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EDITORIAL

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EMERGENCY NETWORKS

EMERGENCY—What does it mean? "A pressing necessity" is one of its meanings which is applicable to Amateur Radio in all times of a National or State crisis.

As this Editorial is being written the first day of summer has past and with it fast approaches one of this country's greatest and costliest of all crises —BUSHFIRES.

To help one of the noblest volunteer services rendered mankind—the Bush Fire Brigades—the Wireless Institute of Australia, through its various Divisions, has formed Emergency Networks which have been already in successful operation in other spheres of activity, viz.: rescue work in locating missing persons and more recently the N.S.W. floods—and have received recognition of their worth. This has been due mainly to the efforts of "the few."

No organisation can render a truly worthwhile effort if it is understaffed, therefore, we appeal to each and every Amateur to give serious consideration to putting his "voice and fist" into this phase of the Amateur Service. You may be one of the boys who will be going portable at this time of the year, or a potential participant in the National Field Day on the 30th of this month, your gear, therefore, will be prepared and in readiness. So why not enrol in your Division's network? Exercises, in the main, are conducted at week-ends on the special frequencies of 3501 Kc. and 7002 Kc. and will not entail much of your time.

From amongst the proud owners of the many and varied types of the small transceivers and the like, procured from disposals sources, it is felt that there is still quite a large number who have not as yet experienced the thrill of portable working. If you are one of these let your Divisional Emergency Network Co-ordinator have your application for membership immediately and join the ranks of those Amateurs whose motto could be "We Serve," whilst to the others we say, "Be Prepared" to assist in some small way—even by home operation.

The Contents . . .

A De Luxe Vacuum-Tube Voltmeter

Part I.—New Methods for Increasing Utility and Dependability

For some years past the vacuum-tube voltmeter has appeared to offer greatest promise in ever-demanding-to-be-improved voltage-measurement technique for d.c. as well as for a.c. up into the u.h.f. region. The use of vacuum tubes as coupling agents between frequency-sensitive or load-sensitive voltage sources and conventional power consuming meters seems to be the simplest means of preventing the power requirements of conventional indicating meters from deleteriously loading delicate circuits.

Reduced to its simplest expression, a vacuum-tube voltmeter is nothing more than a device applied to a direct current milliammeter (usually of D'Arsonval type) to raise the quite-low input resistance of the meter itself up into the multimegohm range in order that the whole meter shall affect the circuit behaviour as little as possible when applied to a source of voltage to be measured. In d.c. measurements it is obvious that the higher the voltmeter input resistance may be, the more desirable the instrument.

The same criterion of excellence applies in measurements of a.c. voltages, but here the problem additionally necessitates the insertion between source and meter of a rectifier to translate applied a.c. into d.c. to actuate the meter movement. The usual practice of employing a copper-oxide rectifier satisfies only the basic requirement of low frequency a.c. voltage measurement, for it limits undesirably both the input resistance and frequency range. It is to be noted that many commercial "vacuum-tube voltmeters" have been such only partially, since their designers resorted to the undesirable expedient of copper-oxide rectifiers for a.c. operation.

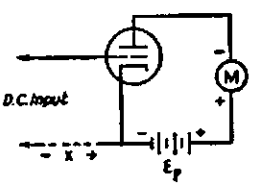


Fig. 1.
Basic vacuum-tube voltmeter circuit.

It is felt that an instrument deserving the name of vacuum-tube voltmeter should be "vacuum-tube" completely in all voltage measurements, a.c. as well as d.c., since the public automatically associates with the term the full merit of complete vacuum-tube operation for all measurements.

DESIGN PROBLEMS

The author begs indulgence for the preceding statement of facts, undoubtedly obvious to most readers, upon the ground that a definite and clear premise is essential to comprehension of any problem—and a problem he has most certainly found in the true vacuum-tube voltmeter. His own interest has stemmed from that experience, usual to serious investigators, of finding most available reasonably priced vacuum-tube voltmeters unsuitable for quantitive, precision work. Faced with the need for a vacuum-tube voltmeter departing negligibly from the dependability and accuracy of the basic indicating meter itself, he found himself forced to continual compromise. So acute became the dissatisfaction developed over recent years in his direction of design, development and production of military projects, using any but the most expensive laboratory vacuum-tube voltmeters of decidedly limited utility, that he set himself to the task of simultaneously taming the v.t.v.m., reducing its cost and expanding its sphere of utility.

Over a period of some years the writer has built quite a few different designs of vacuum-tube voltmeters.

Each one was eventually pulled down and re-built into a so-called "improved design," with varying degrees of success. It was felt that the annoyances of grid, "gas" current, and non-linearity could be overcome, and eventually the writer read the article by McMurdo Silver in July 1945 "QST," entitled "Taming the Vacuum-Tube Voltmeter." This description of the failings inherent in the design of v.t.v.m's. and the eventual development of an instrument to overcome these failings made absorbing reading and ranks, to the writer's mind, as one of the best written technical articles to be seen in a radio journal.

It was resolved that when things became more normal after the war, and low tolerance resistances and ceramic switches became available, an instrument embodying the teachings of this article be built up. This has now been done, and it is felt that its operation is so far superior to previous vacuum-tube voltmeters, both home-built and commercial, of the writer's experience, that Amateurs and those whose profession is radio servicing would find the theory and constructional data of value, so presented herewith is the theoretical development of the design, which will be followed next month by a practical description of two instruments of different mechanical construction, but built to the same circuit.

It was necessary to change the diode types and also the values of the resistance range "stick" slightly to enable valves and resistances readily available in Australia to be used. However these modifications will be discussed at length in the second part of the article.

—J. Duncan, Technical Editor.

It is hoped that a brief review of some of the problems involved, the individual solutions and, finally, the combination of these individual solutions into an instrument of wide utility and extraordinary dependability will be of interest to prospective constructors.

As stated, the basic concept of the vacuum-tube voltmeter is the employment of a vacuum tube between the voltage to be measured and a suitable indicating meter. The triode possesses the advantage of being able to translate a change in grid voltage into a change in plate current; in other words it is a voltage-to-current transformer.

In idealised form, the grid resistance, or input resistance, may be made infinite so as to impose zero circuit loading, powerwise. In practice the grid should not be allowed to open-circuit during periods of non-connection to a conductive source, otherwise the meter may be damaged by excessive plate current. Thus it is desirable to close the grid-to-cathode circuit decisively with a grid resistor—of resistance as high as practicable—in order that such grid resistor itself shall not draw significant power from the source.

Although it illustrates nicely the basic principles involved, the meter circuit of Fig. 1 suffers from numerous drawbacks. Unless the grid is kept negative with respect to the cathode during operation, it will draw current and so load the source of voltage to be measured. The grid must be kept more negative than the highest voltage to be measured. This entails a high plate voltage if the tube is to operate as a Class A amplifier, desirably linear over any useful range of input voltages. The negative grid will prevent grid current, but the high plate voltage will result in what might be termed "gas" current, or "ion" current in the grid circuit when the resistance therein is high—even though the grid is negative. Add to this the unpleasant facts that there is no easy way of covering a multiplicity of widely different voltage ranges and that the calibration of the instrument is extraordinarily dependent upon filament and plate voltages as well as upon long-time changes in tube characteristics, and it becomes apparent that it is of little practical value. Investigation starting from the prior observations of others has revealed that these problems of the simple d.c. vacuum-tube voltmeter can be solved—whereupon more will promptly take their place. But let's take them as they come.

MULTIPLIER "STICK"

An almost unlimited range of full-scale voltage ranges may be obtained most economically by providing a tapped resistance "stick," or resistive input voltage divider, as shown in Fig. 2. This may consist of a multitap switch to move the grid down progressively from the top of the "stick" toward its bot-

tom, the total resistance of the "stick" shunting the source and representing the practical value of meter-input resistance, while the position of the grid tap determines the voltage range in use. Because of inescapable capacitances associated with the (desirably non-inductive) resistors making up the "stick," it will be useless in a.c. measurements without inconvenient capacitative compensation for each step. But there is no need to worry about this yet.

The use of this input resistor "stick" allows a great enough number of ranges to make the d.c. vacuum-tube voltmeter quite universal in application, if its initial sensitivity be adequate for the lowest voltage range desired. It will simplify the design of the circuit, since all that is required basically is a single low-range v.t. voltmeter, the variable input "stick" serving to give this single-range meter as many voltage ranges as may be desired.

What of the resistance of this "stick"? Its total resistance must be high if it is not to load high-impedance circuits to the point where the accuracy of measurement becomes seriously affected. Fifty megohms seems a desirable total "stick" resistance. This will constitute the vacuum-tube voltmeter's input resistance if all other problems are suitably solved. Fig. 2 gives actual resistance values for such a 50-megohm "stick" with six taps distributed down it to give voltage ranges of 3, 12, 30, 120, 300 and 1,200 volts. (Actually, the v.t.v.m. which follows the tap "sees" only 0 to 3 volts total for each of these ranges.)

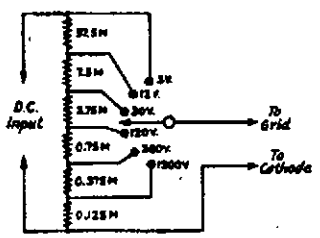


Fig. 2.—Voltage divider or "stick" for obtaining multiple voltage ranges. All resistors are of ½-watt rating. Each should consist of two lower-resistance units in series matched to an accuracy of plus or minus one per cent.

ELIMINATING GRID AND "GAS" CURRENTS

What about grid or "gas" current when the grid tap is moved from 125,000 ohms progressively upward in increasingly large resistance steps to a total of 50 megohms? The designer and the user can deceive himself by saying, "zero-set the meter with the input terminals short-circuited." That is too simple—and seemingly a too-popular misconception of the proper solution. Its effect is to short-circuit the input grid resistor in order to set electrical meter zero before operation, ignoring the effects of "gas" current which causes a significant initial meter reading when the input terminals are opened and "gas" current appears.

If the voltage source to be measured is of low resistance, such as a power supply or battery, this will be permissible in practice since "gas" or grid-current effects once more will disappear when this low-resistance source is connected between grid and cathode. They will not disappear, however, when the source resistance is high, as in amplifier grid-voltage measurements.

An instrument requiring that its input terminals be temporarily short-circuited in order to set meter zero initially therefore will render invalid any low-voltage measurements across high-resistance circuits.

So we are back at one of the besetting sins of most vacuum-tube voltmeters to date.

To eliminate **grid** current the v.t.v.m. grid must be kept definitely negative with respect to its cathode for all orders of input voltage to be measured. But this does nothing for **"gas" current** (often mistaken for tube-base leakage, grid current, or almost anything but what it really is). Gas current is a function of the plate voltage applied to a vacuum tube. It does not show up noticeably in ordinary applications until the grid resistance is made very high—of the order of megohms. But, a 50-megohm input resistance is necessary if the v.t.v.m. is not to impair seriously the accuracy of voltage reading taken when it is shunting the high value of grid resistance often found in resistance-coupled amplifier circuits which must be tested by a universal meter.

INDICATOR SENSITIVITY

The solution is to apply to the tube of the v.t.v.m. a plate voltage so low that "gas" current cannot occur to any effective degree. This plate voltage will be around 20 volts, preferably less. With such a low value of plate voltage and with the grid negative enough never to allow the maximum-value input voltage to be measured to drive the grid positive, examination of tube characteristics indicates that there will be mighty little plate curent to actuate the indicating meter. A 50 or 100 microampere meter is a costly thing at best, and unduly sensitive to mechanical abuse—of which any universal meter will receive plenty in service. It is highly desirable to use a basic meter movement of 0-1 milliampere sensitivity because it is more easily obtained, is more rugged, and imposes a less exorbitant cost premium on the final instrument than a more sensitive meter.

One approach to this particular problem is to use a high-plate-current power pentode operated at low E_p in place of the simple triode. This is workable, but since it is going to be necessary to use two tubes eventually, it is not an ideal solution because it is inevitable that separate tubes, not manufactured identically, will age in a dissimilar manner. The tube manufacturers state that the maintenance of uniformity of sections of dual triodes is greater over a period of time than that of separate tubes. Thus, a dual triode is indicated. Additionally, the fewer and the smaller the elements in the selected tube the better, since the possibility of "gas" current developing over time, even at the ridiculously low plate voltage necessary to eliminate it to start with, is minimised by reducing the amount of metal in the tube's evacuated envelope.

At this point the ubiquitous cathode follower is brought in. A definite and constant order of "gas" current in the v.t. voltmeter tube can be tolerated **if it does not vary**, as it would were the input grid resistance to be changed in the course of changing ranges. The cathode follower permits the satisfaction of this requirement and, at the same time, permits the use of a following **meter-actuating** tube "seeing" a constant grid resistance. The cathode follower may follow immediately the 50-megohm input voltage-divider "stick" of Fig. 2.

When operated at about 17 volts on its plate, none of the usual and unpleasant errors in meter reading arising from "gas" current will be introduced and since its grid automatically is negative, by virtue of the large and heavily degenerative cathode resistor, R1, of Fig. 3, there is no cause for worry about grid current. However, at this low plate voltage, there is insufficient plate-current change to operate a 1 Ma. meter movement directly, exactly as mentioned previously. Also, the circuit will have the nature of a rectifier in the sense that, for a negative voltage applied to the grid, the plate current cannot decrease by the same amount it will increase for an equal positive voltage applied to the grid of the tube.

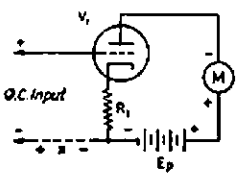


Fig. 3.—Cathode follower coupling stage. The voltage drop across R1 is partially bucked out by a fixed voltage at X to provide Class A operating bias.

If any claim to general usefulness is to be made for the instrument, it is necessary substantially to prevent changes in the tube itself with ageing from effecting its operation. This can be done by making the cathode resistor, R1 of Fig. 3, very large. A suitable value is 5 megohms which, with 17 volts on the tube's plate, means almost no plate current at all. Sufficient cathode resistance should be used to degenerate the tube gain to a point where age and other factors affect operation practically not at all.

Any departure from Class A operation, with its associated linearity, which is required in the final instrument, cannot be tolerated. So the voltage drop across R1 is determined and a potential sufficient to shift the actual operating grid bias up to a value suitable for Class R operation and linearity is placed in series with the grid only, as at X in Fig. 3. Having previously assumed a 3-volt basic range for the v.t. voltmeter proper, the grid may be set at about 4

volts negative with respect to its cathode. If this is done the operation of the tube will be found to be linear over a suitable input-voltage range in both directions; i.e., with the grid run 3 volts positive or 3 volts negative. This total 6-volt range is required so that the polarity may be reversed by a suitable switch at the meter itself for reading either negative or positive voltages within the range of the final instrument without the need for reversing input connections.

METER AMPLIFIER

All of this looks like something promising so far as it goes—a 50-megohm input resistance, enough taps thereon to give all the d.c. voltage ranges reasonably required in the six steps possible with a conventional range switch, freedom from grid current and, most important, absence of "gas" current effects to a point where the usual short-circuiting of input terminals to set an initial meter zero can be eliminated. Zero is set simply, with the input open or shorted, accompanied by a pleasing order of stability, all thanks to the cathode follower operated at very low plate voltage.

The voltage appearing across R1 of Fig. 3 will be a fixed d.c. voltage resulting from plate-current flow through V1, upon which will be super-imposed a d.c. voltage varying almost as does the applied grid input voltage. This variation may be used to actuate a second tube which, in turn, actuates the 0-1 Ma. meter movement. The initial fixed positive voltage across R1 can be washed out by another device later on, so let us ignore it for the moment.

The grid and cathode of the second, or meter-actuating triode will be connected across R1. This tube must be operated at a sufficiently high plate voltage so that a 3-volt change at its grid will cause a 1 Ma. change in its plate current, plus something to spare to allow for variations in individual tubes when first setting up voltage calibration and ranges. In Fig. 4 is depicted the cathode follower at V1, exactly as described above, with the meter-actuating tube at V2. With R1 established at 5 megohms, the excessive negative bias which the voltage drop across R1 would place on the grid of V1 is offset by means of the positive bucking bias provided by the potential B1 and connections are made so as to apply a replica of the varying input voltage appearing across R1 to the grid of V2. But again, ageing of V2 should not affect too significantly the operation of this now-beginning-to-develop instrument.

To obtain a 1 Ma. current change in the plate circuit of V2, for a 3-volt

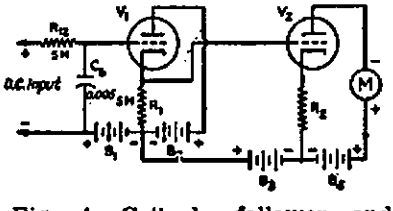


Fig. 4.—Cathode follower and meter-actuating circuits. B1 and B3 are bucking voltages.

input to V1, V2 must be operated at some more normal plate voltage than in the case of V1. This spells an initial order of "gas" current in V2 as a result of the 5-megohm cathode resistor of V1 appearing in the grid circuit of V2. Actually, there is no need to worry at all about this, for the value of R1 never is changed in operation and therefore whatever "gas" current V2 exhibits will be constant for all practical purposes; its operational effect can be washed out by the zero-set adjustment which will be provided later.

To divorce the variability of V2 with time, etc., from the situation, cathode degeneration may be employed once again, this time by means of R2. If R2 be about 40 kilohms and the plate potential B4 about 200 volts, everything will be satisfactory. But once again excessive negative bias must be bucked out, this time upon the grid of V2, exactly as was done for V1 by potential B1. This may be done by obtaining some bucking bias for V2 from the fixed voltage drop across R1, already in the grid circuit of V2, and by supplementing this bucking bias with a suitable potential at B3.

SUPPLY VOLTAGE COMPENSATION

By following properly all of the preceding steps, a portion of the skeleton of a d.c. vacuum-tube voltmeter, free from "gas" and grid current effects in their usual ruinous form, has been derived, and simultaneously long-time changes in tube characteristics have been prevented quite effectively from influencing final results, except as they may be compensated for by a meter zero-set not as yet provided. But what of variations in plate and heater voltage? The plate voltage may be regulated at some small expense, but the same does not hold for economical regulation of heater voltage and cathode emission, although power-line operation (with its invariably fluctuating line voltage) certainly is desirable.

When the circuit of Fig. 4 is converted into what looks like a push-pull circuit, significant and sizable gains in stability versus short-time variation in power-line voltage are obtained. The actuality is depicted in Fig. 5. Here V1a and R1a have been added to balance V1 and R1, as have V2a and R2a to balance V2 and R2. If a 6SN7GT dual triode is selected for VI and V1a, and another 6SN7GT tube for V2 and V2a, a condition is obtained where, assuming only commercially-acceptable tubes in each position, the whole circuit is balanced nicely against supply-voltage variations. Simply stated, whatever change occurs in the V1-V2 branch of the circuit occurs in substantially equal degree, but in opposite polarity, in the circuit branch containing V1a and V2a. With this arrangement variations in supply voltages, plate, grid and heater, of 10% cause a change in meter reading of only approximately 1%.

ZERO ADJUSTMENT

By connecting the 0-1 Ma. meter from cathode to cathode between V2 and V2a, the adjustable resistor, R3, can be inserted conveniently in series therewith, providing a means for setting the voltage range; i.e., R3 is adjusted so that a 3-volt input will give full-scale deflection at M. If R3 is made about 3 kilohms, this may be done nicely for almost all commercially encountered 6SN7GT tubes which may be used at V2 and V2a, but **first** the meter zero must be adjusted **electrically** by balancing the cathode currents of V2, and V2a. Here a 3-kilohm potentiometer, R4, in the plate circuits of V2 and V2a serves with complete satisfaction. Coincidentally it is found that with 1,200 volts applied to the 3-volt range, the meter is provided with practically 100% protection against overload burn-out!

Since V1, V1a, V2 and V2a are operated linearly as Class A amplifiers, investigation of the meter "slope," or deflection vs. applied d.c. voltage, pleasingly reveals that equal increments in input voltage produce equal increments in meter deflection, and that a linear d.c. voltmeter with equal spacing between meter-scale graduations is obtained with this arrangement.

Adding resistor R12 in series with the grid of V1 and C6 in shunt to ground provides a filter which operates to wash out any effects of a.c. which simultaneously may be superimposed upon the d.c. voltage which is to be measured.

PRACTICAL CIRCUIT

Since all of the problems of a 50-megohm input resistance d.c. vacuum-tube voltmeter have been nicely solved, these accomplishments may be translated into a practical constructable circuit. This is done in Fig. 6, in which all previously referenced parts correspond to those of the preceding diagrams. Included are the input voltage divider range-selector "stick" of Fig. 2, at the left, supplemented by R9, a 75-megohm resistor with which any of the six voltage ranges may be multiplied by a factor of 2.5. Thus are realised the six original voltage ranges of 3, 12, 30, 120, 300 and 1200 volts full-scale, all at 50 megohms input resistance, plus six additional ranges (when the input is connected across the terminals marked "3000 v." and "Com.") of 7.5, 30, 75, 300, 750 and 3,000 volts.

These new and added ranges* all are at the seemingly astronomical input resistance (for a stable instrument) of 125 megohms as "seen" by the source to be measured! Yet all positions are equally stable, equally "cool," with no

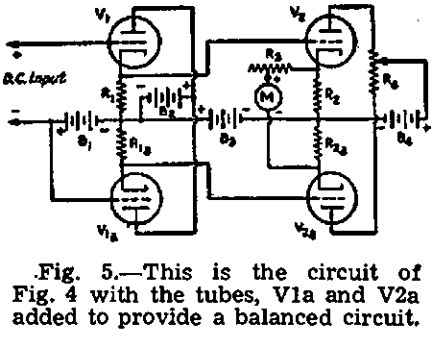


Fig. 5.—This is the circuit of Fig. 4 with the tubes, V1a and V2a added to provide a balanced circuit.

* Not included on basic range selector switch for reasons of complexity and necessary high voltage insulation.

change in meter zero regardless of whether the input terminals are open or short-circuited or ranges switched —quite a contrast to the conditions under which the design started.

Batteries B1, B2, B3 and B4 have been replaced by the voltage-dropping resistors R5, R6, R7 and R8, all connected across the output of the a.c. power supply made up of the rectifier tube, V3, filter capacitors C1 and C2, the small power transformer, T, and the "on-off" switch, S1. By adding the d.p.d.t. switch, S2, the circuit may be arranged to reverse the meter polarity, and thus input polarity, so that positive or negative voltages of anywhere from 0.05 through 3000 volts may be read without reversing input connections—simply by rotating two switch knobs.

CURRENT AND RESISTANCE MEASUREMENTS

At last possessed of a thoroughly practicable, stable and dependable d.c. vacuum-tube voltmeter, truly "vacuum-tube" in its functioning, all that need be done now is to make it function as an ohmmeter, as an a.c. and r.f. voltmeter, db. meter and milliammeter. But the path of the original investigator is easy only when reduced to ultimate written description! Taking the easy ones first, milliampere ranges may be provided by switching suitable shunts across the basic meter, M, by means of an added section on the range switch, this switch and shunts being selected by adding two contacts to what now may be termed the "function" switch, S2, and bringing meter and selectable shunts out to suitable input terminals. This is so conventional as to be worthy of little notice, except to select practically useful current ranges just as was done in choosing the voltage ranges—ranges which will permit the most generally made measurements to be read well up on the meter scale where the basic milliammeter is of greatest accuracy.

Fig. 7 shows fundamentally how resistances from 0.2 ohms up through 2000 megohms may be measured, again in six ranges so proportioned that the most frequent measurements will fall upon "open" portions of the meter scale which, by necessity, is substantially logarithmic and therefore "crowded" at high readings. The six-position switch of Fig. 7, may be yet another switch section added to the basic range switch, brought into circuit by suitable switching added to the v.t.v.m. of Fig. 6.

The whole principle involved is so simple as to deserve no more than passing mention, except to state that the resistance of an unknown resistor, Rx, is measured, not in the usual terms of the current through it, but in terms of the voltage across it. This gives a **right-reading** ohmmeter scale in sharp and pleasing contrast to the backward-reading ohmmeter scales of more conventional service instruments.

By virtue of having switched out the voltage-range "stick" for ohmmeter operation, the v.t.v.m. of Fig 6 "looks" like an infinite resistance to the ohmmeter circuit. This helps in measurements of resistances up to 2000 megohms using only a 3-volt dry battery. Unfortunately it is not easy to eliminate this battery for resistance measurements in favor of drawing an equivalent voltage from the v.t.v.m. power supply. This is because the voltage regulation of the ohmmeter voltage supply must be exceptionally good. The v.t.v.m. power supply has poor regulation to save space and weight, since good regulation is not necessary to the v.t.v.m. power supply, regulation in the instrument as a whole being automatic by virtue of its balanced-circuit design.

It might be added that two 1½-volt standard "A" cells, procurable rather cheaply, work out more economically than would the cost of parts needed to eliminate them. Their life is indefinitely long unless they are used consistently to measure resistance of less than 100 ohms—a condition seldom encountered frequently in radio design or servicing in any case.

A.C.-R.F. OPERATION

At first glance all that is necessary for a.c. voltage measurement (and this **should** mean r.f. up into the u.h.f. region if the instrument is to be worthy of its name) should be to connect a suitable rectifier between the source of voltage to be measured and the d.c. vacuum-tube voltmeter of Fig. 6. It is regrettable that life is not that simple.

The presumed simplest form of a.c.-to-d.c. rectifier is a two-element diode vacuum tube. This type of rectifier has been employed in the best instruments heretobefore available, but it is not ideal. To begin with, the d.c. output vs. a.c. input curve is not linear over the desired low-voltage range of 0-3 volts. Additionally, a diode draws some power from the circuit to which it is applied, power drawn to keep its input capacitor

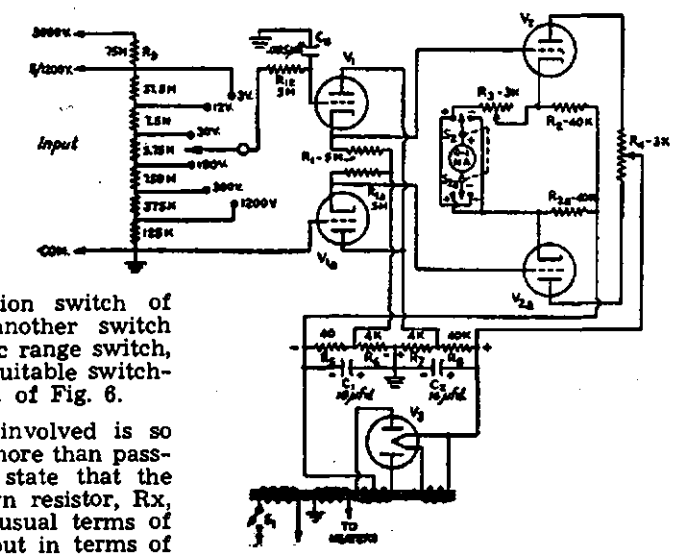


Fig. 6.—Practical vacuum-tube voltmeter circuit with values. Symbols correspond to equivalent units in preceding diagrams.

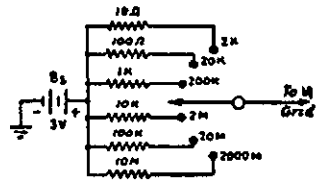


Fig. 7.—Circuit added for resistance measurements.

charged (from which is drawn the steady d.c. voltage to actuate the following d.c. meter). True, this power is very small, and suitable proportioning of the diode circuits can result in an effective input resistance which is desirably high.

Knowing of the excellent linearity of the so-called "infinite-impedance" detector possessed of potentially-infinite input resistance, one is inclined to turn to it—exactly as the author did in an early design. Depicted in Fig. 8, it appears off-hand to be an ideal solution to the problem of an a.c. rectifier for a v.t.v.m. Appearances can be deceiving, however. Theoretically it might be supposed that the capacitor, C3, shunting the large (and therefore degenerative) resistor, R9, would charge up to the peak value of the a.c. input voltage to be measured, and that if the values of C3 and R9 were large enough, this charge would be held substantially until the next input charging cycle. Unfortunately, effects occur upon which the author prefers to express no positive views.

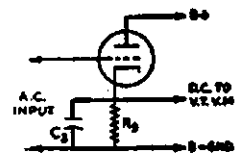


Fig. 8.—Infinite-impedance detector circuit which was tried as a rectifier for a.c. measurements.

The d.c. output voltage does not appear to approximate the 1.41 times the value of sine-wave a.c. input which might be anticipated. This is inconvenient but not ruinous. On the other hand, anticipated linearity, with consequent identicalness of slope between successive voltage ranges for such a rectifier, has been found disappointing. Add to this the fact that the maximum input voltage which may be handled must be significantly less than the available plate supply voltage and what appeared at first glance to be a very nice solution turns out otherwise. (It is not possible to put a voltage-divider "stick" ahead of the a.c. rectifier with particularly happy results.)

DIODE RECTIFIER

Fig. 9 shows a diode rectifier circuit in which C4 insulates the rectifier from d.c., so that a.c. superimposed upon d.c., as in a vacuum-tube plate circuit, may be separated and measured independently. On the positive cycle of the applied a.c. voltage, the diode, V4, passes current, thus charging C4. On the negative half of the cycle, V4 is non-conduct-

ing, and C4 discharges slowly through R10 and R11—slowly because of the high value of R10 and R11 and the effectively high value of C4 with respect to the frequency of the applied a.c. voltage. Here a problem is encountered —the value of C4 suitable for 20 cycles necessitates a type of capacitor construction seldom satisfactory in terms of losses and inductance at 100 megacycles, for example.

In the instrument to be described in Part II. of this article, this disadvantage is circumvented by building V4 into a removable probe which contains a value of C4 suitable for middle audio frequencies on up to over 100 megacycles; also built into the instrument is a much larger duplicate of C4, such as is suitable for low-frequency operation, and an arrangement is provided so that this large C4 is brought into the circuit only when the probe is plugged into its receptacle in the instrument.

Low frequency measurements are made by means of the d.c. probe cords. For all r.f. (and high a.f.) work the probe is withdrawn, to be contacted directly to the circuit carrying the voltage to be measured without any intervening leads to introduce serious, if not ruinous, errors.

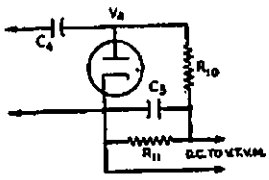


Fig. 9.—Diode rectifier circuit for a.c. measurements.

Since it has appeared that making R10 and R11 large operates to minimise the effects of variation in the internal resistance of individual diodes, R10 conveniently may be made 20 megohms. R11 then may be the 50-megohm d.c. range "stick" of Fig. 2 and Fig. 6. C5 is an a.c. filter capacitor intended to complete the a.c. load circuit of the diode V4 and to aid in removing a.c. from the d.c. v.t.v.m. proper. Making R10 20 megohms serves another useful purpose in addition to making the a.c. diode load resistance high. To the 50-megohm resistance, R11, the resistance R10 bears the relation of 1.4:1, the same relation existing substantially between the peak voltage output of the a.c. rectifier (1.4:1 r.m.s. sine-wave a.c. input, approximately) and the r.m.s. a.c. input.

Theoretically it should be possible to connect the output of the rectifier of Fig. 9 to the input of the d.c. v.t.v.m. of Fig. 6 and read a.c. voltages directly upon the d.c. meter scale of the latter. This is a sound assumption only in part. The non-linearity of the diode rectifier will necessitate a new meter scale for the 3-volt range, although the diode will become sufficiently linear to permit doing just this on the higher-voltage ranges. The d.c. recovery vs. a.c. input characteristic of the diode will not work out precisely as expected, so that the d.c. output may not remain in consistent step for successive ranges. This can be compensated for quite nicely by using, not one range-set adjustment, such as R3 of Fig. 5 and Fig. 6 for all d.c. ranges, but by arranging additional switching to select different values of a.c. range-set resistors as required.

In practice this will work out to about four a.c. range-set resistors for six ranges—one for 3 volts, one for 12 volts, one for 30 volts, and one for 120, 300 and 1200 vlts. This is not a serious problem physically, but it is somewhat annoying when translated mentally into the behaviour-complexity of the seemingly simple circuit of Fig. 9.

REMOVING CONTACT POTENTIAL

Thus far no mention has been made of contact potential generated within the diode in the absence of any applied voltage (except heater). Suffice is to say that, using a 9006 u.h.f. diode for V4, the 70-megohm d.c. load will result in the appearance across R11 of about 1.0 volt in the absence of any input voltage whatsoever. This must be eliminated if it is not to cause false meter readings on those voltage ranges low enough for 1.0 volt to represent a significant error—below 300 volts, for example. So again a balancing tube similar to V1a and V2a is added—in this case V4a of Fig. 10. With four resistors in its own "stick" totalling 10 megohms, V4a will produce contact potential equal to or greater than that developed by V4 across the 50-megohm range-selector "stick," or it can easily be made to do so by interchanging any pair of 9006 tubes so far encountered.

On a.c., R13 is adjusted initially for meter zero, then left alone. This equal and opposite contact potential is applied to the balance cathode follower, V1a, through a suitable switch. This switch, shown in Fig. 10, selects a portion of the contact potential developed across the four resistors in series comprising the load of V4a in step with that selected from V4 by manipulation of the range-selector switch controlling the 50-megohm voltage-multiplier "stick" of Fig. 2 and Fig. 6 so as to keep contact potential nicely balanced out for the 3, 12, 30 and 120-volt a.c. ranges of the instrument. The error introduced in the 300 and 1200 volt ranges from this source is so small as to be neglected, since it is only on the order of eight one-hundredths to three tenths of one per cent.

What is the effective a.c. input resistance of such a rectifier? This is questionable for, while diodes are very simple looking devices, their behaviour seems to belie their seeming simplicity. A conventional method of stating the a.c. input resistance might be to say that it is represented by the actual load resistance shunted by the diode-probe capacitance. This is believed to convey a questionable picture and one not directly meaningful in practice. It seems better, after considerable cogitation, to state that the effective loading upon a circuit to which this particular diode network is applied will look like $r \div 3$ shunted by the diode-probe capacitance, where r is the diode load resistance.

Thus it seems conservative to say that the rectifier of Fig. 9 and Fig. 10 will be "seen" by a voltage source to be measured as 6.6 megohms shunted by 8 uF. A little calculation will show that this represents, commercially at least, an unusually high order of v.t.v.m. input resistance in a.c. operation. This resistance will diminish as the frequency is increased, but the same thing applies to the practically attainable impedances of tuned circuits across which voltages are to be measured in most cases as the frequency is made higher.

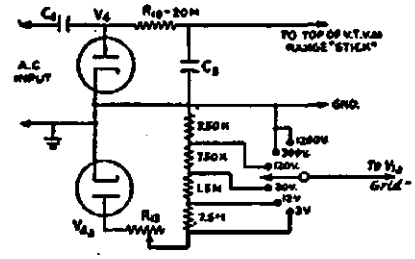


Fig. 10.—Balancing tube, V4a, added to balance out "contact" potential.

SUMMARY

It is believed that several new and novel features have been described. Specifically these are: the insertion of a low-E_p cathode follower and duplicating balancing tube between a simple two-tube balanced d.c. vacuum-tube voltmeter and an input range-multiplier network in order to eliminate the deleterious effects of grid and "gas" currents as a result of changing input resistance; the automatic plug-in substitution of different values of a.c. diode-input capacitance in order efficiently to cover a wide frequency range in one instrument; the provision of a variable source of balancing contact potential which may be kept in step with that resulting from a diode preceding a selective resistive voltage-dividing network. It is hoped that these small contributions to the art of v.t.v.m. design may be of interest.

QUESTIONS AND ANSWERS

VK6WZ would like to know:—

1. A list of commercial telegraph stations which broadcast Press at regular times. JAG, Tokyo, sends Press at a fast bat nightly at about 2000 E.A.S.T. outside the high frequency end of the 7 Mc. band, but frequency, time of operation and speed of others (particularly during the day time) would be welcome.

2. Q.—Can anyone thell me where this new term **electron volts** comes from and how these **electron volts** differ from the good old fashion variety?

A.—This is just one of many instances in which scientists have taken a perfectly innocent word or words, given them a specialised meaning for their own use, and then were quite surprised that the general public wondered what on earth they were talking about.

An **electron volt** is not a unit of **voltage** like microvolt, millivolt, kilovolt, etc., but a measure of **energy**. Suppose we think about a cathode ray tube. Electrons are accelerated away from the cathode by the h.t. of say 1,500 volts. When the electrons have been accelerated and are moving down the tube at a constant speed, they each possess a certain amount of **energy** due to the fact they are moving. (When they hit the fluorescent screen part of this energy appears as light and the rest as heat.)

The energy each electron has is said to be 1,500 **electron volts**. Likewise **1 electron volt** is the energy an electron has if it is accelerated by a potential of 1 volt. This is a very small amount of energy.

Just to see how small it is, let's compare it with the measure of energy most are familar with, the kilowatt hour. As a simple case, think of a diode which has 1 volt across it and this causes a current of 1 amp. Then the power it draws is 1 watt, so in 1,000 hours it will use 1 Kwh. which will cost you about two pence. Now each electron which flows has an energy of 1 electron volt (which is turned into heat when it hits the plate.) And in the current of 1 amp. there are 600,000,000,000,000,000,000 electrons per second, each with 1 electron volt of energy. So if you multiply this rather large number by the number of seconds in 1,000 hours, the answer is the number of electron volts of energy which equals a kilowatt hour. So an e.v. is not much energy.—A.K.H.

P.S.—Considering the first sentence I wrote, I suppose I should remark that where I've used the words power and energy, they have their scientific meaning.

NEW, LOW-COST VARNISHED FIBERGLAS INSULATION

A new varnished fiberglas insulation, which, because of its lower cost, is expected to greatly broaden use of this desirable Class B insulating material, has been announced by the Irvington Varnish & Insulator Co., Irvington, 11, N.J., U.S.A.

This new insulation affords higher dielectric strength and greater flexibility than the conventional material because of a new principle employed in weaving the base fiberglas cloth. This new weave permits better penetration of the insulating varnish between the cloth fibres. The new weave also provides far greater flexibility of the varnished product, while the mechanical strength more than meets all requirements for core wrappings, field coils, punchings, etc.

Irvington style O.W. Varnished Fiberglas is available in three thicknesses—0.007", 0.010", and 0.012". It is manufactured in two colors, black and yellow.

CHANGES OF ADDRESS

W.I.A. Members are requested to promptly notify changes of address to their Divisional Secretary, not direct to "Amateur Radio."

DX Countries of the World

The list of countries as hereunder, and as amended from time to time in Federal Notes, is the Official List to be used in connection with the issue of the Australian DX C.C. Award, and is also the official list used by the A.R.R.L. for their Award.

The list below shows first the Conntry, the Zone number in parenthesis (as used by the "CQ" W A.Z. Award) and the Amateur Prefix.

Aden and Socotra Island (21) VS9
Afghanistan (21) .... YA
Alaska (1) KL7
Albania (15) .... ZA
Aldabra Islands (39)
Algeria (33) .... FA
Andaman & Nicobar Is. (26) VU5
Andorra (14) .... PX
Anglo-Egyptian Sudan (34) .... ST
Angola (36) CR6
Antarctica (12, 13, 29, 30, 32, 38, 39) VK1
Argentina (13) .... LU
Ascension Island (36) ZD8
Australia (inc. Tas.) (29, 30) .... VK
Austria (15) .... (MB9) OE
Azores Islands (14) CT2

Bahama Islands (8) VP7
Bahrein Island (21) MP4
Baker, Howeland & Am. Phoenix Islands (31) KB6
Balearic Islands (14) EA6
Barbados (8) VP6
Basutoland (38) ZS8
Bechuanaland (38) ZS9
Belgian Congo (36) OQ5
Belgium (14) .... ON
Bermuda Islands (5) VP9
Bhutan (22)
Bolovia (10) .... CP
Bonin and Volcano Islands (Iwo Jima) (27) KG6
Borneo, British North (28) VS4
Borneo, Netherlands (28) PK5
Brazil (11) .... PY
Brunei (28) VS5
Bugaria (20) .... LZ
Burma (26) .... XZ

Cameroons, French (36) .... FE
Canada (2, 3, 4, 5) .... VE
Canal Zone (7) KZ5
Canary Islands (33) EA8
Cape Verde Islands (35) CR4
Caroline Islands (27) KC6
Cayman Islands (8) VP5
Celebes & Molucca Is. (28) PK6
Ceylon (22) VS7
Chagos Islands (39) VQ8
Channel Islands (14) .... GC
Chile (12) .... CE
China (23, 24) .... (B)
Christmas Island (29) ZC3
Clipperton Island (7)
Cocos Island (7) .... TI
Cocos Islands (29) ZC2
Colombia (9) .... HK
Comoro Islands (39)
Cook Islands (32) ZK1
Corsica (15) .... (F)
Costa Rica (7) .... TI
Crete (20) .... SV
Cuba (8) .... CM, CO
Cyprus (20) .... (MD7) ZC4
Czechoslovakia (15) .... OK

Denmark (14) .... OZ
Dodecanese Islands (Rhodes) (20) SV5
Dominican Republic (8) .... HI

Easter Island (12)
Ecuador (10) .... HC
Egypt (34) .... (MD5) SU
Eire (Irish Free State) .... EI
England (14) .... G
Eritrea (37) .... (MD3) MI6
Ethiopia (37) .... ET

Faeroes, The (14) .... OY
Falkland Islands (13) VP8
Fanning Island (Washington Is.) VR3
Fiji Islands (32) VR2
Finland (15) .... OH
Formosa (24) C3
France (14) .... F
French Equatorial Africa (36) .... FQ
French India (22) .... FN
French Indo-China (26) .... FI
French Oceania (Tahiti) .... FO
French West Africa (35) .... FF
Fridtjof Nansen Land (Franz Josef Land) (40) UA1

Galapagos Islands (10)
Gambia (35) ZD3
Germany (14, 15) .... DL
Gibraltar (14) ZB2
Gilbert, Ellice & Ocean Is. (31) VR1
Goa (Portugese India) (22) CR8
Gold Coast (and British Togoland) (35) ZD4
Greece (20) .... SV
Greenland (40) .... OX
Guadeloupe (8) .... FG
Guantanamo Bay (8) KG4
Guatemala (7) .... TG
Guiana, British (9) VP3
Guiana, French, and Inini (9) .... FY
Guiana, Netherlands (Surinam) (9) PZ
Guinea, Portuguese (35) CR5
Guinea, Spanish (35)

Haiti (8) .... HH
Hawaiian Islands (31) KH6
Heard Island (39) VK1
Honduras (7) .... HR
Honduras, British (7) VP1
Hong Kong (24) VS6
Hungary (15) .... HA

Iceland (40) .... TF
Ifni (33)
India (22) .... VU
Iran (21) .... EP, EQ
Iraq (21) .... (MD6) YI
Ireland, Northern (14) .... GI
Isle of Man (14) .... GD
Israel (20) 4X4
Italy (15) I

Jamaica (8) VP5
Jan Mayen Island (40)
Japan (25) .... JA
Jarvis & Palmyra Is. (31) KP6
Java (28) .... PK
Johnston Island (31) KJ6

Kenya (37) VQ4
Kerguelon Islands (39)
Korea (25) .... HL
Kuwait (21) .... (VT1)

Laccadive Islands (22) VU4
Lebanon (20) AR8
Leeward Islands (8) VP2
Liberia (35) .... EL

Libya (34) .... (MCI, MD1, MD2, MT2)
Liechtenstein (15) HE1
Luxembourg (14) LX

Macau (24) CR9
Macquarie Island (30) VK1
Madagascar (39) .... FB
Madeira Islands (33) CT3
Malaya (28) VS1, 2
Maldive Islands (22) VS9
Malta (15) ZB1
Manchuria (24) C9
Marianas Is. (Guam) (27) KG6
Marion Is. (and Prince Edward Is.) (39) ZS2
Marshall Islands (31) KX6
Martinique (8) .... FM
Mauritius (39) VQ8
Mexico (6) .... XE
Midway Island (31) KM6
Miquelon & St. Pierre Is. (5) .... FP
Monaco (14) .... (CZ)
Mongolian Rep. (Outer) (23) .... (JT)
Morocco, French (33) .... CN
Morocco, Spanish (33) EA9
Mozambique (37) CR7

Nepal (22) VU7
Netherlands (14) .... PA
Netherlands West Indies (9) .... PJ
New Caledonia (32) .... FK
New Guinea, Netherlands (28) PK7
New Guinea, Territory of (28) VK9
New Hebrides (32) .... FU, YJ
New Zealand (32) .... ZL
Nicaragua (7) .... YN
Nigeria (35, 36) ZD2
Niue (32) ZK2
Norfolk Island (32) VK9
Norway (14) .... LA
Nyasaland (37) ZD6

Oman, Trucial (21) MP4

Pakistan (22) .... AP
Palau (Pelew) Islands (27) KC6
Palestine, Arab (20) ZC8
Panama (7) .... HP
Papua Territory (28) VK9
Paraguay (11) .... ZP
Peru (10) .... OA
Philippine Islands (27) .... DU
Phoenix Is., British (31)
Pitcairn Island (32) VR6
Poland (15) .... SP
Portugal (14) CT1
Principe & Sao Thome Is. (36)
Puerto Rico (8) KP4

Reunion Island (39) .... FR
Rhodesia, Northern (36) VQ2
Rhodesia, Southern (38) .... ZE
Rio de Oro (33) .... (EA8)
Roumania (20) .... YO
Ryukyu Is. (Okinawa) (25) KR6

St. Helena (36) ZD7
Salvador (7) .... YS
Samoa, American (32) KS6
Samoa, Western (32) .... ZM
San Marino (15) .... (M1)
Sarawak (28) VS5
Sardinia (15) .... IS
Saudi Arabia (Hedjaz & Nejd) (21) HZ
Scotland (14) .... GM
Seychelles (39) VQ9
Siam (26) .... HS
Sierre Leone (35) ZD1

Sikkim (22) AC3
Solomon Islands (28) VR4
Somalland, British (37) .... (MD4), VQ6
Somaliland, French (37) .... (MD4), FL
Somaliland, Italian (37) .. (MS4, MD4)
South Georgia (13) VP8
South Orkney Islands (13) VP8
South Sandwich Islands (13) VP8
South Shetland Islands (13) VP8
Southwest Africa (38) ZS3
Soviet Union:
European R.S.F.S.R. (16) .... UA
Asiatic R.S.F.S.R. (17, 18, 19) UA9, 0
Ukraine (16) UB5
Belorussian S.S.R. (16) UC2
Azerbaijan (21) UD6
Georgia (21) UF6
Armenia (21) UG6
Turkoman (17) UH8
Uzbek (17) UI8
Tadzhik (17) UJ8
Kazakh (17) UL7
Kirghiz (17) UM8
Karelo-Finnish Republic (16) UN1
Moldavia (16) UO5
Lithuania (15) UP2
Latvia (15) UQ2
Estonia (15) UR2
Spain (14) .... EA
Sumatra (28) PK4
Svalbard (Spitzbergen) (40) .... (LA)
Swan Island (8) KS4
Swaziland (38) ZS7
Sweden (14) .... SM
Switzerland (14) .... HB
Syria (20) .... YK

Tanganyika Territory (37) VQ3
Tangier Zone (33) .... EK
Tannu Tuva (23) .... (TT)
Tibet (23) AC4
Timor, Portuguese (28) CR10
Togoland, French (35) .... FD
Tokelau (Union) Islands (31)
Tonga (Friendly) Islands (32) VR5
Transjordan (20) ZC1
Trieste (15) AG2, MF2
Trinidad and Tobago (9) VP4
Tristan da Cunha & Gough Is. (38) ZD9
Tunisia (33) .... (3V8) FT
Turkey (20) .... TA
Turks & Caicos Islands (8) VP5

Uganda (37) VQ5
Union of South Africa (38) .... ZS
United States of America (3, 4, 5) K. W
Uruguay (13) CX

Vatican City State (15) .... HV
Venezuela (9) .... YV
Virgin Islands (8) KV4

Wake Island (31) KW6
Wales (14) .... GW
Windward Islands (8, 9) VP2
Wrangel Island (19)

Yemen (21)
Yugoslavia (15) .... YU

Zanzibar (37) VQ1

W.I.A. 1950 National Field Day

GENERAL RULES

1. The Wireless Institute of Australia's National Field Day Contest will be held over the week-end of 28th and 29th January, 1950, and will commence at 1500 hours E.A.S.T., Saturday 28th, and continue through until Sunday the 29th at 2359 hours.

2. The Contest is limited to portable stations operating within the Commonwealth and its mandated territories.

3. A portable station, for the purposes of the Field Day, is defined as one whose power is not obtained from either private or public mains, shall not be located closer than 5 miles to the home location of the operators, and shall not be situated in any occupied dwelling.

4. No apparatus is to be set up or erected on the site of the portable station earlier than 6 (six) hours prior to the commencement of the contest. A station may be moved from one site to another within the same State during the period of the Contest.

5. More than one operator may be used in the operation of the portable station, provided that all operators are licenced Amateurs.

6. Operation may be on any of the recognised Amateur bands, and more than one transmitter may be used, providing only one transmitter is used at any one time.

7. When calling, c.w. stations will use "CQ FD," and phone stations will use "CQ Field Day," to indicate they are portable stations. Attention is directed to the requirements for portable stations in the P.M.G's Handbook.

8. SECTIONS.—The Contest is divided into three sections, namely, Open, C.W., and Phone. The Open Section shall consist of both phone and c.w. operation. Participants may enter for all Sections, provided a separate log is entered for each case.

9. LOGS.—Logs must be forwarded through the Division to reach Federal Executive not later than 21st February, 1950, and decisions of Federal Executive in all matters relating to the Contest will be final.

10. The operator(s) will choose the most suitable 24 hours of operation from the total operating time of 33 hours, and submit this 24 hours' period as their log for the Field Day. Any lesser period than 24 hours may be operated.

11. Logs must show the location of the portable, name and call signs of the operators in the party, a description of the transmitter(s), receiver(s), antenna(e) and the power supplies. The power input to the final stage with the antenna connected (which must not exceed 25 watts) will also be shown.

12. Log entries are to be in the following order: Date, time (E.A.S.T.), station worked, Amateur band used, report sent, report received, contacts points claimed, bonus points claimed, QTH of station worked, and portable operator's call. A summary at the conclusion of the log will facilitate checking.

13. The completed log must be signed by each of the operators with a statement that the P.M.G. Regulations and the Rules of the Contest have been observed.

14. SCORING.—For the purposes of the Field Day, the following constitute separate VK districts: VK2, VK3, VK4, VK5 (South Australia), VK5 (Northern Territory), VK6, VK7, and VK9.

15. A complete exchange of report and QTH is necessary before any points may be claimed.

16. Points will be awarded as follows:—

(a) For contacts with a fixed station within the Commonwealth (Rule 14), outside the competitor's State	1 pt.
(b) For contacts with other portable stations in the Contest within the same State	2 pts.
(c) For contacts with stations in Asia, North America, and Oceania (outside the Commonwealth, Rule 14)	3 pts.
(d) For contacts with stations in Europe	5 pts.
(e) For contacts with stations in Africa and South America	7 pts.
(f) For contacts with other portable stations in the contest outside the State	10 pts.
(g) A bonus for each Continent worked on each band. For Oceania, the contact must be outside the Commonwealth, Rule 14, add to the final score	25 pts.
(h) A special bonus for each Interstate or overseas contact, on or above, 50 Mc., add to the final score	50 pts.

17. AWARDS.—An attractive certificate will be awarded to the outright winners in each Section, namely, Open, C.W. and Phone. Certificates will also be awarded to the winner in each State in each Section. Further certificates will be awarded at the discretion of Federal Executive. The outright winners are not eligible for the State awards.

18. Certificates will be awarded to each operator of the winning stations, provided each operator has contacted at least 26 per cent. of the stations contacted.

19. In addition to the certificates for the outright winners, an order to the value of 3 guineas will be awarded for the purchase of a trophy or equipment.

The South African International DX Contest

The S.A.R.L. International DX Contest, which is now established as an annual event, will be staged during January, 1950. All licenced Amateurs throughout the world are eligible and are invited to participate in the Contest.

The Contest is divided into c.w. and telephony sections. The c.w. section commences at 0001 hours G.M.T. on Saturday, 21st January, and closes at 2359 hours G.M.T. on Sunday, 22nd January, 1950. The telephony section commences 0001 hours G.M.T. on Saturday, 28th January, and closes at 2359 hours G.M.T. on Sunday, 29th January, 1950.

RULES OF THE CONTEST

1. All entrants are bound by the rules governing this Contest and, in the event of a dispute, the decision of the President of the S.A.R.L. shall be final.

2. Operation is restricted to the 40, 20, and 10 metre bands. Cross-band operation is not allowed.

3. Contacts with Government or unlicensed stations are ineligible for scoring purposes.

4. Proof of off-band or irregular operation submitted by the official monitor stations will disqualify the offender.

5. SERIAL NUMBERS which will be changed with each contact are to be exchanged between stations. In the case of c.w. stations, the serial will consist of a 6 (six) figure group, the first three figures to be the report followed by the LAST three figures of the LAST SERIAL NUMBER RECEIVED. For your first contact simply add any three figures to the report to be given. For subsequent contacts give the report followed by the serial number of the last station worked.

In the case of telephony, the serial will consist of a 5 (five) figure group, the first two figures to be the report followed by the LAST three figures of the LAST SERIAL NUMBER RECEIVED.

6. SCORING will be as follows: two points for each station worked in your own country. In the case of Africa, VQ1, 2; ZS1, 2, 3, 4, 5, 6, 7, 8, 9; ZE1, 2; and CR7 count two points, making the contest virtually Southern Africa versus the world.

Five points for each station worked in other countries (see A.R.R.L. List). Multiplier is the number of countries worked on ALL bands.

7. Logs are to be sent to: H. R. Bennett, 47 Flower Street, Pretoria, S. Africa.

8. The contestant must submit a log sheet which will have an analysis and a signed declaration. The declaration to be as follows:—"I hereby declare that my station was operated strictly in accordance with the conditions and rules of this Contest and I agree to abide by the decision of the President of the S.A.R.L. in the event of any dispute."

9. An incomplete log or omission to submit an analysis or failure to make the declaration will disqualify the contestant.

10. The judging will be done by the S.A.R.L. Contest Committee.

11. The log sheets must show the following:—Date, Time of Contact, Band used, Call Sign, Serial Sent and Received, Points Claimed, Multiplier, Number of Countries worked.

12. All logs are to be in the hands of the S.A.R.L. Contest Committee by 30th April, 1950.

13. Certificates will be sent to the Winners of this Contest in each country outside South Africa.

THE OLD MAN

With conditions in a sorry mess, it has been impossible to criticise either good signals or bad during the last month, so perhaps a word of advice to the large number of newcomers to the Ham ranks may not be out of place. Let us either as Hams with their tickets for years, or the fellow with a ticket for six months, go out of our way to call that new call, and welcome the holder to the bands.

I can, and lots of you will, remember that very nervous feeling when we made our first calls and wondered whether the station called would come back to us. What a thrill it was to be working the fellow you had heard on the air for a long time and how nervous we felt when we tried to copy those first few c.w. contacts. If you can remember all that, then give the new Ham a call when you hear him, and a few words of wisdom that you have learnt by experience.

To the new Ham, whether he be starting off with the humble crystal oscillator feeding the aerial or a multi-stage rig, be sure that the signal you emit is one that will reflect credit upon you. YOU are judged by the signal you put out, just as much as you would be for the cleanliness or otherwise of your personal appearance.

Don't be afraid to call the older Ham. If he is the right type he will enjoy the chance of welcoming you to the air. If he is sending too fast don't, whatever you do, come back and say received, when you only got about half. He may have asked a few questions and it is quite obvious when you do not reply, that you haven't received it. Be straight forward and tell him that you only received a portion and ask him to QRS, he will be only too glad to slow down for you. If you're not sure of your procedure, seek out the older Ham who will be glad to put you right. Have a look at the AMATEUR CODE published recently in the Magazine and still to be seen on the front page of the Handbook. Make that your code and your starting point in Amateur Radio.

Join the local Division of your Institute and take a personal interest in its workings, offer your services in a practical way, this is most important. There are far too many people who are content to let the other fellow do the job, but who are only too ready to supply lots of adverse, rather than constructive criticism.

The younger man is sadly needed in our executive ranks to-day. Far too much work is being done by men whose private avocations demand a great deal of their time.

Take care of your purchases, always have in mind when purchasing a piece of equipment whether you can, at a later stage, use it in a more practical way in a larger rig. Careful planning will enable you to save pounds through the years. This piece of advice has been learnt the hard way. Keep your rig tidy, haywire has its place in testing and trying out circuits, but it can be very dangerous, as most of us know.

Finally keep in mind you are constantly near a.c. voltages that CAN CAUSE DEATH. A recent article in "QST" pointed out that the smaller voltages can sometimes be more dangerous than larger ones. One very good tip if you must play around with the h.t. on, is to keep one hand in your pocket, but the safest of all is SWITCH IT OFF.

Accurate Frequency Transmissions for 1950 from VK3WI

During last year's four Accurate Frequency Transmissions, the Victorian Division was unable to obtain, on some nights, complete corrections on the frequencies sent, due to the times of operation clashing with other schedules at the Frequency Measuring Station at Mont Park.

Letters have come in from members asking that corrections be obtained on all future transmissions, and, with this in view, Mont Park was contacted and arrangements made to check this year's four transmissions.

To fit in with their long list of activities, it has been necessary to change the time of operation to 9.15 p.m. on Thursdays, also to reduce the time taken by transmitting every 20 Kc., instead of 10 Kc., as in the past.

Dates for the next 12 months are:—

26th January,
27th April,
27th July,
26th October.

Transmissions take place on the 7 Mc. band at intervals of 20 Kc., the frequency of the transmission being accurate to better than 0.01% or 500 cycles.

The operating procedure and times of transmissions are as follows:—

9.5 p.m.—Phone transmission on 7196 Kc. with a general call and information on what is about to take place.

9.15 p.m.—VK3WI changes frequency to 7000 Kc. and calls as follows on c.w. at 12 w.p.m.: AFT (3 times), de VK3WI (3 times), then —...— QRG —...— 7000 Kc. (twice). The key is then held down for one minute; then QSY 7020 Kc. (twice) de VK3WI (once) AR.

The transmitter then commences operation on 7020 Kc. and the procedure is repeated until 7200 Kc. is reached, after which there will be a phone transmission on 7196 Kc., and if corrections are immediately available, they will be broadcast at this time, also on the following Sunday's VK3WI news.

If the hour is not too late, frequency checks will then be made for any member contacting VK3WI.

Details on dial construction and calibration, also the best way to make use of these transmissions, appeared in the January, 1949, issue of "Amateur Radio" pages 14 and 16.

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

JANUARY, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

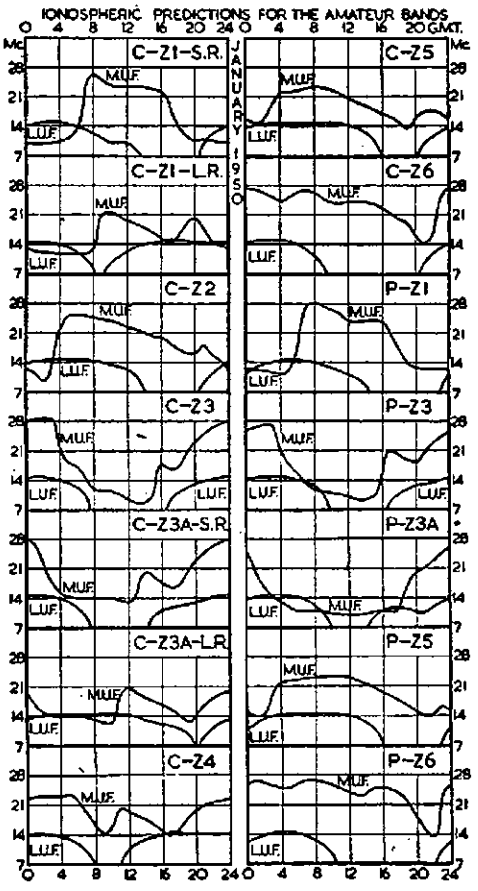
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Perth-San Francisco circuit would be useful.

1. Was the 7 Mc. band workable from 1000 to 1600 hours G.M.T.?
2. Was the 14 Mc. band workable from 1600 to 2000 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the month.



The "Lenfo" Series Phased Array

BY LEN JACKSON† AND C. GIBSON,* VK3FO

With the advent of greater activity on the v.h.f. bands, and the controversy on antenna systems, we discussed and contemplated using a type of array or beam that could be easily constructed and which would require no tuning or pruning, as is necessary in the more conventional types of antenna.

To this end, the writers got together and evolved the "Lenfo" (as aptly named by Charlie, VK3BH). A lot of nights were spent with slide rule, paper, and visits to the Public Library, the results being well worth all the trouble.

When the system was all worked out, discussions with VK3EN and VK3EM resulted in their agreement with the theory, so it was decided to build up an experimental array and try it out.

VK3KE (Jim) kindly put his shack and gear (he also mowed his back lawn for the occasion) at our disposal, for which our thanks are hereby recorded. So now let's to the theory of this array.

This type of beam was first developed by Franklin, of the Marconi Company, being originally only single sided, with one quarter wavelength radiators. It was further developed by the late Howard Love (VK3KU), who duplicated it on the opposite side, giving it its present appearance of a number of folded dipoles joined centre to centre by lengths of feeder.

In the original form, a 300 ohm terminating resistor was necessary to prevent standing waves on the feedlines. **In fact the whole system operates without standing waves on any part of it.** This terminating resistor was retained by VK3KU.

We decided to further experiment with this type of beam and found it possible to eliminate the terminating resistor and produce the same effect by terminating in a folded dipole of 300 ohm impedance. The advantage of this is obvious, since the resistor dissipates 3 db of the total power, whereas the dipole converts this into useful radiation.

The matching stub on the front of the array was also eliminated, the array being fed by 300 ohm ribbon, connected directly into the first element. A twin lamp indicator fails to give any Indication of standing waves on the feeder.

The system used at this station consists of a three element series phased array, terminated in a folded dipole, giving a total of four elements.

Field strength measurements were first made on this array, in conjunction with VK3KE, with VK3EM a very interested observer (unfortunately VK3EN was detained at work).

The forward gain over a folded dipole proved to be at least 10 db, with a front-to-back ratio of better than 20 db. These figures could not even be approached with a conventional two or three element parasitic beam. These figures have subsequently been confirmed by "S" meter readings in a large number of contacts.

As the theory of this array has been well covered by a pervious article in this magazine (Series Phased Arrays‡), it is felt that it is not necessary to go into full details of the theory here, but a few points may be of interest.

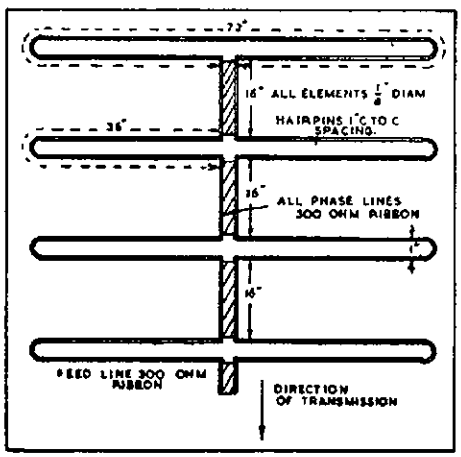
As the system operates without standing waves on any part of it, except the terminating folded dipole, **ordinary calculations for antenna lengths do not hold, and it is necessary to use transmission line theory in determining the lengths of the elements.**

The lengths of the elements should be measured around each folded half, and not from end to end. The length of the folded half is given by the length of a half wavelength in free space multiplied by the velocity factor of the element as a transmission line. For the usual rod or tube form of construction, this velocity factor is about 0.9, giving as the length of the half element—

$$\frac{492 \times 0.9}{\text{Freq.}}$$

The length of the transmission line sections is one-quarter wavelength in free space, multiplied by the velocity factor of the line. If 300 ohm ribbon is used, this becomes $\frac{246 \times 0.8}{\text{Freq.}}$, or if open wire line is used, $\frac{246 \times 0.9}{\text{Freq.}}$

The use of 300 ohm ribbon is recommended, as this is made to very fine tolerances and there is less likelihood of impedance variations than in open wire lines.



Dimensions for 6 Metre Beam

Dimensions round ½ folded dipole, 8′ 6″. Phasing line, 300 ohm ribbon, 3′ 9″.

When the first array was built, to the measurements given in the diagram, many predictions were made that the resonant frequency would be well out of the top of the 144 Mc. band, however, the resonant point is found to be about 146 Mc., thus confirming the soundness of the theory. Hence we strongly recommend that these dimensions be used by anyone who contemplates building this array.

Since the resonance is very broad, and the performance does not change over the entire band, it is not necessary to cut the elements for the transmitting frequency. An array cut for 146 Mc. will work equally well on any part of the band. It is not necessary to stick to four elements, although this is the practicable minimum, but elements can be added indefinitely, without any change in impedance matching or dimensions, with continued improvements in performance.

Elements must be kept to an even number, however, to obtain a high back-to-front ratio, as the radiation cancels from each pair of elements in the backward direction. An odd number of elements would therefore leave one element, whose radiation was not cancelled to the back.

At the time of writing VK3KE and VK3EN have erected six element arrays and while it is too early yet to gauge the performance accurately, the forward gain and back-to-front ratio show appreciable improvement over the four element array.

The diagram shows dimensions and lengths for a 144 Mc. array and calculated dimensions for six metres. It has not been tried at the time of writing, but by the time this appears in print the 6 metre array should be in operation at VK3FO.

We would stress that insulation of the elements at these frequencies is of utmost importance, as r.f. is costly to generate and easily lost, so we want all the energy into the array. Keep the feed line clear of all metal work, guy wires, iron roofs, etc., as close proxminity to these objects will upset the pattern of the array, and also impair the efficiency of the whole system.

Outstanding results have been obtained by VK3KE and VK3BH using the "Lenfo;" VK3KE worked VK3ANW at Mount Dandenong with 3 watts input and the "Lenfo" only five feet high. Charlie, VK3BH, 16½ miles south-east of Melbourne also worked into Geelong on 144 Mc. VK3JO, also using this type of array, with about 1 watt input, is having very good results.

In conclusion we would appreciate reports of tests conducted with this array and other types of beams, so chaps please let us have your opinions as to how good or bad the "Lenfo" is.

† 8 Austin Street, Bentleigh, S.E.14, Vic.
* 424 Centre Rd., Bentleigh, S.E.14, Vic.

‡ "Amateur Radio," May, 1948, page 3.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

Important news for 50 Mc. enthusiasts! News is to hand that the following 50 Mc. stations are maintaining a watch for VK stations:—

VR2BC (Suva), 50.9 Mc.; YV5AC, 50.2 Mc.; YV5AE, 50.05 Mc.; YV5BX, 50.4 Mc.; HC2OT, CE1AH, OA4AG, and OA4BC. No frequencies are available for the four last mentioned stations.

50 Mc. ACTIVITY

NEW SOUTH WALES

50 Mc. is really open now and many excellent contacts have been had with KH6 and ZL. ZLs have W contacts and many KH6. Ere these notes are printed, VK-W-J, etc., will most probably be contacted. VK4 and VK5 have been worked by VK2 but no really good Interstate opening so far.

Due to lack of support, the November V.H.F. Meeting, held on the 11th, had to be chaired by a Council member. A "quizz session" filled in. Lectures are definitely the draw and this will be well catered for in January when a lecture by 2UD Bob Archer, on "Practical Application of Noise Generators" will be delivered.

The Field Day was well attended and approximately 130 were present. The hidden transmitter was found after some difficulty. The start was well organised this time and the transmitter was found after about one hour of searching by a composite party ending in a race, foot style. The winner is to be announced. 2NS guessed the crystal oscillator frequency. Mrs. Collett (2RU's XYL) being a very close second.

New stations on 50 Mc. include 2SY, 2NQ, 2DV, 2ABH on super mod., 2XO North Coast. 2BW visited Sydney during last month and it is hoped to do a 6 metre relay as Alt is in Wagga.

The 28th saw the band open for about 4 hours to ZL and many contacts were had from Sydney to KH6. The ZLs were about even after midnight New Zealand time. JA2AZ was heard at 1230 hours S7 by VK2ANF in Sydney on 23/11/49.

VICTORIA

50 Mc. is providing VK3 stations with many thrills. On Sunday 4th December, all States with the exception of VK5 were heard and worked. Several Melbourne stations worked their first VK6 in the morning, signals being fairly good both ways. The elusive (for Victoria) VK7s made one of their rare appearances and though signals were not good in Melbourne, 3RR and 3ACL, operating from 3ACL's location in Red Hills, made a very good contact with 7XL.

November has proved an interesting month for 50 Mc. enthusiasts in VK3. There have been a number of good DX openings and plenty of local and country stations on the band. With regard to DX openings, these were as follows:—22nd 1300-1445 and 1820-2015 hours, the band was open to VK4, the best signals coming in during the daytime opening. 26th: 1845-2000 hours good opening to VK4. 27th: 1345-1700 and 1925-2000 hours, the VK4s were rather patchy. 30th: Very good opening to ZL from 1315-1410 hours; ZLs 1HY, 1NT, 1HP, 1UZ, 1VW, and 1QS being worked by VK3TH and VK3IM. Interstate signals have been heard briefly without contacts actually being made.

Several new stations have appeared on the band, the first being 3AKE, of Geelong. He is using a converted 522 gear and a two element beam and has worked a number of Melbourne stations and some VK4s. 3DN has also been on using a rig consisting of 6V6 c.o., 6V6 doubler, 6V6 quadrupler, and 815 final. Doug has yet to put up an outdoor antenna, but should put out a good signal when he does so. 3FO is using 40 watts to an 807. Col also has no 50 Mc. antenna at the time of writing, but is building a four element series phased beam which will go up 40 feet.

3AFN, of Black Rock, is using an EF39 c.o., EL32 doubler, VT501 doubler, into the dipole antenna, quite an unusual set-up. Thus it is obvious that quite a diversity of gear can be used to put a signal on the 50 Mc. band; how about a few more having a look in the junk box and getting together the necessary gear for a 50 Mc. transmitter.

On the 13th November, 3CI operated portable six miles south of Tatura and worked a number of Melbourne stations with good signals although some QSB was apparent. Location was in the tower of an old house, approximately 100 feet above the ground. This portable outing will be 3CI's last appearance on the band under this call sign. Syd has now moved to VK5 and the VK3 v.h.f. gang wish him all the best and will be looking for him on six and two. Syd's v.h.f. work has been greatly appreciated by all Victorian stations. Although hampered by a poor home location, Syd went out portable again and again and really put Mt. Fatigue and Foster North on the v.h.f. map. Thanks for doing a fine job Syd.

QUEENSLAND

There has been very great activity on this band during the past month. Southern States have broken through on several occasions. At the time of writing a rumour is circulating that a VK4 has worked South America on this band, but at present we have no confirmation of this.

On 5th November 4XN worked 3EF, 3DA, 3ZL and 7XL. 4HD worked 3RR, 5HD, a number of VK3s and heard 5DC. 4CU worked 7AB, 3RR, 3UI, 3BW, 5HD. Other VK4s who worked VK3s were 4RY and 4RT. 6th November, 4HD worked 5RT on c.w.

14th November between 2030 and 2055 hours, 4FN worked 5CI, 5JN, 5GB, 5QR, 5GF and heard 2OH. Others working VK5s were 4CU, 4XN, 4RY and 4ES. 4FN also heard 4CU and 4XN. 15th: a number of VK5s were heard but no QSOs resulted. 19th: at 2000 hours 4ES and others in Brisbane worked VK5s and ZLs. 22nd: 4XN, 4HR, 4RY and 4HD worked VK3 stations.

26th November: Several VK5s and VK3s were worked between 1845 and 2000 hours by 4XN, 4CU, 4BT, 4ZU, 4RY, 4HD, 4FN, and 4HR. Another break through was made on the morning of the 27th but no details are to hand.

30th October was a red letter day for VK4 as VK4RY at 1402 hours worked KH6PP.

WESTERN AUSTRALIA

So far, there are no reports to hand of any Sporadic E or regular F2 layer openings on the 6 metre band, unless 6WG, of Albury, has any. No notes to hand from 6WG, but I believe he has experienced some sort of activity this season. 6FC, 6BO, 6DW, 6LW, 6RK, 6GS have all been keeping a close watch on the band for many weeks now. Nothing broke through from anywhere as a result of auroral activities which were reported as having occurred during the early hours of Sunday, 20th November. Close watch was kept during the whole of that day with signals being beamed to the south, north and east. It was noticed that signals on the lower frequency bands were absent, especially the 10 metre band, which was as quite as a country churchyard at midnight.

At about midday on Wednesday, 23rd November, 6FC heard the Adelaide radio range beacon on 33.8 Mc., indicating a sharp rise, to well over 40 Mc., in the m.u.f. Adelaide is little more than about 1700 miles from Perth, if it is that, via the great circle route. However, AD Range has not been heard again since.

Notwithstanding the lack of DX outside the State, the boys are steadily improving their gear and now two-way c.w. QSOs between 6BO, 6FC in the metropolitan area, and 6GS Harvey (about 85 miles to the south) are becoming a regular feature. On the evening of 22nd November, both 6FC Perth and 6DW Bruce Rock (150 miles east of Perth) made a two-way c.w. contact. This is the longest two-way 6 metre contact, I believe in VK6. Signals peaked at times to S5, but QSB was severe. However, 6FC, unfortunately, could not read a signal report from 6DW, and only this was necessary for an exchange of QSL cards. 6DW was using an input of 100 watts to a three element beam, while 6FC was using about 60 watts, also to a three element beam. 6FC is wasting no time in adding the fourth element to that beam. This would have made the contact a QSO.

It is quite obvious that success over long distances in this band depends upon an efficient aerial —three element beam at the very least, and then making sure that your power really gets to the aerial with the minimum of losses. Even then, an r.f. output from the transmitter of at least 30 watts is necessary. The more the better, of course. However, the addition of the 4th element to the antenna makes a lot of difference, as was proved when 6BO added a 4th element to his beam. Still better results would doubtless be obtained with even higher gain arrays.

TASMANIA

VK7PF reports reception of a KH6 signal on 36 Mc. approximately. Makes him hopeful that he might be able to do the same thing just 14 Mc. higher sometime. Says nothing doing on six apart from local QSOs between 7LZ and 7BQ. As for the south, same state of affairs seems to exist. Only inhabitants appear to be f.m. signals from b.c. receiver local oscillators, b.c. station harmonics, the local power leaks "and" VK7AJ and VK7DH. Surely the Editor would not be so unkind as to omit the "and" preceding VK7AJ.

7AJ has pulled the band-switching out of his receiver, substituting plug-in coils and says it has made a vast difference to sensitivity on six. Athol is considering a pair of three element beams and permanently aiming the whole works at KH6.

144 Mc. DOINGS OF THE MONTH

NEW SOUTH WALES

Considerable interest is being shown in this band mainly by DX minded crystal control stations. Stacked antenna are more common than any and definitely give a couple of S points of "readability." 2ABC is a recent stacked-antenna aspirant—has 1143 delivering the ergs. Are RL7s (VR136) the finest r.f. pentode available to Hams?

VICTORIA

This band is rapidly increasing in population and once again it is possible to report the advent of some new stations. 3RT is using 10 watts to a 2C26 modulated oscillator, super regen receiver, and twin three beam and is putting out a good stable signal. 3JE has also been on, but details of gear not to hand yet. 3DH is using a 6J6 oscillator and quadrupler, 6BA6 doubler, 6J6 doubler, 832 final, with a 6J6 super regen. Both 3DH and 3VM are arranging their gear for mobile work so some interesting contacts should be forthcoming.

(Continued on Page 24)

Abstracts from Overseas Magazines

"SHORT WAVE MAGAZINE," SEPTEMBER, 1949—

P. 498: "Top Band Cabinet Transmitter;" J. N. Walker, G5JU.—1.7 Mc. Transmitter. First of a series of fully detailed constructional articles using only branded parts so that the exact construction can be repeated by all interested.

P. 506: "Indoor Beam for Ten;" R. W. Rogers, G6YR.—Rotating three element beam with the ends of the elements bent down. Installed in a loft.

P. 509: "More on the Grid Dip Oscillator;" R. F. Stevens, G2BVN.

P. 511: "Surplus V.F.O. Unit;" J. N. Roe, G2VV. —Uses type M1-19467-A.

P. 514: "Double Superhet for Ten;" A. B. Wright, G6FW.—Continued from August.

"WIRELESS WORLD," SEPTEMBER, 1949—

P. 326: "Valve Megohmmeter;" W. H. Cazaly.—Linear scale, two ranges covering 5,000 ohms to 5 megohms.

P. 331: "Audio Signal Generator, Part 2;" M. G. Scroggie.—Description of an elaborate signal generator.

P. 335: "Eddystone Model '680';" Test Report.—Full description of the "680." Circuits of the r.f. coupling system, crystal filter, detector, a.v.c., noise limiter, and S meter.

P. 346: "Electronic Circuitry;" J. McG. Sowerby. —(i) RC oscillators, e.g. a Wien bridge RC oscillator. (ii) Cathode coupled amplifiers and phase splitters.

P. 349: "Generalised Graphs;" "Cathode Ray."

"RADIO AND TELEVISION NEWS," SEPT., 1949—

P. 37: "A Band-Switching V.F.O. Exciter Unit;" P. V. R. Drenner, W0LQS.—An Australian might call this 14 valve gadget a band-switching transmitter. Is standard handbook design of v.f.o., plus doubler string, n.b.f.m. and 807 final.

P. 40: "Self Modulating the 829B;" O. L. Woolley, W0SGG.—Half the 829B acts as an r.f. amplifier. The other half acts as audio amplifier, the common screen and cathode providing the modulation coupling.

P. 50: "A Pocket Signal Tracer;" J. L. Barber. —No batteries. Uses 1N34 crystal rectifier.

P. 52: "Sweep Generator Adjustment of Transmission Lines and Antennae;" J. A. Cornell.—Accurate impedance matching with sweep generator and c.r.o.

P. 54: "The Beginning Amateur, Part 8;" R. Hertzberg, W2DJJ.—Discussion on test equipment.

P. 57: "Shielding Against T.V.I.;" P. S. Rand, W1DBM.

P. 61: "Modern Television Receivers;" M. S. Kiver.—Vertical sweep systems of typical American commercial receivers.

P. 64: "Build This Experimenters' Power Supply;" R. P. Turner, K6AI.—Conventional power supply plus pair of 6L6s as electronic variable dropping resistors. If you don't know this useful idea, try it some time. Take a 6L6 (or 807, or 6V6, etc.), connect plate and screen together to form a triode. Put h.t. in at the plate and take it out at the cathode. Connect a 100,000 pot (linear for preference) from cathode to ground. Connect grid to moving contact of pot. Varying the pot., varies the bias on the grid, varying the drop across the tube and so the output voltage. If one tube won't stand the current drain, put more in parallel. A filter condenser across the output is useful. Connect filament winding to cathode potential.

P. 67: "The Television Receiving Antenna;" B. V. K. French.—Many types of v.h.f. antennae.

"CQ," SEPTEMBER, 1949—

P. 13: "The Ultimate in Converters;" J. E. Stacey, W1KIM.—Very good article on the cascade circuit. Discusses the best tubes to use (6AK5 triode into 6J1 or half 6J6), together with full circuit details of the ultimate (almost) in low noise converters for 28, 50, 144 and 220 Mc.

P. 20: "A Composite Chart of Standard Colour Codes;" A. Shaffer.

P. 23: "Data on the BC610 Tank Coils;" F. Black, W2ESO.

P. 25: "Multi-Band Rotary;" B. Haner, W2FBA. —33 ft. elements which act as half wave radiators on 14 Mc. and as two half waves in phase on 21 and 28 Mc. The parasitic elements have stubs in the centre whose effective length is changed by relays. The driven element can be switched to three different networks so as to operate flat feeders on all bands.

P. 29: "Winning Three Falls from Gorgeous George;" W. I. Orr, W6SAI.—Case history of a successful 14 Mc. T.V.I. house cleaning job.

P. 81: "On a Cycle Right For You;" W. H. Anderson, VE3AAZ.—How to operate transformers, selsyns, relays from a supply whose frequency is different from that for which the unit was designed.

P. 32: "Hobby for the Handicapped;" H. S. Brier, W9EGQ.—Actual cases of the value of Amateur operating as a healer.

P. 35: "Screen Grid Modulating the Command Rigs;" R. R. Hall, W0CRO.—Standard screen modulation applied specifically to a Command transmitter.

"QST," SEPTEMBER 1949—

P. 18: "A Simplified Circuit for Audio Image Rejection;" G. Grammer, W1DF.—Applies audio phasing principles to c.w. beat note reception to remove the audio image. This, together with a peaked audio amplifier, should do as good a job as a crystal filter.

P. 20: "The Gamma Match;" H. H. Washburn, W3MTE.—To match co-ax to the driven element of a beam, half a T match serves.

P. 22: "450 Watts on V.H.F.;" C. V. Chambers, W1JEQ.—6AR5 tritet oscillator, 6AR5 doubler, 832A amplifier or tripler, 832A 144 Mc. amplifier driving p.p. 465A amplifier. The final amplifier tank is novel. On 144, it acts as a quarter wave linear tank. On 50 the shorting bar across the lines is removed and a coil plugged in.

P. 29: "A 1950 V.F.O. Exciter;" B. Goodman, W1DX.

P. 48: "Vertical Beams on 14 Mc.;" A. D. Mayo, W5DF.—Results obtained with driven element plus one parasitic element.

P. 60: "Hints and Kinks."—(i) Low-power AC-DC transmitter. (ii) Broadcast band coverage with the BC348Q. (iii) Cure for "Talk-back" in the BC610. (iv) Lock on for the T17B hand microphone. (v) Uses for the SCR274 dynamotor.

"CQ," OCTOBER, 1949—

P. 11: "T.V.I. Free Rig for 10;" M. Seybold, W2RVI.—The length to which shielding is carried has to be seen to be believed.

P. 15: "Gliding the Gold-Plated Special;" J. Kirk, W6DEG.—Using the National continuous tuning all-band tank.

P. 18: "Neglected Out-Phasing System of Modulation;" W. H. Hartman, W7AF.—The output from the basic oscillator is split into two channels with a small phase shift between them. Each channel is phase modulated by the audio and then amplified up to the desired power. The outputs of final amplifier of each channel are combined and fed to the antenna. The audio equipment is simple, the power economy is high, but since the r.f. section must be in duplicate, the use of the system for Amateurs is doubtful.

P. 27: "Hobby for the Handicapped, Part 2;" H. S. Brier, W9EGQ.

P. 30: "Inside the Shack and Workshop."—(i) R.F. gain control for the S41. (ii) Improving the Collins 75A noise limiter; substitutes 12H6 for 6H6; operating the 12 volt filament on 6 volts reduces hum pickup. (iii) Conversion of BC453 to the broadcast band. (iv) Low voltage tap on Bridge rectifiers; from the centre tap of the transformer supplying a bridge rectifier can be drawn a rectified voltage approx. half that of the main output.

P. 81: "Selenium Supply;" L. V. Broderson, W6OLV.

"WIRELESS WORLD," OCTOBER, 1949—

P. 362: "Magnetic Recording Technique;" D. Roe.

P. 365: "High Quality Amplifier—New Version;" D. T. N. Williamson.

P. 370: "Microwave Lenses;" C. Susskind.

P. 389: "Smoothing Circuits, Part 1 RC;" "Cathode Ray."—The good oil on RC filters.

P. 395: "Electronic Circuitry;" J. McG. Sowerby. —(i) Direct current stabilisers. (ii) Neutralising the cathode coupled phase splitter for improved high frequency response.

P. 398: "Vented Loudspeaker Cabinets;" C. T. Chapman.

P. 401: "Reflex Valve Voltmeter;" M .G. Scroggie.—Single valve voltmeter with 5, 20 and 50 volt ranges and medium stability.

P. 405: "Properties and Uses of Negative Temperature Coefficient Resistors;" "Thermistors."

A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on Thursday, 12th January, 1950. Lectures are held on Monday and Thursday evenings from 8 to 10 p.m. Persons desirous of being enrolled should communicate with Secretary W.I.A., Victorian Division, 191 Queen St., Melbourne (Phone FJ 6997 from 9 a.m. to 6 p.m.), or the Class Manager on either of the above evenings.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. Gronow, VK3WG; Federal Secretary: W. T. S. Mitchell, VK3UM, Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary—Geo. Cameron (VK2GC), Box 1734, G.P.O., Sydney.

Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor.—L. D. Cuffe, VK2AM, 14b Watson Street, Neutral Bay, N.S.W.

Zone Correspondents.—North Coast and Tablelands: P. A. H. Alexander, VK2PA, Hill St., Port Macquarie; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gard., Newcastle; Coalfields: and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: G. J. Russell, VK2QA, 116 Bogan St., Nyngan; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 48 Harrabrook Ave., Five Docks; Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. O. Quin, VK3WQ.

Administrative Secretary.—Mrs. O. Cross, Law Court Chambers, 191 Queen St., Melbourne, C.1.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—North Western: R. E. Trebilcock, VK3TL, 122 Victoria St., Kerang; Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: W. H. Ross, VK8UT, Ballangeich, via Warrnambool; North Eastern: J. A. Miller, VK3ABG, "Erinvale," Avenel; Far North-Western Zone: Harry Dobbyn, VK3MF, 42 Walnut Ave., Mildura; Eastern Zone: Mrs. P. M. Churchward, VK3US, "Shirley," Red Hill.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW on Friday evenings on the 7 and 14 Mc. bands.

VK6WI.—Saturdays 1400 hours, Sundays 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.

Meeting Night.—Last Friday in each month at the Y.M.C.A. Rooms, Edward Street, Brisbane.

Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—E. A. Barbier, VK5MD, Box 1234K, G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AG, 7 Howard St., Perth.

Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.

Meeting Night.—Watch the Monthly Bulletin.

Divisional Sub-Editor.—George W. Ashley, VK6GA, 33 Mars Street, Carlisle, Western Australia.

TASMANIA

Secretary.—R. D. O'May, VK7OM, Box 371B, G.P.O., Hobart.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor.—Capt. E. J. Cruise, VK7EJ, Anglesea Barracks, Hobart.

Northern Correspondent: C. P. Wright, VK7LZ, 3 Knight St., Launceston.

FEDERAL

DX C.C. LISTING

As there appears to be several anomolies in the present Rules, it is anticipated that at the 20th Convention, a complete airing will be given, so if you have any grouches or constructive comments now is your opportunity to send them to your Divisional Council for inclusion on the Agenda.

PHONE			
VK3JD (1)	36		130
VK5RU (2)	37		125
VK6KW (4)	37		124
VK3BZ (3)	36		120
VK3EE (10)			113
VK6DD (6)			112
VK4JP (8)			102
VK3LN (11)			102
VK3JE (7)			100
VK4KS (9)			100
VK3IG (5)			100
C.W.			
VK3BZ (6)	40		157
VK3CN (1)	40		143
VK3VW (4)	39		134
VK4EL (9)	39		134
VK2QL (5)	40		132
VK3KB (10)	39		123
VK3EK (3)	39		121
VK4HB (8)	40		119
VK4RF (11)	36		118
VK2EO (2)	40		116
VK3FH (15)	37		115
VK4DA (7)	38		112
New Member—			
VK3NO (19)			101
OPEN			
VK3BZ (4)	40		178
VK6RU (8)	38		161
VK2DI (2)	40		159
VK3JE (12)	39		153
VK3HG (3)	40		146
VK4HR (7)	40		146
VK6KW (13)	39		144
VK3MC (5)	39		138
VK3KX (1)			135
VK4EL (10)	39		134
VK2ADE (28)			133
VK3OP (19)			128

An application for Open membership has been received from VK7KB and is being checked.

COUNTRIES LIST

Elsewhere in this issue will be found the latest list of DX Countries and the current prefixes. Submit your cards for DX C.C. in that order.

RADIO CONTROL OF MODELS

Another frequency band has been allotted for the radio control of models, namely, the 27 Mc. i.c.w. band. These bands are now as follows:—

26.957 to 27.282 Mc.
40.66 to 40.70 Mc.

A special permit is required to operate models on these two channels, and special application must be made to the Chief Inspector (Wireless) stating details of proposed experiments, type of equipment and circuit to be used, and precise location in which to be operated. These applications are not restricted to Amateurs, but other details must be supplied if the applicant is under age. Licenced Amateurs may use 144 Mc. and higher frequencies without any additional permit.

ZS "GENTLEMEN'S AGREEMENT"

Still another Society to add to the list of those endeavouring to equitably allocate the bands between Phone and C.W. is the S.A.R.L. They have advocated the following distribution:—

3500— 3600 Kc. C.W. only.
3600— 4000 Kc. Phone only.
7000— 7050 Kc. C.W. only.
7050— 7100 Kc. C.W. and Phone.
7100— 7150 Kc. Phone only.
14000—14100 Kc. C.W. only.
14100—14350 Kc. Phone only.
21000—21150 Kc. C.W. only.
21150—21450 Kc. Phone only.
28000—28200 Kc. C.W. only.
28200—29700 Kc. Phone only.

AMATEUR STATIONS ABOARD SHIPS

As at present laid down in the P.M.G's Handbook, para. 50, Amateur Stations may be operated aboard Australian ships in Australian waters only. This has now been amended so that a station so licenced may now do so anywhere in the world, provided that when in the port or anchored to any wharf or pier of any other administration, the equipment will not be operated. The Handbook will at a later date be amended to this effect.

W.I.A. ACTIVITIES CALENDAR

Jan. 14-15: B.E.R.U. C.W. Contest.
Jan. 21-22: B.E.R.U. Phone Contest.
Jan. 28-29: W.I.A. National Field Day Cont. and B.E.R.U. C.W. Contest.
Jan. 31: Membership Rolls of each Division due at F.E.
Feb. 19: 20th Convention Items due at F.E.
Feb. 28: Convention Per-Capita due with F.E. End of fiscal year of Divisions.
Mar. 10: Agenda for 20th Convention issued.
Mar. 17: Annual Per-Capita due not later than this date.
Mar. 31: End of fiscal year for F.E.

SLOW MORSE TRANSMISSIONS

The following transmissions from the official W.I.A. stations are given on 3,504 Kc. on the days and times shown below:—

Sunday—VK3WI, 2030 to 21000 hours E.A.S.T.
Monday—VK2WI, 2000 to 2030 hours E.A.S.T.
Tuesday—VK4WI, 1930 to 2000 hours E.A.S.T.
Wednesday—VK6WI, not operating at present.
Thursday—VK5WI, 1930 to 2000 hours E.A.S.T.
Friday—VK7WI, 2030 to 2100 hours E.A.S.T.

NATIONAL FIELD DAY CONTEST

Elsewhere in this issue appears the Rules of the 1950 W.I.A. National Field Day Contest to which some minor changes have been made. Last year's effort was patronised fairly well, but we cannot but feel that it does not yet enjoy the popularity it merits. Here is your chance to test your portable gear under portable conditions, and at the same time compete for a money order for equipment or trophy.

The v.h.f. boys are also catered for, so here's their chance also for a pleasant outing and a furthering of their experimenting. Let's make this N.F.D. a bumper one!

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Under date of 17th November, 1949, Noel Roberts, ex-VK9NR, writes: "I am leaving Norfolk Island in a few days for New Zealand where I will be stationed at Christchurch for a few months before shoving off for Samoa. I will be on from Samoa, of course, under a ZM6 call sign but do not know whether I will get on from the Christchurch QTH. Will be sending a stack of cards along soon as I expect a new bunch from the printers any day now, so ask the boys to be patient. Would you please pass the word along asking stations to put the correct date-time on their cards. I get quite a few with wrong dates and at first suspect them as "tryouts" but sometimes fluke the QSO in the log a long way off the date shown on the card. I feel sure some blokes may have missed a card on this account as I am careful in checking that a QSO did actually take place before returning a card to anyone. I only made 92 countries from this loca-

tion which Isn't much of an effort in this atomic age . . ." Good luck Noel in your wanderings.

VKs will be delighted to hear that Jack Elliott, ZL3CC, a real old timer and a sound gentleman, expects to again visit Australia during 1950. It must be over ten years since his last visit and those who met him on that occasion relish the prospect of renewing his acquaintance.

A first instalment of the long-awaited cards from Bob, AC3SS, Gantok, Sikkim, via Calcutta, have arrived. Many of the cards relate to contacts as far back as 1946 and 1947. Bob says that numbers of cards he sent from AC3SS seem to have gone astray and he has had to duplicate and triplicate many of them. Bob is now AC4RF and works 14020 and 28040 c.w., and in good conditions will try phone despite his power limitation of ten watts. His current QTH is Bob Ford, AC4RF, Lhasa, care Gyantse P.O., Tibet, via Siliguri, West Bengal, India.

Further news from Felix, FK8AC, reveals that the yacht "Estrelita," out of Sydney and bound for U.S.A., visited New Caledonia. The radio operator aboard is VK2ABJ to whom Felix was able to give great assistance. "Estrelita" will call at Suva and Honolulu en route to the States. FK8AD is now on the air but on 7 Mc. only and FK8AE is still busy building his rig. Felix is now mainly on 14005 around 0430 to 0530 E.A.S.T. and as a result does not find many VKs awake at that hour.

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NEW SOUTH WALES

WOY WOY FIELD DAY 1949

The Division's Field Day was held at Woy Woy on 27th November and as usual attracted a number of Amateurs from all over the State. It was a great success, well over 70 Amateurs and a total of 140 persons were in attendance. The weather, although threatening, held off until the bitter end and so didn't dampen the enthusiasm of the many Hams who were wandering about with 144 Mc. gear of various shapes and sizes.

The following Amateurs were recorded as being in attendance: VK2s OR, WJ, VW, DO, ARN, LY, ARY, PZ, XT, AGY, IC, EL, AFS, VG, OA, OF, KR, CW, OY, NX, HZ, UY, CS, KG, TY, ASW, AAB, JU, WH, AMV, AGD, WP, BG, YC, HO, NS, AEY, EO, LX, MA, ZC, AHA, ASM, RU, MQ, PW, ARF, GA, BN, ARG, ARR, AGW, ADT, YL, AKR, XU, BF, AHU, NO, SW, AMP, JT, EH, CI, QG, AGO, AEZ, and AMU.

The various competitions created a great deal of interest especially the "mistakes in a circuit" contest. Competitors found so many mistakes and so many papers were returned that a special committee will have to be appointed to judge it. The two prizes, a Command Tx, donated by Electronic Equipment Co., and an Eddystone 144 Mc. Tuning Unit, donated by John Martin Pty. Ltd., will be awarded after the committee has judged the entries. The xtal frequency check competition was won by Trevor Evans, 2NS, and he collected a condenser, donated by United Radio Distributors Pty. Ltd. Runner-up was Mrs. 2RU who gained for her husband an 807 tube, presented by Mullard Aust. Pty. Ltd.

Mrs. VK2AHA received a cake dish, being the holder of the ladies' lucky ticket, and Mrs. Fitton, of Newcastle, some salt and pepper shakers for second place.

Two 834 tubes, donated by Philips Electrical Industries, were won by Sid Ward, VK2SW, as a ticket holder, and Trevor Evans, VK2NS, and Jack Young, VK2OY, winning 807 tubes, donated by Mullard Aust. Ltd.

Entrants in the 144 Mc. search had a hard job finding the hidden Tx and only one team managed to locate the Tx, it took them 45 minutes. The team comprised 2PW, 2ASM, 2ARF and Cess Cronin, and the cup was duly presented to them.

Harry Hine, 2ARY, of Bellingen, received an open order on Prices Radio for travelling the longest distance to attend, just a matter of some 300 miles.

It was voted a good day by all and aided by the friendly fellowship displayed by all present, it will be long remembered.

To Mrs. Hardman and Cess, 2KR, our thanks for the day, not forgetting the many other helpers. Yes, it will be on again in 1950.

WESTERN SUBURBS ZONE

Here's wishing all the best for the New Year to the Western Suburbs gang. May all your activities be crowned with success.

The six metre boys are hot after the DX since some rare ones broke through recently. Beams of fantastic proportions are the subject of keen discussion and the regulars are keeping a close watch for possible break-throughs.

2AH, Alan, puts out an exceptionally strong signal with good modulation. 2MQ has 829s going, 2XKs c.w. comes over well. 2IY puts out phone at good strength. 2VP's "halo" antenna lays down a nice signal. The handful of regulars on 144 are always pleased to welcome new ones on the band. 2YM runs 12 watts to a pair of 7193s in a unity coupled circuit and is one of the strong signals on the band; very stable rig. 2AH heard at excellent strength. 2CU has nice phone at good strength also. There are lots of good signals to be heard and flea-power makes its mark!

On other lower frequencies, 2OQ has been making some good DX contacts. 2JT should have his "A" frames erected by now. 2FZ still not very active. 2AHU has a nice modulator now. How are the records Curley? 2AER, haven't heard you for ages Max! Have you finished that new receiver?

NORTH COAST

Activity on the North Coast during the past month has been in the shacks, not on the air. A lot of interest is being shown in the proposed Emergency Network for the North Coast and full emergency gear is receiving attention. The organisera for the next W.I.A. North Coast Convention are making plans for the event to take place on 8th, 9th, 10th of April, 1950, Urunga is again the site. The local progress association has offered to help financially and to assist in the entertaining of visitors. It is a fine gesture that an outside body like the Urunga Progress Association is taking such an interest in Ham Radio. They appreciate the value of the hobby as fully demonstrated to them during the Kempsey and Maitland floods. Activity on the gentleman's band, 80 metres, has been retarded owing to QRN, but the old-timers still stick; 2GI, 2ARY, 2RK, 2CM, 2HC, 2LH, 4OU, 2XO, 2JC, 2XQ, 2AJR, 2ON, 2CI, and 2AAP are active. 6 metres will receive plenty of attention this summer in the zone. The Richmond River boys are working nightly on 6, the Clarence River crew are using 144 and it is hoped to see some of the Grafton gang on 6 soon. The Coffs-Bellingen boys have gear ready and 2XO is transmitting on 6 and listening on 40.

2DX, Nambucca, works 20M only. 2PA has 45 ft. pole erected and 6 and 10 wide-spaced beams are on top. 2DS, when not fishing, works 20 with an G8PO as a rotary. 2JC busy on 6 metre converter, the Tx being completed. 2WT hopes to be on 6 by Xmas, works the Lismore gang day and night. 2DK been on holidays and brought back a junior op., congrats Chas. 2EB now in Darwin waiting for a VK5 call and will come on 10. Reg Stick is making a comeback and has been issued with VK2AMS, welcome Reg. 2TG chasing DX with his windmill towers, one on each band. Bill, 2OE, expects to move to a new QTH, anytime, he will be missed by the coastal gang.

2ARJ active on 10 and 20. 2AJB building new receiver and 2ZX active on 40, puts out a good signal even if two 70 ft. steel towers are lying in pieces in the backyard. N.B. 2XO is writing these notes for the next month or so, send your news along to him.

SEASONAL GREETINGS

N.S.W. Zone Officers extend to all Amateurs Greetings for the Festive Season and may 1950 bring stronger voices to the phone men, arms to the c.w. gang, and more news of your activity for these notes.

HUNTER BRANCH

The Hunter Branch extends its good wishes for the festive season to all, and hopes that 1950 brings better QSOs and DX. Members of the branch who attended the State Field Day at Woy Woy had a wonderful time again, congrats to Cess 2KR, Bill 2MQ, and Bill 2HZ and other helpers.

John, 2XQ, would be pleased to hear from anyone interested in the proposed Emergency Network at Hunter Valley—remember Maitland floods and the name we made there. 2ANA going on 10 with folded dipole, 30 watts working Ws and KH6s. That terrific signal from 2CS has appeared again, Europeans nicely. 2AFS has 95 watts on 10 too and really goes places.

2FP has 117 countries up on 28 Mc. phone, a marvellous effort, can anyone beat that? Warwick Parsons must have a starter! 2AGY still having trouble with a very high noise level, what about moving Fred? 2GW still silent, but doing good work for the branch. 2UY busy and not too active, how is the big Rx? 2NX still on 40 c.w. and does well. Welcome back to 2LV with a nice signal on 40, all the bugs out now! 2ANL popped up on 6 with three element beam, works all the 6 gang. 2BZ and 2UF working 6 and 2, Dave had a run on 10 DX, they all thought him a new station, he had been away for so long. 2XT still not on but very close we hear. 2ZC giving 10 phone a fly, gets out well with a folded dipole, what about a beam Jim, getting worried about an ever-increasing noise level, there should be a cheap city QTH going soon? 2XY building big 20 metre rig, gets out well with a QRP job and zepp. Bert Watts still awaiting a brand new call sign. 2AGD been giving DX away of late, also replacing 300 ohm ribbon with open line, has good dope on super-selective i.f's.

2PQ mainly on 10, 40 too noisy. 2TE working DX on 10 and 20 through bad auto QRM. No news of 2AMM. 2PT on 20 metre DX. 2VU, Singleton, puts consistent signals into Newcastle on 6. 2DG picking off nice c.w. DX on 10 and 20. 2AKF been on holidays at the lake. 2ADX works 10, 8 and 2. 2TY on 10 metre phone mainly and has been on holidays. 2XQ trying n.b.f.m. as a solution to his phone problems. Welcome to OT Ken Greenhalgh, 2KG, who joined up at the November meeting, looks like a comeback, Rx and v.f.o. built already. 2CI not very active, that 24 watt? rig nearly took off his finger recently.

The usual Xmas get-together took place at the December meeting. Dr. Adcock gave a very interesting lecture. Dr. Adcock is the inventor of the Adcock D/F system and is now a resident of Newcastle. We hope to hear a lot more lectures from this world famous figure. 2AHA is working plenty of DX with a zepp, two three element jobs nearly complete, one for 10 and one for 20, then he should rally know how good the new QTH is. Cheers and greetings for Xmas and the New Year.

COALFIELDS AND LAKES

Geoff, 2VU, very busy on 50 Mc. and heard working the ZLs. 2TY was on holidays, but managed to attend the Field Day. Not much heard from Kurri, though 2KF is on 10, 6, and 2, while 2KZ is on 10 and 6. 2PZ very busy, but made the Field Day. 2MK and 2ALR not heard of late. 2MK is a keen archer these days and the game gets second place. 2ADT has 829 on 144 and getting good results to and from Sydney, also working the ZLs on 6, but is looking for the real DX. Not much from the Lakes, but 2AAF, 2KR, 2AEZ, 2AMU, 2LX and 2GA are active. Cess, 2KR, did much good work at Woy Woy in preparation for the Field Day. 73 from the zone to all the gang for Xmas.

WESTERN ZONE

The main event of the month was the Field Day at Woy Woy. This was attended by quite a few zone members including 2WH, 2AMV, 2AAF, 2NS, 2HZ and 2LY. All reported a good time. 2BT has a new converter on 10 and 6, but so far has heard nought, with the exception of 2WH about 10 miles away. There was quite a big hook-up one day with 2BT listening and relaying on 40 to 2QA, and 2AAF also via land line to 2AMV who transmitted the 6 metre signals back to 2WH. We have to welcome an old timer, Wal Salmond, 2SA, to Dubbo, not on air yet but heard from 2AMR. 2AMR has 100 watts on 6 but so far no contacts this year, had a few last, works a lot of DX on 10. 2QA had a visit from 2XP and embryo Ham "Bill" who has sat for his ticket twice and is going to try a third time if necessary.

2XE has a new rig going a little better, but still not as good as the old ATR2A. 2II considering a comeback, is building a rig to beat all, exciter and five or six finals all in a steel cabinet with standard 19 inch panels. There is a new Ham at Dunedoo, 2AGK, using a Bendix Tx end getting good results on 10 and 20. 2NS is building rotary cubicle quad for 10, hopes to have it complete by early in new year. 2JW and 2ALX have decided to convert their 144 Mc. gear to 6, tired of working across the town and hope to get farther afield. 2JO heard on 40 and has the k.w. just about tamed. 2HC still using battery power, heard on Sunday skeds. 2DK also on batteries, became the proud father of a son and heir. 2LY no father, but just as pleased, has a new HRO Rx. 2LZ has a new QTH under way, much better one away from the line noise. 2EX still has housing problems, so can't unpack the gear. 2HZ's haywire has been admired by quite a few visitors of late and 2EF, Warimoo, been very silent.

SOUTH COAST AND SOUTHERN

Old-timer 2AIK again active after enforced spell, has moved to Jervis Bay, using the old gear: 6V6, p.p. 807s and AB2 807s, has plenty of competition from nearby naval station. Wyalong well represented by 2ALN and 2AFV, also 2AEL, the latter just back from VK7, nice signal from ATR14. 2AFV having spot of trouble in the motor generator, but no sign of the 400 cycle note in your phone George. Don't hear the following 2TA, 2TQ and 2PN, although Ross was briefly on 40. The Wagga and Albury stations seem to have gone bush, not a single bit of news on the activity down there. 2PI recently entertaind a few of the Canberra lads. 2TV is on the sick list and will be in hospital for about six months. His gear is to be installed and he will operate on 40, give him a call chaps. 2PI has gear completed, 80 watt fixed station and small job for fireside contacts in the winter, new frequency meter and push-to-talk control. 2JQ was represented at the Woy Woy Field Day by his daughter, Betty, who had special instructions to "hear all" for him to hear later.

Jack, 2OY, represented Goulburn at the "do," had a nice time, how many errors did you find in the circuit? He was on holidays at the Lakes Entrance but came down to lend a hand. The Wollongong Club was strongly represented too, "Klefty" 2WP was there but left his big bottle at home. Ern Ashley, from Bondi, came with Western boys. He is your number one fan, Ian (3IK). The

Fishers—Eric No. 1 and No. 2. designers and builders of 2AMV were also there. Looks like another Ham in Yass, he was a Radio Mechanic in the R.A.A.F. 2ALS not very active, fishing is running neck and neck with radio, but use of v.h.f's. makes it impossible to receive local stations. Finally congrats to N.S.W. W.I.A. Secretary, Geo 2GC, on his engagement, plenty of 88s but no 38s these days. Many thanks to 2OZ, 2ARN, 2GA, 2KR and families for the Woy Woy hospitality. Finally what we want to know is how the 60 stone of Ham Radio from the Central West fitted into an 8/40? It couldn't have been comfortable, allowing for the portable gear and iron rations.

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VICTORIA

SOUTH WESTERN ZONE CONVENTION

The zone's Convention, held at Ballarat on the week-end of 25th and 27th November, was agreed to be an unqualified success by those who attended. However, the attendance of zone members was disappointing, only four members outside Ballarat making an appearance. It is understood that many chaps were unable to be present, but apparently others did not consider the trip worthwhile since there was no business meeting.

We were pleased to welcome a large contingent from Melbourne and trust they had a pleasant week-end. On Saturday afternoon a round of shack visits took place and the mighty 3HW beam was perused, however, the greatest attraction seemed to be the numerous 813s on show at 3GR. Thirty-five showed up for dinner at a local hostelry and went well except for 3RU who couldn't get any cream. We then adjourned to the R.S.L. Hall where 3OO entertained with a show of magic, very much appreciated by all. 3SE then presented a picture show and after one or two games, supper was partaken of and all departed at an early date to prepare for the big day.

Sunday found everyone installed on the picnic ground at Lake Burrumbeet before dinner and the air was soon a trap for birds with antennae strung in all directions.

After dinner a short contest was conducted, the winner being 3AGD, ably supported by 3AKR. Those boys really believe in operating de luxe. I have a suspicion that we may hear more from these boys regarding their week-end. Foot races were held, one for single men and another for married men. Who was it bit the dust in the latter race? 3BI showed great promise as a galloper.

Competitions for home-built equipment brought to light some very nice equipment, particularly the v.f.o., built by 3EM. A welcome was given to the visitors by 3BI to which our State President, 3ML, replied. A vote of thanks was passed to the ladies for their work in preparing the meals. Afternoon tea was then served and after a considerable amount of earbashing, the party broke up.

Any notes of doings in the South Western Zone may be sent to W. E. Sadler, 201 South Street, Ballarat, and will be greatly appreciated.

3ABK has been busy altering his type TA12D and hopes to have it going soon, has not been very active lately. 3WT has gone QRO with new rig. 3BU still putting out a very nice signal on 40. Bill had the gang at his QTH to take the top section of his 47 ft. mast down to replace new ropes, old ones broke during a storm. Bill gave a sigh of relief when she was up again. Has been hearing signals on the 6 metre bend, guess it won't be long before he is operating on that band.

3ALG has new modulator going but not 100 per cent. yet, is now using a dynamic mike. Contacted VE1QG on phone on 20. 3AKE never heard on 40 40 now. 3BW heard on 20 recently calling CQ DX, was answered by 3ALG! Some DX Arch. 3AJT a new comer to the Geelong gang, heard working the DX on phone on 20 and putting out a very nice signal. 3ABE still working a few Yanks on phone. 3AJF, Alf, heard on a couple of times last month after an absence from the air since February. 3CM and 3IC have not been on the band much over the past month. Bob is fixing up his motor bike. 3APO is re-building again and hopes to be on the air again very soon.

Geelong Amateur Radio Club.—An enjoyable evening was spent by members of the G.A.R.C. at the shack of Bob Wookey, 3IC. Bob had quite a bit of gear on display. The gang were interested in his BC348 receiver. He has had to resign from the position of Hon. Secretary owing to being transferred to Werribee. Bob has done a good job as Secretary, so we wish him all the best as he takes up his new duties. Mr. Peter Cartwright has been appointed Acting Secretary for the time being. At the meeting following, after a discussion on a forthcoming field day, Mr. Jack Matthews, 3SY, gave us a lecture on the operation of vacuum tubes, Classes A, B, and C.

Several members of the Club took part in the activities when Mr. Ken McTaggart, 3ANW, took portable equipment to the look-out and contacted 3RR at McCrae on 580 megacycles, a distance of 40 miles. Contacts were established on 2 metres with 3ZL, at Ballarat, also with 3RR, 3AKC, 3ED, and 3MD on the 6 metre band.

WE CAMPED AT LAKE BURRUMBEET

(With apologies to those who have already been ear-bashed)

Recipe for having enough enjoyment in one week-end to last a lifetime: Take one South Western Zone, W.I.A. Convention-cum-hamfest at Ballarat, two Amateurs with one carload of radio gear, add two Associate Members, mix thoroughly with "Ham Spirit," place on a small hill overlooking the lake at Burrumbeet Park, and simmer frequently with high frequency waves for one night and one day, using 3½ hours sleep . . .

Unfortunately this recipe can never again be tested, because the convention mentioned has passed into history; so it is with the hope that others might share our enjoyment and memories that I write the following account.

As this deals mainly with the camping episode, the events leading up to it can be brief. We (Kevin, 3AKR, and myself, 3AGD) arrived in Ballarat early on Saturday morning, collected the "gen" on the camping park from 3BI, and proceeded there with much haste. The base camp site was chosen, bearings ascertained with prismatic compass, and the erection of the main antenna begun. This was a six wavelength long wire prepared the previous week-end, for our attack on 20 metre DX. Our method of placing halyards over convenient limbs on the pine trees, per medium of bow and arrow (with large roll of resin cored solder around the pile-point to you) was not entirely successful, due to the rough breed of bark on said trees, but we eventually erected the best dog-leg long wire ever seen, by much breaking of string, boughs, and arrows, all this activity giving much delight to two busloads of school children. I am afraid that they will continue growing up with the conception of "Hams" which is prevalent at the moment.

Having staked our claim we returned to Ballarat. As to the remainder of the day, suffice to say that we joined in wholeheartedly with all the doings: the conviviality, the meeting of strange faces with well-known voices, the round of shacks, the dinner and social evening. The highlight of the day as far as our portable operation was concerned, was the contacts with 3RD (Caulfield), 3YE (Colac), and 5OH (Mt. Gambier), on 40 metres, using a 12 ft. centre loaded whip antenna, and the Type 3 set up in the car.

During the afternoon we learnt that we were to have company at the park for the night, namely Brian Stares and Roy Barnett from Cressy. After supper the four of us set out, and after only missing the turn twice (the moon was not out, but one of our lights was), we arrived once more at the base camp. The next half hour was used in feverish activity in getting the portable shack set up and feeders attached to the long wire in preparation for 20 metre DX. Some little diversion was caused by Roy who trid to jump a large stump. He would have made it if he had got out of the car first. It took much jacking, with the aid of a spare wheel and a post (which the caretaker requested to be replaced next morning) before the hurdling was completed and the lights were turned in the required direction.

At last all was ready, and tuned up on 20. Equipment as follows: Type 3 Mark II. Tx, series cathode modulated, input 8 watts; Eddystone "640" Rx, running on FS6 vibrator power supply.

The next two hours can be passed over very quickly and put down to experience. We did not get a bite; and so it was that four very disappointed enthusiasts climbed into hammock, sleeping bag and car at 0200 hours after contacting nothing but gnats and large mossies.

Came the dawn (very early at Burrumbeet) and we found that Brian had been out and about for some time, because every time he had gone to sleep he had slipped forward on to the dip switch, gear lever, etc. I think next time Roy will put the car with the let-down seat in the middle of the cricket pitch. While the breakfast was cooking we erected a Windom, tuned up on 40 metres, hung the antenna relay from the roof of the canopy, removed the vibrator hash from the "640," and by 0730, with the breakfast disposed of, we proceeded to find out how long the batteries would last with non-stop operation.

For the next four hours we had a very successful time on both 20 and 40 metres, and I would like to thank those Amateurs in four States who kept us busy throwing all the switches, and gave us such encouraging reports. All contacts were made using the Windom antenna, the results obtained making up for the disappointment the night before.

I feel that a digression on the subject of antenna would not be amiss at this point, as we proved something that will be of interest to those lucky Amateurs who have the space to erect long wires. We have since heard that our friend, Jeff, 2AHM, was also caught. The long wire we erected was made up of four coils of plastic covered stranded steel "aerial" wire which is on the market at the moment. Its weight and price had obvious advantages to us, but apparently these advantages disappear entirely when the wire is used for transmitting antenna of over 100 feet. Also we found that the long wire we had, was the only one we had seen that would not work as a receiving antenna. Next time it will be 16 gauge hard-drawn copper.

To return to the story; by 1130 hours, most of the other boys attending the convention were at the park, and the report of the activities of the rest of the day I leave to better pens than mine. One thing more; I would like to assure some sceptics who visited us on the hill, that we did get everything back in the car, and all did the 115 miles home quite safely.

NORTH EASTERN ZONE

3AT again managed to gather in a good muster for the December zone hook-up, but why the prolonged absence of 3JK, 3BP, 3HP, 3DG, 3GD, 3HN, etc., etc. All members please take note that the next Convention will be held at Shepparton on 15th January, 1950. An interesting programme is being arranged including lectures, wire recorders and competitions, etc.

A Bendix BC221 Frequency Meter is now in the hands of the Secretary (3APF) and is available to any member of the zone for his use. Contact 3APF direct or be on the next hook-up (8th January, not the 1st) for any further information re this meter.

John Miller, 3ABG, is now working at Essendon with the D. of C.A. as a transmitter technician, but will be on the air most week-ends from his home QTH (Avenel) where the rig is still located. Andy 3FD is expecting a new generating outfit early in the new year—make sure it has a high output in watts Andy. Chas, 3ACW, has built an emergency rig of approx. 5 watts which operates from 6 volt battery. What's this I hear about you sitting with the lights out, watching the modulation indicator Chas? She must be a tasty pupil, eh!

At last Mrs. Rankin has caught up with Ken (3KR) and has kicked him and his gear out of the house into a shack in the back yard, nice work Elsie. Ron Gibb still swotting code for next exam. 3HP all prepared for any bush fire emergency. 3JK chasing grubs to contact murray cod. 3YV chasing 10 metre DX, the latest being HB9DS, EQ3SAM, VP6SD, OZ9TI, DL3EA, OH2OV, GI6TK, I1AOV, ON4PA, and LA1MB.

One last reminder chaps, DON'T forget the next zone hook-up is on 8th January (not the 1st), so please make every endeavour to be on it as Convention is one week later.

EASTERN ZONE

During the month we had a visit from Syd Clarke, of Lindenow. Syd is an ex-VK2 and served with the R.A.N. He has sold his business and expects to be in Dargo for a while, where he hopes to be on the air. 3AHK and 3QZ dropped in on 3SS, Keith Scott, and saw his f.b. shack. Everything is switched by relays, even to the earthing of the aerial when he closed down. Keith is making the maximum of his posposals gear, and for inspection, produced the super receiver he is building. We are satisfied that progress has ben made since we saw it not more than six months ago.

Did you know that 3BB, Bert Budge, is going to be Yallourn's new butcher? He is a very busy man. Good luck in the new venture, Bert. We are anxious to get a progress report from Omeo. 3WE has not been heard since he started to shift his location a few weeks ago. 3QZ and family have moved into their new home. Although it is not yet finished, it's much more comfortable than the garage. 3DE has also moved to a new location at Morwell. When will we hear you on the air Doug?

You will be interested to know that Max Reiper, of Bairnsdale, is now with the R.A.A.F. in Port Moresby. During our last visit to Bairnsdale, his father showed us some of the stacks of QSL cards that are coming in for Max from all over the world.

Gordon Morrison, 3TH, called in on his way to the Traralgon Show recently. His interests are divided between dairying and Ham Radio. He is one of those fortunate chaps who has the power on to his farm and makes full use of it. Gordon is anxious that nothing is left to chance for our next Convention. Remember the date, A.N.A. week-end, 28th January, 1950.

CENTRAL WESTERN ZONE

The 1948-49 award to the zone station who had made the most improvements during the year was announced over the zone hook-up on 13th November. The award was made to Jim Farrer, 3DP, who has carried out a lot of work during the past year with a limited amount of gear, and under conditions which were not of the best. Congratulations Jim, and we hope the 807s will soon be operating.

Quite a number of chaps seem to be working on 20 metre beams in the zone. Those of us who were at the Horsham Convention will remember those tapered elements of 3TA's. Byron tells me the four element beam has now been assembled and is tuning up nicely, and hopes to have the beam and 60 ft. tower in operation by Christmas. 3AKP is also busy with the field strength meter and tuning the three element up to concert pitch; another adict is 3GN who has set himself an extensive construc-

tional programme including a 36 ft. tower with a G8PO beam for 20 and a three element job for 10 metres. George is also gathering a "radio centre" type of collection of Tx and Rx for all-band operation; an 818 final for 20, and a 10 metre rig finishing up with a 35T. Both rigs starting off with a BC458A as the v.f.o. and modulated by the 807s. Class B job, for a.m. and n.b.f.m. on both bands using the Oermanian xtal set-up; for 80 and 40 a TA12D will be used, modulated by pair of 809s. The Rx department will be covered by an Eddystone "640" and an AR7 as a stand-by.

8EP in Bendigo has been undergoing one of his periodical re-vampings of the modulator and has a nice sounding job using the 2JU circuit, 6SH7, 6SH7 triode, transformer coupled to a pair of 6L6s. 3YW, despite crude remarks, is still happily n.b. f.m.-ing on 3.5 and 7 Mc. and was quite surprised to find one station on 80 and lately two on 40 using the same type of transmission. He has also taken unto himself a "S.L.C." Rx, reputed to cover 160-190 Mc., so will soon have to think up ways and means of getting it painlessly back to 144 Mc. The Bendix frequency meter has at long last arrived in the zone, and after clarification of conditions of use from H.Q., will be put into final running order.

QUEENSLAND

News from this Division is very scarce this month. Main topic amongst VK4 Hams is the proposed new system of zoning. Reports to hand as we write these notes indicate that members can expect very little progress in this matter during the present financial year. The outstanding point from all discussions on the matter of zoning seems to be "greater representation on Council for the country members." It is expected that in the near future all members will receive a copy of the proposed changes to read at their leisure. We call upon all to give the matter their careful consideration and when called upon to vote on the subject to do so and not sit back and leave it to the other fellow. Quite a number of Hams seem to have a lot to say "off the record," but don't express their views at voting time.

All bands have been extremely poor during the past month and 4WI broadcasts have not been heard, at all well, on only one out of 4 occasions. Greatest activity appears to be on 50 Mc. band, and more about this appears in our 50 Mc. notes.

ZONE AVTIVITY

Gympie (4HZ).—4XR still waiting on dural for a rotary beam on 20. 4LN better known as "Beam Barry," is at present enjoying his holidays motoring in southern Queensland. 4ITA still working Europeans early morning and building a flextal oscillator to take the place of the ARC5 which drifts. 4KT still inactive, but believe he has a pirate doing plenty for him.

4HD: Max, works Europeans on 28 at night and keeps the 50 Mc. receiver running 24 hours a day for the break through, and has been very well rewarded of late. 4HZ, Jim, has dressed up his v.f.o. and has added bandspread. Jim having a lot of fun trying to work out why one of his antennae acts as a reflector on the other antenna which runs at right angles to the first.

Maryborough, Bundaberg, Mackay.—No news from these zones this time.

Townsville (4GD).—The Townsville Club, apart from giving their students every assistance in obtaining their A.O.C.P., has now decided that when a member obtains his licence the Club will pay his first year's licence fee. 4RW is still tinkering with a beam. 4FA has a nice receiver on 144 Mc.—lined it up on 4GD's carrier on that frequency. Believe 4DH was seen about 1 a.m. up on the roof with a large neon seeing how much soup was in the antenna and found just as much glow came off the iron roof.

4JH has a new shack and now with 4WD is casting glances at people's windmill towers. Members of the Club are also in a position to borrow a q.r.o. that the Club has built. 4GZ, of the city once called "the world," has a new v.f.o.—1852 "Clapp" osc. with 50 volts h.t., followed by an 1852 isolator keyed in the cathode. 4FC, of Ingham, is re-building. 4GD has re-built the v.f.o. and now has it running on 1.75 Mc. Len uses phase modulation and finds it works very f.b. using only a carbon mike, mike tranny and westector. 4EJ has W.A.C. using a same system.

Darling Downs (4CG).—No news received this month, we understand Cliff is away on holidays.

Students' Section (Ray Lewis).—The theory classes on 3rd November were replaced by a demonstration by 4FN with his 3-inch c.r.o. which was thoroughly appreciated by all three of the students present. 4FN also conducted the code class at which six were present. 4IF has returned and has again taken over the job of theory instructor.

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SOUTH AUSTRALIA

The monthly general meeting for November was again well attended and Mr. Al Smyth (5MF) entertained the large gathering with what was probably one of the best lectures of the year. The title "Frequency Measurements" was something of a misnomer, as Al covered a tremendous amount of ground in an endeavour to show orally and pictorially just what takes place in a normal Amateur transmitter from the time the audio is applied to the modulator until it appears on the air as a radiated signal. A great deal of apparatus was used in the lecture, and the manner in which the vote of thanks, proposed by Ross Adey (5AJ), was received gave a definite indication of the meeting's appreciation of the lecture.

For the first time to my knowledge no visitors signed the book, but by the way applications for membership have been pouring in of late I can quite understand it. There are no more visitors left, they are all members now. Everybody was pleased to see Ken Tbiele (5QP) present at the meeting after such a long absence, and sparking on all six too. Talking about sparks reminds me that Ralph "Amigo" Turner (5TR) decided to make his own crackers this 5th November, and believe me he was a huge success. There was no doubt about the bang part of it, the neighbours are still wearing cotton wool in their ears to prove it. However, the skyrockets were a washout, plenty of bang but they just refused to go aloft. They did everything else though, they tore up and down the garden, they went through the windows and came out of doors; in fact they put the "wind-up" everybody near and far until at last the youngest harmonic of the Turner household put his head very gingerly out of the kitchen door and said in a very plaintive voice, "No more bangs Daddy, please no more bangs." This definitely moved Ralph and he called off the bombardment, but he is anxiously waiting for next year as he has found out that he left out of the skyrocket mixture a drachm of tincture of self raising flour, so look out next year.

Due to circumstances over which we had no control, Doc Barbier (5MD) and myself (5PS), with our good wives, found ourselves attending a concert evening the other night. A real "La de Da" affair, evening dress and what have you, and believe me that Doc and I were feeling very sheepish as we entered the auditorium with the curtain just rising. We both gave a gasp of surprise as there on the stage stood the Metropolitan Male Choir with "Deadeye Dick" Laidler (5TL) singing with a voice that was at least twenty db over 89. Well fair dinkum, I could have hit him with a tomato one hand kneeling from where I sat, and Doc's hands were fairly itching. I will say this for "Deadeye," he has wonderful self control; we pulled faces, poked our tongues out, and did everything we could to muck up his vibrato obligato, but he beat us hands down. Very versatile is our Tom and quite a good voice if I might say so. Just goes to prove that it wouldn't matter where one might go, one will always bump into a fellow Ham. My wife said to Mrs. Barbier after the show, "Both Warwick and Ted seemed to thoroughly enjoy themselves tonight." If they only knew!

Ever since I became the VK5 scribe for this magazine, someone or other has always picked on me for what I have written. This month it is different, the Northern Net is picking on me for what I have not written, in other words they are hostile with me because I never write anything about them. Speaking just as an ordinary Ham, I personally don't give two hoots about this, in fact they can go peddle their potatoes. Speaking as the scribe for VK5, I feel that they have a definite grievance and it is my duty to do something about it. Now as I have said before, I can't write about people if somebody doesn't send me down some news. "Splatter" is no good to me because it is with me for at least a fortnight, and then lays at least a fortnight old when I get it, it remains with the Editor and the printer for another fortnight or so, which makes the news a little on the old side, plus the fact that it has already appeared in "Splatter." Now what about it fellows, if a couple of you "grizzlers" put the time you spend grizzling into sending me some news on the first of the month, all will be well. Give it a try chaps.

Joe McAllister received this week an extra good photo of all concerned at the Crystal Brook get together last Easter. L. Catford has been fairly busy lately but hopes to erect a six and two metre beam on top of his forty foot tower soon, so look out for a very hefty signal signing 5XL from Clare any day now.

Perc. Hutchins (5PH), of Willaston, near Gawler, is a Ham of twenty years' standing and is using an input of 40 watts into an 807 final with the Shure power supply genemotor and vibrator unit working off a wind driven lighting plant. The outfit works on five different frequencies on 40 metres, and the aerial is fifty feet high and a half wave at that. A crystal mike, pre-amp., and a class B modulator complete the score. Perc. is a keen gardener, plays solo cornet in the Gawler town band, and last but not least he works at the Adelaide Railway Station in the electrical dept.

L. Duncan (5AX), of Gawler, is another keen Ham using a transmitter running 100 watts input and his hobbies are radio and more radio. Fred Brown, also of Gawler, is swotting hard for his A.O.C.P. ticket. Don't forget Fred, the first ten years are the hardest. All the best anyway and hope see you on the air soon. Congratulations to Bert Winter, of Cape Couedie lighthouse, at Kangaroo Island, who was a successful candidate at the recent examination. It was worth pegging at wasn't it Bert. That full member's badge that Doc sent you by mistake must have been a good omen. Hope to have a chinwag some day.

Congratulations to R. A. Sedunary (Solomontown), B. Condon (Port Pirie), A. S. Condon (Laura) (yes they are brothers), and C. W. Mann (Kadina). Welcome fellows, and please leave some DX for us to work. Laurie Sjoberg (5SL) is down from Renmark on holidays and chasing the sixteen footers over at Kangaroo Island, whilst Wick Bayly (5WM) is relieving at Renmark and dancing the light fantastic every night to the dulcet strains of Lil Gray's orchestra. What a life.

5MS has the new Eddystone receiver and is also showing interest in ten metres. Of course Stewart has another new aerial. 5JA is running a pair of 807s at 50 watts in his a.a.a.c., that is, 50 watts on modulation peaks. John is also working on his AR7 with the idea of getting it going on six metres. 5TW has had a few contacts on his cubical quod, and Tom is quite satisfied with the results.

5FD has changed his place of abode and is now off the a.c., and John has therefore been inactive. 5KU has been house-building and "Erg" now realises that it doesn't mix too well with Ham radio. 5CJ has been only on forty and has nothing of any importance to report. Col is about a week behind 5CH with his 2 metre gear and therefore they should be on the air before these notes are printed. Thanks for the wishes Col and I heartily reciprocate. Thanks once again for the ever-reliable notes (Northern Net please copy).

A. Butler (5BR) and P. Syme (5KB) are down at the Mount doing a job at the local drome. They are visiting the various Hams about the place in their spare time, although the local boys are not very worried, having successfully withstood visits from 5MD and 5RR quite recently. 5CH, having finished his 2 metre transmitter, is now putting the finishing touches to the aerial array which will be a lenfo series phased affair. If any of the city 2 metre gang suffer with burnt out aerial coils, it could be Claude with his beam pointed North West.

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WESTERN AUSTRALIA

The only visitor at the November meeting was 6MU from Merredin and Malcolm was about the only country member at the dinner unless you could count 6CP and 6LM from the wilds of Bayswater. The meeting was well attended by the usual regulars. The President, 6WH, stayed only long enough to tender his apologies then had to leave, the chair being taken by 6KW.

New members approved were 6WR of Palmyra, 6GU of Woodman's Point, and 6BO of Bassendean.

Several items came forward from the recent Council meeting. Annual trophies were considered but only one entry was received from 6WG of Albany for the Parkes trophies for v.h.f. work. As it is proposed to hold the annual dinner earlier in the year in future, it was decided to close all trophy entries with the closing of the financial year in February. This will allow consideration of entries and decisions made on awards before the dinner which should be around May or June. However there will be no need of months of consideration unless more entries are forthcoming. It's up to you chaps, you will find the conditions of entry for these trophies in the Bulletin dated 5th October, 1948.

Another Council suggestion concerned the Remembrance Day Trophy, photographs of which were passed around for members' information. The suggestion was that the Trophy should be allowed to visit all States before finally settling in the State fortunate enough to win it.

A breezy letter from 6WZ was read to the meeting giving details of Harry's recent so-journ in hospital.

Having in 6MU an active member of the Emergency Network in the country, the network received a fair amount of discussion. The responsible officer, 6MB, reported favourable progress and 6MU gave a few suggestions for exercises the groups could carry out as training. In the matter of emergency frequencies, 6GM, the Federal Councillor, advised that the P.M.G's. Department recommended the use of frequencies of 3501 and 7002 Kc. for emergency operation.

6MK introduced a subject which was rapidly taken up by members and a lively debate ensued. The "A.R." column "The Old Man" was the bone of contention and the general opinion of members seemed to be that, while the need of some corrective channel was undeniable, the direct personal attack was distasteful and lowering to the standard of a technical magazine. This opinion applied also to the using of the columns of "A.R." to publish letters attacking individual Amateurs.

The matter of the invasion of our bands by high-power commercial stations was again brought up by 6SA. Outlining some of the loopholes in the International agreement by means of which these intruders get away with it. Jim appealed again for any members hearing these stations (their receivers would have to be pretty poor for anyone not to hear them) to log their identity on the forms provided and submit them. Only by a united effort will anything be accomplished to rid our bands of these pests who render large portions of the bands unusable with their splashes and clicks.

As an answer to those members who claimed low finances as an excuse for missing the dinner, 6DD suggested a dinner fund to which members could contribute, say a shilling per month, to ensure the success of our main annual function.

The lecture of the evening was given by 6KW and the subject was of popular interest. The "building-out" of unwanted frequencies in the modulator to reduce the spread under modulation. Methods were described of simple and effective clipping of the speech channel to approximately the range of 500-3,000 cycles. Ron used a wire recorder to demonstrate the fact that the addition of the limiting devices made no apparent differences to the quality of the audio on the transmission.

A short demonstration of v.h.f. gear operating mobile on 144 Mc. was given by 6AG and 6RU using 522s. Wally drove his car up the Terrace with a three element beam standing up in front and managed contact with the meeting despite the hazards of driving through the city streets.

PERSONALITIES

The dinner was a little better supported this year, but was still less than half of the full membership. The committee did its usual fine job and the evening was enjoyed by some 60 to 70 members and friends. Seen taking on fuel was 6CM, aided and abetted by 6AS and 6SK. Staunch oldsters in 6WS and 6CP were showing the youngsters a thing or two. 6MY produced a couple of quiz sheets that really gave the teetotal merchants (were there any besides 6CK?) an unfair advantag. Real mathematical marathons that kept the boys head-scratching. Spotted a menu headed VK2AGA so I guess we had an Interstate visitor in our midst.

Our new member, 6BO, is said to have been over zealous and slipped while adjusting his 6 metre beam. Rollo's OK again now but that is what I call throwing one's self into the game!

Before I go any further, I must remedy an oversight in December notes. Being new to this game, I forgot to include Xmas Greetings, so here is a belated effort. Here's hoping you had a good Xmas and that 1950 will be a bumper year in all respects!

6CM now has a three element on ten which is working out well. 6KW advises the modifications to the prop-motor for beam rotation, described in a recent "QST," is well worth while and gives faster turning with lowered consumption and both mechanical and electrical noise. Big news for 6GD during the month was an elusive South American to give him his W.A.C. at last. Also watching the QSL box these days is 6HL who now has 95 confirmed countries. 6MK brought his Collins 75A along to the meeting for the boys to admire and also gave a short resume of the receiver's layout and performance. Ten is proving a popular band these days with an increasing number of the oops deserting twenty during the busy periods. Another local in 6ZZ has been getting his rig to work down there.

When the DX fades out in the evenings, ten is like 40 without the QRN or the commercial QRM with all the local boys swapping tales about the DX they either worked or that got away. See you down there soon.

These class B 807s are proving popular as modulators. 6AS can vouch for their effectiveness. 6RW even tried to use a pair as r.f. triodes, but found you had to put in nearly as much as you got out, so went back to tetrodes. Found some explanation of 6JB's absence from the air in the recent announcement of Alan's engagement.

— . . . —

TASMANIA

News time again. This month we are commencing a feature consisting of a short description each month of one of our local stations. The high standard of equipment construction in southern VK7 makes this worthwhile. 7LJ, our esteemed President gets it this month. Lon Jensen's set-up features a remote located v.f.o. with "Clap" osc. 6J5, 6V6 buffer. Tx consists of band-switched 6N7, 807 exciter, and 813 p.a. running the full gallon. Rx is Super Pro. Other equipment includes a Type 8 Mark II. for standby operation, a versatile frequency meter with multivibrator and twin 100/1000 Kc. crystal checks. A commercial c.r.o. and a deep and versatile junkbox round off one of our best c.w. stations, operated by a real OT of more than thirty years' experience.

A high operating standard, combining consistency, efficiency and excellent equipment control, places Lon very close to the DX C.C. mark. 121 countries have been worked now, but although Lon won't divulge how many confirmations he has, methinks it is very close to the 100. Lon's antennae have helped in no mean manner with a lazy-H, single section centre-fed W8JK, and stad-by zepp. The whole job has been done on 20!!!

7BH heard on 40 using c.w. and a.m. Your c.w. f.b. Brian, but phone—well Confucius say "Ants in Pants." 7FM consistently works Ws on 40, and 7JB, 7RM on 20 spasmodically. 7DH's s.s.b. f.b. on 20 using phasing system. 7LE heard using a.m. on 40, hearing is believing. 7AF nearly completed yet another receiver. Bob now has four. Talk of Noah and his Ark. Time it all got some work OM. Your QTH not that bad. 7SK busy building at new QTH on Mt. Nelson. 7BH has antenna strife. What say one dark night we shift the R.I. building up a few blocks, Brian, then you can work local as well as South Pole. (Jeeves suggests tying feeders to end of red tape. Too many bends!)

7OM's new Rx looks and works f.b. That dial turned nicely, Bob. Len Dodds, newly licenced, call unknown, should be on soon with the ex-7TA Type A Mark III. Welcome to hamdom, Len. 2ARL, ex-7OL, heard on 40 often with very consistent phone. 7SJ has obtained (or maybe purchased) BC221 frequency meter. 7TA made a lightning 3½ hour raid on Launceston. Also bought new (and very expensive) Kilocycle. Busy studying instruction book, but work on new rig is progressing well, and Xmas Day may not be altogether free from QRM locally. Well, again we take off in search of more news, which is welcome at all times. As 7EJ has permanently gone bush, your scribe temporarily 7TA, so drop a line care 7HO b.c. station, Elizabeth St., Hobart, with details of rig, etc.

Some people can be "stiff." There is a well-known Ham in Hobart who was so keen to have a lash at the DX minus QRM, that he took the afternoon off from his business to have a go at it. Well it would have been OK but there was nothing about to work and if that wasn't enough to make you give the game away, he had the misfortune to get himself booked for having a signal outside the band! Everything is on the up and up now, but as I said, "you can be stiff."

I suppose at some time or other most of the married Hams have had the experience when working on some piece of equipment late at night of getting numerous calls from the XYL to come to bed, etc., etc. Well it's happened in reverse! This time the XYL of a certain family was building the

modulator of the new rig and the OM was twiddling his fingers. Around about midnight the conversation went something like this:—

OM: "Don't you think it's time you knocked off and went to bed."

XYL: "Not yet. I've still got to hook up the screens and the h.t. line."

Ten minutes later.

OM: "Hey! S—— why don't you give it away, it's past midnight."

XYL: "I've only got a few more leads to put in and I'll be finished."

OM: "Goodness me! S—— there's no doubt about this Ham Radio once you get going, there is no stopping you, etc., etc."

The foregoing stories are quite true and if certain people don't come across with a pair of 866s or similar, I may be forced to divulge names in a later issue! It looks as though that if I go on any further, "A.R." will be dubbed as a scandal sheet, so cheers for now and don't forget to let me have any dope that YOU might overhear.

NORTHERN ZONE

No lecture was given at the November meeting of this zone as it had previously been agreed that this meeting be set aside for zone and W.I.A. business. Several items were discussed, these included the emergency network, also the coming Federal Convention.

Our response to State Headquarters' circular on emergency equipment was very disheartening, however 7TE and 7AM have now taken this matter in hand and it is hoped that an efficient self-powered emergency station will be the result.

7PF, 7BQ and 7LZ have been keeping a check on six metres, however nothing has as yet been heard although on numerous occasions the different 38 Mc. beacons have come through at good signal strength.

7RK is still efficiently handling the DX for the zone, whilst 7MC, 7TE, 7DB, 7PF and 7BQ are all active on 144 Mc.

Our State Secretary advises that only two VK7s have forwarded him logs for the recent VK-ZL DX Contest, so it looks as though the other VK7s, like those in this zone, decided that it just wasn't worth the fight.

As our zone does not wish to place too heavy a burden on our very willing, but none-too-numerous, lecturers it was decided that our next meeting take the form of an impromptu debate. All members attending will be divided into two teams and an independent adjudicator will then advise the subject to be debated. It is expected that both an interesting and humorous evening will be the result.

It is yet to be decided as to whether a meeting will be held in January, however, all members will be advised accordingly in due course.

— . . . —

FIFTY MEGACYCLES & ABOVE

(Continued from Page 15)

Conditions to Geelong have been really excellent on some nights during November with signals up to six S points above their normal value and it is felt that on nights like these, much more distant contacts could be made if stations were on. As a guide, it has been noticed that these conditions are usually prevalent on a warm night just preceding a cool change, so if those country stations who have the gear would put out a few calls in the direction of Melbourne and Geelong when they note these weather conditions, some interesting contacts might be made.

While on this subject we would ask Melbourne stations to keep their beams turning when looking over the band as some stations, particularly those to the north of the city, find that they are missing out on contacts due to the beams being always side on.

An interesting contact was made on the 13th November when 3CI portable, six miles south of Tatura, worked 3ABA in Box Hill, *a distance of 90* miles with the dividing range in between. 3CI was receiving 3ABA S7, with signals steady, while 3ABA was receiving an S4 signal with some QSB.

3AKE has been working on 144 Mc. and has now got 580 Mc. in his blood, so he may be on that band soon. 3VF has not been on very much. Arch, 8BW, still having contacts on 2 and 6 metres.

TASMANIA

From north-west we hear that 7KB is using an SCR522 and works cross-band with 7AB who receives him on a broad-band converter. 7KB prefers converter to SCR522 receiver. 7PF now has 12 elements in his antenna. Says it seems to be working OK. Has sent his converter over to 3AKE to have it compared with VK3 receivers. 7BQ has new converter but no sigs to listen to as yet.

Newcomer in Hobart is Ted Nicholls, 7RY, experimenting with super regens and unity coupled oscillator with pair CV6s. 7BM having loads of fun working mobile in car with mod. osc. He is convinced after tests with 7DH that for mobile work, one needs fairly high power and crystal control. Says he can receive 7DH from Rosny Hill quite strongly around and about Hobart.

288 AND 576 Mc. JOTTINGS

3MD, 3EO, and 3LS are testing gear on the 288 Mc. band and will probably have contacted by the time this appears. Gear being used consists of modulated oscillators using 7193s, although 3MD has also been testing an 832 as a push-push doubler from 144, using series tuning. This sounds quite a promising arrangement and may offer an easy way for those with 144 Mc. gear ending up in 832s to get on the band.

This has been a month of achievements as far as 576 Mc. band is concerned. With gear being constantly improved, new and interesting contacts have been made, and distance records broken. 3DA, of Caulfield, has worked 3RR at McCrae, 38 miles, with S9 signals both ways, over a practically line of sight path. 3RR has improved his signal by putting up a 60 degree corner reflector, and also has a self-quenched super regen using an RL18 working very well. 3RR and 3XA have contacted, the distance being 42 miles and this stands as a record as far as home to home work is concerned. The path is not line of sight and signal strengths vary greatly from day to day, apparently depending on the weather conditions. Don, 3XA, now has an eight element beam with a plane reflector up 30 feet and this has been responsible for a great increase in his signals.

3NW has been unable to get through to McCrae from his home location due to a higher ridge to the south of him, however on taking his portable to the top of the ridge Ken has worked 3RR with S8 signals. On the 26th November, Ken, 3ANW, operated from Heighton Lookout, 3½ miles s.w. from Geelong and 300 feet a.s.l. and worked 3RR at McCrae with S9 plus signals both ways. A large number of Geelong Hams accompanied Ken and some converts to the band are hoped for. 3AKE, of Geelong, is busy building gear and should be on before this appears. 3AFN, of Black Rock, is another newcomer, using p.p. RL18s and an ASB receiver. He has worked 3DA, 7 miles, with S9 signals and has heard and been heard by 3RR and has probably worked him by now.

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CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

THE VK-ZL CONTEST—1949

30 Prospect Ter., Kelvin Grove, W.1, Brisbane

Editor, "A.R.," Sir,

May I use some of "A.R.'s" valuable space to air some of my "beefs" regarding this year's Contest?

Firstly, how come the lack of publicity for the Contest overseas this year? Far too many stations came back and asked how, why and such, that it would certainly appear they didn't even know the Contest was on! I take it then, that F.E. did not give adequate notice to overseas Societies, and those Societies did not therefore have time to publicise our Contest in their local magazines, hence the apparent lack of co-operation from the DX stations.

Secondly, why must we swap such an incredible serial number? It is far too complicated (especially if you have to sit down and pound it into an overseas man who wants to know the rules). Can't we use a simpler system? I suggest we adopt the procedure used by the B.E.R.U. Contest—RST, followd by "001" for the first contact, "002" for the second and so on. Much simpler, much quicker, and certainly not complicated.

Thirdly, why make it a VK-ZL Contest at all? Aren't we big enough now to have our OWN Contest? I'm not kicking the ZLs—but surely we and the ZLs could have separate contests. I would like to see the DX Contest solely an Australian (and W.I.A.) affair.

Fourthly, why wasn't the Prize List announced at the same time as the Rules? F.E. certainly knew the Contest was coming off in October, so why wasn't the list ready in time?

Having got that off my chest, I would like to say a word of thanks to the Contest Committee for changing the time limit rule. The old 48 hours and picking 24 hours of it was too suggestive of an endurance contest. This new version of 24 hours only from "go" to "whoa" is much better, and I somehow think you will get support on this point from most of the fellows.

Though not actually a "beef," I cannot conclude without remarking on the long time it took to get the results of last year's effort in print! Surely a fellow doesn't want to wait for 12 months to find out how he did! After all, the A.R.R.L., "CQ," and B.E.R.U. Tests are promulgated much faster than that, so why not ours?

The subject of the 1949 Contest will most certainly come in for an airing at the next monthly meeting of our Division, and further remarks along my lines will no doubt come to light.

—R. CAMPBELL, VK4RC.

[On behalf of the Contest Manager and Federal Executive, I have been asked to reply to the above letter. Of necessity the answers must be brief, but a full report will be given at the 20th Convention.

1. The Rules this year were not sent out until the 1st August as comments were awaited from the N.Z.A.R.T. of any alterations from the 1948 Contest. Airmail copies were sent to the main Societies and most published them in their October issues. The only other reason for the inactivity or lack of interest by overseas stations can be attributed to too many DX Contests at this time of the year.

2. General Business Item of the 18th Convention moved by VK6 and seconded by VK4 recommended the present system of numbering. At present a vote is being taken by the I.A.R.U. on behalf of the W.I.A. for a uniform system of serial exchanges.

3. It is doubtful whether this is the unanimous view of all VKs and in any case the N.S.W. Division and others urged the re-opening of the pre-war VK-ZL Contests and F.E. was directed in this way.

4. Mr. Campbell apparently doesn't realise that Manufacturers, despite their generosity, have to be approached for prizes and usually take some time to reply. In this case, they were still holding prizes for the 1948 Contest, the results of which had not been advised by the N.Z.A.R.T., and incidentally, the full results are not yet to hand. This latter point is no fault of your Contest Manager, whose repeated efforts to obtain the results has still not borne fruit.—W. MITCHELL, Federal Secretary.]

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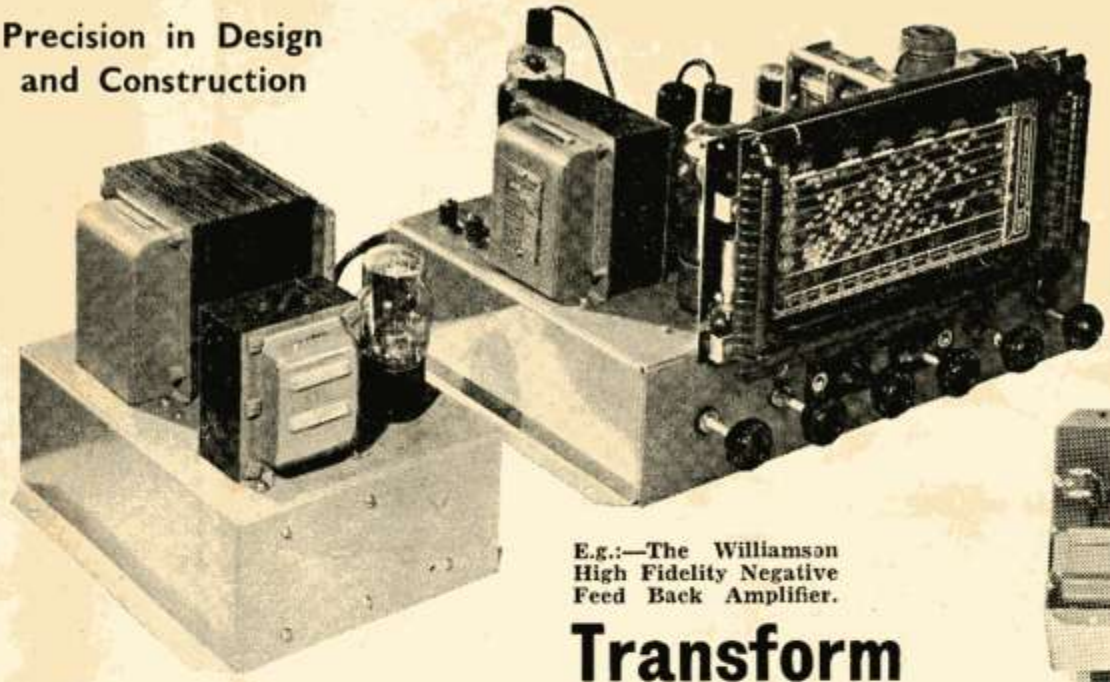

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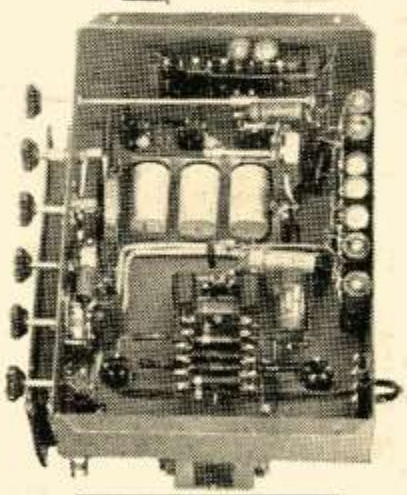

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FEBRUARY 1950

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EDITORIAL

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T.V.I.

With television just around the corner, workers in our chosen field will experience a decided tightening of the conditions under which we will operate without causing interference to the new art. At this stage of the game, most of us have had perforce to study harmonic suppression in some degree to keep the household b.c.l. set trouble free.

But with the possibility of t.v.i. on top of this the onus will be very much on the Amateur to put only a non-interfering signal on the air.

He will lose the oft used excuse of the antiquated b.c.l. set, for if television in Australia takes up at the present state of development in Britain, local manufacturers will be turning out reasonably high quality gear from the start, capable of giving optimum results only with receiving conditions at their best. The situation seems to call for extensive research by the t.v. manufacturers, and those specially appointed technical committees who have for some years been studying and eliminating electrical interference.

The Government would be wise to co-opt these committees at this early stage and publish findings for the information and use of all potential creators of QRM including the licenced Amateur.

Only by such co-operation will we retain sufficient "arm room" to use the bands for our experimental purposes as we are entitled to, without becoming involved in the troublesome task of finding our own way out of difficulties which could, with reasonable knowledge and precaution, be avoided.

—P. E.

The Contents . . .

A De Luxe Vacuum-Tube Voltmeter

PART II.

By J. DUNCAN†, VK3VZ, and A. P. THORNTON‡, VK3IY

After reading the theoretical development of the v.t.v.m. in the last issue, we now turn to the practical problems associated with the construction of an instrument of this type, suitable for the parts readily available in Australia.

Let us study the circuit diagram of Fig. 1. In dotted lines at the upper left is the r.f. probe, the entire EA50 rectifier of the instrument, together with its r.f. input capacitor, CI, a.c. load resistor, R1, and filter capacitor, C2. For low-frequency operation, CI is dropped out and C3 picked up through suitable contacts actuated when the probe is pushed into the instrument. Rectifier-developed contact-potential is balanced out by the second EA50 and switch S-2C. The desired balance potential is selected from the resistor stick consisting of R2, R3, R4, and R5. Since this is required only in a.c. operation, the function switch head, S-1A, either includes or omits it from the grid circuit of the lower balancing section of the 6SN7GT cathode-follower.

Switch S-1F switches the "high" input jack about for desired functions, while the 30 megohm resistor pairs, R6 and R7, provide the 2.5 voltage multiplier for the six d.c. ranges of 7.5 through 3,000 volts maximum at the 3,000 volt panel jack. Switches S-1E and S-1F switch the a.c. rectifier output and the d.c. input to the top of the range stick, R8 through R13 with the desired range selected by the range switches S2.

Since it is not desirable to have the primary cathode follower always to have its grid connected to S-2B, switch S-1B is arranged to disconnect it therefrom for resistance measurements, or to ground it for current measurements. The range head switch S-2D selects suitable resistors, R14 through R19, for the six resistance ranges and connects the dry battery B.

R20 and R21 are the two cathode follower load resistors, to the "high" ends of which the grids of the meter-actuating 6SN7GT are connected permanently. The function switches, S-1C and S-1D, shift the meter itself to suit the selected function, and also to serve to reverse polarity for differing d.c. input polarities. The wire wound adjustable resistor R22 is used to set the d.c. voltage ranges on the meter scale, establishing full scale reading for the 3 volt input (or 2.5 volt if chosen), which serves to place all d.c. ranges in proper step.

Switch S-2A selects the different a.c. range-set resistors, R23 through R26, which are required for the several a.c. voltage ranges. Switch head S-2E, in conjunction with resistors R27 through R32 establish the six direct current ranges. R33 is the front panel ohms adjust control, used to set the meter reading to full scale before starting resistance measurements. One setting of the knob serves for all six resistance ranges. The remaining parts have been sufficiently discussed in Part I., with particular reference to Fig. 6 as to necessitate no further definition.

There is one other point. This instrument is literally **self-testing**. By means of its voltage functions, every internal operating voltage may be measured by the v.t.v.m. itself. Likewise the values of the voltage divider-stick resistors, contact potential balance and current-range resistors may be measured by the vacuum-tube voltmeter. In practical fact, only the resistance-range resistors may not be measured without another separate instrument.

The first major difficulty is the range resistors, which must be of ± 1% tolerance. Resistances of this tolerance are

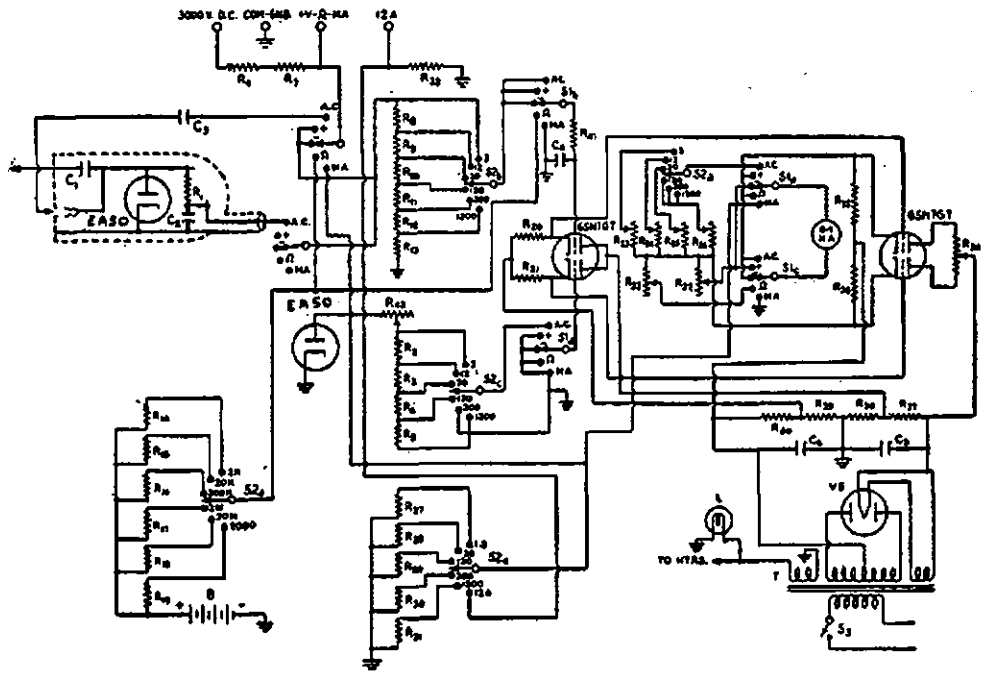


Fig. 1.—Circuit diagram of the Vacuum Tube Voltmeter. With the new setting of R22 to give 2.5 volts full scale, the voltage ranges would become 2.5, 10, 25, 100, 250, and 1,000 volts as mentioned in the text. The 9006s are changed to EA50s, and the altered resistance values are given in the parts list.

C1—0.0005 uF. mica.
C2—0.002 uF. mica.
C3—Three 0.1 uF. 600v. tubulars in series.
C4—0.005 uF. mica.
C5, C6—8 uF. electrolytics.
R1—16 megohms 5% tolerance. (Must be small, in r.f. probe).
R2—10 meg., ½ watt.
R3—2 meg., ½ watt.
R4—1.75 meg., ½ watt.
R5—0.1 meg., ½ watt.
*R6 + R7—60 meg. for x 2.5 multiplier (10 x 6); or 40 meg. for x 2 multiplier (10 x 4).
*R8—30 meg. (10 + 10 + 10)
*R9—6 meg (5 + 1).
*R10—3 meg.
*R11—0.6 meg.
*R12—0.3 meg.
*R13—0.1 meg.
*R14—10 ohms.
*R15—100 ohms.
*R16—1,000 ohms.
*R17—10,000 ohms.
*R18—100,000 ohms.
*R19—10 meg.
R20, R21, R41—5 meg. 5% tolerance.
R22, R23, R24, R25, R26, R34—2,500 ohm w.w. pots.
R27, R28, R29, R30, R31—0-1 Ma. meter shunts.
R32—Set experimentally to give 10 amp. range.
R33—10,000 ohms w.w. pot.
R35, R36, R37, R40—40,000 ohms 5% tolerance, 2 watts.
R38, R39—4,000 5% tolerance, 1 watt.
SI a, b, c, d, e, f—Three banks each five position two-pole.
S2—Five banks each five position one pole.
T—250/250 volts at 40 Ma. with two 6.3 v. fil. windings or one 5v. and one 6.3v. winding.
V5—6X5GT.

* Denotes ± 1% tolerance.

† Technical Editor, 23 Parkside Avenue, Balwyn, Victoria.

‡ 23a Maude Street, Nth. Balwyn, Vic.

available from I.R.C. in Sydney, or through the Melbourne distributors, "Australian Engineering Equipment." It is not always possible to obtain them all from stock in Melbourne, but they can be supplied to order after a short wait. The original values were not very helpful, the resistance values of the voltage divider "stick," being 37.5, 7.5, 3.75, 0.75, 0.375, and 0.125 megohms. These values are obviously difficult to make up, and it was decided to alter the value of the range "stick" to obtain more even values, so the overall resistance of the "stick" was reduced slightly from 50 megohms to 40 megohms, which brings the individual resistances to 30, 6, 3, 0.6, 0.3, and 0.1 megohms, all values which are easier to obtain.

The highest value obtainable in the 1% tolerance at the time of building the instrument was 10 megohms, so the value of 30 megohms is made up of three 10 megohm 1 watt resistances in series. The diode load resistor has to be altered to keep the right proportion, and is changed to 16 megs., made up of a 10, 5, and 1 meg. bank of resistances in series.

It was further decided that the additional terminal which is used to multiply the scale readings should be changed to give a multiplication of 2.

As it was desirable to use a 0-1 milliammeter, and it was simpler to retain the existing 0-1 scale, the fundamental ranges were altered slightly. No alteration to the circuit values or the divider "stick" are entailed, the d.c. resistance range potentiometer R22 being adjusted so that full scale deflection is 2.5 volts instead of 3 volts as originally. The voltage ranges then become 0-2.5v., 10v., 25v., 100v., 250v., and 1,000 volts, and by using the extra terminal we have additional ranges of 0-5v., 50v., 200v., 500v., and 2,000 volts. Note how these ranges fit in between the main ranges.

In practice, the existing scale of the meter is given some additional figures against the 0 to 1 scale and is marked 0-25 under the existing calibrations. It may be possible to obtain a 0-1 milliammeter with this scale marking as it is the standard marking for a multimeter scale. An additional calibrated range is required for the 0.25v. a.c. range only, as this range is not quite linear. If approximate readings can be tolerated, the main range can be used, but for accurate work it will be necessary to hand calibrate against another meter, any a.c. meter with a low voltage scale would be suitable.

The ohms range is easily obtained, either by calibrating against an ohm meter, or alternatively, by using the 0-1 scale, and by calculation, enough points can be obtained to plot in the complete ohms scale. A list of calibration points in terms of the 0-1 scale is appended.

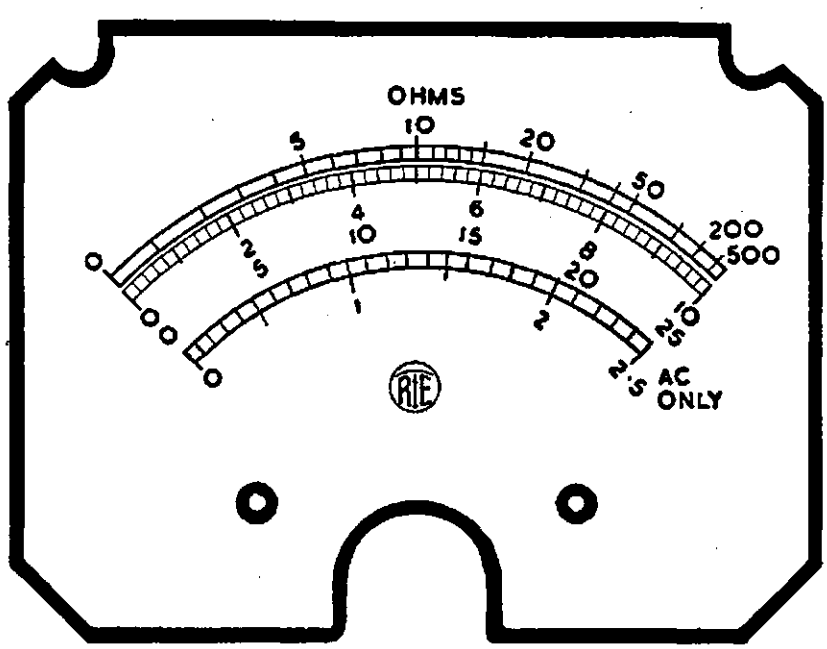
Another advantage in using the existing 0-1 Ma. scale is the fact that standard shunts can be used for the milliampere ranges.

If it is decided to utilise the original idea of hand calibrating all scales and using the 0-3v. as the fundamental, it is advisable to retain the original scale multiplier, and multiply the scales by 2½, in which case the terminal resistance R6 + R7 would be 60 megohms (six 10 meg. in series).

After all it is merely a matter of choice which set of scale ranges are used, personally the writer preferred the 0-2.5 volt fundamental range in preference to the 0.3 volt, because it was felt that scale calibration could be simplified. The two main advantages of using the 3 volt range, are firstly, a 3 volt battery can be used to set the full scale adjustment for the d.c. ranges, and secondly the maximum voltage which can be measured by the instrument is increased, as with the aid of multiplier, voltages can be read to 3,000, as against 2,000 volts with the other scale. The switches in Fig. 1 are marked for the fundamental 3 volt range, it will be observed.

The next main problem is the choice of switches, which need to be ceramic, due to the voltages handled, and also to eliminate leakages between switch contacts; the second point being very important when we consider the high value of resistances between some of the resistance "stick" contacts, and also the fact that the high resistance range is capable of measuring well over 200 megohms.

The function switch consists of three banks of 5 x 2, which is a standard switch, and is readily available. One bank S-1D and S-1C could be an ordinary bakelite if desired, to reduce the cost. The voltage selector switch has



Full Scale Dial Calibration for University 0-1 Ma. standard square type 4" Meter.

six positions and is therefore a little more difficult to obtain. One possibility is to cut the voltage ranges to five and use a standard switch, but this causes a serious gap in the ohms ranges and is not recommended. The best alternative is to use five banks of twelve contacts, and only use those required. Quite a few six position switches are about however, and no difficulty should be encountered on that score. Two banks S-2E and S-2A could again be in bakelite.

The only other main alteration in the circuit was the adoption of EA50 diodes in place of the 9006s, this was done because of their lower inter-electrode capacity, and also their smaller physical size, important when designing the r.f. probe. The changing of these valves brought about a change in the values of the diode balancing resistors, and it is advisable to place them in an accessible position so that they can be altered if necessary. The method is simple. Set the v.t.v.m. to a.c. and switch to the 1,000 volt range, adjust the zero set to give zero on the meter scale, which will coincide with the d.c. zero, and then move the range switch progressively towards the 2.5 volt range, checking the position of the meter needle to see that it coincides with the zero point at each setting. If it varies on any range the resistance below the tapping point will need alteration. If the needle is above the zero point the resistance will need to be increased, and visa versa. On the 2.5 volt range the zero adjustment is done by the potentiometer R42, which should give a reasonable variation above and below the zero point. If it does not do this, change the value of R2. Naturally these adjustments must be made with the r.f. probe in circuit as we are balancing one diode current against the other.

One other alteration was found necessary to the circuit, and that was the use of a separate filament winding for the cathode follower. This was due to the fact that the cathode resistance is 5 megohms, which is virtually between the cathode and filament of the 6SN7GT and it was necessary to supply this valve from the spare 5 volt filament winding on the transformer, which gave quite adequate voltage, and also enabled the winding to be left floating above ground, thereby removing the chances of cathode to heater leakage, with some 6SN7GT.

The remainder of the circuit is quite straight forward, and needs little comment, the only point to remember being that we are dealing with two balanced circuits in the two 6SN7s and therefore any lack of balance in the two opposite halves of the circuit will result in a position arising where it is impossible to zero set the meter. To overcome this see that the two 40,000 cathode resistors in the cathode circuits of the 6SN7 meter tube are of the same value, it is more essential for them to be the same value than exactly 40,000, so select a pair matched on an ohm meter.

The same remarks apply to the balanced voltage divider across the power supply, and in checking with a 1,000 ohm per volt meter on completion, the voltage between the ends of the two 40,000 ohm resistances should be 175 volts, and across the outer ends of the 4,000 divider resistances 12 volts, and measured to ground, —87½ volts, +87½ volts, —6 volts, and +6 volts, respectively. It is not essential to have these exact voltages, as long as the two halves of the divider balance.

If all resistances and voltages are balanced, the meter should read zero with the "zero set" control at about mid scale.

OHMS CALIBRATION LISTS

Ohms	3v. Scale	0-1 Ma. Scale
1	0.273	0.091
2	0.5	0.168
3	0.692	0.231
4	0.856	0.285
5	1.0	0.333
6	1.125	0.378
7	1.235	0.412
8	1.335	0.445
9	1.425	0.475
10	1.5	0.5
12	1.636	0.545
14	1.746	0.582
15	1.8	0.8
20	2.0	0.666
25	2.142	0.714
30	2.25	0.75
35	2.335	0.778
40	2.4	0.8
45	2.45	0.817
50	2.5	0.833
60	2.57	0.857
70	2.63	0.876
80	2.665	0.888
90	2.7	0.9
100	2.73	0.91
150	2.81	0.937
200	2.855	0.952
300	2.905	0.968
400	2.928	0.976
500	2.94	0.98

If the 0-1 milliammeter is reasonably linear, the table above will give sufficient accuracy to enable the ohm scale to be plotted in terms of the 3 volt, or original 0-1 scale, whichever is used.

ADJUSTMENT

D.C. Ranges.—Turn the function switch to d.c. plus and the range selector to the 2.5 volt range, adjust the "zero set" control for zero on the scale. Connect a fresh 1.5 volt battery to the leads and adjust potentiometer R22 for correct scale reading. All d.c. ranges will now be correct.

Turn the function switch to d.c. minus, reverse the battery, and it should again read 1.5 volts, if not the 6SN7s are not operating on the straight portion of the curve, and the cathode resistances will need checking, however, no trouble was encountered on this score in both models built up.

A.C. Ranges.—Switch the function switch to a.c. and the range selector to 2.5 volts. A suitable voltage of 2.5 volts is taken from the filament winding of a transformer through a 600 ohm potentiometer, to give a source of variable voltage, and an a.c. meter connected across the output. The potentiometer R23 is now adjusted to give full scale deflection on the v.t.v.m. The special scale for this range can now be calibrated.

The range selector is then changed to 10 volts, and with a source of 10 volts a.c. from a few filament windings in series, the potentiometer R24 is adjusted for full scale reading.

The same procedure is then adopted for the 25 volt and 100 volt ranges with R25 and R26, it being assumed, of course, that the adjustment of the diode balancing resistances, mentioned previously, had already been carried out. All a.c. measurements and measurements of audio frequencies must be carried out with the external leads, as

the r.f. probe has not sufficient series capacity to function below high audio frequencies.

Ohms Range.—Switch the function switch to ohms, and adjust the "ohms set" potentiometer for full scale with the leads open. Connection of a resistance between the leads will cause a reduction in the meter deflection, and the value of the resistance can be read off. Values of resistance from about 0.5 ohm to over 200 megohms can be obtained, depending on the setting of the range selector.

In checking values of resistance above about 100,000, this meter is far superior to the average multimeter. As an example, on the ohms x 1 meg. range, 10 megohms is half scale on the meter.

Milliampere Ranges.—No explanation is necessary here as the 0-1 milliamp. meter is simply connected to the external terminals and suitable shunts switched across it for the different current ranges. The inclusion of current ranges in the v.t.v.m. is simply to enable the instrument to replace the usual multimeter for bench work.

REVIEW OF USES

Well there it is, and before discussing the practical construction, let us review the unit and its possible uses. Only some of the uses can be reviewed here, as it would require much more space than is available to cover them all.

On d.c. ranges, voltages from 0.2 volt to 2,000 volts at 40 and 80 megohms input resistance, enables us to measure a.v.c. line voltages, grid voltage on oscillators, screen and plate voltages on speech amplifiers simply by placing the test prod on the appropriate point. There are many other applications where it is necessary to use a very high input resistance to obtain accurate results which will occur to the reader, but the ones mentioned above are the main ones in our applications.

To give an idea of the small amount of current drawn from the source of supply in d.c. measurements, the writer found that the voltage of a 4.5 volt battery could be measured quite accurately with the body in series with the test prods.

On a.c. measurements, it would take quite some time to enumerate the many applications this v.t.v.m. has for Amateurs, as it operates from 20 cycles to 100 megacycles, over the range of voltages previously mentioned, but to take a few at random.

All common a.c. measurements at 50 cycles; checking of voltage gain in audio equipment; r.f. operation and amplification; a sensitive neutralisation indicator, etc.

By connecting a small tuned circuit between the probe and its shield it can be used for tracing parasitics and r.f. which has strayed from its proper path. Maybe we should conduct a competition to see who can think up the most uses for this v.t.v.m., but the list could be a very long one.

The ohms scale and the milliammeter ranges don't need any elaboration, but it has surprised the writer on checking through his stock of resistances, how many of the larger values are open circuited internally. Many were consigned to the w.p.b. that would have caused much grief and woe if they had been used at some later date.

One final point. This meter can be used for reading the mains voltage, but remember the negative terminal on the v.t.v.m. is connected to earth through the 3-pin mains plug, so only use the active lead in reading mains voltages. The fact that the v.t.v.m. is connected to the mains at all times must be remembered, and if it is necessary to measure resistances in a receiver for example, which are above chassis potential, see that the mains plug to the receiver is removed, otherwise the chassis of the v.t.v.m. and the Receiver will be connected together through the earth pins on the mains plug which will cause false readings.

If negative voltages have to be read, the a.v.c. line in a receiver for example, the ground side of the v.t.v.m. is connected to the chassis of the receiver and the active prod applied to the a.v.c. line with the function switch on d.c. The marking of the test prods red and black to represent positive and negative is misleading, and if the red prod is considered in all cases as the active lead no confusion will arise.

Whilst on the subject of test prods, there are several points to watch. Firstly it was found necessary to have the active prod lead shielded for measurements of a.c. voltages on the lower ranges, because of the sensitivity to 50 cycle pickup. It was possible to obtain quite a fair deflection on the 2.5 volt range with the test lead lying near a power transformer, so in addition to the normal lead terminal, a co-ax outlet was installed and a shielded lead made up with a piece of co-ax cable. Also as mentioned in the first section of the article, a double ended prod is required, one end having a 2 meg. resistor in series, for measurement of a.v.c. and oscillator voltages without applying any additional capacity to the circuit being measured. This enables a.v.c. voltages to be measured at the grid caps of the i.f. stages in a receiver, without detuning the stages. The addition of the 2 meg. resistance will introduce a slight error, in this case the reading will be 5% low, which can be allowed for mentally.

A commercially built r.f. probe of bakelite construction is available and could be used. It is suggested, however, that the outer barrel be shielded which can be done easily by sticking tinfoil inside the barrel and grounding. The insulation of this probe is only bakelite, and it is doubtful how it would operate at about the 100 megacycle range. If possible a polystyrene bush should be fitted to the probe to overcome that difficulty.

When the probe is not in use it is necessary to have an arrangement whereby the low frequency condenser C3 is connected into circuit. It is important to note that the lead from this condenser to the point of connection in the r.f. probe should be short, and have as little capacity as possible. Any capacity existing between the diode in the r.f. probe and where the extra capacity lead plugs in, is virtually additional capacity across the diode when making measurements. and we are endeavouring to keep this as low as possible. In the construction of the instruments to follow, this point has been taken care of quite nicely.

CONSTRUCTIONAL DETAILS

The first vacuum-tube voltmeter built was entirely conventional in construction, and consisted of a chassis 11" x 7¾" x 2½" deep. The layout of components is shown in Fig. 2 and is self explanatory, the r.f. probe being placed in the inside of the cabinet when not in use. A duplicate miniature 4-pin socket is located on the front panel for use with the r.f. probe.

It is usual for the r.f. probe to be arranged that it can be plugged into the front panel, but it was felt that it would be better to put the r.f. probe in the cabinet to avoid having leads out on the bench which could be in the way.

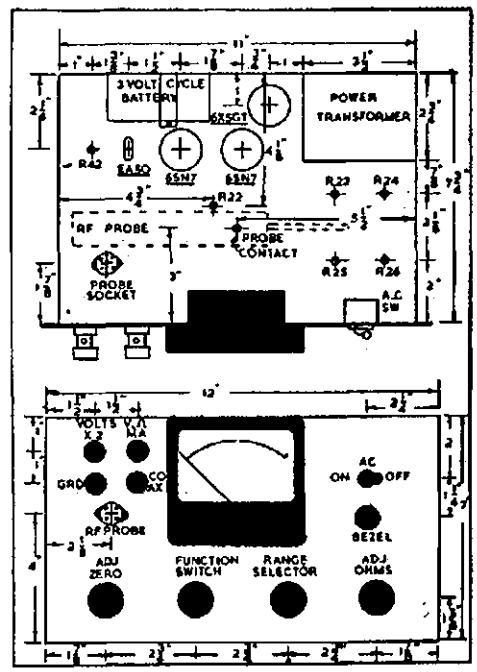


Fig. 2.

It is advisable to make a careful check of the size of components to be used, as there is not a great deal of room to spare.

One of the main difficulties from a space point of view, is the problem of locating all the voltage, diode balancing, and resistance resistors. When it is realised that each resistance shown on the diagram is made up of two 1 watt resistances in series, the space requirements are large. This problem was overcome by constructing several resistance strips of Polystyrene, complete with mounting lugs, and wiring them to the range selector switch with 18 gauge tinned copper wire, so that they are self supporting. The resistances are then wired in place, and the switch bank, complete with resistance strips,

slipped into place, and the necessary connections to the remainder of the circuit made.

In the event of a fault developing in the switch bank or resistance strip, the whole unit can be removed, by unsoldering a few wires.

No details are given of the r.f. probe as it is felt that ideas will differ considerably on this matter, but as a matter of interest, the probe used in this instrument is 6" long and 1" in diameter.

The outer shield is a piece of 1" diameter brass tubing, and inside it is slipped a section of bakelite tubing, which has been split lengthways down the centre. Only one half of this tubing is used, and two circular ends are fitted to it, one of Polystyrene for the probe contact, and the other to take the lead connections.

The components are mounted in this bakelite "trough," and the brass tubing slipped over afterwards. A hole is fitted in its holder on the chassis.

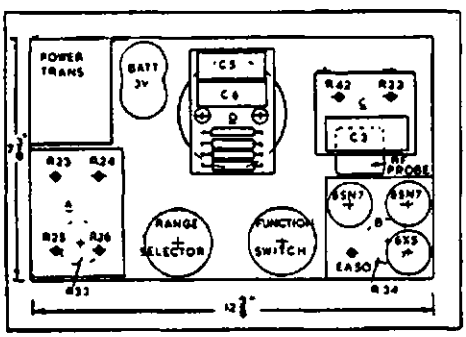


Fig. 3.

ALTERNATIVE LAYOUT

The second vacuum-tube voltmeter was built as shown in the rear view of Fig. 3. Four small sub-panels (A, B, C, and D) were constructed, all except panel B being of insulating material. These panels are mounted on pillars to keep them clear of the front panel components, which in some cases are located underneath. Panel D is supported by the two meter terminals, and carries the electrolytics, C5 and C6, and the voltage divider resistances for the power supply.

The r.f. probe in this case is built into an old i.f. can, and when plugged into the front panel, picks up the connection for C3 on panel C. This panel also supports the d.c. range set resistance and the diode contact potential balancer.

Panel B carries the two 6SN7s, 6X5 rectifier, and EA50 balancing diode. It is mounted sufficiently far from the front panel to clear the zero set resistance R34.

Panel A carries the four a.c. ranges set resistances and is also mounted so that it will clear the ohms set pot. R33.

All main voltage "stick" resistances, ohms, and diode balancing resistances are mounted around the range selector switch, or if desired, resistance strips can be made up as previously mentioned.

The main circuit wiring is cabled to present a tidy appearance, and it is felt that this method of construction is easier, and more accessible than the first unit built.

It must be stressed that a few of the components vary in size and it is advisable when making up the small panels to make sure they are of sufficient size to take the components on hand.

FORMULA FOR DIFFERENT VALUES OF VOLTAGE "STICK"

For those who want to calculate different values of tappings for the voltage "stick," the following simple formula will serve.

$$R_x = \frac{R \times V_m}{V}$$

where V = voltage range required at tap.

V_m = Fundamental range of v.t. v.m.

R = Total value of resistance "stick" required.

R_x = Total value of resistance from earth to tap in use.

E.g.—For 1,200 volt tap—

$$\frac{40 \times 3}{1200} = 0.1 \text{ meg. from tap to ground.}$$

19th Federal Convention Action on Motions Carried

As a result of Agenda item 31 of the 19th Annual Federal Convention, the Federal Executive were directed by Federal Council to publish three months before the next Convention, dated summary of action on motions passed at the previous Convention. In accordance with this motion, the motions which were passed are enumerated below with the action resulting therefrom. Interested members should refer to the June 1949 issue of "A.R." wherein will be found on page 14 the voting and the form of motions.

AGENDA ITEMS

Item 1. VK3WIA has been temporarily operating from VK3UM, mainly keeping schedules weekly with W1AW, and occasional contacts with the R.S.G.B. and the N.Z.A.R.T.

2. Noted for future policy.

4. Action complete and promulgation of amendment made.

6. Endorsement of previous policy.

7. All Divisions have agreed to an increase in price to 7d. per copy. The Victorian Division, as publishers, send out three-monthly statements of the finances.

8. Adjacent frequencies not agreed to by P.M.G., but permission granted to operate the Emergency Nets on 3501 and 7002 Kc. These frequencies are for practice purposes, but should the occasion warrant, any frequency may be used.

10. Action taken by writing three consecutive Editorials on the subject and in re-publishing from time to time in Federal Notes.

16. The P.M.G. would not consider this suggestion with the great amount of additional work to put it into operation. The two licences are now handled by different Departments.

17. As Federal Executive, contrary to the motion, were not able to supply the P.M.G. with any instances of hardship, they would not agree to the motion. They consider the present system to work very efficiently and have had no complaints from Amateurs.

21. All Divisions with the exception of the N.S.W. Division have appointed observers, but very few reports are to hand from those appointed. The P.M.G. have not been able to take any action with other Administrations so far, as the Provisional Frequency Board is still sitting in Geneva, and channels have not been finalised. Federal Executive, however, are determined to build up a file with the Department, which makes consistent reporting important.

23. Rules for permits contained in Federal Notes elsewhere, but Dept. will not grant privileges to all.

26. This motion, proposed by the W.I.A., is at present before the vote of the member societies of the I.A.R.U. Copies of the "A.R." are now sent to all member societies, so that results may be copied.

28. Action complete as this Rule was clarified in the 1949 VK-ZL Contest.

31. Action taken.

32. Policy, and noted by Divisional Councils.

33. For the policy book and all future Conventions.

GENERAL BUSINESS ITEMS

Item 1. Rules finalised and published.

2. As the Contest Manager and Contest Committee had extreme difficulty in formulating rules to suit equitably all States in an all band v.h.f. contest, the matter was referred to all Divisions for comments and suggestions which were few and did not solve the problem. As several Intrastate Divisional V.H.F. Contests are in progress, something valuable may be learned from these before an Annual W.I.A. V.H.F. Contest is inaugurated.

3. Conditions set out in 1950 N.F.D. Contest.

4. Has been in operation since the 19th Convention.

5. This was included in 1949 Rules.

7. Publication of bands allotted has been made.

8. The P.M.G. would not agree to this motion from the security angle and monitoring position.

9. Again, as no specific cases could be quoted, the P.M.G. considered the present system to be satisfactory; but would notify their State Superintendents of the correct interpretation of this regulation.

10. This protest has been registered with the P.M.G. and filed.

12. Advice received that the most space available would be every four months. This has been supplied on regulations and other topical matters.

14. All Divisions in favour with exception of Queensland.

16. The P.M.G. did not agree that the A.A.C. should be concerned with such matters, but undoubtedly, unofficial advice would be given if desired. The present system works efficiently and Inspectors are very co-operative.

18. All Divisions agreed to this motion, and it has been noted for future policy.

20. Published in Federal Notes of "A.R."

21. The first draft has been received and is being considered before passing to Divisions for their comments.

22. This motion is the actual amendment to the Federal Constitution and has been promulgated—supercedes Agenda item 4.

25. The 20th Annual Convention will be held in Melbourne at Easter, 1950, the 7th, 8th and 10th April.

Such are the results of the motions of the 19th Annual Convention, and represents some of the work of your Federal Council, in general, and Federal Executive, in particular. We trust the reading of this summary in conjunction with the motions has proved helpful to members, especially those in the country. All motions not shown, of course, were lost or rejected.

—W. T. S. Mitchell, Fed. Sec.

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

FEBRUARY, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

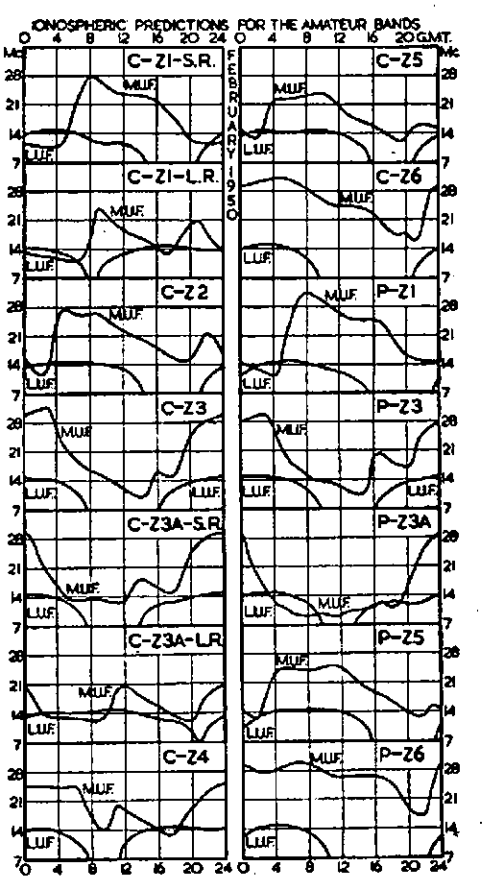
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0800 to 1600 hours GMT?
2. Was the 28 Mc. band workable for a few hours around midnight GMT?
3. Was the 14 Mc. band workable only between 0500 and 1000 hours GMT?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the month.



FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

Good DX conditions, plus the stimulus of the Contest, have made 50 Mc. a very popular band during the pas tfew weeks, but it remains a mystery why a great percentage of stations still use only the first megacycle of the band, with the result that at times it becomes difficult to know whether one is listening on 6 or 20 metres.

An illustration of this was given on 2nd January during the break through from VK2 to VK3, when conditions became almost chaotic at times and many stations were forced to retire from the running. During this break through, VKs 2LY and 3ABA conducted test on 54 Mc. with S9 results, indicating that the openin gwas not confined to the low frequency end of the band only. So what about it chaps! If you cannot spread out a little will you please tune the entire band and give those who do operate on the higher frequency end a chance.

VK5JD is now "on location" at Alice Springs and has already contacted VK2, VK3 and VK5 although full details are not yet to hand. The lucky VK3 station was VK3BD who made contact with 5JD on 17th January. The contact was on c.w., as 5JD has no modulation equipment with him.

HIGHLIGHTS OF THE MONTH

50 Mc.—18th December, 1949: VK2AH-VR2BC; VK2VW-VR2BC; VK2RU-VR2BC. 31st December, 1949: 50 Mc. open from VK3 to VK6 from 1600 to 2230 hours with signals at S9 most of the time. VK7XL-KH6PP. Details as yet unknown.

144 Mc.—11th December, 1949: VK3LS on Mt. Bogong to VK3AKE at Geelong, a distance of 190 miles.

576 Mc.—11th December, 1949: VK3ANW on Mt. Donna Buang to VK3AKE at Geelong, a distance of 90 miles.

50 Mc. ACTIVITY

NEW SOUTH WALES

The band has been practicularly good with regard to DX openings which are too numerous to mention. Notable are the ZLs and VK6s. Many have worked these now and the strength of VK6 signals has been surprising. Local contacts have usually been very brief except when DX indications are very definitely negative.

The 18th December, 1949, wsa a gala day for 2AH who, after many attempts earlier to contact VR2BC, made an excellent S9 QSO with Graham. It will be remembered that 10 metres had been usd for "teeing-up" 6 metres while Graham built up his xmitter for six. 2VW had excellent QSO and then fading set in after about one hour. He was bearing 2WJ S8, but John had a severe power leak which made copy very difficult. Later 2RU made contact with VR2BC. During the first break thruogh, ZL1C was also hearing VR2BC and they QSOed.

ZLs have been contacted almost around the clock up to midnight on 4/1/50. Early morning (0600) QSOs were also possible. VK3 to VK2 (Sydney) on the 2nd was a real break through.

The ZL-VK6 contact is further evidence of what can occur. 6WG has worked all States (except N.T.) in a few hours. The most sought after VK is 5JD who is operating from Alice Springs, the State required by all for W.A.S.

2BW, 2ADE and 2ALS have been heard in Sydney or Katoomba. 2ANU, with 4 watts input at Maswellbrook, a distance of 110 miles, has been worked cross-band 6 and 2 with Sydney. Doug made this first contact both ways on 6 and 2 which is very rare. Single 807 on six and three element beam and 832 to 3/3 beam on 2 metres, good work Doug. 2AFH and 2XG are both on six and working DX. 2VO has increased the height of his beam and now looks over the hill. Doug worked ZL. 2WH, of Forbes, is being called by DX frequently but so far not heard himself in Sydney.

2ARG (aircraft, mobile) was copied for almost 200 miles while flying at 8,000 feet. The rig is a 815 and 18 watts to long trailling antenna. This antenna, by the way, causes a dreadful hash in the receiver and Bob would like to contact anybody who can suggest the reason. This mobile gear is also fitted into the car and gives surprising results. A "halo" proved to be superior to a dipole. Used while in motion, this signal can be copied over unbelievable country for 25 miles or so. In cuttings, below line of sight, at the foot of sheer cliffs, and between city buildings. (Eight metres is the U.S. polcie mobile frequency and will almost go anywhere!)

The following visited the northern boys over the New Year week-end: 2HO, 2MQ, 2VW and 2AH. The visit was enjoyed immnesely. Crammed full of radio and only too short. Shacks visited included: 2BZ, 2ADS, 2UF, 2KF, 2KZ, 2ADT, 2VU, 2YL and 2HD! Also en-route: 2AMU, 2OC and 2RU. Radio under difficulties produces much more versatile Hams. They get more ou of their gear than the City boys. Some towns have only one Amateur who can't "just call" for assistance. Thanks to the XYLs are also heartily expressed.

VICTORIA

As usual for this time of the gear the main source of interest in this band has been the DX which has been regularly breaking through. As far as December is concerned, the trend appeared to be for longer skip, with very numerous openings to VK4 and quite a number to VK6 and ZL. The shorter skip to VK5 and VK2 was almost entirely absent. A summary of DX acitvity is included as this may be of interest to stations in other States who wish to compare times of openigns, etc.

1st of December, 1700-1730 hours: 6FC contacted by VK3s. 2nd and 3rd: Patchy VK4 openings. 4th, 0900-1300: VK4 opening, good signals; 1200-1330 VK6s worked by many VK3s. 11th: very good signals from VK4, 1100-1600. 16th, 1220-1250: VK2 worked, signals poor; 1700-1740: ZL1s and ZL2s contacted. 18th, 0900-0930: ZLs worked. 19th, 0900-1000: VK4 opening, good signals. 20th, 0900-1530: VK4s contacted; 1130-150: VK6s contacted with good signals. 21st, 0900-1030: VK4 opening. 23rd, 0830-1130: VK4 opening; 1700-1800: ZL4s heard, ZL1s and ZL2s worked. 25th: VK4s worked for short periods during the day; 6DW and 6WG worked from 2145-220. 26th, 27th, and 28th: brief openings to VK4 at various times during day. 29th, 1630-1930: ZL1s, ZL2s, and ZL4s contacted. 30th, 0800-0900: ZL1s and ZL2s contacted; 1730-1900: VK4s worked. 31st: VK4s contacted from 1530 to 1830; VK5s from 1620-1730; VK6s from 1600-2230; VK2s from 1645 to 1745. 1st January, 0800-0900: VK2s worked. 1000-1130: VK5s and 6WG worked. 2nd, 1730-1915: very good opening to VK2 with strongest signals heard this season. 3rd, 1000-1030: VK5s contacted; 1430-1900: 2BZ and VK4s contacted. 4th, 1000-1030: ZLs worked; 1845-1930 and 2100-2130: ZL1s and ZL2s contacted; 2230-2330: VK4s contacted. 5th, 0730-0745 and 0845-0915: VK4s worked; 1230-1300: 6FC worked. 6th, 1130-1300: VK2s contacted; 1130-1730: VK4s contacted.

On the 2nd of December, 3ACL worked 7XL on extended ground wave transmission, the distance beign approx. 190 miles with S7/8 signals ooth ways. This evening, 7XL also heard 3RR in Melbourne, approx. 230 miles. On sveeral other days since, 7XL has been heard weakly by 3XA, but conditions do not seem to have peaked as well as on the first occasion.

Conditions for work with country stations have been good most evenings and many interesting contacts have been made; even during daytime hours good signals have been received from 3UI and 3APF on many occasions. 3ZD, of Warragul, is on the band again with a new rig and converter, the former being a 6L6 c.o., 6V6 doubler, and 815 final modulated by 807s in AB1, and the latter having 954 first r.f., 6BA6 2nd, and 6BE6 mixer. Ron is putting a good signal into Melbourne and working plenty of DX.

TASMANIA

Visitor to the South at time of writing is Len Crooks, VK7BQ, who passes on the information that VK7XL has collected the jackpot in the form of KH6PP and VK6WG. No further information to hand re this, but tentative congratulatinos George. 7PF reports that first DX was heard on 4/12/49 when 7AB and 7LZ contacted 4XN. Opened again on the 10th. What was thuoght to be DX on 14th was 2ARG flying over Bass Strait at 8,000 ft. Worked 7XL and 7AB. 2ARG contacted 7AJ on sked while airborne ex-Hobart. Unfortunately 2ARG could not stay on for long.

On 15th from 1750, VK2, VK3 and VK4 were heard until 1830. The next evening saw 7LZ and 7BQ getting amongst the VK5s, between them working 11 stations. VK4s were heard at same time, but went out quickly. The same night 7RK heard 6WG, but Ray has no rig for six. On 17th, 7LZ and 7BQ were called by 4BT but they did not hear him. That night 7LZ shifted from 51.6 to 50.8 Mc. On morning of 18th, 7XL, 7AB, 7LZ, and 7BQ worked into VK2 and VK4.

Some ground wave DX may take place as 7AB and 7XL have both been heard in Launoeston. 7PF made his debut on 25th with 832 in p.a. At 1655 on 27th December, ZL4s and ZL1s were audible until 1830. 7PF contacted ZL4IE and 7BQ ZL4CN. Also 7PF heard and called 7AB with no result.

In South, first known opening occurred on the 10/12/49, when 7DH worked 4BT. 4BT has the most consistent sig here. Usually first in and still there whe nthe rest have dived back into the noise. Band opened again on 15/12/49 at 1607 to VK2 and 4, while on 16th, ZL2 was worked by 7DH at 1100. At 1117, 4BT pushed hole in the noise closely followed by other VK4s and 2s. Remained open until 1235. At 1950 4XN heralded the approach of VK5 heavy artillery. Those sigs really were solid. 7AJ had to attend W.I.A. Council Meeting that night, so 7DH had band to himself. Ten VKs were worked between 2000 and 2215. 7CW came on for whilt, but was confied to c.w. as he had trouble with modulator. Bad luck, Cros. 7AJ reports opening to VK2-4 on 17th and 18th. Band went flat until 27th when 7AJ heard and worked ZL1, 2, 4.

On 29th, 7AJ was fortunate in hearing what he considers to be the best VK7-ZL opening in last two years. This occurred at 1700 hours to ZL1, 2, 4. Altogether Athol worked 14 ZL stations

(Continued on Page 12)

Heralding

THE GREATEST AMATEUR COMMUNICATIONS RECEIVER OF ALL TIME . . . the

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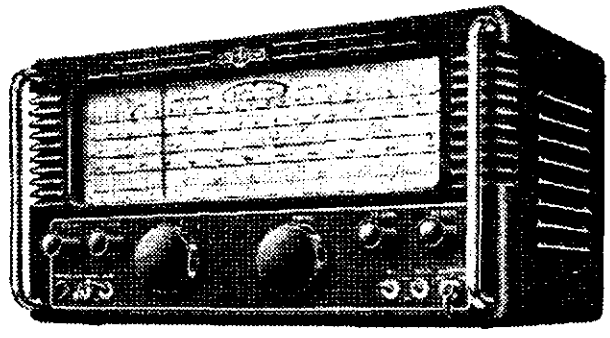

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- WESTERN AUSTRALIA: CARLYLE & CO. LTD., Hay Street, Perth, and 397 Hannan Street, Kalgoorlie.
- ATKINS (W.A.) LTD., 894 Hay Street, Perth.
- SOUTH AUST.: GERARD & GOODMAN LTD., 192-196 Rundle Street, Adelaide.
- TASMANIA: W. & G. GENDERS PTY. LTD., 53 Cameron Street, Launceston, and Liverpool Street, Hobart.
- LAWRENCE & HANSON (ELECTRICAL) PTY. LTD., 120 Collins Street, Hobart.
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It is our policy to bring to the amateur and professional radio field in Australia only quality products in which an investment means a financial saving and an insurance of faithful and efficient performance. For this reason we are proud to mention a few of the good things made by Belling & Lee Ltd. They are obtainable from all good Eddystone distributors throughout Australia.

AERIALS.—The SKYROD anti-interference aerial is 18 feet in length, made in five sections and is complete with fittings for lashing to a chimney or to a mast head. Erected on a chimney or mast, this aerial is well free of man-made interference and vastly improves the signal-to-noise ratio.

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The Belling & Lee aerial systems are available as either complete kits or may be purchased as components as desired. Noise reduction of 10 db or better is possible with the "ELIMINOISE" system and the automatic balancing of impedances adds further gain to any communication receiver.

—R. H. CUNNINGHAM AND COMPANY, MELBOURNE.

FIFTY Mc. AND ABOVE

(Continued from Page 10)

that afternoon. Following two days, again opened to ZL at 1600 and 1625, while on 2/1/50 opened to VK4 at 1800 hours.

144 Mc. DOINGS OF THE MONTH

N.S.W.—The band has steadily received more xtal control stations and now-days the mod.-osc. are fewer. Although quiet, because of the contest, some Interstate skeds during January are being run by 2AH and 3NW-3OD at 2000 hours. Three minute transmissions and three minute listening. 2AH, with the valuable assistance of 2MQ, 2HO, and 2BC erected a 32 array, 40 ft. in height, and has hopes!!

Vlotoria.—During the field day held on the 11th of December, some very interesting results were achieved by stations operating on this band. The portables out were 3AKE and 3VF, 12 miles S.W. of Geelong, operating from a point 700 ft. a.s.l., 3ANW at Mt. Donnabuang, 3LS near Mt. Bogong, and 3TO near Yallourn. The most interesting contact recorded was between 3LS and 3AKE, a distance of approx. 190 miles with S7/8 signals both ways. This is definitely a record as far as VK3 is concerned, and quite possibly one for all Australia. 3LS also worked 3ANW, 120 miles, and 3APF, about the same distance. Other good contacts were 3TO to 3AKE, 120 miles, and to 3RK and 3ABA in Melbourne, about 80 miles.

Conditions on the band otherwise continue much the same, with 3ACH, 3ARL, and 3AAF new stations in the Melbourne area. Geelong signals continue to be very good, on many nights being well above their usual level; however no more distant contacts have been made yet.

With a view to eventually breaking through to VK2, a nightly sked has been arranged. VK3s call VK2 from 2000 to 2003, then VK2s call VK3 from 2003 to 2006. VK3s call again from 2006 to 2009, and the VK2s again from 2009 to 2012. VK2BZ operates on 144.156, 2AH on 145; 2HO, 2ADT, 2ADS, and 2ARG, whose frequencies are not known at present, will all be on the look out as well as others.

On the 27th, 3ABA operated portable from the location of 3DG in Lancefield, 40 miles N.N.W. of Melbourne. 3IM, 3RK, and 3NW were contacted, so when 3DG gets on the band he will provide an interesting QSO for Melbourne stations.

Tasmania.—7MC reports hearing VK3AKA who reports that he does not possess a 144 Mc. transmitter. Possibly it was VK3AKE. No further information on this. Stations now operating on 144 Mc. are 7BQ, 7MC, 7DB, 7PF—all xtal controlled. 7BQ runs 829 final, 7MC using 1143 rig. 7DB 6G6 osc., 6V6 trip., EF50 amp., RK34 tripler driving 815. 7PF has EF50 osc. trip., 6V6 doubler, 832 tripler with 815 in final.

288 MEGACYCLES

Vlotoria.—Interest in this band is now growing and at last some two-way contacts have taken place. 3NW having worked 3XA, and 3LS 3ED. Others with gear for the band are 3MD, 3RR, 3EO, and 3IM. The most popular transmitter seems to be a pair of 7193s with plate and cathode lines, while the receivers are super-regens using 955s or similar tubes. Aerials include a co-ax dipole at 3NW, eight element broadside arrays at 3LS and 3ED, and a dipole and plane reflector at 3IM.

576 MEGACYCLES

New South Wales.—Some future work between Gosford and Sydney (50-60 miles) is contemplated over territory not "line of sight." 2RU at Gosford with gear by 2ND, 2XX and 2YR and others hopes to contact 2XX at Sutherland.

Victoria.—Most important piece of news this month is the establishment of a new record on 11th December when 3AKE portable S.W. of Geelong worked 3ANW at Mt. Donnabuang, the distance being approx. 90 miles. Signals were S9 both ways. 3ANW also worked 3XA and 3DA in Melbourne, about 30 miles.

3XA continues his contacts with 3RR at McCrae and the difference in signal strengths from day to day is really surprising, being anything between S4 and S9 plus. 3RR is still unable to contact 3NW, despite an increase in Ken's antenna height, although they can work with S8/9 signals from a hill a short distance from 3NW's location. It is evident that signals do not bend over hills nearly as much as on the lower frequencies, although it must be remembered that the power outputs on this band are very low, and it might be a different story with 10 or 15 watts out.

2,300 MEGACYCLES

Victoria.—A sudden increase in interest has been shown in this band and a two-way contact over a short distance has been made between 3ANW and 3AKZ portable. Gear used in both cases were co-axial line oscillators using 2C40s, and crystal detectors followed by audio stages. The oscillators are now being tested as separately quenched super regens. 3XA, 3QO, and 3RR also have co-axial line oscillators built using 446Bs, so it is hoped a number of contacts will be made before long.

Abstracts from Overseas Magazines

Since these abstracts started we have not had many comments on their usefulness or otherwise. Those comments we have had, have been mainly agin' the idea. If this is general opinion, then out they go, since space in "A.R." is always short. We welcome your opinion for or against (and on any other ideas about the magazine you may have).

"RADIO AND TELEVISION NEWS," OCT., 1949—

P. 39: "A Novel Tubeless Tone Generator;" R. P. Turner, K6AI.—Uses a crystal rectifiers to produce the 4th harmonic of the a.c. mains frequency.

P. 42: "The Beginning Amateur, Part 9;" R. Hartzberg, W2DJJ.—General discussion on phone operating.

P. 44: "Fringe Area Television Reception;" R. W. Sanders.—Contains interesting data on antennae and low noise pre-amplifiers.

P. 47: "Tune Your Antenna With a String;" H. A. Ulyat, W4JPW.—With pullies, strings and weights, the length of the antenna and feed lines (of twin lead) can be changed to resonate in different bands.

P. 49: "A Signal Tracer at Minimum Cost;" D. G. Ward.

P. 52: "A Wide Range Equalising Amplifier;" H. R. Hyder.

P. 54: "A Low Cost Ham Receiver;" N. G. Noell, W5OPW.—6AO7 mixer, 6C5 local oscillator, plug-in coils, 1600 Kc. regenerative i.f., etc.

P. 57: "Self Supporting Towers for T.V. Antanna Arrays;" L. E. Greenlee.—How to make a tower which will stay up.

P. 58: "Modern Television Receivers, Part 19;" M. S. Kiver.—Horizontal sweep circuits of typical American commercial receivers.

P. 61: Rhombic Antennae for Television;" W. Smith.—Design of v.h.f. rhombics. Good gen.

P. 70: "A Three Pound 10 Metre Beam;" E. F. Harris, W9KNK.—Constructional details of two element beam, using 0.12 wavelength spacing with 5.7 db gain and 15 db front-to-back. Stress calculations show it will stand a 75 m.p.h. breeze.

P. 74: "A Special Wide-Band Scope Amplifier;" M. Kaufman.—6SN7, 6V6, 6V6 amplifier. Sensitivity 0.07 volts per inch (for 5BP1 c.r.t.). Flat for 0 cycles to 1 Mc.

"QST," OCTOBER, 1949—

P. 11: "A Cascade Converter for 144 Mc.;" H. H. Cross, W1OOP.—6AK5 triode connected, plus half 12AT7 as cascade r.f. amplifier, 6AK5 mixer, half 12AT7 oscillator.

P. 14: "Two-Band Antenna Matching Networks;" J. O. Marshall, W0ARL.—How they work and how to design them.

P. 19: "A Built-In 10 Meter Mobile;" B. J. Hanson, W7MRX.

P. 22: "Painless Prediction of Two Metre Band Openings;" W. F. Holsington, W2BAV.—All 2 metre DX men should read this. The idea is that 2 metre DX can be worked along lines of equal barometric pressure. The weather maps over the area where it was known DX was open are shown to illustrate what to look for.

P. 29: "A Crystal Controlled Plug-In Converter for the Q5er;" J. L. Stewart, W6UJD.—Uses a crystal controlled converter with the BC453 as a variable i.f. for 40 and 80 metres.

P. 38: "Your Beam—Will It Stay Up?" R. W. Woodward, W1VW.—Where different metals touch there will be continuous corrosion, especially in humid or seaside atmospheres.

P. 40: "The Hum Bug;" A. F. Scotten, W6ZMZ.—Don't look now, but I think someone is gently pulling my leg. But I'm only an inquisitive phone man.

P. 42: "Tailoring the Series Tuned V.F.O. to Your Needs;" G. L. Countryman, W3HH.

P. 46: "Technical Topics—Stop and Go Circuits." Combination of series and parallel turned circuits for r.f. and audio purposes.

P. 55: "T.V.I. Tips;" G. Grammer.

P. 56: "Hints and Kinks."—(i) modulating the test oscillator. (ii) Hand driven generator hints. (iii) Filter and control circuit for the PE103. (iv) Miniature 10 metre exciter. (v) Simple inverse feed back circuit. (vi) Curing chirp in Command Transmitters. (vii) Low drift condensers from the BC375E. (viii) An improved twin lamp.

"CQ" NOVEMBER, 1949—

P. 13: "Modulating a Kilowatt;" R. C. Check, W3LOE.—Push-pull class AB1 3w4TLs.

P. 16: "Wide Range V.H.F. Converter;" C. O. Bishop, W5HEA.—Uses the "Mallory Inductuner" with 6J6 grounded grid r.f. stage and 6J6 mixer-oscillator. Continuous coverage from 49 to 234 Mc.

P. 18: "Command Set Special;" F. A. Bartlett, W6OWP.—Uses command transmitter and receiver as 80 or 40 metre mobile rig.

P. 22: "More on V.H.F. Converters;" J. E. Stacy, W1KIM.—Good oil for v.h.f. men. Compares the relative performances of various tubes and ranks r.f. stages in the following order of merit: cascade, grounded grid, push-pull, cathode coupled, and conventional pentode circuits a poor fifth.

P. 23: "T.V.I.-Free Rig for 10;" M. Seybold, W2RYI.

P. 27: "The R-5 Mike;" W. S. Rogers, W1DFS.

P. 29: "A Man Size All-Band Exciter;" D. Good, W6EZP.—Collins v.f.o., 6AG7 buffer, four 6L6 doublers, 4E27 final amplifier. Everything band-switched and gang-tuned.

"QST," NOVEMBER, 1949—

P. 11: "The Seleotoject;" O. G. Villurd, W6QYT, and D. K. Weaver, W6VQL.—A variable frequency selective audio amplifier, oscillator and rejector filter.

P. 18: "Break-in with One Antenna;" M. E. Hiehle, W2SO.—Uses same principles as the radar "T-R duplexer" except relays are used to open and short the stubs instead of gas tubes. This one handles a kilowatt on several bands.

P. 21: "Harmonic Reduction in a 500 Watt All-Band Rig;" D. H. Mix, W1TS.

P. 29: "The Regenerative Wavemeter;" G. Grammer, W1DF.—Similar to a grid dip oscillator except the feed-back can be varied. With this adjusted to the verge of oscillation, a very sensitive absorption wavemeter results.

P. 32: "The City Slicker Array for 144 Mc.;" F. S. Harris.—Gain without directivity.

P. 35: "The Story of FP8AA;" J. H. Du Bois, W3BXE.

P. 40: "A 75 and 20 Metre Single Sideband Exciter;" B. Goodman, W1DX.—Uses commercial phase shift networks.

P. 48: "Two Band Antenna-Matching Networks;" Part II.; J. G. Marshall, W0ARL.—Continuation of October, 1949, article.

1950 R.E.F. CONTEST

To celebrate the 25th anniversary of the foundation of the R.E.F. and the I.A.R.U. at Paris in 1925, the contest known as the "Coupe du R.E.F." contested annually with the participation of the Belgian, Luxembourg, and Swiss Hams will be extended this year with the collaboration of all the Amateurs of the whole world.

EXTRACTS OF THE RULES

Dates.—C.W.: Saturday, 25th February, 1200 GMT to Sunday, 26th February, at 2400 GMT.

Phone: Saturday, 4th March, 1200 GMT, to Sunday, 5th March, at 2400 GMT.

To assist the DX working, internal contacts in Europe are asked to cease between 2200 OMT and 0600 GMT.

Foreign stations are to call French, French colonial, Belgian, Belgian Congo, Luxembourg, and Swiss stations in the form "CQ REF" or the general call "REF de . . ."

French stations in France belonging to different administrative districts will be distinguished by a numeral (e.g. F8PK/14) or in Algeria by two letters (e.g. FA8IH/AL) or by a different prefix (e.g. FE8AB, FM8AD, CN5AG, etc.).

Swiss stations belonging to different Cantons will be distinguished by two letters (e.g. HB9GR/GE).

Points.—Three points will be scored for a complete contact.

Scoring.—The total points scored for complete contacts on all bands, multiplied by the total R.E.F. Sections, Swiss Cantons, and different Contest Countries of the R.E.F. worked on each band.

Awards.—A Souvenir Certificate will be presented to the first two stations in each country and each call district of W, VE, and VK, providing a log of all work is sent to the R.E.F.

Logs.—A log will be entered for c.w. and another for phone. Each log entered will show the call sign, name, address, of the station, the final tube and input, type of antenna, and then in columns, the band worked, the date, time GMT, call of station worked, section canton or country worked, number sent, number received, and number of points.

A summary giving, by bands, the number of QSOs, the number of sections, cantons or countries worked, then the number of points, the totals and the final score.

The log will show a signed statement that the Rules and Regulations have been observed and will be sent and addressed to "Coupe du R.E.F.," 72 rue Marceau, Montreuil, S/S Bois, (Seine).

Note.—The serial sent and received will probably be as for A.R.R.L. Contest, although it has not been mentioned here.—Federal Secretary.)

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. Gronow, VK3WG; Federal Secretary: W. T. S. Mitchell, VK3UM, Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary—Geo. Cameron (VK2CC), Box 1734, G.P.O., Sydney.

Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor.—L. D. Cuffe, VK2AM, 14b Watson Street, Neutral Bay, N.S.W.

Zone Correspondents.—North Coast and Tablelands: P. A. H. Alexander, VK2PA, Hill St., Port Macquarie; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gard., Newcastle; Coalfields; and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: G. J. Russell, VK2QA, 116 Bogan St., Nyngan; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 48 Harrabrook Ave., Five Docks; Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. C. Quin, VK3WQ.

Administrative Secretary.—Mrs. O. Cross, Law Court Chambers, 191 Queen St., Melbourne, C.1.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—North Western: R. E. Trebilcock, VK3TL, 122 Victoria St., Kerang; Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: W. H. Ross, VK3UT, Ballangeich, via Warrnambool; North Eastern: J. A. Miller, VK3ABG, "Erinvale," Avenel; Far North-Western Zone: Harry Dobbyn, VK3MF, 42 Walnut Ave., Mildura; Eastern Zone: Mrs. P. M. Churchward, VK3US, "Shirley," Red Hill.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1080 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW on Friday evenings on the 7 and 14 Mc. bands.

VK6WI.—Saturdays 1400 hours, Sundays 0980 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TB, Box 688J, G.P.O., Brisbane.

Meeting Night.—Last Friday in each month at the Y.M.C.A. Rooms, Edward Street, Brisbane.

Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—E. A. Barbier, VK5MD, Box 1234K, G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AG, 7 Howard St., Perth.

Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.

Meeting Night.—Watch the Monthly Bulletin.

Divisional Sub-Editor.—George W. Ashley, VK6GA, 33 Mars Street, Carlisle, Western Australia.

TASMANIA

Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor.—Capt. E. J. Oruise, VK7EJ, Anglesea Barracks, Hobart.

Northern Correspondent: C. P. Wright, VK7LZ, 3 Knight St., Launceston.

FEDERAL

DX C.C. LISTING

PHONE			
VK3JD (1)		37	138
VK6RU (2)		37	130
VK6KW (4)		87	129
VK3BZ (3)		36	126
VK4JP (8)			114
VK6DD (6)			113
VK3EE (10)			113
VK3LN (11)			102
VK3IG (5)			100
VK8JE (7)			100
VK4KS (9)			100
C.W.			
VK3BZ (6)		40	163
VK3CN (1)		40	144
VK3VW (4)		39	135
VK4EL (9)		39	135
VK2QL (5)		40	133
VK3KB (10)		39	129
VK4HR (8)		40	125
VK3EK (3)		39	122
VK4RF (11)		35	119
VK2EO (2)		40	116
VK3FH (15)		37	115
VK4DA (7)		38	113
New Members—			
VK4DO (20)			101
VK3JE (21)		39	108
OPEN			
VK3BZ (4)		40	185
VK6RU (8)		37	163
VK2DI (2)		40	160
VK3HG (3)		40	155
VK3JE (12)		39	154
VK4HR (7)		40	151
VK6KD (13)		39	149
VK3MO (5)		39	139
VK3OP (19)		39	137
VK3KX (1)		40	136
VK4EL (10)		39	135
VK2ADE (28)		40	133
New Member—			
VK7KB (30)			103

COUNTRIES LIST

There has been a mix-up in the status of contacts with Newfoundland and Labrador for which we must apologise. The true story is now that any contacts taking place before the 31st March, 1949, will be counted as an extra country for those who have the necessary card. Credit for Newfoundland has been given to those members of the DX C.C. who previously had it deducted, and the totals in the Listing have been amended accordingly. Those members of DX C.C. who have not previously been credited with it should send in the card with their next batch.

Add to January "Countries List"—Newfoundland and Labrador (2, 5) (contacts before 31st March, 1949), VO.

19th FEDERAL CONVENTION ITEMS

Elsewhere in this issue will be found the action taken by Federal Executive on motions passed at the 19th Convention. This is published for your (yes, YOUR) information, so please spend a few minutes and read it. By so doing you will see something of the work of your representatives. It is hoped also that it will be used by Divisional Councils to "cull out" the "hardy annuals."

REMEMBRANCE DAY RESULTS

As some adverse comment has been made on a paragraph in the official results regarding multiplier, it is desired to apologise for this comment (which is not the official one) but was the personal opinion of the scribe.

FRENCH ANTARCTIC EXPEDITION

After their unsuccessful attempt to reach Adelie Land last year, the French Antarctic Expedition is again on the way—with more success this time, we hope; for on board this time is CN8AO who will be the operator of FB8AX, the official amateur call. Look for them on 10 and 20 metre phone and c.w.

W.I.A. ACTIVITIES CALENDAR

Feb. 7: Appointment of Federal Councillors.

Feb. 19: 20th Convention items due at F.E.

Feb. 28: Convention Per-Capita due with F.E. End of fiscal year of Divisions.

Mar. 10: Agenda for 20th Convention issued.

Mar. 17: Annual Per-Capita from Divisions due with F.E. not later than this date.

Mar. 31: End of fiscal year for F.E.

Apr. 7, 8, 10: 20th Annual Federal Convention in Melbourne.

FREQUENCY ALLOCATIONS

The following is a list of the bands available for use by the Amateur Service in Australia, followed by the types of emission allowed on those bands.

3.5	to	3.8	Mc.—A1, 3, 3a, 5F3.
7.0	to	7.3	Mc.—A1, 3, 3a, 6F3.
14.0	to	14.4	Mc.—A1, 3, 3a, 6F3.
26.96	to	27.23	Mc.—A1, 3, FM.
28.0	to	30.0	Mc.—A1, 3, 3a, 6F3.
50.0	to	54.0	Mc.—A1, 2, 3, FM.
144	to	148	Mc.—A0, 1, 2, 3, FM, Pulse.
288	to	296	Mc.—A0, 1, 2, 3, FM, Pulse.
576	to	585	Mc.—A0, 1, 2, 3, FM, Pulse.
1215	to	1300	Mc.—A0, 1, 2, 3, FM, Pulse.
2300	to	2450	Mc.—A0, 1, 2, 3, FM, Pulse.
5650	to	5850	Mc.—A0, 1, 2, 3, FM, Pulse.
10000	to	10500	Mc.—A0, 1, 2, 3, FM, Pulse.
21000	to	22000	Mc.—A0, 1, 2, 3, FM, Pulse.
30000	Mc. and higher—		A0, 1, 2, 3, FM, Pulse.

Note.—6F3 emission represents a maximum deviation from the quiescent frequency of plus or minus 3 Kc.

RECORDING AND RE-TRANSMISSION OF AMATEUR TRANSMISSIONS

As a result of representations made to the Dept. on Agenda item 23 of the 19th Convention, the publication of the rules governing the issue of these permits is given below.

"The Department, as you know, is totally opposed to transmission of recordings from Amateur Stations but realises that, in certain cases, re-transmission of Amateur signals may produce beneficial results . . . it was intended that such recordings should be made only in cases where evident faults in transmission justified such action . . . It is proposed to re-allocate permits each September, or as a vacancy exists.

"Conditions governing the issue of such permits require, before an application may be considered, that the licencee concerned must satisfy the Department that:—

(a) he has equipment capable of producing recordings of good quality;

(b) he has had adequate experience in sound recording;

(c) he is actuated solely by a desire to improve conditions on the Amateur frequency bands (permits are not issued to enable licencees to extend their knowledge of the subject);

(d) transmissions will be recorded and played back only at the request of the Amateur licencee concerned; and
(e) no use will be made of the recordings other than as stated in (d) above.

"Applications from members of the Wireless Institute should, in the first instance, have the concurrence of the State Division concerned and all such applications should be submitted to the Superintendent (Wireless) in that State for his investigation and recommendation."

The above gives the important portions of the requirements, and the present holders of such permits in each State is listed:—

N.S.W.—No permits have been issued.
Victoria—VK3HF, H. Fuller; VK3DH, I. Morgan; VK3BU, W. Brownbill; and VK3VM, E. Marks.
Queensland—No permits have been issued.
South Aus.—VK5GL, C. Tilbrook; and VK5LK, F. Holsten.
Western Aus.—VK6KW, R. Hugo; and VK6JS, J. Squires.
Tasmania—No applications have been received.

This service is for you, so make use of it.

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Cards to hand from VS1OW (VK5SC) of No. 2 Sergeants' Mess, R.A.F., Seletar, Singapore, quotes the present QTH of the owner as 53 South Terrace, Plympton Park, Adelaide, South Australia, and requests QSLs be sent via W.I.A. Does that indicate that Syd is returning to the Adelaide QTH shortly?

Noel Roberts, ex-VK9NR, ex-VK5NR, ex-VK3NR, can be currently reached at the following QTH: c/o. ZL3MH, Foreman Technican, Harewood Airport, Christchurch, New Zealand. Noel expects to assume a ZM8 call in the early part of 1950.

The following information on MP4BAD comes from VK3CP. MP4BAD, in Trucial, Oman, expects to leave for his home QTH in England by Xmas, 1949, and requests that all QSLs be sent either via R.S.G.B. or to 6 Alder Lane, Hollins, Oldham, Lancs., England. He also suggests that all QSLs for MP4 be routed via R.S.G.B. as they go astray if sent direct to Trucial, Oman. He requests this treatment also for cards for MP4BAB, BAC, BAE, BAJ. He mentions that there is also a station in the Sheikdom of Qatar with call sign of MP4BAM, but he is active infrequently.

The QTH of MD2PJ in Tripoli is Box 66, Tripoli, North Africa. MP2PJ states he has sent QSLs via surface mail to VKs 2NS, DG, PX, TF, DI, ED, EO; 4DO, 6KU. Cards can be either routed direct or via R.S.G.B.

Full and final details of the South African International DX Contest, which was held in January, 1950, did not arrive in time for publication in the December issue of "Amateur Radio." This Contest has been established as an annual event. Logs must contain the following information: Date, time, band, call sign, serial sent and received, points claimed, multiplier and number of countries worked. Logs should reach the S.A.R.L. Contest Committee at 47 Flower St., Pretoria, South Africa, by 30th April, 1950, and must be accompanied by the usual declaration. Certificates will be sent to the winners of this contest in each country.

While on the subject of DX Contests, the writer entirely agrees with the views expressed by Bill Moore, VK2HZ, writing in a recent issue of R. & H. Bill pointed out that the growth in the number of these contests is such that there is now scarcely a free week-end in which the more popular DX bands can be used without being entangled in some International DX Contest with the resultant QRM and the subsequent time spent in compiling voluminous logs. This is a matter which might well be the subject of consideration by the I.A.R.U., as while three or four contests a year meet with the approval of everyone, the multiplicity of contests now staged annually as International events means a falling off in interest in the old established Contests.

Stations contemplating the erection of a G8PO reversible fixed or rotary beam should profit by the experience of the writer as regards the placement of the array. Two fixed 14 Mc. arrays were erected at right angles to each other and so placed that their firing directions gave global coverage. This worked out in practice equally as well as it did in theory, but an aspect that was overlooked was that the spreader of one of the arrays fascinated the bird population around the neighbourhood. During the daylight hours these feathered friends disported and preened themselves on the spreader and expressed their appreciation by caroling and chortling to some order. This gave the writer a feeling of well being which, however, was short-lived as on returning home from work one fine Monday afternoon with pleasant thoughts of a couple of hours of DX before dinner, he was met by an irate XYL who led him backyardwards to the rotary clothes line situate directly underneath the spreader. So accurate had been the aim of our feathered friends that the contemplated two hours of DX resolved itself into two hours in the laundry re-washing the objects of our friends' markmanship.

The QSL Manager will be absent on holiday during January. The Otway district will claim half of the holiday period while the other half will be spent as in previous years, in pursuit of the elusive but valuable yellow metal. Some delay to QSL traffic and correspondence is inevitable during this period.

A much travelled card has recently reached its correct destination after journeying approximately 25,000 miles. W3AOS, of Philadelphia, sent his card direct to VK5BO as an open postcard and addressed correctly except for the omission of the name of the State. After travelling around various States of Australia, it was endorsed try Ottawa, Canada, but of course not being known in Canada, it was eventually returned to the sender, who enclosed it in an envelope and sent it to the Federal QSL Bureau, for onforwarding.

Congratulations to Johnny Jones, JA5AJ, ex-VK3RG on his promotion to Squadron Leader. Johnny is presently signals officer for 77 Squadron R.A.A.F., B.C.O.F., Iwakuni, Japan, and should reach his home location by Easter 1950 after a 15 months' sojourn in Japan.

A few cards addressed to PK6XA and returned by the N.V.I.R. bear the stark endorsement—"PK6XA was murdered in Indonesia."

Stations awaiting a card from AC4NC should take fresh hope from the knowledge that a QSL is certain in due course. Chak advises under recent date that two printings of his cards have run out and he awaits a further printing and assures all concerned that a card will be sent to all contacts.

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NEW SOUTH WALES

NORTH SHORE ZONE

Apart from the lure of the beaches, conditions on the DX bands have been so poor that most of the gang except the diehards have been conspicuous by their absence. However, 2PV, 2AMB, 2PX and others have been rewarded by some very choice stuff whenever the band has opened up for a short break. 2PV has snagged OQ5, FE8, and FF8 in the early mornings, as a sample.

2TL has decided to give away 813s, finding them too temperamental, and is re-building the final using an 811. 2AND has at last given up after his 143rd push-pull 807 design, and is now using an 811 rig on c.w. and phone. 2GC still hammering away on 40 and cleaning up the shack for the 47th time—he doesn't have any more success than the rest of us! 2GQ busy counting up votes for the Senate, and reckons that after that, Contest scores are purely mental arithmetic. 2AMV is a new one on from Mosman with a nice solid signal. 2XM away at sea again, and can be heard quite often from the direction of New Zealand. 2NI has got ten metre elements on his beam, after all, snuggling down close to the twenty metre array. 2ZH, the old maestro, heard raising the fanciest of DX to his CQs from his new location—he must give away a handfull of opals to each new country worked, judging by the way they go back to him. 2AIF heard on the air again after a long absence. 2JG seems to have retired from the game altogether—believed to be taking an intense interest in audio amplifiers. 2AGN hasn't been heard for a while.

2AGW appears to be maintaining his beam service to England, in spite of the present woeful conditions. 2EO is rumoured to be getting in lots of early nights in preparation for the forthcoming R.S.G.B. Contest. 2QL is back from VK3, but tells me he has been posted to Townsville, so will be on there with a VK4 call for about two years. 2RA has been heard occasionally after rare ones in the early mornings. To all the gang on the North Shore, belated, but none-the-less sincere, good wishes and DX for the New Year.

EASTERN SUBURBS ZONE

2HP has made a comeback on 20 metre phone with a brand new rig plus v.f.o. Hopes to get among the DX again. Harold is a dinkum old-timer and past president of the Institute in N.S.W. 2TN has been active on 20 and 40 metre phone, using new crystal mike with good results. Tried some portable work whilst on vacation in VK3. 2AJQ doing extra well on low power on 20 and 40 phone and c.w. He is getting his share of the DX. 2CF has been more active lately on 20 and 40 metre phone. 2FJ is back again after re-building his final and is putting out a better signal than ever. He is anxiously canvassing estate agents for a high located piece of ground on which he hopes to build, retire and erect that super sixty foot tower.

2YF has been on holidays and as is usual with the fraternity, that means that he has found time to construct and erect a G8PO beam and hook it on his 40 foot tower. It is paying dividends and Frank is now working more DX than ever. 2KT, due to a change of jobs, Les has not been active of late, but will be consistently heard on 20 metre phone when his new mast project is completed. 2AIG still toying with his pet subject—electronic keying systems—but managed to tear himself away from it long enough to re-build his final with the resultant improved output and quality. Aims to experiment with suppressor grid modulation.

2CE has been occupied building portable gear and has been heard testing same, running about 2 watts on 40 metre phone. He aims to achieve the ultimate in results from battery and genemotor operation. The receiver in use with the portable rig is a 2/3 tube super with a sensitivity that has to be seen to be believed—but this is just what we have come to expect from Alf. 2QG heard mostly on 20 metre c.w. Phone operation invitee b.c.l. troubles. Anybody got a house in a good location that happens to need a tenant? 2BF, the Waverley Radio Club, a fairly ancient institution in this area, has a new 20 metre phone transmitter but lack of licensed operators is curtailing operations as the station is rarely heard. 2DV only seems to bob up for a brief time during festive seasons.

2NO is still bowling over the DX. Heard him about 5 a.m. one morning working Italians, French, German and North Africans after he had finished his regular chat with a string of Gs. When Don knocked off for a cup of tea he was still in great demand from Portugal and Italy. Unfortunately, like others, he just has to work for a living so it was a case of "big switch." 2AX is considering another re-conversion of the AT5, using 50 watt pentodes in the final and suppressor grid modulation. Activities have been curtailed lately but always seems to make the grade for the usual 40 metre phone fraternals on Sunday mornings.

2AHQ would do better if he would transmit his seasonal greetings over the air instead of sending cards. Hasn't been heard from for months. We know Hams with more than three harmonics who still get on the air, even if there is a prominent background. How about it, Ted? 2AFZ seems to have disappeared lately, same applies to 2AHJ. 2AZH active on 20 metre phone with excellent results from grid modulation to an 813.

NORTH COAST ZONE

It was a happy Xmas this year, everyone seemed to be enjoying themselves and quite a number of portables were active. It was very pleasing to hear the gang exchanging greetings in the true Ham spirit. Conditions on the North Coast have been marred by heavy QRN, storms nearly every afternoon and night. 2AJB is on again, now off the relieving staff and should be heard often. 2JK off until he completes the emergency gear, won't be long now. In his spare time Jack has been practicing trading for yabbies, getting ready for his challenge issued to 2KR and to be held at the next Urunga Convention. 2OE, 2SR, 2GI, 2WQ, 2TB, 2EA, 2NY, the Clarence gang all active over Xmas. The Richmond River gang conspicuous by their absence. What's wrong up there Doc?

2RK been on since his return from holidays with nice QRP signal. 2ARY, 2AAP, spending few weeks in Sydney and will be looking over the junk. Harry hopes to bring back a tape recorder for the Urunga do. 2XO lost all his antennae in a 100 m.p.h. blow. 2ASF and 2ZS active on 40 and had visits from the "Coon" of Coonamble. 2ACU and a few 807s loet their emission at the local during his stay. 2SH heard on 40 announcing he had caught a bag of bream. Doug always comes on 40 and tells of the "whoppers" but hasn't been on 40 for three months so the fish must have been off at Port Macquarie. 2PA chasing DX on 28 Mc. and getting amongst it. 2AWS just erected a new antenna with improved results. Emergency network forms have been sent out to the gang, but so far the needed information has not been returned to 2PA. Please give it your attention so the net can get off to a good start early in the new year.

A big programme and plenty of entertainment has been prepared for the 2nd W.I.A. North Coast Convention to be held during Easter week-end, 8th, 9th and 10th April. Come along with the YF and harmonics and join in the fun. There will be a surf carnival, motor bike races, dances, fireworks display, picture shows. For the Hams a lecture, competitions, 144 Mc. hunt, plenty of prizes. A highlight will be the yabby catching contest. 2JK's challenge to 2KR carries a side wager of £6. We were sorry to hear that 2KR fell down a grease trap during the Xmas festivities ruining his best suit in the process. 2XO has the Urunga Hotel booked out for the Easter Convention, so please let him know as soon as possible if you require accommodation. Hotel expenses 18/- per day. If you like to camp, bring a couple of rugs and stop with the boys, you can eat out in Urunga. A number of Interstate visitors are expected from VK4. Get your portable gear ready and join in the fun. Incidentally the night after 2KR was in combat with the trap, somebody was heard on 40 calling "Willie Pong." Cheers and wishes for 1950 from the North Coast gang.

HUNTER BRANCH

Poor conditions plus the frovolities of the festive season probably accounted for the reduced activity of the month. 10 metre "reliables" 2FP and 2AFS

still working choice DX—new countries scarce though. Believe Bob just has his noise in front, he must have read last month's notes. All members wish to congratulate 2KB on his success in the last Federal Elections and hope you can still find time for a little Ham Radio Allen. 2AMM has at last finished the new shack and working 20 DX with fixed beam. 2PT on 20 occasionally. Bill 2CW was unfortunate to be taken to hospital recently, but got home for Xmas and is OK now. Had the pleasure of seeing the new rig at 2XT's, about five stages ending up in a 813, very fine job too.

2FX inactive but thinking of going underground with rig, no room in garage—that car must be very big Frank. He is now at b.c. station with 2ZC, 2AHA and 2KG. 2ANA back on 40 again with that nice signal. 2LV has the best phone we have heard from him yet on 40. 2UY has the big Rx going, can throw away the 0-V-1. 2CS putting S9 signals into radiograms now, but works a few Gs on 10. Congrats to Bert Watts who received his call at last—2CN. 2AGY not very active but enjoyed his first field day at Woy Woy. Fred does not get many Sundays off. 2PQ still very strong in Europe on 10. 2TB concentrating on 10 and 20 DX. 2CN incidentally active on 40, but could do with a bit more modulation. CW merchant 2XY still working 20 and 40 with fine signal. 2NX still crazy on flying, the c.w. practice receiving little attention. Congrats to 2OS and 2ADS for working VK6 and ZLs on 50 Mc. 2UF putting nice signal across to VK6 but can't hear them. 2BZ looking for real DX on 50 Mc. and looking cross-band to 144 Mc. a lot. 2ANU of Muswellbrook on 50 Mc. with 4 watts, working through to Sydney—a fine effort. 2KQ very pleased with new beam on 50 Mc., 42 feet high, hears Sydney well now. 2ANL also on 6 with strong signal. The Rx at 2KG is looking nice now, glad the jnr. op. OK. 2AGD been batching while XYL in hospital, hope all the worries are over now George; has new freq. meter-phone-c.w.-monitor, all in the one box. 2ZC had great holiday at Forster, very active especially on 40 with the portable rig in the caravan; 2ZS was there too and both caught plenty of fish.

Not a lot of news from Maitland, but 2TY getting out well on 6. 2ADX only heard on 10 working Gs. 2AKP popped up on 40 with a nice signal, like a QSO Vic. 2DG chasing DX with good results as usual. 2VU, of Singleton, on 50 and working plenty of ZLs; gets out well on that band. Missed the associate members from Maitland last meeting, hope the code machine is going OK. Still hear Gordon 2CI on 40 metre phone, works 2WP often; while George 2SO is on 40 c.w. 2AHA nearly made history—the old zepp worked VK6s and ZLs on 50 Mc. Thanks to 2AFS, 2FP, 2ANA and pals for assistance in putting up big beam pole, 45 feet high and location 120 feet above sea level. 73 till next month from the Hunter boys.

COALFIELDS AND LAKES

Activity has been limited due to the holidays and plenty of the gang should be on again by the time these notes appear. 2KR is very regular on 7 Mc. and listens for the gang on 50 Mc. 2AEZ doing good work on 50, must have the beam going Ern. 2AMU on 50 too, Len has a nice rotary. 2RU amongst the DX and had a sort of QSO with VR2BC. VK8s and ZLs are only locals now. 2KF always building something, but finds time to get on 10 metres. 2KZ still the "W King" on 10, but still in trouble with Delaware; what about that 10 W.A.S. in 1950 Max? 2YO, 2PZ, 2MK, 2ALR, don't seem to be active. 2ADT generally under the car when the DX breaks on 50 Mc., but getting his share of Interstate and ZL stations. Tests regularly with Sydney and Newcastle on 144.

2YL, another one on 6, doing well with ZL and VK6, also on 14 Mc. 2VU mainly on 6, ZLs no trouble; Geoff will be going on holidays soon. 2ANU a newcomer to 6, running from vibrator supply, located at Muswellbrook. The Newcastle and Coalfields gang were favoured by a visit from 2AII, 2VW, 2HO, 2MQ, during the new year holidays. The v.h.f. gang certainly get around.

SOUTH COAST AND SOUTHERN

The Xmas party held at the Wollongong Club, 2AMW, attracted many. Lots of toasting and resultant deep voices and sore heads next day. Bill 2WP has forsaken the big bottle for an 807, and now gathering the bits and pieces for new rig. 2AMW on 20, but not much DX to date. 2PM at Canberra on 40 with BC459A using 6J7 and 6V6 to modulate same, built into xtal and magic eye space, also converted one of these for 2TV who is in hospital. 2PI has small rig going nicely and new xtal mike made all the difference. 2JQ introduced his brother to Ham Radio. He was down there for Xmas. 2GU, 2TA, 2TC and 2PN are all active on 50 Mc. and they are all doing well down there. Another Ham will be on soon, an Bowning, an ex-commercial op and is located at the hotel. 6V6-807 the Tx, and with an AR8 will operate c.w. for the beginning. 2OY has acquired a BC348, also had an AR8 that had been through the hands of the U.S. dept. but with the aid of an axe managed to get it into shape!

2AJP very busy man re-wiring one of the alternators at Burrenjuck Hydro. 2ALS spending holidays at Manly, has new half wave 80 metre antenna, which appears to cut out the b.c.i. 2AKE been over at Bathurst and spent few days there. Jim has nothing but the highest praise for 2NS' gear. From 2VS in England comes the following news: "Ham Radio is the same wherever one goes and the Os certainly made me welcome over there, one loaned me a Rx. The 160 metre or top band is the most popular for local chats, 80 metres is popular too and 40 is like the American phone band on 20 when conditions are good. A.O.C.P. examinations are held once a year and licence fees are 10/- a year for 10 watts, £1/10/- for 25 watts, and £2 for 25 to 150 watts. I have been to many society meetings (R.S.O.B.) and also visited the H.Q. Amateur Exhibition, a week was spent at 'Radiolympia.' I hope to contact the VK gang through one of the G stations. Disposal gear is very cheap, SCR522 £1/17/6, BC348 £15, 832 tubes 10/-. The many t.v. antennae around London gave me the idea that every Ham was on 6 metres! All the best to the gang, especially to those at Canberra."

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VICTORIA

MOORABBIN AND DISTRICT RADIO CLUB

The December meeting was held on 6th at the club rooms, and a very large membership was present. The President (VK3KE) occupied the chair and in the absence of the Secretary (working), the Assistant Scretary read the minutes. A welcome was given to a number of visitors by the President.

A very fine lecture on the Cathode Ray Tube was ably given by Len Jackson (the "Lenfo" beam expert), ably supported by John Dawes and Ed. Manifold (3EM). These gentlemen brought all the gear and after questions were asked and answered, a vote of thanks was heartily passed by all.

Application has been made for a transmitting licence; also for membership with the W.I.A.

The next meeting will be held on 7th February, when films will be shown.

CENTRAL WESTERN ZONE

Amateur Radio lost a good friend and the Bush Fire Nets a regular station, with the sudden passing of Joe Graham, VL3KR, at Ararat, just prior to Christmas. We shall miss him at the Conventions (especially those quiet little stories of his). To all his relatives and nearer friends, we offer our sincere sympathy—"he was a good scout."

V.H.F. activity stirred slightly in the zone during the month with a cross band contact on 144 Mc. between 3DP and 3AKP. Jim had the Tx and Keith a super-regen. Now the stage is set for that endless quest of bigger and better sigs., antennae, and what have you—we certainly are a restless lot.

Our newest Ham, VK3AJO, is busy building up a nice flash transmitter. John wrecked the AT5 and is busy on a rack and panel job relay controlled and with fast approaching holidays, Stawell's b.c.i. should get progressively worse. 3AKW now has the re-built RA10 going and finds the double conversion to 100 Kc. very nice indeed.

For the information of other zone members, it was decided at the last zone hook-up to build a combination power supply for the Bendix freq.-meter, 6 volts d.c. or 230 volts a.c., so that it can be used on the farm or in the towns.

Just in case it may have slipped your mind, zone hook-up is on the second Sunday of each month at 10 a.m. on 7150 Kc.

SOUTH WESTERN ZONE

3IO reported on sick list, has however been working a bit of DX on 20 metres. 3APG broke the silence by coming on recently with a power of 20 watts. He is going to reconstruct his G8PO beam. 3ABK will be leaving for a while but hopes to be able to get home each week-end. 3BU has been working on 6 metres, also 3AKE. 3CM has been quiet lately, perhaps he is thinking of going QRO and studying it out. 3ALG worked VE1GG on 20 metre phone, his first DX phone contact. 3ABE and 3AJT have been working on the 20 metre band on phone. 3AJT heard putting out a very f.b. sig and got 40 db over the 9 from a VK4. His four element beam is on the way but believe he is using a doublet with 60 watts input.

Quite a bit of portable work was done over the holidays. 3BU took his gear away and 3ALM using his ATR2B at Torquay with a nice signal. Using that dog-leg long wire Lloyd? 3ASV and 3HW chasing fish and YLs at Wye River without success!! Heard 3WT working a KH6 and getting nice report, using the big rig Bill? 3AJT has been in the Western District with 3AKR and understand the car gave trouble John. 3VA visited Geelong but found most of the boys out.

Hear 3UT getting his share of DX. Vee beams seem to work OK Wal. 3AMH has two element beam up and getting good reports. Still can't work all he can hear. G3AEA visited 3AMH on way to motor-bike races. No doubt about the beams for catching the eye. 3HW mumbling about a couple more reflectors on the present four element beam. That is all for this month boys, if your name is not mentioned, it is your fault.

NORTH EASTERN ZONE

Once again your scribe (3YV) is faced with the problem of compiling notes for this column and once again his appreciation of John Miller's efforts in the past is very high. Over the past few weeks very few of the zone boys have been heard on 40 metres, maybe it's the holidays, maybe DX on 20 or 10, or maybe it's the v.h.f. bands; whatever it is, no one has reported any activity.

Several contacts have been made with ex-zone member Doug of 3DW, who is emitting a fine signal from Woodend and appears to be quite happy down there; best regards from the zone Doug. 3YV has completely re-built his speech amp. and modulators, the line up now is: 6J7, 6L7, 6N7, with 2A3, driving 809s. 3JK landed an 18 and a 5 pounder (Murray Cod) and is still chasing them. 3KR still the zone's most active Ham on 40 metres. 3YV gave his shack a grand clean out for Xmas, also had a visit from 3ZP.

3KR has again erected his W8JK beam and is having lots of fun with DX on 20 metre c.w. 3HP has prohibited all bush fires in his area until after the harvest. 3YV spent a few days holidaying in Ballarat early in the New Year where he met 3GR, 3MH, 3BE, 3ALN, 3ABI, 3DS, etc. His thanks go to Bob, 3GR, for showing him around. 3ACW paid a visit to 3KR on New Year's Day. All members of the zone wish to convey their deepest sympathy to Tom and Jack Speer in their recent sad bereavement.

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QUEENSLAND

The news from Divisional Headquarters this month is very scarce. Owing to the very poor conditions prevailing on the 7 Mc. band, little has been heard at this location of the 4WI broadcasts. It appears that little business has been done owing to the fact that Councillors have been otherwise engaged at Christmas and New Year festivities.

By the time these notes are read the financial year of the Division will be at an end. Once again members will be called upon to elect a new Council. During the past year there has been a lot of criticism, just and otherwise, of the work done by Council. Some of the old Council will not be candidates for the new Council as they have found, like previous Councillors, that their efforts have not altogether been appreciated. It is well to remember, that these jobs have to be carried out in spare time and unless one is prepared to sacrifice his domestic ties, the spare time at his disposal is not enough to carry out the duties to the satisfaction of most.

It is sincerely hoped that each and every member will give his ballot paper careful consideration, and we remind all that it is not only a privilege but a duty of each member to register his vote. It is further hoped, that greater interest will be taken by more members in the official duties, and thus obviate the saddling of a Councillor with more than one duty. We would like to remind all members that subs. are due on the 1st March, 1950.

The outstanding features of the work done by Council during the past year were the establishment of an Emergency Network, the introduction of C.W. Transmission of Morse Practice over 4WI, and formation of a Technical Committee. Membership shows a slight increase of approximately 30 members.

ZONE NEWS

Mackay (4KW).—4EW has moved to Brisbane. 4BJ is a new Ham and is on 14 Mc. band with low power. 4BQ is preparing to move to the country and has built up a genemotor powered job for the new QTH. He has been active trying out the new rig before he moves. 4KR now has a 50 ft. steel tower and is building the boom to go on top with a four element on 20. 4FH once again shifting to a new QTH, believe John is going to give 4KR some QRM. 4MA has been active after a long recess and has been heard the last few weeks on low power.

4AM now installing a v.f.o. Visitors at Mackay during the first part of December were 4MV, from Brisbane, and 4BJ from Bundaberg. After many weeks of poor conditions on the 14 Mc. band and thus being unable to maintain the weekly skeds with 4KW, it was due to short skip on the 28 Mc. band that we were able to contact the zone manager 4KW, and so once again put the Mackay zone into the notes.

Townsville (4GD).—Here again short skip enabled us to contact 4GD on the 28 Mc. band. QSB prevented us from getting more than one item of news, that being that 4RW is now using a two element rotary beam on 14 Mc. fed by 75 ohm ribbon.

Bundaberg (4XJ).—4UK has recovered from his illness and doing very well on 7 Mc. band. Frank is not satisfied with his band-switching rig and may change over to plug in coils. Our old zone manager, 4BJ, has given radio away for the time and has sold out all his gear. We believe that Jack, 4CW, has a shack full of surplus gear now, and has found time to erect the 4BJ tower in his own back yard, and hopes to have the beam going soon. Heard 4HE on 7 Mc. phone from the new QTH. 4XJ settled back in Bundy and heard working some nice DX on 10.

Gympie (4HZ).—4CR very quiet lately. 4XR has a rotary folded dipole doing yeoman service, however we believe Eric has some dural for a new beam. 4LN playing around with a DR106 converted to the 7 Mc. band. 4RA has a new harmonic. 4HD is torn between two desires—one to keep an eye on the 6 metre band for that big break through to the Ws, the other to work all the DX coming through on the 28 Mc. band. Judging by what we have heard at this location, you have been kept very busy Max working the Yanks on 10. 4HZ has an extended double zepp, which Jim is thinking of extending into the 8JK beam. Nice work Jim, working the Yanks and that XZ on 20.

Darling Downs (4CG).—About the only item of interest is the 6 metre band. 4ZN and 4CU are getting their share of the 50 Mc. openings. The 14 Mc. band has been off at night, only stations being heard were VK3, VK6, and Asians (especially the Ham Band Commercials). During the month, 4CG worked VP1, TA3, EA, DK, AP, and the usual DX. The 28 Mc. band has been good with Ws and VEs in the morning and patchy openings to Europe at night. 7 and 3.5 Mc. are useless most nights. 4DA and 4RF inactive. No news of 4KK. 4WY very active on 7 Mc., particularly in the mornings.

Brisbane (4EL).—4RC, with a new exciter unit (6V6, 6N7, 807), put up a huge score in the CQ Contest using all bands and 35 watts. 4GB installed a brand new 813 in place of the p.p. 834 and is doing well with the DX, heard a lot on 28 Mc. 4GE, welcome to Brisbane Ernie, noticed you calling CQ on 28 Mc. Will be interesting to see how the new location compares with that Mango and Grapefruit Grove up in Townsville. 4FJ has been mighty busy knocking over Europeans galore, with a nice new three element beam. 4AP, as is usual these days, piling up the DX due mainly to the excellent antenna arrays used. Alf goes into the antenna business thoroughly and keeps careful record of the various types used. The latest, a three tier stacked array of multi-elements, enables him to work DX that can't even be heard by any one else. Nice work Alf!

4GJ is heard with a beautiful T9X QRI that is emanating from the good old Clapp oscillator. 4RT was heard on 28 Mc. with nice quality phone and also heard on 7 Mc. phone. 4EN is threatening a "come-back" on all bands, so hurry up Eric, that familiar copper plate fist is missing as a good example to the boys. 4HR, old Tibby, was heard talking of trying the new "frequency modulation" with just a 1N34 diode and a mike for the modulator. 4EL was first reported to be a commercial in the 7 Mc. band recently, but turned out to be old Eric knocking over Ws in the recent "CQ" Contest, at a terrific rate, and is believed to have scored 5,000 points on 7 Mc. alone. Eric has just completed his 290th QSO with G5ZA. 4KH, everyone will be glad to hear that Bill is slowly recovering from recent "toe" trouble, and after leaving hospital minus a "big toe" is well on the way to recovery. 4JA has built yet another receiver and is talking of beams of the rotating type, running 50 watts to an 807 final plus a Clapp. 4XG seems to be doing very well with his "plumber's delight," knocking over Europeans on 28 Mc.

SOUTH AUSTRALIA

The monthly general meeting for December took the form of a Xmas social and to say that it was a success would be a gross understatement. 5LW, who shouldered the main job of organising the social, deserves all the praise that has been bestowed on him by those present. The function in previous years has always been of a joint nature between the W.I.A. and the I.R.E., but this year it was only the W.I.A., the I.R.E. having held their social some time before. Incidentally apologies were received from Mr. Tyrrell (President) and Mr. Govenlock (Secretary) of the I.R.E., regretting their inability to attend. A short resume of the night's doings will not be amiss, and with Ross Kelly as compere (and an S9 plus 42 db one at that) the social started off with a bang. The toast of the King was proposed by the President (Hal Austin, 5AW), and that of the visitors by the Secretary ("Doc" Barbier, 5MD). "Doc's" experience in welcoming visitors stood him in good stead in this case, that's what Ross said anyway. The Chief Radio Inspector (Mr. H. K. Burbury) responded in a very pleasing manner to this toast, and stressed the amiable relations existing between his Department and the Amateur. The toast of the W.I.A. was proposed by Dougal Whitburn, 5BY (and who would be more fitted to do this), and the President responded with an excellent speech. The show was kept going at top speed by Jimmie Mundy (comedian), Mel Whitbread (piano accordeon), and Ted Jobbins (magician). The tucker was excellent and everybody left for home more than satisfied with the Xmas Social of 1949.

My spies tell me that some of the VK5 boys were discussing recently as to whether the Xmas social should be wet or dry, and 5QF very dryly said, "why not hold two Xmas socials, one for the wets, and one for the drys, complete with a Xmas tree with pretty lights for the drys. Very subtle, very subtle. Owing to the call of duty I was unable to attend the social, and I was very sorry to miss the magician, as they tell me that some of his tricks were a knockout, especially the one where he plucked rabbits out of the air, and hares from somewhere or other. I always miss out on the good things.

The approach of the Festive Season, plus the very ordinary conditions existing on nearly all bands apparently caused the average Ham to desert the air, and consequently I have heard very little gossip this month, although 5JW seems to care little for conditions or the Festive Season, because every time that I switched on the receiver he was in

contact with somewhere or other. He is fast assuming the mantle of 5JS. Another one who always seems to be on the air is 5WF ("Inky" to you), who seems to have more tests to conduct than an English cricket eleven.

5LW and 5GF went off to Cape Jaffa again for the Xmas holidays and mixed radio (on 40 and 6) and the crayfish with varying success. Was in QSO with 3BH (Charlie) the other day, and he spent quite a while in telling me that he always read the VK5 notes, and he also said quite a lot of nice things about the bloke who writes them. I was so overcome with modesty Charlie, that I was not game to tell you that I was the culprit, but thanks anyway, although I bet you say those nice things to all the scribes you meet.

Well my cup of happiness is filled to the brim, why? Because the Editor of this magazine sent me a Xmas card. Talk about walking on air, why I wouldn't change places with a king. Just to think of it, a lowly person like me receiving a card from such a high personage like the Editor. Jokes aside Tom, many thanks, and the wishes are reciprocated heartily, although I must admit I am looking for the hidden "crack" connected with the front page, hi, hi.

Listening on the air and from conversations with other Hams that I have had, convinces me that we are a very touchy mob of chaps. Praise our signals, pat us on the back, fill us up with all the heifer dust that you care to dish out, and we will reckon you are the best fellow in the world, but, and believe me it is a big but, just say the slightest word about our overmodulation, our asinine habits on the air, our general selfishness and lack of consideration for the other fellow, and look out, we will pick up pen and ink, and in an endeavour to alibi ourselves out of your accusations, we will descend to any depths. The "Old Man" has probably discovered this peculiar fact by now, and while I hold no brief for him (if he blisters me for splatter or something, I will cry pistols or swords with the loudest of them), I think even his worst critic must admit that his little bit of philosophy in the last month's issue was a gem. Nothing that we haven't heard before, but expressed in such a sincere manner, that we must concede him he certainly knows his amateur radio. Giving him all this in, if he dares to print anything about me, I will sue him, I will write a letter of protest to the Editor, in fact I will even deny whatever he has the audacity to accuse me of.

5XU, our genial Treasurer, has resigned from the Education Department and will take up the position of science master at Prince Alfred College in the new year. Gordon is one of those serious minded coves who tackles all and any jobs with determination and sees them through to the bitter end, and deserves any break that comes his way. Best of luck in your new sphere Gordon, and at least I can always say that I knew you when! Incidentally, have they a pipe organ or a wurlitzer at Prince's, you little devil you.

5WM, the man with the pipe, is sporting a little beaut at the moment, it reaches down almost to his knees in a series of curves and twists, and does it pong? Well, as he walks down the street, strong men faint, dogs howl, women clutch their children, and quite often the police call out the fire brigade, fair dinkum.

Speaking of "The Old Man" earlier, and his philosophy, reminds me of that one time stalwart of Amateur Radio, Mayo Richards (5WR). Mayo has long since passed on, but I remember one night after a general meeting, a bunch of the boys were debating out on the footpath as to which was the most important, the aerial, the receiver, or the transmitter. The agrument waxed fast and furious and at last we appealed to Mayo to settle it. In his usual quiet manner he just paused, and then he said, "which is the most important leg of a three-legged stool." The argument came to a sudden stop, and several loud-mouthed individuals went home convinced that there were many sides to Amateur Radio beside their own.

Members of the Advisory Council in all States attended their last meetings this month (December) and even if no obvious results of their work are visible, the average Ham should feel very pleased that a body of fellow Hams have been prepared to give up a good deal of their valuable time to act as buffers between them and the Department. Personally, I make the suggestion that next year's Council consist of all the Hams who have, at some time or other, belittled the work of the Advisory Council. Better we get a "Pro-forma" from the Council, than a kick in the pants from the Dept.

My old sparring partner, 5BZ, has been reported as being a little off colour, but I met him the other day and I am pleased to say that he was looking quite OK again. Glad to see that you are sparking on all six again Cec. 5LR is on holidays at the moment and is mixing gardening and swimming at the time of writng. Jack was Father Xmas at the 5DN staff party recently and did a great job. He told me that he had brought me a pony for Xmas but it had got away from him and he was sorry. He even produced a cardboard box with the proof that the pony had been with him for a little while, but I still don't believe him. Anyway what would I have done with a pony. Don't answer that.

5JA was very surprised on the morning of 4/12/49 to hear some VK4 sigs on his six metre receiver which were R5 S9 at times, and John thinks that he also heard some VK5 sigs as well, but they were too weak to copy. 5MS when last heard of was busy getting enough tubing together to make a 20 metre beam. Not another aerial Stewart? 5KU has been getting the most out of his 10 watts input by working Yanks on 40 metre c.w. Nice going Erg. 5FD has only been on the air since shifting to his new location, about three times. This shifting business takes time, doesn't it John. 5TW has been building new test equipment and also had the misfortune to lose his "cubicle quod" in a recent storm. What did you say Tom? 5CH has just built a new frequency meter and has the job of calibrating it in front of him. Claude's new transmitter is at last finished so the QRM should increase now. 4CJ, who is my highly paid spy from the South East, is a proud father, an 8 lb. 14 oz. son, born on polling day. The only information that I have not received is the harmonic's name, what about it Col. One of his "friends" suggested that he would probably work a lot of DX in the early hours of the morning. However, both father and son have so far shown a decided liking for sleep, although time might show up any variations. Congratulations Col., glad to know that you came through such an ordeal with flying colours. We fathers certainly do have a trying time! Talking of fathers, I must let you know that "Pop" Deans, 5LD, is also the proud possessor of a fine bouncing boy, to wit, William Ashley. Congrats Launce.

Heard Bert Winter (5DR) on the air with telephony on 40 metres the other day, welcome Bert, and hope that we meet up some day.

I have always had a nasty suspicion that the Secretary and the President of the VK5 Division of the W.I.A. sometimes tell little white lies, and at last, after many years of checking up on their statements, I am in the position to produce infallible proof of their double dealings. I realise that this statement is a dangerous one, but I am going to stand by it. My proof is a written one and can be checked up at any time. According to them they were invited to the I.R.E. Xmas Social, and I have their word that they were definitely present, yet in a prominent trade magazine is a write-up of the gathering which includes a list of the important guests, and are Hal and "Doc" mentioned, no sir, they are not. If they had been present, don't you think that the I.R.E. would have said so, no sir, they wouldn't have, I mean yes sir, they would have. Do you require any more proof? Take my advice and vote for Parsons the Perfect President. I say I am terribly sorry, the recent elections seem to have carried me away. My apologies fellows!

Dr. Ross Adey (5AJ) left for England recently and our good wishes go with him. He is a real good scout and we are sorry to see him leave VK5, although we will have the privilege of working him under a G call, we hope. During his sojourn in G land I will endeavour to reduce my girth, and when he returns he will not be able to tell me that I am a sitter for "vernier" or something.

They tell me that a certain picture theatre out at Prospect gave its patrons quite a shock the other night when right in the middle of a passionate love scene the heroine, instead of saying indignantly "NO" to the hero's blandishments, said instead, "hullo VK5ZL, hullo VK5ZL, this is VK5MK calling VK5ZL." This went on until the audience, having had all it could stand, started to wander out into the vestible which, by the way, was covered in hair, the said hair having been torn out in great chunks by the hysterical projection staff and management, to whom the mere mention of the words, "Radio Amateur" is sufficient to cause their blood pressure to rise to 46 db over S9. How could you Ron?

Had a visit recently from VK2ANR who seemed to be enjoying himself in the fair city of Adelaide. He was shown over the best broadcasting station in VK5, met the rest of the gang who were on duty, and then came upstairs to the workshops and chatted to us whilst we toiled at our various highly skilled experiments! He seemed amazed when the office boy arrived to throw water on my face to revive me because I had been working too hard, although I assured him that this was not always necessary as I often came around unaided. Norm seemed a good scout and we were all very pleased to meet him. We tactfully searched him as he left, to no avail, as our lathe is still missing.

5XK writes to say that there has been an increase of one hundred per cent. in transmitters on Kangaroo Island, his own and that of Bert Winter, to whom I referred in an earlier paragraph. Arch, and many more of the boys mentioned the call sign of 5DR and the station at Darwin, but I made a few discreet enquiries from a reliable source, and was informed that it is quite possible for a broadcast station and an Amateur to have the same call, but the broadcast station does not have the prefix VK. All right, you make some enquiries. Thanks for the greetings Arch and Bert, what about putting me in on those W and VE contacts that I hear giving you R5 and S9. Don't be greedy Arch.

Haven't heard 5LH lately, we will have to start the Bureau of Missing Hams working on the mystery. 5AX has gone to Mt. Gambier for a trip, so we might hear him from one of the South East boys' shacks. 5AP is very busy making up a new receiver which, from all accounts, is going to be a "sooper-dooper." Heard 5RJ tied up in the Northern Net the other Sunday, and his mike cable was tied up in a youngster's playground and it was being dragged all over the room, much to the said youngster's enjoyment. 5MA is also busy putting up aerials, possibly with the idea of cornering some of the DX I hear about, but seldom see. 5UX was heard portable on the River Torrens with a Type 3 Mk. II. with an extra good signal; nice work Les. 5PH has a new 12 tube Bendix receiver. I'll bet that took a few notes off of the cornet, Perc. 5VM is also reported as a missing person, therefore he cannot be given any publicity this month. Many thanks Perc. for the notes, keep up the good work.

Jack Coombe is spending a holiday at American River and is using a portable with the call sign VK5MR/P, and this makes three transmitters on Kangaroo Island. Quite a gala month for the marsupials (very funny, very funny). Was snooping the other night trying to glean some news from the c.w. boys and sat in on a QSO between 6WZ and 5MD. Nearest approach to commercial working that I have heard fellows, but the part that I liked was the remark that the better three quarters of 6WZ was a keen reader of mine. My salutations and other expressions of goodwill to Mrs. 6WZ. I received recently a QSL card from 7RM in which he accused me of being the "Old Man." Rupert have you forgotten that there is such a thing as the law of libel. The only thing in your favour is that I have been accused of that several times lately, and therefore I take the opportunity of now publicly denying such an aspersion. Convinced "Roop."

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WESTERN AUSTRALIA

There having been no December meeting of the W.A. Division, there is naturally little to comment on from official quarters. From observations on the various bands over the festive season it would appear the majority of VK6s had an enjoyable time at Xmas. As we are beginning a new year in Amateur Radio and it being the usual time for formulating resolutions, we may or may not adhere to, the following observations may be considered relevant.

A considerable number of Amateurs these days are keen participants in a headlong race to qualify for admission to that exclusive fraternity having as its entry fee confirmation of contact made with Amateurs in a hundred different countries. While this is a laudable ambition providing a deal of satisfaction to the persons fortunate enough to make the grade there are some who take it just a bit too seriously and cannot waste time in a QSO in case they miss a "rare one." Their QSOs follow a boring pattern of "RST pwr. wx. pse. QSL and 73." They are always in a hurry to squeeze in a few more QSOs while the band is open. In this way they miss a deal of the satisfaction to be derived from getting to know the personality behind the call sign. A little time spent in really making the acquaintance of the Amateur himself and not just the call sign adds enjoyment to this hobby of ours. As to the coveted 100 countries, they'll mount up in time. Anyway when you have them, what then? Probably you'll set to and start to have a few real QSOs!

PERSONALITIES

6RU busy settling down in his new QTH, couldn't resist the urge for long. Without waiting for that beam, Jim hooked his 813 to the clothesline and landed an AC3. Did it dry the clothes faster Jim? Another experimenter at heart is 6PJ. He tried dropping his xtal mike—it didn't bounce! Also minus a xtal mike is 6RS, due to an over inquisitive junior harmonic making a reconnaissance around the shack.

Ever-popular ten metres has a good gathering of locals these days. Included are 6LL, 6CM, 6JW, 6NL, 6LM and a few spasmodic visitors. Heard 6FB being answered on ten so he hasn't given the game away entirely. A highlight of the six metre activity was 6DW's fine effort in contacting ZL1TO. Nice work Don. Apparently the a.c. has reached Bruce Rook as 6DW has high power on all bands now.

Breaking a long silence, 6AK was heard exchanging seasonal greetings with the gang on 40 metres on Xmas Day. 5WZ tried to do likewise but found he could transmit but couldn't hear them. Finally tracing the trouble to an open in his ribbon feeder, Harry had to wait for several days till 6CN arrived and between them they narrowed the break down to six inches, then scrapped it. After a long spell of brass pounding, 6FA has installed cathode modulation for Xmas. 6WO broke the 7 Mc. silence from Albany on Xmas Day with tales of great doings on six metres. 6QU's receiver

is headed for a re-build so 6JP has stepped into the breach and loaned John another. Talking of 6JP 'tis said Jack has gone high power! Now squeezes a full 15 watts from genemotors running on a newly installed 32 volt lighting system. Jack is not sure whether to be pleased or sorry that the a.c. line finishes a mile short of his QTH. At least while most metropolitan VK6s are victims of that hour of power racket, again he can boast continuous power.

A newcomer heard on 7 Mc. is 6BP with 50 watts of f.b. plate modulated phone. A strange small voice calling in the wilderness of forty was finally identified as 6MY. Glad to hear you about again Mal. Another who could also be almost classified a stranger was 6MG putting Manjimup back on forty. Said to be haunting shacks in the Perth area is 6DX of Kalgoorlie. Hope you enjoy your stay this time Bill. Heard at intervals on various bands pursuing their favourite hobby have been 6MK, 6KW, 6EW, 6RK, 6BG, 6HW, 6FW, 6ND, 6GS, 6WU, 6YZ, 6AS, 6SA, 6RW, 6CF, and 6DD. So long chaps, see you next month.

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TASMANIA

At the General Meeting held on Wednesday, 7th December, present were Messrs. Jensen (in chair), T. Allen, F. Gee, D. Watson, M. Watson, Millin, Evans, Richardson, Fulton, Anderson, Sidebottom, Porthouse, Brown, D. Davis, D. Smith, Hall, Cannock, Cruise, and Allanby. Apologies from Messrs. Clarke, Excell, Barker, Nicholls, Oldham, A. Allan, C. Walsh. The lecture given by Mr. Max Sidebottom on Selsyns, Gunsights and what have you, was much enjoyed by all and was interspersed with numerous humourous anecdotes (that's putting it politely).

Geoff Clarke, 7TA, was voted into the temporary position of writing these notes, and also in company with Max Sidebottom (it's that man again), was co-opted into performing on the Social Committee to organise the Annual Dinner, etc., which will take place on 4th March, at 7.15 p.m., at a certain restaurant one floor below a certain b.c. station at 82 Elizabeth Street, Hobart. Collections of five bob a head will be taken any time between now and dinner night or then no cash, no dinner.

January meeting lecture was by Mr. Allan Morrisby on 144 Mc. gear and the additional display of gear really got the lads in. Looks as if two will at last become active (we hope). 7BM and 7AJ assisted with their own findings.

ANNUAL STATE CONVENTION

All Northern and Country Members are requested to contact 7OM, 7SK, 7TA, or their Divisional Secretary before 18th February. It's your own fault if you miss out.

POISONALITY PARADE

I haven't slept too well after last month's effort, but here goes again. From 7OM, he worked VK1AJT, Macquarie Island on 14 Mc. phone. John was having hum trouble. When it disappeared later, Bob called him up again and reported it. John has v.f.o. controlled rig and is on various parts of 14 Mc. band with no particular place of abode. Was intrigued to hear that we had snow on mountain, as temperature at time there was 75 degrees and weather calm.

The month's visitors included VK5NV and VK2ARG/ARC Mobile. Former hails from the Garden City, but although I had a yarn with him I can't even remember his name, though could run through his rig for you if needed. He and his XYL were vacationing. The second visitor, Bob Bodsall, is the well-known six metre DX man, and after quite a chase, 7DH and 7AJ ran Bob to ground in the taproom of the poshest pub in town and got the inside gen on v.h.f. doings in VK2.

Local DX. Well Joy, 7YL, was heard calling CQ 20 on a practically dead band, when back comes YV5AZ. Some of you married men had better let the XYL do the calling in future. Then DX should come easily. 7LJ has at last returned to the ranks of the phone gang with an f.b. modulator using AB1 807s, and within half hour of its completion received a 5-9 report from VK4 with nice quality. Lon also has new masts in hand and looks like new antennae are order of the day. 7AF has finished new desk console which would put many a b.c. station to shame. K2UN looks "Amateurish" alongside Bob's layout, and that's saying something. But Bob you still haven't got single switch station control or provision for v.f.o. netting.

It mightn't be a bad idea if all OMs were to read Page 492, 1949 edition of A.R.R.L. Handbook. Can YOU answer YES to all five of those questions? If you can't, then it's about time the shack was re-organised. 7AF's new receiver is completed—shades of the AR7. 7CT, of Huonville, on 40 again like a ghost from the past—mighty vocal ghost too, Terry. 7EJ gone to live at Longley, and found ex-G5VF right alongside—well they say it's a small world. 7TA vacation bound by now and probably will be heard from most shacks between here and Timbuctoo. Will be in VK2, 3 and 5 over a period of three weeks.

A competition for auxiliary gear construction will be held and judged by a panel of professionals at the Annual Dinner. Emphasis is of workmanship, and item must not exceed one cubic foot in volume and must be accompanied by a statement signed by two reputable members as to the working order of the item. Mr. Len Crooks has kindly donated three guineas as first prize, and there will be other prizes also, so do your best chaps. Competition is open to all members and associates and Northern entries welcome. Bring 'em along to the Dinner and DONT FORGET the signed statement.

NORTHERN ZONE

Owing to the holidays, activity has been rather limited, also as the only stations operating have been on 50 Mc., I cannot comment here. 7PF having fully covered these activities for inclusion in the v.h.f. pages.

As I write these notes a message has sneaked through via the grapevine that it has been arranged to pass a vote of hate at our next meeting against a local Amateur who heard a VK3 on 144 Mc. in Launceston and then lost the piece of paper he wrote the details on.

7BQ is on holidays in Hobart at present and we are all waiting to see how much new gear he will arrive home with. 7RK is more interested in building a new receiver than in operating. 7PF busy chasing DX on 50 Mc. and in the "in-between intervals" is constructing a 144 Mc. beam. 7AM has also been bitten by the building bug, the latest being a super for 144 Mc. 7LZ also busy trying to draw up a roster so that 50 Mc. will open the nights I am at home. At present all the gang rush home and listen on 50 Mc. as soon as they know I am out. This system has helped their scores considerably in the v.h.f. contest.

Once again the old, old saying, "once a Ham always a Ham," has been proved true. Many an old timer will remember Chris Cullenan, ex-VK3XW. Chris has now renewed his licence and can be heard on 7 Mc. phone quite often as VK7XW. Welcome back to the ranks Chris.

Have sighted a few strangers in town wearing the W.I.A. badge, but until today I had managed to dodge them. This afternoon my luck gave out because 3OJ and 3JO caught me unawares so it looks as though my last bottle of Xmas cheer is due to become extinct. Anyway I suppose it's for a worthy cause.

The next zone meeting is to be held at the King's Hall, Launceston, on 10th February, at 8 p.m. All are invited to attend.

— . . . —

CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

INTERFERENCE TO AIRCRAFT

Dept. of Civil Aviation,
522-536 Lt. Collins St.,
Melbourne, C.1

Editor "A.R.," Sir,

During the last few months, aircraft flying in the Melbourne area have been experiencing interference on the control tower frequency of 118.1 Mc., the interference manifesting itself as a broadcast station programme.

2. The characteristics of the interference indicate that it is a cross-modulation effect, the factors leading to this deduction being as follows:—

1. The interference is intermittent.
2. The signal strength varies.
3. The quality of reproduction varies greatly.

3. With cross-modulation, two interfering carriers are necessary, and, although identification of the broadcast station provides evidence of one carrier, the identification of a possible second carrier is presenting many difficulties. One possibility under consideration is that an Amateur operating in the 28-30 Mc. band, and in particular on 29.5 Mc., has an installation which gives fourth harmonic radiation as well as the fundamental frequency.

4. It would be appreciated by the Departmental Officer investigating the interference if members of your organisation who hold amateur licences would check their station logs to see if they have been operating on the frequency band indicated at the dates and times listed below:—

Dates	E.S.T.	Dates	E.S.T.
14/9/49	1047	12/10/49	1926
22/9/49	1842	13/10/49	1155
24/9/49	2037	14/10/49	1121
25/9/49	—	28/10/49	1821
1/10/49	1738	28/10/49	0856
2/10/49	1335	3/11/49	1056
7/10/49	1435	21/11/49	1535
9/10/49	1640	22/11/49	2234
10/10/49	1640	3/12/49	0858
12/10/49	1340	5/12/49	1514
12/10/49	1405		

5. The limitations of the particular frequency band are fully understood, and it is realised that the dates and times listed above may not coincide with the periods when the band is useable because of ionospheric conditions, but any information forthcoming will be greatly appreciated.

6. As the elimination of the interference is important from the point of view of safety to aircraft, an early return of any relevant information would be very helpful and greatly appreciated.

—W. L. MILNE,
for Director-Gen. of Civil Aviation.

PIRATE! PLEASE NOTE!

Railway St., North Woollongong, N.S.W.

Editor "A.R.," Sir,

I would be pleased if through the correspondence column of "Amateur Radio," you would inform the "gentleman" who is using my call sign on 40 metre phone if he cares to send me a stamped addressed envelope he can have the QSL cards I have for him.

—K. BRADY, VK2AFF.

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9d. per line, minimum 2/-.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 8th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line.

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FOR SALE.—Tower 40 ft., const. of latticed tubular steel; collapses to 10 ft. sections. Complete with two sets of guys and insulators, base plate and base insulator. Also 10 Mx. three element beam and rotating gear. L. Wade, 6 Edgar Street, Auburn, N.S.W.

NATIONAL H.R.O. Rcv., 30 meg.-200 Kc., pwr. supply and spk. also National, new condition, reasonable offer. 35 Reading Road, Brighton, N.S.W.

EXCHANGE "Velco" CR50 Oscilloscope for Kodak Precision Enlarger or speed graphic camera. Will also exchange radio gear for photo apparatus. J. W. Nairn, 22 McLean St., Morwell, Victoria.

WANTED TO BUY.—AR7 Receiver in good order, either with or without power supply and speaker. Apply G. Laver, Fish Creek, Vic., Phone 10U.

WANTED TO BUY.—English Valves type VT501s and AW3s voltage stabilisers, will pay £1 each. J. Clay, Beach House, Point Lonsdale, Vic.

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AMATEUR RADIO

MARCH 1930

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

FOR THE EXPERIMENTER & RADIO ENTHUSIAST

9D.

Registered at G.P.O., Melbourne, for transmission by post as a periodical.

"HAM" RADIO SUPPLIERS

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BARGAINS — BARGAINS — BARGAINS

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Receiver, 14 valves, double conversion super, incorp. S9er circuit. 956 R.F., 955 Mixer, 6AC7 xtal controlled oscillator (6 Mc. xtal) with 12 Mc. output into 2.5 Mc. I.F. channel which is varied 500 Kc. by AR7 Kingsley dial and gang. 6J5 2nd mixer, to 455 Kc. I.F., xtal filter, audio filter, etc. Plug-in coils for 20 metre band only. Complete with speaker and 230 v. A.C. Power Supply. Price £35.

BC342M American R.C.A., nine valves, band switched, 1,500 Kc. to 18 Mc., xtal filter, two R.F. stages. Complete with 110 v. A.C. Power Supply. As traded, £27/10/-.

BC348 modified to "QST" spec., nine valves, S meter, noise limiter, band spread on 20 metre band. Performs well. No power supply. Price ..... £35.

National N.H.U. Hi-Freq. Receiver. 22 to 63 Mc. in four bands, turret tuned, xtal filter, S meter, etc. No power supply. As traded, ... £35.

WE CAN SUPPLY YOU WITH—

AMERICAN BC966A I.F.F. UNITS

With a few minor alterations (see Conversion of BC966A on page 3), these Units make a handy Transceiver for 144 or 288 Mc. They contain three 7193s, seven 6SH7s, three 6H6s, 10-point Jones plug and socket, four P.M.G. type relays, ceramicon trimmer, 7-plate split stator midget condenser, as well as a large assortment of resistors and condensers, v.h.f. chokes, and sockets. Complete with Genemotor £4

Less the Genemotor £3

Transceiver 108 Mark II. Complete with seven valves, condition as new, band coverage 6 to 9 Mc. Mike and headphones. As traded, ... £8/10/-.

Command Transmitters 4 to 5.3 Mc., easily adaptable to Ham Band. Complete with two 1625, one 1629, one 1626 and 4,600 Kc. xtal. Clean condition. Price ..... £6.

Command Receivers, 3 to 6 Mc. or 6 to 9 Mc. Complete with valves, less genemotor. Price ..... £6/10/-.

Hammarlund plug-in coil units, contains two variable condensers, coil formers, etc. Price ..... £3/10/-.

AT10 plug-in coil units, has two variable condensers (approx. 50 pF.) and two coils. Ideal for wrecking. £1 each.

English Transceivers, frequency unknown. Nine Valves including one EF50, one VT501, one EL32, two EF39, one EK32, one EBC33, two EF36. Chock full of useful parts, relays, genemotor, etc. ..... £6 each.

Tube Special—7193s. 5/- each

English I.F.F. Units. Tube line-up: two VR135 (high freq. triodes), two VR78 (diodes), four VR65A, Eddystone Butterfly Condenser, 1 uF. 1,000 v.w. Block Condenser, Genemotor 11-12 v. input at 3.8 Amp., output 480 v. 40 Ma. Good assorted quantity of Resistors and Condensers, ideal for wrecking, condition as new ..... £2 each.

High Frequency Receiver, Australian AR301, uses three 954s, one 995. Six 6AC7 I.F. Stages at 30 Mc. Easily converted to 144 Mc. ..... £10 each.

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American type SCR52233, band coverage 2 to 9 Mc., plug-in coils, Modulator incorporated. Two 6N7, one VR150, one 1625, two 815s. Easily modified for other bands. Price ..... £12/10/-.

American TA12D four-bands; 12SK7 v.f.o. each band, 807 doubler, two 807s in final, less Modulator. £17/10/-.

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MARCH 1950

Vol. 18. No. 3

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," Law Court Chambers, 191 Queen St., Melbourne, C.1, on or before the 8th of each month.

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AMATEUR RADIO

Published by the Wireless Institute of Australia,
Law Court Chambers, 191 Queen Street,
Melbourne, C.1

EDITORIAL

★

Another year has passed and all Divisions are faced with the task of electing office-bearers for the ensuing year. Divisions which are blessed with plenty of enthusiastic members will have no difficulty in filling all posts; however, the less fortunate Divisions will have to depend upon the stayers to shoulder the load once again.

The Institute represents and upholds the interests of Radio Amateurs in Australia. We, as members of this vast brotherhood, owe much to the work of the Institute's office-bearers during the past twenty-five years. The least we can do to honor the memories of those pioneers of the past, whose keys have been silenced forever, is to carry on the work they so successfully began. Hence it behoves us all to share the burden of management by offering our services to the Institute whenever circumstances permit. We should all make some small sacrifice in the common good.

Younger members who have not the opportunity of gaining administrative experience elsewhere can, by acting as assistants, obtain much valuable experience as a reward for their services to the Institute.

It is only by the periodical change of office-bearers among all our members, that any suggestion of cliques can be disposed of and fresh approaches to stubborn problems made by fresh minds from new angles.

The encouragement and training of young, virile members willing to carry on the good work is the key to our future success. Those members who really have the interests of the Institute at heart will not leave it to the other fellow—something more concrete than lip service is required. Let us recapture the spirit of comradeship and endeavour to surpass the enthusiasm exhibited by the pioneers who raised the Institute's prestige to its present high level.

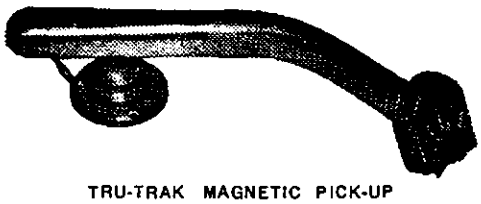
—G. G.

The Contents . . .

Homecrafts PTY. LTD.

Greater Bargains for the Radio Enthusiast

SUPER PICK-UP BARGAINS



TRU-TRAK MAGNETIC PICK-UP

The famous Tru-Trak Magnetic Pick-Up with curved counter-balanced tone arm and off-set head. As illustrated, reduced from 70/- to **14/11.**

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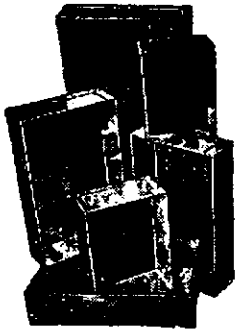

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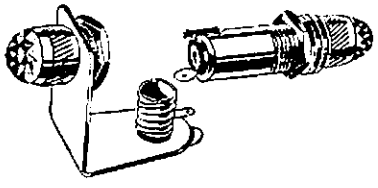

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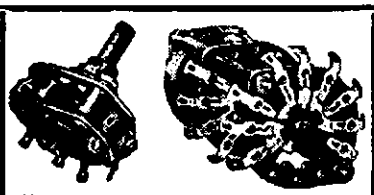

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6 x 2 switches **2/11**
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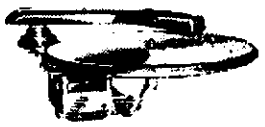

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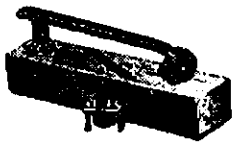

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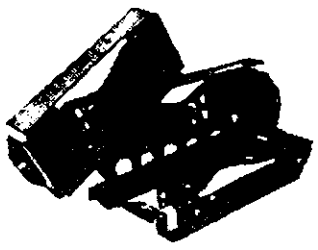

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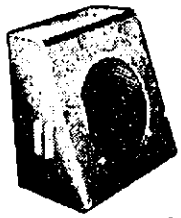
5 valve steel drilled ducoed Chassis. **1/11** each or **19/-** dozen.



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Pick-Up Cartridges

Bargain Pick-up Cartridges. Genuine Cosmocord Crystal Pick-Up Cartridges. Reduced from 31/- to 9/11. . . . . .

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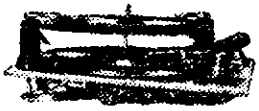
Improve your Phono Radio with the best and lowest priced sapphire needle on the market. The new British B.A.I. Sapphire Needle with over 2,000 playings guaranteed. Price only **9/9** ea.

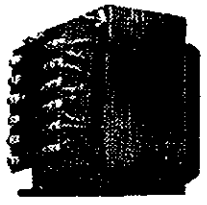


ENGLISH COLLARO RECORD CHANGER

The new English Collaro Record Changer, type RC49. This modern streamlined record changer is fitted with a high fidelity crystal pick-up and will change eight 10-in. and 12-in. mixed records. Price, as illustrated, complete, **£14/8/6.**

CRYSTAL PICK-UP HEADS

High fidelity Crystal Pick-Up Heads, type B.A.I., suitable to replace all Garrard or Collaro Magnetic Pick-Ups. When ordering please advise if required for Garrard or Collaro Pick-Ups. Price, **45/-** each.



POWER TRANSFORMER BARGAINS

Brand new Power Transformer with standard windings. Reduced from 45/- to **24/11.**

290 LONSDALE STREET, MELBOURNE — Central 4311

Converting the BC966A I.F.F. Unit

AS A 144 Mc. PARALLEL OSC. AND SUPER-REGEN. RECEIVER

BY J. DUNCAN,* VK3VZ

This unit, now available to the Amateur, can be converted into a very nice 144 Mc. outfit, which can be used for both portable or home location work. In the form suggested it will consist of a parallel oscillator using 7193s, modulated by any suitable modulator, a suggested arrangement being a 6SH7 speech amplifier, feeding a 6V6G as modulator.

On the receiving side a 7193 is used as a super-regenerative detector, and two 6SH7s as audio amplifiers. If it is desired to use a speaker, the second audio stage could be changed to any suitable output valve.

GENERAL PRINCIPLES OF OPERATION

The I.F.F. Unit picked up the Radar pulse, triggered the transmitter, causing an identification pip on the scope. Two 7193s were used in parallel for transmission, and through internal arrangements, one was used as a super-regen. detector, with its companion 7193 biassed off, then when suitably triggered, both 7193s would transmit as a parallel oscillator, the frequency being varied throughout the band by a motor driven inductance loop.

The remaining 7193, in the end box, was used as an ordinary oscillator for identification purposes. The seven 6SH7s and three 6H6s were used in the various pulse circuits, and are of no use for our applications, so all wiring except filaments are removed from these tubes.

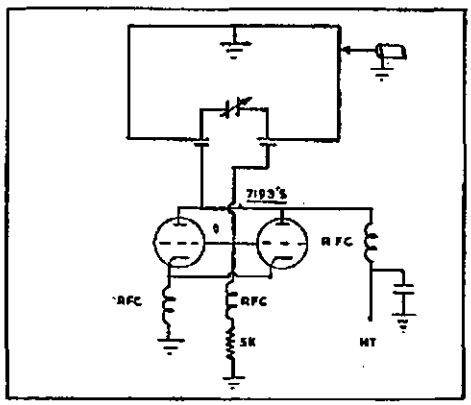


Fig. 1.

CONVERSION

The first step is to separate the power supply and r.f. sections, taking care to disconnect the arm which drives the oscillating inductance loop.

The box containing the two 7193s is altered first. This becomes the oscillator (see Fig. 1). Remove the 6H6 and its associated condensers and r.f. chokes. Take out the variable inductance loop and shaft. Remove the r.f. choke to one 7193 grid, and the wire going from this choke out through the hole in the box. Join the 7193 grids together. Trace the wire from the other 7193 grid, disconnect under the chassis, and connect a 5,000 ohm resistor from this point to earth. Remove the leads from the bottom ends of the r.f. chokes in the cathodes, ground one, remove the other, and join the cathodes together, after removing the small condenser between the cathodes.

Trace the h.t. lead from its r.f. choke and connect to a suitable point for h.t. of 250 volts. If it is desired to use one of the relays for changing from send to receive, this lead can be connected to a suitable point on the relay.

It is advisable at this point to check the operation of the oscillator, so remove all tubes except the two 7193s and apply filament and 250 volts of plate supply from a suitable source. Before doing so, however, it will be necessary to see if the filaments are wired in series or parallel, it varies in the different models. A meter in the grid circuit will give an indication of oscillation, and providing the previous instructions have been carried out the oscillator will work correctly. The oscillator frequency can then be adjusted to the 144 Mc. band by means of the ceramic trimmer on the inductance loop.

All that remains to be done is to provide a simple means of changing the frequency through the band. This can be done in two ways, either by making a small loop and fitting it in the place where the previous variable loop was mounted (the original loop had too great a variation); or by mounting a suitable variable condenser to give the necessary small frequency change.

RECEIVER

The 7193 in the box at the other end of the chassis is converted into a super regenerative detector by a few simple modifications.

First remove the 6H6 socket and all its associate wiring from the box, then unscrew the screws holding the front left hand corner and the rear right hand corner of the box, this will enable the front and right hand sides of the box to come away with its associate wiring. Cut off the wires going from the mounting strip on the grid side, remove the two small condensers, leaving the condenser which goes from the 7193 grid to the stator of the condenser. Fit a 5 megohm grid resistance across this condenser (the value of 1 megohm shown in the diagram of Fig. 2 was not large enough), and also remove the Hi-Lo switch, and its condenser and resistance.

Unsolder the existing tank inductance and wind one with about No. 14 gauge wire, identical in shape, but with one additional turn. Solder one of the 5 pF. condensers, removed previously, across this inductance. Re-solder the r.f. choke which connects to h.t. on to the centre of the coil, and by-pass as shown in Fig. 2 with a 0.001 uF. condenser. Remove the lead which connects to the cold end of the 7193 cathode r.f. choke and ground this end of the choke. It is most important that this cathode r.f. choke be used, otherwise difficulty will be had in making the tube oscillate. Re-assemble the sides of the box.

Two of the relays at the rear of the box are removed, and a suitable 3 : 1 audio transformer installed. The 20,000 ohm variable potentiometer is removed from its bracket and installed in any convenient place on the front panel as a regeneration control and connect to 250 B+ through a 10,000 ohm resistance. With a pair of headphones installed on the output of the transformer, the detector can be checked. As the regeneration control is advanced the detector should go into oscillation with the characteristic hiss of the super-regen. With a suitable piece of wire for an antenna, it should be possible to receive the harmonics of an alignment oscillator; the super regenerative hiss will die away when the signal is tuned in, if everything is working correctly.

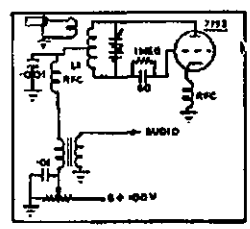


Fig. 2.—Grid resistance should be 5 megohms, not 1 meg. (see text).

The frequency can be checked with an absorption wavemeter, and the turns of the inductance compressed or expanded to enable the condenser to cover the band. It will just do this with a small margin to spare at each end of the band.

To enable a suitable dial to be fitted, the slotted bakelite knob is removed and an extension shaft fitted. The dial can then be fitted with a suitable calibrated scale if desired.

There is one point to watch. A shorting wire is connected across the co-ax socket inside the box of the single 7193 compartment, which is directly across the link to the antenna, its purpose is unknown to the writer, but it should be removed.

The audio stages of the receiver can best be left to the choice of the individual constructor, but plenty of sockets and 6SH7s are available for the purpose.

POWER SUPPLY

Here again no two Hams will think alike, but we can (a) remove the motor generator, etc., and substitute an a.c. power supply, or (b) leave the motor generator for portable operation, and make provision for connecting an external a.c. supply. The latter seems the best idea, although the writer shuns the thought of super regen. receivers in suburban locations.

However, as the conversion of this side of the unit is quite straightforward

* Technical Editor, 23 Parkside Avenue, Balwyn, Victoria.

no attempt will be made to describe it and it can well be left to the discretion and ingenuity of the Ham.

The voltages required for operation of the complete unit is 250 volts, which can be obtained from the motor generator by running the 9 volt genemotor (fed from 12 volts through a regulator originally) off 6 volts, which will give about 250 to 300 volts. In the case of the 24 volt model, running the genemotor from 12 volts will allow the same outputs to be obtained.

The writer feels that this unit is ideal for portable operation, and it would be difficult to beat for this purpose. At the home location, it would be a simple means of starting up on this very fascinating band.

A 288 Mc. TRANSCEIVER

BY A. K. HEAD,† VK3AKZ

After acquiring a BC966A I.F.F. Unit, it was decided to try and convert it to a transceiver for 288 Mc. From the many components in the set an audio section can be made up in many ways according to one's taste. Since audio circuits for transceivers are given in most handbooks, this part of the conversion will be taken as read.

Of more interest is the conversion of the r.f. sections. In the set there were two r.f. circuits. One consists of a single 7193 oscillator tuned by a split stator condenser and coil, and a range switch which adds a fixed condenser across the tuned circuit. Also in the same compartment is a 6H6 which rectifies some of the r.f. to actuate a remote meter to show the set is operating. This circuit was changed to a 288 Mc. super-regen. receiver in the following manner.

The following components were removed from the compartment as they are not needed: 6H6 socket and associated r.f. chokes, high-low range switch and fixed condenser, terminal strip.

The grid of the 7193 was connected to one stator of the tuning condenser via a 1 megohm resistor and 20 pF. condenser in parallel. The plate connection was left as found. As the frequency coverage of the original circuit was 180 to 210 Mc. approx., the coil was replaced by a hair-pin of length 1¼ inches and width ⅜ inches soldered to the tuning condenser.

H.T. is applied via one of the salvaged r.f. chokes to the centre of the loop. Super-regeneration was smooth and the range of the tuning condenser covered the 288 Mc. band with plenty to spare.

The other r.f. circuit consists of two 7193s essentially in parallel. The range of the tuned circuit for variations of the ceramic condenser and tuning loop was found to be from 130 to 210 Mc. approx. As the prospect of getting the parallel tubes up to 288 Mc. did not appear bright, a push-pull grounded grid oscillator circuit was tried.

To do this, everything was removed from the inside of the compartment. The two grids were connected together and earthed through a 5,000 ohm resistor. The plate circuit consists of a loop running straight out from the plate caps and 2½ inch long. H.T. is applied through a salvaged r.f. choke to the mid-point of the loop.

† Assistant Technical Editor, 12 Peverill Street, Balwyn, E.8, Victoria.

Feed back is provided by the existing chokes in the cathode circuits. However it is important to remove a small 10 pF. condenser which connects the two cathodes together for parallel operation.

For 6 volt operation of the filaments, the existing series connection must be changed. To keep the feed back up, it was found necessary to use r.f. chokes in the heater leads as well as the cathode lead.

AND NOW A MODULATED OSCILLATOR ON 144 Mc.

BY C. GIBSON,‡ VK3FO

This conversion of the 966A to the 144 Mc. band is quite simple and should present no difficulties to the Ham. The first operation is to remove the unit that carries the 7193 and 6H6 from the chassis. The leads from this unit go through a grommet at the back of the box—snip them off. Next step is to completely remove the 6H6 socket and all its associate wiring from the unit. Also remove the switch marked "high-low" and its associate resistor and condenser. At the back of the unit there are the chokes, resistors, and condensers associated with the 7193. Leave all these parts "as is."

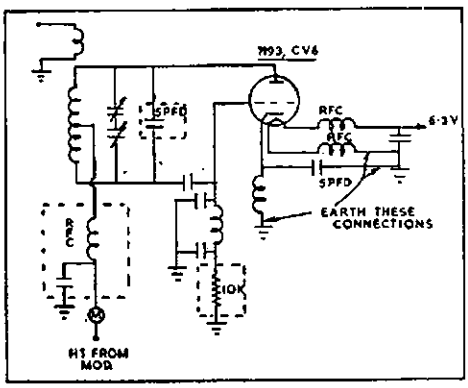


Fig. 3.—Added components shown enclosed by dotted lines. Details of modified coils in text.

Next step is to make a new tank coil. Remove the two-turn coil from the condenser and wind a 2½ turn coil on ¼ inch diameter spaced over ¾ inch. Place this new coil in place of the old coil. Now bring a lead from your h.t. power supply (280-300 v.) to one side of an r.f. choke (there are plenty in the chassis) and from the other side of the choke tap it on to the centre of the tank coil. Be careful to by-pass the choke with a mica condenser (spare from the 6H6 socket).

Now for the grid leak. This is put in from the end of the two ceramicon condensers furthest from the split stator variable (inside the unit). One side of the grid leak to the cold end, and the other to earth. The value of the grid leak is 10,000 to 15,000 ohms and should be determined by experiment.

Place across the tuning condenser a 5 pF. ceramicon condenser (obtained from the 6H6 socket). The aerial coupling coil can be two turns of ¼ inch diameter and placed about ⅛ to ¾ inch from the tank coil.

‡ 424 Centre Rd., Bentleigh, S.E.14, Vic.

Earth one side of the filament wiring and the other end of the cathode r.f. choke a milliamp. meter should be placed in the plate circuit as this will indicate if the oscillator is super-regenerating. The 7193 should draw approx. 25-28 Ma. with 280 plate volts. A greater current than this will exceed the tube ratings, while if the tube draws less than 20 Ma. it is almost certainly super-regenerating. The grid leak should be experimented with to obtain satisfactory operation.

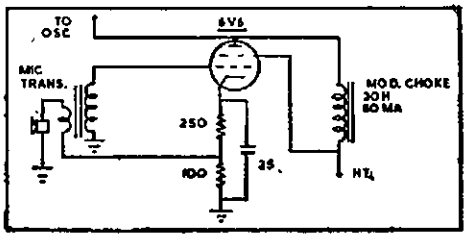


Fig. 4.—Modulator for 966A Conversion.

You should strike the band with the condenser about two thirds of the way in. If by any chance the band cannot be found, try opening or closing the tank coil, as the circumstances warrant.

Ordinary Heising modulation is quite OK with this conversion.

One last word—when modulating do not speak too loud, otherwise the oscillator will be frequency modulated. The circuit of a suitable modulator is shown in Fig. 4.

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EMERGENCY WORK AWARDS

The following letter was received by the Secretary of the N.S.W. Division from the N.S.W. Commissioner of Police, Mr. J. F. Scott:—

"Reviewing assistance rendered to the Police by civilians during the disastrous floods this year (1949), particularly in June last in the Maitland district, I would like to take this opportunity of expressing through you the appreciation of the Police Authorities to the operators of Amateur Wireless Stations who placed their radio stations at the disposal of the Police and relayed messages which could not otherwise have been passed between Maitland and East Maitland and the Police Wireless Station at Waratah, and also reduced congestion on the Maitland Police telephone line.

"The Amateurs who undertook the greater part of the relay work were Mr. V. A. Holmes (VK2AKP), Mr. H. E. Whyte (VK2AHA), and Mr. R. J. Traill (VK2XQ).

"Perhaps you would be good enough to pass on to the gentlemen concerned the attached certificates of appreciation from the Police Force of N.S.W. for the services rendered by them. They may like to include the certificates amongst their collection of cards and certificates received in connection with the operation of their respective wireless stations.

"In addition, a number of other Amateurs rendered assistance from time to time in various ways and I would like you to convey to them, through the columns of your journal, the thanks of the Police Authorities for their public spirited actions."

Further Notes on De Luxe V.T.V.M.

CORRECTIONS

1.—In several places in the article reference was made to the .25 and .3 volt ranges, this should read 2.5 volt and 3 volt ranges.

2.—Page 7, col. 2, para. 3: "If negative voltages have to be read, the a.v.c. line in a receiver for example, the ground side of the v.t.v.m. is connected to the chassis of the receiver and the active prod applied to the a.v.c. line with the function switch on **D.C. Minus.**

FILAMENT CONNECTIONS AND VOLTAGES

It will be noted in the wiring diagram last month that the rectifier is shown fed from a separate filament winding. If a 6X5GT rectifier is used it can be taken from the common 6.3 volt filament winding.

Further tests have shown that in the case of nearly all 6SN7s, the first 6SN7 (cathode follower) can be supplied from the common 6.3v. supply, thereby reducing the number of filament windings required to one. One side of this winding should be earthed, and the other side run in shielded braid, as it is most important that a.c. be kept from the wiring of the resistance "stick" and associate circuits. As an example of this, when the v.t.v.m. is switched to a.c. and on the low voltage range, placing the test prod near any a.c. or power wiring will cause a considerable deflection on the meter.

The following letter is to hand from Mr. Alec H. Clyne (VK3VX):—

"I have read with much interest the two articles entitled 'A De Luxe Vacuum Tube Voltmeter' in the January and February issues of 'Amateur Radio,' and wish to congratulate Messrs. Duncan and Thornton on their efforts.

"At the same time I feel that it is necessary to point out an error, due to a popular misconception, which appeared in the second article, in the following paragraph:—

> "'. . . remember the negative terminal on the v.t.v.m. is connected to earth through the 3-pin mains plug, so only use the active lead in reading mains voltages.'

"Wiring rules, as used in all States, require the third pin of the socket to be earthed only in 'Earthed Situations,' i.e. situations where a person using an electrical appliance can simultaneously touch any earthed metalwork, or stand on a conducting floor such as concrete. In domestic installations it includes kitchens, laundries, bathrooms, and external points. In very few domestic premises is the third contact earthed in living rooms, bedrooms, etc., although when carrying out a new installation or adding to an existing one, it is good practice to take an earthing conductor to every plug socket.

"It will be seen that the supposed earthing of the v.t.v.m. through the power point may be non-existent.

"A further point concerns the actual measurement of a.c. mains voltage. If measured between earth and the active line (of the mains), a false reading may be obtained, as the 'neutral' conductor may be in some cases as much as 50 volts above earth.

"Modern practice is to earth the neutral at the power station, at distribution transformers and other places along the route, and at the switchboard of every installation. This system, known as the Multiple Earthed Neutral (M.E.N.) System, was coming into general use at the outbreak of the recent war, but material shortages have delayed its full implementation. Hence in many areas the neutral is still not earthed at the consumer's end and may therefore have a potential above earth, at the socket, due to voltage drop in the line back to the transformer serving the particular area. This voltage drop will vary with load and distance.

"The M.E.N. System, by the way, has nothing to do with the Earth Leakage Circuit Breakers to be found on many switchboards. They are the basis of another story, and to spare the blushes of the Supply Authorities we will not go into that here.

"A word of caution—if your premises are wired on the M.E.N. System, the neutral, although earthed at the switchboard, must not be used as an earthing line, as it has no over-current protection."

It is regretted that this subject was not covered more fully, but what was meant to be conveyed was as follows:—

Assuming a receiver is under test, before testing filament and transformer voltages with the v.t.v.m., it is advisable to check the mains voltage. The most convenient point will be the board on the power transformer. If the v.t.v.m. leads are placed on the terminals indiscriminently, the chances are the earthed lead of the v.t.v.m., assuming an earthed 3-pin plug connection to the v.t.v.m., will be connected to the active a.c. lead, which will result in a blown fuse and possibly a damaged prod.

First find the active with the red probe, and then when that is done, the black probe can be safely applied to the other mains terminal.

But it is important to know which is the active terminal before applying the negative or black lead to any a.c. mains. As pointed out by Mr. Clyne, a faulty reading would be given in some cases if we took a reading between the active and earth, instead of active and neutral.

If there is any doubt that the 3-pin power outlet used does not have the third pin earthed, or it is used in places where only 2-pin outlets are available, it will be necessary to take an earth wire to the nearest earth point, if a.c. mains measurements have to be taken. It is wise anyway to have the v.t.v.m. case earthed.

In the writer's opinion, he feels that in the interests of safety, unless you are sure of what you are doing, do not use the v.t.v.m. for measurement of a.c. mains voltages, better use a separate meter and live a little longer to enjoy Ham Radio. After all, this v.t.v.m. will measure almost everything else, so this one drawback is not important.

DIAL SCALES FOR V.T.V.M.

Dial scales for the De Luxe V.T.V.M., described in the last issue of "Amateur Radio," can be obtained by applying to the W.I.A. Victorian Division, 191 Queen St., and remitting 1/- to cover cost of printing and postage.

Dial Scales for both 2.5 volt and 3 volt ranges are available.

A Simple 80 Metre Station

BY HANS J. ALBRECHT, DL3EC

Hans J. Albrecht, DL3EC, has now come to live in Australia and for the benefit of all his old DX contacts, here is the rig he used in Germany.

Some aspects of his station would be frowned on by the authorities here, namely the use of an e.c.o. directly coupled to the antenna, and also the modulation of this oscillator.

Nevertheless, by using a crystal oscillator ahead of the r.f. unit, a very simple beginner's station could be developed.

Amateur Radio is mostly said to be an expensive hobby. It is also believed that the construction of all the necessary sets takes a long time. But there is one way to make equipment cheap and quickly constructable, i.e., to use the simplest components only. In the following, the writer will describe such a construction, namely the 80 metre rig, which was built and successfully operated by him from the receipt of his DL call sign until his departure from Germany for Australia.

The writer's station consisted of a receiver with plug-in coils for 20, 40 and 80 metres, and a transmitter for 80 metres, except other sets for other wavelengths. The 80 metre rig worked in the following manner.

Receiver O-V-2. The aerial was inductively connected to a normal audion with reaction coupling effect (see diagram). The valve applied to this stage was a RV-12-P-2000 (German valve, for data see table). The adjustment of the reaction was effected by variation of the screen grid voltage. The following l.f. stage was coupled by resistance coupling. The valve of this stage was another RV-12-P-2000. Both these stages were mounted in a chassis of aluminium. Moreover there was a l.f. power stage for reception by loudspeaker. In this stage a RV-12-P-3000 (German valve, for data see table) was used. The coupling was effected by a l.f. transformer 1 : 4. The loudspeaker had a small diameter.

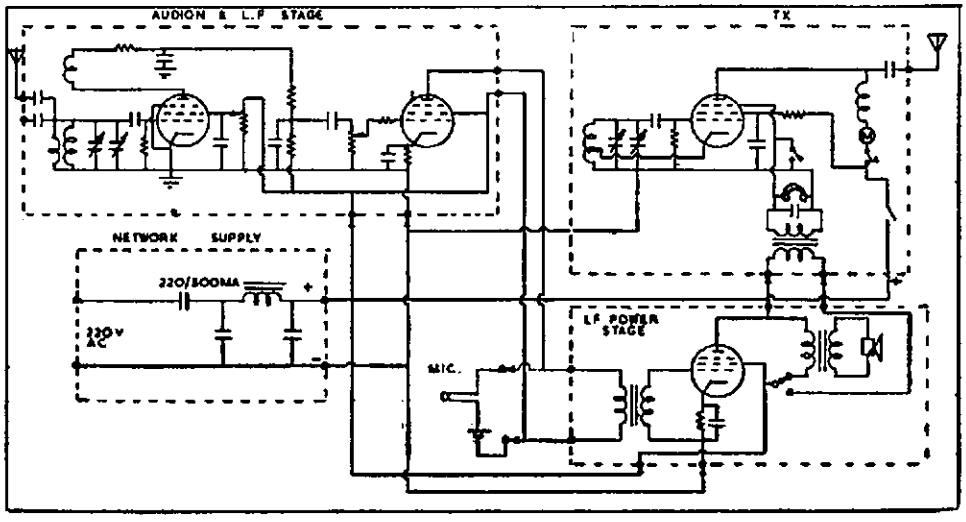
The heater supply for these three valves was directly taken from the network, which had 220 volts a.c., in the following manner. The filament of the RV-12-P-3000 was connected in series with the filaments of the both RV-12-P-2000, which was connected in parallel with a shunt, and a paper condenser of 3.5 uF. The anode voltage was taken from the power supply.

The power supply consisted of a selenium rectifier and a smoothing circuit which was formed by two electrolytic condensers of 32 and 24 uF. respectively, and a smoothing choke. No transformer was used and, therefore; the output voltage came only to about 220 volts d.c.

Transmitter: A LS-50 (German valve, for data see table) was used as an e.c.o. The variable condenser of the oscillator circuit had 100 pF. The coil was wound up on a ceramic coil former with copper wire (diameter 0.06"). A trimmer of 30 pF. was connected in parallel to this circuit. The screen grid was connected to the earth by a condenser of 1 uF. The screen grid resistor came to 10,000 ohms. The aerial was directly coupled to the anode by a condenser of 100 pF. Moreover, the anode was connected to a switch through a h.f. choke, which consisted of a normal iron-core coil former wound by about 50 windings of 0.01" copper wire, a milliampere meter and the key. This switch closed the connection with the power supply at position "transmitting" and disconnected at position "receiving" (see diagram).

Telephony operation. The writer chose suppressor-grid modulation because of the lower cost. The modulation amplifier used was the same l.f. power stage as described above. At position "transmitting," the connections to the receiver (chassis) were interrupted, and the input transformer of this stage was connected to a simple carbon mike, which was mounted on a small wooden board. This microphone was one of a normal telephone apparatus. The driving element consisted of a pocket lamp battery of 4.5 volts (see diagram).

At phone transmission, the output of the l.f. power stage was disconnected from the loudspeaker transformer and connected to a l.f. transformer 1 : 4, whose secondary winding was connected, on the one hand, to the suppressor-grid and, on the other hand, to the earth wire. A condenser of 0.01 uF. and a pair of headphones was connected in parallel to the secondary winding. Although the apparatus worked without suppressor bias, the reports on the modulation were permanently good.



Circuit Diagram of DL3EC's 80 metre station.

The input power came to 6 watts, because the anode voltage taken from the output of the power supply was only 220 volts. The whole transmitter was mounted on a wooden board. The heater supply was directly taken from the network, whilst a glow lamp of 200 watts (for 220 volts) and a small resistor were used as series resistors, because a transformer was not on hand.

Aerial: A windom aerial, 40 metres long, was lowly strung over a yard.

With this station the writer worked many Hams on c.w. The reports were permanently sufficient. The tone was in every QSO T9, and the frequency was always stable. Moreover, the writer worked on telephony with the same rig

The successes of this station and, first of all, the good quality of transmission prove that Amateur Radio is also possible with the simplest and cheapest sets. Although the power input was only 6 watts, the writer was able to QSO stations in all parts of Germany on c.w. and phone. By another rig, of course, DX QSOs were carried out.

TABLE OF THE PENTODE VALVES USED
(Taken from a German Valve Table)

Type	Filament Volts	Filament Amp.	Anode Volts	Anode Amp.	Screen Volts	Screen Amp.	Grid Bias Volts	Mutual Conduct. Umhos	Power Output Watts
RV-12-P-2000	12.6	0.075	210	0.002	75	0.0006	−2.3	1,500	0.9
RV-12-P-3000	12.6	0.21	250	0.02	200	0.0023	−2.5	10,000	3
LS-50	12.6	0.7	300	0.130	250	0.0035		4,000	18

Note.—The RV-12-P-3000 and LS-50 were operated with under-voltage (see text).

MAGSLIPS AND THEIR USES

BY D. L. ASPINALL*

GENERAL PRINCIPLE

Each Magslip consists of a stator and motor, the stator being wound with three sets of windings at angles of 120 degrees in much the same manner as the stator of a three phase induction motor. The three windings are termed phase windings, although in point of fact the currents induced in them differ only in magnitude and not in phase.

The rotor varies in form according to the specific purpose of the Magslip. In the case of a receiver used for indicating purposes only, it is an L shaped piece of iron mounted on the shaft and energised by a fixed coil by means of a magnetic slip ring. The rotor of the Magslip transmitter is an H shaped iron core with a single winding, or its equivalent in the form of a slotted drum armature.

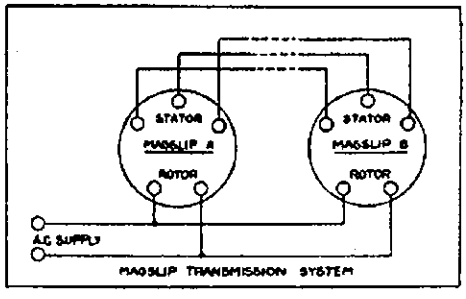


Fig. 1.

The basic scheme for Magslip transmission comprises two similar elements having their rotors energised from a common a.c. supply, and their stator windings connected in parallel "phase to phase" as shown in Figure 1 for the Magslip System. Voltages will be induced in the stator windings, their magnitudes depending upon the position of the rotors. If these are in coincident angular positions, the induced voltages will be equal and there will be no current flow between the stators. If one rotor is now displaced with respect to the other, the balance is upset, and equalising currents will flow in the stator windings, thus producing torque which tends to restore the rotors to coincident positions. Thus if one rotor is turned, the other will follow within very fine limits of angular accuracy of the order of 1% in the case of remote indicators.

USES OF MAGSLIPS

The duties which Magslips may be called upon to perform are legion and may be considered as being limited only by the ingenuity of the user. A few of the more common types are given as follows:—

Power control of a remote mechanism from a director.

Remote indication of the movement and position of a mechanism.

Magslips are a type of small selsyn developed originally by the Admiralty to provide remote indication and control in naval ships. They were adopted and used in large numbers by the other services, and since their removal from the secret list they have become available to the public.

These units are generally described rather loosely by disposals organisations as "selsyn motors," but there are about one hundred different types of magslip elements. Only one or two types, however, are easily obtainable secondhand.

The name is derived from the words "magnetic slip ring," which is a basic feature in the design of Magslip receivers.

The summation of two or more movements with indication of the result, and control of a mechanism accordingly.

A synchronous link or electric gearing between two mechanisms.

Electrical computation.

When considerable power is required to operate or control a mechanism, a servo device, such as a hydraulic pump and motor with a valve controlled by a Magslip hunter, may be used. Another method involves the use of a coincidence transmitter and thermionic amplifier. Basic schematics for some of these devices are shown.

Two methods of using single Magslip transmitters on direct current as indicators or remote control devices will now be described. It is considered that these schemes will be of more interest to the Amateur or Experimenter than any of the above.

The first method involves the construction and use of a controlling element in the form of a potentiometer. Sketches of this as constructed by the author are shown in Fig. 2. It consists of a revolving resistance unit wound on a flat ring of durabestos, having leads for the d.c. supply tapped into two opposite points on its inner circumference. It is clamped between two discs of the same material, and six fixed contacts are arranged so that they are equally spaced around its periphery and bear on the resistance wires as the unit is rotated.

Six leads from these contacts are taken to appropriate points on the Magslip stator as shown in the connection diagram Fig. 3. This is fully explained later. The resistance may be wound with Nichrome wire of about 0.022" diameter. Sufficient should be wound on to give a resistance of about 8 ohms measured between opposite points on the circumference. (Using a Magslip of 50 volts a.c. rating.)

As continuous rotation was desired, slip rings were used to lead the current into and out of the resistance, but if not more than one revolution in either direction is required, flexible leads could be used here to simplify matters.

As previously mentioned, it is necessary to have six leads from the stator of the Magslip. These consist of the three existing leads together with three new ones obtained by disconnecting the star point on the windings. The three internal leads forming the star point must be very carefully located and disconnected. Flexible leads should be soldered and tied on, and brought out through extra holes drilled in the end casing of the Magslip.

Now as to the operation of this scheme, rotation of the resistance will obviously apply the maximum d.c. voltage to each phase winding of the stator in turn, thus producing a revolving field which follows the movement of the potentiometer. Since the rotor is ener-

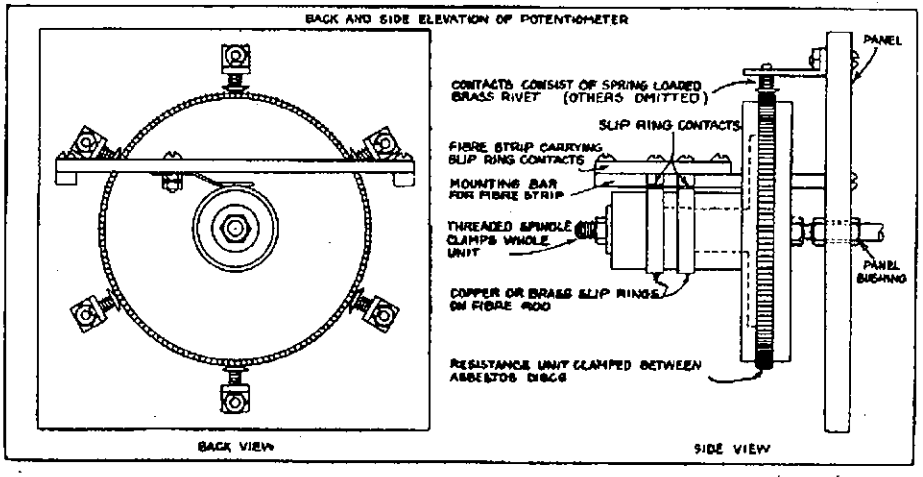


Fig. 2.

* C/o. Technical College, Hobart, Tas.

gised from the same d.c. supply, it also follows this around.

The second arrangement for use with d.c. current is known as the "M" motor or step by step system (Fig. 4), in which one complete revolution of the rotor is performed in 12 definite steps of 30 degrees each. Referring to the diagram, the idea is to connect points 1, 2 and 3

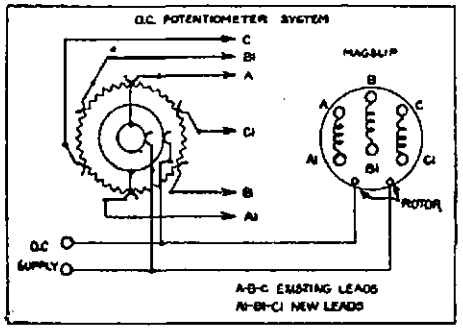


Fig. 3.

of the stator winding to a d.c. source in the sequence shown in the accompanying table. By this means the resultant field is caused to revolve in steps of one twelfth of one revolution. The switching may be conveniently done with a three pole twelve position wafer switch. As the table indicates, the first step is the connection of the supply positive to 1 and the negative to both 2 and 3. As the rotor is also energised, its position will be decided by the resultant field set up by three stator windings.

Using Magslips of 50 volts a.c. ratings, a 6 volt d.c. supply will give a fairly useful torque, but this can be nearly trebled by using twelve volts. This applies to both the above arrangements. A test taken with the potentiometer arrangement showed that practically the same torque was available using a 12 volt supply as was obtainable with the normal Magslip transmission system using 90 volts a.c. The important advantage of the d.c. systems is that heating is reduced sufficiently to allow of continuous operation.

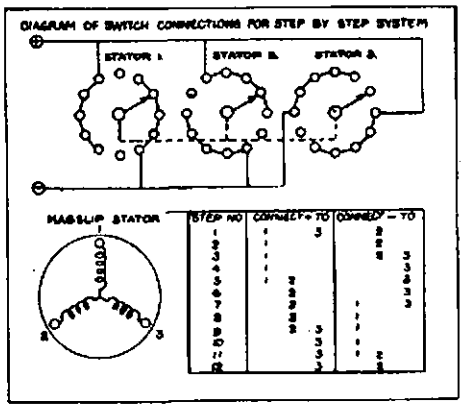
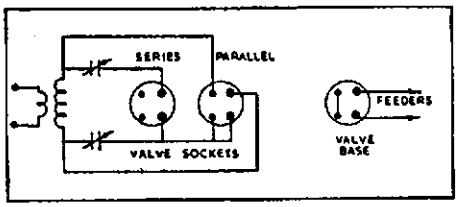


Fig. 4.

Finally, if such uses can be found for them, Magslips may be used quite successfully as alternators and synchronous motors with the rotor energised with d.c., and even as straight three phase induction motors, developing a surprising amount of power for such small units. The last is possible in the case of most transmitters as the rotors have two windings, one of which is closed upon itself. As a word of warning, be extremely careful of the windings, as close examination will reveal that they were apparently not put there by human agency, but like Topsy, "just growed." It will be found an almost impossible task to replace them if they are burnt out or damaged badly.

Series or Parallel Tuning

If you are using one of those multi-band antennae that require series tuning on some bands and parallel tuning on others, then try this scheme for a quick and easy change-over.



Connect your antenna tuning circuit to two four-pin valve sockets and your feeders to an old valve base as shown in the diagram. A series or parallel connection is then obtained by plugging into the appropriate socket.—VK2OA, R. M. Winch, 38 Boundary St., Parramatta, N.S.W.

Canterbury (N.Z.) Centennial DX Contest

The Christchurch Branch of the New Zealand Association of Radio Transmitters will hold a contest to celebrate the first Centennial of the Canterbury Province, 1850-1950.

RULES

1. The contest shall be held from 0001 hours N.Z.S.T. 25/3/50 to 2359 hours on 26/3/50.

2. All New Zealand and Rarotongan stations competing shall be financial members of the New Zealand Association of Radio Transmitters.

3. Phone and/or c.w. may be used, and all operations, whether on phone and/or c.w. shall be within the above period.

4. All contacts shall be with duly licensed Amateur Stations.

5. Only one contact may be counted with any one station during the duration of the contest. However, points may be claimed if the same station is worked on more than one band, or on a different type of emission (phone or c.w.).

6. No schedules will be permitted.

7. The 3.5, 7, 14, and 28 Mc. bands only will be used.

8. All entrants must adhere to the regulations as imposed by the authority which issues the licence under which they operate.

9. Only one operator per station and one station per operator, otherwise separate logs must be submitted.

10. A serial number will be sent and received, the number to consist of six figures in the case of a c.w. station and five figures in the case of a phone station. The first three (or two in the case of phone) to constitute the signal report and the last three to be the contact number in the contest. The contact number for the first contact would be 001 and for the 128th contact, 128; this series to be preceded in all cases by the signal report given. Should any station work any more than 1,000 stations, the 1001 contact would be numbered 001, and so on.

11. New Zealand and Rarotongan stations shall work all overseas stations and shall claim one point per contact with a multiplier for each country worked as per latest A.R.R.L. countries list.

12. Overseas stations shall work as many New Zealand and Rarotongan stations as possible.

13. Certificates will be awarded as follows:—
7 Mc.—c.w.
14 Mc.—c.w., phone, and combined operation.
28 Mc.—c.w., phone, combined operation, and world-wide winner.
All band—c.w., phone, and combined operation.

A certificate will be issued in each of the above classes to winning contestants in each country and in each call area in the United States of America. However, the contest committee reserves the right to allot one set of certificates to a group of call areas should the entries received not warrant a separate set of certificates being awarded to each area.

14. A separate contest will be held on 80 metres for all New Zealand Amateurs who are not holders of high frequency permits.

15. Scoring for 14 above shall be as follows:—One point per contact with a multiplier for each ZL district worked, and a multiplier of 5 for each overseas country worked including Rarotonga, VK2-3-4-5-7 to count as one country, and VK6 as a separate country.

16. A monitoring committee will be formed, this committee to have the power to disqualify any station for operation which may be considered contrary to good amateur practice. The decision of the committee to be final.

17. Each log entered will show the call sign, band used and type of emission, No. contacts claimed, total points claimed, operator's name, and multiplier claimed. Then in columns: Date, time (local or GMT), called, answered by, serial in, serial out, time off.

18. Entry may be made in more than one section as per 13 above, and a separate log will be submitted for every section of entry.

19. All logs are to be forwarded to ZL3LL, 4 Mary Street, Papanui, Christchurch, N.Z.

20. New Zealand logs to be in hand by 19/4/50, and overseas logs by 19/6/50. For this purpose Rarotonga will be considered as an overseas country.

21. Overseas stations will call "CQ ZL/ZK TEST" and ZL/ZK stations "CQ TEST."

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

MARCH, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

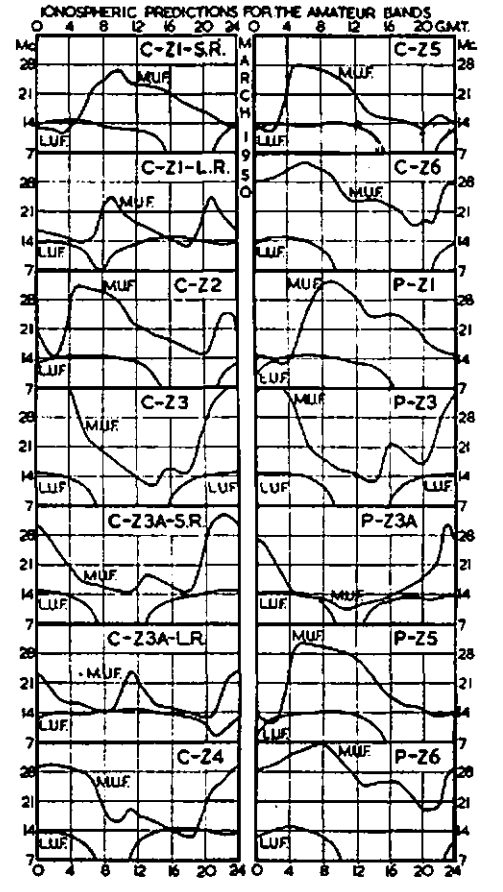
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0700 to 1500 hours G.M.T.?
2. Was the 14 Mc. band workable from 1500 to 2000 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the month.



Abstracts from Overseas Magazines

"ELECTRONICS," SEPTEMBER, 1949—

P. 82: "How V.O.A. Combats Jamming;" G. Q. Herrick.—Description of speech clippers and limiters used by Voice of America to get through foreign jamming. The ideas used should be directly applicable to amateur operation.

P. 88: "Citizens Radio Wavemeter;" W. B. Lurie.—Detailed construction of co-axial wavemeter for citizens band 460-470 Mc.

P. 92: "Converters for V.H.F. Television Reception;" D. K. Reynolds and M. B. Adams.—Converters for the 475-890 Mc. band. Local oscillators using 955 or 6N4 tube. Mixer uses 1N21 crystal diode. Cascade circuit used for first i.f. stage for low noise.

P. 97: "Instantaneous Deviation Control;" M. R. Winkler.—Simple circuit for limiting the deviation of a f.m. or p.m. transmitter. Introduces very little distortion and allows increased effective modulation without wide side bands.

"ELECTRONIC ENGINEERING, DEC., 1949—

P. 448: "An Experimental Crystal Amplifier." How to operate on a pair of 1N34s to produce a crystal transistor. Tranconductances up to 5,000 can be got from such a home-built transistor.

"RADIO AND TELEVISION NEWS," NOV. 1949—

P. 42: "A C.W. Filter;" G. L. Countryman, W1RBK.—An audio phasing filter which will peak or reject at any frequency which can be varied over the audio range.

P. 66: "The Beginning Amateur;" R. Hertzberg, W2DJJ.—Aspects of mobile operation.

"WIRELESS WORLD," DECEMBER, 1949—

P. 489: "Suppressing Impulse Noise;" D. C. Rogers.—Distinguishes impulse noise from modulation by its shorter duration. Very simple circuit but like all noise limiters which are after the detector, is less effective the narrower the receiver bandwidth.

"SHORT WAVE MAGAZINE," NOVEMBER, 1949—

P. 660: "A Transmitter for Beginners;" J. N. Walker, G6JU.—Modern 25 watter for c.w. on the DX bands. 6V6 crystal oscillator, 807 p.a. and uses branded parts.

P. 666: "Extended Double Zepp for Twenty;" A. G. Witham, G3AEN.—The construction and adjustment of an antenna with all round DX coverage and to fit in a long narrow space.

P. 670: "Improving the QS'er;" R. W. Rogers, G6VR.—Replaces diode detector by an infinite impedance detector.

P. 672: "Voice Controlled Transmission, Part II;" R. Knowles, G3AAT.—Continuation of Part I, giving final circuits with various improved features.

P. 684: "Practice of QRP;" C. Practer, G5PR.—Notes on low power working as found out the hard way.

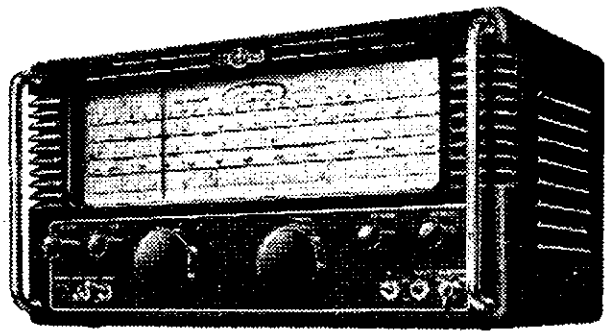
P. 685: "Power Pack PP-51/APQ9 on 50 Cycles A.C. Mains;" R. D. McQueen, G3DVP.

P. 687: "Converter for Seventy Cms.;" G. M. King, G3MY.—1N21B crystal diode in co-axial line. Local oscillator half 6J8 on 144 Mc., other half tripler to 432 Mc. and feeding crystal 8 Mc. i.f. channel.

Heralding

THE GREATEST AMATEUR COMMUNICATIONS RECEIVER OF ALL TIME . . . the

EDDYSTONE "750"



The "750" is a magnificent model—an entirely new, ultra-modern Amateur Bands Receiver with a host of outstanding features. It is the successor to the famous "640"—thousands of which are in use the world over, including the U.S.A.

Featuring:—

- Coverage 480 Kc/s. to 30.5 Mc/s.
- 200:1 ratio dial reduction.
- Modern miniature valves.
- Three watts of audio.
- Double detection superheterodyne (1,600 and 85 Kc/s.).
- Stabilised H.T. supply.
- Provision for external S meter.
- Variable selectivity I.F's.
- New and improved dial provides ample band spread on Amateur Frequencies.

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- VICTORIA: J. H. MAGRATH & CO., 208 Little Lonsdale Street, Melbourne.
- WILLIAM WILLIS & CO., 428 Bourke Street, Melbourne.
- N.S.W.: JOHN MARTIN PTY. LTD., 116-118 Clarence Street, Sydney.
- QUEENSLAND: CHANDLERS PTY. LTD., Corner Albert and Charlotte Streets, Brisbane.
- WESTERN AUSTRALIA: CARLYLE & CO. LTD., Hay Street, Perth, and 397 Hannan Street, Kalgoorlie.
- ATKINS (W.A.) LTD., 894 Hay Street, Perth.
- SOUTH AUST.: GERARD & GOODMAN LTD., 192-196 Rundle Street, Adelaide.
- TASMANIA: W. & G. GENDERS PTY. LTD., 53 Cameron Street, Launceston, and Liverpool Street, Hobart.
- LAWRENCE & HANSON (ELECTRICAL) PTY. LTD., 120 Collins Street, Hobart.
- NOYES BROS. LTD., 36 Argyle Street, Hobart.

Australian Factory Representatives: R. H. Cunningham & Co., 62 Stanhope St., Malvern, Vic. (UY 6274)

BELLING LEE

This is one of the famous old British names in radio and one that you have seen frequently advertised in English journals and therefore requires no introduction from us.

It is our policy to bring to the amateur and professional radio field in Australia only quality products in which an investment means a financial saving and an insurance of faithful and efficient performance. For this reason we are proud to mention a few of the good things made by Belling & Lee Ltd. They are obtainable from all good Eddystone distributors throughout Australia.

AERIALS.—The SKYROD anti-interference aerial is 18 feet in length, made in five sections and is complete with fittings for lashing to a chimney or to a mast head. Erected on a chimney or mast, this aerial is well free of man-made interference and vastly improves the signal-to-noise ratio.

"ELIMINOISE" is the name given by Belling Lee to a system of extremely efficient transformers and feeder cables for the eradication of noise. A complete kit is available for use with horizontal dipoles or the SKYROD vertical aerial. The kit consists of the aerial transformer L306, which is mounted right at the aerial feed point. This unit possesses a balanced RF transformer complete with Faraday screen between windings for the reduction of capacitive pick-up. The receiver "ELIMINOISE" (L307), which is mounted right at the receiver input terminals, is a similarly made RF transformer and is balanced to respond evenly over the 10-50 metre and the 200-2000 metre bands.

L1221 feeder is a 60 to 75 ohm balanced twin shielded RF cable used in conjunction with L306 and L307 above. No pick-up of noise can occur between the aerial and the receiver with this polythene insulated and screened with copper mesh type of cable.

The Belling & Lee aerial systems are available as either complete kits or may be purchased as components as desired. Noise reduction of 10 db or better is possible with the "ELIMINOISE" system and the automatic balancing of impedances adds further gain to any communication receiver.

—R. H. CUNNINGHAM AND COMPANY, MELBOURNE.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

The following letter from Jack Coulter, VK5JD, will be read with interest by all 50 Mc. men who made W.A.S. 50 Mc. due to the activities of Jack on location in Alice Springs.

OPERATION "AUNT SALLY"

In the past I have read of fellows who went "Ham Holidaying" at some outlandish spot with an equally outlandish call sign and resulting in their being very much in demand. This was my first experience of such a happy condition.

I departed Parafield on 8th January with the blessing of the local v.h.f. gang—and a certain amount of their equipment.

The beam was erected the following day and the equipment set up. Owing to power failure it was not possible to use the gear until late at night (approx. 2230 C.S.T.) when it is believed that 4BT was heard, very weakly.

At 1033 C.S.T., 10th January, 4BT was copied at good strength, but no contact resulted. Nothing further was heard that day until 1905 hours when several VK5s were heard. On calling CQ, 5RT replied and communication established. This made 5RT the first station to qualify for the V.H.F. W.A.S. Then followed 5QR and 5CU who also needed this contact for W.A.S. The band was still open at 2300 when I closed. Other VK5s were contacted on the 13th and 15th.

As a reward for three hours of listening and calling on the afternoon of the 15th, I contacted 5DW whose signals were 589. He remained audible for 30 minutes, but no other VK6s were heard, unfortunately.

VK2 and VK3 joined the list of eligibles on the 16th when contacts were made with 2ABC, 2WJ, 2WH, 3YS, 8ABA and 3BD, in that order. There were isolated contacts on the 18th and 20th, leading up to Sunday the 22nd. What a day! I made a total of 36 contacts. It was the activity on this day which determined the above title.—were the boys taking shots at me! I think it was only necessary to call CQ twice in the ten hours of operation.

VK4BT was again the first station heard but again there was no contact. Shortly afterwards the VK2a were heard and several QSOs resulted. The two's then faded out and in came the three's with a vengance. The VK3s were readable until about 2000 C.S.T. with the exception of a period from 1530 to 1730. Incidentally, VK5BC was contacted during the peak of the opening to VK3.

At 2000 hours the three's were fading out and the fives were building up in signal strength. Several excellent contacts were made with the Southerners including one with 5KO. This station was unique in that he was not using a beam. He was using the all wave "bath tub" antenna featured some time ago in "A.R."

At the time of writing VK7 remains to be contacted. It is hoped that this will be achieved before my return to the south.

In conclusion, I would like to thank four VK5s for their part in making this trip possible. 5GF and 5LJ for their very practical help, 5QR for his excellent publicity (I am sure the whole of Australia knew of the projected trip), and 5RT for his good wishes, hi. I might add that it has all been good fun and my success has rather impressed a local gentleman, now we may yet have a permanent 50 Mc. station in the territory.

WATCH OUT FOR—

North and South American 5 Mc. stations who will be watching for VK stations during the next three months.

VK6WJ, at Wyndham, who will be operating shortly on 10 and 6 metres.

VK3ACL and VK3RR who will be operating portable from Cape Schanck on both 50 and 144 Mc. on a Sunday early in April, the actual date to be advised in our next issue. Eric and Dick are going to make determined efforts to get signals across to VK7 on both bands. 3ACL will be operating on 40 and 80 metres during the week prior to the event in order to make arrangements. Cape Schanck is on the southern most tip of the Promontery separating Port Phillip Bay from Western Port Bay and the actual height of the location chosen is 450 feet above sea level and overlooking the sea.

50 Mc. ACTIVITY

NEW SOUTH WALES

The Six Metre Contest came and went, and as is usual after a very active period, there was a corresponding low period—the v.h.f. was dead. This temporary condition has already passed and much discussion re 576 and 288 Mc. can be heard. Field days are again creating interest.

Much appreciation has been expressed for the efforts of VK6JD who, by dint of sheer hard work, provided many W.A.S. QSL to his home QTH as the sojourn in Alice Springs is temporary only. Thanks from VK2 50 Mc. boys OM.

Fred, 2ABC, has a wonderful score in the Contest and very deserving, too. Fred definitely needed a holiday after it. No names, but a visitor found Fred asleep with his head alongside the key!! John, 2WJ, has also an f.b. score.

The January meeting of the W.I.A. V.H.F. Section was easily a record. The attendance being 53. The draw—a lecture on "Noise Generators" by 2UD. Bob cleared the air regarding noise factors. The lecture was particularly well received and informative. 2ADT and 2BZ made the trip and stayed with 2AH.

A great deal of thought is being given to mobile gear, particularly by v.h.f. chaps who have poor locations. February v.h.f. was very interesting and visitors and or newly v.h.f.-minded are 2AFZ, Eric; 2FJ, Jack; and 2JF, Ivan. Dave Evans has passed the A.O.C.P. and is awaiting a call sign, congrats Dave. Boyts Electrical Co. have presented the Section with a handsome Cup to be given to the Amateur who, during 1950, achieves the most outstanding v.h.f. work. Your suggestions are solicited. Suggestions recorded at the meeting were: (1) best piece of amateur made gear; (2) best lecture by v.h.f. Amateur; (3) best 144 Mc. achievement; (4) most advanced v.h.f. technique. We understand that Ken, VK2AIL, is responsible for the above incentive. Thanks Ken.

Another suggestion was that a special certificate be presented to Amateurs who do outstanding work in any field.

VICTORIA

Conditions continued very good for sporadic E work during January and many interesting contacts were made. VK5JD operating from Alice Springs was the most sought after station on the band. He made the first appearance from 1850-1930 on the 16th of January and worked 3YS, 3ABA, and 3BD. On the 18th, 3HT was worked while on the 22nd from 0915 until 1520, Jack worked practically every VK3 active on 50 Mc., with a signal running well over S9 at times. He was also in from 1800 to 1945 on the 24th and made quite a number of contacts.

Openings were practically a daily occurrence during the month and only the outstanding ones will be reported in detail.

8th of January: VK4s contacted from 1100-1330; VK2s and VK4s from 1815 to 2200. Very short skip noticed with 2GU, of Canberra, putting an S9 plus signal into Melbourne for quite some time.

18th: 1100 to 1500—VK2s and VK4s contacted.

16: 1730-2000—VK4s worked. 1850-1930—VK5JD contacted.

22nd: Possibly the best day this season. 0815-1200—VK4s contacted; 0915-1530—5JD contacted; 1020-1800—VK2s worked; 1530-1600 and 1630-2015—VK5s worked with terrific signals; 2200-2230—VK2s contacted again.

24th: 1800-1945—5JD audible. 1825-2215—VK2s and VK4s contacted.

29th: 0930-1430—VK4s contacted; 1000-1045—VK2s worked.

At the time of writing the last opening was on the 5th of February when from 0850-1120, VK4s were contacted and it appears conditions are now possibly tapering off.

Some more extended ground wave work has been carried out between VK3 and VK7. On the 30th of January, 7XL worked 3ACL at 1040 with S8 signals, and 3XA at Mitcham (230 miles) with S2 signals. 7XL was very steady at 3XA, and the absence of fading made it possible for them to have a complete QSO on phone. 7XL was also heard by 3VL at R5 S2 to 3.

Two new country stations are active on the band. 3GV, of Colac, and 3AT, of Shepparton, the former has been heard in Melbourne and has also worked plenty of DX. Melbourne stations will be looking for contacts with both these stations.

New voices heard on the band in the city come from 3ALH, of Kew, with 13 watts to an 807 and a three element c.d. beam, putting out a good signal, and 3AVN, of Black Rock, who is using an 807 screen modulated. 3LV, who was previously active from Trafalgar South, has settled in the city and is active on six again.

144 Mc. DOINGS OF THE MONTH

NEW SOUTH WALES

An excellent suggestion by Ken, 2AMH, that instead of making random calls on 2 metres, that throughout the 24 hours calling and listening be done on the hour. Listening only is useless and it is hoped that Interstate 2 metre men will co-operate. So if you have the day off or are in the shack, give a call and listen on the hour.

A discussion about the mod.-osc. and sharp receiver arrived at no real solution which seems to be inextricably tied up with "noise factors" and power of transmitters plus DX.

VICTORIA

There is little of a spectacular nature to report this month, with possibly the 50 Mc. activity reducing the numbers on the band. Conditions for work with Ballarat were noticeably better than usual on a few occasions and a number of Melbourne stations worked this area for the first time.

New stations on are 3FU, 3FJ, and 3HT, all using simple gear and putting out quite good signals. 3ACH now has an m.o.p.a. consisting of a pair of CV6s driving an 832. This provides quite an improvement over the straight modulated oscillator.

A field day was held on the 5th of February, those out being 3YS at Mt. Macedon, 3FO Mt. Dandenong, 3JO One Tree Hill, and 3TO 400 ft. a.s.l. on a hill outside Yallourn, 75 miles from Melbourne. Many contacts were made by all those on the band although no records were broken, best DX being 3YS to 3TO, 110 miles. 3TO also worked a number of Melbourne staitons; QSB was very noticeable with signals peaking S8 and fading right out.

288 Mc.—Newcomer to the band is 3BD who is using an m.o.p.a. consisting of a pair of RL18s driving an 832 to 25 watts. Receiver is a 955 super-regen. At the time of writing, Eric has worked 3AJH and 3ED, the latter at a distance of 12 miles, the best DX for this band so far, although no doubt greater distances will be covered before long. Other new paths are 3MD to 3IM, and 3IM to 3NW. Eight element broadside arrays are popular and those using this type of beam are 3LS, 3MD, 3ED, and 3BD. Main disadvantage seems to be rather sharp horizontal directivity.

576 Mc.—There is little to write about concerning this band this month. Absence of further portable work has prevented the establishment of any new records and the only new path to be covered is that between 3XA and 3IM, about 12 miles.

2,300 Mc.—3XA, 3NW, and 3AKZ are now all set up for two-way work on this band and tests are to be carried out from Sassafras in the Dandenong Ranges where Ken, 8NW, will be on holidays, to the other two stations. 3NW and 3XA have worked over a distance of about one mile (Ken taking his rig out in the car) wtih very strong signals, so we hope to have some real DX contacts to report next month.

— . . . —

A SUBSTITUTE FOR THE CAPACITY TYPE LIGHTNING ARRESTOR

The capacity type lightning arrestor consisting, as it does, of two metal plates mounted in close proximity on an insulating block is generally not suitable for use on transmitting antennae. A far more efficient method of keeping the antenna at earth potential, that is as far as static charges are concerned, is to place an inductance between ground and antenna.

The inductance is constructed so that it offers a very high impedance to frequencies which are to be used. In practice, it will be found that a coil close wound to a length of three inches with No. 32 gauge s.w.g. enamelled wire on a former one inch in diameter will be suitable for frequencies between 0.5 and 30 Mc.

For frequencies above 30 Mc., a coil with such a large number of turns would not be necessary and it is therefore suggested that 100 turns be used in this instance.

In the case of a doublet antenna, it will, of course, be necessary to use two inductances connected, one between each feeder wire and earth.—VK3KF.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. Gronow, VK3WG; Federal Secretary: W. T. S. Mitchell, VK3UM, Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary.—Maurie Butler (VK2AAN), Box 1734 G.P.O., Sydney.
Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.
Divisional Sub-Editor.—L. D. Cuffe, VK2AM, 14b Watson Street, Neutral Bay, N.S.W.
Zone Correspondents.—Nth. Coast & Tablelands: J. Retallick, Clarence River Council Sub-station, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gard., Newcastle; Coalfields: and Lakes: H. Rawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: G. J. Russell, VK2QA, 116 Bogan St., Nyngan; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 48 Harrabrook Ave., Five Docks; Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. C. Quin, VK3WQ.
Administrative Secretary.—Mrs. O. Cross, Law Court Chambers, 191 Queen St., Melbourne, C.1.
Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.
Zone Correspondents.—North Western: R. E. Trebilcock, VK3TL, 122 Victoria St., Kerang; Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: W. H. Ross, VK3UT, Ballangeich, via Warrnambool; North Eastern: J. A. Miller, VK3ABG, "Erinvale," Avenel; Far North-Western Zone: Harry Dobbyn, VK3MF, 42 Walnut Ave., Mildura; Eastern Zone: Mrs. P. M. Churchward, VK3US, "Shirley," Bed Hill.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WL.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK6DW on Friday evenings on the 7 and 14 Mc. bands.

VK6WI.—Saturdays 1400 hours, Sundays 0930 hours WAST, on 7195 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TB, Box 688J, G.P.O., Brisbane.
Meeting Night.—Last Friday in each month at the Y.M.C.A. Rooms, Edward Street, Brisbane.
Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—E. A. Barbier, VK5MD, Box 1284K, G.P.O., Adelaide.
Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.
Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AG, 7 Howard St., Perth.
Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.
Meeting Night.—Watch the Monthly Bulletin.
Divisional Sub-Editor.—George W. Ashley, VK6GA, 38 Mars Street, Carlisle, Western Australia.

TASMANIA

Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.
Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.
Divisional Sub-Editor.—Capt. K. J. Cruise, VK7EJ, Anglesea Barracks, Hobart.
Northern Correspondent: O. P. Wright, VK7LZ, 3 Knight St., Launceston.

FEDERAL

I.A.R.U. CALENDAR NO. 38

25th Annual International Conference

This event is to be held in Paris during 18th-21st May, 1950, and a total of 13 member societies favour this proposal with one unofficial approval, while five societies propose sending delegates. Although the W.I.A. does not anticipate sending a delegate at this conference, representation may be arranged with the R.S.G.B.

Regional Conferences on Frequencies

Proposals were put forward by the United States Territories Delegation in Region 3 (which includes Australia) for 1800-2000 Kc. and 3500-3900 Kc. to be allocated to the Amateur Service; but the Conference not reaching unanimous agreement, it was left to various administrations to allocate space within these bands to Amateurs. The final decisions have not yet been reached.

International Amateur Communications

As mentioned several months ago in these notes, certain administrations prohibited their Amateurs from communicating with other Amateurs. The I.A.R.U., fearing something was amiss, contacted these with the object of ascertaining the reasons behind the ban. It now appears that these administrations misinterpreted the clause relating to third party traffic on the part of Amateurs, and it has now been referred officially back to the people concerned for clarification. All in all it looks as if Amateurs will retain their rights of international communication with other Amateurs.

New Member Proposed

It was proposed that the Union Congolaise des Amateurs de Radio be admitted to I.A.R.U. membership, and your Federal Executive is pleased to record its vote in the affirmative.

Voting on Previous Proposals

No. 65 on the question of giving consideration to a universal system of serial number exchanges in Contests was carried by 18 for with 1 against. It is therefore agreed that all member societies will give consideration to this proposal in the interests of simplicity and avoidance of confusion.

No. 66 on the question of obligating member societies to publish in their own journals results in Contests of their own Nationals was carried by 17 votes for and 2 against. The A.R.R.L. and the R.C.A. stated they could not be bound by this proposal, but all other societies will comply with this proposal.

No. 67 on the question of reinstatement of the Spanish Society, the U.R.E., was agreed to, 17 for with 2 against.

No. 68 on the question of consideration to the adoption of a universal phonetic alphabet when using telephony, with the recommendation of the Interservices' alphabet was adopted, 16 for with 2 against.

(Proposals 65, 66 and 68 were proposed by the W.I.A.)

With reference to proposal No. 68, which has been carried, it now behoves every VK phone to adopt the Interservices' alphabet when using phonetic spelling. Make a note of this for the operating table.

C.W.-PHONE BAND ALLOCATIONS

The 18th Annual Federal Convention adopted, and reaffirmed at the 19th Convention, the sub-division of Amateur Bands (by "gentlemen's agreement") between phone and c.w. as follows:—

3500— 3550	c.w. only.
3550— 3800	c.w. and phone.
7000— 7030	c.w. only.
7030— 7200	c.w. and phone.
14000—14100	c.w. only.
14100—14400	c.w. and phone.
*21000—21100	c.w. only.
*21100—21450	c.w. and phone.
28000—28100	c.w. only.
28100—30000	c.w. and phone.

* When allotted.

It is anticipated that the 7 Mc. c.w. allocation may be extended due to the emergency network operating on 7002 Kc. This table above is voluntary, but all are urged to abide by it so that all operators may enjoy their hobby.

W.I.A. ACTIVITIES CALENDAR

Mar. 10: Agenda for 20th Convention issued by F.E.
March. 10-14: A.R.R.L. (C.W.) DX Contest.
March. 17: Annual Per-Capita from Divisions due with F.E. not later than this date.
March. 17-20: A.R.R.L. (Phone) DX Cont.
March. 25-26: Canterbury (N.Z.) Centennial Contest.
Mar. 31: End fiscal year for Fed. Executive.
April 7, 8, 10: 20th Annual Federal Convention in Melbourne.
May 7: Minutes of 20th Convention issued.

DX C.C. LISTING

PHONE

VK3JD	(1)	36	138
VK6RU	(2)	37	132
VK3BZ	(3)	36	129
VK6KW	(4)	37	129
VK3EE	(10)		121
VK4JP	(8)		114
VK6DD	(6)		113
VK3LN	(11)		112
VK3IG	(6)		100
VK3JE	(7)		100
VK4KS	(9)		100

An application has been received from VK4HR and is being checked.

C.W.

VK3BZ	(6)	40	166
VK3CN	(1)	40	161
VK4EL	(9)	40	140
VK3VW	(4)	40	135
VK2QL	(5)	40	133
VK3KB	(10)	39	129
VK4HR	(8)	40	125
VK3ER	(3)	39	122
VK3FH	(15)	38	120
VK4RF	(11)	35	119
VK2EO	(2)	40	116
VK4DA	(7)	38	113
	New Member		
VK7RK	(22)		100

OPEN

VK3BZ	(4)	40	189
VK3KX	(1)	40	167
VK6RU	(8)	39	165
VK2DI	(2)	40	160
VK3HG	(5)	40	156
VK3JE	(12)	39	154
VK4HR	(7)	40	151
VK6KW	(13)	39	149
VK4EL	(10)	40	140
VK3MC	(6)	39	139
VK3OP	(19)	39	137
VK2ADE	(28)	40	138
	New Member		
VK7RK	(31)		103

NATIONAL FIELD DAY CONTEST

For some unknown reason, this Contest does not enjoy the popularity it deserves. Before the recent war, it was much more popular and many entrants journeyed forth each year to have fun and also test out their portable gear. With the greater amount of portable disposals gear about at present, it is difficult to understand what this Contest lacks, as this year, for additional attraction, prizes to the value of three guineas were offered for each

section. Even so, as far as known at the time of writing, only VKs 3JD, 3EE, 3UM and 4GB were "on deck."

This is most disappointing to the Contest Manager, and suggestions would be more than welcome for popularising this annual event. Please let your Divisional Council have suggestions.

FRENCH ANTARCTIC EXPEDITION

General details of this expedition were notified in last month's notes, and since then the station, FB8AX, has been in operation and VK7LZ made contact with him on the 6th February on 14008 Kc. His note is chirpy, but he is putting a strong signal into VK7. As he is situated in Adelie Land, French Antarctica, he will be counted as a new country.

REMEMBRANCE DAY TROPHY

This trophy is at present doing a round of the Divisions in order that all might view this unique emblem symbolising our regard for the memory of those who gave their lives. If you would like a photo of this trophy, place your order with your Division—prints will be approximately 1/6.

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Further to para in these notes in February "A.R." anent VS1CW, ex-VK5SC, it now transpires that Syd is not returning to VK, but expects to return to his home address of 11a Burley Wood View, Leeds, 4, England, very shortly. He will then resume activities under a G call sign.

Many cards are held at this Bureau for VK9WL. This station is apparently too lazy to reply to communications and despatches of cards sent to him, so cards will continue to be held here until some acknowledgment is received from him.

This Bureau urgently requires the current address of Mr. Allan Campbell-Drury, VK3ACD. Can anyone oblige? Attempts to obtain it through routine channels have been abortive. John Gore, VK2PG, please note.

The QTH of the Headquarters of the S.A.R.L. has been changed to P.O. Box 3911, Cape Town, South Africa. The address of the QSL Bureau remains unchanged as Box 3037 Cape Town, South Africa.

A card relating to a contact on 7 Mc. made on 18th March, 1936, has just been received from W6NEX, Sid Cooley, Box 163, Los Gatos, Cal., U.S.A. The card, which requests the recipient to QSL is addressed to that ubiquitous and evergreen Bay Ohrbom, VK3OC, a power in the Ham Kingdom in those far off days. I intend making a personal delivery of the card, if only for an excuse to bend the elbow and yarn about the "good old days."

Hams, you have an honest Federal QSL Manager (sufficient haloes already on hand). If it were not so I wouldn't be telling you, and wouldn't be still waiting on 11 cards for DX C.C. and a Vermont card for W.A.S. It is amazing, however, the number of rare DX stations who, when forwarding cards to the Federal Bureau for onforwarding to VKs, enclose one or more blank cards. The continued receipt of these blank cheques is beginning to wear the writer's resistance down a little and it is becoming increasingly difficult to make his satanic majesty heed the instruction to "keep thee behind me."

Sibirsky, LZ1??, of 60 Gladston, Sofia, Bulgaria, writes, "To all VK Amateurs, Merry Xmas and very, very Happy New Year, a best DX year. I shall be very happy if can to receive more of this VK QSLs which me need very for my first transmitting licence." Stations receiving Sibirsky's listeners report should QSL and enable him to get the transmitting licence as Bulgarian stations are a little on the scarce side.

Reference has been made in past issues to the death of our colleague PK6XA. The manner of his death was as follows: Bert, when in Macassar, was PK6AX. (In 1932 writer contacted him as PK6AQ at Boela Ceram in the Molucca group.) After spending his leave in VK he was transferred to Morotai where he was active as PK6XA. At this period he kept fairly regular schedules with VK3JE who was shocked to receive a letter from Mrs. Krygsman in September, 1948, stating that Bert had passed away at Sarong, New Guinea, from a heart clot and that she was with him at the time. Mrs. Krygsman has since returned to Australia and as Sarong is not in Indonesia, her statement disproves the accuracy of the superscription, placed on cards returned by the N.V.I.R. recently, and mentioned in these notes.

Holidays have come and gone, but memories of a pleasant time spent in the Otways will linger in the writer's mind for many years. Apologies are expressed to Ron VK3KX for the inability to drop in and see him when traversing Colac, but time was at a premium. The latter portion spent in pursuit of the yellow metal proved that it was as elusive as ever, but as expenses were made and the pursuit enjoyed, encouragement for further attempts is maintained. It is not certain whether an attack of lumbago on return is a legacy from the pastime or due to struggling with antenna poles singlehanded.

Noel Roberts, ex-VK9NR, is currently on the air under the call sign of ZL3OZ.

Through VK4GJ, ZS6DO advises that he and ZS6GV are going to Swaziland for a few weeks from the second or third week in March. They expect to use the call signs ZS7A and ZS7B respectively, but this is not yet certain. They propose to use 14 Mc. c.w. and no QSLs will be answered unless sent direct to ZS6DO'a home QTH of 16 Fourth Avenue, Lambton, Germiston. They do not wish QSLs to be sent via S.A.R.L. This will be a unique chance to work ZS7.

Andre Baillet, a friend of Felix, FK8AC, has arrived in Noumea enroute to Wallis Island where Andre will take over the W/T and met. station for a period of three years. While at Wallis Island Andre will operate an Amateur Station under the probable call sign of FW8AA. No doubt Andre will be eagerly sought by all DX hounds. QSLs will be certain, but will take some time as there are only five mails per annum between Wallis Island and New Caledonia. Andre will not leave for Wallis Island until approximately the beginning of May, and further information on the bands and frequencies he will be using will appear in these notes. Andre has been given full advice on the use of QHM, QLM, etc., and not to answer calls on his own frequency in an attempt to squash the lids who pile up on the frequency of rare DX stations and make their Ham activities a misery.

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NEW SOUTH WALES

EASTERN SUBURBS ZONE

There has been a noticeable falling off in activities over the past month. This may have been due to a few chaps doing the annual overhaul, but some of the silence has been undoubtedly caused by the wholesale destruction we suffered during the heavy nor-easter which hit us in the middle of January. Most mast and beam owners had trouble in varying degrees—2NO found his two delayed Triplex beams a complete junk heap of wires, spreaders and poly spacers. He replaced the array with a new G8PO twin folded dipole outfit which seems to be giving satisfaction.

Best news of the month in this area is that some of the boys are going v.h.f.—2AFZ, 2AX, 2FJ and 2DV have been heard at times muttering about 50 and 144 Mc. We have a good gang in this zone already on the v.h.f. bands, but there is room for more. 2NO is anxious to get moving above 300—any takers? 2AFZ is busy completing a rig for 144 Mc., a stabilised three stage to an 832, plus a converter for use ahead of his present receiver. 2DV has come to light again with a first-class signal—seems that three harmonics don't keep all Hams off the air indefinitely. Snowy is going for 50 Mc. QRP.

2AZH, 2KII and 2AJG all heard sporadically with good phone but neither often or long enough.

2AIG is always reported as "building another final" and that goes for this month's report—only this time it is true. 2AX threatens to take a retrograde step in deserting plate modulation for suppressor grid—his quality is consistently good irrospective of which type he uses. Andy is another recruit for the 50 and 144 Mc. hands.

2FJ went into smoke for a couple of weeks last month—still looking for that "bit of dirt" on which to place his super tower. With a beaming face he reported that he had found "just the place," not too far from Sydney but far, far away from the small-time, parish-pump, parochial and partisan restrictions which have hampered him in his constructive ideas in the past. Best of luck, Jack, you are a trier, mate.

2NO doesn't seem to get far enough away from his journalistic activities to get on the air much. However, a considerable amount of building has been proceeding in lieu. For 50 Mc. a new transmitter is nearing completion; four position crystal oscillator, followed by a Philips QVO4/7 doubler, 807 buffer and p.p. 833s. Modulator is Class AB2 807s. In the same rack is a new 144 Mc. job and the power supply is common to either rig. Unusual point about the power supply is that it does not use a single glass rectifier and yet manages to hand out the following ergs: 1,000v. at 800 Ma., 550v. at 200 Ma., 200v. negative bias, and 24v. at 6 amps. This is accomplished by the use of British ex-Naval selenium bridge rectifiers.

Besides building operations, Don had to entertain the following visitors last month: VK4KH, VK2WF, ex-G6TM (1924 vintage), 2ALB, 2AKA, ex-2ST, and ZL1QF. The G is now one of the Empire's foremost scientists, but the bug got him at Don's shack and he pounded the key for seven hours with sundry Gs before the contemplated visit of "one" hour was completed. There is a distinct possibility that another VK2 may bob up anytime —get him into the Institute, Don—we can use his services there too.

NORTH SHORE ZONE

Periods of solid heat, blinding rain, humidity, just about every insect that crawls, flies, and jumps, and DX conditions that are about the worst one can remember in years, have made sitting in the shack more an ordeal than a pleasure of late. Still, as both the writer and 2PV have had the pleasure of working AC4 for the first time after more years of trying than we like to talk about, it's been a pretty good year so far!

Have heard from Bob Meadows, 2ARM, that he is tossing In Ham Radio for good, his executive duties on one of the prominent trade papers taking up too much time to allow him to give the attention he'd like to the shack. Hope we'll see him back one of these days, though.

2AMB has discovered that he can at last work a bit of DX over the short route, which means right through his house and the hill at the back of it. He may be in a new location before long. 2ZH is under way once again, and getting in a little time at his chief love, construction. 2NI needs a dare-devil steeplejack, to shinny up his pole and put the centre element of his 10 metre beam back where it belongs. 2GC is still clearing up the shack—it's now possible to open the door without two men to lend him a hand." He'll be departing for a new call area before long. 2AND is getting among the DX with his new rig, but because of his location is only hearing sigs at half the strength anyone else can hear it. Hear that 2FH may be joining the gang on this side before long.

Haven't heard from 2GQ in quite a while, but reports say that he is planning a new antenna array, and polishing up something called a "bug." Noticed that 2ES had his three element beam down, and the old dipole back up there, but guess this is only temporary. 2AGN heard back on again, in between voyages. 2VN, 2RA and the other stalwarts were heard battling away in the B.E.R.U., but I didn't hear a squeak out of Dave, 2EO. Anyway, conditions being what they were, I think it was about the most disappointing B.E.R.U. Contest I can remember. Maybe things will be better next year. Was tickled to hear a KH6 in the middle of the B.E.R.U. calling "CQ AC4," long and fruitlessly. Guess he thought chances were better while the brawl was on!

WESTERN SUBURBS ZONE

2AER has been on c.w. lately although rather infrequently. Is well up in the timber business! 2FZ heard making quite a hit with the DX on 20 metre c.w. 2JT has some super colossal phone going out. Has already burnt out one EF50 in 2AHB's receiver. It doesn't sound at all bad Chas! 2WD was overheard in conversation with a very smooth gentleman, by name of HC2OT. Nice going Arch. 2OQ hasn't had much time to spare lately, but has his two element beam working. Has skeds in the early a.m. with a couple of Ws, works them the long way round. 2CL has been snatching a few good ones on 20 metre c.w. Half your luck Les. 2AGT has his two element beam up using a four-wire folded dipole with reflector or director. It's a honey as AC4NC, CT2AA and TA3FAS will testify. Phone is getting out equally well.

2QL is with the R.A.A.F. at Townsville and will soon be operating as VK4QL. Off for the last six months of 1949 on a radar course, Frank managed to work 54 countries as 2QL/3 at Ballarat. Snagged ZB2I, MD7GR and GC2FMV in Sydney over Christmas. Grand total now 156 countries, all on c.w. According to Frank, W.A.C. is possible any day at Townsville and the total will probably grow as the 50 watt band-switching rig is on its way there. 2TD has replaced his beloved "Window" with a doublet. How's conjugal bliss and ham radio working out Ray? 2NK hasn't yet put his DR106 rig on 6 to the best of knowledge. How about some action, lad.

The Experimental Radio Society has been forced to vacate its premises at the Greenwood Hall, Liverpool Road, Enfield. New quarters are in the offing, but no details just at present.

NORTH COAST ZONE

With conditions improving on 40, the North Coast gang are staging many comebacks. 2HO was heard on 40 working 2NO, also 2NY, 2TB, 2ADE, 2WT, have left 6 and 10. The 80 gang are also more active and the VK4s have been working plenty of ZLs and VK6s. 2SL, 2LH, 2ADE and 2JO have returned from holidays and are active on 40 and 20. 2PA has bought himself a wire recorder and cutting head. 2SH still catching bream and making the boys envious by his good catches. 2AOU and 2MM had their holidays at Urunga, both using portable gear. 2WX, 2AKR, 2RU and 5QI passed through during Xmas and New Year. 2EA experimenting with 144 with good results on the handi-talkie gear. 2GI down on 20 and 2ASF using Command Tx and Rx and working plenty of DX on 40. 2UC reports the Lismore gang hope to be at Urunga in full force to meet the boys at Easter. Allan Simpson, of Kyogle, has received his call sign, 2ASO, is active on 40, congrats Allan.

One of the highlights of the Urunga Convention will be an illustrated lecture by the one and only

2JR. Joe has something that will make the revolving "hospital beds" as out of date as smoke signals. Bring along all your questions as Joe has all the answers. Ted Hamey, of Coffs Harbour, will have his talkie pictures with views of interest for your entertainment. Come along and see the "Boy" wonder, aged 5 years, who will astound you by answers of radio questions. 4FN (4W1) and 4CU will be down with their portable gear and are looking forward to meeting the VK2s; it is expected that quite a few of the VK4s will make the trip.

If you require accommodation at the hotel, please contact VK2XO at your earliest. 2ASM and 2PW will be travelling mobile and hope to make contact with Urunga on the way up from Sydney by car. To all members of the North Coast Zone if you have news please send it to 2XO, of Raleigh.

HUNTER BRANCH

Members of the Hunter Branch wish to congratulate Bill, 2CW, on the excellent job done as Secretary, and they are sorry you can't continue Bill—all the best to the new Secretary, sure he will receive the support of the whole gang. The prediction boys seem to be right on the beam by the way 10 metres is lately, Europeans being worked through for short periods during the evenings. 2PQ still working them, 2FP lost a little interest on ten, but 2AFS still going strong even on a dead band, always gets someone. Guess due to these conditions, President 2CS will be on 20 soon, with the terrific signal, not heard on 10 for a month. 2AGY back on 20 c.w. after a spell, getting onto the DX with the vertical.

Nice modulation from 2LV, the XYL doing a good job too. 2NX and 2UY had a good holiday at the Lakes. Shorty heard on 40 phone, Stan still inactive. 2AAI has a new modulator using 807s, a nice signal on 40. 2ANA has nice open 300 ohm up now in place of the ribbon, results excellent on 40—works well with hose treatment! 2WU has nice signal on 20 with phase modulation and 813. 2XT not on with that nice new rig yet. 2PT and 2AMM getting few new ones on 20 phone with fixed beams. 2AMM doing plenty of flying too. 2MC, from Warner's Bay, has made a comeback on 40, and has anyone heard 2NL?

2KB busy with his new parliamentary duties. 2XY talking of beams and QRO on 20, the 40 phone sounds good too. If you want information on out-board motors ask 2KG, the Rx is taking second place for the moment. 2ANL very QRL at the moment and 2OS working 6 metre DX on the beam, although it is not very high, has ideas of a tower. 2ADS working Sydney well on 6, plus VK5 and VK7. 2UF on 6 too, very pleased about the VK6s. Most of the local gang passed over VK5JD thinking he was just another VK5—much to our sorrow. 2BZ spending lots of time on 2 metres working lots of new Sydney stations. 2TE picked up some new countries on 20 and 10 phone, still investigating new noise limiters.

4BG, Ron Glassop, ex-Newcastle, would like to contact Geo 2SO sometime, 2CI might pass this on. Gordon only heard on 40 phone at week-ends. 2CN had some modulator trouble but it is all ironed out now. Flash! 2AGD back on 40 with p.p. 809s; gets out around the gardens and works a lot of old friends. 2ZC only been on 20 c.w. since the holidays and reports the rig still works. Was visited by Harry 2OQ on holidays from Sydney, the gang wanted to see more of Harry but the XYL had a say! 2FX still QRX in the control room of a b.c. station, has the game sewn up too. Maitland gang not too active. 2AKP strong on 40, 2DG sneaking a few new countries on 20 c.w. 2XQ getting out nicely on n.b.f.m. on 20. John has the Hunter Valley network well under control. 2AKP, 2XQ, 2AHA very pleased to receive certificates from the Police Department for their flood work. Ass. member Chas Hunt and pal must have the code nearly mastered by this.

2TY putting in terrific signal on 10, sounds like a Californian kw. 2ADX must be QRL. Understand we have a new Ham at Stockton in Ron Stuart, sure 2BZ will make a good job of that rig for you. Get 2PT or 2AMM to bring you along and meet the boys at the next meeting. 2AHA's 10 and 20 metre beams are up but not tuned, hopes to get CR5UP before he leaves for Portugal. Still not receiving notes for this column from the boys, thank goodness for a Rx—looking forward to some Maitland news next issue. All the happenings to 2AHA.

COALFIELDS AND LAKES

The most important event during the month has been the official formation of the Hunter Valley Emergency Net. It was decided to carry out tests and practices on the last Sunday of each month. Due to several days of continuous rain with no sign of breaking, a get-together and practice was held on Sunday, 5th February. 2XO, 2TY, 2AFS, 2KZ, 2YO and 2YL participated and it proved very successful. At Muswellbrook, 2ANU is on very low power and is doing a good job on 6. 2VU is also spending most of his time there although Geoff has rigs on all bands. 2TY, of Lochinvar, is likely to be found on any band; 2, 6, and 10 mainly, had a 2½ hour contact with a KH6 on 10 recently. 2YO is back on the air fairly consistently. George is one of the pre-war boys that the bug has bitten again. 2KF is still one that mixes the v.h.f's. and DX; is often working 6 and 2 cross-band, but if there is anything worthwhile on 10 you will find Bob after it. Nil from old-timer 2JZ, if you have any dope let's have it. Another OT, 2PZ, threatens a comeback any day now, Chris has been putting the finishing touches on a re-vamped AT5.

The district has lost 2MK who has taken up residence at Moscot. Nothing heard of 2ALR for ages, what's doing Bruce? Local history was made recently when Max 2KZ finally worked "Delaware" on 10 phone for his 10 phone W.A.S., the confirmation is to hand too! To make it more creditable, it was all done with 16 watts input to an 807, a two-tube "blooper" Rx, plus a Franklin antenna, a very fine effort Max. He is now talking of re-building—why? Max, at odd times, works the gang on 6, still using the "blooper" Rx. "Ole" Jack 2ADT been on holidays but back on the job for a spell. If anyone wants to QSO 2ADT you want a Rx and Tx that covers 2 to 80—he is liable to be anywhere. For the benefit of 2VW, 2HO, 2AH and 2MQ, Jack still modulates 100 per cent. according to a pee-lamp.

Very little from the Lakes area, would appreciate one of the boys sending me some notes on the 2nd or 3rd of each month. Those active, I can hear, are 2LX 50 Mc., 2KR 40 and 6, when are you going to transmit on 6 Cess? 2AEZ seems to have a better signal on 6, where is the DX Ern? 2AMU mainly on 6, likewise Major 2RU who also does a lot of work on 144. 2YL been on holidays met 2WP on the travels, Bill was holidaying about a mile away. With the aid of 2ADT a new four element beam was stood up and results seem to be much improved on 6. Conditions here generally have been poor, the lower frequency bands are very quiet. 2KQ at Toronto, Lake Macquarie also has a new beam on 6, 42 ft. high and is getting out fine. Jack may be off the air for a few weeks. Cheers gang.

SOUTH COAST AND SOUTHERN

Jim 2TC has quit temporarily due to heavy noise created by leaking insulators on the 66,000 volt line running through his property. Suggest you write to 2AJP, c/o. Southern Electricity and give him details to hand into officer in charge. 2APP a new addition to the zone is active and operating from same locality as Jim, but is out of the noise area. Uses two stage 6V6-807 Tx, "640" Rx, and 80 metre doublet. 2TA on ten and six but no details of gear. 2MN, Cec, has given Ham Radio away and shifted to another town. 2VT on ten and six, believed to be on vacation at the moment. 2AQ has had his call for a long time but never gets around to putting a signal on the air. 2WA, is very quiet, but think he does a little on 20 metre phone. 2TV is active now, but has struck a snag in the form of a diathermy machine, operates at 0900 and 1700 hours, QRM permitting. 2ALN spending few days with Cec, 2AIK, and will return via Canberra to stay with Les 2PI. 2ANR and 2ASB, both back to Canberra for a couple of months. Both interested in 144 and expect to hear more about their activity soon. 2PI has CV6 on 144 and Ron 2PM also getting pieces together, he was also responsible for getting 2TV's gear into operation and are often heard working between Canberra Hospital and 2PM. Arch, 2GU, heard briefly on 40 and was asking for dope on 5JD's 50 Mc. signals. 2AOX heard strongly on 40, but quality was not as good as usual.

2OW very happy with new "640" and also keen to get on 20, re-building and guess Gordon will be on the DX shortly. Dick, 3RZ, called in on his way to Melbourne. Maurie Finlay, 2PW, dropped in for a few words as he returned from vacation in Melbourne. 2AID only station heard from Wagga and gear in operation was p.p. 807s, 15 watts, AB2 807 modulators, AR8 Rx. More dope on the Albury and Wagga groups next month, as the most active Ham in Albury will be sending some news.

2ABE and 2ADI are active in Bega and are inquiring about their old friend, Tubby, 2ANN. Roy, 2ABE, is using three stages on 40 and 20 and screen modulation; Jack, 2ADI, two stages and five-tube Rx. 2AMV very consistent signal and also very popular meeting place for members and XYLs. 2MT had 98 countries up post-war and should have the extra two anytime. Chas is likely to shout if you pass through Wollongong. 2LA still not active. Bill, 2WP, still mainly on 40 c.w. and phone and is likely to join the W.I.A. so he can read these notes!

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VICTORIA

The usual monthly meeting of the Division was held on Wednesday, 1st February, at the usual place of meeting, the Radio Theatre, where a fair attendance of members were present, undoubtedly more would have been present but the weather was certainly against things. The chair was occupied by Mr. W. Tregear (VK3TX) in the absence of the President (Mr. R. Cunningham) who is overseas.

A very fine selection of films was screened, the subjects being "The Merlin Aero Engine" and "The Turbo Jet Engine." The screening occupied about one hour, and an expression of appreciation was passed to Mr. H. Webber for having made these films available. After a short (?) "Smoko," the meeting resumed normal business.

Discussion took place on the State Convention and activities of the various groups. The usual box was passed around for "Food for Britain" and a goodly sum was again collected. Nominations were received for Federal Secretary and Mr. Max Hull, VK3ZS, was nominated. He expressed his desire to think the matter over for a few days. Mr. C. Gibson, VK3FO, was appointed Federal Councillor for the next 12 months.

We are pleased to report that Membership Certificates are now well on the way and as soon as things get under way again in the office the members will receive their Certificates, so a little more patience please boys. There are some at the rooms and these can be collected if anyone cares to call.

The Council has decided, owing to unforseen circumstances, that the rooms will be open from 10 a.m. to 4 p.m. We are happy to report that the A.O.P.C. Class, conducted by this Division is full, very f.b. Mr. Medhurst, of the Melbourne University, is the new lecturer, in place of Mr. Bob Tozer who has resigned.

The V.H.F. Group is now very active and big things are under way. Quentin Porter (3IM) is chairman and promises greater activity on the v.h.f. bands.

PERSONALITIES

VK3AWW was seen with a bundle of QSL cards and a worried look on his face. VK3UM is raising a bit of QRM with his new Vauxhall. Have you got it suppressed Bill? A lot of signals eminating from around Kangaroo Grounds were heard, also some more from down Frankston way, on the National Field Day. It is pleasing to hear 3XD back on phone after a long time. 3FP has been transferred to Central Australia for a few months. 3BH is still going strong. Chas. must be one of the original and oldest Hams in VK land. Another old timer 3UG, formerly 3DP way back in the 200 meter days, is also active. Norm is not enjoying the best of health, but we all hope he will improve and cause a little more QRM.

TEST EQUIPMENT CONTEST

Only two entries were received for this contest held at the Victorian State Convention in January, 1950. One, a wide range signal generator, submitted by A. K. Head, and secondly, a pair of 2,300 Mc. field strength meter, a joint entry by K. McTaggart and A. K. Head.

The judges decided to award one prize; this went to A. K. Head for his signal generator. This instrument has been fully described in the November 1949 issue of "Amateur Radio."

The prize money of £5, all of which goes to the winner, was generously donated by A. C. Harris, VK3CH, of Birchip.

NORTH EASTERN ZONE

On 15th January, the mid-year Convention was held at Shepparton. Those present being VKs 3AT, 3KR, 3YV, 3APF, 3UI, 3XZ, 3FD, 3HZ, 3ACK, 3PF, 3PE, J. Harrington, K. Tenant, Ben Chilcott, K. McInness, and our old friend 3RT (Bob Tozer). The President, 3AT, opened the Convention with his address recorded on a wire recorder, then the Secretary, 3APF, delivered his reading of the minutes in a similar fashion. Great interest was shown by all present in the recorder. After the President had welcomed the visitors, the boys settled down to general business and it was decided to change the monthly hook-up from the first Sunday to the last Sunday in the month. Same frequency and time as usual, 7050 Kc. at 1330 hours.

After the business was finished, there was an inspection of home-made gear, the items being: absorbtion wavemeter (3KR), crystal controlled converter (3APF), auto bug key (3YV), 6 metre rig (3UI), 40 metre transmitter and receiver by 3FD, and also the zone's Bendix frequency meter. Then followed some weird and strange noises as several Hams recorded their voices on the wire.

The dinner which followed was something really worth going to Shepparton for and when it concluded, the boys split into two parties, one with 3APF and the others went to Tatura with 3UI. These two keen members then gave a demonstration of a.m. and f.m. duplex on 6 metres and also f.m. on 10 metres cross-band with 6 metres. By the way, Alan's 6 metre log reads like a busy 40 metre log.

Afternoon tea was then served by 3UI, after which some kind persons quietly did the washing up. All in all a very pleasant and enjoyable day was had by all and our thanks go to 3AT, 3APF and 3UI for making our mid-year show such a success.

This is the first zone convention that John Miller, 3ABO, has missed—was it because of work or is he heart-broken at having the front of his new

IMPORTANT

Would all Magazine Contributors please note that all contributions must be addressed to "Law Court Chambers," 191 Queen St., Melbourne, and NOT to the old box number.

Contributions, particularly notes, if addressed to the box number may not be received in sufficient time to be included in Magazine for the month for which they are intended.

M.G. bashed in? Hard luck John, what about a letter on the anbject, Peter, 3APF, worked Bogong from Shepparton on 144 Mc.

CENTRAL WESTERN ZONE

As reported in the last notes, the Bendix power supply has been built and tested, and by the time these notes appear in print the meter should be ready for use by zone members. Its calibration is excellent, and checked 100 per cent. against the "A.F.T." transmissions per the W.I.A. While the meter is at 3YW we will be glad to give any frequency checks required.

Members are also reminded of those prizes donated by 3TA for v.h.f. work in the zone, and also for technical advances in other directions on 3.5 and 7 Mc., so don't hide your light under the bush and let us know all the doings.

Had a visit in person from our worthy President (3GN), a solid QSO for one hour resulted, to the annoyance of some pill swallowers. George is a busy man these days, and the "Radio Centre" suffers as the result, he is also unloading a lot of his disposals gear.

Our v.h.f. twins, 3DP and 3AKP, are now busy building "Lenfo" four element beams in an endeavour to create bigger and better 144 Mc. sigs in Stawell and Deep Lead. 3AKP is also having trouble with the 14 Mc. beam in the way of crystallised bolts which have the habit of snapping off and causing the elements to do likewise, so apparently there is more to it than just putting them up and working the DX.

3AJO is still re-building. John has had so many brain waves since he started, they have gummed the works up properly. 3IQ has at long last departed for Melbourne, so Maryborough and districts there-abouts should be much quieter, best of luck, Kevin. 3XU has been right-up with the top draw over the past few weeks, entertaining the Governor and arrangements thereto certainly kept Gordon busy. Being busy, reminds me to tell you sleeping blokes about the zone hook-up, it's at 10 a.m. on the second Sunday of the month on a frequency of approx. 7155 Kc., will we be hearing you?

SOUTH WESTERN ZONE

My Geelong correspondent has again come to the rescue and I would like to place my thanks on record for the excellent job he is doing. His opening remark is usually to the effect that there has been little activity and then proceeds to give a page of dope. So let's get stuck into it. 3WT getting out nicely to the DX on 20 with his new rig. 3BU been bashing the 40 metre boys to the extent of over 50 contacts in a short while after Christmas. 580 Mc. has drawn another enthusiast in 3APG. 3AJT doing nicely with the DX on 20 and hopes to get his three element rotary on the tower soon. You certainly rock in here on short skip OM. Understand you have a nice location on top of a hill. 3ALG has his modulator going much better. 3BW is too busy to operate, and 3OM has not been heard for a while. 3ABK now working in Melbourne, expect to hear his portable call 8ABW shortly.

Heard 3AKR getting some good advice about XYLs from 3AGD and 3BI the other night. Maybe Kevin is jibbing. 3VA seems to have deserted 20 metres these days, probably "batching" did pot suit him. Visited 3MH at his new QTH the other day. Very compact rig Mart has. 3ASV never heard and rarely seen these days, less QRM for your truly. 3AMH busy re-building final and cleaning up rig in general. Also building up a portable rig for holidays. 3GR heard on 40 metres, seems to have given 20 away, don't blame him either. 3HW is nearly satisfied that his four element is tuned, and has so far failed to live up to his New Year resolution of more listening and less talking.

I must take the opportunity of welcoming a new Ham, 3AVK, who is at the R.A.A.F. camp. Hope to hear you soon Vic. 3AAW, who used to operate from the camp, has now turned up as 4TU and nearly made a VK9 call, best of luck to you Bill.

Geelong Amateur Radio Club.—The first meeting for the year was held on 4/1/50, after the business of the Club had been discussed, members visited the shack of Dick Heighway, 3ABK, and inspected his gear. Undergoing alteration was a TA12D. The second meeting was in the hands of club member, Jack Mitchell, who chose for his subject, "The Theory of Wave Guides." This was new to members and proved interesting. The following meeting took the form of a field night and d.f. loop antennae were the order of the night, trying to locate the hidden transmitter operating under the club's call sign, 3ATL, and operated by 3WT. None of the members were successful in locating the transmitter in the allotted time. 3SY and 3ALG, who had struck trouble with their equipment and were late in starting, were only two streets away when the transmitter gave out its location. In spite of the wet weather, quite a few members joined in the fun.

QUEENSLAND

Notes for the month are very scarce, these notes being written during the annual vacation period. I was holidaying in VK2 and Ham Radio was given a complete rest. Our zone managers were evidently enjoying the holiday period and no notes were received from those sources. No! One exception, 4CG, who sent in some notes for the Downs Zone. Other notes contained herein were compiled by reading your mail since my return a few days ago.

Main items of news during January was the National Field Day. A few VK4s went out into the country, notables were 4CU, 4HZ, 4MF, 4KK, 4AP, and 4EL. Don't know of any others. Conditions were very poor and a few 7 Mc. sigs heard here were little better than S4. Only exception being 4CU. Charlie has excellent gear for portable work and his phone was up to the usual f.b. standard. All except Charlie seem to have had a very lean time. Charlie made thirty odd contacts on 50 Mc. and finished the week-end with well over one thousand points. 4XR and 4KK also got their share of the 50 Mc. break. Later we heard that 4AP and 4EL worked 19 countries, W.A.C. on 14 Mc. and gained 400 points on c.w. alone.

Speaking of 50 Mc., we often wonder why the Toowoomba gang don't operate on this band. 4CU never fails to fill a couple of pages of the log whenever he goes portable on the outskirts of Toowoomba. There should be a 24 hour a day channel between Toowoomba and Brisbane and surrounding district. VK2 boys at Katoomba told me that contacts with Sydney can be made any hour of the day or night.

The general meeting in February was presided over by the retiring President, 4AW. Attendance was very poor considering that the meeting was held to call for nominations for office-bearers for the coming year. Visitor to the meeting was G3DWI mobile marine. Nominations were received for all the positions with the following being filled unopposed; Secretary, 4TB; Treasurer, 4WJ; Station Manager and Emergency Communications Manager, 4FN; QSL Officers, 4EL and 4RC; Traffic Manager 4AG; Librarian, 4WF. A ballot will be held for the other vacancies. The position of Country Rep. will, for the first time in three years, be taken over by a new man. The retiring officer, 4SN, having served in that capacity since the creation of the position, will not be a candidate because other ties will prevent his regular attendance at the monthly meetings.

BRISBANE ZONE

4JA has completed an f.b. lattice tower some 30 ft. high on which he is going to hang long wires under a three element 20 metre beam. 4AP has forsaken 28 Mc. and was heard knocking 'em over on 14 Mc. in the recent R.E.R.U. Contest. 4GB was heard "mowing 'em down" during the National Field Day with a beautiful T9X note, was using Clapp osc. and 807 final, 23 watts and a 136 ft. matched impedance ant. Is believed to have W.A.C. and worked 19 countries in a 24 hour session. 4RC still using only an exciter unit and meditating what to put in the final! Goodnes knows what will happen when he does decide on a final, as he made over 1,200 points in the recent R.E.R.U. Contest with 23-24 watts on the exciter, even working G on the 14 Mc. vertical BUT on 7 Mc.

4FJ not been very active of late, but has all the cards in for his DX C.C., also has between 60-70 countries on phone confirmed. 4EL has not been too active either other than helping to swel 4GB's N.F.D. score, however he has now sent away his cards for W.A.Z., only one more to get now Empire DX C.C. still a few more cards to get yet. 4HR also has not been too active, does not need to be, as talking of Empire DX C.C., Tibby has the only one in VK4 and we think the 2nd in VK. What to do now? Heard 4FN under his portable call, 4MF, recently from a local seaside resort putting out a good signal. Don't know how he manages to do it and at the same time keep the local W.I.A. transmitter going on multi-channels. 4MD has been trying out phase modulation and

been doing quite a good job with an 8JK beam. They say Mick is going to try a pair of good old triodes in the final soon! 4FB heard pounding the brass the other afternoon, quite a change from the old phone; long time since c.w. used I guess. How's the power noise these days Fred? 4RL has a nice big triode in the process of erection of a new final band-switched all bands. 4DN heard on 14 Mc. with a nice phone signal. 4NC heard often on 7 Mc. with a nice phone signal and is re-building at the moment.

TOWNSVILLE ZONE

Manager 4GD.—Wet weather prevented the gang from taking any part in the National Field Day. Anyway we understand that 4EL is the only one in the town with portable gear. A visitor during January was 2AHS, a mobile marine. 4TU, ex-3AAW, is leaving Townsville shortly for Manus Island. Another who is on Manus Island is Wal, ex-4WL. 4VH is back on the air with a new v.f.o. and a super duper phase modulation. 4RU on temporary transfer to Cairns. 4BX will be on the air soon with band-switched transmitter. 4EJ and 4GD spent the Xmas holidays on an island out from Townsville.

4WD, 4GD, and 4JH are busy working on 50 Mc. gear. We believe Joe is now the proud possessor of a new old car. 4DH has come down off the roof now that most of the r.f. is in the aerial. 4RW has a 459A but the magic eye just stares and stares, but a YN QSL card softens the blow. Bob and 4XD gave Ham Radio away the other day to go catching alligators at the local zoo. Bob adopted the magic eye method and hypnotised the brute, whilst Ken sat on the fence doing "nutting."

MACKAY ZONE

Manager 4KW.—District in the middle of the wet season and the boys having a quiet time. 4KR now has a four element beam. 4FH, last we heard of John was a big moan over an unexpected transfer.

BUNDABERG ZONE

Manager 4XJ.—Club gone into indefinite recess. One old timer, 4BJ, has given radio away and 4PG has left the State. 4UK, 4XJ, 4HE, and 4CW re still active, but the old Club needs a transfusion. Jack is the most active of the Bundy gang. 4HE is heard on 40 occasionally, but has not got the antennae erected at the new QTH yet.

IPSWICH ZONE

Not much heard these days of 4CH, but 4MW keeps Ipswich on the map knocking over the Europeans each evening at the rate of 12 an hour. 4ER building new power supply for receiver and after that Eric will probably get that 20 metre rotary. 4LD is using portable gear and contemplating new rig plus the vee beam. 4GG, heard the old iron horse going the other day on 7 Mc. and seems to be quite happy that one of the local b.c.l's. is leaving town. Nothing heard of 4LT lately, Albert either raising more poddies or plenty of DX on 20.

DARLING DOWNS ZONE

Manager 4CG.—Conditions have been very poor since November. As a matter of fact it is many years since the bands have behaved as they are doing now. African signals have been conspicuous by their absence around midnight on 14 Mc. and Europeans have been unworkable even around 5 to 6 p.m., which is normally a good period, and after midnight they are just not there. 28 Mc. has been a flop this year, even the Ws not getting through at any strength or regularity. 3.5 and 7 Mc. are bordering on the useless, what with QRN and QRM from commercials. We note more and more commercials on 14 Mc.—mostly with Soviet call signs.

Only activity of note has been at 4CU and 4XN—our 50 Mc. exponents. Charlie and Eric have been having the time of their lives working the stuff that comes through from VK2, 3, 5 and ZL. 4WY gets on 40 when the noise permits. No news of 4DA or 4RF. 4SG is interested in the emergency network and talks of building some portable gear in near future. There are a few budding Hams around Toowoomba but some are finding the exams rather tough—especially the morse, theory and regis.

We expect a 4LB to blossom forth here in the very near future with a "pansy" rig. 4KK is hibernating—weather too hot out on the plains. As usual the Warwick gang work secretly and without fanfare. 4CG not very active, but has managed to chalk up a couple of W.A.Cs. for the new year and work a couple of new (to him) countries to boot. Here's hoping that ere this appears as spots before the eyes that conditions will pick-up. 4XP, Geoff surprised all OTs by coming up on 7 Mc. phone. Big things here soon when Geoff gets his beam atop his new 100 ft. tower.

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SOUTH AUSTRALIA

The monthly general meeting for January was held to a full house when Mr. E. McGrath (5MO) gave a very interesting and instructive lecture on "Antennae." In doing so he covered all the types of aerials familiar to the average Ham and one or two not so familiar. The lecture was something of a record in two respects, one, in regard to its length, and two, in regard to the intense interest it created. Moving among the boys afterwards, I was a little dubious as to how they had taken the length of the lecture, but I had no need to make many enquiries as it was apparent that they had "lapped" it up, and without any exception they agreed that it could have gone on much longer as far as they were concerned. Once again it goes to prove that providing the lecturer is master of his subject he can talk on for hours and still keep them interested.

A real good show Ted, what about a repeat sometime? The proposer of the vote of thanks was naturally handed to the "umbrella man," in other words, Jim Sullivan (5JK) who is the uncrowned king of antennae in VK5. At the end of his suitable speech he was presented with a badge of office (an umbrella, minus everything but the ribs and handle) by "Sir" Warwick Parsons (5PS) on behalf of all present. Jim was quite overcome at the honour conferred upon him, and promised, somewhat sheepishly, to bring the badge along to all meetings.

Among the visitors present were Messrs. A. B. White (3AUP please note), R. Burg, C. Catmuir (5FY, ex-G3BNS), H. F. Treharne (2BM, President VK2), W. Russell (5WR), P. Walker (5PX), K. Harris (5AL), K. McKenzie (5KN), R. Grundy (5BG), P. Hancock (5RJ), C. Noble (5OY), and last but not least, my fellow scribe Les Wallbridge (5UX). It was quite good to see all those country members and visitors present, and we hope to see them all again sometime.

5FH put on an unrehearsed act during the lecture. I just don't know what happened exactly, but there was a heck of a crash and he fell off the waste paper bin he had been sitting on and looked at the audience with a look on his face like Lot's wife, only he was not turned into salt, judging by the speed with which he retired to the back of the room.

Heard 5JU and 5JK discussing the merits and demerits of the "licorice stick" whilst in QSO the other night and I was trying to figure out what sort of an aerial this might be. It dawned upon me that Huck used to play one in the dance band, and probably still does, but Jim, don't tell me that you are thinking of taking it up, think of the neighbours. Can we book you up for a solo at the next Xmas social Jim?

Went down to Birkalla the other Saturday afternoon to see the amateur horse riders and was quite intrigued with the expression on one of the horses as he was being led around the ring prior to the races. It had a look on its face as if it was in love, or else had been hit on the head by a croquet mallet. I could not take my eyes off the animal, and all of a sudden I had a good look at the attendant with the horse, and the reason for its look became quite clear. The attendant was none other than Wick Bayly (5WM) complete with pipe (he had a hat on so I knew which was the horse), no wonder that the horse looked queer about the eyes. I have seen the same look on the boys' faces at the best broadcasting station in VK5 when Wick was puffing at full speed in the control room. Needless to say the horse ran a bad last and no wonder, fancy trying to run fast with a lungfull of Wick's "Bay Road Mixture."

5JD writes from Alice Springs to say that he has been QSO with quite a number of stations on six metres and thus giving them "W.A.S." He will be home by now and has promised further details, and maybe an article for the magazine.

The A.O.P.C. classes are almost ready to start and Mr. A. Sheard will be the code instructor again with John Allan (5UL) continuing as theory instructor. Recording permits were again issued to F. Holsten (5LK) and C. Tillbrook (5GL) for the ensuing year. VK5 members were very pleased to read of the credit balance by the Magazine Committee for the first three months under the new set-up, and are quick to extend congratulations to the Committee for a job well done.

5CA has tendered his resignation from the Council owing to his being QRL with examinations. In his resignation he asked as to what he would do with the membership certificates that he was working on for the Council. The President (5AW) told him very politely just what he could do with them, although I don't think that Brian will take any notice of him!

Ministerial approval has been received for the printing of 20,000 QSL cards for distribution to VK5 members by the South Australian Tourist Bureau. There will be 2,000 cards of each of ten scenes of Adelaide (The QUEEN city of the South) and full credit for this windfall must go to the Secretary (5MD) whose untiring work made it possible.

The VK5 frequency measuring station, 5DW, advises that checks are now available to members at any convenient time by ringing UA 6115 for appointments.

Heard 5DR on 20 the other day and he was putting in a good signal. I called him but he went back to a VK2 and so my chance to work a Kangaroo Islander was gone. He is using a vibrator supply, and has a small engine charging batteries to the transmitter whose input is twelve watts when the batteries are up.

Our genial QSL Officer, 5RX has been made a member of the "Old Timers" Club in U.S.A., and I should say that George has very nearly exhausted the supply of clubs and certificates available to him. The resignation of Dr. Ross Adey (ex-5AJ, now in G land) was not accepted by Council last month and it was decided to give him extended leave instead. A nice gesture I thought. Everybody at the meeting kept on asking me to go up to 5BY and address him as Mr. Ironmonger. Why Dougal? VK5 is again the first State to secure W.A.S. on six metres. The general opinion among the v.h.f. gang is that they were taken for a ride with the new rules, but all's well that ends well unless some new rules are in the offing!

Commodore Cotton (5LG) has been seen cruising around the Port River of late, although he had a go at fixing up the compass. I believe he has been relegated to the galley. 5TW has been fairly quiet, on ten and twenty mostly, although he has been heard on forty occasionally. How's DX Tom? 5MS has still another aerial, this time it is a G8PO, and as he continues to work the DX, there must be something in this aerial business. You have been putting in a solid signal down my way Stewart on twenty lately. 5JA has been rewarded at last, he worked five VK2 stations on six metres, and as this was his first success on that band, John is feeling very pleased. Understand that he is leaving for England shortly and that we might hear him from the old country.

5CH has been on two metres but so far has only worked 5JA. Claude has been fairly busy on the bush fire net and this does not leave him much time. 5FD has been out on the farm for a while and so radio has been forced to take a back seat for a while, although John has been heard on forty at times. 5KU has been heard on forty and twenty but is still getting the bugs out of his rig. They take some finding don't they Erg.

5CJ is becoming more active in more ways than one and Col says to tell "Doc" that he is using Rinso (there's something here that I don't understand, of course, that is the treatment that I have always had from our charming and respected Secretary, why I can't even get him to write me a letter). Anyway Col, has put up a new 50 ft. pole and by the time these notes are read he will have another one. He has been on 40 with five watts input and has been getting quite a few contacts, although nothing doing on two metres as yet, but you never know.

A little birdie has whispered in my ear that our charming and respected Secretary is about to throw in the towel. This is bad news in more ways than one, as nobody has done more to build up the VK5 Division than "Doc," and he will sure be missed. Anyway it has not been confirmed as yet, but I am worried because the chances of my getting that letter from him don't seem too rosy. I suppose that he can write, must check up on that.

There is no doubt that being the scribe for VK5 has its moments, I receive letters from Editors, General Secretary, people who reckon that they could run the column better than I can, and all sorts of letters from begging, to pats on the back. However recently I received a letter from a real live Justice of the Peace, none other than my old friend Charlie, 3BH. Here I have been in contact with him and giving him the lowdown on how to break into safe deposits and various other places and probably when I am caught I will come up before him for trial. Let this be a warning to you fellows, and thanks for the letter, Charlie.

Last month I wrote a lot of drival as fill in, and along came some notes from the Northern gang and everybody said, "what does he think the magazine is printed for, just for the VK5 notes." This month I lay off the drivel and no notes come from the Northern gang, and now I suppose they will all say, "why doesn't he write some VK5 notes, what does he think the magazine is printed for, just for the other States? Wouldn't it.

In closing for this month I would like to say, that in answer to the many Hams who have asked me how I manage to critise my fellow Hams and still retain their friendship, I once read the following, "If it is very painful for one to critise one's friends, one is quite safe in doing it. If, however, one takes the slightest pleasure in doing it, that's the time to hold one's tongue."

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WESTERN AUSTRALIA

The W.A. Division's first meeting for 1950 was fairly well supported. One visitor signed the book, 6BP, Mr. T. W. Binns, who was seen later in the evening obtaining a membership application. Making his first visit to a metropolitan meeting was old-timer 6RT. Len told the members his future activities would be centred in far away Cue—he shouldn't have too much local QRM up there! Another new country member was approved by the meeting, 6AV, Mr. John Kitney, of Donnybrook.

Once again it was necessary for our Vice-President 6KW to take the chair—good training, Ron! On

view for members was a trophy donated by 6WG, Wally Green, of Albany. Details are not yet available but it will be for a contest among the country members.

6GM, our Federal Councillor, reviewed the results of the 19th Annual Convention to refresh memories prior to preparing the agenda for this year's effort. On behalf of the local Contest Committee. 6DD gave a hint of future fixtures—another Emergency Portable Contest in April and, of course, a 7 Mc. "Scramble" about June. Blow the cobwebs out of that 40 metre gear, fellers!

A feature of the v.h.f. news was the interesting item that local 2 metre boys had at last worked outside W.A.! All the way across to Rottnest where 6AG had his 522 mobile rig working well. 6SA rather shook the meeting with some very pertinent points about our Divisional Constitution and, following some discussion, it was decided to go into the matter a little more closely.

Discussion of agenda items for the forthcoming Convention occupied most of the remainder of the evening. One very interested party who has to wear a deaf aid rather amused the meeting with an occasional burst of feedback as he cranked the gain up a bit too high. Hope you don't think it's r.f. feedback OM!

The final business of the evening was the presentation of certificates to the six State winners in the recent "R.D." Contest: 6RU, 6GA, 6KU, 6FW, 6MB, and 6DX. After this pleasant duty, the meeting broke up into rag-chewing groups as usual.

PERSONALITIES

'Tis said the Geraldton gang are considering offering their services to the local Council to speed up that precious A.C. 6CN particularly, as Cyril has not had power of any description since last year. 6EL reports awaiting the elusive South American QSL to confirm his W.A.C. Ern says his W.B.E. looks lonely on the shack wall. 6GH is again threatening activity, I believe he has a nifty looking 50 Mc. converter nearly ready to tick. Another VK6 sold on the idea of a Geraldton holiday is 6AY. Hope we hear you on again soon OM. 6TP has been heard chasing CQs on ten lately, better get a beam up there OB. Ask 6LL.

6WS is the proud owner of a new Communications Receiver—should be able to hear some DX now Skipper! Ham Radio has been given a back seat in the 6AS establishment, the reason, a smart looking Ford 10! You'll have to go mobile now Alec! 6PJ now sporting a three element clothes drier on 20 metres, but finds the modulator hasn't been the same since he dropped that microphone! 6MU at Merredin reports the DX bands as being only fair just now. Mal was pushing out quite a fair signal with an FS6 operating from a 6 volt battery. Well that's about all this month chaps, but just a parting shot. Was told the other day of the clueless Ham who, listening on ten metres to a few locals rag-chewing, wanted to know if a Housing Commission permit was necessary before "building-out" a modulator! Almost a stop press item is 6RS' purchase of a real classy microphone and, as Ron has at long last become a plate modulation addict, the phone is now f.b.!

— . . . —

TASMANIA

NORTHERN ZONE

Conditions here have been very poor, consequently those Amateurs not working on the higher frequencies have been having rather a lean time, perhaps now that the 50 Mc. band is showing signs of closing, conditions on the lower frequencies will improve. At present there isn't one really active DX station operating in the zone. 7LZ having migrated to 50 Mc. and 7RK is at present building himself a new receiver.

On 7 Mc., 7MC and 7XW are quite active on phone with 7BQ and sometimes 7PF keeping skeds of a Sunday morning. 7LZ moved on to this band on sked one evening to give KP4HU a VK7 on this band; not to be outdone, 7BQ made one of his rare appearances on 14 Mc. and had an f.b. phone QSO with a W5.

50 Mc. has been getting more than its share of attention by 7BQ, 7PF and 7LZ and although nothing better than ZLs have been contacted from this zone, many interesting QSOs have been had. 7PF's 144 Mc. receiver has been returned from Victoria and Peter is now getting all fired up to work a VK3. 7DB, 7MC and 7BQ are also active on this band as also is 7TE when he is not fiddling around at Palm Grove. No, we have not finished yet, 7BQ has now got a transmitter working on 576 Mc. and is at present building his receiver.

It looks as though 7BQ can teach most of us a thing or two because besides all this, Len is rebuilding his 28 Mc. beam and this time a four element array for 144 Mc. is going to keep it company on the lattice mast. Inactive Amateurs at present are 7AM, 7NL, 7HY, 7GD and 7RB.

The shock of hearing that 7LJ is now on phone has proved too much for me so I will have to relax until after our next meeting. This is to be held at the King's Hall, Launceston, on Friday, 10th March, at 8 p.m.

CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

SUGGESTION FOR CERTIFICATES

Alice Springs,

Editor "A.R.," Sir,

I feel that a more suitable title for the V.H.F. W.A.S. Certificate would be "The Ross Hull Memorial Certificate."

The late Ross Hull was undoubtedly the greatest v.h.f. pioneer known to Amateur Radio.

To name this Certificate in honor of this great Amateur would be a small, but fitting, tribute to him and the work he carried out.

Hoping this suggestion will be favourably received by the fraternity, particularly the v.h.f. enthusiast.

—J. M. COULTER, VK5JD.

INTERFERENCE TO AIRCRAFT LOCATED

Dept. of Civil Aviation,
522-536 Lt. Collins St.,
Melbourne, C.1.

Editor "A.R.," Sir,

In the February issue of "Amateur Radio," a letter from this Department was published requesting information from Amateurs operating in the 28-30 Mc. band on certain specified dates.

However, since writing that letter, the interference in question has been eliminated and there is now no need for the information requested.

The broadcast station interference which has been troubling aircraft working Melbourne Control Tower for some months, has finally been eliminated. The originating source was found to be emanating from a private house at West Preston.

For some time, and as indicated in the previous letter, the interference was thought to be a cross-modulation effect, but later development showed the interference to be basically a 118.1 Mc. carrier on which was super-imposed the modulation of the broadcast station to which the receiver was tuned.

With the assistance of the P.M.G's. Department, the source was located by directional finding methods in the area mentioned and further checks isolated the faulty receiver, which was removed for laboratory tests.

The tests showed that the set was oscillating the power output stage which used a type 42 pentode, the actual oscillations occurring in the cathode circuit. At the present time, the reason for the oscillatory action has not been finally determined, but is suspected that a Hartley circuit is involved or that it is brought about by a Transit Time effect.

The modulation heard by the aircraft was simply that to which the receiver was tuned, as this signal modulated the electron stream through the valve and in turn amplitude modulated the spurious oscillations. Because of the condition of the receiver, the owners listened to one broadcast station for a large percentage of the time during which the set was in operation.

It was also discovered that the speaker leads, which were not twisted, provided a very efficient radiator, being cut during construction to a length almost exactly equal to a half wavelength at 118.1 Mc.

The nature of the defect cleared up several aspects of the interference which had at first been attributed to cross-modulation, these points being enumerated in the previous letter.

The intermittency can be accounted for by the fact that the set was not in continuous operation and that at times a lengthy warm-up period was necessary before the oscillations developed.

The variation of signal strength was caused firstly, by the changing conditions in the receiver which caused slight frequency variations and the apparent change in signal strength which was caused by the modulation depth, i.e., volume control setting. Maximum volume control setting produced over-modulation of the radiated signal which accounted for the distorted reproduction at times reported by aircrew hearing the interference.

During the course of the investigation, one other important point was discovered, and that was the subject receiver was radiating on about ten frequencies between 100 and 130 Mc., and it was by pure chance that one of these frequencies coincided with the control tower frequency.

At the present time, efforts are being made to duplicate the condition in another set to allow fuller investigation, but so far, these attempts have been unsuccessful.

—W. L. MILNE,
for Director-Gen. of Civil Aviation.

APPRECIATION

Editor "A.R.," Sir,

During Xmas holidays I went to VK3 to have a look-see what some of these blokes who inhabit the Ham Bands looked like and so on. I got many surprises, the chaps I imagined to be youngsters, voted for Federation, and vice-versa, and the ones I thought would be short and slim were, I found, like "Pansy" Parsons (sorry Warwick, but one must have a standard to compare with). Old or young, fat or thin, they turned out to be a bunch of real f.b. scouts.

On New Year's Day a party comprising VKs 3FO, 3RV, 3BZ and Mr. Len Jackson and their families invited me to join them on a private field day-cum-picnic to Mount Dandenong. Two and 40 metre gear was used and some very nice contacts made. On another occasion 3FO took me to see Norm Cullivan 3UG who is living in retirement at Rhyr. Norm is one of the oldest Hams in VK and is still active and made us very welcome. Another old-timer I met was Charlie Whitelaw (3BH). Charlie is one of the 1908 vintage and passes his time fining drunks and ear bashing on 144 Mc. and 14 Mc. After 15 days in the Melbourne area we went to Ballarat, the city of statues and thanks to Bob, 3GR, who arranged our accommodation, and Bert, 3VA, who put himself and car at our disposal, we spent two very full days. (I said the days were full, "Pansy.") On 8th January we just had to leave and come back to prepare for the daily round and save enough to visit VK3 again.

In conclusion, I would like to thank all the boys and their families for the wonderful hospitality extended to me and for the opportunity of seeing some very fine rigs. To the many whose invitations I had to decline, I say thanks, but there will be a next time. Thanks gang for a wonderful time.

—LUKE, VK5LL.

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Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 5th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line.

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FOR SALE.—Type 3 Mark II. Transceiver, as new with spares, £30 or offer. Ferguson 50 watt modulation transformer, £2. W. R. Jardine, Box 52, Leor gatha, Victoria.

FOR SALE.—VT105s and VT104s with sockets. 12SG7, 12A6, 12J5 and 12AH7. I.F. Transformers 1500 Kc. and 456.5 Kc. One Kingsley 6 metre converter One 2" 0-3.5 amp. R.F. Meter. No reasonable offer refused. B. Falkenberg, Byaduk, Victoria.

SELL.—AR7 Receiver complete, rack panel, seven coil boxes. Reasonable offer. G. Elliott, 39 Rosina St., Kangaroo Point, Brisbane.

SELL.—AT5 T'mitter and H'book £7; Class C Wavemeter, spare valve, calibration chart, £4; Meters: miniature 500 microamp. and uncal. Pullen 1 Ma., £1 each; new Palec valve tester x'former, £1; new Dynamotor, 24v. in, 240v. out at 70 Ma., £1/10/-. Valves: metal 6SK7 (4), 6SA7 (2), 6SJ7 (2), 6H6 (1), 6K6GT (1), 955 (1), £5 lot. VCR97, £1. F. Hill, c/o. Radio Australia, Shepparton.

SELL.—New BC348Q in Trimax Communication Cabinet, plus b'cast converter, heavy duty power supply, speaker, 200 Kc. to 18 Mc., £42/10/- or offer. F. Hill, c/o. Radio Australia, Shepparton.

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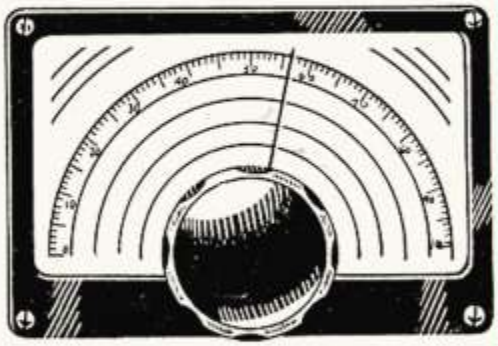

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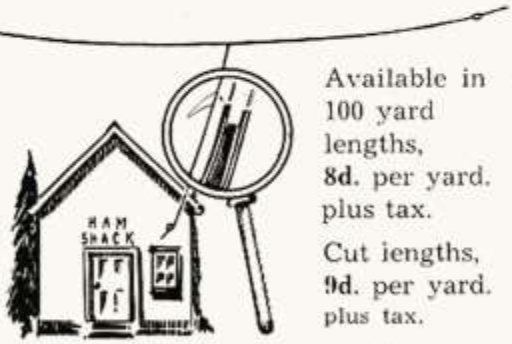

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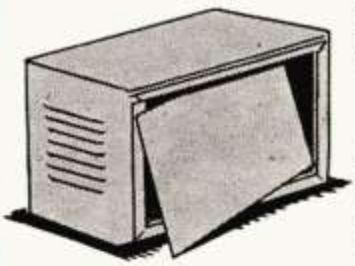

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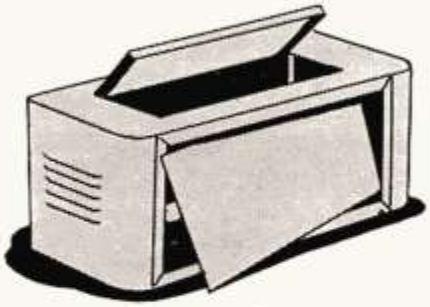

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APRIL 1950

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

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9D.

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APRIL · · 1950

Vol. 18. No. 4

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AMATEUR RADIO

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Melbourne, C.1

EDITORIAL

★

THIS CONTEST BUSINESS

Federal Executive are at times called upon to express their opinions on behalf of the Wireless Institute of Australia when dealing with the I.A.R.U. in the matter of Contests in which the Australian Amateur may be involved. It is, of course, essential that these expressions should be based upon a correct evaluation of the general Amateur feeling on this matter.

The obvious way to do this would be to hold a poll, but while this matter is important, it does not at the moment warrant the expense involved. We, therefore, feel that a deviation from our general method of laying down a policy in these columns can be altered in this case to elicit comments in the form of a "quiz." Federal Executive consequently would like to know:

DO YOU THINK CONTESTS—

Are enjoyable?
Promote International friendship?
Encourage rare DX to come out of hibernation?
Populate the Amateur Bands to good effect?
Improve operating technique?
Encourage breaches of regulations regarding power?
Improve equipment design?
Develop certificate ego?
Depose common courtesy and Amateur manners?
Overcrowd already restricted bands?
Cause domestic strife?
Serve a useful purpose?
Develop mathematical genius?
Are too numerous?
Should be confined to the v.h.f. bands?

WHAT DO YOU THINK?

Your answers to these questions, either direct to the Federal Secretary or the Correspondence Column of this Magazine will be most helpful for the future guidance of your Federal Executive. No doubt many other aspects, not covered above, will occur to you when reading this, and any comments or suggestions will be appreciated.

Remember that only by your reactions to the above, can a correct and comprehensive formulation of opinion be obtained for the execution of future W.I.A. policy.

—Federal Executive.

The Contents . . .

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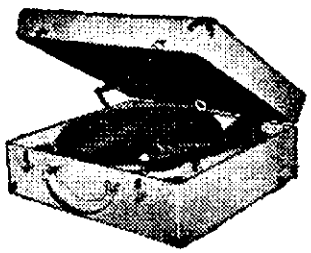

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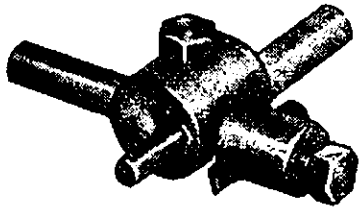

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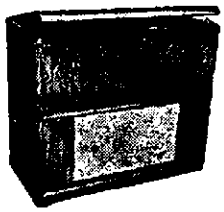

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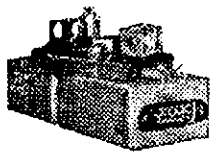

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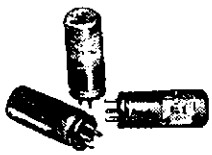

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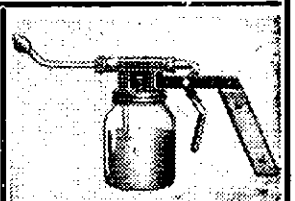
MICROPHONES

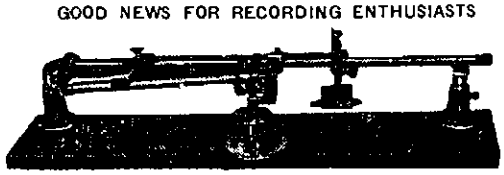
Again available. English D104 High Fidelity Crystal Microphones. As illustrated, only **£4/19/6.**



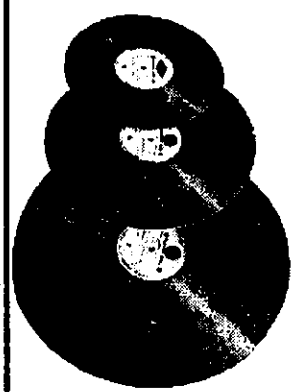
"ZEPHER" HAND SPRAYER

The new "Zepher" Hand Sprayer has hundreds of uses. As illustrated, small size, **24/6;** large size, **26/6.**

GOOD NEWS FOR RECORDING ENTHUSIASTS



The new Capitol De Luxe Traversing Gear. Overhead traversing gear for recording from 8 to 16 inch discs. Precision engineered. As illustrated, Price, **11 Gns.**

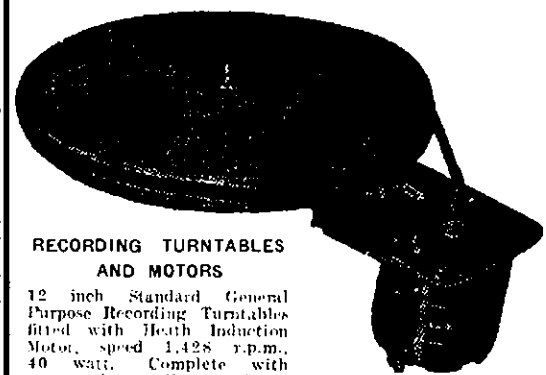


MECHANOID CUTTING HEAD

A low priced Cutting Head (500 ohms impedance) with outstanding performance. Suitable for use with Capitol Traversing Gear. Price, as illustrated, **£5/10/-.**

B.R.S. RECORDING BLANKS

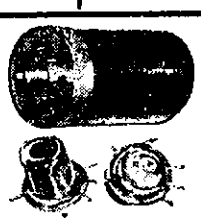
High grade Recording Discs with highest quality aluminium base. Available in three sizes, as illustrated. 8 inch, **5/2;** 10 inch, **6/6;** and 12 inch **8/6.**



RECORDING TURNTABLES AND MOTORS

12 inch Standard General Purpose Recording Turntables fitted with Heath Induction Motor, speed 1,428 r.p.m., 40 watt. Complete with two-speed pulley, direct driving turntable. Price, **16 Gns.** complete. Suitable for use with Capitol Traversing Gear.

DISPOSAL VALVE BARGAINS AVAILABLE FOR IMMEDIATE DELIVERY



Type EF50 High Gain RF Pentode, 6.3v. 9-pin lock-in socket **15/-**
Type EA50 6.3v. VHF Diode, suitable for the Vacuum Tube Voltmeter Test Probes, **15/-**
Type 954 6.3v. Det. Amp. Pentode Acorn Base, as illustrated **15/-**
Type 955 6.3v. Det. Amp. Osc. Acorn Base, as illustrated **15/-**
Type 7A6 Twin Diode **15/-**
Type 807 Beam Power Amplifier **15/6**
Type 12 SPT 4v. Cossor screened pentode **13/-**
Type 5BP1 6.3v. Cathode Ray; 5 in. screen, elect. deflection . . **37/6** plus Sales Tax
Type 7C7 Triple Grid 6.3v. 8-pin lock-in **15/-**
Type 2X2 High Vacuum Rectifier, 4-pin, **15/6**
Type 834 7.5v. 4-pin Power Amplifier . . **29/3**
Type 6SH7 Sharp Cut Off RF Pentode . . **15/-**
Type 211 10v. Jumbo, 4-pin Power Triode, **27/3**
Type 830B 10v. Triode, 60 watt **24/-**

ALL PRICES INCLUDE EXCISE.

290 LONSDALE STREET, MELBOURNE — Central 4311

N.B.F.M. Exciter

BY CECIL C. WARING,* VK3YW

The problem here was the construction of a n.b.f.m. exciter which would give adequate swing on the 3.5 Mc. band without doubling stages. When this requirement is met, it naturally follows from the normal characteristics of f.m., that more than enough deviation will be available for the higher frequency bands.

The following conditions were aimed at:—

1. The final circuit had to be simple and straight forward.
2. Standard parts to be used.
3. R.F. and audio stability to be easily obtained.
4. Good reception on standard a.m. receivers.
5. Standard power supply without extra voltage stabilisation.
6. Frequency occupation to be no greater than a a.m. transmtiter of corresponding frequency range.

Prior to any actual construction, considerable reading was done over past "QST" issues, and a loan of "Hund's Frequency Modulation," obtained from the W.I.A. library. By that time we were familiar with the whys and wherefores of frequency deviation; the difference between phase modulation and frequency modulation, the possible advantages of phase modulation, and the narrow band f.m. permitted for Amateur use.

After weighing the pros and cons, phase modulation was decided on as the most satisfactory approach to the problem. Phase modulation has the attractive feature about it that it may be applied to the transmitter at some point other than the oscillator, without any alterations or additions which might upset the frequency stability.

Without any accurate method of measuring bandwith, it seems undesirable to use direct reactance modulation on the oscillator tube to obtain an n.b. f.m. signal. With the comparatively large swing necessary for straight-through operation on 3.5 Mc., there is always the risk of non-linear operation of the oscillator and its attendant unwanted effects.

The first circuit tried followed closely on the lines of a p.m. unit described in the "A.R.R.L. Handbook" of 1948. This used a Pierce oscillator driving a 6AC7 as the buffer amplifier and the plate tank of the 6AC7 was reactance modulated by a 6SA7 wired to give inductive reactance. It easily filled conditions 1, 2, 3, and 6, the power supply (which was a standard 385 volt transformer and a two-section filter) required the help of a VR150 to clean it up, and so did not measure too well for condition 5, but it really fell down on No. 4.

All reports on 3.5 Mc. were plenty of carrier, but not too much voice. This was not unexpected as the article in question does suggest that for 3.5 Mc. the deviation control would need to be full on.

Following on this, a balanced modulator circuit was lifted holus-bolus from "Hund's Frequency Modulation." This used a pair of 6SA7 tubes as reactance modulators, the grids being fed in push-pull, either from a transformer or a phase inverter, and the output of the plate circuits wired in parallel.

The basic idea was that one reactance tube operated with inductive reactance and the other with capacitive reactance. The net result being that when the inductance was decreasing so too was the capacity and visa versa, with the result that for a given circuit the deviation was doubled.

This circuit certainly fulfilled conditions 1, 2, and 5 but was unsatisfactory on 3, and this in turn upset reception and also the bandwidth. There seemed to be an endless succession of feedbacks, which appeared after its predecessor had been cleaned up, so the set was scrapped and the circuit as shown built up. This is a commercial circuit and closely follows a basic p.m. circuit in "Hund." It was put out by "Temco," a year or two ago as an exciter unit. As it seems to answer all the conditions, let us run over the circuit, and don't be dismayed because there are one or two resistors and condensers in not very usual places.

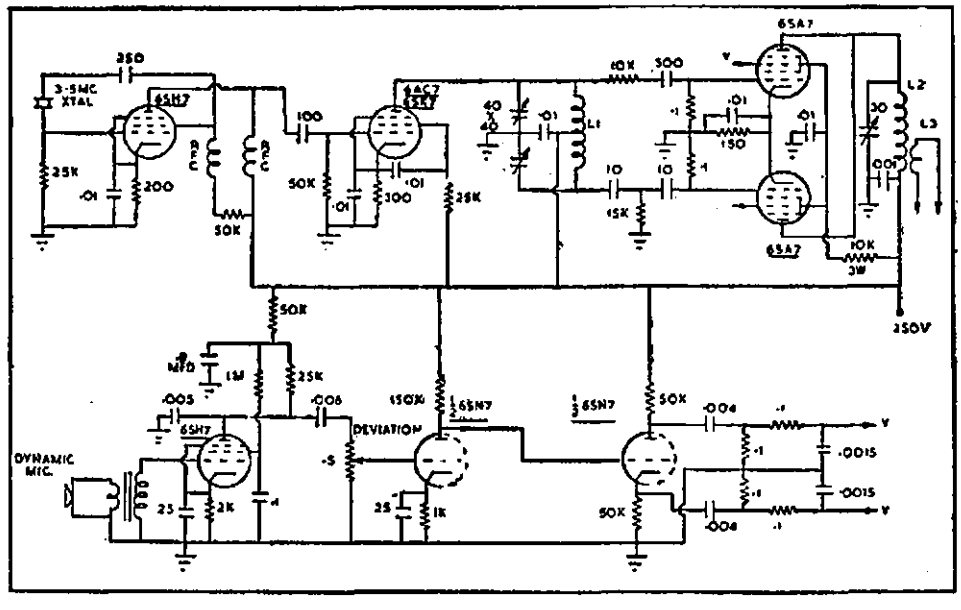
THE CIRCUIT

The r.f. section consists of a grid-screen Pierce crystal oscillator using a 6SH7. 3.5 Mc. output is taken from the plate of this stage to the input of the buffer stage using a 6AC7 (any other similar pentode would do here). The buffer of course could be driven just as easily from a v.f.o. as the crystal oscillator. The plate tank of this stage is centre-tapped and tuned by a split-stator condenser to give 180° out of phase excitation for the number one grids of the 6SA7s, but the plates of the two 6SA7 tubes are connected in parallel and are tuned by an ordinary single ended tank circuit.

Under normal conditions there would be no output from the plates of the 6SA7s. To correct this the excitation to one grid is fed through a 10,000 ohm resistor which, in conjunction with the input capacity of the 6SA7, causes a lag in voltage to that grid. The other 6SA7 is fed through a pair of 10 pF. mica condensers in series and a low value of shunting resistance to give an advance in phase to that grid. There are loses in both circuits, but they are arranged to give practically equal drive to each grid with a phase difference of approximately 120°. Since the grid voltages are not exactly 180° out of phase, a resultant voltage appears in the plate circuit and this represents the normal unmodulated output.

The audio side is quite simple, and contains no trick circuits. As diagrammed, a dynamic microphone is transformer coupled to a 6SH7 or 6SJ7, which in turn is resistance coupled to one half of a 6SN7 twin triode. A 0.0005 uF. condenser runs from the 6SH7's plate to earth to reduce the highs, and the inter-stage coupling condenser is 0.006 uF. to cut down on the unwanted lows (this also removes any tendency to pass 50 cycle hum).

It will be noted that the second half of the 6SN7 is wired as a phase inverter and directly coupled to the triode am-



L1—60 turns, ⅜" diameter, No. 30 enamel covered wire.
L2—50 turns, ditto.

All resistors 1 watt, except screen resistor of the 6SA7 which should be 3 watts.

* 12 Skene Street, Stawell, Victoria.

plifier. This is possible because with the values shown, there is a bias of about 10 volts on the phase inverter.

The p.p. output from the 6SN7 is then fed via a pair of 0.004 uF. condensers through a speech filter to the number three grids of the 6SA7 balanced modulators.

The filter, which consists simply of a 100,000 ohm resistor and a 0.0015 uF. condenser in each audio lead, gives an attenuation of approximately 6 db per octave in the middle voice range, and converts the inherent phase modulation characteristic of the modulators with f.m., that is to say the deviation is essentially proportional to the amplitude of the modulating voltage, and does not increase with audio frequency as would be the case in true p.m.

The p.p. output from the filter is applied as noted to the number three grids of the 6SA7, and when one audio signal is driven positive, the other is negative. The r.f. output of the tube receiving the positive audio signal will be predominant and as a result there will be a shift in phase in the output circuit. Just how much will depend largely on the magnitude of the audio signal and the Q of the associated tank circuit.

A Q of 20 is a desirable figure, and this in turn demands a capacity of about 50 pF. for 3.5 Mc. As the output capacity of the 6SA7 is approximately 24 pF., it means a small value of condenser across the coil. This is not just academic theory, as a noticeable decrease in deviation was demonstrated with a higher value of condenser.

Condition 3 is well satisfied by this circuit, particularly on the audio side, and is probably due to the fact that there is no direct connection between the audio section and the related r.f. circuit and to the fact that the No. 3 grids are screened by grids No. 2 and 4 and by-passed to earth by the 0.0015 uF. condensers.

In operation this exciter is followed by from two to four stages depending on the output frequency. Its own output is not very high and is normally link-coupled to an 807, which drives another 807 for 3.5 Mc. work, or other doubler tubes for higher frequency operation.

POINTS TO WATCH

A must for any n.b.f.m. signal is a clean carrier. Each stage should be checked for parasitics and if any found, eliminated before any attempt at modulation is made. Apart from this, the only other item is to make sure each stage is tuned right on the nose.

On the audio side check the circuit for hum, as this will also do its own modulation, and in the case of doubling to higher frequencies, the hum volume will increase with the frequency. The audio line up as it stands is not subject to this trouble, however, owing to the small coupling condenser.

The r.f. stages following the exciter can be ordinary class C amplifiers or if you are troubled with harmonics, the lower harmonic output of the class B amplifiers are an attractive proposition.

Having got our clean and hum-free carrier, audio can be applied to the exciter and the bandwidth checked. There is no need whatever to put the exciter on the air to do this, simply put the unit on the bench and tune the receiver to the operating band and adjust the deviation control until a satisfactory voice level is heard. On 3.5 Mc. this might be difficult unless the receiver is well shielded. Here a Class C Wavemeter is used and the bandwidth judged against the width of the unmodulated carrier. Final tests were then carried out on the air and checked up fairly well, so you will not be far out.

On 3.5 Mc. the deviation control is almost full on (about 90%); on 7 Mc. only 50%, and on 14 Mc. much less. It was originally intended to build up an audio oscillator and check the deviation as described in the "A.R.R.L. Handbok," but difficulty of getting delivery of coils has stopped that.

One point to be watched is overload or unbalance in the audio stages, which shows up as kicking meters, particularly in the grid circuit of the final.

Persistant distortion in the early tests was due to the plate and cathode resistors being far off the indicated values and resulted in one 6SA7 getting much more audio drive than the other. All meters should be rock steady—upward modulation is out.

The lack of b.c.i. is one of the items put forward on the credit side of n.b.f.m. and certainly reduces types of interference. N.b.f.m. certainly does reduce b.c.i., but it is no cure-all.

If b.c.i. is caused by harmonics of the b.c. receiver beating with the fundamental or harmonics of the transmitter, the spots will still get through. Their strength will depend largely on the selectivity of the b.c. set's i.f. If the b.c.i. is due to rectification effects caused by the shape of a modulated envelope, the trouble will certainly disappear. There seems to be no splatter and splutter as when one is too close to a strong a.m. phone station and it is quite possible to leave the receiver running while the n.b.f.m. transmitter is in operation and hear nothing from it in the speaker. This would be quite impossible to do on a.m.

RECEIVING N.B.F.M.

On the receiving side, n.b.f.m. transmitters are in a much better position than the boys using s.s.s.c. as any reasonably selective receiver will do a good job of work. If the receiver tuning is broad, the voice content of the signal will appear low, but such receivers seem to be very few and far between.

It was thought here that a n.b.f.m. discriminator would be a big improvement, but after careful listening with and without the discriminator there seemed to be very little in favor of its use.

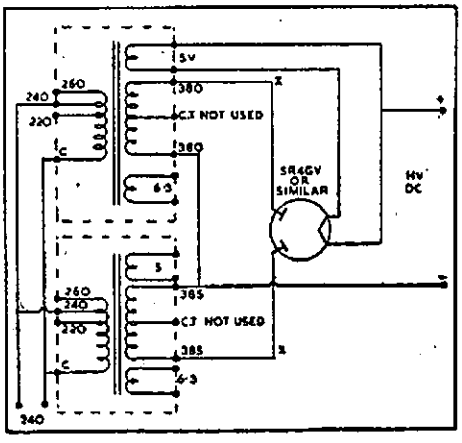
With the n.b.f.m. permitted in our two domestic bands, the a.m. receivers do a really excellent job and no difficulty has been experienced in working through QRM or QRN. In most cases it was not realised at the receiving end that n.b.f.m. was being used, 75% of stations contacted had to be told, and to the writer's mind n.b.f.m. has many advantages which could be well followed up by the thoughtful Amateur.

This article has been written with the idea of stimulating interest in n.b.f.m. and the promotion of discussion thereon. It has been asserted that n.b.f.m. is only equivalent to an a.m. transmitter modulated 25%, maybe in theory it is, as after all the only source of power is the carrier and from the carrier is extracted the necessary power for the sidebands. In fact it is quite possible to reach a stage when the transmission is all sidebands and no carrier at all, but such conditions are not for n.b.f.m. However 25% a.m. equivalent or not, the n.b.f.m. is quite capable of putting as good a signal through QRM or QRN as any other type.

H.V. Power Supplies

Many Hams are apparently overlooking a very useful way of obtaining a high voltage power transformer from standard b.c. parts. The idea is to connect the separate h.v. secondaries of two similar full-wave transformers as separate halves of a secondary of twice the voltage. A glance at the diagram will show how the h.t. for that 813 can be obtained from standard b.c. transformers.

The windings must be connected so as to feed the plates of the rectifier out of phase, otherwise the supply will merely be two half-wave rectifiers in parallel. To check this, connect an a.c. voltmeter between the points marked X. If it reads zero, switch off, reverse the connections to one primary or secondary, then switch on again. The voltmeter should now read a voltage which is twice that of one transformer.



These b.c. transformers normally come with a h.v. secondary of 385, 325 or 285 volts "aside." By using two transformers, 770, 650 or 570 volts "aside" can be obtained. The insulation between windings and to core in any reputable transformer is ample to stand up to this method of operation.

Here, at VK2OA, two 385-385 v. 125 Ma. b.c. transformers are being used to provide 850 v. at 125 Ma. to an 813 and still ran cold even after 24 hours continuous operation in the DX Contest, and they have been in operation now for over a year.—VK2OA, R. M. Winch, 38 Boundary St., Parramatta, N.S.W.

An Inexpensive Modulation Indicator

BY C. GIBSON,* VK3FO

The indicator to be described was the outcome of a few hours' spare time and use of some junk box bits and pieces. The modern receiver selectivity, with the addition of Q5'ers, pre-selectors, and crystal filters, still reveals that all is not right with a large number of Ham phone transmitters.

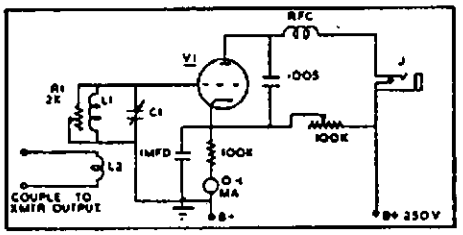
Lopsided moduation is the main cause of the trouble and in the absence of a c.r.o., or pan-adaptor, this indicator was evolved. This lopsided modulation is simply the result of improper operation of the transmitter, causing numbers of spurious sidebands to be radiated which occupy plenty of kilocycles beyond the frequency range a good phone signal should occupy, hence high selectivity is no proof against these sidebands.

When the receiver is tuned to a station badly affected with this carrier shift, or over-modulation, these sidebands are identified by a peculiar kind of distortion that damages the quality of the phone, despite the fact there may be excellent microphone and speech equipment in the transmitter. We learn that for correct modulation, the average amplitude of the wave must remain unchanged; that is it should be the same with the carrier modulated, as it is for an unmodulated carrier.

Apart from a c.r.o. or pan-adaptor, no meter ordinarily used will give us a true indication of this condition. An r.f. meter will not do it, as it only shows effective current values and not average value; it will kick up when the average is actually shifting down. The final plate meter does, however, show something, by either kicking up or down when it should remain steady, but its indications are hard to interpret.

What we want is some simple and inexpensive device to show what is happening to the carrier. As c.r.o's. and pan-adaptors are expensive and sometimes hard to get going, we set out to see what could be done with a few parts from the junk box. To this end, we thought about a one-tube non-regenerative detector, or in other words a vacuum-tube voltmeter.

This gadget is easily constructed and very simple to use, and is worth a place in any shack.



L1 C1—Coil and condenser to tune to transmitter frequency (Plug-in coils).
L2. Coupling Coil—Two turns at ground end of L1.
R.F.C.—Short wave type.
J—Single circuit (closed type) for listening.
V1—6C5, 6J5, 56, 27, 409, etc.
Phones—High resistance type.

We know that the plate current is directly proportional to the average value of the r.f. input to the grid. If the average shifts upward, the plate current increases, or vice versa, so all we have to do is hook in this "gadget" and look, see and listen.

The resistor R3 makes it possible to set the minium bias and also that the tube draws almost zero current with no signal on the grid. Shielded leads should be used to couple the indicator to the transmitter output circuit.

The coupling at the transmitter end, and the resistor R1, are adjusted so that the meter reads about four- to five-tenths of one milliampere, assuming a plate voltage of 250.

The circuit, C1 L1, should not be detuned from resonance. Over-modulation is shown if the meter kicks upwards, hence back off the gain control on the modulator. If the meter kicks downwards, then look to the transmitter.

For best operation the unit should be enclosed in a metal box.

In all, this little unit is the answer to a simple, but highly, efficient modulation indicator.

The "Steco" Again

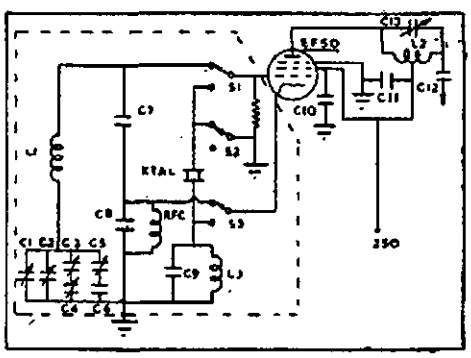
BY R. J. WHYTE,* VK2AHM

One of the most popular v.f.o. circuits presented in "A.R." has been the "Steco" (series tuned e.c.o.). Here is a de luxe version incorporating the added refinement of crystal control.

Quite a number of Hams have written or asked for information over the air as to a more advanced version of the "Steco," as described in "A.R." for September, 1949. The writer hopes the circuit, as shown, will be of help to them and to others.

Since sending in that first circuit, the writer has been able to give this oscillator a still more thorough try out using both versions. In one thousand QSOs, there has not been one report of drift. Special reports were asked for on this until the request was tired of—nor has there been a single QRI report of less than T9.

Getting back to the circuit, looks complex doesn't it? The crystal is only a luxury though and is used primarily for band-setting of my receiver. It can, of course, be left out entirely. In passing the EF50 makes a beautiful tritet oscillator, both as a frequency multiplier and on its fundamental. Another unnecessary part is the temperature compensation gadget comprising C5 and C6. It was put in "just in case," but C5 has always been at minimum capacity.



C1—60 pF. midget ceramic trimmer.
C2, C3, C5—30 pF. midget ceramic air dialectric trimmers (C2 adjustable from outside case).
C4, C13—100 pF. (C4 is bandspread).
C6—N680 ± 30, 40 pF. ± 5% ceramicon.
C7, C8—750 pF. silvered mica.
C9, C12—100 pF. mica.
C10—0.001 uF. mica.
C11—0.005 uF. mica.
R1—100,000 ohms.
L1—15 turns 18 g. 1½" long, 1½" diam.
L2—18 turns 20 g. 1½" long, 1¼" diam., tapped 10 turns from plate end.
L3—10 turns on 1" former.
S1, S2, S3—ganged.

As the writer only uses the 40, 20 and 10 metre bands, L1 was made a fixture on 7 Mc. L2 could be the same, too, for it is not removed, C13 being sufficiently large to tune both 40 and 20 metres.

By adjustment of C3 any degree of bandspread may be obtained, although a high ratio vernier dial is used, the spread may be too great, even with C3 at maximum, in which a greater capacity could be used there. Personally, the writer uses a dial with a ratio of 2-1 and even direct drive would be quite ample.

The 750 pF. silvered mica condensers were used because they were on hand (ex Class C Wavemeter) and the 500 pF. ceramicons, as in the original, would be quite in order.

Note that the grid condenser has been eliminated. It seems to give stronger oscillations without.

In construction, the whole of the grid circuit is contained in a heavy aluminium box with means for adjusting C2 through a hole in the side. This box is bolted to the side of the transmitter chassis, which chassis also holds the tube, L2 and C13.

It is hardly necessary to stress the fact that as in all v.f.o's., the wiring and construction must be rigid, only the best quality components used, and powered with a well filtered power supply.

Summing up, as a plain v.f.o., leave out C5, C6, C9, L3, the crystal and switches. If you want to be more elaborate, leave them in!

— . . . —

IGNITION NOISE SUPPRESSION

The following is a report from the E.R.A. (Empire Radio Authority) who have been conducting tests on this type of noise:—

"Tests made on a large number of vehicles have shown that the insertion of a single resistor of 5,000 to 10,000 ohms in the lead from the ignition coil to the distributor, and with the coil mounted on the engine block, will give satisfactory suppression in the great majority of cases. When additional suppression is required, it can usually be achieved by the insertion of resistors of similar value at the sparking plugs.

"Only in rare cases will additional resistors at the distributor end of the sparking plug leads be necessary. Controlled tests have shown that, in general, resistors, even of values very much higher than those envisaged for suppression, have no effect on engine performance and petrol consumption of the average motor vehicle."

(By courtesy "The Engineer," Oct. 1949.)

* Willow Pt. Station, Wentworth, N.S.W.

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

APRIL, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

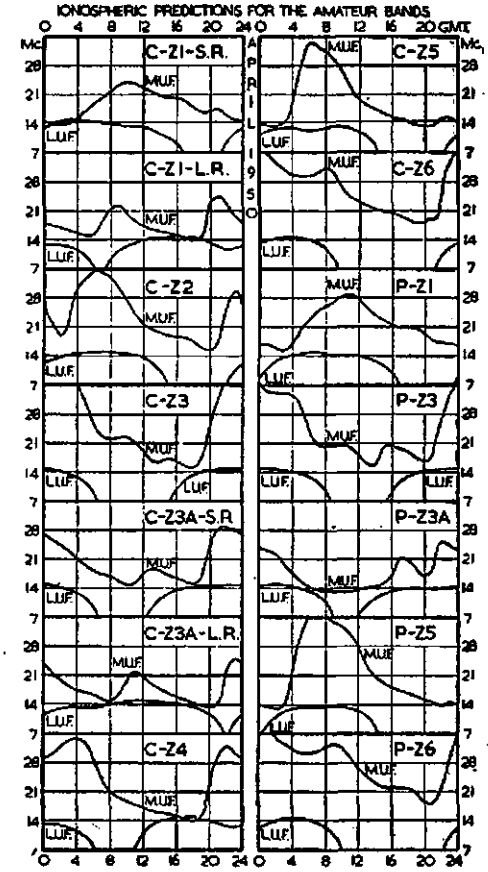
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0600 to 1500 hours G.M.T.?
2. Was the 14 Mc. band workable from noon to 1800 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



Agenda Items for 20th Federal Convention

The Twentieth Federal Convention of the Wireless Institute of Australia is to be held in Melbourne from 7th April to the 10th April, 1950. Following is a list of the agenda items to be discussed:

AWARDS, CERTIFICATES, Etc.

1. F.E.—That the amended rules of the DX C.C., as attached in Appendix "A", be adopted.

2. VK6—That the rules of the DX C.C. be discussed with a view to removing existing anomalies.

3. F.E.—That this Council consider the issue of special Certificates of Merit to individual members for outstanding work on behalf of the Institute and that at each Convention the names of members proposed be submitted by Divisions.

4. VK7—That, if possible, an International organisation for controlling DX C.C. matters be set up through the I.A.R.U. Failing this, the Australian DX C.C. be based on the A.R.R.L. rules and countries list with variations if necessary to suit the Australian organisation.

5. VK7—That separate country status for Tasmania be re-opened.

CONTESTS

6. VK2—That a standard set of rules be adopted for each of the major contests held during the year.

7. VK2—That draft proposals for any changes in the standard contest rules for the VK-ZL Contest be circulated to all Divisions at least five months before the Contest.

8. VK2—That draft proposals for any changes in rules of local contests be circulated to all Divisions at least three months before the Contest.

9. F.E.—That for future N.F.D. Contests the bonus points for 50 Mc. contacts be altered to give 25 points for each new State or Country contacted and not 50 points per contact as at present.

10. VK7—That the I.A.R.U. be approached with a view to limiting International Contests to those conducted by National Societies only, and that they be restricted to one week-end for c.w. and one for phone per year.

11. VK5—That the number and duration of various contests being held in Australia be discussed, with a view to a curtailment of the number of contests and their duration. It is suggested that the period of any contest be limited to any 12 hours in 24.

12. VK4—That the W.I.A. deplores the multiplicity of contests now being imposed on the Amateur bands, as with the development of low frequency bands the original desirability of International DX Contest no longer exists. The W.I.A. now proposes the abandonment of all present contests and the substitution of one World Wide Contest on bands below (lower in frequency) 21 Mc. between January and March, conducted along the lines of the "CQ" Contest, instead of one country versus the rest, and that I.A.R.U. be approached as well as the National Societies to put this into effect as from 0001 G.M.T. 1st January, 1951.

13. F.E.—That the scoring procedure for the award of the State Trophy for the R.D. Contest, as used in the 1948 Contest, be reverted to.

14. VK6—That the existing rules for the 1950 R.D. Contest, with respect to the method of scoring remain unaltered.

15. F.E.—That a discussion take place on ways and means of popularising the N.F.D. Contest, with the introduction of new rules, if necessary.

16. VK6—That an endeavour be made to evolve a standard numbering system for world-wide contest use.

MAGAZINE MATTERS

17. VK6—That all relevant aspects of the publication of "Amateur Radio," from a Federal viewpoint, be discussed with the Victorian Division.

18. VK2—That the responsibilities of Federal Council concerning the policy of "Amateur Radio" be determined.

19. VK5—That the quarterly statement, as now supplied on the income and expenditure of "Amateur Radio," be continued.

20. VK2—That "Amateur Radio" publish, from time to time. suitable articles taken from overseas technical magazines.

POLICY AND ADMINISTRATION

21. F.E.—That matters of policy laid down at previous Conventions will not be changed for two years after making such policy, and then only after majority decision of Federal Council. Further, that all policy matters be discussed at each Convention to ascertain their usefulness or otherwise.

22. VK2—That the Uniform Divisional Constitution be discussed with a view to finalising it if possible.

23. VK5—That in matters of finance, involving all Divisions in Australia, a majority vote of at least 5 to 2 of the Federal Council be required for the passing of the motion.

24. VK5—That the minutes of the Federal Executive meetings, as now supplied to all Federal Councillors, be continued.

25. VK2—That Federal Executive formulate arrangements for the reception and entertainment of American Amateurs in "Back to Australia" year, 1952.

26. VK6—That the 1951 Convention be held in Sydney.

27. VK2—That Federal Executive approach the P.M.G. for permission to play back recorded Amateur transmissions on the Amateur bands from 50 Mc. and higher.

28. VK3—That representations be made to the P.M.G's. Dept. for permission to play back "over the air" of recordings made by wire or other means of other Amateur Stations.

29. VK2—That conditions governing the play back of Amateur transmissions be fully publicised in "Amateur Radio."

30. VK2—That the P.M.G. be approached for permission to transmit music for experimental purposes on sections of the 50 Mc. band and higher.

31. VK5—That the P.M.G's. Dept. be approached with a request that all licencees in the Northern Territory be allotted the prefix VK8.

32. VK4—That F.E. be asked to endeavour to speed up the allocation of the 21 Mc. band in view of the large amount of commercial interference on the 7 and 14 Mc. bands.

33. VK2—That Federal Executive approach the P.M.G. for permission to broadcast from the Institute stations, talks of a technical nature, such as those given at monthly meetings.

34. VK5—That the matter of t.v.i. be discussed with a view to suggesting certain i.f. frequencies to manufacturers in Australia.

35. VK6—That the P.M.G's. Dept. be approached to extend automatic permission for portable operation to the 27-28 Mc. band.

36. VK3—That representations be made to the P.M.G's. Dept. for permission to operate transmitters under portable conditions without applying for a portable licence, in any frequency band.

37. VK7—That the age limit for the issuance of the A.O.C.P. and the grantinng of an Amateur Station Licence be reduced to 16 years.

38. VK3—That representations be made to the P.M.G's. Dept. for permission to use high power components in normal 100 watt transmitters.

39. F.E.—That the "gentlemen's agreement" band for c.w. on the 7 Mc. band be extended to 7050 Kc. in view of the emergency network phone on 7002 Kc.

40. VK7—That approval be sought from the P.M.G. for the use of an identifying signal for Amateurs conducting emergency communications. The signal to have the significance: "I am conducting emergency traffic, please do not cause interference," and that F.E. be instructed to give the signal wide publicity.

41. VK3—That a discussion take place on interference received from medium frequency broadcast transmitters.

42. VK7—That this Council recommends that phonetics be only used where necessary and that the A.R.R.L. list be recommended as being known throughout the world. F.E. should publicise this decision.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

This month we have the results of two events that have occupied the attention of v.h.f. operators for some months past.

V.H.F. DX CONTEST

OPEN SECTION

1st— VK4BT	3887	points.
2nd—VK2ABC	3741	,,
3rd—VK6WG	2955	,,

STATE WINNERS

VK2ABC	3741	points.
VK3IM	1137	,,
VK4BT	3887	,,
VK5QR	2695	,,
VK6WG	2955	,,
VK7XL	1555	,,
ZL2DS	2008	,,

Our congratulations to the winners and it is unanimously agreed that the Contest was highly successful.

VICTORIAN V.H.F. MARATHON

OPEN SECTION

1st— VK3RR	5951	points.
2nd—VK3NW	5880	,,

50 Mc.	Section—	VK3RR	1147	points.
144 ,,	,,	VK3ABA	444	,,
288 ,,	,,	VK3ED	5	,,
576 ,,	,,	VK3RR	247	,,
Over 576 Mc.		VK3NW	4	,,

Once again hearty congratulations to the winners and many thanks to all who assisted by sending in logs. Details of prizes which have been generously donated will appear in next month's "Amateur Radio."

TASMANIAN V.H.F. MEN HIT THE HEADLINES!

The front page of the Launceston "Examiner," dated Monday, 5th March, features a three column spread, complete with photographs of the two metre tests from Mount Barrow, conducted on Sunday, 5th March, by 7PF, 7DB, 7AM, and Associate Rex Summers. The "Examiner," one of the oldest daily newspapers in Australia has shown considerable interest in the tests and has given very good support in the shape of extremely well-written publicity, and also by supplying a car to carry the gang and their equipment to Mt. Barrow when their own transport arrangements broke down. Our photograph is by courtesy of the Launceston "Examiner" and shows Don Brooks (7DB), with mike, and Pete Frith (7PF) on location at Mt. Barrow. The following account of the day's doings was written by 7PF.

On Sunday, 5th March, 7PF, 7DB, 7AM and Associate Rex Summers travelled the 26 miles to Mt. Barrow, east of Launceston, taking 144 Mc. portable gear. The object of the trip was to bridge Bass Strait on 144 Mc. and to attempt to contact 7DH and 7AJ at Mt. Wellington, near Hobart, both mountains being about 4,000 feet high and about 100 miles apart.

This was our first trip out portable on 144 Mc. and many things were learnt. The equipment consisted of three transmitters, two receivers, two modulators and two beams. The transmitters consisted of 144 Mc. rig belonging to Rex Summers with an 829 in final, and a 7 Mc. rig belonging to 7PF. The receivers were a complete 144 Mc. receiver of 7DB, and a normal superhet with a cascade converter 6AK5-6J6-6J6, and a broad-band converter 6AK5-6AK5-6J6. The aerials were a 3 element parasitic and a 4 element "Lenfo." The power supply was a 240 v. a.c. petrol engine driven generator with normal transformer power supplies.

The top of the mountain was reached at about 12 a.m. The sun was shining, but it was very cold. The extreme cold was our downfall as the two-stroke engine would not deliver the power. 7DB's transmitter was tried and it was found that the voltage was too low, the crystal oscillator refusing to oscillate. The receiver using a cascade converter was put into use and at 1330 a tone modulated signal was heard from the south which may have been 7LH. Lunch was then partaken of, a listen being made at 1400 hours in the VK3 direction. 3BH reports that at 1407 he heard a VK7 signal, but could not get complete call. At that time we were not on, but it is believed that 7DH. 7AJ were on at that time. If 3BH heard them, the distance would be about 390 miles.

At 1430 a signal was heard but could not be identified but we believe it was 7AJ. Now at 1450 with the beam north, a station was heard in a QSO and at that time he was describing his receiver as a crystal controlled converter feeding into a superhet receiver. As no one in VK7 was in QSO at that time, we believe that it may have been a VK3, so if anyone owns that signal we would like to know. The reception was hampered by rain which was charged and producing QRN.

The transmitter by this time was working, but with the stage after the crystal oscillator oscillating instead of the crystal. At 1500 7AJ/7DH was heard calling us and contact was made, reports being R4 S5 in both cases, the input to our rig being 10 watts with the three element beam.

In attempting to increase power we got further into trouble and gave up the transmitting. At 1525 7LH at Western Junction was heard at S7 and 7AJ/7DH heard again at 1535 at S8. The gear was packed up at 1600 hours.

The operating was done inside a covered truck, the weather varying from rain to hail at the same time being extremely cold. A lot has been learnt and in the future another attempt is to be made with many alterations in gear being put into effect.

Don Brooks (7DB), with mike, and Pete Frith (7PF) on location at Mt. Barrow.

PORTABLE OPERATION FROM CAPE SCHANCK

The date for the trip to Cape Schanck (some 470 feet above sea level) by VKs 3RR, 3ACL and 3CR has been fixed for Sunday, 16th April. Although the prime intention of this visit is to attempt to establish contact with VK7 on 50 and 144 Mc., 40 and 80 metre gear will also be carried so that communication can be maintained if results on the v.h.f. bands do not work out as anticipated.

Considerable interest has been aroused on both sides of Bass Strait and it is hoped that several other VK3s will participate. New South Wales has also fixed 16th April as a 144 Mc. field day, so it is hoped that, conditions permitting, some records will be broken and some new ones made.

50 Mc. ACTIVITY

NEW SOUTH WALES

The most interesting item seems to be the return of the DX. Saturday, 4th, at 1715, 2ABC contacted KH6PP. Then Saturday 11th the ZLs were being contacted again. Also, the stations heard and worked by Jack 2ADT included VK3, VK5, VK7 as well as ZLs. Sydney stations contacted VK5.

Ground wave contacts have been good. 2JU worked 2PN for a QSO which allowed good phone discussion. Then 2TA (Young) has been in QSO with Sydney 2JU and 2AH, and heard well by 2ARE. 2GU continues to get through to Sydney almost any time and is easily the most consistent long-distance ground-wave station. It is hoped to hear Hugo 2WH, of Forbes, N.S.W., and he can copy 2ARG on c.w. Trevor Evans, of Bathurst, and 40 metre net fame, is believed to be building some 6 metre gear. 2AMV, also of Forbes, will be using 834s in p.p. soon and will make the Sydney beams look westward. Stations behind the range might well have a 6 metre circle of their own. 2BW (Wagga), 2PN (Tumut), 2GU (Canberra), 2WH and 2AMV (Forbes), 2NS (Bathurst) and maybe others unknown at present but interested, to try the v.h.f. and escape the QRM of DX bands.

The V.H.F. (W.I.A.) Section held their meeting at 8 p.m. on 10/3/50 (second Friday in the month remember). Attendance was 30 with six visitors. A particularly interesting lecture was delivered by Jeff Stewart, 2OX, upon Magnetic Recorders. Jeff had previously recorded his introduction, subject history and general aspects, following with technical details and circuits in blackboard style. Music entertained everybody while data was being transferred from notes to blackboard. This was a well thought out and presented lecture which was well received.

VICTORIA

The evening sked with 7AB and 7XL has been continued during the month with varying success. 3ACL continues to be the VK3 making most consistent contact with the VK7s and not many nights pass without Eric hearing them or vice versa; conditions are often so patchy that QSO is impossible, but quite a number of two-way contacts have been made with signals up to S8. 3XA has also been doing good work and although he is not in such a good location as 3ACL, he has worked 7XL on several occasions and 7AB once. 3ZD, of Warragul, has worked 7XL on one occasion with S8 signals and has not heard him at workable strength since. Perhaps the best night so far was the 9th of March, when 7XL and 7AB worked 3BQ, 3OD, 3XA and 3ACL, with signals holding at good strength for two hours.

Apart from the VK7 work, there is little news as far as 50 Mc. in Victoria is concerned, possibly due to many of the regular workers catching up on jobs left undone due to DX and the Contest. Sporadic E appeared to fade out on about the 11th of February, no contacts by this medium having been reported after that date.

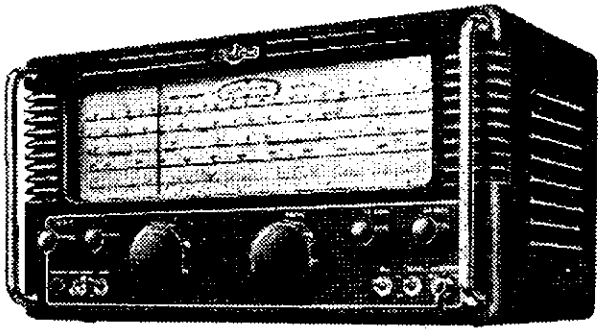
SOUTH AUSTRALIA

Laurie Sjoberg (5SL) sends the following news from the Upper Murray region. Although these notes are a little out of date, we are publishing them as a matter of general interest. Conditions on 50 Mc. were exceptionally good in this region, particularly from 3rd December to 29th January, that is prior to and during the Contest period. There were break throughs every day except for 10 days in all, when there were either no breaks throughs or that Hugh (5BC) was not able to listen to receiver, etc.

VK4 was the prominent State with regular openings to them, and in particular, 4BT. Noel is usually the first in and last out, as was mentioned in other State's notes. Other States break about even; not far behind VK4, this includes 5JD, Alice Springs.

ZL districts 1 and 2 contacted also with some excellent openings. Same applies to sigs from VK7 when band opened to them. Several very good openings to VK6 also.

(Continued on Page 12)



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L 612	12-way	1¼" x 1"
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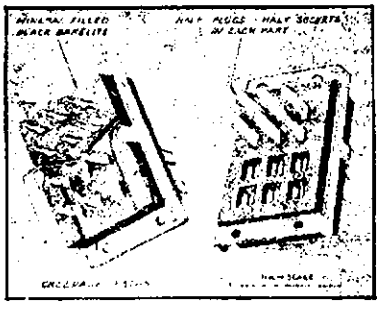

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Results of the 1950 N.F.D. Contest

Another Field Day has come and gone, but the interest shown was not nearly as great as expected, in spite of the additional attraction this year of trophies for the sectional winners. It is difficult to understand why this Contest is not received with greater interest as it does provide that avenue for trying out the portable gear under contest conditions, and realising the thrill of working that DX under emergency operation. But, on to the results, the 50 Mc. band was open with a vengence and the winners took advantage of it.

As far as is known only seven parties were in the field, and they were 4DQ, 4GB (and 4EL), 2AMV (and 2WH and 2NS), 3UM (and 3UH, 3MG and 3AGJ), 3JD (and 3AWW and 3LN), 3EE (and 3AN), and 4HZ. Conditions generally were poor on the lower frequency bands except 14 Mc., but 50 Mc. was wide open on the Sunday afternoon and enabled those parties to tot up many bonus points.

2AMV, the winner of the Open Section, used a v.f.o. into a 6V6-807 on 7, 14, 28 Mc., and a converted 522 on 50 Mc. Receivers: AR7, AMR300 and 3 stage converter on 50. Antennae were dipoles on 7 and 14, doublet on 28, and a wide spaced 3 element on 50. This party also sported a Bendix frequency meter and genemotor supplies.

4GB, the c.w. winner, used a Clapp v.f.o. into 6C5-6N7-807 band-switched for 7, 14 and 28 Mc. A really "super" super was in use, using double conversion and crystal locked oscillator. A windom long wire antenna 136 feet long and petrol driven power supply completed the gear. This party was W.A.C. on 14 Mc.—a very fine achievement for portable operation.

4DQ (portable of 4CU), the Phone winner, scored particularly well on 50 Mc. contacting 20 Interstate stations during the Sunday. The gear used was 6V6-6V6-807 crystal-controlled Tx and modulated by a pair of 6V6s. A 4 element wide spaced beam and home-built Rx, all powered by petrol driven alternator, gave Charles the highest score in the Contest. He also operated on 7 Mc.

3UM and party was unable this year to complete a hat-trick in the c.w., but went close to it with the highest number of contacts of the Contest. A troublesome receiver towards the end cost Bill the points. The other parties had an enjoyable time stringing up antennae in the dark through sundry trees and barb-wire fences, but all participants again voted it a good show. You only need to be in it once fellows, and you'll be out every year! To those who sent in logs we say thank you, and to those who missed this event we say sorry you missed a good time. See you next year!

SCORES

OPEN SECTION							
VK2AMV/2	23	7-14-50	4	73	350	423
VK3UM/3	48	3.5-7-14	9	150	225	375
VK4HZ/4	3	7	-	5	-	5
C.W. SECTION							
VK4GB/4	39	7-14-28	10	150	250	400
VK3UM/3	43	7-14	9	143	225	368
VK2AMV/2	13	7-14	4	45	100	145
PHONE SECTION							
VK4DQ/4	28	7-50	-	38	1000	1038
VK2AMV/2	10	7-14-50	-	28	250	278
VK3JD/3	32	7-14	2	67	50	117
VK3EE/3	30	7-14	1	61	25	80

Figures in the table above represent in the following order: Contacts, bands operated, continents worked, contact points, bonus points, and total points.

Abstracts from Overseas Magazines

"RADIO & TELEVISION NEWS," DEC., 1949

P. 42: "Adding Phone to Your First Transmitter;" R. L. Parmenter, W1JXF.—Heising modulation of the screen of the r.f. amplifier.

P. 59: "The Beginning Amateur;" R. Hertzberg, W2DJJ.—American factory-made transmitters.

P. 62: "Recording Stationary C.R.T. Patterns;" L. Hesse.—How to use ordinary cameras to photograph C.R.O. patterns.

P. 70: "An Automatic Keyer;" J. M. Whitaker, W2BFB.—Multivibrator supplies constant keying pulses for test purposes in adjusting the transmitter.

"CQ," DECEMBER, 1949

P. 11: "T.V.I. on 160 Metres;" P. S. Rand, W1BDM.

P. 15: "A Rack and a Beer for a Fin;" D. S. Tracy, W4AZK.—Home-built relay rack for one third price of commercial job.

P. 16: "The Latest in Exciters;" O. J. McCabe, W1COJ.—6AG7 doubler string driving 829B. Good arrangement with short leads by getting away from "chassis and panel" tradition.

P. 18: "The Two Metre R9'er;" G. H. Floyd, W2RYT.—Applies the R'9er idea to 14 Mc. A one band job with fixed coils and circuit similar to the lower frequency R'9er.

P. 21: "Undercover to Crete;" J. W. Wenglare, TA3AA, SV6AA.

P. 22: "RST 519—Solid Copy;" W. I. Orr, W6SAI.—Small ideas that add up to a lot in receiving.

P. 24: "Practical Screen Modulation;" Frank C. Jones, W6AJF.—Good oil on getting the best out of screen modulation.

P. 28: "Shack and Workshop."—(i) Plastic Meter Can. (ii) Duplex Power Supply. (iii) Stand by A.C. Hum from high-mu zero bias r.f. tubes. (iv) Xtal controlled i.f. channel. (v) Sensitive r.f. indicator. (vi) Extension of a boom.

R.C.A. "HAM TIPS," NOV-DEC., 1949

P1: "A Double Conversion Ten and Eleven Metre Superhet;" J. W. Richardt, W2WIY.—6BH6 r.f. and mixer to 1600 Kc., 6C4 l.f. oscillator, 6BE6 second converter to 455 Kc., 6BJ6 i.f. amplifier, 6AL5 detector and noise limiter, 6AQ6-6AK6 audio. Designed as a mobile receiver and packs into 5 x 9½ x 8 inches.

"QST," DECEMBER, 1949

P. 10: "Miniature Tubes in a Band-Switching Exciter;" W. Mayer, W8OVU.—6AQ5 doubler string driving pair of 807s. All doublers gang-tuned.

P. 16: "Lumber Facts and Figures;" J. F. Antenen, W8SDQ.

P. 18: "The Design of Low Pass Filters;" M. Seybold, W2RYI.—For T.V.I. suppression.

P. 25: "Installing a Practical 75 Metre Mobile Antenna;" J. Oberlies, W2NNK.—How to feed base loaded whips.

P. 33: "A 53 Ft. Rotating Antenna Mast;" R. G. Goshorn, W8DEU.—Made of 1 and 2 inch pipe, guyed at the top and half-way up.

P. 36: "Half-Wave Filters;" George Grammer, W1DF.—T.V.I. suppression.

P. 47: "A Regenerative Osoillator for Harmonic Type Crystals;" G. Trenke, W6DSR.—144 Mc. output from one dual triode, starting with 24 Mc. crystal working on its third overtone.

P. 64: "Hints and Kinks."—(i) Soldering kink. (ii) A v.f.o. coupling amplifier. (iii) Tuning device for surplus gear. (iv) Simple utility oscillator. (v) Battery saving hints. (vi) Non-skid mounting for keys.

"QST," JANUARY, 1950

P. 11: "A High Attenuation Filter for Harmonic Suppression;" A. M. Pickintino, W3NJE.

P. 15: "Antenna Polarisation on 144 Mc.;" E. P. Tilton, W1HDQ.—Report on tests with flop-over arrays. Nothing conclusive.

P. 20: "A One Tube V.F.O. Amplifier;" G. T. White, W3TLR, and L. W. Sieck, W4KMG.

P. 22: "Folded Elements in a Reversible Unidirectional Array;" B. Kelly, W2ICE.—Pair of Lazy H fixed antennae with switched directivity.

P. 32: "An R.C. Type Audio Signal Generator;" R. M. Smith, W1FTX.—Wien bridge circuit. Good detailed instructions for frequency calibration with c.r.o. using Lissajon's figures.

P. 42: "Audio Phase Shift Networks;" G. H. Nibbe, W6BES.—How to design and align them.

P. 46: "Hints and Kinks.—(i) Adjustable tuning rate for v.f.o.'s. (ii) Using the BC221 at v.h.f.

P. 48: "De-bugging the Electronic Bug;" R. H. Turrin.

P. 50: "Answering the Beginner's Question 'C.W. or Phone?';" D. T. Hurd, W2PFU.

P. 54: "Surplus Corner."—Plug-in exciters from Command Transmitters. Used as high power exciters for higher power final.

"SHORT WAVE MAGAZINE," DECEMBER, 1949

P. 740: "Suppression of T.V.I.;" F. T. Wilson, G2XX.

P. 746: "A Transmitter for Beginners, Part II;" J. N. Walker, G5JU.—Construction, adjustment and operation.

P. 751: "Audio Amplifiers for Communication Purposes;" W. J. Crawling, G2IQ.—Advantages and methods of reducing audio bandwidth.

P. 765: "Automatic Morse Key;" J. P. Bromley, G3EPR.—Very simple circuit for producing automatic dashes as well as dots.

P. 767: "First Steps on Phone;" W. Farrer, G3ESP.—Trials of grid modulation.

FIFTY Mc. AND ABOVE

(Continued from Page 10)

There was no actual contact between here and Adelaide—we being 150 approx. miles airline from that city, but on two occasions we heard 5MK and 5HD, when there was a very short skip. On another very short skip—22nd January—5BC worked 3KX at Colac, approximately 200 miles airline from here.

We are situated 150 miles from Adelaide in direct line with Sydney and approximately 20 miles from the Victorian border. Mildura is 100 miles by road (straight all the way!).

5BC's equipment: Tx is a 6F6 tritet oscillator with 8.4 Mc. rock with 7193 doubler into single 807 final, running about 24 watts input. Modulator is a pentode 807, 12 watts output, driven by two 6C6s as triodes from a dynamic mike insert. Receiver is a home-made super, which includes a grounded grid mixer stage. Aerial used for the whole season was a four element close spaced array with quarter wave matching stub from 72 ohm co-ax.

Since 29th January the band has been very quiet with sigs being heard on only two occasions, but no one worked. 5BC is re-building his aerial array, has new pole up, and is adjusting array at the moment. This will now include rotating mechanism controlled from shack.

144 Mc. DOINGS OF THE MONTH

NEW SOUTH WALES

Remember to listen and transmit on the hour if the band appears to be dead. The most interesting thing was the long distance (123 miles) 2 metre contact between 2BG/2YM at the Jibb, Bowral, to 2ADT Cessnock. A mod. osc. p.p. 7193s was used to transmit and a super-regen with concentric line r.f. stage broad-band input, to receive. The antenna a 3 over 3 elevated 2,000 ft. The signal in Sydney, which has no obstacles in the path, was 9 plus. In Cessnock S7/8 on a a.s.v. receiver. 2ADT was barely QSA5 in Sydney which happens to be midway, but S8 in Bowral. Beam angle only slightly different. 123 miles is the N.S.W. record, it is believed.

The skeds run nightly by 2AH have been discontinued. Anyone seriously interested in opening the 2 metre Interstate path is invited to make skeds. It is surprising that some openings have not taken place. 2AH has 300 watts and a 32 element beam on 2 metres

VICTORIA

The field day on the 5th of March was held under good conditions, the weather being perfect for this type of activity. Stations out were 3FO at Mt. Macedon, 3RV Arthur's Seat, 3YS Blue Mountain, near Trentham, 3ZL and 3GM Mt. Buninyong, 3NW Mt. Donna Buang, 3JO Ben Cairn, and 3RR McCrae.

All the portable stations were putting good sigs into Melbourne and the number of stations on the band at times was such that those with unselective receivers were suffering bad QRM. However, despite this every one had a most enjoyable day and it is hoped that this field day will set an example for future ones as regards the number of stations taking part. Many thanks are due to 7PF, 7MC, 7AJ, and 7DH for putting on signals from Mt. Barrow and Mt. Wellington; no contacts were made on this field day, but "better luck next time."

The next field day will be on the 7th May, so keep this date in mind and all those with portable gear be sure to get out.

On the 16th April, the occasion of the Mornington Peninsula Sub-Branch's field day, 3RR will be operating from Cape Schanck on 50 and 144 Mc. and will endeavour to put signals across to VK7 on these bands. It is believed that 7AB will be operating portable from Table Cape so all who can operate on these bands are advised to keep a look out for VK7s on this date.

288 MEGACYCLES AND ABOVE

New South Wales.—The 288 Mc. band has livened up and stations operating include: 2DF, 2HL, 2LZ, 2WJ, 2XF, 2ABZ, 2ALU, 2AZO. 2LY is preparing to give these stations some DX.

Activity on 576 Mc. band by 2XX, 2YR, 2FK, 2ADW and 2AIL continues although cross town contacts are still being tried for.

Victoria.—Activity on 288 and 576 Mc. has dropped to rather a low level on these bands, probably for the same reason as the lull on 50 Mc. and thus there is very little to write about. On the field day, 3NW at Mt. Donna Buang worked 3IM on 288 with S9 signals both ways. On 576 Mc., 3AUX is now set up for two-way work; he has contacted 3RR and will be looking for other stations.

Only news of the 300 Mc. band is a contact between 3NW portable at Sassafras and 3XA at Mitcham, a distance of 8 miles with S7 signals both ways. It is hoped that when parabolic antennae are used at both ends it will be possible to increase this distance quite substantially.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. Gronow, VK3WG; Federal Secretary: W. T. S. Mitchell, VK3UM, Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary.—Maurie Butler (VK2AAN), Box 1734 G.P.O., Sydney.

Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor.—A. Pearce, VK2AHB, 48 Harrabrook Ave., Five Dock, N.S.W.

Zone Correspondents.—Nth. Coast & Tablelands: J. M. Betallick, VK2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 48 Harrabrook Ave., Five Docks; Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 770 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. C. Quin, VK3WQ.

Administrative Secretary.—Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne, O.1.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—North Western: R. E. Trebilcock, VK3TL, 122 Victoria St., Kerang; Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: W. H. Ross, VK3UT, Ballangeich, via Warrnambool; North Eastern: J. A. Miller, VK3ABG, "Erinvale," Avenel; Far North-Western Zone: Harry Dobbyn, VK3MF, 42 Walnut Ave., Mildura; Eastern Zone: Mrs. P. M. Churchward, VK3US, "Shirley," Red Hill.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW on Friday evenings on the 7 and 14 Mc. bands.

VK6WI.—Saturdays 1400 hours, Sundays 0980 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TR, Box 638J, G.P.O., Brisbane.

Meeting Night.—Last Friday in each month at the Y.M.C.A. Rooms, Edward Street, Brisbane.

Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—E. A. Barbier, VK5MD, Box 1234K, G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AG, 7 Howard St., Perth.

Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.

Meeting Night.—Watch the Monthly Bulletin.

Divisional Sub-Editor.—George W. Ashley, VK6GA, 33 Mars Street, Carlisle, Western Australia.

TASMANIA

Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor.—Capt. E. J. Cruise, VK7EJ, Anglesea Barracks, Hobart.

Northern Correspondent: C. P. Wright, VK7LZ, 3 Knight St., Launceston.

FEDERAL

DX C.C. LISTING

PHONE

VK3JD (1)	36	143
VK6RU (2)	37	132
VK3BZ (3)	36	129
VK6KW (4)		115
VK8EE (10)		121
VK4JP (6)		114
VK6DD (6)		113
VK8LN (11)		113
VK4HR (12)	35	107
VK2ADT (18)		102
VK3IG (6)		100
VK8JE (7)		100
VK4KS (9)		100
New Members:		
VK4HR (12)	35	107
VK2ADT (18)		102

C.W.

VK3BZ (6)	40	165
VK3CN (1)	40	161
VK4EL (9)	40	140
VK3VW (4)	40	135
VK2QL (5)	40	133
VK3KB (10)	39	129
VK4HR (8)	40	126
VK6FH (15)	38	126
VK3EK (3)	39	122
VK4RF (11)	35	119
VK2EO (2)	40	116
VK3UM (12)	36	114
VK4DA (7)	38	113
New Member:		
VK5RX (23)	37	105

OPEN

VK3BZ (4)	40	189
VK3KX (1)	40	167
VK6RU (8)	39	165
VK4HR (7)	40	161
VK2DI (2)	40	160
VK3HG (8)	40	155
VK3JE (12)	39	154
VK6KW (13)	39	153
VK4EL (10)	40	140
VK3MO (5)	39	139
VK3OP (19)	39	137
VK2ADE (28)	40	133
New Member:		
VK4FJ (32)		102

Congratulations to Tibby, VK4HB, on gaining what is believed to be the second Empire DX C.C. issued by the R.S.G.B. to Australia. Tibby has also just obtained W.A.Z. and W.A.S. (Aust.).

COUNTRIES LIST

Several new prefixes have been allotted by the French authorities to countries and islands of the Union. Please make the following alterations to the January Countries List.

Antarctica (French) i.e. Adelie Land	FB8
Clipperton Island (7)	FO8
Comoro Islands (39)	FB8
Corsica, (15)	(FC)
Tunisia (33)	8V8

Another tentative prefix and a peculiar one is the French Occupation Forces (ZFO) in Austria—FKS8.

20th ANNUAL CONVENTION

Elsewhere in this issue are shown the various motions submitted by the Divisions for consideration at the Annual Convention of the W.I.A. All members should study these items which concern everyone, and indicates further the present feelings of the Institute.

SLOW MORSE TRANSMISSIONS

The following transmissions from the official W.I.A. stations are given on 3,504 Kc. on the days and times shown below:—

Sunday—VK3WI, 2030 to 2100 hours E.A.S.T.
Monday—VK2WI, 2000 to 2030 hours E.A.S.T.
Tuesday—VK4WI, 1930 to 2000 hours E.A.S.T.
Wednesday—VK6WI, not operating at present.
Thursday—VK5WI, 1930 to 2000 hours E.A.S.T.
Friday—VK7WI, 2030 to 2100 hours E.A.S.T.

DIPLOME DE L'UNION FRANCAISE (D.U.F.)

This Certificate has just been announced by the R.E.F. and rules will be published later when the necessary translation is made.

W.I.A. ACTIVITIES CALENDAR

April 7, 8, 10: 20th Annual Federal Convention in Melbourne.

May 7: Minutes of 20th Convention issued.

June 3, 4: 1950 Trans-Tasman Contest.

June 7: Ratification of Convention Items.

CALL SIGN AMENDMENT LISTS

The Department have notified us that Supplement No. 2 (a 15 page issue) is available on application. Monthly amendment lists will be supplied to the Executive for inclusion in "Amateur Radio," as of yore. All Amateurs should then be able to keep their call books up-to-date.

FREQUENCY ALLOCATIONS

The following is a list of the bands available for use by the Amateur Service in Australia, followed by the types of emission allowed on those bands.

3.5 to	3.8 Mc.	A1, 3, 3a, 6F3.
7.0 to	7.2 Mc.	A1, 3, 3a, 6F3.
14.0 to	14.4 Mc.	A1, 3, 3a, 6F3.
28.96 to	27.23 Mc.	A1, 3, FM.
28.0 to	30.0 Mc.	A1, 3, 3a, 6F3.
50.0 to	54.0 Mc.	A1, 2, 3, FM.
144 to	148 Mc.	A0, 1, 2, 3, FM, Pulse.
288 to	296 Mc.	A0, 1, 2, 3, FM, Pulse.
576 to	585 Mc.	A0, 1, 2, 3, FM, Pulse.
1215 to	1300 Mc.	A0, 1, 2, 3, FM, Pulse.
2300 to	2450 Mc.	A0, 1, 2, 3, FM, Pulse.
5650 to	5850 Mc.	A0, 1, 2, 3, FM, Pulse.
10000 to	10500 Mc.	A0, 1, 2, 3, FM, Pulse.
21000 to	22000 Mc.	A0, 1, 2, 3, FM, Pulse.
30000 Mc. and higher		A0, 1, 2, 3, FM, Pulse.

Note.—6F3 emission represents a maximum deviation from the quiescent frequency of plus or minus 8 Kc.

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER
(23 Lonsdale Street, Box Hill, Vic.)

A large consignment of cards has arrived from Greenland. These should be especially welcome to a number of DX C.C. aspirants.

Such is the feeling between VU and AP that the Indian QSL Bureau, Box 6666, Bombay, will not accept or forward cards addressed to AP stations, but returns them to the country of origin with the endorsement, "Will not accept cards for AP now, sri. Please note AP Bureau is not, repeat not, via India, Pakistan separate Dominion, send via AP5B only." Divisional QSL Managers please note.

The QSL Bureau address for Morocco is: "Relais QSL Marocain, CN8AK, 13 Rue Lassale, Casablanca, Morocco.

John, CR9AG, is pushing off from Macao in about three months and will probably sign VS6AG soon after his arrival back in Hong Kong.

Max Meyers, W2BIB, in forwarding twenty second request cards to VK3 stations, writes, "What the heck is the matter with the VK3 boys, no QSLs yet received from them."

Further re Syd Clark, VS1CW, ex-VK5SC, Syd in a letter to a VK3 station says that VK stations romp in at strength 7 to 9 24 hours a day in Seletar on either 7, 14 or 28 Mc. with a climax in the evenings on 14 Mc. when that band is practically unusuable due to VK and ZL QRM. Syd claims that VKs are so persistent that it is well nigh impossible for him to work any other DX and while he has no objections to working VK stations, he also likes to work other countries. He claims VKs ignore his directional calls and either answer him or v.f.o. on to his frequency and call CQ DX. He considers VKs should not answer his CQ DX calls (with this I do not agree—3RJ) as he considers VK is not DX to him. Without condoning the tactics he complains of, it does appear that he works other DX, as he claims a c.w. score of 145 countries worked and the inflexible use by him of QHM, QLM, etc., would soon remove his grounds for complaint. Maybe, however, only an exclusive band reservation would satisfy his desires. When he returns to G shortly, Syd will probably be at the other end of the argument and can then decide whether local or DX QRM is preferable. At the present time Syd is only sending cards via Bureaux on receipt of cards as he has found this more equitable than the indiscriminate QSL method he formerly observed. Good hunting from G land, Syd.

QSL traffic via the Federal Bureau during the fiscal year ended February, 1950, shows a drop of 7,000 cards over the previous year. This is attributed to the continued publicity given to the QTH of Divisional Bureaux and to an increase in direct exchanges of cards. The larger circulation of the Call Book Magazine has helped in the latter respect. Despite the drop in QSL traffic the Federal Bureau still handles 56,000 cards per annum.

"Chuck" Clarke, KM6AO, of Midway Island, wishes publicity for his mailing address. It is: KM6AO, C. A. Clarke, Navy 1504, care F.P.O., San Francisco, Calif., U.S.A.

It is refreshing and comforting to know that at least two readers of "Amateur Radio" peruse these notes. The par in the March issue requesting the QTH of VK3ACD brought two responses within a few days of the publication of the issue. Many thanks VK4LZ and also Eric Trebilcock. Apropos Eric, he is still located in a civilised area, to wit, Melbourne, and running a D.C.A. training school. Is perturbed by the presence in his home QTH street of two active Hams. I will gladly exchange my 0730/1630 continuous Monday to Friday pilot or arc welder QRM, for his two nearby Hams. The Department offers me its sympathy in the matter, but regrets it cannot do anything to relieve the position. It seems a one-sided arrangement for a Ham causing QRM is soon silenced, but an industrial concern can go on causing QRM indefinitely unless it causes interference on the broadcast band.

A large batch of cards from Abyssinia or Ethiopia has just come to hand. The cards are very informative as to the political geography of the capital, Addis Abeba. It has been a good month for the DX hounds.

Further to Federal Notes last month on FB8AX situated at Adelie Land, Antarctica, comes news of the French Mission stations FB8XX on Kerguelon Island and FB8ZZ on Amsterdam Island. These two stations are greatly in demand by the DX gang, but frequencies are not to hand as yet. FD8RG, in Lome, Togoland, is reported by the R.E.F. to be active on 14 and 28 Mc. and FLA8D on 7 Mc. Another is FY8AO in Cayenne, French Guiana, active on 14040 c.w. and 14300 phone. FK8AG, in Innsbruck, Austria, has been contacted on 14030 in the early morn. He is apparently one of the French Occupational Force stations.

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NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester Street, Sydney, on Friday, 24th February. There was a packed house and after settling down, a most interesting lecture entitled, "How Many Volts" was given by Mr. J. M. Moyle, VK2JU.

Many points on filter and power supply problems were covered and super-modulation, modulation capabilities and reasons for over-modulation and splatter were keenly discussed. In this latter department, Mr. Moyle was ably assisted by Mr. George Multy. Considerable finesse was displayed by Mr. Moyle in keeping to his chosen subject in the face of enthusiastic questions asked by members.

An appeal was made for extended use of the higher frequency bands (notably 288 and 576 Mc.) before we lose them by default.

Simplicity of gear required was particularly stressed, and a 288 Mc. receiver using Lecher bars was exhibited and passed around, together with photographs of a companion transmitter using 7193s. It was pointed out that low power is not a disadvantage.

Mr. J. M. Moyle, VK2JU, was elected N.S.W. representative to the Federal Council and will attend the next Federal Convention to be held in Melbourne commencing 7th April, 1950. Mr. J. Corbin, VK2YC, will also attend with the status of Official Observer.

It was decided that in the opinion of this Division, VK6 should not be considered as a separate country.

The W.I.A. North Coast Convention will be held at Urunga over the 8th, 9th and 10th April, 1950, and over one hundred visitors from N.S.W., Vic., Qld. and South Aus. are expected. The local progress Association is putting out a helping hand, so help swell the population and join in the fun.

Keen disappointment was expressed over lack of support for the recent National Field Day. Perhaps, now that petrol rationing has been dispensed with, some of those men with transport and a yearning for the great outdoors will assist to make the next outing a bumper show.

NORTH COAST AND TABLELANDS

Activity has been limited due to blackouts on all bands, the sunspots playing up. The coast has had more than its share of wet weather. The 80 metre gang are active again at times and DX has been coming through. The VS1, 2, 3 and 4 gang are working this band and will be looking out for VKs on Fridays at 2300 hours E.A.S.T. 2HC, 2WT, 2RK, 2AJB, 2GI, 2OE, 2JC, 2XO and 2AAP from the zone are all working the band. Low power will get you plenty of ZL phone contacts.

2ARY has had two weeks in hospital, but is on the air again now. 2AAP brought back a car load of battery gear and genemotors. 2ZX and 2UN, Inverell, have been very active on 40. 2JC returned from Manly after four weeks' holiday, has had some b.c.i. trouble since his return to Marribri. 2GI reports good DX contacts on 20 with his vee beam. 2EA, Kangaroo Creek, blew the roof off his shack experimenting with a blow lamp and chemicals—some "H" bomb business! Leith using super modulation with his battery operated rig. 2PA busy with his wire recorder and will have some interesting transmissions to play back to the boys at Urunga. 2TB putting out good phone on 20 and 40. 2WQ, "the monitor," hears all and knows all and pulls the big switch sometimes.

2ZY now on 6 metres and testing out with 2LH. 2ADE was on 40 for a couple of days, but soon went back to six. 2AFP, Casino, hopes to have a new QTH soon, by the sea at Byron Bay. 2ASF had mike trouble and using c.w. only. Col won the ear-bashing award at the Convention last year and is resting on his laurels. 2ASO, a new Ham at Kyogle, using c.w.; he is not used to it—much—only been pounding brass at work for 20 years. 2AJB, the only active Ham at Coffs Harbour, has installed a speech clipper with improved results. 2DK puts in a consistant signal with his low power battery transmitter. 2ACU busy coaching Norm Moody with c.w. for his ticket—best of luck Norm.

2ZS and 2ZC had good holiday at Forster, used portable equipment. 2LH active on 40 and 80, with three receivers, monitors all bands while on the air. It is anticipated that the attendance at this year's Convention will be a record, Interstate visitors include VK3QG, 4FN, 4CU, 4UX, 4HZ, and 4GZ. Amateurs will be coming from all over the State, including YL 2AMJ.

HUNTER BRANCH

The last meeting of the Hunter Branch was very well attended, the new Secretary, Harold Mansfield, 2LV, has started off great guns. Some very good lectures are planned for the future, so don't forget the second Friday each month. The new job at 2LV appears most satisfactory. 2CS been entertaining lots of visitors including OT 2IJ, VK7TR ex-2TR. Ray spent a couple of enjoyable days with Lionel and was interested in Lionel's 10 metre efforts. 2CS will be in Melbourne in April, so 3ADF and the rest of the ex-Naval gang had better watch their gear. 2UY back on 40 again planning new frequency meter-monitor now that the Rx troubles are over, also studying for a 1st commercial ticket. 2OW been head-scratching over P.M.G. exams., but has done a little more work on the rig.

2WU receiving varied reports on his phase modulation but it is definitely good stuff. 2XY still belting along on 20 c.w., the QRO rig is progressing well. 2MC must be QRL, only heard on 40 a couple of times. 2AAH has a new QTH in Belmont, up on the hill with 40 F/D in the air. 2AAI getting out well on 40 phone, had a visit from Norm, 2AAP, while passing through to the big smoke. 2CI still very pleased about the new car, it looks nice, too. 2SO only heard on 40 c.w. with a very nice signal. 2VJ not very active, works with 2UY and both on the job for the 1st class ticket. 2UF still getting about on 6 and 2. Like some news from 2CX at Nelson's Bay; believe 2YS is at a migrants' camp there. 2NX still flying mad. 2XO receiving publicity for Urunga "do," as Shorty is flying up there—we hope in one piece—taking 144 Mc. mobile gear for the trip. 2ANA still on 40 phone, by the time these notes appear, all roads will be crowded with the gang going to Urunga. Those contemplating making the trip are 2ANA, 2AHA, 2AGD, 2NX, 2AAI, 2CI, 2AAM, 2UY and 2CN as well as a few still uncertain. 2AGD has a new w.s. beam on 10, results are very good.

2CN has some good 40 phone these days, but has been QRL with concrete of late. 2PQ works 10 metre Europeans that can't be heard around the city. 2TE has plenty of long round-tables with ZLs on 20 phone. 2FP only seems to be maintaining his skeds with Al, W6RV on 10. 2AFS enjoyed himself at the last meeting, still works all the nice stuff on 10 when it is about. 2BZ had a great holiday around VK4 shooting; he made a nice job of 2ASJ's rig. From Stockton, 2ASJ is making plenty of contacts on 40—807 and 807s modulators. 2OS pleased with his 6 DX, only wants a VK4 now. 2ADS working on new 10 rig as 6 gradually going out. The gang were all sorry to learn of 2NL's sickness, they all wish him a speedy recovery. 2FX not on the air, but building super-dooper tape recorder. 2KG did some good work in helping to arrange t.v. demonstration in Newcastle.

2ZC on 40 a little. QSO the Kempsey boys. Also collected a few new ones on 20 to reach 150. 2ASF and 2ZS made a flying trip through Newcastle recently. 2PT only heard on 20 DX with good results. Nil from 2AMM. Bill, 2XT, must be busy, the new rig still not heard. 2AGY getting out well on 20. 2ANL missing off 6, has been shifted, hope to hear from you soon. Still not much from Maitland. 2DG has nice new 50 foot tower where 10 metre beam will probably sit; has 140 confirmed now. Keith never counts countries until the cards arrive. 2XQ has a new Clapp osc., working on the Emergency Net. 2AKP had a fine time at the last meeting, works 40 and 80 for any emergency hook-up. 2TY very active on 10, signals getting louder in Newcastle every day.

A large number of Associates have joined the Hunter Branch, new faces are seen each evening, there will certainly be plenty of QRM around soon. 2AHA is chasing the double century. 73 till next month when we will really have some scandal from Urunga.

NTH. COAST W.I.A. RADIO CONVENTION

URUNGA—8th, 9th and 10th APRIL

Saturday, 8th April, 2 p.m.—Assemble at VK2XO's "Do Me" shack (between traffic and railway bridges) for registration and issueing of identification discs. **5 to 6 p.m.**—At "Do Me" for testing emission of an 18 watter (two 9s in push pull in a single envelope). **8 p.m. onwards.**—Lectures and competitions. The following Amateurs will lecture: VK2ADE, "The Conversion of 522 Receiver for 6 and 2 Metres;" VK2EA, "Super Modulation;" VK2MM, "Crystal Filters and their Alignment;" VK2ADT, "Turret switching in Receivers." The above lectures will be presented at the Urunga Recreation Reserve. Dancing and cards at the Urunga School of Arts for those so inclined. Amateur fishing competition commencing 8 p.m. Saturday, concluding 6 p.m. Sunday.

Sunday, 9th April, 9 a.m.—Yabbie catching competition (world's championship), Urunga Lake. See the Australian champion, Cec Hardman, VK2KR in action. **10 a.m. to 12 noon.**—Bus tour of the Bellingen River Valley. **2 p.m.**—Assemble at the School of Arts—144 Mc. transmitter search for W.I.A. Cup. **5.30 p.m.**—Sing-song and rag chew. **7.30 p.m.**—School of Arts. Welcome by Mr. Chas Eddy, President of the Urunga Progress Association. Movie Films presented by Ted Hamey. Demonstration by four-year-old "Wonder Boy of Radio." Lecture: "Model Radiator Investigation on Low Angle Radiation," by W.I.A. guest lecturer, Joe Reed, VK2JR. Presentation of prizes.

Monday, 10th April, 10 a.m. to 12 noon.—General assembly at the "Do Me," competitions, final review. General exodus!

It is anticipated that at least 100 Amateurs will gather at Urunga during Easter. Visitors from Victoria and Queensland will be present. Sixty guests are booked in at the Hotel and many others at private homes. It is the Country Amateur event of the year, and if you decide to go at the last minute, please contact VK2XO, of Raleigh. He may be able to find accommodation for you.

COALFIELDS AND LAKES

2KQ still off the air, but should be on again before these notes appear in print. Hunter Valley Emergency Net has had another successful run, using 3501 Kc., the emergency frequency. 2XQ, of Maitland, has the Net in hand and a meeting will be held of all members in March. 2KZ is resting after running Delaware down by having a shot at the A.R.R.L. Phone DX Test. Sporting a badly burnt leg due to making good contact with a stove. With Bob, 2KF proceeded to Newcastle and came back with some bronze tubing, so guess beams are on the "jobs list" at both stations. George, another of the Kurri gang, is fairly active, mainly on 10. 2VU is constructing a new ladder tower, about 40 feet high, hopes to put his 10 and 6 beams on top, plus some long wires for the lower frequencies.

Nothing to report from 2ANU. 2TY is as active as ever on most bands, also very interested in the emergency net. 2PZ should be heard soon, the Rx is going and the Tx not far behind. Still nothing from 2ALR. 2ADT can be heard any night on 6 and 2, and has good results with Sydney cross-band. Has just completed a 6 Tx for 2CX, of Nelson's Bay, hopes to make Urunga at Easter, also has 100 countries confirmed on phone. 2YL has hopes of making Urunga too, building a new Rx, but time seems to be the controlling factor. Conditions on the various bands are generally poor. 2RU still to be found on 6 and 2. 2AMU and 2AEZ on 6, while 2KR is on long service leave, so anyone is liable to see Cec in the next couple of months. 2CZ is being heard in Cessnock on 6. Cheerio gang.

WESTERN ZONE NOTES

Hams in the Western Zone will regret to hear that Jack Russell, 2QA, has relinquished the job of Z.O. after many years. Looking through a 1934 edition of "A.R.," I noticed the Zone 6 (Western Zone) Notes were signed by 2QA way back in those days, so thanks for the prolonged effort, Jack.

Congratulations to 2NS on reaching the 200 countries. For the past few months, Trev has been combing the DX bands for the last couple of rare ones to round off the double century. Relaxing now and looking for new fields of activity—50 Mc.? After a spell on the coast, 2SA is back to the cactus, better known as Dubbo, with low powered c.w. rig on 7 Mc. Rest of the Dubbo Hams all more or less active. 2AMR occasionally on 7 Mc. and finishing off 50 Mc. transmitter with 829 in final. 2XP and 2ACT heard on 7 Mc. phone. 2II has "press-to-QSO" rig. Max just thinks of a country he would like, dials a serial number, and after the relays have done their job, hey presto! There it is. No trouble at all. 2VZ busy with the "beam of beams." Modelled on the Sydney Harbour Bridge and pruned with an oxy. torch.

Round Forbes, 2BT has changed his abode. Moved from just out of town to just in town. More noise and less antennae space, but after a holiday on the coast, Bill moved into the new place and was on 40 pronto. Antenna 6 ft. long. 2AMV still piling up DX confirmations on 14 Mc. Over 50 in the bag now, so John decided March was a good month for a couple of weeks at Manly. 2JV still only partially active. Activities at 2WH mainly concentrated on 50 Mc. and a visit to 2ARG's shack was responsible for renewed enthusiasm. 18 watts and a 20 ft. high beam are OK for Interstate contacts, but for point-to-point work, a higher beam and more herbs seem indicated.

2HZ on the point of moving to a new home. Dismantled all the gear, and then popped back just enough to keep skeds with the Emergency Net.

Western Zone lost a member when 2AAF left Parkes for South Australia. Good luck as a VK5 Des. Much silence from the rest of the Parkes gang. 2ACU, Coonamble, very quiet since his return from a coastwise holiday. 2ACU/P via a 3BZ Tx kept Rod in touch while he was away. Big preparations are being made for the Urunga trip. Rod is taking 2AMR and 2XP along as spares.

2XE has left the zone and is dispensing radio parts in Sydney. 2LY has acquired another Rx, a S27, it now sits beside the H.R.O. and the R.C.A. job for the low frequencies. 2LZ has taken up building—the garage completed and now the house is under way—radio is definitely off. 2FI spends most of his time on 6. 2EX still waiting to get into a house before going on the air, moving when 2HZ vacates his present QTH. News and notes to to your new Zone Officer, VK2WH, of Forbes. Believe the following Hams are in this zone and would like some news of your activities: 2JW, 2ALX, 2JC, 2EI and 2SN.

SOUTH COAST AND SOUTHERN

Wollongong Club and Gladesville Club are working together in an endeavour to put signals between Keira, near Wollongong, to Mt. Kurrajong, the band—576 Mc. The station 2AMW on 40 metres has been received very well and the signal is a credit to the builders. It is expected that 2ADM will soon be with us again, no new rig, but a search is on for band-switching motors so the new rig is on the way. 2OW has not been heard on 40 so it appears that the 20 final is complete—what is the latest? 2ABY will be on very shortly—this station is well worth keeping in mind as the location of same is Royal Hotel at Bowning, very close to the highway. 2ABY will be using AT5-AR8

and will be on 40 c.w. until a suitable modulator is built. 2ON is expected to be leaving very shortly on his annual holidays and will be visiting as many Hams as possible. 2BW sends information along showing how to convert TA12D to Ham frequencies. To make channel 4 cover the few extra Kc. on 40, all that is required is to remove quarter of a square inch of silver from compensating condenser which is wired across the grid-cathode coil in that channel. 2ALS very QRL painting, also giving the car a new look, believe the shack will receive some attention in the form of some insulating lining.

2TC again active, so guess the noise from the h.t. lines must have abated. Monty, 2JQ, and Bob, 2MM, have been heard talking about "Silver Bells" and 30 metres, they also mentioned many old-timers. "Silver Bells" was the theme song of 2MM in the days when recordings were part of Amateur Radio transmissions. 2KR, 2GA and the latter's XYL are holidaying in VK5. They dropped in for a few minutes whilst passing through Yass. The steam train attracted the attention of both Cess and John (2NS please note, this train does not run through the main street). Notes this month have been affected by the work entailed in the converting of a TA12D, but we should have more notes by next month.

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VICTORIA

The March general meeting was held on Wednesday, 1st March, at the usual place, the Radio Theatre, Melbourne Technical School. The attendance was rather small owing to the tram strike, about 100 members being present. Mr. Harold Webber (3PW) occupied the chair. The meeting got away to a late start owing to the QSL Department handing out cards.

After the minutes were read and confirmed, the chairman called for 12 volunteers, the response being instantaneous. The Secretary handed to the 12 volunteers a slip of paper with a question written on it. After the boys had perused the questions, they were invited to get up and answer, the time limit being five minutes. The first speaker was 3UM, his subject being "DX Contests and the numbering system." 3LN, being the last speaker, spoke on "How to tune a 14 Mc. Final." The other speakers spoke on many subjects and very interesting comments were made and a lot of useful hints passed on. We must give credit to Charlie Quin (3WQ) for the idea.

The QSL manager reported that there are quite a lot of cards awaiting collection and he would be grateful if the boys would collect same. 3LH, the Secretary of the V.H.F. Group, spoke on the field day for 5th March, also other v.h.f. activities.

The chairman reminded members of the Annual Meeting to be held this month and asked for a good supply of nominations for Council. 3ACS reported on the activities (?) and the annual meeting of the T.A.C. Group. His report was received with gloom and quite a discussion centred around the report. Ian Sewell (3IK), for once, had nothing to say. Max Hull (3ZS), the new Federal Secretary, introduced to the meeting two visitors from G land; unfortunately I could not get their names. After a welcome from the chairman, they suitably responded. The meeting closed at 2235 hours.

Glad to report that 3BH is out of hospital and going great guns. 3UG is back on the air with a new rig. Another to make a return to the air is 3RK. 3EN has erected a new tower and beam. 3FP is still in Central Australia, doing a spot of work for the R.A.A.F. 3ARL has been transferred to Stawell. 3QK down at Churchill Island. 3OF QRMing on 20 metre c.w. 6DX is holidaying in VK3. 3QQ having a spot of holidays (?) and thinking of a name for a new arrival, congrats Jay. The latest member sporting a new car is Jack Groves. Ham Radio seems to have taken a back seat, not the back seat of the car either!

MOORABBIN AND DISTRICT RADIO CLUB

The February meeting was held in the Moorabbin Town Hall Buildings on Friday, 17th February, where 40 members and visitors were present, despite the fact of a very wet night. 3KE occupied the chair and the usual business was dealt with and dispensed in record quick time. The club is now affiliated with the W.I.A. (Vic. Division) and has also applied for a transmitting licence. After a cordial welcome to the visitors by the President, the evening was turned over to a film show, the subjects screened were well selected and highly instructive. The subject being "The Radio Valve," "Electrons," "Sound Waves," "Receiver" (strange as it may be, the crystal set). To finish off the evening a selection of musical shorts were shown.

3ARK and 3FO intimated that they would be taking a series of movies of the local boys and their gear and will screen the pictures to the club very shortly. The next meeting of the club will be held on 21st April (Friday) and a cordial invitation is extended to all.

EASTERN ZONE CONVENTION

By Keith Scott, VK3SS

As everybody should know, the third post-war Convention of the Eastern Zone was held at Morwell on Saturday and Sunday, 28th and 29th January. Through some amazing oversight of the weather controller, the week-end was fine and warm and about 5 p.m. the gang started to roll up at the local recreation hall.

The zone boys met in person, mostly after a span of 12 months, and little groups lost no time in ear bashing. The OM from the Mountains, without whom we couldn't think of holding a Convention, was amongst the first arrivals. 3WE came down on the stage coach to Bairnsdale, then per train to Traralgon where a group of the leading citizens had gathered at Secretary, Graham Colley's (3QZ) highly salubrious new home, on the Princes Highway. Rob Sandon (3ABS) and Len Simmons (3LV), with their XYLs, were there from Melbourne and after an inspection of Graham's shack, we (I was there with my junior op., David) all set forth along the road to Morwell.

Ian Sewell and his XYL were introduced to us upon arrival, also Geoff Wookey (3YJ), his XYL and Ron Higginbotham (3RN) were in the car with them. Shortly afterwards someone, sensing a bit of scandal, found out that Ian (3IK) had been booked into a double room at the local with his XYL. Now as far as the boys knew he had no XYL, so the Eastern Zone, who have a reputation for absolute decentness (we admit it), thought he should marry the girl first and the suggestion was put to Ian. After a long investigation, we called in Bill (3WE) who, as you all know, is a newspaper reporter with many years of experience assisting the North East Mounted among the wild places round Omeo, to assist in getting things straightened out. It all finished up by discovering the double room should have been booked for Ron (3RN) and his XYL and no one would believe poor Ian (or ever will—Ed.).

After we all inspected the latest creations of Keith Heitschs (3HK), and watched him making calls on 6 metres with his mobile gear, we talked some more, then went into the hall where the dinner commenced punctually 45 minutes late. Ron Jardine (3PR), President, welcomed everyone—no, he didn't, because he came late. They called on 3SS, as Vice-President, to do that and after making a marvellous speech, all sat down and talked some more, also ate. 3PR came a few minutes later with a splendid excuse—had to milk the cows first. The dinner was good, as it always is at our Conventions, then we started on the various toasts. Quite the loveliest things were said by all the speakers and I'm sure we all think the world of each other.

The representatives of the Melbourne H.Q. sprang a complete and big surprise on us. They announced the zone had been awarded the "Kinnear Trophy" and we were handed a very nice silver man on a stand, holding something round in his raised arm—the world I think. It was handed around for all to see and handle, until it came into the hands of our Secretary, 3QZ, who can read. He read, "Gadsen Trophy" on it, so we had to put this investigation in the hands of 3WE. Bill, being a wake up to everything, announced the decision that we had been presented with the wrong trophy. This caused terrible consternation amongst the bearers from the city who reckoned without our educated Secretary. So it seems that although Mr. Kinnear has made his presentation to the W.I.A., so far the trophy hasn't been purchased. We will enjoy holding the substitute trophy, which is a jolly good one, until time and circumstances restore the genuine article.

Having passed through the eating and toasting stage, the tables were cleared and we prepared to talk. The agenda was then tackled and officers for 1950 elected. Greatness was thrust upon 3SS when the boys made him President. The new Vice-President was chosen, one 3TH, Gordon, from Yinnar. Then we just naturally made Graham 3QZ keep on as Secretary for he really is No. 1 fellow Secretary. This is the tough job everywhere, and we were lucky when be agreed to carry on. Ossie Kellas (3AHK) was promoted to Deputy Director of Notes Correspondence with Howard Vinning (3VG) to be his assistant. Howard is from Sale, so we will be hearing all about the Sale boys from now on. There are about 5 or 6 Hams in that place and a little "tip," you might meet them all at our next convention and see them at work and play. Most of them keep the local b.c. stations on the air. 3WE is the W.I.A. liaison officer, with 3PR his 2nd op.

Zone hook-ups.—It was decided to continue on 3650 Kc. at 2000 hours every Sunday, and we intend to run more portable field days and contests during the year. The time for our next Convention was FIXED at 25th and 26th November, 1950, and three places were proposed, namely, Omeo, Lakes Entrance and Sale. Everything points towards Sale being the chosen spot, but wherever it is, it is going to be a good one.

Around midnight the zone XYLs, who had returned from a motion picture extravaganza at the local picture palace, served up a nice supper, mostly the handiwork of themselves. One thing we missed was the expected chocolate cream sponge from 3PR. He eats this c.c.s. with a cup of Milo every Sunday night while the zone hook-up is talking itself to the closing stages, and we all expected to try samples of it at the convention. I think he brought rock buns or something, but not a c.c.s. The gang finally dispersed to the various roosts. 3WE, 3SS and Junior Op., 3ABS and XYL spent the night at 3QZ's and believe it or not, breakfast in bed was served by Mrs. Colley and Mrs. Sandon—wonderful girls they are.

To hasten on—I'm getting writer's cramp—we all went back to Morwell that Sunday morning where 3BB and 3TH conducted everyone around the new works at Morwell. Everyone was quite awed at the immensity of operations in preparation for the new open cuts and briquette factory plus railway lines, canals, roads, workshops, hostels, etc. It was all well worth seeing, and we were especially impressed by the work being done with the huge earth moving machines.

Dinner, prepared by our zone ladies, was disposed of, then we set out to visit Yallourn and the Maryvale Paper Mill. Just as we were leaving, Disposals "Big Chief" Chas Quin (3WQ), together with his XYL and Jnr. Ops. joined us. First we saw the paper making machine at the mill. It is about 100 yards long and a marvellous device, believe me. 3DE, who has a big responsibility looking after the vast electrical machinery at the mill, conducted our tour and our regret was lack of time to see more of it. 3ALS, radio technician at Yallourn, conducted us around the open cuts and various parts of the huge undertaking. Being Sunday, we could not see inside the plants, but our time was fully occupied just looking at the outside works. These inspections were exceptionally interesting and impressive, and they alone would make the convention worth coming to. Remember, only the best of conventions are dished up by the Eastern Zone. All good things come to an end so after getting our pictures taken with the "beaut" trophy proudly held in the foreground, afternoon tea was polished off, and we started saying goodbye for an hour or so, then broke up till November.

Various groups gathered at the district shacks that night and the zone hook-up took place as usual. Nothing ever stops it you know. About 9 p.m. reference was made by the group at 3QZ's to the fact that I was looking after the trophy. Now the last I saw of it was on the bench in the supper room, being admired by the zone ladies who just couldn't get over how wonderful their better halves were. So I firmly denied any knowledge of its whereabouts and so did the groups at 3BB and 3TH. Then the terrible fact appeared that it was "missing." So crime reporter William's assistance (located at 3QZ) was again urgently requested, and thus began the first radio investigation in Australia in "The case of the missing Silver Trophy." Most everybody grew excited and worried, fearing that it was still in the supper room at the hall in Morwell, and naturally the first one to spot it would feel very tempted to "hook it." Finally, however, the case was broken down and solved. It seems one person whom I referred to above as a wonderful girl, isn't quite so wonderful after all for Mrs. 3QZ, seeing the trophy looking deserted, wrapped it in a tea towel and smuggled it home. Then confiding her secret in the very person we chose to investigate, 3WE, let things take their course until we found it missing.

That about completes the outline of the convention which everyone seemed well pleased with. Full credit and thanks are due to 3BB and 3TH with their XYL and sister respectively, for the fine job they did in organising the convention and catering arrangements, with further thanks to 3QZ for his valuable assistance, 3ALS and 3DE for organising the inspections, and all the zone ladies who gave their usual valuable help with the catering and in supplying their home-baked cakes, etc. Look forward to the November Convention boys, and try and join us in the Sunday night hook-ups on 3650 Kc. We would especially welcome sigs from the Peninsular Sub-Branch.

EASTERN ZONE ACTIVITIES

Your correspondent, 3AHK, was unfortunately unable to be present at the zone convention, but our new President (3SS) has written the above report on the show. 3US/3VL are getting their new house in order; a.c. on now. Rex says egg crates are handy for putting the rig on and informs us that on 18th February a 50 Mc. three way contact took place between 3ACL, 3ZB and 7XL—per ground wave. 3WE disclaims any responsibility for the super antenna of 3QZ (it works, anyhow!). Bill lost an 813 during a heavy thunderstorm. 3ADC hopes to be on the air soon, is building a new shack. 3MR is very QRL on the farm, but has a Type 3 on c.w. occasionally, is also waiting on the a.c.

3TH is using 807s in his new modulator and has relays operating the v.f.o. and modulation

checker when rig is on the air. 3PR also has new modulator—sounds good, too, Jim. 3DI not very active, he has a new job, playing around with refrigerators and washing machines and repairs radios in his "spare" time. 3ACL and 3ABO too busy picking apples to come on the Sunday night hook-up. 3AEP a regular on said hook-up. Hope to hear some of the Sale boys on 3650 Kc. some Sunday night soon, what about it, chaps? 3BB is another absentee, fixed the feeders yet, Bert? 3AHK going to Mornington for a holiday—leaving the rig at home, but my spies are everywhere!

MORNINGTON PENINSULA SUB-BRANCH

Once again the Mornington Peninsula Sub-Branch are about to celebrate a birthday. Many of you will recall the "turn" put on by the Sub-Branch last year. If you weren't there, no doubt you have heard all about it from someone who was present.

This year the Branch are out to do even bigger and better things; in fact the stage is all set for a really super affair. The party will take the form of a field day on the v.h.f. bands as well as personal ear bashing. A hidden transmitter will be operating on the 7 Mc. band and a substantial prize will be awarded to the finder, if any (do I detect a challenge—Ed.), of the hidden transmitter. Prizes will also be awarded for activities during the day.

After these strenuous activities during the day, a buffet tea together with refreshments (?) and other surprises should provide a very enjoyable evening. By this time the reader will be asking when and where is this day of days to take place—well it will be at the Army School of Signals at Balcombe Camp and the date is Sunday, 16th April.

If you have decided to go along will you please get in touch with 3RR (Dick) by phone U 9537 or by letter to 1014 High Street, Malvern, S.E.3. The deadline for this notification is 5th April. It is very important that you should do this, so that suitable catering arrangements can be made.

Don't be afraid to go along even if it rains because if so suitable arrangements will be made for alternative activities under cover. It is hoped that the "Kinnear Trophy" will be on view.

Don't forget, 16th April, Army School of Signals—Balcombe Camp.

SOUTH WESTERN ZONE

This month's notes will be rather scratchy chaps, for I have been operating portable near Mildura and the notes from my worthy assistant have not caught up with me. However, I will attempt to put together any of the gossip I have heard. Understand a big day was arranged recently in Ballarat for some of the Melbourne gang, but 3VA tells me they all failed to show up. Must have been warned about snow in the City of Culture! 3AKR has now soldered down all the components in his new modulator and is finding it capable of modulating his rig nicely. Heard 3ALG putting out nice phone a week or so ago. I called you a couple of times Fred, but my rig wasn't able to do the job.

3HW seems to be getting itchy feet again and is now talking folded dipoles for a driven element. Confound the man, I've had that cat-walk and beam. 3ASV, 3ALM, 3SE all very quiet and little enough heard from any of the other Ballarat boys. 3AMH finding Ham Radio a relaxation after picking grapes but forty is bedlam at night; beyond his t.r.f. receiver. Had a chat with my predecessor, 3UT, a few days ago, sigs very nice Wal, could hear the generator going. When does the a.c. arrive Wal? Heard about the new type of current chaps? I've heard of direct current and alternating current, but from a country broadcast station I learn of a new type, automatic current! hi.

GEELONG AMATEUR RADIO CLUB

A large gathering of members attended the first meeting of the month. After the minutes of the previous meeting were discussed, Mr. Brian Lloyd gave a lecture on "Electronics" and used his home-made heterodyne frequency meter to illustrate his lecture. He demonstrated his double conversion superheterodyne receiver. The visit which was to have been to 3BW, of Portarlington, was postponed owing to unforseen circumstances, so members got busy constructing a 144 Mc. transceiver from the Disposals i.f.f. unit recently obtained by the club. A power supply was also constructed, this supply will be used for general purposes.

NORTH EASTERN ZONE

Our thanks this month go to 3UI and 3KR for supplying the following notes. Ken is again in trouble, the junior having nicely rammed the D104 with a knitting needle. He is at present getting all he can out of a carbon mike. Please don't ring Ken's phone at the week-ends, chaps, as it causes a panic, especially if he is on the air. Zone hook-up on 26th February had only four starters, bad show! 3FD went to a party—wow—enough said! 3UI is again very happy after working W.A.S. on 6 metres and with Mum home is relieved of the household chores. 3FD chasing bugs in transmitter; maybe you have got some that I got rid of Andy? 3ACK has big rig working very f.b., hope to hear more of you on 40 metres John.

Was very surprised to hear 3APF on 40 metres on 28/2/50, but of course he had to be there as he is taking zone communications with W.I.A. for the month. Peter is now using 829B in final on 6 and 10. Jack, 3PF, has been working hard installing heavy lines and a new generator and hopes to increase power this month, also expects to have phone very shortly. 3YV received visit from 4ZI who hopes to be operating as a VK2 in very near future. After spraying rig with DDT, 3YV is now heard on 20 metres mainly working 6MK whom he hasn't seen since wild school days, 23 years ago. The only thing received from John 3ABG lately was a cloud of dust as he passed 3YV three miles from Avenel on 3/3/50. What about a short note pal.

CENTRAL WESTERN ZONE

The zone has a new and active member in the shape of 3ARL. Lindsay lost no time in getting out the bits and pieces, once he arrived in Stawell and is to be heard banging away merrily on 7 Mc. phone—very good. Lindsay also has an unusual mind, and very quickly worked out a way of getting 144 Mc. signals into Stawell by an original method of frequency conversation, just ask him sometime! During his holidays, 3AKW forsook radio and looked into the country cricket, and apart from getting his photograph in the papers, making a duck or two, and nearly having his head knocked off a few times, Bill had an f.b. time.

Hearing a motor bike outside, 3ANP quickly locked the silver up, and adjusted the gas mask. Ken and Billy opened the door to 3XC and 3GN. Strange to say it was an anti-climax as Willy was very quiet—must have been the effect of the birthday, Bill? 3GN is still popping up in Stawell, and keeping an eye on 3YW, much to his discomfort. Since the departure of 31Q from the Carisbrook region, they tell me the consumption of electricity has decreased. Did you know Kevin, they called you the sleepless wonder.

3DP is still working on the scope, and is now getting the time base going. 144 Mc. should get a boost round these parts now as 3ARL is well bitten with that pecular germ and, with 3DP and 3AKP, should get that band well warmed up. 3YW has just completed a single side band adapter for the receiver, and apart from one or two smoking resistors, it seems OK. It works on the heterodyne principle as per April 1948 "QST," the only trouble is the scarcity of s.s.s.c. sigs, so let's hope 7LE gets very active. Maybe we will put a s.s.s.c. on the air ourselves soon. Chaps, don't forget the sonc has a Bendix frequency meter available for use by zone members. If you want a loan of it or a frequency check, contact 3YW.

QUEENSLAND

We remind all members that annual subscriptions are now overdue. Country members 22/6, city members 27/6. Membership of this Division now stands at 188, being made up of 66 transmitting members, and 28 students in the city area, and in the country, 84 transmitting members and 10 students. Voting on agenda items was most disappointing, as only 54 members throughout the State returned their ballot papers.

Twenty six members were present at the February General Meeting at which 4FN gave a lecture on magnetic tape recording. It is hoped at a later date to have this lecture published in "Amateur Radio."

On the 19th February, the Emergency Communications Network held a practice day. Very wet weather conditions prevented many from getting out with portable gear. Fifteen stations took part and 98 messages, both phone and c.w. were handled. Those heard taking part at this QTH were VKs 4GH, 4AI, 4CU, 4KW, 4TY, 4HZ, 4KK and 4WI. 4TY did a marathon job clearing messages from the north and we believe much of the success of the day was due to Norm. In an interview over a National Station, Communications Manager, 4FN, revealed that there are 48 stations enrolled in the network and the area covered extends from Atherton in the north, to Brisbane, and from Brisbane to Milmerran on the Downs.

GYMPIE ZONE

Manager 4HZ.—4LN is wondering why "100 mils" grid drive would not drive his final pair of 834s. Barry forgot the metre in use was a 10 mil. one. 4HD blossomed forth on 7 Mc. again being urged along by 4HZ who was enjoying a few days' holiday on Buderim Mt., thanks to the flood weather we have had lately. Max has been doing quite a lot of good work on 10 metres. 4HZ is playing around with vertical antennae and is quite pleased with his initial efforts on the 10 metre band.

DOWNS ZONE

Manager 4CG.—Activity on the Darling Downs of late has been confined to drying overcoats and boots and cursing the weather. As far as radio is concerned, there is very little to report. DX conditions have been very poor on all bands. As a matter of fact, it is very many years since the 14 Mc. band has been so devoid of signals. Europeans and Africans have been conspicuous by their absence around midnight, and the afternoon Europeans have been weak and uncertain. South American signals in the early evening have been few and far between. 4CU reports 50 Mc. activity falling off.

4KK has a nice big signal now on 7 Mc. Nothing has been heard of the Dalby gang, but 4XN has at last managed to break through to 4CU on 50 Mc. 4WY fairly active on 7 Mc. with nice phone. 4SG building portable gear. 4TY active again on both 7 and 14 Mc. Newcomer to the zone is 4CH who has moved to Warwick.

BRISBANE AREA

4AP still continues to work Europeans by the bag full on 28 Mc. using stacked "Lazy H" with reflectors. It should be noted that although Alf is giving them up to S8, they cannot even be heard at two good receiving locations using ordinary Zepps for reception, thus proving the efficacy of a good array for 28 Mc. 4RC will readily agree with the remarks about 4AP, and rumor has it that Bob is taking shots with a prismatic compass and cutting half wave elements!! Made an excellent score in the B.E.R.U. Junior Contest, looks hard to beat, and still with the exciter unit. Bob cannot decide on what to put in the final—ye Gods, don't help him!! 4PR has a nice new band-switched 813 final going and has been heard after the DX in the wee hours, also is heard on 7 Mc. on Sundays working old friend, 4KG in Maryborough.

4GB even finds time in between working DX to experiment with electronic bugs, has a beauty under construction which when completed will have switched speeds from 10 w.p.m. to 30 w.p.m. in 5 w.p.m. steps. Reckons 4EL is going to get the job of testing it soon! George also putting up a colinear array for 14 Mc. 4JU was heard recently on 14 Mc. with a very nice clean and solid signal; nice to hear you old-timer. 4WJ heard working a lot of good DX on 14 Mc. phone. Guess that beam is working OK; AO4RF was a nice one. 4JA has just pulled up a nice 30 ft. tower, 4 x 4 ft. on which he will soon be putting vertical 8JK's which will be rotatable. Jim is also re-building rig with a separate 807 final for each band.

4FJ still fairly active on 28 Mc. and as usual doing a good job on phone and has been for some time, judging by the cards coming through from time to time. 4EL finds time when not engaged with the QSL Service to work a few new countries, but mainly keeps to skeds with G5ZA and GC2FMV on 14 Mc. Has now had 350 QSOs with the former. 4RG heard on 7 Mc. with nice quality phone the other day working another old timer, Harry 4HA, who also had nice phone; good to hear the old timers now and again. 4HF heard with excellent phone on 7 Mc. transmitting from a yacht near Bishop Island in Moreton Bay. Haven't heard 4JF much, but rumor has it that he is busy on a new Clapp oscillator and a double conversion super after a visit to one of the local boys with both the aforesaid pieces of equipment. Jack says he didn't feel satisfied with his own straight super when he returned home from the visit!

SOUTH AUSTRALIA

The monthly general meeting for February was held to a somewhat smaller audience than usual, due probably to the prevailing hot weather. Don't let that fool you, however, as there were still no vacant seats and several had to sit on tables, waste paper baskets, and other projecting pieces of wood. Ralph Turner (5TR) was the guest speaker, and as usual gave a very instructive although somewhat unusual lecture, unusual in the fact that he stood out in the front with a piece of chalk and a blackboard and permitted himself to be an "Aunt Sally" for the gathering as a whole. The title of the lecture was "Radio Apparatus as applied to the Amateur." Ralph covered a terrific amount of ground with such subjects as a conversion job on a Type 3 Mk. II., a discussion on the db, calibrating an "S" meter, signal to noise ratio in receivers, mixer and conversion problems, the use of power trannies as modulation trannies, and answering a host of questions as well from members. Ralph is to be congratulated on the lecture, and also on his courage and technical ability, because it takes a good man to stand up and invite questions from an assembled audience, especially when you consider that we have a few "smart Alecs" who would just love to trip up a lecturer. 5DH proposed the vote of thanks which was enthusiastically received by all present.

Visitors to the meeting included Messrs. C. Woskett (ex-ZL2WX), J. Brammer, R. Harrington,

J. West, P. Lawk, N. Johnston, and last but not least, E. Olds (2BY) from Broken Hill. We welcome these gentlemen and trust that they will honor us with another visit sometime.

During Ralph's lecture he mentioned that there was a type of people who suffered from the infirmity of hearing all sounds with the same intensity, but he had forgotten the technical name for this defect. Quick as a flash, Ross Kelly said "Radio Hams," and brought down the house.

Noticed during the lecture an associate member and an active member engaged in a very audible meeting of their own, and I would remind them that the average Ham (budding or otherwise) comes along to the meeting to hear the guest speaker, and extraneous "Ear Bashing" is most distracting, besides showing a decided lack of good manners.

Somebody told 5DR that a good way to clean spark plugs was to put them in an oven and dry them off. Need I say more? Yes, he needs a new oven door, and what a bang!

Talking to 5PN after the lecture, he said that Ralph had opened his (5PN) eyes to something that always puzzled him. It appears that when Les was buying his microphone recently, the salesman said it was 50 db down, and Les snapped it up before the salesman changed his mind, only to find when he saw the bill that 50 db down was not the discount allowed to Hams. How could you Les!

6DX was a visitor at the general meeting and he brought up the matter of Bill Pitchford (ex-5WP) who is in hospital and suggested that a receiver and a transmitter would help Bill Pitchford to pass the long hours away and do much to aid his recovery. 5GF had generously agreed to handle the details and was loaning a Type 3 Mark II., and the Departmental angle was OK, so all was fixed. However, Bill Barber suggested that arising from all this it would be a good idea if all Divisions would in their own particular way organise a service to take care of all sick members and have a couple of portable or mobile Amateur Stations which could be placed at the sick-bed of any member until they had again recovered. As a gesture of his sincerity, and definitely not as a form of publicity, he opened a subscription list for the purpose with a solid donation, and it is to be hoped that the matter will not end there. Remember chaps, none of us know which one of us may have cause to be grateful for this move.

In conformity with the South Australian Division's Constitution, the following members were made Trustees at the last Council meeting: Messrs. C. Baseby (5BZ), D. Whitburn (5BY), and L. Sawford (5YF). A choice, by the way, that would be hard to beat.

The Easter Conference this year will see a change in the Federal Councillor and Observer as "Doc" Barbier did not stand for selection and Hal Austin (5AW) and Gordon Bowen (5XU) will occupy those positions respectively.

Heard a funny one on twenty the other night. A VK6 was being very literal, he was saying at every crossover to a VK2, "This is VK6 sitting by for VK2." Wouldn't it, think what this will lead to. I can almost hear 5MD saying, "This is 5MD lazily reclining on a silken divan with a wisp of dark luxurious hair idly drooping across one eye crossing to his soulmate 5PS." Oh, you say the loveliest things Eddie!!

Members of the Advisory Council were appointed recently and the following are lucky chaps: G. Bowen (5XU), J. Lester (5LR), C. Tillbrook (5GL), and D. Whitburn (5BY). Treat me kindly chaps.

5FM was well to the fore on the opening day of the W/VE DX Contest. Rumour credited him with some fabulous score, but he told me that his score was 407 contacts, and his best average was 47 contacts per hour. He also commented on the splendid operating tactics of the DX stations, and said that dogpiles were conspicuous by their absence.

Now fellows don't read this, because it is a private matter between the Editor and myself. Tom old palsy walsy, I am very hurt, I heard a certain VK3 say over the air that it looked like the magazine was being printed only for the VK5 notes. He also said, with a sneer in his voice, that the only reason I received a Xmas card from you was because I sent you one first. You speak to him Tommy, you tell him that my father is a big policeman, and that I will tell him if he talks about me on the air. You'll do that won't you Tommy.

Apparently my pathetic appeal for correspondents has not fallen on deaf ears because I have received a letter from an old friend of mine who works at the second best broadcasting station in VK5, to wit, 5RM. His name is Laurie Sjoberg (5SL), better known as "Skinny," and it is written on ducky blue paper. Nevertheless it was very welcome and thanks "Skinny."

5CH has just completed and tested his six element, 2 metre "Lenfo" array, but as he has just started his holidays at the moment of writing, I don't suppose we will hear much of him for the present. 5JA has been working with Claude on 2 metres, but aside from that has done nothing to hit the news. 5FD, having started in a new job, has not been able to put much time into Amateur Radio, but look out when he settles down. 5KU has been heard working his share of DX on 20 and 40 metre c.w., but is still house building, so his time is well taken up. 5MS has gone into "smoke," he hasn't been seen, heard, or spoken to. Can it be another aerial? 5CJ is another with the a.c. installed, and is keeping a weather eye on the b.c.i. angle but so far so good, and the harmonic, Bruce Andrew, and his proud parents, are still getting their fair share of sleep. Some people are born lucky.

"Phillips" staged a television show in VK5 last month and I noticed a very strong Amateur representation at the "do." My talented daughter was dancing on the programme (she gets her good looks and talent from her father) and when her name flashed on the screen a voice from among a group of lookers on said, "That is Pansy's daughter, but this is one place where we can speak freely, because he certainly can't get in here." When I piped up from the rear, "is that so," you should have seen them scatter. The mysterious stranger has nothing on me! Bumped into 5IT at the "do" and he seemed very keen to introduce me to one or two executives, but I was very canny, one or two might not like my sense of humour, plus the fact that I find it very embarrassing to be introduced in my official capacity, that of the writer of these notes, because some of these executives have been known to park a "rod," and it might go off. I would rather be a live coward than a dead hero, and don't forget, he who writes and runs away, lives to write another day, by golly.

The Murray Net has little activity on the air to report but this is probably due to the fact that they are more concerned with getting some of the chaps in the district through their tickets. Results so far have been gratifying as two members of the net, John Hampel and Harry Von Toff have just passed the examination and congratulations are due to them both. Two other chaps are coming on well and it looks as if the net is expanding rapidly. The chaps around that district are all very keen on the v.h.f. frequencies and would appreciate some news from VK5 in the magazine. I passed on Bob Manuel's advice to them to get a good v.h.f. receiver and then they would hear all the news, but they politely asked me how good should a receiver be to hear the gang from Adelaide. What about it Bob? 5MA, who I reported as missing recently, should bob up again shortly as I am reliably informed his disappearance was due to using an 810 in the final and the filament and h.t. trannies went "high hat" and shot through. Hysterical laughter was heard from several places, I believe, but you have my sympathy Fred. 5BC spends most of his time on 50 Mc. with an occasional QSO on 40 metres with his brother, 5HD. Other contacts on 40 consist of W and KH6 stations. 5RE is at Renmark and an old-timer who has been inactive for some time, but is back again in a small way. They can't keep away from Amateur Radio, can they? 5SL is in the midst of re-building several pieces of gear and getting good results at that. My spies tell me that he recently became engaged, but as yet no date has been fixed for the great day, the principal thing I expect is getting a place to live in, preferably a house with two tall pines spaced about 66 feet 6 inches apart in the back garden, although Laurie will settle for just a house. My spy from the South East tells me that 5TW will have that d.c. man's dream, a.c., before these notes are printed, and consequently a frantic building of power packs is the order of the day. Tom is walking around with that contented look on his face which can only be seen on a man who has been on d.c. for thirteen years.

5WM has been quite busy denying the fact that he has departed this earth. It appears that a namesake met with a fatal accident and everybody thought that it was Wick. He told me that it was quite queer to see the surprised look on people's faces as they recognised him and he was denying the bad news on the air for a month or more. Fancy Wick playing sweet tunes on a harp and puffing away at that monstrosity of a pipe he is at present wedded to. No imagination could conjure up that vision.

A VK5 Ham, who shall remain anonymous for obvious reasons, was recently "blistered" by the Advisory Council for coming on the air and testing without giving his call sign. Might I be pardoned for asking as to how the Advisory Council member knew who to "blister," if the offending Ham did not give his call sign? Could it be that the members of this year's Advisory Council have been issued with crystal balls, or do they read the teacups?

Ross Adey (ex-5AJ) is now on the way to England and the following, which was in the local press on 15th February, is worth repeating. I quote: "Dr. W. R. Adey, of Adelaide, has been awarded a Nuffield Foundation Dominion travelling scholarship to continue his research work in England. Dr. Adey, who is 27, graduated in medicine at the University of Adelaide in 1943, topping his year. After serving with the Royal Australian Navy, he was appointed lecturer in anatomy at the University of Adelaide, and recently took the degree of Doctor of Medicine. Dr. Adey, who has already left for England, hopes to pursue at Oxford, research on the nervous system, especially on the brain." The photo which accompanied this paragraph was a real likeness. Congratulations from all Ross, but I am a little dubious as to why you showed such interest in me at meeting nights. Could there be something wrong with my brain? Don't answer that.

It's a funny thing, as soon as I start to miss one of the regular Hams, I usually bump into him, or read about him, and this month is no exception. 5LL is a chap that I have been wondering just where he could be and believe it or not, on the back page of last month's magazine I bump into a letter of appreciation to the VK3 boys who helped to make his visit to that State so enjoyable. His slighting reference to my robust build, I treated with ignore, and his excuse that the days were full, gave me a severe attack of hysterics, but I could not help recalling as I read his letter, the good old days when he and I used to have those half a day contacts. He used to wear gloves because the carbon mike he was using in the live feeder became quite hot after a while, and I used to stand on a box, because results from my end were definitely better in the dead feeder as it entered at the top of the window. My oh my, such thoughts make me so nostalgic. Good heavens, did that come out of me?

5LW and 5JK were seen gossiping in Rundle Street recently and as I crept up behind them they started to talk about lamp shades, but they didn't fool me. It appears that Ross has obtained a motor boat and has gone all nautical. I don't know what part Jim played in the discussion, but he made a perfect listener. 5LR has been off from work for a couple of days with a pig stye on his eye, very painful too, but he still managed to work some DX, bad eye or no bad eye. They have to be unconscious before they give up. Well, this may be the last time that I write these notes because the annual elections are almost with us, and the rest lays with the voters. This is only a build up to a story that I heard recently about a sheriff who stood for election and received only 350 votes out of about 1,000,000 who polled. The next day he was to be found walking up and down the main street with two revolvers in his holster. Somebody said to him, "You should not be carrying those revolvers, you have not been voted sheriff." His reply was short and to the point, "Judging by the number of votes I received," he said, "I need them." See you next month playmates!

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WESTERN AUSTRALIA

The February meeting of the W.A. Division also included the Annual General Meeting and the election of Council for the ensuing 12 months. One country member in 6WD from Northam made his first visit to an Institute meeting and appeared to follow the proceedings with interest. Our President, 6WH, was able to attend and pushed things along in his usual breezy manner. The evening commenced with the general meeting which was necessarily shortened. One item of interest was a letter from a chap who has been originating quite a few of late—yes, you guessed it—6WZ, Harry Atkinson, of Geraldton. (Not content with regular mentions in these columns, that guy has to go and attract the attention of Interstate scribes!) Harry's letter queried the apparent discourtesy of 6WI's operator in ignoring calls prior to and after recent news broadcasts. The position was explained in a recent bulletin and the net result is that the regulations do not allow 6WI to communicate in the form of a QSO during news broadcast schedules. So put pen to paper chaps for any queries you may have.

During general business a new member in 6BP, Mr. T. W. Binns, of Inglewood, was duly elected. 6SA trotted out his Constitution question and was successful in having a committee appointed to investigate certain anomalies existing. 6DD raised the question of a laxity among the members in wearing the lapel call sign badges. These serve a social purpose and are a boon to new Hams and visitors, so dig around the junk fellers, bring them along and wear them!

The general meeting was closed at 9.15 and the Annual Meeting opened immediately. First function was the appointing of 6AS and 6KU as scrutineers and away they went with a bundle of ballot papers. The Treasurer, 6RO, Bert Sorley, produced our first post-war balance sheet which revealed a satisfactory state of affairs. Credit is due to the out-going Council for a big reduction in unfinancial members during their term of office. Which reminds me, with the closing of the financial year of the Institute, those subscriptions are due again!

The QSL officer, 6BU, reported on the successful functioning of the Bureau, which, incidentally, holds a high place in the opinions of overseas Hams, one going so far as to say it is the best in VK! Over a period of two years the Bureau is still on the right side of the ledger and members express universal approval of the sticker system. The President in his report expressed satisfaction in the efficient working of all office-bearers and committees in the Division.

After some further discussion, the scrutineers declared the ballot and gave to members their new Council for 1950. The members are E. A. Doddy, 6WH; R. W. Hugo, 6KW; W. E. Coxon, 6AG; B. Sorley, 6RO; G. Moss, 6GM; J. Rumble, 6RU; M. Murray, 6MY; S. C. Austin, 6SA; and G. W. Ashley, 6GA. This concluded the business for the evening and the meeting closed. A point of interest about this Council election was that from 140 financial members supplied with ballot papers, only 53 got round to submitting them.

PERSONALITIES

Considerable activities over near the railway in Carlisle, 6YZ thinks trouble is fast approaching! Some unimaginative type has planted an 80 foot tower exactly opposite Dick's QTH and he has heard there will be some real high voltage a.c. strung on it some day! As a counter, he is moving his shack back one room—it won't be far enough Dick! Seems to be a fair bit of moving going on in the Ham fraternity. 6JN doesn't look real pleased at the prospect of the d.c. up at Meckering—never mind John, contact 6GU who seems to have settled in his new QTH at Boulder. 6XI is said to be planning a shift to Durdanup. 6RT has reached Geraldton to spend some of his vacation up that way.

Ham Radio is still running a bad second at 6AS' where the joy of motoring has, we hope, only temporarily supplanted the zeal for DX. Alec found time, however, to submit his cards for W.A.C. Another to invest in four wheels is 6CM. When does the ten metre mobile start up Bill? 6DW has made his W.A.S. on 50 Mc. at last by a contact with 5DJ in Alice Springs. 6SN has been investigating the capabilities of motor cycles to run without oil (unintentionally, of course, he didn't notice a broken oil line). Saw that beam of 6PJ's the other evening. It certainly looks a nice job Peter, but just how did you get it up there?

Heard 6OR getting out OK on ten these days, also 6RU making good use of his new QTH. Weekending on forty revealed 6AP who has now given ten motres away until things improve. Alf's even pulled the beam down. 6AU, Ivan Norman, heard ironing out the bugs in his 813 on 40. Also making a belated post-war debut is 6DH, Dave Hardisty. Both these chaps have had their licenses for some years and are only just getting around to some real QSOing. 6WZ has had an enforced holiday from Ham Radio of three weeks due to a fault in that Baby Bunnerong. Harry says that elusive a.c. should reach 6CN first, as Cyril is already in the a.c. area. 6EL reckons about six weeks should see him with some real a.c. to play with. In the meantime, Ern is doing fine work with his 10 watts with countries worked at 69 and zones 25. When the bands are dead a new converter is taking shape.

6DX, of Kalgoorlie, is getting around over there in the East. Several VK3 Hams have mentioned contact with Bill. Another name on my list has now become a personality—6LB, who has been heard regularly on 40 with some really first class phone. 6WM, up there in Kalgoorlie, heard fairly often these days on 40 using both phone and c.w. Glad to see someone still appreciates the old code, Bill! 6TB seen making purchases which could be for a v.f.o. at last. They do come in handy Tom, best of luck with it. 6HR has built up the now famous Clapp oscillator with pleasing results. Lou is now hard at work on plans to re-vamp his beam to cover 14 Mc.

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TASMANIA

ANNUAL CONVENTION

The Annual General Meeting took place at the Royal Society Rooms, Museum, at 5.30 p.m. on Saturday, 4th March. Lon Jensen, 7LJ, our President, took the chair and presented the annual report. Bob O'May, 7OM, was voted upon Council recommendation unanimously, an honorarium of £5/5/- in appreciation of his unflagging enthusiasm and devotion to carrying on simultaneously, the three offices of Secretary, Treasurer, and Traffic Manager.

While 7GR and 7SJ were scrutinising the ballot papers for positions of President and Council, other office-bearers were elected by nomination. The office-bearers for 1950-51 are as follows: Patron: Mr. L. J. Crooks, 7BQ; President: Mr. J. Brown, 7BJ; Vice-Presidents: Messrs. L. Jensen, L. Clark, Cruise and Brooks; Council: Messrs. Brown, Fuiton, Batchelor, Morrisby, and O'May with A. Johnson as Federal Councillor unopposed. R. D. O'May collected the posts of Secretary and Treasurer again, and relieving Traffic Manager, that post going to T. Allen, who also takes on the QSL Bureau again. North-Western Councillor: D. Fisher; Northern Councillor: C. Wright; V.H.F. Officer: D. Hildyard; Slow Morse Transmissions: R. Fulton; Publicity Manager and Divisional Sub-Editor: G. Clarke.

Present at the meeting were thirty which is somewhat disappointing in view of the importance of this occasion. Those attending included VK7s: AF, AG, AJ, AL, BH, BJ, BM, DH, EJ, FJ, FM, GR, JB, KA, LD, LE, LJ, MY, NC, OM, PA, RK, SD, SJ, SK, TA, YL, LZ, Don Davis, Geoff Cannock, and VK6DX, Bill Barbour, VK4ZU, 7KL, and 7AB. The dinner enticed 66 along including visitors and country members, in a different venue from 1940. The North-West boys were delayed en route and claimed to have exceeded their top speed by 10 m.p.h. over the concluding stretches. Ian, 7KB, must have "doctored" the car up a bit. They arrived just in time to help consume the second cask, not that any assistance was needed, as certain members seemed to be assisting themselves and undoubtedly contributed to the early demise of the second keg. Such behaviour was not a credit to the Institute. The few dozen bottles of soft drink on the tables were also finished early, and methinks next year we shall have to ration the liquid refreshments out by the bottle. It was a warm night, too, which didn't exactly help things along. It fairly rushed them.

At the dinner we had representatives from VK6, VK3 and VK4 besides the Burnie gang, Launceston and local country members. 6DX, 4ZU, and 3BE with friend, Cyril Looker, all gave replies to "The Visitors" Toast proposed by 7TA and responded initially by Mr. T. Weeks, o.i.c. of VIH, and also according to the printed programme, by 3BE, who represented the South-Western Victorian Zone. Official visitors included Mr. P. E. L. Dunne, Superintendent of Wireless; Mr. C. M. Carroll, Senior Radio Inspector; Mr. E. Larsen, also R.I. Dept.; Mr. T. Weeks, O.T.C.; and Mr. W. C. Gee, P.M.G. Dept.

In proposing the toast to the Institute, the Senior Radio Inspector, Mr. Carroll, outlined the achievements of the Institute in the past, and its excellent record in speaking on the Amateurs' behalf. Mention was made of the value of the Amateur Service in times of civil and military emergency. For the future the Amateur would have the problems of t.v.i. and interference to the new v.h.f. services to overcome, and all his resourcefulness would be needed to overcome these future troubles, though undoubtedly they could be mastered, said Mr. Carroll. In response to the toast the ex-President, Mr. Jensen, 7LJ, mentioned the theme of co-operation between the Institute and the Department and in a humorous sideline, quoted from a past issue of "QST," a parody based on the Ten Commandments of Moses on the Mount. This is reproduced in full in January, 1946, "A.R.," and certainly provides a lesson for the Ham.

In proposing the P.M.G. Dept., Mr. Ted Cruise, 7EJ, emphasised the cordial relations existing between the Department and the Amateur body as a whole and expressed his hope that these would continue in the future in the same or a better mode. In responding, the Supt. of Wireless, Mr. Dunne, reviewed the work of the Advisory Committee in enhancing these relations and in relieving the Department of the job of clearing up minor offences, and in acting as an effective liaisonary body between the Department and the Institute. An example was given. Mention was also made of the desire of the Department that the Amateur Station should consist of up-to-date, modern, tidy, and efficient equipment, and that operating practice can well be improved upon, particularly the "100 CQs without signing" sort of thing, and transmission without first checking that the channel is clear. This sort of thing only mars the good record of Amateur Radio in other spheres, such as bushfire, flood and other emergency work, Mr. Dunne said.

Other toasts were "professionals," proposed by Mr. Bob Fulton, 7AF, with the response from Mr. W. C. Gee, of the I.R.E., and country members, proposed by Mr. J. Batchelor, 7JB, with responses from Ray Kilby, 7RK, and Dr. Ian Pearson, 7KB.

The dinner proved very successful and in conjunction with it a competition for the construction of equipment of an auxiliary nature was held, the panel of judges consisting of Messrs. Carroll (R.I.), Larsen (R.I.), and Weeks (O.T.C.). The judging proved very close and the panel expressed satisfaction with the high standard of equipment, together with the variety and completeness of the pieces. First prize of £3/3/-, donated by 7BQ, went to 7AF for his combined c.r.o., f.s. meter, v.t.v.m., and per cent. mod. indicator. Second prize of a 2 metre transmitting tank unit, donated by a local radio warehouse, went to 7LJ for his crystal calibrated frequency meter. Third was Max Sidebottom whose field strength meter won a 150 Ma. meter, and fourth was Len Edwards, whose frequency meter won an RL18 v.h.f. valve.

The field day held on the Sunday produced some interesting competition to find the hidden transmitter on 144 Mc., first in being 7BJ, with 7BH, and 7KB in close tow. Yours truly opened both envelopes in the end and arrived on the last gasp.

Well, fellers I shall miss the mail if I ramble on, and I'm sure I wouldn't be forgiven a second time, especially two months running, so guess this about closes the notes for this month. 7SK has been heard boasting about his new beam, 14 db of compression and 80 watts of audio to 100 watt carrier, etc., etc. 73 till next month.

NORTHERN ZONE

The Tasmanian Division's Annual Meeting and Dinner was held in Hobart and unfortunately only 7RK, 7LZ and Perc Crawford were able to make the trip from this zone. At the meeting, 7LZ and 7RK were presented with their Remembrance Day Certificates and 7PF, another zone member, was elected v.h.f. officer for this Division.

The highest honour that the W.I.A. can award was conferred on Mr. Len Crooks, VK7BQ, when the meeting unanimously made him a life member of the Tasmanian Division. Those of us who have worked with Len realise just how much he has done for Ham Radio in Tasmania and on behalf of the Northern Zone we say congratulations Len and best wishes for many more years of Ham Radio.

Activity on the lower frequencies is still below normal. On 7 Mc., 7XW, 7BQ and 7MO can often be heard on phone, usually keeping their various skeds, whilst on 14 Mc. 7RK and 7LZ can sometimes be heard, mostly on c.w. keeping watch for the more unusual DX. 7RK was fortunate enough to contact an FC8 on Corsica and the best ones at 7LZ were FB8AX, AC3SQ, YI2UW and ST2RD, all in the evenings.

Most activity was, however, concentrated on 144 Mc. with 7PF, 7DB and Rex Summers testing and re-testing their gear for the trip to Mount Marrow, 4644 feet, from which they contacted Mount Wellington, a distance of over 100 miles.

At the next zone meeting, 7PF is to give a talk on the equipment used, also their experiences. This meeting will be held at the King's Hall, Launceston, at 8 p.m. on Friday, 14th April.

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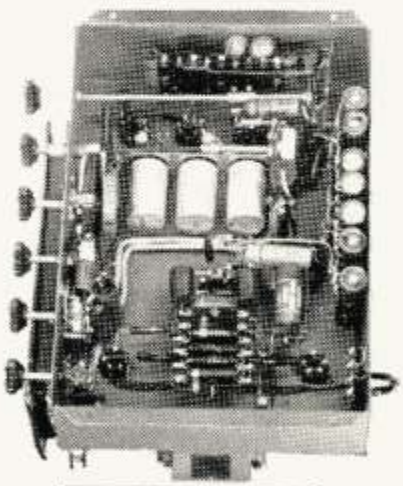

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EDITORIAL

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EMERGENCY OPERATIONS

Most people who use public communication systems such as telephone, telegraph or teleprinter facilities, do so almost without thought as to the acute problem which arises when such channels are rendered inoperative due to floods or bushfires.

It is not really possible to understand what an important link is provided between individuals and organisations by these means until such facilities fail and the whole community is completely cut off from contact with the outside world and is in need of medical assistance, food supplies, and other help.

Most of us know how effective Amateur Radio has been in providing such communications in time of community loss or danger, and it is fitting for us all to consider the really worthwhile contributions effected by many Amateurs during the recent floods in the Eastern States.

In no better field, apart from war service, can the Amateur show his value to the community than in emergency service, and the congratulatory comments by the police authorities to those who assisted them so effectively by maintaining essential communications during this period proves beyond doubt that the Radio Amateur justified his existence in work of this important nature.

The Federal Executive also desires to express its appreciation of the many Amateurs who gave their time and effort to serve the community in this way and urges all those who read this Editorial to train and equip themselves to provide such facilities in the event of failure of normal communication facilities, however caused.

Elsewhere in this issue you will find the detailed stories of this work; we hope you will read of the effects of all those who took part and make up your minds to prepare and be in it when the next opportunity occurs.

FEDERAL EXECUTIVE

The Contents . . .

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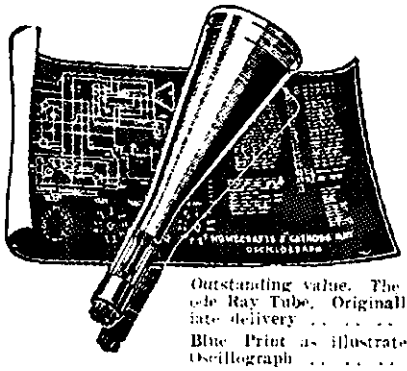
LARGEST STOCK GREATEST BARGAINS



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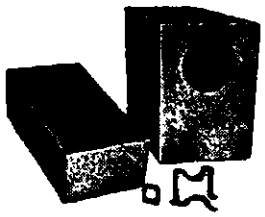

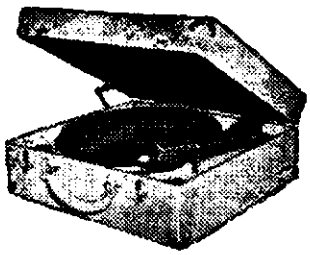

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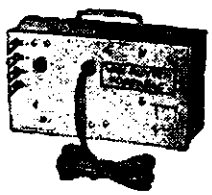

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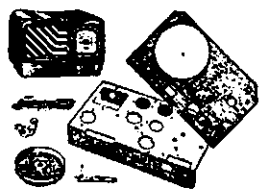

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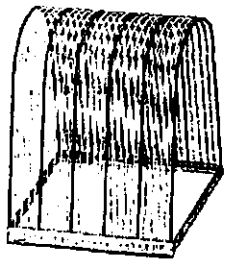

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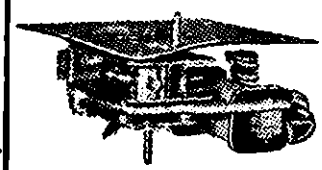

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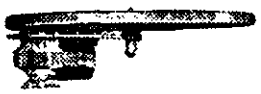

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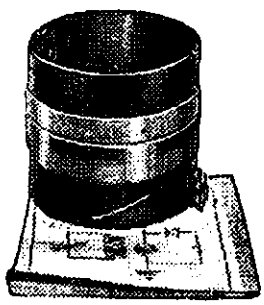

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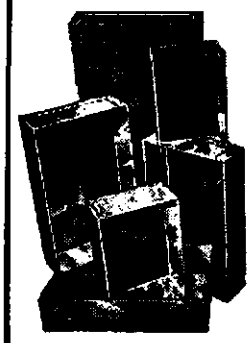
"Buron" Crystal Set Coils complete with circuit diagram. As illustrated, 4/6.



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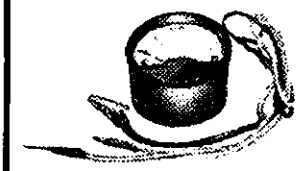

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Polystyrene insulated. Sizes ¼ x ¼, ¼ x ⅜. As illustrated, 4/6.

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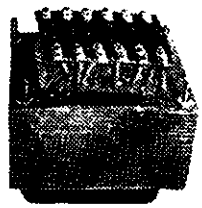

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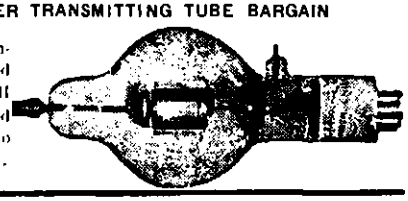


290 LONSDALE STREET, MELBOURNE — Central 4311

Utilising the FS6 Tuning Unit in a V.F.O.

BY E. MANIFOLD,* VK3EM

Tuning Units from FS6 Transmitters have been obtainable from Disposal sources for a few shillings. Here is a simple method of using one of these units as a basis for a v.f.o.

V.f.o. units seem to be the order of the day; largely due to the congestion on our lower frequency channels. The ability to change frequency at will is an obvious necessity.

While nothing new or original is claimed for this unit, it does show how a useful unit can be made from parts ex-Disposals which, believe it or not, had to do a job, sometimes more vigorous and exacting than in the average Amateur Shack.

Having procured a frequency control unit ex-FS6 sometime ago and feeling the pinch of QRM when operating on the 7 Mc. band, due thought and much perusing of v.f.o. circuits was done. Having helped with the calibration of a similar unit and seen how it operated, the writer was satisfied it would do the job.

The unit consists of a 6F6G e.c.o. and 807 as doubler stage, not quite at Class "A" conditions, with the voltage regulation controlled by two VR150/30 tubes in series, which provides 300 volts + and 150 volts + for plate and screen of both tubes.

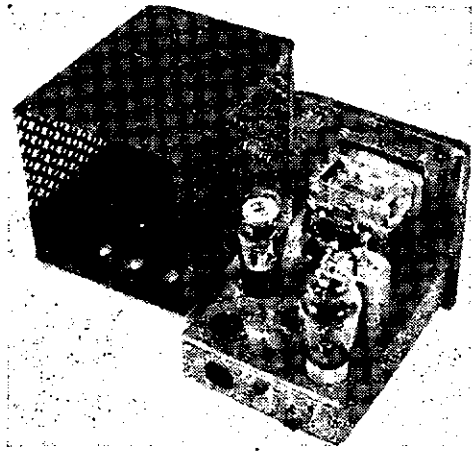
The original FS6 oscillator covered a range of 4.2 to 6.8 Mc. approximately and had two separate windings on the coil former. These are discarded and the whole of the slotted area of the coil former re-wound with 19 B. & S. or 20 S.W.G. to 27 turns with a tap for the cathode of the 6F6G at the third turn.

If the tap is brought up through a hole in the former, the tap can be adjusted on the coil to suit the best operating point; too low a tapping on the coil will not allow the oscillator to be keyed, too high a tapping on the coil will allow the oscillator to continue oscillating weakly with the key up and with poor keying characteristic chirps, etc.

Re-winding the oscillator coil and loading it with high "C" puts the fundamental frequency of the oscillator on the 1,690 Kc. to 1,900 Kc. range and permits operation in the 11 metre band and all our harmonically related bands to 30 Mc. with the addition of the necessary multipliers.

Choke coupling is used between the 6F6G oscillator and the 807 doubler stage and since this stage provides sufficient isolation from succeding stages, the amount of frequency variation from them is small.

The output coil of the 807 stage is slug tuned and has very little capacity other than the tube capacity across the coil. This coil is tuned broadly to the 3,390 Kc. to 3,800 Kc. band, peaking of the slug to 3,500 Kc. allows sufficient drive over the whole range to excite an 807 as a frequency multiplier. It is wound with 129 turns of 34 S.W.G. close wound on a ⅜" diameter former. A link coil is wound over the earth end of the plate coil consisting of six turns of Nylex flexible 5/.009 jumper wire.



Rear view of V.F.O.—The 6F6G oscillator is located on the left hand side of the chassis, with the 807 at the rear right. Located in front of the 807 is the slug tuned output coil. The FS6 tuning unit is mounted on the front panel, with a section of the front panel cut out to receive it.

The key is connected in series with the oscillator screen h.t. supply and is 150 volts + above chassis, so that due care must be exercised in handling the key and earthed points, alternatively a relay could be incorporated to isolate this voltage; the v.f.o. was primarily intended for phone operation.

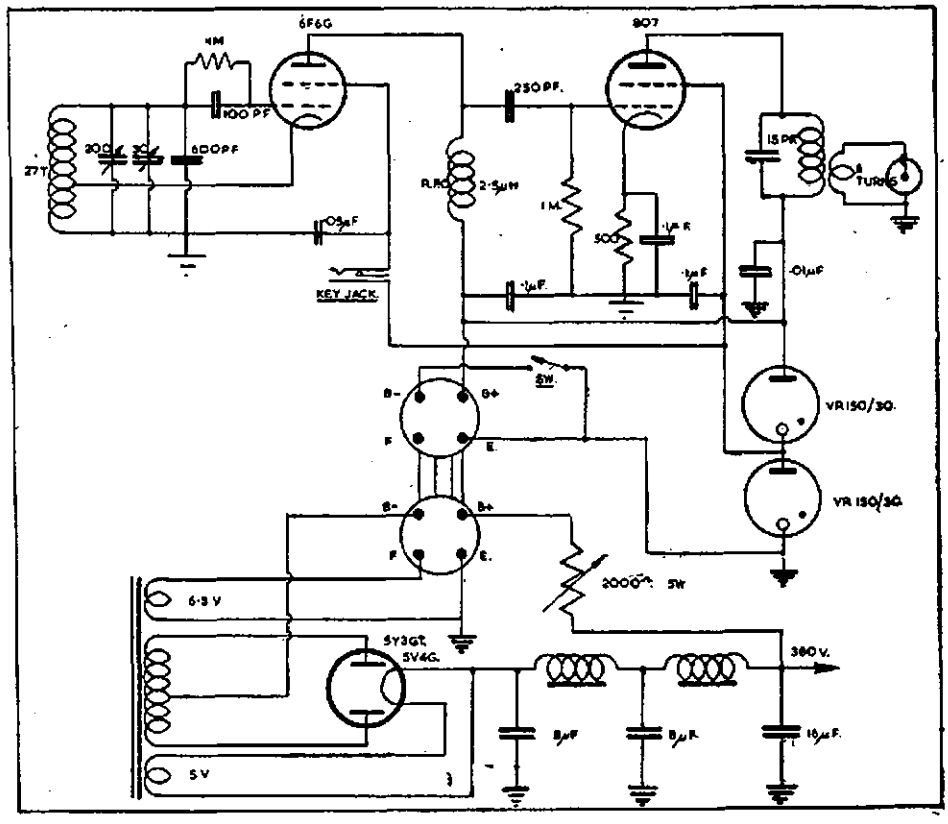
The stand-by or off/on switch is in the negative h.t. lead and was intended to break the centre tapped lead of the oscillator-exciter-amplifier power supply, or use as a relay control lead by connecting h.t. minus to one side of the a.c. filament supply and using the switch to control, through relays, all h.t. supplies.

TUNING ADJUSTMENTS

The first requirement is to see that the VR tubes are operating. Adjust the voltage dropping resistor in the power supply (from maximum resistance) until both VR tubes ignite, as much resistance should be left in series as possible consistent with reliable operation of the VR tubes.

Check for oscillation by listening on receiver and swinging the main tuning condenser from maximum to minimum

(Continued on Page 9)



Schematic Diagram of V.F.O. and suggested Power Supply.

* 267 Jasper Road, McKinnon, Victoria.

V.H.F. Wave Transmission

BY J. BAIL,* VK3ABA

The subject is a wide one and will be dealt with in a general way here as applicable to Amateur work. The object is to discuss the types of wave propagation with particular reference to the 50 and 144 Mc. bands, and it is hoped also to clear up some misunderstandings which appear to exist judging by remarks heard from many Amateurs.

Normally, radio waves, like light, travel in straight lines. Fortunately, there are various conditions which enable communication to be made over distances on the earth's curved surface far beyond the optical range. A great deal of research has been conducted by scientific bodies and individuals into the different forms of radio wave transmission and, in Australia, the Radio Research Board of the C.S.I.R. has made a great contribution to this and related fields of research. This organisation, in co-operation with other institutions, has made extensive use of ionospheric sounding equipment, much of it developed in Australia. This apparatus is used to determine the virtual height and other characteristics of the ionospheric layers, and the well known propagation bulletins are based on the information obtained from various world-wide authorities using sounding equipment.

IONOSPHERIC REFRACTION In the range 3 to 30 Mc. world-wide communication is made possible by refraction in the ionosphere, and under the right conditions radio waves are reflected back to earth from the appropriate ionospheric layer. The features of wave transmission in this range of frequencies, are described by Neil S. Smith in "Amateur Radio," December, 1948. It is noted that the region of ionised layers in the earth's upper atmosphere referred to, extends from approximately 40 to 260 miles above the earth's surface. These layers are fairly well defined and identification letters have been applied to them. Their refractive properties are found to vary mainly with the time of day, the seasons, and period of the sunspot cycle.

The shorter waves in the range are reflected by the highest layer and skip distances are consequently longer. At any one time and zone on the globe, there is a maximum usable frequency (m.u.f.) which varies with the changes in ionisation. From published reports it has been rare for communication by means of F layer transmission to be made within the 50 Mc. band.

However, the majority of long distance contacts established on 50 Mc. is made possible by an ionospheric condition known as Sporadic E or simply E_s. The term gives some suggestion of the patchy nature of the ionisation, being largely unpredictable, and occurring at about the same height as the normal E layer.

The lower frequencies are also affected, as the presence of short skip conditions there indicates. For 50 Mc. work many Amateurs have in fact been guided by the indications on the lower frequencies. In this connection, M. E. Collett, in his article, "What, No Beacons?" printed in "Amateur Radio," March, 1949, describes the use of the Radio Range Beacons on 33.3 and 33.8 Mc. The reader might also be referred to the same writer's article, "Sporadic E Observations" in "Amateur Radio," November, 1949.

Occurrence of E_s has been confined mainly to the summer period, with a mid-winter peak. Attempts have been made to associate the phenomenon with sunspot activity as on the lower frequencies, or certain weather conditions, etc. Despite careful observation, no definite conclusion to the writer's knowledge has been reached. The prediction charts do not cover forecasts for this type of transmission. It will be of interest to observe the E_s conditions during the coming sunspot minima period.

E_s occurs as intensely ionised patches with lateral movement. The result is that on 50 Mc. fading is often quite violent, communication conditions occur over random or large areas, depending on the position and degree of ionisation. The occurrence periods are by no means confined to daylight hours, as many contacts, made well after sunset, have shown. The known upper frequency limit for E_s is approximately 100 Mc. It will be noted that geometric conditions provided by the earth's radius and height of the reflecting layer, determine largely the skip distance concerned with ionospheric transmission.

Some further phenomena are also of interest. During displays of aurora borealis in the northern hemisphere, communication over moderately long distances has been made with strongest signals obtained when directive antennae are pointed northwards irrespective of the direction of the other station. Little is known of this phenomenon on Amateur Bands in the southern hemisphere in conjunction with aurora australis.

Another effect, said to be due to meteor trail ionisation, produces short bursts of high signal strength when listening to a weak carrier.

A further effect, familiar to 28 Mc. operators, referred to as "reflected skip" or "scatter back," enables stations which are normally in the skip region, with respect to each other, to establish contact while their directive antennae are oriented in the same general compass direction, usually towards the prevailing overseas countries being received at the time. When, however, the two beams are rotated towards one another, contact is lost or becomes difficult.

On v.h.f., in the absence of E_s or other ionisation phenomena, the properties of the lower atmosphere must be relied upon for some degree of distance in communication. This will be dealt with now.

TROPOSPHERIC PROPAGATION This refers to transmission of radio waves through the lower atmosphere and is subject to meteorological conditions.

* 62 Shannon St., Box Hill, E.12, Vic.

The physical horizon is a limiting factor in long distance communication on v.h.f. However, due to the normal variation of temperature and humidity with increase of height, refraction of v.h.f. waves takes place, resulting in a slight bending down of the rays. This means that the radio horizon is a percentage beyond the geometrical horizon. When two station antennae are located well within the radio horizon, the direct wave received is modified to a degree by the ray reflected from the ground or other objects. Ghost images on television screens have been caused by reflection from the metal area of a gasometer, etc.

The fluctuation of signals due to an aircraft flying in the vicinity of stations is well known. The above effects are due to the difference in phase of the received signals which arrive via separate paths. In the latter case the phase relation is varying. Such multipath conditions have at times been observed on signals received from stations located beyond the radio horizon.

In addition to the bending due to refraction referred to, an extension to the range is provided by diffraction, which may be compared to the diffraction or dispersion of light around a corner, and decreases in effect with increase of frequency. Thus frequent communication is possible over moderate distances.

It will be appreciated that antenna height, characteristics of the location and adjacent geographical features have a bearing on the range of the extended horizon. Changes in the temperature and humidity of the atmosphere cause a change in the refractive index with consequent variations in the extended horizon and diffraction area.

At times abnormal changes in the temperature and humidity gradients occur and cause refraction to increase considerably. During the recent war the use of v.h.f. equipment for communication and radar revealed many instances of so-called anomalous propagation due to super-refraction. Taking advantage of the situation, the Radio Research Board of the C.S.I.R., in co-operation with the R.A.A.F., conducted observations on the occurrence of radar echoes at coastal stations around Australia with 200 Mc. equipment.

This took place over an approximate period of 18 months, commencing in 1944, and the report on this research project is given in the Australian Journal of Scientific Research (Physical Sciences), for December, 1948. The report is named "Super-refraction in the Coastal Regions of Australia," and some quotations are of interest.

It is stated concisely that "The normal downward bending of radio waves in the lower atmosphere increases and tends to enhance propagation to great distances whenever the lapse of temperature with height is below normal or reversed in sign (temperature inversion) and/or the decrease of humidity with height is greater than normal. Humidity effects are generally considered to be the more important in producing super-refraction."

From the evidence covering the period of observation, "it appears that super-refraction in southern Australia occurs most frequently in the rear halves of the migratory anticyclones, ceasing at a given place as the polar front, which precedes the next anticyclonic cell, passes . . ."

"It was demonstrated, for example, that super-refraction in summer often extends over a large area of southern Australia simultaneously. The effects of super-refraction are most striking in north-west Australia, where echoes from Timor (400 miles away) are received fairly frequently in some seasons and echoes at somewhat smaller ranges recur with great regularity at almost the same time day after day." In this connection some variation from year to year might be anticipated due to seasonal meteorological differences.

Many long distance contacts have been established on 50 and 144 Mc. in the northern hemisphere as a result of similar conditions in the troposhere there. Operators of v.h.f. ground communication equipment connected with airways services have, at times, observed abnormal reception of distant signals.

The increase in numbers of Australian Amateurs on v.h.f. has provided an opportunity of taking advantage of super-refraction conditions here. For example, Victoria-Tasmania contacts have recently been made on 50 and 144 Mc. from home stations, the first 144 Mc. contact being established on the evening of the 27th March this year.

A copy of the weather map for the morning of this date is shown and it will be seen that an eastward moving "high" or anticyclone was across Bass Strait at the time. Readers of "QST" may remember the article "Painless Prediction of Two Metre Band Openings" in the October, 1949, issue which discusses similar conditions applicable to the American continent.

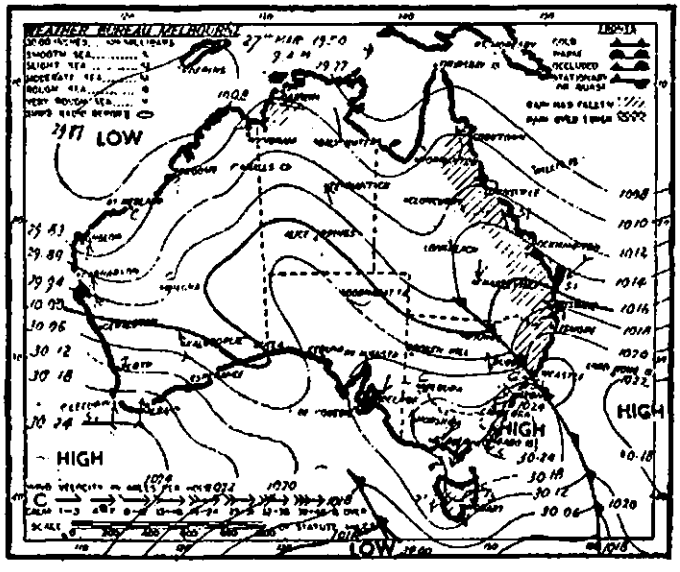
It would appear that "ducting" is associated with super-refraction conditions. The radio wave advances somewhat as though it were in a wave guide formed by two diffuse boundaries close to the earth's surface. Some frequency discrimination would therefore be expected, depending on the dimensions of the meteorological wave guide.

It is conceivable that at times a combination of different propagation conditions occurring simultaneously enables long distance communication to be made. Some particular cases on analysis have shown this to be so.

From what is known, it is obvious that, on 144 Mc., the form of wave transmission to be expected is of the tropospheric type. Transmission at this frequency via E_s or F layer reflection would be highly improbable.

There is much to be learnt about v.h.f. and u.h.f. wave propagation. If you have not yet been active on these Amateur Bands, here is an opportunity to take part in an interesting phase of Amateur Radio. An increase in the number of country stations on these frequencies would provide a more even distribution of activity. If you take the initiative it will provide you with a new interest, without the necessity of abandoning your lower frequency activities.

WEATHER BUREAU CHART OF 27th MARCH, 1950



An anticyclone with its highest pressures over eastern Victoria controls the weather. With clear skies during the night, rapid cooling occurred, and caused many heavy dews, scattered mists and fogs and isolated frosts on the highlands. The chart indicates increasing high and middle level cloud, with weather becoming unsettled later in the week.

IMPORTANT

Would all Magazine Contributors please note that all contributions must be addressed to "Law Court Chambers," 191 Queen St., Melbourne, and NOT to the old box number.

Contributions, particularly notes, if addressed to the box number may not be received in sufficient time to be included in Magazine for the month for which they are intended.

Two Metres, Dry Batteries

BY A. K. HEAD,* VK3AKZ

This two metre transmitter-receiver was made for use as a ground station for ground to glider communication on 131.8 Mc. It also covers the 144 Mc. Amateur Band and has been used very successfully on this band. By using dry battery tubes, the awkwardness of transporting accumulators for portable operation is overcome, but, of course, the cost of operation is rather higher.

The main circuit is a conventional transmitter-receiver using a 958 battery acorn as a super regen detector, another 958 as a modulated oscillator and a 1D8GT triode-pentode as a common audio section. A neon tube audio oscillator is used for m.c.w. or for generating a continuous tone for lining up the sets in the gliders.

RECEIVER The 958 is used as a self quenching super regen detector. The tuned circuit consists of the coil L1, which has 4 turns of ½" diameter and a 7.5 pF. ceramic trimmer in series with the 10 pF. tuning condenser. Super regeneration is smooth and works with the h.t. as low as 45 volts. No r.f. chokes were found necessary in the filament leads. The transformer T1 is a 3 to 1 audio transformer with a third winding of about 50 turns added for microphone input.

Separate volume controls are used for receive and transmit and 50,000 ohm resistors minimise interaction between them. These feed into the 1D8GT triode section which is followed by the pentode section. The transformer T2 is a miniature speaker transformer which also serves as a modulation choke on transmit, or as a choke when earphones are used in jack J2. Bias for the pentode is obtained from the 750 ohm back bias resistor.

TRANSMITTER The tuned circuit of the 958 modulated oscillator consists of the coil L2 which has 2 turns of ⅜" diameter and a 7.5 pF. zero temperature coefficient ceramic trimmer in parallel with the 10 pF. tuning condenser. On 144 Mc. the ceramic trimmer is at maximum capacity and the 10 pF. at nearly minimum capacity, giving low drift.

Heising modulation is used with T2 serving as modulation choke. For phone operation a carbon microphone is used in jack J1 using the 1.4 volt filament voltage for operation. The operation of the neon tube circuit is explained later.

T-R SWITCH This is a two wafer, two position twelve circuit switch which has been modified to give a third position (off) in which the moving contact is not connected through. Eleven of the circuits are used, four are used as the antenna change over, two on each wafer which are back to back, being paralleled, and each of these pairs switching one wire of the 300 ohm twin lead used for feeding a folded dipole. The spacing of the wafers is about equal to the width of 300 ohm line and tests by VK3NW show that the losses of this type of switching are very low, even at 580 Mc.

With the switch in the "off" position, both the A plus and B plus leads are broken. By the filament switching, the 1D8GT filament is on for both receive or transmit, but the filament of the 958 not in use is switched off. This saves 100 Ma. of filament current and since the tubes are instant heating, no time is lost waiting for the filaments to warm on changing from receive to transmit.

NEON TUBE CIRCUIT The phone-m.c.w. switch is a three circuit, two position switch. In the phone position the jack J1 is the microphone jack and the neon tube is connected through a 3 megohm resistor to B plus. The neon is visable through a hole in the front panel and thus serves as an "on" indicator. The current drain is only about 30 microamps.

In the m.c.w. position the neon is connected to B plus through a 1 megohm variable resistance and a 0.001 uF. condenser is connected across the tube. The alternate charging and discharging of the condenser generates an audio tone, the frequency of which can be controlled by the 1 megohm variable resistor. The jack J1 is switched into h.t. supply to the oscillator in order to key it. The current drain is increased to 50 microamps when used as an oscillator.

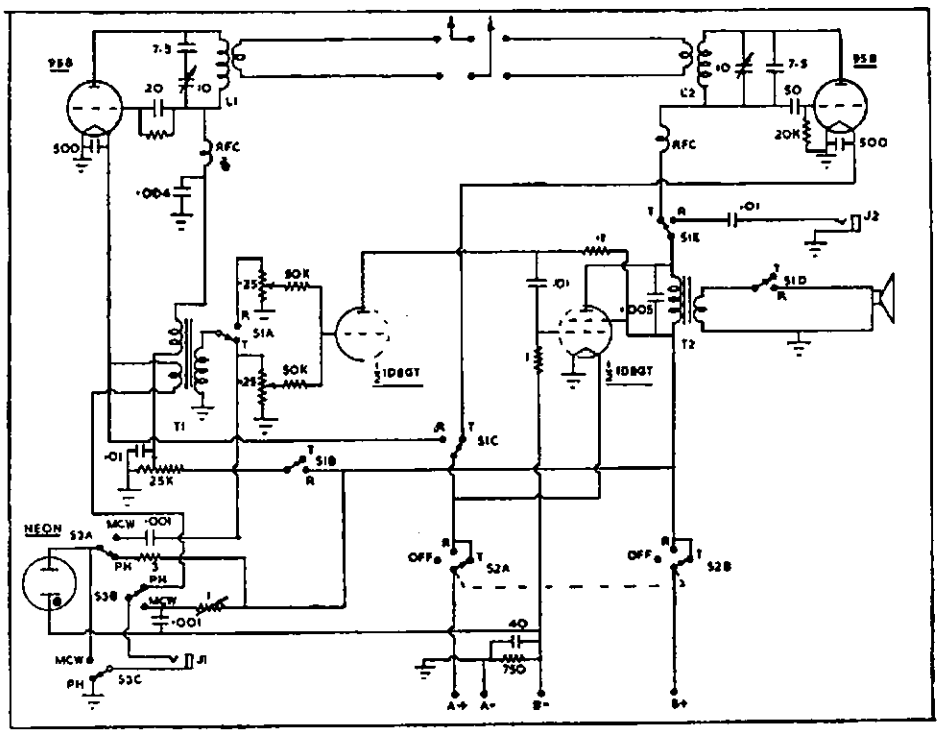
Since the voltage available is limited to 90 volts, a neon with a low striking voltage is necessary. The one used was from a BC453 and strikes at about 75 volts. The negative side of the neon is connected to B minus, rather than earth, so as to avoid the voltage drop across the back bias resistor.

In use on 144 Mc. the set has worked DX up to 30 miles. The receiver can regularly hear more distant stations, but the limitation is the power output on transmit. Since the oscillator only draws 5 Ma. at 90 volts, the input is under half a watt with which it is hard to compete with 10 or 20 watts. However, the outfit does the job for which it was built very well. In place of the 958, 957s can be used. The 50 Ma. filament of the 957 is a distinct advantage and would be a preferable tube for the super regen, although as the oscillator the power output would be less. The 1D8GT has the reputation of being an unreliable tube, but no trouble has been found with the one in use here. The additional gain of the triode section is very useful which was why it was used in preference to a 3S4 or 3V4 as the filament drain is the same as the latter.

CORRESPONDENCE

Several letters have been received on the subject of the Editorial for April.

Federal Executive desire to extract information from these letters. and letters received have been forwarded to them. Several of the most interesting will be published at a later date.—Editor.



* Asst. Technical Editor, 12 Peverill St., Balwyn, E.8, Vic.

Abstracts, Overseas Magazines

"WIRELESS WORLD," JANUARY, 1950

P. 12: "Amateur Exhibition."—Review of the R.S.G.B. annual show with notes of what was on show.

"WIRELESS WORLD," FEBRUARY, 1950

P. 50: "Test Report of 'Denco' DCR19 Communications Receiver."—Test report on a receiver designed mainly for Amateur use. Rotary coil turret, 1.6 Mc. i.f., crystal filter, calibrated bandspread for Amateur bands. Circuit diagram of some parts given.

"CQ," JANUARY, 1950

P. 11: "Small Rig, Big Signal;" R. W. Clark, W0RVD.—6V6 doubler string driving push pull 807s.

P. 16: "Designing the QSL;" O. L. Woolley, W0SGG.—Points on producing attractive QSL cards.

P. 18: "The Zig-Zag Array;" J. W. Steidley, W6ESY.—A compact sixteen element vertically polarised beam with a gain of over 11 db.

P. 20: "Licking the Regulation Problem;" J. Saugier, W9KSQ.—Uses vacuum tubes as keyed bleeders to stop voltage rise in c.w. rigs.

P. 22: "ZC8PM Licks TVI;" P. Miller, ZC8PM; W2AIS.

P. 24: "Meet the Resistor;" R. L. Rod, W2KVY.

P. 27: "Build an Audio Osciliator;" C. Welch, W6MHK.—Three valve beat frequency oscillator operating at 200 Kc. Beat frequency output from 100 to 15,000 cycles.

P. 30: "The Easy Way;" R. W. Ehrlich, W2NJR.—Building a grid dip oscillator from a commercial absorption wavemeter.

P. 33: "Selenium Rectifiers;" R. B. Richmond, W1RRA.

P. 34: "Stay Out of Jail;" F. L. McGraw, W6STS.—Conversion of BC454 as a monitor.

P. 36: "Shack and Workshop."—(i) Tuning your single twin loops. (ii) Antenna switching on the 75A. (iii) Keying monitor. (iv) Modulation indicator and field strength meter. (v) Mobile mike line hash cure. (vi) Regulated oscillator filament supply. (vii) Backwave getting you?

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

MAY, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

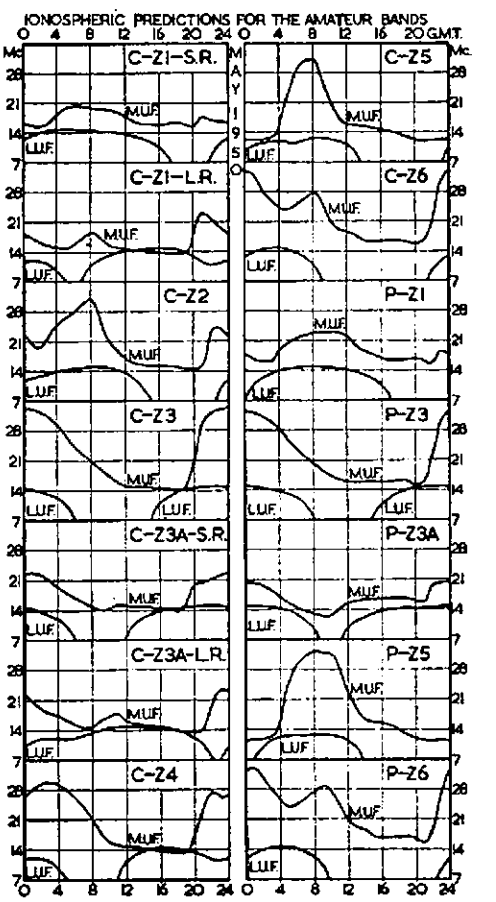
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0600 to 1500 hours G.M.T.?
2. Was the 14 Mc. band workable from noon to 1800 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



Amateur Emergency Work During Murrumbidgee River Floods

Amateur Radio again demonstrated its value to provide communication at short notice when normal services failed at Wagga and surrounding districts during the floods of late March.

The activity could be divided into two sections: emergency communication and a relaying service for the local BC station.

Thursday, 23rd March, saw the river at Wagga almost at flood level, and VK2BW, Alf Moye, reported to the local Police that he had fixed mobile equipment ready for use if other services failed.

Already Jack McPhee (2nd op. to VK2BW and VK2AID), Fred Deppeler (VK2ANT) and Eric Moore (ex-VK3BM) and others had installed a D.C.A. AT14 on the top floor of the local police station and using a frequency of 5330 Kc. (D.C.A.) were contacting the Army Depot at Bandianna and mobile vehicles around the area.

At 4 a.m. on the 28th, VK2BW was called out by the Police to assist and after tuning the main rig to 5330 Kc., acted as a runner, taking messages by car to those concerned, also collecting operators including Bill Jenner, 2nd op. to VK2AID, to man the Army "blitzes" and "ducks."

The operation continued for most of the day, rescueing marooned people and distributing food, etc.

Later in the morning, VK2BW was requested by the Superintendent of Police to try and arrange his station, to relay the BC programme to the transmitter site as land-line communication had failed. The transmitter was tuned to 7175 Kc. and a line provided from the studio. A 600 ohm to grid transformer fed into the modulator (n.b.f.m.). In the meantime, Geoff Hodgson (VK 2ASH) was taking two dual-wave receivers out to the transmitting station by motor boat and was supposed to arrive by midday. Broadcast material was continuously transmitted by VK 2BW and at 1 p.m. BC station 2WG came on the air, the transmission was not very good as the surge (at five miles) was heavy and the receiver was not coping with the n.b.f.m. very well. The system was then changed to plate modulation with greatly improved results, but interference from Amateur Stations was heavy. At 1815 hours the operator at BC station 2WG announced that Geoff Hodgson VK2ASH and his companion had arrived at the transmitter. There was some speculation as to how 2WG op., Don Harberecht (sitting for the next A.O.C.P.), managed to receive the transmissions from VK2BW during the afternoon, as there was reputedly no receiver at the transmitting site. Don, however, who had been copying some c.w. for the A.O.C.P., had a 40 metre command receiver on the job.

The trip to the BC station by VK2ASH and his companion, Les Lidden was in itself an adventure—five miles of flood waters had to be negotiated. Most of the journey was made by pulling themselves along wire fences and finally on foot. At one period they lashed themselves to a telegraph pole to stop being carried away. They averaged just over half a mile an hour for the journey. The broad characteristics of the command receiver accounted for most of the interference, despite good work by VK3KV and others in keeping the channel clear.

The relaying continued throughout the next day until 1715 hours, when an alternate route was used to restore land-line facilities. Telephone communication out of the town at the time was in bad shape and the BC station did much to relieve the uneasiness of the folks in the area.

At the conclusion of the work for the BC station, the Superintendent of Police requested that a radio link be established with the next town likely to be affected, namely Narrandera. Accordingly the AT14 was dismantled from the Police Station and transferred by "duck" to Narrandera. VK2BW's main transmitter took its place and a direct telephone line installed from the Police Station to VK2BW's operating desk. Traffic handled included food orders and messages to the Army Depot at Bandianna, the North Wagga Police Station where VK2AID's modulator was in use, the Aeradio Station at Alstonville and radio controlled "blitzes" and "ducks" operating in the area, and later at about midday with the Narrandera Police Station. The link was maintained all Sunday night, Monday till midnight, and finally closed at 1900 hours on Friday. VK2BW was manned by an enthusiastic high school boy, Brian Mitchell, during the day and by Hams and D.C.A. operators at night. VK2ANT did the midnight to dawn watch on Sunday.

Mal Robinson (VK2HT), who was marooned at Wagga, did some good work helping the evacuation and was requested by the Police to take VK2BW's Type 3 Mark II. to Darlington Point. As this was xtal controlled, the new frequency of 5050 Kc. was adopted all round. Mal was taken by air to Narrandera, by "duck" to Leeton, and arrived at Darlington Point on Thursday. The gear was set-up on top of the local hostelry. Communication was mainly made with Narrandera and with the "ducks" which had arrived in the area.

Signals between the main station's AT14 at Narrandera, AR8/AT5 at Bandianna, and TA12 at VK2BW, varied from S7 to S9; while the "ducks" using Type 19s were from zero to S5.

Receivers in use were an AR7 at VK2BW and BC312 at Narrandera which was loaned by VK2ANT. The Type 3 Mk. II. was again in use up the river as a warning station as the river was again rising.

Many Amateurs co-operated, some in the course of their official duties. They included VKs 2ANT, 2AID, 2ASH, 2BW, 2HT, ex-3BM, ex-2MX, ex-3KJ, 2RB and Allan Williams and Maurie Harrison whose call signs are not known.

As a finale to the 2WG episode, VK 2BW and his XYL were presented with an inscribed entree dish at a ceremony at the studios. Due credit was given to the Radio Ham for the work performed during the crisis.

The local Amateurs and radio enthusiasts very sincerely thank the Police, the Telephone Branch, and the D.C.A. for their wonderful co-operation and encouragement given them during the critical period.

Thus is written another episode in the history of the Australian Amateur, but it is not really complete, because at this moment out in Western N.S.W. other Amateurs are continuing the emergency work. It is hoped to have the full story of their endeavours in the assistance of the public available for next issue.

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UTILISING FS6 TUNING UNIT AS A V.F.O.

(Continued from Page 8)

capacity. If no signals are heard, couple the receiver fairly close to the v.f.o., as being shielded, very little signal is heard on 7 Mc. and higher, however assuming a check is being made on 3.5 to 3.8 Mc., some second harmonic signal should be evident. If not, check for oscillation by inserting a grid meter in series with the oscillator grid leak and adjust the cathode tap for oscillation.

Once oscillation is established, adjustment of the tuning slug in the oscillator tuning coil will bring the tuning range into alignment with about 20 Kc. to spare at each side of the 3,390 Kc. to 3,800 Kc. range.

The small trimmer condenser which is part of the FS6 tuning unit is left at maximum capacity, though it could be removed if desired, having very little effect, of course, with approximately 600 pF. across the tuned circuit.

Having tuned the oscillator to the desired frequency coverage, the doubler output coil can be adjusted for maximum output at approximately 3.5 to 3.6 Mc.

This was done by connecting a 6-8 v. 3 watt globe across the link coil and adjusting the slug tuning to peak the output of the 807 to approximately 3.5 Mc., at which point the globe was almost full brilliance, dropping off at each side to about half brilliance, indicating an output of approximately 1½ watts at the extreme high and low frequency ends of the range with almost 3 watts at 3.5 Mc.

The frequency of the unit was calibrated in 10 Kc. steps and with the arrangement of the FS6 unit, allowed quite good re-set points throughout the 3.5-3.6 Mc. range, which is the most used part.

All by-pass condensers, resistors, and miscellaneous other parts, including the aluminium for the chassis, are ex-Disposals.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

FIRST INTERSTATE CONTACTS ON 144 Mc.

The most important v.h.f. news for many months concerns the first interstate contacts in the history of 144 Mc. in Australia.

On the evening of 27th March, VK3AKE and VK7PF were successful in being the first stations to achieve this honour and to establish an Australian record for 144 Mc. of 270 miles. In the following letter VK7PF tells the story of the doings on that eventful evening.

SPANNING BASS STRAIT ON 144 Mc.

"The morning of Monday, 27th March, was a fine, but slightly cold, but little did we know what was to happen before the day was out. It was at lunch time when VK7PF received the telegram, sent that morning by VK3AKE, which read, 'Conditions good, calling you 7.45 p.m. tonight on two, listening on forty—Ed.' By this time also, the weather had warmed up and the sky was cloudless.

"At 1915 hours, VK7PF, VK7BQ, and VK7MC had their regular hook-up which concluded about 1930, with 7BQ and 7MC leaving the air. 7PF remained listening very intently up and down the band, but nothing was heard. It was then thought that the sked at 1945 was doomed to be a failure, like so many other skeds, but this was not so, for right on 1945 a carrier switched on at the low end of the band. Immediately 7PF tried to work out who it could be, as it was thought not possible for VK3 signals to be so strong, but he soon knew who it was for VK3AKE started calling CQ VK7 or VK7PF. 7PF quickly changed from 7 Mc. down to 144 Mc. and in doing so, forgot to change the output of the modulator over, which nearly caused a disaster. Well at 1950, VK3AKE went over and heard 7PF calling at R5 S8 and contact was made for the first time across Bass Strait on 144 Mc. and also extending the DX record from 190 miles to about 270 miles.

"By 2000 hours, 7PF was R5 S9 and VK3AKE R5 S8 plus. Some idea of the strength of VK3AKE can be gained when 7PF could still hear 3AKE's buffer stage running at S6 with the final switched off. The last part of 3AKE's call was also heard by VK7RB and Val Sydes, up at a local BC transmitter, in a very good location, but unfortunately they had no transmitter. They got hold of VK7MC on the land line and got Ernie onto the band very quickly. 3AKE then worked 7MC, giving him R5 S8 and 3AKE was R5 S9 on 7MC's super regen at 2010 hours. VK7BQ then hit the band and got R5 S9 from 3AKE and gave R5 S8 to 3AKE using a 955 super regen receiver at 2130 hours. Unfortunately in the excitement, no one got hold of VK7DB to tell him the news. 7DB had his xtal rig under re-construction, but had a modulated oscillator which may have got across.

"7MC at 2145 worked 3BW, signals being 7MC R5 S6-7, 3BW R5 S8. This QSO was only made possible by 7RB feeding the output of his receiver down the landline to 7MC. 7PF also heard 3BW at R4 S5, but did not QSO. Other stations heard were 3ED and 3ABA, the peak in conditions seemed to be around 2145 hours.

"A good job was done by 3AKE in lining up stations to call us, and giving us their frequencies, which did at least enable us to hear other stations, even though they could not hear us. 3AKE's signals remained at S9 plus until the signals started to decrease in strength at 2215. The unexpected surprise being the absence of any QSB even on the weaker stations. 7PF last worked 3AKE at 2225, signals being down but still R5. 3AKE was last heard at 2245, still R5 in contact with local VK3s.

"A sked was arranged the following morning at 0700 hours. Unfortunately 3AKE was unable to be on, but 3ABA was heard at R5 S6 on m.c.w. by 7PF and 3ABA also heard 7MC at R5 S6, but no QSOs were made. It is evident that conditions had changed because 3ABA was not audible at 7PF's location the night before.

"The technical details will no doubt cause a bit of a stir, particularly as to the receivers. 7PF used a xtal rig 145.92 Mc. EF50 osc., 6V6, 832, 815 with 25 watts input. The receiver was a cascade converter 6AK5, 6J6, 6J6 into home communication receiver. The aerial was a three over three beam about 40 ft. high. Th location being on a side of a hill, but the 30 mile path to the sea being over quite a bit of hilly country including Mt. Direction (1212 ft.), 12 miles away.

"7BQ used xtal rig on 145.5 Mc., 6G6, 6V6, 832, 829, input 40 watts. Aerial, 4 element parasitic about 20 ft. high. Receiver was a 955 super regen which performed better than a 6J6 mixer-osc. The location is on the flat, but once out of the city, the signal path is over mostly river down to the sea. We appear to be fortunate that the River Tamar runs in the same direction as VK3, as otherwise contact may not have been made.

"7MC used a converted TR1143A transmitter, input 16 watts. Receiver super regen with r.f. stage. Aerial, four element parasitic beam. His location overlooks the river and was the best of the Launceston Hams able to put a signal on the air.

"The location of 7RB was about the best it could be possible to obtain nearby, and the proof was in the signals he could hear using a 6J6 converter into two stages l.f., detector and make-shift aerial.

"The weather was quite warm and cloudless and what may be of some importance was the absence of any wind, in fact on Tuesday morning we had quite a heavy fog. On the morning of Monday, at the local aerodrome, a temperature inversion of eight degrees was recorded, but the height has not yet been learnt.

"Finally a plea to all v.h.f. Amateurs to keep a keen watch on the bands, especially as 50 Mc. was also open at the same time as 144 Mc. between 7XL and 3ACL. Also it seems that simple gear does work out OK, which may encourage more onto the bands.

"The final results are most encouraging, especially as all gear has been adjusted with the other station no further than about two miles away and we are now carefully following the weather and other bands, and hoping for a further opening in the not too distant future."

"OPERATION APPLE ISLE"

Sunday, 16th April, 1950, was a bright sunny day when VK3RR and party, consisting of VK3ACL, VK3APF, VK3UI and VK3CR made their way to a location approximately 480 feet above sea level at Cape Shanck. Approximately three months of planning had gone into the arrangements for this field day and a goodly array of gear was in operation.

The equipment consisted of a 10 watt transmitter for 50 and 144 Mc., a 10 watt transmitter for 40 metres, BC348 receiver, 50 Mc. converter and a crystal controlled 144 Mc. converter feeding into the 50 Mc. converter. The power supply was a 250 watt, 240 volt 60 cycle petrol driven alternator, the loan of which was kindly arranged by VK3KT.

On arriving at the Shanck at 0930 hours, the equipment was unloaded and set up for operation. The 50 and 144 Mc. four element beams were raised (quite an operation in itself) and the 40 metre aerial slung between them. The alternator was located some 50 yards down the hill. At 1025 contact was established with 7PF on 40 metres and a transmission by 3RR was made on 144 Mc. This transmission was heard by 7AB at R5 S6, although his 144 Mc. transmission could not be heard. (It was later found that 7AB's frequency was 300 Kc. higher than he had stated.) At 1230 hours, 7AB was contacted on 50 Mc. with signals at R5 S9 plus both ways, and a sked arranged for 144 Mc. c.w. at 1330 hours.

At the due time 7AB's 144 Mc. c.w. signals were heard at R5 S9 and very steady. 3RR replied on phone and amid much jubilation a very fine contact was had. At 1405, 3RR worked 7KB on 144 Mc. although at this time the peak had passed and signals were only 67. Subsequently, 3BW and 3AKE had c.w. contacts with 7AB, although signal reports were not as good as the earlier contacts with 3RR. 3RR also worked 3BW and 3AKE with signals at terrific strength, although signals from Melbourne both on 50 and 144 Mc. were very poor.

The effectiveness of 40 metres for teeing up v.h.f. contacts was proven as no trouble was experienced in keeping in contact with VK7 on this band, a fact which undoubtedly contributed greatly to the success of the undertaking. 3RR would like to thank all concerned with the episode for their assistance and interest.

3RR confidently expects that contact will be made between VK2 and VK3 on 144 Mc. this winter, and in view of the past effectiveness of Dick's predictions, we look forward with anticipation to this coming to pass.

VICTORIAN V.H.F. GROUP ACTIVITIES

This group holds its regular meetings on the third Wednesday of the month at the W.I.A. rooms, 191 Queen Street, and all those interested in the v.h.f. bands are invited to attend. Even if you think you are not interested, come along to one of these meetings and the enthusiastic members will be sure to encourage you to activity on these bands. A series of lectures, films, and demonstrations has been arranged, so there will be something of interest at every meeting.

On the second Wednesday of the month a practical night will be held when v.h.f. gear and problems can be discussed informally and the test equipment used. On the 10th of May, Mr. Len Jackson will give a practical demonstration of the conversion of the BC966A to 144 Mc. and those who have this gear or who have struck trouble in the conversion are invited to be present.

Country members who are interested in v.h.f. affairs have not been forgotten and if trouble is being experienced with gear, as for example in the lining up of a converter for 50 or 144 Mc. in the absence of local signals, send it to the v.h.f. group at the W.I.A. rooms and this matter will be attended to for you and the gear actually tested on the air to see all is well.

An unusual DX opening on 50 Mc. for this time of the year occurred on 11th March when from 2115 until 0130 hours the next morning, 2ADE, 4KK, 4XN, and 4BT were worked with signals peaking S9. The next opening was a short one on 7th April from 1130 until 1210, 4XN worked three VK3s.

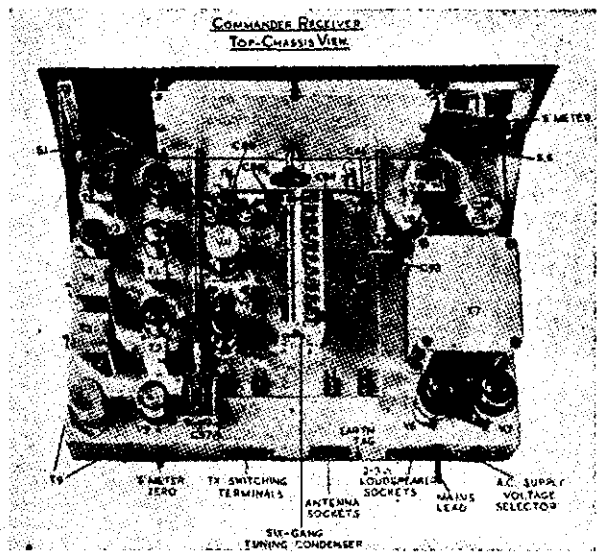
Further VK3-VK7 contacts were made during March, with the best signals reported on 15th and 27th, on the latter date 3HK joined the select group of Melbourne stations who have worked VK7 on extended ground wave by contacting 7XL.

A new path on 144 Mc. which looks like being opened up soon is between Melbourne and Shepparton. 3APF of that town is active on 144 and although his antenna at present is only 15 feet high, he has been able to receive signals over the 3,000 ft. Dividing Range from 3ABA in Melbourne, 100 miles away. 3APF is planning to put up a higher beam before long.

THE "COMMANDER" DOUBLE CONVERSION RECEIVER

For the last week we have had the pleasure of testing the "Commander" communication receiver, under actual Amateur operating conditions. This English manufactured receiver has obviously been designed with the needs of the Amateur well in mind, and our very exacting requirements well catered for, as is evidenced by the excellent bandspread, sensitivity and selectivity provided.

Dealing first with the technical specification. The receiver uses the double conversion principle, the first i.f. frequency being 1600 Kc., and the second i.f. 100 Kc. The b.f.o. is applied to the 100 Kc. stage, and very great stability is therefore obtained on c.w.



The valve complement is as follows:— r.f. amplifier 7H7, first mixer X81, 1600 Kc. i.f. 7H7, second mixer X81, 100 Kc. i.f. amplifier 7H7, detector and a.f. amp. 7R7, noise limiter 6H6, b.f.o. 6J5, audio output 6F6, rectifier 5V4, neon stabiliser 7475, making a total of nine tubes plus rectifier and stabiliser. With this tube line-up, sensitivity is between 1 and 2 microvolts input for 50 milliwatts output. A.v.c. is applied to r.f., 1.6 Mc. i.f., second mixer, and 100 Kc. i.f.

With the single r.f. stage and 1600 Kc. first r.f., the image rejection is better than 30 db at 30 Mc., increasing to over 70 db at 2 Mc. On test no trace of images could be found even with strong local stations operating close at hand, on the 10 metre band; and on DX stations the signal to noise ratio was extremely good, whilst the stability proved to be excellent. These tests were all made on the 10 metre band as it was felt that any weakness would be more obvious on the higher frequencies. C.w. reception on 10 metres showed that the 1st, 2nd, and b.f.o. oscillators were rock steady, a very severe test of any receiver, because to obtain clean stable c.w. on 10 metres is a real problem in design, and says a lot for the mechanical and electrical stability of this receiver.

Operation on the lower frequencies was extremely satisfactory, as was to be expected after the results obtained on 10 metres and it was obvious that both the c.w. and phone man were well catered for. No trace of any radiation from the 2nd oscillator could be found, most unusual as all double conversion enthusiasts will agree.

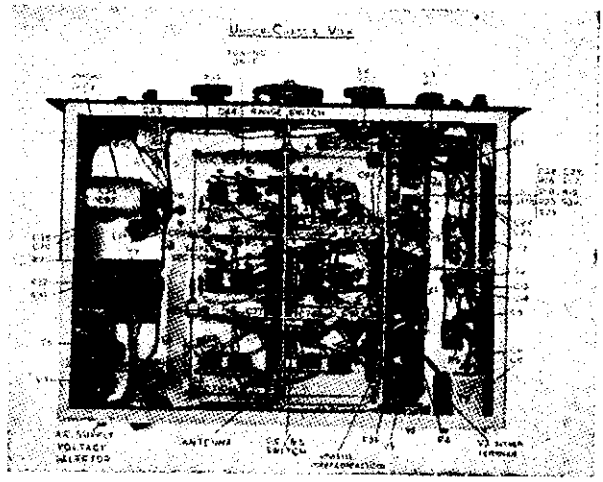
Three positions of selectivity are provided, **Broad**, 10 times down at 4 Kc. off resonance; **Medium**, 10 times down at 2½ Kc. off resonance; and **Sharp**, 10 times down at 1½ Kc. off resonance. It is interesting to note that the signal level remains constant at the three selectivity positions. This variable selectivity is obtained by taking the grid of the second i.f. amplifier from either the plate of the second converter (broad), secondary of the first 100 Kc. i.f. transformer (medium), or from the secondary of an additional 100 Kc. i.f. transformer, which is loosely coupled to the first 100 Kc. transformer previously mentioned (sharp). Variable capacities are inserted in series with the i.f. grid lead to adjust the signal output to a constant level and are provided for the broad and medium positions only. This selectivity control is most definite in its operation, the medium position giving the approximate equivalent of a 455 Kc. i.f. channel. An interesting point about the sharp selectivity position on c.w. reception was the pronounced single sideband effect, which is familiar to users of the Q5'er.

With the b.f.o. pitch control set to one side of the zero beat position, a pronounced single-signal effect is apparent, as on tuning through a signal on the main dial, a beat note will be heard on one side of the carrier only. If the b.f.o. pitch control is set to the other side of zero beat, the opposite side of the carrier is eliminated. This is a demonstration of the high degree of selectivity available, and is very useful in eliminating strong interference on one side of the wanted signal.

A noise limiter is provided which automatically adjusts itself to the carrier level and when switched on clips at 100 per cent. As the control is turned clockwise, clipping occurs at progressively lower levels down to approximately 20 per cent.

The speaker output transformer is mounted in the receiver and output terminals are provided for a 2-3 ohm loud speaker. Plugging in the phones automatically mutes the speaker output. When the phones are plugged in, a 3 ohm resistance is connected across the secondary However any Amateur would have no and the phones connected across this resistance. The output available to the phones is reduced considerably by this method, a little too much it was felt, and this was the only adverse criticism which could be made on an otherwise excellent receiver. winding of the speaker transformer difficulty in making the slight wiring change necessary to overcome this if he felt the phones output needed boosting.

So far no mention has been made of the ranges and bandspread provided, but it was here that we were extremely impressed with the neat way in which the difficulty of providing bandspread and general coverage was overcome. The main tuning gang, has three main sections and, in addition, a small double spaced condenser is mounted in each section and rotated by the same shaft and dial mechanism. Separate stators are used, and leads from them are taken straight down through holes



in the chassis. Mounted immediately under the chassis is a long insulated strip, which terminates in a push button on the front panel under the main tuning dial. Suitable contacts are provided in each coil compartment to switch the coils to either the small or large condenser in each section of the main gang, as the strip is pushed in or pulled out by the knob on the front panel. The switch is virtually one which works like the slide on a slide rule with the contacts arranged on either side. It can be seen that this type of switch reduces the length of leads to a minimum. For Amateur bandspread the knob is pushed in, and pulled out for general coverage.

The main five-position bandswitch is mounted below this general coverage/Amateur band switch, and by the method outlined above the receiver becomes a five-band bandspread receiver for Amateur bands only, with the knob in the "in" position. The different bands being selected by the normal bandswitch.

The Amateur bands are calibrated on the five outer scales of the large main dial, and the general coverage on the four inner scales. Note that position 4 on the range switch is not used for general coverage use.

On Amateur coverage only, a small trimmer is provided across the oscillator section of the receiver for setting the calibrated scales accurately, and is best done by putting the station frequency meter on a known frequency, setting the dial to this frequency, and then tuning in the signal on the oscillator trimmer. Air trimmers are provided in the coil box for setting each range so that only a slight adjustment of the panel control is necessary when changing bands. Bandspread is excellent, the ranges and general coverage being as follows:—

Range	Bandspread	General Coverage
1	3.5—3.8 Mc.	1.7—4.0 Mc.
2	7.0—7.3 Mc.	4.0—7.6 Mc.
3	14.0—14.4 Mc.	7.6—15.0 Mc.
4	21.0—21.45 Mc.	None
5	28.0—30.0 Mc.	15.0—31.0 Mc.

An aerial trimmer is provided for fine adjustment of the input circuit, and also a send-receive switch for changing from receive to transmit. A pair of terminals are provided at the rear for connection to the transmitter relays. No detuning effects are present when changing from transmit to receive.

As seen in the photograph of the top view of the chassis, the coil box is separately mounted in the centre of the main chassis, and is connected to the remainder of the wiring by accessible tag connections. The r.f. and 1st converter tubes are mounted on the coil box, and the sockets positioned to enable the main cross shields to also shield the sockets. All coils are slug tuned and also air trimmed for good tracking.

Referring again to the top view, the adjustment slugs and trimmers for all coils are accessible from the top, which is a great convenience for alignment. The only trimmers which have to be adjusted from underneath are the Amateur bandspread trimmers. The aerial trimmer is rotated by the long shaft to the left of the coil box.

In the top rear view, the left hand row of components, reading from rear to front panel are: 2nd converter, two 100 Kc. variable selectivity transformers, 100 Kc. i.f. amplifier, 100 Kc. i.f. transformer, and stand-by switch on front panel. Second row from the left: voltage regulator, 1600 Kc. i.f.t., 1600 Kc. i.f. amplifier, 1600 Kc. 1st i.f. transformer, detector, twin diode noise limiter. To the rear right of the coil box we have output tube and rectifier, then power transformer and in front, b.f.o. tube and coil. The illuminated "S" meter is mounted on the front panel with the c.w. switch underneath.

The underside view components can be identified from the top view, the main points of interest being the general coverage/Amateur bandspread switch contacts, just visible under the main switch shaft, the selectivity switch, rotated by an extension shaft, to the right, the second oscillator coil in its can at the lower right, and the speaker output transformer to the lower left.

Terminals are provided on the back drop of the chassis for speaker, send-receive relay, mains voltage adjustment, antenna connections, and "S" meter adjustment. The receiver is mounted in a black crackle steel cabinet the receiver front panel being heavy steel plate suitably engraved. A removable panel is provided under the cabinet to enable the necessary adjustments to Amateur band trimmers in the coil box to be made without removing the receiver from the cabinet.

Finally one cannot fail to be impressed with accessibility of all components and it is obviously designed for ease of servicing. This receiver should appeal to the SWL who hopes later to become an Amateur, his receiver will not then be unsuitable for its Amateur role.

We are indebted to Mr. Allen, of Bright Star Radio, for making this receiver available for test.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary.—Maurie Butler (VK2AAN), Box 1734 G.P.O., Sydney.

Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor.—A. C. Pearce, 131A Balmain Road, Leichhardt, N.S.W.

Zone Correspondents.—Nth. Coast & Tablelands: J. M. Retallick, VK2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 48 Harrabrook Ave., Five Docks; Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. C. Quin, VK3WQ.

Administrative Secretary.—Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne, C.1.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—North Western: R. E. Trebilcock, VK3TL, 122 Victoria St., Kerang; Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: W. H. Rosa, VK3UT, Ballangeich, via Warrnambool; North Eastern: J. A. Miller, VK3ABG, "Erinvale," Avenel; Far North-Western Zone: Harry Dobbyn, VK3MF, 42 Walnut Ave., Mildura; Eastern Zone: H. O. Kellas, VK3AHK, Tinambra.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW on Friday evenings on the 7 and 14 Mc. bands.

VK6WI.—Saturdays 1400 hours, Sundays 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.

Meeting Night.—Last Friday in each month at the Y.M.C.A. Rooms, Edward Street, Brisbane.

Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—E. A. Barbier, VK5MD, Box 1234K, G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AO, 7 Howard St., Perth.

Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.

Meeting Night.—Watch the Monthly Bulletin.

Divisional Sub-Editor.—George W. Ashley, VK6GA, 33 Mars Street, Carlisle, Western Australia.

TASMANIA

Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor.—G. D. P. Clarke (VK7TA), c/o. 7HO, 82 Elizabeth Street, Hobart, Tas.

Northern Zone Correspondent.—R. H. Kilby, VK7RK, 5 Galvin Street, Launceston.

FEDERAL

20th ANNUAL FEDERAL CONVENTION

The 20th Annual Federal Convention of the W.I.A. was held over the Easter period, 7th-10th April, in the Victorian Division's rooms and 41 agenda items and 11 general business items were considered by delegates from all States. Those present were from Federal Executive: Mr. W. Gronow (8WG), Federal President; Mr. G. Glover (3AG), Federal Vice-President; Mr. P. Evans (3OZ), Federal Treasurer; Mr. G. Manning (3XJ), Federal Publicity Officer; and Mr. W. Mitchell (3UM), retiring Federal Secretary. The new Federal Secretary, Mr. M. Hull (3ZS), was also present and copious notes and minutes were taken by scribe, Mr. A. Brown (3CX). Interstate delegates were Mr. J. Moyle (2JU) and observer, Mr. J. Corbin (2YC); Mr. C. Gibson (3FO), Mr. V. Jeffs (4VJ), Mr. H. Austin (5AW) and Mr. G. Bowen (5XU), Mr. G. Moss (6GM), and Mr. J. Brown (7BJ).

A novel feature introduced by Federal Executive was the wire-recording made of the highlights of the Convention including the motions and their outcome, which recording will be made available to all Divisions for the general meetings and will serve a useful purpose in indicating to all members the deliberations of the Convention.

The Annual Dinner was held on Saturday night at the Hotel Cecil and attended by the Chief Inspector (Wireless), Mr. J. Martin, who gave a short address on amateur matters and the happy relationships between the Department and the Federal Executive (much to those members' embarrassment). Mr. J. Marsland kindly invited delegates to spend the evening at his place, where a good natter was had by all who attended.

The relevent sections of the Convention determinations will be printed in next month's "A.R."

FEDERAL SECRETARY

Due to Army duties abroad for a period of two years, the present Federal Secretary, Mr. Bill Mitchell, has had to resign, and Mr. Max Hull (VK3ZS) has consented to undertake the job. To Max we all extend our fraternal greetings and a progressive period in the office, and to Bill our best wishes for a happy sojourn overseas, and a safe return to his native land in due course.

DX C.C. LISTING

The Awards Committee submitted a new set of Rules for the DX C.C. which were approved by all Divisions, and will be printed in the next issue. The new Rules clarify a number of anomolies that existed in the present ones. Applications received before the date of publication of the Rules will be judged on the present Rules.

PHONE

VK3JD (1)	36	143
VK6KW (4)	37	134
VK6RU (2)	37	132
VK3BZ (3)	36	129
VK3EE (10)		125
VK4JP (5)		114
VK6DD (6)		113
VK4KS (9)		113
VK3LN (11)		112
VK4HR (12)	35	107
VK2ADT (13)		102
VK3IG (5)		100
VK3JE (7)		100

C.W.

VK3BZ (6)	40	165
VK2EO (2)	40	152
VK3CN (1)	40	151
VK4EL (9)	40	140
VK3KB (10)	39	138
VK3VW (4)	40	135
VK2QL (5)	40	133
VK4HR (8)	40	126
VK3FH (15)	38	126
VK3EK (3)	39	122
VK4RF (11)	35	119
VK6RU (18)		116
VK3UM (12)	37	115
VK4DA (7)	38	113

New Member:

VK7LJ (24)		100

OPEN

VK3BZ (4)	40	189
VK3KX (1)	40	167
VK6RU (8)	39	160
VK4HR (7)	40	161
VK2DI (2)	40	160
VK3HG (3)	40	160
VK3JE (12)	39	154
VK6KW (13)	39	153
VK4EL (10)	40	140
VK3MC (5)	39	139
VK3OP (19)	39	137
VK4KS (24)	36	133

W.I.A. ACTIVITIES CALENDAR

May 7: Minutes of 20th Convention Issued.

June 3, 4: 1950 Trans-Tasman Contest.

June 7: Ratification of Convention Items due with F.E.

COUNTRIES LIST

We hope to be able to publish under this heading from time to time, stations which are of doubtful authenticity and those known to be pirates or not where they purport to be.

UA3BD/UP2—Not in Lithuania as prefix would indicate, but in White Russia or Byelorussia.

VR1AZ/VR1B/VR1—Allowable under KB6, Canton Island and not as British Phoenix Islands.

CZ2AC—Not in Monaco as alleged, but in Switzerland.

VU4CN—A.R.C.I. advise not in Andamaus as supposed as VU4 prefix allotted to University stations.

All PX stations—Those that have been heard so far are not legitimate or even believed to be there.

SP stations—From the R.S.G.B. is news that all SP1 prefixes are pre-war SPs, and SP5s are post-war stations. SP stations are not yet allowable as information is awaited on Polish boundaries.

OE stations—Not at present allowable, but will be under new Rules.

VK4SI/VR4—Pirate and not licenced by P.M.G.

We are in possession of a lengthy list of alleged overseas pirates and definite information in this respect would be appreciated by the Awards Committee, Box 2611W, G.P.O., Melbourne, who would be pleased to have such evidence.

CONTESTS—TO BE OR NOT TO BE!

Contrary to expectations, replies are now coming to hand on our provocative Editorial of last month, which at least indicates that someone does read them! One is from a well known listener and the others from licenced Amateurs, but what of the top Contest men—no words from them yet. What about it, fellows? Surely you have words on this subject.

CHANGES TO AMATEUR CALL SIGNS

Arrangements have been made with the P.M.G's. Department to publish monthly amendments, and the first of these is as below. This list is supplementary to Supplement No. 2 and includes alterations to the 31st March, 1950.

New Issues—

VK2ACH—G. E. Whiting, 16 Louden St., Five Dock.
2AOS—R. E. Schneider, Munnell Falls, Eumungerie.
2APL—N. A. Loffman, 14 Romani St., North Parramatta.
2APS—S. Smith, 50 Upper Street, Tamworth.
2AQM—N. O. Myers, 115 Braeside Rd., Wentworthville.
2ARQ—R. S. Gurr, 10 Kara St., Randwick.
2AVG—E. G. V. Gabriel, 39 Narooma Rd., Northbridge.
2AWG—W. J. Grant, Englands Rd., Boambee, via Coffs Harbour.
2AWN—V. J. McMillan, 26 Waters Rd., Naremburn.
2AYE—D. E. Evans, 21 Sandridge St., Bondi B.
2AYP—H. Y. Powell, 9 Russell Ave., Wahroonga.

VK3NR—C. H. Ranft, 18 Nimmo St., Essendon.
3OM—R. S. Fisher, 81 Neerim Rd., Caulfield.
3SP—R. J. Fleming, 25 Westgate St., Oakleigh.
3ACP—J. A. McCay, 26 Derby St., Camberwell.
3ADP—D. C. Paice, 10 Byron St., Moonee Ponds.
3AFF—L. B. Fisher, 6 Childers St., Kew.
3AGP—E. G. Pont, 76 Gladstone St., Kew.
3AGT—S. W. Ferguson, Miller St., Tongala.
3AIK—J. B. Kelleher, 3 Paine St., Newport.
3ALE—L. Eliason, 15 Collet St., Shepparton.
3ALK—M. E. Dixon, 430 Graham St., Port Melbourne.
3ALX—J. R. G. Harris, 146 Patterson Rd., Moorabbin.
3ALY—L. J. McKay, 40 Forrester St., Essendon.
3ALZ—R. F. Miller, 76 Latrobe St., Warragul.
3ANM—L. N. Macainsh, Eltham Rd., Warrandyte.
3ANP—K. J. Parker, Carlsbrook.
3APC—The Moorabbin and District Radio Club, c/o. Public Library, Point Nepean Rd., Moorabbin.
3AWB—W. Brownhill, 22 Glenmorgan St., East Brunswick.
3AWD—J. W. M. Davey, 37 Weatherall Rd., Cheltenham.

VK4AL—Major C. Allen, c/o. Chief Signal Officer, Northern Command, Vic. Barracks, Brisbane.
4DP—B. D. Pronger, 9 Pound Hill, Gympie.
4JO—J. M. Ross, 65 Liverpool Rd., Clayfield.
4MS—R. K. Sullivan, c/o. Chardona Hotel, Annerley.
4QL—F. T. Hine, R.A.A.F. Station, Garbutt.

VK5BJ—J. A. Hampel, Berri.
5BV—R. C. Howland, c/o. D.C.A. Mess, Darwin, N.T.
5DK—D. H. Kelly, c/o. Mrs. Belverd, 23 Kirkcaldy Rd., Henley Beach.
5EN—A. R. E. Nitschke, 192 Ellen St., Port Pirie.
5FP—F. C. Purcell, 429 Esplanade, Henley Beach.
5GT—R. J. Chamberlain, 3 Clifford St., Lockleys.
5KS—R. A. Sedunary, 28 Pirie St., Solomontown, Port Pirie.
5WO—A. S. Condon, Laura.

VK6LU—L. Stagg, 52 Esperance St., Victoria Park.
6TY—A. V. Savory, 253 Vincent St., Leederville.

Alterations—

VK2EK—13 Stapleton St., Wentworthville.
2EO—34 William St., Hornsby.
2KD—2 Sofald St., Punchbowl.
2KK—259 Glenmore Rd., Paddington.
2LB—383 Cabramatta Rd., Cabramatta.
2MJ—16 Green St., Cronulla.
2MN—65 Currawong St., Young.
2NB—55 Chisholm Ave., Belmore.
2ND—15 Anthony St., Croydon.
2OP—358 Catherine St., Leichhardt.
2QF—9 Bardo Rd., Newport.
2SP—38 Queens Rd., Connells Point.
2VN—109 Springdale Rd., Killara.
2XM—90 Spofforth St., Cremorne.
2ZT—9 Russell Rd., New Lambton.
2AAM—32 Hill St., Belmont.
2ACM—80 Roslyn Gard., Elizabeth Bay, Sydney.
2ACW—19 Trafalgar St., Stanmore.
2ADR—73 Flers Ave., Earlwood.
2AJS—c/o. Mrs. Beatty, 66 George St., South Grafton.
2AKH—S.S. "Moora," c/o. Adelaide S.S. Co., 22 Bridge St., Sydney.
2AKV—26 Page St., Botany.
2ALO—3 Lytton St., Wentworthville.
2ALW—c/o. Post Office, Darby's Falls, via Cowra.
2AMD—Ocean St., Windang.

VK3AH—"Ashburton," 14 Vernon St., Croydon.
3EX—209 Mitcham Rd., Mitcham.
3EZ—Waiora Rd., Mont Park.
3HQ—17 McLean Ave., Bentleigh.
3IA—23 Pope Rd., Blackburn.
3IZ—Main Ridge, Vic.
3LF—97 High St., Glen Iris.
3LL—Wireless Station, Ballan.
3NS—5 Brian Street, Bentleigh East.
3RX—Flat 9, 21 Adams Street, South Yarra.
3TV—"Carriens," Warrigal Road, Holmesglen.
3TM—44 Wheatland Road, Malvern.
3UF—102 Murray Road, East Preston.
3UG—Nepean Road, Rye.
3WW—12 Kinsale Cres., Box Hill North, E.12.
3AAE—13 St. Andries St., Camberwell, E.6.
3ADJ—95 Canterbury Road, Middle Park.
3AGB—McCallum Street, Swan Hill.
3AKI—56 Ormond Road, Elwood.
3ALN—Cr. Buckley St. and Rich Ave., Noble Park.
3ALY—107 Woodland St., Essendon.
3ANA—8 Finlay St., Albert Park.
3ARL—Cr. Darlington Rd. and Hawker St., Stawell.
3AVK—901A Eyre St., Ballarat.

VK4EW—"Strathpine," Yowles St., Red Hill.
4FH—Malcolm More, N. Mackay.
4GH—179 Pallas St., Maryborough.
4HS—24 Bridge St., Albion.
4NF—Boundry Rd., Camp Hill.
4SO—11 Ruby St., Ekiben, South Brisbane.
4SM—14 Mile Cook Highway, via Cairns.
4TB—Stoneleigh St., Coorparoo.
4WO—31 Park Rd., Yeronga, Brisbane.

VK5AK—125A Grange Rd., Beverley, Kilkenny.
5JD—49 Farnham Rd., Keswick.
5JF—132 Winston Ave., Cudmore Park.
5JT—15 Patawilonga Frontage, North Glenelg.
5LS—43 Rose Place, Springbank.
5PK—Rose St., Cudmore Park.
5RA—c/o. P.M.G. Department, Station 5DR, Darwin, N.T.
5SB—118 O'Connell St., North Adelaide.
5UX—Kulpara.

VK6AZ—11 McMillan St., Victoria Park.
6BG—7 Hooley St., Swanbourne.
6FB—37 Sixth Ave., Bassendean.
6GU—94 King St., Boulder.
6GY—129 Abbett St., Scarborough.

6JN—Meckering.
6PX—Hawkestone Rd., Roleystone.
6WL—Cumming St., Brookton.
6XI—c/o. C. Robson, McCallum Cres., Applecross.
VK7PJ—"Brookside," Main Rd., Moonah.
7TE—75 Mayne St., Launceston.
VK9PJ—c/o. D.C.A. Madang, N.G.

Deletions—

VK2QL—Station now operated under VK4QL.
2AAF—Station now operated under VK5DK.
2AMH—Cancelled.
2APA—Station now operated under VK4AL.
VK3BL—Cancelled.
VK4AE—Cancelled.
4SF—Cancelled.
4WR—Cancelled.
4ZT—Cancelled.
VK5RG—Station now operated under VK2ARQ.

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FEDERAL QSL BUREAU

RAY JONES (VK3RJ), MANAGER

The new postal address for the Venezuela QSL Bureau is Radio Club Venezolano, P.O. Box 2285, Caracas, Venezuela.

Brian Woods, ex-VK4ZI, of Thursday Island, was recently in Melbourne spending a well earned vacation. Brian, on resumption of duty, is scheduled to commence at the A.W.A. Station at La Perouse, Sydney. We will probably soon hear from him under a VK2 call sign.

The R.E.F. staged a Contest on 25th-26th February for c.w. and on 4th-5th March for telephony. Information of the event did not reach VK in time to give publicity to same.

A unique method of acknowledging QSLs has been devised by SU1CR, who on receipt of a card stamps the reverse with a rubber stamp impression reading, "SU1CR many thanks for QSL," and a further stamp impression with blanks for date, RST, time, band, etc. A final stamp impression, "Return to sender" is then placed on both sides of the card.

Felix, FK8AC, Radio Engineer in charge of communications in the New Caledonia area, has been busy conducting tests with Paris on 20 Mc. telephony with a view to the opening of a public service. Further tests are scheduled to take place during April and May. FZN on 20095 Kc. and TQA7 (Paris) on 20980 Kc. from 1000 to 1200 G.M.T. daily. Later a telephony service with Australia is proposed. The transmitters used run 10 kw.

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NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester Street, Sydney, at 8 p.m. on Friday, 24th March. The meeting was well attended and visitors present included 2WH, 3CB and 7CL. The main business discussed was agenda items for the 20th Federal Convention, held in Melbourne over the Easter period. Mr. J. M. Moyle was N.S.W. representative and Mr. J. Corbin (2YC) official observer. The President, Mr. H. F. Treharne (2BM) was obliged to leave early in the meeting and Mr. J. M. Moyle (2JU) carried on until the meeting was closed at 10.30 p.m.

COALFIELDS AND LAKES

2RU very busy at present with work, but manages to keep a check on all bands though. Major won't miss anything that breaks on the v.h.f. bands. 2AEZ been swotting and sat for his b/c ticket, here's luck Ern. 2KR still holidaying in the vicinity of Urunga, so guess Cec is just making sure of being there. 2AMU seems mainly interested in stars these days. Len has some nice equipment to follow his new hobby. After some time on 10, 2TY tuned up on 6 the other night. 2VU has at last got his new ladder mast up and 6 metre beam on top, would be pleased to receive any reports. 2JZ has added 10 feet to the tower and will put a new beam on top. 2JZ and 2VU are only about 100 yards apart and do some visual signalling from their respective towers. 2ANU last heard on 80. Since the last notes the Coalfields and Maitland gang have had an emergency net meeting and City Engineer of Maitland, 2ADX, supplied information that was an eyeopener with reference to what can take place during Hunter River floods. The emergency net has a practice run each month, nine stations participated in the last one, and anyone interested should contact John Traill (2XQ) at West Maitland.

2KF is on holidays and between contacts is swinging a paint brush. 2KZ trying out a super and converter, the "blooper" having finally given up the ghost on 50 Mc. Max also talking of higher power and is getting some simple gear ready for emergency work. 2PZ still not on the air, but making progress with the gear. 2KQ is back on 6 metres after six weeks' absence; you will probably find Jack on 80 in the winter. 2ADT been a very busy man in more ways than one—not a bad cook; hope the YF is well again by this OT. Made a 144 Mc. record with 2BO at Bowral. Doing a little on 80 and grabbed a new country on 10. 2YL hopes to leave in a day or so for Urunga with 2ADT, been trying receivers out for a few weeks between jobs for the XYL.

> It is regretted that Western Zone notes are not available this month. Zone Officer Hugh Stitt (2WH) and many others have been active in emergency working out West for many days now. They will appear as usual in the next issue.

NORTH COAST AND TABLELANDS

The W.I.A. North Coast Convention to be held at Urunga over Easter is the talk of the bands. 2MM and 2KR were early on the scene and had a week's fishing before the "do" started. 80 is active and the N.C. gang are having QRN and QRM free QSOs. 2RK has a new antenna with improved results. 2ZY now on 6 working with the Richmond River gang 2LH, 2ADE, 2WC and 2AGM. 2ASO, Kyogle, active on 40 c.w. only. Nothing heard of 2TG; if you read these notes Jim please let's know what's cooking with your DX, etc. 2ZS, 2ASF, Kempsey, very active on 40 these days, working hard organising the Convention. Col very pleased to know that the Grafton's Girls' Band is 40 strong, will be at Urunga during the Convention. 2PA has another harmonic—YL. 2SH, 2DS, 2WC, 2AEY and 2AKI not very active. 2AWS heard on 40 only.

2DK and 2JC have nice signals on 40 and 80. 2WT working Gs on 20 with his vee beam with the greatest of ease. 2ZX heard on 40 every night with an S9 signal. 2TB the most active Ham from Grafton. 2WQ mostly listening and doesn't miss much. 2EA had a snake in his rig. Leith beat the snake out of the shack, fired two shots at 2 inch range and then finished killing the reptile with a stick—should have tried some of that "super modulation" on him!

2ARY not very active due to sickness. 2AAP works all stations with his No. 11, especially on 80. 2AJB keeps Coffs Harbour on the map; he is a keen Ham, has re-built new Rx and now putting very solid signal out. 2DX, Macksville, active on 20 only. We all hope to let you know about Urunga in the next issue. Stop Press—2OF has bought a horse, age unknown, but now delivers the mail house to house, the horse is receiving more attention that the rig these days.

HUNTER BRANCH

The highlight of the month was undoubtedly the Urunga Convention and members from this Branch who attended had a marvellous time. A detailed account of the doings will appear later. Our President, 2CS, has been on holidays in VK3 and did the usual rounds. 2NX, 2UY and 2VJ all sat for their 1st class commercial tickets last exam. All have their doubts about the code, but we sincerely hope they make it. 2NX incidentally, is out of his time at the steel works and looking for a new job. That ticket will help some Shorty. New Secretary, 2LV, not too active of late, on 40 and now talking of 20; got a big shock when he saw his S9 form on TV screen recently! 2ANA at last going QRO, has the big power supply underway, working again on 20 with F/D. Had a great time at Urunga with 2AGD, 2XY, 2AHA and 2UY. What a trip!

2CW completed a little more work on the rig—heard talking of cars recently. 2XT took some of the local gang up to Maitland recently to attend meeting of Emergency Network Stations, highlights of meeting being a talk on the effects of floods on Maitland by City Engineer, Jack Brand (2ADX) and 2FP caught drinking milk shakes in a Maitland cafe—things are bad! 2AGY knocking over the c.w. DX on 20 with his vertical, but is local QRM bad? Ask Fred! 6 metre converter working, so looks like another v.h.f. man. 2NL still off work and inactive.

One of the silent blokes, 2AWD, attended recent Hunter Branch meeting, try and do it more often Arch. 2CI recovering after operation, taking it easy around Sydney. 2SO only heard on 40 with QRP rig. 2AFS still plugging away on 10; new countries very scarce. Has a new w.s. beam on 10. Bob was stuck up the tower for hours on end, neighbours thought there was a pole sitting exhibition going on. 2KB now has an office in the city, wonder if he will use that rig again; it has been a long time between QSOs. Latest reports indicate 2FX would make a fine auto-electrician. 2KG putting finishing touches on super frequency meter. 2MC has shifted to Kahilah—busy building new house and miniature rig.

2PT and 2AMM worked lots of Ws in W/VE Contest with fixed beams and QRP. 2ASJ still piling up QSOs on 40 phone, will go on 20 as soon as the beam is up. 2BZ still concentrating on v.h.f's, working cross band 6/2 to Sydney. Helped to put up 6 metre beam at 2CX's at Nelson Bay. Jack, by the way, is using p.p. 807s on 6 and three elements. 2ADT is responsible for the rig. 2ADS heard on 6, has the 10 beam well under way. 2OS still working on the lattice tower to be 40 feet high; the 6 metre signal will surely go places when it is finished. 2UF only on 2 in recent weeks, what is wrong with 6 metres Frank?

2TE's nice 10/20 set-up still working well, especially with the Europeans in the afternoons on 20. 2PQ has double super Rx on way, but why two r.f. stages Tom? You wont know what to do with gain. 2CN had a spasm on 20, experienced some trouble with the fixed beam. 2AGD been on holidays up the North Coast, went on from the Urunga "do." 2XY very pleased about working G land on n.b.f.m. on 20, been catching up with some H. G. Wells stuff of late and wonders if there are any fellow "brass pounders" on Mars. 2AA1 still working plenty of 40 metre stations. 2AAM not too active, flew to Urunga. 2ZC worked ZS and G from a single CQ on 40. Europeans there every morning if local QRM not too bad. Jim's phone on 20 got the spider webs under control during the final week-end of the W DX Contest.

The Hunter Valley Emergency Net is proceeding along nicely under 2XQ, two practice runs have taken place on 3501 Kc. linking stations from Muswellbrook down, big things are planned for the future. 2ADX threw a great deal of light on how much rain is required to flood Maitland. Although QRL, Jack has been heard on 80 using an 807 buffer. 2AKP working 40 and 80 and very keen on the emergency hook-up. 2DG's hobby still c.w. DX. 2VU has an excellent sig on 6 from Singleton, works everything going.

2TY has 3 over 3 on 2 metres, also uses 40 watts to an 807 on 80 and 10. 2ANU's 4 watts certainly goes places on 80 and 6. Ken will be watching the river rises for the emergency net. 2ANL, late of Newcastle, now of Maitland, and has been heard on 40. 2JZ still QRL and not heard much. 2AHA hopping about from 6 to 80, chasing notes for "A.R.;" can anyone help? Had a great time at Urunga, congrats to 2XO for his organising of the "do."

SOUTH COAST AND SOUTHERN

We learn from 2PI that 2TV, who has been in hospital for four months, has returned home. 2TV was active whilst in hospital, but activity was curtailed due to the high noise level from diathermy machines in near vicinity. The many friends you have extended good wishes for a speedy convalesence OM.

Had pleasure of meeting 2PM who displayed his new gear which is of extremely fine business construction. A double conversion Rx is built and works like the Rx we build castles about. 2ANR was also at 2PM and quite a bit of Ham chatter took place. 2ANR is technician at Parliament House and is also a very keen Ham in spare time.

2PI has his gear nicely set up and a beam for 20 metres will shortly grace his QTH. 2II gave Les details of his gear during a QSO and when I visited Les two hours later he was still looking starry eyed and gasping about push buttons, band-switched, etc.

2JQ heard relaying the latest weather report to Hugh at 2WH who is at the business end of the Lachlan River. Monty's sig always seems the same, always good quality and solid copy. It's an ill wind sorry, I mean rain that does no one any good. Mr. Taylor, better known as 2TC, found that it was hopeless trying to do work around the property, so decided to come back on the air. Much rebuilding and re-organisation of present gear is the order of the day and 50 Mc. will be given a caning very shortly.

George and Les Templeman appear to have their gear under control and both are putting out excellent transmissions from the Collins ATR13s. 2AFV is having trouble with sheep who are affected with some complaint due to the heavy and continous rain. 2ON and wife spent couple weeks holidaying around southern N.S.W. and called in at Yass on their way home. 2ON sports a mast 60 ft. high and also sends a nice drop of c.w. on bug. Ham Radio played important part in providing a link during the flooding at Wagga. 2BW operated on 40 relaying the BC station. The signals here were received much more strongly than the BC station and the quality was quite good.

2AID did not fare so well and his gear was scattered over quiet a wide area at many of his friends' homes. He is active again and no doubt news from Wagga will be sent along for the next issue. The old man of Albury, 2OJ, is active and boasts two rotary beams 20 and 10, 49 watts input with Class B modulator, "640" Rx, and a 100 ft. aside antenna for low frequencies is Noel's set-up at moment. 2QD now out of hospital and back at work; has big plans for new rig. If anybody in Albury knows where a shack attached to a five roomed house is, please end 2QE's search.

2AOW and 2ANQ are planning some 144 Mc. gear and have talked 2EU into having a go on that band. 2ANQ QRL with paint brush around shack. Only other active stations in Albury are 3BP who is delving into the innards of AT5/AR8s and 3HP who is active on Sunday mornings.

At 1815 hours 14th March, when 2EU had just switched the XYL's radio on expecting to hear her favourite serial, was quite staggered to hear, "This is VK3XYZYZ over for VK2BZYZ." Rather astounding to say the least. Continued listening proved it to be the radio serial still in progress with some introduction of Ham Radio to make it more interesting. When the mention of Wireless Institute, plus a few Ham phrases put in for good measure, the serial didn't become any more interesting. Impression is that a couple of Hams, using walkie-talkie gear, were probably searching for the lost hero in the Strathbogie Ranges.

Hugh, the new Zone Officer for Western, is doing excellent work on 80 metres assisting Eastern Command Headquarters and the Army ducks in the flooded area of Forbes and Cowra. QRM from ZL stations is causing delay in the handling of traffic and Hugh is informing those who are operating near the frequency.

On behalf of this zone, I extend congrats to the operators of 2AMV/P on there success in the field held recently, extra good show John. Should imagine trophy will adorn a prominent place in 2AMV. 2WP is having great trouble with the house pet, understand it is a muscovy duck. Latest news to hand reveals that said duck unable to negotiate boggy condition in Wollongong (40 inches since Xmas). 2ALS and 2DO are thinking of 144 Mc. and have managed to get hold of gear that should with minimum of trouble operate down there.

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VICTORIA

The annual meeting of the Division was held on 5th April in the Melbourne Technical School and for once got away to a good start. There were approximately 200 members present, also the President of the Hunter Valley Branch (VK2) of the W.I.A. The meeting was chaired by the Vice-President, Mr. W. Tregear in the absence of the President, Mr. Cunningham, still abroad. The minutes of the last annual meeting were read and confirmed. The Treasurer then presented the balance sheet and members were pleased to see that the Division was solvent. After discussions and questions as to the various items on the balance sheet, it was adopted. A very fine Presidential Report was read by Mr. Tinkler giving the activities of the Division for the past year. Other reports presented were the Magazine, T.A.C., Communications, and QSL Bureau.

The following were elected to office: President, Mr. Bert Simmons (3GS); Vice-Presidents, Mr. W. Tregear (3TX) and Mr. L. Moncur (3LN); Council: Messrs. C. Gibson (3FO), D. Dyer (3DY), R. Dowling (3XD), R. Jepson (3JI), G. Dennis (3TF), S. Dixon (3TE), J. Groves, R. Tozer (3RT). Messrs. J. Bail (3ABA) and K. Magee (3KM) were appointed scrutineers.

After a short break the President thanked the members for electing him as President of the Division and he hoped that he will serve the Institute as his predecessors. The Assistant Secretary reminded the members of a series of lectures to be given by the Melbourne Technical College on television, antennae, and electronics. The course is to commence on Monday, 22nd May, and it was most gratifying to see quite a large number of the boys put their names down for enrolment.

All members should have by now their account for the yearly subscription and the Secretary would be pleased if these accounts were settled as soon as possible.

Bill Mitchell (3UM), the Federal Secretary, has resigned. He is going abroad and the Institute wish him bon voyage and a safe return to his native land. Max Hull (3ZS) has been appointed in his place.

We notice that the transmitter room at the club rooms has been cleaned out. We wonder what is going to happen—VK3WI? The Federal Convention has been and gone and by all reports was an unqualified success.

TECHNICAL COLLEGE LECTURES

It is proposed to hold a further series of lectures at the Melbourne Technical College and it is necessary for members intending to attend these lectures to advise the Secretary of the Victorian Division by Monday, 8th May.

The lectures will cover the following subjects:—
Transmission lines and aerials,
V.H.F. to Microwave Principles,
F.M. for Communication,
Pulse Systems,
Television,
Modern Radio Naviagation Aids.

"Transmission lines and aerials" will cover the fundamental theory of transmission lines, line resonance, use of standing waves for impedance measurement and matching, matching devices, beam forming, aerial arrays, etc. This material serves as a fundamental approach to ultra high frequencies.

A series of 14 two-hour lecture-demonstrations can be arranged, commencing on MONDAY, 22nd MAY, at 7.30 p.m. The fee for the course is to be £1/1/- per head.

NORTHERN SUBURBAN AMATEUR GROUP

A very successful meeting of the lads was held at the residence of 3MZ on Friday, 31st March. Congratulations to Reg and Glad for a grand job. Roy Haines (3RU), our jovial President, occupied head of the table as usual. Alan Stow (3AS) has made arrangements to bring English engineers to our meeting soon to let us know all about the good work done during the last war by our G brothers.

Three of our members were nominees for the State Council. These three fellows were called upon to air their views through much QRM. A motion of congratulations to VK7 from VK3s concerned in the recent Bass Strait crossing on 144 Mc. was unanimously carried. It was a grand night and thanks Effie (Mrs. 3ABJ) for your assistance to Glad.

THE MOORABBIN RADIO CLUB

The monthly meeting of the above club was held in the club rooms on 17th March when 40 members and visitors were present. The President, Jim Keens, occupied the chair. The business side of the meeting was dispensed with in quick time owing to the special agenda item, which took the form of a practical demonstration of "Home Recording." The demonstrators were 3IF and 3SB. These boys brought along "yards of gear" and during the meeting set the apparatus up. The principals of recording were ably explained by Keith, whilst Bert was the "labourer." After a few questions were asked, Keith then informed the meeting that Bert had recorded the meeting and invited those present to listen.

Great was the astonishment thereof when the President and Secretary heard their own voices eminating from the speaker. (Don't blush Jim, you have a marvellous "mike voice.") Bert then came to light with a talk on amplifiers and he certainly knows his audio. As a finale the mike was passed around to the members and they were asked to record their voices as Keith is going to present the record to the club.

A vote of thanks was recorded in the minutes to these two boys for their very fine effort. Next meeting will be on Friday, 19th May, when a lecture on "Relays" will be given by Stan Levings (3NS).

EASTERN ZONE

During March and April a large slice of the zone suffered considerably from widespread flooding, even as far afield as Omeo, where the redoubtable Mr. Williams, (3WE) once again kept the town in contact with the outside world when the telephone services were disrupted. Bill spent quite a while working for the P.M.G., sending telegrams and things and the 809s performed nobly. Nice work, Willie.

In Maffra, where trunk lines were also not so good, 3SS carried out similar work. Good going chaps, we'll get another trophy, yet! The writer, 3AHK, at Tinambra, also suffered somewhat, being completely cut off from the outside world for a week because of large expanses of water, very deep, very wet, and very cold. The ancestral acres were well under water except for about three acres on which the cattle had to exist. The worst flood for many years, and conditions in the district are easily half as bad as the press claims. Some journalistic legs have been stretched at times.

Throughout the zone the boys have maintained listening watch on the 7002 Kc. emergency frequency. A certain VK—no State mentioned—complained that some of the Hams, working on this frequency during the flood, were interfering with his DX chasing, too bad!!

No word from the Sale boys as to their doings in flood time and if I don't get some news from them for next notes, I will take drastic action—that's a promise, boys, not a threat! 3US/3VL have left Bed Hill and are at present visiting 3WE at Omeo. 3LY has moved into his new house at Sale and hopes to be on the air when everything is ship-shape. 3SS and 3QZ visited 3GO who is building up a nice rig, rack and panel, which should be good if and when Graham gets it cranked up. We have two new Hams in the zone, passed their exams. in January, D. G. Anderson, R.A.A.F., East Sale, and R. F. Miller, at Warragul. Our Secretary, 3QZ, is desirous of getting their names on the dotted line for the W.I.A.

3ADC has built a new shack but won't be on the air for some months. He is a marine engineer by profession and is off to sea in a tanker shortly. The zone expects a few gallons of free petrol too! (we hope.) Any member of the Eastern Zone who would like to get into our Sunday night hook-up, but is short of a 3650 Kc. xtal, should contact Ron Jardine, (3PR), Box 52, Leongatha. Ron is now v.f.o. and can spare the rock. 3TH had a nasty mishap when the screwdriver slipped and went under a finger nail, but we expect him to recover very soon. 3AEP and 3LV are regular customers on Sunday nights. Len is still getting the house—and rig—in order. 3AHK has a pair of New Australians as neighbours and thinking of taking out a D4 call, when he learns enough German, hll

In conclusion, the Eastern Zone boys take a very poor view of the suggestion that the weekly 3WI broadcast should be altered to once a month. We consider that the broadcast, even though, at times, it may not contain a great deal of news, does hold the interest of members and if any alteration was made many Hams would miss out, through forgetting which Sunday was which. Very often, it is the only way that we, in the country, can find out just what is going on. Anyhow, we know that 3IK, who is regarded with great suspicion in this zone, since the Morwell episode, is behaving himself for at least an hour once per week! (Now go ahead and sue me, Ian!)

CENTRAL WESTERN ZONE

Our 144 Mc. addict, one Linton Brown (3ARL to the b.c.l's) was wildly excited over the VK3-VK7 break-through on 144 Mc.; the dreamy look in his eyes as he earbashed your scribe could only be likened to a mother looking at her first born, so much so, that as a result of a visit to 3AKW Lin had Bill deep in study of 144 Mc. dope, reports also to hand state that 3HL was forced into taking the 144 Mc. mike during a visit to 3ARL, but I hope has sufficient strength to resist the virus. The 3ARL, 3DP, and 3AKP 144 Mc. triangle is now functioning with the smoothness of a telephone service. All the boys have "Lenfo" beams and are to be congratulated on their results, anyway it is the only band they can work on at night between Deep Lead and Stawell.

3HL is now definitely in the middle of a good burst of Ham activity, and can be heard most lunch times swopping old time yarns with 3KR and other old cronies. There is no doubt about it, the bug never dies. Many long years ago, 3HL and 3BQ used to run 5 metre scheds between Melbourne and Callawadda for twelve solid months. Allan also hopes to get some decent gear built up before the burst dies down. At present he is using a simple set-up running 5 watts to a 6V6 modulated by a 6SN7. 3HQ also put in a short burst with Allan, but at present is very QRL with a brand new junior op.

3ARM has been making a few changes on the rig and cleaned the phone up considerably. Bob also put the Tx down to 20 and got some good reports from a short burst. 3AJO is packing his gear and removing it to a new QTH in Bendigo, so Ted and Wally will have some competition other than the power lines. One wonders at times just where all the Zone Hams vanish to; one is fortunate to hear one on a given band at a time.

The beam at 3AKP is now nearing its absolute completion. Keith has the motor mounted now and all should be ready for push-button control. The neighbours wonder about the motor QRM too, but never mind Keith, a certain Ham not far from you was not game to put his head out the door on a recent Sunday night. 3TA, I believe, had a short burst on 40 awhile back. Sorry I did not hear you Byron, apparently Horsham is still on the map. How is the tower and beam?

Our worthy President, 3ON, has been enjoying a spell of sinus trouble lately but from the look of him has stood the strain and came up his usual self. George would like to remind all you bright and brathy zone members of Byron's offer at the last convention, of prizes for v.h.f. work, and technical advancement on 3.5 and 7 Mc. They will be worth working for, so what are you doing about it Chaps? Do you think we could present him with so many results that he will be completely stumped to pick the best?

There is also the zone hook-up on 7150 Kc. at 10 a.m. on the second Sunday of the month, that will be 14th May.

GEELONG AMATEUR RADIO CLUB

A pleasant evening was spent by members at Portarlington where they were entertained by Mr. and Mrs. Arch Woolnough (3BW). Interest was shown in the 40 ft. windmill tower on top of which was a G8PO rotary beam antenna which has recently been erected. Some of the members climbed the tower to inspect the beam. Members had a chance of viewing the Tx with which Arch works all the DX. It has a pair of 829Bs in the final. The Rx, which is an AR88, was admired by all. A new country YS2AL in El Salvador was contacted on 20 metres. Members were then the guests of Mrs. Woolnough at supper.

The following meeting members welcomed a new member, he was Mr. Graham Smalley. Also present at that meeting was 3WQ whom members were pleased to see. The night was in the capable hands of 3ALW who gave a talk on the American walkie-talkie SCR536B which was passed around for inspection. The following Monday evening members visited the television demonstration which was held in Geelong and were shown over the entire plant after the show for the public was over.

SOUTH WESTERN ZONE

3APG has sprung a surprise on his colleagues in Geelong by acquiring an Eddystone "680." I wish you luck with it Phil and hope you have many happy QSOs with it. 7 Mc. c.w. DX has

been proving interesting for 3IC, nice work Bob with the ZS etc. The c.w. reports here tell me there is nice DX on 7 Mc. c.w., but as it is virtually an unknown language to this Ham, I wouldn't know (yes I hang my head in shame). 3ALO still improving his modulator, you must be nearly as fussy as a cobber of mine, Fred. 3AKE still on 144 Mc. and has now been joined by 3ABE who is using an SCR522 rig with good results. 3BW has erected a G8PO and 3HG dropped in to have a peek at it. Understand 3HG was portable recently, was it Pt. Lonsdale Neil?

3CM and 3ABK seem to have shaken the homicus viricus off for a while. 3BU has been operating a Type 3 Mk. II. from the front of his house, but thinks his antenna is letting him down. 3SE operated portable from Warrnambool over Easter and 3AMH took 3ALM and 3ASV to Mildura and operated portable there. Very good results were obtained all over VK with 9 watts input to folded dipole. Lloyd found the roads unusual and succeeded in getting bogged in the A40. 3AMH found a water melon and proceeded to spit pips while 3ASV discovered an aptitude for golf and this sport looks like displacing the fishing pastime.

A chat with 3QR recently, he tells me his 20 metre beam rises soon, but will be different to the others in that the tower will swing down to lower the beam to the ground for adjustments. A very neat idea and ideal for experimenting. 3MH heard occasionally on 7 Mc., but rarely on 14 Mc. now. Suppose Mart is still knocking over the 7 Mc. c.w. DX. 3AVK heard punching the key on 14 Mc. c.w., but finding that two can live as cheaply as one, is not heard quite so often. Congrats Vic and best of luck.

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QUEENSLAND

The 18th Annual General Meeting of the Queensland Division took place at the Y.M.C.A. Building on Friday, 24th March, 1950. There was a fair attendance and visitors to the meeting were G3CUD, VK1FE, and VK4GH.

The election of office-bearers for the coming year resulted as follows:—President: 4FP; Vice-Presidents: 4KB and 4VJ; Secretary: 4TB; Treasurer, 4WJ; Station Manager, Technical Director and Emergency Communications Manager: 4FN; Country Representative: 4UX; Librarian: 4WF; QSL Officers: 4EL and 4RC; Sub-Editor: 4SN; Student Representative: Mr. Moore.

180 ballot papers were sent out and only 78 were returned. This is a very poor response and it is difficult to understand why members do not take a more active interest in the government of the W.I.A.

PRESIDENT'S REPORT

In his Annual Report, the retiring President, 4AW, said: "This is the occasion of the 18th Annual Meeting of the Queensland Division. The past year has not been one of tremendous activity, but more of a settling down period. Overall membership has remained much the same as at the beginning of the year except that country membership has increased. The present position being that the country has a slight lead on the city, which places increasing responsibility on the country representative.

"Activities during the year have been confined to the various contests held, and have been reasonably supported. No D/F or field days have been organised during the past year, but we would do well not to neglect this aspect in the coming season. V.h.f. activity took a sudden burst on 50 Mc. last season and several members succeeded in working all States and becoming eligible for the W.A.S. Certificate. Several did very well during the recent Contest, one member having made the highest score and winning the trophy. 144 Mc. activity has been very spasmodic and needs a boost by field days or some sort of organised activity.

"Several more members have worked their 100 countries and have been added to the DX C.C. list.

"The Emergency Network has been established and is now on a fairly sound footing. Exercises have been conducted and participants have been very enthusiastic and should the occasion arise, we are sure that those responsible will put up a good performance and prove their worth.

"Unfortunately the price of 'Amateur Radio' had to be increased, but this was understandable in view of ever rising costs. The publishers now appear to be reasonably happy as the magazine is paying its way. Some local facts and figures however have been unearthed which will be passed on as food for thought in an effort to reduce production costs. Some articles have been submitted by members of this Division and were very acceptable, but more are needed.

"Constitution.—The rules of this Division, as Council has been aware for some time, need revising in many ways, and it is hoped, with the help of the recently conducted gallop poll and the latest proposed Federal Constitutions, that the Committee assigned the job of attending to this will be assisted considerably in the work and be able to finalise something in the very near future.

"Finance.—The financial position at the moment is not in a particularly healthy condition, although it presents a truer position than at any other period of the Division's history, because now all subscriptions fall due on the one date. Council moved wisely when it decided to reduce its rent commitments during the year and the incoming Council would be well advised to study closely any means of reducing expenses where possible, without seriously affecting service for the next year. We must realise that costs have increased in every line and that values have dropped and the obvious solutions appear to be: (1) close watch to reduce expenses; (2) increase fees; (3) explore other avenues of revenue. One very surprising highlight appears the low cost of QSL Service for the year, £4/12/4. Surely a record low for the service rendered to members. The QSL officers are to be commended for their efforts.

"Students.—Student classes have been catered for on a voluntary basis over the past 12 months. This unfortunately has its limitations. Scarcity of morse instructors and lack of suitable demonstration equipment has not improved the lot of the students. A committee has been formed to look into the possibility of placing the classes on a sound paid basis. It is expected the outcome of this recommendation will be one of the first items to be dealt with by the new Council.

"Zoning.—It is gratifying to see the 4WI broadcasts are being maintained regularly, and that increasing numbers, although not taking part in the hook-up, are at least listening to the news. This feature is the quickest and most logical means of keeping in touch with members, but some thought should now be given to placing more responsibility on Zone Managers to act as relays in order to expand the network scheme, so as to embrace more and more of the members over a larger area. Some consideration will also need to be given to the members in New Guinea. The outcome of the gallop poll will of course provide a guide as to how this would best be achieved.

"I cannot let the opportunity pass without having a crack at the poor response which is forthcoming when positions on Council are available each year. Men elected to these positions cannot carry them on forever, and we should have members willing to fill the gaps when the occasions arise. It is not sufficient to become a member and sit back and turn on a tap to get all we can out of it; we should all be prepared to assist in the conduct of the Institute. I will admit that some of us may not be suited for some job or may not be able to spare the time, but I would suggest that for activities of short duration during the year small committees with an organiser be appointed so that (1) it relieves Council members whose time is already occupied; (2) it gives others a chance to show their organising ability.

"In conclusion, gentlemen, this concludes my 10th year as President. I think I have had a good innings. I have not grown tired of the job or disinterested, in fact I will always be interested and only too pleased to take part on committees and other Institute activities from time to time. I have met many here in the Institute and made many friends. It has been a pleasure to work with present and previous Councillors and the support given by members has been, with very few exceptions, all that could be desired."

ANNUAL DINNER

The 18th Annual Dinner was held on 25th March with an attendance of 48. The retiring President, 4AW, occupied the chair. Visitors included Mr. P. Andrew, Mr. Lynham (R.I. Dept.); Mr. H. Sprenger (I.R.E.), as well as representatives from C.S.I.R.O.. Mr. Nicol and Mr. Russel F. Roberts. Country members present were 4GH from Maryborough, 4XR, 4CR, 4RA from Gympie. As members arrived they were given an opportunity at guessing the frequency of a 7 Mc. xtal, 4RC was the closest to it with 7132 Kc., the exact frequency being 7135 Kc. The prize was a midget electric iron.

4RT proposed the toast of both the outgoing and the new Council; 4AW responded. The toast of the R.I. Branch was proposed by 4FP and in reply Mr. Andrews said, inter alia, "congratulations to the old and new Presidents and Council for their help and I'm sure from our point of view the W.I.A. is in good hands and will remain so. You come to us and we go to you for help. I think there is every reason to expect that the present conditions will remain. The Departmnt looks to the W.I.A. as the voice of Amateur Radio. Changes and new ideas will have the sympathy of the Department. We stepped up inspections a bit so as to get a clear picture of what is what, but I can assure you we rely on Hams to respect the regulations. I think the new idea of the committee bringing under notice good work done by Hams is an excellent idea."

A competition to write down 10 prefixes from a list read by the President, then 10 countries from list of prefixes read was won by 4RC, who received a 5-inch speaker. Competition to write down the States of the U.S.A. gave 4PR a pair of 6A8s and a 5R4GY.

As we write these notes we have learnt that 4EL has been transferred and relinquishes the post of QSL officer. Two nominations have been received, namely 4JF and 4PR. A ballot is to be taken.

MARYBOROUGH ZONE

Manager 4GH.—4KG gave away his quad and is now using a G8PO. 4QH heard only on 7 Mc. c.w. Local lads have organised a continuous DX Contest, result for the first month being a tie between 4AI and 4BG. The trophy is a handsomely mounted transmitting tube (burnt out). 4AI has overcome his b.c.i. trouble, hopes to get his telephone pole erected soon. 4BY making a comeback on 40 and 20.

DOWNS ZONE

Manager 4CG.—4CH has forsaken the Ipswich Zone for the colder climate of Warwick. 4TY is active in emergency net. Heard 4DA working FN8AD. 4LB holidaying in VK5, hopes to renew activity in April in the Ipswich zone. 4WY very active on 40. 4KK still active from Milmerran. 4SG re-building house in lieu of rig. 4RJ firing up again on 14 Mc. 4CG praying for rain, it takes only a "filmy whisp of floating mist" (Longfellow) to kick off his private S9 power leak.

In conclusion we express our thanks to all those who gave us their support in the recent ballot.

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SOUTH AUSTRALIA

The monthly general meeting for March was held to a somewhat smaller audience than usual, in fact by looking hard, one could find a couple of vacant seats, a somewhat unusual occurrence these last few years. The reason was not hard to find, as word had leaked out that the agenda was to be discussed at length, and need any more be said? The members who attended in the hope that they would be able to see the films which were to be presented and then leave, were dealt a dirty blow by the fact that the agenda was discussed first and then the films were screened. No description of the meeting is necessary therefore, except to say that most of the members sank into a state of somnolence during the agenda, revived slightly for "smoko" and QSL cards, and came back to normal to appreciate the excellent short subjects presented under the able hands of projectionist, Gordon Bowen (5XU).

A slight diversion was presented by 5PS (I must get in somehow) who brought up the matter of trifling and sometimes unnecessary "Blisters" from Advisory Council members. 5JD, who makes it a principle to oppose anything suggested by 5PS, rose to his feet amid the cheers of the assembled members (who scented blood) and proceeded to speak against the matter under discussion. So strong is Jack's sense of fair-play, "ham spirit," and regard for the underdog however, that his speech of opposition became a speech of support, and did much to bring the matter to a satisfactory conclusion. To cheer up those who had hoped that some fireworks might come of the discussion. Jack did say to me after the meeting, "One of these days I will take a poke at you, you old so and so." Such disgusting conversation!

Among the very welcome visitors were Messrs. J. West, E. Hyman, M. Burford, J. Parkinson, J. Iceland (3AJI), Ernie Zahmel and J. Till (4MU), Paul Rohan (OK1VE), and D. Kelly (ex-2AAF, now 5DK).

5GD told me at the meeting that he had received a letter from Dr. Adey, who is now in England, and that Ross had wished to be remembered to his "fat tummied" friend. If I have told him once I have told him a thousand times that it is not fat, it is simply muscle.

There is no doubt about the power of the press, this time last year, with suitable probings from me in these pages, nominations poured in. This year, with me saying nothing in case I was tipped out, it looks as if Council will have to co-opt several members because of a lack of nominations.

I hate to keep referring to 5WM's pipe, but I am told on good authority that one night recently he went swimming at Semaphore and dropped the said pipe on the shore. Next morning he went down and found the pipe about three inches from the edge of the water, with several interested spectators amazed that the water would not come any higher, try as hard as it could. If only King Canute could have had that pipe! Talking of pipes reminds me that the one that 5RT was smoking at the meeting would give Wyk. a shake-up, but at least it did not "tiddley-wink" as high.

Everybody will regret the fact that 5LW has decided to resign from the Council owing to pressure of business (no not monkey business). Ross has done a good job of programme arranging, and his place will be hard to fill. 5MD has also decided to throw in the towel and will vacate the secretarial chair at the end of this month. It is my tip that 5XU will be the new Secretary, with 5TL as his deputy. I could be wrong, but there you are.

The 20,000 QSL cards presented to the VK5 Division by the South Australian Tourist Bureau are almost ready for distribution and the sample

cards on view at the meeting look a splendid job of work. It is suggested that these cards be used for DX contacts and for people like me who cannot work DX, then use them for Interstate contacts.

I don't know whether to thank or query the VK4 who wrote a letter of appreciation to me and said that he had never read anything like the way that I write it. A kick in the pants or a pat on the back OM? Which reminds me, there have been no stiff letters on brown paper lately from Federal Secs., Federal Pres., Editors, or other upper crusters, disgruntled or otherwise. Can it be that I am losing my punch!

5WF tells me that he shoved up an aerial (a long wire) built to very rough dimensions, and worked the world for a couple of nights. Pulling it down, he pruned it with meticulous care, hoisted it up with mathematical precision and has worked nothing since. You amaze me, my dark friend.

Please skip this next paragraph dear reader, it is a private message to the Editor. Tommy, last month I asked you to speak nastily to that VK3 who was talking about me on the air, but apparently you forgot, because he was on the air again this month, and when another VK3 was telling my brother-in-law that he always read the VK5 notes and thought they made good reading, the other nasty VK3 broke in and said, "Break it down old man, if the local VK5 scribe hears that, we will never hear the last of it." He did Tommy, true as true.

Somebody wrote to me and said that my paragraph in the local paper re 5MD resigning from the secretaryship of the VK5 Division, owing to pressure of business, was capable of misconstruction. Recent events in VK5 give that the lie I think! A busier man never existed at the moment, with all those certificates of membership to fill in.

I received a copy of the Northern Net "Splatter" and boy oh boy, what a "new look" copy it was. Congratulations Les, it does you credit and I hope it turns out a huge success. Initiative like that deserves all the co-operation it can get, so rally round this publication gang and help to make it worthy of the Northern Net. How's that Les?

By the time these notes are being read, VK2 will be the scene of a very strong "tiddly-wink," and to put them out of their misery I will let them into a secret. 5WM will be in Sydney by then and by now chaps, you will know, that I have not been guilty of exaggeration. Need I say any more?

Several of my feminine readers have written to ask me just what is the correct procedure to adopt when they speak over the air to other Amateurs. Now this is right up my alley, as I keep a club handy in the shack just in case my sweet and charming better three quarters should decide that she would like to speak over the air. Now the first and principal thing to remember is that you should always burst into an hysterical giggle when you first come on, next, always say in a sweet syrupy voice, "what do I say darling, I feel so silly." This darling business is good propaganda even if you did crown the OM a few minutes before with the rolling pin, it lets the other part of the world hear just how loving you are to each other. Whatever you do be sure to shout into the mike, as this has a very exhilarating effect on the chap at the other end; oh, and before I forget, always say when you are about to finish, that you must hurry away and have a look at the goodies in the oven. This always has the effect of making the other fellow wish that he had some sweet homely soul to cook goodies for him, at least it would if his own XYL didn't use the same line when she is on the air. Last, but not least, when the other fellow says that you have a charming voice and he feels sure that all the Yanks would come back to you if you called CQ, don't go all kittenish and gurgle and splutter into the mike, just say in a very cold voice, "Oh yeah, I'll bet you say that to all the XYL's you contact," and they will have to throw water over him to bring him round. Actually the best advice that I can give you is that before you come on the air to speak, ask the OM to pull the fuse in the modulator power supply, and you will be surprised at the improvement all round. Now write to me again my dears if you want any more advice, and honestly I think you have a charming voice and I'll bet that all the Yanks would come back to you if you called CQ.

The mills of God grind slowly but they grind exceeding small, and the truth of this well known phrase was borne home to me recently because that debonair and dashing aeronautical ace (or joker I don't know which), Associate Member Robert Turner, of the R.A.A.F., has been transferred from Interstate back to VK5. Naturally, as he has succeeded in winning the affection of my charming daughter, he would like to enter the door of my kitchen intent on continuing to woo said daughter. Said father, however, once publicly proclaimed in these pages that no unfinancial member of the W.I.A. could darken his door. Robert Turner has been away for twelve months and according to all reports has been thumbing his nose at said father and said W.I.A. Said Robert and said daughter are now slowly realising that said W.I.A. is going to play quite a big part in the financial set-up of their lives. You will all pardon my smirk, and also please excuse me rather hurriedly as here comes said mother!

Heard 5MX fighting a losing battle with the QRM in the Yank phone band the other night. He must have been putting in a good signal to W land, because several of them were heard remarking that they would have liked to call him, but they did not feel up to battling with all the local din when other VK5 contacts could be made with much less effort. What was the idea Johnny, feel cheeky?

Had a visit from 5CH from Mt. Gambier recently,—at the best broadcasting station in VK5. 5LR, 5FQ and yours truly took a few hours off from arduous toil to engage him in conversation, and as Jack and Claude went to school together you can guess that they had plenty to talk about. Mind you, Brian and I did our fair share of talking, although my natural modesty kept me fairly quiet.

When I used to go to school I would quite often take the teacher a bunch of flowers and you probably did the same. Like me, it wasn't long before you woke up that it did not pay dividends and you discontinued the practice. Believe it or not I saw Jim Paris at the last Council meeting up to the same game, only it was with 5MD. There was Jim handing "Doc" a small brown paper parcel and muttering something about passing it on to his wife. I suppose that when Mrs. Barbier received the parcel that night she would say, "Isn't Jim Paris such a nice young man." Wouldn't it open circuit you!

5CD is transferring from broadcasting station 5AU at Port Augusta to local 5KA where he will replace 5RF who, in turn, will join the staff of local 5AD. I understand that all these broadcasting stations may be found on the dial if one cares to look, but you know me, ahem! Fancy me giving them a free plug, I must be getting soft.

Recently a number of licenced Amateurs and other interested persons met in Darwin with the intention of forming a radio club. The initial strength of this club would be about thirty members including nine licenced Amateurs, and it was the desire of those present to become associated with the VK5 Division. Good work fellows, and don't forget to forward any notes you may have. The Secretary has written to you chaps with full information.

Talking of letters, that reminds me the dishonorary, sorry, honorary secretary at last has written to me. Certainly it was to remind me that my subs were overdue, but beggars can't be choosers.

5RJ has been heard in the Northern Net again with a very nice signal too, good to hear you again Darc. 5UX is in new QTH and naturally is very busy. Will be on air soon with Type 3 Mk. II. 5AX has been experimenting with voice controlled carrier, and at same time is building a 2 metre stock of gear up. 5XL was also heard in the Net, and the signal was a credit to you Lance. 5VM is wearing larger sized hats since the first issue of "Splatter" hit the streets. Nice work Len. 5DF has been busy carrying out tests with 2 metre gear. 5PH is another Northerner to acquire a Type 3 Mk. II. Thanks for the notes Perce. 5LH is at time of writing down in the city to buy a new motor car. How do you do it Jack? 5AP is also on receiver construction, the results of which are a top secret as yet.

5CY is reported as being missing from his usual air haunts, and any information as to his whereabouts will be appreciated. 5JY, according to my receiver, has been mixed up in plenty of 10 metre DX lately, what are you using OM, it sure is doing a good job. 5MA will be back on the air very shortly according to my spies; the only reason that Fred has been so inactive is because the final tranny is still being constructed, or should I say being reconstructed. 5CO is a new station that will be heard on the Northern Net soon. Welcome OM to Amateur Radio. 5EN has been working plenty of DX lately. Hope they all QSL Ern. 5BC has just returned from a fortnight's holiday from Coffins Bay on the West Coast, and it was a radio holiday too, because he only had a broadcast set with him, but wait a minute, Hughie was holidaying with my Chief, could it be that they were keeping an ear on the two best broadcasting stations in VK5 to see if their hardworking staffs were leaving a few decibels behind on the records instead of squirling them up into the sky. Fie upon you fellows, as if we would.

John Hampel and Harry Vonthetoff (pronounced Vontoff) are both waiting for their call signs to bob up and are falling over themselves to get a carrier on the air. Welcome chaps to Amateur Radio, treat it right and it will always treat you right. 5RE is an old-timer at Renmark who is using a Type 3 Mk. II. with 20 watts input. 5LR and Hurtle used to wear the skull and crossbones insignia together back in the days when coils were wound with more hope than wire, and more often than not the hope let them down. 5SL has now installed his v.h.f. gear in the guest house where he resides and as he is making a converter to work from 80 to 6, I am hoping to have a contact with him soon. By the way "Skinny," if you ever contact me, don't address me as "fatty," it sounds revolting! 5KU has been working on 20 and 40 metre c.w., but as Erg is still house-building, he has not very much time for radio.

5FD has been out in the big timber for the past month and consequently nothing has been heard of John. 5CH has returned from his holidays which were spent between Mildura and Swan Hill, and as I remarked earlier, we had the pleasure of a visit from him. 5MS has had further transformer trouble, his final tranny this time, but the blow was softened somewhat by the fact that Stewart managed to upend the 40 foot tower for his 20 metre beam. My spies tell me that his XYL is opening the "mag" first, so as to find out just what her better quarter has been doing in radio during the month. If a gale ever gets underneath that tower, his XYL wont need to read the "mag" to find out what has been happening. My greetings and salutations to you Mrs. 5MS, don't let Stewart dodge those dishes, no matter what the excuse. 5JA made history the other night with a triangular hook-up on 144-148 Mc. with 5CH and 5CJ. John has also been heard on 20 and 40 metres.

5TW is re-building his power supplies for the a.c. and Tom has also been on 10 and 40 metre phone and c.w. He is looking forward to much more pleasant operating when he is all a.c. 5CJ has been playing around on 144 Mc. and has also had a few contacts on 40 metre phone using the new a.c. operated rig. Col now realises what he has been missing whilst he was on d.c., and reckons that this radio game is too simple on a.c. He is expecting a visit from 5RK, and he has warned all the boys what to expect from Ray, so all will be well. My spies from the Mount tell me that Col's harmonic, Bruce, has an output of 5 watts, although at three o'clock the other morning it sounded like 50 watts. To uphold the family reputation I must say that occasions like that are very rare. You may put that rolling pin down Mrs. 5CJ, I must have my little joke!

Well my friends, you may have all the DX to yourselves for the next week or so, as I am off on the second part of my annual holidays. I am leaving for the Oakbank racecourse to spend Easter at the big picnic race meeting that is always held there annually. My duties are of a technical nature, so don't believe the story that 5MD is spreading around that I am working the "thimble and pea" trick in the hope of plucking the locals. The things that he says about me will get him in gaol one day, believe me, or perhaps it will get him out!!

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WESTERN AUSTRALIA

The March meeting of the W.A. Division was held in the Institute rooms with our new President, 6KW, in the chair. Despite favourable weather conditions, the attendance was only fair. To enable members to obtain full benefit of a lecture it was decided to postpone a rather lengthy section of the evening's business, namely, discussion of the agenda items for the forthcoming Convention, until a special meeting later in the month. Details of office-bearers in the incoming Council were given: Patron, Mr. G. Hayman (6GH); President, Mr. R. Hugo (6KW); Vice-Presidents, 6MY and 6RU; Hon. Secretary, 6AG; Treasurer, 6RO; Emergency Network Officer, 6WH; and Bulletin Editor, 6GA.

A Constitution Committee was appointed to give consideration to the new model Divisional Constitution. Members are 6KW, 6WH, 6GM, 6AG and 6SA. Mr. G. Moss (6GM) has been re-appointed Federal Councillor for VK6 for a further year and will be our representative at the Convention.

After the business of the evening concluded an interesting lecture on "Microwave Technique" was delivered by a guest lecturer, Mr. K. Parsons. The subject was popular and was well received by members.

A Contest Committee was nominated and appointed consisting of 6DD (Chairman) with 6PW, 6WT, 6AS and 6KU as members. The Council will be represented by 6RU. A new member for the Division was proposed and duly elected, Mr. Ralph Bullock, ex-G2HHX. The special meeting mentioned previously was duly held on the 30th, but the support given was most disappointing. Despite the poor roll-up, the business was proceeded with and our delegate will leave for the Convention with the VK6 viewpoint on all agenda items.

PERSONALITIES

I guess the camel train bringing the VK6 copies of the April issue is bogged down somewhere in the floods over East. To date (6th) no sign! 6YZ now established in his new shack and heard again active on 7 Mc. Another of those names on my address list came to life the other day when I made the acquaintance of 6AZ, Harold Watson, who was a frequent contact on 14 Mc. when he was stationed out at Forrest. Now located in Victoria Park, Harold is planning a 100 watter which (note this, chaps!) will be TVI proof. Looking ahead perhaps, but not so very far with present day developments. Perhaps in a couple of years we'll all be digging out those "QST" articles on TVI!

6RL at Northam has been on regularly at the week-ends on 7 Mc. and reports activity on ten with his 8 watts from those d.c. mains. Must apologise for the absence of v.h.f. notes these days, but am not a v.h.f. man myself (yet!), and have to depend on what information is passed on to me.

6WG at Albany gets full marks for a very welcome letter on his activities down that way. Six metres is still claiming his attention and he seems to be doing fine. In a recent 50 Mc. contest, Wally, I understand, was placed third. A fine effort and keep up the good work!

The other country centre which has come good with news is my old standby, Geraldton. Up that way 6WZ has installed a bigger and better Baby Runnerong and finds it helps on ten as well as forty, that is, of course, when Harry can get close enough to his rig these days. What with Cyril, 6CN, still without e.m.f. of any type and the prospect of any further away than ever, with 6RT holidaying still and both of these gentlemen feeling the need of a natter to the locals on forty, 6WZ finds his QTH proving popular these Sundays.

6EL still working on a new converter using the 6J6 twin triode. I can recommend that job Ern, I wouldn't part with mine! Also said to be investigating the possibilities of this little tube is 6HL. Found out the other day that activity on another v.h.f. band, 288 Mc., is looming from 6KU and 6MK using 7193s and super-regens. 6RU just back to the big smoke after a visit to the south-west. Another reason for 6EL feeling pleased is the arrival of that South American card at last. Not so happy at the non-arrival of his HK QSL is 6GD who is now on the look-out for another contact with the elusive continent. Better luck with the next one, Horrie, but don't give up hope yet.

Harold, 6AZ, has a CE card somewhere to complete his W.A.C. but just can't locate it after his recent shift. Wouldn't it? In addition to 6GM going East for the Convention, 6RK and 6BB will be across that way and may attend as observers for VK6. 6WT has been unable to get on the air lately due to QTH difficulties, but is showing interest in simple gear for 144 Mc.

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TASMANIA

At the April meeting on Wednesday, 5th, the main business consisted of discussion of items for the Federal Convention, which at the time these notes are being written will already have been held. At the last minute our Federal Councillor, 7AJ, was taken sick and to hospital, which was bad luck for Athol. Fortunately, President Joe Brown was able to get away.

7AF's elements shrink that much in cold weather that they droop drunkenly. Doesn't do the pattern any good either, does it, Bob? 7LJ has recently applied for his DX C.C. and a little bird tells me that it is OK. Congrats Lon, it's been a long time, hasn't it? You are the first southern VK7 to hit that 100 mark and, I think, the third VK7. Lon tells me that a few days after he received the 100th confirmation, he received a few more, and now has about 104 confirmed. Won't be long before you get that sticker for 120.

7RM should now be on holidays in VK5 and intends looking up many of the boys there and will be attending a meeting. Rupe recently purchased an Eddystone "640" Rx, but is a little disappointed. Apparently it doesn't compare with the AR88. Perhaps not Rupe, but all the same she's a mighty smooth receiver once you get the hang. I know, as I've got one too.

7LJ is busy building equipment for 144 Mc. Lon got the Tx finished and proceeded to modulate it with a buzzer. Well, that's one way of getting m.c.w. anyway. Also is building an improved monitor-cum-field strength meter for checking aerial performance by remote control from the operating position. 7AF likewise is building for v.h.f., and also playing round with co-axial standing wave ratio indicators. 7DA building a "Clapp" v.f.o. At least he was chasing after a ceramic coil former recently and we had a rather lively discussion on the pros and cons of ceramic versus airwound coils in oscillators. The argument had yet to be concluded, by practical demonstration.

7LL has built a very natty little grid dip meter, which he entered in the recent competition at the dinner. I like the push to operate battery saving feature. Methinks there will be others building these gadgets before long.

In addition to the previously announced times, I noted the other morning that the Voice of America is broadcasting a 15 minute session on behalf of the A.R.R.L. every Monday morning at 0515 hours E.A.S.T. Frequency is approximately 8.75 Mc., amongst others. This session is conducted by Bill Winter, W2SKE, and the last session was most interesting, dealing as it did with Amateur TV and the methods used to obtain the frame synchronising pulses from a standard TV receiver and then using these pulses for synchronising the outgoing signals in the transmitter. At the same time incoming signals are fed into a converter and from this into the same standard TV receiver.

The W TV band for Hams is from 420-450 Mc., which is well within the range of several of the v.h.f. tubes available in this country, and as far as the receiver is concerned should present little difficulty.

In the case of the transmitter, there are, of course, certain difficulties in getting bottles with a high enough power rating for these frequencies. And, of course, that everlasting thorn—the iconoscope. R.C.A. recently brought out an experimental miniature for Hams, and I believe the E.M.I. crowd may be doing the same thing shortly in the U.K. If we can overcome this obstacle of the picture tube then I see no reason why VK7 Hams should not be the first again with a new development in Ham Radio in this country. I know TV has been tried before the war in VK, but that was using the obsolete mechanical method. The Ws have apparently succeeded in obtaining a range of up to 30 miles for still pictures with little difficulty.

I hope to have more information shortly on the availability of a suitable viewing tube, so maybe VK7 can once again pull it off. Enough rambling about TV—it will cause us many a headache all too soon in the nature of TVI. In some senses, TVI will be a blessing in disguise. Those Hams with improperly stabilised rigs and who radiate harmonics freely will be forced to action and hence the general standard of Ham Radio in this country will undoubtedly be raised. So much for padding.

At the last meeting a Ham, who is also on the staff of a local BC station, was heard to state flatly that his BC station DID NOT radiate harmonics. I wasn't at the meeting, perhaps fortunately, as otherwise a fight might have ensued. How could you Bill? I can check our modulation percentage on my portable monitor, with the 160 meter coil in place. And if that isn't second harmonic, I don't know what is. I hate to admit it, but there it is. We radiate quite a bit of second harmonic power and whilst I had the "640" at home a while back, I had no difficulty in picking up the BC station's second harmonic—indeed listened to it as the Rx doesn't go down to the BC band. Quality was quite good. I quite agree that BC stations should be approached to reduce their harmonic radiation. It does exist and it can be suppressed. It can be useful to the Ham, but is more often a darn nuisance, and is just as much a spurious radiation as many a Ham transmission is.

7TA is giving up two wheels and is purchasing a small car. What has the boys puzzled is just how Geoff is going to get not only himself into it, but also the inevitable piles of radio gear, not to mention extra batteries, passengers, etc. A visit to VK3 will have been made by the time these notes reach print. There are some amongst us who wonder just when I go to work. Well, fellows you take my job and find out, or if you like, come up and see me sometime as the best BC station in the State. I've been threatening for some weeks to come on the air again, and it looks as if it really won't be long now. Some people will be disappointed at the power that I shall be using, however, Seven Talkative Amateurs will make up for it with vocal power. That other big rig is still "under construction" and looks like remaining that way for several months longer.

It's a bit difficult to write notes when nobody ever comes on the air whilst I'm listening, and anyway when I ask them no one has ever done anything during the month. I note that for the past couple of weeks, 10 metres has been particularly good down this way, although 20 has been simply shocking. Just goes to show that if you look on 20 and find it dead, don't pack up, but go up to ten. The band has been wide open, colossal signals from W land during the morning, the fadeout occurring round about 11 a.m., though some signals hold up till noon—from the West Coast. The East Coast is good round breakfast time.

There have been a few good nights on 40, despite what the experts say. It strikes me that one of the causes of 40 sounding so dead, is that the chaps take a look, are aghast at the commercial QRM and the powerful W c.w. signals, and chuck it in there and then. It takes two to make a QSO, and apparently everyone does the same thing and packs it up and off to bed. If you want to try W.A.S. on 40, then just take a "dekker" at 40 any evening. You'll find them there in their millions, particularly late in the evening. C.w. only of course, so that cuts out the phone men. A little c.w. practice doesn't hurt anyone though, and the QSL cards come in just the same.

NORTHERN ZONE

The March meeting of the zone was held in the King's Hall, Launceston, and, being late to the tune of some few minutes, yours truly was almost floored by the teeming throng overflowing the entrance. However, being suspicious of the well-fed and generally prosperous look of the multitude, discreet enquiry revealed the fact that they thought Amateur Radio something that sold soap and were only gathered for a football meeting. So, the gang was sorted from full-backs and others and proceedings began.

Election night it was and from the fights emerged victorious (?): President and Zone Co-Re (ambiguous?), 7RK; Secretary, State Councillor, Treasurer and QSL Distributor (is that all?), 7LZ; and O.C. Lectures, 7BQ. Here a word of appreciation to the retiring President, 7DB, for his handling of the job during his term of office.

Doings of the month are mainly v.h.f. and these achievements and otherwise are, of course, chronicled elsewhere. 7BQ sharing 7 Mc. these days with 7XW—I'm still waiting to hear Chris put a platter on 7 Mc. and call CQ on 1010, no luck so far but while there's life there's hope—or something.

7NL still polishing the bug but no radiation as yet. 7AM breathing threats of super something or other on 144 Mc. 7DS wondered why no DX on 7 Mc. then found his antenna where his earth used to be, so is negotiating with the local football club to use their goal posts during the DX season. 7LZ spent some hard earned boodle and hard-to-come-by energy repairing the 28 Mc. beam and then reads an article explaining why 10 metres is no good now and how many years it will be before it hits the high spots again. Here at 7RK time has been spent mainly on a new receiver that is almost starting to behave, so perhaps can soon start to take an interest in life again.

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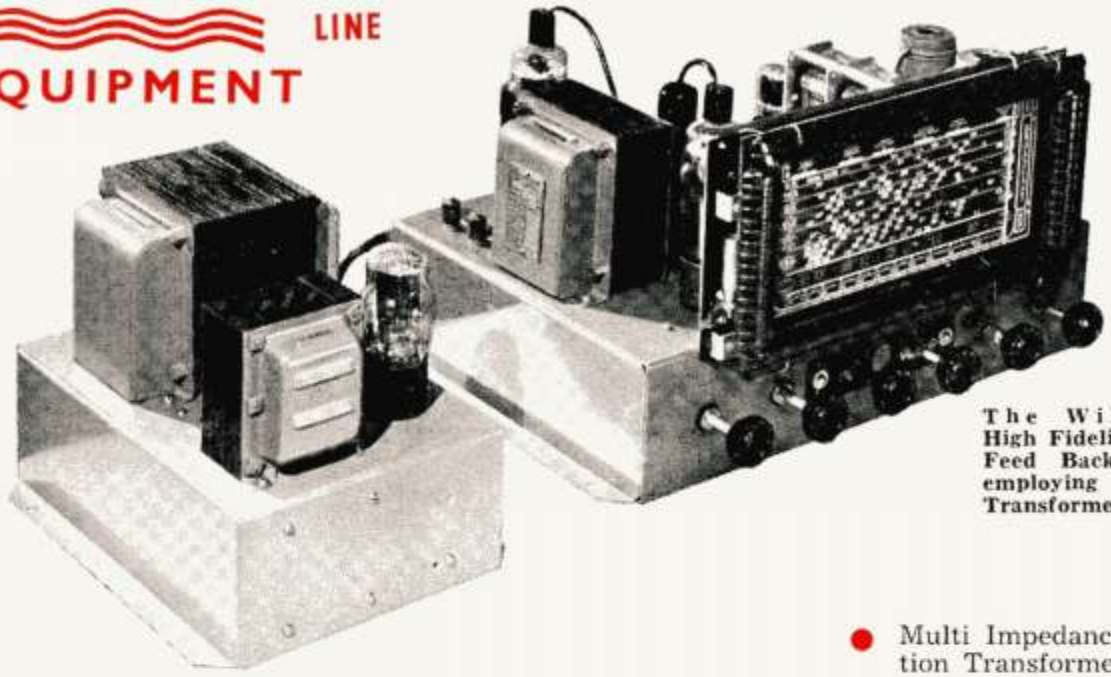

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EDITORIAL

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"UNITY IS STRENGTH"

The above is a very old and somewhat overworked saying, but nevertheless is a very true one.

It applies in all levels of society and equally so in Amateur Radio.

The Wireless Institute is very much aware of this fact and, such being the case, is making a very special attempt to enrol ALL licenced Amateurs, as well as other interested people, in our organisation.

A united Institute, with all Amateurs as members and a large associate membership, would become more powerful than it is at present, and would enable more privileges to be obtained for its members.

With this object in view, all members are earnestly requested to endeavour to enrol as new members all non-member Amateurs and also any others interested in the amateur phase of radio with the necessary qualifications to become student or associate members.

You all have friends who are interested in Ham Radio, so why not try and obtain a new member for the Institute right now.

A phone call to your Divisional Secretary will bring you application forms and brochures by mail and then you can do the rest.

For the benefit of Amateur Radio as a whole and, incidentally, each Amateur individually, do your bit and—

"DO IT NOW."

Federal Executive.

The Contents . . .

TRANQUIL BREAK-IN

By H. MORGAN,† A.M.I.R.E., and E. M. WADDLE,‡ VK4GZ

It will be readily conceded that the ultimate in operating convenience cannot be obtained with the monologue type of QSO which is in general use on the c.w. portions of the Ham bands.

The purpose of this article is to show that tranquil break-in is not a myth, but a reality. In the past, various attempts have been made to achieve this happy state at 4GZ but without success. A system was tried which employed r.f. pick-up and rectification fed to the grids of all r.f. tubes. This was not found to give complete cut off of the receiver, and the fast time constants necessary lead to instability.

For break-in to be successful, the receiver should be allowed to run while transmitting, and no clicks or thumps should be heard in the headphones.

Break-in consists, essentially, in keying the crystal oscillator or v.f.o., and biasing the remainder of the rig until each stage draws a small amount of plate current with the key in the up position. This helps considerably in the prevention of key clicks, as there is always a small load on each stage with the excitation removed.

For those who look with horror upon the idea of keying the oscillator stage, it can be completely shielded and a buffer or doubler stage keyed instead.

Here we would like to point out that if a "Clapp" Oscillator is built like a battleship, you can key it in the cathode without any clicks or chirps, and there is no necessity to use a keying filter—**provided**, and this is important, **choke input with a bleeder is used on all power supplies including the final.** (Here a receiver vibrator choke insulated from ground, was found to give adequate smoothing.) A small amount of standing plate current is present on all stages. With this set-up no clicks are recorded on the Ham bands, and Radio Australia can be listened to without interference on a b.c. set operating from the same power point, and placed along side the 100 watt rig. Prior to using choke input it was impossible to listen on that portion of the short wave band.

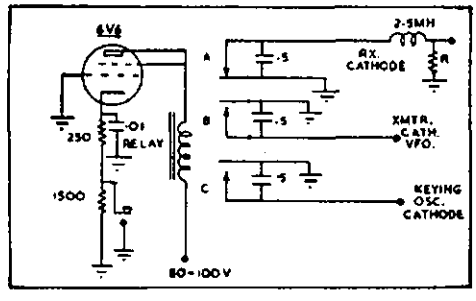
The system in use in the R.A.A.F. AT5/AR8 combination lifts the cathodes of all the r.f. and i.f. stages of the receiver while at the same time the cathodes of all the tubes in the transmitter are closed, and the antenna changed from the receiver to the transmitter. This was done by means of an antenna relay, the coil of which was energised by a 24 volt d.c. supply from a metal rectifier.

The type of antenna in use at 4GZ—ground plane with co-ax feed—precluded the use of this system of switching, and not enough contacts on existing d.p.d.t. relay, so another idea was worked out.

One drawback to relay keying is the necessity to have a source of d.c. for energising the coil. With the disposal types about, this means 24 volts. Keying this will result in sparking at the key. To obviate this, a 2,000 ohm P.M.G. relay was operated by the plate current of a triode connected 6V6 as shown in the diagram.

Overseas circuits for break-in usually specify a high resistance relay energised from the transmitter. This has two drawbacks. (1) A high ohmage sensitive relay is required, and is not readily obtainable cheaply. (2) If the relay is energised from the transmitter, the contacts breaking the receiver cathodes cannot be arranged to operate before the transmitter comes on the air.

The earth end of the resistor network in the cathode of the 6V6 (1,500 ohms) is sufficient to bias the tube close to cut off. When this resistance is shorted out by the key, the tube draws normal current, bias is supplied by the resistance and condenser in the normal cathode circuit.



R—See text for value.

Relay—P.M.G. type 2,000 ohm coil, adjust contacts so that contact A opens slightly before B closes.

The layout on the receiver side is a noise eliminator ahead of the receiver using push pull acorns, and four acorns in the front end of a double conversion job using three i.f. stages. (By virtue of triode mixer and oscillator in the converter section and low noise level mixer in the main receiver, its noise level is very low.)

One set of contacts on the relay opens a fraction of a second before another set closes, and this opens the cathodes of all the acorns and the mixer and the three l.f. stages (11 in all) of the main receiver. The closed contacts close the cathode of the "Clapp" oscillator in the transmitter. There is another set of contacts on the relay which keys a tone oscillator for keying monitoring purposes.

A separate antenna is used which is about 20 feet from the ground plane. The receiver is not shielded and is about a foot away from the transmitter.

The resistor R from the common cathode receiver line to ground should be such that there is a potential difference of 20 volts between key up and key down conditions. The 0.5 uF. condensers are across the relay contacts to absorb any sparking which occurs on making and breaking the cathodes.

When resistor R is satisfactorily adjusted there is NO clicks or thumps in the receiver, only the sound of the tone oscillator. In case some doubting Thomas may think that the note from the tone oscillator would drown the sound of the clicks, we can assure them that with the tone oscillator disconnected, all that is heard is a s-s-s-s-sh sound in the headphones. A switch is incorporated to ground the cathodes for spotting purposes.

The h.t. supply for the 6V6 can be obtained from the same source of supply as that which supplies the keying oscillator.

With this system the operator can cease calling a station when he hears that the station has gone back to somebody else. Thus long calls and unnecessary QRM can be avoided. Also, if the station being worked is also equipped with break-in, he can interrupt the sender for a repeat, instead of waiting until the over is finished, and saying what did you say in the middle of the last over OM?

The only complaint that we have at 4GZ about the whole idea is the scarcity of stations whom are equipped to work complete break-in.

Don't forget fellows, if you hear a chap calling you and adding BK after his call, break him, even if you cannot work complete break-in, he will hear you and stop calling you, giving you the sign to go ahead. A little QRM will be avoided and in these days of overcrowded bands, even a little less QRM is worth while. Think it over, and give it a try. The system here has been going for the past months with complete success.

The transmitter at 4GZ is "Clapp" oscillator with 6J5, on 3.5 Mc. 1852 untuned isolator, 6L6 slug tuned buffer with seven switched crystals, which are never used now, 6F6 tuned 7 Mc. doubler, 807 14 mc. doubler and push pull 830Bs in the final. All power supplies are of the double section filter with choke input, and the plate of the osc., plate and screen of isolator is fed from VR105 regulator tube. As mentioned before, the cathode of the 6J5 is keyed through the relay.

The antenna is a ground plane made of 5/8th conduit and is fed through a co-ax line coupler (see A.R.R.L.), to the final.

In passing, we would like to hear of other Hams who use this antenna on 14 Mc. The conduit stands up very well and has been in use for two years now. Prior to the ground plane, a vertical J, also made of conduit, was in use, but a cyclonic disturbance brought it down.

The writers will be pleased to answer any queries either from 4GZ or by letter.

† Mill Street, Charters Towers, Qld.

‡ Aledue Street, Charters Towers, Qld.

CRYSTAL FILTER S.S.S.C.

BY DR. LEO H. McMAHON,* VK2AC

When anything new is introduced, one of the first things we say is what can I get out of it. In the case of s.s.s.c. the thing we do get is the effect of greatly increased power and with all respect to the decibel, the chap with the power gets the results.

In the case of a.m. we are allowed 100 watts input plus fifty watts of modulating power. This is shared between two side bands. In the case of single sideband, it is not difficult to get 80 watts in one side band which is the equivalent of an a.m. carrier power of 320 watts plus audio. It takes a lot of gear to get and modulate 320 watts of a.m. Another point is we take up very much less of the band and we occupy the band only while we are speaking.

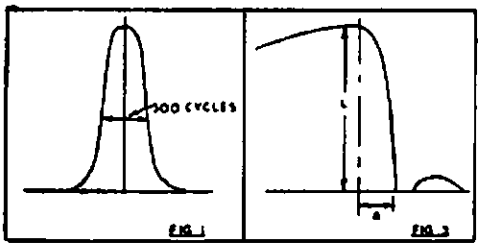


Fig. 1.—Condition of balance.

Fig. 3.—Condition of unbalance. This figure (3) also shows the response of the filter using two crystals of a frequency of 5180 Kc.

The last two points are general improvements for the value of all, but the first one is to our own good. What if you run two tubes Class B at 100 watts input unmodulated? You will get about 500 watts audio out in one side band. Use a beam with a 10 db gain and you have a signal equivalent to that of 20 kilowatts and are still inside the law. Looks good anyway, doesn't it? The article by VK7LE in "A.R." for July, 1949, sets out very well the advantages and disadvantages of s.s.s.c.

Two main systems of obtaining single sideband have been described in this magazine. That of VK7LE uses an audio filter. For the ordinary chap, these filters are out of the question. The author was quoted £60 for one in Sydney and to make one is beyond the scope of most of us. The phasing system of VK4FN is even more difficult to get going as it is difficult to get the matched resistors and condensers. Moreover, the author cannot see how these will maintain their balance over time and weather changes.

A system with which we have had some experience is the use of crystal filters. A good description of the principle involved is given in the "Short Wave Magazine" for July, 1949, which is available in the W.I.A. libraries.

In simple terms, the principle is as follows: When we use the ordinary crystal filter of 455 Kc. for c.w. reception it has, when the stray capacities are balanced out by our phasing control, a symetrical output with a bandwidth of about 300 cycles. It is only when we unbalance it by our phasing control that we get our rejection notch and we can put that notch on either side. As we decrease our response on one side, we increase it on the other. If instead of 455 Kc. with a bandwidth of 300 cycles, we use ten times that frequency we should have a bandwidth of 3,000 cycles which is all we want. Then by bringing our rejection notch in as close as we can to our reference frequency, we get a steep side and a sloping side. The nearer we bring our rejection notch the further we have to unbalance our phasing arm.

By putting two such filters in series we have a greatly increased effect and enough to enable us to wipe out one side band. We can wipe out our carrier with a balanced modulator.

Thus we have the system—

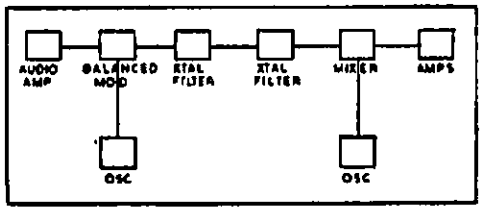


Fig. 2.

The frequency "a" from one side of the rejection notch to the top of the curve is about 400-600 cycles. The author has no means of measuring the db difference, but it is quite sufficient for Amateur purposes.

If we put our carrier about midway up the slope of the filter we will have a good response on one side band and on the other some response for the first 200-300 cycles and very little otherwise. The response to the first few hundred cycles can be decreased by using small value capacitances in the audio system.

The reason 5180 Kc. is used is because two of them were on hand. 5360 Kc. was first tried, but it was found that to get on 7 Mc., somewhere around 1750 Kc. had to be added, and the fourth harmonic of that fell into the 7 Mc. band and caused no end of trouble. Now 2 Mc. is fed in and that trouble is eliminated.

Referring to the filter section of the main diagram (Fig. 4) the crystal filters follow absolutely standard practice. They have low impedance inputs and outputs. Many variations of these filters can be made. The use of lower frequency crystals and the use of two in a band-pass circuit quickly come to mind. However, the author was interested in using components on hand and which could be easily duplicated.

The high frequency side band is used because to get the rejection notch on the low frequency side, the capacity of the phasing condensers had to be increased, whereas to get the low frequency sideband, one had to decrease the capacity of the phasing condensers. This always left a minimum capacity about which nothing can be done, and was not happy that the rejection notch was in as close as it could be got.

Using this principle, a s.s.s.c. transmitter has been built and put into operation and has given very satisfactory results. It uses nothing but junk parts, costs a minimum, needs very little lining up, and can be duplicated by anybody interested. The author is sure that it will be the standard type for Amateur use in the near future. If

* 32 Harbourne Rd., Kingsford, Sydney.

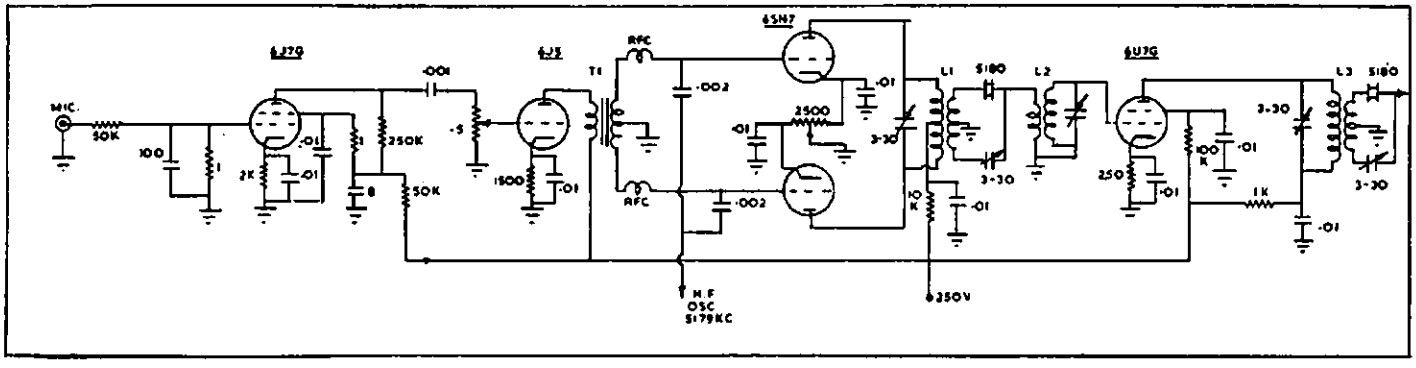


Fig. 4.—Diagram of two stage audio amplifier, balanced modulator and crystal filter single sideband stages. The present h.f. oscillator is a Clapp, to be replaced by a crystal oscillator on 5179 Kc.

you look up the article in "QST" of November, 1949, you will see the complexity of lining up the phasing system type.

THE AUDIO AMPLIFIER

This is a standard two stage amplifier using a 6J7G and a 6L5. The latter tube was used because it was on hand; a 6J5 could be used in its place. The writer wishes to stress the point that everything used in this transmitter was used because it was on hand. Some of the resistor and condenser values may be a bit off the line, but they were the nearest available in the shack.

Small by-pass and coupling condensers were used in the audio to minimise the low frequency response.

The output of the triode is fed to the grids of a 6SN7GT through a standard transformer, single plate to p.p. grids. This is a pre-war S.T.C. type.

THE BALANCED MODULATOR

This follows standard practice also, using a 6SN7GT with the audio fed in in push pull and the r.f. in parallel. The carrier is balanced out in the plate circuit which uses a Bifilar winding tuned to frequency of the carrier (Fig. 6). The other balancing control is the 2,500 ohm potentiometer in the cathode of the tube. A balancing condenser from one grid to earth to allow for the unbalance in the audio transformer was not included, it being found unnecessary.

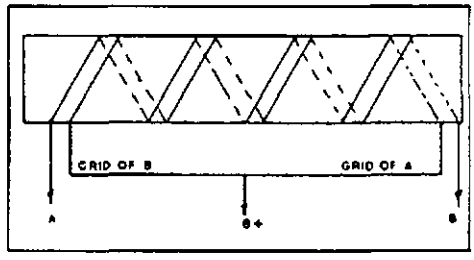


Fig. 6.—Bifilar winding. Total of 50 turns, secondary 12 turns wound over centre of coil. Centre tapped. Wire, 28 s.w.g. d.s.c., former ¾" diameter.

One thing that is important is to put r.f. chokes (2.5 mh.) in series with the grid leads to stop your good r.f. disappearing down the drain through the audio transformer. With this arrangement quite sufficient carrier suppression is obtained. There is not enough left to be used even as a pilot. Some report that the carrier is S½, so you can see the balanced modulator works satisfactorily.

Some degree of mechanical symmetry is necessary in the grid circuits of the 6SN7 to get proper balancing out of the carrier.

FIRST R.F. OSCILLATOR

At present a "Clapp" oscillator is used in this position. Using crystals in the filter of 5180 Kc. it is found that the frequency needed for this first oscillator is 5179 Kc. If the frequency is increased some carrier gets through, but more important, the other sideband appears for the low frequencies. This causes a sort of rumbling sound which cannot be cleared up. If you get too far down on the filter curve, you get very high-pitched phone. A crystal for 5179 is on order and when that is installed it is hoped to clear up all the troubles.

A shift of 100 cycles will introduce the troubles mentioned, so you can see this first r.f. oscillator must be stable.

THE CRYSTAL FILTERS

These follow quite standard practice as stated before. The crystals are the small variety in the FT243 holders. The phasing condensers in use are Philips' concentric trimmers 3-30 pF. They run about full in. A 6U7G is used to separate the two filters and give a bit of gain. The original article just put them in series. You may be able to save a valve that way. There is no need to use a differential phasing condenser as nothing is varied.

The balanced modulator and the crystal filters are the basis of the unit, but they are straight forward.

THE MIXER

This utilises a 6L7, again because it was on hand. The single sideband from the last filter is fed into the grid on top of the 6L7 and 2 Mc. r.f. from another "Clapp" oscillator into the injection grid of the tube. This "Clapp" oscillator works on 2 Mc. and is followed by a cathode follower.

An ordinary oscillator coil for the broadcast band is used to feed in the 2 Mc. r.f., but it cannot be peaked as it does not work so well if this is done, probably caused by too much injection voltage.

This is followed by a 6SK7 r.f. amplifier and an 807, both running Class A. These two follow standard practice and the writer would refer you to VK7LE's article in "A.R." of August, 1949. The snag is oscillation in these stages. The 807 needs to be loaded all the time. A resistor of 5,000 ohms is suggested, but 10,000 ohms is in use at present. Shielding and mechanical positioning are of paramount importance. Reasonable care taken to prevent oscillation in your high gain stages will suffice.

FINAL AMPLIFIER

In the writer's case a Class B 812 is used. This is just his standard amplifier that is used for a.m. Twenty-seven volts bias is applied on it and at 700 volts on the plate it draws 30 Ma. On speech it runs to 130 Ma. You can have your own choice of final amplifier. The standard seems to be Class B 807s.

Whatever you use, it is a linear amplifier and you can run Class B r.f. with only one tube, not like audio where you need two. Hence a single 812.

The aerial loading has a considerable effect on the output from the final, just as we find with Class B audio.

(Continued on Page 7)

PARTS LIST FOR FIGS. 4 AND 5

Filter crystals—5180 Kc.
All 3-30 pF. condensers—Philips' concentric air trimmers.
C2—Hybrid split stator.
T1—Audio transformer, single plate to p.p. grids, no particular type.
L1—See drawing of Fig. 6.
L2—Primary 12 turns of 28 d.s.c. wound over earthed end of secondary. Secondary, 50 t. 28 d.s.c., ¾" diam.
L3—Primary: 50 t. 28 d.s.c., ¾" diam. Secondary: 12 t. centre tapped, over earthed end of primary.
L4—Primary: 12 t., 28 d.s.c., ¾" diam., over earthed end of L4 secondary. Secondary: 50 t., 28 d.s.c., ¾" diam.
L5—21 t., 28 d.s.c., ¾" diam.
L6—Standard broadcast osc. coil for 455 Kc. i.f. used with plate winding as coupling coil. This coil cannot be peaked as it causes overloading and distortion.
L7—12 t., 18 gauge enamel, 1¾" diam.
L8—14 t., 18 g. enamel, 1¾" diam. Link of 2 turns over lower end of L8.
L9—16 t., 18 g. enamel, 1¾" diam.
L10—24 t., 18 g. enamel, 1¾" diam., centre tapped.
NOTE.—All coils close wound.

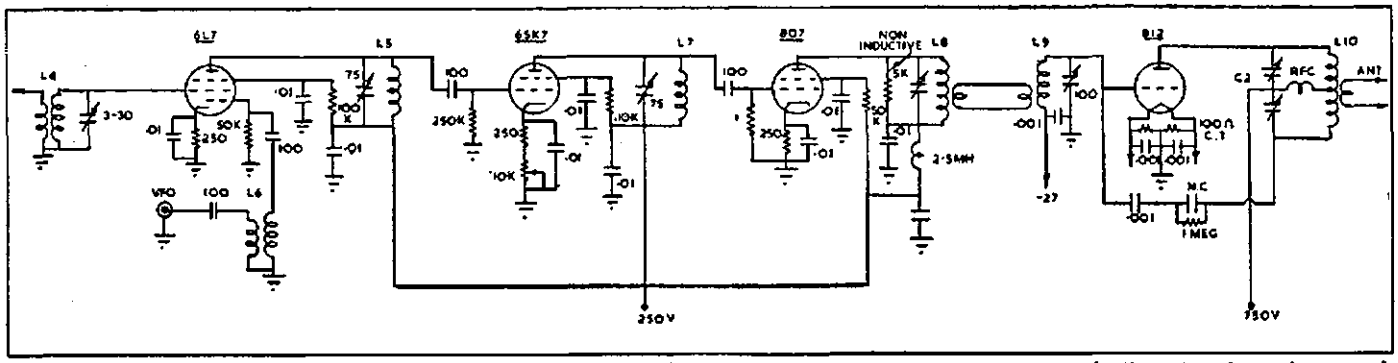


Fig. 5.—In the 812 final stage, with the system of h.t. feed shown, there is equal d.c. voltage on both sets of condenser plates. The neutralising condenser arrangement is well worth consideration as it is easier on the neutralising condenser. L9 and C1 resonates to 7 Mc. as does the output combination L10-C2.

Screen Modulation with Audio Controlled Carrier

BY A. W. N. SOBEY,* VK5VO

The following was evolved in a hunt for an economical and efficient system of modulation. The basic circuit was taken from an American periodical. The title was decided on because of the reduction of carrier when no modulation was taking place.

The transmitter is an AT5 with 807s in parallel in the final, running 85 watts input under c.w. conditions. The adjustments for phone operation consist of tuning up the transmitter for c.w. operation with the excitation adjusted for maximum, with the modulator switched off. Once the transmitter has been tuned for maximum output, no further adjustments are necessary (i.e. excitation is not touched again).

Next the modulator is switched on and it will be noticed that the plate input will drop to about 25 watts with no modulation; on modulation peaks the input reached 75 watts.

The gain control, R2, is then adjusted for 100% modulation. R1, when using single button carbon microphone, is then adjusted for best quality, too much current through microphone will cause packing of granules. When R2 is set at over 100% modulation, the quality starts to become rough and only splatters when set considerably in advance of 100% modulation. As the audio voltage is not superimposed on the d.c. screen voltage (as in transformer coupling), the risk of over-modulation is reduced.

The reports on quality of transmissions have been very flattering. A feature of the system is the fact that there are no transformers and it is not necessary to worry about impedance matching or excitation.

Reports received from VK6, VK5, VK3 and VK2 have averaged R5 S7-9 consistently. R5 S5 was obtained from VK3 at midday under adverse conditions on 40 metres during the R.D. Contest.

With plate modulation, the station was troubled with b.c.i.; this system of modulation eliminated b.c.i.

The 6L6 modulator tube has the plate and screen tied together and the plate is connected to the screen supply of the r.f. final; the modulator switch, SI, is in the cathode of the modulator tube and when opened, the transmitter functions normally for c.w. operation. On closing S1 the modulator is brought automatically into operation.

A rectified audio voltage is supplied from the diodes of the 6SQ7, this supplies a bias to the grid of the 6L6 which varies the plate current of the final according to the bias supplied. When no bias is received at the grid of the 6L6, it draws current, thus lowering the screen voltage of the final and reducing the carrier. On commencing to speak bias is supplied, this allows normal voltage on the screens of the final, thus restoring the carrier.

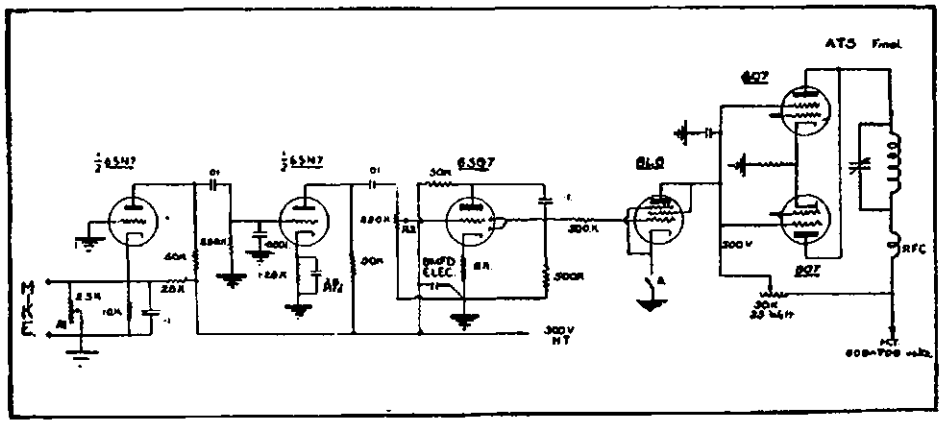
The rest of the modulator follows standard practice, viz.: Single button carbon microphone in the cathode of half an 6SN7, the other half is a triode amplifier connected to the grid of the 6SQ7. Rectified audio is then supplied from the diode plates of the 6SQ7 to the grid of the 6L6. The rectified audio is the essential component in the modulator. A 6L6, 6V6 or preferably a 6Y6 on account of its lower plate resistance can be used. The front end may be modified for any type of microphone.

The efficiency compared with the c.w. operation appears to be 88% (85 watts c.w., 75 watts phone) on actual operating figures at this station, thus comparing favourably with plate and screen modulation, although I do not claim that it will take its place. Other forms of efficiency modulation have been tried and it is far superior to these.

Push-pull, parallel or single ended stages may be modulated by these means. Inputs from 50 watts up to any power the Amateur is permitted, or likely to use, can be modulated by these means.

This article was written mainly to give the newcomer to Amateur Radio a cheap, efficient form of modulation easy to adjust and with reasonable care in adjustments, less likely to give broad or splattering signals. It will also give the experienced Amateur further grounds for experimentation.

* 21 Fern Avenue, Fullarton, South Aus.



CRYSTAL FILTER S.S.S.C.

(Continued from Page 5)

LINING UP

The audio amplifier is checked in the usual way. That presents no difficulties. The next thing is to put one of the crystals in a Pierce oscillator and line up the coils in the filter unit. The receiver S meter is used for this.

Put a crystal of any frequency in the holder of the filter from which the crystal was taken to use as the test oscillator. If you have three crystals all is well.

So far you don't worry about balancing the carrier out. In fact that is just what you do not do. The next step is to replace the crystal you took to put in the oscillator and take your "Clapp" oscillator and vary the frequency slightly around the crystal frequencies. What you are trying to do next is set your rejection notch as close in as you can to give you a very steep side. This is quite a simple procedure as the rejection notch is very definite.

When the filter is set with as steep a side as possible, adjust the carrier half way up it and then peak up all the circuits in the filter. Now by varying the potentiometer in the cathodes of the 6SN7GT, it will be possible to balance out the carrier. Then we have no carrier and only one side band. As stated previously, the high frequency side band is used. The original article suggested 100 pF. for the phasing condensers, but Philips' concentrics were used for the mechanics and shielding.

From this stage on, it is just a matter of feeding in your other frequency and tuning up your amplifiers which need no further elaboration as we all do it in receivers and transmitters.

The original article stated that for maximum rejection it was necessary for the two filter crystals to be exactly the same. They padded them with capacity to do this. The writer's crystals are about 100 cycles apart but it does not seem to matter. No provision is made here for putting any carrier in, other than what gets through.

Quite a full description of crystal filter working is to be seen in the R.S.G.B. Handbook. Articles on the filter type transmitter are to be found in "QST" for January 1948 and March 1949, and "Amateur Radio" for August 1949. The original article in the "Short Wave Magazine" for July would well repay anybody who is thinking of getting going.

In this project the writer has been helped by quite a few, and wishes to acknowledge their aid, especially the following: VKs 2ABB, 2ABH, 2NO, 2ALX, 2JW, and 2YC. This is by far the simplest system seen to date. It is not difficult to get going and certainly gives the results. The only lining up tools used were the receiver, "Clapp" v.f.o., a pair of headphones, and a multimeter. The impedance of anything in the whole thing is unknown, but it is known that no carrier and only one side band is present. For anybody interested, this system is put forward as the simplest method for getting started on this new system, which has advantages not to be passed over lightly. Once the filter unit is built, it is a simple job to put it on any band you like.

Abstracts from Overseas Magazines

R.S.G.B. "BULLETIN," SEPTEMBER, 1949

P. 66: "A Six-Element Aerial Array for the V.H.F's;" F. Charman, G6CJ, and H. E. Smith, G6UH.—Three horizontal centre-fed full-wave elements (i.e. six half-wave elements) with half-wave vertical spacing. Low angle radiation with broad horizontal pattern.

P. 68: "Correlation of Sporadic E Occurrence with Noise received on Two Metres;" D. W. Heightman, G6IDH.—Suggestion that Sporadic E clouds may be located by the direction of maximum noise on two metres.

P. 69: "Home Constructed Impedance Bridge;" D. P. C. Thackeray.—Three valve bridge can measure wide range of resistance, capacity, inductance and power factor.

P. 72: "An Inexpensive V.F.O. and Exciter Unit;" S. A. Denny, G3CIM.—Good conversion of TU5B tuning unit.

R.S.G.B. "BULLETIN," NOVEMBER, 1949

P. 138: "Clipper-Filter Systems;" H. Whalley, G2HW.—Good discussion on what clippers can and can't do with hints on getting the most from them.

P. 141: "A Crystal Checked Frequency Meter;" J. N. Walker, G5JU.—Franklin V.F.O. with 100 Kc. check oscillator.

P. 150: "The President's Trophies' Transmitters;" F. Pike, G3ENS.—Push pull grounded grid oscillator for 420 Mc. using two 3A/147K (CV82) triodes. Input 20 watts. The "President's Trophies" were for the first 420 Mc. contact between fixed stations, more than 25 miles apart and was won on 12th August, 1949.

R.S.G.B. "BULLETIN," DECEMBER, 1949

P. 178: "Single Side-Band Transmission Applied to Amateur Telephony;" N. G. Hyde.—Part One, a review of s.s.b. transmission systems.

P. 180: "The Design of Yagi Aerials;" J. H. W. —Optimum dimensions for Yagi's with various numbers of reflectors and directors.

P. 181: "A Portable Transmitter and Receiver;" A. O. Milne, G2MI.—Dry battery receiver and transmitter for 1.7 and 2.5 Mc.

P. 184: "Improving Receiver Sensitivity;" A. G. Wood, G5RZ.—S-meter for 14 Mc.

P. 186: "Why Not a Windom?;" E. Johnson, G2HR.—How to cut antenna and match single wire feeder for Windom antenna.

"CQ," FEBRUARY, 1950

P. 10: "A Medium Power Transmitter of General Utility;" M. P. Johnson.—225 watts to 249s.

P. 16: "A Slightly Different High Voltage Supply;" E. Black, W2ESO.—Bridge rectifier circuit using 836 high vacuum rectifiers, gives 2,200 v.

P. 18: "Putting Surplus to Work on the 420 Mc. Ham Band;" T. R. Davis.—Conversion of APQ-9 radar jammer. Originally operated between 500 and 700 Mc. using push pull 8012s.

P. 20: "A High Power Modulator for Mobile Operation;" G. M. Brown, W2CVV.—Class B 807 triodes driven by direct coupled cathode follower 6SN7. Lower standing drain, yet higher output than 6N7 Class B modulator.

P. 24: "Stabilising the V.F.O.;" C. A. West, W2IYG.—Stabilising the BC696.

P. 28: "Shack and Workshop."—(i) Automatic sweeping receiver control. (ii) Key-controlled transmitter. (iii) Antenna tuner from BC375E. (iv) Spot frequency c.w.-a.m.-n.b.f.m.

"QST," FEBRUARY, 1950

P. 11: "A Solution to the Keyed V.F.O. Problem;" R. M. Smith, W1FTX.—Fundamental frequency of v.f.o. is one quarter of operating frequency. Amplifier after v.f.o. operated at low level and strictly Class A to eliminate fourth harmonic when harmonic amplifier is keyed.

P. 36: "Two Band Antenna-Matching Networks," Part III.; J. G. Marshall, W0ARL.

P. 16: "A Simple Non-Directional Antenna for Ten Metres;" S. Becker, W7AYB.—Vertical J antenna.

P. 18: "Your BC221 as an Audio Signal Generator;" C. E. Vogt, W8NCO.—Uses audio beat at 1000 Kc. check point.

P. 19: "Eliminating TVI with Low Pass Filters;" G. Grammar, W1DF.

P. 27: "A Two-Metre Station for the Novice," Part I., the Receiver; E. P. Tilton, W1HDQ.—6J6 mixer-oscillator, 6AK5 first i.f. amplifier to feed communication receiver on 7.4 or 10.7 Mc.

P. 33: "Hints and Kinks."—(i) Combined output control and screen protection circuit. (ii) Another neutralising kink for 813s. (iii) Sockets for 15E tubes.

P. 34: "Technical Topics."—(i) Re Half Wave Filters. (ii) Gimmicks and Gadgets.

"SHORT WAVE MAGAZINE," JANUARY, 1950

P. 818: "Band Switch QRO Transmitter;" J. N. Walker, G5JU.—Uses standard British components with 813 final.

P. 828: "Suppression of TVI," Part II.; F. T. Wilson, G2XX.

P. 832: "Experiments with Scale Model Aerials;" F. C. Judd, G2BCX.—Measurements of gain and radiation pattern for 144 Mc. models of more than 30 types of aerials used on lower frequency bands.

P. 839: "Better Clapp Oscillator;" R. S. J. Smith, G2DCI.—Constant output with increased frequency coverage by adding a small ganged condenser from the top of the coil to earth.

P. 842: "Country List by Prefixes."

P. 851: "The Versatile BC357;" V. J. Copley-May, G3AAG.—Marker beacon receiver which operates a very sensitive relay on receiving a modulated signal.

P. 853: "Modulating the Screen;" H. J. Beach, GM8BO.

CAN YOU OBLIGE?

A letter is to hand from R. B. Monfries, of Zenag, via Lae, New Guinea, asking for details of the Receiver type BC348 series "O". If any reader can forward a complete circuit diagram, including values and voltages, he would be very grateful.

Unfortunately, when this type of receiver has been written up in overseas magazines, only sections of the circuit have been shown and he has been unable to get complete details.

Rules of the Australian DX Century Club Award

1. The Australian DX Century Club is open to any Australian Amateur who has established two-way contact with one hundred or more countries in the world and complies with the following rules.

2. All contacts must have been made since the return of licences after the 1939-45 War to be eligible.

3. The Official Countries List, as published annually (and amended from time to time in the Federal Notes of "Amateur Radio") in the magazine, shall be used for the purpose of determining countries.

4. All contacts shall be made with other Amateur Stations operating in the authorised Amateur Bands, or with stations licenced to contact Amateur Stations.

5. Contacts made with ship or aircraft stations will not be allowed, but land-mobile stations may be claimed provided the location at the time of contact is clearly shown on the confirmation.

6. In the case of countries where Amateur Stations are officially licenced by Government authorities, credit may only be claimed for stations using regular Government-assigned calls.

7. In the case of countries where Amateur Stations are not officially licenced by Government authorities, the onus shall lie with the applicant to prove that the confirmation submitted is for a contact with a station in the claimed country.

8. Stations of a portable nature which are using their own call sign followed by the prefix of the country in which they are operating, may be credited under Rules 6 and 7 above, provided the confirmation submitted indicates the particulars of such operation and their other requirements are in accordance with these Rules.

9. Each confirmation submitted must show the date of contact, type of emission used and the report. The band used and the address of the station is also desirable, but not necessarily essential.

10. Confirmations must be submitted exactly as received from the station contacted, and altered or forged confirmations will be grounds for disqualification.

11. Out-of-band operation used to contact a station will result in disqualification and be retrospective in the case of members.

12. All stations must be contacted from the same Australian call area and by the same licencee, although if the call sign is subsequently changed, contacts will be allowed if still within the original call area, and by original licencee.

13. Confirmations submitted which show both phone and c.w. reports may be accepted for both sections if the dates of each contact is shown, and emission is indicated.

14. Should a country be deleted from the Official Countries List at any time, members and intending applicants will be credited with such country if the date of contact is before the date of such deletion.

15. Certificates will be issued for "All Phone," "All C.W.," and "Open" contacts with a hundred countries, and stickers will be subsequently issued for each additional twenty countries confirmed over the one hundred.

16. Successful applicants will be listed monthly in "Amateur Radio." Subsequent to the first application, members must submit additional confirmations not less than five at any one time, for additional credit.

17. Applicants for membership shall be addressed to the "Federal Secretary, Box 2611W, G.P.O., Melbourne," and accompanied by sufficient postage for return by registered mail. Confirmations must also be accompanied by a list of claimed countries and stations, showing relevent details or explanation against stations where necessary.

18. Confirmations shall be examined by the Awards Committee, consisting of the Federal QSL Manager, the Federal Traffic Manager, and the Federal Secretary, who shall, if satisfied that the applicant is eligible for membership in accordance with these Rules, arrange for the member to be listed under the appropriate section in "Amateur Radio."

19. The decisions of the Awards Committee shall be final and binding in respect of any matter pertaining to these rules.

A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on Thursday, 13th July, 1950. Lectures are held on Monday and Thursday evenings from 8 to 10 p.m. Persons desirous of being enrolled should communicate with Secretary W.I.A., Victorian Division, 191 Queen St., Melbourne (Phone FJ 6997 from 10 a.m. to 4 p.m.), or the Class Manager on either of the above evenings.

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

JUNE, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

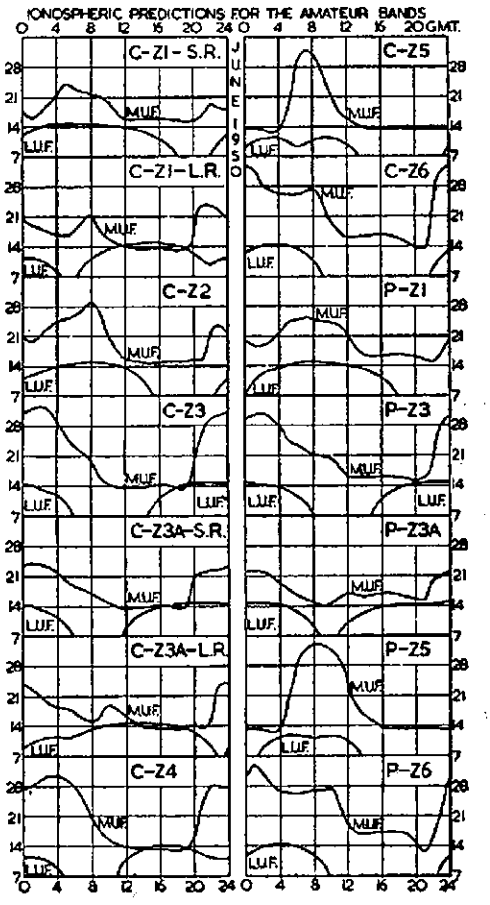
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0600 to 1400 hours G.M.T.?
2. Was the 14 Mc. band workable between 1000 and 1800 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



N.S.W. Div. North Coast Zone Convention at Urunga

By BOB LONG (VK2MM) and DAVE EVANS (VK2AYE)

After months of hard work and publicity on the part of the North Coast Zone Committee, the first rumblings of the good time to come were heralded by the arrival of VK2MM on the 29th March after working mobile on the trip with a No. 11. Bob qualified for the prize given to the first to arrive and unkind contemporaries claim that Bob, after a survey of the scene on arrival, decided to award a trophy for the event. Next on the scene was VK2KR, the world's champion yabbie catcher, complete with a portable refrigerator (contents not divulged) and his stamping outfit for the comp. Immediately on arrival, Cec went into strenuous training for the event, but was disconcerted when told that other fellows had been putting in a bit of quiet practice at their home beaches. Cec then gave it away and retired to the "Do Me" shack to conduct a fraternal with VK2ARY and VK2AAP who had arrived hard on his heels.

From this stage there was a continual show of hand-shaking, gum-lashing and ear-bashing as Hams converged on Urunga by train, truck, car and plane and had to be introduced to their earlier arrived friends. To adopt that trite and time honoured phrase—"among those present" were VKs 2AAM, 2AAN plus YL, 2AAP and YF, 2ACU and YF and brother-in-law, 2ADE, 2ADN, 2AEU, 2AEY and harmonic, 2AGD, 2AGM and YF, 2AHA, 2AJB, 2AJT, 2ALB, 2AMJ and father, 2ANA, 2ARJ, 2ARY, 2ASF, 2AWS, 2AWG, 2AYE, 2CM, 2DK and YF and harmonic, 2DX, 2EA, 2GI, 2JC and YF and family, 2JR, 2JK, 2KR, 2LH, and family, 2MM, 2OE, 2PA, 2RK and YF, 2TL and YF, 2UC, 2UY, 2WQ, 2WT, and YF, 2XO and YF and harmonic, 2XY, 2ZS, 4CU and YF, 4CZ and YF, 4ST, 4UX, 4TY, and 4XP.

Other visitors who contributed to the success of the "do" were Mr. Charles Eddy, Chairman of the Urunga Progress Association; Mr. Ted Hamey and YF, and the radio wonder boy (Ian), and Mr. Percy Sara, Superintendent, Bellingen Ambulance Station.

The North Coast Zone Committee wish to thank the townspeople of Urunga for their ready and willing co-operation in assuring the success of the Convention and, in particular, wish to convey their thanks to the following organisations, whose activities never left a dull moment throughout the holiday period:

Urunga Progress Association,
Bellingen-Urunga Surf Club,
Bellingen Shire Council and Chamber of Commerce,
Bellinger River Am. Anglers' Club,
Urunga Football Club.

A special vote of thanks is due to the Gleeson brothers and their manager, Theo, whose particular job as hosts to the visitors at the Ocean View Hotel was accomplished with a cheerful demeanour and alacrity totally unknown in metropolitan hostelries. For the benefit of those who intend to make the trip next year, it may be mentioned that the abovementioned gentlemen have reserved all the accommodation in the hotel for Hams and their friends. And it seems that Theo, after hearing 2AYE operating in his room in the hotel, has been bitten by the virus and is already on Crieff Retallick's back for a Ham ticket!

A dismal report from Baron Hugo Stitt, 2WH, that the Forbes gang would be unable to attend the fest dampened spirits a little—according to Hugo, conditions were so bad that Army "ducks" were unable to battle against the swirling currents. Better luck next year, chaps. While on the subject of floods, mention should be made of the effort of 2ACU, who had to detour so much that he covered 630 miles to reach Urunga. For 18 miles of this distance in the flood areas, his truck was carried piggy-back on a huge Deisel tractor while Rod bemoaned the fact that he was unable to use his motor-scooter which he carried as secondary transport.

Good Friday was spent in getting acquainted and resting up after the trip in readiness for the strenuous programme which Crieff and his stalwarts had planned. The main item of interest on Good Friday was the arrival of the 18 watter (two 9's in a common envelope) and its installation, with anxious care, into its appropriate rack assembly. 2DK had donated a spring lamb for the boys who were "batching" at the "Do Me" shack and the job of folding it up to fit into the refrigerator was deputed to one Robert Long. Bob's efforts to carve dead mutton into succulent joints with a rusty, blunt fish knife earned him the title of "Mutton Mangler," of which he may be justifiably proud for no cannibal ever mangled a prospective victim more successfully or thoroughly.

COMPETITIONS

The Convention proper commenced at 2 p.m. on Saturday when all Amateurs congregated at the "Do Me" shack for registration and issue of identification discs. The unusual course was then followed of having all Amateurs announce their name, call sign and their particular pursuits in radio. The banana guessing competition, for a huge bunch of bananas, donated by Ted Hamey, the "Banana King" of Coffs Harbour, was won by 2WQ, who guessed the exact weight of 80 pounds. Entries ranged from 32 to 173 pounds and the result indicated good surveying on Bob's part. As a token of their esteem and to mark his success, the boys left him one banana on the stalk.

The code test at 20/25 w.p.m. was won by 4XP with a score of 75 out of 78, with 2JR a close second in the event.

In the voice identification test, 2PA, played back fifteen voices which he had recorded from QSOs on the 7 Mc. band. 2KR and 2AHA tied for first place. This success obviously indicates that these two boys are, at least, good listeners on 40 metres. Much to his chagrin, 2XO, for the second year in succession, failed to pick his own voice in the recording.

Next event was the neutralisation of the 18 watter—a task to which the boys, and some of the YFs, paid strict attention. The boys did their job nobly, but failed to achieve complete neutralisation and, as a punishment, were ordered to work back on the job that evening after lectures were completed.

Photographs then became the order of the day and quite a large number were taken. Joe Reed made a series of snaps, copies of which are now doing the rounds, and which can be obtained from Joe at a nominal cost and which provide a most attractive and pleasant memory of an eventful Convention.

LECTURES IN THE EVENING

So to dinner, to fortify the inner man against the attacks of the lecturers who were billed to go "over the top" at 8 p.m. At this session, 2MM was the first lecturer and he rendered a masterly dissertation on **"Characteristics, Uses and Abuses of Meters."** He was followed by 2ADE, who discoursed on **"The Conversion of the SCR522 to 50 and 144 Mc"** in a manner which left no doubt that Charlie really knew the works. Next on the rostrum was 2EA, who managed to interpolate humour into his lecture in an enterprising way which did not detract from the interest in his talk on **"Super Modulation."** 2ADT, who was booked for a lecture on "Turret Tuned Receivers," was unable to be present due to illness in his family, and Jack's place was taken by 2ARJ who really did justice to a discussion on **"Double Conversion in Receivers,"** which was notable for the fact that Jim had come totally unprepared to deliver a lecture and did not use any notes.

We take advantage of this opportunity to remind our lecturers that they promised to forward scripts and circuits of their lectures to 2AYE for publication in "Amateur Radio" and it would be much appreciated if the scripts could be forwarded as soon as possible to the Institute P.O. Box 1734, Sydney.

2AYE was then called upon to respond for the Council and Institute. In his remarks, Dave stressed the importance of loyalty to the Institute and the encouragement of the younger element in the study of Amateur Radio, the maintaining of the country Amateurs' interest and the desire of the Council to decentralise activities as much as possible. He complimented the North Coast Zone Amateurs on the accomplishment of what was possibly the most outstanding Ham event in the history of the Division and suggested that this was an appropriate time to appoint a working committee to commence organisation for the next Convention.

At this stage, 2JC, the able Chairman, got into his stride and within fifteen minutes a committee was elected and were "rarin' to go." Present aim of

the committee is to have 250 Amateurs at Urunga next Easter and at the time of writing, over sixty have signified their intention of attending. If you want to go, contact Crieff Retallick as soon as possible or you'll be out of luck for accommodation. Next year's Urunga "do" will be the "best ever," as the "mutton mangler" expresses it: "bigger, better, breezier and brighter than ever."

FAMOUS YABBIE CATCHER

Sunday, 9 a.m., saw the start of the great yabbie catching competition and the entire population of Urunga and their visitors were soon elbowing for standing room on the side lines while the competitors were nervously treading water with a few practice stamps and quietly jockeying for good positions. The champ., Cec Hardman, eyed them belligerently and picked himself a weed covered spot some twelve feet away from the upstarts who coveted his title.

On the signal from the judge, all competitors were rapidly stamping out a furious rumba, churning water and sand into a boiling maelstrom, to the accompaniment of clicking camera shutters and the derisive cheers of the harmonics who thought that the OM really had gone nuts this time.

When a halt was called, the exhausted title-seekers had not one solitary yabbie between them and Cec nonchalantly approached the judges and tossed at their feet ten emaciated and nearly defunct yabbies. Well, a yabbie. dead or alive, is a yabbie, so Cec was adjudged world's champion and was invested with his badge of title and presented with a beautiful miniature gold pot. While Cec was enjoying his brief moment of adulation his opponents, who suspected foul work and had ready memories of the portable refrigerator, decided that Cec had used last year's yabbies to take the title and in an irate, and none-too-gentle manner, seized the protesting champ., carried him out to deep water, and tossed him in to fraternise with his yabbies.

From 10 a.m. to noon a bus tour for the Hams, YLs and YFs was provided by the people of Urunga and a most enjoyable tour of the Bellinger River Valley followed. Those who could not find a foot-hold, retired to the "Do Me" shack to listen to the W.I.A. broadcast and compare notes.

HIDDEN TRANSMITTER HUNT

At 2 p.m. the search for the hidden transmitter was organised. Unfortunately, there were only two entrants and this event was won by 2AYE who sat in the hotel lounge discussing matters of moment with 2JC, while 2ASF, who incidentally had never before handled 144 Mc. gear, went out and brought home the bacon. Good work, Col, and may you have that 832 in operation next year.

The beam used by 2AYE consisted of a 300 ohm telcon dipole with reflector and director spaced half wavelengths, the latter consisting of two pieces of quarter inch brass rod and horizontally polarised. The back-to-front ratio of this "stick and string special" is 26 db. Incidentally, the finish of the transmitter search was dramatic, 2ASF locating the transmitter just about ten yards ahead of his rival 2AHA. Better luck next time, Harold. It is hoped that the Sydney V.H.F. Section and associated Clubs will send up a strong group next year. The Newcastle boys already claim that they have it all sewn up.

PRESENTATION OF PRIZES

At 7.30 p.m. all hands retired to the School of Arts where, under the Chairmanship of 2JC, we received a speech of welcome from Mr. Charles Eddy, President of the Urunga Progress Association. In his remarks, Mr. Eddy stressed the good work done by Amateurs in times of distress and the pleasure that the townspeople derived from the fact that Urunga had been chosen as the scene of our Convention. He promised, in advance, to again turn over the town to the boys next Easter. Mr. Eddy's remarks were received in the usual enthusiastic manner.

The presentation of prizes was then commenced, the duty being ably performed by 2AAN, Hon. General Secretary of the Division. Complete presentation was as under:—

1. Banana weight guessing—Bob Wilkins, 2WQ.
2. Code test—1st: Jeff Thompson, 4XP; 2nd: Joe Reed, 2JR.
3. Voice identification—tie between Cec Hardman, 2KR, and Harold White, 2AHA.
4. Fishing competition—Bill Eagling, 2AEY.
5. First to arrive at Convention—Bob Long, 2MM.
6. Travelled longest distance to Convention—Rod Pike, 2ACU.
7. Hidden transmitter hunt—Dave Evans, 2AYE, who called up the real winner, Col Fletcher, 2ASF.
8. World's champion yabbie catcher, gold pot and certificate—Cec Hardman, 2KR.
9. Ear bashers' award—1st: Gordon Kempton, 2CI, subject "Be Kind To Horses," time 22 min. 35 secs.; 2nd: Joe Reed, 2JR, subject "The Joe Reed Oscillator," time 22 min. 34 secs.
10. Lucky number on registration disc —Gerry Chandler, 2ZS.
11. Lucky number on registration, ladies—YF of 2AAP, Mrs. Hart.
12. Lucky number on programme—Miss Lindsay Hewitt.
13. Certificate of commendation—Ian Hamey, Radio Wonder Boy.

A few remarks are justified in connection with the prize-giving. The prize for event No. 6 was 500 QSL cards, donated by that grand old friend of the boys, Ern Ashley, of North Bondi. Ern also donated 1,000 QSL cards for the prize in event No. 10, and the boys certainly appreciate your gesture Ern. Many thanks, old timer. Incidentally, to those hundreds of Hams who still have to attain that signal honour of a card from 2ZS, we suggest that you get on his back immediately. Gerry, at the time of writing, has never seen his name in print—except on police warrants and other blokes' cards.

Prize giving was followed by a demonstration by the radio wonder boy, four-year-old Ian Hamey. Joe Reed was invited to draw any circuit on the blackboard and to question Ian regarding the components. Joe chose an old circuit of the 1930 vintage—the ST300 we believe—and the boy was able to answer all questions satisfactorily. His designations for some parts were not exactly the same as those in the "Designer's Handbook," but his replies definitely could be accepted as indicating a fair knowledge of components. 2ADN then described a power supply and leaving out an important connection, he asked Ian if the circuit would work. Ian laughed and said, "Of course not, you forgot the centre tap in the secondary."

Next item was an hour of 16 mm. films by Ted Hamey. Ted is a photographer of note and his coloured documentaries have to be seen to be believed. As a show they rated as good as anything we have seen in the City, one in particular which described the activities of the banana growers should have a wider circulation.

The next item was the star show of the Convention and was a lecture by Joe Reed, 2JR. on **"Model Radiator Investigations on Low-Angle Radiation."** As is usual with Joe, his racy style of delivery and interpolated Ham style of humour, held the interest of the boys completely. At the conclusion of the lecture, a vote of thanks was accorded Joe by 2AYE and carried enthusiastically. One noteworthy point about all the lecturers at the Convention was that they did not introduce involved mathematical formulae—which always bore and rarely enlighten—but held the interest of their listeners by adapting Ham practice and keeping to phrases and terms which were readily understood and easily digested.

Before concluding this report we feel that mention must be made of the "mad hour"—1600 to 1700 hours on Sunday—when all the chaps with portable rigs teed up a "long distance contact contest" to publicise the Urunga Convention. As is usually the case with unofficial contests, nobody seemed to keep a log, nobody seemed to be quite sure whether the contest was on or not, so, just for the fun of it and to keep faith with the boys down south, who had promised their co-operation, a few of the chaps turned the 40 metre band into a madhouse for sixty minutes. 2AYE managed to contact Bondi, 2AAN beat him by ten miles by connecting with Sutherland and 2KR went out after XEs and Ws, only to find that somebody had "fixed" his automatic key for him. 2DK turned it in—the Urunga QRM was terrific. Anyhow fellows, it will be on next year —in earnest—properly organised and out in the field.

To the ladies who assisted in the Convention we extend our sincere thanks, they are so many that it is impossible to pick individuals. To the various Associations in the district who contributed to the pleasures of our stay, we say thanks a lot, folks, we liked it so much we'll be back for more next year, and to the chaps who organised the "do," well, we guess you know how the fellows feel about it. Well, that's it, blokes, just one more crack before we throw the big switch—**we'll be seeing you at Urunga next Easter, for the biggest, brightest, breeziest, Convention ever.**

Twentieth Annual Federal Convention of the W.I.A

Federal Executive's Annual Report

PRESIDENT'S REPORT

In presenting this report it gives me much pleasure to record the progress made in all grades of membership, which now stands at 2262 as compared with 2156 at this time last year. Although this increase is not very large, it indicates that the Institute has not merely held its ground, but has advanced in the consolidation of membership in all States. It is desired to point out that there is still a big field for Divisional Councils' attention, namely the development of Associate Members to active transmitting membership in the coming year.

Our relations with the Postmaster General's Department have been maintained on the customary friendly basis, and although no very contention problems have arisen during the year, many minor points have been satisfactorily adjusted.

Considerable effort has been made this year to indicate to the P.M.G. the Institute's interest in the elimination of overseas commercial stations straying into the Amateur bands and a considerable number of reports from listeners throughout the Commonwealth have been filed with the Department to illustrate the seriousness of the situation. This year, many opportunities have occurred for Amateurs to participate in National Emergencies, and some excellent work has been carried out by those who were equipped for this purpose. It is felt that every effort should be made by Divisional Councils to encourage members in the construction of suitable equipment for this work.

The Contest Manager has carried out his duties most effectively, and we feel that all members have enjoyed the contests which have been arranged. It was most unfortunate that there was a late promulgation of the Rules for the 1940 VK-ZL Contest. It is hoped that arrangements can be made with the appropriate authorities in New Zealand so that future contests will not be delayed.

This year has seen the finalisation of the Rules for the W.A.S. (Australia) Award (which is the Award offered for the working of all States of the Commonwealth and the Northern Territory on 50 Mc. or higher bands). There has been increased activity on the bands from 50 Mc. upwards and some really excellent work has been carried out with a simple equipment on which much original constructional work has been done.

Several stations have pioneered the s.s.s.c. technique, and quite a number of members have been carrying out experiments on narrow band f.m.

Following the action by the Federal Council in laying down a set of rules for the establishing of member clubs throughout the W.I.A., a number of such clubs have been formed. This move has had the effect of strengthening the Institute in areas where attendance at Institute meetings is difficult.

The usual work falling on Federal Executive officers has been carried out very effectively. The Federal Secretary having handled 776 letters this year as against 686 letters for the same period last year. Twenty-two Federal Executive meetings have been held throughout the period, and all members have shown great interest in the work. The Federal QSL Manager handled cards to the total of 56,822 as compared with 68,786 in 1948-49. Costs now work out at 3.8d. per 100 cards as compared with 2.37d last year and 2.24d. in 1047-48. The Federal QSL Manager, Mr. R. E. Jones, has been ably assisted by Mr. Les Jackson.

A total of 28 applications for W.A.C. and W.B.E. Certificates was handled during the year.

It is pleasing to note that the Magazine "Amateur Radio" is being published so successfully, and the Committee members are to be commended on their efforts in handling its finances so well.

I take pleasure in extending my thanks to the Federal Secretary, the Federal Treasurer, and the Federal Publicity Manager, together with all other Federal Officers who have so capably assisted in the work of the Executive throughout the year.

We are sorry to announce the resignation of the Federal Secretary, Mr. W. Mitchell, who is going abroad. Mr. Max Hull will be the new Federal Secretary, and we extend a very cordial welcome to him.

FEDERAL TRAFFIC BUREAU

Twice weekly schedules have been maintained during the past twelve months in a very satisfactory manner with the Divisional Traffic Managers: VK2ARE, VK4AG, VK5JT, VK6SA and VR7OM.

A total of 893 (400) contacts was made during the period but the traffic handled, both inwards and outwards, was very much less than the previous year. Inwards messages totalled 18 (58) and outwards, to Divisions 27 (66) to a total of 66 addressees (177).

The figures in brackets are the comparative totals for the year 1948-49.

TREASURER'S REPORT, 1949-50

It is with pleasure that I herewith report the annual statement of receipts and expenditure covering the accounts of the W.I.A. Federal Executive.

I desire to stress the necessity of promptly remitting Divisional per-capita payments for the purpose of financing the work of the Executive. This is our only source of income that can be so applied and it is obvious therefore that we must receive your remittances promptly to facilitate our work. It should be pointed out also that the Divisional contributions to the Convention expenses are based upon the membership returns associated with per-capita without which it is impossible for us to compute what contributions each Division should make. At a later stage we will submit for your consideration some alternative suggestions for financing the operations of the Convention. The budgetary figures submitted to you at the 1949 Convention were approximately correct for this year's operations. I now submit herewith the expense account for 1949-50 and budget estimates for the 1950-51 period.

The Treasurer's budget for 1950 was also read:—

QSL Bureau	£10	0	0
Printing and Stationery	10	0	0
Audit	5	0	0
Trophies and Prizes	25	0	0
Convention Minutes	16	0	0
Petty Cash	15	0	0
Convention Dinner	20	0	0
Convention Expenses	150	0	0
Entertaining	10	0	0
Contingencies	20	0	0
	£281	0	0

As a result of the Treasurer's report, the following motions were resolved:—

"That Federal Executive keep a separate account for Convention expenses as distinct from general expenses."—Carried.

"That in assessing the Convention expenses quota per Division, Federal Executive use the previous year's numbers of full members supplied by each Division in their per capita return."—Carried.

"That the amount of money paid by Divisions as Convention expenses in excess of that actually used shall remain in a Number 2 Account to their credit against the next Convention."—Carried.

"That the rendering of Convention accounts to Divisions be made before the 30th November in each year and that the latest date for payment be within 60 days thereafter."—Carried.

"That the Statement of Receipts and Payments, as presented by the Federal Treasurer, be adopted."—Carried.

The New South Wales Delegate desired placed on record that there is no balance sheet and in his Division's opinion a balance sheet is an essential part of the Treasurer's report.

An assurance was given by the Treasurer to the N.S.W. delegate that a balance sheet of Federal finance would be forwarded to Divisions as soon as possible.

"That the budget as presented be adopted for the year 1950."—Carried.

A resume of the minutes of the 19th Annual Convention took place and it was resolved:—"That an expression of appreciation be recorded to those responsible for the design and manufacture of the Remembrance Day Trophy."—Carried.

"That the Minutes of the 19th Convention as presented be adopted."—Carried.

The President then asked the Treasurer if all Divisions were financial and advice was given that no contributions had been received from VK2 and VK4 Divisions.

A discussion regarding powers of voting then took place and the following motion was carried unanimously:—"That this Council extends the time for payment of the 1950 per capita payment to 21st April, 1950, in accordance with Section 41a of the Federal Constitution."

FEDERAL QSL BUREAU

The Federal QSL Bureau again functioned smoothly during the period under review. Cards handled totalled 56,822 as compared with 63,786 in 1948-49, and 65,409 in 1947-48. The lower total is attributable to the continued publicity given to the addresses of the Divisional Bureaux, and to the greater circulation of International call books, thus encouraging stations to either send cards direct to the addressee or to the Divisional Bureaux.

Despite the reduced volume of traffic handled by the Federal Bureau, costs of handling continue to rise. This is a result of an average overall increase of 30 per cent. in the postal charges for printed matter, which took effect from July, 1949. The increased rates covered two-thirds of the year's activities. When the Federal Government, now in office, were in Opposition, they made numerous requests to the Government for a reduction in postage rates, in which they were strongly supported by influential bodies such as the Chambers of Commerce, etc. Since the last Federal elections with the consequential change in Government, no mention has been made of this matter, nor has the Associated Chambers of Commerce been heard on the subject. Possibly some reduction may be envisaged in the next Federal budget when presented later in the year. Costs now work out at 3.3 pence per 100 cards as compared with 2.37 pence last

WIRELESS INSTITUTE OF AUSTRALIA—FEDERAL EXECUTIVE

STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDED 31st MARCH, 1950

RECEIPTS					
Balance in Bank, 1/4/49				£87	8 10
Per Capita payments:—					
VK7	£5	8	0		
VK3	23	4	2		
VK2	27	11	0		
VK4	10	15	0		
VK6	7	0	0		
VK5	16	15	0		
VK7	5	10	0		
VK6	6	17	0		
				103	0 2
Convention Expenses quota:—					
VK7	£6	10	0		
VK3	46	0	0		
VK2	41	6	0		
VK6	12	6	8		
VK4	12	13	4		
VK5	2	12	3		
VK7	2	19	8		
VK6	22	9	9		
VK4	8	6	8		
				150	8 11
Certificates				28	10 6
Exchange added to cheques					2 6
				£364	0 11

EXPENDITURE					
Convention Expenses				£119	13 6
P.M.G. (Cable Address) Telegraphic				2	2 0
Licence VK3				1	0 0
R. Jones (QSL Expenses)				4	0 0
P.O. Box Fee				1	0 0
Insurance (Trophies)					15 0
Photographing Trophies				2	19 6
Trophies and Prizes				11	2 0
Badges and Shields				76	9 8
Printing				3	8 9
Typing and Duplicating (Minutes, Constitution, etc.)				24	4 5
Audit Fees				3	3 0
Secretary's Petty Cash				13	0 0
Bank Charges					10 0
Advances re 1950 Convention Expenses:—					
VK5	£19	10	0		
VK6	54	0	0		
VK7	19	6	0		
				92	16 0
Balance in Bank				7	17 1
				£364	0 11

I hereby certify that I have examined the Cash Book and Vouchers of the Federal Executive of the Wireless Institute of Australia, reconciled the Cash Book with the Bank Pass Book as at 31st March, 1950, and prepared the above Statement of Receipts and Expenditure which, in my opinion, correctly shows particulars of Receipts and Payments for the year, according to the books and the information given to me.

6th April, 1950. (Sgd.) THOS. F. HISCOCK, F.C.A., Chartered Accountant (Aust.)

Wireless Institute of Australia, Federal Executive—(Sgd.) P. Evans, Hon. Treasurer.

year and 2.24 pence in 1947-48. Despatches to the Victorian Bureau were again delivered by hand, thus reducing the working cost of the Federal Bureau and the thanks of all are due to Mr. Les Jackson, VK3XM, for his work in this connection.

Divisional QSL Bureau personnel remained unchanged throughout the year with the exception of the Queensland Division, where during the year the duties of QSL Manager were taken over by Mr. Eric Lake, VK4EL. From a Federal aspect, all the Divisional Bureaux functioned efficiently.

Items of interest from a QSL aspect, as well as other items of general interest were published monthly in the Federal QSL Bureau notes in "Amateur Radio."

Statement of Receipts and Expenditure:—

Receipts

By Credit Balance from 1948-49 . . .	£0	4	1
,, Advance from Federal Executive .	8	0	0
	£8	4	1

Expenditure

To Postages on despatches to Divisional Bureaux, W.A.C. applications, general stationery and surcharged mail	£7	16	4
,, Cash and Stamps on hand		7	9
	£8	4	1

The New South Wales Delegate: "How does the proportion of members to total licensed Amateurs compare?"

The Chairman: "There are 2,800 licensed and the W.I.A. membership is 2,262, which includes associate members as well as transmitting members. There are 1,600 licensed Amateurs as full members. We represent 00 to 75 per cent. of the active transmitting members, as many are not active."

N.S.W. Delegate: "Where have you found that member club activity has been greatest?"

Chairman: "Zones have been progressing very favorably. There are three clubs in Victoria, and New South Wales has been most successful."

N.S.W. Delegate: "The inclusion of member clubs in the Institute has wiped off this argument concerning W.I.A. and club affiliation. We have had no further trouble similar to that which we had with clubs quite a few years ago."

Chairman: "There was a group in Darwin who wanted to form a Division and they are now part of the South Australian Division. They will form a useful zone until they grow up. They have not got 25 fully licensed members yet."

The Chairman then read a letter which had been received from the South Australian Division praising the work of the Federal Secretary.

W.A. Delegate: "Can you give us an indication of the number of observers of commercial interference there are operating?"

Chairman: "Your State is the most active. Most of the other States have not done as much in this matter. In N.S.W. there are none, in Tasmania 2, in Victoria 2, in Queensland 2, in South Australia 1 and in Western Australia 1, a total of 8. In South Australia one man collates a whole lot of individual reports. Western Australia have provided us with a considerable amount of data."

N.S.W. Delegate: "I understand that we have some activity, but not to the same extent as in Western Australia."

It was then moved that the Federal President's report as read be adopted.—Carried unanimously.

Minutes of the Convention

The following sets out the findings of the 20th Annual Convention. All decisions under the heading of General Business must be ratified by a majority of the Divisional Councils before the necessary action can be taken.

AGENDA ITEMS

1. "That the amended rules of the DX C.C. as attached at Appendix A, with the deletion of the words 'or the A.R.R.L. List' in Rule 3, be adopted." The motion was Carried.

The Western Australian delegate stated that in view of the fact that Appendix A has been accepted we are prepared to withdrawn Item 2.

3. "That a special certificate be provided by Federal Council to be awarded by Divisional Councils or Federal Council to members in cases where no suitable award exists."—Carried.

4. "That Federal Executive be directed to contact the I.A.R.U. with a view to setting up an international organisation for controlling DX C.C. matters."—Carried.

5. "That Federal Council recognise that Tasmania be regarded as a separate country for the purposes of the Australian DX C.C. Award."—Lost.

6. "That a standard set of rules, as submitted by the New South Wales delegate, be adopted for the VK-ZL Contests."—Carried.

7. "That draft proposals for any change in the standard contest rules for the VK-ZL Contest be circulated to all Divisions at least five months before the Contest."—Carried.

8. "That draft proposals for any changes in rules of Australian Contests be circulated to all Divisions at least three months before the Contest."—Carried.

9. "That in future National Field Day Contests the bonus points for 50 Mc. contacts be 25 for each new State or Country."—Carried.

10. "That Federal Executive be instructed to approach the I.A.R.U. with a view to securing the co-operation of all societies and organisations conducting international contests in limiting these to one week-end per year for phone and one for c.w."—Carried.

11. "That the Trans-Tasman Contest be eliminated."—Carried.

11a. "That the period of operation of any local Australian Contest be limited to any 12 consecutive hours within the 24 hours set down."—Carried.

12. The Queensland delegate withdrew this item in lieu of Item 10.

13. "That the scoring procedure for the award of the State trophy for the Remembrance Day Contest, as used in the 1948 Contest, be reverted to."—Lost.

14. "That the existing rules for the 1949 Remembrance Day Contest be adopted for the 1950 Remembrance Day Contest and that the method of scoring remain unaltered for the trophy and individual scores."

Amendment.—"That in respect of the points to decide who shall hold the trophy, that the following alterations be made: That the logs of the six highest scorers be averaged and to this average be added a bonus equal to twice the percentage entries in the State." The amendment lapsed for want of a seconder.

The original motion was carried.

15. "That in future National Field Day Contests fullest publicity be given by all Divisions in every way possible for at least three months prior to the contest and further that Divisions organise State teams to ensure active participation by all States."—Carried.

16. "That an endeavour be made to evolve a standard numbering system for world wide contest use and that the numbering system already decided upon for the VK-ZL Contest be recommended as a suitable system."—Carried.

17. "That all relevant aspects of the publication of 'Amateur Radio,' from a Federal viewpoint, be discussed with the Victorian Division."

After discussion it was moved by Mr. G. Moss (W.A.) and seconded by Mr. H. Austin (S.A.) as follows: "We are gratified with the improvement this year in the magazine and trust that the present satisfactory position continues."—Carried.

18. "That the responsibilities of Federal Council concerning 'Amateur Radio' be determined."

After discussion the following determination was arrived at—moved by Mr. J. Moyle (N.S.W.) and seconded by Mr. G. Moss (W.A.): "That the responsibilities of Federal Council concerning 'Amateur Radio' shall include:—

(a) The preparation of Editorials;
(b) All opinions concerning Federal W.I.A. matters and/or contacts with other bodies, and
(c) Any matters which might prejudice relationships between Divisions or between Amateurs generally."

—Carried.

19. "That the quarterly statement as now supplied on the income and expenditure of 'Amateur Radio' be continued."—Carried.

20. "That 'Amateur Radio' publish from time to time suitable articles taken from overseas technical magazines."—Carried.

21. Federal Executive withdrew this item.

21a. "That the contents of the Institute's Policy Book be reviewed at each Convention to preserve continuity of Federal policy."—Carried.

22. "That the following clauses be incorporated in the Federal Constitution dealing with Membership Transfers to provide that:—

(1) The recipient Division shall receive him as a financial member for the remainder of the financial year provided he was fully financial before departing from the losing Division.
(2) The Secretary of the losing Division shall advise the Secretary of the recipient Division of the intending transfer and of the member's financial status and grade."

—Carried.

22a. "That a specimen application form for membership be incorporated as in the Federal Constitution (as amended 1947) as Schedule 'B'."—Carried.

22b. "That the uniform Divisional Constitution as discussed be considered by the Divisions and returned with their comments for incorporation in the final draft, to Federal Executive at the earliest possible moment."—Carried.

22c. "That upon the acceptance of the uniform Divisional Constitution by each Division that Division agrees not to alter any clause in that uniform Divisional Constitution without the approval of Federal Council."—Carried.

23. "That Federal Executive be instructed to institute amendments to the Federal Constitution to provide that in matters of finance involving all Divisions, a majority vote of at least 5 to 2 of the Federal Council be required for the passing of the motion."—Carried.

24. "That the minutes of the Federal Executive meetings as now supplied to all Federal Councillors be continued."—Carried.

25. "That Federal Executive formulate arrangements for the reception and entertainment of American Amateurs in 'Back to Australia' year 1952."—Carried.

26. "That the 1951 Convention be held in Sydney."—Lost.

27. "That Federal Executive approach the P.M.G. for permission to play back recorded 50 Mc. and higher Amateur transmissions on those bands."—Carried.

28. "That representations be made to the P.M.G's. Department for permission to record by modern techniques transmissions of Amateur Stations and play back over the air on frequencies to be laid down by the Department."—Carried.

29. The New South Wales delegate withdrew this item as the matter had already been fully publicised.

30. "That the P.M.G. be approached for permission to transmit music on type A3 stabilised emission for experimental purposes on sections of the 50 Mc. band and higher."—Carried.

31. "That the P.M.G's. Department be approached with a request that all licencees in the Northern Territory be allotted the prefix VK8."—Carried.

32. "That Federal Executive be asked to endeavour to speed up the allocation of the 21 Mc. band in view of the large amount of commercial interference on the 7 and 14 Mc. bands."—Carried.

33. "That Federal Executive approach the P.M.G. for permission to broadcast from the Institute stations, talks of a technical nature such as those given at monthly meetings."—Carried.

34. "That Federal Executive be directed to discuss with the Broadcasting Control Board the matter of TVI with a view to suggesting certain transmitting and I.F. frequencies to manufacturers in Australia."—Carried.

35. "That the P.M.G's. Department be approached to extend automatic permission for portable operation to the 27-28 Mc. band."—Carried.

36. "That representations be made to the P.M.G's. Department for permission to operate transmitters under portable conditions without applying for a portable licence, in any frequency band."—Carried.

37. "That the age limit for the issuance of the A.O.C.P. and the granting of an Amateur Station Licence be reduced to 16 years."—Lost.

38. The Victorian delegate withdrew this item.

39. "That the 'gentlemen's agreement' band for c.w. on the 7 Mc. band be extended to 7050 Kc. in view of the emergency network phone on 7002 Kc."—Carried.

40. "That approval be sought from the P.M.G. for the use of an identifying signal by Amateurs conducting emergency communications. The signal to have the significance: 'I am conducting emergency traffic, please do not cause interference,' and that Federal Executive be instructed to give the signal wide publicity."—Carried.

41. As a result of the discussion which took place on interference received from medium frequency broadcast transmitters, Federal Executive is to publicise in 'Amateur Radio' the need for more reports from observers on this type of interference."

42. "That this Council recommends that phonetics be used only where necessary and that the Inter-Services List be recommended as being known throughout the world. Federal Executive should publicise this decision."—Carried.

ITEMS OF GENERAL BUSINESS

(All Divisions to ratify all items under this heading)

1. "That Federal Executive be instructed to take the necessary steps to amend Section 41a of the Federal Constitution by deleting the word '30' and inserting the word '14'."—Carried.

2. "That an expression of opinion regarding the advisability of the name of the W.I.A. being changed in view of the fact that the present title is 40 years old and could possibly be brought into line with current development."

This question was discussed, but it was felt that no change should occur to the existing name which is well established, for sentimental reasons, and in addition the cost of such an action would be considerable.

3. "That Federal Executive supply each Federal Councillor with a copy of the summarised policy of the Federal Council and with amendments as they arise."—Carried.

4. "That the 50 mile radius limit on portable licences be abolished."

This motion was withdrawn in view of the explanation supplied.

(Continued on Page 16)

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

144 Mc. continues to be the centre of interest for most v.h.f. activities these days, stimulated, no doubt, by the many successful contacts between VK3 and VK7 in the past few weeks. It appears likely that with the more serious interest that is being taken in band conditions, and the increasing use of good equipment, coupled with the growing population of the band, much be done to still further the DX horizon.

The following letter from Doug Fisher, 7AB, will be of interest to those who followed his activities on 16th April (see "Operation Apple Isle" —50 and Above, May, 1950):—

Dear OM.

"I am writing you a few details which may be of some interest of our 50 and 144 Mc. operation from Table Cape, near Wynyard. For some time prior to our operation, we made arrangements through 3ACL with 3RR, who was to co-operate from the Victorian end to cross Bass Strait on 144 Mc. From our end, I found that I could not get my transmitter finished in time, so 7KB concentrated on that which was an SCR522 driving a Philips QQE06/40 (his own transmitter) and we were able to run 100 watts input with excellent efficiency; the same transmitter operated on 50 Mc. also. I used my own converter, a 6AK5 broadband r.f. feeding into a 6J6 mixer converter and into a normal nine tube receiver at 10.7 Mc. with 1600 Kc. intermediates in receiver. Modulation was a pair of 830Bs in Class B used here normally at 7AB. The antenna system, which I think did a very fine job, was the 16 element job described in May 1946 'QST,' but we used it on end for horizontal polarisation.

"Although operating was scheduled for 16th April, we went up to Table Cape on the 15th, Saturday afternoon and stayed the week-end in a caravan. We were able to contact 3ACL and 3HK on the Saturday evening on 50 Mc. and then got things straightened up and had our tea at 12.30 a.m. Next morning we were up early and had a very good breakfast of eggs and sausages, had a few contacts on 40 metres until we heard 3RR at Cape Schanck about 10 a.m. When we were getting ready to contact him, the Type A Mark III. gave out and we heard 3RR contact 7PF on 7 Mc. and arrange to call him. We listened on 144 Mc. and could hear 3RR calling 7PF. By this time the Type A Mark III. was going again and we got on to 3RR, who straight away listened for us on 144 Mc. He missed us as we gave our frequency as 145 Mc. whereas we were on 145.3 Mc. and this evidently requires a lot more tuning on the receiver with a crystal controlled converter. Anyway, we made a sked for 50 Mc. for 12.30. This contact went very well indeed and we also contacted 3HK again.

"A sked was made for 1330 on 144 Mc. and this time we had an excellent contact with excellent signals both ways. We then used c.w. and contacted 3BW at 1400 hours and 3AKE at 1450 hours. 7PF was hearing us when we turned our beam his way but we could not hear his 144 Mc. signals, so we had a cross-band contact from that band to 7 Mc. At 1540 hours we contacted 7RL who was in the hut at Stanley. At 1610 we had the beam on Victoria again and contacted 3YS at Kinglake, then at 1635 3QK and at 1650 3PG. We had to pack up then and get away and we were able to just get away then by dark.

"Judging by the signals and our reactions to the band, we are sure that we could contact the stations at the same location again if we went to Table Cape and did not think that we had a "break through" but would be possible any time. We were very fortunate to have a.c. power available at Table Cape (450 feet above sea level) from Mr. Robert Thomson at Table Cape farm."

50 Mc. ACTIVITY

VICTORIA

Usual local and country contacts have continued on the band this month. No DX openings have been reported and the path to VK7 has been open once or twice only, 3AOL having worked 7XL from his home location with rather weak signals.

On the 15th and 16th, 7AB, who was portable at Table Cape, worked 3ACL, 3OD and 3HK with good signals. Lack of other unusual activity leaves no more to write about this month.

WESTERN AUSTRALIA

A slight increase in activity on this band has been evident lately. Newcomers to the band are 6HR and 6HL. 6HR is using his main transmitter, push-pull 807s at reduced input, but will be able to increase power when sufficient drive is found for the final. Receiving set-up is the normal Rx with one of the lower frequency ranges re-vamped for six. Antenna at present is dipole. 6HL has been testing mobile gear to cover both ten and six. 6RK now using a crystal controlled converter that seems to be doing a good job judging by the comparative ease he has in hearing country stations.

Every Sunday and Monday evening at 8 p.m. from now onwards will be set aside by 50 Mc. stations for a "six metre round-up." QSOs will be kept down to about 10 minutes if possible to enable country stations to break-in if Perth signals are getting out.

6DW, Bruce Rock, still getting down to the city on c.w. and worked 6FC and 6RK recently. 6GS, Harvey, fractured his 6 metre crystal, but believe he has another supplied by a city Ham. Stations now operating six metres in W.A. are 6BO, 6FC, 6FW, 6DD, 6HL, 6HR, 6RK, 6LW, 6AS, 6GB, 6DW, 6EC, 6GS, 6WG. Incidentally, 6BO is now using 807 in the final and is saving his 815 for 144 Mc.

144 Mc. ACTIVITY—VICTORIA

There are some more interesting contacts with VK7 to report this month. First, as mentioned last month, on the 16th April, 7AB was portable on Table Cape and worked 3RR, 3AKE, 3QK, 3PG and 3YS. The latter contact, at 237 miles, was the best for the day. On the evening of the 24th, 3AKE worked 7PF at 2030, signals being S7 both ways and heard 7MC at S5. The next day, being a holiday, hourly skeds were arranged commencing at 0800 hours. Contact with 7PF was promptly established when the first sked came around, with S7 signals, and hourly contacts were maintained up to 1600 with the signals peaking S9 plus at 1400. Stations worked by 3AKE were 7PF, 7BQ and 7MC. No other VK3s were contacted that day, although 3BU, of Geelong, heard 7BQ. The same evening at 20 0 hours, 3AKE again worked 7PF with S7 signals, however he disappeared shortly later and no further contacts have been made up to the time of writing.

On the morning of the 25th at 1100 hours, 3AKE opened up a new VK3 path by working 3ALS at Yallourn, with S6 signals. This distance is approximately 110 miles. So far, 3ALS and 3TO, of Yallourn, have not been able to hear Melbourne stations, 75 miles away, from their home locations, although they are easily worked from a portable location outside the town and about 150 feet higher.

3APF, of Shepparton, has now made a number of Melbourne contacts, having worked 3ABA, 3IM, and 3PG over this 100 mile path. 3UI, of Tatura, has also broken through, having worked 3PG.

Despite poor weather, a highly successful Field Day was held on the 7th of May when stations out were 3YS, Mt. Macedon; 3FO, Arthur's Seat; 3TO, Yallourn; 3ACH, Kinglake; 3ZL/GM, Mt. Bunin yong; 3JO, Mt. Dandenong. 7AB was also co-operating, but due to poor conditions, nothing was heard from him. However all the VK3s out had a large number of contacts, with the record possibly being held by 3FO who worked 15 different stations. Best distance was 3TO to 3ZL/GM, 140 miles.

288 Mc. CONTACT IN W.A.

On a recent visit to Perth, 6DW, using mobile gear, worked 6BO on 288 Mc., the best distance covered being 25 miles. This constitutes a record for 288 Mc. in Western Australia.

6KU and 6MK reported to be getting ready for the band with 7193s and super-regen receivers.

— . . . —

Annual Federal Convention, W.I.A.

(Continued from Page 15)

5. "That a discussion take place on the unrest caused to many Amateurs by the use of excessive and illegal transmitter power by a few Amateurs."

A discussion took place on this question and delegates agreed to bring this matter to the notice of their local Amateur Advisory Committee.

6. "That a Contest Committee be formed in each State, if not already in existence. Such Committee to be formed from experienced Contest Amateurs and to make recommendations on all contest matters referred to the Federal Councillor or Divisional Council."—Carried.

7. "That steps be taken to publish a list of overseas prize winners in the 1948 VK-ZL Contest." —Carried.

8. "That the Awards Committee be instructed to publish from time to time in 'Amateur Radio' an up-to-date list of countries and if applicable, stations which are not acceptable for DX C.C. and contest credit and the reasons therefor."—Carried.

9. "That the standard numbering system for exchanges as adopted from time to time for the VK-ZL Contest shall be applied also to all Federal Contests."—Carried.

10. "That Federal Executive organise an annual 50 Mc. contest with trophies including two sections, one for transmitting and one for receiving. The trophy for the transmitting section will be known as "The Ross A. Hull Memorial Trophy." (Reference General Business Item 2, 1949 Convention.)—Carried.

11. "That the Agenda of the 25th International Congress to be held in Paris in May, 1950, be considered with a view to briefing the R.S.G.B. on our behalf."

"That Federal Executive be requested to ask the R.S.G.B. to represent us in any matters it feels appropriate providing such matters have authority under the Institute's policy book or from matters agreed to in the 20th Convention."—Carried.

12. "That the Federal Council recommends to all Divisions that the principle to be accepted in tendering for Disposals equipment in any one State be that no tenders are to be submitted from an outside State without prior consultation between the Divisions concerned."—Carried.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary.—Maurie Butler (VK2AAN), Box 1734 G.P.O., Sydney.

Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor.—A. C. Pearce, 131A Balmain Road, Leichhardt, N.S.W.

Zone Correspondents.—Nth. Coast & Tablelands: J. M. Retallick, VK2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 48 Harrabrook Ave., Five Docks; Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. Dyer (VK3DY), 10 Collington Ave., Brighton (XA 6326).

Administrative Secretary.—Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne, C.1.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rorke, VK3AKR, Killigrew, Westmere; North Eastern: H. G. Wohlers, 107 Templeton St., Wangaratta; Far North Western: M. Folie, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Tinambra; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WL

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW on Friday evenings on the 7 and 14 Mc. bands.

VK6WI.—Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.

Meeting Night.—Last Friday in each month at the Y.M.C.A. Rooms, Edward Street, Brisbane.

Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—E. A. Barbier, VK5MD, Box 1234K, G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AG, 7 Howard St., Perth.

Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.

Meeting Night.—Watch the Monthly Bulletin.

Divisional Sub-Editor.—George W. Ashley, VK6GA, 33 Mars Street, Carlisle, Western Australia.

TASMANIA

Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor.—G. D. P. Clarke (VK7TA), c/o. 7HO, 82 Elizabeth Street, Hobart, Tas.

Northern Zone Correspondent.—R. H. Kilby, VK7RK, 5 Galvin Street, Launceston.

FEDERAL

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C.W.

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A BRAILLE MAGAZINE

Everett A. Erickson, W1NLM, of 6 Oaklands Heights, Bethel, Conn., U.S.A., in association with other U.S. Amateurs, is compiling a new braille magazine for the blind Amateur and s.w.l. If you know of anyone who might be interested in such a praiseworthy scheme, it would be appreciated if you will communicate with W1NLM.

TRANS-TASMAN CONTEST

In view of Agenda Item No. 11, of the 20th Annual Convention, the Trans-Tasman Contest will not be held.

RADIO INSPECTORS ENTERTAINED

The Federal Executive, on behalf of Federal Council, entertained Messrs. Dobbyn and Pearson, of the Wireless Branch of the P.M.G. Department, at a farewell dinner to Bill Mitchell (VK3UM), the past Federal Secretary, who was presented with a Parker 51 Pen in appreciation of his sterling services. It is hoped that Bill's official duties will permit him to put this pen to paper and thereby give us some news of the Amateur doings in England during the next two years.

Mr. J. Dobbyn, an Amateur, VK3DO, has spent the past 2½ years as the Commonwealth representative on the International Telecommunications Union at Geneva where the allocation of frequencies to all types of services is being considered on engineering principles. As the Atlantic City Convention granted the Amateurs of the world status as a service, your interests were considered, but the bringing into operation of these findings is still in the distant future. When the time does eventually arrive for us to have the 21 Mc. band, there will be, as a counter measure, a decrease in the frequencies on 7 and 14 Mc. as determined at Atlantic City.

CHANGES TO AMATEUR CALL SIGNS

New Issues—

VK2ST—E. C. R. Stoney, 64 Shadforth St., Mosman.
2AOH—A. Hagers, 2 Iluka Rd., Mosman.
2AQZ—R. H. Black, 36 College St., Sydney.
2AUM—J. G. Moss, 18 Baldry St., Chatswood.
VK3ACU—N. Lawrence, 19 Bennett St., North Richmond.
3AFQ—E. L. D. Treharne, 11 Glenvale Rd., Glen Iris.
3AHP—W. H. Fleming, Springhurst.
3ARW—L. C. Weightman, 12 Taylor St., Oakleigh.
VK4EH—R. F. Hambridge, 87 Pine St., Wynnum.
4RR—R. W. Rose, Cassowary St., Longreach.

W.I.A. ACTIVITIES CALENDAR

June 7: Ratification of Convention items due with F.E.

VK5WV—G. C. R. Waters, c/o. Kahlin Hospital, Darwin, N.T.
VK6BY—B. R. Aubrey, 120 Canning Highway, South Perth.
6HB—C. L. R. Bullock, "Aldersyde," Bickley.
6OY—T. H. Mitchell, 121 Hill St., Perth.
VK7BK—S. G. Kitchen, 11 Pine Ave., Seven Mile Beach, Hobart.
7SW—T. E. Ward, 40 Pirie St., New Town.
VK9FM—R. H. Mouhl, Civil Aviation Department, Port Moresby.

Alterations—

VK2GK—22 Landers Road, Lane Cove.
2KN—"Talune," Littleton St., Herne Bay.
2QX—148 Wileys Ave., Lakemba.
2TS—c/o. S.S. "River Burdekin," c/o. Amalgamated Wireless Ltd., 47 York St.,
2TZ—455 Rocky Point Rd., Sans Souci.
2YZ—9 Leo St., Gladesville.
2ABC—60 Alma Rd., Maroubra.
2ARQ—21 Sandridge St., Bondi.
VK3BJ—22 Kernan St., North Essendon.
3DZ—1 Stanley St., North Williamstown.
3JL—60 St. Andrews St., Brighton.
3JX—Rear 438 Neerim Rd., Murrumbeena.
3JZ—4 Birdwood St., Parkdale.
3PE—123 Sobroan St., Shepparton.
3QF—4 Lemnos St., Croydon.
3TV—"Carters," Warrigal Rd., Holmesglen.
3US—Day Avenue, Omeo.
3VL—Day Avenue, Omeo.
3ACB—23 Lesney St., East Richmond.
3AJO—169 Don St., Bendigo.
3ARL—Cr. Darlington Rd. and Walker St., Stawell.
3AWR—15 Cartwright St., Glenroy.
VK5CE—285 McBryde Terrace, Whyalla.
VK6RT—School House, Cue.
6RZ—c/o. O.T.C. Wireless Station, Applecross.

Deletions—

VK2BQ—Cancelled.
2AJI—Cancelled.
VK3GH—Cancelled.
3LW—Cancelled.
3ACQ—Cancelled, now operating under VK3ARW.
3AWV—Cancelled, now operating under VK5WV.
VK4EN—Cancelled.
4RQ—Cancelled, now operating under VK4RR.
VK5AG—Cancelled.
5AY—Cancelled, now operating under VK6BY.
5CI—Cancelled.
5RS—Cancelled.
VK6AB—Cancelled.
6FM—Cancelled, now operating under VK9FM.
VK9BP—Cancelled.
9FJ—Cancelled.
9NK—Cancelled.

PUNCTUALITY

During the last few months some correspondents to this magazine have been forwarding their notes in late. In an endeavour to continue to deliver to you the magazine on the first of each month, it is requested that all notes be posted to arrive before the 8th of the preceding month.

Your co-operation in this respect would be appreciated. No responsibility will be taken by the Magazine Committee for the non-appearance of notes received after the closing date. This will be strictly adhered to as from this issue.

FEDERAL QSL BUREAU

RAY JONES (VK3RJ), MANAGER

Official advice has now been received of the re-licensing of Amateur Stations in Poland with the old International prefix of SP, and the re-forming of their official organisation. The organisation has retained its old title which is PZK (for short) and its address which is also that of its QSL Bureau is PZK, Postbox 320, Warsaw, Poland.

An International Congress of Radio Amateur Associations affiliated with the I.A.R.U. was scheduled to be held in Paris, France, on 25th to 27th March. The Congress was organised to celebrate the twenty-fifth anniversary of the founding of the I.A.R.U. and the R.E.F., according to advices from the latter body.

According to the official A.R.R.L. broadcast, heard at excellent strength on 14,100 Kc. on April 16, the DX Expedition to the Galapagos Islands, conducted by the Guayaquil Radio Club, has been delayed. The scheduled sailing date was advanced to April 12. Four days' sailing time will be required and during that period the expedition was scheduled to operate maritime mobile on 28 Mc. On arrival at Galapagos Islands, the expedition will operate on 80, 40, 20, and 10 metre bands on both phone and c.w., under the call sign HC8GRC. No information was given as to the duration of the stay of the expedition.

Writing under date of April 12, Felix, FK8AC, states that a pirate has been active on 14 Mc. under the call sign FK8BKK. Felix requests the co-operation of all stations "in cornering this black one," and stresses the fact that the only call signs so far issued are FK8AA through FK8AG, but indicates that FK8AI and FK8AH are expected to be on the air in the near future.

Andre Baillet left Noumea for Matautu (Wallis Island) about April 16. As forecast in these notes, Andre will operate under the call sign FW8AA and first will use 7000 Kc. with a small rig using a vibrator power pack putting about 10 watts into a half wave Windom antenna. No further details as to hours of operation are yet available, but as Andre is scheduled to remain at Wallis for three years, there will be time for all to make the contact. Andre has been well coached in the methods of obviating pile-ups on his frequency.

The full QTH of ZK1BC, who is currently putting in a hefty c.w. signal to VK on the 14 Mc. band, is: R. Hanley, care Civil Aviation Branch, Rarotonga, Cook Islands.

The full QTH of VK9JC, who is presently active on 14 Mc. c.w., is: 20524 L.A.C. W. Cromie, R.A.A.F. Station, Momote, Admiralty Islands. VK9JC, who is ex-VK2AWO and ex-VK4WL, says conditions are usually good there in the evenings and early mornings and from 0900 G.M.T. the VK3 stations pour in. He advises the use of airmail for QSL's as surface mails take up to three months to arrive.

Melbourne is again to be favored with a visit from VK6SA, Jim Austin, still very active and with ability undiminished by the passing years. Jim is attending the two yearly conferences of the Police Departments of all States. It seems only yesterday that Jim attended a similar gathering here, which is indicative of the speedy passage of time.

My old friend, Treb, of B.E.R.S. 195, ever willing to assist in any way possible, succeeded in establishing contact by correspondence with VK9WL and thus straightening out an awkward situation with QSL's for the latter station. The following topical pars are from B.E.R.S. 195 and are appreciated.

Ken Cook, G2KK, is anxious to have 7 Mc. contacts with VK stations. Ken is ex pre-war ZC6AQ and SU1AQ and sends his greeting to all old VK friends, especially VK3EQ.

A QSL to hand from ZS3B, Gerhard Schlorf, of Port Tsumeb, British South West Africa, states he is 19 years of age and a bricklayer by occupation. His c.w. signals can be heard on 14 Mc. around 2030 G.M.T.

Friends of ZS9D, Ivan Quarmby, will be pleased to know that he has recovered from injuries received in a motor accident several months ago.

Max Rieper, VK3AMR, late of Bairnsdale, Vic., is now at Madang, New Guinea, and as VK3AMR/VK9 has been active around 1000 G.M.T.

Jim Widdup, VK9WL, writing from Torokini, New Ireland, under date of April 18, indicates that he has not much time for the pursuit of Amateur Radio. Judging by the QSLs that come to hand, Jim makes very good use of the little time he can devote to the game. Jim, who has a lifetime of experience in the islands, the tropics and coastal radio, gives his age away by mentioning his acquaintance with several postal telegraphists at Darwin. I know it is well over 20 years since those men were at Darwin. Alas Jim, Peter Faux passed on at Launceston about 15 years ago, but understand Joe Brophy can still answer the roll call.

This Bureau requires the current address of OKIWE, now in Australia.

Following are the addresses of Divisional QSL Bureaux (for application for incoming cards):—

N.S.W.—Jim Corbin, VK2YC, 78 Maloney St., Eastlakes, Sydney.

Vic.—Graham Roper, VK3ZB, 26 Lucas St., Caulfield, S.E.8.

Old.—Eric Lake, VK4EL, Old Cleveland Rd., Camp Hill, Brisbane.

S.A.—Geo Luxon, VK5RX, 8 Brook St., West Mitcham, South Aust.

W.A.—J. E. Rumble, Box F319, Perth.

Tas.—T. Allan, Thirza St., New Town, Hobart.

Federal (W.A.C. and W.B.E. applications)—Ray Jones, VK3RJ, 23 Landale St., Box Hill, E.11, Vic.

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NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester Street, Sydney, on Friday, 28th April, at 8 p.m.

The annual general report was received and adopted and 20 new members admitted to the membership. Then the returning officer, together with scrutineers retired to count ballot papers for the election of Council members for 1950-51. In their absence general business was resumed and finalised.

The President, Mr. H. F. Treharne (VK2BM) thanked Council and ex-officio members for their good work throughout the year. By all accounts the Urunga Convention was an unqualified success. Council and the Institute were represented by 2AAN and 2AYE. A full report on the Urunga gathering will be found elsewhere in this issue.

2OR moved a vote of thanks to the Chairman for his sterling work during the year and 2XO, organiser of the Urunga Convention, then addressed the meeting. Class manager, Ian Appleby, gave an account of activities in A.O.C.P. Classes.

Fred Phillips, who is Chairman of the Disposals Committee, gave an account of disposals operations and the long hours and hard work encountered. Fred and his merry men are to be congratulated for an extremely fine performance and there are lots of satisfied customers.

2YC reports that more QSL cards are going out of the country than are coming in and hopes that this state of affairs will be soon remedied.

On the motion of 2AYE, 2MM was invited to report on the Urunga show and he was followed by 2AAN in his capacity of official representative of the Institute at Urunga. Dave detailed the events there and forecast some of the things in store to delight the next gathering of the clan. A vote of thanks to 2XO, for his hard work in helping to make Urunga a success, was carried by acclamation.

A long discussion took place on a proposal that members at the monthly meetings should have a small card bearing name and call sign pinned to their coats. It is expected that Council will give very favourable consideration to this novel suggestion, and no doubt members will take advantage of the situation to make personal contact with those fellows they have not chanced to meet, except on the Ham bands.

In the ballot for Council members 1950-51, the following were declared elected:—M. Butler, 2AAN; M. Brown, 2OR; J. Corbin, 2YC; D. Evans, 2AYE; J. Moyle, 2JU; W. Nye, 2XU; V. Wilson, 2VW.

Vaughan Wilson, official operator of the voice of the Wireless Institute of Australia, N.S.W. Div., VK2WI, reported on transmissions during the past year and enlarged on future operations of the official station.

It was disclosed that Eric Bierre, VK2VE, will be moving through Britain, Europe, etc., and perhaps Barbados. Needless to say, Eric will be visiting many a Ham shack in these remote parts and would appreciate VKs listening for any calls. Eric was given a hearty send-off. No doubt the DX fraternity have it fixed to persuade some of the rare ones to look harder down to this quarter of the globe.

EASTERN SUBURBS

VK2ARD, of North Bondi, is having fun with an unusual antenna recommended for trial by 2NO. This is the W3EDP all-band affair which, although as the title implies, originated in U.S.A., is described only in the R.S.G.B. Handbook. In other words, it is popular with Gs. It consists merely of an 84 feet length of wire and a small counterpoise. The latter is 8 ft. 6 in. long where the system is to be used on 10 and 20, and 17 ft. long for 40 and 80. The CP must run inside the shack, at right angles to the antenna. It really does work, too, as witness 2ARD's results on 40 and 20.

2CF been heard for a brief appearance on 40 phone after a lengthy silence. 2OV has been on 40 phone and finds difficulty in working some directions because of location; below a 300 ft. rise. Rob Gurr, 2ARQ, recently 5RQ, is having teething troubles with a modulator and is anxious to run

skeds with his South Australian cobbers when he gets the gear to behave itself. He and 2AYE maintain close liaison and QTH proximity. Another old hand who puts in brief appearances on both 40 and 20 is 2HR. Otto was the originator of Sydney station 2UW—in the far-off days of early broadcasting. His radio business doesn't allow much time for hamming. Also in the category of the "OT lured back" is 2XB who is making merry with DX on 20 phone. One thing Tom, those "skirts" want to come in a bit!

2ABD scored another nautical success in winning that Queensland coast-wise race with his yacht "Kyeema." He, like all Amateurs with a sense of value of mobile gear, takes along a Number Eleven when out among the white horses. 2YF recently broke out with a rotary beam rash, but seems to be in doubt about something. With his plain old single wire feed antenna, 2AX can be heard in with the rest on DX, but mostly on c.w. on 40 and 20, and takes an occasional look-see at 80 as well. Only heard spasmodically these days is 2FJ who ran into a non-mechanical or electrical form of "tower trouble" engendered by local Council wallahs. Jack nurses pipe-dreams of the land he has bought up Gosford way, and that way lies the seeds of planting an antenna farm. 2AYE says that his call sign is the affirmative and 2NO's the negative in the area—if the reader can't see this, have another try! 2NO has been heard more than usually on 40 phone and was engaged in a long nostalgic QSO with 3BD, nostalgic? Yes, for Eric was, in years gone by, the famous 2BP, of Hazelbrook in the Blue Mountains. 2NO and 2BP established the first "out of Sydney" working on the pre-war 5 metre band in 1933-34. A new antenna is under test at 2NO (don't tell me there IS room for any more Don?) in the form of an unusual two-band arrangement using a combination of 300 ohm ribbon, 75 ohm line, and plain wire. He says if the Editor would like the gen he will knock up an article for "A.R." (Articles are always welcomed.—Editor.) 2NO, who is a veteran of the two Big Scraps, is back with his first love, Naval Aviation—concerned with radio and such things.

2TN is heard occasionally on 20 phone and takes an active part in the Waverley Club, along with 2AFZ. Over in Randwick, 2AIO sticks to his key-punching mostly but changes to speech in despair when c.w. contacts are non est. If anybody in this neck of the woods wants any proof of the utility of a vertical radiator, listen to 2AZH. He gets out nicely on 20 phone, and is handicapped by anything but a good location. That grizzled OT "Two HP Sauce," Harold, is reported to be nearly through with the building of a double i.f. receiver to "pull 'em in and mow 'em down" and we believe that 2AZH is the bloke with the soldering iron. This scribe takes the opportunity to congratulate 2AYE on his sparkling enthusiasm for the job of W.I.A. Asst. Secretary, and the enormous help he so obviously was to the North Coast Convention recently. 2XO has been heard recently visiting many Eastern Suburbs' shacks including 2ARD, 2AYE and 2NO, complete with Eleven Set and whip radiator adorning his Austin of G-land. Another E.S. station not usually on 40 has been heard there lately in the form of 2QG.

NORTH SHORE ZONE

One Ham, who won't suffer like the rest of us from XYL trouble when he gets married is 2EL, who has been fortunate enough to win the hand of 2NC's daughter. Congratulations, you lucky people! 2VN is now operating from a new location at Killara, right next door to his permanent location, now in course of erection. 2ZH is another with a shift of QTH in view, to a spot which he assures me is Sydney's choicest DX bringer-inner. 2PV wants to know if there are any Hams in Brazil. He and 2AM have received their QSL's from AC4NC.

2XM has shifted to new location in Cremorne. 2TL getting among the DX with his exciter, but new final is almost ready. 2AND flat out with final exams, but is spending what spare time he has on getting his rig in first-class order. 2AAM, Secretary of the Division, has been elected a Councillor for the ensuing year. 2JU, that tower of strength in Institute matters, is also back on the Council. Congratulations, John and Mauric. Hear that 2ADV, who worked someone in Afghanistan, got his QSL via Moscow! Work that one out.

HUNTER BRANCH

The last meeting of the Branch was very well attended, the main attraction being the showing of a movie film on "Atomic Physics." In the absence of the chairman, 2CS, who was holidaying in VK3, 2AFS was in the chair. The Branch is fortunate to have two good men to fill the job. It was very pleasing to see the Coalfield boys down, namely, 2ADT, 2YL, 2PZ and associate members including Chas Hunt—incidentally Chas should have a call sign anytime now. Since returning from VK3, 2CS has been heard on 10—the new Rx must be predominating. Most of the gang must be either wrecking or re-building disposals gear. This may be the reason for the reduction of operating time. 2ANA with an 811 has the 100 w. power supply well under way. 2UY now the proud

Zona Officer for the North Coast, VK2XO, is on holidays in Sydney so no notes from there this month. The full story of the Western N.S.W. District's flood emergency work in April is still not complete, the gang have to get together to draft the details. They should appear in July issue.

Bill VK2BT supplied notes for May issue in place of VK2WH, Western Zone Officer, but they unfortunately went astray and arrived late in Sydney—our apologies for them missing out.

possessor of a "640" Rx, performance just so-so, may even be fitting compass Rx as Qsr. 2NX has left the district, now working in Sydney, but comes home frequently, may be operating fixed portable soon. 2CW been away in Sydney also, active on rare occasions. Secretary 2LV been building c.r.o. and achieving good results; has the phone going nicely with the aid of the c.r.o.

2WU is giving away n.b.f.m. for a.m. 2AAI is putting out some nice quality on 40 using 807s. 2ZC very pleased about disposal units, may be on 2 Mx soon—recently picked up a couple of new countries, HC8 and VK1. Harvey Fitton waiting for his call. 2FP and 2AFS still "nosing" about 10 for new ones, but conditions very sick. 2AGY is on 20 c.w. and 10 phone when the noise is down. 2AMM now settled in new shack at Stockton. 2PT still using fixed 2 element beam on 20 with good results. Congrats with the best of luck to 2ASJ on joining up the branch. 2BZ had his a.s.v. receiver going a few hours after he received it. 2ADS very active on 6, but not heard on 10 yet. 2OS has a very nice tower these days for the 6 and 10 beams. 2UF only working on 2 Mx these days. 2CI well after his recent operation, fairly silent since winning E.B. Award at Urunga.

2PQ having trouble with the new double super Rx. The super-selectivity didn't pay off in Tom's case, but it should be ironed out by now. 2TE not too active during last month. From a nice location overlooking Lake Macquarie, 2AAM is putting out nice phone on 40 and talking v.h.f's. 2XY had great fun moving a live bomb from an i.f.f. set recently, also revamping disposals gear. 2CN has the new 20 Mx beam under control, works on 40 when not beaming. 2AGD on 10 and 40 since f.b. holiday, did a wonderful job as bush mechanic while on holidays, says b.c. receiver was repaired by aid of pencil and pumpkin seed—how? —ask Geo. Believe or not—Bill 2XT is still collecting disposals equipment, has some very nice gear too. 2KG attended I.R.E. Convention in Melbourne, had a good look at VK3; 2FX still QRL.

The Maitland boys are showing plenty of interest in the Emergency Network and a very successful practice was held recently. 2XQ has the Net under control. 2ADX, although QRL, found time to be in the last hook-up and is very interested. 2TY is working all bands these days, but doesn't like the noise on 80. 2AKP has his zepp altered for 80 and uses it on all bands with great success. 2DG finally caught up with TA3AA and TA3FAS and anxiously waiting for cards to turn up. The gang were very pleased to see 2XO, his XYL, and 2ACU on their way through Newcastle on the trip to Sydney. The No. 11 did a marvellous job mobile on the way and was OK up to 60 m.p.h. 2AEY also made a trip through the coal city and 2ZS spent some time there doing the rounds of the shacks. 2AHA keeping skeds with TA3AF and TA3AA when not revamping disposal gar.

COALFIELDS AND LAKES

Another successful Emergency Network hook-up for practice took place on the last Sunday in April on the 3.5 Mc. band. The organisation is getting under way; besides providing an emergency hook-up, it is reviving a lot of interest in the 80 Mx band. 2ADX, 2ANU, 2VU, 2TY, 2YL, 2ADT, 2KZ and 2AHA plus emergency officer, 2XQ, participated in the run. Not a great deal of general activity in the zone and conditions on most of the bands have been poor, the worst for some considerable time. 2ANU still putting out a good signal on QRP using 80 and 6. 2VU is now to be found on various bands, 6 the mainstay with the new 42 for mast. No news from 2JZ; was adding height to the tower on the last report. 2TY also working quite a few bands with a nice phone signal. 2ALR heard testing on 20, so that's a start Bruce. 2PZ not ready to go yet; attended last Hunter Branch meeting with 2ADT and 2YL, so hasn't lost any interest. Chris' main trouble seems to be the days, there is only 24 hours in them. 2ADT for a change hasn't done anything startling in the way of DX, but has been shining as a cook and home keeper and laundry maid while the wife had a spell in hospital. So if any Ham has housekeeping problems, I'd suggest they contact 2ADT—he also talks of a new v.f.o. 2YO only working 10 phone, but planning rigs for most bands.

2KF hasn't been seen as much as usual, so guess he is cooking up something. 2KZ keeps Kurri on the map, especially on 10 Mx using converter on 6 and talks of a re-build. News from the Lakes is very scarce. The main noise from the area, 2KR, is still on holidays. The local gang owe 2RU a thank you for picking up disposal gear, as they do 2ADT for the final distribution. Would like anyone interested to send me some Lakes notes by the end of the month. 2YL working a few on 14 Mc. phone and hopes to be a bit more active during the next few months.

WESTERN ZONE

Most welcome letter of the month came from 2ACP, Katoomba. Bill is the first Ham who has written to me with some news of his activities. Many thanks, Bill, and hope other Hams in this zone follow your good example. 2ACP heard on 7 Mc. phone, or if you prefer a c.w. contact, Bill has been handling code since 1012. One happy result of the floods comes from Nyngan where 2QA took several fish meals from the Bogan. That sizzling noise on the transmission made many mouths water.

Heard some excellent s.s.s.c. from 2ALX during the month. Found difficulty here in getting the right strength of carrier injection. When this was achieved, the quality was really good Don. Things are very quiet over Parkes way. 2EI heard on 7 Mc. phone only once.

Forbes Hams are still recovering from the hectic activity that took place during the floods. 2BT has the new location just about straightened out—new shack almost completed, three element beam on 14 Mc. rotating, and promising activity on the v.h.f's. ere long. 2AMV also ready for v.h.f. experiments. Can operate all bands now from 3.5 to 144 Mc. (provided the Forbes 144 band is in the same part of the spectrum as the rest of VK). New three element on 10 just gone up and working well. DX has not lost its charm for John yet, as he rose at 0300 the other morning and roped in five new countries before breakfast. 2JV still heard only on very rare occasions. Jim promises to get right down to it before long.

At 2WH, preparation for and cleaning up after the floods, plus a busy time while the Army Ducks were in Forbes didn't leave much time for Ham Radio. Long awaited electric pump has turned up, so windmill tower will soon be available for 50 Mc. beam. Apology to 4QL; Frank when you asked for the QTH of HC8GRC, and was he a new one, I unintentionally misled you. Since found out HE IS! Frank will be remembered by many as 2QL.

2NS paid a visit to Forbes during the big wet and Trev saw the first (minor) flood. Unfortunately, he got out before the big water arrived, so the local shacks missed the benefit of a ten or twelve day stay. Trev's natural resonant freq. must have been right on the homing beacon of the Forbes mossies as they landed blind on him with unerring accuracy. Conditions got so bad on the v.h.f. bands that as great an addict as 2LZ dug up a 7048 Kc. rock and was heard in low powered phone contact with (I know it's unbelievable) 2AH! Looking forward to a yarn Con. Dubbo Hams were in urgent demand during the Macquarie River flood when the Army lost contact with a couple of Ducks. After many watts had been burned up on 7 Mc., it was found that 2XP had been mothering the ducklings for a couple of days, and continued to do liaison work for as long as was necessary.

2ACU just managed to make Urunga. 2JC was another who managed to get to Urunga. Glad Hart and Rod were able to represent the Western Hams as many of us who had planned to go could only sit and watch the waters rise. 2FI reported as active on the v.h.f's. only. Running an 807 on 50.9 Mc. Try that beam west some lunch time or evening Malcolm. It just might happen. From the Blue Mountains—2LY will be changing QTH soon. 2LZ saw the old R.A.A.F. gang at Springwood on Anzac Day. 2EX is on already and working Europeans on 20. 2HZ still has not found anywhere to operate from, the XYL still reading riot act on gear in the house.

SOUTH COAST AND SOUTHERN

We learn that 2AJP has been successful in passing his b.c. ticket—congrats Jack. Guess before long your name will have a string of letters to it. 2OY has a new folded dipole doing a fine job, using a new system of keying too, and has eliminated any trace of back-wave. 2ON has a 3 over 3 on some band, guess it is 50 Mc. Lindsay is not sure whether antenna is OK or needs pruning. A super regen Rx going too—so perhaps the guess on 3 over 3 frequency is wrong! 2AMD near Wollongong on 40 with QRP rig, 5 watts input; uses 90 watts to 807s on 20 c.w. 2JQ has new Compass Rx and hopes to get it operating as one section of double conversion super. Monty spent four days at Yass attending Synod (that Synod bloke certainly gets around Cec 2KKR). 2PI has a super regen on 144 and has converted an i.f.f. 966. Had fun and games changing Command Tx from 80 to 40. 2TV is taking things easy on Doctor's orders. A converted Command Tx is used on 40 with 6 watts input 6V6 mod. and folded dipole. Rx is AMR300 but another Rx on the lines of the famous Hammarlund is on the operating table too. 2PM has altered his audio gear, it is now p.p. 807s in AB1. 144 Mc.

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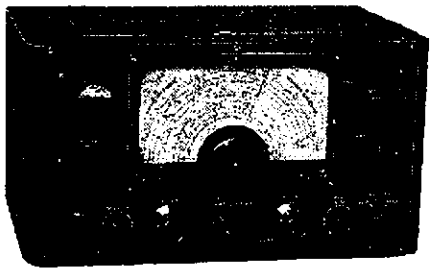

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will be used soon and it looks as if all the Canberra gang will be on that band before long.

2WP will be pleased to hear that Frank Deaman, VK2ADH, is again active and looking forward to contacts with his old Army friends. Wollongong Club, 2AMW, has been busy getting new members for the W.I.A. In a recent b.c. from 2WI many names from the 'Gong appeared. 2TO has many troubles, not doing the right thing—BC348 on the ice and Jim has little time to play Ham Radio. 2APP, new W.I.A. member, has recently taken unto himself a v.f.o. Is using about 10 watts and "640" Rx. Another Ham who will shortly make noises is 2ACG in Kingston, Canberra. 2RM, of Duntroon, again active and operator, Harry Hutton, heard in QSO with someone using a "Dr. Upton" vertical antenna (refer to 2JR for details of the same).

2AEL is QRL making preparations for winter operation on 80 Mx. 2AIK tripping around country (was again seen gazing into radio shop windows in Sydney), he was visited by 2AMW who arrived as Ces was leaving for Kiama. He reported a South American on 7150 Kc. in the early evening. Could have been an XE as they came through nicely last winter. Cc 2ALS has rebuilt the TA12D modulator and has it installed, next job is conversion of a Compass Rx for second i.f. channel.

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VICTORIA

The usual monthly meeting was held on 3rd May at the usual meeting place, the Melbourne Technical College, and once again lived up to the Division's reputation—getting a late start. It was 8.20 p.m. when the new President, Bert Semmons, took the chair to open the meeting to 100 members. After the President called for apologies and gave a hearty welcome to the visitors, the Secretary read the minutes of the last meeting. The visitors present were VK2NT and Mr. Joe Dobbin, of the P.M.G. Department, and we were all pleased to see our immediate past president, Bob Cunningham, with us once again after his sojourn to G land.

The President gave a report on the last Council meeting and outlined what the Council has in hand for the next 12 months. Bob Cunningham was then asked to give the boys his impressions of his trip to England. Bob commenced by saying that the R.S.G.B. send 73 to all W.I.A. Hams. He was impressed with the set-up of some of the Ham shacks visited, these included G5BZ, G5JU, G6XJ, and G2PU (who has a 16 element beam). The QRM is terrific from European stations and it makes the going hard when a VK or ZL signal shows up (how about the AC4RN, Bob?). Quite a lot of the boys are holding down good jobs with the Police and Navy, due to their knowledge of radio. The G boys use the 160 and 80 metre bands quite a lot for cross town "natter" and DX TVI is a major problem and the general idea is if you live near a "looker" you just "pull the big switch;" also another source of QRM are motor cars. An interesting point to note is that there is no law in England for the suppression of apparatus, that may cause interference to radio or TV. Many were the questions that were asked and Bob answered them in his usual breezy manner.

Mr. Joe Dobbin was then introduced by Bob who said that Joe had been away in Switzerland for 2½ years on the Telecommunications and he was sure that Joe would have something to tell the boys. Joe started off by stating that he is a Ham, but not active (as yet). He recalled the days of the W.I.A. when they used to meet at Prahran. Speaking of the set-up now at Berne, Joe related some of the trials and tribulations that beset the delegates. One important outcome of the conference is that Amateurs are now a "Service" with specific bands. However, the difficulty of all Nations coming to an agreement on these matters is a large headache. He could not say when the 21 Mc. band would be available for Ham use. After the usual many and varied questions were asked, and answered, a very hearty vote of thanks were tendered to Bob and Joe for their very f.b. talks.

After "smoko," reports of the various committees were reported and to finish the evening, a wire recording was played of the delegates at the recent Federal Convention. Unfortunately the hour was late and with the caretaker of the building on our "tails" the President closed the meeting at 10.30 p.m.

It is with deep regret that we have to extend our sympathy to 3LH, the popular Secretary of the V.H.F. Group, on the sad loss of his mother. 3IE did a good job with the broadcast from Warrnambool Convention; nice work Alf. 3BH spent an enjoyable holiday among the Hams of Warrnambool. 3ACS been to VK5 land on business. 3ALQ still getting the DX. Max Hull, the new Federal Secretary, is getting that worried look on his brow—Contests coming up Max? What's this we hear about VK8WI going home to its nest. 3AJI is going all 144 Mc. happy. Some misguided individual happened to pass a new red car and took a sudden liking to the nice new spare tyre and cover. We hope that he left the "Jack."

The Outward QSL Manager again requests that all cards be sorted for the respective countries and it would help him if the stamps were affixed to the cards. The Inward Manager has quite a lot of uncollected cards at the Bureau; also there are some cards at the rooms awaiting collection.

THE MOORABBIN RADIO CLUB

The April meeting was held in the Town Hall, Moorabbin, on Friday, 21st April, to the usual large number of members and visitors. 3KE occupied the chair. For once in three months we were favoured with fine weather. The Treasurer, 3EM, reported a healthy bank balance and signed up two more new members. The agenda item was a demonstration and lecture by 3NS on "Relays." Stan held the audience for nearly an hour on the mysteries of relays, and illustrated his several points with the actual thing.

General business items were many and it was decided that the committee go into the matter of holding an exhibition in conjunction with some local body and also solicit the support of the Council.

The club will be on the air about the middle of May under the call sign of VK3APC and the chief operator would be pleased for QSO and reports. Frequency will be on the 7 Mc. band and also on 144 Mc.

3ALY donated a pair of 303 tubes and their disposal netted a goodly sum for club funds. It is pleasing to note the non Hams who are joining with the club and taking an active interest. The morse code class is running very smoothly and is nearly a "full house."

The June meeting is to be favoured with a talk by Fred House on "The Bogong Link." Fred, 3ARK, is employed by the S.E.C. and has had practical experience on this subject.

NORTH WEST ZONE

Well at long last your scribe has gathered enough information to try and put a few notes in our mag, so hope that we can now keep the good work up and keep our zone on the map. Firstly, we must bring to note the very bad luck and misfortune of Roy, 3CE, who has had more than his share of ill luck in loosing the sight of one eye. May fortune smile on you Roy in the future and make up for some of your bad luck. Hope you will be on the air very soon, OM.

Believe 3TL has been active on 80 metres on Sunday mornings, but nothing heard of 3OA or 3BM, so what about it chaps. 3CH also has not been active this year; guess the local power house is taking all his time these days. 3LII has departed from the zone and gone to Healesville. Best of luck Max in your new location OM. 3AIT has his rig pulled down but hopes to be on soon. 3HR is on now and again and will also be more active now that the 80 metre band is coming good.

Nothing heard of 3NN as yet, also silence from 3GW. Welcome to Pete, 3AGB, to the zone. He has been active with 3ZK and 3JG in Swan Hill on 40 metres. 3ACE active on 80, 40 and 20 metres, hoping to put up a beam in the near future and is keen to get on 10 metres. Please pass to 3ACE any items for next month's notes.

FAR NORTH WESTERN ZONE

The members of this zone have been very inactive during the past few months. 3FC and 3AFC both of Ouyen have been the most consistent. 3FC has been trying his hand at 20 metre phone with more or less indifferent success. Heard tell that he tried his Type 3 out on batteries the other night and managed to rope in a W or two, on 7 Mc. 3AFC is still struggling with the TA12D and having a bit of trouble with the drive for 14 Mc. His 7 Mc. phone sure hits this part of the world good 89. 3MF hasn't been heard on the bands for months. I understand he is still doing a bit to his c.r.o. once in a while. 3AUG also c.r.o. happy and is building a 5-inch job complete with r.f. power supply. Noel, who works on 28 and 14 Mc., is scouring the district for an old windmill tower. So far he has had no luck.

Haven't heard a peep out of 3ACY, maybe he will be on very soon now that the winter is approaching. The only cheerful spot of the month is that 3TI is on the air with 7 Mc. c.w. He tells me that now he has a rig on he will devote more time to Ham Radio in the future, so we look forward to hearing signals from 3TI more frequently.

Jim Power, one of our Associates, sat for his ticket in January. Haven't heard the result, guess Jim has been too busy coping with the fruit harvest. 3GZ been too busy to spare much time for Ham Radio, but has managed to get on 7 Mc. from time to time. Max has plans for re-building things and has started on the power supplies. The TA12D gets a few wires changed once in a while.

EASTERN ZONE

We have nothing startling this month, floods have receded and all is quiet, with the exception of our President, 3SS, who says he is entitled to make the longest speeches in the Sunday night hook-up because of his exalted position. He'll probably end up in Parliament House—even if he is merely there to service the p.a. system! 3WE has a couple of rivals now, none other than 3VL/3US, Rex and Gwen, who have settled in Omeo. Tough luck on the solitary b.c.l.—eh boys? The Stratford boys, 3IO and 3AJA, are quiet at present, although Cliff does a little c.w. on 40 metres. 3QZ and 3PR are on holidays, Ron has a new car—these wealthy cow-punchers!

On 16th April, 3RR contacted VK7 on 144 Mc. We hear that 3RH is also playing around on 144 Mc. We are still waiting for 3ALA to build up his modulator. Ted says he is waiting for an audio tranny, but it has been suggested that a certain YL is responsible for the delay. 3TV now resides in Melbourne. 3AHK had a visit from 3VG who, along with 3GO and 3LY, is absorbing large quantities of culture at local regional—3GI. Howard has put in one appearance on the hook-up so far; they are on shift work. How about you blokes taking it in turns to use that 3650 Kc. rock? On Sunday nights, I mean.

3VG suggested a get-together of local Hams so it has been decided to hold a young convention at Omeo over the King's Birthday week-end in June. All are welcome and bring your own blankets, guess it IS cold up there in June. It should be a good turn, field day, etc., and visitors will get a pre-view of what the big convention on 25th-26th November will be like, so what about it you city slickers?

The weekly hook-up keeps going as usual, up to 15 of us on occasions—plus a few ZLs. 3PR and 3QZ usually run a sked on Friday nights, which often ends up in a full scale zone hook-up, just a preliminary run for the official Sunday job.

GEELONG AMATEUR RADIO CLUB

Another meeting was held by the Geelong Amateur Radio Club in Lt. Malop Street. The business of the club was discussed, after which club member Jack Matthews, 3SY, conducted a tour of the studios of the local station 3GL. Afterwards members travelled to the station at Grovedale and saw the S.T.C. 500 watt transmitter. The next meeting was spent by the members in wiring up the power supply of the receiver and a "chin wag."

The following meeting took the form of a visit to Bruce McKenzie, 3VF, at Drysdale, where members spent an enjoyable evening. They saw and heard the latest piece of equipment built by Bruce. It is a "selecto-jet" used in conjunction with his double conversion superhet receiver. Members also saw his rig in which they were interested. The evening wound up with a buffet supper provided by Mrs. McKenzie.

CENTRAL WESTERN ZONE

The recent v.h.f. field day on the 16th April was the opportunity for a big effort on the part of the local v.h.f. gang—effort really should be in capital letters, as the three "experts" plus a brace of interested goers-along hauled their gear including 6 volt accumulators up a mile of mountain track to the aptly named "Pinnacle," one "Lenfo" beam was partly wrecked, but the other mainly survived and was installed on top of a 25 ft. stick and the gang was on the air. Of course nothing was heard, but the boys all say they learnt something from the trip which after all is the main thing. They had a f.b. time and enjoyed the hot sun.

At present Stawell's Ham population has temporarily increased by one in the shape of 3TZ, another of the v.h.f. brotherhood. Last seen he was in deep conversation with 3ARL. 3AKW has now finished up the 144 Mc. converter and is ready to give it a fly. Whether Bill's 100 Kc. if's. will be too sharp for the mod. osc. round here remains to be seen. It seems to your scribe that the "Lenfo" beam has serious disadvantages for country work in that the horizontal pattern is too sharp. The 3AKP-3DP-3ARL set-up have great difficulty in maintaining three way communication over their circuit. Something with a broader pattern seems to be indicated.

3HL will henceforth be known as the little man with the big voice—built himself a new modulator. One hello down the mike and it flashed across the modulation tranny. The next one did the job properly and gummed the works right up. Allen, however, is very happy crooning over a BC348, but wishes the original heater resistors had been left in circuit for it to operate off the 32 volts. 3AJO is still very busy doing up a house in Bendigo, but is all ready to shoot.

NORTH EASTERN ZONE

To the 25 per cent. of the zone members who show they are really interested in the zone, I wish to apologise for no notes in the last issue of the magazine; to the other 75 per cent., I've no need to worry as they don't read them. A very sociable zone hook-up was worked on Sunday, 30th April; those present being 3AT, 3UI, 3APF, 3KR, 3PF, 3TS, and 3YV, seven in all out of about 30 members—Why? Is it because it is such a hell of a job to change a crystal or switch an aerial, or is it just too much damn trouble? Maybe 3HP could tell me, seeing that I took the trouble to give him some reports (while he was testing on 7002 Kc.) and asked him to join the hook-up which had then just started on 7050 Kc., but he didn't.

During the hook-up It was decided to hold the Annual Convention at Benalla on 16th July, 1950, and as all the arrangements are being left in the very capable hands of 3KR and 3PF, you can all look forward to a really grand time. Just think of it chaps, free plane rides, demonstration of radio controlled rockets, demo of duplex television and a two hour talkie on Ham Radio topics—what else do you chaps want to make you interested. Write 3KR for details. 3ABG, where art thou, Essendon, Mangalore or Nhill? I'm still waiting for some notes, pal. 3PF is using phone and how, very nice quality too. Ron Gibb still swotting c.w. and hopes to make it finally in July next, good luck Ron from all the boys. Don Millar, 5LO, paid a visit to 3YV during his April holidays, hope you enjoyed yourself Don. I see in the May issue of "A.R." that we have a new member in the zone, VK3ALE, L. Eliason, welcome OM from all the gang.

Judging from the complete silence from 3WZ, I have the feeling the house must be going up in leaps and loops, which reminds me that 3TS is building a super shack with house attached, everything modern. Glad to know you are having a coke stove Tom, no wood to cut, more time for Ham Radio. Best wishes to you and Mrs. Brown. 3APF and 3UI still having lots of interesting fun and success on the v.h.f. bands. Latest being two-way contacts with Melbourne on 144 Mc. using seven element Yagi arrays. Had a very interesting letter from Bert Brown, of Yea, who is just as amused as I am at 3KR's method of stopping the QRM from his harmonies. Bert, by the way, logged 798 Hams on a b.c. dual-waver for the year—nice going pal, but what about settling down for that ticket. I know Kath will look after the harmonics.

Well chaps, one last question. Can anyone tell me if any of the following Hams are still active: 3AOB, 3PH, 3PE, 3ACW, 3BP, 3SL, 3XZ, 3HN, 3DG, 3GD. 3VU and Vic Bond, of Bogong.

SOUTH WESTERN ZONE

3UT now has an alternator coupled to the diesel and has simplified power supply position. How about putting up a parasitic beam for that DX Wal. 3AGD has got his 2 metre gear going nicely now and has a 4 element "Lenfo" up in the air. 3HW has been making trips to Melbourne lately; couldn't be YL trouble or could it? 3BI is having a bad run with the old rheumatism. Certainly hope things start improving for you Bert.

3YE is going to give 80 metres a go, certainly will be looking forward to hearing you on that band, Vern. Hope the b.c.i. does not prove too much. 3AGU is still very active on 20 metres. When are you going to start operating on 40? Don't hear much of 3KX these days, but believe he has been working some good DX in the way of an HC station. Ron is also active on 144 Mc. 3AMP is still alive and kicking and he is going portable on his vacations, so we might hear something of Murray now. 3BU has his wire recorder nearly completed and going well. Anybody wanting their transmissions recorded and played back, look out for Bill on 40 metres. 3AG heard occasionally on forty at lunch times.

3WT has been working a bit of DX on 20; worked VE7MX and some Ws on phone. Has started to revamp his 3BZ for 144 Mc. Plans to put up a W8JB beam for 20 metres. 3AJF almost ready to shift into the new shack, so guess Alf will be breaking the silence shortly. 3IC been working DX on forty on c.w. He has had a contact with 3AKE on the 144 Mc. band. 3AKE did some fine work on the recent field day. Both Ed and 3VF went out together portable and had 15 contacts on 144 Mc. 3ALG had a new mike, a D104 and has been having quite a few contacts on forty. Fred has been operating the Club's 2 metre transmitter and has worked 3BU and 3AKE. Plans to put up a "H" type antenna for this band. 3ABE has rebuilt his rig and is working DX on 20 metres. 3AJT still putting out a very fine signal on 20 metres. John is in the best location in Geelong on top of a hill and works all the DX. 3CM has been silent for some time. When are you going to break the silence Harold?

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QUEENSLAND

Since writing the May issue of these notes, this Division has had the misfortune of losing one of its busiest officers, namely 4EL, our inward QSL officer. Eric has been transferred to Townsville and we extend to him our best wishes and success in his new sphere. The duties of inward QSL officer have been taken over by old-timer 4JF, congratulations Jack!

The monthly meeting for April was fairly well attended, there being 25 members present. The Federal Councillor, 4VJ, reported on the Federal Convention, details of which appear elsewhere in this issue. In presenting his report on Constitutional matters, 4ZU stated that the recent ballot showed that a large majority of the members favour no changes, but indicated a desire for a re-print of the present Constitution with the addition of certain amendments.

Judging by reports from DX stations, it appears that the Brisbane DX Club is making a name for itself overseas. I have been asked several times in the past month for information regarding club members. How many, who, qualifications for certificate, etc.? What about chasing this one to earth Claude?

50 Mc. activity brightened up a little during March with contacts between 4XN, 2LY, 3IM and 3OD. Eric also heard 4BT on c.w. 4HD and 4LN have been in contact with Bundaberg—4BG. 4TY and 4BF hope to open up a 144 Mc. channel between Milmerran and Charleville. Understand that 4KK is putting 144 Mc. gear in his car and 4SE, the "Peanut King," is also interested.

GYMPIE ZONE

Manager 4HZ.—4SE is DX happy, working all over the world, which shows that Syd'a vertical-cum-horizontal is not so bad after all. 4RA is getting very restive on 7 Mc., too much commercial QRM for Reg, shifting to 14 Mc. Owing to pressure applied by 4XR, Reg operated on phone for a very short time. 4XR is the sad tale of a beam whose motor didn't. Barry in the same boat. Latest DX contact was Portugal. 4LN has replaced the 10 metre beam on the chimney and intends to use stacked beams.

4CR has just finished the annual event of antennae falling and nearly crowned the XYL when the pole came down under its own steam; enjoying holidays at the present time. 4DP, newcomer to Ham Radio, working DX on 7 Mc. c.w. using dipole. 4HZ covering the sky over Gympie with enormous antennae system; works too! Jim is very happy these days with some nice contacts on 10 metres. Lucille has him tickled pink. Overheard in the Emergency Net up Gympie way recently, "calling VK4WI, VK4WI, VK?? here, cheerio love (whacko Frank! How do you do it?).

IPSWICH ZONE

4GG still working ZLs on 80 metres and heard working cross band 80-40. Heard 4KO working DX on 14 Mc. short skip work recently. 4MW getting a very nice shack together chock full of Ham gear. 4LD has a nice new rig with pair of 807s driven by Command Set and hopes to put 100 watts into a vee beam soon. 4SN managing to get some DX on 28 Mc., but meeting with considerable difficulty on the other bands owing to power line QRM. Finding it very hard to keep skeds with zone managers on 7 Mc. with heavy dew on air-gaps these cold mornings.

MACKAY ZONE

Manager 4KW.—4BQ has a new transmitter, converter and AR8 now. Uses a full wave on 20 fed with 70 ohm line, quarter wave from one end. Bill has worked 35 zones and 90 countries. Bill and 4KW can now chew the rag all day and every day as both work in the same job now. Harry has worked 31 zones 62 countries and 30 States. Heard putting in a nice signal on 7 Mc. phone recently. 4FH is the leading light in the Junior Choral Society in Mackay and has moved to still another location. Can't be any housing shortage in Mackay John! John has worked 90 odd countries now.

4MA has a new QTH, Happy Valley, very close to John. 4KR we believe is opposite 4FH and has a 4 element beam. 4AM inactive. Conditions for DX in Mackay have been very poor on 20 metre during the past twelve months. 28 Mc. comes good occasionally.

DARLING DOWNS ZONE

Manager 4CG.—Activity in this zone seems to be at a very low ebb, none of the inhabitants has done anything worthy of note. The 6 metre boys are twiddling their thumbs or finishing their knitting for the winter. However there seems to be a lot of thinking going on. 4KK is thinking of getting 144 Mc., likewise 4TY. 4CU quite recovered from motor bikecrash and back on deck (no good at throwing rounder balls or chopping wood yet!—Sub-Ed.). Heard 4TY on 14 Mc. working a bit of DX. 4CH very quiet since going to Warwick. 4AF getting out with cathode modulated phone. Believe it sounds good too. 4XN thinking about 144 Mc. between periods of listening for that elusive 50 Mc. sig.

4DA and 4RF either inactive or defunct. 4SG's rig must have worked well for 15 minutes as we passed a VK5 card along to him recently. 4EG talking about getting back into Ham activity after absence of about 23 years. 4WY still pounds out good signal on 40 and getting on to 20 lately. Old-timer 2CH has been in Toowoomba recuperating and dodging Sydney humidity. Kept 20 metre skeds on 4CG and 80 metre skeds from 4CU. 4CO very happy at receiving cards from 4QX, 4TI, 4TA, 4VP and a couple of other "rarles."

BRISBANE ZONE

Manager 4UX.—4EH, a new Ham on 40 metres with Command rig, his XYL also studying for Ham ticket. 4ST is still off the air, but has a nice shack erected and should be on shortly. Stan spends most of his time fishing these days. 4RC is still being secretive about high power final which should enable him to equal 4WJ's DX efforts. 4KH is having beam trouble, dry rot set in and he is re-building.- 4SV working plenty of DX on 14 Mc. c.w., has a very nice set-up and wants to know who would be interested in exchanging roofing tiles for W cards. 4TB has moved into a new house and is making arrangements for de-luxe rig remotely controlled. 4RT very generous these days, just donated 25/- to the Police Department. Better get that sticker on the wind screen John. 4UX is re-building receiver and transmitter. Has a dog called "CQ" which Claude reckons has a T5 note!

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SOUTH AUSTRALIA

The monthly general meeting for April was held to a very representative gathering and consisted of general business, the delegates to the conference report, and a wire recording of a portion of the conference. This last portion of the proceedings created quite a deal of interest, and as I was not able to be present at the meeting, due to a previous appointment, I was forced to seek the meeting's reaction to the wire recording from a number of the members present. A few said that they were bored, but most seemed to think that it was a first-class entertainment, and gave them a good idea of just what takes place at the conference.

5XU, our mournful Treasurer, gave his annual report and by the time he was finished, the gang present did not know whether to break down and have a good cry, or to put their hands in their pocket and help the fast sinking VK5 Division back on its feet. However, as all present are beginning to realise that nothing less than a credit balance of a couple of thousand pounds would cause "Shylock" to give even a ghost of a grin, they restrained their feelings and sat tight.

I couldn't say who were the visitors, but I believe that "Roop" Barker (7RM) was present and I was sorry to miss him, but I had been away on my holidays, whilst he was in VK5, sorry "Roop." The meeting ended on a very satisfactory note with the distribution of the QSL cards donated by the South Australian Government Tourist Bureau, for which all members are very grateful.

So many applications were received for the transformers which were made available at the meeting, that it was found necessary to put the names in a hat to find who were the lucky ones. It was my duty to write out the names, and supervise the drawing, and despite the necessary precautions that I took to see that Doc's name was misspelt, mutilated, dropped on the floor, and placed right on the bottom of the hat, he still secured the position of being among the lucky five. Short of clubing this upstart, I'm blowed if I know how to stop him.

5DW and 5LW were familiar faces missing from the Council this month. They have both done fine work in their respective spheres, and we regret that they are both too QRL to continue. Thanks fellows, for a job well done.

My paragraph last month regarding XYL's speaking on the air certainly got results, and if I were to attempt a few of the things they told me to do, I would need to be an acrobat. All I can say is, Puss Puss Puss!

Denzil Kelly (ex-2AAF, now 5DK) has settled in OK at Henley Beach and has been experimenting on two metres together with 5KX. Denz. finds b.c.i. trouble has reared its ugly head on any other frequencies he might wish to use. He has my sympathy in this respect, but it means one less source of local QRM, say I with my tongue in my cheek.

Rob Gurr (ex-5RG, now 2ARQ) is anxious to contact VK5 and may be found on 40 metres, either with his own call or using the call of his friend, 2AYE.

For some unexplainable reason, the VK5 Division's attempts at publicising the test equipment available for the use of members always appears to fall flat, because just when all concerned are patting each other on the back on a splendid job well done, along comes someone and says, "why doesn't someone tell us about the test equipment available to members." Everybody then gets a bucket of water and throws over Hal Austin and myself to revive us and then its on again. So, once again I repeat, there is a Philoscope, Oscilloscope, and a frequency checking service available, we are hoping to purchase an audio oscillator, and a modulated oscillator and any further particulars may be obtained from 5DW who is also available for frequency checks by appointment at UA 6115. What's that you say? Why doesn't someone tell you about these things. Oh for the love of Pete, more buckets of water, please!!

I believe that "two gun" Leidler (5TL) is on the indisposed list, but will soon be back in circulation. I asked Doc what was wrong with Tom, but Doc said that he knew naught about aught, so your guess is as good as mine.

5LW and 5GF decided to go out fishing in Ross' new boat on the last holiday and as Max knew the best fishing grounds around Myponga Beach, he

was official pilot. Unfortunately he wasn't a success and Ross reckons that they finished up in the hills about a thousand feet. The boat was being towed behind the utility and becoming restive, decided to go forward when the utility had stopped. Results were very gratifying, and consisted of a bashed in door and a broken trailer, together with the fishing party finishing up in a farmer's back yard. The trailer was repaired by Ross, proving one of his pet theories, to wit, that there is much truth in the theory of third dimension, as can be seen at any time by looking at a certain survey beacon which now stands on three legs instead of four, high up on a hill near Myponga Beach. And the boat never saw the water at all that day. Wouldn't it.

I am led to believe that quite a few people outside of VK5 read these notes sometimes, and with this in view, I am going to commit the unpardonable sin of preaching about a rapidly growing practice among Radio Amateurs in all districts. I can't say that I noticed it before the war, and I can only assume that it has come into being of late, but whatever be the cause, it is a practice that should never come into Amateur Radio. We are all aware that throughout the world among all sections of the community there exists societies, lodges, chapters, and kindred organisations which have certain signs and phrases to permit fellow members to recognise each other unbeknown to non members. So far so good, but why has it now become necessary for Hams to furtively make veiled allusions to each other as soon as the contact has been established, with a view to discovering if they should be fellow members of some craft or guild or something. Let me remind anyone addicted to this embarrassing habit, that the secret of our beloved Amateur Radio lies in the fact that the person at the other end of the contact can be black, brown, or brindle, male or female, Bush Baptist or Heathen, young or old, it matters naught, the main thing is that two people have got together with a common object, and are equal in all respects to each other, and also have a tolerance and understanding that the rest of the world could well copy. Therefore chaps, in that next contact, when that other end slips in a phrase or allusion which sounds strange to you, don't ignore it, but just draw his attention (in a tactful way) to the worthy principles of our grand old hobby, and gently help him back on the right road. After all, there is a place for everything and everything in its place.

5KU is working a little DX on 40 Mc. c.w., but Erg is also spending a little time "up in the air," as he is an energetic member of a gliding club and has received his first certificate. 5TW is fast becoming a 10 metre fan and has had quite a few very fine yarns during his morning off. I'm sorry to hear that Tom, I've got a couple of 10 metre fans who work with me, and it's the last stage, fair dinkum. 5JA has worked a few Gs on 20 metre phone, and before these notes are read, John will be well on the road to England. He was the original 2 metre station down at the South East, and on the 16th April he was listening for 3ARL and 3DP who were operating from the Grampians, near Stawell. No results however.

5CH is still getting bugs out of his 2 metre converter and is heard quite often on that band. Sighted that Pullin meter yet Claude? 5MS has his 20 metre beam erected, but has still a few details regarding the rotation to finalise. Stewart is well pleased with the progress so far and is experimenting with aerial coupling units. 5CJ is mainly active on 2 metres, but Colin finds the many and varied duties of fatherhood take quite a lot of his valuable time. 'Twas ever thus, and I write from bitter experience and painful memories. Curses upon the head of the person who invented "nappies." Sorry Col., it was too good to miss. There are now four stations operating on 2 metres down at the South East, namely, 5JA, 5CH, 5MS and my chief espionage agent, 5CJ.

Just at the present time my feelings toward anybody that hails from the South East are very mellow and cheerful, the reason being that during my sojourn at Oakbank last month, I sat at the hotel table with two chaps who came from the S.E. and had a horse or two running at the meeting over Easter. Normally I care little about horses, in fact I hardly know which end they feed them, but one of them talked so confidently of his horse's chance that I invested a modicum on it, and it won and paid £2/9/6 for a half crown, so need I say any more. For your benefit the name was Point McLeay, and long may it live, the little beauty. Incidentally, my XYL asked me if I had put any money on it, and I said that I did put some on it, but some rough person pushed it off. So far so good, but some nark will be sure to tell her that the money is put on with a bookmaker and not on the horse. Such is life.

5MD has the honour (doubtful or otherwise) of being the first Council member to contact, Dr. Ross Adey (ex-5AJ) under his new call sign of G3PC. Ross is sharing a huge house situated about 12 miles from Oxford, so huge in fact that he has closed up several rooms. His family are doing well and liking it very much, and Ross wishes to be remembered to everybody. There were no allusions to my fallen chest, but I heard him say that the authorities only granted him a 25 watt licence at first, but after he had given them a learned and forceful thesis on the brain and their lack thereof, they were only too pleased to grant him a 50 watt licence. I must try it sometime.

I see in the local radio paper that 5RL challenged one of the announcers at the radio station, where Rob is the chief engineer, to a race in a midget speed car. Suppose that before long 5LR will be challenging the chief engineer of the best broadcasting station in VK5 to some sort of a race, but on closer looks at the two of them, it will have to be an elephant race, because they couldn't get in anything smaller than a howdah. That should get me the sack! Jeeves, get me my hat and coat!

The playboy from Unley, 5BZ, has returned from a jaunt Interstate, but I believe that in Melbourne's tram strike traffic he met more than his master, and no longer is known as "Battler" Baseby. Cecil where was your pugnacity!

All this month I have heard nothing on the air but "Have you met Charlie," "Charlie is in VK5," "Charlie is a heck of a good fellow, have you met him yet." This sort of thing went on ad nauseum until I felt that if anybody else mentioned the name Charlie, I would finish up having the vapors or something. Anyway, one morning at the best broadcasting station in VK5, the telephonist said respectfully, "'Boofhead,' there is someone to see you out here." One thing I believe in is respect from one's fellow workers, and thanking her for her kindness, I went outside and there was a debonair young man about town who said, "Good morning Warwick, I am Charlie." He took a couple of steps backward when he saw the glint in my eye, but controlling myself very well, I said in a voice which dripped icicles, "How do you do." Then it dawned on me who it was, none other than Charlie White (ex-5MX, now 8AUP) and also that bit of no good who has been poking mud at me over the air from VK3 lately (Tom Hogan, please note.) He turned out to be a good sport and even knew my XYL who used to live in the same suburb as he did when he was in VK5. My XYL said she knew him when he was only an expectant gleam in Mrs. White's eye. So there you are, it's a small world after all, but I am sorry that it has ended that way because Charlie was always good for a paragraph each month, but if he has a shot at me in the future, I can release for publication a few things my XYL has told me. My humble opinion is that it would take Patience to be a wife of Charlie's. Very funny, very funny, don't you think Mark?

5RJ has been on holidays and having a great time working portable with a FS6. Darcy paid a visit to Gawler to see 5PH and 5AX and was camped there for quite a while. 5AX has just finished a new control table, but still finds time for 2 and 6 metres. 5PH has been heard on the air with his Type 3 Mark II., although I did hear that he had a Type 3 Mark II. for sale, so what does that mean Perc? 5VM is missing from his usual haunts and everybody is asking "Lennie, where are you?" 5UX was heard in the Northern Net on c.w., nice sigs Les. How's "Splatter" going? Nothing heard from 5LH since he took delivery of his new car. Going well Jack? The VK5 Treasurer this week received a cheque for the subscription of one Robert Turner, Associate Member. The kitchen door is now open!! 5XL is still putting out a very good signal and I was wondering how DX was treating you Lance. 5AP has also been heard with a good signal and Ron certainly puts all he has into his transmissions. No news from the Murray Net this month so far, but feel sure that if there is any DX or any other exciting doings around, they are right in the middle of it.

I am thinking of running a quiz question in these paragraphs once a month, and if I secure a good response from my two readers I may donate a huge cash prize. However here is a trial question. If a man spent Saturday afternoon weeding, would he have to be out in the garden. The answer is NO, because he could be inside the house weeding his weaders' digest! I've got a million of them, but perhaps I had better not release any more.

I have always said that ten metres is a funny band, in fact I have at times said worse things than that about it, but one thing I have noticed is that quite a number of the local enthusiasts can call CQ in the hope of a little chat, but nobody comes back. Let a DX station bob up and the band is thick with locals all shouting their head off. Can it be that there is a little snootiness about, surely not on the lavender and old lace frequencies.

The reason for the non-appearance of news from the Murray is evidently due to the fact that my private spy 5SL is down with a terrific cold. Hope you are feeling better "Skinny." 5MA is at present down here in the big city on annual leave, and has been seen at Semaphore, but is only pausing here prior to leaving for American River, Kangaroo Island. 5BJ is also on holidays and expect to see him any day now. Just when he will make his appearance on the air appears to be a closely guarded secret. Harry Vonthetoff is fast assembling a rack for the transmitter, which looks a picture, and his signal should hit the air very shortly after the arrival of his call sign. 5BC has returned from his holidays and is busily building a mobile outfit consisting of a receiver and transmitter for forty.

Eight candidates were tutored and prepared for the last A.O.C.P. in Darwin. This is believed to be the first A.O.C.P. held there. Among the eight was Ted Fuller ("Horace"), well known ex-R.A.A.F. tlegraphist. Ted keeps dreaming he failed. Hopes it is indigestion. Ted and 5RA are both keen 144 and 288 Mc. chaps. Tom Bartlett from Mildura, now VK3GP, is in the building stage. Will be pleased to hear your sigs Tom. 5BV has borrowed 5EB's three element beam and is very active on ten. 5EB is using a long wire and is consistently on ten also. 5AE is looking for less than ten countries on ten for C.C. Also looking for outstanding cards. 5CV is on ten between household duties and secretary duties for the zone. 5AS W.A.C. in 75 minuts on ten is a fair effort. John is 5CV's husband and Treasurer of zone, also instructor for A.O.C.P. classes. It is hoped about nine will sit for the next A.O.C.P.

Well, I have put off writing this paragraph all the week, but now I can dodge no longer, it must be done and I tackle it with no feeling of confidence. Between you and I, what I have to write is a "Swan Song" for Doc Barbier (5MD), who last month officially resigned the secretaryship of the VK5 Division. Doc and the VK5 Division are to each other as milk is to sugar, bread is to butter, salt is to pepper, hot is to cold, 5PS is to DX (excuse me slipping in that one), anyway what I mean to convey is that it is almost impossible to imagine the VK5 Division without Doc, and as I am well aware of my limitations as a journalist, I feel that I am not capable of doing anywhere near a job of writing Doc's "Swan Song." When he talked me into joining the Council and dumped the job of Sub-Editor in my lap, I said, "Good heavens, I can't write anything, why I don't know a split infinitive from a subjunctive consonant." "Well," said Doc, "you should know your Ham Radio, so write as you feel and all will be well." So there you are, I'll write as I feel and hope for the best. Doc Barbier is without doubt the finest Secretary that VK5 has ever had, with all respect to anyone else, and possibly this is due in no small measure to his most outstanding attribute, that of being able to mix with all types of people and yet always remain aloof, and still hold their respect. Possibly his present vocation might have groomed him in this respect, but he has not always been officer in charge of the Adelaide Gaol, for back in the last depression he was in business for himself as a pharmaceutical chemist, and believe me, he was just like all chemists, if he did not have the article that you wanted, he always had something as good. A story is told of him, that once, a customer who wished to be neighbourly and polite said, "Have you a wife, Mr. Barbier," and Doc absentmindedly replied, "No, but I have something just as good." Seriously though, what is there that I can say to Doc's advantage that you don't already know, he is a great guy, he has done a wonderful job for Amateur Radio, and we are all sorry to see him vacate the secrtaryship, and nothing but remains for me than to quote a much greater authority than I, "Well done thou good and faithful servant. Thou hast been a true ham."

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WESTERN AUSTRALIA

A visitor to the April meeting was 6DW from Bruce Rock and another who could almost be classed as a visitor was 6LW. Attendance was average and the business included welcoming four new members; 6GY, Don Gardener; 6DH, Dave Hardisty; 6LU, Lou Stagg; 6OY, Tom Mitchell. Several of these chaps have been heard and worked on the air since the meeting.

The main portion of the business of the evening was receiving the report of our delegate to the Convention, 6GM. From the report it was obvious that George had done his usual fine job for the VK6 Division and a note of his valuable representation will be made in the Institute records. 6DJ made a request that the v.h.f. bands be popularised and used for local communications more so than the lower frequencies. The v.h.f. officer appointed for 1950 was 6GB.

It is proposed to hold the Annual Divisional Dinner earlier this year and a tentative date has been fixed at 9th June. Otherwise arrangements will be as in previous years. It will be a Friday night, giving Saturday free for recuperation and members are urged to bring a male friend with them. The price is the same as before so start saving now and give us a bumper roll up this year. The Committee consists of 6RO, 6WH, 6RG, 6GM and 6MK, and the target is "The Marelle." A special invitation is issued to country members to come down to the big smoke and meet the gang in a convivial atmosphere.

Another new member for this month is 6TY, A. V. Savory, of Leederville. It is pleasing to see the steady increase of members in this Division. Are you financial for 1950? The Treasurer will be pleased to see you at the next meeting if you are not. Remember, after two months, no more "A.R."

PERSONALITIES

I find these notes a little harder to accumulate this month having just been put back in circulation after a spell in hospital. However, several members have rallied around with items, so here goes. That super vacationist, 6RT, has turned up in Albany now and has been heard borrowing 6LG's watts down that way. Len expects to return to scholar-bashing on 31st July at Cue. Denies the rumour that once there, he'll have new QSL's printed bearing motto for potential visitors: "When you see Cue, give a CQ!" Talking of vacations, 6CN spent the whole of his, building Ham gear, doing odd jobs about the new home and down on his knees praying for the a.c.

6BJ, married on 22nd April, promised, prior to the big event, he would be back on the Ham bands shortly after. Optimist! 6EL not as active as of yore, but still gets on occasionally on ten. Ern has a beaut vented enclosure built by son-in-law elect. Note to Hams—girls make the best harmonics, look at the useful men they attract about the place. 6WZ more active on forty and ten than previously, and busy writing out QSLs, a pastime he finds very pleasing after the long drought. "Baby Bunnerong" Mk. II. is working fine and capable of 600 watts of a.c. Getting back near the metropolis, 6CP still being heard regularly on 20 and even once he ventured up to forty. 6GM now the proud owner of a 40 ft. tower, shortly to sport a beam or two. 6SN has actually got around to getting his rig on at last after about 12 idle months in his new QTH or perhaps only "idle" as far as Ham Radio is concerned.

Jim Rumble had a spot of bad luck a few weeks back. His bright new 14 Mc. cloud sweeper suffered a little from the impact of one of our local river birds which flopped down right on the end of the folded dipole section and started to look around for the bird bath. All is in order again now, however. 6HO has really sold his XYL on this Ham Radio business, I hear study for the ticket is now on. 6HL must be getting tired of high power, heard Harry on ten with a little rig running a whole 6 watts. Bringing up that beam of 6PJ's again, I am now told Peter has taken it down for the winter. Not tempting providence OM? 6DD still snaring rare ones on the DX bands, the latest being CR4AC, Cape Verde Is.

6AS back from a holiday in the South West and has been heard on six and ten metres. 6MK heard regularly on the high end of twenty making good use of that 75A. 6DX finally remembered which district he belonged in and has turned up again in Kalgoorlie. Heard Bill renewing old acquaintances on forty recently. The v.h.f. gang can often be heard Sunday mornings swapping experiences on forty and arranging skeds for six metres. 6AU has his 40 metre signal nicely cleaned up and puts in a terrific signal in Carlisle. 6YZ is playing with his receiver on 80 metres, but is a bit doubtful about turning the 100 watter loose on that band! Another new Ham in the Victoria Park area is 6LU who has been on 7 Mc. about a month. Lou has been handicapped due to being crystal controlled and having a severe competition from an Oriental broadcast station on almost the same frequency. Keep at the v.f.o. OM!

6PW came to light on 40 again the other evening. 6WH planning big things for the Emergency Net on 40 and 80. Ted suggests members using 80 should pause and listen for newcomers at the hour and half hour during tests on that band. This might well apply to bands above 50 Mc. also. V.h.f. activity in this State is now noticeable on 50, 144 and 288 Mc., and is finding new converts every day as the lower bands become more crowded with blow-ins (commercials, not Hams!). 6AZ hard at work with many plans, forms, permits and more forms. Harold is about to erect a new shack to house a new rig which is making daily progress. 6RB came out of hiding the other day with two badly burned crystals and is now investigating the possibilities of v.f.o. operation. That should teach you to wire a pea lamp in next time, Eric.

Amongst those heard braving the b.c.l. up on 80 were 6NW, 6JP, 6WH, 6AU and 6LG. For the information of those types who never read the headings of this Section, the weekly news from 6WI is given each Sunday morning at 0930 hours on a frequency of approximately 7181 Kc. if done by 6GA, or on 7145 Kc. if taken by 6WH. A tuning tone for about five minutes is given by both stations, so if you can pry the old eyes open at that hour listen and learn! 6WU is now distributing copies of a bright new QSL showing farming activities up his neck of the woods. They're the queerest looking tractors I've seen, Ray!

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TASMANIA

Well chaps having just about finished these notes, I have been told by Hon. Editor that I will be cut down on space this month, so here's to start all over again and wipe out a bit of the b-lather. 7RM has had an f.b. vacation in VK5 and met many of the old-timers there. 7LJ received confirmation of DX C.C. and listing in "A.R." Congrats Lon and I am sure that all other members will join with me, as I understand that you are the first southern VK7 to make the grade. Now for AC4YN and W.A.Z. Heard 7AB the other day. 7DH is to be congratulated on making what is believed to be the first s.s.b. two-way contact Trans-Pacific with a W and later made a two-way with a VE, but was pipped to the post for another first by a VK2 by half an hour. Dave was using the phase system and the W, the filter system. Signals were S9 (or would have been if there were any carriers) both ways. This contact was on 8th April, the VE one being on the 17th. Another first to VK7—believe me brother, VK7 land will always have a strong protagonist in yours truly. Sorry I've lost the actual times and calls Dave, but in the rush to get packed, etc., I mislaid all my rough notes, and these are being written purely from memory; so E. & O. E.

7GJ heard on 20 occasionally, but something not quite right in that rig, somewhere, Jack. You always seem to splatter over most of the band. 7JB heard bowling over the Ws and VEs on ten. Conditions on this band have been more like old times of late, but of course it peaks at a time when most of us are earning the crust. 7DA building a v.f.o. D.C. of course. 7RY has built a nice little crystal calibrating unit, using a 100 Kc. rock, obtained very reasonably from I know where. It holds zero beat for hours with the b.c. rig at which Fred works.

7AJ now back from hosptial. Hope you are feeling better OM and that a speedy recovery will be the order of the day. The other night, 7LJ arranged a sked with 7AF on 80 for after Bob's slow morse transmissions. Bob calls Lon. Lon (and yours truly) give a short call and go straight into some rag-chewing without bothering to check. We are very close to Bob's channel, punching 30 watts up the stick. Bob lives only about half a mile from Lon, almost line of sight. Bob has been blocking our receiver with his 50 watts. Lon signs for Bob and, yes you've guessed it, no sign of Bob. We try again, still no Bob. We are somewhat peeved, so just to show off, proceed to work three ZLs in a row. All, of course, on c.w. We then call Bob again. No soap! Following day I check with Bob, and he tells me that he didn't even hear us on, though there was a powerful signal working someone else. Come now, Bob, tut, tut?

Yours truly, 7TA, actually now no longer exists, and anyone hearing such a call is hearing things. Yes fellers, I have now left VK7, and now have back my old call of VK3PD. Was very sorry to leave VK7, but you never know. I shall be active again almost immediately on c.w. only on 40 and 80 and possibly 20 later. However I may not be too active owing partly to b.c.i. and partly to much study to be done. I hope to be able to keep skeds with 7AF at about 8.45 each Friday night on 80, so if any of the c.w. merchants want a yarn, give me a shout. Unfortunately I am only crystal control on about 3534 Kc., and maybe 3504 Kc.

Here and now would like to voice thanks to the Division for tolerating the second biggest earbasher (3ARL takes the honors) for some 21 months in all, and particularly for the wishes expressed by the Division in that gift. Frankly fellows, I didn't deserve it, and hitherto assumed such things were reserved for octogenarians and such.

Went down to the South-Western Zone Convention shortly after returning here, and represented VK7 (in bulk at any rate). Broke the Warrnambool-Melbourne record on the return trip. Two hours fifty-five minutes for 163 miles. Now put that in your pipe and smoke it; and by car too.

NORTHERN ZONE

The April meeting of the zone took the form of a most interesting lecture by Mr. Harold Wolff on various applications of oscillators. Held at the Launceston Technical College, it was particularly well received by all present and to those of us who are not fortunate enough to possess such gear as was demonstrated, very much in the nature of a revelation. Particularly so was the i.f. response curves viewed and after seeing just what can happen to the i.f's. by apparently correct lining by ear more than one of us have gazed wistfully at those i.f. slugs and wondered just what contortions such a demonstration would show in our own receivers. My own pet winge on the subject is that most sig generators stop at 100 Kc., which makes my second i.f. of 50 Kc. a bit difficult. Boy, how I would like to get that right on the nose as was done to the b.c. set under test. On the nose undoubtedly describes it at the moment, but with a somewhat different meaning.

However, our thanks go out to Mr. Wolff for the time he spent and information he imparted, as also it does to Mr. Jebb, of the Technical College, for his assistance and for the use of the equipment. The meeting concluded on the footpath outside with enthusiastic discussion re 144 Mc. activity and in particular, the weather aspect of such communication. What with weather maps, etc., spread out we could almost have been a bunch of Reds trying to figure ways and means of dodging the "Anti Commo Bill."

Personalities this month divide themselves into those who say DX is a thing of the past and those who don't care anyway. One wonders if, with the attainment of DX C.C. membership of some or perhaps most of the dyed in the wool DXers in the State, maybe lack of interest or of a real goal causes one to just take a look at the band, decide its punk and pack up instead of that intense searching that was so necessary in the pre-hundred days. After all, 200 is such a long way away and without lots of time, patience and the necessary pennies is almost unattainable.

However, to every problem one must offer a solution and, in the absence of really hot news—for how can I tell of v.h.f. which has been the main news lately—here, with the indulgence of our good friend the Editor, is mine. Most of the DX for the DX C.C. has been worked on 20 metres, even those stations who work all bands usually have their largest score on 20 and rightly so, for this is our most consistent DX band. So, why not a DX C.C. for bands other than 20? To my way of thinking, the DX C.C. could consist of four separate awards, each with its own listing, certificates, etc., each one embracing all the present rules, but differing in bands used as follows:—(1) all bands (as at present); (2) all bands other than 20 metres; (3) 10 metres only; (4) 40 metres only. The two major things this would accomplish would be, firstly, it would give a new interest to those of us who like working DX, but who feel that just to add a new country to the list is not the real driving force, that a set goal would be and secondly, it would lessen QRM on individual bands and particularly on those dog piles that appear on the rare ones. However, as someone once said, "Them's my sentiments," and, while not wishing to buy myself a fight, maybe someone wil' agree with me.

Personal doings of note this month seemed to be mainly concerned with the v.h.f. gang and these are to be warmly congratulated but, turn to the v.h.f. notes and see what I mean so please, let's hope the lower frequency gang get busy by next month and give me something to write about. Can't someone push someone else's beam over, just for a para. I'll guarantee not to mention names.

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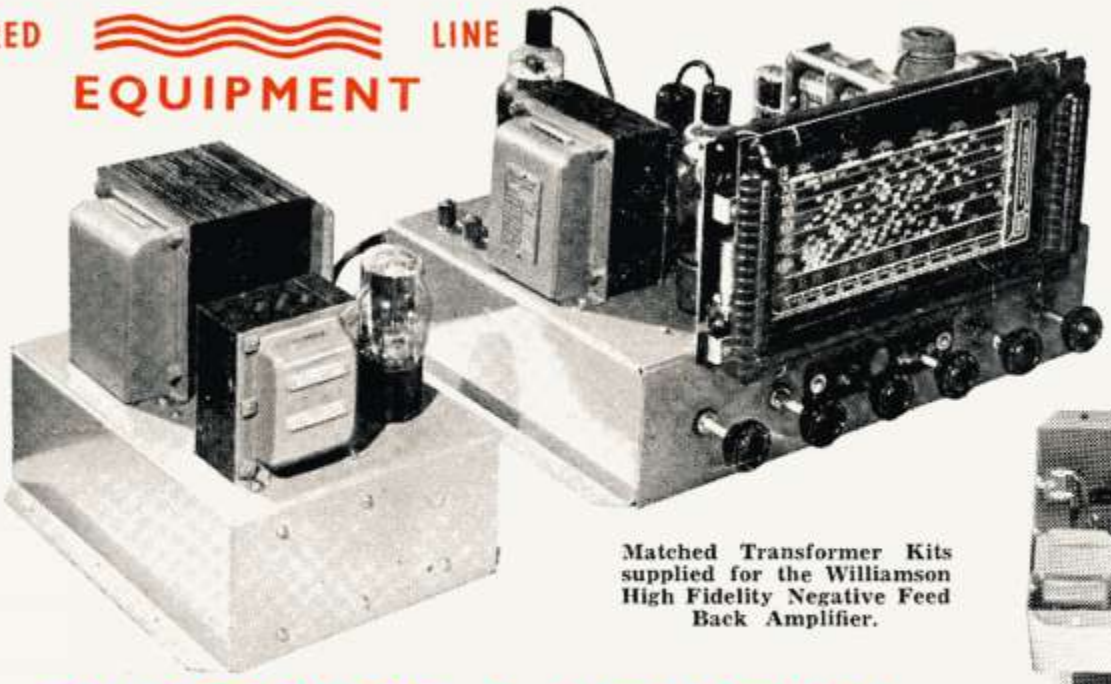

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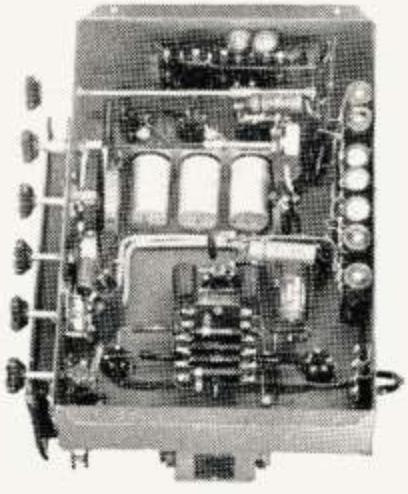

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AMATEUR RADIO

JULY 1950

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EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

ASSISTANT TECHNICAL EDITOR:

A. K. HEAD, VK3AKZ.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

LIAISON:

I. K. SEWELL, VK3IK.

CIRCULATION:

S. I. ZEUNERT, VK3SZ.

ADVERTISING REPRESENTATIVE FOR VICTORIA:

W. J. LEWIS,
20 Queen St., Melbourne, C.1.
Telephone: MU 5154.

ADVERTISING REPRESENTATIVE FOR N.S.W. AND QUEENSLAND:

L. W. CRANCH,
Room 302, 17 Bond St., Sydney.
Telephone: BU 3879.

PRINTERS:

"RICHMOND CHRONICLE,"
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EDITORIAL

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MAGAZINE

Occasionally I take the opportunity to report to members the difficulties which arise in the production of your magazine.

Since the July 1949 issue, except for the past few months, every member throughout Australia received his or her magazine within a few days of the first of each month. This has been possible only by the prompt arrival of all Divisional notes by the 8th of each month.

I don't know if the strain has been too much for some correspondents for over the past few months, notes have been dribbling in up to ten days after the 8th. The nett result has been late delivery of the magazine.

I have many times stressed the fact that any notes arriving after the deadline will not be considered for publication, and if I had strictly enforced this policy there would, over the past few months, have been a number of offended correspondents as well as a large number of members to whom the correspondent is responsible.

I am quite well aware that the person who is held responsible, by the general member for the non appearance of notes, or the late delivery of the magazine, is the undersigned. Nevertheless, I believe I can take it and for the future, let it be plainly understood that Divisional and zone notes MUST be in my hands not later than the 8th of each month.

The 8th of each month has been agreed upon as a deadline, but there is no reason why notes if complete cannot be forwarded by the 1st or the 3rd as the case may be—the earlier they arrive the easier the task of producing the magazine becomes. Your Magazine Committee is an energetic and hard working Committee and anything which makes their task easier is very much appreciated.

To those of you who are always on time with your contributions, I offer my sincere thanks; to those who are perhaps a little slow please see that your notes are on time.

THOMAS D. HOGAN,
Editor.

The Contents . . .

DRIVING THE ZERO BIAS 807s

BY J. C. DUNCAN,* VK3VZ

In August, 1948, "Amateur Radio" presented the latest circutt developed by R.C.A. for using the popular 807, as a zero bias modulator. Since then the 807 has been used in this application by many Australian Amateurs.

Here is a new method of driving the zero bias 807s which simplifies the problems associated with the original circuit.

Nowdays it is quite common to have a contact on phone and hear, "I am using 807s in zero bias as modulators OM," and find another convert to using our "Maid of all work," the 807, in a new job.

This is quite understandable, for used in zero bias, the 807 is completely tamed, and parasitics are non existent.

For those who have not got access to the original article, it may be as well to run briefly over the circuit, shown at "A" in Fig. 1.

The centre tap of the driver transformer is grounded, and the ends of the secondary windings connected to the screens of the 807s. A 20,000 ohm resistor is connected between the screen and grid as shown, and the plates of the 807s are fed to the conventional modulation transformer. The cathodes of both 807s are grounded.

With this circuit, the driver transformer was the catch, as it had to match the driver tube to the grids of the 807s which had an almost constant impedance of 14,200 ohms, grid to grid. In addition, to obtain 120 watts of audio it was necessary to use a driver which would supply 5 watts of drive to the grids; this meant a pair of 2A3s or equivalent, after allowing for transformer losses, etc.

In our applications, 120 watts is not required, and therefore the most popular arrangement has been to use a 6L6G as driver, which allows us to obtain at least 75 watts of audio, and for lower audio requirements, a 6V6 or 6F6 was adequate. Obviously then, with zero bias 807s, the harder we drive them, the more we get out, up to their limit of 120 watts, provided of course, that our plate voltage, regulation, and impedance match are correct.

Ahead of the driver, we need the usual voltage stages to lift the gain from the microphone to give a voltage which will enable the driver to operate at its correct output. With a crystal microphone, this is about two stages, or with a carbon microphone, one stage would be adequate.

So much for the circuit as originally described, and now to the circuit described in February, 1950, "CQ," shown in "B" Fig. 1.

T1 is a conventional plate-to-push-pull input transformer, such as the type used to feed a 6C5 to a pair of 2A3s; in other words, an ordinary voltage transformer (most of us have a transformer of this type lying about). The centre tap of the transformer is grounded, and the ends of the secondary fed to the grids of a 6SN7, which operates as two cathode followers. The cathodes are not grounded, but are connected as shown to the 807 screens and grids.

The plates of the cathode followers are tied together, by-passed, and supplied with 300 volts. The remainder of the circuit is the same as "A."

Conventional methods of producing driving power in circuit "A" Fig. 1 would involve power consumption largely cancelling the power economy advantages of the Class B operation. Such power need be supplied to each grid only on its positive half of the cycle, however, the cathode follower driver is a natural.

Note there is no connection from the 6SN7 cathodes to ground, except through the grids and screens of the 807s. Thus the plate current flowing in the 6SN7s is equal to the grid and screen current of the 807s, and varies from less than 1 Ma. to peaks of 20 Ma. with voice modulation. Actually the total current of a 6SJ7 pre-amplifier, 6SN7 two stage resistance coupled triode amplifier, and the 6SN7 cathode follower stage totals less than 10 Ma. under static conditions. Since the driver section works on about 250 volts, its plate power as well as that of the two voltage stages is obtained from the one supply.

Actually the direct-coupled cathode followers supply approximately 10 volts of positive bias with resultant total static plate current on the 807s of 30 Ma. Of course with modulation, this plate current increases to 80 to 150 Ma., depending on the output required.

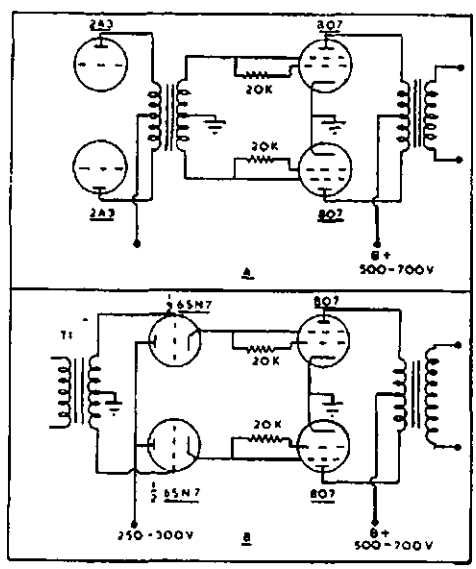


Fig. 1.

The voltage stages required ahead of T1 are important, and it is necessary to see that sufficient voltage is supplied to the primary of T1, otherwise the power output from the 807 stage will be inadequate.

It is recommended that the minimum required from a crystal microphone would be: a 6SJ7 high gain amplifier, followed by two triode sections of a 6SN7 as resistance coupled triodes. In the writer's case the voltage stages used were:—

Pre-amplifier on operating table, 6SJ7 and 6J5 to 500 ohm line. 6SN7 as two resistance coupled amplifiers, feeding T1, cathode followers and then the 807s Class B stage. From the 500 ohm line, all other stages are in the main rack of the transmitter. With this line-up, the gain control is one-fourth on for 100% plate modulation of a 50 watt power amplifier, i.e. 25 watts of audio. The meter reading the combined plate currents of the 807s varies from a resting current of 30 Ma. to about 80 Ma. on peaks, which means that for 25 watts of audio, the 807s are simply loafing along. The plate to plate impedance was 10,200 ohms, and the plate voltage 500 volts, rather poorly regulated.

With this circuit it is claimed that 60 watts of audio can be obtained, so it should be adequate for a 100 watt carrier.

The following plate to plate impedances for the 807 Class B stage are appended for readers who have not a copy of the original article.

Case	1	2	3	
Plate Volts	750	600	500	
Plate to Plate load	6650	5050	4000	ohms
Output	120	90	72	watts
Max. av. anode current (two valves)	240	240	240	Ma.

NOTE.—If the Class B stage is run at lower plate currents or voltages, the plate to plate impedance will be different. The calculations are very simple with the following method, which is accurate enough for our requirements.

In a Class B stage at any instant the grid of one tube will be driven positive and the other tube driven past cut off, and therefore in calculating impedances we need only consider one tube. As far as the one tube is concerned the primary of the output transformer is a resistance and therefore we have this plate load (R_p) and the resistance of the Class B tube in series across the power supply. We can assume that about 80% of the power supply voltage will appear across the plate load R_p as audio voltage, so if our plate supply is 500 volts, 400 volts peak of audio will appear across the plate load R_p. This gives us our voltage for calculation.

(Continued on Page 5)

* Technical Editor, 23 Parkside Avenue, Balwyn, Victoria.

SO YOU WOULD LIKE A.C.?

BY R. H. ATKINSON,* VK6WZ

We Hams who complain when our A.C. Mains Voltage drops a little should feel happier with our lot, when reading this article on the problems confronting the D.C. user and the eventual solution by VK6WZ.

Any war naturally brings in its wake movements of population and the last war was no exception. The effect the writer has observed in his own State must have been duplicated many times over in other parts of Australia, that is, Hams who pre-war lived in the City have moved to country towns, others who used to live in rural areas now have a City QTH on their cards. This is good for the country as it prevents stagnation of population—but it's not so good for the Ham who, like the writer, "cut his teeth" on a.c. mains and now finds himself cursed with d.c.

He finds himself bitterly reflecting that de-centralisation of population is something for the idealists to prattle about, but something with very obvious snags when applied in practice to Ham Radio. The town of Geraldton. W.A., has a three-wire 440 volt d.c. supply with an earthed neutral, giving (sometimes) 220 volts between the outside leg and neutral, polarity with respect to earth depending on which side of the system one's house is connected to.

You may say, "Ah! 440 volts of d.c. —no trannies, no rectifiers, a minimum of filter—what's the man beefing about?" But there's a catch to it. Pre-war, a well-known VK6, now living in the metropolitan area, resided in Geraldton and in the course of moving from one dwelling to another, had the local authorities connect the 440 volt mains up each time. The only additional accessory was one six-volt battery for heater supply, and he was set for plenty of DX.

Perhaps the municipal authorities have "had" Hams—or maybe their excuse of shortages of materials is genuine —suffice it to say that none of Geraldton's post-war batch of Hams can get the 440 volt supply. And, in the case of 6EL and the writer, the two hundred and twenty stalwart volts, which leave the power house, lose from thirty to fifty-five of their brethren before reaching our shacks!

6EL (who should be coaxed into speaking of his own experience at a later date!) turned to the vibratory inverter method developed by Eric Cornelius (VK6EC) and got away from d.c. mains and their snags to the extent of being able to run the rig and a c.r.o. from a.c. The writer tackled the problem from the rotary converter angle and found it not without disadvantages, but nevertheless possessed of sufficient good points to be installed permanently till such time as the Geraldton mains are changed from d.c. to a.c. some time this year.

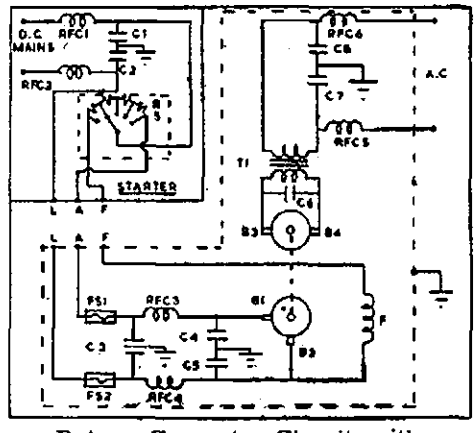
To any Ham living in a country town serviced by d.c. mains, I would sum up the position thus:—

(1) Is there any immediate possibility of conversion of town supply to a.c.?

(2) Have you a small backyard with no opportunities for putting up high-gain arrays?

(3) Is battery charging expensive to you?

If you can answer "No" to all the above, then stick to d.c., put 807s in push-pull in your final and go to it. If, on the other hand, the answer is "Yes" and, additionally, you can scrounge a rotary converter (or buy one if you're affluent), then I'd suggest you manufacture your own alternating current on the premises.



Rotary Converter Circuit with Switchgear.

The rotary starter's metal frame and cover are earthed but in the above circuit the no-volt release and overload trip are not shown. Dotted lines around converter represent steel case. Motor frame is, of course, also earthed.

C1, C2—0.1 uF. 600 volt.
C3—Dual suppression condenser, 0.5 uF. each side of earth.
C4, C5—2 uF., 400 volt rating.
C6—4 uF., 600 volt rating.
C7, C8—2 uF., 600 volt rating.
RFC1, RFC2—125 turns of 18 s.w.g. on 2½" former.
RFC3, RFC4, RFC5, RFC6—50 turns of 18 s.w.g. on 2½" former.
R.S.—Rotary starter switch.
FS1, FS2—10 amp. fuses.
B1, B2—D.C. brushes.
B3, B4—A.C. brushes.
F—Converter field.
T1—Step-up transformer.
Letters L, F, and A stand for line, field and armature.

Choose as large a converter as your purse and your electric power account will stand. A small job, barely adequate for the demands of your equipment will pay off in terms of bad regulation, over-heating and kindred troubles. The bad regulation will be particularly acute when working c.w. Further, if you can, get hold of a machine made "from the frame up" for the purpose of power conversion—not a re-built electric motor.

A double-wound converter is best of all and keeps your d.c. and a.c. circuits isolated. At VK6WZ a single-wound machine is in use (not from choice) and it is necessary to use transformers between the slip rings and load for two reasons. Firstly, the a.c. voltage available is always less than the maximum d.c. voltage applied to the armature and, secondly, it is essential to isolate the load from the d.c. mains. With this machine running on d.c. mains, which measure about 170 to 185 volts, the slip ring a.c. potential is in the region of 115 to 130 volts.

Careful installation is essential if the system is to work with minimum interference to your own and neighbouring receivers. D.c. supply leads should be in earthed lead-covered cable. Plenty of filter should be applied to both d.c. and a.c. leads and the machine should be housed in a well-ventilated steel case.

If possible, get it away from the shack as far as practicable. The 6WZ converter is located on the back verandah, just outside the shack and no more than ten feet, direct line, from the receiver. Hardly an ideal set-up, but nevertheless, with the suppression employed, workable.

The writer imagines that if it were possible to instal the machine in the good-shed or wash-house and bury the d.c. and a.c. leads in water pipe, the arrangement would be entirely silent in the receiver, even on 28 Mc. As it is, reception on 7 and 14 Mc. is unaffected by noise while on 28 Mc., with the noise limiter on the receiver switched in, most worth-while signals can be copied OK. Indeed, on the forty metre band, unsuppressed or partly suppressed domestic appliances in homes one hundred and more yards away make more noise than the converter, whose noise anyway is such as to make no difference to any signal, phone or c.w., which is copyable without the machine running.

Here an important point must be stressed. Standing waves on the feed system of the antenna in use for receiving, play a big part in determining whether clean or noisy reception is to be obtained.

If the antenna is a dipole or beam for the band on which one is listening and the feed line is properly matched, converter noise will be at an absolute minimum. On the other hand, if you use "just a piece of wire" for a receiving antenna, or attempt to receive 28

* 150 Fitzgerald Street, Geraldton, W.A.

Mc. signals on a 7 Mc. doublet (or vice-versa) you'll be in trouble.

Earthing naturally plays an important part in any such installation. Individual cases will, of course, call for special treatment. At 6WZ a water pipe earth is used on the power point end of the d.c. lead-covered line with a heavy 7/22 connection about 15 inches long. Out on the verandah, the end of the same lead-covered is earthed again to an adjacent water pipe about five feet distant. This earth is common to the steel case, converter frame and all mid-points on hash filters, as well as the braiding on leads to the starter-switch, etc.

It has been found necessary to earth the cover of the rotary starter switch and. indeed, the procedure of earthing, one at a time, various metal parts of the system not directly connected to either d.c. or a.c. lines proved a most interesting object lesson, checking the while with the receiver running.

The circuit diagram shows all measures adopted at 6WZ to eliminate noise and although a good deal of work was involved, the results have more than justified it. The pleasure of being able to put into service one's pre-war transformers and rectifiers and of seeing the input on 7 Mc. go up from 6 watts to nearly 32 to a single 807, and that on 28 Mc. from 3 watts to a single 807 to nearly 60, to a pair of these tubes in p.p., has more than offset the bother encountered.

A few final remarks to the novice with electric machines. If your machine is new, good and well. If it is not (as in the writer's case), give it a good overhaul before even thinking about installing it. Industrial and commercial users of these machines seldom give them the care they deserve and about a pound and a half of dirt, grease and oil had to be removed from various parts of the 6WZ machine before it could be usefully employed.

Most machines have an adjustment whereby the relative position of the d.c. brushes can be altered. You'll find that the point of minimum sparking is not only the point of least noise, but also of most efficient working. It won't be the adjustment which will give the greatest armature speed, but speed means very little in this case. Spend as much time as necessary in finding this optimum point, it's about the most important thing in the whole arrangement. See that the commutator is clean and in good condition, if necessary have it skimmed and undercut by a competent electrical tradesman. Slip rings, too, should be clean and should run true.

If you still doubt that such a machine can be effectively suppressed for radio-inductive interference, let this experience convince you. The writer, after having cleaned and adjusted the machine as outlined, had it running for a test on the kitchen floor (what Ham hasn't invaded the kitchen at some time or other?) and in the same room at that time there was a standard type of broadcast portable in operation. This receiver was placed on the lid of the converter's case and, turned with the loop antenna in the correct direction, Perth broadcast stations (300 miles distant) were played with only a trace of background noise.

VK6GA, W.A. Sub-Editor, who has seen and heard this unit in operation, has christened it 6WZ's "baby Bunnerong" and it certainly can be stated that it has put an entirely new aspect on the Ham Radio activities of its one and only "consumer."

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 27th July, 1950, on the 7 Mc. band. Details of the operating procedure and times of operation will be found on page 12 of the January, 1950, issue of this magazine.

DRIVING THE ZERO BIAS 807s

(Continued from Page 3)

Now we want the peak current. Manufacturers' characteristics give the maximum average current for two tubes (sine wave input), so to find the peak current we divide the average current by 0.636. Therefore our peak current for case 3 in the lists above is—

$$\frac{240 \text{ Ma.}}{0.636} = 377 \text{ Ma.} = 0.377 \text{ Amp.}$$

Then from $R = E \div I$ we have—

$$\frac{400}{0.377} = 1061 \text{ ohms for one tube.}$$

The plate to plate load for two tubes will be four times this value or 4244 ohms, which is very close to the manufacturers' ratings (Case 3).

The audio output can be found by the simple formula $W = \frac{I \times E}{2}$ and working on peak values found we have

$$\frac{0.377 \times 400}{2} = 75 \text{ watts output.}$$

Below is the case of Class B 807s to give 100% modulation of a 50 watt carrier (25 watts of audio). Example—

Supply voltage 500 volts.

Av. plate current (two tubes) = 100 Ma. = 0.1 Amp.

Then E peak $= \frac{500}{1} \times \frac{80}{100} = 400$ volts (i.e. 80% of supply voltage).

Peak current $I_p = \frac{0.1}{0.636} = 0.152$ Amp.

Plate impedance (one tube) $= \frac{E_p}{I_p}$

$$= \frac{400}{0.152} = 2630 \text{ ohms.}$$

Then plate to plate impedance = $2630 \times 4 = 10{,}520$ ohms,

and audio output $= \frac{I_p \times E_p}{2} =$

$$\frac{0.152 \times 400}{2} = 30.4 \text{ watts.}$$

CW-Phone Monitor

BY W. L. HEINRICH,* VK5HR

This is a simple monitor which is used at VK5HR for both phone and c.w.

The audio oscillator is quite straightforward, although some variation of resistor and condenser values might be necessary in order to suit varying types of audio transformers and individual tastes as to pitch.

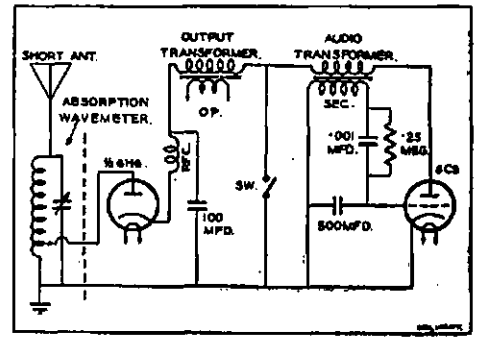


Fig. 1.

The rectifier circuit is also conventional and may be varied to include an overmodulation indicator or a percentage modulation meter.

The circuit shown in Fig. 2 may be connected directly across the existing link between p.a. and aerial coupler of any transmitter without causing any imbalance. It is best suited, however, for low power equipment when used in this manner.

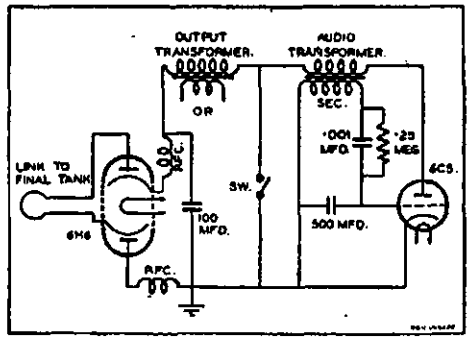


Fig. 2.

The writer's monitor draws less than 0.5 milliamp with a voltage of approximately 3 volts on the plate of the audio oscillator, so power taken from transmitter is very slight.

The purpose of the switch is quite obvious. It simply short-circuits the audio oscillator, thus allowing the monitor to be used for phone.

Output of the monitor may be wired via a relay to the output of the receiver or it can be connected to a change-over switch.

* 17 Roslind St., Kensington Gardens, South Australia.

A CASCODE CONVERTER FOR 50 Mc.

BY DR. ALEX TAYLOR,* VK3AT

This is the circuit of a low noise level converter for 50 Mc. use, using disposal type valves and parts throughout.

The i.f. used is 2 Mc., the i.f. transformer being a 1,600 Kc. one with the iron slug well out of the coils.

The r.f. stage uses a 6SH7 connected as a triode with shunt neutralisation, the second r.f. stage being a grounded grid amplifier, in this case an EF50 with a bias resistor of 120 ohms. The screen and suppressor grids of the EF50 are connected to the plate, and the control grid is grounded. As usual, a shield is run across the bottom of the EF50 socket.

Capacity coupling is used between the first and second r.f. stages and it is found that the coil L4 is extremely uncritical, 10 turns of 16 gauge enamel wire is used, although 8 and 16 turns all seem equally effective.

The mixer is another 6SH7 used as a pentode with control grid injection of oscillator voltage and grid leak bias.

The high frequency oscillator is another 6SH7 using the "Clapp" or "Steco" circuit and although the values of fixed condensers in the circuit are smaller than in the lower frequency versions of this oscillator, it is very stable and c.w. signals on 50 Mc. can be tuned in with ease.

The grid circuit of the oscillator tunes the range from 26 to 28 Mc. and the second harmonic (range 52 to 56 Mc.) is picked off from the plate of the valve.

The oscillator only is tuned in this converter. The first tuned circuit is broad, the second between first and second r.f. stages is very broad, and the mixer coil has a very sharp resonance point. An iron slug is used to tune this coil and when the point of resonance at 50 Mc. is found, the circuit is broad banded by shunting the coil with a resistance of 3,300 ohms, which seems to give a band-width of over 4 Mc. A resistor of 10,000 ohms gave a band-width of 1.5 Mc. approximately, but no apparent increase in sensitivity of the converter.

ALIGNMENT OF THE CONVERTER

The mixer output coil is first resonated to 2 Mc. by adjusting its iron core until maximum noise is heard at 2 Mc. in the receiver used as i.f. channel. The oscillator tuning range is adjusted first and by listening for it on a ten metre receiver, then, with the tuning condenser out of mesh fully, the padding air trimmer is set so that the signal falls on 28 Mc.

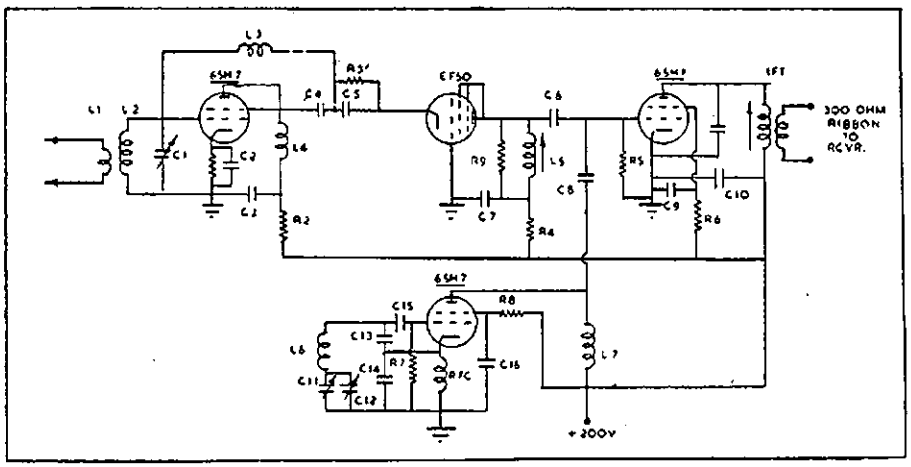
All that remains is to align the mixer and first r.f. coils. An absorption wave meter is handy here. to ensure that one is aligning the stages on the range 50-54 Mc. and not on the image.

Final adjustment is best made by listening to 50 Mc. signals and adjusting for maximum signal.

It will be found that the first tuned circuit is broadly resonant and the noise output of the converter seems to drop at resonance in this circuit.

The neutralising coil, L3, consists of 47 turns 22 gauge d.c. wire on a ½" former and requires no adjustment. One can play around with L4 for hours without improving matters. L5, the mixer coil, however, shows a sharp resonance point and can be broad banded as mentioned previously.

The conventional cascode converter uses a 6AK5 1st r.f. converted as a triode, and a 6J6 as grounded grid stage.



Cathode resistor of 1st r.f. stage (6SH7) is 120 ohms.

C1, C12—3-30 pF. air trimmers.
C2. C3, C5, C7, C9, C16—0.001 to 0.004 uF., mica.
C4, C6, C15—50 pF.
C8—7 pF. ceramic.
C13, C14—200 pF.
C10—0.01 uF., paper.
C11—25 pF. variable.
R1, R3—120 ohms.
R2, R4, R6—decoupling resistors, any value, 1,000 to 10,000 ohms.
R5—1 megohm.
R7—100,000 ohms.
R8—10,000 ohms.
R9—3,300 ohms.
L1—3 turns closely coupled to L2.
L2—4 turns ⅛" copper tubing 1" diam.
L3, L7—47 turns 28 gauge DCC ½" diam.
L4—10 turns 16 g. enamel ½" diam.
L5—6 turns 16 g. enamel ½" diam., iron dust core.
L6—10 turns 16 g. enamel ⅝" diam. on ceramic former, winding length 2".

* 108 Maude Street, Shepparton, Vic.

These would be an improvement, but were not available at the time of construction of this converter and in any case the writer wished to use up some of the many 6SH7s in an I.F.F. Unit.

The 6SH7 is, however, not suitable in a grounded grid circuit as the suppressor grid is connected internally to the cathode, thus ruining any shielding brought about by grounding the grid of the valve.

There are special valves for grounded grid operation and when I can obtain one, results, whether better or worse, will be reported in this journal.

The choice of 2 Mc. as i.f. was made for the following reasons:—

1. The same oscillator and same tuning range are to be used in building a ten metre converter with 2 Mc. i.f. on the same chassis as this one.
2. Better conversion gain in the mixer stage is obtained by using a low frequency 2 Mc. i.f. than when using a high i.f. such as 10 Mc.
3. Images are 14 Mc. away and image interference from Amateur Stations is not experienced. Interference from strong local ten metre stations may occur, but is not a problem in this provincial city.

As in all v.h.f. receivers, lead lengths are short and point to point wiring and mounting of components is the most efficient.

The neutralising coil L3 is connected directly from the control grid pin of the first valve socket to junction of C4 and C5.

There is a small fixed condenser in the i.f. transformer connected across the primary, this was removed and mounted on the socket of the mixer valve directly between plate and cathode. The values of C13 and C14 were arrived at by guess work and some experimentation here, if time were not so precious, would be advantageous.

L6 is wound on a ⅝" ribbed ceramic former, and the turns cemented in place with "Tarzan's Grip."

Earth leads and leads to C11 are rigid, ⅛" copper tubing being used here.

All coils in this converter are mounted underneath the chassis except L1 and L2 and also the 2 Mc. i.f.t., to avoid heat radiation from the valves.

A FEW HELPFUL IDEAS

When using a 6J6 as a mixer-oscillator or as a Clapp oscillator-buffer amplifier. use for the oscillator the triode section with plate pin No. 1 and grid pin No. 6. The other triode section (plate pin No. 2 and grid pin No. 5) has the getter assembly attached to the plate and is more subject to drift and microphonic troubles.—VK3AKZ.

* * * *

Suitable springs to replace those in drill chucks can be obtained from old motor tyre valves.—VK2AC.

* * * *

When carrying a multimeter, turn the selector switch to a high current range. The low resistance shunt across the meter is as good as shorting the leads together for heavily damping the meter and helping prevent bent needles and jarred movement.—VK3AKZ.

Western N.S.W. Emergency Work

For a period of seven days from 4th to 11th April, Amateurs in the Forbes and Dubbo areas in N.S.W. were active in assisting the various authorities by supplying communication channels when other means failed. Without a doubt in the last two years Amateurs have had opportunities to assist in many disasters and they have grasped these opportunities on every occasion to demonstrate the emergency value of Amateur Radio.

The main portion of the work on this occasion was in co-operating with the Army who had a number of Army "Ducks" effecting relief in the area. During the whole operation approximately 400 messages were handled by Amateur Stations on behalf of the various authorities.

On the arrival of the "Ducks" in Forbes, a station was set up at the Town Hall to communicate with Army HQ. This station, manned by the Army, was also to be used for radio control of the "Ducks." On the morning of 4th April, Bill Kennedy, VK2BT, phoned Hugh Stitt, VK2WH, to say that the Army was having difficulty in contacting HQ and could he help? VK2WH then opened up on the 7 Mc. band and requested permission from official P.M.G. Station, VK2AA, to operate on 3830 Kc., the Army's frequency.

The town of Forbes itself was divided into three portions and the "Ducks" were busy in their rescue work in isolated areas, and communication with the "Ducks" was extremely important. Permission was granted and VK2WH's main transmitter was then tuned to 3830 Kc. and remained there for a period of seven days. A No. 11 battery-operated was used on the 7 Mc. band. The main transmitter was used as a link between the Army control station in Forbes and Headquarters and was also used to communicate with the "Ducks" when they were 70 miles away from Forbes.

Bill Kennedy, VK2BT, and John Marr, VK2AMV, in Forbes proper, were also active on both 3.83 and 7 Mc., and later in the operation the three stations worked shifts on the Army frequency of 3830 Kc. A 50 Mc. link between all three stations was in operation and afforded them a channel on which they could communicate without interference on either 3.8 or 7 Mc.

Quite an amount of traffic was also handled on the 7 Mc. band and VK2AA, official station, kept a continuous watch on the Emergency Frequency of 7002 Kc. and gave the Amateurs active every assistance.

The New Zealand 3.5 Mc. band extends to 4 Mc. and considerable trouble was experienced during the evenings with interference from ZL stations. After a message from VK2NS, requesting clearing of the frequency and the appearance of official monitoring station ZL3JT, on the following evening, 3830 Kc. was kept clear of interference.

Most of the emergency work was done on telephony and it was fortunate that stations participating were able to use their main home transmitters. At one stage when the power failed at VK2WH, a request to VK2BT obtained a quick repair. It was typical of the co-operation afforded the Amateurs in their work. Many of the local people listened to the emergency working on 3.8 and 7 Mc. bands and in one case, a message concerning the feeding of some marooned stock was intercepted, and the stock fed before the message finally reached its destination. BCI was even forgotten in the desires of the local people to follow the story.

Later in the operation, two "Ducks" proceeded to the Warren area and after a call on the 7 Mc. band, VK2XP, of Dubbo, was asked to look after them, as it turned out Bob Bensley had been following them for two days and had the position in hand. Bob continued to solve the communication problems of the "Ducks" until the floods had subsided and they were no longer required.

CERTIFICATE OF SERVICE

It was pleasing to see Chas Peddell, VK2KN, as the recipient of a Certificate of Service from the N.S.W. Police Department, for his sterling emergency work during the Kempsey flood disaster last year. His assistant, Mervyn Harrison, also of D.C.A., received a certificate too. They were presented at the June meeting of the N.S.W. Division of the W.I.A.

Several interesting points were learnt from the operation and they could prove valuable for future emergency working of Australian stations.

The first concerned the polarisation of the signals and it was found that reception of the Army "Ducks," using vertical whip antennae, was extremely difficult using the normal horizontal half wave doublet. On changing to a vertical antenna, the signals from the "Ducks" rose a number of points. VK2WH used the vertical for working to the "Ducks" and the horizontal for communicating with HQ.

During the first days of the operation Amateur Stations were active up to 17 hours per day. Working for such long periods gave a good insight into the conditions prevailing on 3.8 Mc. and it was shown that the band each day at 1130 hours became practically useless and that a frequency about 6 or 7 Mc. should be available for use when this condition prevailed.

Conclusions could be drawn that a considerable amount of emergency work with mobile equipment could be done in the 3.5 Mc. band during daylight hours, but such gear should also cover the 7 Mc. band.

(Continued on Page 10)

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

JULY, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

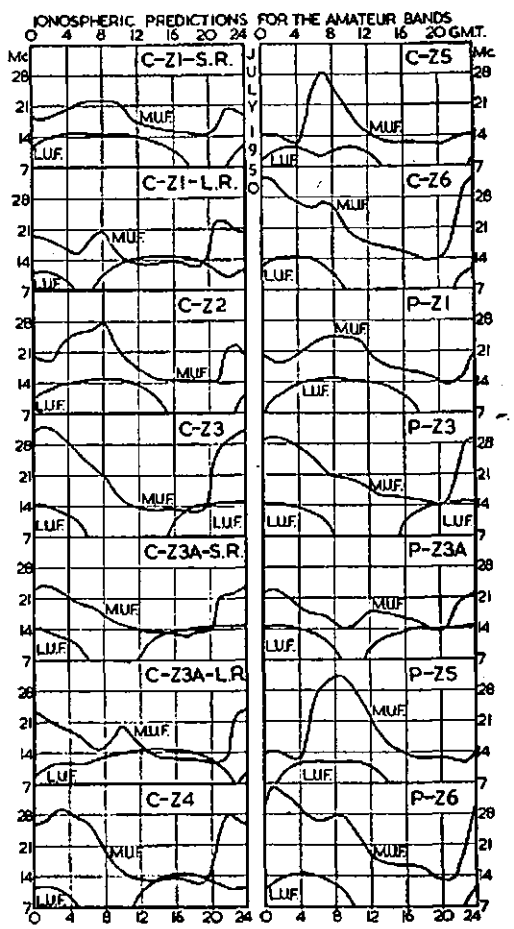
Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0600 to 1500 hours G.M.T.
2. Was the 14 Mc. band workable between 1000 and 1800 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



VK-ZL INTERNATIONAL DX CONTEST, 1950

In announcing the rules for the 1950 VK-ZL International DX Contest, the New Zealand Association of Radio Transmitters, with the Wireless Institute of Australia, invite the participation of members to ensure the continued success of this Contest.

OBJECTS.—For the world to contact VK and ZL stations and vice versa.

WHEN.—

1201 G.M.T., 22nd Sept. to 1159 G.M.T., 24th Sept.	C.W.
1201 G.M.T., 29th Sept. to 1159 G.M.T., 1st October	Phone
1201 G.M.T., 6th October to 1159 G.M.T., 8th October	C.W.
1201 G.M.T., 13th October to 1159 G.M.T., 15th October	Phone

DURATION.—(a) **VK and ZL** stations for contest purposes will limit their period of operation to any consecutive 24-hour period on each week-end within the times given above. Once an operator commences operation, the operator will not exceed 24 hours of consecutive operation reckoned from such commencing time.

(b) **In other countries**, stations may contact VK and ZL stations at any time within the periods shown above.

RULES

1. There shall be three main sections to the Contest.

(a) Transmitting c.w.

(b) Transmitting phone.

(c) Receiving (phone and c.w.).

2. The contest is open to all licenced transmitting stations in any part of the world. No prior entry need be made. Mobile marine stations or other non-land based stations are not permitted to enter the contest.

3. All Amateur frequency bands may be used.

4. C.w. will be used for the first and third week-ends, and phone for the second and fourth week-ends. Stations entering for both phone and c.w. sections must submit separate logs for each.

5. Only one contact per band per week-end with any one station (for contest purposes) is permitted.

6. Only one licenced Amateur is permitted to operate any one station under the owner's call sign. Should two or more operators operate any particular station, each will be considered a competitor and must submit a separate log under his own call sign.

7. Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of 5 or 6 figures will be made up of the RS (telephony) or RST (telegraphy) reports plus three figures which may begin with any number between 001 and 100 for the first contact and which will increase in value by one for each successive contact. E.g., if the number chosen for the first contact is 053, then for the second contact the number must be 054, for the third 055, and so on. If any contestant reaches 999, he will then start from 001 and continue.

8. SCORING.—Fifteen points will be scored for the first contact on a specific band with any overseas country (VK-ZL district for overseas stations), fourteen points will be scored for the second contact on the same band with the same country (VK-ZL district), thirteen for the third and so on to the fifteenth contact which will score one point. All contacts with that particular country (VK-ZL district) on that band will thereafter count one point each. This scoring procedure will be repeated on each band to encourage multi-band operation. There will be no VK-ZL contacts between each other. A.R.R.L. official countries list will be used. VK-ZL districts are VKs 1, 2, 3, 4, 5, 6, 7, 9, and ZLs 1, 2, 3, 4.

9. LOGS.—(a) Logs must show in this order:—Date, time in G.M.T., band of operation, call sign of station contacted, serial number sent, serial number received, points claimed.

(b) A separate log must be submitted for each band. For each band an analysis sheet must be given showing:—list of countries (VK-ZL districts) contacted with number of contacts and points claimed for each country (VK-ZL district) contacted.

(c) A summary sheet to show:—(1) station call sign, (2) name and address of the operator, (3) whether phone or c.w., (4) points claimed for each band, (5) grand total of points, (6) brief description of transmitter, tubes, power, antenna, etc.

(d) A declaration that all contest rules and regulations for Amateur Radio in your country have been observed and that the log is correct and true to the best of your belief.

10. The judges reserve the right to disqualify any station for (a) consistent tone reports under T8, (b) continuing key clicks, (c) phone splatter and/or overmodulation, (d) off frequency operation.

11. The ruling of the Executive Council of N.Z.A.R.T. will be final in the event of any dispute.

12. Overseas stations should call CQ VK-ZL, and VK-ZL stations CQ Test.

13. AWARDS.—Attractive certificates will be awarded to the station returning the highest score from each particular country and **each call area** in the U.S.A. Additional certificates may be issued at the discretion of the Contest Committee. There will be no world winner. VK and ZL awards will be announced by the W.I.A. and N.Z.A.R.T. respectively.

14. Entries from overseas stations should be plainly marked on the wrapper, "VK-ZL TEST," and forwarded to reach N.Z.A.R.T., Box 489, Wellington, N.Z., by 14th January, 1951. Logs from ZL stations should reach the same address by 24th November, 1950, while **VK logs should be sent to their respective Divisions by 24th November, 1950.**

RECEIVING SECTION

1. The rules for the Receiving Contest are the same as for the Transmitting Contest, but is open to all members of any Short Wave Listeners' Society in the world. No transmitting station is permitted to enter for the receiving contest too.

2. The contest times and the logging of stations once on each band per week-end are subject to the same rules as for the transmitting contest except that VK and ZL listeners may listen and log stations over the whole period of the contest. Logs will be in the same form as for the transmitting contest.

3. To count for points, the call sign of the station being called, the strength and tone of the calling station, together with the serial numbers sent by the calling station must be entered in the log. Points will be claimed on the same scale as for transmitting stations.

4. It is not sufficient to log a station calling CQ Test.

5. VK receiving stations cannot log VK stations, and ZL receiving stations cannot log ZL stations, but VKs may log ZLs and vice versa. Overseas stations will log only VK and ZL stations heard operating in the Contest.

6. Certificates will be awarded as in the transmitting contest.

N.S.W. EMERGENCY WORK

(Continued from Page 9)

Local authorities and Amateur Stations co-operated fully in the operation. Of the latter, VK2GS, VK2WI operated by VK2VW, and VK2AMR, not forgetting the many other stations active, were of great assistance acting as guard stations and calling other areas.

The wives of the Amateurs, even with their own worries, assisted often to ease the burden. Mrs. Marr, wife of VK2AMV, for instance, for a number of days ran a receiver on 3830 Kc. and relayed any messages necessary to John. Both VK2BT and VK2AMV had their own personal flood problems early in the operation, but when the normal business of the town was suspended, they operated their stations full time.

VK2WH was isolated very early in the emergency and from then on was nearly full time in the shack, he has been flooded three times since Xmas and is getting a little tired of it all.

The sum total of Amateur Radio activity meant that food relief to the citizens and stock was expedited, as was rescue work and with it goes up another mark on the credit side for Amateur Radio.

Not long ago we read complacently of the emergency work of the American Amateur and with the rider that "it couldn't happen here," passed the matter of emergency organisation by. It has happened here—to be precise, eight times in the last eighteen months—so let us organise that we best perform a function of our hobby, that of supplying communication to those in distress.

Abstracts from Overseas Magazines

R.S.G.B. "BULLETIN," OCTOBER, 1949

P. 104: "An All-Band Crystal Calibrator;" W. H. Allen, G2UJ.—One Mc. crystal oscillator, 100 and 10 Kc. multivibrators. harmonic amplifier and cathode follower for low impedance output. Gives 10 Kc. points up to 70 Mc. and 100 Kc. points up to 150 Mc.

P. 106: "Simple C.W.-Phone Monitor."—For c.w. an audio oscillator whose h.t. is obtained by rectifying a small portion of the r.f. output of the transmitter. On phone, acts as a diode rectifier.

P. 107: "Simple Breakin Systems;" J. P. Hawker, G3VA.—Survey of proven systems. Full of information for those interested in working breakin.

P. 110: "Instant Heating Soldering Iron;" J. Gilbert, G2DDG.—Bit consists of loop of 12 gauge copper wire which is heated by passing 100 amps directly through it. This current (at half a volt) is applied by a small home-made transformer, built into the iron which is in the form of a pistol.

P. 111: "Carbon Microphones;" G. B. Brewer, G4LJ.—Advantages of modern carbon mikes.

P. 112: "Considerations Affecting the Accuracy of Measurements;" J. B. Harris.—General discussion on traps for young players.

P. 116: "The R.S.G.B. 420 Mc. Tests."—Full details of field day with details of all rigs used.

"SHORT WAVE NEWS," JANUARY, 1950

P. 3: "A 420 Mc. Superregen. Receiver;" J. Taylor.—RL18 in quarter wave circuit tuned by butterfly condenser.

R.S.G.B. "BULLETIN," JANUARY, 1950

P. 214: "A Table Top Transmitter for the DX Bands."—Compact 3 stage rig for 14, 21 and 28 Mc. Final is parallel 807s.

P. 216: "S Meter Operation with Delayed A.V.C. Circuits;" E. B. Grist.—Adds an EA50 as an undelayed rectifier.

P. 217: "Single Sideband Transmission Applied to Amateur Telephony," Part II.; N. G. Hyde, G2AIH.—Details of phase shift transmitter and balanced frequency converter for the receiver.

P. 223: "Automatic Change Over;" F. W. Jefferies, G3DJR.—Heart of the system is a large condenser which is charged on keying and discharges through a sensitive relay. This will hold the relay shut for a 1½ seconds' break after which the relay opens and changes circuits to receive.

P. 226: "Bright Ideas;" L. M. Gunnell, G8HB.—(i) Home-made 813 socket; (ii) An oscilloscope power supply; (iii) Burnt out r.f. ammeters as milliammeters.

"HAM TIPS," JANUARY-MARCH, 1950

P. 1: "A Simple Code Practice Unit for the Novice;" K. Bucklin, W2CDP.—1A5GT in Hartley circuit using push-pull audio transformer.

P. 1: "Electronic Keying Systems;" M. Seybold, W2RYI.—Gives seven circuits which have been tried at various times. Latest circuit is for screen keying using a VR tube in series with the screen supply as the essential on-off element together with a control tube to raise and lower the voltage causing the VR tube to conduct or not.

P. 4: "Simple Over Modulation Indicator;" G. Hanchett, W2YM.—1B3GT as negative peak rectifier which flashes a neon when it conducts. The filament of the 1B3GT is heated by the h.t. current to the r.f. final. Suggests using 3V4 diode connected in place of 1B3GT if h.t. is less than 600.

"SHORT WAVE MAGAZINE," FEBRUARY, 1950

P. 898: "Wide Range Heterodyne Frequency Meter;" F. Butler.—Three valve circuit. Electron coupled v.f.o., 50 Kc. crystal calibration.

P. 903: "Self-Contained QRP Portable Transmitter/Receiver;" A. P. Newport, G3ECX.—40 metre dry battery t.r.f. receiver and c.o.-p.a. transmitter.

P. 907: "H.T. Without Transformers."—Methods of obtaining h.t. and filament supply direct from a.c. mains. Not to be recommended.

P. 911: "G.P. Crystal Checker;" J. H. Jowett, G3CFR, and P. J. Towgood.—Pierce crystal oscillator for generating marker harmonics on testing activity and frequency of crystals whilst grinding.

P. 913: "C.R.T. Phone Monitor;" J. A. Plowman, G3AST.—Simple c.r.o. phone monitor in a very neat cabinet.

P. 925: "Testing the S.S.B. Transmitter;" H. C. Woodhead, G2NX.—Adjustment and setting up of crystal filter type s.s.b. transmitter.

P. 929: "Another Top Band Tx;" C. T. Atkinson, G2OZ.

P. 937: "Parallel-Fed Modulator;" D. E. Pasfield, G5NH.—Saturation of modulation Transformer by p.a. current by using an additional modulation choke.

"SHORT WAVE NEWS," FEBRUARY, 1950

P. 32: "A Two Valve Receiver for 145 Mc;" A. R. Tungate, G3ELB.—9002 superregen detector, 6C5 audio.

P. 36: "Seventy Centimetres," Part I.; Major Cycle.—Introduction and methods of frequency measurement.

R.S.G.B. "BULLETIN," FEBRUARY, 1950

P. 252: "A 6K8 Low Power Transmitter;" J. L. Rough, ZL3DT.—6K8 triode section as 1.75 Mc. v.f.o., electron coupled internally to hexode section which doubles to 3.5 Mc. Five watts input to hexode without ill effects.

P. 253: "Communications Receiver Design;" D. Heightman, G6DH.—The best article seen for some time discussing just what is necessary in a communication receiver. If you are going to build a receiver, then read this article first. This description of the development of the Denco DCR19 is full of both general and detailed ideas.

P. 259: "An Electronic Keyer;" B. Brondum-Nielson, OZ7BO.—Although not completely electronic, as it uses two relays, this device for producing automatic dots and dashes appears simpler and easier to get going than the usual ideas on this subject.

P. 261: "In the Workshop;" "Donex."—The technique of soldering.

P. 263: "Bright Ideas."—(i) Stabilising the 813 by inductive neutralisation; (ii) Improving selectivity with out-board i.f. stages.

"QST," MARCH, 1950

P. 11: "A Beginner's Four-Tube Superhet Receivsr;" D. H. Mix, W1TS.—6SB7Y converter, 6SG7 1500 Kc. i.f. stage, 6SQ7 detector and b.f.o., 6SN7 audio. Oscillator covers 5 to 5.8 Mc. Aerial circuit can tune either 1500 Kc. above or below oscillator, thus covering 80 and 40 metres with good band-spread but without changing coils. Also the second harmonic from the oscillator gives two more ranges by retuning the aerial circuit.

P. 18: "Incandescent Light Flicker;" R. E. Shank, W5CKY.—How to get over the lights blinking when high power is keyed.

P. 20: "Eliminating TVI with Low Pass Filters," Part II.; G. Grammer, W1DF.

P. 28: "Crystal Controlled Osoillators;" C. V. Chambers, W1JEQ.—Results of lots of tests on 6AG7, 6F6, 6V6GT and 6L6 in tritet, grid plate, and modified Pierce circuits. Found that: (i) Screen voltage regulation is essential to good keying; (ii) The 6AG7 is by far the best tube type from every stand point; (iii) The tritet gives the most output with 6AG7 in Pierce circuit second; (iv) Modified Pierce circuit is easiest on crystals with grid plate worst; (v) Unless a 6AG7 is used, it is not advisable to tune any oscillator for maximum output because a slight change in circuit conditions may cause frequency shift; (vi) Plate circuit keying gives less chirp than cathode keying.

P. 34: "A Two Metre Station for the Novice;" E. P. Tilton, W1HDQ.—Part II. Transmitter 6J6 24 Mc. oscillator-doubler, 6J6 tripler, pair of 6J6s push-pull parallel final p.a.

P. 46: "'Clamp' Tube Modulation;" B. Goodman, W1DX.—How to try screen modulation of p.a. final using a clamp protection tube. Very suitable for 807s.

P. 50: "Adjusting Antenna Coupling in VHF Receivers;" H. H. Cross, W1OOP.—Adjusting for lower noise figures without a noise generator.

P. 52: "Hints and Kinks."—(i) Two improvements in clamping elements to boom in all metal beams; (ii) Simplified LC calculations; (iii) Code Practice Oscillator; (iv) Simple b.c.i. cure; (v) Preservative for wooden masts; (vi) Direct reading dial for the HRO.

P. 54: "TVI Tips;" G. Grammer, W1DF.—1N34 used as a simple v.h.f. mixer with a grid dip oscillator as local oscillator and communications receiver tuned to i.f. Serves as a simple yet sensitive receiver.

P. 60: "The World Above 50 Mc."—(i) Automatic band scanning gadget used by W9ZHL; (ii) On tripling to 420 Mc., which tubes will, which won't.

"QST," APRIL, 1950

P. 11: "A Constant Modulation Phone System;" G. R. Lippert, W8YHR.—The p.a. is screen modulated in the usual manner except that there is no d.c. voltage on the screen. Instead, portion of the modulator output is rectified and used for the screen supply voltage. Thus the screen voltage increases and decreases with the average speech level, maintaining a high percentage modulation. The low quiescent current in the r.f. final should be useful for portable work.

P. 14: "A Two Stage Transmitter for the Beginner;" D. H. Mix, W1TS.—It really needs an expert to design a simple beginner-proof transmitter. Here is one designed by one. 6AG7 c.o. driving 6L6 or 6V6 p.a. Gives suitable aerials.

P. 20: "Coupling Unbalanced to Balanced Lines;" C. T. Isley, W3OCZ.—LC networks for coupling say 300 ohms twin lead to 75 ohm co-ax. These networks are broad enough to cover an Amateur band.

P. 22: "Welding Aluminium with a Blow Torch;" H. H. Washburn, W3MTE.

P. 23: "Eliminating TVI with Low Pass Filters," Part III.; G. Grammer, W1DF.

P. 34: "Key Clicks and Receiver Bandwidths;" B. Goodman, W1DX.—Methods of eliminating key clicks and how they are affected by bandwidth.

P. 42: "A Two Metre Station for the Novice," Part III.; E. P. Tilton, W1HDQ.—Modulation, power supply and control unit.

P. 48: "50 Years of Progress. A Report on Amateur Radio;" Larson E. Rapp, W1OU.—This noted author's usual 1st April offering.

P. 58: "A High Frequency Crystal Filter;" K. P. Lange, W0BEN.—Between converter and 8 Mc. receiver, a 8 Mc. crystal filter is used. Circuit similar to standard i.f. crystal filters.

P. 64: "Hints and Kinks."—(i) Something new in matching devices for coupling co-ax to beams; (ii) Torque protection for rotary beam antennae; (iii) "Clamper" tube troubles.

P. 77: How to get single sideband exalted carrier reception of a.m. signals using the crystal filter and b.f.o. already in your receiver. An interesting idea.

50 Mc. AND ABOVE

Compiled by J. K. Ridgway, VK3CR

There is a severe shortage of news of v.h.f. doings this month due undoubtedly to an equally severe lack of activity on the bands.

The only DX item of interest concerns a short opening from VK3 to VK4 on Sunday, 11th June, from 2000 hours to 2040 hours when VKs 3RR, 3BQ, 3IM and 3CR contacted VK4CU. Signals were not the best, peaking to S7 at times with plenty of QSB. It is understood that VK4s also worked VK2s on the same date, but no report is to hand at the time of writing.

VICTORIA

Due to the cold weather, activity on this band has been on a somewhat reduced scale this month. A new station is 3JZ of Parkdale, who is putting out a good signal from a single 807 with 50 watts and a 3 element beam. 3FF has returned to the band after a long absence and is doing well with 18 watts to an 832 and a 3 element w.s. beam. DX has been practically non-existent, a few VK2s were heard weakly on the 27th of May, but no contacts were made. It is hoped that with the coming of the mid-winter sporadic E peak there will be a few openings and some Interstate contacts made. Interstate stations are reminded that 3BQ calls CQ on c.w. at 1200 and 1500 most days.

WESTERN AUSTRALIA

A new signal has been reported on six metres this month; that of 6HW, Fremantle. Harry's transmission was heard in Bassendean by 6BO. However it is believed that 6HW is now building another rig for six and we hope it won't be long before you become one of the "regulars" on the band Harry. It might be mentioned that any new signal is welcome on six. There is plenty of room for everyone and this band is ideal for cross town QSOs.

Nothing elaborate is really needed to get on six, and high power is certainly not necessary. 6HL can vouch for that statement I think. Harry's 6 watt rig and rotary dipole is putting out quite a respectable signal. It will eventually be a mobile affair for ten and six, when the installation in the car can be completed.

Of the country stations on six. 6GS and 6DW are still the most consistent signals into Perth. Contact can nearly always be made on c.w. and sometimes conditions peak sufficiently to allow phone to be used.

6AS is using a new converter (ex-VK3UI) and results obtained are very satisfactory indeed. The converter uses a 717A r.f. and 6J6 mixer-oscillator with output on 7 Mc 6HR is now putting out a very solid signal on six metres and apparently has that grid drive problem beaten. Nice work Lew.

Stations active on six at present are as follows: 6BO, 6FC, 6RK, 6GB, 6FW, 6HR, 6HL, 6DD, 6AS, 6DW, 6WG, 6GS and 6EC. Don't forget the weekly round-up on Monday evening fellows.

VICTORIAN 144 Mc. JOTTINGS

This band has been quiet for the same reasons as 50 Mc., although the regulars have maintained skeleton activity on the band. New stations are 3ATB using 522 gear and 3ADU using push-pull 7193s as a unity coupled oscillator. 3ZD, at Warragul, 60 miles e.s.e. of Melbourne, has arrived on the band using 36 watts to an 815 and a 3 element w.s. beam, and will provide the Melbourne gang with some DX contacts. 3AKM, of the same town, is also getting gear ready for the band and should be on before long.

3TO has been operating from his portable location near Yallourn most Sunday afternoons and has been providing some interesting contacts with Melbourne stations. Signals vary a great deal, being quite strong and steady on some occasions and weak and fading badly on others.

288 Mc. WORK IN WESTERN AUSTRALIA

6FC and 6BO have been doing some very f.b. work on 288 Mc. and report terrific signals between Cottesloe and Bassendean (about 12 miles). 6FC (Frank) is using a pair of CV6s and a four element parasitic array, whilst 6BO (Rolo) uses a pair of 7193s and a four over four beam.

No news from the 144 Mc. gang, but will hope to have some news of this band for inclusion in next month's notes.

288 AND 576 Mc. ACTIVITY IN VICTORIA

3ARY, 3ATP, 3ADU, and 3ED, all of Essendon, are active on 288 Mc., using modulated oscillators and superregen receivers and are getting good signals over the short distances involved.

On 576 Mc. the only two active appear to be 3AUX and 3QO, who have been doing a great deal of experimenting with antennae and are getting good signals over this four mile non line of sight path. New blood or renewed activity from old would be appreciated.

IMPORTANT

Would all Magazine Contributors please note that all contributions must be addressed to "Law Court Chambers," 191 Queen St., Melbourne, and NOT to the old box number.

Contributions, particularly notes, if addressed to the box number may not be received in sufficient time to be included in Magazine for the month for which they are intended.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary.—Maurie Butler (VK2AAN), Box 1734 G.P.O., Sydney.

Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor.—A. C. Pearce, 131A Balmain Road, Leichhardt, N.S.W.

Zone Correspondents.—Nth. Coast & Tablelands: J. M. Retallick, VK2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 48 Harrabrook Ave., Five Docks; Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. Dyer (VK3DY), 19 Collington Ave., Brighton (XA 6326).

Administrative Secretary.—Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne, C.1.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—Western: O. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rorke, VK3AKR, Killigrew, Westmere; North Eastern: H. G. Wohlers, 107 Templeton St., Wangaratta; Far North Western: M. Folie, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Tinambra; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3530 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW by arrangement only on the 7 and 14 Mc. bands.

VK6WI.—Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.

Meeting Night.—Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.

Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—G. M. Bowen, VK5XU, Box 1234K, G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AG, 7 Howard St., Perth.

Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.

Meeting Night.—Third Tuesday of each month.

Divisional Sub-Editor.—Alec A. Smith, VK6AS, 75 Weston St., Carlisle, Western Australia.

TASMANIA

Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor.—G. D. P. Clarke (VK7TA), c/o. 7HO, 82 Elizabeth Street, Hobart, Tas.

Northern Zone Correspondent.—R. H. Kilby, VK7RK, 5 Galvin Street, Launceston.

FEDERAL

DX C.C. LISTING

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STANDARD FREQUENCY SERVICE

A Standard Frequency Service, similar to that in operation by WWV in Washington, D.C., and WWVH in Honolulu is now being operated by the National Physics Laboratory at Teddington, England, on an experimental basis.

The frequencies in use are 5 and 10 Mc. and may be heard at the following times: 5 Mc., 3.44 p.m. to 4.15 p.m.; 10 Mc., 4.29 p.m. to 5 p.m. E.A.S.T.

FREQUENCY ALLOCATIONS

The following is a list of the bands available for use by the Amateur Service in Australia, followed by the types of emission allowed on those bands.

3.5 to 3.8 Mc.	A1, 8, 3a, 6F8.
7.0 to 7.2 Mc.	A1, 8, 3a, 6F3.
14.0 to 14.4 Mc.	A1, 8, 3a, 6F3.
26.96 to 27.23 Mc.	A1, 8, FM.
28.0 to 30.0 Mc.	A1, 3, 3a, 6F3.
50.0 to 54.0 Mc.	A1, 2, 3, FM.
144 to 148 Mc.	A0, 1, 2, 3, FM, Pulse.
288 to 296 Mc.	A0, 1, 2, 3, FM, Pulse.
576 to 585 Mc.	A0, 1, 2, 3, FM, Pulse.
1215 to 1300 Mc.	A0, 1, 2, 3, FM, Pulse.
2300 to 2450 Mc.	A0, 1, 2, 3, FM, Pulse.
5650 to 5850 Mc.	A0, 1, 2, 3, FM, Pulse.
10000 to 10500 Mc.	A0, 1, 2, 3, FM, Pulse.
21000 to 22000 Mc.	A0, 1, 2, 3, FM, Pulse.
30000 Mc. and higher	A0, 1, 2, 3, FM, Pulse.

Note.—6F3 emission represents a maximum deviation from the quiescent frequency of plus or minus 3 Kc.

GENTLEMEN'S AGREEMENT

As a result of item 39 of the 1950 Federal Convention, all Amateurs are requested to refrain from using phone between 7000 Kc and 7050 Kc. Remember the gentlemen's agreement please.

COMMERCIAL INTERFERENCE

How many Amateurs are there that complain of commercial interference in the Amateur Bands? Have you made a written report of your observations? If not, why not now. Send your report to your Divisional Council for transmission to F.E.

UNIFORM PHONETICS

The need for the use of a uniform phonetic alphabet is long overdue. The W.I.A. made representation to the I.A.R.U. for an expression of opinion to be obtained from all Radio Societies throughout the world, with the result that the result was unanimous.

As the Inter-Services List is known throughout all Allied Nations, the Federal Council suggests that greater use be made of this list. Furthermore, it is the one suggested by the P.M.G. Department in the Handbook for the Guidance of Licensees of Amateur Wireless Stations.

ADDITIONS, ALTERATIONS, AND DELETIONS TO AMATEUR CALL SIGNS—MAY, 1950

Additions—

VK2AIW—H. S. Watson, 57 Wardell Rd., Petersham.
2AKK—K. Whitmore, 5 Elston Ave., West Ryde.
2APT—H. E. Trevena, 133 Old Kent Rd., East Bankstown.
2AVO—K. V. O'Rourke, 4 Cowper St., Warrawong
2AZI—B. D. Woods, 45 Eurimbla Ave., Randwick.
VK3PD—G. D. P. Clarke, 601 Toorak Rd., Toorak.
3SN—G. P. Lee, 5 Hutchinson St., Sunshine.
3ADV—J. W. Williamson, 36 Westgate St., Oakleigh.
3AOP—G. R. Burrowes, c/o. J. Lakis, 16 Swanston St., Geelong.
3ARP—R. E. Pope, 7 Kyora Pde., Nth. Balwyn.
3ATN—T. R. Naugbton, Fire Station, Sunshine.
VK4IG—H. A. Griffiths, 9 Ipswich St., Toowoomba.
4LB—L. O. C. Baker, 13 Edward St., One Mile, Ipswich.
VK5EH—J. B. Hawke, 219 Stanley St., North Adelaide.
5KW—A. H. Vonthethoff, Vaughan Ter., Berri.
5NB—R. E. Bell, 113 Brighton Rd., Hove.
5NM—M. N. Mayer, 8 Palmyra Ave., Torrensville.
5PF—D. McL. Robson, L.R.W.E. Hostel, Salisbury.
VK9MR—M. J. Rieper, Madang, T.N.G.
9PF—P. T. Filmer, Norfolk Island.

Alterations—

VK2AL—14 Connelly St., Penshurst.
2BT—16 Grenfell Street, Forbes.
2EX—"Mary Villa," Moorecourt Ave., Springwood.
2FR—Albury Street, Holbrook.
2HO—217 Princes Highway, Sutherland.
2IU—Flat 2, 38 St. Georges Cres., Drummoyne.
2KD—2 Sofala Street, Herne Bay.
2KF—78 Mitchell Ave., Kurri Kurri.
2ON—Baan Baan Street, Dubbo.
2OZ—"Wembury," 42 Elizabeth St., Ashfield.
2AGP—8A Kincaid Street, Wagga Wagga.
2AHT—Flat 26D, Cr. Merrylands and Woodville Rds., Merrylands.
2AHU—3 Inverary St., Concord.
2AIX—31 Ruthven St., Bondi Junction.
2ARN—24 Burge Rd., Woy Woy.
VK3EV—15 Elman Rd., Cheltenham.
3IH—3 Cameron Rd., Essendon.
3LU—Old Fernshaw Rd., Healesville.

3MZ—8 Bransgrove St., East Preston.
3TE—16 Callantina Rd., Hawthorn.
3XV—180 Glen Eira Rd., Elsternwick.
3ZW—(Lot 12), Mackie Rd., East Bentleigh.
3AAH—38 Harrison St., Deer Park.
3ADQ—17A St. David St., North Geelong.
3AEV—16 Elman Rd., Cheltenham.
3AOC—278 Malvern Rd., Prahran.
3ARC—14 Wilgah St., East St. Kilda.

VK4AB—6th Avenue, Palm Beach, Elanora P.O.
4AC—6th Avenue, Palm Beach, Elanora P.O.
4CB—112 Churchill St., Maryborough.
4CH—"Salton House," Grafton St., Warwick.
4DJ—P.O. Box 145, Cloncurry.
4DY—196 Ekibin Rd., Annerley.
4MC—c/o. Edith Bryan Hostel, Cr. Free and Goring Streets, Newmarket.
4MP—St. Albans Rectory, Gatton.
4RT—Emma Street, Holland Park, Brisbane.

VK5CD—Keyneton.
5GF—219 Magill Rd., Trinity Gardens.
5GP—Night Cliff, Northern Territory.
5NV—161 Napier Terrace, Westbourne Park.

VK6FL—274 Walcott Street, North Perth.
6KD—c/o. 6AM, Northam.

VK7MG—849 Sandy Bay Road, Hobart.
7WI—"Fairview," Esplanade, Bellerive.

VK9MC—Baiyer River, Central New Guinea.

Deletions—

VK2CD—Cancelled.
2DY—Cancelled.
2ACZ—Cancelled.
2AXP—Cancelled, now operating under 8AOP.

VK3PO—Cancelled.
3SN—Cancelled, re-allotted to G. P. Leé.
3WH—Cancelled.
3ASS—Cancelled.
3ATH—Cancelled.

VK4DG—Cancelled.
4JT—Cancelled.
4KA—Cancelled.
4ZI—Cancelled, now operating under 2AZI.

VK6RF—Cancelled, now operating under 5PF.
6WX—Cancelled.

VK7RF—Cancelled.
7TA—Cancelled, now operating under 3PD.

VK9JT—Cancelled.
9VB—Cancelled.

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

The Northern California DX Club writes under date of 20th March, 1950: "A serious threat to our mutual interests has arisen. The A.R.R.L. and other Amateur organisations have recommended to the F.C.C. (U.S.A.) that the present 20 metre Amateur band frequency allocation for phone be changed. This to become effective at the same time that the 14350-14400 Kc. of the 20 metre band is turned over to the commercials and when the Amateur is given the new 21 Mc. band. The change that has been submitted provides for the allotment of 14300-14350 Kc. for expansion of the present U.S. phone band. At first to a DX man this change might not be considered important, but think a moment of the inevitable results. This is not a c.w.-phone controversy, nor is it aimed at the A.R.R.L. or any other body. What Amateurs are occupying the 14300-14350 Kc. and what will happen to these Amateurs? The Canadian Amateurs now occupy 50 Kc. either side of the U.S. phone band. This is for obvious reasons and it is expected that no change in this line of thought will take place; however, if the U.S. phone band is expanded so as to occupy the frequencies used by the Canadians, what will the Canadians do? Reliable sources have it and logic would indicate that these stations will move to the present part of the c.w. allocation 14100-14150 Kc. All right you say, that part of our band is useless at times for c.w. because of foreign phone QRM. Now what about the foreign phone man now operating between 14300-14400 Kc.? He will take the only way out he has and move into that part of the band 14000-14100 Kc. Now as a DX man, phone or c.w., can you see what we are driving at? The QRM created by U.S. and Canadian phone and c.w. will so completely fill our only true DX band that no DX, phone or c.w., will be worked by anyone. What can we do about it? The following are a few suggestions that could help: (1) Talk to every DX man you can about it, over the air or in person; (2) ask your foreign contacts what they think about it and have them write their views to A.R.R.L. at once; (3) act today. Remember those who want your band are busy."

The best example of QSL card ever sighted by this scribe after handling well over one million cards, is that of Jos Rodriguez, EA5BA. Jose's cards are all hand painted, each with a different and intriguing design and with different colour schemes and layouts. The execution is masterly and yours truly would be proud to own one.

The full QTH of VK9MR, Max Rieper, ex-VK3AMR, is care D.C.A. Madang, New Guinea. Max is currently active on 14 Mc. and is scheduled to remain in New Guinea for three years, from May, 1950.

G8UO, of Keighley, Yorks, England, with printed "chasers" bursts into verse, thus:—

"Wherinell's That QSL?"

"Some moons ago, ole pal, ole pal, we had a QSO,
Mayhap twas short, mayhap twas long, as other contacts go,
But whether it was long or short, I have this much to add.
It gave me just as big a kick as any I have had.
And there is something you should know,
I sent you my QSL card many months ago.
Perhaps the postman pinched it or perhaps I'm not quite sane,
So in case you think I'm joking, I am sending this again.
Again I ask you pal o' mine, deny no more my plea,
Just get the lead out of your feet and send that card to me."

The QSL Manager for the R.E.F., whose Bureau QTH is 72 Rue Marceau, Montreuil sous Bois (Seine), France, advises that owing to the large number of QSL despatches received on which insufficient postage has been prepaid, that all surcharged mail will, in the future, be refused.

HL1CB, "Art" Gramolini, ex-W1NSX, A.P.O. 404, care Postmaster, San Francisco, Cal., U.S.A., supplies the following information regarding his station for the benefit of those desirous of contacting Korea: Operating hours are 0900 to 1200 G.M.T. daily. Frequencies used are 14000, 14050, 14060, and 14100 Kc. Art complains he has received but one card from VK and in future only intends to QSL on receipt of card.

A par in these notes in the April issue of "Amateur Radio" quoted endorsements on cards for AP which had been returned by the VU QSL Bureau instead of being passed on to the AP Bureau. The Asst. Secretary of the A.R.C.I., who read the par, has written stating, "We regret that owing to an oversight, the QSL cards for AP were returned to you with our 'remarks' which were actually intended for the basis of a letter which our QSL Manager proposed to write to you informing you that AP5B is now functioning as the official QSL Bureau for Pakistan so that cards could be sent direct to Pakistan and not via India. We are still handling cards for AP everyday from all parts of the world, and we hasten to state that the most cordial relations exist between the AP and VU Hams in spite of the political differences between our countries. We shall therefore be grateful if you will publish a correcting paragraph so that a misunderstanding may be avoided."

The motor vessel "Halgard," bound for the Gilbert Islands via Suva, called at Noumea en route, enabling the operator Don Reed, VK2DR, to meet Felix, FK8AC. Don has a sked on 7050 Kc. with VK2AJW each evening.

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NEW SOUTH WALES

The monthly general meeting of the Division was held as usual at Science House, Gloucester St., Sydney, on 26th May, 1950. The newly elected President of the N.S.W. Division, Mr. J. Corbin, 2YC, occupied the chair. There was a packed house and the ushers had a busy time hunting up chairs for the stragglers.

Among those present were VR3A recently of Fanning Island, VK2AZI (ex-VK4ZI), and VK2JO of Narrabri. VR3A left early in the meeting on a rush trip to Melbourne, but promised to speak of his experiences on Fanning Island at a subsequent gathering.

Dr. Allison, VK1RA, gave a lengthy and humourous recital of events occurring during his recent period of duty in Antarctica, where he was stationed on Heard Island.

Great interest was shown by members and Dr. Allison stated that it might be possible to show films taken in that area and give a further talk in the near future.

A vote of congratulations to Mr. J. Corbin, 2YC, on attaining the Presidency of this Division was moved by "Pop" Treharne, 2BM, and was carried by acclamation.

Dr. Leo McMahon was the proud recipient of a handsome silver cup presented for his outstanding work and great number of interesting articles written for "Amateur Radio" during the past year. Dr. McMahon, in his reply, pleaded for the gang to send in any novel ideas or articles—no matter how big or how small.

It was moved that an attendance book shall be kept at the entrance hall for the information of members. Voted a splendid idea—the motion was carried. The meeting was closed at 10.45 p.m.

WESTERN SUBURBS

Heard 2WD flat out working some South Americans on 20 metre phone recently. 2OQ is tickled pink with his new location at Chester Hill and has a fine rotary beam in action which is currently knocking them over. Harry runs only 30 watts and soon hopes to be in the DX C.C. class. Nice going Harry! 2ATL is putting out a solid signal with quite good quality phone on 40 metres. 2AER is back in form again after having had the painters in. Maybe I have it wrong, but have you moved the bedroom into the garage and the shack into the house Max? Nice phone.

2ADO has a half-wave folded dipole on 20 and runs 80 watts to an 813. Also runs 50 watts to the filament he laments. 2JT gets amongst the DX and still enjoys that Sunday morning natter. Charlie had a tough break recently when some miscreant spirited off his receiver. No news of 2TD since he got married last year. What goes on Ray? 2AHR having a new QTH and little space, is migrating to 144 and 288 Mc. very soon. 2YM had some excellent contacts on 144 Mc. recently, whilst portable with Gladesville Radio Club on Mt. Gibraltar near Mittagong, 16th April. 2IT and 2ANF were with him and 2AH and 2AWZ were reported as having really solid signals from the Sydney area on 144 Mc.

NORTH COAST AND TABLELANDS

Sorry to miss out with last month's notes boys, but was away on holidays. The car for the trip was fitted with an 8 ft. whip on the back bumper bar and with Rod 2ACU as second operator, VK3, VK4, VK7 and all parts of N.S.W. were contacted with a No. 11. Skip was evident from 5 to 50 miles. On reaching Newcastle, we were directed to 2AHA's on the beam. Harold had arranged to see we met many of the boys and a good time was had by all.

The Gladesville Radio Club was visited and we met about 30 members and enjoyed the hospitality and lectures. We attended the Annual Meeting of the W.I.A. and the North Coast gang wish the new Council every success, and I would mention that the country Amateurs do appreciate the work of the W.I.A. and the Disposal Committee are doing for them. I may mention (although I might be sticking my neck out a little) that after visiting a large number of city shacks, that, the country gang put it all over their city counter-parts when it comes to home-built gear and clean and tidy shacks!

Conditions on 40 at night have been punk, 80 is improving and plenty of VK and ZL contacts are the order of the day. 2RK active on 80 and 40, 2ZY trying to contact Lismore on 6. 2AGM is active and trying to find out if he has any hum on his carrier—he can hear it, but nobody else can. Clive's v.f.o. now. 2SL not very active, but building 80 bedside Tx for the winter nights. 2UO just returned from holidays. Alf works 6, 40 and 80 with 2LH and 2ADE. 2TG working plenty of DX with his four element beam 50 feet high and is going for the phone DX C.C.—96 cards to hand and more to come. 2AFP leaving Casino sub-station for Byron Bay, and hopes to get away from the QRM.

2ZS QRO with 100 watts. 2ASF going well for next year's ear-bashing award, very active on 40. 2PA staged a comeback on 40 and 10. The salt

A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on Thursday, 13th July, 1950. Lectures are held on Monday and Thursday evenings from 8 to 10 p.m. Persons desirous of being enrolled should communicate with Secretary W.I.A., Victorian Division, 191 Queen St., Melbourne (Phone FJ 6997 from 10 a.m. to 4 p.m.), or the Class Manager on either of the above evenings.

air is playing up with Peter's beam. 2DS and 2SH not very active, Doug's G8PO is giving trouble. 2AWS building new house and 100 watt rig, hopes to be on the air in a month's time. 2AEY active on 40, had a trip to Sydney with 2PA and 2AWS. 2DK can be contacted on 40 and 80, Chas will be installing a vee beam for the coming winter. 2JC working 40 and 80, attended annual meeting of W.I.A. and was after information on the forming of a North Coast and Tablelands Branch.

2NN, 2UN, 2YU, 2ZP, 2ABX, 2AIH and 2ANU—no news, are these boys active? Any news would be appreciated. 2ATS puts out a good signal with a No. 11. 2OE active on 10; 2GI on 10, 20, 40 and 80. 2TB, 2NY, 2WQ have a 144 Mc. net working in Grafton. 2EA also on 144, gets ready for the next Urunga "do." 2SR building new house. 2XO on 6, 40 and 80. 2ARY building wire recorder. 2AAP active on 40 and 80. 2CJ staged a comeback and active on 40. 2JK, 2ADN, 2ARJ, 2AJT Coffs Harbour are re-building.

2AJB built transmitter in rack and panel—active on 40. No word from 2DX, but active on 20 only. 2WT had a QSO on 20 with a G using a vee beam. 89 signals both ways. 2PA reports working ZE2KH who was on 21.3 Mc., 2PA on 10, the ZE was using 100 watts to a three element and was 5/8.

HUNTER BRANCH

The June meeting of the Hunter Branch was well attended. The Branch was honoured by a visit from State President, Jim Corbin, 2YC, Vice-Presidents and members of the new Council. The lecture for the meeting was given by Ken Greenhalgh, 2KG, in the absence of 2MS who had to work; "Magnetic Wire Recorders," the subject, and Ken gave a very interesting description and demonstration. The surprise of the lecture was the playing back of a number of the gangs' transmissions—they obtained a fair idea how their signals really sound. Our new Secretary, 2LV, is to be congratulated on the f.b. job he is doing and like all W.I.A. Secretaries it reflects on the time they can get on the air. The new Rx at 2CS is progressing slowly, 6 metre coils in the Rx though. Lionel tested a NC200 recently, but was not very impressed. 2XT at last broken the ice and is on 40 with some nice phone, a little b.c.i. is a worry though. XYL sounds f.b. too Bill.

2CW on 40 also with QRP phone, do it more often Bill. 2UY getting out better on 40 from his shielded location, has a firm hand on the cash for the Branch. 2ANA putting out the usual nice signal on 40, got burnt at work, some "lid" switching on after Norm had switched off. 2NX working in Sydney and only heard week-ends. Welcome to new member, 2ZT—Tom operates on 20 and 40 c.w. with an 807 and a zepp. 2XY using cathode modulation on 40 these days and has some nice clickless c.w. too. Struck some trouble with 70 Mc. b.c.i. on Council's f.m. Neil is unfortunately working in the dark as he cannot get access to the Rx to see what it is all about!

2CI's last year's effort in the Trans-Tasman seems to be his last, as the Contest is due to go according to the Federal Convention voting. Another to join up is old timer, 2WU, Lew McDonald. We would like to see him at some of the meetings. New signal on 10 is Johnnie Clark, 2DZ, from Adamstown, uses three elements and 807s. 2MC still QRL building house and checking electric light meters. 2PQ has the new Rx going f.b.—7.5 Mc. first i.f. and 150 Kc. second channel, got a new one on ten recently, OQ5. 2TE talking of shifting to new QTH. Better sell up to some Ham Bert, it is easier than shifting antennae. 2AFS has been on holidays and will be away in VK6 for some weeks relieving. 2FP got a couple of new ones and now 127 on 10 metre phone—f.b. work Ern.

2AGY only heard on 10 phone and 20 c.w., manages a few QSOs through the QRM. 2ARK back at Mayfield P.O. Very QRL with disposals gear. Nil from Stockton 2AMM, 2PT and 2ASJ. Welcome also to 2ASJ, a new member. 2ZC chasing ZD2 in Zone 35, other bloke didn't come across, so Jim is starting out again, sneaked another country the total about 160 now. The 20 beam at 2CN taking shape. Another Westerner 2AGD has high gain i.f's. in the Rx, now thinking of fixed beams for 20 as 10 is so sick. If you want to hear some good phone listen to 2AAI on 40. 2AAM at Belmont only active on 40, also with good quality.

The activity on the v.h.f's. has slackened in the zone. 2OS still painting the tower, but gets on 6 now and again. 2BZ has private line to 2ADT on 6 and 2 crossband. 2ADS has the beam working on 10—two elements, amongst the DX too; looks forward to better conditions on 10—but when?

The Hunter Valley Emergency Net had another practice and gained more experience, the Net will operate on 6 for their next schedule. Most of the Net members use that band and it is anticipated that the Hunter Valley will even be better covered on 6 than 80. 7002, 3501 Kc. of course still emergency frequencies, but most practices will take place on 6.

2XQ has some nice phone using the new modulators, had a good holiday and busy with the network. 2TY flat out on the 1196s, getting all the good dope for the Net members—how he loves 80! Ask Bob if you want to hear some bad language.

2ADX is a strong supporter of the Net; has been sick and on holidays. Vic 2AKP hasn't been 100 per cent. either and was missed at the last sked. 2ANL still not on. 2JZ going QRO, gets out well but not happy. 2VU is a sticker for 6, but operates all bands. 2DC contemplating another 20 beam, heard recently on 80 'phone or was I hearing things? 2AHA getting some c.w. DX on 40, mainly Europeans between 1600-1700 hours, what's missing on 10, is on 40 now.

COALFIELDS AND LAKES

News is very scarce this month and conditions generally have been very poor with the resultant falling off in activity.

The usual emergency net hook-up in the Hunter Valley took place on the last Sunday in the month. The Net members are making great progress with their portable gear, and should have a try out soon with the gear under field conditions. None of the bands are anyway normal and 80 has often come into its own in supplying a contact. After three years, 2KZ has at last been rewarded for his efforts on 10 phone and the W.A.S. certificate has arrived from the States endorsed 10 phone. So now we wonder if he will discard the old two tube "blooper" and 16 watt rig? Expects to be mainly restricted to week-end operation for a while. 2KF moved QTH to his own home and was last heard of boring holes in the living room floor. Should be on soon with the new microphone. 2YO, the other Ham in the Kurri district, is mainly on 10 phone and has been to Sydney for gear, so it seems there will be some alterations at 2YO.

2VU talking of a turret wave change Rx similar to 2ADT's. No news of 2JZ. 2ANU shows up on 80 for the emergency net. 2RU and 2AEZ can be found on 50 Mc., while 2KR is back on again after a long holiday. Have heard that 2GA is also on 50 Mc. Nothing from 2ALR lately. 2PZ making steady progress, has AR8 re-vamped and working with S meter, etc. So at last he can listen to the gang, it is only a matter of a rig now! 2ADT, strange as it may seem, has not been quite as active though busy in other spheres of the game. A new v.f.o. is one of his efforts. At the moment is working on a high class frequency meter. 2YL working a few of the locals only, not very active otherwise.

WESTERN ZONE

2BT looks like getting his knuckles caned for a long phone QSO on 7002, the emergency frequency, with 2AMV and 2AMR; had a look at the Dubbo disposals sale, there was some good gear there too. 2AMV works 144 with 2BT, uses mod.-osc. and super regen. and doesn't work the low frequencies so much. 2JV inactive and 2WH was flood bound in Sydney for the second time in a few months, besides losing fences and taming 807s and getting the cards for a DX C.C., things are rather quiet! 2NS reports that the South Africans have 21 Mc. and is a bit undecided whether the 10 metre beam will grow or the 20 job will shrink when the band comes along. A search party will have to look for 2IE, not a sound from him. Of the Dubbo boys, 2SA has been holidaying in Sydney; 2II busy on clay pidgeon shooting and the new bouse; nil heard from 2AMR and 2VZ.

2DK and 2JC in Sydney for the sheep show. Hart was neglecting the Merinos that his YF is interested in and was only seeing the Corriedales. 2DK seemed to be supporting Hart. 2ACU arrived with his new Rx to show 2WH who was duly impressed with the performance. On arriving home, Rod told 2WH that one of the tubes was out of the Rx—what a job! Norm, a budding Ham, was with 2ACU and produced a camera worth more than the Rx. The Western Zone was rocked by the presence of both 2EO and 2VN on 40 phone—what a pair to turn up on that band! 2ALX and 2JW not heard, not even on s.s.s.c. They are believed to be active on the v.h.f's. 2LY still using all his Rx's, and should be moving soon. 2EX not very active, blew up a transformer and threatens to re-build. 2HZ still hasn't come on, but has been allotted a shelf in a linen press for some gear and should be on soon with p.p. 9002s or something like that. 2LZ believed to be still busy building houses, but makes 40 on occasions.

SOUTH COAST AND SOUTHERN

The best quality phone heard this month in the zone emanated from 2TC. Jim was using a cathode system of modulation—a very nice signal. 2PN was heard yarning to 2OT—many remarks about 832s plus comments on Compass Rx's. Evidently Ross obtained a Compass Rx from Disposals, sounds like becoming the second stage for a double super. 2JQ has been experiencing trouble with the power supply to the v.f.o. The electrostatic shield went across to the secondary and shield is no longer earthed and all is well. 2AIK sports a new Code Master Bug and much time and patience is being expended mastering the art of using same. A new v.f.o. is under way as the old one jumped off the bench and didn't bounce; the new job 6J5-6V6-807.

2APP having trouble with arcing neutralising condenser. Has been trying out a few new antennae but no decision as to the final choice. 2ALN been heard using super modulation, input swinging from 4 to 13 watts when modulated, had a hard effect here Len. 2PI has installed zero bias triodes, but finds the frequency response has gone up into the boy soprano range. Les suspects the driver tranny is causing the loss of bass. 2PM is running 20 watts input to a re-built ATR2B and Command Tx as v.f.o. 2ON has a new converter for 144, also has design worked out for a new rig for the same band. 2AID getting out with a solid signal; guess Stan must have re-assembled his rig after having the gear in use at various spots during the floods at Wagga.

From Wollongong, 2VH is putting out a really fine signal and 2WP has completed his new rig. Bill has secured an attractive offer and I understand he will shortly be leaving the South Coast for Newcastle; he is using 6V6-807 and a 3BZ. 2AEL is another in the zone trying out antennae and has yet to make a final decision. Visitors to 2DO at Yass during the month include 2XP from Dubbo, 2AJP from Goulburn, 2WD and 2YP from Sydney and 3AHR from Melbourne.

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VICTORIA

The monthly meeting of the Division was held at the Melbourne Technical College, Bowen St., Melbourne, on Wednesday, 7th June, at 8.15 p.m. There were about 100 members present, as well as several visitors. 3GS occupied the chair and in his usual cheery manner, proceeded to business. Apologies were received from 3XD and 3HX. Standing orders were suspended for the lecturer for the evening, one of our members, Fred House, VK3ARK. The subject of Fred's talk was "Duplex Operation" and "Scrambled Speech." Fred dealt with these subjects in a very capable manner, and must be congratulated on his fine effort as it was sprung on him at very short notice. At the conclusion the Chairman congratulated Fred and the meeting showed their appreciation in the usual manner.

The minutes of the last meeting were read and confirmed, no business arising therefrom. Reports from the various Committees were aired. The President gave a concise report of the last Council meeting of what they have done and what is to be done. 3WI transmitter is now in the rooms and will be in operation within (we hope) one month. There is a small amount of work still to be done on the unit, but with the able assistance of a few technical minded men, this should present no difficulty. T.A.C. Chairman reported on T.A.C. activities and appealed for support from the members to use the Library and Instruments. T.A.C. members are in attendance on the last Tuesday in the month at the rooms. The V.H.F. Group reported on their activity. A full report will be found under the "50 Mc. and Above." The next reports were from the Class Manager 3XJ who reported the Class is doing fine and the new Class will commence on 13th July. Communication Manager 3IK had little to report, suffice to say everything going OK.

The "Food for Britain" Appeal raised a few comments; the Federal Secretary, 3ZS, reporting on further appreciative letters being received from England. To finish the evening a visitor from VK2 came to the dais and the President introduced Warren Clark, VK2ASM. Warren's talk was on the radio link between base and car. He is employed by a Sydney newspaper and gave a full story on how the newspaper gets news and "scoops" in record time. The frequency used being in the 72 Mc. band.

This Division still has the old "bogey" kicking around. That is the matter of club rooms. The Council would appreciate any information on the availibility of procuring premises of a permanent nature. Several suggestions were put forward and something concrete may come of them. This matter is very urgent and the Council appeals to all members to help them in finding rooms.

The QSL Outward Manager requests that all cards have the call sign written on the back of the card. This makes the sorting of the cards easy and enables them to be cleared much quicker. Thanks boys.

Was pleased to see 3XU at the meeting. Ron (VK1ADS) handed in a great bunch of cards. 3VA is in town doing the rounds. 3DY going all posh, a new shack and what have you. 3KE playing with beams and quite worried. 3FO showing VK2 visitors the sights of Harrisfield and ended up in getting bogged. 3EN has a new tower and beams. 3JO doesn't know whether he has a Tx or Rx.

It is regretted that the address of the incoming QSL Manager for Victoria (Graham Roper, VK3ZB) has appeared incorrectly in some current call sign lists. Please note that his address is still 26 Lucas Street, Caulfield, S.E.8.

This will be the last issue of the magazine to be sent to unfinancial members of this Division. If you are in this category, may we remind you to renew your subscription immediately.

THE MOORABBIN AND DISTRICT RADIO CLUB

Once again this popular and increasing Radio Club held its usual monthly meeting at the Library Hall, Moorabbin, on Friday, 18th May. The attendance was up to usual, the President, 3KE, being in

the chair. The meeting got away to a prompt start and after the minutes and welcome to visitors the evening was turned over to the Victorian Forrestry Commission who was represented by Mr. Weste. The agenda item was a series of films on the various activities of the Forrestry Commission. The films presented were "Green Gold," "The Hand of Man," "Soil Erosion," "Wild Animal Life." Of course the main interest was the scenes of the radio activity between aircraft and ground stations in the spotting of bush fires. The show lasted for about two hours and a special vote of thanks was recorded to Mr. Weste and his assistants for their very fine effort in bringing this phase of public activity before the public.

Business items were many and the main topics were the forthcoming radio exhibition in conjunction with the Glider Club of Victoria to be staged later on in the year. Bob Richardson (3ZP) donated a 400/400 power trannie, George Wyburd (3LP) a TZ40, Ted Scott two copies of the "Admiralty Handbook." All these fine gifts were thankfully received and will be faithfully applied.

FAR NORTH WESTERN ZONE

Activity a little better in the zone last month. 3TI on every Sunday morning and evening with a very good phone signal. Like the old pre-war days Charlie. Good to hear you after all these years. Charles' son, Cliff, seems to be very keen and from all accounts there will be another Ham at 3TI 'er long. Sunday morning hook-up at 9.15 a.m. continues with up to five and six taking part each week. The members heard being 3FC, 3AFC, 3TI, 3GZ and our old friend from over the river, Jeoff 2AHM, being the most consistent. Frank 3FC is on leave and spent the first week in the Mildura area playing bowls at Red Cliffs. Understand he has honored Melbourne with a visit, not sure if the Type 3 was taken along. 3MF very quiet. Let's hear from you Harry. 3AUG very unhappy about missing out on the 40 ft. windmill tower recently sold in the district. Never mind, Noel, keep the old eyes peeled, there should be some others in the area. Latest news of 3ACY is that he is now resident of Melbourne.

NORTH EASTERN ZONE

Well chaps as you are all aware now, the most important thing for this month's notes is—**do not forget 16th July; big N.E. Convention at Benalla.** This is a "must," fellows, so drop that line to 3KR. Ken, by the way, has just spent a most enjoyable couple of weeks holidaying among his old Ham friends. 3YV is also on holidays (back in bed in hospital where these notes were written)—appendix—well!! But he says he'll be at Benalla on the 16th, Bendix or no Bendix.

By the way Wal 3WZ, I have a few QSL cards stacked up for you old man—what's wrong with your wrist? Writer's cramp eh!

Well chaps that's the lot until I see you all (I hope) at Benalla on the 16th, sorry I can't give you more notes, but the stitches are still hurting like 'ell and tonight's my last chance to get the notes in.

CENTRAL WESTERN ZONE

During the month quite an influx of visitors came and went to and from the zone; firstly, we had 3KR's slim and stately figure wafting through after spending a few days at 3HL, where much good work on Allan's BC348 was done, the genemotor in particular came in for special attention and is now as quiet as the proverbial door nail. Two other visitors were 3TM and 3AKF who arrived after a Ham trip from VK5, to camp at 3ARL's. What I would like to know, however, is why Lin took Bill to the cemetery instead of the railway station on the Monday morning; true it was not quite 5 a.m., but why the cemetery? Also why did Bill have to have three days in bed after getting home; truly the younger generation can't take it. After seeing Bill off, Lin and John paid a visit to 3HL to see how a good country Ham runs off 32 volts (and also how to put xtals in with 3 inch nails).

A pleasant surprise was hearing 3TA on 7 Mc. after a long absence. Byron is still working on the 20 metre beam which is also to be joined by 10 and 2 metre beams. 3FI is interested in 144 Mc., so that they will be able to check one another for a start. The 3ARL, etc., circuit in Stawell will later have other stations to shoot for. Talking of beams, there are apparently more problems than tuning them up. 3AKP is dismantling his five element 20 to increase the element supports. Keith has had more than one element broken with the wind of late.

After getting everything set at Bendigo, 3AJO is to move to Ballarat, so we loose a zone member, and 3VA and company get another source of local QRM. We shall miss John, and take this opportunity of thanking him for his help in the past, especially for the delivery of disposal gear.

3ATR was another to pop up out of the past during the last zone hook-up. Trevor lives on 10 mainly, and had been having fun with a vee beam and the wrong kind of wire. However that is past and Trev. is now happily settled down with 100 watts on the farm powered from an alternator which also runs various gadgets round the house. On 7 Mc. he uses a Type 3.

3DP is busy building himself a 50 Kc. i.f. stage so he should be set to cut through the QRM in the very near future. During a gale recently, 3ARL arrived home to see his 144 Mc. beam behaving in an undignified manner and promptly took it down and then realised he had a 2 metre sked with 3DP, so Lin hooked up the 40 metre zepp and made contact. Owing to the broadness of the signal and terrific variation of antenna current, it is strongly suspected that over-modulation took place, why not try FM?

At the risk of being sacked from this job, I venture to agree with the VK5 scribe on the intrusion of practices of various semi-secret societies, etc., into Ham Radio. Such things should not be and should be stamped on hard as soon as noticed. As it is, it's a grand game, but it can only be kept so by guarding the basic principals which have guided us in the past. Split us up into a lot of little cliques and we can buy Ham Radio's tombstone right now.

EASTERN ZONE

We are looking forward to the show at Omeo on King's Birthday week-end and Bill, Rex and Gwen have everything all set. It will be well over when these notes reach print, so the full gen will appear next month. 3DI is recovering rapidly after having his appendix removed. 3PR and 3QZ have returned from holidays. Graham having visited VK5. Did you hear anything of Sid, VK5SB, ex-VK3CI, Graham? 3ANC is on holidays at Maffra where he is helping 3SS to catch up on the repairs. Keith's junior op., David, has apparently fallen among doubtful characters at school as he has gone so far as to build a 144 Mc. receiver and prattles happily of quench oscillators and other queer things!

3AHK is on c.w. again as the modulation power transformer gave up the ghost in a cloud of smoke and a lot of sizzling sounds. The other boys in the zone say they aren't doing anything to report in the notes, but we have had 3VG, 3GO, and 3AFG, of the city of Sale, in the hook-up lately. Speaking of hook-ups, it would appear that several VK3s either can't read (or don't care) because we have persistent QRM on 3650 Kc. during our Sunday night sked; so give us a break, chaps, we haven't any "California kilowatt" rigs in the zone.

June 24 was "D" Day for VK3GO. Greetings from the Eastern Zone who hope he will now have time to build a transmitter and get on the 'air.

SOUTH WESTERN ZONE

3MH has erected a new antenna. You sure are pushing out a signal these days Mart. 3BI has now recovered from the gout, or was it rheumatism, and the cheery voice is heard a little more often on 40 now. Had an invasion of Hams into the western plains recently, namely 3ARL (Stawell), 3AKF and 3TM (Melbourne). The boys arrived at Dunkeld one Sunday and proceeded to "do" 3AGD's place over. John had an opportunity of working some fine 2 metre DX that day, as 3ARL brought his 2 metre station with him. Later in the afternoon the boys arrived here at Westmere intent on arriving back in Stawell by 7 p.m. The various contacts which ensued were judged by others as emanating from a mad house. However we did have lots of fun and the boys finally arrived back in Stawell about 12.30 a.m. Monday, about 4½ hours before 3TM was due to catch a train for Melbourne.

3GR has a 20 metre beam well under way and should be chasing the DX any time now. A new station on 80 metres, 3EQ, has the Type 3 by the fire in the living room, so might hear more of him this winter. 3AGE of Colac has finished the new shack and now active on the bands again.

Things have been pretty dry for 3HG at Coleraine this autumn, but by now things should be looking better. Would some of the S.W. zone chaps please drop me (3AKR) a line with some news.

Things are very quiet at Geelong. Guess the cold snap and poor conditions on the band have something to do with it. 3WT had a gang at his QTH recently and took his pole down and had it up again in no time. 3AKE was heard on 40 a couple of times; not very often that Ed is up on that band, is nearly always on 144 Mc.; plans to build up a converter. He had his brother 3OP there recently. 3ABK has had a short period at home and made up a 2 metre transceiver using a 955. He made a very nice job of it. 3ABC and 3AJT are still operating on the 14 Mc. band. 3ALG not been very active over the past month, has a D104 mike now.

GEELONG AMATEUR RADIO CLUB

As the year, which ends in June, draws to a close members had a lengthy discussion on the syllabus items for the next 12 months. Members congratulated club member Peter Crosswaite on attaining his Ham ticket. One of the other members not present on this occasion also was successful in getting his ticket. He is Brian Lloyd. Members spent a very pleasant evening at the following meeting when a display at the club rooms of various pieces of equipment was viewed, then members visited the shack of 3WT. Amongst Bill's gear was a CR100 Rx, a midget xtal oscillator, and a 20 metre rig in rack and panel style, very neatly constructed. A nice supper was arranged for the members and in the middle of the table was an iced cake with the words "Welcome to Amateurs" on it.

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QUEENSLAND

The monthly meeting for May was held on the third Friday of the month and we draw the attention of all members to the alteration in the date of the monthly General Meeting. This Division now holds its monthly meetings in the I.R.E. Rooms, Wickham Street, Valley. Meetings are held on the third Friday of each month.

During the past month there is very little of note from Divisional Headquarters. The executive's main activity has been in connection with the purchase of disposals gear. At the last general meeting there was "much binding on the marsh" over this matter, but those present seemed to contribute very little to the progress of the Division as a whole.

Starting in July, the Division will run a full course for those interested in gaining their A.O.C.P.

Advice has been received from VK9JC (ex-VK4WL, ex-VK2) that Wal will commence on 1st June a continuous transmission of phone and c.w. on 50.352 Mc. Wal's QTH is Los Negros Island.

All Northern Zone Managers are requested to forward notes for inclusion in "A.R." to the Sub-Editor by the end of each month. Conditions at the writer's QTH are so bad (power line QRM) that it is impossible to maintain the usual skeds with Zone Managers. Previous years have shown that these conditions will last throughout the winter.

MACKAY ZONE

Manager 4KW.—4AM still having quite a lot of trouble with mikes. 4FH has a new antenna up and is back in circulation. 4KW busy now the football season is here, doing work at the local ball game. Latest advice is that 4BQ is leaving for Brisbane; Bill's departure from Mackay will be a big loss to the local club.

BUNDABERG ZONE

Manager 4XJ.—Very little activity in the zone as everybody seems to be re-building. 4CW operating from a new QTH, but has disposed of the beam to 4UK. 4UK very busy building rig and should be very active soon. 4HE building new rack. 4XJ building new rig also rack and panel. Les has the old 4BJ modulator but rusty chassis demanded paint and the modulator is now in process of re-build. 4BB heard on 20 and 40, but little news. Rumour is that 4BJ is going to return to Hamdom with little rig on 40, very pleased to hear that Vic. and hope to QSO soon.

MARYBOROUGH ZONE

Manager 4GH.—Over the Easter period 2BG visited 4BG, they had a 2 metre transmitter and receiver, 6 metre converter and a three over three 2 metre beam. Skeds were kept with 4LN of Gympie, who went to Maryborough with 2 metre gear and on the return journey maintained contact with 4BG until Barry was within 15 miles of Gympie. 4LN was using an SCR522, 4AI has also got 2 metre and 6 metre going. 4BG also operates on 20 and 10. 4GH also interested in v.h.f. We are pleased to hear that Gordon's XYL is home again and well on the road to recovery from recent illness.

GYMPIE ZONE

Manager 4HZ.—4RA has wrecked the modulator and has ideas of something super. 4LN very busy these days with C.E.L. trucks and f.m. mobile gear. 4CR using low down antenna. 4KT still receiving s.w.l. cards. Please note, 4KT not active. 4SE is running 10 watts to 144 Mc. gear with nine element Jagi and also building a corner reflector. 4XR using trombone matching on 20 metre beam, 300 ohm feed. Hopes to add third element. 4HZ re-erected extended double zepp and worked two YVs and HC on 20 metre phone.

DARLING DOWNS ZONE

Manager 4CG.—V.h.f. is the "big talk" in this zone at present with greatest interest at 4TY. Norm is on 50, 144 and reports hearing Brisbane stations—distance around 100 miles. 4TY heard 4HC on 144 Mc. 4XN called on 4CG and put on v.h.f. pressure talk—results negligible to date. Eric still getting those elusive openings and working VK3 and VK5 on 50 Mc. 4CU has not been so active but keeps regular skeds with 4KK and has worked 4XN. 4KK experimenting with antennae—beams, etc.

Toowoomba was represented in emergency drill on 21st May with 4WE—4SG as control station. 4EG and two new Hams, 4IG and 4TS in the field. Hook-up a bit jerky, but will round off with practice. 4RF and 4DA showing greater interest in new cars than Ham Radio. Alas, poor Warwick

—no news again. (Where's 4CH these days?). 4CG developing into a phone hound, much to the disgust of his c.w. mates. Cliff reckons he is "solid" gold—he is fourteen stone anyway!

BRISBANE ZONE

Manager 4UX.—4SV holidaying at Surfers' Paradise, using 4UX's portable rig. 4EH pulled the leg of quite a few chaps when he came on the air with really beautiful phone. It later transpired that Ron was in 4KP's shack. 4XG is an authority on transplanting holes from one location to another. reckons square holes are best for transplanting. 4HR is interested in 4XG's efforts with holes as he is desirous of putting up rather a nice pole before he strokes all of it away. 4RT also proud of a nice pole, Johno has patted said pole so much that he has worn six inches off the end.

4HB has rather queer noises coming from his rig and can't make out whether it is wasps or a dud tranny. 4WG has installed such a nice beam that works so well that Wally reckons there is no longer any fun working DX. 4PR has put up the aerial to end aerials. Claude passes his place every day and so far has noticed quite a few different aerials. 4XG, 4ZU and 4RT heard working Africians on 10 metres (must be that Brisbane DX Club again).

4JA is erecting two section 8JK and building a house at the same time. Would be willing to bet that beam is finished first. Has a nice double conversion super which really is good. 4ST fishing is firm favourite with Stan, he has finished his shack and reckons that it won't be long now before everything is just, perfect, and regular. 4HA, no sign of Harry these days. 4UX running 100 watts. Claude nearly lost his dog "CQ" when the hound decided to smell the top of a condenser which had 900 volts on it. The dog left in such a hurry that his shadow is still looking for him.

— . . . —

SOUTH AUSTRALIA

The monthly general meeting for May took the form of a "buy and sell" night and it proved quite success, so much so, that it is intended to hold such a night at least twice a year. Personally I don't think that I have ever seen such a collection of junk gathered together in one room (I refer to the radio gear, not the members) in all my experience of these nights, but it must have been just what the members wanted, because it all disappeared before one could say Edward Barbier or some such high-faluting phrase. In VK5 we are not allowed to hold auctions without a special license, and if we get the license we must engage an authorised auctioneer. Therefore we don't hold an auction and we don't have an auctioneer, we just tender for the goods, and the receiver of the tenders is none other than Dougal Whitburn (5BY).

We have held several of these evenings over a period of time and I, in company with several others, have never been quite sure as to whether or not the evening has been arranged for the purpose of giving Dougal a heck of a good time or to permit everybody to throw mud at him. Anyway, laughter was the predominant note of the evening and Dougal's quips and sallies as he tried to talk members into buying (sorry I mean tendering) made good listening.

Apparently someone tendered and bought the visitors' book because I couldn't find it all night and therefore have no names or details concerning the visitors. Most members and visitors kept on the move all night, possibly because they were frightened that if they stood for too long, Dougal would sell them for two bob. Seriously though, I formed the impression that nobody present wanted to tender too much for any one article, as some first-class gear received some ridiculously low offers and some rubbish received some ridiculously high offers, but isn't that just like an auction (pardon me, I have said that word again). When Dougal was about to offer a 1500 volt tranny for tender, he said, "Take this straight home and go on the air tonight," and a wag in the front row said, "and go off the air tomorrow."

The QTH of 5WF is beginning to look like Admiralty House with all the aerials and arrays around the place. 'Tis rumoured that he is considering donning a Naval officer's uniform to fit in with the surroundings. "Mine tinkit he make plurry good sailor."

5GL was talking to me the other day and was complaining because there were no v.h.f. notes for VK5 in the magazine. I disclaimed any responsibility for this and then he said, "I am very interested in v.h.f. notes, as a matter of fact I never read your notes, my XYL reads them and picks out anything that she thinks will interest me." Thank you Mrs. 5GL, and if you care to send me a list of what sort of notes that Clem likes best, I will be only too pleased to squeeze as many of his likes in these notes as I can. After all, one does not often receive such compliments.

I have been listening to Joe E. Brown lately and I have caught the fever, so here goes. Here is the thought for the month. Testing is the name that you give to all those adjustments that you do on the air, but QRM is the name that you call it when the other fellow does the same thing. It's all in viewpoint I suppose. To round it off, I quote, "A man with six children is better satisfied than a man with six thousand pounds. The man with six thousand pounds usually wants more."

The various Council and Executive Officers of the VK5 Division were appointed this month and are as follows: President, E. Barbier (5MD); Past President, H. Austin (5AW); Secretary, G. Bowen (5XU); Treasurer, T. Laidler (5TL); Asst. Secretary, D. Hosking (5DH); Traffic Manager, J. Kilgariff (5JT); QSL Officer, G. Luxon (5RX); Equipment Officer, F. Wreford (5DW); Programme Officer, J. Bulling (5KX); Publicity Officer, W. Parsons (5PS); J. McAllister carries on with the job that he has had for more years than I care to remember, that of Membership Organiser, and last but not least, J. Paris remains the Associate Representative on the Council.

I have purposely left comment on the office of Vice-President until last, because I wish to draw your attention to the importance of this high office. The man chosen as Vice-President must be of high integrity, high morals, a high sense of duty, and above all, of high standing in the community. He must have plenty of this and that (with emphasis on this) and must at all times be able to take the scornful laughter of the motley and yet remain aloof. Need I say more. Ladies and gentlemen, I give you the new Vice-President for 1950—Warwick W. Parsons (5PS). Hooray, hooray, hooray. I thang-you, I thang-you, I thang-you. In reply to the interjection that I have no education, I would like to say that I came through my schooling with high honors, why I was Dux in building blocks, Dux in plasticine, although I did not do too well in bead counters. Anyway, joking aside, they all look an energetic bunch and if we are as happy as last year's Council, then all will be well.

There seems to be a slight doubt regarding the non-appearance of v.h.f. notes from VK5 in the magazine. 5RT has the doubtful honour of handling that side of the notes from VK5, and I can do no more than quote the remarks of that gentleman at a recent general meeting when quizzed by a member on the same subject, "If any one wants to know what is doing on the v.h.f. in VK5 let them get a good v.h.f. receiver and they can hear all the news that they want to hear." Yes I know what is the obvious answer to that one, but tell Bob, don't tell me.

5JA is well on his way to England, in fact he should be there before these notes are printed. I expect that we will be hearing John with a O call before long. 5CH has certainly been around this month as Claude has been heard on 80, 40, 20 and 2 metres with a very good signal, OK on the Pullin meter Claude, unfortunately it could not be repaired, but the gesture was appreciated. 5MS is still chasing 20 metre DX and what is more is doing quite well thank you, Stewart's three element beam is working OK too, although he must have felt a little bit shifty with the wind that was in the south east this month.

5TW has had a fairly quiet month, but Tom is girding his loins in preparation for battle with the winter DX. Will someone tell me when it is around. The winter DX I mean. 5KU has been up in the air more than he has been on the air this month. The fine weather was suitable for gliding and that suited 'Erg." 5FD does not permit anybody to catch up with him whilst in his Holden, so I have nothing to report regarding John, except that without a doubt work always comes first with him. 5CJ would have me believe that work always comes first with him also, but he manages to give 2 and 40 metre the once over. How's the family Col?

Received the April copy of "Splatter" and it gets better and better each copy. This little publication is a credit to all concerned and I am taking the liberty of sending it to the Editor of this magazine to show him what VK5 can do. Once again congratulations 5VM, and keep up the good work.

Heard a VK5 Ham complaining of the poor conditions existing on 20 at night and he said that he was becoming quite bored with listening on that band. Another Ham present advised him to have a listen on 10 metres between 5.30 and 8.30 p.m. to a certain station who was apparently operating from his living room, and it was suggested that he would not be bored with the entertainment provided. Naturally I nosed my way to 10 and I can definitely say that I was not bored with my night's listening. The first night I helped the XYL of the operator to prepare the evening meal, the only thing missing being the appetising smell of the sausages, although why the youngsters should have alluded to them as "snags" is still puzzling me. After tea we all had a "beaut" game of snakes and ladders, but only after we had done our homework (and between you and me, my answers to the arithmetic questions did not tally with those of the harmonic). I became quite annoyed during the snakes and ladders when I was on 93 and threw a six and slid down a ladder to 42, and mind you I will admit that we made quite a lot of din when they caught me cheating, but the cuff behind the ear that one of my fellow players collected sounded a bit severe.

Another night we had three female visitors and while the operator was calling CQ DX did we have a lovely gossip, well I am not one to talk, but!! A later night we had a slight difference of opinion with the operator's XYL as to whether or not she could buy that new hat, and although I felt like weakening once or twice I am glad to say that we firmly said NO! We have visitors coming next week and I am feeling quite excited because I have never met them before, but I believe that they used to work with the operator's XYL before she was married. I can hardly wait, just think only three more sleeps and then they will be there. You think that I am kidding? OK, have a listen sometime, he is using heavy compression and all the background noise comes up and hits you in the face.

In company with all other famous journalists I always make my notes at general or council meetings in my own brand of shorthand and sometimes I find it hard to decipher it. This month I am being worried with some notes I made at the last Council meeting. For the life of me I can't make out what I had in mind when I wrote, "Two drongoes to be invited to supper after the meeting." Now what could that mean? I must ask "Doc," he might know.

There is a suggestion that the next general meeting will be asked to consider making our retiring Secretary, "Doc" Barbier (5MD) an Honorary Life Member of the VK5 Division of the W.I.A., in recognition of his untiring services to the Division. In view of all he has done in the past for Ham Radio in this State, I don't think that there will be much time spent in considering such a matter, as feeling should be unanimous. As I said in my befuddled way last month, a finer Ham has never pressed a key or used a microphone in VK5, if not in VK.

What has become of the terrible twins of 20 metres, 5JW and 5MX? There was a time when one could tune into twenty and if the two Johns weren't on, then no further time need be wasted in listening for any signals, the band could be taken as "dead." Rumour has it that they have migrated to 2 metres, but I cannot verify this. Come out, come out, wherever you are.

5DK has bobbed up on 20 metres operating from the Toe H Club Rooms at Henley Beach. Both 5WF and myself went out of our way to tell him that conditions were putrid on that band, and that he wouldn't like the band, but no, he had to find out for himself. We hope that all his fowls die!

Associate member Bob Turner is at the moment in a R.A.A.F. Hospital in VK3 recovering from an operation. I believe that he had rather a bad time, and we all hope that he continues to make good progress (especially my daughter). I thought she was goofy enough when he was around the place, but since he has been in VK3, well all I can say is "The Lord protect me from my near relatives and I will take care of myself."

I quote the following from "Splatter": "Catford (5XL).—On April 2 at Clare and District Hospital, to Vera and Lance, a son." Congratulations to you both from all down here, and sorry to be so late with the news Lance, but you fellows are so close with your news up there that it takes a month or two for me to catch up with you. My XYL likes the name too, Adrian Jeoffry, although she says that Vera will have her hands full with two Hams in the house later on.

Heard 5JK the other night putting in a surprisingly strong signal to me on 20, in fact 5WF was heard commenting later on that there was evidently another source of local QRM at Henley Beach. Jack has to rise very early in the mornings and that prevents him from being on the air at night to any extent. While I would be the first to admit that he has had professional experience on the mike, he is still an object lesson to all "ummers and errers" on the concise and efficient open and shutting of the mouth in front of a microphone.

A little birdie tells me that a number of complaints are arriving from Interstate sources regarding bad splatter on VK5 phone signals. Personally I am not surprised, but what does surprise me is that anyone should have the hide to doubt that they are splattering after the report comes from Interstate. If they hear it over there, it sure is SPLATTER.

5WM returned from his trip Interstate full of good cheer and other commodities, the principal iniquity being two new pipes; two pipes mind you, as if one didn't tiddley wink enough! Harry Vonthetoff (5KW) has at long last received his call and is making his presence felt in the Upper Murray district. He is running 60 watts to a pair of 807s in the final, modulated by a pair of the same tubes in Class AB2; receiver is a nine tube home-made job, and the lot is mounted in a rack and looks quite professional. Welcome to the air Harry.

5BC is building a v.f.o. unit using the well known "Clapp" circuit and using a built-in power supply. He is very pleased with stability, but I suggest that he makes one of his noted pots of tea and stands the v.f.o. alongside said pot and the stability will be even better. The tea he usually makes is strong enough to hold anything to the

straight and narrow. 5MA is back from holidays and has been seen sneaking into his shack when his XYL was not looking. His activities are mainly confined to 50 Mc. and has been revamping a disposals receiver for that band. Tests between he and 5BC with it were extra good. 5RE has disappeared into smoke for a couple of months, pressure of seasonal work is probably the answer, but he will be back, never you fear, they can't resist it.

5SL has almost completed his converter and results so far are well up to expectations, although he is that busy in his off work hours raking the extra chips in, that he has not the time for much Ham Radio. Of course, there is also the fiancee, you little devil "Skinny." 5BJ is busy building gear but will not be on the air for some time yet. He is another one who is getting rich quick on the side. Look out that you and "Skinny" don't both become the richest men in the cemetery. 5WM has returned from the second best b.c. station in VK5 after a spot of relieving duties and I believe that every time that the boys up there answer the phone these days a feminine voice says, "Is that you Wick, sweety pie." What has he got that I haven't had longer? I think that I must do a spot of relieving duties up there; what am I saying!

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WESTERN AUSTRALIA

The May meeting showed a few of the rarer call signs getting an airing. Seen among an average gathering such comparative strangers as 6DH, 6RB, 6AP and 6BG. A new member in 6TY was approved and, together with old-timer 6AZ, was welcomed in the usual manner. One of the principal items of business for the evening was a report from the new Contest Committee given by 6RU in the absence of the Chairman, 6DD. Jim dealt at some length with future contest activities in VK6 giving details of nearly a dozen contests which will be conducted in the coming year. The first will be the popular 40 metre "Scramble" to be held on 25th June (the echoes should be just about dying down by the time you read this) and a full programme covering all aspects of Amateur interest from 80 to 2 metres or even higher!

The Dinner Committee reported favourable progress for the big event on 9th June (By now only a memory, I hope it is a pleasant one, indications at the time of writing are for a good evening with better support both from town and country members than in previous years). Trophies are to be awarded to the first three place-getters in the "Scramble." First will receive the 1950 President's Trophy which 6KW assures me will be well worth the winning. Also allocated in this contest will be 6JN's prize of one guinea for the best performance on a "miles-per-watt" basis.

PERSONALITIES

I think I shall stick to Ham Radio as a hobby. Look how well the old-timers are wearing over the years. "Skipper" Schofield, 6WS, looking as bright and sprightly as ever, gave members an interesting talk on his recent trip around the Eastern States.

Credit is due to whoever thought up the idea of putting the 20th Convention on the wire for the benefit of the States. The copy was run at the May meeting per medium of 6KW's recorder and gave an intimate and interesting sidelight to the Convention. The quality and continuity were excellent and voices were really "in the room." Take a bow, F.E.

That gad-about mentioned last month as being in Albany, 6RT, turned up at the meeting and took a keen interest in the proceedings. Where to next, Len? Could it be Cue at last? Before I go any further I must also take a bow, a bow out. This will be my last effort as I am handing over to 6AS, Alec Smith, beginning next month. Alec will also handle the 6WI broadcasts as soon as he can get the official gear rigged up at his QTH. My reason? A change of occupation involving a possible change of QTH.

6FD has come back to 40 metres with a signal from Bunbury and has been renewing old acquaintances over the air. 6WZ is a pleased man these days with his new "Bunnerong" giving him a handy 40 watts. Not bad for d.c. mains! Harry has lately discovered a latent talent for gardening (or perhaps the XYL found it for you!) and his garden is beginning to benefit considerably. Another Ham who professes to derive pleasure from tilling the soil is 6XG down Katanning way.

Hams collect various types of junk in their pursuit of their favourite hobby, but one of the strangest was heard on 40 the other day; 6LU was heard telling 6JP of a bunch of tooth-brushes and some pieces of plate glass he had gathered and was sending along. Subtle inquiry revealed the use of handles as spacers on an antenna feed line. It's an idea! The plate glass took the place of the centre insulator, up till then a lowly oil-bottle! Who said the modern Ham was losing his inventiveness?

Remember the lost Ham of Geraldton, 6CN, who has been without power for months. Tired of waiting for promises to eventuate, Cyril is now investigating the possibilities of a battery operated rig. 6AZ deep in contemplation of plans for his new shack which he hopes to complete during his forthcoming holidays. Heard another newcomer to the Ham fraternity on 40—6OY, complete with a braw Scots' accent, welcome to VK6 Tom!

Seven megacycles is showing signs of its winter improvement these days with more and more stations appearing on the band. One station which really had the 40 metre regulars gasping was 6BW coming out of hibernation with a QRP v.f.o. and working up to Geraldton. Mick wasn't the only one to stage a comeback. 6SK was seen working on a nifty looking portable 7 Mc. set-up using a 6A6 push-pull oscillator with modulator complete.

6WH has taken to the country touring business and I understand he turned up in Albany the other day. Also heard checking his rig on 40 was 6RU, who now sports a good antenna for that band. Could all this activity augur well for our 7 Mc. "Scramble"? Another "Bunnerong" advocate is 6GU up at Boulder who swears by the rotary converter to provide the very necessary a.c. from the not-so-popular d.c. 6FL still running a pair of 811s on ten, but Frank finds them a bit hard to drive. Well, I hope you all have (or had) a good time at the Dinner. This business of writing about events before they happen, to be read after they occur, has its disadvantages!

6EC down at Minding has been working steadily at his favourite hobby. Eric now has a fine new beam for ten metres and to go with it he has a turret switched transmitter. Spotted a 35 ft. tower in the backyard of 6JW. Hope it's soon in a vertical position supporting a beam or two, John. Helped Alec, 6AS, to establish the 6WI 7 Mc. rig in his QTH so expect to hear more of Alec on that band. If he is going to take over these notes, he will have to keep going on 40 anyway. Heard 6LW operating his portable rig from up Boulder way and putting quite a fair signal down into the Metropolitan area. Well, I guess that's the issue so 73 to all.

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TASMANIA

NORTHERN ZONE

The King's Hall, on 12th May, presented a very welcome sight by being the best attended meeting for some time. I suspect that quite a few came in an endeavour to ascertain whether or not it would be necessary to water the lawn on Saturday. The lecturer was Mr. Scowan from the airport at Western Junction, his subject broadly, meteorology—specifically designed to give food for thought for 144 Mc. predictions. To this end Mr. Scowan succeeded admirably and, even though we do not know exactly when to slap the ergs on 2 metres, we do know what we are looking for on the weather charts and it will be most interesting to compare future openings with details from the weather man. We are very grateful to Mr. Scowan as indeed we are to all the lecturers who give up their time in an earnest endeavour to impart some of their knowledge to us. Also it is most fitting that on these occasions we have such large gatherings, please keep it up. Incidentally, the weather men said that Saturday should either be showery or raining all day—see final note.

Activities have been somewhat desultory this month, due possibly to our blankety blank cold weather—if this is the best the gang on Macquarie Island can send up to us, I won't work a VK1 again, or will I? Believe 7BQ has not been enjoying the best of health of late and trust 'ere this is printed, his recovery is complete. 7XW seems to have deserted 7 Mc. and maintains a deep silence, to my ears anyway. Let's hear from you Chris, juggle the shifts or something and hop across the road some Friday nights.

7AM should be blowing great chunks out of the ether around 7 Mc. way by print time as he tells me of 100 watts and an 813 and the re-erection of mast, etc. Even went to the trouble of a shack spring clean—horrible thought. 7LZ is back from his sojourn in the wide open spaces, his main impression being, I believe, the case of erecting rhombics on all the decent DX spots. I'll bet that even then though the best conditions would coincide with lambing time or something. 7DS breathing dire threats against me for suggesting he borrow the goal posts from the football club for his antenna but, on looking through the sports column, they only seem to need the little ones anyway.

7PF seems to have successfully cleaned up the little troubles that beset us all at times and at my QTH the signal is OK. Keep it that way Peter and your feet won't get wet. 7DB still very QRL house-building and not very much time for Ham Radio, but it will keep, Don. Here, my single 807 became lonely so I gave it a mate, but it looks like incompatability as they won't behave on 10 yet—ah well, maybe there's a lot to be said for single blessedness.

Our next meeting is scheduled for 14th July. I wonder if some kind bird would whisper that date into the shell like pink ear of our State QSL Manager. Oh yes! Re the end of para one. It was a beautiful, sunny, cloudless day!!!

CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

WARNING TO AMATEURS

4 Sunbeam Ave., Croydon, N.S.W.

Editor "A.R.," Sir,

I would like you to publish the following. On Tuesday night, 9/5/50, my shack was broken into and my Marconi B28 Receiver was stolen. Entry was gained by breaking away the fibro cement sheets near the ground. I would like to suggest that Hams line the inside of their shacks or screw hardwood battens every foot or so up from the ground. Several VK2 Hams that I know of have lost valuable gear in similar circumstances.

Description of the B28 Receiver (No. 263887): size approximately 14" x 14" x 14", weight about 60 lbs, slide rule dial, 0-1 Ma. S meter, 12 valves (11 on top and 6H6 noise suppressor underneath), 10 knobs, one on-off switch, and noise suppressor switch, frequency coverage 60 Kc. to 30 Mc. covered in six bands. In fact it was a very f.b. receiver and I would appreciate it very much if someone could give me a line of it, as apparently commercially built receivers have a ready market and may be shipped Interstate to be disposed of.

—CHARLES LUCKMAN, VK2JT.

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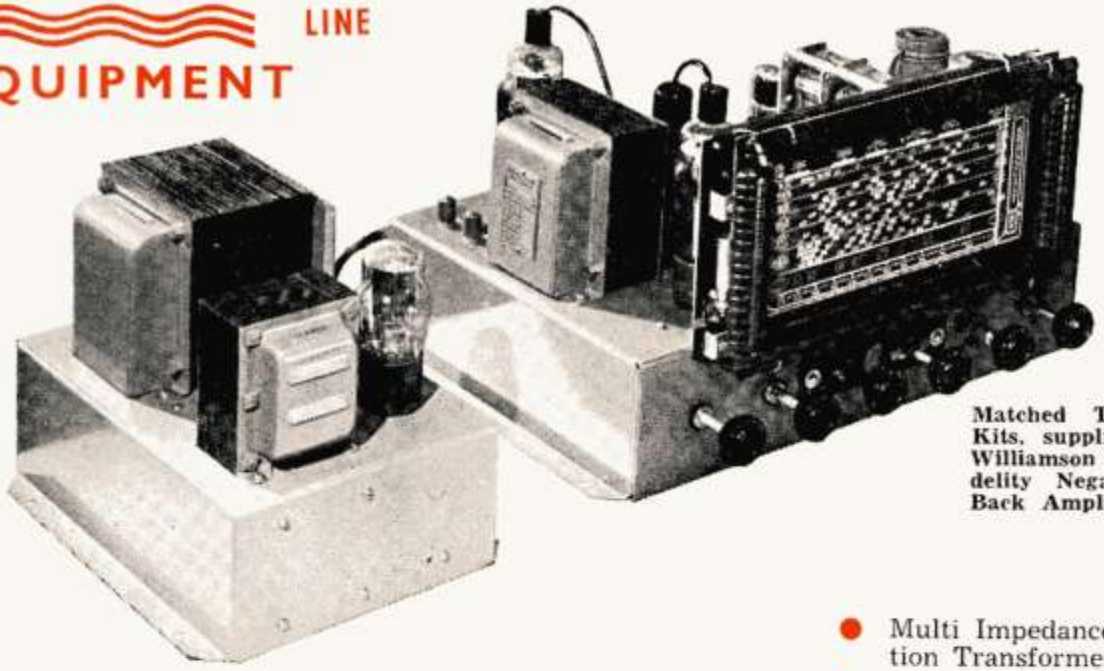

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EDITORIAL

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"JAMMING THE HAMS"

This involves no invasion of the culinary art, but is intended by a recent press article to describe what is happening on the 40 metre band and elsewhere.

Foreign s.w. broadcast stations are said to have "dropped an iron curtain" between Amateurs of different nationalities, thereby "drowning out" one from the other. And so the jargon goes on; all very entertaining to the lay mind, and possibly amusing to the initiated.

There is, however, quite a different approach to this subject, and the thinking Amateur will doubtless realise that his hobby has lately received an injection of political significance at the hands of the Press which may endanger the privileges of close on 3,000 operators in this country. The careless comment; the burning personal opinion on international affairs; or the profound political conviction, find no place within the permissable limits of our experimental licence, and rightly so. Any such phrases eminating from Amateur Stations, and so quickly caught up, may easily and promptly echo to our disadvantage in the high halls of Canberra.

It would require very little official ink thereafter to dispose of all our hard won privileges "for the period," and all would be left lamenting. We strongly advise all members of the W.I.A. to use the pledge of secrecy as a bar to Press curiosity as touching upon our International contacts. We urge also that discouragement should be given to any local or foreign contacts who may show a tendency to go "political." Rather should we seek to guide such QSOs into safer channels where the elements of study and good fellowship can continue to brace and strengthen the hobby of our choice.

FEDERAL EXECUTIVE

The Contents . . .

Balanced Impedance Matching for Aerial Coupling

BY J. G. REED,* VK2JR, M.I.E. AUST.

This article is based on the paper read by VK2JR to the Easter Convention of the North Coast Members of the W.I.A., also to the June Meeting of the Sydney Division.

Impedance matching and electrostatic balancing of the input circuit to the receiver plays an important part in obtaining interference free reception and full advantage of the directional properties of aerials.

Almost without exception, considerable care is taken to employ efficient coupling to the radiator during transmission. However, with the receiver, it is surprising to note how many experimenters pay little or no attention to the important factor of balanced coupling and impedance matching of the input circuit to the transmission lines.

The centre fed dipole is an excellent type of aerial for reception because of its inherent balance to ground, and, when employed as two half waves in phase (such as a 66 ft. centre fed unit) for 14 Mc. reception, the directional property assists in keeping QRM down to a very low order in the quadrants not broadside to the line of the radiator.

If the receiver seriously unbalances the feeder lines to the horizontal dipole, a strong vertical component will be introduced, and depending on the magnitude and phase of the various currents, the field pattern may be distorted badly, in addition to admitting noise interference from local vertically polarised ignition and domestic appliance generators.

Drawing No. 1 illustrates what happens during a special case of combined reception of vertical and horizontally polarised signals. The vertical component has a uniform phase characteristic which may be represented by a circle. The horizontal component of the dipole —which is bi-directional—has one component which is in phase with the vertical, and another which is 180° out of phase. This characteristic is represented by the figure eight diagram.

When the components of the vertical and horizontal currents are combined vectorially, the in-phase signals add, and the out-of-phase signals subtract. Assuming that both are of equal magnitude, the result will be a "heart-shaped" diagram which will readily be recognised by experimenters who have had service experience with direction finders. Instead of the resultant of circle and figure eight as indicated, it is possible to produce many forms of reception pattern when magnitudes vary. This may be proved by drawing the circle and figure eight to different scales and plotting the resultant. Rapid variation of magnitude or phase of either component will produce a synthetic form of fading. This will be noticable with a signal being received from a relatively local station where portion of the signal comes horizontally and some of it vertically by reflection from the ionosphere.

An interesting sidelight to this random reception of multiple polarised signals is the exaggerated directional property attributed to some forms of "beam" aerials by their proud owners. When tested with receivers which are unbalanced with respect to ground, the interaction of vertical and horizontal components may be such as to give apparent high back-to-front ratio (refer to drawing 1). With a properly coupled transmitter the directional pattern may be rather mediocre. A well known Sydney experimenter employing a "G8PO" beam of "rotary bird perch dimensions" claimed a marvellous back-to-front ratio according to a reception test on a distant station, but when tested for transmission, this expensively erected radiator proved itself little better than a simple dipole with negligible back-to-front ratio.

As a subject for experimentation it may be possible to combine the signals from a horizontal dipole with those from a vertical aerial, through an appropriate semi-aperiodic valve mixer to produce controllable "heart-shaped" reception pattern for reduction of QRM from local stations during DX working. The writer is experimenting with this and may have more to say through "Amateur Radio" at a future date.

Elaborate coupling units with electrostatic screens have been used for coupling unbalanced receivers to balanced transmission lines. These have disadvantages in that continuous tuning is required and, in addition, due to the loose coupling between the primary and secondary windings, the reflected impedance of the receiver input to the line winding varies over such a wide range that matching with the transmission line becomes a difficult matter.

The writer has experimented to overcome this difficulty and has produced a wide-band iron dust core Balancing Transformer and Impedance Matching Circuit which provides a high coupling coefficient and retention of transmission line balance when coupled to the normal receiver with one input terminal at earth potential.

Drawing No. 3-4 illustrates the Standard Dummy Aerial characteristics and schematic connections from which it will be seen that the assumption of 300 ohms input impedance would be an all-round figure for the average receiver operating on short waves.

The original transformer developed employed a toroid core in the shape of a closed ring to limit pick-up from external fields. It is quite satisfactory to employ a cylindrical core if care is taken to shield the transformer. In one model the writer placed the wound tubular former in a paper lined screening can and rammed all round it a mixture of iron dust and binder with excellent results.

Precipitated iron powder may be purchased from any large chemical supply house as it is a standard item in school and college chemical laboratories for demonstrating the almost explosive rapidity of oxidation when thrown in its finely divided form into a flask of oxygen gas. Magnetite or its equivalent

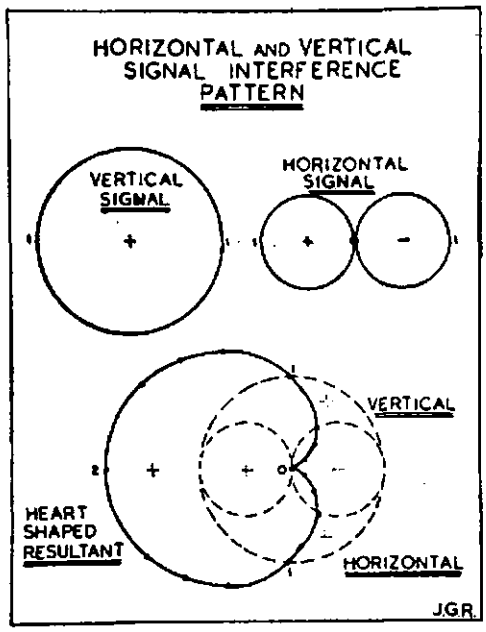


Fig. 1.

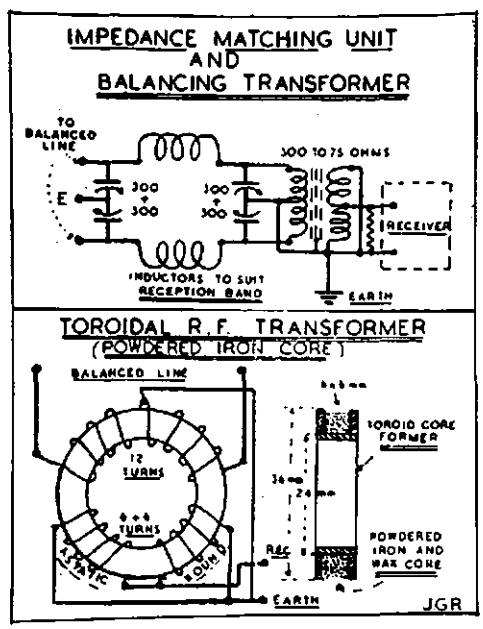


Fig. 2.

* Chartered Engineer; 57 Kameruka Rd., Northbridge, N.S.W.

may be obtained by crushing several cores from "permeability tuned" receiver inductors.

Suitable formers for moulding a mixture of iron dust or magnetite and wax are easily constructed, and these may be for toroidal or cylindrical cores as desired.

Mix sufficient iron dust and paraffin wax to form the required core and melt into an easily worked paste over a stove hot-plate, using only enough wax to form a stiff paste. With a small spatula or end of a tea spoon form the mixture

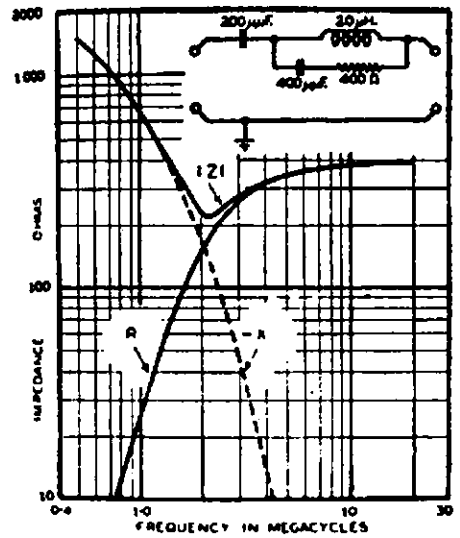


Figure 3 (Inset): Dummy antenna for all frequencies. Figure 4: Impedance characteristic of dummy antenna shown in Fig. 3.

Figs. 3-4.

into cylinder or toroid groove and when cool and hard cover with a layer of light waxed tape for mechanical protection.

VK2JC produced an excellent toroid core by making a casting with a piece of cab-type flex as a pattern. Being a dentist during his spare time from radio, 2JC used dental plate moulding powder to mix with the iron dust and produced a hard ring of such high magnetic property that the writer was able to lift one from the table with a small magnet used for setting the "high-low" index markers of a thermometer.

The secret of the high degree of electrostatic balance coupled with high magnetic coupling is in the polarity of the various windings. For clarity in drawing the toroid winding in Fig. 2 the windings are shown diammetrically opposed. In practice the windings are immediately over one another. The turns indicated in Fig. 2 are for a special transformer coupling from a 300 ohm line to a 75 ohm receiver input.

To cover the normal 20 to 80 metre bands, the windings are not critical, the only requirement of consequence being that the impedance of the windings equal the load resistance at the lowest operating frequency. For calculation purposes—to assist those of mathematical inclination—it may be assumed that the powdered iron core increases the permeability for a factor of about THREE.

For the average 300 ohm input receiver the transformer should have an effective 1 : 1 ratio employing 12 turns for the centre tapped primary or line winding and two sections of 12 turns each for the secondary or receiver winding. It is important to wind the latter in reversed sections.

Commence with the secondary winding by measuring out a little more than sufficient wire to complete the winding, and doubling it back on itself, put on the two identical reversed windings and bind down with a single layer of thin waxed tape. (**Do not use cellulose or "Scotch" tape as this reacts unfavorably during humid weather and may produce fungus growths.**)

Each secondary section should have twelve turns of approximately 26 s.w.g. enamel. The primary or line winding should be placed immediately over the first winding making sure that it is symmetrical. This consists of a total of 12 turns of wire of gauge such as No. 22 d.c.c. or equivalent to exactly cover the secondary. Before placing the line winding wrap on an electrostatic screen made from a non-shorting layer of tinfoil. An excellent material for this purpose is the foil coated waxed paper used for protection of Kodak roll films. With care, a little fluxite and a hot iron —such as a Scope—it is possible to solder light flex to this foil. See that the screen and centre tap of the primary winding are clear of the "hot" centre connection of the secondary (or inner) winding.

With the transformer alone a considerable improvement will be noticed in reception conditions. The insertion loss when operated on a properly terminated line is not more than one decibel which is more than compensated for by the reduction of noise level coming in on the vertical component, allowing use of higher receiver gain. VK2XO, who operates literally surrounded by high tension power transformers at the Raleigh sub-station on the North Coast reports phenomenal reduction of local noise. Ask Crieff to give a demonstration during your next QSO with him.

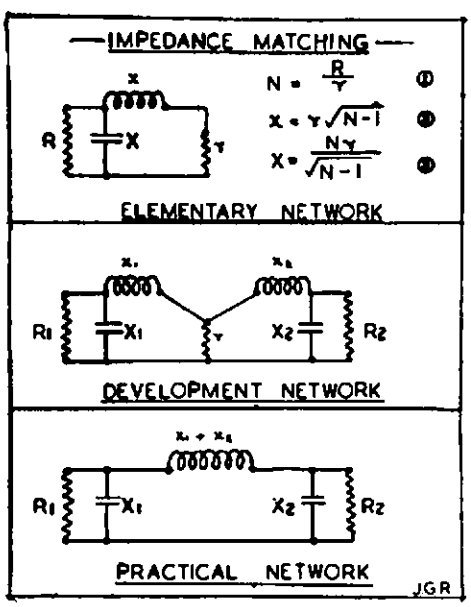


Fig. 5.

For most efficient use of the received signal energy the transmission line terminal impedance should be matched with the receiver input. Measurements show that the centre impedance of a 66 ft. dipole coupled to a receiver through 33 ft. feeders varies from approximately 30 ohms on 80 metres to 3,000 ohms at 40 and 20 metres. Assuming an average input impedance at the receiver of 300 ohms the mismatch will be seen to be 10 to 1; a state of affairs which, if detected in a transmitter, would be given immediate corrective attention.

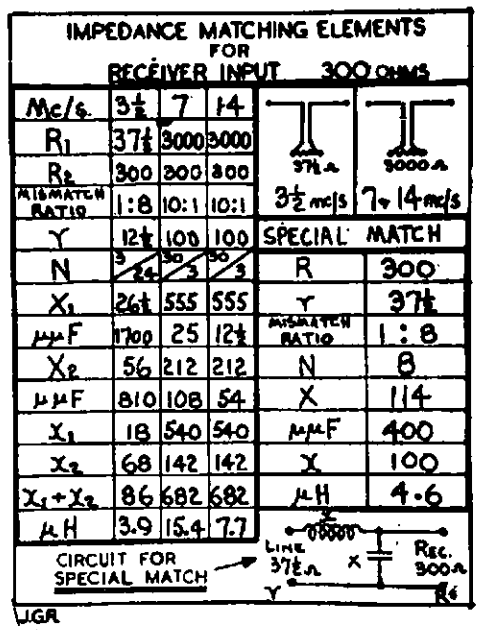


Fig. 6.

It is possible to adjust the length of the feeders for a spot frequency to give a workable match to the input circuit of the receiver. However this will be found an unworkable procedure for multi-band working. A "pi" network of reasonably high Q may be operated as a resonant circuit by making the reactance of the terminal capacitances proportional to the circuit impedances.

Another method based on the Reactance Transformer, evolved by Mr. E. Green, of the Marconi Company, and described in "Marconi Review" No. 67, provides an excellent means of solving the problem. Those who are interested in the mathematical solution of the Reactance Transformer are advised to consult this excellent article and its for-runner in the No. 54 Review. The "bread-and-butter" solution boils down to a few simple equations capable of easy solution.

The Reactance Transformer in its simplest form consists of a simple "L" network in which the capacitive arm always faces the circuit of high impedance. As the transmission line impedance may vary above and below that of the receiver input, the Reactance Transformer would require reversal or operation back to back with another section to form a "pi" network. Assuming the configuration in Drawing No. 5A where r = the low resistance, R = the high resistance, x = the series

(Continued on Page 8)

A Beam Rotator for 144 Mc.

BY JOHN IRELAND,* VK3AJI

The writer recently had need for some means of rotating a four-element beam for 144 Mc., and several methods of achieving this were explored.

Finally it was decided to try the genemotor out of the BC966A I.F.F. Receiver unit, which, with the associated gear train, proved most satisfactory for the job.

The geneniotor was first removed from the chassis, stripped of fan, cams, contacts, etc., and then converted to operate on 230 volts a.c. To do this, the motor was dismantled by removing the gear train, mounting bracket, the castings containing the brushes and then the lugs on the ends of the field wires were snipped off. Extensions were soldered to the field wires, the joints insulated, and the extra leads brought out of the hole where the original wiring entered the motor. The low-voltage brushes were discarded, and two fresh leads connected to the high-voltage brush terminals (marked "H.V." on the casting) and also brought well clear of the motor, through the same hole as the field wires. The motor was then re-assembled, and the gear train replaced.

At this stage it was decided to test the motor as an a.c. unit, so one field lead was connected to one armature lead, the joint taped, and the remaining two leads (one field, one armature) connected to a.c. supply. The motor

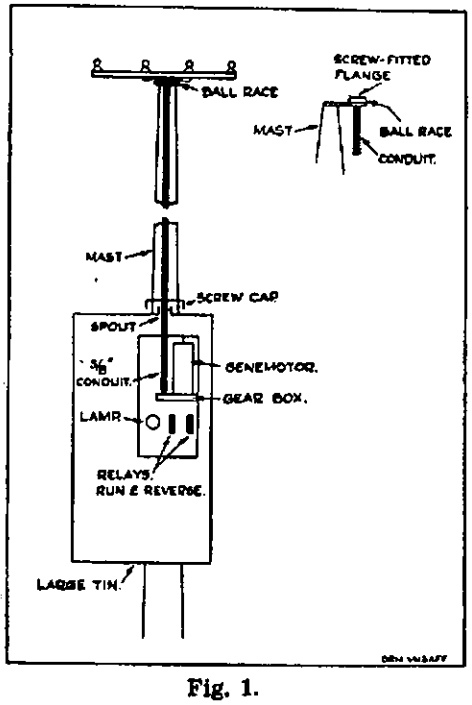


Fig. 1.

ran smoothly, but rather fast, and experiment with a 40-watt lamp connected across the brushes reduced the motor speed somewhat, but at the same time gave the final drive considerably more torque.

* 28 Russell Street, Ivanhoe, N.21, Vic.

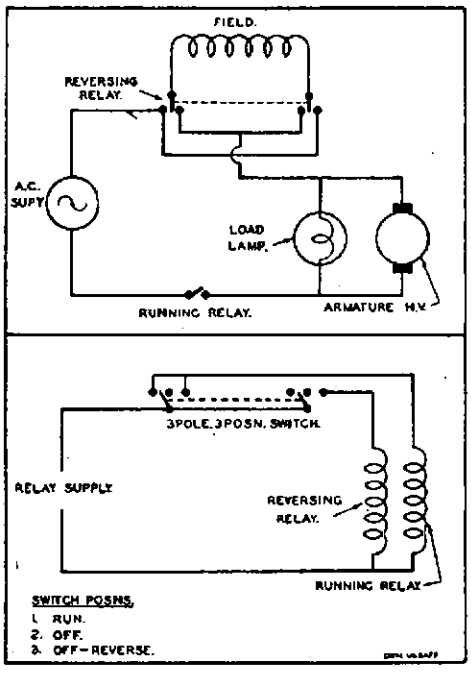


Fig. 2 (above), Fig. 3 (below)

As it was considered essential to have the unit reversible, methods of reversing the motor were investigated, and relay control seemed the best proposition, particularly in view of the fact that controls were to be a minimum in number. By utilising two relays taken from the BC966A it was found possible to have complete control over the unit with a 3-pole 3-position switch of the wafer type.

The temporary connections were then undone, and the motor mounted on a piece of 6" x ⅞" timber about a foot long, a batten-holder and the two control relays were fastened to the motor board, in positions as shown in Fig. 1.

To ensure weather-proofing, the whole was fitted in a kerosene tin from which one end had been removed, a 1" hole cut to allow the drive from the lowest gear to protrude, and the spout from a 1-quart oil tin soldered over the hole. A piece of ½" ebonite rod was line-bored with ¼" drill, tapped 5/32" and a grub-screw fitted, this being fitted on the ¼" shaft from the motor. A length of ⅝" drawn conduit was used to couple the motor to the beam, and this fitted closely over the ebonite bush. Next, a large screw-cap from a coffee jar was soldered to the conduit, just clear of the oil tin spout, making an excellent weather-proof seal, although no friction was incurred.

The whole assembly was mounted on the mast at a height of about 7 feet from the ground, the supply connected, and a couple of coats of paint finished the job.

So far no beam indicator has been installed, but a couple of Selsyns seem to be the logical answer. Another refinement would be some form of end-of-travel switch, and something will be done in this connection in the near future.

On test, the time of rotation was found to be 14.5 seconds in a clockwise direction, and 17 seconds when revolving in an anti-clockwise direction.

Details of control are shown in Figs. 2 and 3, and have proved most satisfactory at this QTH.

The main part of this job seems to be the mounting of the beam at the top of the mast or tower, and it is essential that the unit should be properly balanced, preferably on ball-race. Any suitably sized old ball-race from the junk box would do, and there seems to be no reason why the same motor could not be used for a beam for 6 metre operation.

Due to the slow speed of rotation, no great accuracy seems to be necessary in the drive shaft of conduit, and the whole should be easily made up by anyone, however roughly, with satisfactory results.

Audio Filter for CW

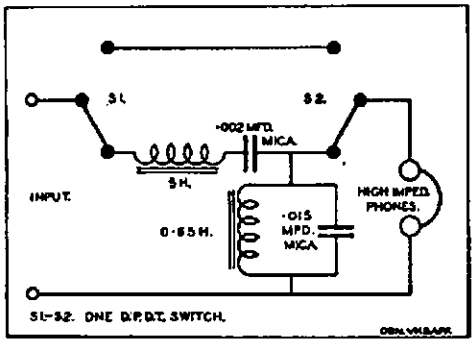
Filter chokes from 400 cycle power supplies can be used to make a simple yet effective audio filter for c.w.

Chokes from an ASB7 rectifier power unit (ex Disposals) were used. The switch shown in the sketch is used to cut out the filter when it is not required. (The writer does occasionally listen to phone signals!)

Resonant frequency was measured as 1400 cycles, with an insertion loss of 6 db (10,000 ohm load).
Bandwidth at:

—6 db is 400 cycles, 1200-1600.
—12 db is 1100 cycles, 900-2000.
—40 db is 5640 cycles, 360-6000.

Used with a selective receiver, the bandwidth in the —40 db region is actually narrower because of side-band cutting.



The insertion loss is less than that of the FL5 Radio Range Filter, and although not so sharp, yet it has proved useful in cutting down QRN and background noise, and is some help in reading through QRM.

For details on design of such filters, see "QST," July, 1949, page 51.

—VK3AWS, W. Stevenson.

REDUCING SPLATTER

BY R. Y. DAWLEY, W6DHG (Reprint from "Radio")

There are frequent cases where it has been found impossible to remove completely the splatter accompanying the modulation of a phone transmitter by any of the ordinary means. Another transmitter with the same tube line-up, but with a slightly different physical layout, will be capable of substantially complete modulation without any trace of splatter while the offending transmitter will begin to have spurious sidebands long before 100% modulation has been reached.

When the operator of such a transmitter was concientious he would probably attempt to isolate the trouble for a couple of sleepless nights, then finally give up and try re-building various stages of the transmitter until finally he found that the trouble had disappeared. Were he not quite so conscientious, he probably would just forget about it (as many have done) and let the other fellow on the band do the worrying.

It is hoped that this article, calling to the attention of the Amateurs a condition that could cause that difficult-to-locate source of sideband splatter, will be instrumental in reducing the sideband width of transmitters which are conscientiously "modulated less than 100 per cent." and yet are guilty of spurious sidebands.

AMPLITUDE AND PHASE MODULATION

In many cases of this kind, after every other avenue of attack has failed, it is quite possible that the difficulty may be found to lie in a seldom thought of type of modulation, phase modulation of the output of the transmitter. Phase modulation of limited amplitude in itself will cause no spurious sidebands; neither will conventional amplitude modulation. However, since the phase modulation that is taking place is the result of amplitude modulation, both modulation types are appearing at the same time with the result that new second and higher order sidebands are produced. It is these new higher order sidebands that cause adjacent channel splatter.

Phase modulation can be explained as a variation in the instantaneous phase of the carrier wave with respect to the phase that the carrier would have at this instant were it not modulated, this variation taking place at an audio rate. Audio modulation of one polarity will cause a slight acceleration in the angular velocity of a vector which can be thought of as representing the carrier frequency; modulation of the opposite polarity will cause a deacceleration in velocity of the vector and under carrier conditions the angular velocity of the carrier vector would be constant.

If the maximum phase shift or instantaneous vector displacement is one radian (57.3 degrees) or less, the sideband components produced in the output of a phase (only) modulated transmitter will be substantially the same as those produced in the output of a conventional amplitude modulated transmitter; the output wave will consist of first order sideband components in addition to the carrier. In other words, only the ordinary sum and difference frequencies will appear. However, if the maximum angle of displacement due to modulation is more than one radian, second and higher order components, similar to those produced by overmodulation of an amplitude modulated transmitter, will appear in the output.

So we see that if phase modulation in excess of one radian is taking place at any modulation percentage as far as amplitude modulation is concerned, the resulting effect will be the same as though the transmitter were being amplitude modulated in excess of 100%. Actually the transmitter is being modulated in excess of its modulation capability as soon as higher than first order effects, due either to amplitude or to phase modulation, appear as sidebands in the output. As a matter of fact, as long as any phase modulation is taking place along with the desired amplitude modulation, second order effects or double-modulation-frequency sidebands will appear in the output. Then if the transmitter is being phase modulated in excess of one radian the spurious-sideband condition can be really serious due to sidebands of three, four, or five times the modulation frequency.

By another analysis of phase modulation, it can be shown that the result is identical to frequency modulation, but with a very limited change in the frequency of the transmitter due to modulation. Since the carrier vector is being accelerated and deaccelerated with modulation, it can be seen that at any point on the modulation cycle the instantaneous output frequency of the transmitter is different from what it is under carrier conditions.

CAUSES OF UNDESIRED PHASE MODULATION

There are three conditions that may exist in a phone transmitter which can cause phase modulation. The first is regeneration in the final stage caused by its being operated out of neutralisation. The magnitude of phase modulation will be proportional to the amount the stage is out of neutralisation and to the transconductance of the tubes. If the final amplifier is exactly neutralised no phase modulation can arise from this source. However, the amplifier may appear to be neutralised when it is tuned up without plate voltage and yet when plate voltage is applied it may show signs of regeneration or degeneration. This condition is much more likely to appear in a single-ended stage when operating at a high carrier frequency than in a push-pull stage.

OPERATION INTO REACTIVE LOAD

Another condition which can easily cause phase modulation is the operation of the modulated stage into a reactive load. This can occur when the final tank circuit is simply detuned from resonance for one reason or another. In such a case the tubes would not be operating at minimum plate current and restoring the tank to resonance would correct the difficulty. Phase modulation arising from this condition is the result of variations in the plate resistance of the tubes with modulation acting in series with the reactance of the output circuit.

The final stage may also be operating into a reactive load when the final tank is tightly coupled to an antenna system which is not exactly at resonance. When coupling an antenna system to a transmitter makes it necessary to retune the plate tank for minimum plate current, it is more than likely that the tubes are operating into some reactance. If the tank is comparatively high Q, it is possible that the reactance will be small and will cause no ill effects. However, if the tank circuit is of the minimum Q permissible for the operation of the stage into a resistive load it is quite possible that when the tank is retuned to minimum plate current it is really being retuned to maximum tank impedance and not necessarily to tank resonance. Under these conditions the tubes would be operating into a reactance (more than likely an inductive reactance) when the tank has been retuned to minimum plate current. Such a condition will cause phase modulation along with the desired amplitude modulation.

An arrangement which can very easily cause phase modulation is the operation of a modulated amplifier into a pi network, especially one of the so-called simplified type where the tank circuit has been eliminated and the tube operates directly into the first condenser of the network. If the network has not been accurately designed, or if the stage is not being operated very closely in accordance with the design, it is quite easy to have a condition which will cause phase modulation.

TESTING FOR REACTIVE LOAD ON THE FINAL

Since the operation of the modulated stage into a reactive load can so easily cause phase modulation with its attendant undesirable effects, a test which would tell whether or not the stage was operating into such a load would be of assistance.

When an amplifier has been properly neutralised and has no regeneration or degeneration in the stage, the point of minimum plate current will exactly coincide with the setting of the final amplifier tank

condenser which gives maximum grid current. This should be true with the amplifier both loaded and unloaded.

It is of course true that the grid current to the stage will be less with plate voltage on the tubes than before the voltage was applied. It is also common knowledge that as the plate tank condenser is detuned either side of resonance the plate current will increase and the grid current will decrease still further. The important thing is that the grid current be highest exactly at the same point that the plate current is lowest. In any amplifier that is operating correctly this will be the case. But when an amplifier is being loaded too heavily for a low-Q plate tank or when a reactance is being coupled into its plate circuit from an external source, maximum grid current will not flow at the point of minimum plate current.

When a stage in which the two points do not coincide is modulated, phase modulation to a greater or lesser extent will take place, the amount of such modulation being dependent upon the magnitude of the reactance into which the tubes are operating.

If the minimum plate current and maximum grid current points come at the same setting of the plate tank condenser when the amplifier is unloaded, but do not when the stage is loaded, it means that the stage is being loaded too heavily for the Q of the tank circuit or that the antenna system is coupling a reactance into the tank. The remedy is either to use a higher Q plate tank or to retune the antenna and feeder system to resonance, or both.

BACK COUPLING AS A CAUSE OF PHASE MODULATION

Another condition which can cause phase modulation as the transmitter is amplitude modulated is coupling from the modulated output of the transmitter back to one of the exciter stages. This can occur when there is inductive coupling from the output tank circuit or the antenna feeders to the tank coil of one of the exciter stages which is operating on the output frequency. This back coupling can cause a phase shift in the grid excitation to the modulated stage. The phase shift would be proportional to the amount of energy which is being fed back, and since the amount of energy in the output circuit would be proportional to the modulation, the phase of the energy appearing at the grids of the modulated stage would vary with modulation. Phase modulation arising from this condition can cause the same undue sideband width or splatter as phase modulation arising from any of the other sources.

The cure for this condition would simply be to shield the exciter stages from the modulated output circuits of the transmitter. In this way the back coupling will be stopped and any phase modulation arising from it will be eliminated.

IMPEDANCE MATCHING FOR AERIAL COUPLING

(Continued from Page 4)

inductive reactance, and X = the parallel capacitive reactance, the relationship is as follows:—

$$x = r\sqrt[2]{n-1}$$

$$X = \frac{\sqrt[2]{n-1}}{n\ r}$$

where n = the ratio of R and r.

To generate a "pi" network it is necessary to assume that both ends of the circuit operate into a phantom common resistance shown by dotted lines in Drawing 5B.

If R1 and R2 are taken as the two end resistances and r the internal phantom resistance, the two values of x (inductive series reactance) should be added to form a single unit. The resultant network is illustrated in Drawing 5C.

Drawing No. 6 tabulates the circuit constants for matching a 300 ohm receiver input to a line varying between 37.5 and 3,000 ohms for 3.5, 7 and 14 Mc.

The capacitors on both sides of the coupling network should be twin ganged to give a centre earth connection, and should have individual section values to give the values shown.

The inductors should be arranged in two half value sections switched by a two gang three section Oak switch to preserve symmetry. If the transmission line is not an exact quarter wave multiple the residual reactances may cause trouble in compensating for their effect on the circuit. It is best therefore to have the transmission lines tailored to the closest multiple to avoid this complication.

Components of the Reactance Transformer and Matching Network should be housed in a screened compartment, otherwise spurious pick-up may nullify all the good work put into the construction of the unit.

This type of coupling transformer, used in conjunction with a rotating loop aerial permits accurate direction finding reception. The writer is at present experimenting with an astatic balanced pair of loops which provide a high degree of discrimination against vertical component signals. This is confidently expected to permit accurate plotting of "pirate" stations. Details are promised for a future issue of "Amateur Radio."

— . . . —

NEW NO. 123 VARNISH STAYS FLEXIBLE AFTER BAKING

Outstanding characteristic of the new Irvington No. 123 Insulating Varnish, developed by the Irvington Varnish and Insulator Company, Irvington 11, N.J., is that it stays flexible after baking. This makes it particularly valuable for impregnating transformer and other similar coils, as the leads can be bent and twisted after the varnish is cured without danger of the conductor breaking or the varnish cracking.

Irvington No. 123 is a clear insulating varnish with excellent bonding characteristics, high dielectric strength, and exceptional resistance to moisture, transformer oils, mineral oils and solvents. Although it retains enough flexibility to permit individual leads to be bent into position, it penetrates deep into coil windings and bakes throughout to form a unified, solidly bonded mass. It exhibits excellent stability characteristics in the impregnating tank as well as in storage.

Technical details and samples of Irvington's new No. 123 insulating varnish are available on request to the manufacturer.

Remembrance Day Contest 1950

The Remembrance Day Contest is an Australian Annual Contest to perpetuate the memory of those Australian Amateurs who gave their lives for their country during World War II. It is held on the week-end nearest to the 15th August in each year, the date on which hostilities ceased in the S.W.P.A.

A handsome Perpetual Trophy is awarded annually for competition between States, and is inscribed with the names of those who gave their lives, so perpetuating their memory throughout Amateur Radio in Australia. The name of the winning State for each year is inscribed on the Trophy.

RULES

1. The contest will commence at 1800 hours E.A.S.T. on the 12th August and continue through until 1759 hours E.A.S.T. on the 13th August, 1950. The period of operation of any station is limited to any twelve consecutive hours within the 24 hours set down.

2. The contest is open to all Australian Amateurs, but only members of W.I.A. are eligible for the awards.

3. The contest is an open contest—c.w., phone or a combination of both may be used.

4. The contest is an Interstate Contest, and Amateurs in each State will endeavour to contact Amateurs in all other States.

5. A station may be operated by more than one operator provided that a separate log is entered for each operator under his own call sign.

6. All present Amateur Bands may be used, and all transmissions must conform with the Regulations as laid down in the P.M.G's. "Handbook for Operators of Amateur Wireless Stations," January, 1948. Any breaches of these regulations will lead to the disqualification of the station concerned.

7. The arranging of schedules for contacts on other bands will not be permitted.

8. All stations entering the contest will call "CQ RD" if using c.w., and "CQ Remembrance Day" if using phone.

9. A State competing for the trophy must submit a minimum of six (6) logs from members before becoming eligible for contesting the Trophy.

10. Only one contact per station per band is permitted.

11. Each participant shall assign himself a three figure number. When more than one operator operates the same station, each must assign himself a separate three figure number. To facilitate checking the logs, competitors are urged to use three figures which are not the same—serials such as 111, 222, etc., are to be avoided.

12. The exchange of serial numbers shall be as follows: The first three figures are those chosen in Rule 11 above, and will be retained throughout the contest; and the second three numbers will commence with 000 for the first contact and for subsequent contacts will be the FIRST three numbers of the station of the PREVIOUS contact. A complete exchange of signal reports must also take place before any points may be claimed for the contact.

SCORING

13. In order that an equitable distribution of points for States with a large number of contest stations to a State with fewer contact stations may be determined, a sliding scale of points has been allotted as shown in the scoring table appended.

14. In addition to the points in the scoring table that may be scored, a bonus of 25 points may be added to the total score for each State worked on 50 Mc. or above.

LOGS

15. The log submitted must show in the following order: date, time (E.A.S.T.), station worked, band, type of emission, signal report sent, signal report received, serial sent, serial received, and points claimed.

16. A statement signed by the operator must be attached at the conclusion of the log, stating that the Regulations (Rule 6) and these rules have been observed. Any logs departing from this form will be automatically disqualified.

17. All logs must be forwarded through the Contestant's Divisional Council (for membership checking) to reach Federal Executive, Box 2611W, G.P.O., Melbourne, on or before 5th September, 1950.

AWARDS

18. Attractive Certificates will be awarded to the first, second and third highest stations in each State. There shall be no outright winner for Australia. Where a large number of logs are received from any one State, further certificates may be issued at the discretion of the Contest Committee.

TROPHY

19. The State to which the Perpetual Trophy is to be awarded shall be determined as follows: The logs of the six (6) highest scorers in each State (see Rule Nine) shall be averaged. To this average shall be applied a multiplier which shall be formed by taking the total log entries from a State and dividing by the total number of licensed Amateurs in that State at the date of the Contest.

20. The logs which will be accepted for the multiplier as determined under Rule 19 shall show at least five (5) contacts in the contest.

21. The Trophy shall be forwarded to the winning State, in its container and will be held by that State for a period of 12 months, when the winner for the succeeding year is determined.

22. The Contest Committee shall be the sole adjudicators, and their ruling shall be binding in the case of any dispute.

SCORING TABLE

From	To VK2	VK3	VK4	VK5	VK6	VK7	VK9	Total
VK2	—	1	2	3	5	4	6	21
VK3	1	—	3	2	5	4	6	21
VK4	1	2	—	3	6	5	4	21
VK5	2	1	3	—	5	4	6	21
VK6	1	2	4	3	—	5	6	21
VK7	2	1	4	3	5	—	6	21
VK9	1	2	3	4	5	6	—	21

NOTE.—Read the Table from left to right for points for the various States.

Examples:

A VK2 scores 1 point for VK3 contact
2 " " VK4 "
3 " " VK5 " etc.

A VK6 scores 1 point for VK2 contact
2 " " VK3 "
4 " " VK4 " etc.

"Worked All America" Award

The "Worked All America" (W.A.A.) Award has been instituted by Liga de Amadores Brasileiros de Radio Emmisso "L.A.B.R.E." to encourage interest in the American area.

1. The W.A.A. Award for confirmed contacts with forty-five (45) or more countries in the American area is available to Amateurs everywhere in the world.

2. Conformations must be forwarded direct to L.A.B.R.E. Headquarters, P.O. Box 2358, Re de Janeiro, Brazil, South America.

3. Confirmations must be accompanied by a list of claimed countries to aid in checking.

4. All contacts must be made with Amateur Stations working in the authorised Amateur Bands or with other stations licenced to work Amateurs.

5. All stations contacted must be "land stations," contacts with ships, anchored or otherwise, and aircraft, cannot be allowed.

6. All stations must be contacted from the same call area, where such areas exist, or from the same country in cases where there are no call areas. One exception is allowed to this rule; where a station is moved from one call area to another, or from one country to another, all contacts must be made from within the radius of 150 miles from the initial location.

7. Contacts may be made over any period of years, dating post-war (i.e. since November, 1945) provided only that all contacts be made under the provisions of Rule 6 and the same station licence; contacts may have been under different call letters in the same area (or country) if the licensee for all was the same.

8. All confirmations must be submitted exactly as received from the stations worked. Any altered or forged confirmations submitted for W.A.A. will result in the disqualification of the applicant.

9. Operating Ethics: Fair play and good sportsmanship in operating are required of all Amateurs working for the W.A.A. Award. In operating ethics, an individual may be disqualified from the W.A.A. Award by action of the L.A.B.R.E. Award Committee.

10. A minimum readability report of 3 shall be recorded on each confirmation submitted.

11. A minimum signal tone report of T8 is required for all c.w. confirmation.

12. Decisions of the L.A.B.R.E. Awarding Committee regarding interpretation of the rules as here printed, or later amended, shall be final.

13. All applications must be forwarded to the L.A.B.R.E. by registered mail, sufficient postage for the return of the confirmations must be forwarded with the application.

14. All certificates will be consecutively numbered and an Honor Roll, showing all those issued, will be kept by the Secretary of the L.A.B.R.E.

15. The list of countries in the American area (North and South America) in connection with the above award is appended.

LIST OF COUNTRIES TO BE COVERED FOR THE W.A.A. AWARD

1. Alaska	KL7	N.A.	Zone	1
2. Antartica	VP8	S.A.	"	13
3. Argentina	LU	S.A.	"	13
4. Bahama Islands	VP7	N.A.	"	8
5. Barbados	VP6	N.A.	"	8
6. Bermuda Islands	VP9	N.A.	"	5
7. Bolivia	OP	S.A.	"	10
8. Brazil	PY	S.A.	"	11
9. Canada	VE	N.A.	"	1–5
10. Canal Zone	KZ5	N.A.	"	7
11. Cayman Islands	VP5	N.A.	"	8
12. Chile	CE	S.A.	"	12
13. Clipperton Islands	TI	N.A.	"	7
14. Locos Island	TI	N.A.	"	7
15. Colombia	HK	S.A.	"	9
16. Costa Rica	TI	N.A.	"	7
17. Cuba	CM, CO	N.A.	"	8
18. Dominican Republic	HI	N.A.	"	8
19. Easter Island	CE	S.A.	"	12
20. Ecuador	HC	S.A.	"	10
21. Falkland Islands	VP8	S.A.	"	13
22. Galapagos Island	HC	S.A.	"	10
23. Greenland	OX	N.A.	"	40
24. Guadeloupe	FG8	N.A.	"	8
25. Guantamano Bay	KG4	N.A.	"	8
26. Guatemala	TG	N.A.	"	
27. Guiana, British	VP3	S.A.	"	9
28. Guiana, French & Inini	FY8	S.A.	"	9
29. Guiana, Netherland	PZ	S.A.	"	9
30. Haiti	HH	N.A.	"	8
31. Honduras	HR	N.A.	"	7
32. Honduras, British	VP1	N.A.	"	7
33. Jamaica	VP5	N.A.	"	8
34. Leeward Islands	VP2	N.A.	"	8
35. Martinique	FM8	N.A.	"	8
36. Mexico	XE	N.A.	"	6
37. Miquelon & St. Peirre Is.	P8	N.A.	"	5
38. Western Netherlands, India	PJ	S.A.	"	9
39. Newfoundland & Labrador	VO	N.A.	"	2–5
40. Nicaragua	YN	N.A.	"	7
41. Panama	HP	N.A.	"	7
42. Paraguay	ZP	S.A.	"	11
43. Peru	OA	S.A.	"	10
44. Porto Rico	KP4	N.A.	"	8
45. Salavador	YS	N.A.	"	7
46. South Georgia	VP8	S.A.	"	13
47. South Orkney	VP8	S.A.	"	13
48. South Sandwich Islands	VP8	S.A.	"	13
49. South Shetland Islands	VP8	S.A.	"	13
50. Swan Island	KS4	N.A.	"	7
51. Trinidade & Tobago	VP4	S.A.	"	9
52. Turke & Caicos Islands	VP5	N.A.	"	8
53. U.S.A.	K & W	N.A.	"	3–5
54. Uruguay	CX	S.A.	"	13
55. Venezuela	YV	S.A.	"	9
56. Virgin Islands	KV4	N.A.	"	8
57. Windward Islands	VP2	N.A.	"	8

TUNING IN S.S.S.C.

A few of us have been using s.s.s.c. and have been very disappointed at the lack of response and help from others on the band. You can call for hours and get no reply, except from the few stalwarts who come to your aid every time.

It is only to be thought that the chaps do not know how to tune it in properly. No other explanation could be counteranced.

When receiving s.s.s.c. the receiver must supply the carrier. This can be done by two methods.

(1) The receiver b.f.o.
(2) An outside oscillator.

The outside oscillator is the better method. With an outside oscillator, which can be your frequency meter, your v.f.o. or another r.f. oscillator, you supply the carrier at the exact frequency of the untransmitted carrier. The nearer you get to this frequency, the better the quality of the received signal. Any variations in frequency have to be compensated for at the receiving end. After you have supplied the carrier at the right frequency you can tune the receiver to give you the best results. After you have used the receiver b.f.o. method, it is a strange feeling to be able to tune the receiver quite freely.

In using the b.f.o. you have to set the frequency in the band pass of your receiver's i.f. channel. Then turn on your b.f.o. and supply the carrier at the right frequency.

In both methods of reception, you must adjust the strength of your supplied carrier to correspond to the strength of the received side band. If you supply too much carrier, you get the effect of undermodulation and if your carrier is too weak, you get the effect of overmodulation with bad distortion. The latter trouble is very common in cases using the b.f.o. The strength of the carrier from most b.f.o's. is quite small.

The solution is to decrease the strength of the received side band. You do this by turning down the r.f. gain control or taking off your aerial. That is the hardest thing to get the chaps to do. You must take your foot off the accelerator. I'll admit it is a terrific wrench to have to turn the r.f. gain back, but it is the only solution.

There is no means of reporting s.s.s.c. strength on the present RST system. All we are interested in is readability. If that is 100 per cent. that is all we really want.

When using an outside oscillator you have to vary the coupling to get, again, the proper ratio of injected carrier to received side band. We thought that if you injected an R9 plus signal at all times and thereby flattened all QRM and noise and put up with the effect of undermodulation, it would be the best thing, but things did not work out at all well that way.

It is all quite easy when you get the hang of it so go to it, give us a hand and the best of luck—but remember that accelerator.

—Dr. Leo H. McMahon, VK2AC.

APPARENT DUPLICATION OF VALVE TYPE NUMBERS

TYPE 6AR7GT

Questions have been asked by those who have noticed type 6AR7GT listed as a double diode in the A.R.R.L. Handbook and in other overseas publications. The answer is that this type number was reserved by R.M.A. for the General Electric Company (U.S.A.) in 1945, but registration was not carried out and the request for reservation was subsequently cancelled. This type number, 6AR7GT, was subsequently registered by the Radio Manufacturers Association (U.S.A.) on application by Amalgamated Wireless Valve Company, for a duo-diode-pentode manufactured in Australia. The use of this type number for any other valve is erroneous. —A.W.V. "Radiotronics" No. 143.

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NEW INVENTION IN RADIO

Mr. P. M. S. Damen, of The Hague, has applied for a patent on a special device to be used in conjunction with radio sets. It is claimed that this device will make it possible to tune in to any broadcast listed in a radio programme. at any given day, time or wave length.

By means of this gadget, which is operated by a clock containing a paper strip listing the different times of eight stations, listeners are enabled to arrange their radio programmes a day—or even a week—in advance by the use of one or two simple manipulations.

The tuning in or the switching off of one station—or the change-over from one station to another—is effected by the use of a number of contact points which are either dropped through the perforations or allowed to by-pass them as required.

The advantage of this new invention is that one need not miss any news, concert, radio play or some other important broadcast which now one often remembers too late. Mr. Damen claims that the purchase price of his gadget, according to experts, will constitute only a small percentage of the cost of a radio.

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

AUGUST, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

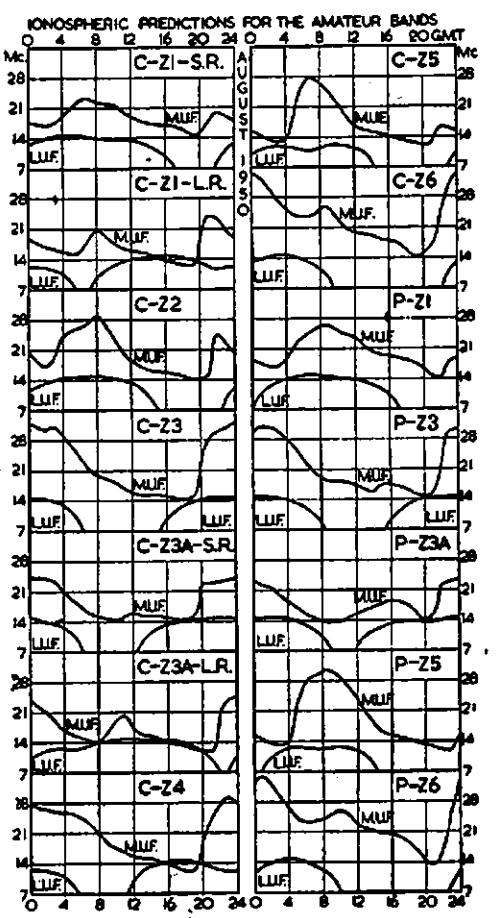
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0600 to 1500 hours G.M.T.
2. Was the 14 Mc. band workable between 0300 and 1800 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

Aotivity during the past month seems to have been concentrated on 144 Mo. VK3TO at Yallourn is running a continuous automatic c.w. transmission on this band and has been heard at good strength by Melbourne stations.

An epidemic of Frequency Modulation is raging amongst the 50 Mc. gang in Melbourne, and many are the arguments regarding the relative merits and demerits of Phase Modulation and Frequency Modulation. At the time of writing, the odds are definitely in favour of Phase Modulation. A good sign is the adoption of n.b.f.m. adaptors for the receivers, and most of the aforementioned devotees of f.m. have fitted them with good results

50 Mc. ACTIVITY

VICTORIA

One of the best DX openings for this time of the year so far experienced occurred on the 30th June when from 1500 to 1620 3BQ and 3IM worked 4XN and 4BT with signals peaking over S9. Between 1800 and 1820 2VW and 2RU were heard, but not contacted, and then from 1950 to 2200 hours 4BT, 4CU, 2LH, and 2SL were worked by 3OD and 3IM. VK4s were heard working VK3s and VK2s, so it is evident that the opening was very widespread.

The Victorian country stations are still on the job and 3UL, 3APF, and 3ZL continue to provide contacts with Melbourne stations. Signal strengths are down compared with summer levels, but the contacts are still being made, which is the main thing. 3VL, formerly of Red Hill, is now at Omeo and hopes to be on 50 Mc. before long. Rex is in a rather shielded location, but will be doing his best to contact Melbourne stations.

SOUTH AUSTRALIA (UPPER MURRAY AREA)

This past month or so has seen a great increase in 50 Mc. activity from the Upper Murray area. Being in the vicinity of 150 miles or so from Adelaide and from most other centres of hamdom, we have good prospects of DX. 5BC has added a p.a. stage, consisting of 833s in push pull, to his 807 output 50 Mc. transmitter and is now running 100 watts c.w. Extensive tests were carried out from 11th to 25th June with 5HD, 5QR, 5RT and 5MK—all in Adelaide. Tests at night were carried out during the week, and day tests on Sundays, and it was found that very little difference occurred between day and night. Although QSB was very prevalent, it seemed worse at night. When heavy cloud existed between 5BC and Adelaide, QSB was less, however best average report both ways was R5 S5 with occasional peaks to S7.

At present 5BC's antenna is a four element wide spaced beam. 5HD is the same, and shortly both are adding an additional four elements on top of each in an effort to improve things. C.w. has been used mostly, but phone has been heard from Adelaide. 5MA in Berri here also is starting on six. His receiver is a converted 1133 receiver and transmitter is a revamped 1138H transmitter section with the RK34 section removed. His antenna is a dipole for the time, but beams will follow.

5XL at Clare, S.A., some approximate 100 miles direct, is also interested in these tests and has a crystal controlled converter feeding into an AR8 receiver. He has had several good crossband tests with the Adelaide boys. 5XL has a transmitter under construction.

144 Mc. DOINGS OF THE MONTH

VICTORIA

With the coming of cold nights and cessation of field day activity for the winter, activity is still at a somewhat low level, but there are still a few stations on the band every night. New calls heard during the month are 3AIQ and 3WR.

As mentioned last month, 3ZD, of Warragul, is now active on this band and has worked a number of Melbourne stations including 3ABA, 3ED, 3IM and possibly others. He has also worked 3TO at Yallourn and 3AKE at Geelong. This latter contact is over a distance of 85 miles and has been made with good signals both ways.

3TO continues to work from his portable location on Sunday afternoons and still works a number of Melbourne stations. 3ZL, of Ballarat, has a new beam up, exact type not known at time of writing, however it is giving a considerable improvement in signals over the old one and Eric has been able to hear 3TO for the first time, under fairly adverse conditions, so a contact over this path should be possible before long.

3WI will soon be transmitting on both 50 and 144 Mc., two TR1143s having been modified for this purpose. A special omni-directional aerial has been designed for the two metre transmitter by Len Jackson, and as the transmitters will be operating from a high location, it is hoped that a good coverage will be obtained on both bands.

TASMANIA

7BQ has just completed a cascode converter for 144 Mc. and is giving it a good test, preparing for the next DX season. 7BQ also has gear for 288 and 576 Mc., but no QSOs have taken place due to the inactivity of the local v.h.f. members. 7AM has built a crystal rig for 144 Mc., but as yet the crystal oscillator seems to be the only thing working.

From Hobart 7MY reports that he is using a m.o.p.a. RK34 osc. driving a pair of CV6s in push pull, all tuned circuits being parallel lines. This rig is modulated by a single 807 and fed into an open wire feeder to a vertical J 50 ft. high. A standing wave indicator shows no standing waves. A four element "Lenfo" is to go up soon on a piece of water pipe with suitable rotating gear. 7MY is to add a pair of VT00s to the final and by the time this is in print, an automatic sender will be in operation and at regular times a m.c.w. signal will be put out with hopes of pushing a signal further afield than the front fence.

ABSTRACTS, OVERSEAS MAGAZINES

Since these abstracts have been running, we have had many enquiries as to where these magazines can be seen or borrowed. For subscriptions McGill's Newsagency can oblige. In Victoria the two other main sources are the W.I.A. (Victorian Division) and the Melbourne Public Library. The W.I.A. (Vic. Division) gets the following: "QST," "CQ," "Short Wave Magazine," "Short Wave News," "Wireless World," "R.S.G.B. Bulletin," and these are available on loan to Victorian Division members from the Librarian.

The Melbourne Public Library gets: "Amateur Radio," "Australasian Radio World," "Radio and Hobbies," "Radio and Television News," "Wireless World," "Electronic Engineering," Electronics," "Radiotronics," "Television" and in the near future will be getting "CQ" and "QST." In general, private individuals cannot borrow these, but they may be read at the Library any day or evening. Similar information from other States will be published when available.—A.K.H.

BOOK REVIEW

OP.-AID.—Published by Amalgamated Short Wave Press, London, 1/6 sterling. This booklet is a concise operating aid. It contains tables of prefixes, alphabetical and by countries; call areas; zone boundaries; local times; QSL bureaux; Q and Z codes; maps of U.S.A. and U.S.S.R. call areas, and more of similar types of facts which are very handy when combined in a small booklet like this.

"RADIO AND TELEVISION NEWS," JAN., 1950

P. 35: "Frequency Measurements for Citizens Radio;" H. McKay.—Simple frequency measurement for 460-470 Mc. band.

P. 43: "A Two Meter Quad;" O. B. Oberto.—Claims to have low angle of radiation and higher gain than two five-element beams stacked.

P. 48: "Converting the Abbott TR4 for 420 Mc.;" D. H. Rogers, W2MLF.

P. 62: "A Versatile Low Power Transmitter;" G. L. Countryman, W3HH.—6AG7 c.o., 807 p.a.

"RADIO AND TELEVISION NEWS," MARCH, 1950

P. 38: "Broadband Converters;" A. B. Kaufman, W6YOV.—Single and two tube crystal controlled converters for 80, 40, 20 and 10 metres.

P. 45: "The Mini Rack Transmitter;" J. F. Clemens, W9ERD.—Small all-band 100 watts transmitter using push pull 807s. Built into neat 10 by 8 inch rack.

"RADIO AND TELEVISION NEWS," APRIL, 1950

P. 42: "The Mini Rack Modulator;" J. F. Clemens, W9ERN.—Companion unit to transmitter described in March issue. 6SJ7, 6SJ7, 6L6, class B 807 triodes. Also describes five band antenna tuner for transmitter.

P. 60: "No Space for an Antenna?" S. Johnson, W0LBV.—For "inside the roof" 10 metre antennae, recommends a vertical quarter wave with ground plane, or the W8JK.

P. 63: "R.f. Power Output Meter for V.h.f. and U.h.f.;" J. A. Houser, W2VCM.—Simple instrument using 1N34 rectifier and milliammeter and will work from 3 to 300 Mc. However it may be hard to obtain suitable high dissipation non-inductive resistors, although it is possible to make your own like the author.

P. 64: "Transmitter Keying and Biasing Problems;" J. N. Whitaker, W2BFB..—Good hints including one on how to shape the keying waveform to compensate for a poorly regulated h.t. supply.

"CQ," MARCH, 1950

P. 11: "The Wide Spread Twin Five;" E. M. Brown, W2PAU.—Two meter beam suitable for swinging from horizontal to vertical polarisation. Two five-element Yagis spaced one wave length.

P. 15: "A 800 Watt Final Amplifier of Modern Design;" A. E. Clark, W2PDH.

P. 18: "T.v.i. Proofing the Command Transmitter;" S. J. Lanzalotti, W2DVX.

P. 20: "The Omnibox;" C. R. Nelin.—Combination tone generator, amplifier, power supply and speaker.

P. 24: "Putting Surplus Meters to Work;" R. L. Parmenter, W1JXF.—How to calibrate unknown meters.

P. 26: "An Economical 25 Watt Transmitter for the Beginner or the Advanced Amateur;" O. L. Woolley, W0SGG.—6V6 crystal oscillator, 6L6 final, AB1 6V6 modulators.

P. 28: "Structural Stresses in Antenna Supports;" L. H. Hippe, W6APQ.—Simple calculations to ensure your tower doesn't blow over.

P. 36: "Inside Shack and Workshop."—(i) Filing your CQs. (ii) Coil shield from old metal tubes. (iii) Ganging surplus tuning condensers. (iv) Six meter bandscanning converter.

"SHORT WAVE NEWS," MARCH, 1950

P. 62: "Observing Sunspots;" P. B. Barrett.—Simple projection telescope for those interested in correlating sunspots with conditions.

P. 63: "Seventy Centimetres," Part II.; Major Cycle.—Construction of ECC91 (or 0J6) modulated oscillator for 420 Mc. Circuit is usual plate-cathode v.h.f. oscillator with 6J5 as a Heising modulator.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

Secretary.—Maurie Butler (VK2AAN), Box 1734 O.P.O., Sydney.

Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor.—A. O. Pearce, VK2AHB. 131A Balmain Rd., Leichhardt, N.S.W.

Zone Correspondents.—Nth. Coast & Tablelands: J. M. Retallick, VK2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

Secretary.—C. Dyer (VK3DY), 19 Collington Ave., Brighton (XA 6326).

Administrative Secretary.—Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne, C.1.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rorke, VK3AKR, Killigrew, Westmere; North Eastern: H. G. Wohlers, 107 Templeton St., Wangaratta; Far North Western: M. Folie, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Tinambra; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST, 50.4 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW by arrangement only on the 7 and 14 Mc. bands.

VK6WI.—Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.

Meeting Night.—Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.

Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

Secretary.—G. M. Bowen, VK5XU, Box 1284K, G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.

Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

Secretary.—W. E. Coxon, VK6AG, 7 Howard St., Perth.

Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.

Meeting Night.—Third Tuesday of each month.

Divisional Sub-Editor.—Alec A. Smith, VK6AS, 75 Weston St., Carlisle, Western Australia.

TASMANIA

Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.

Divisional Sub-Editor.—S. Excell (VK7SJ), 77 Molle Street, Hobart, Tasmania.

Northern Zone Correspondent.—R. H. Kilby, VK7BK, 5 Galvin Street, Launceston.

FEDERAL

DX C.C. LISTING

PHONE

VK3JD (1)	37	148
VK3BZ (3)	37	137
VK3EE (10)		137
VK6KW (4)	37	136
VK6RU (2)	37	135
VK6DD (5)		126
VK3LN (11)		125
VK4KS (9)		121
VK4JP (8)		114
VK4HR (12)	35	107
VK3AWW (14)		105
VK2ADT (18)		102

C.W.

VK3BZ (6)	40	177
VK2EO (2)	40	152
VK3CN (1)	40	151
VK3FH (15)	39	143
VK4EL (9)	40	140
VK3KB (10)	39	138
VK3VW (4)	40	135
VK2QL (5)	40	133
VK4HR (8)	40	126
VK4RF (11)	35	125
VK6RU (18)		128
VK3EK (3)	39	122

OPEN

VK3BZ (4)	40	200
VK6RU (8)	39	169
VK3KX (1)	40	167
VK4HR (7)	40	161
VK2DI (2)	40	160
VK3HG (3)	40	160
VK6KW (13)	39	157
VK3JE (12)	39	154
VK4EL (10)	40	140
VK3MO (5)	39	139
VK4KS (24)	86	139
VK3OP (19)	89	137
VK6DD (22)		136
VK4DO (15)	40	135
VK3LN (29)		128

New Members:

VK3AWW (86)	105
VK4TY (85)	102

SLOW MORSE TRANSMISSIONS

The following transmissions from the official W.I.A. stations are given on 3,504 Kc. on the days and times shown below:—

Sunday—VK3WI, 2030 to 2100 hours E.A.S.T.

Monday—VK2WI, 2000 to 2030 hours E.A.S.T.

Tuesday—VK4WI, 1930 to 2000 hours E.A.S.T.

Wednesday—VK6WI, not operating at present.

Thursday—VK5WI, 1930 to 2000 hours E.A.S.T.

Friday—VK7WI, 2030 to 2100 hours E.A.S.T.

ADDITIONS, ALTERATIONS, AND DELETIONS TO AMATEUR CALL SIGNS—JUNE, 1950

Additions—

VK2SF—V. Fitton, 34 Fawcett Street, Mayfield, Newcastle.
2AJO—S. E. Brown, Lawley House, Canberra.
2AQA—R. W. Amos, 56 Coral Road, Cronulla.
2ATP—T. F. Pyke, 24 Gouldsbury St., Mosman.
2AUJ—R. W. Johnston, Macquarie Rd., Ingleburn.

VK3FB—E. L. Willoughby, "Quebec," Noojee.
3UC—D. A. Norman, 10 Brighton Ave., Preston.
3AER—K. Roper, 53 Kingsville St., W. Footscray.
3AEW—O. G. G. Washfold, 59 Radnor St., Camberwell.
3AIC—P. R. Croethwaite, 10 Wimmera Ave., Geelong.
3AOL—B. E. Lloyd, 16 Victoria Pde., Geelong.
3AUB—R. R. Babb, 32 Waterdale Rd., Ivanhoe.

VK4JC—J. M. Cohoe, 64 Jellicoe St., Toowoomba.

VK5DZ—J. A. Casey, 26 Moore St., Enfield.

VK6WJ—A. G. Wilkey, Government Aerodrome, Wyndham.
6HM—C. W. R. Holman, 9 Elizabeth St., Kalgoorlie.

VK7RX—K. A. Johnston, 34 Tower Rd., New Town.

Alterations—

VK2AL—27 Connelly St., Penshurst.
2DB—7 Harold St., Guildford.
2DI—135 Morgan St., Beverly Hills.
2FO—16 Station St., North Strathfield.
2HZ—Pitt St., Springwood.
2IY—53 Glencoe St., Sutherland.
2MK—55 Main Rd., Thirroul.
2OX—53 Burwood Rd., Belfield.
2SX—Lang St., Croydon.
2UM—97 Clarendon Rd., Stanmore.
2VC—Edward Pde., Sylvania.
2ABL—39 Ethel St., Hornsby.
2ADL—25 Ostend St., Lidcombe.
2ADY—117 Victoria Rd., Gladesville.
2AFD—88 Dudley St., Coogee.
2AFP—Cr. Massenger and Marvel Sts., Byron Bay.
2AGE—I. N. MacLachlan, 75 Weston St., Harris Park.
2AKW—251 Rowe St., Eastwood.
2ALA—Fire Station, Crow's Nest, Sydney.
2ALN—Rev. L. E. Winton, The Rectory, Wyalong.
2AMK—Montview Parade, Hornsby Heights, Hornsby.
2AMW—2 Oxlade St., Warrawong.
2ARQ—21 Hewlett St., Granville.
2ARU—F. N. Sizemore, 22 Tweedmouth Ave., Rosebery.
2ARY—Hyde St., Bellingen.
2AVT—Miller Rd., Guildford.
2AXA—E. Carruthers, should read VK2AXB in call sign book.

VK3EG—2 Frogmore Rd., Murrumbeena.
3LX—Wood St., Nunawading.
3ON—27 Mortimore St., Moorabbin.
3QK—415 St. Kilda St., Elwood.
3RB—"Sunderland House," 230 Toorak Rd., Sth. Yarra.
3RO—2 Langsford St., Williamstown.
3ABI—316 Armstrong St., North Ballarat.
3ADC—Flinders Naval Base.
3AGL—1317 Dana St., Ballarat.
3AKC—91 Victoria St., Warragul.
3AON—1 Rosshire Rd., Newport.
3AWC—c/o. P.O. Korong Vale.
3AXB—88 Eskdale Rd., Caulfield.

VK4CW—"Amshac," Sydney St., Bundaberg.
4DJ—Sheaffe St., Cloncurry.
4GL—Lockyer St., Camp Hill, Brisbane.
4OW—Mount Bassett, North Mackay.

VK5CP—19 Penfield Ave., Salisbury.
5DK—3 Victoria St., Henley Beach.
5FG—466 Cross Rds., Glandore.
5RJ—23 Railway Ter., Kadina.
5VC—12 Dunn St., Semaphore.

W.I.A. ACTIVITIES CALENDAR

August 12-13: Remembrance Day Contest.
Sept. 22-24: VK-ZL DX Contest (c.w.).
Sept. 29-Oct. 1: VK-ZL DX Contest (phone).
October 6-8: VK-ZL DX Contest (c.w.).
October 13-15: VK-ZL DX Contest (phone).

VK6AU—135 Cambridge St., West Leederville.
6DS—Whaling Com., Camp., Babbage Island.
6FD—25 Wisbey St., South Bunbury.

VK7CA—Greens Beach, West Tamar.
7EJ—Opossum Bay.
7SK—"Hilton," Powell Rd., Blackman's Bay.

Deletions—

VK2QY—Cancelled.
2AKH—Cancelled.

VK3ID—Cancelled.
3JC—Cancelled, now operating under VK2AQA.
3AGJ—Cancelled.
3AGW—Cancelled, now operating under VK6WJ.

VK4AU—Cancelled.
4BM—Cancelled.
4WA—Cancelled.

VK5GO—Cancelled, now operating under VK3FB.
5WA—Cancelled.

VK6AO—Cancelled.
6RL—Cancelled.

VK7XA—Cancelled.

VK1RA—Cancelled.

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Here's a new one for the certificate hunters. Any station that has proof of contact with the 58 Californian Counties, may submit their verifications to the Oakland Radio Club Inc., or to W6OT. Pre- and post-war contacts count. Who is going to be the first VK to claim the W.A.C.C.? The list of counties is as follows: Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra-Costa, Del Norte, Eldorado, Fresno, Olenn, Humboldt, Imperial, Inyo, Kern, Kings, Lake, Lassen, Los Angeles, Madera, Marin, Mariposa, Mendocino, Merced, Modoc, Mono, Monterey, Napa, Nevada, Orange, Placer, Plumas, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yolo, Yuba, and Sonoma. The above information comes from W6REB.

Cliff (Robert Clifton) formerly operator at KX6BA is now back stateside and active on 14 Mc. under W6IAV and is looking forward to renewing old acquaintances. He expects to move on to Alaska in September or October. Cliff has about 20 KX6BA cards already made out for VK contacts, but is holding them until he gets a new call book so that he may send them direct. Cliff, in discussing price levels, mentions that in U.S.A. petrol is now down to 22 cents a gallon, new cars are down 200 dollars to 600 dollars on the price two years back. Food and clothing are also on the downgrade to a lesser extent. Rents remain at an almost prohibitive level, from 95 dollars to 67 dollars for a four roomed unfurnished place. However with 10 to 15 million new homes constructed in the States since the war, rentals are expected to drop before long.

Louis White, W6WLY, often mentioned in these notes, advises he is now beaming on Sydney most mornings around 1500 G.M.T. on 50 Mc.

Ross Adey, ex VK5 and now G3GPC, is anxious for VK contacts on 14 Mc. No information as to phone or c.w.

Eric Lake, VK4EL, who did a term as Inward QSL Manager in Queensland, has now been moved to Clevedon, some 25 miles south of Townsville. Eric, who moved there some three months ago, helps keep things going at the regional 4QN. He is on the air from the new QTH.

Welcome to Jack Files, VK4JF in his new appointment as Inward QSL Manager. Report has it Jack that you are just the man for the job. Hope you will enjoy the work. Divisional QSL Managers please note the change and the new QTH for the VK4 Bureau: Jack Files, VK4JF, Vanda Street, Buranda, South Brisbane.

OE3CC, who sends a second lot of cards via his friend Theodore Baitsch, of Holding Centre, Schyville, N.S.W., would like a card from VK5AE, VK7OM, VK7JB and VK9GW. He requests they should either be sent via the R.S.G.B. or via his friend Theodore, who is a new migrant. It is understood that the OE stations are working with the knowledge and tacit but silent approval of the Austrian authorities, but with the approval of only some of the occupation authorities.

This bureau would be grateful for information as to the disposal of cards for VK1AJT, VK1RB, VK1JW, and VK1YM.

PY2CK in a fifth and desperate attempt to wring a QSL out of VK1VU, includes a cutting reading: "Talking of QSLs, can anyone invent an electronic device to burn the ears off all those stations who say 'Sure will QSL' when they haven't the least intention of doing so? It's not the absence of the card that we deplore so much as the dishonest habit of saying that they will send one." PY2CK adds the following postscript: "I have the electronic bomb referred to above and if you don't send your QSL after two days I burn my bomb in your ears —take care Danger."

Felix, FK8AC, has been on the sick list for several weeks, after a surgical. Latest reports indicate that he is on the mend, but will not be on the air for the first few weeks in July.

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NEW SOUTH WALES

The monthly general meeting of the Division was held at Science House, Gloucester St., Sydney, at 7.45 p.m. on Friday, 23rd June, 1950. Visitors present included Superintendent Clifford, of the N.S.W. Police Department, and Charles Peddell, VK2KN. Superintendent Clifford, on behalf of the Commissioner of Police (Mr. Scott) expressed great pleasure in being able to award certificates in recognition of assistance given the Police Department during the disastrous floods at Kempsey in 1949. Spt. Clifford commending Mr. Peddell's outstanding work, said that he hoped that the co-operation shown during the 1949 floods would be repeated in any future emergency.

As we know now, such was the case during the month of June, and Supt. Clifford forecast this happening at the meeting and thanked the Institute for its work in this field. Mervyn Harrison, also a recipient, was unable to attend because of transport difficulties in his district, where flooding had occurred. In his reply, Mr. Peddell thanked Supt. Clifford and the N.S.W. Police Dept. for their co-operation and said that the honor shown him and Mr. Harrison applied equally as well to other members of the fraternity who helped make the flood network a success.

Joe Reed, VK2JR, then proceeded to dispense words of wisdom on "Model Radiator Investigations of Low Angle Radiation" and illustrated by numerous home-grown slides. With him he had a beautifully constructed folded dipole with reflector used as a detector unit in these investigations and a cavity resonator controlled transmitter on 140 Mc. using an 808. Joe debunked many a pet antenna including the "rotary birdperch" and no doubt will be very busy sending out data slides (photostatic copies) used in the course of his lecture.

Appreciation was expressed over the obvious amount of hard work which had gone into the preparation of a subject of such genuine interest.

Dr. Allison, ex VK1RA, advised that three colour films on Antarctica will be available for showing at an early date. The meeting closed at 10.50 p.m.

WESTERN SUBURBS

There seems to be an awakening of interest in 144 Mc. lately and Joyce 2AMJ is a recent convert. Joyce has 38 countries on phone, works Wa and VKs consistently and hits them with a three element beam. 2DW was forced to move recently and now uses a 99 ft. antenna fed a quarter wave from the end with 75 ohm co-ax. Mains volts at Herne Bay jump around like a cat on hot bricks, says Joe. 2ANC works VKs in between building a new home. Garage (shack?) is first to go up and Frank flies model aeroplanes in his spare time.

2QR is knocking 'em over in great style from West Pennant Hills, the long way around on 20. 2AVT has given away 144 and works 20Q's harmonic on 10 metres at Chester Hill. 2AAQ has good phone using screen modulation. Habitates 40 metres. 2KS does some good work in the early a.m. on 20. Currently catching Africans and Europeans. 2OQ has now obtained 100 countries. That beam must be working extremely well as Harry runs only 30 watts to an 807 on 20. 2BX is one who was marooned in recent floods at Milperra near Bankstown in June. Had to row home in u boat. Uses a vee beam. 2MM, after suffering years of pointed remarks about his meat-safe microphone, is working like one possessed to put a handsome cover over the works. 2ALO has just completed his 144 Mc. rig and is using 7193s. 2ARF is seriously considering using a QB6/300 tube in the final on 144 Mc.

The Experimental Radio Society of N.S.W. held a field day in co-operation with the Gladesville Radio Club on 9th July—144 Mc. was used. The election of officers took place on Thursday, 20th July.

HUNTER BRANCH

As these notes are being written the greatest episode in Australian Amateur Radio has just concluded. Our thanks must go to the North Coast Amateurs who put up such a magnificent showing during the disastrous floods in late June. All members of the Hunter Branch offer their congratulations. We cannot let the opportunity pass without special mention of the wonderful operating of both Pete 2PA and Gerry 2ZS—if ever there were two A1 ops, then these boys are them. As the whole story will appear in next issue, we will only deal with our local effort here.

Prior to the North Coast Net coming into operation, the Hunter Valley Net maintained regular skeds right throughout the critical periods of the Maitland floods. Fortunately communications in this area held up and the only official work done was the passing of river heights by 2VU at Singleton, 2ANU at Muswellbrook, 2TY Lochinvar, 2XQ Maitland and 2AKP East Maitland.

Communications from the area to the North Coast was done by 2ZC who had official permission from the R.I. for such a link. During the first couple of days when things were in a bad way up the Coast, a continuous watch was kept at 2ZC's shack. Jim passed much important traffic mainly Police and supply messages to and from the North. Jim did the first portion of the watch alone, but later from Saturday evening was assisted by 2AHA till morning, turns being taken on the watch during the night.

On Sunday, Branch President 2CS, assisted by 2KO, came on the watch, although Jim was supposed to be sleeping, he was still about and operating. Those who were able to assist wish to thank the local R.I. for his assistance, also the operators at Police Wireless. Communication between the duck base stations at Maitland and Taree, to Shortlands Camp was provided by 2AHA, 2AKP and 2ASJ. The Army was particularly pleased with the Amateur assistance when their links failed. Some press and aircraft messages were also received by the above stations. Special mention must also be given to Ron Stuart, 2ASJ, for his wonderful effort. Ron didn't miss a thing and his mother's short-hand copy was particiuarly useful. Operators working under better conditions couldn't have done a better job—nice work Mrs. Stuart and Ron. Vic 2AKP, as well as relaying from Maitland ducks to Newcastle, serviced some duck equipment in the Maitland area. The man with the "filtered ears" was undoubtedly Jack 2ADT of Cessnock, he copied signals that were too tough for most. 2OS and 2BZ provided a high frequency link for the local broadcast station from Maitland to Newcastle. Nev was marooned at Maitland as a result The above emergency doings constitute the major portion of the work around the Hunter for the month.

The poor winter conditions have halted much of the usual activity. The last meeting of the Hunter Branch was well attended, even though the nights are cold. The President 2CS introduced pre-war G2DUX who hopes to settle down in Sydney and get on the air very soon. 2CS and G2DUX met during the war in the Navy. Secretary 2LV has sot been very busy on the air during the month, only heard on 40 on a couple of occasions, but is still doing an f.b. job for the Branch.

2CW was able to get on 40 during the floods. 2ANA still building the QRO rig, believes in taking his time and making a job of it. 2UY retiring from the Treasurer's job so we hear—any nominations? Stan hopes to get that 1st class ticket ironed out soon. Would like to swap jobs with 2MC these days—enough said. Bill is still not on the air, glad to see you join up. 2NX only operates on the week-ends, he is home from Sydney—has all the disposal shops picked out around the big smoke. 2AGY was on deck at Police Wireless a lot during the floods, and didn't hesitate to call on the Amateurs when required. Fred operates 10 and 20 when able.

2PQ has the new receiver working very f.b. and does a bit on 20; doesn't like the band in the winter—still better than 10 in the winter Tom. 2FP not very active on 10, working only a few Ws. 2TE been on 40 with a very powerful signal quite unusual to hear Bert so low. 2CI heard on 40 and 80 only during the week-ends; away most of the week. 2XY has 2 metre gear going, but don't know what he has been working. 2ADS having fun on 10 with his QRP and beam—6 has been fairly quiet; 2BZ seems to be the main sticker. Sydney stations are poor with the exception of 2ARG. 2EG still hopes to get going soon. After such a good start. Bill 2XT seems to have QRT. 2AAI still re-building, only on for local contacts; has converter going OK now. 2AGD not on 10 much with conditions so bad, down there; why not use 40, a lot of the Northern boys would like a yarn with you. 2CN doing a lot of hunting for motors for the beam, etc. Rx might have been double spotting, but we did hear 2DG on phone on 80—got a glass arm Keith, or are you resting it for the next Contest? 2AKP's only activities were during the floods and emergency net practices. 2XQ had the Hunter Net right on tap during the whole of the emergency. All the water in John's back yard has altered his angle of radiation so much that even his quality is improved!!

AMATEURS AGAIN HELP IN AN EMERGENCY

The full story of the activity of N.S.W. Radio Amateurs in the disastrous floods that swept Northern N.S.W. In late June is not yet complete. It is being prepared by Peter Alexander, VK2PA, with the assistance of the many Amateurs that participated.

It will be a story of the services rendered the community in the greatest Amateur emergency working in history. Nearly 20 stations were operating from the North Coast flooded areas—the only means of communication in most cases from these districts. On the Hunter River the emergency net was also in full operation.

Floods have also interferred with the production of country zone notes. North Coast Zone Officer VK2XO was flooded out and Crieff is still clearing up—we hope that the damage was not too great. In the West, Z.O. VK2WH is isolated by flood waters and John Marr VK2AMV contributed the Western Zone notes, this time helped by some phone information from Hugh VK2WH.

Busiest man in Maitland during the crisis was 2ADX, the City Engineer; he was on the job practically continuously, how they saved the river banks from breaking was a miracle. 2TY was also very active, mainly obtaining river heights from Singleton way—2VU supplying the information. 2JZ is also an expert on reading river heights—some of the gang were reading R.M.S. heights instead of peak so we hear—2VU will supply the details. One of these years we will get some news of 2AMM and 2PT—so c.u.l. A bunch of associates of the Hunter Branch are giving the code machine a good work out. The associate from Stockton expecting a call sign, congrats on passing, hope to remember your call sign; what a memory I have for names.

COALFIELDS AND LAKES

Main interest in the past month has been the work done by the various Amateur Flood Emergency Networks. This work performed by Amateurs from Newcastle to the Queensland border has been invaluable and in many instances provided the only means of communication for many days. Listeners on 40 and 80 would have heard the various stations operating. Here in the Coalfields, we escaped the flood damage, but several stations in this area were listening continuously and ready to come on if required. Others around Maitland and towns on the Hunter Valley did good work in supplying rainfall and river heights, indicating the water to be expected at Maitland where damage was the greatest.

Stations active were 2ANU Muswellbrook, 2VU and 2JZ Singleton, 2TY Lochinvar, 2XQ, 2AKP and 2DG Maitland District, 2ADT and 2YL Cessnock and 2KZ Kurrihurri with 2ZC, 2AHA at Newcastle. The last two stations also did good work in conjunction with the North Coast net. 2PA's effort, in my opinion, was a very good one. 2ANU had a consistent signal for his few watts. 2VU's 80 signal is in keeping with his signals on 6 and 40, Geoff is building a v.f.o. too. 2JZ seems to stick to 10. 2TY works all bands. No news of 2KF for a while, guess he is busy in his own home. 2YQ can be found on 10 phone, likewise 2KZ most week-ends still knocking the Yanks over. Max also shows up on 80 for the emergency net working.

2PZ hasn't been heard yet, but Chris must be getting near the end of the work now. 2ADT has had a mixed month—'flu claimed him for a week, then Jack decides he should build himself a decent sort of frequency meter, the last part of the month was spent keeping watch on the emergency frequencies. Six has had a spell for a while. 2YL not very active, doing a little at 14 Mc. c.w., kept an ear on the flood net activities, etc. Hopes to spend a little time on 7 Mc. from now on and would appreciate a call from anyone in the Lakes area re the doings there. Give me a call on c.w. or phone. 2RU may be found on 6 Metres, but have not heard 2AMU for some time, maybe the "stars" hold Len's interest. 2KR, of course, is always to be found on 40! Any Lakes stations who have any news and who don't contact me, please drop a line to 27 Comfort Ave., Cessnock.

WESTERN ZONE

The main item this month seems to be floods. The Lachlan Valley copped it again early in June, not nearly as bad as the April record one, although it got to within 12 inches of it. At present your Zone Officer is again flood bound for the third time this year. The ducks were again in action with the local Amateurs helping with communication. On behalf of the Western Amateurs, T would like to congratulate the North Coast boys on their fine effort. Things like this go a long way towards helping Amateur Radio and the community.

2XP did the round trip through Forbes. No time for visiting Amateurs there, but made up for it at Yass where he called on 2DO and 2ALS, also 2APP at Young. 2XO was a welcome visitor to Dubbo on his way through. Pity you missed Forbes Crieff. 2AMR off the air, believe he sold his Rx to 2AOS, has new Rx on the way. 2AOS is a new Ham at Dubbo and I believe he is active on 20. 2ACT now has a.c. on. Heard on 7 Mc., nice phone, using 813 and vee beam. 2II still very busy with new house and rarely on the band these days. 2VZ still tuning up his tilting beam. Many thanks Bob for the Dubbo news.

2AGK heard on the band using TA12D Tx and Mod., Rx Marconi, antenna long wire. Active on 20, 40 and 80. 2NS must still be having trouble with wind. We thought only babies were troubled with things like that. Haven't heard him on 40 for a long time. Have noticed some DX stations working him on 20. Believe there is a new one in Trundle, 2XZ. How about a bit of news from that quarter OM. 2ACU has a most peculiar complaint, "Peanuts in his Epigloitis." I am lucky Rod that part isn't in my Tx to give trouble. Rod seems to be very happy with his new 680.

2APP paid the Forbes gang a visit recently. All very pleased to see you. 2BT and 2AMV are both very busy re-building after a visit to the studios at Dubbo. While over there, they made the mistake of calling in to see Tom and Max. 2JV still too short of room at the pub to put up a Ham Station. 2QA must have his head in that three tons of radar gear he got at Dubbo. Haven't heard you on the band for some time. Have you tried getting reflections from the moon yet Jack? 2JC heard doing weather reports for the North Coast gang during the floods. No news from 2DK. 2ALX and 2JW must be on two metres as we can't hear them at Forbes.

Hear 2KI occasionally on 7 Mc. Not often enough Lin. No news of 2SN from Parkes. Often hear 5DK (ex-2AAF) putting in a very nice phone. 2WH has given the Ham Bands away. Seems to prefer talking to the ducks. You did a very good job Hugo. There whenever wanted and able to hear sigs that didn't even beat with my b.f.o. on the AMR300. Hope you don't have any more this year. Most popular song of the month—"River Keep Away from my Door." Activity on the Blue Mountains is practically nil, none of the Amateurs can be enticed away from the fire. 2HZ still not on, but has been wandering across to 2KX's to work a little. It is hoped to have more news next month if the snow passes.

SOUTH COAST AND SOUTHERN

We offer our apologies for the lack of news this month. The conditions on 40, which to the Zone Officer is the main source of gossip, have been bad. As the daylight hours are taken up with the job of keeping the wolf from the door and you can't hear anything at night, so hence the lack of news. 2TC is active on 80 and is really laying down a very solid signal; the old rig is working OK Jim, judging from the quality of the phone. 2APP also doing a fair bit on various bands, mainly interested in antennae—a vee beam is the latest. 2PN is handicapped by the lack of time. New rotary beam on 6 is higher and more effective. Good signals are received from 2GU and the 6 metre path between Canberra and Tumut is fairly reliable.

2JQ caused quite a lot of fun on 40 one morning when he was heard exercising his polar bears. One station in the net doubted the fact of polar bears being at 2JQ, so Monty brought the bears to the mike—I wonder just what your audience numbered that morning Monty? 2TA travelled across to Canberra to spend some time with 2GU. Guess something cooking on the v.h.f's. If Alan considered the 100 mile trip so necessary. 2AEL putting out an f.b. signal, but unless Les shoots along some details of the doings out West Wyalong I guess we will have to resort to some eaves-dropping.

2ALS has compass receiver going nicely and Cecil is building a converter for six and ten. Only station heard from Canberra this month was 2PI. Les was only heard for a few minutes and no other news of A.C.T. The little time I spent listening during the month was taken up following the operation of the North Coast Emergency Net. The efforts of the gang was something that every Ham should feel mighty proud about. The interviewing of 2HZ on the Macquarie Newsreel I am sure showed the listening public that Ham Radio is necessary and in an emergency has proved a blessing.

My introduction to the A.R.R.L's. Voice of America happened in rather a strange way. Having gotten myself one of these compass receivers, I was tuning across the b.c. band after the locals had closed down, when suddenly the well known American accent was heard introducing W2SKE on the Amateur session. As requested, 2PN sent along the following news. 2GU has a new beam up too and signals from 2PX over the 4000 ft. hills are now at a decent level at all times. 2TA going strong and the three stations have regular skeds. 2GU is going on a month's holiday soon so the skeds will be missed for a while. 2HW too busy to get on. A new Ham will soon be on in Tumut, Geoff Page; we wish him luck.

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VICTORIA

The monthly meeting of the Division was held on 5th July at the Melbourne Technical College. There were about 150 members and visitors present. The President, Bert Semmens (3GS), being in the chair. Owing to the QSL Manager being a little late in arriving (no fault of his), the meeting got away to a start at 8.15 p.m. Visitors welcomed were VK8AFQ, 3ATN, 1RD, 6GA, 3ADV (ex-VE7ADV), and John Adcock. To all these visitors the President gave them a very hearty welcome and expressed the hope that they would have an enjoyable evening among the boys.

At this stage Standing Orders were suspended and the President invited Mr. Trehearn VK3AFQ to tell the meeting something of his experiences whilst he was in England. In relation to t.v.i., Mr. Trehearn opened his remarks by describing the relations between the Amateur and the British Post Office, the frequencies used, power, antenna systems. After outlining these subjects, he came to the main topic, t.v.i. Many are the trials and tribulations besetting the Ham, but full co-operation is given to the Amateur by the British Post Office Inspectors and the relations between the two bodies are most cordial.

Unfortunately some "lookers" have rather old receivers and very little if anything can be done to overcome the t.v.i. If any interference is experienced, of course the Ham is to blame(?). In conclusion the lecturer said that the proposed Australian television service, if placed on the v.h.f. bands, the problem of t.v.i. would not be quite so bad. So boys, see to that final stage, and get the bugs out and also, if necessary, neutralise the stage. Many questions were asked and were fully answered by Mr. Trehearn. The President expressed his appreciation on behalf of the meeting, and a vote of thanks was carried with acclamation.

After the usual "smoke-o" the Secretary read the previous meeting minutes. No business arising therefrom, the Treasurer gave his report and reported the finances as satisfactory. He stressed the point on outstanding dues. There are still a few of the boys unfinancial. T.A.C. reported on their activities and stated that 3WI nearly completed under the direction of the technical editor Jack Duncan. Disposals still active and a screed to be issued soon. V.h.f. Group reported that activity on these frequencies is increasing. (What about it some of you 40 metre boys for that cross town natter.) The practical nights are a great success. Class Manager reported the new class starts on 13th July and everything going f.b. Communications: The usual skeds and hook-ups going along all right, but very little news comes through. Our script writer has resigned owing to pressure of business.

A few minutes were left so 3ADV (ex-VE7ADV) was invited to tell us something of the Ham activities in Canada. The set up in that country is very much like our own (also no t.v. as yet). Jim gave a very nice concise talk and was thanked by the President and members. The meeting closed at 2230 hours.

New members admitted to the Division at the July meeting were 3AAL, 3ALK, 3AFF, 3AE, 3ANP, and Associates J. Carrucan, R. Dempster, and H. S. Wragge. To these members we give you a hearty welcome. 3ALQ has gone two metre happy. 3AJI wondering why the 80 metre rig won't work. 3RN still worrying about bits and pieces and QRO. 3BZ on the sick list. Where was 3JO and 3QJ; no see Herb and Bob. 3JE playing around with super modulation and how. An old timer, 3ZP, has appeared on 20 metres.

THE MOORABBIN AND DISTRICT RADIO CLUB

The usual monthly meeting was held in the club rooms on Friday, 16th June. Although the weather was cold, the usual number of members attended and the President, Jim Keenes, occupied the chair. The Treasurer's report disclosed a very satisfactory state of the club's finances. The President reported on the erection of the mast at the building and personally thanked the helpers and donors of various bits and pieces to help enable the club's transmitter (3APC) to get on the air.

A new service to members is the collection and distribution of members' QSL cards. This service will be available as from the next meeting. It was resolved to try and hold the "project night" on every second Friday.

As a means of bringing this club under the notice of radio enthusiasts in other countries and also VK land, a scheme was outlined by 3FO and fully discussed. Morrie 3BZ and Bill 3JE were appointed to get the idea under way. The agenda item was a talk by Fred House, 3ARK, on the radio link between Melbourne and Bogong. Unfortunately the club could not procure a film strip projector, and Fred was a little handicapped in illustrating his lecture. However, the talk was listened to with rapt attention by all. In thanking the lecturer for his f.b. talk, the President said that it was very good to have one of the club's members imparting knowledge to others and he hoped that other members would follow the example.

The next meeting will be the third Friday in August when a demonstration will be given by "Pyrox" on their wire and tape recorders. The club has now a total membership of 48 members, 23 being Hams, and is still ready to welcome many more.

EASTERN ZONE

This report should have been compiled by 3SS, but he says that the Eastern Zone gathering at Omeo on King's Birthday week-end wasn't a convention, and what am I paid for, anyhow? The week-end of 10th June dawned bright and clear and several vehicles carrying a large number of the Hams of the Eastern Zone, accompanied by XYLs and junior ops., wended their way to Omeo, which is ruled by one Bill Williams, 8WE. At least Bill runs the local paper, so I guess he is the boss. The highlight of the trip up was at the hostel at Tambo Crossing where the lolly water addict, 3SS, actually invited me into the bar and purchased me a beer. (It's the truth, Mr. Sewell!)

We arrived at Omeo about 4 p.m. and while cruising down a hill we came upon a house with a nicely painted pole in front and portions of a beam antenna lying on the verandah, we deducted that 3US/3VL resided therein. On arrival at 3WE's residence, the Old Man appeared and made us welcome. Later several of us called on Rex and Gwen who were also pleased to see us, at least that's what they said! Later on the Sale boys and girls arrived and were made much of.

Sunday morning's weather was typical, a nice 24 degrees of frost, but the sun soon warmed us up. Before lunch, 3TH, 3VL, myself and XYL travelled several miles up the Omeo Valley to a place where cream was available. The rest of the gang stayed with 3WE for the broadcast.

We all had dinner at the "Golden Age" and the cook made a beautiful job of cooking that turkey. There were nineteen of us all told and fifteen of us went for turkey, the other four preferring witchetty grubs or something. After lunch, the younger members of the party expressed the desire to see snow at close quarters, so we piled into our various jalopies and headed for Mt. Hotham. The hills are very steep and the road in places was very greasy, but the convoy pressed on to within six miles of Hotham. The children and adults, having pelted each other with snow, we drove back a few miles and lighted a large fire. The ladies of the party, assisted by "Jaffle Iron" Scott, leapt into action and unpacked large quantities of eatables, which were dealt with in short order. As dusk approached we proceeded back to Omeo.

In the evening all hands gathered at 3WE's domain, and the usual hook-up took place, which, considering that about the only active zone Hams not present were 3PR and 3AEP, was no mean feat. 3YJ also called up and was welcomed to the fold. The hook-up being completed, we adjourned to the lounge and spread ourselves round the fire. The meeting came to order when 3SS, in his usual manner, complimented our hosts and hostesses on their good work and thanked them for having us. Mr. and Mrs. 3WE and 8US/8VL suitably responded (how am I doing?) and we got down to discussing the coming Convention. It was unanimously decided to hold the show in Sale and 3VG, 8ABF and 3AFG were instructed to boost the entire Sale gang into action and make the necessary enquiries and arrangements. Main business being concluded, the usual Ham conversations went on, ranging from aerial radiation patterns to the old standby, phone versus c.w. A large and sumptuous supper brought the evening to a close.

On Monday morning we drove out to McMillan's lookout which is a high spot about seven miles from Omeo, on the way to Benambra. After lunch had been taken, the cars wended their way back home. It was a swell week-end and we visitors "dips our lids" to our hosts and hostesses. Thanks a lot chaps. Visitors at Omeo were: 3SS and junior op. David; 3VG, XYL and two juniors; 8ABF, 3AFG, 8TH, 3QZ XYL and junior, 3AHK and XYL.

3ANC has a new car—he's rich. 8QZ celebrated his 20th wedding anniversary—congrats to you both. David Scott is learning all the theory, complete with algebra; he dazzles the old man with science now. A sub-branch is to be formed at Sale. As we are all broke through buying disposals gear, there will be no members' fees, so pull your hand back Charlie Quinn. 3GO has returned from his honeymoon. On Sunday, 2nd June, conditions on 80 were queer. Usual S9 sigs were barely readable and by 9.45 p.m. the band practically closed down. The zone intends to hold a portable field day later in the year.

A complaint.—There are some very solid signals on 80—3AKR is outstanding, but unfortunately some of these signals park right alongside 3650 Kc. on a Sunday night and one or two are inclined to splash over a bit. Could we have a reasonably clear channel for an hour or so chaps?

This is all for now and remember chaps, if you don't get a mention in the notes, it's because I don't know what you have been doing (in the radio line) through the month. Cheerio.

CENTRAL WESTERN ZONE

By the time these notes appear in print it will be getting near to Convention time and if members present will cast their minds back to the Maryborough show, they will remember 3TA's offer of prizes to be awarded at the next annual convention for progress in the v.h.f. field, and also for work on the 3.5 and 7 Mc. bands, so don't hide your lights under a bushell, but let them shine before 3TA and his committee, these prizes of course were for zone members only.

As your scribe has been exceedingly busy over the past three weeks and nobody ever sends him any news, these notes are going to be very scanty, however for members' information the zone frequency meter is still in operation and available for frequency checks or on loan to any member requiring it. By the way, the Bendix, besides being good for r.f. checks, is also a handy audio oscillator in its lowest range; the gen is quite simple, you beat the v.f.o. against the crystal check and there you have it.

Our active friend 3ARL ran into a spot of b.c.i. after a week or two of operation on 3.5 Mc., but on checking the b.c. set found it was very hot and full of oscillation. After a trip to the local serviceman all was well, so apparently it is not always the Ham to blame. 3HL has now invested in a 15/- crystal insert and improved his quality no end. Allan is also very busy on a 14 Mc. p.a., and will soon be tickling the vee beams once more. The 348 has passed all tests and is now perking away on all bands. 3AKW is very busy in Stawell at present doing some repairs. His 144 Mc. converter is still on the way. 3AKP is quiet at present, and studying heat radiation from the family fireside. 3DP is another undergoing a winter resting stage; last heard of, Jim had the 50 Kc. t.f. already to wire and it should not be far off now.

Our ex-member 3AJO is having trouble all ways at Ballarat. No place for the Tx and no time for operation. However, he is learning all about many strange items of gear in the S.E.C. rigs. The scribe was quite excited over the recent s.s.s.c. article featuring crystals in the filter, as its author says "it's the simplest to date," the only snag is the price of a pair of crystals £7/15/-, so it is still n.b.f.m. for yours truly. And speaking of the said unfortunate yours truly chaps, it will be necessary for the zone to elect a new Secretary-Treasurer at the next Convention as things are here at present, I will not be available for re-election.

These notes are like a 3WI broadcast—growls at first because of no news, but somehow they seem to fill out. Anyway—see you on the next zone hook-up, 13th August, 10 a.m. on 7150 Kc.

SOUTH WESTERN ZONE

8HG is still working the 20 DX successfully and has skeds most mornings and evenings with G8BUU. Neil's rhombic is certainly going well and is now contemplating a vee beam on top of that hill behind the house. The only snag is the 1,000 feet feed line which would have to be used. Neil is also very busy carting materials for the new house which is being constructed. 8JA still has the Sunday morning 80 metre skeds with Neil. Think I

will join in some day. 3RE (the only Hamilton chap I ever hear of) has also been after the DX. I'll swop half the Tx ability of my vee beams for whatever you are using to hear it Bill. 3EQ has his Type 3 alongside the fire and works occasionally on 80 metre; a fine sig too, only audio needs cleaning up a bit. 3YE has been around quite a lot on 80 this month and puts out just as consistent a sig as he does on 40. Still bemoaning the bent elements in that tetrode Vern? 3AGE is still pretty busy in his spare time setting up the new shack. When's the opening day. 3KX has a super new 20 metre beam and is working Europe at lunch times. Sure must be beaut Ron as I cant even hear it here. Location must have a lot to do with it I guess.

Nothing heard of 3QC, 3AMP, 3AGV, or 3ZU. 3ADN of Lismore has been quite active and puts through a whale of a signal here and most places else on 80 metres. Was talking to 3II the other night and was complaining about the cold. Leigh made it worse by telling me he was packing swimsuits and sports shirts and all his summer woollies in preparation for a trip to VK4. Wish I was going! 3AOD is also going North, to VK9, about the middle of July and has been suffering lately with stiff arms and sundry lumps from the innoculations. 3VA is still battling on and has renewed interests in 144 Mc. 3ZL and 3GM are very active on 2 and are making regular Melbourne contacts.

3AKR has at last heard things (no wise cracks, please) and what's more worked it on 144 Mc., having made contact with Ballarat. Also, up till time of writing these notes, has heard and identified 3YS (Melbourne), also one other station, presumably from the City, in contact with 3ASL.

A new comer to the Geelong gang is Peter Crosthwaite, 3AIC, who is now operating on the 144 Mc. band and was heard working 3BU, 3VF, and 3AKE on that band. Another new Ham is Brian Lloyd, 3AOL, and is now operating on 40 and hopes to be on 2 shortly.

3AJT has been working DX on 20 which includes DL, I, KR, CO, VS1, PK, PI, XZ, HB, G, W. He now has his rotary beams up on a tower and looks very nice. The 20 beam is a four element, while the 10 metre beam is a four element closed spaced. Has built up a new aerial coupling unit. 3IC still working plenty of VK6s, has built up a pre-amp for his modulator. 3VF has put up a vee beam on 20 metres, but complaining about the band being dead. 3ABK is still away. 3APG, 3CM, 3AGS not active for some time. 3BU still heard on the bands quite a bit, also 3WT. 3ABC still operates on 20, never hear him on 40 these days.

GEELONG AMATEUR RADIO CLUB (VK3ATL) HAS ITS SECOND BIRTHDAY

A committee meeting preceded the usual club meeting. The business of the club was discussed after which the syllabus items for the next 12 months were drawn up. They include visits to Ham shacks, lectures, exhibition of gear built by members, field days and nights. In connection with the field days a point system by which competitors may be judged was discussed. The next meeting was the annual general meeting. After the minutes of the previous annual meeting were accepted, new officers were elected and are as follows: A. Forster 3AJF, President; Ed Kosseck 3AKE, Snr. Vice-President; R. Wookey 3IC, Jnr. Vice-President; Peter Cartwright, Secretary; A. Bell 3ABE, Treasurer; F. Freeman 3ALO, Publicity Officer. The Committee consists of W. Brownbill 3BU, W. Barrett 3WT, Brian Lloyd 3AOL, and Bob Reece. Club member Peter Crosthwaite was congratulated by fellow members on attaining his Ham ticket, his call sign is 3AIC. The club has been operating on 144 Mc. band with a modulated oscillator.

FAR NORTH WESTERN ZONE

Things are improving every week in this zone. Our Sunday morning hook-ups at 9.15 usually consists of five stations which isn't a bad effort for this zone. 3TI is back with the gang after a long period of silence. 3FC and 3AFC, our Ouyen members, manage to make the grade on Sunday mornings, although Fred has been a bit busy with the new car and making a place to house same. One of the highlights of the past month was a visit from Ben, 3RK, who has managed to arouse quite a considerable interest in 2 metre activity. All the lads are now getting busy learning about the v.h.f. tchnique and it is hoped that there will be some stations on that band before very long. However we will let you know when you can expect to hear from this area.

3AUG busy building shack so when that is completed he will be able to settle down and complete all the gear he has plans for. Nothing but silence for 3MF. 3GZ on at week-ends only for short period and an occasional lunch time listen. Jim Power making alterations to his double conversion super. Jim hopes to have another shot at his ticket in the near future. Well that's all for this month. 3MF looks like being absent from the air for a while as he has just announced his engagement. Congratulations Harry!

QUEENSLAND

We open the notes this month with Council's expression of thanks and appreciation to 4RU and the Townsville gang for their good work in connection with the purchase of disposals gear. At the time of writing, 4TB and 4RO are on the sick list and Mr. J. Baker is acting as Assistant Secretary of the Division.

4JF, our QSL Officer, advises that the following should send stamps to the Bureau for QSL service: VK4s AJ, AR, AZ, BT, BA, BR, CT, CO, CJ, CO, FO, GC, OG, GX, HV, HT, HK, KA, KK, KC, LA, LT LF, LK, ME, MR, MM, MW, PX, PK, RP, TR, TT, BU, VK, VD, XG. There are cards for these Hams and required stamps to the Bureau will do the trick!

Budding Hams will be pleased to learn that this Division has made all arrangements for the holding of A.G.C.P. Classes. Theory on Monday nights and Morse practice on Thursday nights. The meeting place: room 4 Y.M.C.A. Building, Edward Street.

Anyone knowing the whereabouts of Mark Weston, pre-war 4XO, should contact the Secretary of this Division.

To all Hams who took part in the recent flood emergency network in VK2, VK4 extends its heartiest congratulations on an excellent job. 2PA carried out an enormous task with the greatest efficiency. Peter handled about 600 messages and remained on duty for a week and, we believe, with only four hours sleep in that period. It is most disappointing that great publicity was not given in the daily papers and we were amazed that a certain Government official in thanking all concerned for the work done during the flood omitted to mention the work done by the VK2 Hams.

Recently 4MF motored to Pialba for a week-end break. Frank reached Maryborough OK, but there was completely lost until a New Australian on a motor bike piloted 4MF out to the Pialba road. There was no W.I.A. hook-up that Sunday morning, although 4UX called frantically for the usual gang to come in. However Claude's cries were eventually answered by 4XG. Fancy Gus coming up on the 7 Mc. phone band! 4HR is another of the v.h.f. gang who has been heard recently with very good phone on the 7 Mc. band.

During the month I had the pleasure of a visit by two visiting VK2 Hams, namely 2UP and 2ALD. Hams in the Nambour and Lockyer Valley areas should keep a watch for 2UP as Clive expects to be working those districts during the next month or so.

Very little has been heard from the various zones this month and the only activity from Gympie area is 4HZ's oscillating buffers; 4XR and 4LX lighting bulbs at the end of feed lines of each other's beams. 4HD is very keen on 144 Mc. and hopes, soon, with the help of an elaborate beam, to put a signal into Brisbane.

From 4CG we learn that up on the Downs the cold and very wet weather in that fog bound zone has kept the boys in front of the fire, or in bed, if firewood is too expensive. Activity is at an all time low at all shacks. 4WY seems to have a warm place for his rig as he seems to spend a lot of time on 40. Have not heard 4CU so it must be cold at Clifton (we know it's wet—16 inches in 7 days).

V.h.f. enthusiasts seem to be having a lot of fun by the fire though. 4TY has the 144 Mc. bug and seems to have a nice rig out Milmerran way and spends a lot of time and petrol testing with 4KK, with whom he has exchanged words on that frequency. 4XN still sticks to 50 Mc. but believe there's just a slight 144 Mc. tingle in his blood at present. It still amazes us here, on the Darling Downs, that no Brisbane station has been worked from home QTH's over this 30 mile path. And to think we have the two top ranking stations in the State in this zone. An apple for the correct answer.

4DA and 4RF non est. 4EG heard on 7 Mc. 4AF putting out a nice signal on same band. Warwick gang still very quiet. New one, 4RH, doing nice work on 40 metres from country QTH. Only activity at 4CG of late is the installation of n.b.f.m. using a special design of modulator—not the usual reactance type (what about some dope on it Cliff?). Results have been encouraging and tests are proceeding as activity on the bands permit. A G and a W have been worked, so here's hoping. 4CG adds his congratulations to the VK2 Amateurs for the work done during the recent disastrous floods. Cliff says "it's one reason why EVERY Amateur should be trained in the Emergency Network, not only the ones with portable." (There you are Cliff, your stories-verbatum this month—hi!)

From 4CC we have the following on the Brisbane zone activities.—This takes the prize for the month. It appears that 4AH was on a very flimsy cat-walk at the top of his beam tower the other night. His XYL, not knowing where he was, decided to have a look over the band, or something like that, anyhow, she turned the beam motor on and around and around went the beam with poor old Doc 40 ft. above the ground ducking under the beam every time it came round. I believe he finished up hanging on to the reflector and going around with it until somebody heard what appeared to be an angel crying in the wilderness. We don't blame 4WJ for being proud of his beam. Jack is tickled pink now that he is using shielded twin feeder, he claims that the diathermy machine across the road can now go its hardest as far as he is concerned.

Those who work with 4JR have been waiting anxiously for the great day when he will be on the air. Jack has been building the rig for at least twelve months, nevertheless we know Jack's little boy has been having a tough spin, so that could account for the delay. Best of luck Jack! 4PR is over-joyed with the results he is getting from his 813—*judging* by the results he is getting we are of the opinion that "Peter Rabbit" has four 813s in push pull parallel, guess there must be something in compression after all Jim. Anyone wanting a check should call 4PR and Jim with the aid of his panadaptor will tell you how many thousand Kc. of the band you are using.

4LM seems to have plenty of friends in South America. What have you that we haven't Les? Guess the only way is to get the XYL on the salt shaker if we want results. Can't see much QRM from 4DM within the year or two, as Phil is going to build his own home. Wish we had his energy

—even if we did it's an even bet that the place would be condemned. Anyhow, I know that if anybody has any spare cases of nails for Phil, you will be his lifelong friend. It's nice to hear 4QJ on phone again, very nice quality too Glen. Let's hope you work the Ws by the dozen. We will be watching closely to see how that new type beam works.

Believe 4TT objects strongly when washing day comes around as a line full of washing on the antenna won't load up nearly as well as without it, or perhaps it's Mrs. 4TT who claims that the clothes get scorched with r.f. when Tom uses her washing line—haven't been able to clear up that point. Who was it that claims that because his masts are made of green timber, his antenna gets higher every day? 4NC said his tonsils are red raw as a result of his attempts to raise a KH6, suggest you put golden voiced Claire on the job—bet the KH6 comes in hook, line and sinker, Charlie.

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SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for June took the form of a film evening and lecture at which the members were the guests of the Public Libraries Board in their theatrette on North Terrace. Mr. Canning (of Philips Industries) was the guest lecturer and his subject was "Radio of Tomorrow—F.M. and Television." It was realised by all present that the lecture was intended for the laymen present and therefore it would not rise to any great theoretical heights, and we were not disappointed. However, the films shown were entertaining enough and everybody appeared to be satisfied. Just in passing I feel sure that the projectionist did not realise the number of professional projectionists who were among the audience, as he would have probably felt like jumping out of the window after the film broke the third time. Unless one has been a projectionist in a theatre, one can never realise how smug one can feel sitting in an audience as the film breaks! 5YQ at question time asked a suitable layman's question of the lecturer, a wit, "What was the price in England of a television listener's licence, or should I say a television looker's licence." This question was so laymanlike that it stumped the lecturer, but he had a shot at it and as there was nobody present who could contradict him, it was accepted as gospel. That was a dirty one Ted, although I was going to ask him what would be the fare in a bus from Paddington to Nelson's Monument, but I lost my courage at the last moment. Two of the most important members of the Council and one very unwilling victim of circumstances were the guests of the Libraries Board at supper after the films, but more of that sad event later.

Bill Pitchford (ex-5WP) has been discharged from hospital, and is now fit and well and has resumed work. There will be no need for the portable transmitter and receiver, etc., and nobody is more pleased than Bill. Several members are still ringing Doc Barbier (5MD) at various times in connection with secretarial business. Doc is no longer Secretary of the VK5 Division and all Divisional business is now being handled by "Shylock" Owen (5XU), the new Secretary. Doc is now the President, so what about giving him a well deserved rest. 5PH, who was this year elected to the VK5 Council has been reluctantly forced to resign as from this month, owing to feeling a little off colour, and also to the fact that his XYL is not feeling the best. Bad luck Perc, but hope things will brighten up soon, and then perhaps you will see your way clear to rejoin the ranks of the Council.

Probably everybody has noticed that 5DW has not been given the high sounding name of Custodian of the Frequency Meter this year. He is now known as the Equipment Officer, and I admit as to being the one who moved in Council to have the alteration made to the name. I always have looked cockeyed at such a "highfalutin" designation, because it reminds me of the story of a local City Council who advertised for a rat catcher, and not receiving any applications for the job, they re-advertised for a City Rodent Operative, and had no trouble in filling the position.

Country members are asked not to call VK5WI on Sunday mornings on that station's frequency, for obvious reasons. By all means call up Hal for any information concerning W.I.A. doings, but away from his frequency please, a lot of you fellows don't realise how long you call, and the QRM to everybody else is terrific. How about it gang?

Everyone of us will remember the thrill of our first DX contact, and every one of us will remember just how we felt (personally I felt as if I had a football deep down in my throat, and every time that I wanted to speak, the darn thing would keep lodging near my Adam's apple), but never have I been able to hazard a guess as to how I must have sounded. Well, this week I had the exhilarating experience of hearing Mal Mayer (5NM) work his first DX station (VE7OJ) and now I know just how I sounded some 20 odd years ago. All I can say is that if Amateur Radio can give such excitement and unfeigned happiness to a Ham and his XYL, then quite a few of those wives who look sideways at their husband's hobby should have been tuned in to that contact. Good luck to you Mal and Audrey.

I have always been a little dubious of the results that might be achieved from advertising in "Hamads" which can be found in the back page of this paper, but after my personal experience last month I can recommend them to anyone. In fact I had received my first reply even before I had received the "mag," so that's service for you. Regarding the numerous people who rang me up on the phone and offered me crystal detectors, cats whiskers, and sundry ancient radio apparatus, I can only say that I did not realise that so many of my public had my interest at heart.

Out of the night that covers me
Black as the pit from pole to pole.
I thank whatever Gods may be
For my unconquerable soul.
In the fell clutch of circumstance
I have not winced or cried aloud.
Under the bludgeonings of chance
My head is bloody; but unbowed.

The above lines from William Ernest Henley's "Invictus," illustrates very well the predicament that I find myself in this month. At a Council meeting recently our President, Mr. Edward "iron hand in the velvet glove" Barbier (5MD) announced to all and sundry, for my benefit, that after the film evening, two of the most important members of the Council would be staying to supper. For the purpose of refreshing my memory when writing these notes, I pencilled, very plainly for him to see, "two drongoes to stay for supper." As I had hoped, he complained to the gathering regarding this, and I was suitably disciplined. In last month's "mag," I made several mysterious references to "two drongoes," with the intention of going to town about it this month. However, Mr. Simon Legree, I'm sorry, Mr. Edward "etc" Barbier fixed it with the Public Library Board that I was invited to supper after the film evening. Therefore there were three drongoes to supper, and it goes without saying that I was the biggest drongo. Every bit that I ate nearly choked me, and the four cups of tea that I forced myself to have, tasted very bitter. Hal, who was drongo number three, did not let me out of his sight all night, apparently for fear that I would escape, all of which was I suppose, organised by drongo number two. They both commented that if I was nearly choked with every bite that I took, it was just as well for the Libraries Board that I was off my form for eating. I resent this, as all I had was eight sandwiches, four pies, and several pieces of sponge cake to top it all off. I still say that every bite nearly choked me.

It has been suggested in some quarters, I repeat, in some quarters, that the reason that 5KX was elected to the Council was because he has a new shiny car, and also that he lives at Henley Beach. This statement is very near to libel, and I would like to say that if my palsy walsy John sees fit to offer me a ride to Council meetings in his new, roomy and splendidly upholstered car, which by the way purrs along the road at terrific speed, and with a comfort that has to be experienced to be believed, then it is my own business entirely, and does not concern any ex-secretary of this VK5 Division. So there!

5TW has been heard on 40 phone quite a lot lately, and Tom has been also heard talking a lot about 6 metre converters, so it looks like another "six" fan in Mt. Gambier this summer. 5KU has now a.c. at the front door, so guess the local QRM is due for another member, although Erg is doing real well with his seven watts from a vibrator supply at the moment. 5JA is now well settled in England, so there is nothing that I can say about him exoept that some people are lucky. 5FD is maintaining a silence that cannot be penetrated, not sulking are you John, or are you working DX when all are asleep? There is no DX at that time OM.

5MS is still working a few on 20 and keeping weekly skeds on 2 metres. You were putting in a good signal down here Stewart for quite a while, but I have not heard you for some time now. 5CH is a very busy man at the local power house, but Claude still manages to work a few on 40 and also keep weekly skeds on 2 metres. 5RF is down at the Mount relieving so that the hard workers at the local broadcasting station can take their well earned holidays. Bob has been showing them how good 40 is at the moment, although his gear belies the portable sign he uses, but then perhaps he has a spare camel to carry the odd bits and pieces. 5KB is now stationed at the Drome for a year or so and is reported to have a 522 with him, so it looks as if he will be lured into the 14 Mc. network. Being about seven miles away, he will be a better check for the boys. You should be in demand Peter. 5CJ has been working a few on 40 as well as his weekly sked on 144 Mc. and he tells me that a rumour is circulating to the effect that 5FM is expected down at the Mount for a week-end, and Col says that all the boys have been warned, but he failed to tell me as to why.

I have just finished reading several pages of Ham notes in a well known magazine, written by a fellow scribe who signs himself "Woomera." I wish that I had his ability, because he writes his notes in the manner that I would give pounds to be able to emulate. However he tricked me by saying that 5TL was heard with a good signal from Ceduna recently. Now if I said a thing like that, nearly all of VK5 would be on the phone next day politely telling me their opinion of me as a journalist, because I had always believed that Tom left Ceduna over twelve months ago. Of course I could be wrong. Incidentally "Woomera," I put out a fairly good signal on 20 myself, why I have had a card from as far away as Newcastle. What about giving me a paragraph, I love to see my name in print.

There is very little to report from the River Murray district this month, the most important event was the fact that VK5BJ (I give him the full call sign for once) has hit the air. My spies tell me that he slapped a rig together and has already passed the half century in contacts. I also heard that he is going to have a go at the second class commercial, or even higher if necessary. Good work Jim. 5KW has been heard on 40 a lot, and has been receiving very good reports too. Most of his time, however, is spent on the v.h.f's. 5MA is still winding transformers, at least his offsiders are, but he should be set for high power before long. V.h.f. has claimed most of his time this month, mainly 50 Mc. 5BC has been on "six" this month, and uses 40 quite a lot for cross band working with his brother 5HD. Hughie has finished his v.f.o. and it will soon be in use in his transmitter. Mrs. Lloyd has been on the sick list for a while and he has been cook, baby minder, and everything else, with radio in his spare time. It goes without saying that there has been very little radio.

5SL has completed his v.f.o. to his satisfaction and is now starting on the main transmitter. Progress is very slow, as his time is very limited, but good progress has been made toward that block of land with the two 60 ft. pine trees in the front garden, in fact I have been told that the block is situated in the highest level of the district. Quite by the luckiest of accidents, so he told Patricia!! How could you Laurie.

I have been an active Ham for quite a long time now, and I have probably mixed with more active Hams than the average has in that time, and I feel that most Hams do not realise how lucky they are to be able to come on the air and say and do just as they think fit. I must admit that most of us have been in the habit of tying ourselves to the kite strings of a few prominent Amateurs who have accomplished something worthwhile in the world of radio, and most of us are only too pleased to point to ourselves and say "Everybody realises our worth and would do all in their power to keep us on the air, and the Government knows that we form a reservoir in peace time from which it can draw its ready-made supply of trained men."

It sounds good, it looks good, but if we are honest with ourselves we will ask ourselves just what do we do to justify our existence on the bands allotted to us. If we go on being honest we will be the first to admit that we owe our very existence to the softheartedness of the controlling Government, and providing that we keep a tight rein on our tongue and our actions, they will let us play around for as long as we like.

Bearing all this in mind, I was amazed the other afternoon on 20 metres to hear a certain VK2 shouting his head off to a W4 and giving his opinion on the outbreak of hostilities in Korea, and also his opinion of several notable personages connected with the outbreak. Personally I agreed with all that he said, but I don't think that his passing a simple examination and being issued with a licence to transmit on the air entitled him to open his big mouth for the world to hear on a subject of International importance. The fact that he seemed to think that he had been appointed to speak for the rest of the Hams in Australia only goes to prove to what delusions of grandeur he has reached. His further remarks to the W4 to the effect that we would all be off the air before long were decidedly in bad taste and quite in keeping with the whole regrettable incident, and for the sake of his fellow Hams, if not for himself, it would be more politic if he confined himself to his hobby of Amateur Radio instead of allowing his oversize tongue to get out of control.

Too many incidents such as this will only make those up above begin to wonder if we are such a harmless lot of chaps solely interested in a genuine hobby. We may all be off the air quick enough, without some "dillpot" putting the idea into their heads. Some of you may think that I have overdone the harshness in this paragraph, but always remember that we all have a wonderful hobby placed in our safekeeping, and it behoves us all to protect it to our utmost.

Several members have contacted me to say that the entertainment that I said was available on "ten" certainly lived up to my promise, in fact quite a lot seemed to think that I had soft pedalled it a bit. Anyway it is back again this month with a complete change of programme, so cut yourself a piece of cake on "ten" and enjoy yourself. Oh Mavis!

I have received via the grapevine, information to the effect that both the President and the Past President intend to be absent from the next general meeting, presumably on holidays. Personally I think that it tiddlewinks, especially when you consider that this means that I will have to take the Chair at the said meeting. Oh well, as long as I don't take the table as well, I expect it will be alright.

To close this month's notes I have been asked to announce that all of the Government Tourist Bureau QSL cards have been distributed and if you did not receive an issue of a second hundred, then you are out of luck. This second hundred was distributed on the basis of first come first served, until the cards ran out. It was announced over 5WI each Sunday morning for a month as well as in the "Advertiser" column. Therefore don't blame anybody but yourself if you missed out. If it helps at all, we are very hopeful of a further issue, perhaps in the new financial year, but I could be wrong.

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WESTERN AUSTRALIA

The highlight of the news for this month is undoubtedly the Annual Dinner, which was held at the usual rendezvous on Friday, 9th. The attendance eclipsed all post-war records, no less than 71 being present. There were representatives of the P.M.G's. Department, the Trade, and the Press. It was also very nice to see that four of our country members, namely 6MO. 6DX, 6FD and 6RT were able to make the trip down to the big smoke. Unfortunately none of the Geraldton gang were able to be present, but due to some very nice work on the part of 6WZ and 6KW, a wire recording, giving greetings and good wishes from each and every member of the Geraldton net, was sent down in time to be played at the Dinner. Nice work Harry and Ron. Wonder who wrote the script for the boys!

After a very excellent repast, washed down by the best brew in Australia, 6KW was presented with the G. A. Scott Trophy (a magnificent globe) by old timer, Frank Goldsmith. Competition for this trophy was, I believe, very keen although the number of entrants was rather disappointing. Congratulations Ron on a fine effort.

The evening was then given over to entertainment and competitions. Noticed 6FW carrying home a good armful of prizes. This lad is certainly consistent when it comes to quiz shows. Everyone who attended the dinner had, I am sure, a most enjoyable evening, and the Dinner Committee are to be congratulated on the way in which everything was organised. Nice work fellows.

The June meeting was held in the Institute Rooms on Tuesday, 20th. The attendance was not up to the usual standard, there being 31 members and two visitors present. 6WG and Mrs. Green, from Albany, were present and as the President remarked, it was a long long time since we had seen an XYL at our meeting.

The subject of frequency checks and accurate frequency transmissions came up for discussion and 6DD intimated that he was still available for spot frequency checks. It was decided that the Contest Committee, in collaboration with 6DD, endeavour to arrange a periodical transmission of accurate frequencies covering the Ham bands to enable members to calibrate test equipment, v.f.o's., etc. This should be of great benefit to members and our thanks go to John for volunteering his time and equipment.

Our worthy Secretary, 6AG, delivered another of his inimitable "flashbacks" to the early days of radio in W.A., much to the enjoyment and amusement of those present.

The last item of an interesting meeting was a talk and demonstration on the grid dip meter by 6HL. Harry just about sold the meeting on this handy little piece of test equipment, and I can foresee quite a few more being constructed in VK6. The meeting closed at 10.35 p.m.

Sunday, 25th at 1030 hours, saw the stage set for the 40 Meter Scramble of 1950, and battle begin for the President's Trophy; and boy, what a battle it was! Between 40 and 50 stations were active at various times during the Contest and several of those came on the band during the last half hour or so, just to liven up proceedings. Several stations worked over the forty mark and it would seem that the Contest Committee is going to have a hard task when it comes to finding the ultimate winner.

PERSONALITIES

6RU is certainly having a rough trot with his beam. In a recent gale his tower carrying the ten and twenty beams came down completely, straddling the dividing fence and flattening both it and the next door neighbours' clothes line. If we know Jim however, it won't be long before that tower is up and the beams turning again. 6LU, a comparative newcomer to the game, is putting the finishing touches to a home constructed heterodyne wavemeter and tells me he no longer refers to it as the "freak meter."

6GM is using a 522 on 2 metres and has a fixed beam for that band with provision for rotation later on. A complaint from 6JK, to the effect that none of the locals use c.w. on 40. Try 20 Frank if you want some morse practice. 6RK came to light with a batch of overdue QSL cards the other day. Believe some of them dated back to '47. Another to sport a very attractive QSL is 6LL! Bet you had a swag of them to fill in Clarrie.

The 40 metre scramble brought to light some of the rarer call signs. At least they were rare to me. In this category I would place 6RJ, 6WL, 6JS and 6SK. The latter apparently has his small portable rig working nicely, was putting a good signal at this QTH during the Contest. 6WT still compulsorily inactive due to an uncompromising landlady. However Dave managed to get on 40 with a few milliwatts for the benefit of the scramble boys. Must have been an indoor antenna Dave, couldn't hear you over here.

6WZ and 6EL still keeping Geraldton on the Ham map. 6WZ tells me there is a lot of underground activity up that way and very shortly Geraldton should blossom forth as a very active centre of Amateur Radio. 6CN getting all set for the long awaited a.c. I must apologise for the scarcity of news this month fellows, but it has been too bleak to spend much time in the shack tuning the bands for items to include in this column. Will try and do better next month.

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TASMANIA

An extremely interesting lecture on the construction, operation and uses of Radiosonde Equipment was given by Mr. McDermott, of the Weather Bureau, marked the July meeting, held at the Photographic Society's Room. Everybody present was impressed in the manner in which the equipment played a major role in the compilation of weather reports. To complete the evening, a sale of crystals was conducted by 7LE, followed by a movie show depicting various field day incidents (or accidents) was given by J. Grace.

Congratulations 7RX on obtaining your ticket and it is believed that Keith is building a super-dooper Tx (without a key jack?). Noticed a couple of Gs and Ws amongst the pile of QSL cards collected by 7LD from the Bureau the other night. Having only recently received his ticket, Len has been heard on 40 with some very nice phone. Another ardent c.w. man who I can remember distinctly remarking he would never succumb to phone has been heard using screen modulation and carbon mike on 7 Mc. It surprises me, Ken, how you got that microphone working so well.

Trust conditions on the bands are better for the next Remembrance Day Contest than they are at present and hope an active support will be given in an effort to retain the Trophy. The W.I.A. broadcast now being held weekly is a definite advantage over the original fortnightly transmission as it saves confusion and it is an easy matter to tune to 7196 Ke. for the latest news and doings for the week. We extend our thanks to 7OM for this extra service.

Believe 7SD lavishly acquired two meters for the rig, forgot one or two shunts, and succeeded in wrapping the pointers around the case a few times. Bad luck Don, but why should I complain? 7JB heard on 20 and 40 running a 100 watts into a 810 with f.b. signals. Jack is a very keen DX merchant as shown by his pile of QSL cards. Beats me Jack how you can work all this DX with present conditions.

Heard from ex-7TA the other day, hopes to be remembered to all the boys; you are a bit of an ear-basher Geoff, but we were really sorry to see you go. Hope to see you at the next general meeting, this includes you, 3ARL.

Future try-outs for the emergency network promilgated; this has created interest amongst the Southern lads. A lecture on traffic handling was given by 7JB during the month so we should, in future, have a comprehensive network available if the occasion is warranted.

Sorry there was so much QRM 7AB, your signal was the strongest heard down this way for quite a while. Keen interest is being shown by 7AF, 7OM and 7DA in the modulator made popular by "A.R." a few months ago. From what can be gathered, this type of modulation has proved successful. Was surprised to hear 7YL active again on 40 after a lapse of a few years. Seems the OM slept in or did you give him the housework to do Joy? By the way you blokes, don't forget our next meeting should prove interesting as the lecture arranged deals with oscillographs, so do the right thing.

NORTHERN ZONE

The month under review has produced two meetings, instead of the usual one. The first, held on the usual meeting night at the King's Hall brought to light several contentious matters that received a thorough airing during the course of the evening and even though the necessity for such discussion may be regrettable, it shows a true spirit to air any grievances publicly rather than harbour the thoughts under the surface with possibly disastrous results later. The second meeting, a fortnight later, saw much enlightenment to everybody and it was generally agreed that, far from having any derogatory effect, the whole matter had served to bring all close together.

It was indeed a treat to be once more in a more comfortable room. In this respect, we are very grateful to possibly our most active associate member, Perc Crawford. Do wish you would get a call Perc, so I don't have to write your name in full.

In each of the last two months' notes I have deplored the absence of DX, so need I say more other than the fact that its obituary can be heard almost any night on 14 Mc., the begattes, in the shape of commercials, celebrating in fitting style and the only remaining mourners those few old die-hards that just don't know when they are beaten—let's hope the resurrection is as complete as the burial.

One of the unusual features of the month was the complete black-out on one Sunday morning of the W.I.A. broadcast from Hobart. Most unusual as these broadcasts are normally very well received in the North. 7XW belied my last month para before it hit the press by very actively attending both meetings this month, but we really must have a wire recorder installed as some of Chris' original phrases are gems and none of us, including Chris himself, can seem to remember them when our Secretary comes to write things down.

7TE has been a notable absentee for some time, but believe our meeting nights coincide with the nights that he slaps out the low frequencies in sweet and swing. Be pleased to see you when you can make it Bill. 7DS hopes to line up some films for us for July and to this end is pursuing aforementioned films with admirable zeal, but more of this next month. 7NL seems to have given up the key and ear bashing for a lower portion of the anatomy by walloping shins with a hockey stick—next thing we'll see is Noel limping around and mumbling something about the other bloke being too big. 7HY occasionally graces 7 Me. on phone and am still trying to get Henry to wire a keying jack in and really enjoy the sport.

Some obliging juvenile neighbour at 7LZ, evidently read my piece re someone pushing someone else's beam over, and did his best on Col's 28 Mc. three element. After spending several hours fixing same, Col went inside and blew up his main power tranny, knocked over some bottles of photographic equipment and nearly gave himself concussion on a shelf, which only goes to show what a good day of rest Sunday must be to all those not interested in radio. That about winds us up for this month, any discrepancies will have to be excused by the hour, 0100, and the deadline set for the morning mail. Don't forget the August meeting on the 11th, same time, we'll let you know the place.

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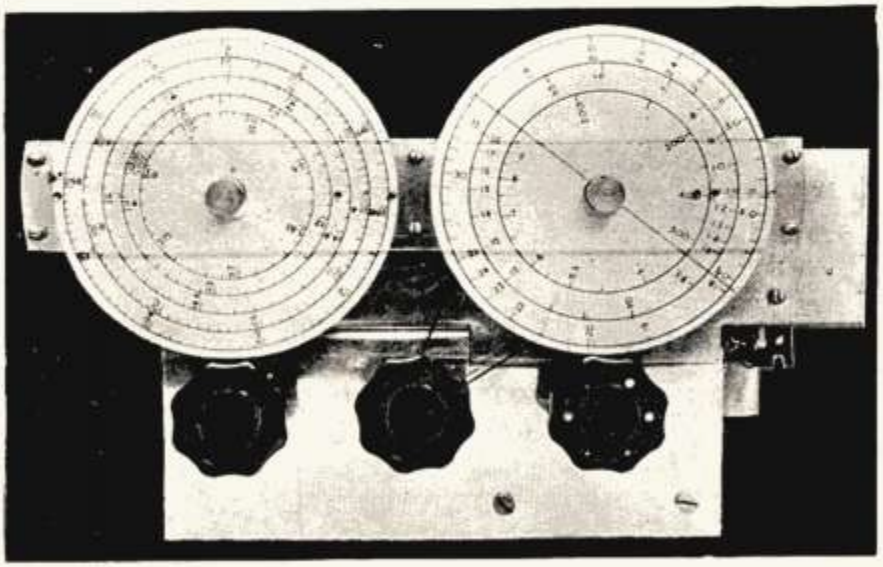

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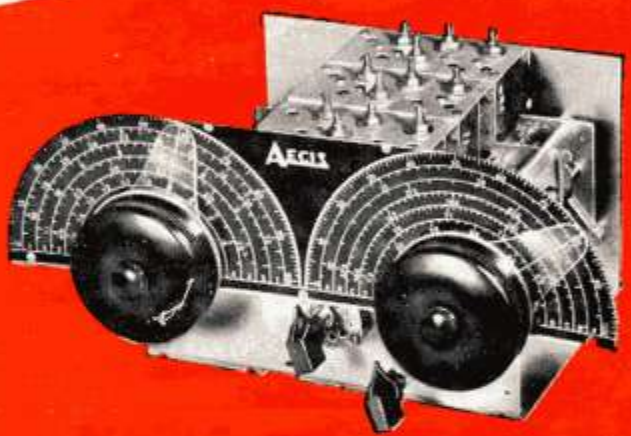

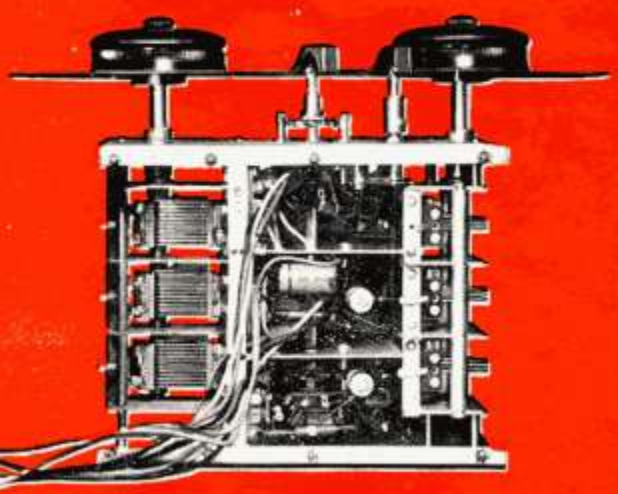

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Newton, McLaren Ltd.
A. G. Healing Ltd.
Harris, Scarfe Ltd.
Oliver J. Nilsen & Co. Ltd.
Gerard & Goodman Ltd.

BRISBANE:
Chandlers Pty. Ltd.
A. E. Harrold Pty. Ltd.
B. Martin Pty. Ltd.

PERTH:
Nicholsons Ltd.

TASMANIA:
Lawrence and Hanson Electrical Pty. Ltd. (Hobart).
Lawrence and Hanson Electrical Pty. Ltd. (Launceston).

AMATEUR RADIO

SEPTEMBER 1950

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

FOR THE EXPERIMENTER & RADIO ENTHUSIAST

9D.

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SEPTEMBER - - 1950

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AMATEUR RADIO

Published by the Wireless Institute of Australia,
Law Court Chambers, 191 Queen Street,
Melbourne, C.1

EDITORIAL

★

Respect the Conditions of Your Licence

Most Amateurs who undertake to operate an experimental station remember the obligations they have agreed to observe under the Commonwealth Regulations, as set out in the Wireless Telegraphy Act.

It is easy to overlook the fact that you signed a Statutory Declaration when you were granted a licence to operate your station. In accordance with the regulations laid down by the Postmaster General's Department, who direct all Amateurs under these provisions, you agreed to observe these regulations in all respects.

You are earnestly recommended to re-read your Handbook for Operators of Amateur Wireless Stations, with a view to refreshing your memory on your responsibilities under the Act with respect to the maintenance of secrecy of all forms of communications heard by you.

Occasionally we hear some criticism concerning the security aspects of Amateur Radio in the Commonwealth, and suggestions have been made that a Radio Amateur may provide a source of leakage which would have a subversive effect on the security of this country.

If such criticism is well founded—which we very much doubt—we suggest that you carefully consider your activities in the light of the requirements of the Commonwealth Investigation Service, whose responsibility it is to ensure that all licencees are loyal and responsible citizens of the Commonwealth of Australia.

FEDERAL EXECUTIVE

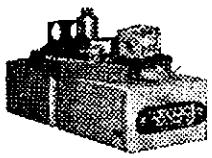
The Contents . . .

ERRATUM

Heading on Page 5 should read: "100 Watt 144 Mc. Transmitter," not 100 Mc.

Homecrafts PTY. LTD.

LARGEST STOCK GREATEST BARGAINS

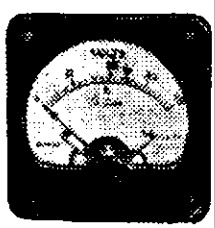


"KAR" SET

"Radio and Hobbies'" Car Radio Kit as described in May issue of "Radio and Hobbies." Homecrafts' offer this Kit complete to the last nut and bolt. Price, as illustrated, **18 Gns.** including Sales Tax.

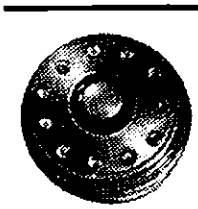
PALEC VIBRATOR POWER SUPPLY

A Vibrator Power Supply from 6 volt DC to 240 AC. Price, as illustrated, **£7/15/-** plus Sales Tax.

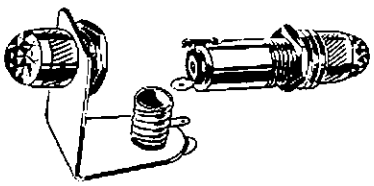


METER BARGAIN

English Moving Coil Meter. 2 in. scale, 200 ohms/volt. Two models available: 0-20 and 0-40 volt. Price, as illus., only **19/11.**

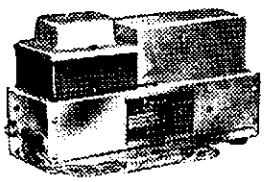


5BP1 Cathode Ray Tube Sockets. Moulded 11-pin Sockets with silver plated contacts. As illustrated, **9/6.**



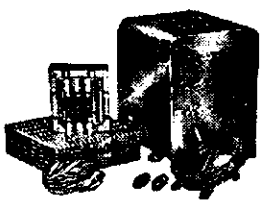
WARNING AND PILOT LIGHT ASSEMBLIES

E.M.A. Type F (facetted) Jewels, wide vision type with nut and spacer for ½ in. hole mounting, **1/9** ea. With back loading pilot light assembly, **3/9** ea. Front loading type **6/-** ea. Colors: Red and Green. Finish: Nickel Plated.



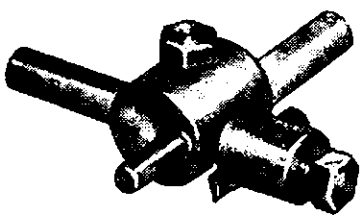
ENGLISH INVERTERS

Balradio, 32 volt D.C. input, 240 volts 50 cycle output at 100 watts. Price, as illustrated, **£22/13/6.**



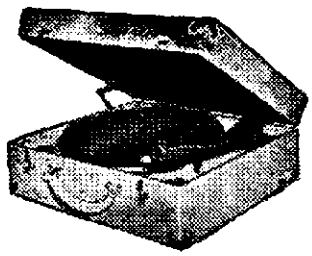
BATTERY CHARGER KIT

Kit of parts to build a 6 volt 1 amp. Battery Charger. Kit includes an English Selenium Rectifier, Transformer, black crackle finish metal case, two terminals, hook-up wire and circuit blue print instruction. 12 volt, 5/- extra. Price, as illustrated, **£4 10/-.**



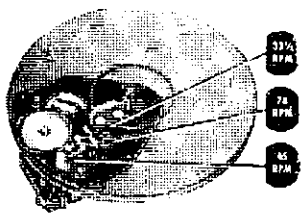
CHASSIS HOLE CUTTERS

Adjustable Chassis Hole Cutters. Cuts holes from 1 to 3½ inches. Price, **16/7.**



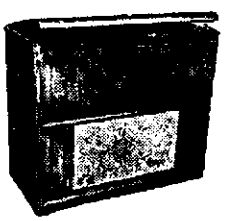
CAPITOL PORTABLE ELECTRIC GRAMO UNIT

English Collaro Motor, High Fidelity Pick-Up, and automatic stop. As illustrated, only **12 Gns.**; 52/- deposit, 3/6 weekly.



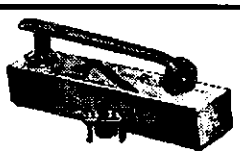
TRIPLE SPEED GRAMO MOTOR

Imported American synchronous type T.S. Electric Motors; 33-1/3, 45, and 78 r.p.m. Complete with Turn-table, as illus., **£12 19/6.**



RADIOGRAM CABINETS

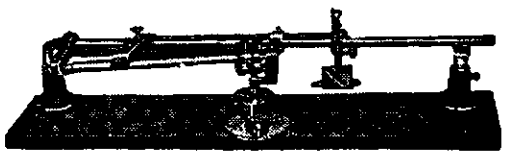
Beautiful walnut piano finish. Standard model, **£13 19/6.** Model with deep well for a Record Changer, **£14/7/-.** Also available in blonde finish, Standard model, **£16/9/6;** model with deep well for Record Changer, **£16/17/-.** Country and Interstate clients add 15/- packing charge.



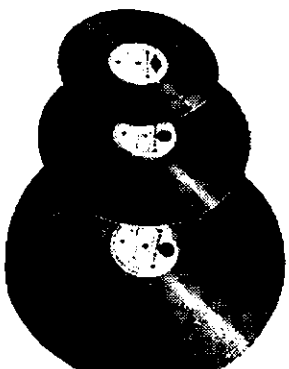
HIGH FIDELITY PICK-UP BARGAIN

English Shefi High Fidelity Moving Coil Pick-Ups. Complete with Matching Transformer. Reduced from £4/19/- to only **29/11,** as illustrated.

GOOD NEWS FOR RECORDING ENTHUSIASTS



The new Capitol De Luxe Traversing Gear. Overhead Traversing Gear for Recording from 8 to 16 inch discs. Precision engineered. As illustrated, Price, **11 Gns.**

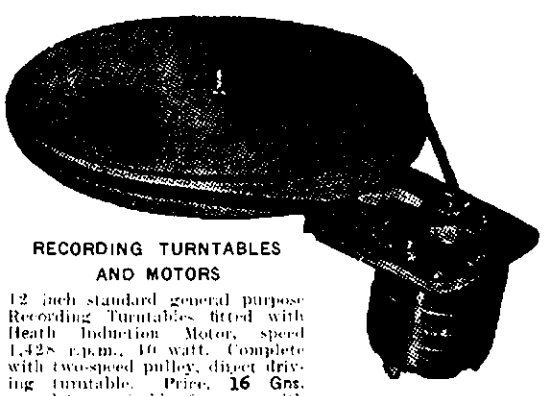


MECHANOID CUTTING HEAD

A low priced Cutting Head (500 ohms impedance) with outstanding performance. Suitable for use with Capitol Traversing Gear. Price, as illustrated, **£5/10/-.**

B.R.S. RECORDING BLANKS

High grade Recording Discs with highest quality aluminium base. Available in three sizes, as illustrated. 8 inch, **5/2;** 10 inch, **6/6;** 12 inch, **8/6;** 16 inch, **13/6.**



RECORDING TURNTABLES AND MOTORS

12 inch standard general purpose Recording Turntables fitted with Hearth Induction Motor, speed 1,428 r.p.m., 10 watt. Complete with two-speed pulley, direct driving turntable. Price, **16 Gns.** complete, suitable for use with Capitol Traversing Gear.

For prolonging the life of Recordings. Complete with instructions for application. 4 oz. bottles, **2/9;** 8 oz. bottles, **5/6.**

COUNTRY AND INTERSTATE CLIENTS PLEASE ADD FREIGHT OR POSTAGE.

290 LONSDALE STREET, MELBOURNE — Central 4311

Characteristics of Indicating Meters

Being Transcript of Lecture Delivered at Urunga Convention, 1950

BY R. H. LONG,* VK2MM, A.M.I.E. (AUST.)

Briefly it should be understood that there is essentially no difference mechanically between a Voltmeter and an Ammeter. The Ammeter is a low resistance-low reading Voltmeter or Millivoltmeter, and the Voltmeter is a low reading-high resistance Ammeter. With this idea in mind we can proceed to a description of the general principles and construction.

It might be advisable at this stage to give some figures as to the order of accuracies of the various types as defined in the British Standard Specification B.S.89 for first grade Meters and a brief explanation of the meaning of these figures.

	Dynamometer Moving Coil		Moving Iron Induction	
	A	B	A	B
Voltmeter†	1.0	0.5	1.0	0.5
Ammeter†	1.0	0.5	1.0	0.5

	Hot Wire Rectifier Thermocouple		Electrostatic	
	A	B	A	B
Voltmeter†	3.0	1.5	2.0	1.0
Ammeter†	3.0	1.5	—	—

† Single range.

Column "A" shows the permitted error from half scale to full scale expressed as a percentage of the indicated reading.

Column "B" shows the permitted error from zero to half scale expressed as a percentage of the full scale value.

So that taking an 0-1 Ma. moving coil Meter—

A reading of 0.7 can be

$$0.7 \pm 1.0\% \left\{\begin{matrix}0.693\\0.707\end{matrix}\right\} = 1.0\% \text{ error.}$$

A reading of 0.2 can be

$$0.2 \pm \tfrac{1}{2}\% \text{ F.S.} \left\{\begin{matrix}0.195\\0.205\end{matrix}\right\} = 2.5\% \text{ error.}$$

A reading of 0.1 can be

$$0.1 \pm \tfrac{1}{2}\% \text{ F.S.} \left\{\begin{matrix}0.095\\0.105\end{matrix}\right\} = 5.0\% \text{ error.}$$

A reading of 0.05 can be

$$0.05 \pm \tfrac{1}{2}\% \text{ F.S.} \left\{\begin{matrix}0.045\\0.055\end{matrix}\right\} = 10.0\% \text{ error.}$$

There are basically five common types of indicating meters, viz.:—

(a) Dynamometer.
(b) Moving Coil (with accessories) Thermocouples and Rectifiers.
(c) Moving Iron.
(d) Electrostatic.
(e) Hot Wire.

* 11 Gelling Ave., Strathfield, N.S.W.

(a) THE DYNAMOMETER

This type of meter is one in which the supply being metered supplies the field in which the moving coil acts. For this reason its use is very limited in radio where the power consumption of the meter generally must be kept to a low value so as not to disturb the circuit conditions.

This type of meter can be used with equal accuracy on d.c. (mean of reversed readings) or a.c. up to approx. 200 cycles and provides a useful comparison between a.c. and d.c.

It is generally restricted to power engineering where its main use is as a substandard.

The range can be extended by the use of Potential Transformers, Resistance Boxes, and Air-cored Current Transformers. The power consumption of a typical range is of the order of 0.5 watts.

(b) THE MOVING COIL or D'ARSONVAL TYPE

This is by far the commonest type used in radio engineering. This type has a permanent magnet to supply the field for the moving coil to act in, and so the power consumption is kept to a very low value, being of the order of 0.00005 watts.

This type of meter is essentially a d.c. meter, but by means of accessories, such as thermocouples or rectifiers, can be used for a.c. measurements with the added errors introduced by these accessories.

When used **without** accessories as above, it is capable of substandard accuracy and is frequently calibrated as such.

The range of this type can be extended by the use of series resistors and shunts, however when used with the accessories such as thermocouples and rectifiers, very definite limitations apply such as:—

Thermocouples.—Seldom if ever used as voltmeters. Thermocouples should never be shunted, particularly when used for r.f. owing to current distribution due to skin effect. Common ranges, 100 Ma. to 100 Amps.

Rectifiers.—Used for both ammeters and voltmeters. The range as a voltmeter can be extended by series resistors or potential transformers for voltages below 10v. full scale as for all practical purposes the zero and 0.5v. readings are co-incident, due to the voltage drop across the rectifier. This point also illustrates why shunting of this type cannot be adopted to increase the current range. A current transformer must be used so that the meter acts as a voltmeter of reasonable range (approx. 0-50v.) so as to get an approximately **linear** scale, rather than the meter acting as a millivoltmeter with a compressed lower part of the scale due to the voltage drop.

This type of meter is generally made so that the moving coil carries currents of 50 microamps. up to 10 milliamps. since the control springs are called on to carry this current. The resistance of the moving coil, together with springs, varies from approx. 1,000 ohms in the case of 50 microamp. meters to 5 ohms for a 10 Ma. movement. In general the resistance of an 0-1 Ma. is of the order of 50-100 ohms, varying with different makes.

The dynamic characteristics of these meters, such as speed of response and overswing, is controlled in manufacture according to the intended use. For example, when used as an r.f. indicator (i.e. a millivoltmeter) an ordinary 0-1 Ma. meter would have too high a resistance and the reading would be very sluggish due to the shunting effect of the couple—so an indicator is made having a few turns of heavy wire to reduce the resistance and the former (metallic) is either split, so as not to form a short circuited turn, or entirely removed. The usual r.f. indicator is from 1-3 Ma. (seldom any definite value) and when used on d.c. without its couple, oscillates about its reading before coming to rest at a steady indication. For this reason, when transporting an r.f. indicator separate from its couple, it is advisable to short circuit its terminals to prevent damage.

Note.—This type of meter available ex-disposals, with a burnt out couple can be advantageously used for high values of current, such as 100 Ma. or higher as the shunt required will act as a short circuited turn across the moving coil and so provide the required damping.

(c) THE MOVING IRON TYPE

As its name imples, depends on the orientation of a soft iron vane due to the field produced by a field coil connected to the supply being metered. The springs in this case are not required to carry any current, so that the windings are constructed to carry usually 5 Ma. as a voltmeter and up to 50 Amps. as an ammeter.

This type is capable of substandard accuracy on either a.c. or d.c. but must be calibrated for one or the other and in the case of a.c. for one particular frequency. They should not be confused with the cheap type such as used on battery chargers or car dash panels, this type uses a permanent magnet operating in the field.

The range of the moving iron meter can be extended by the use of resistances and current transformers (in some special cases by shunts). They are rather subject to the effect of tempera-

ture due to the large resistance of the copper wire (large number of turns) and so usually have a carbon type series resistor (negative temp. co-eff.) in the case of voltmeters to compensate in some degree for varying temperatures. This type of meter should be placed in circuit approx. 30 minutes before reading for maximum accuracy. The power consumption is quite high.

(d) THE ELECTROSTATIC TYPE

The electrostatic type is constructed similar to a very fragile or free moving variable condenser and relies on the attraction or repulsion of the field produced in the plates. Its particular application is for measurement of high potentials where power consumption of the meter is important, although some cases are on record of meters as low as 50v. full scale.

The power consumption of this type is negligible, bu they are rather fragile and they usually rely on gravity for the restoring force, in which case they must be used in the vertical position.

(e) THE HOT WIRE TYPE

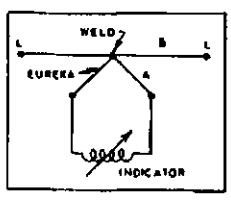
As its name implies, the hot wire type depends for its action on the expansion and contraction of a tensioned filament which carries the power being metered. A ligament is attached to this heater and by means of a system of levers and pulleys amplifies the expansion and contraction of the heater and converts it to rotational movement of the pointer.

This was probably the earliest form of r.f. indicator, but is seldom encountered these days. The main disadvantage is in the power consumption due to the resistance of the heater and the fact that unless very elaborate precautions are taken in the manufacture of the case and base plate, the zero requires constant re-adjustment due to their heating by the power consumed and also the ambient temp.

SOME GENERAL COMMENTS

Thermocouples are constructed so that when current passes through the heater wire, heat is developed at the junction of two dissimilar metals having different thermal e.m.f., and so a current is generated which causes a deflection on the indicator.

Apart from skin effects at high frequencies, this accessory allows the moving coil meter to be used with equal accuracy on a.c. and d.c., although with some forms of couple it is necessary to take the mean of reversed readings when used for d.c.



A = 10% plat., iridium, or nichrome.

B = usually 10% platinum, iridium or nichrome.

Rectifier Units.—These must be wired to the meter so that no power can be be applied to the a.c. terminals if the meter is disconnected from the d.c. terminals, otherwise the voltage across the rectifier will rise and burn the rectifier out. The full subject of the application of metal rectifiers to moving coil meters is a very large one and would require a complete paper on its own to cover such things as wave form error, etc.

MOUNTING OF METERS

When meters are mounted in panels the size of the hole and the material of which the panel is made will have an effect on the reading. If the panel is of steel or any other magnetic material, panel thicknesses of $\frac{1}{8}$" to $\frac{3}{4}$" will reduce the readings by approximately 10%; this figure will vary with different types and manufacturers.

The moving coil type can have this error corrected by adjusting the magnetic shunt which is found in the form of a small piece of metal bridging the magnet poles.

When opening the meter case it should be borne in mind that the meter is a very delicate piece of equipment and any foreign material which is allowed to enter will sooner or later lodge in some part and cause the needle to stick. Particularly hairs or specks of magnetic matter.

Further it should be appreciated that with normal positioning of the jewel and pivot that the pivot exercises a pressure of about five tons per square inch on the jewel and that any rough handling or jarring of the movement can raise this pressure to several hundred tons and so chip and destroy the jewels.

When using any meter it is extremely important to obtain an approximate idea of the maximum value of volts or current to be expected, so that it lies within the range of the meter being used. If using a multi-range meter choose the highest range available to start and decrease the range until a reasonable deflection is obtained on the upper half of the scale, for the reason of accuracy as explained in the foreword.

With a single range meter use can be made of shunts and series resistances which can be varied and eventually removed and the accurate reading obtained by direct reading on the meter.

If the pointer is allowed to fly over hard to the back stop it will most certainly destroy the balance of the movement (due to the position of the back stop) with the consequence of distorting the scale law of the meter.

British Standard Spec. 89 lays down: "The departure from zero of a spring-controlled instrument due to want of balance shall not exceed 1% of the maximum scale value when the instrument is moved in any direction within an angle of 45° from its normal position of use." Re-balancing of a meter to this condition is a tedious and delicate job requiring considerable knowledge and skill after the original balance has been destroyed, so avoid it.

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

SEPTEMBER, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo .
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

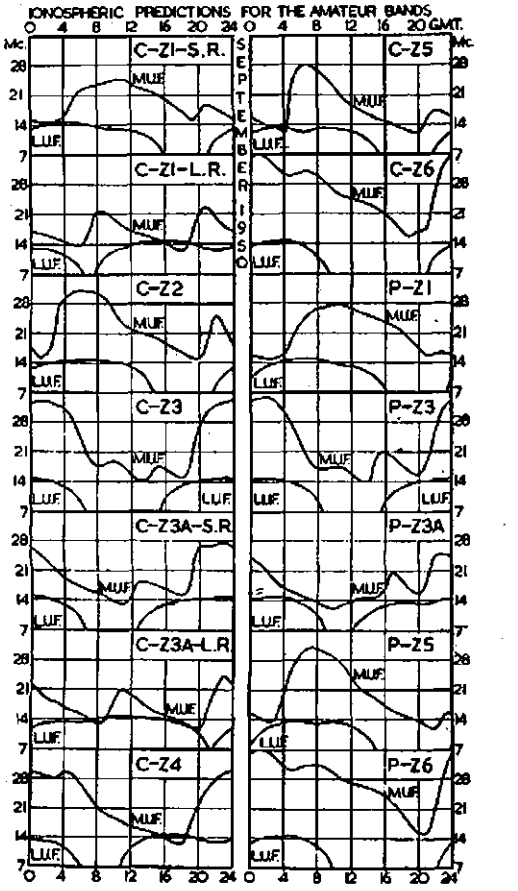
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0700 to 1500 hours G.M.T.
2. Was the 14 Mc. band workable between 1200 and 2000 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



100 Watt 100 Mc. Transmitter

Using Linear Tank Circuit

BY W. E. McGOWAN,* VK2MQ

The need for a full 100 watts on 144 Mc. has been felt for a long time, and with the advent of 826s becoming available on the Disposals market, they seemed the ideal tubes to use in the final.

In addition a linear tank circuit was included as a must for the tank circuit in the 826s.

The radio frequency portion of the transmitter Fig. 1 consists of a 6AG7 harmonic oscillator using an 8 Mc. crystal and a slug tuned coil in the plate circuit doubling to 16 Mc., that in turn is followed by a 2E26 tripler capacity coupled to a push pull 832 tripler to 144 Mc. In common with most triplers, the 832 stage has to be driven very hard to get sufficient output to drive the 829 buffer amplifier.

The method of coupling used between the 832 tripler and 829 buffer grid requires a good deal of time spent on it as the input capacity of the 829 and strays are used to tune the coil, which means as optimum coupling is arrived at adjustment of turns is necessary. More time was spent here than anywhere else in the circuit.

The 829 is then inductively coupled in like manner to the 826s grid except that due to the layout it was not so easy to get at, with the result the 826 grid coil is tuned with two washers ½" diam. on the end of ⅛" Whitworth screws which are soldered on to the neutralising condensers; once again the inductance is adjusted for optimum transfer of energy with frequent trimming of coil.

The metering of the two grids of the 826s was done individually to obtain balanced drive, and the r.f. chokes must be good because they are in a particularly hot spot in the circuit (BT1 resistors filled with 34 s.w.g. enamel wire).

The neutralising condensers are made from trimmers which are available on the market and consists of a polystyrene former with concentric rotor and stator plates riveted on the inside. The fixed or stator plates are removed from the inside leaving the rotor plates to move up and down the inside of the polystyrene tube. A section of brass is

* 47 Iandra St., Concord West, N.S.W.

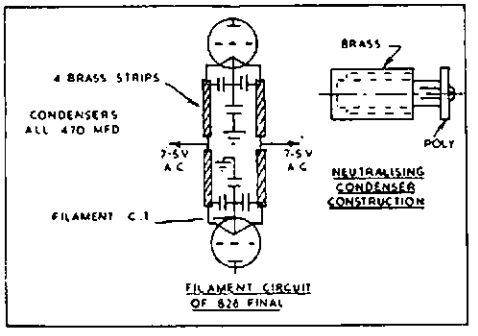


Fig. 2.

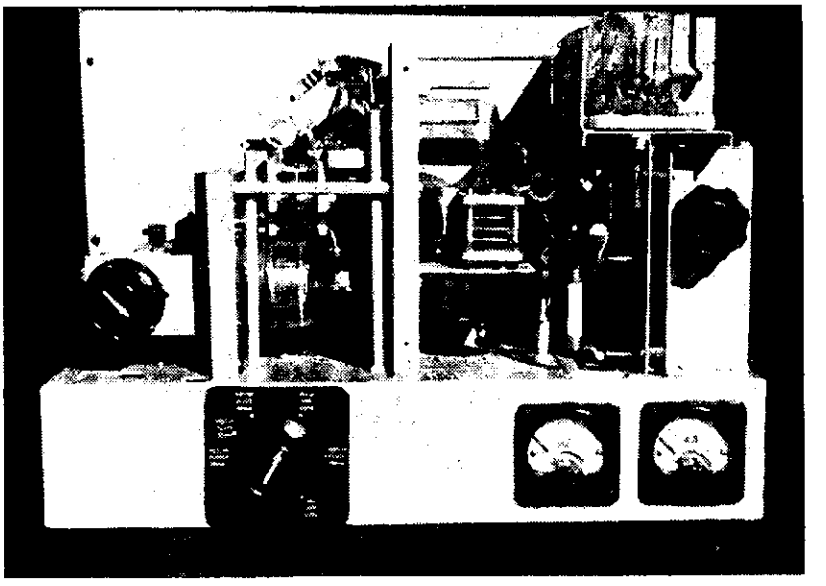


Fig. 3.—Front view of transmitter showing placement of stages to give minimum lead length, with 826s (final) at top right hand corner.

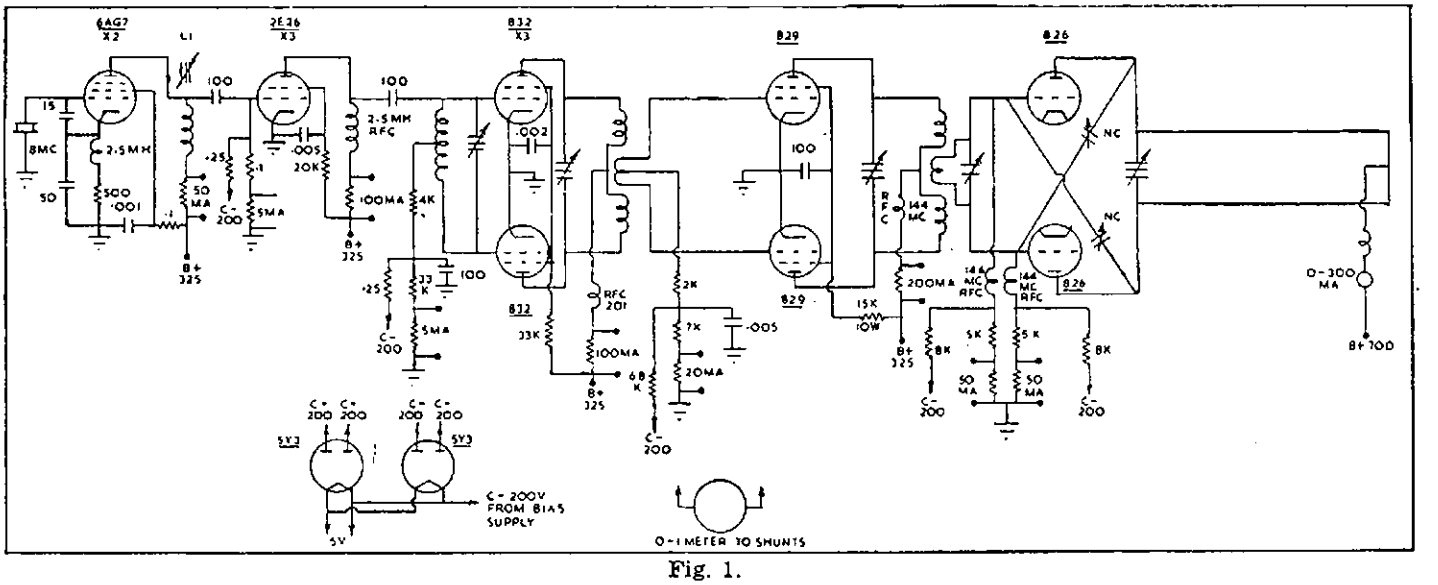


Fig. 1.

now turned up which is $\frac{1}{8}$" bigger in diameter than the tube and $\frac{1}{2}$" long with a step equal in diameter to polystyrene tube at the bottom and 1/16" deep to fit snugly over bottom of polystyrene former. This gives the required capacitance and increases the dielectric spacing, being part air and part polystyrene, to prevent arcing over.

It has been shown that long lines are preferable to coils particularly at v.h.f's. It has been further shown that long lines shielded (linear tank circuit) has a still higher Q, not that all of it can be realised because of the poor dynamic resistance which tubes show at v.h.f., but nevertheless it is preferable to using a coil/condenser combination.

The construction consists of two $\frac{1}{2}$" diameter copper tubes $7\frac{1}{2}$" long mounted on 2" centres, with a very small capacitance mounted across them for final adjustment. In addition, because of the small tuning range used (in this case about 4 pF.), a sliding shorting bar is used.

The shielded portion of the linear tank consists of a box 6" x $1\frac{1}{2}$" x $3\frac{3}{4}$".

LAYOUT

Looking at the photograph, on the left hand side is shown the input tuning of the 832, behind that the 2E26 grid cap is just showing to the right of the 2E26 which is not visible. The 6AG7 and crystal are behind the 832.

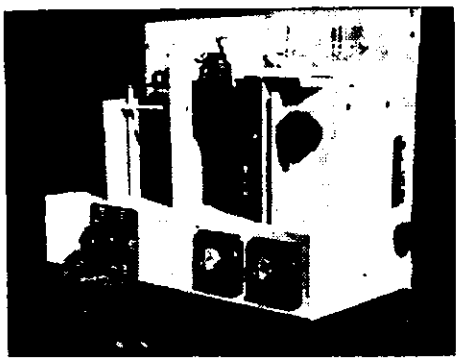


Fig. 4.—Right hand three quarter view of transmitter, showing shield for linear tank circuit with its associated tuning condenser.

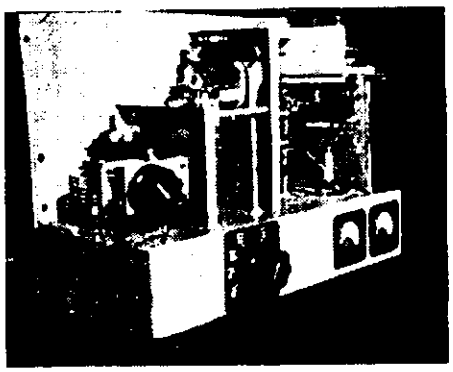


Fig. 5.—Left hand three quarter view of transmitter. The 2E26 and 6AC7 oscillator are behind the left hand tuning condenser.

Progressing to the right, is the 829 lying horizontally under which is mounted the plate tuning condenser; still further to the right are the 826s.

The partitions upon which the 826s are mounted consists of two shields, one of which holds most of the input circuitry, and the other which holds the bracket containing the two 826 sockets

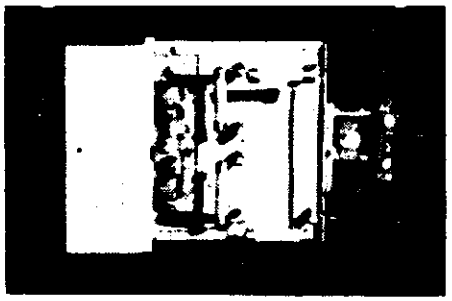


Fig. 6.—Back view of linear tank circuit.

and the shield which covers the long lines of the plate circuit. In addition, on this shield are mounted four strips of brass 4" long and 1" wide with mica between them and the vertical shield (Fig. 2) which are used as filament bypasses. The use of these two shields permits good circuit isolation between the input and output of the final.

TABLE OF VOLTAGES AND CURRENTS

Valve	Freq.	Plate Volts	Plate Ma.	Screen Volts	Grid Volts	Grid Ma.
6AG7	16 Mc.	325	13	150		
2E26	48 Mc.	325	60	160	100	1
832	144 Mc.	325	55	160	130	3.5
829	144 Mc.	325	120	175	88	10
826	144 Mc.				200	40
826	144 Mc.				200	40

FINAL PLATE CURRENTS

	Min.	Max. (loaded)	Watts Input
375 v.	40 Ma.	120 Ma.	48 w.
500 v.	45 Ma.	140 Ma.	70 w.
600 v.	52 Ma.	150 Ma.	90 w.
700 v.	60 Ma.	180 Ma.	126 w.

These figures were developed after loading final with the antenna so that at 700 volts, the input was 126 watts, then voltage dropped in stages as shown above.

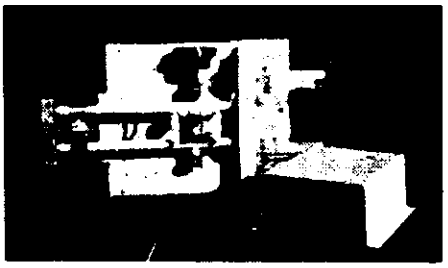


Fig. 7—Front view of linear tank circuit.

In conclusion, may I say that most of the gear used was taken from a 522 transmitter and other Disposals gear, the efficiency generally is quite good, and in justification of the energy expended is a desire to see our 144 Mc. band more populated, so what about it.

[The Magazine Committee is indebted to the author for the supply of the half tone blocks free of charge.]

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1. Linear Tank Circuit. "Electronics," May, 1948.

MAGNETIC TAPE RECORDERS

BY F. M. NOLAN,* VK4FN

Before and during the war the Germans were very active in the field of magnetic sound recording. Lorenz produced a wire recorder for dictaphone use, but the most significant work was done by A.E.G. and the State Broadcasting Service, who co-operated to develop and perfect a system of magnetic recording using plastic tape coated or impregnated with microscopic particles of magnetic material.

During the war an improvement in performance was achieved and the quality of reproduction of both speech and music obtainable by means of this system is of a high order and, it is claimed, consistently better than that achieved with other systems.

There are two principle systems, firstly, the use of supersonic frequency a.c. for biassing (premagnetising) as well as for wiping (erasing), and secondly, the use as recording medium of a tape whose magnetisable layer consists of a dispersion of ironoxide particles in a plastic material. It should be noted that the use of a.c. for biassing was being developed at the same time in the U.S.A., notably by the Armour Research Foundation of the Illinois Institute of Technology, Chicago, though the recording medium in this case was a thin steel wire.

The two features in combination mentioned above have resulted in improvements in frequency response, harmonic distortion, and in the relative strengths of programme and background noise, that is, signal to noise ratio.

In America the first reference to the subject of magnetic sound recording was made in a proposal by Leonard Fuller in 1918. Fuller suggested the use of r.f. erasing with direct current premagnetisation on the wire recorder, known as the "Telegraphone Wire Recorder," developed by Poulson.

In 1921 Carlson and Carpenter described a system for recording on steel wire or tape in the presence of a supersonic signal to agitate the carrier during the recording process. No reference was made to methods for erasing.

In 1929 Carl Rhodenham described a method of using alternating current of audio or higher frequency to erase a magnetic recording.

In 1931 Alverson proposed a system for magnetic recording using a r.f. carrier to saturate the wire in absence of audio, and the audio signal was used to suppress the carrier producing a recording. No erasure was thought necessary with the system.

However none of these proposals bore fruit in a successful commercial equipment. Some of then appear unsound in theory and actual practical application, but they do show that some early thought had been given to this field of recording.

It is known, however, that the Armour Research Foundation did considerable work on high frequency wire recording during the early war years.

The portable wire recorder, developed by this laboratory during the war makes use of both r.f. erasure and recording, and this considerably improves its performance.

In Germany the most significant work known to have been done on h.f. erasing and recording systems, was done by the two organisations mentioned earlier in this article. Their joint efforts produced the high frequency system using a plastic tape and is known as the "Magnetophon."

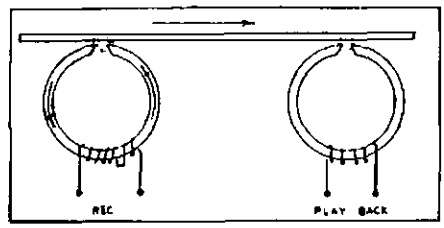

Fig. 1.

The development of this recording technique is credited to Dr. Hans Braumuhl and Dr. Walter Waber. The proposal for their system was made in 1940 and it found widespread application in broadcast service—after that time—and by the end of the war most of the broadcasting stations in Germany were using the magnetophon to replace other types of recordings, and it provided recording performance not surpassed by any other method, with certain advantages not offered by other systems.

Recording is done on a plastic tape about 0.04 millimetre thick and 6 millimetres wide, which is impregnated or coated with microscopic particles of magnetic material. This unique recording material has been the subject of considerable study, and its successful development is to a large degree responsible for the excellent performance of the recording system.

The development of the tape has passed through three clearly defined stages. The earliest type produced (known as type C) used black magnetite, whilst the later type (known as type L) used red magnetite. Both these types were homogeneous. Type LG, the most recent, consists of a carrier layer of non-magnetic material basically polyvinychoride, which is coated with a thin layer of magnetite dispersion similar to that used in the type L. The manufacture of the tape is a highly specialised process.

The H.F. models of the magnetophon are equipped with three heads, which perform the functions of erasing, recording, and playing back. These heads, which are similar in appearance, differ only in gap width and winding impedance. They are arranged so that all three are in contact with the tape and work on a longitudinal magnetisation principle. Fig. 1 shows a sketch of recording and play-back heads in relation to the tape.

The material and dimensions of these heads have been carefully designed to secure the lowest possible tape speed compatible with the desired volume and frequency range.

The significant features of the process of erasing and recording are the use of a h.f. which leaves the tape in a magnetically neutral state, and the use of a certain value of h.f. signal during the recording process to minimise the incremental magnetisation background noise, and decrease distortion due to

* "Fran-Reen," Dawn Street, Stafford Heights, Queensland.

the non-linearity in the magnetisation curve of the tape. This process has been the subject of considerable research, and is responsible for a great improvement in recording performance.

For broadcast purposes, the tape is prepared in 1,000 metre rolls, which are some 10 to 12 inches in diameter, 6 millimetres thick and the weight about the same as two twelve-inch records. One roll gives a playing time of around 22 minutes, at a tape speed of 77 centimetres (about 30 inches) a second.

With proper equalisation in the recording and playback processes, a tape speed of 77 centimetres per second allows a frequency range whose lower limit is governed only by the associated electrical circuits. The upper limit being 10 Kc. down 2 db. Actual overall response measurements of typical systems show a virtually flat characteristic between 30 and 9,000 cycles; with present tape quality it is possible to extend the range to at least 12 Kc. at present tape speed, this calls for a good amplifier and a speaker splitting system using two speakers.

A dynamic range of 60 to 75 or even 80 db has been achieved in this equipment. Actual values are dependant on tape characteristics, hum pick up, and to a surprising extent on the quality of the amplifiers used for play-back.

Magnetic recording using tape is simple, rapid, and almost fool proof; momentary over-modulation produces only a slight increase in distortion as the curvature of the magnetisation curve is encountered. This a gradual effect and there is no phenomena comparable to the groove cross over, or retract encountered in disc recording, or light-value clash encountered in photographic systems.

A recording is ready for instant playback and may be monitored during the process. A programme may be made up from several tape recordings by cutting and joining the tape; all that is needed for this is a pair of scissors and cement.

Now for some technical details of the tape developed by the Germans. The use of this type or recording material was first proposed in 1928 by Fitz Pflemmer in Dresden. It was developed by A.E.G. who did the work in mechanical and electrical portions and I. G. Farber who developed the tape. The first type being the Type C as mentioned earlier in this article, which was a cellulose-acetate backing carrying an active layer 0.01 0.02 millimetre thick, composed of 90% magnetite (ferric-oxide) of grain size 0.002 millimetre and 10% adhesive. This tape tended to become brittle after long storage, and occasionally seemed to "shed" some of its active surface. Noise level was fairly high due to non-uniformity of the active layer.

The Type I Tape was an improvement on the "C," this used a body of "Luvitherm," a variety of polyvinyl-chloride, in which the magnetite was directly impregnated. This produced a very uniform material with excellent mechanical properties which does not appear to deteriorate with age like the "C" type tapes. Background noise with this tape is considerably reduced, and it gives excellent results, particularly with the h.f. systems.

Just before the end of the war, extensive research culminated in the development of the L-G tape. This type had a Luvitherm backing, with a carefully controlled, particularly uniform surface of magnetite with adhesive. Studies of particle size, permeability, and layer dimensions led to development of a layer size and composition which gives optimum performance. It is stated that this new tape gives recording characteristics somewhat superior to the type L tape, and retains the excellent handling and life characteristics of the later, with some increase of mechanical strength. The L type tape is much the easiest to produce in quantity, but mass production problems for the L-G type have now been overcome.

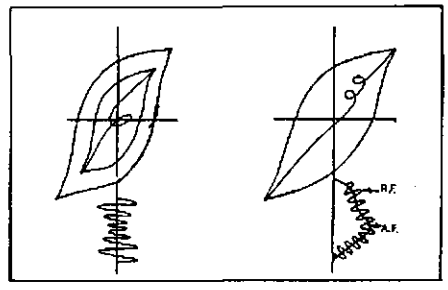

Fig. 2.

It can be shown experimentally and theoretically that the permeability and thickness of the active layer has considerable effect on the upper limit frequency, and the dynamic range. The permeability and thickness of the magnetic layer determines the dispersion of the magnetic field in the layer and affects the field across the gap in the recording and playback heads. This modifies the apparent gap width and so determines the upper limit frequency. The factors also determine the signal energy level of the recording, thus affecting the dynamic range which can be achieved with the existing amplifier noise, variations in the magnetic layers and other limiting factors.

German research has shown that under the magnetophon operating conditions, optimum compromise between upper frequency limit and dynamic range is achieved when the following equation is approximately satisfied:

Thickness of sheet—

$$10^{-3}\text{mm} \times \frac{\text{Permeability of layer}}{\text{Permeability of air}} = 100$$

The physical and mechanical properties of the tape are factors affecting the constantcy of reproduction speed. Study has been made to determine the extent of speed variations caused by tape shrinkage and stretch under operating conditions. It has been found that under normal conditions with a tension less than 250 grams, the speed variations resulting from this source are negligible.

The three heads used for erasing, recording and playback are mounted side by side, each of which consist of a circular assembly of high permeability laminations made up of two semi-circular actions, each carrying half the coil winding on a bakelite bobbin.

These two sections are fitted together in a diecast holder with a non-magnetic spacing shim between one joint to give a carefully dimensioned gap. The erasing head has a gap width of 0.5 mm. with copper spacer. The winding consists of two sections containing 75 turns each. Each section has an inductance of 0.2 millihenries.

The recording head has a gap width of 45 mm. The windings consists of two sections, each 150 turns. The inductance of which is 7 millihenries. The recording head has an additional gap of 0.3 mm. on the rear side to prevent saturation.

The playback head has a gap of 20 mm., two windings each 250 turns and an inductance of 80 millihenries.

Each head is covered (except for the working face) with a shield of high permeability metal to minimise the effect of stray fields. Leads are taken out through a shielded multiplug and the entire head assembly is quickly removable with two thumb screws.

For best results, the recording and playback heads must be carefully aligned so that their gaps are parallel. Actual alignment is provided for in most cases by using an eccentric washer between the head and its mounting.

Erasing is accomplished by energising the previously described head with between 120 and 150 milliamperes at a frequency in the region of 35-40 Kc. The frequency used is not critical. It must be high enough to cause several reversals while the tape is moving a distance equal to the erasing gap width and the upper limit is determined by the hysteric losses and the difficulty of feeding the coils. Sufficient energy can be obtained from a self excited tetrode oscillator, such as a 6V6. It is German practice to feed the erasure through a condenser in series resonance.

Recording is accomplished by energising the recording head simultaneously with the desired audio signal and a premagnetisation current at supersonic frequency. There is an optimum value of premagnetisation current and the audio input must be equalised considerably for optimum results.

The current through the coil should be the same for all audio frequencies to keep the magnetic recording level in the tape independent of frequency. This condition can be met by feeding the head (an inductive load) from a tetrode, which tends to give constant current operation. Furthermore, at the high audio frequencies when the tape moves an appreciable fraction of the gap width during a cycle, it is necessary to increase the signal to compensate for the "slit" loss in a manner comparable to motion picture practice. This is done by simple R-C or L-C circuits to boost the signal over the desired frequency range.

The premagnetisation current determines the results. There is an optimum for lowest distortion, best h.f. response and lowest background noise. The amount of current is determined by the characteristics of the recording head.

In the magnetphon the recording head is energised with from 7 to 10 Ma. of current at from 80 to 100 Kc. In some recorders 150 to 200 Kc. is used; at the same time the audio current is about 5 Ma. at 1,000 cycles. The chosen value of premagnetisation current is that which produces a maximum audio output at very low recording levels at the upper limit of the frequency range. Under these conditions distortion is about 2% at 1,000 cycles.

N.S.W. Emergency Work During Disastrous Floods

BY PETER ALEXANDER,* VK2PA, AND BILL MOORE,† VK2HZ

To describe the events that took place in emergency working in N.S.W. between 23rd June and 29th June as the greatest ever in Australia would be no exaggeration.

In all, some 18 Amateur Stations in flooded areas on the North Coast were active performing a marvellous task in the relief of the public and assisting the various authorities to restore normal facilities.

Twenty-four stations including official stations were active in the North Coast Net, plus of course aircraft and Army "Ducks." In almost 'round the clock operation, the Net kept in operation for six days. During the major portion of the period, Amateur Radio Stations provided the only means of communication between several flood bound towns.

In the Hunter Valley the Emergency Net was alerted and members stood by for a similar period awaiting any call for assistance.

The network on the North Coast extended from Brisbane, where Frank Nolan, VK4WI was active, to Sydney, where official station VK2AA operated. Control was exercised by Peter Alexander, VK2PA, at Port Macquarie.

Serious flooding and interruption to normal communication channels occurred in Taree, Port Macquarie, Kempsey, Coffs Harbour, Bellingen, Grafton and surrounding districts almost simultaneously.

The network commenced functioning shortly after the usual morning contact between VK2PA and VK2ASF and VK2ZS in Kempsey on 23rd June. VK 2GS and VK2AYP in Sydney relayed news of the flood position to the Wireless Branch and shortly afterwards the P.M.G. Station, VK2AA, came on the air. The Net then moved to the official emergency frequency of 7002 Kc. and the following stations reported in within the next 24 hours as the position in their location warranted it. VK2ZS at Kempsey and VK2ZS/Portable, operated by D.C.A. Technician Merv Harrison, at East Kempsey, and later at Gladstone; VK2ARY Bellingen, VK2JK, VK2AJB, and VK2ARJ Coffs Harbour; VK2LH, Lismore; VK2ADE, Casino; VK2TB and VK2NY at Grafton; VK2XO, Raleigh; VK2AEY, Taree.

It might be pointed out that with the exception of VK2PA and VK2AEY at Taree, all stations lost their normal AC supplies, due to flood damage and the majority of these stations operated effectively on emergency power from batteries.

VK2ARY used a No. 11, VK2JK emergency equipment with motor generator supply, VK2XO utilised a Type A Mark III. on 7100 Kc. xtal control. VK2XO, although not heard often due to his enforced evacuation from Raleigh substation, did a very fine job functioning in the Net and receiving very important traffic for the C.R.C.C., enabling power to be supplied to many areas including Kempsey and Coffs Harbour perhaps days before it would have otherwise been possible.

It has been unfortunately impossible to really obtain a true picture of the tremendous amount of Amateur Radio activity that took place during the North Coast and Hunter Valley floods during late June.

It was hoped that all the Amateurs that participated could tell their own stories of their activity, however that was not to be. Many of these Amateurs still have their problems with rivers rising again and for that matter, many of them lost much of their equipment and suffered great personal loss.

The writers are certain that Amateurs throughout Australia extend their sympathy to those of their fellows who lost so much during the disastrous floods.

By Saturday the Net had formed itself and Newcastle was represented by VK2ZC who handled traffic for the Newcastle Police, etc., from the stricken area north. VKs 2AHA, 2ADT and 2ASJ did an excellent job at a later stage obtaining aircraft E.T.D's., etc. VK2ZC was assisted by VK2CS and VK2KG.

Camp Shortland, call UWW, and Sydney Aeradio also operated full time in the Amateur Bands. The operator at VZSY Aeradio, incidentally, was Chas Peddell, VK2KN, who did such a fine job in last year's Kempsey floods. The Postmaster at Dorrigo, an ex-commercial operator, came on with the Net and operating an FS6 handled traffic for that area.

Most of the operating was conducted on the 7 Mc. band by day, and the 3.5 Mc. band by night. However, quite an amount of work was done cross band to aircraft, forestry, and Army frequencies. VK2WH, of Forbes, acted as a link station when conditions were bad and supplied many "fills."

VK2JC, Narribri, VK2APS, Tamworth, and VNS Armidale (District R.I. Station) passed very valuable weather reports and river heights that otherwise would have been unobtainable. VK2EA, Kangaroo Creek, did an excellent job in repairing broken telephone lines in the Nymboida District.

In Kempsey, three stations were active, VK2ASF, VK2ZS and VK2ZS/P (Merv. Harrison). The latter station moved to Gladstone and, using an FS6, handled over 100 important messages. The three stations kept the Kempsey district linked, while VK2ZS handled traffic to the Amateur Net. VK2ASF was flooded out from his shack quite early in the piece and then moved to the Forestry Office and operated mainly on Forestry frequencies.

VK2XO, as mentioned previously, had to flee from the shack, and took the Type A Mark III. with him, but didn't have time to collect a key, so did his sending by touching two wires together. Crieff stored much of his equipment in the roof of the garage. Unfortunately the water rose right over the top of the garage and carried the gear, tools and books out to sea. VK2XO arranged his family's rescue from the roof tops via Amateur Radio and this link was also

* Hill Street, Port Macquarie, N.S.W.

† Moorecourt Ave., Springwood, N.S.W.

responsible for the rescue of many people in the Raleigh District. VK2ARY, from Bellingen, up the river from Raleigh, arranged the rescues. Harry was using a No. 11 and handled a great deal of important traffic for his district.

At Coffs Harbour VK2JK had a great deal of trouble; the cyclone which, incidentally, wrecked the local fishing fleet, took all antennae with it, but Jack managed to get a temporary antenna erected and kept going with only a brief delay.

In Grafton, VK2NY and VK2TB operated in the Net until flood waters rose and they had to evacuate. VK2ADE, in Casino, although not always near the rig, monitored the frequency and came on when required. He used the landline to relay messages to Lismore and Grafton. Charlie did a fine piece of work in getting the wheels turning for an air drop on Bellingen.

VK2AEY handled all traffic for that area and his station was used as headquarters for the Army's "Ducks." Bill also worked with the aircraft dropping relief supplies.

At control, VK2PA, excellent cooperation was given by the Police, Postmaster and Shire Council. A phone was installed in the shack by willing helpers and a direct line was kept open to the Shire Council Wauchope where the train was organised and a shipment of Army "Ducks," bread, etc., was made to Telegraph Point. The only means of crossing the Hastings River at this stage, Saturday 24th, was via the train from Wauchope, as the floods had already closed the main highway north at Port Macquarie. In the later stages, a direct line was obtained to VK2ZS at Kempsey which provided another channel.

Throughout the operation, traffic on the emergency frequencies was extremely heavy. VK2PA recorded 558 messages in and out excluding telephone traffic. VK2ZS and VK2ZS/P at Gladstone passed 60 urgent telegrams besides much Police traffic. VK2ARY handled over 100 messages and VK2JK's score was well up. The grand total was well over the 1,000 mark.

Most of the Amateurs participating operated for the full period of six days, sometimes for many hours without sleep.

Letters thanking the network for the grand job done were received at VK2PA from the Council of the Municipality of Kempsey, Municipality of Port Macquarie, Hastings Shire Council Wauchope. Amateurs who participated received a letter of thanks from Mr. S. F. Kellock, Deputy Director Posts and Telegraphs.

During the North Coast working, members of the Hunter Valley Emergency Net were standing by as river levels rose along the Hunter. The normal communication channels held and their services, fortunately, were not required. River height readings for the Police were, however, supplied as requested. Stations from Muswellbrook to Maitland were active including VKs 2ANU, 2VU, 2JZ, 2ADT, 2AKP, 2XQ, 2TY, and 2DG.

A link was also supplied from Maitland by VK2AKP to Newcastle and then to the North Coast allowing Army "Duck" stations there to communicate with their base.

That completes the story; as mentioned previously, it was hoped that it would have been fuller and if anybody who assisted was missed, please accept the writers' apologies. Thanks must also be extended to the many chaps who were listening and were available to assist if required.

It was a good job done all round and service rendered to the general public received much publicity in the Press, especially in country areas.

DX NOTES BY VK4QL

Under the call of VK2QL, I used to write DX notes for the N.S.W. Division. With very little warning I left VK2 for a six months sojourn in VK3 and, having to do a considerable amount of study, I could no longer carry on the notes. I was hoping to see the notes carried on by a successor. The magazine has now requested that the notes continue on a Commonwealth basis. So, now it is up to the DXer's from all States to let me know what are their doings, so as I can have material for the compilation of the notes each month. Remember, it is only from information received, we can find out what happens in each State. Townsville is a very different QTH to Melbourne, Perth and Darwin, and conditions therefore will also be very different.

- **My address for posting any "gen" you might have is: F/Lt. F. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Garbutt. Incidentally, you need only put one (1) penny stamps on your letters if yon use that address.**

On coming to VK4 for a couple of years duration, I decided to bring my small rig and see just what could be done on reasonably low power and an ordinary simple antenna, in this case a Windom, 132 feet long. In the five months on the air, the results have, I think, especially with the conditions existing, been rather extraordinary.

The power has not exceeded 45 watts on 14 and 28 Mc., 25 watts on 3.5 and 7 Mc. On 7 Mc. five continents have been worked, Europe to come. On 14 Mc. 97 countries, 44 States, and 37 Zones, a W.A.C. being completed in 63 minutes. S9 reports from four Continents and S8 from the other two on 14 Mc. 28 Mc. has four Continents and this band was not operated until the middle of May when the band had practically "had it" for the season.

All this is not in the form of boasting of prowess, but to show that high power and multi-element arrays are not an essential for working DX.

Conditions have not been good over the last couple of months and according to the Ionospheric Predictions, 14 Mc. at least, is going to be worse for the month of August. Despite the poor conditions, some very nice and rare DX has been worked and some others heard, but not worked. When the band seems dead I find that is the time some very rare DX appears and is worked, so gang don't use the DX bands for cross town chatter. Remember, if you can't hear DX, others can and the cross town talk interferes with somebody who maybe can.

DX has been heard right through the daylight hours the last couple of weeks. Between 10 and 11 a.m. on a recent day all continents were heard on 14 Mc., which included quite a few Europeans and South Americans round about 7 a.m. On a recent afternoon ZS2X was worked at 3 p.m. and VQ3BNU was heard. This gives an idea of the way the old Ionosphere is working at the present time up here. I find conditions at Ballarat different to Townsville. I worked one South American at Ballarat in six weeks' operation, yet up here, South America is dead easy. The difficulty here is Europe in the late evening or early morning.

Well gang, this is the start, if you are interested in the notes keeping on let me have some copy, either by letter or over the air.

- **The thought for the month: "Give honest reports and help to clear up the bands."** Cheers till next month.

PREDICTION CHARTS

The Prediction Service is particularly disappointed at the non-receipt of any information, requested each month, relating to the accuracy of its predictions.

These comments should be forwarded to your Divisional Council for onforwarding to Federal Executive.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

There is very little activity to report on the v.h.f. bands and no reports of interstate openings have been received to date. The lack of activity on the bands seems to indicate much re-building activity in preparation for the summer DX season.

We learn with regret of the disastrous fire suffered recently by VK6WJ, when his gear for all bands was destroyed. All 50 Mc. operators extend their sympathy to 6WJ and hope that it won't be long before he returns to the air.

50 Mc. ACTIVITY

NEW SOUTH WALES

VK2ARW, whose job it is to call cars and stations, finds time occasionally to appear on the band with a fireside rig using a pair of 807s feeding a dipole. Between times he is experimenting with 2WR on wire recorders. Their chief difficulty so far has been to wipe the wire clean—a process resembling the demagnetising of a watch.

2WT heard two KH6s on 28th June, but no contact was made. 2ARG, of Palm Beach, 18 miles north, puts a solid signal into Sydney city from a 100 watt rig and a six element beam.

We hear that the band was open between VK3-VK4 at the end of July but no DX was heard in Sydney despite a careful check on the band by several Sydney Hams. It has been suggested that in the slack periods on the v.h.f. bands, calls should be made on the hour and half-hour so that contacts may be more easily made. What is really wanted is greater activity on the band so that more details of ideas and results can be collected.

2AHF, of Canley Vale, was contacted during one of his rare appearances on the band. He has an antenna farm which makes us flat-dwellers envious. He was using a long wire antenna when contacted.

2ADE, of Casino, was working Interstate in mid July. 2HO, of Roseville, is trying to popularise the h.f. end of the band and has a signal on 52.8 Mc. 2VW had a spell at home with the 'flu and has put together a double conversion receiver with 12 Mc. and 455 Kc. i.f. channels.

WESTERN AUSTRALIA

Very little change to report from VK6 during the month of, July on the various v.h.f. bands. No new signals to report on six metres. 6HW has his super-regen receiver working OK and reports hearing 6GB and 6AS. Has probably heard most of the other metropolitan stations by now. Harry has not as yet succeeded in working any stations on six since his signal was heard in Bassendean when he worked 6BO (cross band). I believe 6HW has an indoor beam and when he gets that outside and up a few feet in the air it should make all the difference.

6DW is itching to try his new final, built for use with super modulation, but since building it up, signals over the 150 mile path to Perth have not been good enough to permit phone operation. 6GB has finally vacated his perch up in the wasteland of 53.4 Mc. Now has v.f.o. working OK and no doubt saving the wear and tear on dial driving mechanisms of all other six metre receivers, converters, etc. I think 6PW, down in East Fremantle, must be getting interested in six metres. Heard him transmitting on 20 and trying to hear six metre stations on his receiver. Hope you get the receiver working on this band Ray, because once you do, it won't be long before we hear you operating down here. 6AS talking about pushing his three element bam up a bit higher in readiness for the coming season, and thinking of adding the fourth element whilst on the job.

6CF has been threatening to give six metres a try, but haven't heard anything of Chuck yet. I do believe he can hear six metre signals, so the hold-up must be the transmitter. 6GS, down in Harvey, still keeping up the skeds with 6RK—mostly on c.w. though, only occasionally are conditions good enough for phone operation.

144 Mc. DOINGS OF THE MONTH

NEW SOUTH WALES

During the month Gladesville Radio Club and Experimental Radio Society had a field day passing messages, decoding and encoding with 2AH as the home station. Mobile stations were situated at Prospect, Castle Hill, Koala Park and other likely high spots around the city. The day was dull and cold and there will be no more field days for a while.

2LZ, of Wentworth Falls in the Blue Mountains, is active on the band. He was heard putting a strong signal into Sydney at the end of July.

2XX is busy these nights giving details of his super regen and promises 6-8 signals at least on the band when a new receiver requires testing. 2PU is the latest and is busy looking for the band.

2XG and 2XX made contact over a distance of about 22 miles—a superhet being used by 2XG and 2XX had his super regen. 2ANF has also contacted 2XX. 2WJ, of Kingsford, has a pair of RL18s with 7.5 watts input and a ten element beam. He is able to work 2XX in Sutherland but is not happy about his super regen receiver.

We must record the story of the dog who was banished from the shack because he was blamed for the little puddles of water which had actually come down the co-ax feeder during the rain!

WESTERN AUSTRALIA

6GM now has 522 working nicely on this band and last heard using a fixed beam. However by now George probably has some method of rotation. 6WT also using 522 on this band. Are you allowed space for an array on this band Dave or is that "verbotem" too. Other stations operating 144 are 6KW, 6RU, 6GB, 6AG, 6FC (I think), and 6BO is getting the 815 final ready for operation.

288 MEGACYCLES AND ABOVE

288 Mc.—6FC and 6HO still doing good work on this band. 6DW up in Bruce Rock has to wait till he comes down to Perth to use his 288 Mc. gear, but is still experimenting ready for the next trip down. 6RK has gear for this band, but at the time of writing these notes, has not succeeded in finding the right metre (I don't mean an 0-1 either).

576 Mc.—At the July meeting of the V.h.f. Section, N.S.W. Division, which attracted quite a number of visitors, there was a demonstration of 576 Mc. gear. Secretary, Cec Cronin, brought in his superhet with lighthouse r.f. stage—a beautifully built job with an alarm which rings when a signal comes on. 2ANF, mobile on 144 Mc., was at the meeting and an attempt was made to keep in touch with a car which went to the northern suburbs from Science House. 144 and 576 Mc. gear was carried in the car. Fog and rain made for difficulties, but the experiment was an interesting one and has resulted in a few more converts for 576 Mc.

[Acknowledgments to VK2AQZ and VK6GB for the above material.—VK3CR.]

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ABSTRACTS, OVERSEAS MAGAZINES

"WIRELESS WORLD," MARCH, 1950

P. 82: **"Simple Cathode Ray Oscilloscope;"** M. G. Scraggie.—A minimum component c.r.o. which should meet most needs of Amateur use.

P. 88: **"Wide Range R-C Bridge;"** H. E. Styles. —Very simple bridge for resistance capacity and insulation leakage measurements. Neon tube audio generator and headphones as detector. Full description of easy calibration procedure.

P. 93: **"Interference from Fluorescent Tubes;"** "Diablist."—An obscure source of r.f. radiation and methods of suppression.

P. 103: **"Earth;"** "Cathode Ray."—Some of the finer points on earthing and minimising hum pick-up.

"CQ," APRIL, 1950

P. 11: **"Building a Wide Spaced 20 Metre Rotary Beam;"** W. I. Orr, W6SAI.—Mechanical hints.

P. 15: **"The Traffic Midget;"** W. E. Johnson, W8VOK.—Small 80 metre transmitter-receiver.

P. 18: **"An Economical 10 Metre Mobile Phone Transmitter;"** W. W. Cooper, W8EWC.—Uses 2E30 and 2E24 quick beating filament tubes.

P. 20: **"A Beginners' Transmitter for the 160 Metre Band;"** C. Clark, W1KJS.

P. 22: **"A Senior Grade 807 Transmitter;"** E. W. Hill, W4PQA.—6C4 c.o., 807 buffer doubler, 807 final.

P. 26: **"Stabilised Low Power Tetrode to be available for use in Ham Rigs;"** A. E. Hayes, W2BYF.—Just what is needed, the 807W which has the same ratings as the 807, but has no parasitics due to its compact construction.

P. 28: **"Extending the range of the Grid Dipper;"** W. M. Scherer, W2AEF.—Using a grid dip oscillator at low frequencies.

P. 38: **"In the Shack and Workshop."**—(i) Frequency Halving your v.f.o. for 160 metre operation. (ii) Substitute for the ARC5 plug. (iii) Half voltage from a bridge rectifier.

"QST," MAY, 950

P. 11: **"A Variable Selectivity Sharp I.F. Amplifier;"** B. Goodman, W1DX.—Nine stages at 50 Kc.

P. 16: **"A Low Cost T.V.I. Filter;"** C. A. Dene, W8CPC.

P. 19: **"'Tailor Made' Antenna Couplers;"** G. Grammer, W1DF.—Although commercial coils are used, this contains much good information on antenna couplers.

P. 25: **"Utilising the 826;"** R. M. Smith, W1FTX. —A 250 watt amplifier for 10, 6 and 2 metres.

P. 29: **"The Ground Wave at 1.8 Mc.;"** C. F. Rockey, W9SCH.—The probable consistent range on 160 metres.

P. 34: **"Tower and Rotator Techniques;"** L. H. Hippe, W6APQ. Part I.—Building a rugged tower.

P. 42: **"A Compact Two Metre Station for Mobile Use;"** H. J. Hayes, W3JUM.—A model of intelligent compactness. Crystal controlled transmitter, modulator, receiver and power supply inside 7" x 15" x 3" chassis.

P. 52: **"Graphical Solution of Superhet Tuning Design;"** P. V. Prooijen, PA0PUP.—Determining h.f. oscillator values for simple tracking.

P. 54: **"It's a Pretty Pickle;"** J. W. Paddon, VE1OU.—Home anodising your panels in colour.

P. 56: **"An Automatic Transmitter 'Turner-Onner';"** M. E. Hickle, W2SO.—Switches transmitter off after any keying break of more than two seconds.

P. 58: **"A Simple Vertical for Forty;"** H. E. Thornhill, W6DDT.—81 foot high self supporting dural tubing.

P. 66: **"Hints and Kinks":** (i) Null indicator for the BC221 using a magic eye tube. (ii) Improvement for soldering iron. (iii) Direction indicator hint. (iv) Soldering to polystyrene coil forms. (v) Measuring centre impedance of antennae with the twin lamp. (vi) Inductive coupling system.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President.—J. Corbin, VK2YC.
Secretary.—David H. Duff (VK2EO), Box 1734 G.P.O., Sydney.
Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.
Divisional Sub-Editor.—A. O. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, N.S.W.
Zone Correspondents.—Nth. Coast & Tablelands: J. M. Retallick, VK2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

President.—G. S. C. Semmens, VK3GS.
Secretary.—C. Dyer (VK3DY), 19 Collington Ave., Brighton (XA 6326).
Administrative Secretary.—Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne, C.1.
Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.
Zone Correspondents.—Western: O. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rorke, VK3AKR, Killigrew, Westmere; North Eastern: H. G. Wohlers, 107 Templeton St., Wangaratta; Far North Western: M. Folie, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Tinambra; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW by arrangement only on the 7 and 14 Mc. bands.

VK6WI.—Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

President.—J. F. Pickles, VK4FP.
Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.
Meeting Night.—Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.
Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

President.—E. A. Barbier, VK5MD.
Secretary.—G. M. Bowen, VK5XU, Box 1234K, G.P.O., Adelaide.
Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.
Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

President.—R. W. S. Hugo, VK6KW.
Secretary.—W. E. Coxon, VK5AG, 7 Howard St., Perth.
Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.
Meeting Night.—Third Tuesday of each month.
Divisional Sub-Editor.—Alec A. Smith, VK6AS, 75 Weston St., Carlisle, Western Australia.

TASMANIA

President.—J. Brown, VK7BJ.
Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.
Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.
Divisional Sub-Editor.—S. Excell (VK7SJ), 77 Molle Street, Hobart, Tasmania.
Northern Zone Correspondent.—R. H. Kilby, VK7RK, 5 Galvin Street, Launceston.

FEDERAL

DX C.C. LISTING

PHONE

VK3JD (1)	37	148
VK3BZ (3)	37	137
VK3EE (10)		137
VK6KW (4)	37	136
VK6RU (2)	37	135
VK6DD (6)		126
VK3LN (11)		125
VK4KS (9)		121
VK4JP (8)		114
VK4HR (12)	35	107
VK3AWW (14)		105
VK2ADT (13)		102

C.W.

VK3BZ (6)	40	177
VK2EO (2)	40	152
VK3CN (1)	40	151
VK3FH (15)	39	143
VK4EL (9)	40	140
VK3KB (10)	39	138
VK3VW (4)	40	135
VK2QL (5)	40	133
VK4HR (8)	40	126
VK4RF (11)	35	125
VK6RU (18)		123
VK3EK (3)	39	122

OPEN

VK3BZ (4)	40	200
VK6RU (8)	39	169
VK3KX (1)	40	167
VK4HR (7)	40	161
VK2DI (2)	40	160
VK3HG (3)	40	160
VK6KW (13)	40	157
VK3JE (12)	39	154
VK4EL (10)	40	140
VK3MO (5)	39	139
VK4KS (24)	36	139
VK3OP (19)	39	137
VK6DD (22)		136
VK4DO (15)	40	135
VK3LN (29)		128

STATIONS ON HEARD AND MACQUARIE ISLANDS

The following is a list of VK1 call signs, their private addresses and locations:—

VK1HV—H. Vause, 50 Mitchell Street, North Ward, Townsville, Queensland; location, Heard Island.
VK1YG—L. McGorrigle, c/o. V. J. McGorrigle, Prince's Highway, Engodine, N.S.W.; location, Heard Island.
VK1PG—J. H. Gore, 12 Pearl Street, Newtown, N.S.W.; location, Heard Island.
VK1JW—J. L. Ward, 42 Electra Street, Williamstown, Victoria; location, Macquarie Island.
VK1YM—D. S. Cohen, 35 Devoy Street, Ashgrove, Brisbane, Queensland; location, Macquarie Island.
VK1RB—T. R. Boyd, 6 Portland Street, Seacliffe, Adelaide; location, Macquarie Island.

FEDERAL CONSTITUTION ALTERATIONS

F.E., on behalf of the Federal Council of the W.I.A., hereby gives notice that it is intended to alter the Federal Constitution of the W.I.A. (as amended 1947).

Section 41A, as follows:—Delete the word "thirty" and insert the word "fourteen" in lieu thereof.

Add 67A, **Membership Transfers:** "Where a member transfers from one Division to another. (1) The recipient Division shall receive him as a financial member for the remainder of the financial year provided he was fully financial before departing from the losing Division. (2) The Secretary of the losing Division shall advise the Secretary of the recipient Division of the intending transfer and of the member's financial status and grade."

Add 43A: "That in matters of finance involving all Divisions, a majority vote of at least 5 to 2 of the Federal Council be required for the passing of the motion."

W.I.A. ACTIVITIES CALENDAR

Sept. 22-24: VK-ZL DX Contest (c.w.).
Sept. 29-Oct. 1: VK-ZL DX Contest (phone).
October 6-8: VK-ZL DX Contest (c.w.).
October 13-15: VK-ZL DX Contest (phone).

REMEMBRANCE DAY CONTEST

The Remembrance Day Contest, as indicated by the number of stations participating, was an unqualified success. To ensure that your Division has an opportunity of securing the much coveted trophy, all licencees are urged to send in their logs duly signed as laid down in RULE 16, to their respective Divisional Councils for membership checking.

These logs are to be in the hands of the Contest Manager by 5th September, therefore your prompt action is needed.

ADDITIONS, ALTERATIONS, AND DELETIONS TO AMATEUR CALL SIGNS—JULY, 1950

Additions—

VK2QY—A. M. L. Moss, Flat 3, "Sur La Mur," Cliff Brook Parade, Clovelly.
2AOL—J. W. London, 48 Proof Range, Stockton.
2AVM—C. H. Miller, 29 Park Rd., Five Dock.
2AWE—R. M. H. Weston, "Des Indes," Mary St., Blakehurst, Sydney.
VK3AFW—R. F. Woolley, 14 Breese St., Brunswick.
3AGG—B. F. Gillies, 123 Sobroan St., Shepparton
3AVD—A. V. Dwan, 52 May Rd., Toorak.
VK4AS—K. H. Smith, 32 Enderley Rd., Clayfield, Brisbane.
4IM—J. D. Maclean, 2 Holmau Lane, Kangaroo Point, Brisbane.
4IN—F. E. Naylor, Cr. Hedron and Adamson Sts., Wooloowin.
4RQ—R. W. Rose, Cassowary St., Longreach.
VK5IR—J. A. Robb, Hut T10, R.A.A.F. Station, Darwin, N.T.
VK7SR—"Army Signals Radio Club of Tasmania," c/o. Chief Signal Officer, Tasmania Command, Anglesea Barracks, Hobart.
VK9MT—M. Tie, Kone Dabu, Port Moresby.
9RG—R. G. Garrett, Rabaul, T.N.G.

Alterations—

VK2FE—12 Sera Street, Lane Cove.
2FS—17 Short Street, Summer Hill.
2JW—Park Street, Orange.
2LY—"Yallambe," 6th Avenue, North Katoomba.
2ABY—Commercial Hotel, Bowning.
2ADX—Shire Engineer's Residence, Young St., Grenfell.
2AFC—Cr. Faraday Road and Segers Avenue, Padstow, Sydney.
2AHB—131a Balmain Road, Leichhardt.
2AJV—Canberra Crescent, East Lindfield.
2ALL—Rodborough Road, French Forest.

VK3FB—3 Spray Street, Parkdale.
3JT—14 Bluff Street, East Hawthorn.
3KN—Cr. Yar-Orrong and Barnard Rds., Toorak.
3LY—5 Desailly Street, Sale.
3RS—Lot 382, Sylvander St., North Balwyn.
3VU—8 Fenwick Street, Clifton Hill.
3ACY—216 Cumberland Road, Pascoe Vale.
3AJK—Moss Side, Alexander Street, Belgrave.
3AKN—Cr. Yar-Orrong and Barnard Rds., Toorak.
3ALN—Government Aerodrome, Mangalore.
3ARC—4 C.A. Depot (R.A.A.O.C.), Mangalore.

VK4BB—Barolin Road, Bundaberg.
4BJ—c/o. Wypers Radio Dept., Bourbong St., Bundaberg.
4KR—Elmeo Road, North Side, Mackay.
4MA—High Street, North Maekay.
4WD—"Eve-Lyn," Paramount Terrace, Paramount Heights, Morningside, Brisbane.
4ZZ—c/o. Golden Fleece Hotel, Dalley.

VK5AM—Myal Avenue, Murray Bridge.
5BB—Section 742E, Hundred of Crystal Brook.
5CS—223 West Beach Road, Richmond.
5CX—Liddiard Street, McLaren Vale.
5FY—c/o. Mr. A. V. Ferguson, Eight Street, Gawler West.
5IS—11a Giles Street, Crystal Brook.
5XY—Lot 62, John Avenue, Magill.

VK6AH—38 Lennon Street, Wiluna.
6AY—24 Cunningham Street, Merredan.
6BN—12 Zenobia Street, Palmyra.
6BY—55 Railway Road, Kalamunda, Perth.
6CD—8 Woodroyd Street, Mt. Lawley.
6GR—Myola Road, Maddington.

VK9KT—Samarai, Papua.

Deletions—

VK2OK—Cancelled.
2PL—Cancelled.
2AWF—Cancelled.
2AWW—Cancelled.

VK3ME—Cancelled.
3UN—Cancelled.
3ARN—Cancelled.
3ARR—Cancelled.
3AXC—Cancelled.

VK4CP—Cancelled.
4JY—Cancelled.
4RR—Cancelled, now operating under VK4RQ.

VK5AH—Cancelled.
5RY—Cancelled.

VK7AC—Cancelled.
7UT—Cancelled.

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Andre Baillet, FW8AA, who expected to be active from Wallis Island by July last, has had some unexpected setbacks. Firstly, portion of his gear, which should have arrived from France several months ago, has so far failed to arrive; secondly, the only available transmitter—an A.W.A. job—required a 3.5 Mc. crystal and the only ones available were on 7 Mc. However, Andre will soon be in possession of the necessary 80 metre crystal and can then get a start on the 7 Mc. band, pending the arrival of his own gear. Unfortunately the vessel which makes the run from New Hebrides to Wallis Island four times yearly is now held up in dry dock in Sydney, so it may yet be late September before Andre is heard on 7 Mc.

Squadron Leader Johnny Jones, VK3RG and JA5AJ, who expected to return to Australia by June last after an 18 months' sojourn with the B.C.O.F. at Iwakuni, Japan, does not now expect to be home for some time due to the trend of events adjacent to Japan.

Treb, of B.E.R.S.195 fame, hands the palm to 7 Mc. for current DX. During July in the early mornings, Eric logged the following countries on that band: G, I, OE, OH, DK, UA9, JA2, UA1, HB, UR, UB, UC, F, HA, SM, UQ, FB8, I1/Triesse, KH, KL, VE, YO, VS, UF, FD, LB, VQ4, UP, UO, ZB, KZ, SV1, FK, CE, and HH. A nice assortment.

A repetition of the drill when making application for certificates and awards should not be amiss. W.A.C. and W.B.E. Awards are made only to financial members of the W.I.A. Stations making application for these Awards should submit them, accompanied by the cards, to the Secretary of their Division who will pass them to the Federal QSL Manager for scrutiny and return and the necessary recommendation to the I.A.R.U. or R.S.G.B. through the Secretary of Federal Executive. In the case of W.B.E. applications a money order for 2/6 sterling, payable to the R.S.G.B., London, must accompany each application. Separate fees are payable for each W.B.E. Award, i.e. phone and c.w. No fees are required in the case of W.A.C. applications.

Applications for the VK DX C.C. Award should be submitted direct to the Secretary, Federal Executive W.I.A., Box 2611W, Melbourne, and must be accompanied by the verifications, together with a list of the countries claimed, in alphabetical order. Sufficient postage for the return of the cards must be enclosed and it is advisable to send a minimum of 103 cards to allow for any possible disputed countries. After a DX C.C. Award has been made claims for additional countries should be submitted in tens by the same method.

Claims for the A.R.R.L. W.A.S. Certificate must be submitted direct to the A.R.R.L. by the claimant as the W.I.A. does NOT handle this Award in any way. The handling of claims for Awards entails considerable work and correspondence by your Divisional and Federal officials, whose time and energy is given gratuitously on your behalf, therefore it is incumbent on claimants to ensure that their applications are in order and follow the procedure outlined above.

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NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester Street, Sydney, at 7.45 p.m. on Friday, 28th July, at which over 150 members were present. Mr. H. Stowe, Chief Electrical Engineer of the Water Board and a Foundation Member of the W.I.A., gave a most interesting lecture on "Electronics in the Metropolitan Water Sewerage and Drainage Board." He was accompanied by Mr. Laurie Hughes. Slides and various pieces of equipment were put on show.

After Mr. Stowe's lecture, Mr. Hughes gave a most interesting description of the transmitting set-up. Of particular interest was the application of the transmitter to indicate flood heights automatically by an unattended transmitter. He described the difficulties of fungus and dampness which were gradually being overcome. In conclusion he pointed out that most of the equipment was designed, developed, and engineered by the Water Board's radio staff which, while short of technicians, was endeavouring to cope with all requirements of the service.

Joe Reed moved a vote of thanks to Mr. Stowe and Mr. Hughes.

Agenda items from the Easter Convention (Federal) were then discussed and such items as were considered satisfactory were ratified. On a motion from the Hunter Branch, the nomination of Dr. Frank Adcock for honorary life membership was put forward and discussed. The Chairman, Mr. J. B. Corbin, VK2YC, informed members that Council approved of the nomination. In rising to propose

the motion, Joe Reed, 2JR, gave an outline of Dr. Adcock's achievements in radio science. Mr. Reed's motion was seconded, and carried unanimously.

In welcoming 22 new members, the Chairman stressed the desire of Council to see our membership at the 1,000 mark before the end of the current year and appealed to all members to do their share to make the W.I.A. completely representative of N.S.W. Amateurs.

The resignation of Mr. Maurice Butler, VK2AAN, through pressure of business, was accepted with regret and Maurie was thanked for his services. In accepting the position of Honorary General Secretary, Mr. Dave Duff, VK2EO, takes on a full sized job, but knowing Dave's abilities the position is assured of a competent and thoroughly efficient executive for the future. The meeting closed at 10.30 p.m.

WESTERN SUBURBS

2AIA seems to enjoy working the locals from Ashfield. 2ACD is still persevering with that full wave antenna and hoping for the elusive Ws to come back. 2AHU's modulator sounds good; how is the new mast settling into the cement Curl? 2AGU is heard in regular contact with his son who flies around a few quarters of the globe. 2US still manages his sked with JA5AI in spite of bad conditions. 2BN never fails! If he can hear them he can work 'em on his full wave. 2BX still knocking out Ws with his vee beam. 2XH had a nice card from HP1LB. 2NJ has trouble with the mains voltage. Rex and Keith being close handy chew the rag quite often.

2KS still managing some DX but says conditions poor. 2AMJ, Joyce, must be on 144 Mc. since nothing is heard on 20. 2ANC has not been heard so there must be great preparations going on in the new shack. How is that new rotary beam, Frank? 2OQ's crystal mike passed out, but may revive with silica gel; worked HR1BG and two XEs with a P.M.G. carbon pressed into service. 2ATL works DX under all conditions with his new beam. Is very pleased about it all. 2ARF is thinking of more power on 144, maybe 20 watts or so. 2ALO uses a 522 receiver and home brew transmitter on 144, plus a very elaborate antenna system.

The Experimental Radio Society, Mitchell Street, Enfield (opp. Henley Park in Council Works Depot), hold meetings at the aforesaid address each Thursday and those interested are cordially invited to come along and join in. The President is J. Wells, 87 Liverpool Road, Enfield, and the Secretary, Ted Whiting, VK2ACD.

NORTH COAST AND TABLELANDS

Congrats to all Amateurs active and listeners, especially 2PA, 2ZS and 2ARY for the wonderful job done during the flood on the North Coast. In the Raleigh district alone 50 people were rescued by boats from the roof tops due to messages sent out by radio for help. Full details of the flood emergency will be given in detail elsewhere.

Members active on 6 metres this month on the North Coast include 2LH, 2ADE, 2ZY, 2UC, 2GI, 2WT, and 2EA. The 80 metre band has been improving nightly with plenty of DX about and there are plenty of newcomers on the band who have given 10, 20 and 40 away due to poor conditions. All the Coff's Harbour gang are now working 80. 2CJ, Sawtell, has staged a comeback and a new Ham, 2AWG, Bill Grant at Boambee, in the Coff's district is also active. 2AFP on the air at the new QTH, Byron Bay. 2ZS now QRO with 100 watts.

2ASF very active from the "fowl house." Nothing heard of the gang at Port, Wauchope and Taree. 2DK and 2HC active on 80, both with good signals. 2UN, Inverell, active on 40 and 80. 2ZX now has his 70 foot tower erected. 2APS has built a new rig and putting out an excellent signal; still holding the No. 11 as a stand-by rig. 2GI and 2TB both had their cars submerged in the flood. 2NY, 2GI, 2XO and 2ASF had flood waters in their shacks. 2OE built new portable rig and tested out same on 80. 2AAP's battery charger unit blew up—no batteries—so Norm has not been active. 2JK building all band Rx; 2ARJ given 20 away and on 80. 2AJB has been having bad luck—his wife has been sick and has a poisoned hand himself. 2ADN built a new shack and building a new QRO rig.

(Zone Officer 2XO also had a torrid time during the floods, he had his gear stored in the rafters in the garage, the flood waters burst open the doors and all gear, books, tools, etc., were carried out to sea. The water rose till it was well over the roof of the garage and two feet high in the house. Criff's loss was very extensive and all N.S.W. Amateurs sympathise with him.—VK2HZ.)

HUNTER BRANCH

Despite the bad weather, the boys are turning out in big numbers for the Hunter Branch meetings. Both July and August meetings were well attended. Once again the Branch was pleased to see State President 2YC and members of the Council attending a meeting. By the time these notes appear the air will be disturbed by the activity in the RD Contest. This Branch is endeavouring to see that all members put in an RD log. The VK7s will have to watch the VK2s this year. Secretary 2LV active only on 40 when time permits. All Harold's spare time goes in Branch work and the boys appreciate it too. The "super-dooper" Rx at 2CS is receiving plenty of attention still, Lionel plans a contest (post-war) debut in the RD Contest.

OT 2FP in the process of a big re-build—rig to end rigs—p.p. 24Gs on 10, guess you will be still S9 in the States! 2AFS held the chair at the last meeting, hopes to move into a house near his work at Williamstown soon, still active on 10 despite the rotten conditions. 2AGY using 40 these days and getting out well; nice quality too.

After his win in a code competition at the meeting recently 2AMM gone all c.w. happy even heard on 20 c.w. After copying the code in test through the QRM, Bill thinks c.w. on 20 in the week-end is a push over. 2PT shifting to New Lambton—making a mistake in leaving Stockton DX paradise. 2ASJ has his two elements on 20 going and amongst the DX too. Still waiting to hear from Ivan Shearman with that new call. Varley Fitten is 2SJ, but has been QRL and hasn't broken the ice yet. 2XT on 40 with a converted AT5, puts a nice signal into VK9 with 15 watts.

2CI doing the rounds of the N/C gang when floods permit. 2AWD on 40 c.w. with a hefty signal. Like a lot of members, 2BZ has had the 'flu and 6 metres without him is very quiet; has been playing about with hi-fi. 2OS inactive since the flood, having trouble with his xtal mike, not an uncommon complaint these days. 2ADS has a new QTH not far from 2AGD at Birmingham Gardens, long way from 2AHA (very f.b.). 2TE made a comeback on 40 phone recently, an S9 plus signal. 2PQ getting out fine with his new 20/40 zepp. Tom is pleased with the two half waves in phase. That rig at 2MC's should be good, it's still being built! Don't forget the meetings Bill. 2XY is an RA10 expert now, has converted three of them recently. The F/D makes a noise on 40 Neil. 2ANA also has an RA10 as a "cosy" Rx near the fire these cold nights; you will be able to out-talk the XYL and girls, Norm. 2UY still busy with his studies. 2NX gives 40 a thrashing when home at the week-end. 2CW on 40 with his QRP rig.

Anybody heard 2WU recently—that nice c.w. completely absent lately. 2KG has a Rx going and hearing plenty of sigs; v.f.o. also under way. 2FX hopes to be moving QTH very soon, then Frank will give the bands a whirl. At New Lambton, 2ZT is on 40 c.w. 2ARK still not heard. 2AGD fairly QRL but has made an appearance on 80, not very loud about the Western Suburbs (much). 2CN is busy on the shack re-building. 2ZC, after many years on a straight key, has seen the light and going nicely on the bug. Made a fine job of 2WI's broadcast recently. Recordings Jim arranged at the July meeting were a great success. 2AAI has had plenty of bad luck recently with power transformers, hope no more go west Ron. 2AAM getting plenty of Interstate contacts on 40. 2KB has made the Ham's voice heard in Parliament recently, very f.b. Pre-war 2AFA expects to make a comeback very soon; has a Rx going. Also out Teralba way, 2AGG is getting out well on 40. After standing by through the recent Hunter Valley floods, the H.V. Emergency Net had another practice run. The entire Hunter Valley being represented. Nearly all stations are now on 3501 Kc., which is a great help. The 6 metre sked has been postponed temporarily. 2XQ would like to hear from anyone who has spare 3.5 crystals for the Net who wants or has information on Emergency Nets.

2ARP flat out getting water out of refrigerator motors; active on 40 and 80 during Net skeds. Jack Brand, 2ADX, has left Maitland and the gang were sorry to see him go and they wish him the best in the new job. 2DG has dark circles under his eyes and it's not from chasing DX either, but has been working long hours shifting broadcast stations with 2JZ. 2TY also in the same boat. The TR1196 is going f.b. on 80. 2VU has a v.f.o. these days and is very pleased with it. 2ANU has a terrific signal on 80 using only 4 watts. All the above stations are very keen on the Emergency Net, but don't mention water to the Maitland boys, they have had it. There is still plenty of it in the back yards. 2XQ has his private baths 10 feet deep. 2AHA mainly on 40 and 80 lately—plenty of c.w. DX on 40 these days. Europeans just the same as on 20, especially during sun spot activity.

COALFIELDS AND LAKES

Another successful emergency practice hook-up took place on the last Sunday in July on the 3.5 Mc. band, it being practice night for the Hunter Valley Net. A lot of old timers are making an appearance on this band. 7 Mc. is quite dead at this location after dark, 14 Mc. is very patchy also, while on the 28 Mc. band, a few Ws have been worked during the past month while one opening has occurred on the 50 Mc. band to VK5.

2ANU at Muswellbrook is doing fine on 3.5 and 50 Mc. with a few watts from a vibrator supply and has been heard by 2ADT in Cessnock on 144 with a three element beam. 2JZ not heard much here, but maybe he is going to shift about a bit as 2TY has built him a v.f.o. 2VU in Singleton also gone v.f.o. on 80, but mainly works 50 Mc. 2TY going to change direction and height of his 3.5 Mc. antenna and talks of setting up v.f.o., also an 829 on 50 and 28 Mc., 815 on 14, 7 and 3.5 Mc. with increased power.

Guess 2KZ pretty busy these days as only heard now and again on his old 28 Mc. hunting ground. No news from 2YO this month, but 2KF turned up for the 3.5 Mc. Emergency sked. 2KR been heard working 40 and 6. 2RU seems to have gone haywire these days and is working 7 Mc., also is making himself a Q5er. 2MK, an ex-Cessnock Ham, was in town at the week-end and should be heard on 144 Mc. from Sydney. 2PZ a little nearer—mounted another meter—there still is hope! 2ALR seems pretty tied up at local broadcast station and not on much. 2ADT doing many things from trying an MN26 as a Q5er to building a frequency meter. Talks of new four element beam for 50 Mc. and works all bands in the meantime. 2YL working most bands trying new rig on 7 and 3.5 Mc.

WESTERN ZONE

"Cumbijowa Island" Forbes.—2SA on a visit to Sydney till end of July. 2AMR and 2XP on 144 Mc. with good signal each way. 2ACT on 144 also soon. 2AMR conducting morse classes with help from 2SA; more Dubbo Hams soon. 2QA mainly on 80. 2RT, Katoomba, on 7 Mc. phone, but mostly uses 14 Mc. c.w. Hope to have 100 watts to a pair of 809s with two more 809s as modulators. At the moment is having trouble with the 40 metre gear. He has a good location for DX and hopes to join the v.h.f. shortly. 2ACP, also at Katoomba, is mainly heard on 7 Mc. phone.

2EI at Parkes is getting new Rx and 90 watt modulator, so expect big things from Parkes soon. 2NS heard rarely, very rarely, on 7 Mc., mainly on 20 and 10. 2AMV concentrating on 10 mainly. Many business trips to Sydney and boys think he has changed his QTH and these trips are interfering with DX.

2BT completed re-building by now new transmitter and switched through, just a flick of a switch to choose any band. 2WH experiencing tenth flood as July ends; took a No. 11 mobile on launch round Sydney Harbour. Very satisfactory results, despite 70 m.p.h. gales and sunspot blackouts. 2ADX newly arrived at Grenfell on the border of Western and Southern Zones; Western Zone claiming him as Jack is keen v.h.f. man, at present putting out a very nice sig on 80. Still little activity in the mountains since the winter started. 2EX mainly gardening, 2HZ QRL busy loosing his tonsils, and nil from 2LY, 2EF or 2LZ.

VICTORIA

The general meeting of the Division was held on 2nd August at the Melbourne Technical College, Bowen Street, Melbourne. Owing to the inclement weather, the attendance was not as great as is usual. The President, Bert Semmens, 3GS, occupying the chair, declared the meeting opened at 2015 hours. The late start was that the boys were waiting for the QSL department to go into action, but owing to "old man 'flu" taking charge of things, Graham was conspicuous by his absence. The Secretary read the minutes of the previous meeting; no business arising therefrom. The lecturer as promised by the T.A.C. let them down, so we had no lecture (hope this state of affairs is rectified in the future). There is a reel of wire available and a wire recorder to record these lectures.

Next business was the reports of the various groups of the Division. The President gave a very concise report of the last Council meeting and reported progress on the doings, the main topic was the necessity of obtaining new premises for the Institute (don't forget chaps, this matter of obtaining new quarters for the Institute is URGENT). Next report was from the Treasurer, Chas. Quin, who, through illness, was not present, but sent in his report. This disclosed that the finances are in good shape, and that a few back subscriptions have come forward. Ron Henderson, Secretary of the T.A.C., said that VK3WI is just on completed. Jack Duncan (our Technical Editor) has been flat out on the v.f.o. and power supply and is all ready. The only job to be completed now is the control panel, so by the time these notes appear 3WI should be on the air. V.h.f. reports were very few. Re-broadcasts of the Sunday broadcast are being re-radiated in the 50 and 144 Mc. band. Ian ("Bumf") Sewell reported on the VK3WI Accurate Frequency Transmissions recently conducted and checked by Mont Park and all was found very fine business. QSL Outward Manager said his department was right up to date.

After interval, Mr. Biddle, of the Technical College, gave a talk on the course relating to Radio and Television. The minimum students required are 30 and out of our 600 members, 11 have responded. The fee for the full course of 14 two-hour lectures is £1/1/-. A lengthy discussion took place on the ways and means of celebrating this Division's 25th Anniversary. Quite a lot of suggestions were put forward, the result being that the Council have something to get their teeth into. More suggestions will be welcomed. This Anniversary is something that we, as a Division, must do something big.

To finish up the evening, Bert Semmens suggested that some member get up and ask a question on some radio subject. 3GU quickly responded and proceeded to the blackboard. A circuit of a 144 Mc. super-regen and transmitter was drawn, and asked why it would not "super-regen." A few minutes study of the circuit and answers by Harry, well need we say any more. The meeting closed at 2230 hours after a most enjoyable night spent by all present.

One member wants to know why no personal items appear in these notes. Well OM will you supply them and they will certainly appear. 3JO still 2 metre happy; how about more power Herb? 3AJI has sold the "gee-lopy" and is now driving a brand new car. 3XJ's neighbours are having some peace now George is re-building his rig. 3ARV going the whole hog, 100 watts, to grab some "DX" (what's "DX" Ron?). 3ZA built himself a W8JK antenna. 3ATN got a taste of DX on 20, now migrated to 80 and immediately worked a W7 on phone, f.b. Ray. 3AML now en route to England and will be operating under a G call.

At a special meeting of the Council held on Friday, 4th August, the business conducted related to our 25th Anniversary. It was decided to commence the celebrations on 25th November and continue until 3rd December. Although final details are yet to be worked out, the main points discussed were a formal dinner, smoke night, Ham shack visits, write ups in the daily papers, special issue of the magazine, special programme of "50 and Over" from 3UZ, "We the People," Radio Australia, and, if possible, an Exhibition in conjunction with the radio trade. A lot of detail has to be worked out and it is only with full co-operation of ALL members that the success of the celebrations will be complete. Further details will be published in "A.R." and given over the weekly broadcast. Any suggestions will be gladly received and if practicable will be put into operation.

VICTORIAN RAILWAYS INSTITUTE WIRELESS CLUB, VK3RI

The above mentioned club held its 24th annual meeting in the clubrooms on 3rd August, 1950. The attendance was good considering the adverse circumstances; weather and the 'flu. The Secretary's annual report revealed many difficulties outside the club's control which kept the club off the air for some time. The Treasurer's report and balance sheet shows the club finance to be in a very sound state.

The election of office-bearers for the incoming year was as follows: President, Mr. H. McBain; Vice-Presidents, Messrs. A. Simmons (3TQ) and G. Gillingham; Hon. Treasurer, Mr. W. May; Hon. Secretary, Mr. R. S. Duncan; Committee: Messrs. A. Smith (3UX), N. Hindricken (3ANX), R. Pettigrew, F. Bawyer, F. Higgs, K. Evans, H. Cawkwell, I. Priddle, G. O'Brien.

After the closing of meeting the club entertained all present to a social evening. Mr. B. Semmens represented the W.I.A. and Mr. Dawes represented the Moorabbin Radio Club. Mr. McBain, on behalf of the V.R. Institute. The evening came to a close near the hour of midnight.

MOORABBIN AND DISTRICT RADIO CLUB

The July monthly meeting of the club was held in the club rooms, Nepean Highway, on 21st July, when a very large number of members and visitors were present. The late arrivals were greeted with "standing room" only, such is the popularity of the club. The President, 3KE, occupied the chair and declared the meeting opened at 2015 hours and gave a welcome to the visitors, among whom were VR3A from Washington Island, and 6GA from Western Australia. Both these visitors were invited to relate their experiences in their respective spheres.

Standing orders were suspended and the meeting given over to 3SB and 3IF to demonstrate a twin channel high fidelity amplifier. A large number of recordings were played including recordings of local Hams, included in which the voices of some who have passed on, namely, 3KU Howard Love, and Victor, HK1FQ. The amplifier must be heard to be appreciated. 3EM and 3DY expressed on behalf of the club their deep appreciation to Bert and Keith for their fine effort in bringing along to the club the amplifier. Bert suitably responded with a couple of funny stories.

Business then resumed, and after a lot of discussion the following motion was put and carried, viz.: "To promote interest in the Moorabbin Radio Club throughout the world and VK land, it is decided to inaugurate a scheme for competition amongst the transmitting Amateurs and short wave listeners. A certificate of honorary membership will be awarded to those Hams both in Australia and Overseas, who fulfil certain conditions relating to contacts with club members. The scheme to come into operation on 1st September, 1950." The number of member stations to be contacted are: For all VK land (excluding VK1, VK9) 15, and Overseas 12. The details will be supplied by members of the club when contacted over the air. The certificate awarded will be a thing of beauty to adorn any shack wall, so fellows keep your ears pinned back and chase the stations.

The club membership now stands at 50, so it seems that we will have to look for larger premises. Further donations came to hand via 3ACS, one 6N7, crystal insert via David Bell, a mike case from 3MX, and stand from John Dawes. All these gifts will be faithfully applied to advance the art.

NORTH EASTERN ZONE CONVENTION

This Convention was held in the Shire Hall, Benalla, on Sunday, 16th July. As your scribe arrived somewhat late you will have to be satisfied with what happened after his arrival which was accompanied by loud noise and crashing of seats. Office-bearers were elected as follows:—President, 3KR; Secretary, 3PF; Vice-Presidents, 3FD and 3UI. It is hoped that the newly elected team will carry on as ably as the outgoing 3AT and 3APF. 3AT was unable to attend due to pressure of duties of his profession. With the new team in office, the ball began to roll with very caustic comments about those commercial stations who clutter up the Ham Bands as well as their own.

3YV has a bad time getting out on 80 metres (so he said), but 'twas suggested that it wasn't 80 at fault. Wonder what was at fault? 3HD complained that it cost him 7/6 for every zone hook-up. He has only spent 7/6 during the past twelve months.

Things began to move when it was suggested that all operators instal an egg timer in the shack to limit length of overs. Was this a hint to the ear bashers on 40? It was decided to contact Reg Bush regarding exercises on the emergency network. Questions arose about the W.I.A. transmitters and 3IK said (on hearsay) he believed that 3WI would soon be on the air. Ian must have had a bird's eye view when he climbed the stick six stories above Queens Street to instal an antenna.

Of interest to all country Hams is the news that 3WI, when finished, will apply to the P.M.G. for permission to re-broadcast interesting lectures eminating from the W.I.A. rooms from time to time. Mr. Cunningham was then called upon to give his views on television, having recently returned from overseas studying same in G land. Many interesting questions were asked and most enlightening answers given. After a discussion on push-to-talk operation, the meeting adjourned (frozen) to partake of vituals which were enjoyed by all. After lunch the gang adjourned to 3KR where everything was screwed down for safety. What happens Ken when the Council cuts down one tree used as antenna post, sky hooks?

After a swap session, which looked like a disposal sale, was finished and various contacts made on 3KR's rig, an excellent afternoon tea, prepared by the XYLs of 3KR and 3PF, was partaken of. With a mountain of dishes to be washed, yours truly beat a hasty retreat along with many others. I hope they were eventually cleaned up before you arrived home Ken. Packing up, we went back to the hall to enjoy a film show presented by 3KR. The show was very hilarious and judging by the spurious radiations eminating from the direction of 3YV, Howard enjoyed it most of all. At the conclusion of the show the boys packed up and started their various ways for home.

To those who were in attendance, some 30 odd, I hope they enjoyed the day as much as I did. To those who were unable to get along, I say that I am sorry, you missed something that may never be repeated.

On a recent Sunday 3IK was heard calling in the N.E. Zone, but all that greeted him was silence. Only zone member awake was 3YV who was busily bashing 3EM, what about that egg timer on your overs Howard? 3UI on 40 metres because 10 was out; did a bit of switching to finish your QSO eh Allan. 3KA looking for b.c.i. with XYL on the mike, plus a few harmonics. Better use a rock instead of v.f.o. or was it the outcome of the Convention. 3MH getting himself tied up looking for b.c.i. instead of 3KR.

Heard 3PF, zone secretary, on most of the morning on a recent Sunday and putting out a good signal too; did you re-charge your batteries Jack? 3AGT had bad luck going home from the Convention. Passing truck threw up a stone and starred his windscreen; besides slowing him down, it was a case of put head out, not pull it in; new car too. 3ACK off the air due to modulator being used for p.a. system, so spent the morning playing with model planes. Nothing radio controlled yet though.

Len Herne (3PE) camped out in the Dookie Hills with P.M.G. Research. Haven't heard you on 40 Len, although I know you have the rig with you. 3AGG stumped until Len gets home; better use that i.f.f. unit and get on 6 or 2 Bruce. You have a few nearby to contact, 3AT, 3APP, 3HZ, 3UI all are on 6 and 2 metres. 3AT rather quiet lately on 80 and 40, must be very busy.

Despite pleas of the President, there were only approximately 20 per cent. on the zone hook-up on Sunday, 30th July, at 1.30 p.m. 3AGT was excused as his XYL has presented him with a junior op.; congrats from zone members Stan. 3ABG also excused, flying around VK7 I hear. 3FD in trouble with batteries. In case you didn't hear Andy, 'twas suggested you stoke up the fire and use smoke signals. 3ALE welcomed into the zone; he lost a lot of shut-eye to be with the boys. 3ACK was heard testing, but must have blown up just before the hook-up. Can't blame me this time John. 3EM was caught up and invited to stay, still bashing with 3YV and 3JK at 3 p.m

Any crystals under 3.5 Mc. urgently wanted by Reg Bush for grinding to emergency frequency. Tell them in boys. 2EU and Albury boys welcomed to the zone's activities; this also applied to Corowa boys.

Remember boys the next zone hook-up. Full roll up would be appreciated by all, make it a must. In conclusion your scribe can hear but nor be heard, so roll in the news and make the N.E. Zone notes the most interesting in the magazine.

CENTRAL WESTERN ZONE

On Sunday, 10th September, the zone will hold its annual convention, all members of the zone are urged to attend and join in the fun. At the last hook-up 3DP, 3ARL and 3YW were elected as organising committee and with the help of 3AKP and 3HL the following programme was drawn up: 1230 hours, assembly point at Old Soldiers' Hall, Cr. Patrick and Main Streets; 1300, lunch; 1400, v.h.f., gear swap, competitions, technical talks; 1700, annual meeting and election of officers; 1800, tea; 1900, resumption of annual meeting, talkies.

For the benefit of any Hams staying over the week-end, Sunday morning prior to 1230 will be spent in visiting local shacks, and sundry points of local interest. Of course the Convention is not only open to zone members, we would be pleased to welcome anyone from anywhere. One thing we would ask and that is to let us know if you are coming, overnighters in particular as it is cold up here sleeping on a park seat. We would like to know by Wednesday, 6th September, at the latest to that catering arrangements and bookings can be made in good time; help us to help you chaps. For accommodation contact Lyn Brown, 3ARL, Box 16, Stawell.

A new item on our programme is the gear swap. The idea is to bring along any piece or pieces of surplus gear you have and to swap it over for another piece that somebody else brings that they did not want and you do. It was a success at Benella and with your support could be of benefit to you. Any difference in value of course is arranged between the two swappers to their mutual satisfaction.

There has been quite a lot of local interest happening in the zone of late to one very active bloke, name of Lyn. Unfortunately he won't let me print it, suffice to say after many nights' work on the rig, and a rapidly ageing face, he at last discovered how an 807 should work. Lyn is so pleased I think he could be talked off 144 Mc. and on to n.b.f.m.

It also never rains but it pours, at least that is what happened to 3HL. For many weeks Allan had been vainly seeking a BC457 for a v.f.o., and casually mentioning same to a chap, was greatly surprised to be told yes, so off went telegrams and cheque. Later the same day, 3KR informed Allan he had bought one for him the day before, so now Allan has one and so does 3YW. 3AKP is busy repairing the beam and getting the shack ship-shape for the Convention. 3ARL, apart from other matters mentioned, has acquired by some means an old 4-band commercial job (back to the 6D6 days) and is happily getting it to perk. 3AKW is busy about Stawell these days, and those who come to the Convention will probably see some of the results of his handiwork. 3GN is also about here lately, George is not active these days, owing to his many "good" works.

3ARM, our most western member, has not been heard much of late either, but I guess that has been due to yours truly being tied up rather much himself. We have heard Bob once or twice putting out some nice phone. Horsham, Maryborough and Bendigo are silent these days too, but we hope to see them on 10th September. Had a long and pleasant chat with 3EF the other evening. Bert is very busy these days, working and building a new house, so busy in fact that he is working until 11 or 12 each night, so it is quite understandable that 3EF has not been on the air for over twelve months. However, Bert's new car is due to arrive and unless something unfortunate turns up, he will be at Stawell for the Convention.

The next zone hook-up will fall on Convention day so make it a personal one, and let the other chap see how the last twelve months has treated you. Also try and think up a new President, as George tells me he will not be available for re-election (as if we would).

EASTERN ZONE

Activity appears to be at a low ebb in the zone at present, and 'flu is taking its toll of members and their families. The zone hook-up is in progress at the moment, but for all I can pick-up about what the boys have been doing, I guess they have all taken the August Editorial to heart.

3PR is on c.w. at present, due to the untimely decease of his modulator power tranny, so now there are two of us who would like to learn of a really reliable make of tranny. 3WE has a very nice signal, must be the antenna, Willie! 3VG building a v.f.o., and is alleged to have been heard on c.w. I don't believe it!

The inaugural meeting of the Sale Radio Club will be held about the middle of August so we should have full dope for next month. 3BB is conspicuous by his absence—too busy Bert? Our Secretary, 3QZ, battling hard, checking up on the list of zone members. It has been decided to hold a portable field day on the week-end of 30th September, 1st October; full details later.

3SS is inquisitive about a remark made by 3QZ about having several foolscap pages of addresses of "sorts" re the members' list. Keith wants to know some of the addresses, and him a married man with nine children! A final reminder to all zones. The Eastern Zone Convention will be held at Sale on 25th and 26th November, and we won't alter that date for anyone—not even for 3WQ and his merry men of the Disposals Committee (don't tell Charlie I said that before 20th August, Mr. Editor). The channel has been clear tonight, so I guess our polite request of last month has been granted. See you next month and hope I can get some news out of the boys by that time—cheerio.

SOUTH WESTERN ZONE

3AGD arrived in VK9 safely and by all accounts having a fine time. It's going to be a severe change from New Guinea, to the snow; maybe John will be able to tell us why VK9s can't be worked. 3HG still busy with the new house and is probably the reason why Neil has not been heard very much this month. 3AGE and 3YE of Colac still putting very nice sigs out on 40 and 80. 3BI has been putting a new engine in his car over the past few weeks and has kept him rather busy. Bert manages to put a terrific quantity of audio on his carrier with the super modulation which he is playing about with, and it sounds quite good too. 3ZL and 3GM, also of Ballarat, as always, very active on 144 Mc.

144 Mc. activities within the zone have been quite lively this month and 3AKR has worked nine different stations in the Metropolitan, Geelong, and Ballarat areas on that band. 3AJF is now re-building his power supply, hopes to be breaking the long silence shortly from his new QTH. 3APG hopes also to be on again soon. 3BU heard working 3BH on 144 Mc. recently. 3AIC a newcomer to the Geelong gang has been operating on 144 Mc. and has worked 3AKE, 3VF and 3ALG; has built up a new converter for the band and has heard a couple of the Melbourne boys. Things very quiet at VK3ALG.

3AOL, also another newcomer, has been operating on 7 and 144 Mc. 3BW was heard on 80 metres QSOing 3HL recently. 3AKE was on 40 for a breather recently but is back on 144 again. 3IC, having a little trouble with his pre-amplifier.

Yet another newcomer to the gang is 3AGN who has had his ticket a couple of years and come on 40 a fortnight ago using an AT5 grid modulated; his receiver is a BC348 and antenna a half wave Marconi. 3AJT and 3ABE are still operating on the 20 metre band. Have not heard 3WT for a while, guess he is on the daytime and down with the motor cycle gang at night.

GEELONG AMATEUR RADIO CLUB

The above club recently held its second birthday. The past two years were very successful and the programme for the coming months and each meeting should be interesting to the members. The first meeting for the term started off with a lecture by our worthy Secretary who gave a talk on Multimeters. Peter had on display a meter of his own handywork and put quite a lot of work into it; he used the blackboard extensively to illustrate his lecture.

On the following Monday the club transmitter 3ATL was on the air operating on 144 Mc. The following meeting was also successful. The business of the club was dispersed with in double quick time and members then paid a visit to 3BU/3ABU. Bill had quite a number of bits and pieces on display which took 1½ hours to describe. The evening wound up with a nice supper, daintily served by Mrs. Brownbill, Bill's mother.

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QUEENSLAND

There was a very good attendance at the July general meeting, in fact the best for some months. Old-timers present were 4YA (pre-war 4WA), 4FE and 4ST. Stan was attending his third meeting in 22 years of membership. Other visitors were 4RH and 4RF. There were nine new members admitted during the month—4JO and eight students. The inauguration of student classes has caused an influx of students to this Division. A Technical Library has been established and a nominal charge will be made for the hiring of equipment. Members should watch the monthly bulletin for further information.

4FE advises that VK1 stations operate c.w. on 14010 and phone on 14340 Kc. at the following times (E.A.S.T.): 0100-0430, 1515-1630, 1900-2130 hours.

During the month there was a 50 Mc. opening on the 26th when 4XN worked 3IM.

News hae come in from a number of Hams that the number of pirates is growing apace. It is very regrettable that those who do not hold a transmitting licence have been able to acquire disposal transceivers, transmitters, and like.

Did you know that 4GO, besides having the honour of being the old "iron horse," also has the distinction of having a QSO and exchanging QSL with a VK8. Here's a challenge to our Ham brethren in other States. Can any of you boast such a contact? All George needs now is a VK1 to complete all VK districts.

GYMPIE ZONE

Manager 4HZ.—By the time these notes see the light of day, Jim hopes to have a vertical antenna going complete with untuned lines. Recently Jim received a card from HC2. Three hours' efforts landed the Equador station and a couple of YVs added to reward Jim's perseverance. 4CR has the bugs out of the 60 watt rig and now wants new halyards for the low down antennae. Col is still prospecting.

4RA still working DX on 7 Mc. 4DP has purchased a 108 set for portable purposes. 4XR still on 20 metres and is erecting a three element beam to replace the two element job which has developed sags. 4LN working Ws with three element beam and has some 144 Mc. gear on the way.

BUNDABERG ZONE

4HE is putting out a nice signal on 7 Mc. using a new billiard ball mike. Hughie A-1a commercial now. 4XJ still going strong on 14 Mc. and bobs up occasionally on 3.5 and 7 Mc. 4UK also heard with nice phone on 7 Mc. 4CW heard occasionally from "Amshac." Where's old Vic? Heard he was making a come back, but no sign of 4BJ yet.

DOWNS ZONE

Manager 4CG.—According to all reports the only part of this zone sticking out of the water is Toowoomba. For the benefit of the uninformed peasants of the rest of Australia, this zone has contributed 54 inches of rain to consolidated revenue since January—and are my spaces wet! From which you will gather it has been raining. Gum trees planted at Christmas are now sturdy, up-and-coming antennae supports. Apart from this activity there is little to report. Nobody tells me anything and I can't just bring myself to ask.

4XN surprised the locals more than somewhat by appearing on 40, but something was a-cooking, he was QSOing 4HR and the talk was technical and ears were bashed back and forth for close on 90 minutes—three days in a row. Yes, you've picked it—discussion was 6 metres and 2 metres—how to get there and how to make it work when you arrive. Oh yes, and it was about f.m. too, until 4CG reared his ugly head and demonstrated what good f.m. should sound like.

4RF and 4DA show little interest in Ham Radio at the moment. 4CU active as usual, particularly on 50 and 3.5 Mc. 4SG contemplating a beam. 4WY building a new receiver to replace the AR7 and planning other improvements; Bill has a trunk line to Inverell. 4RH, a new country Ham, is doing

OK with low power; Leith has acquired a GO9 and wonders what to do with the 803. At last we have some news from the Warwick area. 4CK has been working Europeans on c.w. and came up on 40 phone recently, but Len found conditions bad. No news of 4CH, must have gone down in the Condamine flood.

BRISBANE ZONE

Manager 4UX.—4RC is recovering from his illness and is on the air again. Very good to see Bob taking part in the Sunday morning hook-up. 4AW won a GO9 in the recent lucky dip and Claude wants to know if you want it Arthur? 4SV should have his 807 zero bias modulators going soon. 4YA a real old timer, Bill proves that once a Ham, always a Ham. He gave the game away in 1932, and is on again with as much enthusiasm as a brand new Ham.

4KH, with the assistance of 4VJ and others, has at last got his beam up again. Bill has been off the air for about eight months. 4PX, if you ever get trouble with hum ask Arthur. His methods are unorthodox, but they work. Heard on 20 metre phone. 4DA has moved to Brisbane and is looking for a kind hearted landlady who will allow him to set up his rig. Errol told me the other day that if he talks Ham Radio to me much more he will be going on irrespective whether his landlady approves or not.

4YS has ideas with Command gear, but haven't heard Peter on yet. 4RT also has ideas on Command receivers. Was not talking to him long enough to find out, and being a lad of very few words (see you) forgot to ask him. John is kept fairly busy making chassis for the lads. 4HA heard for the first time in many weeks on 3.5 phone the other night. 4AH has recently been promoted and is rather worried as it could possibly mean a *shift* to the land of *wogs and mossies*.

4FE has thawed out after his trip to Heard Island and is on 20 metres. 4ZB has been transferred from Rocky to Brisbane and will be on the air again shortly. Spent the whole day recently playing records with himself the only listener, and got paid for it. A monotonous job as Claude found out the next day.

The Country representative, 4UX, advises country members that they will receive all outstanding receipts and membership certificates in the near future. Contact Claude if you want any matters straightened out for you. 4UX's address: Ernest Street, Gaythorne.

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for July was held at 17 Waymouth Street to a capacity house and the Vice-President (Warwick Parsons, 5PS) was in the chair owing to the President (Edward Barbier, 5MD) vacationing in VK3. The guest speaker for the night was Associate Member, Mr. Williams, and he was assisted by Bob Manuel (5RT), Bob Barringer, and Hughie Gurr. Their subject was given on the notice card as "*The* Practical Side of V.H.F.," but actually it was a practical and theoretical discussion of the v.h.f. radio set-up of the Electricity Trust of S.A.

The lecture was probably one of the most practically illustrated that we have had for some time, and the interest displayed by the members present was sufficient indication of its success. The vote of thanks ably proposed by 5DW was enthusiastically received by all present.

The details of the meeting from now on may become a little disjointed because as I was the acting Chairman and also the scribe it is a little difficult to remain coherent. The "chair" was elegantly draped a la mode with a large rug, intended no doubt to assist in keeping the Chairman snug and warm. Oh yeah! that's what you think, as a matter of fact the draping was only there to hide a series of atom or hydrogen bombs which exploded with monotonous regularity, thereby testing in the process, the composure and the morale of the dignified Chairman. Still, everybody enjoyed the whole fun, and after all it was the first time that the members could join in the discomfiture of the scribe knowing that his mouth as well as his hands were tied up trying to maintain the dignity of his high office.

5JK seized the opportunity to have a shot at the scribe by asking the Chairman to draw the said scribe's attention to the last paragraph in the VK5 notes of the July issue of "A.R." The Chairman consented to do this, and after holding a conversation with himself, was able to throw the right construction on the paragraph, much to the members enjoyment, and when 5PX tried to explain as to how the misunderstanding might have occurred, the meeting broke down in uncontrollable mirth.

Among the visitors present were 5XR, Peterborough; 5TW, Mt. Gambier; 5EH; 5EN, Pt. Pirie; 5XL, Clare; 5HA; 5RE, Renmark; J. Bassett, H. Taylor, R. Richards, and last but not least, W. Williamson (ex-PA0WI). To all these gentlemen we extend our very cordial welcome and we hope that they all enjoyed themselves and will honour us with another visit sometime, although with a more serious Chairman, they won't get as many laughs.

As forecast in these notes recently, the meeting unanimously decided in favour of "Doc" Barbier (5MD) being made an honorary life member of the VK5 Division as a slight acknowledgement of the splendid service he has rendered. Off the record, I am getting a bit sick of patting this joker on the back, and when all this crawling business is finished with, perhaps I will be *permitted* to *come* out in the open and say just what I think. The acting Chairman closed the meeting a little later than usual after explaining the foul, or should it be fowl, trick that the President had played, in talking him into the office of Vice-President and then clearing out to VK3 and leaving the said Vice-President holding the bag; and what a bag!

Our Secretary, 5XU, has been confined to his bed with the "flue," but is said to be fully recovered at this time of writing. I can't vouch for this, but I was told that he rallied very rapidly when he heard that the monthly balance was out to the tune of a halfpenny! The Treasurer, 5TL, is another who is reported off the sick list and said to be doing quite well thank you. I still know naught about aught Tom.

Quite a flurry and a scurry on 20 the other night when one or two stations collided with each other. I didn't hear it myself, but my spies tell me that tempers were a *little* short for a few moments until the usual VK5 good fellowship asserted itself. One eastern suburbs man who was attempting to pour oil on troubled waters nearly "copped the lot," although his well known ability to talk himself out of anything was certainly put to the test.

5DW is one of those quiet chaps to whom nothing is any trouble if he can help a fellow Ham in any way, and the number of chaps that Frank has helped with advice or practical assistance is legion. Some Hams are quite willing to help other chaps, but they are also quite willing to advertise to the world how they were able to get "so and so" out of his trouble, usually to the technical detriment of "so and so." Not Frank, however, the job is done with a minimum of noise, the best of workmanship, and the mere mention of thanks on the part of the recipient is enough to give Frank a bad attack of embarrassment. A true Ham, if I may be permitted to say so.

5CH has been very busy this month, but not on the air except for a few 2 metre skeds. He has been working Saturdays and Sundays at the power station; quite a lot of new equipment is being installed on account of the AC change over, so that means that he has no time for Ham Radio. However he called into the first station in the State recently and with his son Brian, renewed acquaintance with the gang there. Always pleased to see you Claude.

5TW also called into the station and met some of the boys, he was down in town for vacation and we were pleased to see him at the W.I.A. meeting as well. I have been writing about Tom quite often in these notes without knowing that he worked for the opposition down at the Mount, but I must admit that he seems a good scout, and of course it is possible that some other broadcast stations may carry a staff that measures up to the standards of the number one station in VK5; you beaut!

5MS had the bad luck to have his crystal mike give up the ghost, but the old carbon was brought out and dusted up, and did quite a good job. Stewart was heard on 2 metres the other night and rumour says that he will be shutting down for a while soon, although I don't know why.

5KU has been more up in the air than on it, mainly due to the superior attraction of gliding, but let the merest sound of DX appear and I will bet that the gliding goes overboard and "Erg" will be right in the middle of it. 5FD still only appears and disappears in his Holden with micraculous speed, and as no station has been heard with that call I can only presume that John is still busy.

5KB has been checking on the 2 metre transmissions of the local gang so maybe Peter has aspirations on the band. Last heard he was building a modulator. 5CH has been quite active on 40 with satisfactory results, and has also been QSO with Stewart and Claude on 2 metre skeds. Col is expected down in the big city as I write, and may be at the monthly general meeting. He is also going to bring the harmonic (Bruce Andrew) for me to see, as with my fourteen children, I am considered to be something of a good judge of just what a harmonic should look like.

The "flu" has claimed a number of VK5 Hams this month including 5LR, 5XU and my palsy walsy 5KX. "Yes I heard you Doc, I know that he has a new super de luxe luxurious motor car," anyway, I was looking a little cockeyed at this "flu" business but as I have not heard any of them on the air it must be OK. Hope that it finds you all well again boys, and John, old pal, old pal, if the new car is at all dusty, just let me know and I will come straight down and go to work on it.

Through some mischance last month I left 5GD out of the list of Council members and I have been trying to dodge him until I had a chance to write this month's notes to square off. He has forgiven me I hope, and I can assure him that he is one of the few Hams in VK5 that I want to keep in sweet with, otherwise where would I get my black iron chassis made. What am I saying!

I heard 3ANP in QSO with "Doc" on 20 the other week and I have never heard such backslapping in all my life. "Doc" wasn't too bad whilst he was talking to Ken, but when the XYL Billy came on, well you should have heard him. I could almost see him brushing his Lana Turner lock of hair out of his left nostril and fairly breathing Lavender of Roses. Listen Ken and Billy, don't fall for that "hail fellow well met" attitude of "Doc's," he could give Dr. Jekyll and Mr. Hyde 75 yards start in a 100 and beat him with a couple of yards to spare.

5XL took pity on me at the general meeting and promised to send me some notes on the northern gang, and I must admit that I was a little bit dubious as to whether I would receive them, anyway true to his word, Lance fired me down a budget of news and life is now a little lighter for me. 5AX has raised his 6 metre beam up another ten feet and has also finished a new modulator. He certainly puts out a good signal on 40. 5DF is still managing to work a few stations on 80, but somehow or other Wally I don't think that the Heising modulation has improved the signal. 5RJ is still QRT on big rig and he hopes to be in the new QTH in October. His signals have been heard occasionally in the Northern Net on portable. 5JY and 5GY have been trying out some v.h.f. gear, and 5EN also seemed to be quite interested in their doings.

5WG was seen in a certain lower north town recently and he was leaving a party at 2 a.m. when sighted. He is active mostly on 10, but from what I have heard of 10 lately, there is not too much activity around I guess. 5VM has been too busy with pictures and printing to be on the air, but I don't think the printing was "Splatter." Thanks for the regular copy OM. 5UX has been heard once or twice on c.w., apparently after teaching all day he has no voice left for phone. One word sums up the doings of 5LH; silence! 5AP is tinkering with the idea of building a super operating desk with all mod. cons. Even if nothing comes of it, it's a lot of fun dreaming about it. 5XR has had a trip to the city and was noticed at the general meeting. 5MA tied his beam to the clothesline and found out that the final could take it, but the XYL could not; Fred is using 99.9 watts.

5CO and 5WO are two of the gang that have been heard lately with f.b. signals. 5XL is still using the portable, but Lance expects to have the tranny back soon; thanks again for the news OM.

From Ray Latta (5RA) at Darwin comes a batch of news of the boys up there, and whilst Ray seemed to think that the news was a little old, I can assure him that there is no such animal, any news is new news! Ray and I have a lot in common, he is the publicity man and the scribe for Darwin, whilst I hold that doubtful honour for Adelaide and all points adjacent. Actually, that high sounding title really means that we are a sitting shot for anybody that wants to fire a shot; am I right Ray?

Dave Medley (5AE) has resigned from the position of President of the Darwin Club and has been transferred south to Mascot Aerodrome. He did a splendid job at the meetings and will be missed by all. His place has been taken by John Emmel (5AS) who has been an enthusiastic worker for the zone since its formation. Mr. Ted Fuller has taken over his previous job as Treasurer, and is impatiently waiting for a call sign to be allotted, as is Rawdon (Ronnie) Mitchell. These two gentlemen being only a matter of a few hundred yards from 5AS, 5GP, and 5RA, the QRM should be pretty good.

On Sunday, 11th June, a picnic was held at Lee Point and 5AS and 5RA took along some 144 Mc. gear. As a picnic, the day was a terrific success, but as a field day it was somewhat of a flop due to unsuitable power supplies.

It was reported at the monthly meeting for June that some progress had been made with administration in regard to club rooms, and it is hoped to secure a suitable block of land and erect a club room on it. Mr. Charles See Kee has generously donated a disposals transmitter and Mr. Medley has donated a communication receiver which only needs a little attention to make it into a first-class job. Mr. Terry Robinson has submitted a plan for the club rooms and has been commissioned to handle the whole thing. A secondhand typewriter will probably be made available for purchase, and therefore everything in the garden is lovely.

5SA (Bill Symons) is off the air and packed ready to go south, but so far no relief is to hand. He has been tempted to unpack the gear once or twice, but the XYL is frightened that it might jinx their going home. 5AS is in the throes of re-building and it looks like he is finally interested in the v.h.f., because the new rig is expected to go to 2 metres. The classes for theory have been going for three nights a week of late, on account of the examination coming up. The only way to stop the impending QRM will be to bribe the examiner! Thanks again for the notes, Ray, and keep up the good work. I passed on your message to 5RX. See you on the air sometime.

5SL did not bother to send me any doings from the Murray boys this month, because I paid them a short visit last week. Actually, it was quite unexpected and the only reason that I visited the second best broadcasting station in VK5 was because they wanted my expert opinion on a little matter that cropped up. Of course I don't want to boast, but I had no trouble in diagnosing the fault in a couple of ticks, in fact it was obvious to my trained eye at once, that what the fowls needed was more shellgrit, after all any fowl that pecks at an aerial mast carrying two thousand watts must be hungry. Aha! You all thought that I was going to tell you that I cleared a technical fault at the station. My dear friends, they carry a technical station staff for those sort of jobs, I only handle the unusual work. They don't call me "dumbcluck" for nothing.

The day that I arrived at Renmark, 5BJ resigned as a technician and his place is being taken by 5KW, whom I have not yet met, although the pleasure will be mine on the telegraph channel shortly. John is taking up an appointment with a well known Rundle Street radio store, and he assures me that my correct diagnosis concerning the fowls had nothing to do with the decision to give broadcasting away. We all wish him luck in his new sphere and hope that he will remember us when the bargains are around, especially me!

The highlight of my short visit was a looksee over the Berri Co-Op packing shed from which I received an insight into the fruit juice industry. My guide was Murray Nicholson who is the number one chemist there and also a prospective Ham, in fact for all I know he may have passed the exam by now. It sure was a hive of industry, and what with dodging the electric trucks and trying to avoid being sent down the orange graders, I was fairly puffed out. As a matter of fact, before I could say "boo," I was grabbed by some enthusiastic worker, stamped, graded, and packed for export and only for Laurie Sjoberg drawing attention to the fact that the packing case looked a trifle oversize, I probably would have been on my way to India by now. Murray Nicholson, as a grand finale, took me over to the canteen and filled me up with samples of all the fruit juices available, and as they carried me to the car I was too full for words. See you on the air someday Murray.

5BC showed me all his gear and believe me it was worth my seeing, although the station is fairly filled to the roof with disposals gear belonging to Laurie and John, but as they made me walk around with my hands in my pocket, I soon lost interest. Berri, by the way, is full of 144 Mc. aerials, everywhere one may turn they meet the eye and the boys are all hungry for news of the doings of the city v.h.f. gang. I thoroughly enjoyed the trip and the only disappointment was the fact that I did not have time to meet more of the boys than I did. Never mind, perhaps the fowls will become temperamental again and then I will make the diagnosis last a week or so. Are you listening Chiefy Pie?

A little birdie tells me that 5YQ is shortly to walk up the aisle, and whilst I have no proof, the fact that he has sold his gear, lock, stock and barrel to 5GT seems to prove a thing or two.

Regarding my earlier paragraph of a collision on 20, I beg to report that all the participants have received a pink ticket, and as one of them said when he received it. "Well, if one sticks out one's neck, one can't complain if it gets chopped off." Spoken like a gentleman.

I sneaked into the physical culture and dancing competitions the other night and shrinking into a corner I thought, well, this is one place where no Hams will be lurking. So much for that, the first person that passed my seat was 5KL, and 5RX bobbed up shortly after, so there you are, you never know where you may meet a Ham. Of course they both earbashed me as to how good their respective daughters were, but you all know what these fathers are like. Now my daughter, well I could talk for hours about her. All right, all right, I'm a wake up!

In closing these short notes I would like to say that it has been repeated to me that Mrs. Eddie Barbier said after she read last month's notes, "Isn't he a goat." Well Madam, all that I can say to that is "MAAAAAAAA-A-A-A!!"

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WESTERN AUSTRALIA

The July meeting was held in the Institute rooms on Tuesday the 18th. The attendance was slightly better than the previous month which is all to the good. There were no country representatives present, but 6ZO from down Fremantle way whom we had not seen for a long, long time, was duly welcomed to the meeting.

The highlight of the meeting was the presentation of the President's Trophy by the President (6KW) to 6FL, the outright winner of the recent 40 metre scramble. For his fine effort in working 44 out of a possible 47 stations, Frank received a very handsome silver fruit dish and responded suitably, thanking all those stations who provided him with contacts during the contest. The winners of the other sections of the contest were also announced. To 6WZ, of Geraldton, went the Institute Trophy for the highest scoring country entry. Harry made 32 contacts, but one was disallowed by the contest committee giving him a score of 31. The winner of the 6JN Trophy for the best effort on a miles per watt basis was won by 6XG, of Katanning, who, operating with 2.9 watts input, worked Geraldton (approximately 130 miles per watt). Congratulations fellows from us all. Unfortunately two high scoring logs from the country could not be accepted by the contest committee due to breaches of the rules, and the committee has written to those members explaining just why their logs were not acceptable, hoping that those mistakes will not be made in the next contest of a similar nature.

Following the results of the 40 metre scramble, certain aspects of the proposed common constitution were tabled for discussion, and the meeting was wound up with a very practical and interesting lecture by 6AG. Wally demonstrated his grid dip meter in action and also a description of his 144 Mc. beam with particular reference to the method of rotation.

Returning to the 40 metre scramble for a moment. 6KW, our President, put up a remarkable performance in working 47 stations, but, of course, was not competing since he was providing the trophy. 6RU was only one point behind the winning score and next in line was 6KU with 41.

The next contest to be staged by this Division has been arranged for Sunday, 10th September, and will be known as the Country versus City QSO Day. Rules will be approximately the same as for the recent 40 metre scramble and will be promulgated with the August Bulletin. The Contest Committee stresses the importance of submitting a log so that points can be cross checked. The return of logs in the 40 metre scramble was very disappointing. Also make sure the exchange of reports is absolutely correct because if wrong there is a strong possibility that the point claimed will be lost.

This Division would welcome photographs of past events in the history of the Division to commence the compiling of an album so that in the years to come we will have a permanent record of the early days of Amateur Radio in this State.

PERSONALITIES

6WH, Ted Doddy, is back from his jaunt down the Great Southern and is ready to take over the Emergency Network again. Saw quite a few of the country boys and had a good time, thanks to all. It is reported that following a c.w. QSO with 6KU the other day, 6MK had a week off from work, suffering from a sprained right foot! I believe 6PW will take unto himself a YF early in September. Congratulations Ray and all the best in the world to you both from all the gang in VK6.

Contact with 6GA, now in Melbourne, has been established through courtesy of 3AE, late 6AE. Some very nice round table QSOs have taken place of a Sunday evening on the 40 metre band. Those participating being 6DJ, 6RS, 6WZ, 6YZ, 6HR and 6AS. Bill expects to be back in W.A. in September sometime. Hope that new hobby of yours doesn't supplant Ham Radio OM.

6KU seems to be doing a lot of constructional work lately. Saw Ray outlaying a few shekels on parts for a Q5er and is talking of altering his modulator to zero bias 807s. Make sure you have it all ready for the RD Contest, Ray.

6FL is installing 811s in the final in lieu of 809s, but the main problem in front of Frank seems to be finding some place to settle down. Hope you soon find a home OM. I know what it's like when you have to go house-hunting. 6KW has been very quiet lately. Says there's not much use in going on the air with the present conditions prevailing on the bands and I'm inclined to agree with him. 12th and 13th August will see plenty of activity from Ron though.

I am indebted to Harry Atkinson, of Geraldton, for some very welcome news of activity up there and I can do no better than quote from his letter. 6BJ still married as far as we know—promised to be on for part of the 40 metre scramble, but wasn't heard. 6WZ claims to have had the first (and so far only) QSO Bunny has had since getting married. Too bad the QSO broke up when Bunny's 12 volt battery refused to go on supplying the necessary 15 amps or so.

6CN wildly excited about rumour that AC may arrive on his doorstep sooner than expected. Also very pleased (and relieved no doubt) to get back his modulation tranny from 6WZ. Cyril has found a new Geraldton enterprise which re-winds power trannies (by hand)—please don't rush—no further order taken. 6CN is the only client for whom work is undertaken. 6EL still longing for AC. Aren't we all up here? Threatening to build a new rig with s.s.s.c. (Something Sounds Screwy Chum). Ernie also rejoices in the title of The Victor Silvester of 7 Mc. 6LG will tell you why. 6WZ very pleased with new multi-match modulation transformer, new v.f.o. and five inch c.r. tube. Wait till he sees that trapezoid! Just a minute Harry—what was that sign N.A.P. put over the door of your shack for. Shame on you fellow.

No news to hand from the Goldfields gang. 6DX is heard regularly down here on 40 and 80 with a very nice signal and 6OI seems to have the DC problem well licked up in Bolder. Well that's about the issue for this month fellows. Don't forget to let me have any scandal you can dig up and I'll do my best to air it for you in this column.

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TASMANIA

By the time these notes appear in "A.R." the Remembrance Day Contest will have been conducted and all VK7s will be looking forward to the result, just in case we are fortunate enough to retain the Trophy. Heard 7KB mentioned he would be a trier once more. Wish you all the luck there Ian and hope you repeat your previous effort. If your signals are as consistent as usual, this should be no trouble.

On 14th July a meeting was held and a lecture was given by 7JB on "Operation of Emergency Network. Among the members attending this lecture were 7LE, 7DH, 7AJ, 7LD, 7LJ, 7SJ, 7FJ, and 7KA (the man with the obnoxious pipe). Practice for this new venture was promulgated for the 6th August, the frequency 3501 Kc. and c.w. to be used if possible. A suggestion by 7AJ that the speed of c.w. to be approximately 12 w.p.m. was approved (thanks Athol).

Keen interest has been shown between 7SD and 7LD contesting for the throne of champion earbasher recently left vacant by 7TA. Well 7CT had just about given up hope of hearing you again since shifting to your new location. From the strength of your signal which was recently heard things have been happening to your rig since we heard you last. Wonder to me Terry how you can get that signal through the fog; hope you worked that G you were after.

Another one of the City Hams gone bush is 7EJ, now residing at that well known seaside resort of South Arm. Pressure of business has been the cause of silence, but he should be heard shortly. Believe Ted is growing fat and prosperous as the genial country storekeeper, so how about brushing the cobwebs away from the rig and let's hear from you again Edward. Two other locals to change QTH are 7BH and 7SK.

A lecture was given by Mr. Turnbull at the August meeting of the W.I.A. on "Oscilloscopes." Due to a fault in the high tension generator, a further illustration on the working of this type of equipment is to be arranged. This brings me to a rather sore subject, but all members will agree that the resultant splatter due to overmodulation needs our immediate attention. On one recent occasion while listening to three locals, each was badly splattering, one covering approximately 100 Kc. For this there is no excuse, so how about before conducting a QSO check the modulation percentage, and also check your channel. By following this simple procedure, transmissions from VK7 will be greatly improved.

During this meeting dire threats were issued to overcome neighbourly interference between 7AL and 7BJ. These two members will be active during the Contest, their QTHs are only 100 yards apart. Believe Joe is using standover methods at his place of employment to secure participants in the RD Contest.

Congratulations to 7CA on his recent marriage, it has been rumoured Max has given his 100 watts away and now using less than one watt. "Pete," as Max is commonly known down south, has in the past been a very active Ham (in more ways than one). Another promising W.I.A. member eagerly awaiting results of the last A.O.C.P. is Don Davis, who we hope was successful. His inclusion in the ranks will be welcomed by the local Sunday night rag chewers (phone or c.w. Don?).

Hope all members have paid attention to the Editorial in August "A.R." with reference to DX contacts, etc. Trust no VK7 is guilty of this offence.

NORTHERN ZONE

The August meeting of the zone saw a very welcome visitor in the person of the State Secretary. The short review given on affairs in the south was very welcome and after it had developed into a miniature "Question Time," all members seemed very happy to have had several points of view aired and cleared. Really good to see you, Bob, and only regret that your visits are too infrequent.

There was quite a bumper attendance once more, which is very pleasing to those endeavouring to conduct the affairs of the zone. A semi-impromptu talk by 7PF on a new modulation system on trial also brought out some interesting points, but Peter still won't believe the things my S meter does when he talks.

By the time this hits the back page, the 1950 RD Contest will be history—seems to be our best received Contest and deservedly so. If this year comes up to last, and indications are that it will, the memory of those to whom the Contest is dedicated will live long, so here's hoping the 1950 effort is the greatest yet and best of luck to every entrant, be he highest scorer or lowest.

Seems that some of the zone are really going highbrow. In recent months no less than three of the locals have made extensive tests with high falutin' gear to determine frequency response, etc., of their phone—in some cases the results I believe have been really first class—it does make some of us whistle and pea lamp testers hang our heads in shame.

Flash!! 7XW, looking through the junk box one night, came across a thing with two terminals at one end and a knob at the other. Intensive perusal of antiquated publications convinced him that it was what early Hams called a key, but, after trying to open fourteen doors, three safes and one ignition switch with it, Chris gave up until he spotted two terminals on the rig marked key—connected them and now I've been QSOing 7XW using c.w.—if you don't believe me ask 7LZ, he was in on it, too.

After a heart to heart talk with 7TE, I've decided that if I can purchase the block of land behind his QTH for two bob, a load of wood and a canary, I'm going to move in. The stuff Bill hears on 7 Mc. after installing a b.f.o. has really turned my eyes a bright emerald, so I'm going to see the estate agent just as soon as I can cut the the wood and catch the canary—it's all right, I know where I can borrow the two bob.

Another visitor to our fair city this month was 7AL, our State QSL Manager. A rush trip I believe, but longer next time we hope Tom. Interesting item imparted was that a large parcel of VK3 cards arrived just as Tom left Hobart, so there are several of us with fingers, etc., crossed and thoughts of VK1ADS.

Still haven't heard anything of 7AM's proposed QRO, but perhaps that's because I don't listen at the right times. 7DS read my comment re his football team—went to work on them and up they bob to topple the competition leaders, so in future I'll leave the sports items to the dailies. Bill also polishing up the contacts and removing several weights from the bug in preparation for the RD Contest; good hunting Bill. Better wind up now or I'll get myself mixed up in the Hamads. So remember, the date of the second Friday in September is the 8th.

CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

PRESS PUBLICITY

Editor "A.R.," Sir,

There are occasions when achievements of Australian Radio Amateurs may be brought before the notice of the public through the medium of the daily newspapers. During a period of emergency, such as traffic handling in flooded areas, it is logical for "news hawks" to scout around for "copy." Once that is given to the newspaper, however, it is a matter for conjecture as to what journalistic juggling will be indulged in, and in what "garbled" form the article will appear. Unfortunately there are occasions where Amateur Radio is blatantly made use of in the interests of sensationalism.

Recently there has been a glaring example in Sydney. Intended, no doubt, by whoever furnished the "copy" to tell a story for the W.I.A., it conveyed a very different idea. In fact, only the last two lines of a page splurge referred to the Institute. My reaction is that the news editor used Amateur Radio for sheer propaganda purposes—to the effect that U.S.S.R. Amateurs were causing wilful and deliberate interference with Australians—that they won't exchange Christian names with us, and other things.

For the reason that I am not a very active DX man these days, I do not know if there is any truth in these statements; perhaps there may be, but my recollection of QSOs with the few UAs I have worked with on rare occasions is that they seemed to be just like any other Amateurs. They most certainly did not hold back their names—names like Boris, or Stefan, etc. I have always maintained that the real spirit of Amateur Radio, as initially practiced anyway, permits individuals of widely separated creeds and outlook to hold contact with each other with absolutely no thought of ulterior motive. If that is no longer the case, then it is a sad outlook for "civilisation." If we don't agree with the other fellow's way of life, we don't tell him so—most certainly NOT by Amateur Radio.

What the daily press does with Amateur Radio news it gets hold of is another matter. As a publicity outlet for the W.I.A. the story I refer to was sufficient reason why in future it would be better not to use such mediums. Some newspapers are merely circulation boosters; they rarely have scruples as to how they do it. Such people see no real news value in Amateur Radio. They dish up a plethora of distortion gleefully. Better stick to reliable and appropriate magazines of the kind people read because they are interested in radio.

—D. B. KNOCK, VK2NO.

HAMADS

.9d. per line, minimum 2/-.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 8th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line.

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FOR SALE.—Type 3 Mk. II. with most spares, manual. Excellent condition, unmodified. A. F. Elliott, 31 Fenton St., Ascot Vale, Vic.; FU 1580.

SELL.—Transmitter, details: phone-c.w. 60w., v.f.o., 7, 14, 28 Mc., plate mod., c.r.o. checker, 600v. 250 Ma. supply; what offers. Hollins, 91 Walpole St., Kew, Vic.; WA 9069.

WANTED.—Coils for BC454 Receiver, 3 to 6 Mc., J. F. Isaac, 72 Young St., Frankston, Vic.

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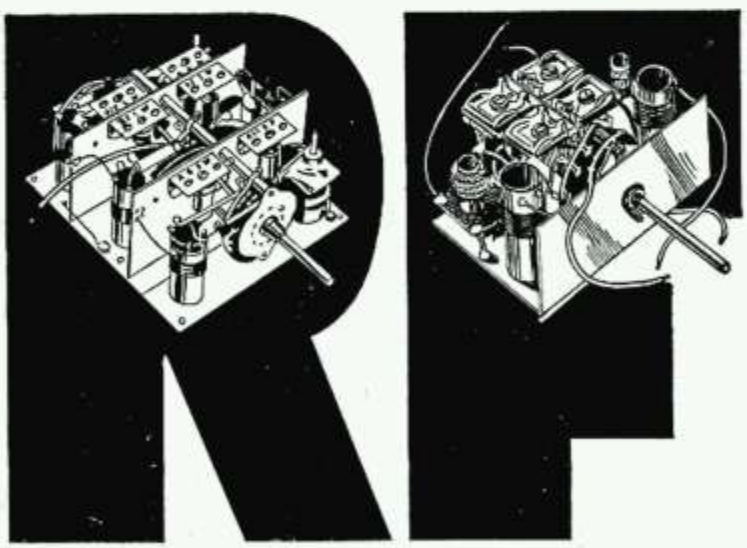

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AMATEUR RADIO

OCTOBER 1950

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

FOR THE EXPERIMENTER & RADIO ENTHUSIAST

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EDITORIAL

★

The rapid post-war increase in the number of licenced Amateurs has reduced the elbow room available for operation on restricted bands when conditions are good.

The "Gentlemen's Agreement," providing for voluntary reservation of portion of each band for c.w. operation, was promoted by your Federal Council with a view to giving c.w. operators a channel comparatively free from phone QRM. Naturally the success of any plan of this nature depends upon the whole-hearted co-operation of the individual. Hence the success of the present plan rests with YOU and every other active Operator.

The major QRM problems in each and every band are created by:— "Inane Earbashing," "Splatter," and "Poor Operating Techniques."

"Inane Earbashing" we will leave to the conscience of the individuals concerned—perhaps when the housing shortage is overcome the aforesaid earbashers will be able to lean on the dividing fence once more.

"Splatter" can be avoided if every law abiding Amateur makes proper use of the monitor demanded by the conditions of his "Station Licence;" therefore no excuses should be proffered or accepted for such offences.

"Poor Operating Technique" is only excusable if the offender is a newcomer to our ranks; however, observation indicates that the chief offenders in this direction are experienced operators or the swaggering type, who satisfy their ego by adopting irregular and individual procedures, which are in many cases in somewhat doubtful taste. Unfortunately some of the younger members who join the Amateur ranks are apt to adopt this slap happy style rather than the more sober procedure designed to give everyone the maximum enjoyment of our hobby.

Federal Executive suggests that in order to promote goodwill and good operating, instead of advocating return to the "probationary period on c.w." (which can never be justified on technical grounds) each and every Amateur should:—

- Make a point of getting to know personally each of the new licencees (Radio Amateur type) in his district.
- Help all newcomers along the road to good operating instead of shunning them as if they were interlopers in our ranks merely because of slowness on the key or hesitancy in phone procedure.
- If unable to help your neighbour solve his technical problem, introduce him to someone who can do so.
- **Practice the Amateur Code.**

Let's make goodwill and good operating a certainty by adopting a co-operative attitude towards all fellow Amateurs, old and new alike.

FEDERAL EXECUTIVE

The Contents . . .

LOGARITHMIC COMPRESSOR

Aids in Preventing Overmodulation While Increasing Signal Effectiveness

Every phone man, at some time in his QRM-ridden life, has wished that he had a small switch available which would permit him magically to increase his power tenfold. This would be Utopia—from one kilowatt to ten kilowatts by pressing a button.

This button is now available, and it is mounted on the front of the Logarithmic Compressor. This unit will give an effective signal gain which is adjustable from a few db up to as much as ten db (ten to one in power).

The Logarithmic Compressor is an audio amplifier device which is inserted between your microphone and your present speech amplifier. Its function is to push up the average modulation level, with the result that high percentage modulation is assured at all times, regardless of the sound level reaching the microphone.

COMPRESSION VERSUS CLIPPING

Those familiar with clippers or clipping circuits can see that the Logarithmic Compressor is intended to do the same sort of job as a clipper. There is, however, an important difference between logarithmic compression as used in the Logarithmic Compressor and clipping.

Fig. 2 compares the characteristics of the two different systems. In either case the input wave suffers distortion, but the distortion caused by the clipping action of the ordinary diode type clipper (Fig. 2B) is worse for a given amount of signal compression than that caused by the logarithmic compression of a copper-oxide instrument rectifier (Fig. 2A).

Distortion present in either circuit will add "harshness" to speech signals and without further treatment would result in excessively broad signals. Therefore, any distorting type circuit should be followed by a suitable filter to prevent the high frequency products produced by this distortion from reaching the modulated stage. With such a filter much of the "harshness" will still be present but the radio frequency signal need not be broad. The harshness results from cross modulation (distortion) products that lie within the pass band of the filter.

The advantage of the logarithmic compression system is that the distortion is less severe (for a given amount of compression) than the clipper type, and this makes possible the use of a vastly simpler filter arrangement. Three "stages" of R-C type filtering used in the Logarithmic Compressor are as effective as more elaborate sharp-cutoff types of L-C filter virtually necessary with the clipper type of circuit.

Further, the transient response of the R-C type filter is such that no overshot of signal peaks can occur. This is not the case with sharp-cutoff L-C filters. This means that the logarithmic compressor circuit with a properly designed R-C filter is superior to the ordinary clipper circuit followed by a sharp L-C filter. Repeated tests confirm this statement.

FEATURES—

- **Provides 10 db increased effectiveness;**
- **Uses self-contained speech-range filter;**
- **Three tubes, including rectifier;**
- **Small size—space saving.**

In keeping with our policy of re-printing worthwhile articles from overseas publications, we present the following article in G.E. "Ham Hints," May-June, 1950.

For those Hams who possess a modulator and speech amplifier, but desire the advantages of speech clipping, this unit will enable them to obtain the advantage of clipping without pulling their present gear about, as it is simply inserted between the microphone and pre-amplifier.

The 12AT7 high-mu twin triodes specified are at present difficult to obtain in Australia, but we understand they will be obtainable soon. The nearest equivalent is the 6SL7, and we would like to know how this circuit works out with these valves so that the information can be passed on to our readers.

CIRCUIT DETAILS

With reference to Fig. 3 it will be seen that the first 12AT7 acts as a two stage audio amplifier to bring the signal from the microphone to a sufficient level so that the compression circuit itself operates at the proper level. Resistor R1 in the first stage has been added as a precaution against r.f. feedback.

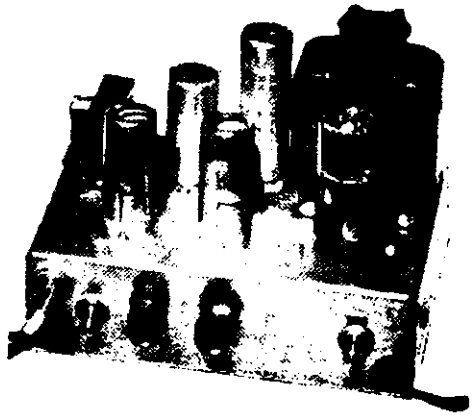


Fig. 1.—The Logarithmic Compressor ready to plug into your present microphone jack. Controls are, left to right, in-out switch, compression control, output control and a.c. on-off switch.

Special care has been taken to attenuate low audio frequencies prior to compression. Doing this gives a well balanced speech response as well as minimising much of the distortion caused by cross-modulation between the low speech frequencies and the intelligence-bearing high speech frequencies. The values of condensers C2, C3, and C4 are chosen to attenuate the low frequencies adequately before speech compression. Condensers C7 and C9 serve the same purpose after compression has taken place.

Resistor R4, by varying the signal input to the second section of the first 12AT7, enables control of the amount of compression.

The audio transformer, T1, is necessary because the limiting circuit must be fed by a low-impedance, low-resistance source. Using the centre tap on this transformer, accomplishes this function.

The actual limiting or compression circuit consists only of R7 and W, the latter being two sections of a copper-oxide instrument rectifier. Resistors R8 and R9, together with condensers C5 and C6 act as a two-section R-S filter. The output of this filter feeds the second 12AT7 directly. Resistor R12 acts as an output control so that the output level from the speech compressor may be made to match the output level of the microphone. Thus when the speech compressor is switched out of the circuit no other adjustment need be made.

The output tube is required for two reasons. It is necessary to present the proper load to the two R-C filters and, secondly, to permit a third R-C stage to be utilised. Inasmuch as the second section of the 12AT7 tube is not used this may seem like wasting part of the tube, but the use of a high-mu triode was dictated and the 12AT7 fills this requirement nicely. Note that the heater of the unused section need not be energised. Many uses for this extra tube section will undoubtedly suggest themselves.

The in-out switch, S2, allows the unit to be switched in and out of the circuit easily. Note that shielded wire is specified for the connections to this switch. The output itself is carried by a shielded lead which plugs into the mike jack of any speech amplifier designed to handle a high impedance dynamic or crystal microphone.

The power supply is conventional in all respects. Because of the low current drain on the power supply a resistor-capacitor filter is employed. Resistor R18 and condenser C11 provide decoupling and additional filtering for the first 12AT7 section plate voltage.

The connections indicated by the heavy black lines in the power supply section should all be made to one ground point. This will prevent the chassis from carrying the circulating capacitor current and help to keep the unit hum-free.

CONSTRUCTIONAL DETAILS

As may be seen from the photograph, the entire unit, including power supply, is mounted on a 5 by 7 by 2 inch chassis. While the layout is not critical, it is advisable to keep the power supply portion of the circuit as far away from the rest of the circuit as possible. The layout shown is quite satisfactory.

With reference to Fig. 1, the front panel layout, from left to right, is: mike jack, output lead, in-out switch, compression control, output level control, AC on-off switch and AC cord. The tubes are, left to right, input 12AT7, output 12AT7 and 6X5 rectifier. Note that the two 12AT7 tubes are shielded. Resistor R1 (underneath chassis) is placed as close to the grid pin as possible.

The wiring can be made simpler if the unused leads from the power transformer are pulled inside the transformer case and securely taped to avoid shorts. This was done with the 2.5 volt and the 5.0 volt windings.

The unit pictured uses a bottom cover plate for the chassis. This is recommended to avoid RF feedback. Any sort of thin metal will serve for this purpose, if your chassis comes without a bottom plate.

COMPONENT PARTS

While no extremely critical values are required, it is recommended that the specified values be used in all cases. For example, C2 and C7 are specified as 1.0 uF. condensers. If lower values were to be used, the frequency response would suffer, and if higher values were used, the result would be insufficient low-frequency attenuation.

Almost any sort of push-pull plates to voice coil transformer will serve as T1. Wattage rating of this transformer is not important.

If possible, linear taper potentiometers should be used at R4 and R12. This sort of taper will give a smoother action than other types of taper.

Care must be taken in purchasing the limiter rectifier, W, because instrument rectifiers come in several different styles. Basically, of course, they are used to make AC meters out of DC meters. However, they can be purchased as half-wave units, doubler units, full-wave units and bridge units.

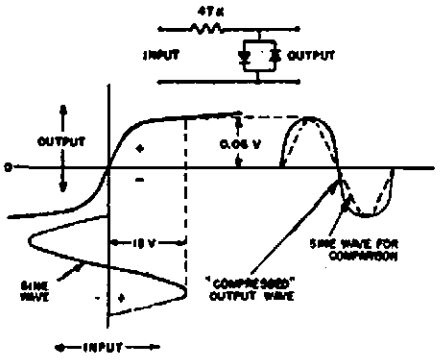
Two separate half-wave units, connected as shown, will work, and the bridge-rectifier style will work if the proper leads are used. The "full-wave" unit will not serve because the two diode sections are connected improperly. In the doubler type rectifier the two diode units are connected as shown in Figs. 2 and 3 and therefore this type of instrument rectifier would be the best to use.

COMPRESSION ADJUSTMENT

The adjustment of the Logarithmic Compressor is done very easily. Plug in a mike and place the in-out switch, S2, in the "out" position so that the microphone is connected directly to your speech amplifier, then follow these three steps:—

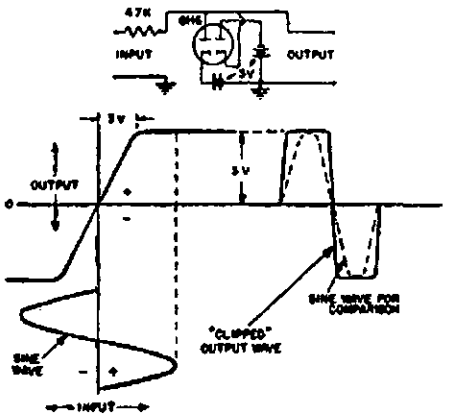
● Adjust the audio gain control on the transmitter for normal modulation as seen on an oscilloscope (the best method) or some other instrument worthy of trust.

Transfer Characteristics of Back-to-Back Copper Oxide Instrument Rectifier



A

Transfer Characteristics of Usual Diode Clipper Circuit



B

Fig. 2.—A comparison between the output waveform of a Logarithmic Compressor and a diode clipper.

● Put the output control on the unit to zero and set the compression control so that it is about half open. Switch the compressor to "in" and advance the output control while speaking into the microphone until the peak modulation is the same as in step 1. While an oscilloscope is not absolutely necessary in order to make this adjustment, it is strongly recommended.

● Adjust the compression control so that the average plate current in the modulator stage on a sustained "00000—0" is, say, not over twice that obtained with the compressor out. Then try compressor "in" and "out" on a few QSOs to find the best operating point of the compression control for the microphone you are using and the receiving conditions prevalent at the other fellow's QTH.

USE OF THE COMPRESSOR

With the Logarithmic Compressor in use the modulator tubes are required to handle much more average power than usual. In fact, it is possible that your modulator stage will not be capable of handling the extra average power required. Careful checking with an oscilloscope will determine if this is the case.

As a general rule, if your modulator can handle a sine wave signal at 100% modulation, then the average power capability of your modulator is adequate for use with the Logarithmic Compressor. (After all, this ten db gain has to come from some place!) This means that, for a kilowatt rig, your modulator should be capable of continuous operation at 500 watts output at 1,000 cycles. For lower powers the same ratio holds.

In operation the compressor must be used with judgment—good judgment that is. Too much compression may make an otherwise acceptable signal almost intolerable. With a judicious amount of compression one can expect to add from 6 db (4 to 1 in power) to 10 db (10 to 1 in power) in the effective-

ness of his signal **provided** conditions at the receiving point are such that understandability without the compressor is impaired by QRM or high background noise.

RESULTS WITH THE COMPRESSOR

In many months of test at W2KUJ the following information has been obtained. Nearby stations, or stations not experiencing QRM, prefer that the compressor **not** be used. Stations receiving a weak signal or listening through severe QRM prefer that the compressor be used.

Reports from the latter stations range from eight to ten db jump in effective signal strength when the compressor is switched in. Reports from nearby stations are that the signal is **louder**, but somewhat less readable with the compressor in use than without it.

In no case has a report been given that the signal was broader when the compressor was used, even when this question was asked of nearby stations.

Tests made at W2RYT's shack indicate that different microphones give somewhat different results when used with the compressor. For example, an Electro-Voice Model 605 dynamic mike and an Electro-Voice Model 915 crystal mike seemed to have identical speech characteristics (although the dynamic mike had less output) when used without the compressor.

When used with the compressor, the dynamic mike was found to have a speech quality which was less harsh than that of the crystal mike. Further, it was found advisable to advance the compression control with the dynamic mike.

The foregoing is not intended as a recommendation for dynamic mikes, nor is it intended as an authoritative comparison between two Electro-Voice microphones. The comparison has been made to emphasise the importance of testing your compressor carefully with each microphone you may use with it.

In summary, one can expect to boost the effectiveness of his signal when it is needed most by use of the compressor (it frequently means the difference between making a contact or not) with some decrease in ease of reading the signal where the compressor is not needed.

Bear in mind that the compressor **can** be misused (to your disadvantage). Seek honestly to find the operating points which best exploit its use. In many cases it is best to **not** use the compressor. But in those cases where it is needed, the Logarithmic Compressor can really do a job for you.

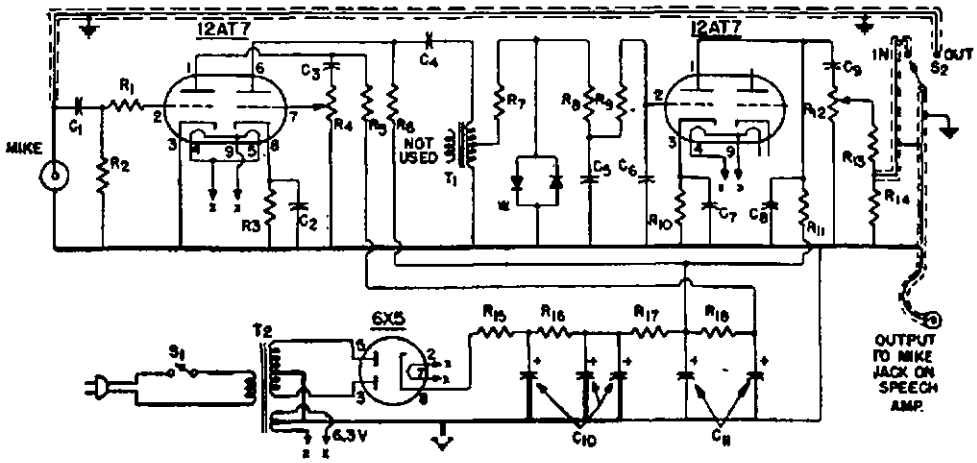


Fig. 3.—Circuit diagram of the Logarithmic Compressor.

CIRCUIT CONSTANTS

(All resistors and capacitors ± 20% tolerance unless specified otherwise.)

C1, C9—0.01 uF. 400 volt paper or mica
C2, C7—1.0 uF. paper (see text)
C3—1000 pF. mica.
C4—0.05 uF. 400 volt paper.
C5—1000 pF. ±10% mica.
C6—100 pF. ±10% mica.
C8—0.005 uF. ±10% mica.
C10—16 uF. 450 volt electrolytics (see text).
C11—8 uF. 450 volt electrolytics.
R1, R14—10,000 ohm, ½ watt.
R2—10 megohm, ½ watt.
R3, R10—470 ohm, ½ watt.
R4—0.5 megohm potentiometer.
R5—0.1 megohm, 1 watt.
R6, R11—47,000 ohm, 1 watt.
R7—47,000 ohm, ½ watt.
R8—56,000 ohm, ±10%, ½ watt.
R9—0.56 megohm, ±10%, ½ watt.
R12—0.1 megohm potentiometer.
R13—0.47 megohm, ½ watt.
R15—470 ohm, 2 watts.
R16—2,200 ohm, 2 watt.
R17—1,000 ohm, 1 watt.
R18—4700 ohm, 1 watt.
S1—SPST toggle switch.
S2—SPDT toggle switch.
T1—Push-pull plates to voice coil audio transformer (see text).
T2—Power transformer, 300-0-300 volts at 50 mils., 6.3 volts at 2 amp.
W—Copper-oxide instrument rectifier (see text).

Extracting the Watts

BY E. A. CHARLES,* VK5YQ

With the receiver problem out of the way (August "A.R."), thoughts turn to the transmitter and output efficiency. There are many ways of feeding various antennae and checking the S.W.R. to affect the matching of the transmission line to the antenna. This is a most necessary pre-requisite to efficiently loading the transmitter, as well as ensuring that the antenna system **only** is doing the radiating. However, the usual antenna tuner has been left in its pre-war form—a high L/C circuit designed for both series and parallel tuned feeders.

The usual antenna tuner was constructed on similar physical lines to the final p.a. tank. The Amateur was not concerned with loss of fidelity due to attenuation of high frequencies—side-band cutting. A high impedance tank was required for voltage-fed resonant lines for Zepp fed aerials and multi-band operation.

With the introduction of low impedance, un-tuned, non-resonant lines, the way out was to feed them by either tapping down the antenna tuner tank, or by inductively (link) coupling the transmission line. More often, an antenna tuner was not considered, if, by pushing a one or two turn link into the final tank, it "loaded." If it didn't, the coupling was increased until it did "load," or, the new aerial (or transmission line) was immediately condemned!

With the availability of 300 ohm twin lead, or the economy and free-from-weather-effect of home-constructed 300 ohm transmission line, its flexibility makes it a natural choice. It has low losses, freedom from radiation, and freedom from unbalance due to proximity of grounded objects. So, you leave tuned feeders and full-wave Zepps to the countryman, the old-timers and experimenters like the VK5 "Umbrella-Man," putting your antenna system, whatever it may be, wherever most suitable, without any worries where the feed line must go.

Now, let us see what else is required. The object is to draw power from the p.a. and put all possible into the antenna (again remembering that **only** when the line is matched to the antenna feed-point impedance will all that power go into the antenna). In addition, we also desire:—

(a) The most efficient transfer of power;
(b) Absence of b.c.l. interference;
(c) Absence of harmonic radiation (and t.v.i.);
(d) If possible, multi-band operation.

With the transmitter itself properly tamed, (b) and (c) are taken care of by link coupling and a Faraday shield. It is a simple matter to install the popular 75 ohm co-ax line, using the outer braiding to form a Faraday shield. However, you must ensure that the antenna tuner is not within the field of the p.a. tank, or the effect of the Faraday shield is lost. It does not have to be co-ax line—you can shield a loop with braid (and insulate it) and earth it, running twin lead to the antenna tuner, unshielded when it is out of the p.a. pick-up zone. And it does not have to be exactly 75 ohm line, for a short line (compared to a quarter wavelength at the operating frequency) similarly terminated each end, reflects the same impedance both ends.

* 193 Young Street, North Unley, S.A.

The reason for the figure 75 ohm, is because the antenna tuner is a parallel-tuned two turn coil (2" inside diameter, spaced wire diameter, heavy copper wire or tubing, silver plated if possible). The single turn link becomes the primary of a 1 : 2 turns/voltage step-up transformer; which is a 1 : 4 impedance step-up. Four times 75 equals 300—right on the beam for our 300 ohm line.

For plate-modulated phone, a p.a. tank with a loaded Q of 12 is desirable. An optimum practical coefficient of coupling of 0.09 makes the antenna tuner with a loaded Q of 10, so for parallel resonance, the capacity required equals: $C = \frac{Q}{2\pi f R}$. Remembering, again, only where our antenna is matched to the line (which now behaves as a purely resistive load at the operating frequency—300 ohms).

The capacities in circuit to resonate our antenna tuner with parallel tuning are:—

Ten Metre Band	100 pF. approx.
Twenty Metres	350 pF. approx.
Forty Metres	900 pF. approx.

Since it is a low-voltage tank, a receiving type condenser will be satisfactory—a 0.0005 usual b.c. type is OK. One that can be mounted with equal capacity between fixed and moving plates to earth is preferred. For tuning forty metres, a 0.0005 fixed condenser in parallel is required (or forty metres can be series-tuned by having a capacity of approximately 7 pF. in series with one leg of the 300 ohm line—the parallel capacity out of circuit).

The capacities are given as approximate, as they will depend, in actual working conditions, on the extra amount of inductance present in the circuit represented by the actual length of leads from the coil to the condenser. The parallel capacity will usually be a small percentage less. However, if the antenna loads way off the capacity shown, you haven't remembered! Or, if you have, you haven't done anything about matching the line to the antenna—you have got a poor S.W.R.! So get to work with a twin-lamp!

Assuming you have a low S.W.R., you will find that you will have the same or a little better line current as when using the high L/C type antenna tuner. After all that was really like putting in a power transformer when all that was required was a 2.5v. to 6.3v. auto-transformer!

To refresh your memories, the line current to be expected is calculated from $P = I^2R$, where R is your line Z when flat. So, if you are running forty odd watts to an 807, then an output of 30 watts is pretty good, giving 0.32 Amp. in the 300 ohm flat line to the antenna.

$$\left(I = \sqrt{\frac{P}{R}}\right)$$

For you 100 watt men, unmodulated line current of 0.5 Amp. is the order of the day. If you have any more on an accurate RF meter, it means either (a) you have standing waves, or (b) the R.I. is away on annual leave!

Put up a folded dipole for each band desired, you know that is well matched.

Abstracts from Overseas Magazines

R.S.G.B. "BULLETIN," APRIL, 1950

P. 332: "The Design of Tank Circuits of Constant Q;" R. W. Rogers, G6YR.—How to pick L/C ratios and match impedances of power amplifiers.

P. 336: "A 28 Mc. Communication Receiver from the R1132A;" H. E. Smith, G6UH.

P. 338: "Avoiding Harmonic Generation;" E. Willis, G6OU.—To avoid TVI, operates VFO on 28 Megacycles.

P. 338: "Determination of Meter Resistance;" P. Hughes.

P. 339: "A Simple S Meter for the BC348;" A. J. Bayliss, G8PD.

P. 340: "In the Workshop."—Files and filing. Shears and tin snips. Cutting large holes. Drilling glass.

"SHORT WAVE NEWS," APRIL, 1950

P. 92: "A Communication Receiver from the R1132A;" P. Lamb.

P. 97: "Seventy Centimetres, Part III.;"—Super regen receiver using 955.

"SHORT WAVE MAGAZINE," APRIL, 1950

P. 98: "Two Metres with Three Valves;" G. Elliot, G3FMO.—6SN7 harmonic c.o. and tripler, QVO4/7 doubler, 832 final. Good sketches of physical layout.

P. 105: "Screen Control Modulator;" H. J. Beach, G3f8BO.—Economic screen modulation.

P. 108: "Voice Switching Circuit;" E. A. Knight, G3BNZ.—Circuits for voice operated break-in.

P. 112: "Modulation Level Indicator;" H. Barnett, G2AIQ.—Rectifier and meter across modulator output.

P. 113: "Dual Purpose Modulator;" J. N. Walker, G5JU. Part II.—100 watts audio from p.p. EL31s.

P. 127: "Matching Feeder Lines;" F. Tillotson, G6XT.—Practical hints for adjusting feeders in particular for 300 ohm twin lead.

"RADIO AND ELECTRONICS," MAY, 1950

P. 4: "A Sub-Miniature Receiver for Radio Control,"—Full details of 50 Mc. superregen receiver using three hearing aid valves. A battery drain of 75 Ma. at 1.5v., B battery drain 500 microamps. at 22.5v. Receiver, relay, and batteries weigh six ounces.

P. 9: "Actuator Mechanisms for Radio Control."

P. 20: "A Portable Transmitter for Ralio Control Work."—8A5 (or DCC90) self excited oscillator. Three watts output at 50 Mc.

P. 24: "New Philips Range of Transmitting Valves."—Discussion of the amateur uses of the QQO6/40, QVO4/7, QB3/300, TB2.5/300, QQEO4/20, QQEO4/40, and QQCO4/15.

"SHORT WAVE NEWS," MAY, 1950

P. 122: "A Portable Battery Receiver;" J. N. Walker, G5JU.—Tuned RF stage, regenerative detector, audio. Plug-in coils.

P. 128: "Seventy Centimetres, Part IV.;"—Aerials; corner reflector. Sixteen element beam. Twenty-four element beam.

"RADIO AND TELEVISION NEWS," MAY, 1950

P. 35: "Simplified Ham TV Station, Part I.;" J. R. Popkin-Clurman, W2LNP.—General discussion of the "flying spot" system used.

P. 39: "Something New in Transceivers;" K. M. Kortge, W8AHT.—Two metre transceiver with RF unit built into a telephone handset.

P. 51: "A Supermodulation Phone Transmitter;" R. P. Turner, K6AI, and J. W. Graves, W6MYR.—829B final using one half as the power amplifier and the other as the positive modulator.

P. 63: "N.B.F.M. and F.S.K. Unit for Self Excited Oscillator;" R. W. Jones, W6EDG.—Uses 6SL7 as Miller effect reactance tube.

"CQ," MAY, 1950

P. 11: "Design Considerations for Class C Power Amplifiers;" K. L. Klippel, W0SQO.—Simple formulae for Class C calculations.

P. 16: "Crystal Controlled Walkie-Talkie for Operation on the 144 Mc. Band;" G. Trewke, W6DSR.—Dry battery operation. Six tube transmitter-modulator; three tube super regen receiver.

P. 18: "Eliminating TVI in Your Ten Metre Transmitter;" S. Kupferman, W2GVT.

P. 22: "Meet the Capacitor;" R. L. Rod, W2KVY.

P. 25: "A Midget Communications Receiver;" R. C. Amundsen, W1HYF.—Two tube superhet covering 80 and 40 metres. 6BE6 mixer, 6J6 regenerative detector and audio.

P. 28: "Variable Audio Selectivity with the Surplus FL-8 Filter;" J. P. Tyskewiz, W1HXU.

P. 29: "The Electrical Design of the 20 Metre Wide-Spaced Rotary;" W. I. Orr, W6SAI.—Good straight forward information on tuning them up.

"RADIO AND ELECTRONICS," JUNE, 1950

P. 37: "A Sub-Miniature Receiver for Radio Control," Part II.—Adjusting and testing.

"SHORT WAVE NEWS," JUNE, 1950

P. 154: "An O-V-O Receiver;" G. H. M. Yule.

P. 157: "An Efficient Aerial for 28 Mc.;" H. E. Smith, G6UH.—Two wavelength wire, fed off centre with 100 ohm balanced feeder.

"QST," JUNE, 1950

P. 11: "Amateur Television—A Progress Report;" E. P. Tilton, W1HDQ.

P. 16: "An All-Band Mobile Antenna System;" S. S. Perry, W1BB.—Quarter wave whip for 2, 6 and 10 metres. Loaded whip for 20, 40, 80 and 160 metres. Details of universal loading coil and adjustment procedure.

P. 19: "An Impedance Bridge for Less Than Ten Dollars;" B. Dudley.—Simple bridge for measuring L, C and R.

P. 26: "Six Metre Coils for the HRO;" L. G. Windon, W8GZ.—Conversion of a spare coil box for six metres.

P. 28: "Packaging the Basic Phone Exciter;" R. W. Bradley, W1FIN.—Miniature construction of s.s.s.c. exciter.

P. 30: "A Four Tube Bandswitching Circuit for Mobile Rigs;" W. L. Lin, W9LHF.—6N7 crystal oscillator, doubler, 807 final, 6N7 class B modulator.

P. 34: "A Noise Limiter for the HRO-M;" R. W. H. Bloxam, GM6LS.—6H6 limiter for pre-war and war-time HRO's.

P. 36: "A Low Cost Audio Filter;" G. F. Montgomery, W3FQB.—Uses two filter chokes and a few condensers.

P. 41: "Tower and Rotator Techniques;" L. H. Hippe, W6APQ. Part II.—A rotator, direction indicator and control unit.

P. 56: "Hints and Kinks": (i) Improved b.f.o. circuit for the SX42. (ii) Antenna feed through panel. (iii) Protection for modulation transformers.

"HAM NEWS," MAY-JUNE, 1950

P. 1: "The Logarithmic Compressor."—Speech clipper using a copper oxide instrument rectifier instead of diodes for clipping. This has a softer clipping action and an R-C filter can be used instead of the elaborate L-C filters necessary for diode clippers.

P. 7: (i) "VFO Hi-Lo Switch;" (ii) "Proper Care of Crystal Microphones."

Tribute from Postmaster General

The following letter has been received from the Postmaster General personally commending the Amateurs on their valuable service to the people of Australia concerned in the recent floods in New South Wales.

The Postmaser General says: "In a recent broadcast over 2KM Kempsey in connection with the recent widespread floods in New South Wales, I made appreciative reference to the assistance given by the licencees of Amateur Wireless Stations."

He then continues, "Since then, I have received further information of the part played by members of the Institute, both in the Kempsey area and also in other parts of the State affected. Accordingly, I would now like to confirm in writing the sentiments expressed over 2KM, and to say how pleased I am with the readiness shown, once again, by Amateur Operators to perform a public service, in times of emergency, with the facilities for which they are licensed."

Federal Executive, on behalf of all the Amateurs, have great pleasure in conveying the contents of this letter to members and, on behalf of the Wireless Institute, of thanking those members who participated in this public service for stricken people in the flood areas. Keep up the good work of having reliable equipment available for times of national emergency. It is gratifying to receive such tribute from the Postmaster General and to know that the activities of Amateurs are held in such esteem by high authority. Let us pursue our hobby always on a plane that will maintain this happy relationship.

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Moorabbin & District Radio Club's Honorary Membership Certificate

For the past few weeks the Moorabbin Radio Club has been publicising their publicity scheme in relation to Honorary Membership Certificates. The rules appear below and would suggest that you read them carefully. This is not a competition, but just a thought to foster goodwill among Hams.

The Moorabbin Club has a membership of over 50 including 26 active Hams, working from 80 to 2 metres. The meeting nights are as follows: Second Friday in the month is the practical night, and the third Friday is the general meeting. Club rooms are at the Town Hall, Nepean Highway, Moorabbin. The club's call sign is VK3APC.

RULES OF AWARD

Object.—To promote interest and friendship in VK3 contacts.

1. There are many active transmitting members of the club and to become eligible for the award, Australian mainland stations are to contact, by radio, 14 member stations, including the club's call sign VK3APC.

2. Overseas stations, including ZL and Pacific Islands, to contact any 12 member stations by radio, phone or c.w., not necessarily including the club's call sign, VK3APC.

3. The contacting station to ask if the VK3 being contacted is a member of the Moorabbin and District Radio Club, and then contacted member station may give explanatory details relating to the award.

4. On completion of the required number of contacts, the contacting station to give a list of christian names ONLY, together with dates of all contacts, to the final station.

5. After checking with logs of named stations and finding correct, a certificate of honorary membership will be awarded.

6. Honorary membership will allow all privileges of full membership less the power of vote.

7. This award is not available to club members.

8. Rules and conditions of this award may be amended where necessary (as outlined in Constitution No. 3, paragraph H) by a notice of motion, one month prior to being put to the vote, at a regular meeting of the club. After being duly passed by a majority of its members, the amendments will come into force.

THE EDDYSTONE "750" COMMUNICATIONS RECEIVER

Selectivity.—The answer to the problem of obtaining high adjacent channel selectivity with freedom from image interference is to adopt the double superhet principle as has been done in the "750" receiver. The first i.f. is 1620 Kc. and the second 85 Kc. In the 85 Kc. transformers, the coupling between the coils can be varied mechanically to give a wide range of selectivity. At the extreme, the response is 60 db down at 5 Kc. off resonance, giving a very sharp "nose" and almost the highest usable degree of selectivity. This position is for c.w. reception—telephony is still readable but the side bands are cut to a considerable extent.

With the selectivity control at minimum, the response is 30 db down at 5 Kc. off resonance. This still represents a much higher than average selectivity and telephony stations only a few kilocycles apart can be separated easily, whilst maintaining moderately good audio quality. As a matter of interest, provided a loudspeaker of adequate size is used, properly mounted, the quality of speech and music from broadcast stations will satisfy all but the most critical.

Sensitivity and Signal-to-Noise Ratio.—These two features are being dealt with as one, since it is pointless to quote only sensitivity, without reference to the noise level. By adding valve after valve to a receiver, the absolute sensitivity can be increased but whether any worth-while improvement in the actual reception of signals takes place depends on how much the noise level increases. Which leads to a point about specifying sensitivity. Most well designed communications receivers will render audible signals having a strength of one microvolt or possibly less, but the information is really useful only when a figure is quoted in comparison with noise. In the "750" the minimum sensitivity is quoted as 5 microvolts for a 20 db signal-to-noise ratio—which is an extremely good figure. It simply means that a comparatively weak signal is audible against a very quiet background and this is one of the most noticeable and most appreciated features which immediately claim attention when one comes to use the "750."

It is normal for the sentivity to vary to some degree over each range of a receiver. Sometimes the variation is great, but in the "750" the inter-stage couplings have been adjusted so that the variation is small. Maintenance of accurate tracking of the ganged condenser also assists considerably in this respect.

Valves.—Of recent years much research has taken place in the development of improved valves and the modern miniature types have many advantages over older valves. One is the short lead-out wires, resulting in low inductance, another the lower anode/grid capacity, achieved by reason of better internal screening—two factors which materially assist in improving the high frequency performance. In the "750," nine miniature valves are employed, plus a rectifier and a neon stabiliser, the two latter being of the octal type.

Circuit Line-up.—By reason of careful design and the use of a high slope 6BA6 valve, the r.f. stage gives amplification of a high order. The gain is more than sufficient for all normal purposes and the addition of a second stage, is not justified.

Then follows the first frequency changer, in which position an ECH42 triode-hexode valve is used. The anode of the triode portion is earthed and the oscillator voltage, developed by a separate valve (a 6AM6) is injected into the grid. An increased degree of frequency stability is thereby secured.

The output at 1620 Kc. from the i.f. transformer in the anode circuit of the ECH42 is fed direct to the second frequency changer, another ECH42. Now some may question the absence of an intermediate amplifying stage, so a few words on this will not be out of place. Whether or not an amplifying stage will be of benefit depends on the signal voltage required at the grid of the second frequency-changer to ensure a high signal-to-noise ratio. In the "750" the high gain given by the r.f. stage, the good conversion efficiency of the first frequency-changer, and the high "Q" of, and voltage magnification given by the 1620 Kc. i.f. transformer, result in the voltage at the grid of the second frequency-changer being adequate without further amplification.

The oscillator section of the second ECH42 operates at a fixed frequency of 1585 Kc. and the resulting output at 85 Kc. is fed to a high "Q" transformer and amplified by the 6BA6 high slope valve. The coupling between the windings in both transformers are continuously variable by a mechanical linkage controlled by a butterfly knob on the front panel.

There follows a double diode triode, the diodes being employed one for signal detection, the other for a.g.c., the triode section amplifying the audio signal before it is passed on to the high slope N78 output valve. The latter is a new type of Osram manufacture and is capable of giving in excess of 3.5 watts output at a low level of distortion.

One diode of a type 6AL5 valve is used as a series noise limiter, and as a result of the careful attention given to the design, this limiter is strikingly effective and is a great boon in situations where automobile ignition and similar interference is prevalent. The noise limiter has only a slight effect on the general audio level.

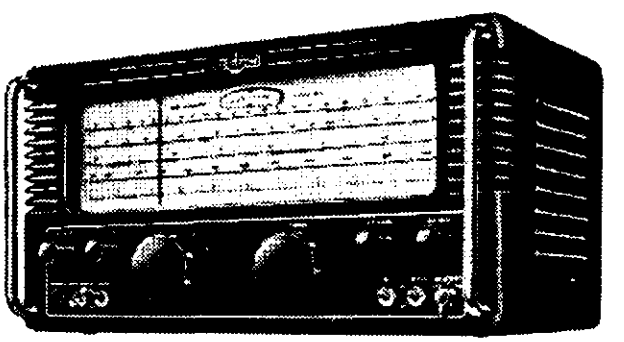
The second diode is connected in series with the external "S" meter (when used). By its normal rectifier action, it prevents the flow of current in a reverse direction, and thus prevents the possibility of damage to the 200 microampere movement fitted to the "S" Meter.

The b.f.o. is a completely screened unit, utilising a 6BA6 valve and designed for high stability.

The VR150/30 stabiliser valve regulates the h.t. voltage to the anodes of the oscilator valves, to the screen of the first frequency-changer valve and also to the resistor network associated with the "S" Meter when the latter is used. Finally, there is a 5Z4G rectifier valve.

Special Points about the "750."—Attention has already been drawn to the high selectivity and sensitivity possessed by the "750" receiver and there are a number of other features which deserve mention.

The heater circuits are balanced, the centre tap of the transformer winding being earthed. Heater by-pass condensers are used where necessary and stray couplings through the heater wiring minimised. As a result, there is a complete absence of modulation hum right up to the highest frequency—signals with T9 note are heard as T9. The smoothing in the h.t. line is fully adequate and no hum is heard from this source.



Special attention has been given to the noise limiter circuit, not only to make it fully effective but also to prevent the introduction of hum due to heater/cathode leakage. A separate centre tapped winding is employed for the noise limiter valve and a bias system is arranged to ensure that the cathode is positive to the heater.

The transformer fitted to the "750" is of generous size and is capable of providing more power than the "750" actually uses. The transformer therefore runs cool under any conditions. All components are finished for tropical use, the metal has been specially treated to resist corrosion and reliability of a high order is assured even when the receiver is operated in areas of high ambient temperature and humidity.

Tuning Mechanism.—The train of spring-loaded gears forming the tuning mechanism is a fine piece of small engineering. The control knob spindle is flywheel loaded and the movement is smooth and positive. The mean reduction ratio between control knob and gang condenser spindle is approximately 150 to 1, which makes possible very fine tuning. The scale is directly calibrated, a noticeable feature being the linear spacing of the markings. The dial is large, occupying the major portion of the front panel and it is edge-illuminated by three small lamps fitted along the top.

Band-Spread.—Driven from the main gears is a rotating scale, the graduations on which (0-100 divisions) are read off in the opening at the top of the main scale. For every complete revolution of the auxiliary scale, the main pointer moves the length of one major division printed at the bottom of the main scale. In all, the band-spread scale covers 2,500 divisions over each wave range, equivalent to a length of about 32 feet. It follows that ample band-spread is available on each of the Amateur bands, the actual figures being given below. These are based on the allocations made at the Atlantic City Conference.

Band Width	Tuning Coverage on Vernier Scale	Vernier Divisions of Band-spread	Kc. in Band
29.7 to 28 Mc.	34.375"	208	1700
21.45 to 21 Mc.	7.5"	45.5	450
15.35 to 14 Mc.	6.45"	89	350
7.3 to 7 Mc. .	15"	91	300
4 to 3.5 Mc. .	61"	364	500

Absence of Crystal Filter.—The selectivity given by the "750" receiver with the control at maximum is so great that it is practically impossible to make effective use of any greater degree. It is therefore not necessary to go to the expense of adding a crystal filter, with its attendant complications.

Operation on Telephony.—With its high sensitivity and low noise level, the "750" receiver is the ideal for those whose interest lies in the reception of weak telephony, either from Amateur Stations or from far distant Broadcast Stations. The intelligibility of such transmissions can be enhanced by careful adjustment of the selectivity control, which should be at minimum with strong stations and in cases where interference is not present. Unfortunately, under present day conditions, interference is a major problem and occurs only too often. Moving the selectivity control towards maximum will gradually cut it out and only in extreme cases will it be necessary to use the highest possible selectivity.

Automatic gain control in the "750" is most effective and the audio output from a given signal is held within close limits despite severe fading.

C.W. Operation.—Some experience is necessary with any receiver if maximum results are to be secured and the "750" is no exception to this rule. When the b.f.o. is switched on, a.g.c. is cut out (otherwise the sensitivity would suffer). With minimum selectivity, the i.f. transformer couplings are optimum and there is rather more i.f. gain available than is desirable under normal circumstances, hence i.f. gain should be reduced manually.

In the majority of cases, it will be advantageous to use a high degree of selectivity and, with the transformer couplings below optimum, the i.f. gain control should be advanced.

The b.f.o. pitch control gives a variation of 3 Kc. each side of zero beat. Because of the very steep slope of the selectivity curve, it will be found that a signal peaks up on the side to which the b.f.o. pitch is set. When interference is present, it can often be reduced or removed by moving the b.f.o. pitch to the other side of zero beat and then slightly retuning. In effect, single signal reception is pos ible.

Standby Switch.—The standby switch is fitted with a long "dolly" (operating lever) so that there is no mistaking it from the other switches. The method used for muting the receiver is to increase the bias on the i.f. amplifier valve, with the h.t. remaining on all stages. Two benefits result—the oscillator valves operate under constant conditions thereby maintaining good frequency stability and the receiver is available to monitor the outgoing signal from the associated transmitter.

Pick-Up Terminals.—Provision is made for the use of a standard type crystal or magnetic pick-up and these terminals serve another useful purpose—a signal from a separate monitor (c.w. or telephony) can be fed in and will become audible on the telephones or loudspeaker, thereby rendering unnecessary an external switch.

"S" Meter.—Some operators like to have available an "S" Meter, which instrument can be very useful for comparative reports of telephony transmissions and as a tuning indicator. Other operators, and particularly those whose main interest is c.w., do not require an "S" meter and the latter is therefore made an optional extra. It takes the form of a diecast housing finished to match the receiver and fitted with an octal plug which only has to be inserted in the socket at the rear of the receiver to bring the "S" meter into use.

Power Requirements.—The "750" receiver is designed for operation normally from a.c. mains, 40/60 cycles, a voltage selector panel enabling voltages of 110, 200/220 and 230/25 to be chosen. The consumption from the mains is approximately 70 watts. The transformer is of more than adequate size and runs cool over an extended period. Very generous smoothing is included, with a consequent absence of hum.

On occasions, it may be desired to operate the receiver from a battery supply and a special vibrator unit is available to meet this requirement. Listed under Cat. No. 687/1, this unit is contained in a small cabinet which matches the receiver, and is fitted with plugs for connection to the receiver. The consumption from a 6 volt accumulator is in the region of 6 amperes.

Conclusion.—Although the foregoing description of the new Eddystone Receiver is fairly lengthy, it still does not cover the subject completely, nor do justice to the inherent "know-how" which has gone into the design of the receiver. But enough has been said to enable the reader to judge for himself the suitability of the "750" for use in Amateur and Professional Communications and for Broadcast Reception on high and medium frequencies.

The above details have been supplied by the manufacturers—Stratton & Co. Ltd., Birmingham, England—and described by J. N. Walker (G6JU). The Australian Factory Representatives are R. H. Cunningham Pty. Ltd., of 62 Stanhope St., Malvern, Victoria.

DX NOTES BY VK4QL

For the week-end of 12th and 13th August, I don't think there were many VK Hams interested in DX, the attraction being the 1950 Remembrance Day Contest, and what a party. Each year this Contest is creating more and more interest, with more and more taking part.

Many of the keen DXers who have been hibernating while the DX has been so poor, crept out of their cocoons for this week-end and have apparently gone back to them as I have been unable to get any scores to include in these notes.

Conditions in Townsville were rather good for the Contest, 3.5 Mc. on the Saturday night and the lack of DX sigs on 14 Mc. on the Sunday afternoon, enabled us to hear the weaker VK sigs. 4TU and I tried to work 7 Mc. in the early hours of the morning, but more than half a mile is required to let two use that band at such close range. 4TU worked UA4FE on 7 Mc. in the middle of the Contest. Wouldn't it, with me needing Europe for 7 Mc. W.A.C. Two South Africans were also heard in the Contest on this band. The only scores I know of over the 400 mark are: 2PA 617, 2EO 593, 4QL 445, 4TU 425. Have not heard any of the VK6 or VK7 to see what happened over there.

As was anticipated, the DX on all bands has been very erratic and it looked as though these notes were going to have very little in the way of DX news. But, as I always say, you never know when the bands will "turn it on." This was borne out on the 14 Mc. band the week-end following the R.D. Contest, prior to a fade-out on the Sunday afternoon.

I find that just before a good fade-out is a real DX time, and this was the case on the Friday and Saturday. I managed six new countries out of the contacts made. I think the most interesting contact was PI1LS, who was on a Dutch weather ship, the QTH being 52°N and 20°E. QSL address is Box 400, Rotterdam.

The next week-end the same thing happened, but the noise level was well down, enabling the weaker DX to be heard. All over the world this year Hams have complained about the high noise level on the 14 Mc. band. Well, this week-end it was missing. The best catch this time was 9S4AX, whose QTH is Saarbruecken, Saar STR9. He advised there are four stations operating in the Saar. Strange to say no "dog pile" formed on him and he made a couple of fruitless CQs and called a couple of VKs with no result. Guess he was thought to be just another commercial in the band.

Some of the DX stations who more or less had a prefix to themselves are having competition, e.g. KV4AQ and KV4AU have been worked as well as KV4AA. A number of SP, OE, PJ, and HA calls have been heard. Some of the calls missing from the bands for some time are FN8AD, CR1OAA, FI8ZZ, VR5PL, and FU8AA. CR9AG has left Macao and from what he told me is going on a bit of a world tour.

Some of the rarer calls which have been heard or worked this month are: TG9AD, Box 299 Guatemala City; TA3AA, TA3FAS, UG6WD, 9S4AX QSL via D.A.R.C., PJ5FN, PJ5RE, HS1SS, KS4AC Swan Is., c/o. Tampa Florida; VP1NW, PZ1AL, Box 226, Surinam; PK5AA, Radio Stn. Balik Papan; FQ8AC, Box 175 Bangui; LA4ZZ, VR1B, TF5TP, VP9OO, via VP9D. Except for about two of the above, the stations were heard between 2 p.m. and 11 p.m. E.S.T. QSLs received from TF3AR, VP7NM, VP7NU. One also received from FN8AD for our VK3 contact. Did anybody ever get a QSL from FI8ZZ? Haven't heard of any myself.

A certain VK5 has never heard of the "Gentlemen's Agreement." Was running a sked the other night on phone in c.w. band with PK4DA. DX was coming through fairly well at the time here.

Have you had a look at the Station List in the latest issue of the Short Wave Handbook put out by "Radio and Hobbies?" Did you notice in the overseas station list the number of stations shown operating in the 7 Mc. band? I think 2JU could do the Hams a service if he gets all the details of the broadcasts and submits them to Federal Executive for action to be taken up with the right people. What about it John?

● The thought for the month: "The Ham never uses the air for his own amusement in such a way as to lessen the pleasure of other fellow Hams."

DX C.C. LISTING

OPEN		
VK3BZ (4)	40	200
VK6RU (8)	39	169
VK3KX (1)	40	167
VK4HR (7)	40	167
VK6KW (13)	40	161
VK2DI (2)	40	160
VK3HG (3)	40	160
VK3JE (12)	39	154
VK4EL (10)	40	140
VK4DO (15)		140
Endorsement		
VK2AHA (9)		128
VK4FJ (32)		120
New Members		
VK2TJ (37)		103
VK3HO (38)		103
VK2TG (39)	39	100
C.W.		
VK3BZ (6)	40	177
VK2EO (2)	40	152
VK3CN (1)	40	151
VK3FH (15)	39	143
VK3VW (4)	40	140
VK4EL (9)	40	140
VK3KB (10)	39	138
VK2QL (5)	40	133
VK4HR (8)	40	131
VK4RF (11)	35	125
Endorsement		
VK4DO (20)		113
New Members		
VK6SA (28)		136
VK3XB (30)		105
VK4FJ (29)		102
PHONE		
VK3JD (1)	37	148
VK3EE (10)		143
VK6KW (4)	37	140
VK3BZ (3)	37	137
VK6RU (2)	37	135
VK6DD (6)		126
VK3LN (11)		125
VK4HR (12)	35	122
VK4ES (9)		121
VK4JP (8)		114
New Member		
VK2AHA (15)		102

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

OCTOBER, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

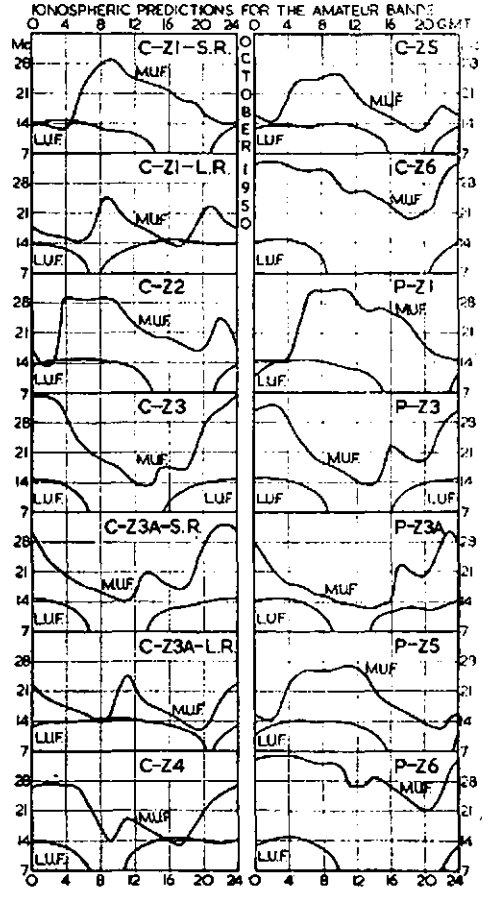
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0700 to 1500 hours G.M.T.
2. Was the 14 Mc. band workable between 1200 and 1500 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

SYDNEY STATIONS ACTIVE ON 576 Mc.

The following list, sent in by VK2AQZ, gives details of the surprising increase in 576 Mc. activity in the Sydney area.

VK2ANF—Two RL18s, 5 watts, superregen. Rx, corner reflector ant., 12 miles greatest distant.
VK2ALU—Two RL18s, 5 watts. ASB7 Rx, Helix Ant., 13 miles.
VK2ABZ—Two RL18s, 5 watts, superregen. Rx, 16 element ant., 7 miles.
VK2AWZ—Two RL18s, 5 watts, corner reflector ant.
VK2AZO—Two RL18s, 5 watts, superregen. Rx, 4 x 4 ant.
VK2XX—One RL18, 2.5 watts, superregen. Rx, Helix ant., 22 miles.
VK2YR—One RL18, 2.5 watts, co-ax mixer (1N21 xtal) Rx, Helix ant.
VK2WJ—Two RL18s, 5 watts, superregen. separate quench Rx, 5 x 5 ant., 18 miles.
VK2ABH—Two RL18s, 5 watts, superregen. Rx, 4 x 4 ant.
VK2AJA—Two RL18s, 5 watts.
VK2PU—Two 8012s (on way), superregen. Rx, dipole mesh reflector ant.
VK2XG—Two RL18s, 5 watts.
VK2IO—Superregen. Rx, Helix ant.
VK2ADW—One RL18, 2.5 watts, superregen. Rx, Helix ant.

2WJ and party are planning an expedition to Mt. Boyce (3,775 ft.) on 17th September with 576 and 144 Mc. equipment. 2ANF had an informative letter from VK3 describing the 576 Mc. gear used and the results obtained down south. This has stirred 2AQZ to construct the above table showing the status of equipment and results of Sydney stations who are active on this band. 2IO is the furthest south (by about ¼ mile) station on this band in the Sydney area. Cec Cronin, with his double conversion superhet, has heard 2ADW, 2YR, 2FK, 2WJ, 2AJA, 2DF, 2ABH, 2AWZ, 2QW, 2XG, 2ANF, and 2XX. Col Geoffries, another non-transmitting member, has a 955 superregen. Rx on 576 Mc.

144 Mc. FIELD DAY AT STAWELL

From 3DS we have news of the 144 Mc. Field Day held at Stawell on 10th September. "There was a good muster of portable gear and much working around the district. Before leaving Ballarat, I arranged with 3ZL (Eric) that we would call and he would listen for us on the hour and half-hour during the afternoon. We set up our station, operated from 12v. via an inverter and also a 12v. No. 11 genemotor, consisting of my rig, a converted i.f.f. and three element beam, 300 line fed, and a superhet receiver which belongs to a s.w.l., Ron Wilkinson, also of Ballarat, who accompanied us and which consisted of two stages of p.p broadband 6J6, into a 6AG5 mixer and 955 osc., i.f. at 11 Mc., into a commercial D/W Rx, and which really goes! At Ballarat he receives the Melbourne and Geelong boys, also Kevin, 3AKR, at Westmere, at good strength on a 4 over 4.

"The first hour was a washout, due to a 144 scramble, but we stayed on and listened on a quiet band. First signal heard was 3RR at McRae! Readability 5 strength 6 on peaks with bad QSB; beam directly on Melbourne, no reflections of the ranges. Then Eric from Ballarat at R5 S9 plus. Both these sigs were heard consistently during the afternoon until 1635 when we heard 3BH very weakly and bad QSB, but our batteries were nearly out from calling these stations and we had to close, no contacts with these stations having been made."

50 Mc. ACTIVITY

NEW SOUTH WALES

There have been no Interstate openings during the month but 2ADT, Newcastle, has been worked from Sydney. 2VW had his beams down and did a re-paint job on the tower. Vaughan hasn't been too well and has been packed off to the mountains for a few weeks where he'll probably haunt the shacks of 2LZ and company. V.h.f. members will miss the Sunday night broadcasts from 2WI. 2XV made a rare appearance on the band and kept his fingers crossed during the QSO, watching the power supply for smoke. Nev. is busy re-conditioning a manual organ which he says is like wiring up a telephone exchange with rubber tubing.

2BG has cleaned out the shack which is apparently a big thing. 2LG has re-appeared on the band after an absence of two years during which he has built up a rig with a pair of 807s in the final. Cliff puts a strong signal into Sydney city albeit from a dipole ten feet high. 2ANF wants to be ready for two and six cross-band contact with Newcastle by the summer time. 2HL is having QRM trouble from car ignition on Pacific Highway and reckons cars should have transmitting licences (a noise generator is not required in College Street either). 2ARH is almost ready to go with a pair of 800s. He has been finding all sorts of resonant circuits in the final stage with his grid dip oscillator. Second op. Jack, at 2XX, is off on a visit to G land with a list of gear to bring back. Two "double axe" won't sound so west-country for a while. 2ZW makes rare appearances on the band with an 834 in the final. Why so elusive, Stan?

VICTORIA

Rex, 3VL at Omeo, is now transmitting on 50 Mc. each Sunday evening from 1930 to 2000 hours and is looking for contacts. Here is a new contact for the v.h.f. gang, so watch the band for his signal to break through. 3XW and 3XA have both been presented with harmonic oscillators and both XYLs are doing well, likewise the harmonics. Congratulations are offered to Ken and Don.

SOUTH AUSTRALIA (by C. H. Castle, VK5KL)

Each month these notes will appear by the above writer to fulfill a long-felt want and request to the VK5 Council by the country members to whom the main contact with the city affairs is via this magazine. My whole interest is in v.h.f. and I have a practical understanding of the country members difficulties on the v.h.f., having spent three years in Darwin operating 50 Mc. without local support. In the lacking of personal pars and doings, owing to the shortness of time this month, I would like to be considered as a question box. So country members, send me your v.h.f. problems and where possible I will try to solve them. Write me your activities to 55 Rose Terrace Wayville, or if in town, ring U 2546.

With the weather improving and the DX season approaching, now is the time to check over your gear or finish off new equipment. December 1 can be considered as the start of the real DX, so go to it chaps. 5JD has re-erected his 50 Mc. four element beam, but the prop. motor is not attached as yet. 5GL still re-broadcasting W.I.A. session on Sundays on 144 Mc. Has nice collection of xtal converters for all bands. 5MK heard on 7 Mc. phone; why the migration Ron? 5GB inactive recovering from appendix operation. 5KL has a xtal converter under construction; have 9-4 Mc. xtal operating on fifth harmonic for the oscillator. Well chaps, I hope to have a good round up next month.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President.—J. Corbin, VK2YC.
Secretary.—David H. Duff (VK2EO), Box 1734 G.P.O., Sydney.
Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.
Divisional Sub-Editor.—A. O. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, N.S.W.
Zone Correspondents.—Nth. Coast & Tablelands: J. M. Retallick, VK2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, Eastern Suburbs: H. Kerr, VK2AX, No. 4 Flat, 144 Hewlett St., Bronte; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

President.—G. S. C. Semmens, VK3GS.
Secretary.—C. Dyer (VK3DY), 19 Collington Ave., Brighton (XA 6326).
Administrative Secretary.—Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne, C.1.
Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.
Zone Correspondents.—Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rorke, VK3AKR, Killigrew, Westmere; North Eastern: T. K. Tennant, 18 Harold St., Shepparton; Far North Western: M. Folie, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Tinambra; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7190 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW by arrangement only on the 7 and 14 Mc. bands.

VK6WI.—Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

President.—J. F. Pickles, VK4FP.
Secretary.—W. L. Stevens, VK4TB, Box 638J G.P.O., Brisbane.
Meeting Night.—Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.
Divisional Sub-Editor.—F. H. Shannon, VK4SN, Minden, via Rosewood.

SOUTH AUSTRALIA

President.—E. A. Barbier, VK5MD.
Secretary.—G. M. Bowen, VK5XU, Box 1234K, G.P.O., Adelaide.
Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.
Divisional Sub-Editor.—W. W. Parsons, VK5PS 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

President.—R. W. S. Hugo, VK6KW.
Secretary.—W. E. Coxon, VK6AU, 7 Howard St., Perth.
Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.
Meeting Night.—Third Tuesday of each month.
Divisional Sub-Editor.—Alec A. Smith, VK6AS, 75 Weston St., Carlisle, Western Australia.

TASMANIA

President.—J. Brown, VK7BJ.
Secretary.—R. D. O'May, VK7OM, Box 371B, G.P.O., Hobart.
Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 163 Liverpool St., Hobart.
Divisional Sub-Editor.—S. Excell (VK7SJ), 77 Molle Street, Hobart, Tasmania.
Northern Zone Correspondent.—R. H. Kilby, VK7BK, 5 Galvin Street, Launceston.

FEDERAL

REMEMBRANCE DAY CONTEST

Members have caused considerable delay and inconvenience by forwarding Contest Logs direct to the Federal Secretary instead of to their respective Divisional Councils. With all Federal Contests it is necessary that members forward their logs to the Divisional Council in order that their financial status and membership can be confirmed. The Divisional Councils are then responsible to see that logs are forwarded to the Federal Contest Committee for checking.

Members are therefore asked to remember to do this, and by so doing help the already overburdened Federal staff to have the final results available for publication within a reasonable time after the conclusion of a Contest.

● **Some members still omit to sign their logs! Remember this mistake makes your log invalid because anyone can type or write a list of contest contacts and put your call sign at the top. Your signature, checked against your original application form signature, proves the authenticity of your log entry.**

DX C.C. MANAGER

With the greatly increased membership of the W.I.A. it has been found necessary to expand the staff of Federal Executive to cope with the increase of secretarial work involved, which in turn we hope will increase the efficiency of Federal Executive to the benefit of all members.

In this regard VK3BZ, G. I. Morris ("Morrie"), has gladly accepted the honorary position of DX C.C. Manager and will be speeding up the presentation of this certificate to claimants. "Morrie" has also indicated his willingness to check W.A.S. 50 Mc. and Above for members interested in the v.h.f. bands.

● To avoid the necessary delay involved in forwarding cards to G.P.O. Box 2611W, members are asked to forward their verification cards direct to "DX C.C. Manager, G. I. Morris, Esq., 50 Eighth Street, Parkdale, Victoria."

In the meantime, members who have claimed DX C.C. and W.A.S. 50 Mc. Certificates and not yet had them issued, are asked to be patient for a week or two until the system becomes operative. Your Certificates have not been lost!

SILENT KEY

VK2ZS

It is with deep regret we announce the passing of Gerry Challender, VK2ZS, on Monday, 4th September, 1950.

FEDERAL CONSTITUTION ALTERATIONS

F.E., on behalf of the Federal Council of the W.I.A., hereby gives notice that it is intended to alter the Federal Constitution of the W.I.A. (as amended 1947).

Section 41A, as follows:—Delete the word "thirty" and insert the word "fourteen" in lieu thereof.

Add 67A, Membership Transfers: "Where a member transfers from one Division to another. (1) The recipient Division shall receive him as a financial member for the remainder of the financial year provided he was fully financial before departing from the losing Division. (2) The Secretary of the losing Division shall advise the Secretary of the recipient Division of the intendng transfer and of the member's financial status and grade."

Add 43A: "That in matters of finance involving all Divisions, a majority vote of at least 5 to 2 of the Federal Council be required for the passing of the motion."

DX C.C. CERTIFICATES

Because of repeated criticism of the existing DX C.C. Certificates, Divisional Councils in each State have been requested to forward to Federal Executive their Division's comments on the quality and standard of this Certificate preparatory to requesting specimen designs for a new Certificate.

Members who are competent with the drawing board are asked to take an interest when this matter is brought up in their Division and submit designs. Don't leave it to the other member!

W.I.A. ACTIVITIES CALENDAR

Sept. 22-24: VK-ZL DX Contest (c.w.).
Sept. 29-Oct. 1: VK-ZL DX Contest (phone).
October 6-8: VK-ZL DX Contest (c.w.).
October 13-15: VK-ZL DX Contest (phone).

ADDITIONS, ALTERATIONS, AND DELETIONS TO AMATEUR CALL SIGNS—AUGUST, 1950

Additions—

VK2BQ—G. C. Page, 59 Simpson St., Tumut.
2ACN—R. S. Nancarrow, 1A Parklands Ave., Lane Cove.
2AHC—R. H. Corcoran, 23 Glasgow Ave., Bondi.
2AIF—J. C. Fairweather, 555 Fisher St., Broken Hill.
2APB—K. H. Branford, 1 Centennial Ave., Lane Cove.
2APF—H. J. Freeman, 90 Rosemont St., Punchbowl.
2ATR—E. F. T. Reynolds, c/o. S.S. "Mungana."
2AWM—D. J. Medley, 16 Kennett St., Bondi.
VK3AHG—D. G. Gilder, 58 Clarendon St., East Melbourne.
VK3AOS—O. K. Scouller, 878 Mt. Alexander Road, Essendon.
3AVM—V. R. McKenna, Christian Bros. College, Queensberry St., North Melbourne.
3AZW—T. Lelliott, Owen Street, Boronia.
VK4EN—E. D. Neale, 38 Felix St., Wooloowin, Brisbane.
4FQ—J. F. Murdoch, 29 Godsall St., Toowoomba.
VK5EA—R. L. Archibald, 8 Penong St., Hyde Park.
5EC—G. E. A. Cameron, Flying Doctor Base, Alice Springs, N.T.

Alterations—

VK2DP—176 Albion Street, Annandale.
2JU—108 Quarry Road, North Ryde.
2ML—Lot 46, Smith Avenue, North Manly.
2NB—17 Bray Avenue, Earlwood.
2OG—"Bushlands," 15 Linden Avenue, Pymble.
2QT—35 Sunnyside Crescent, Castlecrag.
2YI—61 Leura Road, Auburn.
2AID—"Marell," Fernleigh Road, Wagga.
2AJC—108 Quarry Road, North Ryde.
2AKT—7 Chelmsford Avenue, Epping.
2APD—53 Prince Street, Mosman.
2ARD—65 O'Donnell Street, North Bondi.
2AST—37 Gordon Rd., Long Jetty, via Gosford.
2AWJ—25 Hendy Avenue, Collaroy.

VK3OC—5 Service Street, Ballarat.
3HU—9 Bethell Avenue, Parkdale.
3NW—1 Oxford Street, Box Hill.
3NZ—141-3 Beach Road, Mentone.
3AAB—232 Victoria Parade, East Melbourne.
3ADA—R.A.A.F. Station, East Sale.
3AFW—1 Cope Street, Coburg.
3AGN—8 Fairmont Road, Newtown, Geelong.
3ANW—1 Oxford Street, Box Hill.
3ARE—Kent Road, Hamilton.
3ASB—25 Wellman Street, Box Hill.
3AXB—Flat 2, 15 Jersey Street, Balwyn.
VK4KD—Chester Street, Thursday Island.
4ZB—57 Ridge Street, Northgate.
VK5BJ—79 Alexandra Street, Prospect.
5KV—8 Saltram Road, Glenelg.
5RZ—8 Burgan Street, Broadview.
VK6EI—41 Salisbury Street, Leederville.
6GK—c/o. Flying Doctor Service, Meekatharra.
6KX—47 Colin Street, West Perth.

Deletions—

VK2GC—Cancelled, now operating under VK5EC.
2NV—Cancelled, now operating under VK3AHG.
2AMA—Cancelled.
VK3AYN—Cancelled.
VK4BD—Cancelled.
VK5AE—Cancelled, now operating under VK2AWM.
5BW—Cancelled, now operating under VK4TE.
5FV—Cancelled, now operating under VK2AIF.
5HB—Cancelled, now operating under VK2APB.
5RL—Cancelled.
VK9SN—Cancelled.

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

The new address for the Canal Zone QSL Bureau is: KZ5IP, Isaac R. Price, Box 64, Diablo Heights, Canal Zone.

The D.A.R.C. Short Wave Amateur Convention of 1950 was held in Bad Homburg, near Frankfurt (Main), Germany, from 8th to 10th September. A comprehensive proramme to entertain and instruct all visitors and members was scheduled and included lectures on all aspects of the technical side of Amateur Radio. An exhibition of Amateur built equipment was held, and numerous competitions including a 2 metre and an 80 metre foxchase was arranged. Other entertainment included tombolas and auctions. The post office provided a special stamp for mail matter. The entire function was broadcast by the Convention station DLOKT over the Amateur Bands. Many visitors from adjacent nations were present at the Convention.

KZ5ES in forwarding QSLs states, "If possible you might let the fellows know that if I owe them cards, I have not received theirs, and my log for dates previous to June, 1050, has been lost. I will be pleased to QSL these if they will apply direct. His QTH is Box 337, Diablo Heights, Canal Zone.

For the benefit of v.h.f. enthusiasts, XE1A advises that in addition to operating on the 80, 40, 20 and 10 metre bands during the forthcoming VK-ZL Contest, he will be running continuously on 50.052 Mc. and desires reports on reception.

Yet another for the certificate hunter. The S.S.A. is sponsoring an award for Hams who have worked the whole seven Swedish districts. European stations have to send in cards proving they have had two contacts with each of the seven districts. Non-Europeans have to send in cards proving one contact with each of the districts. Contacts must be post war. An application for the award must be accompanied by ten international reply coupons and be forwarded to S.S.A., Stockholm 4, Sweden.

C3MC, heard during August-September on 14 Mc. c.w., gives his QTH as Shao, Box 1, Taushu, Taiwan.

VR4AA is no longer active, but a new Ham is there and active on 14 Mc. c.w. only under the call sign of VR4AC.

Wal Cromie, VK9JC, in writing to this Bureau, mentions that 28 Mc. is very dead up there, but that 20 is OK and also that he has yet to hear a signal above S2 on 7 Mc. His full QTH is A296 L.A.C. Cromie, W., VK9JC, Transmitting Station, R.A.A.F., Admiralty Islands.

HZ1AU, whose cards come from U.S.A., states, "I will confirm for all QSLs sent via I.A.R.U. Card for card."

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NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester Street, Sydney, on Friday, 25th August, and the meeting was opened at 7.45 p.m. The correspondence was read and received, and a large number of applicants admitted to membership of the Institute. Visitors present included Peter Haldenmu, IIB1HL, who is visiting this country. Peter expressed great pleasure in being able to come along and meet the boys. Also present was ZL2BX, who brought up that hardy perennial of ZL concern over VK interference on the DX bands. The President, Mr. J. Corbin, VK2YC, expressed the pleasure of the meeting in having VK2HJ, one of the licenced lady Amateurs, present.

A proposal was put forward that the Prime Minister's Department should be approached, for the supply of QSL cards, descriptive of the Australian scene. This is in view of the statement made by Mr. Menzies, on his return from overseas, regarding the cementing of friendship with the U.S.A. and its peoples, and presumably other countries. Correspondence received from the Queensland Division referred to interference caused to broadcasts from VK4WI, and the President, 2YC, asked that members endeavour to cause less interference on the official channels used by VK4WI.

Dr. Allison, ex-VK1RA, was unable to be present and colour films taken on Heard Island are scheduled for early showing, circumstances permitting.

VK2XU, as Master of Ceremonies, dispersed "prizes" from the Disposals lucky dip, and great fun was had by all. Competition became very keen for sought-after items, and a vote of thanks to Wal for his good work was passed by acclamation. The meeting closed at 10.30 p.m.

WESTERN SUBURBS

2AMJ, Joyce, has been getting excellent reports from Europe lately, using her new 3 element beam. 2NJ has been grabbing all the DX around the place. None of these beams for Keith. Just a staid old full wave antenna; nice quality phone. 2APT has his new beam; now all the locals are waiting to see how it works; there is keen competition among the DX chasers. 2XH has been delving into the mysteries of making v.f.o's. tick; will be homing onto the rare ones soon. 2AHU's poles are still standing; many a bag of cement went into the foundations.

2ANC, nothing has been heard of Frank but no doubt the beam is up and plenty of work is being done in the new shack. 2BX works the Ws with alarming regularity using a vee beam. 2ADL has settled in at the new Lidcombe location and although his folded dipole is only on the roof, has been receiving S9 reports from the U.S.A. 2OQ has 112 countries up on phone with the same old 30 watts to an 807; hopes desperately that they will QSL; the two element beam is working well. 2BN had a three-way QSO with YN4CB and another rare one on 7 Mc. recently. 2ACD has just put up a new half wave dipole and is getting good Interstate reports; keep at it Ted and the DX may soon roll in.

NORTH COAST AND TABLELANDS

Rain, rain, rain and more rain, together with poor conditions, have been the order of the day in the zone with the one exception, a rare bit of DX collected by 2SH. Doug called five long CQs with no results and on his sixth CQ a strong signal came back from Mars, the operator giving his handle as Smokeiniski. Does anyone know of another Ham working Mars? If not, Doug claims it as a world's record. Another record for the North Coast is the Quads owner/operator, the one and only Percy Sara, Associate Member W.I.A., of Bellingen. Perc hopes to get his ticket very soon and the Department should give Percy the first VK four letter call sign VK2QUAD. Good luck to you Percy, your wife and family from all Radio Amateurs. 2JC is having a visit to Sydney to the Dental Conference and no doubt Hart will be seeing a number of the gang down there. 2PA and wife are on their way to Sydney on holidays by car and as usual Peter's portable can be heard on 40.

VALE VK2ZS

The Council of the N.S.W. Division of the W.I.A. regrets having to inform members that it received, on Monday, 4th September, an intimation that our esteemed friend and colleague, Gerry Challender, VK2ZS, passed away.

Gerry was widely known in the Amateur ranks and was one of our most popular VK2s and attained distinction by the capable manner he undertook his arduous duties in the North Coast Net during the recent disastrous Kempsey floods. Since his return from war service, Gerry's health had been indifferent and, as a result of his activity on the public's behalf in the floods; he was committed to Kempsey Hospital in a serious condition. Fortunately he recovered sufficiently to be discharged to his home and it appeared that he was daily improving. On Monday, the 4th, however, he suffered a relapse and failed to rally. His friends were shocked to hear that he passed away at 3 p.m. So passes from our midst a lovable character, a good husband and father, and a sincere and affectionate friend. Vale, Gerry!

To his widow and two sons the Council and all members of the Institute extend their sincere and heartfelt condolences and expressions of sympathy.

The Wireless Institute of Australia was represented at the funeral by Mr. Col Fletcher, VK2ASF, one of Gerry's close friends, who placed a wreath on the grave on behalf of members of the Institute. The Hunter Branch of the N.S.W. Division of the Institute was represented by Jim Cowan, VK2ZC; also present was Peter Alexander, VK2PA.

2JK has another harmonic. 2AJT going to Sydney on holidays, liable to be found in any junkshop. The Lismore gang have been very quiet of late, mostly working 6. 2UC just completed a new 6½ metre beam and is putting a consistent signal to 2ADE at Casino. 2LH also erecting beams for 6. 2AUE has staged a comeback and is working on 40. 2SL building a concrete mixer to help build his home. 2AFP now at Byron Bay is back on the air at his new QTH. 2AGM does more listening than transmitting and drops in on 80 some times. 2AAP has returned home from hospital and was soon on the air with his No. 11. If Norm can obtain the wire, he will be putting up a vee beam from hill to hill, attached to two 100 feet dead trees, the centre would be 600 feet above the ground! No news from 2TG, only that Alex intends to have his holidays around this district.

2ASF active on 40 and works DX on 40 with his Command. Col is the most active member on the Coast. Col can confirm 2SH's contact with Mars! 2AEY had a rush trip to Sydney and brought back a number of 1196's for the North Coast Emergency Net. 2DK not very active, too busy with the sheep at present. 2APS putting out an f.b. signal with his new transmitter and antenna. Russ Watt still finds time to come on the air at night on 80 with his vee beam and always puts a strong signal to the coast. Russ says his XYL is studying the morse and hopes to have her ticket very soon. 2ZX heard testing during daylight on 80. 2OE and 2GI not very active. Keith has had the wife and family sick and has been chief cook for the last week. 2ARY has been busy in Bellingen and hitting the headlines with Percy and the Quads.

2ADN busy building a new QRO rig with band switching and 813 in final. A newcomer to the North Coast gang is Bill Grant, 2AWG. Bill is a few miles out from Coffs Harbour. 2EA busy with six metres and hopes to contact 2GI. Leith works ZL on 80 metres with five watts and super modulation.

HUNTER BRANCH

Members of the Hunter Branch are still talking about the wonderful lecture given by Mr. Angus Robinson on f.m. Lectures of this standard are doing a wonderful job for the Institute in getting new members, and holding the interest of old. While on membership, it is pleasing to note that at each meeting a couple of new members join the Branch. Old timer 2ZW, who attended a recent meeting of the Branch, must surely have been proud to see the Branch so firmly established. Stan was, an ex-President of the Newcastle Radio Club. As the September meeting was the annual meeting, we saw the election of officers. Congratulations to the new office-bearers and let us see next year one of even greater progress. Once again the State President 2YC and Councillors made the trip up from Sydney for the meeting.

The R.D. Contest went off with a bang and a large number of Branch members participated, but there were some who didn't, and we will fine them an 813 or something next year if they don't—so watch out. The DX fiends of the Branch are all "steamed" up for big scores in the VK-ZL DX Contest.

2CW has been on holidays at Nelson's Bay during the month. Sorry to hear junior op. was sick, Bill. Also on holidays was 2AMI, Ron was down the Lake and had a good time, even took a portable with him. 2ANA still reckons his homebrew Rx takes some licking after long comparisons with the RA10. The family must have kicked Norm out of the kitchen as the RA10 is now beside the main Rx. 2UY still not active, is doing a new course. 2NX lost a bit of interest in Ham Radio recently. My spy even reports Shorty at local dances while home week-ends. Would you believe it—2AFS and 2FP were able to work PK4KS on 10 in the dead of a winter's night.

That vertical at 2AGY's shack comes into its own when conditions are "screwy." Things are serious over at Stockton as 2AMM is still on c.w. and working plenty of DX. Bill managed a big score in the R.D. Contest. 2PT has moved to New Lambton so guess he will be back on again very soon now. 2ASJ shows just what can be done with QRP if you have a beam, using only 10 watts. Ron is working plenty of DX, S9 from Ws, countries are sneaking up, has XE, TG, W, KH6, I, etc., and the antenna is still only about 30 feet high. Also have a report that a new Ham is on at Stockton, namely Col London, 2AOL, up at the Fort. Would someone in that area please see he gets AWL one meeting night.

The big news in the Newcastle area is the appointment of Wal Salmon, 2SA, Police Superintendent in charge of this area. OT's will remember Wal and his activities in the past. Branch members welcome 2SA to the district and hope to see him along at Branch meetings. Due to a printer's error, Varley Fitten's call was wrongly given, it is 2SF (Sugar Fox), sorry Varl. Hope to see you on soon. 2XT has been working the DX on 40 with his QRP W, VE, PK, etc. Has the pipe for a 10:20 beam so things are serious. 2CI only heard on the week-ends on 40 and 80. Gordon likes a yarn not a QSO (remember Urunga). Although he will have to improve if he is to hold the honors won there—2ASF will take some beating. 2AWD only on 40 occasionally. 2BZ is back on 6 and 2

after a long absence, has made some very fine QSOs with 2VW on 2, not bad for winter conditions! The tower at 2OS Thornton is still receiving much attention.

2ADS is very QRL at the new QTH, but hopes to have gear ready for the DX season on 6. The 10/20 beam at 2CN's went up very easily. Bert was amazed, it took only about an hour. Although only 25 feet high at present, it is to go higher. 2AGD going well with the portable on 40 and 80 having fun with it too. Remember George, I told you 40 and 80 was fun! 2MC is still checking meters, but not Ham rig meters. 2XY still passing the time on 40, gets plenty of c.w. DX too. 2TE blew up his modulation transformer, but now has a super one working well. 2ZT has lots of fun on 40 c.w. and is another that does well with QRP. Mac 2ARK is at Stockton P.O. now we hear, but is still inactive. 2ZC put up the highest R.D. Contest score for the Hunter Branch next to 2PA and 2EO we learn, congrats Jim. Don't miss any time next year Jim. 2AAM comes on at lunch time on 40 from Belmont. 2AEA will be on again soon, now has a No. 51 and a good receiver.

2FX hopes to make it soon. The v.f.o. at 2KG's is at a stand-still—has been very QRL. The August sked of the Hunter Branch Emergency Net went off very well—the September sked has been put forward a week to miss the VK-ZL Contest. Thanks to 2XQ and gang you can't miss these c.w. gents. The Net is still in need of 3501 (or lower) xtals—doesn't anybody read these notes!! 2XQ, the Net Control Officer, is getting very "cagey" these days to make it a bit harder—it is too simple on 3501 Kc. at night—the next sked will be on 7002 Kc. on Sunday afternoon. 2XQ put in some good work in the R.D. Contest.

2TY has been on holidays in Grenfell to see 2ADX. Bob didn't think he would make it at one stage of the proceedings. 2JZ not very active, only heard on 10. 2ARP has a portable going well, but the big rig has some oscillating trouble. 2ANL was only active a couple of times during the recent flood. 2ANU with his "4 kw." rig getting out well. 2VU missed on the last sked—must be getting ready for the DX on 6. 2DG silent but expect to hear loud noises from that way in the VK-ZL Test. Most disappointed man in Newcastle last month was 2AHA, was all set to go in the R.D. Contest, but missed out due to family illness. Will make up for it in the VK-ZL Contest though.

COALFIELDS AND LAKES

Conditions have been poor on most bands during the last month, were hoping things would improve with the warm weather—especially on the v.h.f's. The old 80 metre band has been the mainstay for sometime now. 2ANU still doing good work with his few watts, been busy with the shearing season, but managed to get up a rotary beam for 50 and seems pleased with the idea. Has been getting some calibrations for his 144 Mc. set-up. Singleton been kept on the map by 2JZ on 28 and by 2VU who seems to be sticking to 50 with some sessions on 3.5 Mc. 2TY can be found on 80, 10 and 6 talking of getting a v.f.o. going. The Kurri Kurri gang are not very active, don't hear 2YO and 2KF much—are found on 28 and 50 when active. 2KZ also fairly quiet these days. Max only gets on at the week-end due to working consistently through the week, 10 and 6 are his favorite haunts. 2ALR is seldom heard, plenty of gear but busy otherwise.

2PZ has a few more bits and pieces wired in Tx and Rx running, it shouldn't be long now! 2YL is another whose activities are limited due to lack of spare time, active on 80 and 6 when time permits, hopes to set up small rig on 144 Mc. 2ADT (Always Doing Things) has done it again, yes Jack has done something else, knocked his xtal mike off the table and fractured the xtal. Fortunately it was only the xtal that broke and Jack didn't feel half so bad when, after picking it up again, he found that his specially made and highly polished case had not been marked or dented. Last I heard Jack was back on, fractured xtal stuck together, talking of making a new xtal for the mike. Also has just put up a new four element beam on 50 Mc. Has frequency meter finished and calibrated. This being Jack's busy time (school holidays), he can be found on any band from 80 to 2 metres—anytime.

At last I can have notes of the Lakes, they are much appreciated, and my thanks to 2ARV for letter and 2RU who sent notes via 2ADT. 2ARV from Chittaway Point is only home at week-ends and though licenced for past 12 months, didn't get on till 5th August using 6V6-807 with 25 watts 7 Mc. c.w. Third QSO was with 4XP who, prior to the war, was 2XP at Wyong—there was some talk of Wyong pre-war. Chas reports 2OC and 2TX not heard at all. 2CZ can be found on 6 and 40. 2AEZ not very active these days, recently joined staff at 2UE. 2ARN another not very active, but plays golf and is also a pilot which keeps him busy. 2LX not active since June when storm wrecked his antenna systems. 2GA is on 6, 20 and 40 while at Avoca Beach. 2EH gets on 80 now and again on battery supply. 2KR for a change fairly quiet, working 40 only, but going to try 80. 2AIO from the Entrance not heard, same goes for 2AMU —how's the stars Len? Any DX? 2RU has added a Q5er to his l.f. receiver, working 6 and 40 between times. Major can be found mixing concrete putting down paths—been seen pushing a wheelbarrow away from his pet hill—reputedly moving dirt, but the gang say he is moving the hill so he will make ZL next season on 6—which is it Major?

WESTERN ZONE

Have gone through this month's notes and every time the word "flood" appeared the red pencil went to work. Still can't get away from 'em though and 2YN at Bourke has been in the swim this month. As John is the only Ham at Bourke, he welcomed the arrival of the "Ducks" with their complement of radio men. 2JC helped pilot the "Ducks" through to Nyngan where 2QA took over. Jack got careless and lost one and frantic calls were heard on 3.5 Mc. looking for DKH. The ether plays some funny tricks and the boys over Cessnock way say that the "DKH" went through "DKX" to "Duck Eggs." Upset Jack so much he murmurred something about his gun and missed out on a sked with 3BD.

New call to these notes is 2NN. Don is at Narribri West and will be remembered as old 2DM. After a very long silence, 2FH, St. Mary's, popped up on 7 Mc. c.w. with a new rig, 813 final to be modulated by a pair of 811s. House building has kept Alan off the air.

2RT, Katoomba, heard only once during the month on 7 Mc. phone as also 2OY. Jack did good job in the 4QR test. Katoomba seemed to be the "most favoured zone." 2EI, Parkes, has his new xmitter going now. Pair T20s modulated by a pair of 250s. Wonder how many Hams can find a 250 in their shack? Thanks for the other Parkes news Lin. 2SJ has been on 7 Mc. phone, but suffering receiver troubles. 2SN rarely active and 2UJ at Mecktown. QRM'd by rabbits.

Round Forbes, things have been very quiet. 2BT still putting the finishing touches to the perfect switched transmitter. 2AMV really on 50 Mc. now with a converted 522 and planning a 50 Mc. beam and an automatic caller. 2WH mainly keeping (?) skeds on 6 with 2AMV. A new lathe is occupying some of the shack space and a lot of Ham time. Another good Ham left the West Zone; 2SA has been transferred to Newcastle. Sorry we didn't make that personal QSO while you were out West Wal. 2II (that's Item-Item not eleven!) still pops up for a rare contact on 7 Mc. Likewise 2AMR and 2XP. Other Dubbo Hams silent.

2ADX, Grenfell, putting out fine signal on eighty. Jack is expecting a visit from 2TY and promises activity on six after that. 2NS nearly finished new frequency meter which will make Bathurst the WWV of VK2. Believe the new job will almost tune a piano, and certainly split the Kc. to a cycle, if not the atom. Would hate to see you become radio-active Trev! Have heard of, but not from, 2ACU during the month. Believe Rod is off to the Coast —not enough water round Coonamble. No not a word about floods—till next month. 2LY has moved to new QTH and terrific noises will be heard from North Katoomba soon. 2EX has acquired another transformer and is on 40 phone. 2HZ at last made the grade and is operating from a linen press, tired of QRP already, so will go QRO.

SOUTH COAST AND SOUTHERN

Activity in the zone this month was very much below that of previous months. The R.D. Contest brought a few stations out of their winter hibernation. 2PN was heard actively engaged in the Test and a brief exchange of scores had us fairly closely grouped. 2APP was another very active, but we haven't heard his score to date. He had an excellent signal and seemed to be holding his own. 2PI heard, but his signal lacked the usual punch that is usually associated with his transmissions. According to Les, the gang in Canberra are very quiet, he reports nothing happening of interest over there. 2JQ heard late in the Contest working stations hand over fist. No news of the Goulburn or Wollongong gang. 2ALS has been far too busy to play Ham Radio and he complains of the cold weather.

2AKE far too interested in sheep to worry about Ham Radio, has hopes of an a.c. supply one of these days. No news of 2TC or 2TA, guess both of these chaps are far too absy with their properties. Heartiest congratulations to Alf Moye, 2BW, Mal Robinson 2HT, and Brian Mitchell who were presented with certificates of merit for their magnificent effort during the flood at Wagga and the lower Riverina. During the R.D. Test a brief CQ R.D. brought a reply from W1RD! Must find out whether that contact should bring a bonus or not?

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VICTORIA

The September general meeting of the Division was held on Wednesday, 6th September, at the usual place, the Melbourne Technical College, Bowen Street, Melbourne. There was a good attendance present. The President (Bert Semmens, 3GS), being in the chair, declared the meeting opened at 2000 hours. Visitors welcomed to the meeting by the President were 3ACE and 3AUM and were extended a hearty welcome. The Secretary (Dick Dyer, 3DY) read the minutes of the last meeting and no business arising therefrom, they were put to the meeting for confirmation and carried.

The agenda item for the evening was a film show (the first on for some considerable time) and the titles were "The Flying Doctor" and "The Cathode Ray Tube." The first film dealt with the activities of the Flying Doctor Service and the part radio plays in his work among the people of the outback. The c.r.o. tube was very simply explained with working models, also the construction and application that one can put this very versatile instrument to. It was a pity that the show only lasted for 40 minutes, as we could have taken 140 minutes of this type of film. All present expressed their appreciation of the show.

The President submitted a full report of the last Council meeting explaining all that happened at the meeting and all present seemed satisfied with Council's activities. The next question was the "Food for Britain." This raised a terrific amount of controversy. It was suggested that we wind up the appeal. After the pros and cons were put and argued out, it was resolved that "A letter be sent to the R.S.G.B. and ask their opinion in relation to food parcels, whether they wish us to discontinue with the scheme." A short interval was then taken. Whilst the boys were having a natter we noticed the Secretary very busy at the table issuing out membership forms (we have new ones).

Upon resumption of business, reports were called for from the various groups. T.A.C. reported on 3WI and told us all is now completed. QSL Manager reported everything under control. The Treasurer being absent, the Secretary read his report and this showed that the finances are pretty good. Class Manager reported on the last examination and said that seven of his students sat and one was successful, the other six passing in two subjects. Disposals Manager, Jack Groves, told the meeting that owing to a lot of work involved in checking new gear, the next hand out will be some time next month (October). The Secretary reported on the 25th Anniversary celebrations and gave a concise report of the programme. (Don't forget you chaps, to let us have your ideas.)

Our Membership Secretary has started a new drive for new members and is meeting with excellent results, 22 new members being signed up. The meeting passed a vote of thanks to the Membership Secretary for his fine work. The T.A.C. Secretary gave forth on the difficulty of obtaining lecturers for the general meetings. Surely there must be plenty of our own members that could expound something to the general meeting.

The agenda item for the next general meeting (October) will be a lecture by 3ART on "Sunspot Activity." The subject is, we understand, very interesting and absorbing. He will illustrate his talk with charts (which go back for some 200 years) and show how to read the prediction charts the easy way. This should be one of the best lectures that we have had for some time. If arrangements can be made, the lecture will be wire recorded and sent around to the different zones. There being no further business, the meeting closed at 2230 hours.

PERSONAL JOTTINGS

3JO getting ready for the coming v.h.f. field day activities; f.b. Herb, let's hope that you can get a little more power into that "Lenfo." Now that gas rationing is over, 3OJ will warm up his shack and resume activity. Hear a whisper that Bob is getting field day happy also. 3ACE wants to know who is the best VK3 ear basher; we have our ideas on this subject. 3MZ had difficulties in erecting a Windom antenna; 3JR and 3AIX were present to offer advice. 3AIX, we understand, knows all about alarm clocks; he must be logging those commercials in the 40 metre band.

Things must be crook on 20 when one hears 3HF on 40. 3KE and 3JE are doing the rounds of the Western District and, of course, have a portable rig with them. 3DY wants to know how to get a crystal oscillator to mote. 3LN still worried about harmonics in the 20 metre band, what's wrong with 40 or 80 Len?

VICTORIAN RAILWAYS INSTITUTE WIRELESS CLUB—VK3RI

The abovementioned club held its monthly meeting on Thursday, 7th September. The usual business was duly dealt with after which a general discussion on future activities of the club received a lot of support. The club wishes to state that the 40 metre rig has been put into working order again and would appreciate any contacts for reports, etc. The club hopes to have a three element beam for 50 Mc. at an early date. The next club dances will be held on 14th September and 18th November. Our meeting nights are the first Thursday of each month.

MOORABBIN RADIO CLUB

The usual monthly meeting of the above club was held on Friday, 18th August, at the club rooms, Town Hall, Moorabbin. There was a good muster of members and visitors present and the President, 3KE, in his usual breezy style, gave them a right royal welcome. Owing to change of jobs, the Sec-

retary, Ted Scott, tendered his resignation and the Assistant Secretary, 3ALX, was appointed to carry on. The meeting placed on record the good work Ted has done and wished him well in his new job.

The main item of business was the formation of the rules of the "Honorary Membership Certificate" for Australian and Overseas Hams. A full set of rules appear elsewhere in this issue. On fulfilment of the rules, an illuminated certificate of Honorary Membership will be issued to the successful applicants. The club asks you to read the rules very carefully, further details can be had from members when in QSO.

Len ("Lenfo") Jackson chose for his lecture "Sound on Film Recording." After the lecture, the President expressed on behalf of the members his appreciation of Len's fine effort. 3EM reported on the practical night recently held and stated that the xmitter is well under way. The club authorised Ed to purchase a suitable receiver for club use. Donations still come in in the form of gear for which the club is very grateful. John Dawes reported on his visit to the V.R.I. Radio Club's annual meeting and conveyed that club's greetings to this club. There being no further business, the meeting closed at 2230 hours. The club meetings are held on *the second and third* Friday evenings of *each* month at the Town Hall, Nepean Highway, Moorabbin. The next meeting (20th October) will be a lecture on "High Frequency Transmissions," given by a "high" up in the R.A.A.F. We would like to see as many of the boys as possible at any of our meetings.

EASTERN ZONE

The main subject this month is the inaugural meeting of the Sale Sub-Branch of the W.I.A., which took place on 15th August at the residence of 3LY, Ron Schmidt. Those present were 3SS, 3GO, 3IO, 3VG, 3ABF, 3AFG, 3QZ, 3AHK and a flying brass-pounder, Bud Poundsett, of the R.A.A.F. Bud has his ticket, but as yet no call sign. Our Zone Secretary, 3QZ, opened the show by reading a long screed, full of "where-as" and "hertofore's," pertaining to the formation of sub-branches, etc., and it was decided to carry on with the sub-branch, in spite of all the long words in the screed. The group will be known, locally at least, as the Sale Radio Club, with the object of encouraging and assisting the radio minded lads of the district, to extend their knowledge of the noble art of Ham Radio and eventually gain their tickets. We intend to hold regular meetings in our various towns and this should give the beginners considerable aid through getting to know each other and being able to ask questions to which the handbooks don't always seem to have the answers.

3ABF was elected President and 3SS Vice-President; Howard Vinning, 3VG, is Secretary and Treasurer. That wily warrior, 3QZ, when enthusiasm reached its height, pulled out a bundle of W.I.A. enrolment forms and said, "Sign here, please." The four back sliders of the zone paid up at once! On conclusion of the meeting, the gang dealt with the very nice supper served by the much-better halves of 3LY and 3GO. We then inspected Ron's rack and panel gear which he is building up and after much ear bashing, we proceeded homewards.

The following evening 3QZ attended a meeting of would-be Hams in Bairnsdale and it looks as though 80 metres will have some more QRM in the near future. Graham collected five more applications for the W.I.A. there, which, with one from Trara'gon, gives the zone ten new members for the month! Beat that, if you can!

Apart from the foregoing, personal items this month are scarce. 3SS is the proud possessor of a *nice new Chev.*—see it at our Convention! Keith also had trouble recently with twisted feeders—have you all woken up yet chaps? 3WE has been very ill, but is picking up now, I am pleased to say. 3US/3VL have the 6 metre beam 45 feet up now—these v.h.f. cranks! Gwen has been inactive for about three months so someone else has been using her call sign. Any decent cards Gwen?

The hook-up proceeds each Sunday as usual, 3PR, 3LV, 3TH and 3AEP being well to the fore. A new power tranny has turned up for 3AHK so after three months of phone silence, he will have to dust off the 807s again. Let 3AHK know what's doing chaps, especially our Bairnsdale associates, as if no can hear, no can write notes.

SOUTH WESTERN ZONE

On the 17th August 3AGD and your scribe, 3AKR, departed from the temperate south west, for the *snowlands. As they* were travelling in two separate cars, it was decided to install 144 Mc. mobile equipment in each car, consisting of superregen-modulated oscillators. lots of funny effects were discovered in the timbered and hilly country while operating mobile. On the Sunday at Mt. Buffalo, we had a welcome visit from 3KR and 3AT who brought their XYLs and harmonics up for the day. At the end of the week, bruised and tired, we started for home, calling at Ken's (3KR) shack on the way.

3WT had some choice DX in the form of a visit from HB1HL from Switzerland. I wish Peter had been able to visit us out here, he would have been able to tell us all about the snow over there. Bill also has a 50 watt modulator for his TA12D now and in no time at all will be really pushing out a signal. 3YE decided the other day to blow the cobwebs out of his 20 metre coils and in so doing worked himself some fine DX. 3KX's new 20 metre beam is working out f.b. and the country list is really climbing. 3HG will soon be shifting into the new home and shack; will you have to shift the rhombic and vee beams, Neil?

3MC is still working the DX on 40 and only wants Europe for W.A.C. on that band. 3ZU has his new controlled carrier rig going, says input swings from 20-70 watts on speech. 3BI has been heard on 80 lately and putting out a fair sort of a signal too; believe Bert has been having trouble with the eyes again, certainly hope it is better by the time this goes to print.

By the way, I would like to remind zone members *that there* IS a hook-up on the first Sunday *of* EVERY month at 10 a.m. I would also like to ask those chaps who have not been on these hook-ups to make an effort to do so in the future. After all, how can one or two chaps discuss matters relating to the whole zone.

The Geelong gang have not been so active over the past month, guess the cold weather has a lot to do with it, also some illness. 3AOL has built up a new v.f.o., also has a new mike which has improved his quality. 3AJT still working some good DX on 20 metres; has a new Rx, a "750". 3ABI will soon have his new beam up for 20 metres and has been busy wiring up the motors for it. 3BW heard on 80 recently; has made a xtal locked converter for 144 Mc. 3AKE still having regular contacts on 144 Mc., is building a new converter and has put a lot of work into it. 3ALG has a new v.f.o. Have heard very little of 3WT, 3IC and 3CM. 3AGN is *now* using *controlled carrier*, in spite of his very low antenna, he was heard working : VK4 recently. 3AIC has built up a portable transceiver for 144. 3ABK was home for a short period and was on for a time. 3BU had a couple of contacts on 144 using his 522.

GEELONG AMATEUR RADIO CLUB—VK3ATL

A very interesting evening was spent by members of the above club at the first meeting for the month when 3AKE gave a practical demonstration ot v.h.f. antennae. Ed showed how extra gain could be had by adding elements to the antenna. He used in this case a three over three. Members were able to see the difference with the aid of a field strength meter. Ed also showed how a simple 144 Mc. antenna could be made up in a few minutes and with the aid of materials he brought proved this point. He also described the "City Slicker" antenna and used the blackboard to illustrate this antenna. Many questions were fired at him.

The following meeting, the business of the club was disposed of rather quickly, then members paid a visit to the shack of 3ABE. Alex runs 100 watts to a 35TG and operates on 20 metres and has a beam ready to go up on a latticed mast; his Rx is an AR7. Members were treated to a supper, buffet style, prepared by Mrs. Bell.

The next meeting took the form of an Exhibition Night. This is the first of its kind held by Amateurs in Geelong and members brought along equipment made by them besides disposals gear and made a very impressive show. On view also was the club's new Rx recently obtained at the last hand-out of the W.I.A. which the club feels very proud to possess. During the evening 3ALT, the club's transmitter, was on the air on 80, 40 and 2 metres. In spite of the wet night, there was a good roll up.

NORTH EASTERN ZONE

A straight line is not necessarily the shortest distance between two points, so says our peruser of maps for the zone, 3UI, to 3AKR. Now this may seem strange, but I believe it is to be kept in mind when operating on 144 Mc. 3AKR is trying to break through and contact 3APF on 144. A newcomer to the ranks of 144 is 3YV. 3KR has a pupil for morse by the name of Peter who is a school teacher over Benalla way. Hope you catch on quicker than I, Peter; good luck. I am now in a position to feel sorry for the last zone correspondent. This month has brought nil in the way of notes, so have been a snooping to have any notes at all.

3UI on lunch hour quite frequently, but 3APF, 3AT, and 3HZ still preferring the higher frequencies. 3ACK building planes, only decent job of radio was to fix band spread on his Rx which had the habit of sticking at critical times. 3ABG now in Queensland looking at tall timbers, having retired from D.C.A. Boy does he get about. 3AGT hasn't been heard lately, too many heterodynes Stan without turning on the rig?

Last zone hook-up didn't go too good. 3KR was off due to power failure. 3AT off on business after getting in a few words. 3APF in Melbourne. 3FD using smoke signals as batteries were low, sorry Andy, couldn't even find you. You boys were wrong about 3HP not using his modulator. While I didn't hear his voice, I am sure I heard a lot of canaries each time he came on. Maybe 'twas my Rx. However, I couldn't copy you Henry, but that isn't saying much. Congrats on working that W on 80 though Henry.

Ron Gibb up Wangaratta way now has his ticket, but as yet no call sign. Good hunting Ron. 3JK burning up gas instead of the ether with a new car a Jacquer, so I'm told, very subtle Howard. While I'm on the Job Howard, every time you open the mike there is quite a hum, as none of the boys have ever told you while I've been listening. I think you should know. My guess is a tranny modulating. 3UI troubled on 144 by atmospherics every Saturday night, seems man-made. Alan why not look at local flicks, DC generator?

3ACK worked a ZL on 40 with c.w., who was the lad who turned on a b.c. set using the oscillator to blanket the ZL out? Bad luck, John. Hear that 3UI is working on an automatic keying arrangement for v.h.f. Can't say much without being overheard eh Alan. Zone members were conspicuous by their absence at the recent disposal hand-out held at 'Scray. Reason, inadequate time for zone officials to organise anything. More time, next time for country members please is the cry from up this away. 3FD might be on phone soon (cheers from zone members).

Didn't hear the end of zone hook-up due to urgent job on the car. However, I would implore you fellows to say ft quick, be like 3ACK and run out of words long ago. However, Howard, I like the suggestion of a get-together before the next Convention. Let's hear more about it next hook-up, but make it short. What with organising the dinner, looking after two harmonics, washing up, trying to copy notes I haven't much time. Sorry, forgot to tell you, XYL is in hospital. Well boys I have run out of snooping, so cheers and 73.

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QUEENSLAND

This mouth we have very little news of activities at headquarters in Brisbane. However we have a wealth of zone news which we hope will make up for the lack of notes on general meeting, etc.

During August visitors to Brisbane included 4EL, 4ER, 4RH, 4LD, 4SN, and 4CU. Those who went along to the Exhibition had a good look at the W.I.A. exhibit. Although small and lacking in some respects, it was nevertheless a beginning of what we hope will grow into something worth seeing at future Exhibitions. Equipment on display included a 100 watt transmitter, Class C Wave Meter, N.C. Silver Anniversary Receiver, Oscillograph, Command Sets, S.s.s.c. Transmitter, Portable Gear, and DX Cards. Those responsible for the loan of these items were 4FP, 4MF and 4VJ. Whilst waiting near the exhibit for some other Hams to come along I had the pleasure of meeting a real old timer (whose name I have forgotten), who operated in the good old "coherer" days at Nambour. Then helped some budding Hams to fill in application forms for membership and last, but not least, met pre-war Latvian YL2BI, who is now living in Queensland and hopes to become an active VK4.

Owing to the holidays I was not a participant in the R.D. Contest this year, but did manage to take time off to listen for a short period during the Contest. It was noticeable that the standard of operation was very high and showed a marked improvement on last year. For future Contests I suggest that Contest be limited to any twelve consecutive hours operation between 0600 Saturday to 1800 hours Sunday.

- **We have been advised by our outward QSL Officer that VK4RL, 61 Manilla Street, East Brisbane, is handling this section until further notice.**

4RC has been on the sick list for some time. Everyone will be sorry to hear of Bob's illness and I know I am expressing the sincere wishes of all in wishing you, Bob, very speedy recovery.

BRISBANE ZONE (4CC)

4PX, like most of us at times, has had more than his share of "hum" trouble. it was most interesting to hear the dozens of methods of overcoming the gremlin that were suggested to Arthur during the month—some even went so far as to infer that Arthur must have his shoes off, because the rig is right next to the bed and he must be all set to tumble into it. You must have an understanding wife, Arthur; anyhow, we think the hum-bug has been buried at 4PX's shack. 4FP has been off the air for the last month or so and has been using the time in building a beaut three element beam. The tower is a simple but very effective ladder type, which was easily pushed up by four of us, and within five minutes of its erection, Jack was up on the top of it with all the confidence of a veteran. Speaking of climbing towers I suggest you take a gander at the "ants" walking around the tower being erected on the top of the Brisbane G.P.O., then you can go home to your humble 40 footer with confidence.

Like many other Brisbane stations, 4FR and 4MD have changed over to zero bias Class B 807 modulators with very good effect too. By the way, I've yet to hear of a lazier way of turning on the rig than Mick has—he just presses a button with his foot. 4JO should soon be stirring up the DX with his own rig, he did pretty well in the recent ballot—I can see some hair being pulled out though —he lives next door to 4FP; wouldn't it? Wish I had both the voice and quality that 4TT is pushing out of late, it is really super. Both Tom and 4NC (Charlie) are lucky enough to have Command transmitters to use as v.f.o.

Speaking of 4NC, his photogenic daughter has kindly offered to take notes of items of interest as she twists the OMs dial and pass them on to me for inclusion herein. Better watch out or you will be quoted verbatim as Claire is a shorthand typiste. I am told that 4JV has other loves besides Ham Radio, he was observed going to the Grange Archery with a gaily coloured tackle case the other Sunday.

In a recent copy of "A.R." it was noticed that 4EN had closed down. Rumours reaching the sub-editor seem to indicate that Eric is suffering from an itchy key finger. Clive reports that Eric, Jnr., told him that 4EN has started hammering, sawing and soldering again and to all intents and purposes it could be that Eric, Snr., is coming on the air again, we hope so anyhow.

TOWNSVILLE ZONE (4EL)

4EJ now world wide authority on relays and their adjustments and electronics keyers. Still knocks over the DX with a rather drunken one-and-a-half element beam. 4GD mainly on 28 Mc. and testing out screen modulation with clipper, and it sounds good too. 4TU puts out a nice clean signal on 7 and 14 Mc and is getting his share of the DX. Keens skeds with 9MR in Madang. 4QL often heard calling "CQ DX" and does quite a lot of listening on the band too. 4WH putting out a nice c.w. sig and has changed from his centre fed Zepp to end fed job, and now has a lobe on Europe and doing quite well, also getting ready for 28 Mc. when (?) it opens, and also a nice rig for 50 Mc. complete with beam. 4GF, the old Edgar, heard in a big four-way hook-up on 14 Mc. one night, holding his own with his QRP rig.

4XD not heard lately due being QRL at local commercial station. 4BX has been heard with some nice c.w. lately as a change from phone. Graham is said to have been chased by a big bad wolf on the air one night. 4DB also at the same QTH as 4EL—as a matter of fact, they are approximately 30 feet apart, how's that for QRM? Doug is rebuilding rig and has a new 830B final just completed. 4RW has forsaken the phone for a while, has two nice beams on 14 and 28 Mc. 4EL out at the local National station in the mulga, has lots of time and space and is making full use of both by trying out all sorts of arrays on Europe and reckons 4AP had the right idea when he said the lazy H was the daddy of 'em all. Eric now up to his 400th sked with G5ZA. General conditions in Townsville have not been too good, the best periods for 14 Mc. have been from 0700 to 0900 and 1500 to 1700 hours. 28 Mc. quite dead and 7 Mc. fair for Yanks in the evening. Eric also reports working countries that he had never even heard in Brisbane, his latest being OY and EA9, and has worked 250 Europeans since June.

DOWNS ZONE (4CG)

General grouch in this area is "conditions." And we say for the umpteenth time, never in 25 years of operation on the Ham bands have we known conditions to have been so poor. This year noise has been up and activity has been down. There is little general activity in this zone. 4WY is most consistent with his trunk line to Inverell. Heard 4CK on 40 one day recently, so Warwick is back on the map. 4CU active mostly on 80, but still listens an awful lot on 6 metres. Soon Charlie, soon! 4XN is polishing his folded dipole, getting it all nice and shiny for the 6 metre season. 4KK proposes to be in on it this year too with big arrays. 4IG and 4JC getting more power on 40 these days, heard testing few nights recently (4OA seems to be in on this too).

4FQ planning to get on again after eleven years. Unluckiest Ham in VK is Fraser, got his licence on 28th August, 1939, and a telegram the same night cancelling same—war was on. Never pressed his key or said "boo" into his mike, now knocking up low power transmitter for 240 volt d.c. (our sympathy to him). 4DA motored to Melbourne and took a load of portable and a couple of ports of clothes. Kept skeds with 4XN and 4RF and worked a lot of the gang on the way down. 4SG quite inactive. 4CG not doing anything spectacular—just biding my time.

With the notes I have completed two years as sub-editor for this Division. I have been greatly assisted in the compilation of the notes during that period by 4EL, 4RW, 4KW, 4XJ, 4BJ, 4HZ, 4GH, 4CG, 4FX and 4CC, to each of whom I extend sincere thanks and appreciation. I think the time has now come to hand over the sub-editor's job to someone who has more time for Ham Radio acitivity and, in particular, to someone who is better able to attend monthly meetings and keep in closer touch with Council. During my term I have travelled 10m miles a month to attend meetings, but am now finding this a little too much. I have enjoyed writing your notes and hope I have brought something of interest to our VK4 readers. Wishing my successor every success and your continued co-operation and thanks for having me at your place each month during the past two years, 73 and all the best—VK4SN.

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SOUTH AUSTRALIA

The monthly general meeting for August was held to a representative gathering at the club rooms, the guest speaker being Mr. Clem Tillbrook (5GL), who chose for his subject "Crystal Locked Converters." This is not the first time that Clem has lectured to us and as I have said before in these notes, he possesses that most prized attribute among lecturers, the ability to express in simple language the complex theory or formulae associated with the lecture and yet do so in a manner as to make it all seem so simple. He brought along one or two converters that he had constructed along the lines discussed in his lecture, and judging from the number of questions and the discussions that arose later, it would be no stretch of the imagination to say that the evening was an unqualified success. 5TX, from Kulpara, proposed the vote of thanks which was received with enthusiasm. One point which Les stressed will bear repeating, and that was that it was a great pity that the country member, due to the circumstances of his being so far from the city, was excluded from such lectures and the instructive question and answer period which always follows. This is a question which has from time to time given much food for thought to Council, and no matter from which angle it is looked at, no suitable answer has at yet presented itself. If any member, city or country, can find a suitable solution to this problem, he will be welcomed with welcome arms by all concerned. Just in passing, officialdom takes a dim view of any suggestions regarding recordings and playing back over 5WI, or anything along similar lines. (Such interesting lectures could become the basis of an article for this magazine, where both city and country members who were absent from the meeting could study same.—Ed.)

Among the welcome visitors were 5UX (Kulpara), 5NV, 5XL (Clare), 5LH (Port Augusta), 5CD (Port Augusta), 5FP, K. Eckerman and T. Taylor. To these visitors, some of whom are members, we say again, come as often as you can, and to those that are not members, we say, if you have found us a decent bunch of fellows, well then join up and be one of us. Remember that if you ever bump into any trouble from up above, what they can do to you is no one's business when you are only an individual, but collectively, well that is a horse of another colour.

I was quite impressed with the speed and agility with which Joe McAllister found a blackboard duster when asked for one by Clem. The words had hardly left his mouth when through the air with the greatest of ease came a duster, and all I can say is that Joe must have had it up his jumper.

5JK appeared to thoroughly enjoy the lecture, at least his gentle snores gave that impression, and when Norm Coltman jabbed him in the ribs, Jim sat up very quickly and said, "I think that a half wave vertical is a lot better than a full wave horizontal." When he eventually realised where he was, he disappeared down inside of his overcoat in complete embarrassment.

The new President, E. Barbier (5MD), having been so successful in his foul purpose of the previous month's meeting, deigned to take the chair and in a few well chosen words eulogised the work of the past President, Hal Austin (5AW), these sentiments being shared by all members present. With an obvious sneer in his voice, the President also thanked the Vice-President for stepping so manfully into the breech at the previous meeting, thereby causing several members to titter audibly, but as my spirit has been ground into the dust by the continued attacks on the part of the President, one or more poisoned darts matter little.

John Sheard (ex-5JA, now in England), writing to Joe McAllister, says that he is now domiciled in Burwood Park, Surrey, and hopes before long to be on the air with a G call. He speaks well of television and says that it has a clarity and fascination equal to any home movie and also said he had viewed a cricket match in his sitting room comparable or better than he has viewed some matches in the grandstands. As a matter of interest he quoted the price of his television set as being £18/10/- complete.

News also to hand of Dr. Ross Adey (ex-5AJ, now G3GPC) to say that all is well and that he is looking for VK5 contacts on 20 metres. He also said that 5PS is putting in a signal into G land that has to be heard to be believed, well, he did not say that exactly, but I know that he would have said it if he had thought of it. Cheerio Ross, and all here wish to be remembered to you, and my fallen chest is still falling.

5TL forwarded on to me a letter he had received from 2TL in connection with a misdirected QSL card. In the letter, 2TL wished to be remembered to all the VK5 chappies and especially to the "Droll Character" who writes the VK5 notes for the mag. I was puffed up with my own importance for about a week after that until I saw a dictionary which said that droll meant "odd or queer" and now I am not too sure of myself. Oh well, he had probably just finished a QSO with my soul mate Barbier when he wrote the letter so, what else can I expect.

The Remembrance Day Contest has come and gone again and many are now licking their wounds and figuring as to how they could have grabbed a few more contacts if only they had been more of a wake up to several little points. Anyway, it was a whale of a good time and appeared to be enjoyed by all. To be quite frank, a number of VK5 boys (including myself) who entered the Contest, did so, not because they are keen on Contests, but simply to pull their weight for their State, and all those that did enter all agreed that it was good fun and that they would not have missed it for worlds. I confined my activities to 14 Mc. phone, and in common with many others, did not hear a VK3 throughout the Contest; don't know why, just one of those things I suppose. I managed to put a crimp in the curly locks of 7RM which gave me intense satisfaction. "Roop" was dashing hither and thither, handing out and receiving S9 reports, until his voice was nearly bursting with pride as the S9 reports were mounting up. I called him and gave him an S6, and did he do a song and dance; he screamed and yelled as if he had sat on the wrong end of a garden rake. He was definitely cut to the quick, and I felt sorry that it had fallen to my lot to topple him off his perch. Sorry "Roop," but pride goeth before a fall.

Incidentally, quite a number of people, not all Amateurs, listen to the daily skeds between 7RM and 5QP at noon every day, and after listening to a few myself, I am convinced that the reason for their "stickybeaking" is only to hear what construction "Roop" will put on the twelve o'clock ABC news. On two occasions that I heard him, he said, commenting on a cloudburst in Sydney that day, "Water is flowing over the tops of the parked cars in Pitt Street, and all the suburban houses have water flowing over the chimneys," and referring to a cold snap that we had in Adelaide, he said, "Mt. Lofty is covered in snow and King William Street traffic is blocked with snow three feet high." "Roop," how could you!

Our new Divisional Secretary, 5XU, has as yet not sufficiently recovered from his recent illness and as there is some suggestion of a sojourn in hospital, our ex-secretary, 5MD, has consented to carry on until Gordon has recovered. It looks to me as if I have a chance to receive that letter from him after all. We all hope that Gordon will soon be well again and also hope that the trip to the hospital will not materialise.

5MA can now be seen at club meetings wearing a huge crown on his head upon which is written "VK5MA, King of the Butchers," and below it in huge letters a list of all the "accidents" that have happened to him lately including a 1000/1000 tranny, three filter condensers, and sundry other articles. Aside from this, Fred has nothing further to report. 5KW has been fairly active on 40 and has just completed a new aerial coupling unit which has improved things all round for him. He is also building new gear for a receiver and also for 6. Harry is settling down into his new job at the second best broadcasting station in the State, but the telegraph sounder is not treating him too well. The first ten years are the hardest Harry; I know because I have still two years to go.

5BC is at present on holidays down at Victor Harbour with a portable rig on 40, and when I bumped into him down there he was raving about the almost perfect conditions that he has found there. 5SL is too busy house chasing and looking at building plans to have much time for Radio, and all signs seem to point to the fact that it won't be long now. My friend of the Berri Co-op. Packing Shed, Murray Nicholson, is sitting for his ticket in October, so here's hoping it works out alright for you Murray.

One of my spies from England has forwarded me a cutting from the "Short Wave Magazine," and now I know where a certain President disappears to now and again. I quote: "We recently had the pleasure of a personal QSO with Commandante Marcelo Barbieri (LU3BG) who is over here on a short visit. Major Barbieri, to give him his equivalent rank in English, is the President of the Radio Club Argentina. Major Barbieri was unfortunate enough to leave behind at the airport all of his photos and other items of Amateur Radio." Do you get it? and I will bet my life that this Major Barbieri spent a half an hour running down his Vice-President Colonel Parsoniski to all who would listen.

Well this is all I have for this month, for some unexplainable reason, my correspondent from Mt. Gambier is in the land of the missing, and also the same applies to 5XL who has apparently broken down under the strain. Anyway as I have been down with the 'flu and don't feel quite 100 per cent. yet, perhaps it is all for the best. I hope that all is well Colin and Lance. Just in passing, Gordon Bowen has unfortunately gone to Daws Road Hospital for observation. Here's hoping that he will be home soon.

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WESTERN AUSTRALIA

The August meeting of this Division was held in the Institute Rooms, Padbury House, St. George's Terrace, on Tuesday the 15th, before a rather disappointing attendance. The business of the evening was conducted in what must have been record time, due in one way to the Secretary leaving the minutes of the previous meeting at home, and in another, to the President feeling rather off colour after a gruelling at the dentist's that afternoon. Noticed Ron making a quick exit when the meeting adjourned for the usual ragchew.

6JS, acting as chief projectionist, treated the meeting to a screening of two excellent films, one on radio research and the other on transport problems in the United States. I believe all the civic authorities in Perth have viewed the latter film. Let's hope they learned something from it. A hearty vote of thanks to 6JS was moved by the Secretary before the meeting closed at the early hour of 9.50 p.m.

Well by now the Remembrance Day Contest is over for another year, and each Division will be awaiting the results with great impatience. VK6 was well represented with approximately 65 stations operating. Conditions were not good by any means and the 20 metre band took the count very early in the Contest, leaving 40 metres to the tender mercies of some scores of stations. Boy! was that QRM fierce. Several stations found the going that tough they didn't manage to make the necessary five contacts. Those who were able to work 80 metres were able to operate in comparative comfort and much good work was done on that band. Considering the relatively poor conditions, some remarkable scores were made by several VK6 stations, namely, 6RU, 6KW, 6DX, 6FL, 6KU and 6MB. The main thing to do now is get your logs in to the Secretary and help build up that multiplier. VK5 seemed to be very well represented and I think our main opposition will come from that State. The standard of operating in the Contest was once again very high, and there seems to be no doubt about this Contest being the most popular of the year. May the best State win.

On Friday, 1st September, it was my privilege to be able to attend the Annual Dinner of the Radio Society of Western Australia. A very well organised and successful function it turned out to be, and the Dinner Committee of the Society is to be congratulated. Every speaker emphasised the splendid work being done by the Society in training their members for the A.O.C.P., thus keeping up a steady flow of new licencees to swell the Amateur ranks in VK6. Those present were taken back to the earlier days of radio in this State by the reminiscences of Frank Goldsmith (ex-6FG), Bert Congdon 6BC, Skipper Schofield 6WS and Ted Doddy 6WH. Incidentally 6BC was the Secretary to the Society for just over 25 years, which must surely be an all time Australian record. The President of this Division, 6KW, is also President of the Radio Society, and many Amateurs in this State belong to both the W.I.A. and the Radio Society.

By the time this appears in print, the Country versus City QSO Day will be but a memory. The date is Sunday, 17th September, and the venue 40 metres. Roll up one and all, but leave just a couple of Kc/s. vacant for me, please!

PERSONALITIES

The R.D. Contest brought many a rig out of mothballs, with disastrous effects on some long idle power supplies. 6RG lost a pair of 866s, and a power tranny. Russ finished up running the rig from the exciter power supply and working the required number of contacts. 6PJ lost a driver transformer in the modulator. If VK6 wins the trophy better submit a bill for the damage fellows. 6WS, Skipper Schofield, recently celebrated his 76th birthday, but still as young as when he made his first contact many years ago. Skip has been interested in radio since about 1925 and has a wealth of stories to tell about those earlier days. Recently treated himself to a commander receiver and can be heard on 20 and 40 metres. 6YZ heard trying some n.b.f.m. on 40 a week or so ago, but since then has been back on a.m. Didn't you like it or didn't the boys like it Dick?

6CP still active on 20 and occasionally ventures down to 40. 6JW is back on 20 and 10 after a very long absence from the air. Putting out a nice signal John. Must have the dual beam working nicely. 6RT finally turned up in Cue and with ten watts (sometimes) from d.c. mains puts a very respectable signal into Perth. 6WZ now on holidays and is carrying a small portable rig with him. Contacted Harry from Lakewood (near Kalgoorlie) recently and the seven watts were getting down to Perth quite well. 6GA will be back in the West 'ere these notes are printed. Looking forward to seeing you back Bill, even if it does mean more QRM for the Carlisle gang. We can take it, even if my receiver can't.

6DJ still very active on 40 and is keen enough to set the alarm for 5.30 a.m. or thereabouts to work the Europeans on that band. Winter time too. How do you do it? The getting up part, I mean. 6RS back from holidays down at Mandurah and all ready for another year's toil. Before going away, Ron did some high pressure work on his Bendix Tx and just finished in time to use it on 80 for the R.D. Contest. 6DD very quiet these days; rumour has it that the royal and ancient game of golf has nearly supplanted radio as far as John is concerned. 6HL also on holidays and has portable gear for 40, 10 and 6 (one transmitter), installed in the family buggy. Just don't know whereabouts Harry went for the vacation, but he has been heard and worked on 40. 6AG, our Secretary, is away on a business trip up the North West. Last heard of from Meekatharra.

This month I will have to blame the lack of activity on the various bands for the scarcity of news. That lack of activity is no doubt due to the very poor conditions prevailing. Once again, if you have any items for this column, let me know, I'll do the rest—Cheerio.

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TASMANIA

Activity amongst the southern members for the month of August has been relatively quiet with the exception of the Remembrance Day Contest, when most Hams did their best for our fair State. From what can be gathered some excellent logs have been received by our worthy Secretary, and with the addition of the North and North Western Hams, a good score should result. Unfortunately, some operators used wrong numbering procedure, this mistake can easily occur even in the best of circles. Several members were fortunate to secure the services of scribes which made the going much easier.

An additional member of the W.I.A. to graduate to full membership is Don Davis who, after a hold up with c.w., managed to pass the recent A.O.C.P. examination. Plans are well in hand for the Ham shack and within a few weeks another member will be present at the Sunday night ragchew. Next time you run into 7RM, ask him about the unofficial South American record he holds. Believe he was the only marine operator who could copy a very fast press station and have his supper at the same time (or something to that effect). You are a bad lad, Rupe.

Listening to 7BH one recent Sunday night and was envious of the f.b. signal which was received at this end. Thought it might have been my receiver, but I will have to admit the transmission was faultless. Congratulations, Brian. Believe "Acker" Anderson is a noted authority on microphones as he was given a mike to check by 7SK. Was puzzled at the lack of output so upon opening the case, believe it or not, found our mate had forgotten he had taken the insert out; you beaut.

For those not so financial and desirous of a radio receiver suggest you walk past a certain Ham's store in Liverpool Street, any time after six p.m. Anything from a mantle receiver to a combination radiogram can be obtained, suggest you leave your AR88 out one night Max and see what happens.

A new call to most is 7SR which is operated by an Army Signal Club and is located at "Beaumaris." Noticed a DL1 amongst other foreign calls listed in the log. Several well-known Hams are in the Unit and so another "radio hungry club" has been formed.

A meeting was convened by 7AB with the purpose of forming a North Western Zone. This should be a great benefit in fostering Amateur activities in this area as one of their aims is to conduct A.O.C.P. classes which should increase W.I.A. membership. Most of the Hams in this intended zone find it most difficult to attend Institute meetings at Launceston, owing to the long journey necessary.

It was whispered Johnie Grace has now decended from the remoteness of 144 Mc. to 40 metres and now contemplates building a receiver for this particular band. 7SD now works exclusive DX in the form of a G on 40 and was received at S9 plus. Was a surprise until I found the "G" was marine mobile in port at Hobart.

As these notes have been prepared prior to our September meeting, it is intended the Lecture will be given by Mr. Turnbull, continuing his previous lecture. This should prove interesting as a panoramascope will be exhibited and how the c.r.o. can be used in the checking of receivers. Discussion regarding future emergency network practice will be another major topic, so how about leaving the fireside armchair and enjoy the cosy comfort to be had at these meetings?

NORTHERN ZONE

Seems to me that last month I tried to run 30 days ahead of myself and reported the August meeting before it happened—obviously should have read July, sorry, but now we can talk of August. Our meetings seem to be drawing bigger and better crowds as they go on and this month was no exception. All present were treated to a very interesting and informative talk by 7XW on the whys and wherefores of a modern b.c. station. Chris is naturally very well fitted to discuss such matters being engineer at one of our local b.c. stations and the material presented was very well received. A vote of thanks, ably proposed by 7RB, who is by way of being in the opposition, but very friendly opposition it seems, was carried by acclamation.

Well, the 1950 R.D. Contest is now but a memory and what a memory! The pounding those poor bands took was just nobody's business. The contacts just rolled in one after the other, guess most stations turned up to play their part for their State and pay tribute to the memory the contest perpetuates. Judging by the activity some really bumper scores will be turned in and the final result bound to be close.

Activity apart from the R.D. Contest has been somewhat desultory during the month. 7BQ has been firing up on 6 getting ready no doubt for the season to commence. The main occupation at 7LZ seems to have been blowing trannies; after the second one went, Col, working on the usual sequence of three, took one from the junk box and threw it out for insurance, but no good, another one popped which just goes to show what a cruel thing fate is. A new converter for 6 and 10 is starting to emerge from the work bench and I, for one, am closely following results with an eye to a future similar piece.

Was walking out Lyttleton Street way some days ago and idly speculating as to which QTH belonged to 7PF when lo and behold an amazing collection of arrays met my eye; beams of all sorts and sizes, feeders and all the trimmings. I stood and gazed and wondered if I were a signal which of the maze I would choose to get myself inside and reach the ears of the operator. However, judging by the results, they do sort themselves out very well.

This month we have lost to the zone the person of 7NL, Noel has been transferred to VK2 and will we hope be heard from there. While not very active on the air, it was very seldom a meeting took place that he did not attend and he will be missed by us all. Good luck in the new State, Noel, and it's been nice meeting you.

7HY, 7DB and 7TE all were in on the R.D. Contest for a few contacts and out at Longford 7DS kicked off very well, but struck receiver trouble I believe—tough luck Bill. The expected card from VK1ADS, mentioned as being a hopeful in the batch received by the QSL Manager from VK3, did not eventuate, so we are still on the waiting list; a compensation for 7LZ and myself did arrive however this month in the shape of FN8AD, long since written off as one of the "won'ts." DX is showing a slight improvement although still wouldn't go into raptures about it. The ionospheric prediction charts for September look interesting so maybe 'ere the month is out, things may be well on the up grade.

So, once more it's curtains and, as a reminder, the date in October is the 13th—for jittery members a supply of rabbits' feet and lucky charms will be available at the door at a small charge, proceeds to go to the society for destitute Hams—as if there are any other sort!

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CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

CONTEST RESULTS

Lascelles Ave., Beaumont, S.A.

Editor "A.R.," Dear Sir,

I have read, with interest, the rules for the 1950 VK-ZL Contest, and could not help smiling at the heavy print of Rule 14 requesting logs by 24th November, 1950. Isn't there a rule 15 missing requesting the Contest Committee to return results by a definite date?

Well seriously, the 1948 Contest—handled in ZL—was not exactly encouraging in that respect; results being published in a rather sketchy manner, and only for VK-ZL districts about 12 months after.

In 1949 I really had hopes that VK3 would be quicker on the job, but alas, 12 months have gone by and no sign of Contest results.

Most of the fun of the Contest is lost with that lag in publishing the result, and an effort should be made to get the results in say three to six months. Of course it may be said that even the A.R.R.L. is struggling in spite of all their staff and facilities, but nevertheless the high scorers are given within three months.

Could not the beet brains in hamdom be asked to devise a new basis for Contests which simplifies and reduces checking work?

I remember an Editorial some time ago asking for views on Contests in general and while I am on the subject, I can mention that I believe that there is still a lot of interest in Contests, particularly in the big ones which have been established for some time and are well supported. I don't think the average man can manage to participate in more than two or three each year and send the logs plus analysis sheets in.

I cannot conclude this letter without expressing my appreciation for the promptness with which the "A.R." arrives every month. In fact I am approaching the mail box with utmost confidence to look for it. If I could only find those test results!

—F. G. HAAS, VK5FH.

[No one understands the problem of having Contest results available within a reasonable period after a Contest than does Federal Executive, but the trouble is always, and will continue to be, that of "no interested members to help" until such time as a Contest Committee is formed to keep Contest matters up to date. Federal Executive agree with the criticism fired at them and despite a united attempt by the Victorian Council to obtain four—only four—interested members with Contest experience who would take over the responsibilities of putting "this contest business" on a sound footing, to date no definite results have been achieved. Many hands make light work of building a solid framework of efficiency where chaos exists! Can you—and you—and you, do something NOW! We need four experienced contest members to form a Contest Committee in conformity with General Business Item No. 6 of the 1950 20th Annual Convention. Let's hear from you.—Federal Executive.]

BRAILLE MAGAZINE

"Grand View," Cliff Drive, Katoomba.

Editor "A.R.," Dear Sir,

In response to the paragraph which appeared in the June issue of "Amateur Radio," concerning the publication in the United States of a new magazine in Braille, I wrote to the address given and have received in reply a letter, a copy of which is appended below.

I have also forwarded a copy to the New South Wales Division of the Institute, and I would suggest that all concerned should give such publicity to this matter as is considered necessary throughout all Divisions.

The first issue of the magazine referred to in the letter has not yet come to hand, but when it does so, I shall inform you as to the general nature of its contents.

WILLIAM J. ZECH, VK2AOP.

Dear Bill,

Received your letter inquiring about the new Braille Magazine for Blind Amateurs today and very pleased to inform you about it.

It is called the "Braille Technical Press," and the first issue was released in March of this year. It is a Radio and Electronic guide published monthly for the blind. Edited by Robert W. Gunderson, W2JIO, executive offices, 980 Waring Avenue, New York City, 67, New York, U.S.A. The cost of the publication is six dollars a year, and it will be sent to blind hams, short wave listeners, sound engineers and servicemen anywhere in the world.

We hope to reach all blind persons interested in radio, whether they can afford the subscription price or not. Of course it is a tremendous project and a costly one, but it is already off to a good start. Your name has been placed on the subscription list, and you soon will begin to receive copies. After receiving your first copy please write to W2JIO stating your desire to continue to receive the publication, and that you read Braille. This is important as those not answering will be dropped.

Will you kindly inform the official organ of the W.I.A. that the publication went to press in March and that we are anxious to hear from all blind Amateurs, short wave listeners and servicemen who read Braille.

After receiving and reading the "B.T.P." we will welcome any suggestions or criticisms you may wish to offer. I am serving on the board of directors and, with other blind Amateurs and Radio Engineers, will set the policy of the magazine.

At the present time I operate only on 10 metres, both phone and c.w. using a Halicrafters' HT9 transmitter running 100 watts and a three element beam, also using a national NC200 receiver with a preselector and a Millen v.f.o. I am planning to erect a beam for 20 this summer. I have part time employment at a metallurgy plant and have a guide dog to take me back and forth from work.

It will be greatly appreciated if you will send along any information that you may have on blind people who may be interested in radio. You may write either in Braille or print. Here's hoping you will receive the magazine soon and enjoy it also, and that we may meet on the air some day, very 73. —EVERETT A. ERICKSON, W1NLM, No. 5 Oaklands Heights, Bethel, Connecticut, U.S.A.

CLASSIFIED ADS.

Advertisements will be accepted under this heading from the trade, and/or others who are actively engaged in trading as a livelihood. Rate: 15/- per inch.

WANTED TO BUY.—BENDIX FREQUENCY METERS BC221 or LM7, etc., in good condition, any quantities. R. H. Cunningham Pty. Ltd., 62 Stanhope St., Malvern, Vic. (Phone UY 6274).

HAMADS

9d. per line, minimum 2/-.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 8th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line.

Dealers' Advertisements not accepted in this column.

FOR SALE.—Halicrafter SX18 Communication Receiver, fitted with noise silencer and voltage regulator. Complete with S meter and speaker. £40 or offer. O. L. Nestrom, 8 Burgan Street, Broadview, South Australia.

SELL.—Marconi Xmitter TNS2 50w. brand new with valves and 3.5 Mc. xtal, £20. Also TA12D Xmitter, excellent condition. Write R. Black, Central School, Liverpool, N.S.W.

WANTED.—AMR200 Components and Dust Covers for Receiver Coil Box and Power Supply. T. D. Hogan, 127 Oakleigh Road, Carnegie, S.E.9, Victoria (Phone: UM 1732).

WANTED.—Good VCR140 C.R.T. Tubes. G. Millerd, 18 Ward Street, South Melbourne, Vic.

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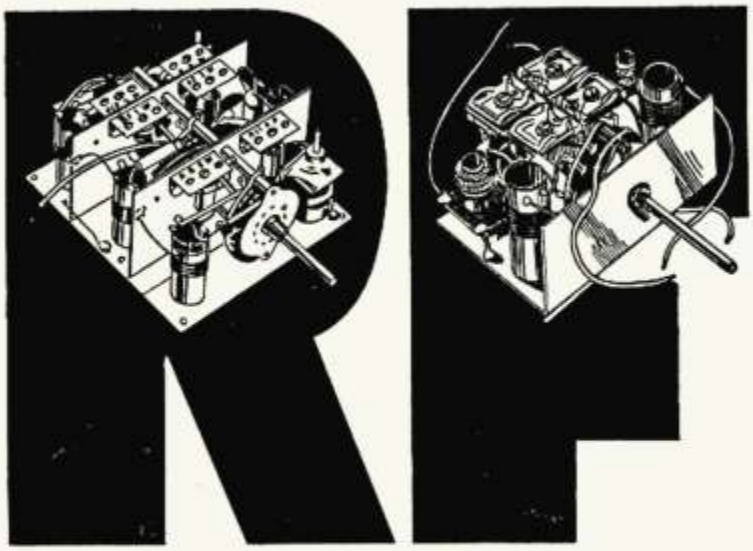

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AMATEUR RADIO

NOVEMBER 1950

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

FOR THE EXPERIMENTER & RADIO ENTHUSIAST

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EDITORIAL

★

Two years ago your Federal Executive, through the F.I.A.T.S., completed arrangements with Dr. Green, of the Commonwealth Ionospheric Prediction Service, for the publication in "Amateur Radio" of Monthly Prediction Charts, specially prepared for the magazine and covering Amateur Bands. The service was to be provided for a period of six months, in return Dr. Green requested that Amateurs using the service collaborate by submitting summaries of their reception data for research purposes.

We quote extracts from letter recently received from Dr. Green:—"No report on the usefulness of the predictions has ever reached this service, although the original trial period of six months has, of course, long since expired. As a result, we have been compelled to rely on other sources of information for the purpose of checking the predictions for the Amateur Bands and the benefit of these checks has been automatically passed on to the Amateurs in the form of improved forecasting techniques . . . It is to be regretted that the Amateurs who have made many contributions to the progress of high frequency radio communication, have so far failed as a body to assist with the progress of the new art of ionospheric forecasting."

Federal Executive is astounded at the lack of reports in view of the fact that the service is obviously popular and well used as evidenced by Federal Council's directive to F.E. based on members' opinions, to request continuation of the service. However, before having the temerity to request continuation of the service for the third year we would like to be able to offer Dr. Green concrete evidence of the gratitude we feel towards him and his staff. YOU can help by jotting down your observations every month and forwarding same to your Divisional I.A.T.S. officer, whose duty it is to collate the information and pass it on to Dr. Green.

We are confident that the Amateurs are capable of far more co-operative effort than hitherto displayed, and we are sure that the Australian sense of fair play will not permit members to go on accepting a gratuitous service without making some endeavour to reciprocate.

FEDERAL EXECUTIVE.

The Contents . . .

THE VK3WI ARRAY FOR 144 Mc.

BY LEN JACKSON*

The problem recently arose of providing an antenna for the projected Two Metre Transmissions from the Club Rooms, Queen Street, Melbourne. A consultation between VK3IM, VK3LH, and the writer was held to decide on a suitable type and resulted in the following specifications:—

- The antenna should be omni-directional, of turnstile or suitable type.
- It should consist of not more than two bays, to limit the size.
- It should have the highest possible gain consistent with the above two specifications.

The writer was of the opinion that this could best be achieved by using the same principles of feeding and phasing as were used in the "Lenfo" Series Phased Array (see January "Amateur Radio," 1950), and undertook the development and construction of a suitable antenna. The result has fulfilled all expectations.

Although not quite a perfect circle, the pattern is excellent and the gain in the region of 6 db over a dipole (in the most favourable direction of the dipole), compared with about 1.3 db for a two-bay turnstile of conventional type.

The array consists of four elements, two in each bay placed at right angles to each other, the two bays being stacked slightly over four feet apart (see Fig. 1).

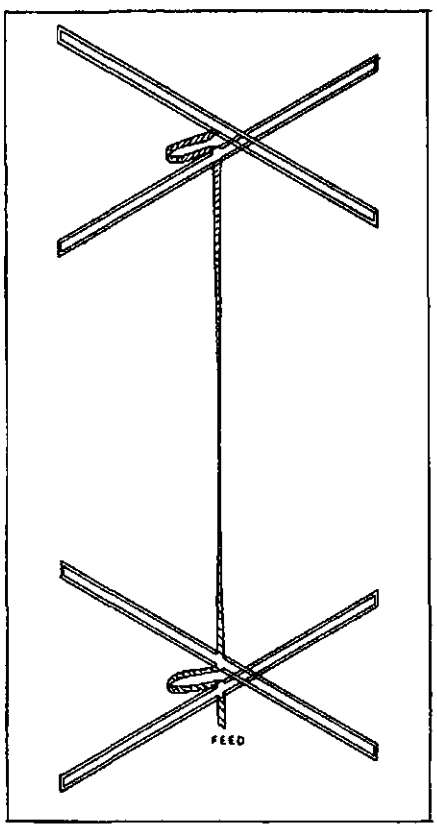
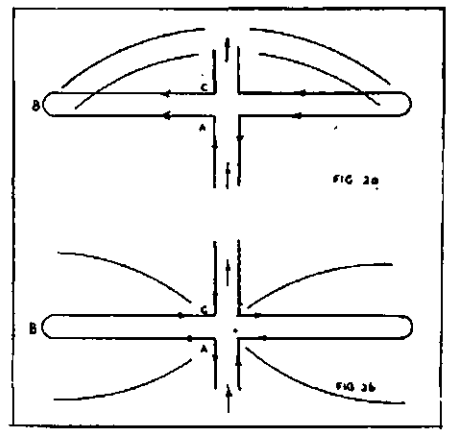


Fig. 1.
Isometric view of elements, 300 ohm ribbon phasing section, and feed line.

The feed line is 300 ohm ribbon, as are also the phasing lines between elements. The elements have the appearance of folded dipoles, with the feed line attached to the centre of one leg; the feed line to the next element being taken from the centre of the other leg. It should be noted that the first three elements have the appearance only of folded dipoles, their behaviour being quite different.

In view of the controversy and criticism aroused by the dimensions of the "Lenfo" beam, it might not be out of place to review here briefly the theory of the series phased array, before proceeding further.



Referring to Fig. 2a, the radio frequency currents generated by the transmitter travel along the feed line towards point "A" forming travelling waves on the line. At point "A," at say the positive peak of the cycle, the instantaneous currents have the direction indicated by the arrows. At point "B" which is a quarter wavelength further along the direction of travel, the current is at zero. A further quarter wavelength brings us to the point "C," which is at the negative peak of the previous cycle. Since the direction of travel has been reversed at the end of the element, and the current is also reversed, due to the half cycle time lag in traversing the element, the currents at points "A" and "C" will be in the same direction, and therefore add.

A quarter of a cycle later, the currents will be as shown in Fig. 2b. Here points "A" and "C" are undergoing reversal of current, so there is no current flowing. At point "B," which is at maximum current, the currents in the two legs of the element are flowing in opposite directions, and therefore cancel. The result is therefore as though there were no current flowing in the element. A quarter cycle later again, the currents have the same distribution as in Fig. 2a, but are now flowing in the opposite direction. The net result therefore, is as though there were standing waves on the element, and the same radiation is produced, although actually, only travelling waves appear on the conductors.

It will be seen that the important dimensions on these elements is the distance from "A" to "C," via "B," since this must be exactly a half wave length to provide the required reversal of phase. However, since "A-B-C" constitutes a single turn loop, the self inductance and capacity will be somewhat higher than on a straight wire, thus reducing the speed of travel.

In practice, this dimension should be 0.9 of a half wavelength, or 443 ÷ freq. It should be realised that the action is very different to the usual antenna and calculation by antenna formulae will result in an element which is too long. The impedance of these elements is 300 ohms, so the use of 300 ohm feed and phasing lines is essential to prevent standing waves.

To produce a circular radiation pattern, it is necessary to use two elements, placed at right angles with the centre of one immediately above the centre of the other, and feed the two with a phase difference of 90°. This is quite easily achieved by connecting the two by a quarter wavelength of feed line, the required phase delay being provided by the time taken by the currents to traverse this length of line. Due to the high dielectric constant of the polythylene insulation used on 300 ohm ribbon, the speed of travel is again lower than in space, and hence the line will be shortened by a factor of 0.8.

The final array is constructed as follows: The feed line is taken to the centre of the lowest element, which measures 36½", from points "A" to "C," via "B," as in Fig. 2. The actual spacing of the two legs is not important, provided it is small. From the centre of the first element, a quarter wavelength of feed line, 16½" connects to the centre of the second element placed immediately above, and at right angles to the

(Continued on Page 5)

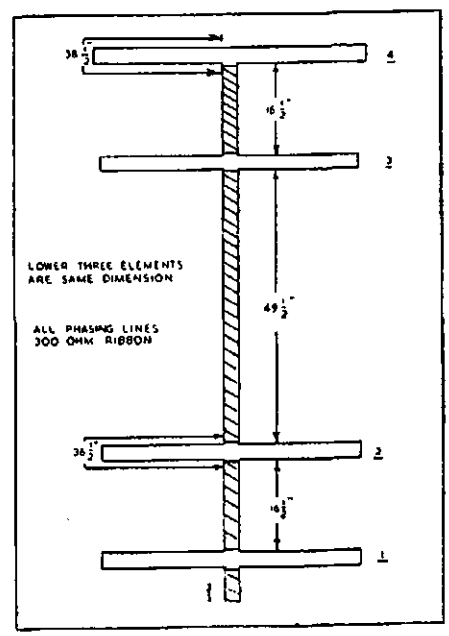


Fig. 3.

* 8 Austin Street, Bentleigh, S.E.14, Vic.

Painless Extraction of Harmonics

BY F. DICKSON,* VK2FB

It is one thing to read in a book that you can measure very high frequencies by means of a high frequency heterodyne wavemeter, using its harmonics, but it is quite another matter to do this in practice. Only too often there is no telling which harmonic one is hearing or even if it is a genuine harmonic at all. Furthermore it is disconcerting to find that some harmonics are stronger than expected while others are extremely weak. In fact, to do the job with any assurance of success, one must already have quite a fair idea of what the unknown frequency is, but unfortunately, this is not always the case.

There is quite an easy way of getting over this, a simple arithmetical juggle, which settles the question of which harmonic is being heard.

We need a wavemeter which will put out harmonics in the band in which we are interested and a detector or receiver which will let us hear the beats between its harmonics and the oscillator being measured.

The first step is to get a beat with some harmonic or other, note the wavemeter frequency and then shift it to the next higher frequency which gives a beat, and preferably a third, the next higher frequency again. Now the unknown frequency is a multiple of all these three known frequencies and we can find unambiguously the harmonic numbers of them.

Let us call the lowest frequency we took f_1, the next f_2, and the third f_3. The unknown frequency, F, can be put down as

$$F = nf_1$$

where n is the harmonic number.

As f_2 was the next higher frequency which gave a zero beat, its harmonic will be 1 less, so we have

$$F = (n-1)\, f_2$$

and likewise, if we want a check to make doubly sure

$$F = (n-2)\, f_3.$$

From two of these equations we can find the value of "n" thus,

$$(n-1)\, f_2 = F = nf_1$$

therefore $(n-1)\, f_2 - nf_1 = 0$

and $nf_2 - f_2 - nf_1 = 0$

We can tidy this up to get

$$n(f_2 - f_1) = f_2$$

so that $$n = \frac{f_2}{f_1 - f_2}$$

As we know f_1 and f_2, "n" is easily found and we know which harmonic of f_1 we were hearing, and similarly which harmonic of f_2.

In the same way we can tell which harmonic of f_3 was picked up, if we took the trouble to observe one. It is a good idea to take an extra point or two in the first rough check because in some oscillators various harmonics are extremely weak and we may have missed a beat, and perhaps what we took for f_2 is really f_3. By noting several of these f's. we can tell if one has been missed because the gap between the two where one has been missed would be much bigger than between the others and would be clearly shown. Usually once the harmonic characteristics of the oscillator are known, the additional points are not necessary.

If an oscillating detector is used to observe the beats, or a superhet receiver, there may be some additional beats, but these can be distinguished because as they are with harmonics of the detector they would give wavemeter points much too close together, being several orders higher in frequency, and will normally be weak, so there is no trouble in distinguishing them.

Quite often it will be found that "n" does not come out as a whole number, which it obviously should be, and this is due to errors in the calibration or reading of the wavemeter and the nearest whole number is taken. If the value of "n" is much different from a whole number, it is high time to check the wavemeter calibration.

Now let us take an example of the method. We have an oscillator which we hope will put us in the 144 Mc. band and the i.f. is 20 Mc., so that the oscillator will have to lie between 144 and 148 Mc. We turn on the old faithful R/S receiver as our detector and that heterodyne wavemeter we built (or acquired) a couple of years ago. As the calibration is quite good around 7 Mc., we will operate in that region and the results of our heterodyning give us:

$f_1 = 6.725$ Mc.
$f_2 = 7.124$ Mc.
$f_3 = 7.570$ Mc.

From f_1 and f_2, by the little formula, we get:

$$n = \frac{7124}{7124-6725} = 17.84,$$

so we can call it 18, and making a check with f_2 and f_3 we have 16.97 which we call 17, and the oscillator under test is therefore at:—

18 x 6.725 = 121.050 Mc. according to f_1
and
17 x 7.124 = 121.108 Mc. according to f_2
and
16 x 7.570 = 121.120 Mc. according to f_3

Now the figures for "n" were 17.84 and 16.97, and as the latter is rather closer to a whole number, we decide to use f_2 and f_3 rather than f_1 as they are probably more accurate. Averaging the value of F from f_2 and f_3, we get F = 121.114.

It happens that the oscillator actually measured in this case was a crystal oscillator about 3.028 Mc., with harmonic amplifier and the real value of F was 121.115 Mc.

This meant that we were multiplying 40 times instead of 48 which would have put us in the band at 145.339 Mc. As a measurement the result was quite good, but it shows that the wavemeter calibration could be improved around 6.7 Mc.

Since we now have an unambiguous method of using harmonics, we can set about v.h.f. measurements with complete confidence about the harmonic order and have only to worry about the accuracy of the wavemeter used.

It is also to be noted that if we have access to a number of accurately known v.h.f. frequencies, we can reverse the above process and calibrate our heterodyne wavemeter from them with great accuracy.

One further point is worth mentioning, this general scheme also works out for determining low frequencies by the inverse method. Suppose we want to fix a frequency around 60 Kc., we can use broadcast station carriers instead of v.h.f. carriers and calibrate a l.f. oscillator very nicely indeed. Obviously, for a rough check one can use the fact that the interval between successive harmonics of the l.f. oscillator heard in the B/C band is equal to its frequency.

* 38 Trevellyan Street, Cronulla, N.S.W.

VK3WI ARRAY FOR 144 Mc.

(Continued from Page 3)

first. Three-quarters of a wavelength of line, 49½", then connect to the third element, which is parallel with the first, and spaced the length of the feed line above the second. This length of line is required to bring the first and third elements into phase, while the spacing is about right for optimum gain.

Another quarter wavelength of feed line connects the third and fourth elements, which are placed the same way as the first two. The fourth element is required to terminate the line with an impedance of 300 ohms and hence takes the form of a standard folded dipole, 38½" long. All the dimensions have been calculated for the centre of the band (146 Mc.), the array being very broadband, covering the entire band with ease.

Since elements **one** and **three** must be in phase, also elements **two** and **four, care must be taken to connect the phasing lines the right way since reversal will result in a pair of elements being out of phase.**

This is quite simple if carried out as follows: The elements are laid out and connected as shown in Fig. 3, the same wire in the phasing line connecting to the left hand side of the element at each end. Elements **two** and **four** are then rotated **in the same direction,** until they are at right angles to the other two. Elements **one** and **two** are then moved up together as close as practicable, also elements **three** and **four,** while **two** and **three** are separated by the length of the phasing line between them. The array is then mounted so that all the elements are horizontal, with **three** and **four** vertically above **one** and **two.**

Although a certain amount of experimental work was entailed in the development stages, the final array was built up in the manner and to the dimensions described, no tuning or adjusting of any description being necessary. If the instructions are followed carefully, no difficulty should be encountered by anyone wishing to duplicate this array.

It proved impossible to make field strength measurements in a suburban back yard, reflection from clothes lines and other conductors having a very great effect upon the pattern. Therefore testing had to be confined to checking under actual operating conditions; the theoretical predictions for gain, etc., being very well borne out.

For the foregoing reason, it is recommended that the array should be mounted as high as possible, well away from any other conductors, such as other aerials, roofs, guy wires, etc.

In conclusion the writer sincerely thanks VKs 3FO, 3ABA, 3EM, 3EN, 3DY, John Dawes and particularly Herb Stevens, VK3JO, for their valuable co-operation and able assistance in the testing of the "VK3WI Array."

FREQUENCY ALLOCATIONS

The following is a list of the bands available for use by the Amateur Service in Australia, followed by the types of emission allowed on those bands.

3.5	to 3.8	Mc.	A1, 3, 3a, 6F3.
7.0	to 7.2	Mc.	A1, 3, 3a, 6F3.
14.0	to 14.4	Mc.	A1, 3, 3a, 6F3.
26.96	to 27.23	Mc.	A1, 3, FM.
28.0	to 30.0	Mc.	A1, 3, 3a, 6F3.
50.0	to 54.0	Mc.	A1, 2, 3, FM.
144	to 148	Mc.	A0, 1, 2, 3, FM, Pulse.
288	to 296	Mc.	A0, 1, 2, 3, FM, Pulse.
576	to 585	Mc.	A0, 1, 2, 3, FM, Pulse.
1215	to 1300	Mc.	A0, 1, 2, 3, FM, Pulse.
2300	to 2450	Mc.	A0, 1, 2, 3, FM, Pulse.
5660	to 5850	Mc.	A0, 1, 2, 3, FM, Pulse.
10000	to 10500	Mc.	A0, 1, 2, 3, FM, Pulse.
21000	to 22000	Mc.	A0, 1, 2, 3, FM, Pulse.
30000	Mc. and higher		A0, 1, 2, 3, FM, Pulse.

Note.—6F3 emission represents a maximum deviation from the quiescent frequency of plus or minus 3 Kc.

DX NOTES BY VK4QL

The month of September was one of varying fortunes and effective blanketing by the "Ion Curtain," which resulted in generally very poor conditions on all bands except for Friday and Saturday, 16th and 17th, when the 14 Mc. band was wide open. Other bands, including 28 Mc., showed some improvement, but not to the same extent. From then on the whole of the high frequency bands deteriorated, until at the end of the month, very few signals of any note and strength were getting through.

Despite the poor conditions some things of note occurred. Firstly, from my own personal angle was the working of DL1FF on 7 Mc., thus completing my 7 Mc. W.A.C. Secondly, the ease with which South Africans were worked on 7 and 14 Mc. for the first three weeks of the month. On 14 Mc., VQ8 and ZS stations were workable at 9 p.m. E.S.T., whilst on 7 Mc., a number of ZS, VQ2GW, ZE2JI, CR7AJ were worked between 6 and 7 a.m. In the 4WI broadcast on 9th September, it was said good signals, up to S9, were received from Europe in Brisbane. There was no trace of those signals here, nor of the VKs working them. Very few Europeans were heard on 7 Mc., but southern stations seemed to be working them OK. KV4AA and KP4CC were operating on 7 Mc. in the evenings, at times better strength, than the few W signals getting through.

Some very "tasty" DX was heard on 14 Mc. this month, but a lot of it got away. The calls included 3V8BD, YI6DB, SV0WM, GC3ZU, AP2X, 4X4CR, ZD6EF, 4X4CL, ZD4AB, VQ8AD, VQ8CB, IS1CNG, IT1KB (Sicily), PK5JT, ZC4HV, VP1AA, VP6CDI, VP7NM, C3KS (Formosa), ZK2AA, ZM6AK, 9S4AL, FF8JC, OQ5AS. FF8JC was worked at good strength at 7 a.m. with good strength each way, yet no other readable sigs were on the band. Activities this month have been quite restricted, so there may have been other openings, with the consequent good DX getting through. It's just a matter of being around when those things happen these days.

ZS licensees have now reached three letter calls, so there must be quite an increase in calls being issued. Increased activity was also observed from VU stations during this month.

One thing occurred on the band one night which I never expected to see. It was the fruitless CQs of John, VK1PG. I think he eventually gave it away without a QSO.

Some of us heard an interesting "duel" between W6AM and TA3GVU on 14 Mc. one afternoon. W6AM apparently wanted to get a new country on phone and tried all he knew to get TA3GVU to go in the phone band for him. After a number of "pleading" overs, TA3GVU said, "Nothing doing," and sent QRZ without listening further for W6AM! A number of VKs then benefitted from a TA QSO and made comment on what had taken place.

The commercial interference on 14 Mc. seems to have increased, while on 7 Mc. it is extremely hard to find a clear spot without a commercial spreading over the frequency. 4TU had an experience on 7 Mc. one night, when a commercial told him to "GET." We wouldn't object if some of them took that to heart instead.

What is now routine for Dave, 2EO, is the winning of the 1950 A.R.R.L. DX Contest, with 2GW and 5FM 2nd and 3rd respectively.

I had hoped to hear from some of the Interstate DXers this month, to let me know what had been happening in other States, but the only info is from 3CX, who is trying to organise himself sufficient QSLs for his W.A.P. Award. Alan has 133 countries worked and 112 confirmed. Incidentally, the W.A.P. Certificate is quite attractive and well worth getting. Things got a bit out of hand in the issuing of the Certificates recently, but ZL2GX has again taken over the reins and promises better service. This Certificate is going to be a little harder to come by these days with some of the required prefixes disappearing off the bands. [See "A.R." March, 1949, p.16, and May, 1949, p.12, for rules—Ed.]

QSLs of the best picking this month received by 4TU and 4QL were ZD4AM, PK5JT, NY4DD and VR4AD plus UB5 and UI8. That's about all for this month, but **"please, oh please," let me have some news of what ticks round VK.**

● The thought for the month, prompted by a remark from ZD4AD: "If a station sends, with his CQ, QLM, HM, U5 or D10, it means 'Do not reply on my own frequency'."

DX C.C. LISTING

PHONE

Call	No.	Ctrs.	Call	No.	Ctrs.
VK3JD	1	148	VK4KS	9	121
VK3EE	10	148	VK4JP	8	114
VK3BZ	3	141	VK2AWW	14	105
VK6KW	4	140	VK2ADT	13	102
VK6RU	2	138	VK2AHA	15	102
VK6DD	6	126	VK3IG	5	100
VK3LN	11	125	VK3JE	7	100
VK4HR	12	122			

CW

Call	No.	Ctrs.	Call	No.	Ctrs.
VK3BZ	6	163	VK7LZ	17	112
VK2EO	2	153	VK3JE	21	108
VK3CN	1	151	VK4RO	13	107
VK3FH	15	143	VK2GW	16	107
VK2QL	5	141	VK5RX	23	105
VK3VW	4	140	VK3YD	27	105
VK4EL	9	140	VK3XK	30	105
VK3KR	10	138	VK5FH	31	105
VK6SA	28	136	VK3JI	25	104
VK4HR	8	131	VK4FJ	20	102
VK4RF	11	125	VK3APA	14	101
VK6RU	18	125	VK3NO	19	101
VK3EK	3	122	VK3OX	26	101
VK3UM	12	116	VK7RK	22	100
VK4DA	7	113	VK7LJ	24	100
VK4DO	20	113			

OPEN

Call	No.	Ctrs.	Call	No.	Ctrs.
VK3BZ	4	202	VK5FL	26	116
VK6RU	8	170	VK2ADT	14	113
VK3KX	1	167	VK4RO	21	110
VK4HR	7	167	VK3ZB	34	110
VK3HG	3	166	VK2ZC	25	108
VK6KW	13	161	VK2YL	11	106
VK2DJ	2	160	VK2AHM	20	106
VK3JE	12	154	VK3JI	33	105
VK4EL	10	140	VK3AWN	36	105
VK4DO	15	140	VK2VN	18	104
VK3MC	5	139	VK4UL	27	104
VK4KS	24	139	VK2HZ	17	103
VK3OP	19	137	VK7KB	30	103
VK6DD	22	136	VK2TI	37	103
VK2ADE	28	133	VK3HO	38	103
VK2AHA	9	128	VK7RK	31	102
VK3LN	29	128	VK4TY	35	102
VK2NS	16	123	VK2ACX	6	100
VK4FJ	32	120	VK2TG	39	100
VK7LZ	23	116			

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

NOVEMBER, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

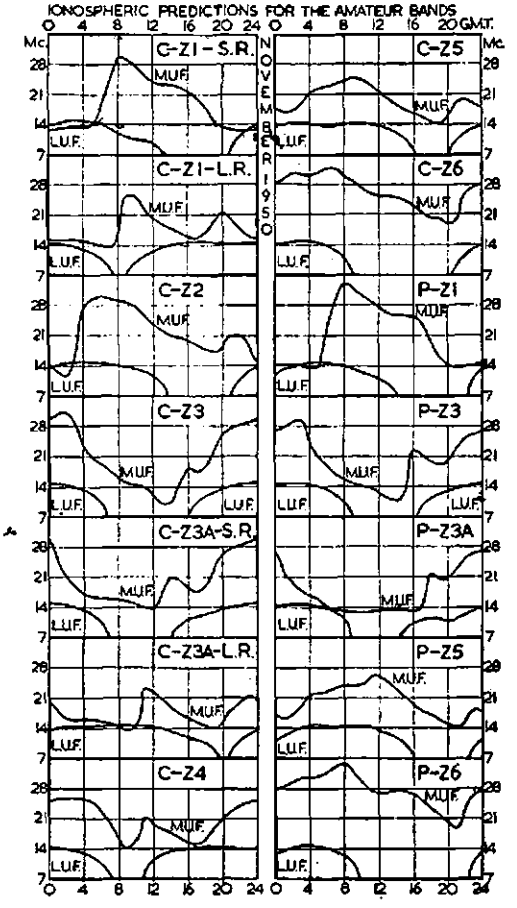
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0700 to 1600 hours G.M.T.
2. Was the 14 Mc. band workable between 1100 and 1600 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



W.I.A. 1951 NATIONAL FIELD DAY

GENERAL RULES

1. The National Field Day Contest of the Wireless Institute of Australia will be held over the week-end of 27th and 28th January, 1951, and will commence at 1500 hours E.A.S.T., Saturday, 27th, and continue through until 2359 hours, Sunday, 28th.

2. The Contest is limited to portable stations operating within the Commonwealth and its mandated territories on a power not exceeding 25 watts with the antenna connected.

3. A portable station, for the purposes of the Field Day, is defined as one whose power is not obtained from either private or public mains, shall not be located closer than five miles to the home location of the operator(s), and shall not be situated in any occupied dwelling.

4. No apparatus is to be set up or erected on the site of the portable station earlier than 6 (six) hours prior to the commencement of the Contest. A station may be moved from one site to another within the same State during the period of the Contest.

5. More than one operator may be used in the operation of the portable station, provided that all operators are licensed Amateurs.

6. Operation may be on any of the recognised Amateur bands, and more than one transmitter may be used, providing only one transmitter is used at any one time.

7. When calling, c.w. stations will use the call "CQ FD," and phone stations will use the call "CQ Field Day," to indicate they are portable stations. **Attention is directed to the requirements for portable station operation as defined in the P.M.G's Handbook for the guidance of Amateurs Operators.**

8. SECTIONS.—The Contest is divided into 3 (three) sections, namely, open, c.w., and phone. The Open Section shall consist of both phone and c.w. operation. Participants may enter for all sections providing a separate log is entered in each case.

9. LOGS.—Logs must be forwarded **through the Division** to reach Federal Executive not later than the 20th February, 1951, and decisions of Federal Executive in all matters relating to the Contest will be final.

10. The operator(s) will choose the most suitable 24 hours of operation from the total operating time of 33 hours, and submit this 24 hours' period as their log for the Field Day. Any lesser period than 24 hours may be operated.

11. Logs must show the location of the portable station(s), names and call signs of the operator(s) in the party, a description of the transmitter(s), receiver(s), antenna(e) and the power supplies. The power input to the final stage(s) with the antenna(e) connected (which must not exceed 25 watts) will also be shown.

12. Log entries are to be in the following order: Date, time (E.A.S.T.), station worked, Amateur band used, report sent, report received, contact points claimed, bonus points claimed, QTH of station worked, and portable operator's call. A summary at the conclusion of the log will facilitate checking.

13. The completed log must be signed by each of the operators with a statement that the P.M.G. Regulations and the Rules of the Contest have been observed.

14. SCORING.—For the purposes of the Field Day, the following constitute separate VK districts: VK2, VK3, VK4, VK5 (South Australia), VK5 (Northern Territory), VK6, VK7, and VK9.

15. A complete exchange of report and QTH is necessary before any points can be claimed.

16. Points will be awarded as follows:

(a) For contacts with a fixed station within the Commonwealth (Rule 14) outside the competitor's State 1
(b) For contacts with other portable stations in the Contest within the same State 2
(c) For contacts with stations in Asia, Nth. America, and Oceania (outside the Commonwealth, Rule 14) 3
(d) For contacts with stations in Europe 5
(e) For contacts with stations in Africa and South America 7
(f) For contacts with other portable stations in the Contest outside the State 10
(g) A bonus for each Continent worked on each band. For Oceania, the contact must be outside the Commonwealth (Rule 14), add to the final score 25
(h) A bonus for each new State or Country worked on 50 Mc., add to the final score 25
(i) A special bonus for each Interstate or Overseas contact on 144 Mc. and above, add to the final score 50

17. AWARDS.—An attractive certificate will be awarded to the outright winners in each section, namely, open, c.w. and phone. Certificates will also be awarded to the winner in each State in each section. Further certificates can be awarded at the discretion of Federal Executive. The outright winners are not eligible for the State awards.

18. Certificates will be awarded to each operator of the winning stations provided each operator has contacted at least 25% of the stations contacted.

19. In addition to the certificates for the outright winners, an order to the value of 3 guineas, to be divided between the place getters in each section, will be awarded for the purchase of a trophy or equipment.

DIVISIONS ARE ASKED TO ORGANISE STATE TEAMS TO ENSURE ACTIVE PARTICIPATION BY ALL STATES IN THE NATIONAL FIELD DAY CONTEST.

4th All-European DX Competition, 1950

Contest Calls.—European Amateurs will call stations in the remaining five continents by "CQ AW" (OQ All World)—stations outside of Europe will use "CQ EU" (OQ Europe).

RULES

1. **Eligibility.**—Amateurs operating fixed Amateur stations in any and all parts of the world are invited to participate.

2. **Object.**—Amateurs of all European countries will try to work as many Amateur stations in remaining five continents as possible under the rules and during the contest periods.

Amateurs outside of Europe will try to work as many European Amateurs as possible under the rules and during the contest periods.

3. **Conditions for Entry.**—Each entrant agrees to be bound by the provisions of this announcement, the regulations of his licensing authority, and the decisions of the S.S.A. Award Committee.

4. **Entry Classifications.**—Entry may be made in either or both the CW or Phone sections. CW scores are independent of Phone scores. Entries may be made only by single-operator stations at which one person performs all the operating functions. Multiple-operator stations obtaining any assistance from further persons are excluded from participation. Competition takes place on the following bands: 3.5, 7, 14, 28 and 50 Mc. in both the CW and Phone sections.

5. **Contest Periods.**—There are two week-ends, each 48 hours long; one for CW work and one for Phone. The CW section starts at 0001 GMT, Saturday, 25th November, 1950, and ends at 2400 GMT, Sunday, 26th November, 1950. The Phone section starts at 0001 GMT, Saturday, 2nd December, 1950, and ends at 2400 GMT, Sunday, 3rd December, 1950.

6. **Valid Contacts.**—In the telegraph section, all claimed credits must be made both ways only on CW. In the Phone section only voice-to-voice contacts count.

7. **Exchanges.**—Each participating operator will choose three figures as a self-assigned number. CW contestants will exchange six-figure numbers, each consisting of an RST report plus the three self-assigned numbers. (Examples are given in the sample log.) Phone contestants will exchange five-figure numbers, each consisting of a Readibility-Strength report plus the three self-assigned numbers. The self-assigned number remains the same during the whole contest period in either or both the CW and Phone sections.

8. **Scoring.**—(a) **Points:** Every European station earns 1 point upon receiving acknowledgment of a number sent, and 2 points upon acknowledging a number received. Stations outside of Europe earn 2 points upon receiving acknowledgment of a number sent, and 1 point upon acknowledging a number received. Each contestant in any part of the world can therefore earn at least 3 points for each contact.

(b) **Final Score:** European stations multiply the total points earned under Rule 8a by a multiplier which is the sum of all non-European countries worked on each band. Countries will be those on the A.R.R.L. Countries List, valid at the time of the Contest, with the exception that each of the W and VE licensing areas count as a separate country. There are 18 licensing areas: 10 in the United States and 8 in Canada.

Stations outside of Europe multiply total points earned under Rule 8a by a multiplier which is the sum of all European countries worked on each band. Here likewise, only those European countries will count which are on the A.R.R.L. Countries List valid at the time of the contest. All W and VE licensing areas compete separately.

9. **Repeat Contacts.**—The same station may be worked again for additional points if the contact

Famous Last Words

"The Contest starts in two minutes and I haven't got any grid drive."

is made on a different frequency band. The same station may be worked again on the same band only if the complete exchange for a total of three points was not made during the original contact on that band.

10. Quotas.—Any European contestant may, in the CW section, work the maximum of three different stations of any country (W/VE licensing area) outside of Europe on each band. Thus the maximum possible number of points which can be earned per country per band is 9. There is no such restriction for stations outside of Europe, so that they may work as many European stations as possible.

In the Phone section of the competition the number of contacts with any country, respecting Rule 2, is restricted for neither European nor non-European stations.

11. Reporting.—Contest work must be reported as shown in the sample form. Each entry must include the signed statement as shown in that example. Contest reports must be mailed no later than 31st December, 1950, decisive being the date of the postmark. Reports received after 30th April, 1951, will not be considered. All reports are to be sent to the address: SM6ID, S.S.A. Contest Committee, Postbox 609, Gothenburg 6, Sweden.

12. Awards.—(a) Suitable certificates will be awarded to the first three Amateurs attaining the highest score in each country and each W and VE licensing areas.

(b) Certificates will be awarded separately for work in the CW and Phone sections.

(c) Contest results will be sent to the International Amateur Radio Union for publishing in "QST" as well as to Amateur Societies in each country.

13. Judges.—All entries will be passed upon by the S.S.A. Award Committee, whose decisions will be final.

14. Disqualifications.—Off-frequency operation will disqualify. Low tone reports in logs will also be considered by the S.S.A. Award Committee as grounds for disqualification.

LOG, FOURTH ALL-EUROPEAN DX COMPETITION
(Logs from Europe, for each band)

OW Entry

Call .....
Name .....
Address .....
Antenna(e) .....
Transmitter Tubes .....
Plate Watts (input last stage) .....
Number Hours Station Operation .....

Bands Mc.	3.5	7	14	28	50	Total	Different Countries Worked
No. DX Stations Worked	2	4	6	1	—	13	
No. Countries Worked	2	4	5	1	—	12	11

(Logs from points outside of Europe indicate, for each band, in the above part of the log: "Number of European stations QSOed" and "Number of European countries QSOed.")

Date and Time GMT	Station Worked	Country	Worked Record of New Countries for each freq. Band Mc.					Numbers Exchanged		Points
			3.5	7	14	28	50	Sent	Received	
Nov. 25—										
00.05	W2MV	USA2		1				579555	569777	3
01.47	VE3BG	Canada3		2				469555	559123	3
00.15	KP4HU	P.Rico		3				589555	589000	3
05.11	W7PY	USA7			1			579555	469678	3
06.29	VK3MC	Austr.			2			569555	569777	3
10.54	UI8AE	SSSR				1		599555	594111	3
Nov. 26—										
03.32	W1DHD	USA1	1					459555	?	1
04.01	CM2AZ	Cuba		4				568555	458999	3
17.45	ZS8UK	N. Afr.			3			559555	559866	3
20.53	LU1AA	Argent.			4			599555	599383	3
20.58	VK2AV	Austr.			4			449555	349555	3
21.17	W2FCL	USA2			5			599555	599000	3
23.55	W4ML	USA4	2					359555	?	1

Total Points—35
Multiplier: 2 plus 4 plus 5 plus 1—12
Final Score: 35 (points) multiplied by 12 (multiplier)—420

(Logs from points outside Europe can contain in the above part of the log only European Stations.)

I certify, on my honour, that I have observed all competition rules as well as all regulations established for Amateur Radio in my country, and that my report is correct and true to the best of my belief. I agree to be bound by the decisions of the S.S.A. Award Committee.

.....Operator's Signature.

Useful Workshop Hints

By N. E. COXON,* VK6AG

Miss print W.E. Coxon

Keep a container in which to drop all odd nuts, screws, etc., that are come by from junk, alterations, or off the floor. Then, apart from a valuable source from which to find that odd screw, etc., periodically the container can be emptied into respective screw and nut compartments.

* * * *

Sheet aluminium is best divided by nicking and breaking. Have an 18" length of 1" angle iron held together by 2 x ¼" bolts at the ends to form a clamp. Mark the line to sever, clamp and hold in vice, cut with point of a strong penknife, and bend several times, and the break is clear, straight, and no twists in the aluminium.

* * * *

Tinned copper wire used as bus bar often is tarnished when bought. To clean, rub with a wire file brush, and to straighten, hold end in vice and hold other end in flat nosed pliers. Give a sharp jerk and the wire is straight.

* * * *

Whenever a screw is shortened by cutting with pliers, always file off the burr, for you never know when it will be necessary to remove the nut, and no end of difficulty is experienced when a screw head has been chopped off. Brass screws are bad enough, but steel screws treated in this way are time wasters.

* * * *

When tapping sheet metal, it is safer to hold and tap the hole by using the tap (1/10th" to 5/32nd") in a wheelbrace.

* * * *

Paint with various bright colors, handles of small screw drivers, spin-tight spanners, and various other tools. It makes them easy to find when bundled together on the bench (not always as tidy as desirable).

* * * *

Keep a small bottle of thin oil with a wire dipper handy. Many a nut, wood or iron screw is coaxed along by a little lubrication.

* * * *

When a small drill is broken, insert and solder the broken portion into a shank. It makes a more robust drill, and uses the portion with the best cutting section. The contributor has often deliberately broken off ½" from a small drill to fit it to a larger shank. Solder is quite sufficient to hold it.

* * * *

Wheel braces will take several size larger drills if the shanks are filed with three flats. By such means a ¼" drill can be made to slip into a wheelbrace made for 3/16" shanks. The flats also prevent the drills slipping in the jaws.

* Leithdale Road, Darlington, West. A.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

As the DX season approaches, activity on the 50 Mc. band is increasing, and operators are anxiously awaiting for signs of band openings. At the time of writing no reports of such openings are to hand, although unidentified signals, from the north-east, believed to be KH6s, have been heard in N.S.W.

This month we report a new N.S.W. DX record on 576 Mc., and the re-establishment of contacts between Sydney and Newcastle on 50 Mc. and 144 Mc.

An excellent suggestion comes from VK5KL:— Clarry suggests that city and country v.h.f. operators have a get together on 7 Mc. on Sundays after the 5WI broadcast when mutual problems could be discussed.

VICTORIAN V.H.F. GROUP NOTES

The September meeting of this group, attended by 21 members, associates, and visitors, was held at the Institute Rooms, 191 Queen St., on the evening of 20th Sept. The business of the night covered such things as election of a new Secretary, reports of activities of various members of the group, the proposed field day on 15th October, and was rounded off by a talk on Radio Propagation by H. E. Dickason, 3RR.

Hon. Secretary, Bert Leckie, 3LH, found that his work was interferring too much with his job as Secretary of the group, so the group had to find a new Secretary. Max Dixon, 3ALK, was elected to this post and the good wishes of the group go with you Max. To Bert, we say many thanks for a job well done and express the hope that at some future date your services may be available to the group once again. 3ABA reported on progress with the power supplies for 3WI. These are well under way, but more work is required and it is not expected that they will be ready for the field day.

We have to acknowledge in response to our recent letter to all zones, a letter from the North-Eastern Zone giving details of the activity of its members on v.h.f. bands. The following stations are active: 3APF, 3AT, 3HZ all at Shepparton on 144 and 50 Mc., 3UI at Tatura on 144 and 50 Mc., and 3YV at Wangaratta on 144 Mc. It is known that quite a number of Hams in the other zones are active on v.h.f. bands, so that when replies from these zones are received there should be quite an impressive list of these stations.

The prizes for the field day competition on 15th October will take the form of an order to the value of £1/10/- in the case of the section for portables and £1 in the case of the section for home stations on one of the radio supply houses, so the winners can select their own prizes within the limits of the amounts mentioned. The object of the contest was merely to provoke more interest in the field day.

3RR held the interest of the meeting while he read extracts from an article in the August issue of "Radiotronics" concerning the propagation of radio waves of various frequencies. Points worthy of note are too numerous to mention here and Dick strongly recommends perusal of the article with particular attention to the charts, graphs and tables. One table, which gives propagation factors for various types of terrain, gives a clue to the reason why the only Interstate contacts in Australia on 144 Mc. to date have been between VK3 and VK7. A propagation factor of 4.3 over water compares with only 1.6 for forest country. Altogether a very interesting and informative evening was much appreciated by all present.

50 Mc. ACTIVITY

NEW SOUTH WALES

2VW has returned from a holiday in the mountains and again conducts the 2WI v.h.f. broadcast, but is not on much as the doctor had ordered him to keep early hours. 2MQ acted as 2WI on 50 Mc. while Vaughan was away. 2ANF has increased power using an 815 modulated by Class B 807s. 2ON, of Dapto, visited Sydney and was heard over 2PU. Lindsay was looking for tubes and ideas for v.h.f. contact with Sydney. 2JU is pleased with his new suburban location and is trying to contact 2PN Tumut and 2GU Canberra.

2XX contacts the Coalfields regularly and relays v.h.f. dope from 2ADT (Cessnock) to your scribe. 2BZ is ready to shift to a new QTH and will be QRT for some time. 2KQ is active on the band. 2ANL, of Maitland, uses an 80 metre zepp on this band. It has one end tied to the Church spire! 2OS has erected a beam on the new tower and awaits results. 2ANU, of Muswellbrook, uses 3-5 watts with a beam and regularly contacts Cessnock. 2ADT has a new four element beam—thanks for the dope, Jack. There has been some shuffling around of frequencies on 50 Mc. and some of the rarely heard stations may be surprised when next they open up on the band.

VICTORIA

News of VK3s on 50 Mc. is rather sketchy this month. The band has been kept warm by the old regulars, with the return of a few calls who have not been heard for some time. 3BQ still calls CQ on c.w. on 50.312 Mc. at 1200 and 1500 hours daily. He is usually answered by 3QO on approx. 51 Mc. and/or 3RR on 50.25 Mc. Night time usually sees the regular habitues of the band on the job; prominent are 3BD, whose a.m. signal is much improved, 3HK still very busy with skeds with 3YJ, 3ZL and 3TH; 3RR who is heard almost nightly; 3ACL who is suffering from a faulty 300 ohm feeder which Eric is hoping to replace with co-ax shortly.

Ballarat is well represented with 3ZL and 3GM. 3ALH is still active and we are pleased to hear 3FF and 3JZ back again. 3AUX puts in time on 50 and 580 Mc. to good advantage. 3XA has not been active for the past few weeks, but we know that Don has been kept pretty busy rocking the cradle. 3YS and 3ABA are still active with skeds with the country boys, especially 3UI and 3APF who still put in f.b. signals to Melbourne and the Mornington Peninsula.

Portables appear to be in fashion. 3APF has a new portable rig with a 12A6 in the final—worked into Melbourne and Macrae from Pretty Sally using b.c. antennae. 3HE has a new portable rig in his car using an 832 in the final and on Sunday, 1st October, he went to Donna Buang, primarily to try to contact 3VL at Omeo, but although Keith heard Rex on two occasions, contact was not made. Keith worked other stations in the Eastern Zone with good signals both ways. Also portable on 1st October was 3AYJ. Jeff was operating from Burke's Lookout, Mt. Dandenong, and made quite a few nice contacts.

SOUTH AUSTRALIA

To prove the theory that the north-south path is open more often than to the east or west, active stations on 50 Mc. are needed this summer on the Northern Territory. To this end, your scribe has written to the club in Darwin, and also 5KO has just returned from spending a few weeks in Darwin selling 50 Mc. How about it, you Darwinites? Just one station will do.

There is a sad story to the report in last month's notes that 5JD had his beam up—it is now down again. Yes, fell down. 5JD, with 5QR and 5KL, decided to lower it without waiting for 5GF. One guy wire was too slack. You should have seen the smile on 5QR's face. We consoled Jack that it didn't bend MUCH. 5BC was a visitor to the Sept. meeting. After making adjustments to Rx and beam, Hughie says he can now hear city signals on 50 Mc. almost whenever they are on. Also present was 5ME, who tells us he has a xtal converter on 6. At the recent air pageant at Parafield, 5CU was seen active. Holding a wing up of a glider.

5RO is newly licensed and welcome to 50 Mc.; using 2 watts to a 6J6, first triode as harmonic oscillator, second half doubling to 50 Mc. and modulated. Will some of the 14 Mc. phone kings with there 100 watts working across town, faces be red when they read this. That is something worthwhile promoting. If you must chat across town why not change to a band where you only need one watt to do the job and not clatter up a DX band for others. 5PQ has been heard active on 50 Mc. 5AX at Gawler heard on 7 Mc. saying he was having 50 Mc. beam trouble. Proposes to use a 832 on 144 Mc.; already has a superregen. Rx.

5HD has been having r.f. feedback in his mod. transformer. Relays 5WI on 50 Mc. Bill has added two extra elements to his beam, total now six. There was a break through to VK2 on the 16th September around 6 p.m. No reports of any contacts received. No notes have been received from the country boys. Come on chaps, these notes are for your benefit.

144 Mc. DOINGS OF THE MONTH

N.S.W.—New stations are popping up including 2ACH with a modified 1143, 2AQB and 2PD with 522s and 2LG with a xtal rig reputedly with a single 7193 in the final. 2XY has a mod. osc. with a 3 x 3 beam and puts a S9 sig into Cessnock from Lambton. He is inaudible there when using a dipole. 2KR is still wrestling with a 522 and has been testing with 2RU of Gosford. 2PU is building a converter to replace the superregen. 2LS' voice was heard on the band—original or relayed Lionel?

Victoria.—Stations heard during the past month have been: 3ABA, 3YS, 3BQ, 3CP, 3AKE, 3VF, 3BW, 3FO, 3BH, 3DA, 3RK, 3EN, 3ATB, 3ADU, 3NW, 3AKZ, 3ASL, 3ED, 3RR, 3OP, 3DY, 3ZL, 3GM, 3AKR, 3APF and 3JO.

Tasmania.—The gang are getting fired up on 144 Mc. for the DX season. 7AM is radiating a terrific signal now from a 815 and a "Lenfo" beam. The general listening time is 1915 and anyone around get together for a chat. Those on being 7PF, 7BQ, 7AM and 7MC, with 7DB threatening to come on again. 7TE has been building a cascode converter in between beats on the double bass. 7BQ still having hand capacity trouble with cascode converter, whilst 7PF has improved his by means of the use of a noise diode. 7PF has gone mobile with a handie-talkie carrying it up a 4,700 ft. mountain on his back, but no results. The real news is the strength of sigs reaching Longford, 14 miles away, as reported by a listener, this being the furthest distance we have at the moment, until the DX comes in. 7PF is again climbing a mountain on the next VK3 field day and hopes to hear something.

576 Mc. IN NEW SOUTH WALES

The Kingsford Radio club organised an expedition to the Blue Mountains on 17/9/50 and set up 570 Mc. gear at Blackheath. Contact was made with 2AKC (58 miles) with strong signals at both ends. 2AJA was heard at good strength and 2ANF was worked throughout the afternoon. A superregen. Rx, RL18s and a 24 element beam were used by the mobile party. 2WJ and 2ABH wish there were higher hills further away from Sydney! A mystery station on the band has turned out to be 2AZO who at last has put a signal beyond the back fence. 2AWZ has a superregen Rx going and others have been enquiring about 576 Mc. gear.

At a recent v.h.f. section meeting a 144 Mc. contest for October was discussed and will be just about over when these notes appear. 2ON attended the meeting and received plenty of advice about the gear he should build up for v.h.f. work.

Acknowledgments to VKs 2AQZ, 3JO, 3RR, 5KL, and 7PF for the above material.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President.—J. Corbin, VK2YC.
Secretary.—David H. Duff (VK2EO), Box 1784 G.P.O., Sydney.
Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.
Divisional Sub-Editor.—A. O. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, N.S.W.
Zone Correspondents.—Nth. Coast & Tablelands: J. M. Retallick, VK2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. O. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, Eastern Suburbs: D. B. Knock, VK2NO, 43 Yanko Avenue, Waverley; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

President.—G. S. C. Semmens, VK3GS.
Secretary.—C. Dyer (VK3DY), 19 Collington Ave., Brighton (XA 6326).
Administrative Secretary.—Mrs. S. May, Law Court Chambers, 101 Queen St., Melbourne, C.1.
Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.
Zone Correspondents.—Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rorke, VK3AKR, Killigrew, Westmere; North Eastern: T. K. Tennant, 18 Harold St., Shepparton; Far North Western: M. Folie, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Tinambra; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7176 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7185 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WL

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK6DW by arrangement only on the 7 and 14 Mc. bands.

VK6WI.—Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

President.—J. F. Pickles, VK4FP.
Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.
Meeting Night.—Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.
Divisional Sub-Editor.—Clive J. Cooke, VK4CC Kuran Street, Chermside, Brisbane.

SOUTH AUSTRALIA

President.—E. A. Barbier, VK5MD.
Secretary.—G. M. Bowen, VK5XU, Box 1234K, G.P.O., Adelaide.
Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.
Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

President.—R. W. S. Hugo, VK6KW.
Secretary.—W. E. Coxoo, VK6AG, 7 Howard St., Perth.
Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.
Meeting Night.—Third Tuesday of each month.
Divisional Sub-Editor.—Alec A. Smith, VK6AS, 75 Weston St., Carlisle, Western Australia.

TASMANIA

President.—J. Brown, VK7BJ.
Secretary.—R. D. O'May, VK7OM, Box 871B, G.P.O., Hobart.
Meeting Night.—First Wednesday of each month at the Photographic Society's Booms, 163 Liverpool St., Hobart.
Divisional Sub-Editor.—S. Excell (VK7SJ), 77 Molle Street, Hobart, Tasmania.
Northern Zone Correspondent.—B. H. Kilby, VK7RK, 5 Galvin Street, Launceston.

FEDERAL

ECUADOR THIRD-PARTY TRAFFIC

Arrangements have been completed between the governments of Ecuador and the United States to permit the handling of third-party traffic between Amateurs in the two countries. Similar arrangements have existed for several years between Amateurs in the U.S.A., Canada, Chile and Peru.

The agreement provides that no compensation for handling such messages may be accepted directly or indirectly by the Amateurs, and that the messages handled shall not be of such character as would be ordinarily sent by any other existing means of communication. In the event of a disaster, this latter restriction shall not apply.

This arrangement applies to all the continental and insular territory of Ecuador and to the U.S. and its territories and possessions, including Alaska, the Hawaiian Islands, Puerto Rico and the Virgin Islands, and to the Panama Canal Zone. It is also applicable to the case of Amateur Stations licensed by United States authorities to United States citizens in other areas of the world.

MISCELLANEOUS COMMENTS FROM VARIOUS MEMBER SOCIETIES OF I.A.R.U.

PERU.—"Because of political disturbances that took place last year, the issuance of Amateur Radio Station licenses has been denied, in general, to all new applicants. This has resulted, naturally, in a reduction of activities. It is felt that after July an easing of the situation will be experienced."

"During the last Ecuadorean Earthquake, a time when many of the OA stations assisted with relaying traffic and by notifying all South American stations of the tragedy and requesting that they keep the frequencies of 14160 to 14180 clear for distress traffic, the need for agreement on a common frequency for this work was brought home with considerable force.

"At a recent meeting of the Radio Club Peruano it was recommended that the band of frequencies of 14160 to 14180 Kc. be set aside for that purpose in Latin America and that whenever emergency traffic had to be handled it would be on these frequencies. Naturally, these frequencies are available for all normal communications whenever this class of traffic is not handled or necessary. We suggest you make known our ideas on this matter through your office."

SILENT KEY

VK4RC

It is with deep regret that we record the passing of Bob Campbell (VK4RC) late in September.

NEW ZEALAND.—"Amateur transmitting is becoming a more popular hobby daily. Very favourable public reaction during last two or three years due to helpful daily newspaper publicity, consequent upon research and rescue work by our Radio Emergency Corps now organised to approved government ideas under the new name of Amateur Radio Emergency Corps, A.R.E.C.

"The same factors, plus considerable internal reorganisation, is making N.Z.A.R.T. more popular with all licensed Amateurs as is reflected in our growing membership."

INQUIRIES RE UNION MEMBERSHIP

There have been recent inquiries regarding membership in the I.A.R.U. from Amateur Societies in the Dominican Republic and French Morocco. In neither case has the Society's qualifications yet been established.

W.I.A. ACTIVITIES CALENDAR

Nov. 5: "CQ" DX Contest (see Aug. 1950 "CQ" for details).
Nov. 25-26: Fourth All-European DX Competition, 1950—c.w.
Dec. 2-3: Fourth All-European DX Competition, 1950—phone.
Dec. 15: Motions for 21st Convention due with Divisional Councils.
Jan. 27-28: W.I.A. Nat. Field Day Contest.
Jan. 19: Convention Motions due in to Federal Executive.
Jan. 31: Membership Roll of each Division due with F.E.
Feb. 28: Convention Per-Capita due with F.E.; end of Fiscal of Year of Divisions.

PROPOSED NEW MEMBERS OF I.A.R.U.

The following have been proposed as members of the International Amateur Radio Union:—
The Israel Amateur Radio Club,
The Amateur Radio Club, India,
Technical Institute of Radio (T.I.R.), Syria.
F.E. has voted in favour of the above Societies becoming members of the I.A.R.U.

NEW MEMBER SOCIETY

The question of the admission to I.A.R.U. as a new member of Union Congolaise des Amateurs de Radio (U.C.A.R.) was carried 22 aye votes to none opposed. As a result, this body has been admitted to membership in the International Amateur Radio Union as the member society for the Belgian Congo and the mandated territory of Ruanda Urundi.

ADDITIONS, ALTERATIONS, AND DELETIONS TO AMATEUR CALL SIGNS—SEPTEMBER, 1950

Additions—

VK2DY—E. C. J. Fisher, 2 Oxlade St., Warrawong.
2PD—J. D. Sibbald, 170 Dunning Ave., Rosebery.
2AAW—W. A. Richardson, 22 Austral Ave., Westmead.
2AEA—Dr. R. W. Allison, 98 Wardell Rd., Dulwich Hill.
2AOA—K. F. Alcock, 7 Denman St., Eastwood.
2AQB—M. H. Brown, 19 Farnell St., Gladesville.
2AQS—N. C. Scott, Flat 32, Block F, Housing Comm. Flats, Parkway Ave., Merewether.
2ASE—E. Ashley, 99 Hastings Pde., Bondi.
3ATC—Sydney Technical College, Ultimo.
2AXG—J. E. George, 33 Bland St., Port Kembla.
2AYM—E. A. Brennan, 9 Atkins Rd., Ermington.
VK3DO—R. T. Pettigrew, 2 Donne St, West Coburg.
3AAK—C. S. Rann, 10 Station St., East Kew.
3AAN—J. G. Nicholson, 101 Powlett St., East Melbourne.
3AAP—A. E. Phillips, Citizens Park Hotel, 164 Church St., Richmond.
3ABP—K. B. Pounsett, Raglan St., Sale.
3AGI—D. W. I. Gove, Flat 2, 22 Pine Ave., Elwood.
3AHD—A. H. Downward, 2 Balmoral Place, South Melbourne.
3AJG—H. J. Gale, Flat 7, 205 Alma Rd., East St. Kilda.
3AJJ—H. R. James, 28 Keith St., Parkdale.
3AJM—J. G. Moss, Flat 6, 95 Grey St., St. Kilda.
3ALV—L. G. Watson, 449 Glenferrie Rd., Malvern.
3APD—J. P. O. Downie, 97 Cole St., Gardenvale.
3ATC—R. J. Cayzer, 504 New St., Elsternwick.
3AUC—A. D. Cook, 490 Kooyong Rd., Caulfield.

3AUW—S. D. Wheeler, 21 Caroline St., South Yarra.
3AVW—E. J. V. Willis, 567 Whitehorse Rd., Surrey Hills.
3AYW—K. Y. Wenborn, 124 Dandenong Ed., Oakleigh.
3AZX—J. R. Trevena, 17 Mary St., Essendon.
VK4EB—P. Bobileff, 45 Dansie St., Greenslopes, Brisbane.
4KF—K. V. Ford, Old Northern Road, Everton Park, Brisbane.
4YH—R. Hodgins, 62 Abbott St., Cairns.
VK5DV—D. B. Vaughton, 19 Marion Rd., New Mile End.
5HL—H. H. Lloyd, 40 Lefevre Terrace, North Adelaide.
5KP—G. M. Gray, 5 French St., Broadview.
5RO—C. A. Moore, 15 Cavendish Street, West Croydon.
VK7KX—D. A. J. Davis, 3 Crelin St., Hobart.

Alterations—

VK2FU—No. 1 Flat, "Wassimoo Court," Addison Rd., Manly.
2KT—57 Palace St., Petersham.
2PM—30 Meehan Gardens, Narrabundah, Canberra, A.C.T.
2PT—6 Queens Rd., New Lambton, Newcastle.
2TJ—7 Fraser St., Dulwich Hill.
2WP—C/o. Mr. C. Saywell, 727 Pacific Highway, Marks Point.
2XE—75 Laurel Street, Willoughby.
2ZF—90 Dutton St., Yagoona.
2ABI—8 Rawlinson Ave., Wollongong.
2ADJ—Great Western Highway, Faulconbridge.
2AGN—"Cranston," 256 Howick St., Bathurst.
2AJU—60-70 Elizabeth St., Sydney.
2APG—C/o. Rosco, Carinda 4W, N.S.W.
2ASF—82 Tozer St., West Kempsey.
2AXB—Flat 16, "Hedingly," The Esplanade, Elizabeth Bay, Sydney.
VK3MY—17 Devon St., Cheltenham.
3OW—C/o. E. A. Robinson, Allendale.
3QJ—149 Ashburn Grove, Ashburton.
3ZT—2 Donal St., Hughesdale.
3AAF—"Sefton," Burwood Rd., East Burwood.
3AOC—43 Mackay St., Prahran.
3ADW—7 Salisbury St., Balwyn.
3AKS—5 Heatherleigh Place, East Malvern.
3ANX—Should read: N. R. Heinrichsen, 28 Grandview Ave., Pascoe Vale South.
3WIA—50 Eighth St., Parkdale.
VK4DF—Imbros St., Wavell Heights, Brisbane.
4DN—Hurdcotte St., Gaythorne.
4ES—40 Kingsholme St., New Farm, Brisbane.
4GM—M.V. "Dell," C/o. Island Industry Board, Thursday Island.
4GN—"Hollis," Lamington Ave., Doomben, Brisbane.
4RQ—"Red Dome," Flat 2, Prince Edward Pde., Redcliffe.
4TW—Mendhams St., Mysterton East, Townsville.
4ZS—226 William St., Rockhampton.
VK5WX—58 Marion Rd., Brooklyn Park.
VK6BJ—3 Conway St., Geraldton.
6RM—C/o. Broadcasting Station 6CL, Collie.
VK7CF—Williams Ave., Queenstown.
VK9FM—C/o Department of Civil Aviation, Rabaul.

Deletions—

VK2JM—Cancelled.
2MZ—Cancelled.
2ALC—Cancelled.
2AMN—Cancelled.
2ART—Cancelled, now operating under VK4YH.
2AUM—Cancelled, now operating under VK3AJM.
VK3AHC—Cancelled.
3AMG—Cancelled.
VK4LA—Cancelled.
VK5WS—Cancelled.
VK6CH—Cancelled.
6ST—Cancelled.
6TW—Cancelled.
VK7GD—Cancelled.
7LH—Cancelled, now operating under VK3AJJ.

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Due to a typographical error the incomplete address of VK9JC was given in October "Amateur Radio." The complete QTH is: A296, L.A.C. Cromie, W., VK9JC, Transmitting Station, R.A.A.F., Momote, Admiralty Islands.

The present QTH of ex-VK4XO is particularly wanted by VU2JP. VK4XO left Queensland after the war and it is believed he went to New South Wales. Anyone knowing his present whereabouts please communicate with this Bureau.

While on the subject of appointments, it is with great pleasure that I read of the appointment as DX O.O. Manager, of that old fox "Morrie," VK3BZ. No longer will he have the time to lay in wait for the unwary DX. Joking aside, a better choice for the appointment could not have been made. Anything "Morrie" undertakes he does well, and is always prepared to devote time, energy and an abundance of "nouse" to the job in hand. It is hoped that he will continue in the position for many years to come.

Just a reminder of the Fourth All-European DX Contest, scheduled for CW from 0001 GMT, 25th November, 1950, until 2400 GMT, 26th November, 1950, and for Phone from 2nd December, until 3rd December, 1950. Times for Phone are similar to the CW section. This year this contest is being sponsored by the S.S.A., the Swedish Amateur Radio Society. Full information as to rules, logs, etc., appear elsewhere in this issue.

A new certificate pops up each month. Here is the latest. "QRV," the independent Amateur Radio Magazine of Box 585, Stuttgart, Germany, has created this latest award styled W.A.E.—Worked All Europe. There will be two sections of the Award, namely, exclusively CW, and exclusively Phone. At present Europe consists of 84 geographically defined countries, 15 islands or groups of islands, and 8 miniature states, etc. These will form the basis for the award. One point is scored per country on every Amateur band below 30 Mc. (bands between 27/30 Mc. taken as one band). Contacts on bands higher than 30 Mc. count two points. When 100 points have been scored and the necessary verifications received, these should be forwarded to "QRV" for checking and issue of the certificate will follow. If later on your score reaches 150 points, an endorsement will be issued. Germany may be worked twice, i.e., once with German nationals, and once with members of the occupation personnel. Contacts prior to 1st December, 1949, will not count. Further details as to country list may be obtained from this Bureau. Interested in this one, VK5RX?

Max Rieper, VK9MR, in high glee after contacting AC4RF phone on 25th September, supplies the following information on frequencies used by AC4RF. When using his 6 volt vibrator powered rig, he uses CW 14090 and Phone 14150 and 14361 Kc. When using the HT9 80 watt rig he uses 14240 Kc. Commenting on the VK-ZL Contest, Max states he is building a 10 metre beam constructed of aluminium spars out of a "Zero" lying on the side of the Madang airstrip. He hopes to have it completed and fired up for the phone section of the Contest. The first week-end of CW section was a fiasco for him as conditions were very poor and power troubles were manifest.

George Luxon, VK5RX, the doyen of QSL Managers, DX hunters and certificate swipers, accepts a challenge thrown down by VK4GG on page 17 of September "A.R.," as to whether any other station possessed a QSL from VK8. George has all districts, his VK8 being VK8XT when Alf Traeger, of undying Australian Inland Mission fame and ex-VK5AX, was operating VK8XT. George also states that Pete

Bowman, VK5FM also has all districts including VK8XT. So VK4GG is tossed in two places. Maybe there are others? George recently received the OTC Certificate from the A.R.R.L. and now has all the certificates that body issues to overseas Hams!! He badly needs AC4 for W.A.Z. The dope I have given in the preceding par almost makes a present of it to you George. Yes?

Some QTHs for the DX hounds—

VR1E (ex-VR1B) B. Schroeder, care P.A.A. Canton Island, Phoenix Group.
CN8EJ Jim, Navy 214, Box. F.P.O., New York, U.S.A.
ZK1BC, Bob, Radio Station, Rarotonga, Cook Islands.
YV5BZ, Lou, Box 3208, Caracas, Venezuela.
VR4AD, Bruce McLeod, Honiara, Solomon Isids.

Stations wishing to avoid a serve of anti-U.N. propaganda should eschew a contact with OK1OUR with alleged QTH as Prague. Operator Mirek at above station heard on several occasions dishing it out at conclusion of QSO. OK1OUR on l.f. end of 14 Mc. with T4 OW.

Welcome back on air to Tommy Lelliott, VK3AZW, ex-VK3ZW, who after hibernating for 12 years has come to life on 7 Mc. CW from Boronia. During the rip van winkle period, Tommy acquired himself a wife. When passing above information on to my wife and trying to refresh her memory on VK3ZW, the lady replied, "Is he the chap with the wicked brown eyes?" Tom's eyes never worried me any, but the blighter would never allow me to accumulate any "stand-by refreshments." His re-appearance on the air led to a two-man re-union at the "House of Commons." Tom was one of the pair; guess who was the other.

Felix, FK8AC, advises that at long last the vessel for Wallis Island left Noumea mid September, with bits and pieces for Andre Baillet's idle transmitter. FW8AA should be heard any day now. There is a distinct possibility that Felix will be returning to France early in 1951 and a further possibility of his return to New Caledonia at the end of the same year.

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NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester St., Sydney, on 22nd September, 1950. The meeting opened at 8 p.m. and the minutes of the previous meeting were read, after which, general business was dealt with and sixteen new members admitted to the membership. The Duntroon Military Radio Club was one of those admitted; through the person of its Secretary.

Dr. Allison, ex-VK1RA, who was accompanied by his mother and Miss Beale, were officially welcomed by the President, Mr. J. M. Corbin, VK2YC, who thanked Dr. Allison for his endeavours in securing films of the Antarctic expedition, of which the Doctor was a member. Vaughan Wilson, 2VW, then moved that standing orders be suspended, and this was seconded by Dave Evans, 2AYE.

Dr. Allison then assumed a strategic position as darkness prevailed, and a running fire of commentary enlivened those parts of the films which were without sound. Particularly interesting were the scenes of Kerguelen Island's old whaling station, now a desolate and abandoned ruin. Graphic shots taken during the erection of some special 70 feet high masts intrigued the audience. These were erected by means of a jury rig and the help of a bulldozer, and since it was impossible to secure guys to earth in the normal manner, 44 gallon drums filled with rocks were used to keep them up.

Big Ben Peak on Heard Island was most impressive, the more so when the party discovered that the supposedly dead volcano was once again active. Dr. Allison spoke of brilliant aurora in shades of blue, green, yellow and red—the red which turned out to be from an active volcano. A party endeavouring to climb the lofty peak of Big Ben was forced to turn back by blizzards after climbing up for several thousand feet. Most of the films were in colour, and some of these were taken by Alan Campbell-Drurie, 3ACD. At the conclusion of the showing, Malcolm Perry, who is a foundation member of the Institute, moved a hearty vote of thanks to the Doctor.

Mr. Perry was present at the first meeting of the Institute, held at the Hotel Australia in March 1910, and, as an early Secretary, was instrumental in choosing an operator for Dr. Mawson's expedition to Macquarie Island and Adelie Land in 1912. Malcolm said those were the days when an operator really lived up to the name of "Sparks," and the crystal set reigned supreme. He also told of members of that expedition sunbathing on the ice, clad only in bathing costumes, until forced to cover by biting winds. Dr. Allison answered many questions put by the members and bore up manfully under the steady flow from the audience.

It was stated that Don Christianson may deliver a lecture on "Radio Waves in the Milky Way" at the November meeting. Professor Bailey's experiments and Amateur co-operation were also discussed. The meeting closed at 11 p.m. and all wended their way home after a most satisfactory evening.

WESTERN SUBURBS

Since the 20 metre band folded up recently, the local addicts seem to have given the game away, although the stalwarts still keep trying. On 144 Mc. there are stirrings of activity and 2ACH comes on quite often. 2AWD was heard in lengthy conversation with 2PD the other week-end. 2PD is putting out an exceptionally strong signal. 2LG, although using low power, succeeds in putting most of it into the aerial. 2ABC lays down an enormous signal in the Western Suburbs. What's the secret, OM? 2BF uses chicken wire in his antenna, but has yet to "lay" down a signal out this way. 2DF puts out some nice f.m. on two metres, and has been conducting tests on 580 Mc. with 2AJA of Arncliffe. Arthur also works on two metres. 2APT is very happy with his new beam; heard working the DX. 2AGX has worked his first Italian (I1YJ). 2KS has been heard making contacts under poor conditions on recent mornings. 2ANC has moved to new location and hopes to be on with a new beam soon. 2XH is weighing the pros and cons about putting up a new beam. 2NJ made some good contacts during the DX Contest. 2VY recently built a new modulator.

2OQ has been heard trying his new driven beam. Heard working VS1DT after a long lapse of time. 2ABO is using a super antenna of 2OQ vintage, Ted is highly delighted with results—contacted 82 new countries in 35 QSOs. 2ZF has been welcomed by the Bankstown boys and will shortly be hitching his sky-hook into position. 2BX is still using the vee beam; struggling to work DX under current poor conditions. We hear that 2ADL is very reluctant to take his folded dipole off the roof because of the way the DX is rolling in.

IMPORTANT

In order that the January issue may be printed before the Christmas holidays, Advertisers and Contributors are requested to forward their copy so that it reaches Melbourne not later than 1st December. We appreciate the co-operation received last year in this regard and hope that it will be repeated.

EASTERN SUBURBS

A fair amount of activity prevails in the area, and the latest to break the ice is VK2ASE, Mr. Ernest Ashley, of Bondi. He is another example of what can be done by the older generation in the way of sticking at the hurdles until being able to make the A.O.C.P. grade, for 2ASE is no youngster. He has been an enthusiastic listener for some years and has played a prominent part in what has become known as the "Home To Lunch Club." Possessing a sense of humour, he demonstrated this by providing the "H.T.L." gang with printed reading material of laughable nature. So far he is heard on phone on 7 Mc., and is pursuing a goal dubbed the "W.A.B." No playmates, that does NOT mean "Worked All Ear-Bashers," but simply "Worked All Bondi"! To do it is really a tall order, for there is quite a team to chase. Whilst talking of the older radio gang, a thought of sympathy is expressed for all who know him in the area to Mr. Frank ("Pop") Stroud, veteran listener to Amateur phone, on the recent loss of his wife, after illness.

2ARD active since his appearance on 7 and 14 Mc. with good quality phone. Lots of wild gentry from other suburbs have been heard at 2ARD, and that goes for 2AYE as well! Dave was heard gnattering away with one or other of the gang per medium of 7 and 3.5 Mc. phone. We wonder how Dave finds any time to get on the air in between W.I.A. and daily toil duties. Recently he was heard on a Sunday morn at 2ADT, in company with 2YC and 2EO. Surprising how the microphone is showing an appeal for previously dyed-in-the-wool key punchers. Latest to break out with phone is 2EZ and Jack has been pounding a key exclusively for so long that the corners of the earth know his c.w. call intimately.

That old radio club that goes by the name of "Waverley" has been showing lots of life on 14 Mc. phone lately, with 2BM doing the operating chores for the club station; has been knocking off a few Interstaters and Maorilanders. 2BV is the club call sign and the station functions under a severe handicap in that it is not possible to get a radiating system in the clear. Have the block of flats next door moved boys—you were there first!! A goodly measure of enthusiasm among members runs through this club with youngsters answering to the names of Tony and Phil rapidly heading toward their own ticket and stations.

Heard at intervals on 14 Mc. phone is 2CE, but there are bigger spells of silence these days. The reason isn't far to seek for Alf has acquired the pride and joy of his life in the way of a natty G-made car. 2ABD doesn't seem to be the consistent 14 Mc. phone DX chaser of yore, and is heard occasionally on 7 Mc. making use of a No. 11 transceiver. Colin was in the news lately when he came near losing his ocean speedster "Kyeema." Also on 14 Mc. phone is 2HP, who has blossomed out with a comprehensive double conversion i.f. receiver. Unless we miss our guess, 2AZH had a lot to do with the evolution of the receiver, which uses 110 Kc. second channel. 2HP has taken to the (gasoline) road and seems to be dashing hither and yon. His buddy, 2AZH, is still making out reasonably well on 14 Mc. phone with a vertical antenna.

2HH puts in an appearance now and then on 14 Mc. phone; Otto doesn't appear to be interested in DX, but seems to like a yarn with our own Interstate gang. His ribbon folded dipole being broken, has changed for an open wire folded dipole and feedline, and it stays in one piece. 2QY has been showing up lately on 7 Mc. phone after a few months' absence. Notice that you have lost that pseudo-FM dead-spot in the centre of the carrier OM, and that the transmission now sounds like AM as intended. 2AX doesn't miss his Sunday morning 7 Mc. phone chat with old cronies such as the "Wily Fox" and "Old Bill," but what we want to know is where is that other old diehard Andy? Who? Why, the old "Mud Lark" of course! 2AX can be heard frequently knocking over a few Ws on the key on 7 Mc.

2FJ is still dreaming of what he is going to do with a plot of land somewhere up the coast away from all us QRM makers. "Toweritis" has been a sore point with Jack ever since some bureaucrat said "Nay." Nevertheless, we hear 2FJ in with the Ws at times, so the old "Rolly" (W9NLP) beam can't be too bad. In the same area, 2YF is getting more consistent DX results since he installed a two element rotary, and that in itself is no mean feat when living perforce in a block of flats; recently burnt out his modulation transformer.

2AJG working c.w. DX on 7 and 14 Mc.; we haven't heard that cathode modulated phone for some time. Listened the other day to 2QG on 7 Mc. phone talking to 2AYE. Always a station with pleasant-to-listen-to phone—on this occasion it was more pleasant than usual. A background was audible of the most beautiful bird songsters, revelling obviously in the sunshine of the day, after months of rain, damp, mildew and fungus that has gone to make up life in Sydney. To answer queries; no it is not correct that 2NO has given up the hobby completely—merely that he is relatively inactive owing to pressure of duties. That's all for now, and if Eastern Suburbs blokes will pass on the gen, they might see themselves in print; if not, they still might anyway.

NORTH COAST AND TABLELANDS

2ADN, Jack Gerard at Coffs Harbour, is staging a comeback and has just completed a band switched rig for 80, 40, 20 and 10 using 813 in final and AT5 driver. Antenna half wave Zepp, 60 feet above the ground; Jack should get good results with the new gear. 2WT has been using his home-built Transceiver as fixed portable using 3 watts on 80 with almost the same results as the old rig. 2AAP has strung up a long wire antenna, 300 yards long from hill to hill; results so far are disappointing. 2ARJ Coffs Harbour just completed new double conversion Rx, Jim works all bands. 2JK not active, too busy with the new harmonic. 2AJB going on holidays and expects to meet the boys at Woy Woy and visit Ham shacks on his way to Sydney. 2JC hopes to meet the North Coast gang at Xmas during his holidays. Hart intends to travel the Highlands road to the border and then come down the coast road to Urunga. 2APS playing around with antenna. 2AJT heard portable at Coonamble. 2SR just completed his new home and has a new transmitter under construction; it won't be long before Geoff is on the air again. 2TB has had a bad spot of b.c.i. with next door; with aid of bottle of Scotch and hard work, Peter has cleaned up b.c.i. as well as Scotch. Both parties are happy now! 2NY, 2GI, 2TB, 2SR, 2AAP and 2XO met at Grafton and had a "pow wow" and inspected the Grafton match factory. No news from Richmond River gang. 2PA and YF have returned from a two weeks' holiday visiting the Dubbo boys, 2NS, and a few of the gang in Sydney. Peter used a Command Tx and Rx as a portable.

2ARY busy with recordings and installing a two element beam on 20. 2XO not very active due to sickness. 2ASF the most active Ham, and can be contacted any morning around 7 a.m., coaches a few prospective Amateurs in Kempsey in his spare time. 2DK not active due to shearing; Chas. expects to go QRO from the wool clip. 2HC still active on 80 using a new mike with excellent results.

HUNTER BRANCH

The new Branch Secretary, Varley Fitten, 2SF, seems to be settling down to the job very nicely. What with work and Branch activities, Varley is still not on the air. The recently formed committee to arrange lectures, etc., have worked out a scheme to cope with the next 12 months, and this will relieve the Secretary and President of much work. 2CS has been experimenting with low frequency i.f.s. and getting some very interesting figures on same. 2AFS had a great time recently during an Air

Force Display smoking American cigarettes—good old Uncle Sam! The latest craze at 2AFS is photography and doing a fine job at it too. By look of those very fine chassis at 2FP's Ern must mean business with the p.p. 24Gs. 2AGY is going on 2 metres with mod. osc. and has worked 2BZ across town; has a 6 mx. converter going too. 2PQ has been operating on 10, 20 and 40 phone and a little c.w.; Tom worked a few during the Contest. 2TE is building converters; has a very f.b. job for 2XT. 2CW had a great holiday and has his all-band exciter going and is in the market for a band-switched Rx. The past Secretary, 2LV, still very QRL but has new exciter under way. No news of Shorty, 2NX, guess the YLs are winning.

2SA hasn't had time to get on the air, but attended the last meeting. 2ANA making a super job of the QRO rig. 2UY has been helping 2MO build his house, Bill still not active. 2PT just sits and listens—not settled down at New Lambton yet. 2ZT, also of New Lambton, active on 40 c.w. and working DX too. 2XY is a very happy man—has worked 2ADT S9 on 2 with a 3 over 3 beam. 2AAI another that had a good holiday, is in the new shack and is very busy with the paint brush. 2AAM not heard this month. 2BZ is moving from the dirt and smoke out to Wallsend. Why the boys pick the West I don't know, is the QRM increasing! Dave's main prob'em is the removing of the telegraph pole from the old QTH to the new one—any ideas? VIS has moved also, gone to Birmingham Gardens, only listening as yet.

Aircraft flying north-west from Newcastle have to watch out going over Thorton as 2OS has his tower up with four elements on 6 on top. The new Branch Treasurer, 2AMM, worked a lot of DX in the phone and c.w. sections of the VK-ZL DX Contest. 2ASJ raised a couple of new ones, TI and ZK2 on 20 with his QRP and two element beam. Also at Stockton, Ivan Sherman just about has the code mastered—good luck. 2XT has made all preparations for the rotary has been amongst the DX on 40 c.w. 2ZC, 2DG and 2AHA were flat out in the VK-ZL and all have good scores. Interest seemed to be lagging a little in this f.b. contest. The Contest Committee could certainly alter this if they really got down to some better rules instead of letting these fine contests just fade out. 2CN is still improving his 10 and 20 rotary. 2AGD has crawled out from under the car at last, and now turning to some radio, 20 mx antenna now a problem.

2FX has at last moved into his own home and is very QRL, but should make the air soon. 2KG has the chassis of his h.f. Rx copper plated, should go to 100 Mc. from all accounts. It is very pleasing to learn that O.T. 2UF has improved greatly after his serious illness, best of luck Frank. 2AOL has been operating on 40, hope you can get along to the meetings on the 2nd Friday of each month old man. 2AFA still sorting out the Tx. 2CI made a nice job of a p.a. recently; only heard on 40. 2ZC went to Kempsey to pay his last respects to Gerry 2ZS, and represented the Hunter Branch on this sad occasion. Gerry's fine c.w. fist will be missed on 40. Police radio man, Norm Scott, now has his Ham call, 2AQS, and is active on 40 c.w. with an 807. How about attending our meetings with a guinea or we will have the law onto you! Up at Maitland, things are pretty quiet except for 2DG in the Contest. The phone bug has caught on, Keith must have got tired of the smoke signals. 2XQ arranged another emergency net practice. John hopes to arrange a State-wide hook-up in the near future and should create much more interest. 2ANL is on 6 again, with a solid signal, has 807s on 40 and 20. Despite poor conditions, 2JZ has been getting out well on 10.

2TY had a good time with 2ADX and is now settled down for another 12 months, works 2ADX frequently on 80, besides plenty of KH6s and W6 on 10 phone. 2VU still very keen on 6 mx and the v.f.o. goes well. The power house at 2ANU still generates 6 watts on all bands. 2AKP now has some nice quality phone on 80.

COALFIELDS AND LAKES

During the past month the Coalfields were favoured by a visit from three of the Sydney Division of the W.I.A. in the persons of 2YC, 2EO and 2AYE. All seemed to have an enjoyable week-end and we on our part were happy to have them. Apparently 2RU has been too busy shifting the hill between himself and ZL to allow 50 Mc. working to get on much. 2KR is of course on each day on 40 in the lunch hour hook-up with 2YC, 2ADT, etc. 2YO has been heard on 10 again, still talking about antennae; better get something ready for that DX on 10. Nothing from 2KF, but 2KZ has some new meters and will probably re-build the rig, so more of that later. Hear 2ANU on 6 working down to 2ADT and 2KQ at Toronto; Ken should have some more time with the shearing over. Nothing new from 2VU, mainly on 6 working the locals.

2TY often heard on 80 working ex-Maitland Ham, 2ADX, now at Grenfell. 2ALR still too busy for Ham Radio. 2PZ hasn't made it either. 2ADT as usual working all bands, 6 being the main stamping ground, while he uses 40 as a hide out around lunch time. Been playing around with the TR1196 on 80. Had a few days in the big smoke with an athletic team. 2YL reasonably quiet, managed to work a few in VK-ZL c.w. week-ends. Conditions seemed good for Europeans. 2AST new Ham at Long Jetty, is on the P.O. carrier wave staff and hopes to be on 144 and 50 soon. 2GA, 2KR, 2RU are busy on field day organisation for the Woy Woy do. 2AMU busy with high fidelity, talking of micro grooves, alter lancing speakers, etc. Conditions on 144 seem to be on the improve at Gosford, 2ABC S9 plus consistently.

WESTERN ZONE

The saddest event of the past month was the sudden passing of our cheery comrade, Gerry 2ZS. Into the long list of Silent Keys, his name will go, but his memory will remain. Vale Gerry—Good DX O.C.

Welcome to a newcomer to the Western Zone. 4WY is soon to take up activity in Orange. Expect to hear quite a lot too from 2AGN from Bathurst. Heard 2AJT portable from Coonamble. Understand Bill was originally a Coonambler, but now located on North Coast. 2ACU appears to be V.I.S.iting most of the month—or cracking jokes!! When Rod says, "Have you heard this?" Duck!! 2ACP heard from Katoomba during the month. When do we listen out for that 6 mx sig Bill? Broken Hillite 2YN putting out the usual good sig. When conditions were bad, John heard all and was heard by all. Not much news from Dubbo. 2AMR occasionally active when he can dodge QRM from a neighbour (not a VK). 2XP and 2II very quiet, whilst the only noise we heard from Freddie was a yell from one of his patients.

2ACT is probably too busy chasing DX with the new AC! How about that Bill? 2EI only active Amateur in Parkes. 2ADX is mostly on 80. 2AMV very busy producing harmonics. Congrats Bunny. I believe Mary helped, congrats. to Mary. 2BT not on much. Main aim now is 10 mx and playing the old man's game. Very quiet at 2WH, life getting "tejus" one bog after another. Cumbijowa is now an isthmus. Trev Evans laying doggo most of the time. Heard an AC4 chatting happily away to 2NS at about 50 w.p.m. (more or less). If you hear a stutter from St. Mary's, it will be 2WH's relay. It likes 240v. Nothing either from 2ALX and 2JW at Orange. 2EX at Springwood busy with the pansies, but on 40 a little. 2HZ laid the foundation stone for the shack, it's a Government job, so should be finished by 1952. 2LY keeping an eye on 580 Mc. and was out with the Sydney party establishing the record.

SOUTH COAST AND SOUTHERN

There seems to be some activity on the South Coast. 2WP and 2DY being most prominent. 2DY has a very effective signal and is running a revamped 101 and controlled carrier system. You hear a weak carrier, but when the modulation is on the S meter is pushed hard. 2TC and 2ADX were heard on 80 and it appears there will be plenty of changes at both stations. Jack recently arrived at Grenfell and is putting out an f.b. signal. 2TC is very QRL, but manages to get on for a yarn now and again. The power line through his property spoilt the location for the erection of antennae. Six mx will receive plenty of attention this summer.

2APP of Mont Eagle active on 40, heard talking of rotary switches and such things. 2WP was heard romancing about his new rig. 2JQ has been transferred from Crookwell and will be heard operating from Junee in the near future. Expect any day to see a semi-trailer loaded with Monty's possessions passing through Yass. 2TV at Canberra has re-built his gear for 10; few snags at first, but everything OK now. Has a two element beam plus an f.b. Rx, a la Hammerlund style. 2PI very busy with b.c. station work. 2AJP has taken unto himself a new panel van and is fitting it out for mobile work and is looking for a Command Rx BC454—any offers? 2OY is building up a narrow f.m. adaptor. Jack active on 40 c.w. 2ALS has been trying out an 1852 as an r.f. stage in his AR8. Not much activity due to pressure of work. Little activity at 2DO, have sold my old Rx and have new job covering 0.54 to 31 Mc., xtal filter, S meter, noise limiter, five position selectivity, reg. voltage to osc. eleven tubes in all. Heard my first ZS6 on 10 during September. Would appreciate help from Associate members in this Zone in providing news and notes each month; send them along to the listed address.

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VICTORIA

The monthly general meeting for October was held to a large gathering on Wednesday, 4th October, at the Melbourne Technical College, Bowen St., Melbourne. The meeting got away to a good start at 2000 hours. Our genial President, Bert Semmens (3GS) was in fine form and declared the meeting opened. The Secretary, Dick Dyer, read the minutes of the last meeting. Apologies were received from 3XD, 3AND, 3OF, and Messrs. Lemming and Wheelahan. The following visitors were given a hearty welcome to the meeting, viz.: 2ASK, 3AHG, VQWH, and Bill Jamieson (who signed an application form for membership).

Without further delay, the President called on the guest speaker of the evening, S/L. Ron Hargreaves (3AFR) to tell the meeting something about Sunspots and their relation to radio signals. Ron had that most prized attribute among lecturers, the ability to express in simple language the complex theory associated with the lecture and do so in a manner as to make it all seem so simple. He had the help of film strips to illustrate his talk and started off by showing the anology of radio signals striking the various layers in the outer atmosphere. As the talk proceeded, charts of the observations of the Sunspots were traced back for the past 200 years and these charts showed how consistent the Sunspots appear approximately every 11 years.

He then passed on to explain how to read the Prediction Charts as appear in "A.R." Although they may look a little hard to read, it is a simple matter. According to charts and graphs, the maximum Sunspot activity appeared in 1948, and Ron left us with the remark "Well boys, the DX bands will be OK in 1959." However it will not be as bad as that, because there will be openings from time to time with excellent DX workings. The lecture took 00 minutes to deliver and was listened to with very great interest as was shown by the numerous questions fired at Ron, who answered them very fully and to the satisfaction of the questioners.

The President called on the meeting to show their appreciation to S/L. Hargreaves for his f.b. talk and this was carried by great acclamation. During the talk, one Jack Groves was busy with a wire recorder. Interval was taken at 2140 and we noticed that the Secretary was busy with the receipt book and application forms. Upon resumption of business, reports were called for from the various groups of the Institute.

The Secretary submitted a total of 31 membership applications for the meeting's approval, and all these members were admitted to the Division. The most important item of general business was the 25th Anniversary celebrations. Our President, 3GS, has the matter of shack visits in hand and issued a questionerre to members so as he can get some idea for times, etc., to arrange for the country visitors. Window space in one of the big retail firms is trying to be arranged, to stage an Amateur gear exhibition. The official dinner is to take place on Friday, 1st December. Also there will be visits to Essendon Airfield, Lyndhurst Short Wave Station, and concluding with a big Ham Fest at Wattle Park. For further details listen to the broadcasts every Sunday morning. The President expressed the hope that every member of the Division will pull his weight and make the celebrations a mighty success. Remember the dates, November 25 to December 1. The agenda item for the next meeting is a lecture on the ever absorbing topic, "Antennae," to be delivered by Mr. Len Jackson. The meeting closed at 2230 hours.

3AJI touring the nearer hills looking for suitable spots for v.h.f. working. 3ABA and 3YS going Interstate. 3BY coming more active on the 40 metre band; also 3AM putting in a good signal. A contest committee has been formed with the personnel of 3ML, 3ZA, 3ARV and "Skipper." This should please the Federal Secretary and relieve him of a lot of worry. 3WQ has been very busy with "show" business.

Hearty congratulations to Ian Sewell (3IK) on his engagement to Miss Lynette Parkinson, of Hawthorn. (Is that the reason why you wanted to sell your rig?—Ed.) 3KE playing around with a wire recorder. 3EM in the throws of building a new shack. 3IE got XYL sewing machine trouble. 3RN buying a gun to eliminate cats. 3XD been on the sick list.

For the purpose of getting some news about the boys in the metropolitan area, the President passes around at the general meeting a sheet for anyone to write down pars. The trouble is that everyone wants to read what the other fellow has written hence very little appears. How about it gang? Let's have some news and notes on what is happening around your area.

MOORABBIN RADIO CLUB

The September monthly meeting took place as usual at the club rooms, Town Hall, Moorabbin, on Friday 15th at 8 p.m. The President (3KE) occupied the chair. Unfortunately owing to circumstances beyond control, the meeting was left high and dry for an agenda item. The attendance was fair, but we have found out since that a lot of boys were down with 'flu. After the minutes and correspondence were read, the President suggested a "Question" Night. This proved quite successful and brought forth several bright ideas.

The "Honorary Membership" Officer reported on the launching of the Certificate scheme and stated that quite a lot of members have been asked the question. The Certificate was presented to the meeting for approval and all present expressed their delight with the design and wording.

The club's receiver has been modified and is working f.b. The Tx is now completed and only awaiting a filament transformer. The members were appreciative of the alterations made by the trustees of the hall to the improved lighting facilities. The next meeting of the Club is the Annual Meeting and it is requested that ALL members turn up (also visitors will be welcomed), and hear the report on the Club's first year's activity. The date of the Annual Meeting is Friday, 17th November.

VICTORIAN RAILWAYS INSTITUTE WIRELESS CLUB—VK3RI

The monthly meeting of the above Club was held in the clubroom on 5th October, there being a fair attendance of members. After the general routine of business, a general discussion took place on many topics for the improvement of club activities. It was decided to have a working bee on the third Thursday of each month and whenever possible the club's transmitter to be on the air.

The Club also extends an invitation to any Amateur who would like to take an active interest in the club's activities. We will be pleased to see you on the first Thursday of any month. Don't forget fellows, the club is running a Dance in the V.R. Institute Ballroom on Saturday, 18th Nov.

CENTRAL WESTERN ZONE CONVENTION STAWELL—SEPTEMBER 10

A Convention has been defined as "an assembly" there certainly was an assembly of Amateurs, Associates, and interested parties at Stawell on 10th September; in all a total of 60 rolled up and greatly exceeded the committee's expectations. It really started late on the Saturday afternoon when that scout from the open plains, 3AKR, got lost in Stawell's unstraight streets.

From then on the town rapidly acquired numerous mechanical transport devices draped with various and many types of antenna, from the humble dipole to four element beams (none however came up to the standard as set by 3ABG at Castlemaine last year). The main street was filled with earnest CQs on 144 accompanied by roar of many rush-boxes. The overnighters then deseended in force on the QTHs of 3AKP and 3ARL; much ear-bashing took place and large amounts of supper were consumed by the hungry lads. Mrs. 3AKP was ably assisted by the two attractive YLs accompanying 3IK and 3QN; Mrs. 3ARL had 300's XYL as a backstop.

Sunday 10th at 10.30 a.m., a group was despatched to Callawadda to 3HL's. Allan had almost given the boys up and was on the point of leaving for Stawell when, presto, 20 or so of the lads were busy eating and drinking at the festive board once more. Those of the boys who remained in town were conducted by 3DP and 3AKP over the town, the power station, and out to 8DP's at Deep Lead. Like well trained Hams, they were back to link up with the day visitors at lunch (1300 hours).

The afternoon was given over to portable v.h.f. work and culminated in the reception from Big Hill of 3ZL Ballarat and 3RR Macrae by a Ballarat group including 3DS, 3AMH, and an Associate member, Ron. The latter owned the Rx, the front end of which consisted of two stages of broad-band r.f. using 6J6s, 6AG5 mixer, and 955 osc. feeding into a BC Rx. 3ZL was 5 and 9, and 3RR 4 and 5. Frantic efforts were made to contact 3ZL and 3RR, who were listening for replies on 7 Mc., but no luck.

A competition in the shape of a crossword puzzle was then conducted by 3ARL and resulted in a win by 3ND of Castlemaine. Roy was presented with a selection of writing materials so that he will be able to make notes all over the shack. A recorded technical talk on A.V.C. then followed; this had been arranged by 3TA and was given by Cor Schouten, a Dutch technician working with Byron. Cor certainly knows his stuff and illustrated the talk with suitable diagrams. 3TA's tape recorder did a good job of the recording and many appreciative comments were heard on its quality.

After our President (3GN) had presented his annual report, the following officers were elected for the coming year: President, 3XU; Vice-President, 3TA; Secretary-Treasurer, 3YW; Committee: 3DP, 3AKW and 3GN. After the elections, tea was served at 1800 and then back to the meeting hall to continue the Annual Meeting, where our good friend 3PD made an offer of two 6AG5s and a 6AQ5 to be given to the first Central Western Zone member to work into Melbourne on 144 Mc. The offer was gratefully accepted and members appreciate Geoff's generosity in making this gift available. It should stimulate interest in the construction of the better type of 144 Mc. gear. Our new President (3XU), being a man of action, kept things moving and after discussion it was decided that the zone hook-up should remain as at present—second Sunday in the month at 10 a.m. on approx. 7150 Kc.

Various suggestions were then put forward for the conduct of the next annual convention to be held about the same time next year, and if they can be carried out should make things brighter and better. At the conclusion of the meeting a programme of movie films were shown, and then came the turkey supper. This had been graciously provided and prepared by 3AKW's mother and sister, Mrs. Kinsella and Carmel, who had worked almost the whole day getting things shipshape. The boys certainly showed their appreciation of their hostesses' efforts by their onslaught of the good things provided, and in a happy and witty vein our President charmingly expressed the zone's thanks for all that had been done for us.

We also owe a debt of thanks to 3AKW; Bill provided us with one of the most convenient meeting places we have had for our conventions to date, and it was due to his enthusiasm in the first place that the convention was held in Stawell, so once again, Bill, many thanks. The Stawell Convention is now history, and we hope all those who came enjoyed themselves as much as we did, and we will look forward to seeing many of you next September.

The zone now has a new and active member in the shape and sound of 3TZ who is a temporary-permanent resident of Stawell. Tom makes Hant No. 4 in the town, so things are looking up. At present he is operating with a Type 3, but is busy gathering bits and pieces to make up a new Tx using n.b.f.m. Tom thinks n.b.f.m. has something, but not the something that those two old grousers, 3ARL and 3IE, think it has.

3ARL is busy getting portable gear ready (both v.h.f. and m.f.) for his forthcoming holiday, but had all his ideas on modulation sadly upset by a display of "Clamp Tube" modulation by 3XK during a recent visit to Stawell. 3AKP is also running into a bit of bother with his modulation.

During conversation with 3TA at Stawell, Byron told me he had temporarily given up 144 and 288 Mc. and gone into the 2300 Mc. range, so there must be some interesting v.h.f. gear round Horsham way. 3DP is adding an r.f. stage to the front of his 144 Mc. superregen. in an endeavour to cut down receiver radiation. Jim takes a dim view of the fact that he can hear the Stawell receiver out at Deep Lead, only 3 S points less than the transmitter. Jim is also leaning towards the 2AC type of filter for a.s.s.c. and is interested in 8YW's results using the system.

EASTERN ZONE

Main topics this month are the second meeting of the Sale Sub-Branch and the portable field day. The first was held in the R.S.L. club rooms on 19th September and the attendance was 22, including three Associate members who came down from Bairnsdale. About ten members of the R.A.A.F. from East Sale were there, all radio men, including three Hams—John 3ADA, Col 3UO, and Bud 3ABP. The President, 3ABF, was in command with 3VG as the unfortunate being who has the job of writing the minutes. Several applications for W.I.A. membership were received and then we ran out of application forms. However, 3QZ will be on the job next meeting—or else!

3SS, 3QZ and 3ADA explained various phases of Ham Radio and the W.I.A. for the benefit of the newcomers, and then 3VG gave out details of arrangements which have been made for the Convention on 25th and 26th November. Everything appears to be in order, with the exception of the accommodation, which cannot be made definitely until we find out how many visitors will be here. Our Secretary, 3QZ, Graham Colley, c/o. S.E.C. Traralgon, would like all intending visitors to let him know, as early as possible, their requirements in the accommodation line.

3ABP has been appointed as class manager for the Branch and we hope to obtain films used in the R.A.A.F. radio training courses on various phases of the noble art. After much ear-bashing on various subjects, the meeting adjourned for supper of tea, biscuits and bung, prepared by our chef, Fred 3AFG, and the meeting finally concluded at 2315. Next meeting to take place on 17th October.

Second Item.—The portable days, 31st September and 1st October. The boys spread themselves and the rigs all over the zone and a good time was had by all. Dealing with the six metre blokes first, they were 3HK at Donna Buang, 3TH Yinnar, 3DI Leongatha, and 3VL Omeo. 3HK and 3DI both heard 3VL's c.w. sigs at R3/4 and S3, but could not contact Rex, who is running 100 watts to a three element rotary on c.w. I don't know for sure whether the 100 watts is input or output, but being of a charitable disposition (Ian Sewel please note!) and knowing the Omeo power supply, I think Rex means "input." Anyhow, we know that the signals can get through, so all 6 metre boys are requested to turn their beams in the direction of Omeo.

3SS and 3QZ took their Type 3s to the Glenmaggie Weir, and on the Sunday afternoon carried out mobile tests on 7002 Kc. Keith mounted a ten foot rod on top of his van and headed into the tall hills behind Seaton. 3QZ's signals were audible up to six miles and then blacked out until Keith was about 13 miles out, when they appeared again. The country is very rugged up there, but 8SS was in contact with 3MH, at Ballarat R5 S3 at all times. At the 13 mile mark, Keith put up 25 feet of wire about eight feet off the ground and worked Omeo and other parts of the zone with reports of S7 both ways, so it would appear that the 25 foot antenna is the best for the hill country. If 3QZ and 3SS ever get to Ballarat, they promise to mow the lawn for 3MH, who spent all the afternoon testing with them. Thanks a lot, boys!

Although it will be old news when these notes hit the press, the Eastern Zone extends its best wishes to 3IK, and we hope he is now a thoroughly reformed character!

NORTH EASTERN ZONE

Last zone hook-up was a washout due to the bad conditions prevailing on 40. However, around the Shepparton area, 3APF, 3UI, 3ALE, and 3ACK were waiting to be called in on the net. Heard a VK2 working 3KR, so the President was on deck even if I couldn't hear him. 3APF went back to building v.h.f. mobile gear; 3ALE, who was dragged out of bed by XYL to be on hook-up, stayed up and tinkered with a 6 metre converter. Visited 3AT one Sunday night recently; Alec explained his 2 metre converter. 3ACK in the middle of building a tape recorder. It has very good clarity and quality; one of the wonders of the experimenter. Hurry up and let us see the finished job for the next Convention John. 3PE busily trying to put rig into a container. Hear that the modulation tranny wont fit Len, saw the corners off it. 3AGG still deserting radio for romance; fatal day is very near so I'm told.

3YV and 3KR busy making contacts for No. 1 Certificate of the Moorabbin Radio Club, only two in this zone who seem really interested in having a go. What about it you 40 metre bashers? 3FD still has the keying relay, if comments from 3IK are any indication; what about that phone Andy? Seeing as my daughter's arrival has been discussed over the air, I will report same as heard from 3AOK. Arrived 30th August, weight 8 lb. 1 oz., at 9.55. XYL and daughter doing fine. Incidentally, M.C. was 3AT. Thanks for everything Alec; thanks also John for the information.

Hear that a couple of local chaps are going onto c.w. so as to defeat the zone correspondent. They claim he can't read it. "Cads!" *I'm doing my* best but what with my inability to read it and their inability to send it, is it no wonder things aren't reported properly. 3KR on weekly sked with old zone member, 3DW (Doug.), might have heard a lot *if QRM hadn't* blotted you both out. XYL claims I'm only an eaves-dropper with a fancy title anyway. 3ACK has a second op. on Saturday mornings to do his bashing, send out his QSL cards, keep the log in order, tidy the bench, sweep the shack, etc., "Guess Who?"

3YZ assures me that he will soon be heard on 40 and 80 after his sojourn on 6 and 2 metres. Reason is he has a v.f.o. that he thinks may stay put now. However a 40-80 metre antenna is a little longer than a 6 metre one. 3UJ has gadgets galore and I saw the result of the automatic keyer he was making, works bautifully too. Anybody interested should contact Alan and he can explain how it works because I can't. A lot of portable gear laying around also.

3YV, Howard, is again in hospital and by the time this reaches print, we hope he is well again. Best wishes from all the boys Howard. 3AGT has a c.r.o. fitted to his receiver to take modulation checks on incoming signals. Don't forget to allow for the non-linearity of the i.f's. Stan or you will be giving over-modulation reports. Talking of c.r.o's. 3ALE was trying to copy 3FD by watching a dot bounce on the screen. What about using your freq. meter for a b.f.o. Les and save a nervous break down? 3FD still waiting for a home light plant, so the zone still awaits 3FD's carrier to be modulated by his voice. 3FO joined in the hook-up to obtain news of the zone's activities. Heard 3KR had visited Ballarat and complained about the cold something about his writing hand being frozen off. Next time you go tripping Ken, how about a note via the circuit mail box? (film can to the uninitiated). 3YZ managed to get his 40 metre aerial up on Sunday but not in time for the hook-up. Also absent from the hook-up were 3ACK flying (I think), 3APF skedding on 6 metres, 3AT, 3PE, and 3AGG. Anyway if these boys had turned up, it would have been a marathon; golly can you blokes bash?

SOUTH WESTERN ZONE

3MC, of Coleraine, still has his 80 mx skeds with 3HG on Sundays and hopes to be really active soon. 3II is contemplating a super dooper new rig. 3WT had a visit from Brian Fairs, s.w.l., who was one of the intrepid four who camped at Lake Burrumbeet last Ballarat Convention. Brian is now in the R.A.A.F.; best luck Brian. Heard 3JA putting out a very nice sig; why don't we hear more of you on the lower frequency bands Jack? 3BU is expecting some tape recording equipment from England soon and hopes to have a tapo recorder as well as the wire job before very long. 3UT active on lower frequency bands (20 and 10 have been flat); using a Type 3 Mk. II with series cathode modulation. 3HP has put a rhombic on the States, 12 waves per side and is getting colossal results. Harry is also on 40 occasionally using Command rig with 15 w. input. 3ARG has also been heard on 80 after local station closes down. 3AMH has recently got himself a new car and of course has not had time to go on the air much.

3HW changed his 20 metre beam and put up a six element c.s. one, but it wasn't much good, so the four element one is now back on the tower. 3BI has had another attack of eye trouble. Bad show Bert, I do hope it gets better very smartly. 3VA has been lamenting the loss of one only 20 metre-grounded grid pre-selector; must have received quite a shock when it turned up in the mail one day (coils and all).

144 Mc. is still booming in the S.W. Zone and 3ZL and 3GM are still bowling them over with their respective four over four and five over five beams. 3AGD has now got a 522 outfit and hopes to have it going satisfactorily soon.

3AOL been rehashing Rx, now putting out a better signal to when he first came on. 3AIC has come up on 40 using 6V6 xtal osc., 807 in the final; operates on both phone and c.w.. Has worked VR2AS and quite a few ZLs and Ws. 3ALG having a bit of trouble with the rig, has worked quite a few Ws on 40. 3BU heard operating from his portable location with a Type 3 under his portable call 3ABU; puts out an extra good signal. 3AJT complains of poor conditions on 20, but still manages to get quite a bit of DX. 3ALG was at his shack recently and John worked PK3LC who gave him 5 and 9 plus. 3ABE hopes to have his new mast in the air shortly and now has everything wired up to turn the beam. 3IC works quite a few VK6s on 40. 3WT heard in the S.W. Zone net, not on very much. Nil to report from 3VF, 3BW, 3AKE, 3CM or 3AES. 3AGN has built up a transceiver for 2 mx. although have not heard of his activities on that band yet.

GEELONG AMATEUR RADIO CLUB

The Geelong Amateur Radio Club held an exhibition night recently. This was the first of its kind to be held in Geelong. Many pieces of modern equipment were on display including receivers and transmitters for v.h.f. and other bands. During the evening the club's transmitter was operating on 40, 80 and 2 metres. At a later meeting the lecturer was 3AIC who gave a very fine talk on transformer design and made use of the blackboard throughout his lecture. At the next meeting members were favored with a lecture by a guest. He was Mr. Cruickshank, B.E., A.M.I.E., whose subject was on generators including the i.f.f. genemotor. The lecture was very interesting and members "fired" questions at Mr. Cruickshank from time to time. The President of the Club, 3AJF, thanked the lecturer for his talk. A visitor to the club was s.w.l. Brian Stears.

FAR NORTH WESTERN ZONE

The gang from this zone are still rather quiet, so far as activity on the air is concerned. 3TI is on most week-ends and occasionally through the week. The new receiver is working very well and Cliff, the 2nd op., keeps Chas posted with the doings on the bands. Sunday morning hook-ups are fairly well attended; 3FC, 3AFC, 3TI, 2AHM and 3GZ usually making the grade. 3MF appeared on 7 Mc. with c.w. one week-end. Let's hear from you again Harry. 3SN worked portable from here for a while, using a Type A on phone and c.w.

3AFC spent his holidays in Sydney. Bring any good gear back? 3SN, 3TI and Cliff gathered at 3GZ's shack on a couple of Friday nights. Chas and Max spent most of the night trying to fathom out how the old 813 worked and wrecked a few before they gave it away as a bad job. Graeme and Cliff were left to work the rig and managed to rope in a couple of Ws on 7 Mc. 3AUG reports that his shack is nearing completion, also his 5 inch scope is now functioning. Good work, Noel, won't be long before we have 144 Mc. gear on the air.

Jim Power, one of our Associate members, sits for his ticket in October. Best of luck, Jim. Max White, an Associate from Ouyen, was in Mildura recently and pounded our ears about Ham Radio. Max hopes to sit for his ticket soon; best of luck

to you also Max, hope to hear you on soon. No word has been heard from 3NG at Red Cliffs; guess you are still waiting for the a.c. power. 2AHM from Willow Point Station has been to Mildura three or four times in the past six weeks. Jeff is working on his new receiver, a turret tuned job with double conversion, etc. That's about all the news and doings from this zone for the month.

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QUEENSLAND

Well commencing with this issue of the mag, you have the misfortune to have acquired my services as Sub-Editor, Queensland Division, which I accept with a word of warning to all you fellows who reckon I splatter or who jam me when I'm working that rare DX—'tis said the pen is mightier than the sword —also I expect nothing less than T9X reports on c.w. I would here like to take the opportunity of thanking Frank, VK4SN, for the excellent job he has done over the past two years as Sub-Editor. He has really set a high standard for me to follow; in fact so well did he do the job that, being entirely inexperienced, I am hoping I haven't taken on more than I can cope with. It is hoped that the various promises of reports from my spies will help to offset the latter. I know I am speaking for every reader of the Queensland notes when I say we appreciate all you have done Frank and that we are sorry you are unable to carry on with the job—for the time being anyhow. Let me know when you are free again and you will be welcome to the job O.B.

At the monthly meeting of the Institute held in the I.R.E. Rooms on 15th September, there was quite a good crowd—didn't notice 4MD there though—and it was decided that non-members could receive any cards forwarded to them care of the Inwards QSL Manager, only after payment of a fee of 5/- per year had been made to cover cost of postage and handling of same. Personally, I think any Amateur who is not a member through his own choice has a hide to expect any service from our organisation free of charge and I think the above is only encouraging the growth of non-members. I am glad to see that they apparently will not obtain service from us re outward cards. Remember these opinions are mine and not necessarily those of the meeting.

Also on display at the meeting were the transmitter (7 Mc.) and receiver which are going to be presented to Arthur Tonge who, as many of you will know, is blind. The gear has been beautifully engineered and is made so that it is impossible for the v.f.o. to be tuned out of the band by being locked to within 5 Kc. of the band edges. The receiver dial has an embossed calibrated dial (all bands) and is also scaled.

A very informative lecture was given by Mr. Doug Sanderson, of the P.M.G. Department, on "Multi-Channel Telephone (Radio) Systems," in which we got an insight into what makes such things tick as well as the various problems that confront those who undertake the selection of suitable sites. After that, the P.M.G. chaps have more respect than ever from we humble Hams. That sounds a bit screwy coming from a P.M.G. man, but I am on the telegraph side, so I am still a humble Ham. After the lecture I suggested to 4FP and 4JO that possibly they could both amalgamate seeing that they live next door to each other and by inventing a process whereby multi-channel (actually two-channel in their case) may be employed on 20 metres. 4JO would then be able to take advantage of 4FP's three element beam—I don't think. 4FP was interested, mainly because they didn't think they would be able to determine who should pay the electric light bills. I hate to think what is going to happen when 4JO decides to erect a three element rotary too. They will be getting different settings of the tuning stubs according to which way the opposition has his pointed. That should work out nice and dandy for we poor dipole morsels —or is it mortals. From what I could gather the r.f. power output on one of the commonly used P.M.G. systems is only 300 milliwatts. The EF50 and EF91 are prominent in the one hundred and eight valves used.

It would be appreciated if anyone, who hears of any news of Amateurs in Queensland, would write me a letter with such gen. It doesn't matter how you write it—who cares, I'm sure I don't. The name and address is Clive J. Cooke (VK4CC), Kuran Street, Chermside, Brisbane.

Have been reading some mail on 80 metres last few nights and have been surprised to hear the ZIs and VKs of all States romping in. 4HA seems to have the band to himself, in Brisbane area anyhow, from what I heard in that short space of time. He was working a VK6 at one stage and told him that he could hear a W7 calling CQ at intervals. I couldn't hear a sign of the W myself, so I've got either bad ears or bad gear or, what is most likely, 4HA has good equipment; nevertheless it was an eye opener to me to know that a W could be heard on the band (about 11.30 p.m.). The VK6 changed from plate modulation to carrier-controlled modulation (screen grid), and to my way of thinking the latter was far easier to listen to. I tried the system myself for a while, much to the annoyance of my neighbouring Hams, although the 500 Kc. I was supposed to be covering was a bit stretched I think.

VALE VK4RC

With the passing of Bob Campbell, VK4RC, late in September, Amateur Radio in Australia and in particular the Queensland Division, loses one of its outstanding and well liked personalities.

Obtaining his ticket in 1933, Bob had maintained a high standard of operating and his passing removes from the list one of the few remaining 100 per cent. "brass pounders."

As a DX man, his efforts were noteworthy, holding post-war W.A.C., W.B.E., B.E.R.T.A., DX C.C. (Aust. and U.S.A.) and was second VK4 member of the First Class Operators' Club.

A staunch W.I.A. man, he was Outward QSL Officer until his illness forced him to relinquish the position. He was also Treasurer of the Queensland Division for some time just after the war.

VK4EL, his lifelong friend, in writing says, "In my lifelong experience in Ham Radio or for that matter in any walk of life, I have never met a more admirable character, such an even tempered and genteel person and I am sure Hams everywhere will miss his cherry and excellent fist. He was truly 'A Gentleman and a Ham' and fulfilled to the letter the following clauses of the 'Amateur Code':—(i) The Amateur is gentlemanly; (iv) The Amateur is friendly; (v) The Amateur is balanced."

In the interests of harmony, I have reverted to plate modulation with negative peak clipping and so far I have not bothered to tell one of the few ex-complainants that he covers practically the same amount on my dial when he is after the DX; he is OK on local contacts though. I've so far taken the charitable view that perhaps my receiver is at fault. As one famous leader once said, "He who is without sin, let him cast the first stone."

4DN has been in the news a lot lately matrimonially, but it is nice to hear Phil back on the air again. He has been having strife trying to get on to 40 though, usual troubles, loading. 4WJ has been sporting a new car; notice either by design or by accident, there is a parcel rack in the front which is an ideal possy for mobile gear. I am tipping that Jack soon has one of the few mobile gears in Brisbane—if he can find ways and means of making those three "hunks" of tubing mobile as well. Believe 4WD is threatening to build a new receiver, and speaking of Bill, I don't think it was noted in these pages that he is now living in Brisbane; he has brought his family down from Townsville and has settled in to a new house. It is nice to see you at our meetings Bill and hope we see you there for many years to come. No doubt you all know Bill was one of the early pioneers in post-war phase modulation a la battery, carbon mike, and transformer. Simple enough and it really works, and although he is now using zero bias class B 807s, he can let you hear p.m. any time you want to. Ask Jim (4PR) what he knows about car spraying.

Did you hear about 4AH, he had some Fluxite which for some reason or other, was not in a tin, so he put it into an empty Marmite jar. You can imagine what he said when he found after the fourth sandwich that he had not been eating Marmite. Moral—don't stow your gear in the kitchen. To 4UX we extend hearty congratulations on the arrival of a son. By the time my turn comes around I bet there are no boys left. Anyhow Claude please extend the congratulations to your good wife; you don't deserve all the publicity.

Now this is important and it is hoped that those of you who read this will pass it on to those who have already been bored. The QSL officers' names and addresses are as follows:—

- **Outward QSLs—VK4RL, 61 Manilla Street, East Brisbane.**
- **Inward QSLs.—VK4JF, Vanda Street, Buranda.**

I was lucky to be 4EB's first VK 20 metre contact. Peter has only been on the air for the past week, at date of QSO, and he seems very enthusiastic about 20 metres compared to 40 metres. He has a 40 watt rig crystal controlled at the moment and modulated with—yes, the usual—zero bias class B 807s. After listening to Peter and Mick (4MD) burning the midnight oil in a crosstown QSO, I think Peter is going to be a contender for the ear-bashers belt if that is ever handed out. Never mind about that though Peter, you have a few rivals in myself, 4AH and 4FB. Speaking of 4FB, it was quite a pleasure to meet Fred in person recently when the XYL allowed me off the chain for a half hour and gave me sixpence to buy him a milk shake. I got quite a surprise to see how young old Fred looks—and handsome, too. He reminds me of my childhood radio hero, Uncle George of 2GB.

Before pulling the big switch I wish to remind zone managers to let me have notes by the third week of the month if possible. I hope I receive the co-operation you gave Frank in this thankless task. Here are some notes from Clare, one of 4NC's harmonics (that is no wise crack either Charlie), for which I publicly thank her and I only hope she can find time to keep up the good work.

Heard a VK4 deploring the fact that commercial stations were appearing on the 20 metre band and remarked there was always one on top of 4MD—any clues Mick? 4FP working some of the rare ones; looks like that new beam is really working John. Sorry to hear 4GE is leaving the Amateur ranks and disposing of all his rig. Well maybe not all Ern, you never know when the bug will bite again. 'Tis rumoured that all aircraft were being re-routed to dodge 4VJ's beam; some pole Vince. 4NF's rectifier tubes are the sole property of his XYL Cynthia and can be promptly removed without notice. You'll have to rectify this Noel. 4MH in Brisbane for show week, managed to visit quite a number of the local boys before returning to his own QTH. Heard a budding Ham sign off recently with: "73 and plenty of XYLs."

DARLING DOWNS ZONE (4CG)

Conditions are picking up a bit on the bands. Twenty metres recently has turned on some good European and African DX around 11.30 p.m. onwards. Plenty stuff like CN8, FA, CR7, F, DL, YU, SM, OH, UA, G, ON, GZ there for the taking. Heard 4TY in on it. 4CG also claimed his share. Dame rumour hath it that we are to lose 4WY. Bill at present having a spate of farewells prior to going to Orange where he will be on with a VK2 call. Fare-the-well, young Willie. 4IG putting out nice phone on 40 and likewise 4JC. 4SG living the quiet life. 4CK on 40 regularly these days.

Probably the most interesting happening in this zone has been the upsurge of 50 Mc. activity. 4CU and 4XN, Queensland's top 6 metre men, have a pretty reliable two-way circuit operating between Clifton and Dalby, about 50 miles over the flat black soil plains. Likewise 4CU has a very reliable circuit to 4KK at Milmerran and in turn 4KK can work 4XN more or less regularly. Now, due to high-pressure stuff from 4XN and the air testing of a converter, 4CG has entered the select ranks. 4CG has been hearing all three stations during the past month with monotonous regularity. The 6 metre Tx is almost ready. 4CG also reports hearing 4FN on 51.6 Mc. on Sunday, 25th September. Norm, 4TY, is showing more than a passing interest in all this going on and will probably succumb to the bug shortly, especially if 4XN and 4CU put that pressure on.

Members of this zone were profoundly shocked at the sudden death of our good friend, Bob, 4RC. Only a week previously we had a happy QSO with him and he was feeling fine. And so the wheels of fate grind relentlessly on. Vale Bob.

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SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division, for September, was held at the School of Mines Building and took the form of a film evening, which was heartily enjoyed by the large number of members present. Naturally this meeting was not in the true sense a general meeting, and therefore no official business was discussed, no visitors signed the book, nobody aired any grievances, nobody had a shot at me, in fact I have been left high and dry, with absolutely nothing to write about and no matter how hard I try, I cannot even "pad" this opening paragraph any further.

I was not at the meeting, owing to pressure of business (and not monkey business either, thank you very much), but quite a number of chaps that I spoke to next morning, said that the evening was a huge success and that they would like more of them. My immediate superior on the VK5 Council was heard to remark that the reason that I was not at the meeting was because 5KX was not available with his sooper dooper vehicle and that I was too proud to patronise the electric tram. I treat that remark with nausea, although I must admit that John was not available because a stork had been seen flying around Henley Beach during the day and therefore no risks could be taken. I was shrewder that John, because I not only shut all the windows, but I blocked up all the chimneys as well. Anyway, to cut a long story short, John is the father of a bonny bouncing boy who answers to the name of Michael John, but I shudder to think just what my XYL would have said to me if I had not thought of that chimney. I can hear her now, with that voice of shocked reproof that she keeps for special occasions, saying, "Petals, how could you!" Best wishes Mr. and Mrs. 5KX, and not only will I be available to wash and polish that roomy and comfy vehicle, but I will also be only too pleased to wheel Michael John along the seafront at any time. Try that on your grand piano Barbier!

There appears to be a hoodoo on the VK5 Divisional Secretaryship at the moment, as first of all 5XU, the present Secretary, had to go off to hospital, and when 5MD consented to act as Secretary, he was hardly in office a couple of weeks

before off to the hospital he goes. 5TL is acting as Secretary at the moment, and although I told him the other day that he was looking very pale, and tried as hard as hard to talk him into hospital, he only made a very rude grimace at me and told me a few things about myself that I did not know. At the moment of writing, Gordon (5XU) is expected home and providing that he takes things easy he will be OK, but the news regarding "Doc" is far from good. I visited him at the hospital, but was not allowed in, so that speaks for itself. Here's hoping that the news will be more favourable before these notes are posted away to Melbourne.

The well known saying, "God take care of my relatives and I will take of my friends," has been brought home very forcibly to me over the past few months. My brother-in-law has been interested in radio for as long as I have, but try as hard as I could, I never succeeded in talking him into becoming a Ham. However, I finally wore him down, and brother, have I regretted it. To the name of Lance ("Inky") Worrall, he added 5WF, and in the same breath became my chief local QRM. He heard and worked all the stations that I have been trying to hear for years, he lowered my high prestige among all the other in-laws, and then to rub it well in, he gets a QSL card from C1EF, which is the daddy of all QSL cards. When it is unrolled, it stands six feet high and is eighteen inches wide, and has a message in Chinese with the characters nine or ten inches square. Of course "Inky" is telling everybody that it says his signals were S9 plus 60 db or more, and what makes me bite my ingrown toenail is that I can't prove it to the contrary. I believe that when he took it to a local Chinese laundry to be translated, he addressed the man behind the counter and said, "Velly velly good morning, you talkee talkee Australian and read this letter to white man?" They had to throw water on him when the man said, "It will give me the greatest of pleasure to translate that QSL card which you have received from one of my countrymen." Alright, I know it was an old one, but I had to work it in somehow.

The mystery of the missing Mt. Gambier notes from last month's mail has been solved. I happened to hear one of the youngsters playing postman on the beach and wishing to humour him I said, "any letters for me," and believe it or not, he handed me the missing mail from the South East. Needless to say, the mailbox has now been raised several feet higher and all should be well.

Before these notes appear in print, 5KU should be on the air with about 60 watts from his new location. "Erg" has the aerial up, the gear all shifted, and is only awaiting the official authority to operate from the new QTH. 5KB is now all ready for action; Peter has the permission from D.C.A. and as soon as the OK comes from the P.M.G's. Department, look out! 5FD is still very busy, but as John has a new converter, it could be a sign. 5MS is still collecting bits and pieces for the new transmitter and from what one or two have seen of them, they hope that Stewart never points the beam at them. He is still on 2 mx with a bigger and brighter signal than ever.

5CH is as usual up to his neck in work at the power station; look out that it doesn't go over the head one day Claude. He has built a new tuner which seems to do a good job on 20 and 40 mx. See you soon Claude? 5TW also has a new aerial for 40 and 20 mx and has also built a new frequency meter. Tom couldn't read closer than about 20 cycles with his old one, so of course out it had to go. Remind me to put the axe through mine when I finish these notes. 5CJ is still only allowed to have radio as a hobby (don't quite get that Col), anyway he is on 7 and 144 Mc. sometimes and appears quite happy. Sorry about those notes Col, but my letter explained in time I hope. Also sorry that I did not see the XYL and harmonic, still there's plenty more chances, although my time will probably be taken up with taking Michael John Bulling for walks. All right Barbier.

No notes to hand from my Upper Murray correspondent as yet, but as Laurie Sjoberg (5SL) is to be married in a fortnight from now, I don't expect any. Laurie and Patricia, I feel that I must give both of you the advantage of my years of experience and tell you a few things that you probably don't know. Patricia, you first, always remember that DX comes before dish wiping, and you, Laurie, always make a stand on this matter, no matter what the stand may bring, after all, the rolling pin does not hurt as much as you would think. Well I am sorry that I can't stop to tell you both any more, as my wife is calling me to help with the dishes and I don't quite like the sound of her voice.

5BJ is sure an elusive bird. I go to the trouble of telling everybody in these notes that he is going to a certain Rundle Street radio store, and what does he do, he goes into the P.M.G's. Department, on the radio side. He is a correspondent for a well known radio publication and I don't suppose that we can blame him for withholding vital information from amateur journalists. It hurts me to say it John, but I thought your first effort was particularly good, and I am fair dinkum. I can quite see why you get paid and I don't. Keep it up. 5XR is in the midst of power transformers and so forth at the moment, and it looks as if Cam. will be applying higher voltage before long.

A couple of days before these notes reach you, a field day will have been held at Kulpara and if my copy of "Splatter" is to be believed it will be a field day and a half. 5UX appears to be the leading light in the affair and, knowing Les like I do, he will be flat out. I trust that "Splatter" will give me any details concerning the day. 5LW seems to have faded right out of the radio picture of late, I believe that he has been very QRL in connection with his vocation, although I did hear his name mentioned concerning transformers of a well known local make. I wouldn't trust him with any transformers that I made, Ralph! Now that I come to think of it, I did hear his dulcet voice plaintively calling CQ the other night on 20, and conditions were so bad that he did no good for himself and was heard a few minutes later telling the world that he would be willing to talk to anybody, even his mother-in-law.

Several of the boys have commented on the fact that a well known southern suburban Ham, who is very keen on operating procedure and gentlemen's agreements, was heard on the c.w. end of the band with a strong phone signal the other night, and a local contact too! People who live in stone houses shouldn't throw glass bricks. I have been looking for an old pal of mine on 20 for some time now and imagine my surprise when I heard him say to another VK5 that he had just finished reading the VK5 notes and could not believe that Warwick writes them, as he never imagined me as being so crazy. Well Alan (2AIQ), it is wonderful what one can do in the interests of a hobby that ranks as the greatest hobby of them all. Bill told me that you were on 20 but so far you have not trickled into Henley Beach. Will still keep looking for you most afternoons OM.

5GD is a confirmed ten metre man who has been heard lately on 20, and judging by the reports that he has been getting, the new beam, which is mounted below the 10 metre beam, must be quite OK. 5JD and I seem to be real buddies these days, in fact if he is not ringing me, then I am ringing him. Of course this does not mean a thing, he is just as likely to hop into me at a general meeting and tear me apart as not. One thing about Jack; he calls a spade a spade, and after all that's a good recommendation.

Regarding the earlier paragraph about the outsize in QSL cards received by 5WF, the translation may interest you. "Confucius says, he who plays joke on honourable brother-in-law with QSL card, should take steps to ensure that joke does not boomerang back on honourable self." Tee-hee, tee-hee (this tee-hee business is loud Chinese laughter).

I rang the hospital and enquired as to the health of "Doc" and the news is particularly good. "Doc" sent back a message to the effect that he was feeling very fit, so there you are. Now that he is OK again, it has just dawned on me that with him convalescent and not being able to attend the general meeting, I will be called upon to take the chair. What some people will do to put one over me is almost unbelievable.

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WESTERN AUSTRALIA

The September meeting of this Division was held in the Institute Rooms, Padbury House, Perth, on Tuesday the 19th, and once again the attendance was very poor. Don't know where all the VK6 boys are hiding these days, but they should know by now when and where the meetings are held. 6WZ, Harry Atkinson, from far away Geraldton, was the only country visitor present and was welcomed to the meeting in the usual manner. Harry was just rounding off his annual vacation and 'ere these notes appear in print, will be hard at it again. Nice to see you Harry. Also present (after an absence of three or four months) was 6GA, Bill Ashley, who has been away in that land of sunshine, Victoria. Welcome back, Bill from all the gang.

The subject of domestic contests came up for discussion and the Contest Committee were given a few ideas to think over for inclusion in future contests. Restricted power input for local contests, or failing that, a contest especially for low power was suggested by 6NC. 6WZ, in his annual speech, came to light with a very good suggestion, namely, a system of penalties for breaches of rules in contests in lieu of total disqualification, as has occurred on occasions in the past.

The business of the evening was concluded at an early hour and then followed a most interesting hour and a half. Two lectures were presented. Firstly, 6MK, continuing the "My Station" series, gave a most entertaining description of his conservatively rated "kilowatt outfit," and demonstrated his latest piece of equipment, namely, a combined beam turning indicator and control panel; very nice too. 6WH, Ted Doddy, followed on with "Band-spreading the Command Transmitter." Using the gearing provided in the unit, together with a home-made dial (cord driven from an attachment on the existing dial), it is possible to get over 1,000 degrees of band-spread and still cover all 40 or 80 metres as the case may be, with one spin of the dial knob. One Kc. occupying well over an inch of space. Needless to say, this lecture aroused a great deal of interest and I believe Ted is going to run out a bulletin to country members giving the details so that they can, if they so desire, make the modifications to their Command Units. Congratulations Ted on a very fine job.

The "Country versus City QSO Day" took place on 40 metres on Sunday 10th September and only about half the usual number of contestants faced the barrier to wage battle with the QRM at 10 a.m. A total of 28 stations operated and the winner of the 6WG trophy for the highest scoring country member turned out to be 6WU with 24 points. In the metropolitan section a tie resulted, both 6YZ and 6RU scoring 26 points. Congratulations fellows, and thanks to those stations who submitted logs.

PERSONALITIES

6JB (recently married), must have talked the XYL into letting him back on the air, because that call sign has been heard on 40 and 20 metres. 6SN is reputed to be building a receiver for 50 and 144 Mc. Wondered what was keeping you so quiet Alf. 6KB heard back on his favourite stamping ground, 20 metre c.w., lately. Has there been anything to work there Val? It is reported that our worthy Treasurer, 6RO, has ventured so far as to have some QSL cards printed. Does this augur greatly increased activity Bert. 6VM is now using a new mike and has done a certain amount of building out in the modulator—the result, a much crisper and more easier signal to listen to.

Still no sign of 6CN, in Geraldton, so apparently the long awaited a.c. has not arrived. If I know Cyril everything will be ready to go on the air just as soon as they wire up the last point. 6LU, when not keeping 40 metres warm, has been adding a pre-amplifier to the modulator and also doing some work on another receiver. Is talking of building another rig for 20 and 10 metre operation. Once again 0RU did very well in the last CQ World Wide DX Contest. 6KW also helped in this Contest to keep Zone 29 on the map. Heard both these boys last week-end in the VK-ZL Contest and although conditions were against them, were still piling up the points. Best of luck Ron and Jim.

6RB is occasionally heard on 40 metre c.w. with a very nice clean signal. 6AK has once again appeared on 40 metres with a nice c.w. signal. Understand he is using a pair of 807s with 50 watts input. 6RW is sporting a National NC200 receiver that is doing a nice job of work. Bob can be heard with a solid signal on 40, 20 and 10 metres. It is no wonder 6WU did so well in the last 40 metre contest; he pours a whale of a signal into Perth, no doubt due to the home brewed a.c. 6DX was recently operating portable from Cook and Tarcoola and getting down to Perth very nicely, thank you. Don't know whether Bill is back in Kalgoorlie as yet. 6HL is another who operated mobile during a recent vacation down to the Porongorups. Harry did not seem to like the idea of getting back to toil when seen at the last meeting.

6GA is contemplating re-installing his T40. Look out 20 metres, here we come! 6DH still pounding out the c.w. on 40 and 20. How's the modulator progressing Dave? 6CF was sighted in Perth recently, but has not been very active. No doubt when ten brightens up we will hear plenty from Chuck. 6FW still in the throes of house-building and Amateur Radio looks like taking a back seat for some time to come. 6TB has been modifying the receiver and can now hear the signals much better on ten metres. It is a good receiver that picks up signals on that band these days.

6AR has been in Kalgoorlie, but as future movements are uncertain, no gear was taken. 6WL made a very respectable score in the recent 40 metre contest, notwithstanding the low power used.

That is all I can rake up this month fellows, so till next time, 73, but please let me have some items for this column, my imagination has been claiming overtime lately. Of course, we are not all as fortunate as some people who can sit down at the control desk of the "best broadcasting station" in a certain State and write reams of notes while watching (occasionally) the antics of a few meters!

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TASMANIA

The October meeting of this Division was held in the Photographic Society's Rooms in Liverpool St., on Wednesday the 4th, before a rather disappointing attendance. Business for the evening was quickly dispensed and the lecture, which was to be given by 7JB, on "Operating Procedure," was ably handled by our worthy Secretary, 7OM. A welcome was extended to Norm Parsons, 2AHS, and at the conclusion of the evening a sale of tubes and sundry other radio equipment was conducted by Len Edwards. Amongst the tubes offered was a 808 purchased by 7AL for more or less a gift, whose intentions are, I believe to run about 99¼ watts inpur.

Received a pleasant surprise a few weeks ago when a visit from one of the popular VK2 boys in the person of Syd. Ward, 2SW. During his stay quite a number of shacks were visited and one or two outings arranged so as Syd would have an enjoyable time while in the capital city.

Talking of visitors, saw old timer 7AG paying his monthly visit to town. John's activity has been in the past confined to 80 metres, but believe a new final is planned, so looks as though one or two new frequencies will be used in future.

Believe 7BM is at present active on 576 Mc. Several local v.h.f. men show interest although other than 7BQ in the north, Bill has this band to himself. Conditions on 40 and 20 metres during the month has not been bright, it is rumoured a few 10 metre lads are watching this band; indications at present show conditions are not as good as in previous years. Incidentally, mentioning 7BQ, brings to mind that Len is the only Northern Ham who is active on all Amateur allocations from 80 metres to 576 Mc., which is no doubt a fine achievement.

Congratulations Ted on the addition of a junior operator to the family. Incidentally 7GB is one of those unfortunate people whose profession does not permit his attendance at W.I.A. meetings. Activity has been so far on 40, and is often heard working DX with f.b. signal. The rig consists of a "Clapp" v.f.o. and a 807 in the final running approximately 25 watts, nevertheless a good report is usually received.

Happened to meet one of our Associate members the other day who is desirous of joining senior ranks if successful at the A.O.C.P. examination by the name of "Sandy" Powell. At his place of employment, "Sandy" is regarded as a conscientious worker an unbiased teetotaller; his entry into Ham Radio will be welcomed at least by one, that being his old mate, 7CA, now long banished to Siberia, sorry Launceston. Anyway, hope to work you sometime in the future "Sandy."

Activity amongst the southern members have been limited; those heard during the month were 7JB, 7OM, 7SD, 7RX, 7KX, 7KA, 7LD and 7SK. A recent adjunct to the W.I.A., which has been welcomed by most Hams, is the frequency measuring facilities ably given by 7JB after the W.I.A. news on a Sunday. Plans are already in hand at 7SR for participation in the next field day contest which is usually held in February. Believe quite a lot of portable gear is available, so it is hoped a good score will result.

Noticed 7GT and 7LL purchasing radio gear at one of the local radio stores. Seems as though "Doc" intends "operating" again after a few months' silence. Was glad to hear 7MY is feeling better after an illness. You had me worried Alan, that time you mentioned giving Ham Radio away, but things must be OK again after seeing that large parcel of radio gear you recently purchased. 7RM back in town again after his monthly visit to the north, believe a crystal controlled converter is next on the list.

NORTHERN ZONE

Our lecturer at the September meeting was a visitor to the zone in the person of Mr. Leon Durkin, 7JP, and being in the employ of our worthy P.M.G., his subject covered telephone exchanges generally and more particularly the relays used therein. Two cases were needed to house the exhibits and not more than half the members objected to the search on the way out. These cunning little "doovers" seem to do just about everything except put Ham Radio on a sound financial footing, and audible gasps of amazement were frequent as their operations were traced through a modern exchange, particularly the automatic type. We are indeed indebted to Mr. Durkin for his most interesting talk and I, for one, am not nearly so reluctant now to insert the "two pennies separately please."

On the way home both 7LZ and myself reverently doffed our hats in silent awe to each public telephone we passed. I do hope somebody sends a copy of this to the P.M.G., he may decide that it's time to scrap our manual and give us telephones with those dial gadgets on front.

As a follow up to the subject of lecturers, a mention could be very well made of the member who is responsible for the line-up of extremely interesting talks we are enjoying. 7BQ is our officer I/C lecturers. I'm not sure of his technique, whether it is bribery, cajoling an influence in the Taxation Department, or just plain threats, but Len certainly seems to get around among the right people to add the pleasant side to our meetings. Good work Len, and keep them rolling.

The bands have not yet recovered from the thrashing they took during August, maybe it's just peevishness on their part, but listening on 20 one would certainly think the month was June rather than October. Even the annual DX Contest failed to provoke even a vestige of the frenzied activity of the past few years. Listening around, I noted the absence of quite a few of the regular contest calls. Seems that the novelty of running up big scores with its necessity of pounding a large amount of stereotyped QSOs has worn somewhat thin. The main use for such occasions now seems to be the snaring of some new and elusive country which seems to be a very good argument in favour of one good world-wide contest each year, instead of such a large number of smaller affairs.

Doings of the month seem to vary from debugging converters to buying motor bikes—the former at 7LZ, and the latter at 7DS. Col's converter for 10 and 6, a 6AK5, 6J6 affair, is now yielding to persistent attacks on its irregularities and is beginning to perform very well, the main objection to complete satisfaction is of course still the absence of DX stations on ten to really test it. The budding speedway star in the shape of 7DS has startled the world and his uncle, by disposing of the only four wheeled canary in captivity, a truly great jalopy which is still the only car known to modern science that can have 365 gears changed (down of course) on any given hill and still have some to spare. At least one very happy memory remains with me of a trip in the Fiat, Bill, and I'm sure Longford isn't the place it was without it, but wouldn't four of us look silly turning up at the annual dinner on the two wheeled wonder.

7XW showing an interest in DX on 7 Mc. with a VR2 on phone. Seems to be quite a bit of Pacific stuff available on this band. My pet snooper must be wearing out as I don't have even one juicy bit of scandal to vent this month. 7AM said recently that he was sparking on all 144 of those megacycles out his way, but as I have no means of listening thereabouts, I have to leave that to our v.h.f. snoop to verify or argue. Here, in search of something new, I unhooked the main power supply on my parallel 807s and hit them in the kisser with the full output from a "B" eliminator, net result a full 5 watts input and believe me, I've got as much kick out of that as a two hour W.A.C. To date the score is VK, ZL, W, and KL7 in a couple of weeks—not amazing DX, but lots of fun on QRP.

Believe 7KB is sueing me for a new set of ear drums, busted when I changed from 3 watts to 85 in the middle of a QSO, but why should Ian worry, he can get a new set at cost price. That's the works, so, in case you mislay our brand new invitation card, the next day to remember is Friday, 10th November.

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CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

CHALLENGE ACCEPTED RE VK8

Editor "A.R.," Dear Sir,

In the Queensland Divisional Notes in the last issue of "A.R.," reference is made to VK4GG having the distinction of a QSO with a VK8. A challenge is issued as to whether any other States can boast such a QSO? I am sorry to have to disillusion our Queensland friends, but the answer is **very definitely yes.**

In years gone by, I had three or four contacts with VK8s, and hereby quote an instance, taken from a dog-eared old log book of "OA2NO":—

> "Date, 25th October, 1927; wavelength (we weren't on freqs. then) 32 metres. Transmitter, parallel UX210s in Hartley circuit, with 50 watts input. Antenna, 52 feet Zepp. Station contacted, OA8AO, Australian Inland Mission, at Alice Springs."

Contacts with OA8AC followed on schedule for a week or so and some traffic was handled.

I recall also working another OA8 in those days somewhere around Tanami, and another at Tennant's Creek. Of course, there was also the well-known VKZ, operated by Joe Kilgarriff, from Alice Springs. This latter I should think might have been the first Amateur Station using a "commercial" call sign. Later, in 1930, I myself used a three letter call sign allocated as VIX, at Wyndham Meatworks in the Kimberley country. Also, I had another (strictly Amateur) call sign at that location, VK6NK.

—DON B. KNOCK, VK2NO.

[See Federal QSL Bureau notes. VK5RX and VK5FM also claim working VK8XT (Alf Traeger, of undying Australian Inland Mission fame).—Ed.]

HAMADS

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Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 8th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line.

Dealers' Advertisements not accepted in this column.

AMATEUR selling up, going abroad. Lots of items of interest will go cheaply. Gear includes BC453 Q5'er, 6 Mx. Converter, 8 tube 2 Mx. Rx., Genemotors, Xtals, 576 Mc. Tx and Beams, 809s, 800s, 807s, etc., co-ax cable 45 and 70 ohm, 1,000 volt a side 250 Ma. Transformer, 1N34s, Field Strength Meters, etc., etc. Call and inspect at 1 Oxford St., Box Hill, Vic. (evenings and Saturdays). K. McTaggart.

FOR SALE.—All my 144 Mc. gear as follows: **Receiver**—17 tube triple conversion, crystal controlled h.f. oscillator and tuned i.f. amplifier, crystal controlled third oscillator and b.f.o., S meter, noise limiter, etc. **Transmitter**—8 tube with 832 final, plate and screen modulated, built-in modulator and speech amplifier from low level mike, includes crystals on 144, 145, 146, 147 and 148 Mc. Both above items are built in commercial type black crackle cabinets with well arranged and lettered panels. Receiver is tuned by slow motion gear driven dial and is directly calibrated in frequency, each 100 Kc. occupying half an inch on the scale. The above outfit regularly works Melbourne and Geelong stations from Yallourn and has made contact with Ballarat. Complete, less speaker and power supply, Receiver £25; Transmitter £15. J. E. Rogers, 61 Broadway West, Yallourn, Vic.

FOR SALE.—AR7 Receiver, 140 Kc. to 25 Mc., good order and appearance. Transmitter phone-c.w. 80 to 10 Mx. in black crackle cabinet. 6V6 osc., 807 final, 6N7s mod. Includes Trimax Hi-Fi Class B driver and multi-match modulation Transformers. Meter switching; professional appearance. Also Crystal, antenna relay, power supplies, £65 lot. Consider separate offers. L. Hearnes, "Radio Australia," Shepparton, Vic.

FOR SALE.—AR8 Receiver in perfect order, new A.C. power pack, new Rola 8" per. mag. speaker, £25; less power pack and speaker, £18. K. Cairns, Hygeia Street, Rye, Victoria.

FOR SALE.—Complete 60 watt phone, c.w. transmitter. Covers 7, 14, and 28 Mc. bands. Ready for immediate use. What offers? N. H. Hollins, 91 Walpole St., Kew, Vic. (WA 9069).

FOR SALE.—Dural tube 1" diam. heavy gauge, numerous lengths to 14 ft. 9d. ft. R. W. Edwards, 15 Hinkler St., Brighton-le-Sands, N.S.W. (LX 1719).

FOR SALE.—Magnificent double conversion superhet (see article "A.R.," March, 1949). Owner selling up. D. R. Ayre, WX 4767 (Vic.), nights only.

FOR SALE.—Station consisting 2/100 w. phone Tx, rack mounted Super Pro and BC342, mod. S/A etc. 6 Mx. Converter, CRO, and workshop full of parts, no rubbish, £250. Consider exchange. Letter only to C. P. Smith, 275 City Road, South Melbourne, Victoria.

FOR SALE.—Type A Mk. III., Transceiver 110-250 AC or 6v. DC, band spread on 80 and 40 and dial directly calibrated in frequency. As new, but no spares, £10. Type 3 Mk. II. Transceiver, converted to 807 in lieu of 6L6 and fitted terminals for plate and screen modulation. Receiver band spread on 80, 40, and 20. Complete with power supply and coils for 80, 40, 20, but no spares, as new £20. English RF unit type 26 converter, covers 50-54 Mc., complete with tubes, new, £5. J. E. Rogers, 61 Broadway West, Yallourn, Victoria.

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

Amateur Radio

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Melbourne, C.1

EDITORIAL

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Victorian Division's 25th Anniversary

This number of "Amateur Radio" marks the 25th Anniversary of the Victorian Division of the Wireless Institute of Australia. On behalf of this Division, I wish to thank the Federal Executive of our Institute for affording me the privilege of writing this editorial.

In thanking Federal Executive I am reminded of changes which have occurred since 1st December, 1925, when our Victorian Division was incorporated under the Companies Act. In the next few years various commercial journals became in turn the official organ of the Wireless Institute of Australia. October, 1933, saw the first issue of "Amateur Radio," as the official organ of the Victorian Division and of the Royal Air Force Wireless Reserve. The editorial by the President, the late George Thompson, claimed approximately 300 members and three affiliated clubs for Victoria. The Victorian Railways Institute Wireless Club was one of these, as it is today. That issue contained an article by Max Howden, VK3BQ, appropriately entitled "Simple Crystal Control." It was a veritable milestone in Amateur Radio. In November, 1933, the editorial stated that "we have been honoured and are proud to state that this journal is now recognised by the Federal Headquarters as the official organ of the Wireless Institute of Australia."

Subscribers to the Memorandum of Association formally incorporating the Victorian Division of the Wireless Institute of Australia were Maxwell Howden, the late R. M. Dalton, B. J. Masters, Bruce Hardie, and the late K. Love. To these men and others of that time, Victorian Division owes a good deal. We have benefitted not only from their foresight in organisation, but also from their technical ability in the field of Amateur Radio. Their success in the Trans-Pacific Tests of 1923 and in the first transmission of speech to England in 1924 were steps in a series of remarkable developments.

In those 25 years, Amateur Radio has achieved much. The Victorian Division, now consisting of 720 members, is proud that its members have contributed to those achievements, and it is a loyal section of the parent Australian organisation now consisting of 2500 members.

Yes, those 25 years have seen great things in Amateur Radio in our portion of the Ham world, but we must now look forward. What are the grounds for allocation of portion of modern communication channels for the exclusive use of our section of the community, mainly as a hobby? In present times it is understandable that increasing difficulty is experienced by any section in alienating community property for exclusive use of that particular section. Amateur Radio must feel the affect of this trend. What grounds have we to make special claims and what have we to offer in return?

First to mind is the service of Amateur Radio in emergencies. October issue of this magazine contained a letter of thanks to Amateur operators from the Post Master-General for their help in the flood peril in New South Wales. Members will recall similar instances where Amateur Radio has been privileged and able to afford help to the community, and the recent letter from the P.M.G. is very pleasing and reassuring.

(Continued on Page 11)

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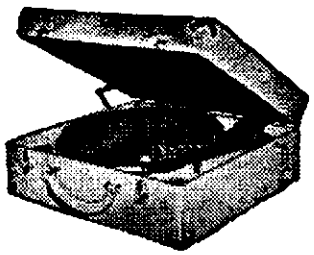

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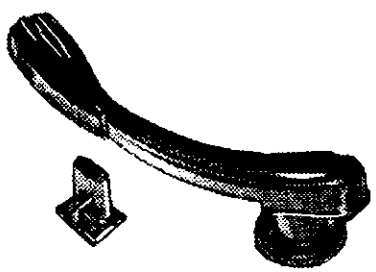

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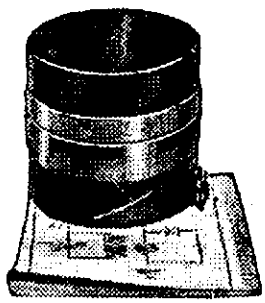

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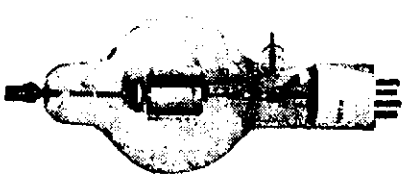

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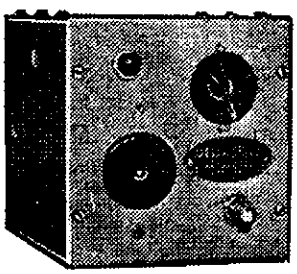

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A complete Portable Recording Studio. Operates from mains, makes commercial standard recordings, complete with amplifier, microphone and two speakers. Housed in leatherette carrying case. Price, complete, **£120.** Terms: £25 deposit, 28/6 weekly.

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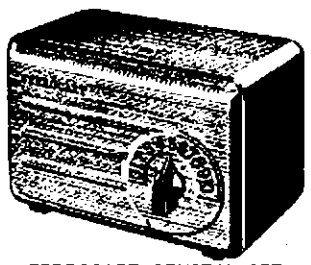

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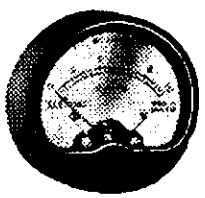
In streamlined plastic cabinet. Complete with Brown's English Headphones. The Ideal Xmas Gift. Price only **£4/12/6.**



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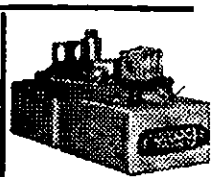
Built with 18 gauge steel. Grey or brown crackle finish. Size 11 x 7 x 5½ inch, **30/-** with panel as illustrated. Sloping front type 9 x 8¼ x 6¼ inch, **24/-.**

New Palec Multimeter, model M30. **£12/17/6** including sales tax. Terms 52/- deposit, 4/6 weekly.

New Capitol Microgram; combined high fidelity amplifier, speaker, electric motor and pick-up, in smart leatherette carrying case. Price, as illustrated, **£25/10/-.** Terms £5/10/- deposit, 8/9 weekly.



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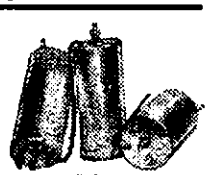
Cut to only **2/11** each.



290 LONSDALE STREET, MELBOURNE — Central 4311

"THE QUIZMASTER"

BY C. A. CULLINAN,* VK7XW

"Have your signals that smooth velvety sound that so many young receivers like to caress?"

"Does your beam put out more signal to the rear than the front?"

"Are you having trouble winding coils for that new receiver?"

"If so, friends, listen closely whilst I tell you about utopia. For nothing down and a quid a week for life you can buy . . ." Hold on, looks as though I'm writing a "commercial," so let's get down to business or rather the "Quizmaster" for this little gadget will give you the answer to many of your problems—in Amateur Radio of course.

So we present "The Quizmaster," a multi-purpose instrument with a host of uses.

Fundamentally "The Quizmaster" comprises a meter, a tuned circuit and a power supply that can be switched to any one of the valves to give a—

- **Grid Dip Oscillator.**
- **Good Phone Monitor.**
- **Field Intensity Meter.**

By-products of these functions (as the atomic boys say) enable "The Quizmaster" to be used as a rough checking frequency meter and a good over-modulation monitor as well as many other functions.

Reference to the circuit shows that as a grid dip oscillator, the tuned circuit is connected to a 6V6G oscillator valve, the meter is inserted in the grid circuit and plate voltage is obtained from a regulated supply using a VR150/30.

In the second switch position another 6SN7 is brought into use. The first half of this valve is employed as a diode and is followed by an audio amplifier. The meter is connected into the diode circuit and is used to check over-modulation, as a movement of the meter during modulation indicates carrier shift.

When the selector switch is moved to the third position, a 6SN7 is substituted for the 6V6G oscillator. This 6SN7 acts as a plate detector driving a vacuum tube voltmeter, the meter being connected to the second half of the 6SN7.

"The Quizmaster" is housed in a small metal cabinet, the front panel of which contains the various controls, also a terminal and a co-ax connector.

It will be observed that the coil has a small primary coil, one end of which is earthed, the other end being brought out to the terminal and co-ax connector just mentioned.

The purpose of this duplication is that when used as a monitor a piece of rigid wire can be connected to the terminal in the fashion of a small vertical antenna. On the other hand, when used as a grid dip oscillator, a low impedance link circuit is employed via the co-ax connector.

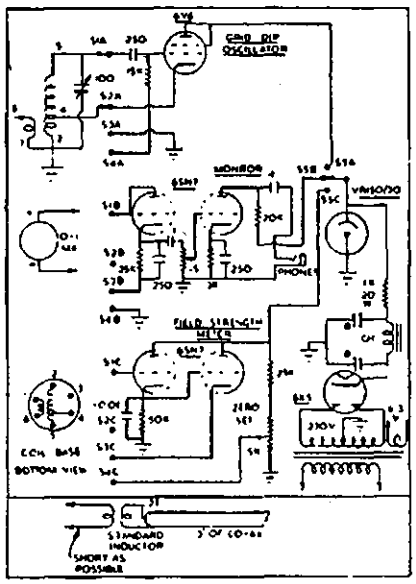
The parts list indicates that the switch must be of the non-shorting type—that is does not short between contacts when being turned. If a shorting type of switch is used, the meter will get banged about during switching unless some means is taken to remove the h.t. voltage.

* 12 Montrose Place, Launceston, Tas.

GRID DIP OSCILLATOR

For use as a grid dip oscillator, the instrument must be calibrated and this can be done in any convenient manner. As "The Quizmaster" is not a precision frequency meter, no attempt has been made to use temperature compensation, etc. However, for grid dip purposes its calibration is sufficiently accurate for Amateur needs—likewise it can be used for approximate frequency measurements. A two-turn coupling coil at the end of a length of co-ax cable or something similar makes a simple job of coupling the oscillator to a tuned circuit under examination.

Care must be taken to avoid mistakes in the dip because of this coupling loop; also the amount of the dip will not be as great as though coupling were made to the main coil. However the link enables one to leave "The Quizmaster" at a suitable spot on the workbench instead of holding it by hand.



CH.—Rola 6 hy. choke, 430 ohms.
Switch (S1, S2, S3, S4, S5)—Five pole, three position four bank non-shorting between contacts.

In construction use a cabinet with a hinged lid and arrange the coil so that coupling can be made to it through the open lid to take care of those few odd occasions when the link does not give sufficient dip.

It is obvious that if "The Quizmaster" has been calibrated in terms of frequency, then the frequency of any resonant circuit within its range can be determined.

On the other hand, if one cares to go to the trouble "The Quizmaster" can also be calibrated in terms of capacity and inductance. This is done firstly by using a fixed condenser of known value at the end of the transmission line and placing across it an inductance, then determining the resonant frequency of the combination. From this the value of the inductance can be calculated and marked on the dial. Other coils are substituted and the process repeated until calibration is complete. Then the process can be revised by using one of the now known values of inductance and substituting various values of capacity to obtain a capacity calibration.

In use, if it is desired to check the value of a condenser, the correct size of "standard inductor" is connected, the unknown condenser is also connected and the capacity read off the dial when the grid dip occurs.

The reverse procedure is used to find the value of an unknown inductance. This is the principle of many of the "inductance-capacity" checkers on the American radio service market. It must be realised that in many cases condensers can be checked in position in a receiver without disconnecting them.

The grid dip oscillator can be used to check aerial systems, but this must be done with discretion as, when so used, "The Quizmaster" is a small transmitter and needless QRM can be created.

PHONE MONITOR

The usual form of station phone monitor consists of a single diode and a pair of headphones, but this system has its drawbacks which "The Quizmaster" removes. Due to the audio amplifier, the coupling to the transmitter is not so critical and a volume control is a convenient method of controlling the volume. In this circuit the meter is in the diode circuit and the coupling to the transmitter should be arranged to give a reasonable deflection on the meter.

During modulation with normal a.m. methods, no movement of this meter should be noticeable. If there is, it will indicate carrier shift which is very undesirable. Carrier shift can be caused by many things, but the two most common causes are over-modulation and poor power supply regulation.

It is not claimed that this monitor will show up all phone faults—hum may not show up due to the poor low frequency response of most headphones, but it will be found more than adequate for the majority of phone monitoring systems, particularly if you have a good recording system to play back to yourself.

FIELD INTENSITY METER

As a field strength meter a small vertical or other aerial is connected to the front panel terminal and the tuned circuit tuned to resonance at the operating frequency. "The Quizmaster" is set up some distance away from the transmitting aerial, and with the transmitter off, the "set zero" knob is adjusted for "0" reading on meter. With the transmitter on, "The Quizmaster" is tuned in exactly and if the meter pointer is hard over, the pick-up aerial is reduced until a desirable reading is obtained. Then without altering "The Quizmaster" or its aerial in any way, any alterations to the main aerial, feeders, coupling and transmitter adjustments will be shown on the meter.

The meter may be calibrated in the following manner. The meter is firstly adjusted to read exactly zero, then the

transmitter is turned on and the pick-up aerial is adjusted to give exactly full scale deflection on the meter, making sure "The Quizmaster" is properly tuned to resonance. Next reduce the power input to the transmitter by exactly half and note "The Quizmaster's" reading. This represents a reduction in signal strength of 3 db. Again reduce power input by half and read the meter. This is another reduction of 3 db or a total of 6 db from full scale reading. The process can be repeated as far as desired.

Alternative calibration can be made by setting the transmitter on one-quarter power and adjusting "The Quizmaster" pick-up aerial to give half scale reading. If then power is doubled, the new meter reading will be + 3 db, and if again doubled it will then be + 6 db. Likewise powers below quarter power can be used to get drops in strength. Of course in the first case if you want to read + or — against half scale, it's only a matter of labelling the meter case correctly.

It must be remembered that this calibration is arbitary. If you take the meter along to a friend's shack and he uses different power or a different aerial or you use a different pick-up aerial, you may get more or less indication on the meter, **but** if you adjust the pick-up aerial so you get full scale deflection irrespective of power, then the meter will read correctly in decibels change.

The meter cannot be calibrated in absolute units of field strength, but only in change in relative strengths and after all, that's what Hams are most interested in with aerial systems.

In conclusion, "The Quizmaster" is one instrument that remains "put" for its uses are legion and this article merely covers a brief outline of its most important uses towards better Ham Radio.

APPENDIX

The 20 watt resistor in the h.t. B plus line is adjusted so that with either 6SN7 switched in, the current flowing in the VR150/30 is between 25 and 30 Ma., but not over 30 Ma. When the 6V6G is switched in the VR150/30's current will drop to about 5 Ma. The voltage at the output of the VR150/30 will remain at 150 volts.

Due to changes in input impedance between the different circuits, the **frequency** calibration of the grid dip oscillator will not hold for the other two functions.

The grid dip circuit can also be used as a wavemeter if a switch is arranged to remove the h.t. from the 6V6G, but the field strength position is much more satisfactory.

Standard Inductor No. 1: One open turn of 1/32" thick brass, 2" diameter by ¼" wide. This is tightly coupled to the two-turn coupling coil on the end of the co-ax cable.

Standard Inductor No. 2: 4½ turns of 16 gauge B. & S. enamelled wire, 2" diameter tightly coupled to the co-ax coupling loop.

If these are to be regularly used, it is recommended that each be made up with its own co-ax cable, otherwise variation in coupling can cause serious erroneous readings.

Connection to condenser under test is via short pieces of brass which must make good fitting to the condenser being tested.

COIL DATA

No. 1—210 turns No. 32 B. & S. enamelled wire close wound on 1½" diam. former. Coupling coil, 30 turns, same wire at earthed end of main coil.—1 millihenry, 500 to 1000 Kc. approx.

No. 2—70 turns No. 32 B. & S. enamelled wire close wound on 1½" diam. former. Coupling coil, 7 turns, same wire at earthed end of main coil.—200 microhenries, 1 to 2.5 Mc. approx.

No. 3—38 turns No. 20 B. & S. enamelled wire close wound on 1½" diam. former. Coupling coil, 4 turns, close wound at earthed end of main coil.—40 microhenries, 2.5 to 5 Mc. approx.

No. 4—14½ turns No. 20 B. & S. enamelled wire close wound on 1½" diam. former. Coupling coil 2 turns of same wire close wound at earthed end of main coil.—10 microhenries, 5-10 Mc. approx.

No. 5—8 turns No. 16 B. & S. enamelled wire close wound on 1½" diam. former. Coupling coil, 2 turns, same wire close wound at earthed end of main coil.—2.5 microhenries, 10 to 20 Mc. approx.

Note.—Coils Nos. 1 and 2 are mainly for inductance and capacity checking.

USING TYPE 19 GENEMOTOR FOR 12 VOLT D.C. OPERATION

The above unit has been operating satisfactorily for the last three years and therefore output ratings and modifications carried out here may be of interest.

The unit is compound wound and needs no starter mechanism. The ratings of the two output windings as given on the name plate are correct with 14 volts at the input terminals, viz.: 275 volts (110 Ma.) and 500 volts (50 Ma.). At 12 volts, these drop to 250 and 450 volts respectively. The 250 volt section is adequately filtered for supplying a v.f.o. and low power stages.

The modifications carried out were to remove switch, input and output sockets, and associated wiring, together with the r.f. choke in the negative input lead. Two heavy terminals were fitted in place of the sockets on the front of the case. The negative terminal grounded to case and connected to negative input brushholder by a heavy lead. The positive terminal connects to the **Series Field** lead through the r.f. choke. Do not connect direct to the brushholder.

Holes may also be cut in the case to allow easy access to the grease nipples on the bearing housings.

On the output side the negative 250 volt remains as originally connected (to ground). The negative brushholder of the 500 volt winding is connected direct to the positive brushholder of the 250 volt winding, thus placing the two windings in series.

The output voltages are approximately 250 volts and 650 volts on load, with the input current running between 12 and 14 amperes.

This unit is supplying a five stage rig including v.f.o., with an input to the final 807 of 45 watts on c.w. The final voltage (600v.) varies less than 20 volts between key-up and key down. However, to obtain good regulation, the input leads must be as short as possible and heavy—not less than 7/.036". At this station, the genemotors are placed as close to the batteries as possible; an automotive horn relay being used to remote control the Type 19.

—J. M. FARRER, VK3DP.

Converting ZB2 Homing Adaptor for 50 or 144 Mc.

50 Mc. Converter

The adaptor in its original state consists of three RF stages using 954 acorn tubes and a detector using another 954. The original frequency band is 234 to 258 Mc., and it should be noted that no oscillator or frequency changer is incorporated. It has been found, however, that it is relatively simple to change the wiring to provide two RF stages, a mixer, and an oscillator, the output of the converter being on 5 Mc. or on any desired frequency which the individual Ham may prefer. The circuit diagram of the finished converter given herewith should assist one in carrying out the modifications, which are listed, for ease in working.

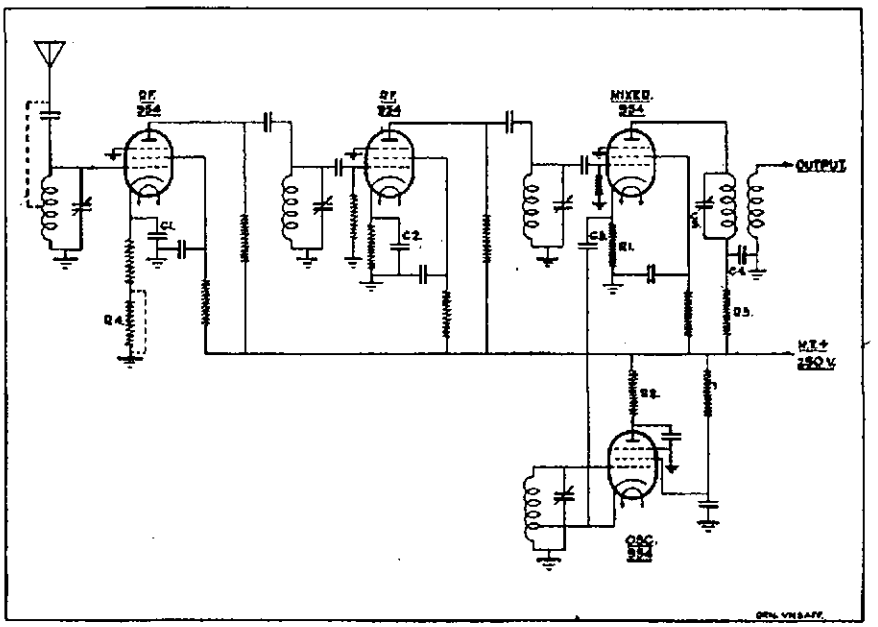
1. Remove all surplus filament wiring and switch, and wire all filaments in parallel for 6.3v. operation. The adaptor was originally wired for 12 or 24v. and the switch was used to change over from one to the other.

2. Remove plugs Nos. 1 and 3 at rear of unit retaining No. 2 plug as power inlet if desired, and the co-ax connectors as antenna input and i.f. output.

3. Commencing with the r.f. stage, cut existing coil leaving ¼" to ⅜" of wire in position for soldering to new coil. Short grid tap on coil to stator of antenna trimmer. Remove ceramic condenser from stator of antenna trimmer to earth. Take out 10,000 ohm resistor in cathode circuit, leaving 1,000 ohm resistor intact and connect to earth, the junction of these two resistors being originally connected to rear plug by plain white wire, also to be taken out. Add a 0.001 condenser from cathode to earth for additional by-passing, otherwise r.f. stages may oscillate because of the lower frequency.

4. The second r.f. stage remains intact with the exception of an additional 0.001 uF. condenser from cathode to earth and a new tuning coil.

5. Convert third r.f. stage to a mixer stage as follows: Remove plate coupling condenser and 30,000 ohm plate resistor. Remove cathode resistor and re-place with 100,000 ohm, which is the resistor removed from the first r.f. stage. Lift cathode by-pass condenser from earth. This condenser serves as a coupling condenser to oscillator (3.3 pF.).



In the schematic diagram the grid condenser and grid resistor to the 954 oscillator were inadvertently omitted, existing components retained.

C1, C2, C4—0.001 uF. condenser.
C3—3.3 pF., lifted from ground.
C5—3/30 pF. trimmer.
R1—100,000 ohm resistor.
R2, R3—30,000 ohm resistor.
R4—100,000 ohm resistor shorted to earth or removed.
Coils—See text.

Quite a number of ZB2 Homing Adaptors have been available on the Disposals market and in response to requests from members, we present herewith a collection of data on the above unit.

The first article we present with due acknowledgement to "Break In," and the latter article to Herb. Stevens, VK3JO.

7. In rear compartment remove existing r.f. choke, strip off the old winding and re-wind with 40 turns of 28 s.w.g., or sufficient to reach output frequency should this be other than 5 Mc. After waxing this coil, wind on four turns over the "cold" end, or more, depending on amount of coupling desired to provide connection for low impedance output. Replace what is now the i.f. transformer and connect the "hot" end to "B" positive through a 30,000 ohm resistor and by-pass to earth through a 0.001 uF. condenser. Place a 3-30 pF. trimmer across primary winding. One end of the output coil is earthed and the other end taken to "output" co-ax. connector. Note that "output" connector is next to plug No. 2.

8. The plate of the oscillator tube is connected to "B" positive through 30,000 ohm resistor.

9. Coils. As mentioned for first r.f. stage, all existing coils are clipped out leaving ¼" to ⅜" of wire to take new coils.

R.f. coils, 11 turns.
Mixer, 11 turns.
Oscillator 14 turns (tapped at 4 turns from ground end).

All coils are close wound on ⅜" diameter former with No. 20 s.w.g. enamelled wire and slid off to leave a self supporting coil.

10. Solder the coils into place to the remaining wires of the original coils. The oscillator coil tap is connected to the cathode of the oscillator tube and also to the mixer tube cathode through the coupling condenser previously mentioned in instruction 5.

11. If a "grid dip" meter is available, all four circuits may now be lined up, r.f. stages and mixer to 50 Mc. and the oscillator to 45 Mc. (if the i.f. frequency is 5 Mc.), using the original air trimmers. At these frequencies the silvered slugs should be completely withdrawn from the coils. Note that as the slug is inserted into the coil, the inductance is lowered, and the frequency increased.

12. All screen circuits remain intact and are connected to "B" positive by the white wire with an orange stripe, and all plate circuits fed by the white wire with red stripe.

13. The original antenna coupling through the co-ax. connector and line to first r.f. stage remains, also the small ceramic condenser coupling to the grid, or tap in on coil to suit impedance of transmission line.

The coils, as specified, give full band spread from 50 to 54 Mc., but to increase the coverage a smaller diameter coil, having more turns, will be required. The converter is very sensitive and the signal to noise ratio leaves nothing to be desired.

144 Mc. Converter

At the outset it was desired to operate the ZB2 as a converter for 144 Mc., feeding into the Type 3 Mk. II. receiver as a receiving set-up for portable use. Conversion along the lines described above for 50 Mc. should prove equally as satisfactory (provided coils of appropriate size are substituted for those specified) as the conversion method to be described, for the only differences are that the oscillator tube used here is a 955 triode, the injection into the mixer stage is by means of the suppressor grid, and the interstage coupling has been modified slightly to give somewhat better performance.

Conversion of the two r.f. stages is as described above for 50 Mc. All heaters are wired for 6 volt operation, unnecessary by-pass condensers and resistors removed, cathode by-passes increased to 0.001 uF., screen by-passes (30 pF.) and resistors (0.2 meg.) remain, but the coupling between first and second r.f. stages and second r.f. and mixer stages is altered so that improved coupling is obtained. The grid resistors, 50,000 ohms, are removed, the grids connected directly to the tuned circuits, and the 5 pF. condensers, so gained, connected in parallel with the 5 pF. coupling condensers from the plates of the first and second r.f. stages to the tuned circuits. R.f. chokes were tried in place of the 30,000 ohm plate resistors, but as no improvement was noticed and as it was convenient to operate the unit from a power supply giving a higher voltage than is recommended for these tubes, the resistors were replaced.

The reasons for the use of the 955 tube as oscillator are twofold: (a) One of the 954 tubes in the unit was found to be defunct, and (b) A 955 reposed in the spare tubes' department. However, getting it going presented one or two difficulties. The circuit used is essentially the same as the above 954 oscillator, the plate of the 955 being fed through a 30,000 ohm resistor, by-passed to chassis with 250 pF. and the cathode tapped up from the "cold" end of the coil. The values of grid condenser and leak are 100 pF. and 20,000 ohms respectively.

Snag number one was in getting the tube to oscillate and was overcome by increasing the value of the plate by-pass from 30 pF. (existing screen by-pass for 954 tube) to 250 pF. as mentioned above. Number two snag was in keeping it oscillating! In order to check that oscillation was occurring (prior to the frequency being corrected) a meter, 0-1 Ma., was connected in series with the grid leak at its earthy end. However, removing the meter leads and connecting the grid leak to earth caused all other symptoms of oscillation to disappear. Putting an r.f. choke (from an I.F.F. unit) in series with the grid leak at its "hot" end and by-passing it with a 30 pF. condenser cured that one.

Injection of oscillator voltage into the suppressor grid of the 954 mixer is accomplished by disconnecting the suppressor grid from the chassis, inserting a 47,000 ohm resistor between these points and then connecting a 5 pF. condenser between the suppressor grid and the "hot" end of the oscillator coil. The plate circuit of the mixer tube is treated as described above for 50 Mc., but the cathode resistor is 10,000 ohms and is by-passed with 0.006 uF., this value being used because it was the first one to be found in the condenser department. Any good mica condenser whose reactance at the intermediate frequency is quite low compared with the value of the cathode resistor, should be suitable.

The aerial coupling should be as tight as possible and the actual method will depend largely on the type of feed line used. In this instance, a "Lenfo" beam fed with 300 ohm twin lead is used, so the co-ax antenna lead was dispensed with and the 300 ohm lead, brought in through the top cover plate, is connected directly to a three-turn coil wound over the top of the three-turn grid coil. Some further experimental work here may be beneficial.

All coils are of three turns, approx. ⅜" diameter. The cathode tap for the oscillator, which is on the low frequency side of the signal frequency, being at one turn from the "cold" end of the coil. Some adjustments, trimming and concertina-ing of the coils was necessary to line-up and track all circuits, but presented no great difficulties and the hash from a superregen receiver gave a rough alignment, final adjustment of the trimmers being made with the aid of various signals on the band.

At this stage it was noticed that tuning was very sharp and it was necessary to adjust the Type 3 receiver in order to tune signals in at all. In an effort to overcome this, the existing drive arrangement for the tuning slugs was removed and a finely threaded ¼" diam. rod arranged to drive them. Even though the push rod has been spring loaded, back lash is still apparent, but it is possible to tune a signal in without adjusting the tuning of the Type 3 receiver. The band is now covered by about 10 or 12 complete revolutions of the tuning knob, compared with about 230 degrees of rotation with the existing drive arrangement.

Results.—Signals which previously were smothered by hash of the superregen. are now audible and, if crystal controlled, quite readable. If from a mod. osc., they may, or may not, be readable depending on the degree of frequency shift under modulation and

(Continued on Page 14)

RESULTS OF 1949 VK-ZL DX CONTEST

The results of the VK-ZL DX Contest for 1949 are published herewith and although the number of logs submitted locally was not an adequate indication of the activity, the general feeling was that an extra good time was had by all concerned and mention is made of the fact that some very good work was done particularly on the l.f. end of the spectrum.

C.W. SECTION

The winner of the **Open Section** for c.w. operation was ZL1MB with a terrific total of 152,847 points in 81 countries, a truly magnificent effort and our congratulations go to him for his effort.

VK2EO made a welcome re-appearance in this Contest and tops the VK end of the scores by a big margin; other State winners were VK3XK, VK4RC, VK5FH, VK6RU, and VK7KB, congratulations to one and all.

Open Section

ZL1MB	152847	VK4RC	24912
VK2EO	130248	VK7JB	22032
VK2DG	95460	VK3DQ	20664
VK2ZC	85640	VK3JI	18093
VK2RA	83148	VK5OU	17346
VK2TF	69135	ZL3AB	11088
VK5FH	62784	VK3PG	9321
VK2JX	62634	VK3ABA	8370
VK3XK	57408	VK5AF	7080
VK6RU	53130	VK3UM	6966
VK7KB	50787	VK5KO	4686
VK3FH	42132	ZL1QW	3180
VK3XQ	36670	VK2IC	2106
ZL1MQ	28776	VK3TX	1008
VK5RX	28204	VK3EG	1005

14 Mc. Section

VK2DG easily proved the best on the 14 Mc. band and his entry of 430 QSOs in 74 countries for the Contest period was excellent—total 95,460 points. Conditions on this band were good for most of the time but were marred by intermittent bursts of bad key clicks from leading ZL stations which, aided by fortunate skip effect, were not sufficiently prolonged to involve disqualification. Local stations were not exempt from this by any means and it is about time that some of the consistent offenders in this respect took a look at their own signals.

VK2DG	95460	VK5RX	17115
ZL1MB	80808	VK3DQ	14312
VK2TF	69135	ZL1MQ	13284
ZL1DV	48216	ZL4BR	11178
VK2ZC	45708	VK4TY	11136
VK7KB	42000	ZL3AB	9360
VK2RA	41748	VK5FM	8502
VK5FH	33462	VK7LJ	7800
VK6DX	28204	VK5OU	7650
VK3XK	24948	VK5AF	7080
VK2JX	22755	ZL11G	3960
VK2OA	21456	VK3YF	2983
VK7JB	19440	VK2IC	2106
VK3PL	19320	ZL1QW	1848
VK5BO	19320	ZL3CP	1620
VK3JI	18093	VK5KO	1479
VK3YD	17205	VK3TX	1008

28 Mc. Section

From a VK point of view the 28 Mc. conditions were good over the first half but fairly poor on the latter end. This did not seem to disturb VK4AP who netted 18792 points in easy style, thus winning the ten metre c.w. section. There was little activity on the 11 metre band.

VK4AP	18792	VK3XK	1365
VK5AE	16416	VK2RA	1008
VK3NM	9792	ZL1MQ	864
VK3HT	6972	VK7JB	720
VK2AHM	4914	VK2GW	384
ZL1MB	3289	VK7KB	357
VK2JX	3120	VK5OU	231
VK2ZC	2040	ZL1QW	162
VK5KO	1479	ZL3AB	81

27 Mc. Section

VK2RA	12
VK2JX	3
VK3EG	3

7 Mc. Section

The 7 Mc. band was wide open for the Hams who wanted to take advantage of it with the result that VK2GW, working here (and on 28 Mc.), had by far the best results of any VK-ZL stations and managed 70 QSOs in 18 countries, and this was good going OM. Congrats!

VK2GW	3780	VK5OU	792
VK5KO	1632	VK2ZC	759
VK3XK	1485	ZL1MB	750
ZL4GA	1470	VK3FA	693
VK2RA	1296	ZL1MQ	528
VK2JX	1260	VK4XJ	231

3.5 Mc. Section

VK5KO takes the cake for his 80 metre work scoring 96 points with six Europeans and two Ws, and was the only log received. The old reliable VK2RA worked DL1FF on 3.5 Mc., but did not submit it as a log.

Check logs for the c.w. section were received from VK4RF, VK2PV, VK2JQ, VK3ASB, and ZL3GR.

OVERSEAS C.W. SECTION

The following are the results for overseas stations for the bands and/or open sections for which they were entered.

14 Mc. Section

W1RY	4080	OE1AD	1500
W1BIH	1950	OE3CC	870
W1APA	1224	OE5AR	480
W2AIS	3969	OE1KR	144
W3OCU	3090	FA8DA	1458
W3ADZ	1710	VU2MA	60
W3KQD	750	DL1FF	3600
W3CGS	480	DL1XS	1188
W3NCF	468	DL1EN	756
W4LZF	1026	DL1TS	744
W5JD	2130	DL1DA	594
W5PKF	1080	DL1FI	462
W5JUF	336	DL1EV	135
W6AM	1344	G6XN	3480
W9AEH	4950	G8KP	1512
W9WEN	936	G5TL	528
W9GDI	1053	GW5SL	3270
W9QLW	63	GM6RV	420
VE3AMK	408	GI4RY	300
ZS5U	504	SM5LL	108
F9BO	1440	SM5TQ	27
F9DW	408	SM3FY	45
F9OL	45	PA0ZL	1134
OE1CD	3000	KP4CC	2220

28 Mc. Section

W1RY	306	ZS5U	1152
W4LZF	234	F9DW	12
W4EEO	60	OE1CD	192
W5PKF	231	OE1AD	72
W6YC	525	OE3CC	18
W8JFC	420	DL1FF	450
W9AEH	945	G8KP	360
W9WEN	12	GW5SL	156

7 Mc. Section

W1RY	108	ZS5U	72
W5PKF	432	DL1FF	96
W9AEH	378		

3.5 Mc. Section

DL1FF	18	DL1YA	3

Open Section

W1RY	9720	DL1EI	486
W2AIS	3969	DL1GU	210
W2EMU	1950	DL1FZ	18
W2EQS	513	G5YV	7056
W3ARK	3120	G8KP	3360
W4KVX	5559	GW5SL	5124
W4LZF	2295	GI4RY	300
W4CYC	1755	SM5WL	2730
W4DRK	234	SM7QY	1080
W5PKF	5184	SM5IZ	672
W5KC	3468	PA0ZL	1134
W5JD	2130	PA0RL	270
W6AM	1344	PA0QF	224
W6GPB	1131	KP4KD	2730
W8OCA	2820	KP4JE	96
W8DAE	696	OK3AL	690
W8PM	324	OK2MA	567
W9AEH	16575	OK1KY	504
W9WEN	1190	OK1XQ	210
VE3AMK	408	OK1DL	180
VE3ACS	96	OK1GT	36
VE1CU	63	ON4AZ	1110
ZS5U	4446	VS1DZ	5952
F9BO	1440	I1KN	3015
F8TM	630	KH6IJ	4920
F9DW	530	CT3AV	48
OE1CD	4872	TF3ZM	18
OE1AD	2262	4X4RE	693
OE3CC	1152	CX3CS	1080
FA8DA	1458	LA7Y	2970
VU2MA	60	LA2B	600
VP1AA	720	LA6U	483
DL1FF	10512	VO6EP	200
DL1FK	5616	OA4J	3600
DL1KB	4176	OZ3FL	3600
DL1DX	3285	ZS6BJ	120
DL3DU	1590		

Check logs were received from:—G3DVM, G3HK, G6CJ, G8PW, G8LN, VP9G, VE3IJ, PA0UV, SM5HH, OK1BM, W1BOD, W1AB, W4PN, W6BVQ, W6NNV, and W8HA.

PHONE SECTION

Open Section

ZL4HP	47616	ZL1MQ	9804
ZL3HC	41760	VK2AMV	4698
VK4KS	38979	VK5LC	1035
VK6KW	15369		

14 Mc. Section

VK4KS	38979	VK6KW	5022
VK3IG	26790	ZL1MQ	4500
VK2US	25704	VK2WD	1050
ZL3HC	17820	VK3MX	297
ZL4HP	12969		

28 Mc. Section

VK5AS	21150	VK6KW	2820
ZL4HP	10875	VK5LC	1035
ZL3HC	4950	ZL1MQ	900
VK6HL	4536		

50 Mc. Section

ZL1MQ was the only station to send in a log for 50 Mc. where he made contact with KH6PP—a fine effort—scoring 3 points.

OVERSEAS PHONE SECTION

Overseas stations have forwarded the following logs:—

	14 Mc.	28 Mc.	Open
PK4KS	108	1458	
PK3WH		1431	
PK3MR			3042
VE3AMK	18		
ZS5DS		30	
PY2CK	1140		
F9BO	483		
DL1FK			1656
W7KK			163
W4EEO		72	
G6XN			1539
OQ5BA			24
CX2CO			162
VS1DZ		1485	
OK1HI			54
ON4AZ	12		

RECEIVING SECTION

Phone and C.W.

In both the number of local and overseas entrants there would seem to be a marked lack of entries. So small in fact that there is doubt that this section is worth persevering with.

VK-ZL Section

BERS195, Eric Trebbilcock, 184 Osborne Street, Williamstown, W.16, Victoria	137808
M. Phillips, Box 33 Warkworth, North Auckland, N.Z.	5460
F. H. Price, 74 Cleaver St., West Perth	3469
A. Moore, 18 Bourne St., New Farm, Brisbane	606

Overseas Section

OE-196, Richard Payer, P.O. Box Knittelfeld, Austria (QRA as from entry)	2304
OE-059	2094
OE-323	849
OE-314	672
DEM-1687	2685
HB9RSE	66
OK1-1647	465
BRS15822	3888
G. Hoffmann, Frankfurt-Hoechst, Emmerich Josef Str., Germany	6783

14th B.E.R.U. CONTESTS, 1951

Dates.—Phone: 1700 G.M.T. February 3 to 1700 G.M.T. February 4, 1951. C.W.: 1700 G.M.T. February 24 to 1700 G.M.T. February 25, and 1700 G.M.T. March 3 to 1700 G.M.T. March 4, 1951. Phone and C.W. have **Senior** (full licensed power); C.W. also has **Junior** (25 watts maximum).

Bands.—Phone: 14 and 28 Mc. only; a.m. or n.f.m. as permitted. C.W.: 3.5, 7, 14, and 28 Mc.; T9 only.

Open to licenced British subjects in British Commonwealth and British Occupation Forces, being fully paid up members of a recognised Commonwealth Society.

Call.—"CQ BERU" and work Commonwealth Stations. Exchange five- or six-figure serials: RST or RS plus three figure number starting between 001 and 400, and increasing by one each QSO.

Scoring.—Commonwealth is divided into 28 zones as below. Fifteen points for first QSO each zone, fourteen for second, thirteen for third, etc., and one point for fifteenth and further QSOs. Scoring system repeats for each zone and for each band. No QSO with own zone.

Entries.—In form shown appended, with declaration (on sheet 1) and zone score analysis (sheet 2). Paper size, Quarto (8 x 10) or Foolscap (8 x 13), Logs in time order.

Post to R.S.G.B., New Ruskin House, Little Russell Street, London, W.C.I, not later than February 12 (phone), or March 12 (c.w.) to be received by June 4, 1951.

Zones:—

1—AP, VU2, 4, 5, VS7.
2—G, GC, GD, GI, GM, GW.
3—DL2, MB9.
4—MD, MF, MS, MT, ZB.
5—MI, ST.
6—VE1, 2.
7—VE3.
8—VE4, 5, 6.
9—VE7, 8.
10—VK2, 3.
11—VK4, 7.
12—VK5, 6.
13—VK9, VR4.
14—VO.
15—VP1, 3, 5, 7, 9.
16—VP2, 4, 6.
17—VP8, VK1.
18—VQ1, 3, 4, 5, ZD6.
19—VQ2, ZE.
20—VQ8, 9, ZC2.
21—VR1, 2, 3, 5, 6, ZK, ZM.
22—VS1, 2, 4, 6.
23—VS6.
24—VS9, MP4.
25—ZD1, 2, 3, 4, 7, 8, 9.
26—ZL.
27—ZS1, 2, 3.
28—ZS4 to 9.

All logs will be acknowledged on receipt. Check logs however small will be gratefully received.

ENTRY, SHEET 1—

B.E.R.U. Contest 1951.....Section

Name (block letters).....Call.....

Input power to final stage.....Watts

Aerial Systems.....
(Other station details may be given.)

Declaration.—I hereby certify that my station was operated strictly in accordance with the rules and spirit of this Contest, and I agree that the decision of the Council of the R.S.G.B. shall be final in all cases of dispute.

Date..... Signed.....

Also, if not a member of R.S.G.B.:—
I hereby certify that at the time of the Contest I was a fully paid-up member of .....

Date..... Signed.....

ENTRY, SHEET 2—
Zone Analysis of Score

Zone	...Mc. Contacts	...Mc. Points	...Mc. Contacts	...Mc. Points	...Mc. Contacts	...Mc. Points
1—AP, VU2, 4, 5, VS7						
2—Great Britain						
3—DL2, MB9						
4—.....						
Totals						

Log Sheets

Date	G.M.T.	Band	Call Wkd.	Serial Nos. Sent	Serial Nos. Rcvd.	Pts. Clmd.	(Leave)

OUR FRONT COVER

Pictured on the front cover is the new transmitter at VK3WI. The background is provided by a photograph of 2CM's transmitter of 25 years ago.

The new VK3WI transmitter as pictured consists: the two lower panels are the main 1,200 volt h.t. supply with the voltmeter in the centre of the top panel. The next panel is the 600 volt minor h.t. supply, bias and filament supply.

The fourth panel contains the relay switching with the control buttons for local control of the transmitter. In the centre of the panel is the minor h.t. voltmeter with the meter switches on either side.

Panels 5, 6, 7, and 8 are the separate finals for each band, the 80 metre final being number 5.

The v.f.o. output feeds via a co-ax line on 3.5 Mc. to an 807 amplifier which drives a pair of 834s in push pull on 80 metres.

When the control panel switch is thrown to 7 Mc., the r.f. from the 3.5 Mc. 807 is directed to the panel above where it is fed into an 807 doubler which in turn feeds a pair of 834s on that band. The same principle is used for the successively higher bands, 14 and 28 Mc.

From the operating desk, band changing is accomplished by simply throwing the appropriate toggle switch for the band required.

This photograph is, of course, only the r.f. section of the complete VK3WI, the audio equipment being housed in a smaller rack.

Unfortunately we were unable to obtain, in time, a description of Charles MacLurcan's (2CM) transmitter, no doubt that will be forthcoming for a future issue.

The Victorian Division wish to express their appreciation to Philips Electrical Industries of Australia Pty. Ltd. for their generous gesture in allowing use of their space on the front cover.

TIME MARCHES ON

This, the 25th Anniversary of incorporation of the W.I.A. in Victoria, marks another milestone in its history—but let us not forget "Old Timers" whose efforts 25 and more years ago laid the foundation of the present-day Wireless Institute of Australia, Victorian Division.

It was hoped to be able to give you a complete history of the W.I.A. over this period, but unfortunately many records cannot be found, consequently we have had to rely on information gleamed from those "Old Timers" who are still available. This article will tell, as far as possible the events leading up to, and those Amateurs who took part in, the incorporation of the Institute.

Unfortunately, many of those who took part in this great work have "passed on" but their work lives on.

As early as 1900, individual members of our Melbourne community had been laboriously carrying out experiments to disclose fundamental knowledge of the new science. Prominent in those days were Mr. Jenvey who made the first wireless tests with the S.S. "Ophir" when King George V., then Duke of York, visited Australia in 1901.

By 1908 quite a few were working with spark coils as the means of transmitting a signal and with coherers as the means of receiving it. The latter was usually constructed from glass tube, silver rod and filings from a threepenny piece. On reception of the signal the filings cohered, at the same time indicating this fact by a suitable electric sign at the receiving station. An electric bell was usually pressed into service to give the coherer the necessary jar to decohere the filings and make them ready to receive another signal. Reception of each dash or dot involved that whole cycle of operations and placed real limitations on speed of reception. Brass rods—usually curtain rods—formed the basis of much of the apparatus to transmit and to receive radio waves more effectively.

By 1909 crystal detectors appeared instead of coherers. These were of galena or of iron pyrites and many were the favoured methods to get the best results from them—leading to the "cat's whisker" days still outstanding in the memory of anyone connected with radio. A list of names of Amateurs in those days would include Bill Jenvey, Alf Avard, Chas Whitelaw and Stan Hosken.

The next two years were very important to Amateurs for 1910 was marked by an unfortunate incident in the United States where signals from a ship in distress were jammed by an Amateur there. This affected the standing of Amateurs all over the world. However, in 1911, whilst the fight for existence was still on, another experimenter in the United States was the means of saving life at sea. He heard a ship's distress signal and was in fact the only one to do so—which re-established in some part the standing of Amateur Radio.

These years saw the formation of the Wireless Institute of Victoria. The driving force in Melbourne was Walter King Witt. A booklet, dated 1914 (a copy of which is held in the Melbourne Public Library) stated in its Preface that:

"This publication, the first of its kind for Australia, has been compiled from official and other authentic sources in order to fill a long felt want by wireless experimenters, and also to show the public to what extent has been the growth of wireless in Australia during the past three years. It is issued with the hope that it may promote both study and experiment in this most useful branch of science."

The booklet published by the Wireless Institute of Victoria listed office-bearers as under:—

President: Vernon Cole, Esq.
Vice-Presidents: W. King Witt, Esq., F. F. O'Shannessy, Esq.
Council: Douglas Harrison, Esq., Herman Lindow, Esq., John Strickland, Esq., W. Ednacott, Esq.
Hon. Corresponding Secretary: C. R. Dodson, Esq.
Hon. Organising Secretary: John Welch, Esq.
Hon. Treasurer: Angus McGregor, Esq.

Victorian Amateurs, under X call signs, numbered 193, with approximately a similar number for New South Wales, and a few in each of the other States.

Outbreak of the First World War gave Institute members an opportunity of showing the value of their training as Amateurs. Their technical knowledge

was far above the average marine operator (of the time) and after a brief course in code, these men were passed into transports and other vessels in war work.

Return to the peace of 1920 brought severe opposition by the Navy to the re-establishment of the Amateur here. With a supporter in W. M. Hughes, Amateurs at last managed to convince Commander Cresswell on the point. Licences were again issued, but at first were for receiving only. A fee of £2 was charged. This, however, was not without its compensations for it made Amateurs here concentrate thoroughly on the art of reception.

Subsequently, control passed from the Navy to the P.M.G's. Department under whom Amateur Radio progressed remarkably well. The name of J. Malone, of the Departmnet, must be mentioned here as a staunch supporter of the Amateur cause in these days. Active in reforming the Institute in those early post-war years was Victor Nightingall, ably supported by W. Conroy as Secretary. H. K. Love at that time asserted in arguments for the Amateur cause that they were fully qualified and could, with encouragement, be equipped to give and receive overseas signals—a statement which was subject to a great deal of ridicule from some. However, a committee was appointed to prosecute the idea. It consisted of H. K. Love as chairman, Max Howden, Ross Hull, E. K. Cox, with C. H. Philpott as Secretary. These communicated with the American Radio Amateur organisation and a test was arranged for May 1923.

Publications setting forth Amateur Radio activities in Australia included the "Radio Experimenter"—the official organ of the Wireless Institute of Australia, and also of the Royal Australian Air Force Wireless Reserve. From these journals and from the daily press of the time, one reads of achievements of Amateurs in Victoria in that post-war period. To view Amateur Radio achievements in the right perspective, one should remember that much of the work was done on wave lengths discarded by commercial radio as of no value.

To return to the test arranged for May, 1923, a report by H. K. Love in "Radio Experimenter" told of organised listening watches all over Australia for the Americans. Many stations heard weak c.w., but no stations were logged. Then came May 10 when Ross Hull, 3JU, between 6.30 and 7.40 heard 6CGW calling TJ. On May 17, word perfect messages were received from 6JD and 6KA, 8,000 miles away. Names of Victorian Amateurs in the news in those years have a familiar ring today 3SW, S. Gadsden; 3GB, M. A. Glover; 3BQ, Max Howden; E. H. Cox, 3BD. With these one must mention the New South Wales Amateurs, 2CM, Charles MacLurcan, and P. S. Nolan, 2YI. The four last mentioned were heard in England in 1925 by numerous stations working over the long path and using wavelengths of 35 to 38 metres. Reception was reported excellent.

FIRST OVERSEAS CONTACT

In 1924, Max Howden, the first Australian Amateur to communicate with England and with America by morse code, conducted a test with Mr. Simmonds, 2OD, of Gerrards Cross, London. This included a test with speech, but unfortunately it was spoiled because trouble with equipment intervened. However, Max Howden later distinguished himself as the first Australian to speak to England by radio—an achievement by an Amateur, before commercial radio entered the field.

It was in this very active period that the Wireless Institute of Australia held its first Convention. Its President in 1924 was H. K. Love; Vice-Presidents, Ross A. Hull and Max Howden; Hon. Secretary, T. P. Court; Organising Secretary, B. J. Masters; General Treasurer, C. Short. Affiliated clubs numbered 23, including those at Ballarat and Bendigo. Its meeting place was first at the rooms of Amalgamated Wireless of Australia. Later, meeting place changed to rooms in The Arcade, Prahran. Originally inhabitated by pigeons for many years, the rooms were made shipshape by the boys who built their own furniture, cupboards and erected their masts complete with 12 feet spreaders. This antenna system was the sight of the town. Subsequently, a move was made to Kelvin Hall, Collins Place, Melbourne.

In 1924 the Victorian Division of the Wireless Institute held an exhibition of equipment, together with trade exhibits in the Melbourne Town Hall.

1925 was a significant year—a year of development. It was fitting that a great wireless exhibition was held in May of that year at Wirth's Olympia, Melbourne. Jerym B. Masters, on whose shoulders rested most of the organising of the exhibition, was a prominent member of the Institute whose President at the time was the late H. K. Love. The prize for best complete station was awarded to W. Gadsden, second prize to M. Chaffer. Kew Club won the prize in the club section. No doubt that equipment was liberally strewn with pancake coils, spiderweb coils, home-made grid leaks and with the new triode valve—articles on the four electrode valve appeared in 1924. One should mention in passing the name of P. H. McElroy, Doyen of the Retail Wireless trade in Victoria and a familiar name of Amateurs seeking material to build their own equipment in those days.

Clubs were numerous in those days. Geelong Radio Club distinguished itself by giving the first complete radio religious service in Australia. It was transmitted by the club from the Newtown Church. Records state that the rectifier used one dozen aspro bottles with aluminium and lead strips. Hawthorn, Prahran, Malvern, East Kew, St. Kilda were each represented by radio clubs of the period. It is in that year, also, we read in the daily press signs of things to come—"Amateurs opposed to wave length restrictions." In that year was held the Federal Conference of the Wireless Institute reported in the "Argus" on September 18. Mention of pirates is found in the news, also fading investigations and day and night effects. One must not let the year pass without listing Charles Whitelaw's transmission from Benalla to Pennsylvania—more Amateurs speak to England and to Holland. In that year also were references to a seemingly incredible fact—that stronger signals were heard at greater distances and so began the piecing together of an interesting story, the results of which many take in a very matter of fact way today.

Whilst 1925 was regarded as a year of development, for much occurred in that year in technical progress, that year also marked the incorporation of the Victorian Division of the Wireless Institute of Australia as a trading body. This step calls to mind the name of J. Malone, at the time Chief Manager Telegraphs and Wireless in the Postmaster General's Department, and respected among Amateurs for his helpfulness and tolerance.

"Radio Experimenter" of that period records a letter from Mr. Malone advising Amateurs to "put their house in order"—advice which led to the incorporation of the Victorian Division of the Wireless Institute—the twenty-fifth anniversary of which we celebrate this year.

EDITORIAL

(Continued from Page 1)

Secondly, Amateur Radio provides a reservoir of trained personnel for defence purposes, and this must weigh heavily in the scales. These important factors should be sufficient to stimulate each Amateur to maintain his station in such a condition that he can put a satisfactory signal on the air in an emergency, despite continual alterations to equipment.

Thirdly, Amateur Radio has reason to be pleased with its contribution in radio research by pioneering short wave communication and in developing new techniques—antenna systems, selectivity devices, instruments and the like. There is every indication that it will continue to make similar contributions in the future.

But there is another aspect which brings us before the public eye more than these. Do we realise what a wonderfully powerful means we have in our hands to promote friendship and understanding between peoples—not only between different States of our Commonwealth and we need that most certainly—but also between people of other lands? But with that power goes a great responsibility—a responsibility to represent our own folk truly and well to other groups about the world. This to me seems to be the greatest task we have as Amateurs, and it is according to the extent to which we measure up to the standards by which others judge our conduct on the air that the future of Amateur Radio will depend.

In the 25 years of Amateur Radio, marked by this number, we have much to be proud of. What can we make of the next 25 years to ensure that we justify and strengthen the confidence of the authorities which we at present enjoy? Victorian Division, in sharing in the pleasures of twenty-five years of achievement, likewise must share in that responsibility.

G. S. C. SEMMENS (VK3GS),
President, Victorian Division, W.I.A.

Western N.S.W. Amateur Emergency Activity

N.S.W. Amateurs during the last 18 months have been active in many emergencies when floodings in many parts of the State caused loss of life and tremendous damage. Due to the abnormal rains and the resultant saturated ground, run off is practically complete and rivers are still rising very rapidly after rain.

With the summer approaching the position should improve, but during late October the Lachlan River was again flooded and Radio Amateurs in the valley were active assisting to maintain communications in the area.

It was evident by Saturday, 21st October, following heavy rain, that a major flood would occur along the Lachlan. Accordingly Jim Corbin, VK2YC, was requested to contact the authorities and inform them that Amateurs in the Forbes district would be requesting permission to handle emergency traffic within the next 24 hours. The next day with flood waters rising, 300 subscribers to the Forbes telephony exchange had lost communication and the main business portion of the town, the District Hospital and the Police Inspector were out of contact.

After an emergency call, official P.M.G. station VNS was contacted on 7 Mc., and permission was granted to handle urgent telephone messages within the Forbes area. Local Amateurs were fully equipped with battery operated equipment as the switch gear in the local sub-station was under water, and a temporary one installed, it was considered that a power failure was imminent.

By this stage, Forbes was cut into three "islands" with Bill Kennedy, VK2BT, operating from one, Jim Carr, VK2JV, from the second—the town itself, where he had a runner to the P.O., John Meagher, VK2AMV, from the third, and Hugh Stitt, VK2WH, from outside the town area; all stations handling urgent traffic as required.

The Amateurs were advised that Army "Ducks" had been dispatched for relief in the area and as they had required assistance in the April floods, a continuous watch was manned on the Army frequency of 3380 Kc. They arrived in the small hours and Amateur assistance was requested. The following morning, 23rd October, VK2AMV obtained permission from VK2AA, P.M.G. station, to co-operate with the Army, and from that date onwards until the departure of the "Ducks" on 28th October, Amateurs were continuously operating on 3380 Kc.

The Hams relayed messages where required and forwarded daily reports to Army H.Q. in Sydney. Later when the "Ducks" were in the Warren area, VK2WH again contacted them and passed further messages to Sydney.

Bands used by the Amateurs during the operation were 3.5, 7, 14 and 50 Mc., plus the Army frequency. Conditions experienced during the period were extremely poor, influenced no doubt by the Aurora disturbance at the time. C.W. proved a blessing and with it quite a percentage of the traffic could not have been handled.

Amateurs who operated in the Forbes area extend their thanks to the many Amateurs in the State who assisted checking transmissions and band conditions, also the P.M.G. Department for the rapid permission given for operation and the help given by official stations.

These floods were the worst experienced in the history of the valley and the Forbes "Advocate" praised the work of the Radio Amateur.

● **It might happen to you so be prepared.**

SUBSCRIPTIONS

● **Please pay your Subscriptions PROMPTLY when due. Failure to do so may result in the loss of valuable issues of "Amateur Radio." High costs of production make it necessary to limit the number of extra copies printed each month.**

DX NOTES BY VK4QL

October produced an even thicker "Ion Curtain" than the previous month. Hard listening to hear the weak signals which did get through was a necessity.

All bands were effected, and to make matters worse, the noise level from static on 3.5 and 7 Mc. prevented listening or operating on those bands for days on end. One notable thing on 14 Mc. was the big changes that took place over a period of 24 hours, and an even bigger change in a week. For example, one week Europe came through until 5.30 p.m. The following week they were non-existent. 28 Mc. showed the same erratic behaviour. Plenty of Asians one night, the next, nil stocks. Europe has been non-existent on 14 Mc. round 6-7 a.m., but North and Central America, with the odd North African, were heard. One morning on a dead band, CR5AC was QSOed at 6.30 a.m. with S7 at both ends. He was just as surprised as I was at the strange conditions. FF8JC was again heard in the same circumstances.

Southern stations seemed to do reasonably well in the VK-ZL Contest, but it was not easy work. ZL1MB did not seem to be "bowling them over" with his usual ease.

FI8BK was QSOed this month. Our QSO was his first on the air and he was going through the usual "jitters we all go through, but he was not helped by the impatient VKs who kept jamming the QSO. All that I could get as far as QTH is concerned is: "I am a French soldier in Indo-China, and will write you." He was not heard after the QSO, so probably went for a "quickie" to recover his composure.

The last week-end of the month produced a "black out" on 14 Mc. ZLs blocked the receiver, but the rest of the signals were very weak and were Oceanic only. The band remained dead on Sunday, except for a brief period round 4.30 p.m. to 5.30 p.m., when some very weak DX got through. Since then the noise level has been extremely high, even on 14 Mc. 7 Mc. has been useless, even the VKs being weak and a "hollow" effect on the signal.

I am indebted to 5JE for dope on 7 Mc. in Adelaide. He mainly operates this band, but the band fell away as the month progressed. However, HC2IH showed up on the band one night and by hooking him, 5JE completed his 7 Mc. W.A.C. Strange, but true, he worked FA8BG at 4.30 p.m. on the last Sunday of the DX Contest. Contacts were made with VS7 and Europe also, so Adelaide produced a W.A.C. in the month for 5JE. He says very good signals came from the States between 5.30 and 7 p.m., then they faded out until 9 p.m., when they returned for a period of an hour. Nothing like that up here. I could not work or hear the South Africans the same as last month. Many thanks Ted. What about somebody else giving me some news, eh?

Listings for the month are not too bad, despite the poor conditions. They are: 28 Mc.—EQ3FM, XZ2EM, ZC6JM, KJ6AL, HS1SS; 14 Mc.—CR5AC (Box 38, Biscau, Portuguese Guinea), FO8AD, IS1AHK, HZ1KE, PK7NL, *3V8BD, VQ8CB, VP3FJ, VP9TT (QSL via the R.S.G.B.), LA2B, ZB2I, HR1DF (Comayaguela, Honduras), KS4AI, FKS8AR (Vienna, Austria), ET9X (QSL via the A.R.R.L.), UF6AC, UF6AP, 4X4BR, 4X4CL, 3A2AB, FF8JC, FI8BK, ET6AC, AC4RM. The last named caused quite some consternation on the band the night he appeared. As was expected, everything but the kitchen sink appeared on the band. A VK3 got the honor. He was being pressed for his QTH, when "foney" was transmitted by another VK3, adding that his signal was coming from the South. The signal from AC4RM was quite strong here, but having no beam, I could not check. Anyhow there was a smart exit from the band of the AC4.

QSLs received were C3MY, Formosa; VQ8CB, KV4AU, VR1C, ZB2I, VP6SJ, SP1SJ, UL7AB, YO3GH, YU3FLA.

Trev., 2NS, is bemoaning the fact he cannot get a QSL from VP2, EA8 and AR8, but is still hoping. I am still trying to get a QSL from FO8AC for VK2, VK3 and VK4 contacts.

The Propagation Bulletin for December does not give much hope for good hunting on 14 Mc., but 28 Mc. and 7 Mc. should be better than the month of November.

● The thought for the month: "Populate or perish." Use the lower frequency bands more, otherwise we will lose them. They are better for cross town chatter than 14 Mc. anyhow.

DX C.C. LISTING

PHONE

Call	No.	Ctrs.	Call	No.	Ctrs.
VK3JD	7	148	VK4JP	8	114
VK8EE	10	138	VK8AWW	14	105
VK3BZ	3	141	VK4WJ	17	104
VK6KW	4	140	VK2ADT	13	102
VK6RU	2	136	VK2AHA	15	102
VK6DD	6	126	VK4WF	16	101
VK3LN	11	125	VK3GG	18	100
VK4HR	12	122	VK3IG	5	100
VK4KS	9	121	VK3JE	7	100

CW

Call	No.	Ctrs.	Call	No.	Ctrs.
VK3BZ	6	183	VK7LZ	17	112
VK2EO	2	152	VK3JE	21	108
VK3CN	1	151	VK4RO	13	107
VK4EL	9	150	VK2GW	16	107
VK3FH	15	150	VK3YD	27	105
VK2QL	5	141	VK3XK	30	105
VK3VW	4	140	VK5BO	33	105
VK3KB	10	138	VK5FH	31	105
VK6SA	28	136	VK3JI	25	104
VK4HR	8	131	VK4FJ	29	102
VK4RF	11	125	VK3APA	14	101
VK6RU	18	125	VK8NO	19	101
VK3EK	3	122	VK3OX	26	101
VK5RX	23	119	VK2OA	32	101
VK3UM	12	116	VK7RK	22	100
VK4DA	7	113	VK7LJ	24	100
VK4DO	20	113			

OPEN

Call	No.	Ctrs.	Call	No.	Ctrs.
VK3BZ	4	202	VK5FL	26	116
VK6RU	8	170	VK2ADT	14	113
VK3KX	1	167	VK4RO	21	110
VK4HR	7	167	VK3ZB	34	110
VK3HG	3	166	VK4WF	40	109
VK6KW	13	161	VK2ZQ	25	108
VK2DI	2	160	VK2YL	11	106
VK3JE	12	154	VK2AHM	20	106
VK4EL	10	150	VK3JI	33	105
VK4DO	15	140	VK3AWN	36	105
VK3MC	5	139	VK2VN	18	104
VK4KS	24	139	VK4UL	27	104
VK8OP	19	137	VK2HZ	17	103
VK6DD	22	138	VK7KB	30	103
VK2ADE	28	133	VK2TI	37	103
VK2AHA	9	128	VK8HO	38	103
VK3LN	29	128	VK7RK	31	102
VK2NS	16	123	VK4TY	35	102
VK4FJ	32	120	VK2AOX	6	100
VK7LZ	23	116	VK2TG	39	100

IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

DECEMBER, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N.-West America	San Francisco
3a	N.-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

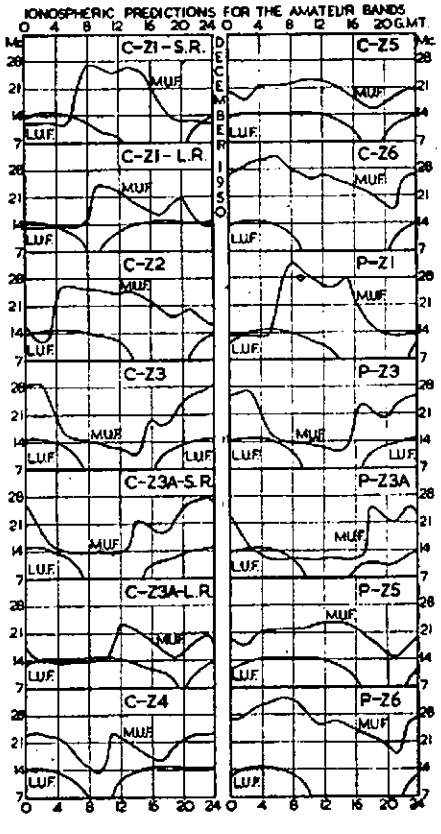
The Perth charts are similar to those based on Canberra.

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 1000 to 2000 hours G.M.T.?
2. Was the 14 Mc. band workable from 0600 to midnight G.M.T.?
3. Was the 28 Mc. band workable from 0200 to 0800 hours G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



ZB2 HOMING ADAPTOR

(Continued from Page 7)

the consequent distortion due to the sharpness of the Type 3 receiver. Noise level is quite low, so low in fact that it is a cause for doubt that the converter is working as well as it could be. Stability of the oscillator leaves quite a lot to be desired and the use of such a selective receiver means that these faults become readily apparent. When operating the ZB2 from the Type 3 power supply, the note from the 955 oscillator is about T4-5. R.f. chokes in the heater leads make no difference, but operating it from a separate power supply causes the note to improve to T6-7. Unfortunately, the design of the ZB2 does not allow much scope for experimentation here and so far no further improvement in the note has been possible, though the same tube in a series fed Hartley oscillator does produce a good clean note.

There is a continuous drift in frequency for 15 minutes or so after switching on and in addition every slight fluctuation in voltage causes the frequency to move. These effects may be overcome by the use of temperature co-efficient condensers and voltage regulator tubes, but to date these have not beeen tried. As it stands, it has achieved its main purpose—a more effective portable receiver than the superregen. detector.

Since writing the above, the output frequency of the mixer has been altered from 9.7 Mc. to 7 Mc. with a consequent increase in strength of both signals and noise. This confirms that the middle range of the Type 3 Receiver now in use has greater sensitivity than the highest range, and also serves to indicate the desirability of using a highly sensitive receiver in conjunction with the ZB2.

CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

The Magazine Committee extends to all members, readers and advertisers a very Happy Xmas and a Bright New Year.

U.C.C. MOVE TO NEW BIGGER PREMISES

Moving an entire factory in three days without serious loss of production calls for first-class organisation. It has been achieved by United Capacitor Co. Pty. Limited.

The Company began on midday Friday, October 20, the move to its own modern factory premises situated at 433 Punchbowl Road, Enfield (LF 3511). The following Monday morning production re-commenced on a worthwhile scale.

The step is an indication of the progress which U.C.C. has made—progress which is very commendable in view of the Company having been formed just a little over twelve months ago by Tecnico Limited in conjunction with several oversea capacitor manufacturing companies.

Interviewed about the move, Mr. R. V. Bridekirk, Director of United Capacitor Co. Pty. Limited and of Tecnico Limited, dealt with the benefits which the new U.C.C. factory should bring to the radio, electrical, and electronic fields.

"This is an important step in the Company's plan to give the trade an even greater volume and range of capacitors," said Mr. Bridekirk. "The new premises will accommodate special machinery expected shortly from overseas, some of which will produce types of capacitors not previously made in this country. New techniques and processes are being introduced in the extra space now available," added Mr. Bridekirk.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

STOP PRESS!

As we go to press we have just received news of the first 50 Mc. openings of the season. On Saturday, 11th November, ZL stations worked into VK5, VK6, and VK7. No details are to hand.

On Sunday evening, 12th November, there was a short break between VK4 and VK3. VK4XN was contacted by VK3BO, but signals faded after reports were exchanged.

On Monday, 13th November, at 1220 hours, VK4BT was worked by VK3RR at McRae, but once again contact was broken by the sudden closing of the band after a couple of transmissions.

50 Mc. ACTIVITY

NEW SOUTH WALES

The month has seen some country contacts with the city, but most of the activity has been directed to getting going for the 144 Mc. contest. There has been no DX openings.

2ANF has 807s in zero bias Class B modulator for an 815 which has resulted in a very nice signal. John is converting a 522 for 144 Mc. 2AWZ, 2JU and 2ANF have been heard working 2GU in Canberra. 2PN in Tumut has been trying to work through to Sydney. 2DV is putting out a nice signal with a 6J6-832A combination. 2JF is a new call sign on the band. 2AQZ has received his old call, 2QZ, back again and has a new rig on the band. 2OS, of Thornton, has a beam 45 ft. high on a new tower and is putting a good signal into Sydney. 2BZ is inactive due to change of address. 2VW is only heard rarely on the band these days, but with any sign of possible DX, he is there. 2AML is a new signal on the band with Dot as second op. This invasion of the v.h.f. bands by YLs and XYLs may cause more use of the 288 and 576 Mc. bands by the misogynists.

SOUTH AUSTRALIA

The highlight of October was the Northern Net Field Day held at Kulpara on the 29th. Ably organised by 5UX, the day was a great success. The portable gear was of excellent construction and a credit to the country boys present. Except for 5GF, 5KL and Joe McAllister, who went up from the city with v.h.f. gear, 5LR's 50 Mc. converter was the only v.h.f. gear seen amongst the Northern Net members. It was a field day for v.h.f. 5GF made contact with 5QR, 5HD and 5MK in Adelaide on 50 Mc. and cross-band duplex 50/144 with 5QR (5GF on 144). Reports were that the 144 signals of 5GF were better than the 50 Mc. The field day phone and c.w. contest were both won by 5GF operating 50 Mc. against the others on 7 and 14 Mc. This only bears out what has been proven before that contact with Adelaide is more reliable on v.h.f. than on the lower frequencies and should be remembered for future field days and should encourage country members to try v.h.f.

5HD having mod. trans. feedback troubles. 5PQ going to Leigh Creek, taking 50 Mc. gear Paul? 5GB, rumour has it you will be heard again soon George. 5SB heard on 50 Mc. the other night when the band looked like opening. 5MK putting in the loudest signal at Kulpara. 5JD has the beam up again and about ready to rotate. 5KE using 50 watts to a pair of 15Es on 288 Mc. 5RR has RL18 super-regen Rx and a pair RL18s in the Tx; reports good results all round the city from Windy Point. 5GL sawed his 50 Mc. beam down, but 144 gear is OK. 5QR been chasing DX on 14 Mc., but will be back on 50 Mc. from now on.

WESTERN AUSTRALIA

Still about the same amount of activity on this band—everyone seems to be waiting for the band to break with the approach of summer. Let's hope conditions are good this year. 6BO has been doing some constructional work and now sports a four over four beam on this band, and results are very excellent. Has also built the exciter about three times in the last month chasing drive, but has sufficient now—when the mains voltage is up. 6GB is very satisfied with his xtal controlled converter for six. Still has the finishing touches to do, but the final result should be very worthwhile. 6FC has been heard back on six after a lengthy absence while his beam was down. Frank may be changing QTH soon to the country and we hope he can get on six from there to provide another country regular. 6GS still putting a consistent signal into Perth from Harvey (80 miles); has been busy working on some super modulation.

6DW from Bruce Rock is also very consistent over the 150 mile path to Perth. During the end of October, his signals peaked to S7-8 at times. 6BO and 6GB worked Don under those conditions for three hours one evening. 6DW has his W.A.S. for six metres confirmed and is the third in VK. Fine work Don. When one considers that every QSO Don has made has been DX and with no local stations with whom to test gear etc., one realises just what a fine job Don has been doing up there in Bruce Rock.

6HL has his mobile all band Tx and Rx working well and it does a fine job on this band. Whilst on vacation down at Karribank, Harry worked 6WG in Albany (35 miles). 6GM is threatening to come onto six, but is very busy putting up a hefty tower at present. How many arrays are you going to stack on it George. 6AS finally wound another grid coil for the 815 and finished up with more than enough drive. Still has to push the three element beam a little higher, but by the time this is printed it should be up. 6HR occasionally appears on the band, but is still looking for more drive for the p.p. 807s. 6LM can transmit on six now but needs a Rx or converter to complete the set-up. 6IG and 6HW have been very quite. In 6HW's case I think boating (or is it yachting) is a bigger attraction than six metres.

50 Mc. W.A.S.

Call	Certificate Number	Additional Countries
VK5LC	1	
VK4RY	2	2
VK6DW	3	
VK4HR	4	1
VK3PG	5	1
VK3RR	6	1

144 Mc. DOINGS OF THE MONTH

NEW SOUTH WALES

2AMJ caused a stir when she appeared on the band with gear borrowed from 2ALO. 2PU has built a 6J6 converter for 144 and won't look at a super-regen now. 2CE came on with a 6J6 mod. osc. with a watt input and his first contact was with the Blue Mountains. 2ADT has worked 2LZ, of Wentwork Falls for the first time on this band. Jack and 2XY, of Lambton, are keeping nightly skeds. 2KF is using an 807 tripler to 144 Mc. 2VU, of Singleton, has made the band after four years using QV6s in parallel line oscillator, modulated by 807s and a ten-tube responsor unit Rx. 2ANU is building a stabilised rig with p.p. 7193s in the final. 2GA, of Gosford, has a Rx on the band with a 3 x 3 beam and has worked Sydney stations cross-band.

2YM brought his portable gear along to 2QZ's one afternoon, but couldn't raise a thing which doesn't sound very hopeful for the proposed use of this band here. At the V.H.F. Section meeting during the month, 2ABH demonstrated some simple converted i.f.f. units for beginners on the band and the conditions of the 144 Mc. contest were finally decided upon.

VICTORIA

The V.H.F. Group meets on the third Wednesday of each month at the W.I.A. Rooms at 8 p.m.—all interested are welcome. The two main items of interest at the October meeting were the Field Day of 15th October and a lecture on U.H.F. by Mr. C. Jackson, of the University of Melbourne.

10th October Field Day Results.—The outstanding event of the day was the break through to VK7 late in the afternoon. Including 7KB, 61 stations on 144 and 50 Mc. participated, 80 of whom were good enough to send in logs. In VK3, 10 portables were active: 3ACH, Mt. Macedon; 3FO, Yarrambat; 3AKE, Barrabool; 3AJI, Mt. Dandenong; 3AAP, Fern Tree Gully; 3APF, Shepparton Golf Links; 3JO, Arthur's Seat, all on 144 Mc.; 3NW, Mt. Donna Buang, on 144 and 50 Mc.; 3HK, Mt. Donna Buang; 3AYJ, Mt. Dandenong, on 50 Mc. 3EN operated from the tower of the fire station at Eastern Hill, and 3AKR joined forces with 3AGD, Dunkeld.

7KB worked 3AKE, 3ED and 3XA on 144 Mc. and 3NW and 3BQ on 50 Mc. He also heard 3EN and 3DA and numerous signals too weak to be identified, and remarks that had more use of c.w. and m.c.w. been made, more contacts would have been possible.

Mr. C. Jackson, in his lecture on U.H.F., touched on various problems associated with lighthouse tubes, Klystrons, and Magnetrons and the means adopted to produce oscillations at frequencies between 2,300 Mc. and 30,000 Mc. To illustrate his points, he exhibited two cavity resonator oscillators using a 2C40 tube, a reflex Klystron for 9-11 centimetres and an eight cavity split anode Magnetron for 10,000 Mc. As references for this work, he quoted Text Book of Radar, C.S.I.R. Aust.; Principle of Radar, M.I.T.; and Electronics, Feb. 1946, pages 3 to 7. After questions had been asked and answered, the meeting accorded a vote of thanks with acclamation to Mr. Jackson.

3APF was unable to work outside the Shepparton area in spite of "A mighty lot of QQs." 3AKR and 3AGD were left lamenting when 7KB broke through and all the beams went in his direction.

Contest Results: Home Section—1st, 3ED, 34 QSOs; equal 2nd, 3EN and 3RV, 20 QSOs. Portable Section—1st, 3AKE, 28 QSOs; 2nd, 3NW, 27 QSOs; 3rd, 3FO, 21 QSOs.

Acknowledgments to VKs 2QZ, 3JO, 5OK and 6AS for the above material.

THE ROSS A. HULL MEMORIAL V.H.F. CONTEST, 1951

The Ross A. Hull Memorial Trophy V.H.F. Contest is a Federal Contest to perpetuate the memory of the late Ross A. Hull whose untimely passing saddened the ranks of Amateurs all over the world. The Contest will be held each year on the 50 Mc. band and the outright winner will hold the trophy until the following year. Certificates will also be awarded to the highest scorers in each State of Australia and each district of New Zealand.

To get this Contest under way for 1950 the N.S.W. Division of the Wireless Institute of Australia are running the Contest on behalf of Federal Executive.

RULES

1. The Contest will commence at midnight E.A.S.T. December 16 and continue through until midnight E.A.S.T. January 7, 1951.

2. Points will be claimed for contacts from home locations using the 50-54 Mc. band.

3. Exchange of RS and RST reports and reference number will constitute a contact.

5. The serial number of five or six figures will be made up of the RS (telephony) or RST (telegraphy) reports plus three figures which may commence with any number between 001 and 100 for the first contact and which will increase in value by one for each successive contact. E.g., if the number chosen for the first contact is 050, then the number for the second contact must be 051, for the third 052 and so on. If any contestant reaches 999, he will then start from 001 and continue.

6. Scoring will be as follows:—

Other than VK and ZL	10 Points
Interstate	1 Point
New Zealand	3 Points

PLUS one (1) point for each complete 100 miles of the contact.

Example: VK2 worked VK7, a distance of 630 miles:—

Contact	1 Point
Distance $\frac{600}{100}$ miles	6 Points
Total	7 Points

7. Point to point calculations are to be measured airline on standard maps.

8. The exchange of serial numbers prior to the contest is forbidden and will be reason for disqualification.

9. Logs are to be set out as follows:—
   (a) Continuous log for period of the contest showing station worked, time of working in E.A.S.T., RS or RST report, and serial number given and received, distance and points claimed, and total points claimed.
   (b) Indication of type of chart or map used to determine distances.
   (c) Append a brief description of the equipment used and notes on impressions and experiences of the Contest.

LOGS MUST BE FORWARDED TO REACH THE CONTEST COMMITTEE, N.S.W. DIVISION, W.I.A., BOX 1734, G.P.O., SYDNEY, NOT LATER THAN THE 12th FEBRUARY, 1951.

10. Entries will be accepted from all States of the Commonwealth and New Zealand.

11. The decisions of the Contest Committee of the N.S.W. Division of the W.I.A. will be final.

12. The results of the Contest will be published in "Amateur Radio."

13. Regulations under your country's administration must be abided by where applicable.

AWARDS

The outright winner of the Contest within the Commonwealth of Australia, will, in addition to receiving a certificate appropriately endorsed, hold the Ross A. Hull Memorial Trophy for a period of twelve months.

The highest scorer in each State of the Commonwealth of Australia, and in each district of New Zealand, will be awarded a certificate appropriately endorsed.

NOTE.—In view of the fact that this will be the first Contest of this nature organised on the v.h.f. bands on a Commonwealth basis, contestants' constructive criticism under part 2 of Rule 9 Section (c) will be welcomed. Every effort is being made to obtain an appropriate trophy for presentation to the outright winner when the results are ready for publication. Help us to help you to make this Contest something to look forward to year after year.

Abstracts from Overseas Magazines

"RADIO AND TELEVISION NEWS," JUNE, 1950

P. 40: "A Portable 40 Metre CW Station;" H. C. Gould, W1KWU.—Regenerative receiver, two stage transmitter run from dry batteries.

P. 42: "A 500 Watt RF Amplifier for the Ham;" H. D. Hoston, W3KPX.

P. 53: "Simplified Ham TV Station, Part II.;" J. R. Popkin-Clurman, W2LNP.—Flying spot scanner, pick-up amplifier, blanking and sound circuits.

P. 62: "Mobile Antenna for 75 Metres;" R. W. Jones, W6EDG.—Centre loaded whip. Test unit for resonating it exactly.

P. 64: "New Applications for Crystal Diodes."—Germanium rectifiers used for (i) Peak to peak voltmeter rectifier; (ii) Diode modulator for signal generator; (iii) Harmonic attentuator; (iv) Voltage regulator for 2 volt supply; (v) Relaxation oscillator.

P. 75: "Ten Ko. to 1 Mc. Multivibrator;" G. Dexter.—Dual range multivibrator (10 Kc. or 1 Mc.) locked to 100 Kc. crystal.

"CQ," JUNE, 1950

P. 9: "The Latest Techniques for the Elimination of Ham TVI;" P. S. Rand, W1DBM.

P. 15: "A Flea-Powered VFO Rig for 10 Metre Mobile Operation;" G. C. Voyles, W9THD.—6AK5 VFO on 14 Mc., 6C4 doubler, 6AQ5 final, 6AQ5 modulator.

P. 17: "The Air Force Interest in Sporadic E Ionization;" N. C. Gerson.—Contains interesting series of maps showing the appearance, growth and drift of a number of Sporadic E "clouds."

P. 20: "The Helical Hi-Pot;" T. Nicholson, W0CKR.—An effective "compressed" antenna for the low frequency bands.

P. 23: "A Flexible 150 Watt Transmitter;" G. E. Rouf, W8OPG.—6SK7 ECO, 6F6, 6F6 isolators, 6V6 buffer doubler, 6V6 or 6L6 doubler, 826 final.

P. 27: "Modifying the BC469 for TVI-Free 40 Metre Operation;" H. S. Brier, W9EGQ.—Good hints on converting a Command transmitter for Amateur use. Improved keying, parasitic debugging and harmonic suppression.

"QST," JULY, 1950

P. 11: "An Accessory for C.W. Reception;" G. Grammer, W1DF.—An audio limiter for saving the eardrums.

P. 14: "All-Driven Arrays;" W. M. Andrew, W3AM.—For those who are fed up with parasitic beams, this article should be just the thing.

P. 18: "An All-Band Crystal-Controlled Exciter;" L. A. Langley, W2CDQ.—6AG7 oscillator, 6L6 buffer-doubler.

P. 20: "Basic Operating Procedure;" B. Goodman, W1DX. Part I., Radio Telegraphy.—Everyone can profit by reading this.

P. 29: "Technical Topics: How to Visualise a Phone Signal."—Sugar coated discussion on sidebands, modulation s.s.s.c. and other similar topics.

P. 31: "Radiator Length and the Gamma Match."—Points out that the Gamma match can only give low s.w.r. if the antenna is tuned to resonance. It appears that the Gamma match is now reactive, i.e., the usual formulae for element lengths apply.

P. 34: "Coil Design for Link-Coupled Circuits;" K. A. Pullen.—Simple method for determining proper circuit constants.

P. 50: "More Effective Speech Amplification;" T. W. Swafford, W5HGU.—Shaped frequency response plus a.g.c. compression.

P. 56: "Hints and Kinks": (i) Combined cleat and counterweight for antennae. (ii) Non-skid bug mounting. (iii) Crystal calibrator and r.f. indicator. (iv) Band-spread for the VFX680. (v) Tapping small coils. (vi) Improved keying for the GF11 transmitter. (vii) Home-built air dielectric co-axial lines.

"CQ," JULY, 1950

P. 13: "The Low Frequency Discone;" M. Seybold, W2RYI.—Discone antenna cut for 11 Mc. Gives flat match to 52 ohm co-ax feed from 11 to over 66 Mc.

P. 23: "Under-the-Dash Mobile Transmitter for 75 Metre Phone Operation;" O. M. Lowery, W4MMK.—6C4 Pierce oscillator, 6AQ5 r.f. final, 6C4 speech amplifier, 6AQ5 modulator.

P. 26: "The Secret Weapon;" H. J. Hanson, W7MRX.—40 and 80 meter transmitter-receiver in 7 x 7 x 14 inch case.

P. 29: "Increasing the Versatility of the Collins 32V Transmitter;" W. I. Orr, W6SAI.

P. 33: "A Modulator for the Medium-Power Transmitter;" M. P. Johnson.—40 watts of audio from class B 24Gs.

"RADIO AND TELEVISION NEWS," JULY, 1950

P. 83: "Oscilloscope for R.F.;" G. Dexter.—Modulation indicator using 5BP1 without any amplifiers.

P. 43: "A V.T.V.M. for A.C.-D.C.-R.F.;" R. P. Turner, K6AI.—Battery operated using 1G4 voltmeter tube and 1A8 diode rectifier.

P. 46: "Simplified Ham TV Station," Part 8; J. R. Popkin-Clurman, W2LNP.—Describes modulator, crystal controlled 420 Mc. transmitter, power supplies and receiver.

P. 53: "The 'Sumodget' Transmitter;" M. E. Lowe, W6NBF.—Super modulation transmitter using two 813s in final.

P. 57: "An Inexpensive Grid Dip Oscillator;" W. Y. Yuenger, W0IOK.—Covers 1-64 Mc. with plug-in untapped coils. Uses electron eye tube as indicator.

"QST," AUGUST, 1950

P. 11: "Better Results on 420 Mc.;" E. P. Tilton, W1HDQ.—Receiver and transmitter ideas for the u.h.f. experimenter.

P. 16: "Basic Operating Procedure;" E. P. Tilton, W1HDQ, Part II., Radio Telegraphy.

P. 19: "A Tunable 75 Meter Mobile Antenna;" C. Buff, W2ABS.—Inductive loading coil in centre of 8 ft. whip.

P. 24: "A Two-Control V.F.O. Rig with Bandpass Exciter, Part I.;" C. V. Chambers, W1JEQ.—120 watts to 829B, f.m. or c.w., 80 to 10 metres. Many ideas for those who like to QSY and jump bands with the minimum of effort.

P. 30: "A Two-Tube Crystal Controlled Converter for 10 Metres;" C. L. Faulkner, W6FPV.—6AK5 r.f., 6J6 mixer, harmonic crystal oscillator.

P. 35: "A Mobile Converter for 144 Mc.;" P. S. Rand, W1DBM.—6AK5 r.f., 6J6 mixer-oscillator.

P. 45: "Hints and Kinks": (i) Adapting the co-ax s.w.r. meter for 300 ohm twin lead. (ii) Audio filter connection. (iii) Home-made insulators from salvaged medical gear.

P. 46: "T.V.I. Tips": (i) High pass filters. (ii) A co-ax filter.

"CQ," AUGUST, 1950

P. 11: "How to Neutralise Your Single Ended Tetrode Final;" W. B. Bruene, W0TTK.—Capacity bridge neutralisation for 807, 813, etc., plus a special trick for 813s by using the beam forming plates for neutralising. Same idea can be used to neutralise receiver i.f. stages if they want to take off.

P. 14: "Gain Without Headaches;" C. K. Falar.—Uses of the Wallman cascode circuit.

P. 15: "W9EGQ Builds Another Beam;" H. S. Brier, W9EGQ.—Three element 20 metre and four element 10 metre beams interlaced.

P. 20: "CQ Tests the Lysco Transmitter;" A. E. Hayes, W2BYF.—Comments on commercial 25 watt transmitter. 6AG7 v.f.o., 6AG7 buffer, 807 final, band switched 160 to 10 metres.

P. 22: "Use Your 304TLs;" E. P. Bonner W5RCA.

P. 24: "SCR274N Transmitter Modifications;" J. N. Whitaker, W2BFB.—Useful alterations for making these popular disposals items more suitable for Amateur operation.

P. 29: "Building a Non-Guyed Steel Tower;" G. D. Johnson, W0TJ.

P. 31: "Real Audio Selectivity Using Standard Parts;" L. F. Fleming.—Three section LC filter using small power filter chokes.

"RADIO AND TELEVISION NEWS, AUGUST, 1950

P. 20: "Radio Control of Model Boats;" W. L. North, W4GEB.—Very simple radio control equipment.

P. 46: "A Simple Noise Limiter;" R. P. Haviland.—1N34 and 0.5 meg. resistor connected across audio load resistor of the second detector.

P. 47: "Voltage Regulation for Higher Fidelity;" J. C. Hoadley.—Good article on VR power supplies.

P. 51: "A Compact Amateur Band Superhet;" R. D. Zimmerman, W3KOY.—3.5 to 54 Mc. plug-in coils. Twin triode mixer, 1,600 Kc. i.f.

P. 61: "Complete 30 Watt Ham Station;" S. Johnson, W0LBV.—Transmitter 6L6 c.o., Receiver 6K8 mixer, 6SN7 regen. detector and audio.

P. 66: "Home Built 2 Inch Oscilloscope;" J. S. Anderson, W9UFE.—Usual simple c.r.o.

"CQ," SEPTEMBER, 1950

P. 13: "Building and Using the Antennascope;" W. M. Scherer, W2AEF.—The Antennascope can be used to determine antenna resistance and resonance, to match transmission lines for minimum s.w.r., to find receiver input impedance and other r.f. measurements. Consists of a simple resistance bridge and looks like an extremely valuable instrument round the shack.

P. 19: "Push-Button Control Circuit;" W. Waite, W8GDQ, and G. Gnandt, W8AIK.

P. 20: "How to Build an Operating Console;" C. A. West, W2IYG.

P. 24: "Simplicity on Six;" C. O. Bishop, W7HEA.—6J6 oscillator-mixer with R9-er type input matching and 5 Mc. i.f. output.

P. 27: "Pi Network Tank Circuits;" E. W. Pappenfus, W0SYF, and K. L. Klippel, W0SQO.—The good oil on the adjustment of pi networks.

P. 34: "Four-Band Mobile Rig;" H. Bumbaugh, W6HI.—Uses 815 final and 815 modulator, covers 80, 40, 20 and 10 metres.

"QST," SEPTEMBER, 1950

P. 11: "Crystal Controlled Converters for V.H.F. Use;" E. P. Tilton, W1HDQ, and C. V. Chambers, W1JEQ.—Low noise converters for 10, 6 and 2 metres, using cascode circuit in push-pull 6J6 circuit.

P. 17: "The Mountaineer—A Hiker's Portable;" R. W. Vreeland, W6YBT.—Light weight dry battery 80 metre transmitter-receiver.

P. 20: "Another Inductive Coupling System for Rotary Beams;" R. E. Mumma, W8ORI.

P. 28: "A Simple Voice-Operated Keyer for Automatic Break-in Operation;" J. L. Flanagan, W1SJT.

P. 29: "A Two-Control V.F.O. Rig with Bandpass Exciter, Part II.;" C. V. Chambers, W1VEQ.

P. 34: "Safety and Commonsense in Transmitters;" N. K. Bale, W0PXZ.—Chassisless construction with components mounted on panels. Panels hinged on rack opening forward to allow access from the front of the rack.

P. 38: "A Dual Crystal Q5-er;" R. A. Titt, G3CMJ.—Better selectivity from a two-crystal filter.

P. 40: "Working DX;" B. Goodman, W1DX.

P. 44: "Push-Button Power Control Circuits;" V. W. Hansen, W0FUL.

FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President.—J. Corbin, VK2YC.
Secretary.—David H. Doff (VK2EO), Box 1734 G.P.O., Sydney.
Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.
Divisional Sub-Editor.—A. O. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, N.S.W.
Zone Correspondents.—Nth. Coast & Tablelands: J. M. Retallick, VH2XO, Raleigh; Newcastle: H. Whyte, VK2AHA, Vale St., Birmingham Gardens, Newcastle; Coalfields and Lakes: H. Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cumbijowa, Forbes; South Coast and Southern: R. H. Rayner, VK2DO, 42 Pettit St., Yass; Western Suburbs: A. O. Pearce, VK2AHB, 131A Balmain Rd., Leichhardt, Eastern Suburbs: D. B. Knock, VK2NO, 43 Yanko Avenue, Waverley; North Sydney: L. D. Cuffe, VK2AM, 779 Military Rd., Mosman; St. George: J. A. Ackerman, VK2ALG, 32 Park Rd., Carlton; South Sydney: V. H. Wilson, VK2VW, Cr. Wilson St. and Marine Pde., Maroubra.

VICTORIA

President.—G. S. O. Semmens, VK3GS.
Secretary.—C. Dyer (VK3DY), 19 Collington Ave., Brighton (XA 6326).
Administrative Secretary.—Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne, C.1.
Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.
Zone Correspondents.—Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rorke, VK3AKR, Killigrew, Westmere; North Eastern: T. K. Tennant, IS Harold St., Shepparton; Far North Western: M. Folie, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Tinambra; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7196 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intra-State working frequency, 7175 Kc.

VK3WI.—Sundays, 1130 hours EST, simultaneously on 3580 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneously on 3750 Kc., 7196 Kc., 14342 Kc., 52.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7065 Kc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW by arrangement only on the 7 and 14 Mc. bands.

VK6WI.—Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI.—Sundays at 1000 hours E.S.T. on 7196 Kc. No frequency checks are available.

QUEENSLAND

President.—J. F. Pickles, VK4FP.
Secretary.—W. L. Stevens, VK4TB, Box 638J, G.P.O., Brisbane.
Meeting Night.—Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.
Divisional Sub-Editor.—Olive J. Cooke, VK4OO Kuran Street, Chermside, Brisbane.

SOUTH AUSTRALIA

President.—E. A. Barbier, VK5MD.
Secretary.—G. M. Bowen, VK5XU, Box 1234K, G.P.O., Adelaide.
Meeting Night.—Second Tuesday of each month at 17 Waymouth St., Adelaide.
Divisional Sub-Editor.—W. W. Parsons, VK5PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

President.—R. W. S. Hugo, VK6KW.
Secretary.—W. E. Coxon, VK6AQ, 7 Howard St., Perth.
Meeting Place.—Padbury House, Cnr. St. George's Ter. and King St., Perth.
Meeting Night.—Third Tuesday of each month.
Divisional Sub-Editor.—Alec A. Smith, VK6AS, 75 Weston St., Carlisle, Western Australia.

TASMANIA

President.—J. Brown, VK7BJ.
Secretary.—R. D. O'May, VK7OM, Box 371B, G.P.O., Hobart.
Meeting Night.—First Wednesday of each month at the Photographic Society's Booms, 163 Liverpool St., Hobart.
Divisional Sub-Editor.—S. Excell (VK7SJ), 77 Molle Street, Hobart, Tasmania.
Northern Zone Correspondent.—R. H. Kilby, VK7RK, 5 Calvin Street, Launceston.

FEDERAL

F.E. DISCUSSIONS WITH P.M.G. DEPARTMENT

Federal Convention items from the 1950 Convention concerning the Postmaster-General's Department are listed herewith together with the results arising from discussions between Federal Executive and the Department.

Item 27: That Federal Executive approach the P.M.G's. Department for permission to play back recorded 50 Mc. and higher transmissions on those bands. Result: The licensee of any Amateur Station may, in the Amateur frequency bands of 50 Mc. and upwards, record and re-transmit transmissions from other Amateur Wireless Stations operating in these bands. The equipment so employed must be capable of producing recordings of high quality. Re-transmissions made at the request of an individual station to be limited to a period not exceeding five minutes in the aggregate in any one day.

Item 28: That representations be made to the P.M.G's Department for permission to record by modern techniques transmissions of Amateur Stations and play back over the air on frequencies to be laid down by the Department. Result: The Department agrees that the number of permits now issued in the various States to record and re-transmit the emissions from Amateur Wireless Stations operating in the Amateur frequency bands below 50 Mc. shall be increased to allow for the issue of any number of permits up to 10 in New South Wales and Victoria, and 5 in each of the other States. Permits will be issued by each Superintendent to Institute members and non-members in the same proportion as the Amateur Advisory Committee personnel in the relevant State, but where it is found that insufficient non-W.I.A. members than the number concerned in each State desire permission to undertake recordings and re-transmissions of Amateur transmissions, such vacancies may be filled by W.I.A. members. Institute nominees will be appointed by the Superintendent concerned after recommendation by the State body of the Institute.

Item 30: That the P.M.G's. Department be approached for permission to transmit music on Type A3 stabilised emission for experimental purposes on sections of the 50 Mc. band and higher. Result: The Department was unable to accede to the request.

Item 31: That the P.M.G's. Department be approached with a request that all licensees in the Northern Territory be allotted the prfix VK8. Result: For reasons previously explained, this request was disallowed.

Item 32: That Federal Executive be asked to endeavour to speed up the allocation of the 21 Mc. band in view of the large amount of commercial interference on the 7 and 14 Mc. bands. Result: Pending implementation of the Atlantic City Frequency List, the Department is unable to take action as requested.

Item 33: That Federal Executive approach the P.M.G's. Department for permission to broadcast from the Institute stations, talks of a technical nature such as those given at monthly meetings. Result: As an extension of the existing approval is given for one of the weekly broadcasts in each month to include technical talks, the total duration of which shall not exceed 30 minutes.

Item 35: That the P.M.G's. Department be approached to extend automatic permission for portable operation to the 27-28 Mc. band. Result: For the reasons explained to representatives, the Department could not agree. (The main reason arising from the discussion between Federal Executive and the Department was that the Department feel justified in knowing where and when a portable station is in operation should it be necessary for them to contact the station in the event of interference in commercial channels. Despite the fact that operators, under the regulations, must sign their call and location at least once every five minutes, the Department consider that with automatic permission for portable operation it would be difficult to police the bands where out-of-band operation or commercial interference may require them to do so. —Federal Secretary.)

Item 36: That representations be made to the P.M.G's. Department for permission to operate transmitters under portable conditions without applying for a portable license, in any frequency band. Result: The Department was unable to accede to the request. (The reasons are in the terms of Item 35 above.)

Item 40: That approval be sought from the P.M.G's. Department for the use of an identifying signal by Amateurs conducting emergency traffic. The signal to have the significance: "I am conducting emergency traffic; please do not cause interference," and that Federal Executive be instructed to give the signal wide publicity. Result: The Department raises no objection to the proposal. W.I.A. Executive to determine what it considers would be a suitable signal and to further discuss the matter with Chief Inspector (Wireless) before introducing the procedure. (Federal Executive requests that members forward suggestions through their Divisional Councils, bearing in mind that the signal must be appropriate and be dissimilar to any other signal used by Commercial Services.)

W.I.A. ACTIVITIES CALENDAR

Dec. 2-3: Fourth All-European DX Competition, 1950—phone.
Dec. 16-Jan. 7: Ross A. Hull Memorial Trophy V.H.F. Contest.
Dec. 18: Motions for 21st Convention due with Divisional Councils.
Jan. 19: Convention Motions due in to Federal Executive.
Jan. 27-28: W.I.A. Nat. Field Day Contest.
Jan. 31: Membership Roll of each Division due with F.E.
Feb. 3-4: B.E.R.U. Contest—Phone.
Feb. 24-26: B.E.R.U. Contest—C.W.
Feb. 28: Convention Per-Capita due with F.E.; end of Fiscal Year of Divisions.
March 3-4: B.E.R.U. Contest—C.W.

PERMITS TO RECORD AND RE-PLAY

The following Amateur Wireless Station Licensees in the various States have been granted permission to record and re-play transmissions from other Amateur Stations during the twelve months ending 1st September, 1951:—

N.S.W.: No applications received.

Victoria: VK3VM, Dr. E. Marks, Malvern; VK3DH, Mr. I. Morgan, Hawthorn; VK3BU, Mr. W. A. Brownbill, Geelong; VK3HF, Mr. H. S. Fuller, Warrnambool; VK3TA, Mr. B. V. Hardinge, Horsham.

Queensland: No applications were received.

South Australia: VK5GL, Mr. C. Tilbrook, Colonel Light Gardens; VK5LK, Mr. Holsten, Unley Park.

Western Australia: VK6KW, Mr. R. W. S. Hugo, Subiaco; VK6JS, Mr. J. Squires, Subiaco.

Tasmania: No applications were received.

APPLICANTS FOR DX C.C. PLEASE NOTE

Prospective members of the DX C.C. are reminded that the cards submitted to the DX C.C. Manager for checking are to be in alphabetical order of COUNTRIES. A list in the above order showing call sign of station worked, date, frequency, and type of transmission must also be submitted.

SUCCESSFUL A.O.C.P. CANDIDATES

The following is a list of candidates who were successful at the examination for the Amateur Operator's Certificate of Proficiency held on Tuesday, 10th October, 1950:—

New South Wales:

Aspery, R. J., 126 Charles Street, Ryde.
Dunford, R. G., John Street, Coonabarabran.
Hanson, N. A., Ryan Avenue, West Kempsey.
Nowill, E. W., 100 Orinan Street, Hurlstone Park.
Rushby, A. W., c/o. Mr. F. Cracknell, Lumsdane Street, Picton.
Shearman, I. A., 182 Douglas Street, Stockton.
Smith, R. R., Cr. Gipps and Cobra Streets, Dubbo.
Tavares, P. A., 39 Prince Street, Randwick.
Taylor, W. D., 14 Forfar Street, Stockton.
Thomas, B. W., 2 Havilah Avenue, Wahroonga.

Victoria:

Akram, M., R.A.A.F. Air and Ground Radio School, R.A.A.F., Ballarat.
Barnes, P. D., 14 Dendy Street, Middle Brighton, S.5.
Caporn, R. F., 12 Roosevelt Court, E. Brighton, S.6.
Cations, J. B., 14 Francis Street, Werribee.
Collins, M. A. L., 18 Natimuk Road, Horsham.
Lawless, L. E., 12 Hall Street, West Brunswick.
McNabb, R. I., Newstead.
Power, J. H., "The Shack," Birdwoodton via Mildura.

Queensland:

Atkinson, J. A., Cr. Meade and Western Streets, Wandal, Rockhampton.
Greenwood, R. H., c/o. Department of Works and Housing, Box 250, Rockhampton.
Weatherley, H. J., East Street, Clifton.

South Australia:

Caldwell, W. C., N.T. Comd. Sig. Sqn. Milto, Darwin.
Corke, B. W., R.A.A.F. Station, Darwin.
Dow, M. R. 80 Alexandria Street, Prospect
Neale, J. B., 9 Deacon Avenue, Marleston.
Schilg, D. F., 44 Janet Street, Marylands.
Smith, B. C. W., 22 Jervois Street, Torrensville.

Western Australia:

Howsett, H. R., 80 View Street, Albany.

Tasmania:

Kirmsse, A. G., Flat 5, 10 Frederick St., Launceston.

ADDITIONS, ALTERATIONS, AND DELETIONS TO AMATEUR CALL SIGNS—OCTOBER, 1950

Additions—

VK2HM—R. S. Sargent, 93 Willison Rd., Carlton.
2ACK—J. A. McCay, "Alray," Boundary St., Tweed Heads.
2AQP—H. F. Powell, 15 Stewart St., Artarmon.
2ASA—W. A. Symons, 53 Ebden St., Ainslie, A.C.T.
2ATB—R. Bamber, 41 Hamilton St., Lane Cove.
2AVS—R. T. Southwood, 183 Liverpool St., Sydney.
2AWY—W. O. Yates, 25 Thomas St., Orange.
2AXM—W. A. McDivitt, 123 Maitland Rd., Mayfield, Newcastle.

VK3ADD—D. C. Dunstall, 11 Chauser St., Moonee Ponds.
3AEE—C. B. Edmonds, Golden Vein, Willowmavin.
3AHH—H. J. Albrecht, 10 Belgravia Ave., Box Hill North.

VK4JG—J. J. Gallagher, c/o. Radio Station 4CA, Cairns.
4LA—W. G. Smith, Walloon Road, Amberley.
4PT—C. R. J. Paton, 3 Jenning St., Toowoomba.

VK5HE—H. V. Eastwood, 23 South Pde., Darlington.
5IM—C. W. Meech, R.A.A.F. Station, Darwin.

VK6BS—B. H. Smith, Avon 19401 or 19400, Manmanning.
6JA—J. A. Cook, 70 Angela St., South Perth.

VK9NY—J. M. Harrison, c/o. A.W.A. Ltd., Aviation Service Depot (Aerodrome, Lae. T.N.G.).

Alterations—

VK2BF—29 Stevenson Street, Birrong.
2MB—51 Watson Street, Bondi.
2XS—90 Spotforth Street, Cremorne.
2ADS—9 Timmina St., Birmingham Gardens.
2AEL—"Rothsay," 147 William Street, Young.
2AFJ—"Forest Glades," Torokina Ave., St. Ives.
2AGA—9 Sylvania Rd., Sylvania Heights.
2AGZ—9 Pleasant Ave., Wollongong.
2AKT—5 Elimatta Rd., Mona Vale.
2ALG—Bourke Street, Parramatta.
2AMW—100 Crown Street, Wollongong.
2ANC—Post Office Road, Darlingford.
2ANO—6 Gore Street, Arncliffe.
2ARE—152 Eastern Valley Way, Castlecrag.
2AVO—8 Smith Street, Wollongong.

VK3SG—23 Jordon Street, Malvern.
3TY—c/o. 8TR, Sale.
3TZ—c/o. Coles Pharmacy, 96 Main St., Stawell.
3ZO—Flat 7, 40 Manningham St., Parkville.
3AOT—53 Deakin St., Essendon West.
3AJZ—A. J. Zarth, 443 Waverley Rd., North Carnegie.
3AWB—558 Bell Street, Preston.

VK4MC—Cr. Sandgate Road and Eton St., Nundah.
4OA—2 Lilley Street, Toowoomba.
4SV—36 Jamieson Street, Bulimba.

VK5CD—32 Kitchener Street, Kilburn.
5CE—285 McBryde Ter., Whyalla (P.O. Box 107)
5KB—D.C.A. Aerodrome, Mount Gambier.
5KU—Shepherdson Road, Mount Gambier.

VK6BP—23 Grand Promenade, Bayswater.
6FL—"Hillcrest," Gooseberry Hill.

Delations—

VK2HE—Cancelled.
2AIX—Cancelled.
2ANY—Cancelled, now operating under VK9NY.
2ARS—Cancelled, now operating under VK4JG.

VK3ACP—Cancelled, now operating under VK2ACK.

VK4RC—Cancelled.
4SJ—Cancelled, now operating under VK2AVS.
4WY—Cancelled, now operating under VK2AWY.

VK5QL—Cancelled.
5SA—Cancelled, now operating under VK2ASA.

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

And yet another for the certificate hunters. The A.R.A.L.V. (Association of Radio Amateurs of Las Villas), Cuba, gives a Certificate or Diploma to all foreign Amateurs who have worked the eight radio districts of Cuba. The QSO may be in c.w. or phone on any band, and s.w.l's. may also claim the award. Forward your eight QSLs to Box 136, Santa Clara, Cuba. The eight districts are as follows: Pinar del Rio, City of Havana, Province of Havana, Isle de Pines, Province of Matanzas, Province of Las Villas, Province of Camaguey, and Province of Oriento. Stations signing CO work c.w. and phone all bands (Class A); stations signing CM work c.w. on all bands, but phone only on 7 Mc. (Class B); CM9 is not a district. It is a prefix allotted for purely experimental work.

KX6AA, Louis Snell, with home QTH at Donnellson, Ill., U.S.A., offers apologies to any station who had to pay surcharges on cards from him. Lou desires all QSLs to be sent to his home QTH and is taking home his log so that he can reply to all cards received.

A "Ham's Interpreter" and abridged dictionary has been published by OH2SQ, Mr. Pentti Aarnio, Helsinki, Taplolantie 21, Finland. The publication has the blessing of the Finnish National Society, S.R.A.L. The book has sections dealing with the alphabet, numbers, general calls, calling other stations, expressions of courtesy, miscellaneous phrases, rigs, modulation, conditions, QSLs, QTHs, examples of QSOs and a glossary of useful words. All of the above subjects are given in English, French, Spanish, Italian, German, Swedish and Finnish. Assistance in the compilation of the book was given by G2AFO, F8LQ, EA2CA, I1BVE, DL3CF, SM5PW, and OH2QZ with OH2US. The book is well indexed and while it appears to have been primarily designed for use by phone stations, it is extremely useful to c.w. stations as well. While the terms of VK licenses ensure that VK stations must make all their transmissions in English, a more comprehensive QSO is now possible by VK stations using English and the foreign station using his national language. The "Ham's Interpreter" will make this possible. Any inquiries regarding the book should be addressed to the author-publisher at the address shown above.

Further interesting news from Max Rieper, VK9MR (ex-VK3AMR), care D.C.A., Madang, New Guinea, indicates that he has completed one year of his three-year sojourn at that location. Max now has installed a beam on 28 Mc. Projected installations includes a BC610 for use on 7, 14 and 28 Mc. (phone and c.w.), but as the only 240/110 tranny he possesses is 0.5KVA and has to supply the SX28 as well as the BC610, there will not be much left for the final. Present rig uses an 815 in final with 70 watts on c.w. and 60 on phone using zero bias 807s as modulators. Max mentions a big swag of cards on the way down but they have not arrived up to 6th November.

Morrie, VK3BZ, having now published a full list of VK DX C.C. awards in November "A.R.," will next turn his attention to an up to date list of countries. Air liaison with A.R.R.L. and R.S.G.B. stations will make the compilation of this list possible at an early date.

Johnny Jones, VK3RG, ex-JA5AJ, has arrived home after a 21 months' sojourn with the B.C.O.F. (R.A.A.F.) at Iwakuni, Japan.

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NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester Street, Sydney, on Friday, 27th October, 1950. Proceedings opened at 7.45 p.m. with a packed house and the ushers were kept busy supplying chairs for the stragglers. What business was outstanding received prompt attention and was finalised.

Angus Robertson, VK2QZ, then delivered his lecture on the subject of "Crystals and Crystal Oscillators." Angus in his usual inimitable style completely debunked the idea that many Amateurs have regarding the stability of crystals in general. Without delving into the realm of higher mathematics, Angus ably demonstrated that drift in a crystal is inherent and according to the type of cut and the temperature regulation.

Angus, then anticipating a later question, described at length the method required to obtain a measurement accurate to one part in one hundred million. He also described other methods of frequency control other than crystal control and precision equipment for frequency measurement that he has seen in operation in various parts of the world. Angus concluded his lecture by adding some words of wisdom on obtaining crystal stability under Amateur operating conditions.

A number of visitors were present including one of the fraternity with a very rare call which made the DX men rather weak at the knees.

Council was authorised by the meeting to take constitutional steps to deal with 170 unfinancial members in accordance with Article 43 of the Articles of Association.

EASTERN SUBURBS

A leaning to v.h.f. channels prevails in the area just now. To be heard on 144 Mc. are 2PU, 2CE, 2AX, and 2AFZ. There are others no doubt, according to the grape-vine. Active occasionally on 50 Mc. is 2AYE who looks like being the number one "All Band Man" around here. 2ARD is temporarily QRT owing to illness in the family (hope it is soon OK OM). Noted that 2MB has a new QTH over in Bondi, so no doubt he will be providing another contact for 2ASE's "Worked All Bond!" award. 2ASE is heard in action on 40 with a coterie of cobbers, and puts out good phone. 2AHQ doesn't appear to find much time for brass-pounding (or phone either) these days, as 'tis understood that three "harmoniques" keep him in harness. 2BC, one of the really old time gang, is not active either, being very QRL with picture transmission stuff in a commercial capacity.

2MY, although having recently acquired a nice receiver, hardly finds time to listen and certainly is not on the air. Daily toil, it is rumoured, may take him over to regions where he may sport a VK6 call sign, but as yet it is only Dame Rumour. 2AIG, always on his favourite band, 40, uses about 10 per cent. time on phone and the other 90 on brass-pounding. Ray is one of those people who keep the key on the operating table for other purposes than just to impress visitors. 2CF appears infrequently on 40 phone with a very nice transmission, but is kept on the go in other directions by studies. They tell me that what John doesn't know about relays isn't worth knowing.

The gem of the month seems to be an unofficial general call initiated ('tis understood) by 2ABD. Colin reckoned that those VKs who so blatantly contact American Amateurs with the purpose of wheedling gear (even receivers) out of them should announce their purpose by calling "CQ ASGAG." Which means simply, "Calling Any Sucker Giving Away Gear." Yea OM, some stations (not in this area) must have given Ws the impression lately that we are an impecunious lot.

The outstanding single sideband exponent in this part of the world continues to be 2CP, who is always ready to pop his QRM-cutting transmission on. He has made lots of overseas (two-ways now using s.s.s.c. The other shining light in that respect, 2AC, doesn't appear to be active. Maybe on v.h.f's. Leo? Over in that Kingsford area there is a bright little gang of 576 Mc. band enthusiasts who are doing good work. They include 2ABH, 2WJ, 2VW.

Noted that a N.S.W. Western Zone correspondent asks, in "AR" for October last, "How many Hams can find a 250 in their shack?" Well OM, if you looked around this area you would find in an Old Timer's collection of odds and ends, not only one or two UX250s, but a yet intact Marconi T250. This latter made a frightful r.a.c. din on "thirty-two metres" and raised a pile of DX in the 1920s. For the edification of youth, the filament requirement for this bottle is 12 volts at 12 amperes!!

Over in Coogee that Contest Warrior 2VA is heard well in the fray whenever the intervals of Contestitis prevail. Vince appears to have blossomed forth again with an array on 20 instead of the rotary dipole that has sat atop the tower of late. Recent visitors in the area have included 3DH, ZL1OF and CCM. 2NO, able to get on the air at intervals, has been in again on one of the "Three Musketeer" contacts with ZL1BQ and JA5AI on 20 metre phone. The opportunity is taken to wish good luck to A.O.C.P. aspirant Harry Oakes of the Centennial Park region in his exam for the coveted ticket. You'll make the grade yet Harry!

WESTERN SUBURBS

2ADL has a new power amplifier in the shape of a recently arrived junior operator. Congrats Ern! 2KS working early morning DX and has been heard working his old friends in Algiers. 2APT is back on again after a bout of pneumonia. Jack is still rather shaky, but hot on the trail of DX. 2XH has been wrestling furiously with his new beam; will unload a big signal soon. 2VY also beam happy and will provide stout competition in the Bankstown area. 2ZF has two new masts up now and finds that getting onto the DX is not so hard after all.

2ABO has been grabbing some good DX on 20 and is never at a loss for words! 2ANC is now in operation from the new location but has little time available; has a big job ahead in building a new house. 2OQ, amazed to hear Harry working a few Russians on c.w. 2ACD has been working some good DX lately; has a folded dipole up and finds it very good. 2AHU is doovering with microphones and now sports a folded dipole.

Z.O's. EXTEND SEASONAL GREETINGS

Country Zone Officers, Crieff 2XO, Harold 2AHA, Harry 2YL, Hugh 2WH, and Roy 2DO, extend to all the country gang the best for the Festive Season. They hope in 1951 to hear of all your doings for these columns. You like to know what the other chap is doing, and they want to know the news of your efforts. So make that New Year's resolution and pass the information along.

NORTH COAST AND TABLELANDS

2RK just returned from holidays and is active on 40 and 80. 2ASO now using phone on 40. The Lismore gang not active or rather audible, believe they yarn amongst themselves on 6. Believe we have two Hams at Byron Bay, has anyone heard of them of late? From Port Macquarie only one signal can be heard, 2PA, although the town boasts five Amateurs. 2ASF keeps Kempsey on the map with his consistant signal on 40. 2AEY had a visit to the Clarence and met the boys on the way—staying the night at Maclean and earbashed 2OE until the early hours of the morning. 2JC making Urunga for Xmas holidays, Hart's XYL has not enjoyed the best of health of late and the zone hopes she is soon 100 per cent. 2WT works plenty of DX with his rhombic.

Most of the North Coast gang have had a visit from the R.I. and had their gear checked over. 2APS off the air with burnt out power supply. 2SR just completed new house, now building transmitter. The "monitor," 2WQ, still listening.. 2ARY still having slight b.c.i. trouble but hopes to clean it up soon. 2CJ building himself a new home. 2APT just completed new transmitter, 813 final. 2AJB active on all bands and will be on 6 after his wife Else and Len have their four weeks' holidays; will be along to the Woy Woy "do." 2AJT putting out good signal with his new mike. 2AWG active again on 40. Congrats to the Forbes gang for the good work done by them during the Lachlan floods. Did anyone hear someone calling CQ Hunter Branch with a r.a.c. voice, it was good to hear the happy gang of 40 members and their wise-cracks in the H.B. "Scramble."

HUNTER BRANCH

Both the October and November meetings of our Branch were well attended. The Committee's idea of presenting two short lectures each meeting appears to be catching on fine, adds greater variety to the night's entertainment as well as getting more volunteers for lectures. The new Secretary, 2SF, is really enjoying himself in the job, he says the work is more than compensated by the pleasure gained in doing it. Incidentally, Varley was able to get on during the Hunter Branch "Scramble" and had his first QSO. Had the pleasure of a visit from the "Duke of Doonside" during the month, Jack 2OF introduced me to "Putt-Putt Pete." Jack made the trip to Newcastle and Maitland district and seemed to enjoy himself.

The highlight of the month was the Hunter Branch "Scramble," oh boy, what a scramble it was, a great time was had by all. 2ADT was the winner (with his 2 metre score) with a dead-heat for 2nd between 2CW and 2ANA on 40. It was almost a triple dead-heat. So popular was the Contest, that it is likely to be an annual affair. Our President, 2CS, came up with a great score on 40 c.w. using his v.f.o.—much to the surprise of all. Yes c.w. is right, he was only a couple of points behind the winners. These 40 boys worked hard and had 2ADT flat out. 2ASJ also put up a great show with his 40 score. It was great to see the friendly rivalry between 2CW and 2ANA who were equal nearly all the way through. The contest certainly gave the v.h.f. band a kick also—there was actually QRM on 6 on the Saturday afternoon. 2FP was about the first to work the Europeans on 10 this summer and did Ern work some! 2AFS was amongst them also, but was away to Canberra for the R.A.A.F. for a while. 2XT finished high in the "Scramble" too, didn't put In full time either; the rotary not yet completed. 2AGY tied up for the last month and was only in the contest for a short while. 2AMM is too good as the Branch Treasurer, was seen giving back money to members at the last meeting—that's one way of balancing the books! 2SA must still be QRL, but hear he thinks Lochinvar is a great place particularly for DX.

2FX is settled down in his new location and is busy on the gear when time permits. The v.f.o. at 2KG is going well—so it won't be long now. 2AAI just made the "Scramble;" a lot of trouble with the gear playing up in the new shack. 2ZC has a very nice converter going on the v.h.f. bands. 2ANA has installed a super-charger in the RA10 now, but forgot to use it in the contest. 2NX has given Ham Radio away from all accounts, has the car "bug" now. Congrats to 2UY and 2VJ on obtaining their 1st class commercial tickets—very f.b. 2LV was putting out a very nice sig on the new exciter. 2ARK also put a signal on 40 and was promptly "jumped on" too. The 20/10 phone man, 2TE, was also on 40 swapping numbers. Bert has some good dope on modulation transformers which we hope he will pass on to the boys in the form of a short lecture—what say? 2PQ has been offered some ridiculous black-market prices for his QTH, but Tom won't sell as he hears everything.

The entire Branch were sorry to hear that 2BZ has been ill, we all wish you a speedy recovery. The boys miss you on 6 and 2. 2OS is putting a very reliable signal into Sydney on 6 with the new beam and should do even better on some QRO soon. 2ADS has been on 6 with a temporary antenna from the new location and is impressed so far. 2AGD has the 20 rotary nearly completed, using brass tubing and should be knocking over the DX by the time these notes appear. 2CN is a pretty good carpenter now-a-days. Bert made an extra good job of the garage and has only been on 40 and 20 with his new AB 807 modulators for limited periods. 2CI very busy travelling, but likes the yarns on 40 with 2ASF, was heard entertaining an OT recently on 40 c.w. 2UF has had trouble with his 6 metre gear, but should be OK now. 2DZ is having fun on 20 working the Gs when time permits. On the lake, 2AMM has been very quiet with an occasional QSO on 40 phone; same goes for 2AGG. 2AFA still working hard trying to get on 40. We have a new Ham in the Hunter Branch, old-timer 2WP, who is at Marks Point temporarily, but Bill hopes

to move to Charlestown very soon; what about coming to our meeting and meet the gang.

Up at Maitland, 2XQ has his emergency rig, the 1196, going very f.b. now—he really did enjoy the "Scramble" from all accounts. The November sked of the emergency net went off OK. DX hound, 2DG, went into the contest too, finishing up with a good score. 2ANL is now active on 6-10-20-40-80 using 807s, signals are very strong in Newcastle, especially on 80. 2ANU hopes to get going on 2 soon, meanwhile is doing very well on 6 with an S5 signal in Newcastle using flea power. 2TY has a private line to KH6 on 10, having had over 100 QSOs with one particular KH6. 2JY only seems to be active on 10, but does well on that band. 2AKP at East Maitland is very QRL, but hopes to get on 6 shortly. 2AHA exchanged a few numbers in the "Scramble." A very merry Xmas to all W.I.A. members from the Hunter Branch boys.

COALFIELDS AND LAKES

Most interest during the past month was centred around the Hunter Branch "Scramble," many stations in the zone took part. Many a story will be told of the way the 50 and 144 Mc. boys stuck to their bands and put up good scores. 2OS, 2YL and 2ADT worked every possible 50 Mc. station in the contest. 2ADT was the only station to concentrate on 144 Mc. work and had contacts with seven stations in Singleton, Newcastle, Kurri Kurri, Cessnock and Lochinvar. 2VU finally made 2 metres by contacting 2ADT using a four element beam. 2KF has an 807 tripling to 144 Mc., goes quite well with 400v. at 60 Ma. 2KZ rescued his 2 metre beam from fowl house. 2TY re-appeared on 2 after an absence of about six months, while 2PZ made time to have a QSO.

2ANU still doing remarkably well with his 4 watts, had several 50 Mc. test contacts, at present is building up 2 metre gear. 2VU is one of the consistant ones on 6 and looking forward to the summer DX. Battling hard to finish cupboard building before DX breaks. 2KF putting out a consistant sig on 2, 6 and 10. Watch out for wire entanglements if you visit Bob; admitted to 2KZ that he couldn't move for wire. Only heard 2YO on 10. 2PZ fairly close now with a converted AT5 for some of the lower frequencies. 2ALR at present not active. 2YL working all bands a little and has got himself on 2; works 2ADT with a dipole in a shack. 2GA is going on 2 and 6, has a good sig on 6 here in the C'fields. 2RU seems to be laying low waiting to pounce on any 6 DX that may show up. 2KR also going on 6, working his locals, but not heard here on Coalfields.

WESTERN ZONE

With the floods out west, the members of the zone have been busy in emergency work. Zone Officer, 2WH, is isolated once again—no mail—for about the twentieth time this year. In Orange, 2ALX has put his AT20 on 6 and 2JW spent a month on 144 listening and calling, but no results. Lost his 144 beam in a blow and will be on 6 soon. In the Blue Mountains, stations are not very active. 2LY specialising in Rxs, the line-up at present is: 15 Kc. to 2,000 Kc. a R.C.A. marine job, Philips No. 4 reception set 1.2 to 20 Mc., HRO 190 Kc. to 30 Mc., and S27 27 to 145 Mc., and an ASV Rx for 144 Mc.—just the bare five; Stan's 30 foot telegraph pole for the 6 beam went up recently. 2RT and 2AQR, both Airways ops., are active on 20 and 40 when home. 2LZ finished the garage and now started the house; the YF was very surprised, didn't think the OM would ever make a builder. OTs remember he built a "Queen Mary once, a receiver five feet long! 2FI doing a little on 7 Mc. 2HZ still busy on the shack between planting spuds. 2EX still working in the garden too, would like to get on 10 again and annoy the Ws during the day.

SOUTH COAST AND SOUTHERN

Mr. Reg George, associate member of Cootamundra, has forwarded along notes for this edition. Within two days of the broadcast from 2WI suggesting that associate members could help the zone officer in collecting notes, we had a letter from Reg offering a helping hand. 2APP active on 40, having a yarn over the back fence with 2TC and 2BT in Forbes. Much discussion on doubler coils, 101s and FS6 power supplies. Say Bill, that 101 must have been altered if it had a 6V6 in it. 2AEL doing a spot on 40, excellent sig seems to be going places. 2PI active on 40 and 20; Les has worked a KR7 on 20. Believe a beam crept into the discussion between 2PI and 2PM—what band fellows? Not 144? 2RM heard on 40 running 100 watts, S meter won't go round more than twice Harry. 'Tis reported the speech quality is very good—guess you must have put some granules in the mike.

2OY burning holes in 40, heard working North Coast stations; little bird tells me your YF won't allow QSL cards to be nailed on the lounge room wall. Jack. 2ON on 40 with nice signal from n.b.f.m.—very pleasing quality. 2AOX laying down swell signal on 40 and has some QSOs on 20; rig has been re-built. 2DY, President of the 'Gong Club, is active under his own call. The XYL is quickly adapting herself to the Ham bands and was heard yarning to her heart's content. 2AER and 2DY had visions of illegal transmitter, etc., on one QSO, but things sorted themselves out to their satisfaction. 2AMW and 2WP also putting forth mighty signals; Bill uses the c.w. to raise DX on 40. Only Wagga station heard, struck some heavy QRM and not much to report other than it was 2AGP. Nil from 2JQ, believe he will be moving to Junee at the end of November. 2ADX active on 80. 2ALS has acquired a Rx bearing the mark SX28, 15 tubes no less and all the refinements. A great improvement was noticed when an extra r.f. stage was added to the AR8, an 1852 doing a fine job. 2DO made a comeback on 40 and had a few words with the boys during a home-to-lunch session.

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VICTORIA

The November monthly meeting was held at the Radio School, Bowen St., Melbourne, on Wednesday, 1st November. The attendance was good despite the transport difficulties, there being approximately 150 members present. The President (3GS) occupied the chair and declared the meeting open at 2000 hours. The usual minutes were read and confirmed and then the President called on the guest speaker of the evening, Mr. Len Jackson, to talk on the ever-absorbing subject—antennae. Len opened his remarks with a brief description of a simple dipole and then proceeded through all types of aerials, right up to the series phased arrays. Numerous questions were fired at Len and the President had to call time, so as to get the rest of the business finished.

A short interval was taken and upon resumption of the meeting the usual reports were given. The most important item was the 25th Anniversary celebration arrangements. By the time this appears in print, the celebrations will be all over. The Secretary reminded members that agenda items for the next Federal Convention should be sent in by the December meeting. The Treasurer's report, as read by the Secretary, disclosed a good balance at the Bank. After a few more items of general discussion, the President closed the meeting at 2230 hours.

3ABA and 3YS look very fit after their holiday in VK2. 3JO still worried about his 955. 3IM very busy with exams. 3LP had trouble with one of his poles, it crashed; George now QRP. 3DY nearly got strangled when his sky wire came down. 3BZ very QRL with DX C.C. claims. 3KE trape-

zodial pattern happy, is building a c.r.o. 3KM is shack happy, complete with blue carpet. 3AJI going QRO on two metres. 3IK very conspicuous by his absence on the air. 3WQ trying hard for Honorary Membership in the Moorabbin Club. 3TF and 3TK rushing around getting all arrangements finalised for the Hamfest.

THE MOORABBIN RADIO CLUB

The October meeting of the Club was held on Friday 20th to a good attendance of members. The President (3KE) occupied the chair and opened the meeting at 2000 hours. The agenda item was a lecture by 3QY on "V.H.F. Frequencies and Radar." The main business discussed was the Honorary Membership Certificates and it was decided to amend the rules as follows: (1) That any station making contact with a member of the Club, who is working portable, the contact will be accepted for the Certificate; (2) Only financial members of the Club will be counted as a claim for the Certificate.

The practical nights are proving very popular with all members and plenty of bright ideas come forth. The Committee was instructed to find ways and means for the purchase of a 16 m.m. sound projector. This will be a great asset for the Club, as there will always be something to interest everybody at each meeting. After routine general business, the meeting closed at 2300 hours. The next meeting will be held on 15th December when a wire recording of Club members, as taken off the air, will be played.

EASTERN ZONE

The Sale sub-branch held their monthly meeting on October 17, there being 17 members present. After discussing various phases of the November Convention. 3ABP took the floor and delivered an interesting address on the Aeradio system in Australia. 3ADF gave us the first of a series of lectures on television. John has taken great pains with this subject, having prepared a large number of diagrams, etc., in fact he dassled us with science. The meeting concluded at 2315, as 3VG was sleepy and wanted to close the hall!

Now for the v.h.f. group. 3VL at Omeo desires it to be known that he is making large preparations for portable work on 6 metres. He has a new xtal which will put him on 50.724 Mc. and the new Rx is about ready. Rex and Gwen have been adding to their new countries list on 20. I have been informed that 3WE is sporting a villainous sandy beer strainer (moustache to you); he has been warned to shave before the Convention! 3IO is travelling round in a Land Rover—these wealthy sheep wallahs! 3VG has a station waggon—that's why we pay a b.c.l. licence fee!

I would like to warn prospective passengers in 3SS' glamour van to insure themselves. His latest effort was a trip to Omeo, and on the return journey a wheel came adrift. Fortunately no one was hurt, apart from the brake drum, which assumed an egg shaped attitude. Next time he went out he got bogged. The Convention will be over when this reaches the newsstands, but I think I can safely say that it was the best yet!

CENTRAL WESTERN ZONE

Those zone members who attended the Stawell Convention will recall 3PD's offer of three miniature tubes for the first two-way contact between Melbourne and the zone. The tubes, two 6AG5s and a 6AQ5, have now arrived, so go to it chaps, and see what you can do. There will be plenty of stations willing to co-operate in Melbourne especially if skeds are arranged.

3XU is doing some considerable re-building, and also taken delivery of a "750" Rx, so things should be much improved round Castlemaine. Is it any good for n.b.f.m. Gordon? 3TZ has his v.f.o. and buffer going nicely, the osc. is on 1750 Kc. and is reactance modulated. N.b.f.m. sounds f.b. and should be OK when an 807 is added as a final. 3DP is going to build up a s.s.s.c. unit using 1.6 Mc. crystals in the filter. 3YW's single sideband unit worked out OK on low power tests. On adding an 815 in Class AB2 for a final stage, it was discovered that the tube had shorted out internally, so the local receivers are safe for a little while longer.

Zone notes would not be complete without 3ARL. Lin had a holiday recently, and it sounded as if he had brought home a spark coil power supply for the modulator. After blaming a new xtal mike, Lin discovered a by-pass had gone in the v.f.o. and then all was well. 3AKW is still very busy with farms, pictures and b.c. stations and has not had time to complete his 144 Mc. converter. 3HL has changed over to "Clamp" tube modulation and is pleased with the result. Allan also had a very nice 28 Mc. converter built up to go ahead of the 348 for "when the band comes good."

3AKP has given his commercial "front end" unit away in disgust and blown the dust off his old and hot receiver and is much happier. Keith is now busy with the Tx and modulation problems. The gang at Horsham, Ararat, Maryborough, and Bendigo have not been heard of late, no doubt they will pop up soon. 3EF came on for a brief spurt a few weeks back. 3HL, 'tis rumoured, has ceased collecting QSL cards and is now collecting hats—Allan how could you at your age!

SOUTH WESTERN ZONE

VKs 3AKR, 3ARL, 3BV and 3PD (ex-7TA) met at 3AGD's at Dunkeld recently to enter in the V.H.F. Field Day. John's beam was erected and 3VF in Drysdale was contacted on 144 Mc. with excellent signals both ways. During the Field Day only three stations were worked, namely 3GM, 3AKE and 3ZL. It has since been found out that the reason no stations were heard after 1600 hours was that beams had all been swung to the VK7 signals which at that time broke through. It is hoped that the boys in the bush aren't forgotten in like manner during the next field day.

3ZU playing about with n.b.f.m. with excellent results. 3MC working plenty of DX on 40. 3BI on 80 and 40 occasionally though still having quite a lot of the old trouble; Bert is going on holidays to VK7 very soon, hope you have a really good time Bert. 3GR been active on 20 and has proved that the band is not as dead as it seems; that two element beam certainly is doing the job.

3AMH reckons he's going to get on 40 soon; when is the eventful date Bill? No word of 3ASV, probably tearing about in that sports car. Recently worked 3AGE on 80; Gordon puts out a whale of a signal with that AT5. Heard 3YE working portable from Lorne and putting in a colossal sig here. 3AGD some time back broke through to Westmere on 144 Mc. for the first time. The Tx used being a 7193 mod. osc. with 2 watts input, has also been heard in Ballarat by 3ZL (a distance of 80 miles).

3BU has been active on 40 using his Type A. 3ALG has a mod. osc. perking on 2 metres at present, and will be completing his 3 over 3 beam for 2 metres soon. 3AJT active on 20 and 10, working Ws. 3AJF been operating on 144 Mc. using a 522 and has been heard in Melbourne at quite good strength. 3ABE has not got his beam in the air yet, has struck a little trouble which we hope he will overcome in the near future. 3AKE active during the last v.h.f. field day. 3BW been on holidays recently. 3VF heard working on 2 metres recently. 3AOL re-building his Rx. 3AIC having a few contacts on 40. 3AGN heard a few times after a short period off the air, is going to change his method of modulation.

GEELONG AMATEUR RADIO CLUB

There was a good attendance of members at the mid-week meeting of the above club. A visitor to the Club on this occasion was 3DQ/3ADQ who was welcomed by the President of the Club. The speaker for the evening was 3APF who spoke on the 18⅓ Set, as used by the Army and came armed with books and blue prints and gave a most informative address.

The following meeting was the field night. The business was cut rather short and members, with the aid of loop antennae (which varied from simple to more elaborate types) and portable Rxs, set off to find the hidden Tx which was operating under the Club call sign of 3ATL. Competition proved very keen as two of the parties arrived in the vicinity of the hidden Tx at the same time. They were 3SY and 3ALG in one party, and 3AKE and 3IC in the other. The Tx was located first by Fred and Jack with Ed and Bob just a few minutes afterwards.

NORTH EASTERN ZONE

3YZ is on 40 more frequently now he has his antenna fixed. Somebody pirating 3ALE on 20; Lea swears he has never called CQ DX in his life. 3FD has some rude remarks about those in town who can't read c.w.; Andy's 32 watt plant will be in action very soon, maybe a little modulation then. On Sunday, 29th October, the zone journeyed to North Nallnga to a picnic site with YLs, XYLs and harmonics, in all a gathering of 37. First there was 3UI who erected the antenna for the portable rig; very soon after, a procession of cars containing 3APF, 3AT, 3KR, 3PF, 3FD, 3YV, 3ACK, 3YZ, 3ALE arrived. 3APF climbed trees to raise antenna with the agility of a boy scout. The broadcast from 2WI was heard but no VK3s, the band being out as far as we were concerned. However, a VK2 was worked through much local QRM as can be imagined with the array of talent present. 3APF took his 6 metre rig (mobile) down the road and a contact was made with 3UI.

Radio appeared to be a secondary consideration as the highlight of the afternoon was an exhibition of cap-line plane flying, kindly put on by 3ACK. There was much excitement when John looped the loop, side slipped, nose dived and crashed the plane much to the disappointment of the old and young fry alike. However, a free flight plane was produced and it certainly did everything, much to the delight of everybody. A vote of thanks to 3ACK for providing the highlight of the afternoon was heartily endorsed by all present. 3AT organised races for the children. Much yarn swapping began to take place among the boys and I suspect among the ladies too. Gear was then packed up, but nobody wanted to move so most of the crowd voted to have the evening meal on the spot. After this was accomplished, the drift began amid adieus, goodbyes, etc. From what I can gather, the whole day was a great success and I wouldn't be surprised if the next Convention was in picnic form, if the XYLs have any say; could be arranged too, no doubt.

QUEENSLAND

It is with deep and sincere regret that we heard that Jack Rintoul's (4JR) little boy, Johnnie, passed away at the tender age of 4 years and 9 months. I know that I for one cannot adequately express my sorrow at such a blow John, but I know I am speaking for the entire gang by offering you, your wife and daughter, our sincere and heartfelt sympathy. May the memories of a brave little boy give you comfort in this, your darkest hour.

Please forward any gossip to me, chaps, care of Box 638J, or at Kuran St., Chermside (4CC). Country members please forward to your respective zone managers. It seems that I have already started putting my foot in the works. A month or two ago in the Brisbane notes I quite innocently stated that 4PX must have an understanding wife. Although I have apologised to Arthur, it is only right that it should be done publicly and it is with humble apologies and deep concern and sympathy to Arthur that we record that he lost his wife 12 months ago.

Recently 6LG was putting in a very powerful signal (two S points over nine on my meter). Len said he had only been on 20 for the past week and at first I thought I was working the alleged "Joey" using his call because no other VK6 stations were audible. He knew the name of the main street in Albany so I don't think I was hoaxed. If you read this Len, am keen to swap cards with you to make sure. 4CI seems to be having tough luck with his modulator or mike. Said he paid ten good Australian pounds for the mike; boy that is practically as much as I paid for the whole rig, almost, anyhow.

Did 4NC ever tell you of the time his mother was visiting him and was trying to pretend she was very interested in Ham Radio? After Charlie had called CQ and said, "And now tuning the band," his mother said, "Ah, that's good, now we might have some music." The other night we had a very good demonstration of what clipping and frequency restriction can do if correctly employed. The demonstrator was 4HR; Tibby certainly has the game tied up. If you are around at 4MD's place, watch out for the Adams-apple-crusher he has on his vertical. Mick says that a three-wire counterpoise has made the world of difference to his vertical, so there is a tip for you vertical cranks—but they must be exactly at Adams-apple height for optimum results.

After an absence from Ham Radio for 11 years, 4IM (ex-2IM) has returned to the fold. Mac is in the shadow of the Story Bridge and one suggestion was to hook his feeder to the end of it, or as an alternative to use it as a boom. It would then be touch and go between 3HW and Mac as to whose was the largest. It was funny when Mac was making one of his first post-war CQ calls; after many unsuccessful CQs poor old Mac, in desperation, said, "For goodness sake somebody please answer me." Although yours truly was waiting to contact 4VJ on some important matter after he had finished his QSO, I didn't have the heart to let a plea like that go unheeded so just had time to put Mac out of his misery and let him know that his signals were nine plus at my QTH.

Thanks to the article featured in the January, 1949, issue of this magazine, 4PR said that for the first time since he had been on the air, he can now claim to be free of b.c.i. If any reader suffers from a tunable type of interference in which case one's signals appear at regular intervals along the b.c. receiver, it is suggested you too share 4PR's happiness; it must be a wonderful feeling Jim. Did

you know that 4IN, now in Brisbane, is ex-G3CUD? Believe Fred is mainly on 40 metres. It was nice to see 4RQ of Longreach at the last meeting as a visitor. 4RT now sports a four element beam, guess he will be too proud to talk to the cross-town DX now; as a matter of fact I haven't yet heard John on the 20 metre band, which reminds me I often wonder what has become of my old pal, 4GJ —haven't heard him for months.

4UX is contemplating installing a voice-operated transmitter control to operate after a delay of four seconds, but 4WG reckons that Claude's transmitter will never go off the air in that case. I wonder what made 4WG suddenly decide to go on the air again. Perhaps the novelty of a new car is starting to wear off.

How on earth 4AH gets into all the strife he does and comes out laughing I'll never know. His latest is that his YF complained that she was getting a "bit of an electrical shock" when she was hanging out the clothes. "Doc" investigated and thought it must have been some of the stray r.f. when he was transmitting—he has more than he wants. Anyhow he smartly altered his decision when he commenced to climb the tower and found that he had turned a few cartwheels and back-flips. It appears that "Doc's" beam is rotated with an electric motor and, in keeping with modern trends, he has a 240 volt excited selsyn transmitter up top as well. Naturally he has to get the juice up to it via wires—yes you have guessed it, the wires shorted during a wind (didn't blow the fuses—must be nails) and touched the tower (can't be earthed). The latter is of metal construction so naturally the clothes line which is attached to it would become quite a lethal weapon. Hope you can make sense of all the above, but it may serve as a warning of what might have happened.

"CLARE'S CORNER"

4UX is back on the air again chasing the DX after a complete re-build; Claude is also the proud possessor of a Halicrafter SX28. 4AH has built himself a new receiver which from all accounts is a super-duper. 4MD not active lately owing to proximity of examinations; best of luck Mick and no doubt you will make up for it when they are all over. Have not heard 4NF on as much as usual; is it the lounge suite or the 866s Noel?

4CC is quite a picture-goer, but I very much doubt if his wife will be able to drag him along to see "Gone With The Wind." Since Clive put his beam up, he has been a little sceptical about it, and even took some photographs before putting it on the pole. Anyway it is still up and doing a good job.—Clare. (4FP must have been worried too—he arrived at my place with four bags of cement for the guy wire posts—gratis. Thanks Jack—Sub-Editor.)

DARLING DOWNS ZONE

Zone activities for the past month have been just the usual run-of-the-mill affairs with one chap working the other for absolutely no reason at all. Conditions generally have improved, particularly on 7 Mc. where the band has been exceptionally good at night with the onset of summer conditions. Some excellent signals have been heard.

4IG and 4JC have been getting out very nicely with creditable phone signals for newcomers to the Ham ranks. Often think it's queer that 80 metres has so few starters in this zone. The Five Fusiliers (the "little" guns) have been playing around with 50 Mc. and 4CG has already QSOed 4KK. Likewise 4KK and 4TY have had some contacts. 4CU, 4XN and 4KK have weekly (sometimes daily) skeds in the wee small hours round 7.30 a.m. An amazing display of stamina for boys of their age. 9.30 a.m. is a nice time for breakfast in any home.

Lots of nice DX coming through on 14 Mc. late at night—midnight on. Europeans in scores, Africans, Asians and South Americans. We heard all Continents in the course of one swish round the band and all over S7. VK1PG (ex-2PG) is on regularly around 1330 G.M.T. 14120-150 Kc. looking for VK contacts. Uses 28 watts to a rhombic. Notice the local emergency net is flopping—some new ideas required along with a recasting of personnel and a change of policy with regard to equipment. The silly business of having to have portable gear wants wiping and an all-Hams-in policy promulgated for the benefit of the community—not the self-glorification of the selected few.

TOWNSVILLE ZONE

4EJ not very active due to newly acquired boat, but talking about installing gear in same. 4LD fairly active on 14 and 28 Mc.; nice quality phone and nice clean c.w. 4GF often heard on late in the evening with a nice signal and fist. 4TU good phone signals from Bill, seems to use 14 and 7 Mc. quite a lot and does well too; he put up a good score in the Remembrance Day Contest.

4QL, when not too busy writing DX notes, finds time to work a bit of DX on 14 Mc.; he also put up a good score in the R.D. Contest. 4BX heard with nice quality phone when time permits. 4WH very active on 14 Mc. and often heard knocking them over in the afternoons; heard doing well in the VK-ZL Contest. 4EL, well I have at last made my electronic bug and very pleased with it. Still keep up my motto of "A European a Day," although it is generally a dozen. Still trying fixed arrays, Lazy H is the best with Collinear next.

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SOUTH AUSTRALIA

The monthly general meeting for the VK5 Division took the form of a "Buy, Sell, or Swap" evening, and to say that it was a huge success could be classed as an understatement. Everybody came along to see the junk, as they called it, and everybody said in a very sophisticated manner, "you don't catch me falling to any of that junk." Certainly they didn't fall for it, they crashed headlong into it. The associate members practically fought with each other for the privilege of bidding against each other and one youngster increased his bid another sixpence without anybody bidding against him. Anyway, it was a wonderful night, and the master of ceremonies, 5BY, did more than his share to make the night a success. 5RF left the meeting loaded like a pack horse with all the radio gear in the world. One associate member had to hire a taxi to take all that he had bought, but the look on his face as he proudly displayed his spoils made many an old-timer wish that he could re-capture the first flush of his enthusiasm for Amateur Radio. To sum it all up, we should have more of these nights.

That stork that was flying around Henley Beach last month apparently gets around because 5BC became the proud father of a baby daughter a couple of days ago, although I have no particulars as yet. Congratulations Madge and Hughie. 5LW is another one who would not listen to my advice about that stork that tried to get down my chimney, and consequently it was attracted by his beam and pausing to see if it was a ten or twenty metre beam, the stork liked the look of the QTH, and to cut a long story short, Ross became the father of a beautiful baby daughter. I rang him up to find out all the particulars and he said that the little darling's name was Bronwyn.

By the time these notes are getting ready for print, 5SL will be getting ready to say "yes." Best of luck Patricia and Laurie, and what about a piece of wedding cake to put under my pillow so as I can dream of my past. You beaut!!

Every month or so I do a bit of a winge about the scarcity of Amateur news and how difficult it is to find enough to fill these notes. Except for a few old reliables who send in some notes regularly, I am forced to work on my imagination quite a lot. Now what about it fellows, it is a lot easier to write facts than to think a lot of fiction, and even

if you only know one little item of interest, you can pass it on to me at a meeting. Don't be frightened that I will give my source of information away because my journalistic ethics wouldn't let me.

The train strike is apparently the cause of the late delivery of the "mag." this month. I did not realise that it was as popular as it is, but when I counted up the number of enquiries that I and other members of the Council have had concerning the lateness of the delivery, well I was amazed. This is all to the good, as I can remember quite well when the same "mag." wouldn't have been missed if it had never turned up.

I noticed in the last issue of the "mag." that Bob Paech (5RL) has now cancelled his licence. I should say that his duties as Chief Engineer of broadcasting station 5KA give him all the radio that he requires, but one thing I am sure of is that he will never forget the lessons he learnt from Amateur Radio, nor the opportunities of practical training that it gave him. Sorry that you are throwing the towel in Bob, but I understand.

Ray Latta (5RA) writes from Darwin to say that at one of the meetings of the Far Northern Zone they were favoured by a visit from 5KO who was making a flying visit to the Territory in the capacity of Radio Inspector. Johnny, in the capacity of a Radio Ham gave them a very interesting talk and answered many questions put to him by members, all of which should prove helpful to the many chaps who are at present studying for their tickets. Between you and I, this has always been a habit of this gentleman, and many a raw beginner can remember Johnny's little word of encouragement or advice, long after the Q signals and procedure that they learnt parrot fashion for the exam. has faded from their memories. Yes I know what you are saying, I'll get on, but all jokes aside, he did as much or more than any VK5 Amateur, to put Amateur Radio and the W.I.A. back into the public eye at the conclusion of the last war. John Emmel (5AS) and his wife (5CV) are at the moment of writing both down South and it is very uncertain as to when they will be back. John is the Chairman and his wife the Secretary, of the above-mentioned Far Northern Zone.

5SA has at last left for the City of Churches and his QTH is Enfield. How about coming along to the meeting one night Bill? 5EB is operating under difficulties at the moment due to an unsympathetic hostel manager who does not like rotary beams and antennae cluttering up the landscape. Keith, however, seems to manage to work his share of DX just the same. 5BV has been in hospital with a broken collar bone as a result of a motor bike accident; he came out for a while, but had to go back again for more treatment. Bad luck, Roy, here's hoping for a speedy recovery. A v.h.f. group has been formed with 5RA as organiser in an endeavour to foster interest in 50 Mc. and Ray would be pleased to hear from any of the Northern Territory boys who may be interested, and Ray also said that if it is only 8 Mc. crystals that is holding you back, then get in touch with him, as he picked up quite a few of these at a recent disposals sale. What more do you want? A potential QRM maker, Ted Fuller, is still anxiously awaiting his call sign, but we believe that the holdup is due to a technicality in his birth certificate. The stork certainly gets around these days. 5RA is now the proud father of a baby daughter and Ham Radio has suffered somewhat in consequence. Thanks for the notes, there is no such thing as stale news Ray.

If I was cornered, I would be the first to admit that I have done a little "crawling" in my time, but I don't think that I have sunk to the depths that one G station apparently has. I heard with my own ears on twenty c.w. the other late afternoon, a G station who is an ex-VK5, say to 5MD, "I am sorry Doc, but I won't be able to stay very long as I am going to take my landlord's little daughter for a motor car ride in a few moments." Well I ask you, could any one sink lower, no wonder he is living in a big slap-up house with more rooms than he can use. Naturally I won't mention who it is that has sunk so low, but I would never have believed that Ross Adey was capable of such tactics, still, as I have said before, one never knows what these doctors will do next.

The danger period for executive officers of the VK5 Council seems to have passed, as both the President and the Secretary are now well on the road to perfect health and have resumed duties. They both had a bad time and we are pleased to welcome them back to Council. 5CH is still not getting much time for Amateur Radio but always manages to keep his skeds on 144 Mc. Claude has had quite a long spell of week-end work at the local power house, but I believe that it is at long last coming to an end. 5MS has just recovered from a beautiful dose of the 'flu (he didn't call it beautiful) and also, Stewart has had his 20 metre beam down for alterations, it is now fed by a T match. 5KB is the latest recruit to 144 Mc. Peter has all the necessary approvals for operating from his new location and although he has had no contacts as yet on the v.h.f., he will be on 40 metres to get his share. 5TW has had another quiet month, but has managed a few contacts on 40 and 20 metres. Tom is still pleased with the new aerial (thanks to our President). You'll get on Col, slipping that one in on me!

5FD has been in the news this month if not on the air. John put the best broadcasting station in the south east off the air the other night when he moved one of the high tension poles out of position with his truck. No serious damage to anybody other than the pole. Listen Col, you got away with the preceding paragraph regarding the President, but I can't let that pass concerning the best broadcasting station. Take ten years' notice.

5KU is now operating with the long awaited AC from his new home and is very pleased with everybody and everything. Erg is on 20 and 40 c.w. 5CJ occasionally is to be heard on 40 and 2 metres, but Col is apparently becoming busier and busier, judging by his declining activity in Amateur Radio. Thanks for the notes Col. 5MS, 5CH, and 5CJ strained their ears listening for 3AKE and the Geelong v.h.f. gang on 15th October, but heard nothing that could be identified.

There is no doubt about it, if one cares to listen on 20, one can quite often hear a few things about oneself, and tonight I heard VR2BJ, an ex-VK5, tell 5LW that it was always possible to keep a check on Ross' skulduggery by reading Pansies notes. Wouldn't it! By the way, this Pansy business is only a joke you know, so the joker that sent me a letter addressed to Pansy Parsons, would he please note.

Twelve months ago today I wrote in these notes that 5TR would be making his own fireworks this year, but if my information is correct (and it was given to me by a female spy, named Mata Hari), Ralph was not very interested this year. A Guy Fawkes party was certainly held at the QTH of Ralph, and one of the guests, 5LW, certainly did arrive home at the obnoxious hour of 3 a.m., but no mention has been made of any home made crackers. My spy also made mention of large quantities of firewater, but definitely did not mention fireworks. Now I wonder just who that female spy could be!

Talking of female spies, if any of my XYL readers would like to let me in on a few secrets of their OMs, I could use them. Now here's your chance girls, some of those things that he does that annoy you so much and yet you don't like to hurt his feelings. Just whisper it to me and he will never know what has happened until the train blows the whistle. You may trust me implicitly my dears. I close these notes this month with a query. What has become of 8BH? I miss his cheery voice on 20. Are you there Charlie?

FIELD DAY AT KULPARA

A successful Field Day was held by the VK5 Northern Network at Kulpara on 29th October. We are indebted to VK5UX for the following details of the event. The gathering comprised approximately 60 people—Hams included 5DR (Kangaroo Is.), 5CY (Balaklava), 5VM (Crystal Brook), 5XR (Peterborough), 5CO, 5EN, 5KS (Port Pirie); 5WO (Laura), 5CE (Whyalla), 5XL (Clare), 5DF (Kadina), 5BJ, 5AL, 5KL, 5GF (Adelaide), and Joe McAlister (unofficially representing the W.I.A.). Local interest was aroused by announcements in local papers and over the ABC and brought non-technical visitors from a 20 mile radius.

Photographs were taken by 5VM. A sack race and an ice-cream-licking competition was run for the children, while bowling at stumps and thread the needle events were organised for the ladies. Mystery parcels for men and women caused some fun. For the men, 5AX finally got what he insultingly called "A heap of junk" (so it was, but he could have called it "disused electronic gear!!"). The lucky and unlucky lady and gent were balloted for and 5DF walked off with three beautiful front-loading bezels that I wanted.

5GF brought both 50 and 144 Mc. gear and contact with Adelaide (60 miles) was made on both bands with excellent signal strength. Joe McAlister had a 144 Mc. handie-talkie (he heard plenty of car ignition) and Clarrie Castle (5KL) had an f.b. 50 Mc. converter perking well. The Code Speed Contest was won by 5WO at 25 w.p.m. with 5KL second. Some good home made gear was on display. The prize was won by 5KL with his 50 Mc. converter—a really fine piece of workmanship.

Conditions on lower frequencies were, unfortunately, not so good and despite lusty calls and much QRM (and how!), the prizes for both phone and c.w. were won by 5GF on the v.h.f. bands. A "miles per watt" competition, run in conjunction with this contest, was also won by Max (5GF) who averaged 2½ m.p.w. on 6 and 5 m.p.w. on 2 metres. Prize-giving and wind-up took place at 1600 hours to give long distance travellers a chance to get home at a reasonable hour.

The Northern Network are indebted to the following for their generous support in making the Field Day a real success: Newton McLaren Ltd., £2/2/-; Gerard & Goodman Ltd., £2/2/-; B.H.P. Co., Whyalla, £2/2/-; Philips Electrical Industries, an 854 valve; Oliver J. Nilsen & Co. Ltd., £1/1/-; Radio Electric Wholesalers Ltd., 10/6; Mr. Peter Spencer, of Whyalla, a ball point pen; 5VM, 100 QSLs; 5CE, three front-loading bezels. Our grateful thanks are due also to 5CY who supplied an amplifier, and 5JY who cut the record for the code speed contest.

It is thought that everyone had an f.b. time. Let's see the W.I.A. put on a big day (at National Park, say) each year on N.F.D. or on some public holiday.

WESTERN AUSTRALIA

The October meeting of this Division was held on Tuesday the 17th at the usual location, with an attendance slightly higher than the previous two months, which is a very good sign. It was also very encouraging to see three new members admitted to the Institute, namely old-timer 6LJ (welcome back to the fold OM), 6JA (Jack Cook), and 6BA (Mr. B. Moore). Let us hope that your associations with the VK6 Division are long and happy ones, gentlemen.

There was one visitor present at the meeting, VK2TN, who was welcomed in the usual manner by the President, 6KW. 2TN replied to the welcome in a very able, and at times, amusing manner. I especially liked the little anecdote about his visit to VK5. Apparently he was taken for a drive by one of the officials of that Division and was a little perturbed when the car drove up to a pair of ominous looking iron gates, which were opened by a sentry and then bolted carefully after they had entered. "Don't worry," said his host, "this is just where I work." "There was a VK6 present there," announced 2TN in all innocence. Quick as a flash came the rejoinder from 6AG, "Was he inside or out?" and it nearly brought the house down. Strange to relate 2TN didn't mention visiting any broadcasting stations whilst in VK6, however he returned East on the morning following the meeting, taking with him the good wishes of this Division to the N.S.W. fraternity.

Following the conclusion of the business for the evening, 6JW gave his contribution in the "My Station" series of lecturettes and made a very workman-like job of it too. Each section of the equipment was taken in turn, and any unusual items of design were dealt with in full detail. Two films followed through the courtesy of 6JS. The second dealt with electron theory as applicable to vacuum and gaseous tubes and proved most instructive and interesting. Wish I could have seen it when I was studying for my ticket.

The meeting closed about 10.45 p.m. There will be no meeting of this Division in December. It would normally be held on the 19th and it was considered that this would be too close to Xmas. However the Council meeting will be held as usual in December.

PERSONALITIES

6EC makes headlines this month by being the first VK6 to operate on s.s.s.c. Nice work Eric. Once the boys get to know just what it is you are emitting and can supply the missing carrier with a stable local oscillator of some sort, you should get plenty of QSOs, on 40 anyway. 6WH is building another final for exclusive operation on 80 metres, the present one being retained for 40; a common exciter and modulator will complete the set-up. 6WT, during his enforced absence from the air, is keeping his hand in building a dual conversion receiver. Next March or thereabouts Dave will be travelling East by car and taking portable gear with him. Will be working back to 6JA on the way over. 6RO is another who is busy on an elaborate double conversion receiver; how is it going?

6MK has just had a fortnight in hospital, but is back again pursuing his favourite pastime, viz., blowing apart the top end of 20 metres, so everything must be OK with Tom. 6LU and 6RS both busy with compass receivers as Q5ers. Wonder who is going to be the first to have his operating. 6GD has the XYL home from hospital after a very serious illness. We all hope that Mrs. Geldard is completely recovered and that Horrie will be able to let up on the cooking and bottle washing. 6RW is now sporting a National NC200 and can be heard most evenings on 20 metre phone with a very nice signal. Don't ask 6GA if his T40 can run 100 watts; if you do, you're likely to collect a defunct 866.

6FL has at last settled down in Gooseberry Hill. Frank tells me he had to do a spot of lumberjacking before he could string up a sky wire and the shack is still surrounded by sixty foot trees. 6LL, 6LM and 6NL are still persevering with 10 metres. It looks as though their patience will soon be rewarded. Shouldn't be long before the DX breaks through on that band. 6CM has been very quiet of late. What's brewing out there in Shenton Park Bill? 6MU last heard of working on the Bendix Tx endeavouring to modify it for all band operation. Seemed to be working OK on 40 Mal. No news from 6WZ and the Geraldton gang. No news is good news they say, so I guess all is well up there.

TASMANIA

During the month of October an all round improvement in conditions of the more popular bands became evident, and during the course of the month increased number of Hams were noticed, either working DX or engaged in rag chewing. Congratulations must be extended to the North-Western gang on their activities especially 7AB and 7KB, whose efforts to popularise our v.h.f. allocations is well worthy of mention. During the course of a week-end, portable equipment was taken to the "Bluff"

overlooking Burnie and several excellent contacts between VK3 and VK7 were made. Six and two metres were the bands used and it is believed reports of strength 9 was usual. News has been received of the change of QTH of 7CK. Poley no doubt will be a loss to the Burnie gang and from what can be gathered, conditions for radio is unsurpassed from the Deloraine area.

The weekly 7WI broadcast for the 23rd October was ably conducted by 7LE, our hard working Emergency Network Officer, not heard much these days, but who created a lot of interest in experiments with s.s.s.c. transmissions. Glad to hear you Len, sorry the recent emergency network was not as successful as hoped, but from the look of things, future State-wide co-operation is assured. Future field days are planned and all members are asked for thir help in building up this unit into a efficient force.

7GA's rig at present consists of a 6AG5 osc., 802 dblr., and a 813 final running 93 watts. 7RM heard on 20, together with 7AJ, 7LJ, 7JB, 7OM, and 7RX. Popularity of 80 has increased in recent months and some of those heard with f.b. signals were 7SR, 7SK, 7AF and 7AG. The 40 metre gang consists of 7BH, 7LD, 7KX and the rather big game hunter, 7SD. A future prospective Ham met the other day was Bert Clark, who has decided to sit for the February A.O.C.P. exam. 7AJ active on 10 and 20, recently heard working Fiji using a 3 element rotary beam. No news from 7EJ, believe QRL. 7CT seen visiting the big city. News has been received that Bill Watson, ex-7YY, has retired from the rigours of the tropics, and will shortly return to Hobart.

7KA now finished a new receiver after 12 months and believe results have justified the time spent. Noticed 7AF busily pumping money out of the ground one day, where have you got to Bob, haven't heard you for awhile. It is rumored 7SK is now an authority on Army procedure, especially with regards pamphlet six. 7JB and 7YL busily home planning. Jack now a specialist on "oles." Also hear Joy is awake up to week-end "exercises." Another one time active Ham is 7JP, not heard for a year now. Leon is now unfortunately away from his own QTH being stationed in the north of the island. What's wrong in building some portable gear? Sorry 7KX to hear b.c.i. is causing some trouble, trust Don you can fix up this matter and from reports I have heard, your signals are getting through OK. As these notes have been prepared prior to our November meeting, details are not available, but will be included in next month's notes.

NORTHERN ZONE

The second Friday in October, despite its ominous position as the 13th day of the month, saw a very pleasing roll up of members at the studio of one of our local b.c. stations, 7LA, to witness an extremely interesting talk by Rex Maclean, 7RB. The subject in general was "Records and Recording" and Rex treated us all to a most enjoyable evening. Obviously, a study of records has been almost a life long interest and the enthusiasm with which the subject matter was presented, together with the equipment used to demonstrate, was the major factor in the presentation of a lecture which must be one of the best we have had the pleasure of attending. Our thanks to you Rex and also to the management of 7LA for the use of the studio.

We have two new Associate Members to welcome to the zone and the Institute this month in the persons of Messrs. Soloman and Rich, both very keen and enthusiastic attenders of meetings. We're very pleased to have you and hope you think sufficiently well of us to stay in the fold for many moons to come. Our tally of Associates is quite imposing and it is to you that we look for the future full members, so keep the handbooks and keys to the fore and remember that the Associate membership is the stepping stone with the ticket as the goal.

Contest interest has waned considerably here and neither the VK-ZL nor the "CQ" Contest produced an entrant from this zone. Conditions for the "CQ" seemed fairly good and how easy it is to pick the state of conditions with the system of serial numbers that uses the zone number as a termination. Even ten metres provided an interest by coming good for Europe for a couple of hours one night.

All the cobwebs are being cleared from 50 and 144 Mc. gear around the town. Don't know of an Interstate break through as yet, but when they do pop up there are plenty ready to knock them over.

The converter at 7LZ has surrendered the fight and now sounds f.b. Power line QRM is the big stumbling block there however, and Col certainly has his and someone else's share of that. Seems that 7DS, in our outer suburb, has gone into smoke.

7AB starting to take an interest in life as the new abode nears completion. 7AM has been on the lower frequencies, but prefers the quiet of the v.h.f's.; is another waiting with flattened ears for a VK3 to stick his head up on 144 Mc. 7HY has deserted the bands for the fairways and the mike for the tennis racquet. Here my QRP efforts are still bearing fruit and the countries on five watts have now reached double figures. October as usual managed to provide two new ones to the grand total in the shape of TF3ZM and PK5AA, but I smacked the 807s with the works for them, no five watts on DX like that.

CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

CHALLENGE WAS NOT ISSUED

Yarraman, Qld.

Editor "A.R.," Dear Sir,

Reference to contacts with VK8, and items in latest issue of "Amateur Radio," I wish to make it quite clear that I neither issued a challenge, or was responsible for same appearing in our magazine. The item was sent by someone who must have overheard a QSO which I had with VK1RB. I asked him to QSL me as I wanted VK1 to complete my VK list, as I had a VK8 card which was hard to get, and I believed I was one of the very few who had such a card.

It was good to see a letter from VK2NO, written like the gentleman he is; the VK5 reply seems to be tinged with a touch of venom, totally unnecessary. My contact was with VK8XT, Cloncurry, and came about through that station seeking tidings of an overland party from southern VK5. I remember also, contacting Don Knock at Wyndham Meat Works. Knowing the history of the Inland Mission and the interest of VK5 therein. I was never foolish enough to think I was the only Ham to contact VK8. What I did say, however, still holds good, that I am one of the very few to hold a VK8 card. Long live the Inland Mission.

—GEORGE HALBROM, VK4GG.

St. Paul's Rectory, Dora Creek, N.S.W.

Editor "A.R.," Dear Sir,

Re the claim made by Queensland on behalf of VK4GG of having the distinction of having a QSO with a VK8, looking through old logs I see that I had several QSOs from 1932 to 1934 with VK8OA on 7 Mc. and with VK8XT and old VKZ on 14 Mc.

—WILBER BROOKE, VK2BR.

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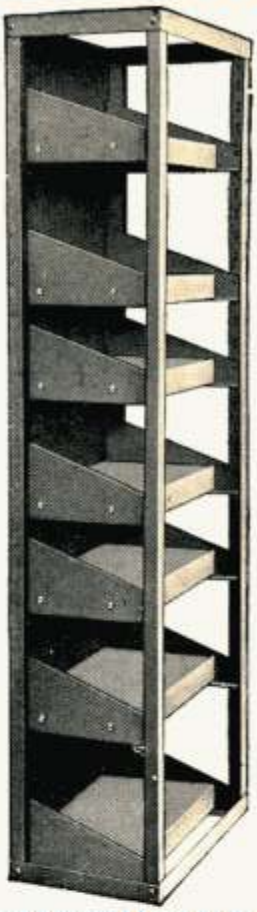

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