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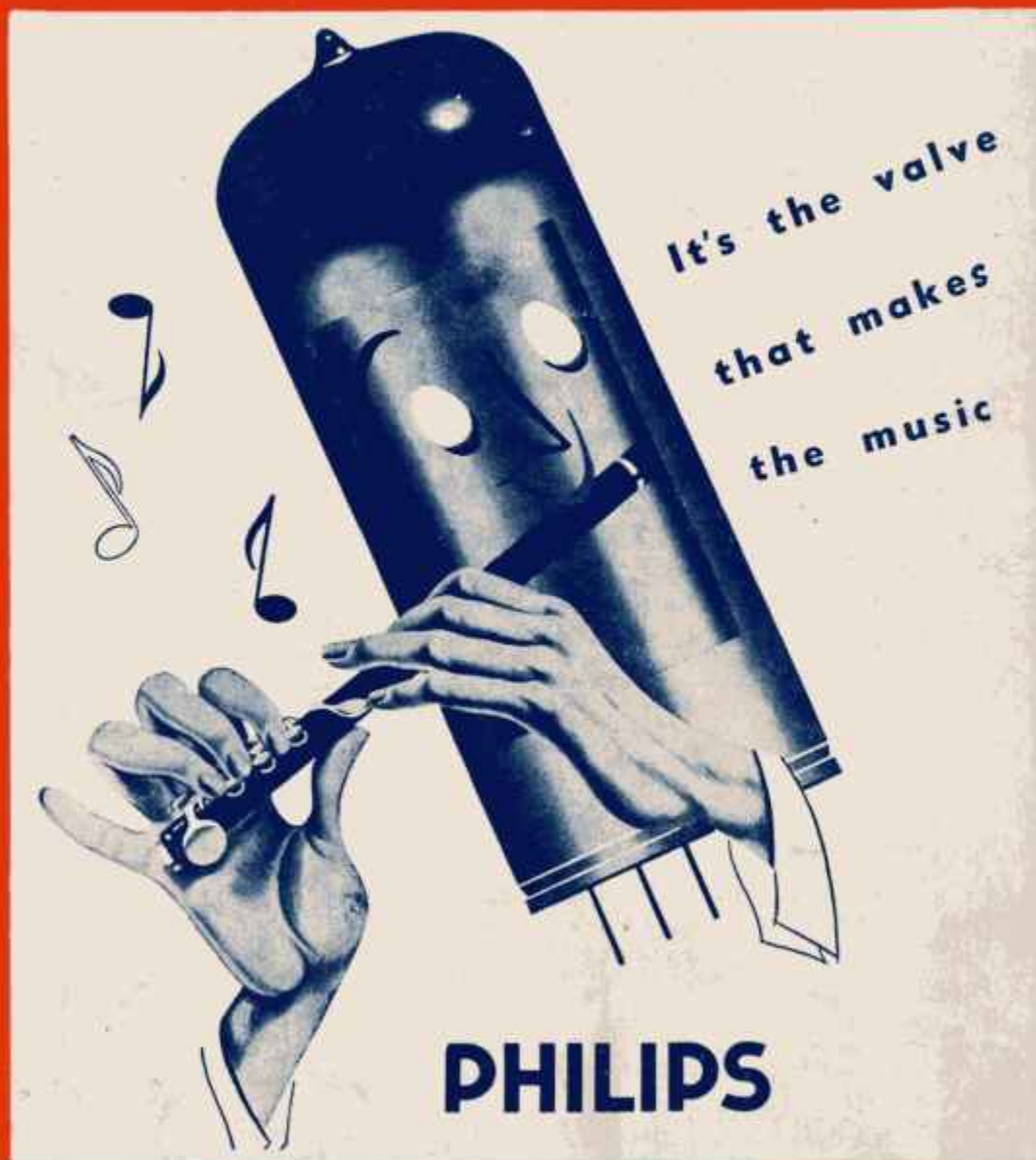
JOURNAL OF
THE WIRELESS
INSTITUTE OF
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EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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VK7WI: Sundays, at 1000 hours EST, on 7196 Kc. and 146.5 Mc. No frequency checks are available.

EDITORIAL

Doubtless all are now aware of the further increase of Sales Tax on electronic component parts that, for the purposes of taxation, could be used in the construction or maintenance of radio receivers, and/or paging or public address systems and amplifiers to which is connected a gramophone motor and pickup and/or radio tuner.

The fact that such components are taxed under "luxury items" is brought about by the classification of radio receivers and amplifiers, etc., as musical instruments. This in itself is sufficiently absurd to have merited greater foresight by the Taxation Authority. The imposition of the same high rate of tax on the parts and accessories which, unlike accessories of a piano or guitar or other forms of musical instruments, find a wide and important use in the vast field of electronics, as applied particularly to Amateur Radio—greatly concerns us.

In opposition to the original increment in taxation as affecting communications receivers and the parts and accessories thereof used by Amateurs in the pursuits of their investigations and research into the mysteries of radio wave propagation and reception—an activity that the Government and the people of Australia know only too well as having been the means of saving lives, homes, and property during many times of emergency—the Wireless Institute of Australia on behalf of its 3,000 odd members made representation to the Commissioner of Taxation—as did every other section of the radio and electronic industry—for the consideration of a tax remission by the Federal Treasurer when preparing his Budget for 1951-52.

So far as the Institute was concerned every indication was given that consideration of its request would be undertaken by the Federal Treasurer, the Institute having pointed out the great National advantage of having a ready pool of semi-trained technical

personnel together with emergency operating networks which could be immediately available to the Government or the Armed Services in times of emergency—National or otherwise.

To say the least of it our representation brought a most disappointing and disheartening result; not only did Sales Tax again increase, but it increased to the extent of showing a marked disregard of the National worth of the Amateur of Australia by the Authorities.

Radio receivers are now classified under the fourth schedule together with toys, games, puzzles and fireworks! A perusal of this schedule indicates that, with the exception of radio receivers, very few parts and accessories of the items in the schedule could be used in anything other than the article for which they were intended. But in the case of radio receivers almost every component used in its manufacture is also used somewhere in electronic equipment which is still taxable at the lowest tax rate. What inconsistency!

But the answer is an easy one, without any variation of the express provisions of the Law being involved. In the same way that personnel engaged in the manufacture or maintenance of electronic equipment—as distinct from receiving equipment—can purchase these same component parts at the lower tax rate on the production of some form of authority, so should Amateurs be able to do so on production of their license granted them by the Postmaster-General's Department or any other kind of form suitable to the Taxation Department which the Institute would be pleased to print at its own expense.

Let's hope that 1952 will bring forth some sane reasoning by the Authorities so that the Amateurs of Australia can play their part in time of emergency as they have been able to do in the past.

—FEDERAL EXECUTIVE

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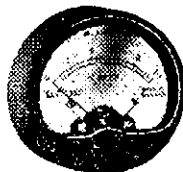
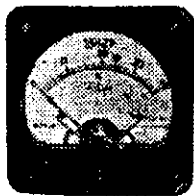
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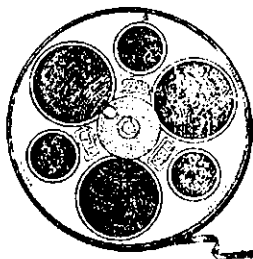
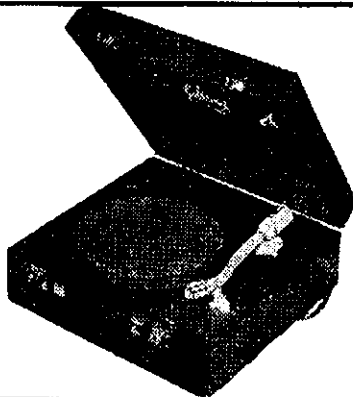
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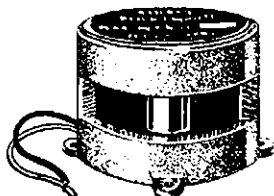
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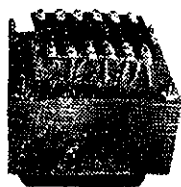
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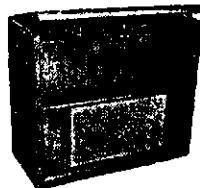
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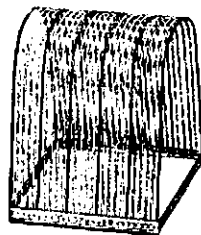
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Built-in Clamp Tube Modulation for the Command Transmitter

BY P. PAGE,* VK2APP, AND O. L. BROWN,† VK3ARL

The portable capabilities of a Command Transmitter are at first consideration very great, and for c.w. operation this is so; the only external equipment necessary being the power supply. But for satisfactory portable or mobile phone operation compactness becomes somewhat more difficult if an external modulator is to be used. There is also the current drain to be considered in mobile operation.

After experimentation with various types of modulation using transformers, it was found that to build one onto the chassis of the Command and still retain the r.f. stability was almost an impossibility. The only other alternative, therefore, was an external modulator or something using no more than two tubes and no coupling transformers. The only system that appeared readily to fit the bill was the Clamp Tube System of Screen Grid Modulation.

The two tubes used were a 6L6 modulator tube and some triode pentode, in this case a 6P7 as a speech amplifier driver.

The first necessity was to remove all components under the chassis used in connection with the crystal calibration check originally incorporated in the Transmitter. This necessitated the removal of all resistors under the centre and right hand sockets at the back of the transmitter, and the filament trap wiring for the magic eye. The series parallel filament resistor across the 1626 master oscillator tube was also removed, and this tube given straight 12 volt filament wiring. The filaments of the centre and right hand sockets were connected in parallel, and owing to the fact that 6 volt tubes were used in the modulation section, a 6 volt filament source was supplied in addition to the 12 volt source for the three r.f. tubes in the transmitter.

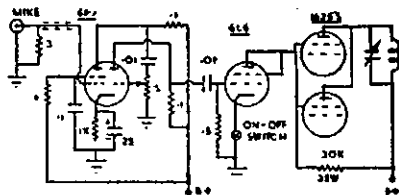
Both relays and their appropriate wiring were removed. The parallel cathodes of the 1625 output tubes were taken direct to ground. The high tension to the plate of the master oscillator tube—which originally went through a pair of contacts on the relay under the chassis—was taken direct from its pin on the input socket to a suitable tiepoint, bypassing the relay, and the unnecessary wiring removed.

Some of the pins on the two sockets used for modulation were originally used as tiepoints for other circuits. These, where necessary, are removed and connected direct, either to the appropriate pin on the input socket or to some other common tiepoint.

The centre, or crystal socket, is now used to mount the 6L6, which is triode connected, the plate and screen being tied together and taken directly to one of the screen pins of the parallel 1625s in the p.a. The grid bias resistor of the 6L6 is 500,000 ohms from grid to

earth and the cathode is taken through an s.p.s.t. switch, directly to earth. The grid of the 6L6 is also taken through a 0.01 uF. tubular condenser to the triode plate of the 6P7. The grid of this section has a half megohm potentiometer from grid to ground. The moving arm of the pot is taken through a 0.01 uF. tubular condenser to the pentode plate. Both triode and pentode plate loads are 0.1 meg. The pentode screen load is a 1.0 meg., the cathode of the 6P7 goes to ground through 1,000 ohms, bypassed with a 25 uF. electrolytic.

The grid of the pentode section is taken along the right hand side, under the chassis and round to the bottom left hand corner of the front panel in shielded cable, where it is attached to the microphone jack, which has a 3.0 meg grid bias resistor across it. The microphone jack is of the unshielded closed circuit type, though any suitable jack shielded or otherwise could be used; in this case an old i.f. can, cut in half, was used to shield the jack.



The normal screen voltage supply to the 1625s is entirely removed, and screen current is obtained through a 30,000 ohm 25 w. dropping resistor from the common B+ supply. This resistor is mounted under the chassis at the left hand ends of the p.a. tuning condensers. A small right angle metal shield was made to enclose the under chassis modulator components at the rear of the transmitter so that, when the bottom chassis cover is in position, the modulator circuitry is almost entirely shielded from the rest of the transmitter.

The aerial tuning coil was removed from behind the front panel and a false panel was fitted over the rectangular window to support a small plate meter for tuning purposes. The ends of the variable link in the Command tank coil were brought out to two insulated terminals on the front left hand side for antenna connection.

To obtain independent p.a. tuning, apart from the ganged p.a. and oscillator tuning arrangements, the pre-set p.a. condenser under the chassis was unlocked by removing the screw from the locking lug, and a small extension shaft was brought through the side of the chassis.

The set-up as used for a.c. operation has two 100 Ma. power supplies on an external chassis—one at 300 volts for the transmitter p.a. and modulating section, the other at 220 volts or less for the master oscillator and the Command Receiver.

The filament supply is obtained by connecting in series the two 6.3 volt windings available on the transformers to give 12.6 volts for the oscillator and p.a. tubes in the transmitter and the 12 volt tubes in the receiver. The 6.3 for the two modulator tubes is obtained from the junction of the two windings. This arrangement appears to cause no undue heating of the transformers when used with a 3 amp. winding from 0-6 volts and a 2 amp. winding from 6-12.

The potentiometer for modulation gain control is a combination s.p.s.t. switch and pot, as used in some b.c. receivers. The switch section was used in the cathode of the 6L6, thus necessitating only one external control to serve two purposes. The control is mounted in the right hand side of the chassis, at the rear, directly beneath the socket of the 6P7. When the switch is in the "off" position, the screen load is effectively removed from the p.a. tubes and the transmitter should be tuned up in this position. The switch should be in the "off" position for c.w. operation if required.

Disc Recording from Wire or Tape Recordings

Often an outside-start recording is required and it is found much more trouble to cut than the inside-start. If the material to be disc recorded is already recorded on wire or tape, there is an easy way out of this trouble.

Just play the wire or tape recording backwards at normal speed, feeding into the cutting head amplifier. The recording turntable is run backwards and cutting is done from inside to outside.

When the disc is put on a normal clockwise turntable it will play from outside to inside in a perfectly normal and satisfactory way.

However, many types of wire recorders won't play backwards at normal speed. To overcome this trouble, the wire can be re-wound as follows. Instead of threading up in the usual way, put the recorded wire spool on a dummy spindle and connect the start of the wire to an empty spool on the re-wind spindle. Run on reverse or re-wind until all wire is transferred to this spool, then thread up normally.

Running the recorder forwards will now be pulling the wire through backwards as far as the recorded material is concerned. Due to wire build-up effects, the speed of the wire at the ends will be slightly different than when recorded, but in practice will not be noticeable.—B. Hannaford, VK2ALR.

* "Stoneridge," Mont Eagle, N.S.W.
† Darlington Road, Stawell, Victoria.

TELEVISION MADE EASY

Part v.—Further Notes on the Receiver

BY KEN WALL AND JOHN JARMAN,* VK3ADA

So we've found that the vision section of a television receiver (both common to sound and vision), a vision i.f. channel (consisting of about four stages, and using an i.f. around the 15 Mc. mark) and a vision detector. Now the detector is a diode type, similar to that used in common sound receivers, but for one important difference.

During the high frequencies (up to about 6 Mc.), representing picture detail, which the detector must separate from carrier, the load resistor cannot be by-passed by a simple capacitor, as we find in a sound receiver. Instead, the by-passing (of the surplus r.f.) is done by a complicated filter, as is shown in Fig. 1, which is designed to by-pass the carrier frequencies only, allowing the video frequencies to pass through the load resistor.

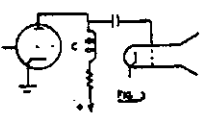
Our detector must also be connected, so as to ensure that the picture on our screen will be positive, and not negative (like the negative of a photo) and, here in Australia, where negative modulation is to be used, we must ensure that the picture brightness will decrease when carrier amplitude increases. Now look at Fig. 2, which shows two basic detector circuits, with the filter system omitted. If the detector be coupled directly to the cathode ray tube, the circuit "B" would be the "shot." This is called the "anode above ground" detector, whose output voltage becomes more negative (thereby reducing picture brilliance) when carrier amplitude increases.

But suppose a video amplifier stage be inserted between detector and c.r.t. This amplifier will reverse the phase of the detector's output, so that the "cathode above ground" circuit, shown in Fig. 2A, must be used.

Now refer back to the block diagram, given in the last article. We see that if a video amplifier be used, it must be provided with a d.c. restorer.

Let's study the video amplifier first of all. Remember the detector's output varies in frequency from 25 c.p.s. (frame frequency) to about 6 Mc. All of these frequencies must be evenly amplified, so that our video amplifier must have a flat response over a wide band.

Well, it is basically a resistance-capacitance coupled amplifier but provided with means of extending the



normal bandwidth. One type is shown in Fig. 3, the small "peaking" coil "C" working in conjunction with the natural capacitance of the circuit to help maintain uniform amplification at the high and low ends of the video band.

Now for this d.c. restorer. We have learnt that the detector's output consists of a combination of a.c. and d.c., the former representing the picture detail, and the latter the average light and shade, e.g., the difference between dusk and bright sunlight.

The video amplifier, however, amplifies only the a.c. component, rejecting the d.c., so that before the video output can produce a picture, the lost d.c. component must be replaced. How can this be done? Well take a look at Fig. 4.

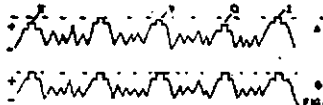


Fig. 4A.—Video Output before D.C. Restoration.

Fig. 4B.—After D.C. Restoration.

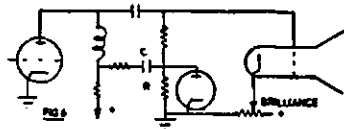
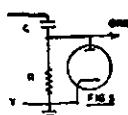
At Fig. 4A we see the signal just as it leaves the video amplifier. At "B" is the signal required to make the picture. What is the difference? Simply that the synchronising pulses (which represent maximum signal amplitude) all have the same level. Just think of it. Because the synch. pulses have a fixed amplitude, which is kept constant at the transmitter, it follows that if their amplitude be kept at a fixed level in the receiver's output, the rest of the video signal will assume correct shape.

So you don't believe me? Then look at it this way. Suppose the signal at Fig. 4A be applied directly to the grid of the c.r.t., together with a self-adjusting bias voltage so that whenever the maximum output falls below a certain level (such as at points X, Y, and Q), negative bias will decrease, permitting the signal level to increase, whereas at Z, where amplitude tends to exceed the required level, the negative bias will increase, so that the points of maximum signal (i.e. the synch. pulses) will be kept at the same level.

Now consider differences in signal, between these peaks, and the troughs between them. Is there any reason why these differences would be changed by the video amplifier? And for that matter, any reason why the amplitude difference between the troughs and synch. pulses in Fig. 4B should not be the same as those in the original signal? Well, if we are all agreed on this point, we will see at once that our lost d.c. component can be restored, by simply varying the grid bias on the c.r.t. so as to keep the peaks (i.e. the synch. pulses) at a fixed level. Try and reason this out before reading further.

So our d.c. restorer is simply a "self adjusting" grid bias source, similar to

a grid-leak detector. The basic circuit is shown in Fig. 5. Suppose the signal shown in the Fig. 4A be applied between points X and Y. At point Z (Fig. 4A) the charge on C (Fig. 5) will be increased, and since this represents the negative bias applied to the grid, the peak level will be reduced, whereas at X, Y, and Q less electrons will be drawn through the diode (Fig. 5), so that the negative bias will be reduced and the peak level therefore raised.



The location of this restorer in the circuit, of course, varies with different types of receivers, but its operation is the same. One system is shown in Fig. 6 (compare this with Fig. 3). Of course, for proper operation, the R/C combination must have the correct time constant.

Speaking of picture brilliance, it might be mentioned at this stage that the brilliance control, on a television receiver, operates by varying the grid bias on the c.r.t. One type is also illustrated in Fig. 6.

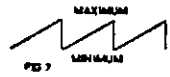
So much for the picture signal, and how it varies the brilliance of a spot of light, but to produce a picture, this spot must be kept moving, so we will now deal with deflection.

In articles one and three we learned that the spot of light on the receiver screen traces out 625 horizontal lines, in zig-zag fashion, 25 times per second or, to be more exact, 312½ lines, 50 times per second (refer back to article three, if necessary). This is achieved by applying two deflecting forces to the electron beam (in the c.r.t.) at the same time.

The first of these is the horizontal deflecting force which moves the beam from left to right at a uniform rate and then rapidly back to its starting point. This process is repeated at line frequency, i.e. 15625 times per second.

The other force moves the spot from top to base of screen at uniform rate, then rapidly back to its starting point. This is repeated at field frequency, 50 times per second.

Now consider a c.r.t. using magnetic deflection. The position of the electron beam (and spot) at any instant, depends upon the value of current flowing through the deflection coils. To move the spot in the manner described above, we must pass through each set of coils a current which increases from minimum to maximum at a uniform rate, then falls rapidly back to minimum, the process being repeated at the required frequency. In other words, the required current, if graphed, would have the "saw-tooth" wave form, as shown in Fig. 7.

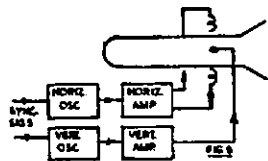


Each pair of deflection coils must therefore be coupled to a special oscillator which will supply this type of

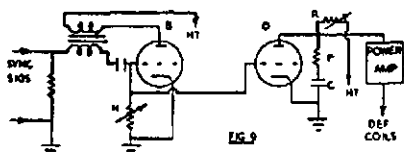
* A11426 L.A.C. Jarman, J. B., c/o. A.R.D.U., R.A.A.F., Woomera S., South Australia.

current. Now these oscillators vary considerably in design, in fact, new improvements are developed almost daily. The objects are:—

1. Reduction in number of components for economy and compactness;
2. Improved linearity (uniform rate of increase being difficult to achieve in practice);
3. More accurate synchronisation (to be dealt with in next article).

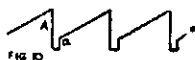


Space will permit the description of only one system here, but they all follow the same general layout, shown in Fig. 8. Now some of you will have guessed that the old thyatron oscillator provides the answer. Well, admittedly, it is used in older sets, but it is now being superseded by circuits which are more stable, and permit better synchronisation (this will be explained in the next article) so we will temporarily regard it as obsolete, and study the "blocking oscillator" type, as shown in Fig. 9.



Capacitor C (Fig. 9) is charged by h.t. voltage through resistor R, so that the voltage across C will rise from minimum to maximum. Before this voltage reaches maximum, however, C must be rapidly discharged, so that process can be repeated. This is done by the discharge tube D (a vacuum type) which is normally biased to cut off, but periodically made conductive, by the sharp positive pulses supplied by the blocking oscillator, tube B.

The voltage across C is therefore "saw tooth" type and can be used to drive the deflection amplifier, but there is one important point to note. The current through the deflection coils must be as shown in Fig. 7. Now to overcome the effects of the coil's inductance, which tends to oppose changes in current, our driving voltage must be shaped as is shown in Fig. 10.



This is done by inserting the small resistor r in series with C (Fig. 9). Since the ratio A/a equals approximately R/r, our voltage can be adjusted in wave form to produce the required deflection current, and of course our deflection amplifier must be designed to preserve this wave form.

A G8PO Without Any "Cut and Try"

BY ROTH JONES,* VK3BG

Probably no antenna has created so much enthusiasm and argument over the last few years than the G8PO unidirectional beam.

Some members of the Amateur Radio Fraternity have had remarkable results with it; others have achieved little and pulled the antenna down in disgust, satisfied it would never work.

To the latter I say: "Don't give up in disgust. Read this article and put up another antenna to these simple formulae and it WILL work."

Unfortunately no ready formulae have been applied to the antenna and most users have had to be content with "cut and try" methods. This has involved hours and hours of patient work and the purchase of long lengths of twin lead.

Since the antenna was first introduced to this country by my esteemed friend Lieut. Commander E. H. ("Ted") Ironmonger, R.N. (ex-G8PO and ex-VK3WU) the designs which have followed have fallen into three chief categories. They are:—

- (1) Single wire flat top with 72 ohm co-axial cable feed line and delay section as used by VK3WU himself;
- (2) A three wire flat top with 300 ohm twin lead feed and delay lines, and
- (3) Single wire flat top with either the 150 ohm or 72 ohm twin lead feed line and paralleled one eighth lengths of 72 ohm and 150 ohm leads as delay lines.

Each system has its own specific merits. Co-axial feed line does not give the balance experienced with the twin lead, is expensive and always difficult to work and cut. The three wire flat top version is heavier and uses 300 ohm twin lead which is prone to moisture effect and breakage due to wind. The type used by the writer is extremely light, is not affected by rain to any great extent and does not move unduly in windy weather.

I claim no credit for the design, particulars of which were given by Harry Chapman, VK3GU, a veteran in our ranks who is still as enthusiastic over antennae as in the olden days.

Main secret of the system is the antenna loading coil and condenser which allows the whole antenna to be tuned, thus placing the standing waves where they should be.

It is assumed the centre impedance of the two dipoles spaced one-eighth wavelength is about 40 ohms. If the feed lines are an even multiple of quarter waves (less the velocity factor), then the impedance at the end of these lines will be 40 ohms irrespective of the transmission line impedance.

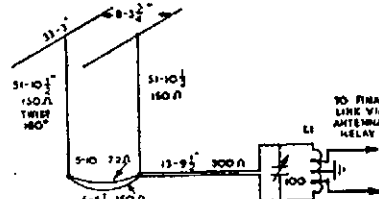
Therefore to match this impedance two separate one-eighth lengths (one 72 ohm twin lead and the other 150 ohm) are in parallel for the delay line, thus giving an impedance of approximately 40 ohms.

A quarter wave length of 300 ohm lead is then taken from the junction

of either feed line and delay line (depending of course which direction the antenna is firing). This is purely a step up transformer raising the impedance from 20 ohms (the 40 ohms at the end of the lead in and 40 ohms delay line being in parallel) to around 4,500 ohms.

This is connected directly across the ends of the tuned circuit, the tap for loading being taken one turn either side of the centre. To secure balance, the centre of the coil can be earthed or if a split stator is used its rotor can be connected to earth.

Tuning is simple and quick provided two hands are used. The coupling coil condenser is tuned for maximum current and the final for minimum. The former will be much sharper if the system is working satisfactorily. After a little bit of juggling, a point will be found where the point of maximum and minimum current will coincide. Extremely light coupling will suffice for maximum input.



L1—10 turns 2" diameter, self support.

Velocity Factor of Ribbon:—

300 ohms	0.83
150 "	0.78
72 "	0.7

Several systems can be used for switching but to avoid loss and keep the impedances constant, the writer has assembled four octal sockets and wired them so that if four small Bulgin plugs or crystal holders are plugged in they will be connected together. These plugs are also affixed to the ends of the feed lines, the two delay sections and the 300 ohm quarter wave transformer.

To change direction of firing the plug affixed to the 300 ohm quarter wave length has only to be switched from one socket to the other.

This allows the whole system to be switched quickly and, if necessary, the antenna used as a single section W8JK by discarding the delay lines and connecting the feed lines together after twisting one 180 degrees.

Results. Conditions have been very poor and erratic over the last two months the antenna has been installed, but sufficient DX has been worked to convince the writer the beam has a good two S points gain over a very efficient long wire which has worked more than its share of DX during the last few years.

The antenna has been cut for 14075 Kc. allowing band edge working for c.w. and phone in the 14100-14150 Kc. region.

It is fixed and directed at Europe where most stations report strength as above average. As an example, seven Europeans replied to a short CQ DX on a recent busy Sunday afternoon.

* 25 Panoramic Road, North Balwyn, E.9, Victoria.

Manufacturers of . . .

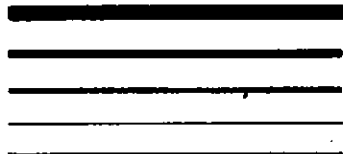
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Australian National Field Day, 1952

BULES

- The National Field Day Contest of the Wireless Institute of Australia will be held on Sunday, 27th January, 1952. The Contest will be of twelve hours duration commencing at 0900 hours E.A.S.T. and concluding at 2100 hours E.A.S.T.
- 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.
- A portable station for the purpose 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.
- No apparatus is to be set up or erected on the site of the portable station earlier than 24 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.
- More than one operator may be used in the operation of the portable station provided that all operators are licensed Amateurs.
- Operation may be on any of the recognised Amateur bands and more than one transmitter may be used, providing that one transmitter only is used at any one time.
- 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 operation as defined in the P.M.G.'s Handbook for the Guidance of Amateur Operators.
- 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. Participants may enter all Sections provided a separate Log is entered in each case.
- Logs must be forwarded through the Division to reach the Federal Contest Committee, Box 1734JJ, G.P.O., Sydney, not later than the 27th February, 1952.
 - 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) must also be shown.
 - 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.
 - The completed Log must be signed by each of the operators with a statement that the P.M.G.'s Regulations and the Rules of the Contest have been observed and that the operators agree to accept the decision of the Federal Contest Committee on all matters pertaining to the Contest.
 - SCORING. For the purposes of the Field Day, the following constitute VK Districts: VK2, VK3, VK4, VK5 (South Australia), VK5 (Northern Territory), VK6, VK7, and VK9.
 - Serial numbers must be exchanged during the Contest as follows: The first three figures will be the RST in the C.W. Section followed by the serial number of the contact commencing with any number between 001 and 100 for the first contact and increasing by one for each successive contact. In the Phone Section the first two figures will be the RS and then as in the C.W. Section. In addition the QTB must also be given.

- Points will be awarded as follows:—

(a) For contacts with a fixed station within the Commonwealth (Rule 13) including 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, North America and Oceania (outside the Commonwealth, Rule 13)	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 outside the State	10
(g) A bonus for each Continent worked on each band. For Oceania the contact must be outside the Commonwealth (Rule 13) 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., add to the final score	80
- AWARDS. An attractive certificate will be awarded to the outright winners in each State, 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 the Federal Contest Committee. The outright winners are not eligible for State Awards.
- Certificates will be awarded to each operator of the winning stations provided each operator has contacted 25% of the stations contacted.
- In addition to the Certificates for the outright winners, an order to the value of Three Guineas, to be divided between the place-getters in each section, will be awarded for the purchase of a trophy or equipment.

The Jubilee Relay Results

The Jubilee Relay has been won by Stan Coleston, VK9XK, with the fine score of 27,440 points, closely followed by Keith Schelleher, VK4KS, with 26,480 points.

9XK used three bands, whilst 4KS used two bands but on the second band had only one contact!

ZL3IA was the highest scoring station in New Zealand with 22,592 points and in addition had the greatest number of contacts in VK-ZL, viz., 353, but could only muster 64 countries.

The interest shown in ZL was not very great and as far as Australia is concerned it is quite safe to say that twice as many stations were heard relaying the message than the number who actually sent on Logs.

The DX worked by both 9XK and 4KS was outstanding and a lot of credit is due to these chaps for making known the Jubilee VK-ZL DX Contest in some of the remote corners of the globe.

Call	Bands	C'tries	Contacts	Points
VK9XK	3	80	343	27440
VK4KS	2	80	331	26480
ZL3IA	3	64	353	22592
VK2AMR	2	78	276	21528
VK2AHA	4	94	219	20596
ZL4GA	2	62	261	16182
VK5DR	1	58	244	14152
VK3LN	1	64	141	9024
VK5RX	1	39	121	4719
VK2OW	1	44	105	4620
VK3JE	1	38	81	3078
VK5LC	1	39	75	2925
VK6RU	2	39	64	2496

In VK2, Tom Stroud 2AMR did a fine job having 276 contacts in 78 countries, all on phone. 2AMR was closely followed by 2AHA who used four bands. The first three places in VK2 were filled by country Amateurs who followed up the good work done in R.D. Contest by country members. 2AYE also decided to show the gang that he could work DX as well as natter to country members and ran up 30 countries in 50 contacts.

In Victoria, Len Moncur, 3LN, did a fine job on phone with 141 contacts in 64 countries. DX man 3JE also contacted some very nice stations like VQ8, VP9, and YO. 3XB got among the Ws on 7 Mc.

5DR, on Kangaroo Island, using 15 watts vibrator supply to an 807 put up quite a remarkable performance. Oh yes, of course, he has a few vee beams but nevertheless 14,152 points

on 14 Mc. is pretty good going. George Luxon 5RX, if my memory serves me rightly, made all his contacts in the small hours of the morning. SLC wants a separate award for phone and c.w. and also commented on the manner in which the message was at times forwarded; thanks for your remarks OM.

Jimmy Rumble, 6RU, threatens the Eastern States in the Jubilee VK-ZL.

From the Logs, 3283 messages were handled and it is safe to say that every country in the world knew of the Jubilee and the VK-ZL Contest.

NEW SOUTH WALES

Call	Bands	C'tries	Contacts	Points
VK2AMR	2	78	276	21528
VK2AHA	4	94	219	20596
VK2OW	1	44	105	4620
VK2VW	1	37	60	2320
VK2AYE	2	30	50	1500
VK2MT	1	18	34	628
VK2OA	1	19	27	513
VK2KJ	1	17	30	510
VK2ASJ	1	15	18	270
VK2ZC	1	11	12	132
VK2ARV	1	5	22	110
VK2TI	1	10	10	100
VK2DI	1	1	10	80
VK2RA	2	7	8	63

VICTORIA

Call	Bands	C'tries	Contacts	Points
VK3LN	1	64	141	9024
VK3JE	1	38	81	3078
VK3XB	2	28	73	2044
VK3XO	1	24	63	1512
VK3ADW	1	25	54	1350
VK3ACW	1	11	15	165
VK3ABB	1	7	17	119
VK3AHH	1	5	10	50
VK3AJP	1	4	4	16
VK3ABA	1	2	3	6
VK3BS	1	2	2	4

QUEENSLAND

Call	Bands	C'tries	Contacts	Points
VK4KS	2	80	331	26480
VK4KW	1	15	21	315

SOUTH AUSTRALIA

Call	Bands	C'tries	Contacts	Points
VK5DR	1	58	244	14152
VK5RX	1	39	121	4719

VK5LL	1	39	75	2925
VK5CE	1	4	8	32
VK5EH	1	2	2	4

WESTERN AUSTRALIA

Call	Bands	C'tries	Contacts	Points
VK6RU	2	39	64	2496
VK6WW	1	30	48	1440

PAPUA

Call	Bands	C'tries	Contacts	Points
VK9XK	3	80	343	27440

NEW ZEALAND

1st District				
Call	Bands	C'tries	Contacts	Points
ZL1ADX	1	16	23	366
ZL1QW	2	8	9	73
2nd District				
Call	Bands	C'tries	Contacts	Points
ZL2HG	1	2	2	4
3rd District				
Call	Bands	C'tries	Contacts	Points
ZL3IA	3	64	353	22592
ZL3NQ	2	16	34	544

4th District				
Call	Bands	C'tries	Contacts	Points
ZL4GA	2	62	261	16182

—Federal Contest Committee.

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.

VK3WI ACCURATE FREQUENCY TRANSMISSIONS FOR 1952

During last year, four Accurate Frequency Transmissions were made from VK3WI. These transmissions were made possible with the help of the Frequency Measuring Station at Mont Park, and the thanks of the Victorian Division are hereby extended to those boys at that Centre.

Through a suggestion by one of our members, a slight change will be made in twd of the Accurate Frequency Transmissions for this year.

For example, on the first 40 metre transmission on Thursday, 28th February, VK3WI will commence on 7000 Kc. with a band edge marker, which will enable members to set their dial calibrations made on the last broadcast of 1951, then VK3WI will shift to 7010, 7030, and so on at 20 Kc. intervals.

By providing 20 Kc. points from 7000 Kc. on one broadcast and 20 Kc. points commencing at 7010 Kc. on the next broadcast, calibration will in future be possible at 10 Kc. intervals on the 7 Mc. band.

On 3.5 Mc. band the same principle will apply, the alternate 30 Kc. intervals giving 15 Kc. points by the use of the two broadcasts this year.

Dates for the next twelve months are as follows:—

- Thursday, 28th February, 7 Mc. Band. Band edge marker on 7000 Kc., then 7010 Kc., 7030 Kc., etc., at 20 Kc. intervals.
- Thursday, 29th May, 3.5 Mc. Band. At 30 Kc. intervals, commencing at 3500 Kc.
- Thursday, 28th August, 3.5 Mc. Band. Band edge marker at 3500 Kc., then 3515 Kc., 3545 Kc., etc., at 30 Kc. intervals.
- Thursday, 27th November, 7 Mc. Band. At 20 Kc. intervals, commencing at 7000 Kc.

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 (three times), DE VK3WI (three times), then QRG 7000 Kc. (twice)." The key is then held down for one minute, then "QSY 7020 Kc. (twice), DE VK3WI (once), AR."

DX C.C. LISTING

PHONE			
Call	No. Ctr.	Call	No. Ctr.
VK3EE	10 158	VK6KW	4 145
VK3JD	1 185	VK6KS	9 135
VK3BZ	3 154	VK3LN	11 132
VK4HR	12 151	VK6DD	6 126
VK6RU	2 148	VK3JE	7 123

C.W.			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 200	VK3CN	1 151
VK3FH	15 167	VK6SA	28 150
VK4EL	9 163	VK3VW	4 143
VK4HR	8 154	VK2QL	5 141
VK2EO	2 152	VK3KB	10 138

OPEN			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 213	VK2DI	2 170
VK4HR	7 160	VK3KX	1 167
VK6RU	8 181	VK6KW	13 165
VK3JE	12 180	VK4EL	10 163
VK3HG	3 171	VK4FJ	32 158

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 broadcast over VK3WI.

The 80 metre transmissions will be the same as the former, only the voice will call on 3598 Kc. and then the checks will start on 3.5 Kc. and finish on 3.8 Kc. with the exception that the checks will be given every 30 Kc.

ACCURATE FREQUENCY TRANSMISSION RESULTS

The following is the official results of the Accurate Frequency Transmission from VK3WI on 22nd November, 1951, on the 7 Mc. band:—

7000 Kilocycles	45 cycles low
7020	0
7040	50
7060	40
7080	4
7100	16
7120	0
7140	8
7160	8
7180	14
7200	6

AMATEUR CALL SIGNS

FOR MONTH OF OCTOBER, 1951

- ADDITIONS**
- New South Wales**
- VK—P. H. Sara, Hyde St., Bellingen.
 2QV—P. H. Sara, Hyde St., Bellingen.
 2AHY—E. E. Hayles, 8 Smith St., Wollongong.
 2AW—H. L. Wright, 33 Carrington St., Bexley.
 2AWU—W. Schreuer, 29 Smith St., Summer Hill.
- Victoria**
- 3GT—G. E. Lewis, 10 Henderson St., West Brunswick.
 3JC—T. K. Tennant, 36 Wilson Avenue, Tatura.
 3SG—L. R. Dwyer, Newry, Gippsland.
 3AEB—A. E. Bridge, McBean Ave., Lower Macedon.
 3AJQ—J. R. Kling, 1 Kardella St., East Malvern, S.E.S.
 3APK—P. C. Perkins, 182 McKillop St., Geelong East.
 3AXR—C. G. Williams, 6 Woodfall St., East Frahran, Melbourne.
- Queensland**
- 4RI—R. H. Gordon, 17 Goldring St., Rising Sun, Townsville.
 4TG—A. H. Burton, Mobile: S.S. "Cape Leewin"; Postal: Stewart St., Clayfield, Brisbane.
- South Australia**
- 5JJ—J. C. Jennison, 2 Cross St., Enfield.
 5OK—L. F. Brice, Flat 2, Cecil Mansions, 14 Rundle St., Kent Town.
- Western Australia**
- 6TK—T. W. Kelly, 39 Princep St., Norseman.
 6VB—V. R. Birks, Robinson St., Broome.
- Tasmania**
- 7CJ—A. E. Finch, 12 Augusta Rd., New Town, Hobart.
- ALTERATION**
- New South Wales**
- 2LB—14 Landers Road, Lane Cove.
 2OE—55 Fitzroy Street, Grafton.
 2OI—17 Oaks Avenue, Dee Why.
 2OP—41 Beresford Road, Strathfield.
 2UN—30 Byron Street, Inverell.

THOSE MISSING NOTES

Although correspondents were requested in the November issue to forward copy for the January issue by the 1st December, some failed to do so. We regret that it was not possible to wait for their copy, as we had to go to press earlier than usual for this issue.

- 2YW—11 Young Street, Wagga Wagga.
 2AWK—477 New South Road, Double Bay.
- Victoria**
- 3MH—Rutherford Street, Swan Hill.
 3TX—5 Oeric Street, Ashburton, S.E.11.
 3WY—43 Rowen Street, Burwood, E.13.
 3ABF—43 Macalister Street, Sale.
 3ABP—62 York Street, Sale.
 3ACT—51 Deakin Street, Essendon West.
 3AJB—Lewellin Grove, Carrum.
 3AKS—147 Patterson Road, Moorabbin, S.20.
 3ANC—Corner Lydiard Road and Dowling Street, Traralgon.
 3ATC—71 Tucker Road, Moorabbin, S.20.
- Queensland**
- 4AO—249 Buckland Rd., Wavell Heights, Brisbane.
 4TT—90 Lamington Av., Eagle Farm, Brisbane.
- South Australia**
- 5DP—63 Victoria Ter., Kingswood Park.
 5DV—Burbridge Road (North East corner of Elston Street), Brooklyn Park.
 5KB—17 Northgate St., Unley Park, Adelaide.
 5TS—Hut 27B, Nightcliff, Darwin.
- Western Australia**
- 6RC—Wattle Street, Osborn Park.
 6TAS—Tasmania
 7MY—"Waterloo," Sandford.

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 VICTORIA

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

The 50 Mc. DX season is well into its swing with reports of break throughs coming from far and wide. Highlight of the recent news is the contact between VK3RE, at McCrae, and VK9XK in New Guinea on the evening of Saturday, 12 December, 1951. 9XK was also heard in Melbourne but no contacts were made in spite of many calls from the Melbourne gang. It is understood that Russ also made contacts with VK4 stations but no details are yet to hand.

NEW SOUTH WALES

At the November meeting of the V.H.F. Group, Bob Black, 2QZ, resigned from his position as chairman and Bill McGowan, 2MQ, was elected in his place. Bob will be leaving Sydney shortly for a trip to the islands (work, not pleasure!) where he will be operating on the lower frequencies with a Type 3 Mark II. We hope that on his return to VK2 he also returns to the v.h.f. bands.

Dr. Helen Turner delivered the lecture for the evening the subject being the limitation of measurements. Dr. Turner, whilst knowing very little about radio matters, was able to demonstrate the correct method of conducting an experiment designed to prove whether horizontal or vertical polarisation was better on 576 Mc. This subject having been rather controversial of late, those present were extremely interested. Bill 2MQ proposed a vote of thanks which was enthusiastically carried.

Cec Cronan also resigned from the position of secretary during the evening and his place is to be taken by Harry Solomons, 2AJZ. Cec has taken on a new job which will not allow him to attend all meetings but no doubt his interest in the group will continue as before.

50 Mc. News. The 50 Mc. band has really come good with a bang and whilst VK2 has not yet worked VK6 this season, all other States and ZL have been worked. Openings to VK5 have, as usual, been the most frequent but there was one very good opening to VK4 early in the month. 2RU was the first VK2 to work Interstate this year—Major must monitor 50 (or 33) Mc.

VK6 was heard during the morning of 23rd Nov. when 6FC was heard calling CQ. All efforts to raise him failed. On the 26th the band showed a short skip condition, stations heard in Sydney being 2JC Narrabri, 2ADE Casino and 2LH Grafton. 2JC worked 2RU, thus giving him his first contact with VK2!

2JX has bobbed up again, this time at Wentworth Falls where he is a near neighbor of Con 2LZ. Peter should do well from this location and may serve as a very convenient halfway house between Sydney and the Western Zone chaps.

2WH in Forbes amongst the DX, but reports that generally the VKs go right over his head. 2AMV is minus beam at the moment—a great time to be caught with your beam down John! 2QZ has, by some means, managed to get a dipole erected on the roof and is now getting much better results than before, both with the DX and the boys up north.

144 Mc. News. Most important items this month concern the contacts over the Blue Mts. to Bathurst. 2NS has succeeded in making two way contact with 2MQ and is much elated as a result. He has also heard 2AJZ and 2ANF and been heard by the latter. Trevor has almost completed a five over five beam, and will shortly be running close on 100 watts to an 829B, so he should be fairly easy to contact. 2WH has been heard by 2MQ and 2ANF but has so far been unable to hear any Sydney stations. The recently allocated country zone—144.0 to 144.1 Mc. has proved extremely valuable in searching for the country stations and appears to be working out very well.

2TA is working regularly with 2WH although as yet no two-way contact has been established.

mainly because 2TA has no Rx. However he has just acquired a P38 Rx so it won't be long. It was implied in these notes last month that the path from 2TA to 2WH was over flat plains but this is not so as your scribe has been reminded on a number of occasions. Sorry Alan!

In Sydney, activity has decreased somewhat for no apparent reason. Could be the boys are re-building in order to join in the country contacts. 2JY was heard complaining recently that nobody tunes the high end of the band. Jim operates above 147 Mc. so don't forget to tune up that way. 2AH active on 144 again; Alan building a crystal controlled converter with a 6AK5 and pair of 12A7Ts. 2OA puts out an excellent signal from a stable mod. osc.

576 Mc. News. Activity appears to have waned on this band, the only regulars being 2WJ and 2AJZ who may be heard most nights working cross band to 144. Considering the number of ASE7 Rx's the boys got hold of recently, this seems surprising.

VICTORIA

Next meeting of the Group is on 16th January at the rooms; details of the lecture for the evening will be announced on 3WI broadcasts.

Attendance at the October meeting was up to the usual standard and Mr. Rhum's illustrated lecture on Microwave Field Observation was well received. This dealt with fading and other phenomena encountered during tests with 3,000 Mc. and 10,000 Mc. on various stages of the path between Melbourne and Sydney. It was interesting to note that considerable fading could occur at these v.h.f.'s, and that this was most marked over the longest stages where the direct line from the Tx on one mountain peak to the Rx on another peak passed very close to the earth. Mr. Rhum answered many questions and chatted informally with the active 576 Mc. members present.

A large gathering was present at the November meeting and a warm welcome was extended to a visitor from Broken Hill, 2DQ who is spending a week or so of his leave in Melbourne. Dud says that many of the VK2 chaps on 50 Mc. do not realise his location is 750 miles from Sydney and that he is often passed over as just another VK2 when the band opens up for him. It was unfortunate that our lecturer, Mr. J. Mansergh, of the P.M.G. Dept., who was to discuss modifications to the TR1143A, was unable to be present, however as a substitute for the lecturer, 3JO ran through the alterations he made to the ZB2 when using it as a converter for 144 Mc.

During discussion of the field day results, there were one or two unfavorable comments about the difficulty of securing contacts when using frequencies between 146 and 148 Mc. and of QRM on frequencies near 144 Mc. The gentlemen's agreement mentioned in the VK2 notes on this page of the November issue has much to commend it and it could well be adopted here also; what do you think, fellers?

Fine weather prevailed for the November Field Day, number two of the series, and many interesting contacts were made. Pride of place must go to the 144 Mc. contact between 2PN located at The Granites, a 4,715 ft. peak near Kiambra, and 3UI at Mt. Major in Northern Victoria. This is the first VK2-VK3 contact on 144 Mc. and although the distance covered, 160 miles, is less than that covered by 3LS at Mt. Hotham and 3AKE some two years ago, it is none the less an important event which, we hope, may lead to more activity on 144 Mc. by Hams in Southern N.S.W. and Northern Victoria. 2PN's signals, S8 to S9 at Mt. Major, were also heard by 3CI at Nagambie, 200 miles, and it is unfortunate that Sid was unable to make contact. 2PN used 522 Tx and Rx and 3UI used a home brew Tx with 20 watts input and xtal controlled converter with a Command Rx. Antennae were simple 3 and 4 element parasitic beams. 3UI's sigs were also heard by 3FO at Arthur's Seat, but due to QRM on 3UI's frequency, no contact was made, distance 140 miles.

Another record was made when 3GM, on Mt. Buninyong, worked 3DA, Caulfield, on 576 Mc., distance 62 miles. Other portable stations were 3ACB, Mt. Macedon; 3AJI, Fretty Sally; 3ADU, Maryborough; and 3JO, Mt. St. Leonards. Main field day activity was on 144 Mc. though 50 and 576 Mc. were also used.

3AKE has been operating portable on 576 Mc. each Thursday evening and he has worked into Melbourne on several occasions. Other stations active on 576 Mc. are 3XA, 3ALH, 3QO, and 3AUX. No information of 288 Mc. activity is to hand, but on 144 Mc. the following stations have been active of recent weeks: 3ABA, 3YS, 3GM, 3ZL, 3AGU, 3RR, 3FO, 3BH, 3UG, 3EN, 3AKE, 3ED, 3YJ, 3ADU, 3AUZ, 3CP, 3BW,

3ALH, 3KF, 3UI, 3CI, 3ZD, 3WY, 3ML, 3ZV, 3FG, 3XA, 3BQ, 3CW, 3ACR, 3ABJ, 3ATB, 3OJ, 3ACH, 3AJI, 3GS, and 3JO. Country stations 3UI, 3CI, and 3ZD complain that they hear Melbourne stations working each other but that unless they make skeds they are unable to make contact. How about adopting the procedure used on 56 Mc. pre-war when stations in contact paused on the hour to listen over the band for calls from any other stations.

SOUTH AUSTRALIA

November has been brightened by the number of constant break throughs, much to the delight of the 50 Mc. gang.

A study of weather maps in conjunction with break throughs show up to now that where a good front is between the two places there is a good chance of a break through. This will be studied over the whole of the next few months before commitments are made. During November all States plus ZL have been worked and the DX season looks like it will be extra good and also for the V.h.f. Contest.

It is pleasing to note that some of the country chaps are becoming active. 5AX was heard in QSO with a VK4 one night and 5XL has been carrying out tests with 5BC/5MA. 5CN, at Darwin, is still active but no new dope received this month.

There are three VKs active, or will be soon—9XK, 9GU and 9MF. This should ensure plenty of activity from that tropical island.

5RO has a tower and is busy building a beam to put atop of it. Still finds time to natter and work a little DX on a dipole. 2ADT did not think much of 5RT's austerity single sideband even when Bob put the carrier back in it.

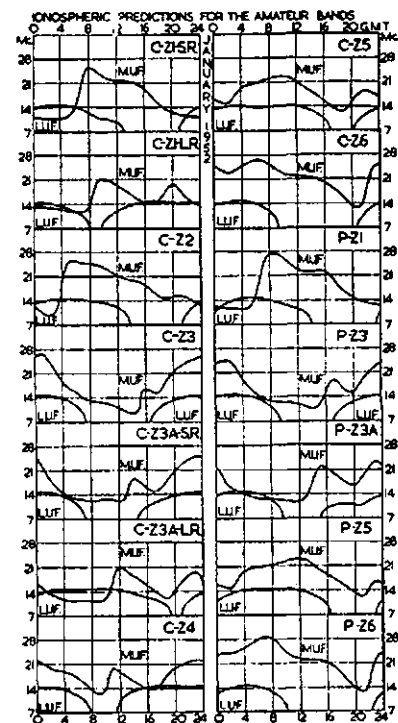
The Ross Hull Contest will be losing a lot of supporters soon if the trophy does not soon turn up. Two people have won it, one person reports seeing a photograph of it.

5QR and 5GL can be heard crossband 50/144 Mc. trying to fathom out how to get enough drive on 288 for their respective rigs. 5AJ is not a summer tourist on 50 Mc. Activity will live up from Mallala on 288 Mc. again soon when a call sign is allotted to one of the boys up there. 5BC gets amongst the DX and the list Hughie worked recently was very imposing. 5MA has missed a lot of break throughs due to shift work; you haven't got that on your own either.

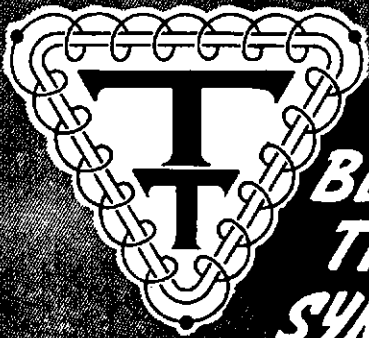
5ME, 5GF, 5ZL, 5JD, 5MK, 5HD, 5GL and 5OQ have been heard regularly on 50 Mc. There has been nil reports on 288 Mc. activity from the local gang.

With the Xmas festivals behind us we, in VK5, wish all v.h.f.'s good hunting for and during 1952.

PREDICTION CHART FOR JAN., 1952



50 Mc. W.A.S.			
Call	Certificate Number	Additional Countries	
VK2WJ	13	3	
VK4RY	2	2	
VK2VW	9	2	
VK5LC	1	1	
VK8DW	3	1	
VK4HR	4	1	
VK3PG	4	1	
VK3RH	5	1	
VK3HT	7	1	
VK2AEZ	10	1	
VK3XA	11	1	
VK3GM	12	1	
VK3ACL	14	1	
VK2ABC	8		



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UCC

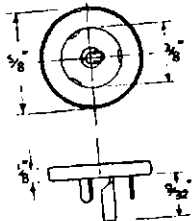
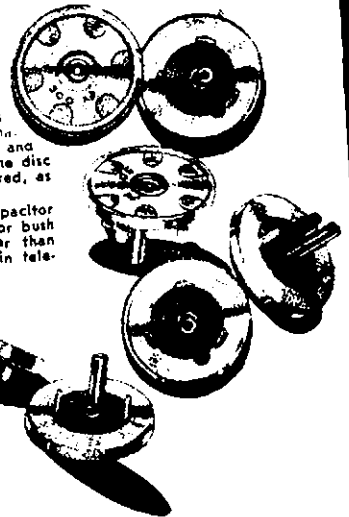
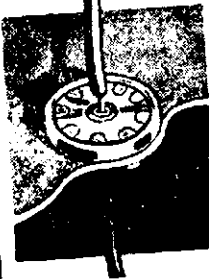
INFORMATION BULLETIN

MICADISCS

This type of "Micadisc," a smaller version of the larger transmitting types, is designed especially for radio receiver application.

They are of stacked foil construction, contained in a circular-plated brass case, which forms one terminal. The case is provided with three lugs so that the capacitor may be mounted directly on the chassis, the lugs bent over and the capacitor soldered. The other terminal is formed by a tag-eyelet at the centre of the disc soldered. The other terminal may be passed, soldered and continued on if desired, as depicted in the illustration at left.

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Working voltage: 350 at 71° C.
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5511-193

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 Country, the Zone number in parenthesis (as used by the "CQ" W.A.Z. Award) and the Amateur Prefix.

Aden & Socotra Is. (21)	VS9	Denmark (14)	OZ	Liberia (35)	EL	Scotland (14)	GM
Afghanistan (21)	YA	Dodecanese Is. (Rhodes)	SV5	Libya (34)	(MC1, MD1, MD2, MT2)	Seychelles (39)	VQ9
Alaska (1)	KL7	(20)		Liechtenstein (15)	HE1	Siam (26)	HS
Albania (15)	ZA	Dominican Republic (8)	HI	Luxembourg (14)	LX	Sierra Leone (35)	ZD1
Aldabra Islands (39)	FA	Easter Island (12)		Macau (24)	CR9	Sikkim (22)	AC3
Algeria (33)	FA	Ecuador (10)	HC	Macquarie Is. (30)	VK1	Solomon Is. (28)	VR4
Andaman & Nicobar Is. (26)	VU5	Egypt (34)	(MD5), SU	Madagascar (39)	FB	Somaliland, British (37)	(MD4), VQ6
Andorra (14)	PX	Eire (Irish Free State)	EI	Madeira Islands (33)	CT3	Somaliland, French (37)	(MD4), FL
Anglo-Egypt. Sudan (34)	ST	England (14)	G	Malaya (28)	VS1, 2	Somaliland, Italian (37)	(MS4, MD4)
Angola (38)	CR6	Eritrea (37)	(MD3), M16	Maldives Islands (22)	VS9	South Georgia (13)	VP8
Antarctica (13)	(KC4)	Ethiopia (37)	ET	Malta (15)	ZB1	South Orkney Is. (13)	VP8
Argentina (13)	LU	Faeroes, The (14)	OY	Manchuria (24)	C9	South Sandwich Is. (13)	VP8
Ascension Island (36)	ZD8	Falkland Islands (13)	VP8	Marianas Is. (Guam)	(27) KG6	South Shetland Is. (13)	VP8
Australia (inc. Tas.) (29, 30)	VK	Fanning Is. (Washington Is.)	VR3	Marion Is. (and Prince Edward Is.) (39)	ZS2	Southwest Africa (38)	ZS3
Austria (15)	(MB9), OE	Fiji Islands (32)	VR2	Marshall Islands (31)	KX6	Soviet Union:	
Azores Islands (14)	CT2	Finland (15)	OH	Martinique (8)	FM	European R.S.F.S.R. (16)	UA1, 3, 4, 6
Bahama Islands (8)	VP7	Formosa (24)	C3	Mauritius (39)	VQ8	Asiatic R.S.F.S.R. (17, 18, 19)	UA9, 0
Bahrain Island (21)	MP4	France (14)	F	Mexico (6)	XE	Ukraine (16)	UB5
Baker, Howland & Am. Phoenix Is. (31)	KB6	French Equa. Africa (36)	FQ	Midway Island (31)	KM6	Belorus'n S.S.R. (16)	UC2
Balearic Islands (14)	EA6	French Indo-China (26)	FI	Miquelon & St. Pierre Is. (5)	FP	Azerbaijan (21)	UD6
Barbados (8)	VP6	French Oceania (Tahiti)	FO	Monaco (14)	3A2	Georgia (21)	UF6
Basutoland (38)	ZB8	French West Africa (35)	FF	Mongolian Rep. (Outer)	(23) (JT)	Armenia (21)	UG6
Bechuanaland (38)	ZS9	Fridtjof Nansen Land (Franz Josef Land)	UA1	Morocco, French (33)	CN	Turkoman (17)	UH8
Belgian Congo (36)	OQ5	Galapagos Is. (10)	(HC8)	Morocco, Spanish (33)	EA9	Uzbek (17)	UI8
Belgium (14)	ON	Gambia (35)	ZD3	Mozambique (37)	CR7	Tadzhik (17)	UJ8
Bermuda Islands (5)	VP9	Germany (14, 15)	DL	Nepal (22)	VU7	Kazakh (17)	UL7
Bhutan (22)		Gibraltar (14)	ZB2	Netherlands (14)	PA	Kirghiz (17)	UM8
Bolovia (10)	CP	Gilbert, Ellice & Ocean Is. (31)	VR1	Netherlands West Indies (9)	PJ	Karelo-Finnish Republic (16)	UN1
Bonin & Volcano Is. (Iwo Jima) (27)	KG6	Goa (Portugese India) (22)	CR8	New Amsterdam Is. (29)	FB8	Moldavia (16)	UO5
Borneo, Brit. Nth. (28)	VS3	Gold Coast (and British Togoland) (35)	ZD4	New Caledonia (32)	FK	Lithuania (15)	UP2
Borneo, Netherl'ds (28)	PK5	Greece (20)	SV	New Guinea, Neth. (28)	PK7	Latvia (15)	UQ2
Brazil (11)	PY	Greenland (40)	OX	New Guinea, Territory of (28)	VK9	Estonia (15)	UR2
Brunei (28)	VS5	Guadeloupe (8)	FG	New Hebrides (32)	FU, YJ	Spain (14)	EA
Bulgaria (20)	LZ	Guantanamo Bay (8)	KG4	New Zealand (32)	ZL	Sumatra (28)	PK4
Burma (26)	XZ	Guatemala (7)	TG	Nicaragua (7)	YN	Svalbard (Spitzbergen) (40)	(LA)
Cameroons, French (36)	FE	Guiana, British (9)	VP3	Nigeria (35, 36)	ZD2	Swan Island (8)	KS4
Canada (2, 3, 4, 5)	VE, VO	Guiana, French, and Inini (9)	FY	Niue (32)	ZK2	Swaziland (38)	ZS7
Canal Zone (7)	KZ5	Guiana, Netherlands (Surinam) (9)	PZ	Norfolk Island (32)	VK9	Sweden (14)	SM
Canary Islands (33)	EA8	Guinea, Portugese (35)	CR5	Norway (14)	LA	Switzerland (14)	HB
Cape Verde Is. (35)	CR4	Guinea, Spanish (35)		Nyasaland (37)	ZD6	Syria (20)	YK
Caroline Islands (27)	KC6	Haiti (8)	HH	Oman, Trucial (21)	MP4	Tanganyika Ter. (37)	VQ3
Cayman Islands (8)	VP5	Hawaiian Islands (31)	KH6	Pakistan (22)	AP	Tangier Zone (33)	EK
Celebes & Molucca Is. (28)	PK6	Heard Island (39)	VK1	Palau (Pelew) Is. (27)	KC6	Tannu Tuva (23)	(TT)
Ceylon (22)	VS7	Honduras (7)	HR	Palestine, Arab (20)	ZC8	Tibet (23)	AC4
Chagos Islands (39)	VQ8	Honduras, British (7)	VP1	Panama (7)	HP	Timor, Portugese (28)	CR10
Channel Islands (14)	GC	Hong Kong (24)	VS6	Papua Territory (28)	VK9	Togoland, French (35)	FD
Chile (12)	CE	Hungary (15)	HA	Paraguay (11)	ZP	Tokelau (Union) Is. (31)	
China (23, 24)	(B), C	Iceland (40)	TF	Peru (10)	OA	Tonga (Friendly) Is. (32)	VR5
Christmas Is. (29)	ZC3	Ifni (33)		Philippine Islands (27)	DU	Transjordan (20)	ZC1
Clipperton Is. (7)	FO8	India (22)	VU	Phoenix Is. Brit. (31)		Trieste (15)	IT, AG2, MF2
Cocos Island (7)	TI	Iran (21)	EP, EQ	Pitcairn Island (32)	VR6	Trinidad & Tobago (9)	VP4
Cocos Islands (29)	ZC2	Iraq (21)	(MD6), YI	Poland (15)	SP	Tristan da Cunha and Gough Is. (38)	ZD9
Colombia (9)	HK	Ireland, Northern (14)	GI	Portugal (14)	CT1	Tunisia (33)	(FT) 3V8
Comoro Islands (39)	FB8	Isle of Man (14)	GD	Principe & Sao Thome Is. (36)		Turkey (20)	TA
Cook Islands (32)	ZK1	Israel (20)	4X4	Puerto Rico (8)	KP4	Turks & Caicos Is. (8)	VP5
Corsica (15)	FC	Italy (15)	I	Reunion Island (39)	FR	Uganda (37)	VQ5
Costa Rica (7)	TI	Jamaica (8)	VP5	Rhodesia, North. (36)	VQ2	Union of S. Africa (38)	ZS
Crete (20)	SV	Jan Mayen Island (40)		Rhodesia, Southern (38)	ZE	United States of America (3, 4, 5)	K, W
Cuba (8)	CM, CO	Japan (25)	JA	Rio de Oro (33)	(EA8)	Uruguay (13)	CX
Cyprus (20)	(MD7), ZC4	Jarvis & Palmyra Is. (31)	KP6	Roumania (20)	YO	Vatican City State (15)	HV
Czechoslovakia (15)	OK	Java (28)	PK	Ryukyu Is. (Okinawa) (25)	KR6	Venezuela (9)	YV
		Johnston Island (31)	KJ6	Searland (15)	9S4	Virgin Islands (8)	KV4
		Kenya (37)	VQ4	St. Helena (36)	ZD7	Wake Island (31)	KW6
		Kerguelon Is. (39)	FB8	Salvador (7)	YS	Wales (14)	GW
		Korea (25)	HL	Samoa, American (32)	KS6	Windward Is. (8, 9)	VP2
		Kuwait (21)	(VT1), MP4	Samoa, Western (32)	ZM	Wrangell Island (19)	
		Laccadive Is. (22)	VU4	San Marino (15)	(M1)	Yemen (21)	(4W)
		Lebanon (20)	AR8	Sarawak (28)	VS5	Yugoslavia (15)	YU
		Leeward Is. (8)	VP2	Sardinia (15)	IS	Zanzibar (37)	VQ1
				Saudi Arabia (Hebjaz & Nejd) (21)	HZ		

RAAF

VACANCIES FOR RADIO ENGINEER OFFICERS

The Royal Australian Air Force invites applications from suitably qualified men for appointment to Permanent and Short Service Commissions as Radio Engineer Officers.



FOR A PERMANENT COMMISSION applicants must be normally not more than 25 years of age, and hold a University degree in Engineering (preferably electrical) or in Science (preferably in physics, mathematics, and electronics), or hold a diploma in Engineering (preferably electrical or radio) which gives complete exemption from the Associate Membership Examination of the Institution of Engineers, Australia. Diploma candidates must also have not less than two years' experience in engineering after completion of diploma or have had war service in any of His Majesty's Forces, or be qualified to commence the first year of study for a University degree in Engineering or Science.

FOR A SHORT SERVICE COMMISSION (of 4 years with an extension for any period not exceeding three years). Applicants should be under 45 years and have held an appropriate technical appointment as an officer in His Majesty's Services or have completed an apprenticeship or comparable training in radio engineering, followed by at least five years' experience in that trade. Claims of applicants who have held Warrant or N.C.O. rank in a technical mustering will be given special consideration. Officers serving on Short Service Commissions are eligible for Permanent Commissions. All applicants must be British subjects of substantially European descent.

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(Pay is on a 7 days per week basis)	SINGLE	MARRIED
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<i>Flying Officer</i>	39/3	49/3
<i>Flight Lieutenant</i>	45/9	55/9
<i>Squadron Leader</i>	56/3	66/3
<i>Wing Commander</i>	71/3	81/3
<i>Group Captain</i>	86/9	96/9

APPLICANTS with former commissioned service in His Majesty's Forces will be considered for appointment in his former rank or such rank as may be commensurate with his qualifications and experience. Other candidates will normally be offered the rank of Pilot Officer but higher rank may be determined depending upon qualifications, age, and other attributes. Officers are required to contribute to a pension scheme which provides a generous retiring allowance and covers invalidity or death during service.

For further information write to:—

THE SECRETARY, AIR BOARD, VICTORIA BARRACKS, MELBOURNE, S.C.I.

FEDERAL, QSL, and DIVISIONAL NOTES



Federal President: O. GLOVER (VK8AG); Federal Secretary: G. M. BULL (VK8ZS); Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President: John Moyle, VK2JU.
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: Don B. Knock, VK2NO, 43 Yanko Avenue, Waverley, Sydney.

Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; Newcastle: Ron McD. Stuart, VK2AS, 84 Dunbar St., Stockton; Coalfields and Lakes: Harry Hawkins, VK2YL, 27 Comford Ave., Cessnock; Western: H. Stitt, VK2WH, Cambiowa, Forbes; South Coast and Southern: Roy Raynor VK2DO, 42 Pettit St., Yass; Eastern Suburbs: Don Knock, VK2NO, 42 Yanko Ave., Waverley; Northern Suburbs: Harry Powell, VK2AYP, Russell Ave., Wahroonga; St. George: Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah Bay.

VICTORIA

President: G. S. C. Semmens, VK3GS.
Assistant Secretary: C. Gibson (VK3FO).

Administrative Secretary: Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.
Zone Correspondents: Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rourke, VK3AKR, Killigrew, Westmere; North Eastern: T. K. Tennant, VK3JC, 36 Wilson Ave., Tatura; Far North West: M. Folle, VK3GZ, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Timandra; North Western: C. Case, VK3ACE, Cumminn Ave., Birchlip.

QUEENSLAND

President: J. H. Farrell, VK4WJ.
Secretary: J. F. Pickles, VK4FP, Box 633J, G.P.O., Brisbane.
Meeting Night: Third Friday in each month at the I.R.E. Rooms Winkham St., Valley.
Divisional Sub-Editor: Clive J. Cooke, VK4CC, Kuran Street, Cherraside, Brisbane.

SOUTH AUSTRALIA

President: E. A. Barbier, VK8MD.
Secretary: G. M. Bowen, VK3XU, Box 1234K, G.P.O., Adelaide.

Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.
Divisional Sub-Editor: W. W. Parsons, VK6PS, 10 Victoria Avenue, Rose Park.

WESTERN AUSTRALIA

President: J. Campbell-Watson, VK6JW.
Secretary: H. B. Lang, Box N1002, G.P.O., Perth, W.A.
Meeting Place: Perth Technical College Annex, Mounts Bay Road, Perth.
Meeting Night: Second Monday of each month.
Divisional Sub-Editor: R. H. Atkinson, VK6WZ, Box 127, Geraldton, W.A.

TASMANIA

President: R. O'May, VK7OM.
Secretary: L. W. Edwards, VK7LE, 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 St., Hobart, Tasmania.
Zone Correspondents: Northern: C. A. Cullinan, VK7KW, 12 Montrose Place, Launceston; North Western: R. K. Wilson, 4 Menal St., Burnie, Tasmania.

FEDERAL

MEETING WITH CIVIL DEFENCE MINISTER

On the 16th November, 1951, members of Federal Executive were granted an interview with the Minister for Civil Defence, the Hon. W. S. Kent-Hughes, to discuss with him the aims of civil defence in relation to communications and the part the Amateurs could play.

Mr. Perc Evans, by whose good offices the interview was arranged, acquainted Mr. Kent-Hughes with the details of the general organisation of the W.I.A. and the nucleus of an excellent communications system available from the transmitting Amateurs of the Commonwealth.

Mr. Kent-Hughes gave a brief but enlightening report of his proposed Bill for authorisation to form a skeleton civil defence system, which he hopes to put through in January, 1952, and advised of his original intention of including the Amateurs in the scheme.

Apart from the necessity for communications in the major cities and metropolitan areas, Mr. Kent-Hughes attached great importance to the Amateur flood and bush fire networks in the country areas and considered them a major consideration in any civil defence system. He maintained that food and food supplies was the most important matter in times of emergency, that a lighted match either carelessly or deliberately thrown into dry grass or scrub in the country areas at the right time could wreck more havoc on the population than an air-raid on a city.

Mr. Kent-Hughes evinced keen interest in the information given to him regarding the Amateur networks at present in existence and personally requested that he be given full details of these because he considered that ultimately any civil defence system would utilise them to full advantage.

In conclusion he thanked the members of F.E. for the early interest displayed by the Wireless Institute of Australia in offering the services of the Amateurs, and the keen appreciation of the seriousness of the international situation and the necessity for civil defence communications should a state of emergency exist in this country.

NATIONAL FIELD DAY CONTEST

In view of the lack of interest in the National Field Day Contest over the last two or three years, notice was sent to all Divisions requesting the opinions of members as to whether this Contest should be continued this year. All Divisions agreed to its continuance and a slightly revised set of rules were forwarded to Divisions by the Federal Contest Committee and are published elsewhere in this issue.

With an eye to the future needs of civil defence communications, it is hoped that members will take a keener interest in this contest and delegate some of their equipment to the construction of light and compact portable gear. There's lots of fun to be had in a field day contest, so what about giving it a "fy" boys!

OTHER COUNTRIES' BANDS AND POWERS

A request to the I.A.R.U. for a list of frequencies, types of emission and power inputs allowed Amateurs in other countries by their administrative authorities, brought an airmail

SILENT KEY

It is with deep regret that we record the passing of:—

VK2WK—Rev. W. Kennedy.

letter of thanks for the suggestion and advice that this would be included in the June issue of the I.A.R.U. Calendar. For the interest and information of all members details will be published in a future issue of "Amateur Radio."

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—VK3WL, 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.

FEDERAL QSL BUREAU

RAY JONES, VK3EJ, MANAGER

Jack Decure, VK5WL, ex-VK3WL, drops a word that he recently joined the ranks of the grandpops. States he gave hamming away after the first day of the last W contest and cancelled his licence end of August. He'll be back, sometime, if I know him.

SM5AQW, who renders sterling assistance at the Swedish QSL Bureau, mentioned that of over 150 VK stations worked and QSLed, he has received only 20 cards in return. Hop on to it fellows, never let it be said, etc.

Eavesdropping on ZK2AA, of Nieuw, recently returned from a trip to U.S.A., heard the following: "Yes had a very wonderful trip... Brought back a Collins 320B exciter and an R.M.E. converter and lot of other gear... Running pair 24Gs in final at 1,000 volts... Only been back one week, haven't re-built my modulator yet or beam, so will be QRL for a while. Only returned here for two years this time so you will see me back in ZL one of

W.I.A. ACTIVITIES CALENDAR

Jan. 6: Conclusion of Ross A. Hull Memorial V.H.F. Contest.
Jan. 19-30: N.Z.A.R.T. Field Day for 1952.
Jan. 26-27: W.I.A. National Field Day Contest.
Jan. 31: Membership roll of each Division due with F.E.
Feb. 15: Convention motions from Divisions due in to F.E.
Feb. 28: Convention per capita due with F.E.; end of fiscal year of Divisions.

these days. Travelled 6,000 miles by planes, cars, etc., when in W. Hospitality was wonderful, had to return here for a rest, hi!"

Some scores of cards returned by the Roumanian QSL Bureau. YRSJ was a phoney.

In forwarding his QSL, John Gore, ex-VK1PG of Heard Island, now back in VK, he mentions that printing has held up his QSLing but that all cards for his VK1 activities have now gone forward. Desires publicity for this fact. Anyone who dipped out, please come again.

Copied from ZL1ST: "VR5GA returned to ZL early in November and is now living in Auckland, but his ZL1 call sign has not yet been allocated. In an amusing address at a Branch meeting, VR5GA eulogised the generosity of the W, KH6, and VE gang. ZM6AA is scheduled to return to ZL in early December."

George Grubb, G5LI, probably one of the best known of the G gang, has left for Canada where he will reside for at least one year. George is retaining his G call sign and merely taking down his antennae for the period he is absent. Although he will qualify for a VE licence, he does not expect to establish a station in VE but hopes to be heard frequently from the rigs of his Montreal friends VE2WA, VE2KZ and VE2EV. W will miss you from the band, George and wish you a healthy and happy sojourn in Canada.

VK2AHA advises that M/Sgt. Wenglare, of TA3AA and TA3FAS, is now back in U.S.A. and active under W3SPL. Any station who contacted the abovementioned TA stations and has not received a card should write to W3SPL, M/Sgt. Wenglare, 1905 A.A.C.S. Squadron, Andrew AFB, Wash. 25, D.C., U.S.A., when that want will be supplied.

An SX76 receiver has been sent on by FK8AC to Andre Baillet FW8AA in the Wallis Island. Maybe this will stimulate Andre's interest sufficiently to entice him on to the Amateur bands. all other inducements have failed so far.

NEW SOUTH WALES

The November meeting of the N.S.W. Division was held at Science House on Friday 23rd with the President, John Moyle, in the chair. A somewhat sparse attendance might be accounted for by the fact that the evening was set aside for discussion of the agenda items to be submitted to the next Federal Convention to be held in Sydney. This was in place of the usual lecture. The only visitors who made their presence known were 9RC and 3IE who were suitably welcomed.

After the routine business had been attended to, Wing Commander Charlie Ecurie addressed the meeting for some twenty-five minutes on the R.A.F. active reserve in the hope of interesting members in joining this body. He outlined the organisation and requirements of the service and the benefits to be obtained by joining up. One thing which became clear from the discourse and which seemed to disappoint the members somewhat, was the very noticeable gap which is appearing between the Amateur Radio game and the Services counterpart. In the Services, the emphasis is less and less on radio operators and more and more on radio technicians—not that Amateurs are lacking in

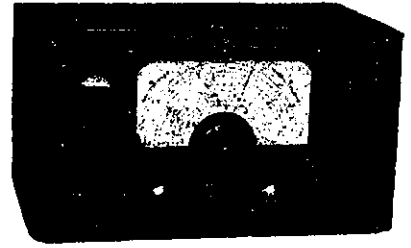
(Continued on Page 15, Column 3)

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VK2 Division's Annual Field Day at Woy Woy

REPORTED BY DAVE EVANS, VK2AYE

Sunday, 18th Nov., was about the finest day in N.S.W.'s twenty-six-day drought and the brilliant weather was responsible for the biggest roll-up at the Annual Field Day yet seen in the Division's history. A great deal of preparatory work, under supervision of Bill 2HZ, our Convenor, fully deserved the support which members and their families extended by their attendance.

The total attendance was 240 and showed an increase of 70 over last year's figures. Among the visitors were noted G3GVN, VK3AKS, and VK5WQ (ex-VK3WQ). There was a large roll-up of associate members and the XYLs and YLs numbered 58, and in addition, there were a goodly number of harmonics.

All the attractions of previous years were repeated with one or two additional variations, possibly the most popular being the Swap Table where members were able to buy and swap gear from each other. About £70 of gear changed hands on this feature which indicated the excellence of the gear brought by members and justifies the hard work which Major 2RU undertook when he commenced the project.

President John Moyle, 2JU, opened proceedings at 11 a.m. with a brief speech in which he welcomed visitors and declared the Field Day open. From then to 12.30 p.m. 2HZ was kept busy at the registration while the competition for the frequency check of an L/C circuit and a technical quiz diverted the chaps. The harmonics being offered in races arranged by Mrs. Davies (XYL 2FE).

Then followed the lunch period which was voted a great success by the harmonics who enjoyed to the full the free lolly water and ice cream available to them. From 1.30 to 2 p.m. the children indulged in a treasure hunt while their elders, who should have known better, went crazily for the bran dip which presented a major function. There were many surprises in the dip, some of the items included lucky numbers which entitled the fortunate ones to some desirable pieces of equipment. A deal of amusement was evident when Eva Cowan drew a lucky number and struggled away with the main portion of an AR8 Rx—what Jim thinks hasn't been reported!

The hidden Tx hunt was started off by Dave Duff promptly at 2 p.m. A variation in this event was that both the 3.5 and 144 Mc. Tx's were located at the same spot—the first to locate the position being adjudged the winner irrespective of frequency used. This event was won by the starter, Dave Duff, and among rude remarks heard around the place was an insinuation that Dave must have had the job of hiding the Tx. While the Tx hunt was being held, Ted and Heather Davies tended to the needs of the ladies by running some competitions. At 3 p.m. the Woy Woy all band scramble commenced and for 30 minutes the chaps churned out plaintive CQs in their determination to become the possessor an attractive trophy.

3.45 p.m. saw 2JU mount the rostrum again, this time to introduce Lionel 2CS, President of Hunter Branch, to whom had been delegated the presentation of prizes. This chore was disposed of by Lionel with his usual verve and good humour. The next and final event of the day was a film show by Dave Duff. Convenor Bill Moore, having discovered an unopened nine watt, immediately ordered its decapitation and demolition—a task which found many willing helpers. The outing came to an official end at 5 p.m. and the general exodus began.

The register showed the following members: VK3 2AYH, 2ASM, 2AAB, 2ASW, 2OA, 2ARF, 2AKZ, 2ST, 2ABZ, 2ANF, 2KM, 2AAP, 2ACD, 2AYE, 2AMD, 2OF, 2FZ, 2YL, 2FD, 2KZ, 2ACC, 2AGD, 2VG, 2ID, 2CS, 2XT, 2ABO, 2RX, 2QZ, 2KF, 2JU, 2AJQ, 2ADT, 2AHH, 2LR, 2AYT, 2EO, 2XO, 2NT, 2VW, 2ADS, 2VR, 2RU, 2MQ, 2OY, 2FO, 2CE, 2DX, 2AG, 2AJ, 2AMW, 2M, 2KH, 2XJ, 2TN, 2DY, 2AE, 2AA, 2AHY, 2BT, 2AJW, 2AKU, 2HO, 2VL, 2AH, 2AMM, 2IS, 2PT, 2AIR, 2ALA, 2GA, 2BR, 2ABU, 2NX, 2IT, 2YM, 2UV, 2XU, 2FG, G3GVN, VK5 2ZC, 2AHA, 2AQ, 2WO, 2FP, 2AKS, 5WQ, 2ASE, 2IO, 2EH, 2VY, 2HZ, 2BF, 2AKR, 2AOM, 2FE, 2AFS, 2ZH, 2AEZ, 2CZ.

The competition results were as follows: Hidden Tx Search (144 Mc. op. John 2ANF, 3.5 Mc. op. Jim 2ZC)—Winner, Dave 2EO and party, time 14 min.; 2nd, de between Wal 2XU and party and Harold 2AHA and party, 14½ min.; 4th, Alex 2ABU and party, 15 min. Amateur Quiz—Winner, Jack 2OF; 2nd, Jim 2ZC, Woy Woy All-Band Scramble (30 min. operation, any band or power)—Winner, Jim 2ZC, 18 contacts; 2nd, Jim 2AKU, 17 contacts; 3rd, Wal 2XU, 18 contacts. Frequency of Toned Circuit—Winner, Harry 2YL, 55 Mc.; 2nd, Jack 2OF, 55.1 Mc.; 3rd, de between Bill 2MQ, 54 Mc., and Alf 2CE, 56 Mc.

In any attempt to thank individuals for their willing and unstinted work on the Field Day, it is inevitable that some must be missed inadvertently and Council desires to place on record its appreciation of the support which members and their families gave the organisers and ensured the success of the venture.

Thanks to Mrs. Hardman for the tough assignment which she undertook in the kitchen and to Jack Francis for assisting her; to the Woy Woy gang in general for their assistance in everything; to Johnnie Walker who did a swell job getting a screen, taps for the beer, and a gramophone; to Ted and Heather Davies for spending the day looking after the XYLs and harmonics; to Bill Moore for the general supervision of the whole show; to Bob Wilson and Jim Trick, without whose aid it would have been a prohibition party; to Ernie Ashley for donating a doll for the youngest attendant at the show (won by a seven weeks' old harmonic); to the Disposal Committee, Wal Nye, Fred Phillips and Morris Butler for supplying, wrapping, transporting gear, and operating the bran dip; to Dave Duff for running two picture shows; and finally to the group who always have the chore of cleaning up the hall and wreckage which we leave in our wake—the same old Woy Woy warriors, under Brigadier Hardman. Thanks a lot, folks, for everything. If we have missed you in the list of thanks, be sure it isn't intentional because we want your services again next year for a bigger, brighter and better Woy Woy Field Day at the Watery Wonderland.

New South Wales

(Continued from Page 13)

the latter sphere, but after all, the average Amateur still regards the operating of his station as a big part of his hobby. It can only be expected that this gap will widen fairly rapidly as communication by radio becomes more and more a matter of automatic tape relay and automatic telephony and less and less a matter of individual operators passing and relaying messages to each other.

After the Wing Commander had answered a barrage of questions, the President gave his usual round-up of news and events to which we look forward with more and more pleasure as time goes on—a sort of a highlight of the month for keeping up to date with what goes on. Notice was given of the Annual Dinner on 26th January, a date to write down in your diary now. The great success of the Woy Woy Field Day on 18th November was mentioned.

A gloomy picture of the balance sheet was given as a prelude to a tentative suggestion that the annual subscription should be put up to thirty shillings for members and one pound for associates. The Council members present all furtively made ready to duck for cover from the irate membership but this proved unnecessary as the only reaction was a motion that the suggested increase wasn't enough and that subscriptions should be two guineas for members, and twenty-five shillings for associates. This was decided upon with few dissenters. After all, the subscription has been the same ever since the W.I.A. started.

Nine agenda items were then discussed with a surprising lack of heat—all being accepted at least in principle.

The only item which provoked anything like a spirited discussion was John Meagher's motion calling upon Federal Executive to prepare a case for a 250 watt power limit to be placed before the authorities. Most of the speakers were against this, but it was passed by a big majority all the same. John came all the way from Forbes to put this before the meeting and brought a great file of correspondence from other Hams in support of it. It proved unnecessary to broach this file except superficially (fortunately). The meeting closed at 10.50 p.m.

NORTH COAST AND TABLELANDS

The North Coast is still without rain and many water tanks have run dry, paddocks have no grass for cattle, in a nutshell things are grim! Perhaps some Ham with an aircraft could drop a few blocks of dry ice around the place! Highlight of the month was the Sydney-Hunter Branch "do" at Woy Woy. The North Coast was represented by 2LR and 2AHH who both agreed it was an excellent day, however they were two weary souls when they arrived home after a round journey of 650 miles. Some good advertising was done for our Urunga show and we hope to see some of the Woy Woyites up the North Coast during Easter.

Calamity for the month fell to the lot of 2DX, of Macksville. Ted was dismantling his three element beam for 20 preparatory of taking up

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VALE

REV. W. KENNEDY, VK2WK

It is with deepest regret that we must record the passing of "Bill" Kennedy. One of the old timers, "Bill" was born on the 23rd November, 1869. His birthplace was Pitt Street, Sydney, on the site now occupied by Messrs. Hordern Bros.

From school he entered the P.M.G. Telegraph Department and later studied and qualified for the Ministry of the Church. He became interested in radio and conducted some experiments with Father Shaw and was active in this direction until the year 1914. To 1926 he was successful in obtaining his A.O.C.P. and operated from Roekdale, Lana Cove, Willoughby, and Helensburg.

"Bill" was an active Amateur until about three years ago and possessed a current license at the date of his death. Though mainly a c.w. man, he was heard occasionally on phone. For all of his 82 years of age, he has set an example that many of us would like to follow.

a new QTH. While the beam was on the way down, the ropes broke and needless to say the beam did too. You have our sympathy Ted, hope you get the windmill tower OK. The Inverell and Tenterfield gang are becoming 2 mx conscious and it is hoped it won't be long before signals are emanating from 2UN, 2WT and 2ATS. Len 2LR has erected a new 6 mx beam and is hopeful of having a signal on by Xmas. 2GI has been on the sick list of late and when he recovers he will undoubtedly be known as the "toothless wonder," best wishes Keith. 2FM was a visitor to the North Coast and called on 2XO, 2QV and 2ADN.

Ken 2APB called on the writer but unfortunately I was in Sydney at the time and I missed meeting Audrey as well as Ken. Jack 2ADN is spending a fortnight at Southport so holidays must be the rule. Peter 2PA has been up and down the Coast several times since last issue and has been visiting his mother who is in hospital at Kempsey. We all hope she will soon be well again. Len 2LR ripped off the crown wheel of his car and knocked off the diff. for good measure. For the new year mark up Easter for the North Coast Convention, you are certain to get a hearty welcome from Crieff and the gang.

COALFIELDS AND LAKES

This zone was well represented at the Woy Woy Field Day, some of our inactive members came out of hiding for the day. Conditions at Erina are apparently good as Ern 2AEZ has improved to the extent of about three stone. Harry 2YL showed he was still frequency conscious by winning that competition. We must thank Cess and his good lady for the fine job they did in attending to the local side of the organisation of the day's proceedings. Other members present were 2KF, 2KZ, 2ADT, 2PZ, 2EH, 2GA and 2RU. Major 2RU has taken unto himself a new automobile but still makes time to work some DX on 50 or chew the rag with the locals. 2VU and 2ANU have been getting their share of DX on 50 during the early openings. Charlie 2ARV is still going strong on 7 Mc. Here's hoping we hear a little more of some of you other chaps during 1952.

HUNTER BRANCH

After listening to the lecture on "Tape Recorders" given by Wal Porter at the November meeting, many of the boys are seriously considering building a recorder themselves. Wal showed us how to build a machine of simple construction which would give good overall reproduction for minimum cost. He was assisted by Mr. Don Coombs, of I.R.E., who explained where various bits and pieces went. Among the new members and visitors present was Bill Myers, W4NKH, of Tampa, Florida, whose ship was in port. Bill met quite a few of the local Hams socially, and some are just recovering! The Hunter gang were well represented by members, associates, and their XYLs, YLs and harmonics at the Woy Woy Field Day. As expected, they were well to the fore in the competitions, and 2ZC and his team really knocked

GREETINGS FROM ZONE OFFICERS

N.S.W. Country Zone Correspondents Noel 2AHH, Ron 2ASJ, Jack 2ADT, (Vice, Harry 2YL), Hugo 2WH, and Roy 2DO, extend to the gang all the best wishes for the Festive Season. They hope the forthcoming year brings plenty of interesting news for their columns and when something does happen let them know about it.

'em over in the Scramble. When Divisional President, 2JU, invited our President 2CS to present prizes and draw lucky numbers, further success to the Hunter boys was assured!! A sight well worth seeing was 2AHA sitting on the bonnet of 2DZ's Renault in the Tx hunt! Harold was first in on 144. We Hunter folk are mighty grateful to 2KR and his XYL, 2HZ, the Divisional Councillors, and all those responsible for a grand day.

The National Field Day is near at hand and the boys hope to win it this year. 2IS is getting his axe ready! Ivan now has plate and screen modulation using speaker trannies. Vice-President 2AFS is about again and Bob took family to Woy Woy in new buggy—has the Rx going now. 2VJ getting No. 11 ready for Hobart Yacht Race. Geoff is operator on local yacht Nirvana. Harry 2AFA worried by local noise, but getting out well on 40 phone and c.w. 2YS has been looking up the town boys. Norm is enjoying his 40 phone contacts. 2AKM popped up on 20 again; Bill has been QRT for a while. 2NX's mobile rig still in blueprint stage; Shorty took an attractive 2nd op. to Woy Woy. Doug 2ADS been busy on car maintenance so little done on converter for 6 mx.

2OS back at work and Nev feels much better—keep it up OM. Dave 2EZ still painting house. 2ARK making a comeback. Mac has TA12 for 80, 40, 20 and 10, and active on 40 c.w. The other TA12 man, 2XY, very quiet; Neil is probably listening though! Lew 2WU is on 20 phone and c.w. about twice weekly. 2CI visited North Coast Hams recently; Gordon also attended Sydney meetings. Thanks to 2XQ via 2AHA for Maitland gossip. John himself is very pleased with his new monitor. 2VO will be heard on air shortly—glad to know you've joined up Colin. Vic 2AKP is QRL on frig. work this warm weather. 2ANL is one who is active; Joe sticks to 10 and 6. 2DG not heard since contests. Although flat out Norm 2ANA found time to give 2MR a hand with Rx; Edgar is a regular on 40. 2AAI QRT with mike trouble. Harry 2AFX playing with converter. House building keeps Bill 2MC QRT. 2TE also busy building but manages a QSO on 20 and 10 mx. 2CN worried by fibrosis, Bert poking a sig out on 40 again now. 2PT going quietly on 20.

Ernie 2FP helped Hunter team in Scramble. Bill 2PJ has new rig on 20—a Heising modulated ten watter. 2PQ planning new beams. Tom had bushfires rather close. Pleasing to see 2AGY at meetings again; Fred busy with jobs

around new home. Another who is anxious to get cracking is 2LV, but Harold determined to get home chores completed first. 2ANG pleased about winning the lucky number at Woy Woy—Phil will make good use of that tube. 2AMM plans to re-erect two element delta match in lieu of vee beams. Bill reports 2nd op. harmonic doing well. 2CW's rig is idle but ready for use when Bill's car not top priority. Hot weather keeps 2XT busy and Bill can't get QRO power supply completed. 2ASJ says thanks a lot to 2XT and 2UY for nice day at Woy Woy. Stan and I nearly found hidden Tx—without a Rx.

Notice of Meeting.—The first meeting for 1952 will be held at Newcastle on Friday, 11th January. A good night is assured, so roll up.

SOUTH COAST AND SOUTHERN

Even though the news of the 2PN/3UI 144 Mc. contact may be mentioned elsewhere, we feel that we must congratulate both Ross and Alan for their efforts on 144 Mc. Actually the contact had a few unique features—it was the first contact, the first signal heard and the first Interstate contact for Ross 2PN. 2BQ shared in the fun, he was second op. and chief beam rotator for 2PN. Geoff is off on holidays to Narooma and no doubt we will hear 2BQ/P. Gordon 2QW actively engaged on 20 c.w., has 86 countries with 50 confirmed. A new station contacted was 2AUB, of Wollongong who is putting out a nice signal. Believe the South Coast was well represented at the Woy Woy Field Day. 2DY took home a beautiful trophy in the way of a Command Tx.

2AHY is on duty at 2AMW, he hails from the North, was 4HY at one time. There has been a great deal of activity in Canberra since the new club began, it can boast 26 financial members. 2PM, who is Secretary, has an 815 final on 144 Mc. and uses a stacked array. Ron has 30 watts on 40 with 12 db of clipping. Officers of the A.C.T. Radio Club are as follows: President, Stan Brown 2ASE; Vice-President, Les Pitt, 2PI; Sec., Ron May, 2PM; Treas., R. Brockman; Publicity Officer, Ker Finney, 2AIL. Meetings are held on the 1st and 3rd Friday in each month. 2AIL is re-building 144 gear with an 829B final, plus a multi-element beam. 2RN active, but curtailed to some extent due to exams. 2TA sigs are consistently heard on 144 by Hugo 2WH. Alan runs 70 watts to an 829B and a 12 element rotary beam. 2BO is active and works most bands using 50 watts; v.f.o. is Type 19; some gear for 144 is under way and another Rx for 6 mx. is being built.

Monty 2JQ worked recently and is too busy to do much Ham work, has hopes of a vacation in New Year and has big plans for new antenna. Jack 2OY works plenty of European DX but not doing any good with the Ws. Many points were lost for that reason in VK-ZL DX Contest; the beam is far too sharp. 2AJP and 2AIZ both inactive. Ron 2RH is QRL with orchard, also has trouble with master switch in AT5 having no circuit; this trouble should soon be rectified thanks to 2ANF who came to the rescue. Les 2AL has been quite active as he really lays down a solid signal. Bob 2XP has forsaken radio and has taken up the land for his livelihood, near Goulburn. Lindsay 2ON heard on briefly and Cec 2AIK has left the country for the city. Col 2ASF has the world well informed of doings at Twofold Bay.

WESTERN ZONE

Rod 2ACU had little time for radio this month as he, along with most of the Coonamble people, had a really bad time bush-fire fighting. Lin 2EI busy with harvest now, but keeping regular skeds with Forbes on 2 mx. Jim 2JV, now of Parkes, heard on 7 Mc. Bob 2AXS and Tom 2AMR are the most active Hams in Dubbo. Tom has 522 Rx going on 2. 2XP heard occasionally. Trev 2NS keeping Bathurst in the news with regular skeds on 2 to the Sydney v.h.f.'ers. 5 over 5 beam and xtal controlled rig on the air soon. Phil 2IE staging a come back via 50 Mc.

John 2AMV has had a very busy month; took his beams down for overhaul, built new 28 Mc. final and then went to Sydney to attend W.I.A. meeting. 2WH has been hearing things, at least a ZL on 144 Mc.—no confirmation yet. To prove he is still alive, Bill, of Eugowra, shows up on 7 Mc. occasionally, but 2BT has been sadly missed on v.h.f.'s lately. Round Orange Norm 2JW is still pulsing a very strong signal to Forbes on 144. Believe Don 2ALX is thinking of doing things on 50 Mc. again. Have to welcome Peter 2JX to the Western Zone; now at Wentworth Falls and doubtless hatching up something with Con 2LZ, 2AFO, etc.

2JX been active on 50 and rattles the Rx's in Sydney over a line of sight path. Jack 2OF worked hard in the kitchen at the Woy Woy F.D., but took time off to win a couple of prizes. 2HZ collecting bush poles for the antenna systems but not scheduled for erection until 1953.

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VICTORIA

NORTH EASTERN ZONE

Best news of the month was the zone picnic among those present being 3AFP, 3HZ, 3UI, 3TS, 3ALE, 3AGT, 3FF, 3KR, 3DW, 3JC, Doug Twigg, Ken McGulnes, XYLS, YLs and harmonics. Highlight of the day was Alan's (3UI) contact on 2 mx with 2PN at Tumut, air line over 150 miles from Mt. Major and the very first VK2-VK3 contact on this band. A faithful few from Melbourne turned beams north and were worked. Sundry photos were taken of the rig and witnesses by courtesy of 3DW. Doug spent night with 3KR at Benalla, bet plenty of ear-bashing, what say Else? 3TS and XYL on honeymoon in new car also called in on Ken and were invited to picnic. Bob 3RT visited 3KR also. Don't you ever get tired of visitors Else?

3YV was back in hospital after trying to crank the car, tut tut Howard, how could you? 3WQ is a new member to the zone. Welcome Colin, believe you operated phone in c.w. end of band. Fancy me being the bird to QRM you and with my c.w. too. 3CI getting annoyed at possums using his 2 mx beam for a gymnasium; throwing bricks with unusual accuracy so I'm told. 3DW now has one switch control, but got awfully tied up explaining it, didn't you Doug. 3UI patiently awaiting 6 mx to open, has had several good contacts. 3JC one up on 3UI in working a VK1, competition getting keen, but I'm afraid I've got a long way to go to catch up on Alan. 20 mx has been kind to me since last month's notes. Merry Xmas and Happy New Year from your zone correspondent—3JC.

Stop Press! 3UI again with a first for this State. This time on 6 mx with a VK3. Good hunting Alan. 3KR turned up a VK1. I still have to snoop to find these things out.

EASTERN ZONE

I thought I'd have a spell this month, but my understudy, 3SG, is too busy getting his rig on the air to write the notes, so he says! The November meeting of the Sale Sub-Branch was held at Sale and 15 members were present. 3IZ and his mate John, came up from Yarram, with 3HK, who was on holidays there. After general business, we had a film show by courtesy of Bud 3ABP.

Personal notes are scarce, no one doing anything apparently. We regret to report that Mrs. 3WE is at present in the Bairnsdale Hospital. 3QZ's daughter, Dawn, has also been in hospital with appendicitis, but is OK now. 3FR has a soft job, starts "work" at 9 a.m. 3SS has at last completed his freq. meter! Nice work, David! 3ADA would like to hear from any of his mates (didn't know you had any, John), his new address being: A11426 L.A.C. Jarman, J. B., A.R.D.U., R.A.A.F., Woomera, S.A. John's a long way from home, so go to it boys.

After doing a little brass pounding on 20 mx, I wonder why so many T9 reports are given to DX stations whose real notes are anything from T7 to "B awful?" Mine is, of course, T9X! (3ARV please note!) 3TH is busy with the harvest. 3DI, 3VL and 3US active on 6 mx. 3BB and 3AEP are silent these days and 3AGF is active on 40, doing battle with the commercials. 3ALA spends his spare time at fire brigade drill, and the modulator is still unfinished.

A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on Thursday, 17th January, 1952. Morse and Regulations are held on Monday and Theory on Thursday evenings from 8 to 10 p.m. Persons desirous of being enrolled should communicate with the Secretary W.I.A., Victorian Division, 191 Queen Street, Melbourne (Phone FJ 6997 from 10 a.m. to 4 p.m.), or the Class Manager on either of the above evenings.

3ABF playing with radio controlled model planes, and 3AFG spends his nights making weird noises on a saxophone. 3VG says he will probably be a VK9 in the near future, probably at Port Moresby.

This is all for this month and 3SG will be on the job for the next issue, or else! We, of the Eastern Zone, extend to you all our best wishes for a Happy New Year.

CENTRAL WESTERN ZONE

As broadcast by VK3WI the zone will be holding a field day over the Foundation Day weekend; this function will be of a two-fold nature, (a) a zone effort, (b) a kick along for the W.I.A. National Field Day which is run over the same period. Rules and scoring will be the same as the National Field Day, which you will find elsewhere in this issue.

Members who take part are asked to submit two logs, one to your zone secretary (3YW), and the other to the W.I.A. for inclusion in the National Field Day, which up to date has been very poorly supported. Portable operation is a field of its own, and one in which every Amateur should be interested. Good work has been done in the past, so what about it chaps, let's have a good muster on the day. What sort of gear? Nothing elaborate, just something simple and reliable—you possibly may win a pair of 807s. For Zone purposes, the Field Day will be an open contest, i.e., both c.w. and phone can be used to total up the one score.

3ARL, as mentioned last month, has been working on an all-band tank. Lin now has it going f.b., and re-built the Tx to include band-switching right through, so now he goes from 3.5 to 28 Mc. at the flip of the wrist. Lin is also interested in QRO, and last seen had a 600 volt tranny under one wing (let's hope it blows up). 3HL is still catching an odd one on 20, but, as the XYL says, harvest's on now and radio is out. 3AIM is still building that 100 watt rig, and slowly getting along. 3DP has the new double conversion Rx going now and uses a 2 stage 50 Kc. amp. for the 2nd i.f. with two trannies back to back for the input and mixer stage at the end for c.w. and s.s.b., it's a big improvement on the ordinary diode.

3XC we believe has been on a trip to Sydney and visiting one or two shacks. 3ARM has not been heard of late and is doubtless busy gathering up the "golden grain." 3YW has been building a portable Rx to lick you other blokes during the field day, hence the s.s.b. (much to 3ARL's delight) has been very quiet, however we also have thoughts of QRO too.

Don't forget the zone hook-up which will be on the second Sunday of the month (13th January) at 10 a.m. on approx. 7155 Kc.

GEE LONG AMATEUR RADIO CLUB

The first meeting for the month of November went off in full swing although the lecturer for that evening, Mr. J. McConnell, 3SW, was unable to attend owing to sickness, but he will be on at a later date. However, after the business had been discussed the technical committee gave their report on their activities. 3AJP reported he had re-aligned the club's Rx and had put new plugs on it. 3BU said he had put the modulator on the Type A Mark III.

On 21st November the business was dealt with in double quick time as the syllabus for that evening was a hidden Tx hunt. The Tx was hidden by Alf Forster, J. Beckingham and Ray Tucker. First to arrive at the location were 3SY, 3ALG and Bob Reiss. This party have been having quite a bit of success in these Tx hunts. Their time was 45 minutes and their mileage was also good, being 5.9 miles. Second to come in was 3AKE and party who arrived 10 minutes later—their mileage was 7. The Tx was hidden at Montpelier.

QUEENSLAND

Due acknowledgment is given to 4PD for supplying the following:—

The 40 metre band has been very noisy and patchy during the past month; nevertheless contact has been maintained with most of the country stations, especially during the W.I.A. Sunday morning hook-ups. Interstate contacts have been reasonably good, also ZLs and some Pacific Island stations.

The Somerset Dam "Do" to be held on the 26th, 27th and 28th of January, 1952, is taking shape and promises to be very successful. Extracts from the programme have been printed in "QTC" and posted to all members of the Institute, also to all VK4 Hams that are within travelling distance of the Dam. Copies have also been posted to all VK Division Secretaries and to a number of VK2s that intend to make the trip. The organisers, 4GG, 4FP, 4HZ and 4PD are working very hard, both on the air

and in personal contacts, to make this "Do" all that it should be.

George 4GG, the "old iron horse" from Yarraman, is to be heard nightly bashing the ears of some Ham, just in case he hasn't heard the glad tidings. George, by the way, is one of our oldest VK4 Hams and it is many years ago that he first thought up the idea of a Ham get-together. Now that the opportunity has arrived, he has put his shoulders to the wheel and together with his fellow organisers and the co-operation of all other Hams, will definitely make this "Do" something to be remembered. So fellows, talk about it during your contacts, dream about it, and don't forget to go to it.

A word of thanks, from the organisers of the "Do," to Crieff 2XO, of Raleigh, for his assistance and suggestions. As you all know, Crieff has been tied up with the Urunga Convention from its inception and is therefore a very handy man to have about the place. Programmes are already out for their Easter 1952 Convention and 'tis rumoured that quite a few VK4s intend to make the journey to Urunga.

Associate member Noel Martin, of Bell via Dalby, reports on Dalby Hams: 4DA not very

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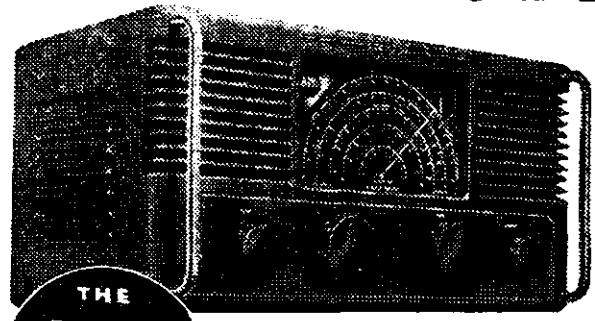
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active, but goes on 20 now and again to keep the spiders out of the works. 4ZZ has had his QTH transferred to Dalby; hope to hear Les on the air soon. 4XN works a few on 6 mx, but shift work has him tied up somewhat. Noel himself is a very keen listener on quite a few frequencies. He sports a three element beam and hopes to have his ticket and QRM factory very soon (best of luck, Noel).

Claude 4UX is once again on the move; the powers that be think he was putting on too much weight at Plalba, so have transferred him to harder food, namely maize, at Atherton. We hope to hear from you at least on Sunday mornings, Claude, providing the old gas buggy can climb the Tablelands. OK. 4XR, Gypmie, has shifted to a new QTH in the same town and thinks that he is now down about one S point on Jimmy 4HZ. Knowing Eric's ability, he will find ways and means of overcoming this small deficiency. Barry 4LN has been very silent of late.

The peanut king of Kingaroy, 4SE, has visions of starting a new industry in Maryborough, having transplanted his stud plants to that city. Best of luck Syd and perhaps a little peanut oil may revive the other Hams in that fair city. Apart from 4GH and yourself, very little is heard from "your neck of the woods." Lennie 4DI is trying very hard to keep the flag flying in Rockhampton and is a regular visitor to the hook-up on Sunday mornings. He is also trying to organise a party to Somerset Dam in January. We would certainly like to meet up with you boys, so keep trying Len. Bundaberg is very silent on 40, with the exception of 4BJ who is heard most Sundays in contact with Cedric 4PT. What about coming into the hook-up Vic? North of Rockhampton, 40 mx seems to be out of date or out of skip. Occasionally 4ZP of Sarina is heard in contact with 4EL. Nothing is heard from Mackay on 40 of late. We are still listening for our old friends 4FH, 4KW and 4BQ. Let's hear from you boys. Maybe 20 mx is the order of the day.

Very rarely we miss getting a call from 4RN, of Woodford. Bob has about 100 cows to attend to, but seems to hurry things up a bit on Sunday morning so as to be in the hook-up. Toowoomba is represented by Cedric 4PT. At the present time he is flat out converting 986A units to operate on 144 Mc. He has offered to chase the spiders out of 4PD's units and put them on 144 while Tom is away on holidays in the south. Some fellows have all the luck. 4CG has been heard many times lately with his single sideband transmission. The boys just don't seem to be able to catch on Cliff. Stick to Charlie, he seems to have the hang of copying it OK. Speaking of Charlie, 4CU, he is a very hard man to catch on the air, also is 4OR. Perhaps Key will come good after the harvest.

Looks like 50 Mc. and 144 Mc. are booming at the moment. Quite a number of the boys are converting gear over to 144 Mc. or polishing up their old gear. 4FP and 4JO would be pleased to carry out tests with any other stations. It has been reported that VK2 has heard ZL on 2 mx., so keep listening John, one never knows!

SOUTH AUSTRALIA

The South Australian Division's monthly general meeting for November took the form of a visit of inspection to Aeradio at Parafield Aerodrome where an opportunity was taken to see all the inner workings of an aerodrome. Members came from all directions, on all types of transport, and altogether there was an attendance of 75 or so, which was very gratifying to the programme organiser who can only gauge the success of his arrangements by the number of members who attend. Forty-five members were transported to the aerodrome by bus, and if I may say so, they thoroughly enjoyed the trip. As is usual in VKs, I sat in the front seat with the driver and became the target for the night, putting up with coarse remarks regarding the best broadcasting station in the State, with rude remarks regarding my athletic build, and with suggestions of my financial status because I thought that I would travel for nothing.

Upon arrival at the aerodrome the party split up into groups and were shown around to all sections of the aerodrome, and our thanks are due to George 5GA, Lloyd 5BR and Eric Halliday (call sign slipped my memory) for their untiring efforts to make the inspection a success. The night was a huge success for John 5KX who is the programme organiser, and all who attended said that there should be more of this type of general meeting.

The highlight of the evening for the party that I was in was the inspection of the control tower and the little incident that occurred there. We were all listening to the tower operator telling us the various functions of the gear under his control, and when he pointed

to a loud speaker and said that only important messages came out of it, we were suitably impressed. His composure, and our seriousness, was severely shattered when out of this very important speaker came "It all sounds like b—— to me." If he could have got the one who sang that well known tune, he would have cheerfully cut his throat. Also, the wireless set in the meteorological section was tuned into one of the National stations, and the gentleman busily engaged in delivering papers, who bumped into me at the doorway, went out of his way to tell me that they could not receive 5DN so were forced to listen to 5CL. Very funny, very funny.

Well at last Harry 5KW is on the air from Northfield Hospital. The battle of "red tape" is over and the victory is ours. Three and a half weeks after they gave us permission to install the Type 3 Mark II at his bedside, the signal hit the air. Just to show them how the W.I.A. does things, "Doc" SMD and the handsomest Amateur in VKs (must I mention his call? Oh well, if you insist, 5PS) completed the installation and were on the air less than three hours after the final phone call was received giving permission. The first CQ on 40 was answered by 5APW, who came back to us on c.w. at a speed that gave me the impression that he only had a few seconds to live. We explained that we were operating from a hospital bed and asked him to QRS. The next time that we heard him he was QSO with a VK2, still with only a few seconds to live. The irony of it all is that he was actually in QSO with "Doc" and not Harry, and I don't think that anybody will argue with me when I say that "Doc" is capable of carrying on a c.w. contact with the best of them. Twas ever thus. Anyway VK5KW/P is on the air, and Amateur Radio has played its part toward a fellow ham, so what more can one ask.

If it wasn't for the fact that I am sulking about not being invited to the meeting held to consider ways and means of running the VK5 Division Exhibit at the coming Royal Exhibition, I would tell you that all is going very well with the arrangements, we have an excellent site allotted, we have a very enthusiastic committee, and all and all the exhibit will do a lot for Amateur Radio in VKs. But as I am still sulking, I refuse to tell you anything, so there.

Had a letter from Bert 5DR who, as you probably know, is located at Cape De Couedie Lighthouse on Kangaroo Island, and it was a sad story of wrecked aerials, beams, etc., to say nothing about an engine giving up the ghost. Bert has knocked up 63 countries on c.w. during his 10 months on the island, running only 15 watts. He is seeking that elusive South American for his W.A.C. but so far nothing doing. He will be taking six weeks' leave soon and will be mobile with about 2 watts, so keep an ear open for him. Hope to see you at the January meeting Bert, and thanks for the letter.

Ross 5LW is in somewhat of a quandary, the reason being that as he is one of the leading lights in the organisation of the exhibit for the Royal Adelaide Exhibition, he was one of the first to see the letter of permission to broadcast from the exhibit that the P.M.C.'s Department kindly let us have. The letter also said that the broadcasts must be carried out with decorum, and that is why Ross is in a stew. He has gone through the membership list and can't find any joker by the name of Decorum in either the members or the associates' list. If anyone can wake him up as to just who this bloke Decorum really is he will be very grateful. After all, no Decorum, no broadcasting.

Quite a number of my readers think that all the things I say about the President are only in fun and that we are really good pals. Good pals is right, why out at the hospital when we were installing the Type 3, he shrewdly put me outside the window to guide the aerial through and then unfastened the wire screen so that it fell on my boko with a resounding crash. The bump on my head was nearly as painful as a certain ham's wife experienced when she slipped on the soap in the bath, the only difference being that my bruises were on my head!

Wvk 5WM is at present relieving at the second best broadcasting station in the State, and is feeling on top of the world as he has just passed the first-class commercial. You can't beat these river boat men. 5BC has blown away all the cobwebs from his 40 mx rig and has been heard consistently on the "schoolboy" band as he calls it (I must find out just what he means by that crack), and a good deal of Hughie's contacts have been with those blokes who used to fly the "Jolly Roger" back in the old days, when call signs were the least of the worries. Hughie, you little devil you.

5MA is still going around with that secretive air and the boys are really interested in this mysterious piece of equipment that Fred throws

out dark and sinister hints about. He denies all knowledge of atom bombs, hydrogen bombs, and even stink bombs, but you never know these quiet blokes. Is it television Fred? SCE has been too busy with gardening this month, growing trombones in fact, to even go into the shack, but he is preparing to erect two new poles for his aerial system. Murray lost his temporary aerial in the recent gale.

SSL has not much to report except that his son is doing fine. Good heavens is that son in again? Pardon me Laurie, this is where I came in. See you and Pat when you come down to the big city. I might even nurse Gary if he behaves! 5FD has been demonstrating his tape recorder to the boys lately and the other night he recorded a four way QSO between 5CH, 5KU, and 5CJ, and all agreed that it gave them a good check on their transmissions compared with the other signals on the band. It would seem that John and the recorder will be in demand quite often.

5KU is working on a new modulator although Eric is still wedded to the garden. 5TW has been very quiet this month, and for all I know may still be recovering from his holidays. 5CH is still working on his frequency sub-standard and his xtal controlled 2 mx Tx. Claude has purchased a MC348 and is in the throes of Rxs to throw away OM? You must be tripping over one or two. 5JA has been conducting some wired television experiments and John was last heard of looking for a lens for his pick-up camera. These South East boys are hot stuff, wired television, makes my de-coherer seem a little out of date.

5MS is still waiting for 20 mx to come good and believe me Stuart you have a lot of mates. The band is screwing down here, VK3 signals coming in like locals, and some DX signals mixed up with them at times. The whole thing is beyond conjecture! 5CJ is recovering from his annual leave and has not caught up with his chores as yet. Incidentally Collin, quite a number of the female staff sought me out after you and the XYL left the best etc. station etc. when you were down, and all wanted to know the name of the harmonic and how old he was and other details, he must have impressed them. Call in again with him, I have not had so many of the fair sex around me for a long time. 5XK is about to partake of three months' leave, and Arch is going to visit VK6. Jealousy is not one of my fallings but I ask you, three months, I thought that Tom 5TL was making it a bit hot when he disappeared for three months or more, but now Arch is about to disappear in the opposite direction.

Austin 5WO turned up trumps this month and forwarded me a batch of Northern notes for which I am extremely grateful. The Northern gang, by the way, are numerous and enthusiastic for Ham Radio, and I hope that we can see a record of their doings every month. Many thanks Austin.

Len 5VM heard rarely these days, busily engaged with showing pictures. Nothing heard from Wally 5WJ recently; Wally suffered a very hard blow two months ago when one of his sons was accidentally killed. Jim 5JY and Snow 5NW, nil from these boys of late. Ern 5EN busy with house building, some mobile work. Ron 5KS had little activity, swimming togs have top priority this weather. Brian 5CO is another home builder, but has found time to construct 40 ft. tower, 3 element beam, and worked a bit of DX. Bob 5OD leaves for the U.K. this month; his job, padre on returning migrant ship. Mac 5CE has a 3 element beam going on 20 and it works very well; worked a bit of rare DX in 3VB8B in Tunisia. Nobby 5GY heard working on 20, no news regarding his v.h.f. activities. Ron 5AP heard on 40 a few Sundays with an f.b. signal. Jack 5LH having his share of trouble with his new rig, especially the modulator.

Cam 5KR busily engaged in building himself a new shack and also preparing to move the rig from his shop, has a good 2nd op. called Jack. Lance 5XL has been on 6 and has heard a bit of stuff coming through; unfortunately one of his trannies gave up working on his v.h.f. rig, understand that Lance has a good tower erected and some fine arrays on top of it. John 5EB is a newcomer to the ranks and has been heard on 40 a few times. Tim 5TJ heard putting in a good signal on 40 recently; Tim was a keen 80 mx man last winter. Wally 5DF busy at the power house, but was heard on 40; his Rx is hot on 20 now. Darc 5RJ will not be on for a few months yet. Austin 5WO has a 3 element beam just about completed, intends using it on a 30 ft. windmill tower, has worked a bit of DX on 20 c.w. lately.

These notes being the first for 1952, it was my intention to conclude them with a pep talk for our grand old hobby, and perhaps try in my humble manner to write something that would do justice to the year that has passed on, and possibly paint a rosy picture of the future. Fortunately for me I discovered an editorial in "QST" which is going to save me

the job: I include it in the notes without any apology, as it is without doubt one of the finest boasts for Amateur Radio that I have read. It was written by Frank Fisher (W5AHT) and although I have slightly altered it to fit in with our conditions, my only regret is that I am not capable of writing such an epic. I quote:—

"In looking back, the past is rich in memories for many of us. Memories of other days and of friends, some of them now passed on, who have helped to build the structure we know as Amateur Radio. Memories of those who laid the foundation stone and who laboured with untiring effort to build onward and upward from this sound foundation to the present eminence we now enjoy. Chiseled in the cornerstone of this structure is the name of the W.I.A., a name which our founders could never have visualised as becoming recognised throughout Australia, and for that matter throughout the world as typifying and representative of the Radio Amateur. His aims, his problems, and his accomplishments. Yet, my friends, we have built a structure of which we are justly proud, and I regret that I personally, contributed but little to its building, and realise that I owe a lot to those who have cheerfully done my share in addition to their own. Perhaps I can make up for some of my thoughtlessness in the year to come, because there is still a lot to be done in such a big structure as ours, and I don't know a better time to get in with the boys and work. I would be glad to have you come along with me, fellow Ham, so what about it?"

The members of the VK5 Division and the Council take this opportunity of extending to all fellow Hams, wherever they may be, the compliments of the season, and the renewal of air friendships in this new year.—73.

WESTERN AUSTRALIA

Well chaps, by the time you read this we'll have had Xmas and New Year (and when I say "had it" I mean just that), but at the time of writing it's still November. So I'll have to cast my mind in two directions—backwards to report what's happened, and forwards to try to forecast what will happen.

Early in November a representative group of W.I.A., I.R.E., University, Technical College and radio trade types were invited to see a preview of the film, "Destination Known," and by all accounts it was well worth seeing. I had a smile to myself over George's sly references in the 6WI broadcasts to certain small technical points he mentally queried and his wife's summing-up of his outlook. Take a woman to see a film about inter-planetary travel and she'll either be bored to tears with the whole thing or else sit on the edge of her seat awaiting the shots where they show the latest Martian fashions; take a man to the same film and he'll watch for technical slip-ups and talk about 'em from the time they step outside the theatre till his wife, in self-defence, snores off. Women haven't our critical faculty; that's what it did appear though to have taken the producers a lot of time and research to ensure a higher-than-usual standard of technical accuracy and all who saw it were most impressed.

The R.D. Contest results were announced by George over the Sunday morning broadcast and while a disappointment to us, are justification for cheers in the VK7 Division and congratulations from VK6 and the other States. The boys of the "Apple Isle" are to be commended on their enthusiasm for this event and their better than 50% return of logs. Our effort of only 30 logs looks a bit sick alongside that when you remember our slightly larger membership than VK7s. Contests as a rule bore me to tears, but I do enter for the R.D. and I feel there are many others who feel the same way for it's a contest different to all others where the team spirit really means something. Make a resolution now, chaps. Next year VK6 will have a bumper entry of logs and we'll

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give VK7 a bit of hurry up! We could win the R.D. just as they have—i.e. by getting the major proportion of financial members sending in logs. As for changing the rules—No! (The opinions expressed here are those of the author and not necessarily those of the Division—sounds like election time on the broadcast band doesn't it?)

The November meeting included 6AG's demonstration of the Flying Doctor reply to the Marconi auto-alarm. Instead of sending out twelve long dashes in 1-for-how-many-seconds, the outback resident who wants contact with a base station outside actual sked times switches on the rig, blows softly into a whistle held near the mike and a selective audio amplifier at base does the rest. Relays turn on lights, ring bells and (although Wally didn't say so), probably rev up the doctor's kite, flash a message on the local picture show's screen and blow a siren in the local—er pool-room! At the same meeting 6RU's logging and filing system was described by Jim who obviously is a thorough sort of person who likes orderliness in everything he does. I must copy this system. It will be handy for me to know the Christian names of the stations I work (about four of them—regularly). Our President 6JW described how he has extended the usefulness of a Class C Wavemeter by including such features as a 3.5 Mc. crystal checker and diode monitor and carrier-shift indicator.

Conditions Dept.—28 Mc. still seems to be in the doldrums most of the time, although 6MO gets in there when things are doing; Allan confessed to having an hour's QSO with a W6 one November morning when the band was open. 14 Mc. seems to yield most for the boys these days. 7 Mc. is improving at night for country-to-city QSOs provided you can find a spot to park. Relative to this I'm opening a fund for the installation of twenty or thirty 100kw. Tx in the N.T. each with rhombics aimed and operating from 7070 to 7200 Kc. These will be turned on each night and left running. Within a few weeks, gents, I guarantee the 40 metre band would be fit for gentlemen to inhabit once again. Offers of 813s, thousand-volt trannies and 866s should be addressed to me and the goods sent freight paid. If the powers-that-be can't (or won't) do anything for us, we'll have to do something ourselves. The band has opened up for after-dark contacts in a very patchy manner, sometimes closing up at 7 p.m. and on other nights remaining open till 10.30 and on one recent night 6RT (Cue) was in QSO with 6FB (Perth) till ten minutes to midnight when the band suddenly collapsed. 3.5 Mc. is still used by a few stalwarts, notably 6LG, 6RT, 6MO and 6RS.

Scandal Dept.—Not a great deal this month. I would refer all VK6 readers to the trenchant remarks by Uncle Warwick in an adjoining column in November "A.R." and to the excellent services rendered by the Mails Branch of the G.P.O. Don't hide your light under a bushel (or a "two-over-two")—come out and mix with the "old women" on 7 Mc. or else get out the ball-point and drop me a line; the address is Box 127, Geraldton. I'm not a thought-reader!

6CN should have made an appearance with his beaut new rig with professional looks inside and out (and all home-made too) by the time you read this. 6RS says the rockets and black-devil scared the DX out of the 7 Mc. band on Guy Fawkes night for he heard Europeans on c.w. between 2230 and 2300 W.A. time. Early summer brought a water-shortage to Cue through a breakdown of the local pumping engine. Len's OK though; he has a stand-by rig when the water cooled job can't be used. The town was also in the news through the activities of a man who pointed a gun at himself—and it went off—with fatal results. Rumours that he was a victim of b.c.l. who could stand no more are unfounded and are hotly denied by 6RT!

6EL catching up on the DX with the new 815 rig which runs 60 watts to a 300 ohm fed multi-band window.

STOP PRESS! Congratulations are extended from the VK6 gang to Mr. and Mrs. VK6BWM, of Kalgoorlie, upon the arrival of a daughter born on 24th November, 1951.

TASMANIA

Welcome visitors to the November Council meeting were Len Crook and the Northern Secretary, Les Arnold, feeling a little tired after their long drive from the northern capital. Plans were formulated for a 144 Mc. relay from Hobart to the north west coast and eventually, a VK3 hook-up. It seems activity will soon be restored on 144 Mc. band as it is anticipated field days will begin in January which should stimulate quite a lot of interest, particularly on this band. Special attention is to be given to the kiddies at all future field days; believe arrangements are being made to

conduct races, treasure hunts, etc. with some good prizes attached. As a lot of effort and time is being spent in the preparation of the field day it is hoped all members will participate even if no gear is available; still come along and enjoy yourselves.

Owing to these notes being prepared prior to the December meeting, no report can be given on the sale of radio equipment which is to be auctioned by 7OM at this meeting. Keen bidding has taken place in the past with several humorous incidents and we trust this disposal of equipment is as readily received as previously. The lecture is to be given by Mr. Joe Brown and the subject is entitled "There's nothing new under the sun" and knowing Joe, it should be interesting.

Amateur activity on all bands has been retarded somewhat owing to the poor conditions, but a few of the ardent Hams can be still heard working crossband on 7 Mc. DX is becoming scarce although on 40 the QRM from commercials would make it impossible to copy very much.

A 100 watt Tx is being planned by 7SD, although swotting for one of the commercial tickets may retard progress quite a deal. Parallel 807s is the final decision on and when completed should be f.b. A new 60 watt modulator is soon to be in operation at 7AG, so we should hear quite a lot from John in the future. Difficulty in hearing the Institute's Sunday morning broadcast has been experienced from this area, 80 mx is the only band which is workable at all if Hobart signals are received.

From 7AF it is learnt the tape recorder under construction should be completed by the time these notes appear. No doubt on completion, Bob will be good enough to give us a lecture on the pitfalls which one can encounter in the preparation of this type of equipment. In the north it seems 7CA is again active after a considerable lapse of time. An 802 is the final amplifier and Max's f.b. modulation is a pleasure to listen to. 7SA active on 20 and 40 and it seems the long wire being used works out OK. from reports received.

Our hard working Secretary, Len Edwards, is spending a few weeks touring the State and we trust an enjoyable time was had during this period. Talking about Len, saw 7LD busily engaged in furthering the new enterprise recently. Len has not been active of late, but as things become further established in the business sphere, we hope to hear more from this QTH. Incidentally Len, I read in the local newspaper about the great fishing expedition and glad to hear of your success. Received a surprise to see 7SD working during the week, how's the feet standing up to it Don. 7KX busily tuning up his latest hobby in preparation for the summer motor launch racing, how about coming on some time Don? It's ages since we have heard you. 7GA active on 20, mostly heard working ZLs and uses grid modulation with success.

NORTH WESTERN ZONE

There seems to be a number of new rigs being built here lately. 7WA is putting a lot of time into a rack and panel job with a broad band switching exciter and silver plated coils in the final tank; it looks quite professional and it won't be long before you are pushing out the "ergs." We don't hear 7DM very often, what about coming on the air one night Eric? Just to show us that your rig still works. 7KB was heard working some very good DX the other day on 10 metres, one of the stations being a KL7; good work Ian.

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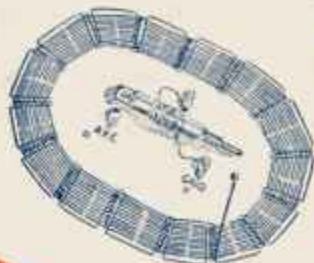
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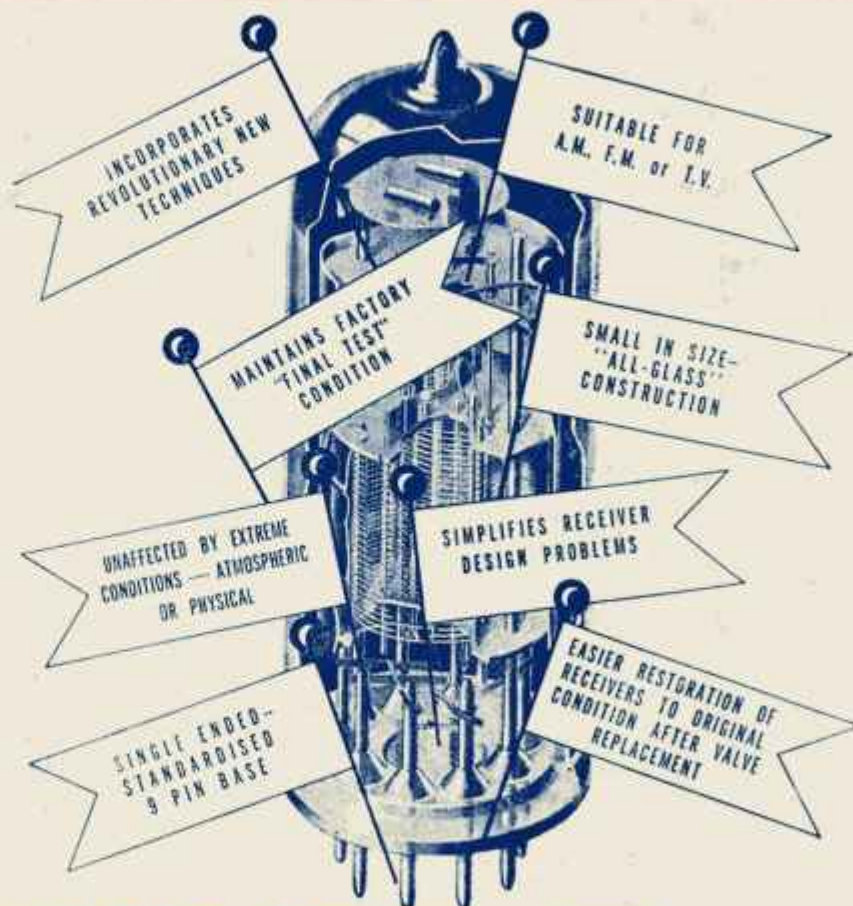
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VK5WI: Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW by arrangements only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0830 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7196 Kc. and 146.5 Mc. No frequency checks are available.

AMATEUR RADIO

Published by the Wireless Institute of Australia,
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EDITORIAL



An Open Letter

During recent months the hobby of Amateur Radio has received a greatly increasing amount of publicity in the columns of commercial periodicals. This is very good; we heartily endorse publicity of Amateur activities for at no other time has the need been more urgent than in this era of international tension and critical change in world affairs and living standards that, from the electronic point of view, is tending to make inroads on the already reduced bandwidths for which the Amateurs have so justly earned the right to use over the past three decades.

That the interesting and worthy activities of the Amateurs should be widely known by the general public is beyond argument. But at the same time they should be factually presented and embrace the Commonwealth and its Territorial Mandates.

In this respect it has been all too evident that the Commercial see little further than one State of the

Commonwealth, thus leading the readers to presume that the entire hub of the Wireless Institute of Australia revolves round this State, and in some instances the information presented in the columns of these papers has not been accurate.

We feel safe in saying that the Editors have not intended that such an impression be created, but a wider knowledge of Amateur activities by the writers of these columns would not only be of great value to Amateur Radio generally, but would also create a worthwhile increase in the number of readers.

It is not intended that undue criticism be levelled against these commercial papers who have sufficient faith in the hobby of Amateurs to preserve space month after month to publicise their activities. At the same time we would direct attention to the one-eyed point of view expressed by their columnists in addition to misrepresenting, in many cases, the true facts.

FEDERAL EXECUTIVE.

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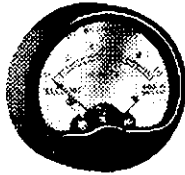
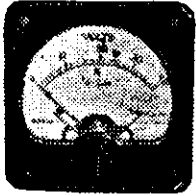
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Homecrafts

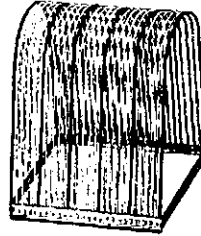
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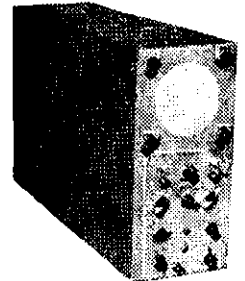


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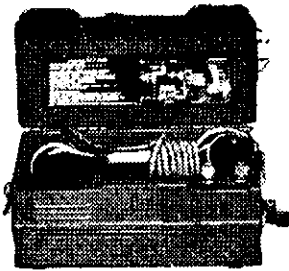
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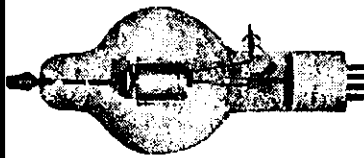
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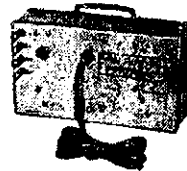
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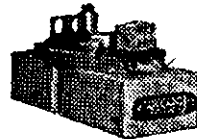


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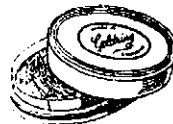


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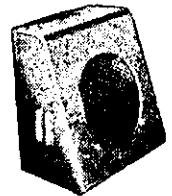
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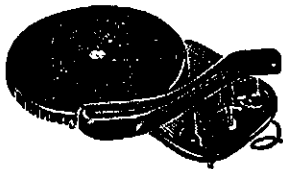
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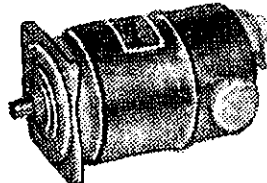
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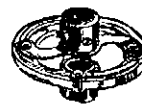
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Twin Doublet Antenna With Alternative Phasing

BY DON B. KNOCK,* VK2NO

One of the simplest yet most effective antenna systems for transmission and reception is the twisted pair doublet. Apart from those systems designed for wide frequency response in reception, the fundamental half wave doublet, as fed in the centre by a twisted pair or other low impedance line near enough to effect a reasonable match, is strictly a one-band antenna.

Although a certain amount of directivity is obtainable from such a system erected approximately one half wavelength above ground (if you don't think so, try one rotary and see), the polar diagram is really such as to render it almost omni-directional.

A twisted pair doublet is very suitable for general communication in all directions where space is limited. In most suburban plots a length of about 70 feet is available in one direction or another and so advantage may be taken of this

Just before the 1939-45 War, two G Amateurs, G2TD and G5ZJ, worked out a simple but ingenious scheme, in which two half wave twisted-pair doublets are used together for 20 metre operation, and in which the phasing can be change at will at the operating position.

Fig. 1 shows how the two doublets are erected. Each is 0.97 of a half wave in length and supported, end to end, by an insulator as shown. As the matching delta is $4\frac{1}{2}$ " in each doublet, this amount of spacing is used for the insulation between the two antennae. 75 ohm Telcon or co-axial cable can be used, but the former is more desirable, being a balanced system.

The originators used the pre-war 80 ohm Belling Lee line and stated that with 100 feet lengths of line on 20 metres, the losses were negligible. Insulation in feedlines has improved enor-

ously since then, so that yet higher efficiency can be expected from modern material.

Just before the 1939-45 War, two G Amateurs, G2TD and G5ZJ, worked out a simple but ingenious scheme, in which two half wave twisted-pair doublets are used together for 20 metre operation, and in which the phasing can be change at will at the operating position.

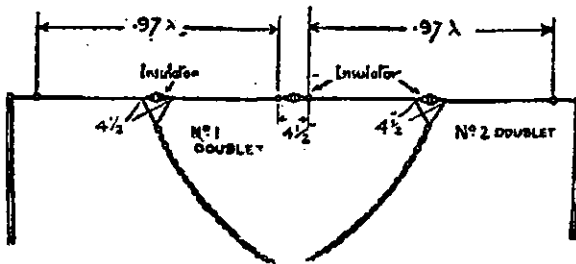
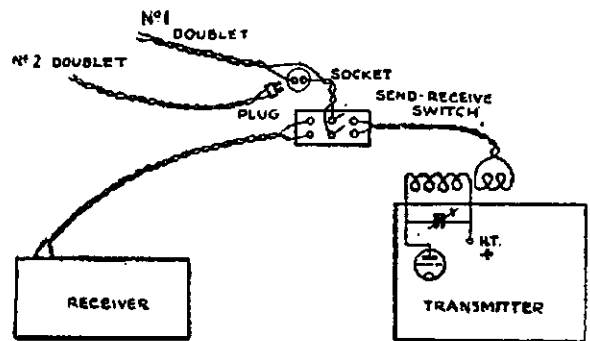


Fig. 1 (above).—The two doublet aeriars are suspended end-to-end with feeder lines of equal length.

Fig. 2 (at right).—The connection scheme to transmitter and receiver.



to erect a system which, for 20 metres, is either effective as two half waves in phase if centre fed, or as one full wave with four lobes of approximately 40 degrees if end or single wire fed in an unbroken length.

The s.w.f. method has the advantage that such an antenna can be used as a half wave on 40 metres. Another method of feeding a 67 feet length of wire for use on 20 is by twisted pair, co-ax, or other low impedance line at a point one quarter wave from one end: 300 ohm ribbon can be used successfully also.

In these instances, the antenna is a four lobe type, but can be used only on 20 metres. Four-lobe coverage as a full wave antenna on 20 and a half wave on 40 is obtainable also by the use of a tuned feeder at one end; in other words the ever-useful "Zepp."

It is apparent that with a 67 feet "top" it would be an advantage to be able to change the radiation pattern at will from the full wave to that of two half waves in phase; the latter having considerable advantage in greatly increased gain with broadside directivity.

The twin feeders are brought into the transmitting room and connected in series. By reversing one feeder the phase is reversed in one antenna so that the polar pattern is changed.

Fig. 2 shows how this is arranged in the shack. A two-pin socket is used in series with one feeder side from one doublet and the two feeders from the other doublet are plugged in as required. It is a simple matter to remove this plug and to replace it with the pins in the opposite sockets. A d.p.d.t. switch or relay is needed for transmit/receive but the wire feeders should be splayed out as little as possible.

The feeder lengths from the two doublets should be as symmetrical as possible, even if a feeder has to be made longer than really necessary and then given a special "detour" in order to get them both of the same length.

Furthermore, the feeders should not be coiled in any circumstances. If one feeder is longer than the other, the

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REDUCING NOISE IN DOUBLE CONVERSION RECEIVERS

Excessive noise in double conversion receivers can be reduced by using a triode as a second mixer. All that is necessary with conventional converter tubes is to tie the screen to the plate. In the writer's case the receiver used a type 6K8 to convert from 1600 Kc. to 455 Kc. Although sensitive, the receiver was unduly noisy. The suggested modification was effective in dropping the noise to a low level without materially affecting the sensitivity.

* 43 Yanko Avenue, Waverley, Sydney.

TELEVISION MADE EASY

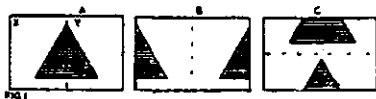
Part vi.—How the Receiver is Synchronised

BY KEN WALL† AND JOHN JARMAN,* VK3ADA

So we've learnt that a cathode ray tube is contained in the receiver and another, in modified form, in the camera, and that each contains a moving electron beam.

As for this synchronisation, what is it, and how is it accomplished? Now it doesn't mean making the sound coincide with the picture movements (as it does in talking pictures). In television this is automatically taken care of by the fact that sound and picture signals travel at the same speed (like all other radio waves) and must reach the receiver together.

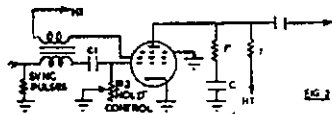
Synchronisation means making the movements of the receiver's electron beam coincide with those of the camera's scanning beam. Suppose for example the camera was shooting the triangular object in Fig. 1a. Imagine also that at the instant when the scanning beam commenced its journey, from the top left corner (x), the receiver's beam was already half way across the first line (point y). The picture would appear as in Fig. 1b. Now suppose that while the camera's beam scanned the top line, the receiver's beam reproduced a line half way down the screen. The picture would appear as in Fig. 1c.



We see therefore that the two electron beams must work "in step." How is this ensured?

Referring back to articles two and three, we find that synchronising pulses are included in the transmission. Turn up these articles now, for reference.

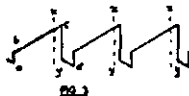
Last month we also learned that the receiver's beam is moved both horizontally (15,625 times per sec.) and vertically (50 times per sec.) by the "sawtooth" output of beam deflecting circuits. We also dealt with one type of circuit, in which the saw-tooth output was obtained by charging a capacitor through a resistor and rapidly discharging it by pulses from a blocking oscillator. Two valves were used, one to produce pulses and the other to discharge the capacitor. Both operations, however, can be performed by one valve, in some circuits, one of which is shown in Fig. 2.



To understand how synch. pulses control this circuit, let's first see how it works.

The screen forms the plate of a simple transformer-coupled oscillator. We are not concerned with its frequency of oscillation, but the frequency at which this oscillation is interrupted. As always, the oscillation develops a high negative bias on the control grid and C1 and R2 are made large enough to cause oscillator to "block." In other words, their values are chosen so that the electrons accumulate faster on the grid than they can escape through R2. After a short "burst" of oscillation, therefore, valve develops such a high negative bias that the plate current is cut off and oscillation stopped until sufficient electrons have escaped through R2 to permit resumption of plate current and oscillation, when process is repeated. This is called a "squegging" oscillator.

Now while plate current is cut off, the valve is non-conductive and capacitor C is charged by the h.t. voltage, which draws electrons away from the upper plate of C, through R and r. The voltage across rC therefore rises from minimum to maximum, as shown by the line "abc" in Fig. 3. When the valve resumes conductivity, C discharges by drawing electrons back to its upper plate, through the valve. Voltage across rC now falls back to minimum, shown by line "cd" in Fig. 3. Simultaneously, however, oscillation will have resumed, so process will be repeated. Voltage across rC therefore forms the saw-tooth output, required for beam deflection.

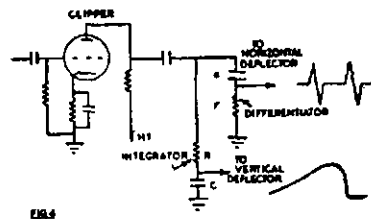


Now consider the instant "xy" (in Fig 3. By applying, at this stage, a large positive pulse to the control grid so that valve becomes conductive sooner than normal, we can discharge C (Fig. 2) sooner than normal.

Now this is just what our synch. pulses do. R2 is first set so that the negative grid bias is just sufficient to prevent C from discharging before the synch. pulse arrives. Although all receivers don't use the same deflection circuit (multivibrators being also popular), the oscillator in use is always set at a pulse frequency lower than the deflection frequency, and the synch. signals operate, by cutting each cycle shorter, thus speeding the pulse frequency up to the required value. The "hold" control, though varying in its method of operation, has always the function of holding the deflection oscillator in step with the synch. pulses. In every receiver there are two "hold" controls (vertical and horizontal), usually at the back of the set, inaccessible to "itchy-fingered" owners.

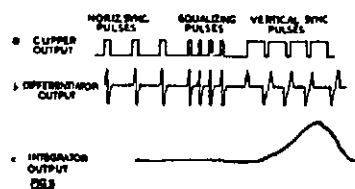
Horizontal and vertical deflectors use similar circuits, but the synch. pulses intended for one deflector must not interfere with the other, but before reading further, revise article three, and note the difference between horizontal and vertical synch. signals.

First of all, the synch. pulses must be separated from picture signals. Since these pulses represent maximum carrier amplitude, this can be easily done by a "clipper" (or "separator") which is simply a valve placed ahead of the detector and biased so heavily that only the synch. signals appear in the output. One type is shown in Fig. 4.



To control the horizontal deflector, we require short, sharp pulses, as in Fig. 5b. These are obtained by the differentiation circuit, shown in Fig. 4.

Consider what happens. The leading edge of each pulse produces a positive impulse, across r, as c charges, and the trailing edge a corresponding negative impulse, as c discharges. Note that it is the leading edge of each pulse that "triggers" the horizontal oscillator. Vertical synch. pulses have the same effect, since their leading edges are at line frequency.



Equalising pulses are at twice line frequency, but, since the oscillator (Fig. 2) can't be "triggered" until an appreciable portion of the negative charge has escaped from the grid, oscillator will only respond to alternate equalising pulses.

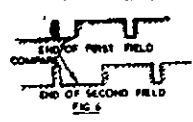
Now our vertical oscillator is set to respond to the large pulses, shown in Fig. 5c. These are produced by the integrator circuit, in Fig. 4, where R and C have such values that the broad vertical synch. pulses, in Fig. 5a, cause a charge to accumulate on C. Horizontal and equalising pulses have no effect here, being so short, compared with the intervals between them.

Now these equalising pulses; what are they for? Well, we've learnt that each picture is scanned in two "fields," each of 312½ lines. The first field is terminated in the middle of a line, and the second, at the end of a line. (Refer back to article three, if necessary.)

Now, supposing that normal horizontal synch. pulses were used right up to

† 172 Johnson Street, Maffra, Victoria.
* A11426 L.A.C. Jarman, J. B., c/o A.R.D.U., R.A.A.F., Woomera S., South Australia.

commencement of vertical synch. pulses. Consider the interval between the last horizontal and the first vertical pulses.



At the end of the first field, it would be shorter than at the end of the second field, as shown in Fig. 8. The small charge left on the integrator, by this last pulse, has therefore less time to escape so that at the end of the first field, charge on integrator reaches its peak faster.

In every picture, therefore, the first field would be "cut short," so that interlacing would not be correct. The lines of the second field would tend to "overlap" those of the first, instead of falling between them.

To prevent this, we substitute some of the horizontal synch. pulses, both before and after each set of vertical synch. pulses, with narrow pulses, at twice line frequency, to equalise conditions for each type of field.

Now it's apparent that the deflection oscillators described can be "triggered" not only by synch. pulses, but by any interfering signal of sufficient amplitude to "penetrate" the clipper. Sure enough, one of the greatest problems in television is to prevent synchronisation from being upset by interference which, by the way, can be caused by Hams as we'll learn later.

A television project which has received much attention overseas is the development of synch. systems sufficiently selective to respond to only the orthodox signals and "ignore" interference. Many interesting circuits have resulted, mostly employing automatic frequency control, and to understand what this means, we'll study one of the simplest circuits of this type, shown in Fig. 7, used for horizontal deflection control.

Synch. pulses excite the tuned-plate circuit of the valve V1, setting up an oscillatory sine wave current, at line frequency (15,625 c/s.). The induced secondary voltage is mixed, in the diode V2, with the pulses in Fig. 8b, which are produced by feeding back part of the deflection oscillators' saw-tooth output to the differentiator circuit, RC.

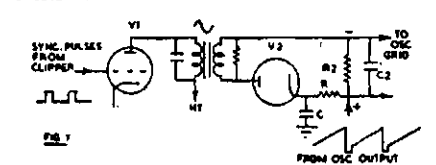
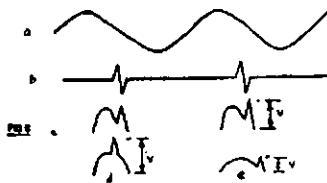


Fig. 8c shows the rectified resultant voltage which appears across R2 and is applied as bias to the grid of the deflection oscillator, which may be the type shown in Fig. 2. C2 has such a value as to filter out rapid changes in this voltage, but preserve the gradual changes required for frequency control. In most cases, V1 and V2 are combined into one duo-triode valve.

Now the pulse frequency of a blocking oscillator depends partly upon the grid bias. The more negative we make the grid, the lower the pulse frequency.

Now consider the voltage developed (Fig. 8) across R2. It is the instantan-

eous sum of the pulse and sine wave voltages, as shown by v in Fig. 8c. Bias on oscillator grid depends on this. The "hold" control can be set so that bias is correct (for required frequency) when pulse falls half way between zero and crest of sine wave, as in Fig. 8c, and any change in oscillator's output frequency will cause this pulse to change its position.



An increase in the saw-tooth frequency causes the pulse to occur sooner in the sine wave, so that the sum voltage v is increased as in Fig. 8d. The consequent increase in negative bias will "slow the oscillator down" to the required frequency.

Conversely, a decrease in saw-tooth frequency places the pulse in a later phase of the sine wave, so that sum voltage v is reduced, as in Fig. 8e, causing a decreased negative bias which "speeds oscillator up" till normal frequency is restored.

We see, therefore, that in this circuit the pulses control the frequency of the oscillator, instead of merely "triggering" it, thus permitting the use of tuned filter circuits to help reject interference.

By now, we should all be sufficiently acquainted with the general principles of television, to be ready to deal with the subject of interference. We have had to "wade" through a lot of theory, to reach this stage, but no doubt you will agree that it's been worth while.

Article eight will therefore deal with the interference problems which television will impose on the Ham. Meanwhile, keep those queries rolling in. They indicate your interest in these articles, and we are glad to receive and answer them.

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 6LQ—R. E. Lander, La Bouchere St., Como.
 6LT—N. T. Lee, 32 Grey St. (West), Albany.
 6VK—V. J. Kitney, 43 Sayers St., Midland Junction.

Tasmania

- 7CJ—A. E. Finch, 12 Augusta Rd., New Town, Hobart.

Territories

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 9RT—Miss R. G. Tobin, Women's Hostel, Cuthbertson St., Port Moresby.
 9WK—W. K. Webster, Five Mile, Port Moresby.

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 2XJ—123 Griffiths Avenue, Bankstown.
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 2AIK—8 Excelsior Road, Cronulla.
 2ANI—c/o. Knight and Canning, Quirindi.
 2ASB—Lawley House, Canberra, A.C.T.
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 3MK—18 Hourigan Avenue, Clayton.
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 4DB—11 First St., Railway Estate, Townsville.
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 2ARL—Cancelled; now operating under VK6LQ.
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 3ABG—Cancelled.
 3ADD—Cancelled.
 3APK—Cancelled.
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 4KD—Cancelled; now operating under VK6VB.
 4LA—Cancelled.
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 4NB—Cancelled.
 4TR—Cancelled.
 4YH—Cancelled; now operating under VK2ART.

South Australia

- 5KO—Cancelled.
 5XO—Cancelled.

Western Australia

- 6CA—Cancelled.
 6ND—Cancelled.

Territories

- 9CJ—Cancelled; now operating under VK7CJ.
 9QK—Cancelled; now operating under VK3QK.

Manufacturers of . . .

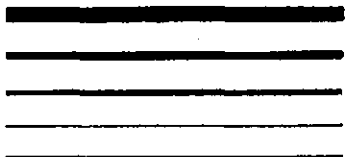
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- WOOL TOPS



USING RESISTORS AS R.F. LOADS

THE practice of testing an Amateur transmitter while it is coupled to an antenna is quite common, despite the fact that the P.M.G. frowns on such doings. While testing an antenna system, of course, it is necessary to be on the air, but for most transmitter tests a dummy load is desirable. Use of a dummy antenna not only obviates unnecessary QRM, but, if a known dummy load is employed, quantitative measurements of actual power output can be obtained.

The purpose of this article is to explain how to procure a good dummy load, and how to use it.

TYPES OF DUMMY LOADS

Anything which will absorb power and not act as an efficient r.f. radiator may serve as a dummy load. As we know, an electric light bulb can be used. As a matter of fact, it is possible to use a tub of salty water as a dummy load. In actual practice most Amateurs use either a light bulb or non-inductive resistors.

Electric light bulbs have one big disadvantage, and that is, their resistance varies with the amount of current passing through them. If the resistance of a dummy load is not known accurately, then it is impossible to make any accurate output measurements. However, in the case of the light bulb, Amateurs judge output by the amount of brilliance in the lamp. Unfortunately this can be most misleading, because a large change in the amount of power dissipated may be indicated by an imperceptible change in brilliance.

Non-inductive resistors are perhaps the logical choice for use as dummy loads, if only because they have fewer disadvantages than other types of loads. The cost of these units is surprisingly low, and properly handled, they will be a permanent investment. For this reason all further discussion will be restricted to the use of resistors as dummy loads.

RESISTORS IN GENERAL

Many different types of resistors are currently manufactured, but those in widespread use fall into two general categories: the composition type and the wire-wound type. Composition resistors are seldom used for dissipation of more than 2 watts. Wire-wound resistors are available with dissipation ratings up to 200 watts.

Composition types of $\frac{1}{2}$, $\frac{1}{4}$, 1 and 2 watt ratings are made in resistance values from 10 ohms to 10 megohms. For lower resistance values, these same wattage ratings can be obtained in wire-wound units only. For example, one manufacturer makes $\frac{1}{2}$ watt wire-wound units in the resistance range from 0.47 ohms to 820 ohms.

Wire-wound units can be obtained in resistance ranges from a few tenths of an ohm to 250,000 ohms, but not all wattage ratings and styles are available over this complete resistance range.

All resistors will not serve as usable dummy loads. Those which are usable are the composition type and the non-inductive wire-wound type. The criteria here is lack of inductance.

The wire-wound inductive resistor will not serve as a dummy load at radio frequencies because its relatively high inductance will not permit a current flow unless a tremendous voltage is available.

For example, assume that a regular inductive resistor has an inductance of 100 millihenrys, and a resistance of 100 ohms. An inductance of 100 millihenrys at 14 megacycles is an inductive reactance of 8,000,000 ohms! One ampere of current, representing a real power of 100 watts into this resistor, would require that 9,000,000 volts be applied to the resistor. This example assumes that the inductive resistor had zero capacitive reactance, which is not possible, but the example does serve to illustrate why it is difficult to get power into an inductive resistor at these frequencies—unless a difficult tuning job is attempted.

COMPOSITION RESISTORS

A simple equivalent circuit of a composition resistor is a capacitance C shunted by a resistor R where R is the d.c. resistance and C the total capacitance across the resistor. The equivalent circuit will not hold strictly true for all frequencies but it suffices for most generalisations.

At frequencies up to approximately 100 megacycles the inductance may be neglected (except for very low values of resistance). The total capacitance is also low, being less than one pF. (when considering composition resistors in the resistance range below 1,000 ohms). The effective capacitive reactance is high enough that it presents no problem.

In other words, composition resistors are good for use at radio frequencies. They will act as though they are a pure resistance—within limits. The main disadvantage of these units is that they are available only in low-wattage styles. This need not be too serious a drawback, as will be explained later.

WIRE-WOUND RESISTORS

The simple equivalent circuit of a wire-wound resistor is a resistor R in series with an inductance shunted by a capacitance C. This will hold true in a general way for both inductive and non-inductive units, where R is the d.c. resistance, C the total capacitance, and L the total inductance. In the case of

non-inductive units, L is the residual inductance. However, because of such factors as skin effect and dielectric loss there will be some limiting frequency where this circuit is no longer valid.

As frequency is increased the inductive reactance increases proportionately and the capacitive reactance decreases proportionately. Both of these effects are undesirable. Regular wire-wound resistors cease to be resistors in the true sense of the word at frequencies slightly above the audio range.

For radio-frequency uses it is necessary to go to the so-called non-inductive resistors. These are manufactured in such a way that the inductance is kept at a minimum. One popular scheme is the Ayrton-Perry winding in which two layers of wire are wound in opposite directions. As an example of what may be accomplished, one manufacturer states the inductance of a wire-wound unit at 66 microhenrys and the inductance of an identical value non-inductive unit at 0.6 microhenrys.

Generally speaking, non-inductive wire-wound resistors are not as good for use at radio frequencies as composition resistors, but the wide-wound units are capable of dissipating a great deal more power, and by the proper choice of unit satisfactory operation may be obtained.

POWER CONSIDERATIONS

Before discussing which resistor to use where, it might be well to consider power ratings. If you have a kilowatt transmitter, with an output of 750 watts, it might seem necessary to have a dummy load capable of dissipating this amount of power. However, this is not true, because it is possible to use resistors (both the composition type and wire-wound type) at several times their rating.

Tests have been made to determine the amount of overload which may be placed on resistors, and the following conclusions may be drawn. A resistor, or resistors of the composition or wire-wound type, may be used at 300% overload if the overload is applied for not longer than one minute, and if a fifteen minute cooling-off period is allowed between successive overloads.

Inasmuch as most tests can be conducted in a sixty-second on period, there is no need to use resistors which are capable of dissipating the full amount of power. As a matter of fact, if it is desirable to use resistors for long test periods, it may be necessary to have a safety factor involved unless adequate ventilation is provided for the resistors. That is, for long test periods, you should use resistors capable of dissipating twice the power you apply to them.

CHOOSING A RESISTOR

Now that we have a general idea of the power rating we may need, let's see what resistors we can use for various power levels.

For measurement or antenna matching work, where you usually use your v.f.o. or a grid-dip oscillator for a power source, half-watt composition

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 28th Feb., 1952, on the 7 Mc. band. Details of the operating procedure and times of operation will be found on page 8 of the January, 1952, issue of this magazine.

TWO WORTHWHILE ANTENNAE

BY G. M. BOWEN,* VK5XU

Three-Band Antenna

40, 20, AND 10 METRES

Physical Dimensions.—68 feet long, cut into two parts at 23 feet from one end, insulator inserted and a 300 ohm feed line connected, one lead to each part of the flat top.

Electrical Dimensions.—

- 40 metres— $\frac{1}{2}$ wave length;
Pattern—Figure of 8.
- 20 metres—1 wave length;
Pattern—Four lobes.
- 10 metres—2 wave lengths;
Pattern—Four lobes.

Feed Line is not symmetrical to earth and therefore should be linked to the final p.a. tank at a few turns away from the earth end of the tank for unbalanced finals or to one side of the earthed point in p.p. finals and symmetrical tank circuits.

The Coupling Link may require about one-third of the number of turns in the final tank coil, but this is all in order as 300 ohms is a high impedance for power transfer.

Retuning of final tank condenser should be negligible if the antenna has been cut to resonance.

Antenna Tuning Units may be inserted between the final tank and the feed line, but the tuner should be treated as outlined for the coupling to the final tank when coupling to the feeder. Experimenting with single or double turn low impedance links here (either earthed or not) will help reduce harmonic radiation.

The idea for the antenna was obtained from "Radio News and Television" and was originally for two bands only, but by accident and then by design, and the drawing of impedance curves and checking with a s.w. lamp indicator, VK5MD and I successfully used it on the three bands.

Since then many others have erected the antenna either using 300 ohm ribbon or open wire lines and all report worthwhile success for DX operation. The power does get into the antenna for a minimum of effort.

I believe now, that somebody else has erected a similar arrangement with double the dimensions so that four bands can be used—80, 40, 20 and 10. Country Hams could possibly try this and report on it. My wife objects to erecting a pole in the front lawn!!

Two-Band Antenna

50 AND 144 Mc.

Reading the May issue of "QST", "World Above 50 Mc.," on page 48, I came across the information that the Oxford County of Amateur Radio Association was using a single co-axial antenna for 6 and 2 metre operation. Their antenna had the dimensions of 55 $\frac{1}{2}$ " for both spike and skirt, thus working as a halfwave antenna on 50 Mc. and three halfwaves on 144 Mc.

The idea appealed and already having a co-axial antenna for 2 metres with skirt and spike 18 $\frac{1}{2}$ " long, I decided that by adding 37 inches to the quarterwave spike I would obtain a full wave radiator without altering the characteristics for 2 metre operation.

Actually I pushed a 55 $\frac{1}{2}$ " length of $\frac{1}{2}$ " dural rod over the spike and bolted it securely by putting $\frac{1}{8}$ " Whitworth brass bolts (tapped holes) through both the 18 $\frac{1}{2}$ " and 55 $\frac{1}{2}$ " pieces of metal rod and tubing. The skirt remained unaltered.

On 2 metres no change in the coupling was required, indicating that the extra halfwave added had not altered the radiator electrically.

On 6 metres the coupling had to be reduced so that with an 8-turn final tank coil and a 1-turn coupling loop to the co-axial cable (75 ohm), the loop was only about quarter way in mesh. There was little retuning of the final necessary, indicating a close enough antenna resonance and a standing wave ratio which was low enough to be tolerated.

Theoretically, the skirt should have been lengthened to 55 $\frac{1}{2}$ " to make a perfect match on 6 metres, and I can answer all the objections to using the 18 $\frac{1}{2}$ " skirt, but the fact is it works and works well on both bands and my curiosity and pocket is well satisfied!

HOW TO KILL AN ORGANISATION

These six points have circulated around the world for years and are still worth pasting in your hat.

1. Don't come to meetings.
2. If you do attend a meeting, find fault with the officers, the other members, and the organisation's policy.
3. Never accept office because it is easier to criticise than to do things, but get sore if you are not appointed.
4. If asked by the Chairman to give an opinion on some important matter, tell him that you have nothing to say. After the meeting however tell everyone how you think things ought to be done.
5. Do nothing more than is absolutely necessary, but when other members roll up their sleeves and willingly use their ability to help matters along, then howl that the organisation is run by a clique.
6. Whatever you do don't bother to get any new members, always let the other fellow do that.

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 7.0	3.8 Mc.—A1, 3, 3a, 6F3.
7.0 to 14.0	7.2 Mc.—A1, 3, 3a, 6F3.
14.0 to 28.96	14.4 Mc.—A1, 3, 3a, 6F3.
28.96 to 29.0	27.23 Mc.—A1, 3, F.M.
29.0 to 50.0	30.0 Mc.—A1, 3, 3a, 6F3.
50.0 to 144	54.0 Mc.—A1, 2, 3, F.M.
144 to 288	148 Mc.—A0, 1, 2, 3, F.M., Pulse.
288 to 576	296 Mc.—A0, 1, 2, 3, F.M., Pulse.
576 to 1215	585 Mc.—A0, 1, 2, 3, F.M., Pulse.
1215 to 2300	1300 Mc.—A0, 1, 2, 3, F.M., Pulse.
2300 to 5650	2450 Mc.—A0, 1, 2, 3, F.M., Pulse.
5650 to 10000	5850 Mc.—A0, 1, 2, 3, F.M., Pulse.
10000 to 21000	10500 Mc.—A0, 1, 2, 3, F.M., Pulse.
21000 to 30000	22000 Mc.—A0, 1, 2, 3, F.M., Pulse.
30000 Mc. and higher	A0, 1, 2, 3, F.M., Pulse.

* 73 Portrush Rd., Toorak Gardens, S.A.

resistors are adequate, power-wise. For impedance values of 50, 75 or 100 ohms single unit $\frac{1}{2}$ watt resistors are good up through 150 megacycles. For 300 ohm work, a single 300 ohm resistor is not satisfactory, as the effective capacitive reactance starts to show up at 100 megacycles. However, two 150 ohm $\frac{1}{2}$ watt resistors in series are satisfactory up to 150 megacycles.

No tests were made on resistors of more than 300 ohms resistance, but it is obvious that the capacitive reactance will be a factor to be considered, so that higher and higher values of resistance will be "pure resistance" only for lower and lower frequencies.

Dummy loads capable of handling sixty watts (the output of a 100 watt input transmitter) can be made by employing 2 watt composition resistors. Ten 2 watt resistors will dissipate twenty watts, which, with our factor of three employed, allow their use as 60 watt loads. Obviously, these resistors can be placed either in series or in parallel, but tests indicate that it is desirable to make these loads as follows:

For a 50 ohm load use ten 500 ohm resistors in parallel. For a 75 ohm load, use ten 750 ohms resistors in parallel. For a 300 ohm load, use ten 30 ohm resistors in series. All of these combinations give good results as dummy loads up to 150 megacycles.

The proper way to parallel resistors is to make two circular discs of copper or brass, and drill ten holes, equally spaced, around the edge of each disc. Mount the resistors between the discs and solder each lead to the disc. If desired, a coaxial fitting may be mounted, or broad straps may be soldered to the two discs.

If you use a 300 ohm load, the resistors should be in series. The best way to do this is to make two sets of five resistors, each set in a straight line, then connect one end of the two sets together. This brings the two leads of the composite resistor adjacent to each other. All leads in the series string should be as short as possible.

Dummy loads capable of handling 300 watts can be made from ten 10-watt non-inductive resistors. For a 50 ohm load, use ten 500 ohm resistors in parallel. For a 75 ohm load use ten 750 ohm resistors in parallel. For a 300 ohm load, use ten 3,000 ohm resistors in parallel. All three combinations are usable to 150 megacycles if the units are paralleled as described before.

USING A DUMMY LOAD

There are a few precautions to be observed when connecting a dummy load to a source of power. One, make as direct a connection as possible, and use low inductance leads, such as copper straps.

Two, keep the dummy load away from metallic objects, in order to avoid an unbalance to ground.

Three, keep the dummy load well in the clear so that adequate air circulation is assured.

The information just given on non-inductive resistors is intended as a general guide to the selection of such resistors. Rigorous and complete tests are quite difficult to make, especially when a large variety of resistors is considered. —"Lighthouse Larry," Jan.-Feb., 1951, "Ham News."

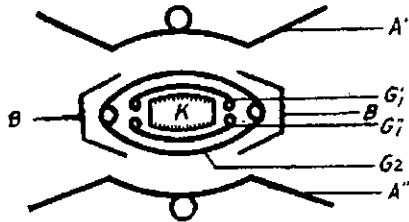
THE QQE06/40

QUITE considerable interest has been shown in the new Philips double tetrode, the QQE06/40, and the object of writing this article is to supply a few more details than are generally known about this tube.

Firstly, the filaments can be operated from either 6.3 volts at 1.8 amp. or 12.6 volts at 0.9 amp.; the cathode, which is indirectly heated, is common to both tetrodes; more will be said about this later.

The d.c. anode voltage is 600 volts maximum at frequencies below 250 Mc., 400 volts maximum at frequencies above 300 Mc. and maximum of 500 volts in the intermediate frequency range; the screen grid voltage is 250 volts.

The dissipation of each anode may amount to 20 w. and that of the screen grid is 7 w., so that in a well-designed rig the plate input can be 68 w. on phone or 100 w. or more on c.w.



If you take a look at the drawing of the horizontal cross-section (Fig. 1), you will see that the screen grid (G2) is, like the cathode, common to both sections. This screen grid is made of windings fixed to two supporting rods. This construction avoids the necessity of separate leads for the two halves, and thus also completely eliminates the self-induction of these leads.

Since the beam-plates prevent them from following long trajectories, all the electrons have about the same and the shortest possible transit time. Without such a measure there would be a difference in transit time, and at very high frequencies these differences would adversely affect the efficiency of the valve.

Reverting to the cathode, if you look again at Fig. 1 you will see that this is in the form of a roughly rectangular tube. Only the long, slightly convex sides of this tube are coated with an emitting material, so that really the tube has two cathodes interconnected by the shorter sides of the rectangular body. The self-induction of these short and wide "connecting strips" connected in parallel is so small that even at frequencies of 400 Mc. the effect of self-induction in the cathode interconnections is quite negligible.

The resistance of this connection is likewise very small, even at high frequencies, due partly to the fact that the working temperature of the cathode lies above the Curie point of nickel, so that permeability is 1, and consequently there is but little skin effect. The two control grids are curved so that when they expand the distance between the grid and cathode is not reduced, and thus there is no risk of short-circuiting.

These control grids are made of molybdenum wire plated with a layer

of gold. This plating reduces the resistance at high frequencies, and minimises the risk of thermionic emission from the grid.

An outstanding property of this tube is its inability to oscillate unless feedback is purposely applied externally.

This very desirable effect is brought about by virtue of the fact that it has its own neutralising capacitors actually built in. These are in the form of a short wire welded on to the extended support of each control grid and extended adjacent to the opposite anode. The capacitance is practically equal to that between an anode and its corresponding control grid. In this way, a neutralisation is obtained which is entirely independent of the frequency at which the tube is working.

The tube as a whole is very rugged, the glass envelope is made of hard glass which is able to stand high temperatures. The anodes protrude from the top of this, all the other electrodes being connected to seven rods of molybdenum which are fused into a base of "Sintered" glass.

There is no doubt that this tube is really good and ideal for the Amateur; it has an efficiency of 72% on a wavelength of 5 metres, and above that probably has still even greater efficiency.

Just in passing, I will mention the fact that this tube is widely publicised in America, where the type number is AX9903, which is the same tube and manufactured in Holland.

[The above article is reprinted from "Radio ZS," May, 1951.]

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Clamper Tube Controlled Carrier for Screen Grid Finals

Controlled carrier is, of course, no new thing. In the past many methods have been devised to effectively control the carrier via the audio intensity with varying success. These methods ranged from voice-operated relays to "class B electronic control," each seeming to have some snag or other, making it unsuitable for Ham work.

Quite recently, however, a good system became available to Hams (April "QST"), but it is specifically of the screen modulator variety which, it is felt, has no ready appeal to Hams. We generally realise that a 50 watt plate modulator, with its attendant higher efficiency, isn't a huge order (and more than sufficient for the full licence requirements of 100 watts).

It was thought necessary, therefore, to develop a method of carrier control suitable for plate modulated finals preferably of the tetrode variety, as this seems the more popular these days. The "clamper" tube effectively controls the screen volts of a tetrode final by means of audio-derived excitation.

The advantages of controlled carrier are well worth while provided the method of achieving it isn't complex; briefly, these advantages are:—

- (a) Economy of tube life and power.
- (b) Virtually full modulation for any audio level.
- (c) Ability to exceed ratings with some justification.
- (d) Reduction in heterodyne interferences.

The method finally arrived at has all these advantages and more; it is cheap, simple, foolproof with no fussy adjustments for guaranteed success. One has only to build it as a separate little unit and tie it to the existing rig via a short cable.

It uses the "clamper" tube principle, but instead of letting the clamper receive its negative grid supply from class C bias, we now use rectified audio in a similar manner so that when no audio exists the clamper holds the screen voltage of the final amplifier well down, and low r.f. output results. The moment audio enters the mike, the clamper draws less current through the final's screen-dropping resistor and the screen voltage rises, r.f. output rising in unison.

A variable sensitivity control is provided (an ordinary volume control with switch to cut out carrier control for tuning transmitter and loading). Maximum control approx. minus 16 db.

More control than this figure is not possible with the scheme—nor is it really desirable. Recent experiments at ZS2LT have shown that circuit noise, hum and general room noises can finally modulate a carrier when this carrier is reduced by 20 db or so. This gives rise to the disconcerting effect of speech-noise, when received under a.v.c. conditions at the far end, hence it is not truly advantageous to have greater control than this, without changes in receiving technique.

Briefly following the circuit, we tap off some audio from the plate of the second speech amplifier; this audio is fed via the sensitivity control to the 6R7, whose plate circuit feeds an ordinary "plate to push-pull grids" transformer. The secondary winding feeds the diodes of the 6R7, and the centre tap provides negative d.c. to the grid of the 6Y6 (or 6L6) clamper tube.

The plate and screen of the 6Y6 are commoned and connected directly to the screen of the r.f. final amplifier (this screen being conventionally fed via a suitable dropping resistor to the modulated h.t. supply).

It will be noticed that the diode returns to the cathode of the 6R7 in order that the grid of the 6Y6 be slightly positive for the silences, thereby taking advantage of the heavier drain (more effective "hold down" of the r.f. final's screen volts) that the 6Y6 causes this way.

In speech type audio a tremendous proportion of transmission time is actually silent; these silences are "cool-off" or rest periods for the final when the carrier is controlled—this ensures a long and useful life (813s are no longer a few bob each).

A comparative test revealed that an 815 at 75 watts input with controlled carrier runs appreciably cooler than it normally does at 50 watts without control.

There are no snags to the construction or operation of the unit, and the few shillings spent on it is well worth while—you probably have it all in the junk box, anyway.

Operating is simple; one merely advances the sensitivity control sufficiently

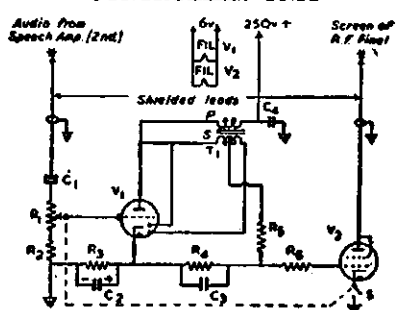
until a normal voice power kicks the plate meter from a low reading to its usual reading.

So much interest has been provided by this high-efficiency gadget, and since the thing performs extremely well, it is heartily recommended to the many 807s and 813s, etc., final amplifier users of our Ham fraternity.

[Note from Technical Editor. It should be realised that as the clamper tube is controlled exclusively by audio, there is no protection to the final in the event of loss by excitation. This protection may be provided by other means, such as an excitation-controlled clamper tube, should it be necessary.]

—By ZS2LT, reprinted from "Radio ZS," May, 1951.

CLAMPER TUBE CARRIER
CONTROLLER UNIT



- C1—0.01 mica (600 v.)
- C2—25 uF. electrolytic (25 v.).
- C3—0.25 uF. paper.
- C4—0.5 uF. or better (600 v.).
- R1—1 meg. volume control with switch.
- R2—15,000 ohm (½ watt).
- R3—1,000 ohm (2 watts).
- R4—0.25 meg. (½ watt).
- R5—5,000 ohm (½ watt).
- R6—50,000 ohm (½ watt).
- T1—Plate to p.p. grids transformer.
- V1—6R7.
- V2—6Y6 (or 6L6).

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NEW SOUTH WALES

60 Mc. News: The Ross Hull Contest got away to a good start with the 50 Mc. band in fine fettle. This year has shown a return to the conditions prevailing some three years ago with the band being open interstate for long periods, sometimes for the whole day.

Outstanding amongst the breaks have been those to New Zealand, with signals romping in like locals for hours at a time. Even those who normally are unable to work ZL unless signals are very strong, have been making many contacts in that direction.

It has now been learned that the first VK3 to be worked by VK9XK was VK3UI at Tatura. Russ and Alan contacted on 1st December at 1930 on c.w. and again at 1950 on phone. Another contact was made at 2145 with 3UI on phone and 9XK on c.w. Signals averaged 57.9. 3AFP also worked 9XK on phone at 1955-2000 hours. Russ has been very much sought after since these contacts were made, but to date the only VK2s to make the grade have been 2WJ and 2WH. The ZLs have been heard working VK9XK practically every time the band opened to VK2. So far the stations from VK8 have been unheard in Sydney, in fact some begin to doubt whether they are really active at all.

Contacts with VK4 have been very much more frequent this year than for some time and during the last few days of 1951 the band was open each morning to the northern State.

At time of writing the band is open to VK4 with 2AC working 4NG. Leo has been popping up on six a few times of late and collecting some of the DX. 2ABC has been very active during the contest and has a pretty large score. Fred insists that he isn't taking the contest seriously, that's why he may be heard calling DX almost any time one turns on a Rx!

5BC and his brother 5HD should enter into the VK2 notes this month as they must surely have more powerful signals in Sydney than they have in VK5, they just couldn't be any stronger!

The QRM position on the lowest 100 Kc. of the band gets worse. 2HL has joined the fray along with 2AH, 2ABC, 2VW and 2JK so that during a DX opening one may as well skip that part of the band as far as the DX stations are concerned. One VK5 remarked to 2ANF that the latter's frequency high up in the band was quite a good one well clear of the QRM. The frequency in question is 50.28! Upon being told that there were stations operating up to 51 Mc. in VK2 the said VK5 went off to tune what he termed "the high frequency end of the band."

2HO has been having many troubles with "parasitics" which he is still trying to cure; try some D.D.T. Roy, 2QZ, who shortly travels northwards, has been amongst the DX, his holidays happily coinciding with the DX season. 2WJ has a special private tunnel through which the ZLs just "pour in" and John has been making hay while the ZL sunshines. How many ZLs have you worked this year John?

In the country districts there has been much activity. 2WH has been chasing them up followed by his near neighbour 2AMV. During a short skip opening 2FN was heard in Sydney and to judge by the number of stations calling him, 2AMV of Dubbo must be doing very well. During all this feverish activity on six, 2ABT is silent, being away on holidays on the North Coast. What a feast you have missed Jack.

144 Mc. News: On the 15th December, at 1830, 2AH made the first two-way contact with ZL on 144 Mc. His contact with ZL3AR lasted for some seven minutes at 57 dbm on c.w. At the time, 50 Mc. was wide open to ZL and had been for some hours, the 144 Mc. contact being made during what appears to have been the peak of the 50 Mc. opening. 2AH was using 100 watts to an 829 and a 32 element beam.

Allan was heard by two stations in ZL and a number of the Sydney chaps heard the ZL. The contact has created wide interest and attempts at 144 Mc. contacts when the band opens to ZL have been frequent since then. A report is to hand that ZL3AR was using 250 watts to a pair of 826s and a fairly large array. It would thus appear as though high power plus a high gain beam is necessary for the best results.

On 5th December, 2GU and 2ANF made the first Sydney to Canberra contact on 144 Mc. Signals were 55 from Sydney and 56 from Canberra. 2MQ followed in and a second contact was made. 2GU was running 70 watts to an 829B and a 12 element beam; 2ANF 18 watts to an 832 and a three over three; and 2MQ 100 watts to 826s with a 16 element beam. Since then 2GU has not been heard and there is at the moment no news as to whether he is still active on 144 Mc.

The same evening a few minutes after the Canberra contact, 2MQ made the first Sydney-Musswellbrook contact with 2ANU with signals rising to 58. A number of other Sydney stations also made the contact with Ken who is running fairly low power from a 32v. house lighting set.

A few days later, conditions being kind once again, 2ANU made quite a haul of Sydney contacts including ZIO who was and still is using a dipole between the roof and ceiling! Albert has a beautiful location for the north but nobody thought he would be able to work as far as 2ANU with his buried antenna!

On the 9th, 2JW went portable with 144 gear on the top of Mt. Canoblas near Orange and made contact with 2ANF. Norm also heard a number of other Sydney stations at good strength but was unable to raise them. The Tx he intended using refused to work so he fell back to the small job running 2½ watts! Later in the month Norm made a second trip but once again the Tx didn't behave too well. Norm has now cleared up the troubles and has sufficient grid drive so the next trip should be a great success.

2NS has his new 829 Tx going and puts in a good signal to the Sydney area using about 70 watts. 2WH has made two-way contact with 2TA in Young, Alan having acquired a P38 Rx which fills the gap in his 2 mx gear. 2WH threatens to excite his 829 and should be quite a fair signal in Sydney when he does so.

In Sydney, 2AGG is a new station, Alec, who is located at Newtown, is using an 832 final, xtal controlled and putting out a very good signal. 2JY has shifted from his spot on 147 Mc. and moved to the low end of the band, 144.5 to quote Jim—the frequency, however, is almost spot on 144.0 in the country zone! Apart from this accidental excursion the only station not observing the gentlemen's agreement is 2XG who still remains on approx. 144.0. 2KR and 2GA have not been very active of late but Cec has been able to make contact with 2ABZ much to Bill's delight.

578 Mc. News: Very little to report on activities in this band. 2YR has shown up complete with ASB7 Rx which from reports comes up to expectations. 2XX also has his ASB7 Rx going and is very pleased with the performance of same. 2AZZ has been getting adverse signal reports of late, but has been too busy with xtal controlled converters for 144 Mc. to do anything about it.—VK2ANF.

VICTORIA

Dates to remember: February 10, Field Day No. 4; and February 20, the Group meeting.

The following Melbourne stations are expected to be operating from portable locations: 3ABA, 3FO, 3ACT, 3ADU, 3AJJ and 3JO, while country stations 3AKE, 3ZL, 3UI, and 3ZD may also be at portable locations. Any others who can operate portable are urged to do so and help make this Field Day an outstanding success.

Arrangements for the lecture on February 20 have not been finalised but will be publicised by means of 3WI broadcasts.

Attendance at the December meeting was below the usual standard, but those present spent a very full and interesting evening. Once again our lecturer, Mr. Mansergh, through mistaking the date, was unable to be present, but in his stead Harry Chapman 3GU and Bert Semmens 3GS explained the manner in which they had modified their TR1143A sets for operation on 144 Mc. 3GU uses the r.f. section of the Tx only and this drives p.p. 7193s which in turn drive an 834. 3GS uses the whole works, even to the push button control of frequencies for the Tx. His receiving set-up is unusual, too, in that the Rx is used as it stands, that is, crystal controlled to receive signals around 110 Mc. A ZB Homing Adaptor has been altered to a converter which converts 144 Mc. sigs to

110 Mc. for feeding into the TR1143A Rx. Since the oscillator is about 30 Mc. it is fairly simple to make stable, the biggest difficulty being to mix the 30 Mc. and 144 Mc. signals. Bert tried many methods and eventually settled for cathode injection.

Only one log for the 578 Mc. Contest was received and the prize of a pair of 24Gs goes to Geoff 3AUX. However, as there appears to be some confusion as to whether this prize should have been awarded for a previous contest, it was decided to withhold presentation until past records of the Group have been consulted and the position clarified. The contest achieved quite a degree of success in that it stirred up some activity on 578 Mc.

Excellent conditions prevailed on 50 Mc. for the Ross Hull V.H.F. Memorial Contest, the band being wide open nearly every day and many good contacts were made with both Interstate and ZL stations.

On 13th January, VK2FK attempted to work through to Melbourne from One Tree Hill at Ararat and although his signals were heard in Melbourne, he was unable to hear any of our calls, but had a scratchy contact with 3ZL, of Ballarat. In Melbourne for a few days prior to returning home he operated portable at Yarrambat and worked several Melbourne stations. He also visited Big Hill at Stawell and reports that both this and One Tree Hill at Ararat offer excellent possibilities for v.h.f. working. He hopes to try 144 Mc. again during his holidays next year.

JCR has made his long promised debut on 144 Mc. with 45 watts to an QQE08/40 and a four over four beam.

New calls on the band are 3IP at Ferntree Gully and 3AAP. 3UG at Rye is now putting in a much stronger signal with two four-element "Lenfo" beams stacked. 3RR has shifted his domicile to Horsham. Dick is now active on 6 and 2 mx and is also working 40 mx and looking for contacts with his old v.h.f. cronies.

On-the-air discussions between 3UI, 3AFP and 3CI have resulted in the election of 3UI as v.h.f. correspondent for the zone and Alan has promised to keep the magazine informed of the doings of the boys up his way. 3EN has had some xtal trouble and is now on a new frequency, and 3CI at Nagambie with increased power is working more of the Melbourne stations.

Finally, another reminder of the Field Day on 10th February and also of the Field Day Contest. Rules for this contest are the same as those for the previous contest held early in 1951 and were printed in these notes in the February and March issues of that year. Closing date for logs this time is April 30, 1952, so please let us have yours this time. With 60 stations active last year, 13 logs received was a very poor response indeed—please don't let it happen again.

SOUTH AUSTRALIA

Congratulations to VK5GL/VK8BO who made two-way contact on 144 Mc. at 1640 C.S.T. on 30th December, 1951. Most of 50 Mc. men in VK heard Clem and Rolo in QSO and change to 144 and the results that occurred. Good work both and let's hope it will be repeated.

Other highlights of December, 1951, was on the 29th when VK9XK came through and was worked by all on the band at the time. On the 31st, ZK2AA reports hearing VK5BC.

Conditions have been very good during the Ross Hull Contest with most consistent signals being VK4 and VK6, conspicuous by their absence were the Darwin boys which we all feel sure would have been heard if only they were active. 5BC is leading in contacts in the Ross Hull Contest and looks like winning for VK5 again this year. Hughie has put up a good effort and no one will deny him the rights to it if he does win; he even sleeps with the Rx running.

A lot of work is being done on 144 and 288 Mc. gear and several xtal controlled Tx's are on 288. Notable is the line-up of 5MO using seven tubes. 5JD is now getting oodles of drive to his 832 on 144 by using an RL7 dbr. 5QR is now convinced that the RL7 is a good tube. Reg was scratching for 288 Mc. drive when 5GL broke through on 144. 5AX/5YF, of Gawler, have had over 70 QSOs on 144; good work, hope to hear you both in the Interstate Contest. 3ZL has been operating portable from North Glenelg.

Recently 5BC and 5MA have been audible in Adelaide at very good strength at night, at times 5BC was like a local. 5MT is a new comer to 50 Mc. and is putting out a nice signal and works the DX OK. 5XU has been active also. A howler heard after VK5JD had called CQ on 50 Mc. was the ZL who was calling ZL5JD. Jack did not hear him so was not insulted. 5CA has appeared on 50 Mc. and is putting out a nice signal.

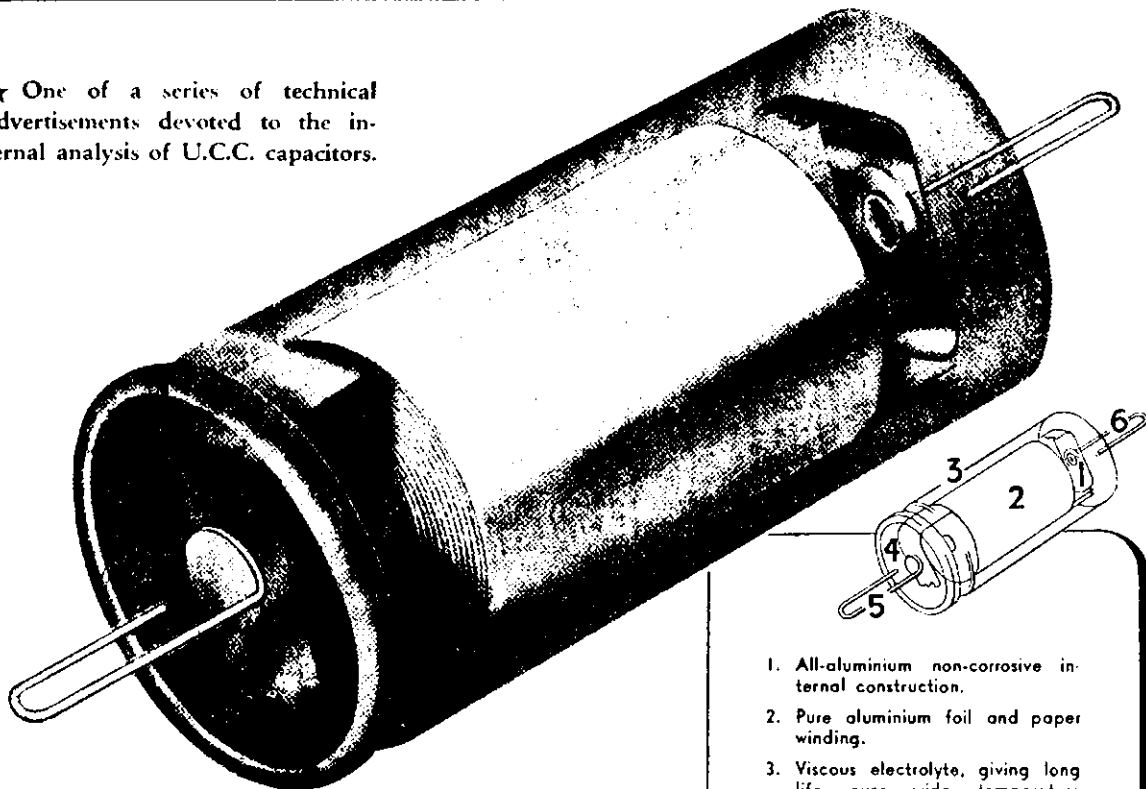
Of interest is the distances in nautical miles shown between aerodromes concerned of the two latest 144 Mc. contacts: VK2AH-ZL3AR Sydney-Auckland, 1161 miles; and VK5GL-VK6BO, Parafield-Gulford, 1151 miles.—VK5KL.

50 Mc. W.A.S.

Call	Certificate Number	Additional Countries
VK2WJ	13	3
VK4RY	2	2
VK2VW	9	2
VK5LC	1	1
VK6DW	3	1
VK4HR	4	1
VK3FG	5	1
VK3RR	6	1
VK3FT	7	1
VK2AEZ	10	1
VK3XA	11	1
VK3GM	12	1
VK3ACL	14	1
VK2ABC	8	1

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CL1

DX NOTES BY VK4QL *

A few strange calls are appearing on the band so possibly this list will help identify some of them:-

British Colonies ... 4PA-4PZ	Norway ... 3YA-3YZ
Canada ... 3BA-3FZ	Peru ... 4TA-4TZ
China ... 3HA-3UZ	Philippin. 4DA-4DZ
Chile ... 3GA-3GZ	Poland ... 3ZA-3ZZ
French Colonies ... 3VA-3VZ	San Marino 9AA-9AZ
Haiti ... 4VA-4VZ	U.S.S.R. ... 4JA-4JZ
Mexico ... 4AA-4CZ	United Nations 4UA-4UZ
Monaco ... 3AA-3AZ	Venezuela 4MA-4MZ
Morocco ... 5CA-5CZ	Yemen ... 4WA-4WZ
Nepal ... 9NA-9NZ	Yugoslavia 4NA-4OZ

My apologies to those who sent me material for last month's issue, but we can blame the P.M.G.'s Dept. for non appearance of the notes.

This month my own activities have been a little restricted and, it seems, so have a few of the other DXers. Static has again cramped the activities of those who like to give the lower frequency bands a flutter. One disturbing note is the deliberate interference by many during the course of a QSO with a hard-to-get DX station. During the QSO, stations have been zero beating one of the two stations in contact and, to help matters, then getting their rig "on the nose!" "Busting in" was also observed. 9XK had ZD1SD come back to VK9XK?? and W4TO broke in and took the QSO away from Russ. I had a similar experience with VQ5CW, whilst I was QSO him, listening to W4HQN break in and carry on a pseudo QSO with the VQ5 on his frequency giving R to the VQ5 whilst he was still transmitting to me.

The band survey shows varying fortunes. Times shown as GMT and DX worked as *:-

3.5 Mc.: No news from anybody so guess the QRM too severe. Myself, I could not hear anything whenever on this band.

7 Mc.: At this QTH early in the month, the early mornings produced good results, enabling me to increase my countries to 59. Evenings were of no use at any time. The best of the month were ZC4XP*, PY2AUX, KH6QY/KC6*.

7EK found the noise too high and signals lacking. Haven't heard 5JE to see how he fared over in South Australia.

14 Mc.: Some good DX has appeared on this band, but was the usual story, that no pattern was followed by the band and you had to be around at the right time. The station that caused the most interest was probably VQ1RF, which most of the VKs interested seemed to work on c.w. and phone. On 22nd Dec. at 2330 and 2355, good signals were heard from Z53K and EA0AB respectively. Rather a strange time for them. 2XK got amongst some of the good ones to the tune of CE7Z*, CE4AD*, ZD2DCI*, FQ8AG*, FQ8AK*, VQ5CW* (Box 89, India), CX1FY*, YV5AK*, VQ3KIF*, FM7WF*, P11UF*, P15RE*, VQ8CB*, T12TG*, TL3RC*, KH6QY/KC6*, FR7ZA*, 4UJAJ (Kashmir), VQ1RF, EA0AB, ZD1SD. Russ had 92 when the above was received and was trying to get his 100 before the end of the year. 7RK can hear a few Africans in the mornings but cannot beat the Ws to them. It's fairly easy here Ray, which does not help you with your Zone 35 does it? Ray finds very little on the bands in the afternoons, evenings providing the usual Asians. But at 1200, the Europeans appear and are worked with ease. Ray lists FQ8AE, VP7NM, 4X4DF, 4X4BX, CR9AF, F180, KV4AA*, FKS8AA*, ZS6A* and would like to see what the VK6 gang are doing. So would I Ray, but my appeals have fallen on deaf ears over that way.

4BG had his activities cramped for the first half of the month due to a power leak, but managed three new ones as a Xmas box in LA, CR9 and GI. Ron lists OQ5BZ, VQ4BY, FQ8AE, VP6CJ, CR9AF*, F18KVA, M13DD, VP6G. 4CB was one who caught VQ1RF to give him his 100th country on phone. 4QL's listing: CE7ZQ*, HH3L*, KT1LM (U.S. Legation Tangier), KG4AC*, KG4AF, VQ8CB*, AP4A, CR5AD (Box 206, Bissau), M13DD, M13SL*, ST2GL* (via R.S.G.B.), KH6QY/KC6, FN8AD*, VQ1RF*, EA0AB, EA0AC, TG9RB*, VQ5CW*, FR7ZA*, Z53K, FFR8AJ*. The new ones in this lot bring the total to 173. 4EL has not found the bands to his liking and has not been able to maintain his daily sked with G5ZA. 3CX did alright for himself this month and lifted his total to 166 with things like FR7ZA*, FB8BB, VQ8TW, OQ5VD, OY1AJ (wonder if he is OK Alan), VQ1RF, MP48BD, MP4KAE, ST2GL, KG4AF, F8EX/AR, CR7CN. The ones that get away were FL8BC, EA0AB, ZA1A, M13LK, VQ5CW, EK1AD, ZD6DU. 3YF heard Z59N, which will have the gang on their ears. 2AMB also worked three new ones in VQ1, VQ3 and Y13 in addition to SUI6B.

28 Mc.: This band, as far as I am aware, has produced nothing of note, except frequent short skip.

QSLs of interest are not numerous. 9XK received F77YC, and 7RK FK8AL, VS2CP and PK5AA. 4QL had 7 Mc. W.A.C. confirmed with the receipt of LU7CD. Others received were ET3A, TF3AR, ZE4JG, FK8AD, FK8AL, ZC4OR, EA9AP, EA8BF and 3A2AD. A QSL from F7AR indicates he operates or has operated 7B4QF and 3A2AC, his home call being W8PQ. Q.

The gen section produces another interesting item. KE4PK will be with an expedition to the Isles of Rivella Gigeo, and expects to operate for about 30 days, so another "hunt" looks like being on. Each QSO will be given a number and it will be essential for you to quote that number for a confirmation. Guess he is prepared for the pseudo QSOs that some guys have.

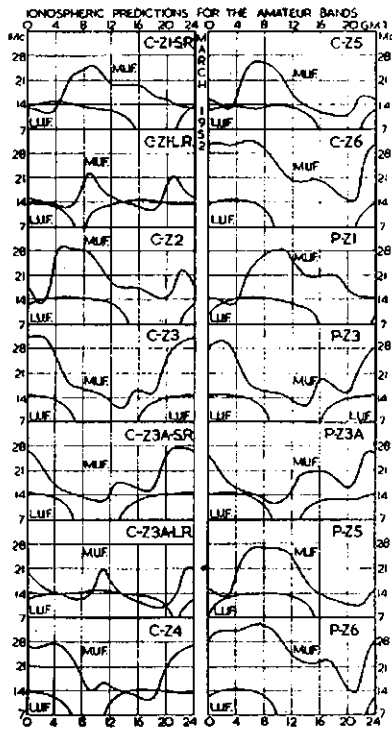
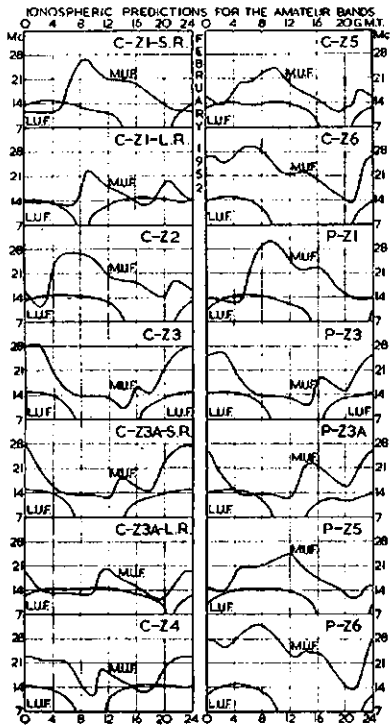
QSLs have been received by some from FD8AA, so that's good news after the doubt that existed on his legit.

WOELA, who made an attempt to get on from VS5, eventually obtained permission but too late. However, now he has the clearance, is going to make another attempt to get to VS5. The old "DX hound" W1FH has now amassed the total of 245 countries worked. Once upon a time we doubted the existence of there being 200 workable. Two stations, which are legit, and worth watching for are FL8BC and MC1KN who is in Benghazi.

Those I heard breaking the gentlemen's agreement this month took a bit of a hammering. Very heavy c.w. activity suddenly appeared on their frequency for the duration of their transmissions. KV4AA heard it happen to a VK3 working a VK4, the VK3 being S6 over there, until he was cut to pieces.

Well that's about the lot gang, so my thought for the month is "Unless you want to go nuts trying to get rid of chirp in a v.f.o., be very chary about using slug tuning in the osc. grid coil. I found out after hours on hours of trying."

Last month I wished everybody the season's greetings, but missed out in the issue, so once again good hunting for 1952.



* Fil./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

DX C.C. LISTING

PHONE

Call	No. Ctr.	Call	No. Ctr.
VK3EE	10 158	VK4WF	16 121
VK3JD	1 156	VK4JP	8 114
VK3BZ	3 154	VK3AWW	14 112
VK4HR	12 153	VK4FJ	21 109
VK6RU	2 148	VK4DO	20 104
VK6KW	4 145	VK2ADT	13 102
VK4KS	9 135	VK2AHA	15 102
VK3LN	11 132	VK8PJ	19 101
VK8DD	6 126	VK3JG	5 100
VK3JE	7 123	VK3GG	18 100
VK4WJ	17 122		

C.W.

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 200	VK3JE	21 124
VK3FH	15 172	VK3YD	27 123
VK4EL	9 163	VK3EK	3 122
VK4HR	8 161	VK5FH	31 119
VK2EO	2 162	VK3JI	25 118
VK3CN	1 151	VK3UM	12 116
VK6SA	28 150	VK4DA	7 113
VK3VW	4 143	VK3PL	38 113
VK2QL	5 142	VK7LZ	17 112
VK3KB	10 138	VK4RC	13 107
VK6RU	18 135	VK3YI*	39 106
VK2GW	18 132	VK2YC	34 103
VK3RX	23 132	VK3HT	37 103
VK3CX	28 132	VK3APA	14 101
VK4FJ	29 129	VK3NC	19 101
VK5BO	33 129	VK2OA	32 101
VK3JK	30 128	VK7RK	22 100
VK4QL	38 128	VK7LJ	24 100
VK4RF	11 125	VK2AEZ	35 100
VK4DO	20 125		

OPEN

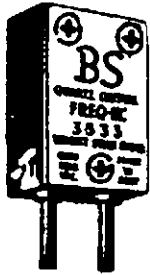
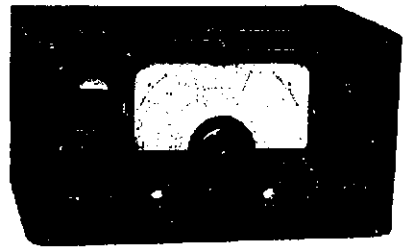
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 213	VK3VQ	48 116
VK4HR	7 194	VK3AWW	45 115
VK6RU	8 181	VK3TA	43 114
VK3JE	12 180	VK2ADT	14 113
VK3BG	3 171	VK3PG	47 111
VK2DI	2 170	VK3MM	49 111
VK3KX	1 167	VK4RC	21 110
VK6KW	13 165	VK3ZB	34 110
VK4EL	10 163	VK2ZC	25 108
VK4FJ	32 155	VK2YL	11 106
VK4DO	15 151	VK3AWN	36 105
VK4KS	24 149	VK2VN	18 104
VK5FL	28 143	VK4UL	27 104
VK3MC	5 139	VK6PJ	44 104
VK3OP	19 137	VK6PW	50 104
VK6DD	22 136	VK2HZ	17 103
VK3LN	29 135	VK7KB	30 103
VK2ADE	28 133	VK2TI	37 103
VK2AHA	9 128	VK3HO	38 103
VK4WF	40 128	VK6DX	42 103
VK2AHM	20 125	VK7RK	31 102
VK2NS	18 123	VK4TY	35 102
VK3HT	41 123	VK9GW	48 102
VK3JI	33 119	VK2ACX	8 100
VK7LZ	23 116	VK2TG	39 100

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C.W.: February 29-March 2 and March 14-16

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As usual, special certificate awards are offered to the top single-operator phone and c.w. scorer in each country and A.R.R.L. section. If you're new to the DX Contest, it won't take you long to catch on. During the contest period, stations outside of the U.S. and Canada will call "CQ WVE" or "CQ TEST" and will exchange numbers as shown in the sample elsewhere on this page. If the input is 100 watts, your number is 100. If you run only 75 watts, use the number 075. If your input is different on different bands, change the number to approximate the input figure, but don't bother about 0.1 per cent. accuracy on any band—the usual approximation is adequate.

Explanation of DX Contest Exchanges		
Exchanges	RST Report Stat'n W'ked	3-Digit No. rep. Power Input
Sample (c.w.)	579	150
Sample (phona)	57	500

RULES

- Eligibility:** Amateurs operating fixed Amateur Stations in any and all parts of the world are invited to participate.
- Object:** Amateurs in the continental U.S. and Canada will try to work as many Amateur Stations in other parts of the world as possible under the rules and during the contest periods.
- Conditions of Entry:** Each entrant agrees to be bound by the provisions of this announcement, the regulations of his licensing authority, and the decisions of the A.R.R.L. Award Committee.
- Entry Classifications:** Entry may be made in either or both the phone or c.w. sections; c.w. scores are independent of phone scores. Entries will be further classified as single- or multiple-operator stations. Single-operator stations are those at which one person performs all the operating functions. Multiple-operator stations are those obtaining assistance, such as from "spotting" or relief operators, or in keeping the station log and records. A special phone listing is available for those entrants whose work is exclusively in the 10 and/or 11 metre bands.
- Contest Periods:** There are four week-ends each 48 hours long; two for phone work and two for c.w. The phone sections start at 2400 G.C.T., Friday, Feb. 1, and Friday, Feb. 15; ends 2400 G.C.T., Sunday, Feb. 3 and Sunday, Feb. 17. The c.w. section starts at 2400 G.C.T., Friday, Feb. 28, and Friday, March 14; ends 2400 G.C.T., Sunday, March 2, and Sunday, March 16.
- Valid Contacts:** In the phone section, all claimed credits must be made voice-to-voice.

In the telegraph section, only c.w.-c.w. contacts count. Crossband contacts may not be counted.

7. **Exchanges:** Each participating operator will use three figures to represent the approximate transmitter power input. C.w. contestants will exchange six-figure numbers, each consisting of an R.S.T. report plus the three "power" numbers. (Examples are given in the sample log.) Phone contestants will exchange five-figure numbers, each consisting of a Readability-Strength report plus the three "power" numbers. If the input power varies considerably on different bands, the "power" number should be changed accordingly.

8. **Scoring:** (a) Points: 1 point is earned by a W (K) or VE/VO station upon receiving acknowledgment of a number sent, and 2 points upon acknowledging a number received. Two points are earned by any other station upon receiving acknowledgment of a number sent, and 1 point upon acknowledging a number received.

(b) **Final Score:** W (K) and VE/VO stations multiply total points earned under Rule 8(a) by the number of countries worked on one band plus the number of countries worked on each other band. All other stations multiply total points earned under Rule 8(a) by the sum of the number of W (K) and VE/VO licensing areas worked on one band plus the number of W (K) and VE/VO licensing areas worked on each other band.

Countries will be those on the A.R.R.L. Countries List. There are 19 licensing areas: 10 in the United States, 9 in Canada (VO, VE1-VE8).

9. **Repeat Contacts:** The same station may be worked again for additional points if the contact is made on a different frequency band. The same station may be worked again on the same band if the complete exchange for a total of three points was not made during the original contact on that band.

10. **Quotas:** The maximum number of points per country per band which may be earned by W (K) stations in the c.w. section is 12, and contacts made on the same band with the same country after the quota is filled will not count. Thus complete exchanges with four stations in one country on one band fill the band quota for that country. The maximum number of points per country per band which may be earned by VE/VO stations in the c.w. section is 18, and contacts made on the same band with the same country after the quota is filled will not count. Exchanges with six stations in one country on one band are thus permitted Canadian participants. There is no quota for stations in the c.w. section outside of the U.S. and Canada. There is no quota for any station in the phone section.

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 18th April, 1952, to be eligible for "QST" listing and awards. All DX Contest reports become the property of the American

Radio Relay League. No contest reports can be returned.

12. **Awards:** To document the performance of participants in the Eighteenth A.R.R.L. International DX Competition, a full report will be carried in "QST". In addition, special recognition will be made as follows:—

(a) A certificate will be awarded to the high scoring single-operator phone and to the high scoring single-operator c.w. entrant in each country (as shown in the A.R.R.L. Countries List) and in each of the 72 U.S. and Canadian A.R.R.L. sections from which valid entries are received. In addition, a certificate will be awarded to the high scoring multiple-operator station in each section or country from which three or more valid multiple-operator entries are received.

(b) A suitable certificate will be awarded to the operator making the highest single-operator phone score in each A.R.R.L.-affiliated club, provided the club secretary submits a listing of a minimum of three phone entries by bona fide resident members of such club, and provided further that these scores are confirmed by receipt at A.R.R.L. headquarters of the individual contest logs from such members. The highest single-operator c.w. scorer in each club will be awarded a certificate under the same conditions.

(c) A.R.R.L. will award a gavel to the affiliated club submitting the greatest aggregate phone and c.w. score by bona fide resident club members, whether single- or multiple-operator entries, provided such scores are confirmed by receipt at A.R.R.L. headquarters of the individual contest logs from such members.

13. **Judges:** All entries will be passed upon by the A.R.R.L. Award Committee, whose decisions will be final. The Committee will void or adjust entries as its interpretation of these rules may require.

14. **Disqualifications:** Off-frequency operation (as confirmed by a single F.C.C. citation or advisory notice or two A.R.R.L. accredited official observer measurements) will disqualify. Low tone reports in logs will also be considered by the A.R.R.L. Award Committee as grounds for disqualification.

SUMMARY, 18th A.R.R.L. INTERNATIONAL DX COMPETITION

Entry Call Country
 (C.W. or Phone)
 Name Address
 Transmitter Tubes
 Receiver Antenna(e)
 (Logs from foreign countries show number of U.S.A. and Canadian call areas worked.)

Bands	3.5 Mc.	7 Mc.	14 Mc.	27 Mc.	28 Mc.	Total
No. Ctries. QSOed	1		4		3	*8
Number of Contacts						15

No. of Different Countries Worked
 No. of Hours of Station Operation
 Asst. Person(s): Name(s) or Call(s)
 45 (Points) x 8 (Multiplier) equals 360 Final Score

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 A.R.R.L. Award Committee.

Operator's Signature
 * Figure in this box is multiplier.

LOG, 18th A.R.R.L. INTERNATIONAL DX COMPETITION

Sheet 1 of 1. Call A.R.R.L. Section or Country

Date and Time	Station Worked	Country	Record of New Countries for Each Band					Serial Numbers		Points
			3.5	7	14	27	28	Sent	Received	
Feb. 2—0005 GCT	VF9E	Bermuda			1			56375	57080	3
Feb. 3—1300	PA0GN	Netherlands					1	58375	47075	3
1306	G6CL	England					2	58375	46150	3
1345	PA0RA	Netherlands					2	56375	58080	3
2030	LUTAZ	Argentina					3	58375	57750	3
2310	VF9X	Bermuda			1			57500	56050	3
Feb. 16—1020	ZL1MR	New Zealand				2		58500	58075	3
1035	YK2YI	Australia	1					47500	46100	3
1105	YK2RI	Australia	1					46500	45100	3
1421	PA0LQ	Netherlands					3	45375	57100	3
Feb. 17—0925	TF3EA	Iceland			3			57500	57050	3
1245	G2MI	England				3			46125	2
1258	G3KP	England				3		56375	57100	3
1350	G2MI	England				3		57375		1
1430	G5BA	England				3		46375	55100	3
2320	KZ5AW	Canal Zone			4			58500	58500	3

Sample of report form that must be used by foreign c.w. and all phone participants.

Sample of summary sheet that must accompany all reports.



Federal President: G. OLOVEB (VK8AG); Federal Secretary: G. M. HULL (VK8Z8); Box 2811W, G.P.O., Melbourne.

NEW SOUTH WALES

President: John Moyle, VK2JU.
 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: Don B. Knock, VK2NO, 43 Yanko Avenue, Waverley, Sydney.

Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; Newcastle: Ron McD. Stuart, VK2ASJ, 98 Dunbar St., Stockton; Coalfields and Lakes: Harry Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cambijowa, Forbes; South Coast and Southern: Roy Raynor VK2DO, 42 Pettit St., Yass; Eastern Suburbs: Don Knock, VK2NO, 42 Yanko Ave., Waverley; Northern Suburbs: Harry Powell, VK2AYP, Russell Ave., Wahroonga; St. George: Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah Bay.

VICTORIA

President: G. S. C. Semmens, VK3GS.
 Assistant Secretary: C. Gibson (VK3FO).

Administrative Secretary: Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne.
 Meeting Night: First Wednesday of each month at the Radio School, Melb. 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, VK3JC, 38 Wilson Ave., Tatura; Far North West: M. Folle, VK3GZ, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHC, Tinambra; North Western: C. Case, VK3ACE, Cumminn Ave., Birchip.

QUEENSLAND

President: J. H. Farrell, VK4WJ.
 Secretary: J. F. Pickles, VK4FP, Box 838J, 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, Kurran Street, Chermiside, Brisbane.

SOUTH AUSTRALIA

President: E. A. Barber, VKEMD.
 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. P. Parsons, VK5PS, 10 Victoria Avenue, Rose Park.

WESTERN AUSTRALIA

President: J. Campbell-Watson, VK6JW.
 Secretary: H. B. Lang, Box N1002, G.P.O., Perth, W.A.
 Meeting Place: Perth Technical College Annex, Mounts Bay Road, Perth.
 Meeting Night: Second Monday of each month.
 Divisional Sub-Editor: R. H. Atkinson, VK6WZ, Box 127, Geraldton, W.A.

TASMANIA

President: R. O'May, VK7OM.
 Secretary: L. W. Edwards, VK7LE, 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 Mollie St., Hobart, Tasmania.
 Zone Correspondents: Northern: C. A. Cullinan, VK7XW, 12 Montrose Place, Launceston; North Western: R. K. Wilson, 4 Menal St., Burnie, Tasmania.

FEDERAL

News is scarce this month; Federal Executive "shut up shop" for the holidays and so, apparently, did all other societies for there was practically no overseas mail coming in from which to glean interesting Amateur information.

However, Convention time is coming around again for which motions from the Divisions are due with F.E. by the 15th February. The Convention will be held in Sydney during Easter this year and an extra good agenda is looked for to compensate the higher costs of holding it there. There is your chance to bring up that matter you've always wanted to; your motion or suggestion forwarded to your Federal Councilor can still reach F.E. in time. But make it good—something really constructive and worthwhile to Amateur Radio as a whole.

LAST YEAR'S CONVENTION

In conformity with the policy of the Federal Council of the W.I.A. the action taken by F.E. on the agenda from the 1951 Annual Federal Convention is published herewith for the information of members:—

- Item 1: Agreed at the Convention that the policy book covered the situation.
- Item 2: Entered in Federal policy book and noted for 1952 Convention.
- Item 3: Entered in Federal policy book.
- Item 4: Greater publicity given to v.h.f. contests to solicit more interest.
- Item 5: Withdrawn by Queensland delegate at Convention.
- Item 6: Motion lost.
- Item 7: Context of editorial, July, 1951, "Amateur Radio." Matter referred to and in the hands of the P.M.G.'s Department.
- Item 8: Arrangements being proceeded with for 1952 Convention.
- Item 9: Clarified at Convention.
- Item 10: Entered in Federal policy book and notified to Divisions.
- Item 11: Motion lost.
- Item 12: Entered in Federal policy book, notified to Divisions, and included as first agenda item for 1952 Convention.
- Item 12a: VK5RT determined to be the rightful recipient of the W.A.S. Australia (50 Mc.) Trophy and cheque for the sum of £5/5/- forwarded to the South Australian Division.
- Item 13: All Divisional Presidents requested to include events of historical nature in annual reports and forward a copy to F.E.; Divisions asked to co-operate by obtaining historical records from "old timers" in respective States. Some records on hand being co-related by Federal Vice-President.
- Item 14: Printing pending requirements of Divisions after first using balance of individual State forms now on hand.
- Item 15: Submitted to P.M.G.'s Department for information. I.A.R.U. notified. Published elsewhere this issue of "Amateur Radio."
- Item 16: Divisions requested to co-operate by appointing Publicity Officer. Matter further

dealt with by editorials and correspondence. Subject one for constant reminder where and when necessary or possible.

Item 17: Refer F.E. notes, January "A.R." 1952. P.M.G.'s Department approached and matter discussed. Further action pending results of meetings already convened between F.E. and Joint Services Committee.

Item 18: Editor of "Amateur Radio" notified. Delegates discussed matter with Editor at Convention. Item entered in Federal policy book.

Item 19: Published August and September "Amateur Radio" in conformity with Federal Constitution, and forwarded to Divisions for vote. Further action pending.

Item 20 and 20a: Original amendments ratified by Divisions. Subsequent amendments drafted in and final draft forwarded to all Divisions for vote. As at this date VK3, VK4, VK5 and VK7 accepted; VK6 partial acceptance; VK2 pending result of members' vote. Further action pending.

Item 21: Item lapsed for want of seconder.

Item 22: Item withdrawn by Queensland delegate.

Item 23: Item withdrawn by Queensland delegate.

Item 24: Matter clarified at Convention. Divisions requested to continue with reports. Further action pending.

Item 25: Request refused by P.M.G.'s Department. Main reason given to be representation from National Committee for Protection of Citizens Rights during war years.

Item 26: Immediate agreement refused, but the Department agreed to obtain details of New Zealand system and discuss the matter further. Action pending.

Item 27: Sub-Committee co-opted from Queensland Division. Further suggestions forwarded from F.E. Action pending.

Item 28: Motion lost.

Item 29: Matter discussed at Convention.

Item 30: Draft prepared. Further action pending financial position improving. Amendment to rules delayed until new form in publication.

Item 31: Motion lapsed for want of seconder.

Item 32 and 33: New South Wales Division Contest Committee co-opted to function as Federal Contest Committee for the year 1951-52. Committee functioned and conducted contests.

Items 34, 35 and 36: Withdrawn by delegates.

Item 37: Federal Contest Committee advised. Motion later rescinded by vote of Federal Council in favour of scoring system used by the A.R.R.L.

Item 37: Attached to minutes of Convention as per the motion.

Item 38: Entered in Federal policy book and Divisions notified accordingly. Federal Contest Committee advised and rules of contests changed to incorporate where applicable.

Item 39: Discussed at Convention.

Item 40: Printed and forwarded to all Divisions for use in 1951 R.D. Contest. Divisions charged on per capita basis to defray cost. Further action pending financial position. Entered in Federal policy book and Divisions notified accordingly.

Item 41: Federal Contest Committee advised and R.D. Contest rules amended to incorporate.

Items 42 and 43: Withdrawn by delegates.

Item 44: Original motion withdrawn as written as per the minutes of the Convention. Necessary equipment purchased and Divisions notified.

G.B. Item 1a and 1a: Items discussed at Convention. Item 1a entered in Federal policy book. Meetings held with R.A.A.F. Headquarters. Arrangements made for R.A.A.F. personnel to speak at Divisional meetings, etc.

G.B. Item 2: Meetings held with Taxation authorities. Representations made to Canberra. Matter addressed in editorial. Further action pending.

G.B. Item 3: Entered in Federal policy book.

G.B. Item 4: Clarified at Convention.

G.B. Item 5: Published in August and September "Amateur Radio" in conformity with Federal Constitution, and forwarded to Divisions for vote. Further action pending.

G.B. Item 6: Item withdrawn by delegate.

G.B. Item 7: P.M.G. would not accept unless cards were a "post-ard" as classified by the Department. "73 and best wishes" followed by signature of sender constitutes a letter-card. Matter difficult. Further action pending.

G.B. Item 8: Department would not agree for reasons given last year.

G.B. Item 9: Equipment purchased and Divisions notified.

W.I.A. ACTIVITIES CALENDAR

- Feb. 1-3 and 15-17: C.W. Section of 18th A.R.E.L. International DX Comp.
- Feb. 15: Convention motions from Divisions due in to F.E.
- Feb. 26: Convention per capita due with F.E.; end of fiscal year of Divisions.
- Feb. 29-Mar. 2 and Mar. 14-16: Phone Section of 18th A.R.E.L. International DX Comp.

FEDERAL VICE-PRESIDENT VISITING NEW ZEALAND

Federal Vice-President Gordon Weynton, VK3XU, expects to be on a business trip to New Zealand by the time this goes to press. This is an admirable occasion for an Officer of the W.I.A. to pay a goodwill visit to our neighboring ZL Amateurs and Gordon has signified his willingness to carry with him a letter of introduction to the N.Z.A.R.T. with which he hopes to have the opportunity of officially and personally conveying the good wishes of the members of the W.I.A.

FEDERAL QSL BUREAU

RAY JONES, VK9RJ, MANAGER

Snow Harrison, VK3CN, ex-VK7CH, has at long last shaken the dust of Victoria from his shoes and returned to his native Isle. Seems like yesterday that Snow first came to Shepparton but he assures me it is 17 years back. He anticipates no trouble in securing his old VK7 call sign, but just when he will get back on the air is a little obscure at present.

A budget of news from Ron Mould, VK9FM, now at Madang, T.N.G., was received just a day too late to include in the January issue notes. Ron expected to get on from his new QTH around Xmas time with a 7e-built rig: 6AG7 Pierce osc., 6L6 doubler, 6L6 doubler buffer, into 829 final. Modulated 807s AB2 with volume compression; antenna, long wire (four wavelengths) on 14200. Plans to use 14, 28 and 54 Mc. Says "What with re-building, and newly married for six months, have been flat out" (Aptly put Ron). States there are two other Hams in Madang—VK9RC Ron Chugg, 32 years in the Territory and the first VK9 Ham, and at time of writing (November) was on a long well-earned holiday in Melbourne. Other Ham is Carl Spears, an American with the Lutheran Mission who also is using an 829 in the final. Ron is very fortunate in that his XYL is genuinely interested in Ham Radio.

The A.R.A. of Las Villas (Cuba) again draws attention to the "Worked Cuba Award." Details of this diploma were published in a past issue and briefly requires a contact with a station in seven of the eight radio districts of Cuba. Further details may be had from this Bureau.

Felix Franchette, FK8A, expects to leave Noumea for holidays in France towards the end of February. He has asked for a license in France so that he may continue to contact his many VK friends. At the expiration of his 12 months furlough, there is a possibility he may gain return to New Caledonia.

During the latter portion of 1950 an Eastern State QSL Bureau erroneously sent 170 cards for VK6 to the R.S.G.B. They were returned to the Federal Bureau in November, 1951, and went forward to their correct destination on the day they came back from England. This may explain to any VK6 station who notices the unusual delay on the cards. However, just to prove that all bureaux make mistakes, the R.S.G.B. included with the return of the above cards, some 65 cards from G stations to Russian addresses!!

F18KVA, Lionel, gives a QSL address with a request for cards to be placed in a plain envelope and any reference to his call sign omitted. This address may be had on application to the QSL Manager. If the old fox down Parkdale way really desires a card from F18, he should contact F18KVA in preference to the numerous bogdies he has fallen for in the past.

It is reported that examinations were conducted in Japan during the latter half of 1951 for the purpose of preparing to re-issue Amateur licences during 1952.

Diploma of the Provinces of France (D.P.F.). This new award has recently been made available by the R.E.F. and is open to every licensed Amateur regardless of affiliation with an organisation associated with the I.A.R.U. The rules as fully translated by Felix, FK8AC, are as follows:—

(1) The D.P.F. is available for contacts made since January 1, 1951. Separate certificates being awarded for c.w. and phone. Any or all of the Amateur bands may be used. For frequency bands 28 Mc. and higher exclusively, either phone or c.w. can be employed. The same stations may claim both certificates.

(2) Eligibility for the award is obtained by producing confirmations of contact with 16 of the 17 French provinces listed hereunder:—

(3) All claims for the award must be made direct to the R.E.F., using the address R.E.F., D.P.F., 72 rue Mareau, Montreuil sous Bois (Seine), France, and must include a letter of application and the sixteen QSL cards required, together with sufficient postage (by means of International Reply Coupons) to finance the return of the QSLs together with the certificate. If sufficient postage is enclosed these documents will be returned by registered post.

The 17 provinces are: Nord, Hiedcirance, Normandie, Bretagne, Touraine, Champagne, Bourgogne, Alsacelorraine, Franche-comte, Alpes, Languedoc, Provence, Auvergne, Poitou, Gascogne, Corse, Villedeparis.

Clarification of any point not shown above may be had from this Bureau.

NEW SOUTH WALES

The Christmas meeting of the N.S.W. Division of the W.I.A. was held at Science House on Friday, 21st Dec., with the President (John Moyle) occupying the chair. It was preceded by a special meeting convened for the purpose of declaring the ballot adopting the new uniform constitution. There were only five dissentient votes, and as the other States had already adopted it, the new constitution will now become law throughout the Institute.

After the President's monthly round-up of doings and events, a last opportunity of submitting agenda items for the Federal Convention was availed of by a couple of members.

A recording of Christmas messages from members of Federal Executive was then played (most of it, that is), followed by a microgroove recording of an Amateur contact which had been "got at" and amusingly doctored with suitable (or unsuitable) insertions.

The main business of the meeting was a full length feature film which was enjoyed by the members. A special Christmas feature was superimposed over which a good Ham get-together was had.

Here's hoping that everyone will have had a good time at the 1952 Harvest which will be over by the time this goes into print.

For those interested in working a new country (we hope!) Dr. Rob Black (VK2QZ) has now postponed his departure for the Trobriand Islands until February. He will be taking low power portable equipment and intends, I believe, to work mostly on 7 Mc.

NORTH COAST AND TABLELANDS

As usual we commence the zone notes with a motor accident. Jack ZADN, whilst travelling to Southport recently, quelled a couple of fires in the car—we know you go fast Jack but that's a bit hot—welcome to a new Amateur, Merv Finlay, VK2AID, who hails from Tamworth; he can be heard consulting with local Syd ZAPS. Another prospective call will be heard from Port Macquarie, the owner Arthur Monck—it should arrive soon; welcome to the N.C. gang Arthur. Geoff Bailey, of 2VJ, recently spent a busman's holiday in Kempsey—he called CQ DX from 2AHH's but all he could raise was 2AHA from his home town, Newcastle. Ken ZAPB had an 1800 mile motor trip down the Pacific Highway and returned via New England. Ken visited a few of the gang on the Blue Mountains and had a very pleasant spell from watching DC3s ploughing through his antenna farm at Coff's Harbour.

Peter 2PA used to tell of the DX he worked on his three element beam on 28 Mc., but since a recent storm he tells of his two element job! Peter's mother and wife are both in hospital and we all wish them a speedy recovery. Allan ZACC spent a caravan holiday at Urunga recently, we hope he can repeat it at Easter time. Another Allan, ZASO, visited the big smoke recently, but like the rest of us from the bush was glad to retire from the "bun rush." Quite a few of the N.C. gang are active on 50 Mc., Crief ZXO and Norm ZRK are the latest exponents. Syd ZAPS complete with family was on the North Coast and the gang were pleased to see him. Unfortunately I was out when Tom 4PD called in from Brisbane.

All being well, 2AHH will operate portable during the holidays and hopes to work many of the gang. Wedding bells I understand will be tolling for Ken ZAPB and Audrey about next June, so now's the time to give him the usual advice chaps. Doug ZSH burned up rolls of film in his new camera when he visited Kempsey and your scribe's place. Even photographed the family and the rig. Hope you and your Dad had a pleasant stay Doug. 2AHH will be on holidays in January so here is hoping I contact you.

HUNTER BRANCH

As everyone knows the Xmas Social was a huge success. On behalf of the boys and their families may I just say how grateful we all

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.

are to the committee, their XYIs and all who worked so hard. It was a grand effort and they must have been gratified with the result.

A recent visitor to local shacks was 2AHI of Casino; Ron on holidays at Stockton. Some of the holidaymakers are operating portable on 40 mx. 2AHA putting out beautiful sig with his transceiver from Port Stephens; Harold had visit from ZANA and Norm took some "807s" along for testing—whacko! Secretary ZSF has joined forces with ZAGD for tour of North Coast using Varleys c/s and George's two stage 6V6 rig. Jim ZCC made his camp at Forster and besides catching fish, rag chews on 40. ZUY returned from holidays, but didn't have any portable gear away with him. Geoff ZVJ missed out on Hobart Yacht Race through no fault of his—bad luck OM. ZAWD at Xmas Party but Arch has his rig on ice.

ZLV couldn't make it at last moment, better luck next time Harold. ZXT had few QSOs over Xmas despite QRL with business. Bill ZAXM has the new modulator using 6L6s perking on 20. ZYS has changed his final 807s from push-pull to parallel and Norm had some fun(?) when faulty by-pass blew power supply—awfuling new tranny. ZWU doing some beam and rig maintenance over holidays. ZZZ very quiet of late—Tom made Xmas Party though. ZKG enjoyed first QSO for 20 years when Ken did holiday tour of N.C. using borrowed portable (2AHA's). ZAAI has nice phone again and Ron now using Command as v.f.o. ZAAAM giving lecture at Aero Club; give us some good publicity Merv! Doug ZADS was one of the first to work VK6 on 6 mx; nice work OM! ZBZ enjoying holidays after which Dave plans some shack work. ZTE has new home well under way; Bert says QTH will be super for DX.

New Hams in Hunter are ZRC of Denman and ZJE of New Lambton. Hope to hear you two chaps soon. Edgar ZMR enjoyed recent QSO with ZNS as they both held AO call signs. Bill ZWF hasn't got rig perking from Lakeside QTH yet. At Williamsown, ZLP has started building modulator so won't be long 'ere Len on phone. His neighbour, our worthy Vice-President, ZAFS, has begun re-assembling his beam for 10 mx. This will be good news for Bob's sparring partner Ernie ZFP who has been holding the fort. Although still doing well on 40, Harry ZAF has an eagle eye on 20. "Santa" ZDS is helping Phil ZANG with a 3 element c.s. beam for 10, and Johnny is thinking of a 2 element w.s. for himself. ZPT may try cathode modulation; Allan also has car radio under construction. ZAMM and family are holidaying at Nelson Bay. Bill ZMC would like the locals to come back on 144. No standing wave ratios OM. Some nice 40 mx phone from ZCN over holiday period—good show Bert. Pleased to report ZKY active; Neil helped Mac ZARK get his TA12 going and it's putting out an i.b. sig on 30, 40, 20. Very pleased to be on again. Neil completed conversion of his own TA12 too.

Grateful to ZXQ for sending me Maitland news and thanks to ZDG for supply same. John active only for skeeds but thinking of trying once again. Keith came on 20 on Xmas Eve and worked two new countries. EAOAB Spanish Guinea and MP4BBD who is the only Ham on Bahrent Island in Persian Gulf. Nice Xmas present! Co. ZVO active on 40 and very happy with new Rx. All pleased that this competent c.w. old-timer on again. ZANL not heard on lower freq. bands; Joe probably chasing DX on 6. ZPJ more active lately with nice phone and c.w. on 40. Bill plans a new freq. meter. ZIS having spell; Ivan recuperating from Xmas emission testing by playing recorded music—soothing type!

Notice of Meeting.—The March meeting will be held on Friday, 14th, so roll up and have an enjoyable evening. If you have a young clobber interested in radio, bring him along too.

COALFIELDS AND LAKES

The holiday season has taken its toll on Ham activity in the zone, so it seems that everyone is enjoying the break. Ken ZANU took advantage of some good temperature inversion to work through to Sydney and Sutherland on 144 Mc.—nice going. Geoff ZVU is trying to get enough time at home to complete some of the many building projects and also to work some DX on 4x. Harry ZVI came out of hiding and found the rig would still work—nice to hear your signals again. Jack ZADT holidaying at Urunga and working portable on a Type A when fishing permits. The Kurri boys ZKF and ZKZ hold the fort on 10. Further south ZRU is doing his best not to miss anything on 6—he worked ZJC on that band. ZARV on 40 at week-ends from home and has a portable at work during the week. Most of the gang managed to get down to Newcastle for the Xmas party and all had a thoroughly enjoyable time. Congratulations to the organisers of such a successful function.

SOUTH COAST AND SOUTHERN

During this month we have had a few visitors through the village. Jeff 2BQ, who had been on holidays at Narooma, stopped to say hello and yarn about Ham Radio. 2BQ/P was active from the seaside and made many contacts. Peter 2APP also called and had a contact with 2BQ. The car developed a fault and Peter and John had to spend a night at Mittagong. Rod 2ACU was next visitor, he and his family and mother stopped overnight at Yass before moving on to Adelaide. Cecil 2ALS has been away in Sydney and spent nearly two weeks at Manly. Except for a brief visit to 2WF surfing was the main attraction. Ron 2PM has plenty of gear in working condition and the grid dip osc. is quite a nice and effective piece of gear. Recently constructed an 815 final but the 144 Mc. beam appears to have seen better days.

Les 2PI is putting out a fine signal, we understand that one of his eyes is becoming affected from the shock of 10,000 volts he received some time ago. We all hope the effects are only of a temporary nature. 2TV and 2ASB both have been active on 40 and Bob 2TV is building some 144 gear. No doubt another beam will be on the top of the 10 mx job. 2AEL Les certainly puts out a nice signal, it's very effective when the band is noisy. 2RS and 2RM have not been so active of late, although 2RS seems always to be working VK3 stations.

Down the South Coast 2DY, 2AMW and 2ASF active, 2AUB occasionally heard on 40. Lindsay 2ON has packed up to Dapto and left for England where he will do a two-year course—Ham Radio we believe is out until his return—the best of luck Lindsay.

VICTORIA

SOUTH WESTERN ZONE

Things have been pretty quiet this month on the air and as far as I'm concerned, in occupation, extremely busy. Having made my excuses for the absence of S.W. Zone news in January issue and for the scarcity in this, I shall endeavour now to piece together a few lines for the second magazine in 1952. The only time I have heard 3HG this month was on the only zone hook-up which I was able to participate; Neil has been flat out on seasonal farm operations—seems quite happy with the a.c. on the rig. 3AGD and 3II pretty quiet of late and

not much to report this month from Dunkeld. Nothing heard from Warrnambool area nor from Colac. 3ADN made a brief appearance on 80 on New Year's eve and wished the zone a happy and prosperous New Year.

3ASU and family spent their annual vacation at Wye River surfing and fishing; hope there wasn't too many "dumpers" Jack. I did hear that 3HW was going down there too. What's this I hear about YL trouble Johnny? 3IQ, of Ararat, has been on the air a little lately and by all accounts had a whale of a time on the round Australia by car trip last year. Kevin is talking about crocodile shooting on the Gulf of Carpentaria this year—might be with him too. Incidentally, 3AKR's New Year resolution for 1952 is for better and more consistent zone news, hl. 73 and the best for 1952 chaps.

NORTH EASTERN ZONE

3ALE has a new beam motor working, a new antenna to go up as soon as he can get away from the gardening. 3IJ still trying to get poles up along with 3CI who has 10 and 6 mx beams to erect. Looks like the gang, 3APF, 3UI, and 3JC, will have to go a touring and help the boys 3IZ playing with 6 mx converter in between contacts. 3IJ enjoying himself immensely on 8 mx one evening. 3KR has another convert to the ranks, best wishes Rex.

Zone hook-up conditions not so good, 3IZ heard VK9 on 6 mx, didn't think anything of it. How could you Peter, the only one on 6 mx in existence so I'm told. 3KR's Rx on the blink, hope you found the fault Ken. Howard 3YV still managing to get out for a few QSOs every Saturday and Sunday. Howard has "Radio," "CQ," and "QST" magazines, yours for the asking if there is any left. 3AT looked in on hook-up for a few minutes, Alec has been working them on 6 mx.

3UI had a visitor from VK5. 3JC still managing a little DX. 3FD now on phase, enough said. Andy how could you? 3DW, ex-zone member, is now working 2 mx I hear. 3JK also on 6 and 2 mx. 3IJ and 3JC visited 3UI for Xmas evening, many broached 807s were left in the wake of a very pleasant evening. 3CI working very hard at a back-to-Nagambie week, finished up in bed.

EASTERN ZONE

Well, well, it's happened at last, 3AHK has gone walkabout and left his poor old assistant

to do the notes. Not a great deal to report this month, however will see what we can do. 3PR working on a new rig, looking forward to hearing it in action Ron. 3ALA hasn't got that modulator finished yet, when is it going to be finished Ted? The 2001? Speaking of the year 2001, 3AHK has been talking about a new rig for a long time now.

Good roll ups on 3650 Kc. lately, keep it up boys. 3WE complaining about poor numbers on the emergency network these days. Go to it chaps, 10.30 a.m. Sunday, most important at this time of the year you know. Happy to report that Mrs. 3WE is well and strong once again. 3SS on 20 mx for the first time since 1938, good on you David, show Dad how to get that DX. 3QZ getting very interested in mobile antennae, it won't be long now.

3IZ and associate John Batterick on seven weeks' holiday, you lucky people! 3TH a big-game hunter these days since the flying foxes invaded his orchard. 3AHK still complaining about being overworked. 3ABF working on his radio-controlled aircraft, what about cranking the rig up again Arthur. 3AGF going to VK4. I think he must be trying to get away from the b.c.l., might find plenty of QRN though. 3ANC working on his rig, stick to it Norm, we want to hear you again, soon. 3DI working VK6 on 6 mx, nice work Jim. Glad to hear you back on 3650 Kc. again, what about the rest of the 8 mx gang now.

The Sale Radio Club held a most enjoyable Xmas meeting at the home of 3AHK. Hams and associates travelled up to 80 miles to be present, and believe you me, it was worth it. Bill 3TY gave a most interesting talk on antennae and answered many questions on the subject. Incidentally Bill had his 9000th contact during the month. After Bill's talk there were refreshments, to cheer the inner-man, including a magnificent Xmas cake prepared by Mrs. 3SS. Well so long for now, we'll have Ossie back next month—I hope!

CENTRAL WESTERN ZONE

A Christmas visitor to the zone was pre-war 3TK, of Rupanyup (now 2FK). Tom is back into civilian life now and mainly interested in 144 and 50 Mc. (says you can at least have a decent yarn there). While in Stawell he ran a 144 Mc. test from Big Hill in an endeavour to contact Melbourne, n.g. that way, but he

Received 100% p.c. O.K. except name and report... WELL!!!

(That's probably all he told you anyway)

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was a good S7 in Horsham (about 40 miles to the N.W.).

A new call to the zone is 3RR. Dick is now located in Horsham (for life we hope) and is putting out a nice signal on 7 Mc. and of course will still maintain his activity on the v.h.f. bands, maybe 144 will get another lease of life in the zone, maybe who knows. 3ARM has been heard on and off on 7 Mc. of late. last heard Bob seemed to be having more trouble than usual with his modulators.

3HL is glad he is busy with the harvest as 14 Mc. is practically dead out his way in any case. 3TL is not satisfied with his antenna on 7 Mc. and is thinking seriously of a non-resonant, terminated folded dipole, which has a frequency range of 5-1 (your sig here in Stawell is still only S9 plus Byron). 3AKP is still too busy putting up cupboards and chasing faults in the local electric supply to get on the air (thank goodness). 3DP, of course, is gathering in the golden grain and hence is not very active at present. 3YW has been having a lesson in shirt selectivity and as a result the large and ancient Kx is not regarded so highly as it was a few weeks ago.

By the time these notes are printed the zone and National Field Day will be over and your Secretary is looking forward to showers of zone logs to check, don't forget to read the log requirements carefully before sending them in, and don't forget to make two copies, one for the National Field Day and the other for the Zone Contest.

GEELONG AMATEUR RADIO CLUB

The above club recently had a fine lecture given by John 3SW, who chose for his subject "Radio aid to navigation" including Loran and Radar. This lecture lasted 2½ hours, during which John used the blackboard extensively. On the following Sunday the club organised for its members a Tx hunt. The weather proved very wet on this occasion, however there were five starters ready to take part. 3SY and 3ALG had to pull out of the hunt because of a breakdown in their Rx four miles from the hidden Tx—this trouble was later repaired. First to arrive was Ed Kossack and party. The Tx was hidden approx. 18 miles from Geelong by 3AJF and J. Beckingham; the club's call 3ATL was used. During the afternoon the Tx was again hidden, this time it was located first by 3SW with Bill Ackfield a passenger. 3SY and 3ALG arrived four minutes later.

On 19th Dec. the club held its Annual Xmas Break-up when members entertained their wives, families, and friends to a Picture Night. These films were obtained from the Regional Film Council. Afterwards a nice supper was served, buffet style, which was enjoyed by all.

QUEENSLAND

CLARE'S CORNER

Having just finished reading last month's "A.R." I see that Clive has mentioned the departure of Jack 4WJ to Quilpie, so I would like to add my little bit. Jack's pleasant manner and courtesy on the air at all times has been an example we could all follow, and will be looking forward to hearing him from his new QTH. Best of luck to you Jack, your XYL and Judith. Jack's late job of President is in the capable hands of Vince Jepp 4VJ. Best of luck Vince.

4TT is back on the air again after a long absence. Nice to hear that Scotch accent again Tom. A quick visit to the city for a few days was made by 4EL. I bet you had a busy time Eric. 4DN has been trying out a new beam lately; hope it works OK Phil. 3ASD, of Laverton, is looking forward to becoming a VK4. The only thing stopping Snow is the accommodation problem. Any suggestions? It doesn't matter if there is no room for his radio equipment or antenna, hi!

4PD and XYL leaving behind the Queensland sunshine and going on a motoring holiday down south. Tom has quite a list of Hams to look up, and should have a wonderful time. 4YA is also going on holidays, and will be staying with his old friend 3ND, at Castlemaine; hope when you come back you'll feel 100 per cent. Bill.

Even though these notes will be out after Xmas, I'd like to wish you all a very merry Xmas and a happy new year, and may your brightest day of 1951 be your dullest day of 1952. My new year resolution is to get these notes into Clive early, as I know he's always on edge wondering if they are coming or not.

SOUTH AUSTRALIA

The month of December was a big time month for the VK5 Division, a Xmas Social and a General Meeting all in the one month. What excitement, what late hours, what dissipation,

what a lot of rot I write. Anyway the Xmas Social was another success and full credit must be given to those who organised it, particularly to Ross 5LW who not only arranged all the items for the members' entertainment, but acted as compere for the night. When I say that Ross was his usual genial self, I think that I have fully described his antics for the night, and the fact that the night went with such a swing was entirely due to his efforts.

With his usual Machiavellian cunning, the President, "Doc" 5MD, contrived to spend the night confined to a sick bed, thus putting his Vice-President in the position of Acting Chairman, with its obvious headaches.

We decided to make things as confusing as we could with our guests of honour, to wit, Mr. K. Burbury, who is the Chief Inspector (Wireless), represented the I.R.E.; Mr. M. Brown (SMB), represented the Radio Inspectors; Mr. D. Gooding, who is the Chief Engineer of broadcasting station 5AD (boo-boo-hiss-hiss), also represented the I.R.E., and last but certainly not least, Mr. G. Barber, who is the Chief Engineer of the best broadcasting station in the State, 5DN (cheers, cheers, prolonged cannon fire, and general pandemonium), who was a welcome guest because of past favours, and future ones too, we hope!

The toast of the King was proposed by the Acting Chairman, who could just be discerned behind a mountain of sandwiches and cake, plus a few glasses of that he-man's drink, lemon water. The visitors' toast was ably proposed by the Past-President, Hal 5AW, and Mr. Burbury replied on behalf of all the visitors. Mr. Burbury in his remarks, stressed the cordial relations that have always existed between the Wireless Branch and the VK5 boys, and also pointed out that the Wireless Branch could only see that the regulations were carried out, and could not be expected to give any Ham permission to break any regulation, any more than a burglar could expect to get permission from the police to break in to any building. Think that one over, you jokers and you will get the point. Mr. Burbury's remarks were well received, and no one will dispute his obvious sincerity. Gordon 5XU proposed the toast of the W.I.A., and the Acting Chairman responded to the best of his somewhat doubtful ability.

The evening came to a conclusion with a re-play of the wire recording which Federal Executive had forwarded to us, with special emphasis on the farewell remarks of Mr. Martin. Everybody seemed to enjoy themselves, and our thanks are due to Max 5GF for his usual generosity in installing the p.a. system, to Jack 5JZ for the presentation of the three tier cake with a perfect replica of a three element beam on the top, and finally to the ladies (bless 'em) who cheerfully came out in the afternoon heat and tastefully decorated the hall with all those beautiful blooms on the walls and the tables. All in all a very successful night was had by all, and also a tangible proof that it is possible to hold a Xmas Social without half of the members present collapsing under the table half way through the night.

The monthly general meeting was held in the Physics Laboratory of Prince Alfred College where Gordon 5XU, who is the Physics Master at the College, was the lecturer for the night. Unfortunately I was some 200 miles away at the time and therefore cannot report to any great length on this meeting. I believe that Hal 5AW acted as Chairman of the meeting, in the absence of "Doc" who is still far from well. I have been told by a number of those present that the lecture was a something out of the box, in fact I was told that even a "dilpoot" like myself would have been able to follow Gordon's lecture on "Aerials and Transmission Lines," and I was also given to understand that quite a few of the boys are kicking themselves that they did not come along. Nice work Gerty! Whoops. [Methinks the Sub-Editor should obtain the script of such lectures, they could form the basis of an excellent article for the magazine—Editor.]

"Doc" 5MD, our President, is still far from well, in fact at the moment of writing there is some talk of hospital, but we all hope that this is not necessary. Whilst I would not suggest that the long service he has given to the VK5 Division is responsible for his illness, I cannot fail to point out that there has been many a time that he could have relaxed at ease instead of concentrating on the work of his Division. His many years of Secretaryship of the Division entailed a lot of correspondence and we all know what that means, and it has always been his proud boast that he personally answered any letter that he received, no matter how late it kept him up at night. They don't come any better, although now I come to think of it, he never wrote me a letter!

That salute that Dougal 5BY gave me as he walked down between the tables at the Social almost caused me to lose my balance at the head of the table, although the precision with which he executed it showed much practice.

SFD has little to report this month, but from private information I am led to believe that John will be having a busy time in a few years or so if his daughter continues to develop in looks in the same manner that she has in the past few months. Even the "junior op" of 5CJ could not resist a second look in the side of the crib at John's daughter the other day. 5KU has gone fishing, down at the coast for three weeks' leave; could it be that Erg is waiting for another wreck? 5MS has a new h.t. transformer, so Stuart should be bigger and better than ever in the new year; at present he is in Melbourne on a couple of weeks' holiday, walking from one disposal shop to another I suppose. 5CH has gone bush for a while, the noise evidently got the better of him, and now Claude is now away from it all, including the a.c. mains; he has obtained a 108 so we may hear him on 40 mx and he is going to try to get his 2 mx gear going off a motor generator, which is all somewhat ironical as he is still manufacturing ergs for everybody else as fast as he can go, but cannot get any for himself; has Ripley heard about this?

5JA has settled down after his trip to the Old Country, and I have heard that he has been discussing housing designs and pastel shades for walls, etc., looks bad to me, but John manages to keep his 2 mx skeeds. 5TW is still fairly quiet but is putting all of his "spare" time into his 2 mx gear and it is hoped that Tom will be heard on that band early in the New Year. 5CJ, aside from his skeeds on 40 and 2 mx has little to report; his harmonic, Bruce, dropped one of his best bottles, in fact the only bottle of Xmas cheer that the Ferguson household possessed, therefore a deep gloom rests upon all. 5XU, our genial but thrifty Secretary, whose motto is a six-penny piece rampant over a halfpenny, with the words, "every mickle makes a muckle," or something, is going to step into a relief shift at the best broadcasting station in the State, in the near future; he is one fellow who is going to eat his words, after he has been with us for three weeks, he will eat, drink, and sleep 5DN or we will know the reason why!

By now everybody knows that Joe McAllister has passed his exam and is a fully fledged Amateur, but I wonder just how many can realise just what it means to Joe. When one thinks of the VK5 Division, one automatically thinks of Joe, because nobody has done more for the Division, in a practical manner, than he has. Although only an associate member, he was granted life membership years ago in appreciation of his work for the Division, and his living ambition was to have his own call sign. He tried for years and years, but always seemed to trip up somewhere or other, and was fast approaching the conviction that he would never be able to sit for an exam. The late "Pop" Sheard took him in hand and with his well known brand of psychological approach to the Morse key, soon had Joe ready for an exam. John 5UL then stepped in and swore "that by hook or by crook" he would ram the theory into Joe and make it stick. The rest of the story you all know, and with Joe taking his place on the Council, not as a co-opted member, but as a full member, the curtain can now fall. However, one side of the story has still to be told. The dogged persistence displayed by Joe will be the means of several other associate members having a shot at the ticket, which is all to the good, and also the question must be asked, "if VK5 carried no associate members, would Joe have ever been able to secure that coveted ticket." VK6 please note!

5KW left the hospital for Xmas week at home and is loud in his praise for the Type 2 Mark III, which he uses at his bedside at the hospital. Harry also is a bit overcome with the Ham spirit which apparently exists around the Murray District, because the boys up there (5MA, 5BC, 5SL, 5WM and 5CF) all rallied round and played the part of Father Xmas and made sure that the harmonics of Harry had their share of toys. Nice work fellows.

5BC only does two things these days, either he is on 50 Mc. or asleep, and is doing a good job in the Ross Hul Memorial Contest. SSL has returned from his annual holidays, a fortnight in the city and the rest on a farm out in the Murray Mallee, fit and well. One thing, he has apparently been too busy to write to me this month, and I am indebted to Fred 5MA for these doings. 5MA, from the tone of his letter to Hal 5AW, has been spending most of his time on the v.h.f.'s, and as I cannot write anything about the v.h.f. doings without treading on the corns of Clarrie 5KL, that is all about Fred for this month. I understand that Frank 5LX has been sailing around Kangaroo Island way over the Xmas season and reports good fishing.

As is common with all things in the world today, members of the VK5 Division this month have to decide just how much they are prepared to pay in fees for the coming year. Every-

body realises that with rising costs of everything an increase in fees is unavoidable, they also realise that the Council strive to keep expenses down to a minimum, and also that the full members carry the associate members, which is all to the good because in time the associates become full members and then do their share towards carrying the younger members, but any increase is at best not very palatable to us all. However the next meeting should tell the story, although whatever the increase the VK6 Division will have its nose to the grindstone for some time to come. Unfortunately we have no "milkling cow" to go to when we need any finance!

WESTERN AUSTRALIA

Owing to the need for January's notes to leave VK6 earlier than usual, there seems a lot to catch up on in my little "scandal book." First, a welcome to Norm 6LT, of Albany, who made his first 7 Mc. appearance on the weekend, Nov. 24-25. He uses a TA12D and is also interested in 50 Mc. work. Nice to hear you on, Norm! During late November, Lou 6LU decided the gee-gees weren't what they used to be and, far from winning him an occasional 807, wouldn't even buy him smokes. However, I am happy to report that Lou has now given up giving up smokes! Someone in the house left some "weed" lying around where the OM was sure to find it—and he did!

Nice to hear 6MG on now and again; heard you working 6AS recently Mac, but where was Alec? On 14 Mc.—or on a dummy antenna? Not audible in Geraldton. By the way, Alec, I'd like a short essay from you on what it feels like to leave a.c. and go and live in a d.c. town. If your feelings were anything like mine when I made a similar move, please type your essay on asbestos paper and have the XYL censor it before forwarding—remember, all my readers are "refrained" young gentlemen!

6MB has been heard at odd intervals during recent month and gets out well on 7 Mc. with low power to a Type A Mk. II. Since I took over the writing of these notes there hasn't been one postcard, Russian s.w.f. card, letter, cablegram, or other communication from any VK6—so my only source of copy has been the 7 Mc. band. One bloke, however, had a QSO with me one night per kind favour of George Rex. There was I trying to keep the b.c.l.s. happy when the studio phone rang and it turned out to be trunks with a call from Telegraphs Office, Perth; subject, one weather telegram. That sort of thing is common enough but the voice that reads the doings to me is usually that of a charming young female—this time it was a man's voice and it seemed to ring a bell—and I was right—it WAS Eric 6RB. Tells me he has a new house and included in the plans is one only shack in the backyard. Eric should be on again ere this is read. Eric's cobbler, Barry 6BR, is another who, like 6AS, has traded the big city and its a.c. for a country town and its d.c. Barry, however, has slipped one step further in degradation—he's given up telegraph operating in favour of working at my opposition. Barry, old son, the technical equipment (excluding the stand-by Rx) may be tops—but—boy, those programmes! Hope you have the gear assembled and working in Geraldton by the time this is printed.

Ted 6WH has discovered something to make the technical giants of our day and age turn green with envy. He has "hotted up" his Rx without changing valve types, without slugged circuits, and without altering one wire—he uses a primus. Ted, that fluid that oozes out isn't wax—it's that mysterious stuff called DX.

64 Dollar Question: Which VK6 has, as his theme-song, "Kiss Me Again?"

Strictly Ripley: 6AG wants to hear those 7 Mc. broadcasting stations a little better so he has aimed a vee beam at them—five wavelengths in each leg! 6FW, having taken the temper out of the bed springs with r.f. and having also (it is rumoured) melted the XYL's clothes line with the same commodity, has at last turned orthodox and is now using a transmitting antenna.

Biggest Flop of 1951: Country-versus-City QSO Day, Dec. 9. Somebody had blundered!

Institute Doings: At the December meeting 6HL and 6GH gave a most interesting and instructive demonstration of the grid dip oscillator at work and showed, among other things, that the theory about a half-wave at resonant frequency presenting a short circuit, was right for they inserted a half-wave of co-ax in an absorption wavemeter circuit and demonstrated that it didn't alter the setting of said wavemeter when cut for exact frequency. One jarring note at the meeting however was the visiting Irishman who said it was all a fake and there was no such leprachaun as Gnome O'Gram.

The January meeting included a lecture by Mr. Hutton, ex U.K., where he worked on

radar and t.v. Mr. Hutton gave a most illuminating talk on modern t.v. Rx design and was closely followed by all present. A suggestion has been put forward that a "Zone 20 Award" be instigated. It seems likely that the idea will be accepted and put into force. A new Advisory Committee will have been formed ere you read this; membership not known at date of writing.

Who was the bright VK6 who tried to talk a lot of chaps into coming on just after the beginning of 1952—and then failed to turn up? All right, all right! My head is hung! 6RT, however, who was in Geraldton at the time, monitored the 7 Mc. band and reported that about six VK6s swapped New Year greetings AND—I repeat—AND, noted among those present was 6WPI! And I wasn't even at home. Wouldn't it?

Finally, a note to all 14, 50 and 144 Mc. biggots who scorn the use of the "old woman's" band. If you're getting sick of reading about other blokes in these notes—you know who is to blame, don't you? If 7 Mc. is beneath your dignity, then a postcard or letter will do; the address is on the title page for Federal and Divisional Notes.

Wise-crack of the Month: Swapping 7 Mc. DX-periences following 6LU's epic with the flock of Gs, 6RS came out with this one: "a whole mob of them, UAs, UBs, and U-so-and-so's." Soviet papers please copy!

TASMANIA

Saw 7KX the other day, busily engaged in procuring equipment for a three element rotary beam which Don hopes will be ready in time to take away, and be used during the National Field Day Contest which was to be held on the 27th of January. Seems strange having a portable three element beam but according to Don this is just the thing and can be easily constructed from ordinary conduit without much effort. Believe 7BH will be accompanying Don so we wish them luck. Another entrant for this Contest will most probably be the Army Signal Radio Club, 7SR, under the watchful eye of 7AL. The only other possible participant from the south will be 7OM using his Type 3 Mark II, which performs very well on 80 and 40. Rather disappointing feature in my opinion is the hours to be worked, which will restrict quite amount of DX that normally could be worked otherwise.

Talking of DX, rather interested to hear the amount being worked from the QTH of 7RX with the aid of the new three element rotary beam. A ZSS was the latest contact which you must agree, especially on phone, is not too bad an effort from this area, so keep up the good work Keith. Listened recently to 7ID arranging skeds for the 144 Mc. band with 7OM and 7LE. "Tiny" has devoted most of his leisure time on this particular band and believe a superhet has been constructed especially for the v.h.f. Heard "Tiny" trying to interest 7RM in the possibilities of this band, so it looks as though Rupe will be the next to migrate from 20 and join the v.h.f. gang.

Two associates, Ray Calvert and Doug Watson, sat for the A.O.C.P. examination during January and we trust both members are successful in their first effort. Believe our old friend Bert Clark has now passed the necessary examination and is now waiting on his call sign, so another signal should be shortly heard. A north western member heard lately with a very solid signal was 7WA who, so far, has concentrated most of his operating to 40 mx. 7BH must be contemplating further additional equipment for the shack as when seen last was collecting quite a parcel of radio equipment, so it seems Brian will be busy for the next week or so. A high quality superhet is the aim of 7FJ who intends building a Rx to end Rx's, so we hope everything works out OK Ted with this venture.

Inactivity from 7LL has been attributed to pressure of work although "Doc" what about spending an hour or so now and again on the band, it's ages since we have heard your signals. 7GB, located in the New Town area, advises he will shortly have a modulator completed and hopes to be on more often in the future. Ted has been active mostly around midnight in the past and believe in that time quite a lot of DX has been worked, the band used being 7 Mc. Much of 7SK's available time is now concentrated on asking for his ever-increasing fleet of cars and trucks which gives little time for radio. Believe another vehicle is expected which will make the fourth and to think all I can afford is a push bike.

In town for a quick visit prior to Xmas was 7EJ who mentioned he should be active in the near future, 20 mx is generally used. Our next lecture is to be given by 7AJ and believe the subject will be to do with tape recording and knowing Athol, should prove interesting. Disappointed to hear from TMY that he intends definitely to give up all activities associated with

Ham Radio and has disposed of most of the radio equipment. It seems the Institute will feel the loss of this member who was very keen on v.h.f. equipment.

NORTHERN TASMANIAN ZONE

Right in the middle of December came the Northern Zone Dinner at W.B.H. and what a roll up of zone members—at first the festive board looked as though New York's "400" had possession, but after the introduction all round by the Zone President 7RK, it was discovered that the following were present: 7RK, 7LZ, 7AM, 7BQ, 7GM, 7TE, 7LK, 7DB, 7RB, 7PF, 7BY, 7XW and Associates Percy Crawford, Rex Summer, Graeme Nicholls, Mark Smith, Jim Crompton and Henry Solomon.

During the evening the Chairman, on behalf of members, presented 7BQ with a writing set for use during his trip abroad. Len responded suitably and again impressed on members the need to get more full members in order that the zone can carry on in the future. When these notes appear, Len will be about half way to Britain.

A welcome back was given to TFF who has returned to civilisation. 7AK, who was on holidays from King Island, was unable to attend the Dinner but he was able to look up some of the Launceston Amateurs before returning to work. Another visitor was 7BH who came up on a job of work to assist the R.I. 7RB kept them up until about 2.45 a.m. so on the next night 7XW let them off early (about 1.30 a.m.) and Brian was sitting for his first class Commercial Certificate the day after. Wouldn't it. And here's another wouldn't it. 7LZ walked out of the shack for a few minutes one night and during that time Percy Crawford, who was also listening on 6 mx., heard a VK6 break through at good strength, so Col missed out on a VK6-VK7 contact.

NORTH WESTERN ZONE

The January meeting was held on the 4th and eight members were present and our President ruled that matters of anatomy should not be brought up at the meeting. The latest arrival on the North West is GISUW and it is hoped that he will become a member of this zone.

The 6 mx band is quite open here now with ZLs coming in strength 8-9 and it is reported that 7AB has already worked 40 stations this season. There is much work in hand for the 2 mx hook-up, such as the best type of gear to use, the best locations and many other problems. It is reported that 7KB is contemplating building a tower for many beams and also believe that 7AI is also building a beam for 10 metres.

HAM ADS

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.

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WANTED.—One only prop-pitch motor in working order. Also one dozen or more 85 Kc. I.F. Transformers out of ARC5 Q5'er Receiver, and two coil boxes, any band. Write Thomas Dick, 29 Dundas St., Wellington, E.5, New Zealand.

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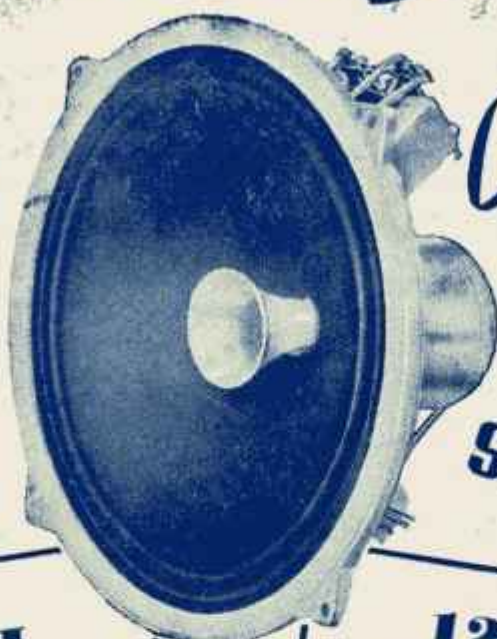
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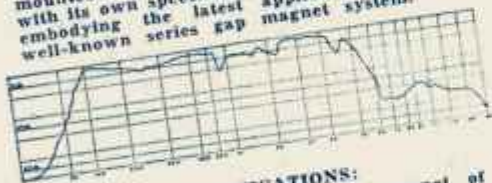
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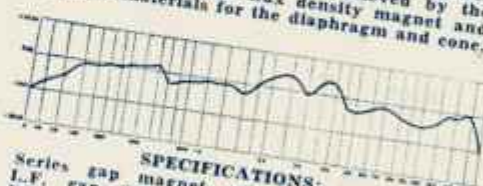


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 H.F. speech coil impedance, 15 ohms at 1,000 c.p.s.
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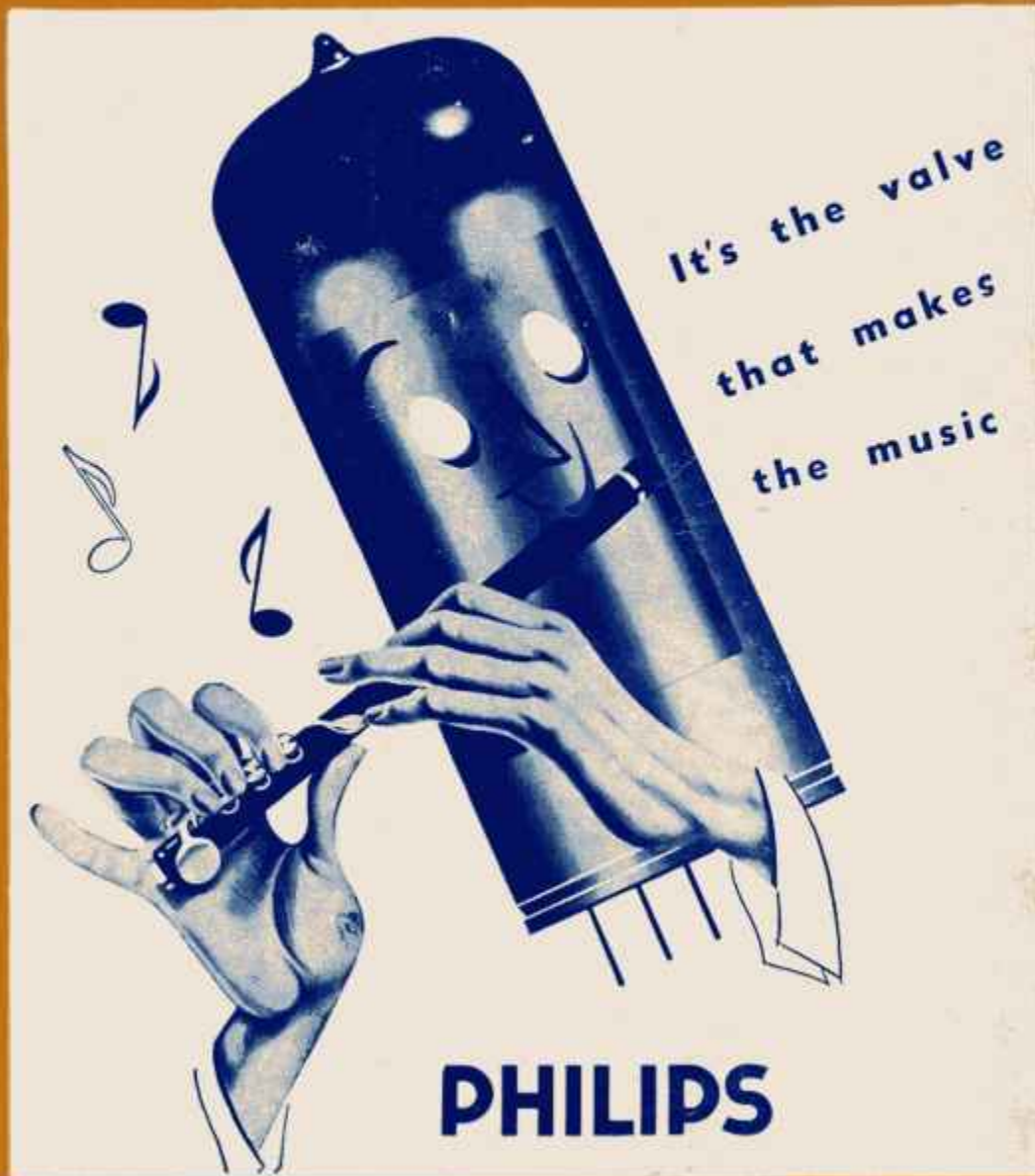
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3517 Kc.	7029 Kc.	8019.5 Kc.	8171 Kc.
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WI BROADCASTS

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.

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VK4WI: Sundays, 0900 hours EST, 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 arrangements only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0830 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7196 Kc. and 146.5 Mc. No frequency checks are available.

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Melbourne, C.1.

EDITORIAL



"Please convey to the Royal Family on behalf of members of Wireless Institute of Australia sincere sympathy on passing of His Majesty King George VI."

These few simple words by cablegram to the Royal Family through the office of the Australian High Commissioner in London expressed the sadness in the hearts of all when the news of His Majesty's passing on the morning of 6th February, 1952, was received in Australia.

To every loyal subject, this news came as a sudden and unexpected shock, although we were all aware of the condition of His Majesty's health which necessitated cancelling his Australian Tour.

By his devotion to his people and Empire, King George VI. set an example that bears no criticism, but will create a niche in the lineage of the British Monarchy which all the future generations of the British race will look back upon with great respect.

As citizens of the British Commonwealth of Nations we can learn a great lesson from our late King and

thereby further one of his cherished aims in life—"For all classes to learn to know and understand each other better."

The Radio Amateurs of the world—and our Empire in particular—have fine opportunities to implement this understanding.

In mourning his loss, the memory of a Monarch who gave his life in service and duty to his people will be revered by all mankind.

The principles of home life so simply adhered to by His Majesty and the high example set by his democratic leadership will surely be the foundation on which the British Nation will stand firm forever.

We honour our new sovereign—Queen Elizabeth II.—and to her pledge our loyalty as British subjects. Though she is young to shoulder the heavy tasks and responsibilities of a ruling Queen, she has, in her ten years of public life, established herself in the right of her own personality as one of the great individuals of the Royal line who will lead the youth of the Nation to great heights of purpose and achievement.

"GOD SAVE THE QUEEN."

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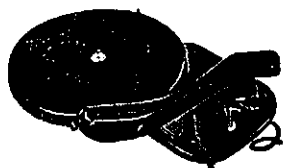
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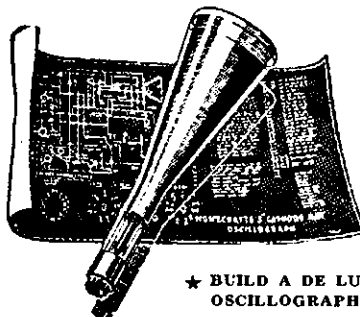


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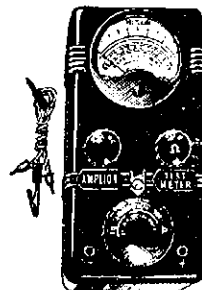
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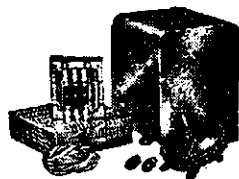
Outstanding value. 5BP1 Cathode Ray Tube, originally cost £15, cut to only 37/6. Blue Print to build Oscillograph, 1/6. Socket for 5BP1 tube, 8/6. Cathode Ray Cabinet, black crackle finish, steel drilled cabinet and chassis complete with brackets, £4/7/6. Power Transformer for 5BP1 Cathode Ray Oscillograph, £3/19/6.

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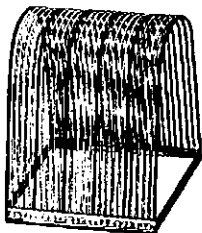
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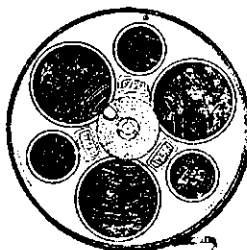
★ BATTERY CHARGER KIT

Kit of parts to build a 6 volt 4 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. Price, as illustrated, £5/10/-, 12 volt 2 amp., 5/- extra.



★ "RECORDEX" RECORD RACKS

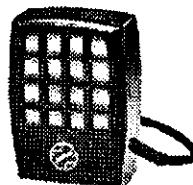
The new improved grammo Record Rack, holds 25 10-in. or 12-in. records. Complete with index card and gummed identification numbers for records. Price, as illustrated, 17/9. Model to hold 50 records, 33/-.



★ TAPE RECORDING EQUIPMENT

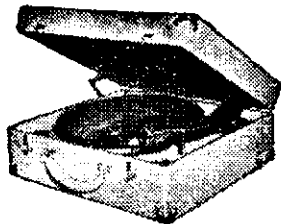
Pyral French Recording Tape, the world's best. ¼ inch tape with plastic or paper base:—

5 inch Spool, Paper Base	28/6
7 inch Spool, Paper Base	40/-
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7 inch Spool, Plastic Base	63/4



★ NEW ZEPHYR "4XA" CRYSTAL MICROPHONE

High Fidelity Crystal Insert with centre cell filter. Price, £6/5/3.



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English Dual Speed Gramo Motor (33-1,3 and 78 r.p.m.) and Collaro High Fidelity Magnetic Pick-up in streamlined leatherette carrying case. As illustrated, £14/19/6.



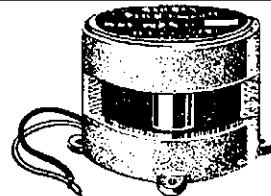
★ NEW R.P.M. AMPLIFIERS

Two models: Type PA1, turns an ordinary 4-valve receiver to a full-powered grammo amplifier. Type PA2, for working low output microphone with an ordinary 5-valve receiver. Both models, price, £5/13/6.



★ ELECTRIC GRAMOPHONE UNIT

The new B.S.R. three-speed Electric Gramophone Unit, Model GU4, three speeds: 33, 45 and 78 r.p.m. Automatic stop. External knob to change speed, light weight High Fidelity Pick-up. A Pick-up for microgroove or standard recordings. Price, as illustrated, 15 Gns. Easy terms available in Victoria.



★ RECORD AND ERASE HEADS

Model L.I., Low Impedance Play Back Head, with frequency response 70 to 7,000 c.p.s. Suits any type tape. Price as illustrated, only 6 Gns. Model E.I., General Type Erase Head, voltage required 6-8 volts. Frequency 30 to 40 Kc. Price as illustrated, only 6 Gns.

290 LONSDALE STREET, MELBOURNE

Central 4311

THE "QX"

Combining Selectivity, Sensitivity and Simplicity in a New Type I.F. Amplifier

BY K. RUDKIN,* A.M.I.R.E., VK2DG

Have you ever wished for a simple way of Improving the gain and selectivity of your receiver without recourse to all those "back-to-back" i.f. transformers, 100 Kc. outriggers, or crystal filters? You have? Well read on brother, this is what you have been waiting for.

Browsing through some copies of "Electronics," I came across an article on a simple Q multiplier. It took but a short time to realise that here was something that could not be overlooked from a Ham point of view, promising as it did a tremendous increase in selectivity together with a gain equalling, if not exceeding, that of two conventional i.f. stages and with only one, yes one tuned circuit.

I will admit that at first glance it appeared fantastic that a circuit Q of 15,000 or more could be so easily obtained, but a careful perusal of the article convinced me that this was no fallacy but a very definite fact.

It is neither my desire nor intention to present a series of mathematical formulae proving that "this here" equals "that there," but to prepare this article in such a manner that it is clearly understood by all those readers whose interest is primarily practical. However, if mathematically inclined readers wish to study the derivation of the circuit, I refer them to the original "Electronics" article.

It is well known that the Q or efficiency factor of a tuned circuit is the ratio of reactance to resistance.

Now suppose that in parallel with this circuit there appears a network having a negative resistance characteristic. The negative resistance thus applied tends to reduce or even cancel out the original positive resistance. As the effective resistance therefore becomes less, the circuit Q is greatly multiplied.

Beginning with a tuned circuit already having as high a Q as practical, it is now possible to reach undreamed of values of Q by the comparatively simple method of controlled positive feedback. As an increase of Q also means a proportional increase of selectivity, the high value realised provides us with a corresponding high degree of selectivity.

A similar effect is obtained in the ordinary regenerative amplifier or detector circuit, but these, as is well known, lack a most important char-

acteristic, that of stability, the slightest misadjustment or voltage variation causing violent oscillation. Not only this, but the variation of the feedback control invariably produces a corresponding variation in frequency.

The circuit shown in the accompanying Fig. 1 not only provides the necessary feedback to give the effective Q multiplication, but the mean frequency is independent of the feedback control and furthermore the circuit is absolutely free from oscillatory tendencies.

It will be noted that the basis of this circuit is the cathode follower which has the correct phase relation plus a high degree of stability. The cathode follower nevertheless has a gain of less than unity and so to realise an active gain, a further element must necessarily be introduced. This is taken care of by arranging the input circuit to represent an auto-transformer equivalent giving the required step-up in gain to the grid of the valve.

This now means that the circuit shown combines the following desirable characteristics: high selectivity, high gain, absolute stability and simplicity.

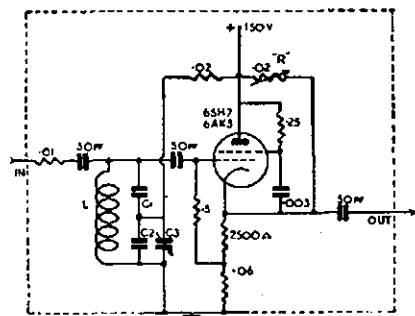


FIG. 1.

The first practical application was made at 1550 Kc., being the first i.f. channel in my communications receiver. The installation however, was temporary only, to discover its possibilities, and I admit that not much care was taken in the construction of the unit, the basis of which was a 6SH7 valve and one winding from a 1500 Kc. i.f. transformer.

Results, however, were beyond expectations, but considerable annoyance was experienced due to the coil being mounted in a shielded compartment already occupied by two valves and the resulting temperature changes as these valves warmed up made necessary a continual re-tuning of the "QX" to the original 1550 Kc.

However, the vast improvement in selectivity of the receiver decided me to re-build the unit along sound lines and incorporate it with the second i.f. channel of 450 Kc., as an integral part of the receiver. Consequently, the first of two 450 Kc. i.f. stages already in the receiver was removed, together with its "back-to-back" transformers. The sec-

ond stage was left in circuit to provide the usual source of a.v.c. voltage from the plate of the last i.f. amplifier, the new circuit not lending itself to this application.

As shown in Fig. 2A, the first 450 Kc. i.f. transformer was also left in circuit mainly for convenience in coupling the mixer valve to the Q multiplier although tests proved that this transformer may also be removed, substituting an r.f. choke for the primary winding and taking the input to the "QX" from the plate of the mixer through the resistor-condenser combination as shown in Fig. 2B.

No difference in performance is noted with either method of input coupling providing that the input impedance, or I should say, the source impedance is kept as high as possible. The series resistor helps in this regard and also serves to reduce the signal input, to the benefit of the following "QX" circuit.

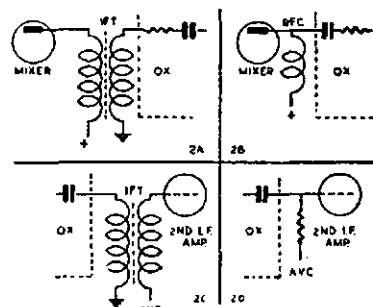


FIG. 2 ALTERNATIVE INPUT & OUTPUT CIRCUITS

The preparation of the tuned circuit LC requires some explanation. The coil L is, as previously explained, one winding from an i.f. transformer. The type of transformer is not important. I have used with equal success, an R.C.S. 450 Kc. winding and a disposals type taken from a No. 11 set.

Remove the shield can and carefully disconnect the two wires leading from the top winding to the soldering lugs at the base. Then, with a hacksaw, cut through the coil former, first making sure that the iron slugs are not in the way. Either of the two windings may be used, whichever is the easiest to mount. It will be noticed that each winding has a condenser already wired across it. This must be removed and its capacity noted. The usual value found in R.C.S. or Crown units is about 50 pF., whereas the No. 11 type has condensers of 115 pF.

It will be necessary to provide this total capacity across the finished coil if we are to tune to the original frequency. Referring to Fig. 1 again, it will be seen that this total C is made up by three separate condensers combining to give an approximately equal amount each side of the feedback connection. In the case of the 50 pF. total, these three are as follows: C1 100 pF., C2 75 pF. and C3 a 50 pF. variable set at half capacity. The purpose of this variable condenser will be explained later.

It will be seen that the total capacity across the coil is now back to the original 50 pF. A similar arrangement must be made with any type of i.f. winding making sure that the series combination of C equals the original value.

(Continued on Page 7)

* View Street, Maitland, N.S.W.

† "Simplified 'Q' Multiplier," H. E. Harris, "Electronics," May, 1951, page 130.

TELEVISION MADE EASY

Part vii.—The Carrier Difference System

BY KEN WALL† AND JOHN JARMAN,* VK3ADA

So a television set consists of two receivers on the one chassis, one for the picture or "vision" signals, and the other for the sound. How much cheaper it would be if a single receiver could handle both signals!

Believe it or not, such a receiver can be designed. It is the "carrier difference" receiver, whose operating principle depends upon the use of different modulation methods for the vision and sound signals.

Now we have learnt that the Australian television system will use amplitude modulation (a.m.) for the picture signal and frequency modulation (f.m.) for the sound, so that this type of receiver will be quite practicable in this country. Before we can learn how it works however, we must understand the "outlines" of frequency modulation and how it differs from the conventional system which we call amplitude modulation.

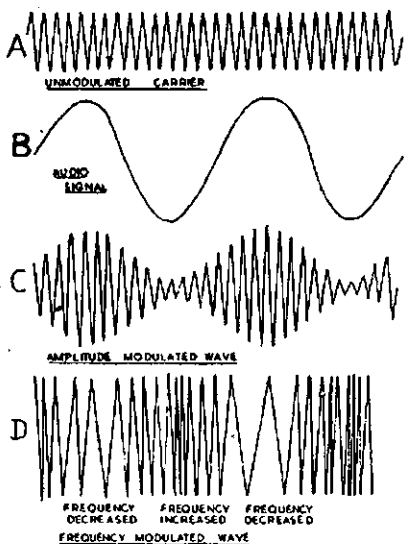


Fig. 1.

Now take a look at Fig. 1, where A represents the waves emitted by any transmitter when it is on the air, but no sound is being sent out (e.g. during an instant when nobody is speaking). This is called an unmodulated carrier. Suppose now that the announcer speaks into the microphone. Fig. 1B represents two cycles of the audio voltage which his voice will produce.

Fig. 1C shows the same waves as A after being amplitude modulated by the audio signal (B). Note that the waves are evenly spaced, but the height or amplitude varies. This method of modulation is used by all broadcast stations and by most Hams.

† 172 Johnson Street, Maffra, Victoria.

* A11426 L.A.C. Jarman, J. B., c/o. A.R.D.U., R.A.A.F., Woomera S., South Australia.

Now note Fig. 1D. This shows the same waves (A) but this time frequency modulated by the signal (B). The amplitude now remains fixed, but the spaces between the waves vary. In other words, the frequency changes. Frequency modulation, therefore, simply means varying the frequency instead of the amplitude, as is done in the conventional system.

Now for a little more detail. Compare C and D of Fig. 1. Note that in f.m., the crest of each sound wave is conveyed by decreasing the frequency of the radio waves and the trough of the same sound wave by increasing the frequency. The louder the sound, the greater will be these increases and decreases in carrier frequency. The number of times per second that they take place is the audio frequency, or "pitch," of the note being transmitted. Still clear as mud?

Then let us take a numerical example. Suppose a carrier of 1,000 Kc. be frequency modulated by middle C, whose pitch is 256 cycles per second. Suppose also that the note be loud enough to make the frequency change by 10 Kc. Our carrier frequency, instead of remaining steady, will now alternately rise to 1,010 Kc. and fall to 990 Kc., repeating the process 256 times per second.

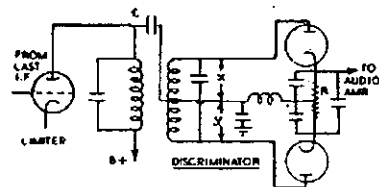


Fig. 2.

Best we now introduce two common technical terms. The amount by which our frequency increases or decreases in each half cycle is called the "deviation" (in this case 10 Kc.), and the total change in frequency in each cycle is called the "swing" (in this case 20 Kc.).

Suppose now that the same note be played softly, so that the deviation is only 5 Kc. Our carrier frequency will now swing between 995 and 1,005 Kc., 256 times per second.

We see therefore, that the louder the sound, the greater will be the deviation, and it is interesting to note that we cannot over-modulate the carrier, as in a.m.

Increasing the deviation, however, produces extra sidebands, thereby increasing the band-width of the signal, so deviation must be restricted, and the Australian Broadcasting Control Board has limited the maximum deviation to 25 Kc. In other words, transmitters must be adjusted so that the loudest sound will not cause the frequency to increase, or decrease, by more than 25 Kc.

An f.m. receiver is a superheterodyne type, differing from the a.m. set mainly in that the detector is replaced by a device whose output is proportional to changes in frequency, instead of changes in amplitude. Two of these devices are shown in Figs. 2 and 3, and we will outline their operation very briefly.

Each uses a modified i.f. transformer in whose secondary winding, two alternating voltages are produced. One of these is induced electromagnetically in the normal way, and the other is fed to the centre tap, in this case through a capacitor C.

Both windings are tuned to the centre value of the i.f. and, if we review our theory of the tuned circuit, we will find that the phase of the magnetically induced voltage must change as the i.f. swings between its highest and lowest values.

Remember, at resonant frequency, a tuned circuit (such as the secondary winding, in Figs. 2 and 3) is purely resistive, but when the frequency changes it becomes either a capacitive or an inductive reactor, depending whether the frequency varies above or below resonance. Our magnetically-induced voltage will therefore "lag" or "lead" the centre tap voltage, and by combining with the latter, it produces a surprising effect.

Consider the voltages x and y (Figs. 2 and 3) across the two halves of the secondary. At resonant frequency, they are equal and opposite. When the i.f. increases above resonance, however, y becomes greater than x so that the output voltage (across R) decreases, producing a "trough" of audio voltage. When the i.f. decreases below resonance, x becomes greater than y so that the output voltage across R increases, producing a "crest" of audio voltage.

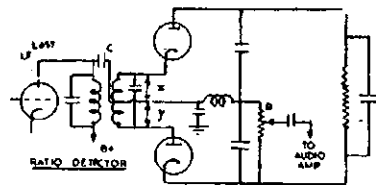


Fig. 3.

The device therefore turns frequency changes into audio voltage, which is just what we require. There is an important difference, however, between Figs. 2 and 3.

In the discriminator (Fig. 2), the output is proportional to the difference between x and y, whereas in the ratio detector (Fig. 3), it is proportional to their ratio. This means that the discriminator will respond to either f.m. or a.m. signals, whereas the ratio detector responds to f.m. only. For this reason, the discriminator, when used, must be preceded by at least one limiter. This is simply an amplifier, operated in over-loaded condition so that it "flattens out" any changes in signal amplitude, thereby making the receiver immune to a.m.

It is by "turning the deaf ear" to a.m. that the f.m. receiver achieves its main advantages over the conventional set,

the most important being elimination of interference. All known forms of interference, including valve hiss and static, cause only amplitude modulation, so that if our receiver responds only to f.m., we will have noise-free reception.

Now, readers who have experimented with f.m. will have their own opinions about this, but we shall not argue, since we are concerned with an entirely different aspect of f.m.

We have "harped" on this subject for a long time, but readers not already familiar with f.m. will agree that it has been quite relevant. The main point we have been trying to drive home is that an a.m. detector (if broadly tuned) will not respond to f.m. signals, and likewise, an f.m. "demodulator" (Fig. 2 or 3) will not respond to a.m., and if this is clear, we are now ready to deal with the carrier-difference receiver.

Consider two signals, on adjacent frequencies; one a.m., the other f.m. By means of a broadly tuned receiver, the two signals can be picked up and handled by all pre-detection stages, without interfering with each other, and separated after detection. This is the operating principle of our carrier-difference receiver, illustrated in Fig. 4, in which the a.m. signal carries the picture detail, and the f.m. signal, on a frequency 6 Mc. higher, carries the sound.

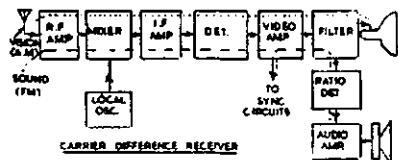


Fig. 4.

Yes, we have combined two receivers into one, to produce a cheaper television set, but why call it a "carrier-difference" receiver? Here's the secret. Whenever two signals, of different frequency, are mixed in a detector a new frequency equal to their difference is produced. We are already familiar with one example of this, in the mixer, or converter stage of a superheterodyne receiver. In our c.d. receiver the same action takes place in the detector, between the sound and vision i.f. signals, whose difference will be 6 Mc.

The detector's output, therefore, contains, in addition to the normal detected video signal, a new 6 Mc. signal. Since this is frequency modulated, its value will actually swing between 5.975 and 6.025 Mc. By means of a filter, we can separate this from the video signal (which goes to the cathode ray tube), and by a suitable demodulator (in this case, a ratio detector) we can produce our audio voltage as already explained and convert it into sound by the normal methods.

We see therefore that our audio signal is obtained from the difference between the two r.f. carriers; hence the name "carrier difference" or "inter-carrier modulation" system, and it should be noted that even after detection, the sound and picture signals can be amplified together, without interfering.

The advantage of this system? Mainly the prevention of fading of sound when the local oscillator drifts. The difference between the two carriers is fixed at the transmitter, so that no matter how much our local oscillator frequency varies, the 6 Mc. signal applied to our filter and sound circuit will remain unchanged.

But why not build a stable local oscillator? We do, or at least as stable as present-day techniques permit, but remember we are handling carrier frequencies between 180 and 204 Mc., so that our l.o. must operate at such a high frequency that even the smallest practicable percentage of drift must appreciably change the i.f.

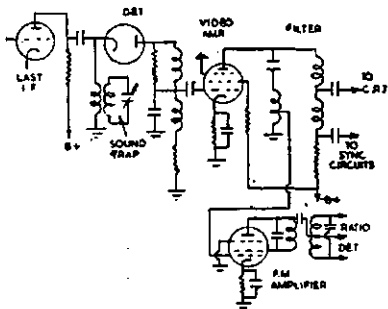


Fig. 5.

Now in the conventional television set we have separate i.f. channels for vision and sound and although each channel is tuned as broadly as practicable, the band-pass of each is limited by the danger of the two i.f.'s. signals interfering with each other, so that a very little change in either i.f. can weaken the output appreciably.

The advantages of the c.d. receiver, where both i.f.'s. can be handled by the same circuit without interfering, should now be quite apparent. The common i.f. circuit can be tuned broadly enough to accommodate the anticipated drifts in frequency, thereby preventing fading of the picture, and we have already seen how fading of the sound is prevented.

Did somebody mention a crystal-controlled local oscillator? Yes, this would work, but it is hardly a commercial practicability, since it would necessitate frequency-multiplying stages, thereby increasing the cost of the receiver.

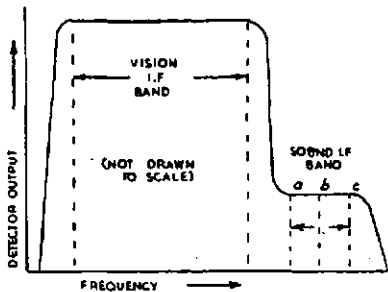


Fig. 6.

A typical circuit arrangement is shown in Fig. 5, which should be studied in conjunction with Fig. 6, which represents the detector output (not the i.f. band-pass, remember).

As an extra precaution against the sound signal interfering with the picture, a sound trap is provided which weakens the sound i.f. before detection, as shown by the "shelf" a-b-c in Fig. 6. This is compensated by passing the 6 Mc. signal, after extraction by the filter, through the f.m. amplifier, which is operated in such condition as to have a slight limiting action since, although a ratio detector does not respond to amplitude modulation, experience has proved that it gives better results when preceded by a limiter.

Note also that if the circuit is adjusted so that the shelf a-b-c in Fig. 6 is perfectly flat, the swinging of the frequency of the sound i.f. (i.e. its frequency modulation) will not cause any change in the detector's output. In other words, our detector is tuned to respond only to amplitude modulation so that the f.m. sound signal cannot interfere with the picture.

To end this "chin-way," we will mention a rather interesting draw-back of the c.d. system. We have already learnt that with negative modulation, the brighter the picture element, the smaller will be the carrier amplitude. Now suppose a scene contained an object so bright that it reduced the carrier amplitude to zero, in other words, cut the carrier (Fig. 7).

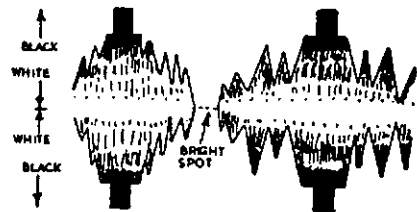


Fig. 7.

Since our sound filter is tuned to the difference between the two carriers, our sound signal is dependent upon the vision carrier, so that cutting the latter must also cut off the sound. Therefore, each time the bright spot is scanned, there will be a short pause of silence, so that our sound will be interrupted at field frequency (50 cycles per second), so that a 50 cycle hum would accompany the sound from the speaker.

The Australian Broadcasting Control Board, however, has taken care of this possibility by limiting the minimum carrier amplitude to 10% of its maximum value, so that transmitters must be adjusted to ensure that the brightest objects televised will not reduce the carrier amplitude below this value.

Having now covered the principles of television, we should be prepared to deal with the subject of interference which, of course, is the Ham's chief concern. This will be the subject of our next instalment.

Manufacturers of . . .

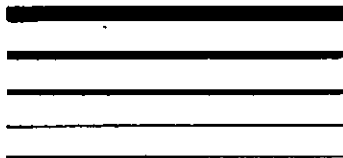
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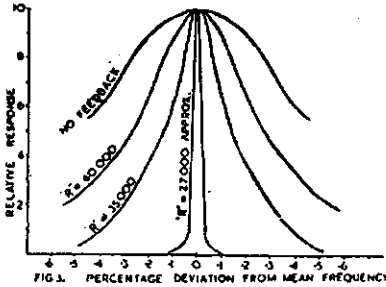


THE "QX"

(Continued from Page 3)

No restrictions are placed on the actual construction of the unit, but it will be found necessary to shield the coil L if it is in close proximity to other 450 Kc. tuned circuits, otherwise interaction is bound to occur. In my own case the new unit is well removed from other i.f. circuits, the input and output being taken through co-ax leads. This was done to allow the unit to be mounted at the front of the receiver for ease in manipulation of the control knobs on C3 and the feedback potentiometer. However, the mechanical arrangements may well be left to the individual constructor.

Now for the purpose of the variable condenser C3. For purely phone work, this condenser could quite well be eliminated, its place being taken by a fixed capacity of suitable value.

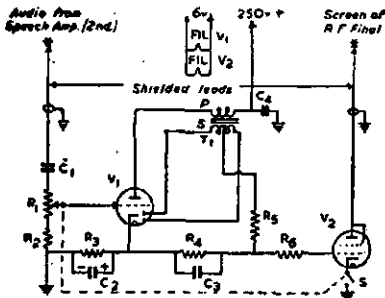


In c.w. reception however, the situation is altered. Normally in receiving c.w. signals, three methods are commonly used, being (a) tuning the receiver to zero beat with the required station and then varying the b.f.o. tuning until the required beat note is heard; (b) Setting the b.f.o. frequency to a value of from 500 to 1,000 cycles higher or lower than the mean i.f. frequency, thereby providing a strong beat note on one side only of the zero setting, the so-called "single signal" method, and (c) Setting the b.f.o. at exactly the i.f. frequency and receiving a beat note of equal strength on each side of zero.

Each of these methods has its drawbacks. In (a) the tedious necessity of jiggling the b.f.o. tuning for each station required; (b) being limited to a beat note on one side of zero only, leaves

ERRATUM

We apologise for an error in the Clamp Tube Modulation diagram on page 10 of the February issue. The diode obviously should not be connected to the plate, otherwise high positive voltage would be applied to the grid of V2. The corrected diagram is shown below.



no alternative when an interfering signal appears. Personally, I prefer method (c), but the undesirable feature of this method is that the signal, or beat note is received on the side, or skirt of the i.f. selectivity curve, definitely not the receiver's most sensitive position.

Now with the "QX" circuit, the variable C3 permits the variation of the mean i.f. frequency to plus or minus 1 Kc. or more. The procedure is this. Tune in the signal in the usual manner choosing the side of zero beat where QRM is at a minimum as is the usual custom. If the QRM is light and the required signal strong enough it is unnecessary to make any further adjustments, but if the required signal is weak or the QRM solid, as is often the case on our crowded bands, then C3 is moved slightly, peaking the i.f. channel on exactly the frequency produced by the required station. Presto! The wanted signal immediately stands out like a shag on a rock while the interfering station is relegated to the background where it belongs.

For phone reception, the C3 control is left in the centre or mean position. It will be found though, that with the feedback control set at the critical value for maximum feedback, a value of from 25,000 to 30,000 ohms, the selectivity is so high that phone stations appear to be well undermodulated and with a preponderance of bass due to the severe cutting or attenuation of the high frequency sidebands. This cannot be avoid-

ed in any highly selective circuit and it may be necessary to "back off" the feedback control somewhat if audio fidelity is required. This is left to the operator and it is an easy matter to turn a knob, the only operation necessary to change from sharp to broad tuning.

Fig. 3 shows comparative selectivity curves obtained for various settings of the feedback control R. These must not be taken as extremely accurate because of the lack of laboratory instruments, but merely serve to give a good indication of the results which may be obtained with the unit described.

Although the "QX" has been used with equal success at 1550 Kc. and 450 Kc., these frequencies are by no means the only ones on which it may be used, and there is every reason to believe that it could operate successfully at frequencies ranging from the low i.f.s. of 50 Kc. or 100 Kc., right through to the high frequencies if care is taken to avoid phase shift. I intend, at some time in the near future to conduct experiments with it in the range 10 to 30 Mc., where conventional h.f. amplifiers are notoriously lacking in selectivity.

The "QX" should be a distinct advantage to those Amateurs using simple superhet receivers, giving as it does a selectivity comparable to that of a much more elaborate receiver using a crystal filter, with much greater ease of control.

I would be glad to hear from any of you who try this circuit, particularly if experimenting in the h.f. ranges.

A Simple 12 Watt 144 Mc. Transmitter

BY A. H. MORRISBY,* VK7MY

The transmitter described will be used later to drive an 832, which in turn will drive a pair of VT90s (micro-pups).

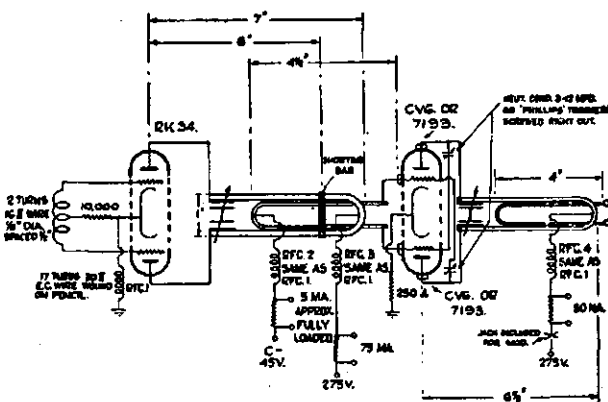
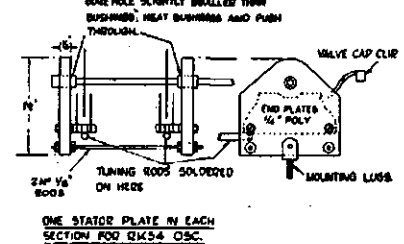
The general construction and layout of the 144 Mc. transmitter circuit is as follows: The chassis size is 22 inches by 7 inches by 4 inches deep, with the RK34 valve recessed through the chassis so that the plate caps are the same height as the CV6 caps. The grid coil is mounted under the chassis on a polystyrene strip. All pillars and insulation throughout are of polystyrene.

The split stator tuning condensers are made up from standard midgets, by replacing the ends with larger pieces of polystyrene and mounting to the stator plates double spaced at each end, making them part of the plate tank rod as shown in the diagram.

All tuning rods are made of 1/8" copper tubing and coupling can be adjusted by bending the grid rods and antenna rod respectively.

The oscillator stage must be constructed so that all parts and wiring are firm and cannot be jarred out of adjustment.

The remaining details of the transmitter are self explanatory if the diagrams are studied, and the tuning and setting up of the transmitter follow conventional lines.

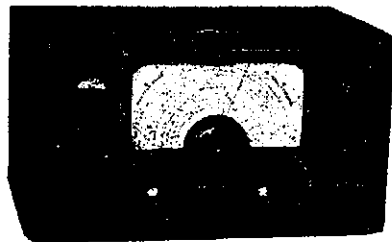


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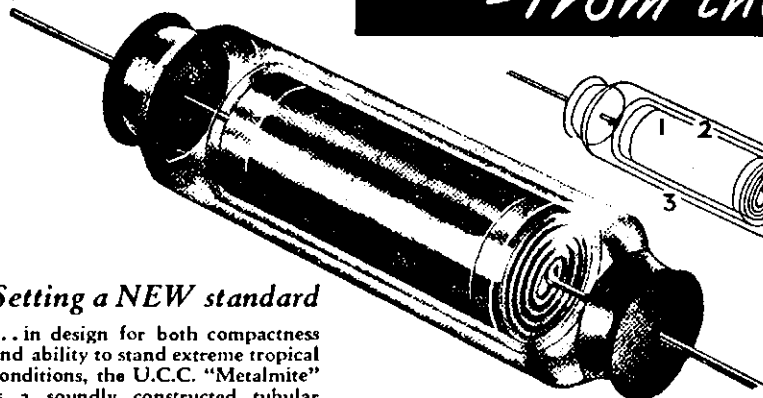
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Antenna System for General Amateur Use

The following is a description of an antenna system devised by the writer in an attempt to fulfill the following requirements:—

- To be suitable for at least three of the harmonically related Amateur bands.
- To be self-resonant only on the band in use so as to minimise the radiation of harmonics.
- To be fed with a flat line (a small s.w.r. was of no objection).
- The system to be balanced in order to keep the feeder currents equal so as to prevent losses in and radiation from the feeders.
- To be as simple and easy to construct as possible.

It will be realised that to satisfy all the above requirements at the same time is almost impossible. However the final arrangement arrived at, which has been erected and tested and which does go a long way towards the ideal, is as follows:—

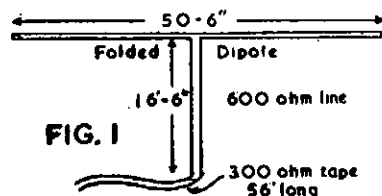


FIG. 1

Fig. 1 shows the dimensions and construction of the antenna. Due to there being a difference of potential between the two antenna wires on 14 Mc. and a slightly lower p.d. on 7 Mc., it is advisable to separate these two wires with small separators about 2" long. The antenna and matching section can be made of ordinary 14 gauge antenna wire. The feed line should consist of 300 ohm tape. The bottom end of the matching section should be held in position by means of a stay wire secured to a short pole or some other fixed object in order not to place any strain on the 300 ohm tape feed line.

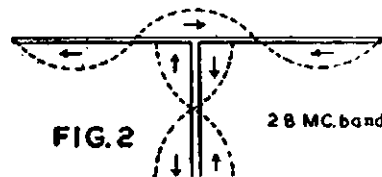


FIG. 2

Fig. 2 shows the current distribution when used on 28 Mc. The system is a one and a half wave lengths folded dipole with a half wave length linear transformer between the centre of the antenna and the feed line. The radiation pattern consists of four major lobes fairly evenly distributed with minimums off the ends and centre of the antenna. The feed point impedance is approximately 350 ohms.

Fig. 3 shows the current distribution when used on 14 Mc. The system is a three-quarter wave length folded dipole with a quarter wave length matching

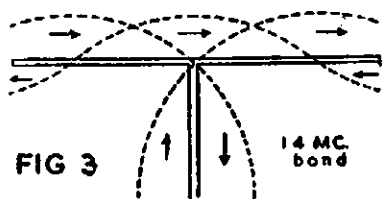


FIG 3

section between the antenna and the feed line. The radiation pattern is similar to that of an extended double Zepp and is in the form of a narrow figure 8 at right angles to the antenna. The feed point impedance is approximately 150 ohms.

Fig. 4 shows the current distribution when used on 7 Mc. The system is a half wave length folded dipole with the currents in the bottom one-eighth section out of phase. The radiation pattern is similar to an ordinary half wave dipole. The feed point impedance is approximately 200 ohms.

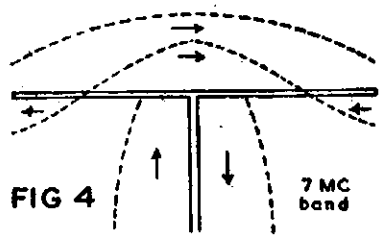


FIG 4

When used on 3.5 Mc. feeder ends are tied together at the transmitter and the whole system is used as a "T" top Marconi antenna against ground. The feeders should be well insulated throughout their length, which should be such that a current loop or maximum is obtained at the transmitter. The earth wire should be as short and direct as possible and should not be the normal earth wire used for earthing the other equipment in the shack.

If the dimensions are doubled the antenna can be used on 3.5 Mc., 7 Mc., and 14 Mc. as a self-resonant antenna.

The feed point impedances quoted were arrived at experimentally and are therefore very approximate. Due to the slight mismatch between the antenna and the feed line there are standing waves on the feed line but they are not serious.

No difficulty will be experienced in loading the antenna if the feed line is made of multiple or half wave lengths long (56 feet is the shortest length for 7 Mc.). However any length of feed line can be used if provision is made to tune out the reactive component at the transmitter. In most cases a 150 pF. receiving type variable condenser connected either in parallel or series with the link will be sufficient.

The writer trusts that this antenna will prove of interest and use to other Amateurs and that those who are experimentally inclined will try it out and perhaps suggest some improvements.—ZSIDH. (Reprint from "Radio ZS," May, 1951.

"ZONE 29 AWARD" ANNOUNCED

A new award for working VK6 stations has been announced by the Western Australian Division of the Institute. The "Zone 29 Award" came into force at 0001 hours W.A. time, 1st January, 1952, and rules are given below.

This new certificate should stimulate interest in working VK6 stations on the various bands and it is hoped that the VK6 Council will be kept busy endorsing and sending out these awards!

RULES

1. The "Zone 29 Award" is issued by the Western Australian Division of the Wireless Institute of Australia to licensed Amateurs throughout the world who satisfy the following requirements:

(a) Establishment of two-way communication with any 25 different Amateur Stations situated in Zone 29. Communication to be after 0001 W.A. time, 1st January, 1952.

(b) The total of 25 different stations may be obtained by operation on one or more of the Amateur bands.

(c) Any types of emission which are permitted by the local licensing authority may be used.

2. The certificate will be endorsed when issued as confirmation of fulfilment of the following special conditions:

(a) All 25 stations obtained from operation on one band only.

(b) All 25 stations obtained from operation of phone transmission.

(c) All 25 stations obtained by one-band operation and phone only.

3. Confirmation, in writing, of all contacts must be submitted to the Western Australian Division of the Wireless Institute of Australia, Box N1002, G.P.O., Perth, with sufficient postage to cover cost of return of cards to owner.

EMERGENCY!

Where Amateurs are conducting emergency communications, the following emergency signals will be used and adopted as a standard in VK:—

For phone, the words "EMERGENCY TRAFFIC."

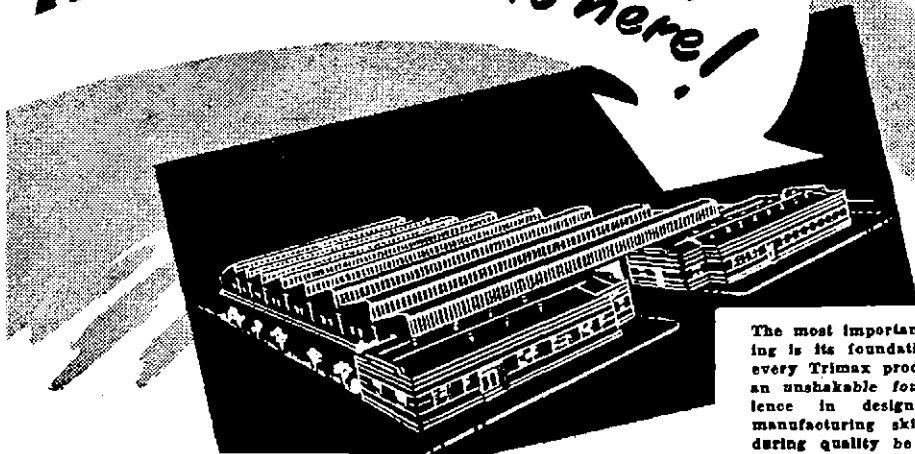
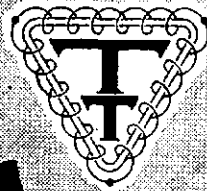
For c.w., the letters "QRRR".

WHERE LIFE AND PROPERTY IS ENDANGERED AND NO NORMAL MEANS OF COMMUNICATION IS AVAILABLE, AMATEURS ARE PERMITTED TO CONDUCT TRAFFIC USING THE ABOVE SIGNALS WITHOUT PRIOR CONSENT OF DEPARTMENT.

A.O.C.P. CLASS

A few vacancies exist in the present class for students desirous of obtaining the A.O.C.P. Persons so interested should communicate with the 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 Monday and Thursday evenings between 8 and 10 p.m.

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FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

NEW SOUTH WALES

The January meeting of the N.S.W. V.H.F. Group was held in an unusual meeting place. At the last moment it was discovered that the usual small lecture room at Science House had not been hired, so the meeting was held in the offices of "Radio and Hobbies." John 2JU, who was present, was able to make this last minute arrangement and the entire meeting journeyed by sundry cars to the substitute meeting place. Apologies must be extended to anyone who may have turned up at Science House after the safari had left.

The meeting was devoted to a lecture by Alan Bird, 2QW, of A.W.A., who spoke of signal circuits in v.h.f. Rx's. The lecture was of great interest to those present, the subject matter being very topical. Alan covered the design of most of the commonly used types of v.h.f. "front end" including the cascade, push pull neutralised triode, and grounded grid triode. Comparing some of the commonly used tubes, he displayed a graph showing their relative merits. The 6AK5 as a pentode was quoted at 7 db noise figure, the 6J4 grounded grid at 3.6 db, and the 6AK5 triode (as used in the cascade) at 3.8. Alan also detailed some figures taken on the performance of the ASB7/8 Rx's—using the 955 mixer without the r.f. stage—noise figure at 576 Mc. was 15 to 20 db, using an EA50 as a diode mixer without r.f. stage gave 10 db (a similar figure was obtained with a 1N21b crystal diode). The diode used in conjunction with the lighthouse tube r.f. stage resulted in a noise figure of 8.6 db.

The lecture was very well received and a vote of thanks enthusiastically carried. Bill 2MQ, the Group's recently elected Chairman, carried out some high pressure salesmanship during the evening disposing of quite a number of tickets for the VK2 Divisional Hamfest.

50 Mc. News: The Ross Hull Memorial Contest ended with some quite astronomical scores, this season having been the best for some years. The 6 mx band was extremely lively during the contest but since the DX has more or less departed, so have the locals! It would seem that whether we like it or not, six has become a DX band and eventually may be populated only by the DX chasers. The characteristics of the band make it also an ideal local band which could carry all the local traffic which clutters up the low frequency bands—hasn't somebody said this before?

The 13th of January produced a lively general opening with VKs 3, 4, 5 and 7, plus ZLs—all at once! However, since then the band has been very quiet.

144 Mc. News: During the month, conditions have been kind to those attempting the extended ground wave path to 2NS at Bathurst. On one evening in particular the band came unstuck properly and signals were travelling both ways at up to S9. Trevor worked eight Sydney stations and capped it all by making an easy S9 contact with 2ADT in Cessnock. Those in Sydney making contact with 2NS were 2QZ, 2AJZ, 2ABB, 2ANF, 2AST, 2HL (using a pair of 6J6s as p.a.), 2XG and 2ABC. 2NS is now using the new 15 element beam and 829 final.

2WH at Forbes found his 829 full of air but was able to obtain a QV07/40 and late news to hand is that it is working but not yet on the air. Hugo should put a fairly good signal into the city despite the very long path.

2JW at Orange has at last succeeded in hearing 2NS from home, his previous efforts only meeting with success when he went to the top of Mt. Canoblas. Norm now has a crystal controlled rig going and is expecting to set up in the country zone shortly.

2ADT returned from holidays just in time to join in the scramble during the break

through to Bathurst Jack has been staying at Urunga and getting amongst the big ones.

2AJZ has a new crystal controlled converter going and seems very pleased with it—last heard of trying to talk 2WJ into building one to replace his ASV. Fancy having to talk anyone into building one of these to replace that!

On the 18th, 19th and 20th the V.H.F. Group ran a contest on 144 Mc. with rather novel rules. The operating periods were confined to the hours between 1800 and 2300. This idea proved very popular as these periods correspond to the hours most chaps usually operate. No doubt it proved popular with XYL's also! Thirty-nine stations were operating and things were happening pretty quickly. Unfortunately after 2200 hours, things slowed down so maybe an even shorter operating period would have been better. Logs have not yet been checked so the results will have to be held over until next month.

The "biggest beam" recently reported (32 elements spaced 10 ft. between centres of the two 16 element sections) is giving its owner 2AOA many headaches. The minor lobes are anything but minor and up to date nothing tried has reduced them to any extent. However Keith seems determined to clear up the trouble and will no doubt do so. The forward gain of the main lobe is pretty terrific.

2AWZ is back on the band after many moons. Have no idea where he's been as he didn't say, but it looks like Dave means business again as he is building a cascade Rx and has re-erected his 12 element beam.

676 Mc. News: Nil—576 enthusiasts please note! Best appoint a 576 Mc. "zone correspondent!"—2ANF.

VICTORIA

Dates to remember—March 9, V.H.F. Field Day No.5; March 19, V.H.F. Group Meeting.

Attendance at the January meeting was not up to usual standards, but those present were well catered for by a talk on Ionospheric Propagation by Mr. O. Errey, of the C.S.I.R.O. With the aid of sketches on the black board, Mr. Errey explained the various layers and their refractive effects on signals of various frequencies, with emphasis on 50 Mc. Mr. Errey cast some doubt on the generally accepted idea that QSOs with ZL on 50 Mc. are the work of sporadic E layer. In order to shed as much light as possible on these as well as other similar phenomena he is most anxious to receive information from Hams about openings on 50 Mc. This is a matter in which we should also, in return, receive much helpful information about possible band conditions.

The C.S.I.R.O. are able to obtain much valuable data by observation of the 33 Mc. aircraft signals since these are continuous transmissions, but the absence of such signals on 50 Mc. precludes similar observations on this frequency. It is here that we can help by keeping a note of times when the band opens to a particular spot, when it closes again, and if there are any subsequent openings to either the same or another spot. It is hoped to make available a log sheet to assist you keep these records, but more of this later. Mr. Errey answered many questions and his informal chat with group members was greatly appreciated.

The field day scheduled for the 10th was postponed at the last minute when news of the King's death was received. It was felt that it would not be in keeping with the general feeling of sadness at this great loss. The March field day scheduled for the 9th should provide some interesting contacts, for, on that day, a number of VK7's will be operating portable in various parts of that State. A cross-State relay on 144 Mc. is planned and, with our co-operation, the VK7 Div. H.Q. in Hobart hopes to pass a message to the VK3 Div. H.Q. or maybe even further if that is possible. Amongst the VK7 portables will be 7AB at Table Cape and it is anticipated that many QSOs with VK3s will be possible from there. We have already intimated to VK7 that we will co-operate to the fullest possible extent and are looking forward to an interesting day.—VK3JO.

SOUTH AUSTRALIA

Apart from the local v.h.f. contest held each Sunday evening, the bands have been fairly quiet, although 50 Mc. is still open at times. More interest has and will be shown in 144 Mc. equipment and already several chaps have gear operating or in progress of building.

VK5WI will be operating on 50 Mc. from the Royal Adelaide Exhibition and as many stations as possible, city and country, are asked to contact 5WI during the operating periods or when heard. In replying, all stations should remember that the receiver will be fed into a

small amplifier and heard by the public. Try not to mix Ham jargon, such as quoting Q signals in place of their plain language meaning, or the ridiculous saying of hi, hi. At all times contacts must be conducted with decorum. Remember the public will judge you by what they hear.

5AX has been active on 50 Mc. in contest; still do with some more modulation Les. 5BC still putting a good signal into the city. 5QR migrating to the lower bands and antiquated gear; using a 813 xtal oscillator feeding the antenna on 7 Mc. 5JO a new license holder and welcome to 50 Mc. Joe. 5JD has a Tx and Rx going on 144; also tries out his bug on 7 Mc. c.w. 5GA should be operative soon, only has to make the xtal converter now. 5RO has three beams erected, 50, 144 and 288 Mc.; Col having a spot of trouble, the 50 Mc. receives only. He is a recent convert to xtal converters.

WESTERN AUSTRALIA

As there has been no news published from VK6 for some time, it is necessary to report on some "history" to bring the record up to date. Rolo 6BO has kindly offered to supply dope for each month's notes and wrote what follows while he was in Bunbury recently.

50 Mc.: After several months of comparative quiet, this band came to life with plenty of activity. On 16th November, 4XN was heard in Perth and during the next day or so VK6s worked through to VK5. Numerous openings to VK2, 3, 4 and 5 maintained interest until the Ross Hull Memorial Contest began. During the contest period the band opened from VK6 to VK2, 3, 4, 5 and 7, and ZL1, 2 and 4. No reports from ZL3. 50 Mc. was still opening up to 20th January when these notes were written.

On 9th December, 6HM (Kalgoorlie) and 6BO (Bassendean) had a solid phone QSO. On 29th December, 6HM and 6RK (Subiaco) also had a solid QSO. Three days later, 6BO heard 6WG (Albany) at 5 by 9 in QSO with 5MK whom Rolo couldn't hear. On 6th January, 6WG called 6BO and reports (not outstanding) were exchanged. The process was repeated both morning and evening on 20th January. A solid QSO should result ere long.

Grapevine stuff: 6IG has a 2 element beam (picket type) and was heard calling DX; Ian has been away on holidays and missed the Xmas-New Year period.

6RK, after months of unrefined noises has borrowed a mike, thrown out an 829B and put in clipping—and now puts out a readable phone signal. Rumour has it that 6RK and 6GB are awaiting the contest results to see which will receive a new modulator as a consolation prize! 6LM comes on occasionally and has his friendly growl about not being heard! 6LT "snuck" up to Perth and was hoping to get a QRO6/40 back to Albany; did the 2E26s arrive, Norm? Was it the DX or the Xmas spirit that brought 6LW on to 50 Mc.? Anyway, Wally was there—and working the DX too. Heard the boys over east calling 6MU (Meerendin), too, so Mal must have been on. 6FC (Narrogin) is still putting a good signal into Perth and bashed his share of the "break-through" also. 6GS, the bloke who lives in the city and travels to Minding for his QSOs, has put up a six mx rhombic, aimed at Perth.

6BS' 25 Mc. oscillator hasn't been heard on 50-54 Mc. for a long while. We still keep looking for him. 6GU still has a beam on six, but John must have grown tired of sitting on a kero. case for he's making a nice-looking rack and desk. He hopes the family will give him a chair to match! 6DW (Bruce Rock) and 6BO still maintain the 0830 and 1945 skeds. They had a friendly tussle in the Contest. 6DW has taken delivery of a larger car—what for? Time alone will tell. The hole in the band at 50.051 Mc. is due to be taken over during 6BO's holidays—or part thereof. 6LU has been collecting bits and pieces for 6 mx; Lou makes enough noise on 7 Mc. with "no power," so what will he do on 507.6AS, now at Manjimup, should be able to work through to 6WG and 6LT. Hope you'll get on soon, Alec!

144 Mc.: Only local signals for many months heard by 6BO are those from 6DW, 6FC and 6GB. Haven't been able to raise 6CR, 6BG or 6AG. 6GS (Minding) received 6BO's 2 mx signals on the 50 Mc. rhombic. 6DW and 6RK have made two-way contact on 2 mx, but the big news just now is Rolo's 2 mx contact with 6GL (Colonel Light Gardens, Adelaide), signals were R5 S3-8. R. Harrington, a VK5 s.w.l. reported hearing 6BO during this contact—on a super-regen! The distance (1,327 miles) is thought to be a world's record.

6XI, Waterloo, has now some gear on 144, only low power as yet, but it works very nicely. 6WG and 6LT also have gear on the band so with the increase in the number of country chaps on the band, there should be some good contacts during the coming months.

50 Mc. W.A.S.

Call	Certificate Number	Additional Countries
VK2WJ	13	3
VK4RY	2	2
VK2VW	9	2
VK5LC	1	1
VK6DW	3	1
VK4HR	4	1
VK3PG	5	1
VK3RR	6	1
VK3HT	7	1
VK2AEZ	10	1
VK3XA	11	1
VK3CA	12	1
VK3CL	14	1
VK2ABC	8	
VK2WH	15	

VK4 Amateurs Hold Convention

Somerset Dam on 26th, 27th and 28th January

There is little need to tell of the antecedents of the first "VK4 Ham Do." 4GG and 4PD as soloists, with 4FP and 4WD as chorus, saturated the ether in a grand publicity campaign. They should feel pleased with the success of their efforts!

Those attending were VKs 2LR, 2AHH, 4GG, 4PD, 4HZ, 4LM, 4HR, 4JC, 4OR, 4SG, 4HA, 4CZ, 4PN, 4AF, 4VJ, 4AP, 4WB, 4JF, 4OA—in all 40 visitors of whom 19 were licensed Amateurs.

In fine (too fine) hot weather, the Saturday of the Australia Day week-end found George, the Iron Horse, Tom of Puppy Dog fame, Les 4LM, Lenny 2LR, bringing Geoff, his son, and Noel 2AHH, early on the job and from then on the two main organisers never let up, looking after visitors' comfort, organising contests, keeping everybody happy, and really excelling themselves as hosts to all.

The location was ideal! Eighty miles west of Brisbane, situated in the gorges of the Stanley River, the little township surrounding the huge concrete Somerset Dam itself nestles in the trough of steep mountain slopes averaging 1,500 feet high, almost straight up. The Departmental authorities were magnificent in co-operation!

Clean, comfortable barracks with separate rooms, equipped with a.c. power and light, cooking, bathing and lavatory facilities, and equipped with stretchers, were made available for 2/6 per head for the whole week-end. The scenery is uniquely beautiful, the river bathing superb during the heat of the day, and the Assistant Resident Engineer, Mr. McDonald, even turned on a personally conducted tour over, round and through the great Dam which was a highlight of interest to all.

A promise to explore radio communication between Somerset Dam and Brisbane was welcomed by Hams and early on Saturday morning 4LM operating on 7 Mc. made first contact at 11.30 a.m. with 4PN in Brisbane who reported Q5 S8/9. A whacking big three ton truck arrived during the day with the Toowoomba gang and when the boys saw a large diesel generating set in the back, they all burst into tears and wanted to go home. However, the Toowoomba gang were delivering the unit to a customer, thus getting the truck for transport of their own gear, and they disappeared till Sunday afternoon, when they returned to the Dam, and the air became hideous with QRM, b.c.l. and networks of harmonics—at least that's what everybody not operating told everybody who was!

4LM made most contacts and squatting on his heels at one end of a verandah like a Chinaman, he belted away hour after hour, was QSOing a ZL at one stage, and ran up 30 contacts. 4RH arrived with a sweet set-up of a Command Tx on 40 with Rx complete, mounted in an original rack, which has never failed to perform. It promptly developed feedback; an hour later it was in bits with an advisory committee of about ten all saying something different, and then Leigh 4RH put the lid on the business by picking up his hat, in which he had carefully placed the 1625 final for safety, and the tube crashed on to the verandah, and is still in bits. Leigh looked at the huge cement Dam wall, and says cement tubes for him in future. Later he found the trouble, borrowed a 1625, and helped the hullabaloo.

Sunday saw many one-day arrivals, and the W.I.A. President, 4VJ, won the frequency guessing competition. Old-timer, Harry 4HA, swapped some old time yarns with the Iron Horse 4GG and 4PN and when 4OR and 4AF landed from the Darling Downs with Kels movie camera, Tom 4PD became photographic adviser for the day. We're all still wondering why Tom was born so beautiful!

The middle of each day was—as one visitor put it—'ellish 'ot, and the cool river was immensely popular, with many lounging in the shady spots and rag chewing direct—all except 4LM. They must feed him on wound up clock springs, ants' eggs and vitality pills. He just never let up, whether the 7 Mc. band was open or not!

Jimmy 4HZ made Sunday memorable by transmitting on 80 mx and getting lovely reports on his transmission—all from 40 mx. Jim says he still doesn't believe it, and told 4JF, Jack Files, QSL officer, he wasn't to accept any cards containing such inaccurate reports. As soon as Associate Fred Cox showed up with his AR7, 4LM carefully steered it to his end of the verandah and that was that! Taking ways, that boy!

At all schedule times, Brisbane reception was checked by 4UL and 4AW, who helped a great deal. After Church hours on Sunday night the Iron Horse advised that a little get together was arranged in the Picture Theatre to distribute the prizes—4PN to comper things. When the gang went up to the hall, the whole of the local population in best bib and tucker were there waiting for the concert to be provided by the city slickers! Was there consternation? However, the boys hopped into the breach and a sing-song and a quiz for prizes resulted in a good time being had by all; Mrs. 4PN acted as pianiste. At the end, the whole audience joined hands with the Hams, and sang Auld Lang Syne with gusto.

Competition winners were: Frequency Guessing Competition: 4VJ nearest, 4AP second; Stanley River Scramble: 4LM and 4HZ dead heated on adjusted handicap; Men's Quoit Contest, 4GG; Ladies' Quoits Contest: Mrs. Cox; Ear Basher's Award: 4LM; Visitor from Furthest

Point: 2AHH; Most Distant Portable Contact: 4LM; Sudden Scramble: Divided between 4SG, 4LM, 4RH, 4HZ, 4JC.

The committee are grateful for the donation of prizes by 4YA, Stanley River Scramble Award; 2JC, The Ear Basher's Award; 2QV, Ladies' Quoits Prize; 4CU, Most Distant Visitor Award; 4PN, Frequency Guessing Competition.

A special thanks goes to 2XO for his pioneering of "get-togethers," and his help and inspiration to 4GG and 4PD.

The Ladies' Fishing Competition having produced no edible fish, they ran off a Quoits Competition on Australia Day and Mrs. Cox again won with Melba 4LM in estacades of delight with her prize, 2QV's picture of the Quads. Les 4LM and 4AP went after fish on Sunday after dark, and came struggling back with five large eels, including the Old Sam of Somerset Dam, 4 ft. 6 in. long, the five weighing close on 40 lbs. They looked awful—but did they taste good?

The radio tests showed 40 mx as patchy as expected, 80 mx giving more promise, but it is now intended to go back soon with 6 mx gear and transmit from the Scouts Hut, up on a 1,700 foot ridge above the Dam and it seems that this will prove the answer to direct radio contact between Somerset Dam and Brisbane. If 144 Mc. gear is available, this will also be tried out.

At break up on Monday afternoon, a unanimous vote of a splendid effort well organised and efficiently carried out was given by all who took part, and many kind references to the Stanley River Works Board and their Resident Engineer, Mr. de V. Gipps, were heard.

Queensland Ham Radio owes a tremendous debt to 4GG and 4PD for a highly successful pioneering effort, worthy of all their hard work. We want more!

Hunter Branch's Xmas Party

This happy social function was held on 15th December, 1951, at the Henderson Park Memorial Hall, Adamstown, and proved a huge success, due to the splendid attendance and the efforts of the committee in arranging for the various modes of entertainment. The attendance was 130 adults and 59 children.

Guests of Honour were Dr. F. Adcock (of Adcock Direction Finder fame and an Honorary Life Member of W.I.A.); Mr. P. Lobiger, Senior R.I. Newcastle District; Mr. F. Hinks, Asst. R.I. Newcastle District. An apology was received from Mr. Alan Fairhall, M.H.R., for his non-attendance due to parliamentary duties.

Members of Council present were: Mr. J. Moyle, 2JU (President, N.S.W. Div., W.I.A.); Mr. V. Wilson, 2VW; Mr. F. Phillips; Mr. L. Woolnough, 2GW; Mr. D. Evans, 2AYE. Visitors were Mr. T. Davies, 2FE, Heather his wife, and child; Mr. Bill Engling, 2AEY, wife and children; Mr. E. Marstella, 2AEZ, and wife; Mr. E. Fisher, 2DY, and wife.

The proceedings commenced at 7 p.m. and the opened doors revealed a gaily decorated hall draped with streamers, festoon lighting, balloons, etc., whilst in the centre of the hall stood a huge Xmas tree, loaded with presents. As each person or party arrived, the Hunter Branch Secretary, Varley 2SF, announced their names, call signs, etc., over a "paging system," and this gave everyone present an opportunity of knowing "who was who."

As the evening proceeded, there was all sorts of fun and games, dancing, "jolly millers," musical chairs, community singing and ventriloquism and, everybody entered into the spirit of the party.

The highlight of the evening was the entry of Santa Claus, played by Johnnie 2DZ, who, attired in traditional garb, cut a pleasing and amusing figure. At an appropriate time Jimmy 2ZC arranged a fan fair of trumpets, sound effects of a violent storm and skillfully dimmed the lights and then blacked out the hall, and during this black out and fan-fair, Santa Claus, with a sack on his back and bells on his clothes, sneaked in and when Jimmy Cowan brought on the lights to the tune of Jingle Bells, there was Santa Claus in front of the Xmas tree, waving greetings to all present—did the kiddies howl with delight!!

Santa Claus and trophy masters (Jimmy 2ZC and Harold 2AHA) then proceeded to line up the kiddies and give them a present from the Xmas tree, a bag of lollies and a piece of fruit. The ladies were then presented, each and everyone with a present from the Xmas tree and some of them (oh boy!) even wanted to kiss Santa Claus. Next the Hams and gentle-

men present were regimented into line, headed by the Guests of Honour, and they were presented to Santa Claus and received a present plucked from the Xmas tree by the trophy masters. Our esteemed member R.I., Pat Lobiger, received special attention and was requested to open his gift in front of Santa Claus, and his gift proved to be a marvellous piece of electronic mechanism. After carefully opening the parcel, Pat revealed a box which, upon lifting the lid, set into motion the bell of an alarm clock which had received a face-lift (per courtesy of Ernie 2FP). The electronic mechanism, which was actually an old alarm clock, had inscribed across the new face the words, "Wot Meter" and the four positions were marked, "Sydney Wots," "Newcastle Wots," "Correct Wots," and last, but not least, "Callifornian Kilo-Wots," this latter referring to the Sydney boys of course, as we in Newcastle are quite pure.

Our old friend, Ken 2KG, provided an excellent movie projection show, the subject being "The Last Urunga Convention" and this was followed by a colour strip of the Dorrigo Mountains. These films were kindly loaned for the occasion by the maker, our old friend, Norman Moodle, associate of Coonamble.

The buffet supper which followed was excellent and the tables were colourful and beautifully arranged by the XYLS of the committee who also were responsible for the making of the excellent savouries, sandwiches, etc. During the entire evening there was an abundance of refreshments, candies for the kiddies, and two nine watters for the adults and of course soft drinks! Two raffles were drawn during the evening and were won by the following: The G. Kempton 2CI/Bramco prize was won by V. Wilson, 2VW; the 12 bottles prize was won by Dave Evans, 2AYE.

At supper time, Lionel 2CS, President of the Hunter Branch of the W.I.A. officially welcomed the visitors and paid tribute to the excellent work of the committee and their ladies, without whom it would not have been possible to have made the evening a success.

The Secretary of the Hunter Branch, Varley 2SF, wishes to express his sincere appreciation of the whole-hearted co-operation of the following committeemen: Mr. J. Cowan, 2ZC; Mr. H. Whyte, 2AHA; Mr. I. Shearman, 2IS; and Mr. J. Clarke, 2DZ, who worked hard in the preparation of the details which made the function such a success. He also thanks all the ladies who worked so untiringly in their assistance to the committee in such a practical manner, and without the XYL's advice, the party for 3/- per head could not possibly have achieved such successful heights.

DX NOTES BY VK4QL*

It's a long time since I have heard 14 Mc. so poor as the month of January produced. Anytime I listened to the band, it was always the same story almost day after day—a dead band. Even the odd Ws, who were coming the long way round in the mornings, had disappeared towards the end of the month. Europeans, well one or two round 9 p.m., was the best I could do. Looking at my listing, it's the smallest ever for this band. Even interstate contacts have been out, that is for good solid signals. Other parts of VK seem to have fared somewhat better, but not up to expectations.

The bright spot here has been 7 Mc., especially when the cyclone was raging. As the cyclone was at its peak, this band was very good in the mornings, but when the cyclone eased down, so did the DX on 7 Mc. Evenings on the band were of not much use. The break in this band enabled me to bring the worked total to 65. Other than 9XK and 2DG, no others were heard in there.

Static has been troublesome at times as far down as 14 Mc. and seemed to be general on 7 Mc. with all DX worked. ZD4AB told a ZS he could hear practically nothing through it, which was unfortunate from my point of view. The catch of the month for me was VU5AB in the Nicobar Islands. He was VS1ED, and as my QSL was posted in Singapore, he has now

apparently left VU5 again. One very disturbing note on 7 Mc. is the appearance of Radio Pakistan on 7010 Kc. with a very hefty signal.

The band survey, with times in GMT, Z time, and stations worked as *:-

3.5 Mc.: Have no reports from anybody on this band. 7RK has been inactive for most of the month, so has nothing to report. Managed to get across to W myself a couple of times, heard a few others and KH6, but static was the problem most of the time and it was hard to read anything. ZLs varied in strength from night to night.

7 Mc.: Other than my own activities, there is little to tell of for this band. Evenings were of little value, and at all times the band was erratic, but as mentioned this band paid off up here. My listings are VU5AB*, VQSCW*, 9S4AX*, KP4DV at 2100z, AP4UAK*, FA8BG*, CR5AE*, SUIWP, CN8FO*, SUIGO*, MP4BAM, 4UAK*, CR5AF, ZD4AB, ISIAHK. In addition to numerous South Africans, Europeans and a few VS. 5JE has not been doing much on the band and worked nothing outstanding, but with his XYL away, he intends to try the band a bit harder. 9XK was heard having a struggle with CR5AE one morning, but Russ does not seem to have heard the same DX as I managed, yet 5JE was working Europeans that I could not hear when the band went off here.

14 Mc.: 2ACX, who will be QRT for some time due to change of QTH to Gratton, nabbed FL8BC, MP4KAE and FY7YB, bringing his total to 220 worked. Art is still chasing EA0AC and ZS8MK. 2DG improved his score with MP4BDD* (Bahrein), FB8BB*, EA0AB*, 9B3AA (Bulgaria, QSL via 9S4AX). Congrats to Keith on winning the Open Section of the VK-ZL Contest for '51. 20W finds the bands not very much to his liking, but just the same lists SUIAD*, SUIFA, SUIGB, VQ4CM, AP4A, VQ4AQ, EA6AM, 4X4BX, 4UAJ, LU8EN*, HSIAS*, FN8AD*, KG4AF*, FBEX/AR*, ZS1BM*, MP4KAE*, MP4BDD*, ZBIAJX* EQ3FM*. ZS1BM gave Gordon his first South African. 3CX has been trying to hook VP3VN, PZ1AL and YN1AA with negative results, but got on to JA0IJ (Iwo Jima) and EK1CW giving him a score of 168. 4QL: VQSCW*, FRTZA*, FM7WF* 2100z, CN9R, EQ3FM, MP4KAE* (via R.S.G.B.), IS1CNG, FF8AJ*, VQ8CB, FF8AB, F08AB*, 4UAD, 4UAJ*, ZD6HN, JA0IJ, EA8BE. 7RK, as mentioned earlier, has been inactive, due to a shack clean-up, but now that he has found his rig, is going to produce some activity. 9XK has sneaked up to 106 worked with things like CN9R*, CR9AR*, EK1AQ*, EK1CW*, ET8R*, CT3AE, PK4DA*, F78AC*, FB8AG, VQ8TH, M13LK*; Russ heard ZD1SD but no luck.

28 Mc.: This band seems to be useless. 4EL reckons it's hardly worth while listening there.

The QSL situation is causing heartburnings as usual, some VKs getting one, whilst others miss out, from the same rare DX station. 2ACX reaches 205 confirmed with ZS8K, 3A2AC, FY7YB, 3A2AD, 9S4AR, 2DG, EA0AB, 20W, CT3AA, 9S4AX, FK88AL, ZB2I, DU1EC, giving him now 59 cfd. DU1EC looks like the boy to watch for that hard to get DU QSL. 4QL: ZD1SD, VU5AB, FRTZA, C3MY, 9XK, FRTZA and VQ8CB. The grape vine tells me 5FL has reached the nice total of 204/197.

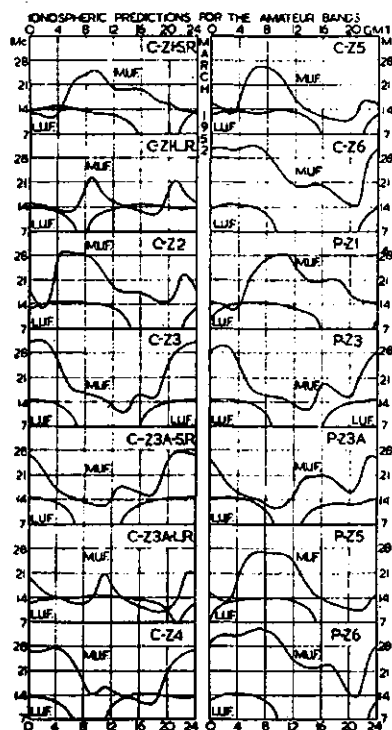
It would appear that a few of the gang are counting the 4UA prefix as a new country. It will be found this is not a country but a prefix allotted to the United Nations, and therefore is likely to appear in a number of countries. For example, 4UAD is in New Delhi, 4UAJ Jammu and 4UAK in Rawal Pindi, Kashmir is not at the present time a separate country. Just received a QSL from 4UAK and the information on the card is: United Nations Military Observation Group, India and Pakistan, Field Observation Team, Kotli, Pakistan.

Don't pass up JA0IJ as just another JA station. He is in Iwo Jima. The reason for the JA0 is not known to date. EQ3FM looks like one of those guys who promises a QSL, but after waiting over a year they are still not being seen. CT3AA is of a different category, and keeps his promise. On my QSL from ZD1SD he said he is having great difficulty in convincing the other ZD1 Hams he has really worked VK, as, he said, VK is an unheard prefix over there. Is anxiously waiting my QSL to convince the "Doubting Thomas." Don't pass MP4KAE up as another MP4 like 4EL did. His QTH is Kuwait.

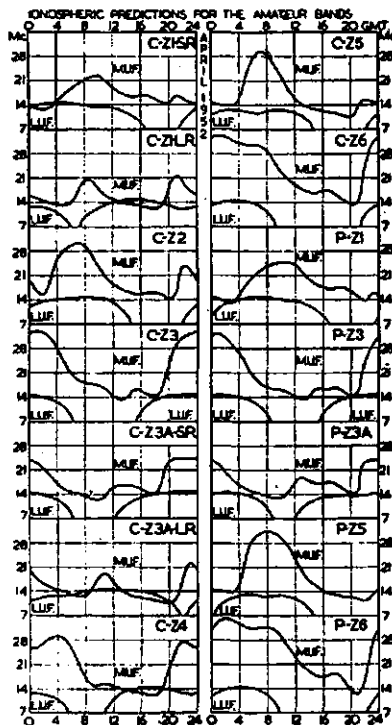
The thought for the month is an extract from a Woman's Magazine which the XYL put in my lap one day. "Her husband was a

Ham Radio addict and he drove her wild by sitting for hours at the mike while the lawn sprouted paspalum and dandelions. "You think you will get Hollywood this morning? Well you won't I've taken out a valve from the set, and I won't tell you where it is until the grass is cut." What are your thoughts? Cheers and keep the lawns cut, blokes.

PREDICTION CHART FOR MARCH, 1952



PREDICTION CHART FOR APRIL, 1952



* Flt./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

DX C.C. LISTING

PHONE			
Call	No. Ctr.	Call	No. Ctr.
VK3EE	10 156	VK4WF	18 121
VK3JD	1 155	VK4JP	8 114
VK3BZ	3 154	VK3AWW	14 112
VK4HR	12 154	VK4DO	20 109
VK6RU	2 149	VK4FJ	21 109
VK6RW	4 145	VK2ADT	13 102
VK4KS	9 135	VK2AHA	15 102
VK3LN	11 132	VK6PJ	19 101
VK6DD	8 126	VK3E	5 100
VK3JE	7 123	VK3GG	18 100
VK4WJ	17 122		

C.W.			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 200	VK3JE	21 124
VK3PH	15 172	VK3VD	27 123
VK4HR	8 166	VK3EK	3 122
VK4EL	9 162	VK5FH	31 119
VK2EO	2 183	VK3JI	25 118
VK3CN	1 151	VK3UM	12 116
VK6SA	28 150	VK4DA	7 113
VK3VW	4 143	VK3PL	38 113
VK2QL	5 142	VK7LZ	17 112
VK3KB	10 138	VK4RC	13 107
VK8UB	18 138	VK3YL	39 106
VK2GW	18 132	VK2YC	34 103
VK5XK	23 132	VK3HT	37 103
VK3CX	26 132	VK3APA	14 101
VK4DO	20 129	VK3NC	19 101
VK4FJ	29 129	VK2OA	32 101
VK5BO	33 129	VK7RK	22 100
VK3XK	30 128	VK7LJ	24 100
VK4QL	36 128	VK2AEZ	35 100
VK4RF	11 125		

OPEN			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 213	VK3VQ	48 116
VK4HR	7 187	VK3AWW	45 115
VK6RU	8 183	VK3JA	43 114
VK3E	12 180	VK2ADT	14 113
VK3HG	3 171	VK3PG	47 111
VK2DI	2 170	VK3MM	49 111
VK3KX	1 167	VK4RC	21 110
VK8KW	13 165	VK3ZE	34 110
VK4EL	10 163	VK3ZC	25 108
VK4DO	15 157	VK3YL	11 106
VK4FJ	32 155	VK3AWN	38 105
VK4KS	24 149	VK2VN	18 104
VK5FL	26 143	VK4UL	27 104
VK3MC	5 139	VK6PJ	44 104
VK3OP	19 137	VK8PW	50 104
VK6DD	22 138	VK2HZ	17 103
VK3LN	29 135	VK7KB	30 103
VK2ADE	28 133	VK2TI	37 103
VK2AHA	9 128	VK3HO	38 103
VK4WF	40 128	VK6DX	42 103
VK2AHM	20 125	VK7RK	31 102
VK2NS	16 123	VK4TY	35 102
VK3HT	41 123	VK9GW	48 102
VK3JI	33 119	VK2ACX	6 100
VK7LZ	23 116	VK2TG	39 100

AMATEUR CALL SIGNS

FOR MONTHS OF DECEMBER, 1951, AND
JANUARY, 1952

ADDITIONS

- VK—** New South Wales
 2FN—F. G. Noble, 43 James St., Lismore.
 2ACK—C. Jeffery, 33 Seymour St., Hurstville.
 2AMY—A. R. Morgan, 128 Victoria St., Ashfield.
 2ARO—R. C. Overton, 62 Mowbray Rd., Willoughby.
 2ASY—S. A. Sibly, 5 Collins Ave., Rose Bay.
- Victoria**
 3IJ—D. R. Twigg, Bank St., Avenel.
 3LJ—R. W. Field, 680 North Rd., Ormond, S.E.14
 3NP—M. J. Marshall, 28 Cloverdale Av., Toorak, S.E.2
 3OL—F. C. Bibby, 10 Westbourne Gr., Camberwell, E.8.
 3SX—L. R. Bradshaw, 9 Grange Rd., Toorak, S.E.2
 3VU—J. C. Chippindall, 29 Waverley Pde., Pascoe Vale.
 3AMG—C. W. Meech, 22 Clendon Rd., Armadale
 3ANR—N. Cooper, 13 Moor St., Sandringham, S.8
 3ANU—R. Coffin, aboard vessel "Carole G"; Postal address: 10 Dillon Gr., Glen Iris.

Queensland

- 4MT—R. C. Morris, 39 Kent St., Rockhampton.
 4NV—L. L. Neaverson, "Hollandia," Lamrock St., Holland Park, Brisbane.
 4VD—V. S. Bell, 35 Jones St., Wandal, Rockhampton.
 4ZO—J. Hillhouse, Carpet St., Collinsville.

South Australia

- 5JO—J. E. McAllister, 126A Chief St., Brompton.
 5QY—C. W. Richardson, R.A.A.F. Station, Darwin, N.T.

Western Australia

- 6LC—E. L. L. Cordell, Flying Doctor Service, Killarney St., Kalgoorlie.

Tasmania

- 7CH—C. Harrison, A.N.Z. Bank Ltd., Moonah.
 7PF—P. D. Frith, 60 Lyttleton St., Launceston.
 7RC—R. C. Ireson, c/o. D.C.A. Aerodrome, Western Junction.

ALTERATIONS

- VK—** New South Wales
 2CZ—128 Wangee Road, Lakemba.
 2FA—30 Strathlora, Strathlora.
 2JK—"Omapers," Blaxland Road, Wentworth Falls.
 2LB—383 Cabramatta Road, Cabramatta.
 2MA—10 Lucinda Avenue, Wahroonga.
 2OE—149 Hoof Street, Grafton.
 3QU—61 Methven Street, Lithgow.
 2SV—248 Buffalo Road, Ryde.
 2VV—65 Herbert Street, Rockdale.
 2XB—34 Westbourne Road, Roseville.
 2YV—2 Tenilis Road, Northbridge.
 2AAE—Lot 9, Chisholm Street, Turramurra.
 2ACM—23 Botony Street, Randwick, N.S.W.
 2AFQ—Vessel "Syangie," Campbell's Boatshed, Rose Bay.
 2AFS—R.A.A.F. Station, Williamtown.
 2AOM—Flat 26, 42 Macleay St., Potts Point.
 2ASB—20 Campbell St., Ainalie, Canberra.
 2AZO—35 St. George's Crescent, Drummoyne.

Victoria

- 3AC—156 Moreland Road, West Brunswick.
 3BF—Lot 16, Quinus Road, East Bentleigh.
 3DO—2 Wadham Street, Pascoe Vale South, W.7.
 3DZ—207 Pt. Nepean Road, Gardenvale, S.4.
 3EF—206 Scott Street, Warracknabeal.
 3GN—Cr. Speed St. & Toucher Ave., Ararat.
 3HC—"Yanagin," 45 Banksia St., Heidelberg.
 3IZ—26 Batt Avenue, Wodonga.
 3JU—Argent Road, Cornella.
 3JK—Churchill Island, Newhaven.
 3RU—Lot 17, Koonung St., Nunawading.
 3RV—Cr. Boulevard & Centre Ave., Eildon.
 3VQ—480 Beach Road, Beaumaris, S.10.
 3WJ—20 Ruby Street, East Preston, N.18.
 3YR—11 Derry Street, Esmond West, W.5.
 3ABN—C/o. Payneville P.O.
 3AE—8 Kerry Parade, Box Hill North, E.12.
 3AJD—18 Sobraon Street, Shepparton.
 3AKP—Fisher Street, Stawell.
 3AMC—Hampton Villa, Princes St., Drysdale.
 3AOP—46 Neill Street, West Geelong.
 3ASC—17 Chloris Street, Caulfield Sth., S.E.8.
 3ATN—Cumming Avenue, Birchip.
 3AWU—27 Berry Street, Regents Park.
 3AZK—7 Bent Street, Bentleigh.

Queensland

- 4BY—Fairview Hill, Gympie.
 4DR—257 Rainbow Street, Shorncliffe, N.E.7.
 4FT—Flat 74C, Victoria Park Housing Commission, Brisbane.

- 4GG—John Street, Yarraman.
 4MD—22 Baildon Street, Kangaroo Point.
 4SE—65 Adelaide Street, Maryborough.
 4TD—Hope Street, Cooktown.
 4WJ—C/o. Power House, Quilpie.
 4XJ—4 Catermill Street, West Bundaberg.
 4ZS—44 Prospect Street, Rockhampton.
 4ZZ—Hut B, Harristown, T/A.

South Australia

- 5BI—Croydon Boys' Technical School, Croydon.
 5DF—Kilron Point, Port Lincoln.
 5DR—Cape Borda Lighthouse, Kangaroo Island.
 5MH—29 Main Street, Lockleys.
 5WX—9 Blairgowrie Avenue, St. Georges.
 5XR—20 Pine Street, Peterborough.
 5YQ—42 Adelaide Terrace, Ascot Park.

Western Australia

- 6DQ—151 Gullercliffe Street, Scarborough.
 6KX—2 West Street, West Perth.
 6RB—148 McDonald Street, Joondanna Heights.

Tasmania

- 7CA—56 Trevallyn Road, Launceston.

Territories

- 9HI—Laws Road, Port Moresby.

DELETIONS

New South Wales

- 2FU—Cancelled.
 2HI—Cancelled.
 2HX—Cancelled.
 2HY—Cancelled.
 2KJ—Cancelled.
 2ON—Cancelled.
 2PY—Cancelled; now operating 9PY.
 2QA—Cancelled.
 2WK—Cancelled.
 2ABJ—Cancelled.
 2ACM—Cancelled.
 2AEO—Cancelled.
 2AOG—Cancelled.
 2ARB—Cancelled.

Victoria

- 3CN—Cancelled; now operating 7CH.
 3LR—Cancelled.
 3QY—Cancelled; now operating 8QY.
 3ABV—Cancelled; now operating 7PF.
 3AFK—Cancelled.
 3AFU—Cancelled; now operating 2FN.
 3AHX—Cancelled; now operating 3VU.
 3AOZ—Cancelled.

Queensland

- 4BO—Cancelled.
 4CT—Cancelled.
 4DD—Cancelled.
 4EN—Cancelled.
 4JG—Cancelled.
 4KH—Cancelled.
 4LF—Cancelled.

South Australia

- 5IM—Cancelled; now operating 3AMG.
 5IR—Cancelled; now operating 3UN.

Tasmania

- 7GH—Cancelled.

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- ★ Type OT711-11 Low-level Output Transformer, radio-metal core, 20,000/600 ohms, match p.p. stage, F.F.R. 31/6
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- ★ Type IT557-6 Interstage Transformer, 20,000/80,000 ohms for single ended stage, V.F.R. 31/6
- ★ Type IT504-10 Input Transformer, low-level, 200/120,000 ohms, mumetal core, F.F.R. 49/6
- ★ Type IT577-10 Input Transformer, low-level, 500/100,000 ohms, mumetal core, for use with shunt fed primary, F.F.R. 49/6
- ★ Type IT580-6 Input Transformer, low-level, 600/150,000 ohms, mumetal core, for use with shunt fed primary, F.F.R. 49/6
- ★ Type LT310-10 Line Transformer, 50/600 ohms, balanced to unbalanced line, mumetal core, F.F.R. 49/6
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- ★ Type Z1013-1 Filter Choke, 7 henry, 250 Ma. 45/-
- ★ Type Z969-1 Filter Choke, 30 henry, 80 Ma. 37/6

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Secretary: David H. Duff (VK2EO), Box 1734 G.P.O., Sydney.
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Secretary: L. R. Bradshaw, VK3SX.

Administrative Secretary: Mrs. S. May, Law Court Chambers, 191 Queen St., Melbourne.
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Secretary: G. M. Bowen, VK3XU, Box 1294K, G.P.O., Adelaide.

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Secretary: H. B. Lang, Box N1002, G.P.O., Perth, W.A.
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Meeting Night: Second Monday of each month.
Divisional Sub-Editor: R. H. Atkinson, VK6WZ, Box 127, Geraldton, W.A.

TASMANIA

President: R. O'May, VK7OM.
Secretary: L. W. Edwards, VK7LE, 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 St., Hobart, Tasmania.
Zone Correspondents: Northern: C. A. Cullinan, VK7XW, 12 Montrose Place, Launceston; North Western: R. K. Wilson, 4 Menal St., Burnie, Tasmania.

FEDERAL

COMMERCIAL INTERFERENCE IN THE 7 Mc. BAND

Many have been the requests by Amateurs for something to be done about the Commercial Interference gradually dominating the 7 Mc. band. This matter has been taken up with the Department on numerous occasions, but it appears that very little could be done about it.

It is doubtful whether many Amateurs are fully aware of the full story surrounding allocations in this band and the difficulties any administration would have in taking steps to clear it for Amateur use.

The editorial in the December, 1951, issue of "QST" gives a rather interesting and comprehensive outline of the general problem in this band and, whilst it concerns mainly the effects in the northern hemisphere, it does also give a clear picture of the frequency allocation arising from the Cairo (1938) and Atlantic City (1947) Conventions whereby the 7000 to 7200 Kc. (as used in Australia) in the southern hemisphere is a shared channel.

Australia, like America, preserved portions of the 7 Mc. band exclusively for Amateur use, but it will be observed that the allocation is at the discretion of the national administrations. So whilst we are granted 7 to 7.2 Mc. exclusively as far as our administration is concerned, other administrations permit broadcasting down to as low as 7.1 Mc. How can we win? Anyway, boys, you read December "QST."

DEFENCE

At 2.30 p.m. on Monday, 4th February, members of Federal Executive received a two-hour hearing at the sitting of the Joint Services Committee to discuss proposals whereby Amateurs could be of assistance in any defence plans for times of national emergency.

The W.I.A. proposals were discussed with great interest and hopes are running high for future results from this meeting. The accent is one defence—both civil and military—and every Amateur should take steps now to interest himself in constructing reliable portable equipment for use in the v.h.f. and l.f. bands. Don't wait but be prepared for any plan that may evolve. If the Institute is successful in its negotiations it will be the greatest opportunity Amateur Radio has ever had to show what it can and will do.

TRAVELLERS ABROAD

Once again the opportunity has presented itself for Federal Executive to give a letter of introduction to a member of the Institute travelling abroad. This time it is to J. L. (Len) Crooks, VK7BQ, introducing him to the members of the R.S.G.B. in England. Len also proposes to travel in Europe. We hope he has an enjoyable trip and a safe return to his native land.

Don't forget, any time you propose travelling outside of VK to contact F.E. through your Council and obtain a letter of introduction to the society in the country in which it is proposed to travel. National contact is a very important thing and does more to cement the bonds of Amateur friendship when done in person than by any other means.

SILENT KEY

It is with deep regret that we record the passing of:—

VK3VK—Mr. M. Bowen.

ADDITIONS TO DX C.C. LIST

The following countries are now eligible for the DX C.C. List:—

Guinea, Spanish EA0
St. Paul and Amsterdam Is. FB8

Contacts with Newfoundland prior to 31/3/49 will be counted.

W.A.C. AMERICA

Requests have often been received as to how one goes about obtaining the W.A.C. (Worked All Continents) America Award. This award is presented by the I.A.R.U. to any Amateur who can give satisfactory evidence that he or she has contacted each of the six recognised continental areas of the world by two-way communication with other Amateur stations. The main continental areas are: North America, South America, Europe, Asia, Africa and Oceania.

By agreement with the I.A.R.U., the necessity for applicants to forward cards to America is obviated by the appointment of an Officer in the Institute to undertake the checking of the verification cards submitted in support of the claim for the award.

An applicant for the award submits his written application, together with his verification cards, to the Secretary of his Division. The Secretary then verifies that he is a financial member and passes the application to the Federal QSL Manager, Ray Jones, VK3RJ, c/o. Box 2611W, G.P.O., Melbourne, C.I., who, after checking the verifications submitted, forwards the application to Federal Executive. The Federal Secretary applies to the I.A.R.U. on behalf of the applicant and the certificate is forwarded out in due course.

A specially endorsed certificate is available to an applicant who makes all six contacts on phone.

When applying please don't forget to give your name and address and return postage for your cards.

FEDERAL QSL BUREAU

RAT JONES, VK3RJ, MANAGER

The QTH of AU4J is Ted Gull, United Nations Radio, Jammu, Kashmir.

Results of the Third All-European DX Competition, 1949, have just come to hand. The Australian section list is as follows—C.W.: 6FH, 2EO, 3XK, 2GW, 2RA, late 4RC, 3RJ; Phone: no VK stations listed.

Writing on 24th November, 1951, G2FTK makes enquiries of Bill Algar, VK3WH. Writer states that after spending 12 months in Coven-

try and making many friends, Bill left to go to Sweden, but the Coventry gang have heard no news of him since. They pass along their best wishes and would like to hear from him.

The Cuba Radio Club again send information on how to obtain the W.C.A. (Worked Cuba Award) and express surprise that they have had no VK claimants so far. Prime requirement of the award is having worked stations in CMI, 2, 3, 5, 6, 7 and 8 districts. Other requirements can be ascertained from this Bureau.

ZS6BW, who is handling the QSLs for ZS2MI, operating on Marion Island, advises that ZS2MI is on from 0400 to 0600 G.M.T. on three Sundays in each four. He uses the following frequencies: 1st choice 14350, 2nd choice 14180. His c.w. frequency is 14060 but unfortunately he prefers phone. He will not answer calls on his own frequency. He will be on Sundays, 10th, 17th and 24th February, then miss one Sunday, then on again Sundays, 9th, 16th and 23rd March, and so on.

Reviewed rules of the Worked All Europe Award are to hand from the D.A.R.C. If the Editor can find the space, it is proposed to briefly list the requirements for all awards in the near future.

An interesting batch of cards sighted during January were from EQ3FM, of Teheran, Iran. QSL address, however, is: Sgt. Frank Murphy, U.S. Mil Mission, A.P.O. 205, care P.M., New York, U.S.A.

A correspondent seeks information on VK2POM who has been heard on 7 Mc. phone stating his QTH is Katoomba. Sounds like a "black" one.

B.E.R.S. 104 (Treb) has broken the silence. In addition to performing relief duties at Nhill at end of 1951 and subsequently enjoying annual holidays, Eric has been busy logging stations in the recent N.F.D. and logged 89 QSOs from portable stations in the Contest. Is thrilled with recent receipt of card from FB8ZZ (1950-51 expedition to New Amsterdam Island). Also repeatedly boasts of having received a card from VK1VU. Must have caught him with his heart very wide open Treb. You are the only one I have heard of possessing such a "treasure."

NEW SOUTH WALES

NORTHERN SUBURBS

There has been little activity in this area since Xmas, though bush fires have caused some excitement in the Hornsby District. Ted 2FE had a very narrow escape in Mt. Kuringal when fires completely surrounded his home which he was extremely lucky to save. Three Hams, among others, arrived to help with the fighting. Recently our Secretary had fires within a few hundred feet of his home; Dave was last heard of sitting on his beam pole (with a bucket of water?). 2AAJ planning to build a beam for 20. 2FD heard on 20 mxt phone. 2AIE heard after DX on 20. 2AEN heard on the air again after about three months' spell.

It is good to hear some of the v.h.f. gang on the lower frequencies, 2ANF and others active on forty. Max 2OT, from Broken Hill, called on Dave 2EO on his way through to his new QTH in Newcastle, where a 75 ft. tower will mark the spot. Dave 2EO operated portable

on his car trip to Melbourne and back, having daily contacts with 2AYP during the trip. It is good to hear Dave once again on the air when his job as Divisional Secretary allows. News about the activity of Hams in any area would be appreciated by the Sub-Editor and also by the readers of "A.R.," Box 1734, G.P.O., Sydney, or 9 Russell Avenue, Wahroonga, JW 2604.

WESTERN SUBURBS

There has been considerable activity on the various bands during the past few months by members residing within the limits of the Western Suburbs. 2ANF and 2MQ are doing very well on 2 mX these days, near nightly skeds with 2NS and no doubt will eventually break into the Forbes district in the near future. 2ARF went away for Xmas and finished up having an excellent Xmas dinner (one glass milk) in hospital, back on deck now fully recovered. 2OQ now on 144 we hear, should do well on this band Harry. 2AHU is on the air again now, is to be congratulated, along with Joyce, on the new second op. Hear that young Keith is colour conscious already.

2AAB still looking for DX, has totted his list of countries up ready for DX C.C., and

must be getting pretty close. Heard Joyce 2AMJ putting the usual good signal out of late, she never seems to be satisfied with the RX, but works them just the same. 2AWU talks a lot about beams, the vertical beam should put out the herbs in the right direction. 2APL heard frequently with a good signal despite the skip.

The Burwood Radio Club meets each Tuesday night at Greenwood Hall, Liverpool Road, Enfield. A good night assured to all who care to attend. 2AIR is building a real Tx for 144, gets out from the hollow quite well. 2AGX is on holidays these days, but the local fort is being held quite well by 2APT, 2XH, 2VY, 2QP, 2NJ and a few more of the local boys. 2ABA has a very f.b. signal on 14 Mc., another beam coming up in the near future.

2AAH quite active again despite the study, nice drop of f.m. on 20. 2ACD busy with typing, work and trying to work DX, but getting interested in 144. 2AGG in camp at Ingleburn these days and so soon after getting his ticket as well. 2ATL was on holidays but heard on 20 occasionally. 2KS still works DX the hard way in the morning. 2ANC has a beam which appears to be working out quite nicely. 2ARA heard on 20, has had a battle getting the Tx down there and was heard talking of getting on 10.

BROKEN HILL AREA

With Max 2OT's departure from Broken Hill it will, in future, be my pleasant task to keep the flag flying in this part of the Western Zone. Max left on a caravanning-radio holiday via Mildura, Bendigo, Melbourne, Albury and Canberra before taking up his new post as Electrical Master at a Newcastle school. He has been heard all the way and contacted many Hams along the way, personally also. Another teacher on 2VR, has been transferred to the "addition and subtraction" staff at Bathurst. Before leaving, he was putting the finishing touches to the car radio, converter and Tx for 40. 2DQ is renewing old acquaintances and making many new ones while in VK5; Dud is active on 50 Mc., but is having trouble taming the p.p. 807s.

2AMX has been on vacation visiting VK5 Hams along the trip. 2RV still too busy fixing b.c. sets so he can give them all b.c.i. when the customers get them back. 2AFW is working out how to suspend or otherwise mount a Type A Mk. III, on his newly acquired motor bike and if solved, then where to tuck away the extra six volt battery. Absence of any Silver City notes any month may mean the National Safety Council can quote another case! —2AFW.

NORTH COAST AND TABLELANDS

Christmas and New Year saw quite a lot of the chaps on holidays and many of them visited other "zones," we too had many visitors from other zones as well. We are always happy to see anyone travelling through; if you come this way at Easter, don't forget the Urunga "Do" and all the prizes that can be won.

A newcomer to the air, Alan 2ARQ, holidayed near Grafton and was operating portable. 2ADT and 2JC spent quite a time at Urunga and worked regular 144 skeds with 2XO. Hart put up a second tank on his shack but omitted to connect it up with the overflow from the original one. Last heard, Hart was paying for water to be carried—punishment for his omission. Not satisfied with that, he fell twice from his launch, but caught a few taller. Heard Doug 2SH early in the year teasing Perce 2QV by drinking his health—made one thirsty. Bill 2ZY of Murwillumbah has been heard around 40 again, reason for his absence was a speed-boat and a YL!

Len 2LR is busy re-building his shack which incidentally was "pre-fabbed" before erection. Norm 2RK was very active in the N.F.D. and was heard rattling up a good score. Ken 2APB has managed to buy himself a house, so it looks like Audrey will have to run him down the aisle earlier than June as predicted last month. Highlight for the N. Coast boys was the VK4 "do" at Somerset Dam; it was a good show for a first effort and future gatherings have great possibilities. The N.C. was represented by 2LR and 2AHH, both of whom enjoyed the hospitality of the VK4 boys and met many of their regular contacts for the first time.

Your scribe, in journeying to Kyogle to meet Len 2LR, had the privilege of meeting many of the N.C. gang and takes the opportunity to thank all those that made the trip so pleasant. Antenna farms at 2XO, 2APB, 2LH and 2LR were inspected and 2XO has more beams around the place than Radio Australia. I hope to meet more of the crowd next year. Would like to hear from the boys in Inverell and Narrabri. Don't forget, it's a date at Urunga at Easter.

HUNTER BRANCH

The big news this month is, of course, the result of the all band section of the Jubilee DX Contest. All extend hearty congrats to

fellow Hunter Hams 2DG, 2AHA and 2ZC, on not only maintaining, but putting on an even higher level, the good name of Hunter Branch. Keith 2DG was well rewarded for fine operating when he received the magnificent trophy for first position in c.w. Harold 2AHA was not far behind in second place, followed by Jim 2ZC third. First three places! Double congrats to 2AHA for his marvellous effort in gaining second place in phone section also. We are very proud of you chaps and the job you've done. Although we are sorry Harold didn't come in first in phone section, we offer hearty congrats to 4KS. Keith can certainly handle a contest. We also congratulate the VK3 who came third.

President 2CS, accompanied by Bill 2XT and Johnny 2DZ, not forgetting Keith 2DG, represented the Branch at the Annual Dinner of the N.S.W. Division held in the "Big Smoke." Lionel puffed with pride when "his boys" names were announced as winners in the Jubilee Contest, and we understand he made an excellent speech in supporting the toast to the Federal Government, during the course of which he subtly reminded those present that Alan Fairhall, M.H.R. (2KB) who presented the prizes on behalf of the Government, was also a Hunter Ham!

Associate Ron Appleby also made the trip down to the Dinner. Bill 2XT, who has always been a hard worker for the W.I.A., really deserves a medalion himself for taking the boys (especially 2DG) down and back. After taking 2DG home to Maitland, he then drove him out to the b.c. station at Lochinvar where Keith works. Bill reached his home QTH about 0430! That's the Ham spirit plus. 2JZ also co-operated and worked 2DG's shift.

Anna Bay was QTH chosen by our team in National Field Day using call sign of 2AHA/P. The advance party comprising Secretary 2SF, Ivan 2IS Associates John, Borg, Les Baber, Syd Daniels, with 2ASJ set up camp on the Saturday afternoon. Despite a few wings about bluntness of axe, 2IS felled four poles which were tied all over 2SF's utility and with Les hanging on by seat of his pants, some dare-devil driving by Varley, a point very close to Tx site was safely reached. The poles were erected quickly despite southerly gale roaring up from the sea below and a test QSO was soon in progress. This made the ops. hungry (and thirsty!) and while 2IS' buggy vanished in the direction of Nelson's Bay, Associates John and Les returned to town for the night. Meantime, 2SF, assisted by Ass. Syd, prepared Dinner, while 2ASJ sat and watched—until Greenhead ants got up his pants! Ivan arrived back with a scrumptious meat pie and a couple of squat tubes, the emission of which caused 2SF and 2IS to modulate in a peculiar manner when further test QSOs were held! (No wonder the battery ran flat!) Ivan and Varley decided to make trip down to 2IS' shack where more tubes needed testing—they arrived back for breakfast! John and Les returned shortly after and the first two Contest contacts were made soon after 0900. Then Chief op, 2AHA and George 2AGD arrived and Harold soon had things running smoothly.

Harold's RA10 Transceiver did a mighty job with 5 watts phone and 7 watts c.w. All went well until 1930 when heavy rain put 2AHA/P off the air until 2035 when we made a comeback for the last few minutes. The three Associates had Ham Radio the hard way, but they did a grand job assisting in many ways. Harold was master operator, but was ably assisted by Varley, Ivan and George.

An item of interest comes from Johnny 2DZ. He has learned from a letter written to him by his sister in London, who was present at a reception accorded to Capt. Carlsen, of the "Flying Enterprise" fame, that Carl belongs to the Ham fraternity and operates from his home town in New Jersey with c/s W2ZXM. It was pleasing to see Vice-President 2AFS in the chair at the January meeting whilst President

15th B.E.R.U. CONTESTS, 1952

Unfortunately the rules for these Contests arrived too late for publication in full. The event will be divided into three sections, namely:—(a) Senior telegraphy (max. licensed power); (b) Junior telegraphy (25 watts max. input); (c) Telephony (max. licensed power).

The contest periods will be as follows: Telegraphy (Senior and Junior): From 1200 G.M.T., March 29, to 1200 G.M.T., March 30, 1952. Telephony: From 1200 G.M.T., April 5, to 1200 G.M.T., April 6, 1952.

Further details of the rules, etc., may be obtained from your Divisional Secretary or the Federal QSL Manager.

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MAXWELL HOWDEN
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VICTORIA

2CB gave interesting talk on Double Conversion Receivers.

Nettee of Meeting.—The March meeting will be held in Newcastle on Friday, 14th. Further details over 2WI. An interesting evening is assured.

COALFIELDS AND LAKES

With the continued dry weather in this zone the strongest signals seem to emanate from the power leaks which seem to be universal—poor quality coal I suppose. Harry 2YL managed to get in a few contacts on 6 and 20 just to prove that the gear still works, but the elements have taken toll of the antenna farm. Bruce 2ALR still displays two aerials, but I have not heard them being excited for some time. Chris 2PZ cleaned up his work bench and found his power supply half re-designed. However, he cannot recollect the intended design or where he left off. He is contemplating a trip up the tower with the paint brush (ZEO please note). 2ADT gave the game away (almost) for a whole month and returned much refreshed. Quite an effort to stay away with so much DX on 6 and so many messages to tell him how good it was.

Up at Muswellbrook 2ANU is building a new converter for 144 and planning portable gear for his holidays in a few weeks' time. We are all waiting for 2VU to get cracking on 2 mx, but Geoff is still very busy with odd jobs round the house. That's will-power for you, or is he receiving drive from an external source. Nothing heard from Kurri, but I guess those boys are hatching something big or lying in wait for a signal to come through on 40. There is little to report from the Lakes area. 2KR has been busy with carnivals and 2RU has been beset by a power leak greater than ordinarily. What are you other chaps doing these days?

WESTERN ZONE

Heat, holidays and a few bush fires kept many of the zone's Hams from their shacks. As 7 Mc. was unusable for most of the month it was difficult to keep track of all the activity.

So far all the gang residing in the Blue Mts. have escaped the bush fires. Jack 2EF at Warimoo was fortunate as two houses were burnt out on one side of him—14 altogether in the street—glad to see you miss it Jack. 2AZO's week-ender at Valley Heights however was a total loss. Believe there is a new Ham in Dubbo but no call yet. 2AGN has migrated to VK3, we are very sorry to lose Graham. In Bathurst main activity centres on 144 where Trevor 2NS is using all his wiles in putting a bigger and better signal into Sydney. Tom 2AMR journeyed down to Sydney to receive the medalion for second place in the Jubilee Relay, presented at the Annual Dinner—congrats OT, 2EI, of Parkes, is heard on 144 only. John 2AMV spends more time in the baths than the shack.

2WH went down to Sydney for his usual monthly break—saw Malcolm 2FO and Trev 2NS on the way. Ex-2LY, of Katonba, now a VK3 was back over Kings and was active with some of the gear he left at home. Rod 2ACU journeyed to Vic. and S.A. during the holidays, visited 3II and Col 2ASP of Eden on the trip. 2JX of Wentworth Falls has a new antenna (two elements) on 50, threatens to describe it for A.R.! 2LZ mainly building, but sometimes on 50. 2EX threatens to re-build. 2HZ still trying to work a W in the morning on 40 round the long way, has a couple of QRZs to date, but that is all. New one in the zone is 2ART, ex-4YH, at Glenbrook, but not heard to date.

VICTORIA

EASTERN ZONE

As my assistant, 3SG, is busily constructing a new p.p. 807 final, once again it is my duty to record (or invent) news of this zone. 3SS has had three weeks' holiday at Lakes Entrance—these radio mechanics must be raking in the boot! 3BB and 3AEP still missing from 3550. 3PB using a new rig—p.p. 807s—a full gallon with Class B 807s as modulators. What! No b.c.l.? John 3ADA is still located at Woomera in VK5, and would like some mail from this end. Also advises that permission has been granted to establish a radio club at the station.

3ABP active on 40 mx phone. Doug 3ASE, at East Sale, is mad with the DX—20 mx c.w. R.A.A.F. Associate Ray Pulford is doing an

This photograph was taken by 3DW at the North Eastern Zone's Picnic. From left to right: 3KR, 3PF, 3HZ, 3APP, 3IJ, 3UI, 3DW, Ken McInnes, 3JC, and 3TS. In the background is rig with which Alan 3UI worked VK2 on 2 metres a few minutes later.

(Block by courtesy of North Eastern Zone.)

advanced course at Ballarat 3TH will have joined the ranks of the benedicts before this hits print. Congrats and best wishes, Gordon and Charmaine, and don't forget the cream sponge! The Sale boys, 3ABF, 3JAG, 3GD and company, are conspicuous by their absence from the air. 3IO and 3AJA still not in the hook-up. 3JANC still quiet at Traralgon and 3AGF and 3JMY keeping up the QRM from Morwell and Warragul respectively. 3QZ attended Country Week Bowls in Melbourne in February. Can you turn 'em from the off Graham? That's about all for this month, but I would like to know how to suppress the remaining sideband when using s.a.s.c.? Cheers!

SOUTH WESTERN ZONE

Once again things have been fairly quiet this month and with the lack of news for this month goes my 1952 New Year's resolution. 3HG has now got an air-cooled petrol motor driving his alternator and now has his full 240 volts; Neil had great trouble with his power supply filter condenser when the change was first made. 3AGD spent the other Sunday over at Lake Glinthgow, doing acrobatics on the water; John soon discovered that falling off an aquaplane at a speed of 50 m.p.h. could be very painful; however, the art of travelling behind a racing speedboat, on an aquaplane, was soon mastered and John reckons the sport we had with a board behind the Landrover around Lake Colac was simply chicken-speed.

If contributors desire to supply blocks for publication in "A.R." it is suggested that they first contact the Editor for particulars as to size, screen, etc.

Nothing heard from the Warrnambool area this month at all, not even from Wai 3UT. We now have a new Ham in the s.w. zone in the person of Graham Nixon-Smith, ex-2AGN and now 3NV, located at Derrinalum. Graham's gear is still at the old QTH of Bathurst except for the S28 Rx which he QTD managed to bring with him. Let's hope you retain that three prefix for quite a while Graham.

Geelong Area.—3SW, who has been absent from the air for some time, is planning to make a come-back on 20 mx with high power. 3ALP has given 40 the go-by for the time, says there is too much QRM so has gone back to 20 mx and working some DX on phone. 3AOL is on 288 Mc., also has a c.c. Tx using an 815 in the final and a three element beam on 2 mx, and is on the look out for 2 mx contacts with the Melbourne gang. 3APK still on 40 mx quite a bit, has also got going on 288 Mc. works 3AOL. 3ALG been having a few contacts on 80 mx. 3BU has been out portable a bit lately; Bill's 3AI2D is working out nicely on 80 mx. 3BW is heard occasionally on 40 mx putting out a good signal. 3AKE active on the 2 mx band. 3AJT has also been heard on 20 mx. 3IC not on much but manages

to get into the zone hook-up; his phone is much better with the new mike. 3WT not heard so much now the fine weather is here.

CENTRAL WESTERN ZONE

The hard luck story this month comes from one of the portables during the National Field Day, dozens of CQs were sent out but few contacts made: stations could be heard calling the said portable all day, but n.g., either the Rx was not so hot or the location was crook; of course, the poor bloke in strife was 3ARL, as usual. Lin picked on the Gramplains, which unfortunately have a bad radio reputation.

That "Old Timer," 3HL, has discovered over the past few weeks, how little basic theory he really knows, trouble started when the second harmonic decided to swot radio theory—poor old Dad was in a spot, never mind Alan, school is in again and you are safe until the term holidays. 3ARM is busy with the zone frequency meter calibrating the new Rx, don't pick the wrong harmonic Bob! 3AKW has been a bit off color with a crook jaw and the 'fu. or was it that party you went to in Stawell Bill?

3TA and 3RR, our two v.h.f. experts, journeyed to "Reid's Lookout" (in the Gramplains) on Foundation Day with the avowed intention of working VK5 on 144 Mc. However, apart from hearing one carrier early in the afternoon on about 144.6 Mc. for a few minutes, nothing else was heard but their own plaintive CQ, so it looks as if it might be in the interest of science if the v.h.f. chaps did a bit on modulating instead of putting unmodulated signals on the air. 3RR is also running skeds at present with Melbourne stations in an attempt at two-way contacts between Horsham and Melbourne; these v.h.f. blokes are certainly triers, nearly as good as us s.s.b. blokes, ho hum!

3AKP is apparently coming along slowly, as he knocked the 3YL's washing down while playing round with an antenna. 3ARL's QRO supply is coming along slowly too (the slower the better) and the locals are dreading the result. 3DF has been quiet of late, but very busy on the farm, however he is still slowly moving towards that alleged s.s.b. paradise, the 14 Mc. band (I wonder). Well, will we hear you on the next zone hook-up on Sunday, March, 1000 hours on approx. 7155 Kc.

GEELONG AMATEUR RADIO CLUB

The first meeting for 1952 went off in fine style and in spite of the holidays quite a few members attended. The President, Dick 3ABK, occupied the chair, and the business of the club was discussed at length. Later Mr. J. Beckingham talked on his c.r.o. unit which he had constructed and told members the difficulties he had to overcome in the design and construction of this unit. Many questions were asked from time to time by the members present to which Mr. Beckingham answered.

The following meeting was a v.h.f. night at the club and some of the members brought along some of their gear. 3AOL brought his Tx and Rx on 288 Mc.; during the evening contact was made with 3APK with good signal strength at both ends. Two visitors were welcomed at this meeting.



QUEENSLAND

TOWNSVILLE ZONE (By VK4RW)

Ham activity in Townsville was never at a lower ebb than at the present time as one can well learn by listening on 20 mx. There once was a time when every night there were cross-town rag-chews when the conditions were unfavourable, now one hardly ever hears a local Ham even less a rag-chewing session. Once in a while a local will be on for a night and then high presto, back to other pursuits. One sign for the days when the local club had Ern 4GE as Secretary who did yeoman service in founding the club and putting it on a sound financial footing, now all remains of the club is a good bank balance.

4QL was heard again on c.w. the other night after being missing or perhaps not heard at this QTH. 4WH still chasing countries on c.w. and can be plaintively heard sending CQ DX after 5 p.m. hoping that Africa will be heard on the long path. 4JH bobbed up on the W.I.A. frequency the other Sunday calling CQ—listen, next time, Joe. What about coming on more often any how, and did you manage to hear the VR2 calling you on that frequency? I hope the QRM did not spoil it.

4RU has been removing his Tx and gear from the front room to the shack which has been built on level of house to save climbing hill to old location. Golf balls being so expensive, why not come on the air occasionally and let us hear how to hole out in one? 4LR now v.l.o. controlled and could be heard after 12 midnight calling South Africa—hope you make it Rex on the low power of 9 watts. 4KD heard from new QTH in Hermit Park working the VK3 boys; do you sigh for the old days spent in VK3 land now that we have a hot spell? 4DH missing from the band as is also 4GF.

4JE and family are holidaying in Brisbane. 4RW heard arguing with 4FW about which way the South Africans were coming through at 3 p.m. one Sunday—long or short path—any answers? Both were using beams. (Maybe I can help out Bob, I worked 13 of 'em with my beam pointed south and that was the way they had their beams pointed, so I guess they were coming via the short path; just the same, I personally wouldn't care to swim the distance. —Sub-Ed.)

MARYBOROUGH ZONE (By VK4GH)

4SE has settled in and is operating on 7 and 14 Mc. Reports that he misses his peanuts for breakfast. The local gang tried to find him a QTH on the fringe of the town, but Syd wound up near 4AI. 4AI building 14 Mc. converter and 50 Mc. rig. 4BG also on 50 Mc. gear and has re-built three element beam for 8 mx. Ron extended his beam pole for 88 ft. vertical and it worked well while it lasted, for two weeks, after which the pole broke. 4AI and 4BG haunting 14 Mc., as usual.

4GH re-building rig. Having seaside holidays without portable gear. 4KG going back into the R.A.A.F. Arch 4CB worked his 100th country on phone. Only has to get the cards now.

CLARE'S CORNER

Congratulations to 4FE on being elected the new Federal Councillor. Arthur should be a worthy representative at the next Federal Convention to be held in Sydney. Heard 4VJ back on the air after a short spell in hospital. Sorry to hear of your illness, and hope you are OK again. 4RT would like to get hold of a really good crystal set to replace the H.R.O. as the number of knobs on the front panel gets really confusing at times. Have not heard 4FN on lately. 4TT is again on the air from his new QTH; Tom has re-built and is now running the full 100 watts to a pair of 807s. 4RJ and 4IN are heard quite often during evenings looking for local contacts. 4CI is at present holidaying in N.S.W. and operating portable VK2.

4WD has a simple method of suppressing both side-bands by not switching on the modulator, but very difficult to copy, Bill. 4YA is back again after a short holiday in Victoria. Bill spent quite a lot of time at Castlemaine with 3ND and from all accounts a good time was had by all.

— . . . —

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for January was held in the clubrooms to the representative gathering that we have become so accustomed to. In fact we take the large crowd so much for granted that I feel that we should attend a meeting of one or other of our kindred organisations, and then we might realise that we are very fortunate in having such a roll-up. The guest speaker for the

evening was Clarrie Castle (5KL) and his subject was "Radio Control of Model Aeroplanes." This lecture broke new ground for quite a lot of those present because whilst many of us have read a good deal on the subject, few have had any practical experience. Clarrie tackled the subject in a workmanlike and illustrative manner by bringing along a working model and fully describing its construction, and also the many heartbreaking failures that he experienced before the job was a success. His talk undoubtedly created interest among the members present as was evidenced during question time, and it was also apparent that Clarrie was intensely proud of his model, not as a model alone, but principally as a problem that Amateur Radio had "licked." He delivered the talk in a very chatty and informal manner and the more that I hear this type of lecture, the more I am convinced that it is the best manner of approach to adopt with a gathering such as ours with its variety of vocations and standards of technical knowledge. Nice work Clarrie. The vote of thanks was given by Reg 5QR who in his remarks said that he had personally seen the model perform at various times and could vouch for the time and patience that had gone into its construction. The response to the vote of thanks clearly indicated the success of the lecture.

The principal business for the evening was the proposed increase in the annual subscription, and strangely enough no member spoke against the increase, and quite a number spoke for it, apparently realising that with the increased cost of everything these days, the increase was inevitable. Quite a number, however, spoke suggesting ways and means of cutting unnecessary expense down to a minimum, and all these suggestions will be given careful consideration by Council throughout the coming financial year. Federal Executive came in for its share of criticism, from a financial angle, but as I am apparently only permitted to mention F.E. when praised, I therefore can say no more regarding criticism.

Among the visitors were the following, Messrs. Pride, Gurton, Thomas, Drage, and Pfeiffer, and to all these gentlemen we say come again, you are more than welcome. Reg 5RR gave the meeting a brief resume of all that has so far been done in connection with our exhibit in the coming Royal Adelaide Exhibition, and also asked that all members give some thought to the preparation of a skeleton staff roster, to be in attendance at the exhibit each night. Frank

Received 100 p.c. O.K. except name and report... WELL!!!

(That's probably all he told you anyway)

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SDW asked the acting President if he was considering being one of the skeleton staff, but the uproarious laughter that greeted this question completely drowned anything that the acting P. might have said in reply. The trouble with most of those present was that they do not know ripping muscle from fat. Owing to the continued illness of the President, the chair was occupied (and we mean occupied) by the Vice-President, although I do not consider that it was necessary to look around for the biggest chair in the building, as was done by a couple of desperate-looking characters who had apparently gained admittance to the meeting under false pretences. The meeting closed at somewhat earlier hour than usual, due no doubt to the fast moving tempo with which the Chairman usually conducts any of his business dealings. Play that on your zimboka, Barbier (5MD).

The Mount Gambler gang appear to be in the doldrums as far as radio is concerned this month, but by dint of much listening at keyholes and peeping around corners, my chief of the intelligence department down there succeeded in garnering some news. 5JA will be married before these notes are being read, and we all join in wishing John all the best in his new life. As is my custom at a time like this, I always give a little advice to the prospective bridegroom, but seeing as I am a little late, I will content myself with the well-worn words: "Dee Ex Before Dishea."

5CH is still out in the country, and so far Claude has had no time or the inclination to get any gear together. I am disappointed in you Claude, a whole month and no radio, but, tut, tut, 5MS is still too busy keeping the house-builders on the move to have any thought for radio, but Stuart must weaken before long. 5TW has had a few contacts on 40 m. 5AM is slowly progressing with his 2 mx Tx. 5KU is still in the process of trying to get the one that got away, and all that Erg will say is that they are biting well.

5CJ has been spending most of his spare time assisting with the construction and installation of a new Tx, Rx and an aerial set-up for the base station of the Mount Gambler Emergency Fire Services. He was working up at Naracoorte on New Year's Day and met Wally 5PB who said that his frequent changes of address had kept him off the air recently, but as he had now settled down he expected to be on the air more often. Colin also met 5HK who was chasing crayfish at Port McDonnell, but he is not very active on the Ham bands although he has a communication unit on his fishing boat. 5XL and 5AM visited Colin during the holidays, as did several VK3 boys who were passing through on their way to Adelaide.

There is no doubt about it, I could not spit in the sea; last month I said that I was sulking because I had not been invited to the meeting of the Royal Exhibition. The committee put their heads together and sent me a gilt edged invitation to this month's meeting and I had to send my apologies because I was working. The jeers and cat-calls could be heard all over Adelaide and suburbs.

Two airmail letters were received from England this month by the Secretary of the VK3 Division to the effect that the R.S.G.B. intends to give the VK3 exhibit in the Royal Adelaide Exhibition all the publicity it can, as will the "Wireless World." We are becoming famous at last.

John 5KK has been appointed as the VK3 Delegate to the coming Federal Convention and will also be a member of Federal Council for the coming year. It has been the custom for the past five years for the VK3 Division to send an observer to the Federal Convention as well as a Delegate. The idea being that we would always have on the Council several members who could go as a Delegate at a moment's notice. Unfortunately, with the rapidly rising costs of transport and accommodation, it seems that this practice will have to end. We have on the agenda this year a recommendation that Federal Conventions be held every two years instead of every year, and if this should be accepted, financial considerations connected with Conventions should be eased. When one looks back on previous yearly conventions and considers the amount of really important business that has come up for consideration, the two-yearly plan has a lot to recommend it.

The members of the Advisory Committee for the VK3 set-up were announced this month, and the following lucky Hams were appointed: Messrs. D. Whitburn (5BY), J. Coulter (5JD), H. Austin (5AW) and W. Parsons (5PS). The two representatives of the non-members of the W.L.A. are J. Townsend (5HT) and S. Little (5AF). The Advisory Committee has always been a controversial subject whenever Hams meet, and most of this is due to a lack of appreciation of the duties and responsibilities of its members, but as the years roll by and the benefits of the system become more and more apparent, this bigoted attitude is fading away. After all it is better to get a Pro-forma

B from the Committee than a "please explain" from the Wireless Branch. Always remember that everyone on the Committee has at some time or other committed a breach of the regulations and therefore has nothing but sympathy for the receiver of the Pro-forma B.

Preparations for the Royal Adelaide Exhibition exhibit are proceeding according to schedule, and as I write, a working bee has been announced for the coming Saturday to finish all the many little jobs that seem to crop up in an undertaking of this nature. 500 of the Tourist Bureau QSL cards are to be overprinted in gold lettering for the use of the station. The thirty foot rotary beam tower is almost finished, and the 500 watt Tx is undergoing its preliminary tests. The exhibit is glass enclosed and the visitors to the exhibition will be able to see all that is going on and yet not be able to become too curious. All that is required now is plenty of interesting contacts, with an entire absence of "heifer dust" and Amateur Radio should secure some well deserved publicity. The organising committee deserve nothing but praise for their magnificent efforts, and the members can show their appreciation by nominating for duty at the exhibit whenever possible.

Tom 5TL has been transferred to Renmark Post Office and thus we lose a Treasurer. He has given the VK3 Division good service in the past and we are going to be hard pushed to secure a successor. When you stop to consider the amount of work involved in these executive jobs it always amazes me how we ever get anybody to take them on. I offered to take on the job myself, but "Doc" 5MD very cryptically said, "It is three years for embezzlement, I think." I have not worked out yet whether he was for me, or agin me!

In notice in the federal notes that 3XU (ex-5XU) is making a trip to New Zealand and his F.E. Vice-President will convey our good wishes to the ZLs. Gordon has come a long way in the world since he and I used to visit each other in our ancestral mansions and heatedly debate which windmill we would have a tilt at next. Anyway he has probably consigned Don Quixote to his correct place in his youthful and impetuous past by now, although Gordon, the sight of a windmill, however small, is still enough to make me grasp my lance and go to it. You too? I thought so!

5MA has bought a small fruit block at Renmark and thus a source of QRM in the Berri area will cease. Fred is very busy packing up gear and organising a working bee to dismantle his metal beam tower although it only seems the other day that the same working bee was helping him to erect same tower. 'Twas ever thus. 5RE has had it all on his own at Renmark for a long time now, but with Fred 5MA and Tom 5TL moving in on him it looks as if Hurtle will have more than his share of QRM from now on. Anyway, as Hurtle is the local J.P. he will be able to serve a Habeas Corpus or a Nil Desperandum on them. That should put them in their places.

5BC has been very busy adding up on his fingers and toes all the points scored in the v.h.f. contest, although Hughie has found time for a few contacts on 40 mx. 5KW is now an out-patient at Northfield Hospital and it looks as if it will not be long before Harry is going back home. He tells me that he is heartily sick of doing nothing and the time to start work can't come quick enough. Gee, it must be wonderful to feel that way.

5CF has been heard on 40 mx at some very odd times lately. One night at about midnight he was heard in a three-way contact with a VK7 and a maritime mobile VK2. The VK2 was fishing in the Sydney Harbour and the advice that he received from the other two as to how to catch the fish was terrific. Did you get any fish Murray? Shame on the VK2. 5SL has not been on 40 mx very much these past few months because of some spare time fruit picking. Lulling a 3 mx converter and hopes to join the ranks of the v.h.f. gang soon.

Step Fress! The 1950-51 Ross Rule Memorial Contest Certificates have at last arrived in VK3. Well well, well, how things move in these modern times, why before long we will be meeting someone who has even seen the trophy. Pardon me whilst I keel over.

WESTERN AUSTRALIA

Things are looking up! After a few months of hoping, praying and being downright rude to people in these notes, I am happy to state that from now on my mail-reading on the 7 Mc. band will be supplemented by (a) minutes of Council and General Meetings and (b) a digest of v.h.f. activity supplied by 6BO. Thanks Council! Thanks Rolo!

Most important VK6 matter discussed and passed recently is the "Zone 29 Award," details of which will be found elsewhere in this issue. The rules for this were tentatively drawn up towards the end of last year and upon being

submitted to the January meeting were carried. This award is now in operation, it now remains to be seen who'll be the first to qualify.

Other matters dealt with at recent meetings have included admission of associates, the position of Federal Councillor and also various submitted agenda items for the next Convention.

Preparations are well advanced for the Field Day and hidden Tx hunt which will be held in the vicinity of Kwinana on 16th March. Bring the YL, XYL, the whole family if you like. Idea is to dispel the belief (quite erroneous!) that Hams are anti-social beings and that there is no place in their world for women-folk! Ha! What an idea—of course there's a place for them—who supplies the frequent morning and afternoon teas when other Hams drop in? Who supplies the even-more-frequent cups of black coffee to keep you awake during long contest sessions? So go to it and turn up in force chaps, and make it a day in the open-air for the benefit of everyone.

Visitors to the January meeting of the Division included the lecturer, Mr. Geo. Hutton; Mr. Wilson-(6LG, Jnr.), Mr. Brown, and VKs 6LT, 6MO and 6RT. My spies tell me that black arm-bands were worn by all present in the larger-than-usual attendance as a sign of sympathy to 6RT who has been transferred to "Flatulence" which is not a little town in the "Old Country Down," but is an outpost of Empire, rejoicing in the name of "Windy Bingley" or "Blindi-Blindi" or something. When you take up the thousands of kids who have passed under the birch at the hands of 6RT in the 74 years he's been with the Department, you'd think they could have posted him to a place with a.c. or d.c. at least. I'm glad for the sake of the Geraldton change-over that we got him out of town just in time; I noticed him at our power-house gazing with malicious intent at our new Rushton-Hornsby's and their 500 kva. alternators. Forget it, Len. You'd never get one of those in your 1917 model two-seater!

Among those who made a New Year re-appearance on 7 Mc. was 6XG who rose to the surface to greet a few of us. He confided in me that he'd been on a holiday to the "land of his fathers" (VK5) and had had a nice time. If he'd said "land of his grandfathers" I might have believed him; they tell me this 5PS fellow is getting on in years.

You can't tell how a transmission is likely to turn out these days from a preliminary check, any more than you can tell how brilliant a radio technician will be from his ability to file out a one-inch cube in copper! Recent experience with the 6WI broadcasts has shown that a signal which is unreadable in the country at 9.25 a.m. will come up to 5 by 8 to 9 between 9.30 and 9.45. Similarly you shouldn't judge the band at night by the absence of Ham signals; 6LG says you should follow—the old precept for success on 6 and 10 mx—don't condemn the band till you've put out a transmission or two; maybe the other fellow is only listening too!

6DX passed through the city during early January on his way overseas. Bill and XYL are off to G-land for a holiday. While you're looking over those mouth-watering surplus bargains we can only read about, Bill, see if you can find a cray-pot or two!

It's hard to believe that in this year of grace 1952 there could be a VK without a frequency meter, yet on 6th January someone distinguished himself by diving right out of the low end of the band by more than just a handful of kilocycles. Calibrating a v.f.o. can be done OM without putting a signal on the air—and it's not so risky.

6LC and 6JG are recent arrivals on the air, the former (Lee Cordell) is no stranger to radio by any means. Seems as though 6DX finally talked you into it, Lee! Ted 6JG is operating from Bumbury and after a few preliminary trials and tribulations is now getting out OK.

Fish! "Prominent Ham's House Burgled! Prowlers Purlon Plonki!" Did you see those headlines? 6KW had a visit from some person or persons unknown, but they couldn't have been Hams for the rig wasn't missing a couple of 813s or anything like that—in fact, according to the Press, the thieves were mainly news-worthy for removing some drinks from the premises. Now if it had been me... well! Alcohol is all right, I guess, but give me a 522—or a communications Rx—or even a wire recorder!

Instigate Doings. Most noteworthy of recent happenings have been: Promulgation of new by-laws relative to associates and to Federal Councillor; Election of new Councillor (to take place after these notes go to Press); Announcement of the winners of the Country v. City QSO Day—6DX Country, 6NC City; and the despatch to members of their annual subscription accounts. Pay up, pay up, and play the game, you cads! See you all next month.

TASMANIA

The main item of interest to report on activities during January was the very successful field day which was held on Sunday, 20th. Transmitter party on this occasion was 7DA, 7KX and Alan Davies with 7FM becoming a last-minute member. Location was at Howrah, the Tx's being concealed in thick scrub, short distance from the main road and the frequencies used were 3.5 and 144 Mc. "Joe" was the easy winner of the hunt, locating the Tx within 42 minutes from commencement of operation, with 7LE filling second place, approximately 37 minutes after 7BJ's winning burst. Social activities were organised by Burney Watson who arranged races, treasure hunts, and free cordial for all kiddies in attendance. A "guess the frequency" competition of a coil and condenser was held and was won by Alan Davis, the frequency being 45 Mc. Guesses of between 23 and 110 Mc. were made by various members; believe 7BJ was 55 Mc. out in his calculations, much to Joe's dismay. A nail-driving competition for the ladies was held which caused much amusement. Judging from comments made, the next field day will most probably be held after the annual general meeting on a larger scale and trust more members will participate.

For the benefit of members who have purchased the TR1143 v.h.f. rigs, a lecture on the conversion of them to 144 Mc. will be made by 7OM at the April meeting. From reports received, this unit of Bob's, performs remarkably well and his signal can usually be heard any evening on this band. It seems the general trend with southern Hams is to 144 and 288 Mc. which is very encouraging in the fact of our need to use all available bands. A party consisting of 7LE and 7AJ have intentions of going to the top of Mt. Wellington on 3rd February in an attempt to make contact with the north and north-west of the State which we trust proves successful.

Elimination of b.c.l. which has retarded activity by 7KA has now been successfully overcome so it seems Ken will be pounding the old brass once again after a long absence. 7RX also troubled with similar complaint, while 7RM has intentions of a new type aerial for the new QTH. Interest in amplifiers has caused a restriction of activity by 7NC who mainly works c.w. on 20 mx. A short trip to Devonport caused the absence of 7GA from our last meeting; he is now finally settled in the new home at Sandy Bay. Participants in the National Field Day Contest from the south only amounted to one party going away which was 7SR, operating again from Penna. Lack of interest is attributable to the short duration of this contest, although this we hope will be reviewed before next year and the old times of operating will be available once again.

A temporary loss to VK7 is the absence of 7JB who has moved on to Japan for an undisclosed period. Jack has always taken a keen interest in Institute affairs and was a prime mover in the organisation of the emergency network during the last few years. Believe intentions are to operate on 20 mx soon as time permits and knowing Jack this won't be long. Quite a lot of worry in the form of house building has also kept Jack fairly quiet during the last few months and it is the thoughts of all members of this Division that it won't be long before we hear the old familiar call again on the Amateur bands.

Northern visitor here for a day or so was 7DB; owing to restriction of times, he was not able to visit any members during his stay. Noticed Johnny Grace frequenting radio supply houses recently purchasing quantity of radio equipment, what about that license John? Aerials are the main case for discussion with 7AL since his recent trip to Beckeno. No news from 7LD for quite a time, what's wrong Len, how about giving that fishing away and having a natter once in a while.

Main business for the February meeting was discussion which included arrangements for the Annual General Meeting to be held on 1st March, concluding with a talk by Mr. Ken Newham entitled "The London Radiotelephony Terminal," which was appreciated by all in attendance. A vote of thanks was passed for the lecture and the meeting concluded at 1000 hours.

NORTHERN TASMANIAN ZONE

Congratulations have been pouring in to 7LZ from all parts over his magnificent 6 mx work when 50 Mc. opened up. Yes, Col "knocked 'em off in a row": VK2, VK3, VK4, VK5, VK6, and VK9, also all N.Z. districts. Nice work Col. Now 7LZ is out for 144 Mc. DX and a 12 element beam now graces the skyline in Knight Street, Launceston.

Another who is becoming beam conscious is zone president 7RK who is contemplating a 3 element on 20 mx to raise that elusive zone

needed for W.A.Z. Ray, who has been spring-cleaning the shack, managed to put the works together again and is again active on c.w.

Zone secretary 7AM has been holidaying, so missed our February meeting. A visitor for a few hours was 7CF from Queenstown. 7CA, who is now living in Launceston, can be heard on 7 Mc. 7CL has returned to 7 Mc. after a long absence. 7RB, 7OB, 7TE and 7HY are not very active at present either because of house-building or too much work.

7GM is in the throes of constructing a 100 watt 144 Mc. Tx. In the meantime, Gordon has been very active on 7 Mc. phone despite poor conditions. From 7LX comes advice that a new Tx is taking shape and should be ready soon. 7BQ is now well on the way to G-land and may have reached there by the time these notes appear.

For our February meeting night 7XW brought along a low-powered phone Tx for portable work on 80 and 40 mx. At our meeting a warm welcome was extended to new Associate Chas Kittman.

Finally don't forget that the March meeting is the Annual Meeting, so roll up in force. The meeting will be in the Trades Hall since the old meeting room in the King's Hall Chambers is no longer available.

CORRESPONDENCE

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

18 Ninmo St., Essendon, W.S. Vic.

Editor "A.R." Dear Sir,

Having been interested in receiver design for some years, both commercially and as an Amateur, I read with interest the notes at the foot of page 3 of February "A.R."

I would like to raise some points. I realise that destructive criticism is always very easy, but I feel that the remedy suggested by your contributor is rather a sweeping generalisation and tends to dodge what may be the main issue.

Firstly what do we understand by "sensitivity"? Surely the only worthwhile measure of this is on a signal-to-noise ratio basis? All commercial specifications adopt this method and sometimes in addition quote a figure of final output power at which this ratio is obtained; e.g. "2 uv. for 10 db signal/noise ratio at 50 mw. output" would be typical.

I submit that, as quoted, "although sensitive, the receiver was unduly noisy," is a contradiction in terms.

The fact that in this particular receiver the noise from the 2nd mixer was extensive leads one to wonder whether some other fault is not present or whether there is not some fundamental defect in the design.

It is admitted that altering the 2nd mixer to a triode system might reduce the noise generated by it, but so will many other expedients of varying degrees of inelegance. I think, however, that at those frequencies one should not be seeking to eliminate noise at that stage to the extent where we have to abandon the other advantages of the 6K8 in the conventional connection.

With tubes such as the 6K8 it can be shown that providing there is a voltage gain of about 10 times between the signal source and the 6K8 grid the noise generated by the 6K8 can be neglected compared with the total noise voltage at its own grid.

The assumption is that the first or only valve before the 6K8 generates a noise voltage, referred to its own grid, of about 1 uv. This should be the case with a modern r.f. pentode with reasonable first circuit design.

Very non-sinusoidal waveform of the 6K8 oscillator would possibly upset this picture and would be due to excessive feedback in this section. The remedies are obvious.

In the design of a double superhet I would say that one should aim for a signal of 20 uv. at the 2nd mixer grid and this should be easy even assuming 1 uv. at the aerial terminals, as one would have presumably at least two stages before this point.

A suggested layout might be: r.f., 1st mixer, high i.f. amp., 2nd mixer, which should produce a great enough signal at the 2nd mixer grid to make its noise completely negligible. The receiver sensitivity would then depend, as always, on:-

1. The performance of the r.f. stage and its associated tuned circuits;
2. The noise generated by the first mixer (same arguments as already set for second mixer apply here);
3. The overall bandwidth of the receiver (not here under discussion).

Do not let us confuse gain with sensitivity.

—E. H. RANFT, VK3NR.

10 Victoria Ave., Rose Park, S.A.

Editor "A.R." Sir,

In the VK5 monthly notes for February, I included a paragraph which opened with "Federal Executive has been placed on a pedestal by VK5 members together with Ned Kelly, three card tricksters, and thimble and pea experts." I then went on to give the reason for this elevation, together with pungent comment on their lack of financial equilibrium. Federal Executive in their wisdom saw fit to order that the red pencil be run through the offending paragraph and sent a letter to the VK5 Division voicing their annoyance. I have no quarrel with this as I did not think for one second that it would be permitted to see the light of day in the magazine, and it had achieved its object in getting under the skin of F.E., which was, after all, the only reason it was written.

However, quite a number of VK5 members, who were the instigators of the offending paragraph, have approached me and are suggesting that I have failed in my duty by refusing to write a suitable paragraph when requested. I would therefore, Mr. Editor, appreciate some explanation, however small, from you as to why the paragraph referred to was deleted from the VK5 notes, and I humbly suggest that if the explanation were to follow this letter in the magazine, then all the gentlemen who have been pointing the finger of scorn at me will be convinced as to my definite desire to carry out their instructions, even if it means criticising such an august body as F.E.

In closing I would like to say that it is my personal opinion that the essential difference between F.E. and an ostrich, is the fact that an ostrich cannot manufacture its own sand.

—WARWICK W. PARSONS, VK5PS.

[The paragraph in question was referred to F.E. (as do all others which fall into the same category) under an item which appears in the policy book, and reads as follows:—

"The responsibilities of Federal Council concerning "A.R." shall include—

- (a) The preparation of Editorials.
- (b) All opinions concerning Federal W.I.A. matters and/or contacts with other bodies.
- (c) Any matters which might prejudice relationships between Divisions or between Amateurs generally."

The matter from which the whole question arises, i.e., the purchase of office equipment, is covered in the minutes of the last Federal Convention. See "A.R." for June, 1951, page 7, item 9.—Editor.]

HAM ADS

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FOR SALE.—Transmitting and receiving gear; 80 mx to 2 mx., in excellent condition. B. E. Cabena, 20 Uvadale Grove, Kew, Vic. (Haw. 2571).

WANTED.—A low power Phone/C.W. Transmitter, 40-20 mx. L. R. Bradshaw, 9 Grange Rd., Toorak, Vic. (BJ 1903).

WANTED.—BZ3 Transmitter and/or Receiver. Particulars and price to N. Culliver, Rye, Vic.

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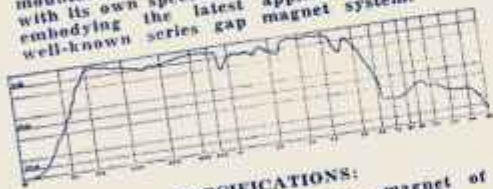
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EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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W. J. LEWIS,
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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.

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VK5WI: Sundays, 1000 hours SAST, on 7196 Kc. Frequency checks are given by VK5DW by arrangements 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 EST, on 7196 Kc. and 146.5 Mc. No frequency checks are available.

EDITORIAL



A stirring message and, no doubt, an inspiration to each and everyone of us, entitled "A Call to the People of Australia" was recently promulgated throughout the Press and Radio Stations of Australia.

From this message springs the thought that it could be applied to the Radio Amateurs of this country—and in no small degree the members of the Wireless Institute of Australia—in that we are in danger from the apathy of the general member in not doing his bit or not putting his all towards achieving the goal of inducing each and every licensed Amateur to become a member of the Institute.

We believe that each of us has a duty to perform by recruiting into our ranks, at least, one non-member, and in so doing help further our aim from which comes additional benefits in the administrative, social, and financial spheres of our hobby.

The Federal Treasurer in his Christmas message stated that finance is the life blood of any organisation and you all know that money is a very important commodity in the conduct of a business. Each Division is a non-profit sharing business, and whatever is earned is utilised in giving a better service to its members in return.

What are you doing towards increasing this return? Are you the one who leaves it to the other fellow? If so, your apathy, coupled with that of a great proportion of your fellow

members, is the very thing that places the burden on the "faithful few" who are in turn called "the clique" because their best endeavours do not meet with your approval. Does it ever occur to you that your efforts are not recorded so they can be the subject of criticism? Perhaps you prefer to shelter in your seat at the general meeting and say nothing until the meeting is over, or in your shack vent your opinions where they do the least good.

Recently this Executive had an interview with the Minister for the Interior, The Hon. W. S. Kent-Hughes, who expressed delight at the offer of the Institute in providing a large nucleus of trained personnel for the formation of a civilian defence network. He intimated that in a Bill to be presented to the Federal Parliament, shortly, provision would be made to absorb the Radio Amateur in the communication side of the proposed scheme.

This is a challenge to the members of the Institute, which we feel will be accepted wholeheartedly, but unless it is, the Radio Amateur will lower the high prestige he now holds with the authorities, both civil and defence.

Therefore, we call upon you individually and collectively to reflect on these remarks, and in so doing, give thought as to how your future efforts can be of benefit to Amateur Radio and the Commonwealth of Australia.

—FEDERAL EXECUTIVE.

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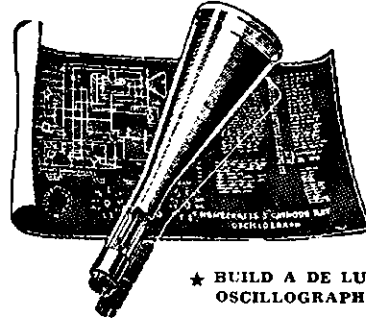
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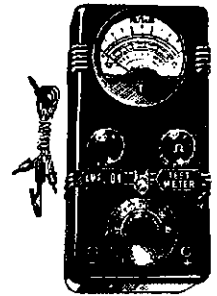
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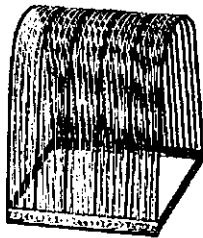
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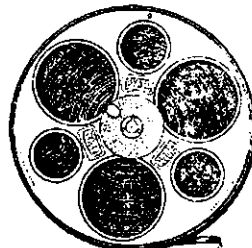
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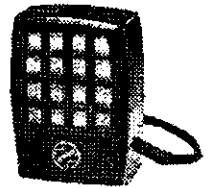
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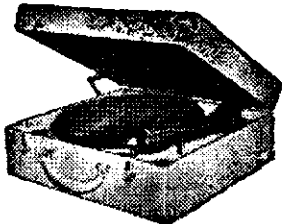
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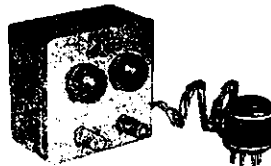
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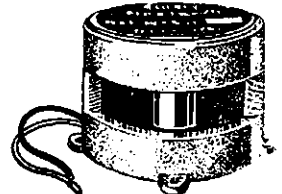
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Central 4311

Agenda Items for the 22nd Federal Convention

to be held at Sydney, 11th to 14th April, 1952

The Twenty-Second Federal Convention of the Wireless Institute of Australia is to be held in Sydney from 11th April to 14th April, 1952. Following is the agenda items listed for discussion:—

ADMINISTRATION

1-1. VK2—That Federal Executive be located in New South Wales for the 1952-1953.

Comment: It is felt that the time has come for some of the other Divisions to share the responsibility and arduous duties associated with running the Institute on a Federal plane, and also that the introduction of new blood and fresh ideas and enthusiasm would be to the benefit of the Institute generally.

1-2. VK5—That Federal Executive be transferred to the New South Wales Division.

1-3. VK3—That consideration be given to holding the Federal Convention bi-annually.

1-4. VK4—That in view of the increasing high costs of conducting an Annual Federal Convention, the Convention be held every two years, the next to be held in 1954.

1-5. VK3—That in future Federal Convention be held once in every two years.

1-6. VK4—That a uniform method be adopted by the Divisional QSL Bureaux with respect to unclaimed QSL cards for non-members, and the possibility of having them returned to the Federal Bureau after a determined time for storage, and future fate be considered.

1-7. VK7—That the addresses of the Divisional QSL Bureaux be included in the list of other official Divisional addresses in "Amateur Radio."

1-8. VK5—That the Divisional QSL Officer be the responsible person for the checking of QSL cards for the W.A.C., DX C.C., and other awards.

POLICY AND FINANCE

2-1. VK6—That if and when Federal Council authorises any project involving expenditure of funds a specific appropriation be made.

Comment: Economy should be practiced by F.E. If a specific sum is allocated for any item, F.E. should cut the coat to fit the cloth. A recent example of unwarranted extravagance is the colossal sum expended on contest certificates, presumably because Federal Council did not specify any limit.

2-2. VK5—That the approval of all Divisions be obtained by F.E. before a sum greater than £25 be spent on one particular item.

2-3. VK6—That approval of Federal Council be obtained in advance for expenditure by F.E. on any item over £25.

Comment: A perusal of the F.E. expenditure will reveal sufficient reason. In all cases, the approval of Federal Council should be obtained as soon as possible in conformity with Item 23 of the 1950 Convention.

2-4. F.E.—That it be the policy of the Institute to maintain a better standard of certificates issued by it both for local and overseas applicants, and that the cost be not made the major issue but rather the advancement of the W.I.A.

2-5. VK5—That the per-capita for Federal Executive be increased to 1/6.

2-6. VK5—That the Standard Log Sheet be not made compulsory for contestants' logs as set out in the policy book, but that the wording be altered to make it a voluntary act to be publicised by the Divisions.

2-7. VK6—That the Divisions be encouraged in the interests of the Institute as a whole to freely exchange ideas and news of current happenings in the form of a news letter amongst themselves.

2-8. F.E.—That it be the immediate policy of the Institute within its Division to appreciate the value of increasing its technical service to the public, and that all Divisions form active Social Committees to raise funds whereby all modern technical facilities can be owned by the Institute in every State.

Comment: With the greater technical advances made in the science of radio the Institute should be expanding in this sphere to maintain recognition as a technical Institute.

2-9. VK7—That special efforts should be made to obtain the co-operation of all Amateurs in limiting the increasing amount of QRM in evidence on the Divisional Broadcasts.

Comment: Not only members of the W.I.A., but all Amateurs should co-operate, especially those who, because they cannot themselves hear a particular broadcast, think their own transmission does not interfere on the broadcast channels.

CONSTITUTION

3-1. F.E.—That the intention of the Uniform Divisional Constitution be discussed with a view to eliminating misinterpretation and failure to achieve complete uniformity.

3-2. F.E.—That consideration by Federal Council be given to combining the Uniform Divisional Constitution with the Federal Constitution as one document to be known as the Federal Constitution of the Wireless Institute of Australia in accordance with Item 1a of the 1948 Federal Convention.

3-3. VK6—That the Federal Constitution be altered so that the voting members are Divisional representatives only.

Comment: It is wrong in principle that the machinery by which the wishes of the Divisions are carried out has an effective say in its own destiny.

3-4. VK6—That the Federal Constitution be clarified regarding the attendance of F.E. personnel at Conventions.

Comment: There are three different sections dealing with this and they all conflict. Surely if one delegate is sufficient to represent a whole Division, one delegate is more than ample to represent an Executive of five. Other members should be on the same basis as observers if they attend.

3-5. VK6—That the Federal Executive be incorporated into the Federal Council as follows:—

(1) The office of the President of the Federal Council and of the Wireless Institute of Australia shall rotate annually among the Divisions and shall be known as the Federal President of the W.I.A.

(2) An Executive Vice-President, Secretary, and Treasurer shall be appointed annually by the Federal Council and shall carry out the directions of the Federal Council.

(3) The Federal Vice-President may, with the approval of the Federal President, co-opt up to two ex-officio members for any specific purpose deemed necessary.

3-6. VK2—That the Federal Constitution be amended to provide that the Federal President be President of the Institute and Chairman of the Federal Council, but not a member of Federal Executive, and that Federal Council elect at each Convention a Vice-President from the Federal Councilors of the Divisions, and that the composition of Federal Executive be examined to decide whether additions should be made to its number in place of the Federal President and Vice-President.

Comment: In order that the Federal Council shall function as an impartial body, it is most desirable that its personnel should not overlap with the Executive it directs. To date there has been a tendency for the President and Vice-President to act on behalf of the Executive rather than of the Council. If the office of Vice-President was filled from the Divisions, the decentralisation of office and the wider Divisional representation would throw more stress on the Australian-wide nature of the Council. The intention is to see that Federal Council operates as a completely independent body for the good of the Institute as a whole without the distraction of Executive responsibilities.

AN APOLOGY

Owing to the publication of Agenda Items for the Federal Convention and the results of the VK-ZL DX Contests, technical articles have had to be cut severely, therefore Part viii. of the Television series has had to be deferred for one month.

A number of letters have been received by the author of the articles, and we are printing, as space permits, some of the questions and answers which he feels are of general interest to readers. All other questions are answered directly by mail to the person concerned.—Technical Editor.

3-7. VK6—That the following extract from Federal Executive's letter to VK6, dated 1/11/61, re Federal Councilor be discussed:—

Extract: "The activity of the Federal Councilor has nothing to do with the Divisional Constitution except that he be appointed by the Division and becomes an ex-officio member of Council. He is not a Divisional Officer; he is a Federal Officer and his activities are governed by the Federal Constitution. His appointment by the Division under Clause 23 is perfectly valid in the same way as any other appointment the Division may make. There is nothing else any Division can do about a Federal Councilor other than appoint him, because he is not a Divisional Officer in actual fact."

CONTESTS, PUBLICITY AND AWARDS

4-1. F.E.—That this Convention consider means of ensuring a greater degree of permanence of rules governing all contests.

Comment: Whilst contests are a very important feature of Amateur activities, Federal Council should consider the many man-hours wasted by the continual changing and amendment of rules—man-hours that could well be spent in activating other interests in the hobby of Amateur Radio.

4-2. VK5—That a discussion on the future of the National Field Days take place to ascertain from all Divisions whether they wish them to be continued or not.

4-3. VK4—That portable stations operating in the National Field Day Contest be limited to ten or fifteen watts maximum input because of the difficulty in obtaining petrol driven generators.

Comment: Petrol driven generators are difficult to obtain whereas with a limited input of ten or fifteen watts this power could easily be obtained from generator or vibrator supplies.

4-4. VK4—That in view of the increased interest in the National Field Day Contest (although not borne out by the number of entrants this year) it be continued for at least another year.

4-5. F.E.—That Federal Council consider with great earnestness the necessity for expanding interest in the National Field Day Contest in view of the possible future requirements of Civil Defence.

4-6. VK5—That the Standard Log Sheets, as prepared by F.E., be altered to get rid of any ambiguity.

4-7. VK3—That the rules of the Ross Hull V.H.F. Contest be revised after discussion by the Delegates of the effects of the 1951-52 Contest.

4-8. VK5—That the Ross Hull V.H.F. Contest be extended to include all v.h.f. bands.

4-9. VK7—That the Ross Hull Memorial Contest rules be amended to allow other v.h.f. bands to be included.

Comment: It is thought that in view of the increased activity on 144 Mc. and higher frequencies the contest should not be confined to one band.

4-10. VK4—That the N.S.W. Contest Committee be again co-opted by the Federal Council to function as the Federal Contest Committee during 1952-53.

4-11. VK4—That the Federal Contest Committee be asked to frame a fresh set of rules for the Remembrance Day Contest so that the large States of VK2 and VK3 may in future have a more reasonable chance of winning the Contest, and that the multiplier be on the number of Logs submitted to the membership of the Division and not to the licensed Amateurs in the State as it now applies.

4-12. F.E.—That the Remembrance Day Contest be divided into two sections: Section "A" on the lines of the present Contest, Section "B" in the form of a V.H.F. Relay, the scores of each section to be added together to determine the final result.

4-13. VK6—That an open award considered higher than the existing award be made for future VK-ZL Contests to be determined from the sum of the final points of a competitor's entry for both phone and c.w. sections.

Comment: This will encourage more entries to both phone and c.w. sections which is so lacking in past contests.

4-14. VK7—That in all Contests the clause confining the operation of any one station to any consecutive twenty-four hours be deleted and that contestants be permitted to work the entire thirty-six hours or any part thereof if they so desire.

Comment: After all, if a contestant wants to stay up for the whole time that is his business, and as the DX bands are usually open for only part of each twenty-four hours a contestant

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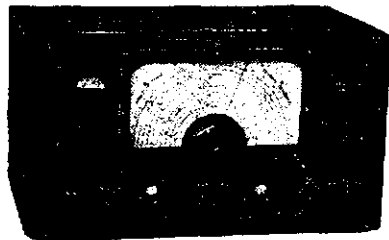
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should be entitled to work all such times as the bands are open during the entire period of the contest.

4-15. VK2—That a certificate be made available and awarded to Amateurs making confirmed contacts with one hundred different stations on frequencies of 50 Mc. and above.
Comment: Such certificates would help to popularise v.h.f. operation for which no similar award now exists. The requirement is not easy to meet and the award should be popular.

4-16. F.E.—That an annual Federal award be made by the decision of Federal Council at each Annual Federal Convention to a member of the W.I.A. who will be selected from six annual Divisional award winners for outstanding work in one or more of the following fields of Amateur activity:—

- (a) The design and construction of an outstanding piece of equipment;
- (b) For outstanding service in the sphere of emergency communications;
- (c) For contribution of the greatest service to the advancement of his Division; and that the annual Divisional award winners will be eligible only if his name and call sign together with full details of his achievements are submitted with the annual agenda by his Division for the decision of Federal Council.

4-17. F.E.—That the proposed rules for the W.A.A.S. or equivalent award be considered by Federal Council and that upon agreement immediate and wide publicity overseas be arranged.

MEMBERSHIP

5-1. VK5—That Item 10 from the Minutes of the 1951 Convention be annulled.

Comment: Whilst we are trying to achieve unification of the Institute throughout Australia we are not allowing the Amateur the free choice of which Division he may become a member. The conception is decidedly inconsistent with our aims, even to the point of one Division not allowing Associate Membership whilst proposing the item.

(Item 10 of the 1951 Convention reads as follows: "That any person eligible for membership in any grade residing in a Division can become a member of that Division only.")

5-2. F.E.—That any member of the W.I.A. may be entitled to receive privileges from a Division other than the Division in which he is residing by the payment of a nominal sum as a fee to that Division for such privileges.

5-3. VK3—That to assist in publicising the Institute a car windscreen sticker in the form of a replica of the badge be printed and issued to members for a nominal fee.

5-4. VK7—That the matter of non-members of the W.I.A. wearing Institute badges be discussed with a view to devising a scheme whereby the above practice can be overcome.

Comment: Many individuals—notably Associate Members—who join up in the first flush of enthusiasm and then drop out, continue to wear badges. It is realised that they have paid for the badges and that therefore they own them, but it is felt that some scheme may be devised to overcome the practice.

MAGAZINE

6-1. VK4—That the pages of "Amateur Radio" be used to publish a list of the DX Certificate Awards and their conditions as conducted by the member societies of the I.A.R.U.

Comment: So that VK Amateurs may become familiar with the requirements of same.

6-2. VK4—That an International campaign be launched, the co-operation of overseas Amateur bodies be enlisted, and publicity be sought in publications such as "Amateur Radio," "QST," "CQ," and R.S.G.B. "Bulletin" by written articles, short "pars," or slogans printed in "italics" to endeavour to revive the enthusiasm in each station sending out QSL cards on request or at least promptly sending a QSL card on receipt of or in reply to one already received.

6-3. VK3—That the Sub-Editors in each Division be directed to assist in obtaining advertising material for the magazine in accordance with the duties of their office as laid down in the Federal Policy Book.

Comment: Federal Council must surely agree that at least one member in each Division must be capable in the art of selling advertising space—or at least assist the agent Interstate in selling space—for the Magazine.

6-4. VK2—That the present position of "Amateur Radio" be discussed.

Comment: To provide an opportunity to consider Federal aspects of the magazine.

GOVERNMENT DEPARTMENTS

7-1. VK3—That Federal Executive negotiate with the appropriate authorities to procure for the W.I.A. the copy rights to publish or have published an Australian Amateur Station Call Sign Book.

Comment: In view of the present situation where "Amateur Radio" is the only publication to print amendments to the existing call sign book printed in 1948, and in view of the W.I.A. being the representative body of the Australian Amateurs, it is appropriate that it should take steps to procure the copy rights.

7-2. F.E.—That in all initial negotiations with Government Departments on behalf of the W.I.A. the approach be made to the Administrative body rather than the Ministerial head.

7-3. VK5—That the P.M.G. be approached with a view to obtaining a Novice and a Technical License issued as per the U.S.A.

7-4. VK3—That steps be taken to press for the 160 and 200 metre bands.

7-5. VK3—That steps be taken to press for the widening of the 40 metre band.

7-6. VK3—That the Government be pressed to take action to eliminate or suppress electrical interference to radio reception.

7-7. VK3—That the Government be approached to allot the emergency networks a special frequency outside and in close proximity to the Amateur bands, and that the authorities be approached to recruit Amateurs on days declared acute emergencies and the operators be compensated for any pecuniary loss sustained.

7-8. VK3—That the P.M.G.'s Department be approached with a view to obtaining Television licenses for Amateurs.

7-9. VK6—That the minimum age limit for the granting of the A.O.C.P. and the Amateur License be 18 years.

Comment: With the advance in educational standards we consider this step to be warranted, and ample safeguards exist.

7-10. VK6—That the Federal Council should press for an AMATEUR RADIO ACT to replace the present administration of the Amateur by Act, by Statutory Rule, by printed edict, and by bureaucracy.

Comment: By similar methods that were taken over the Broadcasting sections of the Act, the Amateur could have an Act which would set out the fundamentals and reason for his being, together with Statutory Rules to suit his needs. The claim is, that while there would have to be an administrative authority, the issue would be more clear cut in favour of the Amateur.

7-11. VK6—That the problem of non-Amateur stations operating in the exclusive Amateur bands be continually pursued with the utmost vigour.

Comment: Mere reference of this matter to the P.M.G.'s Department is not the only way the problem can be attacked. The co-operation of other Amateur organisations in other countries should be sought. For example, 7000 to 7100 Kc. is exclusively Amateur in all regions; Amateurs should be encouraged to "accidentally" conduct all tests on the same frequency as Commercial in that part of the band, especially for local communications where the signals of the usurpers have little effect.

7-12. VK2—That F.E. approach the P.M.G.'s Department with a request to allow music to be transmitted on 50 Mc. and higher and that if the Department refuses permission, the matter be referred to the Postmaster General.

Comment: This type of transmission will allow Amateurs to obtain experience in wide-band l.m., etc., which is a legitimate field for experiment. It will help to more fully occupy the bands, and there is no danger of interference with services overseas. Only portions of the bands would be set aside for music, i.e., 53-54 Mc., 147-148 Mc. Despite a recent refusal, the matter is considered worth pursuing.

7-13. VK2—That F.E. request the P.M.G. to adopt the following policy for the re-issue of Amateur Call Signs:—

(a) Any call sign relinquished due to death of the holder shall not be re-allocated for a minimum period of 10 years.

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(b) Any call sign relinquished for any other reason shall not be re-issued except to the previous holder for a minimum period of five years.

(c) An Amateur applying for a re-issue of a license after a period of being non-licensed shall if he so requests be issued with his previous call sign if available.

(d) An Amateur changing from one State to another shall on request be issued with the same letters in his call sign if these are available.

(e) The periods mentioned in (a) and (b) shall not include periods during which Amateur activity is banned.

Comment: Although some of the points mentioned are probably observed at present, there have been instances where calls of deceased Amateurs have been re-issued to the embarrassment of all concerned. Most Amateurs are well known by their call letters and these should be retained to avoid confusion and preserve continuity.

7-14. VK2—That the cure of b.c.i. should not be solely the responsibility of the Amateur concerned in cases where the interference is caused by circumstances beyond his control.

Comment: There have been cases of non-co-operation by Listeners which have made the cure and even the observation of interference by the Amateur impossible. Yet he is frequently the sufferer as in such cases a solution of the problem is not possible.

7-15. VK5—That the P.M.G. be approached to allow any Amateurs to record and re-play on approved equipment another Amateur transmission at the request of the Amateur concerned.

7-16. F.E.—That Federal Executive's negotiations with the Civil Defence authorities on behalf of the W.I.A. be discussed.

7-17. F.E.—That this Convention consider the minutes of the meeting of the Joint Services Communication Committee at which F.E. represented the Wireless Institute of Australia.

7-18. VK2—That F.E. prepare a case for submission to the P.M.G.'s Department defining power limits to be used with various types of Amateur transmission based on an input limit of 250 watts in place of the present 100 watts, and in the event of the case not being accepted in a form satisfactory to the Institute, F.E. shall submit it to the personal attention of the Postmaster General.

Comment: At the present time there are various types of Amateur transmission for which logical power limits have not been set. In asking for an increased limit of 250 watts it should be remembered that many countries have higher limits than our own and few smaller. The extra power is particularly valuable for v.h.f. extended ground wave communication which is now reaching great proportions throughout Australia, and will be of extreme value for Defence.

MISCELLANEOUS

8-1. VK7—That a form of token QSL card be issued by F.E. on confirmation from contest logs and on application by members to take the place of unobtainable QSL cards for contacts which would count in the applicant's score for DX C.C. and similar awards, and that a suitable charge should be made to defray the cost of the scheme.

8-2. VK5—That the I.A.R.U. or the A.R.R.L. be approached to amend the rules of the DX C.C. regarding the receipt of QSL cards for confirmation of contacts suggesting instead that stations located in out-lying countries forward a list direct to the A.R.R.L. giving confirmation of contacts made during certain periods of time.

Comment: In view of the increased postal charges and cost of printing cards, it is felt that some more economical means should be found for those stations in countries where there may be considerable hardship imposed upon them in forwarding large quantities of QSL cards.

8-3. F.E.—That the first draft of the "Companion Handbook" be considered.

8-4. F.E.—That the affiliation of other societies with the Wireless Institute of Australia be discussed.

Comment: There is a large field of communication activity outside of the sphere of Amateur Radio that warrants discussion in relation to its affiliation with the W.I.A. and the possible advantage gained therefrom in respect to increasing the Institute membership, viz. radio control, model engineering and its relation to remote control, model aero clubs who are rapidly interesting themselves in radio control, and other allied clubs. A discussion on this subject would at least bring up some interesting angles.

8-5. VK3—That the venue of the next Annual Federal Convention be determined.

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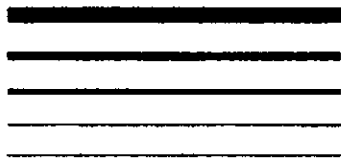
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FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

NEW SOUTH WALES

The February meeting of the v.h.f. gang, held at Science House, was devoted to a lecture by Bob Winch, 20A, on the measurement of capacity. Bob's talk was very interesting and his demonstration of a device for the measurement of capacitors from 1 uF. to 1 pF. must have started quite a few of the chaps building a similar device.

Present at the meeting was a visitor from G land who gave a brief talk on conditions on the 144 Mc. band in England. He also gave some details of the English zoning system whereby stations in each district are grouped in one frequency zone. The main advantages of this system are prevention of QRM to distant stations by locals and knowing where to look for contacts with any desired district. The recent allocation of the country zone (144 to 144.1 Mc.) in VK2 has proved the excellence of this scheme and there may come a time when a system similar to the English one may be of advantage in this country.

50 Megacycle News: The 50 Mc. band has given a few DX openings to the small number of enthusiasts still keeping a watch on the band. VK2 has worked VK3, 4, 5, 6, and ZL over the last two weeks of February.

A new station is 2HE. Located at Killara, one of the highest points of the North Shore, Adrian is getting results which promise big things when he gets going on 144 Mc. Gear in use is 2E26 with 14 watts input and portion of a cubical quad as the antenna.

144 Mc. News: This band has been somewhat quiet of late with a good many of the chaps completely silent. We hope this is due to re-building activities and not lack of interest!

2GU from Canberra is once again active and being heard in Sydney, but unfortunately Arch has struck some trouble with his Tx which

caused bad frequency modulation, making the signal very difficult to copy. 2WH has his new QV07/40 final going and the result is a signal of good readable strength in Sydney.

2TC located at Montegale near Young has started out on the construction of 144 Mc. gear and plans to run a QQE06/40 in the final and a cascade Rx. Jim is determined to contact Sydney on 144 Mc.

2ADT has been heard frequently of late and quite a number of Sydney stations have been making the contact to Cessnock.

2RU seems to be carrying out his threat of many years standing and looks like arriving on the band within the next week or so—we think! Major will be using an 829B final and a three over three or four over four beam.

576 Mc. News: There has been mild activity on this band, a new station being 2ANK who is the furthest south and classed as near "DX"! Barry is using Cec Cronan's telephone outfit which must rate as one of the most travelled outfits in use! 2ABZ has his AS8B Rx going and whilst he has not yet been able to hear 2WJ has heard 2AJZ at S7. Bill has the aerial craze again and seems to have quite a collection of arrays for 576 Mc. Up to date his original 16 element seems to be working out best. 2HL is still using a single RL18 in a small co-axial line oscillator which once did service as a test oscillator and put most of the Northern boys on the band. Others active on 576 Mc. include 2QW, 2WJ, 2DP and 2VW. Still having trouble digging out news of what is happening on 576 Mc.—VK2ANF.

VICTORIA

Dates to remember—6th April: V.h.f. Field Day No. 6; 16th April: V.h.f. Group Meeting. The February meeting of the Group was well attended and the time was spent discussing

several important matters, amongst which were the Field Days and the 576 Mc. Contest award. On 9th March more portable stations were out and activity was much greater. Added interest was given by the break-through of signals from 7EP and 7LZ, both at Launceston, who were worked by 3GM/3ZL at Mt. Bunninyong, while 3AKE and 3XA also worked 7EP. The VK7 cross-State relay had to be cancelled at the last minute when 7AB, who was to operate portable from Table Cape on the North Coast, was transferred to Devonport and could not get his gear ready in time. However, it is hoped that this relay will now take place on the April Field Day. 7LE and 7OM went from Hobart to Mt. Wellington and 7AJ and 7DH were operating portable in the Midlands but no reports of contacts are to hand.

Other portables in VK3 were 3ABA (Mt. Tar-ranger), 3ACH (Mt. Macedon), 3ZD (Strez-lecki Ranges), 3UI (Mt. Major), 3FO (near Mt. St. Leonards), 3JO (Mt. Donna Buang), and 3ADU (Mt. Gellibrand), while 2PN was at his portable location near Batlow. 3UI and 2PN worked several times during the day with good signals at both ends, however 3UI was bemoaning the lack of contacts with Melbourne stations. Many were on during the day but none appeared to have any interest in making contact with him and it is not surprising that Alan should feel that his efforts were cold-shouldered by the Melbourne stations. In addition to 2PN, 3UI worked 3ABA, 3ACH and 3JO who was on total control for the first time using a single VT501 tripler as the final. At the time of writing no information is to hand as to the portable stations and their locations on the next Field Day but as this will be the last of the present series, many stations are expected to be active.

Don't forget the Field Days Contest as this will conclude with the next Field Day. Logs covering all six Field Days should be posted to reach the Secretary of the Group not later than 30th April, 1952. The winners will be announced and prizes awarded at the May meeting of the Group. Please send your logs in early.

SOUTH AUSTRALIA

Activity is still increasing on the higher frequencies and many stations can be heard working nightly. 5FM is a new one on 144 Mc. Glad to hear you down there Pete. 5ME is back on the air again. 5GL/5QR are heard nightly cross-band or otherwise. 5MO has a good signal. 5JO has been active on 50 Mc.

5WI already heard on from the Royal Adelaide Exhibition. 5BC/5MA heard in QSO on 7 Mc. remarking about lack of city signals. 5AX still gets through to the city on 50 Mc. 5XL has worked the town lads also.

5GL has been carrying out polarisation tests on 288 Mc. and has a solution to the QRM caused by mod. oscillators on that band. Controlled tx/rx's use horizontal antennae, the mod. osc. super regen rx's use vertical, nil QRM is caused to each other. Clem requests tests be tried out Interstate and see if it works out also. What say chaps.

5QR has received his Ross Hull Contest Certificate and very pleased with it. Has to sign the trophy yet. 5MK believed dismantling gear prior to shifting QTH.

5HD should have a handy lead in the local contest, having several contacts with 5BC.

WESTERN AUSTRALIA

Conditions on 6 and 2 mx in W.A. during January and February (the latest periods possible of reporting in this issue) are reviewed by 6BC in a letter to Divisional sub-editor 6WZ.

The 50 Mc. band has opened on several occasions to VK5 and VK2, maybe to others, but none heard. 6FC made a trip to Perth but has not been heard on the air since returning to Narrogin. 6BS is back on the band and has worked through to VK5 and also to Perth from his QTH at Manmanning. We are still undecided as to whether Basil's signal is a.m. or f.m. Another recent 6 mx visitor to Perth was 6GS who got around to most of the v.h.f. shack.

Don of Bruce Rock is coming into Perth on 6 better now than for some months past. 6BO has returned to work and is unable to make the usual noise. 6HK is another who spends a good deal of time on the band now.

144 Mc.: Not much to report here, but stations active in the West include 6AG, 6BO, 6DW, 6GB and 6OR. The biggest news of late was the 2 mx break-through to VK5 on February 9 when 6BO worked 5GL and 5QR on phone. The opening lasted for well over half an hour.

298 Mc.: 6HK has been heard on this band by 6BO. 6GB has a c.c. rig (SCR522 with 832 tripling) and a square-corner antenna. Jack puts a good signal over to 6HK and a readable one to 6BO. Best effort so far was 6HK's "keying backwards" technique which is a new method of obtaining m.c.w. 6BO is another using an 832, this time as a p.a. driven by his crystal exciter. Puts quite a decent signal across to 6HK.

DX NOTES BY VK4QL*

The band survey shows as follows, stations worked, and times in G.M.T. or Z time:—

3.5 Mc.: At this QTH it was the band worth watching. Most W call districts were heard, KH8Q/KC6 has been very consistent. Very strong VK and ZL sigs were heard some nights, and it is a long time since that happened. 7EK had trouble with QRM early in the piece, and indications are that this band will be "out" for the WVE Contest on the first week-end for the same reason. Without listing the Ws heard, others were PK4A, KH8Q/KC6*, KV4AA*, PAOZR, DL8DS, OK2FI, OK1AEH, and two Gs. ZD4AB was up there but could not hear him. Incidentally, if you want to hear commercial QRM, have a listen on this band at 2000Z.

7 Mc.: Up here this band did not come up to expectations but 3CP found it a little better. Some good ones were heard but got away. Radio Pakistan is still taking a good bite out of the band round 710. 7EK found the band patchy, with high noise level and heard nothing much out of the ordinary, except ZK3IMZ, which has us tricked at present. Ray also lists the usual Europeans we hear here plus KP4KD 230Z and EA4CR. 3CP worked a few Ws the long path that he did not audible here. Athol found the Commercials troublesome, but managed to work, from 2000Z, W1, W2, WS, W4, SM, I, YO, SV0WP, VS6, ON, F9, DL, HB9, YU, LA, FA8 and 3V8AB. He also heard IS1CQE, ZS3K, EA4 and EI4. He had a three-way QSO with W1DIT and HB9EU, with 88 sigs all round. One noticeable point is that Athol does not hear the S. Africans that I do up here. 20W can only hear Commercials on this band. 4QL's listing is the usual Europeans and S. Africans, with the addition of ZC4KN*, SV8AB, MC1CG, VQ2GW*, VQ2AH*, LU3EL*, 5A2TT (Tripoli), ZS3K*, ZD4AB, KP4KD 2100Z, CT3AB.

14 Mc.: This band has been erratic everywhere, and you just had to be around at the right time. If you were, all was well. 2DQ found he could work Europeans at times when he could hear no other VK being called by them. 30W not quite so active, found little of interest and what he did hear could not raise. Gordon lists KV4AQ*, OQ5CP*, KX6AO*, 4X4, APAN, 4U4AJ, VQ4 and JA0LJ. 4DE, after being QRT for a long time, is finding Townsville a much better QTH for DX than Ipswich. Europeans were almost non-existent there, but plenty now. Jock is just finding his feet on

the band but to date has no complaints. Wait till you hear the bands really turn it on OM. 3CX also somewhat inactive this month and feels his inactivity has not missed out on much, but managed to snare VP2MD and MP4KAE. Alan said 3XO landed LU4ZI on Deception Is. TRK found the same story of poor conditions applied in the "Apple Isle," a few Europeans in the late evenings being the main DX. Ray lists ZS1H* at 0700Z, JZEE*, AP4A, LA8J, HC1PC, PY6DU, OA4EK, C5MC, LUSDBN*, VPTN2* 2130Z. 9XK has the same complaint re the bands, but one notable change is the re-appearance of the Europeans again. 4QL, when not on the lower freqs., found JA0LJ* (Iwo Jima), MP4BBD*, CT3AE, EA0AB, EA8BE, FN8AD, PZ1WK, 9BSAA* (Balkans), MP4KAF (Kuwait), MN2AC (Marine), VF2MD, ZS7F, STZHL. As you see, most of them got away.

28 Mc.: Very little news of this band, and my own listening produced only Pacific stations. 7EK found the band useless, as also did 9XK, who worked ZK2AA to give him a new one. Have no news from 2DG, 4BG, 5HI and 5JE this month to help me out.

The "gen" section this month has little of interest. Another station is expected to be operating from Reunion Is. shortly, F9EJ is now with FR7ZA. The QSL QTH given by JA0LJ (Iwo Jima) is R. W. Cook 1033, Alcatraz, Oakland, and MP4BBD is R. W. Awali, Bahrain. The OY which 3CX thought he had worked turned out to be JY1AJ in Jordan. VRIA is now on the air again after a holiday in VK3. For those who are interested in QSLs without their full QTH shown, XUEF and YB3ZL have been allowed for my DX C.C. but so far not ET3X, ET9X and SUIAD; KV4AA said the ET QSLs have been allowed by the A.R.R.L. for their DX C.C.

QSLs of note are not many. 20W had them from DU1GT and OA5A, increasing his total to 61 confirmed, whilst 3CX had F9QV/FC, MD5PM, PJ1UF, FR7ZA, CT3AN and JY1AJ. 4CC very pleased with one from 3AZAN, who was HC1FG. TRK, after sorting out the odds and sods, found he had OE1ZZ and C3MY left. My own were KG4AF, VQ5CW 7 and 14 Mc., PJ1UF, ZC4OR, OQ5DA.

● The thought for the month is a repetition of a previous one. "If you intend to enter a contest, make sure of the rules first!" A VK2, according to his number, was using in the A.R.R.L., over 300 watts. Even if you were OM, don't advertise it.

Cheers till next month and please let me have your doings, and once again—what about a VK0???

* Filt./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

Jubilee VK-ZL DX Contest 1951 Results

Here are the results of the 1951 Jubilee VK-ZL DX Contests sponsored by the Commonwealth of Australia and organised by the Wireless Institute of Australia in association with the New Zealand Association of Radio Transmitters. The Contest was very well supported, approximately 580 Logs being received—335 c.w., 180 phone and 65 receiving. This return must be considered as excellent in view of the fact that the Contest clashed with a Simulated Emergency Test in the U.S.A., thus reducing the entry from one of the main supporters of the VK-ZL Contest. Again, in Australia, conditions were very poor, particularly during the first week-end when the whole of the East Coast of Australia was in the throes of an electrical disturbance making conditions very bad.

Some adverse comment has been received by the Contest Committee regarding the right to select a twenty-four hour operating period. Quite a number of competitors were of the opinion that each contestant should be on for the same period, e.g., that the contest should be of 24 hours duration from, say, 10 o'clock Saturday until 10 p.m. Sunday night, thus making conditions equal for everyone. Again, a number of stations continued operating after their twenty-four hours were up and sent in check logs for the additional time, thus defeating one of the objects of the selected period, namely the reduction of QRM. Again confusion was caused as some stations hearing others going did not think that there was any time limit.

VK2DG will receive a Trophy as winners in their respective countries.

The Open Phone Section was won by VK4KS with 15,456 points and in New Zealand ZL1HY was successful with 9,447 points. VK2AHA put up a fine all-round performance in running second in Australia for both the Open C.W. and Open Phone.

Following is a description of VK2DG and VK4KS stations.

VK2DG has five transmitters, all similar and using 6V6 e.c.o. 807 buffer and p.p. 807s p.a. with 80-90 watts on 3.5, 7, 14, 28, and 50 Mc. Transmitter required is selected from operating position by key switches and relays. Modulator (when used) is p.p. 807s with the usual speech amplifier and xtal mike. Receiver: 18 tube double conversion super with band switching, is home-built and incorporates the well known "Selectoject" and a novel type of i.f. stage which he has designated the "QX" (details of which appeared in last month's issue of this journal). Antennae: (1) (2) and (3) Double Section 14 Mc. "W8JK's" arranged to give full 360 degree coverage, (4) and (5) 600 ohm 28 Mc. folded dipoles, (6) 135 feet Zeep used on 7 and 3.5 Mc. Antenna is selected by key switches and relays from operating position.

G.M.T. The key also is home made. Two small doors at lower left and right enable entry to the back of the equipment. These doors are kept locked.

B.E.R.S.-195 won the Receiving Section with a fine score of 14,070 points, which was a very fine effort.

Awards are now being finalised and those contestants who are eligible should receive same in due course although some little time may elapse. The Federal Contest Committee used the powers conferred on it under Section 11 of the Rules in a very liberal manner.

The Committee would like to thank all those Overseas Societies who helped with publicity in making known Australia's Jubilee and the Contest. All contestants are thanked for their participation whether the log was large or only numbered a few contacts. It is the number of participants that makes the Contest.

C.W. OPEN

AUSTRALIA					
VK2DG	22484	VK2RA	7198	VK7LZ	1768
VK2AHA	16800	VK3DQ	7112	VK3HT	1056
VK2ZC	13080	VK4GL	7018	VK5KU	928
VK6RU	11523	VK2EO	6710	VK2YC	268
VK5FH	10505	VK7JB	5300	VK2HZ	165
VK5BO	10050	VK3GU	4905	VK3ABA	153
VK3FH	8316	VK2DI	4806	VK2YL	150
VK4KS	7830	VK3BD	3348	VK6LJ	130
VK7KB	7749	VK2AMV	2304	VK3EH	128

Check Logs: VK2AOG, VK3ANJ, VK4XJ, and VK5BY.

NEW ZEALAND					
ZL1MB	25575	ZL1WQ	9516	ZL3GQ	2368
ZL3OA	24346	ZL1ADX	5952	ZL1VJ	601
ZL1HY	11696	ZL4GA	5895	ZL2GG	480
		ZL3JA	3871		

NORTH AMERICA

United States of America					
W1ASU	14	W4PHJ	65	W6GEB	84
W2WZ	2975	W4IZR	18	W7PGX	3375
W2WC	8r	W5KC	765	W7DL	2662
W2ADP	36	W5PNA	608	W7PUM	216
W2LWI	28	W5AWT	192	W7PQE	117
W2ZQW	1	W5KWY	78	W7EJD	32
W2N1Y	1	W6MVQ	5332	W8JIN	660
W2BOT	1	W6ATO	1496	W8OG	60
W3JTK	864	W6PQT	1070	W8DAE	50
W3JVS	660	W6CIS	544	W8ZBC	50
W3PDX	490	W6ALQ	387	W9AEH	840
W3LXE	72	W6WJX	360	W9ALI	162
W3CGS	21	W6AM	288	W0EEQ	308
W4BGO	867	W6GWQ	270	W0YFQ	48
W4DCE	152	W6WQJ	91	W0CTR	16
		W8EJA	88		

Check Log: K2CX		Mexico	
Canada	VE3KY		
VE7GI	360	VE3YV	
VE3CCK	261		
VE3BBR	49		
VE6EO	9		
Check Logs:			
VE1CU			
VE3SR			

Honduras		Puerto Rico	
HR1AT	84	KP4KD	170
Check Logs:			
VE1CU			
VE3SR			

Brit. Honduras		Virgin Isl.	
VF1AA	63	KV4AA	1008

EUROPE		Madeira Is.	
Denmark		CT3AA	90
England		Netherlands	
G4CP	901	PA0UN	2121
G6XN	740	PA0VB	228
G2LB	560	PA0ZL	16
G3FBX	374	PA0JW	8
G8PB	360	PA0LY	2
G8QZ	312		
G3EBH	160		
G3BDQ	60		
G3AIM	48		
G8DA	40		
G3EEM	25		
G2JB	4		
G3FPK	1		
G2HOF	1		
G4XC	1		

Sweden		Czechoslov.	
SM5LL	456	OK7HI	325
SM8CO	440	OK2BDV	35
SM5AQ	380	OK2UD	4
SM7QY	90	OK1CX	1
SM3LX	45		
SM4AOK	36		
SM6ID	35		
SM5AQV	18		
SM7VX	10		
SM6VY	2		
SM7AO	2		

Finland		Poland	
OH2RU	25	SP1JF	870
OH2MC	6	SP1SJ	198
OH3NU	4	SP6XA	12
OH3NY	4		

Portugal		Sardinia	
CT1JS	12	IS1FIC	1

Cyprns		Norway	
ZC4DT	4	LA2B	180
		SW2/land	
		HB9MU	132

Germany		Spain	
DL1DX	2205	EA4CN	310
DL7AA	1680	EA4CR	96
DL2RO	550	EA3GF	8
DL3HW	385	EA3CK	4
DL6DF	42	EA5AF	1
DL1WU	32		

Nth. Ireland		Saar	
GI6TK	77	9S4AX	198
		Gibraltar	
		ZB2I	28

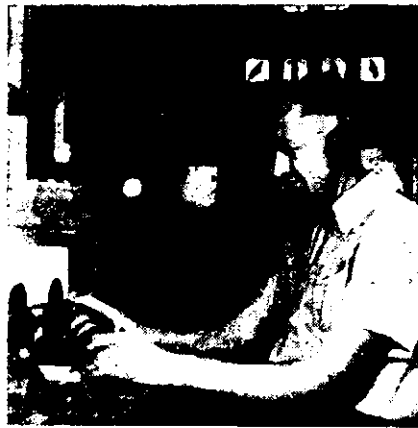
Belgium		Italy	
ON4GU	440	I1KN	286
		I1ER	30

Jugoslavia		France	
YU1AG	256	F9DW	120
		F7AT	78
		F9XB	20



Keith VK4KS tuning up the rig.

VK4KS: V.i.o. with Class A Isolator, 807 doubler, 807 buffer, 813 final. Modulators, a pair p.p. 807s in Class AB2, driven by a 6F6 as a triode, 6SN7 and 6H6 speech limiting and 6SJ7 pre-amplifier, a Tecnico N80 crystal microphone is used. The antenna is a four element rotary beam 55 feet high with a three element 10 metre beam eight feet above. Receiver is a home-made dual conversion with grounded grid 6J6 and 6C4 cathode follower to 6SK7 v.f. 1852 mixer, 6SJ7 oscillator, 1700 Kc. i.f. stage to the second converter ECH35, crystal locked with three stages of 175 Kc. 6H6 supplies the a.v.c. 6SJ7 driver to 6V6 in the output with a 6C5 beat oscillator. This receiver is band switched 14 and 28 Mc. The 28 Mc. transmitter is the same line up as the 14 Mc. transmitter. The speech equipment is common to both. The transmitters are remote controlled from a kidney shaped operating console. All the equipment is housed in a special radio room built on to the house. All equipment in use is entirely home constructed. In the photograph, 4KS is standing by the 14 Mc. transmitter, the two units in the centre are the speech equipment and to the right is the 28 Mc. transmitter. Separate v.f.o.s. are used. At the top is the 12 inch speaker and call sign, below is the beam indicator which, when the pointer goes past north, automatically cuts the beam motor off. At the left is E.S.T. clock and right is



Keith VK2DG intent on copying that DX signal.

The question has also been raised as to the advisability of including VK1 and VK9 among the Australian Districts. If they were included as DX they could only work VK-ZL stations and possibly they would not like that.

Other than the above comments it would appear that contestants were quite happy about the Contest and in view of the large number of Logs received it would be quite safe to say that the method of scoring was more than justified and it is hoped will be continued in future Contests. Just before we leave this section of general comments: In the phone section quite a number of VKs and ZLs were heard operating in the W phone band and although ZLs are certainly licensed to operate there, VKs when hearing them moved down likewise. This position was to some degree brought about by some W stations stating that they would tune around their own frequency, but nevertheless made receiving rather difficult at times for all concerned.

The Receiving Section was well supported and it was surprising the large number of Logs received from Japan. Some of the comment from the Japanese listeners was very amusing!

In the Open C.W. Section, pride of place must go to ZL1MB who topped both Australia and New Zealand with 25,575 points using three bands—7, 14 and 28 Mc. ZL3OA gained second place with 24,346 points from 329 contacts. ZL1MB had 341 contacts. In Australia, VK2DG topped the Commonwealth with 22,464 from 234 contacts in 96 countries. VK2AHA was runner-up with 224 contacts in 75 countries. As a matter of interest ZL1MB's multiplier was 75 and ZL3OA's 74. Both ZL1MB and

Algeria FA8DA 312	AFRICA United States of S.A. ZSSU 72 Check Log: ZS6IX	Mauritius VQ8AF 8
Fiji VR2CG 7094 KH6IJ 2574	OCEANIA Guam W0DEA/ KG6 12	New Caledon. FK8AL 910
Brazil PY1ADA 405	SOUTH AMERICA Falkland Is. VK8AI 1	Venezuela YV3AE 729
Barina XZ2EM 1060	ASIA Hong Kong VS6BJ 1235 VS6CG 770 VS6BA 720 VS6CF 390	Japan JA2HB 1802 JA2OO 154
Ceylon VSTN 1088	Israel 4X4RE 957	Malaya VS1DZ 2912 VS1EJ 810
Formosa C3MY 720		

Canada VE7AIH 234 VE6WZ 42	Costa Rica T2OE 248	Cuba CO2MG 3 CO6OK 2
Brasil PY4KL 12 PY1ANU 4	SOUTH AMERICA Chile CE1AJ 168	
England G2DPZ 810 G2AJ 670 G3EOG 392 G6XN 322 G3DVM 44	EUROPE Madeira Is. CT3AE 44	Switzerland HB9LA 248
Scotland GM8MN 360	Denmark OE2TJ 4 OZISP 1	Netherlands EA0NU 115 PIJ 49 PA0JA 49
Wales GW2FSP 238 GW8BW 126	France F3OX 206 F8FT 132	Spain EA3FW 1
Libya MD2AM 125	Germany DL3IB 50	Sweden SMSLL 45 SM6APA 6
	AFRICA Tunisia 3V8BB 189	Union of S.A. ZS6JS 84

Fiji VR2CG 2224 VR2BJ 650 Tahiti FO8AB 224	OCEANIA Hawaii KH6IJ 3230 KH6ADY 224 KH6AEH 25	Guam W0DEA/ KG6 84
Hong Kong VS6BA 979 VS6BP 810	ASIA Malaya VS2BS 923 VS1CZ 288 VS1EL 196 Formosa C3MY 66	Japan JA2MB 2970 JA2DK 1177 JA2AG 1100 JA5CO 520 JA2OO 4
Burma XZ2EM 1232		
	3.5 Mc. PHONE NEW ZEALAND ZL3FM 1	
	7 Mc. PHONE NEW ZEALAND ZL1HY 4 ZL1MQ 4	

C.W. 3.5 Mc. BAND

VK3KS 1	ZL4CD 1
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C.W. 7 Mc. BAND

AUSTRALIA		
VK5JE 1000	VK6FH 735	VK2AHA 228
VK2DG 925	VK2DI 429	VK3XB 198
VK2GW 846	VK3DQ 330	VK3FA 49
	VK2ZC 260	
NEW ZEALAND		
ZL3LL 1755	ZL2GH 1190	ZL1MQ 520
ZL3OX 1480	ZL1MB 952	ZL3JA 284
ZL2ACV 1386	ZL1PN 864	ZL1IB 9

C.W. 14 Mc. BAND

AUSTRALIA		
VK3KX 10615	VK3YD 1792	VK3ASB 330
VK5BO 9552	VK3AWW 1782	VK2TI 320
VK2DG 9348	VK3PL 1764	VK2PV 165
VK4DA 8096	VK2MT 1820	VK5EH 154
VK2AHA 7245	VK3JI 1560	VK2ABE 130
VK2ZC 5934	VK2OA 1288	VK2AND 100
VK2DA 5600	VK6WV 1276	VK3ACI 70
VK4EL 5535	VK7LJ 1150	VK2VW 63
VK2VC 5500	VK2OW 943	VK5BS 54
VK5FH 5282	VK3ACW 874	VK5BZ 49
VK3JE 5151	VK2ASW 890	VK5WQ 45
VK3NM 4884	VK3RK 540	VK3AS 42
VK6RU 4633	VK3AHM 476	VK4RI 42
VK4KS 4280	VK3CK 468	VK3RM 42
VK3AZW 3876	VK3BS 435	VK3XB 30
VK3DG 3384	VK5AJ 434	VK3DW 24
VK2OY 3045	VK3RJ 384	VK3AEP 15
VK5RH 2997	VK5JT 375	VK5LU 15
VK2AM 1980	VK2HW 357	VK5RK 15
NEW ZEALAND		
ZL1MB 10560	ZL4CK 1456	ZL2ACV 748
ZL3OA 8400	ZL1RD 1107	ZL1NX 720
ZL4AW 8216	ZL3JA 920	ZL1GQ 480
ZL3AZ 3200	ZL1GQ 868	ZL3IA 377
ZL2GS 2923	ZL1FE 864	ZL3CP 388
ZL1MQ 2450	ZL2DX 840	ZL2GX 224
ZL2MN 1728	ZL2AFZ 805	ZL1MT 77

C.W. 27 Mc. BAND

VK2RA 25	VK2AHA 9	VK2ZC 1
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C.W. 28 Mc. BAND

AUSTRALIA		
VK6RU 980	VK2DG 462	VK2RA 300
VK2AHA 615	VK2ZC 364	VK4DO 40
VK4KS 532		VK5FH 6
NEW ZEALAND		
ZL1HY 810	ZL1MB 630	ZL3JA 238
	ZL1MQ 630	

PHONE OPEN

AUSTRALIA		
VK4KS 15456	VK2AMR 3306	VK4KW 1155
VK2AHA 9600	VK7AJ 2754	VK4DO 779
VK3IG 6380	VK3ATN 2448	VK4XJ 416
VK6RU 5586	VK2AMV 1612	VK3PG 170
VK6MK 4950	VK9DB 1274	VK3ASB 154
VK2DG 4512	VK5LC 1248	VK7LZ 123
VK4CB 2570		VK3BA 2
NEW ZEALAND		
ZL1HY 9447	ZL1MQ 5616	ZL1FV 96
	ZL3OA 2205	

Check Logs: ZL1MT, ZL1QW, ZL2ADS, ZL2AI, ZL2LB.

NORTH AMERICA

United States of America		
W2WZ 308	W6LYG 1	
W3LXE 12	W6TIX 420	
W4HA 80	W6TIX 310	
W5IX 136	W6KJN 181	
W5KC 80	W6WJX 102	W7HAD 135
W5LEF 36	W6SQP 30	W8JIN 704

14 Mc. PHONE

AUSTRALIA		
VK3LN 7686	VK2AHM 770	VK4LM 162
VK4KS 5203	VK2AHP 693	VK2VW 150
VK3IG 5040	VK5QE 576	VK2NG 140
VK3EE 4608	VK3DQ 405	VK2SJ 120
VK2AHA 4438	VK5VP 392	VK3HL 104
VK4CC 3698	VK2VC 390	VK3AJ 98
VK6MK 2917	VK2TI 384	VK5AJ 84
VK2ATS 2604	VK2YA 312	VK2BQ 77
VK6RU 2592	VK2VY 308	VK2AYE 70
VK5MS 2178	VK3ADW 308	VK3AGT 70
VK3AUP 2100	VK2AIU 252	VK2AWB 45
VK2DA 1755	VK4DO 216	VK3MX 35
VK6PJ 1430	VK3ALY 208	VK3DG 35
VK2ACT 1232	VK3WM 198	VK4GA 30
VK5LC 888	VK2AAB 192	VK5AJ 28
VK6ZM 882	VK2ZX 187	VK2AGX 20
VK3AZX 880	VK4DI 162	VK2ABE 20
VK2WT 792		VK2ACD 9
NEW ZEALAND		
ZL2GX 6048	ZL2AAM 1000	ZL2QK 594
ZL1HY 4185	ZL3LL 660	ZL2AAH 210
ZL1MQ 2627		ZL4GA 190

28 Mc. PHONE

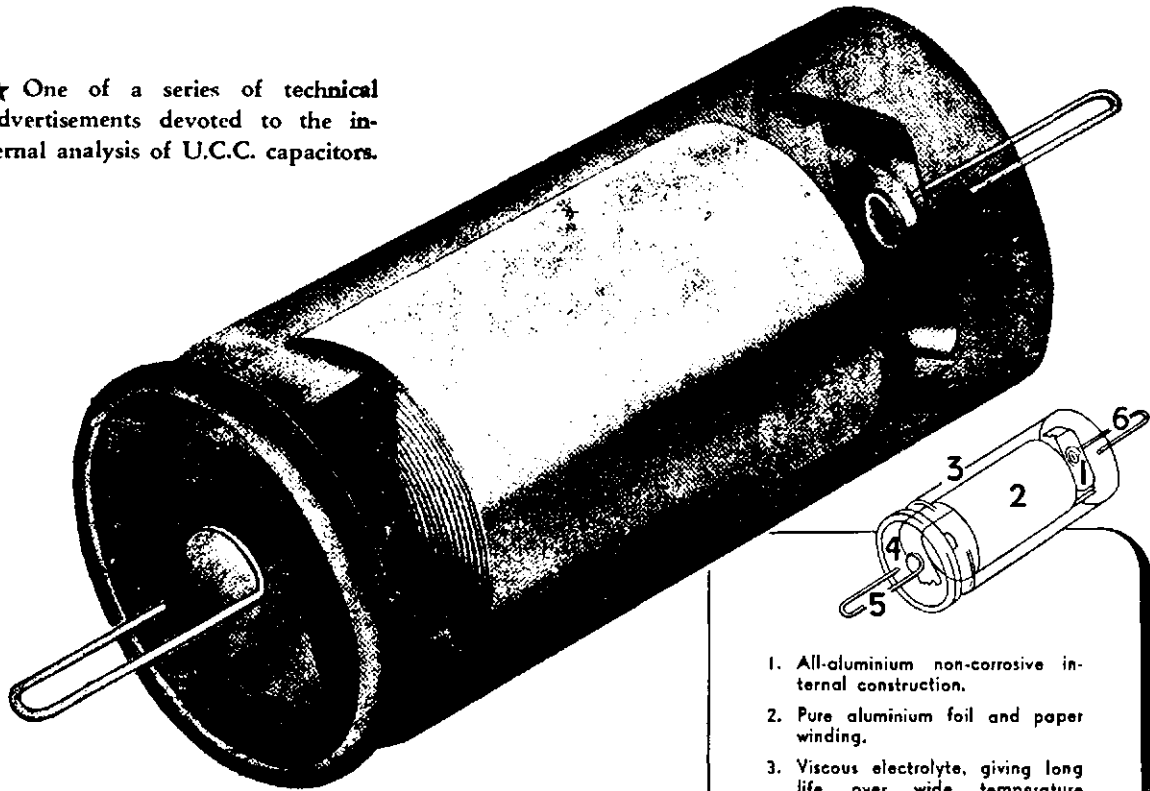
AUSTRALIA		
VK4KS 2678	VK4EL 595	VK2FP 135
VK2AHA 980	VK6RU 561	VK3IG 66
VK5TS 840	VK6MK 406	VK3YS 64
VK6GW 814	VK4DO 170	VK5LC 24
NEW ZEALAND		
ZL3LE 2775	ZL1MQ 465	ZL2QI 330
ZL1AH 2214	ZL1KW 351	ZL4G 7340
ZL1HY 855		ZL2HG 21

RECEIVING SECTION

AUSTRALIA		
B.E.R.S.-195 14070	Smyth 902	
Bowden 4410	McIlhatton 792	
Burlinson 2952	Dash 358	
Giddings 1980	Jones 345	
Edge 1495	Edwards 160	
McLeod 940	Pearce 66	
NEW ZEALAND		
O'Grady 8784	Burgess 1944	
Gray 7084	Gould 1914	
Kan 3842	Ryder 861	
McStay 3060	Gawler 828	
Hardwick 2548	Peckman 162	
EUROPE		
Austria		Switzerland
OE-403 1547	HE9RDY 384	
OE-196 884	HE9ROK 248	
OE-323 714	Gibraltar	
OE-347 278	B.E.R.S.-749 224	
OE-150 187	Sweden	
OE-515 171	Engberg 175	
OE-325 112	England	
OE-450 12	B.R.S.-15622 1944	
	B.R.S.-19107 573	
Czechoslovakia	B.R.S.-15846 126	
OK3-10603 78		
ASIA		
Japan		
Hashida 2408	JA2-250 184	
J7-62 1630	J3-193 182	
J5-169 1404	J2-38 176	
J1-680 790	J3-332 174	
J1-829 690	Nishimura 108	
Akimoto 680	J2-172 38	
JA2-86 550	JA3-347 15	
Higuchi 530	Nakazima 12	
J1-648 528		
Check Logs: Taniguchi, Ito, J2-30, JA8-21, Saito, Mizoguchi, J6-181, Tanaka, Shimizu.		

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FEDERAL

22nd ANNUAL FEDERAL CONVENTION

Not long after this issue of "Amateur Radio" appears on the bookstands and reaches financial members of the W.I.A., the 22nd Annual Federal Convention of the Wireless Institute of Australia will be in session.

Upon the decision of Federal Council at the 1951 Annual Federal Convention, this year's Convention is sitting in Sydney. Delegates will arrive there on the 10th April from all States of the Commonwealth to deliberate on the context of the largest agenda ever before tabled at a W.I.A. Federal Convention—in all 72 items exclusive of general business items.

The Convention will open at 1 p.m. on Friday, 11th April, and continue through until some time in afternoon of Monday, 14th April.

The following officers of the W.I.A. will be present:

- Mr. G. Glover, 3AG, Fed. President.
- Mr. G. Weynton, 3KU, Fed. Vice-President.
- Mr. G. M. Hull, 3ZS, Fed. Secretary.
- Mr. G. Manning, 3KJ, Fed. Treasurer.
- Mr. W. Gronow, 3WG, Fed. Publicity Officer.
- Mr. V. Wilson, 2JU, N.S.W. delegate.
- Mr. J. Moyle, 2JV, N.S.W. observer.
- Mr. C. White, 3AUP, Vic. delegate.
- Mr. L. Jackson, Vic. observer.
- Mr. A. R. Burton, 4FE, Qld. delegate.
- Mr. W. J. Bulling, 5KX, S.A. delegate.
- Mr. J. Coulter, 5JD, S.A. observer.
- Mr. R. W. Hugo, 6KW, W.A. delegate.
- Mr. R. D. O'May, 7OM, Tas. delegate.

Elsewhere in this issue will be seen the agenda for this Convention. Your member-delegate—and observer where a Division has sent one—are going to sit at the Convention table right over the Easter holiday period and decide matters of considerable importance to you, the member, and the future of Amateur Radio and the Wireless Institute of Australia.

If you are interested—and all members should be—you are cordially invited to attend the Convention and listen-in on the proceedings. With the exception of Friday, 11th April, and Sunday, 13th April, Convention sessions will commence at 9 a.m., and 1 p.m. on the above two days. It will be held on the premises of Associated Newspapers Ltd., 60 Elizabeth St., Sydney, N.S.W.

FEDERAL QSL BUREAU

RAY JONES, VKSRJ, MANAGER

Although Felix FK8AC left Noumea by ship on March 5 for his furlough in France, the old QSL Bureau address: Box 104 Noumea, still holds good for FK8. Jean Charles FK8AE will take care of cards addressed to the Box.

The R.C.A. (Italy) with QTH Box 112, Ravenna, Italy, announces a new award—the W.A.I.P. (Worked All Italian Provinces). The Rules provide that claimants must have proof of contact with 60 of the 75 Italian Provinces and must submit these cards to the R.C.A. A list of the Provinces is held at this Bureau. The R.C.A.—a newly formed body apparently in opposition to the A.R.I.—seems to be following the pattern which we have seen in many other European countries during the past 10 years and it is hoped that this division does not indicate political and civil differences.

C3JK, Jack, of Box 419, TAIPERH, Taiwan, has presented me with a new problem. He has sent a multiple card confirming 14 Mc. phone contacts with VK8DB at 2101 R5 S6/7; VK4CC 2117 R5 S6/7; and VK4KN 2135 R5 S8. All on 19th November, 1951. To whom do I send this card?

Rob VK5RG expects to be leaving for Macquarie Island in April. His call sign there is not yet known. Rob expected to visit Melbourne during March to tie up a few loose ends prior to his departure for Macquarie Island.

A claimant for W.A.C. has submitted a QSL from VK1VU as his African confirmation. This is interesting as it is the first card from VK1VU sighted by this Bureau, and proves that they do actually exist. The W.A.C. applicant also states that he, through an intermediary, offered to fill out and despatch all cards on behalf of VK1VU if the latter would hand him his log and cards. This generous offer is alleged to have brought forth the reply that "They can all go and jump in the lake, bother them," or more forceful and unprintable words to that effect.

Frank Clark, VK3FC, expects to visit Melbourne on vacation during the middle of April. Trevor Boyd, ex-VK1RB, whose QTH is now P.O. Stratford, via Cairns, Qld., expects to be heard under a VK4 call sign shortly. Trev.

The Divisional information usually published here will in future appear in the March, June, September and December issues only.

cleaned up his backlog of VK1 QSLs but unfortunately a considerable number of cards is owed to him, by VK stations, particularly. Trev forwards a list of the outstanding VK3s through B.E.R.S.195. The list is so large that it indicates they must be held up somewhere along the line. If Divisional QSL Managers, particularly VK5s, are holding any cards for Trev, please forward them to the above QTH.

The accuracy of a listing in January "A.R." to the effect that New Amsterdam Isld. (FBZZ) is in Zone 29 is disputed by a correspondent who states that the FBZZ card he has shows the position of the island as Long. 77°E. Correspondent claims that Zone 29 joins Zone 39 at Long. 80°E, and cites the N.Z.A.R.T. list as showing the island as in Zone 39 which he claims is correct. Could the DX C.C. Manager publish a ruling on this point?

Another correspondent wants to know how the Newcastle Hams won the "Jubilee DX Contest" and already have their cups as published in March "A.R." seeing that no results have yet been published or other section winners informed.

Writer expected that notes for this column would be brief or entirely non-existent this month (March) due to his absence on vacation. However, due to a number of reasons including the necessity for chiropractic treatment to "offset the onset" of infirmities usually associated with advancing age, made it impossible to leave Melbourne. So the "gold in them thar hills" stays put for at least a further twelve months.

HER MAJESTY'S REPLY

The following reply was received from Her Majesty, Queen Elizabeth II., in answer to a message of sympathy from the members of the Wireless Institute of Australia on the recent passing of her Father, King George VI.—

Clarence House,
St. James.

The Private Secretary is commanded by the Queen to thank the Wireless Institute of Australia for their kind message of sympathy, which Her Majesty much appreciates.

18th February, 1952.

Managing a QSL Bureau has not many advantages, but disadvantages aplenty, one of which is the handling of cards from DX stations worked by the Manager but who misses out on the QSL. This has happened on so many occasions even with stations that QSL 100%, such as Y13ZL, FO8AC, HS1VR, etc., etc.

A panel on page 16 of March "A.R." relative to the forthcoming B.E.R.U. Contest, 1952, indicates that further info on rules, etc., can be obtained from the Divisional Secretary or the Federal QSL Manager. Up to the moment of writing (March 8) neither the VK3 Divisional Secretary, Federal Secretary, or the Federal QSL Manager has any further info or copies of the rules. This will explain to applicants why so far I have been unable to fulfil their requests.

NEW SOUTH WALES

The February meeting of the N.S.W. Division was held at Science House, Gloucester Street, Sydney, on Friday 2nd, with President Mr. John Moyle in the chair. Sixty members attended the meeting which opened at 8 p.m. The preliminary business was quickly disposed of and a very interesting lecture on "Miniature Portable Equipment" was given by Mr. Bob Zuker with a demonstration in which he was assisted by Mr. Israelski.

He dealt first with the subject in general. The merits of different frequency bands, frequency modulation or amplitude modulation,

antennae, etc., and then described in more detail several commercial models with emphasis on the special merits and purposes of each. He had two of the sets with him and oh boy, did our mouths water! They were the perfect example of how to build a twenty-two tube f.m. transmitter-receiver on a chassis about ten inches long and four inches wide without any suspicion of crowd anywhere. Everything was sub-miniature of course. There are probably a good many Hams who would be capable of putting together a job like that, not me though!

Mr. Israelski and some of the boys took one of the sets walk-about round the streets among the tall steel-framed buildings while the other was operated in the hall and only once for a few seconds did the strength drop below maximum. Mr. Zuker then acted as "Aunt Sally" for questions and the boys fired them at him point blank. He had all the answers though, and then some. A vote of thanks was moved by Angus Robertson and passed by acclamation.

The meeting was then opened for general business and the President exhorted members willing to do their bit for the W.I.A. to come forward and nominate for Council—especially in view of the agenda item to be discussed at the coming Federal Convention suggesting that Headquarters be moved to Sydney this year.

A suggestion from the chair that the P.M.G. be asked to issue two new classes of licenses, viz. "novice" license and "technician" license, was enthusiastically received and after a lively discussion with many constructive ideas coming forward, a motion to implement the suggestion was passed unanimously. More will be heard of this ere long and it may be the turning point for the hobby in this country. The matter will be discussed at the Federal Convention.

VISITORS TO URUNGA CONVENTION PLEASE NOTE

An excellent suggestion has been received from Crief 2XO asking all visitors to Urunga to bring with them any portable or other equipment in order to show the country visitors and others interested just how equipment is being constructed for the v.h.f. As can be imagined this will be an excellent opportunity to assist the country lads to get going on the higher frequencies, and one that will not be repeated for a long time. The lads themselves will know what is best to take by remembering the details they were not clear on when they started on the v.h.f.

NORTHERN SUBURBS

Many thanks to Harold 2AQF and John 2ANF for assistance in compiling these notes. Any news of Ham activity in this or any area will be very much appreciated. Gerald 2AGS back on 40 after a trip to England. Mac 2ML about to leave on holidays to VK4 and hopes to call in at Urunga on the way. Bill 2WF is busy constructing a rotary W&K for 20 mx and the Manly gang intend giving a hand in the erection of same. 2AEN busy with photography and not heard as much these days. Stan 2ASB has left us and gone to Canberra; not far from the XL now Stan? Harold 2AQF recently returned from a pleasant holiday in VK3 where he visited a number of Hams. Alan 2FH inactive of late, hopes to move into a new home shortly when the 20 mx beam will be put into operation again. Adrain 2HE, a new Ham in Killara, is active on 6 mx; may your association with Ham Radio be a very happy one Adrain.

Of interest to all zones: Bob Black VK2QZ is going to the islands and has been heard testing out the gear he intends taking with him on the trip, which he expects to last about five months from the beginning of March. Should be a new country and will be active on 20 mx as VK2QZ/VK3.

Dave 2EG chasing the elusive DX on 20 mx. testing new 3 element w.s. beam. 2AYP still in throes of building his first beam and tower. 2AMB heard chasing DX on 40 and 20. Lyell 2GW busy during the W contest in amongst the QRM and QRN; hope you make a big score Lyell. John 2ANF had a visit from Ken 2ANU of Muswellbrook who is holidaying at Mona Vale complete with portable rig; nice sig. Ken. Ray 2YM is expecting to move into a new residence shortly; heard he had his car stolen and returned less radio, hard luck Ray. Bruce 2BG busy building a new house in the Dundas area and has been heard on 6 mx only once.

Would any Amateurs interested in reading these notes like to help compile them? A short note covering the Ham activity in your area sent to your Zone Correspondent or to the Sub-Editor will be very much appreciated. The addresses were given at the top of page 13 in last month's issue.

ST. GEORGE ZONE

Visited Cec Cronan who listens on v.h.f. very often. Has been active mobile. 2VC listening on 50.15 Mc. every night mobile. 2YR has shifted to new shack and is active on 144, 50 and 578 Mc. Ted 2XX active on all v.h.f. bands as usual. Newcomer to 8 mx. Colin 2ACK, welcomes contacts every night. Barry 2ANK at Heathcote listening on 578 Mc. particularly, and will welcome contacts on any band. Tom 2IY is to be heard on 8 mx again nightly. 2ADW on 8 also with low power, but very spasmodic. Joe 2RQ can be heard with very nice 8 mx signal. 2FK very quiet lately, what's doing Tom? 2XH threatens to put a signal on 2 mx. What has happened Tom 2MZ? V.h.f. is still operative! Charlie 2AZK building 578 Mc. gear. (Chas. 2YK has been busy studying television and his efforts with these notes are be much appreciated. Thanks Chas.—Sub-Ed.)

WESTERN SUBURBS

Much the usual activity has been evident in this area during the last month. The bands have not been so good on the whole, but despite that, most have made the best of conditions offering. 2AAB has been by car to VK3 and while there had time to visit one Ham

3SP. On return stoked the gear up on 10 and threatens to invade 144. 2AGX has been off nursing the latest type of 'flu, but back on the air now and has installed restricted speech range in the modulator to good effect. 2APT still playing with the beam, feed line suffered last month and is getting something good in poles shortly.

The Burwood Radio Club meets at Greenwood Hall, Liverpool Road, Enfield, each Tuesday night, all interested are welcome. This club has now applied for a transmitting license, and it is hoped to commence operations in the near future on 144 Mc. Operations on other bands will follow.

2AGU only heard on few occasions these days, busy with work seems to be the reason. 2SC putting out a nice signal, reading the mail we hear that Sam suffered a lightning strike to his rig despite the arrestors, little damage done fortunately, and business as usual. 2AHU finds a little time to get on the air, but busy with domestic chores. Will be v.f.o. controlled one day. 2LG worked on 20 recently, putting nice signal out on that band.

WOLLONGONG AMATEUR RADIO CLUB

The above club is busy training candidates for the forth-coming examinations. The club station 2AMW can be heard every Wednesday evening on 40 mx—is v.f.o., using a Clapp osc. at the moment a new freq. meter-monitor is being built by the members.

Ern 2AHY (ex-4HY) has been constantly operating 2AMW's rig but has now portion of a 40-20 mc 50w. rig built and hopes to operate from his own QTH. Don 2AFD using a Type A Mk. III. from new QTH at Woonona, building a 20w. phone job for 7 and 14 Mc. Howard 2AMD busy building separate finals for 40-20-10-6 in a new rack, fully metered; can be heard on 20 c.w. Col 2AGZ experimenting with 2 mx gear, should be putting signals out soon; heard working 20 mx DX on h.w. vertical with much success. Eric 2DY not very active due to work, building a converter and 2 mx tx using 815s; his problem now is how to get beam off ground.

Harry 2AOX heard on 20 working VK8, 7, W, JA and VR1; sorry to hear the OM has to QRT for 2 months for health reasons; best wishes Harry. Kevin 2AFF only heard on leave periods from R.A.A.F. (Melb.) on 40 and 20; has received some nice cards from overseas. Charlie 2MT heard chasing DX on several bands, good work Charlie old boy, but don't keep such late hours. John 2AUB in camp, will be out shortly and will regain his ear-bashing championship from the local boys working 40 mx. Alan 2VH been QRT for a time having to vacate his QTH, has a new home almost completed and will be on the air again this month.

NORTH COAST AND TABLELANDS

The event of the year will take place on April 12, 13 and 14 at Urunga. It is the "Annual Do" of the North Coast gang which has proved so popular over the last few years. It is so popular in fact that some of the chaps have returned there for their holidays and Hart 2JC has even built his own shack there. Present visitors to Urunga include 2AMV, 2DK, 5QI. If you wish to meet some of the chaps to whom you have spoken so often, then this is the opportunity to gratify that desire. Among the definite starters are 2XO, 2QV, 2AHH, 2UC, 2RK, 2AEY, 2IS, 2WH, 2XZ, 2ACD, 2AAB, 2ASW, 2ARF, 2ZM, 3BH, 4GG, 4PD, 4PN and visiting Hams from VK, W, and ZL districts including the old "Monitor" Fred Leader who is well known to many of the old timers. Make sure that you bring your portable gear, not forgetting a receiver for the 144 Mc. hidden tx hunt as the prizes for the various competitions will easily allow you to clear expenses. See what you can do to make it a date.

Associate Arthur Monk had a pleasant tour visiting Hams on the Western Plains. Fred 2DX has been heard at Kempsey working the DX on 20 from his new QTH. John 2AMV has been holidaying on the North Coast and is rather concerned at the lack of power point facilities at the various camping areas he visited, however this did not prevent him from making many pleasant contacts with his portable rig even when his battery was on the way down. Perc 2QV has had a spot of worry the last few weeks over his "harmonics" who have not been too well of late but pleased to relate they are all OK once again. Peter 2FA is back home again complete with XYL Ina who has recovered from her recent illness. Likewise Doug 2SH is on the band again after a spell in bed.

Richard, 2XO's Jnr., has journeyed to Newcastle to attend college and will no doubt be welcomed by the Hunter gang. Missed out on a very interesting 12-minute over from Norm 2RK the other day. Although his sigs were S max, I could not copy a word! Norm omitted to plug in his mike. However things like that happen to us all at times. 2MM is another representative of the big smoke who will shortly enjoy his holidays at Urunga.

COALFIELDS AND LAKES

The following received from Jack 2ADT who is helping out while Harry 2YL has a spell. Quite a number of the chaps in this zone seem to have gone QRT completely as nothing has been heard of them for some time. I trust am not mistaken in thinking I heard Bob 2KF calling a VK8 on 8 mx one night. Let's hear some more of you and what have you done with Max 2KZ? There is much silence in the North as 2ANU is spending a vacation at Mona Vale. Ken is working portable at this location and putting out a fine signal on 40 and 80. 2VU had to throw lots of junk out of the garage to make way for the new car. Still not on 144 Mc. but threatens to do something soon.

2VZ now has a 20 mx beam adorning the back yard so we will be interested to hear how it performs. Here in Cessnock, 2YL reports activity for the month as on night on 20 mx—result eight contacts and eight countries. Think of the result if you multiply that by 30 Harry. 2ADT has had contacts on all bands from 80 to 2 mx. Conditions on 2 mx has been quite good and VK8 contacts on 6 mx are a speciality at this location. The doings on 144 have stirred Major 2RU into bringing home the material for a new beam. Not to be outdone by all the local advice he intends to make it a 5 over 5 according to latest reports. Chas 2ARV continues to keep 40 alive in that part of the country. 2MR is not as regular as of yore, but has been heard on odd occasions.

WESTERN ZONE

Rod 2ACU, after a three-State 3,000 mile trip, needed a holiday so went to Sydney and bought a new car. Coomabie has since had over eight inches of rain, so the "new job" still has no miles up; can be unlucky! Graham, ex-2AGN, now 3NV, but not on the air as yet. 2VR, ex-Broken Hill, has secured a flat in Bathurst and is now looking for somewhere to hang up a sky wire. 2BT celebrated a birthday on the 28th by maintaining a strict radio silence; twenty-one again Bill? Bill 2MQ planning a visit to 2NS at Easter. After long years of silence, Phil 2IE will shortly be on the air if recent rumours prove correct; 50 Mc. gear nearing completion. A very welcome visitor in April will be Fred Leader, 77-year-old ZLer, known to many of the older Hams as the "Monitor." In the early 1930's Fred monitored the 80 mc band and was a regular listener on the Sunday night VK-ZL round tables. During his visit Fred will stay with 2HC, Quirindi, 2XO Raleigh and 2NS Bathurst, also the home of the late 2RJ, Reg Fagan, of "Sunnyridge," Mandurama.

From Dubbo it is learned that Max 2II is now in his new home and active on 14 Mc. with a multi-element rotary and mighty sig overseas. 2AXS active on 7 and 14 Mc. Noel 2APE heard on 7 Mc. 2VZ not heard since Fred moved into new shack. Bill 2ACT inactive as far as can be ascertained. Russ 2AOS still on battery power and keenly awaiting the a.c. supply. Newest Ham in Dubbo is 2APX; will be looking for a contact as soon as you get going Eric. 2AMR very kindly supplied the above Dubbo news, and Tom says he is QRL with a wolf and the building of a caravan but will be getting 144 gear going this winter. Jack 2OF of Doonside, heard occasionally on 7 Mc. keeping skeds with 2AGA.

John 2AMV on a caravanning trip on the North Coast looking for any possible places a tx could be hidden round Urunga. For the first twelve days it rained. At 2WH, radio this month has been seriously interfered with by preparing for and recovering from a fishing trip. Yes the big ones got away. Main interest, still trying to make two-way contact with Bathurst and Sydney on 144 Mc.

HUNTER BRANCH

An exceptionally large roll up at the February meeting was treated to a very fine lecture by 2DZ, Johnny spoke on the "Rothman System of Modulation" and the lengthy and enthusiastic discussion which followed was evidence of the masterly manner in which the case was presented. And we don't mean the brief case from which John pulled the modulator capable of giving enough audio for a 500 watt carrier!

President 2CS was in the chair and Lionel extended a hearty welcome to 2OT ex-Broken Hill. Max now resides here and we are pleased to have such a progressive Ham in our Branch. Surprise of the evening was announcement by 2MC that he was shortly leaving the district for Tasmania. Mr. President spoke for all when he stated that although we were sorry to lose Bill, all wished him well in his new venture. Bill's affable manner made him popular with all, and I know from personal experience he was always ready with a helping hand. Best of luck to you, XYL, and family in VK7. OM. Members were pleased to have Vice-President 2AFS again taking active part in meeting.

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The social news this month is the marriage of our good pal 2XY. Most Newcastle Hams have been assisted by Neil at some stage and all wish him and XYL Mavis the very best in the future. Many local lads are preparing for Urunga to uphold our prestige against the "Wild Westerners." 2AHA has completed a new rx for 144 hidden tx hunt; Harold pleased with results from 1.4 tubes. 2KG is taking the family up; Ken has f.b. sig on 40-20 with QBP rig now. 2PT finishing off car radio to provide entertainment travelling to Urunga. Alan is taking Bill ZAMM as navigator—more entertainment! 2UY and 2NX very quiet lately. Another who is making the trip is 2CN but Bert lying doggo lately. 2IS (with 2ASJ) will also be in Vanguard (or should I say Fordson?) of Urunga pilgrimage. Making a comeback on 20 mx phone. Ron 2AAI found he can still put a good sig into Europe. Bad conditions haven't stopped 2AAM from working plenty of DX on 20—helped by his Dad, Merv, experimenting with antennae.

2ZC cleaned up shack and Jim put sig on 20 for first time since DX contest. George 2AGD putting up "flop over" beam on 20. The "car man" 2AFX preparing for holidays at Turcumy. Still waiting for Fred 2AGY to break long silence. 2MR active on 40 and Edgar making up coils for 20. Norm 2ANA popped up on 40. 2CW says he does something called "work" which keeps him off air. Recent showers caused a pole fire near 2XT's resulting in 50% improvement in noise level! 2WU has nice sig on 20 with reconditioned beam perking well. A good 40 phone sig still emanates from 2CI at week-ends. 10 mx not dead to 2FP. Ernie recently worked W.A.C. in quick time. Nil heard of 2ANG lately so maybe Phil on 10 too.

Meeting Notice.—Special announcement! The April meeting will be held at the 2HR Auditorium, Maitland, on Friday, 4th April, when a special lecture will be arranged by the N.S.W. Divisional Council. Roll up Coalfields and Upper Hunter Hams and bring anyone interested. Newcastle members please contact the Secretary re transport. NOTE.—First Friday of the month.

VICTORIA

EASTERN ZONE

3SG back on the job this month, Ossie 3AHK begged to be excused while he did battle with a home-brew rx and I mean battle! The R.I. did the rounds of the zone during the month, however everything was in order, even 3SS had a freq. meter! It is rumoured that shortly after the R.I. arrived at 3AHK Ossie and he were seen heading for the local hostel, my word 3AHK will get on.

3IZ putting in a good signal on 3550 Kc. using an AT5 with clamp tube modulation. I'm afraid he's got into the rough with h.c.i. though. 3ABP, another regular on the hook-ups these days, putting in a good signal also. 3PR's new rig working very nicely. 3ABF working on his rig expects to be on again soon. Incidentally, Arthur got that radio controlled aircraft working alright, apart from a crash or two. 3AFG is becoming quite active again, he actually had a look at his rig last month. 3ALA conspicuous by his silence lately. What is it, fire brigade or YL Fred? Associates David Scott, John Batterick, Alan Jacka and Ritchie Matherson are sitting for the A.O.C.P. exam in April. The zone would like to take this opportunity of wishing you the best of luck boys. All are prodigies of the Sale Radio Club.

The Sale Radio Club held its monthly meeting on the usual third Tuesday, when a very good number were present. Graham 3QZ spoke at length on the necessity of fostering portable and mobile work in the zone. This was with a view to possible emergency work in the future. It was decided therefore to hold a portable and mobile Field Day on 6th April. A contest will be held in conjunction with mobile stations having the highest scoring potential. A set of points was worked out allowing points for working mobile, portable and fixed stations both within and outside of the zone. These arrangements were ratified over the zone hook-up and the co-operation of all Hams is requested. The success of the Field Day will depend of course on the number of stations that are on, so what about it chaps?

FAR NORTH WESTERN ZONE

During the past few months members of the zone have been doing a spot of re-building. Chas 3TI, having modulator trouble, has tried out several modulators in an endeavour to overcome lack of modulation. In spite of all this he has managed to keep the weekly sked with 3WI. Harry 3MF has completed new modulator and erected new antenna and hopes to have a signal on the band soon. We'll be listening for it Harry. Noel 3AUG busy with harvest but still manages to get to the shack once in a while and work some DX on 20. He is also thinking hard of a system to rotate the old beam with a minimum outlay of cash.

Jim 3AFP has moved to Mildura and now lives one block from 3GZ. Jim hopes to be on shortly. Hold up at present is the shack under construction. Max 3GZ has all-band final working in the TA12 and has beam on 14 Mc., and is chasing a bit of c.w. DX.

Big news from Ouyen. The a.c. has arrived and Frank has unpacked his beloved Type 3 and I gather he is chasing DX on 20. We don't hear much of Frank on our Sunday afternoon hook-up, bad QRM from "Bowls." How about showing up one Sunday Frank? 3AFC, like the Arab, has folded his tent and moved on; Fred now in VK2 at Deniliquin, expect we will hear from you soon Fred. We have had some visitors through Mildura over the past few months. Max 2OT, late of Broken Hill, camped at Mildura for approx. a week. Had a nice mobile 40 mx rig in the car. Bill 3AMH at present at Cardross.

CENTRAL WESTERN ZONE

The Zone Field Day, which was a disappointment to the organisers, was won by 3ARL. Lin is to be congratulated for his effort as he was persistently hampered by lack of sensitivity in his rx, which resulted in numerous answers to CQs not being heard—you can't keep a good man down.

3ACI has just completed a portable for the car and it seems to work out very well (you'll need it for Horsham Charlie). Charlie is also going on 144 Mc. and looking for contacts—well I ask you, with another addict in Horsham, that should be easy. Keith, who is now nicely settled back in Stawell, is busy building one 30 ft. tower on which to mount the old 14 Mc. beam, it won't be long now before 3AKP is back on the air, and with the new 230v. a.c. supply fun and games will soon be had by all. 3GN, another of the missing ones, has all the gear set up in the new house, but no juice until a few more poles are erected, and the two-phase supply brought in.

After a few weeks' holiday, 3JHL appeared once more on 3.5 Mc. with his usual good signal. Alan finds DX on 14 not so good—have a look on 7 and 3.5 Mc. its there too. 3DP has completed a new 100w. tx for 14 Mc., however nothing was heard on a test with him last week—let's hope the genemotor has not burnt out. Dick 3RR and 3APA have once more tried to imitate the mountain goats and climb Mt. William just to radiate 144 Mc. sigs, you blokes certainly do it the hard way, and what's this rumour about a VK4 hearing 3RR on an indoor folded dipole on 2 or 8 mxt? Never mind, Dick, it's all in the cause of science, and they at least don't call you "Donald Duck."

3ARL has been experimenting with combined control and screen grid modulation using the Clamp tube. Lin finds it a big improvement and now gets 100% modulation. 3YW also finds it an improvement as his receiver gets less of a bashing while Lin is on; Lin also has (believe it or not) been heard on c.w. of late.

The next zone hook-up will be held on the second Sunday in April at 1000 hours on approx-

imately 7155 Kc. 3YW in control, will you be there?

NORTH EASTERN ZONE

3UI building again, this time a crystal controlled converter for 40-20-10-6 metres; works well on all bands too. 3IJ on holidays. 3AT practicing at being William Tell, so I hear. 3JC had a 20 mx beam, 3 element rotary. Results weren't as good as expected on the forward gain and had 3UI, 3JL, 3APF and 3JC all studying to find out where the mis-match is; incidentally the front-to-back ratio from all points of the globe has been 30 to 36 db. Beam came down when a guy wire shot through, not much damage—the beam-lifting gang will again be welcome.

3KR getting emergency communications organised in Benalla and district. Pity conditions were so bad Ken for the demo. 3UI, 3APF and 3JC were all listening out for you. 3AGT emerged from the land of the missing for a brief word of advice or information for the zone correspondent. Hope the reply wasn't too fierce Stan. Among those I list as missing are 3ACK, 3PE, 3AGG, 3AJO. Where do these fellows get to in the summer time.

3CI now occupying a major portion of the kitchen, right next to fire too. 3IJ and 3ACW playing with 2 mx. 3UI made a hurried visit with 3IJ when fog closed Melbourne down, Mangalore on these days is as busy as Bourke Street. 3GD still working a few on 20 mx. 3AT also, if conversations on antennae is anything to go by. 3ALE working hard, must be seldom, hear him on. By the by, what happened to that idea of another zone picnic before the weather gets too cold.

SOUTH WESTERN ZONE

Well fellows, once again it would seem that the zone notes are a little on the mean side, and what news I have, is mainly derived from my very spasmodic listening on 3.5 Mc. Activity of the zone members on bands workable here, that is 3.5 and 7 Mc., has not been high. Of those who work 20 and 10 and upwards, I know nothing. At one time news was, in the past, regularly sent in from Ballarat and Warrnambool areas, but this, after a few spasmodic lapses, finally ceased.

Neil 3HG is heard occasionally on 80 and is a very regular starter in the weekly zone hook-ups. Neil, in spite of the poor conditions, manages to snare some DX. 3ADN has been busy this last month throwing up sandy soil in his locality to produce dust. Pat got so used to it during the annual C.M.F. camp at Puckapunyal that he finds he can no longer live without it.

3AGD has become quite interested in 144 Mc. again and has renovated the six element Lenfo and installed a three tube converter, but to date has heard nothing but auto ignition noises. John should be able to work through to Horsham now that 3RR has migrated there. 3AKR is busy besides with the farm work, getting together gear for the s.s.s.c. tx which is under way. Kevin is also pursuing the same operations as 3ADN. 3AMH had some rather bad

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luck with the Renault which left same rather crumpled along one side.

The S.W. Zone Convention will be held on the week-end of 5th and 6th April. The Convention will be held at Geelong and bring along that d.f. equipment as tx hunts will be held on the Sunday.

QUEENSLAND

It is with pleasure that I hand over the Sub-Editorship to 4AP. Let's hope you get the co-operation from the zone correspondents Alf. Good luck Alf OM and I sure look forward to reading your articles. I cannot sign off without thanking Clare for her regular monthly contributions. I hope we will still continue to read your corner, Clare.

Our new Federal Councillor, 4FE, figured in an unusual set-up the other day. He was the VK4 member of a large round table between a W and a VK2 VK3, VK5, VK6, and VK7. Also the same gent heard a VK3 on 144 or was it 288 Mc? I do not know, but anyhow I think he had no Tx to reply on because he had lent it to me. Did I ever tell you about Clare's Pop (4NC) and how he painted himself into the corner of the bathroom? What is more, the paint wouldn't dry for days.

We are very grateful to young 4FP for accepting the job of Secretaryship again. Same goes to the QSL boys too, but I know John has a little more work to do than other members of Council which also includes the publishing of "QTC." In fact thanks all you chaps who went back for a second helping.

Bob 4RW reports he worked 4KS at some place called Lamond and 4TM at Cunningham, also 3LN somewhere in Victoria during the Field Day Contest. He has just sent the cards for DX C.C. membership; congrats Bob OM. He is not sure if F18KVA is OK or not for DX C.C. Has anybody any clues?

Well, cheerio and thanks for having me for the past 15 months. Like a bad penny, I'm sure to turn up again but in the meantime please send all the gossip you can to either Clare or Alf 4AP.

CLARE'S CORNER

Congratulations to Ray 4FJ and his XYL Olive on the arrival of a son. No more staying up late to work DX now Ray or you'll wake the baby. 4CC, the "Chermside Clipper," has purchased a car, so I wouldn't be surprised if

Ham Radio suffers for a while and jaunts in the car take first preference. 4ZE, having worked that elusive JA0, has now only to wait for the cards before he can claim the "Worked All Japan Award."

Holidays seem to be the order of the day lately. 4KS and family are going on a motoring holiday down south. 4EL will be down from Townsville to spend his holidays with his family at Camp Hill. 3GR and a couple more Bullarat boys will be spending a holiday in Brisbane, including 2JZ who will stay overnight and then travel to the South Coast. 2AIR is back home after holidaying here for a couple of weeks. It's a wonder Hams can afford holidays after buying radio parts these days.

Shortly 4TN and 4AP will be taking over the positions of Station Manager and Sub-Editor respectively. Best of luck to both of you. 4TT is replacing the folded dipole with a ZL special. Hope it works out OK Tom. 4EL of Townsville seems to be in possession of a secret weapon. He contacted 4EE and Arthur's final tube blew up, he then contacted 4NC whose power transformer went up in smoke. 4WF then broke in and finished the contact with a spare for everything close handy.

COUNTRY JOTTINGS

From 4GG we heard that he had words with 4RF at Cominya who reported that 4LT is leaving Cominya for Nanango and hopes to be on the air from the new QTH. 4RF himself also expects to be leaving Cominya but so far no new QTH has been suggested.

From 4GH at Maryborough we are told that 4BG and 4AI are doing well on 50 Mc. 4BG is using a three element beam and 4AI a folded dipole; the former having had 18 QSOs, and 4AI 11. 4SE has left the retail trade and has joined the local b.c. station. He is also active on 20 mx. 4KG has joined the R.A.A.F. again. This time permanently we hear, so it looks like a brand new motor boat will be for sale. 4GH once more swings the stick at school after a very f.b. vacation, but Gordon reports that the fishing was very poor.

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for February was held at the club-rooms to a very representative gathering and

the guest speaker was Dave Hosking 5DH who gave a very interesting lecture on "The new South Australian Railways' diesel trains." These new diesel trains have aroused quite a deal of interest throughout Australia, and as Dave was connected with the installation right from the beginning, it was expected that he would be the right man to lecture on them, and I might say that our expectations were exceeded. The vote of thanks was passed by Bob 5RT and it was received with the same enthusiasm as was the opportunity to ask questions which preceded it. Nice work Dave.

At the opening of the meeting Ross 5LW welcomed the President "Doc" 5MD back to the chair after his illness, and although he left the meeting early, he found time to sweetly thank the Past President (Hal) for taking the chair in his absence, and with a sneer in his voice he alluded to the fact that the Vice-President ("Pansy") had weakened the legs of the chair at times. Among the welcome visitors were Messrs. Basson (2), Roper, Smith, Fletcher, Orr and Laidlaw. To these gentlemen we say welcome and come again.

Bert 5DR, who puts up such a good performance in the Jubilee Relay Contest, has now left the lighthouse at Kangaroo Island and is domiciled at the lighthouse at Cape Borda. Congratulations Bert, you put the VK5 Division well out in the spotlight. Heard George 5GD on 20 the other Sunday asking a VK3 for a check on his phone, so I presume that he has been bitten by the bug again, welcome back OM. 5FB should be given the job of publicity officer for Clare judging by the way he was rapping it up on 40 the other Sunday, although he did not exactly rap it up when describing his QTH as regards noise level. By the sound of it the noise level must be terrific. Ross 5LW has been telling all and sundry on 20 mx about the annual fishing trip that he and Max 5GF had and he made it sound like a "fisherman's paradise." It appears that they caught over 300 crabs and heaps of whiting, and finished up using the said whiting for lobster bait!

Alan 5VO was heard telling Brian 5FQ of his proposed re-building programme and apparently he considers that his newly built shack deserves something better than his old rig, because he was giving dark hints of separate finals for all bands and a sooper-dooper rx with fixed-tune converters for each band, with a tuneable i.f. Robert Pearce, one of my spies,

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is having trouble with his rx but was still able to snoop a little for me, thanks OM.

Who was the person associated with the Goals Department who pointed out some timber to a gentleman from the Police Department, and was even prepared to assist the said gentleman to carry the timber to the beam being erected at the Wayville Showgrounds? Black mark, Eddie. The other night I came home from the pictures and went into the shack just to have a listen on 20 mx. Wham! What do you think came back at me? Wham! You said it, nothing!

Tom 5TL, who conducts the slow morse session in VK5, tells me that the noise on the 3.5 Mc. band may be too much for the learners. Anyway, despite repeated requests for reports on the transmissions, he has received none. Tom wonders whether he is wasting his time and power.

5TW is still putting most of his spare time into his 2 mx gear, although Tom seems to find a little time for a few contacts on 40 mx, as a means of breaking the monotony. 5CH is still out in the country and as quiet as a mouse. So far Claude has not been able to make the 100 reach out very far although he did have a contact with 5TW, but it was only after getting within a stone's throw of Tom's QTH. A big stone mind you. 5JA is back at work after his honeymoon but as yet John has not even thought of radio. He hopes to be active within the month. I hope you have remembered my advice, OM, regarding DX before dishes! Excuse me for a short while, my wife has called me to help wife up.

5MS hopes to move into his new home in a couple of weeks or so and it goes without saying that he is a very busy man, although I must admit that my spies tell me that Stuart is, at that, still the most heard station down that way and manages to get a new one occasionally. He has 106 configurations to date. 5KU has given the fishing away and has returned to the beam that I mentioned a few months ago. All the bearings have been "lined-up" and Erg expects to be using it by the next month. 5FD has nothing to report except to say that he has a shot-gun handy behind the door in case there is any truth in that paragraph of mine recently concerning the Junior-op of 5CJ. If the said Junior-op ever takes it into his head to go a-visiting the harmonic of John, he will "cop the lot."

5CJ has had a few contacts on 40 mx and an odd one on 20, but Col has been doing more listening than actually transmitting, especially on 2 mx. All the activity on 2 mx has gone into temporary retirement for some reason or other and therefore there is not much more that he can do other than listen. 5DF, who will be remembered for his activity at Kadina, has now shifted to Port Lincoln and is busy seeing that the town's supply of ergs continue to flow into the ohms watt pay their bills (what a humourist!). Wally says that he will be too busy to think of coming on the air for some time yet, but I have heard that remark before. 5KW is back home again after his long spell in hospital and it should not be long before Harry is gathering his gear together and gets on the air. He tells me that he is heartily sick of doing nothing and will welcome the chance of getting back to work.

5WK who has been relieving at the most powerful station in the State during the sickness of 5KW has now returned to the big city. However, my spies tell me that Wyk was back at Renmark a week later, and although I have heard say that the "River gets you," I somehow feel that there is more to it than that. The fact that it is Autumn and not Spring confuses the issue a little, but I still think that it is "Cherchez la femme." 5MA has now shifted to his new QTH at Renmark, to the accompaniment of loud cheers and visible signs of relief from the gang at Berri, although why the moving of a little QRM should affect the Berri boys is beyond me, and Fred has been spending most of his time trying to decide which room to make his shack in, although if he only knew it, his XYL has already decided that one for him, but of course when he has been gently led toward his decision he will still be under the impression that he thought of it first. The voice of experience speaking!

5CF has been very busy with odd pieces of radio gear, including a v.t.o., with a measure of success. Murray has been a little unlucky in coming into radio at a time when the bands are all going through the doldrums, but at least it can't last for ever, or can it? 5BC has been a little quiet lately because he is in the throes of designing a new rx. One thing Hughie, you won't want any audio stage in the new rx, with those ultra-sensitive ears of yours. Now calm down, I am not being personal. 5SL has re-built his final for the tenth time and is using an 834. No tests as yet, but Laurie has a funny feeling of success at last, it even looks good! He strained his supply of optimism very badly the other night by calling a KG6 on c.w., but his ten watts apparently did not make the distance because the KG6 remained strangely

silent. Of course the signal could have fused the aerial. No? Oh well, it was only a suggestion. 5JH is paying a visit to the Upper Murray boys early in March, and Vic will be taking some photos of the shacks to add to his collection of over 40 VK5 stations. The local boys are busy with dusters and rubbish bins in anticipation. Brian 5FQ is on a holiday in the Upper Murray district, and if my report is correct he is renewing acquaintances made when he was relieving at the second best broadcasting station in the State some years ago.

The Ross Hull Memorial Certificates were much admired in VK5 and all felt that F.E. had excelled themselves, so much so that it has been suggested that a sample should be sent to the A.R.R.L. to show just what can be done in VK. No doubt these words of praise for F.E. sound a little strange coming from me, but at least I can recognise good work as well as I recognise niggers in woodpiles. The two representatives from VK5 for the Convention are John 5KX and Jack 5JD. It would appear that VK3 are making this Convention a sort of Cook's tour, judging by the number of delegates going, but there is no truth in the rumour that F.E. intends to get on its dudgeon and ride over!

All Amateurs will be pleased to know that "Doc" 5MD is well and sparking on all six again, and I feel sure that the genuine welcome back that he received from all the members at the meeting must have made him feel even better. I relaxed to the extent of giving him a slight nod of recognition! Jim 5JK was heard giving a learned discourse on the zimbooka and the quilt to Rex 5KY on 20 mx the other night. It was all very technical, but I thought that Jim might have at least spared a few words for the porkazooka. You don't know it Jim? It is two violin strings stretched across—oh well, it doesn't matter.

One of my espionage agents visited the working bee at the Exhibition recently and he tells me that he found an enthusiastic band of workers headed by Reg 5RR and Ross 5LW in solemn conclave around a frame for a rotary beam. Hal 5AW and Tom 5TL were acting as despatch riders, dashing hither and thither in search of missing parts or persons as the case may be. Joe 5JO was putting in some good work with the sign-writer's brush, and associate member Sappalizer was doing a man-sized job fixing the rotating beam mechanism. Norm Coltman had a bag of tricks from which he produced a scope iron, an electric drill, a 66 ft. tape, two white rabbits and a bunch of coloured streamers. Later in the day, "Doc" 5MD and Gordon 5XU dropped in and were promptly grabbed and put to work, and over the way from them were 5LW, 5WV, 5EA and other interested personages pouring into the pages of a handbook. The net result of all this activity was that the beam was duly hoisted into place and the only fly in the ointment—is that during the following week a power line was erected about five or six feet from the top of the beam and the result of this unexpected opposition is still a matter of conjecture. However, if enthusiasm on the part of the organizing committee counts for anything, and the co-operation of all the willing workers means anything, then the whole thing is an assured success. Some of the equipment belongs to the S.A. Division, some has been loaned, and it goes without saying that Max 5GF figures in this side as usual, and a roster of duty operators has been prepared for every night to ensure that the general public will at least see what makes the average Ham tick. Here's wishing them all the best.

Tom 5TL was the recipient of a vote of thanks at the March Council meeting in recognition of his work in the past as Treasurer. We regret that he has been transferred to Renmark, but our loss is that town's gain. They have my sympathy, fancy that motor bike tearing through the town flat out at 15 m.p.h. Bedlam is the only word for it.

With nominations for Council now in hand, and all appearances pointing to a ballot, I am very busy canvassing my constifoot-constituent-constitit-my voters. What with kissing charming little babies, smiling sweetly at XYLs, and laying foundation stones, I am finding it quite a strain! However, if I should be thrown out to the wolves, I have enjoyed every minute of it and at least I have tried to do my little bit for that grandest hobby of them all. Pardon me while I break down and weep unrestrainedly. Oh, and whilst I am on the subject, I am definitely no grandfather, 6WZ to the contrary. I'll bet that your voice has broken OM!

— . . . —

WESTERN AUSTRALIA

At the February general meeting of the Division, proceedings began, at the request of 6JW the President, with all present standing in silence for a minute as a mark of respect for His late Majesty, King George VI. Business dealt with included the report from Council on

agenda items and the advice that these had duly been forwarded on. New members enrolled and welcomed were J. Godley (VK6JG, Bunbury) and N. Lee (VK6LT, Albany). Two visitors were present, Mal 6MU (Merredin) and Mr. D. Brown, Mal, by the way, insists that a local paper which must remain anonymous for fear of libel actions, was wrong in a report published about 6MU's bread-and-butter. The paper in question said it had recently been "increased in power to 2000 wasps." Mal also had something to say about the amending of a motion of which due notice had been given and also pointed out that the amendment giving the Federal Councillor a vote on Council (in the event of the elected man not already being a Councillor) was out of order. Both points were discussed and the President ruled that (1) Normally no amendment is permitted to a motion of which notice has been given (the correct procedure being to accept or reject as it stands). The fact that the meeting allowed the amendment without challenge gives the amendment legal force. (2) Constitutionally the amendment is out of order as it virtually increases the Council from nine to ten members. For this reason he ordered the motion to be re-submitted in the next bulletin, in its original form.

The ballot for our Federal Councillor was declared at the meeting, 6TX and 6LM acting as scrutineers. 6KW received 45 votes, 6HL nineteen, and 6AG nine; 6KW therefore being declared elected. Of the 125 ballot papers sent out, only 73 were returned. That means, my merry men, that you, you and possibly YOU didn't trouble to vote! If the cap fits—then resolve to take a mite more interest in your Division and see that next time ballot papers go out we get more than 54.4% return. After all, it costs country members like myself 3/4d. to vote—so there's no excuse for you city slickers. At the same meeting, an R.D. Certificate, won by Bill 6MB, was duly presented to him. Would like to hear your cheery voice on 40 again some time, Bill!

Referring to the election of Federal Councillor, I should retrace my footsteps to record that 6JW spoke in appreciative vein of the services rendered the Division and the Institute as a whole by the retiring Councillor 6GM. John said that the post of F.C. was not an easy one and revealed that getting an expenses sheet from George had been about as difficult as getting an 807 to neutralise. Rank and file members probably would not realise in just how many ways George had served the Division, even to such matters as saving it money. The new Federal Councillor 6KW moved a vote of thanks to 6GM which was seconded by 6HL and carried with acclamation. I might add that George and his XYL spent a week or two up in my neck of the woods enjoying the gentle (?) southerly breezes, the flies, mosquitoes and other fauna. Life in the great outdoors and all that!

The lecture at the meeting was given by Mr. G. W. Dean, who was Secretary of the old Perth Radio Club, the forerunner of the W.I.A. Mr. Dean spoke interestingly of early days when he held the call sign "XYL" (no kiddin' fellers) and Wally Coxon (now 6AG) was "XYK." The club was started in 1908 and ran until after World War I. The meetings were held in the Science Room of P.B.S. where "Tinny" McKail, whom many thousands of this States' youths (now grown men), must remember affectionately. The vote of thanks to Mr. Dean at the end of a most interesting talk was moved by 6MU, naively described in 6HL's minutes as "one of our old-timers." Well, it's a year or two since I last saw you, Mal, but I can't believe you're showing your age to that extent. On the other hand, take a peek at some of the real greybeards like 6AG, 6SA and 6WP—now there's "crabbed age" for you if you like—but not "Bluey"—surely not!

After the President had read out in silvery tones a recent editorial in "QST" and pointed out the gloomy picture about that 7 Mc. band, we have yet we haven't, an auction was held of surplus gear; no reserve was allowed and according to the copy of the minutes sent me by 6HL, "the buyers seemed happy, anyway."

Before leaving official business I must remind you all that the April meeting will be held NOT on the second Monday this month, but on the FIRST Monday, which is, 7th April. Be sure to attend for it will be both the April general meeting and the annual general meeting. A good attendance is especially requested.

Sensation Dept.: I had no less than five reports from my spies this month and together with 6HL's usual secret cypher (for Pete's sake, somebody, buy a new ribbon for Harry's mill!) which, when returned from M.I.5 turned out to be the minutes, I find myself with enough news to fill about four columns. How's about it, Chief?

One of the nicest gestures was a screed from Alec 6AS who once had this thankless task of bashing out the notes once a month and who

knows what it's like to be without news. Thanks, pal. Alec tells me Mac 6MG has been busy of late building up electronic timers for the local photography fans. Three have rolled off the assembly line so far and all appear to be doing the required job. Mac, OM, how about designing one for the "hullo-goodbye" DX specialists so's they won't waste valuable time talking unnecessarily to people in whom their only interest is a new piece of paste-board? Should sell like disposals—and make your fortune too, like the same stuff has done for — (censored!). A surprise visitor to Manjimup during February was 6MU who had intended journeying on to Boyup Brook but owing to a hitch in arrangements spent the night in what Alec describes as "this fair city." Mal saw both Mac and Alec and no doubt many were the tales that were told. As for the next part of Alec's letter, I don't know whether to brush away a strong, silent tear of compassion for him or to break out into a wild, sneering laugh of the "I-could-have-told-you-so" type. Quote: "When I first came down here in November everyone assured me that a.c. would be on tap by Christmas or shortly after. They omitted to say which Christmas." Unquote!

Bill 6WR was another to heed my plaintive call for help and out of the blue came some very welcome additions to the call signs. I include in this column from month to month. Bill says he's recently increased power to 50 watts to his pair of 807's, 2 element beam adorns the chimney but some work had to be put in on matching systems to get the s.w.r. down. Bill says the T-match and 150-ohm line gave best results although he's not quite satisfied yet. 6RW paid a visit to 6VM's place some time ago and Bob was so impressed with Eric's shack that he went home and tore his own to bits and re-built it, also the rig!

6FL has been active too and has a "hush-hush" beam (mentioned in 6WR's letter but so secret that Frank said "now!" about it in the letter HE wrote me!) and it seems every country is now within his grasp; Bill says the boys wait around till Frank has worked the DX then queue up—but 6FL doesn't mind! 6LL is always good for a QSO on 14 Mc. Clarrie runs 40 watts (when the mains arc up) and swears by his vertical folded-dipole. 6BG popped up recently after many many months of silence. Peter runs only 10 watts but gets around just the same.

6NC surprised 14 Mc. one night (late) recently by coming on and calling. My spy tells me it's the first time he's heard Nell on 20 mx. Neil said he couldn't sleep; guilty conscience no doubt! Mail-reading has reached a new low since the VK6JW-VS1AD combination has not been heard. 6AP has to wait till late at night to do his DXing as he works as a sprocket-hole ripper at a film star foundry. How's the "black box" performing. Alf? 6IG is putting a back verandah on his Attadale mansion—not much time for hammering, they tell me. 6FW believed to be ill about but not very active.

Bill Ashley was brought round by the resident M.O. at Forrest after I wrote to him and so far recovered as to write to ME—then it was my turn to faint. Quickly recovering I read what he had to say and it appears that Bill's finding DX very scarce out there. Queued up recently for a contact with VK1VS but "n.d." Says Forrest is as good a spot as you could wish for, for reception, but the band conditions are just plain bad. Tells me Alan Doodson 6AR is married and has settled in Kalgoorlie and is setting up in business on the 14 Mc. band. DX stations please note.

6GA also wants me to "tack down" a sub-ed. from another Division who had a crack at VK6 on the associate-member question which, having been solved some time ago, is now stale, as Bill says. Wait till some month when the mail-bag isn't bulging with spies' reports, Bill, and then I'll let him have it—fair in the middle of his "best broadcasting station."

Chiefly Briefly: 6CN has moved from Geraldton to Kellerberrin. 6LC puts out a nice signal with low power and makes the National news headlines with electric-fan QRM. Latest baby at the 6EC household is a "Wireless World" type wobulator sweep-signal generator. 6LG heard ZSS on A-3 at height of the day on 7 Mc., 24/2/52! 6LU has noted new tobacco prices, says "this is it!" 6FL has joined the Claremont gang and having got the new QTH shipshape is in there working the DX, even promises to be on 7 Mc. again some day. The new Advisory Committee comprises 6LJ, 6AG, 6FT, 6WV, 6KW and 6HC.

Unbelievable Dept.: One-time VK6AW of Boulder, and war-time resident of Geraldton, Andy Watkins is married! 6FL saw him and his wife "passing through" but Frank didn't say passing to where. Andy married! Well, blow me down. He was one I never thought they'd catch.

Erratum: Referring to an earlier paragraph, I've looked over 6HL's copy of the Divisional minutes again and have decided that what somebody should buy him is a new typewriter for his ribbon!

TASMANIA

The Annual General Meeting of the Division was held at the Photographic Society's Room, 174 Liverpool Street, on Saturday, 1st March. The President, Bob O'May, opened the meeting at 5.30 p.m. and about 40 members from various parts of the State were present. The North was ably represented by 7CA, but we were disappointed by the absence of visitors from the North West. VK3 land prestige was capably upheld by Lance Frith, 3ZA.

J. Brown and G. Cannock were appointed as scrutineers to check Council Ballot Papers, after which the following officers were elected for 1952: Patron, Mr. L. Crooks; Vice-Presidents, L. Jenson, J. Brown, R. D. O'May, R. Kilby, I. Pearson; Traffic Manager, 7OM re-elected; Broadcast Officer, 7LE re-elected; QSL Officers, 7AL and 7SJ re-elected; V.H.F. Officer, 7AJ; Auditors, 7BJ and 7GR; Slow Morse Transmissions, 7KA; and Publicity, 7JD.

On the return of the Scrutineers, the Ballot results disclosed that the following members would constitute the new Council: L. Edwards, R. D. O'May, F. J. Evans, A. Johnson, T. Allen, S. Excell and R. Fulton.

A certain amount of QRM and cross-talk was experienced when the meeting was asked to decide upon a new night for future meetings, and it was finally decided that Thursday night would suit the majority of members.

The meeting closed at approx. 6.30 p.m., and members then adjourned to Ellerslie House for the Annual Dinner. Official visitors were Mr. F. M. Morris, Radio Inspector of the Wireless Branch, P.M.G.'s Dept., and Mr. T. Weeks, of O.T.C.

Quite a few members lingered late in an endeavour to leave no doubt in the minds of the Dinner Committee, that their efforts were greatly appreciated. Our thanks go to the committee, consisting of 7AF, 7FJ and 7AL, for a most enjoyable evening.

A highly successful Field Day and Tx Hunt was held on the following Sunday. The hunted tx on 146.5 Mc. was operated by 7OM and 7BJ. Quite a bit of merriment ensued when it was realised that Bob's climb heavenwards after a halo was essentially practical and not spiritual. The tx was located just one hour after leaving the starting point, Mt. Rumney, by 7LE. Barney Watson ran into second place one minute after 7LE, and half minute ahead of the 7DH/7AJ combine. Athol lost some time in a rather one-sided engagement with a barb-wire fence, and Barney's efforts are to be commended when one considers that he was looking for Uranium at the same time.

I must apologise for the somewhat sketchy nature of the foregoing notes, but I did not realise that I would be responsible for them, until assured by the previous Officer that the post was vacant possession. So many years of learning "never to volunteer," and one still gets caught. However, I shall endeavour to improve—come April.—7JD.

NORTHERN TASMANIAN ZONE

With 80 mx practically useless due to static and with an improvement in conditions on 7 Mc., there has been some increased activity on this band in recent weeks. 7PF, who has settled down in a new QTH, has been heard testing on 40. Peter is lucky in that he is located in one of the residential areas, yet the nearest b.c.f. receivers are a considerable distance away. 7PF has also been active on 144 Mc. as has 7LZ, the man with the mighty beam.

7DB has now moved into his new house but considers he will not be active for some time, whilst another busy house-building is 7RB who spent his holidays with hammer and nails. From 7GM comes news of a logarithmic compressor that sounds f.b. Gordon finds it more effective than his previous splatter suppressor. 7LX and 7RK recently had a visit from 7BH who was in town in his official capacity. 7LX is wearing a very worried look, not because of this, but because he will soon be between two fires. Observation shows that Ken's QTH is directly in line with 7RK and 7XW's proposed new address. Ray is located about 150 yards north of 7LX and Chris about the same distance south. Look out QRM.

7TE doesn't quite know what to make of things when someone refers to him as a "Ham," as Bill doesn't know if they are referring to his Amateur Radio activities or his Amateur Hour broadcast. (One way of working all States, etc., Bill, but you won't get any QSL cards for it.)

Away on a quiet holiday in Sydney has been 7HY. Secretary 7AM also enjoyed a fine holiday. 7CA, who is now settled in Launceston, was along to our last meeting and warmly welcomed. hope to hear him on 40 before long.

At the Annual Meeting of the Zone the following office-bearers were elected: President, 7AM; Secretary, 7GM; V.h.f. Officer, 7LZ; Lecture Officer, 7PF; Zone Correspondent, 7XW.

NORTH WESTERN ZONE

Sorry I missed last month, but owing to a brief spell in hospital, yours truly has been out of circulation for a while but am on the mend again. It has come to my hearing that we have gained a new member, namely, Mr. S. Medford—fine business on passing the exam Syd. It is also my painful duty to mention that one of the pillars of this zone has been transferred some short distance, namely 7AB, hope we see you at our meetings occasionally Doug. Heard TWA calling CQ on 10 mx the other day, you are certainly putting out a fine signal now Ellis. Believe 7KB has been doing some work on the same band in his spare time which I believe is very scarce now-days.

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FOR SALE.—5" C.R.O. complete, in excellent condition, price £25. F. Smith, 32 William St., Forbes, N.S.W.

SELL.—AR8, 140 Kc. to 20 Mc., a.c. power supply, £21. 9-valve Comm. Rx power supply and speaker, band spread Amateur bands, £20. Calstan Modulated Oscillator, a.c., £7/10/-. Ferro-tune unit and chassis, 5v. broadcast, £2. 150 Ma. 30 henry choke, £1. 0-1 Ma. Meter (multimeter scale), £1. Set (16) AR14 Coils, 10/- 455 Kc. I.F. Transformers, 2/6 each. Must sell. Particulars, K. Bridger, 132 Nott St., Port Melbourne, Vic.

SELL.—Complete issues "CQ" 1951. Best offer April 15 be notified. E. Trebilcock, 184 Osborne St., Williamstown, Vic.

SELL.—Hi-Fi Speaker Labrynth, 10 or 8 inch source, Mahogany French Polish, Cow Hair lined, £15, Win. 2263.

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"5XA" CONFERENCE MIKE is an omni-directional crystal microphone, specifically designed for use in conjunction with wire and tape recorders, in addition to general communications purposes. It is capable of recording with crystal clarity, comments, music, etc., from all directions.

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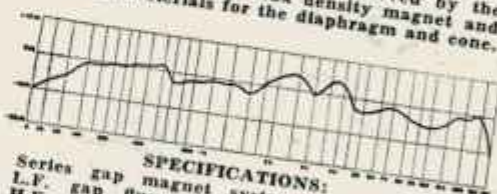


SPECIFICATIONS:

50 to 14,000 c.p.s. series gap magnet of Alcomax 3.
 Flux in L.F. gap, 12,000 gauss on 1" pole.
 L.F. diaphragm of multi-fibre material, graduated cone formation 10" diameter.
 L.F. speech coil impedance, 3 ohms at 1,000 c.p.s.
 Flux in H.F. gap 13,000 gauss on 1" pole.
 H.F. metal diaphragm, convex formation 1" diameter, mechanically protected and loaded by non-resonant central pressure horn.
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Amateur Radio

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3509.2 Kc.	7006.2 Kc.	7140 Kc.	8150 Kc.
3511.2 Kc.	7012.5 Kc.	7177 Kc.	8155.71 Kc.
3514 Kc.	7013 Kc.	7179 Kc.	8161.538 Kc.
3517 Kc.	7029 Kc.	8019.5 Kc.	8171 Kc.
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EDITOR:

T. D. HOGAN, VK3HX,
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MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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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 3598 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7186 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

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VK6WI: Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7196 Kc. and 146.5 Mc. No frequency checks are available.

EDITORIAL



Release of the 21 Mc. Band

As members may well remember back in Atlantic City in 1947 a frequency table was decided upon by the International Telecommunication and Radio Conference which would allocate frequencies for all the various types of radio services on an engineering basis.

At this Conference were delegates from every country in the world, meeting together on an international footing in order to arrive at some agreement whereby the radio frequency spectrum as we know it today could be divided up in a systematic manner so that the requirements of all countries could adequately be met.

This in itself was a superhuman task, and it is a credit to mankind that at a conference of this nature where languages create such a difficult obstacle to conversation, a frequency table as is now in existence was possible.

However, despite the presence of the Frequency Table, the implementation of it seemed a remote objective until the Extraordinary Administrative Radio Conference held in Geneva in 1951. At this Conference steps were taken to commence the implementation of the frequency table in that part of the frequency spectrum below 27.5 Mc., the responsibility remaining with Administrations to implement the various transfers of services to frequencies agreed to at the Conference, some of which were to be implemented on certain specified dates.

So far as the Amateur band frequency allocations are concerned for Region 3 (which includes Australia) under the Frequency Table agreed to in 1947 at Atlantic City, we would

ultimately lose 50 Kc. in the 7-7.2 Mc. and 14-14.4 Mc. regions, and gain the 21.0-21.450 Mc. frequency allocation.

Over the period since 1947 we have made strenuous approaches to the Australian Administration requesting the implementation of these frequency agreements to which Australia was a signatory. In every instance the Administration Authority has appreciated our approach and given a sympathetic hearing to our requests, but for many reasons—too numerous to recount although well recognised as difficult obstacles against immediate implementation—it has not been possible.

After we became aware of the Agreement reached at the Geneva Radio Conference concerning measures for the implementation of the lower part (below 27.5 Mc.) of the Atlantic City Frequency Allocation Table, we again pressed the Amateurs' case with the Australian Administration.

Arising from our discussions we have every reason to expect that implementation of the Amateur bands within the spectrum encompassed by the Agreement reached at the Geneva Conference will take place about the 1st May, 1952.

We feel justly proud of the fact that we have been instrumental in gaining the implementation of these frequency changes on behalf of the Australian Amateur, and although our two lower frequency bands have been reduced by 50 Kc. on the high end—which of course we all knew would inevitably be so—we have gained a band that should be an excellent DX band as well as an additional band.

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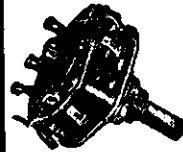
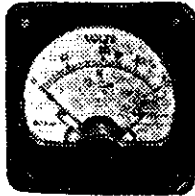
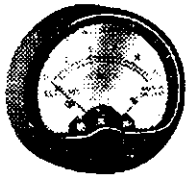
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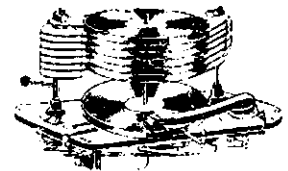


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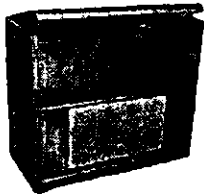
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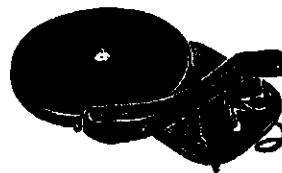
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Central 4311

Low Power 2 Metre Crystal Controlled Transmitter

BY K. B. MITCHELHILL, VK2ANU

In warmer weather most v.h.f. fans and newcomers to v.h.f. bands are usually constructing and overhauling gear for greater activity.

On looking through current radio magazines it is noted that there has been very little space devoted to the construction of gear for the 144 Mc. band in the way of transmitters of the crystal control type. As modulated oscillators are gradually giving way to crystal control and transmitters of better stability, the low power rig here described should be of interest to many in getting to 144 Mc. using a VT501 disposals tube as a series tuned tripler (civil type TT11). Ratings of this tube as known are: 250v. plate, 250v. screen, 6.3v. heater at 0.8 amp. Such tubes were used up to 130 Mc. in airborne v.h.f. equipment.

To most of us the ultimate is to use whatever gear is available in the junk box without spending too much money, as is the case where v.h.f. equipment is concerned. The only outlay in this case is for an 832 and socket. This tube is not by any means the only one that has been successfully used as a final, as the tripler output is ample to drive a pair of 7193s in push-pull.

The main point of interest is firstly to get to 144 Mc. and the method of coupling to the 832 final.

as various crystals are concerned, especially where crystals are somewhat sluggish.

Next tube in line is the 6F6 doubler; the tuning condenser being mounted on the front panel of the chassis between the 6F6 doubler socket and the VT501 tripler socket to ensure the shortest of leads.

From here the remaining tank circuits are mounted above the chassis. The VT501 is mounted vertically; this allows correct length for the 144 Mc. series tuned coil and room for adjustment. The series tuning condenser is mounted on a metal panel on the front edge of the chassis so that it supports the cold end of the coil and gives sufficient room for the 832 grid coil to come directly off the grid pins for positioning beneath the tripler plate tank.

It is advisable to mount all components up to the VT501 tank circuit. The 832 is then mounted horizontally on a bracket and with the grid coil mounted on the socket, the bracket is then slid along the chassis until a suitable position is found where the grid coil sits directly under the cold end of the tripler plate tank coil. This ensures the shortest of leads.

In the 832 plate tank, the coil is constructed with half inch spacing between the two sections, i.e. the coil is wound

this case the base of an old ceramic padding condenser.

For neutralising, two lengths of No. 16 s.w.g. enamel wire were soldered to the grid pins, crossed over and continued through insulated bushes in the bracket holding the 832 as far as the top edge of the 832 plates viewed through the glass envelope. These wires are bent relative to the tube elements until there is no further flicker in grid current when the plate tank is tuned through resonance. For neutralising the voltage is removed from the plate and screen of the 832.

The r.f. chokes used were originally taken from an I.F.F. set and are ideal.

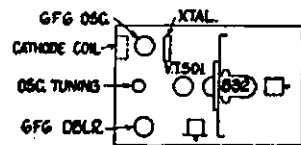


FIG 1



FIG 2

POWER REQUIREMENTS

The circuit diagram shows a series heater circuit as the writer's power supply is derived from a 32 volt lighting plant. Modification for other voltages is a simple matter. The high voltage is obtained from a genemotor delivering 250 volts at 100 Ma.

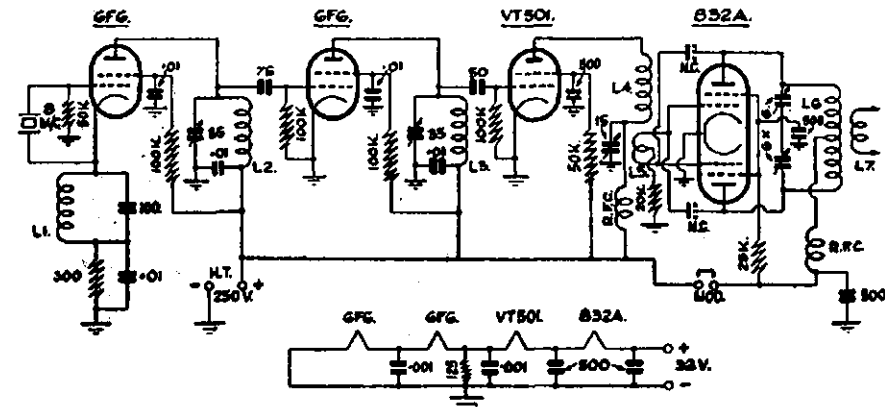
Total current drawn by the two 6F6s and VT501 tripler is in the vicinity of 50 Ma., allowing the remaining 50 Ma. for operation of the 832. In operation, the 832 is loaded to 40 Ma., being an input of 10 watts.

TUNING

After preliminary adjustments have been made and the various circuits put on frequency with an absorption wave-meter, tuning of this little rig is straight forward. As the output of the VT501 tripler will over-drive the 832, the doubler circuit is detuned so that the final grid drive is 2 Ma. which is found to give most efficient operation. Detuning the doubler circuit does not appear to affect operation in any way as it is better to detune this circuit in preference to the tripler in view of efficient operation.

The only circuits metered are the 832 grid and plate. The modulator used with this little rig is p.p. 6V6s in Class AB1, plate and screen modulating the 832 final.

Mounting of the tripler plate tank is shown in Fig. 2 and the method of mounting the 832 grid coil will be seen from Fig. 1. The coupling is such that both coils are tuned by the tripler plate tank condenser, and the coupling is adjusted by experimentally squeezing the coils until maximum grid drive is obtained.



- L1—7t. No. 20 s.w.g. on large valve base.
- L2—7t. No. 16 s.w.g., 1 1/2" diam., close wound, self supporting.
- L3—4t. No. 16 s.w.g., 3/8" diam., spaced 3/8".
- L4—5t. No. 16 s.w.g., 3/8" diam., spaced 1/4".

- L5—2t. No. 16 s.w.g., 3/8" diam., spaced 3/8".
- L6—4t. 1/4" copper tube, 3/8" diam. with 1/2" space at centre.
- L7—2t. No. 16 s.w.g., 3/8" diam., spaced 1 turn.

CONSTRUCTIONAL POINTS

The transmitter is constructed on a chassis 16" x 6" x 3" as indicated. The first tube is a 6F6 used as a tritret oscillator with an 8 Mc. crystal tripling to 24 Mc., the plate circuit being fixed tuned by means of a 3-30 pF. air trimmer. The cathode coil is made to plug into a socket mounted on the end plate of the chassis near the oscillator tube socket.

A little time spent in adjustment of the cathode coil will pay dividends as

in two halves with half inch between the two, allowing space for the antenna coupling coil. This coil is mounted directly onto the condenser, which in this case was a modified condenser taken from a TR1143, stripped down to three fixed plates in each stator section with three plates left for the rotor. The condenser is mounted on brackets to bring it to the height of the 832 plate pins and is connected to the plate pins with half inch lengths of copper strip or flattened braid and small Farnstock clips from an old dry battery. The antenna coupling coil is supported on a small ceramic strip, in

* "Inglewood," Muscle Creek, Muswellbrook, N.S.W.

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(The G.P.O. is opposite)

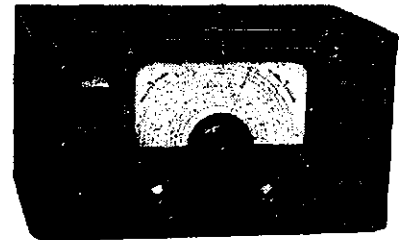
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Free Data Sheets on Request

Interstate Representatives: West. Aust.—Messrs. Atkins (W.A.) Ltd., 894 Hay St., Perth. Queensland—Messrs. A. E. Harrold, 123-5 Charlotte St., Brisbane. In other States direct your inquiries to firms handling Bright Star Crystals.



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Transmitters altered for Bush Fire and Fishing Boat Work.

CRYSTALS, as illustrated, 40 or 80 mx., AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

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Large, unmounted, 40 or 80 metre, £2 each.

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BRIGHT STAR RADIO 1839 LOWER MALVERN ROAD, GLEN IRIS, VIC. Phone: UL 5510.

TELEVISION MADE EASY

Part viii.—

Interference, and How the Hams Can Check It

BY KEN WALL† AND JOHN JARMAN,* VK3ADA

Let us put the clock forward by a few years and imagine that Australia's long-awaited television service is at last in operation.

Johnny Citizen, having purchased and installed his television receiver, is now enjoying his favourite evening programme, when alas! Just as his favourite strip-tease artist is about to shed her last garment, something goes wrong. A burst of interference makes the picture either invisible, or distorted beyond recognition!

Enraged with disappointment, he must blame somebody and who is a better "sitting target" than Bill, the nearest Ham, who is duly visited. We censor John's "opening address" as Bill opens the door to him.

Now a television receiver is prone to all kinds of interference and quite likely Bill (who could be any reader) is "not guilty." He might not have even been on the air and probably feels like telling John to go and get a better receiver.

Remember, however, that there are other Hams on the air whom John may suspect, unless shown the real cause of the trouble, so that an indifferent attitude on Bill's part may provoke complaints about Ham interference, which are neither justified nor necessary, and which won't help us, as an organisation, to obtain further privileges when we apply for them.

We see, therefore, that Bill's duty is not only to prevent his own rig from causing television interference (abbreviated t.v.i.), but to help the complainant locate the real cause.

Furthermore, all radio shops will probably be closed at this time of night, so that Bill may be the only "radio bloke" available, and any assistance on his part will be appreciated.

Now Bill is not a trained television serviceman and to tamper with a delicate instrument like a television set would be most inadvisable. What can he do? Well, having proceeded to examine John's receiver, he should try and place the fault in one of the following categories:—

1. Simple receiver faults which he can rectify.
2. Serious faults to be fixed only by a television serviceman.
3. Amateur interference.
4. Interference from some other radio station.
5. Interference from faulty electrical appliances.

Now this cannot be done by mere guesswork. It requires careful investigation combined with an elementary knowledge of television theory, and this is just what these articles have been intended to provide.

†172 Johnson Street, Maffra, Victoria.
*A11426 L.A.C. Jarman, J. B., c/o A.R.D.U., R.A.A.F., Woomera S., South Australia.

Let us first consider what interference Bill's transmitter might have caused.

Since Australian television signals will be on frequencies from 180-204 Mc., Bill's main "bug-bear" will be harmonics and parasitics. We have also learnt that our system will use 25 pictures per second, and 625 lines per picture, which amounts to 15625 lines per second. Now suppose a spurious signal, on a frequency within the television band originates from a Ham Station, using a modulating frequency of 3125 c.p.s. Now the spurious signal will also be modulated at this frequency. How will television receivers respond to it? Well, 3125 is one-fifth of 15625, so that every fifth line will be darkened, so that dark horizontal bars appear across the screen.

In actual practice, of course, the signal will be modulated by a multitude of audio frequencies, so that the bars will not remain steady, but will move vertically, flashing on and off with modulation. A similar effect occurs when the interfering signal beats with the required one. If the resultant frequency exceeds 15625, the bars will no longer appear horizontal, but become sloped, and varying in thickness.

Another common form of t.v.i. is the upsetting of the synchronisation. We learned in article vi. that most receivers distinguish the synch. pulses purely by their amplitude, and can therefore mistake any interfering signal of sufficient amplitude, for synchronising signals, so that their deflection oscillators get "out of step." One therefore sees, on the screen, not a steady picture, but a series of pictures, joined end-to-end racing madly across, either horizontally or vertically.

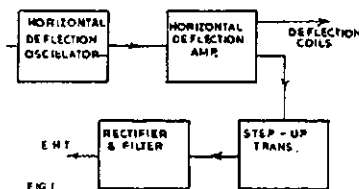


Fig. 1.—Popular method of obtaining High Voltage for Tube.

Indirect forms of Ham interference occur where the mains voltage has poor regulation, so that every time Bill presses his key, the lights go dim. The affects on neighbouring television sets will vary, according to design, and here we shall pause, to explain two innovations.

We know that a cathode ray tube requires very high voltage on certain elements, and in a television receiver this is known as e.h.t. (extra high tension) as distinct from the normal h.t. or B plus supply, and methods of producing it vary. Mains transformers are not favoured in television receivers, since their positioning, to prevent their

magnetic fields from interfering with the scanning spot, is too critical and introduces design problems.

The familiar a.c.-d.c. circuit, as used in some broadcast receivers, is therefore commonly used and one popular method of producing the e.h.t. is to step up the output of the horizontal deflection oscillator as outlined in Fig. 1.

In receivers using this circuit a change in mains voltage may cause a change in either picture brightness, picture width, or both.

The other modern source of trouble is the automatic gain control circuit, incorporated in some receivers. In a vision receiver, the a.g.c. voltage is applied to the r.f. and i.f. stages as in a sound receiver, but it is obtained in a different way. We are familiar with circuits in which the a.g.c. voltage is proportional to the average value of the signal. Now, in television, this voltage is made proportional to the peak amplitude of the signal or, in other words, the amplitude of the synch. pulses. Special circuits must therefore be used, one type being shown in Fig. 2.

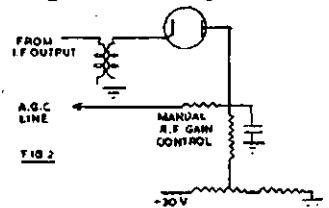


Fig. 2.—Simple A.G.C. Circuit for Vision Receiver.

The values of the components in any a.g.c. circuit are very critical, and if incorrect, such circuit will be affected by any impulse interference and any change in mains voltage. Either may weaken or completely "blank out" the picture.

There are other cases when the interference may be the fault of the receiver, rather than the Ham. Some faults may cause a receiver to respond to signals from a Ham transmitter that is operating quite normally. These include:—

1. Cathode ray tube grid picking up 80 metre band signals directly.
2. R.f. stages admitting signals within i.f. band.
3. Generation (by mixer) of harmonics of Ham signals, within i.f. band.

Another fault, for which innocent Hams are often blamed, is the "leakage" of sound signals into the receiver's picture circuit, since this produces the same "dark bar" effects as Ham interference.

Overseas, these faults have often resulted from poor receiver design, but in Australia this is less likely. Our receivers will be designed upon the very latest advice from overseas engineers who, in their years of experience, have had to contend with all kinds of interference (Hams included) and will surely take all precautions against same.

Bill is therefore likely to strike this trouble only on three occasions:—

1. When receiver has been tampered with.
2. When receiver has deteriorated with age.
3. In a home-built set.

Continuing the story, let us first take the case when Bill has been on the air,

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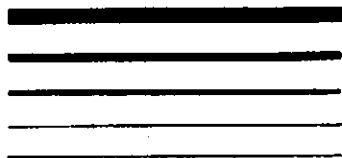
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and might have been causing the trouble. He must first ascertain whether his transmitter is responsible, which is done by arranging for a fellow Ham to operate his rig while Bill watches the screen. If the interference coincides with the keying, sure enough Bill's transmitter is interfering, but may not be at fault. It could be one of the receiver faults listed above.

In any case, however, if Bill sees the interference pattern he will first photograph it for future reference. This is not essential, but quite a good plan, as we will shortly see.

Bill now investigates, to see whether other receivers in the neighbourhood are displaying the same fault. If not, John's receiver is to blame. It is appropriate to mention here a certain receiver fault which may be misleading, namely the "leakage" of the local oscillator output into the aerial circuit. This causes the aerial to radiate a signal at low frequency, which beats with the required signal in other sets, often causing the same "dark bar" effect as Ham interference. In this case the offending set will be the only one not displaying the trouble.

In any case, Bill's next job, after having established which set is faulty, is to link up with the television serviceman, who repairs the receiver, showing him the photo and making test transmissions at the serviceman's request, to facilitate correction of the fault.

Now take the case when Bill finds that all local receivers experience the same fault, coinciding with his transmissions. Yes, Bill has faulty rig! He will now thoughtfully stay off the air during television programmes (which only occupy limited hours) until the trouble is cured.

He has wisely studied these articles and now, applying the theory given, endeavours to figure out just how his transmitter could be causing such interference. It may be something quite new and different from any effect described in this series. On such occasions a few minutes discussion with a television serviceman may solve the problem completely (particularly if a photo is available), at the same time improving Bill's knowledge of interference and its prevention. In all cases, Bill's task of eliminating the trouble will be made much easier if he can first work out how the effects are caused, even if he can only do so with assistance.

Suppose now that the effects do not occur when Bill's rig goes on the air. His rig may be innocent, but don't be hasty. The fault may be intermittent.

Finally comes the case when the interference occurs when Bill's rig is not even on the air. Breathing a sigh of relief, Bill now examines the pattern, or visual effects, and considers the possible causes, paying special attention to the most probable ones. Of the five categories given earlier in this article, which do the effects suggest?

Could it possibly be another Amateur Station? Could it be some other radio station, such as aircraft, aerodrome control tower, radio-equipped cars, etc.?

Do John's neighbours experience the same trouble? If not, John's set must be faulty, but must he engage a serviceman or can Bill fix it? Bill now gives the set a brief examination. Any

audible interference suggests a faulty set, since a properly adjusted f.m. receiver gives noise-free reception. How are the power leads and aerial feeder? Any poor connections or intermittent shorts? Is the aerial feeder insecure, and swaying in the wind?

One fault, which a Ham can often cure is the "ghosts" caused by multi-path reception. We know that radio waves can be reflected by certain objects, such as buildings, etc., and quite often a television signal reaches a receiver by a number of reflected paths, in addition to its normal direct path from the transmitter. The longer the path, the later and weaker the reflected signal will be on reaching the receiver.

Each picture impulse therefore reaches the receiver not once, but several times, becoming progressively weaker, so that the scanning spot, as it travels from left to right, is modulated several times by the same picture impulse. Each object in the picture therefore appears to have a series of images or "ghosts" placed behind it. In Fig. 3, for instance, the three waves each carrying the same picture impulse would reach the receiver in the order a, b, c.

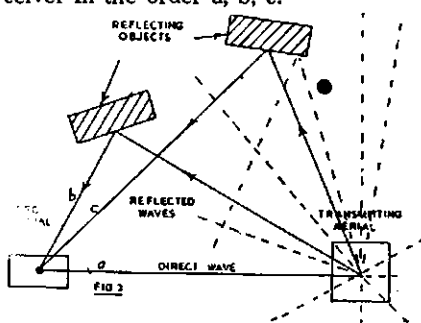


Fig. 3—Example of Multi-path Reception.

If a directional aerial is in use, this effect can often be cured by rotating the aerial to a position where it will pick up only the direct wave, so that the "ghosts" disappear. Remember that in Australia, all television signals will be horizontally polarised.

Having decided that the trouble is a case for a serviceman, Bill will "link up" with the latter, showing him the photo. Bill's description of the effects may be very useful to him and Bill, in turn, can learn the cause of the trouble for future reference.

Finally comes the case when neighbours share the same trouble, proving that there's a source of interference in the district, which is not a radio station of any kind (according to symptoms). What does the pattern suggest? Different forms of interference produce different patterns. Ignition, for instance, produces short horizontal bars all over the screen, while diathermy apparatus (used by doctors) produces a pattern like herringbone cloth. It would be hasty, however, to attempt to identify the interference by the visible effects alone. These must be associated with other observations.

Bill now produces his pocket book and asks John some relevant questions. "How long have these effects been apparent and at what times of day?" "Do they occur on all channels (or television carrier frequencies)?" "How long do

Ross A. Hull Memorial Contest 1951-2 Results

The Federal Contest Committee has pleasure in reporting the results of the 1951-52 Ross Hull Memorial Contest for Interstate working on 50 Mc.

Support for the contest was greater than in previous years and 45 logs were received. Altogether some 200 stations took part in the contest at some time or another—an indication of the popularity of 50 Mc. and of the interest which the contest aroused.

Most of the comments received were enthusiastic and the contestants apparently enjoyed themselves. Some thought that the contest should be of shorter duration with, perhaps, a limit on the number of repeat contacts. An increase in the number of points for short-skip contacts may be desirable, e.g. VK3-VK7 and VK2-VK4 contacts are comparatively rare.

Our congratulations go to Hugh Lloyd VK5BC who wins the Ross Hull Memorial Trophy this year with the fine score of 2521 points for 436 contacts. He was closely followed by Roland Everingham VK6BO with 238 QSOs and 2285 points, and then last year's winner, Fred Stirks VK2ABC, with 2010 points.

Included in 8BO's winning score were 27 QSOs with New Zealand, while VK6DW had 23 contacts with ZL. Russ Coleston VK9XK created a great deal of interest by coming on for the contest and working all districts except VK6 and ZL4.

From across the Tasman, ZL2BJ, ZL1WW and ZL2DS put up excellent performances, working all districts, and we hope to see even more New Zealand participation next year.

In addition to the Ross A. Hull Memorial Trophy to be held this year by VK5BC, certificates have been awarded to district winners, viz.: VK2ABC, VK3IM, VK4BT, VK5BC, VK6BO, VK7LZ, VK9XK, ZL1WW, ZL2BJ, ZL3PN.

Full results appear below:—

VK5BC 2521	VK4RY 793	VK2JX 267
VK6BO 2285	VK5MA 606	VK3PG 241
VK2ABC 2010	VK3JE 593	VK5KL 230
VK6DW 1704	VK3ABA 525	VK6HK 227
VK9XK 1646	VK2ADS 485	VK2ABR 183
VK9HD 1637	VK4NG 372	VK2XO 183
VK6WG 1607	VK2AMV 368	VK3AJ 159
VK4BT 1603	VK7LZ 344	VK2UC 116
VK2VJ 1459	VK5JD 313	VK7BQ 112
VK4KJ 1339	VK4KJ 288	VK4AW 71
VK2VW 1054	VK3GM 275	VK4BG 47
VK3IM 938	VK7AB 271	VK3GE 44
VK2WH 814		VK2AC 40
ZL2BJ 1339	ZL2DS 1202	ZL3PN 227
ZL1WW 1224	ZL2HP 807	ZL2OU 7
	ZL2ADO 483	

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 29th May, 1952, on the 3.5 Mc. band. Details of the operating procedure and times of operation will be found on page 8 of the January, 1952, issue of this magazine.

they last on each occasion?" "Have they become progressively worse over a period?"

With this information, coupled with his visual observations, Bill now tries to work out the possible causes and where to look for them. Could they be in John's house? Or in any of the neighbours' homes? Is there an adjacent hospital, surgery, garage, or industrial plant? Electric motors and automatic switching devices are all potential trouble-makers.

The final phase is a tour of investigation, continued until the source of interference is found. Bill, of course, need not do this himself, but he should direct the complainant to a party capable of doing so and assist to the best of his ability.

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Ohms															
2000	2	3-4	5	8600	6350	4300	3620	2150	1070	—	—	—	—	—	—
2000	1	2-5	6	15700	11400	7900	6650	3920	1950	—	—	—	—	—	—
3000	2	3-4	5	13000	9400	6500	5500	3240	1620	—	—	—	—	—	—
3000	1	2-5	6	23500	17000	11800	10000	5900	2950	—	—	—	—	—	—
3800	2	3-4	5	16400	12000	8200	7000	4100	2050	—	—	—	—	—	—
3800	1	2-5	6	29800	21500	15000	12600	7500	3740	—	—	—	—	—	—
4000	2	3-4	5	17400	12500	8650	7300	4300	2160	—	—	—	—	—	—
4000	8	9-10	11	—	—	—	—	—	—	5500	3450	2850	1850	1380	250
5000	2	3-4	5	21600	15700	10800	9150	5400	2700	—	—	—	—	—	—
5000	8	9-10	11	—	—	—	—	—	—	7000	4300	3500	2300	1730	300
6000	1	3-4	6	8600	6350	4300	3620	2140	1070	—	—	—	—	—	—
6000	8	9-10	11	—	—	—	—	—	—	8300	5150	4250	2750	2180	370
6600	1	3-4	6	9500	7000	4750	4000	2350	1180	—	—	—	—	—	—
6600	8	9-10	11	—	—	—	—	—	—	9100	5650	4660	3000	2400	405
7000	1	3-4	6	10000	7300	5050	4280	2500	1250	—	—	—	—	—	—
7000	8	9-10	11	—	—	—	—	—	—	9700	6000	5000	3200	2400	430
8000	1	3-4	6	12000	8400	5800	4900	2900	1440	—	—	—	—	—	—
8000	8	9-10	11	—	—	—	—	—	—	11000	6900	5650	3700	2760	500
9000	1	3-4	6	13000	9400	6500	5500	3200	1620	—	—	—	—	—	—
9000	8	9-10	11	—	—	—	—	—	—	12500	7750	6300	4150	3100	550
9000	7	9-10	12	—	—	—	—	—	—	6200	3900	3200	2050	1550	275
10000	1	3-4	6	14400	10500	7200	6100	3600	1800	—	—	—	—	—	—
10000	8	9-10	11	—	—	—	—	—	—	14000	8600	7100	4600	3450	600
10000	7	9-10	12	—	—	—	—	—	—	6900	4300	3500	2300	1740	310
12000	1	3-4	6	17400	12500	8700	7250	4320	2150	—	—	—	—	—	—
12000	7	9-10	12	—	—	—	—	—	—	8300	5150	4250	2750	2070	370
14000	7	9-10	12	—	—	—	—	—	—	9700	6000	4900	3200	2440	430
16000	7	9-10	12	—	—	—	—	—	—	11000	6900	5600	3700	2789	500
18000	7	9-10	12	—	—	—	—	—	—	12500	7750	6300	4150	3140	550

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FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

NEW SOUTH WALES

The March meeting of the V.H.F. Group, held at Science House was devoted to a lecture on a.v.c. and its application. The lecture was very capably given by Mr. Walter Shuerer, 2AWU, of A.W.A. Some very interesting points were raised during the lecture and subsequent questions and answers which show that a.v.c. is a subject which is not quite so straightforward as it looks.

Present at the meeting were two country visitors, John 2AMV, from Forbes, and Norman Moody, from Coonamble. Both visitors were made welcome; country members visiting the city should remember the date of the V.H.F. Group meeting as the v.h.f. boys are always pleased to see country members. The meetings are held on the first Friday in every month, at Science House, Gloucester Street, City.

The autumn field day coincided with the Victorian Group's attempt to pass a signal from VK7 to as far north as possible, but it was considered too late to change the arrangements for the VK2 field day in order that VK2 could co-operate. It is hoped, however, that something along the lines suggested by VK3 might be possible later in the year. Interested parties in VK3 might look out for 2MQ or 2ANF on the 7 Mc. band in order that some preliminary arrangements might be discussed.

50 Mc. News: With the passing of the DX season activity has waned on this band and news is scarce. Tropospheric propagation conditions seem to follow after the decline of the sporadic E conditions and contacts from the city to the Newcastle area have been very good. Stations heard from the north include 2ADT, 2ANU, 2VU, 2BZ and 2AHA. It goes without saying that 2RU, from Gosford, has been putting in the usual 59 signal in the Sydney area.

2HE finally made contact with 2ADT after much trying at the wrong times or when the other one wasn't there! The half cubical quad antenna gave a very good account of itself. 2PB has gone all QRO with 50 watts to a pair of 80% and finds they need plenty of drive to make them behave. 2AJR finally got a crystal mike but now finds he doesn't need one, as one station at least can copy him with no microphone connected. No prizes offered for the solution of that one. 2LY ex-3AFL ex-2LY, having turned to VK2 has got his old call back again and is active on the band again.

144 Mc. News: Conditions on 144 Mc. have been very good with extended ground wave working to the north and south showing excellent results. 2GU, at Canberra, is active again, having cleared up the trouble in his Tx. His frequency is 144.03 Mc. in the country zone and he may be heard frequently calling Sydney stations at 8.30 p.m. The drill is to listen for five minutes and then Sydney stations call 2GU for five minutes. 2ADT has been putting an excellent signal into Sydney during the evenings. Jack usually tunes across six whilst calling and answers on two. 2KR has also been a good signal in Sydney and very nearly made a full two-way contact with 2ADT. We understand Cec will present a cup to Jack if the contact is made! What sort of cup Cec?

Activity in the west has been less than usual, with 2NS away on holidays and 2WH busy getting his new final under control. 2TA and 2TC at Young are both putting in some good work and Jim, 2TC, is building a cascade converter for the band which, along with his new beam and proposed QQEO final, should make quite a contribution to his attempt to contact Sydney. In the city, 2AJZ is still building crystal locked converters. The latest one is for portable work to be used with a Command Tx. His near neighbour, 2ABE, who is currently holidaying at Katoomba, is watching Harry with interest and seems about to launch off into something rather special in the way of Rx's himself. 2WI has just finished a new portable rig using 6B6s in a c.c. circuit which performs very well. A new call is 2ATO. John is located at Drummoyn and has been heard many times in the past from his brother's station. Welcome to the band John.

Horrie (Marco Polo) Laphome, 2HL, is organising another trip, this time to Barrington Tops. Gear for 144 Mc. with 50w. and also 7 Mc. gear will be taken. The party will include Charlie 2NP, Cec Cronan and Graham Allan. They hope to make contact with many of the country v.h.f. enthusiasts from their vantage point 5,100 ft. above sea level.

2HL has also struck a very good blow for Ham Radio by carrying out a test on behalf of the Radio Research Board. The said R.R.B. doubted the possibility of a path existing between Sydney and Camden on bands above 100 Mc. 2HL trotted off complete with 636 xtal rig and ARR2 Rx plus observers from the R.R.B.

and proceeded to make easy contact with Sydney, receiving 2AH and 2ANF at very good signal strength, thus dumbfounding the experts! Good for you Horrie.

376 Mc. News: Once again news is scarce from this band for the usual reason. 2ABZ has his Rx under control at last and is now able to receive most of the Sydney stations. 2HL has been the 144 Mc. "round up" station listening on 576 with most of the active Sydney boys wandering in and out on 576. Current shortage of lighthouse tubes is embarrassing to those with ASB7 and 8 Rx's, but quite a few of the Rx's are in operation. Tx's are still of the push pull RL18 variety but recently some interesting information has come to light on push pull and push push multipliers using diodes, e.g. 6A50, so perhaps stabilised transmissions on 576 are not far off. With the consequent narrowing of Rx bandpass this will allow results may be somewhat more encouraging.

With these notes your scribe (2ANF) will be completing his year of duty as correspondent. As yet, the new correspondent has not been elected, but he will be writing the notes from next month onwards. It is hoped that the next scribbler receives the full support of all those on the v.h.f. bands. Remember to pass on any information worth repeating. If when you heard it you were interested, others will be also.

VICTORIAN V.H.F. GROUP

Next Group meeting is the 21st May at the rooms. Listen to 3WI for details of the evening's activities. The March meeting was well attended and was fully occupied with election of office-bearers for the ensuing year, reports on field days, arrangements for the April field day and progress reports on the 144 and 50 Mc. rigs for 3WI. The office-bearers for the next year are: Chairman, 3JO; Sec., 3AJG; Vice-Chairman, 3YS; Asst. Sec., 3OJ. Reports by portable stations were given on their activities on the field days of Feb. and March and it was seen that most activity was on 144 Mc., some stations were active on 50 Mc., but there were no reports of activity on 288 Mc. and 576 Mc. Weather conditions for the April field day were good although there was a thunderstorm during the afternoon. Portable stations were 3FO, Mt. Dandenong, 3ABA Mt. Tarrangower, 3ACH Mt. Blackwood, 3CM Mt. Buningyong, 3ABE Mt. Macedon, 3JO Kinglake, 3YR Sorrento, 3ADU Kellor, 3RR Reed's Lookout, Gramplains and 3UI who went portable near the Waranga Basin when the power supply at home failed.

Next field day season, 7PF hopes to operate portable from Mt. Barrow from where no difficulty is expected in contacting VK3. 3IM and 3QO reported on progress they have made with the 144 Mc. and 50 Mc. installations for 3WI and their efforts have brought these a further stage nearer completion. Apart from field days, activity on the bands has been very slight, several stations, including yours truly (3JO), have been very inactive of late.

SOUTH AUSTRALIA

V.h.f. enthusiasts will be pleased to learn that the 144 Mc. contact between 6BO and 5GL was repeated a few weeks after the first contact and that 5QR also made contact with 6BO. Fine work all round. There are reasons to believe that March is the best time to make an all out try to Interstate working on 144 Mc. and an endeavour to get parties in each State with equipment ready and tested to co-operate for a series of tests over a week-end or two in March, 1953.

A break through on 50 Mc. one night during March to VK2 gave the boys a break from local rag-chews. At the Royal Adelaide Exhibition great use is made of 50 Mc. by link stations relaying answers to calls by VK5WI on 14 Mc., thereby overcoming the terrific interference in reception caused by all the electrical appliances operating at the Exhibition. Self rostered nightly, and doing excellent work, is 5GL, 5LW and 5HD. A 288 Mc. link has not been so successful. 5WI on 50 Mc. was heard QSOing two VK2s.

5QR re-building i.f. Rx, has separate Tx for 50, 144, and 288 Mc., all c.c. 5GL busy almost nightly as v.h.f. link for 5WI at Exhibition. 5RO has put up a good score in local v.h.f. contest and should have a handy lead. 5MK shifted QTH and for time will use a 5KL Special (antenna on rotary clothes line).—VK5KL.

TASMANIA

144 Mc. News: Around Hobart this band is the most popular, a CQ generally results in a round table rag-chew. After using a mod. osc. for some time, 7JD went QRT and came up c.c. At the moment a converter v. superhet is keeping the referee "Tiny" on his toes. The TR1143 gave 7OM some strife, but he has it working very nicely now; about time for that lecture on same Bob! Sure the other boys with them would appreciate it. 7AF just finished v.h.f. grid dipper which should speed up the re-modelling of a TR136 Tx and R1225 Rx, hope to hear you soon Bob. Two mobile units in use by 7DH and 7LE make interesting contacts for fixed stations. Both are c.c. and run about 5w. input.

On 6th April 7LE and 7OM went to Mt. Wellington, while up north 7LZ and 7PF both took equipment to 7EX's hill, with hopes of relaying to VK3. Signals between north and south were 9 plus, but 7LZ and 7PF were unable to contact VK3. We think there must be a grem-lin around as one circuit in the link is always dead. However, 7LE-7OM also worked 7JD, 7AJ and 7DH who was mobile at Blackman's Bay. Signals between 7LZ and 7PFA on 7EX's hill and 7KB at Burnie were R5 without the antenna on the Rx.

Going up the mountain, the 12v. battery in the boot of 7LE's car turned over. Results, two thirsty Hams, as the acid was diluted with the contents of one flask. Just as well your knowledge covers a wide "scope" Bob or your 3 element beam repair may not have been as easy. Len managed to pull the beam in half. Whose sig were you chasing when that happened Len? The Hobart gang are awaiting a signal from 7MY at Sandford with interest.



Group around Tx and Rx set up on the hill near 7EX's Tx on 6th April when contact was made with Hobart on 144 Mc. From left (in front): 7PF, 7LZ, Associate G. Compton, 7GM; at rear, 7AM (near Tx), Master R. Frith, and 7LX.

DX NOTES BY VK4QL*

Last year I made comment that the bottom of the "DX Bucket" had been reached. If somebody had said, "You haven't heard anything yet," they would have been aptly referring to the present DX conditions. One has usually been able to find one band useless, but others to occupy his DX hours, but that condition no longer exists. 4CC told me last year to work all the DX I could then, as 1952 would not produce much. From your Crystal Ball Clive, when do you expect the bands to show some improvement?

The band survey, with stations worked shown *, and times in GMT (Z time):—

3.5 Mc.: 2RA seemed to do very well in the A.B.R.L. Contest, his contacts being unknown, but the first week-end, he had a multiplier of 10. Just before the contest I could work Ws OK, yet in the contest two Ws and a KL7 were the sum total. 3CP worked all W districts except W5 on the 16th. 7RK found static very severe but could not hear any of the Ws that others were working. 2GW found one week-end OK, the other of little help. 5YP heard G8CJ, G3HTQ, OZ1BY and SM3ACW. I ran a sked with ZS3K, and although I heard him, no contact could be made. DU8RG and ZK2AA were also heard.

7 Mc.: Although in this neck of the woods, not much success was attained, others found it profitable, but erratic just the same. I could hear strong W sigs between 0800z and 0900z once but its a struggle to hear a W or VE at any time now. The Europeans and Africans were very patchy. Just the same, 3CP worked FA8, HB9, YU3, G, GW, LB4VB (Antarctica), DL, ZE3JP, I, OK, SM, F, AP4UAK, VP7NT, SP3PF, KZ5CS. On the 8th, between 0700z and 0810z, six Gs and HB9 were contacted. Athol also heard ZD1AC, CX1KB, KP4KD, EASDG, ZD2GAY, CN8MI, ZC4XP, FF8AG, UQ2KAA, PY2QW, PY6DU, ZB1BQ, EA3HE, the whole being an impressive list. 5DP, who has a two el. fixed beam on Europe, lists YU*, SM7*, F8*, F9*, G5*, HB9*, DL7*, CE1KN, IS1AHK, 4X4DE, 4X4DC, EASDF, ZS6OW, VP6CDL. Is just getting into his DX stride, being a DX 'redgling'! 7RK heard some very strong sigs from the Ws

* Flt./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

in the contest, also G5RI 0700z, YV5DE, KX6AH. Ray found, like me, KX6AH does not answer VK calls. He thought he had a nice catch in SM8BNA, but found he was marine 200 miles from Adelaide. He was strong here too Ray. 4QL: ZD2GAJ, who could not hear a reply to his repeated CQs FF8AG*, KJ6AR, ZK2AB*, 5A2TT, W3* and W4 2100z, KZ5CS*, SU1FD, KC6QY, VP5BH (Caymans), G3BKF and G6BS 0745z, ZS3K*, VS2LP*.

14 Mc.: Nobody content with the performance of this old standby, and all contributors voice the same opinion. 2ACX, who by the way is not changing his QTH after all, lists a contact with VP8AJ, Graham Land, which gave him 222/210. Arthur received cards from EA0AB and FB2XX. 3CX was one who found some Europeans, also HK and LZ1AS. Received QSLs from OQ5VD, EQ3FM. 4EL had trouble maintaining his sked with G5ZA, but managed to reach his 600th contact with him before he proceeded to his home on leave. 5HI snared JA0JJ, VR3C, KC6QY and received cards from EA6AM, KB6AQ and IS1AHK. 7RK has little to raise the eye brows for this band other than PY1AP 0230z, TI2RC. 6XK, who will now be away for two months, did not like the conditions much, especially with the approach of the B.E.R.U. contest, but Russ hit a purple patch on 14 Mc. for the Gs early. Plenty could be heard calling him, yet I could not get one. When last heard Russ had about 200 contacts. 4QL did not hear much, other than KS6AA, YN1AA, PK5AA*, VP1AA*, VESAA*, ZK2AB*, VQ4HJP* 0430z, LZ1AS, PZ1OY.

28 Mc.: This band like a morgue. 7RK heard one or two Ws in the DX Contest, as did I. Other than that, Pacific stations were the limit.

KV4AA gives some help for the "gen" section this month. ZL1BY has worked through to the Ws on 160 mx. Dick said over there they are expecting to get the 21 Mc. band on the 1st May. He gives the following new prefix allocations: 5A2T for Amateur use in Tripolitania, 5A2C in Cyrenaica, and 5A2F in Fezzan. KV4AA worked quite a few Ws on 160 mx in the A.R.R.L. Contest and he finished up with a multiplier of 80. 4DO was heard working 5A2TV, who gave his QTH as Abadan, which does not follow the previously mentioned allocation. 3CP said TT1CW is quite OK, and YA4UU

has been heard, but no known VK contacts. According to "QST" the EK1 prefix is to be changed to CN2. Additional prefixes to those in a recent issue of "A.R." are JYA-JYZ Jordan, JZA-JZZ Dutch New Guinea, PK5A-Z. I told me he is shortly returning home. Am still waiting on his long overdue QSL. I had a look at 21 Mc. this month, and there are quite a few high speed stations in the band, some using U.S. prefixes, so it can be reasonably expected they will disappear on the release of the band to U.S. Amateurs.

● The thought for the month, which must be in the minds of us all these days, is the wish for a very early improvement in DX conditions.

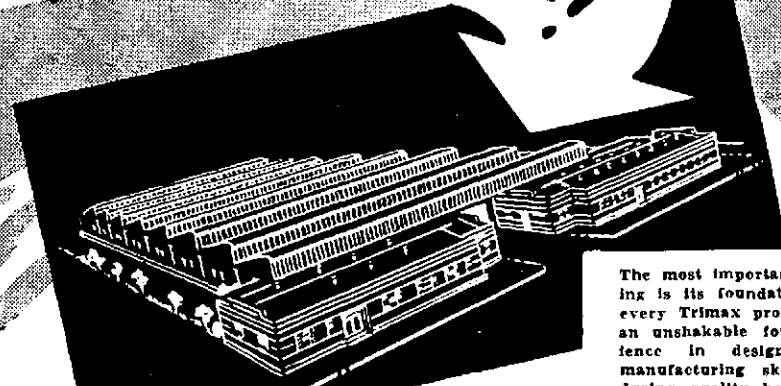
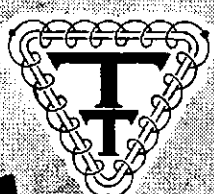
DX C.C. LISTING

PHONE			
Call	No. Ctr.	Call	No. Ctr.
VK3EE	10 158	VK4KS	9 135
VK3JD	1 155	VK3LN	11 132
VK4HR	12 155	VK4FJ	22 129
VK3BZ	3 154	VK6DD	6 126
VK6RU	2 149	VK3JE	7 123
VK6KW	4 145	VK4WJ	17 122

C.W.			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 200	VK3CX	26 140
VK3PH	15 177	VK3KB	10 138
VK4HR	8 170	VK6RU	18 138
VK4EL	9 167	VK5BO	33 133
VK2EO	2 152	VK5GW	16 132
VK3CN	1 151	VK5RX	23 132
VK6SA	28 150	VK4DO	20 129
VK4FJ	29 146	VK3KK	30 128
VK3VW	4 143	VK4QL	36 128
VK2QL	5 142	VK4RF	11 125

OPEN			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 213	VK4KS	24 149
VK4HR	7 200	VK5FL	26 143
VK6RU	8 183	VK3MC	5 139
VK3JE	12 180	VK3OP	19 137
VK3HG	3 171	VK6DD	22 136
VK2DI	2 170	VK3LN	29 135
VK4FJ	32 170	VK2AE	28 133
VK3KX	1 167	VK2AHA	9 128
VK4EL	10 167	VK4WF	40 128
VK6KW	13 165	VK2AHM	20 125
VK4DO	15 157	VK2NS	16 123

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FEDERAL

UNIFORM SCORING SYSTEM FOR INTERNATIONAL CONTESTS

Arising from discussions of the Federal Council of the W.I.A. at the 1951 Annual Federal Convention, proposals were directed to the I.A.R.U. (see F.E. notes, December, 1951) with reference to the adoption of a standard numbering system by all member societies when conducting International DX Contests, and that such a numbering system be that which is used in the VK-ZL International DX Contest from time to time.

These proposals—numbers 77 and 78 respectively—were circulated to all member societies of the I.A.R.U. through its constitutional medium, The Calendar, for a vote for or against the adoption of such a system.

Federal Executive is now pleased to advise that the proposals were accepted by a large majority of those who voted. Whilst some of the overseas member societies have not agreed to the proposal, and quite a number have not been interested enough to cast a vote at all, the following societies have signified their intention of accepting our standard scoring system. Into this category falls our friend and neighbour society, the N.Z.A.R.T.; this is very pleasing for it now removes one of the biggest obstacles we have encountered in trying to standardise the VK-ZL Contest rules irrespective of whether the W.I.A. or the N.Z.A.R.T. is running the contest.

American Radio Relay League—A.R.R.L.
Club de Radio Aficionados de Guatemala—C.R.A.G.

Hong Kong Amateur Radio Transmitting Society—H.K.A.R.T.S.

Irish Radio Transmitters Society—I.R.T.S.
Liga de Amadores Brasileiros de Radio Emissao—L.A.B.R.E.

Norsk Radio Relae Liga (Norway)—N.R.R.L.
New Zealand Association of Radio Transmitters—N.Z.A.R.T.

Osterreichischer Versuchssenderverband (Austria)—O.V.S.V.

Radio Club Argentino—R.C.A.
Radio Club de Chile—R.C.C. (Chile).

Radio Club Dominicano (Dominican Republic)—R.C.D.

Radio Club Uruguay—R.C.U.

Reseau des Emetteurs Français—R.E.F.

Reseau Luxembourgeois des Amateurs d'Ondes Courtes—R.L.

Radio Society of Great Britain—R.S.G.B.

South African Radio League—S.A.R.L.

Sveriges Sandareamatörer (Sweden)—S.S.A.

Union de Radioaficionados Espanoles (Spain)—U.R.E.

Vereeniging voor Experimenteel Radio Onderzoek in Nederland—V.E.R.O.N.

Wireless Institute of Australia—W.I.A.

The A.R.R.L. has intimated its agreement with the principle of adopting a standard numbering system internationally and will make every effort to abide by it. However, they have reserved the right to discard the W.I.A. system should it prove unsatisfactory for use in the A.R.R.L. Annual DX Competition where a number of contestants regularly make more than a thousand contacts and the use of the W.I.A. system may cause some confusion.

ZL OFFICIAL BROADCAST

The official broadcast of the N.Z.A.R.T. is radiated on 3960 Kc. at 9 p.m. (New Zealand time) on the evening of the last Sunday in each month. The official station call sign is ZL2IY.

NEW PHONE-C.W. "LABRE" CONTEST ON 21 MC. BAND DURING FOUR WEEK-ENDS OF JULY, 1952

This is a special opportunity for Hams and SWLs the world over, to observe the conditions of this new band, listening in to the PY's work.

Brazilian regulations having enforced the 21 Mc. band for phone and c.w. operation, according to Atlantic City's International Conference of 1947, a very interesting contest is now being announced by Labre Headquarters, for the month of July, 1952.

PY stations will be trying to obtain the maximum possible coverage of the 8,500,000 square kilometers of their territorial area over the 21 Mc. band, while the Amateurs and SWLs of every country are being invited to participate in this interesting contest as "listeners in," thus qualifying for special awards according to the reports submitted to the Brazilian League.

The new band affords a wide segment for work in c.w. (A1), extending from 21000 to 21450 Kc., and provides a sub-band for phone work (A3) from 21150 to 21450 Kc.

The contest will comprise four periods, corresponding to the week-ends of July next, according to the following schedule: Phone Section, starting at 0301 on Saturdays, July 5 and 19, ending at 0300 on Mondays, July 7 and 21 (GMT); C.W. Section, starting at 0301 on Saturdays, July 12 and 26, ending at 0300 on Mondays, July 14 and 28 (GMT).

Amateurs of any country outside the PY area, irrespective of class or category, licensee or otherwise, may partake in this contest as "listeners in," and are invited to send their reports to Labre Headquarters, with the following data: date, time (GMT), call sign of PY station calling, call sign of PY station called, and series of figures sent by calling station.

"Listeners in" will be credited two points for every correct copy, and they may copy the same PY station as many times as heard, provided there is a difference of, at least, two hours between each notation.

Participants as "listeners in" who will obtain the greatest credit in points will be awarded a special certificate, the same applying to those immediately below in number of points, as second place, in each country.

Logs shall be sent to Labre Headquarters, P.O. Box 2353, Rio de Janeiro, D.F., Brasil, in time to be in their possession up to October 31, 1952, ultimate date for reception.

Judgment of this contest will be made by Labre's Awarding Committee, and their decision will be final.

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

The Danish Amateur Society (E.D.R.), who have been appointed to conduct the 1952 All European DX Contest, advise that the contest will form a part of the E.D.R. 25th Jubilee celebrations. Preliminary notification of the dates of the contest are given as follows: C.W. Section—0001 GMT, Dec. 8, to 2400 GMT, Dec. 7, 1952. Phone Section—0001 GMT, Dec. 13, to 2400 GMT, Dec. 14. Further details and reminders will be given throughout the year.

Robbie, VK2QZ, who is currently signing VK2QZ/P/B from the Trobriand Islds., after cursing the continuous rainfall of that area, states he will be leaving for the Solomons early in April and expects to remain in that locality until May. QTH will be Honora.

VK1RF who served a term at Macquarie Isld. has come up for a second serve. This time Reg will be at Heard Island. Presumably he will again sign VK1RF.

Twos my pleasure to receive words from Bill Mitchell, VK3UM, ex-Hon. Secretary, Federal Executive W.I.A., prior to departing to England in May, 1950. Bill and family expect to return to VK around July of this year and has enjoyed his sojourn in England. Has done no radio from G, but has spent any spare time fishing for salmon and trout with the assistance of a new Vauxhall Velox. Presume that comes to VK with him on return. On the way over Bill met VSTES, VSTJW, VU2GB, VU2FU, and others. He has since met many renowned ham personalities in England. A card from G8VB followed Bill to England and purported to confirm a QSO on 3.5 Mc. c.w. on 12th November, 1950. As Bill was already in England on that date it appears that G8VB has mistaken the call sign unless Bill's call has been pirated. G8VB, a good scout and father of Bob Simmons, ex-V54SR of Labuan, only requires a card from Oceania for his 80 metre W.A.C. and is anxious to identify the station with whom he contacted. Should this ring a bell with any VK station, please forward the card to G8VB pronto. G8VB also only requires an Oceania contact for his phone W.A.C. on 3.5 Mc. and requests VK stations to keep a look out for him on 3755 Kc. every night from 0001-0400 GMT and requests a call on c.w. if unable to raise him on phone. He is looking for VKs and ZLs particularly. Further details of the abovementioned "QSO" with "VK3UM" are RST 459 and the freq. was 3515 Kc. Check your logs chaps.

A letter from a Japanese SWL dated 2nd Jan., 1952, gives the latest position in that country. I quote: "J.A.R.L. is publication CQ that is organ of J.A.R.L. The contents of the book is receive and DX guide in chief. Tx description is not. But my many friends have a Tx the extent of 100 watt input which use 807 p.p. and it is prepare oneself for on the air. Sometimes we are surprise find a Japanese Ham's undercover station in the sky, example, C2AP, C2PO, C2TK and J2PDX, J2YL, etc., about one hundred. I feeling deep regret on these stations. They are arrest by officers of Wireless."

Further news from Ron Mould, VK9FM, of Madang, indicates that Ron is still not on the air from that locale due to tardiness in arrival of gear from the South. Ron was pleasantly surprised recently by a visit from Russ VK9KX when the lighthouse maintenance ship pulled in at Madang for a day prior to its departure for Rabaul. Ron also sends me regards from ex-F.M.G. telegraph, Charlie McGovern, Ian Parsons, and Sid Hulse, who are now operators for D.C.A. in the Islands. Ron pays a tribute to the operating ability of these chaps and wishes he had more of them. I bet he does. Ron expects to regain the mainland about March, 1953, and intends motoring from Brisbane to Perth via all mainland capitals, and is keen to take in as many W.I.A. functions, fields days, etc., as possible. We will all be pleased to meet both Ron and XYL Gina.

A large number of cards are to hand from FABCR. Many of these date back to 1949, and help to restore one's faith in humanity. Speaking of late cards, Treb, B.E.S.195, in his usual bright budget of new mentions receiving a card from VR2AK (now VK2ANZ) after five years! He also mentions that SMSAQV is looking for VKs on 3.5 Mc. particularly on 3535 to 3590 Kc. c.w. between 1930 and 2030 GMT on Saturdays and Sundays. Treb adds that he is hearing fine DX on 80 around 2000-2030 GMT. Among the Europeans he has heard are SMSAQV, DL1VU, F8TQ, SL6AM, SL7CA, G2HKG, HB9BX, HB9EL, DL5LK and SM6AZ.

Ron Mould VK9FM, in a further letter additional to an earlier par in these notes, states that the following Hams who have left the islands are now located as follows: VK9GB, Arch Barrie, 44 Mt. Eden Rd., Mt. Eden, Auckland, N.Z.; VK9QK, Ted Roberts, c/o. Radio Workshops, Mascot, N.S.W.; VK9YY, Bill Watson, c/o. Hobart Radio, Hobart, Tas. Ron states that the following Hams are still in the territory but not known to be active: VK9RM, VK9DC, VK9BI, VK9CS and VK9RT. Ron makes a couple of requests. Wants any info on establishing an Emergency Network and also the date of the "QST" that has the "gen" on hotting up the BC342N or better still loan of the particular copy. Can anyone assist?

NEW SOUTH WALES

NORTHERN SUBURBS

Thanks to Harold 2AQP, the following from the Northern Beaches area. Bill 2WF is now the proud possessor of a rotary WJJK beam. Harry ex-2WO has left this part of the world and is now operating from Townsville under the call of 4XK. Warren 2ASM has changed his QTH to Dee Why. Chic 2ALB spending most of his time on his SX28 Rx, heard on 40 occasionally. Tom 2KX and Harry 2AHZ not very active these days. Heard Fred 2AJM on 14 Mc. discussing the forthcoming marriage of his daughter. From John 2ANF we hear that Drummoynne has a new Amateur in John 2ATO who is active on 40, 20, 8 and 2 mx; congrats John and a hearty welcome to Amateur Radio. Keith 2AOA going to Kangaroo Valley for a holiday after Easter; will be active with portable rig on 40 mx. Barry 2ABZ of Kingsford, holidaying with 2RT in Blue Mountains and is operating on 40 and 2 mx. 2ARG has a new boat—two to look after now. Ken 2AKK, of Gladesville, has just been married; congrats and best wishes Ken, hope it won't keep you off the air too much. Bob 2QR heard talking about getting going on 2 mx with gear lent by 2BG.

The following notes of the activities of the Gladesville Radio Club, kindly supplied by their Publicity Officer, Ken Andrew. Newly elected: Horrie Laphorne, Pres.; Graham Allen, Sec.; Mac Brown, Treas.; Allan Tollow, Alan Llewellyn and Chas Freyer, Com.; Keith Alcock, QSL Officer; Ken Andrew, Vice-Pres., Librarian, Pub. Officer, etc., etc. One of the outstanding club fixtures this year was the camping weekend at Garie Beach, under the guiding hand of 2HL—this proved a great success.

WESTERN SUBURBS

Despite the odd and infrequent good conditions on the bands of late, there has been a considerable amount of activity during the last month. Several of the locals are experimenting with antennae of reduced dimensions for use in confined spaces on 14 Mc. 2AFA, 2ANC, 2ARA and 2ACD are all concerned using different types of array, which is leading to a certain amount of discussion on the subject. 2AXZ heard and contacted on 40 and 20, with a yearning for 10. 2AAB going to Urunga, built a brand new mod. and assures us it is good.

2APT still playing with full sized beams, gives a good account of itself. 2AHP fiddling with beams, only six S points back to front. 2AHU is really hitting the highs this month. 2XW appears to be a regular on 20 at night, fine sig John. 2XH still doing a good job, not heard much of late. 2AGX is another one doing very nicely, teeing up the questions and answers. 2ZF is keen on contacts with his s.s.s.c.; co-operation is necessary to get any place with his experiments.

2AWU the only chap around here to work DX regularly, the beam is really f.b. 2OQ not heard on 20 for some time, hear that he has the 144 Mc. bug. Sorry to hear of the sickness of Joyce 2AMJ's father; hope to hear you soon Jack. 2ID appears to be getting his share at almost any time, must get the recipe. 2ABO is operating 20 with a rotating dipole, also on 144 Mc. again. 2MH on holidays at Kennebrri, operated portable up there. 2AMP on most bands recently, nice to hear you again Geoff. These notes by courtesy of Ted ZACD.

NORTH COAST AND TABLELANDS

By the time these notes have been printed the third Urunga Convention will be history to be remembered and I trust you all had a splendid time. A full report on the proceedings will appear in the next issue for those who were unable to be in it. The North Coast Zone has had quite a few visitors this month, and conversely a number of N/C boys have gone visiting. Mick 2ARF had a few days with Alf 2UC at Lismore. VRID and VREJ are holidaying near Urunga and Laurie 2MY spent a period at Kennebrri and returned to Sydney via Tamworth. A visitor to Grafton is 2AWH Harold who is spending Easter with his folk. Ken 2APB has journeyed to Queensland to undertake further training with D.C.A., whilst Doug 2SH has gone to Parkes for a few weeks.

Not a month passes that some member of the N/C gang does not crash up a car! Latest exponents of the art are Taree Bill 2AEY and Don 2YU. It is said that Bill succeeded in cracking the chassis in two places and Don made a real job of his. Jack 2JK is back on 40 once again after deciding to give it away! A new voice may soon be heard from Kempsey in the person of Bruce Murphy, no call at time of writing.

ing, shouldn't be long now. Terry 2AJS on holidays for a few weeks, heard on 20 mx. Len 2LR busy building a new Tx in a small space, working out very well.

COAFIELDS AND LAKES

2ANU returned from his holidays at Mona Vale with much gear and many ideas, on the way with a new xtal controlled converter for 144 Mc. 2VU can now listen on 144 Mc. using double conversion by feeding his responder unit into the main Rx. 2UZ chasing DX on 20 mx using new beam with good results. 2ADT consistently working into Sydney on 144 Mc. and also managed to catch some VK5s on 50 Mc. when the band opened. 2KF is also working on 20 mx. 2KZ rebuilding, held up by lack of vital parts. 2YL has not reported his usual one night's activity for the month; don't let that work get you down Harry. 2RU has completed the beam for 2 mx (4 over 4) and has now only to paint and erect it. 2KB active on 40 mx and 144 Mc., made history by putting a signal into Cessnock on 144 from the water-logged wonderland. 2GA works 8 and 40 mx and plans to take Cec to Urunga again this year. Even 2LX was heard on 40 mx this month.

SOUTH COAST

The Wollongong Club class is getting the final brush up in readiness for the exam. One of the boys worked his first W5 (WSOLG) on 40 mx using 35w, and getting one S point less than local Ham using 100w., which speaks well of the club rig which is made out of old b.c. sets. The club call is VK2AMW. Eric 2DY is very busy building a 2 and 8 mx Tx and hopes to be finished before going to Urunga. Jim 2AXG not quite so busy calling CQ, as he is now back at his drug store after having been laid up for 11 months and is now helping the locals to seek cures not CQs. Howard 2AMD busy chasing DX on 20 mx using his new rack and panel job running 8w. John 2AUB busy building a new rig and with the knowledge gained at the club and during his training at R.A.A.F., Richmond, we expect something good so hurry up John. Charles 2MT heard working a GW on 40 mx and doing a fine job, but do not run the beam too hot! 2UK and 2VH still

home-building for the next two months, so will not hear from them for some time yet. Jim 2AKM waiting for the a.c. power mains to his new QTH at Barracks Head, Shell-harbour; he's been looking along the road for so long that I am sure he will need glasses now. Harry 2AOX not had the best of health out his way; cheer up Harry, and hope to hear you soon. Col 2AGZ busy building, not heard much of late. Col 2ASF conspicuous by his absence lately. Perhaps having a well-earned rest after the bush fires down Eden way or maybe having a long sleep to make up for lost time.

HUNTER BRANCH

A representative gathering from most Hunter Valley towns was present at the Annual Meeting held at the Technical College, Newcastle, on 14th March. Although his calling prevents him actively partaking in Ham Radio these days, Allan Fairhall, M.H.R. (2KE), came along, indicating he is still first and foremost a good Hunter Branch man. Allan took the chair at the invitation of the retiring Chairman while the President was being elected. The following officers were chosen by members to act on their behalf in the ensuing year. Pres., Lionel Swain 2CS; Vice-Pres., John Clarke 2DZ; Sec., Varley Fitton 2SF; Treas., Bill Hall 2XT. Nominated for President, John 2DZ declined to oppose Lionel to whom he paid a glowing tribute. Pleasure was expressed by all at the election to office of 2DZ and 2XT, both of whom are hard workers for the Branch and Institute.

Many interesting facts were given to members by Lew Ansell 2TO, who is O.I.C. Newcastle Police Radio, when he spoke on "Development of Police Radio Communications." Lew paid tribute to pioneering work done by Hams in the Force since the network started in 1924. Some eight thousand messages a year are handled in Newcastle now.

W5SGH/mobile marine, radio officer on S.S. Michael J. Goulondris, was recently in Newcastle; Howard Walp hails from New Orleans Louisiana. Another visitor was 4KS, winner phone section Jubilee DX Contest with a family en route VK5 on caravan holiday call. on 2AHA. Last, but not least, among the visitors was Taree Bill 2AEY.

Once again I'm indebted to 2DG for Maitland doings. Congrats to Keith on winning another Contest. Has just been advised by Swedish Amateur Society that he has been awarded first place in c.w. section 1950 European DX Contest. 2VO enjoying holidays, hopes to put phone on the air soon. Another who has had short but well-earned break is 2AKP. Vic working hard and can't get near Tx. John 2XQ working Ws on 80 phone. 2CN on 20 with a nice sig. Bert reports trouble with beam motor gears. Another to make a come-back is 2IS, Ivan is modulating well and has acquired two 805; and an 828. Holidaying at Forster, Harry 2AFX is putting out a solid signal from 2AHA's Bendix RA10 Tx, YLs permitting! Varley 2SF got his c.c. 807 keying well on 40. 2PJ has joined the "Old Gentlemen" on 80 with f.b. sig from 8 watts, Bill has new freq. meter with xtal check and monitor perking well. 2AXM is building new final around an 813. It's true boys, the old 2FP is re-building; Ernie is putting in a couple of 35Ts; his new neighbour 2O'H started with portable but Max has his 813 in commission now and hearing it out. Talking of neighbours, Phil 2ANG has shifted QTH; almost next door to 2ZC! 2AAI has new QRO rig with p.p. 80Ts on 20 but Ron still playing with modulator. 2MR not on 20 yet but Edgar hopes to make it soon. 2ARK has XYL home again so Mac has more time for Ham Radio; interested in Rothman modulator. 2CI usually manages to QSO 2WI on Sundays for report and comments on b.c. George 2AGD is mostly on 20. Norm 2ANA rag-chewing on 40 phone.

Notice of Meeting.—The May meeting will be held on Friday, 9th, at the Technical College, Tighes Hill, Newcastle. Listen 2WI for details.

VICTORIA

CENTRAL WESTERN ZONE

One is surprised at the way a grudge is stored up for years and years until the right moment. That villian, 3GN, waited for years to get even with 3YW, and was I caught bending? George even rolled in shortly after to see if I had got my breath back. George, by the way, is putting out a nice signal with a very temporary antenna and the Type 3, the big rig is still on ice. 3DP for the time being has gone all DX, with 100wt. on an 834 on 14 Mc. c.w.; Jim can bowl them over whenever they appear and has quite a bag to date. 3HL may or may not be trying to emulate 3WI and put out transmissions on 7 and 3.5 Mc. all at once as on the last zone hook-up 3ARM could copy Allan nicely thank you while he was going on 40 mx, ho-hum.

After checking 28 Mc. daily for weeks, 3ARL missed a beautiful opening on the only day

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he missed, never mind Lin. We all slip sometimes, maybe it will open on the next 28-day cycle—by the way where is the 600 volt power supply? 3AKP has now lifted the QTH power supply to just on 200 volts, so should be able to appear in the not too distant future. 3XC, we believe, has not been 100 per cent. of late, cheer up Bill, nothing lasts for ever. 3AFO was heard on 7 Mc. putting out a nice sig, either I listen at the wrong time or something, but the Hornsman boys seem quiet of late or have they all gone v.h.f.

3ARM has now checked up the v.f.o. with the Bendix and everything is lovely. Two new s.s.b. stations appeared on 3.5 Mc. of late. ZLAAE and ZLJAW, both have good signals, which are not difficult to read. ZLAAE has been worked to date for the first VK-ZL s.s.b. contact on 3.5 Mc.

Zone members are asked in future on zone hook-ups, if skip is long on 7150 at 1000 hours, to change to 3.5 Mc. at 1015 hours where control will be on approx. 3580 Kc. That is on the second Sunday of each month.

EASTERN ZONE

I had intended to push this job onto 3SG again this month, but after the way he libelled me last time I thought I'd better do the job myself. Leo isn't a bad sort, though, and he has just discovered that p.p. 807s don't always behave as the book says they do!

The field day held on 6th April was quite a good show, with perfect weather, and much useful knowledge concerning antennae, especially top loaded ones, was gained by the mobile chaps. Graham 3QZ had a breakdown with his modulator so had to use c.w., but apparently 3ALA was the only one with a b.f.o. on his Rx! Graham did manage to slaughter an outside in snakes, though. Much enthusiasm was shown by Peter 3IZ, who sent his mate John all the way to Timbora for some xtals, the round trip being over 120 miles. Apart from running out of petrol, and falling off his motor bike, John had a nice run—I hope!

The stork has been around again—Norm 3ANC and Graham 3GO, each acquiring a new YL junior op. Conditions on 80 appear to be improving and the line-up on 3650 Kc. on Sundays is very satisfactory. We are still waiting for 3IO and 3AJA to join the hook-up. What about you blokes buying a xtal between you, eh? I hope to have paid a visit to VK5 by the time this hits the newstands, bit awkward this writing about the future, but for the benefit of a trio of v.h.f. enthusiasts—there are ominous signs that 3SS will be heard on 50 Mc. before long! Believe it or not.

NORTH EASTERN ZONE

Things were very bright at the zone hook-up with a record 14 on the air. Strangers in 3ACK and 3TS were welcomed back to the fold. 3ACW on holidays, his wanderings are not apparently being made to any set plan. Thought we would have seen you Chas. 3UI and 3APF experimenting on 288 Mc., but I never thought I would see the day when the exponents of xtal controlled converters and Tx's would descend to the low level of mod. osc. 3JC still in the midst of 20 mx beam troubles. You would never believe some of the queer things it does. Chased an II for a month, got the contact and lost it due to local electrical interference. Hasn't been game to look on 20 since. 3ALE has good modulation now, what did you do Les? 3YV back with us again, giving lots of cheek. Ducks seem to predominate the zone hook-up. Come in all flavours, so it seems. 3KR had a visit by 2NS.

Last v.h.f. field day, 3UI and 3JC journeyed to Mt. Major and once again contacted 2FN on 2 mx. This occurrence is happening so often as not to become news any more. Most Melb. stations gave us the go by. Everything lined up for next field day which is the last. Somebody must have received the mag early this month. The picnic was mooted to be held at the suggestion of 3CI at Nac-ambee—well you asked for it Sid. However I agree with you Sid, about it being a good spot. Residents will be warned before Les SALE takes a plunge—flood warning, I take it. 3CI DXing on 10 mx, also working regularly on 2 mx. 3LJ buying up spare parts while in Melbourne. Now hasn't time to assemble same in desired circuits.

GEELONG AMATEUR RADIO CLUB

A field night was recently arranged for members of the Club. The Tx which operated on 80 mx under the Club's call 3ATL was hidden by the President of the Club, 3ABK, and Peter Cartwright at Fyansford. First to arrive were 3SY, 3ALG and Mox Stock. Their time was 23 min. Those operating the Tx did a good job in hiding it and added 100 yards of mike lead from the Tx.

At the next meeting several items re the Club had to be discussed, this took the whole evening up. The main item was arrangements for the forthcoming South Western Zone Convention to be held in Geelong. A visitor to

the Club was Mr. Ted Blackney who was nominated for membership by 3AKE. The Geelong hook-up still takes place at 2000 hours every Thursday night.

QUEENSLAND

By the time these notes appear in print, the new Council for the VK4 Division should be comfortably ensconced in office. Except for three new members, those who shouldered the burden last year stay put. Stout "fellas." The three new faces to grace the Council board are those of Arthur Burton 4FE, Ossie Harris 4TN, and Alf Guildford 4AP in the positions of Federal Councillor, VK4WI Station Manager, and Divisional Sub-Editor, respectively.

PRESIDENT'S REPORT

Presented at VK4 Annual Dinner, March 29

Gentlemen and Members—It is my privilege to present to you a resume of the Division's affairs for 1951-2. During this period, membership has decreased by 55, including 25 full members and 30 associates. However, this loss is partly offset by the enrollment of 32 new members, bringing our present total to 201 and, as most of the year lies ahead, prospects of increased membership are really good. Likewise, our finances are good as will be noted from a perusal of the balance sheet which will be sent to all members with an early issue of our own little publication, "QTC." The No. 1 Account, admittedly shows only a small cash carry over, but what must be considered is that the Division holds equipment worth approximately £150, including a modern duplicator which will more than save its cost over the ensuing years. As regards the No. 2 Account, the happy result of disposal equipment sales, I am pleased to state that this is being held in trust for allocation at a later date to permanent headquarters for the VK4 Division.

Our departments, QSL Service, Station 4WI, "QTC," Library Service, etc., have been fully maintained, and, I believe, much appreciated. Council itself has functioned actively, smoothly, and with almost 100 per cent. attendance figures. We lost three councillors of real value at the termination of the year and to them I wish to tender our thanks for their unstinting service.

Equipment Library.—Funds and personnel now allow this much needed service to slowly come into operation. Some of the equipment for electrical measurements is available and will be added to as time permits.

Contest Committee.—This newly formed group has been busy framing contests of a local nature for VK4 members. Details will appear monthly in "QTC" and your earnest support is requested.

Student Classes.—The class, as last year, is in the capable hands of Mr. Tom Atthey. Every assistance is given to those anxious to attain the A.O.C.P. as it is in this section that our future will be assured.

Emergency Network.—Arthur 4AW, a past president of several years' standing, has continued with this most important section. Net members now number 50 and areas covered include Darling Downs, Atherton Tablelands and the East coast. Members are required for the remaining country districts. Net drills are held on the third Sunday morning of each month and those anxious to participate should contact 4AW.

Somerset Dam Convention.—I was fortunate to be present at this Convention, held early this year and cannot speak in sufficiently glowing terms in praise of the tremendous efforts by Messrs. 4PD and 4GG to make the "Do" the success it really was. It is not necessary for me to add that more functions of like kind are eagerly awaited.

Station VK4WI.—Almost without exception 4WI has been on the air every Sunday morning for the dissemination of Divisional news to both country and city members. Our sincere thanks go to the past Station Managers, 4FN and 4WD, for their sterling work in winning and holding members. In connection with 4WI, I must strongly stress that there is always an urgent need for news—remember the other fellow is just as interested in your doings as you are in his. Direct all items of interest to the new Station Manager, Ossie 4TN and thus help him maintain the high standard of past broadcasts.

In a short report such as this, I cannot cover the whole of our Divisional activities. However, we have adopted new universal Divisional Constitution which so far suits our needs and could possibly be the forerunner of the federation of our divisions. Also we have done, and will continue to do, everything possible to uphold Queensland Division's interests and affairs to the high standards set in the past. As regards yourself, a member of this Division, I would like you on occasions throughout the year to consider your justification as an Amateur, and give thought to the privileges

you now enjoy. In this connection I suggest that you pay more attention to the use of the high frequency channels; that you take advantage of new technique such as s.s.s.c. transmission and reception; and that from time to time you review latest technical trends and allow these new trends to influence your radio activities.

In conclusion, I urge all members to conduct their operational activities so as to comply strictly with the regulations, and thus maintain our self government and the confidence and respect which has been shown to us in the past by the Postmaster General's Department.—(Signed) V. JEFFES (VK4VJ), President.

CLARE'S CORNER

Absent on 20 lately is 4PX—reason, new 10 mx beam. 4CC has chucked up over 100 contacts with F8FT. Ballarat visitors, 3GR and XYL here recently. Eob visited quite a few of the boys. Pleased with the results from his new vertical is 4RJ; looks forward to even better results when in new Northgate QTH. 4TT is experimenting with a ZL Special and getting his fair share of DX. Active on 20 with nice phone signal is 9BD; love to hear that laugh of 9YT's.

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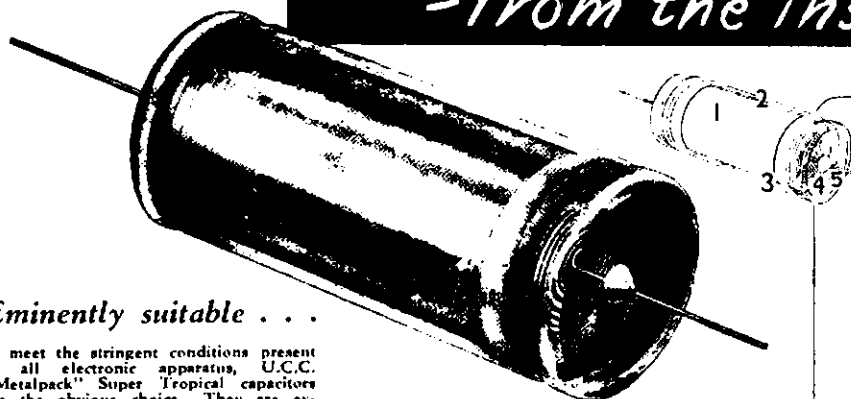
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TOWNSVILLE ZONE (By 4RW)

Main item of interest is the addition to our ranks of new members 4BE and 4RW. A shift to a new QTH, still in the flood area, accounts for the inactivity of 4WH. 4RU just sat for a commercial ticket; hope it bobs up Wally as reward for the swiftness, despite the fact it will probably mean more QRM for 4RW.

As was expected, it didn't take long for Frank ex-4FN to make a welcome re-appearance under the call of 9FN. Heard him rag-chewing with Carl 9YT, Barry 4LN and some of the Brisbane lads. The only new country at 4RW this month is VP2LE of the Windward Islands. He is on the band daily around 3.30 p.m. on 14350 and suggests calls directed to him be higher in frequency in order to dodge YV5 QRM. One other item to report is that 4RW's cards, submitted for DX C.C. in both phone and open sections, have been confirmed as OK. Soon the coveted awards should be adorning the shack walls. 4QL still keeping Townsville on the map as far as p.w. is concerned. Am told Frank is consistently on the low end of 7 Mc. just after sunrise.

CONTEST ACTIVITIES

Even the most ardent epicure in the matter of contest feast couldn't complain about the tasty dishes our newly-formed VK4 Contest Committee has cooked up for us over the next twelve months. Yes, there is something doing every month and, on first thoughts, I was very much afraid the old blokes, like myself, who have been in the game long enough for their XYLs to frown with disdain on radio contests, to feel a little perturbed over so much proposed activity. But rest easy, our sponsors have made no contest arrangements that will interfere with domestic bliss or call for a 24 hour binge with the "hangover" attached. The contests are exclusively for VK4 members and in the framing of them several good objectives have been kept in mind. One of them is to provide periods of friendly competition with all the fun and excitement that such rivalry brings out. Another is to furnish a test of equipment—during these workouts who doesn't learn ways to improve gear? Other objectives are to encourage those who have good gear to use it more often, and for those who use one band only to show more versatility by their ability to work all or most bands.

Remember, these contests, or perhaps a better way of putting it would be operating activities, are sponsored for your enjoyment, and if you can see any way in which they can be improved, the Contest Committee would be glad to have your ideas on the subject.

Brief details of the May Test, which is more in the nature of a QSL hunt than a contest, are as follows: During May VK4 members will endeavour to work as many stations as possible outside Australia. Two sections are provided—c.w. and phone. Contestants may enter either section or both. There is no open section. Scoring is on the basis of one point for each contact and a multiplier of the number of countries worked. Good news is that users of single element antennae receive a bonus multiplier of two (2) which means that the beam boys will not start with a 6 to 10 db advantage.

Judging will be in December, based on the number of QSL cards received and sent through the Bureau until 1st December, 1952. Prizes will be awarded for both sections with additional special prizes for the best 7 Mc. only and 3.5 Mc. only entries.

(It is regretted that the VK4 personal pars have had to be severely cut.—Editor.)

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for March took the form of a buy and sell night, although in this "refined" State of South Australia, it must be called a tender and disposal night. In case the local policeman on the beat might pass the clubroom doors and hear the auctioneer calling for bids. Wouldn't it? Anyway, it was a good night and the large audience enjoyed themselves immensely at the antics of the tender receiver (auctioneer to you). Dougal 5BY. Quite a lot of good gear changed hands. Quite a number of articles submitted were beautiful examples of the craftsman's art, but one fact stands out at these buy and sell nights, and that is that nobody has big money to spend and only the bits and pieces get any bids. The lesson to learn from this undeniable fact is that if you have anything to get rid of, spend a little time in dismantling it and let them bid for the tidley bits. You will be pleased with the result.

Among the visitors were Messrs. P. McEwen, R. Hellyor, D. Harewood, A. Halliday, L. Carpenter, G. Basson, R. Capon, A. Williamson, M. Marshall (3MM), L. Baker (5OB) and last but not least, my one-time espionage agent from Darwin, Ray Latta (5RA). "Doc" Barber 5MD, our respected President, was in the chair, looking fit and well again, and the business

side of the tenders and disposals was efficiently handled by Tom 5TL, Hal 5AW, Dave 5DH, John 5KX, Jack 5JD and that athletic looking bundle of business acumen, "Pansy" 5PS.

You have all realised by now that the W.L.A. exhibit at the Royal Adelaide Exhibition is an assured success and all those VK5 members who gave of their energy, time, and equipment can sit back and accept the plaudits of the crowd. It was a job well done toward bringing Hom Radio before the general public, and despite the moanings of one or two "Mother Grundy's" who professed to be disappointed with the set-up, the exhibit more than achieved its object, and when it was announced that a silver medal had been awarded to the exhibit, then the boys behind the effort felt that their goal had been reached. To mention any one individual in connection with the exhibit would only be unfair to all those who worked so hard to make it a success, but I feel that Max 5GF is worthy of some mention as he lent most of his station to the exhibit and in his quiet modest way put his shoulder to the wheel in no uncertain manner.

Harry 5KW sent a letter of appreciation and thanks to the VK5 Council concerning the installation and operation of the Type 3 Mark II. at his bedside whilst he was anchored in Northfield Hospital as a polio patient. Quite a number of members were not aware that the VK5 Division had this equipment available for bedridden Hams, and quite a lot of complimentary remarks were passed regarding the Council members for having used their "noodles" and purchased the gear.

John 5JG, who secured first place in the National Field Day Contest for VK5 was presented with the certificate at the general meeting. There is no doubt about these quiet blokes, take your eyes off them for a second and the next thing you know they have shot to the front and don't stop until the post is reached. Nice work John, but did you have to look so ashamed when you collected the certificate, after all it was an honour, not a summons!

Noticed Associate member Allan Hunter at the general meeting, he is usually too busy to come along. This chap is the radio man with the Electricity Trust's changeover from 210 to 240, and speaking from experience, nothing is too much trouble for him and no problem too big. They don't come any better, and in case you should think I have an axe to grind, well you are wrong. Mine is already sharpened!

Had a chat with Ray 5RA from Darwin who was down for the meeting. He gave me a good line-up on things at Darwin and explained that the lack of news from that quarter was due to the fact that the boys were on the move so much that when the notes appeared in the mag. it was stale.

An item in a recent issue of "Amateur Radio" passed unnoticed by quite a number of VK5 Hams, due principally to a misprint of the call sign, and also due to the fact that very few believed that it could be possible. I refer to the fact that Jack 5KO had given away Amateur Radio. Known to all in VK5 as Johnny, he occupied the rather dubious position of "Father Confessor" to all VK5 Hams, and incidentally has done more for Amateur Radio, in his quiet and efficient way, than any ten Hams put together. During the anxious days that followed the last war, when Amateur Radio in VK5 was drifting around in uncertainty, Johnny, with a firm belief in the future, was the driving force behind the newly organised VK5 Division, and his infectious enthusiasm was responsible in no small manner for the foundation of the success, which is our proud boast today. I could write a lot more than this, but it would only be gilding the lily, although he is far from being a lily, suffice to say that Amateur Radio in VK5 has lost a stalwart, and we can only hope that the "bug" will bite again and bite hard. Incidentally, if you think that he will be appreciative of all that I have written, then let me assure that you were never so wrong, in fact I will have to dodge him for the next few months because he will kick me right where I sit down if he catches up with me. Sorry Johnny, but my conscience wouldn't let me rest if I did not put my pen to paper in salute to a true Ham.

John 5JA is still settling in after his marriage and hopes to be on the air about Easter time. He did not state what year! Tom 5TW is also quiet although he has had a few contacts on 20 and 40 mx. Claude 5CH is still out in the country with no power and no Tx. Can you imagine it, here is a joker with a power plant of his own, and he is forced to rely on smoke signals or something. Claude I am disappointed in you. Erg 5KU is making slow progress with his beam and all I can say is "Remember Bruce and the spider," or was it "Alfred and the cakes."

John 5FD has a couple of sticks up in the air but as yet there is no sign of any activity. Stuart 5MS has at last shifted into his new

home but is still waiting for the power, so it goes without saying that he is also among the quiet ones. Col 5CJ has had a few contacts on 40 mx but is also quiet. Say, I am sick of using this word quiet when speaking about the South East boys, so the best thing I can do is to remain quiet myself. Who said impossible, fling him to the lions.

5MA has been too busy picking grapes at his new QTH in Renmark to even think of going on the air as yet, but Fred has not been posted as hopeless by the Berri boys at the time of writing. 5BC has not been very active this month having had much more important things to occupy his attention, but Hughie has been getting plenty of publicity in the Ham magazines for his good work on the v.h.f. frequencies, so that makes him well satisfied. Incidentally, Hugh, I did not get time to wish you well in the new job and say goodbye, but I know that you took that as spoken. It was a pleasure working with you.

5CF has been working back quite a lot this month and has not been so active as of recent months. When is that sooper dooper special Rx coming along Murray? 5KW has been having some oscillator troubles with p.p. 807s and decided to take the advice of those who learnt the hard way and replaced them with an 834. Harry is getting on real well again after his recent battle with polio. 5SL has been heard on occasionally when conditions are OK. Laurie has not put the h.t. on the recently completed 834 final, but look out chaps when he does, he has been getting S9 reports with 10w. input to a 6V6 final. He will be returning to the "best etc. etc." any day now and we will have him singing the praises of the "best etc. etc." very smartly.

5KR has returned to the air after an absence of over 18 months and has built a new shack. Vic is only using the exciter stages of his rig at the moment, but the 100w. final will be hooked up as soon as he is sure that all is well. 5ZR received an S9 report from 5WI at the Royal Adelaide Exhibition the other night which in itself is probably nothing out of the ordinary, but as he was only working on a dummy antenna (a 60w. lamp) it was not so bad. 5VO who has tried just about all types of modulation known to man has at last seen the light and installed a plate modulator. Alan borrowed a mod. tranny from John 5HI which worked so well that John has asked for its return! 5LW was heard telling the world about the annual fishing trip that he and Max 5GF will be undertaking at Easter. Ross is taking enough food for one day, plus a bag of spuds, a pound of butter, a tin of fat, and a loaf of bread. The fish must bite!

SDP is trying out a rather novel type of ground plane antenna on 20 mx. The vertical element is 16 feet 8 inches of 1 inch dural tubing fed with 80 ohm twin lead using the roof of his QTH as the ground. The ground wave is colossal, but so far the DX has not had a good try out. What happens when you pull the plug out of the bath Ted? 5PH has been so busy on the S.A.R. diesel electric cars that he has had no time for such commonplace things as radio. Perc spends a lot of his spare time in planting daffodils, and as he gained the Grand Champion at the last Royal show, he must know his onions. Pardon the mixed metaphor. He also blows a wicked trumpet in the local band, so it is no wonder that he has no time for radio. Thanks for the offer re the gear Perc.

This paragraph is going to hurt me more than it hurts you, boys, but it is sometimes necessary to be cruel to be kind. At 9.59 p.m. on the 1st of April, Federal Executive officially advised the VK5 Division that the VK6 Division had decided to accept associate members to its ranks. My crack at the VK6 Division regarding associate members, apparently was not as stale as friend 6AG would have us believe, because I made it in February. Your apology is accepted, fellow sub-editor, and incidentally OM, keep up the good work, your notes are attracting considerable attention in this State, and I am not "crawling!" The ball is on your side of the net!

My arch enemy "Doc" 5MD will be given the opportunity to write next month's notes, thus getting a little of his own back during my annual vacation.

WESTERN AUSTRALIA

Now I know what Pharaoh felt like. Talk about seven fat years and seven lean! In March I was bombarded with (very welcome) news and notes from everywhere. This month there is not a scratch of a pen from anyone. Even Rolo has let me down. So, turning to the "scandal" book" (my notebook which reposes handsy to the Rx) and my fertile imagination—here goes.

If another war breaks out and any of you fellows want to settle into a nice, cushy job, try the codes and cyphers branch. And to help

you along towards promotion to at least the rank of a brigadier-general, here's some real inside stuff. To make documents hard, difficult or even impossible to decipher follow these hints. First, get yourself some paper of tissue thinness—cigarette paper will do if you have any but even that's rather thicker than I recommend. Next, get a "mill" of 1918 vintage (or earlier) and proceed to type whatever it is you don't want the enemy to decipher. Type all over the face of the paper, then turn over and carry on on the reverse side. If your paper is thin enough, the typewriter old enough, and the ribbon battered enough, you'll fool the enemy, gain rapid promotion, and turn in a passable imitation of VK6 Divisional Minutes as supplied to me. (Moved 6HL that 6WZ be asked to resign forthwith or even sooner!)

Having remonstrated with 6HM over running too close to the deadline for these notes with the birth of his baby daughter a month or two back, I now find myself forced to admit that Mary Elizabeth 6WZ arrived in Geraldton on the 6th of the month, about three or four days after her dutiful father had posted his notes to Melbourne. Wouldn't it? Still, I'm getting used to hearing her S9 plus signal at about 0200 hours each morning and anyway, what does that matter? Everyone who sees her says she's a beautiful kid—which ain't surprising when you cast an eye over her father. (Or is it? Don't answer that.)

The 7 Mc. band has been doing the most amazing things during past weeks. Contacts between country and city have been most erratic and to cap 6LG's effort in hearing ZS stations on phone at the height of the day, yours truly heard (and called—ha! ha! what an optimist!) a ZS on c.w. at 12.20 p.m. on recent Sunday. Need I say no contact resulted? I need not. The same band brought to light an HB9 station (you heard—an HB9) during March and what's more, several of the boys worked him. Before the Eastern States VKs begin tearing their hair or booking their passages to the sunny West, I should add that HB9GX/MM was operating on 7 Mc. in Fremantle Harbour!

The price of the "Woden" Modulation Transformers, advertised by Wm. Willis & Co. on page 8, is £11/6/6 including Sales Tax.

6CN has left Geraldton and is now set-up in his own business as a master pill-roller at Kellerberrin. The Geraldton boys will miss you, Cyril, and wish you every success in your venture. If Cyril still remains a Ham after all that's happened to him in recent years, then I "dips me lid" to him. First of all, on d.c. for a spell, then he moved from the small beach-cottage he had occupied to a larger house in an a.c. area, but at a time when no new connections to the service were being made. He had to endure that (a.c. laid on to nearby houses, but none for 6CN) for a couple of years, then, at long last, came the a.c. Cyril began slowly (as time permitted) and it didn't permit much or often) to completely re-build the rig in a totally-enclosed type of steel cabinet. At the time of leaving Geraldton, Cyril hadn't quite completed that de luxe rig. Did he take it with him? No he sold it—for at his new QTH—yes, you've guessed it—he's back on d.c. again! Wotta saga!

Another bloke who should make you city-slickers pause and think how lucky you are is 6RT. After some years on batteries, wind-chargers, "dunks" and genemotors, Len spent about 12 months in Cue on 220 volts d.c. After his term there did they send him to be head-master of a large metropolitan school? They did not. They posted him to Bindi Bindi where there's no a.c., d.c. or any other kind of c. (except that in Len's tank circuits). Nothing daunted, Len bought a small engine and a 220-volt motor, revamped the latter to act as a generator, and laid on his own d.c. mains. After some preliminary bother suppressing noise, he is now on the air on 80 and 40 with low power but getting out quite well.

6BR who is now a Geraldton-ite is inactive in the Ham game at the moment, but is busy with study, hunting around for a block of land and practising hypnotism. Fair dinkum! Not the kind of hypnotism you chaps use to convince the XYL that Ham Radio is a wonderful hobby but the real McCoy. As the a.c. may be very much nearer 6WZ's QTH by the time these notes appear, I must get Barry to give me a few lessons. With plenty of 50-cycle stuff around the house I might put in a pair of 813s in p.p., then when the R.I. comes around I'll make a few passes in front of him and he'll go away convinced that they're only 6V6s and I'm running a pair of 20 watts!

6WD of Northam was heard recently; where have you been Wally? Still on d.c.? 3.5 Mc. seems to have shown a little promise lately and 6LG and 6RT are known to have been

active. Wonder if Lionel has been on there yet? Heard him on 7 Mc. the other day telling someone all his woes. By the way, OM, who's the "we" I hear you referring to so often?

Recent Institute happenings have been well publicised in both broadcasts and circulars so there is no need to go over stale news here where space is valuable. One point, however, seems to deserve comment and that is the suggestion that general meetings should deal with resignations in much the same way as they deal with applications for membership, the feeling being that as the monthly meeting is responsible for beginning one's membership it should also be charged with accepting or rejecting one's resignation if and when such is tendered. That seems to be a point of view no one could quibble over.

The new Council for 1952 was elected without there being more than the required number of nominations—indeed there was actually one less than the nine needed—therefore there was no need for a ballot. One extra member to make up the nine will be co-opted. Those nominated and declared elected are 6HC, 6AG, 6KW, 6RU, 6KO, 6MU, 6CM and 6LJ. In conclusion, I would like to thank all those who wrote to me with news for the April issue and to apologise to them for not having answered them direct by mail owing to pressure of work. Perhaps by the time this appears I'll have written to you chaps and also perhaps you may feel disposed to repeat the process. No scribe can have too many spies.

TASMANIA

For those of you not already aware, the following officers have been elected: President, Bob O'May 7OM, re-elected; Secretary, Ted Evans 7FJ; Asst. Secretary, Bob Fulton 7AF; Treasurer, Sid Excell 7SJ; and Disposals Officer, Tom Allen 7AL. In passing, I feel sure I am voicing the wishes of all, when I extend to the retiring Secretary, Len Edwards, our very sincere thanks for a job well done. Len was untiring in his efforts to render service to the Institute, and I am certain that many, if not all, were sorry when it was realised that he could not see his way clear to continue. A big "thank you" also goes to the retiring Treasurer, Brian Hall, for his contribution in the past year of office. In farewelling the "old," we must not neglect the "new," and our best wishes are extended to those newly appointed officers, mentioned earlier. It is hoped that you will favour them with your continued support, and thus help to form the Institute into an even more united body.

Jack 7JB is now ensconced in Kurc, Japan, and is being kept quite busy with matters military. Having untangled certain licence difficulties, Jack hopes to show up soon now in the 20 mx band, with a mere 600w. into a wind-ham antenna. We will be listening for you Jack, and you may be called upon to enlarge on certain "mod. cons." Your XYL however, was quite adamant when she stated that she would not allow you to souvenir any of those "house girls" to bring home with you.

Two more Associate members have joined our ranks—namely, Mr. J. O. Webb, of St. Helens, and Mr. M. H. Hurburgh, of Hobart. In addition, Bert Clark and G. Kerrison now answer to the calls 7BC and 7XO respectively. Is it a fact Bert that you intend opening on 576 Mc., or is it just idle rumour?

It should not be long now before 7FM is back on the air again. An enforced silence, brought about by a non-co-operative h.t. transformer, is due to terminate any time now. Secretary 7FJ found himself with much to do, and little time to do it in, but he made it in time for the Sunday broadcast. A nice signal Ted, and modulation very pleasing to the ear. 7LE joins 7DH with 144 Mc. equipped auto, and it seems to me that the best way to express it is "If they have halos, you know they are not police." Keith 7RX is contemplating 2 mx, but somehow I feel that 20 mx will have to completely collapse first. What about proving me wrong Keith?

Attempts at 144 Mc. relays have been made by 7LE and 7OM, the first on 9th March and later on 6th April. The first attempt resulted in excellent two-way communication being established from Mt. Wellington to 7AJ and 7DH at Mt. Seymour, and on 6th April similar results were obtained from Mt. Wellington to northern members at the 7EX Tx site. The foregoing, in greater detail, will no doubt be covered by 7AJ in his v.h.f. notes.

The April meeting was held at the usual place on 3rd April. Some 20 odd members attended, and the main business discussed was agenda items for the 22nd Federal Convention, followed by an auction sale of surplus radio equipment. Star turn of the sale was 7AL's rather expensive purchase, by proxy, of some xtal grinding materials. Getting two chaps to bid for you, unbeknown to each other, is certain to cause inflation Tom!!!

NORTHERN TASMANIAN ZONE

V.h.f. officer 7LZ has been very busy recently organising the 144 Mc. field day for 6th April, and everything including the weather, went off without a hitch. 7PF and 7LZ pooled their equipment and operated the gear throughout the day whilst 7AM provided the transport. Members of the zone who assisted in one way or another were 7GM, 7LX, 7XW and Associates Geoff Dineen, Graeme Nicholls, and Ron Rich. First class communication was had with 7OM and 7LE on Mt. Wellington and 7KB in Burnie, but VK3 proved very elusive. The site used was a few yards south of the aerial system of b.c. station 7EX (who made a.c. power available) and is nearly 1,000 ft. above sea level.

Prior to this field day there had been considerable activity on 144 Mc. as beams and equipment were tuned up. 7AM is erecting a 12 element beam painted "cornflower blue," whilst 7LZ uses "silver" and 7PF has his in "brick red." Is anyone game to use "Pansy pink"?

7 Mc. came good recently in the early evening hours. 7RK could be heard upholding the c.w. honor of the zone. 7LX is considering taking to c.w. again as some of his neighbours complain that they can't hear the other side of Ken's phone QSOs. Rumour has it that 7XW has actually been copying Ws on 7 Mc. c.w. and actually took the key out of moth balls. 7DS, 7TE, 7DB, 7HY, 7CA and 7RE appear to have gone into retirement for the time being, but all hope to become active again as soon as time permits.

A recent visitor has been Max 3AKM who has been taking his holidays in VK7 land. Attendances at zone meetings have shown an improvement recently so remember it is the second Friday in each month and the more that turn up the better it is for the zone, so how about doing YOUR part.

HAM ADS

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.

AR301/ASV Receiver converted for 144, want Class "C" Wavemeter, D104 or N80, or sell. 6 Queens Road, New Lambton, 2N.

EXCHANGE.—Type 3 Mk. II. complete and 4½w. portable modulator for Communication Receiver, BC348, etc. Cash adjustment if required. C. Blackmore, Kerang, P.O., Vic.

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FOR SALE.—Palc Model VCT-V Valve and Circuit Tester, good order, £15. J. Oliver, Latrobe, Tasmania.

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FOR SALE.—Type W1081 Frequency Meter, £16; Beam Motors, £4; 6 mx Tx, £8; 10 and 20 mx Tx, £12; 40-80 mx Tx, £9; 40w. Mod., £30. B. E. Cabena, 20 Uvadale Gr., Kew; Haw. 2571.

TA12D completely converted for 80, 40, 20, partially for 10. To sell or exchange for modulator for 100 watts. Call or write 3 Ardoch St., Essendon.

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Amateur Radio

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EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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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, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WL. Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc. and re-broadcast on 50 and 144 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 7146 and 14342 Kc. 7065 Kc. channel is used from 0930 to 1030 hours each Sunday for the W.I.A. country hook-up. No frequency checks available.

VK5WI: Sundays, 1000 hours SAST, on 7146 Kc. Frequency checks are given by VK5DW by arrangements only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 146.5 Mc. No frequency checks are available.

EDITORIAL



Amateur Operator's Certificate of Proficiency

The aim of the majority of persons interested in Amateur Radio is to obtain an Amateur Operator's Certificate of Proficiency, be they young or old.

The fascination of Amateur Radio as a hobby is intense. Its appeal is stronger than the Lorelei, and in some instances has the same disastrous results, therefore it behoves each of its adherents to temper the hobby with moderation. Make it your hobby not your MASTER.

The return and enjoyment you receive from being an Amateur is like all other hobbies. It depends on how much you put into it, not so much the financial side, but your interest and activities in its administrative and social affairs.

To obtain that coveted A.O.C.P. study is necessary, whether be it at home, one of the Institute's Divisional Classes, a local Radio Club, or a Commercial College.

In the case of group instruction you receive only a limited number of hour's tuition per week. During the period of the course you will realise that the total number of hours involved amount to so many days or weeks full time. Say to yourself, "Am I capable of absorbing and retaining the knowledge gained in this short space of time?" If the answer is NO, you should now realise that home study to supplement the group instruction is essential, therefore, set your course along those lines. Self discipline is a MUST if you expect to be successful.

The Ham fraternity is world wide and no matter where you travel the same cordial welcome awaits you.

A visit to any of the local Ham shacks will give you an insight into how the Amateur builds, utilises and maintains his station equipment. Your interesting visit may begin a very fine friendship, the help of which could guide your future progress along the "Road to Hamdom" and assist you to reach your goal—"the A.O.C.P. and Station Licence."

The examination for an Amateur Operator's Certificate of Proficiency is conducted by the Wireless Branch of the Postmaster General's Department on the second Tuesday of the months of January, April, July, and October of each year.

The examination is divided into three sections, viz.:-

- (1) The transmission and reception of morse code at a speed of 14 words per minute.
- (2) Regulations as laid down in the "Handbook for the Guidance of Amateur Station Licensees" issued by the P.M.G.'s. Department.
- (3) Elementary knowledge of the theory and principles of transmission and reception of radio.

Since World War II, the Amateur has been licensed to use new techniques in the fields of transmission and reception. This privilege calls for the use of equipment of a design entirely new to the average Amateur. The P.M.G.'s. Department, therefore, has insisted that each new station licensee shall have a very elementary knowledge of these subjects. Likewise the syllabus of lectures for A.O.C.P. Students has been enlarged to cover the following subjects:-

- (1) Frequency and Phase Modulation (n.b.i.m., p.m.).
- (2) Pulse Transmissions.
- (3) Single Sideband Reduced Carrier (s.s.r.c. or s.s.s.c.).

Morse code is something you cannot learn merely by reading a book. All reading will give you the basic idea of the code and how to learn it. To become proficient, it requires proper tuition and plenty of practice.

The most satisfactory system of teaching morse code is where the characters are sent at approximately 18 words per minute, but the spacing between characters is long. As the student progresses, the spacing is reduced until the practice messages or cypher groups are sent at the speed of 18 words per minute. During the period of tuition the student has learnt to recognise the rhythmical sound of the characters at 18 words per minute, therefore, as the spacing is reduced he has little difficulty in increasing his speed.

Summarising the foregoing, it is very evident that time must be made available each day for study purposes. Make this rule and adhere to it strictly. Nothing is harder to break than a habit, so create a habit of studying. Piecemeal attempt at study may eventually get you your "ticket"—but you may be too old to enjoy being a Ham for long.

FEDERAL EXECUTIVE.

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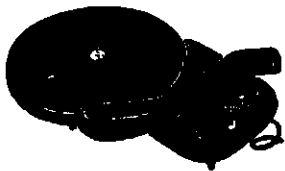
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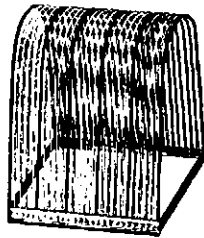
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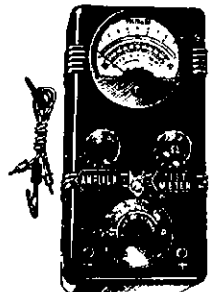
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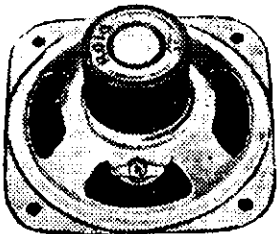
The new improved Gramo Record Rack, holds 25 10-in. or 12-in. records. Complete with index card and gummed identification numbers for 25 records. Price, as illustrated, 17/9. Model to hold 50 records, 33/-.



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1,800 ohms per volt. Three voltage ranges AC/DC, two milliamp. ranges and resistance up to 200,000 ohms. Self contained battery. Complete with test prods., price only £8/15/- plus 12 1/2% sales tax.

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- Model 5C 5" Per. Mag., 40/8.
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Also a limited number of 12OX's available, £8/19/2. Model 12C 12" Auditorium, £10/9/-, less transformer.



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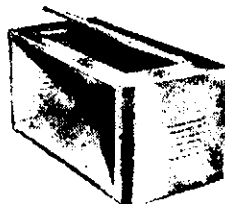
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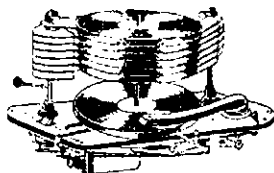
SUPER BARGAIN

5B1 Cathode Ray Tubes. Limited quantities. Originally cost £16. Cut to only 9/11.



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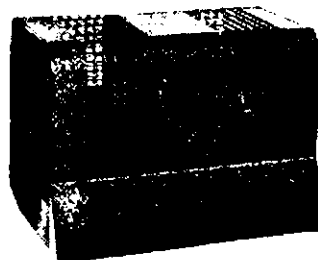
Electron type Insulated Steel and Copper Stranded Aerial Wire. 50 ft. 5/7 reel; 100 ft. 11/2 reel.



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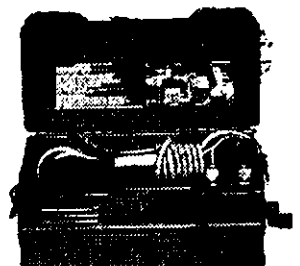
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Central 4311

HOW TO USE DRY RECTIFIERS

BY HANS J. ALBRECHT,* VK3AHH

Dry Rectifiers of all sizes and types are now available in surplus shops. It is often not realised what highly valuable components can thus be obtained at a reasonable price. And, on the other hand, rectifiers of this kind have advantages compared with the ordinary valve rectifiers. The following information should help the Ham who wants to use them in a proper way.

HOW A DRY RECTIFIER WORKS

The fundamental principle as discovered by Braun, 1874, holds for all types of dry rectifiers, including crystal diodes which are, however, not dealt with in this article.

Some metals touching a semiconductor produce at the point of contact a resistance which depends upon the direction of the current flowing through that contact, i.e., a high resistance (about 100,000 ohms) exists in one direction and a low resistance (in the order of 5 ohms) in the other one. Such a contact can therefore be used for rectification of an alternating current.

There are quite a number of possible pairs of metals and semi-conductors, but the following two combinations are most commonly used:—

- Iron (metal)—Selenium (semi-conductor).
- Copper (metal)—Cuprous Oxide (semi-conductor).

They are called selenium rectifiers and copper oxide rectifiers, respectively.

The principle is illustrated by Fig. 1 where M represents the metal, S the semi-conductor, and C the counter-electrode. Such a single unit is called a "cell."

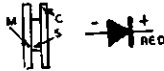


Fig. 1.

GENERAL CONSIDERATIONS

The actual rectifier consists of a number of cells connected in series. For any calculation regarding the use of those rectifiers always remember—

- Voltage to be rectified depends upon the number of cells connected in series.
- Current to be rectified depends upon the cross-section of the plates.

The maximum current depends upon the heat developed in the cell. Dry rectifiers work usually with better efficiency at higher temperatures, but as just mentioned, temperatures must not exceed the data given, so that a safe action and finally the life of the rectifier is not endangered. It is natural that a rectifier mounted in a free position, e.g., on the chassis, can stand more current than one inside the chassis.

The maximum current density is usually about 50 Ma. per square-centimeter, i.e. 320 Ma. per square-inch. The temperature of a single cell should not exceed 50°C., i.e. 122°F.

In practice dry rectifiers can be overloaded and even short-circuited for a short period, for the increase in temperature follows only slowly.

The single selenium cell can rectify up to 15 volts, but breaks down at 16 volts. For that reason it is usual practice to operate a rectifier of such a kind with about 13 volts per cell. A copper oxide cell is capable to rectify no more than about 20 volts.

All dry rectifiers have an infinite lifetime if the maximum data given are not exceeded. The only thing which can happen after some thousand hours of operation is an increase in the internal resistance, but mostly there is no noticeable change in efficiency even after a much longer period.

Usually a selenium rectifier is safer regarding long periods of operation, while copper oxide rectifiers may produce some head-aches after some years. As an example, one particular selenium rectifier for 300 volts and 500 Ma. has been used by the writer since 1947 and still operates very well connected in series with a similar one for rectification of the transmitter's power supply (750 volts at 100 Ma.).

The efficiency of a dry rectifier depends upon the load as illustrated in Fig. 2.

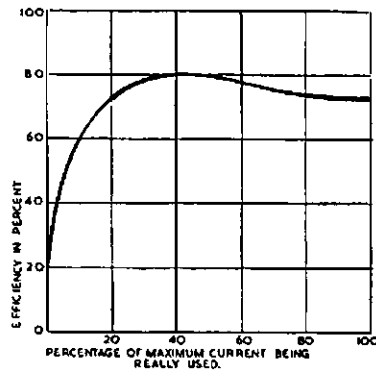


Fig. 2.

PRACTICAL USE

You can use the dry rectifier wherever you would use an ordinary valve rectifier. The advantages of the former are:—

- (1) Unlimited time of operation;
- (2) No filament requirements;
- (3) Good efficiency;
- (4) Insensibility to rough mechanical or electrical treatment.

One disadvantage must be mentioned. The ripple voltage is slightly larger than that of an ordinary valve rectifier because a very small current flows in the direction of high resistance. This can easily be overcome by a small increase in filter capacity or filter inductance.

It is always advisable to by-pass the dry rectifier for r.f., e.g. by a condenser of about 0.1 to 0.001 uF. The condenser is not shown in the circuit diagrams.

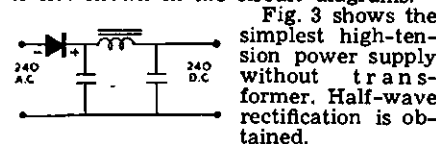


Fig. 3 shows the simplest high-tension power supply without transformer. Half-wave rectification is obtained.

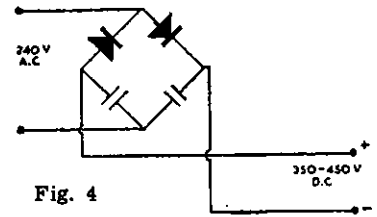


Fig. 4.

Fig. 4 gives the circuit of the voltage-doubler method using dry rectifiers. Again a transformer has not necessarily to be used; the filter circuit is not shown.

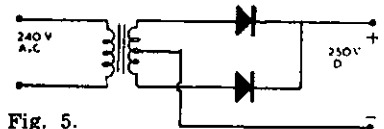


Fig. 5.

Fig. 5 shows the well-known full-wave rectification with dry rectifiers. The filter circuit is not shown.

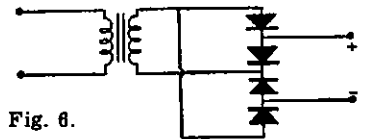


Fig. 6.

Fig. 6 shows dry rectifiers in bridge circuit used for charging batteries. The secondary winding of the transformer has to supply a voltage which is slightly higher than the d.c. voltage wanted.

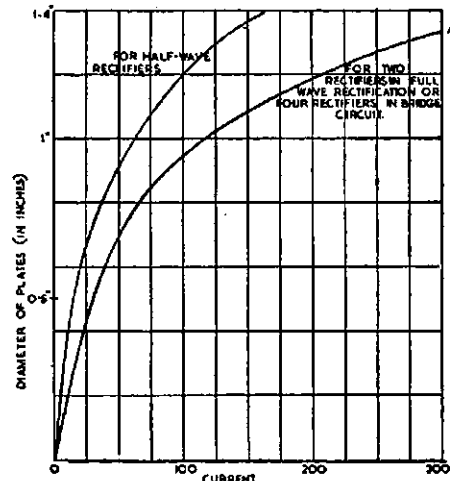


Fig. 7.

The graphs in Figs. 7 and 8 are based upon experience and may serve as a guide for anyone who intends to use dry rectifiers. They show the diameter of the plates (in inches) against the current.

(Continued on Page 5)

* 10 Belgravia Avenue, Box Hill, Vic.

TELEVISION MADE EASY

Part viii. Continued—

Interference, and How the Hams Can Check It

BY KEN WALL† AND JOHN JARMAN,* VK3ADA

Awakening from our day-dream, we now begin to wonder why this subject should even concern a VK, when we have no television service in this country.

Now this is just where we have the advantage. Prevention is better than cure and the time that elapses before the opening of Australia's first television station will give the Ham an ideal opportunity to not only "smarten up" his own transmitter, but also help to eliminate other forms of interference in his location. This will be a long job, and the time to start, believe it or otherwise, is right now!

But what can be done at this stage? How can one even tell whether his transmitter will cause interference? Now the ideal test would be to build a small television receiver and instal it complete with aerial system close to the Ham shack. The circuits and building constructions for such receivers are published in some magazines, and probably many readers have already attempted building them. Although this scheme is very educational, however, we appreciate that it's beyond the means of most Hams, so this simpler scheme is suggested:

Our aim is to eliminate spurious emissions, on frequencies within the television band, viz., 180-204 Mc. Suppose we build, borrow, or otherwise acquire a v.h.f. receiver to cover this band, or at least, a substantial portion thereof. If our rig is giving out signals in this band, it should surely detect them. With our test receiver installed close to the Ham shack, set at maximum sensitivity, and using the best available aerial system, an assistant is now engaged to carefully tune this receiver over its entire range, while test transmissions are made on our rig.

Admittedly, this test may not be completely infallible, since there are some emissions which will affect a television receiver, but which may not produce any audible output in our test receiver. This test will, however, show up the worst part of the trouble and in any case, if the rig under test produces an audible signal, it's a sure bet that it will also cause t.v.i. and the precautions taken to eliminate the emissions causing this audible output will usually also eliminate those which the test receiver cannot detect. Using this same receiver, we can now test each domestic electrical appliance in the same way, not forgetting the car or motor cycle.

Finally comes the question of other interference in the locality. Listening watches should be kept regularly and all audible interference carefully tabulated, noting for each noise the time

of day, frequencies where heard, repetition frequency (where applicable) and if possible, a description of the nature of the sound.

Note, by the way, that this test can be performed by any reader even if he is not a licensed Ham, since it involves listening only and no transmission.

The actual location of each source of interference may involve quite a lot of inquiries, and general investigation around the district. True enough, the Ham has no authority to forbid people to use interfering appliances, but is it any offence to politely remind them that they have appliances needing repair. A little tactful explanation will bring the co-operation of a surprising majority, and the remainder will change their tune in their own interests when television is established.

A directional aerial system will naturally help in locating these sources of interference, and some enthusiastic readers may even be contemplating using portable v.h.f. receivers.

No inquiries should be made, however, until the same interference has been logged for several days. From the information obtained, an attempt should first be made to predict what type of device is responsible and the probable owner contacted. This should be done while the interference is in progress, and the owner requested to temporarily switch the appliance off, or alternatively, notify by telephone when it is switched off. A careful record should be kept of all sources of interference in the locality, preferably on a sketch map, for future reference.

So much for locating the interference. How can it be corrected? Well, as for electrical appliances, different devices require different treatment, and are best dealt with by a licensed electrician, who should be familiar with the appropriate methods, in co-operation with the Ham who will check this electrician's results, with his v.h.f. receiver.

We are chiefly concerned, however, with the elimination of spurious emissions from our own transmitter. Now this is largely a matter of individual experiment, but the following hints may be helpful.

First of all ascertain whether the emissions are harmonics or parasitics, by noting their frequencies. If harmonics, follow the sequence to find out where they are being generated.

● Disconnect the plate voltage from the output stage. If the same emission still persists, go back stage by stage, until the offending circuit is found. Subsequently, the offending component can be isolated.

● On the other hand, if the interference disappears, when the output stage is made inoperative, disconnect the aerial and tune up on a dummy load. If the emission disappears, the aerial

system must be dealt with, and suitable stubs in the feed line will often do the trick.

● If the emission persists, try shielding the dummy load.

Next look for other "channels" for radiation. Using a suitable detector, test for r.f. on the power lines, h.t. leads, panel leads, etc. Remember around 200 Mc. even a very short lead makes an effective radiator.

It should be noted that harmonics can not always be completely eliminated, but they must be sufficiently attenuated to prevent t.v.i.

Now parasitics, on the other hand, can be eliminated completely, and their causes can usually be traced if each stage be tested as follows:

1. Remove plate power from all stages and remove filament power from all except the stage being tested.
2. Temporarily apply plate voltage to this stage, having first increased the negative bias for safety, if necessary.
3. Test for parasitics by either grid current, a neon-bulb indicator (applied to each terminal of valve), or abnormal plate current (compared with data sheets).

Beware also of cases where spurious oscillations momentarily occur only when transmitter is keyed or modulated. The shape of keying impulses requires close attention. Each dot or dash (if graphed) should have a sloping leading and trailing edge, with a reasonably rounded top.

In all cases, however, the actual cure for the trouble will be a matter of individual experiment, different transmitters requiring different treatment. Many rigs will require complete rebuilding, and a certain quality which has hitherto been a feature of most experimental transmitters, namely, accessibility, will often have to be sacrificed. In other words, it is seldom possible to build a transmitter that won't cause t.v.i., but still keep its components accessible for modification, as we like to do.

Disheartening as this sounds, however, it is purely a sign of progress and will probably result in the production of much better quality Ham transmitters, just like the time when our "fore-runners" had to "dice" their robust spark transmitters for more precise equipment.

Some valuable hints on prevention of t.v.i. should be available from our American colleagues and here's where our DX enthusiasts can help. Those who obtain any useful tips on the subject should arrange with the Technical Editor of this magazine to have them published.

We see, therefore, that the prevention of t.v.i. is not just a matter of individual care, but demands a coordinated effort, necessitating the utmost co-operation between Hams themselves, and mutual understanding between Hams and the general public.

It should now be apparent why so much theory was covered in the series, before the actual subject of interference was dealt with. In short, one cannot cure

† 172 Johnson Street, Maffra, Victoria.
* A11426 L.A.C. Jarman, J. B., c/o A.R.D.U., R.A.A.F., Woomera S., South Australia.

t.v.i. without first knowing how a television set works.

It must be emphasised, however, that television is making very rapid progress and even while these articles were awaiting publication, further important developments have been made. For this reason this series has been intentionally written to deal with only the basic principles which would not appreciably change, as television progressed, with the intention of helping the Ham to understand the more advanced television articles published frequently in current magazines.

Readers should take every opportunity to study this literature, and keep up to date with television's latest developments.

Photographs of the patterns produced by the various forms of interference are quite often published, and it is not a bad plan to keep these photos filed for future reference.

Remember, the Ham can't learn too much about television.

One final tip: If you must transmit during television programmes, use only a rig that has been previously tested, and proved free from interfering emissions. If you suspect your rig of causing t.v.i., play safe and use it only between television programmes, using the latter periods for maintenance, etc.

The same applies of course to any electrical appliance and as far as practicable to any motor vehicle that causes t.v.i. Next month our final instalment will deal with colour television. Meanwhile, put this article in a safe place for future reference, and keep those queries rolling in to VK3ADA.

— . . . —

HOW TO USE DRY RECTIFIERS

(Continued from Page 3)

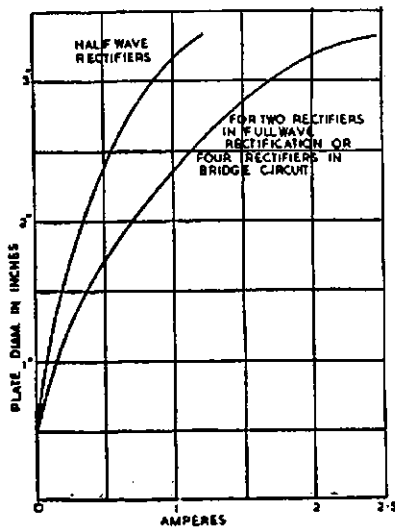


Fig. 8.

The theoretical side of dry rectification has been purposely neglected in this article. If the general interest for a treatment of the theory exists, the writer will always be pleased to deal with it in a further article. Furthermore, the writer will be glad to supply any further information on dry rectifiers, if possible.

THE 8PO AERIAL

Here is a comment from G6CJ on the article by VK3BG on the 8PO aerial. We feel his finding and opinions on this matter are sufficiently illuminating to readers to warrant its inclusion in the magazine.

In the January, 1952, issue of "Amateur Radio," VK3BG has probably come as near as matters to a working specification of the 8PO aerial. The theory of it is quite simple, up to a point; all you have to do is to get equal currents in the correct relative phase in the two radiators, and it cannot fail.

It is the complex feeder adjustments necessary to produce this state of affairs coupled with the fact that people so seldom stick to working instructions, which have caused so much argument and so much disappointment.

The feed problem is always complex when two coupled aerials are in some arbitrary phase relation, and not zero or half-cycle. In the 8PO the phase is 3/8 cycle, and if you calculate the impedances of the two elements you find they are unequal, that is to say, the two wires do not contribute equally to the radiation. In theory they come to about 30 and 25 ohms; in practice, allowing for surroundings, they may have other values, and VK3BG's figure of 40 ohms may well be good enough.

However, if you reverse one feed, the impedances come to new values, over 100 ohms, and hence it is better to reverse direction by transferring the main line to the other end of the 1/8 wave jumper, rather than to reverse one of the branch lines which is what was so often done.

We have published a number of articles on it over here in England, and there has been a good deal of argument and many unsuccessful attempts to get one going. There is no doubt, however, that it is a powerful little unit, and if users will stick to some arrangement which has been made to work correctly, keeping to the right types and lengths of feeders, as for example, those offered by Roth Jones, VK3BG, they will be successful.

TRADE NEWS

On the 1st May, 1952, Philips Electrical Industries of Australia Pty. Ltd. shortened the title of the Company. The correct name is now Philips Electrical Industries Pty. Ltd.

BOOK REVIEW.

Philips' "Radio and Television Manual"

We have received from Philips Electrical Industries Pty. Ltd. a copy of their new publication, Philips' "Radio and Television Manual," price 59/6.

This manual of 776 pages contains just about everything the Serviceman, Engineer, Amateur and Student could possibly need in the way of information. It is divided into seven sections as follows: (1) Broadcast Reception—theory of the receivers; (2) Broadcast Receiver Technique—receivers and amplifiers in very great detail with special emphasis on the servicing angle, including power supplies of all types; (3)

National Field Day, 1951, Results

This year twelve logs were received, although from a perusal of the logs it would appear that a considerably greater number took part and operated during the Field Day. It is to be hoped that next year the contest will be better supported, otherwise it seems hardly worth continuing.

The Open Section was won by VK2ASW/P, operating from Mt. Colah, near Sydney. The operators were B. White VK2AAB, R. Gurr VK5RG, and D. Pollard VK2ASW. The transmitter ran 20 watts input to an 807, modulated by a Class B 6N7. Power was from three 400 volt genmotors.

VK4RR/P won the C.W. Section with 15 watts to an 832. Tibby was assisted by VK4RL and they operated on 7, 14, 28 and 50 Mc. from Maroochydore, Queensland.

The Phone Section was won by VK4KS/P, of DX Contest fame, helped by W. Young VK4YA. A vibrator supplied the power to a 1625 modulated by a Class B 6N7.

Dipoles were most popular on all bands. Check logs were received from VK4AW and from B.E.R.S.-185 to whom our thanks go. Several contestants complained of the lack of co-operation from home stations who were busy chasing DX. Let's give the portable boys a hand next year.

Call Sign	OPEN SECTION			
	Bands	Contacts	Bonus	Pts.
VK2ASW/P	2	80	75	259
VK2AHA/P	2	45	50	196
VK4RR/P	4	33	75	183
VK7SR/P	1	30	25	115
VK2AWN/P	1	10	25	83
VK3JO/P	2	8	—	44

Call Sign	C.W. SECTION			
	Bands	Contacts	Bonus	Pts.
VK4RR/P	2	10	75	120
VK2AHA/P	2	10	50	77
VK7SR/P	1	11	25	69

Call Sign	PHONE SECTION			
	Bands	Contacts	Bonus	Pts.
VK4KS/P	2	69	50	224
VK4TN/P	2	73	25	171
VK2AHA/P	2	35	—	119
VK3LN/P	2	36	25	117
VK3ALQ/P	2	37	—	104
VK2AMV/P	2	31	—	87
VK2RK/P	1	11	—	58

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."

URGENTLY REQUIRED

The Mobile Radio Unit of the Flying Doctor Service in Queensland urgently need to obtain a manual of the AR7 Receiver. Their own was destroyed in a recent bush fire.

If anyone can help, would they air mail it to P.O. Georgetown, North Queensland, together with the cost.

Components, aerials and transmission lines, valves and amplifiers, oscillators, ultra high frequencies, frequency modulation, pulse modulation, acoustics; (4) Service to Radio Receivers; (5) Technical Formulae, Tables and Charts; (6) Mathematical Formulae and Tables; (7) Valve Data.

It is impossible to adequately list all the subjects covered in the above sections, but the few listed will give some idea of the ground covered.

A television appendix of 60 pages gives the theory, and possible servicing troubles which will be encountered when television finally arrives.

All in all, this book is a must for everyone who has anything at all to do with radio, be it from the engineering, servicing or experimental angle.

Manufacturers of . . .

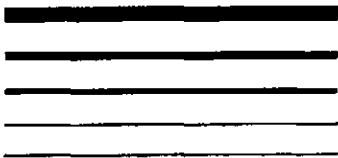
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- SPORTS COATINGS
- SPORTS TROUSERINGS
- WOOL TOPS



FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

The 288 Mc. band, which has been rather badly neglected, save for the efforts of a few stalwarts, has a group of enthusiastic VK5 operators in the persons of 5MT, 5KC and 5BO who have established an Australasian record of 106 miles for this band, made on a portable expedition during Easter, 1952. Here is the story in the words of 5RO (Collin Moore).

During the Easter break, 5MT/5KC went portable to Cape Jervis, 950 ft., and 5RO and associate member, Ralph Taylor, went to Kulpara, 600 ft. Both set-ups were running 7 and 288 Mc. The path up St. Vincent's Gulf looks very good on paper, but owing to poor weather conditions (rain and wind), the job was no "push over." However, after testing for some 24 hours, 5RO's 288 Mc. signals were finally heard at 9.30 a.m. on Sunday, 13th. A two-way contact was then established, 5RO to 5MT/5KC with signals running up to strength five, with heavy QSB. The distance was 106 miles, which we think is the Australasian record for 288 Mc. 5MT/5KC then shifted QTH to Sellick's Hill, 500 ft., and established contact with 5RO, signals being very good 57; distance was then 84 miles. 5MT/5KC also contacted 5SD who is a new licensee. The distance being 33 miles.

Equipment used: 5MT/5KC, 15 watts to p.p. VRI35, mod. osc., through 20 ft. 300 ohm ribbon to 16 element vertical beam; 955 sup. reg. receiver. 5RO, 15 watts to 7193 mod. osc., transmitter up 15 ft. in antenna, antenna 3 x 3 beam vertical, relay switched down to receiver. 955 sup. reg. receiver.

DX NOTES BY VK4QL*

For the period that I have been compiling these notes, this month becomes the hardest to get enough to make things interesting. Up this way, all bands have been flat, whether you wanted to work DX or VK. Reports from the gang are nothing for them to be in high glee about either. There has been a marked difference in some respects in what VK2 have been hearing or working against the rest. 7RK reckons VK7 should be a different country, then he might do better.

The band survey, stations worked *, and times in G.M.T. (Z time) shows:—

8.5 Mc.: No reports from other than 7RK and myself, and we both agree that there has been nothing worth while going up there for. Except for one KH6, only VK and ZL were heard and poorly at that.

7 Mc.: This band seems to have passed its peak. The great VK activity that was heard over the last couple of months has died, which is a fair indication of the way the band has gone off. The mornings produced very little in the way of DX. VK2QZ/9, operating from the Trobriands, has given many a new country. Bob agrees with me, and as so many found during the war, that the VIs of the Trobriands are the prettiest of those to be found in the Pacific Islands. 2TG, using a vee beam, has been hearing South Americans round 0600Z, but has not worked any. 4XJ can hear the Europeans some mornings, but is the wrong time of the day for him to get on the air. 5MZ has been doing alright with his Type 3 Mk. II. His 20w. has worked FK8, KH6, VQ4HJP, VU2AG, 2QZ/9. Over the last 18 months this QRP rig has worked 162 Ws on this band; Frank still has to get himself a European. 7RK finds the band fair in the evening for North America, which is in direct contrast to up here. I tried to get through to OA4ED on sked, but neither Ray or I heard him, and OA4ED did not hear me. My others on this band were only VS1CO*, 5A2TT, VQ4HJP, VK1RG*.

14 Mc.: This band has been almost useless up here, but according to 9FN, it's going OK up in Port Moresby, so maybe the poor conditions of a few months ago in VK9 have drifted south. The Anzac week-end the band was greatly improved. Whether it was a flash in the pan remains to be seen, but comments on the band indicated a general improvement had occurred. 2DG inactive due to doctor's orders, but sneaks on occasionally, and was quite relieved when I told him he had not been missing out on much. 3CX still able to add an occasional new one, this time 9B3AA, also hooked VQ8AF and VP6AA. Heard a station sign OD5AB and give his QTH as Beirut, Box 293. Alan said conditions have improved greatly. 4XJ finds the Ws appearing round

SOUTH AUSTRALIA

Two excellent pieces of news in the v.h.f. world for this month are the following. One hundred and five miles covered on 288 Mc. by 5KC and 5RO from Cape Jervis to Kulpara on Easter Sunday, and the news that 5BC has won the Ross Huil Contest. Congrats to the above three for outstanding achievements.

The VK5 Intrastate Contest has finished and logs are being checked. As a pre-view, it looks like Col 5RO being the winner. The Royal Adelaide Exhibition has closed and 5WI dismantled. Special thanks must be recorded to all the operators who gave their time and especially to 5GL, 5HD and 5LW who acted as links on 50 Mc., relaying all contacts to overcome the local interference at the Exhibition, another advert for the v.h.f. gang. With the winter setting in, most chaps are taking the opportunity to overhaul their gear and prepare for the next DX season.—VK5KL.

WESTERN AUSTRALIA

50 Mc.—5HK and 6GB are reliable. Don 6KH has a new final on the way, a pair of 834s and has had drive on them. 6TR, a new licensee is a welcome addition to the 6 mx fraternity and uses a pair of 6M5s in the final. Unfortunately he hasn't quite enough modulation as yet to do them justice. 6LU, once thought to be a firm fixture on 7 Mc. branched out on 28 recently and before the shock had died away opened fire on 50! Nice work, Lou. 6HK and 6TR are the "bozos" (Lou's name for 'em) who plotted up the skull-duggery neces-

sary to bring 6LU on six. Roger 6RK is shifting gear (not QTH) and has not been heard too often. His "old faithful" 3 element beam has had to receive a shot of Scotch—scotch tape—to hold it together.

Don 6DW and Blake 6GS have been on holidays, the former to Albany, Manjimup and Perth, Blake to Perth (and to 6BO's place, inevitably). Frank 6FC not heard often. He has apparently a high noise level. You're not alone, OM—5HK, 6TR, 6GB and 6BO all complain of the same trouble. Wally 6LW also heard on the band sometimes. 6GB's description was "Sporadic Wall E." Another of Jack's sayings of note—he claims to have "centimetric mosquitoes with dipoles." Rolo 6BO endeavouring to get a portable Tx going for two band operation (7 and 50 Mc.). Uses a 6M5 final and results so far quite pleasing.

144 Mc.—Wally 6AG and Jack 6OR are still good regulars at 8.30 Sunday evenings. 6JS and 6GB also heard and worked. 6DW, 6GS and 5BO had checks on 144 Mc. converters recently and honours are about in order of call signs given above! Rolo sealed up the neutralising on Don's 676 to stop him from fiddling! Roger 6RK has a new converter for this band which is very f.b. Also a new Tx on the way.

No news at all about 288 Mc. in VK6 this month, chaps.—6BO and 6WZ.

DX C.C. LISTING

PHONE			
Call	No. Ctr.	Call	No. Ctr.
VK3EE	10 183	VK6KW	4 145
VK3JD	1 185	VK3LN	11 141
VK4HR	12 155	VK4TJ	21 135
VK3BZ	3 154	VK6DD	6 126
VK4KS	9 152	VK3JE	7 123
VK6RU	2 149	VK4WJ	17 122

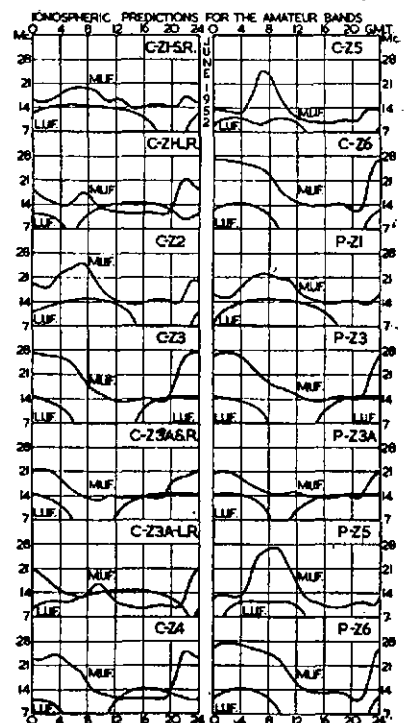
C.W.

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 200	VK6SA	28 150
VK3FH	15 177	VK4FJ	29 150
VK4HR	3 170	VK3VW	4 143
VK4EL	9 187	VK2QL	5 142
VK2EO	2 182	VK5RX	23 140
VK3CN	1 151	VK3CX	26 140

OPEN

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 213	VK2DI	3 170
VK4HR	7 200	VK3KX	1 187
VK6RU	8 183	VK4EL	10 187
VK3JE	12 180	VK4KS	24 187
VK4FJ	32 173	VK6KW	13 185
VK3HG	3 171	VK4DO	15 157

PREDICTION CHART FOR JUNE, 1952



* Flt./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

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FEDERAL, QSL, and DIVISIONAL NOTES



Federal President: G. GLOVER (VK8AO); Federal Secretary: G. M. HULL (VK8ZS); Box 2611W, O.P.O., Melbourne.

NEW SOUTH WALES

President: John Moyle, VK2JU.
 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: Harry Powell, VK2AYP, 9 Russell Avenue, Wahroonga.

Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; Newcastle: Ron McD. Stuart, VK2ASJ, 9 Dunbar St., Stockton; Coalfields and Lakes: Harry Hawkins, VK2YL, 27 Cornfort Ave., Cessnock; Western: W. H. Sitt, VK2WH, Cambijowa, Forbes; South Coast and Southern: Roy Raynor VK2DO, 42 Pettit St., Yass; Eastern Suburbs: Don Knack, VK2NO, 42 Yanko Ave., Waverley; Northern Suburbs: Harry Powell, VK2AYP, Russell Ave., Wahroonga; St. George: Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah Bay.

VICTORIA

President: G. Dennis, VK3TF.
 Secretary: L. R. Bradshaw, VK3SX.

Administrative Secretary: Mrs. J. Hurley, Law Court Chambers, 181 Queen St., Melbourne.
 Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.
 Zone Correspondents: Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rourke, VK3AKR, Killigrew, Westmead; North Eastern: T. K. Tennant, VK3JC, 36 Wilson Ave., Tatura; Far North West: M. Folie, VK3GZ, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Timambra; North Western: C. Case, VK3ACE, Cumminnig Ave., Birchip.

QUEENSLAND

President: V. Jeffs, VK4VJ.
 Secretary: J. F. Pickles, VK4FP, 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: A. Guldford, VK4AP, 36 Bramston Tce., Herston, 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, 10 Victoria Avenue, Rose Park.

WESTERN AUSTRALIA

President: J. Campbell-Watson, VK6JW.
 Secretary: H. B. Lang, Box N1002, G.P.O., Perth, W.A.
 Meeting Place: Perth Technical College Annexe, Mounts Bay Road, Perth.
 Meeting Night: Second Monday of each month.
 Divisional Sub-Editor: R. H. Atkinson, VK6WZ, Box 127, Geraldton, W.A.

TASMANIA

President: R. O'May, VK7OM.
 Secretary: F. J. Evans, VK7FJ, Box 371B, G.P.O., Hobart.
 Meeting Night: First Thursday of each month at the Photographic Society's Rooms, 163 Liverpool Street, Hobart.
 Divisional Sub-Editor: V. Dore, VK7JD.
 Zone Correspondents: Northern: C. A. Cullinan, VK7JW, 12 Montrose Place, Launceston; North Western: R. K. Wilson, 4 Menal St., Burnie, Tasmania.

FEDERAL

RELEASE OF 21 Mc. BAND

Following on the Editorial in the May issue of "Amateur Radio" all Amateurs have now been officially informed of the changes in the frequency allocations including the implementation of the new 21-21.45 Mc. band.

At one minute past midnight on the 1st May many VK stations were heard in QSO on the new band. Current conditions on all bands have been seemingly at an all-time "low" which rather gave a bad start to the new band. However, it is yet early to comment on the possibilities of this part of the frequency spectrum until such time as more Amateurs become active on the band, and other overseas administrations implement the frequency allocation.

During the preliminary discussions with the Department on the release of the 21 Mc. band, Federal Executive requested that the authorised types of emissions in the various bands be reviewed to permit wider facilities.

All Amateurs have now been advised of the wider scope in types of emissions permitted in the various bands which we feel will open up yet wider fields for experimentation.

1952 FEDERAL CONVENTION

Over the Easter recess fourteen official delegates and observers—representing every Division of the Wireless Institute in each State of the Commonwealth—sat in conference at the 1952 Federal Convention held this year in Sydney.

By courtesy of the directors of Associated Newspapers Pty. Ltd. and the Editor of "Radio & Hobbies", conference room facilities were made available for the Convention in quiet and pleasant surroundings where delegates could concentrate on the details involved in some seventy-three agenda items, general business items and a review of policy matters arising from previous Conventions.

Delegate Vaughan Wilson, VK2VW, and observer, John Moyle, VK2JU, ably represented the New South Wales Division in the discussions evolving from the agenda. Members of Federal Executive and some of the Divisional representatives were later entertained at the private residences of Vaughan and John where the hospitality was both spontaneous and sincere. An excellent display of equipment was demonstrated in operation at both stations, in addition to which a pleasant hour of high fidelity reproduction from micro-groove discs was enjoyed at John's home.

Charlie White—delegate from Victoria—with Len Jackson as observer, accredited themselves well at their first Convention, and returned to their Division happy with the knowledge that they had carried out the wishes of the members in their Division.

Arthur Burton, VK4FE, delegate from Queensland, not satisfied with the job he was doing for his Division during the first two days of the Convention, really "got down to it" on the third and fourth days after Ron Hugo from away out west demonstrated how to energise the human mind and body by hypnotism and mesmerism. All those who had the opportunity to witness Ron at work in this intriguing study of the control of the human mind, voted full marks to Arthur for the sporting fashion in

SILENT KEY

It is with deep regret that we record the passing of:—

VK3ZJ—Jim Salmon, 28/4/52.

which he co-operated as the "subject" in letting Ron demonstrate the art of hypnotism to others.

The delegate from South Australia—John Bulling, VK5KX—ably assisted by his observer, Jack Coulter, VK5JD, did some heavy debating on behalf of their Division. John, quietly spoken but forceful, was first introduced to Convention proceedings last year when he represented his Division as observer. Jack, vested with the v.h.f. responsibilities in his Division, made short work of the agenda items dealing with his pet subject.

Ron Hugo, VK6KW, admirably represented the Western Australian Division at his first Convention. Any similarity between the voting procedure adopted by VK4 and VK6 is purely coincidental and has no relationship with the hypnotic spell under which Arthur fell at the mere swing of a key-chain! Mind you, all this hypnotism business was conducted during off-convention-hours and there were plenty of witnesses to see that Ron and Arthur couldn't pull off any coup between them.

The Tasmanian delegate—Bob O'May, VK7OM—needs no introduction. Bob did a good job, his only complaint being that he was usually the last speaker and by the time his turn came everyone else had stolen his thunder. Despite late hours and tiring work, Bob always managed to awaken the delegates at the boarding house so they wouldn't miss breakfast and the 6.35 a.m. ferry across the harbour. The only thing about that was the time—6 o'clock!

All in all the Convention was a success and the States had the important opportunity of again getting together to discuss matters concerning Amateurs and Amateur Radio in Australia.

Mention should be made of those who found time to visit the Convention during its sessions. Dave 2EO, Harry 2AYP, Leo 2AC, Wal 2TI, and Ray 2RA, Chairman and Deputy Chairman respectively of the Federal Contest Committee; Lionel 2CS, President of the Hunter Branch of the N.S.W. Division; Arle Bles, PK4DA, of Summatra, now on his way to the U.S.A.; Jim 2YC, who attended every session of the Convention and entertained delegates and members of Federal Executive at his home; Morrie 2AAN, and Lyall 2GW.

Space does not permit of relating all the various interesting sidelights of this, the first Convention to be held in New South Wales, and the first Convention to be held away from Melbourne for many years. Suffice it to say that it was a success, and many matters of policy and interest to Amateur Radio were discussed in a manner that could only be done over the conference table.



W.I.A. 22nd ANNUAL FEDERAL CONVENTION

The 22nd Annual Federal Convention of the Wireless Institute of Australia in session in Sydney during the Easter holidays. Left to right: Miss Grey (Official Stenographer), Max 3ZS, George 3XJ, Vaughan 2VW, John 2JU, Charlie 3AUP, Len Jackson, Arthur 4FE, John 5KX, Jack 5JD, Ron 6KW, Bob 7OM, and George 3AG.

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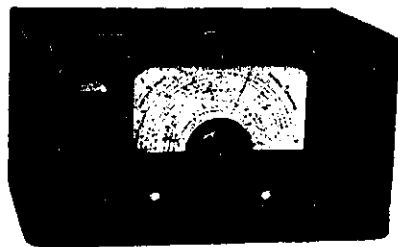
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FEDERAL QSL BUREAU

BAY JONES, VK3RJ, MANAGER

The QSL Bureau for Luxembourg is located as follows: Bureau Luxembourg, 40 rue Trevires, Luxembourg.

Pleased to make acquaintance with Bill Storer, VK1BS, who passed through Melbourne on the way back from Macquarie Island at end of April. Bill, who looked well and carried the full complement of hirsute adornments, expects to resume on the air shortly using the call VK2EG. Replacing personnel at Macquarie Island include VK1EM, Eric Macklin, ex-telegraphist of Melbourne, Rob Gurr VK1RG ex-VK5RG, and VK1RR Roy Arnell. Their sojourn at the Island extends until April, 1953. Bill VK1BS has 1500 cards printed and will make an attack on the back log shortly after his arrival in Sydney.

A new Radio Association has been formed among Amateurs in Holland. The new society, styled "Vereniging Van Radio Zender Amateurs" which means "Dutch Society of Radio Transmitting Amateurs," has its headquarters at Box 100, Groningen, Holland. The President is PA0HJK and the Secretary is PA0GN. The reason for the formation of the new body, which is restricted exclusively to transmitting Amateurs, is, according to the V.R.Z.A., "to the existing society, V.E.R.O.N. (composed of the pre-war transmitting society 'N.V.I.R.' and the pre-war S.W.L. society 'V.U.K.A.')." has turned out to be a society of S.W.L.'s and professionals of which transmitting Amateurs form only 18% of the total membership, and decisions affecting Amateurs are being made by individuals who are not Amateurs." The V.R.Z.A. also alleges that the N.V.I.R. will only "pass out cards" for non-members twice yearly and then only against payment." The new body will handle cards for members and non-members alike and the QSL Bureau address is as above.

VK2AFF, Kevin Brady, of Wollongong, N.S.W., is currently undergoing a radio course at the Melbourne Technical College.

Norm Walding, ZM6AK/ZLIFT, in a short note accompanying QSLs, says he has over 1,000 cards to send out to 45 countries and is literally and actually sweating over the job.

KV4AA asks VK3AMA to note that his pictures will appear in the May or June issue of "CQ."

Belated notice of a QRP Contest conducted between 0500-2300 G.M.T. on May 4, by the R.E.F., has just come to hand. The Contest was arranged to show what could be accomplished with a maximum of 10 watts. Any VK who contacted a participant during the above contest is requested to send his report to the usual R.E.F. address, viz.: 72, rue Marceau a Montreuil (Seine), France.

To celebrate the 25th year of its existence the Danish Society E.D.R. is conducting Jubilee celebrations, with various contests during May. They have also decided to issue a certificate styled the "OZ Cross Country Award." The award is open to all Amateurs in the world, and is based on contacts with most or all of the 25 districts into which Denmark is divided. Contacts since 1st August, 1947, are recognised and one point is given for a contact on 3.5, 7, 14 or 28 Mc. Foreign Amateurs must produce verifications showing contacts with 15 districts and totalling 50 points to get the Class 3 Certificate; 20 districts and 60 points earns a Class 2 Certificate, while 25 districts and 70 points earns the 1st Class Award and an E.D.R. Memory Plaque. Applications for the award may be sent to OZ2NU, Borge Petersen, Himmerlandsgade 1M3, Aalborg, Denmark. A list of contacts should be included together with the cards. The latter will be returned. Fees are Class 3, five international reply coupons, Class 2, two reply coupons, Class 1, one reply coupon. Further details may be had from this Bureau. The celebrations will end on 23rd August with a grand party at the palace of Count Moltke. Representatives of many foreign Amateur societies are expected to attend.

NEW SOUTH WALES

The Annual General Meeting and the April monthly meeting of the Division were held at Selwyn House on Wednesday, 30th April, with the President, Mr. John Moyle, in the chair. The ordinary meeting night was on Anzac Day and the hall was unavailable, hence the change. Despite this and the very cold weather, there was a good roll-up, probably attracted by a lecture of unusual interest.

The Annual Meeting got away to a prompt start and the minutes were confirmed after some discussion and argument by one member as to whether they were a true and correct record. The President's annual report and balance sheet had been circulated to members with the ballot papers for the election of

Council and the monthly Bulletin. These were not read in detail, but the highlights were picked out by the President and the reports were then discussed by the meeting. The question of increased subscriptions was dealt with at some length out of a request from the Hunter Branch that the matter be re-opened. It was pointed out that nothing could be done to make a further alteration in the subscription rate until next year. Both the President and the acting Auditor (Brian Anderson) were congratulated on their respective reports. Our Honorary Auditor of long standing, Mr. Frank Goyen, was forced to stand down owing to ill health and a motion in appreciation of his services to the Division was passed by acclamation. Brian Anderson was elected to fill his place and is thanked for taking on the task. Scrutineers were appointed and retired with the ballot papers and the Annual Meeting was adjourned pending their return.

The monthly meeting was then opened and the routine business was quickly disposed of. The main item of interest then followed, which was a lecture, demonstration and film by Mr. Gil Miles on Radio Controlled Aero Models. It proved to be a really fascinating subject and was dealt with in a masterly fashion by the lecturer, who combines an expert knowledge of radio, modelcraft and aeronautics—surely a rare combination. He brought his own model aircraft with 9 ft. wingspan to the meeting, as well as an exhaustive array of miniature radio control equipment, both transmitting and receiving. This particular model had many successful radio-controlled flights and although the hall was a little small for an actual demonstration (!) the actuating of the control surfaces by means of a small battery operated Tx was convincingly demonstrated. The film was a record of experiments and research carried out by the Radiophysics Laboratory of the University of Sydney. Mr. Miles figured largely in the film which was more interesting and entertaining than any thriller one can remember. To write down all the meat in that lecture and demonstration would take many pages and one can only hope that someone will be able to persuade Mr. Miles to write an article for "Amateur Radio." Suffice it to say that everyone present was intensely interested. The lecturer was kept busy by a lively barrage of questions until 9.45 p.m. These were very capably answered. A vote of thanks was moved by Dave Evans and carried by acclamation.

The general meeting was then adjourned and the Annual Meeting re-opened to enable the results of the ballot to be announced. The following were elected to Council for the ensuing twelve months in the order shown: Dave Duff, John Moyle, Lyell Woolnough, Fred Phillips, Vaughan Wilson, Harry Powell, and Wal Nye. Congratulations are extended to the new Councillors, Wal Nye and Harry Powell. Although Wal is, of course, no novice to Council ranks. On re-opening the general meeting, the visitors were welcomed. These were Mr. D. Dunkerton, Vice-President of the Model Aeronautical Association of Australia and G3HP/VK2AIP. The Federal Councillor, Vaughan Wilson, then gave a brief account of the Federal Convention held in Sydney over Easter. This was enlarged upon by the Divisional Observer, Mr. John Moyle. The results of the Ross Hull V.H.F. Contest were announced and general business proceeded until the meeting was closed at 10.48 p.m.

NORTH SHORE ZONE

Very little news from this area due to the inactivity of the zone correspondent and the absence of one and the illness of another helper. Hope you are enjoying your trip to the country area John ZANF, and trust you will soon be back on deck Harold ZAPF. You have both been a great help in the past and am looking forward to your assistance again. 2GW heard keeping his traffic skeds on Mondays and Fridays, nice work Lyall. Dave ZEO conspicuous by his absence on the bands due no doubt to W.I.A. work. ZAYP now the proud possessor of a 4 element rotary beam and can be heard sporadically chasing the elusive DX on 20 mx. Bob ZQR a regular on 20 phone yarning with the Ws, together with Jack ZJP. Any news from this or any area would be appreciated.

WESTERN SUBURBS

2AAB, ZARF, ZACD, ZAGG, ZAXZ and ZAKR were all at the North Coast Convention at Urunga and an excellent time was had by all. ZAHU on holidays, this time to Canberra, in between times is acting the proud pa-pa. ZAHF is soon to take a trip to Central Australia and will visit 5NC we hope, the beam is doing a good job Harry. Heard ZAWU and ZLG on 21 Mc. with good signals. Jack ZAMJ is recovering we hear and no doubt all will be pleased. ZARA playing with antennae, has a new one up, an "A.R." version of an odd antenna. ZACD has the beam up at last, trying out the Signal Squisher of years ago with a few modern slants,

the elements are square in form with sides 8 ft. 3 in. in length, spacing between the elements is 6 ft. 9 in. at the moment. ZALO heard occasionally, waiting for 28 Mc. to improve.

The Burwood Radio Club is still meeting at Greenwood Hall, Liverpool Road, Enfield, each Tuesday night. All visitors are very welcome, there being something for all. Come along and meet the chaps.

ZQC will be on 21 Mc. soon, he can at least receive on the band. ZMC heard on 7 Mc. as well as 144. ZBM seen at the last meeting of the Institute, nice to see you around Fred. ZAGX was sitting next to him and is still busy deciding whether to increase power or not. ZXH, ZVY, ZVL, ZNJ are all heard occasionally working ZAPT, all nice solid signals but no comments on their activities. ZOA doing things on 144 and other bands. ZAPL heard locally on 14 Mc. phone after quite a spell. ZFM has a beam, works nicely down there. ZOQ has not been too well but appears to be much better now, the phone is really good after the modulator inspection. ZHX still after the DX and he gets on to it as well. ZAMP and ZMH have not been heard for some time, must be hibernating some place.

WESTERN ZONE

The main event of the month was the Urunga "Do" at which the Western Zone was well represented. Present were ZACU and Norm Moody from Coonamble, ZACT Dubbo, ZWH, ZAMV and XYL Mary from Forbes. Congratulations to the organisers of a well conducted show. The Hunter Valley gang were again hard to beat, however we were able to make them work hard against us. There has been a lot of movement amongst Hams during the past month and welcomed in Forbes were ZSH and his father, ZAEY and Mrs. Eagling, ZAHM and ZANF. The latter is staying with ZAMV and is putting a lot of pep into local v.h.f. activities. During the month a group of Western and Southern Hams visited Young, holding what almost amounted to a "South Western Convention." Present were ZWH, ZAMV, ZANF, ZAFP, ZGU, ZTA, ZTC, ZAEL and ZLH. ZTA played host to the crowd and Mrs. Thackeray did a yeoman job in feeding the brutes! Imagine being invaded by nine hungry (and thirsty) Hams at once. The Forbes boys arrived early and visited ZAFP, being well looked after by Mr. and Mrs. Page. Before leaving Mont-eagle, two-way contact was established between ZAMV/Mobile and ZTA, the mobile party homing on the very powerful ZTA 144 Mc. signal. Stan ZLY is back at Katoomba after a long stay in VK3. ZJX active on the v.h.f. bands. Max ZII showing interest in 144 Mc., expects a visit from ZAMV and ZANF with 144 Mc. gear; they hope to make contact with ZWH in Forbes. With ZAMR and ZACT expected on 144 shortly, there should be quite a bit of activity in this zone. Norm ZJW, from Orange, is selling most of his gear and will be going for a holiday. We hope Norm returns with improved health and gets his 144 Mc. gear going to provide the link between Bathurst and Forbes. ZNS building 144 Mc. gear and ZANF reports good progress at Bathurst when he was passing through. ZWH is once again marooned on the island of "Cumbjowa," the Lachlan River having burst its banks for the umpteenth time.

On the Blue Mountains main activity as usual is on the v.h.f.s. ZJX is building a super converter for 50 and 144, using about 4 xials. ZLZ has 133 feet of wire strung out so possibly the v.h.f.s. will have a rest. Stan ZLY concentrating on 576 Mc., hopes to work to Sydney from his rather shielded location. Anzac Day saw a gathering of locals and R.A.A.F. types for their annual re-union at Springwood. ZVN, ZKQ, ZVG, ZHZ, ZLY, ZEZ, ZSY, ZJX, ZKD and ZAP were present at the Golf Club where a general yarn was conducted until late into the evening. ZEX still inactive, works 8 1/2 days a week so no spare time.

HUNTER BRANCH

Details of the successful Maitland meeting have already been covered in the monthly Divisional Bulletin. Our President ZCS represented the Branch at the Federal Convention; Lionel carried out this duty in his usual capable manner. A notable visitor this month was Fred Leader, "The Monitor," of the N.Z.A.R.T., who paid a brief visit while on his way to Sydney with ZKO and XYL. Crieff returned later for few days with locals. Other visitors were Don ZYU and XYL of Tamworth, and Taree Bill ZAEY who took ZAHA's portable on southern tour. Operating in the zone have been ZHL/P and his v.h.f. gang who went up the Barrington, and ZAAA and ZOK with Army Sigs at Singleton.

The Hunter gang was present at Urunga in good numbers and certainly enjoyed themselves. All are most grateful to ZKO and his committee for their efforts on our behalf. We are indeed sorry that due to ill health this was Crieff's last year as chief organiser as he has done a grand job for all Hams. Congrats

to Harold 2AHA on winning Challender Memorial for 2nd successive year and his 2nd place in Hidden Tx Hunt. Associate Syd Daniels won the Fishing Contest for us with 2½ lb. whiting. Varley 2SP and Ass. Syd did good job log keeping, and combined well to defeat my fellow scribe 2WH in snoring contest! Ken 2KG and family enjoyed their first "Do" as did 2DG, XYL and son. This Keith bloke was the larrikin! Stan 2UY and Shorty 2NX handled the Hidden Tx. Associate Les Sparke and XYL had good time and Les' railway "Gen" was most helpful to our boys. A pleasing feature was the presence of and interest shown by our Assistant R.I. Frank Hincks. We are grateful to Taree Bill 2AEY for transporting us during the "Do."

Event of the century—Ernie 2FP came on 40 to QSO Urunga boys; f.b. signal too! Edgar 2MR still a 40 mx regular. Harry 2AFA now using a 40 mx folded dipole with excellent results. 2BZ really keen these days and Dave active on all bands. The Barrington effort has revived interest in 2 mx. 2XY quite active on 144 and Neil busy on AR301 and SCR522 for 2ASJ. He also converted an AR301 for 2XT and Bill putting it to good use. Bill 2PJ is building a parallel line osc. for 144. Very pleased

STOP PRESS—SILENT KEY

VK2TI—WAL RYAN

It is with regret that we announce the passing of Wal Ryan, VK2TI, on 16th May. Wal was Chairman of the Federal Contest Committee, a Past Federal and State Secretary, and a Life Member of the N.S.W. Division.

to report that 2AGY is active again; Fred on 144 using indoor antenna! Doug 2ADS spends his time between 40 and 2 mx. On 20 Merv 2AAM is fairly active. Ron 2AAI has the QRO rig nicely modulated. 2AXM yawns on 20 with the locals. John 2DZ enjoyed short holiday in VK3/7; told 'em all about Rothman Modulator!

Max 2OT sighted tripping the light fantastic atop his 50 foot tower without safety belt! New modulator and v.f.o. working well for Bert 2CN. 2AGD is busy on new double conversion Rx using 1600 and 100 Kc. i.f.s. Norm 2ANA listens a lot and pops on 40 when opportunity offers. Want a Job Norm? Allan 2PT plans a 100w. of plate and screen modulation utilising existing power supply. At Maitland, John 2XQ is worried by butterflies; not in his rig!! Vic 2AKP has an occasional cross town 80 mx QSO with the 122 "Bedside Special." It was good to hear Joe 2ANL again putting out a nice signal with his QRP on 40. 2CI has been busy servicing amplifiers. Norm 2YS has been QRT for complete re-build but soon active again.

Notice of Meeting.—The June meeting will be held on Friday, 13th, at Technical College, Tighes Hill. If you have any bright ideas on lectures, etc., let us have them chaps.

SOUTH COAST

VK2AMW (The Wollongong Club). Some of the boys sat for their A.O.C.P. exam. and now await the results. The rest of the class will sit for the next exam. The boys are still in the throes of re-building some new gear. Since the Urunga "Do," we have had almost a Wollongong Convention here, having had the pleasure of visits from Bill 2AEY, Stewart 2PL, Alan 2ACC, XYL and family, Jack 2AJQ and family. Crieff 2XO also arrived.

John 2AUB has now almost completed his new rig; by the way, during the heavy rain on Easter week-end, John had the water a foot deep through his house. Don 2AFD has now completed his new rig at the new QTH at Wonona and now can be heard brass bashing. Col 2AGZ busy re-arranging his gear in his new shack. The club boys say they are highly honoured by one of their member's XYL (2DY's) winning such a cherished award as she received at Urunga. The first lady to receive the Ear Basher's Award. Howard 2AMD has finished his separate finals for 40, 20, 10 and 6 which looks very impressive, also his vee beam, and can be heard working DX. Eric 2AHY doing good work at the club station 2AMW and can be heard almost every evening; hopes in about a week to be on the air on 40 and 20 on his rig at his QTH. Jim 2AXG can be heard each evening working 40 with a mighty fine signal and getting good QSOs. Glad to hear you are back on your job Jim after such a long illness.

NORTH COAST ZONE

The major event for the North Coast Zone was the Urunga Convention, held over the Easter week-end and proved to be an overwhelming success. Lots of acquaintances and friendships were renewed and many long rag-chews had by all. One noticeable fact was the number of associate members present, and no doubt they benefitted from seeing the array of gear and chatting with the operators of same.

2APS, of Tamworth, had a most fascinating piece of apparatus with him, namely a 2 mx absorption wavemeter. On being asked to show his associated gear, Syd blithely replied he hadn't brought any with him. The purpose of the wavemeter, according to Syd, was to absorb some 2 mx sigs and take them back with him to Tamworth where he could listen to them at his leisure.

Crieff 2XO, after the strenuous work involved in the smooth running of the Convention, is having a well earned spell, and has been heard from numerous shacks in the Sydney area. After three conventions, Crieff has been reluctantly compelled to ease down on the amount of work he is doing as his health is not 100%. Rod 2ACU is going to do the labours next year and we wish him every success. Quite a lot of 2 mx activity is taking place on the North Coast but to date no startling contacts have been made. The latest addition to the v.h.f. gang is Jack 2JK from Coff's Harbour, who proposes to do a lot of portable work from high points in the district. Taree Bill 2AEY is touring the South Coast and may bring news of Col 2ASP.

SOUTHERN ZONE

Not having heard a sound from the Southern Zone Correspondent since taking on the Div. Sub-Ed. job, I have asked Jimmy 2AJO to fill the gap. Many thanks indeed Jim.

2BQ, Tumut, is active on 40 and talking of really going to town on 144. We hope to get an f.b. signal from Tumut Geoff. Ross 2PN, also of Tumut, active on 40 and 144. Ron 2PM of Canberra heard battling with QRN, etc., on 40. Ray Kendal at Leeton waiting on his call sign. Hope to hear you on the bands soon Ray, best of luck with new gear. Lyn Turner, Associate of Coolamon, is frantically working on c.w. in preparation for the exam. Best of luck Lyn. Stewart 2PL, of Griffith, active on 40. How did you make out at Urunga Stewart? I hear the bottles were OK. Gordon 2OW at Temora back on 40 after a spell on 20, good to hear you Gordon. 2AKF at Deniliquin active on 40, how about some 144 Mc. gear John? Don 2RS at Albury active on 40 and putting out a good signal. Monty 2JQ at Junee heard on 40 occasionally. Peter 2AP heard on 40 and also had a visit from 2ANF, 2WH and 2AMV.

2PI at Canberra heard on 40; Les is in the process of improving a Collins Rx. Still not 100% since his accident. Jim 2AJO, of Coolamon active on 40 and looking for signals and skeds on 144, using an 832 p.a. and 3 over 3 beam, receiver an AR301.

COALFIELDS AND LAKES ZONE

The highlight of the month was the invasion of this zone by the 2 mx gang operating under the call of 2HL portable. Their intention was to operate from Barrington Tops at an elevation of over 5,000 ft. but unfortunately lack of suitable roads brought them to a halt some miles on the wrong side of the peak and about 1,000 ft. below it. As a result their signals to the south were weaker than expected and fading was severe. The 144 Mc. gang in this zone were pleased to work them and also to hear 2 mx really come to life when the Sydney boys turned on the works in this direction.

A really fine signal on same band was provided by 2AAA operating from the Army Camp at Singleton. This station has also been active on 7 Mc. Ken 2ANU has built a cascade c.c. converter for 144 using 6AK5/6J6 r.f., 6J6 mixer, and 6J6 osc. feeding into a 6 to 8 Mc. Command. Results are very pleasing. Geoff 2VU hauled the 4 over 4 beam up to the top of the tower and then proceeded on holidays just when the fun started. Major 2RU is convinced that 2 mx sigs do get into Gosford from the north. He built a xtal locked osc. for the ASV Rx and mounted the 4 over 4 beam on the back verandah. 2ADT has been in the midst of all the doings.

Cec 2KR and John 2GA journeyed to Urunga for the Convention. Harry 2YL came out of hiding to work the portables at Urunga on 7 Mc. Max 2KZ has been heard on 10 mx again at week-ends. The month ended with a short visit to 2ADT by the old warrior 2XO who was duly impressed by the size of the village. And so one more member has been added to the ranks of those who shake their heads and murmur "How can it work?" (If you do not understand this last remark you are obviously not one of that select band. But how it works can be heard by all who care to listen—Sub-Ed.)

VICTORIA

VALE—VK3ZJ

It is with regret that the Victorian Division of the W.I.A. records the passing of Jim Salmon, VK3ZJ, late of St. George's Road, Elsternwick. Jim passed away on the 28th April, 1952, after undergoing three major operations.

EASTERN ZONE

Ossle put up some lame excuse again and put his assistant to work once more. 3IZ is putting out a wallowing signal using 100w. with Class B zero bias modulators. Some say good old b.c.i.!!! Peter and John have a BC348 in about 3,348 pieces at present, hope to get it back in one piece again soon. It's going to be the full gallon, 14 tubes, double conversion, Q5'er, QX and all. 3PR using a new rig these days with much increased power, putting out a mighty signal also. Ron's ideas for the shack in his new house seems to include everything but a butler. 3AHK experimenting with Wyndham antennae these days, still talking about his new rig. 3SS working on a 6 mx Rx at present, the Tx is working and is quite a delightful piece of work, if I may say so. His next stop looks like being One Tree Hill. 3JZ basking in the charms of VK4 these days. Incidentally, Ossle's holiday to VK5 fell through for the time being, however he has high hopes for a future date.

Sale is silent again since Bud 3ABP left, what about someone breaking the silence from that way. 3AGE still being heard with the TA12 working better than ever. 3AMV

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QUEENSLAND

This month, messieurs, I hardly took a trick nosing for news. Spoke to President 4VJ and Secretary 4FP about the matter and asked them to refer it to the next Council meeting, but all I got from my colleagues, now not so esteemed, were the discomfoting words, "You don't get paid for it, but no news and you'll get flayed for it." So they think. They haven't seen me over the past three weeks down at Snowy Hill's Gymnasium, sparring with Elley Bennett and Len Dittmar.

APRIL MEETING

Starting promptly at 8 p.m. and winding up after a good get-together "chinwag" around 10.30 p.m., the April meeting was held at the usual rendezvous, Institute of Engineers' Rooms, Wickham Street, Valley, and proved quite interesting. The attendance, however, was not up to the usual standard. The first part of the meeting was taken up with a discussion on VK4 Contest activities, and if the keen interest shown can be taken as a criterion of how much success will attend our local contests, members of the Contest Committee are to be congratulated on their efforts in making radio-active those VK4 Hams who, for the last decade or so, seem to have been in a state of hibernation. Clive 4CC cleared up a few slightly doubtful points in connection with contest scoring. He declared that the bonus multiplier of two (2) for users of single element antennae would apply not only to contestants using dipoles but also to those using 66 ft. Zepps or long single wires of any number of half waves. A full cover on our contests appears in "QTC" and to that excellent little monthly publication you are directed for the full details.

Federal Councillor, 4FE, gave a resume of what makes the wheels go round at a Federal Convention. Thanks from all present at the meeting for the excellent address, Arthur. Business concluded with several members, namely, 4XL, 4PR, 4JR and 4AP declaring their shacks as "open houses" for visiting Hams, student members, etc. Nice gesture fellas—the true Ham spirit.

PERSONAL ITEMS

4SS, well known ardent brass pounder, has renewed his licence and recently embarked on the good ship "Matrimony." Better remember, Alan, the weighty words of advice to all newly marrieds from the facile pen of our worthy VK5 Scribe—"DX before Dishes." Best wishes for future happiness to both from the gang. Did Jimmie 4PR tell you about the sweet young thing who, after visiting his Ham station, wondered at what time and over what station the "Amateur Bands" were presented so she might tune in? Secretary John 4FP active on c.w. in Intrastate contest; John keys the screen grid of the final per medium of a clamper tube. You never know what sort of information you may get in this Ham game.

John 4RT QSOed a newcomer recently and asked him where he was keying his Tx. Back came the reply: "Am Keying Tx in my bedroom." 4HD still sits around on 3.5 Mc. Stout 7 Mc. c.w. adherents are 4DO, 8GM, 4AW and 4QL. Still continuing to keep the c.w. portion of the 14 Mc. populated in the VIB area are 4FT and 4XL. John, using 30 watts, gets out nicely, and last time heard Jim he was contacting FB8 for a new country.

Rumour has it that 4HR has hit the double century on the DX C.C. calendar. Better give it up now Tibby. It's not an everyday occurrence to work two YL c.w. ops in a row. This happened to 4AP the other evening when he contacted Madeline CN8CW and Marlan W4GTM. Understand 4KW, 4HR, 4ZB and 4RT quickly broke the ice on the 21 Mc. band. Ted 4MH out of luck, Rx tranny gone up in smoke. 4AX still active on phone. Bob 4RW puts solid phone signal into Brisbane during 4WI Sunday morning 14 Mc. hook-ups. Winner of VK4 Intrastate contest likely to come from 4FP, 4NG or 4AW. All have high scores. 4FE, 8FN, 4VJ, 4KP and 4CC all participants in Sunday morning hook-ups. Bowling enthusiast, Ed 4FG, using only 27w. and a temporary antenna, "bowls" a nice 14 Mc. phone sig down here around 10 p.m. Herb 4ES still inactive; Urunga prize for longest distance travelled Ham went to Harold, 4DO.

4HZ consistently QSOs Len 2LR at Kyogee. Neutralisation troubles have put another furrow in the forehead of Kev 4OR. Harry 4ZF has been busy overcoming coil troubles. Busy building a new rig, battleship style, is 4BJ. Better let us know when you crack the bottle over her Vic. 4NG has a 6 mx converter that can't be beaten. Would like circuit of same. Bob, Charlie 4NC is more loquacious on 14 Mc. phone than at Council meetings. Jack 4FJ and Ron 4RL both too busy with QSL cards to come on the air. Still doing grand job as master of ceremonies in 7 Mc. country hook-ups is Tom 4PD. Sunburnt and smiling as usual was Eric 4EL when he visited me the other evening after his South Coast holiday with family. Must tell you saw Sam 4CZ few days ago with a really troubled look on his face. Yes, Sam sure has some problems down at the power house—trying to stop Brisbane and environs from becoming as black as Egypt when Moses blew the gas out.

CLARE'S CORNER

Gordon 4XG has installed a tape recorder and now gives a few of the boys an idea of just how the other fellow hears them. The sun is shining brightly, and the birds are singing merrily—no not in the trees—but on the folded dipoles at 4TT's place. He has a farm of 'em, one in every direction. 4TN got a shock when he could only hear a VK4 in Gympie off the back of his beam. Maybe he was coming in over the long path Aussie? Would like some news on 50 and 144 Mc. doings, so what about it, Russ 4PN, or Bill 4RY?

does not seem to be able to get the same results from a TA12. 3CI looked in on 3850 Kc. one Sunday night, pleased to see you Syd. Good roll ups on the hook-ups lately, 10 or 12 stations on is becoming quite common. Will be looking for all we can get on in future with the Convention looming up once again. Now here is the date to remember: 1st and 2nd Nov., 1952, for the Eastern Zone Convention. Results of the zone field day on 6th April are to hand and the winners are as follows: Portable Section—3ALA 48 points; Mobile Section—3SS 41 points; Combined Section—3ALA. Teddy has now won three contests in a row. I'm a bit suspicious of him, because he has also worked VK1 on 40 with the AT5!

Chas. 5WQ put in an occasional appearance on a recent hook-up, he proved very useful as a relay station. 3ASE knocking off the DX on 20 from East Sale 'drome. Don't know how, because I can't hear 'em, my Hx is good!

NORTH EASTERN ZONE

This month brought many surprises, to me anyway. 3IJ has been scrounging parts to build a new v.f.o. and had a right royal time while his XYL was away. However Doug was a little sick of batching when he became real hungry, lonesome and his supply of clean shirts ran out. Fast developing into a 40 mx ear basher too, tut, tut, Doug. 3RK visited 3CT while in the district. The zone picnic took the form of a beam raising expedition for 3CI. After a considerable amount of time, a rhombic was finally erected after which Sid and his XYL entertained a considerable amount of people to afternoon tea which was thoroughly enjoyed by all. Don't know how you organised it Bob. Gang then took leave and went with 3IJ to the Avenal drome where the gear used by D.C.A. was inspected and the gang yarned with 3ACW who was on duty.

3JC about to dismantle 20 mx beam and re-assemble it for 15 mx. Thinks he might get it to work better (the hopes). 3UI already on the new band with quite a few contacts to his credit. Heard him disconcert a fellow Ham by saying he had a xtal controlled converter into a tunable i.f. for 40 mx, as casual as if it were an everyday occurrence. Zone hook-up discussed the next zone convention which looks like being held at Tatura sometime in July. Zone correspondent tendered his resignation but judging by the comments it is not going to be easy to get anyone to accept same.

CENTRAL WESTERN ZONE

We often record pleasant happenings in these notes, one such was a short visit to the zone by the W.I.A. Secretary, Russell 35X. Russell arrived at short notice, but despite this and the fact that the zone secretary could not be present, a quick round up was made and a meeting arranged at 3ARL's QTH. 3ACI, 3ME and 3HL came in from Lubech and Callawadda and a pleasant evening eventuated, with subjects of a wide range under discussion. Russell appreciated the gathering and we appreciated the opportunity of meeting him, each, I think, learnt something from the other.

3ACI has been pushing on with 144 Mc. gear; last heard of Charlie had a 4 element beam up and had just about completed tests with it to 3AKW three or four miles away. In the wide flat open spaces of Lubech v.h.f. sigs should get a good kick off. 3ARM has been heard of late putting out a good signal on 3.5 and on 7 Mc.

Our "Clamp Tube" expert has now decided his modulation was not as good as it was cracked up to be (despite the 4/6 mike), and has now changed over to normal plate and screen. It's just unusual to hear 3ARL sine rattles and splatter, however Lin still has his troubles. Our nautical operator, one 3IQ, when not on the briny, gives the YLs in Ararat a thrill by appearing in full uniform, as 3GN remarks he looks the goods and gets 'em in. 3YV is at present in the throes of Rx building, and as the second i.f. is on 110 Kc. it is not much use throwing his transmissions at him as the said i.f. just chops them off with a lot of other things. A new one in the zone is 3ME, Ewen has just lately obtained his Ham ticket, and should be about before these notes appear in print. Welcome to the very best zone in VK3 OM.

GEELONG AMATEUR RADIO CLUB

During the month of April members showed their interest in the club by good attendances. Some pieces of gear were tendered for by members and competition was keen. The money will be used to obtain tools and other pieces of equipment for the club. Three new members were welcomed by members, they were Messrs. T. Blackney, W. Zimmer and K. Hawkins. A Morse class is being conducted by 3IC each week and it is hoped that those taking part will obtain the "ticket" shortly. The lecturer for the evening was Brian 3AOL who chose for his subject, "Improving the Effectiveness of a Modulator," including speech clipping, compression and limiting.

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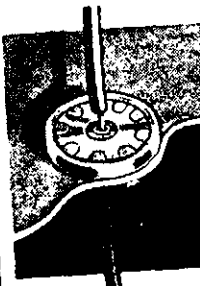
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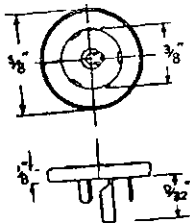
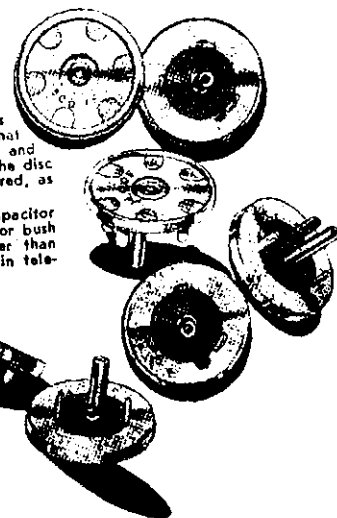
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TOWNSVILLE ZONE (By 4RW)

So far this month band conditions here have been far from good and, as indicated by the prediction charts, lucky is one to find an opening in the desired direction at a convenient time. Band openings to any particular country are of extremely short duration and much time must be spent in listening to take advantage of any DX offering.

There's no doubt about the success of the VK4 Intrastate Contest, it has certainly stimulated some much-needed VK4 activity. Out of hiding places have come chaps and again put their call signs on the air instead of allowing them to sleep soundly in the call sign book. Only snag here is that there are only three Townsville stations on the air. What wouldn't one give for the old times? Then, in this zone alone, nearly 50 points could have been amassed for contacts on three bands. Have even heard some of the Downs boys using 3.5 Mc. to boost their scores. Also, must report that 4NG in the city is drilling the locals to work him on all bands. You're a bit unlucky Bob they do not have 50 Mc. gear.

After an absence of eight months, 4RU is back on the air. Came good again on Good Friday. Why the change Wally? Is the long grass too tough for the little white ball after the recent rains? Since moving from the high tide area to a flood area QTH, 4WH is still missing on the band. 4EE been busy overhauling car but found time to give me a contest point on 14 Mc. 4DE has nice plus carrier but weak modulation. Suggest you hot up the audio Jock. Should mention that if you've worked KCGWC (Bob) on Falau (Pelew Is.) don't forget to count him as a new country. Was put wise to this by KCGDX on Truk in the Eastern Carolines. Another item—Japanese nationals are on the air with J prefixes. Have worked two to date, so either the ban must be lifted or someone is beating the gun. Wonderful is the 14 Mc. two element beam at 4RW. Still more wonderful, are the results with it on the 7 and 28 Mc. bands—signs actually get out. Someone work that one out for me please.

SOUTH AUSTRALIA

PRO SPE

The Annual General Meeting of the South Australian Division was held at 17 Waymouth Street, on 8th April, to a good attendance of members and the interest taken in the business proceedings proved that a goodly portion of the total membership are very interested in the way the Division is being run by their Council, but the number of votes cast for the Ballot for Council makes one wonder if there is not some laxness in this regard or is it that the average member is perfectly satisfied with the job the previous Council has done.

It would appear from the results that the latter view may be the case as the present Council was returned with only one member losing his place and that was Dave 5DH, who was outvoted by Reg 5RR, the remaining Council: Hal 5AW, Gordon 5XU, Warwick 5PS, Joe 5JO, John 5KX, Ross 5AJ, Jack 5JD, and the Past President, 5MD, are to carry on for the next twelve months. The retiring Treasurer, Tom 5TL, presented his report and showed the Division as being in a sound financial position, this has only been accomplished by the wise handling of the finances and correct budgeting for expenses for the year. Tom was presented with an electric clock as a token of appreciation from all the members of the South Australian Division and it was with genuine regret that we say good-bye to him and wish him well in his new position as Postmaster at Renmark, we do hope that your enthusiasm will infect the local Coroner in that District, enough to make him again an active and much sought after station. After all, Hobbie there are other things besides being tough on the local "Hobos."

The retiring President presented his report for the year, covering the activities of the Division for the last twelve months, appreciation was conveyed to the many lecturers who gave up their time to present most instructive evenings. Thanks were also conveyed to the firms and Government Departments who made visits to their respective places possible. A special mention was made of the very fine work done by the Sub-Editor, Mr. W. Parsons, in the writing of the notes for the magazine and for his weekly effort in the daily paper. How does one spell weekly Warwick? In case anybody might have the idea that the rotund personage is patting himself on the back just a little too much, let me assure you reader that this month "Tubby" is on holidays and is perfectly in the dark as to what will appear in this column. There is also no truth in the rumour from VK6 that he is a grandfather yet, back to the meeting again.

The President thanked Hal Austin for his weekly broadcasts from 5WI, the Magazine

Committee in Melbourne for their sterling work in the production of the magazine, the Exhibition Committee for the magnificent work in putting SWI on the air from the Royal Adelaide Exhibition and the Relay Stations: Clem 5GL, Ross 5LW, Bill 5HD, without whose help transmissions would not have been received.

He pointed out to the members that the Division has an Oscilloscope, Philoscope, Modulated Oscillator and the former confined to hospital, a Type 3 Mark II Transceiver. All of these instruments are available for members to borrow for their own use. The letter of thanks received by the Council from one member, who borrowed the Type 3 for his sojourn in hospital, was ample reward for those who made this purchase possible. Last, but not least, he thanked the members for the generous support given to all officers during the year and urged that the younger member should accept some responsibility in the running of the Division by offering his services for the many and varied jobs that have to be done.

Brian 5CA in some well chosen words, thanked the President for his work during the last two years. John 5KX, the delegate of this Division, went through all the Convention items, to seek approval from the meeting for the way he was to vote. The meeting closed at 11 p.m. and the close attention that was given to all business matters augurs well for the forthcoming year.

A blitz was held recently in this city on jay walking, and who should come out of the "Best . . ."—well a building—in a dust coat, but a short rotund figure, who promptly defied all the laws that had been laid down that day, and calmly proceeded to cross the road at an angle of 45 degrees. If I had had only the powers of a Police Officer that day!

The play-boy of Kingswood is in the news again, with bow-tie and all. There is no truth in the rumour that the "Prop" will revolve if you say "contact." South Australians appear to be very belligerent these days; who was the "boundah" who dared to pound his fist on the Convention table and in front of F.E. too, and did those two on twenty mx the other night, make some interesting listening, hardly the band to have a dog-fight on. Why don't you two come down on six, you can call each other what you like there.

It is rumoured that Reg 5RR is to be the next Secretary of this Division. If this be so, we have no better man for the position. His handling of the Exhibition Committee was excellent and no more methodical person could you meet. My spies also say that Jim 5FO will undertake the duties of Treasurer. Jim's vocation in that hard worked body of men (the South Australian Public Service—N.B. you Commonwealth guys) should fit him well for the position and it is pleasing to see at least one of the younger Hams willing to do his bit. Heard one senior member of a Commonwealth Dept., on six the other night, working a local on two, but I was fortunate I knew his voice and I was able to know who he was without him announcing it! One familiar voice there turned out to be none other than that grey headed old so and so, Freddy 5AH. How nice to hear you on again.

Many and varied were the comments made upon the various operators from the Royal Adelaide Exhibition. Some were scathing, others full of praise, which only goes to show that it is impossible to please all the people, all of the time. My own views were that the boys did a magnificent job, they gave up many of their spare evenings to keep the station on the air—and that's a lot more than you guys who criticised, did.

SRO working from Kulpura and Ken Cahill at Cape Jervis did some good work on 288 Mc. at Easter by establishing a two-way contact, a distance of 106 miles which is a record for this State, VK1RG Rob Gurr (ex-5RG) advises that besides transmitting on 14 Mc. he will have Tx's modulated simultaneously on 50 and 144 Mc. and would appreciate reports should he be heard in Australia.

Upon enquiring from Mrs. "Pansy" as to whether she and her husband had had a nice holiday, I was informed "it was wonderful," accompanied by a long-drawn sigh. I remarked that it sounded like a second honeymoon!!!

5CH is still out in the country and has yet to get on the air; Claude has, during his enforced holiday off the air, been catching up with his QSL cards. SMS is in his new home but unfortunately is without power so that means that Stuart's equipment is also resting. 5JA is finding that married life takes a lot of his spare time and John has yet to be heard on the air. 5FD is still finding too many jobs around the home to enable him to get on the air, but John is still hoping. 5KU has not been sighted for some time. 5TW having an occasional contact on 40 mc, but Tom is also having a quiet time. To conclude this report of fever-

ish activity on the part of the South East gang, I can only say that 5CJ apart from a few skeds on 40 mc is also quiet, although Col tells me that he hopes for better news next month.

5DF is now pretty well settled down in his new QTH at Fort Lincoln and found that it was a major operation to change over from d.c. to a.c., but it was well worth the while, 5LT has just finished erecting a "dual dipole" rotary beam for 20 mc and Pat now works all the rare DX much easier. 5VJ busy building sooper-dooper gear and Jack is looking forward to getting on the air again. 5BY put up a ground plane antenna and Dougal is raving about it (or should it be raving, period?). He only wants three more countries to make 200 on c.w., so perhaps it will do the trick for him.

5WY has been having hum trouble and John has been conducting all sorts of tests with Brian 5CA to find the cause. 5DP, who last month reported as using the roof as a ground for his ground plane antenna, has now given it a real test with DX, and Ted is well satisfied with the results. 5RY has been on the air several times of late and has also built up a c.r.o. which apparently is the goods. 5SL has left Berri to live in Adelaide and Laurie will be missed by the gang up there. His cheery personality, extreme good nature, and unlimited energy in all things radio cannot be replaced. The gang wish you all the best, "Skinny." 5MA has at last made the air again since his moving into his new QTH and Fred proudly boasts three contacts. The gear is not set up properly as yet but here is hoping.

5TL has not made the air as yet since arriving at Renmark, but is busy chasing some vile electrical interference, most of which, it is said, comes from the telephone exchange. Tom is living next to the Police Radio Station, so I expect that he is waging the straight and narrow. These days 5RE is also QRT because of electrical interference and is thinking of petitioning the High Court or something. "Hobby" is also having trouble with his 300 ohm feedline breaking off at the antenna joint or somewhere. Rumour has it that another Berri identity who was on the air prior to 1939 is considering making a comeback. Alec Kelly is the name, and for all I know he may be on the air now. A working visitor this month to Berri is Alec 5GS and he expects to be there about five or six weeks. 5KW is still madly building gear, some of which works and some of which doesn't. Harry seems to be in good health although still burdened by that Leg-Iron.

At last I am getting something out of Pansy 5PS for nothing. In the mail today I found an invitation to his daughter's coming marriage to associate member Robert Turner. Just think of it, food and drink at his expense, oh boy! Wait a minute, what is this in his handwriting at the bottom of the invitation, "Please Bring A Basket." Well I give up. The cheek of him.

WESTERN AUSTRALIA

Most heartening feature of the past month has been the re-appearance of communications from my spy-ring. And this is just as well for conditions on the 7 Mc. band have severely hampered my investigations (so spelt, but pronounced by some of my friends(?) as "snooping"). Conditions don't seem to have stopped a certain well known denizen of 40 however for he succeeded in working a Yank (phone v. c.w.) and says he has a witness to prove it! I've no doubt the W copied his phone OK, but how did HE copy the _____ (censored).

Normally, when I receive a letter with a window in front and an "if not delivered" notice on it suggesting it came from Treasury Gardens, I hastily reach for my false beard, black Homburg and spats, put them on and go for a walk to the Post Office to re-post the epistle marked "not guilty" or "not known at address." The one dated April 29, a copy of which was received by you, you and perhaps you, too, was the exception, for I opened it and learned to my great joy that Tokyo Rose, Saigon Sally and Korean Kate will henceforth have 50 Kc. less of our 40 mc band to pinch; ditto the 20 mc one. Further joy was occasioned by the release of the 21 Mc. band which, like the change-over from d.c. to a.c. at this QTH, was long looked upon as one of those beautiful mirages which dance before the eyes but never become reality. My first listen on 21 on May 1 revealed nothing but sundry f.s.k. commercial code stations going "prrrr, prrrr, prrrr," by the hour. May 2 revealed much the same but on Saturday May 3 the band was alive with signals from every Division (VK6s were on but not logged here) and some ZLs. It was worth a guinea a box to hear confirmed phone ops calling "CQ phone or c.w." and begging (almost) for ZLs to come back! Incidentally, amongst the c.w. logged there were some good notes and some that were definitely "p.u." One ZLI I heard sounded like a keyed power house. Among the VK6s not heard but

being called and worked were 6DJ, 8WU, 6MB, 6LW and 6RW. I heard one VK2 calling a VR2 on c.w. but don't know whether a QSO resulted. Mal 6MU reported to me later that he had heard that some of the Eastern VKs heard South Americans on 21 and that one at least worked a YV. By May 4 and 5 the band had gone dead again here in Geraldton and the sole occupants were the aforesaid "prrrp, prrrp, prrrp" merchants.

Spies—and Otherwise.—They tell me Lou 6HR has a new beam that sits up and begs, wags its tail and points to where the DX is when Lou pushes the button. Lou bought a disposals batch of post-holes, connected them in series and installed them in the backyard. Now he has a signal-squitter that disappears into the ground like a comedian's trick walking-stick (when adjustments, etc., are in progress) and then shoots skyward for action. Lou put an ad in the "Situations Vacant" column recently for a qualified lift-driver to work the thing.

Eric 6VM, who is Harry Lime squared (ninth man to you, co-opted to Council) has been putting down yards and yards of piping and sprinklers and although he tells people it's for the benefit of lawn and garden, truth is he's working on a new theory of boosting low-angle radiation by means of keeping the ground wet. He's another to have the beam down at the time of writing, having the boom galvanised. Still more beam news this time re 6LJ. I remember the first Ham tower I ever saw was in Jack's backyard in Vic. Park years ago pre-war; now he has a brand new 1952 model, 40 ft. high. As yet he is undecided as to whether a three, four or five element will adorn it. My spy's comment is "they all work, Jack, only some better than others!"

"Twenty" produces some rare calls at odd times and a recent surprise was 6WS, 6NC and 6AU all in a three-way. Should be more of it, chapel 6LL has just returned from the land of Pansy P., sorry, from VK5 and caught a chill on the boat (I wonder how?). Clarrie called on 5KG and bent elbows with Bert who arranged skeds with VK8 but they didn't click. Did you visit that far-famed "best b.c. station" Clarrie? 6BC, another tripper, took three months to visit VK2, 3, 4, and 5. Presumably noting the fashionable waistline now being worn by at least one citizen of VK5, Bert put on 1½ stone but says it wasn't through riotous living—"costs 6/- a bottle, plus cover charge, plus—" anyway, he says it wasn't worth it.

May visitors to Perth (this has to be written in anticipation) were expected to include 4PN attending a Flying Doctor Convention, and 6WM down from the Golden Mile on vacation. Lee of 6LC has been around the lower portion of the State recently but is now back home again. Albany, Bunbury, Manjimup and Perth were on the itinerary and maybe others I don't know about.

There's been an outbreak in the "T" section of the call sign department, 6TK, 6TR and 6TY all being recent arrivals on the air. Welcome, chaps! Late in April VK2AQK/MM bobbed up on 40 and some of the lads worked him but I only heard him once and had no luck when I called him. "Skipper" 6WS has been on occasionally, still with that little portable of his that gets out so well.

6GA from Forrest has been heard and worked a few times lately and it sure is nice to hear you again, Bill. If you could persuade the met. man to make a balloon available you could put up a wonderful vertical long-wire—provided you could get a piece of wire that long.

Regulars (more or less, conditions permitting me to hear them) on the 7 Mc. band include 6LU, 6LG, 6DJ and 6RT. 6WI is either heard at 59 here or not at all and other stations, city and country, pop in and out with astounding suddenness. 3.5 Mc. gets a little attention—a very little attention—now and then but usually only from the regulars. 6MO, 6LG and 6RT only ones known to be using "eighty" so far this season. As for Geraldton doings—well there seems to be nothing. Haven't heard or seen either Ern or Bunny for ages so don't know what they are plotting. Barry 6BR embarrassed one of my staff (not a Ham) recently over a meal in a local hash-house and got on the soap box properly about the loss of 50 Kc. from 40 and 20 mx—but so far hasn't got his gear up from Perth, so what the heck, anyway?

As for myself, I'm hoping that between the time I write this and you read it (you do, don't you—don't you? Answer me, someone!). As I was saying, by the time this appears I hope to have a.c. That is a commodity I have been waiting for since 1947 and you just can't guess how I long for the day when I can have the shack full of power trannies purring away contentedly on fifty cycles. Excuse me, I must go now, the XYL has just reminded me I have not finished converting the b.c. Rx. See you next month.

TASMANIA

The monthly general meeting for May was held at the usual location, with President 7OM in the chair. A fairly representative gathering was assembled, the number increasing somewhat as the evening progressed, by the addition of a few late-comers. Main business consisted of a summary, by the President, of the results of the recent Federal Convention. Included therein, for good measure, was a brief description of a rather amusing incident which occurred during the visit. Incidentally, Bob, one or two members view with a certain amount of scepticism, the bona fides of the said incident. A vote of appreciation for Bob's able representation was proposed by 7LJ, and passed with acclamation.

The meeting closed with what I can now almost call the "customary" auction sale of surplus radio equipment. Quite a few absolute bargains changed hands. As I see it, you chappies who are seeking good equipment, cheap, cannot afford to miss out on the monthly meetings.

Seen at the meeting, succumbing to the "bargain atmosphere," was Reg 7RL, from Stanley. I trust that when you get that gear back home, Reg, you will do the right thing and advise all N.W. members to fit an additional shunt across their S meters. That reminds me that perhaps I had better shunt my own S meter, because I seem to remember 7OM purchasing a couple of wicked looking "bottles that cheer."

A cordial welcome back to VK7 land is extended to Snowy Harrison. I am given to understand that Snowy, who was recently 3CN, now has his old 7CH call sign back, and whilst at the time of writing, I do not know anything of his proposed activities, we trust that he will show up in one or more of the bands in the near future. Once again—greetings, Snowy. We are listening for you.

I guess that by the time this appears in print, most members will have adapted themselves to the recent band changes, and the mutterings of those who "lost" rocks in the 40 mx band, will have died away to a faint murmur. The general consensus of opinion seems to be that the new 21 Mc. band will be a well worthwhile addition—given time. One certainly could not condemn it when compared with conditions on the other bands at present. Athol 7AJ has been set up for 21 Mc. operation right from the start and is patiently waiting for others to follow suit. I hope that it is not as lonely as I once found 144 Mc. in the past Athol.

Another highly successful 144 Mc. Field Day was held on Sunday, 19th April. The hidden Tx, operated by 7AJ and 7DH, proved too elusive for most, but was found by 7LE first, with 7BJ walking second. Rumour has it that Joe is most anxious to purchase a pair of seven league boots, for the next Field Day, so if anyone can help would they please come forward. The hidden Tx was located in the Snug area and when all wanderers had assembled, competitions for both young and old rounded off another enjoyable outing. Fortunate members who travelled in 144 Mc. equipped autos found the trip home very much enlivened by car to car QSOs.

Another welcome addition to our membership list is Tom Ward, 7SW. Tom has been licensed for some time now, but home-building activity has precluded active interest in Amateur Radio. However, I think everything is well under control now, so what about firing up that rig Tom, in preparation for the next R.D. Contest.

7RM is now the happy owner of a 40 ft. pole, and is finding the improved signal reports most gratifying. A 2 mx antenna should perform well from the top of that mast, Rupe.

Associate member, Johnny Grace, with a revived 2 mx interest, now has a converter working very nicely on that band. 7AZ, with a converter under construction, and further plans for a Tx should be showing up soon. Don't be too long Doug. 7BJ seems to have caught another whiff of the fever, and has a 144 Mc. rig well in hand. Day 7DH has just about eliminated all of his 2 mx re-build worries. Commencing Friday night, 9th May, and thereafter on each alternate Friday, the Army Signals Radio Club proposes to operate 7SR between 2000 and 2200 hours approximately. Bands used will most probably be 40 and 20 and all calls will be welcome.

NORTHERN ZONE

As this month sees our worthy zone correspondent, 7XW, on holidays in VK3, all claims for libel and other damages should be sent direct to 7RK; it's quite some time since I penned these notes, so please excuse any omissions. The April meeting of the zone, held in the Trades Hall, was well attended and those present heard a very interesting talk by 7FF on cascade converters for v.h.f. Quite some few points of interest were raised and explained and much information gained by all. One advan-

tage of having 7FF as lecture officer is that if the lecturer fails to turn up, Peter takes over himself—good work.

Doings of the gang, as always, many and varied ranging this month from building bigger and better beams to rubbing the "good oil" into would-be footballers—the culprit in both cases being 7AM. Les is a man of many parts, but I do wonder what the effect would be if he gets his activities mixed. Would his full-forward oscillate on 144 or would the final kick a goal? 7LZ at the moment on holidays and will no doubt come back full of new enthusiasm and ideas for 144. Has the re-vamping of a Command Rx under way as a tunable i.f. section, as has also 7EP? Believe Peter had to dash off in a hurry to Flinders Island recently to repair the aeradio station, didn't even have time to stow a Rx in the hip pocket.

7GM active on 40 and building a super-dooper rig for 144. 7LX getting the DX bug on 20 and I believe has erected a W8JK for that band. Try c.w. Ken and really work them. Here at 7RK the v.h.f. bug still doesn't bite, apart from a brief sojourn on 288 many moons ago, still content to chase that small particle of DX that remains after the somewhat one-sided clashes with old man ionosphere. 7CA has cleaned the bugs from his phone on 40 and can be heard quite frequently on that band. 7XW went on 144 in a big way then took fright and bolted to VK3 till the racket dies down. 7HY wearing that harassed business man expression which probably accounts for his absence from the air, my information has it that he intends making his second million then getting back on the air so we can expect him any day now.

Had information from Associate Perce Crawford that 7BQ is having a great time in G land and, I guess by now, many other places of interest. Best news for the month, for me at any rate, was the acquisition of 21 Mc. and had lots of fun from 1st May onwards watching the band take shape. Have not as yet heard any of the locals using it yet.

HAM ADS

9d. per line, minimum 2/-.

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FOR SALE.—Eddystone S640 Receiver and S Meter, less Speaker, £60. J. M. Hilliard, P.O. Box 1, Salisbury, South Aust.

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EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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EDITORIAL



TOO YOUNG AT SIXTEEN?

Ever since the re-allocation of Amateur Station Licenses in the post war era the Institute has been asked "Why cannot a person be licensed to operate an Amateur Station at the age of sixteen years?"

This is a serious subject and one that has two "schools" of thought—the old and the new. By the old is meant people of so called "mature age and judgment," and the new, people mature in age but whose tenure could be said to be considerably less than their more aged brothers insofar as experience in the affairs of the world is concerned.

In deliberating on a decision of this nature one must have due regard to these two groups of people, because in a progressive and scientific world such as the past two generations have been born into, it is imperative that the newer group has a say, tempered if necessary by the more experienced voice of the older group.

Everywhere in the world today young people still at school take a keen interest and active parts in the affairs of all kinds of clubs and institutions, and they are encouraged to do so; they have advanced by some years their activities, compared to their forbears at the same age.

And why? Because educational and living standards have changed with the passing years. With the advent of the electronic and electro-mechanical age, school curriculums cover a wider sphere of learning, there are more basic principles to learn, the older ones must sometimes be modified to fit men for modern learning—all in all, the modern scholar must be more knowledgeable—and is in fact more so—than the scholar of two decades ago. One has only to heed the oft' spoken words, "I don't know what he is talking about, I never learned that at school in my day"—or even just listen to the modern scholars talking among themselves.

By and large, the older group—composing the parents of today—

countenance all sorts of activities by their offspring—club activities, photography, chemistry, dancing, in fact anything that assists their educational advancement and at the same time serves as a relaxation from their normal school study periods.

And yet, without any authenticity, you will hear the older group—and to be fair, the newer group, too, sometimes—say that scholars in their early teens should not take up radio as a hobby, particularly to become an Amateur Operator, because such an activity interferes with their studies! "To grant an Amateur License at the age of sixteen," they say, "is too young because studies continue even after completing the normal school terms up to intermediate and leaving standards."

This thinking is utterly wrong and baseless in fact!

The study of radio takes in basic theory of electricity and magnetism and mathematics almost entirely in one form or another, and, having gained a license, a scholar operating a station on the air gains stupendous insight into the subjects in an advanced form with the added phase of geographical learning thrown in for good measure.

The solution of the problem is simple enough. If a scholar has the knowledge and temerity to pass an A.O.C.P. examination at the age of sixteen he should be granted a license.

The key to the problem of interference to studies is one of parental control—nothing else—and should be subjugated to the right perspective. Parents should not permit their son or daughter to "play" radio at the expense of studies any more than they are prepared to permit them to attend clubs, go dancing, or "play" at any other hobby. But relaxation one night per week at least, is the forerunner of a sound, logical, healthy and contented mind.

Grant an Amateur License at the age of sixteen! Why not?

FEDERAL EXECUTIVE.

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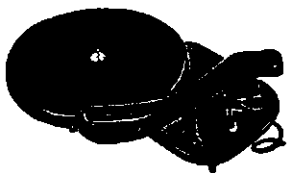
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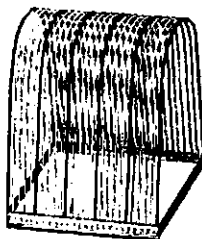
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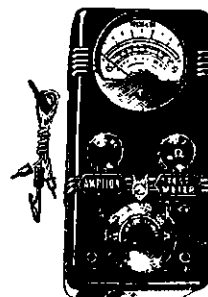
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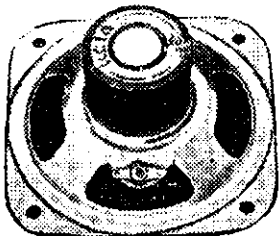
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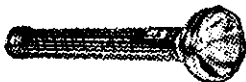


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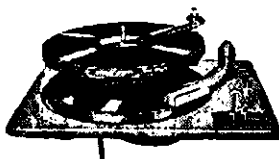


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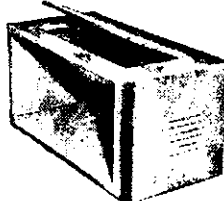
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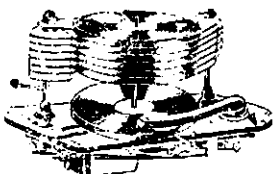
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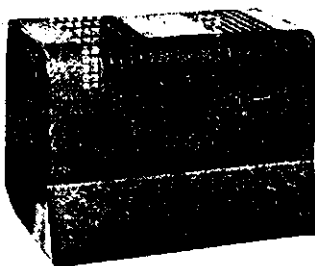
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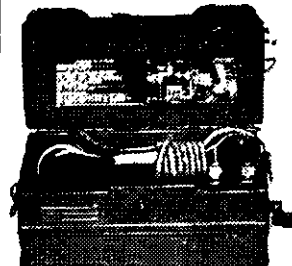
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Some Pointers on Good Quality Phone

BY R. DOWLING,* VK3XD

Herewith are a few hints for phone transmission if you want a pat on the back for good quality signals.

All power supplies to be well filtered, plenty of buffering with amplifiers, Class C or Class B, doublers; no regeneration of any stage in itself or to other stages; decouple the stages in your power supplies by good chokes and condensers.

The buffering with amplifiers prevents frequency modulation of the carrier, and/or carrier shift. (These between oscillator and final stage.) In other words the carrier beat note should never change, as observed on a receiver with the b.f.o. in operation.

The Class C buffers should be perfectly neutralised (not doublers). The final modulated amplifier should be capable of perfect neutralisation. Feedback in the final amplifier will be reflected in non-linear modulation (almost like single side-band). This will cause audio amplitude distortion of the signal.

The Class C final, if modulated, should be biased to about 2.2 times cut-off and should have about 25% more grid excitation than for c.w. operation. Lack of drive (also some in reserve) will also cause non-linear modulation. (One side of carrier modulated more than other, or modulated non-symmetrically.)

The tubes used in the final Class C modulated amplifier must have a reserve of filament emission, sufficient to allow the peak plate current to double during 100% modulation. This, if not done, will also cause non-linear modulation. (Don't over-couple your antenna with low plate voltage to get more output, or don't worship the amplifier's milliamperes, if you do, you will kill the tubes.)

The modulators, if Class B, should be assisted by a swinging choke in the power supply filter. This means that with variation of plate current on the tubes, between standing current and maximum audio drive, the more the plate current. The filter should work to cope with varying loads for good voltage regulation which means that a swinging choke is a component which varies in its inductance according to the varying currents passing through the windings, viz., the choke on light current loads, no modulation (choke input filter), and when the load is heavy (modulating, more plate current rise) (condenser input). This choke then needs an assistant, a 30 hy. choke, and large capacity filter, 8 uF. or more on the output of the supply to bring about good decoupling and preserving audio response.

Good shielding or isolation of the r.f. portion from speech equipment. No r.f. to get into speech equipment whatsoever. If it does, it cancels out the audio causing overloading, blocking, whistling or singing, and instability of audio.

Completely shielding the speech amplifier is preferable to shielding the r.f. section of the transmitter. This is hard to believe, but personal experience has

shown to me that unwanted coupling and r.f. to audio equipment increase directly with the frequency used. When operating on 20 metres, the transmitter, for a given degree of operation with good isolation resulting in good signals or trouble-free ones, will be almost useless on 10 metres due to feedback troubles.

Suggest getting the rig going on 10 metres first for 10, 20 and 40 metre operation if good signals are wanted on 10 metres. The feedback from a 20 metre transmitter for a given degree of isolation (mediocre) is eight to 10 times as evident as in a similar transmitter operating on 120 metres, and eight times as much shielding and trouble-precautions are necessary to isolate audio from r.f. troubles.

[A separate power supply for the speech amplifier and decoupling through a 600 ohm line to the drivers for the modulators pays dividends in this respect.—Tech. Ed.]

R.F. goes everywhere, regardless of paths of low or high resistance, not

necessarily the shortest path to audio circuits. R.F. in low level audio circuits causes all kinds of troubles.

As you know, the actual process of modulation is the mixing (superimposing) of audio and radio frequency (carrier) or superimposing audio (a.c. on d.c. (r.f. carrier); a complex business. In your case, this all occurs in the plate circuit of the Class C r.f. stage. The term "plate modulation" is not strictly accurate, but power modulation is more descriptive of what goes on.

Now this final stage. It is possible that your carrier, with no modulators connected, could be putting out a distorted wave form due to wrong Q of the final tank circuit. To correct this, you must have the stage operating to give you more output with coinciding minimum plate current, and until you get this condition in the final, you cannot load properly with the antenna to maintain that large reserve (flywheel effect) necessary to produce a signal with effective modulation, whereby the tube filament emission has sufficient reserve to permit the plate current to double during 100% modulation. If this is wrong, we then come back to non-linear modulation, splatter, distortion. "So do ye ken?"

Simple Conversion of AR301 to 144 Mc.

BY D. C. HABERECHE,† VK2RS

Before detailing the necessary minor alterations, a few words regarding the original receiver will not go astray.

The AR301 formed part of airborne equipment, A.S.V. type, operating on frequencies between 170 to 178 Mc. The design includes four i.f. stages at 30 Mc., using 6AC7 valves, the r.f. end comprising of two 954s as r.f. amplifiers, and two 955s as mixer and oscillator.

These receivers can be obtained through disposals stores at a reasonable cost and lend themselves particularly well to conversion to 144 Mc. The whole conversion should not take much more than an hour to complete.

ALTERATIONS TO WIRING

Firstly remove the original power supply wiring and if you so desire, remove the power transformer and choke, thus leaving ample space for a self-contained power supply. Then check over filament and h.t. wiring for breakages or corrosion, etc.

From the junction of resistors marked R16, R21, etc., located on the terminal strips connecting the 6AC7 i.f. stages, wire in a 5,000 ohm wire wound potentiometer. This control conveniently serves as an i.f. gain control, as this receiver is not equipped with a.v.c. This will prove useful in controlling some of the stronger signals.

The only other stage requiring alteration is the last 6AC7 stage following the 6H6 detector stage. This 6AC7 was originally wired as a cathode follower and can be quite simply converted to an audio voltage amplifier. To do this, simply remove the cathode resistors and replace with a 5,000 ohm resistor, by-passed with a 25 uF. condenser. Then from the plate of this valve, remove

the 500 ohm resistor and replace with a quarter meg. resistor; next connect to this plate a 0.1 uF. condenser to a half meg. volume control, taking care to shield the leads to this control. The return lead from the control is then brought back to the grid of the spare socket immediately adjoining the last 6AC7 stage. This socket is then wired in the conventional manner as an audio power amplifier using any available output valve.

The only other alteration necessary is to remove the co-axial lead from the switching motor and plug it into one of the spare co-axial plugs on the front panel.

FREQUENCY COVERAGE

If you are lucky enough to have access to a grid dip meter, little difficulty should be experienced in re-setting the stages to cover the 2 metre band. Should a grid dip meter not be available, a simple absorption meter will do the job equally as well, but will be more painstaking.

In order to get the oscillator stage tracking over the range from 114 Mc. to 118 Mc., a small air trimmer is wired directly across the oscillator coil. Then adjust this stage in steps, keeping the aerial and r.f. circuits peaked, until a noticeable drop in noise level occurs when you inductively couple the wavemeter to the second r.f. stage or mixer, making sure to use as little coupling as possible in giving you sufficient indication.

A final check on alignment can be obtained either from a signal or from car ignition noise.

This receiver, with these alterations, should prove a very successful and worthwhile inclusion in any v.h.f. man's shack, and most certainly offers a good and inexpensive means of covering the 2 metre band.

† Room 17, Central Chamber, Kiewa Street, Albany.

* 6 May Street, North Fitzroy, N.7, Vic.

TELEVISION MADE EASY

Part ix.—Outline of Color Television

BY KEN WALL† AND JOHN JARMAN,* VK3ADA

So we have learnt how a television set works—and why it sometimes does not, but what is this color television we hear so much about? Indeed, this subject has received so much publicity in the past two years, that this series would be incomplete without mention of it. Let it be understood from the outset, however, that no color system has yet been perfected. In other words, color television is still in its experimental stages, and in this concluding article we will discuss the main trends of overseas experiments.

How often have we wondered how colors could possibly be transmitted by radio? Well, strictly speaking, they are not! In every color system the picture is transmitted just as if it were in plain black and white, the color being applied artificially after reception. The whole "mechanism" of color television can be summed up as a means of ensuring that this artificial coloring is performing correctly. Its operation depends on two elementary principles, viz.:

1. Light of any color can be reproduced by the "blending" of three primary colors—red, green and blue, in correct proportion.
2. Conversely, the light reflected by any object can be "split-up" into these primary colors, in different proportion for every reflected color. Study these carefully, before reading any further.

Now white, for example, is composed of the whole three; yellow is a combination of red and green, and black is the absence of the whole three. By means of color filters, these primaries can be separated. For instance, a red filter allows red light to shine through it, but "blocks" all other colors, and if placed over the lens of a camera, will allow the latter to photograph only the objects whose colors contain the primary, red. Likewise, blue and green filters "pass" only blue and green light, respectively, and when a scene is to be televised in color, here is briefly what happens.

Firstly, all the red components are "extracted" by a red filter, transmitted as one group, and after reception, tinted red. Likewise, all the blue components are extracted from the same scene, by a blue filter, transmitted as one separate group, and tinted blue after reception. The green components are treated in the same way.

In the receiver, we therefore have three incomplete pictures, each of a uniform color. By combining them, we reproduce the original picture in full color. At once we see that an essential feature of color television is the transmission of three separate sets of detail (which, for convenience, we will call "images"), instead of one, and the problem confronting scientists, is how to do this, without increasing the bandwidth, or sacrificing picture quality. Remember, too, that color is not applied until after reception. Each image is transmitted in black and white, or "monochrome" as it is termed.

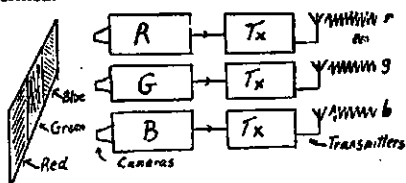


Fig. 1.—Transmitting Set-up.

To illustrate the principles of coloring, we will first consider a purely imaginary set-up. Fig. 1 shows three television cameras, each focussed on the same object, which is a rectangular board, painted red, green and blue. Camera R is fitted with a red filter, so it receives only red light. Similarly, cameras G and B are fitted with green and blue filters, and respond only to green and blue lights respectively. The images formed in the three cameras will therefore be as shown in Fig. 2.



Fig. 2.—Images Transmitted.

† 172 Johnson Street, Maffra, Victoria.
* L.A.C. Jarman, J. B., c/o. A.R.D.U., R.A.A.F., Woomera S., South Australia.

Now suppose each camera be connected to a separate transmitter, on a different frequency. Our picture will therefore be transmitted as three separate signals—*r*, *g*, and *b*.

For reception we will use three television receivers, tuned respectively to the three frequencies, as in Fig. 3. Receiver R will reproduce the image, shown in Fig. 2a. Likewise G and B will reproduce the images in Fig. 2c and 2b respectively. But each of these images is in monochrome! Let's color them.

Over the face of cathode ray tube R, we place a red glass, and likewise, we will fit green and blue glasses on tubes G and B respectively. We now have three colored images. All that remains to be done is to combine them.

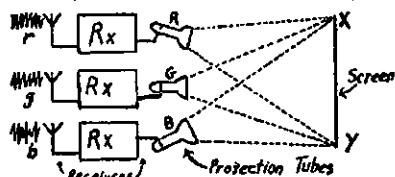


Fig. 3.—Receiving Set-up.

Now there is a type of cathode ray tube available whose face glows with such high brilliance that, if fitted with an optical lens, it will project its image on a distant screen, just like a magic lantern. Let us fit this type of tube, with lens, in each receiver so that each image is projected (through a colored glass) on to the screen XY. The three colored images will now combine, to reproduce the original picture in full color.

As a further illustration, suppose the televised object was yellow all over. The images transmitted would now be as shown in Fig. 4.



Fig. 4.—Images Transmitted for Yellow Object.

In place of the colored glasses, we can use tubes with colored phosphor coatings, thus producing the required colored light beams. Now for perfect color reproduction (or "color fidelity"):

1. Color applied to each received image must be identical with that "accepted" by the corresponding filter on the camera.
2. The brilliance, for a given signal strength must be the same in each receiver tube, otherwise colors will not be correctly balanced.
3. The three images projected on the screen must coincide perfectly with each other. This is called correct "registration" of color.

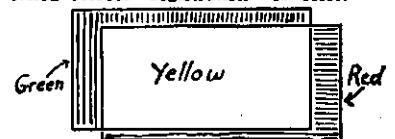


Fig. 5.—Faulty Reproduction.

Fig. 5 shows an example of faulty color registration, where our yellow object appears as two, one in red, the other in green. In the preceding illustration, each image was transmitted continuously. In other words, the whole three were transmitted simultaneously, so that this is called a "simultaneous" system, requiring three times the bandwidth of a monochrome signal. Such systems (with modification) have been tried, but rejected.

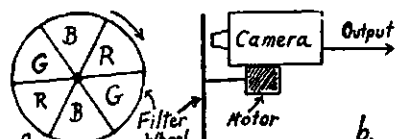


Fig. 6.

An alternative method, requiring only normal channel width, is to transmit the images alternately, in quick succession. Take a look at Fig. 6. Using only one camera, suppose we mount our color filters in a wheel (a), and set it revolving in front of the camera (b) and synchronised so that each field is scanned through a different filter segment. During scanning of the first field, for example, a red filter is in front of the lens, so that only the red components of the picture are "seen" by the camera. During the next field, however, a green filter segment is in front of the lens, so that only green components are transmitted, and likewise, every third field contains only the blue components. The color images are, therefore, transmitted in sequence so that this is called a "field-sequential system."

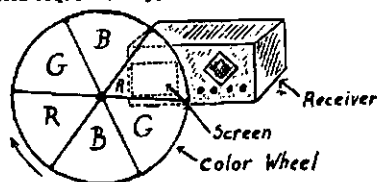


Fig. 7.

Now look at Fig. 7. In front of the receiver screen (which is one single c.r.t.) a color wheel revolves, similar to our aforementioned filter wheel, and synchronised with same, so that while a red filter is in front of the camera lens, a red glass covers the receiver screen so that all the red components, having been "sorted out" by the filter, are now tinted red in the received picture. Likewise, the green and blue components are reproduced in their respective colors and the three colored images are repeatedly flashed before the observer in such quick succession that they appear to "blend," reproducing the original picture in full color.

In other words, our old friend "persistence of vision" is being further exploited, but wait! This has its limitations. Consider our yellow object (Fig. 4) received as two images, red and green. These will appear to blend, only if both occupy the same position, on the retina of the eye. Now, if the eyes are moved, this will not be the case, so that object will appear in red and green, as shown in Fig. 5. This is called "color break-up." Movement of the object gives the same effect, but in this case, it is called "color fringing." Take also the case of a large area of primary color (e.g., blue sky, or green grass). Since each primary color is scanned only once in three fields, it will appear on the screen only 50/3 equals 17 (approx.) times per second, giving severe flicker.

Each of these defects, however, can be overcome by stepping up the field frequency, and an American Company, using this system, achieved an acceptable result, by increasing it from 60 to 144 fields/sec. To maintain the permissible bandwidth, however, the number of lines per frame had to be reduced from 525 to 405.

We see, therefore, that in a sequential system, each primary, instead of being transmitted continuously, is "sampled" rapidly. For convenience, we may crudely say that our transmission keeps "changing color." In the field sequential system just described, it changes after every field, but there is another system, in which it changes after every line.

In the camera, a special optical system focusses the three images on to the one target, side by side. As the scanning beam travels across, it scans one line of each image. Since it is also descending vertically, however, it will scan the next alternate line of each image. For example, if it scanned line 1 of the green image, it would scan line 3 of the blue, and line 5 of the red.

The receiver uses a special tube, whose face has three phosphor coatings, side by side, corresponding of course to the three images on camera target, and each giving a different color. A special optical system "combines" these three coatings so that to an observer, they appear to coincide, forming one frame, in which the lines are reproduced in the order green-blue-red, green-blue-red, etc. This is called the "line sequential" system and, since it uses the same line and field frequencies as the standard monochrome system, its pictures can be received in black and white on existing receivers, without modification. It is therefore classed as a "compatible" system.

It has, however, some grave disadvantages. Any line of a pure primary color is scanned only once in six fields, and in a 60 field/sec. system (as used in American experiments), it appears only ten times per second, causing "inter line flicker," and apparent vertical movement of the horizontal lines, called "line crawl."

Before dealing with the next color system, let us review a little elementary theory. In

article 3 we briefly mentioned the "picture element," which is defined as the shortest distance along a scanning line, in which the shade can change from white to black. Each line of a television picture is therefore composed of a row of elements, which correspond to the grain particles in photographic film, and the dots, which constitute a printed photo (in a newspaper, etc.). For convenience, we will call these elements "dots."

Now examine a newspaper photo carefully and note that at normal viewing distance, the individual dots cannot be distinguished. They appear to merge into areas of uniform shade. Now, if these dots were of different colors, the viewer would not see their individual colors, but the resultant. We therefore have another method of blending colors. Let us see how this can be used in television.

We have already seen that in any sequential system the received picture is continuously changing color, so rapidly that the viewer apparently sees the colors combined in one picture. So far we have tried changing the color after every field, and after every line. Having seen how each line is received as a row of dots, let us now try changing the color after every dot!

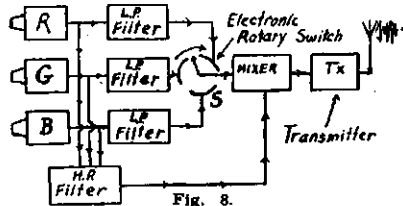


Fig. 8.

Consider the three cameras in Fig. 1. Instead of connecting each one to a separate transmitter, let us connect them alternately to the one transmitter, as in Fig. 8, by the rotary switch, so that at any instant, only one camera is on the air. Momentarily ignoring the filter circuits, suppose S be an electronic switching device, operating at such a high speed, that each camera is on the air only for the duration of one dot! Yes, we have done it! Each line is transmitted as a row of dots, each representing a different primary color.

For reception the arrangement in Fig. 3 can be modified, so that the three cathode ray tubes are alternately connected to the one receiver, through an electronic switch similar to that in the camera unit, and synchronized with same.

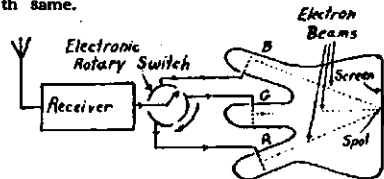


Fig. 9. Tri-color Tube

In place of the three tubes, however, we can use the special tri-color tube, illustrated in Fig. 9. This tube has three electron guns, and a screen with special phosphor coating, which can glow in either red, green or blue, depending upon the angle, from which the electron beam strikes it. Gun B is placed so that wherever its beam strikes the screen, it will produce a spot of blue fluorescence. Likewise, guns G and R are placed so that their beams will always produce spots of green and red, respectively.

The three beams scan the screen concurrently, so that at any instant, all beams are directed at the same point. Only one of them, however, is active. In other words, the three grids are biased, so that at any instant, only the one connected to the receiver will give its beam sufficient intensity to produce any visible fluorescence. Screen is therefore scanned by a spot of light, whose color is rapidly changing, so that each line of the picture is "painted" as a row of dots, of different colors. In a white line, for instance, the dots would run in the order: green-red-blue, green-red-blue, etc., each dot so small, that at normal viewing distance, they would appear to merge into the resultant—white.

This method is therefore called the "dot sequential" system. In actual practice, the three-camera arrangement in Fig. 8 is replaced by the apparatus in Fig. 10, which was three camera tubes, but only one optical system. Color filtering is performed by three special mirrors, each reflecting only one primary color and allowing all other colors to shine through it. They are therefore called "color selective" mirrors. This system is "compatible," i.e. its pictures can be received in black and white on existing sets, without modification. Furthermore, this system lends itself to a unique modifi-

fication. Readers familiar with color printing will know that a color picture is printed in four stages, viz.: three primary colors and a fourth in black and grey. This fourth "impression" serves two purposes. Firstly, it brings out the fine picture detail more clearly, and secondly, it covers up minor faults in color registration (Fig. 5).

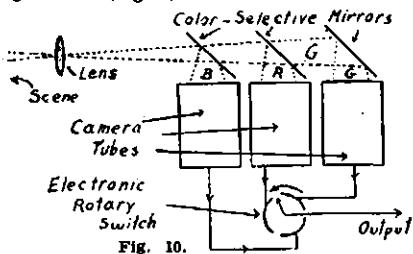


Fig. 10.

In effect, it outlines every object in black ink, and it achieves this by simply reproducing all the finer details in black and grey, leaving only the larger areas in color.

Now in the dot sequential system, the same effect is achieved electronically. Remember, the finest picture details will produce the highest video frequencies. Looking back at Fig. 8, we now see what the filters are for. The low-pass filter, connected to each camera blocks all frequencies above about 2 Mc., so that only the lower video frequencies reach the switch. The remainder are "collected" by the high-pass filter mixed, and inserted in the signal ahead of the switch, and will therefore be continuously transmitted, irrespective of which camera is on the air.

In the receiver, therefore, these higher video frequencies are applied to all electron guns, irrespective of the colors represented. Consider the effect. Each negative half cycle (above 2 Mc.) will cut off all three electron beams, so that the reproducing spot (i.e. the spot that changes color!) will momentarily turn black. Each positive half cycle, on the other hand, will release the three primary colors, in the correct proportions to produce white, or grey. The net result is that all details less than about eight dots in width, are reproduced in black and grey and only the larger ones in color. Since there are over 400 dots per line, eight is only a small percentage.

This principle is applicable only to the dot sequential system, since the other systems make no distinction between the dots, along each line. These dots have further significance, which is worth mentioning. They are a measure of pictorial detail, or "resolution," as it is termed. The more dots per picture, the clearer will be the background "close-ups" not being appreciably affected).

For comparison, 35 mm. theatre film uses about one million dots per frame; 18 mm. home-movie film uses 200,000-250,000, while 8 mm. home-movie film uses only 50,000!

And television? Let us first explain. Each dot represents half a cycle of video current, so that the number of dots per frame is limited by the bandwidth of the signal, so that although the height of each dot is fixed (equals thickness of scanning line!), the length will depend upon the highest video frequency the system can handle. Each dot is therefore oblong rather than square. (Read the definition again.)

American television therefore achieves resolution of about 200,000 dots per frame, in monochrome. In the field sequential color system, this is reduced to about 166,000. In the line sequential system, it's appreciably higher than this, whereas the dot sequential system achieves the same resolution as monochrome, viz., 200,000. Australian television should have greater resolution than its American counterpart, since we will use a lower field rate, while allowed a greater bandwidth, so the number of elements per line can be increased proportionally.

Of all color systems, the dot sequential seems the most promising but it has its drawbacks. Firstly, in both camera and receiver, there are three separate scanning beams, introducing difficulties in both color registration (Fig. 5), and color balance. In white, and in flesh-tints, the slightest misbalance can ruin the picture. Furthermore, the tricolor tube used in this system is extremely expensive to manufacture, nor does it lend itself to mass-production.

The field sequential system, on the other hand, uses only one scanned surface in both camera and receiver, nor does it rely upon colored phosphors for color reproduction, but purely upon color filters, which, being an older invention, have naturally reached a higher standard of development, color registration, balance, and fidelity, are therefore achieved automatically and with much cheaper apparatus than other systems. It was mainly for these reasons that the Federal Communications Commission (U.S.A.) approved of the field

sequential system, back in 1950, in preference to the other methods.

To realise these advantages, however, the receivers must use mechanical color control (although adaptable to electronic methods). This is inconsistent with modern practice, which tends to eliminate moving parts. In any case, this system is incompatible, inevitably using non-standard line and field frequencies so that its adoption would make all existing receivers obsolete.

The line sequential system suffers inherent line crawl, interline flicker, and reduced apparent vertical resolution, and seems incapable of much improvement.

In view of the problems imposed by color, one might well ask whether color television is really necessary. Unfortunately, the answer is "yes," for two reasons.

Firstly, for educational purposes. Chemistry students, for example, can learn little, by watching experiments, or demonstrations by television, unless they can also see the color changes in chemical reactions. To medical students, color is equally important, in the television of a surgical operation, and similar arguments can be applied to almost every branch of science.

The second reason is less apparent, but equally important, and is best understood by comparing television with a newsreel. In the latter case, the film, before screening, can be examined, and modified. Scenes of no interest can be cut out; those too long can be cut shorter, and the strips finally selected for inclusion can be arranged in whatever sequence will prove the most entertaining, and pieced together, to be further enhanced by a rehearsed commentary.

Now in television, where the programme must go direct from scene to screen, this "second chance" does not exist, and in any unrehearsed type of programme, it often becomes very difficult to hold the attention of the audience. Long periods may elapse, before anything interesting happens, yet, cameras must remain trained on the scene, in anticipation. This is where color would help enormously, by providing extra "channels" of interest.

During a cricket match, for instance, color would allow the audience, during lulls between runs, to study the surroundings of the oval, to say nothing of dress fashions amongst the spectators. In general, color would maintain the interest of the audience, wherever programme material failed. There is ample motive, therefore, for scientists to perfect color television, however long this may take.

It is encouraging to compare color television with talking pictures, which were first screened as early as 1912, but not perfected until 1928, and the first attempt were so futile, that they literally disgusted their audiences. Color television is going through this same phase, and some day it will surely reach the same standard and be just as common as talking pictures are today.

In October, 1951, America suspended all work on color television, to conserve materials for defence needs. Meanwhile, it is quite probable that electronic research in other fields will provide the clues to perfect a color system far superior to those described here.

Although attention has been concentrated upon sequential systems, there is still hope for simultaneous systems, which would overcome most flicker problems. They were originally put aside because of the excessive bandwidth required, but methods of condensing this bandwidth, without sacrificing picture quality, are still being sought. For instance, some scientists claim that in the wide band covered by a video signal there are certain odd frequencies never used, and are investigating the possibility of using these, to carry the extra detail required for color. Nor has Britain been asleep, during all this research work, across the water. She has done some very important color experiments.

Well fellows, that is the story of television. We hope you have found these articles interesting, and if they help you to prevent t.v. when television comes to Australia, they will have admirably fulfilled their purpose. Meanwhile, try and keep up to date with the latest developments in television (described in most radio magazines), and remember, our query service will still continue, so keep those questions rolling in. All queries received by 3ADA (at the given address) are answered directly, by mail, and any that may interest fellow readers are answered in duplicate, the second copy being submitted to this magazine, to be published anonymously, when space permits.

Queries need not be confined to the subject matter of these articles. Already many interesting questions have been received from readers, concerning aspects of television of which they had read in other magazines, but which we had purposely excluded from these articles for simplicity. We strongly encourage readers to submit queries of this type, since they are a measure of your interest in the subject, and we are delighted to answer them.

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 2ADB—A. A. Cheetham, 9/26 Manion Ave., Rose Bay, Sydney.
 2AJO—J. S. W. Edge, Wallace St., Coolamon.
 2AJX—H. R. Barrington, 243 Anzac Pde., Kingsford.
 2ANZ—J. P. Shortall, 28 Lower Wycombe Rd., Neutral Bay.
 2APV—A. H. Gray, Station: 35 Blues Point Rd., McMahons Point, Sydney; Postal: 35 Middle St., McMahons Point.
 2APX—E. Piraner, 47 Jubilee St., Dubbo.
 2AVB—R. W. Pratt, 73 Bassett St., Hurstville.

Victoria

- 3FK—J. B. Neale, 91 Francis St., Bairnsdale.
 3LW—A. F. E. Nickson, 18 St. Andries St., Camberwell, E.8.
 3NV—G. E. Nixon Smith, "Edgemont," Derrinallum.
 3SV—J. F. Howarth, Faraday, via Chawton.
 3TV—A. E. Styles, "Allendale," Warrigal Rd., via Ashburton, Holmesglen.
 3ABL—Dr. J. D. Blackwood, 10 Mooltan St., Flemington, W.1.
 3ACA—J. A. Adcock, 75 Gordon St., W. Coburg.
 3AFT—J. H. Gribbon, 55 Churchill St., Morwell.
 3ATG—Dr. E. Marks, Station: Heatheret Rd., Sassafras; Postal: 1150 Malvern Rd., Malvern.

Queensland

- 4XH—H. A. Perkins, c/o. A.W.A. Aviation Service, Station 4TO, Townsville.
 4JK—J. H. Cruice, Kilcay Rd., Woodford.

South Australia

- 5OB—W/O Baker, L. O. C., R.A.A.F. Station, Mallala.
 5RS—R. S. Edgar, 34 Lily St., Blair Athol.
 5SC—E. K. Broadbridge, 161 Coglin St., Brompton Park.

Territories

- 1SD—R. J. Hoseason, Heard Island.
 1PN—A. M. Ferriman, Heard Island.

ALTERATIONS

New South Wales

- 2DW—Lot 187, Dargan Street, Bass Hill.
 2GX—8 Macleay Street, North Ryde.
 2LX—265 Ocean View Road, Etalong.
 2OT—38 Hebburn Street, Newcastle.
 2RS—Room 17, Central Chambers, Kiewa St., Albury.
 2TS—S.S. "Iron Kimberley," c/o. B.H.P. Ltd., Newcastle.
 2ABT—Electrical Engineer, Ulan County Council, P.O. Box 91, Coonabarabran.

2AFD—Ocean Avenue, Woonona.
 2AFQ—Vessel "Syangie," c/o. Box 3787, G.P.O., Sydney.

2AIL—11 Wessgarth Street, Turner, A.C.T.
 2ASM—10 Monash Parade, Dee Why.

Victoria

- 3GY—11 Beatrice Street, Burwood.
 3IT—6 Olinda Avenue, Olinda.
 3IZ—High School, Yarram.
 3JY—c/o. 3HA, Hamilton.
 3OD—Brighton Street, Frankston.
 3ADG—2 James Avenue, Highett, S.21.
 3AFW—2a Janley Grove, Ascot Vale.
 3AMR—580 Barkly Street, Footscray, W.12.
 3ANL—Victoria Street, Kerang.
 3ARB—c/o. 21 Bennett Road, Horsham.

Queensland

- 4CI—58 Musgrave Road, Red Hill, Brisbane.
 4DE—Married Quarters, "Camp Magnetic," R.A.A.F., Townsville.
 4ES—9 Paxton St., Holland Park, S.E.3.

South Australia

- 5MA—Cr. Barwon and Eighth Sts., Renmark.
 5FL—2 Dev Street, Kent Town, Adelaide.
 5QI—Oleanda Street, Brighton.
 5RD—415 Seaview Road, Henley Beach.
 5VJ—Lincoln Place, Port Lincoln.

Western Australia

- 6LK—35 Schmitt Road, Kalbarunda.
 6WT—9 The Grove, Wembley.

Territories

- 1RF—Heard Island.

DELETIONS

N.S.W.: VKs 2FR (now operating under 3SV), 2FP, 2SD (now operating under 1SD), 2WO (now operating under 4XH), 2AGN (now operating under 3NV), 2AJX, 2AKC.

Vic.: VKs 3AM, 3DY, 3OR, 3PN (now operating under 1PN).

Qld.: VK4ZU.

S.A.: VKs 5LZ (now operating under 3FK),

5TS (now operating under 3TV).

W.A.: VK6PX.

— . . . —

WAS IT YOU?

An Open Letter to a Ham

Dear OM,
 Yesterday afternoon I heard you on —Mc. I know it was you for I've known you for years and I recognised the voice. You put your carrier on and off several times during twenty minutes, you counted, you said "hullo test," you whistled, you muttered something to

someone else in the shack, but not once did you give your call sign. Even assuming that in that you were not committing a breach, what have you against your call sign? Don't you like the sound of it unless from a DX station? Doesn't it make a good "test" pattern on your c.r.o.?

Do as much of your testing as you can on a dummy, OM, and when you must test on the air, give your call. You may not have meant it that way, but what you did yesterday afternoon sounded like deliberate flouting of the "regs." coupled with a deliberate attempt to fool the monitoring station. Don't do it, OM! Whether you mean it that way or not, it's a pretty poor show. There's no room on the Ham bands for the anonymous signal.

—73, VK6WZ.

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High tension voltage of 1,000 volts D.C. on load at 350 Ma. is available for transmitter supply. Coarse and fine controls are brought out to the front panel giving a range of H.T. voltage adjustment from 20 to 1,100 volts in approx. 20 volt steps. A plate voltage meter facilitates setting of the step switches to any voltage within this range.

All the above supplies are protected by individual breakers in the primary circuits. In addition, they are interconnected and protected by a time delay relay and low temperature thermostat to prevent application of the plate voltage before the rectifier filaments have reached operating temperature and the mercury vapourised. If the ambient temperature is below 65°F., heating coils operated by a thermostat raise the temperature of the rectifier tubes to 65°, during which time no plate voltage can be applied even though the "start" button is depressed. A third thermostat controls the operation of a forced air ventilating fan.

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FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

NEW SOUTH WALES

Activity generally on the v.h.f. bands has been mainly confined to the 144 Mc. band. A direction finding field day was held and won by 2AAA under the guidance and control of 2OK.

The annual election of officers took place with the following results: 2ANF, Chairman of Group and Country Liaison Officer; 2AOA, Vice-Chairman and Convener of Management Committee; 2AJZ, Secretary; 2HL, Field Day Organiser; 2OA, Contest Organiser; 2MQ, Publicity Officer; 2HL, 2OA and 2MQ, also constitute the Management Committee; 2WJ, 580 Mc. Co-ordinator.

The chairman, 2ANF, has just spent four weeks in Forbes during which period he inculcated a little more enthusiasm for the v.h.f.s. among the country Hams. During his trip he visited the following stations: 2BT, 2TA, 2WH, 2NS, 2APP and 2II, also met 2GU, 2AMR and 2AEL. It was made quite evident that the activity and enthusiasm in the Western and South Western Zones of N.S.W. are quite high and with the spate of building going on, some very reliable inter-country contacts are assured.

50 Mc.: Activity somewhat lower than usual with 2ADT, 2RU, 2VW, 2NP and 2HE among the most consistent.

144 Mc.: Most activity has been confined to this band with some outstanding contacts between 2WH, at Forbes, and 2ANF, 2ATO, 2AJZ, and 2ABB, all of Sydney. 2ANN, also of Forbes, established his first contact with 2ANF of Sydney. 2NS and 2WH are heard most consistently in Sydney during the evenings. 2NS is building a new final and cascade converter, 2WH also building a new cascade converter. 2GU of Gosford is now on 144 Mc. and puts a good signal into Sydney.

580 Mc.: 2HL, 2VW, 2AJZ, 2DF, 2ABZ and 2WJ most active on this band with 2VW trying a new many-stacked co-axial array.

At the last V.h.f. Group meeting it was proposed to conduct a Statewide Field Day Weekend Eight Hours Day, October, in co-operation with the Gladsville Radio Club with all Sydney stations and country stations out on the major mountain tops. In this respect, a group headed by 2II with 2NF and Cec Cronin in the party went to Barrington Tops, many miles

north of Sydney and succeeded in making contacts with Sydney under the most trying conditions.

VICTORIAN V.H.F. GROUP NOTES

Results of the Field Days Contest are as follows—Portable Stations Section: 1st, 3GM, 238 pts.; 2nd, 3ACH, 214 pts.; 3rd, 3FO, 186 pts.; 4th, 3JO, 166 pts.; 5th, 3AJI, 70 pts.; 6th, 3ABA, 60 pts.; 7th, 3ADU, 28 pts. Home Stations Section: 1st, 3ABA, 45 pts.; 2nd, 3ADU, 29 pts.; 3rd, 3AZK, 5 pts.

3GM receives a 2E26 donated to the Group by 3XA as the prize for the portable section, and 3ABA receives an order to the value of £2/10/-. As will be seen from the foregoing, only ten logs were sent in, whereas more than three times that number of stations participated and it was expected that many more logs would have been received. It appears obvious that the majority of stations have no interest in Field Day Contests and it is unlikely that any more will be arranged.

The attention of the Group has been directed towards arranging its exhibit at the forthcoming Exhibition and a committee comprising 3ABA, 3AJG, 3XA, 3ALZ, 3AHD, and 3JO has been formed to handle all the necessary arrangements. This committee has met and some plans formed, but suggestions are always welcome and a need exists for some equipment for display and some assistants to man the stand during the Exhibition. All offers of help would be greatly appreciated and should be directed towards the committee members.

Equipment promised so far includes a 100w. Tx for both 144 and 50 Mc. and a crystal controlled Rx for 144 Mc. A turnstile antenna for each band is being made and enough co-ax lead to feed them has been promised. A 50 Mc. converter or receiver is needed for the complete working model as well as various other pieces of equipment for display purposes.

Ray 3RJ had an interesting contact on 20 mc recently with Russ 9XK, and kindly passes on the following news. Russ expects to be returning to Melbourne about next August when he no doubt will resume his old call of 3XK. His initial contacts from Papua with each State on 50 Mc. during the last DX season were VKs 4BT, 3UI, 2WH, 5MK and 7LZ. Unfortunately

no luck with VK6. The North Eastern Zone certainly led the field for Victoria, as the first two VK3s contacted were 3UI (twice) then closely followed by 3APP. We hope that Russ may see his way clear to come along one evening and tell us some of his VK9 experiences.

WESTERN AUSTRALIA

50 Mc.: Only ones active are 6HK, 6GB, 6DW, 6FC, 6BO, and 6RK. 6GS is threatening to come back on the band. 6FC has a very nice array on 50 and 144, but is troubled by some noise which seems to be coming from the power transformer at the end of the h.v. line from Marrogin. 6HK's new 834 final nearly ready to go.

144 Mc.: 6AG, 6OR, 6KW and 6WT have been on of a Sunday evening. I believe that they have altered sked time to 8 p.m. Also believe I heard 6JS. 6DW has put in a new tank circuit and has silver plated same. 6GB is talking new beams for this band. A couple of the new QQEOB/40s have found their way into some shacks. One found its way into 6BO's but was taken away again with loving care! Still it was good to have seen one. A new lining in 6HK's shack should make Don feel warmer during the next few months. Home comforts indeed, a lined shack and a pair of 834 radiators!

50 Mc. W.A.S.

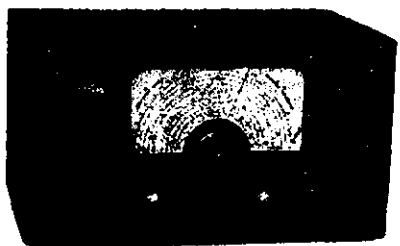
Call	Certificate Number	Additional Countries
VK2VW	9	3
VK2WJ	13	3
VK4RY	2	2
VK4HR	4	2
VK6LC	1	1
VK6DW	3	1
VK3PG	5	1
VK3RR	6	1
VK3HT	7	1
VK2AEZ	10	1
VK3XA	11	1
VK3GM	12	1
VK3ACL	14	1
VK3ZD	16	1
VK2ABC	8	
VK2WH	15	

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Free Data Sheets on Request

Interstate Representatives: West. Aust.—Messrs. Atkins (W.A.) Ltd., 894 Hay St., Perth. Queensland—Messrs. A. E. Harrold, 123-5 Charlotte St., Brisbane. In other States direct your inquiries to firms handling Bright Star Crystals.



Valves, new, boxed, RCA 834s, £1/8/- each.

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Limited number of the following Taylor Tubes: TZ20s, £2/10/- each; TB35s, £6/10/- each.

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DX NOTES BY VK4QL*

This month, my own time on the bands being infrequent and having some leave in the Mackay area, most of the material comes from the regular contributors, some of them apparently being too inactive to drop a line this month. Please let me have your material by the 28th of the month. All sources confirm that the bands are very flat and not much DX has been about. The main interest to DXers has been the release of the 21 Mc. Its general release to all continents is in doubt at the present time, as some have heard and worked the odd European, but a DL told me the band had not been released over there, so maybe those heard are not there with official approval. The band survey, with stations worked*, and times in G.M.T. (z time):-

3.5 Mc.: 4XJ had a listen on this band (28 Mc. must be bad eh Les?) and heard a few KH6, KH8ABY being ST. 7RK still unable to do anything better than VK and ZL on this band. Why not make a sked with KC6QY Ray? He uses the band.

7 Mc.: The notable absentee has been Radio Pakistan which leaves quite a part of the l.f. end of the band free for any possible DX. My own observations have shown the band useless for VK or DX contacts. 2AMB has been giving the band some attention and was rewarded with HH2FL and VR4AF. 3CP did not have a very successful month, hearing plenty, but not being able to raise them. Athol lists VR4AF*, MD50G*, VQ4HJF*, VP8AA*, KP4CC*, GC2CNC, ZE3JP, VQ2GW, TA2EFA, FT9GX, ZE3K.

* Fil./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

DX C.C. LISTING

PHONE

Call	No. Ctr.	Call	No. Ctr.
VK3EE	10 163	VK4WF	18 121
VK4HR	12 160	VK4JP	8 114
VK3JD	1 155	VK3AWW	14 112
VK3BZ	3 154	VK4DO	20 109
VK8RU	2 152	VK4RW	23 104
VK4KS	9 152	VK5MS	24 104
VK6KW	4 145	VK2ADT	13 102
VK3LN	11 141	VK2AHA	15 102
VK4FJ	21 135	VK6PJ	19 101
VK8DD	6 128	VK4RT	22 101
VK2JE	7 123	VK3IG	5 100
VK4WJ	17 122	VK3GG	18 100

G.W.

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 200	VK4RF	11 125
VK4HR	8 182	VK3JE	21 124
VK3FH	15 177	VK3YD	27 123
VK4EL	9 167	VK3EK	3 122
VK2EO	2 152	VK3JI	25 118
VK3CN	1 151	VK3PL	38 117
VK6SA	28 150	VK3UM	12 116
VK3CX	26 150	VK7LJ	24 114
VK4FJ	29 150	VK4DA	7 113
VK3VW	4 143	VK7LZ	17 112
VK2QL	5 142	VK4RC	13 107
VK8RU	18 141	VK3YL*	39 106
VK5RX	23 140	VK2YC	34 103
VK3KB	10 138	VK3HT	37 103
VK5FH	31 134	VK3APA	14 101
VK5BO	33 133	VK3NC	19 101
VK2GW	16 132	VK2OA	22 101
VK4DO	20 129	VK7RK	22 100
VK3XK	30 128	VK2AEZ	35 100
VK4QL	36 128		

OPEN

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 213	VK3AWW	45 115
VK4HR	7 206	VK3JA	43 114
VK8RU	8 186	VK2ADT	14 113
VK3JE	12 180	VK4RW	52 113
VK4FJ	32 173	VK3PG	47 111
VK3HG	3 171	VK3MM	49 111
VK2DI	2 170	VK4RC	21 110
VK3KX	1 167	VK3ZB	34 110
VK4EL	10 167	VK2ZC	25 108
VK4KS	24 167	VK2YL	11 106
VK6KW	13 165	VK3AWN	38 105
VK4DO	15 157	VK2VN	18 104
VK3LN	29 144	VK4UL	27 104
VK5FL	28 143	VK5PJ	44 104
VK3MC	5 139	VK6PW	50 104
VK3OP	19 137	VK2HZ	17 103
VK6DD	22 136	VK7KB	30 103
VK2ADE	28 133	VK2TI	37 103
VK2AHA	9 128	VK3HO	38 103
VK4WF	40 128	VK6DX	42 103
VK2AHM	20 125	VK7RK	31 102
VK2NS	16 123	VK4TY	35 102
VK3HT	41 123	VK9GW	48 102
VK3JI	33 119	VK5HI	51 101
VK7LZ	23 116	VK2ACK	6 100
VK3VQ	46 116	VK2TG	39 100

TA3AA, CT1DJ, HL1AA, HK4DF, RH2FL, so it's there if you can make it. Athol put his 7-watter on to work W2FKE, 4XJ spent some time on this band, getting amongst the North Americans, also KV4AA, VR4AF, KM6AX and VK1RG. 4QL, by a QSO with CO3BU brought his 7 Mc. country total to 70. Also logged HL1AA, KC8QY, ZS8AIA. 20W can't hear anything decent on this band. 9XK heard chasing Vermont and Utah to complete his W.A.S. before he returns South again. Managed to get VR4AF and W0EGY/KJ6. 7RK has been hearing some good signals from North America and KV4AA. Ray heard a few Europeans one morning. KC6QY was the only other station of note for him.

14 Mc.: This band has not produced any reliability as yet. At this QTH the hours of darkness produce a dead band, but there has been some slight but erratic improvement in the afternoons. One morning opening to Europe was observed. 2AMB managed two new ones in ZC4XP and MF2AA. Heard 8CX madly calling EA9DC. 8CP heard some South Americans at 2200z on 13th May. Also heard FB8Z and F18AB in a long QSO early one evening. 4QL did not do much good and lists EA9DC, YS10*, M13LK, EA8AF, EA8BM, KV4AA*, KV4AK. All these in the afternoons and at poor strength. 7RK finds this band improving, but erratic in the afternoons. Lists T12PZ, KH6PA/KB6*, F18AB*, E14G, E12T. Said he is doubtful if there is an active station in Zone 38. Keep listening Ray, you never know. 9XK landed SUIAD*, EK1AO*, FKS8BC*, ZC2MAC*, VQ8CB*, KG6IG* (Bonin Island).

21 Mc.: For quite a few, this band has been watched most closely in an attempt to see how it behaves, but generally everybody has been disappointed. No stability and sudden disappearance of the stations in QSO. 3CP and 7RK reaped little reward for their labors. 3JE found the opening day OK and got across to South America OK. Some of the prefixes worked are W, VE, KH6, KG6, KC6, KG4. 3CP has reached all Ws except W8. The general opinion is this will be a good band when conditions improve.

28 Mc.: 7RK and 4XJ found little to hold their attention on this band.

The QSL situation has brightened the clouds for some. 2AMB very pleased with one from ZD6DU and 20W's stocks went up with PK4DA, ZS1BM, KG4AF, PJ1UF, HS1SS, and KX8AB. 4EL very pleased with one from FB8AG and VK1BS. 4QL improved his with M13SL, M13LK, VK1BS, ZS2X, F9QV/FC, ZC4XP, ZC4KN, FB8AG, FY7YB, and Z53K, some for 7 Mc. TRK, FKS8AA, HG8AT, GW3ZV, CO2OE, KR6FK, PJ1UF, EQ8FM, OX3MG (1948).

The gen section is a bit vacant, but KV4AA helps out again. For those who are not aware, EA9DC is operating from Inl, and is possibly going to Rio de Oro in July. FO7AW, who is HB9AW, is on from Clipperton Island. ZC2MAC on Deception Island does not seem to be heard in VK, but is apparently on the band round 1300z. 9B3AA may possibly be heard soon signing LZ3AA. Believe a VK3 has his QSL.

The thought for the month comes from 7RK's watch on 21 Mc., and is: "Because we have a new band, it's not open season to break the Gentlemen's Agreement, the dividing line being 21,150 Kc."

"OPERATION BUSHFIRE"

Throughout the district of Victoria, members of the St. John Ambulance Brigade are organising to meet the above emergency, that is an ever present danger during the summer season, Bush Fire.

It is with a view of organising some means of rapid communication during this emergency, that the Amateur Radio members have been approached. It is felt that with their co-operation all services concerned in this emergency may benefit. Transport of vital supplies and requests for personnel can be readily organised and much time can be saved by relaying of the urgent messages. Such assistance would have been greatly appreciated during the recent fires. It is felt that with a definite plan in operation, liaison between the Amateur Radio operators and the St. John Ambulance Brigade will have a very beneficial effect.

ACCURATE FREQUENCY TRANSMISSION RESULTS

New measuring equipment at the Checking Centre enables the frequencies to be given at the beginning and end of the one-minute key-down period. In the following lists the first correction given is the beginning of the period. L = Cycles low; H = Cycles high.

3500 Kc.	5 L.	8 L.
3530 Kc.	50 L.	60 L.
3560 Kc.	16 L.	20 L.
3590 Kc.	16 L.	22 L.
3620 Kc.	16 H.	12 H.
3650 Kc.	24 H.	24 L.
3680 Kc.	45 L.	52 L.
3710 Kc.	8 L.	2 L.
3740 Kc.	56 L.	68 L.
3770 Kc.	5 L.	1 H.
3800 Kc.	38 L.	40 L.

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Operating Awards and Diplomas

COMPILED BY RAY JONES, VK3RJ,
FEDERAL QSL MANAGER

The following list, whilst not complete, may prove of assistance to members. Australian and New Zealand Awards are not included herein.

Great Britain, B.E.R.T.A.: Proof of contact with 25 of British Dominion Call Areas and 15 British Colonial Call Areas. Apply R.S.G.B. Charge: 2/6 stg.

Great Britain, H.B.E.: Proof of hearing above areas. Apply R.S.G.B. Charge: 2/6 stg.

Great Britain, W.B.E.: Proof of contact with one Empire station in each of the five Continents. (North and South America counted as one.) Apply W.I.A. Charge: 2/6 stg.

Great Britain, Empire DX Certificate: Proof of contact with 50 Empire Countries on 14 Mc. A separate Certificate issued for contacts with 50 Empire Countries on all bands other than 14 Mc. Apply R.S.G.B. Charge: 2/6 stg.

U.S.A. (I.A.R.U.), W.A.C.: Proof of contact with one station in each of the six Continents. Apply W.I.A. Charge: Free.

U.S.A., W.A.S.: Proof of contact with one station in each of the 48 States of U.S.A. Apply A.R.R.L. Charge: Free.

U.S.A., DX C.C.: Proof of contact with 100 Countries since 15th November, 1945. Apply A.R.R.L. Charge: Free.

Germany, W.A.E. (Worked All Europe): Details on request to this Bureau. Too lengthy to publish in full. Apply D.A.R.C. Charge: 10 Reply Coupons.

Spain, Espana Diploma: 125 contacts with EA stations including three with each of the nine districts. Since 1/1/52. Apply U.R.E., Madrid. Charge: Free.

Italy, W.A.I.P. (Worked All Italian Provinces): Contact with 60 of the 93 Italian Provinces. List held at this Bureau. Since 1/1/49. Apply R.C.A., Ravenna. Charge: Free.

Cuba, Worked Cuba Award: Contact with 7 of the 8 radio districts of Cuba. List held here. Apply W.I.A. Charge: Free.

Brazil, W.A.A. (Worked All Americas): Contact with 45 countries in the Americas. List held here. Apply L.A.B.R.E., Rio de Janeiro. Charge: Return Postage.

Denmark, OZ-C.C.A. (OZ Cross Country Award): Contact with 15 of the 25 radio districts in Denmark on points basis. Details held here. Apply E.D.R., Aalborg. Charge: Five International Coupons.

France, D.U.F.: Four sections. Contacts with stations of French Union. (1) 3 Conts., 5 Countries; (2) 4 Conts., 8 Countries; (3) 5 Conts., 10 Countries; (4) 6 Conts., 16 Countries. Each to include Europe as one of Continents. Sections may be obtained progressively. List of Countries held here. Apply W.I.A. Charge: Free except 4th section which is a medal; fee 700 Francs.

France, D.P.F.: Contacts since 1/1/51 with 16 of the 17 Provinces of France. List held here. Apply R.E.F. Charge: Return Postage.

Chile, W.A.C.E.: Contact with each of the seven radio districts of Chile. Apply R.C.C., Santiago. Charge: Free.

Sweden, No Title: Post-war contact with each of the seven radio districts of Sweden. Apply S.S.A., Stockholm. Charge: Ten Reply Coupons.

British East Africa, W.E.A.: Contact with one VQ3, one VQ5, and three VQ4 stations in

any year (1st Jan. to 31st Dec.), gives entitlement to an Annual Certificate. Five of these Annual Certificates plus one VQ1 contact makes the final award (W.E.A.). Claimed to be something special in awards. Apply R.S.E.A., Nairobi. Charge: 5/- each Annual Certificate, and 5/- fee for W.E.A.

Canal Zone, No Title: Contact with ten different KZ stations. Bigger and better Certificate for contact with 25 different KZ stations. Apply C.Z.A.R.A. Charge: Free.

U.S.A., W.A.Z.: Contact with each of the 40 radio zones of the world. Apply "CQ." Charge: Free.

Applicants for any of the above awards are requested to ensure that all conditions have

been fulfilled before application is made and that the prescribed fee is enclosed with the application. Registration of all verifications is recommended. It is also essential that the application be made direct to the authority listed for each award.

In the past many applicants have taken the easy and oft-times cheap way out by forwarding applications for overseas certificates to the W.I.A. While full information on any award will be given to any applicant, the handling of any application, other than those listed above as W.I.A., cannot be undertaken. Your officials, who gratuitously give their time and energy to Institute affairs, have sufficient legitimate duties to perform, and all mis-labeled applications will, after publication of this list, be returned to the senders.

VK5WI STAND AT EXHIBITION

TECHNICAL DESCRIPTION

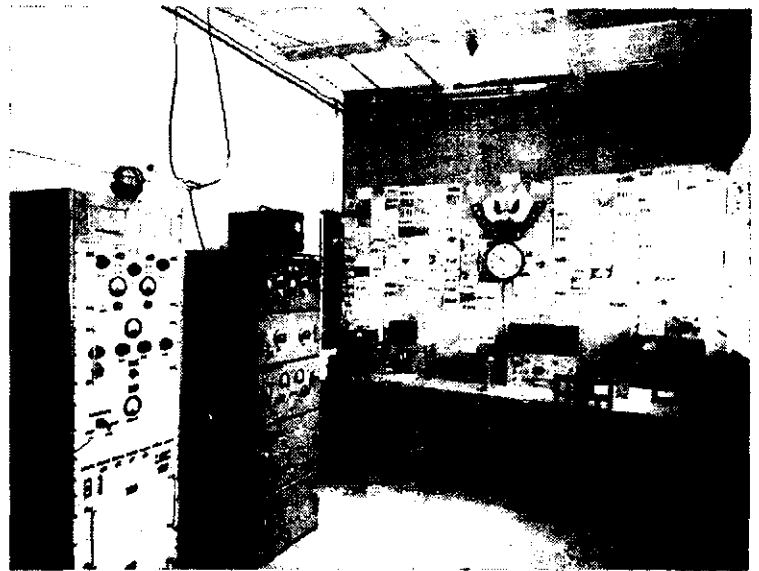
Bands of Operation: 7, 14, 50, and 288 Mc. 7 and 14 Mc. Transmitter: RF-6V6 xtal osc., 807 buffer (doubler on 14 Mc.), and 813 final. Audio-crystal mike to 6SJ7 and 6J5 speech amplifier, 6V6 driver, pair 813s in Class B as modulators. Plate and screen modulating 813 final amplifier.

This transmitter was a converted Philips' broadcast transmitter and was converted by members of the Exhibition Committee. It made a very attractive piece of equipment and there was much favourable comment from members of the public. The transmitter was capable of running inputs up to 300 watts, but to comply with Regulations, the input was reduced to 100 watts and ran at this point for the duration of the Exhibition.

Receiver: AR7 for both 7 and 14 Mc. Antennae: 7 Mc.—The popular 68 ft. "all band" antenna, fed 23 ft. from one end with 300 ohm ribbon. 14 Mc.—Two element close-

by scores of motors driving the many working exhibits and extensive use was made of official 50 Mc. link stations in the suburbs. Stations performing official link duty were VK5GL, VK5HD, and VK5LW where signals were received on 7 or 14 Mc. and beamed to the Exhibition on 50 Mc. It was found that these strong signals completely "killed" the noise and reception was as good as could be expected at any average suburban location. The 288 Mc. link was used on two occasions where there had been a temporary breakdown on 50 Mc., with similar results.

Public Address System: A small public address system was installed with a loudspeaker outside the building. The mixing circuits (seen between the two AR7s in the photograph) allowed operators to relay to the public both the incoming and outgoing signals in order that they may hear both sides of the conversation. There was also a third microphone enabling operators to make announcements to the public.



spaced rotary beam mounted on a 30 ft. steel tower. This was also fed with 300 ohm ribbon to a suitable quarter wave matching section.

50 Mc. Band: Transmitter, R.F.—VT52 xtal osc., 807 doubler, 807 doubler, 834 doubler, pair p.p. 834s final amplifier. Audio—Crystal mike to 6J7, 6J5, pair 6J5s speech amplifier, pair 6L6s sub-modulator driving pair TZ40s in Class AB2 modulators. Plate modulating the pair of 834s. Power input, 100 watts. Receiver: Crystal controlled converter feeding into another AR7 receiver (shown in the photograph at the far left of the operating table). Antenna: Four element rotary beam, mounted above the 2 element beam on the 30 ft. steel tower.

288 Mc.: Receiver only, consisting of 6J6 super regen detector and 6J5-6V6 amplifier. Installed for intercom, purposes only and for use in case of emergency. The antenna was a 3 x 3 beam.

Link Stations: In practice, it was found that very few signals, other than powerful locals, could be received direct due to noise generated

Other Equipment: Oscilloscope—Seen on top of the 7/14 Mc. transmitter. Frequency Meter—Seen on extreme right of operating table. Panoramoscope—Seen on top of the Frequency Meter and beneath the 288 Mc. receiver.

Duration of Exhibition: The Exhibition opened on 7th March, 1952, running for eight weeks, closing on 3rd May, 1952. During that period, operators made 576 contacts, a number of stations being worked several times. The following analysis (excluding VK5) may be of interest to readers. The figure in brackets indicates the number of individual stations contacted in that District: VK1 (1), VK2 (62), VK3 (41), VK4 (19), VK6 (12), VK7 (10), VK9 (2), ZL (7), VS1 (2), VS7 (1), KL7 (1), KR6 (2), KH6 (1), KG6 (1), JA2 (3), JA5 (1), HB9/MM (1), W4 (3), W5/VK4 (1), making a total of 171 individual stations excluding VK5.

QSL Cards: Special souvenir QSL Cards were printed for the S.A. Division by the S.A. Government Tourist Bureau and a card will be forwarded to every station contacted.

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.



Federal President: G. GLOVER (VK3AG); Federal Secretary: G. M. HULL (VK3ZS); Box 2611W, G.P.O., Melbourne.

FEDERAL IT'S FREE!

By courtesy of Mr. Philip S. Rand, WIDBM, of the Laboratory of Advanced Research of Remington Rand Inc., South Norwalk, Conn., U.S.A., a quantity of booklets on Television Interference have been shipped to the Wireless Institute of Australia on application for free distribution to members.

The booklet consists of over 100 pages of the most comprehensive articles on t.v.i., and its causes and cures, that has ever been seen in this country under the one cover. Mr. Rand has excelled himself as editor in producing a complete up-to-the-minute booklet to assist the amateur and engineer to avoid the pitfalls of t.v.i. and how to go about curing the trouble when it exists.

Although Amateurs in Australia are not confronted with these problems as yet, the Amateur with foresight will provide NOW for the elimination of television interference insofar as his transmitter is concerned because as sure as the sun rises in the east and sets in the west, the Australian Amateur will, in the not too far distant future, have to contend with the t.v.i. problems that beset the American Amateur and are at present causing great concern to the British Amateur.

If you as an Amateur member of the W.I.A. are interested in meeting these problems before they reach out and "snag" you, write in to the Federal Secretary, W.I.A., Box 2611W, G.P.O., Melbourne, enclosing a 4d. stamp to cover postage and a copy will be reserved for you and sent on when the shipment arrives. Applications will be filed and numbered in strict sequence as received and copies will be posted out in this order until supplies are exhausted, so be early.

EMERGENCY NETWORKS IN CIVIL DEFENCE

If you have been following the activities of Federal Council and Federal Executive over

the past year or more, you will know that your Divisional Council has a mandate to forward to F.E. a chart showing the organisation set-up of emergency communications in your Division. This information is required for the Minister for Civil Defence so that he will know where the Amateur networks can be drafted into the civil defence requirements.

You have already been told in these columns of the interest displayed by the Minister in the potential worth of the Amateur Movement in any civil defence scheme, and his express desire that he be given a document outlining the complete Amateur system as at present in existence in the Commonwealth of Australia.

F.E. cannot complete this document if you—the man with the equipment, the inclination for emergency communications, and the desire to serve your country during times of emergency—do not advise your Division regarding what equipment you have on hand, the area in which you could operate, the network in which you could participate as an active operator, and details of future equipment you intend to construct that could be useful for communications services in the field at a moment's notice.

Admittedly, defence projects have been somewhat curtailed, but this does not forbid the Institute from continuing with its present emergency communications networks and expanding them to encompass the entire country twenty-four hours a day if necessary.

This is the greatest opportunity the Australian Amateur has had offered to him to show the very highest authority what an Amateur communications network can do when called upon to function. But if you don't initiate the greater envisaged scheme by taking an active interest in constructing suitable equipment and having it ready for immediate service, you will find that other emergency communications systems will be doing the job rightfully belonging to you.

Your Federal Council knows, you know, in fact everybody knows, that you as an Amateur will be ready to offer your services in any

capacity. But that is not good enough! Besides your services you must be ready to offer your equipment too!

Remember, the Amateur's greatest chance to maintain a wartime Civil Defence Network in conjunction with other Services lies in the field of v.h.f.

Already some Divisions have recognised this fact and are encouraging Amateurs all over the country to interest themselves in v.h.f. activities; asking them to get on the air on the higher frequencies; organising field days in attempts to pass messages over great distances by relay stations at strategic points throughout the States. Some of these networks are functioning NOW and growing in strength every day of every month. But many more are wanted, especially in the country areas.

The future of emergency networks lies in your own hands; the privilege of continuing to conduct your unique hobby whilst serving a national need is tightly linked with it. Because you may say you are away out in the bush and cannot be heard on v.h.f. is fast becoming a myth. You—the country man—are the key man in a nation-wide network.

Do today what you will criticise others for having lost tomorrow!

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Johnny Jones, VK3RG, who has been in England since July, 1951, attending R.A.F. Staff College, is due back in VK in July. Shortly after his return it is likely we will hear him under a VK2 call sign.

A Japanese correspondent states that by the end of the current year Japanese stations will be back on the air.

The Danish Society E.D.R., which is presently conducting its 25th year Jubilee celebrations advises visitors that the "grand finale" of the festivities will be held on 23rd August at "Haandvaerkerforeningen" in Copenhagen. Vis-

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Phones: M 1475-76-77

itors will be welcome, and are advised to get in a little practice on how to ask for a rail or ferry ticket to the above locale.

Many attractive and ornate cards have passed through from HZITA, H.R.H. Prince Talal Al Saud with QTH: The Royal Palace, Ryladh, Saudi Arabia. A real posh job in gilt on a waterwave board. A spare is on hand addressed to VK3AW. Rightful owner can have same on application.

The R.S.S.R. (Radio Society of Southern Rhodesia) advise that their QSL Bureau QTH has been changed from Bulawayo, to Box 2377, Salisbury. This society, which now has almost 100 members, expects to be accepted into the I.A.R.U. very shortly.

The QTH of VK9GM is George Meaton, Dept. Civil Aviation, Norfolk Island.

Russ Coleston, VK9XK and VK3XK, expects to return to Melbourne in August. During his comparatively short tour of duty in Papua, Russ has run up 120 countries. In the recent B.E.R.U. Contest Russ was much sought after and ran up 1,500 points in the Senior. On 50 Mc. Russ contacted all VK States except VK6.

Bob Black, VR4AF and VK2QZ, writes interestingly under date of 20th May, from Savo Island, British Solomons, to where he moved from the Trobriands. At the latter location he signed VK2QZ/P and VK2QZ/P/8. He states: "This delightful tropical island is actually a volcano and feels like it. The call VR4AF is a portable station which will be operated on various islands around the Solomons. I am visiting little-known Polynesian atolls in the group which are visited by white men about once a year (Savo is Melanesian). The malaria hunt is still on, but the end is in sight—I mean our return to VK2. We have another five weeks to go. Conditions here are pretty good and the old Type 3 Mark II is doing nicely with a car battery. Although QRM from Ws and expatriate Ws in the Pacific is heavy, I manage to keep my skeds. ZLs are very strong, but the VKs not good on the north side of the old volcano. The QRN in the tropics is not a patch on the QRM in the city on v.h.f. bands, but the QRM and bad manners of the impatient leaves a lot to be desired. I worked 250 contacts from the Trobriands—no Europeans or Africans—but was not out after DX. Enroute to the Trobriands I met Geoff VK9GW, and Maurie VK9MT, also Russ VK9XK at Samarai. He has a lovely site on a hill. One contact made was with a research station on an ice floe at Juneau, Alaska. Have made a few 3.5

Mc. contacts both from the Trobriands and from here—all ZLs, but have heard Ws. The antenna in use here gets itself tied to the top of a coconut palm at the other end. I don't use an earth."

From the D.A.R.C. "Please notice to your information: German authorities have issued all DL calls to German nationals (DL1, DL3, DL6, DL7 Berlin), including DL9ZZ. Reserved for Allied Forces are DL2, DL4, and DL5. Not in official use is DL8. The calls will begin with DJ1AA and will be continued as usual."

A young lad—the son of WYNATNG, of 136 North Stonewall St., Rockhill, South Carolina, U.S.A., seeks a pen pal in Australia. His name is Ed Sanders, and he is 12 years of age and hopes to get a license of his own very shortly. You married guys pass this on to your hopefuls.

Felix Franchette, ex-FK8AC, at present on furlough in France, writes under date of 20th May, to state he arrived safely after a sea trip of approximately two months. Felix states that it is almost certain that he will return to FK8 for a further tour of duty commencing 1953. Hopes to get an F license to cover his year in France, but presently is rehabilitating himself and family and trying out a new 11 h.p. Citroen. Notices a big upward trend in the cost of living in France from his last home visit.

Bill Storer, VK2EG ex-VK1BS, has got boldly behind the job of replying to VK1 QSLs—so much so that he will not be able to get on the air as VK2EG for some time and until he shakes down into a permanent address. Writing under date of 31st May, Bill makes some enquiries as to certificates and states that a couple of overseas DX men have made enquiries of him regarding ex-VK1VU. Requests my assistance regarding the latter! I refer you to previous pars in these notes! Bill, I have washed my hands of this guy as a hopeless task.

NEW SOUTH WALES

The May meeting of the N.S.W. Division of the W.I.A. was held at Science House on the 23rd under the chairmanship of the President, Mr. John Moyle. The office-bearers for the current year, including some appointed earlier, were announced as follows:—President, 2JU; Vice-Presidents, 2GW and one to be elected; Hon. Sec., 2EO; Treasurer, 2RX; Assist. Hon. Sec., 2OA; Class Sec., 2AYE; Class Supervisor, 2BF; V.h.f. Liaison Officer, 2XU; 2WI Co-ordinator, 2JU; QSL Officer, 2YC; Bulletin Dispatch Officer, 2PV; Div. Traffic Manager, 2GW;

Div. Sub-Editor, 2AYP; Hon. Auditor, 2AND; Country Liaison Officer, 2RA; Fed. Contest Committee, 2RA, 2XU, and one to be appointed, to take the place of the late Wal Ryan.

The President read a letter of sympathy to Mrs. Wal Ryan sent on behalf of the Division following the death of her husband, VK2TL, from a stroke on the previous Friday. Wal's funeral was attended by a large number of people including more than fifteen VK2 Hams, as befitting so outstanding a member of the Division. The meeting stood in silence for a minute as a mark of respect to one who worked untiringly for the W.I.A. for so many years.

The Adam's trophy winner was announced. It will be remembered that this was donated for the best article in "A.R." for the year emanating from a member of the N.S.W. Div. It goes this time to 2DG for his article on the "Q" Multiplier.

Ratification of agenda items passed at the Federal Convention was set down as the main business of the evening and ratification or otherwise generally followed the original voting instructions given to the delegate (Vaughan Wilson) at a meeting before the Convention.

The meeting was then opened for general business and amongst the matters discussed were the following: A notice of motion by Wal Nye that all benefits of W.I.A. membership, including "A.R.," cease forthwith for unfinancial members. This brought forth some lively discussion which promises to be even more lively at the next meeting when the motion will be put. The question of pulse modulation was brought up by 2ASR. The reason for its deletion from Amateur privileges in the recent circular from the F.M.G.'s. Dept opening the 21 Mc. band will be followed up.

The lack of Amateur co-operation in checking the accuracy of the monthly prediction charts was raised. These charts are supplied on the understanding that data would be forthcoming from the Amateurs and it was resolved to organise the necessary co-operation.

What proved to be the most interesting item of the evening was an impromptu talk by two visitors fresh from Macquarie Island, Bill Store, VK1BS and Zeb Jeffrey a radiophysicist. Once they were set going by a few leading questions they had the meeting really interested and everybody was disappointed when the meeting had to be terminated owing to the lateness of the hour. We could do with a continuation on some later date. (2GW).

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WESTERN SUBURBS

2AAB has acquired a bug. 2AXZ is now heard with a fine signal, the new reg. power supply is doing a good job. 2ABO operates all bands except 80, new antennae being designed still. 2ARF busy on 144. 2AGG on 144 again, but be operating other bands. 2AGX occasionally misses monthly meeting, nevertheless quite active. 2XH is on 20 a little more often. 2NJ gets around on the odd evening, also as does 2AFT, but the lack of DX!!!! 2ANC a busy boy, what with the beam and the junior op's measles. 2AHU heard on rare occasions—domestic duties. 2AIA, 2AAH, 2ACD and 2ARA all busy on the antenna problem. 2QP heard quite often, also interested in beams but time is at a premium. 2ID heard on 21 Mc. with a nice drop of signal, as is also 2AWU, 2ABO and 2AAB. 2OQ not heard this month, possibly still busy with the house. 2FM has a beam almost on the ground, but works DX. 2DW silent, busy getting garden into shape.

The Burwood Radio Club is a virile organisation which meets at Greenwood Hall, Liverpool Rd., Enfield, each Tuesday night. It deserves your support, all will be welcome, and bring your friends along too.

2AIR still resident in VK4, has got himself engaged, congrats. Alan. 2IV attended to mod. with desired result. 2JT now operating the wheel of a car, too busy for Ham Radio. 2AER and 2HX heard infrequently these days, must be a reason. 2AGW is in the bush. 2AMJ was heard again recently, friends will be pleased to learn that Jack is getting around a little again on the two legs, we hope it will be even more, speedy Jack. 2BI an old timer we feel heard regularly after quite a spell, nice work Roy. 2BD off to VK7 on leave, erecting beam.

NORTH SHORE ZONE

Harold 2AQP preparing ground for erection of beam. Nice to hear John 2ANF again on the air from his home QTH after a month's holiday in the Western Zone where he has given a real kick to v.h.f. activity in that area. Ray 2YM has moved into new home and pleased to find that the location is not as bad as was expected. Brian 2AND expects to be active on 144 Mc. soon, starting the right way with a cascade Rx. Horrie 2HL heard on 40, had mod. trouble, so is building a c.r.o. 2AYP has had visitors from North Coast, Q'land and Vic.

Percy 2QV dropped in for a yarn on his way to Sydney on business (what a man!). Jeff 4XP put in a day looking over gear and yarning about everything from radio to photographs. Dropped in to say good bye with YF on his way back to VK4. Geoff 3AGF holidaying in Sydney and looking forward to trying 2AYP's new 20 mx beam. Lyell 2GW the only one in this area heard on new 21 Mc. band working Ws at the time. Dave 2EO only heard at broadcast time these days on 40 mx. What has happened to the beam Dave?

Of interest to most Hams: Bob Black, VK2QZ, is now operating under new call VR4AF and is on most nights on approx. 7030 Kc. Understand Bob will be a new country to most.

SOUTH WESTERN ZONE

Harold 2GU at Canberra was heard by John 2AMV at Forbes on 144 Mc., nice work John and Harold. 2AKF heard on 80 with good sig. Stewart 2PL active on 40, has Command Tx going now, having trouble with mod. 2APZ, at Leeton, is a new call in this zone, putting out a good signal with 15w. input, hearty welcome to the ranks of Hams. Ray. 2OY active on 40, 2RS heard testing on 80. 2AJO active on 40 and 80, building Tx for 20, 15 and 10 mx. Jim 2TC heard with f.b. sig. on 80. Ross 2PN heard on 40 mx, says it is too cold to work 144 Mc. portable at present. Geoff 2BQ on 20 and 40 mx c.w., getting among the DX, also trying 21 Mc. using a Type 19 and v.i.o., 8AG7 tripler, 807 buffer and 834 p.a., has an 832 p.a. on 2 mx but says the hills are too high at Tumut unless one is portable.

2RM active on 40 and 80 mx. The club at Duntroon has about 25 members at the moment. The Tx runs about 55w. on 40, and 80w. on 80 mx. The other gear used is an 11 tube super, also 6 tube super. Antenna 134 ft. long and 40 ft. high. There is also a workshop fitted out with all the necessary test gear plus a 3-inch c.r.o. and freq. meter. Gerry reports that accurate frequency checks will be gladly given to anyone requiring them. 2OJ, Albury, heard with an f.b. signal on 80 mx. 2APP heard with a good signal on 40 mx.

NORTH COAST AND TABLELANDS ZONE

Doc 2LH had a pleasant stay in Canberra where a minor hamfest was held among the local together with John 2ANF and Hugo 2WH. 2ADE, 2UC, and 2AHI on 6 mx with 2LR rapidly assembling equipment. Most North Coast boys are active on 80 mx and many daylight contacts are now being made. Sigs on 60 mx at night have been heard from 2LH, 2DE, 2UC, 2AHI, 2RK, 2JK, 2AHD and quite a few others. Geoff, junior op of 2LR, spent a pleasant time with Jim 4HZ, has developed an

VALE—WAL RYAN, VK2TI

On 16th May of this year, Wal Ryan, VK2TI, joined the ranks of silent keys at the age of 47 years. His record of service, extending over nearly 20 years, virtually traces the progress of the N.S.W. Division during that period. It is difficult to over-estimate the value of his work during some of Amateur Radio's most difficult years.

When Wal entered Divisional affairs about 1936, the name of the W.I.A. was held elsewhere, and the Division functioned as the Association of Radio Amateurs. Wal's ambition was to recover the Institute's name for the Division which he did in 1938. He first showed prominence in the affairs of the old established Waverley Radio Club, and before he withdrew from Institute affairs on medical advice in 1946, he had held the posts of Divisional Secretary, Federal Councillor, Federal Secretary, Federal President, and Divisional President. In 1947 he was elected a Life Member of the Institute in recognition of his services.

In carrying out his duties he was a terrific worker and a completely efficient one. Many will remember the fine Amateur Exhibition of 1938—probably the best ever held—and a further equally successful exhibit the following year in the Sydney Town Hall.

During the war years, when normal activity had ceased, Wal organised and conducted the Amateur Section of the National Emergency Services—work for which he was highly commended. Not only did he keep the Division functioning, but also the Federal Executive, which was in N.S.W. during the war. Despite these heavy commitments, he found time to entertain servicemen at his home, including many overseas visitors. Wal Ryan was well known on the air, particularly in DX work. He was an early winner of the A.R.R.L. DX C.C. Certificate. In 1938 he obtained W.A.C., and pre-war was one of the few Australian stations to hold W.A.S. He was always active in the A.R.R.L. DX Tests, being the leading VK competitor on one occasion. V.h.f. work was not neglected—in 1937 Wal ran a pair of 806s on 56-60 Mo. From time to time he was active on every Amateur band.

From his "retirement" he emerged in 1951 to be Chairman of the Jubilee Contest Committee, and organised probably the best VK-ZL Contest ever held. In work of this kind we have not seen his equal. Wal's life was a full one. For his unselfish and untiring efforts we will remember him with gratitude and pride. We have never seen a more efficient administrator, and his record will stand as an example to those who follow him.

Amateurs throughout the Commonwealth extend to Mrs. Ryan and family their deepest sympathy. They feel, too, that they owe her a great deal for the part she played in helping Wal to build up his outstanding record.

enthusiasm for portable operation. Crief 2XO had a pleasant holiday trip visiting many shacks and finished with a spell at Urunga with Jack 2ADT. "Blue" 2AEU had a pleasant trip to North Queensland, and a visitor to Urunga was the brother of Rod 2ACU whilst 2FH is planning a holiday at Coff's Harbour. 2PA and 2JK are proposing to carry out portable tests on 144 Mc. and results are awaited with interest. Alf 2UC had a visit to the city but was glad to get back to the bush. Quite a few contacts have been made on the new 21 Mc. band, Peter 2PA being the first to be on.

HUNTER BRANCH

Despite the bad weather our last meeting was well attended, details of which have already been given over 2W1. The Newcastle Technical College have formed a radio club under Max 2OT. The Hunter Branch has offered every assistance. A.O.C.P. syllabus has already been supplied by Secretary 2SF. Both Varley and President 2CS have attended meetings of the club. Lionel 2CS has completed his new double conversion Rx, happy over its performance.

Much discussion is taking place over the chain letter from our Western friends and here's hoping we can do some good. Zone correspondent, Ron 2ASJ, holidayed around Denman way; operated portable on 80 and 40 with the Type 3. 2SF is a c.w. DX man now, Varley has a new antenna-coupler which really works. Also on c.w. consistently is Tom 2ZT and Harry 2AFA, both doing well on 40 in the evenings. Ken 2KG is more active lately, been on 80 but not happy about antenna situation. 2IS on 40 phone with QRO, but has gone bush again. 2LV is busy at home but is gradually rebuilding. Phil 2ANG back on 20 with a new antenna coupler. Bill 2FJ warming the 807 plates, but not hurting them. John 2DZ building a 5-inch c.r.o. between QSOs on 20. On 2

mx the locals are burning the air across town with their Hunter blowatts into their 1193s and big pipes. Jim 2ZC is the latest newcomer. The net now includes: 2KY, 2ZC, 2AGY, 2BZ, 2ADT and in the near future 2ASJ, 2XT and 2KG. Bill 2XT trying out various Rx's, plans a super double conversion job.

Associates Les Sparke and company are taking advantage of the code practice lessons given at the Postal Institute, which are very worth while for those interested. Stan 2UY not active, his offsideer Shorty 2NX has new 813 final. Old timer Lew 2WU heard bashing 20 phone recently with a very fine signal. Ern 2FP well under way with new super rig. Max 2OT active on all bands, hasn't been able to test 10 mx beam with the poor conditions. 2YS active again, using new double conversion Rx—says "it's the shot." Associate Sid Daniels looked up VK6s on his recent holiday. Frank 2FX gave the fish a belting at Lake Macquarie.

Doug 2ADS more active on 40 since holidays. Dave 2BZ still on 2 and 6 regularly, occasionally on 40 and 20. Edgar 2MR active on 40. Geo 2AGD has yet another Rx, a double super with 100 Kc. I.F.s. which is the tops. John 2XQ again settled down to work after fine holiday, visited 2HC. 2VN has been up that way and passed through Maitland and Newcastle on the way home. 2DG recently ill, busy building new shack, so may be off the air for a while. Joe 2ANL hops up on most bands when time permits. Associate Chas Hunt sold his radio business and now works at steel works, so may now have more time to get stuck into the code.

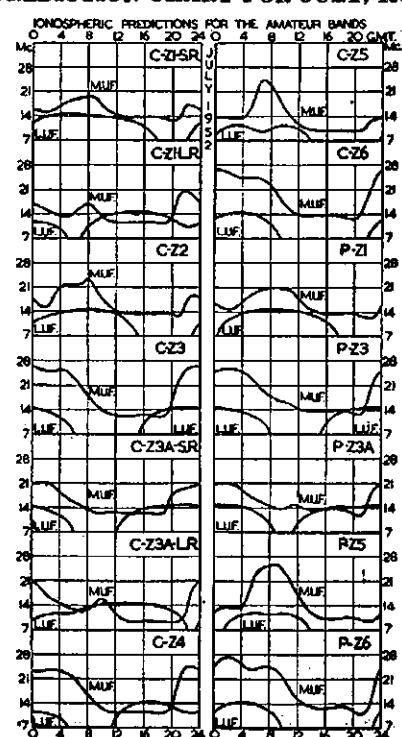
The new 21 Mc. band seems to be OK, 2TY, 2DG, 2AHA, 2ZC and 2YL have all been active. It's open every day to the States despite the winter and bad conditions, so prospects are good for the summer. Neil 2XY will be on 21 Mc. by the time these notes appear. WIBCR hadn't heard a 21 Mc. sig. gave a CQ, contacted 2AHA. Both 2AAI and 2AAM pop up on 20 phone at times. Nev 2OS has not been active of late. Norm 2ANA, like many others, is thoroughly fed up with all the Commercials on 40 and threatens to give the band away for one of the higher bands. Bill 2AX is now his own boss and work keeps him off 20. Does anyone know where 2CW is hiding, nothing heard of Bill for months. Well, cheers till next month when Ron 2ASJ will be back with you.—2AHA.

Notice of Meeting.—The July meeting will be held at the Technical College, Tighes Hill, Newcastle, on Friday, 11th July, so come along. We promise you a good night's entertainment.

COALFIELDS AND LAKES ZONE

With the onset of colder weather and the falling off of conditions on the higher frequency bands, quite a number of the gang

PREDICTION CHART FOR JULY, 1952



have commenced work with the soldering iron in an effort to remodel existing gear or to make concrete some of the brain-storms of the past months. Ken's latest creation is a v.f.o. for the 2ANU shack; it runs entirely from 32 volts, both for the heaters and plates. Ken has used a pair of 2L5 tubes as amplifiers and doubler in this unit following the usual osc. (e.c.o.) and isolator. Geoff 2VU returned from holidays, busy rebuilding 50 Mc. rig into a more compact unit; heard on 80 mx.

2ADT spent a very enjoyable week at Urunga helping Crief 2XO catch some of those famous fish, has added a single 807 to the v.f.o. which provides a 5w. signal on 80 mx without b.c.i. (the hopes). 2KF trying various arrangements on 144 Mc. with varying success. 2KZ plugging away on 10 mx each week-end. Major 2RU finally got the two mx beam up, mowing them down on two. 2KR active on 40 and 2, while 2GA has been on the latter band. (To see that Cec. behaves himself I take it.) 2EH is plugging away on 80 c.w., but threatens to build a mod. Nothing is known of the activities (if any) of other stations in the zone. There is no need to be bashful chaps. If you are doing anything pass the word along or you might feel neglected.

WESTERN ZONE

The visit of John 2ANF has been a great help to v.h.f. country Hams. John's demonstrations of what a good Receiver can do, and how not to build v.h.f. gear have been invaluable. Towards the end of the month 2MQ, 2HL and Ces Cronin paid a visit to Trev in Bathurst. A bit early to say yet, but it looks as though regular contacts with Sydney will be possible on "two" as a number of Sydney stations report hearing Forbes stations. 2MQ, 2ANF and 2ATO have been heard in Forbes, and 2MQ and 2ANF have both been worked by 2WH. QSO with Bill lasted for an hour, both stations losing each other in QSB at times, and that with 2ANF lasting half an hour with copy solid at both ends.

Dubbo Hams are working among themselves on 144 Mc. and 2ACT and 2AMR are looking for outside contacts. Rod 2ACU had bad luck with a beam that wouldn't stay up, but has it fixed now, and ready to crack open the Coonamble-Dubbo path or points further out. 2AWY briefly heard on 80 mx with a good sig. Strange how many ZLs, VK3s and how few VK2s are heard on 85 Mc. 2WI broadcasts well received in the west and would like to see

them continued. Ron 2VR, ex-Broken Hill, now at Bathurst and hear whispers of v.h.f. activity. Jack 2OF broke a long silence and showed up briefly on 7 Mc. phone. Another rare one, 2BT. I hear Bill is going to put Eugowra on the v.h.f. map shortly.

VICTORIA

NORTH EASTERN ZONE

Sunny VK2? Well fellows such is to be will be, but if I never see much rain again I will be satisfied; mud, rain, more mud, oh well at least I had a good rest. Last I remember was 3JC working on 20 mx c.c. converter, ably assisted by 3UI. 3JC working a few Ws, Js, JAs, VKIs and thoroughly enjoying himself. 3ALE about to become the next zone correspondent; Les has a new 6 mx beam up and the results justify his labours. 3HZ dickering around with the rig, heard Murray say the more controls to put rig on the nose the more he likes it. 3AFF having fun and games too. 3AT very silent these days. 3KR heard on 80 mx, sorry I had to run out Ken. Ex-zone member, 3DW, also a constant 80 mx man.

EASTERN ZONE

All quiet on the eastern front at the moment, judging by the lack of E.Z. sigs on 80, except on Sunday nights, when the boys dust off the rigs and enter into the bull-ring! Have just returned from a cruise over a fair slice of VK3 and VK5 with a short run into VK2, a good trip apart from the fact that it rained every day but one! However, 5WQ gave us a right royal welcome and we discovered that the west end of VK5 is not so bad! How's that, Peter? Returning home, we found that J. Pluvius has been on the job and once more, I am flood bound! It's a cruel world.

3IZ has the 348 together again—says it works too. Peter says John is still busy with the crow! 3QZ back from VK4—no dents in the new jalopy either. 3PR sporting a new vehicle too—they say the farmers have all the dough, but I wonder? 3SG rather quiet these days, he is alleged to be interested in chickens! 3SS and junior still working on 6 mx gear. 3AGF on holidays in VK4. 3ABP on 80 occasionally. 3AFG still thinking of firing up the rig. 3AMV another quiet type. 3LV a regular on 3650 Kc. with greatly improved modulation. No word from 3ABP since his transfer to Melbourne. 3ADA still at Woomera, what about a

letter to him, chaps? Shouldn't have said that, but I'm a poor correspondent myself! Two of our Bairnsdale associates sat for the A.O.C.P. and I hear that they were OK on the theory but the dots and dashes trapped them. However, it looks like more QRM on 80 soon.

CENTRAL WESTERN ZONE

Henceforth and forever more be it known that the Central Western Zone hook-up will be on 3.5 Mc., in other words we have had 7 Mc., its fifty ways, and endless QRM. In future the frequency will be approx. 3578 Kc. at 1000 hours on the second Sunday of each month. 3ACI paid a visit recently to 3ARL's and after inspecting Lin's all-band final tank, decided one would have to go in the output stage of the new Tx. 3AKW now has the mobile rig in operation and it goes very f.b., tune it up well for the September Convention Bill, and clean up on the scramble.

3DP, after testing the DX, has decided to do the right thing and erect a vee beam so that the 100w. rig can get a real kick-off. 3HL floored a Yank by giving him the same report when he reduced power from 1,000 to 25 watts (Aussie 250 watters please note!). 3YW's Rx is coming along slowly, but is sadly hampered by stocktaking. 3ARM seems to be straying from the straight and narrow as last heard he was deep in conversation with 3DP on astro-compasses, and the fact that he was only 2-3 chains out after pacing out a line 1½ miles long. 3RR is still v.h.f. happy at Horsham, last heard was goading 3AGD into putting the 144 Mc. beam up again to contact Dunkeld.

GEELONG AMATEUR RADIO CLUB

The two meetings of the above club were well attended by members. Bob 3IC is conducting a Morse class which is coming on very well. Mr. J. Beckingham brought along a relay controlled two-stage xtal rig, including a modulator and power supply, built on the one chassis. The workmanship of this gear was a credit to Mr. Beckingham. The syllabus for the forthcoming 12 months was finalised and should be an interesting year for members.

QUEENSLAND

Poorly attended was the monthly meeting, held on the third Friday of May at the Institute of Engineers' Rooms, next to the Civic Theatre, Valley. This fact was noted and commented on by quite a few of the older members

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present who found it hard to reconcile such a state of affairs with a slowly increasing membership for the Division. In wrestling with this problem in the hope of finding the answers, suggestions were put forward in regard to more social activities, more lectures by our leading Hans on v.h.f. activities, antenna systems, transmitter and receiver construction, etc. Also stressed was the advisability of making meetings more popular by devoting a half hour or so to auction sales and selling and swapping of gear. So, whilst we are hot on the subject of the last named which seems to be popular with all members, it is suggested that you delve deeply into junk boxes and get out all the gear, even the smallest bits and pieces, you want to auction, sell, or swap and drop a list of same to the Secretary, J. F. Pickles, Box 638J, G.P.O., Brisbane.

Old Timers' Night: Other points which came forward in an endeavour to remedy the attendance situation resulted in this month's meeting taking the form of an Old Timers' Night. Numerous invitations have gone out and already many old timers, some early pioneers, have signified their intention of being present. So set aside the third Friday evening of this month for what promises to be the brightest and most enjoyable meeting of the year. No need to say you'll hear the veil of time lifted whilst the old timers reminisce over the days when t.p.g. and Hartley rigs held their place.

The speaker for the evening was 4KS who gave an impromptu account of a recent 4,800 miles holiday motoring tour, with family, through the lands of VK2, VK3 and VK5. A little two-stage portable rig was squeezed in at the last moment and according to Keith it was the key to the door of many fine new friendships and of inestimable value from time of departure to return.

PERSONAL ITEMS

Other Sunday, Emergency Network Manager, 4AW, was so sore that none durst go near him. Only two, 4GH and 4BW, toed the line for network drill and to use Arthur's own words "it was a washout." What about it network members? Eric 4DY inactive for about 12 years but renews license yearly—Joining W.I.A. on Old Timers' Night. Russ 5XK sure putting Papua on map, his long wire seems to have lobes at every point of the compass. Tom 4PD and Cedric 4PT both experiencing trouble with noise level. Keen to get Contest Committee to stage an 80 metre show is George 4GG. Using home-made electric winder, Jim 4FR, now winding own trannies. Jim 4XL disgusted with conditions for contest during May. Understand Russ 4FN is still bitten with 144 Mc. bug. 4CU of Clifton often foresakes high frequencies and pops into 40 mx Sunday phone hook-up. Proud "poppa" Bert 4AO, busy building own home. If you want to make serious John (4RT) smile, tell him where to get a good modulation tranny.

Aussie 4TN always good for a ragchew on 14 Mc. phone. 4KW and 4BQ seem to be only ones really active in Mackay area. Heard Bill with VQ8CB around 8 p.m. other evenings, but couldn't find a trace of the Mauritius sig here. Found, at Bulimba, in newspaper business, ex-4GK, old timer supreme; don't be surprised if Mac makes comeback. Fat 4KB very quiet these days both on the air and at meetings. Like VK4 winter sunshine does Alan 2AIR, who is up here on aircraft service for few months.

CLARE'S CORNER

Observations during the month on the new 21 Mc. band revealed that as conditions on the band waned, so did the interest. Tibby 4HR reports that the band showed most promise on the opening week-end and his log to date reads 10 countries for about forty QSOs. Others heard on 21 Mc. c.w., working most W districts and an occasional Central American were 4WF, 4AP and 4JU.

It is whispered that 4XY who has been swotting almost nightly at the University will soon have the title of Badaad Inspector. Congratulations! Lloyd since the arrival of a new brass-pounder, Don 4GF never seems to have time to trouble about the ether. Just the opposite is the case of 4FJ; Roy has jumped a few rungs up the DX C.C. ladder since his brass-pounder's arrival. Conclude by congratulating 4KS/P and 4HR/P and assistants 4YA and 4RL on their success in last N.F.D.

TOWNSVILLE ZONE (By 4EW)

Conditions have never been so poor up here as during the month of May. Opening of our new 21 Mc. band stimulated some interest, but this was soon lacking due to band deteriorating. Two new prefixes, OD5AR and DP6LD, were heard but no dope on their location. Perhaps 4QL can supply their QTH's in next month's notes. A 5A2TO was contacted but the QSO marred by QSB. Personal pars are almost out due to inactivity in this zone. Have heard Alan on 21 Mc. but none of the other locals. Eric, 4EL will be hard nut to crack in Inospheric Contest if he keeps up his QSO per day with G5ZA. He has had over 600 contacts with the

G station to date. 9FN and 9GM spasmodically active on 7 Mc. 2QI, mobile marine, is in port and hope Chris can get out for a visit. Incidentally, any Amateur passing through this way is cordially invited to call at the 4RW shack.

SOUTH AUSTRALIA

The readers of these notes for the month of May will now stand to attention whilst a 24-gun salute is fired, whilst a tumultuous multitude cheer themselves hoarse, and whilst the Past President kneels in obeisance to the new VK5 President—Rah-Rah-Rah.

The monthly general meeting of the VK5 Division for May was held in the clubrooms to a very representative gathering of members to whom Mr. R. Harris (5FL) gave a very interesting lecture on "Plastics and Plastic Insulation." Ross held his audience for over an hour in rapt attention and at the conclusion of his talk he was besieged with questions, the nature of which clearly indicated how effective his talk had been. The vote of thanks to the lecturer was ably presented by visiting ex-VK5SU (now VR2BJ), to wit Malcolm Gray.

Among the visitors were Messrs. N. Butstone, A. McRitchie (5CE), M. Campbell, L. Dolan, D. Walcot (VRID soon to be VR2CL), M. Gray (VR2BJ), and last but not least, Mr. Lampere (3ALL), who came in late and left early, thus giving us no chance to give him our usual hearty welcome.

For many years now I have always thought that "Doc" 5MD, as President of our Division for the past two years, was participating in some sort of "handout" which was only available to the President. He hotly denied this aspersion of course, and always said, "wait until the day comes that you are President and then you will see just how much anybody gives you." As President of the May meeting it was my pleasure to receive from the lecturer, as a token of his appreciation and esteem, a plastic beer mug. Need I say more! "Doc" is now running around in circles screaming at the top of his voice, "Two years as President and nobody ever as much as gave me a kind smile, and then this upstart gets a present the very first night that he is in the chair." Mr. Edward Barber (5MD), may I be excused for quoting, "He who excuses only accuses." You Beaut!

The following executive officers to the VK5 Council were appointed this month:—President and Chairman of the VK5 Division, 5PS; Past President, 5MD; Vice-President, 5XU; Secretary, 5RR; Treasurer, 5FO; Minute Secretary, 5DH; Federal Councillor, 5KX; V.h.f. Representative, 5JD; Programme Organiser, 5AJ; W.I.A. Official Operator, 5AW; Membership Organiser, 5JO; Traffic Manager, 5JT; and Associate Members' Representatives, J. Paris and J. Sappalizer. Members of the Division will agree that this is a strong executive line-up and all of these gentlemen have given long service in the cause of Amateur Radio. Give them your support throughout the coming year.

5CH is still out in the country and therefore remains on the inactive list. Claude was recently seen by one of my spies leaving the Mt. Gambier gaol, but I feel sure that this is not "the country." 5TW has had a few contacts on 20 and 40 mx, but Tom finds the bands very quiet these days. He was also seen leaving the Mt. Gambier gaol with a worried look on his face and when someone rattled some keys near him the other day he gave a noticeable shudder. There is some mystery here that I must unravel. 5JA has his 2 mx beam erected up in a tree so maybe he will soon get around to connecting it to a Tx. John, I have repeatedly referred in these notes to that well known proverb, "DX Before Dishes" and I hope that you heed it.

5KU has at long last erected his beam pole which I understand is an example of craftsmanship well in keeping with the type of work that Erg turns out. After checking the job he has done on the splicing of the guy wires, I can quite see why his spiders stay up in the air. 5FD has been keeping the moths out of his equipment by working a few stations on 40 mx, and John gave Erg a hand with the erection of the previously mentioned beam pole, which I forgot to mention is 4, x 4 oregon, 45 feet high. 5MS is still impatiently waiting for the a.c. power to be connected and I believe Stuart has bitten his finger nails up to the elbow from frustration. 5PB is busy house-building at the moment and therefore Wally does not even know what the words Amateur Radio mean, although he will eventually get time to puzzle it all out.

Jack Fowler, who is a new Associate member from the Mount way, is Captain of the Emergency Fire Service Communication Unit, and has been experimenting with some new aeriels. Welcome to the gang Jack, see you on the air sometime? 5CJ is at present hiding his blushes from the world as recently he made the mistake of asking 5JO what his christian name was. What did you tell him Joe? Which all goes to prove that Colin's recent assertion

that his memory was not what it was, might be right. Col, how could you. The Mt. Gambier gang weathered a visit from those two intrepid motorists, 5E2 and 5MD, during the first week in May. These two speed demons, accompanied only by their better three-quarters, successfully bridged the gap which lies between the City and the Mount in the record time of some sixteen hours or so. Neither of these two dare-devils would disclose details of their nightmare ride, but it is common gossip that speeds of up to 25 miles per hour were maintained for periods of twenty minutes or so. Joking aside, the Mount gang were very pleased to see them and hoped that they enjoyed their sojourn.

5DP is now in a position to disclose just how good his new antenna really is, and is prepared to back it against any other type when the conditions are unstable. He tells me that in no circumstances should the bath plug be removed whilst he is on the air as the ground plane assumes diametric centrifugal co-axial resonance with the U bend, with very telling effects. Les 5UX received a letter from a well known radio firm in Adelaide who advised him that they had stocks of a germanium diode GEX35. So far Les has not been able to find out exactly what colour the GEX35 will be in bloom, but he understands that the leaves grow upside down, thus permitting the dew drops to flutter in one direction. Incidentally, the poles for a.c. are now up near the QTH of "Uncle Xray" and he expects to have the power on in 1957, oh well if you must have accuracy, 1956 and a half. 5BC is much too busy building the new broadcasting station 5RM to have time for Amateur Radio, but possibly Hughie is resting his laurels on the strength of his efforts in the Ross Hull Memorial Contest. Congrats again Otto.

5KW is still building a 6 mx converter but Harry finds time for a few contacts on 40 mx. Still keeping well OM? 5CF has a new v.f.o. working at last and Murray also manages a contact or so on 40 mx. 5TL is not as active as yet, but is busy setting up his rack and panel and may be heard on the air any time now. Tom listens to the Sunday morning W.I.A. broadcast regularly and we all hope down here that you have settled in OK by now. Have you frightened the natives yet with "Rattling Salvation"? 5RE is rebuilding his antenna feeders, changing from 300 ohm plastic to 300 ohm spaced line, but Hobby is apparently not active during his changeover. 5MA is only active on 40 mx on Sunday mornings around W.I.A. broadcasts but Fred is doing his bit for Ham Radio by keeping me in touch with the local boys. Many tnx. Two city slickers who have been working at the aforementioned broadcasting station at Renmark or Berri, take your pick, are George 5GS and Sid 6ME, and my spies say that Clarrie 5KL called in to see Tom 5TL on the way to visit Merber (near Mildura).

Mentioned in last month's notes that Alec Kelly, from up the Murray way, was a likely starter again in Amateur Radio, and I believe that he is championing at the bit but so far no call sign has arrived. All of the Renmark and Berri members of the W.I.A. are having a meeting at Spring Cart Gully (yes, that name is fair dinkum, believe it or not) on the same night as the W.I.A. meets in the city, to determine whether or not they will continue to hold their meetings always on the second Tuesday in each month. It is also hoped to finalise at this meeting details concerning the formation of an Upper Murray Network (preferably v.h.f.) which will be called something like "The Association of Upper Murray Members of the W.I.A. (S.A. Division)." Nice work, fellows.

5SL, now resident in the city, is blushing profusely at all the nice things that he read about himself in last month's "A.R." He said that he was not sure whether it was an obituary notice, on account of all the pats on the back. Laurie old son, you must have deserved it, because my spies always tell the truth, you should know that.

The articles paragraph should really be in the articles for soon but I have been asked by the XYL of Hal 5AW to see if anyone is interested in borrowing his modulated oscillator. She tells me that the whoo-oo-oo-oo that comes out of it is wearing her down and if it goes on much longer she will be forced to jump on it. I pointed out to her that my XYL said the same thing to me the last time that I borrowed it, but in my case it went whee-ee-ee-ee. Please see if you can help her fellows, before she goes wow-ow-ow-ow.

As the newly appointed President of the VK5 Division who is also the scribe, I am in the happy position of being able to close these notes for the month of July with a few words of thanks to those misguided members of the VK5 Council who voted me into the exalted position I now hold. I thank them for the honour that they have bestowed upon me and I can assure them that I fully realise that in following in the footsteps of last year's President ("Doc" 5MD), I have been set a task that will take some accomplishing. However,

I can only do my best, and if a faith in our grand game of Ham Radio is any recommendation, then I come to you well recommended. There is one small point that I would like to clear up at this juncture. In fairness to myself, and that is that as a scribe I often give the appearance of being a definite dill, but don't let that trick you when you see me disguised as the President of the leading Division of the W.I.A. The scribe for VK6 will now take his vitriolic pen, dip it into the vitriolic inkwell, and put to paper a vitriolic sentence pertinent to Pansy the President.

WESTERN AUSTRALIA

At the May general meeting of the Division business dealt with included applications for membership from 6GB and 6TR, both of whom were welcomed to the fold; Jack once again, and Tom for the first time. Resignations from 6KX, 6MK and 6LU were deferred on the motion of 6JW to the June meeting. The President (6AG) gave a report on the May Council meeting and as other officers had nothing to report, next business to come up was that of calling for applications for the post of Traffic Manager. None were forthcoming so it was decided to advertise in the members' bulletin for aspirants. The same overwhelming response greeted the discussion on forming a Contest Committee, so a sub-committee of Council is to be formed to co-opt other members it thought necessary. Watch out boys, the press-gang will be abroad again!

One of the evening's pleasant surprises was the presentation by the President to 6RU of the bronze medallion Jim won in the 1951 Jubilee Relay. Congrats, Jim! Further presentations included an Honorary Life Membership Certificate to Wally 6AG by the immediate past President, 6JW. Wally certainly deserves this honour for he is without doubt one of the few now-active Hams in VK6 who was in the game right back in the very early pre-broadcasting days and has been all along a staunch worker for the Institute. Wally hasn't been afraid to air his grievances from time to time and hasn't sulked when the opposing forces have said their say, sometimes in emphatic terms. I'm sure I echo the sentiments of all VK6s, old and new, when I say "heartiest congratulations, Wally, on that Life Membership and on your election as President." (As 6SPS would say—I'll get on!) The remaining presentation also concerned 6AG who received from 6HL (on 6FL's behalf and his own) the Lambert and Lang trophy, won by 6AG at the recent Field Day and picnic outing. Both presentations were applauded and Wally made suitable response.

Other business included the acceptance of radio clubs and societies into the W.I.A. and the rules governing same and also the opening of the 21 Mc. band. The former I don't intend to touch on here and the latter appeared to arouse some acrimony among those who seemed to think that "someone" knew about the P.M.G.'s decision sooner than the editorial in "A.R." would indicate. Anyway, what are you beefing about, fellows? We've got the band (or those sections of it not occupied by commercial f.s.k. stations) and it's not yielding much anyway. Perhaps someone's "narked" at not having sufficient advance information to "beat the gun" as some people seem to like doing! I have no information as I write this as to whether 3XU turned up at the June meeting—if he did, I'll bet he had a hot time answering questions. We are an insular lot in VK6!

Main business of the evening was the report on Federal Convention by our Councillor, Ron 6KW. As well as giving a report on the agenda items, voting, etc., he also showed a short film of Convention personalities and some "stills" of the recent Field Day. Then followed 6BB's informal, but highly interesting, talk on his recent trip to the U.K. I quote from 6LW's meeting minutes—"Portion of 6BB's discussion was recorded by courtesy of 6KW and will be re-broadcast if possible over 6WI after suitable censorship."

Dossier on Doings.—6RO fishes, they tell me—but the fish don't! 6HR's wench—sorry, Lou—winch works very nicely hauling his "ostrich special" up out of the ground and, as required, lowering it back again. 6BR is investing in a small yacht; too small altogether—no room for a portable, Barry says. What's Ham Radio coming to? 6BS tells me he's just had an antenna pole down for the first time in 20 years for a re-paint. 6DJ is doing some re-building, including something likely to become known as "Bill's Old Oak Chest." It's a rig for c.w. only with a 211 in the p.a. and built (just for nostalgia's sake) on good old head-board lines. The "deck" is a family heirloom—an oak leaf out of Mum's extension dining table. Well, I've heard of some hostile Mums and XYLs, I've met some completely detached and apathetic ditto, but this must surely rank as an all-time high in indulgent womenfolk! How do you do it, Bill?

6VM having the beam galvanised. 6JW not heard often but busy trying to make a good Rx out of an SX24. 6MK bemoans the fact that there is little to work on any band and is still doing his best (my spies report) to put his boat up on a reef or sandbank or something. 6TR had an inspection by the R.I. and is busy putting one or two points to rights. 6LM is doing the rounds of the country areas and finding them (I'm told) most lucrative as well as first-class opportunity for meeting country Hams. 6WS recently lectured before the Radio Society. Skipper's still waiting for that prop. pitch motor but nevertheless manages an occasional contact with the reliable portable. 6FL has the tower up and beam ready to attach but is cogitating about adding elements for 21 Mc. before setting it up. 6RW busy with a converter for "six" and planning portable rig. 6HK is mostly on "six" where the new p.p. 834 final is operating but c.w. only till the new mod. is completed.

6BO keeps popping up on most bands, mostly 7 and 21 Mc. Evidently things on 144 and higher are quiet! 6AP no beam, no DX, no incentive; result: Alf is getting more and more sleep and, I'm told, liking it. 6FW having completed his Bassendean home lost no time in getting on the air. Between new home chores, Ham Radio and two jun. ops, Frank is a busy man. 6MB works 'em on 21 with his antenna on the roof and says it's no trouble! 6KW and 6RU quiet these days, except for an occasional (very occasional) appearance on 7 Mc. Jim visited Geraldton recently and allowed a few precious minutes of his time for me to drool over his latest car. Jim no doubt griding his loins to do battle again in the R.D. and I sincerely hope you and the other top-scorers get better support this year, Jim. Last year's poor show must NOT be repeated.

6LW lived up to his record and was on 21 Mc. as soon as the clock and the calendar proclaimed 1st May. Wally's made a feature of always being first in on any new band released and I'm thinking of asking the P.M.G. to take 7 Mc. away from us for a couple of months, then releasing it again—maybe I'd have a chance of a QSO with 6LW again after all these years! Apart from those already mentioned in despatches, the following have been noted on 7 Mc. in recent weeks, some frequently, others just for one or two visits: 6EL, 6JC, 6JG, 6MG, 6MU, 6EW, 6LT, 6LC, 6AR, 6JP, 6YZ, 6TK and 6TY.

And now, to close on a sad note. My copy of "A.R." is even later in arriving than I am in sending in these notes, so I don't know what 6PS has to say about me and will have to reply to any slanders, etc., in the August Issue. But I did appreciate his May comment, and only hope that I'm not kidding myself—perhaps the notice taken of this column in VK5 is hostile notice—good grief, I hadn't thought of that! See you next month—I hope.

TASMANIA

The June general meeting was held in the Photographic Society's room on Thursday, 5th June, and was presided over, as usual, by Bob O'May. The attendance was rather good, when one considers that Hobart has been experiencing almost continuous rain for several days, plus temperatures lower than usual. The evening's main item of interest was a lecture on "X-Ray Equipment and Technique," by Mr. Tom Allen. Illustrated per medium of film stills, this lecture proved highly interesting, and was greatly appreciated by all present. Welcome visitors to the meeting were Bill Nicholl, associate member from N.S.W. Hunter Branch, and associate member Graham Nicholls from our Northern Zone.

Our congratulations go to Doug Watkins, TDZ, who enjoys the unique distinction of being the 100th Ham to be licensed in Tasmania. From what I hear, Doug is quite active already, and has no intention of letting any cob-webs gather on his final. A welcome also to new associate member, Don Simpson, of Tarooma. Methinks that once we get Don's XYL on our side, it won't be long before Don is contributing his share of r.f. to that already in circulation. Tarooma should be a good spot Don, with little or no opposition, so the rest is up to you. Further congratulations also to associate member, Roy Emmerton, who, having passed the A.O.C.P. now awaits a call sign. Believe also that associate, Don Clifford has only the code hurdle to clear now, so it's head down and fall up Don, and best of luck to you.

Members are reminded that since our financial year has been changed (1st March to end of February), subs due now are on a pro rata basis, for eight months ending 28th Feb., 1953.

According to various reports, there has been no drastic change in reception conditions on the various bands, and the spell of cold, wet weather has done little to promote activity. In fact, it's quite common these days to hear someone say that he must vacate his shack soon before frost-bite prevents him from so doing.

There is also a lull on 2 mx at the moment, but this can be readily rectified, if some of you chaps who are "nearly there," just make the final effort. So what about it fellows, it's a far less painful process going crackers on 144, than by looking for DX on the other bands.

I have no direct news to hand on 7MY, but latest grape-vine is "that there bug" is biting again, and Alan may soon show up again in the 2 mx band. Pressure of business is unfortunately keeping 7LD inactive, but Len, just think of all those condensers drying up. Better have a weekly "switching on" ritual, and keep in touch at the same time. TDA is revamping his Rx preparatory to returning to the fold. Can't quite make out why he gave me such a bellcose look, when all I said to him was QX. I am still awaiting gentle enlightenment on the subject.

Bill 7WG has been working diligently on gear for some time now. With two harmonics to hand, it's soon time we tuned in your fundamental Bill. 7RY and 7SD heard in c.w. contact resting their vocal chords, whilst 7SK, 7RM, 7RX and 7AJ have been proving quite conclusively that whatever else the 20 mx band lacks, it shall not be wanting in local activity. 7ML is having some difficulty in convincing fellow Hams that he is really serious in his efforts to get rid of certain equipment. That twinkle in the eye seems to be your undoing, Max. Well, it's hard to say which has been the hardest to acquire during May—news or DX. Here's hoping June proves more fruitful in both.

NORTHERN ZONE

A most interesting letter to hand from 7BQ in G land via 7SA, for which many thanks Chas. Len visited 7SA's mother near Cambridge and also spent some time with G3CJY, Col Wash-tell, who also works 14 Mc. with G2PU. Len appears to have collected a vast store of information on the doings of the G lads in the 144 Mc. field. Chas hopes to be back on 20 mx by the time this appears. 144 Mc. has been quiet here as most are inactive at the time on this frequency. 7LZ is still operating on the appearance of his house, whilst 7FF has been busy with studies. From 7GM comes the news that 7LX is so pleased with his W8JK antenna that Ken is rebuilding the Tx for 100w.

Max 7CA has been nobly upholding the zone honour on 40 with 7GM doing a bit on 80. Our last lecture was most ably presented by Ron Rich and was appreciated by all. We are getting better attendances at meetings and it is most gratifying to all. Associate Graeme Nicholls spent a few weeks holidaying in Hobart, whilst, the fact that our trams are again running on time indicates that Henry Solomon is back in harness after his illness.

NORTH WESTERN ZONE

A new design of Rx circuit has come to hand which uses Franklin osc. and many other improvements and seems to be very popular at the moment. I believe 7WA has nearly finished his new Rx. A new comer to the North West is Mr. Honey who has had experience with t.v. in England and is late VP9, of Bermuda. The May meeting was well attended at the home of yours truly. Last month's meeting was held at station 7WV.

Have not heard much of 7KB lately. I guess the high pressure of work has kept him from coming on the air. Saw 7AJ the other day. He is experimenting with new types of oscillators, a new design of audio oscillator has just been completed, and a 100 Kc. frequency standard with built-in interpolation is nearly completed. He is also experimenting with time bases and c.r.o. tubes.

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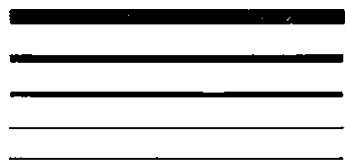
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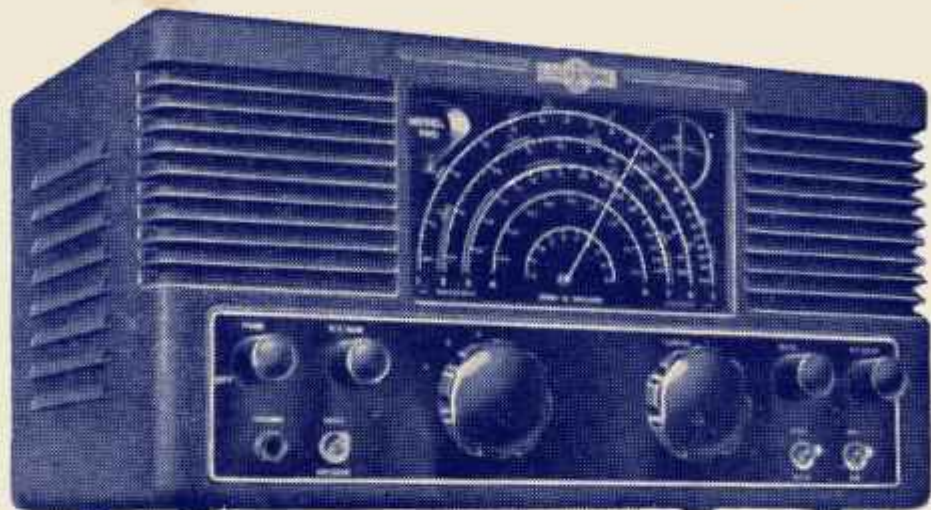
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T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 146.5 Mc. No frequency checks are available.

EDITORIAL



"LEST WE FORGET"

Comes the month of August each year and minds turn back to memories of the war years, 1939-1945, when a great many of the Amateurs of Australia were in uniform serving their king and country in the grimmest war the history of mankind has ever known.

We think of those war years in the month of August because it was in this month, 1945, that victory in the Pacific was an accomplished fact, signalling the cessation of hostilities and the expectation of a prolonged peace throughout the nations of the earth.

Looking back over those grim years we recall times of hard work, of sometimes long arduous hours on duty, of drilling, marching, training, of the more pleasant times during hours of relaxation or days spent on leave, and the social and entertainment side of service life.

But above all we recall the friendships we made with men from all walks of life who had given up their professions and occupations to join forces in the common cause in defence of democracy; of men who shoulder to shoulder suffered the pangs of hunger and thirst, encount-

ered untold dangers; were in need of our friendship as indeed we were in need of theirs; of men who died that we and the people of our country might live on in peace.

It is of these men—Amateurs who paid the supreme sacrifice—that we think most at this time, and in our humble way honor their memory by our Remembrance Day Contest.

Every year this Contest is organised by the W.I.A. over the week-end in August nearest to the fifteenth of the month to perpetuate the memory of our gallant members and fellow Amateurs who passed to the great beyond in the service of their country.

The rules are simple and appear elsewhere in this issue for all those who can participate. You are asked to do so even if only for half an hour as a mark of respect.

"They gave their lives. For that public gift, they received a praise which never ages and a tomb most glorious—not so much the tomb in which they lie, but that in which their fame survives, to be remembered for ever when occasion comes for word or deed . . ."

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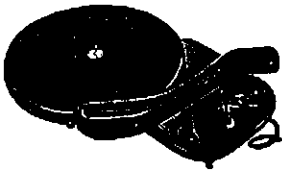
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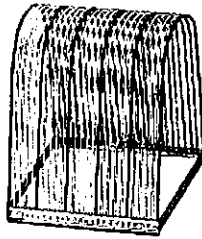
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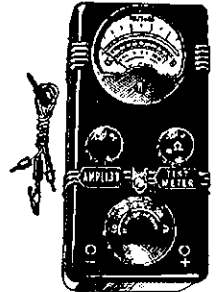
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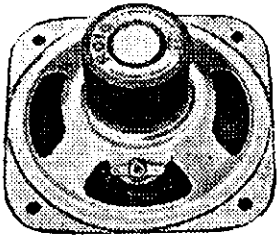
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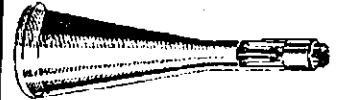


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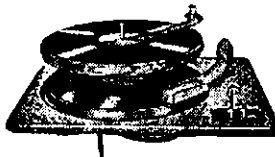
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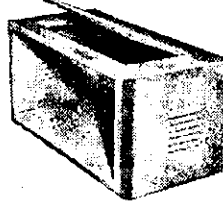
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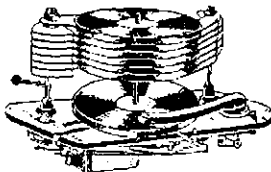
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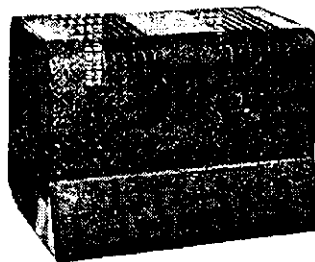
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AN ALL-BAND TANK CIRCUIT

BY R. S. CHOATE,* VK6RK

Those Amateurs who like an all-band transmitter and have run into the problem of band switching or plug-in coils, may be interested in this circuit which has been in operation in my transmitter for some time. The scheme is modified from an all-band final and coupling system which appeared in "QST" some time ago and later in the A.R.R.L. Handbook. It is very simple and it can be used for any pair of bands i.e. 80-40 and 20-10, or say 40-20 and 10-6, etc. It takes up little space, little can go wrong with it, and it can be easily adapted for portable work.

Referring to Fig. 1 it will be seen that V1 is a driver tube which will normally be a doubler or tripler. The plate circuit of V1 and grid circuit of V2 and V3 consists of the network L1 L2 and C1 and C2.

Assuming that the transmitter is for 80-40-20-10 bands, the circuit works as follows: If an 80 metre signal is placed on the grid of V1, C2 is rotated to near maximum capacity and resonates coil L1 to 3.5 Mc. At near minimum capacity, it will resonate L1 to 7 Mc. providing of course that L1 is of suitable value. Injecting a 7 Mc. signal on V1, or a 14 Mc. signal, C2 will resonate L2 to 14 Mc. at near full capacity and to 28 Mc. at near minimum capacity. There will, of course, be other resonances on both coils which will vary according to the input frequency, and in the initial stages a wave meter check is necessary to select the right resonances.

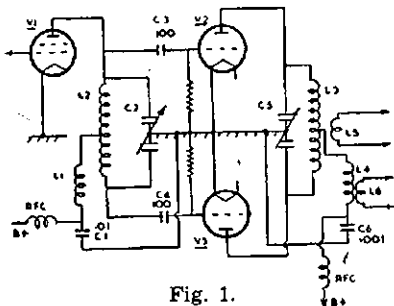


Fig. 1.

Now when resonances occur with L1 C2, the condenser C2 being a two gang or split stator, tunes L1 in parallel and the coil L2 acts merely as connections from the "hot" ends of C2 to the coil L1. The current will be in phase opposition in L2 and will therefore cancel any r.f. in this coil on that frequency. On 20 and 10, the coil L2 and condenser C2 resonate with the two halves of C2 in series and inductance L1 becomes an r.f.c. of small value connecting the h.t. to the centre point of L2. Thus the drive on V2 and V3 is in parallel on 80 and 40, and in push-pull on 20 and 10.

The same applies to the output circuit, C5 L3 and L4. Here C5 resonates L3 in push-pull on 20 and 10, and resonates L4 on 80 and 40. Output for 20 and 10 is taken by a link at the centre of L3 and output for 40 and 80 by link at the "cold" end of L4. L5 in Fig. 1 being the 10-20 link, and L6 the link for 40 and 80.

An additional modification can be made to the output circuit by replacing C6 with a large variable condenser and coupling any odd length of wire to the junction of this condenser and L4. This will give a pi output circuit on 40 and 80 for portable work.

Dimensions for the coils and values for the tuning condensers are not given purposely. The split stators or two gangs have to be sufficiently large to resonate the coils for two bands in each case. The coils will have to be pruned to fit and, in particular, harmonically related resonance points should not coincide. That is the resonance point for 40 and 10 should be moved as far as possible from each other by pruning the coils.

The circuit is excellent for c.w. or for n.b.f.m. On phone, the L/C ratios are

not optimum, but in practice works quite OK. The tubes can be anything of course, but it is better to use tubes such as 829 or 815 or 807s. If triodes are used, and there is no reason why they should not be, then ordinary "cross over" neutralisation will take care of the push-pull aspect and link neutralisation for the 80-40 system between L1 and L4.

All of the usual items, such as metering, screen by-pass, and feed, etc., have been left out so as not to confuse the issue. In any case, they will vary according to the tubes used. I use a pair of 807s and 6B0 has a pair of 6M5s in a nice little portable rig for 6 and 40. Of course one tube only in the final will work quite OK.

Note that on the lower frequencies, coils are tuned in "parallel," and the higher frequency ones in "push-pull," the values of L1 and L2 are about 2:1 in inductance.

SUNSPOTS AND DX

BY J. A. GAZARD,† VK5JG

Back in 1947 and 1948 even the new Amateur equipped with an 807 final, plus a "piece of wire" for an antenna, could work DX on 14 Mc. nearly all round the clock.

Today conditions are very different and although 14 Mc. DX is still worked, it is only there at short intervals of the day and not every day. The cause of this change is the state of the ionosphere which is affected by sunspots. These spots appear on the sun in varying numbers from day to day and the numbers have been recorded at the Zurich Observatory since the year 1750. The average daily numbers per year have been plotted and it is seen that they vary from a maximum lying between 50 and 150, to a minimum approaching zero in a well-defined cycle of approximately eleven years from maximum to maximum.

It has also been found that the maximum usable frequency (m.u.f.) varies directly with the sunspot number, so that when the sunspot number is a maximum, DX conditions are best; and at a minimum, DX conditions are worst.

1947-1948 was a time of sunspot maximum and we are now approaching a minimum. The prediction charts published in "Amateur Radio" have shown a corresponding decline in m.u.f. over this period. In "QST" of December, 1947, there appeared an article by Kenneth A. Norton, of the Propagation Laboratory, U.S. National Bureau of Standards, on the effects of sunspots on high frequency transmission, and from curves given in this article, the recent maxima and minima have been taken as follows:—

Minima	Maxima
1923	1928
1933	1938
1944	1948

The next minimum is predicted for 1954-5. It is interesting to note that the last minimum occurred during the war

and was well past before Amateur activity recommenced, so that only old timers have operated through a minimum.

The 28 Mc. band is most affected by sunspots and it may surprise newcomers to know that, although a few enthusiasts kept trying, no International DX was reported on 28 Mc. from 1931 until early 1935 and that "QST" of November, 1935, reports the making of the first W.A.C. on 28 Mc. during October, 1935, and in the same issue a contact between VK and Europe in October, 1935, is stated to be the first between these two continents on 28 Mc.

Not having experienced a previous minimum, many Amateurs who found 28 Mc. DX so good in 1936-39 and 1948-49, regarded this band, with its easily constructed rotary beams, as ideal and permanently settled there and dismantled their lower frequency antennae.

What can we expect in the next few years? In accordance with sunspot predictions and charts given in the "QST" article, after this summer (1951-52), there should be no F2 DX on 28 Mc. until the summer of 1955-6. Sporadic E reflections may permit occasional Interstate working, but otherwise the band will be just a local band.

14 Mc. DX will still be worked during the minimum, but generally only on a few days of the month and at the most favourable time as predicted by the m.u.f. charts. A lot of listening per contact will be required.

7 Mc., being less affected, may be the best DX band in the next few years. If rotary beams were possible on forty, this would be a good DX band at any time, but there are other types of antenna which are capable of "stretching out" signals. A ground plane antenna for 7 Mc. was described in "QST" of June, 1947, and if tall poles and plenty of ground space are available, a 7 Mc. 8JK fixed beam directed on Europe or North America would make an interesting experiment.

* 228 Hensman Road, Subiaco, W.A.

† 39 Glenhuntly Street, Woodville, S.A.

The Rothman System of Modulation

BY JOHN CLARKE,* VK2DZ

When new systems of modulation are first introduced, the Ham fraternity usually are very sceptical and want to know the whys and wherefores, and always ask, does it work?

The writer has tried this system with excellent results as many VK, ZL, and some DX stations will testify, and it is the writer's intention herein to outline briefly the theory of operation and its practical application to Amateur transmitters.

As we all know, there are two general types of modulation, namely—

(1) Variable efficiency systems wherein the plate power input remains constant and only the efficiency of the tube is varied to achieve modulation.

(2) Constant efficiency systems which employ variable plate power input and modulate the plate voltage and plate current to achieve modulation by variation of these two factors.

Now the Rothman system comes under the second category due to the fact that modulation is generated as variations of plate current which thereby varies the plate power input.

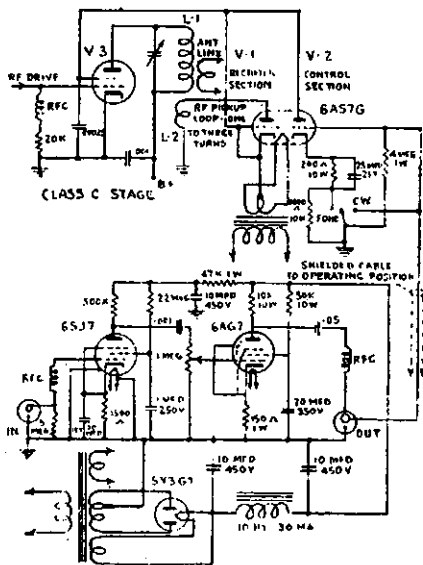


Fig. 1.—1 Kw. Rothman Modulator and Speech Amplifier.

THEORY OF OPERATION

The Rothman system of screen grid modulation achieves efficiency comparable to high level modulation and this is accomplished by the use of de-modulated r.f. feedback to the screen grid electrode of the class C stage in such a manner that a substantially constant r.f. angle of plate current flow is maintained during the modulation cycle, thereby preventing "efficiency modulation."

In the circuit diagram (Fig. 1), r.f. energy from the plate tank circuit V3, is fed to the rectifier V1 by means of

the pick-up loop L2. The de-modulated r.f. containing the modulation envelope, is then fed to the screen grid of V3. Control of this feedback link is effected by the tube V2 into the grid of which the modulation intelligence is introduced. The main requirements for this circuitry are—

Correct adjustment of feedback link L2;

Correct biasing of control section V2;

Low plate resistance characteristics in V1 and V2.

Although tubes shown in Fig. 1 are new American types, suitable Australian types are available and the type 80 and 6CD6 can be used with excellent results.

The feedback circuit operates to reinforce the modulating signal and a negative-going signal at the grid of V2 causes a rise in screen grid voltage. This rise in screen grid voltage causes the r.f. output of V3 to increase, thereby resulting in an increased screen voltage output from V1. At this point, the cycle again repeats at a very rapid rate, building up almost instantaneously to a point of equilibrium, bringing about a high average of screen grid voltage which is correct for any given value of plate power input during the application of the modulation cycle. For a positive-going signal at the grid of V2, the action is identical, but in the opposite direction and all screen voltage to the Class C stage is reduced to zero.

COMPARISON WITH STANDARD HIGH LEVEL PLATE MODULATION

In standard high level plate modulation, the modulating power is introduced in series with the d.c. plate input of the Class C stage. The resultant effect is to modulate the plate voltage between zero and twice the power supply voltage output. This modulation of plate voltage results in a directly corresponding modulation of plate current and for 100 per cent. modulation, the power input to the Class C stage at the positive peak of modulation is therefore 2Ep times 2Ip or four times the carrier power level. At the negative peak of the modulation cycle, both Ep and Ip are substantially zero.

Now with the Rothman system, Ep is kept constant and all the modulation components must be generated as a variation of the plate current. It is therefore necessary that the d.c. plate voltage be equal to the sum of the d.c. and a.c. components utilised in normal plate modulation. This quantity is equal to twice the d.c. plate voltage used in high level modulation systems. Thus, with Rothman modulation the average plate current and screen voltage for constant carrier conditions is adjusted for one-half the values utilised in normal high level modulation. This is done in order to enable symmetrical modulation of these parameters without approaching tube saturation conditions, and at the same time allowing equal plate input through use of twice the plate voltage.

Since in Rothman modulation the side band component of the plate power input must be supplied by the Class C plate power supply, a 50 per cent. increase of average plate current occurs with a 100 per cent. modulation. The plate dissipation of the Class C amplifier tube is identical with that of high level plate modulation for the same plate input, since in the latter the modulation energy must be converted to side-band energy by the Class C tube.

In rating plate power input levels for high level modulated Class C amplifier tubes, it is common to decrease the allowable plate input from the c.w. rating by an amount equal to the high level modulating energy and this is done because of the fact that the d.c. plate voltage and current meters do not read the modulation component of plate power input since it is symmetrically disposed about the carrier power level. In Rothman modulation, however, the d.c. indicating meters always read the true total average plate power input. The allowable plate power input rating for Rothman modulation is therefore exactly equal to the c.w. rating for the tube used.

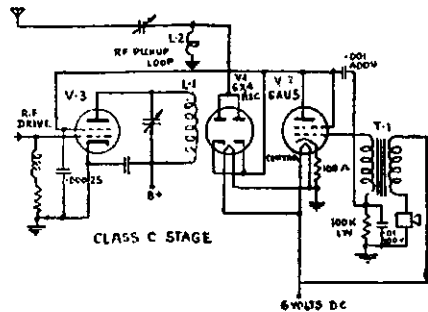


Fig. 2.—100 Watt Rothman Modulator.

COMPARISON WITH STANDARD SCREEN OR CONTROL GRID MODULATION

Rothman modulation differs from the ordinary screen or control grid modulation in that efficiency modulation is prevented by the maintenance of a constant r.f. angle of plate current flow in the Class C amplifier stage. Accordingly, the generation of side-bands is accompanied by a corresponding rise in plate power input. This characteristic is not true of ordinary control grid or screen grid modulation which maintains a constant average level of plate input and generates side-bands by modulation of the angle of plate current flow, e.g., efficiency modulation.

SUMMARISING

At this stage the reader no doubt will say "how do we obtain the same plate power input with the Rothman system as compared with high level modulation, under comparison?"

Assuming we have a 60 watt plate power input to the Class C stage with 600 volts on the plate at 100 Ma. plate current reading, we would probably

* King Street, Newcastle West, N.S.W.

have somewhere around 200-250 volts on the screen. Now with the Rothman system, it is necessary that the d.c. plate voltage be equal to the sum of the d.c. and a.c. components utilised in normal plate modulation and this quantity, as previously explained, is twice the usual d.c. plate voltage, although in practice it is found that an increase of 50 per cent. of the plate voltage will give excellent results. For example—

High Level:

$$600 \text{ v. (Ep)} \times 100 \text{ Ma. (Ip)} = 30 \text{ watts}$$

Rothman:

$$1200 \text{ v. (Ep)} \times 50 \text{ Ma. (Ip)} = 60 \text{ watts}$$

At this point it is well to bear in mind that the only source of d.c. screen voltage supply to the Class C amplifier tube is by means of voltage supplied by the rectified r.f. taken from VI of Fig. 1.

MOBILE EQUIPMENT

Fig. 2 shows a Rothman modulator for 100 watts plate power input which although shown as a complete mobile unit due to the fact that it is d.c. operated, can easily be changed over for a.c. operation to meet the requirements for the standard 100 watt transmitter license as applied to Australian Amateurs. The circuit is straight forward and it works well. The writer has used this modulator, which only measures 4 inches by 4 inches by 2 inches deep, with great success to modulate his 100 watt Class C stage. Here again Australian type tubes can be used, the principal requirement being low plate resistance characteristics.

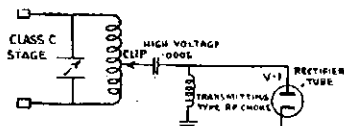


Fig. 3.—Alternative Method of Coupling R.F. to Modulator.

ADJUSTMENTS

1. Disconnect your screen supply altogether from the screen grid electrode.
2. See that your plate voltage to the Class C final tube is at least half as great again as that used with high level modulation for the same plate power input.
3. Back out your aerial coupling link to minimum.
4. Tune the final tank for resonance and you will notice that the resonance point will be indicated by the maximum plate current reading and not the usual

dip, this being because the screen grid voltage has been removed.

5. Couple the r.f. pick-up coil (attached to the de-modulator of the twin triode) to the cold end of the Class C stage and adjust same until the screen grid voltmeter reading shows half the voltage stated by the manufacturer's chart in respect of the plate voltage applied and this voltage must be obtained by application of modulation, i.e. whistle into the microphone at a constant level and adjust the pick-up coil until you obtain the required screen grid voltage.

6. Now couple your antenna coil to get a rise in plate current and when the plate current starts to fall off, this is the point at which the coupling to the antenna is correctly adjusted.

7. Don't be misled by small plate current readings because that shown on the meter is only the average value, the peak being twice that shown. However, if you have an aerial ammeter or pea lamp, you will see the energy that is being transferred to the aerial and when you apply modulation (speech), you will see the terrific increase in this energy due to the audio voltage adding to the de-modulated screen grid voltage and thereby varying the r.f. output of the transmitter.

The adjustments might seem complicated, but they are really quite simple and no difficulty should be experienced and once you get the correct settings, it is all plain sailing.

Unlike plate high level modulation, the plate current will kick about frantically, due to the modulation in this system appearing as variations of plate current.

LIMITATIONS AND SPECIAL REQUIREMENTS OF THE SYSTEM

The degree to which Rothman modulation can approach 100 per cent. is affected by the screen characteristics of the Class C amplifier tube used. With tubes possessing a reasonably high screen to plate transconductance, modulation or percentages between 90 and 95 per cent. are readily obtained. The plate power supply for the r.f. stage must be designed for twice the voltage normally used and must be capable of an output equal to the sum of the carrier and side-band components of the plate power input to the modulated Class C stage.

Care must be exercised in adjusting the feedback link to insure that the screen voltage at the peak of the modulation cycle does not approach screen

saturation. This is necessary in order to prevent excessive screen dissipation and efficiency modulation with resultant decrease in plate efficiency.

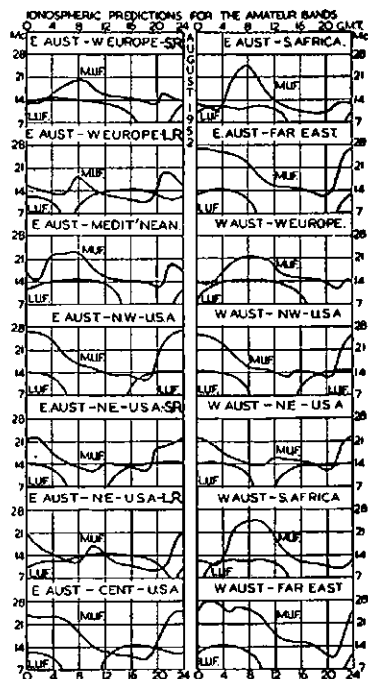
Since the degree of output coupling to the r.f. load affects the amount of energy in the plate tank and therefore the screen feedback link, adjustment of output coupling and feedback coupling are interdependent.

Plate resistance of the control and rectifier tubes should be low, about 500 ohms being ideal.

ADVANTAGES OF THE ROTHMAN SYSTEM

1. Elimination of bulky and heavy high level modulation components including Class B modulators, drivers, and modulation transformers.
2. Consolidation of plate power requirements into a single power supply at twice the normal impedance, thereby enabling a saving in space and weight.
3. Capable of linear modulation at extremely high modulation frequencies with all the flat response characteristics of resistance coupled operation.
4. Elimination of separate screen power supply or power wasting voltage dropping or dividing resistors.
5. Since screen power is generated only under conditions of resonance, protective fixed bias is unnecessary and superfluous.
6. Controlled carrier operation is readily obtainable with extremely simple circuitry.
7. Negative feedback of the de-modulated intelligence is easily accomplished by merely connecting a suitable network between the plate and grid electrodes of the control tube as shown in Fig. 2.

PREDICTION CHART FOR AUG., 1952



ANNOUNCEMENT

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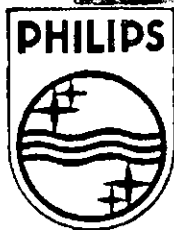
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DX NOTES BY VK4QL*

June was not very successful from your scribe's point of view with my own reduced activities, not much news from any of the gang, and wondering how much of my Sydney QTH will be in one piece after the damage it has been receiving in the storms. This is one case where "out of sight, out of mind" does not apply.

The DX ethics of some of the W stations on one or two rare ones that appeared, namely, VR7AB, FR7ZA and FK3, made one wonder just what is happening to the Ham spirit as it used to be known. A W7 for one example, moved his Tx back and forth over more than 5 Kc. of an FK8, calling all the time, thus effectively making sure, if he did not get the station, others would not either. Later in the notes mention will be made of VR7AB. The goings on, on this poor guy's freq. were amazing. Even the days he was not on the air, he was still being called blind by one or two. When he was on, those who missed out, carried on back chat on his own freq., appeals from VR7AB having no retarding effect.

Early in the month, both 7 and 14 Mc. showed some promise, but it was not maintained after the first few days, then they went back to the doldrums. On one or two days, exceptionally strong signals from some West Coast WVE stations came through, so there is some improvement in the band from that quarter on 14 Mc.

The band survey, with stations worked * and times in 2 time, shows—

3.5 Mc.: ZAWU struck the jackpot on this band working CE2AC on the 22nd at 1200z. 7RK thinks this band shows promise as he had heard a number of stations, even WNS which shows power is not essential. Ray says if the DX gang used the band, they would work plenty. 4QL only heard W6ZAT.

7 Mc.: This band showed some improvement up here in the mornings, but was not maintained. 4XJ found that he could hear W, VE, KH6 and KL7 OK, especially round 1300z. 7RK reports the band varying from fair to poor. 4QL heard very little of good strength, even VK way down. 4EL for example, 20 miles distant being almost unhearable, but lists HH2LD*, HH2FL, PY8DU, ZS4CZ*, VK9GM*, CN8FF, KP4CC, VR4AF*. At long last a VK6 took up his pen, 6LU to wit, who operates this band. Lou is very perturbed at the amount of Commercial QRM on the band (so am I after looking at the Berne list). Just the same, he lists KG6FAA*, VU5AB*, KC6QY*, CR9AF, CO6PP*. One morn he worked seven Gs, one GW and GI in a row.

14 Mc.: Some of the East Coast gang seem to be able to work Europe in the early mornings, but a beam seems to be necessary. Up here, they have been very weak, if at all, and the band is useless for 20 out of the 24 hours, which is a far cry from 14 Mc. as we used to think of it. ZL&FA reports the same over there. 20W has increased his tally to 99 by a QSO with KC6DX. 4XJ found the afternoons best and lists CO2OZ*, VR1B*, TI2CHV*, ZS1V*, XE2KW. Can hear the Europeans and works the odd one in the mornings. On 14th heard three ZS and KH6 in a four-way. 5HI did say he hooked ZD2HAH and FB8BE, the latter at 0330z, and heard VQ1MD at 2330z. 4QL at last completed his W.A.S. and now waits the arrival of four QSLs. Lists VR7AB, ZS5CZ at 0630z, FR7ZA, VK1EM, HZ1MY, KG4AF*, VR4AF*, EA8BC, HH3L, EK1FM, EN1BZ (QTH given as Stuttgart), and VP1AA*. 7RK found some hefty signals also from W/VE in the afternoons, but nights useless. Ray tried to find EA8DC but no luck. He lists FA8IH, CO2OE*, EA6AM, ZS1JA, 9XK, who shortly returns to VK3 again, is chasing Vermont to complete his W.A.S. Russ lists PK7XX*, VP2AD*, VP1AA*, his total being now 125.

21 Mc.: This band has been disappointing to most, and not much DX has been heard. ZAWU worked KZ5AW and heard ZE3JJ. 3NM disappointed he missed out when some VK3s worked ZE3JJ, but has now amassed the total of 194 on all bands. 4XJ showed no results for his visits to the band. 4QL: KZ5AW* and heard a few Ws. 7RK found W and VE the only ones in the way of DX.

28 Mc.: 4XJ and 7RK found the band hardly worth while looking at. The Ws say that many of the confirmed 28 Mc. stations are appearing on 14 Mc. over there.

The QSL position is like the bands, not much to report. 7RK a blank, 9XK VP90Q, 4QL EK1AO, ZD2DCP, ZE3JP, VK1YG and SU1GO. The gen section depends on how much space the Editor makes available as there are some general interest items this month. Firstly will

be the subject matter of a letter from ZE3JJ to the VK3 Division, reference 21 Mc. As the letter was written in April, some of the letter is past history. As I mentioned in a recent issue of these notes, 21 Mc. had been available to South Africa for some years, but activity of the ZE stations waned when there was no other to QSO. However, the news of the release on 1st May started the ball rolling again. During 1949-50, ZE1JB and ZE2KH conducted tests on the band, and effected cross band contacts with most continents, but interest then lapsed somewhat. (4EL heard ZE on 21 Mc. months and months before its release to VK). ZE3JJ, using a vert zepp, on 19th April worked ODSAB who reported he had worked OQ5, VST and PY. A QSO with M13 and PY then followed, PY1AQT reporting much activity on 21 Mc. ZE3JJ says he was hearing Radio Australia excellently on the freq. of 21.54 at 0500z, and the BBC on 21.47 Mc. 1200z-1700z. ZE stations active at present are ZE2KH, ZE2JK and ZE3JJ. As mentioned above, since the release of the band ZE3JJ has worked VK3.

Whilst on 21 Mc., I was told that the band was being released to the Gs on 1st July. W stations are in an unhappy frame of mind re this band, as the F.C.C. allocation of the band, at present intention, is phone on the high and low ends, with Novice and teletype operation in the present agreed c.w. part of the band. This allocation would certainly make things somewhat difficult.

W stations have told me this month there is increased activity in ZP these days, quite a few now being on the 14 Mc. band. ZS2MI is again active for a short period. I received a letter from Eimac Tubes, saying that they had the log of 4WIAC, and noted I was one of the chosen few in the 38 QSOs that station had. They are at a loss to understand the small number of contacts, seeing that 4WIAC was using high power, so were interested in details of my rig. Once again, it has been proved low power and a simple antenna can go places.

VR7AB is causing much discussion, especially amongst the Ws, as to his being legit, or otherwise. Many of them who miss out, jam the freq. saying he is soney. If he is, he certainly tells a good story, part of which is, that he is an ex-GM who was operating v.h.f. until a couple of years ago and has few clues on DX-ing. So much so, that he does not realise how "hot" he is and will rag chew for up to an hour with one station, much to the chagrin of the impatient. He says he has had great difficulty getting a license, the Post Master being most unco-operative, so eventually had a license issued by the British Authorities and now the P.M. wont speak to him. VR1B is reported to have cabled Nauru and received a negative reply, but, remember the P.M.I.

VR4AF (VK2QZ) will be back in Sydney long before you read these notes. Bob had just over 250 QSOs with this call. The KC8 prefix is getting some DXers' noses a bit, so here is the score, right from the horse's mouth, KC6QY. The islands of Yap and Palau are one country, whilst Ponape and Truk are classified as another. VK6GM should not be passed over as he is on from Norfolk Island.

Well that winds it up and 6KU gives us the thought for the month as "There is a lot of undeveloped territory right under your hat."

FIFTY Mc. AND ABOVE

THE VK5 INTRA-STATE V.H.F. CONTEST

VK5RO showed commendable enterprise in piling up a score of 3973 points in the recent V.h.f. Contest. He used the following bands: 50, 144 and 288 Mc., working 29 individual stations. To Colin goes our heartiest congratulations, to say nothing of a QQE08/40 which was generously donated by Philips Industries and we feel that the best possible use will be made of it.

While a considerable number of stations participated in the Contest, the return of logs was to say the least disappointing, although when the winner is presented with the tube at the next meeting the gang will be the disappointed ones. It is felt that the Contest was not without value, however, because several appreciative comments were received from enthusiastic builders of v.h.f. gear, who said, "At least we knew that there would be signals on the bands each Sunday evening."

The only country stations to appear were 5BC of Renmark, 5XL of Clare, and 5AX of Gawler. It is hoped that next year's Contest will see more country stations active and we feel sure that when the tube is examined by all and sundry at the meeting, quite a number of those who did not bother to submit logs will be "kicking themselves."

The receiving section of the Contest was won by Max Hilliard, of Salisbury, with Joe McAllister (now 5JO) in second place. The winner of this section will receive a pair of 6J6s, donated by our staunch friends, Gerard and Goodman.

Quite a number of listeners submitted logs but were ineligible because they did not include a description of the equipment in use as requested by the rules. All in all, the VK5 Division's first attempt at an Intra-State V.h.f. Contest was a definite success and all the credit must go to the v.h.f. representative on the VK5 Council, 5JD, Jack to you, who handled the whole matter from start to finish. Nice work Jack, take a bow.—SPS.

SOUTH AUSTRALIA

Things are fairly quiet with most activity being on 144 and 288 Mc. A lot of re-building is taking place and with a few new calls activity should be high next summer. It is reported some chaps are trying out the Birdcage type of antenna on 288 Mc. and finding the gain very useful. Reg. Davies, a well known ex-VK5 v.h.f. man, was on a visit to Adelaide recently and was accorded a hearty welcome by the boys at an evening held at 5GF's place.—SKL.

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* Fil./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

AMATEUR CALL SIGNS

FOR MONTH OF MARCH, 1952

ADDITIONS

VK— New South Wales
 2HX—T. L. Somers, 2 Ingham Av., Five Dock.
 2IG—L. J. Bone, 14 Railway Av., Eastwood.
 2VX—V. E. Stanley, O.T.C. Radio Station, Carlingford.
 2PO—R. B. Reeks, 7 Wheeler St., Carlton.
 2ATO—J. D. Thornthwaite, 33 Collingwood St., Drummond.

Victoria

3ME—E. C. Cameron, c/o. 3LK, Lubeck.
 3ARC—R.A.A.F. College Radio Club, R.A.A.F. College, Point Cook.

Queensland

4SS—A. Shawsmith, 54 Davenport St., West End, Brisbane.
 4TL—D. N. Robinson, 47 Dunnellan St., Green-slopes, Brisbane.

South Australia

5OC—L. O. C. Baker, 7 Lillian St., Prospect.
 5SD—R. S. Amos, 76 Oval Av., Woodville Sth.

Western Australia

6TR—T. W. Reed, 17 Auckland St., Nth. Perth.

Tasmania

7BC—B. D. Clark, Short St., Lindisfarne.

Territories

1AE—G. Major, Macquarie Island.

ALTERATIONS

VK— New South Wales
 2BA—17 Scales Pde., Balgawlah.
 2FI—"Windward," Buena Vista Av., Wentworth Falls.
 2GL—c/o. Qantas Airways, Operations Dept., Mascot.
 2LY—"Notrella," Rodova St., Katoomba.
 2OX—9 Glamis St., Kingsgrove.
 2QY—36 Cliffbrook Pde., Clovelly.
 2ABH—Lot 65, Horton St., Bass Hills.
 2ADA—28 Cathcart St., Fairfield.

Victoria

3BP—Howlong Loose Bag, Rutherglen.
 3GB—755 Burwood Rd., Hawthorn, E.3.
 3GV—Ruda St., Doncaster.
 3HD—9 Ackaringa Cres., Black Rock, S.9.
 3PD—Cr. Henty & Campbell Sts., Barwon Heads.
 3RA—71 Tennyson St., Elwood.

3RF—93 Latrobe St., Warragul.
 3WK—35 Lubrano St., East Brighton.
 3AAB—37 Gordon Gr., Northcote, N.16.
 3AAK—"Coinda," May Rd., Syndal, via Glen Waverley.
 3ATD—c/o. Station 3BO, Bendigo.

Queensland

4FM—41 Little St., Cairns.
 4KR—Eimeo Rd., North Mackay.
 4WI—c/o. A. Harris, 15 Turner St., Windsor, Brisbane.
 4XW—10 Ashton St., Camp Hill.

South Australia

5MK—55 Lynton Av., Millwood Estate.
 5MN—17 Railway Ter., Kadina.
 5MP—2 Dew St., Kent Town.

Western Australia

6CN—Moore St., Killerberrin.
 6FW—117 Hamilton St., Bassendean.
 6OY—10 Kipling St., Narrogin.
 6RB—152 McDonald St., Joondanna Heights, Mount Hawthorn.
 6RT—School House, Bindl Bindl.
 6UF—c/o. D.E.S., W.A. Govt. Rlys., Geraldton.
 6VK—R.A.A.F. Station, Pearce.

Tasmania

7RA—Lenna St., Rosebay, Lindisfarne.

Territories

1RF—Heard Island.
 1RG—Macquarie Island.

DELETIONS

N.S.W.: VKs 2AFL, 2ATL (now operating under VK2HX).
 Vic.: VKs 3ADE, 3AFL (now operating under VK2LY).
 Tas.: VK7JB.

FOR MONTH OF APRIL, 1952

ADDITIONS

VK— New South Wales
 2LJ—L. J. Coupland, 135 Morgan St., Beverley Hills, Sydney.
 2ATF—J. S. R. Price, R.A.A.F. Station, Richmond.
 2AUA—M. C. Carpenter, 3 Heathcote St., Rockdale.

Victoria

3ALZ—I. F. Berwick, "Courtney Park," Murchison.

South Australia

5OP—P. S. Roper, 27 Miles Ter., Nth. Adelaide.

Western Australia
 6MR—H. T. Mulder, Station: Aboard M.V. "Sabina," Postal: 4 Tyrell St., Nedlands.

Territories

1EM—E. L. Macklin, Macquarie Island.

ALTERATIONS

VK— New South Wales
 2AO—22 Targo Rd., Kogarah.
 2HF—32 Wattle St., Killara.
 2LJ—12 Anzac St., Canterbury.
 2MZ—44 Linthorn Av., Croydon Park.
 2TZ—36 Kardina Rd., Clifton Gardens.
 2UM—4a Cuddeps Rd., Burwood.
 2VH—114 Gippes St., Wollongong.
 2XP—Girrahween, R.M.B. 331, Dalton.
 2ZH—81 Beechworth Rd., Pymble.
 2AAG—26 Meakin St., Merrylands.
 2AB1—Lot 61, Cabbage-tree Lane, Fairymeadow.
 2AJE—88 Gannons Rd., Carlingbah.
 2AKK—27 Cecil St., Ryde.

Victoria

3DV—82 Scott St., Dandenong.
 3KH—28 Nerissa St., Burwood.
 3SF—376 Fortescue Av., Seaford.
 3ABP—28 Lewisham Rd., Windsor.
 3AGP—39 Sixth St., Parkdale.
 3AGX—40 Birdwood Av., Dandenong.
 3AJI—165 Glen Eira Rd., East St. Kilda.
 3AOL—34 Bellerine St., Geelong.

Queensland

4GW—168a George St., West Bundaberg.
 4LK—Anne St., Charters Towers.
 4LT—Fitzroy St., Nanango.

South Australia

5AC—15 Hughes St., Woodville.
 5DG—140 Raglan St., Harcourt Gardens.
 5VC—Cr. Montacute & Moorland Rds., Hectorville, Adelaide.

Western Australia

6AR—9 Elizabeth St., Kalgoorlie.
 6CM—30 McDonald St., Kalgoorlie.

Tasmania

7WI—27 Bishop St., New Town.

Territories

9RO—S.D.A. Mission, Box 11 P.O., Lac. T.N.G.

DELETIONS

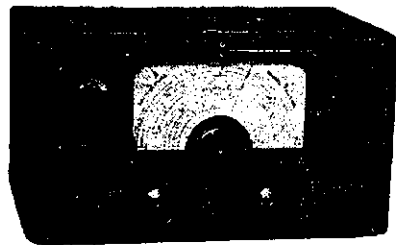
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 Qld.: VK4KM.
 S.A.: VK5EK (now operating under VK2ATF).
 Territories: VK1KJ.

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Television Questions and Answers

Questions on television, submitted to VK3ADA, after being answered by post, will be anonymously published and again answered here, as space permits, to benefit other readers.

Q.—Ref. Part ii. As a photographer, I noticed that the design of the Emitron camera does not permit the lens to be placed close to target, as shown in Fig. 1. Apparently this camera can use only lenses of large focal length, with the inherent disadvantages of same. Surely all television cameras don't suffer this limitation. How can it be overcome?

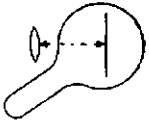


Fig. 1.

A.—You are quite right. The disadvantage you mention is due to the functions of photo-cathode and scanning target being combined on the one surface, and is overcome in later types of camera tube by separating these two functions. Perhaps the simplest of these tubes is the Super Emitron, outlined in Fig. 2.

In this tube, the photo-cathode consists of a small sheet of transparent mica, or glass, coated with photo-emissive material and placed against a flat "window" in the tube, so that the optical lens can be placed as close as required.

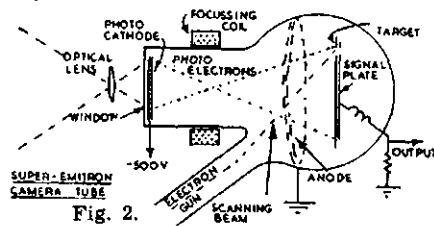


Fig. 2.

Photo electrons, after being liberated from this cathode (by light from the scene) are attracted by the anode towards the target, on to which they are focussed by the coil, just as the optical lens focusses the light rays on to the cathode.

Upon striking the target these electrons dislodge others from the target's surface, so that the "charges" produced by the light are "transferred" from the photo-cathode to the scanning target, from which the output is obtained just as in the Emitron tube (which, by the way, is not obsolete. It still has some advantages).

The Super Emitron uses a method of amplification quite different from those with which we are familiar. As each photo-electron strikes the target at high velocity, it dislodges not one, but several electrons so that the charges on the target are greater than those on the cathode. In other words, the signal is amplified, making the camera far more sensitive than the Emitron.

This method of amplification, called "electron multiplication," is used quite extensively in television cameras, but for simplicity's sake, the subject has

been purposely omitted from this series, since it does not concern the Ham's angle on television.

Q.—I've read that when an object moves rapidly across a television screen, it appears distorted in shape. Why?

A.—Consider the square object in Fig. 3 moving from left to right. Suppose that when the camera commences scanning its top line, it is in position ABCD, but by the time its base line is scanned, it has moved to position HGFE. Now, on the receiver screen the top line will be reproduced at position AB, and the base line at EF, so that instead of being square, the object will assume the "rhombic" shape ABFE.

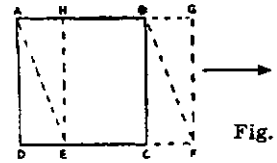


Fig. 3.

This point has often been raised in support of 60 field/sec. systems, but in reality, even in a 50 field/sec. system, it is far from troublesome; in fact you probably would not notice it if you had not been told.

The distance DE is that travelled by the object (on the screen) in about one-hundredth part of a second or less, and for this to be appreciable, the object would have to be moving so fast that its shape would not be clearly discernible in any case.

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REMEMBRANCE DAY CONTEST, 1952

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 15th August in each year, the date on which the hostilities ceased in the S.W.P.A.

A handsome Perpetual Trophy is awarded annually for competition between States, inscribed with the names of those who made the supreme sacrifice, and so perpetuating their memory throughout Amateur Radio in Australia. The name of the winning State each year is also inscribed on the Trophy.

RULES

1. The Contest will commence at 1800 hours E.A.S.T. on 16th August and continue through until 1759 hours on the 17th August.
2. The Contest is open to all Australian Amateurs, but only members of the W.I.A. are eligible for the awards.
3. The Contest is an open event—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 under his own call sign, provided each operator enters a separate log.
6. All existing Amateur bands may be used, and all transmissions must conform with the Regulations as laid down in the P.M.C.'s. "Handbook for the Guidance of Operators of Amateur Wireless Stations." Any breaches of these will lead to the disqualification of the operator concerned.
7. The arrangements 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 financial members before becoming eligible for contesting the Trophy.
10. Only one contact per station per band is permitted.
11. Serial numbers to be exchanged during the Contest will be as follows:—
(a) For c.w., the first three figures will be the RST (telephony) report, followed by the serial number of the contact commencing with

any number between 001 and 100 for the first contact and increasing in value by one (1) for each successive contact. If any contestant reaches 999 he will then commence 001 and continue 002, 003, 004, etc.

(b) For phone the first two figures will be the RS (telephony) report, followed by the serial number of the contact commencing with any number between 001 and 100 for the first contact and increasing in value by one (1) for each successive contact. If any contestant reaches 999, he will then commence 001 and continue 002, 003, 004, etc.

A complete exchange of serial numbers must take place before any points may be claimed for the contact.

SCORING

12. In order that an equitable distribution of points for States with a large number of contestants compared with a State with fewer contestants may be determined, a sliding scale of points has been allotted as shown in the scoring table appended.

13. In addition to the points in the scoring table that may be scored by a contestant, a bonus of 25 points may be added to the total score for each State worked on 50 Mc. or above.

LOGS

14. The log submitted must show in the following order: Date, time, band, emission, call sign, RST/No. sent, RST/No. received, points claimed. No log will be accepted unless laid out in this order!

15. 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 automatically be disqualified.

16. All logs must be forwarded through the Contestant's Divisional Council (for membership checking) to reach the Federal Contest Committee, Box 1734, G.P.O., Sydney, on or before 12th September, 1952.

AWARDS

17. Attractive certificates will be awarded to the first, second and third highest in each State; there will be no outright winner for Australia. Where a large number of logs are received from any one State, further certificates may be awarded at the discretion of the Contest Committee.

TROPHY

18. The State to which the Perpetual Trophy will be awarded shall be determined as follows: To the average of the top six (6) logs shall be added a bonus arrived at by multiplying this average by the ratio of valid logs submitted by that State to the total of Amateur Licensees in the Division at the time of the Contest.

Example: Total points equals—

$$\text{Average Score} \left(1 \text{ plus } \frac{\text{Number of Logs}}{\text{Number of Licensees}} \right) \text{ in Division}$$

19. The logs which will be accepted for the multiplier under Rule 18 shall show at least five (5) contacts in the Contest.

20. The Trophy shall be forwarded to the winning State in its container and will be held by that State for a period of twelve (12) months when the winner for the succeeding year is determined.

21. The Federal Contest Committee shall be the sole adjudicators and their ruling will be binding in the case of any dispute.

SCORING TABLE

	To	VK2	VK3	VK4	VK5	VK6	VK7	VK9	Total
VK2	1	2	3	5	4	6	5	21	
VK3	1	3	2	5	4	6	5	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 a	VK3	contact.
	2	"	"	"
	3	"	"	"
A VK6 scores	1	"	"	VK2
	2	"	"	VK3
	4	"	"	VK4

Rules for Overseas Stations in VK-ZL DX Contest, 1952

N.Z.A.R.T. and W.I.A., the National Amateur Organisations in New Zealand and Australia, invite world wide participation in this year's VK-ZL DX Contest. Rules for Overseas Stations are the same as for 1951 and may be summarised as follows:—

When: C.W.—24 hours from 1200 GMT, Saturday, 4th October, to 1200 GMT, Sunday, 5th October.

Phone—24 hours from 1200 GMT, Saturday, 11th October, to 1200 GMT, Sunday, 12th October.

Scoring: One point will be scored for each contact on a specific band with any VK-ZL district. The final score will be derived by multiplying the total contacts on all bands by the total number of VK-ZL districts worked on all bands. VK-ZL districts are: ZL1, 2, 3, and 4; VK1, 2, 3, 4, 5, 6, 7, and 9.

Serial Numbers will consist of six figures (five figures for phone), made up of the RST report plus three figures which should commence with 001 and increase by one for each successive QSO, i.e., 002, 003, 004, etc.

Logs: (a) Must show in this order: Date, time in GMT, call sign of station contacted, serial sent, serial received, band. Please underline each new VK-ZL district when contacted. PLEASE use a separate log sheet for each band.

(b) Summary Sheet to show: Call sign, name and address (please in block letters), details of rig, Total score by showing total of districts worked on all bands and total contacts on all bands. (Districts x Contacts equals Total Score), and signed declaration that rules have been observed.

Awards: Attractive Certificates to the highest scorer in each Country (each call area in the U.S.A.). Other Certificates will be awarded depending upon the number of logs received from each Country.

Logs should be posted to reach N.Z.A.R.T., Box 480, Wellington, N.Z., on or before 23rd January, 1953. (Mark envelope VK-ZL Test.)

Listeners' Section as before. To count for points, a VK or ZL station must be heard in a Contest QSO and the following noted in log: Date, time in GMT, call of station heard, call of station being called, RS(T) of station heard, serial number sent by the calling station, band. Scoring is on same basis as for transmitting section, and log should be similarly made out.



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FEDERAL, QSL, and DIVISIONAL NOTES



FEDERAL

NEW BAND IN NEW ZEALAND

Commencing at 0001 New Zealand time on the 1st July last New Zealand Amateurs holding high frequency permits (ordinary or special) were licensed to use the frequencies 28,960 to 27,230 Kc. in the 11 meter band for A1 and A3 transmissions.

Additionally, from the same time and date A3 transmissions were permitted (by the above class of permit holders) in the portion 21,101 to 21,450 Kc. of the new 21 Mc. band. Telephony will not be permitted on the frequencies 21,000 to 21,100 Kc. which is reserved for A1 transmissions only.

ZL LOCAL AWARD IN VK ROSS HULL V.H.F. CONTEST

Over the past two years the ZL activity in the Australian "Ross Hull V.H.F. Memorial Contest" has been ever increasing. The N.Z. A.R.T. asked the W.I.A. if there was any objection to them making a local award for the highest ZL scorer in the Contest, this, they considered, being a step towards popularising the v.h.f. bands in New Zealand. The trophy will be known as the H. P. V. Brown Cup.

WHAT OF 21 Mc.

Much speculation is rife on whether the 21 Mc. band is going to be any good, and therefore, whether we should spend time and money building a final and a beam for a band that is worse, if anything could be, than the 10 and 20 meter bands have been this last two years.

One thing that does assist to make a band "a good band" is the number of stations operating in it, and in this respect the 21 Mc. band is sure to improve with an influx of signals to be heard.

However, one bright spot on the horizon is the upward curve of the sunspot cycle, which undoubtedly will cause a rapid improvement in band conditions, when the 21 Mc. band should prove to be the DX band combining the characteristics of the 14 and 28 Mc. bands.

So don't adopt the attitude that 21 Mc. will never be any good and that therefore it is useless wasting time and money on equipment to use in it, for there is a heyday not so very far ahead when Amateur bands will come into their own and those who were prepared will enjoy an era of operating such as they never dreamed of.

CIVIL DEFENCE

With wonderful prospects ahead for Amateurs to organise themselves into emergency networks for civil defence and other emergencies, now is the time to think about really making an effort to construct equipment for mobile/portable use—equipment that can also serve as a stand-by rig for field days and when on holidays.

Those who are interested are referred to the American magazine "CQ," May, 1952, which is a special mobile issue, and gives many pages of interesting ideas, which, even if not followed exactly to the circuits published, due to unavailability of some components, at least serves as an excellent basis on which to commence designing your equipment. Articles on the conversion for mobile use of the now famous Command transmitters and receivers merits the interest of all Australian Amateurs because everyone seems to have obtained at least one unit of this range of equipment.

FEDERAL QSL BUREAU

RAY JONES, VK5RJ, MANAGER

The new and permanent address for the QSL Bureau of the Singapore Amateur Radio Transmitters' Society is Box 176, Singapore 1, Malaya. The Manager is VS1DU.

Bill Storer, ex-VK1BS, is still busy on the back log of QSLs. He intends doing battle with ex-VK1VU, saying, "Maybe he will talk to another VK1."

Jim Wilson, VK7JT, writing from Penguin, Tasmania, states he has "temporarily" forsaken radio during the past 18 months. Jim finds plenty to interest him in his present occupation in the analytical field.

June, 1952, was a post-war "low" in the QSL line, and is probably a reflex of the poor conditions persisting on the International DX bands.

W.I.A. ACTIVITIES CALENDAR

August 16 to 17: Remembrance Day Contest.
October 4-5: VK-ZL DX Contest (all bands), C.W. Section.
October 11-12: VK-ZL DX Contest (all bands), Phone Section.
December 6-7: European DX Contest (all bands), C.W. Section.
December 13-14: European DX Contest (all bands), Phone Section.

NEW SOUTH WALES

The June meeting of the N.S.W. Division was held at Science House on Friday, 27th, under the chairmanship of the President, John Moyle. After disposing of the minutes and correspondence, a lecture was presented by Mr. Angus Robertson on Ionospheric Prediction Charts. In this he was ably assisted by Mr. Joe Reed who had presented a talk on somewhat similar lines a couple of years before. Joe turned on a comprehensive set of lantern slides and did the honours with the lantern.

The Division needed no introduction to the lecturer who has regaled us from time to time on various somewhat abstruse subjects in a lucid and efficient manner. The mysteries of ionospheric charts, their evolution, and production were laid bare and their uses made as clear as daylight. The reason for the lecture arose from the previous meeting when the lamentable lack of co-operation from Amateurs in general to the appeals from the C.S.I.R.O. for confirmation of the accuracy of the charts as published monthly in "Amateur Radio." It was pointed out how much toll went into the preparation of those charts (we now know how much!) and that it was up to all the DX hounds to forward the results of their observations to the C.S.I.R.O.

It has been decided to make a real effort to show that Australian Amateurs can and will help in this matter of scientific importance and 2XU has been appointed as co-ordinator. An appeal is hereby made to all Amateurs reached by this magazine to volunteer their assistance by dropping Wal a note or a card. Those who are unable to undertake organised assistance can still help by letting Wal know from time to time of any unusual path opening, of "threshold" conditions on any band at any given times, and of times at which a DX path is heard to open or fade out. Even an occasional observation of this kind will be of value when multiplied by those received from the other fellow!

After the lecture Angus showed us some colour slides of Norfolk Island made by himself and a colleague, and very good they were!

There was not much time left for general business, which was unfortunate, as notice had been given of a motion to suspend all privileges of unfinancial members. Some keen discussion on the motion took place, but I, for one, felt that a little more time spent on it would have brought out a lot of points which were not covered. The motion was passed but a legal difficulty has momentarily spragged the action. By the time this appears in print it is pretty certain that some drastic action will be taking its course. It always beats me why some chaps, with the best intentions in the world of paying their subscriptions, eventually seem to procrastinate until it is too late! It is hoped that only the no-hopers will be scrubbed on this occasion.

In the remaining five minutes at our disposal, the remaining agenda items, ratification of which had been held up by the non-receipt of the Convention minutes from F.E. in time for the May meeting were bulldozed through.—2GW.

NORTH SHORE ZONE

Very little activity from this area during the month and no notes whatever from the boys. Conditions have not been good, with high winds, cold weather, and large lumps of silence on all bands, when time found to listen. Hear Dave 2EO is re-vamping rig, Harold 2AQP still building beam. Vic 2AEN has at last cleared up trouble in his rig when last contacted with nice drop of c.w. and f.b. phone, congrats Vic. John 2ANF heard on 40 with usual f.b. signal. News of activity will still be appreciated gentlemen!

ST. GEORGE ZONE

Until recently I have been unable to go around and see the local boys, nor have I been able to hear them on the air. Believe me, I have been busy, and now I can sit back and rest (before I find more to do). I went and visited John 2XW and he was very surprised to see me, he was wondering if I had left the State. He tells me that 20 has been very dead lately, and seeing that his mast collapsed recently, he has not been heard of as much as yore. Sid 2SW I hear is back, and I will drop in and see him very soon and let him tell me all about his travels, and see if he knows anything interesting. I called on Cedric 2ASK, but was told that he was in Japan. John 2JJ and Frank 2ABA, I must go and see if they are still around. Switched on the gear to see if it still went after the holiday it has had, but no fuses blew, and had a quick look around the band, to see if I could make any contact. Had everything ready to go when visitors arrived, and had to play host, anyhow what I did hear on the band was not much so I don't think I missed much. During the next month I will also visit the v.h.f. boys and maybe next month I will have more notes from this area.

SOUTH WESTERN ZONE

Les 2PI heard on 80 mx. Jim 2TC also active on 40 and 80. 2APP heard on 40 and 80 mx. Peter in the process of constructing a g.d.o. 2AKF also active on 40. Jack 2OY and Les 2AEL both heard on 40 mx. Fred 2AJI heard on 80 mx putting out a good signal. 2FL making alterations to house, and busy rounding up prospective Hams at Griffith, Stewart is the proud father of a new son, congrats OM.

2OW now has worked 98 countries, 75 confirmed, nice going Gordon, also informs that he worked a KL7 on 20 mx and received his card seven days later. Geoff 2BQ heard on 80 mx. 2APZ active on 40 and is really getting contacts with his 15 watts, the AR8 Rx should be better than your old super, Ray. Not much progress has been made with the South Western Zone hook-up at 0930 on Sunday mornings as conditions seem haywire at that time. Some of the chaps have suggested 80 mx for the hook-up, it's worth a try. If you have not been in the zone ragchew, how about it fellows?

COALFIELDS AND LAKES ZONE

With the coming of winter and the prevailing conditions, the gang seems to find the call of the fireside, stronger than that of the Ham shack. In addition some of the boys are busy with the soldering iron modifying gear during the winter lull. Ken 2ANU has been busy re-vamping the low frequency Rx to suit his 32 volt supply. Geoff 2VU re-appeared on 50 Mc. with his re-built rig and has commenced operations on his 2 mx gear. Alex 2JZ still chases the elusive ones on 14 Mc. Harry 2YL has been on the air again for odd contacts and even stoked up the rig on 21 Mc. Main activity at 2ADT's shack has been in connection with a QRP rig for 80 and 40. Bob 2KF has kept Kurri on the map with contacts on 7 and 14 Mc., but Max 2KZ seems to have deserted 10 mx, maybe I don't listen at the right time.

Major 2RU is still working regularly on 2 and 6 mx. Charlie 2ARV may be heard on 40 mx at the week-ends. Cecil 2KR works on 40 and 2. He now has a 4 over 4 beam on 2 and is planning an 829 final. John 2GA has completed his 829 final for 2 and is doing battle with a xtal controlled converter. He also sports a 4 over 4 beam. Harry 2LX is occasionally heard on 80 and 40 and is watching 21 Mc. in case it breaks open. In spite of the violent westerlies, I have not heard of a single beam tragedy in the zone. May they continue to withstand the elements in the days to come.

HUNTER BRANCH

Your zone officer is very grateful to Harold 2AHA for compiling these notes last month and enabling me to have a very nice holiday. Must have been a change for you chaps having something decent to read! Thanks a lot Harold. President 2CS gave an impromptu lecture on the problems that are associated with building v.f.o.s. and matching antenna feeders at the June meeting. The concise manner in which Lionel "delivered the goods" combined with the discussion which followed, resulted in those present voting it one of the most interesting evenings yet. The President advises that at present he is actively engaged in correspondence with the Div. President expressing our disgust at lack of any definite outcome from the Federal Convention.

Due to kind help of 2XY, our veteran Ham, Edgar 2MR, is now putting out a nicely mod-

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ulated sig on 20. Neil spent most of his holidays rejuvenating the gas buggy but now very active on 144. 2OT hopes to hit 144 soon and Max rehashing 10 mx converter for Rx—will use 832 driving pair 24Gs in Tx. Harry 2AFK listening on 144 with super-regen and should hit band soon with pair 1793s. At Mayfield 2ANA thinks he'll cultivate a soprano voice and Norm plans a 20 mx rotary dipole to escape 40 mx commercials. The 6 x 4 inch portable is doing a grand job on 20 for Bill 2AXM. When will that 813 final be ready OM? Jim 2ZC recently chased an elusive VR7 whose sigs appeared to be coming in wrong direction. Success at last, but it turned out to be a pirate. John 2XQ still holds the fort with "Old Gentlemen" on 80 mx. Doug 2ADS is our most regular 40 mx man on week days. From Toronto we learn that Jack 2KQ is enjoying long service leave. 2CI recently had marathon QSO with a 2L on 80—59 both ways. Ken 2KG is very QRL with work these days. Recently returned from N/C, John 2DZ is planning some improvements on his 20 mx beam. Ron 2AAI been on 20 occasionally.

Sorry to report that our old pal, Ernie 2FP, not well at time of writing. The locals could hardly believe it when they heard Ernie QSO-ing 2OT on 40!! Tom 2PQ is sticking to 80 and 40 these days. 2nd op. harmonic seems to be keeping 2ANM off air completely; what about it Bill? Norm 2YS is making up for lost time in his QSOs with 2ZW. Secretary 2SF has just hooked some real DX, a VR4. 2XT enjoying well earned holiday. Bill motoring to VK4 with XYL and 2nd op. Bert 2TE been inactive due night work. We expect Bill 2PJ to be on 144 soon. Our sympathy to Harry 2AFA whose father passed away recently. The letter from our Western pals is still receiving strong support in this zone.

Notice of Meeting. The August meeting will be held at the Technical College, Tighes Hill, on Friday, 8th. The Committee is working on a plan to arrange future lectures, etc., well in advance. They are doing their best for you, so help them if you can.

NORTH COAST AND TABLELANDS ZONE

Conditions this month have not lent themselves to the gleaming of information on the 40 mx band as majority of N/C stations cannot be heard with any regularity at any location. 80 mx of course has been excellent for evening ragchews but have only a limited time available for "reading the mail" during that period. 20 and 23 Mc. activity is practically non-existent except for 2LH and 2ADE who have a permanent circuit on 50 Mc. 2FA and 2AHH are now active on 21 Mc., but only phone activity is among VKs, the DX being all on c.w. On 14 Mc., 2DX can be heard working anything that appears on the band.

Peter 2FA recently visited Newcastle and returned home to Fort Macquarie to find that the top half of his mast had blown down and slightly damaged the back of his house. Fortunately the major loss was only a piece of gutting. Charlie 2ARV visited 2AHH at Kempsey and proceeded north via Grafton to visit Alan 2ASO at Kyogle, whilst Len 2LR departed from Kyogle to visit his wife in hospital in Brisbane, spending a week-end with Tom 4PD. Keith 2GI has been active on 80 and worked VR2BK on 40 mx during one afternoon, the VR only using 6 watts. 2AWH has been operating portable at Lawrence (near Grafton). He was in strife for a while with modulation problems, but is now putting out a nice signal. 2NY and 2XO are showing an interest in tape recorders, whilst Norm 2RK is interested in railway engines running on unfenced tracks. They have got them near Sydney too. Norm, at Richmond. 2WQ can be heard once again on 40 mx. If any of the N/C boys are interested in the ionospheric prediction charts published in "A.R." a note to the W.I.A. now and then regarding actual conditions would be appreciated.

VICTORIA

SOUTH WESTERN ZONE

All members of this zone would like to offer our sympathies to Bill 3BU and his relations on the passing of his father, a man who will be remembered by us all as a great advocate of Amateur Radio. Our sympathies go also to Jack 3JA who received the sad news that his brother was killed in an accident in Melbourne. Well it looks as though our flood troubles are practically over and by this time many of the country boys will be busily sliding up the mess left by the flood waters. I don't think that they have affected Kevin 3AKR as every time we hear Kevin of a Sunday morning he has just arisen and when on the air is usually in the process of having a shave. John 3AGD now boasts a super Rx as he had Jeff 3APD staying up there with him, and they practically re-built the BC348, much to John's satisfaction.

Neil 3HG is active and can be heard almost any day at dinner time and is going into the adventures of remote control, wishing to turn his diesel generator on and off by remote control buttons. 3AGV has inspired activity on 144 Mc. During the last Convention up here at Geelong, Gordon had remarkable success with his portable 144 gear; with his car built around Tx and Rx, from Barwon Heads he contacted several stations receiving 5 x 9 from Ballarat, and all members present were amazed at the performance of the gear. The outcome is that now 3AOL, 3ALP, 3AOP and 3APK are now ready to get on 144 Mc.

EASTERN ZONE

Main topic this month is the very good job done by 3SS, 3IO, and 3SG during the June floods in this area. When telephone lines went out between Neury and Maffra, 3SG, 3SS and his junior op., David, handled large quantities of traffic for the P.M.G., for two days, until the technicians were able to repair the damage. Lindsay 3IO, with his trusty Type 3, series cathode modulated, spent three days riding around in the Army duck, which was operating in this area and was in touch with 3SS, base station, at all times. Operating frequency was 3850 Kc., which was highly satisfactory, and no trouble was experienced with QRM, thanks to various Hams who saw to it that any intruder did a quick QSY! Thanks chaps.

The local constabulary is highly delighted with the local members of the Emergency Network and Number One Fella Gendarme assured 3SS that said Network will receive honourable mention in official report. The radio certainly saved much time and trouble, especially as the duck was on the job at all hours.

At Sale, 3ABF and 3AFG also had gear available, but fortunately, were not required. (That could be taken two ways, but I intend it to be interpreted the nice way, chaps!!)

Apart from the floods, all is quiet, the Sunday hook-up goes on as usual, in spite of screwy conditions on 80. 3QZ tells me the 3650 Kc. spot frequency has been in use for nearly six years—time sure flies.

NORTH EASTERN ZONE

As this will be the last notes I will write for this zone, I wish to thank all those who co-operated each month in the way of news; would like to welcome Les 3ALE as the new correspondent and hope he may succeed where I have failed—Good luck Les. 3UI about to become a VK2 v.h.f. Victorian representative; I can't say I blame you Alan. 3IJ working hard on a new power supply. 3JC now on 6 mx and is re-designing 20 mx beam, hopes to work more DX when it goes up another 15 feet. 3UI has shifted his shack and is very comfortable in its new location. Nothing heard of most of the fellows this month due undoubtedly to my not being in the shack. However, I will see you all at the Convention.

CENTRAL WESTERN ZONE

Before these notes are printed the date of the Annual Zone Convention will be fixed; as members may remember, at the last Convention it was decided to hold this year's event at Horsham towards the end of September and to make it a two-day affair for the benefit (in particular) of the visitors. Efforts will be made to cater for the YLs, XYLs, and harmonics, so that a good time may be had by all. A hidden Tx hunt will be held on 3.5 Mc. so that the three miniature tubes will be removed from the Secretary's keeping. In addition, a free-for-all scramble will be held to test the efficiency of all those portable set-ups. Efforts are also being made to arrange functions for those not actually taking active parts in the hunts or scrambles. Further details will be given over 3WI and in the next zone notes.

Conditions on the bands over the past month have been bad, long skip on 3.5 and blackouts on 7 Mc. 3WI on 7 Mc. conspicuous by its absence. Most of the country boys are now to be found on 3.5. 3ARL is worried (as usual) by the lack of limiting of his limiter on 28 Mc. (who cares about 28 Mc. anyway!). Received a shock the other day when 3AKP told me the tower was up, and one of the three elements of the beam was in place; so it looks as if it won't be so long; Keith's biggest worry is the wx. 3RR still vainly trying to sell v.h.f. to the local boys. (Never mind Dick, I know how you feel. I can't sell s.s.b. either.) Dick even threatens to come on 3.5 for the next zone hook-up, so you can see how far he has fallen.

As a closing thought, keep the Convention in mind chaps, tune up the portable and D/F gear, and make a date with Horsham for the end of September.

Zone hook-up is now on approx. 3580 Kc., 1000 hours, second Sunday of the month.

GEELONG AMATEUR RADIO CLUB

The month of June proved an interesting one for members of the Club. Early in the month an interesting lecture was given by P. Perkins 3APK on Valve Characteristics. He used the blackboard from time to time and was asked many questions during the course of the lecture. 3IC has kept a morse class going through the month for students going for the next A.O.C.P. examination. An auction of gear also took place in which there was keen bidding.

At last meeting of the month the syllabus for the next 12 months was presented, after which the election of new officers took place and resulted as follows: President, 3IC; Sr. Vice-President, Max Stock; Jnr. Vice-President, 3ABK; Secretary, 3APK; Treasurer, J. Beckingham; Publicity Officer, 3ALG; Librarian, K. Hawkins; Committee: 3AKE, 3WT, 3BU, and Bob Reece; Technical Advisory Committee: 3AJF, 3BU, 3AKE, and 3AOL.

QUEENSLAND

In order to get this month's Divisional news, particularly that outside the Greater Brisbane area, I almost had to conduct myself like a supplicant for alms. As a last resort, radioed a plaintive plea for help to 4EL and Eric responded promptly with one of the most comprehensive covers on Northern doings this column has had for some time. Thanks OM.

Here is a date to jot down on your Calendar—Friday, 15th August. On that evening, instead of the usual monthly meeting, a visit will be made to the Archerfield Aeradio Station. Members are requested to be outside the club rooms, next to Civic Theatre, Valley, not later than 7.15 p.m. so that arrangements for conveyance to the dome can be completed in time for a prompt 7.30 p.m. departure. The sight seeing tour of the innumerable transmitters will be conducted by Don 4GP, so there's no need to stress that the evening will be enjoyable and informative.

One-time writer of these notes, Howard 4ZU, last month set sail on good ship "Matrimony." Pat 4KB and John 4RT attended wedding ceremony. Understand Howard's new QTH will be Indooroopilly. Best wishes to both for future happiness from all the gang.

Thanks to generosity of Tom Atthey, who conducts our student classes, the Technical Equipment Library is now richer by the addition of a grid dip meter. Warmly welcomed at the June meeting were 4NV, an ex-G, and ex-ZL3FL, who should soon be airing a VK4 call in the Brisbane area. Although possibly known to most readers per medium of 4WI, we here set down for the record results of the VK4 Intrastate Contest: 1st 4FP, 2nd 4AW, 3rd 4NG, and then, in order of placings, 4PT, 4OR, 4RW, 4XJ, 4XR, 4HZ, 4JF, 4CK, 4BJ, 4AS, 4HW, 4RO.

A keen angler is northerner 4MH. Suggest you get on the beam with Ted, and constant visitor to his shack, 4AX, if you want to hear some "beaut" fish yarns. Are conditions as bad as we paint 'em? Other Sunday morning, almost on 4WI's 14 Mc. frequency, heard DL4ET and PY2CK coming through on phone. Arthur 4FE also heard the DX. Russ 4PN gets about in a manner that would put even Marco Polo in the shade. One week he is in Cairns and the next in VK6. Overheard him giving account of travelling experiences and referring in glowing terms to the popularity in Perth of the Sunday evening 2 mx net. Good to hear 4FT active again after being QRL due to sickness; John risked reprimand from XYL and sneaked in a QSO with Jim 4XL.

Frank 9FN, up in Papua, reports that he will be active on 50 Mc. at the end of July. A forty-foot 4 element beam will do the radiating. Two new VK9s heard here during the month are 9HI and 9RC, both with solid sigs. Bill 4WD busy seeking reports on 80 watt phone rig just finished. Result of the first VK4 one hour Scramble Contest set a bit of a poser for the Sorted Committee judges. Four contestants, 4TN, 4XR, 4PT and 4TY turned in identical scores—all had 14 contacts. Others heard on my kilocycle catcher taking part in the scramble included 4CZ, 4PD, 4CC, 4LT, 4CW, 4FP, 4OR, 4RN, 4GG, 4LM and 4HZ—making a total of 15 stations. No wonder the QRM was hot.

CLARE'S CORNER

On the air again from his new QTH at Northgate is 4RJ. Think it should be a good DX location Dell. Conditions can't be too good on 28 Mc. when we hear 4ZB and 4PX operating on 14 Mc. 4CC, Professor Cook, believes in catching them young. Clive recently lectured on Ham Radio at the local school and thereby sowed the seeds of future QRM. Aussie 4TN is still the most consistent operator on twenty. Roy 4FJ is nearing his 100th QSO with KL7AFR. Here's reason why 4NF hasn't been heard on the air lately, Cynthia has hidden the 866s till new house is completed.

NOTES FROM THE NORTH—BY VK4EL

Seems that conditions have kept most of the boys off the air as there seems very little to report. My own survey of the bands is that 7 Mc. is the only band where anything like a decent QSO can be had on either phone or c.w.—even that band is cranky—would say that it is the best of a bad bunch. 28 Mc. absolutely useless and devoid of signals most of the time with a very occasional VK or ZL or KH6. 21 Mc. opens at times in the afternoons early when some good VK contacts can be had at S9 both ways, but there is always the possibility of a fadeout suddenly terminating the QSO, which may be S9 plus at both ends. 14 Mc. is patchy, with the only sign of Europeans in the early mornings up to around 9 a.m., but most times unworkable and with a hollow sort of sound, and they seem to be working amongst themselves or Ws. 7 Mc. good-oh on week-ends when populated in the daytime, and good to poor at night, but after 2000 hours E.A.S.T. is full of foreign phone stations and c.w. stations, which seem to wander all around the place.

Harry 4KW not much, QRL on Brampton Island installing some sort of commercial radio equipment. John 4FW not very active due to a full time job with the choir of which he is maestro, have heard him working on 14 Mc. very little. Alec 4MA QRL studying for exams and not active. Bill 4BQ is intermittent on 7, 14 and 50 Mc. Harry 4ZP seems to only be on when heard with 4EL which he skeds each day. Edgar 4GF puts out a really remarkable signal for his 15 to 21 watts, slugs it out with the best of them on 7 Mc. phone and c.w. Ted 4EJ not active, except on the bowling field where he is extremely active.

Frank 4QL QRL on a new v.f.o., a Clapp, that has keys for break-in working, has a beautiful compact rig out there at Garbutt, a real credit, fully band switched from 3.5 to 28 Mc., and gets out too. Jock 4DE not very active, but when heard puts out a nice sig mainly on 14 Mc. c.w. Wally 4RU seems to have become a golf and talkie these last few months. Tells me he has re-built rig and will soon be on again, hope so Wally. Graham 4BX not heard for some time, but threatens a comeback soon. Doug 4DB has not sorted himself out in new house since settling down with new daughter who no doubt keeps him occupied; what about it Doug, let's hear from you.

Herb 4IW was worked and had a mighty signal on 7 Mc. a few days ago, nice to hear the old timers on again. Andy 4BW another old timer, bobs up now and again, but mainly to make sure the emergency gear doesn't gum up, puts in a mighty signal and has just finished a new modulator, and it sounds good too, old timer. 4EL, well as for myself, in any case I sort of knock off work to carry bricks, but have to fill in the time somehow between shifts, out in the mulga; am active on all bands, that is 7, 14, 21 and 28 Mc. and shortly will have a rig going on 50 Mc., am always on some part of the day, main interest at moment is seeing how the 21 Mc. band will perform and keeping skeds with old coppers in Brisbane and elsewhere. Unfortunately my daily sked with GSZA has fallen through after the 600th contact, can only use the mill to contact him now as no sign of him at 0700 G.M.T. these days.

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for June was held as usual in the club rooms to an audience of 96 members and one visitor. The wardie speaker for the night was Mr. Sid Wardle (5OU) and his subject, "Stability in V.H.F. Amplifiers." Sid gave a very concise and instructive talk on this subject, illustrating his remarks on the blackboard in such a manner as to make the whole talk clear even to the youngest associate member present. The talk only occupied fifty minutes but all present were quite surprised to note just how much ground could be covered in so short a time by one who had such a grasp of his subject. The vote of thanks to the lecturer was ably proposed by 5GL and the audience showed their appreciation in no mean manner.

Only one visitor honoured us with his presence, to wit, Mr. S. Mahony, and to this gentleman we say welcome and be sure to come again. The meeting established what is probably an all time record for an early finish, coming to a conclusion at the incredible time of 9.40 p.m. However, the Chairman pointed out to those present that there was no need to leave immediately and perhaps they would like to have a "natter" among themselves. The members needed no further urging to do this, and in retrospect it would seem that an opportunity to have a good "chinwag" is something that the boys would like occasionally. I left at 10.30 p.m. and nobody showed any signs

of leaving, and on checking up later I discovered that all present thought the little "get together" after was quite an innovation, so we learn something new for our meetings.

Every two or three years I seem to include in these notes a paragraph concerning Ralph 5TR changing his vocation, and every new paragraph about him seems to always be stating how the particular change of job is taking him higher and higher. This is only a lead-up to the fact that Ralph is now Inspector for Public Entertainments in South Australia. Nice work O.M. I salute you, and I always had you first favourite for the job from the beginning.

The other night I was working in my shack when the fire engine went past at top speed. Jumping on my Jaguar-two-wheeler I hastily followed the brigade and was amazed to find that it stopped next door to the QTH of Hal 5AW. From the remarks of the crowd gathered at the scene of the fire I pieced together what is probably the story of the month and also my biggest scoop. Hal was about to get into bed when the lady next door called out that there was a fire in her house and would he please help. Trainee fireman Hal needed no further call to duty, and hastily he raced into the house next door, holding his trusty fire extinguisher which he had grabbed from his car. Deputy fireman Hal found that the fire was in the front room and let go with the extinguisher, being rewarded with a gentle little trickle which wouldn't have put out a candle, let alone a fire. Leading fireman Hal seized the cause of the fire, a kapok cushion, and rushed it outside on to the verandah. Station officer Hal rushed back into the smoking house in search of damsels in distress, but everybody was outside in safety. Deputy chief Hal came out on to the verandah and the gathering crowd cheered him to the echo whilst he modestly said, "It was nothing, all in the line of duty." Fire chief Hal advised everybody to go home to bed as the danger was now passed, and with the huge crowd starting to leave, somebody shouted, "Three cheers for fire controller Hal," and the still night air was filled with acclamation for the hero. In a statement to a representative of "Amateur Radio" later, Hal said that next time that he is called out to a fire he thinks that he will grab a hose with some water in it, but he was much too excited to think of that at his first fire!

5TW had his aerial blown down during a recent storm at the Mount. 5CH still inactive. 5MS patiently waiting for the power to be laid on and until that happy day, Stuart is twiddling his thumbs or something. 5JA had the misfortune to blow up his transformer for the final and will be out for a while. 5FD is in smoke and there is nothing to report concerning John. 5KU has the boom up ready for the elements of the beam and it is expected that Erg will be able to report next month that all is complete. 5CJ has nothing to report this month, but Col hopes to have more news next month as the weather will be getting a little warmer and the shacks more habitable; many thanks Col for the news.

My chief city spy, Robert Pearce, writes to tell me that conditions have been so bad, and the nights so cold, that nearly everybody has been spending their leisure hours before the fire and therefore news is rather scarce. Nevertheless he manages a good batch of news for the month to which I say "I thank you." 5XJ has built up a new modulator, Class B 80%, and Col is driving them through a pair of triode 6V6s and is well satisfied with the results. 5ZL is having trouble with moisture in his power supplies, first a h.t. tranny blew up and then after straightening things out, on switching on again, up went a filament tranny. Esperanto as spoken by Carl is sure a picturesque language. 5WY has built up a fine 6 mx xtal controlled converter which is doing a good job, but John had a bit of trouble at first by mixing up the grid and plate of a 12AT7 with confusing results, but all is now well. He has also built up a "QX" and is very pleased with it. Where do they get the energy?

5WF, who is back on the air after six months absence, has installed a l.p. filter and a low level clipper, but at the moment of writing Alan has a little feedback trouble on his hands. 5CA has returned after a holiday in VK2. 5RY has also built up a Class B 807 modulator but is in the midst of a spot of hum trouble and slight distortion. 5LC has obtained a motor to rotate his beam and is now in the throes of determining a way to hook it on. Les has also apparently had a spot of Rx trouble, judging by his mutterings to himself on the air to himself! Robert also said that he has been listening on 14 Mc. every day for a fortnight and has not heard one phone signal, only 5BY and 5AJ on c.w., and he wants to know is the band that bad or must he trim his coils a bit.

Speaking of Dougal 5BY reminds me that he was a visitor to the first station in the State the other day, and when I bumped into him he asked to have a look at the Tx, etc. I told

him to go down the passage to the last door on the left which was my office and wait for me. In all seriousness he marched off, and when he found himself in my "office" his roar of laughter could be heard all over the building. The bigger they are, the harder they fall. You beauty!

The Upper Murray Hams held their meeting this month at the QTH of Hughie 5BC at Springscart Gully, yes fair dinkum, that is the name, and quite a deal of earbashing took place especially by 5RE and 5ME who found that they had many R.A.A.F. experiences to recall. It was also found that many of the boys had met personally but were only known to each other by their call signs. It was agreed that the members would meet on the second Tuesday each month at the QTH of one of the members who would take it in turn to act as host. The next meeting will be held at the residence of Alex Kelly and it is hoped that another evening of earbashing will be enjoyed by all. The first meeting incidentally ended at the witching hour of midnight after the boys had partaken of goodies kindly provided by Mrs. 5BC. I hope Hughie did not make the tea, boys, as when he makes tea you need a knife and fork to drink it, as I know from bitter experience.

5RE has departed for a visit to Perth, so I expect that crime has decided to take a holiday too, whilst Hobby is on vacation. If ever I come up in the court before him I will turn the conversation into radio channels and then perhaps he will only send me down for three months, which would bring me closer to "Doc." The mere thought entrances me. Brrrrrrrrrr!

5TL has settled into the life of the village very quickly, but then why not, it is no new experience for Tom, moving from country town to country town as he has done. He is not on the air yet but it won't be long now. I believe that the town turned out in full force to see Tom in shorts and big Army boots using a shovel the other day. If only I could have been there, what a time I would have had. Cheers Tom, from all the Council.

5MA is not very active and all that Fred seems to do is to give Hal 5AW a report each Sunday morning with respect to 5WI. He has only a temporary shack at the moment and it is too cold these nights. Thanks for the notes Fred, and I like being addressed as Mr. Parsons, that makes them grit their teeth down here. Just plain jealousy, that's all.

WESTERN AUSTRALIA

Well, gentlemen, this is where I feel I should bow out of the Ham picture for good. You see, after earbashing all and sundry for the past umpteen years about the difficulties of operating a Ham rig on d.c. mains and the wonderful things that I could do if only I had a.c.—if I don't launch out soon with a large quantity of new gear I'll be finished for good. Even my best friends won't speak to me! For the long-awaited sine waves are here, arriving in batches of fifty each second. So my bluff's been called gentlemen; what happens now I don't know. But it certainly is good to have the "real McCoy" instead of the home-made stuff. A very marked improvement has taken place in the local noise level too, sundry domestic and commercial refrigerators having swapped their saw-tooth damped wave generators for modern induction motors.

My regular spy has reported for duty once again but I'm afraid my v.h.f. operator, 6BO, has been shot down by a MI-5 as there's nothing in the mail from Rolo this month.

There are times when I feel genuinely sorry for 5FS for he does appear to take a lot of abuse over in VK5 and I was reminded of how lucky this scribe is to be 300 miles away from the seat of government when I read in the minutes of the 24th June VK6 Council meeting that somewhere, somehow, a discrepancy of 1/- had occurred in the 1951-52 Balance Sheet. Can you imagine the meaning looks and vile slanders that would be bandied about if that had happened in VK5? Can you imagine the ditto ditto ditto if I were a Councillor? My own personal theory on the matter is that the bob was used to buy a cigar to bribe "Skipper" to take over the auditor's duties! Anyway, it's very pleasing to read that 6WS has offered to take this task in hand; an auditor's job is a very responsible one, yet I can think of no one better qualified to tackle it than "Skipper".

At the same Council meeting the Treasurer presented to each Councillor a copy of a list of unfinancial members. It was decided to send a special circular to each unfinancial member advising him of the position regarding the removal of his name from the membership register and mailing lists for "Amateur Radio" and the Divisional Circular. The Lecture Programme for the next six months was submitted by 6GM and it makes interesting reading including as it does talks on radar, picturegram

equipment, experiences on Heard Island (by Kevin Johnston, ex-VK1KJ), x-ray equipment, "My Trip to England" (6WS) and antenna patterns. The Lecture Co-ordinator has full control of the situation and you are promised some really top-notch lectures for the remainder of the year.

There has been some discussion lately over the air and over counters and other places where Hams foregather about the need for the Institute to help those experimenters who desire to build up bridges and other gear calling for components of known values to a reasonable degree of accuracy. Various schemes have been put forward and at last Council has decided that rather than the Institute purchase standard resistors, condensers and the like with the attendant risk of damage in transit, it will set up a standard measuring service. This means that if you are building a multimeter, a measuring bridge or any other piece of gear intended for measuring something, then the W.I.A. will measure your resistors, capacitors or inductors for you to within very close tolerances—certainly close enough for Amateur standards. But if you've just bought a 1931 model broadcast set at an auction and junked it—and you can't read the values on the components DON'T send them to the W.I.A.! The service is for parts needed for measuring equipment only.

Reports from the Spy Ring. A recent surprise was the re-appearance after a very long silence of 6HT. Harry was heard using what appeared to be f.m. Another old-timer comes back! So 6KW is another Ham hypnotist! Dark horse, Ron OM. Never would have believed it of you. Yet Barry looks a decent, clean-living lad too—and he's a possessor of the "fluence." Wot next? 6XI is another who made a recent comeback on 7 Mc. although it seems Colin is more interested in the v.h.f.s. and in mobile working nowadays.

Talking of mobiles—did you see the recent "QST" article about the "California Kilowatt" on wheels? 800 watts input mobile! And it takes me a roomful of junk to put 33 watts into a humble 607 on 40! A recent mention in this column of the VS1AD/VK6JW technical pow-pows on 14 Mc. has brought forth the information that they're still on—but now it's Sunday mornings. VS1AD says VK6s don't get up early enough in the mornings. Apparently he has to wait around for us to thaw out. 6WT ("... and now sir, have you any statement to make to the Press on t.v. or not t.v.?") was heard putting out a signal on 7 Mc. recently; hope there'll be more of it. Dave. Another backslider to return to the fold of 7 megacyclists is Bill 6MB.

The leaves of the grapevine have been rustling to the effect that 6DX should be back home soon. No doubt with some genuine imported cray-pots for his many 20 mc cronies. 6RU is re-building and the plans include a new exciter to include 21 Mc. Girding your loins Jim for the "R.D.?" I am told that Tom 6TR now has the key to the situation and a recent issue of a week-end newspaper displayed a picture of him complete with three charming YLs, receiving the "key of the door." Careful Tom, or Ham Radio will be taking a back seat! Blake 6GS has been on 7 Mc. again lately after a long absence. But I believe that can't be taken as a sign of inactivity for he's still as keen as ever on 6 mx and works there often. A recent visitor to his old home town was 6FC from Narrogin. Frank was heard from 6BO's shack but as more visitors arrived, Rolo closed down. Was the competition too great, Rolo? (Must have been for he didn't send me any notes this month. Black mark, Hetherington!)

Clarrie 6LL is an exclusive band man. But my spy doesn't know whether it's exclusive 10 or ditto 20. What happens if all bands come good at once, OM? There's another band-switched Tx on the slipway—6BC goes modern. Have they converted you at last, Bert? Don't know what Ham Radio is coming to—filters here, fuses there, safety-interlocks to the left of 'em, completely screened rigs to the right of 'em.

A Ham with a real "whinge" is 6RW. Bob had one dose of the flu and then another right on top of it. His radio silence would have been broken ere this had not the germ decided to attack twice. My sympathies, Bob. It was rotten luck. 6JW has been experimenting with a new modulation system but unfortunately the contact I had with him was marred by local (d.c. motor) QRM. Try again now the a.c. is on here, John! They tell me Dick 6YZ is trying his hand at making relays—assuming the right one at the right price doesn't arrive from elsewhere. Never mind, Dick, 6LJ's going to lecture about 'em—in December! 6KW, once one of the most consistent of DX operators, now earns the reverse of that title. What's due to happen, Ron? And where and when?

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 28th August, 1952, on 3.5 Mc. Details of the operating procedure and times of operation will be found on page 8 of the January, 1952, issue of this magazine.

A distinguished visitor to VK6 a few weeks ago was Dr. G. H. Munro, chief of the Radio Research Board of the C.S.I.R.O. who lectured before one or two august bodies (not you, Pansy! Sit down!) and also made the trip to the Ionosphere Sounding installation at Watheroo. Among VK6s who met and talked with Dr. Munro were 6MO and 6GH, the latter almost a "school-mate" of the worthy doctor's in England at a time when both were doing radio research work. Among some interesting recent discoveries revealed by Dr. Munro was the fact that the ionosphere possesses ripples of semi-cylinder shape which move in certain directions during winter and then appear to reverse during summer. It is to be hoped that 6GH will either persuade Dr. Munro to communicate some of these findings to the W.I.A. or that George himself will prepare a lecture on what promises to throw new light on propagation.

TASMANIA

A most pleasing feature in connection with the July general meeting was the excellent attendance. The meeting was held at the usual venue on Thursday, 3rd July, under the chairmanship of Mr. Bob O'May. As the meeting progressed, it became evident that there was standing room only at the rear, and it was indeed most encouraging to see such a representative gathering. The meeting admitted two more associate members to the ranks—namely, E. L. Morey and A. N. Davis, both of Hobart. We extend to them a hearty welcome, with the hope that their "transit time" between associate and full membership will be of short duration.

After a little more general business, all present sat back and prepared to absorb the "gen" on TR1143A 2 mx conversion, as deliv-

ered most capably by TOM, TLE and TBJ. The Tx side was handled by Bob and Len, whilst Joe took care of the Rx side. Just about all aspects of the conversion were covered, and must have been of great help to members either possessing this equipment, or contemplating purchase thereof. At the conclusion of the lectures, a vote of appreciation by TLJ was warmly endorsed by all present. Incidentally, the last I heard of Joe in connection with 144 Mc., was that he had just purchased an armful of 6J6s and was really going to town in a big way.

By the time this appears in print, the R.D. Contest will be just around the corner, so I shall take this final opportunity to alert members in this regard. A concerted effort is required from as many members as possible, and it behoves all who desire Tassie to repeat past performances, to see that their gear is fit and able.

Another point which I feel should be brought to the attention of southern members—a point which, I am sure many have overlooked, is as follows. The regular weekly operation of 7WI makes certain demands on the time of the operator concerned, and in some cases, the broadcasts are carried out at great inconvenience. It must be most discouraging to carry out a broadcast under such conditions, then stand by and listen to acres of silence. Northern and North Western members always rally when receiving conditions permit, but the response from Southern members is frequently nil. Perhaps many feel that, having no business for 7WI, a call is rather futile, whereas on the contrary, I know that all calls are welcome. A short call, if exchanging nothing more than signal reports, at least tells 7WI that he is getting out, that someone is listening, and he is not entirely wasting his time. In the 80 mx band, 3672 Kc. has been used as well for the last three or four broadcasts, and the next contact 7WI has on that band will be the first. Four more broadcasts will have taken place before members read this, and if the situation remains unchanged, well I can only say "what about it chaps?"

7KA, with shack under the house, is finding ambient temperatures anything but to his liking. Should be quite a good excuse Ken, for putting a compact, small 2 mx rig in the living room. Think it over, and let us know when to listen. Secretary 7FJ seems to have overcome the problem of how to get the rig into the house with one swift move, and could possibly be prevailed upon to drop a hint or two. I'll bet this copy of "A.R.," however, is not left lying around the 7FJ menage.

7RY is well advanced with the construction of a new frequency meter plus 100 Kc. standard. I am amazed that you still have that 100 Kc. rock Fred. I have seen many envious eyes (including mine) cast upon it. Of course, if we can spirit it away with the frequency meter wrapped around it—well, so much the better.

Caught a fleeting glimpse of Leon 7JP behind the wheel of a certain green vehicle. Guess we

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had better attach the P.M.G. label Leon, or someone is bound to ask whether it was the green cart. Anyway, long time no hear son, 7BK is now resident in Hobart, and, while I have no knowledge of future plans, trust he will soon be active again.

7CJ is taking kindly to the idea of a small, portable rig, and the possibilities thereof. Suggest you devote a couple of days of that long leave to the idea Alan, preferably before the R.D. Contest, because we can sure use the extra points. Tommy 7FM has just completed a new RX, complete with QX. 7RX has a strangle hold on a 5BPI, and Brian 7BH, well we are just not hearing you these days. Time you returned to the fold.

That's all for this time. In closing I might add that any news of general interest is always very welcome—so don't be shy.

NORTHERN ZONE

The June meeting of the zone was held at the Trades Hall on Friday, 13th. A very fine lecture was given by 7EF, his subject being the various methods of communication and safety devices necessary to keep our skyways running smoothly. Peter covered an interesting subject well and enabled us all to appreciate the care and planning that goes into making our air lines something to be proud of. A vote of thanks was ably moved by our President, 7AM, and recorded in an appropriate manner.

Once more I find myself in the role of deputy to our correspondent, 7XW, who is at long last moving into his new QTH. Chris does promise bigger and better things when settled in. 7LZ heard on 7 Mc. c.w. a few times during the month but conditions there don't make for a very great interest. 7AM is nearing the completion of the 2 mx super dooper and is reported as being quite happy about the results to date. 7GM putting the finishing touches to his all-band Tx and is another reported to be very happy with the results. 7LW finds a few minutes every so often to gaze fondly at the 8JK in between exams. Ken wants the band to really open to demonstrate its qualities.

7DS is evidently still alive and kicking as I heard him the other night on 7 Mc. c.w. with a nice sig. Don't see much of you these days Bill. Get Peter to tell you the date of the meeting. 7HY still forsaken Ham Radio for golf. Here at 7RK the main interest has been an electronic key which probably explains some peculiar un-morselike characters emanating from the rig but things have settled down now and it really works like a charm. The only drawback with it now is the operator. He'll learn—I hope. Heard from associate Eric Crawford that 7BQ is on the way home from parts distant and should hit VK about the time this sees print. Len will be very welcome back here and we look forward to hearing some details of his travels abroad. Don't forget, the date to keep clear in August is Friday, 8th.

NORTH WESTERN ZONE

Our congratulations go to Syd Medford who is now a fully qualified Ham and is operating under the call of 75F with 100 watts and was heard with 7WA recently working VK2 and VK5. Another of our members who may be on the air soon is Murray Richardson who has passed and is awaiting his ticket, fine business. It is alleged that 7AI is studying radar with a view to detecting many things. The bands have been very quiet here lately except for odd occasions when quite a lot of DX stations can be heard and the other day, one of these occasions, saw 7KB work 20 different countries in 1½ hours. Our monthly meeting, which was to have been held on 4th July, was postponed a week to suit members.

CORRESPONDENCE

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

FEDERAL CONVENTION

23 Lambton Rd., Waratah, 2N, N.S.W.
17th June, 1952.

Editor "A.R.," Dear Sir,

'Tis said that many a true word is spoken in jest and the mention in Federal Notes in your June issue of VK6 Delegate, Ron Hugo's, mesmerism and hypnotism at the 1952 Federal Convention makes one wonder what black magic F.E. instigated into the proceedings. As a guest of Federal Council at the Federal Dinner in my capacity as President of the Hunter (Newcastle) Branch of the N.S.W. Division, it perhaps ill becomes me to criticise my hosts, but, after all, we were invited to sit around and listen.

At the outset I must confess my ignorance of the Federal Constitution, but despite that lack, certain principles are fundamental. What astounded me most was that F.E. had a vote in the proceedings and F.E. delegate voted as directed by Federal President.

Constitution or no constitution, is not Federal Council a body created and elected by the Divisions to implement the mutually agreed wishes of those Divisions? Why, therefore, should F.E. have a vote? Say yes or no to what the constituent Divisions desire to be done. Such a situation seems to my humble intellect to be both ludicrous and Gilbertian and going dangerously close to a state of affairs where our servants become our masters.

And, when all is said and done, what earthly use are Federal Conventions on the existing basis? The agenda for this incomprehensible moot is circulated to all Divisions and after consideration by their members, the respective delegates are instructed how to vote.

That being so, why go to the expense of a gathering of the clan from far and wide unless delegates have power to vote as the merits of the arguments advanced for and against may convince them as thinking individuals.

Assuming therefore that black magic did not operate and that delegates were free to vote as convinced by logic in debate, does not that presuppose that every motion on the agenda must receive the courtesy of a formal seconding so that discussion can take place. And it is beyond question that several motions were still-born because of the binding of delegates.

So through your columns, I crave leave to cry "to my aid ye pounders of brass" so that all black magic be swept aside and F.E. and its hosts be discomfited with the keen edge logic and reason.

—LIONEL T. SWAIN, VK2CS.

23 Lambton Rd., Waratah, 2N, N.S.W.
7th July, 1952.

Editor "A.R.," Dear Sir,

I am in receipt of a letter dated 3rd inst on a Victorian Division letterhead from one J. Hurley who styles (her) himself(?) Administrative Secretary, acknowledging, on your behalf, my communication of 17th June.

Since addressing you on that occasion, I have been reminded of the letter from Warwick W. Parsons, VK5PS, in your issue of last March regarding an alleged reluctance to print certain comment and assured that my communication would suffer a similar fate.

That F.E. has, through its policy book, taken unto itself the right to censor all criticism so that, presumably, members shall be protected from heresy and schism rather suggests that it considers itself to be made of different clay (or sand?) to its overseas contemporaries.

As a member of the R.S.G.B. and a reader of "QST," I have noted no reluctance on the part of either organisation to print letters containing any form of criticism and I suggest that F.E. would be well advised to permit the columns of your journal to be used as a "safety valve" for the feelings of members, albeit always retaining the right of reply.

The lack of any such letters in your columns, due to this guardianship of our Amateur "soles" can only suggest to anyone who contemplates writing that all is well with Amateur Radio and he is apparently the only misguided one with a chip on his shoulder.

The ultra-conservatism exhibited by members of F.E. at the Easter Convention gave me furiously to think and the adoption by them (or it) of any attitude of papal infallibility has apparently brought about a state of complacency that when the growing dissatisfaction in Amateur circles boils over, they (or it) will plaintively bleat "my, my, no one didn't tell us."

I therefore look forward to seeing my letter published in your August issue (what a fitting adjective!) with any informative comment F.E. designs to offer.

—LIONEL T. SWAIN, VK2CS.

Federal Executive welcomes Mr. Swain's letters and has no more hesitation in publishing them than of many others in the past. There are only two known instances when this Executive caused any comments—whether written as members' correspondence or Divisional notes—to be withdrawn from publication.

On these particular occasions the Executive acted on the directions of the Federal Council as laid down from time to time as policy. The policy directive under which the Executive acted was in fact a motion submitted to the Federal Council by Mr. Swain's Division in 1950, and concerned the responsibilities of Federal Council towards its official organ—"Amateur Radio." The specific responsibility concerning the reasons why certain comments were withdrawn on these occasions reads: "any matters which might prejudice relationships between Divisions or between Amateurs generally." The Executive has never withdrawn constructively, informative or misinterpreted information from publication.

A perusal of overseas journals will indicate a strong tendency to adopt the same policy; seldom, if ever, does one see facetious criticism or personal criticism published in these journals.

Mr. Swain's criticism of Federal Executive—and inadvertently, the Federal Council too—arises from misinformation of certain matters referred to in his correspondence, and, not only ignorance of the Constitution (which he readily admits), but ignorance of the manner in which the Executive and the Council function under its Constitution.

Unfortunately, due to the necessity to curtail space in the magazine, it is not possible to publish the rather lengthy reply required to satisfactorily answer the various points arising from Mr. Swain's letters; the Executive has written direct to Mr. Swain.

However, it seems evident that quite a few members of the W.I.A. are not aware of certain details of the functioning of their own Institute, so Federal Executive proposes, in its columns on the Federal Notes page, to acquaint members each month with some of these details.

If the members don't like the mechanism by which the Federal administration works, then it's in their own hands to change it. In the meantime, you can rest assured the Federal Council and its Executive body works to the Constitution you approved of from time to time. —Federal Executive.]

VICTORIAN V.H.F. FIELD DAY CONTESTS

Editor "A.R.," Dear Sir,

I notice with sardonic amusement that the v.h.f. gang are going to cease v.h.f. field day contests because of lack of interest.

Has it stopped to think why this so called lack of interest exists. During the past v.h.f. field day year, 3UI, 3APF and 3JC were out every day after travelling some 40 miles to a good location. Signals came through at good strength but few were interested to work a country portable station.

One v.h.f. man, considered to be one of THE v.h.f. men, went so far as to say, publicly on the air, that he just wasn't interested in working country portable stations.

If members of the Melbourne group express themselves so, how can it be expected by the same group that country stations take an interest.

Same man was reported to be moaning over lack of reports on his v.h.f. transmissions. I wonder why?

VK2 v.h.f. have already asked co-operation of the v.h.f. gang in this zone for the coming field days, so don't wonder why your CQs are unanswered when as an after thought you turn your beams north. This, of course, will not include the few regulars who always were obliging.

—VK3JC, N.E. Zone Correspondent.

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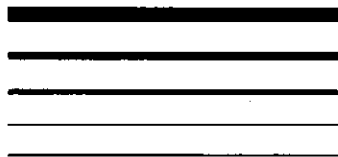
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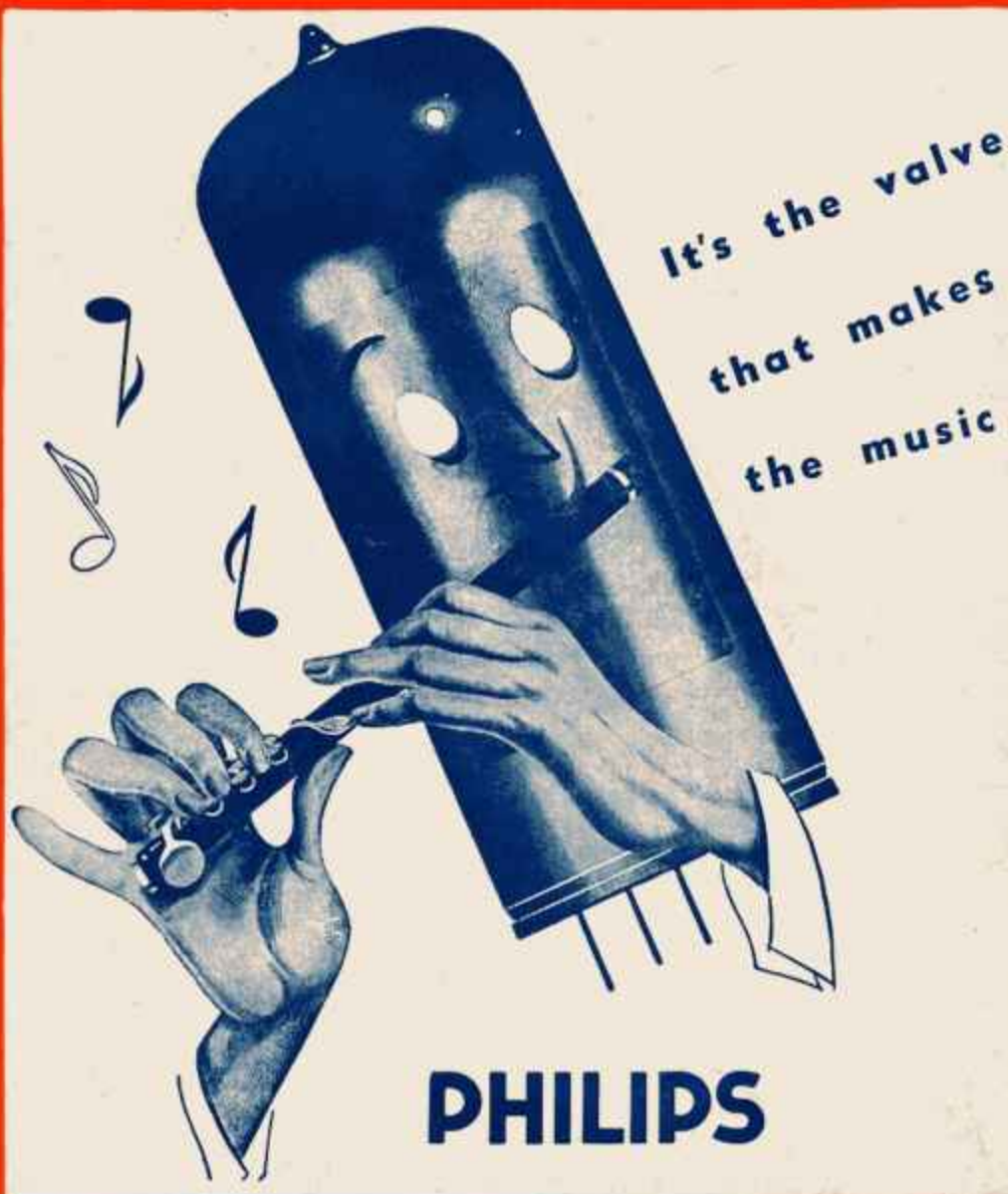
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EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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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, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc. and re-broadcast on 50 and 144 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 7146 and 14342 Kc. 7065 Kc. channel is used from 0930 to 1030 hours each Sunday for the W.I.A. country hook-up. No frequency checks available.

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VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 146.5 Mc. No frequency checks are available.

EDITORIAL



Members of the Wireless Institute of Australia living in country areas may be able to erect large and effective antennae to the discomfort and envy of their city brethren, but they suffer from the disadvantage of not being able to attend monthly meetings of their Division.

At these meetings, much information is given to members concerning the activities of their own Division and the activities of the Institute as a whole. Although much of this information is disseminated in weekly broadcasts and in this magazine, quite a lot of information never reaches the members who cannot attend meetings. Thus a position is created where members do not know what is going on and why.

It is of vital interest to all members to know what is going on because the growth of any organisation is dependent upon the amount of interest it creates amongst its members, and the recruiting of new members is difficult or well nigh impossible, in an organisation which is almost stagnant.

With a view to creating and stimulating interest in our organisation,

Federal Executive believes that, in addition to weekly broadcasts and the news distributed at meetings, members should have available to them some record of what is being done by Federal Executive on their behalf. Although this information is available at monthly meetings, the country member does not receive it and is, therefore, largely without information.

This and future issues of the magazine will contain a resume of the minutes of the proceedings of Federal Executive by which means it is hoped that members will be better informed than they have been in the past.

Furthermore, members will be able to judge whether or not and along what lines many matters, some of them contentious, are being handled.

Although only a resume can be given owing to the space factor, Federal Executive feels that the information provided will assist members to understand the machinery by which the Institute works and to have first hand information on what is afoot.

FEDERAL EXECUTIVE.

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Effects of Electricity on the Human Body

By W. B. KOUWENHOVEN,* Fellow A.I.E.E.

One of the causes of death on this planet that has existed since the time of creation is lightning. The true nature of this cause, however, was not recognized until the researches of Benjamin Franklin, 1749 to 1752, established the fact that a lightning stroke was an electric discharge on a grand scale and involved the flow of an electric current.

In 1753 one of the experimenters in this field, Richmann, of St. Petersburg, was killed by a discharge. The first man-made electric shock of which we have any record occurred in Holland in 1746, when two Dutch physicists unintentionally discharged a Leyden jar through their bodies. The first reported death due to man-made electricity occurred in France in 1879, and the second in Scotland a year later. Today in the United States and Canada the number of fatalities annually ascribed to electricity is seven per million of population, and approximately half of the accidents reported are fatal. In the utility field the number of deaths of employees ranges from 70 to 80 per year.

FACTORS

In determining the effects of the passage of an electric current through the body there are certain factors that should be taken into consideration. They are:—

1. Type of circuit with which contact is made.
2. The voltage of the circuit.
3. The resistance offered by the human body.
4. The value of the current that flows through the tissues.
5. The pathway of the current through the body.
6. The duration of the contact.

These six factors are related to each other and no attempt has been made to arrange them in the order of their importance. In some instances it is impossible to discuss a single factor separately.

The Circuit. The type of circuit and its voltage, with which contact is made, have a profound effect upon the resulting injury. D.c. circuits do not produce the strong contraction of the muscles that is found with alternating current, and in general the sensation produced by direct current is greatest when the circuit either is made or broken. Low voltage d.c. circuits are not as dangerous as the corresponding a.c. circuits. In fact, there is only one case on record that the author has knowledge of where a man was killed on a 120 volt d.c. circuit in which there was no possibility of a high induced voltage due to the opening of a field circuit or similar cause. On the other hand, contact with high-voltage d.c. circuits is more apt to be fatal than contact with alternating circuits of the same voltage. In cases of lightning shock the musculature contraction is usually absent.

Amateurs generally take far greater risks than they should when handling high voltages in their transmitters, and in reading this article, for which we are indebted to the State Electricity Commission, take particular note of the section on ventricular fibrillation, which is in effect, an oscillation of the heart caused by **LOW VOLTAGES**, and if that happens, unless medical assistance is at your side, means **CERTAIN DEATH**.

Read, take precautions, and finally think before you plunge your hand into the transmitter.

With alternating current there is little if any significant difference in the reactions of the body to shocks from 25 and 60 cycle circuits. Dalziel has found that the response of the human body is practically uniform for frequencies ranging from 10 to 300 cycles per second. At 1,000 cycles, a somewhat greater value current is required to produce a given reaction, while very high frequencies, such as are used in diathermy, have only a heating effect.

The effects produced by interrupted direct currents vary not only with the period of the interruption, but also with the cycle followed. An exponentially rising unidirectional current is the most efficient for the stimulation of nerves. As such wave forms are difficult to generate, square or rectangular waves usually are employed. Square waves are almost as effective as the exponential type, and they are generated and controlled more easily.

Voltage. People recognize that high voltages are dangerous. However, they should be equally careful of low voltages. There are a number of cases on record where contact with 60 and 65 volt circuits of commercial frequencies have resulted in fatal accidents. The lowest voltage fatality of which the author has any record occurred at 46 volts, 60 cycles. It is probable that circuits of 24 volts or less may be considered as safe under practically all conditions.

Resistance of the Body. The resistance of the body consists of two parts, that offered by the skin at the points of contact, and the internal resistance. The skin consists of two principal layers. The outer skin or epidermis is from 0.05 to 0.2 millimeter thick. It is non-vascular and on the palms and bottoms of the feet horny and calloused. The inner skin, or derma, is from 0.5 to 1.7 millimeters thick and contains blood vessels and nerves. Dry epidermis has a high resistance which may reach 100,000 ohms per square centimeter. The resistance offered by the inner skin is low, as body fluids and blood are good conductors because of their salinity. In fact, the only poor conductors inside the

body are the bones. The internal resistance of the body is therefore relatively small.

The equivalent electric circuit of the body consists of three parts. Where the current enters, the epidermis acts as capacitor with a poor dielectric. The tissues of the body act as pure resistances and provide a homogenous path for the passage of an electric current. At the point where the current leaves, we again have a capacitor with a poor dielectric. This may be demonstrated by taking an oscillogram of the current when a continuous potential of 50 volts is applied to electrodes held in the hands. At five microseconds after closure of the circuit a current of 19 microamperes was recorded. At 500 microseconds the current had fallen to three microamperes. At 10,000 cycles the power factor of the body of a normal healthy person is about 0.1.

The resistance of the skin is not constant. It varies with the amount of moisture that it contains, the temperature, and the applied voltage. Under thoroughly wet conditions, the resistance of the epidermis may fall to as low as 1/100 of its dry value. If contact with a circuit continues for any length of time, the skin loses its protection because of the formation of blisters. At 50 volts blisters form in six or seven seconds. The relationship between a 60-cycle voltage and the resistance offered to the flow of current is illustrated in the following table.

Alternating Voltage	Average Resistance (Ohms)	Range Resistance (Ohms)
50	10,000	5,000-18,000
500	1,200	800-1,800
1,000	1,100	800-1,800

These readings were taken three seconds after the circuit was closed, and were made on cadavers. The circuit through the body was from hand to hand. When the epidermis was removed, the resistance was found to be practically independent of the voltage. In general, the skin of the female is of lower resistance than that of the male. This is true for skin taken from such areas as the abdomen and back where callousness is not present. An individual's skin resistance also increases considerably (about double) when asleep.

Current. The value of the alternating current that flows through the body when contact is made with an electric circuit is of extreme importance as it determines the resulting injury. Current values that are of interest are—

1. Threshold of feeling.
2. Let-go current.
3. The freezing current.
4. The current which an individual can withstand without being rendered unconscious.
5. The current that will produce ventricular fibrillation.
6. The current which will produce a block in the nervous system.
7. The counter shock current.

The current that will just produce a tingling sensation which can be detected at the point of contact, is of the order

* Dean of Engineering and Professor of Electrical Engineering, The Johns Hopkins University, Baltimore, Md.

of one or two milliamperes. Some individuals, particularly women, are extremely sensitive to small currents. Other individuals are not so sensitive. The sensitivity of an individual to detect a small current also varies with his physical state.

It is well known that contact with an electric circuit produces a contraction of the muscles. This contraction may be so severe as to prevent the victim from freeing himself from the circuit. The let-go current is that value of current which an individual can withstand without harmful effects for at least the time required for him to release his hold on the circuit. Professor Dalziel has made an exhaustive study on a representative group of men and women and reports that for men the standard frequency let-go current is nine milliamperes and for women, six. This is the current value that 99.5 per cent. of the individuals tested could release voluntarily. The value of the let-go current varies with the individual and Dalziel found that for men it ranged from 8 to 22 milliamperes.

The current that will hold an individual frozen to a circuit is naturally in excess of his let-go value. Because of the heating produced by the current where it passes through the epidermis and the short time required for the skin to blister and lose its protective resistance, this freezing current should be avoided at all costs. Unless there is someone present to break the circuit, the result may be fatal.

There is no information available as to the current that an individual can tolerate without losing consciousness. The lowest value of current that will produce unconsciousness is somewhere between the let-go current and that required to produce fibrillation.

A current of 100 milliamperes flowing from the hands to the feet is sufficient to throw the ventricles of the heart into fibrillation. This value of current is not large enough to hold the heart in diastole; instead it disturbs the rhythm and co-ordination of that organ. Each individual heart muscle functions without regard to the others, and the action of a heart in fibrillation looks like the ripples that flow across a puddle when a pebble is dropped into it. In this condition the circulation of the blood ceases, because the heart no longer acts as an effective pump.

The current that will produce a block or partial paralysis in the nervous system is of the order of several amperes. The nerve block prevents the signal from the brain reaching the lungs and natural breathing ceases. Artificial respiration should be applied promptly in such cases.

The counter shock current is that current which will bring the ventricles of a fibrillating heart to rest. A 60-cycle counter shock current of between one and two amperes applied directly to the heart will arrest fibrillation. When this current is broken sharply, the heart usually will resume its normal co-ordinated beating. There is no information available as to the most advantageous location of the electrodes nor as to the current value required when the electrodes are applied externally to the body.

Pathway Through the Body. The pathway that the current traverses in

its passage through the body is of extreme importance. In general, if there are no vital organs, such as the brain, the heart, or the lungs, in the current path, the resulting injury is a minimum one (burns excepted). For example, in some experiments on rats in which the animals were given a two-second shock at 220 volts, 60 cycles, all those where the current path was from foreleg to foreleg died; while those where the path was from hindleg to hindleg survived.

In most industrial accidents the current path is from the hands to the feet. This path involves the heart and the lungs and is, therefore, particularly dangerous. When contact is made at two points on the same arm or leg, no current passes through the trunk. In fact, when current enters the body via one leg and passes out through the other, no vital organs lie in its circuit.

Once the current enters the body trunk, it follows a more or less fusiform pattern. When through-type current transformers were inserted in the body, it was found that approximately ten per cent. of the total current passed through the heart when the current pathway was from one hand to the feet.

Duration of the Contact. The duration of the contact should be as short as possible, and the higher the voltage, the shorter should be the time of contact, if there is to be any hope of recovery. In fact, duration of the contact should be as brief as the janitor's Christmas.

EFFECTS

The passage of an electric current through the body produces numerous effects that differ not only in intensity, but also in kind. They range all the way from a slight tingling sensation to death. The consequences depend upon the value, frequency, and pathway of the current and on the duration of the shock. The aftermath may be good or evil. An electric shock may produce healing in certain mental diseases or it may produce a state of depression of the vital processes of the body characterised by rapid but weak pulse, rapid but shallow breathing, pallor, restlessness, and a depressed mental state similar to surgical shock or a highly excited, almost maniacal state. Some of the effects produced by an electric current are discussed in the following.

Conscious Phenomena. If the victim of an electric shock retains consciousness during and following the contact, there is often a whistling or ringing in the ears and partial deafness for a time. In addition, there may be visual disorders such as flashes and brilliant luminous spots. Pain and soreness of the muscles are a common reaction. If the shock is a severe one, the victim usually will be restless and irritable. These disorders generally disappear in a few hours.

Muscular contractions are produced when contact is made with an electric circuit. These contractions are particularly marked when the circuit is an alternating one of commercial frequencies. At high voltage the tetanus of the muscles is very sudden and severe. It may throw the victim clear of the circuit. In some instances bones have been broken. The severity of the contraction probably accounts for the soreness that is felt in the muscles. Clonic contrac-

tions of the extremities often are observed following a shock and tremors may continue for some minutes.

Convulsions may occur in cases of electric shock. They usually are characterised by irregular muscular spasms and tremors.

Loss of consciousness occurs in many electrical accidents. Sometimes the victim recovers spontaneously; in other cases, either after the application of artificial respiration, or never. Cases also have been reported where the victims lost consciousness when contact with the circuit was made at two points on the same leg or hand, and in which there was no burning of the tissues. Such cases are believed to be due to a severe shock to the system.

Electric burns are of two types, those produced by the heat of the arc, as may result when contact is made with a high-voltage circuit, and those that are caused by the passage of the electric current through the skin and the tissues. Burns resulting from an electric arc are, in general, similar to those produced by high-intensity heat sources. The true electric burn often is characterised by a pinkish mark on the surface of the skin. The burns, however, may penetrate deeply and require considerable time to heal. Jellinek reports a case where the current value was large enough actually to char the flesh at the elbow where there exists only a relatively small amount of body tissue. Burns, blisters, and markings are not necessarily present on the skin after an electric accident. When the skin is saturated thoroughly with water and the contact area is not restricted, a fatal shock may not leave the slightest detectable blemish. Burns produced by electricity usually heal without infection. They, however, heal slowly. In severe cases, fingers or limbs may be lost and death may follow as a secondary effect.

The Nervous System may be so profoundly shocked or fatigued by a contact with an electric circuit that it cannot function normally again for a period of minutes or hours. The nerve cells are injured, especially in areas that have been traversed by the current. Injured cells are characterised by a dark shrunken nucleus, which is often eccentric in position, and the loss of granules. The damage, however, is patchy in distribution so that injured and normal healthy cells lie in close proximity. Autopsy of shock victims also has revealed cavities in the nervous system of 25 to 200 microns in diameter. These may be caused either by heat or electrolysis.

One of the most common effects on the nervous system is the production of a temporary paralysis or block. The location of this block will depend upon the path taken by the current. The lungs or other portions of the body may be paralysed following the shock. There is a case on record where a woman stood with her back resting against the edge of an electric range when the power line was struck by lightning. She received a severe shock which was followed by a temporary paralysis and loss of sensation in both limbs that lasted for about four hours. The many successful resuscitations resulting from

(Continued on Page 5)

Economical Design for a Simple Standby

BY E. A. CHARLES,* VK5YQ

The need for an auxiliary transmitter often arises. Quite frequently you would try out that new idea if you didn't have to QRT to do it. Less frequently something goes haywire and you are QRT until you make the necessary repairs or alterations.

At present most transmitters have become a semi-permanent fixture on twenty metres. When that band is dead (and that's often during present sun-spot activity) you end up tuning the other bands and often hear an old friend calling CQ. By the time you have decided to change up (or down) and returned, he is probably in a "black-out" area, and then you find that DX has broken through on twenty!

There are usually two or three times a year you would operate mobile IF you had the gear made up. And those cross-town chats, the promises to join the v.h.f. gang, and the next R.D. Contest! Why not combine the bare essentials to cater for all contingencies in a "Jubilee Austerity Auxiliary?" Here is one way to do it with about ten watts input for phone and up to twenty watts on c.w.

Firstly, here is a brief summary of the ideas from which it was made up.

"Economy" refers to cost and space, i.e.—

- (1) Using a minimum of components commensurate with desired versatility and general usefulness;
- (2) Using standard receiver, disposals or junk-box parts where possible;
- (3) Making use of the main station's spares and accessories;
- (4) Getting the maximum from a minimum current drain.

"Simple" implies only the essential controls, and absence of critical adjustments (no neutralisation; no efficiency modulation).

"Stand-By" means a phone-c.w. transmitter for home or outside operation on all popular bands, that is capable of easy conversion to a simple transceiver for emergency operation.

* 193 Young Street, North Unley, S.A.

THE POWER SUPPLY

Always remembering that any transmitter is only as good as its aerial system, the mobile one has another limitation—the life and strength of its power supply.

There is a variety of disposals vibra-packs and genemotors available, and, if you have something on hand, the transmitter can be designed to get the full benefit from its voltage and current output. If you are going to make something up, then it is desirable that it can be used to run other equipment when not required on this standby transmitter. With the power pack described, switched to choke-input filter, it can be used for a receiver, frequency meter, test equipment, etc.

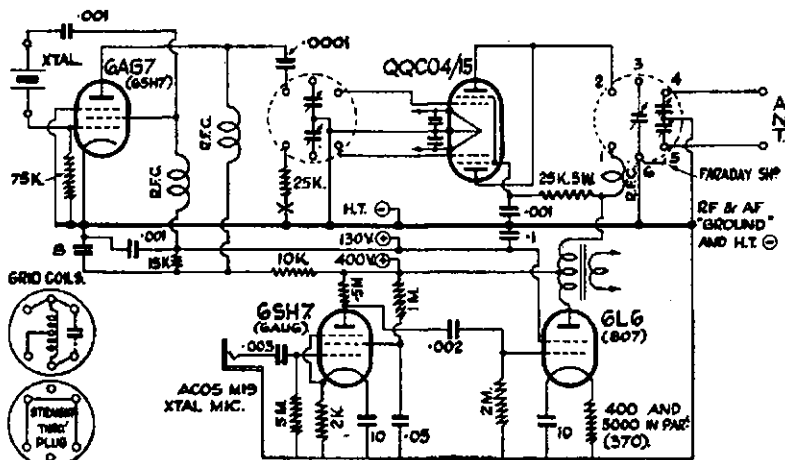
"Old Age Pension." (See the A.R.R.L. Handbook chapter on Power Supplies.)

This circuit is taken as the basis for the line-up of the transmitter which, as a result, is limited to an input of 400 volts at 75 milliamperes.

THE MODULATOR

This was quite a long search—the economies of Class B operation were not! It is of little use having ten watts of audio if you have not sufficient milliamperes left to produce five watts of r.f.!

Delving into pre-war valve characteristic pamphlets produced a set of figures for the 6L6 (807) that had to be the answer. With 375 volts on the plate, 125 volts on the screen, a class A 6L6



The only suitable available rectifier for a dual supply is the 6X5. Its ratings per A.R.R.L. Handbook are: 350 volts per plate, 4 uF. condenser input filter, 75 Ma. output. It is possible to draw up to 100 Ma., but it is considered neither desirable nor necessary with the circuit used. A special transformer can easily be made from a "salvaged" b.c.l. tranny. It would be expensive, if bought. The addition of low tension windings is easy and, you could make provision for using a second 6X5 if the transformer is

large enough to supply the extra milliamperes. However, a common commercial type suitable is the 385 aside with two or three heater windings. The addition of another five-volt winding will be OK for the vibrator circuit if the transformer has only two low tension windings.

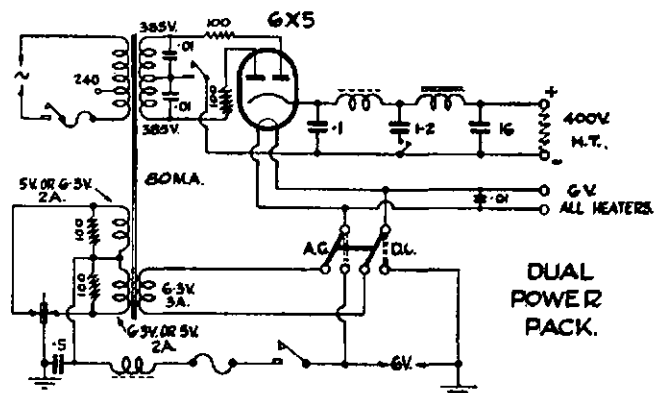
Current limiting resistors in each plate lead and a reduction of the filter input capacity will drop the output to 400 volts under load, and qualify the 6X5 for the gives four watts output into a 14,000 ohm load for a total maximum current drain of 26.8 Ma. The plate current is 24.3 to 25 Ma., the screen current 0.7 to 1.8 Ma., and the cathode resistor 365 ohms.

From theory, 50% audio power is required for 100% sine wave modulation; for speech, 30% to 40% is considered quite sufficient. The p.a. plate (and screen) input can thus be around 13 watts. The push-pull (10w.) audio output tranny as a 1 to 1 modulation transformer reflecting the p.a. load as the 6L6's plate load impedance results in only slight impedance mismatch and d.c. unbalance.

Because this is low power, it is no reason for poor quality. The big rig's xtal microphone can be utilised by having a single 6SH7 (6AU6 in miniature) speech amplifier stage driving the 6L6.

The Acos M19 does require close speaking for maximum output, but it is preferred to the use of a carbon mike which requires either a transformer (space) or a tube drawing much more current than the 6AU6 (less than 1 Ma.). The 6AU6 (6SH7) has more gain than a 6J7.

Of the 75 available milliamperes, a steady 25 have now gone to the audio section.



THE R.F. SECTION

Whereas other circuits may be considered more suitable in some applications, this was chosen as the best all-round answer. Circuit switching is by means of the plug-in coils.

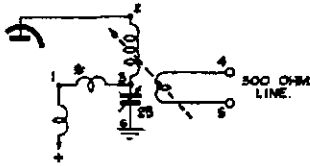
The 6AG7 harmonic oscillator saves a tuned stage and triples better than the tri-tet. It produces the full maximum drive for the final from 10 Ma. plate and 6 Ma. screen currents. Other popular well-screened pentodes as the EF50, 6AC7 or 6SH7 will produce sufficient drive for satisfactory low power operation.

Witness VK5KL's results with 6 watts on 6 metres ("A.R.," July, 1951). The available milliamperes for the p.a. are now 34.

The QQCO4/15 was my choice on account of its socket connections and high efficiency. An 832 would no doubt perform as well, but it requires almost twice the screen current. Note that the Philips' tube is directly heated and needs a separate circuit ground other than the chassis if it is to be used for both a.c. and d.c. operation in a car. The parallel or push-pull doubler p.a. runs at approximately 24 Ma. plate and 8-10 Ma. screen current, representing 9.6 watts final plate input with plate and screen modulation.

A choke-input filter and a bleeder resistance would help on c.w. A special section-wound final r.f.c. is preferable to the usual 2.5 mH.

PA. PLATE TUNING & ANT. COUPLING. SERIES TUNING.

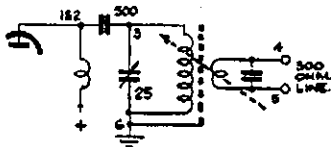


6 METRES: 10 TURNS 14 GAUGE.
1" O.A. AIR WOUND ON 6 PIN PLUG
SPACE TO CENTRE BAND.
NOTE: SPECIAL 6 METRE R.F.C.

OPERATION

On the 144 Mc. band the QQCO4/15 is used as a plate modulated oscillator. Whereas a plug-in/clip-on tank could be used, a separately wired socket with v.h.f. heater chokes is a simpler alternative, depending on your mechanical ingenuity. For six metres, we triple and double an 8 Mc. xtal with the final series tuned.

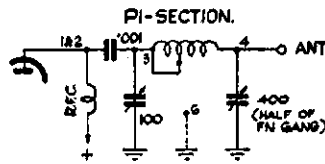
PA. PLATE TUNING & ANT. COUPLING. SHUNT FEED PARALLEL TUNING.



20 METRES: 11 1/2 TURNS 15G. 1 1/2" FORM
10 METRES: 7 TURNS 14G. 1 1/2" FORM
SINGLE-TURN LINK VERY LOOSELY
COUPLED.

Ten and Twenty Metres: Parallel tuning is used with a 1 turn Faraday shield pick-up link loosely coupled for 300 ohm line output. On 20 metres, a 0.0003 uF. fixed condenser is wired across the link to be in parallel with the F.N. two-gang to make up the required capacity.

PA. PLATE TUNING & ANT. COUPLING. PI-SECTION.



40 & 80 METRES:
PLUG-IN COIL WIRING.
50 TURNS 22 SWG 1/4" DIAMETER
SPACED ON FORMER (ABOUT 2 1/2")
(TOP OF PLUG & SOCKET VIEWS)

Forty and eighty metre operation is with a long wire (random length—i.e. 5JK type) antenna. The final tank and output is switched to become a Collins Tuner when plugging in the appropriate coil. Multiple taps enable it to be used on 40 and 80 with any length of wire. The final has both sections operating in parallel (by means of the straight-through grid plug) when operating at crystal frequency.

A final tank condenser of 25 pF. gives the correct L/C ratio for a Q of 12 with the high impedance of the final, up to 40 metres, allowing for valve electrode and stray circuit capacities. A 0.0001 uF. condenser is required if operating up to 80 metres.

Keying and metering can be of your own choice. The addition of a (super) regenerative detector feeding into the audio section could turn the stand-by into a transceiver (with suitable switching and using the modulation transformer's voice coil output). Switching the high tension to the home station receiver would also permit emergency battery operation.

It is better to plan your layout many times and only build it once.

EFFECTS OF ELECTRICITY ON THE HUMAN BODY

(Continued from Page 3)

the prompt application of artificial respiration to shock victims may be ascribed to the temporary nature of this paralysis. If nature is given the opportunity, it often will repair the damage and again permit the signal from the brain to reach the organ in question.

Ventricular Fibrillation results when a small current passes through the heart and disturbs its normal co-ordinated rhythm, as explained in the foregoing. The human heart does not recover spontaneously from ventricular fibrillation. While the heart is in this condition there is no circulation, and death will ensue.

Ventricular fibrillation may be arrested by the passage of a 60-cycle current of the order of one to two amperes through the heart. This value of current is sufficient to bring the muscles of the heart to rest and hold that organ in diastole. Then when the circuit is broken the heart usually will resume its normal operating rhythm. The feasibility of this method of recovering the heart by an electric counter shock was demonstrated by using experimental animals. It has been applied to man and two cases of successful recovery of the fibrillating heart are reported.

Permanent Effects. Permanent injuries from contact with electric circuits fortunately are extremely rare. Perwitzschky reports 23 cases of auditory and vestibular injuries that appeared either immediately or from one or two years after the shock. It is peculiar that the damage was not related in any way either to the severity of the shock or to the path of the current through the body. There are cases on record where the ear formed one of the circuit contacts yet no permanent after-effects resulted.

Death from electric shock may result from a number of causes or from a combination of two or more of them. In general, low voltages kill through the mechanism of ventricular fibrillation and high voltages either through the destruction or inhibition of the nerve centres; asphyxia being the immediate cause of death.

A YOUNG MAN'S GAME?

So radio is a young man's game? Don't you believe it! As a profession, maybe. But as a hobby—well, you're never too young or too old.

Take "Skipper" Schofield, VK6WS for example. VK6WS makes no claim to be the "oldest" Ham in VK6 from the point of greatest number of years spent pursuing the hobby, but he does claim to be the oldest in the true sense. Not many men approaching sixty set to and study for their A.O.P.C., but "Skipper" did—and got his ticket in the early 1930's. Now, at 78, VK6WS is still active, mostly on 7 Mc. these days, but hoping for a return of good conditions to twenty metres, his favourite pre-war stamping ground.

Forty metre activity results from a Type 3 Mk. II., but the main rig is v.f.o. controlled, finishing with a T50

in the final. Operation can be had on 80, 40, 20 and 10. There's a "Commander" communications receiver to bring the signals in and a dual 20 and 10 metre beam, power-driven, to push "Skipper's" signal out. The original rack-and-panel frame, which VK6WS built, is still in use although, as "Skipper" himself says, "the innards have been altered many times from the old tri-tet and a P.M.G. type carbon mike."

A qualified accountant and a Justice of the Peace, "Skipper" is now living in retirement after thirty years in business as a hotel and business broker. His chief interests aside from Ham Radio are gardening, photography—and cigars! A question he'd very much like answered is "has any other Division a member with as many (or more) milestones to his credit?" Any takers?—VK6WZ.

Radio Control of Model Aircraft

BY C. H. CASTLE,* VK5KL

At first sight the control of Models is not Ham Radio as we know it, but a hobby that the Amateur is closely allied to because of the transmitting and receiving equipment used and the knowledge that the Amateur can give to overcoming the many difficulties that can arise in the operation of the radio gear. Much credit can be given to our fellow Australian, the late Ross Hull, who, whilst on the staff of "QST" over a period of years, made a close study of radio controlled Models and his development of a simple actuator and escapement is still used today in simple types of control and is most reliable.

Purpose of Control started with the introduction of Petrol engine powered Models because of their range and necessity to bring the Model back instead of having to chase it for miles.

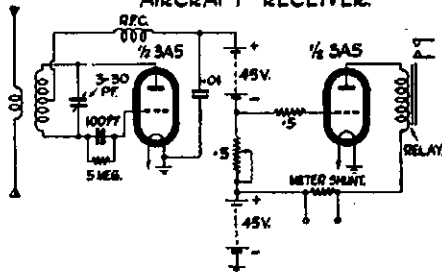
Weight.—Apart from special designing of the Model, it is necessary to carefully consider the weight that has to be carried (batteries, receiver, relays, etc.) and the distribution of the weight so as not to upset the equilibrium and centre of gravity for stable flying.

Number of Controls in Order of Preference:—

- (1) Rudder—right or left.
- (2) Elevators—up or down.
- (3) Motor speed.
- (4) Shut off motor.

The simplest is rudder control only and is best to start on before graduating to the more complex systems.

AIRCRAFT RECEIVER.



Action of Receiver on reception of signal is to energise a sensitive relay which in turn closes the battery circuit to operate a second relay that is part of the actuator and escapement that operates the rudder. Early receivers used type 30 and 1F4 tubes, and mainly used about three valves to get enough change in plate current to operate the relay. In 1938 a gas triode (RK62) was made and its present day equivalent is the XF1G. With the introduction of high ohmage sensitive relays, the receiver was reduced to one tube. Other hard valves such as the 3V4 and 3A5 are all used successfully.

Circuit used is the super-regenerative detector because of its sensitivity. In practice the combination of plate volts grid condenser and resistor, plus aerial loading, are used to adjust the plate current of the tube until it will hold in the tongue of the relay. On receiving a signal, the plate current will drop and

thus release the relay tongue and so close contacts that will operate the escapement relay. The gas triode tubes give the best variation in plate current from 1.5 to 0.5 Ma. and the hard tubes from say 5 down to 3.5 Ma. according to signal strength. It was found that all these adjustments were very finicky and prone to body capacity and unstable in operation from one time to another; at one time the relay would have positive action and a little later it would be unreliable.

A friend had asked the writer to assist with the building of a radio controlled Model, supplying the necessary radio knowledge. After investigating several others' gear and reading as much as can be found on the subject, a receiver was made up and experiments started with the results that after a few months had passed we still did not have a satisfactory receiver due to the faults mentioned beforehand.

The main trouble seemed to be that one could not get an adjustment whereby the receiver was stable enough for operation for hours on end, nor was it stable enough in plate current variation to work the relay positively. In field tests sensitivity dropped away fairly quickly after the first few hundred yards.

It was decided to postpone launching the aircraft until such times as a better receiver was devised and to this end a few months was spent on research, testing all the tubes and circuits that has been used successfully and some that had not. The relay being used was the squelch relay from a 522 and although it will operate on 0.5 Ma. change in plate current, it seemed to hold in best when a static plate current of about 3 Ma. was used. At that current the XF1G was out and a hard tube used.

What was wanted was one tube as the super-regen. receiver and a second biased to cut-off until on reception of a signal, then to draw enough current to operate the relay with positive action. After a further few months of trying all sorts of schemes, the receiver to be described was eventually sorted out and proved most satisfactory, both in field tests and in actual flying. It is very sensitive and positive even after six flights and landings without retuning and works even after weeks of inactivity.

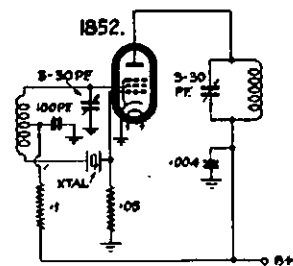
RECEIVER CIRCUIT

Looking at the circuit it will be seen that a 3A5 twin triode tube is used, one half being the normal super-regen. receiver and the second half the biased section to work the relay. The split h.t. battery is a bit unorthodox. Plate current drawn by the super-regen. section through the potentiometer in the centre of the battery produces a negative voltage across the resistor and so biases the second half of the 3A5 to cut-off. (This can be adjusted by the potentiometer to suit the amount of voltage that is applied to the plate of the relay tube.)

On receipt of a signal the plate current of the super-regen. receiver drops

and although it is minutely, the voltage variation across the potentiometer is great enough to overcome the negative bias on the second half of the 3A5 and becomes a positive voltage. The tube immediately conducts and draws plate current, limited by the amount of positive voltage applied to the plate. This current passing through the relay actuates the tongue of the relay and closes the contacts. On no signal, it releases and the tube returns to rest, biased and drawing no current. This is also a saving on the batteries.

The resistor in series with the grid of the relay tube limits the current drawn by the grid of the tube if at any time the receiver section should fail to draw current and so sustain the bias on the second half. The receiving section, now not having to also draw enough current to operate the relay, does not have to be loaded up and so consequently as a super-regen. receiver, is much more sensitive.



TRANSMITTER.

In practice, on the frequency band 40.66 to 40.7 Mc., the Aircraft is taken as far away as possible from the transmitting point and tuned up with no antenna on the transmitter by use of earphones connected via a fixed condenser from earth to the plate of the receiver, and with transmitter key down, tuned on frequency for minimum hiss of the super-regen.

The potentiometer is then adjusted by the aid of clipping in a meter in the plate circuit of the relay tube and adjusting for nil plate current. (In practice it is found best to adjust at a idling current of about 0.25 Ma.) On key down of the transmitter, the current will rise to around 3 Ma. and operate the relay.

When the antenna is put on the transmitter, it extends the range and no trouble has been found of controlling the Model up to two and three miles on the ground. The receiver antenna is a quarter-wave centre fed fixed along the trailing edge of the wing.

LOCATION OF COMPONENTS

Batteries in the aircraft are installed immediately behind the engine only in the fuselage section and are of the small type used in portable receivers. The lighter type as used in hearing aids are not recommended as the saving in weight against useful life is not warranted. A small four-pin plug is used for connection as this simplifies matters when renewal is necessary.

Next down the fuselage is mounted the receiver. Contrary to some, this is mounted firmly to the body and not suspended with rubber as it is found better to take any shocks of crashes.

Near the tail is the escapement and relay and also a flat 4½ volt battery for

* 29 Turnbull Road, Enfield, South Aus.

operating the relay and the rubber motor that is associated with the escapement. The escapement is of the simple sequence type and operates neutral left, neutral right, neutral. There is no need to describe this as anyone interested will have the necessary knowledge or can obtain same from certain publications dealing with them.

TRANSMITTER

Of the two frequencies allotted for radio control of Models in Australia, namely, 26.957 to 27.282 Mc. and 40.66 to 40.7 Mc., the higher frequency was chosen as there it was more practical to use a half-wave antenna on the transmitter and also the wing span of the Aircraft would allow a quarter-wave aerial to be used.

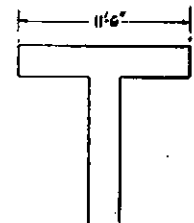
The failure of some types of gear seen, seemed to be in the stability of the transmitters and so from the first, crystal controlled was aimed at and overcome in one tube by the use of the harmonic oscillator circuit. The crystal frequency is 6780 Kc. and the output frequency 40.68 Mc. A lot of the success of control is attributed to having stability in the transmitter.

ANTENNA

Used in all tests is a simple folded dipole made of 300 ohm ribbon, the flat top being 11 ft. 6 in. long.

ANTENNA.

Conclusion.—Although this article is not explicit in all minor details and does not include construction of the actual Aircraft, it is hoped that it will give those interested in this very fascinating hobby, that combines radio, enough knowledge to help overcome some of the very obstacles that may be



marring their attempts to achieve successful control of their particular Model, be it Aircraft or Ship.

All enquiries will be answered by the author and help given where possible.

MORSE CODE

Many thousands of W/T Operators throughout the world have successfully mastered Morse the Candler way.

SPECIAL COURSE for those who only wish to reach essential speeds to pass the test for an Amateur Transmitting Licence.

JUNIOR COURSE.—A complete course for the Beginner. Average students reach speeds of 20 w.p.m.

ADVANCED COURSE.—Recommended for those who can already send and receive at not less than 15 w.p.m. Average students reach speeds of 25-30 w.p.m.

TOUCH-TYPEWRITING.—A course specially prepared for W/T Operators.

Send for a copy of the CANDLER "BOOK OF FACTS," it gives full details of all the above training.

THE CANDLER SYSTEM CO.
(Dept. A.M.)

52b ABINGDON RD., LONDON, W8, Eng.
The Candler System Co., Denver, Colorado, U.S.A.

RADIOTRON 6BV7

Double Diode Power Output Pentode—

The new Radiotron noval 6BV7 miniature valve has been designed by the engineers of Amalgamated Wireless Valve Company especially to meet the needs of manufacturers of compact, low-cost receivers with high performance. This new valve is mounted on the standard nine-pin miniature base and contains in one envelope, two diodes and a high-slope power output pentode with a common cathode.

With a seated height of 2 3/8 inches and a maximum diameter of 1/4 inch, the 6BV7 makes possible the design of ultra-small superheterodyne receivers using only three valves: 6AE8 (or the 6BE6), 6BV7, 6X4.

The pentode section mutual conductance of 10,000 micromhos allows the receiver engineer to employ audio tone correction circuits without seriously affecting the overall sensitivity.

The 6BV7 is capable of a 2 watt output under low plate voltage conditions, thus enabling power supply economies to be made.

List price of the Radiotron 6BV7 will be 19/6.

GENERAL DATA

Electrical:	
Heater, for unipotential Cathode:	
Voltage (a.c. or d.c.)	6.3 volts
Current	0.8 amp.
Direct Interelectrode Capacitances (with no external shield):	
Pentode Unit: Grid to Plate	0.5 pF. max.
Input	11.5 pF.
Output	9.5 pF.
Diode (pin 1)—Diode (pin 6)	0.01 pF. max.
Diode (pin 1)—Pentode Plate	0.7 pF. max.
Diode (pin 6)—Pentode Plate	0.3 pF. max.
Diode (pin 1)—Pentode Grid	0.1 pF. max.
Diode (pin 6)—Pentode Grid	0.1 pF. max.

Mechanical:	
Mounting Position	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length, Base Seat to Bulb Top (excluding tip)	2" plus or minus 3/32"
Maximum Diameter	7/8"
Bulb	T-6 1/2
Base	Small Button Noval 9-Pin
Base connections for bottom view—	
Pin 1—Diode Plate.	
Pin 2—Pentode Plate.	
Pin 3—Pentode Grid No. 2.	
Pin 4—Heater.	
Pin 5—Heater.	
Pin 6—Diode Plate.	
Pin 7—Cathode and Pentode Grid No. 3.	
Pin 8—Pentode Grid No. 1.	
Pin 9—Cathode and Pentode Grid No. 3.	

PENTODE UNIT

A.F. Power Amplifier—Class A

Maximum Ratings, Design-Centre Values:	
Plate Voltage	250 max. volts
Grid No. 2 Voltage	250 max. volts
Plate Dissipation	10 max. watts
Grid No. 2 Dissipation	2 max. watts
Peak Heater-Cathode Voltage:	
Heater negative with respect to cathode	90 max. volts
Heater positive with respect to cathode	90 max. volts
Typical Operation and Characteristics:	
Plate Voltage	180 250 volts
Grid No. 2 (Screen) Voltage	180 250 volts
Grid No. 1 (Control Grid) Voltage	—4 —5 volts
Peak A.F. Grid No. 1 Volt.	4 5 volts
Zero-Sig. Plate Current	20 38 Ma.
Zero-Sig. Grid No. 2 Current	3.5 6.0 Ma.
Plate Resistance (approx.)	130000 100000 ohms
Transconductance	8000 10000 umhos
Load Resistance	7000 7000 ohms
Max. Sig. Total Harmonic Distortion	10 10 %
Max. Sig. Power Output	2 4 watts

Maximum Circuit Values:

(for maximum rated conditions)	
Grid No. 1 Circuit Resistance:	
For fixed bias	0.1 megohm
For cathode bias	0.5 megohm
For back bias	see under Application

DIODE UNITS

Maximum Ratings, Design-Centre Values:
Plate Current (for each diode) ... 1.0 max. Ma.

Diode, Considerations:

The two diode units are placed on opposite sides of, and parallel to the cathode, the sleeve of which is common also to the pentode unit.

The minimum diode current per plate with an applied d.c. voltage of 10 volts is 0.8 Ma.

APPLICATION

The Radiotron type 6BV7 is a nine-pin miniature duo-diode output pentode with a transconductance of 10,000 micromhos and a power output of 4 watts for 10% total harmonic distortion under recommended 250 volt operating conditions. The valve was designed primarily for use in low cost four valve receivers in which good performance is required with reduced plate and screen voltages and low cathode current. In this application with plate, screen and control grid voltages of 180, 180 and —4 volts respectively, Radiotron 6BV7 will deliver 2 watts output for 10% distortion with a plate current of only 20 Ma.

Diodes

The location of the diodes in the output valve allows a very convenient layout of the conventional 4 valve straight or reflexed receiver and enables higher i.f. gain to be obtained without excessive regeneration, or without neutralising, than is possible when the diodes are located in the r.f. amplifier valve.

In receivers with an a.f. amplifier between the detector diode and the grid of the pentode section, it is recommended that the diode connected to pin 6 be used for detection as this diode has the lower capacitance to pentode plate. In other types of receivers either diode may be used for detection.

Pentode

Grid Resistor. The maximum permissible value of grid resistor for Radiotron 6BV7 under maximum dissipation conditions is 0.5 megohm for cathode bias operation and 0.1 megohm for fixed bias operation. In conventional back-biased receivers in which the pentode is operated at maximum ratings, the grid resistor should be reduced from 0.5 megohm in the ratio that the cathode current of the 6BV7 bears to the total current drawn by the receiver.

Larger values of grid leak may be given when the dissipation of the valve is reduced. For example, under the 180 volt conditions quoted above in a back-biased receiver in which at least half of the total B supply current is drawn by the output valve, the maximum permissible value of grid resistor is 1 megohm.

Grid Stopper. The high transconductance of Radiotron 6BV7 provides good power sensitivity and under 250 volt operating conditions an input of 0.25 volt r.m.s. gives 50 mW. output. Under 180 volt conditions an input of only 2.6 volts r.m.s. gives full rated output. In addition to its usefulness from the point of view of pure sensitivity, the high transconductance of Radiotron 6BV7 makes possible the use of a larger degree of negative feedback than would otherwise be possible. Even in the case of a four valve straight receiver a worthwhile degree of negative feedback can be applied to the output stage while still maintaining good overall sensitivity.

Because of the high transconductance of Radiotron 6BV7 a grid stopper should always be used and a value of 5,000 ohms is recommended.

In four-valve straight receivers a large audio voltage appears on the diode and with the volume control turned to minimum the amount of playthrough is proportional to the impedance between control grid and ground. For this reason, the grid stopper should not be too large—5,000 ohms is as effective as 50,000 ohms in suppressing parasitic oscillation—nor should the grid coupling capacitor be too small. Under these conditions playthrough will be very low.

Use with Low-Level Pick-Ups. When Radiotron 6BV7 is used as part of a high-gain pick-up amplifier, such as is required with some low-level pick-ups, it is desirable to arrange the radio-gramophone switching to remove the detection diode from the circuit in the high-gain pick-up position in order to remove the possibility of feedback through the diode circuit. As such switching is incorporated in most receivers to prevent interference with recorded items from radio programmes, this arrangement does not normally involve additional cost.

Ventilation. The envelope of Radiotron 6BV7 becomes very hot in operation, and free circulation of air around the valve is necessary.

FEDERAL EXECUTIVE PROCEEDINGS

This is a new column to be featured monthly bringing to the country members and metropolitan members, who are unable to attend the regular monthly meeting of the Division, a brief summary of resolutions arising from meetings of the Federal Executive. By this means the more isolated members of the Institute will be kept in touch with what is going on.

The Federal Executive meets twice in each month—sometimes three times—to discuss and resolve the directives and problems of each Federal Council.

A copy of the minutes of all meetings is forwarded to each Division through the Federal Councillor, who is the liaison officer between his Divisional Council and the Federal Executive. Any member in a Division who desires more detailed information on any matter appearing in this column is at liberty to address the Council of his Division.

A member may desire to have a matter of a Federal nature discussed and resolved by Federal Executive. He does not write direct to the Executive! He writes to his Divisional Council first; the Council then decides if the matter is Federal, or whether it is domestic. If the matter is considered a domestic one action is taken by the Council; if the matter is on a Federal level it is forwarded by the Federal Councillor to the Federal Executive. The resolution of the matter by the Federal Council is detailed back to the Divisional Council who in turn advises the member. The machinery of the Federal organisation works smoothly. The members should use it to achieve their requirements.

Resume of Minutes of Meetings of the Federal Executive held during July, 1952

Ratification of Convention Minutes.—The Secretary reported that all Divisions had ratified the minutes of the 1952 Annual Federal Convention.

After discussion, it was agreed that the Secretary would implement action on all items as soon as possible.

Visit of President Elpido Quirino, President of the Philippines.—It was

agreed that it would be an appropriate time to ask President Elpido Quirino why the DU Amateurs had been forbidden to contact other than Amateurs of the U.S.A. since the Philippines gained its independence after World War II.

Office of Assistant Federal Secretary.—It was agreed to offer the position to John Rice-Oxley, VK3AKO, who had signified his willingness to undertake the duties involved.

Knowledge of Federal Affairs.—Discussion took place on the lack of knowledge of what was happening in Institute affairs at a Federal level—particularly on the part of country members who were unable to attend monthly meetings of the Division.

It was resolved that a resume of Federal Executive meetings should be included in the magazine under the heading, "Federal Executive Proceed-

ings," similar to the method adopted by contemporary overseas magazines.

144 Mc. Transmissions from VK4.—The Secretary submitted correspondence from the Queensland Division reference 144 Mc. transmission on the air between 7 p.m. and 7.30 p.m. every Sunday night. It was agreed to ask all Divisions to ask their v.h.f. members to listen out, and if heard, report direct to VK4.

Discussion with the Postmaster-General's Department.—After consideration of a report of discussions between members of the Federal Executive and Officers of the Wireless Branch of the P.M.G.'s. Department pursuant with directives from Federal Council arising from discussions on appropriate agenda items at the 1952 Convention, it was agreed that the Federal Executive should press for finality of the appropriate matters without delay.

AMATEUR COMMUNICATIONS THROUGHOUT JUNE-AUGUST N.S.W. FLOODS

During June many N.S.W. inland towns experienced their worst floods in history. Although Amateur Radio Stations during the emergency were not called upon to handle any great amount of traffic, stations were always available when called upon. They spent many hundreds of hours listening and operating and reflected upon the potential value of the service in emergency.

Many Amateurs in various areas assisted in the operation, 2WH, 2AMV, 2WT, 2ANF, 2ADT, 2AWY, 2SN, 2ALX, 2TC, 2JV, 2ACT, 2II and 2BQ all rendered assistance.

It was another credit mark recorded for Amateur Radio and all stations participating.

The authorities—Army and P.M.G.—gave Amateur Stations full support and prompt co-operation.

Late in July and early in August, N.S.W. Amateurs were again engaged in emergency working. At the end of July when the Macquarie River floods reached serious proportions at Bathurst, the 144 Mc. band was used for an emergency call to Sydney. At the time, the telephone link to Sydney was out and the Bathurst Police requested Trevor 2NS to contact Sydney. They required

an urgent message to be relayed calling for the immediate dispatch of Army "Ducks" to the area for rescue work. A number of people were isolated and lives were threatened.

A CQ Sydney Emergency, on 144 Mc. at 10 p.m., resulted in a reply from Charlie 2NP answering, who passed the message to the Sydney Police. The link was kept open until 1 a.m., when all traffic was cleared.

It was the first important work on the v.h.f.s. in emergency and the distance covered—100 miles—makes it even more interesting.

Further emergency work was performed on 6th and 7th August, when the Hunter Branch Net swung quickly into operation, after a cyclonic disturbance caused river levels on the Hunter and its tributaries to rise swiftly.

Stations active in the Net were: 2ANU, 2VU, 2JZ, 2DG, 2XQ, 2TY, 2AKP, 2ADT, and 2AHA.

During the last three years, the Hunter Branch Emergency Net has been active on many occasions during flooding of the Hunter. The Net, by their work, have clearly shown the value of Amateur Radio in such emergencies.



Valves, new, boxed, R.C.A. 834s, £1/8/- each.

6C4s, 12/- each.

Limited number of the following Taylor Tubes: TZ20s, £2/10/- each; TB35s, £6/10/- each.

TRANSMITTERS ALTERED FOR BUSH FIRE AND FISHING BOAT WORK.

CRYSTALS, as illustrated, 40 or 80 metres, AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

20 metre Zero Drift, £5 each.

Large, unmounted, 40 or 80 metre, £2 each.

Special and Commercial Crystals—Prices on application.

Crystals re-ground, £1 each.

BRIGHT STAR CRYSTALS may be obtained from the following Interstate firms: Messrs. A. E. Harrold, 123 Charlotte St., Brisbane; A. G. Hesling Ltd., 151 Pirie St., Adelaide; Atkins (W.A.) Ltd., 694 Hay St., Perth; Lawrence & Hanson Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 409 Lonsdale St., Melbourne; Prices Radio, 5-6 Angel Place, Sydney.

DC11 TYPE CRYSTAL HOLDERS WANTED. ANY QUANTITY.

Screw-type Neutralising Condensers (National type), suits all triode tubes, Polystyrene insulation, 19/6 ea.

BRIGHT STAR RADIO

1839 LOWER MALVERN ROAD, GLEN IRIS, VIC. Phone: BL 3510
Prompt delivery on all Country and Interstate Orders. Satisfaction Guaranteed.

AMATEUR CALL SIGNS

FOR MONTH OF MAY, 1952

ADDITIONS

- VK—New South Wales**
 2EG—W. J. Storer, 17 Brook St. Muswellbrook.
 2AKC—J. K. Cotton, Camden St., Balgownie.
 2APZ—Rev. R. L. Kerdel, St. Peter's Rectory, 10 Church St., Leeton.
 2AQK—D. Hodgins, Mobile aboard S.S. "Bel-tana"; Postal: "Selroydon," Ross St., Glenbrook.
 2ART—D. Hodgins, "Selroydon," Ross St., Glenbrook.
 2ATE—P. F. Christie, 1 Marcella St., Kingsgrove.

Victoria

- 3AM—A. M. Forecast, Mountain Highway, The Basin.
 3KO—M. A. O'Keefe, 46 O'Keefe St., Preston.

Queensland

- 4MU—G. G. J. Matheson, Knight St., Red Hill, Kingaroy.

South Australia

- 5AV—A. E. V. Moineux, 39 Coorara Ave., Sth. Payneham.
 5OG—L. E. Lawton, 31 Forts-green Ave., Pennington.
 5SU—F. M. Gray, 52 Ormond Gr., Adelaide.
 5WT—J. W. Trevor, Portable in Central and Southern Districts of S.A.; Postal: Myal Ave., Murray Bridge.

Tasmania

- 7DZ—D. H. Watkins, 27 Hope St., Newtown, Hobart.

ALTERATIONS

- VK—New South Wales**
 2KW—50 Harris Street, Sans Souci.
 2NB—206 "Cheverell's," 2 Elizabeth Bay Road, Elizabeth Bay.
 2RY—Lot 26, Charles Street, Herne Bay.
 2WP—95 Lambton Road, Charlestown.
 2XK—288 President Avenue, Miranda.
 2ANR—Flat 1, Howe Cres., Ainslie, Canberra.
 2APO—16 Harper Street, Merrylands.

Victoria

- 3Bi—C/o. P.O. Learmonth.
 3FQ—28 Potter Street, Dandenong.
 3JU—1040 Sydney Road, Merlynstone.
 3PC—18 Cushing Avenue, Bentleigh.
 3QA—Fairhills Parade, Glen Waverley.
 3QK—415 St. Kilda Street, Elwood.
 3QL—Morgan Street, Rosebud.
 3TY—8 Raglan Street, Sale.
 3VH—48 Glenhuntly Road, South Caulfield.
 3VK—34 Malabar Road, Boxburn.
 3ZZ—Ochard Crescent, Box Hill North.
 3AAP—14 Carlyle Street, Maldstone.
 3ABO—Lot 7, Taylor Street, Clayton.
 3AFH—9 Faurus Street, North Balwyn.
 3AGK—16 Barnard Grove, North Kew, E.5.
 3AJL—22 Royal Crescent, Camberwell, E.6.
 3AKC—6 Grant Street, Colac.
 3AMG—52 Orrong Road, Armadale.
 3AMZ—52 Hoddle Street, Elsternwick.
 3ATN—Campbell Street, Birch-park.

Queensland

- 4GK—44 Henderson Street, Bullimba, Brisbane.
 4SG—74 Herdham St., Toowoomba.
 4WH—23 Mindham St., Mysterton Estate, Townsville.

South Australia

- 5GW—29 Grassmere Road, Prospect.
 5HE—National Bank, John Street, Salisbury.
 5LM—114 Anzac Highway, Helmsdale.
 5MS—Acacia Street, Mount Gambler.
 5SL—34 Albert Street, Semaphore.
 5TL—Ral Ral Avenue, Renmark.

Western Australia

- 6BR—1 Mark Street, Geraldton.
 6XE—Married Quarters R.A.A.F. Station, Pearce.

Tasmania

- 7GR—73 Nelson Road, Sandy Bay, Hobart.
 7MG—Opossum Bay.
 7RB—Block 9, Prospect Street, Launceston.

DELETIONS

- N.S.W.: VKs 2FA, 2AOT, 2AOW.
 Vic.: VKs 3AC, 3UB.
 Qld.: VKs 4GE, 4MO.
 W.A.: VKs 6KV, 6KZ.
 Tas.: VK7OK (now operating under VK3KO),
 Ter.: VKs 1BS (now operating under VK2EG),
 1DC.

FOR MONTH OF JUNE, 1952

ADDITIONS

- VK—New South Wales**
 2SZ—P. T. Filmer, 84 Cabramatta Rd., Mosman.
 2ACW—L. R. Hawkins, 624 Olive St., Albury.
 2AGP—G. T. Raiph, 85 Kurra-ba Rd., Neutral Bay.
 2AKH—G. F. E. Knox (Lt/Comdr.), 18 Brentwood Ave., Turramurra.
 2APN—D. G. Littlejohn, 14 Chamberlain Ave., Rose Bay, Sydney.
 2AVK—E. F. G. Williams, "Elmsmore," Edwin Ave., North Katoomba.

Victoria

- 3HQ—Mrs. M. L. Williamson, 17 McLean Ave., Bentleigh.
 3KD—R. S. Chambers, 328 Pascoe Vale Rd., North Essendon.
 3OR—R. W. Davey, Point Avenue, Beaumaris.
 3PC—D. A. Miller, 21 Sweeney St., Ballarat.
 3AAS—Army Apprentices' School Amateur Radio Club, Army Apprentices' School, Balcombe.
 3AHF—H. L. Fogg, C/o. Australia and New Zealand Bank Ltd., Benalla.
 3AJS—J. S. Duncan, 5 Glyndon Ave., Brighton.
 3AKO—J. R. Oxley, 38 Victoria Ave., Canterbury, E.7.
 3ANO—R. A. Jones, 9 Norge St., Sunshine.
 3ANS—A. N. Sinnbeck, 182 Buckley St., Footscray.
 3APL—J. W. London, 80 High St., Glen Iris.
 3AVE—V. B. Aldrich, 22 Somerville Rd., Yarraville.

Queensland

- 4HJ—J. H. Chesterfield, Russell St., Cleveland.
 4OX—H. Cox, Flat 1, 11 King St., Nth. Mackay.

South Australia

- 5TA—R. W. Tate, 21 Bertie St., W. Hindmarsh.
 5VK—W. F. Kempster, Smithfield Hostel, Smithfield.
 5WZ—F. G. Anear, C/o. R.A.A.F. Station, Mallala.

Western Australia

- 5AU—I. A. E. G. Norman, 16 Agett Rd., Claremont; Postal: Box N1058, G.F.O., Perth.
 5FE—F. M. Eddy, C/o. Radio 6AM, Northam.

Tasmania

- 7DR—D. J. Robinson, Penguin Rd., Ulverstone.
 7RT—R. T. Calvert, 310 Park St., Hobart.
 7SF—S. F. Medford, 4 Cooper St., South Burnie.

Territories

- 8DT—D. G. Taylor, Samaral, T.N.G.

ALTERATIONS

- VK—New South Wales**
 2BG—343 Kissing Point Road, Dundas, Sydney.
 2ED—26 Lavender Avenue, Punchbowl.
 2GO—32 Blake Street, Rose Bay.
 2JB—Reid Street, Seaforth, Sydney.
 2LU—111 Hood Street, Yagoona.
 2VM—35 Weeroona Avenue, Narrabeen North.
 2WZ—74 Landsdowne Parade, Oatley.
 2YT—31 Avenel Street, Canley Vale.
 2ABM—Lot 15, Northcote Road, Bankstown.
 2ADO—92 Campbell Parade, Manly Vale.
 2AGS—Fishbourne Road, North Manly.
 2AHF—Albert Street, Casino.

Victoria

- 3JT—Eldorado Hotel, Leveson St., North Melbourne, N.I.
 3JZ—7 Foam Street, Parkdale, S.II.
 3OY—45 Warrigal Rd., Oakleigh, S.E.12 (VK3OY recently changed from VK3HQ).
 3RX—22a Mercer Road, Armadale.
 3US—15 Hassett Street, Leongatha.
 3VL—15 Hassett Street, Leongatha.
 3ZJ—26a Queens Ave., Caulfield, S.E.9 (VK3ZJ recently changed from VK3AZJ).
 3ZM—126 Bellair Street, Kensington, W.I.
 3ABX—3 Fairway Avenue, Mount Beauty.
 3AGH—Nolan Street, Kilmore East.

Queensland

- 4JC—5 Stoneleigh Street, Toowoomba.

South Australia

- 5OP—18 Price Avenue, Lower Mitcham.
 5WJ—D.C.A. Parafield.

Western Australia

- 6AT—40 Broadway, Bassendean.
 6BF—93 Toorak Road, Rivervale.

Territories

- 9BI—Lae, T.N.G.

DELETIONS

- N.S.W.: VKs 2TI, 2AAD (now operating under VK3AJS), 2AHT, 2AOL (now operating under VK3APL), 2AOP, 2AOX (now operating under VK4DX).

- Vic.: VKs 3NR, 3OH, 3RG, 3ZJ, 3AAC, 3AZJ (now operating under 3ZJ).

- Qld.: VKs 4HP, 4NF.

- S.A.: VKs 5HF (now operating under VK3AHF), 5GD (now operating under VK3OR), 5LO (now operating under VK3PO), 5MB.

- Ter.: VKs 9PF (now operating under VK2SZ), 1WO.

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."

Television Questions and Answers

Questions on television, submitted to VK3ADA, after being answered by post, will be anonymously published and again answered here, as space permits, to benefit other readers.

Q.—What is meant by "Spot-Wobble?"

A.—This is a system incorporated in some British 405-line receivers, to "make the scanning lines invisible." As the spot of light traces out each line on the screen, it is made to rapidly oscillate vertically, thereby broadening each line just sufficiently to fill the spaces between them so that the latter are no longer visible.

Although this system does not improve the definition, it has the psychological effect of making the picture appear clearer, through the absence of the familiar "pencil lines" across it.

Q.—I've read that if Australia copied the American system of 60 fields per second, instead of 50, we could have a brighter picture. Why so?

A.—Actually, by adjusting the brilliance and contrast controls, you can make the picture as bright as you please, Old Man—so long as you don't mind flicker! You see, it's been proved that the brighter the picture, the more noticeable becomes the flicker. For in-

stance, in a modern cinema, the projector's shutter frequency (corresponding to our field frequency) is only 48 exposures per second, yet no flicker is apparent, simply because the picture on the screen is so dim, that it can only be seen in a dark theatre.

If the picture were made brilliant enough to be viewed in a brightly-lit living room, however, the flicker would become very noticeable and could be eliminated only by increasing the repetition, or "field" frequency to around the 60 mark, so your quotation would be quite correct, if the words "without flicker" were suffixed.

In television, however, if the field rate was increased from 50 to 60, the number of lines per picture would have to be reduced to keep the signal's bandwidth within its limits and the consequent sacrifice in picture detail is hardly justified.

A 50 field/sec. picture can be sufficiently reduced in brilliance to eliminate flicker, and still remain quite bright enough to be viewed under average domestic lighting conditions; screen phosphors have also been developed with sufficient persistence to eliminate flicker in an even brighter picture, without adversely affecting the latter.

In any case, the darker the viewing room, the better will be the picture, even with a 60 field/sec. system, because of the improved light/shade contrast. The reduced brilliance is probably better for the eyesight, too.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

NEW SOUTH WALES

The August meeting of the V.h.f. Section was held at Science House and took the form of a "gear" night. An excellent display of gear was shown with many excellently built crystal controlled converters, crystal control Tx's, and grid dip oscillators. It says much for the progressive attitude of those interested in v.h.f.

A Scramble was held on Sunday, 3rd August, on 6 metres which was a huge success with the boys in the North showing up to increase the total. The event was won jointly by 2ANF and 2VW with a total of 17 contacts out of a possible 22.

Main interest at the moment is the forthcoming 144 Mc. Field Day (week-end) during October when the Gladesville Radio Club and the W.I.A. are combining to make the event one of spectacular interest. It is proposed that camping groups will go out and man the major mountain tops some distance from Sydney and others will man the closed mountain tops within one day's travel to and from Sydney. It is hoped by this means to really establish some long distance contacts and also, if the VK3 Division co-operates, to work through to Victoria.

VICTORIA

The next V.h.f. Group meeting is on the 17th September, 8 p.m., at the

Rooms, 191 Queen Street. Visitors are welcome. Listen to 3WI for further announcements regarding meetings.

At the July meeting of the Victorian Division V.h.f. Group, Fred 3YS described his portable 6 and 2 mx Tx. This is xtal controlled with an 832 in the final, running 3 watts input and series modulated. The Tx was on view together with motor generator and three element beam.

Victorian v.h.f. enthusiasts have been preparing gear for their section of the W.I.A. stand at the forthcoming All Models Exhibition. A 50 and 144 Mc. station will be in operation to contact fixed and mobile stations, so if you hear them calling for contacts, please give them a call. Various other units of v.h.f. gear will be on display.

At the N.E. Zone Convention, held at Tatura on the 20th July, some neatly constructed v.h.f. gear was displayed by 3UI and 3APF. Of special interest were the xtal controlled converters which have been used so successfully. The N.E. Zone is to be congratulated on their early and consistent effort on v.h.f.

SOUTH AUSTRALIA

All bands still remain quiet although some have a little activity. 5ME has returned from a few weeks' duty at Renmark with 5BC and reports being able to hear Nhill Aeradio on 122 Mc. almost every day, a distance of approx. 160 miles. This even in winter, so

how about a little more activity chaps? It can be done if the will is there.

A recent "QST" gave a mention of the good work done by 5GL, 6BO, 5QR, on their 144 Mc. QSOs. 5AX's efforts have been rewarded and now has a very good signal in the city on 144 Mc. 5GY, in town recently, was given an eye opener of v.h.f. activity. Would be a sitter from his QTH. 5MK hopes to shift into his new home shortly and will be back on the v.h.f. bands soon after. How about the gardening Ron.

WESTERN AUSTRALIA

50 Mc.—6LU has appeared with both Rx and Tx. 6JW with a vertical dipole puts out a strong sig from a QQE06/40. John is making up a 6J6 pre-amp. on this band. 6IG on phone again—nice signal. 6DW and 6FE on this band also. 6HK has dropped his 834s until a new modulator is built. 6RK is back in his old shack and on the air again. 6GB not heard for some time. 6BO has nil to report except a new mast being built for the 7 Mc. antenna.

144 Mc.—Last month 6AG went portable and put out a marvellous signal from Greenmount. There have been quite a few in the QSOs of a Sunday evening, up to seven or eight—6JS, 6AG, 6OR, 6GM, 6RU, 6KW, 6WT, 6RK and 6BO (6GB also!). Roy 6RK has made his appearance with an 829B—fine sig too. 6HK using a QQE06/40 and a folded dipole, awaiting the new modulator. Don 6HK also puts out a nice sig from his pair 6M5 triplers. 6FC has now worked first QSO on 144 over 100 miles with self. Frank puts a very good sig into Perth.

TRIMAX

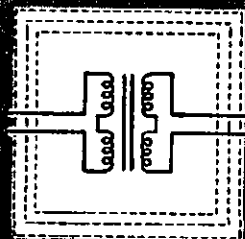
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DX NOTES BY VK4QL*

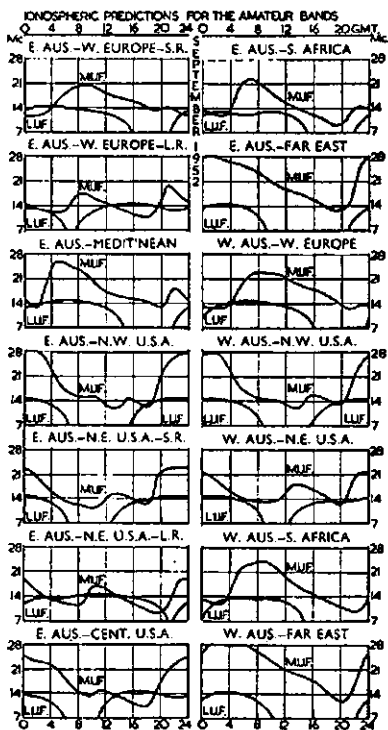
It's still a matter of being around at the right time, if you want to work anything decent in the way of DX. The old attitude of "Think I'll go on and work some DX," is not fulfilled in a great percentage of those visits. No warning is given when the opening will be, and a few hours of one particular day is preceded and followed by days of quiet. I myself was a little luckier this month to hear some, but not necessarily work the good ones that appeared.

On the 10th, for example, at 2145z, the 7 Mc. band produced four continents, the prefixes being ZS, OK, W and VK, and on the 13th at 2200z, ZD4, W1, W2 and W3. On the 13th, 21 Mc. was the best I have ever heard it as far as strong DX sigs were concerned, but only W, KH6, ZL were heard. In the evening of the 16th, practically no Ws were coming through on 7 Mc., but XE, KZ5, J, CO and YV were there instead.

On the 20th, 14 Mc. opened to Africa for a brief period in the afternoon, ZS1, ZS3 and CR6 being worked, while VK3 worked ZD4. I did the wrong thing then, as I went to 7 Mc. to see what it was producing, whereas 2AWU watched 21 Mc., and was rewarded by a break through to Europe. 4EL found one afternoon, 0500z, he was able to work Europe on 7 Mc., and they were gone by 0600z. 3CP also got through to Europe on this band at 0645z. 4EL and others have worked Europe on 14 Mc. up to 2359z. So you see from that

* Fil./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

PREDICTION CHART FOR SEPT., 1952



that things are abnormal on all bands, no set pattern being followed. The band survey shows:—

3.5 Mc.: 4QL found little in the way of DX, but towards the end of the month, ZL sigs were exceptionally strong, and VR2CO was worked. 5FL, who when I worked him, was portable at Pine Creek, and using 10 watts, said he had worked W, VE and KG6, at dusk on this band. Nice going Ross. 7RK heard a few Ws underneath the noise.

7 Mc.: 3CP has not found the band to his liking, and reports very little of note, other than his one break through to G on the 20th at 0645z, and one morning at the end of the month. Athol also heard HK5CR*, CO2BM*, 4X4BX* (2000z), LU4ZI, SM7AAZ*. 4XJ can hear the Ws OK of an evening, and also landed a good one on phone in FU8AC at 2100z. 4QL found a few interesting calls, and added a new one to bring his 7 Mc. score to 73 worked. Lists VP7ND, ZSSNM*, ZS5DE, ZS5LN*, W3PDW at 2200z, ZD4AB 2200z, WIARE and W2WWP 2200z, W3TBP 2245z, XE2OK, KZ5CZ, J2GO*, CO2BM*, YV5DE*, 4X4DH, K4USA 2230z. With the exception of the Central Americans, most were heard as late as 2200z, which makes 7 Mc. a daylight band. 7RK not doing so well, Ray only hearing the usual run of N. Americans.

14 Mc.: 3CX said that LB2XD, ZS7D, VR7AB, FB8BE, ZA3KAA, LZ1KAB, ZS2MI, ZD4AB, FL8MY have been heard or worked by the VK3 boys. Some of these in the evenings, which is in contrast to this QTH where nights are useless. 4XJ, not so active, lists J*, KB6AX*, YV5AZ, KR6IN*; Les finding Ws OK most afternoons. 4QL lists 4W1MY, HP1LA*, HP1BR, EA8BF 2245z, ZB2I*, ZS3K*, ZS1H*, CR6BZ*, FL8MY, TA3AA. The jackpot was hit, by my giving VS5ELA his No. 1 QSO on setting up in Brunei, and bringing the total worked to 179. Incidentally, after about the third QSO, the gang were calling him on his own freq., but not getting anywhere. 7RK remarks that most of his listing, in normal times, he would not mention. You're not on your own in that Ray. He shows 4X4BN, 4X4RE, 4X4DK, KB6AX, KM6AX, ZC4XP, CN8ET, CN8MI, HZ1MY, ON4RM*, OZ8F, EA3CY, FI8AB, CR9AF, VR3C, FB8ZZ* 0020 and 0115z, FB8BB, ZS2MI. Ray wore his fingers down after the last two, and said the VK5 gang fastened on to ZS2MI on 19th. TA3AA, YSIO, and KV4BB complete the list. Also says LZ1MY, LX1DC, ZA3KAA are known to be active.

21 Mc.: As well as 2AWU getting through to the Europeans, think there were others who made it, but calls are unknown. 2AWU lists YU1AD*, G6GN*, G6HL. Walter is interested if his QSO is the first legit QSO VK/Europe. 4XJ found KH6 only. 4QL KH6*, W0*, W2, W4 and W6. 7RK nothing further than ZL. At the present time, this band is good up here for VK2 and VK3.

28 Mc.: This band seems to be at the all time low and most hear nothing to work.

The QSL situation is like the bands, not much doing. 3CX received GD2FRV,

VQ1RF, FQ8AC, TF5TP, YI3EFE, VQ8AF, ST2GL, 4XJ: YU1BK, VP6SD, KC6DX, KH6QY/KC6, KV4AA. 4QL: 4W1AC, KV4AA 3.5 Mc., VR1A, YU1AD, CT3AN.

The "gen" section this month has very little of interest. VS6CG was unable to make the projected trip to VS5 with WOELA. ZC2MAC is reported to be now QRT. On 1st August there was quite a big reorganisation of frequencies amongst the Commercial stations, in VK at least, and it will be interesting to see how our bands fare if International changes are taking place round the same time. 7RK offers a suggestion to those seeking morse training. Listen to ZKF, of the R.N.Z.A.F., on 3320 Kc., Saturday and Sunday from 0700-0800z. Speed starts at 10 w.p.m. and finishes at 30 w.p.m. As from 26th July, the KA prefix supersedes that used by JA stations.

Finally it is getting more difficult each month to "make ends meet" for this page, and if the DX gang can't find time to let me have the necessary to "make ends meet," I will have to consider cessation of compilation of this page. So do you help, or do we close down? It's up to you.

DX C.C. LISTING

PHONE			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	3 163	VK4JP	8 114
VK3EE	10 163	VK3A WW	14 112
VK4HR	12 160	VK4DD	20 109
VK3JD	1 188	VK5MS	24 109
VK6RU	2 182	VK4RW	23 104
VK4KS	9 152	VK2ADT	15 102
VK6KW	4 150	VK2AFA	15 102
VK3LN	11 141	VK3HO	15 103
VK4FJ	21 135	VK8B	15 103
VK3JE	7 133	VK4RT	22 101
VK4WF	16 130	VK3IG	5 100
VK6DD	6 126	VK3GG	18 100
VK4WJ	17 122		

C.W.

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 207	VK4QL	36 128
VK4HR	8 182	VK4RF	11 125
VK3FH	15 177	VK3VD	27 123
VK4EL	9 167	VK3EK	3 122
VK2EO	2 182	VK3JI	25 118
VK3CN	1 151	VK3PL	38 117
VK2GW	16 151	VK3HT	37 117
VK3CX	26 150	VK3UM	12 116
VK6SA	28 150	VK7LJ	24 114
VK4FJ	29 150	VK4DA	7 113
VK3VW	4 143	VK7LZ	17 112
VK2QL	5 142	VK4RC	13 107
VK6RU	18 141	VK3YL*	39 106
VK5RX	23 140	VK6KW	40 104
VK3KB	10 138	VK2YC	34 103
VK5FH	31 134	VK3AFA	14 101
VK5BO	33 133	VK3NC	19 101
VK4DO	20 129	VK2OA	32 101
VK3JE	21 129	VK7RK	22 100
VK3XK	30 128	VK2AEZ	35 100

OPEN

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 220	VK3VQ	46 116
VK4HR	7 206	VK3A WW	45 115
VK3JE	12 190	VK3JA	43 114
VK6RU	8 186	VK2ADT	14 113
VK4FJ	32 173	VK4RW	52 113
VK3HG	3 171	VK3PG	47 111
VK6KW	13 171	VK3MM	49 111
VK2DI	2 170	VK4BC	41 110
VK3XK	1 167	VK3ZB	34 110
VK4EL	10 167	VK3HO	38 110
VK4KS	24 167	VK2ZC	25 108
VK4DO	15 157	VK2YL	11 106
VK3LN	29 144	VK3A WW	36 105
VK5FL	28 143	VK2VN	18 104
VK3MC	5 139	VK4UL	27 104
VK3OP	19 137	VK6PJ	44 104
VK4WF	40 137	VK6PW	50 104
VK6DD	22 136	VK2HZ	17 103
VK3HT	41 135	VK7KB	30 103
VK2ADE	28 133	VK2TI	37 103
VK9GW	48 132	VK6DX	42 103
VK2AHA	9 128	VK7RK	31 102
VK2AHM	20 125	VK4TY	35 102
VK3NS	16 123	VK5HI	61 101
VK3JI	33 119	VK2ACX	6 100
VK7LZ	23 116	VK2TG	39 100

FEDERAL, QSL, and



DIVISIONAL NOTES

Federal President: O. GLOVER (VK2AG); Federal Secretary: G. M. HULL (VK5ZS); Box 2611W, O.P.O., Melbourne.

NEW SOUTH WALES

President: John Moyle, VK2JU.
 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: Harry Powell, VK2AYP, 9 Russell Avenue, Wahroonga.

Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; Newcastle: Ron McD. Stuart, VK2ASJ, 98 Dunbar St., Stockton; Coalfields and Lakes: Harry Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cambljowa, Forbes; South Coast and Southern: Roy Raynor VK2DO, 42 Pettit St., Yass; Eastern Suburbs: Don Knock, VK2NO, 42 Yanko Ave., Waverley; Northern Suburbs: Harry Powell, VK2AYP, Russell Ave., Wahroonga; St. George: Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah Bay.

VICTORIA

President: G. Dennis, VK3TF.
 Secretary: L. R. Bradshaw, VK3SX.

Administrative Secretary: Mrs. J. Hurley, Law Court Chambers, 191 Queen St., Melbourne.
 Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.
 Zone Correspondents: Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: P. Perkins, VK3APK, 182 McKillop St., Geelong East; North Eastern: A. D. Buchanan, VK3FD, "Booroodal," Warrling; Far North Western: M. Folle, VK3GZ, 101 Lemon Ave., Mildura; Eastern: H. O. Kellas, VK3AHK, Tinambra; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

QUEENSLAND

President: V. Jeffs, VK4VJ.
 Secretary: J. F. Pickles, VK4FP, Box 636J, G.P.O., Brisbane.
 Meeting Night: Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.
 Divisional Sub-Editor: A. Guildford, VK4AP, 38 Bramston Tce., Herston, Brisbane.

SOUTH AUSTRALIA

President: W. W. Parsons, VK5PS.
 Secretary: R. G. Harris, VK5RR, Box 1234K, G.P.O., Adelaide. Telephone: J 1151.

Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.
 Divisional Sub-Editor: W. W. Parsons, VK5PS, 10 Victoria Avenue, Rose Park.

WESTERN AUSTRALIA

President: W. E. Coxon, VK6AG.
 Secretary: J. Mead, Box N1002, G.P.O., Perth.
 Meeting Place: Perth Technical College Annexe, Mounts Bay Road, Perth.
 Meeting Night: Second Monday of each month.
 Divisional Sub-Editor: R. H. Atkinson, VK6WZ, Box 127, Geraldton, W.A.

TASMANIA

President: R. O'May, VK7OM.
 Secretary: F. J. Evans, VK7FJ, Box 371B, G.P.O., Hobart.
 Meeting Night: First Thursday of each month at the Photographic Society's Rooms, 163 Liverpool Street, Hobart.
 Divisional Sub-Editor: V. Dore, VK7JD.
 Zone Correspondents: Northern: C. A. Cullinan, VK7XW, 12 Montrose Place, Launceston; North Western: R. K. Wilson, 4 Menal St., Burnie, Tasmania.

FEDERAL

PA0 ON 21 Mc.

The V.E.R.O.N.—Netherlands Section of the I.A.R.U.—have advised that the PA0s are now permitted to operate in the new 21 Mc. band. The official list of frequencies for the use of licenced Amateurs in the Netherlands is as follows:—

3500—3800 Kc.	144—146 Mc.
7000—7150 Kc.	420—450 Mc.
14000—14350 Kc.	1215—1300 Mc.
21000—21450 Kc.	2380—2450 Mc.
28000—29700 Kc.	5650—5850 Mc.
	10000—10500 Mc.

1952 REMEMBRANCE DAY CONTEST

Judging by the "Solid Walls of QRM" evident on the bands—particularly the 7 Mc. band—during the Remembrance Day Contest last month, it seems a certainty that the participants reached an all time high, indicating an annually increasing interest in this most worthy Contest.

Particularly noticeable was the gentlemanly operating technique employed by most operators in waiting as long as practicable before "coming in" on top of another station—in other words, until serial numbers had been satisfactorily exchanged. This consideration of the other man was exemplar of good "Hamming," and will no doubt show up in the final results by the actual contacts made by all participants.

The members of the N.S.W. Division Contest Committee have again been co-opted by F.E. to function as the Federal Contest Committee, and all participants are urgently requested to forward their Logs through their respective Division without undue delay so that the arduous work of checking the Logs will not be unnecessarily impeded.

The sooner the Logs reach the Committee, the sooner the results will be known.

September 12 is the last day the Logs can be received by the Committee—See Rule 16, August "A.R."

Incidentally, the Contest again proved that the 7 Mc. band—in particular—is not as "useless" at night as most Amateurs think. So what about using it more!

FEDERAL QSL BUREAU

RAY JONES, VK8RJ, MANAGER

Cards from HZ1HZ state, "This city, Mecca, has no other religion but Islam, and no other foreigners but Muslims."

A card from VU2BC relating to a phone QSO on 6th April, 1952, is addressed to VK3P— and states, "Thanks Redge." The card from HZ1TA confirming phone QSO on 16th January, 1952, and addressed VK3AW is still unclaimed. Owners please apply this Bureau.

Stan Mayne, VR2AS, writing under date of May, 1952, states, "Hurricane hit me hard, smashed up the business, but my home safe. The salt air got into all trannies and they blew up one by one. The business lost the top storey and of course the frill ceiling couldn't keep out the rain, so for a month or so it poured in and we had to wade through water. May get on again with QRP soon."

Felix Frauchette, FK8AC, on furlough in France, has been issued with the call sign

FGGQ, and expects to come on the air for three months commencing middle September. During this period he will be located at Tamaris.

Interesting details of the life and conditions on Macquarie Island are given by Eric Macklin, VK1EM. Winds of 80-90 m.p.h. velocity are commonplace and constitute the worst enemy of radio by bringing down the antennae. A new 100 watt Tx to replace the 50 watt job now in use, has been constructed and will take the air shortly.

During end of July, W0ELA was located at Brunel signing VS5ELA. The itinerary provided for a visit to Sarawak but radio conditions were so poor that he abandoned the projected visit and returned Stateswise.

It is stated that it is now permissible for DU stations to contact all other Nations. While confirmation of this statement has not been sighted, observations on the air support the rumour.

NEW SOUTH WALES

The July meeting of the N.S.W. Division was held at Science House on Friday, 25th, with the President, Mr. John Moyle, in the chair. John looked a bit battered with a piece of sticking plaster over his right eye and deemed it necessary to forestall facetious remarks by explaining at the outset that he had been in bed with two carbuncles. It was announced that the Annual Field Day would be held at Way Way on 16th November and it is hoped that it will be an even bigger success than last year's effort. Put the date down in your appointment book now so that you will keep the day clear of other engagements.

Dr. Bob Black, VK2QZ, VK2QZ/9/P, VR4AF, was then called upon to talk on his experiences in the Trobriand Islands and the Solomons with a Type A Mk. III rig. The talk was well illustrated with lantern slides and the rather sparse attendance, which braved the very inclement elements, learnt quite a lot about geography and ethnology as well as portable operation in the tropics. Bob exhibited a wealth of dry humour which one had hardly realised was there and gave us all a very satisfying experience.

After the lecture, Bob answered a barrage of questions on all sorts of subjects and finally persuaded Dr. Holt, of Honiara, Guadalcanal, to be the platform to assist him. The discussion became very medically technical at times but none the less interesting. Dr. Holt has a

VR call sign but has not been very active lately mainly on account of receiver trouble.

General business followed and suggestions for suitable lecture subjects were called for. A few good suggestions were received, but if anybody has any ideas, please trot them along to the Hon. Secretary. It may be some time before a suitable lecturer is tee'd up but finding out what would interest the members is the hardest part of the battle and if you want to know about some particular matter there are probably plenty of others who do so too, so let us hear from you. The meeting concluded with a short report from the Federal Councillor.

WESTERN SUBURBS

2AXZ, not heard much of late, busy with his new projector and other photographic gear. 2AAB has better modulation since he cleaned things up, nice signal now. Berry, what about some DX? 2ARW on the band with nicely modulated signal, pleased to hear you again Ray. 2APT is back on his beam, now of course horizontally polarised; but the signal on the vertical was very fine indeed. 2NJ's beam will soon be rotating. 2XH building test gear. 2XJ worked wonders with his signal of late, modulation much improved also. 2AWU working the DX on 21 Mc. 2OQ back on again recently. 2HX logged the other night on c.w.!

The Burwood Radio Club is meeting each Tuesday night at Greenwood Hall, Liverpool Road, Enfield; the 144 Mc. Tx is being built by degrees, should be on the air in near future. Visitors always welcomed and assured of a good night.

2XU heard on 7 Mc. recently, getting a little practice for the R.D. Contest. 2AER still bashes

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W.I.A. ACTIVITIES CALENDAR

- October 4-5: VK-ZL DX Contest (all bands), C.W. Section.
- October 11-12: VK-ZL DX Contest (all bands), Phone Section.
- December 6-7: European DX Contest (all bands), C.W. Section.
- December 13-14: European DX Contest (all bands), Phone Section.

WHAT DO YOU THINK?

The Magazine Committee have, from time to time, received letters suggesting the elimination of the Divisional Notes.

In view of the restricted size of the magazine, the Committee are seriously considering acting on this suggestion.

However the Committee consider that Divisional Notes of a general character should be published. That is notes on the general activity of each Division; personal notes will be completely eliminated. What do you think?

7 Mc. occasionally, also 14 Mc. DX. 2KT was a visitor to our shack, displaying great interest in the compact beam here. 2AAH getting his rotary adjusted, certainly looks a fine job. 2AIA has been ill but is gradually recovering, spending his convalescence building a c.r.o. and n.b.f.m. modulator. 2APL fairly consistent on 14 and 7 Mc. 2ID getting rid of the herbs on 3.5 Mc. with n.b.f.m., nice stuff.

2SI has been holidaying, quite active on 3.5 and 14 Mc. 2AIR plans building the rig to end all rigs. 2ALD still knots a few over on 14 Mc. phone, waiting for ten to open. 2AGG not yet on the lower frequencies, but will make a move in the right direction 'ere long.

NORTH COAST ZONE

Conditions on the bands have not been really inspiring this month, particularly for local contacts. 80 mx appear to be the only band that one can rely upon for this purpose. Short bursts have been heard from 2XO, 2QV, 2SR, 2WQ, 2ADE and 2NY on 40 and quite a few DX stations have been heard calling 2XO, 2QV and DDX on 20; 21 and 28 Mc. appear to be very quiet. Roy 2NY has developed an interest in tape recorders, whilst fellow Grafton Ham 2WQ not only has a severe cold but had the misfortune to "do in" his mike.

Visiting Kempsey to see his mother on her 80th birthday was Jim 2AJR who also found time to spend a few hours with 2AHH. Jim has gone away with the intention of getting onto 80 after a few QSOs from Kempsey. By the time these notes are published the Remembrance Day Contest will be over and I hope the North Coast boys will have had good hunting and as many as possible will have enjoyed the true spirit of the Contest.

MAKE A NOTE IN THE LOG

The Victorian Division will be exhibiting at the All Models Exhibition to be held in the Melbourne Exhibition Building from Saturday, 30th August, to Saturday, 6th September.

It is hoped to have transmitters running on 580, 144, 50, 14, 7 and 3.5 Mc. As band conditions are very poor, we would greatly appreciate any effort on your part to try to contact the VK3WI transmitters. The stall will be manned from 10 a.m. to 10 p.m. each day, and if a contact is made, please use plain language as it is hoped to have both the in and out signals audible to the general public.

SOUTH WESTERN ZONE

John 2AFQ heard on 80, has a rhombic on 80 with 240 ft. per side about 40 ft. high; Rx operates off 32v. lighting plant and Tx on 230v. from a 1½ k.v.a. motor alternator. 2OJ heard on 80 with a nice sig. Lea 2FI active on 40 and 80. Reports that the Canberra Radio Club are now the proud possessors of a new club room, 60 ft. by 18 ft., also has a very good location. All the best to members at Canberra.

Gordon 2AIZ active on 40. Ron 2RH has good sig on 80, 40 and 20, using an AT5 with cathode mod.; Ron's pet subjects at the moment are a.c. units, how to burn out r.f. meters, and how to cure sore throats. Jim 2BO heard on 40 and 80 with a good signal. Geoff 2BQ also on 80; he is playing with a c.r.o. at the moment, also building a new Tx for 6 mx with an 834. Conditions have been poor on 40 in this Zone during the month especially for the Zone hook-up. As from the first Sunday after the delivery of this month's "A.R." the South Western Zone hook-up will be held on or near 3.7 Mc. at 7.30 p.m. Sunday evenings.—2NAJO.

COALFIELDS AND LAKES ZONE

It seems incredible but Ken 2ANU fell victim to power cuts this month—self-imposed restrictions. Geoff finally got the 2 mx rig on the air—12 watts to an 832, heard at S9 in Sydney. No contact over that path to date as the receiving side is not yet straightened out. Harry 2YL paid a visit to VK4 on holidays and managed to repay a visit to 4HA. 2KF has a good signal on 20 and 40, while a little bird whispers that 2KZ has devoted his attention to a shiny new automobile. 2RU doing nicely on 2 mx, and has joined the throng in sneaking across the mountains to Bathurst, congrats Major.

2GA has xtal converter for 2 now working. 2KR is to be heard on 6, 2 or 40. 2ARV is a hard man to keep up with. He has been North to VK4 and back home only to turn up in 2VU's shack in Singleton for a demonstration of cross-band duplex with 2ADT. Only explanation seems to be the efficiency of the N.S.W.G.R. Phil 2TX has returned from a trip abroad and is making preparations for an early appearance on the air. Singleton may soon have another active Ham as old timer Frank Basset is reported to have applied for a call after many years of silence.

HUNTER BRANCH

Over 30 members and visitors were present at the July meeting held at Technical College, Tighes Hill. Young and old members agreed they learned much from the instructive radio and electronic film features which were shown by courtesy of the College authorities and the Newcastle branch of A.G.E. Ltd. Visitors welcomed by President 2CS included Max Henschel formerly OK2MB. All very pleased to see Chris 2PZ who represented the Coalfields gang at the meeting. On behalf of the branch, the President extended hearty congrats to John 2DZ who has recently been elected President of Newcastle Division of I.R.E.

Despite poor conditions, there has been more activity this month. On a recent Sunday night it was like old times with a local 40 mx phone hook-up. 2AGD making a tape recorder. Ernie 2FP was in the hook-up! The proposed 20 mx antenna still not in operation at 2ANA. Ken 2KG spends a little time on 40 mx phone and c.w. Bill 2AXM has his 813 final on 40, has miniature rig on 80 mx. The complete re-build by Harold 2LV is making slow but sure progress. Stan 2UY regular at meetings but not on air. Always busy. Nell 2XY is converting a TAI2C for 2WP. Bill has shifted QTH to Charlestown and expects to be active shortly. Dave 2BZ moving to good v.h.f. QTE at Lambton. Fred 2AGY on 40 and 20 with 100w. rig; using 7 Mc. ¼ wave vertical directly fed from antenna coupler.

40 mx DX still attracts the local c.w. men. Secretary 2SF getting good reports from Ws. Harry 2AFA gets out well too, receiving some DX QSLs now. 2AAI looking forward to holidays; Ron received his first QSL from DL. Jim 2ZC making his 144 Mc. 3/3 rotatable. 2AFX copying the gang on 2 mx, Harry would like a check on his Tx.

Combined Field and Social Gathering.—This great event will be held at Blackall's Park, Lake Macquarie, on Sunday 23rd September, and a cordial invitation is extended to all Sydney and Country Hams besides our own Hunter Valley boys to come along and bring the family. Special attention will be paid to the XYL, YL and Harmonic's entertainment, including a 16 m.m. film show which will commence right after lunch. There will be free ice creams, soft drinks, etc., and hot water will be provided. Bring your own lunch. The show will commence at 10 a.m. and among the radio events will be 144 Mc. hidden Tx hunt and this will have some very special features! It is most important that you, advise our Secretary, Varley Fitton, at Phone B1874 or Box 13, Newcastle, if you

are coming and the number and composition of your party. Adult gents will pay the small fee of 3/-. A train will leave Newcastle at 8.40 a.m. and return from Blackalls at 5.20 p.m. It will be a great day, don't miss it!

Maitland Meeting.—The September meeting will be held in the 2HR Auditorium, Maitland, on Friday, 12th September, when we will be privileged to hear a lecture by Angus Robertson. Newcastle boys travelling by car to meet western side of the junction of Tudor and Hunter Street West. Don't miss a very good evening.

VICTORIA

FAR NORTH WESTERN ZONE

Members of the zone have been on a re-building programme for the past few months. Chas 3TI constructing grid dip oscillator, new frequency meter, and re-building Tx. Noel 3AUG hopes to have a rotating beam 'ere long. Harry 3MF very quiet these days, XYL plus new junior op keeps him busy, no time for Ham Radio these days. Jim Power has completed his shack and hopes to be on the air in the very near future. Graeme 3SN recently

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had holiday in Melbourne. Max 3GZ on at week-ends only, busy with house renovations and no time for Ham Radio. Frank 3FC heard on c.w. occasionally, puts a solid S9 signal into Mildura. Geoff 2AHM working a bit of DX on 20 during afternoons, has improved his modulation by modulating both screen and control grids.

NORTH EASTERN ZONE

The North Eastern Zone's Annual Convention has come and gone after being held in the Mechanics Hall in Tatura on 20th July and leaving in its wake as President 3UI, Sec.-Treas. 3JC, zone correspondent 3FD, and Communications Officers, that is someone to report on the VK3WI Sunday morning broadcasts, etc., etc., 3KR and 3WQ. A pleasingly large number of forty members and visitors attended, including some of the senior officers of the State and Federal Executive. It was decided, amongst other things, to hold the zone hook-up on 80 mx instead of 40 mx if the conditions on the latter band are not suitable for intra-state working.

Heard at the Convention. Howard 3YV in good form again. That 3IJ is going to do a D.C.A. technician standardisation course in Melbourne, leaving Chas 3ACW to hold the Institute fort in Avenel. Jack 3FF has built up ex tempore mobile gear he hopes he won't have to use. Later heard that Associate Rex Anderson had passed his A.O.C.P.; congrats OM. Must keep some news on ice men, so more next month, Editor and the weather permitting.

CENTRAL WESTERN ZONE

20th and 21st September—days to remember and keep free—are the days of the Central Western Zone Annual Convention, to be held this year at Horsham. You remember the Ararat Convention last year? It was a good one, Horsham will be better. There will be a hidden Tx hunt on 3.5 Mc. with a new slant, a free for all scramble which will test the portable rigs under tough conditions, and things to see for those not out hunting or scrambling. A contest will be held for the best piece of home-built gear on exhibition, with a worthwhile prize.

We aim this year to plan for the XYLS and harmonics, too (so that the OM will not be having all the fun); so chaps bring along the wife and family. We have a good park avail-

TECHNICAL ARTICLES

The Technical Editor reports that the technical articles' bag is very nearly empty, so how about it chaps?

Don't forget the beginners have to be catered for, so articles on beginners' equipment are also welcome.

able with plenty of playing facilities for the children and a real get-together for everybody.

Those of you who can come for the two days and require accommodation contact Byron Hardinge, 3TA, 32 Natimuk Road, Horsham (Phone 379 or 542), by phone, letter or telegram, but don't leave it late or you may sleep in the park.

Further details will be put over VK3WI, as they come to hand. Make a date to be in Horsham on Saturday and Sunday, 20th and 21st September. Will we be seeing you?

EASTERN ZONE

3AHK has blown up another power transformer on his modulator, that's the third isn't it Ossie? Anyhow, that's one less earbasher on the air. 3SS and 3SG using new Rx's. 3SS working on a 100w. rig using an 813 in the final. David, the junior op. at 3SS, sat for his ticket during the month, looks like another call sign for the zone. Alan Jacka, at Bairnsdale, also sat for his ticket, passed everything except the morse receiving. Jack 3FK expects to be putting out a signal from Bairnsdale shortly. 3ABF continues to put a good signal from Sale, although the rest of the boys from over that way are silent. It is rumoured that Howard 3VG may be heard again soon. 3AGF expects to be forsaking us for the charms of VK4 shortly, best of luck at your new QTH Geoff. There are two new Hams in the zone, they are 3AOD and 3VN, both are located in the Latrobe Valley.

The Hams that took part in the emergency operation during the floods, received personal

letters of thanks from the Chief Commissioner of Police.

The last meeting of the Sale sub-branch was held at the home of Graham 3GO. It was decided to hold a portable-mobile field day in the Orbest district late in September or early in October. This is with a view to future emergency operation in that district, so blow the cobwebs out of the rigs chaps and let us have a good roll-up.

Whatever you do don't forget the Eastern Zone Convention to be held at Bairnsdale on the 1st and 2nd of November.

SOUTH WESTERN ZONE

3JA and 3AKR are building new rigs, Jack hopes to be on the air soon, and Kevin is just putting the final touches to his rig. 3GR heard on 80 mx phone using 2 watts, doing well on small rig. 3HG has nearly got all his problems regarding remote control for his diesel generator ironed out and soon hopes to operate his rig using all the comforts of home. Pat 3ADN heard on the hook-up the last few Sundays.

Jack 3ALP bought a wind generator at Werribee, almost ready for transportation back to Geelong. 3II having had luck with his power transformers, is using 3AGD's rig while John holidaying up in the snow at Mt. Bulla complete with Type 3 and batteries. The best wishes of the zone go to Bert 3BI who has been presented with a new junior operator in the way of a son. 3NU has not been heard of for quite a while so any news re his whereabouts would be greatly appreciated. John 3ASV is still mad on car racing and, like quite a few other members of the zone, is building up a real super duper rig.

GEELONG AMATEUR RADIO CLUB

At the beginning of the month the new President, Mr. Bob Wookey, 3IC, occupied the chair. After the business had been attended to, a letter was read to members which had been sent by Bill 3BU thanking the members for their kindness and expressions of sympathy in his recent loss of his father. The late Mr. Brownbill, although not a member of the club, took a keen interest in it, taking part in many field days.

At the following meeting, a large number of members were present. The syllabus for the evening was a lecture by Alf 3AJF on Taxi Radio and had a complete set-up on display. Later he conducted a tour of inspec-

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tion to the base Tx. At the final meeting for the month, a sale of surplus gear took place and many "bits and pieces" changed hands. Two new chaps were nominated for membership. The Morse class conducted by the President is going ahead very well.

QUEENSLAND

At the Old Timers' Night, held on 18th July, in the Institute of Engineers' Rooms next to Civic Theatre, Valley, Mr. Leo Feanaghy 4LJ, doyen of Amateur Radio in Queensland, set the right note in his speech of appreciation for the evening. He said: "When an organisation reaches its twenty-fifth year, such as yours, then it has a future, and I sincerely hope that many here will attend another occasion as memorable twenty-five years hence."

Radio Amateurs and their guests, student members and representatives of the trade who attended this meeting left us with no doubt about the future of the W.I.A. in the Queensland Division. From opening to closing of the meeting, one was impressed by the vigour of the Institute generally and its happy relations with other sections of the radio industry.

This was essentially an Old Timers' get-together, carried through in that spirit. It had its more serious moments, notably a very fine address by Past President 4AW on the up and down days of the Amateur Radio movement in 1927 when the Queensland Radio Transmitters League was formed. It also had its frivolous moments, notably the amusing accounts by pioneers on early activities.

But it all summed up to one thing. The door facing the VK4 Division on the eve of its twenty-fifth birthday was a door opening up on a happy vista. All of us who attended the meeting will echo congratulations to the organisers, President 4VJ and Secretary 4FP. Particularly should they be thanked for the excellent manner in which the evening was conducted. Usual business concluded in a mere half an hour and by 8.30 p.m. old timers Matt O'Brien 4MM and Leo Feanaghy 4LJ were our conductors as acting chairman and secretary respectively. We could, with advantage, have more of these evenings.

On occasions such as this it is, of course, in the private conversations, the friendly interchange of news and views, that the real highlights are to be found. But these, unfortunately, are off the record. Of the statements made, and recorded on the tape recorder, kindly loaned by Chandlers Pty. Ltd., quite a few stood out apart from the very fine addresses given by 4VJ, 4MM, 4CW and 4KO.

Mac 4GK amused by reading out extracts from logs of 1930 vintage and even brought along his old 952 bottle for inspection. Bill 4RY endorsed most of 4AW's statements and referred to the efforts of Arthur 4BB, 4EL, and 4AP in bringing the Fisk Trophy to Queensland. Harry 4HR covered our early days on the 60 Mc. band and also paid high tribute to Pat 4KB for his untiring assistance to many present ticket holders. Frank 4JU gave a vivid account of the first round table phone W.A.C. of which he was the VK participant. Madeline 4YL, teen age YL operator supreme around the days of 1935, made some of the newcomers blush for shame after reciting some of her DX worked and contest scores in B.E.R.U., etc. Others to face the tape recorder included 4HG, 4AP, 4SN and 4WF. And, of course, when supper was served the chin wagging that took place had to be heard to be appreciated.

NORTHERN DOINGS (By 4EL)

Harry 4KW heard on 7 Mc. phone, not active lately due pressure of business. John 4FH also heard on 14 Mc. phone, still busy with choir. Alec 4MA still QRL studying. Bill 4BQ more active on 7 Mc., what about getting on of a night Bill so we can ragchew with you out here in the mulga at 4QN. Harry 4ZP recently had his first QSO on 3.5 Mc. with 4EL. Edgar 4GF not very active lately due to a bout with the 'flu, has a new super, and still puts out a potent signal with that 15w. Ted 4EJ when not entering bowls tournaments is QRL on his launch, he is thinking of installing 7 Mc. gear aboard, so look out chaps! 4XH heard on 14 Mc. with a good signal.

Frank 4QL still working all bands 100 per cent. c.w., and picking up any stray DX of tasty origin (as usual) that happens to filter through; don't know how he finds the time to do all he does and then find time to write a full page of DX Notes in the mag. each month too!! Jock 4DE not heard much lately. When last seen, 4RU was giving George 4GB "Road Service" at Stuart, when George en route to visit your scribe at 4QN; told George he soon hopes to be on again. 4BX heard very little, but believe he is present at 4JM's shack at odd times. Alec 4JM keeping skeds with an old friend, Ken 2KG, on 7 Mc., packs a wallop on 7 Mc. phone. Bob 4RW talking about put-

ting up a decent 7 Mc. antenna to look for Europeans on the band.

Alan 4BE has a nice compact rig and often heard on 7, 14 and 28 Mc.; putting the finishing touches to a 8JK beam, hope she rakes 'em in Alan! Lundy 4DC heard testing on 14 Mc. c.w., looks like that old timer staging a comeback in the near future. Ted 4MH heard grumbling about lack of DX, but was heard only a few minutes before working a KL7, and got a new one in KJ6, hill Roy 4AX has got into a groove, yeah, a "microgroove"; Roy's YL ops. are keen classical feeds, hence his absence from the ether. Despite shift work at the local beer factory, Herb 4JW pops up now and again on 7 Mc., with a mighty sig and brand new mod.

Andy 4BW keeps skeds with another old timer Harry 4HK, keep a look out for him on 7 Mc., Sunday mornings. Harry 4HK also staging a comeback, is looking for contacts with the lads in Brisbane mainly Sundays on 7 Mc., puts out a potent sig. 4EL keeping the wide open spaces company on 21 Mc., still no sign of that European even on the first day the Gs got the band, noise level does not exist at Clevedon so when I say there are no sigs, well I mean just that, 14 Mc. gives plenty of Europeans and also 7 Mc., but 21 and 28 Mc. no go at all. A welcome visitor from Brisbane was George 4GB who dropped in for an evening and stayed two days, and didn't want to go, the place got him in!

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for July was held in the club rooms to an audience of 94 members and associates, all of whom thoroughly enjoyed a lecture by Mr. D. Robertson (SRN) on "The Tracking of Meteors by Radar." Once upon a time a lecture with such a title would have been the signal for all members to have important engagements for that evening and all that the audience would have consisted of would have been the long-suffering members of the Council and a few others who had not been forewarned. Today however the average member is much more awake to the great steps that have been made in his hobby and its allied sciences, and he is only too anxious to hear all that he can about any branch of radio, especially from such a recognised source as Dave, whose previous lectures on beams, etc., are well remembered. To say that the audience were not disappointed would be to make an understatement, as there was not one member present who did not display lively interest during the lecture and judging from the number and variety of the questions at the conclusion, I think that even Dave should have been surprised and pleased at his audience's reaction. The vote of thanks to the lecturer was ably proposed by "Dougal" 5BY who in his inimitable style managed to slip in several references to subjects remote to radio, much to his listeners' amusement.

Very little general business required attention and with all present having few, if any "wings" to be dealt with, the meeting closed at 10 p.m., although at the suggestion of the chairman, members stayed for some time and indulged in "nattering" among themselves on the subject nearest and dearest to themselves. A very welcome visitor to the meeting was John 2AFW who was on holidays from Broken Hill, visiting his parents in Adelaide. John looked well, and is apparently as keen on Amateur Radio as ever and it was not long before he was on his feet asking questions concerning matters of importance to his fellow Hams.

Two very welcome visitors passed through Adelaide this month. Geoff 3PD on his way to England, and Len 7BQ who was returning home after six months in that country. 3PD called on me at the best broadcasting etc., etc., and 7BQ called on Doc., although there is some excuse for him as his absence for six months from VK would probably explain his making such an unconscious "faux pas." You beautiful! Geoff was quite taken up with the best broadcasting etc., etc., and I rang Arch 5EA at the Police Radio and fixed it with him for Geoff to have a look see.

SEN busily engaged getting his bandswitched rig ready for the R.D. Contest. VK7 should watch this boy, he means business: Ern's mobile rig is working extra well, especially when YL is acting as second op. 5CO has just completed a trip through VK2 and VK3, but Brian says the only Hams he saw were in the Silver City. Recently had a h.t. tranny pass out. 5KS has found it a little cold this time of the year and has taken up the pencil instead. Ron was to be seen recently busily engaged with said pencil at the Quorn Racecourse. What price Doc in the popularity stakes Ron? First favourite! Break it down, break it down!

5BG has been busy putting his new QTH in order and quite a big job it was I understand, but Bob still finds time for the spot on 80 mix looking out for that personage 5LH who

claims that his QTH is the garden city of the north. 5AP has not been heard on the air for some time now, understand that audio amplifier for his father has top priority with Ron at the moment. No sign of 5PC on the air lately and if something is not soon heard of Harry, a search party will be formed. Visitor to the Northern Areas this month was ex-5BJ, now 2AFW, from the Silver City. John visited the local b.c. station and also several Ham shacks. This joker certainly gets around.

5VM engaged on new shack, order now replacing chaos; Len manages to find time for plenty of movie activity. 5WG waiting patiently for 10 mx band to open again, on 40 mx on odd occasions. No news of 5JY, if Jim does not report his whereabouts soon, he will receive the same attention from the party that they will give to 5FC. 5NW, who is exclusively a 10 mx man, is having a lean time at the moment but Snow manages a contact or so, now and again. He is confident that this band will improve some day. 5XR has moved into a new shack, and d.c. power may be a thing of the past, at least I bet Cam hopes so; the second op, Jack, does a real good job, handles the mike like an old timer. Nothing much is heard these days from the Whyalla gang, Mac 6CE and Nobby 5GY it is understood are confirmed 20 mx men now, and 5TJ was heard putting an f.b. signal out on 80 mx the other night, and Jim is the only one of the Clare gang heard for months. 5WO busy getting a TA12B on the air and hopes to have it operating by R.D. time. Many thanks for the notes Austin, and hope you can spare time to repeat the dose.

5CH still out in the bush. Claude has obtained an AR301 and material for a new 2 mx aerial. 5TW awaiting the opportunity to replace his aerial, and Tom is another one of the boys who is making a new 2 mx aerial. 5JA has his 2 mx gear operating again, John has been welcomed back to the fold by the gang. 6KU frantically hunting for some 300 ohm ribbon to complete his beam, but Erg is not finding conditions on 20 or 40 mx anywhere near up to expectations. 5MS has at least had the a.c. power installed and it will not be long before the watts are waiting back and fore. 5FD has been finding the conditions far from good, but John, an associate down the "Mount", Jack Fowler, has been keeping his visitors under nervous tension because they never know when his home constructed tape recorder is operating. 5CJ, like the rest of the boys, is blaming conditions and has the cheek to say that he has been spending most of his time on "the best broadcasting station in the South East." You will pardon me Col, but you are stealing my thunder.

The monthly meeting of the Upper Murray boys was held at Alex Kelly's residence on the heights overlooking Berri, and among those present were Tom 5TL, Hugh 5BC, Harry 5KW, Fred 5MA and an associate member, Ron Kemp, from Berri. It goes without saying that the host, Alex, was also present. A very good session of earbashing, planning, and particular attention to the inner man, was enjoyed by all, together with a thorough diving over of Alex's gear by all present; a n.b.f.m. Tx, and a BC348 were the chief attractions. Further progress was made with the organising of a network on 144 Mc., those with the gear were to get the cobwebs out of it and help those without gear to get some simple equipment working (as a temporary measure). A couple of the boys with surplus 7193 tubes handed some over to the less fortunate and all were happy. The next meeting will be held at the residence of 5TL and the boys are looking forward to it immensely. Mrs. Kelly did her share toward making the evening a success by turning on an extra grouse supper, to which the gang did justice in no mean manner. Incidentally, I must say that I think that these get-togethers among the boys are a good thing for Amateur Radio, especially in the country areas, because it is remarkable how much can be learnt by listening to gathering of the boys talking radio; keep it up boys.

Loud and long are the moans regarding the fact that 5WI has not been heard in some country areas for a long time now due to peculiar conditions. Naturally the remedy for this unfortunate state of affairs is being eagerly sought after by those responsible for the broadcasts, and many and varied have been the suggestions received. However it is believed that the remedy has now been found, and if all is well, then by now the reception of 5WI has returned to normal. In case I have built up your hopes falsely, please do not hold it against me but blame the ionosphere-anasphes-eyenos, well any way, blame anyone but me.

To close these notes for this month I must make some illusion to a peculiar letter that I received from a character in VK, who invited me to call him Harry, and launched into congratulations concerning my recent elevation to the position of VK5 President. Whilst I am

not usually "snooty," I would like to point out to this Harry person that to the best of my knowledge we have never been introduced, and therefore, I cannot descend to the level of Christian names with a rising copy-boy, no matter how good his notes may be. Possibly in a few years time when he is pulling down the salary that "A.R." now pays me, I might call him Atkinson, or even 6WZ, but Harry, never, it is just not done in literary circles. I am sorry Harry but I just could not do it.

WESTERN AUSTRALIA

By the time this is in print the 1952 R.D. Contest will have come and gone and where will stand VK6? At the head of the list, I hope! But if it doesn't you know who is to blame, don't you? There may be those who can understand and excuse the fellow who says "Oh contests! I won't send logs in—it only means helping VK6—to win more honour and glory for himself!" You may understand that selfish attitude; I don't. But that's for ordinary contests; the R.D. is different. No one Ham "wins" it—it's a joint effort by a State team, with the much maligned "limelight-seeker" of normal contests doing all the bullocking for you while you pick a time that suits you, work a minimum of contacts and then retire. So I hope every one of you who now read this can say, with an easy conscience—"Well, I didn't let the State down; my log was sent in and it conformed to requirements."

On 13th July, VK6WI gave brief details of Dr. Munro's work on ionosphere research and the previously-mentioned "cylinders" or "troughs" that move about. George also touched on Villard's "Q Multiplier," which sounds to me like an i.f. application of the same gentleman's "Selecto-jeet" which some of us have tried. George said it was hoped practical tests would be made with the "Q Multiplier" in VK6 if suitable components could be obtained and if so, further dope would appear in later broadcasts and members' circulars. Incidentally, it sounded that morning as though Dr. Munro's "cylinders" resent being talked about for the 7 Mc. band was certainly screwy. It was later that same day that I heard (and called) PY2EB on 7 Mc., but the queue of Yanks wouldn't yield an inch to a mere VK6! During July, however, there was usually plenty of c.w. to be worked on the band even if it did mainly consist of three prefixes—VK, ZL and W! One early morning session (0630 local time) yielded nothing. However, towards the end of the month a QSO was managed at 0630 with V57NG—it would be hard to imagine who was the more surprised.

Note These Dates, Males: 5th September—Combined Dinner of the W.I.A. and Radio Society of W.A. Tickets available from Council and committee members respectively. 14th September—7 Mc. Scramble. Blow the dust off the rig, fire 'er up and get in amongst it. It is bedlam while it lasts, but it is a lot of fun. 16th September—Monthly General Meeting. Remember, meetings are now held on the third Tuesday of each month.

Sleeping and Snoring.—6XG writes to say activity at Katanning is at a low ebb. Says 6XF is at the stage where he'd gladly trade an 607 for a re-enamelled golf ball. 6XG's main interest seems to be a re-built v.f.o. Old one, writes George, had so much drift it sounded like the Luton Girls' Choir. Another Ham who has joined the "swing club" is 6RT. XYL, Enid, also enjoys chasing the little white pill.

No signals from Kellerberrin at date of writing. Hurry up, Cyril, we're all waiting for you. Looks as though his arrival in that town may be the signal for the encouragement of one or two local chaps to study for the ticket. 6VK prefers c.w. but comes on occasionally with a nice phone signal, the result of screen modulating the final with a 6J5. Vic is getting to know a lot of the boys through 7 Mc. contacts. Just as well 6MO seems an even-tempered sort of bloke; the comments those uncouth people 6LG and 6WZ pass about his phone quality would cause severe foaming at the mouth in any touchy individual. Never mind, Allan, you can always pass it off as "restricted range with low-level clipping, high level ditto, compression, building-out and nickel-plated wing-nuts." Then everyone you work will say how good it is and immediately ask for the circuit!

This month, my spy asks me the pertinent question, "Who was the VK6 who got a b.c.i. complaint from 300 miles away?" Well, it would have worked only my XYL who is well trained in these matters! answered the phone and when a voice asked for me, requested the caller's name in her usual brisk and business-like manner. The voice, without hesitation, replied "Frank Beadie." That ripped it! Too bad, chaps, it could have been a good leg-pull. Thanks for the dope on metal rectifiers, Frank. A nice gesture.

Rolo came to light again this month with some notes and these should appear in the "50 Mc. and Above" department. His comments on the lower bands are: "21 Mc., the only VK6s I know to have been on are 6WU, 6AR and self. 6TB has been altering his 28 Mc. beam and now has up a two-element which could be for 21—although I haven't heard him." 28 Mc., "Nothing heard."

Last month, due no doubt to my long-windedness, parts of the notes were deleted by ye Hon. Ed., including a reference to a certain State electing, of all people, its scribe as President. No matter—we can be as rude to each other as we like from now on, we're pen palsey-waiseys, aren't we, Warwick?

TASMANIA

Unfortunately, this month, time does not permit covering the monthly general meeting, which is to be held after the deadline for getting the notes away. However, I feel quite certain that 7AJ's lecture on "16 m.m. Sound on Film" will prove highly interesting, and will attract a good attendance.

Ere this appears in print, another R.D. Contest will have retreated into the past—and in the quiet which follows such intense activity, I feel it may be fitting to cast just one more thought back to those Hams in whose commemoration the Contest was held. Fate decreed that they should not be with us, but let us hope their memory will be perpetuated by many more Remembrance Day Contests to come.

Latest news to hand on 7JB is that he hoped to leave Japan in August, 1952, in order to do a course in Melbourne—and who knows?—Melbourne is not so far from Hobart these days. Once again, congratulations are the order of the day, and they go to Brian 7BH on his appointment as Radio Inspector. We feel sure that things will continue to run smoothly for you Brian, and with a minimum of trouble. Ted 7EJ has now shaken the Southern dust from his feet, and is now resident at East Devonport. Guess you will be showing up soon on some of the bands, so grab a bit of time off from that new love and let us hear from you.

Also some news to hand on 7MY who recently changed over to n.c.s.m. (no carrier, suppressed modulation to you). Alan should be appearing again soon, with the accent on v.h.f., and at the present time is very QRL. We look forward to you re-joining the gang Alan. And now, in passing, we have an un-paid advertisement. An unhappy member, with non-working QXer is most anxious to meet up with another member who possesses one that will work. For further particulars, please contact the Secretary—Oh Mavis!

7DA has now moved to a brand new home out Glenorchy way, and is finding plenty to do. As a temporary measure only, a certain small room has been taken over for the Ham gear, and I am not alone in the suggestion that you should incorporate additional filters in all power supplies.

Two metres has been rather tranquil, but there have been one or two violent spasms which prove that though it may be down, it's far from dead. Bert 7BC is still coming up the straight on 144 Mc., so a little more haste is called for on that modulator Bert. I believe that's the only hold up now. 7LE and 7DH are endeavouring to keep the ball rolling with very successful all-mobile, all-talking QSOs. 7FM has at last acquired the long awaited 600 aside tranny, and assures me that everything is well in hand for early activity.

NORTHERN ZONE

Col 7LZ has received his certificate as highest scorer in the State for the last Ross V.H.F. Memorial Contest. Zone Secretary Gordon 7GM busy building a multi-band tank for Tx and new multi-band antenna coupler, can now change bands in about 10 seconds; a new v.f.o. is also on the way. Looking bronzed and fit, and with plenty of news of G land, 7BQ returned early in August after his trip abroad. Me thinks Len will be in demand as a lecturer in the near future. Tape recorders are in the news again as 7TE is building one up, and 7HY wrestles with circuits for a tape.

7DB hopes to have rig on the air soon, it has arrived at the new QTH. 7EB is another who should be heard again soon. 7LX read with glee the comments about a 7 Mc. W8JK antenna in VK5JG's "Sunspots and DX" in August "A.R." Then the glee changed to gloom when the super antenna came down. 7XW blew up a power transformer getting a signal on for the R.D. Contest. Heard that VR2AS had the misfortune to lose his antenna system in a recent hurricane; Sam is a VR2 who always offers a helping hand to VKs and he QSLs.

NORTH WESTERN ZONE

The Annual Meeting and Dinner was duly held at the home of Mr. M. Richardson. An

election of officers was held but no alteration was made, the officers being: President 7KB, Secretary and Treasurer 7SF, and Zone Correspondent R. K. Wilson. Mr. D. Richardson agreed to be code instructor for the new classes. Our sincere thanks go to Mr. M. Richardson for his untiring efforts toward the working of the zone in the past year and also for securing a room for the purpose of holding classes and meetings.

Those present were E. Sheldrick, S. Medford, M. Richardson, R. Richardson, K. Hancock and R. Wilson. After the meeting had concluded a very nice supper was enjoyed by all.

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.

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FOR SALE.—Kingsley AR7 Receiver, complete with coils and instruction manual, less power supply and speaker. Best offer. S. Ferguson, Miller Street, Tongala, Vic.

FOR SALE.—733D High Freq. Rcvr., complete xtals, tubes, as new, £7/10/-; 465 Kc. Bliley type CF1 Xtal Filter Unit, £2; VCR139A Cathode Ray Tube, new, 35/-; Copy National type PW-O Slow Motion Dial, £5. R. Jepson, 12 Camden St., St. Kilda, Vic. Phone (business hours): MX 4641, Extn. 210.

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WANTED.—One Prop. Pitch Motor. T. Dick, 29 Dundas Street, Wellington, New Zealand.

WANTED TO BUY.—Transceiver ATR4A or 12 volt D.C. ATR2 series. Lang, Titanga, Lismore, Victoria.

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F40/285	40	285/285	"	"	Flat	"	"	F80/285	80	285/285	"	"	Flat	"	"
U40/325	40	325/325	"	"	Upright	29/8	35/8	U80/325	80	325/325	"	"	Upright	40/8	59/8
F40/325	40	325/325	"	"	Flat	"	"	F80/325	80	325/325	"	"	Flat	"	"
U50/225	50	225/225	"	"	Upright	29/2	34/10	U80/385	80	385/385	"	"	Upright	42/8	80/-
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F80/285	80	285/285	"	"	Flat	"	"	F100/285	100	285/285	"	"	Flat	"	"
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3573 Kc.	7016 Kc.	7062 Kc.	8161.538 Kc.
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T. D. HOGAN, VK3HX,
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MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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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, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc. and re-broadcast on 50 and 144 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK1WI: Sundays, 0900 hours EST, simultaneously on 7146 and 14342 Kc. 7065 Kc. channel is used from 0930 to 1030 hours each Sunday for the W.I.A. country hook-up. No frequency checks available.

VK5WI: Sundays, 1000 hours SAST, on 7146 Kc. Frequency checks are given by VK5DW by arrangements only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 146.5 Mc. No frequency checks are available.

EDITORIAL



OBSERVATIONS

For security reasons Australians generally—and Radio Amateurs in particular—have not been officially invited to take part in the Atomic Tests at Monte Bello. However, Federal Executive feels confident that the large force of trained observers represented by the Amateur fraternity may, by mass observation, supply some very interesting and valuable data relative to the effects of electromagnetic disturbances caused by the sudden release of so much radio active energy.

By noting carefully any change which takes place in propagation conditions and recording faithfully and methodically any unusual phenomena observed during and after the tests, Amateurs will have taken the first step. However, unless this information is forwarded to a central point for correlation, the effort will have been wasted.

Therefore the second step is to forward every scrap of information—no matter how insignificant it may appear—to your Divisional Iono-

spheric Officer as soon as possible. He will then forward it to the Federal Officer for final collation.

Remember! Most of the great discoveries in the scientific world have been made by trained men perusing and collating the results achieved by the observations of others, and glean- ing therefore a clue leading to a final solution.

The Radio Amateur of Australia represents a unique force of trained observers spread over the entire continent and the territories beyond. Who else is better equipped to undertake the task of filling in the gaps which will enable our Ionospheric Prediction Service to provide even more accurate results than at present achieved, and extending these predictions to the troposphere, wherein the future of Amateur activity lays?

Brother Amateur, overcome your natural aversion to committing yourself to paper and add your mite to the pile which may well kindle the flame of enthusiasm and open the door to a new field of activity.

FEDERAL EXECUTIVE.

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The Amateur Emergency Network of the W.I.A. (Victorian Division)

By R. T. BUSCH,* VK3LS, Emergency Network Co-ordinator

It is proposed to divide this article into two parts: the first part on organisation and past accounts of the emergency network of Victoria, and the second on a technical presentation of material which it is hoped will assist other Amateurs in Australia who are interested or who are about to become interested in emergency work.

PART ONE

The object of the Amateur Emergency Network is and has been to provide communications between country centres, country centres and the capital of Victoria—Melbourne—and, where necessary, between State capitals. Most emergency work to date has been at country centres, where stations operating in that particular zone in which the country centre is situated have gone out into the field and worked back to the base station situated in the country town. There have been instances where the base station has had to relay, or pass on, or seek advice from the capital, and this has been made possible by communicating with the Institute station in Melbourne.

It is felt that the emergency network could be expanded further throughout Victoria, and it is felt also that the presentation of this article will act as a guide to the formation of zone nets in parts of Victoria which, at the moment, are not covered.

It is desired to point out that the establishment of emergency nets in the 3.5 and 7 Mc. frequency bands is easier due to the fact that most Amateurs already have communication receivers and equipment which, without very much work, can be modified for emergency work.

A communications emergency occurs whenever normal facilities are interrupted or overloaded, and may or may not involve a general public participation. Many problems of the community at large can be handled, and have been handled, by Amateur Stations from time to time. Official messages from Police, Military, Country Fire Authority and the Forests Commission having absolute priority in an emergency.

In emergency operating, a fine sense of discrimination is necessary. The desire to help through transmitting participation is often a very dangerous thing. Careful listening locates stations, places and nets, and keeps the use of the emergency frequencies to a minimum, thus permitting the handling of traffic efficiently to and from an emergency area. Talking it over, i.e. general talk, should be reserved until the emergency condition has passed. Organisation should avoid unnecessary duplication of channels, and messages should be routed from point to point, by a single channel if possible, to eliminate duplication or repetition of the same message.

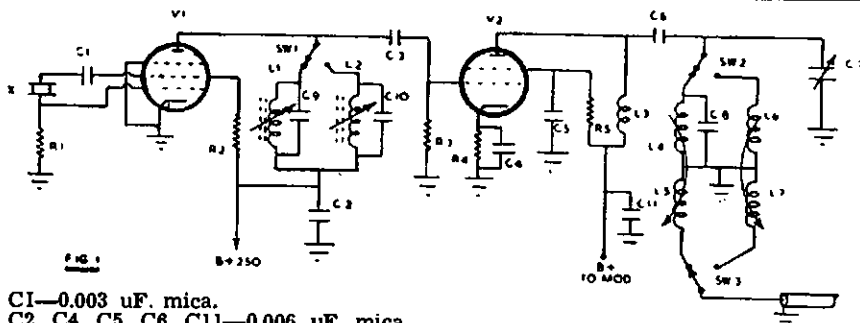
* 5 Hillside Parade, Nth. Essendon, W.6.

The function of an Amateur Station in handling point to point information efficiently is to observe secrecy so as to ensure that information will not be misconstrued and thus lead to the commencement of rumours. It is important that the originating station or stations number their messages and put them on the standard form. This makes the work systematic and respected, and takes it out of the "hit or miss" category into which casual exchanges fall in the minds of recipients. It is improper to delete essential limiting words from a message, or to expand it, or to exaggerate or alter its meaning.

The best service that can be given by Amateurs under emergency conditions is to man a few fixed best-situated stations, with Amateurs in organised shifts, rather than to man inadequately too many Amateur Stations, which will result in overworked operators creating bad congestion. Zone

unselfishly to the success of the group's objects, and must be guided entirely by the word of the zone co-ordinator. As mentioned previously, a common—or nearly common—frequency is desirable, and a time for tests and exercises should be selected which suits the majority of the operators and avoids the time of operation of other networks in nearby territories.

The successful operation of a net depends to a large degree on the zone co-ordinator, and this station should be chosen carefully. The zone co-ordinator should be a person who will not hesitate to enforce each and every net rule and who will set an example by his own operating. The position of zone co-ordinator is generally assigned to the eldest member of the net, but it may be assigned to any station that can best fulfil the duties. It is important, though, that as operators become experienced, they should have the opportunity to



- C1—0.003 uF. mica.
- C2, C4, C5, C6, C11—0.006 uF. mica.
- C3—100 pF. mica.
- C7—100 pF. variable.
- C8—50 pF. mica.
- C9—30 pF. air trimmer.
- C10—30 pF. air trimmer.
- R1—100K ohm, 1 w. carbon.
- R2—50K ohm, 1 w. carbon.
- R3—25K ohm, 1 w. carbon.
- R4—200 ohm, 3 w. w.w.
- R5—10K ohm, 1 w. carbon.

- L1, L4—3.5 Mc. tank.
- L2, L6—7.0 Mc. tank.
- L3—R.F.C.
- L5—3.5 Mc. aerial coupling.
- L7—7.0 Mc. aerial coupling.
- Sw1, Sw2, Sw3—2 position ganged switch.
- V1—6AU6.
- V2—6AQ5.
- X—3.5 Mc. Crystal.

co-ordinators should aim to create an organised operator reserve for general emergencies.

When first making an emergency call, it is recommended that the emergency call of QRRR be used in preference to the indiscriminate CQ callings. It is also recommended that the emergency frequencies of 3501 and 7002 Kc., situated at the band edges, be utilised for emergency callings. If other networks operating in emergencies desire to use these frequencies for calling, it is suggested that the particular zone in which the emergency has arisen transfer or shift frequency to that particular zone's frequency.

This has been done from time to time, and has allowed the emergency frequency to be made available for any further QRRR calls.

Amateur Stations forming a zone network must be willing to contribute

serve as acting zone net control station so as to become familiar with the duties and to thus enable any one of them to act in that capacity should the necessity arise.

If the net control station does not take control within three minutes of the time set for the beginning of the schedule, any station present should take charge and begin regular net operation. As soon as the net control station enters the net, the acting net control station should make a report of the stations in the net and other necessary information, after which he should turn over control to the authorised station.

After the establishment of the zone net, and smooth operation can be assured, it is the duty of the zone co-ordinator to contact the bodies to be served. This can generally be covered efficiently by notification to the local

branch of the Victoria Police Department, which body takes control in the event of emergencies. It might be wise, however, to make known the existence of the net to the Country Fire Authority, the Forests Commission, and ambulance bodies of the district and to make available to them information as to the extent of the Amateur facilities, with addresses and individual telephone numbers, and to ascertain from them what their possible requirements may be in the event of emergency conditions arising.

Over the last three or four years, the Victorian Division of the Wireless Institute of Australia Emergency Network has rendered assistance to various bodies throughout Victoria. The North-Eastern part of the State has been capably served by that particular zone, and valuable assistance has been given to the Victorian Railways and the Country Fire Authority. The Eastern part of Victoria has been covered in various emergencies by Amateurs residing in that zone. Valuable assistance has been given to the Police on numerous occasions and recently this zone network gave unlimited assistance to the Victoria Police in the recent disastrous floods. The South-Western Zone has, from time to time, rendered assistance, and the Central Western Zone has been instrumental in getting messages through to Melbourne when ionospheric conditions were such that direct contact was not possible.

It might be pointed out that the network in general has given assistance to the following bodies: State Electricity Commission of Victoria, Victoria Police Department, Country Fire Authority, Postmaster-General's Department, and the Victorian Railways. The assistance that has been rendered has not passed unnoticed, the daily papers have contained accounts of these activities, and it might be mentioned that the Chief Commissioner of Police has, on two occasions, expressed his appreciation, and that of his Department, of the wonderful assistance rendered by Amateur Radio Operators.

In concluding this section of the article, it is desirable that zones should keep the Victorian Emergency Network Co-ordinator in Melbourne advised of changes in the organisation of their respective zones, and should also forward, as rapidly as possible, full accounts of emergency activities.

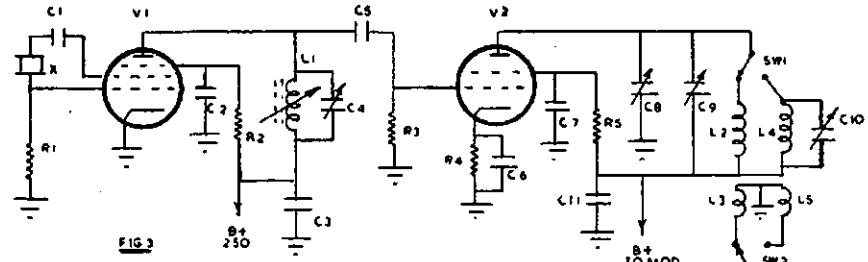


Fig. 3.—In above diagram, the suppressor of V1 should be connected to cathode, and connection made to the suppressor should be connected to the screen.

- C1—0.001 uF. mica.
- C2—100 pF. mica.
- C3, C6—0.01 uF. mica.
- C4—Philips' 3-30 pF.
- C5—200 pF. mica.
- C7—0.005 uF. mica.
- C8—0.88 pF. air trimmer.
- C9, C10—80 pF. variable.
- C11—0.006 uF. mica.

- R1—250K ohm, 1 w. carbon.
- R2—30K ohm, 1 w. carbon.
- R3—50K ohm, 1 w. carbon.
- R4—200 ohm, 3 w. w.w.
- R5—10K ohm, 1 w. carbon.
- L1, L4—3.5 Mc. tank.
- L2—7.0 Mc. tank.
- L3—7.0 Mc. aerial coupling.
- L5—3.5 Mc. aerial coupling.
- Sw1, Sw2—3 position ganged switch.
- X—3.5 Mc. crystal.

PART TWO TRANSMITTERS

The two transmitters to be described have been designed specifically for emergency use for either fixed (base or portable) and mobile operation respectively. Simplicity and reliability were the two main design points that were considered, and further consideration was given to the use of components that could be secured readily and replaced in the field.

The valves used in the transmitter are of a normal receiving type and are available from local radio service stores and distributors in most country towns. The first transmitter to be described can be used for base operation where low power is a consideration, or for portable operation. The transmitter requires 6.3 volts for the heaters and from 250 to 300 volts for the high tension supply.

It will be noticed from Fig. 1 that the two valves around which this circuit has been developed are the 6AU6 and the 6AQ5. The 6AU6 is used in a modified Pierce oscillator circuit, utilising the screen grid, the control grid and the cathode for the triode section of the oscillator, and having the plate electron-coupled to the oscillator circuit.

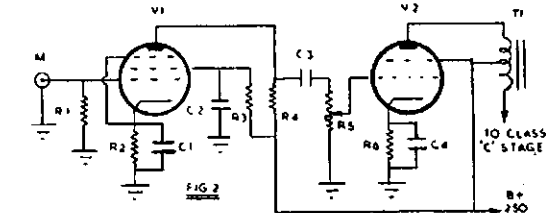
In the setting up and adjustment of this circuit, it was found that reliable and stable operation of the crystal could be obtained without the use of the normal regeneration or feedback control condenser, which is usually connected between the screen of the valve and earth. The crystal used is ground for the 3.5 Mc. band and, for straight-through operation at the crystal frequency, the plate tank of the 6AU6 is pre-tuned to the crystal frequency. When harmonic operation is required—that is, 7 Mc.—the tank of the 6AU6 is switched to take in another pre-tuned circuit tuned to 7 Mc. The output stage is resistance-capacity coupled to the 6AQ5.

It will be noted that the tank circuit of the power output stage is shunt fed. This was purposely arranged so that the tuning condenser could be operated at ground potential. The values of all components shown were experimentally ascertained, and were found to give optimum results. To protect the 6AQ5 in the event of a crystal oscillator failure, i.e., loss of grid drive, cathode bias was introduced. The ohmic value shown is sufficient to reduce the plate current of this valve to approximately 30 Ma.—well within the Class A rating of the valve.

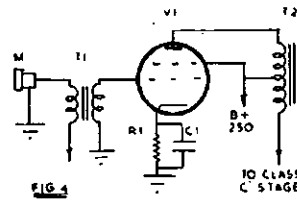
Two pre-tuned tanks are also incorporated in this section of the circuit, so that correct valve loading could be obtained and inductive coupling is used to couple the antenna to the output tank circuit. With 300 volts applied to this transmitter, all components and valves are operated within their normal ratings and an input of approximately 40 Ma. can be obtained when the 6AQ5 stage is adjusted for phone operation.

Neutralisation has not been introduced. This was found to be unnecessary when the output valve was loaded with the aerial circuit. The 6AU6 crystal oscillator amplifier develops approximately 1½ Ma. of grid drive with the value of grid leak shown, and this gives satisfactory operation under modulated conditions.

The modulator (Fig. 2) used with this transmitter consists of a 6AU6 as a pre-amplifier driving a 6AQ5 in the



- R1—2M ohm, 1 w. carbon.
- R2—2K ohm, 1 w. carbon.
- R3—1M ohm, 1 w. carbon.
- R4—500K ohm, 1 w. carbon.
- R5—500K ohm potentiometer.
- R6—300 ohm, 3 w. w.w.
- C1, C4—25 uF. electrolytic.
- C2—0.05 uF. tubular paper.
- C3—0.02 uF. tubular paper.
- T1—Centre tapped speaker transformer.
- V1—6AU6.
- V2—6AQ5.
- M—Acos crystal microphone.



- R1—300 ohm, 3 w. w.w.
- C1—0.5 uF. tubular paper.
- T1—Microphone transformer.
- T2—Centre tapped speaker transformer.
- M—Carbon insert.
- V1—6AQ5.

output stage, the 6AQ5 being coupled to the Class C stage by a 1:1 auto-transformer. The 6AU6 pre-amplifier is coupled to a crystal microphone type Acos MIC 3 and with the values shown, a gain of 28 db—or a voltage ratio of approximately 200—is sufficient to swing the grid-cathode circuit of the 6AQ5 to a value which will give full output, that is approximately $4\frac{1}{2}$ to 5 watts.

The second transmitter to be described was designed with mobile operation in view. It will be noted from Fig. 3 that the same valve line-up has been utilised, but certain circuit changes have been made. The 6AU6 is once again operated in the modified Pierce circuit, but an addition of the regeneration control condenser has been made. This was found to be necessary so that a greater output could be obtained from the crystal oscillator stage, as the final stage was to be operated as a frequency doubler in the 7 Mc. band. To obtain reliable operation with plate modulation, when utilising the p.a. stage under this condition, it is essential that the grid-cathode circuit of the p.a. stage be driven hard. The tank circuit of the 6AU6 is always tuned to the crystal frequency and the plate circuit of the 6AQ5 is arranged by switching so that the desired pre-tuned tank circuit can be selected.

When operating as a straight-through amplifier on 3.5 Mc., no neutralisation was found to be necessary. It might be mentioned that considerable thought was devoted to the lay-out with the view of eliminating neutralisation, and as mentioned previously when operated in the 7 Mc. band, the 6AQ5 is operated as a frequency doubler. A value of 3 Ma. grid drive is developed with the value of grid resistor shown in the circuit and an input of 40 Ma. at 250 volts is obtained on both frequencies and the efficiency of the output stage is quite high—50 to 60 per cent. A careful check of the transmitter used as a straight amplifier in the 7 Mc. band indicated that the small increase in the efficiency

did not warrant the extra equipment necessary for straight through operation.

A careful note of the circuit arrangement of coils and tuning condensers for the two-band operation of the plate circuit of the 6AQ5 is worth-while, as a considerable saving in components was secured. The modulator (Fig. 4) used with this particular transmitter makes use of a 6AQ5 as the modulator. The circuitry is similar to the modulator previously described, but no pre-amplifier stage is utilised as the microphone, which is of the carbon insert type, is connected by way of the microphone transformer to the grid-cathode circuit of the 6AQ5. Ample grid drive or swing is possible with this type of circuit. It is worth while spending a little time in the selection of a suitable carbon insert as good inserts will give above average quality speech. Both transmitters described may be used for c.w. operation merely by the addition of a key and key-click filter in the cathode circuit of the 6AQ5.

RECEIVERS

Two types of receivers have been developed, namely, one suitable for operation from a 6 volt source and one suitable for operation from a 1.4 volt, or dry cell, source. Fig. 5 shows a 5-valve circuit using 6.3 volt miniature valves. The circuit is straightforward, and it is not proposed to spend very much time on its description. The output from this particular circuit is fed to a speaker. If the use of headphones is found to be necessary, these may be shunted across the low impedance winding of the output transformer or, if high impedance headphones are used, condenser-coupling may be made to the plate circuit of the 6AQ5.

The only other point worthy of note is the use of 455 Kc. intermediate frequency transformers. This was considered necessary so that some degree of selectivity could be obtained, particularly when operating in the 7 Mc. band.

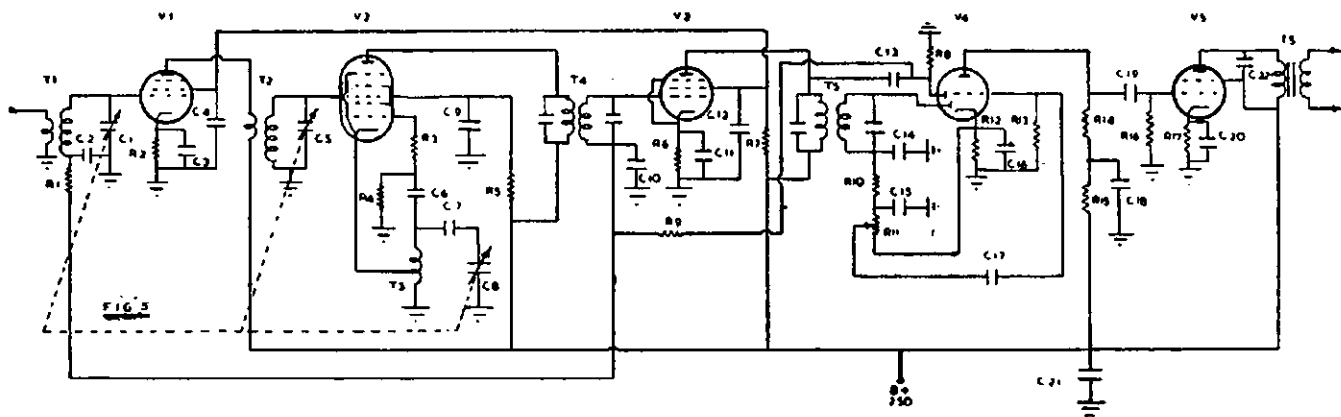
The second receiver is a battery operated receiver using miniature 1.4 volt series valves. This receiver is similar in all respects to the previous one described, but no speaker facilities have been included.

AERIALS

Base and portable stations have a wide selection of aerials to choose from as, in most cases, they are not restricted to space. The use of half-wave antennae, or quarter-wave Marconi type antennae operated against ground are available, but with mobile operation, the antennae fall into a very closely defined field. It must be realised that the length of an aerial which a mobile station can use is limited to a maximum of approximately 12 feet. This antenna is electrically short compared to the frequencies used, and therefore must be a very inefficient radiator.

Various methods of improving the radiation efficiency of this type of antenna have been developed from time to time. All of these methods aim at operating the antenna as a quarter-wave section against the metal chassis of the car as the earth. Fig. 7 shows one method of bringing about this desired result. A loading coil of sufficient inductance is inserted at the base and tuned with the whip capacity to the desired frequency. The feed to the whip is made by way of coaxial cable from the transmitter aerial coil. Fig. 8 illustrates a whip antenna with the loading coil inserted at the centre, approximately. The coil is resonated with the whip capacity to the desired frequency. Fig. 9 shows the addition of top loading, at the same time utilising the centre loaded whip.

Various results have been claimed by experimenters for the three particular types of mobile antennae described. The base loaded antenna is recommended for the use of mobile stations, first, on account of the ease of making a sound mechanical unit and, secondly, sight must not be lost of the fact that mobile



C1, C5, C8—variable, three-gang.
C2, C3, C10, C11—0.05 uF. 200v. paper.
C4, C9, C12, C17, C19—0.05 uF. 600v. paper.
C6—50 pF. mica.
C7—Padder.
C13, C14, C15—100 pF. mica.
C18, C20—25 uF. electrolytic.
C18—0.1 uF. 600v. paper.
C21—8 uF. 600v. electrolytic.
C22—0.01 uF. mica.

R1, R15—100K ohm, $\frac{1}{2}$ w. carbon.
R2, R6, R17—250 ohm, 1 w. carbon.
R3—50 ohm, $\frac{1}{2}$ w. non-inductive carbon.
R4, R5—20K ohm, $\frac{1}{2}$ w. carbon.
R7—40 K ohm, 2 w. carbon.
R8, R9, R13—1M ohm, $\frac{1}{2}$ w. carbon.
R10—50K ohm, $\frac{1}{2}$ w. carbon.
R11—500K ohm, volume control.
R12—5K ohm, 1 w. carbon.
R14—250K ohm, $\frac{1}{2}$ w. carbon.
R16—500K ohm, $\frac{1}{2}$ w. carbon.

T1—R.F. transformer.
T2—Mixer transformer.
T3—Oscillator coil.
T4, T5—455 Kc. I.F. transformers.
T6—Output transformer.
V1, V3—6BA6.
V2—6BE6.
V4—6AV6.
V5—6AQ5.

stations engaged in emergency operation are required to work to a base station or a mobile station in its zone, and not for State-wide communication.

The use of the centre-loaded whip and the capacity top-loaded whip, give superior results, but the mechanical construction that would have to be put into these types would not be justified by the extra radiation efficiency which would be obtained. The use of capacity top loading is not new, it has been used for years by broadcasting stations in an endeavour to increase the antenna current flowing in the vertical section of their antennae. This has been found to give stronger field-strength readings at a given point.

The same explanation can be applied to a less degree, to the centre loaded whip. The capacity of the top section

of the whip to the chassis of the car increases the current flowing at the base of the antenna or the bottom half section of the whip, producing results similar to those for the capacity top loading. The use of coaxial cable between the transmitter-receiver and the base of the antenna has been found to operate satisfactorily and to reduce the effects of car ignition to a minimum. It is recommended that the antenna system be mounted at the rear of the car, that is, in a position farthest away from the source of generation of ignition interference.

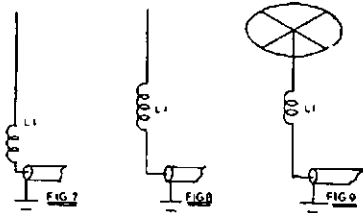
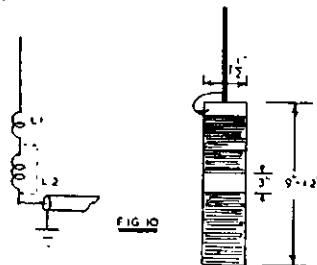


Fig. 10 shows a mobile antenna suitable for two-frequency operation. The loading coil or coils are made up on a single former with a spacing of approximately three inches between inner ends so as to reduce inductive coupling to a minimum. For the higher frequency or 7 Mc. operation, L2 is shorted out and the whip resonated by the adjustment of the inductance L1. For operation of the whip on the lower frequency of 3.5

Mc., the short-circuit is removed from the bottom coil L2, and its inductance adjusted to resonate the whip plus the inductance of L1 to the lower frequency. When this has been accomplished the changing from one band to the other can be achieved by merely shorting the bottom coil for high frequency operation, or unshorting the bottom coil—that is, making use of the two inductances L1 and L2 in series—for the 3.5 Mc. operation.



The reason for the low coefficient of coupling between L1 and L2 is to reduce the losses in L1 when L2 is short circuited, that is to keep the Q factor in L1 as high as possible.

No values of inductance have been given for the loading coils as the value is governed by the particular installation, that is, the length of whip, position mounted on vehicle, and the type of car (sedan, tourer or truck).

Low Drift Crystals

FOR

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ACCURACY 0.02% OF STATED FREQUENCY

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FEDERAL EXECUTIVE PROCEEDINGS

Resume of Minutes of Proceedings at Meetings of Federal Executive held during August-September, 1952

Federal Executive Vote at Federal Convention.—After discussion of the contention by some Divisions that the Federal Executive—as the ex-officio executive of the Federal Council—should not have voting power at a Federal Convention, it was agreed that the time was opportune to obtain the decision of the Federal Council on this matter. Resolved therefore that Federal Council vote on the following motion:—

"That the right of the Federal Executive to vote in Convention be deleted from the Federal Constitution always provided that all members of the Federal Executive be ex-officio members of the Federal Council."

Remington Rand "Television Interference" Booklet.—Secretary reported that as at date of meeting in August seventy-five applications had been received from members for the free booklet "Television Interference," being shipped to the W.I.A. from Remington Rand Inc., Buffalo, U.S.A.

Resolved that copies to spare at time of receipt of shipment be forwarded to Divisions for free distribution to members.

W.A.C. (America) Certificate Issuance.—Secretary reported that W.A.C. (America) Certificates had been received for VKs 3PV, 3ATN, 3APV, 3JI, 3AHH and 7RX. Agreed that these be forwarded direct to the applicants in

accordance with the agreement of Item 1 of General Business of the 1952 Federal Convention.

Release of 160 Metre Band for Emergency Work.—Secretary reported receipt of approval from the Director-General Postmaster-General's Department, of allocation as from September 1 of the band 1840-1860 Kc. to the Australian Amateur Service for use by its emergency organisations. Types A1 and A3 emissions, and d.c. plate input powers of up to 100 watts are authorised for use within the band concerned.

Novice and Technician Licenses to be considered by Director-General.—Consideration was given to a letter received from the Postmaster-General's Department, Wireless Branch, in reply to the W.I.A.'s application for approval for issuance of Novice and Technician Licenses. Department advised that since reference to other administrations and departments would be necessary, inquiries were likely to be protracted. Resolved that W.I.A. give every possible assistance to the Department in easing any administrative obstacles.

Re-Allocation of Amateur Call Signs.—Resolved that a letter of complaint from Tasmanian Division with reference to the re-allocation of the call sign of a recently deceased VK7 Amateur be forwarded to the Department in support of W.I.A.'s application for the adoption of a new method in re-allocating VK call signs.

Proposed New Appointment to Office of Federal Treasurer.—Secretary reported that Ced. Ewin, VK3AGC, had signified his willingness to undertake duties of this office when present Treasurer, George Manning, VK3XJ, vacated. This may not be for some time.

The QH (Quick Heading) Beam Antenna*

A Stationary "Rotary" Array for 14 Megacycles

● Here is a stationary beam antenna for 14 Mc. whose parasitic elements can be simply and instantly switched to provide a sizable gain over a dipole in any desired direction, and gains of up to 10 db. in four favoured directions. Constructionally, it is simpler than a conventional rotating job and is one of the few beam antennae than can feasibly be erected using a tree as its support as the author does.

Despite the widespread popularity of the horizontal rotating beam for 20 mx DX, the many mechanical problems involved are not often easily nor inexpensively solved. For the past several months, a non-rotating beam of the parasitic type has been in use at WIPKW with highly satisfactory results.

The general plan is shown in Fig. 1. It consists of a vertical half-wave folded dipole surrounded by four parasitic elements. Each of the parasitic elements can be tuned, from the operating position, so that it will act as either a reflector or a director. Thus any one of several directional patterns, as shown in Fig. 2, can be obtained, depending on the reflector-director combination selected by simply flipping four toggle switches.

A system of this type has several advantages. Perhaps the foremost of these is that directivity can be changed instantly without waiting for the rotator to turn. Furthermore, the pattern can just as readily be made essentially non-directional, when desired, for CQ-ing or general listening. Since no rotator is involved, the cost of the array is little more than the cost of the elements. Less space is needed—the over-all spread is only about 19 feet compared with the 33 feet or so needed for the horizontal beam—and the element supporting structure need not be as heavy or complicated, since vertical elements withstand wind and icing much more readily.

A feature that many will find of more than ordinary interest is the fact that it is one of the few types of beams that can be mounted in a tree. The branches in this case can serve as a convenient means of getting at the elements for assembly and adjustment.

A stationary beam of this type can usually be adjusted to compensate for the detuning effects of large objects in its field. This, of course, is not possible with an array whose position in relation to such objects is variable.

METHOD OF TUNING

To allow for tuning adjustments, the parasitic elements are cut slightly shorter than the appropriate length for a director. In each element, a tuning stub

is added at the centre to bring the electrical length up to that of a reflector. When the element is to be used as a director, the tuning stub is shorted out with a relay switched from the operating position. Thus the control system consists merely of the four relays, and a s.p.s.t. toggle for each. With one switch closed, the associated element acts as a director while the others work as reflectors, etc.

CONSTRUCTION

All of the elements are made of $\frac{1}{2}$ " i.d. aluminium tubing. The folded dipole is 34 feet long. One conductor is made up of two 17-foot sections of tubing joined by a metal insert fastened in place with machine screws through the tubing and insert. The other conductor

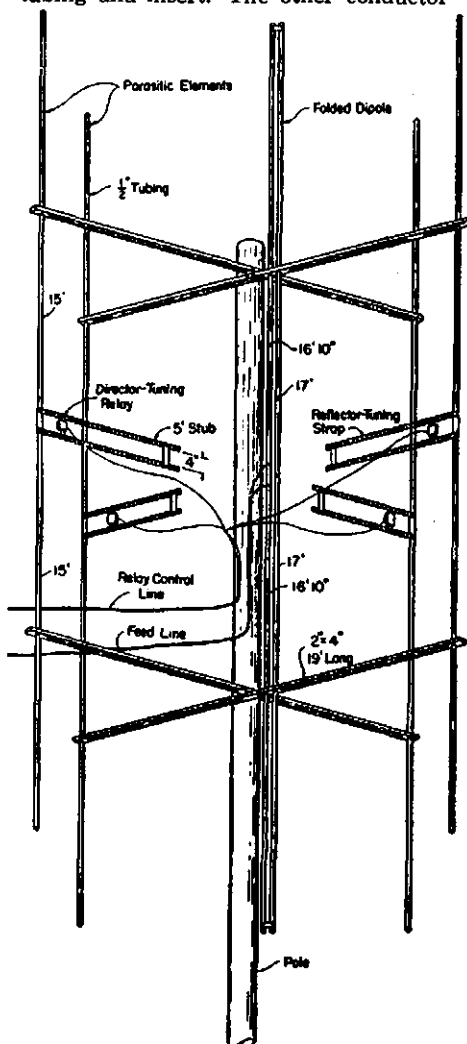


Fig. 1.—Sketch of the 5-element stationary "rotary" beam antenna. Each of the four parasitic elements can be tuned as a director or as a reflector by the remotely-controlled relays at the centre, thereby altering the radiation pattern as desired.

is similar, except that each section is cut 2" shorter to accommodate a 4" insulator at the centre where the folded doublet is fed. This insulator can be a 6" length of $\frac{3}{4}$ " or 1" nylon, bakelite or polystyrene rod, turned down for an inch at each end to fit inside the aluminium tubing. The two conductors are connected together at the ends with galvanised iron straps that space them about 5", centre to centre.

Each parasitic element is made up of two 15-foot sections of tubing joined by an insulator similar to the one used in the radiator. The tuning stubs are made of 5-foot lengths of $\frac{1}{16}$ " x 1" perforated galvanised iron strap. The perforations provide an easy means of adjusting the positions of the shorting bars and relays. The relays should be provided with weatherproof housings fitted with heavy metal tabs connected to the contact terminals and drilled to match the holes in the tuning stubs.

The framework carrying the elements consists of two pairs of 19-foot 2 x 3's or 2 x 4's, the pairs spaced about 15 feet on the pole or other support. The two pieces in each pair are fastened to the support at right angles and the pieces are bored near the ends to pass the aluminium tubing which is fastened in place with bolts or metal pins. (This gives a spacing of about 0.12 wavelength.) One piece of each pair is bored also near the centre for the folded dipole. Better insulation has not been found necessary, but, if desired, the crosspieces can be bored with large clearance holes and the elements insulated from the crosspieces with pieces of sheet insulation drilled to fit the tubing snugly.

If the crosspieces have a tendency to sag, this can be corrected with suitable guy wires or diagonal braces. If the antenna is mounted in a tree, as mine is, the branches may serve as additional support. If a tree is not used, the support should be of wood. When fastening the crosspieces to the support, they should be orientated so that the lobes of Fig. 2A are in the most desired directions.

At present I am feeding the folded dipole with RG-8/U coaxial cable, but plan to change over to a balanced line using RG-22/U or RG-57/U. If coaxial cable is used, it would be better to use a balun or bazooka connection. The relay-control wires should be brought to the supporting structure and formed into a cable, which together with the transmission line, should be run at right angles to the elements to avoid distortion of the beam patterns. If necessary, the tuning stubs can be steadied by guying them to the pole with rope.

ADJUSTMENT

In adjusting for operation in the 20 mx phone band, for example, the antenna should first be fed at 14.3 Mc. Each of the parasitic elements, in turn, should be tuned as a director by adjusting the position of the relay (closed), while the other three elements are en-

* From "QST," June, 1952.

Awards and Certificates

Compiled by Ray Jones, VK8BJ, Federal QSL Manager

One or two errors crept into the list as published on page 10 of the July issue of "Amateur Radio." For the Empire DX Certificate, read the following: Proof of contact with 50 Empire call areas on 14 Mc. and with 50 Empire call areas on bands other than 14 Mc. One Certificate only.

Sweden, read title of award as W.A.S.M.

Canal Zone, read title of award as C.Z.A.R.A., and omit portion relating to an award for 10 contacts, until confirmation obtained.

ADDITIONAL LIST OF AWARDS

Argentine, T.P.A.: Proof of contact with 21 American (North and South) Countries (includes Canada). Apply R.C.A.

Argentine, T.P.G.: Proof of contact with the 26 provinces of Argentine. Apply R.C.A.

Ecuador, W.H.C.: Proof of contact with eight districts of Ecuador. Apply G.R.C.

Colombia, W.H.K1: Proof of contact with 10 HK1 stations. Apply HK1DZ.

Belgium, W.X.B.A.S.: Proof of contact with 10 Brussels stations. Apply U.B.A.

Belgium, W.A.B.F.: Proof of contact with all Belgian Provinces. Apply R.B.

Panama, W.R.P.: Proof of 20 contacts with stations in Republic of Panama.

A further list will be published shortly when up-to-date particulars of the following awards have been obtained: A.A.A. (Worked All Africa), W.A.VE. (Worked all VE Districts), W.P.R.25 (Worked Puerto Rico), C.A. (LU100) 100 confirmed LU contacts, HB22 (Worked all Switzerland), W.A.CX. (Worked all Uruguay), W.A.YV. (Worked all Venezuela).

In order to celebrate its Silver Anniversary (1927-1952) the R.E.P. (Portugal) has instituted a new award called D.P.C.I. The rules call for confirmations proving 50 contacts with 13 districts of Portugal and the Azores and Madeira Islands. One contact at least must be had with each of the 13 districts and may be c.w. or phone or both. Contacts must be subsequent to 1st January, 1952. A special award will be made to the first Amateur in each country who obtains the award. A list of the districts can be obtained from this Bureau and applications for the award, which is free, can also be sent to me.

Another Portuguese award is the Diploma Do Mundo Portugues D.M.P. which in English means Worked Portuguese World. The rules of this award demand proof of contact, since July, 1947, with 10 Portuguese possessions. The ten are Portugal, Azores, Madeira, Cape Verde, Portuguese Guinea or St. Tome and Principe Islands, Angola, Mozambique, Portuguese India, Macau, and Portuguese Timor. The award is for c.w. or phone or both, and applications with cards must be sent DIRECT to the R.E.P., Travessa Nova, De S. Domingos 34-1, Lisbon, Portugal. No charge is made and the R.E.P. will bear the cost of returning the cards and the award. Listeners possessing the necessary confirmations are also eligible for the award.

the front-to-back ratio is really good. It is very interesting to hear a VE8 coming in strong then switch to south and hear an LU or a PY working on the same frequency.

Using surplus cable and relays, the total cost of my "beam in a tree" was less than \$25.00. Is it surprising that I am enthusiastic? Try one and you'll never use a rotating array again.

TECHNICAL ARTICLES

The Technical Editor reports that the technical articles' bag is very nearly empty, so how about it chaps?

Don't forget the beginners have to be catered for, so articles on beginners' equipment are also welcome.

tirely open. The adjustment in each case can be checked by maximum reading on a field strength meter located several wavelengths from the antenna. Readings should be taken, of course, in the direction of the expected lobe. Then, with the transmitter operating at 14.2 Mc., the reflector shorting bar is adjusted on each element, one at a time, with all relays open and the tuning stubs of all other elements open. This adjustment should likewise be checked with a field strength meter in the proper direction. Staggering the two sets of adjustments at frequencies either side of a centre frequency helps to broaden the frequency response of the system.

RESULTS

In the six months that this antenna has been in operation, more South African stations have been worked than in the previous 20 years, and excellent reports are received from all continents. With three reflectors and a director,

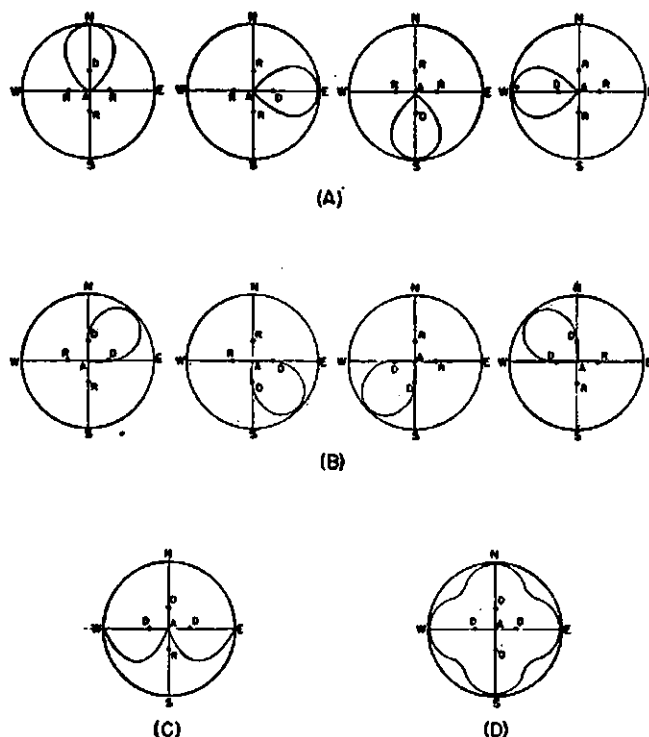
Fig. 2.—Approximate directional patterns obtainable with the stationary directional beam antenna.

A—With one parasitic element working as a director and the other three as reflectors, radiation patterns in any of four different directions may be obtained. Maximum gain is about 10 db.

B—With two parasitic elements acting as reflectors and the other two as directors, four new directional patterns are obtained. The maximum gain here is about 8 db.

C—Broader patterns are obtainable by using three directors and one reflector.

D—An essentially non-directional pattern with a gain of about 4 db is obtained when all four parasitic elements are tuned as directors.



(A)

(B)

(C)

(D)



Valves, new, boxed, R.C.A. 834s, £1/8/- each.

6C4s, 12/- each.

Limited number of the following Taylor Tubes: TZ20s, £2/10/- each; TB35s, £6/10/- each.

TRANSMITTERS ALTERED FOR BUSH FIRE AND FISHING BOAT WORK.

CRYSTALS, as illustrated, 40 or 80 metres, AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

20 metre Zero Drift, £5 each.

Large, unmounted, 40 or 80 metre, £2 each.

Special and Commercial Crystals—Prices on application.

Crystals re-ground, £1 each.

BRIGHT STAR CRYSTALS may be obtained from the following Interstate firms: Messrs. A. E. Harrold, 123 Charlotte St., Brisbane; A. G. Healing Ltd., 151 Pirie St., Adelaide; Atkins (W.A.) Ltd., 894 Hay St., Perth; Lawrence & Hanson Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 409 Lonsdale St., Melbourne; Prices Radio, 5-6 Angel Place, Sydney.

DC11 TYPE CRYSTAL HOLDERS WANTED. ANY QUANTITY.

Screw-type Neutralising Condensers (National type), suits all triode tubes, Polystyrene insulation, 19/6 ea.

BRIGHT STAR RADIO

1839 LOWER MALVERN ROAD, GLEN IRIS, VIC. Phone: BL 3510
Prompt delivery on all Country and Interstate Orders. Satisfaction Guaranteed.

FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

VICTORIAN DIVISION V.H.F. GROUP

The All Models Exhibition proved a success, and a description of the v.h.f. equipment used at the W.I.A. stand may be of interest. The transmitter which worked so reliably was built by Don 3XA, being of relay rack construction with separate r.f. sections for 6 and 2 metres. The line up on 6 mx is a 6J6 overtone crystal osc. and dblr., 832 bfr., p.p. 25Ts p.a., 100w. input. On 2 mx a similar line up is used with an additional 6J6 as a p.p. trebler to drive the 832 buffer on 144 Mc., and the p.a. p.p. 24Gs. The common modulator consists of p.p. 830Bs.

For reception, complete 6 and 2 mx receivers, built by 3HK and 3TO respectively, were used. Each Rx employed broadband r.f. amplification, crystal controlled h.f. osc. and tunable i.f. stage.

The two aeriels, each a single bay turnstile, made by 3ABA, were mounted on the Exhibition roof about 100 ft. high, 270 ft. of co-axial feeder was required for each, due to the roof layout.

Many contacts were made on both bands; those made with mobile, walkie talkie and portable stations providing particular interest. Some of the nearer country stations were contacted and reports received from others.

A demonstration of the beaming effect of a directive antenna was shown in a working exhibit constructed by 3AUX. It consisted of a 580 Mc. Tx connected to a rotatable four element beam. At a distance of roughly 10 ft. a field strength meter gave a visual indication of relative field strength.

Other equipment on display included 6 mx mobile gear, field strength meters, receivers, etc. The work of country v.h.f. members was represented by a portable 6 and 2 mx Tx from 3UI, and a 2 mx trough line converter from 3GM.

At the August meeting of the Group some portable gear was on display. The first was a Tx from 3UI. This was the job which Alan used for his 144 Mc. contact from Mt. Major, near Dookie, to VK2PN near Kyandra, N.S.W., approximately 150 miles, during the last field day season.

Herb and Bob, 3JO/3OJ described the various units which they had used during their field day activities. This included the 955 osc. which ran an input of 1½ watts. Operating during one field day from Ben Cairn with this Tx, a contact over a distance of 90 miles was made.—3ABA.

WESTERN AUSTRALIA

50 Mc.: Country contacts from Perth have been very patchy with quite severe QSB. 6FC, 6DW and 6BS come in still. Alan 6MO brought down a very neat converter using a 6J6 mixer. Roy 6RK has his beam up a little higher. 6IG and 6JW have been on a few times. John 6GU threatening to get going on 50. Lou 6LU still on band despite threat of leaving. Jack 6GB bobbed up recently. Don 6HK has a new modulator and his pair of 834s on again. We have heard Tom 6OY's voice and Tom 6TR's voice from 6FC's. What about hearing them from their own stations?

I went down to Bunbury and Donnybrook over the week-end. Saw Colin 6XI and worked Ted 6JG cross band 50 and 7 Mc. Also saw Arthur 6AL and tried to get him back on the air! Called on Jack 6AV at Donnybrook. While at Bunbury, on 24th August, I heard 6HK 4 x 7 for over two hours. I did not contact Perth because they were not looking for a signal from the south! Better luck next time! I was using my EL91, EL91, 6M5 portable rig modulated with another 6M5.

144 Mc.: Wally 6AG went portable to Rottnest and put through a good signal. Also worked 6BD who was apparently at Wally's QTH. Have only heard a few on this band as my Rx was U.S. for a while. 6RU, 6KW and 6GM active on the band. 6FC was off for a while, his 815 went out. 6BS has his 522 going, but has no aerial up as yet. Whispers about 6RK and 144 were too soft for me to hear. 6HK too busy elsewhere to worry over 144 yet. 6GM and 6GB talking bigger and better beams. 6BG called at my QTH but unfortunately I was away. Please call again Peter.—6BO.

RADIOTRON 6AE8

Miniature Triode—Hexode Converter—

Amalgamated Wireless Valve Co. Pty. Ltd. announce the release of a new novel Australian-made Radiotron—the 6AE8. This nine-pin miniature, now available from stock, is intended for use as a frequency converter in all-wave and broadcast superheterodyne receivers. The miniature equivalent of the older octal-based X61M, the 6AE8 has improved characteristics giving superior performance.

Under typical operating conditions this high gain valve has a conversion conductance of 750 micromhos and a plate resistance of 1.5 megohms. As well as the normal advantages of miniatures, the 6AE8 features improved short wave performance, lower interelectrode capacitances and better frequency stability, making it a worthy companion to the Radiotron 6BE6 converter already well established.

GENERAL DATA

Electrical:

Heater, for unipotential cathode:	
Voltage (a.c. or d.c.)	6.3 volts
Current	0.3 amp.
Direct Interelectrode Capacitances (with no external shield):	
Hexode grid No. 1 to all other electrodes (r.f. input)	4.5 pF.
Hexode plate to all other electrodes (mixer output)	6.2 pF.
Triode grid and hexode grid No. 3 to all other electrodes (osc. input)	5.3 pF.
Hexode grid No. 1 to hexode plate	(max.) 0.05 pF.
Hexode grid No. 1 to triode grid and hexode grid No. 3	(max.) 0.25 pF.
Triode plate to all other electrodes (triode grid earthed)	1.7 pF.
Hexode grid No. 1 to triode plate	0.07 pF.
Triode grid and hexode grid No. 3 to triode plate	1.8 pF.

Mechanical:

Mounting position	Any
Maximum overall length	2-3/16"
Maximum seated height	1-15/16"
Maximum diameter	7/8"
Bulb	T-6-1/2

Base	Small Button Noval 9-Pin
Pin 1	Grid Nos. 2 and 4.
Pin 2	Grid No. 1.
Pin 3	Cathode.
Pin 4	Heater.
Pin 5	Heater.
Pin 6	Plate.
Pin 7	Grid No. 3 and Triode Grid.
Pin 8	Triode Plate.
Pin 9	Internal Connection.

CONVERTER SERVICE

Maximum Ratings: Design-Centre Values	
Hexode—	
Plate Voltage	300 max. volts
Plate Dissipation	1.5 max. watts
Screen (Grids 2 and 4) Supply Voltage	300 max. volts
Screen (Grids 2 and 4) Voltage Dissipation	125 max. volts
Control Grid (Grid 1) Positive Voltage	0.4 max. watts
Cathode Current	0 max. volts
Peak Heater-Cathode Voltage, plus or minus	10 max. Ma.
	90 max. volts
Triode—	
Plate Voltage	175 max. volts
Plate Dissipation	1 max. watts
Cathode Current	6 max. Ma.
Triode Characteristics:	
Plate Voltage	100 volts
Grid Voltage	0 volts
Amplification Factor	22
Plate Resistance	7800 ohms
Transconductance	2800 umhos
Plate Current	10 Ma.
Typical Operation:	
Hexode Plate Voltage	250 volts
Hexode Screen (Grids 2 and 4) Voltage	85 volts
Hexode Control Grid (Grid 1) Voltage	-2 volts
Triode Plate Supply Voltage	250 volts
Triode Plate Voltage	115 volts
Triode Plate Dropping Resistor	30 kilohms
Triode Grid Resistor	30 kilohms
Hexode Plate Resistance	1.5 megohms
Conversion Transconductance	750 umhos
Hexode Control Grid Bias for Sc equals 10 umhos	-25 volts
Hexode Plate Current	3.5 Ma.
Hexode Screen Current	3.2 Ma.
Triode Plate Current	4.5 Ma.
Triode Grid and Hexode Grid 3 Current	300 Ua.

APPLICATION

The Radiotron type 6AE8 is a nine-pin miniature converter with a conversion conductance, under recommended operating conditions, of 750 micromhos, a hexode plate resistance of 1.5 megohms and an oscillator transconductance of 2,800 micromhos. The signal grid has a remote cut-off characteristic, and a signal-grid bias of -25 volts reduces the conversion transconductance to 10 micromhos.

RECOMMENDED OPERATING CONDITIONS

Signal-Grid Bias. The recommended signal grid bias is -2 volts and is the minimum bias at which the 6AE8 should be operated. The comparatively low cut-off bias voltage of -25 volts is useful in avoiding overloading of a following i.f. amplifier when a common a.v.c. voltage is applied to the two valves. It also assists in reducing playthrough in reflex receivers by restricting the i.f. signal applied to the grid of the reflexed amplifier on strong stations.

Screen Voltage. Although a screen voltage of 85 is recommended for the 6AE8, this figure is not critical provided that the screen dissipation is not exceeded.

The screens of the converter and i.f. amplifier in a typical receiver are usually operated from a common source, and when a.v.c. voltage is applied to the two grids the screen voltage will rise. This may decrease the plate resistance of the converter and thus alter the coupling, and reduce the selectivity, of the converter plate circuit i.f. transformer. This effect occurs only on stations of sufficient strength to operate the a.v.c. system; where it is undesirable it can be eliminated by stabilising the screen voltage by the use of a suitable voltage divider. In the case of the 6AE8, provided that the screen voltage does not rise above 140 volts due to normal a.v.c. action, the plate resistance of the valve should not fall below 1 megohm; for plate voltages between 180 and 250 volts.

Oscillator Grid Resistor. The comparatively low value of oscillator grid resistor, 30,000 ohms, specified for the 6AE8 greatly reduces the possibility of squegging occurring at the high frequency end of the 6-18 Mc. short wave band, so that a grid stopper is not normally required.

(Continued on Page 9)

All Models Exhibition, Melbourne, 1952

The All Models Exhibition was held from Saturday, 30th August, to Saturday, 6th September, at the Exhibition Building, and proved to be most popular with the public. Official attendance was 92,000, which was 20,000 more than the previous time the Exhibition was held—three years ago.

The Victorian Division of the Wireless Institute appointed Mr. Len Moncur, VK3LN, to organise the stand, which was located on the stage, probably the best position in the Exhibition.

Three large screens about 12 feet high and stretching across the 90 ft. stage were hung with a dark cloth upon which QSL cards from all countries were displayed, at suitable intervals attractive black and white signs were printed giving the countries which each group of cards represented. Across the full width of the stage, above the cards, in large letters were placed the words, "World Wide Communication by Amateur Radio."

Behind the screens and hung in front of the organ loft, was a large dark backdrop, to form a suitable background for the names of each country, each sign having tinsel streamers hanging from it.

At the top of the screens were located five miniature beams, turning in unison. The overall effect from the body of the hall was most striking.

Amateur equipment on display included transmitters operating on all bands from 2 to 80 metres, and it was possible for the public to see and hear at close quarters just how an Amateur Station is operated.

Antennae used for this equipment included beams for v.h.f. and 20 metres and half-wave dipoles for 40 and 80 metres. Due to the strong broadcast harmonics on 80 and 40 metres in the city area a v.h.f. link was installed to

VK3JD in Albert Park. During the period of the Exhibition over 500 contacts were made.

Apart from the transmitters actually operating, quite a number of transmitters, field strength meters and similar gear were on display, including the small emergency portable transmitter described by VK3LS in this issue of the magazine.

One of the most popular sections, particularly with the small visitors, was the novelty section! A Geiger counter which gave off the characteristic noise when a sample of uranium was brought near it; a miniature four-element beam driven by a v.h.f. transmitter, with a half-wave dipole and indicating meter at the other end of the table, which was used to demonstrate the principle of the beam; a ping-pong ball floating on a column of air, when an attempt is made to reach for the ball the air is cut off and the ball drops back (many small boys went home tired out after fighting this teaser); an electronic key was also operating in this section, together with a light which cut on and off when an invisible beam of infra-red light was cut. Small boys monopolised the novelty section as was anticipated.

On one front corner of the stage a tape recorder drew quite a crowd as people crowded around to record their voices, some of the girls present even sang a song.

One of the main exhibits was a television transmitter and receiver built by Len Moncur, VK3LN. This equipment used an iconoscope and electronic scanning of 130 lines, 25 frames. With the aid of two photo floods and a frame to keep the visitors in focus, thousands of children were televised to be viewed by their proud parents at the other end of the exhibit. One girl complained she couldn't see how she looked, so was

advised that if she rushed round quickly she might see herself! She tried at least three times before she woke up to the fact Len was pulling her leg.

The Moorabbin Radio Club and the Railways Institute also displayed some of their members' equipment, and throughout the whole exhibit simple transmitting and receiving equipment was on display to encourage the beginner who may be awed by the elaborate set-ups.

All in all, it is safe to say that Amateur Radio received some excellent publicity, as without doubt, almost all of the 90,000 who attended saw the exhibit by the W.I.A.

RADIOTRON 6AE8

(Continued from Page 8)

Oscillator Grid Current. Under typical conditions of operation, optimum performance will be obtained with an oscillator grid current of 300 Ua. in the 30,000 ohm grid resistor. If the grid current is allowed to fall appreciably below this figure, loss of conversion gain will result. The range between 300 and 400 Ua. will provide the best compromise of sensitivity, noise and spurious responses in most cases, although somewhat higher figures can be used.

Oscillator Signal Grid Coupling. On the short wave band the oscillator should be operated on the high frequency side of the signal and, particularly when a low value of signal grid bias is used, care should be taken to see that coupling between signal grid and oscillator grid circuits is not great enough to cause signal grid current to flow at the high frequency end of the band due to the presence of oscillator voltage on the signal grid. If, with a particular layout, the oscillator voltage cannot be reduced to a sufficiently low value, then neutralising may be required, though this is not normally the case.

It should be noted that it is not necessary to reduce the oscillator voltage on the control grid to zero because a small amount of correctly-phased oscillator voltage will increase the conversion transconductance of the valve.

Grid Versus Plate Tuning. Plate tuning of the oscillator gives better frequency stability on the short wave band than grid-circuit tuning, but due to the greater amplitude of oscillator voltage developed in the oscillator plate circuit, it may make unnecessarily difficult the reduction of oscillator voltage in the signal circuit to a satisfactory level, even on the broadcast band. Accordingly, grid-circuit tuning of the oscillator is recommended unless an unusual degree of oscillator-frequency stability is required. With either plate or grid-circuit tuning of the oscillator, better frequency stability is obtained with high values of oscillator grid current.

MORSE CODE

Many thousands of W/T Operators throughout the world have successfully mastered Morse the Candler way.

SPECIAL COURSE for those who only wish to reach essential speeds to pass the test for an Amateur Transmitting Licence.

JUNIOR COURSE.—A complete course for the Beginner. Average students reach speeds of 20 w.p.m.

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The Candler System Co., Denver, Colorado, U.S.A.



AMATEUR CALL SIGNS

FOR MONTH OF JULY, 1952

ADDITIONS

- VK—** New South Wales
 2SU—C. B. Jones, Lot 5, Hutchinson Street, Redhead, via Newcastle.
 2ABJ—B. W. Proudlock, "Guyong Court," 72 Edward Street, Bondi.
 2AMA—M. G. Burleigh, c/o. Nymboida Power Station, via South Grafton.
 2AOJ—L. C. Parr-Smith, 76 Ferry Av., Kogarah.
 2ARB—R. D. Smith, Flat 1, 7 Merton St., Stanmore.

Victoria

- 3SQ—A. E. Robinson, c/o. Department Civil Aviation, Aerodrome, Mildura.
 3AJU—W. D. Guild, Block 257, Red Cliffs.
 3ALF—L. R. Fowler, 11 Evan St., Parkdale, S.12.
 3AOD—A. G. Earwicker, 17 Thoresby Rd., Newborough, North Yallourn.
 3ATF—R. T. Forster, 57 Robinson St., Moonee Ponds, W.4.
 3ATK—H. M. Meallin, 63 Waratah St., South Oakleigh, S.E.13.
 3AZD—W. Dempsey, 568 Pascoe Vale Rd., Pascoe Vale, W.8.

South Australia

- 5LF—R. J. Sanders, 2 Olive Av., Westbourne Park.

Western Australia

- 6NP—G. S. Bemrose, 221 Broome St., Cottesloe.

Tasmania

- 7MC—W. R. Attwood, Waddamana.
 7WN—W. R. Ion, House 285, Bronte Park.

ADDITIONS

- VK—** New South Wales
 2FJ—2a Hamilton Avenue, Naremburn.
 2VR—195 Hope Street, Bathurst.
 2YB—383 Oxford Street, Paddington.
 2ABX—Cr. Lake Rd. and Margaret St., Warner's Bay.
 2ADH—5 Richardson St., Old Bar, via Taree.
 2AMW—45 Rosemont St., West Wollongong.
 2APH—12 Pearl Avenue, Epping.

Victoria

- 3GK—170 Martin St., Garden Vale.
 3LY—76 Cunningham Street, Sale.
 3PY—84 Bournian Avenue, Strathmore.
 3XR—18 O'Connor Street, Horsham.
 3XQ—6 Goldsmith Avenue, Preston, N.18.
 3YE—7 New Street, Surrey Hills, E.10.
 3AJI—8 Victoria Avenue, Elsternwick.

Queensland

- 4VH—38 Grimes Street, Yeronga.
 4RJ—Methodist Parsonage, 54 Peary St., Northgate, Brisbane.

Western Australia

- 6SR—537 Charles Street, North Perth.
 6ZX—Cody Street, Northam.

DELETIONS

- N.S.W.: VKs 2DD, 2MC (now operating under VK7MC), 2NF, 2AJY.

- Victoria: VKs 3PD, 3UW (now operating under VK6NP), 3VS, 3AJK.

South Australia: VK5SU.

Western Australia: VK6ON.

- Tasmania: VKs 7MA (now operating under VK2AMA), 7WD (now operating under VK3AZD).

Territories: VK1NL.

FOR MONTH OF AUGUST, 1952

ADDITIONS

- VK—** New South Wales
 2ACA—Canberra Radio Club, Station: Hut No. 3 Riverside, Barton, Canberra. Postal: Canberra Radio Club, P.O. Box 59, Kingston, A.C.T.
 2APU—D. H. Collins, 18 Sharland Av., Chatswood.
 2APW—E. G. Baker, 41 Tramway St., Mascot, Sydney.

Victoria

- 3UR—R. R. Anderson, 42 Smythe St., Benalla.
 3AFB—W. C. Caldwell (Cpl.), c/o. Chief Signals Officer, Southern Com., Melbourne.
 3AIB—A. I. Berry, Hazelwood Rd., East Warburton. Postal: 11 Goldthorns Av., Kew, E.4.
 3AID—F. C. Hutton, 62 Wellington St., West Footscray.
 3ASH—R. R. Elkin, Bay View Rd., Grand View Estate, North Geelong.
 3AUD—A. V. Dwan, Portable throughout Australia. Postal Address: 52 May Rd., Toorak.

Queensland

- 4WL—W. Robertson, 16 Alcock St., Coopers Plains, Brisbane.

South Australia

- 5JN—J. M. Brammer, 30 Clifton St., Goodwood.
 5PD—J. H. Boucaut, 5 Newak Rd., Torrens Park.

Tasmania

- 7FC—F. C. Harland, Station: 12 Wellesley St., South Hobart. Postal: 25 Wentworth St., South Hobart.
 7MR—D. M. Richardson, 6 Cooper St., Burnie.
 7RE—R. A. Emmerton, 19 Strahan St., North Hobart.

ALTERATIONS

New South Wales

- 2CE—109 Murrivier Road, North Bondi.
 2FW—39 Collins Street, Annandale.
 2MZ—"Killara," Great West Highway, Lawson.
 2QO—32 Laycock Street, Bexley North.
 2RT—11 Seaforth Avenue, Cronulla.
 2VQ—16 Beach Street, Balgowlah.
 2YM—2 Henderson Street, Eastwood.
 2YS—Cabramatta Hostel, Cabramatta.
 2AAP—19 Salvia Avenue, Bankstown.
 2AEJ—Wellington Street, Baradine.
 2AFH—11 Patterson Street, Ermington.
 2AHX—15 Pinnacle Street, Miranda.
 2AHY—18 Market Street, Wollongong.
 2ASC—23 Caoma Av., Nth. Brighton, Sydney.
 2AVM—Flat 2, 9 Hipwood Street, Kirribilli.

Victoria

- 3EY—C/o. R. Dickison, 278 Buckley Street, Essendon.
 3GT—C/o. Department Civil Aviation Aerodrome, Mallacoota.
 3TY—37 Lansdown Street, Sale.
 3ZR—46 Simmons Street, South Yarra.
 3AJJ—15 Kitchener Street, Deepdene, E.8.
 3AOL—Laura Avenue, Belmont, Geelong.
 3ARA—30 Reynolds Parade, South Pascoe Vale.

Queensland

- 4FT—Purnell Street, Zillmere.
 4GD—"Kloek," Cape Pallaranda, c/o. G.P.O., Townsville.
 4IN—53 Stuckey Street, Clayfield, Brisbane.

South Australia

- 5DA—C/o. Station 5CK, Crystal Brook.
 5ED—2 Shannon Street, Blair Athol.
 5GP—Allotment No. 1127, Victualing Yard, Darwin. Postal: C/o. P.M.G. 5DR, Darwin, N.T.

- 5LG—64 Weroona Avenue, Parkholme.
 5NV—29 Fashoda Street, Hyde Park.
 5RZ—32 Inverness Avenue, St. Georges.
 5VK—2 Gregg Terrace, Millicent.

Western Australia

- 6LA—189 Lockhart Street, Canning Bridge.
 6WD—25 Lockyer Avenue, Northam.

Tasmania

- 7DA—42 Barry Street, Glenorchy.
 7DB—6 Amy Road, Penquite, Launceston.
 7EJ—177 Tarleton Street, East Devonport.
 7KW—64 Lawrence Vale Road, Launceston.

DELETIONS

- New South Wales: VKs 2DP, 2XC, 2ALY.
 Victoria: VKs 3OQ, 3OS, 3QX, 3WB, 3ALN, 3AVD (now operating under VK3AUD).
 Queensland: VK4KG.
 South Australia: VKs 5MG (now operating under VK3AFB), 5SU.

WHERE IS THAT RESISTOR?

How often is the junk box raked over for a resistor of some particular value or, if there is some order in the shack, how many times is a cascade of assorted resistors poured out on the bench and the resulting heap explored at length?

The problem has been solved here by a simple filing system using flat 50 cigarette tins and a few dabs of paint. Seven tins are used and the ends are painted respectively black, brown, red, orange, yellow, green and blue. Resistors are stored under the colour representing their multiplier (R.M.A. Colour Code), i.e., the colour of the third band or the dot.

When a resistor of a particular value is required, the tin of the appropriate colour is selected, e.g., red—thousands of ohms, or yellow—hundreds of thousands of ohms. The wanted resistor usually presents itself without further ado—or the nearest approximation is immediately available.

A similar filing system can be used for capacitors. It is remarkable how many items can be stored in this rather attractive, gaily-coloured stack of tins. —Robert H. Black, M.D., VK2QZ, 36 College St., Sydney, N.S.W.



Make it a HABIT to call in personally—phone your order—or write to U.R.D. for your ENTIRE RADIO and ELECTRICAL REQUIREMENTS.

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5789

VK-ZL DX CONTEST, 1952

N.Z.A.R.T. and W.I.A., the National Amateur organisations in New Zealand and Australia, invite world-wide participation in this year's VK-ZL DX Contest.

Objects: For the world to contact VK and ZL stations and vice versa.

When: CW—24 hours from 1200 GMT Saturday, 4th October, to 1200 GMT Sunday, 5th October. **PHONE**—24 hours from 1200 GMT Saturday, 11th October, to 1200 GMT Sunday, 12th October.

Note: Duration for all contestants is 24 hours.

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 licensed Amateur transmitting stations in any part of the world. No prior entry need be made. Mobile Marine or other non-land based stations are not permitted to enter the Contest.

3. All Amateur frequency bands may be used, but no cross-band operation is permitted.

4. C.w. will be used for the first week-end and phone for the second week-end. Stations entering for both phone and c.w. sections must submit entirely separate logs for each.

5. Only one contact per band is permitted with any one station for contest purposes.

6. Only one licensed 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. **Cyphers:** 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 (c.w.) 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 start again with 001.

8. **Scoring: For VK and ZL Stations ONLY**—Fifteen points will be scored for the first contact on a specific band with any overseas country; fourteen points will be scored for the second contact on the same band with the same country; thirteen points for the third and so on to the fifteenth contact which will score one point. All contacts with that particular country on that band will thereafter count one point each. This scoring procedure will be repeated on each band to encourage multiband operation. There will be no VK-ZL contacts between each other. Official A.R.R.L. countries list will be used. **Note:** Points will not be entered in the log for each contact—totals for each country will be shown in the summary. **Each CALL AREA in the U.S.A. will be a "country" for scoring purposes.**

Overseas Scoring: One point will be scored for each contact on a specific band with any VK-ZL district. The final score will be derived by multiplying the total contacts on all bands by the total number of VK-ZL districts worked on all bands. VK-ZL districts are: ZL—1, 2, 3, 4; VK—1, 2, 3, 4, 5, 6, 7, 9.

9. **Logs:** (a) Logs must show in this order: date, time in GMT, band of operation, call of station worked, serial number sent, serial number received.

(b) A separate log must be submitted for each band. For each band an analysis sheet must be given showing: list of countries worked with numbers of contacts for each country and points claimed for each country worked, and total points for that band.

(c) A summary sheet to show 1, station call sign; 2, name and address of the operator; 3, phone or c.w.; 4, list of points claimed for each band; 5, grand total of points; 6, brief description of equipment used during the Contest—transmitter, power, antennae, 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 right is reserved to disqualify any entrant who during the Contest has not observed regulations or who has consistently departed from the accepted code of operating ethics.

11. The ruling of the Executive Council of N.Z.A.R.T. will be final in the event of any dispute.

12. **Awards:** N.Z.A.R.T. will award attractive certificates to the top scorer on each band and the top scorer in each VK and ZL district. Awards of trophies will be announced independently by W.I.A. and N.Z.A.R.T. Additional certificates will be awarded depending upon the number of logs received.

13. Entries from VK and ZL stations should be posted to N.Z.A.R.T. Contest Manager, 86 Lytton Road, Gisborne, N.Z., to arrive no later than 31st December, 1952.

Receiving Section

1. The rules for the receiving section are the same as for the transmitting section, but it is open to all members of any shortwave listeners' society in the world. No transmitting station is permitted to enter for the receiving section.

2. The Contest times and logging of stations once on each band per week-end are as for the transmitting section. Logs will take the same form as the transmitting section.

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. Scoring will be on the same basis as for transmitting stations.

4. It is not sufficient to log a station CQ.

5. VK receiving stations may log overseas stations and ZL stations, while ZL receiving stations may log overseas stations and VK stations.

6. Certificates will be awarded to the highest scorers in each country. Extra certificates may be issued depending upon the number of entries received.

AN AID FOR COMPUTING SCORE

No. of Contacts		No. of Pts.	
Contacts	Pts.	Contacts	Pts.
1	15	11	110
2	29	12	114
3	42	13	117
4	54	14	119
5	65	15	120
6	75	16	121
7	84	17	122
8	92	18	123
9	99	19	124
10	105	20	125

"CQ'S" WORLD WIDE DX CONTEST

A precis of the important rules are as follows:

1. **Contest Period:** Phone Sections—0200 GMT October 25 to 0200 GMT October 27. C.W. Sections: 0200 GMT November 1 to 0200 GMT November 3.

2. **Bands:** The Contest activity will be in the 3.5, 7, 14, 21 and 27/28 Mc. Amateur bands.

3. **Competition** will be divided into four sections: (1) One operator phone section, (2) Multiple operator phone section, (3) One operator c.w. section, (4) Multiple operator c.w. section. Stations in both phone sections may contact each other, and stations in both c.w. sections may contact each other, but no contacts between phone and c.w. stations will be allowed.

5. **Serial Numbers:** C.w. stations will exchange serial numbers consisting of five numerals, the first three being the RST report, and the last two being their own zone number. Stations in Zones 1 through 9 will prefix their zone number with zero (01, 02, 03, etc.). Phone stations will exchange serial numbers consisting of four numerals. The first two being the readability and strength report, and the last two being their own zone number. Phone stations in zones 1 through 9 will prefix their zone number with a zero (01, 02, 03, etc.).

6. **Contacts:** Contacts between Amateur stations on different continents shall count 3 points; contacts between Amateur stations on the same continent, but not in the same country, shall count 1 point; contacts between stations in the same country, for the purpose of obtaining zone and/or country multipliers, shall be permitted, but no points will be allowed for these contacts. More than one contact between stations on each band will not be permitted.

7. **Multipliers:** Two types of multipliers will be used: (1) a multiplier of 1 for each zone contacted on each band, (2) a multiplier of 1 for each country worked on each band.

9. **Scoring:** The contest score for each single band is the sum of the zone and country multipliers of each band, multiplied by the contact points of that band. The total all band score is the sum of the zone and country multipliers of all bands, multiplied by the total of contact points on all bands.

All logs must be postmarked no later than December 15, 1952. Send logs direct to: Herb Becker, W6QD, DX Contest Committee, 1140 Crenshaw Blvd., Los Angeles 19, Calif.

DX NOTES BY VK4QL*

These will be the last DX notes you will read from the pen of VK4QL, not because of my "threat" of last month, although very little help has again been received, but by the time you read these notes, VK4QL will have signed for the last time, and maybe signing VK2QL once more. In the meantime, until things are sorted out and I find whether circumstances permit the necessary time, Ray VK7RK has consented to carry on. Ray will probably not have the time to be able to watch the bands as I have been able to up here, nor will I in VK2, so please do the right thing by Ray and let him have some material. Ray's address is 5 Galvin Street, Launceston.

The band survey is as follows:—
3.5 Mc.: 2GW was heard one morning trying hard to raise something, but do not know how he fared. Some very strong Interstate signals were heard during the R.D. Contest. 3FH said he can usually hear one or more Ws on here at night. 4QL heard YO6VG but he seemed interested in Russian satellite countries only.

7 Mc.: This band is packing up again in the mornings for Europe, but I still can't raise them, whereas southern stations can. 4QL's best catch, much to 7RK's dismay was ZD4AB in Ray's hoodoo zone. ZD4AB claims this is the first ZD4/VK QSO on 7 Mc. In the middle of the R.D. Contest, 2DG worked YI2FD and HB9HM, the latter on phone, while I heard three ZS, working one. 3CP lists GI6TK*, FP8A1* (0800z), CM3GC*, EA1DY (0700z). 4EL has been playing round with aeriels to work

* Fit./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

the Europeans he hears round 0500z, and found the answer in a vertical, working two LAs first try. 3FH has been working them an hour later. 4QL has reached 76 countries on this band, and latest listing, KB6AX*, G6BS 0640z, G8NF 0700z, CO2OK 0700z, YI3BZL, LZ2KAC, YV5FH, KPACC*, ZS6AAC*, ZS5NM, ZD4AB*, ZC4RX, VQ2AT, LU6WH, YI2FD, CR9AF*, ZE2JS, and many Europeans. 7RK does most of his listening at night on this band and other than the consistent KC6QY, nothing out of the ordinary is heard. Try getting out of bed early Ray. Our s.w.l. from VK3, Don Grantley, also hearing the Europeans well, the pickings being GD3FSS, GM5YB, HE5RE, UB5HK, UC2KAB, HZ1MY. 4XJ worked KH6s, obtaining S8 on one phone transmission. The KH6 remarked that they are expecting permit for 7 Mc. phone shortly. Working FU8AC OK.

14 Mc.: This band has been erratic as usual, one State having an opening whilst the other a dead band. 2ASO at 2100-2245z on 5th, found the band strange, very little noise and signals from Europe, G8s, DLs, OK, OE, F3, also K5FBN, KJ6AR, FQ8AG, ZP5RD, CN8GG. Then the noise came up and the signals disappeared. All he worked was DL9KR. 2HZ works North America 1200-1400z, Bill tried to find VS5ELA but no luck. 4FJ lists CR6BZ*, VP5BH*, Roy has scored 183 countries in Open and 162 in c.w. countries score, and is awaiting arrival of his D.U.F. Award. 3CP managed to organise a two-way with EA6AM. 4EL has found a few openings in the wee small hours, the time respectable people are in bed. 4QL heard ZS2MI the one and only time, but the chase got too hot and burnt out his bias transformer. In the 2½ years at Townsville, a total of 181 countries were worked. Power 50w. and the old Windom. The latest listing is PJ2AD, PJ2CD, HB1JJ/HE*, ZS1H and ZS2MI 0800z, JY1JK, EA8BF*, C3MC*, VP9AW, TG9AC, HP1BR, EA3BF 0100z. The band is changing as the Europeans are again appearing in the afternoons and mornings. 7RK still hoping for the conditions to improve lists HC2OS, IIARK, VK1EM*, VK1RG*, PJ2AD, EA4CY, DL4EF*, HB9IX*, CT1JS, ZS1H. 2AMB got amongst it on the opening of the 10th, having no trouble with quite a few countries. 9GW chased M1D without result. 4XJ finds the Ws are falling off. Lists DU6IV*, SM5CO*, DL1LD*, and KW6AZ.

21 Mc.: Not much in way of reports on this band. Either skip was wrong or not many tried the band in the R.D. Contest as I heard very few. 4QL heard/worked KH6, W, VE, KZ5 a couple of openings, but towards the end of the month, 9GW has been getting through to Europe nightly, even running a sked at 1000z. Geoff found, to his disappointment that he was not the first to QSO Europe on 21 Mc. 4XJ, nothing other than VE7AIV and ZL.

28 Mc.: Nil sightings in most places, but 9GW found very strong sigs from KH6 on 22nd. 4XJ worked a couple of KH6 and heard one W. Is hoping for improvement next month.

The QSL situation is not gladdening the DXer's heart these days either.

2AWU has received his from G6GN in confirmation of 21 Mc. 3CP: VR4AF, KG4AF, VP2MD, PJ1UF, KTIOC, YK1AH. 4FJ: C9AM and KS6AA. 4QL: FG7XA and VR4AF. 4XJ: FU8AC, OE5ZZ, has received one from HP3FL for a 7 Mc. phone contact.

The gen section has little of interest, one reason being I have not heard Dick KV4AA. A recent "QST" said that VS2 is now a separate country from VS1. From W7JLU we learn that FP8AK, ZD8BH and HH2FL are active on 7 Mc. I heard ZD9AA being called one morn. 5MZ will be in VK3 for one week from October 10, and intends seeing some of the gang. Here is one for the propagation boys to work out: On 22nd at 0730z 9GW and 4QL were QSO on all bands-except 27 Mc., from 3.5 to 28 Mc. in 13 mins., and except for 3.5, where it was S6, all reports were S7 or S8. 3YP has now also QRT and gone to VK4 to set up himself. He worked 215 countries and has 199 confirmed.

The thought for the month is for those who helped during the period I have been trying to make these notes of some interest, and for those who will help Ray carry on. "Many thanks."

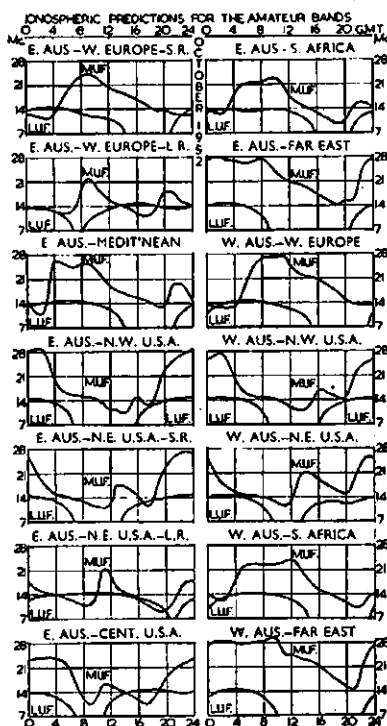
DX C.C. LISTING

PHONE			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	3 163	VK41P	8 114
VK3EE	10 163	VK3AWW	14 112
VK4HR	12 160	VK4DO	20 109
VK3JD	1 155	VK3MS	24 109
VK6RU	2 152	VK4RW	23 104
VK4KS	9 152	VK2ADT	13 102
VK6KW	4 150	VK2AHA	15 102
VK3LN	11 141	VK3HO	25 102
VK4FJ	21 135	VK6PJ	19 101
VK3JE	7 133	VK4RT	22 101
VK4WF	16 130	VK3IG	5 100
VK8DD	6 128	VK3GG	18 100
VK4WJ	17 122		

O.W.			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 207	VK4QL	36 128
VK4HR	8 182	VK4RF	11 125
VK3FH	15 177	VK3YD	27 123
VK4EL	9 167	VK3EK	3 122
VK2EO	2 152	VK3JI	26 118
VK3CN	1 151	VK3PL	38 117
VK3GW	16 151	VK3HT	37 117
VK3CX	26 150	VK3UM	12 116
VK6SA	28 150	VK3YL	39 115
VK4FJ	29 150	VK7LJ	24 114
VK3VW	4 143	VK4DA	7 113
VK2QL	5 142	VK7LZ	17 112
VK6RU	18 141	VK4RC	13 107
VK3RY	22 140	VK6KW	40 104
VK3KE	10 138	VK3WC	34 103
VK3FH	11 134	VK3AFA	19 101
VK3BO	33 133	VK3NC	19 101
VK4DO	20 129	VK3QA	32 101
VK3JE	21 129	VK7RK	22 100
VK3XX	30 128	VK2AEZ	35 100

OPEN			
Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 220	VK3VQ	46 116
VK2NS	7 208	VK3AWW	45 115
VK6RU	16 195	VK3JA	43 114
VK3JE	12 190	VK2ADT	14 113
VK6RU	8 188	VK4RW	52 113
VK4FJ	32 173	VK3PG	47 111
VK3HG	3 171	VK3MM	49 111
VK6KW	13 171	VK4RC	21 110
VK3DI	2 170	VK3ZB	34 110
VK3KX	1 167	VK3HO	38 110
VK4EL	10 167	VK2ZC	25 108
VK4KS	24 167	VK2YL	11 106
VK4DO	15 157	VK3AWN	36 105
VK3LN	29 144	VK2VN	18 104
VK5FL	26 143	VK4UL	27 104
VK3MC	5 139	VK6PJ	44 104
VK3OP	19 137	VK6PW	50 104
VK4WF	40 137	VK2HZ	17 103
VK8DD	22 136	VK7KB	30 103
VK3HT	41 135	VK2TI	37 103
VK2ADE	28 133	VK6DX	42 103
VK6GW	48 133	VK7RK	31 102
VK2AHA	9 128	VK4TY	35 102
VK2AHM	20 125	VK3EJ	51 101
VK3JI	33 119	VK2ACK	6 100
VK7LZ	23 116	VK2TG	39 100

PREDICTION CHART FOR OCT., 1952





FEDERAL

CHANGE OF FEDERAL TRAFFIC MANAGER

John Tutton, VK3ZC, who has been Federal Traffic Manager since 1946, has left Australia for a sojourn of six months or so in England. He hopes to join the staff of the London Assurance Co.—the parent Company of the organisation in which John has been employed in Australia.

We all wish John bon voyage, and trust that his working holiday in U.K. will be all he hopes for himself. He carries with him the good wishes of all his associates in the W.I.A.—particularly the boys who worked the schedules with him during six years operation on the traffic network—and the sincere thanks of all members of the Executive for his unparalleled devotion to the duties pertaining to his office.

The vacancy in the Federal ranks has been filled by Doug Paine, VK3FH, and a cordial welcome is extended to him. We feel safe in assuring Doug that the same co-operation from the operators in the State stations of the traffic network will be available to him as has been available to his predecessor.

21 Mc. BAND

Reported in the R.S.G.B. Bulletin for July is the release of part of the 21 Mc. band to U.K. Amateurs effective from 1st July. At the date of publication, c.w. transmission only was permitted although negotiations are afoot to obtain permission for phone operation.

During the first two days on the new band, W2, VQ4, and KP4 stations were worked by 7s whilst 11 stations were heard and logged.

Activity on this band in Australia has not been very good due to conditions, but expectations are running high for some really good DX during the coming summer months.

VICTORIAN DIVISION EXHIBITION

From 30th August to 6th September the Victorian Division of the W.I.A., in affiliation with the Australian Association of Model Societies, staged an Amateur Radio stand at the 4th All Models Exhibition at the Exhibition Buildings, Melbourne.

An attendance of 10,000 people on the opening night and attendances exceeding this number on other afternoons and evenings during the week of the Exhibition, was an indication of the intense interest the public have for spare time hobbies.

Great credit is due to Secretary Russell Bradshaw, VK3SX, and Len Moncur, VK3LN, Exhibition Committee Chairman, and their team of hard-working assistants for the undeniably excellent decoration and operation of the W.I.A. Amateur Radio exhibit.

Although the problem of a high noise level was difficult to overcome on the high frequency bands, transmitters were maintained in operation on 80, 40 and 20 metre bands throughout the Exhibition, and hundreds of good contacts were made for the benefit of the milling public seeking to hear and see what was going on. Many overseas contacts were made despite the difficult reception conditions.

Excellent transmission and reception was maintained on the 2 and 6 metre bands. Mobile stations as far out as the Dandenong Ranges assisted to show the public the great advances made in the v.h.f. portion of the frequency spectrum.

A closed circuit 130 line television hook-up installed and demonstrated by Len Moncur, VK3LN, together with many exhibits of Amateur transmitting, receiving, testing, and electronic equipment, completed an exhibition that should have done much towards recruiting many exuberant juniors to membership in the W.I.A. and the Amateur ranks. Pictures elsewhere in this issue will no doubt be of interest to the readers of "Amateur Radio."

W.I.A. ACTIVITIES CALENDAR

- October 4-6: VK-ZL DX Contest (all bands), C.W. Section.
- October 11-12: VK-ZL DX Contest (all bands), Phone Section.
- October 25-27: "CQ's" World Wide DX Contest, Phone Sections.
- November 1-3: "CQ's" World Wide DX Contest, C.W. Sections.
- December 6-7: European DX Contest (all bands), C.W. Section.
- December 13-14: European DX Contest (all bands), Phone Section.

Brief details of the forthcoming CQ World-Wide DX Contest scheduled 0200 GMT, 25th October, to 0200 GMT, 27th October for Phone Sections, and 0200 GMT, 1st November, to 0200 GMT, 3rd November, for C.W. Sections, shows the Contest to be divided into four Sections, namely, (1) One operator Phone Section, (2) Multi-operator Phone Section, (3) One Operator C.W. Section, (4) Multi-operator C.W. Section.

Eric Trebilcock, B.E.R.S.195, with his usual interesting budget of tidbits, writes, "Have now 209 QSLs from 222 countries heard, latest being FB8XX (Kerguelen Is.) . . . I've heard that ex-VKIYG (Herald Is.) has sent some QSLs to French Hams, I didn't share in the handout despite two stamped envelopes . . . The present operator of FB8ZZ is Joseph Klein who may be relieved early next year by the 1949 operator Louis Pelard . . . The well known FB8XX operator, Lt. Mohe, is now back in France, but the name of the present operator of that station is not known. As far as is known no FB8AX (Adelle's Land) QSLs have ever been sent out. One of the operators (Gros) did not return to France but went to New Caledonia . . . A bundle of QSLs from FB8XX and FB8ZZ have left France for Australia . . . Heard ZS2MI of Marion Island via long path at 0700z at low edge 14 Mc. c.w. He was badly QRW'ed by our R.D. Contest sigs . . . ZL2MY, a lad of 70 summers, seeks VK contacts on 7 Mc., the elderly gent is on daily . . . Europeans are to be heard on 3.5 Mc. around sunrise at week-ends."

A small publication that should prove of great use and interest to DX bounds is the "Time Zones of the World," compiled and published by Mr. C. G. Costello, 115 Hobart St., Miramar, Wellington, E.4, N.Z. The book, which measures 8 x 5 inches, contains more than 300 country listings, six pages of maps, universal time indicator. It is obtainable for the sum of two shillings and ninepence (N.Z. currency) post free, from the publisher.

Ron Mould, VK8FM, of Madang, T.N.G., finally got the rig perking from that location, but after a few minutes of use, heavy mistortune overtook him. Firstly the bias pack for the final gave out, then the minor h.t. tranny blew and a new 829B went west. In addition the power pack tray looked as if it had been struck by lightning. Ron has sent south for replacing parts and in the meantime has constructed a smaller rig using 6V6, 6V6, 807. Ron and KYL Gina are eagerly looking forward to February, 1953, that being the month of their departure south. During middle of August they were favoured by a visit from Doug Beadel, VK9DB, who blew in to perform some installation work.

SMSARP is looking for VK contacts on 3.3 Mc. in an endeavour to complete his W.A.C. on that band. He is operating between 2000-2100 GMT daily particularly during the month of October, and is using 3560 Kc.

NEW SOUTH WALES

The August general meeting of the N.S.W. Division was held at Science House on the 22nd with the President, Mr. John Moyle, occupying the chair. After the minutes were disposed of, the visitors were welcomed and the correspondence read. The President gave his usual round-up of the month's activities and of coming events. By the way, don't forget that Annual Field Day which is again to be held at Woy Woy where such a good time was

had by all last year. It will take place on Sunday, 16th November.

The ionospheric predictions for the R.D. Contest came in for some discussion and all agreed that they were accurate and most useful. Contrary to current policy, the meeting was thrown open to general business before the lecture instead of after. The inevitable result was that an interminable argument developed about Division finances and the position of the official organ "Amateur Radio" in the scheme of things. This argument led nowhere and resulted in an interesting lecture by the President being slightly hurried in order to make time for a discussion and demonstration afterwards. To those many who follow the latest developments in audio amplification, the lecture on that subject delivered in John Moyle's faultless style was most interesting and informative and as usual the lecturer had all the answers to the questions which came up in the discussion. We died-in-the-wool old key-bashers (a dwindling race?) will have to get down to tinkers with some phone soon or get left behind altogether. The discussion was followed by a most instructive and pleasant demonstration of radio and pick-up amplification, all visually monitored on a c.r.o. The lecturer had the Hon. Secretary's assistance in bringing a whole van load of gear for the demonstration and there were many who would have liked to hear a great deal more of it.

The meeting concluded at 11 p.m. when we were ushered out by the caretaker.

WESTERN SUBURBS

ZKS gets along with his share of DX and if head denotes that there is an opening to some place, ZAGT has further improved his signal and gets among it also. ZAEF will move into a new QTH at the end of the year, about 20 yards away. ZNJ now has the ironmongery for atop the tower and will be rotating it soon. ZKH still busy, has got well into the building programme. ZAGX has nice signal. ZAIA been very ill, is rapidly recuperating. ZAMJ still wrapped up in getting good response from that mike, no need to worry Joyce, we all recognise the voice. ZLJ heard quite a lot of late. ZARF on 144 mostly, seems very quiet these days so something must be brewing. ZAGG also in the same boat, but says he will be on the lower frequency bands in the near future.

Burwood Radio Club is a virile institution, more members are showing up and there is plenty of activity for all. Meets each Tuesday night at Greenwood Hall, Liverpool, Enfield. Buses pass the door and all are welcome, come down and have a look see.

ZQC has not been too well of late, hope to see you around soon Jess. ZAWU heard on most bands, works most on the air that is at all possible, very fine effort. ZAAE playing around with his modulator. ZAHU again threatens to become active, heard this afternoon for the first time for months. ZAMP had a go during the R.D. Contest, and did quite nicely as did many more from this area. ZACD

A.O.C.P. CLASS

The Victorian Division A.O.C.P. Class will commence on Thursday, 30th October, 1952. Morse and Regulations are held on Monday and Theory on Thursday evenings from 8 to 10 p.m. Persons desirous of being enrolled should communicate with the Secretary W.I.A., Victorian Division, 191 Queen Street, Melbourne (Phone FJ 6997 from 10 a.m. to 4 p.m.), or the Class Manager on either of the above evenings.

FEDERAL QSL BUREAU

RAY JONES, VK8RJ, MANAGER

Still no claimant for the card from HZITA addressed to VK3AW, and no applicant for the QSL from VU2BC addressed VK3P. Doesn't anyone read these notes?

Bill Storer, VK1BS, now VK2EG, advises that he has completed and mailed all QSLs. Anyone not receiving theirs by end of October please let Bill know.

working on the de-hydrated beam, getting results with it as well, but experiments are not as yet finalised.

SOUTH WESTERN ZONE

Don 2RS active on 40, also Jack 2OY. Stewart 2PL still trying to get fellows at Griffiths interested in Ham Radio. Roy 2DO heard putting in a solid signal during the R.D. Contest. Gordon 2OW also heard on 40. Ron 2RH can be heard "earbashing" nearly every evening on 80, the two main sufferers being 2DY and 2AJO. Have not heard 2AFZ about, what's the trouble Ray OM?

2AJO now has a three element 20 mx beam working OK; no DX yet, but hoping; also getting gear together for 50 Mc. with four element beam and using 807s in final. Not much news this month, but we hope to have more for next if the fellows in the zone come up for a "ragchew" on 80 at 7.30 p.m. on Sunday evenings.—2AJO.

HUNTER BRANCH

Once again serious floods have hit the Hunter Valley. Maitland "copped it" twice within a week, and our Emergency Net was ready for action, but fortunately the main communication lines held. The following were "teed up" in various sections of Maitland: 2XQ, 2DG, 2AKP (with his Bedside Special), and 2ANL. Schedules were kept on 80 mx. In Newcastle, Jim 2ZC did some liaison work between Hunter boys, 2AHH at Kempsey (where position had also) and Police Wireless and R.I. Fred 2AGY and Norm 2AQ8 did good job on duty at Police Wireless Station, while Lou 2TO took Police Van with Emergency Tx through swirling water to isolated township of Morpeth. Associate Mac O'Brien's farm at Miller's Forest was in worst of flood but we hope Mac OK again now.

It was most disappointing to our hard working committee when only a handful of our members turned up to hear Mr. J. F. Anderson, of the A.W.V. Co., lecture on "Transmitting Valve Ratings," at the August meeting. Your committee went to considerable trouble to arrange this interesting lecture and it is up to you chaps to support them. The I.R.E. joined us for the night and provided an excellent supper which was very much appreciated.

At a special meeting called to consider the matter, it was decided to accept the offer of the Tech. College to provide radio equipment

and room to house same, thus enabling the Branch to run its own station. A Technical Committee comprising 2OT, 2XT and 2AHA was elected with power to co-opt. These chaps have big job of converting TA12 Tx, RA10 Rx, SCR522, etc., so buck in and help them fellows. Our President has donated a Tx power supply and our Treasurer has loaned a mike and modulator. This is a great start, and our Management Committee is arranging a roster of Licensed Hams and other details in preparation for opening of station. So, hand your name in right away, don't leave it to the other fellow. Help our Branch, help Ham Radio, and help the other chap get his ticket.

Lionel 2CS just had holiday in Riverina district. 2XT kindly kept 2WI scheds while yours truly flew north for brother's wedding. 28F did very well in first effort, got amongst the VK6s. 2DZ used his Rothman Modulator to advantage. Harold 2AHA right among top scores and did well on 21 Mc. Norm 2ANA thought one VK6 was hard to get on with!!

Lew 2WU getting S9 reports from Ws on 20 c.w. 2AMM was unable to get gear re-erected in time for R.D. Contest. Lakesider 2AAM pleased with Rothman Modulator he has built. Bill 2WP has the TA12C perking on 80, 40, and 20 mx c.w. using single wire matched impedance antenna. Tom 2PQ finds his Rx just as good with one i.f. stage! Old timer 2KQ active again and Jack operating from new shack. Had cross lake QSO with 2AFA, Harry been playing with modulator.

2CN also active again; has built gear into steel rack with common v.f.o. and modulator and separate finals. Ken 2KG keeps weekly 40 mx scheds with VK4s. A new 40 mx 4-d. giving 2MR excellent results. Shorty 2NX will probably build Rothman Modulator—when time available! An all-band antenna is planned by Phil 2ANG. George 2AGD has completed his tape recorder. Ron 2AAJ used miniature Tx while holidaying at Wangi. It was modelled on Bill 2AXM's "Pip Squeak." Ernie 2FP did some brass pounding with the small rig he uses on 40!! As his h.t. tranny "cooked up," Neil 2XY now using 500 aside job which gives him nearly 50 watts. Doug 2ADS does well with ZLs on 40, also works locals on 144. Bill 2PJ using new v.f.o. and working ZLs on 30 mx c.w. 2ASJ grateful to those who have provided transport for him.

Notice of Meeting.—The October meeting will be held at Tech. College, Tighes Hill, on Fri-

day, 10th. One item of business will be the election of committee to arrange Xmas Social.

NORTH COAST AND TABLELANDS ZONE

Quite a lot of water has passed under and also over many bridges since last month and the North Coast had its share of excess water. Fortunately for us, we did not experience the distress which again visited Maitland, but the low lying farms over quite a large area around Kempsey were covered by as much as ten feet of water. In times of distress, such as the flooding of Kempsey and Maitland, it is very pleasing the way fellow Amateurs are ready and willing to help one another and your scribe wishes to take this opportunity of thanking those on the band who helped whilst the flood danger existed.

Crieff 2XO had a visit recently to Coff's Harbour on the occasion of the visit of Marjory Jackson. Congratulations to newly-weds, Ken 2AFP and Audrey, and we do wish them all the happiness possible. Quite a few people are holidaying in this zone at present and am sure they will have an enjoyable time. Ron 2ASJ was at Murwillumbah, whilst quite a few spent their time at Urunga. We sympathise with Alec 2ABU and his wife Jean who had the misfortune to overturn their car near Dorrigo and whilst they escaped serious injury, their lad sustained a broken leg.

Chas 2ADE has been heard pounding brass on 40 whilst Jack 2ADN is getting among the DX on 20 with a 70 ft. high double extended zepp. Harry 2ARY was on deck in case of floods. 2JK has added a son to his five daughters, our congratulations to you and your good wife Jack. Two metre activities look like starting up again shortly as 2AWG has beam and 2AHH a new stock of 7188s. Quite a few of the boys are warming up on 6 mx for the coming summer and it will be very interesting to try 2 mx once contact is established on 6. Results will be awaited with interest.

COALFIELDS AND LAKES ZONE

News of the month—2PZ has hit the air again after a two years silence and has been on 7 Mc. phone and getting out nicely. Ken 2ANU still active on v.h.f. bands and has added 2AGY to his contacts on 144 Mc. Not much heard of 2VU this month, apparently Geoff is carrying on with his re-building programme. 2ADT on holidays, spent the first week in bed, so not

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Cat. No. 706/Y 16-6.7 Mc. " " " " " "	9 4
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very active at the moment. 2YL not active on any band at present and contemplating dismantling some of the gear. No news of any activity from Kurri this month.

The southern gang seem to be more active. 2ARV very busy on 7 Mc. at week-ends. Major 2RU has built a rig for 21 Mc. and has already worked an odd spot of DX on that band. 2GA very pleased with new 144 Mc. gear and managed to hook 2NS. After prolonged efforts, 2KR finally managed a complete QSO with 2ADT on 144 Mc. A defunct 201A is to be exchanged in recognition of this effort.

VICTORIA

NORTH-EASTERN ZONE

According to my information Henry 3HP did not make the Convention as he was being connected to the S.E.C. power lines, and Col 3WQ had that petrol tank trouble still. Associate Jim Harrington was taking a great interest in things; what about doing an A.O.C.P. Correspondence Course OM then things will be still more interesting and easier to follow.

Syd 3CI, Alan 3UI, Peter 3APF and Murray 3HZ are doing a little on 6 mx. Syd's 3YL had the small daughter in a very attractive fancy dress costume at a local function one night recently. Ken 3KR has increased the height of his masts and installed a Lazy H antenna on 20 mx and was right in on Central American and European DX around 1600 hours at the end of August. Tom 3TS is brightening the happy home with a few concrete paths. Rex Anderson, of A.O.C.P. fame last month, is now VK3UR with 50 watts input, nice work OM. 3YV recorded and played back the transmissions on the August zone hook-up, very interesting. Vic 3ABX hopes to move down to Benalla shortly. Have found out only lately that 3ANG was formerly a VK6.

EASTERN ZONE

Fairly quiet in the zone at present, except on Sunday nights when the boys leave the fireside arm chairs for the zone hook-up. 3SS revamping the shack, it now looks almost respectable. David Scott passed the theory OK in the last A.O.C.P., but code tripped him up. Alan Jacka, of Balnardsale, was successful at the same exam. 3IZ's mate, John Batterick, goes for his ticket in the October exam. Good luck John! John tells me the c.r.o. reacted very well to 230 volts of a.c.

The annual meeting of the Sale Sub-Branch was held at Stratford at the home of 3IO. 20 odd members attending, and a good time was had by all. On 18th and 19th October a field day will be held in the Orbest area, as a good try out for possible emergency work in the future, so look out for signals from the zone on those days.

3SS is revamping an ATs for emergency work. 3SG preparing to put a full gallon on the air with a converted TA12. Better remove the rectifier from the b.c. set, Leol 3ABP tells us that Ray Pulford, of the R.A.A.F., now owns the call sign of 3AR0. 3ANC now earning his daily bread and margarine at Warragul. Jeff 3AGF leaving for VK4. 3AMV missing. 3LV another regular on 80. Not very active myself, too cold at night, and having much modulator trouble—blown fuses and pre-amp. hum, just to mention a few reasons. Think I'll take up golf or something!

GEELONG AMATEUR RADIO CLUB

During the month of August members were entertained with a film night given by Chris 3JR. This was held at the Gordon Institute of Technology. Two new members were welcomed to the club and another nominated for membership. Syllabus items were given by Ed 3AKE who brought along a 2 mx super regen. Rx. Members will build this type of equipment to use in the forthcoming field night to be held on the 144 Mc. band. It consisted of a single RL18 and uses a dipole antenna. 3AKE also brought his grid dip oscillator to the club and one of the members was able to get his Rx into the band.

QUEENSLAND

NORTHERN DOINGS BY VK4EL

Harry 4KW on all bands during the R.D. Contest. John 4FH QRL, but found time for R.D. Contest. Alec 4MA last seen en route to Brisbane to attend Uni. there. Bill 4BQ still at it on 14 Mc. They tell me Harry 4ZP has discovered a copper mine, at any rate he now has 33 ft. of it standing vertically for a new all-band antenna, loads up beautifully, so look out DX! Edgar 4GF not been too well of late, but is on occasionally on 7 Mc. and is always good for a rag chew. Ted 4EJ still working on that launch of his, but says it won't be long now before he has a 7 Mc. signal permeating

the ether telling the usual fishermen's tales! Alec 4JM, who also has an interest in the boat, is installing 50 Mc. equipment which he hopes to test out soon with Len 4GD and yours truly on that frequency.

Harry 4XH had his first 21 Mc. contact with the writer of these notes a few days ago, but says he prefers 14 Mc. Frank 4QL has "The Bomb" almost ready, this is a highly compact 8 x 8 x 10 in. mighty Tx that operates on 7, 14 and 21 Mc., with a single switch doing everything, sure has a kick out here at Clevedon! Not much heard of Bob 4RW lately, only heard in the Sunday morning hook-up of the W.I.A. Alan 4BE just finished one of the best 2 element beams the writer has ever seen, it is a masterpiece, and if it works only half as good as it looks, well I know where most of the DX cards that come to Townsville will go to; a mighty job Alan, congrats. Doug 4DB just gone to V.I.B. for a course of 6 months just as he was going to make a comeback on the air. Len 4GD coming on 50 Mc. again in the near future, don't be too long Len. Ted 4MH still getting his, or more than his share of the DX on 14 Mc., say what about coming on 7 Mc. Ted?

Roy 4AX still "spinning the platters," say what about cleaning the cobwebs out of the rig mate? Andy 4BW still pops up occasionally on 7 Mc. with a nice signal and it was the writer's pleasure to be in a three-way QSO with Andy and another old timer, Harry 4HK, the other day; both Andy and Harry had potent signals at this location. 4EL, gee whiz, it's my turn again, well I must confess that I have felt uneasy for months, why? Well, because I don't have a vertical antenna around the place, so the other day I put one up, a 33 ft. end fed Zepp, only 6 ft. off the ground, and the first CQ on 7 Mc. landed me a LA, which only goes to show you!

Would welcome a call from any of the gang up North from Mackay to Cairns on 7, 14, 21 or 28 Mc. to tell me of their goings on for this column.

SOUTH AUSTRALIA

It was my intention to open these paragraphs in some striking new manner as from this month, firstly to attract back to the fold some of my straying readers who are showing an inclination to read a certain scribe's notes from across the western border before mine, and secondly, to show a certain up and coming copy-boy from VK6 just how things should be written. However, my palsey waisy, Tommy (the Editor to you), has assured me that I have nothing to fear from that direction because that scribe still writes his notes on a slate, and therefore postage costs prevents him ever being a menace to me in any direction.

The August meeting took the form of a "buy and sell" night, and quite a varied collection of gear was offered for sale, or as we are forced to say in VK6, offered for tender, that is if we want to stay within the law. The tender receivers (and a tougher two guys it would be hard to find) were Dougal 5BY and Ross 5TW and the three clerical looking gentlemen seated at the head of the table handling the money and the receipts were Dave 5DH, Jim 5FO, and Hal 5AW. Everybody seemed to thoroughly enjoy themselves, and when you consider that the last member left the clubrooms at eleven forty p.m., well nothing further need be said.

Among the visitors were Messrs. C. Robinson, A. Burrow, S. Wigley, R. Cutts, F. Bourne (5BU), M. Brown (ex-5MB), and a well known old-timer, H. Brook (ex-5DP) who, incidentally, has been bitten by the bug again and should be heard on the air any time now under a new call. To these gentlemen we say welcome and hope to see you all again.

Frank 5MZ will be in Melbourne from 10th October until the 14th and is hoping to renew the friendships that he made on his last trip to VK3, and if possible meet some more of the local boys. He will then journey to Ballarat and remain there until the 18th. Frank is a keen Ham, and as he will be travelling with the South Australian Girls' Physical Culture and Dancing Team, which will be competing at the competitions, he should have some spare time to visit a few of the shacks in Ballarat. Look after him boys!

The Remembrance Day Contest has come and gone again and judging from the remarks heard on all sides the Contest this year was even more popular than previous years. I was on the wrong shift to take a very active part, but came on for the necessary contacts to qualify, although had I been able to take an active part in the Contest I don't think that I would have worried any of the competitors, judging by some of the scores that I heard even early on the Sunday morning. This Contest is without doubt the one Contest that all and sundry enter for in the spirit in which it was intended, but I feel, and possibly many others feel the same, that if individual States start running "tickets,"

organising teams to compete to the exclusion of individuals, and all and all running the Contest like an election campaign, then the spirit behind this annual get-together of fellow Hams will eventually be obliterated, to say nothing of the loss of a chance to pay our respects to a gallant band of "silent keys."

"Doc" 5MD has me a little worried, he greets everybody by the name of Micky, he has been seen practicing in his garden with several boomerangs, he has even been seen walking around in a pair of white shorts and shirt, in fact it would not surprise me if one day he sent me a smoke signal to the effect that "Him big medicine man go plurry walk-about." Very subtle, very subtle!

On the 27th August at 9 p.m. twenty metres was dead, and yet at 9:05 p.m. the same band was thick with the lucky ones who heard the Yanks break through at terrific strength. Quite a number of the regulars who hate late this band night after night were caught napping and have been as grumpy as bears with sore heads ever since. The DX stations were audible for more than three hours and brought back memories of the good old days to those who were lucky enough to hear them. Among the lucky ones to get their share were Lloyd 5QL, Harry 5HP, Ross 5LW, Les 5LC and John 5JW. One noticeable fact was that the boys with beams cornered the market, one noticeable exception being 5QL, but even he has been heard to admit that his new location is something out of the box.

Possibly I am a little sentimental or something, but I could not repress a pang of regret as I saw the gear of Merv. Brown (ex-5MB) going down at the auctioneer's hammer at the general meeting. If any gear in VK6 could tell a story of the early days of Ham Radio, that gear certainly could. I could not help but think back to that galvanised iron shed in the back yard of Harold's old home, where dozens of embryo Hams had taken code practice from him, who had struggled through the theory which he had always hammered into them, and had considered that the fitting reward for their night's work was climaxed if Merv would switch on his transmitter and call a CQ. Many a dream was born in that shed, and many a dream came true, only because of the fact that Merv. never gave up hope in a pupil, and it naturally followed a pupil never gave up hope. Incidentally, this Merv. Joker used to carry my wife's school bag home from school, so I am told. She must have been one pupil that caused him to give up hope! "Yes, my sweet, I am coming now to help you with the dishes," You must keep in with these 3YL's you know! In your hat, Brown!

Scott Little, 5AF, is the 1951-1952 winner of the Sir Ernest Fisk scholarship, awarded by the I.R.E. to a student who, in the opinion of the authorities of an approved institution, is considered to have shown the most promise in his radio studies. Congratulations Scott, member or non-member of the W.I.A., it all helps to keep the grand old game of Ham Radio well to the fore. I salute you.

5TW, at the time of writing, has left on a well earned holiday but before Tom left he found time to secure quite a number of contacts in the R.D. Contest. 5CH will be in town on the air supply and day now. Clau has been heard on 2 mx a couple of times lately, so it would appear that the bug is still nibbling a little bit. 5JA is another one to be heard on 2 mx and John is welcomed back to the fold. 5MS is back on the air again and Stuart was heard knocking them over in the R.D. Contest. 5KU will have the beam finished before these notes are read, and Erg will be looking for some stations to try it out on. How did you go in the Contest OM? 5FD seemed to be working a few stations in the Contest, but John does not seem to have been very active this month. 5CJ has been very busy this month, but still Col found time to send in the usual batch of notes. He had a few contacts in the Contest and also manages to squeeze in a few minutes each day on 2 mx. Thanks for all Col.

I was foolish enough to mention over the air that I expected to have my new aerial mast up in the air any day now and to say that I regretted even alluding to the subject would be to put it mildly. Any hour of the day, strange faces could be seen peering over the back fence or looking through the gates and making audible remarks about the strong gales about how masts crack under strain, in fact anything that could be said that would make me hesitate about putting up an up-to-date aerial system. Treating them all with ignore, I went on my way, whistling and singing, just to show them all that a Parsons never turns back and the day dawned when the super-duper structure was ready. Hal 5AW and Jim 5JK came along the morning that it was to take the sky and cheerfully told me that they wanted to be in at the crash, but actually they took over the job and had the mast up in the air whilst I was trying vainly to push a ladder through the almond trees under the impression that I was

pushing against the mast. The job was a huge success and I thank them sincerely, but as I have been spending all my time answering the phone to the "Director of Air" who informed me that I must install aeroplane lights on top of the mast; to the "Director of Navigation," who informed me, with a voice suspiciously like that of Ross S.L.W., that all shipping in the Gulf was at a stand-still because of the new buoy installed at Rose Park; and to all and sundry who felt like appointing themselves as "Directors of any Government Department" that came to their minds, I have as yet had no opportunity to try the aerial out. What about laying off it follows, one day someone really important from a Government Department is going to ring me up on genuine business and will be slightly overcome when I tell him just what he can do.

5TL is at last on the air. Tom made a burst to get going for the R.D. Contest and has been heard on 80 and 40 mc fairly consistently ever since! Has also been dabbling with some simple 144 Mc. gear, but as yet has not applied the ergs. 5RE has returned from his extended holiday in VK6 and "Hobby" is reputed to have found out some of the VK8 gang's secrets. 5MA has been busy on his horticultural pursuits, planting orange trees, with the welcome assistance of 5TL and forwards a photo of these two hard workers in the midst of toil. I recognised you Fred, but was that an orange tree next to you holding the shovel? It was Tom! Well, well, tell him to wear a hat next time just for identification purposes.

5BC has had his nose to the grindstone and has not had much time for radio as a hobby, but has been heard on 40 mc once or twice. Hughie will be on holidays as these notes are being written, if my memory is OK, and also if he runs true to form. 5KW has been building some simple 80 mc gear for semi-portability and Harry has also been re-arranging his 144 Mc. gear. How have you been keeping OM? 5CF did his bit in the R.D. Contest and has been fitting his gear up in a rack and panel, or something. Have you heard SSL yet Murray? Alex Kelly is still awaiting his call sign due to a slight delay over a small matter of details of his frequency meter. Alex will probably be on the air as these notes are being read. Here's hoping anyway.

The monthly meeting of the Upper Murray boys for August was held at the QTH of 5TL and the usual gang rolled up and many and varied were the subjects discussed. Special emphasis was stressed on the piping hot supper provided by Mrs. Laidler, as a matter of fact this supper business seems to be the main activity at these meetings. Could it be intended to make my mouth water. Shame on you Fred!

WESTERN AUSTRALIA

There was once a VK6 who thought the W.I.A. (W.A. Div.) smells. There are two of us now. My revised opinion of the "best Division of the best etc. etc." (to coin a phrase!) is brought about by the fact that the day after these notes have been written, the combined Annual Dinner of the VK6 Division and the Radio Society of W.A. will be held in Perth. Will I be there? Will the Division pay my return fare over 300 miles of air-travel? And my hotel expenses? Will they do all these things so that in a subsequent issue there may appear a brilliantly-written report of the season's most brilliant function? The answers are NO. And I consider the Division most unreasonable. After all the Press is always invited to important shows. So, in the circumstances, all I can do is hope that by the time you are reading these notes you have got over the hangover, but can still remember some of the funny stories you heard on that night of nights.

During the month I was told that our untiring broadcasts officer, 6GH, almost broke his good record recently. So many have been the scientific bigwigs passing through our fair city and so frequent the late nights occasioned by these comings and goings, that George awoke with a rush one recent morning, looked at the clock, saw it was well after 9.30 and dived for the shack to put on 6WI and prepare to make suitable apologies to all concerned. Fortunately his XXL managed to prove to him in time that it was Saturday morning—not Sunday.

6JC, at Kalgoorlie, is about the baldest man in the business if what I hear is true. Jeff, it seems, has had "6MO-itis," i.e., modulator rebuilding fever and the shack floor is strewn with handfuls of hair—Jeff's hair. Talking of Kalgoorlie, reminds me to congratulate 6DX on his score in the R.D. Nice work, Bill. Another Kalgoorlie-ite should be a Cocos-ite by the time this hits the print. 6HM has been posted to Cocos Island and has full intentions of taking his gear with him. Cocos should now be put properly on the map with 28 and 50 Mc. operation, but tell me, Chas., do you get a

new prefix? Perhaps you'll be VKOHH next time we contact. Or are you a new country?

Heard a number of stations working VK3WI at the All-Models Exhibition and among them a VK4 who gave me food for one of those Ripley-isms which delight us all at times. VK4EL, it seems, is a technician at a National regional station which is about as far (or farther) up the East Coast of VK as is the local Regional on the West Coast whereat one, VK6EL works! Ern, incidentally, hasn't been on much of late what with a modulator power supply blowing up and being active with Boy Scouts, Buffs, and other organisations. But let the rumour get around (which doesn't seem likely till about 1954) that 10 mc is wide open and Ern will be back at Ham Radio with bells on!

Nothing heard from Kellerberrin yet, but we have hopes. Come on, Cyril, it only needs a concentrated effort like getting Peg to chop the wood for a week—and you'll be back on the air again.

6WR tells me his new eight-by-eight shack in the backyard is the goods. To use his own words, it's "well away from harmonics and XYLs and other disturbances." What I want to know, Bill, is why the plural? How many XYLs HAS the man got? My advice to Bill is to install an intercom unit between house and shack and keep it in first-class order and always dutifully answer it—for the first month or two. Then, when the choice DX is coming through, remove a wire from a strategic place on the intercom, replacing it again when conditions are not so hot.

6DJ tells me 7 Mc. conditions in the early morning can sometimes yield a piece of DX. Bill worked a G4 at 5 o'clock one August morning. Brrr! And August is our coldest month, too!

Another of the QQEO-stroke-something-stroke-something else addicts is 6JW who now has one of the animals sitting up and begging on 50 Mc. My regular spy who reports the doings of the metropolitan gang on those frequencies which I do not hear here has gone a.w.I. this month and if it were not for Rolo there'd be little or nothing to print. And I'd better be nice to Rolo in future for he has threatened that if I grizzle any more he'll keep me waiting three months instead of two. So just to show you how much I like you Rolo, I'll "smitch" some of your dope for this column and leave the 50 Mc. and higher for the other section.

Rolo's comments on 21 Mc. are: "This band is still not used very much by VKs. I have had many decent contacts with VKs 2, 3, 4, 5 and 9 and also with ZL. Heard a VET on c.w. for about 6½ hours"—note that, gentlemen, there's obviously a household where the XYL DOES cut the wood!—"but had no v.f.o. and no crystal near him. At various times I've heard 6AR and 6DW being called and, I believe, 6EC too." Thanks Rolo.

One final word, gentle reader. If you don't like the notes as they were last month and have been again this time, how about dropping me a line and giving me some gen for next time?

TASMANIA

The general meeting for September was held in the Photographic Society's Room, with Len 7LJ presiding. In the absence of Mr. Bob O'May. The item of business which commanded the most attention was that in connection with a new club room. Various pros and cons were advanced, and the general consensus of opinion seemed to be that it would be much more satisfactory if the Institute possessed its own club room, providing that the financial side could be satisfactorily covered. I would suggest that members give a little more thought to the matter, and I hope I am not striking a too optimistic note when I say that by the time these notes are published, another proposition may be forthcoming, which is likely to meet all our requirements.

The latter part of the evening was covered by Len 7LE with a lecture entitled "Getting Power into the Aerial." Len presented his lecture capably, and after coping with various questions at the conclusion, was shown in no uncertain manner how much it was appreciated by those present.

Our congratulations go to D. M. Richardson, TMR, and S. Medford, TSP, on attaining full membership of the Institute, and we also welcome to our ranks the following Associate Members: E. A. Beard, W. K. Moses, A. Fryce, H. Matuszewski, and H. Rittman. We hope that it will not be too long before we are congratulating the latter members on their elevation to full membership also.

Well, just as I feared, the Remembrance Day Contest has left in its wake, a dearth of news which I find hard to overcome at the moment. I hope this famine will break in the next few

weeks, but as the saying goes, "It's an ill wind that blows no one any good." I find myself in the happy position of being able to give the maximum co-operation to a general editorial request to cut down on space required for notes. Most members are aware of the reasons underlying the above request, and I sincerely hope that the necessity for same is of very short duration.

NORTHERN ZONE

Our last zone meeting took the form of a general discussion night. 7GM came up with a beauty over modulation reports and is still wondering why his 80 metre reports say his percent. modulation is down when his c.r.o. says its 100 per cent. Yet with the same modulation on 40, he gets reports of full modulation. 7TE and 7HY appeared in the R.D. Contest, so did practically all Amateurs in the Northern Zone. 7LX, with a crystal controlled 6w. job, collected quite a few points and proved once again that a low powered rig can get out. 7RK now has his electronic keyer working beautifully. 7BQ now has a new receiver to play with—on he brought back from G land. From 7LZ comes news that his and 7PF's second channel Command receivers are working well and both are happy with them.

7KW overcame his power transformer trouble in time for the Contest and decided to go the full way with his 807 final so jacked up the input to 60w. 7PLX, who now has two 60 waters, 7RK and 7KW, each about 100 yards away from him. Ken is going in for reprisals as he has a new multiband 100w. Tx nearly finished. Max 7CA is still upholding zone honour on 7 Mc., but 7DB, 7AM, 7DS and 7RB appear to be somewhat inactive. In closing this month's notes, we want to award a rare orchid to the gent in VK2 who in the R.D. Contest called CQ about 50 times and ended up with CQ. CQ, this is VK2—standing by for the CQ Contest.

NORTH WESTERN ZONE

It seems that Tasmania has put a very good effort into the R.D. Contest, all the local stations sent in a log and I believe 7KB will have the top score for the State, nice work Ian. Working the full time is certainly worth the effort, even if it is hard to keep awake at times. TWA and 7SF also did a good job, though 7SF would have done better if QRM had not been so strong. A number of new stations were on for the Contest. Some of which were TMR and 7SF and others. 6HM was also heard doing his share, have not heard much of 7AI of late, hope you are alright Ken.

The monthly meeting was held at the home of yours truly and it was decided to hold the next meeting at the Technical School. 7KB decided to continue his appointment as President of the zone. 7AL paid us a short, but enjoyable, visit. Hope to see more of the members from the south in the near future.

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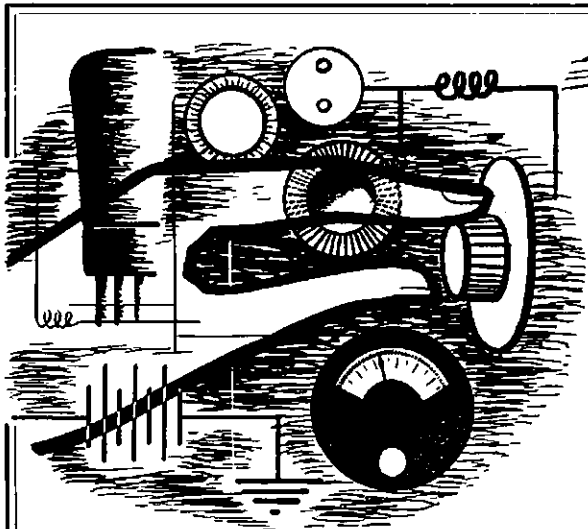
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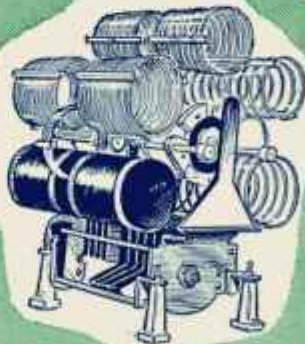
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3511.2 Kc.	7015 Kc.	7058.5 Kc.	8155.71 Kc.
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EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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

VK3WI: Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc. and re-broadcast on 50 and 144 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK1WI: Sundays, 0900 hours EST, simultaneously on 7146 and 14342 Kc. 7065 Kc. channel is used from 0930 to 1030 hours each Sunday for the W.L.A. country hook-up. No frequency checks available.

VK3WI: Sundays, 1000 hours SAST, on 7146 Kc. Frequency checks are given by VK3DW by arrangements only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VK1WI: Sundays, at 1000 hours EST, on 7146 Kc. and 146.5 Mc. No frequency checks are available.

EDITORIAL



"I WAS TELEVISED IN 1952"

Twenty years from now—maybe less, maybe more—thousands of Australian people can cast their minds back to a crowded, noisy, echoing building, where children, along with their parents, enjoyed and were intrigued by an "All Hobbies Exhibition" such as they had never seen before.

At this time, when Television will probably be as commonplace as ordinary amplitude modulated broadcast reception is today, these same people will be telling their children and grand-children, "I was televised in 1952."

This fact in itself was probably not unique because many Australian people saw themselves televised as far back as 1949. But what was unique is the fact that the television equipment with which they were televised was Amateur equipment; the first known Amateur television equipment in Australia.

This was a working exhibit at the Exhibition, completely home-built and installed by Len Moncur, VK3LN, on the stand of the Wireless Institute of Australia, Victorian Division.

As far back as radio goes, the Amateur has been in the forefront in experimenting; from the broadcast frequencies to the shortwave frequencies, from the shortwave frequencies to the very high frequencies, from the very high frequencies to the ultra high frequencies, the Amateur has shown his ability to pioneer the unknown. And now an Amateur has shown, with limited knowledge and equipment, his ability to experiment in the field of television. Admittedly the equipment was relatively simple 130 line tele-

vision on a closed circuit, but given the opportunity, the availability of equipment, the authority to actually transmit the images, there is not a shadow of doubt that the Amateur could continue to improve on this as he has done in the past with other forms of transmission and experimentation.

One day television will come to Australia with all its requirements of highly skilled technicians and operators. The British Post Office has seen fit to license Amateurs in the United Kingdom to conduct Amateur television transmissions in the u.h.f. spectrum, and already two Amateurs have created a milestone in the history of Amateur Radio by successfully conducting the first two-way Amateur television QSO.

The Wireless Institute of Australia is negotiating with the Postmaster-General's Department for permission for Australian Amateurs to conduct television transmissions. The Department would do well to appreciate the great asset of having even a small percentage of the 3,000 odd licensed Amateurs of Australia interested in television, because from the ranks of the Amateurs will come many of the skilled technicians and operators the television industry will ultimately require.

The 625 line television expected in Australia with its inherent complicated circuitry will be far removed from the simple television seen in Melbourne in 1952, but the basic fundamentals must still be understood. What better opportunity is there to educate manpower than to give the Amateurs an early chance to study and experiment?

FEDERAL EXECUTIVE.

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A Unique Crystal Converter for 50 and 144 Mc.

BY C. D. L. TILBROOK,* VK5GL

With the growing interest for v.h.f. experimenting, comes the desire for a receiver capable of doing justice to the bands allocated above 28 Mc. It is quite apparent also that the 6 and 2 metre bands are receiving much more attention for local working, and results obtained with good equipment outpace the lower frequencies for this purpose. The writer has used this type of converter on 28, 50, 144 and 288 Mc., and has no desire to revert to the ordinary type of converter after having appreciated the following features:—

- Set the receiver on a known frequency and wait for that station to come up.
- Read c.w. on 6, 2 and 1 metre with a note like that from an 80 metre crystal transmitter.
- Tune simultaneously, if desired, on the same dial the entire 6 and 2 metre bands.
- Use one good dial (which everybody should have on the station receiver) to tune v.h.f. bands.
- Use the calibrations on the station receiver to read direct in the frequency without reference to a chart or extra dial.
- Listen to more than one station on different frequencies in the same band simultaneously (with the aid of another low frequency receiver).
- Use the transmitter as the local oscillator for duplex working, thus eliminating "birdies."

The circuit shown herewith was designed with these points in mind and although a dual unit is described, the principles are the same for single band use.

CIRCUIT

The circuit in general can be described as a push-pull neutralised triode r.f. stage, push push triode mixer, followed by a cathode follower and a fixed crystal oscillator and multipliers. The oscillator can be of the usual tritret type or can incorporate an overtone type oscillator if desired.

In the circuit detailed, the tritret was chosen as it is more readily adapted to experimenting with different crystal frequencies to give various effects which will be described later.

MAIN RECEIVER

It is essential, of course, that the receiver to which the converter is coupled, has a good dial, good frequency stability, and if maximum advantage is to be had from the converter, a dial calibrated in 100 Kc. steps or better. Between 3 and 7 Mc., drift in the main receiver will, of course, reflect in the converter's performance, but not to such a degree as would be apparent on a variable oscillator type of converter on the v.h.f.

* C/o. Gerard & Goodman Ltd., 192-196 Rundle Street, Adelaide, S.A.

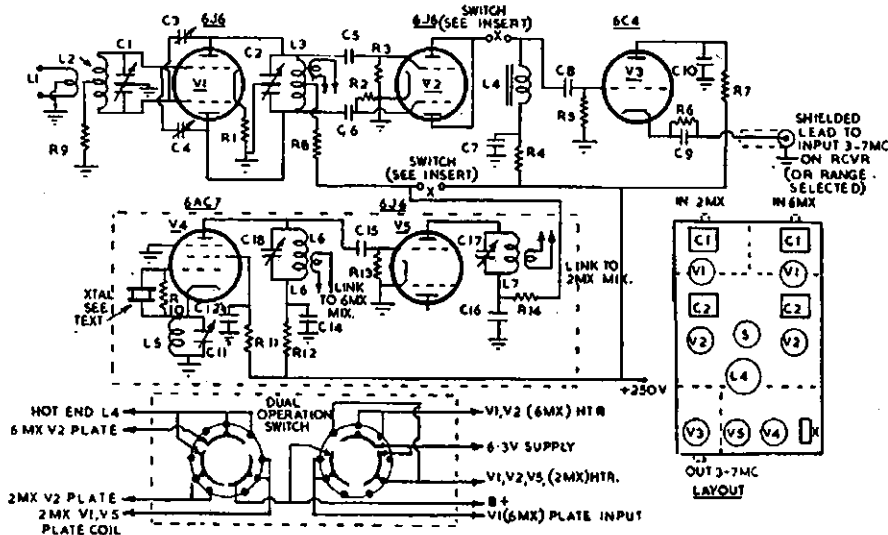
PRINCIPLE OF OPERATION

To cover briefly the principle of operation, let us take as an example the standard superhetrodyne. In this we have (a) a fixed i.f. frequency, say 455 Kc.; (b) a variable oscillator to create the difference or sum, and (c) the fixed station to which we wish to listen. Here we vary the tuneable oscillator to be plus 455 Kc. on to say 1,000 Kc. = 1455 Kc., or minus 455 Kc. from 1,000 Kc. = 545 Kc. By changing things around we could have a fixed or crystal oscillator on either 1455 Kc. or 545 Kc. with the input to the mixer tuned to 1,000 Kc. and a fixed i.f. frequency of 455 Kc. This would give the same result as the previous arrangement. Now if we could tune the i.f. frequency to 465 Kc. using the oscillator fixed at 545 Kc., we would then receive a signal operating on 1010 Kc., or by tuning the i.f. to 445 Kc., we would receive a station on 990 Kc. By using the oscillator fixed at 1455 Kc., we would get the same effect in reverse, e.g. to tune a station higher in frequency than 1,000 Kc., you would need to increase capacity (tune away from the local oscillator 1455 Kc.). For many obvious reasons this arrangement would not be very practical, as we are already receiving the benefit of tuning at low frequencies.

Besides this, if the low frequency local oscillator of say 100 Kc. was used, a carrier would appear every 100 Kc. on the tuning dial unless very strenuous efforts were made to eliminate them.

Let us take a more practical example to suit the Amateur bands based on the above principles. Taking a mixer oscillator combination, suppose we have the oscillator or output of a multiplier on 47 Mc., tune the output of the mixer to a 3 Mc. channel. If a carrier was running right on 50 Mc., a beat will be set up by the difference between the 47 Mc. local oscillator and the signal 50 Mc. = 3 Mc. If the local oscillator was adjusted for 48 Mc. under the same conditions by changing the crystal, the beat will be at 2 Mc. and so on. By the same reasoning, if, when using the 47 Mc. oscillator, a signal comes up on 51 Mc., a beat of 4 Mc. with the incoming signal will be set up.

It can be seen from the above that by tuning the output of the mixer between 3 and 4 Mc., a frequency tuned on 3.1 Mc. would be equivalent to an input frequency of 50.1. $3.2 = 50.2$, and so on throughout the entire 4 Mc. of tuning from 3 to 7 Mc. It is of course necessary to trim up the mixer and r.f. stage input for maximum sensitivity, but



- C1, C2—8 x 8 pF. butterfly (Eddystone Cat. No. 739).
- C3, C4—See text (neutralising conds.).
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- C8—500 pF.
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- R4—10,000 ohms, 1 w.
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- R6, R7—1,000 ohms, 1 w.
 - R8—20,000 ohms, 2 w.
 - R9—100,000 ohms, $\frac{1}{2}$ w.
 - R10—15,000 ohms, $\frac{1}{2}$ w.
 - R11—100,000 ohms, 1 w.
 - R12, R14—30,000 ohms, 1 w.
 - R13—75,000 ohms, $\frac{1}{2}$ w.
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- Pin 1—Plate No. 1.
 - Pin 2—Plate No. 2.
 - Pin 3—Heater.
 - Pin 4—Heater.
 - Pin 5—Grid No. 2.
 - Pin 6—Grid No. 1.
 - Pin 7—Cathode.

this is reasonably broad and needs only a plain knob adjustment.

It is not absolutely necessary to use the range 3-7 Mc. when building single band units, but with the dual unit described, it is essential as by adding a trebler to the 47 Mc. output of the local oscillator, we get a frequency of 141 Mc., just 3 Mc. away from 144 Mc. It is this fact that allows both bands to be tuned simultaneously. If it is desired with single units to use a different i.f. tuning channel, it is only necessary to select the range desired for tuning, say 7-11 Mc. and fix the local oscillator at a frequency equal to the difference between the lowest signal frequency 50 Mc. and 7 Mc. = 43 Mc.

Here a word of warning can be added on the use of overtone type oscillators. A crystal with a fundamental frequency of 8.6 Mc. will not give exactly 43 Mc. on the fifth overtone, but in most cases will be slightly lower. When "locking" this type of oscillator, do not listen on the fundamental frequency of crystal, but on the harmonic on which the output is required. The accuracy of the crystal used in these types of converters is most important if calibration is required to be on the dot, especially on the 144 Mc. unit.

CONSTRUCTION DETAILS

It is assumed that anyone considering the construction of a converter of this type would be conversant with the finer details of construction. Usual v.h.f. wiring practices and mounting of components is the main point to watch.

Any chassis layout can be selected, but the one suggested on the circuit lends itself to short leads and good symmetry where it is required most—in the v.h.f. circuits.

It is a good idea to start the construction by building the complete oscillator section, making sure that output is obtained on 47 and 141 Mc. This can be best verified by the old reliable absorption type wavemeter, as it is quite easy to pick the wrong harmonic when first tuning up.

Next is the cathode follower which is quite straightforward, the output of which is fed into a shielded outlet. The Pye co-axial connectors available from disposals are excellent for this purpose.

After this has been finished, it is recommended that the 50 Mc. "front end" be completed. When the mixer is finished, signals should be heard without the r.f. stage if the aerial is coupled to the mixer input coil. This will enable adjustments to be made in preparation to neutralising the r.f. stage. A strong six metre signal should be audible even if the coil is only somewhere near correct. Slight pruning and adjustment will put the resonance point in the correct place without the worry of the station shifting about by coil adjustments.

The same action should then be carried out on the r.f. stage, adjusting aerial coupling, etc., for maximum performance. It is suggested that the value of R8 be increased to around 50K ohm during the neutralising process and when satisfactory neutralising has been effected, the correct voltage be applied.

The link from the oscillator to mixer consists of one turn close coupled to the cold end of the 47 Mc. plate coil and one turn close coupled to the centre of the mixer input coil. The same

applies to the 141 Mc. multiplier to the 2 metre mixer.

The inductance L4 in the plate circuit of the mixer is a broadly resonant coil slug-tuned to approximately 3 or 4 Mc. Although a disposals 1600 Kc. i.f. transformer with condensers removed from across the winding was used in the original model, the same effect can be had by using the grid coil of a standard broadcast aerial or r.f. coil. This is roughly resonant around 3½ Megs., but is not critical, however, and is really the only "broadband" part of the converter.

CRYSTAL OSCILLATOR

Many combinations of fundamental crystal frequencies can be used. Originally 9.4 Mc. was used and later 11.75 Mc., as easy 6 and 2 metre operation can be obtained on the same tuning range. There is nothing against using a crystal of 7.8333 as the sixth harmonic will be on 47 Mc. An overtone oscillator operating on the third can be used to advantage here as it is only necessary to double once to get to 47 Mc. The writer often uses an 8 Mc. crystal plugged into the 9.4 Mc. crystal socket without any adjustment to tune the 50 Mc. band from 2 to 6 Mc. In fact as the 8 Mc. crystal multiplies to 144 Mc., good reception can be obtained on 50 Mc. without any crystal in the receiver at all with the 144 Mc. transmitter on. The beat is produced between the 48 Mc. multiplier of the 144 Mc. transmitter and the 6 metre band tuned on the 2 to 6 Mc. tuning unit.

A crystal with a frequency of 12.3625 Mc. plugged into the socket without any other alteration to the converter, except feeding the output into the aerial terminal, allows the tuning of the first megacycle of the 50 Mc. band to be tuned on a broadcast receiver, 550-1600 Kc. This is worthy of consideration from a mobile point of view, using the car radio dial for easy tuning.

Many other combinations can be worked out to suit special requirements, but it is necessary to watch that harmonics do not fall in the band to be tuned.

NEUTRALISING

The condensers used for neutralising the 6J6 r.f. stages appear complicated, but in effect are quite simple. The writer used a ceramic strip which conveniently had 4 holes in the right place and brass plates about the size of a threepenny piece were fixed to these. One of the plates was fixed off centre to an ⅜" brass bolt through the ceramic strip, thus allowing it to slide across and about 1/32" from the fixed plate. This small unit was mounted to the shield under the chassis between the r.f. and mixer stages, making possible very short symmetrical leads to connect to grids and opposite plates of the 6J6 r.f. stage.

There are, of course, many other ways of neutralising. One popular idea is to use a short piece of 70 ohm twin lead acting as a small condenser and cutting off a piece at a time until the correct neutralising has been obtained.

If a transmitter is available, neutralising can be accomplished very easily by inserting a meter in the c.t. of the input coil of the 6J6 r.f. stage, and very loosely coupling to the transmitter to

give a grid-current reading. Tuning the plate condenser will show a dip in the "grid" meter if not correctly neutralised and adjustments can be carried out to obtain the desired effect. Another method is to use a signal on the band with the filament of the 6J6 open circuit. Tune the neutralising condensers for minimum signal. If no signal is available, "cut and try" methods will eventually remove all sign of oscillations when the grid or plate condensers are varied.

MIXER-OSCILLATOR COUPLING

In the first instance, the link which connects a single turn around the cold end of the oscillator plate coil to one around the centre of the mixer input coil was switched, but it was found that detuning of the circuit was apparent and affected the drive to the tripler, making it necessary to adjust when switching between 6 and 2 metres. No detrimental effect, however, was noticed when these links were left connected and tuning of the oscillator and multiplier circuits was not affected.

THE CHANGEOVER SWITCH

It can readily be appreciated from the circuit that apart from the plates of the mixer which are at a low frequency anyway, the switching is only in power supply circuits, doing away with the trouble producing r.f. switch contacts. The rather complicated looking design is only necessary if simultaneous tuning of both bands is contemplated. If only 6 or 2 metres are to be tuned alternately, a much simpler arrangement would be a 2 position 3 pole switch, or if you don't mind the extra filaments running (enabling quick switchover), a 2 position 2 pole switch is sufficient. In the one described, the filaments of the section not in use are turned off. The plate connection from L4 and the h.t. to r.f. stage and 141 Mc. multiplier are switched in their correct sequence.

Of course if the converter is to be made for one band only, no switch is required at all.

COIL DATA

50 Mc.—

- L1—2 turns coupled to centre of L2.
- L2—8 turns No. 16, ⅜" diam., ⅜" long.
- L3—8 turns No. 16, ⅜" diam., ⅜" long.
- L4—See text.
- L5—18 turns No. 18, ½" diam., 1" long.
- L6—9 turns No. 18, ½" diam., 1" long.

144 Mc.—

- L1—2 turns coupled to centre of L2.
- L2—4 turns No. 16, ⅜" diam., ⅜" long.
- L3—3 turns No. 16, ⅜" diam., ⅜" long.
- L4—See text.
- L5—18 turns No. 18, ½" diam., 1" long.
- L6—9 turns No. 18, ½" diam., 1" long.
- L7—4 turns No. 16, ⅜" diam., ⅜" long.

OTHER APPLICATIONS

A unit similarly constructed except that it uses an overtone oscillator, giving an output on 25 Mc. from a 6C5, gives excellent results on the 28 Mc. band using the range 3 to 5 Mc. for tuning.

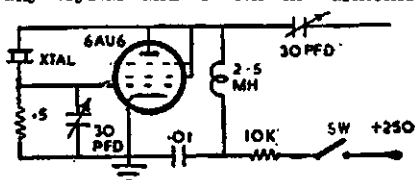
The 288 Mc. unit uses two 6J6s in the oscillator section—overtone oscillator using third overtone of a 10.55 Mc. crystal suitably ground to give 31.666 Mc.—trebling in the second half of 6J6 to 95 Mc. and driving a push pull 6J6 (Continued on Page 4)

A Crystal Marker for Amateur Receivers

BY C. A. CULLINAN,* VK7XW

Readers of "QST" and "CQ" may have noticed a tendency by some manufacturers of communications receivers to include a crystal marker. At first the use of such a marker may not appear to justify its existence, but those Amateurs who have included them are well aware of their advantages. The most obvious is that of checking the calibration of the receiver, or v.f.o., at any time without the necessity of setting up signal generators, etc.

The marker to be described was included in VK7XW's receiver quite a while ago and has repeatedly proved its work. Basically a 6AU6 valve is employed as a Pierce oscillator. The Pierce was chosen as it does not require many parts, will oscillate with almost any crystal and is rich in harmonics.



Normally a 3.5 Mc. crystal is used, but the marker works beautifully with 200 Kc., 1,000 Kc., 3.5 Mc. and 8 Mc. crystals which are available. Coupling into the receiver is via two inches of wire.

* 64 Lawrence Vale Road, Launceston.

The trimmer condenser between grid and ground is absolutely necessary and may be used to obtain a vernier adjustment of frequency. If the crystal is a few cycles high in frequency it can be brought to dead zero beat on exact frequency.

However, this is not usually necessary unless a precision crystal is used as the usual run of crystals will shift slightly as they warm up and with changes in ambient temperature.

Anyhow, try one in your receiver and you will wonder how you got on without it before.

THAT 21 Mc. ANTENNA

Now that we have the 21 Mc. band another antenna is required. Quite a number will prefer beams, which on this band are not too large and can be erected fairly easily, but for the Amateur who does not want to put up a beam or a special antenna, what about the 7 Mc. dipole?

Many of us use a simple half-wave dipole fed in the centre with 75 ohm or 50 ohm coaxial cable. This aerial will operate very nicely as three half-waves on 21 Mc. The radiation pattern is a four lobe field with the major lobes towards the ends of the antenna. A 40 metre zepp will operate equally well on the 21 Mc. band.—VK2VW.

UNIQUE CRYSTAL CONVERTER FOR 50 AND 144 Mc.

(Continued from Page 3)

trebler to 285 Mc.—just 3 Mc. away from 288 Mc. The rest of the design is similar to that described above.

CONCLUSION

Earlier in this article it was mentioned that it was possible to listen to more than one station at a time through the same converter. It can be seen that if one or more extra receivers tuning the range 3 to 7 Mc. having their inputs suitably connected to the cathode follower output of the converter, other stations on the same band could be tuned independently. This has a great advantage in that it enables a watch to be kept on the band while in contact with another station. If, as an alternative, the i.f. tuning channel was the broadcast range, as many b.c. sets as available in the room would receive as many independent stations. This system, in restricted form, can be used to advantage for group monitoring purposes or for cross-band v.h.f. hook-ups. If you are located near a strong local broadcast station, certain spots on the band may be unuseable due to broadcast signals leaking through that channel.

These suggestions have been mentioned only as a matter of interest. Perhaps many other applications can be found and individual modifications made in design to suit particular applications.

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1525—21	200, 230, 240	—	—	2.5v.—10a. (1,000v. insul.)	47/6
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*983—1A	25	20/5	30/300	90	1,000	65/6
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A Simple 80 Metre Transmitter

BY VAUGHAN WILSON,* VK2VW

With the Remembrance Day Contest looming in the offing and a study of the Ionospheric Predictions showed that the 80 metre band would provide most of the points during the hours of darkness, the writer decided that it was time to do something about a transmitter for that band.

A certain amount of thought was given to the matter and it was decided that the following requirements would have to be met:—

1. Funds being low, the transmitter would have to come out of the junk box.
2. The transmitter would have to be simple, and yet capable of 100 watts input.
3. As space was not available to erect a half-wave antenna, the transmitter would have to load satisfactorily into a short antenna without complicated aerial couplings units.

A few minutes sketching on a piece of paper evolved the circuit shown which would meet requirements two and three and a search of the junk box proved that requirement one could also be met.

In the writer's case the existing power supply and modulator were used and these are not shown in the circuit diagram. If you are starting off from scratch, any conventional power supply capable of delivering 500 volts at 250 Ma. and a modulator capable of 50 watts of audio will do the job. There are plenty of both described in the various handbooks.

The r.f. section of the transmitter is quite straightforward and no trouble should be experienced in getting it going.

The oscillator may be crystal controlled or alternatively the oscillator stage may be used as a buffer when v.f.o. control is desired. The method of coupling the v.f.o. to the buffer stage is of interest.

In the shack here the v.f.o. is about ten feet away from the transmitter and is coupled via a length of 70 ohm co-axial cable. The normal method of coupling a v.f.o. is to a tuned grid circuit with small link coils, but in this case the output of the v.f.o. is on 80 metres and it was thought that a tuned grid and a tuned plate circuit was asking for trouble.

In the circuit shown, the 6V6 buffer operates as a grounded grid stage and will not oscillate. The r.f. from the v.f.o. is coupled into the cathode circuit across a resistor which terminates the characteristic impedance of the co-axial cable. The stage has some gain, quite sufficient to drive the 807s to 10 Ma. grid current. The total cathode current of the 6V6 is 35 Ma. with a plate voltage of 250 and a screen voltage of 200.

Precautions were taken against parasitics in the p.a. stage as a matter of course. It may work without the suppressors but it is advisable to include them to be on the safe side.

The p.a. output circuit is a little unconventional, but it works very efficiently and has the advantage that it will load satisfactorily into any load impedance from about 2 ohms to 100 ohms, which means almost any piece of wire up to about five-eighths of a wave long.

The coil is one of the revolving type taken from a piece of disposals equipment. Most junk boxes contain at least one. About 20 turns are all that are necessary.

Tuning procedure is simple. With the power on and the oscillator and/or buffer tuned to resonance, rotate the coil slowly, at the same time swinging the tuning condenser through its range until a setting is found where the plate

current dips. This indicates that the tank circuit and antenna are at resonance.

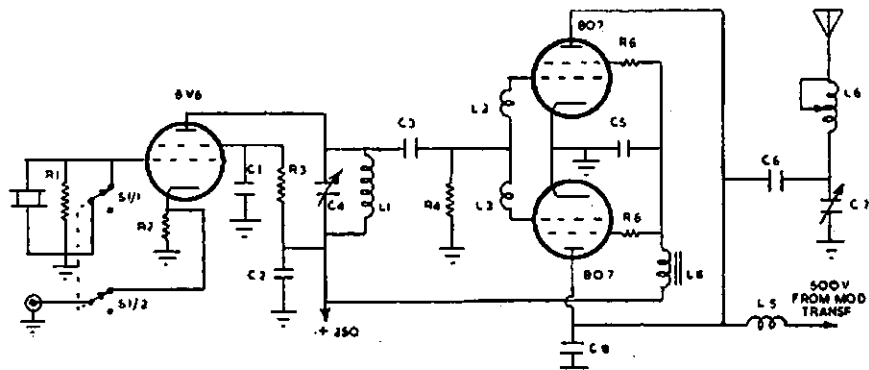
Now adjust the loading by means of slight variations of the coil, keeping the circuit at resonance by means of the condenser until the correct plate current is obtained. The transmitter is ready for use.

The efficiency of the aerial varies with length, naturally the shorter lengths being most inefficient, but it was found that six feet of wire would radiate a signal strong enough to get S9 from VK3-4-5.

This type of tank circuit, which is an adaption of the familiar Collins Pi Coupler, would be ideal for mobile or portable equipment.

Typical meter readings obtained are shown below:

- 6V6 Cathode Current 35 Ma.
P.A. Plate Current 200 Ma.
P.A. Plate Volts 500 volts
P.A. Grid Current 10 Ma.



S1—2 position 2 section switch.

R1—50,000 ohm, 1 w.

R2—75 ohm carbon.

R3—10,000 ohm, 5 w.

R4—15,000 ohm, 2 w.

R5, R6—100 ohm carbon.

C1, C2—0.01 uF. 600 v.w.

C3—100 pF. 600 v.w.

C4—150 pF. variable.

C5—0.002 uF. 600 v.w.

C6, C8—0.002 uF. 1,000 v.w.

C7—150 pF. variable.

L1—30 turns 1" diam., spaced diam. of wire—20 s.w.g.

L2, L3—10 turns 24 s.w.g. on 1/2 watt resistor.

L4—30 henry filter choke.

L5—2.5 millihenry R.F.C.

L6—Roller-type coil, about 20 turns 3" diam.

C.W. Ratings of Some Receiving Type Tubes

The newcomer to Amateur ranks sometimes finds himself in a quandry in establishing ratings for receiving type valves when used for transmitting purposes. Therefore the following list, abstracted from "Radiotronics" No. 136, should be of interest as it shows the

maximum ratings in c.w. service. In all cases, the maximum value of the grid resistor is 100,000 ohms. The power output is the valve output based on 70 per cent. plate efficiency, whilst the frequency rating is for full power output and input.—VK7XW.

Valve Type	Max. Plate Volts	Max. Screen Volts	Max. Grid Volts	Max. Plate Ma.	Max. Screen Ma.	Max. Plate Dissipn. (Watts)	Max. Screen Dissipn. (Watts)	Power Output (Watts)	Max. Freq. (Mc.)	Grid-Screen Amp. Factor	Max. Grid Ma.
6AG7	375	250	—75	30	9	9	1.5	7.5	30	22	5
6AK6	375	250	—100	15	4	3.5	1.0	4	60	9.5	3
6C4	300	—	—100	25	—	5	—	5.5	60	—	8
6F6	400	275	—100	50	11	12.5	3	14	30	—	5
6V6GT	350	250	—100	47	7	8	2	11	30	—	5
6L6	400	300	—125	100	12	21	3.5	28	30	—	5
6N7	350	—	—100	30	—	5.5	—	7.25	30	—	5

* 26 Wilson Street, Maroubra, N.S.W.

ODDS AND ENDS

BY J. M. COULTER,* VK5JD

Many Amateurs are unaware that a number of articles, designed primarily for other trades, are very easily adapted to their hobby. It is the purpose of these lines to point out a few such items and briefly describe some of their applications.

ELECTRICAL

Appliance Connectors.—These consist of two parts, the male and female. Whilst the female may be a little bulky, it is none the less effective and is much preferred to having long flexible leads attached to power supplies, signal generators, and the like.

Both sections may be purchased but the writer prefers to construct the males from 3/16" brass rod which is cut into lengths of approximately 1 1/4". One end is threaded to take 5/32" Whitworth nuts for mounting on an insulating strip. When completed, the male section is mounted in a suitable position on the piece of equipment and wired to the primary of the transformer.

Every-day examples of the use of these connectors may be seen in any home on domestic irons, toasters, etc.

Flush Inlet Sockets.—These are also male connectors and are preferred where the equipment itself is not earthed. They are a little more expensive than the previous item, but are well worth the additional outlay.

Wiring Connectors.—Wiring connectors may be obtained in both porcelain and bakelite. The former are supplied in one, two or three way and make excellent terminals for reasonably high voltage power supplies. The construction is such that accidental contact would be impossible.

The bakelite type are supplied in strips with a total of 24 connections. They make ideal terminals for lower voltage power supplies and facilitate inter-wiring of equipment and controls.

T.R.S. Junction Boxes.—These are extremely neat and handy bakelite boxes supplied with two or four terminals. With the cover in position they give complete protection from accidental shorts or shock. An inspection of these boxes will suggest a dozen uses in the Ham shack.

Neutral Links.—As the name implies, they are manufactured for use in the neutral side of the a.c. supply, but many other uses may be found in inter-wiring, etc.

Nipples and Flexible Conduit.—This combination is particularly useful where complete shielding of the a.c. supply is required between power outlet, control panel and transmitter, etc. Whilst this system is to be preferred, the reader is advised to consult the supply authority as there are a number of conditions (which vary from State to State) in regard to a.c. supply wiring.

The nipples have a thread and lock nut at one end for attaching to a cabinet and a clamp at the other to grip the flexible conduit. The proper use of these fittings provides a safe, neat system of wiring the a.c. supply from outlet to equipment.

Switches.—The variety in style and shape of switches is considerable, but there are a number which are particularly useful to the Amateur Radio enthusiast. Among these are the flush-mounting and micro switches.

The former may be mounted behind panels, have greater current rating and are more durable than the toggle switch.

Basically, all micro switches have the same movement, but the actuation differs, making it possible to use them in a number of ways. They may be used as door switches, panel switches, operated by relay or mounted on the side of a telephone switch so that an a.c. line may be made or broken with a number of other low power d.c. circuits.

Ceiling Roses.—These are useful where it is necessary to join a solid cable to a flexible lead or even as a junction. In the latter case, a piece of fibre should be fitted within the rose to prevent any possibility of contact through the unused hole.

Ceiling roses may be obtained with two or three terminals.

Silver Plated Switch Contacts.—A number of different types are available for replacement purposes. They will be found handy for re-vamping relays, etc.

HARDWARE

A number of accessories may be more cheaply obtained at the hardware merchant than at the radio dealer. Among these are draw handles and "insertavents."

The former are in a variety of sizes and styles and in the shack become chassis handles.

The "insertavents" may be described as gadgets for putting the "finish" on ventilating holes. They are a nickel plated circle enclosing a piece of "fly" wire. Backing this, is a serated edge for crimping in position.

TOOLS

The Spring Loaded Punch.—This is an extremely useful tool for "centrepopping" socket holes, etc., as the operation may be done with one hand. Just place the punch in position and "press." There's a click and spot is marked! Provision is made to vary the pressure of the spring for working on different materials.

Abra File.—This tool is about 1/2" in diameter and is designed, together with adaptors, to fit a hack saw frame. It may be used to cut holes of any shape in almost any material such as sheet steel, brass, or aluminium and polystyrene, etc. However, the size of the hole is limited by the clearance of the hack saw frame and the relation of the hole to the edges of the job.

Washer Cutter.—These tools are satisfactory for cutting holes of a half to three inches in diameter in aluminium, copper, etc. With specially hardened cutters, they may be used on steel. Lubrication is most important. Oil should be used freely.

In concluding this brief outline of odds and ends, it is hoped that these tips will prove useful and that others may be encouraged to forward similar ideas.

AMATEUR CALL SIGNS

FOR MONTH OF SEPTEMBER, 1952

ADDITIONS

VK—New South Wales
ZDP—M. T. Webb, 178 Albion St., Annandale.
2FU—G. Pollock, 116 Smith St., Summer Hill.
2IR—C. E. Bardwell, 33 Moore St., Harbord.
2NV—L. A. Wade, 6 Edgar St., Auburn.
2QL—F. T. Hine, 18 Bridge Road, Homebush.
2APY—F. J. Timmins, Pacific Highway, Stokers Siding.

Victoria

3AC—R. Cameron, 43 Mackay St., Prahran.
3ID—J. A. Elton, 23 Wentworth Av., Canterbury.
3VC—R. K. Wicks, 35 Berry Av., Edithvale.
3ACV—C. N. Stilwell, 263 Boundary St., Bendigo.
3AEY—O. L. Evans, c/o Station 3TR, Sale.
3AGQ—G. P. Butler, 70 May Road, Nth. Fitzroy.
3ARO—R. C. Pulford, St. Helena Rd., Greensborough.

South Australia

5DT—B. Hannaford, 3 Russell Av., Hazelwood Park.
5UZ—H. E. E. Brock, 2a Marlborough St., Fullarton.
5YM—G. N. Growden, Wedge Island, via Port Lincoln.
5XN—L. E. Werner, 28 Overland Rd., Croydon Park.

Territories

9YY—A. J. Smith, A.W.A. Aviation Service Depot, Govt. Aerodrome, Lae, N.G.

ALTERATIONS

VK—New South Wales
2BD—1 Silver Street, Marrickville.
2MQ—12 Clyde Street, Rydalmere.
2OG—Merelyne Ave., West Pennant Hills.
2RQ—5 Pleasant Way, Blakehurst.
2AOC—Nepean Hotel, Great Western Highway, Emerald Plains.

2APA—"Aramol," 364 Norma Road, Palm Beach.
2AQS—Police Station, Delegate.
2ARK—Post Office Residence, Cummoock.
2AVE—Melrose Shoalhaven Street, Klamla.
2AVT—No. 1 Flat, Beach Road, Edgecliffe.
2AWS—Pacific Drive, Port Macquarie.
2AZH—6 Third Avenue, Jannall, Sydney.

Victoria

3DW—Deschamps Street, Lillydale.
3IQ—Rundle Street, Ararat.
3JG—58 Stradbroke Av., Swan Hill. (Postal: c/o Dept. of Agric., Box 202 Swan Hill).
3SV—Landsend Street, Castlemaine.
3VT—13 Serpentine Street, Surrey Hills.
3VG—7 Templeton Street, Sale.
3WR—45 Darling Street, South Yarra.
3AAM—18 Hawthorn Road, Caulfield.
3AAW—Signals Section, R.A.A.F., Sale.
3ALX—37 Wolesley Grove, Brighton Beach.
3AOC—43 Empress Street, East St. Kilda.
3AOP—46 Heather Street, West Geelong.
3ARI—6 Burnett Street, Mitcham.

Queensland

4GW—Leeson Street, West Bundaberg.
4XF—c/o. R.C.A. Photophone, 173 Ann Street, Brisbane.
4XY—Octantis Street, Coorparoo.
South Australia
5HI—11 Kitchener Avenue, Netherby.
5RO—30 Ryan Ave., Woodville West.
5VJ—Dickens St. (Trust Homes), Port Lincoln.
5VK—Snuggery (P.O. Box 77, Millicent).
Western Australia
6HM—c/o. D.C.A., Cocos Islands.
6JN—55 Drummond Street, Bedford Park.

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"Amplifiers, the Why and How of Good Amplification"

"Amplifiers, the Why and How of Good Amplification," by Briggs and Garner. We are quite sure that the quest for the perfect amplifier is one which takes the spare time of quite a number of radio enthusiasts, Amateurs included, and therefore we feel that the book mentioned above will be of considerable interest to a great many readers.

The treatment is unusual as in spite of the highly technical nature of the subject, the reader, through the simply worded text and the disarming style of the writer, finds he has negotiated a complicated subject without finding it difficult.

To illustrate the various points under discussion, large numbers of oscillograph photos are provided, which also helps to give a clearer understanding to the reader.

The subjects covered in this book are numerous and every aspect of amplifier design is discussed, always from the point of view of the man in quest of the perfect amplifier. One chapter which impressed me considerably was the one on phase changers. The tabulated data on the various types, their good and bad points, and the best recommended types to use, would be a must for all amplifier enthusiasts.

One could go on mentioning the various chapters in the same terms, for all have a great deal of information in them, but it is suggested that the next

time you are at McGill's Agency you take a look through this book, and if you follow the quest for the perfect amplifier, it is our guess that it will be residing on your bookshelf.

Our copy from McGill's Agency, 183 Elizabeth Street, Melbourne, who hold Australian distributing rights for this publication. Price 23/9 and 1/- postage.

Philips' Valve Manual

The new Philips' Valve Manual is a most comprehensive tabulation of all the necessary valve data, and socket connections, completely up to date, and its main value to the Amateur is the fact that it covers both American and Continental types, thereby giving a complete coverage of all types likely to be met with in Australia.

The book is fitted with a spiral spring binding so that it will lay flat at any page, and has a semi-stiff cover. In size and information it is a vast improvement on the previous Philips' valve data book.

We are indebted to McGill's Agency, 183 Elizabeth Street, Melbourne, for our copy. Price 8/6.

TECHNICAL ARTICLES

The Technical Editor reports that the technical articles' bag is very nearly empty, so how about it chaps?

Don't forget the beginners have to be catered for, so articles on beginners' equipment are also welcome.

IDEA FOR BARING PLASTIC INSULATED HOOK-UP WIRE

The usual methods of baring P.V.C. insulated hook-up wire are either to cut the plastic with a knife, which is not only tedious, but often damages the wire strands, or to drag the plastic off with a pair of cutting pliers which leaves a ragged end.

The following method is both quick and effective and leaves a neat end on the plastic.

Twirl the wire against a corner of the bit of a hot soldering iron, so melting a groove in the plastic. The end of the insulation may then be removed generally with a light tug with the fingers or at the most with a pair of pliers.

The finished job will have a slight knob on the end of the plastic and this may be smoothed down with a hot soldering iron if it is a disadvantage.

—D. E. Hosking, VK5DH.

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 27th November, 1952, on 7 Mc. Details of the operating procedure and times of operation will be found on page 8 of the January, 1952, issue of this magazine.

IMPORTANT!

The Book of the Year . . .

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The How and Why of Good Amplification

By BRIGGS & GARNER — — Trade Enquiries Invited

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AVAILABLE NOW!

Western Australia Does It!

Congratulations to the Western Australian Division in breaking the iron-like grip on the Remembrance Day Trophy held by the Tasmanian Division for the past three years. There is no doubt that Western Australia worked hard for its comparatively comfortable (sleepless for some) win from Queensland, the efforts of which were none the less meritorious. Tasmania followed in third place and although there was again, marked evidence of good organisation and support within the Division, there was an inadequate number of sufficiently high scores to come out triumphant again.

Although no Divisional organisation as yet exists in the Territory of Papua and New Guinea and thus the entry could not be accepted as competitive, a number of VK9s participated whose scores have been tabulated and a total arrived at in conformity with the rules. Whilst referring to Territories, VK1RG, on Macquarie Island, exchanged serial numbers with many mainland stations, some of whom claimed points for the contact. As the rules as published made no provision for participation by VK1 Amateurs, no points could be allowed. However, the matter of VK1 activity in future R.D. Contests might well receive the attention of Divisions for amendment of the rules as deemed necessary.

As has been found since its inception, the Contest again proved most popular, a total of 418 logs being received as

compared with 384 in 1951, 20 of the additional 34 coming from Western Australia. The only other State to show a marked increase in number of logs was Victoria. In individual scores, however, the all-time high total of 664 set by VK6RU in 1951 was topped this year by VK4CB with 784, VK4FP 760, VK7KB 734, VK6RU 728, VK2AHA, and VK6FL 725 and several others. Whilst in no way detracting from the efforts of these Amateurs, the higher scores by comparison with other years are in a way, a measure of the activity. It is interesting to note that the highest scorer used telephony exclusively on 3.5, 7 and 14 Mc. for 297 contacts and managed four hours sleep! VK6FL mustered the highest number of contacts, 302, using c.w. and telephony on 7 and 14 Mc. Listeners' Logs were received from B.E.R.S. 195, Eric Trebilcock, and Mr. F. H. Price.

Little use appears to have been made of the 21 Mc. band although from a perusal of logs, it seems that the band was open during daylight hours for contacts over comparatively long paths, e.g., North Queensland to Tasmania, and East Coast to Western Australia.

With reference to logs, the standard generally was quite high and in some cases, considerable attention had been paid to neatness and accuracy which greatly facilitate the task of the Contest Committee. A number of stations had duplicated QSOs and where points were claimed, the scores were reduced

accordingly. Several competitors, some with high scores too, did not show a sub-total of points claimed at the bottom of each page, others did not add them up at all, and one with a considerable number of contacts didn't bother to claim any points!

The success of the Contest is a mark of appreciation for those of our ranks who gave their lives in service to their country during World War II. It is an opportunity to renew old acquaintances, many of whom only appear from year to year in the R.D. and it is not infrequent during the Contest that one hears "see you in twelve months." Some of these old familiar calls have not only been heard in all post-war R.D. Contests, but were entrants in the pre-war Fisk Trophy and more recent All Band Contests.

May the 1953 R.D. Contest be an even bigger success with more entrants and logs from all States—in particular New South Wales and Victoria.

—Federal Contest Committee.

REMAINING SCORES

In addition to the six leading logs from each State, the following were also received to help swell the various States' totals and thus increase the bonus:—

NEW SOUTH WALES					
VK2AWU 470	VK2AMB 179	VK2AJO 106			
2AYP 441	2GT 177	2XN 94			
2GW 431	2EO 175	2AJQ 85			
2BO 424	2ASJ 170	2ZQ 83			
2ATS 417	2IC 169	2AJL 81			
2BQ 366	2AAI 162	2AGT 79			
2VW 352	2AHI 148	2APP 78			
2ASM 317	2AEN 145	2ACC 77			
2OY 314	2ABO 144	2SR 75			
2AHM 290	2EL 143	2OW 73			
2AAB 279	2QV 142	2ACX 73			
2CN 245	2JZ 138	2AAW 68			
2ADT 234	2ASW 124	2RA 66			
2OA 225	2AVG 120	2SF 63			
2XO 197	2AHP 110	2RF 62			
2XQ 191	2AVK 109	2ST 62			

1952 R.D. CONTEST RESULTS

	VK6	VK4	VK7	VK2	VK3	VK5	VK9
Division	VK6RU 728	VK4CB 784	VK7KB 734	VK2AHA 725	VK3JE 568	VK5FO 557	VK9GW 630
Scores:	6FL 725 6KU 670 6KW 643 6VM 608 6DX 603	4FP 760 4RT 686 4TN 677 4CC 615 4KW 554	7GM 647 7RK 569 7AJ 457 7LJ 455 7JD 333	2DG 628 2DO 578 2VN 566 2WH 557 2ANN 535	3HG 498 3ADW 491 3ALQ 449 3AHH 448 3FH 440	5EN 513 5KN 413 5RR 350 5HI 347 5WO 340	9FN 375 9WK 245 9HI 108 9ML 81 9DT 16
Aggregate:	3977	4076	3195	3589	2894	2520	1455
Average:	662.8	679.3	532.5	598.2	482.3	420.0	242.5
No. of Logs:	50	54	45	83	103	76	7
No. of Licences:	181	303	105	1028	955	330	36
Bonus:	183.1	121.0	228.3	48.4	52.0	96.7	47.2
Total:	845.9	800.3	760.8	646.6	534.3	516.7	289.7



Valves, new, boxed, R.C.A. 834s, £1/8/- each. 6C4s, 12/- each.
 Limited number of the following Taylor Tubes: TZ20s, £2/10/- each; TB35s, £6/10/- each.
TRANSMITTERS ALTERED FOR BUSH FIRE AND FISHING BOAT WORK.
 CRYSTALS, as illustrated, 40 or 80 metres, AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

20 metre Zero Drift, £5 each. Large, unmounted, 40 or 80 metre, £2 each.
 Special and Commercial Crystals—Prices on application. Crystals re-ground, £1 each.
 BRIGHT STAR CRYSTALS may be obtained from the following interstate firms: Messrs. A. E. Harrold, 123 Charlotte St., Brisbane; A. G. Heeling Ltd., 151 Pirie St., Adelaide; Atkins (W.A.) Ltd., 894 Hay St., Perth; Lawrence & Hanson Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 409 Lonsdale St., Melbourne; Prices Radio, 5-6 Angel Place, Sydney.

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 Prompt delivery on all Country and Interstate Orders. Satisfaction Guaranteed.

NEW SOUTH WALES (Continued)

VK2HC	59	VK2QZ	46	VK2ANL	32
2AFA	59	2ATM	45	2AJZ	30
2JU	59	2ABB	45	2AAJ	26
2PL	56	2ZC	43	2AXZ	19
2JF	55	2RK	36	2PV	18
2PK	54	2KQ	36	2DI	17
2RM	48	2ANF	36	2HM	17
2HZ	47	2XU	33	2XT	17
2RS	47	2UC	33	2RU	13
2TF	47			2OT	12

VICTORIA

VK3AAP	431	VK3LV	105	VK3ABA	23
3AOW	429	3ABP	105	3DG	23
3ASB	424	3WQ	104	3VZ	22
3IZ	411	3AZK	103	3AHK	22
3FD	410	3JJ	101	3SP	19
3AWW	358	3EO	100	3IK	19
3OM	385	3AJG	98	3QZ	16
3XB	376	3GZ	93	3ZM	15
3ZA	349	3ARV	92	3UG	14
3AVB	279	3IO	89	3LA	14
3RN	279	3ALY	82	3XH	10
3ZO	278	3YW	76	3OJ	8
3AN	257	3ZV	72	3II	8
3AZW	253	3HL	69		
3HE	234	3AMD	68		
3PG	230	3AGF	66		
3YF	229	3EW	64		
3AZV	222	3ADU	61		
3ASG	215	3IJ	59		
3HT	215	3UR	58		
3YV	206	3ED	55		
3ACA	194	3FO	52		
3ND	187	3AT	51		
3AAF	176	3AKW	51		
3SX	168	3ARM	48		
3XU	166	3TB	45		
3ACI	162	3KV	44		
3ANA	149	3YS	42		
3IC	142	3ACJ	41		
3ANS	138	3AJA	38		
3AKO	137	3ALG	37		
3PL	135	3ME	37		
3XD	135	3ALD	36		
3KE	132	3AXC	35		
3XJ	132	3TH	34		
3EB	128	3JI	32		
3AFF	126	3ARL	28		
3AKV	125	3TO	26		
3TI	124	3ADP	28		
3ALP	118	3DP	25		
3ZS	114	3AJU	25		
3AIM	107	3AVM	24		

QUEENSLAND

VK4QL	551	VK4OR	81
4DO	417	4BE	79
4DI	406	4KK	66
4EC	400	4KS	65
4FE	374	4GG	53
4ZB	331	4WD	46
4WF	315	4SN	44
4XG	296	4AW	42
4XR	293	4NG	38
4RH	281	4BG	38
4RL	268	4ZP	37
4PT	256	4CF	33
4EL	237	4FT	32
4XL	216	4AF	32
4CK	187	4SU	28
4JF	174	4PX	23
4FB	160	4HZ	22
4RJ	130	4HD	18
4SF	128	4PD	17
4HW	127	4FJ	14
4HA	108	4ZZ	13
4HH	93	4RW	13
4GA	85	4JO	11
4GH	83	4CZ	10

SOUTH AUSTRALIA

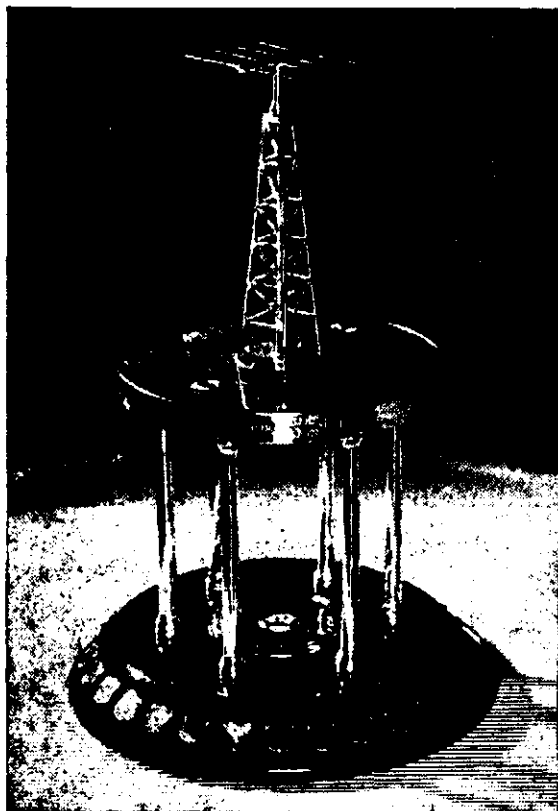
VK5JT	323	VK5EH	104	VK5TL	43
5LC	317	5BY	103	5XU	43
5WY	314	5BF	103	5CT	39
5AX	301	5GM	103	5YQ	35
5DP	289	5JN	102	5FD	32
5CE	283	5RY	102	5MK	32
5FM	283	5TW	100	5KU	31
5CO	275	5HN	99	5KE	29
5LB	259	5HP	92	5ZL	29
5WQ	259	5RK	86	5PS	27
5XK	256	5AP	83	5WM	27
5DH	246	5JL	81	5CT	24
5LQ	231	5OD	81	5KS	24
5MZ	231	5JK	78	5OZ	22
5CA	217	5PW	76	5JM	18
5LD	216	5AW	69	5KY	16
5MD	188	5TD	65	5EA	14
5GF	172	5JG	63	5MA	11
5OC	147	5OK	58	5ZY	11
5JO	137	5MR	57	5WR	9
5WF	134	5WI	54	5JD	7
5JW	113	5CY	54	5TA	7
5TJ	107	5BZ	52		
5MS	106	5FJ	49		

WESTERN AUSTRALIA

VK6DW	497	VK6BC	55	VK6BO	15
6HK	422	6LL	42	6UF	14
6GU	377	6WZ	34	6DF	14
6EC	355	6AV	30	6TY	13
6DJ	349	6AS	30	6WT	13
6AZ	331	6VK	23	6BG	13
6GA	322	6HS	23	6SR	12
6WW	228	6ZZ	23	6GB	12
6JC	206	6RW	22	6JA	12
6LJ	129	6DU	19	6RS	12
6AR	119	6GH	17	6XG	12
6TK	97	6TB	17	6JK	12
6BO	83	6AG	16	6JS	11
6MB	82	6FT	15	6HR	11
6WM	69			6XF	10

TASMANIA

VK7DZ	328	VK7JT	154	VK7CK	51
7DW	325	7RX	140	7DM	49
7AL	291	7MR	127	7AG	48
7LZ	273	7RY	108	7SA	40
7WA	232	7FJ	83	7SD	39
7YH	180	7RM	75	7FP	34
7KA	170	7AM	70	7BJ	26
7AI	165	7OM	53	7TE	26
7SF	158	7SK	52	7CA	24



Western Australian Division of the W.I.A. wins the Remembrance Day Trophy

TASMANIA (Continued)

VK7WI	23	VK7LE	17	VK7XW	11
7LX	21	7BH	16	7HB	10
7LL	21	7GB	14	7XL	6
7AB	17	7KX	13	7SR	5

NEW GUINEA
VK9XX 12

Logs from VK5BU and VK7BR were not eligible due to insufficient contacts.

Check logs were received from VK6LG, B.E.R.S. 195, and Mr. F. Price, Perth, W.A.

Don't Forget! Closing Date for Copy for January issue is 1st December.

"TIME ZONES OF THE WORLD"

No Ham should be without a copy of this new publication. Here, for the first time, is a booklet of a handy size devoted solely to an up-to-date documentation of time as it is observed throughout the world today. A time chart to end all time charts! Compiled with the assistance of authorities in over 40 countries, "Time Zones of the World" carries over 300 country listings, six pages of maps, and a UNIVERSAL time indicator. This is true value for 2/9 New Zealand currency. Mail by money order now to C. G. COSTELLO, 115 Hobart St., Miramar, Wellington, N.Z.

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Ross A. Hull Memorial V.H.F. Contest 1952

RULES

1. The Contest will take place in the 50-54 Mc. band and will commence at 0001 hours E.A.S.T. on 20th December, 1952, and will continue until 2359 hours E.A.S.T. hours E.A.S.T., 4th January, 1953.

2. Points may be claimed for contacts outside the competitor's own call area.

3. Only one contact with any one station per twenty-four hours commencing midnight E.A.S.T. to count as a scoring contact.

4. Exchange of a serial 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 must 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, then he will start again 001 and continue.

6. Scores will be calculated on a points basis as shown in the table appended.

7. Logs should contain the following information: Date, time (E.A.S.T.), call of station contacted, serial number sent, serial number received, points claimed for the contact, and at the foot of each page total points claimed, and at the end the grand total. Logs should be

signed by the competitor, together with a declaration to the effect that the station was operated strictly in accordance with the Rules and spirit of the Contest and that the decision of the Federal Contest Committee shall be final and binding. Logs must be received by the Federal Contest Committee, Box 1734, G.P.O., Sydney, not later than the 25th February, 1953.

8. Entries will be accepted from all States of the Commonwealth and Districts of New Zealand. Check logs from other countries will be appreciated by the Contest Committee.

9. For the purposes of scoring, Northern Territory will count as a separate call area, VK9 will be considered as a

State of the Commonwealth, and VK1 (if any activity) as a separate country.

10. The decision of the Federal Contest Committee will be final and binding upon all matters pertaining to this Contest.

11. The regulations governing the control of Amateur Radio in each contestant's country must be observed.

12. Awards. The outright winner of the Contest within the Commonwealth of Australia will receive an appropriately inscribed certificate and, in addition, if a financial member of the W.I.A., will hold the Ross A. Hull Memorial Trophy for one year.

The highest scorer in each call area in Australia and New Zealand will be awarded a certificate. In addition, the Federal Contest Committee will have the right to make any additional awards.

	VK2	VK3	VK4	VK5	VK6	VK7	N.T.	VK9	ZL1	ZL2	ZL3	ZL4	Other Countries
VK2	-	5	4	2	10	4	6	10	7	7	7	7	20
VK3	5	-	4	4	9	10	6	11	7	7	7	7	20
VK4	4	4	-	5	11	7	3	7	7	8	8	8	20
VK5	2	4	5	-	7	5	3	10	8	8	8	8	20
VK6	10	9	11	7	-	10	12	14	17	17	17	17	20
VK7	4	10	7	5	10	-	7	12	7	7	7	7	20
N.T.	6	6	3	3	12	7	-	3	15	15	15	15	20
VK9	10	11	7	10	14	12	3	-	12	13	14	15	20
ZL1	7	7	7	8	17	7	15	12	-	4	2	3	20
ZL2	7	7	8	8	17	7	15	13	4	-	4	3	20
ZL3	7	7	8	8	17	7	15	14	2	4	-	4	20
ZL4	7	7	8	8	17	7	15	15	3	3	4	-	20
Other Countries	20	20	20	20	20	20	20	20	20	20	20	20	-

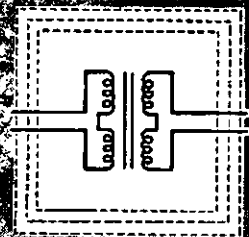
To obtain points per contact, look down the column of your call area until you come to the line of the State contacted. The figure where the two lines intersect is the points score for that contact. For example, VK5 works VK4—points score is 5.

TRIMAX

Quality

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(CLIFF & BUNTING PTY. LTD.)
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N.S.W.: University Graham Instruments Pty. Ltd.
John Martin Pty. Ltd.
WEST. AUST.: Nicholson's Ltd.
Atkins (W.A.) Ltd.
Carlyle & Co. Ltd.

DX NOTES BY VK7RK*

These notes are being written in Tasmania instead of VK4 land. As 4QL explained last month, he is being transferred back to VK2 and I will endeavour to carry on until he can get back on the air again. I hardly think that I could improve on his efforts and will consider the job well done if I can approach his standard. One small addition I will make this month will be to separate the phone listings from the c.w. It may not be quite accurate for this issue as most reports seem to cover both types of emission and I will only separate those given to me as being specifically phone. Might I say, with regard to this and any other aspect of the notes—if you don't like it, please tell me.

The bands seem to me to add up as follows:—

3.5 Mc.: The only reports on this band come from Eric Trebilcock, B.E.R.S. 195, who, in an interesting letter, covers DX which almost turns my key green with envy. Those he lists on this band cover SL5BO (1930z), SM5AQV (2045z), DL9VBA, DL9OM, UA2AC, UB5DI, SM7BQH, HB1MG, ZK2AA, UA4KCE, DL9UU, PA0CI, DL7AJ, SM3AOA. From this it appears that the Europeans are really there and it's a matter of going after them. The best I can do is to hear a few Ws on stray evenings.

7 Mc. is providing some of the interest that seems to be fading on 14 and here Eric again supplies some very interesting calls heard: IS1FIC, HH2FL, ZS8OW, SP2KGA, SUIHG, SP6RX, HB1MG, HB1KU, UI8AE, FR7ZA (at 2000z in QSO Europe), UC2KAB, PYY1AHL (2220z), SP9KKA, 4X4BT,

LZ1KAB, 4X4DH, YI2FD, GD3FSS, YI2AM, ZC4XP, SP5AB, UH8KAA, UD6BM, UR2KAA, ZB1HLW, UG6WD, UI8KAA and many calls like G, DL, F, YO, YU, UA, etc. 4QL evidently managed to squeeze out a few CQs in between packing cases as his efforts netted him ZE2JN*, ZS6AAC*, KP4UW* and W2VFD at 2130z. 2AMB: OA4ED* (0700z), CR9AG, LU6WH* and KM6AH/KB6* on Canton. From the sunny State 4XJ swapped reports with FU8AC* and VR2 together with lots of W and VE. 3AIII, who is ex-DL3EC, seems to have brought European QRM with him as Hans complains of it about 2000z to the tune of G, DL, F, I, EA, YU, HB9, OH and FA8 for good measure; broke through the noise and worked OH2YK* and G2RT*. 7RK found early mornings around 2000z to 2200z good for Europe. Evenings provide Nth. Americans and Pacific stations on most occasions. In general PA0AFN, GI2DHB, OK3OUS, OH5WX, ZB1KQ, HA5KBP, HB9CV, ZS4TX, FA3FM, FA9VN, ZB1KQ, 4X4BX, LZ1KAB.

Phone seems to be occupying more Kc. on this band with reports like these: 3AHH: HK5ER, OA4R 0500z; 4CW: DU7SV; 4XJ: CO2AZ and 2AMB: CT1QF and HC1FG.

14 Mc.: Eric B.E.R.S.195: VR1A, VP9BG, VR4AE, ZS2MI, EQ3FM, FB8ZZ, TA3AA, HB1JJ/HE, SV1SMX, ZE5JP, FR7ZA, FE8YB, FI8AB, JY1AJ (a "newie" on me), KS6AA, ZC4RS, EK1AO. 4QL managed such choice morsels as LX1AS, SV0WB, TG9AC*, MF2AG, CT3AE, ZM6AA, HC2OS*, PJ2AD*, FF8AJ*, CE1BD. 4CW: C3AR*, HS1SD*, ZC5VR*, VP6SD*, YV5AB*, YI2AM, KV4VB, OA4AI, CN8GD, KTIWX, ZC5VR (N. Borneo). Says to watch for a Sth. African operating from St. Helena—80w. c.w. and phone. 4XJ is doubtful over BIAB* who gave location as Formosa but much happier with calls like ZM6AA*, KB6AX*, DJ1BZ*, CR9AF*, HS1UN*, OK5BG, OQ5EZ, CN8GG and FF8AG. 2AMB: ZS2BC* 0600z, his total worked now 143. 2ACP: CT3AA* (Madeira Is.). 3AHH: LU3GH*, CN8AF*, and HB, SM, F, G, DL, as worked; and OE13HL, ZS1H, YU, I, OH as heard. 7RK: TA3AA, EI4Y*, CR9AF, KG4TO, HS1SD, VS7NX*, KZ5DE*, OE13HL*, GI 4RY, 4UAJ*, plus the more common ones.

Phone reports cover, from 2AMB: FF8WC; 3AHH: HP1CC, KV4BB; and 7RK: C3AR, VS7WL, VR2CM, VS1AY.

21 Mc. is definitely on the up and up. 4QL: PA0KX*. 3AHH: DL7AP at 0900z, also a KA. 4XJ bagged VQ4HJP*, KH6ANZ*, KH6ARA*, VETAIH*, W5*, W6* and AD1FEC. 7RK: ZC4RX* (two successive week-ends), VQ4HJP*, VQ4DO, KH6ARA*, KH6ANZ*, KA2FE* and VS2CR.

28 Mc. a dead loss to everyone except the old die-hard 4XJ: KH6NES*, KH6FO*, KH6AHU*, W3*, W6* and W4*.

QSLs appear to be as scarce as ice-cream in OQ5 as the only one received here all month was VP7NZ. Eric, B.E.R.S. 195, after sorting over LB6XD (Jan Mayen Is.), FB8XX, FB8BB, EA0AB, 3A2AB, VP5BH, VP8AI, 4WIAC, FB8ZZ, ZC4XP, VQ1RF, 3V8AB, FI3AG,

W6RMG/HL1, HC6NB, VP7NM, TG9RB, SUIFX, YV5AE, OE13LL, YI3ETQ, TA3FAS, EA6AM, DL1VU (3.5), HB9BX (3.5), SM5AQV (3.5) found he had cards from 210 countries out of 224 heard. That's really some listening OB.

The gen. section is almost non-existent, the only item that comes to mind is the change in call signs for Japan. It appears as though the Jap. nationals are now re-licenced and are operating with JA calls, the occupation troops having gone over to KA.

Some QTHs that may be of interest are: OE13HL, QTH Linz, Austria; QSL via A.P.O. 168, c/o. P.M., N.Y.C. KM6AH/KB6: c/o. C.A.A. Canton Is. KT1WX: B.P.O. 57, Tangier, N. Africa.

From the above reports it seems as though no DX is worked from positions west of Melbourne, but my experience tells me different, and I would much appreciate some dope from the other States, particularly VK6 so as to give a general coverage for these notes and make them interesting. Many thanks to those who contributed this month and please have the necessary here by the end of the month.

DX C.C. LISTING

PHONE			
Call	No. Ctr.	Call	No. Ctr.
VK4HR	12 167	VK4JP	8 114
VK3BZ	3 163	VK3A WW	14 112
VK3EE	10 163	VK4DO	20 109
VK3JD	1 155	VK5MS	24 109
VK6RU	2 152	VK4RW	23 104
VK4KS	9 152	VK2ADT	13 102
VK6KW	4 150	VK2AHA	15 102
VK3LN	11 141	VK3HO	25 102
VK4FJ	21 141	VK6PJ	19 101
VK3JE	7 133	VK4RT	22 101
VK4WF	16 130	VK3IG	5 100
VK4DD	6 128	VK3GG	18 100
VK4WJ	17 122		

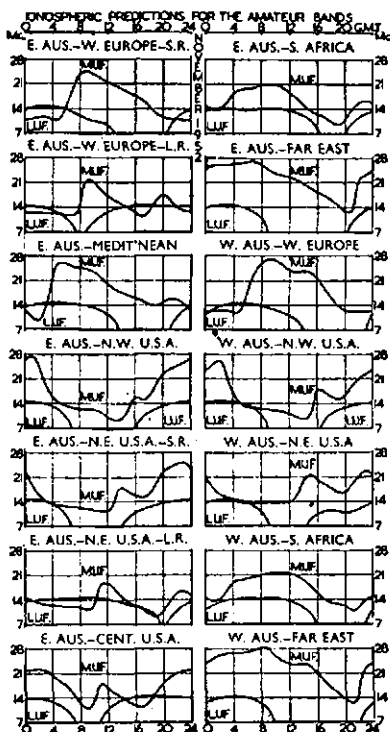
C.W.

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 207	VK3KK	30 128
VK4HR	6 188	VK4RF	11 125
VK3FH	15 177	VK3VD	27 123
VK4EL	9 167	VK3EK	3 122
VK4FJ	29 186	VK3J	25 118
VK3EO	2 152	VK3PL	38 117
VK3CN	1 151	VK3HT	37 117
VK2GW	16 151	VK3UM	12 116
VK3CX	28 150	VK3YL	39 115
VK6SA	28 150	VK7LJ	24 114
VK4QL	38 146	VK4DA	7 113
VK3VW	4 143	VK7LZ	17 112
VK2QL	5 142	VK4RC	13 107
VK6RU	18 141	VK6KW	40 104
VK3RX	23 140	VK2YC	34 103
VK3KB	10 138	VK3APA	14 101
VK3FH	31 134	VK3NC	19 101
VK6BO	33 133	VK3OA	32 101
VK4DO	20 129	VK7RK	22 100
VK3JE	21 128	VK2AEZ	35 100

OPEN

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 220	VK2ASW	53 116
VK4HR	7 206	VK3A WW	45 115
VK2NS	16 195	VK3JA	43 114
VK3JE	12 190	VK2ADT	14 113
VK6RU	6 186	VK4RW	52 113
VK4FJ	32 184	VK3PG	47 111
VK3HG	3 171	VK3MM	49 111
VK6KW	13 171	VK4RC	21 110
VK2DI	2 170	VK3ZB	24 110
VK3X	1 167	VK3HO	38 110
VK4EL	10 167	VK2ZC	25 108
VK4KS	24 167	VK2YL	11 106
VK4DO	15 157	VK3AWN	36 105
VK3LN	29 144	VK2VN	18 104
VK6FL	26 143	VK4UL	27 104
VK3MC	5 139	VK6PJ	44 104
VK3OP	19 137	VK5PW	50 104
VK4WF	40 137	VK2HZ	17 103
VK6DD	22 136	VK7KB	30 103
VK3HT	41 135	VK2TI	37 103
VK2ADE	28 133	VK6DX	42 103
VK6GW	48 133	VK7RK	31 102
VK2AHA	9 128	VK4TY	35 102
VK2AHM	20 125	VK5HI	51 101
VK3JI	33 119	VK2ACK	6 100
VK7LZ	23 118	VK2TG	39 100
VK3VQ	48 118		

PREDICTION CHART FOR NOV., 1952



FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

VK3 HEARD ON 2 MX. BY ZLs

Keen interest is being displayed in the 2 mx band as reports of amazing distances being covered continue to come in. The latest of these reports concerns the 2 mx signals of VK3RR at Horsham which were heard by ZL3AQ on 2nd October. We are indebted to D. W. Buchanan, ZL3AR, of Ashburton, N.Z., for the following information.

"Thursday, 2nd October, early evening was very warm, calm and pressure was high at 30 inches. 144 Mc. conditions were exceptionally good, the Christchurch boys 50 miles north and the South boys through Temuka, Geraldine to Timaru 50 miles south, simply pounded in although in several instances were running some 15 watts to mod. osc. A signal which heterodyned ZL3CS on 145.6 Mc. for at least 20 minutes was logged as VK3RR by another local, ZL3AQ, when he signed as Victor King Three Roger Roger at 0807 G.M.T. His signal was steady for a long time at Q5 S5 to S6." (Time and frequency have been checked with 3RR—Ed.)

Also by courtesy of ZL3AR we publish the following list of ZL3 stations active on the 144 Mc. band.

Ashburton—

ZL3AQ: 100w. to p.p. 826s, beam 5 over 5, 144 Mc. crystal.

ZL3AR: 100w. to p.p. 826s, beam 5 over 5, 146.19 Mc. crystal.

ZL3IQ: 70w. to 829, 4 element beam, 145 Mc.

Christchurch—

ZL3LE: 100w. to p.p. 24Gs, 16 element beam, 144.15 Mc.

ZL3KS: 70w. to 829, 4 over 4, 144.4 Mc.

ZL3CS: 70w. to 829, 4 over 4, 145.6 Mc.

ZL3CA: 70w. to p.p. 834s, 4 over 4, 145.5 Mc.

ZL3QW, ZL3QE, ZL3GV, ZL3FM: operate about 15w. to mod. osc. p.p. 7193s.

Geraldine—

ZL3IO: 70w. to p.p. 834s, 16 element, 145 Mc.

Temuka-Timaru—

ZL3LD, ZL3IE, ZL3DY, ZL3KQ: operate mod. osc., about 15w. to p.p. 7193s.

ZL3AR also operates 1,300 ft. up in Foot Hills to Southern Alps under the call ZL3IG with 100w. to p.p. 826s, 5 over 5 beam, on 146.1 Mc.

Recently returned from a trip to England, VK7BQ tells this story about the ingenuity of a group of G 144 Mc. operators.

It seems that this group had considerable difficulty in working into London due to an intervening range of mountains, until a parasitic array was erected on the highest point of the aforementioned mountain range. This array was then shock excited by directing the transmitting stations' antennae at it, result! Consistently reliable contacts with London stations. With due respect to the G Hams concerned it should be

mentioned here that this idea was suggested to the writer some 12 months or so ago by VK3RR as a means of working from Horsham to Melbourne under similar conditions. You win Dick!

NEW SOUTH WALES

The last meeting of the V.h.f. Group at Science House was a huge success and everybody thanks Barry 2ABB for his fine lecture on "Crystal Control Converts." A field day of some importance was held on the week-end of 4th-5th October and at least nine parties planned to man the mountain tops near and far. Much time and feverish effort was spent making ready for the big event. Parties participating were 2ANF, 2HL, 2AST, 2OA, 2AOA, 2PN (Tumut), and 2NV. We understand that the Canberra Radio Club and the Royal Naval Radio Club participated in the field, good work boys.

We wish to congratulate Hugo 2WH and 2PN for their recent effort in two-way contact on 144 between Forbes and Tumut, a distance of 138 miles as the crow flies. They have tried a long time for this to happen, and have succeeded at last—good work boys.

Although 144 Mc. has been quiet, the following stations have been heard at times: VKs 2ANF, 2LZ, 2NS, 2WH, 2RU, 2GA, 2KR, 2LG, 2HL, 2NP, 2DF, 2JY, 2XX, 2YR, 2WJ, 2VL, 2WF, 2YM, 2OA, 2DP, 2JH, 2HE, 2OK, 2BM, 2HO, 2ADT, 2ABC, 2AST, 2AJZ, 2AZK, 2AZO, 2AHP, 2ABR, 2ATO, 2ABZ, 2AYM, 2ARG.

2MQ is shifting, enough said. Where are the others? 2AWZ, 2ABO, 2XG, 2AQQ, 2AH, 2PU, 2PF, 2ALU. What about a show? There has been some activity with mobile units here of late, 2ANF, 2HL, and 2ABZ have been out with signals all round. 2JX will be on 144 soon, so keep a look out for him.

50 Mc. has been very quiet, only stations logged here were 2RU, 2ADT, 2VW, 2HE, 2JK, 2ABR, 2NP, 2ABC, 2GA, 2KR, 2ANF, and 2HO.

580 Mc. is also quiet and no news was forthcoming this month. The usuals are 2WJ, 2AJZ, 2DF, 2LZ, 2JX, 2LY and 2XX. ZL has heard Sydney stations from Wentworth Falls and reports S5 R8 signals, good work Con.

2HL has a new 12 element 144 Mc. beam finished. 2MQ has finished his 16 element 144 Mc. beam, hope we hear him soon. 2ANF has just finished a complete portable and mobile outfit, xtal controlled, 832 in final, also xtal cascade converter and tunable i.f. stage—all run on generators with excellent efficiency.

Please remember to pass on any news if it is of interest to you.—2HO.

VICTORIAN DIVISION V.H.F. GROUP

At the September meeting of the Group, Len Jackson and Col 3FO described their 6 mx mobile gear which was available for inspection. Of compact construction, the Tx and Rx were built into separate boxes 6" x 4" x 3". The Tx consists of a 12AU7 twin triode as an overtone crystal oscillator and doubler driving a 12J5 final with 5 watts input

The Rx uses four tubes commencing with a 6AG5 r.f. stage and a 12AT7 as mixer and oscillator. The first i.f. amplifier is a 6SH7 at 1600 Kc. followed by a 12C8 as second i.f. stage, detector and a.v.c. A germanium diode provides an effective noise limiter.

An audio unit in a separate box 6" x 6" x 4" with speaker consists of a 12SQ7 driving a 12A6 which does double duty as a plate mod. or Rx audio amplifier.

The antenna used is a vertical co-axial dipole mounted at the rear of the car. A genmotor provides d.c. h.t. of 260v. at 80 Ma. using a 12v. battery from which 5 amps. is drawn, including filament drain. Best DX worked so far is VK2.

A discussion on field days took place and the following dates were agreed upon for the coming season: Oct. 5, Nov. 2, Dec. 14, Feb. 1, Mar. 15, Apr. 26. The October field day was arranged to coincide with the 144 Mc. field day week-end in N.S.W. 3UI, operating portable from Mt. Major, worked 2PN portable near Tumut. The line-up of Alan's Tx is a 6AG7 xtal osc. multiplier, 6AG7 dblr., 832 trbrl., and 832 final with 20 watts input.

It is proposed to hold a contest commencing with the November field day, the rules to be finalised and made known later.

Efforts are continuing each evening to establish contact between VK2 and VK3 on 144 Mc. VK2 stations call, with beams towards VK3, from 8.30 to 8.35 p.m. E.S.T., and then listen for our signals during the following five minutes. Judging by the achievements elsewhere, it should eventually be possible to span these paths.

Meetings of the V.h.f. Group are held on the third Wednesday of each month at the Institute Rooms, 191 Queen St. All are invited to attend. Listen to 3WI for further information regarding meetings and field day news.—3ABA.

SOUTH AUSTRALIA

Activity seems to be increasing on all v.h.f. bands and some good work should be done this summer. 5JD has been on leave and made a visit to VK3, active on 50 Mc. 5ME heard with xtal rig on 288—p.p. 6AK5s tripler feeding the antenna was the line up; quite a good signal Sid. 5QR testing 16 element beam on 288 and now S9 plus at 5GL's; going to test it out against 5GF's corner reflector. Stations active on 144 Mc. are: 5FL, 5AJ, 5MT, 5KC, 5CA and 5GL. 5MD was heard on 50 Mc. in QSO with 5JD; a nice signal Doc. 5JD's mod. percentage is rather low.—5KL.

50 Mc. W.A.S.

Call	Certificate Number	Additional Countries
VK2VW	9	3
VK2WJ	13	3
VK4RY	2	2
VK4HR	4	2
VK5C	1	1
VK6DW	1	1
VK3FG	5	1
VK3RR	8	1
VK3HT	7	1
VK2AEZ	10	1
VK3XA	11	1
VK3GM	12	1
VK3ACL	14	1
VK3ZD	16	1
VK2ABC	8	
VK2WH	15	

FEDERAL, QSL, and DIVISIONAL NOTES



FEDERAL

25th ANNIVERSARY OF E.D.R.

This year the Danish I.A.R.U. member-society, Experimenterende Danske Radioamatører (E.D.R.), is celebrating its 25th anniversary, and appropriate ceremonies are being held.

On Saturday, 3rd August, there was a jubilee festival in Copenhagen at which a Region 1 delegate represented the I.A.R.U.

E.D.R. has been appointed by the Region 1 bureau as the committee for the "1952 All-European DX Contest" in December for which E.D.R. is issuing special certificate awards for contacts with OZ stations.

The Contest periods will be: c.w. section commences at 0001 G.M.T. Saturday, 6th December, 1952, and concludes at 2400 G.M.T. Sunday, 7th December, 1952.

Phone Section commences at 0001 G.M.T. Saturday, 13th December, 1952, and concludes at 2400 G.M.T. Sunday, 14th December, 1952.

The W.I.A. joins other I.A.R.U. member-societies in wishing E.D.R. 73 and congratulating it on its 25th anniversary. First organised in 1927, E.D.R. became a member of the I.A.R.U. in 1929 and has faithfully served the Amateurs of Denmark for twenty-five years.

21 MEGACYCLES

Although probably many other countries have since permitted their Amateurs to operate on the 21 Mc. band, the I.A.R.U. June, 1952, Calendar officially lists the following countries as having licensed Amateurs to operate there:—

Australia, Belgian Congo, Brazil, Burma, Canada, Cuba, Denmark, Dominican Republic, Ecuador, Guatemala, Iceland, Netherlands, Netherlands Antilles, New Zealand, Panama, Peru, Southern Rhodesia, United States of America, and Uruguay. England has since granted this band to G Amateurs.

LEBANESE AMATEURS ACTIVE

Amateurs in Lebanon have finally succeeded in obtaining official government sanction of Amateur Radio. The Lebanese Government has notified the I.T.U. that it no longer objects to Amateur Radio operation, and the prefix OD5 has replaced the familiar AR3.

AMATEUR BAND SUB-ALLOCATIONS THROUGHOUT THE WORLD

In accordance with a suggestion from the W.I.A., I.A.R.U. Calendar No. 44 carries a summarised chart of Amateur band sub-allocations in various countries throughout the world. This chart was compiled from information supplied to Headquarters by member-societies of the Union. Unfortunately not all member-societies responded to the request for information concerning their respective Amateur bands so Headquarters have called for any corrections and/or additions to the chart. When the complete chart is available it is proposed to publish it in "A.R." for the information and interest of all Amateurs.

NEW MEMBER-SOCIETIES TO THE I.A.R.U.

The following Societies have been granted membership to the I.A.R.U. by a majority of votes of member-societies of the Union:—

- Radio Society of Bermuda (R.S.B.).
- Guayaquil Radio Club (member society for Ecuador) (G.R.C.).
- Deutscher Amateur Radio Club (D.A.R.C.).
- Vereeniging voor Experimenteel Radio Onderzoek in de Nederlandse Antillen (member society for the Netherlands Antilles) (V.E.R.O.N.A.).

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Leon Paul, VK3XO, advises that cards for all contacts made by VK1NL have been despatched. Nil's log is still held by Leon.

The new address of the I.R.T.S. QSL Bureau is care E15Z, 23 Orwell Gardens, Rathgar, Dublin, R. of Ireland.

Austine, VK3YL, advises that FBQQ and the rest of the F gang are keen to QSO VK and ZL on the 21 Mc. band. They are listening there each Sunday from 0930 to 1100 G.M.T.

The E.D.R. Denmark are sparing no pains to make the sixth All European DX Contest a success. They are issuing plenty of early publicity. A précis of the rules has already been published in "A.R." and a full copy of the rules is held at this Bureau. The c.w. section com-

W.I.A. ACTIVITIES CALENDAR

November 1-3: "CQ's" World Wide DX Contest, C.W. Sections.

December 6-7: European DX Contest (all bands), C.W. Section.

December 13-14: European DX Contest (all bands), Phone Section.

mences at 0001 G.M.T. Saturday, 6th December, and ends at 2400 G.M.T. 7th December. The phone section begins at 0001 G.M.T. on 13th December and ends at 2400 G.M.T. 14th December. This year's Contest is staged by the E.D.R. in conjunction with the 25 years jubilee of the formation of this Society. Previous countries staging this Contest were: 1947, Netherlands; 1948, France; 1949, Czechoslovakia; 1950, Sweden, and 1951, Great Britain.

Felix Franchette, FK8AC, currently on furlough in France and operating under the call sign of F3GQ, expected to commence operations from Tamaris at end of September. Felix advises he has sold his house at that location and has purchased a larger one and much better suited for radio at Sanmur. This location is on top of a hill and has plenty of grounds surrounding the house, admirably suited so he says for vee beams. He hopes to be in full blast about the end of October and remain active until his return to New Calendonia towards middle of 1953.

Robbie, of VK2QZ, is abroad again. This time he pops up from New Hebrides, under the call sign of YJ1AB. He expects to be at Vila until end of November.

NEW SOUTH WALES

The September meeting of the N.S.W. Division was held at Science House on Friday, 26th September with the President, Mr. John Moyle, in the chair. There was a large attendance, no doubt to hear the lecture on "Test Equipment."

The meeting was opened at 8.10 p.m., a point which aroused a little criticism later in the evening. The late start was somewhat offset by the disposal within twenty minutes of the apologies, welcome to visitors, minutes, correspondence, etc.

The lecture, which was delivered by Mr. Reg Rawlings, of Phillips Pty. Ltd., was not therefore unduly delayed. It was very interesting and covered a very wide range of test equipment, perhaps too wide. Typical examples of most of the types were described briefly. Such things as vacuum tube voltmeters, valve testers, signal generators, frequency meters, audio frequency oscillators of various breeds, square wave oscillators, distortion meters, and countless types of equipment based on the cathode ray tube came under discussion. Obviously an explanation of the purposes of some of the instruments was necessary so that detail was at something of a premium. This was made up for in the discussion in which the boys soon showed their desire for details. This looked like continuing indefinitely until the Chairman had to call a halt in order that some general business could be dealt with. The lecture was well illustrated by a host of commercial test instruments which made the boys drool with envy.

A quick round-up of current Amateur events and affairs was given by the President. If you have not made a note of the Woy Woy Field Day date DO IT NOW. Sunday, 16th November, and if you leave your decision to the last minute you can pay at the door. Bring the YL or XYL and harmonics, there will be enjoyment for all. The answer to a question regarding the official organ of the W.I.A. was

SILENT KEY

It is with deep regret that we record the passing of:—

ZLIAJL-VR5GA.—Pat Spry, of Kamo Whangarei, N.Z., on 21st August, 1952, in the Auckland Hospital.

given and nearly started another futile argument like the one at the previous meeting whence the question emanated, but the Chairman rightly squashed the argument in its infancy and called for a notice of motion to provide a basis for discussion which might lead to finality on the subject. The meeting closed at nearly 11 p.m.

HUNTER BRANCH FIELD DAY

Blackalls, Lake Macquarie, was the point to which Hunter Hams and their families headed on Sunday, 28th September, for the Branch's Combined Social and Field Day. With a beautiful day, 35 OMs plus their XYLs, YLs and harmonics congregated at the hall which was the focal point for the day's events. All present, from the very young up, enjoyed themselves thoroughly whether they were quaffing ice cream and soft drinks, chasing hidden Tx, running in a 3-legged race, or testing emission of an "813"! A novel innovation which went very well was the Tone Guessing and C.W. Competition.

The hidden Tx event was most popular, due no doubt to the fact that practically every Ham and Associate present was able to participate. The real Ham spirit was shown here, the Hunt being run in two heats (a prize for each), so that parties in the first heat loaned their Rx's to others in the second heat, the Tx meanwhile being moved to another location. Max 2CT and Secretary Dave 2EO, Ern 2FP and party, who won the first heat, announced they would give the prize to Z2C whose gear they used—Jim could not be present because of work. Another event which provided much fun was the Ladies' Nail Driving Contest. Going on form shown by some XYLs, it won't be surprising if next time there is some shack building to be done, the hammer will be presented to the lady of the house!

ABBREVIATION OF NOTES

The paragraph "What Do You Think" in the September issue brought forth many letters from all States including one ex-VK3-VK7 now in England.

The general consensus of opinion was that the Divisional Notes should be continued, but that all unnecessary padding should be eliminated.

Would all Contributors of Notes please endeavour to write their notes in a more concise form.

We are always pleased to see our friends the R.I.'s, at our functions, and this time we had the honour of entertaining the District Radio Inspector Pat Lobegier and his XYL and family, and Assistant R.I. Frank Hincks, XYL and family. It was also pleasing to have as our guest Dave 2EO and XYL representing Divisional Council, and QSL Officer Jim 2YC who was a most popular man when he arrived with a batch of DX cards for the local boys. Other visitors included Major 2RU and XYL from Gosford. Also present was Ern 2EH from Avoca and Ass. John Adkins from the "Big Smoke." Our Upper Hunter gang were represented by Geoff 2VU and family from Singleton. From the Coalfield, 2ADT, 2PZ, 2DG plus their respective families. The North Coast was also represented when 2XO's 2nd op. came along later in the day. Visitors were welcomed by President Lionel 2CS.

The credit for this grand show goes to the Committee and their assistants. Johnny 2DZ was a tower of strength, doing everything from doleing out liquid refreshments to starting races; he is now expert at "drop the hanky!" Varley 2SF did sterling job registering each arrival, issuing lucky numbers, helping in bar, etc. Harold 2AHA had many tasks to keep him busy all day, chief among these being operation of the 144 Mc. hidden Tx, his helpers in this being Norm 2ANA and Associate Dave Eelsey. Bill 2AXM did a good job maintaining a 40 mx link from the hall to the hidden Tx with his 3/4w. special. General all round help, especially provision of p.a. gear was given by Ken 2KG. Thanks are also due to Neil 2XY who provided the 144 Mc. Tx, to Treasurer 2XT for his "XT

Special" brew, to Frank 2FX and Station 2KO for the tone c.w. recording, to Bert Harvey for operating the film projector by courtesy A.G.E. Newcastle, to John Cowan for his piano playing, and to all who gave a hand.

At the conclusion of events, prizes were presented to the following winners by President Lionel Swain:—

Transmitter Hunt: 1st Heat—1st, 2EO, 2FP, 2OT and party with 2ZC's gear, time 5 min.; 2nd, 2DG, 2ADT and party with 2VU's gear. 2nd Heat—1st, 2DG and party using 2VU's gear, time 7 min.; 2nd, F. Hincks Asst. R.L. and party with 2ZC's gear; 3rd, 2NX and party with 2AHA's gear. Tone Guessing—1620 Cycle Tone: 1st, 2KG, 1600; 2nd 2AGD, 1650. C.W.: 2EO 1st. Lucky number prize of two speakers won by XYL of Associate Les Sparke. Ladies' Nail Driving: 1st, XYL 2AGD; 2nd, XYL of 2AHA. Women's Race: 1st, XYL 2DG. Visitors' Race: 1st, Valerie Pitton; 2nd, Judy Cowan. Three Legged Race won by 2AHA's XYL and 2FP's daughter. Boys' Race: 1st, Barry Rudkin.

SOUTH WEST ZONE

Noel 2OJ at Albury heard on 80, also Don 2RS. Ron 2FM at Canberra reports all Hams there are interested in the new club, which has about 40 members. The call sign of the club is 2ACA. Peter 2APF changing all his gear, says he is sick of the look of his old set-up. 2PL at Griffith active on 40 and still trying to collect new Hams at Griffith, good luck Stewart. 2BQ at Tumut heard on 80 with very solid signal. 2APZ at Leeton active once more on 40 and 80 after having considerable trouble with his ATS, it is good to hear you again Ray. 2RH at Yerrinbool active on 20, 40 and 80, Ron can be heard "earbashing" on 80 most evenings with the usual gang. 2AJO active on 80, 40, 20 and still trying to break through on 144 Mc.

COALFIELDS AND LAKES ZONE

The latest activity from 2ANU is concerned with coaxing (either interpretation of the word applies) energy from an oscillator on 288 Mc. into an antenna system. 2VU is now set up to work straight on 144 Mc. and is only waiting a suitable opportunity to become a piece of DX for the gang. 2ADT has been keeping one eye on 21 Mc. and is slowly gathering them in. Had a nice session with Europeans one evening recently. 2YL feels like coming on, but can't find the time. 2PZ still working on

JANUARY ISSUE

This time every year a plea is made to Advertisers and Contributors to forward copy early for the January issue.

To explain once again—as the printers close down for annual holidays from just before Xmas until the middle of January, it is necessary—if the magazine is to be posted to you on the 1st of January—for the magazine to be printed before Xmas.

Therefore it is requested that material for the January issue must be in the printers' hands by the FIRST of DECEMBER.

Your co-operation in this matter will be much appreciated.

—Editor.

7 Mc. and planning other gear. 2KF has been heard on 7, 14 and 144 Mc., but no sign of 2KZ.

Major 2RU is another one interested in 21 Mc. and works them when they are there. He is forced to work 2ADT via Perth on that freq. 2AEZ has joined the old men on 3.5 Mc. together with 2EH who has now progressed to the stage of operating with the charging system running. This last fact accounts for the sudden shortage of 0.1 uF. condensers in the various warehouses. 2KR and 2GA are still keeping their area on the map on 144 Mc. The zone was represented at the Hunter Branch Field Day by 2VU, 2PZ, 2RU and 2ADT, all with their families. On this occasion, 2VU gave his portable gear its maiden run in the 144 Mc. Tx hunt with successful results in both heats.

HUNTER BRANCH

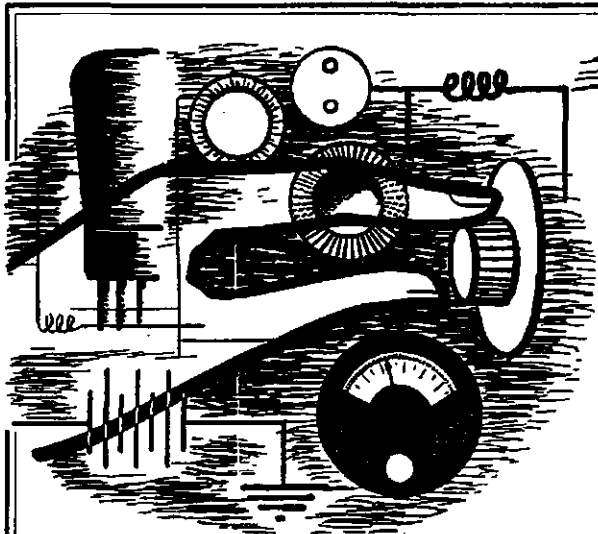
September was a very busy month for those organising Branch activities. Thanks to the hard work of our Committee and their assist-

ants, the Field Day/Social went off with great fervour. Details are given elsewhere in this issue, and a report on the Maitland meeting has appeared in the Bulletin.

President 2CS pleased with his "Sickuva-switch" all-band (including 21 Mc.) exciter; Lionel only needs a final now! Two more certificates to DX specialist 2DG. Keith received Certificate No. 31 for Worked All Japan, and a beautiful hand made silk Certificate of Merit for working all Swedish Districts; XYL has her eye on later for scarf! Other Maitland men 2XQ and 2ANL mainly active for scheds on 80 and 20 respectively. Harry 2AFA pleased at receiving QSLs for both his KL7 contacts on 40 mx c.w. 2AGD's Tx doesn't need a good antenna; although his dipole only few feet high. George beat all VK competition for S8 report from CN8 on 20 mx phone. 2KG one of our keenest members; Ken always helpful and co-operative at Branch functions. Valuable behind the scenes assistance is also given by Frank 2FX. These things are appreciated by the Committee which is always grateful for help given.

The bug bit 2AWD again, Arch put f.b. sig on 40 from his xtal controlled 10 watter. Ivan 2IS also came out of moth-balls for brief session. 2TE on again too; Bert can still get S9 from DX land on 20 mx phone. Merv 2AAM yarned to 2PQ on 20—tried to interest Tom in 2 mx, but latter wants to finish his all-band exciter. 2PJ has new e.c.o., built n.b.f.m. unit for 80, and replaced 6V6 mods. with 807s. 2AGY working plenty of Europeans on 20 mx c.w. 2CN feels lackadaisical after VK4 holiday. 2WF pays us nice compliment; says spirit of Hunter has enticed him to join W.A. Bill's TAI2C got him f.b. report from O44 on 40 mx. 2VY working on Branch's Tx—among others! Doug 2ADS pleased with improved reports on 144 since adjusting the feeder on his 3/3 beam.

Ernie 2FP has the AR8 alongside bed now—frightened he'll miss something! 2KQ starting to organise in new shack; Jack using temporary antennae on 80 and 6 mx. 2ANA received a shock when his harmonics sprang a surprise party for his Silver Wedding Anniversary. All extend congrats. to Norm and XYL Phyllis. 2AXM's "Mighty Midget" Tx getting Bill S9 reports from all States. Max 2OT has a 40 mx Rx on car dashboard which really drags 'em in. The Field Day has given 2NX added enthusiasm to get on air again. Best of luck to



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Associate "Speaker" Sparke who sits for A.O.C.P. this month. Treasurer 2XT's 2nd op. showing an interest in Ham Radio already—especially mobile gear! Developing a real DX fist is Secretary 2SF; Varley now receiving some nice QSLs for his 40 mc. c.w. efforts. 2AFS doesn't fancy using his present Tx—Bob reading mail with his BC348. Harold 2AHA and Jim 2ZC cranked up for VK-ZL Contest. 2BZ busy shifting but put sig on 40 to QSO 2XX/P, an old v.h.f. clobber. Gordon 2CI re-appeared on 40, been QRL. 2ASJ enjoyed himself at Murrumbah thanks to 2ZY and 2RK. Fellow plane passenger was QSL Officer 2YC—plenty Ham talk!

Notice of Meeting.—The last meeting before the Xmas Social, and last for 1952, will be held at Technical College, Tighes Hill, on Friday, 14th November. Listen to 2WI for details. An early warning! This year don't fail to notify Secretary of composition of your party for Xmas Social so we can cater accordingly. Please advise number, sex, and age of harmonics—that is most important.

VICTORIA

CENTRAL WESTERN ZONE CONVENTION Horsham, 21st and 22nd September

As 3YW, our faithful Zone Secretary for the past five years, insisted on retiring this year, please excuse if these zone notes are not compiled with the same literary genius as before. However to get to business, the Zone Convention was held at Horsham accompanied by warm pleasant weather. The Saturday afternoon arrivals, easily distinguished by their whip antennae, congregated at 3TA's where general ragchew took place. After tea the boys systematically set about finding the weak spots in Byron's rig, while some of the quieter element retired to the lounge to lap up high quality microgroove and tape recordings with a few films interspersed. After supper, kindly supplied by Mrs. Hardinge, the boys retired for a few hours rest before the big day following.

1200 hours on Sunday saw a large collection of cars, antennae, and Hams. After more ragchew, the gang proceeded to lunch. Conclusion of lunch saw re-assembly at the recreation hall and the start of the hidden Tx hunt. Upon finding the signal, cars proceeded to all points of the compass around Horsham. After much coming and going and completely losing and finding the signal, your scribe 3ATR arrived down a lane in time to see 3ACI doing a fine 100 yards sprint ahead to find the elusive Tx concealed under a tree. At conclusion of Tx hunt a scramble contest for portable Tx was held. Six stations participated for a very busy hour, the honours going to 3AGD working three States.

During the Tx hunt and portable scramble, a visit to b.c. station 3WV was enjoyed by all those not taking part in other events. Later on after an enjoyable tea, the gang retired to 3TA's lounge for the annual meeting.

Office-bearers elected were as follows:—3AKW President, 3TA and 3ARM Vice-Presidents, 3ATR Secretary-Treasurer, 3AKD, 3ATR and 3YV Committee. A motion of appreciation to Cec. 3YW was recorded for his fine service as Zone Secretary for the past five years. Zone hook-up was arranged for the low end of 80 mx at 2030 hours every Wednesday evening. It was resolved at the meeting to endeavour to increase interest in zone activities and to that end field days and outings will be held throughout the year.

Present at the convention were 3TA, 3AKR, 3AKA, 3ACD, 3NN, 3RR, 3I, 3AFO, 3ATR, 3ARM, 3ND, 3ARB, 3IB/3ACI, 3DF, 3EF, 3AKW, 3AV, 3VA, 3AID, 3ALQ, 3AUT, 3GR, 5AZ, 3ASV, 3AMH and a number of XYLs. When all business was concluded a number of technical films were screened which were appreciated by all. The Convention was rounded off with supper by courtesy of Mrs. Hardinge. There is a prize for best zone hook-up attendance, so don't forget it every Wednesday night on 80.

NORTH EASTERN ZONE

Syd 3CI is shifting his rig out on to the back verandah. Doug 3DW is moving down to Lilydale. Former PA0YX and PA0HC have come to live in the zone at Merrigun. Alan 3UI is doing a little house painting in his spare time as well as radio and driving a new car. Ken 3KR was still working the DX when last heard and has added fifteen new countries to his list in about six weeks. The latest from Ken is that the DX has faded a bit though. Rex 3UR is still on 80 mx. Jack 3FF was using only nine watts on the September hook-up. Tom 3TS has fitted a trolley lift to his beam tower to simplify the making of adjustments. Jim 3JK has gravitated to 2 mx now. Keith 3JC put his 20 mx beam up with the director in the wrong place, but it is working well now it is in the right place.

GEELONG AMATEUR RADIO CLUB

The meetings of the club during September were well attended. A new member to the club was Mr. J. Barber, who travels 10 miles from Mt. Moriac to attend the meetings. A visitor to the club also was Mr. W. Barker, who was welcomed by the President, 3IC, who introduced him to each member present. A lecture was given by 3ABK whose subject was "Cathode Ray Tubes," he used the blackboard and a cathode ray tube to illustrate his lecture and explained the construction and the function of each element of the tube. The lecture was recorded on tape by 3BU and if suitable will be transferred to microgroove. The Exhibition, which was to be held in October, has been postponed.

QUEENSLAND

NORTHERN NOTES BY VK4EL

Not so much activity to report this month as a lot of the lads are still not using the bands much. Seeing that our old friend Frank 4QL has, like the Arab, folded his tent and stolen silently away (having transferred back to VIS), I may be permitted to give the state of the bands as I find them here at Clevedon. 7 Mc. very patchy, some Europeans workable around 1500 to 1800 E.A.S.T.; however after about 2000, commercials, both phone and c.w., seem to move in and take over the band, even the BBC has a European transmission in at 7.13 Mc., and Asiatic phones are getting more numerous daily; it is hard to find a place to park for a good "phone natter" in the evenings. 14 Mc. is by far the best band, both for local and DX working, Europeans abound between 1800 and 1900 and again between 2300 to 0200 when it is easy to work all parts of Europe on phone and c.w. and get up to S9, in fact just like old times. 21 Mc.: This band showed some promise early in the month when Africa (VQ4 and Z5) was worked around 1700-1800 and then Europe came through a couple of nights between 1930-2100, but this didn't last and the band is very mediocre again now. 28 Mc.: Worst of the lot, only a couple of KH6 and Ws heard for the month, didn't even trouble to put the Tx down there.

Andy 4BW still keeping his skeds going with Harry 4HK, but complains of inability to tie in with the Emergency Link, is very keen to be in it, also been trying his luck on 14 Mc. lately. Harry 4KW on 7 and 14 Mc., but reports conditions poor, keeps a lunch-time sked with your scribe on 7 Mc. Bill 4BQ QRL constructing a new 2 element beam, but just you wait until the job is done, then DX look out. John 4FH still fully occupied with other things than Ham Radio, reckons he spends 1 per cent. of his spare (?) time on Ham Radio. Bill 4AM staging a comeback and very nice to hear of the old timers combing the cobwebs out of the gear (and ziff). 4KR now farming instead of hamming, still we hear it won't be long before the bug (radio) bites again. Joe 4JH has a new all-band-switched Tx 3.5 to 50 Mc., will be operating soon he says.

Lennie 4GD has disposed of all his gear except the 50 Mc. gear, will be on that band when the barrier goes up for the current season. Eddie 4WH has re-appeared from his new QTH and with a brand new band-switched job from 3.5 to 50 Mc., also sports a new 2 element beam that seems to be working okay; Eddie keeps me company on 21 Mc. some nights. Jock 4DE getting amongst the Europeans in the wee small hours, guess this northern QTH a bit better than the Ipswich one eh Jock? Wally 4RU has a new rig also; when I met him in town the other day he said something about getting expensive tastes after visiting some of the National Regional stations, it is certainly reflected in the beaut. new rig he has.

Ted 4EL actually making a comeback at long last, tells me he hopes to be on in a month or so, so may have something to report on his activities on this page next month. Other stalwarts in the shape of 4RW, 4BE, not heard lately. Although we lost Frank 4QL, we have gained another in Harry 4HV, late 1HV; he has just arrived back complete with new Tx, so look out for a hefty signal from a reconstructed AT5. 4EL, gee that's me, oh yes, well not much to report, but have renewed my marathon skeds with Ralph 6ZA at long last, and other than making the first VK-VQ contact on 21 Mc. a few weeks ago, really nothing, mainly keeping skeds on phone and c.w. and giving new Gs their 1st VK contact. Anyone missed out, please shoot along their doings to me care 4QN.

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division was held in the club rooms to a slightly smaller gathering than usual, 84 mem-

bers to be exact, plus a few visitors. The guest speaker, Mr. I. Thomas (5IT) gave a talk about his trip to Hawaii and the W6 area of the U.S.A. "Tommy," as he is better known, made his talk last for one hour and three-quarters, but he could have gone on for another hour or so without losing the interest of his listeners one little bit. In my many years of attending meetings of the VK5 Division I can safely say I have never seen such an intent audience and I have never seen or heard a speaker who so obviously enjoyed his task as did "Tommy."

The vote of thanks was ably proposed by Les 5UX who echoed the sentiments of the meeting when he said that "Tommy" not only deserved the thanks of the meeting for his interesting talk, but also for the excellent ambassador for VK5 that he must have made. The applause that greeted the proposal of thanks gave sufficient indication of the appreciation of those present.

Among the welcome visitors were Messrs. W. Mann, Tom Welling (5TW) from Mt. Gambler, and "Uncle Xray" from Kulpura.

Very little general business came up for discussion, although a long discussion took place regarding the Xmas Social and the intention of Council to replace it with a Social Evening on the December general meeting night. The idea of a social evening in the club rooms to which all those attending should bring a basket of "tucker," the Division to provide the tea, coffee, cocoa, etc. appealed to all, although quite a few present thought it would be a good idea to include the ladies in the evening. This idea of the ladies was decided against until the success or failure of the social evening was proved, although Council was directed to go into the matter of the YL, XYL, and children side of the question when considering the social activities of the Division. This angle is well worth considering, and I feel sure that Council will give it its usual prompt consideration.

Mr. J. Jones, 2JJ, passed through Adelaide this month and paid a flying visit to the Secretary, Reg 5RR; and another visitor to our fair city was none other than Herb Stevens, 3JO, with whom I had the pleasure of a few minutes chat at the QTH of Hal 5AW. I think that he was somewhat disappointed with me as he expected me to look like a rednosed vaudeville comedian with funny ha ha's flowing from my dainty lips. Mind you I am not one to gossip, but he was in VK5 spending his honeymoon, although now that I come to think of it he did say to me that I was not to mention it in the notes, so perhaps I had better not mention it.

At the moment of writing, if rumours can be believed, VK6 appear to be favourites for the R.D. Contest and I am very pleased to hear this. The only thing that I am not happy about is that if this rumour should be confirmed, then that character from Geraldton will in all probability be sending me a letter of a gloating nature, and that would be too much to take this month, on top of the suggestion in the magazine that personal notes might be cut out in the future. Please have pity dear Editor, how can I support my wife and eleven children if my salary from "A.R." should cease.

5KU has his beam functioning on 20 mx and is very pleased with the results. 5FD has another Tx using an 813 in the final. John complains that the final tank coil gets a little hot after a short run which does not augur well for Colin (5CJ) who has a building block very near to the QTH of John. 5TW has returned from his well-earned holiday in the city and now has a new exciter unit, is expecting to get on 2 mx any day. 5CH is rapidly settling in at the new location and has been seen measuring the yard with that thoughtful look on his face that goes with something different than gardening. Claude still manages to get on 2 mx each Monday evening.

5JA is also heard on 2 mx occasionally and is rewinding his main h.t. power tranny. 5MS is busy settling in but has had time to erect, or should I say, re-erect his tower and also sort out some gear. 5CJ is supposed to be on holidays, but when you know that on 16th September he became the proud father of a beautiful daughter, the word holidays seems a little superfluous. What is the little darling's name Col, and congrats from all. 5BC has returned from a caravan tour of Victoria-Melbourne to Sydney-Canberra-back home via Mildura. Hughie says that his nerves are a little steadier now. He met a number of his 50 Mc. friends in and around Sydney and stayed with 2ABC for a night, or was it a couple of nights? Hughie had a wonderful time and met quite a few good Hams. 5RE is still active but only on Sundays. 5TU is very active, in fact his XYL is threatening to put an axe through his gear if he doesn't get active in the garden, hi, hi. 5CF has been having trouble with gremlins, to wit, "hum" trouble, but Mur-

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3695 Kc.	7020 Kc.	7063 Kc.	8171.25 Kc.
5460 Kc.	7021.5 Kc.	7110 Kc.	8177 Kc.
5780 Kc.	7032 Kc.	7129 Kc.	8182.5 Kc.
6000 Kc.	7033 Kc.	7175 Kc.	8183.5 Kc.
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	7041 Kc.	8021.5 Kc.	

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EDITOR:

T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:

J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:

J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:

L. B. FISHER, VK3AFF.

COMPILATION:

R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:

I. K. SEWELL, VK3IK.

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EDITORIAL



REVIEW

Over the past twelve months it is gratifying to note that in the realm of Amateur Radio events have taken place not only indicating the true Amateur zest and enthusiasm for his hobby, but also his willingness and ability to organise and function emergency communications in time of need.

Firstly, an increasing activity has and is taking place in the v.h.f. spectrum where already record distance contacts have been made over terrain where previously the sceptic said radio communication at high frequencies would be impossible. Not only have these relatively short distances been spanned, but v.h.f. signals have been heard as far afield as New Zealand, showing great promise for a field of activity as yet unexplored.

During the year the Amateur Emergency Communication Networks again contributed their services to the needs of the people in areas stricken with flood and bush fires, especially in New South Wales and Victoria where these unfortunate events happen so often.

The next few years should see thrown into the emergency communications field under the possible requirements of Civil Defence, the vast advantages of short-haul v.h.f. networks, which, together with normal long-circuit networks, should provide the Commonwealth with an

Amateur Emergency Service of which every citizen will be justly proud; a service that in time of National emergency can be operated by personnel who would be too old or otherwise exempt from defence service.

1952 saw the implementation of the Atlantic City Frequency Table as regards the agreed changes to the Amateur Bands on a world-wide basis. Regrettable, but unavoidable, was the loss of portion of the 7 and 14 Mc. bands; the release of the 21 Mc. band eagerly accepted although the conditions on the lower frequency bands have not been favourable to really test the quality of the new band.

Although the year has witnessed a reduction in W.I.A. membership throughout the Commonwealth after the post-war flush of enthusiastic disposals gear seeking members, the Institute is settling down with a body of keen, experienced, far-seeing, steady citizens who augur well for the future of the Society and Amateur Radio, and who see in the W.I.A. the means by which their hobby will be fought for against the slow encroachment of commercial enterprise.

On behalf of the Federal Council of the W.I.A., the Federal Executive wish you all the Compliments of the Season wherever you may be situated on land, on water, or in the air.

FEDERAL EXECUTIVE

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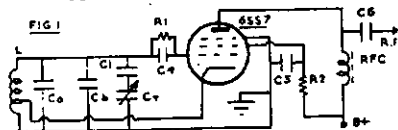
Simple V.F.O. With Temperature Compensation

BY HANS J. ALBRECHT,* VK3AHH

Many articles on V.F.O.'s have been published in the past. Some contained simple types, others more complicated ones. By describing his V.F.O., the writer does not at all intend to increase the number of contributions on this subject by another one, but to provide some ideas to prospective constructors of a V.F.O. how this may be done with a minimum of material and time.

Before describing the oscillator in detail, its general properties may be of interest:—

- Absolute stability of the signal on all bands from 3.5 Mc. to 28 Mc., accomplished by mechanical rigidity and temperature compensation.
- The c.w. note is T9X on 7 Mc. and below, and T9 on 14, 21 and 28 Mc.
- Electrical bandspreading allows a convenient change of the operating frequency without the use of a complicated dial.
- The V.F.O. is compactly built and therefore of comparatively small size.
- Its construction is simple and less expensive than that of a crystal oscillator.



L—5.1 uH. (length 1.38 inches, diam. 1.96 inches, 11 turns, tap at 2 turns from grounded end).

- C1—40 pF.
- C2 = Ca + Cb.
- Ca—100 pF. (ceramicon, —750 temp.)
- Cb—250 pF. (mica).
- Ct—100 pF. (variable)
- C4—100 pF.
- C5—0.01 uF.
- C6—100 pF.
- R1—50,000 ohms.
- R2—100,000 ohms.
- R.F.C.—2.5 mH.

I.—CIRCUIT AND CONSTRUCTION

The circuit is that of an electron-coupled oscillator (E.C.O.). It is well known that there is another type of excellent stability, the Clapp oscillator, but it is doubtful if that circuit is more advantageous than a carefully built E.C.O. for ordinary Ham use. A real comparison between both types would require a lengthy theoretical discussion which would take too much space in this article. It may, however, be stated that the output obtainable with either a Hartley or a Colpitts oscillator in an electron-coupled circuit, at a stability by far satisfactory for Ham use, is larger than that of a Clapp oscillator.

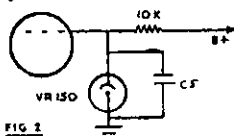
The circuit diagram is shown in Fig. 1. The valve used in the circuit at the writer's station is a 6SS7. 6AC7 proved to be of the same performance. Any penthode with a separate suppressor-grid connection may obviously be

utilised. A power penthode would provide more output, but was not tried due to impractical power supply connections. As this circuit was designed for optimum stability at satisfactory output, other steps clearly reducing the power output are explained.

Such are the r.f. choke replacing a tuned plate circuit and the relatively high screen series resistor of 100,000 ohms. If a tuned circuit is substituted, ample drive may be obtained for a p.a. tube with low drive requirements, as for example, the 807. On the other hand, it is not advisable to use a tuned plate circuit, certainly not one tuned to the fundamental frequency, in a compact V.F.O. like this, because it is hardly possible to shield its r.f. field from that of the oscillating circuit in a satisfactory manner.

The oscillating circuit is one of the Hartley type. It is operating on the 80 mx band. The value of the circuit capacitance is relatively high to diminish the action of any capacitive alteration in parallel to the circuit (e.g. changes in the grid-cathode capacitance). The frequency of the circuit is varied by a tuning condenser which is connected in series with an appropriate fixed condenser in order to cover only the band required. A fixed condenser is then connected across the whole arrangement forming the so-called electrical bandspreading which is described in detail in Section II. The latter condenser consists of two capacitors, the temperature coefficients of which being in the correct proportion for a satisfactory temperature compensation of the whole circuit (see Section III.). The tap on the coil must be in such a position that the feedback factor, given by the ratio of the numbers of turns on either side, is large enough to maintain stable oscillation in the desired frequency range.

The power for the V.F.O. is taken from an external power supply (to avoid any possible source for a T8 signal) which also supplies the two subsequent buffer-doubler stages of the transmitter (employing a 6V6 and a 6L6, respectively). Due to the E.C.O.'s careful design, particularly the low screen voltage, the frequency of operation is insensitive to voltage fluctuations. Voltage regulation is therefore not required. If, however, one power supply is used for the V.F.O. and a modulator stage, it was found necessary to stabilise the screen voltage, as shown in Fig. 2, in order to avoid possible frequency modulation which is more than likely under those circumstances.

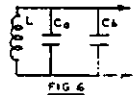
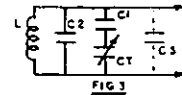


The oscillator's cabinet is a steel box 5 x 5 x 5 inches. It is of course necessary to make the mechanical work as rigid as possible. This is particularly

easy as a complicated dial is not necessarily required with the method of bandspreading used.

II.—ELECTRICAL BANDSPREADING

The method of spreading a certain frequency range by connecting a fixed condenser in series with the tuning condenser has always been a popular way of overcoming possible dial difficulties. Fig. 3 shows the general idea. A brief discussion with reference to this V.F.O. may, however, be of value to a number of Hams.



As illustrated by the figure the tuning condenser Ct is connected in series with a fixed one (C1) and this arrangement, together with another fixed capacitor C2 is then connected across the coil forming the resonant circuit. The tuning condenser therefore covers only a frequency range determined by C1 and C2, which equals a bandspreading of that range. To obtain the frequency coverage of the circuit we have first to consider the two capacity limits of the combination Ct and C1. They are given by—

$$\frac{C1 \times Cf}{C1 + Cf} \text{ (maximum value)}$$

and

$$\frac{C1 \times Ci}{C1 + Ci} \text{ (minimum value)}$$

where Cf = final capacitance } of Ct.
and Ci = initial " }

Secondly, the capacity variation of the total circuit capacitance has to be determined. Denoting the maximum value of the total capacitance Cmax and its minimum value Cmin we obtain, using above expressions:

$$Cmax = C2 + C3 + \frac{C1 \times Cf}{C1 + Cf}$$

$$\text{and } Cmin = C2 + C3 + \frac{C1 \times Ci}{C1 + Ci}$$

Where C1 = series capacitor } see Fig. 3
C2 = parallel " }
C3 = equivalent capacitance representing stray capacitances and interelectrode capacitance.

It is obvious that C3 is a quantity which cannot be calculated, and we must therefore assume a certain value for it. It is general practice to adopt a value of about 15 to 25 pF. As the self-inductance is supposed to be known, the frequency range is given.

To enable readers to determine appropriate values of C1 and C2 for their particular requirements, the writer made the attempt of calculating suitable charts for two common V.F.O. frequency ranges, namely 3,500 to 3,800 Kc. and 3,500 to 3,600 Kc. The first one is of course for operation on 80 mx band and all others which are harmonically related to it, while the latter

* 10 Belgravia Ave., Box Hill North, E.12, Victoria.

range is mainly intended for operation on bands higher than 3.5 Mc. only. The charts are shown in Figs. 4 and 5, respectively. Their use is extremely simple.

Consult any inductance chart (to be found in handbooks or technical diaries) for determination of the inductance of the coil to be used in the circuit, or, alternatively, calculate its inductance using the known formulae. The next step is to find the capacitance necessary for resonance on a frequency of 3,500 Kc. This value may be read off a frequency chart (in handbooks, etc.). Now use Figs. 4 or 5, whichever frequency coverage of the V.F.O. is desired. Here we have on the vertical axis (Cmax) the capacitance found above for 3,500 Kc. Four curves, each for a common type of variable condenser, allow the appropriate series condenser C1 to be determined for the variable condenser available. The left part of the figure shows a nearly straight line by which we can easily find the necessary parallel capacitor C2.

III.—TEMPERATURE COMPENSATION

As is generally known, any oscillator circuit alters its frequency if it is subject to temperature changes and not compensated. This is due to changes in the electrical behaviour of circuit components as the temperature alters. This is denoted by the so-called temperature coefficient of the component concerned. We speak of a positive temperature coefficient if the value of the component increases with rising temperature and of a negative one if the value decreases with increasing temperature.

In order to make an oscillator circuit stable and insensitive to any temperature change, there is first of all a very logical solution to the problem and that is to place the actual circuit components as far as possible from any "heating" element, i.e. valves, transformers, and so on. This, however, is impossible in a small, compact V.F.O. But any frequency change caused by an alteration in temperature in the circuit elements other than the valve itself can be satisfactorily compensated. Let us now consider what has to be done to achieve such compensation.

Even if the condensers were unaffected by temperature we still have a small, positive temperature coefficient of the circuit, which is due to changes in the inductance of the coil, stray capacitance, and so on. This may nearly be made ineffective by using a suitable combination of capacitors such that the temperature coefficient of the whole circuit equals zero. In condensers the change in capacitance is due to an alteration in the properties of their dielectrics, i.e. the dielectric constant K varies. Thus the unit of the coefficient may be defined as the change in K relative to the actual K times 0.000001 per degree Centigrade. Manufacturers of ceramic condensers usually publish this data for their types. A common type of ceramic condenser is, for example, one with a negative temperature coefficient of 650 to 850 units.

The simplest way of compensation in a resonant circuit is to divide the fixed parallel capacitor into two condensers, both of which having opposite temperature coefficients. The ratio of the two condensers must then be chosen in such a way that the total coefficient of the condenser combination compensates the small positive one of the rest of the circuit which can usually be assumed to lie between +50 and +200 units. Adopting a value of +150 units we obtain the following expression which permits the determination of appropriate capacitors in a simple way:

$$\frac{C_a}{C_b} = \frac{-150 - T_b}{T_a + 150}$$

where C_a = value of condenser Ca
 C_b = value of condenser Cb
 (see Fig. 6)

T_a = temp. coefficient of Ca
 T_b = temp. coefficient of Cb.

To illustrate the procedure of calculation, let us now return to the V.F.O.

Suppose we have a ceramic condenser of 100 pF. and an average negative temperature coefficient of 750 units.

C_a = 100 pF., say,
 and T_a = - 750.

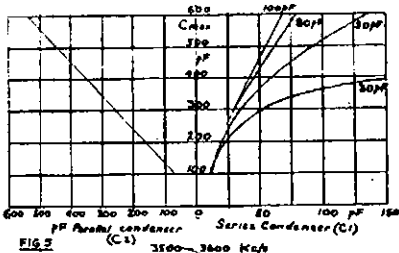
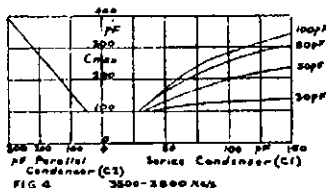
The total parallel capacitance which is in this case given by other factors (see section II.) is 350 pF. Thus

$C_b = 350 - 100 = 250$ pF.
 and the ratio

$$\frac{C_a}{C_b} = \frac{100}{250} = 0.4$$

Thus, by above expression, $T_b = +90$ units. Therefore the second condenser of the parallel combination must have 250 pF. at a positive temperature coefficient of about 90 units. As natural mica has a coefficient of +80 units, a mica capacitor of 250 pF. is used in the V.F.O.

In practice, this V.F.O. has now been used for almost two years with good results, so that its construction may be recommended to all interested. The same circuit can be utilised for the oscillating circuit of a frequency meter as it is stable within 200 cycles on the fundamental frequency under ordinary operating conditions.



In calculating the charts it was assumed that the initial capacitances of the variable condensers treated, equal ten per cent. of their total capacitances, and secondly, that C3, i.e. the sum of stray capacitance and interelectrode capacitance, and so on, is 25 pF. As those data may be slightly different in each case, it is obvious that this is a limit for the accuracy. Thus if the range is desired to be very exact, it is advisable to use ceramic trimmers to form the last 10 to 20 pF. of both the series and the parallel capacitor, by which the frequency limits may be adjusted as accurately as desired.

The length of the winding on the coil former is 1.38 inches and its diameter is 1.96 inches, while the number of turns is 11. This results in an inductance of 5.1 uH. The capacitance needed for resonance on 3,500 Kc. is found to be approximately 400 pF. Now supposing the frequency range is to be 3,500 to 3,600 Kc., we find the necessary parallel capacitance is about 350 pF., and the series capacitor for a variable condenser of 100 pF. is 42 pF., i.e. 40 pF. As mentioned above, the value of both fixed condensers may have to be adjusted experimentally for exact frequency limits.

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A Phasing Type Single Sideband Suppressed Carrier Exciter

PART ONE

BY N. SOUTHWELL,* VK2ZF

The theory of s.s.b. transmission in general has been well covered in articles appearing in this and other radio journals; it is not the intention in this article to cover that ground in any detail, but to describe an s.s.s.c. phasing type exciter that has been functioning satisfactorily for some time on the 14 Mc. band, and only to bring in as much theory as is required when discussing points of technical design.

Component parts for the exciter are readily obtainable and apart from six resistors and six condensers in the audio phase shift network, no close tolerance parts are used, in fact, the components available influenced, to a certain extent, the circuit used, as for example, the use of two transformers instead of one, in coupling the 6F6 output to the audio phase shift network, because one transformer of suitable power rating and impedance ratio was not obtainable.

The equipment needed to align the exciter consists of an a.c./d.c. multi-meter, a receiver, and an audio oscillator to provide a source of low distortion tone of around 1,000 cycles per sec. If a b.f.o. is available, so much the better. An oscilloscope is not required, though one can be quite handy for checking adjustments; it is by no means essential.

* 90 Dutton Street, Yagoona, N.S.W.

THE AUDIO CIRCUIT

Fig. 1 is a block schematic of the exciter, whilst Fig. 2 is the complete schematic.

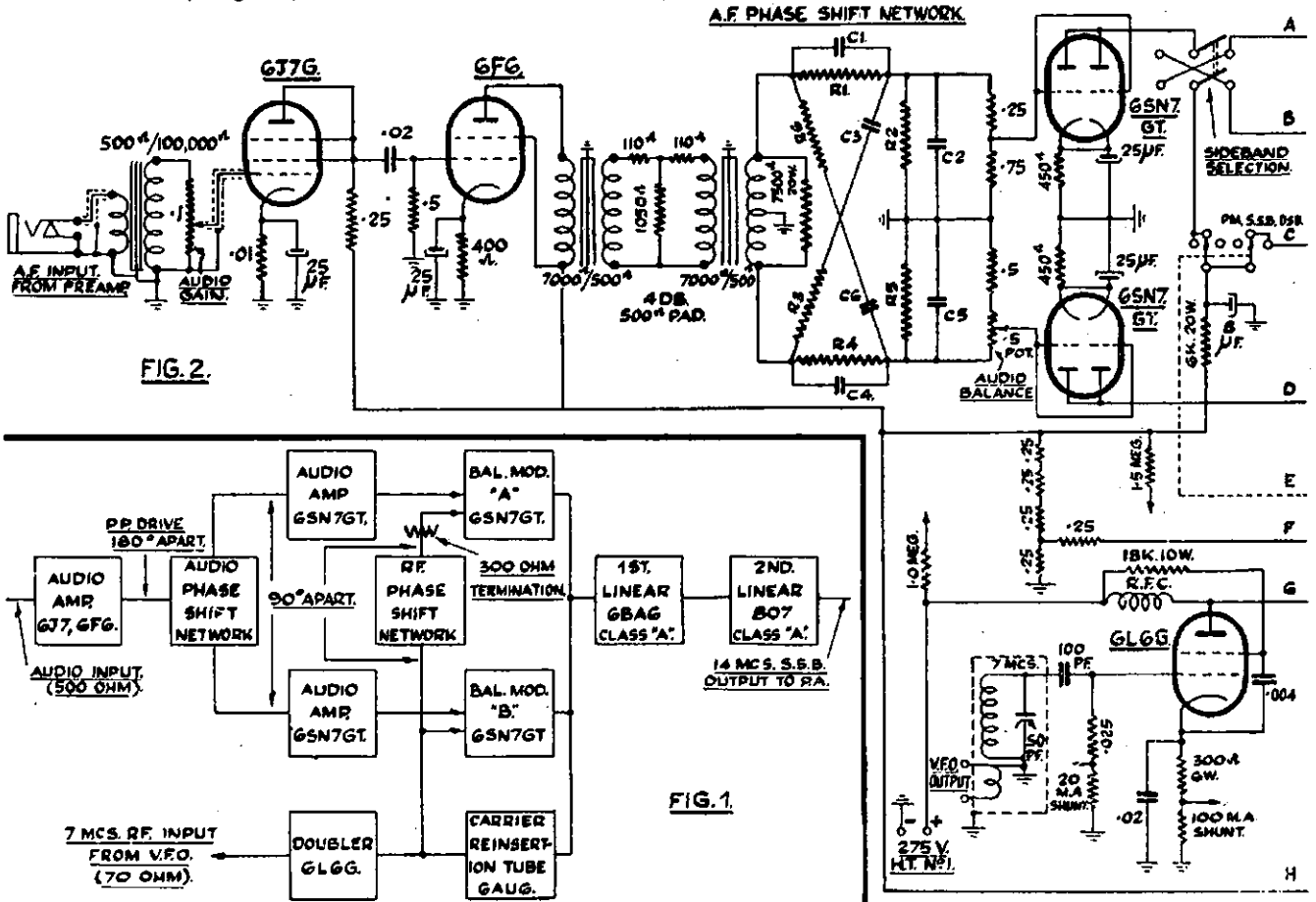
Network Components	Nearest Commercial Value to that required.	Exact Value required	Value Measured on Bridge
C1	0.001	0.00105	Cm1
C2	0.002	0.00210	Cm2
C3	0.006	0.0063	Cm3
C4	0.005	0.00475	Cm4
C5	0.01	0.0095	Cm5
C6	0.03	0.0285	Cm6
R1	Ohms	100	Cm1
	100,000	100,000	
R2	50,000	105	Cm2
		100	
R3	15,000	100	Cm3
		453	
R4	100,000	476	Cm4
		453	
R5	50,000	476	Cm5
		453	
R6	15,000	453	Cm6
		453	

Table 1.— Audio Phase Shift Network Circuit Component Data.

The audio input channel of the exciter has an impedance of 500 ohms, and is normally connected to the output of the station's microphone preamplifier which, in the writer's case, incorporates a l.p. filter having a cut off frequency of less than 4 Kc. The low frequency response of the preamplifier drops away below 300 cycles per sec. due to the choice of the interstage coupling components. A narrow frequency response in the preamplifier is desirable as the audio phase shift network only works well over the "voice frequency" range.

The gain control in the 6J7 grid circuit governs the amount of audio fed to the exciter and when radiating on s.s.s.c., the setting of this control determines the peak power output of the unit.

The 6J7-6F6 amplifier section is of standard design, the 6F6 output is transformer coupled to the input of a "Dome" type wide-band audio phase shift network by means of two transformers separated by a 4 db. 500 ohm pad. The reason for using two transformers has already been given, the 4 db. pad serves to provide an amount of isolation between the two transformers, as cascading them directly is liable to cause interaction between them as regards impedance matching, etc. The 7,500 ohm secondary of the second transformer is loaded by a 20w. 7,500 ohm resistor to correctly load the 6F6.



The wide-band audio phase shift network was originally brought out by R. B. Dome, and articles on it have appeared in various journals. This type of network must be fed from a low impedance push-pull source, the exact impedance is not critical, as long as it is not very high; the secondary winding of a small class B modulator driver transformer is excellent. A lower value than 7,500 ohms could be used as long as sufficient audio voltage can be developed to drive the grids of the 6SN7GTs. The use of the 6F6 as driver provides a reserve of power as the loss in the network is fairly high, around 13 db., which is a voltage ratio of approx. 4.5:1. This ratio becomes 9:1 when the voltage divider networks on the o.p. of the phase shift network are included. It is better to have a reserve of drive than to have too little, also the driver tube can be run well within its ratings. Other experiments in view, requiring considerable audio power at this point are in mind, so the 6F6 was chosen for the driver stage.

Phase Shift Network

The values of the six resistors and six condensers comprising the audio phase shift network are critical and should be as close as possible to the actual values required. The values of the components used in this network are similar to those used in the W2UNJ exciter in "QST" for August, 1949, mainly because the exact values required in it approach values which are easily obtainable com-

CIRCUIT NOTATIONS

Figure 4 is simple Vector Diagram showing operation of Balanced Modulators "A" and "B" at any peak instant.

- (a) Balanced Modulator "B."
- (b) Balanced Modulator "A" (Note R.F. Carrier lags 90° on Bal. Mod. "B" and A.F. input is shifted 90° also).
- (c) Result of adding outputs of Bal. Mod. "A" and "B" as shown on the left (upper S.B. radiated). Carrier energy is balanced out by Bal. Mods.

Coil Data

6L6G: grid 27t. close wound 3/4" diam. Link 4t. wound over cold end. Plate 22t. close wound 1/2" diam.

6SN7GT's Plate: 2 x 10t. each 5/8" diam. winding length 11/16", coils mounted in line, distance between ends of coils when mounted 3/16", link is 2t. 18 d.s.c. wound in the 3/16" space.

6BA6 grid and plate: each 17t. close wound 5/8" diam.; links each 2t. wound over cold end.

All coils above, except 6SN7GT link, wound with 28 s.w.g. d.s.c.

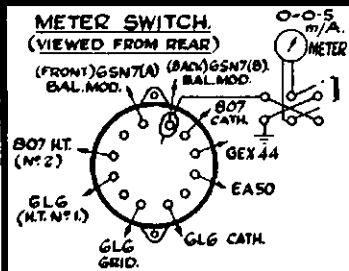
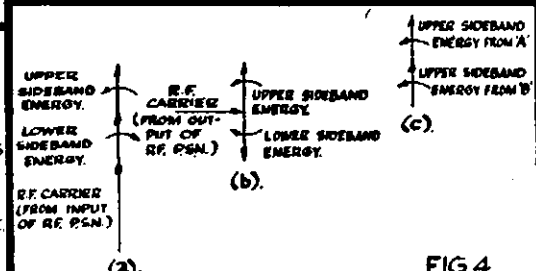
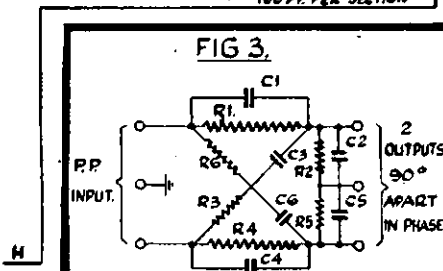
807: grid similar 6BA6; plate 12t. 20 s.w.g. enam. 1" winding length, 1 1/2" diam. and c.t.; link 2t. Belden wound over centre of plate coil.

mercially, as can be seen from Table 1. If you desire to strike out on your own and select a new set of values, the article by VK4FN on s.s.s.c. in "Amateur Radio" for Sept., 1949, will provide you with the necessary information to do so.

When selecting components for the network, do not take the values stamped or colour coded on them for granted, values vary widely from these in practice. Obtain as many condensers and resistors as possible of the approximate values required, then go through the condensers one at a time, measuring their capacitance on a bridge, pick out six whose values are nearest to those required, or build up to the correct values by using more than one condenser for each position in the network. Then apply the condenser values obtained to the formula given in Table 1.

To obtain the exact values of the six resistors required, obtain or build up resistors of those values by again using the bridge. In the writer's case the values were obtained by using a small general purpose bridge, not a laboratory precision instrument, and the network has never given a minute's trouble.

Across the two outputs of the audio p.s.n. are connected two 0.5 meg. resistors and a 0.5 meg. resistor with a 0.5 meg. pot, respectively. These are voltage dividers, one fixed, one variable to enable the two outputs from the network to be adjusted for amplitude balance, by adjustment of the 0.5 meg. pot, thus providing equal audio drive to each



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balanced modulator through their respective audio driver stages.

The plate circuit of the 6SN7GT audio driver for balanced modulator "A" has in it a d.p.d.t. switch which, when operated, reverses the connections to the primary of the coupling transformer, changing the phase of the audio energy fed to balanced modulator "A" by 180°. This action results in either the upper or lower sideband energy being cancelled out in the balanced modulators' tank circuit, depending upon which way the switch is set, hence the designation "sideband selection switch," as its position determines which sideband is radiated.

Balanced Modulators

The audio drivers are coupled to the balanced modulators by two transformers. These must be identical (of the same make and type), this is important, as the use of similar transformers will result in a similar audio response and phase shift in each channel. Do not try and use dissimilar units, it just will not be satisfactory.

The transformers used in the original unit came from the disposals market, and had a secondary impedance of 500 ohms, a higher impedance would be quite satisfactory though, but the writer prefers to drive his balanced modulators from low impedance circuits.

The transformer secondaries are loaded with 500 ohm 5 watt resistors for terminations, because the load presented to the transformers by the balanced modulators is considerably higher than that value.

THE R.F. CIRCUITS

Turning now to the r.f. circuits of the exciter, which is driven from a 7 Mc. output v.f.o., we first come to the doubler stage from 7 to 14 Mc. using a 6L6G. The use of a tube of this size in such a low level circuit may seem unusual, but when the exciter was under construction, it was not known whether the v.f.o. would prove stable enough to generate a carrier for feeding an s.s.s.c. exciter, and it would have been quite an easy matter to re-wire the doubler stage as a tritret and use crystal control, had such proved the case, and the 6L6G was the most suitable tube on hand.

In passing it may be pointed out now that if it is intended to use a v.f.o. to drive an s.s.s.c. exciter, the v.f.o. must be of excellent stability, better than that normally required for a.m. phone or c.w. work. The oscillator must also be completely free of phase modulation from the 50 cycle supply. (Note.—Clapp oscillators followed by some frequency multiplication and having their heater circuits above ground are prone to this trouble.) Above all, the oscillator must be stable. Many a v.f.o. will be found to fall down when put to the task of driving an s.s.s.c. exciter. Nothing is more annoying when receiving s.s.b. transmissions than having to sit with one hand glued to the receiver b.f.o. pitch control to keep a drifting transmission synchronised, however, enough of v.f.o.'s., let us return to the 6L6G stage.

The coupling from the v.f.o. is via a 70 ohm coax link, a combination of grid leak and cathode bias is used to keep the plate current within safe limits irrespective of the amount of drive from the v.f.o. Metering of the grid and

cathode currents is provided. The grid tank is a semi-fixed-tune circuit and once set to 7,100 Kc. needs no further adjustment.

In the plate circuit of the 6L6G is the 90° r.f. phase shift network. The 90° phase shift is accomplished by the use of a pi network terminated in its characteristic impedance of 300 ohms. This set up is equivalent to a quarter wave terminated line. A few moments thought regarding a terminated quarter wave line will bring to mind that the electrical length of the line is 90°, which means a phase shift of 90° occurs between its ends, also that the voltages across its ends are equal in amplitude, the very requirement needed to supply r.f. drive to our two balanced modulators.

The 300 ohm network termination, which must be non-inductive, is made

up of carbon resistors, paralleled up to give a power rating of 10 watts. Use only carbon resistors for this termination. Ten watts may seem an unwarranted power rating for this resistor as only a watt or so of r.f. is in the circuit, but it must be remembered that the termination must run practically cold, any undue heating will alter its value and thus throw the whole network off its correct operating position. Mount the resistors where they can get some circulation of air around them.

The tuning condenser for the pi network is a "butterfly" type disposals job of approx. 100 pF. per section, used as a two-gang condenser.

The efficiency of the 6L6G working into such a low load as the network presents, is somewhat low, but this was considered a small price to pay for the

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Q-Max Type BD400 Direct Drive 4" Dial, cal. 0-180	£1/1/-
Q-Max Type S.M.D.A. Full Vision Dial with blank scales	£2
Technico 1 Pole 12 Position Rotary Wafer Switches	3/11
American General Electric Type NE51 Neon Lamps, M.B.C. base	2/4
American General Electric Type NE2 Neon Lamps, pigtail connection,	2/4
M.B.C. Socket to suit Type NE51 Neon Lamps	1/7
Labgear Wideband Couplers for R.F. Exciters: 80, 40, 10 metre,	£2/4/6

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ease and convenience that this method of r.f. phase shifting gives, and after all the amount of power dissipated in the 6L6G is not great.

R.F. Phase Shifting Networks

Quite a number of r.f. phase shifting networks were tried with varying degrees of success, until the present circuit was arrived at. Generally speaking, the other systems were found awkward to adjust, especially those circuits using two branches in which the reactance of an inductance and a capacity is made to equal the resistance in their respective branches, thus retarding and advancing the phase by 45° in each circuit, giving an overall shift of 90° between the two outputs. There are too many variables in circuits of this type for them to be easily adjusted.

It was reasoned that it would be simpler instead of having to derive two r.f. drives, each 45° removed in phase from the r.f. source, to use the r.f. source to drive one balanced modulator, and shift the phase 90° to drive the second balanced modulator.

Ideas investigated, included coupled circuits; these gave quite good amplitude balance, but had a fixed phase difference which, though a lot of time was spent on the problem, could never be made exactly 90°, apparently due to slight stray capacitive effects, even though these were kept as low as possible and efforts also were made to neutralise them. The result was that the sideband rejection was not high, being only around 20 db. The pi network was then tried and over a period of months has been found stable and easily adjusted.

DONATION

Mr. J. Coulter, VK5JD, has kindly denoted a prize of One Guinea for the best technical article to be received for the magazine between 1st of January and 30th June, 1953. This prize is open to all Members and Associate Members throughout Australia. So how about it chaps!

The balanced modulators used are 6SN7GTs, with the r.f. energy fed to the grids in parallel and the a.f. power applied to the cathodes in p.p. The sources of drive are all of low impedance, and the output tank, across which both balanced modulator outputs are connected in parallel, has a reasonably high impedance, resulting in an efficient operation of this section of the exciter as is possible.

It may surprise you to see that no d.c. plate voltage is applied to the balanced modulator, the only voltage on the plates of these tubes is the audio voltage which appears across the 500 ohm secondary of the audio transformer to which each tube is coupled. Half the voltage across the transformer secondary, from c.t. to each end of the winding, is applied between cathode and plate, of each section of each tube, with the plate side of the driving voltage being earthed.

A d.c. voltage applied to the balanced modulators, would only raise the plate dissipation of the tubes and would not

produce any additional output to that obtained at present.

Operation of a Balanced Modulator

From experience on the air, it is evident that the majority of Amateurs are somewhat confounded by a balanced modulator and have no idea of its operation. The simplest way of explaining the operation of a balanced modulator is to consider it as being an electronic switch operated by the r.f. drive, and reversing every half cycle of r.f., thus switching the audio energy supplied to the balanced modulator at that rate. The amount of r.f. carrier in the output circuit of a perfectly balanced stage would be nil, because the r.f. is applied in the same phase to both grids simultaneously and thus cancels out. However, nothing in this world is perfect, so we are told, and that applies to balanced modulators also. A small amount of r.f. carrier appears in the output circuit due to slight unbalance in the stage, the amount of carrier depends upon how great the unbalance is, but more of that later when we consider lining the exciter up initially.

(To be continued)

VICTORIAN WEATHER

Overheard on 40 metres during the South Western Zone's Convention and Field Day at Creswick. During a particularly heavy downpour, a VK3 was heard calling CQ in the following manner: "VK3—'Mobile Marine' at Creswick." Locality, Creswick, is approximately 150 miles from the sea.

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Dielectric	Polythene	Polythene	Polythene	Polythene	Polythene	Polythene
Outer Cover	P.V.C.	P.V.C.	—	P.V.C.	P.V.C.	—
Characteristic Impedance	68-78 Ohms	60-74 Ohms	75-85 Ohms	60-75 Ohms	45-55 Ohms	275-325 Ohms
Capacity per Foot	17 pF.	21.5 pF.	18 pF.	24 pF.	35 pF.	4.6 pF.
Attenuation per 100 Feet—						
1 Mc.	0.2 db	0.4 db	0.5 db	1.2 db	0.92 db	0.15 db
10 Mc.	0.68 db	1.3 db	1.5 db	3.0 db	2.90 db	0.4 db
100 Mc.	2.4 db	4.3 db	5.0 db	—	6.00 db	—
Loading (Watts In Air) at—						
1 Mc.	1500	1500	1000	500		
10 Mc.	500	500	300	150		
100 Mc.	150	150	100	—		
Conductor Arrangement	Concentric Supported On Open Polythene	Concentric	Parallel Twin Spaced 0.057-inch	Two Insulated Wires Twisted	Concentric	Parallel Twin Spaced 11/32-inch
Velocity Factor	0.86	0.67	0.67	0.67	0.67	0.67
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DX NOTES BY VK7RK*

October has always been, to my mind, the DX month of the year and so, on this occasion, has provided much more interest than the preceding months. Of course, ionospheric conditions being what they are, it's a very sorry comparison with a few years ago, but any improvement is welcome and the hopes for those new ones live again. Naturally enough, with very limited time, I cannot hope to hear even a small part of the available DX so let me enter a plea once more for some doings of the gang. Even the stations you consider commonplace working are probably of interest to the other chap.

3.5 Mc.: Once more the only report is from Eric B.E.R.S.195, who lists SM5A QV (daily 1900-2030z), SM4ALB, SM4GL, SM7JM, DL3BQ, LA3LC, W7BL, W8BHW. The one morning I listened brought HB9BX and UB5KCA.

7 Mc.: All reports indicate that Europeans are easily worked in the early mornings and around breakfast time such calls as G, F, DL, SM, etc., come thick and fast. From Eric once more comes YJ1AB, W6CYX/KP4, MP4BAU, TA2EFA, 4X4BX, 4X4DH, CO8AQ, KB6AY, KC6QY, ZB1KQ, FK8AJ Y12FD, Y12AM, Y13BZL, VQ2AT, VQ3BU, VQ4AQ, ZC4RX. 3AHH adds to the general run of Europeans, KJ6FAA* and VP5BH, just 2 Kc. inside the band at 0530z. 2AMB: YJ1AB*, VS6CG*, SM5ANY*, CE3AG*, PA0VB*, and PA0UN*. 5XK: YJ1AB*, KG6FAA*, VK1EM*, CM8SL*, FK8AJ*, KB6AY*. 7RK managed the usual few Europeans early plus YJ1AB*, LA3TD, HB9CM, YU1AHI, UB5BP (they still won't play), CT1EL and 4X4DR.

* 5 Galvin Street, Launceston, Tasmania.

14 Mc.: Evenings provide quite good contacts with stations in JA, KA, VS6, KG6, KR6, etc. Afternoons seem very erratic, on some occasions have heard all continents under one hour, but on other occasions almost nil. Around 2200z North Africans are available together with Ws long path. B.E.R.S.195 comes up with CE3AG, F18AC, YJ1AB, PY2CK; while 3AHH lists YJ1AB*, CE3AG*, KZ5DE*, PY2CK*, OH1PW*, OH5NK*, ZS5AM* (at 0500z on a dead band), ZK2AA*, MI3LK, OZ8U, MF2AA, OE13HP, HC1FG, HZ1SD. 4XJ lists VR3C*, F18AC*, F18AD*, G14RY*, GC2FZC*, GM2ACQ*, FB8ZZ*, KP4AZ*, VR4AE*, CR9AF*, MB9BJ*, MP4KAC, and a long list of the more general ones; in all Les worked 44 countries for the month. 4CW: 4X4BT, SM7QK, OH5CE, PA0BI, PY9BR, LU3PK, SM5ACC*. 5XK swapped reports with SP6SA*, SM5CO*, G14RY. 7RK at long last added ZK2AA* to the list and logged HS1VN*, SL5CB*, PJ2AD, ZE1JE, CE3AG, KX6AI, HC1FG, KZ5GO, LA3DB, JA2CB*, CN8GD.

Those stations reported specifically as phone are, from B.E.R.S.195: KJ6AW, ZK2AA, ZM6AA. 3AHH: I1BDV*, CT1FM*. 7RK: DU1J1, VS7FJ, VR2AP, VR3C, C3AR, 4X4RE, TA3AA, ZK2AA, PY2CK, LU7DX, VK1RG.

21 Mc.: As I said last month, this band is showing signs of really coming good. Europeans are peaking about 1000-1100z and a good indication of the state of the band is obtained by listening for the commercial GLI3 on approx. 21410 Kc. 2XQ works Ws. one as early as 2100z; heard him among the Europeans during "CQ" Contest. 4HR heard Europe QSO ZD9AA, ZD7A and FF8 at 1000z. 4XJ lists W6*, W0*, ON4NC*. Eric B.E.R.S. 195 heard VE7AIH, KA2OL, W0BLZ. ZL4GA says Africans known to be on 21 Mc., apart from those listed elsewhere are CN8MI, FA8CR, FA8BG, FF8AG, CR7AF. 7RK had a good month working 15 countries including VQ4HJP*, DL2RO*, 4X4RE*, 4X4BX*, GW3FSP*, OZ2PA*, OE5CA*, G6CJ*, ZC4RX* and hearing, apart from numerous G and DL, F8BS, F8BI, EA3CY, ON4AS, HB9EU, TA3AA, PA0KW, VR2CG (phone and c.w.), VE7AIH.

28 Mc.: As also with last month, the only one who seems to be active seems to be 4XJ who entered W6VAD*, W6TWF*, W6PKF*, W5VIU*, W7PBD, KA2OM*, KH6AGY*, KH6FC*, KM6AX and ZK2AA. Here 28 Mc. is dead.

QSLs received during the month. 2AMB: KG4AF, MF2AA, SU1GB, FO8AB, VP5BH (Cayman Is.), the last two for 7 Mc. contacts. 3AHH: FU8AC.

Some QTHs that may be of interest are: MP4BAU—Adi Lawyer, Qatar, Bahrain Is. HS1UN—C/o E.C.A.F.E., Bangkok, Thailand. SA2CB—Benghazi, Libya via R.S.G.B. SA3TA—Box 372, Tripoli, North Africa.

4QL, now settled into VK2, provides the dope that G3AAT has gone to Greenland for a period of approx. 2 years with the British North Greenland Expedition. He will be operating when circumstances allow under G3AAT/OX and QSLs will be despatched when the Expedition returns. DU stations now appear to be permitted to work outside American possessions.

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Call	No. Ctr.	Call	No. Ctr.
VK4HR	12 167	VK4JJ	5 114
VK3BZ	3 163	VK3AWW	14 112
VK3EE	10 163	VK4DO	20 109
VK8JD	1 155	VK3MS	24 109
VK8RU	2 152	VK4RW	23 104
VK4KS	9 152	VK2ADT	13 102
VK6KW	4 150	VK2AHA	15 102
VK3LN	11 141	VK3HO	25 102
VK4FJ	21 141	VK6FC	19 101
VK3JE	7 133	VK2AT	22 101
VK4WF	16 130	VK3IG	5 100
VK8DD	5 126	VK3GG	18 100
VK4WJ	17 122		

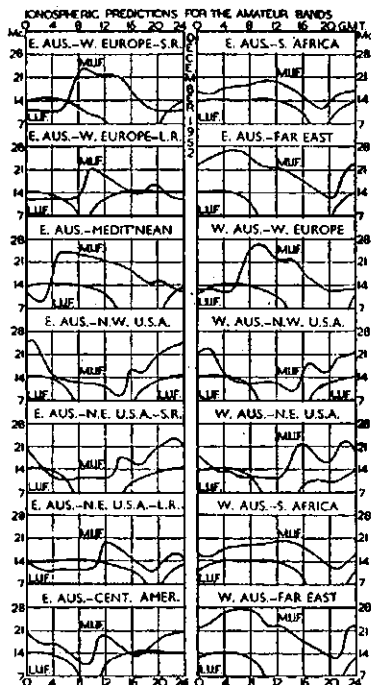
C.W.

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	6 207	VK3XK	30 128
VK4HR	8 188	VK4RF	11 125
VK3FH	15 177	VK3YD	27 123
VK4EL	9 167	VK3EK	3 122
VK4FJ	29 165	VK3J1	25 118
VK2CN	2 152	VK3PL	38 117
VK3CN	1 151	VK3HT	37 117
VK2GW	16 151	VK3UM	12 116
VK5RK	23 150	VK3YL	39 115
VK3CX	26 150	VK7LJ	24 114
VK6SA	28 150	VK4DA	7 113
VK4QL	36 146	VK7LZ	17 112
VK3VW	4 143	VK6FC	13 107
VK4EL	5 142	VK6KW	40 104
VK3U	18 141	VK2VC	34 103
VK3KB	10 138	VK3AFA	14 101
VK5FH	31 134	VK3NC	19 101
VK5BO	33 133	VK2OA	32 101
VK4DO	20 129	VK7RK	22 100
VK3JE	21 129	VK2AEZ	35 100

OPEN

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	4 220	VK2ASW	53 118
VK4HR	7 208	VK3AWW	45 115
VK2NS	16 195	VK3JA	43 114
VK3JE	12 190	VK2ADT	14 113
VK6RU	8 186	VK4RW	62 113
VK4FJ	32 184	VK3PG	47 111
VK3HG	3 171	VK3MM	49 111
VK6W	13 171	VK4RC	21 110
VK4EL	1 170	VK3ZB	34 110
VK3X	1 167	VK3DO	38 110
VK4LS	10 167	VK2ZC	25 108
VK2KS	24 167	VK2YL	11 106
VK4DO	15 157	VK3AWN	36 106
VK3LN	29 144	VK2VN	18 104
VK5FL	26 143	VK4UL	27 104
VK3MC	5 139	VK6FJ	44 104
VK3OF	19 137	VK6PW	50 104
VK4WF	40 137	VK2HZ	17 103
VK6DD	22 136	VK7KB	30 103
VK3HT	41 135	VK2TI	37 103
VK2ADE	28 133	VK6DX	42 103
VK6W	48 133	VK7RK	31 102
VK2AHA	9 128	VK4TY	35 102
VK2AHM	20 125	VK5HI	51 101
VK3J1	33 119	VK2ACX	6 100
VK7LZ	23 116	VK2TG	38 100
VK3VQ	46 116		

PREDICTION CHART FOR DEC., 1952



FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

NEW SOUTH WALES

A meeting was held at Science House on 7th October with a good roll-up. Those in attendance were 2JU, 2ANF, 2AOA, 2AJZ, 2OA, 2WJ, 2HL, 2VW, 2ABZ, 2AST, 2HE, 2AYM, 2HO, also a number of visitors. The night was enjoyed by all. 2ANF, 2NP, 2HL, 2AOA and 2AST gave a talk on their experiences at their various locations which was applauded.

The greatest highlight of the month was the v.h.f. combined field day, which was held on the Saturday and Sunday, 4th and 5th October. There was a number of stations out in the field, and most of the home stations were active. Conditions for the two days were not the best, it rained heavily all the time in most locations, but despite the weather, it was a success.

Stations in the field were 2ANF who had a very nice c.c. tx, 832 in final and a xtal converter (cascode) with a 7 Mc. i.f. channel, modulator two 6C4s class B, he used a halo antenna while mobile, 3 x 3 element beam was used. Station was set up on top of Mt. Canobolas, 4610 ft. high. The greatest distance worked was 175 miles to 2PN, the Granites (6 miles south of Batlow). The mobile tx was in action on the way up to Bathurst, and QSOed many stations.

2HL and party were on top of Mt. Lambie with a nice xtal converter and an 829 in the final of the tx. The beam was a 3 element type. 2AST and party were at Mt. Tomar, they used a xtal converter, c.c. tx, and antenna was 3 half wave stacked dipole voltage fed 15 ft. high. They had 40 mx. gear but that band was dead and no contacts were made. Thirteen contacts in all were made on 144.

Ross 2PN was on top of the Granites 2,147 ft. high and he made a number of contacts, VK3UI on Mt. Morgan being the highlight. This contact was made during very bad conditions and signals were S4/5, the distance was 179 miles, which I think will top the pole for the field day. Ross uses a 522 tx. and 4 x 4 antenna. 2ALG was mobile on both days and he was at various mountain spots likely to be good get-aways for signals. His signal was heard all over Sydney at S9. No news was received from the Royal Naval College on the Canberra Radio Club, but they were out in the field.

John 2AMV was mobile from Forbes to Orange. 2NS was active from his home location and made many contacts. 2ATO made a brave effort and went to Sassafrass on Turpentine Ridge near Nowra and only heard 2HL, but the wx. there was also very bad and John gave it away. His rig was a cascode converter and tx. had 6J6, 6J6 and QV04/7. 2AOA located at Canberra had no contacts, but was heard by 2ANF and 2WH at S7. 2WH was very active at home location and worked many stations. Hughie has an xtal converter and an 829B in the final of tx. Antenna was a 4 x 4.

2ACT of Dubbo was worked by 2ANF, 2EI, Parkes, used a mod. osc. 2TA, Young, has a rotary beam.

Many Sydney stations were active over the two days. 2GU Canberra and 2TA

have been heard a lot in Sydney. Arch has an 829B in final and also a crystal converter. Keep your beams on Canberra at 8 p.m.

The general meeting of the W.I.A. was held at Science House in the large hall on 24th October. The V.h.f. Group gave a lecture and demonstration of v.h.f. and u.h.f. gear. The lecturer, 2ABB, gave a very good resume of what v.h.f. boys do, what they build and why. The job was excellently done and we thank him very much. He was assisted by 2AJX who described xtal cascode converter and 2HL who described the building of his 144 Mc. tx., using the flat strip plate lines. Both did a good job. Thanks again boys. There was all types of gear from 2 tube xtal tx's (pip squeak) to high powered p.p. 826 final rigs.

We welcome new stations on 144 Mc.: 2ADE, 2AYM and 2MZ. Old stations back are 2ASK, 2FO, 2ACC and 2AHP.

A few break-throughs have been noted on 50 Mc., 2AHR, 2ADT coming in R8 in Sydney. The beacons were heard here on Sunday, 26th, from TL, NL. So keep an eye on 50 Mc. 2VL says he is going to get on 576 Mc. soon as he has a rx. ready; 2DF, 2WJ and 2XX are occasionally on that band.

VICTORIAN V.H.F. GROUP

The October meeting of the Group was devoted to a description of 144 Mc. portable gear by Cedric 3ACH, and a discussion on the coming field day contest. Cedric's tx is a three stage job using an EF50 tritet c.o. with output on 24 Mc. driving a second EF50 which is a dblr., this in turn driving a final 832 as a trebler to 144 Mc., with an input of 20 watts. The rx is a modified 522 with 6AK5s in the r.f. section and the audio end is used for modulation purposes when transmitting. H.t. power is obtained from I.F.F. genemotors. The antenna is a Lenfo beam, and the longest distance worked is to VK7.

The field day contest rules were finalized and are as follows:

(1) Period of contest. Between 1200 and 1700 hours E.S.T., on Nov. 2, Dec. 14 this year, and Feb. 1, Mar. 15, April 26, 1953.

(2) Contacts. Every contact made counts toward the final score with the restriction that only one contact with any one station per band per day will count.

(3) Scoring. The system of scoring is on a mileage basis thus: Up to 10 miles, 1 point, with the addition of a point for each additional 10 miles up to a total of 100 miles; from 100 to 120 miles, 11 points, plus a further point for each 20 miles above up to a total of 200 miles; 200 miles and above 16 points. On 50 Mc. any contact over 300 miles earns no more than a total of 5 points.

(4) Multipliers: 50 Mc.—2, 144 Mc.—3, 288 Mc.—6, 580 Mc. and above—9. Each multiplier applies only to the score obtained on that particular band; i.e., if a station scores 118 points on 50 Mc. and 10 points on 144 Mc., the total score then becomes: $118 \times 2 = 236$; $10 \times 3 = 30$; total 266 points.

(5) Sections. There is a receiving section for associate members and a section

for transmitting members. Both home and portable stations may compete in the transmitting section. This enables one to operate from home or portable as determined by circumstances such as weather conditions.

(6) Logs. In the receiving section they are to show: Date, time, station heard, band, location of station heard, whether calling CQ or another station, signal report on station logged, estimated distance, points claimed. In the transmitting section logs are to show: Location, date, time, band used, station worked, reports given and received, location of station worked, estimated mileage for each contact, points claimed.

At the end of the logs show a summary of the totals for each sheet with multipliers and grand total. Logs to be signed by the participant. In matters regarding the contest the decision of a contest committee appointed at a Vic. V.h.f. Group meeting will be considered as final and binding. Logs should be posted to reach the Victorian Division rooms before 7th May, 1953.

(7) In determining distances, Army Survey Maps of 1" = 4 miles scale are to be taken as standard. Alternatively, the method shown in "A.R." of March, 1948, may be used.

(8) It is planned to have useful prizes available for the leading scorers in both sections.

WESTERN AUSTRALIA

50 Mc.: Lou 6HR and Basil 6BS have again been heard, both with quite strong signals. Don 6HK has overhauled the beam and feeders. Rog. 6RK and Jack 6GB are around quite frequently. Jack is talking of a new beam to go on the tower. Don 6DW has built up a silicon "noise generator" and now intends to prove that his converter is better than 6BO's! Conditions between Bruce Rock and Perth have been quite scratchy. The route to Frank 6FC has not been much better. Lionel 6LM has also been on 50 again, but his converter has lost its stability (echoes—xtal converters are the best!). For myself—little to report. I am just sitting back enjoying a yarn to any station that cares to natter. Blake 6GS is still off the air. Charlie 6HM is on his way to Cocos Island; we all hope to work him.

144 Mc.: Don 6HK has had his "QQ" on the band and is now driving it with a QQCO4/15; is busy on beams. Jack 6GB has his "QQ" also going. It sounds very nice indeed and there is some r.f. getting out! Rog. 6RK is driving his 829 with an 815 as a class A driver. Rog. and Don 6HK have found some merit in coils over linear tanks. Frank 6FC and I have had several QSOs and we wonder if 2 mx isn't better than 6. I have had a couple of contacts with 6AG and 6RU. The 2 mx. channel is still used every Sunday at 2000 hours. They stand by and no newcomer need wait long before he has a chance to enter the net. I have been toying with a pair of 834s for this band but even my 815 is hard pushed to drive them. Believe 6BS has his 522 going.

If previous years are any guide, the 50 Mc. and 144 Mc. bands should soon offer an opportunity for DX and to anyone who has the bits and pieces and the DX spirit, December and January are, or have been, the best months.—6BO.

FEDERAL EXECUTIVE PROCEEDINGS

Resume of the Minutes of Proceedings at Meetings of the Federal Executive held during Sept., Oct., and Nov., 1952.

Request for Divisional Status by VK9 Amateurs.—Consideration was given to a request by a VK9 Amateur for the right to form a VK9 Division of the W.I.A. Agreed that this could not be done unless the requirements of the Federal Constitution relating to the formation of a Division could be met, and the VK4 Division's approval given for the modification of its Divisional boundary within which the VK9 call area was encompassed. Resolved that VK4 Council receive copies of all correspondence dealing with this request.

Emergency Network Plans For Civil Defence.—Resolved that dye-line prints be obtained of draft drawings of proposed basic Emergency Network Plan for Civil Defence tabled by the Secretary. Agreed that copies be forwarded to each Division with a detailed report as soon as practicable.

Disposition of Unclaimed QSL Cards.—Consideration was given to disposition of unclaimed QSL cards for non-members of the W.I.A. under the terms of Item 1.6 of the 1952 Annual Federal Convention. Agreed that a report be obtained from Mr. Ray Jones, Federal QSL Manager, and an Officer of the Postmaster-General's Department, on the legality of destroying these. Further agreed that upon receiving said report, copies be forwarded to Federal Council for comments.

Vote of Federal Council on Submitted Motions.—The Secretary reported on the result of voting of the Federal Council on the motion previously submitted reference approaching the Postmaster-General's Department for permission to operate emergency portable/mobile stations at any time, such privilege to be for the use of members of the emergency networks only. Voting: Aye—VK3, VK4, VK5, VK6, and VK7; Nay—VK2. The motion was therefore carried by five votes to one opposed.

The Secretary reported on the result of voting of the Federal Council on the motion previously submitted reference the deletion from the Federal Constitution of the right of the Federal Execu-

tive to vote in Convention. Voting: Aye—VK2, VK3, VK5, VK6; Nay—VK4, VK7. The motion was therefore carried by four votes to two opposed. Agreed that Federal Council receive notification of said voting and that action be implemented on the motions immediately.

1956 Olympic Games Suggestions.—Consideration was given to a letter from VK6DX in connection with suggestions that F.E. inaugurate plans for accommodation, supply of tickets, transport, and Amateur activities for the 1956 Olympic Games. Resolved that the matter should be dealt with by the Victorian Division as the host State on this occasion, and that copies of the correspondence be detailed to the Victorian Division in this regard.

Federal Policy Book.—The Secretary tabled duplicated copies of the Federal Policy Book for distribution to Federal Council containing all amendments and

additions agreed up to and including the 1952 Annual Federal Convention. After checking with original, agreed that these be sent out for the use of all members of Federal Council.

Combining of Federal and Uniform Divisional Constitutions.—Consideration was given to Federal Council's directive to combine the Federal and Uniform Divisional Constitutions to become the Constitution of the Wireless Institute of Australia. Resolved that expert legal advice be sought as soon as possible so that adequate time could be allowed to thoroughly study the two Constitutions.

Standard Log Sheets.—After discussion, it was resolved that the requirements of all Divisions for the Standard Log Sheets for Contest purposes be sought so that quotes for various quantities could be obtained with the indicated requirements as a basis. Agreed that requirements based on a five-year period be obtained.



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FEDERAL, QSL, and DIVISIONAL NOTES



Federal President: G. GLOVER (VK9AO); Federal Secretary: O. M. BULL (VK82S); Box 2611W, G.P.O., Melbourne.

NEW SOUTH WALES

President: John Moyle, VK2JU.
 Secretary: David H. DuR (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: Harry Powell, VK2AYP, 9 Russell Avenue, Wahroonga.
 Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; Newcastle: Ron McD. Stuart, VK2ASJ, 98 Dunbar St., Stockton; Coalfields and Lakes: Harry Hawkins, VK2YL, 27 Comfort Ave., Cessnock; Western: W. H. Stitt, VK2WH, Cambijowa, Forbes; South Coast and Southern: Roy Raynor VK2DO, 42 Pettit St., Yass; Eastern Suburbs: Don Knock, VK2NO, 42 Yanko Ave., Waverley; Northern Suburbs: Harry Powell, VK2AYP, Russell Ave., Wahroonga; St. George: Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah Bay.

VICTORIA

President: G. Dennis, VK3TF.
 Secretary: L. R. Bradshaw, VK3SX.

Administrative Secretary: Mrs. J. Hurley, Law Court Chambers, 191 Queen St., Melbourne.
 Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.
 Zone Correspondents: Western: T. B. Rodda, VK3ATR, Box 254, Warracknabeal; South Western: P. Perkins, VK3APK, 182 McKillop St., Geelong East; North Eastern: A. D. Buchanan, VK3FD, "Booroondal," Warring; Far North Western: M. Follie, VK3GZ, 101 Lemon Ave., Mildura; Eastern: Leo Dwyer, VK3SG, and John Batrick; North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

QUEENSLAND

President: V. Jeffs, VK4VJ.
 Secretary: J. F. Pickles, VK4FP, Box 688J, G.P.O., Brisbane.
 Meeting Night: Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.
 Divisional Sub-Editor: A. Guildford, VK4AP, 38 Bramston Tce., Herston, Brisbane.

SOUTH AUSTRALIA

President: W. W. Parsons, VK5PS.
 Secretary: R. G. Harris, VK5RR, Box 1234K, G.P.O., Adelaide. Telephone: J 1151.

Meeting Night: Second Tuesday of each month at 17 Waymouth St., Adelaide.
 Divisional Sub-Editor: W. W. Parsons, VK5PS, 10 Victoria Avenue, Rose Park.

WESTERN AUSTRALIA

President: W. E. Coxon, VK6AG.
 Secretary: J. Mead, Box N1002, G.P.O., Perth.
 Meeting Place: Perth Technical College Annex, Mounts Bay Road, Perth.
 Meeting Night: Second Monday of each month.
 Divisional Sub-Editor: R. H. Atkinson, VK6WZ, Box 127, Geraldton, W.A.

TASMANIA

President: R. O'May, VK7OM.
 Secretary: F. J. Evans, VK7FJ, Box 371B, G.P.O., Hobart.
 Meeting Night: First Thursday of each month at the Photographic Society's Rooms, 163 Liverpool Street, Hobart.
 Divisional Sub-Editor: V. Dore, VK7JD.
 Zone Correspondents: Northern: C. A. Cullinan, VK7KW, 12 Montrose Place, Launceston; North Western: R. K. Wilson, 4 Menal St., Burnie, Tasmania.

FEDERAL

SEASONAL GREETINGS

The Federal President and Officers of the Federal Executive extend hearty Seasonal Greetings to Federal Council and members of the Wireless Institute, and to kindred member Amateurs of all Societies wherever they may be situated throughout the world.

May the friendships cemented by the many contacts between VK Amateurs and the Amateurs of other countries during the past year be a further stepping stone to peace on earth and the continued goodwill of mankind one to the other.

E.S.G.B. RE-DRAFTS ARTICLES

The Articles of Association of the Radio Society of Great Britain have, after a quarter of a century, been re-drafted to take into account many of the changes that have developed in the character of the Society and Amateur Radio since the original Articles were drafted way back in those early days. Some of the changes are quite interesting.

All members who are of age will be Corporates, and Associate membership will be confined to those who are under 21 years of age and are not qualified for Corporate membership. Candidates to be eligible for election as Corporate Members must be actively engaged in Radio Research, Experimentation or Communication. Candidates under 21 years of age who do not fulfil these requirements but who are interested in research, experimentation or communication, are eligible for election as Associates.

The affairs of the Society shall be managed by a Council consisting of the President, the Immediate Past President and his predecessor, the Executive Vice-President, the Honorary Treasurer, seven ordinary elected Members and not exceeding six other Members each representing one of the six zones comprising the United Kingdom of Great Britain and Northern Ireland. The zonal boundaries shall be determined by the Council and may be changed from time to time. All Members of the Council shall be elected to serve for a period of three years.

The Council shall make provision for carrying out the objects of the Society and for conducting its affairs in accordance with the Memorandum and Articles of Association. They shall, subject to the Regulations of the Society for the time being, and to the provisions of the Statute, have the sole control and management of the income, property, and affairs of the Society, and may appoint and dismiss any paid officers or servants.

The Council shall have power to make from time to time such Regulations not being inconsistent with the Articles, as they may deem to be for the well-being of the Society.

AMENDMENTS TO THE FEDERAL CONSTITUTION

Under the direction of the Federal Council of the Wireless Institute of Australia, the Federal Executive hereby gives notice that it is intended to alter the Federal Constitution (1947) of the W.I.A. as follows:—

Section 8: By deleting after the word "and" in the second (2nd) line the words "three representatives of."

W.I.A. ACTIVITIES CALENDAR

December 6-7: European DX Contest (all bands), C.W. Section.

December 13-14: European DX Contest (all bands), Phone Section.

Section 16: By deleting after the word "meet" in the first (1st) line the words "annually at the Annual Federal Convention" and inserting in lieu thereof the words "at the Federal Convention."

Section 29: By deleting the words "The Federal President, the Federal Vice-President and the Federal Secretary shall be ex-officio members of the Federal Council and shall have one vote on behalf of the Federal Executive in decisions of the Federal Council" and inserting in lieu thereof the words "The Federal Executive as constituted under Section 20 shall be ex-officio members of the Federal Council."

Section 44: By deleting the words "The Annual Federal Convention shall be held once in each year at a time and place to be determined from time to time by the Federal Council," and inserting in lieu thereof the words "The Federal Convention shall be held at a time and place once in each year or as otherwise determined by Federal Council."

Section 52: By deleting after the word "Council" in the third (3rd) line the words "provided that the Federal Executive shall have the right to one vote (see Sec. 29)," and after the word "vote" in the ninth (9th) line the words "irrespective of whether the latter be on behalf of the Federal Executive or."

Parts One (1) to Seven (7) and the interpretation (Page One): By deleting where they appear in any Section thereof the words "The Annual Federal Convention" and inserting in lieu thereof the words "The Federal Convention."

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

VR2CG requests publicity to the fact that he is on 50 Mc. daily from 1230 to 1240 and from 1230 to 1250 New Zealand time, looking for VK and ZL contacts.

VSBAW is in Oman not Aden and is a separate country from Trucial Oman. He gives his

MISSING NOTES

It is regretted that the N.S.W. Divisional Notes do not appear in this issue.

The Notes, according to telegraphic information, were posted in sufficient time for publication, but up to the time of printing they had not arrived. Unfortunately, no duplicate copy had been kept.

—Editor.

QTH as care R.A.F., Salala, Aden Command, for QSL purposes only, and advises that the only station in Trucial Oman is MT4HBK who desires QSLs via R.S.G.B.

FI8AC, whose QTH is Box 527, Saigon, Indochina, is reported to QSL OK.

VR1E, while on his way South on leave from Tarawa, called in at Ocean Island and set up operations. In the space of half an hour he worked VK4HR and VK4EJ on 21, 14 and 7 Mc. He also tried 28 Mc. without success. He is now in Australia to spend his three months' leave and asks all to be patient regarding QSLs which will be sent out on his return to Gilbert Island.

Z5TC showed up on phone during the phone portion of the "CQ" Contest. He was on 14 Mc. and at excellent strength and was snapped up by many VK4 stations.

ZC5VR, H. V. C. Randall, P.O. Sandakan, North Borneo, has sent out temporary cards. Permanent cards will follow when they come to hand.

B.E.R.S.195, Eric Trebilcock, was lucky enough to receive a QSL from LB6KD in the Jan Mayen Island whose full QTH is Terry Lillevik, Weather Station, Jan Mayen Island, via Tromsø, Norway. Other notes from Eric's budget state that Jean Charles, FK3AE, promises that his T6 note will shortly become T9. SMSAQV, Ake Anderson, of Sundbyberg, Sweden, voices his disappointment at the lack of VK signals on 3.5 Mc. between 1900 and 2030 G.M.T. daily. Eric states he hears Ake consistently at 55. Ake is on 3550 Kc. with 500 watts. YN3AG Willard Hutton, indicated that he expects to operate from Nepal in June, 1953; while active at YN3AG Willard QSOed 196 countries but failed to QSO another YN. Willard is back home at the moment as W3AG. ZB1HLW, David Filley (GSHYW), of the Signals Training School, H.M.S. "Ricasoli," Malta, is looking for VK contacts on 7 Mc. c.w.

A budget of news from Ron VK9FM arrived a couple of days too late for inclusion in Nov. "A.R." Ron states he managed to get a QRP rig on the air around mid-September and took a small part in the VK-ZL Contest. Unfortunately he loses his mains power at 2300 daily, much to his XYL's delight. Ron and XYL Gina are eagerly looking forward to their return to the mainland early in 1953.

VICTORIA

EMERGENCY NETWORK

On the 18th and 19th of October, 1952, the Eastern Zone carried out a full scale emergency demonstration using Orbst for the control centre. The demonstration was arranged so that the Shire Council and Police Department would have first hand knowledge of communications that could be made available in cases of further flooding of this area.

The net assembled at Orbst on Saturday, 18th, and carried out a preliminary survey of the district. On Sunday, 19th, in the presence of members of the Shire Council and the Chamber of Commerce, a non-technical description of the equipment was given together with the network organisation.

The following stations took part in the demonstration: VKs 3SS portable (Orbst, Control), 3IZ mobile, 3IO mobile, 3SS mobile, 3SG (Newry), 3TH (Yinnar), 3QZ (Traralgon), 3WE (Omeo), and 3LS (Melbourne).

Various test messages were handled by the net, one in particular which earned the appreciation of the Orbst representatives was a message directed from Mario (VK3IO mobile) via Orbst control to Melbourne. The time which elapsed from the originating of the message to reception of a reply taking only three minutes.

Mobile to mobile and mobile to control working was demonstrated with reliable communication up to 20 miles.

At the conclusion of the demonstration, the Shire Council expressed their appreciation for the fine demonstration carried out by the Eastern Zone.—VK3LS.

EASTERN ZONE'S CONVENTION AT BAINSDALE

Well, the Convention was a roaring success! Admittedly most of the roaring was done at Jack 3FK's place after the meeting but these 813s do need neutralising. Anyway the muster of boys at Bairnsdale was excellent considering the distances to be travelled. Keith 3HK was our Melbourne visitor and very welcome too. The Convention resolved the following office-bearers for 1952-53: President, Ossie 3AHK; Vice-Presidents, Lindsay 3IO and Peter 3IZ; Secretary, David Scott; Treasurer, Grahame 3QZ; Asst. Secretary, Keith 3SS; Correspondents, Leo 3SG and John Batrick; and the official Zone Station is to be VK3IZ, Yarram.

It was decided to hold three field days on all bands in 1953. One v.h.f. field day late in January is to be organised also. Interest in mobile and portable field days has increased since the last Orbst Show turned out so well; but opinion is against contest type field days. The next Convention is to be held at Orneo in 1953; Bill 3WE assures us of a good time!

On Sunday the boys, accompanied by XYLs, harmonics, journeyed to Lakes Entrance where a very enjoyable boat trip to Metung was undertaken. Our President Ossie made a very fine speech at the conclusion of the day thanking Bairnsdale boys Ray Dorrington, Alan Jacka, and the others for making the Convention such an enjoyable one, and the zone heartily endorse his remarks. Thanks boys!

On Sunday morning from Jemmy's Point, Peter 3IZ showed us that the gear in the back of Alf's car really did work, and the 12 ft. loaded whip was not only for show, because he managed to work Gordon 3TH in Yinnar. George 3AOD came down with Geoff 3AGF

on Sunday and was very interested in the Lakes trip.

Keith 3SS, for the first time on Sunday night, took over his new duties as control station on 3850 Kc. at 2000 hours for the Eastern Zone hook-up; we are all looking forward to the hook-ups with an increased attendance in future. What about it chaps? We hope to have a station on from Bairnsdale soon when Alan Jacka gets some of the gear cranked up that he's got around his shack. Hope to see more of the boys from Bairnsdale on soon. With keen members such as they showed themselves to be by organizing the Convention so successfully, the zone cannot help but to prosper and flourish.

NORTH EASTERN ZONE

Noticed a photo of 3HZ's XYL in one of the provincial papers bowling the first ball of the season at a local Bowling Club opening. No sign of the OM though. Syd 3CI is now recovering from his accident. Heard George Wyberg was back in the zone again, relieving duty at Wangaratta. Alex 3AT has been heard round the bands lately. Les 3ALE is still at Radio Australia. Col 3WQ has been active in the construction field lately and Ken 3KR has now lined up 22 new countries on his list in ten weeks, while Rex 3UR is lashing out as well. Bill 3ANG is now on the air in Benalla whence Vic Bond, 3ABX, has just arrived and has had to set up his rig in the fowl house. Peter 3AFF had his radio activity curtailed by urgent plumbing work and Keith 3JC is still in trouble with his beam. John 3ACK is recently married. Met Associate Jim Harrington at a recent R.F.B. Instructional Field Day.

CENTRAL WESTERN ZONE

As usual the bands have had their usual surprises and disappointments this month. All bands from 80 through to 2 mx seem to have their activity in the zone. Zone hook-ups on 80 mx have gone well, although one week conditions were impossible. Generally about six stations come on with hopes of more as time goes on. Even 3YW is readable these days with a fine n.b.f.m. signal and s.s.b. on tap for those interested.

On 40 mx we have 3TA with a mobile rig and whip antenna getting good results and 3RR knocking over CL, HL, FV, OA, etc. on 40 mx phone. 3ARM has his alternator now, so Bob will have a lot more scope for experiments when he gets a.c. laid on.

20 mx is where your scribe comes into his own provided Byron is too busy to get on; good results from South America, Europe and North Africa. 10 mx has been quiet as far as I know, but Dick 3RR was heard in ZL on 2 mx and 8 mx is starting to open according to Dick. 2 mx activity in Horsham is on the increase so someday we may even hold our zone hook-ups on that band. In the meantime we'll settle for 80 mx, 8.30 p.m., Wednesdays with everybody present. That means you!

GEE LONG AMATEUR RADIO CLUB

Since our last report, the club has been honoured with four visitors, one being from Colac. We had a very good lecture by Ed 3AKE whose subject was "V.h.f. Converters." He brought along three different types of converters to illustrate his lecture. The Morse class given by Bob 3IC is still continuing. Two of our members were wished all the best of luck when they sat for the last A.O.P.C.

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for October took the form of a film evening at which 140 members and visitors attended. All present thoroughly enjoyed the programme and quite a number commented on the high standard of the films chosen and I must agree with them. The two that seemed to impress everybody being "Highlights of a holiday trip to Port Lincoln," and the "Xmas Pageant."

Very little general business saw the light of day, so I presume that all is well with the complaints department, and a pretty little ceremony took place instead of general business, to wit, the announcement of the receipt of the Silver Medal awarded to the VK5 Division at the recent Royal Adelaide Exhibition for its working exhibit. The meeting closed at the witching hour of ten, and at the suggestion of the President, all stayed for that little ragchew that is fast becoming part and parcel of our general meeting. The fact that the lights had to be put out one by one to tactfully suggest that the hour was getting late is a sure indication that nobody appeared very anxious to leave the convivial atmosphere. My apologies to the many XYLs who were probably deciding to get the rolling pin from the kitchen cabinet, but you all know how those boys can talk about radio.

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The Vice-President of the VK5 Division, Gordon 5XU, was the projectionist at the general meeting, and when we remember that he had been far from well all day, and also that but for him we would probably be hard put to obtain a machine to screen the films, then the round of applause, given him at the conclusion of the show, was well deserved. "Shylock" is a heck of a good scout, a typical schoolmaster, but one who could give me six hands any day and make me like it.

The news of the month is of course the fact that Frank's (5MZ) daughter was the winner of the Graceful Girl Section at the Ballarat Competitions. This section takes winning, and of all the times that the S.A. Interstate team has been going to Ballarat it has only won this section twice. Who won it beside Frank's daughter? Pardon, by blushing, my daughter in 1949 (Sorry Frank, I had to slip that in). My knowledge of pre-natal influences is not very high, but could it be the influence of all the r.f. that is in our shacks Frank? Anyway, Frank, and also the XYL and Barbara, our congratulations, and only I know how you felt waiting for the results.

I take the opportunity of reminding all members that the December general meeting will take the form of a Xmas Get Together, in place of the Xmas Social and will be held in the clubrooms at 17 Weymouth Street. Don't forget to bring along something to eat, the Council will take care of the tea, coffee, and sugar, to say nothing of the milk and the cups, saucers and plates. The cats will be pooled and a good time should be had by all. This is an experiment, and if it is a success, then it will be repeated. So come along fellows, do your bit to make it a success, and give yourself a good time as well. We are trying to organise a few simple competitions with suitable prizes, and all in all it should be a night of nights, why I will even sing a song for you if you think that you can stand it. Anyway, come along and see the films, have a good time, have a good "natter," and make this experiment a success.

Quite a number of the locals have been running neck and neck for a long time for the unofficial title of the "VK5 DX King," but a dark horse bobbed up last month with a newly erected beam and has shot so far out in front that quite a number of the runners are thinking of retiring and licking their wounds. In all the time that I have been in the grand old game of Ham Radio I don't think that I ever remember anybody who could work the DX as easily as John 5JW appears to do over these last few weeks. From what I have been told the beam is a very workmanlike job and it certainly is paying dividends.

The XYL of Jim 5FO certainly knows all about the "Blarney Stone." The first time that I contacted Jim she had a word or so to say to me, and finished up by saying that she always read my magazine. I repeat, my magazine. It is my intention in the future to contact Jim at least once a week, if only for my ego (personal pride to you). I haven't been able to put on my hat since that contact. My magazine, wow, what do you think of that Tom!

Apparently the initiative of the Upper Murray gang, plus their enthusiasm, has infected the Northern areas, because I received a letter from Lance 5XL in which he said that they have decided to hold a get-together each month to report activity and to send down to me any doings that they might have. He also said that they seem to have drifted away from Ham Radio lately and possibly by having a get-together, discuss their activities, pass on the news, etc., they will boost up interest and at the same time not only assist the Institute, but also let the members know that they are still active. This is a darn good idea Lance and it has always been one of my chief regrets that the doings of the Northern areas have not always had the publicity that they deserve. I am entirely dependent upon the notes that the various country scribbles send down to me, and I can assure them that I am very grateful for all that they have done in the past. By all means send along some notes, I can use it all.

5TJ has been putting out a good signal on 80 mx and Jim has also been heard on 40 mx. 5FB has not been very active lately, but the reason is apparently that John has been bitten by the recording bug. He has some extra good gear for the job, p.p.t.c. 807s, d.c. amplifier, and is more than pleased with the results.

5XL has been busy getting bushfire emergency gear ready for the coming season. Lance hopes to get going on 6 mx again; he can always

manage to hear a signal on six, but does not seem able to get a tx going properly. He closed his short note to me by asking "Where is the Northern Net these days?"

5TW has his new exciter working very well on 40 mx at the moment and Tom is more than satisfied with the results on the air. 5CF has at last resumed activities on 40 mx after a break of quite a few months. Glad to know that you are back on the air Claude. 5JA is back from his holidays, and his main h.t. tranny has been rewound, which gives rise to the theory that it won't be long before John is distinctly audible. 5FD is having a little feed-back trouble in his new hi-power modulator with a consequent mounting of John's blood-pressure. 5KU is very pleased with his new beam and Erg is quietly but consistently working the new countries. 5MS is almost fully operational again, which is only Mount Gambier double talk for the fact that Stuart is almost on the air again. Associate member Jack Fowler is in bed with "dog's disease," as he call it, and we all hope that he will soon be around again. 5CJ, apart from keeping a few skeds on 2 mx, and a little activity on 40 mx, is very busy keeping skeds with the cradle.

5TL is having a touch of key click trouble and is also bothered with a crystal which gets the wander just and roams up and down the 40 mx band at the slightest provocation. Does it travel faster than "Rattling Salvation." Tom? 5RE had his first contact with 5MA after all these years. "Hobby" and Fred could almost open their shack windows and talk to each other, but it has taken all this time to talk on the air to each other. 5CF has been on holidays and has now moved his radio gear out of his room to make way for Father Xmas, who is expected with a present for someone (very subtle). 5KW is now recognised as the most prolific experimenter in the Upper Murray, he has more gadgets than all the other boys put together. Harry has consented to give a practical demonstration of some of them at the November meeting of the gang.

5XO is at last officially on the air, yes, at last Alex has his call, but has not had much time for radio since taking over his fruit block. His Class C wavemeter works like a charm, much to the astonishment of the gang, who up to now thought it was only for display purposes! 5EC has been heard on 40 mx once or twice, but it is believed that Hugh has been on 6 mx consistently, because the band has opened up occasionally. How are you keeping, Otto? 5MA has been active spasmodically but finds time to forward his usual monthly notes, work on his block, clean out his 22,000 gallon underground tank with the help of Tom, hold the usual monthly meeting at his QTH, and for all I know, quite a number of other important jobs. Thanks again OM for the notes and although I am known as Mr. Parsons to my creditors, I am better known as "Pansy" to my friends and enemies. Get it?

The monthly meeting of the boys in the Upper Murray district for October was held at the residence of Fred 5MA and among those present were Tom 5TL, Murray 5CF, Harry 5KW, Hughie 5BC and Alex 5XO, Ron Kemp, Wolfgang Wutke, Mr. Craig, and a V.I.P., who will remain nameless, completed the gathering. An enjoyable evening was held and the aforementioned V.I.P. gave the boys a talk on a.h.f., which from all accounts turned out to be the highlight of the evening. I understand that the two visitors from the City were more than impressed with the enthusiasm and keen attitude of the local boys, and once more the advantages of holding these local meetings of the boys has been demonstrated.

A visitor to the City of Churches this month was the Victorian Secretary, Russell 3SX who made a visit to the best broadcasting station in the State and was more than impressed with what he saw. There was a split stator condenser laying around the control room, which he described as the daddy of them all, and after seeing the gleam in his eyes we shifted the said condenser behind the racks out of harms way. I know these secretaries.

The boys from the Upper Murray have asked me to publicise the fact of how much they appreciate the re-broadcast of the W.I.A. session on 80 mx. They personally thank Reg 5RR for all he has done, to say nothing of Hal 5AW and they say that the 80 mx transmission is very reliable, and if it had not been for this, they would not have heard the session very much these last few Sundays.

WESTERN AUSTRALIA

It may sound like banging a worn-out drum, but I think we all feel pretty pleased with the result of the 1952 R.D. Chaps, you have now seen what you and you and you can do—so let's hope 1952 won't be the only time the trophy comes to the Sunny West. I'm sure we all felt that an adjoining State under the able guidance of its Columnist-President,

would have romped home. I wonder what happened?

The monthly meetings continue to provide much of interest to city members and many worthwhile lectures and demonstrations are given. It looks to me from this distance that our patron and broadcasts officer has more than a little to do with securing some of these, coming as they do from Technical College lectures. It was my good fortune whilst in Perth on holiday to be shown over the college by George and there I met, among others, Mr. George Hutton who put on at a moment's notice the antenna pattern recording demonstration he had earlier given before the Institute. It was certainly a revelation to see the selsyn-controlled 3 element beam rotate in sympathy with the cursor while George traced a polar diagram from direct signal-strength readings alongside the chart. The equipment in the radio engineering department would make your mouth water, gents! And they're ever on the lookout for new stuff to expand their facilities for measurement and demonstration. As an ex-student of many years ago, I can say that the lad learning a trade these days has everything at his command to begin on a successful career the right way. The credit for this belongs to present and past Superintendents of Technical Education, and the W.I.A. is indeed lucky to have not only the moral support of 6GH, but also his very active support as well. Many a Ham with George's responsibilities would be content to stand well back and view Amateur Radio in a detached sort of way.

Although my visit to Perth did not coincide with any W.I.A. function, I was fortunate in attending the I.R.E. "Founders' Day" Dinner on 10/10/52 and fell far from out of place in that august company for there were many Hams present, some as guests like myself, and others because they were both "Pro" and Ham. Among the VKBs present whom I recognised were 6AG, 6BC, 6HL, 6KW, 6JS, 6JP (minus camels that night), 6NL, 6GH, 6BK, 6RU, 6SA, 6WP and 6WT. Apologies to any missed but "Sybille's" act is sufficient excuse for forgetting everything—including what Mum told me. I know now that middle and old age have their compensations for the grey heads and the baldies had all the luck when the comely wench was singing her songs (with actions). One well known denizen of the DX bands moved his place three times in an effort to "catch the speaker's eye," but had no luck at all. Bad luck, Jim, your youthful and wolfish appearance is your undoing!

By way of direct contrast with normal months, my gleanings this time are not from mail-reading on 7 Mc., but from personal contact, so here goes. 6JS seems to devote his time to photography these days—mostly colour transparencies. When drawn out on radio, Jack expounds his theory about the ideal rig—small, compact, self-contained, knobless, cableless, and streamlined. If he could find a way of dispensing with the mike cable running to the tx and spoiling its beauty, Jack says he'd start building his dream rig. 6HL still has his mobile 7, 28 and 50 Mc. rig in the car and gave me a practical demo.; unfortunately I proved to be a dud as second op. for after volunteering to operate the send-receive switch I showed it only as far as the hyphen—with somewhat perplexing results as far as 6GH was concerned! Harry invited me aboard his luxury cruiser "Trammy" and we spent a most enjoyable Sunday on the Swan River. Of course other people spend their Sundays (and other days and nights) on the "Swan" without leaving dry land, but we Harrys aren't boys like that. Thanks for an enjoyable outing, mate! 6KW paid a visit to Kalgoorlie and met 6CN and others en route. 6RK tells me he listens to the technical discussions on "forty" on Sunday mornings and enjoys them; I would feel better about that kind of thing if I were one of the technical giants answering the hard ones—but my role is that of the neophyte asking George and Eric for the answers! Roger told me also that Eric 6EC is boning up on t.v. and s.s.b. is now a jilted love. Blake 6GS is naturally partly responsible for this state of affairs.

6LU is very pleased with his grid dipper and was as surprised as I was when he found it had enough ergs to light the lamp in a small absorption wavemeter held close. Did we bite our nails as we sat and listened on 8/10/52—or did we? ZLs working Portugal the long way round on 7 Mc. phone at 4 p.m. W.A. time! And we couldn't raise a VK6, let alone VKs or ZLs! 6WP looked most impressive as an S.M.I.R.E. at the dinner already referred to; Bill was handing out scholarships and cracks at the University with gay abandon. At the same function, 6RU told me he had no luck calling a certain VK5 during the R.D. until he called him as the "best station in VK5" where a QSQ resulted. You've got to ponder to these geological haps. 6SA is heard on various bands at odd times working the rare ones, sometimes the ones others can't even

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hear, thanks to Jim's sensitive ears and his super-sharp rx.

On my way to Perth I called at Blndl Bindl and spent an hour with 6RT and saw his gear. Hope you can soon find some spare time to fire it up, Len. Seems ages since we last heard you on. On the return trip in company with 6GH and Mrs. Hayman, we called on 6MO and marvelled greatly at the fantastic array of sensitive measuring devices, radio equipment and other bits and pieces. Strange though, I wonder why Alan tied my hands behind my back before we began our tour of inspection? 6MO has been keeping skeds with Heard and Macquarie Islands to which outposts of the Empire two of the staff of the Watheroo Observatory are soon to be transferred.

As these are the last notes for 1952, may I conclude by wishing each and every one of you a Merry Xmas and a Bright and Prosperous New Year.

TASMANIA

Despite the inclement weather, the November general meeting attracted a representative gathering. The meeting was held in the Photographic Society's Room on Thursday, 6th, with Mr. Bob O'May presiding. A lecture entitled "Scraps from the Notebook," was given by Mr. D. Asplnall, and proved to be most interesting. I think most members were in agreement with 7LJ when he suggested that the Notebook in question must contain some really good "gen."

Two visitors, Horst Matuszewski and friend, were present from Bronte Park. Horst explained that he previously shared the call sign DL7FH with another Ham in his home country; it being the practice for novices to share a call sign with an established Ham until they became proficient enough to be granted a separate call. The meeting closed after the usual "rag chew."

I have not the slightest doubt that all members are with me when I extend our heartiest congratulations to Western Australia on their scoop in the R.D. Contest. A most creditable performance, but watch out, we will be on your wheel next year.

Whilst in a congratulatory mood, we must not forget 7L5, of Queenstown; a son and heir, I believe Len.

7LE has had his shielding, sorry, I mean plaster, removed, and has been back home for some time now. We hope you don't have to wait too long for the 100 per cent. OK decision Len. Bob 7OM is seriously considering using the elements of 7MY's 2 mx beam for garden stakes, so Alan, you had better hurry up and collect same and let us hear from you. Two mx could do with a good injection these days, and it seems to be in your hands to be the doctor.

Charlie 9WG (ex-7WC) is now active at Port Moresby, and is looking forward to any VK7 contacts, so if you hear him, hail him. If he can hear you at all, he will come back.

I am led to believe that a most complex cross-band QSO took place between two local members recently. I think Nicky is the man to enlarge upon the subject, so I shall say no more.

Well that's all for now. I have often thought what wonderful boost to news it would be if all mains (other than Lower Sandy Bay) were changed over to 110 v.d.c. My address is Zeehan, should anyone wish to express their views on the foregoing.

NORTHERN ZONE

Radio silence has at last been broken by 7DB who recently made a welcome re-appearance on 40 mx. Zone President 7AM has been busy learning all about motor cycles, but expects to be on 2 mx before long.

7BQ, 7FP, 7LZ and 7XW have been very active on 144 Mc. with aerial systems directed on VK5 in hopes of a break through. 7.15 p.m. E.S.T. is the time.

7RK is so busy getting the "gen" on DX conditions that little time is left for usual operating. Looking bronzed after his holidays, 7LX returned to work and exams but finds a little time for building the 100 watt for next year. 7GM and 7CA are still working through difficult conditions, but 7RB is making additions to the "castle on the hill" instead of the long promised Ham shack. Finally, congratulations to VK6 on winning the R.D. trophy.

NORTH WESTERN ZONE

7KB has at last completed his steel tower which holds a motor driven 10 and 20 mx beam, nice work Ian and good DX hunting. 7WA and 7SF have declared war on local power interference and have conducted many investigations as to noisy transformers and tuned power line loops and also the equipment necessary for locating them. The bands have been very quiet here since the atomic blast a few months ago, but some good DX is starting to break through now and we can look forward to some good listening as the summer comes on.

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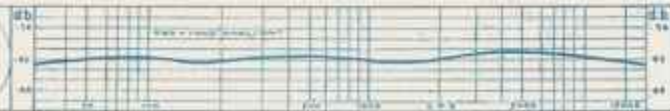
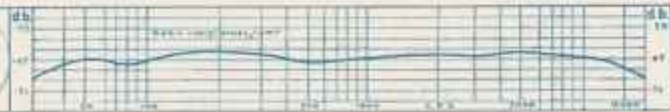
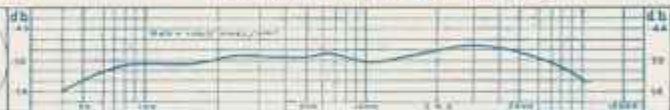
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