

The
Queensland

RADIO NEWS



A MAGAZINE *for the*
SET CONSTRUCTOR &
BROADCAST LISTENER

6

JUNE 1st 1928
Vol. IV No. 3

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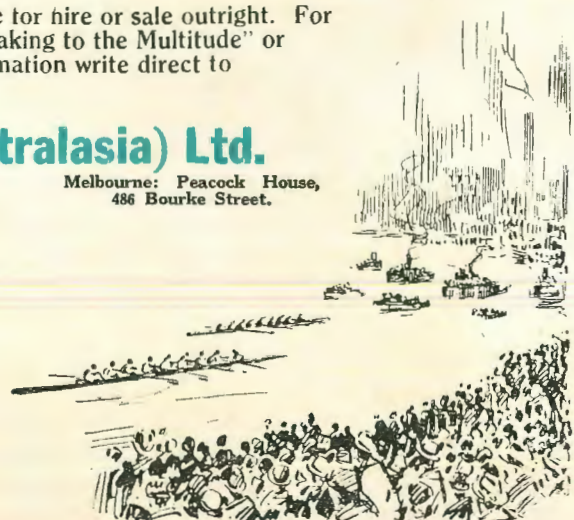
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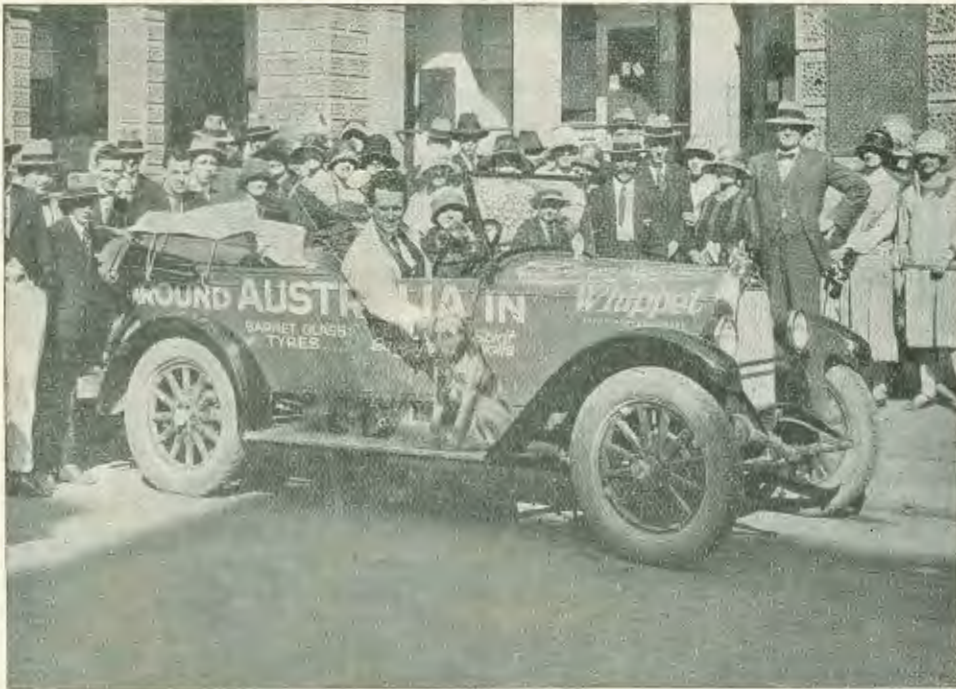
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What this great scheme really means? Are you fully awake to its possibilities? If the wonderful Trophy were offered as the only incentive to enter, the competition would be well worth entering. But apart from the trophy EVERY ENTRANT is paid

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Note the generous and robust construction of the Wonderful Mullard P.M. Filament shown in the above sectional view of the P.M.5. This is the construction that brings improved results from any radio receiver.

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<i>For 2-volt accumulator</i>			
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P.M.5 B (Resist. Cap.)	0'1 amp. 13/6
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<i>Super power valves for last L.F. stage</i>			
P.M.254	...	(4 volts)	0.25 amp. 15/-
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World Broadcasting

3LO Cheers Lonely Newfoundland Lightkeeper

Listening-in on his wireless set—his only means of communication with the outside world—Thomas Cooper, the lonely lighthouse-keeper at Random Head, Trinity Bay, Newfoundland, picked up 3LO Melbourne one Sunday night recently.

So delighted was he to hear from far-off Australia, that he wrote to 3LO, giving details of the programme as received, and congratulating the station upon the excellence of the items and the clarity of reception.

Congratulations from Overseas.

This is just another instance of the extent and success of 3LO's world range short-wave tests, which have done so much to advertise Australia in all countries of the world, and to draw attention to her as outstanding among the leaders in wireless broadcasting.

Every mail from overseas brings hundreds of letters of congratulation from listeners from far and near. Short-wave programmes are broadcast every Monday morning from 4.30 to 6.30 (Melbourne time), and are received on the other side of the world on Sunday night.

Germany Wants More.

On March 12th, the 3LO short-wave broadcast service was re-broadcast by the German station at Mun-

ich, with great success. It was picked up at 8 p.m., and was heard distinctly. 3LO Melbourne has received a letter from the Munich station asking for regular transmission of short-wave programmes.

In the last overseas mail were letters from listeners in almost every country of the world, and all praised 3LO's short-wave programmes, paying tribute to their strength and clarity. Writers in West Africa, in Holland, Egypt, Florida, Newfoundland, Denmark, Malta, India, and, of course, England, testified to the calibre of the service.

Bridging the Gap.

It is not difficult to realise that in this way the station is creating a wonderful new interest in Australia among a very good class of people. 3LO is forging a bond between Australia and wireless enthusiasts overseas, from which good must result. The station is making Australia better known, in the way we would like to be known—as a country of culture.

In short, 3LO Melbourne is bridging that gap caused by distance, and bringing other countries closer to us. It is the personal touch that counts in every thing, and it is wireless that is providing it between Australia and other countries of the world.

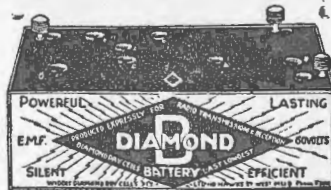


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DIAMOND Radio Batteries

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Cell it will immediately be replaced. Remember, a Radio Set is no better than its battery, therefore it is most essential to choose a battery that will give long and honest service. Such are Diamond Dry Cells.

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- "A" Buzzer Cells, 1.5 volt 2/9. each.
- "B" 60 volt Super B. Battery, 27/6 each.
- 45 volt Super B. Battery, 22/6 each.
- 60 volt Standard B. Battery, 18/ each.
- 45 volt Standard B. Battery, 15/ each.
- "C" 4.5 volt "Biaison" C. Battery, 3/3 each.

Wholesale only from:—
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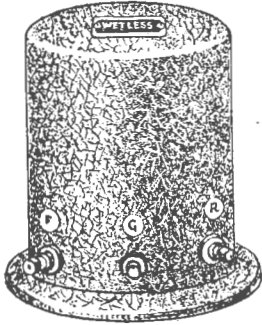
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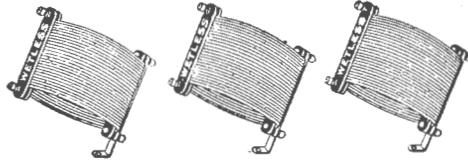
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GUARANTEED RADIO PRODUCTS



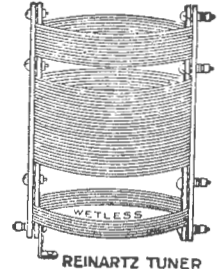
SOLODYNE SHIELDED COIL.

"Wetless" Solodyne Kit with two Neutralising Condensers. Price 70/- per kit.



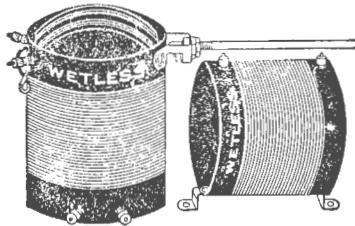
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"Wetless" Neut. Kit, with two neutralising condensers. Price 35/- per kit.
 "Wetless" Radio Frequency Choke. Price 6/6 each.



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"Wetless" Reinartz Tuner. Price 10/6 ea.



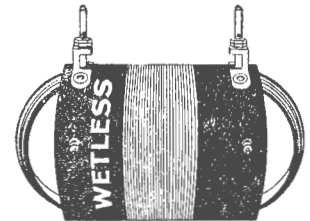
BROWNING DRAKE

"Wetless" Browning-Drake Kit with Neutralising Condenser. Price 38/6 per kit.



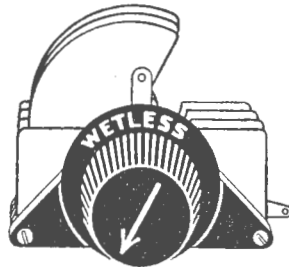
SINGLE ROTOR TUNER

"Wetless" Single Rotor Tuner. Price 13/- ea.



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"Wetless" Double Rotor Tuner. Price 18/6 ea.



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"Wetless" Midget Condensers, 3-plate, 4/3; 5-plate, 4/9; 7-plate, 5/3; 9-plate 5/6; 11-plate, 5/9; 13-plate, 6/3 each.



"B" TYPE.



"A" TYPE.

"WETLESS" MICA CONDENSERS

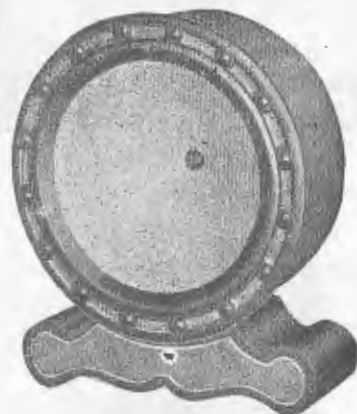
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	.00015		.00015		.004	2/6	
	.0002		.0002		.005	3/-	
	.00025		.00025		.006	3/6	
	.0003		.0003		.0075	3/9	
	.0004		.0004		.01	5/-	
	.0005		.0005		.02	5/6	
	.001		.001		.0025 (with clips),	2/6 each.	
	.002		.002				
	.00025 (with clips, 1/9 each.						

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MAGNAVOX "CORNELL" SPEAKER. Delivers pure musical tone and clean-cut speech.
PRICE £3/15/-

In every field of human endeavour there are always those lines which, by virtue of their inherent goodness, are universally recognised as leaders in their respective fields.

Such a name is MAGNAVOX. In U.S.A., where competition for supremacy is keen, Magnavox stands high in the estimation of discerning radio men. The whole world over Magnavox Radio stands supreme.

Magnavox Radio is of the one-dial five-valve type. It is designed primarily for tone, but is a wonderful distance getter as well.

Something New!

Magnavox Power Cone Speaker

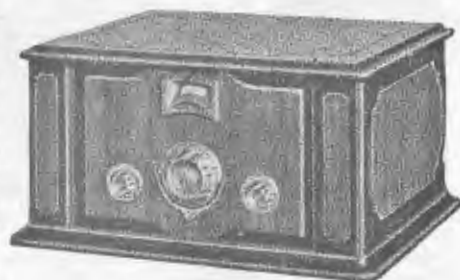
This new Magnavox invention is the highest type of radio loud speaker yet manufactured. It gives remarkable reproduction — upsetting all previous standards of excellence.

This speaker is of the electro-dynamic type, having a field which must be excited by an external source of D.C. supply of suitable voltage. This supply is made through a separate cord which is connected to the 6-volt "A" accumulator. The usual speaker cord is, of course, fitted to the unit. The field consumes slightly over ½ ampere.

Ideal for use with gramophone pick-up device.

A DEMONSTRATION WILL AMAZE YOU.

PRICE, £14/14/



MAGNAVOX "ETON" RECEIVER—five valves, one dial, perfect tone, great distance-getter. In beautiful walnut cabinet.
PRICE, complete £47/10/-
T-Drawer Model as above, without cabinet, Complete .. £41/10/-

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ALFRED T. BARTLETT
Editor

LEIGHTON GIBSON
Technical Editor

RN

The
QUEENSLAND
RADIO NEWS

FRIDAY, 1st JUNE, 1928.

THESE BROADCASTING MERGERS

IN the belief that quite a lot of unnecessary overlapping of programmes could be avoided, the Royal Commission on Wireless, its report to Parliament towards the end of last year, recommended that there be some effort of co-ordination between the broadcasting stations of the Commonwealth. Parliament eventually adopted the suggestion, with the result that all "A" class broadcasting stations received notification from the P.M.G.'s Department, requesting that some effort at co-ordination be made.

The first two stations to move in the matter were 2FC (which is controlled largely by J. C. Williamson Ltd.) and 2BL, both of Sydney. These stations decided that the best method of obtaining co-ordination was by amalgamation. Recently, 3LO Melbourne (another J. C. Williamson station) merged with 3AR, also of Melbourne. Meanwhile two additional stations—6WF Perth and 7ZL Hobart—were absorbed, making a total of six "A" class broadcasting stations under practically one control—now floated into a huge company.

Only two "A" class stations stand independent. 5CL Adelaide has stated its aversion to an association with the combine, whilst 4QG, being under Government control, cannot easily be bought over.

Whether or not these mergers are going to be a good thing for Australian broadcasting, time alone can tell. The chief objection to them is that they will tend to eliminate healthy inter-station rivalry.

It must be admitted, however, that the huge entertainment resources of J. C. Williamson Ltd. are a force to be reckoned with. The broadcasting stations under the J.C.W. control are placed in the extremely fortunate position of having exclusive access to the cream of the shows and the best of Australian and imported talent.

Theatre broadcasts have played no small part in the popularity and success of 2FC and 3LO. A broadcasting station that can consistently broadcast comic operas, musical comedies, plays, pantomimes and the like, must naturally build up a great following among the listening public.

If all six stations can be run as efficiently as are 2FC and 3LO, listeners will have little to fear—indeed, they may have much to be thankful for.

QUEENSLAND RADIO NEWS



4QG LISTENERS THINK THAT



— The Cherniavsky Trio, which delighted 4QG listeners on recent Saturday evenings, came through very well. The station has thus added to its record of notable broadcasts.

— Now that the Speedway season has drawn to a close, an occasional Stadium broadcast would provide a welcome change for listeners.

— If the dance music we are inflicted with from Saint Barnabas Hall occasionally is really the music of the Saints—then may the Saints preserve us. It's awful—and that's putting it mildly.

— The most appreciated of all 4QG concert parties regularly heard from the studio are Eric Hayne's party, Erich John's party, The Troubadours, The Orpheans, The Silkstone Apollo Club.

— Whilst old soldiers may never die, some ballads we hear should certainly be laid to rest. Examples of such songs recently broadcast are "In the Garden of To-morrow," "I Like 'Em," "In An Old Fashioned Town," "Friend o' Mine," etc., etc.,

— If more artists of the Raymond Ellis calibre could be coaxed to Brisbane and to 4QG—a forest of aerials would quickly arise in our midst.

— While Miss Cecile Pritchard's pianoforte solos are always appreciated, her standard of violin playing is not yet high enough for broadcasting. Faulty intonation in double stopping and improper control of the bow marred her playing on May 3rd.

— A bedtime story session on Sunday evenings would be welcomed by the majority of parents and children. The semi-sacred broadcasts to children on sabbath evenings from southern stations are enjoyed by many families in this State.

— Wave traps have their advantages and their disadvantages as well. An arduous listener operating a little 2-valver a few doors away from the writer has lately built a wavetrap to cut through the local station. The results are somewhat painful. Listening to a rendering of "Sing Joyous Bird" from 3LO the other evening, the item was embellished by the neighbour playing a very vivid yet nevertheless appropriate obbligato upon an oscillating valve.

— Brass bands are not as plentiful upon the week-night programmes as they were in days of yore. Why? we ponder. Few items sound as well over the radio as a well-balanced band playing a stirring march or a lilting waltz.

— If any reader of a sporting turn of mind would like to take up a little wager with us we'd be pleased to accommodate him. We'll wager the announcer who describes the races so excellently for the station, to open his description of five out of any six races with these words: "They're off; it was a good start."

— The best concert of the month (apart from the Raymond Ellis recitals) was the programme arranged by Mr. Percy Brier and relayed from King and King's showrooms. The transmission, too, was good, although the interruptions caused by a faulty landline were annoying.

ATWATER KENT RADIO.

Of all the radio receivers in the world, none perhaps is so famed or so worthy of fame as the Atwater Kent line. In U.S.A. over one million models of Atwater Kent receivers have been sold. They are the "big sellers" of the U.S.A., for they offer remarkable performance, perfect tone, flexibility, keen selectivity, and compactness at prices that make buying still more attractive.

The handling of the Atwater Kent line in Brisbane and Southern Queensland has been entrusted to Messrs. Wireless House Ltd., who state that the sets are selling themselves wherever they are demonstrated. We hope to test and report on this new line in our next issue.

VAR-LAC

CONNECTING WIRE

Prevents internal short circuits. Perfect insulation. Ends easily stripped for connecting. No frayed edges. In six colours: Red, Blue, White, Green, Black and Yellow.

10ft. Coil, 13 S.W.K. ... 10½D.

FLEXIBLE ELECTRIC CORDS LTD.
QUEENSWAY, PONDER'S END, MIDDX.

VAR-LAC

MULTI-WAY BATTERY CABLE

is sold by the yard

Seven different coloured leads under one water, acid and flame proof covering. No matter how far your batteries may be from your set, VAR-LAC will reach them. Scrap those untidy wires and use VAR-LAC Battery Cable. Supplied in any length. If your dealer is out of stock, write direct. Per yard 1/8

FLEXIBLE ELECTRIC CORDS LTD.
QUEENSWAY, PONDER'S END, MIDDX.

This Year's **Browning** *"The Queensland Radio News" version* *of the famous Four Valver* By **THE TECHNICAL EDITOR** **Drake**

THE most unique among four-valve circuits, is the Browning-Drake, in that it is the only circuit in this class which has stood the test of time, and emerged, four years after it was first published, with undiminished popularity. There is no doubt in the minds of those who are familiar with the various types of multi-valve sets that the Browning-Drake Four is easily the equal of many five-valve arrangements, and there is a very good reason for its splendid performance.

Glen H. Browning and F. H. Drake, both Harvard University men, and originators of the circuit which bears their name, set out on their experiments with a definite object in view. Their ambition was to design a receiver using a single stage of radio-frequency amplification and valve rectifier, and to increase the operating efficiency of this combination to a point which had not hitherto been approached. A radio-frequency transformer was designed mathematically in

which the windings were so proportioned and disposed that a very large transfer of energy was obtainable without the amplifier becoming unstable. This transformer was later designated the "Regenerformer" (a combination of the two words "regeneration" and "transformer"), and may be described as the foundation of the Browning-Drake receiver. In order to ensure a high degree of stability in the R.F. amplifier, this valve is neutralised, while additional ampli-

fication almost equal to that provided by a second R.F. stage is due to the use of regeneration or reaction in the detector circuit; this reaction, it should be noted, is at all times under perfect control.

Now, the original Browning-Drake receiver has been described many a time and oft. Of recent months, however, the Browning-Drake Corporation of America, which seeks instantly to improve the original arrangement, has announced a modification of the standard circuit which has been found to yield even better results than were

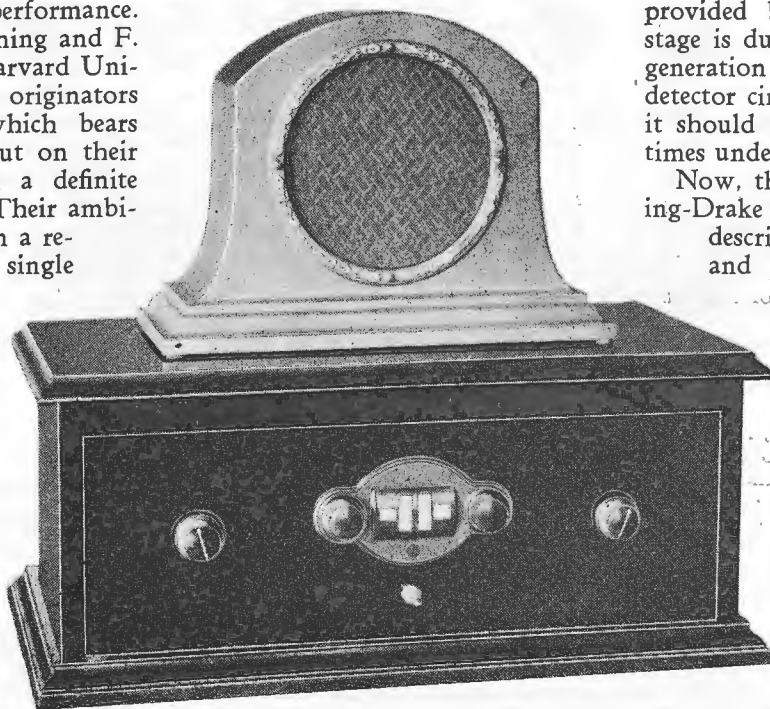


Fig. 1—The Complete Receiver. The double tuning control with drum indicators gives the panel a distinguished appearance.

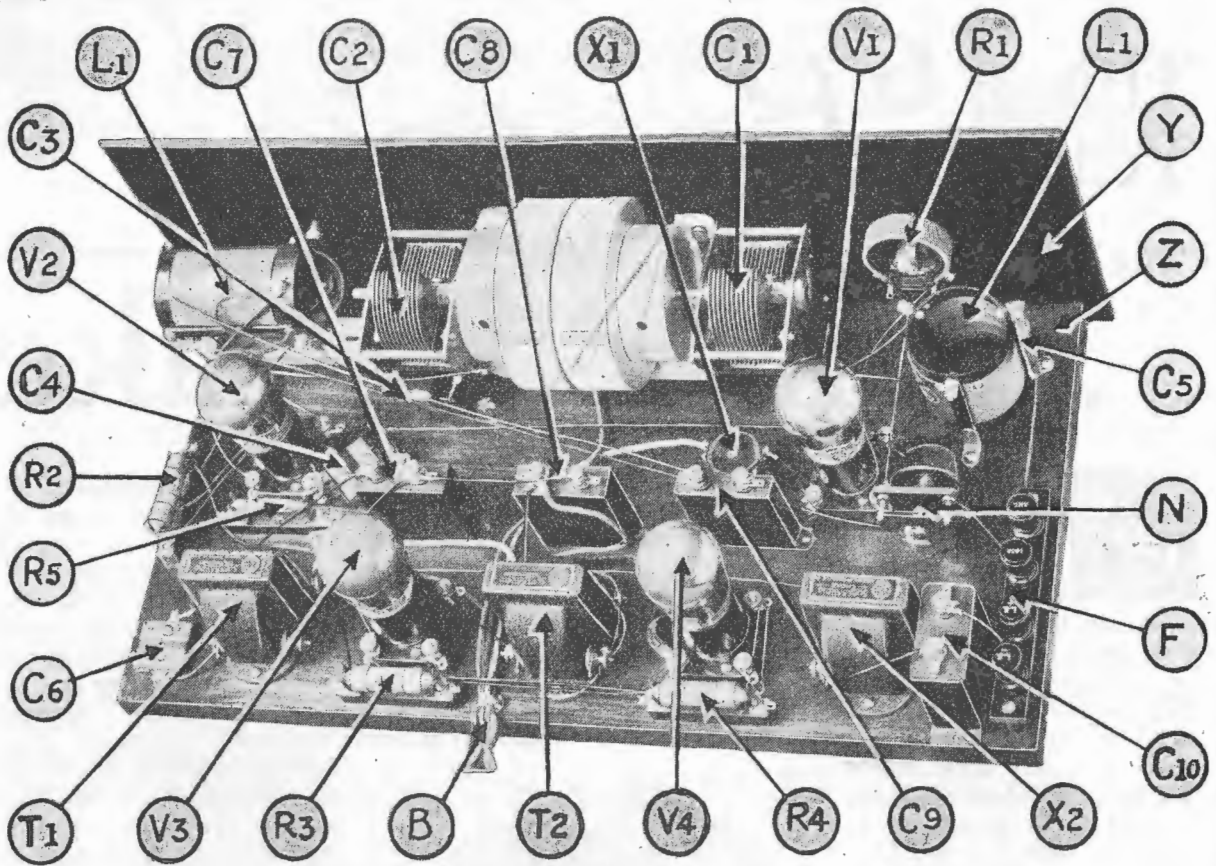


Fig. 2—Every part can be clearly seen in this photograph. The fixed condenser C3 is supported by the wiring.

heretofore obtainable. A progressive Australian manufacturer has placed upon the marked an excellently designed and constructed set of coils for use with the modified circuit, and in this article we describe the latest arrangement of this famous four-valve receiver.

General Description.

Referring to Fig. 1, the front view of the complete receiver, it will be noticed that the dials are of the drum indicator type, rotated by adjacent knobs. This double-control is connected with the two .0005-mfd. tuning condensers, thus centralising the station selector controls. To the left is a 10-ohm rheostat in the filament circuit of the R.F. valve, on the right a knob for controlling regeneration, while immediately below the central tuning unit is the battery switch.

Now glance at Fig. 2, which is a back view of the set, removed from its cabinet. From left to right, mounted on the front panel, will be seen the regenerator (consisting actually of three coils—primary, secondary, and tickler), the double tuning condenser and drum control assembly, and the 10-ohm rheostat. The remainder of the parts may be identified by means of the indicating letters and numerals, which corres-

pond with those on the drawing (Fig. 5), and also with the letters printed in front of each item in the list of parts. It will be observed that the energy coming in from the aerial passes from right to left, through the R.F. amplifying valve V1, to the regenerator L1, thence to the detector valve V2, and then from left to right, through the audio amplifying system T1, V3, T2, V4, X2, and C10, and to the loudspeaker terminals. If desired, the output filter X2, C10 may be omitted, in which case a connection will be made direct from the plate terminal of the last valve V4 to one loudspeaker terminal.

Reference to the circuit diagram, Fig. 3, will show that a departure from the usual practice is made in connecting the grid leak from the grid to the positive terminal of the detector socket instead of directly across the grid condenser. This is done because using a drum control means that the spindles of both condensers are connected to filament negative; as the coils are connected to the condensers, a little thought will reveal that to connect the grid leak across the grid condenser in the usual way would mean that a negative bias would be applied to the grid of the detector valve, whereas the detector works more efficiently with a **positive bias**.

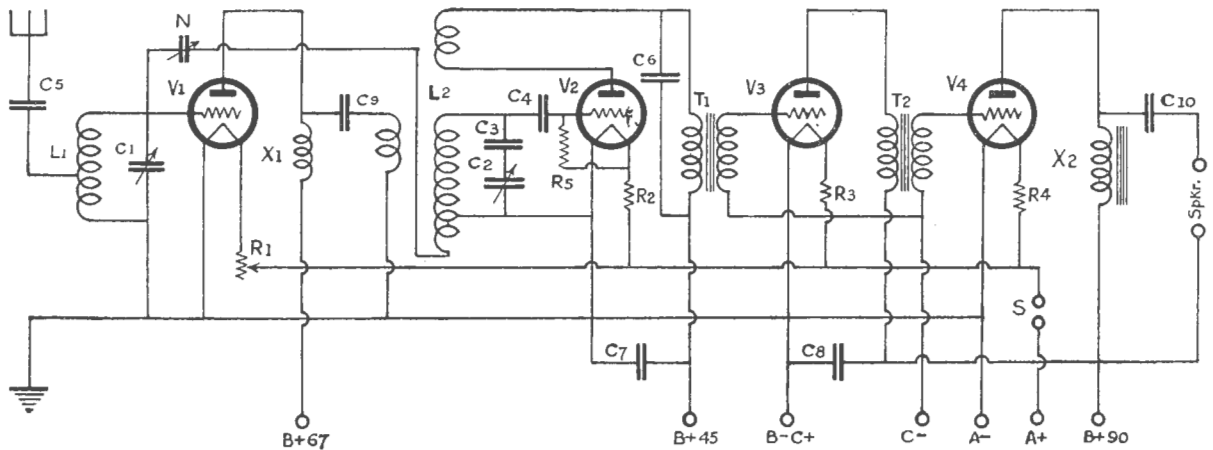


Fig. 3—A Complete Circuit Diagram. Note the output filter formed by choke X2 and condenser C10, which protects the loudspeaker windings from injury.

Some Points About the Construction.

The bakelite panel should be drilled according to the layout given in Fig. 4, which shows all the holes necessary. The removal of the square in the centre of the panel in order to accommodate the drum dials is not as formidable a task as it appears; the whole operation is carried out by means of a drill, using the template supplied with the drum control unit. It should be mentioned here that the Emmco double control unit is supplied complete with the two tuning condensers; this point is emphasised because the fact that we have placed separate indicating letters on the condensers might be misleading.

The next point is very important. Having drilled and cleaned up the panel, **mount the battery switch before doing anything else.** If a Cutler-Hammer switch is used, be sure to remove the hexagon nut from the switch bushing, so that the switch will lie as close to the panel as possible. If these precautions are not taken, it will be found that the back of the switch will foul the supporting member of the drum tuning control. After the switch is mounted, attach

the positive "A" battery (red) wire of the battery cable permanently to one terminal, and two pieces of wire about 8 inches long to the other terminal. This is done because, once the drum control is mounted, it is impossible to obtain access to the battery switch.

After the drum control, the regenerative, and the rheostat are mounted, and the panel screwed to the baseboard, the remainder of the parts are screwed down, no particular order being necessary here. Make certain, though, that the sockets and transformers are mounted with their terminals facing in the correct direction—the drawing shows this.

Connections.

In connecting up the various items, the diagrams must be followed minutely. By this we do not mean that each wire must fall into place exactly as it is depicted in the pictorial wiring diagram, Fig. 5; this is not the case, as the various wires are drawn in such a position that they will show most clearly, and for that reason do not follow the most direct route from terminal to terminal, as is actually the case in the receiver itself. What we **do** mean is that one cannot

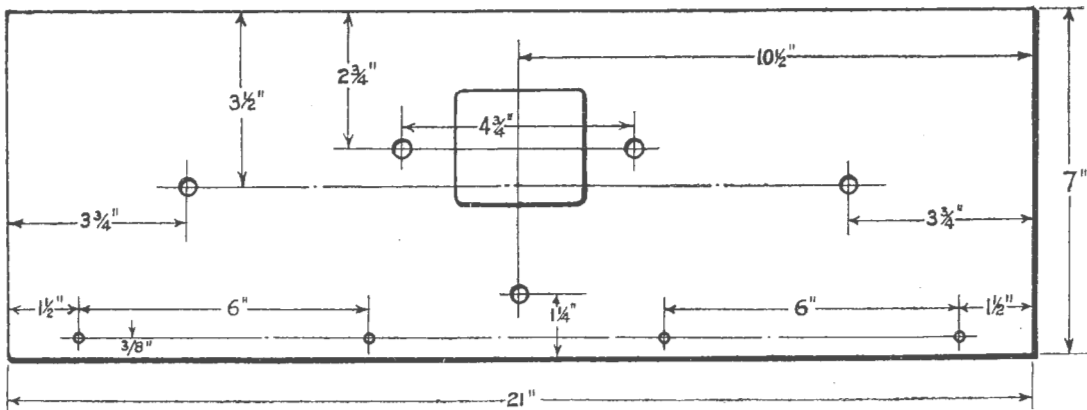
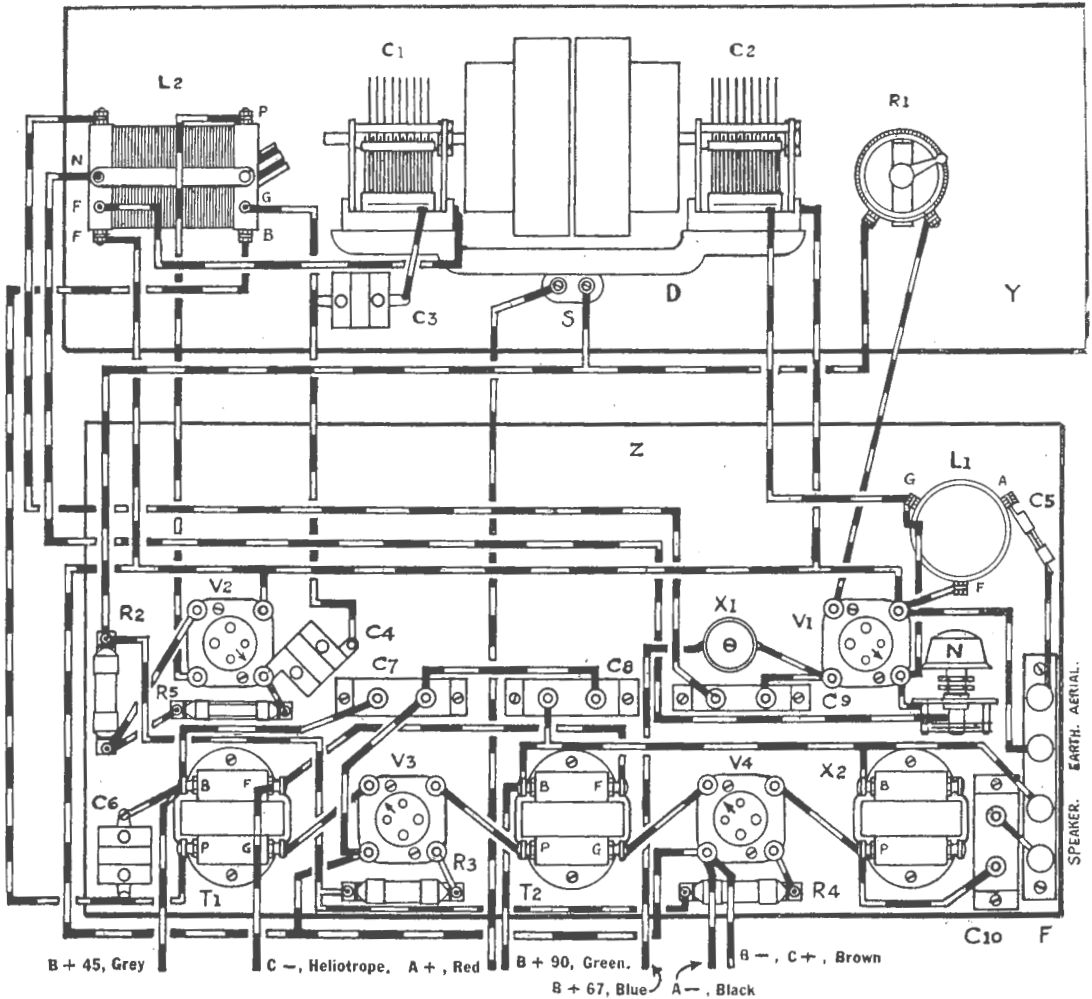


Fig. 4—Lay out your panel according to this drawing. The large opening in the centre accommodates the drum dials.

Fig. 5—
In order to assist those who have difficulty in following a circuit diagram, we present this pictorial diagram.

The wires shown projecting at the bottom belong to the battery cable, which should be secured to the baseboard by means of a clip.



be too careful in ensuring that the different parts are connected together correctly, as a mistake here will result either in failure of the complete set to operate, or in damaging valves or batteries.

It is a good idea to wire the filament circuits first, as the connections in this section of the circuit usually lie close to the baseboard. The remainder of the wiring is then completed, after which every wire should be checked with the diagram. All joints should be soldered—an easy matter if the job is approached in the right way, especially as the connections to be soldered are very few in number.

Now, before connecting up the batteries, it is a wise precaution to insert the valves in the sockets, and to connect the "A" battery only. Turn on the switch, and see if all the valves light. (This applies, of course, only if Radiotrons, or some similar type of valve in which the glow of the filament is visible, are used. Many of the "dull-emitter" valves exhibit no glow whatever, in which case it is impossible to tell whether they are "on" or "off.")

Assuming that all the valves light up, it is fairly safe to conclude that the wiring of the battery circuits is correct, and the "B" and "C" batteries may be connected. Note that the brown wire is common to both "B" negative and "C" positive, therefore it should be connected to the negative terminal of the "B" battery, and a wire run from this terminal to the positive terminal of the "C" battery. The value of the "C" battery will depend entirely upon the valves used. With 201A's throughout, and 90 volts "B" battery, a single 4½-volt "C" battery is sufficient. If any other make of valve is used, the manufacturer's instructions should be followed implicitly.

Neutralising and Operating.

When all batteries, and aerial, earth and loud-speaker have been connected, the next process is that of neutralising the R.F. valve. It should be understood that the R.F. valve must never be allowed to oscillate, oscillation being confined to the detector, where it is under control. Oscillation in the radio-frequency stage spells failure as far as distant reception is concerned.

Let it be said at the outset that the neutralising—or, more correctly speaking, stabilising—of the new Browning-Drake is a very simple matter indeed, whatever difficulties may have been encountered in the older model. In our own set, as a matter of fact, no adjustment of the neutralising condenser was necessary, the set being quite stable with the plates of the neutraliser turned all the way out of mesh.

There are two ways of neutralising or stabilising the set—one the simple direct way, and the other the strictly correct method according to accepted practice. We will treat them in the order in which they have been named, for the writer never experiences any trouble in adopting the following procedure:

Set neutralising condenser "N" with plates all out. Tune in a station, preferably 2BL, or some station on the lower half of the dials. It will be found that the two tuning dials are not so very much out of step for a given station. There should be no whistle (or carrier-wave) in evidence when the regeneration control is moved towards the left (counter-clockwise). If there is, the plates of the neutraliser should very gradually be turned into mesh until the whistle stops. For each movement of the neutraliser, the left-hand dial will have to be slightly re-tuned for maximum volume. The R.F. valve will now be **stabilised**, but not **neutralised**, by which is meant that the adjustment is just sufficient to suppress oscillation, but the amplifier will be operating with a certain amount of regeneration present. This is an advantage, as regeneration has the effect of lowering the effective resistance of the circuit in which it is present, which means a great improvement in efficiency. So much for the "short-cut" to stabilising the radio-frequency amplifier. Now for the generally accepted method of neutralising:—

The R.F. valve is turned off by means of the rheostat "R1," and a local station tuned in to the best possible strength. Now slowly rotate the neutraliser until a point is reached at which a distinct reduction in volume is evident. Turning it further will result in the volume increasing again. Leave the neutraliser at the point of minimum volume, and turn on the rheostat again, when the R.F. stage should be fully **neutralised**.

The Parts are not Expensive

- C1, C2 and D—Emmco double drum control, fitted with two .0005-mfd. SLWL condensers.
 C3—Electrad .001-mfd. fixed condenser.
 C4—Electrad .00025-mfd. fixed condenser.
 C5—Electrad .0001-mfd. fixed condenser.
 C6—Electrad .001-mfd. fixed condenser.
 C7, C8—Dubilier 1-mfd. Mansbridge condensers.
 C9—Dubilier .5-mfd. Mansbridge condenser.
 C10—Dubilier 2-mfd. Mansbridge condenser.
 F—Bakelite terminal strip, 5 x 3/4 x 3/16 ins., fitted with 4 Belling-Lee binding-posts: ANT., GND., SPKR., SPKR.
 L1, L2—input coil and regenerator of Radiokes Master Browning-Drake kit.
 N—Advance neutralising condenser.
 R1—Electrad 10-ohm rheostat.
 R2, R3, R4—Brachstat automatic filament controls, type dependent on valves used; type 1B for 201A valves.
 R5—Electrad 3-meg. leak, in single resistor mounting.
 S—Cutler-Hammer battery switch.
 T2, T2—A.W.A. Superaudio transformers, 3:4 to 1 ratio.
 V1, V2, V3, V4—Benjamin UX sockets, assembled.
 X1—A.W.A. radio-frequency choke.
 X2—A.W.A. Superaudio choke, 50 hys.
 Y—Bakelised fibre panel, 21 x 7 x 3/16 ins.
 Z—Stained pine baseboard, 20 x 10 x 7/8 ins.
 B—Battery cable, 7 wires.
 1 coil (25-ft.) Celatsite flexible wire.
 Screws.

Accessories

- 5 Radiotron UX.201A valves.
 1 6-volt storage battery.
 2 45-volt "B" batteries.
 1 44-volt "C" battery.
 1 Loudspeaker.

Note—The parts specified in the above list are the exact makes used in the receiver described and illustrated. While the experienced set-constructor may make some changes in his selection of parts, it is recommended that the list be closely adhered to in order to ensure duplication of the results obtained with our own model. This applied in particular to such items as coils and condensers; in the case of parts which perform a purely mechanical function, such as sockets, dials, terminals, etc., substitution may be made with safety, provided, of course, good quality parts are used.



In tuning the set, the rheostat plays quite an unimportant part; once set for maximum volume, it need not again be touched. The easiest way to tune in a station when one is familiar with the receiver is to turn the regeneration condenser fully to the right, when the detector should oscillate. By rotating the two dials approximately in step with one another, the carrier-wave or whistle of the distant station will be picked up. The regeneration control (right-hand knob) is then turned back towards the left until the whistle ceases, and the station tuned in clearly with the two dials. The volume is adjusted by means of the regeneration control. Once a station is tuned in satisfactorily, a note should be made of the two dial readings, so that, in future, a search will be unnecessary.

The Browning-Drake, as might be expected of an unshielded receiver having only one stage of radio-frequency amplification, is not very selective. However, this drawback can be tolerated when it is borne in mind that the addition of a good wavetrap effectively solves the problem of eliminating interference from the local station.

Although we have specified the use of 45-volts on the detector and 67 volts on the R.F. amplifier, it may be found that better results are obtained if these voltages are increased to 67 and 90 respectively. Start off with the voltages specified, then, when you have the receiver working, try the effect of the increased voltages. A little experimenting in this direction frequently is very much worth while.

Due to the use of good transformers and a well designed audio-amplifier, the tone quality is very pleasing. Care must be exercised, however, in the use of regeneration, because, just as with any other regenerative receiver, the reproduction immediately suffers if the regeneration control is "pushed" too far.

Regarding the matter of range, all we will say is that our own model brought in JOAK Japan, several nights running, at weak speaker strength (good head-phone strength). We think this is quite a creditable performance for a four-valve set, and we feel sure that readers constructing the new Browning-Drake will find that it more than upholds the reputation gained by its famous predecessor—the dependable old "B.D. Four."

*Your finger
brings the talent
of the World
before you!*

TWO or three years ago a five valve receiver that would bring in 2FC and 2BL at Brisbane was considered to be a fine piece of apparatus.

Tone quality was harsh ; tuning was difficult-but no one worried ; radio was too wonderful for anyone to be critical.

To-day, in the Udisco Line of Receivers, radio has been revolutionised. Range has been extended, tone has been purified and control simplified.

Right from the Udisco Three Valve Model to the Udisco Eight Valve Model each is a masterpiece of radio engineering—each model represents the utmost in value.

Udisco Receivers are Australian made to suit our special conditions. They are ultra-selective for tuning on crowded wavebands ; they are great distance-getters. *Hear the Udisco Line demonstrated.* They are the finest receivers your money can buy.

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Super Neut

RADIO

One Dial Control
Perfect Tone Quality
Razor-like Selectivity
Enormous Range



UDISCO

A Distinguished Line of Radio Receivers

"UDISCO" THREE

The most popular three-valve receiver on the Australian market. It employs a modified Reinartz circuit. Receives all Australian "A" class stations, and also N.Z. stations under favourable conditions. One dial control. Selective, needing a simple wavetramp to eliminate 4QG at close range. Tone quality is excellent.

PRICE,
COMPLETE £27-10-0

Set and Valves, £15/-/-

"UDISCO" FOUR

A well-made and very efficient model that eclipses many five-valve sets in actual performance. Employing the famous Udisco Super-Neut. circuit, making for smooth tuning, splendid tone, and ease of handling. The "Four" is a one-dial receiver, selective, and will eliminate 4QG at five miles' range. All Australian, also New Zealand stations received at speaker strength.

PRICE,
COMPLETE £32-10-0

Set and Valves .. £20/-/-

DAYLIGHT RECEPTION



ENORMOUS RANGE

"UDISCO" FIVE

Perhaps the most popular of the entire Udisco Line. Fittingly described as a "Wonder Receiver," this model, employing the Super-Neut. circuit, puts up astounding performance. Keen selectivity, enormous range, sweet tone, ease of tuning, are but a few of its attributes. All "A" and "B" class Australian stations, New Zealand stations, and even Japanese stations under good conditions. No five-valver has yet equalled the UDISCO L5 for performance.

PRICE,
COMPLETE £45-0-0

Set and Valves .. £30/-/-

"UDISCO" EIGHT

Now we come to the Rolls-Royce of Radio—the UDISCO L8. A fine big set that is easier to tune than a crystal set, that has limitless range, and tone quality that defies description. Reception of foreign stations is not a difficult matter with this receiver. In fact, one user has received no fewer than 108 stations, 62 of which were outside Australia!! If you desire the best in Radio, you should interest yourself in the Udisco L8.

PRICE,
COMPLETE £84-0-0

(Complete with Battery Cabinet.)

Set and Valves .. £55/-/-

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Distinguished Artist at 4QG



Mr. Ellis sings "The Irish Famine Song" with true pathos.

The bottom right-hand photograph depicts Mr. Ellis in jocular mood as he sings "Largo al Factotem" in his own wonderful style.



MR. RAYMOND ELLIS
(From a Painting)

LURING the month of May listeners to 4QG were afforded the unexpected pleasure of hearing Mr. Raymond Ellis (English baritone with the British National Opera Company) in a series of brief but brilliant recitals.

Altogether, Mr. Ellis made five appearances in six days, something of a record for a broadcasting artist, yet his last recital left listeners hungry for more.

His appearance at 4QG brought an inundation of telegrams, letters and telephone calls of appreciation to the station from listeners who found keen delight in listening to the renderings of Mr. Ellis.

Revolutionary Methods.

Right from early days of 2LO London, when the announcer swept the studio, locked up, etc., Mr. Ellis has made a close study of voice technique as applied to broadcasting, with the result that he is now regarded as one of, if not the finest, radio vocalist in the world.

Mr. Ellis adopts new and revolutionary methods before the microphone. Instead of standing six feet off to sing AT the microphone, he stands within six inches of the instrument and sings TO it. He adopts an attitude somewhat akin to a boxer sparring. Standing on tip-toes, he sways to and from the microphone during the rendering of an item, bending close over the microphone for the soft passages and drawing himself back and singing with more gusto as the melody increases in volume. This accounts for the wonderfully clear diction that marked each recital from the station.

Another new method adopted by this great artist is the standing to one side of the microphone, instead of directly before it. Thus the edge of the voice really glances that delicate little instrument, where another artist standing as close, but full-on, would paralyze it.

Mr. Ellis invariably broadcasts minus his coat. He enters right into the spirit of his song, and as he smilingly remarked to our representative, "if we artists cannot secure adequate fees, we may as well have comfort." Even our photographer could not induce Mr. Ellis to depart from his custom of doffing his coat. "If you want photographs," he said, "you should take them in my true broadcasting attitudes."

An Informal Lecturette.

Realising Mr. Ellis's valuable broadcasting experience, the Director invited him to give a little lecturette to 4QG artists on the "Art of Broadcasting."

As many artists as it was possible to communicate with at short notice were invited to be present at 4QG at 5 o'clock on the evening of Friday, May 11th, to hear Mr. Ellis speak. Over 100 artists and leading musicians of Brisbane attended and spent a very enjoyable and instructive hour-and-a-half listening to Mr. Ellis, who illustrated his lecture with demonstrations before the microphone.

Empire Broadcasts.

Mr. Ellis was one of the group of distinguished artists who sang from 2FC last year in the first successful Empire broadcasts.



With mingled feelings of joy and sorrow, he sang to the Homeland, where he knew his old father and mother had arranged to listen to the voice they had not heard for so long.

During these broadcasts, private message were not permitted. Mr. Ellis badly wanted to get his greeting home, so during his rendering of "Largo al Factotem," from "The Barber of Seville," which he sang in Italian, he departed from the correct words midway through the piece, and sang, "Love to father, love to mother," in their stead. Mr. and Mrs. Ellis caught the message, but the authorities knew nothing of it until the "Daily Mail" of London published the joke next morning under the heading of "Message Home—Words not in the Book."

A Notable Career.

Mr. Ellis is in his early thirties, yet he has had experience that many a veteran artist might well envy. He was principal lyric baritone of the National Opera Company with the British Nanyang for four years, singing many title roles in all the big productions.

He has appeared in leading cities in the British Isles, Europe, America and Canada. In the last two countries he visited over 400 cities and towns.

As a student he had great success, gaining many valuable scholarships and prizes at the Royal Academy of Music, of which institution he is an

A.R.A.M., and is the holder of the Operatic Gold Medal for 1914.

In all, he studied seven years before making his debut; that was at the Queen's Hall, London, under the baton of Sir Alexander Mackenzie, who, as Principal of the Royal Academy of Music, was greatly interested in Ellis when a student and afterwards when he entered the profession.

Mr. Ellis has had experience in all the higher branches of the musical profession, resulting in the development of a complete artistry.

He is a native of Yorkshire, but of Russian parentage, this, perhaps, explaining his ability as a linguist, for he sings in seven languages.

He is now making his farewell appearances prior to departure for England.

Mr. Ellis to Write For Our Next Issue.

Mr. Ellis has kindly consented to write of some of his early broadcasting experiences for this paper. The many farewell engagements accorded him in Sydney prior to his departure did not allow him sufficient time to prepare the matter for this issue. The article will appear in our July number.



The Worries of Broadcasting

For his final appearance at 4QG, Mr. Ellis called for request numbers. The result was somewhat overwhelming. Whilst many requests included numbers from the repertoire of Mr. Ellis, and were graciously acceded to, requests for such ballads as "Just a Girl That Men Forget, and "Hustling Hinkler," had to be passed by. Our picture shows Director Robinson handing Mr. Ellis a sheaf of "impossible requests." No wonder they look worried!

Experimental Station 4RM

A revelation in volume from small power, with perfect modulation of both speech and music, characterises the tests that are now going out from 4RM, Hawthorne.

Tests of one hour are held every Monday, Wednesday and Friday nights from 7 p.m. to 8 p.m. The well-known voice of Mr. C. V. Woodland is often heard in announcements and speech tests.

Experimental Station 4RM state that the main purpose of these tests is to try out a new system of modulation. By the reports received the system is proving itself to be highly successful.

To aid the station in its experiments, radio fans are invited to listen-in and report on the tests which, as previously stated, are held on Monday, Wednesday and Friday evenings, from 7 to 8 p.m. The wavelength is approximately 240 metres.

Distortion Problem Solved!

Great Elation Among 4QG Listeners

WHAT HAS BEEN DONE?

Listeners in all parts of the State and Commonwealth were greatly surprised and elated to find that on the night of Saturday, May 18th, a sudden transformation had been wrought upon 4QG's signals. Instead of the distortion which, for the past seven months has marred reception in all centres beyond a narrow radius of Brisbane, clear, clean-cut signals now find their way into the furthest corners of the country.

The Director of the Queensland Radio Service, Mr. J. W. Robinson, who was interviewed by a representative of this paper was asked if he cared to make a statement regarding the distortion problem.

"It is really a little too early for me to make a statement," Mr. Robinson said. Certain reports have come to hand at the station, but our testing work is by no means complete, and were I to make any definite statement, I would hardly be fair to the station.

"I think I can safely say, however, that since a series of very intensive tests, working along certain lines, were carried out, there has been quite a noticeable improvement in reception of 4QG in country districts. From many of the affected areas, such as the North Coast Line of Queensland and the Toowoomba area, reports indicating excellent reception during the past few days have come to hand. The station has also received comments from listeners in the Northern Rivers District of New South Wales, stating that 4QG is now coming through quite clearly and distinctly."

Asked if he could give any information regarding the causes of distortion, Mr. Robinson said it was too early yet to make any definite statement on the matter. The tests, had, however, he said, showed that there was interference with 4QG by a foreign station whose carrier wave was coming through almost on top of 4QG's transmission.

Mr. Robinson also stated that certain very careful tests had been made by observers of the station stationed at outside points, and measurements had been made of the frequencies of various stations with a view to trying to solve the problem.

Our Views on the Matter.

We cannot altogether agree with the theory that interference from a foreign station has been the cause of the distortion. Whilst Japanese stations are received in parts of Queensland on efficient receivers without great difficulty, reception of these stations in Southern and Western States is very rare. Yet the distortion of past months has been as much in evidence in Perth as it has been in Cairns or any other Queensland town. Following the improvement noticed on May 18th, reports were simultaneously received from Northern Queensland and Western Australia, whilst measurements show that 4QG's wavelength has not varied in the slightest.

We are of the opinion that some vital adjustments have been made to 4QG's transmitter. The "double peak" that has been so noticeable on 4QG's carrier for some time past has now disappeared.

This leads us to believe that two circuits which in the past were out of tune have now been brought into resonance, resulting in the elimination of the distortion.

Whatever has been done, or whatever may have been the cause, the fact remains that the problem has been unfathomed, and with the clearing of the cloud, there is great jubilation among the listeners, radio dealers—and, of course, all at 4QG. Once again will listeners be able to tune in to the programmes of their own station which for so long have been denied them.

Hurried Test Trip to the Country.

Some two or three days ago a representative of this journal accompanied the Director of 4QG as far as Gympie, where definite tests were carried out until the early hours of the morning. Gympie has at all times been a very bad centre, but on the occasion of the visit, excellent reception was obtained. Tests were carried out in the railway carriage with only a very small aerial, and the rails used as an earth. The quality of the transmission on 4QG's tests left nothing whatever to be desired. Modulation was good and deep, and both speech and music came through with exceptional clarity.

A Good Battery is Essential!

A poor battery will make your set useless—you have no chance of getting good results with faulty battery power. Instal a C.A.V. British Radio Battery, and notice the wonderful difference a truly good battery makes.

The C.A.V. Battery, especially constructed for radio work, provides a smooth, even flow of power, ensuring perfect reception throughout its long life of radio service.



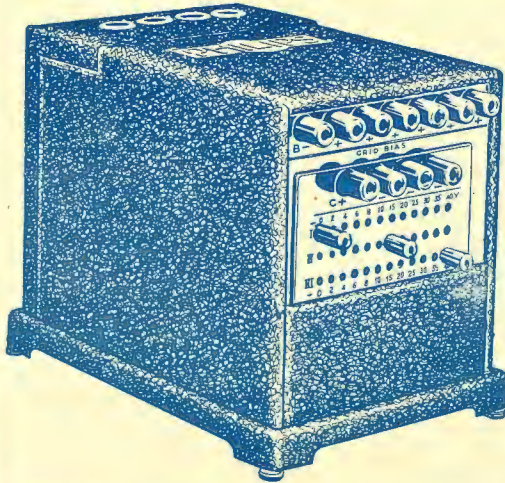
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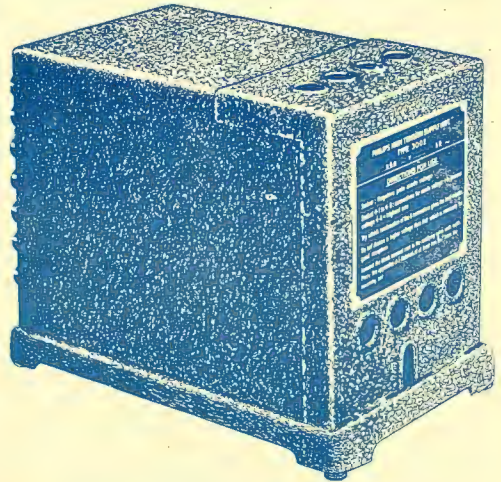
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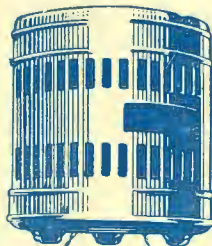


POWER PLUS "B" UNIT.
Type 3002. £9-15-0

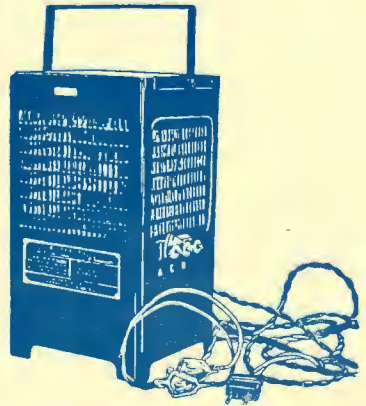
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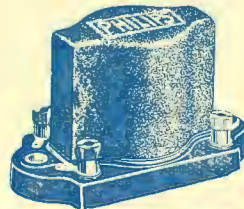
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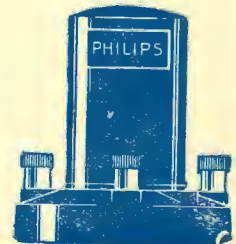
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RESISTANCE CAPACITY COUPLING UNIT.
Type 4001. 25/-.

RADIOKES MASTER BROWNING - DRAKE COIL KIT

Radiokes Coils are specified in 75% of constructional articles published in Radio Papers. There must be a reason.

The Browning Drake has been the one four valve set that has retained popularity all the years. The 1928 Radiokes Master Kit makes it more popular than ever.

This 1928 Model Browning Drake Kit is one of Radiokes latest productions, and one of which the factory are justly proud.

Of considerably smaller physical dimensions than those of its predecessor, this Kit is none the less efficient, but conforms with the latest developments announced by its originator, Mr. Glen Browning of U.S.A.

This Kit embodies a new method of neutralization, and by virtue of its smaller diameter is not so susceptible to local pickup or magnetic inter-action between units. Another feature is the one hole panel mounting applied to the Regenerformer.

Built according to Radiokes Low-Loss principles, and mounted in a Bakelite framework; this makes up into a particularly robust Kit, fitted with plainly designed screw terminals. Has a Bakelite arrow-engraved knob on reaction coil for greater tuning convenience.

PRICE

£2

From all live
Radio
Dealers



PRICE

£2

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As Specified in the 1928 Browning-Drake Set

Constructional Article in this Issue

Manufactured by

METROPOLITAN ELECTRIC CO.

27-29 KING STREET, SYDNEY

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The Leaders in Radio Merchandising

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BRISBANE

Precision in Radio decides between results and failure. The Radiokes Trade Mark ensures precision and quality.

Send for the Radiokes 1928 booklet—24 pages of information and circuits on the 20 different Radiokes Coil Kits now available—Gratis.

Getting the Most and the Best out of the CRYSTAL & VALVE

By THE TECHNICAL EDITOR

THIS receiver was designed to give the best possible results on local reception, keeping in mind the requirements of tone quality (which was considered of primary importance), ease of control, and economy in construction and operation. It fulfils all these requirements, and is a set which can safely be put into the hands of anyone, however inexperienced. The combination of fixed crystal detector and high-quality amplifier is an excellent one, and can be highly recommended.

It is an undoubted fact that there exists a wide demand for a small, easily-built receiver which will give loudspeaker reception of the local station within the city and suburban area at a low upkeep cost. First and foremost, a receiver for this purpose must have the property of delivering faithful reproduction of the original broadcast music to the loudspeaker, and, because of the fact that a set of this description is often placed in the hands of elderly people, it is imperative that its operation be simplified to the greatest possible extent.

The crystal-valve receiver described in this article gives a splendid quality of reproduction, with a volume quite sufficient for the average room. It is **not** the cheapest set that can be built, for the simple reason that the audio - frequency amplifier is a first-class job, as "eco-

nomy" at this point could only be effected at the expense of tone quality. At the same time, it will be found that the total cost of the receiver is quite low, considering the high-grade parts used.

The construction of the Crystal-valve Receiver is so simple and straightforward that it was considered unnecessary to publish a conventional circuit diagram and panel-drilling diagram. The back-panel photograph of our set gives a good idea of the layout of parts, while the wiring is adequately taken care of by the pictorial wiring diagram (Fig. 2).

A list of the parts used in our own set is printed on the following page. These parts have been selected with care, and it is recommended that our choice of parts should be followed as far as possible if best results are to be obtained.

The incorporation of a detector of the fixed carborundum type solves the problem of providing a satisfactory rectifying device which will remain constant under all conditions, and which requires no adjustment at any time.

Since the receiver is intended for local work only, the sensitivity of the carborundum detector is quite sufficient without the use of a local "stabilising unit." Inclusion of the latter, while resulting in increased sensitivity, would also mean an extra control and increased cost,

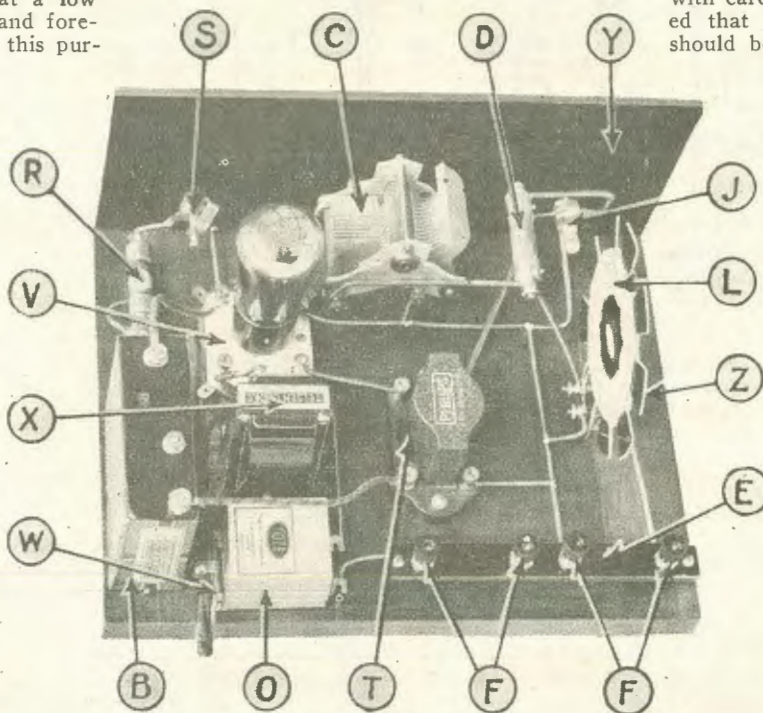


Fig. 1.—Identify the parts in this back-of-panel photograph with the list of components on page 21.

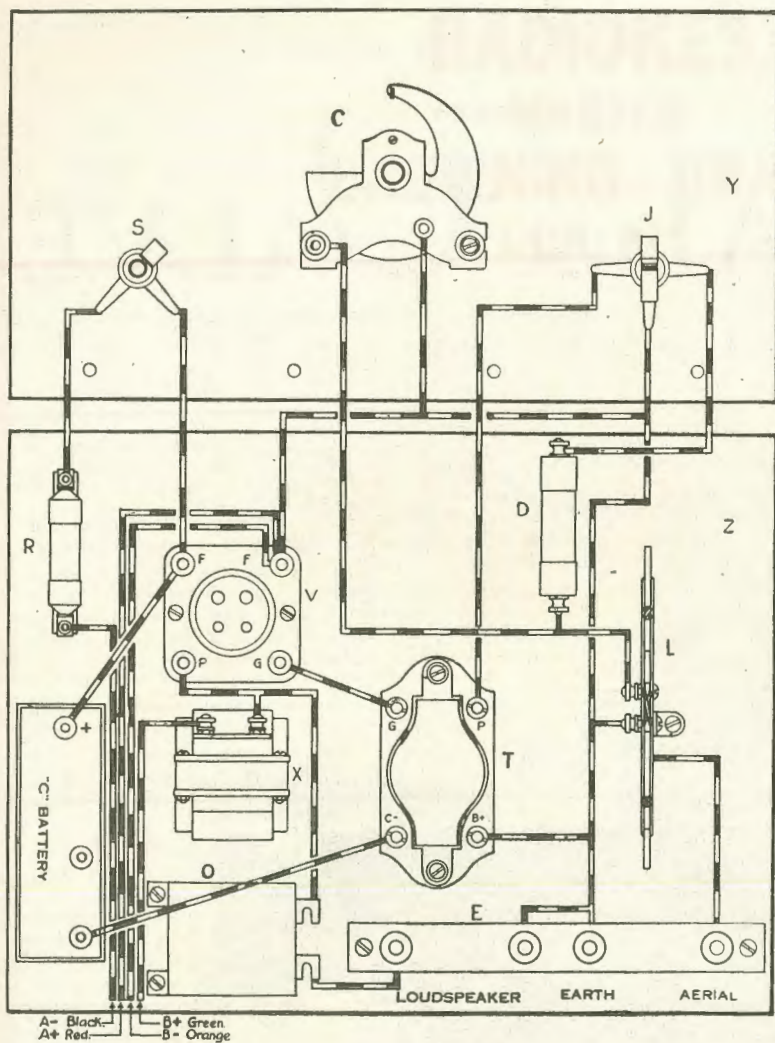


Fig. 2.—Wire your set from this pictorial diagram. The four wires emerging at the left-hand bottom corner represent the battery cable. The colours indicated are purely arbitrary.

and, for those reasons, was not considered worth while.

A noteworthy feature is the 'phone jack (J), mounted on the front panel. By its means, the receiver may be operated as a straightout crystal set simply by plugging in the headphones or loudspeaker. This is a distinct advantage when it is desired to listen in to some item of particular interest while the battery is away being charged, or if for any other reason the valve amplifier is inoperative.

In accordance with good present-day amplifier design, an output filter, consisting of an iron-core choke and a large-capacity condenser, follows the amplifier, this unit serving the dual purpose of protecting the loudspeaker from overloading, and improving the tone quality. Needless to say, a "C" battery is part-

and-parcel of the set; the duty of this battery is to apply a steady negative potential to the grid of the valve, of correct value for proper operation of the amplifier.

As the filament temperature is not critical, satisfactory control is provided by the automatic "ballast resistance" (R); the value of this unit will, of course, be governed by the type of valve used. This is a point to watch when buying the components.

Following our usual practice, the battery cable is "built-in," the coloured connecting-wires being run direct to the terminals on the socket, transformer, and Brachstat, as the drawing shows. We believe this makes a better mechanical and electrical job than the commonly used row of terminals on a bakelite strip, and it certainly is cheaper.

Constructional Details.

The panel used in our set is of standard size, and one of these dimensions may be purchased ready cut, and with square, smooth edges. To assist the constructor in laying out the panel assembly, it might be mentioned that the variable condenser is located on the vertical centre-line, 3 1/2 inches from the bottom of the panel. The jack and the switch are centred 2 inches from the left and right-hand ends respectively, and 2 inches from the bottom.

The location of the various parts on the baseboard will be gathered from the illustrations. As far as directness of wiring and general accessibility are concerned, the layout shown could not very well be improved upon.

A little explanation is necessary here regarding the "spider-web" coil. This coil consists of 45 turns of the 24-gauge wire, the ends being taken to two terminals on the spider former. A tapping is taken at the 25th turn, and another at the 35th turn. The purpose of these tappings will be explained under the heading of "Wiring."

The spider former used in our set was equipped with a plug and socket for insertion in a standard coil mounting. These were removed, one bolt and nut replaced (to be used as a terminal), and a small brass angle bracket secured to the coil former by the remaining bolt and nut. The inside (beginning) of the winding is joined to the terminal which secures the bracket; this is important.

Wiring.

The wiring of this receiver has been carried out with 18-gauge bare tinned copper wire, covered—

chiefly for the sake of appearance—with spaghetti tubing. Figure 2 shows all the connections clearly, and it should be noted that the lines which are shown "broken" are those which pass **underneath** those which continue unbroken. Wherever joints are made, they should be soldered, and this injunction applies also to the connections to the jack and battery switch.

Ample support for the crystal detector is provided by the wiring itself; no catswhisker is used in this type of detector, so a small amount of vibration is of no account.

The aerial terminal is connected to either one of the two tappings on the coil—merely twisted round it, for the time being. After the set is completed, it must

both 6-volt and 4-volt. Any one of the valves specified may be used successfully, and the order in which we have listed them signifies no particular preference on our part.

For best results, it is strongly recommended that the highest "B" battery voltage available be used, provided, of course, the manufacturers' figures are not exceeded. All amplifier valves are furnished with a chart showing the correct values of "C" battery voltage to be used with various "B" battery voltages and, for high-quality reproduction, as well as economy in current consumption, **it is absolutely imperative that these directions be followed minutely.** High plate voltage is worse than useless unless the correct value

We used these Parts—

- | | |
|---|---|
| C—Advance .0005 mfd. variable condenser | V—Advance UX. valve socket |
| D—Carborundum fixed detector | X—Telsen audio-frequency choke |
| E—Bakelite terminal strip, 6½ x ¾ x 3/16th inches. | Y—Bakelised fibre panel, 12 x 6 x 3/16th inches |
| F—4 Binding-posts | Z—Stained pine baseboard, 12 x 9 x 7/8th inches |
| J—Electrad small-space closed-circuit jack | 24-Gauge D.C.C. wire for coil |
| L—Grodan bakelite spider former | 16-Gauge tinned copper wire for wiring |
| O—Tobe 2-mfd. fixed condenser | 2 Lengths spaghetti tubing |
| R—Brachstat automatic filament control, type dependent on valve used (2-C for PM.6 valve) | 1 Battery cable |
| S—Electrad filament switch | B—4½-volt "C" battery |
| T—Philips audio-frequency transformer | Wood screws |
| | Mullard PM.6 valve |

Valves for use with

4-VOLT BATTERY.

- | | |
|------------------|------------------|
| Radiotron UX.120 | Mullard PM.4 |
| Philips B.405 | Mullard PM.254 |
| Philips B.409 | Cossor Stentor-4 |
| Philips B.403 | Condor PR.50 |

6-VOLT BATTERY.

- | | |
|-------------------|-------------------|
| Philips B.605 | Radiotron UX.112A |
| Radiotron UX.201A | Mullard PM.256 |
| Radiotron UX.112 | Cossor Stentor-6 |
| Mullard PM.6 | Condor PR.55 |

be determined which tapping gives the better results. Probably the 35th tapping will yield greater volume, but the 25th will give increased selectivity. With a set of this type, selectivity is of no importance at the present time, but it may be highly desirable at a later date, when one or more "B" class stations are in operation.

Valves.

Now, with regard to the selection of a suitable type of valve: In our own set, a Mullard PM.6 was used with excellent results. However, there are many other valves which will function equally well, so we are printing a table setting out several suitable types,

of grid bias is used with it; this is a point which is all too frequently neglected—not only in amateur-built receivers, it may be mentioned.

Sometimes it is found that the carborundum detector gives much improved results when connected a certain way round in the circuit. Therefore, when music or speech is being received, the detector should be reversed, and connected permanently in the position which yields the greater volume.

For once in a way, directions for operating the set occupy no more than a few words. They may be condensed into one sentence: Turn on the switch and rotate the dial until the station is heard at the desired strength.

ANOTHER BROADCASTING MERGER

3LO AND 3AR AMALGAMATE.

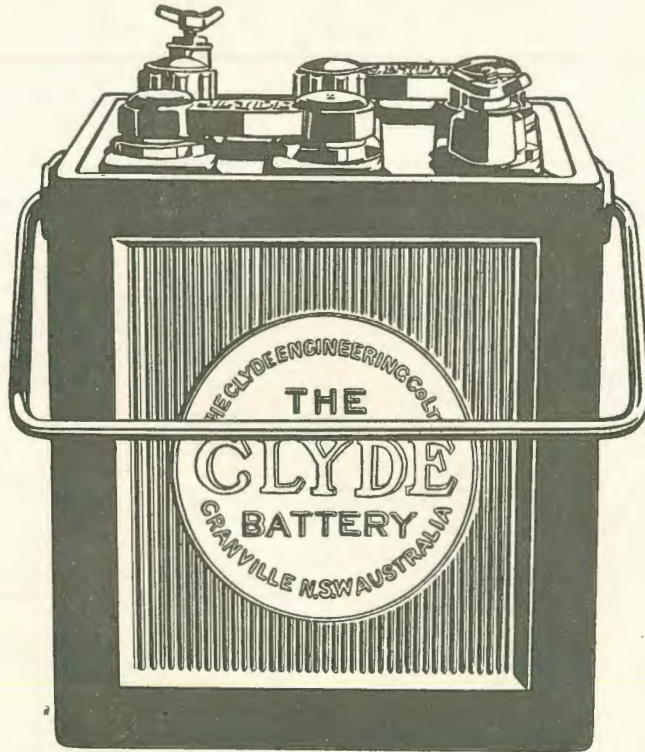
Following close upon the heels of the 2FC-2BL fusion comes the interesting announcement of another broadcasting merger between The Broadcasting Company of Australia Pty. Ltd. (3LO) and The Associated Radio Company (3AR), both of Melbourne.

The purpose of effecting an amalgamation of activities is to provide a co-ordinated broadcasting service for the listeners of Victoria. This co-ordination will enable a central management to direct the service

with many advantages to the listening public. Duplication of programmes, which was inseparable from the present arrangement of individual services, will be avoided, and listeners will be able to obtain alternative programmes at all times.

As some time must necessarily elapse before programme details are planned and arranged, the full advantages of the co-ordination will not be experienced for some weeks.

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He will tell you that it has given him—right through—steady, silent service, without trouble or worry—that it has stood up to its work as a good battery should.

Depend upon it. You're quite safe in buying a Clyde

Made by the CLYDE ENGINEERING CO. LTD., GRANVILLE

Battery Sales Dept., MAIN SERVICE STATION, 106-110 Goulburn Street, SYDNEY

4QG Features for June

JUNE 1st.—A varied programme by Erich John's popular concert party. The programme embraces gems from the operas, Russian folksongs, sacred numbers, old favourites, and light operatic songs.

JUNE 2nd.—Billy Maloney and his party will dispense half-an-hour's fun from the studio, after which Lennon's Orchestra will be broadcast.

JUNE 4th.—King's Birthday celebrations. B.A.T.C. Races in the afternoon from Ascot will be broadcast, while in the evening an organ recital by Mr. George Sampson, followed by a programme by the Silkstone Apollo Club, will be provided.

JUNE 5th.—Once again Billy Maloney appears before the microphone in popular numbers. The Metro Male Quartette follows on, while the transmission is completed with a brief gramophone recital.

JUNE 6th.—A special concert by the Corpus Christi Choir of Nundah. A fine programme has been arranged, which will occupy the full night session.

JUNE 7th.—The ever-popular Troubadours appear at 4QG on this date and provide a fine programme from 8 p.m. to 10 p.m.

JUNE 8th.—The Studio Syncopators will broadcast from the Hotel Carlton.

JUNE 9th.—A feature of this programme will be the relay from Murwillumbah of the choral session of the Musical estival being held in that town.

JUNE 11th.—The first half of the programme will be relayed from "The White House," Woolloongabba, while the second half will be broadcast from the studio. A short recital by the Excelsior Band will conclude the session.

JUNE 12th.—Mr. Archie Day, Brisbane's youthful concert pianist, will provide a classical programme during the first portion of the evening, which will be followed by numbers from the studio.

JUNE 13th.—The usual weekly jazz night by the Studio Syncopators.

JUNE 14th.—This programme should be rich with talent, for it is given by the prize-winners in the re-

cent Windsor Eisteddfod. Community singing will also be featured.

JUNE 15th.—For those who love a smell o' the salt, "a nautical night" has been arranged and will be rendered by popular 4QG artists.

JUNE 16th.—Races in the afternoon, followed by studio programme in the evening. A new feature will be a lecturette, "The conquest of the Air" (No. 1) by "Propellor."

JUNE 18th.—Erich John has once again arranged a brilliant programme, which will be broadcast from the studio.

JUNE 19th.—A radio adaptation of Charles Dickens "Christmas Carol" will be broadcast from 8.30 to 10 p.m.

JUNE 20th.—Another "Jazz Night" by the Studio Syncopators will be relayed from the Hotel Carlton.

JUNE 21st.—Upon this evening a concert from the St. Barnabas Hall, Red Hill, will be relayed.

JUNE 22nd.—This programme is to be relayed from "The Acacia Gardens." Some splendid artists are listed to appear.

JUNE 25th.—Erich John's ever popular concert Party has arranged another semi-classical concert for this date.

JUNE 26th.—The Sampson Concert Party is to provide the first half of the concert, whilst the second half will be broadcast from "The White House," Woolloongabba.

JUNE 27th.—Another "Jazz Night" will be broadcast for the benefit of those who trip "the light-fantastic."

JUNE 28th.—This programme will be given by the City Tabernacle Choir.

JUNE 29th.—A party from 4QG will visit the Red Cross Hospital, "Ardoyne" at Corinda, to entertain the invalid soldiers. This concert will be relayed and broadcast.

JUNE 30th.—A studio programme followed by Dance music from Lennons.

THOUGHTS FOR TO-NIGHT

By WILL. H. LISTER

FROM 4QG

You have heard these over the air and have enjoyed them.

A first series of sixty, together with some short poems, may be had from Booksellers and The Read Press Ltd., Adelaide Street, Brisbane. Price 2/-. If you send address and Postal Note it will be sent you.

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How many times when listening-in to relays of overseas stations or listening direct to short-wave stations have you been slightly at sea in regard to the difference in time between cities in other countries and **YOUR OWN TOWN?**

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(By Robert Ware.)

A thrilling series of Secret Service yarns—built around actual incidents during the Great World War—and told in a manner that grips your interest.

Episode No. 3. ~ "The Mystery of Ampheros Channel"

I.

A blinding storm of hail was sweeping down the Aegean Sea. A cyclonic wind lashed the yellow-green water into serried ranks of angry, rushing billows, and whipped their crests into sheets of stinging spray. The lofty pile of barren rocks known to sailors as the island of Ampheros, was like a small stone in a seething cauldron—its perilous shores ringed with foaming breakers.

Yet three boats rode these angry seas and faced the driving wind and hail. One was the British transport "Ravensworth Castle." The accumulated rust of many voyages hung on her sides like a coat of dark paint, mute evidence of the strenuous days in which she lived. The moment she docked, somewhere in England, gangs of men would swarm aboard and the winches would commence their maddening rattle, bang and clatter—loading the old tramp to the limit for another eventful voyage to some far-flung battle-front with materials of war. Tanks to Havre, armoured cars to Archangle, trains, waggons and rails to Baghdad, machine guns to Kilindini, and now, five thousand tons of high explosives for Salonica. Her officers and crew had almost forgotten those wonderful words "Shore leave"—their lives being a continuous round of loading and sailing, unloading and sailing, ad infinitum. Only British blood and bone could have withstood the incessant demands of bodily labour, the brain-chilling thoughts of danger from torpedoes, mines, storms and tempests, and, above all, the nerve-shattering suspense and agonising vigils to avoid the inevitable "break" in their luck.

The "Ravensworth Castle" doggedly "punched" her way through the smother of spume and spray—gradually bringing her dangerous cargo nearer and nearer to the insatiable guns at Rupell and Strumitza. Her decks were entirely deserted save for two oil-skin clad figures in the wing of the bridge.

"Keep her close in to the island ahead, Quartermaster," bellowed Captain Trevethick, turning for a moment from the task of piercing the grey wall of hail ahead.

The Quartermaster's response from the chart-room was not audible to either of the watchers owing to the roar of the wind, but they both knew that the man at the wheel had heard the command.

"Come here, Chief," shouted the "Old Man" to his companion as he steadied a telescope against a stanchion.

Slipping and sliding on the heaving, wet deck, Chief Officer Haynes joined his skipper in the port wing of the bridge.

"What do you make of that chap?" queried Trevethick as he indicated a barely discernible "smudge" in the distance.

The younger man looked intently for a few seconds before replying, and then turned with a smile and gave it as his sagacious opinion that the said "smudge" would go a long way in a long time.

Trevethick, however, continued gazing at the object of their interest. "You're right, boy, he's not making the slightest headway. What do you make him out to be?"

Occasionally an "empty spot" would pass in the storm, when, for a few moments, objects at a distance might be hastily inspected.

"Look's mighty like one of those motor fishing schooners from the North Sea," slowly vouchsafed Haynes without lowering the telescope. "Though you don't often see them around these coasts. He's all reefed and battened down, and is just keeping his head on to the sea, by the look of things."

"Just what I thought," corroborated the skipper, "and what for, I wonder, in a blow like this?"

"Ask me something easier than that, Sir," laughed the younger man, as, with a bored air, he replaced the glass in its box in the wing.

The "Old Man," however, was interested to an unusual degree, and kept his eyes glued to the telescope, muttering a series of inquisitive comments anent the craft.

"Haynes! There's someone on the stern mighty interested in us. Wonder if he wants assistance in any way?"

"Let him run up his flags if he does, Sir; I wouldn't give the blighter a second thought."

But Captain Trevethick seemed fascinated by the stranger, and continued his wrapt inspection.

"H'm. He's satisfied at last, evidently, Haynes. He's just gone into that 'monkey-island' cabin aft."

"Not in the least interested in the greasy old thing, Sir," remarked Haynes blithely as he strode across the bridge. "When we get to Salonica—"

His sentence was never finished, for there was a sharp, short explosion followed by a long, thunderous roar.

II.

About two miles astern of the veteran munition carrier, the hospital ship "Maurentic" was driving into the head seas at slightly under fifteen knots. Although her huge bulk was scarcely affected by the short, angry breakers unless she was sent full-ahead, the low visibility and possibility of floating mines in the fairway demanded a certain amount of caution. In the "danger-zone" her glassed-in bridge was constantly patrolled by at least three officers, each of whom had been watching the rusty old transport just ahead for some considerable time.

Possessed of a "sixth-sense" which scented danger, Lieutenant Curtis, R.N.R., stepped to the speaking-tube which communicated with the Commander's State-room, and after gently blowing the tube, spoke into it in very quiet tones:

"Would like you to have a look at things, Sir."

Such a request from a very junior officer would, at ordinary times, have called down a storm of righteous wrath on the daring one, but, Commander Samson's reply was a calm, "Very good, Mr. Curtis."

During the War quite a number of men had developed this feeling of "something's going to happen," and many, many times Commander Samson had cause to be grateful to this "premonition of fireworks," as Curtis expressed it.

Though fireworks did not always follow, the Commander of H.M.H.S. "Maurentic" had never yet refused his junior officer's plea to "come and have a look at things."

"What's that craft over there?" he asked as soon as he had assumed control.

"Don't know, Sir, somehow I don't like the way he's behaving."

"Why, my boy!" laughed the white-haired man, "he's only a Greek fishing vessel."

"Probably, Sir," persisted Curtis, "but you can't catch fish here when a northerly is blowing. Moreover, this is no sea for a fisherman to sit still in—he can't possibly anchor where he is—he's in twenty fathoms, right in the 'gutter' between Ampheros and Phersorin," he continued in low, earnest tones.

"Humph! Hand me a telescope, please."

Commander Samson gazed intently, first at the Greek fishing boat, then at the heaving, bucking tramp ahead.

"That's the 'Ravensworth Castle,' isn't it?" he asked.

"Yes, Sir—five thousand tons of H.E. for Salonica"—responded Curtis.

"Hope to God they get through," came the earnest wish, "Captain Trevethick is a very old friend of mine, and—my God! They've got him."

Closed in as they were, the group were struck dumb as the dull, shuddering crash swept over the sea, and a huge water-spout rose from the starboard side of the ill-fated vessel. An eye-searing flash quickly followed, and there was an explosion which flung the bows of the "Maurentic" high into the air. A moment before, the onlookers saw a trusty, plucky British transport—and now she was literally swept from the seas.

Commander Sampson recovered himself with a shudder that went right through his big frame, and with a bound, reached the engine-room telegraph and rang, "Full ahead!"

Crossing to the telephone, he commanded the wireless operator to advise Malta of the catastrophe, and that the "Maurentic" would render every assistance possible.

Surging through the water at twenty-two knots, it was only a matter of minutes before the "Maurentic" was on the spot where they had last seen the "Ravensworth Castle."

Wreckage strewed the sea in all directions. Pieces of lifeboat, broken hatch covers, splintered bulkheads, bits of handrails and jagged lengths of riven decking floated indiscriminately amongst boxes, tins, bedding and lifebelts—but no sign of life could be observed anywhere.

Suddenly, the fiercely glinting eyes of Commander Samson descried a huddled and limp human form floating amongst the debris, but imprisoned in a mass of broken woodwork.

"Stop her!" he cried. "Get a boat out, quickly—there's somebody in that big piece of wreckage on the port bow."

Willing hearts raced to the davits and rapidly lowered the boat, and, in a few seconds it was tossing like a cork in the heaving seas—but gradually forging ahead.

Commander Samson, leaning over the boat-deck rail, urged the straining crew to super-human efforts.

"Pull, men—pull like hell—save that poor fellow if it's the last thing you do."

The old, white-haired sea-dog was shaking with anxiety and frenzy.

"War certainly is hell!" he muttered as he watched the lifeboat creep amongst the wreckage of the "Ravensworth Castle."

At last they reach the spot, and with the glass to his eyes, Commander Samson watched them break away the jammed timber and haul the unconscious figure into the boat. As they did so, Samson gave a groan, and blinked hard—for the uniform of that limp figure carried three bands of waved gold braid, even as his own—and he knew that the boat was now returning with what remained of his lifelong friend, Dick Trevethick—Commander in the Royal Naval Reserve—and known the Seven Seas over as Captain "Tre" of Falmouth.

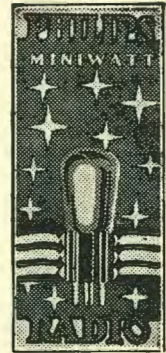
Samson had taken the "Maurentic" forward slowly and now manoeuvred to stand broadside-on to the gale and shelter the boat. The crew were standing-by with a wide sheet-sling, but as the Chief Officer brought the boat alongside, he looked up at "Old Man" Samson, removed his cap, and shook his head.

Samson turned from the wing and crossed the deck, his head and shoulders bent in sorrow—for Trevethick and he had been brother apprentices in those faroff, carefree days "in sail," sharing each other's joys and grief in a manner not known amongst the present generation. Quickly but carefully the inanimate form was carried to Samson's State-room, where the ship's surgeon and a couple of army doctors had made hasty preparations in the hope of saving the rescued man's life. After a hasty examination the doctor turned to the anxiously-waiting Samson:

"He's not 'out' yet, the heart's just flickering. He's had a frightful crack on the head with a flying piece of metal, but with hot water and dry clothes we might pull him round yet."

(Continued on Page 39.)

THERE ARE NO BETTER VALVES THAN THESE "MINIWATTS"—EVERYONE WILL TELL YOU.



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—and it is only a matter of time when YOU TOO will say this without the slightest hesitation.

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- B409 High Gain Pwr. 15/-
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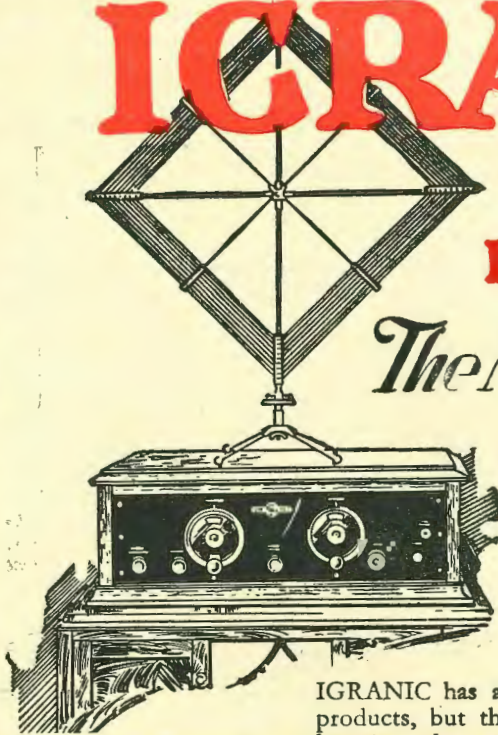
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I have recently completed one of your "Igranic" Super-Heterodyne Kits and wish to inform you that I am exceedingly pleased with it in every way.

I have not heard any set to give such volume on the same number of valves and I was able to tune-in all the Australian stations on the loop with considerable strength. The New Zealand station 1YA was very nearly as loud as Melbourne.

The selectivity is all that could be desired and no trouble was experienced from interference between 2BL and 3LO.

The original of this letter from a leading Sydney expert may be seen on request.

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It is exceedingly selective, no trouble being experienced in tuning-out any station not required. 2BL, 2FC and 3LO might be a thousand or only ten metres apart for all it matters to the Igranic Super-Heterodyne. It is pleasingly free from all extraneous noises, and the purity of tone and absence of distortion are a revelation even to the most exacting critic.

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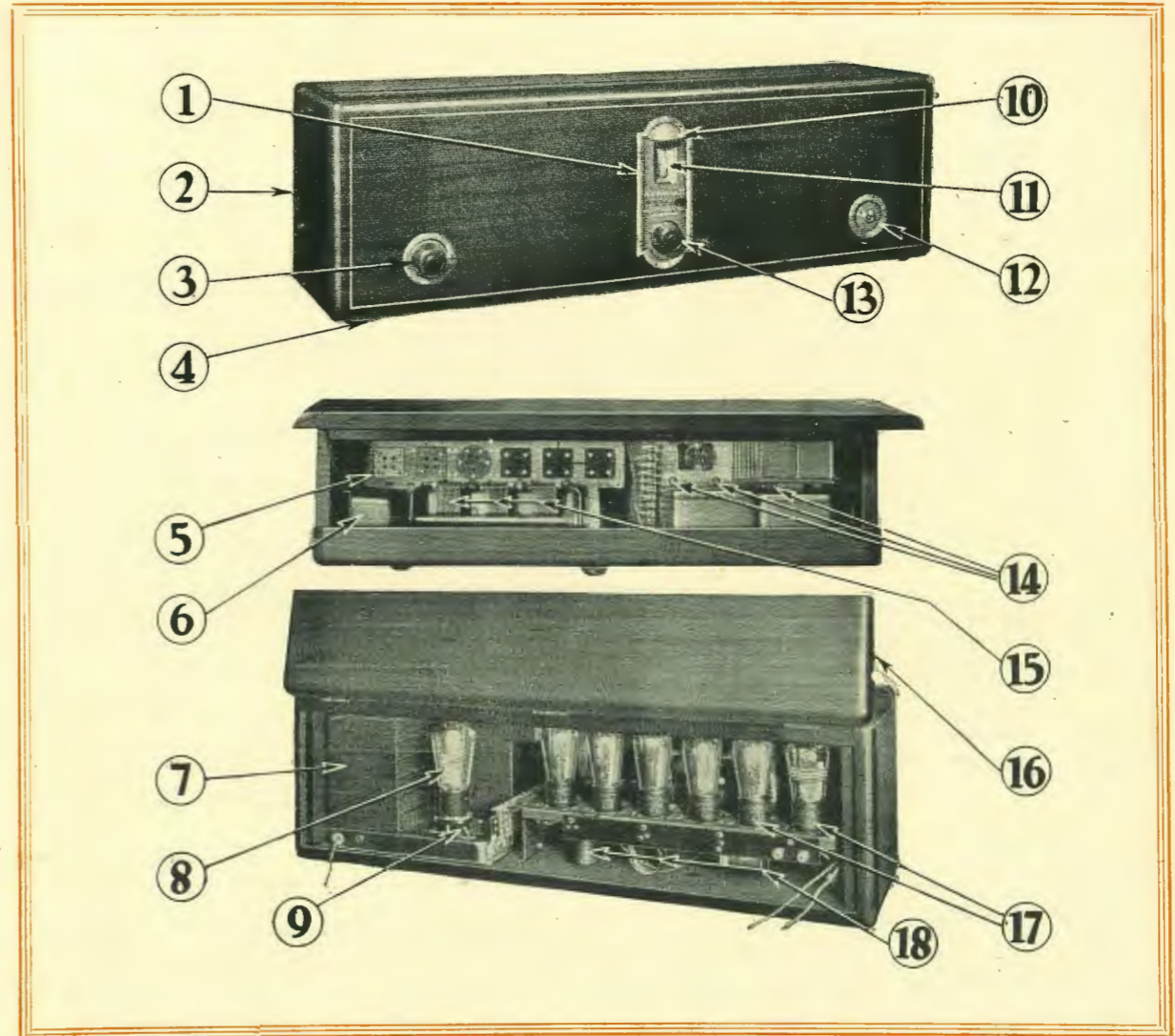


RECEIVER MODEL 17

AUSTRALIAN

GENERAL ELECTRIC
Australian General Electric Company, Ltd

Atcherley House, Queen and Adelaide Streets, BRISBANE



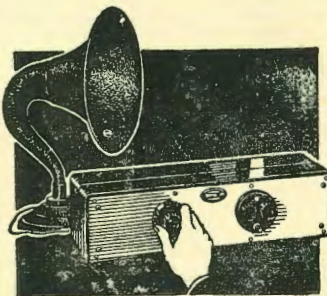
- 1 The Model 17 circuit consists of three stages of radio-frequency amplification, detector and two stages of audio-frequency amplification.
- 2 Beautiful grained mahogany cabinet of extremely sturdy construction. Note unusual thickness of mahogany of which the cabinet is constructed.
- 3 Volume control allows for variation of volume without the necessity of re-tuning. Volume control is consistent in operation over the entire broadcast range.
- 4 Rubber pedestal feet which prevent the marking of any polished surfaces on which the model may be placed.
- 5 Specially treated high grade alloy steel is used in the cores of the audio-frequency transformers. This steel is largely responsible for the wonderful tone quality.
- 6 Output transformer prevents all possibility of passing direct current of high voltage through the loudspeaker, which might injure its delicate mechanism.
- 7 Power supply unit used in Model 17 is designed and built according to the latest and best electrical engineering practice.
- 8 UX.280 Radiatron, which changes the alternating house lighting current into direct current.
- 9 Voltage switch permits Model 17 to be operated on circuits supplying alternating current within the limits of 200 to 250 volts.
- 10 Pilot lamp in addition to illuminating the station selector dial, indicates whether the power is turned on or off in the set.
- 11 Station selector dial is mounted behind a bronze escutcheon plate.
- 12 Power switch by which the A.C. current used in the set is turned on and off.
- 13 Vernier tuning control not only permits the operator to pass rapidly from one station to another, but at the same time permits of extremely fine tuning.
- 14 Potentiometers provide means of adjusting for variation in electrical characteristics of vacuum tubes, which might cause slight A.C. hum.
- 15 Tuning condensers are permanently fastened to a solid shaft, which is mounted in a rigid steel "bath tub."
- 16 Cover is hinged to permit of easy access to the Radiatron compartment. Self-locking stay-arm prevents the lid shutting unintentionally.
- 17 High plate voltage used on both audio-frequency amplifying tubes results in an increase of volume without distortion in the loudspeaker.
- 18 The three radio-frequency coils are placed below the steel chassis, and are shielded and protected against possible damage.

An
Announcement
of
Vital Importance

What's your
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Whatever radio program you like,
the speediest, easiest and surest
means of getting it is the

One dial
**ATWATER
KENT
RADIO**



Model 32, seven-tube Receiver.
Speaker, Model H.

Turn ONE Dial and hear every-
thing within range, station by sta-
tion. Tour the air or get your
favorite station instantly—it's all
the same to the Atwater Kent ONE
Dial. Let us demonstrate.

**Country Agents
Wanted**

Applications are invited
from reliable radio dealers
desirous of handling At-
water Kent Radio.

THE 1928 radio season opens with a most interesting an-
nouncement. The world-famed Atwater Kent line of
Radio Receivers has at last arrived in Queensland, and is
putting up performances that surprise everybody.

It is fitting that the distribution of such a distinguished line
should be placed in the hands of Wireless House Ltd., and the as-
sociation of Queensland's oldest Radio Supply House with the
World's Most Popular Receiver should prove an ideal combination.

The astounding selectivity and terrific punch (if required) of
these compact little sets is nothing short of amazing. Tone is won-
derful. In our many years of radio merchandising we have never
yet handled a set so smooth, so powerful, nor so sweet as the At-
water Kent line.

Notwithstanding the remarkable and exclusive attributes of
these receivers, prices are extremely reasonable.

MODELS AND PRICES

MODEL 35—A one-dial six-valve
Receiver, complete with speaker,
equipment, instruction book, log card
PRICE £43/10/

MODEL 33—A one-dial six-valve
Receiver with antenna adjustment
(for selectivity). Complete with
speaker, best equipment, detector
cap, instruction book and log card.
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MODEL 32—A one-dial seven-valve
Receiver, complete with speaker,
best equipment, detector cap, in-
struction book and log card.
PRICE £61/10/

ATWATER KENT SPEAKERS—
yielding superb depth and brilliancy
of tone.
Model L—£3/15/. Model G—£4/18/6
Model H—£4/10/. Model E (Cone),
£8/15/.

NEW MATERIAL

CLIMAX "B" BATTERIES.
The most reliable light capacity
"B" Battery. Tapped every 3 volts
45-Volt Type 12/-
60-Volt Type 16/-
Country Distributors Wanted.

Ericsson Crystal Set £1/7/6
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Speaker) £15
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Wireless House Ltd.

Queensland's Pioneer Radio Supply House
EDWARD STREET BRISBANE
Brisbane and Southern Queensland Distributors for Atwater Kent Radio.

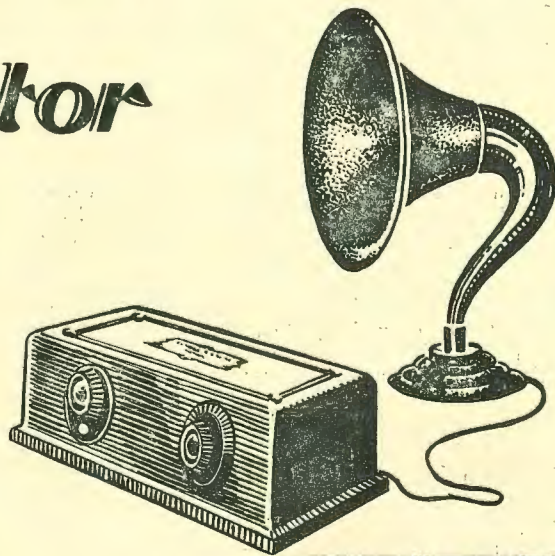
One in every ten is an inspector



IN the 15-acre Atwater Kent Radio Factory (largest in the world) one out of every ten employees is an inspector. Every set has to pass 159 tests before it can leave the factory.

Little wonder, then, that Atwater Kent Radio is everlastingly dependable. And in the four years of radio manufacture, over a million people have purchased Atwater Kent Radio Receiving Sets—which means that, when you buy your Atwater Kent, you are taking no risks.

Illustrated here is "One Dial" Six-valve Set with its Companion Atwater Kent Speaker.



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due to Atwater-Kent huge output

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ATWATER KENT RADIO

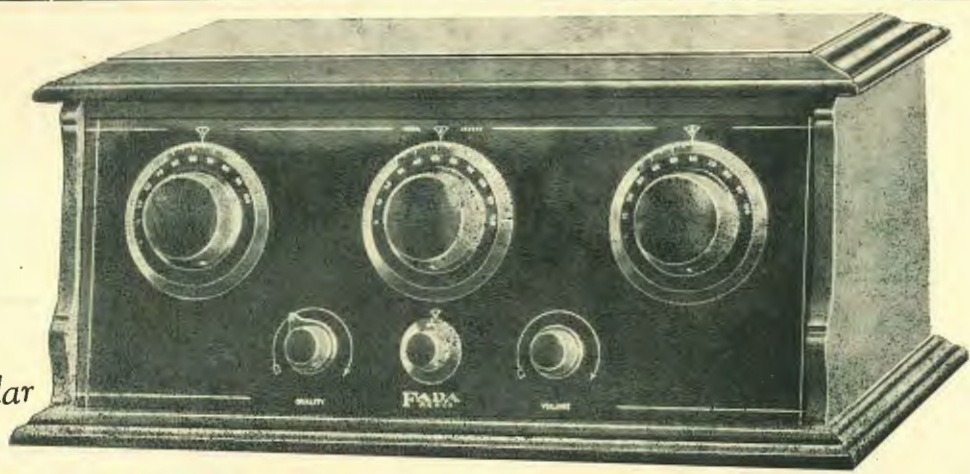
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WIRELESS HOUSE LIMITED

Queensland's Pioneer Radio Supply House

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The Popular

FADA 5-Valve Neutrodyne

Receiver Only

Here is a typical example of Trackson's policy of value-giving:—GENUINE FADA 5-VALVE NEUTRODYNE RECEIVERS offered to readers of "The Queensland Radio News" at the astounding price of £20 each.

The Fada Neutrodyne is renowned the world over for tonal quality, constructional quality, selectivity, simplicity, and range. It is essentially a quality product. The only cheap thing about it (so far as Tracksons are concerned) is the price. Secure one of the fine sets at this amazing price. This is an opportunity that comes but once in a lifetime.



A Wonderful Bargain!

Special Offering of Speakers and Receivers

	SALE PRICE	Ordinary Price
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A.C.3 Mahogany	9 0 0
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WE OFFER THE AMPLION LINE AS FOLLOWS:

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157-159 ELIZABETH STREET

BRISBANE

2FC Now located in NEW STUDIOS

A description of the New Studios — the Brilliant Opening Function—and a Brief Review of the Remarkable History of Australia's Pioneer Broadcasting Station.

OF all Australian broadcasting stations none, perhaps, enjoys a higher reputation for quality of programmes and excellence of transmission than does 2FC Sydney.

Recently the studios were removed from the roof of Farmer's big Department Store to Market Street, in premises adjoining Her Majesty's Theatre. The new home of 2FC is beautiful indeed, the architecture throughout being executed along Old English lines, with handsome domed roofs and walls of celotex, finished throughout with beams and panels of burnt woods.

The New Studios Described.

There are three studios at the new location: No. 1, measuring 55 x 25 feet; No. 2, 50 x 21 feet; and No. 3, 25 x 21 feet. The system of wall drapings originally used extensively in broadcasting studios, has been entirely abolished.

The construction of the apparatus in the Control Room has been carried out by A.W.A. Every modern device has been incorporated in equipping the control panel, making for the most efficient production of studio and outside performances. The panel is housed between the main studios, and occupies a room measuring 14ft. x 15ft. In this room also is the Branch Exchange installed by the P.M.G.'s Department for controlling 200 lines, which are available for connection with outside points of transmission.

The Studios Officially Opened.

The new studios were officially opened upon the last evening of April by His Excellency the Governor of N.S.W., Admiral Sir Dudley de Chair, K.C.B., M.V.O. The opening function was a brilliant affair. Over 200 guests were present and were entertained in one studio by loud speakers reproducing the rendering of the artists in adjacent studios. The programme was broadcast on the dual wavelengths of 442 and 28.5 metres.

At 8.15 p.m. the Vice-Regal Party arrived and were welcomed by Mr. George Wright (Chairman of Directors of 2FC Ltd.). Lady de Chair was presented with a bouquet of Waratahs decorated in blue and gold—the station's colours.

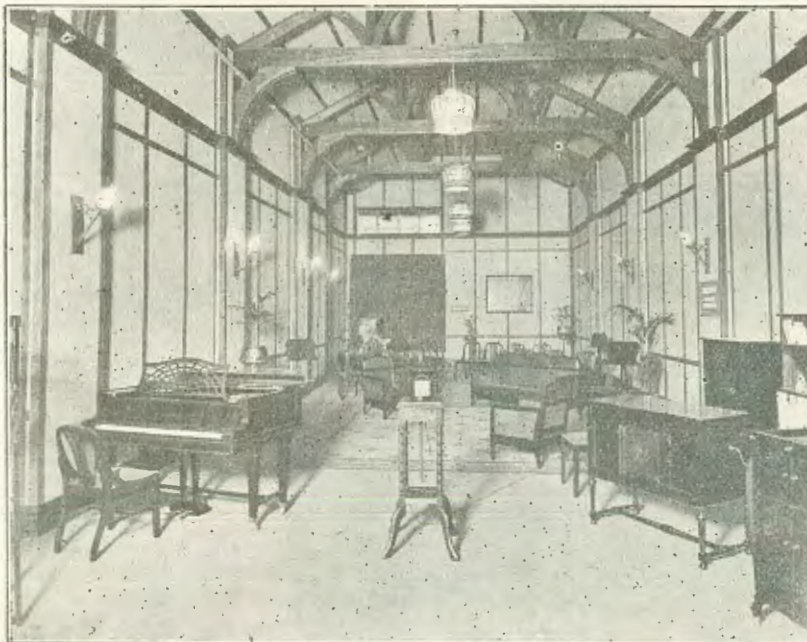
In opening the station, His Excellency referred to the great service rendered to the community by Station 2FC. He further spoke of the station's enterprise in Empire broadcasts. "You are rightly acclaimed the pioneers of Empire broadcasting," he stated.

"You have forged a great link with the Motherland and in the mutual interests of this wonderful medium of communication. You have created a world-wide spirit of good fellowship."

His Excellency was then conducted through the model station and expressed his appreciation of the excellent design of the studios and the ideal conditions under which the engineers of 2FC work.

Looking Back.

Upon the occasion of the official opening



The No. 1 Studio of 2FC.

of the new studios, the station had printed a handsome programme brochure, in which were set out some interesting facts and comparisons. We have taken the liberty of publishing some extracts from this brochure, for they make very interesting reading:

Broadcasting in Australia is still comparatively new, but the development, taking into consideration the small population of the Commonwealth and the vast areas to be served, has been extraordinarily rapid.

The regulations governing the control of broadcasting in the Commonwealth were issued by the Federal Government on 25th July, 1923, and the first license to operate a broadcasting station in Australia was issued to Farmer & Company Limited. The call sign was 2FC, and the service commenced on 5th December, 1923.

The first studios were built on the premises of Farmer & Company Limited, and the first station was designed and constructed by A.W.A. Ltd., on a temporary site at Wiloughby. When 2FC commenced there was no precedent in Australia as a guide to its efforts. The work had to be pioneered. Commencing with a service which occupied five hours transmitting each day, Farmer & Company Limited secured the full co-operation of J. C. Williamson Limited, and thereby gave listeners for the first time in the world's experience of broadcasting a regular service of theatrical productions from the theatres.

At this stage it is interesting to glance back over some of the records of 2FC, showing as they do the



The No. 2 Orchestral Studios at 2FC.

consistent expansion of the service. In January, 1924, 2FC was on the air for 63 hours, while in January of this year 424 hours were occupied in transmitting. In January, 1924, 91 performers were broadcast, while in January of this year the total was 2,253. The largest number of soloists and principals broadcast in any one month was in June, 1926, when the total reached 659. For instrumentalists the record was reached in January, 1927, when 948 were broadcast. The record for choristers was also in June, 1926, when the number totalled 1,822.

Station 2FC has, from its inception, gradually developed the transmission of performances from outside the studios, commencing with eight in January, 1924. These performances steadily increased until in July, 1920, transmissions were collected from no less than 163 outside points. The broadcasting of news, market reports, commercial and financial matters and sporting in January, 1924, occupied only 16 hours. The progress of this phase of broadcasting is shown when the record of 188 hours was established in January of this year. The musical copyright figures also show the striking progress in the number of musical works broadcast. The total musical items broadcast in the first year of 2FC reached 10,065, whereas in the twelve months from July, 1926, to June, 1927, 20,179 musical items were transmitted.

Commencing with less than half a dozen pairs of telephone and special broadcasting lines connecting with outside points of control, 2FC is now oper-



Auxiliary Power Plant at 2FC Station at Pennant Hills, which is brought into operation if the council power fails.

ating 97 pairs, and is sending amplifying apparatus for outside special transmissions to an average of over 100 places every month. Theatrical transmissions covering Grand Opera, Gilbert and Sullivan Operas, Musical Comedy, Comic Opera, Drama, Comedy, Revue, Comedy Drama, Pantomime and Shakespearean performances in the four years, reached 102 individual productions. This is probably a world's record.

Station 2FC has to its credit some unique broadcast transmissions during the period in which it occupied the original studios on the premises of Farmer & Company Ltd. It was the first station in the world to transmit a full sitting of Parliament—it broadcast the ceremony of the presentation of the Speaker's Chair to the Federal Parliament at Canberra. A description of the arrival of the American Fleet, which was met at sea by a steamer fully equipped with a transmitting set, picked up at 2FC station, and re-broadcast with complete success. From the steamer "Hunter," five miles outside Sydney Heads a description was broadcast of the arrival of H.M.S. "Renown," with the Duke and Duchess of York. During the Great Public Schools' Regattas, 1925, 1926, 1927 and 1928, the progress description of each race was broadcast from the Parramatta River. The stories of two divers from the bed of Middle Harbour were broadcast. Details of the first train to run underground were broadcast from St. James'. The Prime Minister's policy speech, delivered at Dandenong, Victoria, was trunked to Sydney and broadcast by 2FC. This constituted the longest land line transmission in Australia at that time, but new records have since been established, one being the description of the arrival of Sq.Ldr. Bert Hinkler at Bundaberg, which was brought by land line to Sydney, and, in addition to being broadcast in Sydney, was sent to Melbourne by trunk line for transmission in the Southern capital.

A description of a coal mine, 3000 feet under Sydney Harbour, was broadcast by 2FC, which also had the record of broadcast, for the first time in the world, a complete vaudeville performance. The first church service in Australia was broadcast by 2FC on Friday, 18th April, 1924, from St. Mark's Church, Darling Pt.

Another record established was to broadcast, for the first time in the world, the complete Gilbert and Sullivan Operas, "Trial by Jury," and "H.M.S. Pinafore," on the occasion of the gala performance to the Duke and Duchess of York, in 1927. The first act of the "Mikado" was broadcast in February, 1927, for the first time. Station 2FC was the first to equip an aeroplane and successfully describe a flight from over 10,000 feet in the air. During the flight of Sir Alan Cobham to and from Australia, this station broadcast daily despatches from the famous aviator. It also gave a full description of his arrival at Mascot.

In January of this year 2FC carried out transmission tests between Sydney and England through the agency of Mr. A. J. Scott-Dack of the R.M.S. "Oronsay" wireless staff. These tests culminated in the successful logging of 2FC at Torquay, in Cornwall.

During the visit of the famous evangelist, Gypsy Smith, the exclusive broadcasting of his mission was carried out by 2FC, and, on the final night, arrangements were made to equip no less than 102 city and country churches with loud speakers.

Within a short period of four years 2FC has outgrown the original studios provided for carrying on the

service. It has developed into a large organisation catering not only for the entertainment of its vast audience, but providing also a regular news service, particularly for those persons in country districts far removed from the cities.

First Empire Programme.

To 2FC, Sydney, falls the honour of transmitting the first Empire broadcast programme. Having covered every phase of what may be called domestic and Interstate broadcasting, 2FC looked round for other fields to conquer. On September 5th, 1927, in co-operation with Amalgamated Wireless (Australia), Limited, 2FC transmitted the first Empire programme. The reception was remarkably successful, and the programme was rebroadcast by the British Broadcasting Corporation. It is estimated that several millions of British listeners heard the programme. Some features of the programme on this historical occasion are worth placing on record. His Excellency the Governor of N.S.W., Admiral Sir Dudley de Chair, delivered a short message to other parts of the Empire. The Right Hon. S. M. Bruce, P.C., M.P., delivered an Empire message from Frankston, Victoria, over a land line 600 miles in length by which his speech was conveyed to the studio of 2FC. Further messages were delivered by the Right Hon. W. M. Hughes, P.C., M.P., the Lord Mayor of Sydney to the Lord Mayors of British capital cities, and Mr. E. T. Fisk, Managing Director of Amalgamated Wireless (Australia), Limited, to wireless interests overseas.

Among the artists on the programmes were Messrs. Joseph Hislop, world-famed tenor, George Carney, eminent English comedian, Raymond Ellis, of the British National Opera Company, and Alfred Cunningham, English baritone, also Miss Strella Wilson, Savoy Opera Star. All these, with Australian artists, made up one of the most remarkable aggregations of distinguished artists ever broadcast in one programme. Further Empire programmes were transmitted on October 17th, 1927, October 31st, 1927, November 7th, 1927, and December 26th, 1927, all of which were rebroadcast by the British Broadcasting Corporation, London.

QUICK SALE, 3-VALVE SET, new, guaranteed, without cabinet or accessories. £7, or accept best offer. R. Vickary, Cunnamulla, Q.

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If you would become proficient in Morse Sending and Receiving, let me coach you, as I coached 4RB, 4AZ, 4BO and others, including commercial operators. Sounder or Buzzer method; speed and proficiency guaranteed; terms moderate.

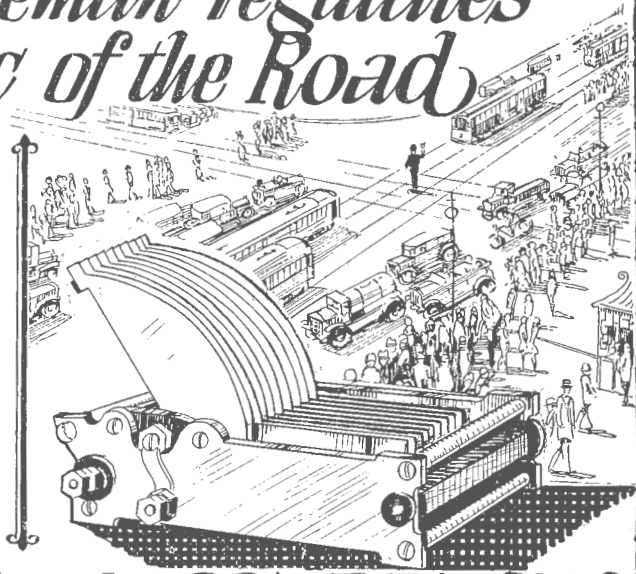
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(3 Years' Experience as a Morse Instructor; Several Years as a Commercial Operator.)
Address enquiries c/o "Queensland Radio News,"
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RADIO **ADVANCE** PARTS

As the Policeman regulates the traffic of the Road

THE "Advance" Straight Line Frequency Condenser is the best air-traffic "Cop" obtainable. It effectively stops every item but the one you wish to listen to. With it, too, you increase selectivity. Stations are logged evenly over the whole sweep of the dial instead of being crowded into one small section. Fit your set with an "Advance" S.L.F. Condenser to day and enjoy the programmes you want. Thousands of listeners-in have already discovered that "Advance" is synonymous with better Radio.



ADVANCE *Straight Line Frequency* **CONDENSER**
regulates the traffic of the Air

Made in Australia by Radio Corp of Australia Pty Ltd

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10/-

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ADVANCE
Range of
RADIO PARTS

Wholesale Distributors for Queensland—

EDGAR V. HUDSON

55 Charlotte Street, BRISBANE

(Continued from Page 26.)

"Very good, Doc. Have anything you want, but save him if you possibly can."

About an hour later a perspiring medico announced that the Captain of the "Ravensworth Castle" had been dragged back from the edge of the yawning abyss and was asleep with a normal, though very weak, heart action.

"Thank God for that," came fervently from Commander Samson, as he turned and gave the Quartermaster a change of course.

III.

The four men in conference were all well into what are usually termed "their declining years." White-haired, with faces seamed and lined with the battles of life, they should all have been enjoying a well-earned existence of peace.

But, in their country's moment of need, even those who had finished their life's work, came and demanded a job—no matter what the work was, if they could do it, their services were freely and willingly offered.

The British Empire owes as much to her loyal hard-fighting "grey beards" as she does to her wonderful youngsters who flung their youthful energy and proud, unflinching determination into the conflict.

At this moment, however, the four old men felt the need of a younger and more virile intellect—they felt they were up against something which their wits could not measure. It was not to their discredit, for they were fighting a foe well versed in the art of warfare, and who had not scrupled to use the most merciless means to achieve her aim—one, moreover, noted throughout the world for diabolical cunning and ingenuity. At last Lord X, Britain's Prime Minister, placed the issue before the gathering.

"Gentlemen, as every British seaman is aware, Admiral Cross has accomplished wonders in his sphere of protecting British transports in the danger zones, but I feel that in this case we are menaced with something more than our patrols can effectively deal with. Ampheros Channel is an essential seaway in our Balkan campaign, but, though vigorously patrolled, has recently been a bottle-neck deathtrap to our transports. I therefore consider it time to request the assistance of younger and possibly keener brains than ours. Consequently, gentlemen, I intimated to Commander Hilton my desire that he should be present this afternoon. He is here now, and I shall be grateful if you will give him all the information you can."

This resolute decision produced a visible sense of relief—even Admiral Cross, with true naval sportsmanship, welcomed the thought of Hilton's presence.

The Chief of the British Naval Intelligence Department, despite his magnificent achievements, did not attempt the slightest presumption on his entry into the huge drawing-room of 10 Downing Street, and stood to rigid salute.

The four senior men, however, immediately stood up, and Lord X went forward with outstretched hand, Admiral Cross following close behind him.

The Prime Minister briefly introduced Samson and Trevethick—motioned everyone to be seated and, without preamble, plunged into the subject.

"My boy, I think we have another problem which can only be solved by the Intelligence Department. Ampheros Channel, as you know, is a most important

link in our Mediterranean communications. I believe, in fact, you were at the conference which decided that the task of clearing mines and submarines from the many other Aegean channels a waste of effort, and that our attention should be concentrated on keeping this one free from danger. Despite the most vigorous precautions, however, during the past few weeks we have lost no less than ten vessels off the Island of Ampheros. To clear the rest of the Aegean would be a long and hazardous undertaking, and I want you to try and solve this problem before abandoning Ampheros Channel and risking our vessels among the other islands.

"We obtained permission from Athens to suspend submarine nets at each end of the channel, with a 'gate' in the centre of each net, controlled by ourselves, and through which, of course, our own vessels pass. The only stipulation made by the Greek Government was that our nets should not reach higher than within twelve feet of the surface. This provision was made so that the small Greek vessels that ply round the coast should not be subjected to stoppage at our 'gates.' To this we agreed, for no submarine could 'hop over' the net without being seen. Yet, in the face of this, and most vigilant patrols, vessels are being lost **between the two nets.**"

Having outlined the position, Lord X resumed his seat and looked anxiously at the good-looking, bronzed, young Naval Officer, in whom he placed unwavering faith.

Presently Hilton rose slowly to his feet and looked straight into the Prime Minister's blue eyes.

"Well, Sir," he commenced, "I might as well admit that events in Ampheros Channel have been causing me some apprehension lately. It is one of our 'key-ways' in the Mediterranean, and I know that most diligent steps have been taken to render it safe for our ships. On the face of it, there are only two possible explanations, both of which are almost 'blown out' by Admiral Cross's operations. Either enemy submarines are 'sneaking' in and out of the 'gates,' underneath our own vessels—or there is 'something doing' amongst the numerous neutral craft which fly the Greek Ensign."

"And under the face of things?" gently queried Lord X.

"That, Sir, is purely hypothetical—in fact, merely wild imagination, but I'm hoping that the information these two gentlemen can give me will make things a little more intelligible."

Any apparent discourtesy in these words was swept away by a smile which told the Prime Minister that his protegee had once again put two and two together in a manner which made an excellent four.

The Statesman's slight nod of acquiescence told the younger man that he was understood, and, turning to Samson and Trevethick, Hilton commenced his search for facts.

"Captain Trevethick, how far was the fishing vessel you mention in your report from you when you were torpedoed?"

"About a mile."

"How far did she move between the time you sighted her and when you were struck?"

"She was apparently holding her position, with only enough way on to overcome the wind and sea."

"Did you notice any identification marks about her?"

"Nothing particular—her name was covered by ropes and tarpaulins."

"What length of time elapsed between the time the man on this boat entered the after cabin and the first explosion?"

"Not more than a few seconds."

"And you were struck on the starboard side?"

"Yes."

"How far from Ampheros were you?"

"About half a mile."

"What depth of water were you in at the time?"

"About six fathoms."

"And a rock bottom?"

"Yes."

"What time elapsed after you passed the 'gate' before you were torpedoed?"

"About fifteen minutes—we had covered a little over two miles."

"How long had the 'Maurentic' been through the 'gate' when the 'Ravensworth Castle' was struck?" Hilton suddenly asked Commander Samson.

"Only a few minutes."

"And had you been watching the 'Ravensworth Castle' for a long while?"

"I had not personally been watching her for long. Immediately we passed through the 'gate' I went below and Lieutenant Curtis called me a few minutes later. I think my officers had been watching her, though."

"Did they report anything untoward about her movements?"

"No."

"Did you slacken speed when passing through the 'gate,' Captain Trevethick?"

"No; we kept straight on."

"Was the 'gate' kept open for the 'Maurentic'?"

"No; it was closed immediately I passed."

"Commander Samson, did you notice where the Greek fishing boat went after 'Ravensworth Castle' blew up?"

"She went straight ahead at about seven or eight knots."

"Your wireless operator was on watch the whole time?"

"Yes."

"And he didn't report anything unusual?"

"No; his report was that the ether was absolutely dead for almost an hour before he sent the message to Malta."

"Were Malta's signals strong or weak?"

"His log records 'V.P.T., strength 8.'"

"Did either of you notice whether the fishing boat had wireless or not?"

"I'm pretty certain she did not," answered Trevethick, "I was looking for flag signals, and remember that her masts were bare of everything, even the straining guys were missing."

IV.

Hilton travelled overland to Brindisi, where a fast flotilla-leader was waiting for him, and in two more days was at the seat of mystery in the Aegean Sea. The Ampheros patrol was quickly apprised of the scheme of operations, and Hilton, still on board the flotilla-leader which had brought him from Italy, retired to a small island about fifty miles north of Ampheros.

The following morning an urgent wireless message was brought to him, which, when decoded, gave him the following information:

"Vessel answering description proceeding northward—now about thirty miles south of Ampheros."

Slipping across to a merchantman lying at anchor nearby, Hilton gave the Commander minute instructions, and then hastened southwards.

Taking a south-south-easterly course, the flotilla-leader sped to the same latitude as Ampheros, and then, turning due west, came up under the eastern side of the island, anchoring at a point where she was concealed from the view of traffic in the channel.

Meanwhile the transport, stretching out to her full twelve knots, was rapidly approaching the northern "gate."

From the south the fishing vessel slowly made her way towards the net, sailed over it, and when about two miles into the channel, stopped her engine and "lay-to."

More than once the patrol boats had stopped and searched her, but not the slightest excuse for detaining her could be found, and, with bitter hearts, the patrol sat and saw her sail whither she would, when she would.

The merchantman was, by this time, nearing the north end of the channel, and, totally unobserved, Hilton crawled to the highest point on the island of Ampheros, a pair of earphones and a rapid "searching" outfit securely strapped round his waist.

Selecting the highest point possible, without coming against the skyline, he unscrewed the "searcher," fixed the earphones, and trained a pair of powerful binoculars on the motionless fishing boat about three miles from the island.

According to instructions, the transport came down the channel at half speed, while Hilton concentrated his gaze on the fishing boat.

Yes; there was the figure in the stern gazing intently at the oncoming merchantman, never shifting his glance, seeming to wait until the big vessel reached some particular spot. Then casually, he lowered his glass and disappeared into the high cabin on the stern.

Hilton began swinging the dial of the "searcher" feverishly, while he shifted his gaze to the water between the island and the British vessel. Suddenly a shrill screech filled his ears, and a white sizzling spark jumped across the protection points of the condenser—and—a hundred feet below him the bright blue water showed the tell-tale track of a torpedo.

Without waiting to see the effect of the explosion, Hilton scrambled down the face of the cliff, leaping from rock to rock, risking everything in his haste to reach the tiny strip of beach. Once down, he jumped into a waiting pinnace and steamed quickly to the flotilla-leader. Standing-by, with anchor raised and a full head of steam, she barely waited Hilton's return before racing round the island to the northern end of Ampheros Channel.

The "Greek" boat had been stopped by a British destroyer who had sent a boat-load of men to guard her until Hilton arrived.

When about twenty yards from the suspect, however, a fierce fusilade raked the approaching boat. Nothing daunted, the crew again dipped their oars and drove their craft onwards.

Another volley greeted their efforts, and the destroyer, convinced that further attempts to board the ship would result in needless loss of life, recalled the boat crew and trained her guns on the unknown vessel.

As the racing flotilla-leader passed, the destroyer megaphoned the information:—

“Boarding party fired upon; two killed, one wounded.”

Hilton swore grimly and fiercely and, sweeping almost alongside the fishing boat, he leaned from the bridge and called upon his foe to surrender.

The reply came in the form of a rifle shot, which struck Hilton in the shoulder.

Mad rage blazed within the Chief of the Intelligence Department, but this died down as quickly as it flamed, and became a cold, merciless resolution.

“Sink her and save whom you can,” he commanded the Lieutenant-in-Charge.

“Aye, aye, Sir,” came the willing response, and almost immediately the forward four-inch gun spat venomously.

Crash! The shot hit the “Greek” just above the water-line and tore a gaping hole in her side.

Slowly she heeled over and commenced to settle. Suddenly a figure leapt to the top of the after cabin, fired a revolver at the flotilla-leader, then placed the gun to his mouth and fired his last cartridge.

The pinnace sped from the Britisher and, clambering on board the sinking ship, Hilton staggered to the mainmast, which had fallen when the heavy shell had pierced the side.

Almost grinning with satisfaction, he saw that the heavy wooden mast was hollow and contained a carefully insulated aerial. Further search he could not make, so he hastily turned to the boat and returned to his ship.

The body of their unknown assailant was carefully hoisted aboard the flotilla-leader and Hilton, gazing fixedly at the blood-stained features, gave a start of dismay as recognition flashed into his brain.

“My God! Schwiefeld of all people!” he gasped.

V.

Hilton stood once again at the salute in the doorway of the huge room at No. 10 Downing Street.

Looking, if possible, more bronzed than ever, the young Naval Officer could not repress a smile as Lord X hurried to greet him.

“Well, my boy, what news?” eagerly questioned the Prime Minister as he held out his hand.

“Fixed him, Sir.”

“I knew you would, Hilton. Sit down and let me hear all about it.”

The remarkable faith this clever, kindly Statesman had in the young Intelligence Officer was most ardently reciprocated, and, with a happy laugh, Hilton took the proffered cigar and settled down to give his story.

“Well, Sir, it seems ridiculously simple when its all told, and I’m very annoyed with myself for not ‘tumbling’ to it before the ‘Ravensworth Castle’ affair.

“We had not been furnished with any particular details, however, until we suffered the tragic loss of the ammunition carrier—and it was entirely due to you, Sir, that the information necessary to open my eyes came my way. If you had not insisted upon Commanders Samson and Trevethick coming here, I should be still marvelling at the audacity and skill of our enemies—U-boat captains in particular.

“But, Sir, think of it—a vessel is torpedoed during a gale, at a spot half a mile from shore, in thirty-six feet of water, with a rock bottom. She was, moreover, struck on the starboard side, which would necessitate her assailant being **between her and the shore**, and there’s no submarine commander alive who would risk submerging his boat during a gale, in thirty six feet of water or less, with a rocky sea-bottom that could rip him to pieces. In a flash I realised that my engineering friend, Schwiefeld, must have carried into effect one of the many ‘hair-brained’ schemes he was always bragging about.

“To cut the story short, I requested the ‘Q’ ship ‘Pegasus’ to meet me at a rendezvous north of Ampheros, and waited there until the Greek fishing boat was again on duty bound. She duly set out for Ampheros Channel, so I raced to the far side of the island, went ashore, and climbed to the highest point I could find, which gave me a good view of the channel.

“I saw the stranger with his telescope, and when he went into the cabin I knew I was to witness the ingenious plot in all its subtlety. As the ‘Pegasus’ drew abeam of the innocent looking fishing boat, a torpedo shot from the very rocks below me.

“I had chosen the ‘Pegasus’ for the experiment because she is fitted with ‘blisters,’ and although she was hit, she got back to Imbros without any trouble and is now being repaired.

“The fact that the ‘Greek’ did not, apparently, have wireless was, of course, only what I expected, but I took my short-wave searcher and a pair of ‘phones. He evidently didn’t anticipate discovery, for he used a direct-coupling, and had a wave as ‘flat’ as a pancake, for it ‘came in’ all over the ‘searcher.’ I knew immediately that my ‘guess’ had been an easy one. He had a concealed aerial on board and a cunningly-contrived automatic torpedo-chamber in the rocks of Ampheros Island itself.

“He would take up his position, and when his prey reached a certain spot he merely pressed his transmitting key and released the torpedo. I afterwards found the receiving aerial which led to the contraption, and sent a diver down to investigate, so that we now have an extremely heavy steel case of large proportions, which contains an unknown quantity of T.N.T. in the form of torpedoes, and which we don’t yet know the proper way to open. We can’t, of course, ‘rough-house’ it because I’m mighty keen to finger that automatic release.

Oh, by the way, Sir! there was only the one man aboard the innocent ‘Greek’ fishing vessel—Schwiefeld himself.”



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of the BRITISH PRODUCT

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The complete range of "B" batteries is listed below—ask your dealer for the type best suited for your needs.

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- Small size, type W.P., 42v. 12/6
- Small size, type W.P., 63v. 18/
- Type H.D., 45v. 23/6
- Type S.S. 45v. 27/6

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Greatly improved reception is obtained, both as regards volume and tonal qualities, when an EVER-READY No. 126 is used, and, moreover, the life of "B" batteries is considerably prolonged.

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Years ago thousands of wireless enthusiasts delved into the question as to which of the many "B" Batteries then on the market offered the most in reliability, long life and true value-for-money power.

A consideration of price, quality of materials, craftsmanship in the making, and the time the battery was in transit from the manufacturer to the user, invariably led to "EVER-READY" Radio Batteries being selected to help them gain better reception.

If you are an "EVER-READY" user, we congratulate you on your choice, for our faith in their worth is due to an honesty of purpose in manufacture to which we have held unvaryingly since the first "EVER-READY" was built.

"EVER-READY" "B" Batteries are made in a complete range of types to suit all requirements, including the two new 45-volt "B" batteries, known as Heavy Duty and Super Service, and are obtainable from all good radio dealers.

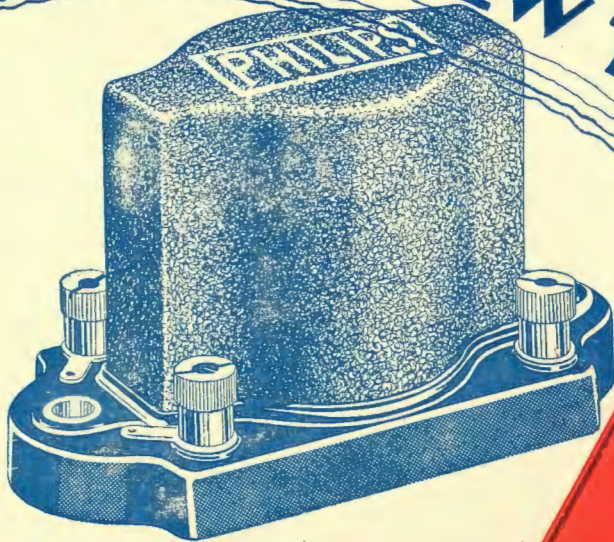
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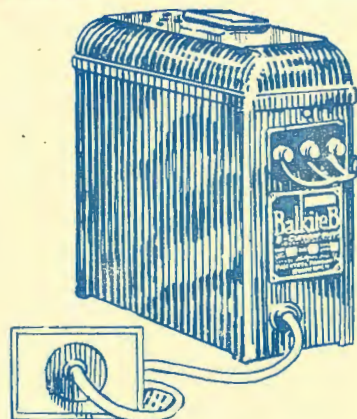
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AUDIO TRANSFORMERS

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The noiseless, tubeless, permanent, light socket "B" power supply.

MODEL BW for set with 5 valves (201A type) or less £3-19-6

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Trickle Charging Began With Balkite and Balkite still leads in popularity, service and number in use

Trickle charging, now the most convenient and most popular of all means of charging your radio "A" battery, was not possible until the development of the Balkite Trickle Charger. For Balkite was the first charger that could be connected permanently to your "A" battery and the light socket. It was the first charger that kept the battery always fully charged. And Balkite was the first charger that converted your battery into a complete power unit supplying "A" current from the light socket.

To-day there are over 750,000 Balkite Trickle Chargers in use. Just as it was first in making trickle charging possible, Balkite has always been first in popularity and number in use. Balkite is the standard trickle charger, tried and proved by use in the hands of its thousands of owners.

Like all Balkite Radio Power Units, this charger is a permanent piece of equipment. It has no tubes and nothing to replace or renew. It is noiseless in operation and can usually be used during reception. It is very compact and small, and its current consumption is very low.

The Balkite Trickle Charger can be used as a trickle charger with any 6-volt radio "A" battery. Thus used, it keeps your battery always at full power and in effect converts it into a light socket "A" power supply. With 4-volt batteries, it can be used as an intermittent charger of the usual type. Or as a trickle charger if a resistance is added. Charging rate is approximately $\frac{1}{2}$ ampere.

Add a Balkite Trickle Charger to your "A" battery. Know the convenience of permanent silent "A" power from the light socket always.

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AMONG THE AMATEURS

The bottom seems to have dropped out of the thirty metre band this past month or so, if one is to judge by the woebegone countenances of our thirty-metre DX fiends. Though 'tis true our Yankee brethren are not as a rule much given to effacing themselves, lately they seem to have developed a retiring disposition which ill becomes such self-assertive gentlemen.

Splendid Phone on 33.

4BD is responsible for some very fine telephony which has been heard recently on 33 metres. The quality of modulation is far in advance of the usual amateur phone, and the reason is not hard to discover. In the first place, 4BD is using an excellent power-supply system composed of two UX.281 half-wave rectifier tubes, followed by a good filter, the result being about 400 volts of D.C. Two paralleled 210's act as oscillators, and two as modulators, the Heising arrangement being utilised. For transmitting phonograph music, a Magnaphon electric pick-up is plugged into the detector socket of an R.C.A. Model 20 broadcast receiver. The two audio stages, consisting of a 199 and a 120, thus act as speech amplifiers, and the output from the loudspeaker terminals is fed into the modulating system. For broadcasting the dulcet tones of 4BD's melodious voice to the four winds of Heaven, a Stromberg-Carlson solid-back microphone is used in front of the same speech amplifier. The carrier-wave is not very deeply modulated, 4BD wisely deciding in favour of quality of output rather than extreme distance.

From 4NW comes the welcome news that a fair number of Yanks has been worked on 23 metres, which he says is a great improvement over the 30-metre band. His first CQ after QSY-ing brought back three NU's, one after another, each of which gave him an R-6 report. Several reports have just been received from Cuba and Holland, one of the latter reporting reception of 4NW's signals on a single valve receiver.

Cliff, brother of Ted—otherwise 4CG—has been rather quiet lately, for the best of good reasons. You know, of course, that 4CG, 4NW and 4GO journeyed to Sydney to help the Two's out of their troubles at Easter time. What you don't know, perhaps, is that 4CG found that the charm of the Southern Capital was not confined to its Harbour, which possibly accounts for the fact that the trio quite frequently was reduced to a duet. That's not strictly accurate either, for Tom of 4NW also showed a mysterious propensity to quietly disappear occasionally, leaving poor old 4GO to conduct explorations on his own account. But CG was more fortunate than NW, for, by a great stroke of good luck, it transpired that the attraction had not to be left behind in Sydney, but belonged in actual fact to the fair Northern city which affords shelter to 4CG and Co. The story, which we regret we cannot print in detail, for want of space, is a very charming one, full of human interest and vivid romance. Further details will be published in due course.

4AW managed to get down to 2 metres a couple of weeks ago—it seems this O.M. will stoop to any

level. He worked 2JY at 8 a.m., May 6th., on 23 metres, using .4 watt from a 45-volt battery—another instance of daylight saving. 4CN, who rejoices in the name of C. R. Morris (no relation to Cowley), and is parked at "Clifton," Elizabeth Street, Rosalie, is a new Four from the Engineer's Branch of the P.M.G. He has already clicked with NU, OZ and OA, which is a very good start. Another newcomer (officially speaking) is 4BB, R. J. Beatson, First Avenue, Wilston, who has connected up with NU, OZ, OH, OI, OA, and just missed Belgian 4AU on 23 metres recently. Let us hope this gentleman's name is no indication of his behaviour toward his offspring—if any. One can overdo these things.

4WS, 4WA, 4CN, and 4PN held a prayer-meeting last week per medium of four-way telephony on 33 metres. Their enthusiasm reached such a fevered pitch that they carried on from 11 p.m. until 2 a.m. next morning. These four should have to answer a charge of besmirching the good name of our movement; soon we'll have as bad a name as Bowlers for the "gift of the gab." Shameless hussies!

4RB, 4PN, 4AW and 3HL are QRV 10 metres; 4RB has arranged a schedule with nu-6BQ. 4GO worked Ireland and Belgium (something like a Scotch mixture) in the one afternoon, on 23 metres. He uses a TGTP with a Zepp. aerial—35 watts on a 210. 4FK has rebuilt and is putting out good phone on 30 metres.

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music. Choose COSSOR VALVES—and your set will give the most faithful reproduction. Superb tone, with all the richness and sweetness of the original—majestic, full-throated volume with absolute freedom from microphonic

noises—these essential features of the COSSOR valve have won for it the title "The Melody Maker." The music lover accepts it as the Stradivarius among valves—no higher praise can be accorded.

Obtainable from all Good Radio Dealers

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Club Activities

TOOMBUL RADIO CLUB.

Toombul has been "up and doing" since last report and great interest in club matters is being taken by all concerned.

Perhaps realising that the members and the general public should like to "trip the light fantastic" to the social advantage of both the club and the public, the said club has organised a Euchre Party and Dance.

The function will be held in the Northgate-Virginia School of Arts on Monday, 11th June. The services of the Blue Bird Orchestra have been secured for the occasion, and refreshments will be served. Both ladies and gents prizes for Euchre, Chocolate Waltz, and Monte Carlo are being given and the club expects a good roll-up.

The first of a series of inter-club lectures was delivered on May 17th, when a Toombul man visited Woolloowin. It is understood that the next lecturer will come from Woolloowin on June 13th, and there is no doubt that the exchange scheme will be a great success.

During the past two or three week-ends 4TC's 250 metre transmitter has been testing on telephony with somewhat limited power supply due to the non-arrival at date of writing to new filter system from the South.

This report would not be complete without reference to the trip to Sydney by Mr. T. W. Starkie, of 4NW fame. At a recent meeting Mr. Starkie gave a description of his experiences in the Harbour City. Whilst there he visited several manufactures of radio apparatus, and most of the Sydney experimenters, and he reports having an extremely enjoyable time both on the journey to and fro. and during his stay in the City.

Meeting are held every Wednesday evening at the clubrooms, corner Eton Street, and Sandgate Road, Nundah.

* * * *

EASTERN SUBURBS RADIO CLUB—oa 4ER.

Although it is some time since our last report, the Club is still as active as ever. A new chemical rectifier (stop jar type) is being built for the transmitter, which we hope will be on the air again shortly after being overhauled. New halyards have replaced the old ones which refused to hold the aerial to our stately mast. The Club is now divided into two sections, one part for B.C.L. experiments, and the second half for short wave work.

By the way some of the members have taken to the morse class, it would appear that the air is going to have a rough spin shortly. We wish to notify absent members that our annual meeting is due shortly as our second year of good progress is drawing to a close.

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The Battery that RECUPERATES while idle!

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This exclusive feature is to be found in no other dry cell. It ensures longer life and full value for every penny spent.

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ELIZABETH STREET (Next to 4QG),
BRISBANE.

Good Aerial Masts

In these days when aerial masts protrude above the horizon like pins in a pin-cushion, the first thing that strikes one's eye in any Brisbane suburb is the non-descript collection of prop-sticks, odd lengths of hardwood, bamboos, etc., which are pressed into service by nine out of ten wireless enthusiasts.

Many a man, apparently, thinks nothing of working all Saturday afternoon and Sunday in an effort to beautify his home, only to spoil the whole effect by hurriedly erecting any handy scrap of lumber to support his aerial.

Good, permanent aerial masts are so inexpensive nowadays that it is difficult to discover the reason for this false economy, especially when one can have a slim, beautifully proportioned mast delivered to one's home for a very small sum.

There is one class of timber which stands out pre-eminently for use in this field. We refer to Oregon pine, or Douglas Fir, as it is called in America. A mast of Oregon pine will withstand the ravages of the weather almost indefinitely, and the writer has seen a fine 50-foot mast lifted with apparent ease by one man! Obviously such lightness means much when the question of erecting and staying the mast is to be considered, and another valuable feature is the suppleness which characterises this timber.

Messrs. Rosenfeld & Co. (Qld.), Ltd., of Moray Street, New Farm, have for some time made a speciality of supplying Oregon pine wireless masts, and are

in a position to supply masts of any length from 30ft. up to 80ft. in one piece. The timber for these masts is specially selected, and this firm also manufactures and supplies suitable caps for the peak of the mast in addition to heavy hardwood yokes for mounting the pole.

THE GIRLS ON THE COVER.

The two young ladies whose smiling faces adorn the cover of this issue are Misses Doris Caritte (left) and Anne Crommelin (right). These girls, who are from the orchestra of the s.s. Orungal, feature on 4QG's programmes in violin and piano numbers whenever their vessel is in port.

MR. R. F. GARDINER OF 3AR RETIRES.

Prior to retiring from the active management of Station 3AR, consequent upon the merger of Associated Radio Company with 3LO Melbourne, Mr. R. F. Gardiner, who has been the managing director of 3AR for about 18 months, was entertained by the staff, and presented with a handsome traveller's clock.

The presentation was made by Mr. David C. Cameron, the engineer, who referred to the marked improvement of the services of 3AR during Mr. Gardiner's regime. In responding, Mr. Gardiner expressed appreciation of the cordial relations which had always existed between the staff and himself, and voiced his regret that other pressing business engagements compelled his retirement from 3AR.

OREGON WIRELESS MASTS

IN the use of Masts to carry Wireless Aerials, Rosenfeld's Oregon has proved to be the most serviceable. The Oregon for these masts is specially selected.

Call, 'phone 5991, or write to us for further particulars and prices of Wireless Masts.

You can purchase your Masts in one length of Oregon Pine, from 30ft. lengths of 3 x 3, to 80ft. lengths of 6 x 6, also 4 x 4, and 5 x 5 to any length.

ROSENFELD & Co. (Qld.) Ltd.

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Phone C. 5991.

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No Soldering Iron Needed**

TISIT is a liquid solder that is applied cold with a stick. No heat or soldering iron required. It is heat-proof and acid-proof. Easy to use and always ready. Dries in 22 minutes.

TISIT is the only known solder for aluminium, and is used successfully on radios, steam pipes, cracked radiators, cracked cylinder heads, petrol tanks, leaky milk cans, pans, pails, kitchen utensils—in fact, any place where solder can be used.

PRICE: 2/11 per bottle, sold by all hardware stores and radio Dealers.



Queensland Distributors:

Canada Cycle & Motor Agency (Q) Ltd.
Adelaide and Creek Sts., BRISBANE

Radio and Electrical Exhibition

PLANNED FOR JULY

This year Brisbane is to have a Radio and Electrical Exhibition. Elaborate arrangements are in hand to make the Exhibition a huge success. The Bohemia Theatre in Stanley Street, South Brisbane, has been selected as the site, and July 16th to 21st (inclusive) have been arranged as the dates.

This year Brisbane will witness a huge Radio and Electrical Exhibition. It will be remembered that two years ago a very successful exhibition was organised by the Radio and Electrical Traders, and was held during Exhibition Week in the Exhibition Hall. Although the license figures in those days were considerably lower than they are to-day, many thousands of people attended the Exhibition, and a good deal of useful publicity and propaganda work resulted.

Last year, unfortunately, no effort was made to organise a Radio and Electrical Exhibition.

A few weeks ago the Director of Station 4QG, Mr. J. W. Robinson, called a meeting of radio and electrical traders, which was held in the reception hall at 4QG. At this meeting Mr. Robinson discussed the possibility and the wisdom of holding a Radio and Electrical Exhibition this year, and asked those present to voice their views on the subject.

With hardly an exception the traders present supported the Director's suggestion, and Mr. Robinson came forward with a concrete proposal to the effect that he should take over the Exhibition and completely control and organise the whole affair. Mr. Robinson stated that he was prepared to do the work, not for any personal glory, but rather in the interests of the advancement and popularising of radio in Queensland.

This suggestion was viewed with favour by the traders, and Mr. Robinson then adjourned the meeting while he went carefully into details.

Further meetings between the traders and Mr. Robinson have since been held, when full details have been dealt with and arrangements definitely completed for the holding of the Exhibition.

The Bohemia Theatre in Stanley Street, South Brisbane, has been selected as the location, while the dates have been fixed at from Monday, July 16th to Saturday July 21st inclusive.

Amateur Section.

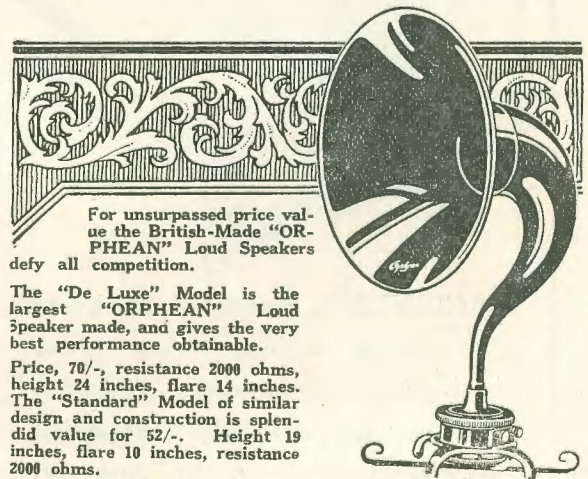
Those of our readers who attended the last Radio and Electrical Exhibition will recall the great public interest that was centred around the Amateur Section. This section, which was under the direct control of "The Queensland Radio News," occupied the largest stand at the show, and was crowded at all sessions. The large number of entries, and the excellence of the displays, helped in no small measure, to make the exhibition the great success it turned out to be.

At the forthcoming Radio and Electrical Exhibi-

tion, this journal has again agreed to take control of the Amateur Section. An attractive schedule is being prepared, and good prizes are offered. By the generosity of many of the radio wholesalers and retailers of Brisbane, liberal open orders are being donated as trophies for the various sections.

At the time of going to press with this portion of the journal, full details of the section and prizes have not been completed. These, however, are published elsewhere in this issue.

Further details of the Radio and Electrical Exhibition will be published in our July issue.



For unsurpassed price value the British-Made "ORPHEAN" Loud Speakers defy all competition.

The "De Luxe" Model is the largest "ORPHEAN" Loud Speaker made, and gives the very best performance obtainable.

Price, 70/-, resistance 2000 ohms, height 24 inches, flare 14 inches. The "Standard" Model of similar design and construction is splendid value for 52/-, Height 19 inches, flare 10 inches, resistance 2000 ohms.

The "ORPHEAN GEM" the STANDARD MODEL, cheapest efficient British Loud Speaker, is obtainable in marvellous price value. Costs only 30/-, Height 19 inches, flare 10 inches, resistance 2000 ohms. The "Oriol," for those who favour the cabinet type, is a splendid instrument at 60/-, Size, 15 inches by 9 inches by 4½ inches. Enclosed in an artistic Oak Cabinet.

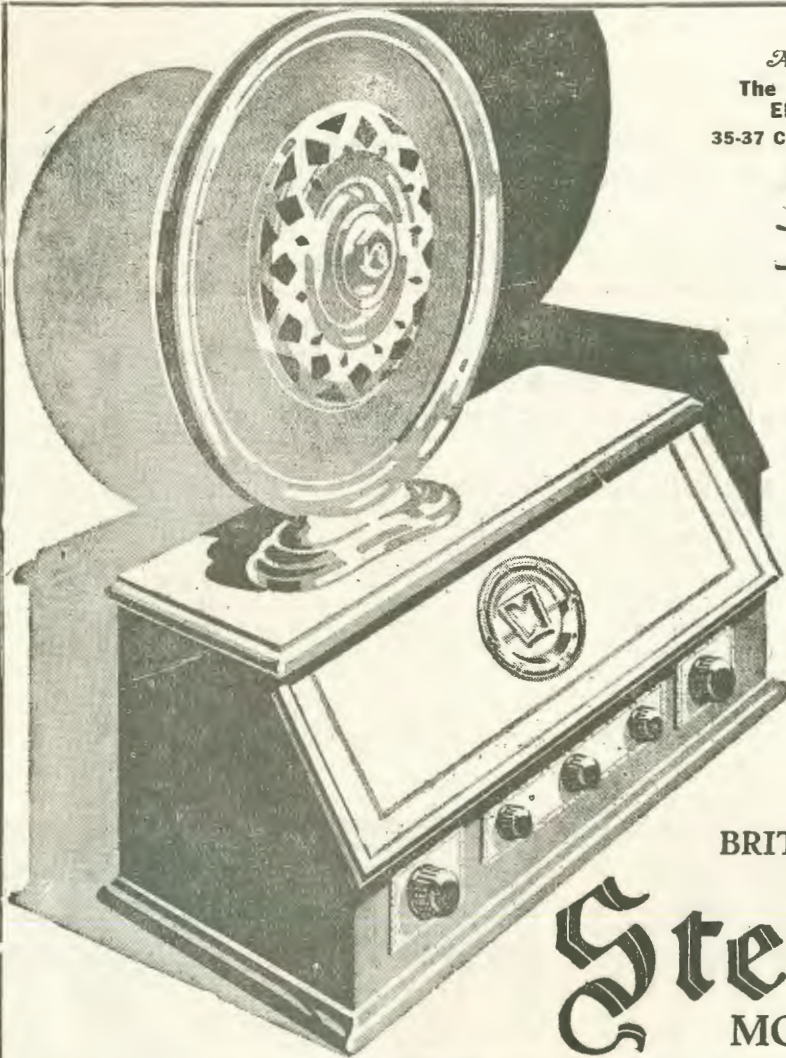
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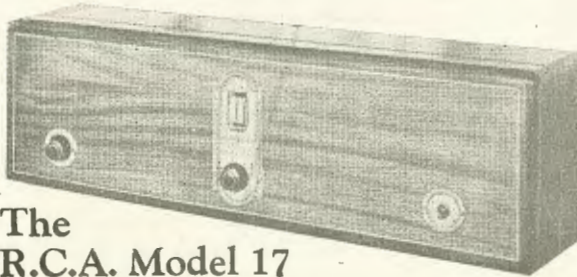
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Room 12, 5th Floor, Daily Telegraph Buildings, SYDNEY, N.S.W.

NEW RECEIVERS REVIEWED

In response to many requests from our readers, we have inaugurated this new department. It is our intention to test each new receiver as it appears upon the market, and to offer candid criticism upon its performance.



The R.C.A. Model 17

The trend in up-to-date receiver design is definitely towards the light-socket set—a receiver in which all batteries are dispensed with, the necessary power being drawn wholly and solely from a convenient light socket or power-point.

As far as tone quality is concerned, the A.C. operated set has a very obvious claim to superiority over its predecessor. Ample power is available at all times, therefore the factor of economy as regards current-consumption may be ignored by the designers. This means that special power-valves with large current-handling ability may be utilised in the audio amplifier, supplied with high plate voltages and appropriate grid bias. The result is an enormous reserve of power, with an ability to deliver an absolutely undistorted output of great volume to the loudspeaker.

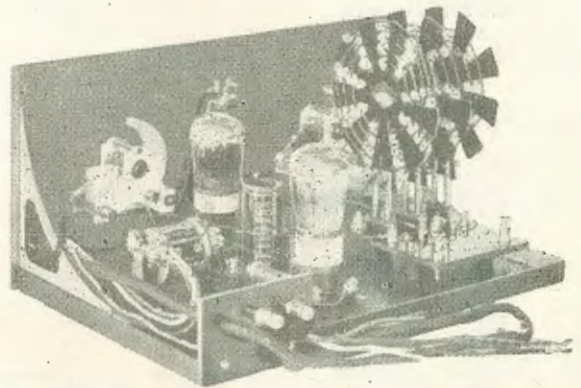
An outstanding example of the new socket-power practice is the R.C.A. Model 17, manufactured by the Radio Corporation of America, and submitted to us by the agents, Messrs. Australian General Electric Co.

The Model 17 is a six-valve receiver, having three stages of tuned-radio-frequency, detector, and two stages of audio-frequency amplification. The use of the new Radiotrons, UX.226, UY.227 and UX.171A, using raw alternating-current for filament supply, and Radiotron UX.280 in the plate and grid supply unit, makes the R.C.A. 17 a complete socket-power receiver operating on 220 to 240 volts, 50-cycle A.C. lines.

An interesting feature of the R.C.A. 17 is its remarkable compactness; the entire outfit is completely self-contained in a handsome mahogany cabinet measuring 28 x 7½ x 8½ inches, the only exterior wires being the connections to the light socket, aerial, earth and loudspeaker. The figured mahogany panel carries but three knobs—a centrally located station selector with illuminated drum dial, a volume control rheostat, and a power switch.

The three balanced radio-frequency stages provide great range and volume on distant stations, and when the Model 17 is used in conjunction with the Model 100A cone speaker, the depth and quality of tone are such as to make it necessary to completely revise one's ideas on the subject of faithful reproduction. The volume of sound which the receiver will deliver, still

retaining this perfect tone quality, is truly astounding. The power consumed by the R.C.A. 17 is quite negligible—less, in fact, than the smallest light in an average house, and there is not the slightest trace of hum noticeable while the receiver is in operation.



The Grodan-Hudson Short Wave Receiver Kit

Messrs. Edgar V. Hudson, 55 Charlotte Street, Brisbane, have just placed upon the market, a complete kit comprising all the necessary parts for the construction of a two-valve short-wave receiver of modern design. The kit, which is contained in a stout cardboard box, is complete to the last detail, only a pair of pliers, a bradawl and a screwdriver being needed to assemble the set.

At their request, we subjected a receiver assembled from one of the kits to a thorough test. Outstanding features of the Grodan-Hudson short-wave receiver are the interchangeable glass-insulated spider coils (a new development of Messrs. Grose and Daniel, of Sydney), heavy aluminium panel which eliminates several connections and reduces body-capacity trouble, cushioned sockets, and simple wiring, from which all soldered connections have been eliminated.

Under actual test, the programme of 2LO London, transmitted by 5SW Chelmsford, England, on a wavelength of 24-metres, was clearly and loudly received between 7 and 8.30 a.m. regularly, while 2XAF (New York), PCJJ (Holland), and 3LO (Melbourne) also were clearly heard at various times. The wavelengths covered by the five coils (which are wound by the constructor) lie between approximately 10 and 60 metres; additional coils may be wound for other wavelengths. A well-illustrated leaflet of instructions accompanies the kit, and the construction of the set is simplicity itself.

Revolutionised Broadcasting in Great Britain

WITH the introduction of ELECTRON WIRE into Great Britain broadcasting entered into a new era. It brought wireless within the reach of everybody. Its simplicity and inexpensiveness enabled everybody, young and old, rich and poor, to erect an aerial in a few minutes. ELECTRON WIRE can be used without masts, insulators, and separate lead-in wires. That is why wireless in Great Britain has gained such immense popularity and ranks amongst the best.



ELECTRON WIRE is the quality aerial—the highest possible quality. It brings envied results, and is the best and cheapest aerial in the world. Multitudes of wireless enthusiasts use it in every corner of the globe. **TRY IT**—then you will know why it is so popular.



Price

2/6

Coil of 100 feet



SUPERIAL—the King of Aerials—is an enormous advance on any aerials previously offered. The extra-heavy vulcanised rubber insulation is a perfect protection against leakage. For long distance reception we definitely claim that



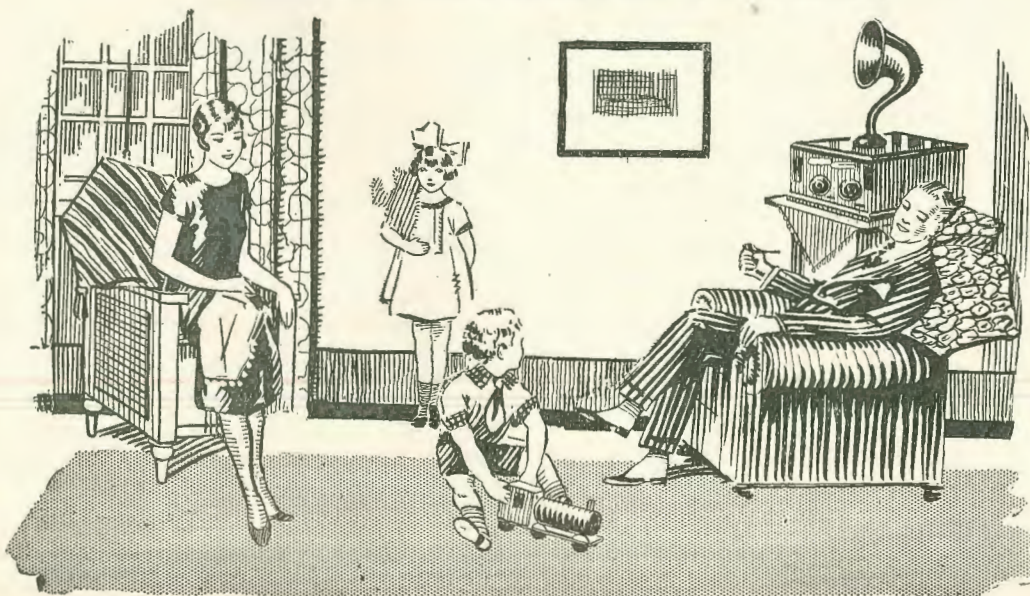
SUPERIAL is absolutely superior to all. **SUPERIAL** is trouble proof, inexpensive, and can be erected by anyone, anywhere.

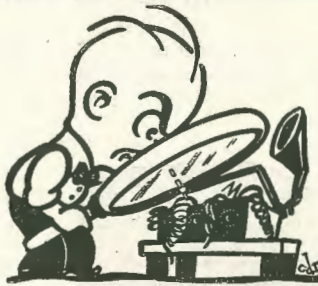
4/6

Coil of 100 feet.

Sole Distributors for Queensland:

CANADA CYCLE & MOTOR AGENCY, LTD.
CORNER CREEK and ADELAIDE STREETS, BRISBANE.





TESTED AND RECOMMENDED

A Department of Investigation, conducted for the benefit of our readers. Every piece of material featured on these pages is subjected to a rigorous and searching test before publication. No remuneration is received for the publication of these paragraphs.

THE MAGNAVOX ELECTRO-DYNAMIC POWER CONE SPEAKERS.

From Messrs. Mick Simmons Ltd., Queen Street, Brisbane, we have received for test a sample of the "Beverly" model of the Magnavox cone speaker.

We have subjected this speaker to critical and comparative tests, and have no hesitation in saying that the reproduction was finer than that of any other speaker we have so far tested.

The driving unit is of the electro-dynamic type, and requires a source of 6-volt direct current to energise the windings; usually the same 6-volt storage battery which is used to supply filament current to the receiver may be utilised. The speaker should always be used with a receiving set in which a fairly large power-valve is incorporated in the last stage, with a plate voltage of at least 135, and corresponding "C" voltage. As no loudspeaker can improve speech or

music spoiled or distorted in passing through a receiving set, it is most important that the amplifier be of the highest possible type; this is especially true with the Magnavox, as the speaker is super-sensitive to audio or voice-frequency currents, and will magnify already-present distortion not heard with ordinary speakers. The Magnavox Electro-dynamic Power Cone speaker is a really excellent job, and can be highly recommended.

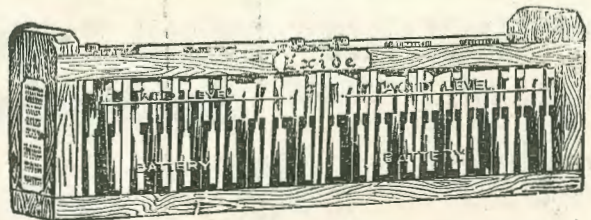
THE POLY CLAROPLUG.

This instrument, when used as a plug on the terminals of a loudspeaker, greatly improves the reproduction under certain operating conditions. "Rattling" and raggedness on the high notes due to a faulty amplifier or loudspeaker, is eliminated or much reduced, and the output is given a body and roundness of tone which is very pleasing to the ear. The clari-



At all
Radio Stores
and
Exide Dealers.

Exide WIRELESS BATTERY



EXIDE Battery, Type WJ; Price 23/-

EXIDE W.J. Type High-Tension Batteries have an actual capacity of 2500 milliampere hours with a voltage of 20, and a mid-point tapping of 10 volts. Several of these handy-long-life units make the most economical and efficient "B" Battery it is possible to own.

The cost of running your wireless set depends upon the efficiency of your batteries. If they will not hold their charge and require constant attention at the repairer's hands, maintenance costs become excessive, and the money you may have saved by buying an inferior article will soon be lost.

EXIDE Batteries enjoy a world-wide reputation for efficiency and long life, because they embody the results of more than 35 years' specialised manufacturing experience. There is an EXIDE for every wireless need, making it easy for you to choose the most suitable battery for your set. EXIDES are the most economical batteries to buy and maintain.

EXIDE BATTERY SERVICE (Q.) LTD.

Adelaide Street (opposite St. John's Cathedral), BRISBANE. Also at Stanley Street, Sth. Brisbane.

fyng device is completely enclosed in the body of the plug, which is rather larger than the usual phone plug. Two terminals are provided, to which the loudspeaker or headphone leads may be attached, or, should the loudspeaker already be equipped with a plug of the ordinary type, this may be inserted in the jack which is incorporated in the Claroplug. The mechanical construction is excellent, and the Claroplug should prove a valuable addition to many receiving sets of the older type, in which the audio-amplifying equipment is not quite up to the standard reached in present-day practice. Our sample of the Claroplug was submitted by Messrs. Trackson Bros. Ltd., Elizabeth Street, Brisbane.



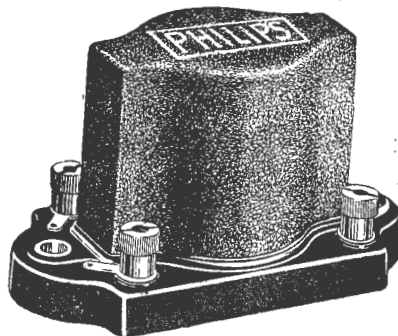
THE PHILIPS AUDIO TRANSFORMER.

The latest addition to the well-known Philips radio line is an audio-frequency amplifying transformer, presenting several unusual and interesting features. That the size and weight of the instrument is no indication of its quality was amply proven by our tests.

It is said that, on account of the use of new core material of very high permeability, core saturation is an impossibility under normal operating conditions, while the chance of breakdown of the windings due to corrosion is eliminated by the use of special non-corrosive wire. Heavy nickelled terminals are conveniently located in the moulded bakelite base, and the windings are shielded and protected from mechani-

cal injury by a pressed metal case, well finished in black crystalline enamel. Provision is made for earthing the shield and core if necessary.

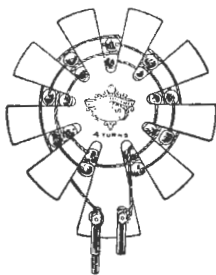
Under actual test in a two-stage audio-amplifier of conventional design, the Philips Type 4003 trans-



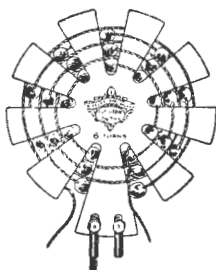
formers gave an excellent account of themselves, both as regards quality of tone and volume. The turns ratio—3-1—has been found to yield the best all-round results, and for that reason the transformer is available in the one ratio only. Our samples are received for testing purposes from the Philips representative for Queensland, Mr. A. T. Hills, Perry House, Elizabeth Street, Brisbane.

“GRODAN” Wind Your Own Pure Bakelite Spider Formers

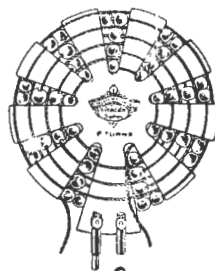
Excellent for Short Wave Work.



2 and 4 turn Coils may be fixed to Spider former



Loose End Connections are taken direct to Condensers, Plates, Grid etc. as desired.



Price, 19/- per 5 Formers with Glass Insulators

In order to meet the public demand for an efficient short wave coil kit, we have evolved our Pure Bakelite Formers. There is absolutely no loss, and glass insulation between wires is perfect. They are simple to wind. Complete instructions with each kit, also circuit diagrams and list of world's short-wave stations.

Unsolicited testimonials from Australia's leading Experts have proved their efficiency. "Grodan" Wind Your Own Bakelite Formers and the "Grodan" Radio-frequency choke. (Price 8/9).

OBTAINABLE FROM ALL LIVE RADIO DEALERS.

Manufacturers:
GROSE & DANIELL,
Holden Street, Redfern, N.S.W.

Distributors:
EDGAR V. HUDSON,
55 Charlotte Street, Brisbane.

NATIONAL RADIO EXHIBITION.

The National Radio Exhibition, organised by the Radio Manufacturers' Association, will be held from September 22nd to 29th inclusive at Olympia (New Hall), London. The success which attended presenting a gift to visitors who passed through the turnstiles at various times during the day, has led the exhibition management to consider other attractions of more striking character. These features will be supplemented by new developments of a revolutionary nature in the radio industry, which cannot but help make the exhibition an even greater success than last year's show.



FAMILY REUNITED.

The old story of a family being separated through its members migrating to different countries, was revived recently when 3AR Melbourne received a request from Mrs. Bertha De Vean, of St. Helena, California, to locate by broadcasting her long lost father and other members of his family who were thought to be somewhere in Australia. The broadcasting by 3AR of a special message had the effect of tracing Mrs. De Vean's father and brothers and sisters after 30 years' separation, and she now writes to 3AR expressing her very great gratitude. Wireless is pressed more and more into the service of mankind, and its possibilities for use in tracing missing friends are unlimited.

INTERESTING ART TALKS.

A highly interesting and instructive series of talks is being given over the air from 3AR by Miss Stephanie Taylor, who is well known in Melbourne's artistic circles. Thoroughly versed in every branch of her profession, Miss Taylor has chosen "Art in Everyday Life" for this series of talks, and by her vivid and artistic word painting, is able to conjure up a mental word picture in the mind of the listener. It is to be hoped that Miss Taylor has more of these delightful talks in her wallet, for they are not only most entertaining, but have a distinctly educational value as well.



EILEEN BOYD.

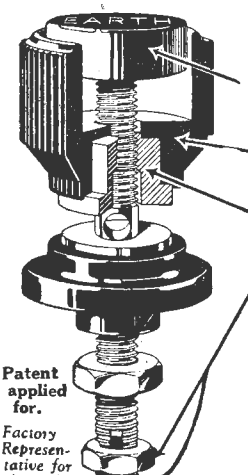
Listeners will regret the hurried return to Sydney of Eileen Boyd, the world-famous contralto, who has been broadcasting with distinct success from 3AR Melbourne. It is hoped however that Miss Boyd will return to 3AR in the near future.



3AR STAFF MOVES.

Following the amalgamation of 3LO and 3AR, leave was taken by most of the 3AR office staff last week of their old quarters. Regretfully they packed up their typewriters and the thousand and one mysterious whatnots that ladies seem to gather around them, and now they are accommodated at 3LO, where they have made themselves quite at home.

THE HEAD DOES NOT COME OFF



Engraved button fixed rigidly to stem.

Bakelite Insulated Head rotating about the button.

Brass Screw-threaded Insert securely fixed in the Bakelite head.

Transverse Slot with clamping nut, eliminating soldering.

The unique advantages of the Belling-Lee Terminals. Made with 20 different engravings.

PRICES: — Standard Model Bakelite insulated (Type "B"), 1/- each.
Popular Model, non-insulated (Type "M"), 9d. each.
Cheap Model, rotating name (Type "R") 6d each.

Write for Catalogue.

Patent applied for.
 Factory Representative for Australia
W. G. WATSON & CO.
 55 Charlotte St. BRISBANE

BELLING-LEE
 TERMINALS

Not a Luxury— but a Necessity of Life



All our sets are built and designed on this principle. They therefore deserve the name given to them by the public itself.

LOEWE Popular Sets

You get a perfect set operating without disturbance, consuming a minimum of current, and one that can be handled even by a child.

Ask your radio dealer to demonstrate one of our sets—there is no obligation on your part.

LOEWE  RADIO

BERLIN, STEGLITZ (Germany), Wiesenweg 10



The Golden Voice!



**Perfect Curve—Perfect Tone
Full Amplification**

The GOLDEN VOICE Transformer has been designed to reproduce the notes of all musical instruments, including the low notes of the drum and kettle-drum and the lowest organ notes with equal volume to all other frequencies.

The GOLDEN VOICE covers the full scale without distortion up to 8000 cycles, that is, the full range of the harmonic scale.

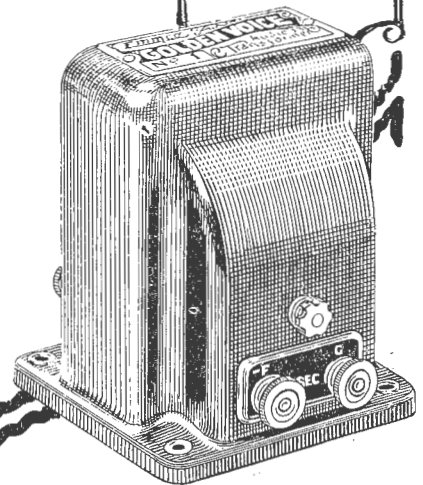
The world has not yet seen a transformer which compares with this latest triumph of Emmco. No finer contribution to perfect radio reception has ever been made. An engineering masterpiece, scientifically designed and fulfilling every single requirement of modern broadcast reception.

AT ALL DEALERS.

PRICE

42/6

Made in ratios
No. 1 & No. 2
for 1st and 2nd
stages of audio.



Other EMMCO Transformers.

Cavalier Transformer	21/
Emmco Transformer (metal case)	17/6
Emmco Midget Transformer	13/9

A.W.A. Radio Guide for 1928

If any reader has eighteen-pence lying idle in his bank or in his pocket, we would strongly urge him to invest it in a copy of "The Radio Guide for 1928." We use the word "invest" advisedly, for the purchase of this publication is certainly an investment in the fullest sense of the word.

"The Radio Guide" has, for the past three years, been published by Amalgamated Wireless (A.'sia.) Ltd. at the beginning of each radio season, and has, by virtue of its wide scope of usefulness, made a universal appeal to wireless fans of Australia.

With the 1928 edition the publishers have reached a standard of excellence, and have made the book of such a bulk as to cause one to wonder how such a production can be made to sell at such a low figure.

"The Radio Guide for 1928" runs into some 216 pages profusely illustrated and well printed on good paper. A full colour art cover binds the pages neatly and strongly—for it is recognised that the wealth of needed information within is such as will occasion frequent usage.

The index occupies four pages, the various articles being placed into five sections, viz., "Wireless Activities," "Receivers," "Accessories," "Technical and Service Articles," and "Call Signs and Licenses."

It is, of course, impracticable to detail the complete contents of the book, but a list of the articles contained in the third section should give readers some idea of the wide scope of usefulness of the "Radio Guide for 1928."

Technical and Service Articles.

- | | |
|---|--|
| <ul style="list-style-type: none"> Aerials Good and Bad Aerials The Earth System Choice of a Receiver Crystal receivers Installing a Receiver in Your Home Low Tension Accumulator High Tension Battery Bias Battery Keeping the Set Fit Distortion in Receivers Interference from Power Mains and Electrical Apparatus The Loudspeaker Fault-Finding in Radio Receivers Valve Precautions Fire Underwriters' Radio Installation Rules The Use of the Marine Direction-Finder Broadcasting Time Schedule Broadcast Licenses in Force Map Showing Distances between Australian Broadcasting Stations | <ul style="list-style-type: none"> Home Construction Receiver Circuit Diagrams Single Valve Circuit Single Valve Circuit—Capacitive Reaction 2-Valve Reinartz Circuit Short-wave Receiver 3-Valve Reinartz Receiver 3-Valve Choke-Coupled Receiver The Browning-Drake Circuit 5-Valve Neutrodyne Circuit Transformer-Coupled Amplifier Resistance Capacity and Transformer-Coupled Amplifier Choke-Coupled Amplifier Technical Terms Used in Radio Series and Parallel Battery Connections Some Useful Formulae Wireless Symbols International Morse Code Condenser and Inductance Formulae Radio Telegraphic Abbreviations Frequency and Wavelength Tables Useful Data |
|---|--|

The other sections also contain many interesting articles and valuable data are given. Prominent among these are:—

- Beam Wireless
- Worldwide Broadcasting
- Empire Broadcasting
- Short-wave Research Work
- Australian Short-wave Stations
- Short-wave Stations of the World
- Australian and New Zealand Broadcasting Stations
- Broadcasting Stations of the World
- American Broadcasting Stations
- Australian Transmitting Licenses
- etc., etc., etc.

"The Radio Guide for 1928" is a veritable compendium of wireless, and a book that no radio fan or amateur can afford to be without. Copies may be obtained from most radio dealers, from "Q.R.N.," or from Amalgamated Wireless (A.'sia.) Ltd., King House, Queen Street, Brisbane. Price 1/6—posted 1/11.

WEATHER MESSAGE BY WIRELESS TELEPHONY.

A special service of coastal weather forecasts to ships at sea by means of wireless telephony was recently inaugurated by Amalgamated Wireless.

This service is intended for those ships trading on N.S.W. coast which are not fitted with wireless telegraphy apparatus.

The messages are transmitted from A.W.A. Radio Centre, Pennant Hills, and are sent out twice daily (Sundays excepted). On subscribing to the service a vessel is supplied with an efficient valve receiver capable of picking up the messages and which can be quite easily handled by any person on board without any special knowledge of wireless.

The special weather reports are supplied to A.W.A. by arrangement with the Commonwealth Meteorologist, Mr. D. J. Mares.



A CROSS in this square denotes that your subscription expires with this issue.

Subscription 6/6 year

SUBSCRIPTION FORM

"QUEENSLAND RADIO NEWS."

Box 1095N, G.P.O., Brisbane.

Please send me the "Queensland Radio News" for 12 months. I enclose cheque or P.N. for 6/6.

Name

Address

What's on To-night ?

Don't wonder any more—send a P.N. for 9/6 to Box 1095N, G.P.O., Brisbane, and the "Broadcast Bulletin" will be posted to you for one year. Contains full details of all the radio programmes.

MODERNISE YOUR OLD SET OR IMPROVE THE NEW WITH FERRANTI TRANSFORMERS

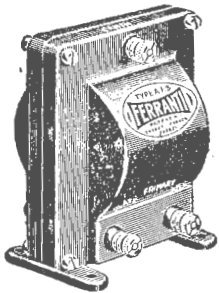
THEY ARE THE NEAREST TO PERFECT
AND MOST DEPENDABLE YET CONSTRUCTED.

FERRANTI OUTPUT TRANSFORMERS

The "Output Transformer," a recent Ferranti product, is highly desirable for use with all types of Loud Speakers, its principal objects being the elimination of the D.C. Plate current and isolation of the high tension voltage from the Loud Speaker. Constructed in two types. OP 1 (Ratio 1 to 1) for use with ordinary Loud Speakers of the diaphragm and cone types. Type OP 2 (Ratio 25 to 1) for operating Loud Speakers of the coil driven cone type.



TYPE OP 1, 41/-
TYPE OP 2, 41/-



TYPE AF 3, 45/-
TYPE AF 4, 34/-

FERRANTI AUDIO FREQUENCY TRANSFORMERS

The "Ferranti" Transformer is designed to improve your set, by increasing the efficiency of your Loud Speaker, and is constructed in two types. AF-3 (up to 410,000 ohms), 45/-—no better transformer at any price—and AF-4 (up to 90,000 ohms), 34/-. No better transformer available at the price.

ELIMINATE FAULTY REPRODUCTION BY INSTALLING



BRITISH MADE.

TRANSFORMERS

THE BEST IN THE WORLD.

OBTAINABLE
FROM EVERY
RADIO DEALER IN
AUSTRALIA.

Dealers communicate with: A. BEAL PRITCHETT (AUST.), LTD., Sydney and Melbourne.
EDGAR V. HUDSON, Brisbane. WEDMA LTD., Adelaide.
GIBBS, BRIGHT & CO., Perth.

N.

This department is conducted for the assistance of our readers. Except under special circumstances, we do not undertake to supply answers by mail.

Questions Answered

By the TECHNICAL EDITOR

Questions received before the 20th of the month will be answered in the following month's issue. Queries arriving after this date are deferred until the next issue.

R.S., Gordonvale.—"Can you recommend a wireless school in Sydney that teaches wireless—not by correspondence? (2) Where can I obtain a wiring diagram of a good complete short-wave receiver, and would it be possible to receive international broadcasting on it?"

Answer.—The Marconi School of Wireless, 97 Clarence Street, Sydney. (2) In our August, 1927, issue we published a full constructional article entitled "The Q.R.N. Short-Wave Receiver," which should suit your requirements admirably. We shall be glad to mail you a copy of the issue mentioned on receipt of sixpence in stamps.

F.H., Mapleton.—"Which way does the current from the "A" battery travel—from the positive through the valves and back to the negative, or vice versa? I have always thought it was from positive to negative, but have been reading something lately which makes me think I am wrong."

Answer.—From positive, through the valves, and back to negative is correct. Many thanks for your reminder re batteries. That is the obvious solution, and is what the writer does himself, but the questions asked "why"—not "how."

T.M.B., Barcaldine.—"Some time ago my five-valve neutrodyne went dead in the last low-frequency stage. I became suspicious of the transformer, and replaced it with a new one, after which the set was quite right. The thing that puzzles me is that I get a distinct click when I touch the wires from a pair of phones and a battery on to the transformer terminals. Judging by this test the transformer is O.K., although I get a louder click from the secondary. Can you tell me the reason for this?"

Answer.—The occurrence you mention is quite in order. Evidently the primary is open-circuited, while the secondary is O.K. The weak click which you get from the primary is caused by the "distributed capacity" of the winding. The adjacent layers in a large winding such as the coil of a transformer, being insulated from one another, act as the plates of a condenser. Thus, even though the continuity of the winding is broken, this miniature condenser has sufficient capacity to become charged when a potential (supplied by your testing battery) is applied to it, and will then discharge through the headphones; the result is the click you mention. Thus you will see that a head-phone-and-battery test is not at all conclusive when applied to transformers; the only really reliable method is by means of a milliammeter and battery. A breakdown of the primary winding is quite a frequent happening during wet weather.

S.T., Sandgate.—"Will tinfoil be satisfactory for shielding a short-wave receiver? (2) I have been told that it is unnecessary to disconnect my "B" batteries at night as long as my filament switch is turned off. I am using rechargeable "B" batteries (96 volts). Is this the case or not?"

Answer.—While it is possible to use tinfoil for shielding purposes, its use is not recommended on account of its comparatively high resistance. For best results, shield material must possess a minimum resistance, as any appreciable resistance results in eddy-currents being set up in the shield itself, and raises the resistance of any nearby coils. Copper, aluminium, and brass are the best metals for shielding radio-frequency units, and may be purchased cheaply. About 20-gauge is correct. (2) Certainly there is no occasion to disconnect your "B" battery when your set is not in use. While the filaments of the valves are not heated, no plate ("B" battery) current can flow, as the plate

current is carried by the electron stream thrown off by the heated filament. Therefore, if your filaments are turned off, no current—either "A" or "B"—is being consumed, unless, of course, there is some leakage within the set, which is not at all likely.

J.H.S., Red Hill.—"Could you supply me with the way to use a battery and potentiometer with the carborundum crystal detector?"

Answer.—We are mailing you a diagram showing the correct connections.

A.L., Monamona Mission, Cairns.—(1) "I am using a two-valve tuned-anode circuit, one H.F. and detector with double reaction, but can't get daylight reception. Would it be any improvement to change to a neutrodyne circuit? Reception is quite satisfactory at night, as we are getting seven Australian stations; also JOAK Japan. (2) I added one stage of L.F. amplification with excellent results, but as volume was not quite sufficient for the loudspeaker, I added a second stage. Results were disappointing, as it is only after 9 p.m. that we can use the loudspeaker. Can you suggest any improvement?"

Answer.—Regret your letter arrived too late to be dealt with in last issue. From what you say, it looks as though either your last valve is faulty (emission reduced), or you have insufficient "B" voltage. The transformers you mention are quite good, but you might try reversing the secondary connections of the second transformer. As you are using a 43-volt "C" battery, you should have 90 volts of "B" on the L.F. amplifiers. Cannot suggest anything else, as according to your description, the amplifier should work perfectly. If you cannot rectify matters, write again, enclosing a diagram of your circuit.

C.E.E., Bli Bli, via Nambour.—We are replying to your letter by mail.

"Marlow," Clayfield.—"Do you think a wavetrap would assist me to eliminate 40G on my five-valve neutrodyne? I can tune in 2BL and 2FC with only a faint background of 4QC, but 3LO is hopeless. Different sizes and types of aerials have been tried, but the interference still remains. Can you recommend a good wavetrap?"

Answer.—The "Q.R.N." wavetrap, which was fully described in our July, 1927, issue, will almost certainly eliminate the local station completely, and allow you to tune-in 3LO. It is very easy to construct, and may be attached to any set in a few minutes.

R.McP., Nundah.—"I have built the Solodyne receiver described in your March issue, and am getting very good results; the tone, as you say, is wonderful. However, when I connect the "B" batteries, even though the switch is turned off, I get a distinct spark at each battery terminal. I have checked over all the connections, but cannot find anything wrong. Can you tell me where to look for the trouble, as I am afraid of running the batteries down or damaging the set?"

Answer.—This is quite in order, and is a good indication. You will notice that 1-mid. fixed condensers are connected across the various battery connections within the receiver. The sparks you mention are caused by these condensers charging and discharging, and indicate that the insulation of your fixed condensers is very good. You may safely leave your batteries connected permanently, as there is no consumption of current while the set is not in use. It may be said that, when large-capacity by-pass



IF YOU are up
against a problem
let the Technical
Editor help you out!

condensers are used, the absence of sparks when connecting or disconnecting the "B" batteries would be an indication that something was wrong. See reply to S.T., Sandgate.

C.D., Dalby.—"How would I connect a "C" battery in a three-valve set, using Philips B.406 valves and Jefferson transformers?"

Answer.—An examination of your receiver will disclose that the terminals on your transformers marked "F—" are connected together, thence to the negative filament circuit. This latter connection should be cut, and the "C" battery connected in the "cut" in such a way that its "plus" terminal is connected to the negative filament circuit, and its "minus 4.5" terminal to the two transformers. Using the valves you mention, 4.5 volts is right for a "B" battery voltage of 90; lower plate voltage should not be used if best results are to be obtained.

RADIO IN THE GULF COUNTRY.

(Extracts from Letter received from Presbyterian Mission at Mornington Island.)

(By the courtesy of Messrs. J. B. Chandler & Co.)

There is a great old row in the camp to-night. The oldest man on the island died to-day, so there is great wailing and crying. The old chap died some distance away, in fact the people were carrying him in to me with the hope that I might be able to help him, and he died on the way.

The old fellow had a huge goitre, in fact I gave him the name of "Guitre" and from what I gather, this was the ultimate cause of his death.

We have intensely warm days, and it is very warm to-night. Wireless reception has been very much off for the past week.

Our boat is going across to connect with the "Kallatina" next week, and as Mr. Sydney (my co-worker) is going with her.

Since I last wrote you, I have erected a new aerial of the twin inverted L type. My wires are 5ft. 6in. apart, but unfortunately they have a number of soldered joints which perhaps are not conductive to good reception, and I will soon have to replace the whole of the aerial.

The masts of the new aerial are 45 feet high, and are made from the spars salvaged from two vessels that have been wrecked on the island here. We have to dress them down a bit on a saw bench, but they have turned out well, and as they are nicely painted and secured to ant-proof concrete bases, they should stand for many years. The lead-in from the aerial is down through the roof of the house. I ground the bottom off a small round medicine bottle to serve as an insulator; this fits into a cone made of galvanised iron, and the cone is soldered into the room, making the whole thing watertight. In this way I have been able to shorten the lead-in very considerably, and I think that the insulation is alright.

We got Brisbane, Adelaide, and two Melbourne stations to-night, but the reception was not too good, the volume being only fair. The 4QG programme was the opening of the banqueting hall at the Hotel Carlton.

Statics were fairly bad, and this was to be expected on such a close night. I am perspiring freely as I write.

A boat bound from Burketown to the Northern Territory quite unexpectedly called and landed a mail for us.

On Saturday night we had very good reception, and the programme from 3LO was very good; 4QG was not too bad, either.



(The Editor, "Q.'d. Radio News.")

Dear Sir,—I have been following for some time the controversy re distortion from 4QG. If I may take the liberty as one of Australia's pioneer broadcasters of giving my views on the subject, it may be of interest to you, and also the Director of the station, to know that I receive 4QG in Sydney without the slightest distortion and absolutely wonderful volume at all times. I may add that the control of the receiving set has something to do with this, and that at full volume and absolutely accurate tuning I can get distortion. But on resetting reaction I can get rid of all obnoxious noises. I would like to state that the children's session is the most noticeable for complaint, but after 8 o'clock the station seems to clear right up.

I am using an ordinary 5-valve shielded set built on the Solodyne principle.

If I may venture my humble opinion, the trouble is caused by overloading the plate, giving volume to the detriment of modulation. In my little experience I always found that a high percentage of modulation was better than a high meter reading. Yours faithfully,

J. S. MARKS,
Late 2GR, Rose Bay.

ANZAC DAY CELEBRATIONS IN THE DOMAIN, SYDNEY. APRIL 25th. 1928.

To perpetuate the memory of the glorious deeds of the Anzacs, a crowd estimated at from 75,000 to 100,000 people gathered in the Domain. In the ordinary course of events, but very few of these would hope to hear the speeches made on this memorable occasion. But perched up in front of the platform was a tiny microphone, and as the speakers spoke or bands played, so were the sounds caught up, conveyed to amplifiers and distributed spontaneously to a large number of power loudspeakers cunningly distributed to serve a wide area. These reproduced with great fidelity every spoken word, and instead of only a few hearing, the greater number of those present heard everything.

The Amplion equipment used on this occasion is proving a great success, and has been used at all recent functions of importance, including the Hinkler receptions, Sydney and Melbourne, the G.P.S. regatta, etc., etc.

DON'T GUESS

Make certain of what you are going to listen to by sending 9/6 to Box 1095N, G.P.O., Brisbane, for 52 weekly issues of the "Broadcast Bulletin." Posted every Thursday evening. Programmes commence from following Monday.

The 4WN Treasure Hunt

(To the Editor.)

Dear "Eddy,"—

I feel that in the interests of our growing youth, I must register a definite protest against the action of the Woolloowin Radio Club in staging a Treasure Hunt last week-end. It is quite bad enough to have that gang of scamps polluting the atmosphere with the 30 metre outpourings of their asthmatic transmitter without having to watch them careering over the roads in motor cars with the notice "Woolloowin Radio Club, 4WN, Portable Transmitter Testing."

Anyway, the gang parked 4JG, and that chap Bouchard, into a poor dear little Baby Austin, and then made it carry a copper rod as an aerial and a little hoopajooob that 4FK said was a transmitter. It wasn't, for 4JG said it was a pink invention of Satan, and he should know, for he had a big millimetre thing on his knee and one of those dot-dash things on the other knee that Bouchard used to press when he wasn't looking.

Then the rest of the gang numbered off and called itself Red or Blue or Green, and got into the other cars which had receiving set installed.

The transmitter sent the Red car off with the clue "WAKEFIELD," and the Green car was told to "Bombard Bulimba from the Park." The Red imbeciles looked up the directory and found that Mr. Wakefield was an inhabitant of Bulimba, so they buzzed over to the Hamilton Hotel and took the ferry and after bribing Charon to depart from his normal route, found a message to say how were they, and it was a fine day wasn't it, but their card was on the other ferry pontoon. So the time they wasted was appalling and their thoughts were what a lady isn't allowed to say. The Greens played ring-a-rosie round the gun in Newstead Park till they found half a card stuck on with a filthy piece of chew. Oh, disgusting! The other half was on another gun in another park. The Blue car was given "Marjorie 249," and just think, they had the impertinence to ring up 249 and ask for a girl they didn't know the surname of. It must have been awful! Marjorie, being a little lady, wouldn't tell any stranger where she lived, but said she did have a card for them, so 4FK and his parcel of—er—specimens had to find out through "Information" at the Telephone Exchange. Then what do you think they did next? They got a message "On der tank," and thought it was the tank at the Lutheran Church, so they went there and snooped round while the service was on. Brazen, I call it, don't you? It's a miracle they weren't thrown out with the furniture. So they found no tank there and yet they thought a German tank **must** be found. Then someone thought of the tank thing up at our War Museum, and they said they'd try there. It wasn't 4FK who thought of it—4JG says he can't think of anything sensible, because look at the transmitter he made. Anyway, when they got to the Museum the gates were locked, so they climbed three fences and found a card in the tank. Yes, right inside on the radiator thing. Then the caretaker caught them and said what the yell were they doing and the sooner they did something else the better, and how the yell did that card get there and it wasn't there yesterday—so they left.

The Blue car was pondering out a message, "Tom

Terrace Tabernacle Tut-Tut," so 4RG (I mean the 4QG 4RG, not the other 4RG who was in the Red car of course) went up to Wickham Terrace to see whether any Blue cards were knocking around. 4RG went into the Tabernacle, but the Johnny there said no there were no Blue cards, but the offering would be taken up on retiring and there might be one then, but 4RG thought he wouldn't wait, and after a while, someone found a pretty blue ticket that Tommy Elliott nailed to the tabernacle of 4CM's mast near the Observatory.

I haven't got enough patience to tell you where the motor cars didn't go. It was so intriguing to see Brisbane's leading optician beaming on the dear little boys in his car and making an Overland forget its gout and rheumatics and do—oh, ever such a fast speed, and to see one of our best-known commission agents hitting it up in a Buick that should have been spending the evening of its life at the Dog Refuge in Yeerongpilly. I can't tell you their names, but if you can guess, they were G...f...ld and St...d...ge.

Someone was advised to "Buy a ticket for the Sport of Kings," and found a card on the window at Kedron Park Racecourse, and Oh! it was so funny to see Love and his henchmen clambering over the Nealeads looking for one ("3 to 5 miles from the Clayfield gates on the Sandgate Road"), which carried the tell-tale card and, when they found it it said, "180 feet E.S.E." So Taylor ruined his cream strides by going through the swamp to the—er—er—appointed place.

And then another gang, after finding their card near Nudgee College, had to count 183 fence posts (hunner-and-one! hunner-an-two!! hunner-an-three!!! and that one where the cow is, hunner-an-four!!)

But at Sandgate they were disgraceful. They went (some of them) up and down Rainbow Street looking for Mrs. Beetham. I do hope she was annoyed when she gave them their card. It's not right that such goings on should be tolerated with equanimity. 4FK satisfied his artistic soul by leading his gang of pirates to "Search Sandgate Central," and after roping in the porters, stationmaster, police sergeant, and the local Boy Scouts, found the Green card reposing in—well, one of the few places in this world wherefrom mere males have not been ousted by dominant feminism. Oh, I can't put it plainer than that!

A later clue said "On Cash's Crossing Bridge," and do you know, the whole lot of them couldn't find the cards, and they were in plain sight all the time. Some people are born blind—and the "Treasure"—Oh, no, they couldn't find that—it required common sense, and the man who hid it was the only one who had any!! Then, of course, the—what did I call him—er—commission agent named St...d...ge tried to reverse his Buick while doing about 25, and burst its tuning fork or whatever it is, and had to let the Overland tow him home.

It was just fitting, I thought, that the Toombul Club should meet them while incapacitated, so now there'll be another chortle in their club notes this month. They'd been on another of their convenient week-end parties to Woody Point—convenient I say, because they should have been home helping their mothers rake the backyard.

Anyway, I'm fed up, and my boy isn't going to join a club like, that.—Yours with love,

MOTHER OF TEN.

The Radio Exhibition

MORE DETAILS OF THE AMATEUR SECTION.

As stated on page 49 of this issue, a Radio and Electrical Exhibition is to be held in Brisbane next month. When we went to press with the portion of the issue which contained this announcement, details of the Amateur Section (to be controlled by this journal) had not been finalised.

The schedule has, however, now been drawn up, and we publish hereunder a list of the various sections:—

SECTION 1—BEST PIECE OF HOME-MADE APPARATUS.

(Juvenile—15 years or under.)

First Prize—Open Order, value	£2 2 0
Second Prize—Open Order, value	£1 1 0
(Donated by Lawrence & Hansen Electrical Co., Ltd.)	
Entrance fee, 6d.	

SECTION 2—MOST NOVEL AND ORIGINAL CRYSTAL SET.

First Prize—Open Order, value	£2 10 0
Second Prize—Open Order, value	£1 10 0
Third Prize—Open Order, value	£1 0 0
(Donated by Aust. General Electric Co., Ltd.)	
Entrance fee, 1/6.	

SECTION 3—BEST MADE CRYSTAL SET.

First Prize—Open Order, value	£2 10 0
Second Prize—Open Order, value	£1 10 0
Third Prize—Open Order, value	£1 0 0
(Donated by Noyes Bros. (Sydney) Ltd.)	
Entrance fee, 1/6.	

SECTION 4—BEST 1 OR 2 VALVE SET (Any Circuit—May include Crystal).

First Prize—Open Order, value	£2 10 0
Second Prize—Open Order, value	£1 10 0
Third Prize—Open Order, value	£1 0 0
(Donated by Radio Products Ltd.)	
Entrance fee, 1/6.	

SECTION 5—BEST 3 OR 4 VALVE SET.

First Prize—Open Order (Radiokes coils), value	£4 0 0
Second Prize—Open Order (Mullard valves), value	£2 0 0
Third Prize—Open Order (De Jur components), value	£1 10 0
(Donated by Edgar V. Hudson.)	
Entrance fee, 2/-.	

SECTION 6—BEST 5 VALVE OR OVER SET.

First Prize—Open Order (Philips products), value	£4 0 0
Second Prize—Open Order (Philips products), value	£2 0 0
Third Prize—Open Order (Philips products), value	£1 0 0
(Donated by Philips Lamps Ltd.)	
Entrance fee, 2/-.	

SECTION 7—BEST SHORT WAVE RECEIVER. (Tuning down to 20 Metres or below.)

First Prize—Open Order, value	£3 0 0
Second Prize—Open Order, value	£1 10 0
(Donated by Harringtons Ltd.)	
Entrance fee, 1/6.	

SECTION 8—BEST HOME-MADE PIECE OF APPARATUS (Points allotted according to Amount of Work entailed.)

First Prize—Open Order, value	£3 0 0
(Donated by Wireless House Ltd.)	
Second Prize—Open Order (All American products), value	£2 2 0
Third Prize—Open Order (All American products), value	£1 1 0
(Donated by W. E. Peterman.)	
Entrance fee, 1/6.	

SECTION 9—MOST NOVEL LOUD SPEAKER.

First Prize—Open Order, value	£2 10 0
Second Prize—Open Order, value	£1 10 0
Third Prize—Open Order, value	£1 0 0
(Donated by Trackson Bros., Ltd.)	
Entrance fee, 1/6.	

SECTION 10—BEST LOW-POWER TRANSMITTER.

First Prize—Open Order, value	£3 0 0
Second Prize—Open Order, value	£2 0 0
(Donated by United Distributors Ltd.)	
Third Prize—Open Order, value	£1 1 0
(Donated by J. T. Greenlees & Co.)	

SPECIAL PRIZES.

4QG SILVER CUP—Donated by Station 4QG for the best made exhibit in the competitions.
 "Q.R.N." and "B. BULLETIN"—Donated for competition among radio clubs, under specified conditions.

Big Prize Money.

By the generosity of Brisbane radio dealers, exceedingly handsome trophies are being offered the winners of the various sections. These trophies will take the form of open orders on the firms who donate them. Approximately £50 prize money has been promised, which will allow substantial prizes being allotted all sections.

4QG to Donate a Silver Cup.

The Director of 4QG, Mr. J. W. Robinson, in an effort to still further stimulate interest around the Amateur Section, has promised to donate a silver cup which will be known as "The 4QG Cup." This handsome trophy will be awarded to the exhibition of the best piece of apparatus in the whole section. The entrant of the humble crystal set will share equal chances with the multi-set exhibitor of winning the cup. Points will be awarded for excellence of operation and construction, and the prize becomes the outright property of the winner.

Entry Forms.

Entry forms are now available, and may be obtained from the office of "The Queensland Radio News," Douglas Chambers, Adelaide Street, Station 4QG, or from the counters of metropolitan wireless dealers. Readers desirous of entering are requested to secure the entry forms and return them as soon as possible.

More Details.

More details concerning prizes, conditions, etc., will be published in "The Broadcast Bulletin" of June 11th.

Features

for

JULY Q.R.N.

Next issue promises to be even better than the June Number. Here are a few of the big features planned:

THE PERIDYNE FIVE, with Resistance Coupling.
 MY EARLY DAYS OF BROADCASTING (By Raymond Ellis).

A GOOD THREE FOR FIVE NOTES.
 THE FORTHCOMING RADIO EXHIBITION.
 THE FLIVVER CRYSTAL SET.
 ALL ABOUT THE NEW SCREENED GRID VALVE
 UNRECORDED INCIDENTS IN THE GREAT WAR.
 NEW RECEIVERS REVIEWED.
 TESTED AND RECOMMENDED.
 ETC., ETC., ETC.

"A Remarkably Complete Record of Wireless Practice and Activity!"

(WIRELESS WEEKLY)

WIRELESS WEEKLY
12th April.

The story of the years' advance in commercial wireless services, research work, receiver development, and design of wireless parts is splendidly told in the "1928 Guide," in a manner that both the technical and non-technical can appreciate. . . . The book itself is a remarkably complete record of wireless activities in every field and contains, in countless instances, the answers to questions which often puzzle the radio user. The technical section is remarkably well defined. . . . It is a book which we, ourselves, find of distinct value for reference purposes, and one which we can recommend to anybody, whether his interest in wireless be superficial or otherwise. Without direct reference to this work it would be almost impossible for the average lay man to realise the extent to which wireless commercial services in Australia have been developed. . . . The ramifications of the commercial services which are centred around the Radio Centre at Pennant Hills and the Receiving Centre at La Perouse form a most fascinating subject. The technical section is remarkably defined.

By an intelligent use of the A.W.A. "Radio Guide," the listener who has but a slight knowledge of the technicalities of radio can secure information that will enable him to so "service" his receiver that he will be sure to have it always in reliable working condition, and so will not have any fear of a "silent" night when he invites his best friends to participate in a radio programme having a very special appeal on that particular occasion. A mass of essential information on wireless is to be found in the 1928 Radio Guide issued by Amalgamated Wireless (Australia) Ltd.

SYDNEY MORNING HERALD
9th April

SYDNEY
SUN
27th
March

A wide appreciation of what radio means in the world of communication and especially as it affects Australia is to be gathered from the "Radio Guide," for 1928. A surprising amount of new, unsuspected and enlightening information is concentrated within its 216 pages. Particular mention is made of the inauguration of the Beam Wireless service between England and Australia on April 8, 1928.

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- Call Signs of Australian and New Zealand Experimental Transmitting Stations.

The 1928 "Radio Guide" is the finest A.W.A. Guide yet produced and is profusely illustrated by photographs and diagrams. No wireless enthusiast should be without a copy.

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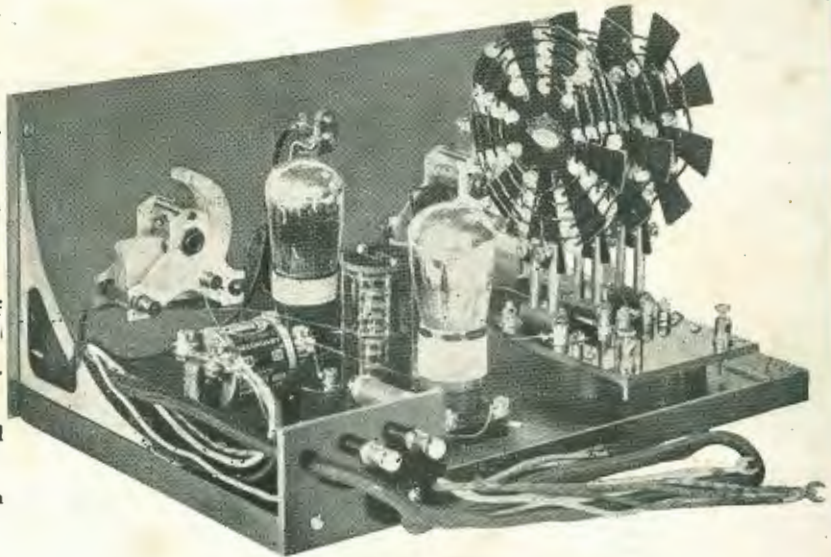


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