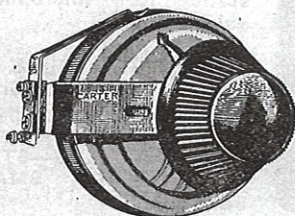




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These genuine Carter products are known for their distinctive individuality and are preferred for their fine workmanship. By using them you are assured of the finest quality obtainable at the lowest cost.



CARTER VERNIER CONTROL RHEOSTAT.

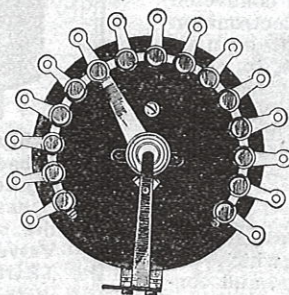
No scraping or jerking; no friction bearing connection. Phosphor bronze contact springs. One hole mounting. Clock spring pigtail connection ensures positive and reliable operation.

With Black Knob and N.P.
Pointer, Retail Prices,

25 ohm Rheo. 13/-
30 ohm Rheo. 13/-

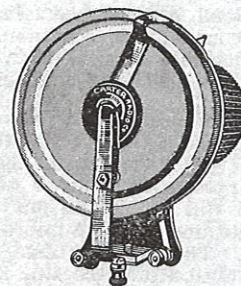
CARTER INDUCTANCE SWITCH.

Self-contained. Mounts back of panel. Only one panel hole drilled. Solder terminal and contact one



piece; adjustable stop pin. New type knob dial eliminates panel numbering. Pigtail connection eliminates sliding contacts.

Retail Price 11/9



CARTER VERNIER CONTROL POTENTIOMETER.

Nickel-plated phosphor bronze contact arm always makes positive and noiseless contact. Many small turns of resistance wire permit Vernier Control using only one knob. Clock spring pigtail connections eliminate friction contacts. One hole mounting. Binding post connections. Satin Silver finish. Complete with knob and pointer.

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because it contains just as many negative as positive ions. The zinc plate which is placed in this solution is attacked by the acid, and zinc atoms are taken into the solution or electrolyte. When this occurs, the zinc atoms take with them their positive charge, and leave their negative or electrons on the zinc plate.

The positive zinc ions now in the solution give a positive charge to the solution about the zinc plate, which tends to repel the hydrogen ions to the carbon plate. On reaching the carbon plate they unite with some of the free electrons in the carbon, forming neutral molecules of hydrogen gas which is given off from the plate.

This leaves a deficiency of electrons—electricity—on the carbon plate, while there is a surplus on the zinc, thus providing a difference in electrical pressure.

Providing the plates are not connected by an outside conductor, this movement of ions in the cell continues for a very short time only, as the zinc becomes so strongly charged negatively that it pulls the positive ions back to it with as much force as the acid pulls them into the solution. Similarly, the carbon plate soon ceases to take any more positive electricity from the hydrogen ions, since it soon acquires a large enough positive charge to repel them from itself with a force equal to that which is driving them from the solutions by the positively charged zinc ions.

This is why no chemical action continues in a simple primary cell, beyond a certain point, while the plates are not connected by an outside conductor. Thus the plates become charged to a definite potential difference, or E.M.F. of the cell.

If a wire or conductor of some kind be connected to the plates of the battery, the surplus electrons on the zinc will move around the conductor to even up the charges. As long as this continues to occur the acid will be able to pull the zinc ions from the zinc plate and to allow more hydrogen to leave the solution. This will continue producing a continuous current until either the zinc is eaten away or all the hydrogen has left the solution, i.e., until either the zinc or the acid become exhausted.

If a heavy discharge is taken from these cells, the bubbles of non-conducting hydrogen gas which collect on the carbon form an insulating film, and consequently the voltage and efficiency of the cell drops. This is known as polarisation, and manganese dioxide is used in the dry cell to overcome this trouble.

In the dry cell, as in the simple cell just described, the zinc dissolves in the liquid, and hydrogen is liberated at the carbon plate. Here it is slowly attacked by the manganese dioxide, which is packed around the carbon, thus preventing rapid polarisation.

The designation "dry" cell is really a misnomer. They are not actually dry, but use a moist paste for the exciting chemical as differing from the liquid electrolyte of the typical wet cells.

(To be Continued.)

Arrived!

THE NEW VALVE

YOU'VE NEVER HEARD PERFECT MUSIC BY WIRELESS

UNLESS YOU HAVE

The Wonderful

TRUE BLUE VALVES



Non-microphonic and Vastly Superior to Ordinary Valves. Better and cheaper in the long run. The only non-microphonic Valve in the world. Saves in battery charging, and has 2 or 3 times longer average life. Don't blame static for microphonic valve noises.

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TWO STYLES—STANDARD AND SMALL SOCKETS.

"Cheap" Valves make a good Set sound like a bad Gramophone. "Cheap" Valves draw big current, and are expensive on batteries. "Cheap" Valves have about one-third the life of TRUE BLUE TUBES. So "cheap" Valves are dear. Improve your Set with TRUE BLUE TUBES. They are cheaper in the long run and better all along. True Blues are obtainable at

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Exit Ordinary Valves
Enter Non-Microphonic Tubes

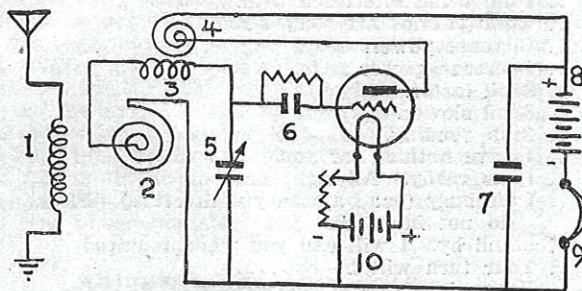
Overcoming Local Interference

The Local Station tuned in or out at will, with the aid of Special Tuning Coils described herewith.

From reports we find that many broadcast listeners find it difficult to tune in 3LO and 2BL, while 4QG is in operation. In truth, only those with very selective receivers can claim the advantage of tuning 4QG in or out at will.

For those who find it difficult to tune out the local station we offer a suggestion which from our experience has proved most successful. The secret lies in the construction of the tuning coils.

The coupling arrangements used between the primary and secondary radio circuits is generally known as a "tuner." However it is handed across radio store



- 1.—Aerial coil, 50 turns.
- 2.—Secondary coil, 30-50 turns.
- 3.—Grid coil
- 4.—Anode coupling coil
- 5.—Tuning condenser, .001 variable.
- 6.—Grid condenser and leak.
- 7.—Bypass condenser, .001 fixed mica dielectric.
- 8.—H.T. Battery.
- 9.—Telephone receiver.
- 10.—Filament Battery.

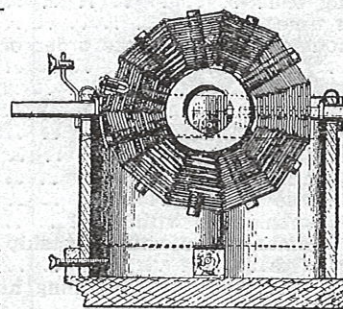
counters under various designations, chief among which are "variocoupler," "loose coupler," "honey comb coils," "lattice wound coils," "stagger woven coils," "basket wound coils," "tuning coils," "Lorenz wound coils," and "duo lateral coils."

These various coupling devices have much in common in structural details. For the 200 to 400 metre band of wavelengths the primary coil ordinarily consists of approximately 50 turns of wire, tapped at each five and ten turns. The secondary coil or circuit contains from 30 to 50 turns of wire, the shape of the latter almost invariably being cylindrical. In addition to the inductive functions of these tuners the primary coil forms one plate of the condenser, while the secondary circuit functions as the other plate. This is detrimental to good tuning.

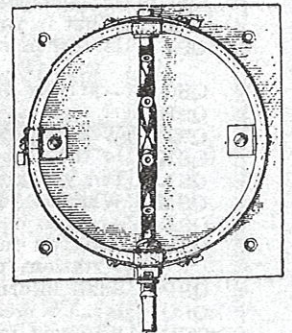
The whole secret lies in obtaining a high maximum and low minimum inductance in the coupler and at the same time a minimum amount of electrostatic capacity.

Now to get to the point, we suggest that all coupling in a selective circuit be obtained by using variocouplers. That is, the outside coil be wound in the ordinary way, and the inside coil substituted with a spider web rotor. The latter contains a hard rubber hub, with tiny hard rubber spokes radiating from the centre. Interwoven in these spokes are the windings of the secondary coil and on the coil we suggest winding 40 turns. In operation, maximum transfer of electrical energy from the antenna circuit to the secondary circuit is effected when the plane of this spider web winding is at right angles to the axis of the primary winding. On the other hand, minimum or zero coupling is obtained when the plane of the secondary winding is approximately in line with the axis of the coil or wire constituting the primary circuit.

The winding on the rotor of this newly designed variocoupler is similar in design to the intricate webs fashioned by a spider, hence the term "spider web variocoupler." The instrument may be employed in a variety of radio frequency circuits. It is especially applicable for use in radio frequency amplification. When used in the tuning circuit before a radio frequency amplifier, that stator or primary winding is connected in the aerial system proper, and the rotor or secondary is connected to the input circuit of the initial stage of radio frequency amplification. From



Showing Half Section of Coil.



Looking Down on Coil.

actual experience on a receiving station within a mile radius of 4QG the Southern Stations were tuned in without any difficulty, but when using the so-called honey comb coils it was found impossible to tune 4QG out. After trying all makes and all types of couplers none was found to succeed in a measure anywhere approaching that of this "spider web variocoupler."

The selectivity of this tuning device should prove a boon indeed for the reception of radio signals on bands of wavelengths closely approximating each other.

Abbreviations Used in Wireless Signalling

Abbreviation.	Question.	Answer to Notice.
PRB	Do you wish to communicate by means of the International Signal Code?	I wish to communicate by means of the International Signal Code.
QRA	What ship or coast station is that?	This is,
QRB	What is your distance?	My distance is
QRC	What is your true bearing?	My true bearing isdegrees.
QRD	Where are you bound for?	I am bound for
QRF	Where are you bound from?	I am bound from
QRG	What line do you belong to?	I belong to theLine.
QRH	What is your wavelength in meters?	My wave-length ismeters.
QRJ	How many words have you to send?	I havewords to send.
QRK	How do you receive me?	I am receiving well.
QRL	Are you receiving badly? Shall I send 20?	I am receiving badly. Please send 20.
	for adjustment?	For adjustment
QRM	Are you being interfered with?	I am being interfered with.
QRN	Are the atmospherics strong?	Atmospherics are very strong.
QRO	Shall I increase power?	Increase power.
QRP	Shall I decrease power?	Decrease power.
QRQ	Shall I send faster?	Send faster.
QRS	Shall I send slower?	Send slower.
QRT	Shall I stop sending?	Stop sending.
QRU	Have you anything for me?	I have nothing for you.
QRV	Are you ready?	I am ready. All right now.
QRW	Are you busy?	I am busy (or: I am busy with). Please do not interfere.
QRX	Shall I stand by?	Stand by. I will call you when required.
QRY	When will be my turn?	Your turn will be No.
QRZ	Are my signals weak?	Your signals are weak.
QSA	Are my signals strong?	Your signals are strong.
QSB	Is my tone bad?	The tone is bad.
	Is my spark bad?	The spark is bad.
QSC	Is my spacing bad?	Your spacing is bad.
QSD	What is your time?	My time is
QSF	Is transmission to be in alternate order or in series?	Transmission will be in alternate order.
QSG		Transmission will be in series of 5 messages.
QSH		Transmission will be in series of 10 messages.
QSJ	What rate shall I collect for?	Collect.
QSK	Is the last radiogram cancelled?	The last radiogram is cancelled.
QSL	Did you get my receipt?	Please acknowledge.
QSM	What is your true course?	My true course isdegrees.
QSN	Are you in communication with land?	I am not in communication with land.
QSO	Are you in communication with any ship or station (or: with)?	I am in communication with(through).
QSP	Shall informthat you are calling him?	Informthat I am calling him.
QSQ	Iscalling me?	You are being called by
QSR	Will you forward the radiogram?	I will forward the radiogram.
QST	Have you received the general call?	General call to all stations.
QSU	Please call me when you have finished (or: ato'clock)?	Will call when I have finished.
*QSY	Is public correspondence being handled?	Public correspondence is being handled.
QSW	Shall I increase my spark frequency?	Please do not interfere.
QSX	Shall I decrease my spark frequency?	Increase your spark frequency.
QSY	Shall I send on a wavelength ofmeters?	Decrease your spark frequency.
QSZ		Let us change to the wave-length ofmeters.
		Send each word twice. I have difficulty in receiving you.
QTA		Repeat the last radiogram.
QSS	Do my signals fade?	Your signals fade.

* Public correspondence is any radio work, official or private, handled on commercial wave-lengths. When an abbreviation is followed by a mark of interrogation, it refers to the question indicated for that abbreviation.

Stray Technicalities

GRID BIASING.

A good deal of misunderstanding seems to exist on the part of the average amateur as to the exact meaning of grid bias. The question has often been asked, "Why can't the grid be biased negatively by connecting the grid return lead to negative side of the accumulator?"

When we say that the grid of a valve is biased two volts negatively or two volts positively, it is obvious that we must have some fixed standard of potential to work upon, otherwise the term becomes meaningless. For instance, when the grid has been made two volts negative, it indicates that it has been made two volts more negative than the fixed standard, which is the negative side of the filament. Obviously, if we connect the grid return lead to the negative pole of the accumulator, the grid will be at the same potential as the negative side of the filament, assuming that no external filament resistance is used in the circuit, whilst connecting the return lead to the positive side of the accumulator will give the filament a positive bias of two, four or six volts, according to the type of accumulator used.

ADJUSTING VARIABLE LEAKS.

Another question which is often prompted by amateurs is "How should I adjust my grid leaks?" As the value of the grid leak is very important for the satisfactory operation of a receiver, and as this unit is often the unsuspected cause of a lot of trouble, a few words on its adjustment will not be amiss.

If the resistance of the leak be too high the grid of the valve will have an excess negative charge, owing to the accumulation of electrons on it, thus limiting greatly the current flowing through the valve, while, if an attempt is made to introduce reaction, howling will be set up. If, on the other hand, the resistance is too low, a loss in signal strength will again result, and where the grid leak is connected between the grid and filament direct, it is often a difficult matter to make the valve oscillate. By using a grid leak of fairly high resistance stronger signals may often be obtained than when the resistance is of a lower value.

Perhaps the following method of adjusting the leak is one of the most satisfactory. The leak is first adjusted to a high value, so that when the reaction coupling is increased the valve "howls."

The resistance is then gradually lowered until the howl is entirely eliminated when using fairly tight coupling of the reaction coil. In this position the valve will work well, and maximum signal strength will still be obtained. This adjustment may vary slightly with different values of filament current and high tension voltage, so to try the different values until the best results are obtained is the best course to adopt.

MAKE YOUR OWN CRYSTALS.

The writer made a few years ago, a synthetic crystal, which proved to be super-sensitive as a detector compared with the natural minerals obtainable at the time, and as the only two constituents are generally available about the home I would strongly recommend experimenters to try their hand at making this crystal.

Obtain a small quantity of pure lead (Pb) not solder or lead alloy. Also some flowers of sulphur—ordinary powdered sulphur. Cut the lead in small pieces and mix with the sulphur in the ratio of seven parts by weight of lead to one part of sulphur. Place the mixture in a crucible, a tin cup or some convenient container other than glass or porcelain. Heat over a Bunsen burner or gas ring. In a very short time the mixture will begin to glow and the lead and sulphur will fuse together. At this point remove the mixture from the heat and place the container in a basin of cold water to cool. Do not let any water get on the crystals as it will ruin them. If you have had things just right you will now have a crystal that is super-sensitive all over its surface. If the lump is crumbly you have "cooked" it too much, and if it is streaked with lead you did not cook it long enough, or you used too much lead.

Wireless sets are under a temporary ban of the Venezulan Government. It is claimed that listening-in interferes with the work of the nation.

When You Buy a—

G.A.C. Radio Receiver

You get the benefit of Eighteen Years Radio and Electrical experience.

5 Valve Set £37-0-0

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Using Atmospherics

Silhouetted against the skyline on the east bank of Manhattan Island, New York, can be seen an ordinary looking aerial that differs not one little bit from thousands of others in the immediate neighbourhood. This one, however, is no mere interceptor of broadcast entertainment, for it guards the city against unexpected darkness caused by daytime storms, saving millions of people inconvenience and keeping the wheels of industry revolving when they would otherwise be compelled to close down for lack of power. To this aerial is attached a wireless receiver which actuates a bell indicating the approach of a storm. It is operated by Nature and is always on duty ready to record the approaching storm, although it may be over fifty miles distant and thus not due to strike the city for several hours; thus giving the electric power and light companies an opportunity to put into service additional machines to generate sufficient current to take care of the additional load required during the period of daytime darkness. The demands upon the electric supply system when a storm breaks are so acute that in a period of five minutes there may be an increase of nearly 75 per cent. in current consumption due to the turning on of lights, so that a storm detector is almost indispensable. The method of operation is very simple. Most of us are acquainted with the violent type of atmospheric disturbance which accompanies a summer storm, and it is this selfsame interference that operates the storm detector. The disruptive "static"

discharges are intercepted by the aerial and led to a device which consists of a short-circuiting switch, a spark gap, a coherer, a relay and battery and a condenser with an earth connection which comprises the whole of the device. A storm five or six hours distant causes the bell to ring about every ten minutes. As the storm draws nearer the frequency of the bell ringing increases until the storm is about half an hour away, by this time it is practically continuous and the signal is passed along to the furnace-men, to the effect that an increased consumption of current may be expected any minute. This novel device is far superior to any other method of storm warning, as a storm may be only half an hour away, invisible and no wind blowing, yet the wireless bell will ring continuously, heralding its rapid advance.

Kennerley Rumford, the husband of Clara Butt, has issued once more, warning to the many Australian women vocalists who are casting longing eyes on London. His experienced advice is an emphatic "Don't," and his reasons are up to date. Owing to the spread of broadcasting and the almost universality of listening-in, the position of the concert-singer has become parlous indeed. Only the very top-line vocalists are doing even fairly well at their profession. He holds out hope that later, probably some equitable arrangement between the British Broadcasting Coy., the listeners-in and the singers will be arrived at; but till then he very seriously advises anxious aspirants to remain in Australia.

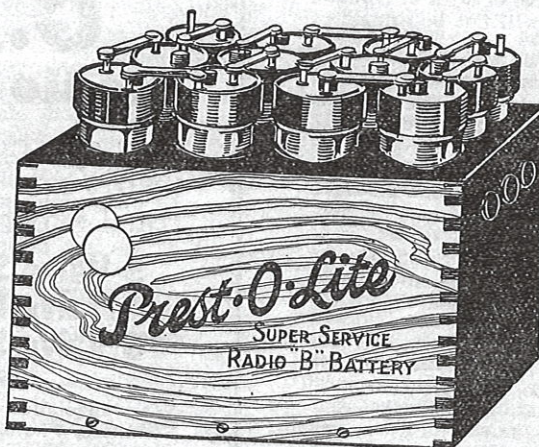
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See Our Expert

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A Great Radio Pioneer

Speech by Senatore Cugliolmo Marconi, C.C.V.O., D.Sc., LL.D., etc., at the Central Hall, Westminster, London, on the occasion of a presentation to Sir Oliver Lodge.

"Sir Oliver Lodge is, as we all know, one of our greatest physicists and thinkers, but it is particularly in regard to his pioneering work in wireless, which should never be forgotten, that we all welcome him here amongst us to-night.

"In the very early days, after the experimental confirmation of the correctness of Clerk Maxwell's theory as to the existence of electric waves and their propagation through space, it was given to only very few persons to possess clear insight in regard to what was considered to be one of the most important hidden mysteries of nature, and Sir Oliver Lodge possessed this insight to a far greater degree than perhaps any of his contemporaries.

"The result of our understanding something of this subject is now fortunately manifest to all, when we look round at the wonderful progress that has been achieved by radio, which has already become an aid, or rather a necessity to all civilised communities throughout the world.

"We look back over a comparatively short period of time, and proudly reckon up all the benefits that wireless has conferred on mankind: Telegraphy, telephony, broadcasting (that most popular of all present-day wireless manifestations), safety to sea and air navigation; these are all but steps in the ever ascending ladder of wireless applications.

"But although our knowledge has progressed and although we now know a great deal about producing, radiating, and receiving these waves, we know very little, and, I might say, we now realise that we know a good deal less than we thought we knew sometime ago in regard to the laws governing the propagation of electric waves through space across big distances.

"Little over two years ago we all believed that to cover world-wide distances it was necessary to employ large amounts of power and long waves.

"We thought that short waves could only be utilised for communication over considerable distances at night, but that those night ranges were freaky and although too unreliable to allow the carrying out of commercial work.

"Now all this has been changed, and it looks very much as if short waves, and short waves alone, were destined to carry the bulk of long distance telegraphic and telephonic communications throughout the world.

"We found that these waves will carry messages at all times of the day and night to such distant parts as Australia and I might recall the successful tests by amateurs in exchanging two-way communication with New Zealand.

In regard to New Zealand, Australia and other places near the Antipodes I should, however, point out that when using broadcasting, or non-directive methods, we have never so far been certain as to which way the waves travelled round the earth, there being always when working to the Antipodes a practically dark way round one side of the earth, when the other side is exposed to daylight.

"During the last few days further tests have been carried out between Chelmsford and Buenos-Ayres (in the Argentine) over a distance of nearly 6000 miles by Captain Round and other engineers of the Research Department of the Marconi Company.

"In regard to the Argentine the great circle track of transmission not being very far away from a North-South direction, there is no other track of comparatively the same order of distance over which the waves could travel in darkness at the same time as when the short direct track is exposed to daylight.

"By using a 15 metre wave and a power of only one-fifth of one k., which is an amount of energy comparable to that which has been used by amateurs in their tests, it has been found not only possible but easy to communicate with the Argentine during the hours of daylight at possible speeds of 30 words per minute. Nothing, however, could be received at Buenos-Ayres on this particular wavelength when darkness extended over the area separating the two stations. It was further noticed that the signals were strongest and at their best when the sun was at its highest, over the great circle track separating the two stations.

"So much for the idea that short waves will only travel big distances at night, and it should therefore be no longer necessary for wireless enthusiasts to continue losing their sleep by staying up into the small hours of the morning in order to communicate with their friends in very far distant countries."

Afternoon Tea and Supper at SYRMIS'



When in town of an evening call at Syrmis Cafe for refreshments, and be entertained by 4QG's Studio music broadcasted through our Super Six Receiver.

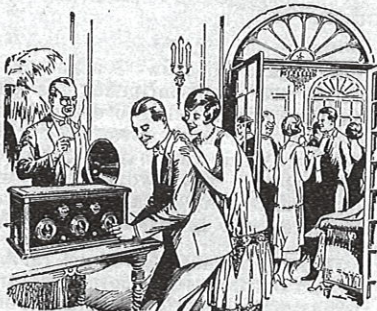
Dainty Afternoon Teas a Speciality

SYRMIS CAFE
GEORGE STREET, BRISBANE.

The HARRINGTON Popular 3

The Best
Radio
Investment
to date

A new 3-Valve Receiver of fine tone quality and exceptional selectivity. Operates with dry cells, valves, and batteries. The set is constructed of the finest component parts. It is built into a handsome maple or oak cabinet, and is supplied with all accessories. There are no extras to buy, and a child can operate it. Price, complete, including Loud Speaker,



£27/10/-

The "POPULAR 4"

This new Model is a 4-Valve Tuned Radio Receiver, and has unusual range, selectivity, and wonderful tone quality.

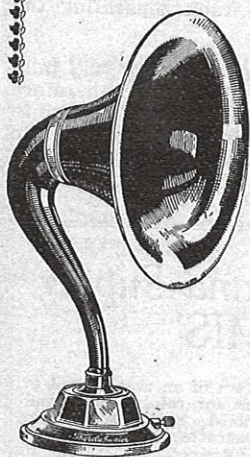
Only the very best of parts are used. The Cabinet is polished in Oak or Maple. It is supplied with all accessories, either dry batteries or accumulator, and loud speaker.

£32

The "THOROLA"

A Better Speaker. Amplifies the faintest radio electrical impulse without the slightest distortion. The ideal speaker for the drawing-room. The volume can be adjusted as desired.

£4/10/-



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93 QUEEN STREET, BRISBANE

MR. J. C. PRICE EXPLAINS!

January 15th, 1926.

The Editor,
"Queensland Radio News,"
Brisbane.

Dear Mr. Editor,—

As you have made reference on two separate occasions to a particular two valve set owned by me, I feel compelled to give an explanation to the many thousands of readers of the "Queensland Radio News."

This set was received on the 12th July last, and weighed only 6½lbs. complete, with all accessories, including battery power, loud speaker, valves, and aerial equipment.

The operation of this set is exceedingly simple, although the results obtained at times are anything but pleasant, loud squeals, and howls being obtained especially when battery power is low.

There is no interference outside the range of the next door neighbour, so that there is no reason for any complaints being lodged by other radio fans that interference is experienced.

The set has now been in operation for six months, and no battery replacements have been required, although frequent daily recharging is essential to the life of the set. Strange to relate the weight of the set has now more than doubled itself. It gives excellent results at the seaside, although curiously is not affected by salt water.

No doubt some of your readers have already guessed that this particular two valve set is in reality a delightful little daughter, with large hazel eyes, curly hair, and the most lovable little limbs imaginable.

Don't you wish you had one? If you do, go right ahead.

Yours faithfully,
J. C. PRICE.

DV-3 TUBES PERFORM SPLENDIDLY.

We are in receipt of the following letter from the agents of the popular DV3 Tubes:—

44 Reynold Street,
Cremorne, Sydney.
1/12/25.

Dear Sir,—

I have been using two of your DV-3 Tubes in my low loss set, and have been very successful on the short waves.

On 40 metres stations in England, Canada, America, Hawaii, Java, Philippine Islands and Japan have been received, and I have cards from England and America checking my reception.

On 20 metres I have heard 4AG (New Zealand), and also an European Station.

The tuning range on my receiver is from 15 to 120 metres.

In the near future I will try a DV-3 Tube on still lower waves, and let you know how it works.

Yours faithfully,
S. HUME.

U.S. Short Wave Stations

In view of the large numbers of readers who operate short-wave sets and are unable to ascertain the Q.R.A. of American short-wave stations heard, we publish this list of American commercial short-wave stations:—

Fy-Kc.	Wave length.	Location.	Owner.	Power.	Call Signal.
	21	Bellevue	U.S. Navy	10 Kw.	NKF
8560	35.03	Rocky Point, New York ..	R.C.A.	20 Kw.	WQO
6970	43.02	New Brunswick, N. Jersey	Do.	20 Kw.	WIZ
6119	49	Sharon, Pa.	Westinghouse El. & Mfg. Co. . .	150 W.	WHD
4400	68.4	Pinecrest, Fla.	E. G. Watts, Jr.	5 W.	WRP
	68.4	Do.	Do.	100 W.	WRB
4050	74.03	Rocky Point, New York ..	R.C.A.	20 Kw.	WQN
3480	86.16	New Brunswick, N. Jersey	Do.	20 Kw.	WIR
3331	90	Kahuku, Hawaii	Do.	20 Kw.	KIO
3156	95	Bolinas, California	Do.	20 Kw.	KEL
2910	103	Tuckerton, New Jersey ..	Do.	20 Kw.	WGH
2220	135	Rochester, New York	Rochester Gas. & Elec. Co. . . .	750 W.	WJF
2188	137	Wilsonville, Pa.	Penn. Power & Light Co. . . .	100 W.	WLF
	137	Allentown, Pa.	Do.	200 W.	WHC
	137	Williamsport, Pa.	Do.	100 W.	WPH
	137	Hauto, Pa.	Do.	100 W.	WDS
	137	Hazelton, Pa.	Do.	100 W.	WCJ
	137	Frackville, Pa.	Do.	100 W.	WBI
2142	140	Flint, Michigan	F. D. Fallain	500 W.	WGF
2100	143	Baltimore, Md.	Board of Fire Commissioners ..	500 W.	WEQ
	143	Portable Stn. in California	Los. Angeles Examiner	150 W.	KTA
	143	Do.	Do.	250 W.	KPK
	143	Do.	Tribune Publishing Co.	20 W.	KGA
	143	Washington, D.C.	Potomac Elec. Power Co.	50 W.	WIX
	143	Do.	Do.	50 W.	WJH
2070	145	Rochester, New York ..	Rochester Gas & El. Co.	750 W.	WJF
2050	146	Portable Stn. in California	Goldwyn Producing Co.	10 W.	KYJ
	146	Do.	Do.	5 W.	KYI
	146	Pysht, Washington	Merrill & Ring Lb. Co.	5 W.	KJA
	146	Portable Stn. in Russell	—	50 W.	KFZ
	146	Reed, California	Do.	50 W.	KGV
	146	Do.	Pratt & Dutro	500 W.	KYX
	146	Do.	Do.	100 W.	KZI
1480	202.3	Harrisburg, Pa.	Penn. State Police	500 W.	WBAK
	202.3	Butler, Pa.	Do.	250 W.	WBR
	202.3	Wyoming, Pa.	Do.	100 W.	WDX
1260	238	Honolulu, Hawaii	Hawaiian Pineapple Co.	50 W.	KYB
1040	288	Kaumapalapu, Hawaii ..	Do.	50 W.	KRQ

AID FOR SHIPS IN DISTRESS.

VALUE OF WIRELESS DIRECTION FINDING.

During the recent gales in the Atlantic the value of wireless as a means of bringing aid to ships in distress has again been proved by practical experience. The Anglo-Newfoundland Development Company's ship, "Geraldine Mary," on a recent voyage, received a wireless message from the s.s. "Stikiestad," stating that she had broken her propeller shaft and needed to be towed to St. John's, Newfoundland.

The "Geraldine Mary" used her direction finder to locate the "Stikiestad," and went to her assistance. Owing to rough weather, four days elapsed before a towing wire could be taken aboard the "Stikiestad," and during that time the ships twice lost touch with one another, having been blown as much as 50 miles apart during severe hurricane.

On each occasion the "Geraldine Mary" was able to find the "Stikiestad," and return to her vicinity, by means of wireless bearings taken with the Marconi direction finder. Finally the crews succeeded in passing a towing wire.

CLUB ACTIVITIES

Wireless Institute of Australia (Queensland Division)

Activity is not a feature of the division at holiday time but it is hoped that the surfing, etc., that members who were lucky enough to get away, enjoyed, has put them in good fettle for the new year. Some members of council have been putting in good work right through, and business is all in up-to-date order.

By the time these notes are published it is hoped to have 4W1 on the air every night on 40 and 25 metres.

Summary of an Admiralty test has been received from headquarters and particulars will be forwarded to those who are prepared to furnish reports. It is a distinct advance when the amateur is given a status in this way, and it is hoped will lead to better things. Considerable thought has been given to the matter of finance by the executive, with a view to having available to experimenters apparatus of practical value, and which in the ordinary way they can-

not acquire. It was decided that an Art Union was the best way at present to secure the necessary amount quickly, but to eliminate the undesirable features of many of these affairs it was decided to make the value of prizes as close as possible to the amount of money likely to be raised and depend on the concessions granted by the dealers for the profit. It is expected to sell sufficient tickets to make a clear £75, the whole of which sum will be devoted to the purchase of apparatus. The objects are good, the prizes are right and there is no catch anywhere. Let us see that the wireless public appreciate a fair run for their money.

Country members desiring to take an interest in amateur traffic working either transmitting or receiving only are invited to get in touch with the acting hon. secretary, A. A. Jackson, C/- Courier, Queen Street, Brisbane.

Woolloowin Radio Club

Since our last report the attention of members has been fully occupied in completing the alterations to our new club room. We are indebted to Mr. F. R. Emmott for the able and workmanlike manner in which the electric light installation was carried out, and to Mr. V. F. Keena for the construction of the switchboard.

The most important question under present consideration is the installation of the transmitter. We hope to have something interesting to report in regard hereto, in the near future.

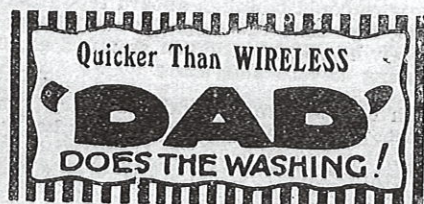
Early in the month, two of our members, Messrs. C. J. Grant and V. F. Kenna, returned from a trip to Sydney and had much of interest to report. Both took the opportunity to visit the Wireless Institute of Australia, N.S.W. Division, and were hospitably received. Mr. Grant met a number of well known radio men during his stay in the southern capital, and collected much useful advice and information, which was passed on to the club members.

On January 14th, Secretary Jiear delivered the first of a series of lectures on "Generators and Motors." He dealt with the principles of electricity and magnetism insofar as the machines under consideration were concerned. The second of the series, entitled "Generators," was dealt with on January 28th. With the aid of blackboard diagrams, the construction and operation were explained.

The Graceville Radio Club has been invited to visit us during February, and an interesting meeting is anticipated.

Our new year greetings were extended to the Editor and staff of "The Queensland Radio News," the manager and staff of Station 4QG, and to the officers and members of all Queensland Radio Clubs and Societies, per medium of this paper. Our letter must have escaped attention of our good friend, Mr. Editor, so we take this opportunity to wish the above mentioned bodies increased happiness and prosperity during the coming year, and in many years to come.

(This letter was received too late for publication.—Ed.)



Wireless Aerials

Supplied, Delivered and Erected.
Good Timber, Solid Foundations.
Enquiries Invited.

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South Brisbane

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SCOTT ALEXANDER,
Comedies and Sketches.



A. S. COCHRANE,
Hello Man.



MONTGOMERY STUART,
Elocutionist.



D. M. BAXTER,
Tenor.

WIRELESS SUNDAY SCHOOL AT NEWMARKET

Quite a novel Sunday School was held recently on the occasion of the Sunday afternoon broadcasting by 4QG of the Newmarket Baptist Bible Class. A receiving set was installed in the Newmarket Baptist Church, and instead of the usual Sunday School

being held the children "listened-in" to their own Bible Class. The church was well filled, several adults also being present. Reception was good. This is possibly the first time that a Sunday School has been held by wireless in Queensland.

*You'll spend less for batteries—
You'll have better reception—*

When you buy Willard's you buy Batteries that last for years. Your investment in Battery economy is an investment in better reception, too, for these

Batteries are rechargeable. No need to tell the difference this makes in the quality of reception.

Obtainable from all Licensed Dealers

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Motor Supplies Ltd.

Where Adelaide and Boundary
Streets meet—Brisbane.

Willard

**RADIO
BATTERIES**

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Wireless Aerial 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.

We are experts and specially select the timber for this purpose. Write or Ring Desk A to-day, you will be surprised how little good Aerial Masts will cost you.

Rosenfeld & Co. (Q'ld.) Ltd.

"The Oregon Specialists"

TIMBER MERCHANTS.

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'Phone C. 5991.

"AENOLA" RADIO RECEIVERS

The Cheapest in Brisbane by far

Well built and remarkably cheap. Designed to give long range with clarity. Call and ask for a demonstration before purchasing high-price sets elsewhere.

NOTE THE PRICES:

Crystal	£3-0-0	3 Valve	£20-0-0
1 Valve	£9-0-0	4 Valve	£25-0-0
2 Valve	£4-0-0	5 Valve	£32-0-0

These prices include Dull Emitter Valves, Batteries, Headphones, Cabinet, Aerial Equipment and Coils.

Loud Speakers from £2 upwards extra.

Using a standard 4 Valve "AENOLA" Radio Set in Melbourne, music was received from Durban and San Francisco on several occasions, and was at times strong enough to work a loud speaker.

Your Choice will be an "Aenla"

A. E. NEWNHAM

Care of H. E. HOWCROFT,

FIVEWAYS, WOOLLOONGABBA

Phone J 2555.

A PEN PICTURE

(BY M. A. PRUDENCE, BRISBANE.)

To-day as I listen to the broadcasting of music and song my thoughts drift back to those grim days when the ether was filled with, not music, but poignant messages of distress, a jumble of Morse, Telefunken and Marconi, enemy and friend, secret codes and submarine warnings.

A cold bustering night with the salt tang of whipped spray, a pale moon peeping behind scudding clouds, sheds a pale radiance over the vast expanse of ocean, barely revealing a motley assembly of vessels purging through the rising sea, great black shapes, unrelieved by a light of any description, excepting here and there a dull red glow emanating from a funnel, as the "black squad" below stoke the furnaces.

Ships laden with the needs of a nation. Ships large and small, tramps mainly. French and Spanish, British and Brazilian, huddled together for safety, with the long grey slim destroyers like faithful watchdogs, steaming at a further distance to each side of the convoy.

It is midnight, aboard one of the ships a watch is just commencing; eight bells have struck. A stamping of feet on the bridge overhead my cabin, a murmur of voices, the doors opens and, admits the portly frame of the third mate, who yawns for a moment and then ambles below to a hot mug of cocoa and his bunk.

As no lights can be shown the sole illuminating of the wireless cabin, is a faint ray of light streaming through a hole in a discarded cigarette tin that is fixed over the bulb of the wireless table light, a miniature spotlight that sufficiently reveals the opened log book lying before the receiving instruments.

The noises die away. I readjust the telephones and receiver, light a pipe, reach for a pencil, and start jotting down the incoming messages . . .

The high-pitched note of a German land station, in code, then. "Allo. Allo. Allo. S/S C . . . Submarine sighted, no attack, sub diving." . . . silence for a while then the booming note of warship; a croaking Marconi station; faintly . . . British destroyers working code . . . Nantes sending submarine warnings . . . silence again.

Time passes. Calls are less frequent; a sense of drowsiness steals over me. The steady throb, throb of engines and the faint clanking of the steering rods alongside the cabin alone breaks the uncanny stillness. A troubled world seems peaceful again, well here anyhow, I shake off the drowsiness, light the pipe again.

Then suddenly it comes, cutting the ether with startling clearness. SoS. SoS. SoS. S/S W . . . torpedoed. Position . . . badly holed . . . come quickly . . . taking to the boats . . . hurry . . . Silence again. Then BWP the Azores Station repeating the SoS. . . The second mate enters the cabin with a mug of cocoa. "Have a drink, Sparks." How's thing, eh. Going to clear up a bit . . . his voice drones on . . . more commonplaces . . . Whilst out there in the vast sea, an unconvoyed ship alone—the travail of souls . . . a Tragedy of the Great War.

Home Assembly, Complete Set of Parts for Home Construction of any Style of Sets

1 VALVE SET.

	£	s.	d.
1 Bakelite Panel, 12in. x 9in. x $\frac{1}{8}$ in.	0	9	0
1 Valve Socket	0	4	6
1 30 ohm Rheostat	0	4	6
1 2-Way Coil Holder	0	10	6
1 .0005 Variable Condenser	0	14	9
1 Combined Grid Leak and Con-			
denser	0	3	6
1 Baseboard	0	2	6
8 Bakelite Engraved Terminals ..	0	3	6
1 Soldering Set	0	2	6
1 Set of Screws, etc.	0	3	6
1 Bakelite Terminal Strip	0	0	9
12 Lengths Bus-Bar Wire	0	2	0
	£3	1	6

1 Pair Headphones	1	1	0
1 42-Volt "B" Battery	0	12	6
2 Dry Cells	0	5	6
1 Dull Emitter Valve	0	17	6

Total £5 18 0

3 VALVE SET.

1 Bakelite Panel, 18in. x 9in. x 3-16	1	3	6
1 Baseboard	0	2	6
1 2-Way Coil Holder	0	10	6
3 Valve Sockets	0	13	6
2 30 ohm Rheostats	0	9	0
2 Audio Transformers, 5-1, 3 $\frac{1}{2}$ -1 ..	2	2	0
1 Combined Grid Leak and Con-			
denser	0	3	6
1 .0005 Variable Condenser	0	14	9
1 Single Circuit Jack	0	2	3
1 Phone Plug	0	3	6
8 Bakelite Engraved Terminals ..	0	3	6
1 Soldering Set	0	2	6
1 Set of Screws, etc.	0	3	6
1 Bakelite Terminal Strip	0	1	0
15 Lengths Bus-Bar Wire	0	2	6
	£6	18	0

1 Pair Headphones	1	1	0
3 Dull Emitter Valves	2	12	6
2 42-Volt "B" Batteries	1	5	0
3 Dry Cells	0	8	3

Total £12 4 9

2 VALVE SET.

	£	s.	d.
1 Bakelite Panel, 15in. x 9in. x $\frac{1}{8}$ in.	0	11	3
2 Valve Sockets	0	9	0
2 30 ohm Rheostats	0	9	0
1 2-Way Coil Holder	0	10	6
1 .0005 Variable Condenser	0	14	9
1 Combined Grid Leak and Con-			
denser	0	3	6
1 Audio Transformer, 5-1 ratio ..	1	1	0
1 Baseboard	0	2	6
8 Bakelite Engraved Terminals ..	0	3	6
1 Soldering Set	0	2	6
1 Set of Screws	0	3	6
1 Bakelite Terminal Strip	0	0	9
15 Lengths Bus-Bar Wire	0	2	6
	£4	14	3

1 Pair Headphones	1	1	0
2 Dull Emitter Valves	1	15	0
1 60-Volt "B" Battery	0	18	6
3 Ivy Cells	0	8	3

Total £8 17 0

4 VALVE SET.

1 Bakelite Panel, 21in. x 9in. x 3-16	1	3	6
1 Baseboard	0	2	6
4 Valve Sockets	0	18	0
3 30 ohm Rheostats	0	13	6
1 2-Way Coil Holder	0	10	6
1 Panel Plug	0	3	6
1 400 ohm Potentiometer	0	9	6
2 Audio Transformers, 5-1, 3 $\frac{1}{2}$ -1 ..	2	10	0
1 .001 Variable Condenser	0	18	6
1 .005 Variable Condenser	0	15	0
1 Grid Leak and Condenser	0	4	9
1 Double Circuit Jack	0	3	0
1 Single Circuit Jack	0	2	3
1 Phone Plug	0	3	6
1 Soldering Set	0	2	6
1 Set of Screws	0	3	6
1 Bakelite Terminal Strip	0	1	0
8 Bakelite Engraved Terminals ..	0	3	6
20 Lengths Bus-Bar Wire	0	3	4
	£9	11	10

1 Pair Headphones	1	1	0
4 Dull Emitter Valves	3	10	0
2 42 Volt "B" Batteries	1	5	0
3 Dry Cells	0	8	3

Total £15 16 1

J. B. CHANDLER & CO.

"For Radio Service"

ADELAIDE STREET, BRISBANE

(Next Allan & Stark Limited)

S.A.S.

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FOR SALE OR EXCHANGE

If you have anything to sell or exchange here is the place for it. A small charge of 1/6 per insertion (prepaid) for 3 lines (about 24 words) is made. Stamps in this case will be accepted. Address: "For Sale Column," "Queensland Radio News," Box 1095, Brisbane.

For Sale.—Complete Brand New 10-Watt Transmitting Set, adaptable for telephony, tonic train and continuous wave transmission. The outfit consists of a beautiful control panel, 400 volt generator, adaptable to A.C. or D.C., rectifier, filter and smoothing unit, rheostat, transformer, microphone, morse key, and two 5-watt Radiotron valves. Price, £40. Apply: A. W. Joss, C/- C.C.M., Creek Street, Brisbane.

For Sale.—A Four-Valve Set. One Radio Detector, Two Audio, built of standard parts, without accessories. Will demonstrate. Price, only £12. Apply: "Grid Leak," C/- "Queensland Radio News," Box 1095, Brisbane.

For Sale.—Five-Valve Receiver, of superior design, best parts used throughout. Owner has no further use. Price, without accessories, £16. Demonstration arranged. Apply: "Neutro," C/- "Queensland Radio News," Box 1095, Brisbane.

For Sale.—Two 35ft. Steel Tubular Masts (ammonia), complete with guys, strainers, flange, cases, aerial wires, spreaders, etc. Price, £7 complete. Apply: "Nollidea," C/- this paper, Box 1095, Brisbane.

One 4-volt, 60 actual A.H. "Exide" accumulator, new, in excellent condition for best offer. Reason for selling, charging facilities limited. G. Hughes, Box 4, Miles.

£12 buys 2-valve low loss all wave receiver complete in cabinet with all accessories except accumulator. Has received messages from England and many other countries also concerts from America. Holds several reception records. See DX list in August "Queensland Radio News." Also quantity other apparatus cheap. Particulars from Harold Hobler, A-4DO, Lennox Street, Rockhampton.

Will Sell or Exchange for good Radio Gear, the following: Winchester Rifle, Sandow Developers, Punching Ball, Chest Expander, Medical Battery (for medical use or sport). Apply "Ex-Sandow," c/o This Office, Box 1095, G.P.O.

CORRECTION.

In our last issue (on page 1), we referred to the Radio Inspector for Queensland as Mr. Goodall. This was an error. As is generally known Mr. T. Armstrong is Queensland Radio Inspector, and it was he who appeared in the photograph.



WINCHESTER Radio 'B' Batteries

22½ Volt Size

13/-

See these famous Batteries in our Windows and Show Cases, or if out of town write us for further particulars.

45 Volt Size

26/-

Install the WINCHESTER 'B' Battery for Longer Service

The most troubles connected with Wireless Receiving Sets can be traced to "B" Batteries. Install a Battery that is guaranteed—such as WINCHESTER "B" BATTERIES and you eliminate most of your Radio faults.

WINCHESTER "B" BATTERIES carry a shelf guarantee of 12 months—no other Battery can give such a guarantee.

AMICO [Q'LAND] LTD.

"Brisbane's Electrical House"

Queen Street, Brisbane



RADIO SMILES

Mrs. Brewster: "John, that woman broadcasting has a voice just like mine, hasn't she?"

Mr. Brewster: "Yes, just like yours! We will see if we can't get somewhere else, my dear."

Mum Woop (seeing electric signs for first time): "What's that, dad?"

Dad: "Must be one of them wireless sets on fire."

Boy (looking in radio dealer's window): "Dad, I wish I was you."

Dad: "Why? my son."

Boy: "Well, if I were you, I'd buy you one of those wireless sets."

SOME AERIAL.

Mistress (to new maid): "How is it, Mary, you have not swept the cob webs off the corners of the ceiling?"

New Maid: "Why, mum, I thought they belonged to the wireless."

A MODERN BEDTIME STORY.

"Once upon a time there was a flapper who bought a new evening frock, placed it carefully in a drawer and locked it. A poor little moth who lived in this drawer was also locked in. Days went by and the poor little moth starved to death and the flapper lived happily ever after."

"They say she's frightfully strict with her husband."

"Rather; so ridiculously narrow-minded—she won't even let him get Paris on the wireless!"

ROCK CAKE.

Wife: "How do you like my cake? I got the recipe over the radio; it's a western idea."

Husband (trying to bite into the cake): "That recipe must have been broadcast through the Rocky Mountains, then."

DON'T!

Hump Your Battery to the
Charging Station—

IF—

You are living in the South Brisbane area and adjacent Suburbs, we will call for and deliver same promptly. We charge and repair any battery.

Phone J2350

J. E. DYNE

Exide Service Station

525 Stanley Street, South Brisbane.
Near Vulture Street.

The Bed-time Story Tellers at 3LO



Left to Right: Lady Greensleeves, Miss Kookaburra, Mary Gumleaf, Billy Bunny.

BEDTIME STORIES.

Gradually wireless is extending its scope, and the various broadcasting companies are catering now for every type of listener-in. All the world, from the cradle to the grave, can now listen-in and be sure of hearing something, either highbrow or lowbrow, that will interest it. Even Jojo, the sleek white donkey which Marie Burke uses in "Wildflower" listened-in the other day. He didn't say anything; but he looked pleased. And so, from granny who secretly enjoys the latest jazz music, to baby who likes the noise, there is something in wireless to appeal to everyone.

Children, for example, are especially well catered for, and 3LO, Melbourne, has combined the newest way of telling stories and the very oldest form of story with excellent results. It has two tellers of fairy stories broadcasting on various nights; and they have brought a new joy into the lives of the children. Not many parents can tell a good fairy story, and still fewer have time to tell them, even if they could; and so the wireless has filled a long-felt want.

Hundreds of letters each week are received at the 3LO Melbourne studio from children—all enthusiastic, and all saying how much they look forward to the stories. The letters vary amazingly in quality; but not a bit in sincerity. They come from far and near: from Tasmania and South Australia, and the far outback, and letters have been received from lonely stations in Queensland. The letters of the bush children are almost pathetic in their gratitude. One little chap, far away in a lonely outback district, writes that he can only hear the bedtime stories one night—on Sunday—as he has to walk five miles to and from school, and gets home too late to hear

the stories on other nights. Another little girl tells of the difficult bush life. Her father is short-handed, and her mother is away ill; and so, to help him, she is learning to milk. The wireless is their only form of entertainment.

But the bush children do not have all the hardships. A little town girl, in a pathetic letter, says that she has been in bed now for two years, because of an injured leg; but the wireless, and especially the bedtime stories, have made her very happy, and she thinks about them and looks forward to them all day, as she lies in bed staring at the ceiling. Another lonely little girl has no father and mother and no one had ever told her a fairy story before. She was so grateful to "Billy Bunny" that she bespattered the whole page with crosses, and offered to send him her doll!

Many of the letters, on the other hand, are quaintly humorous, as the children quite take "Billy Bunny" and "Little Miss Kookaburra" into their confidence, and seem to look on them as auxiliary parents. One youngster writes:—"I had meesles and couldnt lisen in. I got spanked for coming out cos I wanted to hear your story so bad. The doctor gave me a glass thing to suck. I blew hard to make the needle inside go up, and it went up, and the doctor thought I was going to die, and then my father spanked me again." His is a hard life.

A small girl writes:—"My father says that 3LO Melbourne is so loud he will have to put some more nails in the roof to keep it on." Another writes:—"I am going to write these few lines to let you know how I like your stories. Will you tell me more of that Magic Circle story I simply like them. I am six to-morrow, and I must go to bed—Good night." Another has a novel way of finishing up. She describes a visit to the fleet, and ends: "The people when they were coming back they stood on my toes with love from—." Another ends: "I am a gurl 7 and a harf love from—."

What these bedtime stories mean to the children and what they think of the people who tell them is expressed in the following letter from a parent:—"My little daughter wrote a letter to you about a week ago, and she has been listening very attentively each evening except one (when we could not use the wireless), and so we think you may have answered her letter on that very evening. I would not trouble you to answer it again, only you know how much it means to these little ones—their eyes open wide and glisten with pleasure when they hear their names called by you, and you are a very real personality to them, and very dear. . ." Presents of anything from flowers to knitted scarves are constantly being received at the studio as marks of gratitude from little listeners-in. And there is no doubt that both the tellers of stories and 3LO Melbourne have earned the gratitude of both children and parents.

LEARN CODE QUICKLY. A new, easy, positive and fast method of learning Morse Code. Simple instructions enable you to enjoy hearing the world's code traffic. Also full list of abbreviations and intermediate call signs all countries. Send postal note, two shillings, to Box 1055, G.P.O.

WILL "ANY" VALVE DO?

In wireless shops I have been very greatly surprised indeed at the attitude of Mr. X when he wants to buy a valve. Mr. X, I should explain, is the wireless "man in the street"; he is the average enthusiast, neither expert nor yet absolute beginner, who uses his set on most evenings of the week for the purpose of receiving broadcast transmissions. He knows quite a bit about wireless; the three-, four-, or even five-valver that he has made at home is a piece of work that no one would be ashamed of. He may have views of his own upon such subjects as loud speaker distortion, reaction, and the shunting of audio-frequency inductances. Yet when he goes out to buy a valve he is apt to set about this important business as lightly as if he were purchasing a box of matches or a new pair of bootlaces.

BUYING A VALVE.

He enters a wireless dealer's shop, "I want a valve," he says. "Yes, sir. What make did you want?" "Oh, just let me see what you've got." The assistant produces various standard types, and possibly a few cheap (and frequently nasty!) importations. Mr. X looks them over, selects one, asks if it is a good laster, and on being told that it is, buys it. To him, apparently, all valves are alike so far as their performances are concerned; the only important difference is that some expire, after a momentary display of bluish-purple light, in a shorter time than do others.

Now, does the man who buys valves in this haphazard kind of way get the best out of his set or the greatest value for his money? Most emphatically he does not. If he is lucky, quite respectable results may come his way; but in the majority of cases, though he saves nothing in the original cost by buying in happy-go-lucky fashion, his reception is never more than mediocre.

WHAT A VALVE DOES.

Consider for a moment what valves do. They have three quite separate and distinct functions in the set. The high-frequency amplifier receives upon its grid oscillations whose frequency, even upon the broadcasting band of wavelengths, may be anything up to one million a second! The higher the incoming frequency the more noticeable are the evil effects of interelectrode capacity within the valve.

If a valve with a high capacity between its grid and plate is selected for the radio-frequency side of the set, reception on the shorter waves can never be satisfactory. Then there must be a certain flow of grid current when the grid is at its normal working potential in order that stability may be obtained. Without it the set is perpetually falling into self-oscillation.

The rectifier has an altogether different duty to perform. It receives magnified oscillations at radio frequency from the valve or valves in front of it and converts them into rectified pulses at audio frequency. For successful grid leak and condenser



For the Best Results Use an

"Exide"

WIRELESS BATTERY

Exide Batteries mean a silent and clear reception of all Radio Broadcasting. They are reliable and provide a steady current.

Instal an Exide and you are sure that this part of your equipment is of the highest efficiency.

Exide Batteries are made in England by the largest manufacturers of Storage Batteries in the world.

EXIDE BATTERY SERVICE [Q] LIMITED

Queen Street :: Perrie Bight

BRISBANE

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rectification a heavy flow of grid current is essential when the grid is set at a slightly positive value.

NOTE-AMPLIFIERS.

The note-amplifiers deal with rectified impulses at speech frequencies, their role being simply to magnify them without any trace of distortion. Here, since oscillations take place at a comparatively low frequency interelectrode capacity does not greatly matter; but it is of vital importance that the valve should be capable of working about a point in its characteristic curve at which there is no flow of grid current. Should the straight portion of the curve be too short, or should grid current pass, there will be distortion of the most horrid kind.

The man who does not care to devote a little of his spare time to the study of the little idiosyncrasies of the various valves on the market will perhaps do well to confine his purchases to "general purpose" valves made by a manufacturer of repute. With these if they are intelligently used, quite good results are obtainable.

But since there are now "special purpose" valves available at no greater cost than others, why should we not make use of their particular qualities? The general purpose valve can, at best, never be more than a compromise. One can imagine a nondescript dog of fair size being trained to course hares, to kill rats, or to retrieve. All of these things it would do fairly well, but a greyhound, a thoroughbred terrier, and a retriever would be at him handsomely every

time it matched against him in its particular speciality. The general purpose valve performs the three functions required of it about as well as the lurcher dog acquits himself at coursing, ratting and retrieving. The special valve has one definite duty, and performs it as well as the specialised dogs mentioned perform theirs.

FOR SPECIAL PURPOSES.

The wise amateur will select valves intended for particular purposes, just as he uses a pair of strong boots on a wet day, light shoes in hot weather, and comfortable slippers in the evening. No one form of footgear could give complete protection and comfort on all occasions, and no single type of valve will produce the best results in all parts of the set.

ADVICE.

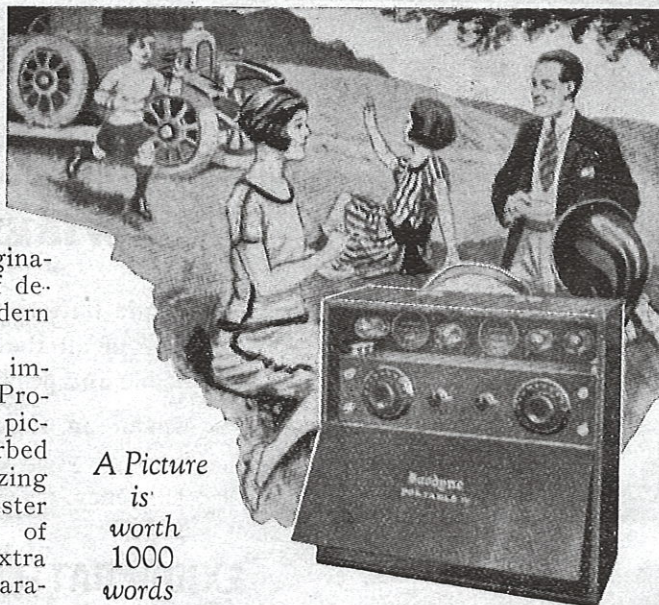
My advice to the thinking amateur is this: Go for the specialised valve. Use it sensibly and your results will show an enormous improvement. Use something designed for the purpose that you want it to fulfil. Be discriminating in your choice, and do not take the first thing that is offered to you. Above all never buy a valve just because it is cheap.—R.W.H. In "The Wireless Magazine."

Pictures Talk

*where words
fail*

Illustrations that stimulate the imaginative faculty and implant the seeds of desire are the strongest force in Modern Advertising.

The development of technic and the improvement in methods enables the Process Engraver to produce realistic pictures in a form that is readily absorbed by the masses. The Advertiser utilizing the services of Members of the Master Process Engravers' Association of Queensland has at his command an extra and powerful sales force—for a comparatively small yearly outlay.



A Picture
is
worth
1000
words

The Master Process Engravers' Association of Q'ld.

MURRAY FRASER LTD.,
Charlotte Street, Brisbane.

S. A. BEST LTD.,
Gipps Street, Valley.

THE PRESS ETCHING CO., LTD.,
Charlotte Street, Brisbane.

2BL STUDIO NEWS

On January 22nd last, Dan Thomas, the world-famous pantomime dame, delighted the listeners-in with his quaint and irresistible humour transmitted by 2BL. Already Mr. Thomas has made for himself an enviable reputation as a wireless entertainer. On the same evening there was heard Miss Margaret McKenzie, possessor of a beautiful mezzo soprano voice, and Broadcasters' Brass Quartette in numbers from their repertoire.

Unique among the provision of musical items to assist in producing the atmosphere for a moving picture, is Hoyt's Imperial Orchestra. In addition to delighting the patrons of Hoyt's Theatre, this orchestra assists to entertain many thousands of listeners-in when put on the air by 2BL.

Monday night is one of 2BL's special Jazz Nights. On January 25th, the programme opened with the Ambassadors Instrumental Salon Quartette in classical numbers, and was followed by the combined orchestra (directed by Mr. Hammett) in jazz numbers. Dance music continued until midnight. More and more home entertainments are being organised which take advantage of the opportunity of obtaining dance music of the highest order per medium of wireless.

One of the most delightful combinations of human voices possible to imagine, is that of a contralto and a tenor. From 2BL's Studio on January 26th, a song Cycle was broadcast, comprising solo and duet numbers by Miss Myra Gillon and Mr. Norman Wright. These two voices blended beautifully.

On January 27th, jazz music from the Embassy Dance Palais was broadcast. Elliot and Edwards were heard in harmony numbers, and the Honolulu Duo presented steel guitars and other instruments. Instruments of the ukelele type continue to please, and as presented by the Honolulu Duo, something of the glamour and the magic and the moonlight of the Pacific Islands is brought home to the listener-in. Another fine combination heard from 2BL comprise Miss Myra Millie Hughes and Mr. Ray Beatty. These artists are often heard in solo and duet numbers.

Steadman's Welfare Society presented their first annual concert at the Australia Hall, on January 28th, and the whole programme being transmitted by 2BL. Assisting artists comprised Miss Heather Kinnaird, Miss Dorrie Ward, Mr. W. E. Lewis, Miss Edith Dickerson in songs at the piano, and a humorous entertainer in the person of Mr. Fred Gooch.

Miss Dulcie Blair, well known as a solo violinist, and also by her fine work as a member of Broadcasters' Instrumental Trio, has returned to Sydney after spending a holiday in Albury and has resumed work.

A series of Astrological Lectures under the general title of "Astrological Aids to Characters," is being broadcast by 2BL, and delivered by Mr. Fraser Anderson, President of the Astrological Association. As there is a good deal of popular interest in this age, old and much misunderstood science, listeners-in will be glad to avail themselves of the opportunity of hearing a thoroughly competent exponent.



Famous Symbols The World's First Valve Was Made by EDISWAN



A.R. Bright Emitter	10/-
R. Bright Emitter	10/-
A.R.06 Dull Emitter	18/6
A.R.D.E.	15/-
P.V.5.D.E. Dull Emitter (power)	22/6
P.V.6.D.E. Dull Emitter (power)	25/-

Stocked in English and American Caps
by all Wireless Dealers, or wholesale
from

The Edison Swan Electric Co. Ltd.

Adelaide Street, Brisbane

Use the Famous

Ediswan Valves

[ALL BRITISH]

and Hear Everything



TYPE A. R.
Plate Voltage, 30-80.
Filament Voltage, 4.
Normal Filament Current
0.75 amperes.



TYPE A. R. 06.
Filament Voltage, 2.5.
Plate Voltage, 20-50.
Filament Current, .06 amperes

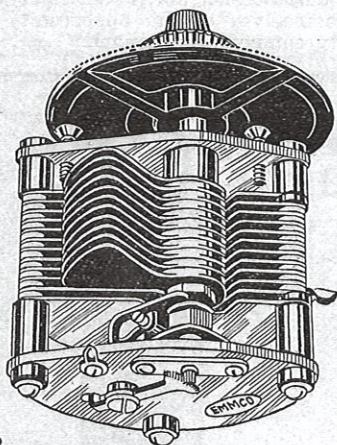
&

The
Staff
at
Temporary
4QG

&



Back Row (left to right): Mr. L. L. Sheil (Accountant), Mr. W. F. Barden (Assistant Engineer), Mr. F. W. Stevens (Chief Engineer), Mr. N. A. Cooling (Announcer), Mr. H. Scott MacCallum (Musical Director).
Front Row (left to right): Mr. C. Moran (Cadet Operator), Miss M. E. MacFarlane (Director's Secretary), Mr. J. W. Robinson (Director), Miss C. H. Archdall (Typiste).



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RADIO PRODUCTS

GUARANTEED LOW LOSS CONDENSER. All capacities with direct vernier. Built like a watch. Most minute adjustment. Absolute insulation. Grounded rotor metal end plates. Straight line wave length. Square Law.

EMMCO PRODUCTS

“Australian Made” *Is not an Appeal to the Heart*

There is a sound commercial reason why you should favour Australian made Radio parts.

“EMMCO” products, manufactured by the firm that produces the famous “Beta” Electricity Meters, have proved that what other countries can do, Australia can do better.

The “EMMCO” Condenser displayed here is an example of how careful workmanship and modern production methods can produce the equal of any highly priced overseas article at a cost well under the price usually asked for radio parts of its high quality.

Our other radio products are distinguished by the same moderate price and delicate finish that should be the two very sound reasons why you should favour Australian made.

A list of “EMMCO” products and prices will be forwarded on application to the manufacturers.

ELECTRICITY METER MFG. COY.
16-22 Australasian St., Camperdown, Sydney

QUEEN RADIO SETS

For discriminating buyers who require purity of tone, together with good range and selectivity, our Sets are comparable with the most expensive imported Sets.

TWO VALVE SET

which will work a Loud Speaker under favourable conditions around Brisbane, complete with all accessories.

£16

THREE VALVE SET

complete with accessories, and good loud speaker. For excellent results on 4QG, and on the Southern Stations when conditions are favourable.

£28-10-

FOUR VALVE DE LUXE SET

with all accessories and B.T.H. Loud Speaker.

£46

J. T. Greenlees & Co.

87 CREEK STREET, BRISBANE

MELTON'S

For Radio Requirements

We stock only proved and reliable material. Freakish and unpracticable apparatus find no place on our shelves.

The famous STROMBERG CARLSON and COLIN R. KENNEDY Receivers solve the problem for those requiring a de luxe set, whilst the Five Valve RICO-DYNE at £24, stands alone amongst the lower priced outfits.

Whether you require advice on set building, or whether you wish to purchase a set ready to operate, our advice is always at your disposal.

COUNTRY CLIENTS are especially invited to write to us. Prompt attention assured.

Melton & Co.

8, QUEEN STREET, BRISBANE.

If it's of Steel—We'll build it

If you are contemplating the erection of a building, Wireless Masts, a travelling crane, bakers' oven fitters, or any thing that is built essentially of steel, see us about it.

And, for some years we have been making Steel Flood Boats. These have been bought mostly by squatters and shire councils where floods are prevalent.

Their value lies in the fact that they are puncture proof, cannot leak or water log, or dry out, or open at seams. As evidence that no job is too big for us we remind you that we built the gigantic Wireless Masts on the roof of the State Insurance Building, Brisbane —4QG Broadcasting Station.

Ask us to submit you a price.

HARVEY & SON

"Staunch Service"

Structural Steel Engineers

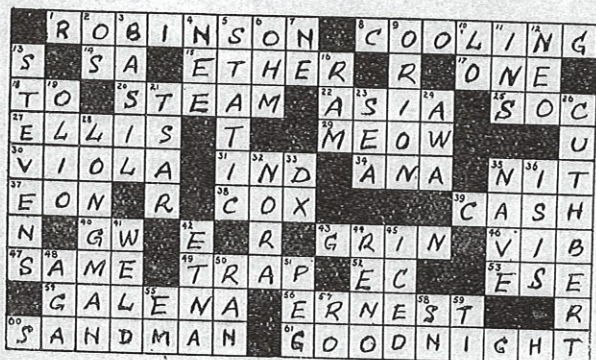
MARGARET ST., BRISBANE

S.A.S.

When Replying to Advertisers, kindly mention this paper.

The Cross-Word Puzzle

Great Interest Displayed



Remarkable interest has been displayed in our second Cross-Word Puzzle, no fewer than 447 replies being received.

The drawing took place on Saturday, January 30th, when the compiler (Mr. Dean, of Eagle Junction) shuffled the envelopes (face downwards) in a long shallow box, and proceeded to open the envelopes.

Quite a few envelopes were opened before a correct solution was secured. The first correct puzzle opened bore the signature of:—

A. G. SAMSON, Marley Street, South Brisbane,

and we heartily congratulate this gentleman. A cheque for £2/2/- will be forwarded to him. It was indeed interesting to wade through the huge pile of answers, and observe the wide area which our paper covers. One reply hailed from New Zealand, others from Victoria, New South Wales, while another carried the post mark of Port Darwin. Northern, Central, and Western Queensland were well represented, while over 200 were from amateurs within a 20 mile radius of Brisbane. We hope to run another Cross-Word Puzzle Competition at an early date.

GIANT LOUD SPEAKER.

The world's largest loud speaker is being built in Germany. It will be used experimentally to supply music over an area of about half a mile, though the makers anticipate that it will be heard at a much greater distance. The giant instrument will have three bell mouths, each 40ft. across and 110ft. in height. Only four valves will be used, but music will be amplified 200 times.

TRADE QUOTES TO DEALERS SETS
TO OWN CIRCUIT.

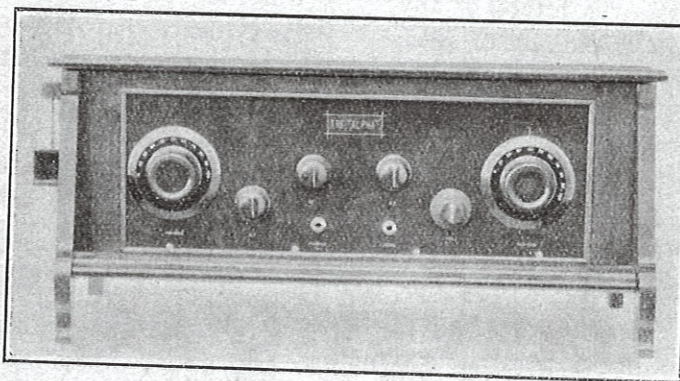
INSTALLATIONS AND TUITION FREE.
EASY TERMS IF REQUIRED.

THE "ALPHA" SETS

As the Name Implies are Right in Front. No Trouble—Great Volume—Easy Controlled

Quotations:—
Everything Included

- 1 Valve £9/10/-
No Loud Speaker.
- 2 Valve with L.S.,
£18/15/-.
- 3 Valve with L.S.,
£24/10/-.
- 4 Valve, A.R.19,
loud speaker, £35



5 Valve, A.R.19,
loud speaker
£38/10/-.

6 Valve A.R. 19,
loud speaker
£55/10/- Very
superior.

All in Silky Oak
or Maple, beauti-
ful finish. First-
grade fittings. "A
thing of beauty
and a joy for
ever."

Alec. McCulloch & Co.
King House, Queen Street, Brisbane

Sets Altered or Re-
paired. Absolutely
best Workmanship.

When Replying to Advertisers, kindly mention this paper.

Questions Answered

J.B., Goombungee.—The paragraph is correct. You will observe that the grid of the fourth valve is connected through the secondary of the transformer to the negative filament wire which passes along to the common negative battery terminal, the end where it enters the coil is the one marked G on the transformer by the manufacturers, and the other end is marked F. Regarding paragraph seven referred to, this should be quite clear. If you connect the terminal marked G on the transformer on to the one marked G on the valve socket following it, and the transformer terminal marked P to the one on the valve socket marked P, and so on, you cannot go astray. The low potential end of the coil is the earth end.

C.R., Brisbane.—The grid return from the detector valve is connected to the positive filament wire so as to apply a positive charge to the grid in order to set up grid currents for rectification purposes. An article in rectification will appear in an early issue. The opposite connection on the radio frequency valve is to stop rectification as far as possible in that valve, and to keep it amplifying on the straight portion of its characteristic curve, this being determined by the normal grid potential, thus eliminating distortion which would otherwise be caused in the radio frequency amplifiers.

R.E.I., Brisbane.—There is no way of remedying the defect. However, you may possibly do it by lighting the filament, and by gently tapping the valve so that the taps tend to move the heated filament away from the grid.

W.H.A., Oxenford.—The position which you marked on the diagram was the correct one for the crystal detector, i.e., between the end of the transformer winding and L₃. Polar condensers are quite suitable; their construction giving a vernier adjustment. Try a 1 megohm leak in place of the 100,000 ohms resistance. For best results the leak should be variable. Also try reversing the connections to the crystal detector. It is unwise to use 4.5 volts on the filaments of the 3 volt valves which you use in the set. The filaments of these valves are specially treated, and have a coating of thorium which gives a greater electron emission at a lower temperature. Excessive voltage would burn the thorium off the filament, tending to greatly decrease the emission and consequently the efficiency of the valve. When the crystal is disconnected in your set, it simply functions as a P.I. circuit. We gave this circuit a reasonable test, and were not favourably impressed with it. While you will no doubt rectify your trouble by reversing the connections to the crystal, providing of course, that the remainder of the wiring is correct, and the valves have not been ruined through excessive filament voltage, we are unable to make any further suggestions without further details of your experiences. The C battery is only necessary when an excessive plate voltage is used on the amplifiers.

G.T.McG., Upper Barron.—We are afraid we are unable to help you much without a diagram of the wiring of the set particularly of the parts preceding the first valve. We are inclined to believe that there is a wrong connection somewhere. The design of the set moreover appears to be unsuitable for Australian conditions. Regarding the type of coupler you mention, we regret that we have no experience with these, and consequently cannot advise you on the matter. Your description of the alterations made to the filament is incomplete. Please describe in detail, submitting sketch if possible so as we can correct.

I.S.McL.—Station 8AC is installed on a Ford motor car travelling at present, we believe, in the Northern Territory. It is operated by Mr. John Flynn, of the Australian Inland Mission. The diagram you request is not available at present.

F.N.R., Avon Downs, N.T.—We would not advise the use of Leclanche type cells for radio "B" battery use. The price at present is something over 6/- for a one-volt cell, and the cost of upkeep is also very considerable.

A. G. MYERS & CO.

719 Stanley Street

(opp. Railway Yards)

South Brisbane



Crystal Sets

Assembled and Unassembled.

Valve Sets

Complete or Ready to Assemble, 1-5 Valves.

Valves—Phillips, Ediswan, &c., &c.

Accessories of All Descriptions.

Also All Electrical Supplies Stocked.

Gramophones and Records

Also in Stock.

JOIN OUR GRAMAPHONE RECORD EXCHANGE

It Will Pay You.

Consult Us when Quality and Service
in Trouble. Our Motto

Roberts' Exhibition Wireless Cabinets

A well-built, finely polished Cabinet, will make all the difference to the appearance of your set.

We build Wireless Cabinets of Maple, Silky Oak, or Rosewood, to any size, and polish them in any color. The cost is very reasonable. Call and see us.

To Those in the Country

To facilitate packing we supply "knock-down" Cabinets, cut and polished, ready to screw together. Write us for prices.

HENRY ROBERTS
BRUNSWICK
HOME FURNISHERS

BRUNSWICK ST. - OPP. JACKSON'S BOND
STORES NEAR EXHIBITION - VALLEY - BRISBANE

SAVE
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HUDSON'S

HUDSON'S

For Wireless Sets and Accessories

Single Valve Set, £7/10/, complete.

Two Valve Sets, £14/10/., complete.

Three Valve Sets, with Loud Speaker,
£25, complete.Crystal Sets, made specially for 4QG
Brisbane, from 35/., complete.

All Latest Records Stocked.

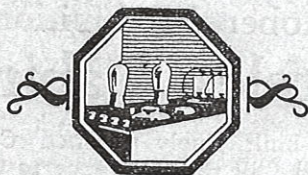
Talking Machines from £3/7/6.

Gramophone Repairs Speciality.

HUDSON'S Gramophone Shop

354 GEORGE STREET, BRISBANE.

(Opp. John Hicks).



RADIO FANS

Make a note of this: Chris Turner Ltd. execute Fine Press Work and Lathe Work for Radio Parts at most reasonable prices.

General Stamping to The Trade
Get in touch with us. We are experts and **GUARANTEE YOU SATISFACTION.**

CHRIS TURNER LTD.
GIBBON STREET, W'GABBA.

Phone, J 4305.

Correspondence

C/- "Courier,"
December 23, 1925

The Editor,
"Queensland Radio News,"

Dear Sir,—

I thought it may interest you to hear of the success I have had with my three valve portable receiver, designed and constructed by myself from the circuit published in "The Queensland Radio News," of March last, describing a set used by Brien Lawrence, of the Diggers Co. (one stage radio; detector and one audio), the only alteration made being the addition of a reaction coil and a variable grid leak. I have made the set self contained—batteries, valves, phones, loudspeaker, and frame aerial all being included in the one case so that the case can be closed up completely when the receiver is in action. Using the receiver as it stands (with no outside aerial), 4QG comes in fairly well on the loudspeaker (a Dragonfly) while 3LO can be tuned in on the phones quite distinctly, any night. With an outside aerial, Stations 2FC, 2BL, 2KY, 2UG, (or 2UE), 2LO, 3AR, and 5CL (Adelaide), have been received all on the one night. The local station, 4QG, being entirely eliminated in each case except 5CL. This station cannot be received while 4QG is broadcasting by any set in Brisbane as far as I know. Good loudspeaker volume is obtained from 3LO, and fair speaker volume on 2BL, while 2KY was also tuned in on the loudspeaker during testing under a class condition. In each of the other cases loud phone strength is obtained. To those who complain of their sets not being selective, I can thoroughly recommend this circuit to them.

Should any "doubting Thomas" disbelieve the present capabilities of my receiver I do not think I will have any difficulty in arranging a demonstration with the new owner (the receiver now having passed out of my hands).

A. H. SMOUT.

Mr. G. A. Campbell, of Stanley Street, South Brisbane, has had a long experience in radio and electrical work. He has been in the electrical business practically all his life and built his first receiver in England in 1909. He came to Australia in 1912 and put an aerial up in Sydney in 1913, and was experimenting until 2BL started transmitting. Mr. Campbell then made receiving sets a commercial proposition.

WIRELESS POLES

Hardwood and Oregon Pine Wireless Masts delivered and erected. Three coats white paint, well-finished, and fitted with special hardwood base. These poles will stand for a lifetime. Ring J1976 for particulars.



E. ROWDEN
EARL ST., THOMPSON ESTATE
SOUTH BRISBANE

Phone J1976.



Super Radio Frequency Transformer

— 30/- —

Points of Superiority!

1. Gives constant amplification over a wide range of wavelengths without adjustment.
2. No switching or other mechanical device is used in the A.W.A. Super R.F. Transformer.
3. The elements have been made moisture-proof by sealing in an insulating compound.
4. Efficient electrostatic and magnetic screening has been provided for in the container, and the aim has been to reach perfection in the mechanical and electrical construction.
5. **GUARANTEE.** We undertake to make good any defect in the A.W.A. Super Transformer that may arise within ninety days of date of invoice in respect of either material or workmanship, provided the apparatus is not tampered with, and is returned to us carriage paid and duly advised.

Our responsibility is limited to making good the defect free of charge.



At all Radio Dealers

Amalgamated Wireless
(Australasia) Ltd.

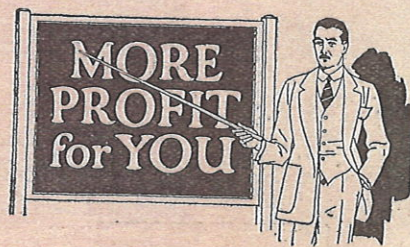
97 Clarence Street
SYDNEY

167-9 Queen Street
MELBOURNE

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The Lowest Prices for Quality

This is our motto, and we live up to it by giving our customers the full advantage of every market advantage enjoyed through our immense buying power. Our stocks have been further augmented by additional shipments of high grade radio equipment. Here are a few extracts from our new 1926 Catalogue, which will be off the press very shortly.



"More profit for you" means less profit for us—of course. But we are content to build our business on large turnover and smaller profits than other stores—for by this policy we aim to win and hold your patronage.

AERIAL WIRE.

3/20 H.D.C., 100 feet	2/9
3/20 Enamel Covered, 100 feet	5/-
7/22 H.D.C., 100 feet	7/6
7/22 Enamel Covered, 100 feet	8/6
Indoor Brass Spring Aerial	6/-

INSULATORS.

Best English Porcelain Egg Insulators, each	2d.
Best English Large Type Egg Insulators, each	6d.
Best English Porcelain Lead In Insulators, gin, ea	3d.
Best English Porcelain Lead In Insulators, Curved, each	4d.
Insulated Screw Eyes	3d.

"B" BATTERIES.

Hellesen 22½ Volt, each	7/6
Hellesen 36 Volt, each	10/6
Hellesen 45 Volt, each	14/-
Hellesen 60 Volt, each	18/6
Eveready 42 Volt, each	12/6
Eveready 60 Volt, each	18/-
Columbia 45 Volt, large capacity, each	22/6
Winchester 45 Volt, large capacity	26/-

CRYSTAL DETECTORS.

"Grip" Detector for Panel Mounting, each	1/6
Horizontal Glass Barrel Type, each	3/-
"A.W.A." Glass Barrel Type, each	4/9
Grodan Pericon Detectors, each	4/9

RHEOSTATS.

H. & H. Rheostats 30 ohm, with Dial, each	6/-
Frost Metal Frame, 35 ohm, with Pointer, each	6/-
Frost 6 ohm Bakelite (Vernier), each	10/-
Frost 35 ohm Bakelite, each	9/-

Our Technical Department is at your service—if you are experiencing trouble with your set, bring it to us without delay, and save further annoyance. We will make an inspection of the set, and give you the necessary advice for remedying the trouble, or if you desire we will re-wire and overhaul your set at a nominal cost.

CORDS.

Telephone Cords (Double) with Pins, each	6/-
Loud Speaker Cords, 6 feet, each	2/6
Loud Speaker Cords, 10 feet, each	5/3
Loud Speaker Cords, 20 feet, each	7/6
A and B Battery Cords (5 Leads), with Clips, set	7/6

JACKS.

"B.M.S." Jacks Open Circuit, each	2/9
"B.M.S." Jacks, Double Circuit, Fan Tailed Lugs, each	3/6
"Mirra" Open Circuit Jacks, each	2/9
"Millimeter" Double Circuit Jacks, each	3/3
"Millimeter" Single Circuit Jacks, each	2/6

LIGHTNING ARRESTERS.

Electrad Arresters, each	4/-
Muter Arresters, each	3/6

VALVE SOCKETS.

Standard R. Sockets, Panel Mounting	1/6
Standard R. Sockets, Table Type, each	2/- and 2/6
H. & H. V.T. Sockets, Bakelite, Rubber Feet, each	5/-
H. & H. U.V.199 Sockets, Bakelite, Rubber Feet, each	4/6
Weco Valve Sockets, each	3/6

MISCELLANEOUS.

Spaghetti Tubing, yard	9d.
Liquid Spaghetti, All Colours, bottle	1/9
Ear Pads, Sponge Rubber, pair	3/-
Square Busbar Wire, feet	1d.
Phone Tips, N.P., pair	2d.
Soldering Lugs, Various Types, dozen	6d.



Wireless House Ltd.

Brisbane's Oldest Established Radio Supply House

ADELAIDE STREET, BRISBANE

(opposite Normal School)