

# Marketplace

Members wishing to advertise in the next issue should ensure that their ads reach the Editor by the 21st April, 1989. There is no charge for this service but please be sure to include your name, address and phone number. **NOTE** - no verbal or telephone ads will be accepted. The NZVRS is not responsible for any transactions between members. Address ads to: The Editor, NZVRS Bulletin, 281-C Hillsborough Rd, Mt Roskill, Auck.4

## AVAILABLE

For Sale: Emerson console, 6-valve, good condition \$150; Rolls table model \$50; STC table model \$50; GEC Super 6 receiver \$60; Courtenay model 65 \$50; Ultimate table model \$40; Wells Gardner (Gulbransen) \$50; Philips mantel battery set (cabinet restored) \$50 plus 17 other non-goers with good cabinets, including Courtenay, Little Aristocrat, Ultimate, Philips, Radion, Pilot 43B, Columbus 14A (two), etc; also Jackson model 636 tube tester in going order \$35. Purchasers pay freight. Dale Felmingham, 3 Gilbert Rd Paroa, Greymouth. Ph: Paroa, Greymouth 26-876.

Valves, several hundred dating from 1930s onward, ex deceased estate. Out-of-Auckland offers for the lot only welcome. Write for list. Eric Kirby, 10/29 Owens Rd, Epsom

Auckland 3  
General Radio signal generator 9kc - 30 MHz; Cromwell model 531; Courtenay model 36. Neville Grubner, 27 View Rd, Titahi Bay Wellington, Ph.(04)366661

Valve cartons - tidy up, protect and index the valves in your collection by using plain unprinted valve cartons, finding the valve you require become very easy. Four sizes available - Small (EL41 etc) \$10 per 100, GT size \$10 per 100, Medium (24A etc) \$12 per 100, Large (5Z3 etc) \$18 per 100. Paul Burt, 44 Hastings St. West Christchurch 2.

Radios - Skyscraper RU (p.73 Golden Age); Gulbransen 5K (p.102 Golden Age); A K 356 (p.92 Golden Age); Stewart Warner R-119 (p.125 Golden Age); Philco 710P; Gulbransen model 7G. All in excellent condition. Don Strange, 10 Pendlebury St, Titirangi  
Ph. Auckland 817-8611

For sale or disposal, AK 145, chassis and speaker good, was going, damage to cabinet top, knobs missing; Console cabinet for AK 145, has a couple of extra holes on front, some borer (treated); Columbus 90 chassis and speaker; Capehart (US) R/Gram chassis, FM-AM, 117-volt, 10-valve with 12" speaker in good working order; chassis and dial escutcheon for Radion 'Rugby' (p.46, 47 Golden Age); Various Radio Ltd chassis;

Ross Paton, 56 Glengarry Rd, Glen Eden, Auckland 7 Ph. 818-8463

Old Signal Generator, 100kHz to 30 MHz, Clough-Brengle USA model OCA, offers  
Granville Watson, 28 Pullham Cres, Hamilton. Ph. 553812

## WANTED

Cast alloy tuning dial (drum) for 1927 RCA model 17, also volume knob; Silver bird and part of missing mechanism for 1924 Brown's 'Q' speaker; parts for Airzone model 404 (p.148 Golden Age), valve shields (3), two smaller knobs. Also horn speakers.  
Eddie Maddocks, 190 Roberts Road, Greenacre, NSW 2190, Australia

Escutcheons for RCA model R37; knob for RCA radiola 60; Unit for RCA 100A speaker (I have housing), or buy complete speaker; an 8" EM A K speaker; chassis for A K mod. 228 battery set; Arc dial for Clarion AC80 etc; Driver unit for Amplion AR114 horn speaker; coil for Gilfillan GN1, is 3" diam by 3½ plus inches long, brown former.

Murray Hall, 802 Rolleston St, Thames Ph. (0843) 88804

Matching pair of interstage audio transformers to complete a Browning Drake kitset; Chassis for an RCA 9T. Neville Grubner, 27 View Rd, Titahi Bay, Wgtn Ph.(04) 366661

Chassis for A K model 558, need not have tubes but must be complete otherwise  
Bill Farmer, 26 Irirangi Rd, One Tree Hill, Auck. Ph. 665-549

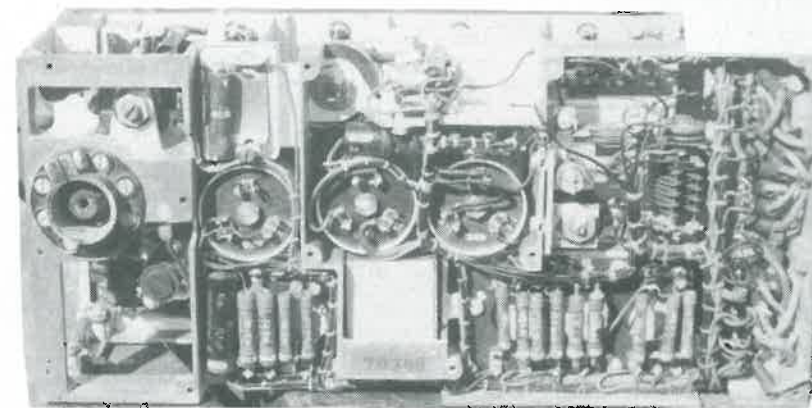
Mains transformer (117-234V), 1st and 2nd IF transformers, closed-top valve shield and wooden (Broad-Sharp) selectivity knob for Gulbransen model A1; EM speaker and dial scale for Colonial 661EU; complete set of knobs for Pilot model 193B. Bill Adams  
Ph. Auckland 8244725

First Philip Radio P10  
Printed by Accord Printing Co. Don Pt (cost \$3.50)  
Philip "What's It?" P.14  
Parklands P.14  
SW Converter

**NZVRS BULLETIN**

Vol. 9 No. 4  
Feb. 1989

**NEW ZEALAND VINTAGE RADIO SOCIETY**



GERMAN WWII AIRCRAFT RADIO RECEIVER

This receiver uses a separate control head and a separate power supply, both of which are missing in this case. It is believed to have been made by Telefunken, but no further details are available as there is no name plate on the receiver itself. Note the use of Telefunken 'N' series of 12.6-V P-base valves.

(Owned by Barry King)

# NEW ZEALAND VINTAGE RADIO SOCIETY

A non-profit organisation devoted to the preservation of early radio equipment and associated historical records.

PRESIDENT: Bill Farmer 26 Irirangi Rd, One Tree Hill, Auckland Ph. 665-549

SECRETARY: Don Strange 10 Pendlebury St, Titirangi, Auckland Ph. 817-8611

TREASURER: Bryan Marsh, 20 Rimu Road, Mangere Bridge, Auckland Ph. 667-712

THE N.Z.V.R.S. BULLETIN is published quarterly in the months of February, May, August and November. Contributions are welcome and should be sent to the Editor.

BULLETIN EDITOR: John Stokes, 281C Hillsborough Rd, Mt. Roskill, Auck. Ph. 656-615

BULLETIN MAILING: Tim Gash, 32 Staveley Ave, Mt. Roskill, Auckland Ph. 657-526

## Editorial Notes

As a result of reciprocal arrangements entered into between the NZVRS and various overseas vintage radio organisations, copies of their bulletins are interchanged with ours on a regular basis. This allows the mutual exchange of information and keeps each party in touch with what is going on in other areas. With the idea of taking full advantage of the arrangements, our Executive Committee decided, some years ago, to make overseas bulletins available for borrowing by all members, though no such equivalent service is apparently provided by other societies.

However, our librarian, Clarry Schollum, reports that, apart from one or two regulars, few members take advantage of this service. Now, this seems a great pity because much interesting information is contained in these bulletins, information which some members value highly enough to pay good money to acquire membership in overseas societies. Elsewhere in this issue there is a list of publications available for borrowing and members are urged to take advantage of the opportunity.

For some time past there has been a desire to make improvements to the Bulletin, particularly in the matter of better reproduction of photographs. To achieve this goal it is necessary to, firstly, use a better grade of paper, and then to use better plates for the printing; to make one of these changes without the other would not achieve anything. But such improvements cost money, money which in the past we have just not had available. But now, as a result of the continuing steady growth in membership, our finances have reached a point where change is affordable.

In regard to the subject of 'growth', the late Waldo Hunter who had a special interest in the progress of our Bulletin, once expressed his views to me along these lines: Why is it that so many people always equate progress with growth, and consider bigger is automatically better? As editor I have always borne this remark in mind when considering the question of an increase in the size of the Bulletin. But, because in our case, where growth in membership has allowed an increase in quality, perhaps Wally would have been prepared to accept it. I would certainly like to think so.

J.W.S.

## NOTICES

### THE FOLLOWING PUBLICATIONS ARE AVAILABLE FOR BORROWING FROM THE NZVRS LIBRARY:

TITLE	PUBLISHER
HRSA Bulletin ....	Historical Radio Society of Australia
Old Timer's Bulletin ....	Antique Wireless Association (USA)
California Antique Radio Gazette	Southern California Antique Radio Soc.
The Antique Radio Gazette ...	Antique Radio Club of America
Bulletin of the BVWS ....	British Vintage Wireless Society
CHRS Journal .....	California Historical Radio Society
Sparks Journal .....	Society of Wireless Pioneers (USA)
The Horn Speaker .....	Jim Cranshaw, Texas, USA
Radiohistorisch Tijdschrift ...	Nederlandse Vereniging voor de Historie van de Radio

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In addition there has been a recent donation of books to the library by Mark Urry. These include: Valve data books, a large qty of circuit diagrams of military radio equipment and three volumes of Applied Practical Radio. For any of the above apply to: Clarry Schollum 34 Pentland Ave Mt Eden, Auckland 3

### LIBRARY SERVICE

Members are reminded that there is a good range of books as well as the publications of various vintage-radio organisations throughout the world which may be borrowed from the library. For details write: Clarry Schollum 34 Pentland Ave, Mt Eden, Auckland 3

### SUBSCRIPTIONS 1989-1990

A renewal form will be included with your February Bulletin. Sub. for N.Z. members is \$12, rates for overseas members will be stated at the time.

## TAPESPONDENCE

At a recent meeting of the NZVRS the suggestion was put forward that some members might be interested in making tape recordings describing their activities which could be interchanged with others. This idea should suit those who don't like writing letters! Actually this procedure has already been in use amongst a few people, but the idea now is to encourage others to join in.

An appeal is there made to anyone who feels inclined to send in a cassette recording which could be anything from the story of the acquisition of an unusual set and its subsequent restoration to just a newsy description of meetings with other members in the area.

Apart from this, the Society already holds tapes of talks given by various speakers at regular meetings and copies are available on request. Eric Reynolds has volunteered to act as tape librarian and all recordings and enquiries should be sent to him. The address is: Eric Reynolds, 13 Coronation St Belmont, Auckland 9

### MEETINGS

Regular monthly meetings of the NZVRS are held on the third Monday of each month. Auction sales of vintage equipment are held on regular meeting nights during the months of March, June, September and December. VENUE: Meeting Room of the Methodist Church, 426 Dominion Rd, Mt. Eden. TIME: 7.30 pm. PARKING: There is a parking area alongside the Church itself.

### IMPORTANT NOTICE

There will be no Auction Sale in March 1989. The sale has been postponed until a later date, to be advised.

Out of town members who may be in Auckland on any third Monday of the month are invited to contact Bill Farmer, Don Strange or Bryan Marsh if requiring transport. See Page 2 of this Bulletin for telephone numbers of these people.

## SHORT-WAVE CONVERTERS

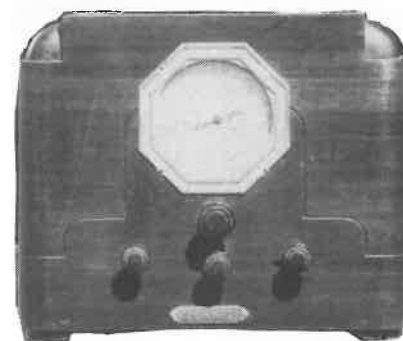
by Ray Knowles

In the early 30's, short wave listening tended to be in the realm of the enthusiast, who was quite likely to own a Pilot Super-Wasp or something similar. However, many would-be short wave listeners could not afford such a luxury. Later, from about 1934, when dual-wave receivers became common, owners of perfectly good broadcast sets were still often reluctant or unable to up-grade. The scars of the Great Depression were slow to heal, and a new radio cost many weeks' wages.

A low-cost solution to this dilemma was to supplement the old faithful BC set with a short wave converter or adaptor. Many of these were home-built, but from 1929 to 1936 several major radio manufacturers produced at least one model. Some American examples were: ABC Radio Labs (10 models - they made nothing else!), Atwater Kent, Browning Labs, Crosley, Grigsby-Grunow (Majestic), Howard, Kennedy, Midwest, National, Philco, Pilot, RCA, Silver-Marshall, Sparks-Withington (Sparton), Stewart-Warner, Stromberg-Carlson, Transformer Corporation of America (Clarion). Of these, specimens of Atwater Kent, Stewart-Warner and RCA are known to survive in New Zealand collections. It would be interesting to hear of any others. In Britain, an Eddystone model was produced by Stratton & Co. So far, no reference has been found to any factory-built Australian converter.

The "Big Three" of New Zealand radio all dabbled in the converter market. Radio Ltd made an Ultimate 3-valve Model 312 in 1932, while in 1935 Collier & Beale Ltd produced a Cromwell 4-valver, and Radio Corporation of N.Z. Ltd built a 2-valve Pacific model in the same year. 1935 was rather late in the day to launch a converter on a commercial scale, so it is not surprising to find the Pacific being sold off by Fears Ltd, Wellington, in 1936 at the rock-bottom price of £5 ! Some American manufacturers continued to make converters into the octal era.

Converters / adaptors were divided into two sub-species: regenerative and superheterodyne. For the record, "Drake's Cyclopedia" suggested that the former should be called an adaptor, and the latter a converter. But the RCA model SW10 superhet. "converter" proclaimed itself to be an "adaptor" on the cover of its metal case. So much for the rule! Some were self-powered, others partly or wholly dependent on the parent set's

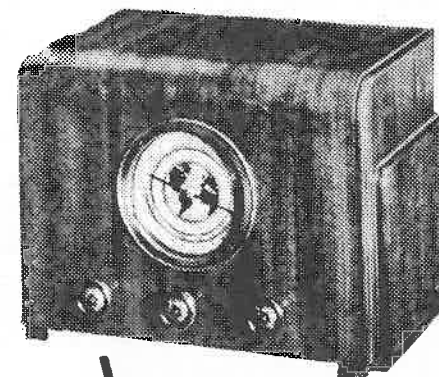


CROMWELL (1935)



ULTIMATE (1932)

Make Your  
Old Set a  
Short-Wave  
Receiver



BY INSTALLING

**PACIFIC  
CONVERTER**

**£10**

TERMS  
ARRANGED

Simplicity of operation—attractive appearance—  
negligible cost of operation—ease of installation.

For operation with all standard type  
Superheterodyne Sets.

PACIFIC (1935)



power supply, to reduce cost. All known commercial models made in New Zealand were superheterodyne and fully self-powered.

Broadly speaking, the regenerative adaptor belonged to the era of pre-1932. It was put into service by removing the receiver's detector valve (and shield!) and plugging the adaptor in its place. Any preceding RF valves were also removed, so that the parent set became for the time being just an audio amplifier. What with all this valve removal, plugging in of coils and so on, it must have been no small hassle to gear up for an evening's "listening on the short waves". One had to be an enthusiast!

Superheterodyne converters were a much better proposition, and utilised all stages of the parent receiver, whether the latter was TRF or superhet. The converter was simply connected to aerial and ground, with its output fed to the aerial and ground terminals of the parent set. SW signals were tuned in on the converter, which translated them into an intermediate frequency falling within the broadcast band (1000 kc was often chosen). The parent set was tuned to that frequency, and the output from the converter was then amplified through the various stages of the parent set.

If the converter was not self-powered, things were not quite so easy. It had to be hooked up to the parent receiver's power supply at some convenient point by way of an added socket. Semi-powered converters (with heater transformer only) were fairly common, while a few (mainly kit-sets) derived even their heater voltage from the parent set.

Some innovative manufacturers built console radios having a BC receiver and separate SW converter mounted in the same cabinet (e.g. Stewart-Warner). One or two Ultimate models incorporated what amounted to a converter on the same chassis as the main radio, with additional valves as well as coils being switched into circuit by operation of the SW band selector.

Whatever its merits, the humble SW adaptor/converter does have a place in radio history, and moreover, because of small production and limited vogue, any example of the species is now relatively rare, and collectible.

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Can you . . . . . pick the difference?



Illustration of replica GE by arrangement with the Antique Wireless Association.



THOMAS (otherwise known as Edison!)

MORE REPOS ..... A SIGN OF THE TIMES

Page 39 of the Nov. 1988 issue of 'Old Timer's Bulletin' (USA) carries an article on a recently available (in the U.S.) reproduction radio. Accompanying the article is a picture of a less-than-full-size replica of a 1932 General Electric model 4100J, a set which was identical, apart from the cabinet, to the RCA-Victor R-74. Quite by coincidence an article on the same subject, but not on the same radio, appeared in our own NZVRS Bulletin for the same month. Who said repros weren't interesting?

Now, yet another repro has recently turned up in N.Z., a BCA (sic) made in Italy. This one has a full size wooden cabinet which is a replica of that used on the RCA-Victor, or HMV, R-7 Superette. This set appears to have been made by the same firm which made the repro of the RCA R-4 as described on p.6 of the Nov. 1988 NZVRS Bulletin.

## VALVES Part 2

SERVICING FOR BEGINNERS by PETER LANKSHEAR

Apart from bent pins, which are easily enough straightened, the Post War glass based valves have few physical problems which can be corrected. However, the older valves are prone to a number of faults in soldering and cementing\*which are repairable.

Today, there is a large range of adhesives for all purposes, including many that adhere strongly to glass. Considering that in the heyday of valve manufacture there was nothing of this nature available, remarkable results were achieved with glues as simple as a mixture of resin and plaster of paris for fastening bases and grid caps. Now, 50 or more years later, these cements are losing their grip and due care should be taken. The most difficult time for a valve is during extraction from a socket, so ease bases gently out of sockets. One way is to use a screw driver as a lever under the base, and grid clips should be loosened in a similar way.

If a grid cap is loose, but the wire is intact, simply unsolder the top of the cap and after carefully straightening the wire, take the cap right off the valve. With a knife, scrape off any adhesive adhering to the glass. Now clean out the cap and glue it back on to the valve with a two pack Epoxy resin, superior in my opinion to instant "Power Glue" which may be great for impatient people who want to lift elephants, but which is not gap filling and relies on intimate contact between mating surfaces. Wait a day until the glue has hardened before resoldering the lead. Excess adhesive can be removed with a sharp knife a couple of hours after glueing.

Loose bases can often be refastened by inserting some adhesive between the glass and the base. In this case, if the original cement has not crumbled, power glue may be satisfactory. The most serious results of base loosening occurs with valves with metallised coatings such as the gold and red Philips series. At the junction of the base and the glass is a fine earthing wire which also loosens when the cement bond is broken, resulting in instability and noises. The most practical repair is to first reglue the base, and then, after cleaning some of the paint off the earthing wire, tightly and evenly wind on about a dozen turns of 5 amp. fuse wire immediately above the base. Carefully solder the earthing lead to the fuse wire and smear some epoxy resin over the winding. The result is likely to be a bit unattractive, but can be disguised by wrapping a narrow strip of tape or paper around the top of the base.

One of the best features of the all-glass valves was the elimination of soldering to the base pins and grid caps. In the separate base construction only the tips of the leadout wires and the base pins are soldered. The bond is easily broken when the base loosens, and creates an intermittent contact, often triggered by pushing the valve around in its socket. This is the cause of a particularly annoying fault in which the heater will start to cool, causing the receiver to fade over a period of 5-10 seconds. It even happens in valves with

well cemented bases. Resoldering is sometimes successful, but not always. Often, the wires are black with oxides and probing around in an attempt to clean the surfaces is unsuccessful. Then the only remedy is to remove the base and clean the leads properly. This may seem to be a daunting process, but with a bit of patience, it is really quite simple. It is not a bad idea to practice on a discarded valve first!

Start by working the base a few degrees each way and it will soon loosen up. Then melt the solder out of the pins and carefully pull the base straight off so as to retain the lead configuration. The wires will be seen to emerge from the press at the top of the stem and a bit of quiet study will show that they follow a sequence with the filament leads at the middle of the press, and finishing with the anode at one side. Draw a diagram of the leads and their pins. Carefully clean the bottom of each lead with fine sandpaper and coat it with solder. It would be nice to be able to resolder the leads directly to the pins, but invariably they need extending first, and again, 5 amp fuse wire is suitable. Wrap the fuse wire around the leads so that they will enter their pins without catching and solder them. Now make sure that there will be no contacts between leads. Sometimes manufacturers will have used sleeving if there was a chance of a short circuit and if necessary you can do the same. Thread the leads back into their pins and after applying adhesive to the inside of the base, carefully position it back on to the bulb. Resolder the pin tips, trim off the surplus wire and the job is done.

This technique can be used on odd occasions when a valve base is damaged, but the internals are thought to be O.K. A typical case is when a rectifier base arcs across and carbonises a track. Putting on a new base will often save an otherwise unservicable valve. There may also be times when an original type is hard to find, but a later equivalent is common. A typical example is the 6D6 and the 6U7G. Modifying a valve with a new base and grid cap is far less drastic than the alternative of attacking a chassis to change to a different type of socket.

Defective soldering to a grid cap is common and can cause frustrating symptoms similar to those caused by a faulty capacitor. The receiver seems a bit insensitive and a sudden noise impulse such as from an appliance switching will cause the sensitivity to return to normal. Unsoldering the cap will often reveal a completely black lead which should be scraped clean and resoldered.

Frequently, a grid lead will break off flush with the surface of the glass and at first sight, the valve appears to be a write off. With a bit of care, it is possible in about 90% of cases to resurrect the valve. Most grid lead seals have a fair depth of glass, and can spare up to a half a millimetre. With a sharp, very fine triangular file make three or four cuts in the glass at the tip of the seal. On the fourth cut, the glass tip is likely to break off, leaving a short piece of wire exposed, hopefully with the vacuum intact. Now take a piece of the ubiquitous fuse wire and make a small loop in the middle. Lasso the projecting tip of grid wire with the loop, and carefully apply some solder. Twist the two tails of fuse wire together to become the new grid lead.

I have run out of room again, so will not be able to cover valve substitutions as promised. Regretfully, this will have to wait for the next issue of the "Bulletin".



# THE FIRST PHILIPS RADIO

BY JOHN W. STOKES

Feb. 1989

Because of the widespread interest in Philips receivers nowadays apparent amongst collectors in many countries, the question sometimes arises as to which was actually the first model produced. Because, in the very early days, another firm was also involved the position is not quite so straightforward as it would otherwise have been. That firm was Nederlandse Seintoestellen Fabriken (N.S.F.) of Hilversum, which had been established in 1917 as a manufacturer of marine radio equipment. Later, in 1924, N.S.F. had started to make domestic receivers. This firm's knowhow and experience were apparently considered worth acquiring by Philips to provide a springboard for their entry into the field of receiver manufacture.

So it was that in 1926 Philips took over the firm of N.S.F. and by the end of the year were ready to launch their first receivers. Just prior to this, however, they had marketed a few radio accessories which included a cone speaker and two models of HT battery eliminators. Other similar items were to follow over the next few years until production of this class of goods was discontinued in 1931.

The first receivers to carry the Philips name were two small 3-valve sets, types 2501 and 2502; the former an AC mains model and the other a battery set. They were housed in compact leatherette-covered cabinets which were of similar size and shape to the one used on the later and better-known type 2802 short-wave receiver. Both models used the same circuitry, a SG RF stage, a regenerative detector and pentode output, the design of which has been attributed to N.S.F. The valve line-up consisted of - C142 tetrode, F215 triode, D143 pentode. Only the F215 was indirectly heated, its heater rating being 2.5 V, 1.5 A. The other valves, including the bias rectifier to be mentioned later, had filaments rated at one volt. To the writer the chosen voltages reflect some uncertainty as to which way to go on the part of Philips at the time. The figure of 2.5 volts had by then already been chosen as an industry standard in the U.S. for American indirectly-heated valves, a fact which must have obviously influenced Philips in their choice of the same voltage. But the use of a voltage as low as one volt for directly-heated valves was going one step further than the American figure of 1.5 volts. However the 1-volt valves soon became obsolete and the figure of four volts became the European standard for AC mains valves.

Apart from the valves, the main point of interest to be found in the 2501 was its unusual power supply arrangements. Although using a separate power pack, as was common practice in other countries at the time, in Philips' case only the HT supply was derived from this unit. Probably to save having to develop a completely new combined A, B and C supply Philips opted for using one of their existing HT battery eliminators and providing the LT and bias supplies by means of an inbuilt filament transformer. This transformer had three secondary windings, one for the detector heater, one for the filaments and one to supply grid-bias voltages via a diminutive half-wave rectifier, type 2504.

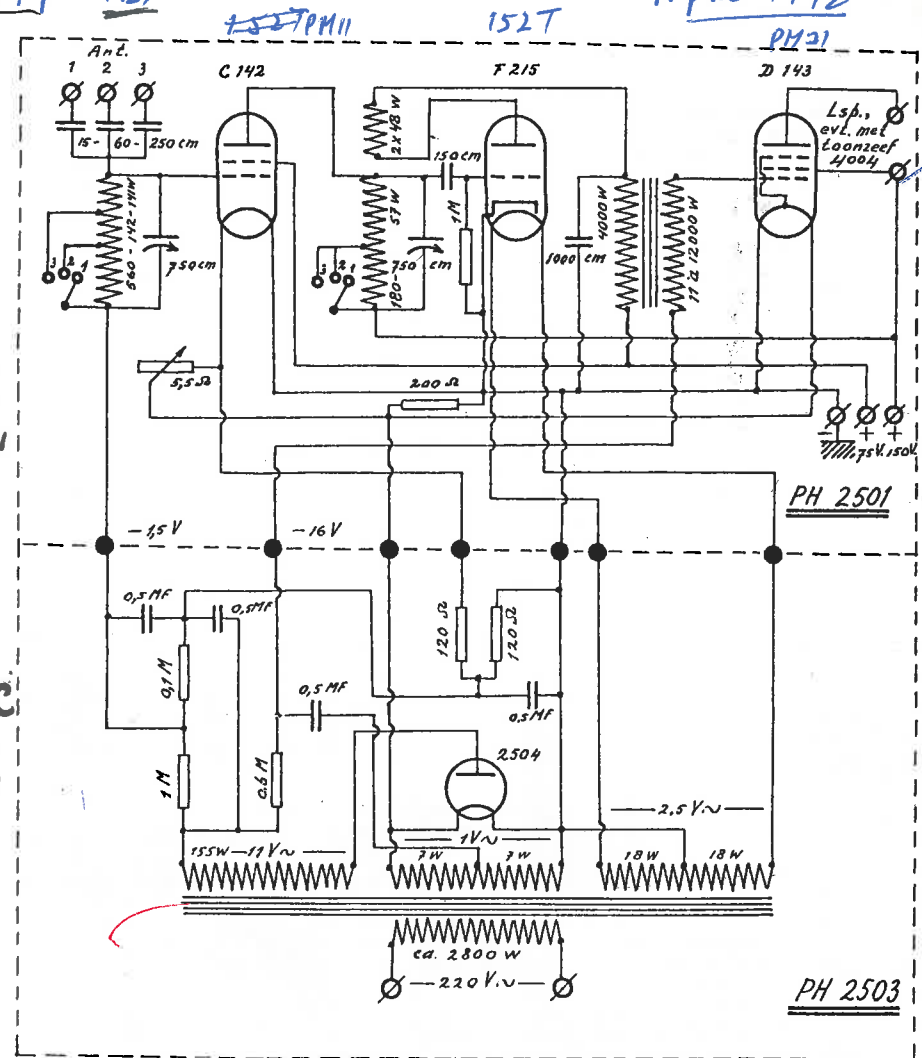
The question now arises as to why Philips should have chosen such a roundabout way of obtaining a bias supply when the use of self-bias or back-bias would have been far simpler and cheaper. After all, even Philips, who were specialists in bringing out new valve types at the drop of a hat, must have incurred extra production costs by using a special valve solely for the purpose of obtaining grid bias. So why do it?

Maybe it was due to Philips' unfamiliarity with the state of the art; perhaps they didn't realise that it was possible to arrange back biasing when using a separate 'B' eliminator, though at the cost (in this case) of a reduction of 16 volts in the available HT voltage. Self-biasing, too, although necessitating separate filament windings for the RF and output valves, would still have been simpler and cheaper than the chosen arrangement. Another possibility could have been the desire to avoid the use of patented circuitry which would have incurred the payment of royalties, often an important consideration in those days. Remember, even grid bias itself was once a patent! But, whatever the reason was, subsequent Philips receivers used conventional power supply systems.

refer article in BVWS Bulletin p24 Vol17, No2  
dated April 1927  
April 1992

Set Proper

A-C Power Unit



PHILIPS TYPE 2501 RADIO WITH  
BUILT-IN POWER PACK TYPE 2503

Note the unusual method of obtaining bias by means of a separate rectifier. The valves used were specially developed for this receiver; note that the screen-grid valve is directly heated.

(Circuit diagram published by arrangement with  
(Nederlandse Vereniging voor de Historie van den Radio)

should have included acknowledgment to Dutch author, as well as (A. Houtens)

# THE AERIAL

G.R.GILBERT

In these days of loopsticks and local stations the outside aerial, once a common sight all over the country has suffered a drastic decline. And now, with the removal of many local stations to the VHF fm waveband some of our most distinguished older receivers may be rendered mute for want of a signal source.

And yet the vintage wireless receiver is not really complete without a vintage aerial installation. Certainly, without an adequate aerial the vintage set is at a disadvantage for it usually had a well shielded input circuit and/or low sensitivity.

In the thirties and earlier a good aerial was considered a must. Enthusiasts would invite friends over to view (or assist in erecting) their installations. Forty-foot (12 metre) lengths of well-stayed galvanised-iron water pipe were greatly favoured, with a down-lead direct to a window adjacent to the radio receiver. If the set was battery operated an earth was made to a handy water pipe or an earth rod driven some three feet (1 metre) or so into the ground. The ground around the rod was kept well watered. In the days of the quarter-acre section and very few restrictive by-laws it was practicable to erect a pretty imposing 'sky-hook' and the improvement it made to reception was dramatic. In those days of over half a century ago most reception was, dx (distance) reception and competition to see who could receive the most distant stations was fierce. A common boast was of listening to 2FC (Sydney, 5kw) over lunch. In the early evening almost every one with a decent set would be entertained by dance music broadcast from the Coconut Grove by station KFI (50kw) in Los Angeles. This sort of reception (which was only possible through the paucity of New Zealand transmitters and the low noise level) required a pretty effective aerial.

But a good outside aerial was often necessary to receive much, or perhaps anything, of the few New Zealand broadcasting stations.

In 1932, apart from a few privaterats and mice, the input power of which could be as low as 5 watts, and which were only active for a few hours a day, Auckland Christchurch and Dunedin had modest 500 watt stations while 2YA Wellington boasted a mighty 5 kw. These stations broadcast from 3 pm to 10 pm (2YA 10 am to 10 pm) with one silent day each week for maintenance.

Perhaps those who wish to show off their vintage radios, or to compare their performance, or merely test them, should consider installing an outside aerial. In these days in many places it is probably impractical (and possibly illegal) to attempt to erect the standard vintage aerial which was 40 feet (12 metres) high and not less than 50 feet (16 metres) or more than 100 feet (30 metres) long. Still, a good length of insulated wire suspended between posts about ten feet high, with the lead-in brought through a convenient window, should work wonders. Even an insulated wire hanging from an upstairs window is much better than a few feet lying on the carpet. But those of us who still boast of a quarter-acre section and are untroubled by zealous city authorities may wish to consider something more effective and rather more proudly obvious. For example, a couple of well-stayed 25 to 40 foot (8 to 12 metre) masts in the A configuration (see any ARRL Handbook) about 75 feet (25 m) apart with the flat

top of stranded tinned copper wire fitted with pyrex glass insulators, and an insulated down-lead going to a period multi-point switch via the (then) obligatory lightning arrestor. From the switch leads can be run to chosen sets in the collection and they can thus be instantly compared, or various fine old dx receivers can be persuaded to show their paces.

However—a word of warning. Unless you are operating a battery set do not install or connect any earth wire to any of your sets even if a connection is provided. In New Zealand we have an earthed-neutral mains system and the radios are effectively earthed through the earth pin of the mains plug and socket. A second earth may introduce undesirable or even dangerous potentials between the set and the user.

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Ed. note: Regarding Bob Gilbert's comment that radios are "effectively" earthed through the usual 3-core flex and 3-pin plug, while this should be true from a safety angle it is not necessarily true from the point of performance or reduction in interference pick up. Like everything else nowadays, 'earthing' seems to be getting more complicated all the time! Perhaps other readers would like to comment? Incidentally, there were no less than four pages of correspondence on the subject in the May, 1988 issue of Electronics Australia. Ed. ← omitted see above



COMMEMORATING 75 YEARS OF THE OPERATION OF AWARUA RADIO, ZLB  
18 DECEMBER 1913-1988

13 Photo supplied by Arthur Williams