

AMPLIFIER (4.5-WATT) CIRCUIT A507

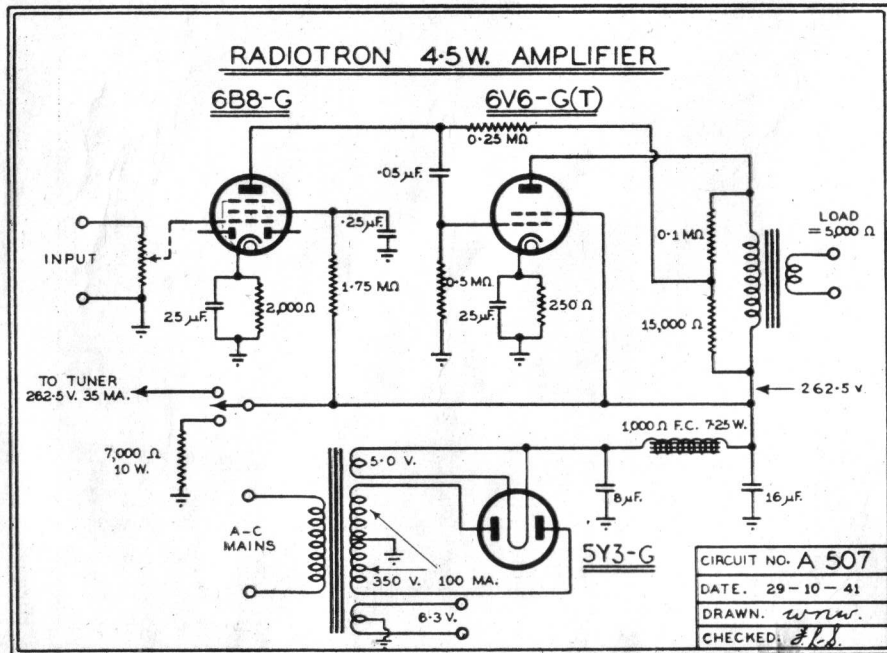
USING TYPES 6B8-G AND 6V6-G(T)

Radiotron circuit A502, published in Radiotronics No. 108, used valve types 6J7-G and 6V6-G. Requests have been received from time to time for one using 6B8-G in the first stage and we are therefore pleased to give circuit A507 in this issue. This circuit is fundamentally the same as the one using type 6J7-G in the first stage and gives the same power output, although the overall gain is slightly less, owing to the lower mutual conductance of type 6B8-G. The distortion is also approximately the same as that with the 6J7-G.

As in the earlier circuit, provision is made for the supply of current to the radio tuner, but if this is not used it is

necessary for a 7,000 ohm 10 watt resistance to be connected as a load on the power supply, otherwise the voltage would rise considerably above the normal voltage. If it is desired to omit this load, it will be necessary for a higher resistance to be used in series with the field coil, or for a lower voltage transformer to be used.

The main feature of type 6B8-G is that it is fitted with two diodes which may be used for detection or rectification. In a normal radio set one of these might be used for detection and the other for delayed A.V.C. or both might be connected together and used in a simple A.V.C. circuit. Other uses are possible for special applications.



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RADIOTRONICS

DIGEST

THE CONTENTS OF THIS ISSUE

Amplifier (4.5 watts) — Circuit Diagram No. A507.
Miniature Valves, Type 1R5, 1S5, 1T4, 3S4, 3Q4.
Photograph, application data, Reference Chart.
Reference Book — data sheet releases.
Designer's Handbook — publication figures.

Although it was hoped to resume the publication of "Radiotronics Technical Bulletins" many months ago, the position continues to be fraught with many difficulties; technical staff, paper stocks, censorship — these matters influence the release of material of the high standard which "Radiotronics" has always maintained.

It is felt, nevertheless, that the constant enquiries for "Radiotronics", though extremely gratifying in themselves, call for a more concrete response than vague references to obstacles already only too keenly realised by all.

The original Radiotronics mailing list has been preserved in our files and in presenting "Radiotronics Digest" to subscribers, the hope is expressed that it will, in some measure, bridge the period with timely pointers to what is developing in the radio province of Electronics until such time as circumstances once again permit a full and thorough treatment of the subject of valves and their application.

Radiotronics is available by application to the Head Office of the Company:
AMALGAMATED WIRELESS VALVE CO. PTY. LTD.
47 YORK STREET (G.P.O. BOX 2516BB), SYDNEY, N.S.W.
Mailing fee — two shillings (2/-) per year.

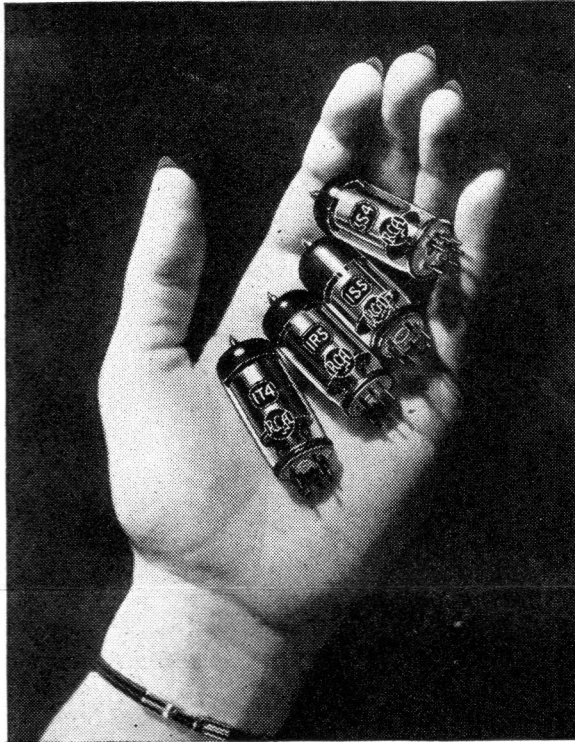
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MINIATURE VALVES

1.4 VOLT TYPES

The Radiotron Australian-made range is planned to include types 1R5, 3S4, 1S5 and 1T4 with the later addition of type 3Q4 as an alternative to type 3S4.

The preparation of an application note is now in hand and though this may take some weeks, copies will be mailed to all Radiotronics subscribers as soon as available.



MINIATURE VALVES APPLICATION DATA

- 1R5. Has conversion transconductance of 300 micromhos at 90 volts on plate.
- 1S5. Combined diode and a-f pentode providing high voltage gain.
- 1T4. Useful as r-f or i-f amplifier — no external bulb shield needed.
- 3Q4. Can handle relatively high audio output of 270 milli-watts.
- 3S4. Similar to Type 1S4 but has filament arrangement for either series or parallel operation.

REFERENCE BOOK

The resumption of the Sales Engineering Service was marked by the release in April of the following 21 Valve Data Sheets for inclusion in the Radiotron Loose-leaf Reference Book.

Contents	Type 1Q5GT	Type 6H6GT
Type 1A7GT	2A3	6J8G
1D8GT	5V4G	6K8G
1H5GT	6A7, 6A8G	6U5/6G5
1J6G	6B7, 6B7S	6U7G
1N5GT	6F6G(1)	6V6G
1P5GT	6F6G(2)	6X5GT

It is expected that a further release of 8 data sheets will be made either late in June or in July on the undermentioned valve types:—

Contents	Type 6J7G(3)
Type 1H5GT	6J7G(4)
6J7G(1)	6B8G(1)
6J7G(2)	6B8G(3)

RADIOTRON DESIGNER'S HANDBOOK

A marked improvement has been brought about in supplies of the Radiotron Designer's Handbook — due principally to better deliveries from the book binders. At the present time, immediate despatch can be made from stock of orders for single copies — the full rexine cloth bound edition price being 5/- plus 4d. postage (plus sales tax).

Some interesting figures are now available relating to the third edition of the Radiotron Designer's Handbook.

Number of Impressions	10
Distributed in Australia	46,000
Exported to United Kingdom	12,000
Translated into Polish	5,000
Published in United States	115,000

U.S.A. figures are to June, 1944 only, whilst it is proposed to publish the handbook in England and possibly in the the Argentine.

QUICK REFERENCE CHART

Type	Description	FILAMENT			MAXIMUM RATINGS			Typical Plate Ma.	Trans-conduct.*
		Volts	Amps.	Type	Plate V.	Screen V.	Total Cath. Ma.		
1R5	Pentagrid Converter	1.4	0.05	Fil.	90	67.5	5.5	1.6	—
1S5	Diode-Pentode	1.4	0.05	Fil.	90	90	4.5	1.6	625
1T4	Super-Control R-F Amplifier Pentode	1.4	0.05	Fil.	90	67.5	5.5	3.5	900
3Q4	Power Amplifier Pentode	2.8s	0.05	Fil.	90	90	12	9.5	2150
		1.4p	0.10						
3S4	Power Amplifier Pentode	2.8s	0.05	Fil.	90	67.5	9	7.4	1575
		1.4p	0.10						

* — At maximum plate volts (μ mhos)

p — Filaments connected in parallel.

s — Filaments connected in series.