

The New A.C. Single-Ended GT Range

Comments on Individual Types

Type 6SA7-GT is a pentagrid converter which is very popular in U.S.A. for both broadcast and shortwave operation. Owing to its special design and the omission of the "anode grid," it has high oscillator transconductance and is very easy to maintain in oscillation, but requires special oscillator coils.

A useful article on the application of type 6SA7 appeared in Radiotronics No. 95, pages 8 to 14.

Some receiver designers may prefer type 6J8-G for sets having ample sensitivity and in which low noise level and excellent oscillator frequency stability are desired. This type or its GT equivalent will continue to be available for new equipment.

6SJ7-GT is a single-ended version of type 6J7-G, but having considerably higher transconductance. As a resistance-coupled pentode it is very suitable as a high-gain audio frequency amplifier, while, as a triode it has characteristics similar to those of type 6J5-GT.

6SK7-GT is a single-ended version of type 6U7-G, but having higher transconductance. It may be used as an R.F. or I.F. amplifier.

6SF7-GT serves a similar function to type 6G8-G, but in addition to being single-ended it also has much higher transconductance (equal to that of type 6SK7-GT)

but only one diode. Its principal application is as an I.F. amplifier followed by diode detection, but it may also be used for diode detection followed by A.F. amplification. In the latter application there may be sufficient capacitance between diode and control grid to allow some I.F. voltage to appear on the control grid, possibly resulting in distortion on strong signals; type 6SQ7-GT is, therefore, to be preferred for this position.

6SQ7-GT is a duo-diode high-mu triode which is a single-ended version of type 6B6-G, and having identical characteristics.

6V6-GT is already in wide use, and is too well-known to need further description. It is intended to supersede type 6V6-G in all cases, including replacements.

6X5-GT is a small indirectly-heated rectifier intended for use in small sets for which type 5Y3-GT is unnecessarily large.

5Y3-GT is the well-known type 5Y3-G in a GT envelope. It is intended to supersede type 5Y3-G in all cases, including replacements.

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RADIOTRONICS DIGEST

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The New A.C. Single-ended GT Range

Radiotron Receiving Types.

This issue gives detailed information on the Radiotron valve types now available for use in new Radio Receivers, also types being developed for the 1946 range of new receivers, together with types for replacement purposes.

Considerable benefits were experienced during the war period through the adoption of a standard range of valve types, and we propose to continue the same policy of manufacturing those types which serve a really useful purpose, avoiding unnecessary duplication of the same type of valve in different forms of construction.

The local manufacture of the new A.C. single-ended GT range will make possible the use of these very popular American types in Australian sets. The elimination of top caps and the standardisation of the small envelopes will be very popular, not only with receiver manufacturers, but also with those engaged in servicing and handling the sets.

The miniature 1.4 volt series will meet the needs of portable receivers and those larger battery receivers which are required to operate from dry cell A batteries. The highly efficient 2 volt battery series, soon with the addition of the new converter valve, will supply the requirements of sets using accumulator A batteries with either battery or vibrator B-supply.

Radiotron List of Valve Types for 1945-1946

1.4 Volt GT.

The following will continue to be available for new equipments and replacements until the 1.4 volt miniatures are available and thereafter for replacement purposes only:—

- 1A7-GT Converter
- 1H5-GT Second Detector
- 1P5-GT R.F. and I.F. Amplifier
- 1Q5-GT Power Amplifier.

1.4 Volt GT. for replacement purposes only.

- 1D8-GT* Diode-triode-power amplifier.

1.4 Volt Miniatures (for 1946 new equipment)

- 1R5 Converter
- 1S5 Second Detector.
- 1T4 R.F. and I.F. Amplifier
- 3S4 Power Amplifier
- 3Q4 Power Amplifier for sets using 90 volt B. Batteries.

2 Volt (new equipment types for both 1945 and 1946)

- 1C7-G* Converter
- 1K5-G R.F. Pentode
- 1K7-G Second Detector
- 1M5-G R.F. and I.F. Amplifier
- 1L5-G Power Pentode
- 1H4-G Triode Driver
- 1J6-G Class B. Amplifier

*With the addition of an improved converter to take the place of type 1C7-G for 1946 new equipment.

2 Volt types for replacement purposes only.

- 1A4-P R.F. and I.F. Amplifier
- 1C4 R.F. and I.F. Amplifier
- 1C6 Converter
- 1D4 Power Pentode
- 1D5-GP R.F. and I.F. Amplifier
- 1H6-G† Second Detector
- 1K6 Second Detector
- 19 Class B. Amplifier
- 30 Triode Driver

†Type 1H6-G may be used to replace type 1B5/25S, which is not at present in production, the two types being electrically identical but having different sockets.

A.C. Range.

The following will continue to be available for initial equipments and replacements until the single-ended GT series is ready and thereafter for replacement purposes only:—

- 6A8G Converter
- 6J8-Gx Converter
- 6J7-G R.F. Pentode
- 6U7-G R.F. and I.F. Amplifier
- 6G8-G Second Detector
- 6B6-G Second Detector

- 6V6-GT Power Amplifier
- 5Y3-G Rectifier
- 6X5-GT Rectifier

x To continue to be available for new equipment as well as for replacements.

A.C. Single-ended GT. range (for 1946 equipment)

- 6SA7-GT Converter
- 6SJ7-GT Sharp cut-off R.F. Pentode
- 6SK7-GT Super-control R.F. Pentode
- 6SF7-GT Diode Super-control R.F. Pentode
- 6SQ7-GT Duo-diode high-mu triode
- 6V6-GT Power Amplifier
- 6X5-GT Rectifier
- 5Y3-GT Rectifier

For large Amplifiers there will also be types

- 5R4-GY Special Rectifier
- 807 Beam Power Amplifier

A.C. Miniature types.

It is proposed to develop two miniature A.C. types, both high-slope R.F. pentodes, one with a super-control characteristic and other with sharp cut-off.

A.C. Types for special studio and public address amplifiers

(initial equipment and replacements)

- 1603 Non-microphonic pentode
- 6SN7-GT† Twin triode

†Available from stock.

A.C. Types for replacement purposes only.

- 5V4-G Indirectly-heated Rectifier
- 6A7 Converter
- 6B7§ Second Detector
- 6B7S Second Detector
- 6B8-G§ Second Detector
- 6C6 R.F. Pentode
- 6D6 R.F. and I.F. Amplifier
- 6F6-G Power Amplifier
- 6H6-GT§ Twin diode
- 6K8-G§ Converter
- 42 Power Amplifier
- 75 Second Detector
- 80 Rectifier
- 83V Indirectly-heated Rectifier

2.5 Volt A.C. Types

- 2A5
- 45
- 47
- 57
- 58

§Future local manufacture uncertain.