# Announcing 4

## ...FOR FM AND TELEVISION

## They're New! They're Tops!

**Designed and developed by General Electric,** these new nine-pin miniatures are keyed to the requirements of advanced FM and Television receiving sets scheduled for early production by radio manufacturers.

**Multi-unit design permits increased flexibility of circuit application,** broadening the usefulness of the tubes. In size—seated height 1 15/16 inches—they are true miniatures, with the advantage which this brings to the electronic designer who must pack maximum receiver performance into minimum compass.

**Pin-to-pin spacing is the same as with seven-pin types**—made possible by a slight increase in base diameter. Both electrically and in length of service life, these fine new miniature tubes give performance which is convincing proof of their modern, efficient design and precision methods of manufacture.

**Complete descriptive data is available** to radio builders and circuit designers interested in applying G.E.'s new nine-pin miniatures to sets now on their boards. Also, G-E tube engineers will be glad to cooperate personally in selecting the right tubes for your commercial receiver or other electronic unit in the planning stage. Wire or write *Electronics Department, General Electric Company, Schenectady 5, N. Y.*

### 6T8

High-perveance triple-diode triode with 6.3-v, 450-ma heater. For use as a radio detector and audio amplifier in FM and Television receivers.

### 19T8

High-perveance triple-diode triode, with 18.9-v, 150-ma heater. For FM and Television service as a radio detector and audio amplifier.

### 12AT7

High-transconductance double triode. Used primarily as a converter in FM and Television receiver applications. Center-tapped heater permits use of the tube either in a-c/d-c receivers or in receivers with a 6.3-v heater supply.

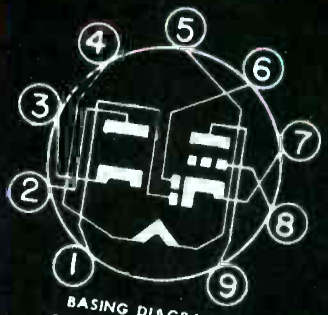
### 12AU7

General-purpose double triode (its octal-series prototype is the 6SN7-GT). Center-tapped heater allows use either in a-c/d-c receivers or in sets with a 6.3-v heater supply. Chief applications are as a multi-vibrator and for special service in Television receivers and industrial-control panels.

# Nine-Pin Miniatures

## RECEIVER APPLICATIONS

### CHARACTERISTICS AND TYPICAL OPERATION




BASING DIAGRAM
TYPES 6T8 AND 19T8

**Triode Unit**

| | Heater voltage | Heater current | Plate voltage | Grid bias voltage | Plate current | Transconductance | Amplif. factor |
|---|---|---|---|---|---|---|---|
| 6T8 | 6.3 v | 0.45 amp | 250 v | −3 v | 1 ma | 1,200 micromhos | 70 |
| 19T8 | 18.9 v | 0.15 amp | 250 v | −3 v | 1 ma | 1,200 micromhos | 70 |

**Diode Units**

For both tubes: avg diode current, per unit, with 5 v d-c applied.....20 ma


BASING DIAGRAM
TYPES 12AT7 AND 12AU7

**Each Triode Section**

| | Heater voltage, series | Heater voltage, parallel | Heater current, series | Heater current, parallel | Plate voltage | Grid bias voltage | Plate current | Transconductance | Amplif. factor |
|---|---|---|---|---|---|---|---|---|---|
| 12AT7 | 12.6 v | 6.3 v | 0.15 amp | 0.3 amp | 250 v | −2 v | 10 ma | 5,500 micromhos | 55 |
| 12AU7 | 12.6 v | 6.3 v | 0.15 amp | 0.3 amp | 250 v | −8.5 v | 10.5 ma | 2,200 micromhos | 17 |

**Proof of G-E tube-design leadership** is this great new series of nine-pin miniatures! The dealer who handles General Electric tubes, the radio service-man who installs them, both know that their G-E product marches to the quickstep of today's electronic progress. With G-E tubes you may PROFIT by servicing the new AM, FM, and Television receivers which the public today is buying in increasing volume. Stay well ahead of your competition by installing and selling General Electric radio tubes—*design leaders* in the electronic-tube field!

**GENERAL ELECTRIC**

170-F13-8659

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