



Sylvania  
**TYPE 12A**  
**DETECTOR**  
**AMPLIFIER**

**CHARACTERISTICS**

Filament Voltage AC or DC . . . . .	5.0 Volts
Filament Current . . . . .	0.25 Ampere

**Direct Interelectrode Capacitances:**

Grid to Plate . . . . .	8.0 $\mu\mu\text{f}$
Input . . . . .	3.5 $\mu\mu\text{f}$
Output . . . . .	2.5 $\mu\mu\text{f}$
Maximum Over-all Length. . . . .	4 $\frac{1}{8}$ "
Maximum Diameter . . . . .	1 $\frac{1}{8}$ "
Bulb . . . . .	ST-14
Base—Medium 4-Pin . . . . .	4-D

**Operating Conditions and Characteristics:**

Filament Voltage . . . . .	5.0	5.0	5.0 Volts
Plate Voltage . . . . .	90	135	180 Volts
Grid Voltage . . . . .	-4.5	-9	-13.5 Volts
Plate Current . . . . .	5.0	6.2	7.7 Ma.
Plate Resistance . . . . .	5400	5100	4700 Ohms
Mutual Conductance . . . . .	1575	1650	1800 $\mu\text{mhos}$
Amplification Factor . . . . .	8.5	8.5	8.5
Load Resistance . . . . .	5000	9000	10650 Ohms
Power Output . . . . .	0.035	0.13	0.285 Watt

**CIRCUIT APPLICATION**

Sylvania 12A is intended for use where a tube of lower plate impedance than the 01A tube is desired. It is, therefore, particularly useful in the last audio frequency stage, where a tube of moderate battery requirements in plate, grid, and filament circuits is needed.

Its lower impedance more nearly matched that of the loud speaker than the 01A type did and thereby produced better tone quality. It was also used in the other audio frequency stages and as a detector tube to some advantage.

The use of this tube in the last audio frequency stage cannot be recommended for the best results unless plate voltages of at least 135 volts with the rated "C" voltages are used.

The tube may be also utilized as an r-f amplifier by employing the proper "C" bias for the operating voltage used. This tube will give better amplification than the 01A tube. If trouble due to oscillation is experienced, proper neutralization of the circuits for this tube will permit its use with increased gain.