Functions of the Accessories

The Clip-on Capacitor is .33uf Tantalum, 35 volt. Placing it across the AGC line to ground makes the "hang" characteristic optimum for SSB and CW. It compensates for a time-constant reduction caused by the RF and IF Tubesters' inputs loading the line.

The Mute Jack Adaptor consists of a resistor (390 ohms in the STA-4, 820 ohms in the STA-5) between an RCA plug and jack. With the panel switch in STANDBY, RF Gain control at maximum, and the receiver enabled remotely (by the transmitter relay in the usual installation) the Adaptor resistance between the Mute line and ground establishes the normal AGC threshold with the Tubesters installed.
(The "threshold" is the no-signal voltage on the AGC line, normally about -0.8V, furnished through a high resistance from the RF Gain control wiper. The RF and IF Tubesters can not have as high DC input impedance as do the grids of pentode tubes, and they pull the threshold down to near ØV with the Mute line grounded).
Turning the panel switch to OPERATE grounds the Mute line ahead of the Adaptor, and under no-signal conditions the AGC line at near ØV is evidenced by the S-Meter reading below "0" and front-end noise increasing. Backing off the RF Gain panel control to bring the S-Meter up to "0" will set the same AGC threshold in OPERATE that is established by the Adapter in STANDBY with RF Gain at maximum.

S-Meter Operation

With the RF and IF Tubesters installed and the S-Meter zeroed per the instructions (no incoming signal, Mute Jack Adapter installed, Function switch in STANDBY), the S-Meter will give readings from 0 to about 85 DB corresponding to AGC voltages on the same curve as that with the vacuum tubes installed. Toward the high end of the meter scale the ST107 Tubester current is so low that increasing AGC has little effect on the reading.

Receiver Model Tubester Interchangeability

All but two of the Tubesters furnished in the Sets are suited for use in the proper sockets in any of the 75S- receivers. The two exceptions are:

The ST101A Audio furnished with the Sets 75S-1 and 75S-3/3A will draw about 5 watts input in these models, which have 145V "plate" voltage on the stage with the Tubesters installed. THE ST101A WILL BURN OUT IF INSTALLED IN A 75S-3B/C.

The ST101B Audio furnished with the Sets 75S-3B/C will draw about 5 watts input in these models, which have 185V "plate" voltage on the stage. The ST101B may be used in the 75S-1 or 75S-3/3A, but about 1/3 less maximum audio output will be available.

The ST106A IF Tubester furnished with the Sets 75S-1 and 75S-3/3A has an additional input attenuator circuit that makes R57 effective. The ST106A may be used in the 75S-3B/C; its attenuator circuit is negated by the grounded Pin 7 of V6 in these models.

The ST106B IF Tubester furnished with the Sets 75S-3B/C may be used in the 75S-1 or 75S-3/3A, but if so the R57 "RF Gain Adjust" will be almost ineffective.