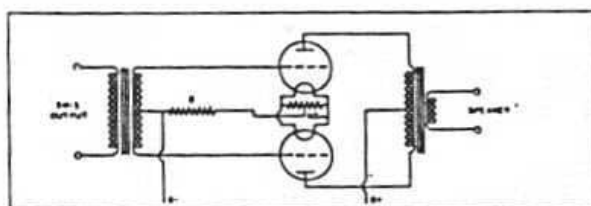


AUDIO AMPLIFIER

For loud speaker reception, the audio amplifier shown at the right is recommended. Resistor "R" will depend on the particular tubes employed, as follows: 2-45's, 750 ohms; 2-2A3's, 400 ohms; 2-2A5's triode connected, 350 ohms; 2-27's, 1000 ohms.



DWG. NO. 4 — CIRCUIT DIAGRAM OF AUDIO AMPLIFIER

Alignment and Service

Coil Alignment

ALL SW-3 Receivers and coils are tested to laboratory standards and are, therefore, mutually interchangeable. In normal service, possible adjustment of the band-spread detector

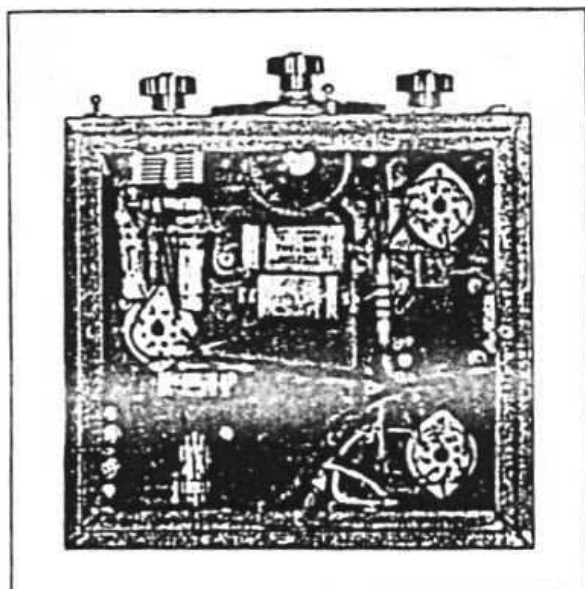


PHOTO NO. 1 — BOTTOM VIEW OF THE UNIVERSAL MODEL SW-3 RECEIVER

coils should be the only realignment required. The necessity for such adjustment is determined by the accuracy of receiver calibration as compared to the calibration curves Dwgs. Nos. 2 and 3.

The procedure for adjusting any band-spread detector coil is as follows: With the coils to be aligned in place and with the receiver controls set for normal C.W. reception, the main dial should be tuned to the high frequency limit of the band. An accurate test oscillator or signal generator should be coupled to the receiver antenna input terminals and tuned to deliver a signal of the same frequency as indicated by the receiver dial setting. The trimmer capacitor in the detector coil should be varied until the test signal is tuned in. With this trimmer properly set, the low frequency limit should be accurate, and the R.F. amplifier and detector stages should track.

Tube and Circuit Failures

Failures can readily be located by checking the individual components, including tubes, with reliable equipment or by temporary substitution with parts known to be in good condition. A replacement detector tube should be selected with care to eliminate the possibility of trouble from microphonics, hum modulation, or instability of signals.

Earlier Models of SW-3

General

THE data on the Universal Model SW-3 applies, in most part, to all models of the SW-3 Receiver. Details applicable to older types only are given below.

ACSW-3 Receiver

Dwg. No. 5 shows the circuit diagram and parts list. This model uses two type 58 tubes as R.F. amplifier and detector and one type 27 as audio. Heater circuits require 3.75 amps., 2.5 volts; "B" circuits, 135-180 volts D.C. "60-70" series of coils are used.

6V DCSW-3 Receiver

Dwg. No. 6 shows the circuit diagram and lists values of parts. Tubes used are two type 36 as R.F. amplifier and detector and one-type 37 as audio. Heater circuits require .9 amps., 6.3 volts; "B" circuits, 67 and 135 volts DC.

If desired, type 35 tubes may be substituted for type 36 and type 27 for 37, making the receiver suitable for .25-volt heater operation. Heater current drain when so operated is 5.25 amps.; "B" potential, 67 and 135 volts DC. In either case, "10-20" series of coils are used.