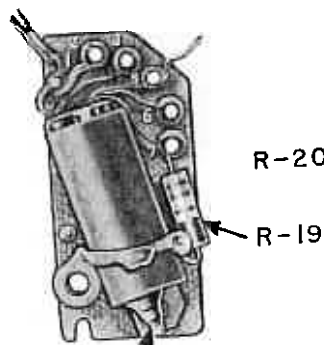
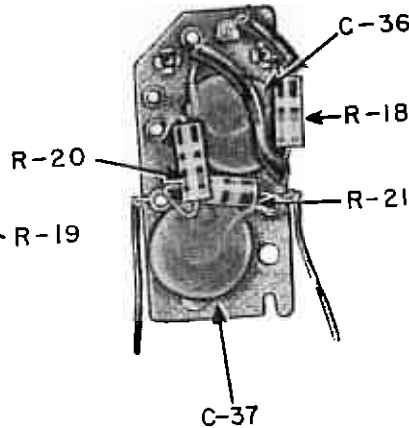


R-F PANEL ASSEM
REAR VIEW

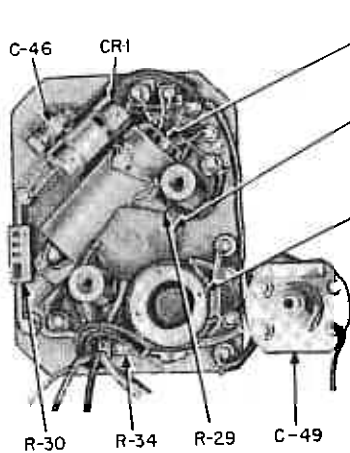
2ND I-F AMP
PANEL ASSEM
FRONT VIEW



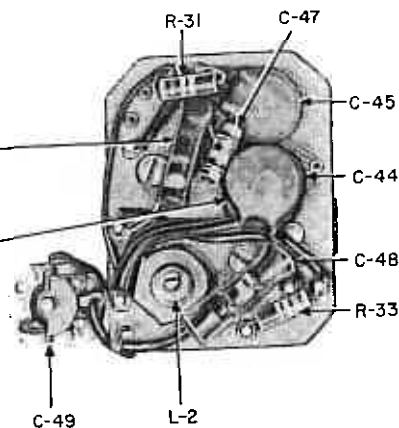
V-5
2ND I-F AMP
5899



2ND I-F AMP
PANEL ASSEM
REAR VIEW



TOP



BOTTOM

BFO
PANEL ASSEM
TOP
&
BOTTOM
VIEW

panel assembly parts locations.

generator output as required to keep the output around 5 mw.

(e) If in step (d) the maximum reading is lower than that in step (a), it indicates that the r-f resonance has been passed. In this case, repeat steps (a), (b), (c), and (d), turning r-f trimmer (C26) clockwise instead of counterclockwise.

(15) After the true r-f resonance has been found, recheck the alignment of T1, T3, and T5 at 3.5 mc.

(16) If it was necessary to move any of the slugs (T1, T3, or T5) while rechecking the alignment at the low alignment point on the dial (3.5 mc), recheck the alignment at the high alignment point on the dial (6.0 mc).

NOTE: Because of the extreme accuracy desired in this receiver, it is well to recheck the alignment at both the low and high alignment points on the dial three times. After the first alignment the r-f resonance should be close enough to the true resonance so that only the oscillator trimmer and slug need be re-adjusted.

(17) After the low band has been accurately aligned, apply glyptal to the low-band trimmers and slugs.

(18) Set RANGE switch to "red" position (6.5-15 mc).

(19) Set the receiver and generator dials at 7.0 mc.

CAUTION: Check for image frequency as in step 12.

(20) Turn trimmers C11, C17, and C29 so that the slots are parallel to the long edge of the compartment.

(21) Tune oscillator slug in T6 for maximum output.

CAUTION: Do not force slug into the coil.

(22) Tune T2, T4, and T6 slugs for maximum output.

(23) Set the generator and receiver dials at 14.5 mc.

(24) Adjust the oscillator trimmer (C17) and antenna trimmer (C11) for maximum output.

(25) Repeat the "rocking" procedure as described for the 3 to 6.5 mc band in step 14 to find the true resonant frequency of the r-f tank. In this case, however, adjust the r-f trimmer C29, and oscillator trimmer C17.

(26) Repeat the alignment at both the low and high alignment points on the dial three times.

(27) Replace glyptal on trimmers and slugs.

(28) The set when properly aligned will have a sensitivity on both bands of less than 20 micro-

volts for 5 milliwatts output.

f. Alignment by Crystal

(1) The receiver may be aligned in the field by replacing the a-m signal generator with the radiated signal from the calibrating crystal and by using the phone as an output indicator. The alignment procedure is the same as with the generator except that the bfo is turned on. The gain of the receiver must be reduced sufficiently after the beat is located to permit hearing a change of volume when the adjustments are made.

(2) If aligned on the image, the dial calibration will be off and large sensitivity variations will be noticed over the band. Aligning on an image or wrong harmonic of the crystal will result in an abnormal position of the coil slugs and trimmers. The slugs normally extend $\frac{1}{16}$ " to $\frac{3}{16}$ " beyond the end of the coil base. The slots in the trimmers are normally less than perpendicular to the long edge of the compartment. A slot perpendicular to the long edge would very likely indicate that the set is misaligned.

27. DIAL SCALE MECHANISM—DISASSEMBLY AND REASSEMBLY — (Refer to Figure 17)

a. DISASSEMBLY

(1) Lift the frequency channel indicator (B) up at the large end, and slide out of spring clamp (D).

(2) Remove the screws (J) and remove the assembly consisting of (A), (C), (D), and (L).

(3) Remove the three screws (K).

(4) Push the vernier (E) in the direction indicated until it clears the dial. Hold it in position until the dial scale has been removed.

(5) Remove the dial by lifting straight up, because it fits snugly on hub.

b. REASSEMBLY

(1) Replace dial, placing pin in hole (F).

(2) Replace screws (K).

(3) Replace the assembly consisting of (A), (C), (D), and (L) and screws (J).

(4) Turn the dial until the tuning capacitor is fully meshed.

(5) Hold spring (A) back and insert the end of frequency channel indicator (B) into spring clamp (D) until the white line (G) falls over the line between the top two scales on dial.

(6) Engage the pinion gear (H) with the rack gear teeth on rear of frequency channel indicator (B).

(7) Make sure the end loop on spring (A) rests on *top* of frequency channel indicator (B).

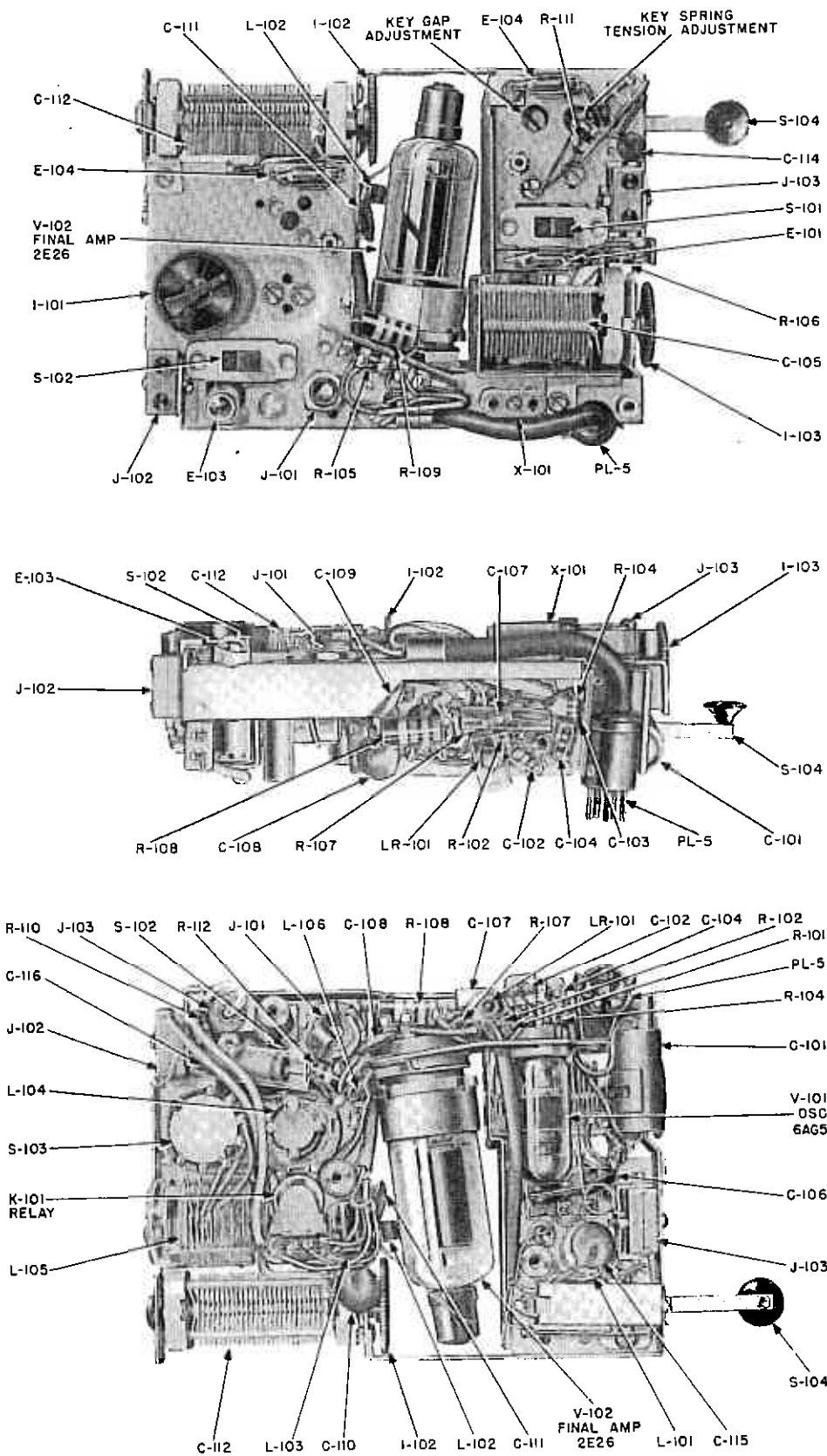


Figure 19. Transmitter RT-6, parts location.

29. CORRECTIVE MAINTENANCE OF TRANSMITTER

a. A trouble-shooting chart for the transmitter is supplied as an aid in locating trouble. Voltage

and resistance measurements of the defective circuit should ordinarily be sufficient to isolate defective components not specifically mentioned in the trouble-shooting chart.

TRANSMITTER RT-6 TROUBLE-SHOOTING CHART

SYMPTOM	PROBABLE CAUSE	REMEDY
Low power output.	Low oscillator output.	Replace 6AG5.
	Shorted bypass.	Replace C106.
	Defective crystal.	Replace crystal.
	Weak 2E26.	Replace.
	Open output indicator.	Replace.
	Shorted coil turn (check coils at taps).	Remove short.
Limited tuning range.	Shorted coil turn (check coils at taps).	Remove short.
Low harmonic output.	Defective crystal.	Replace.
Poor keying waveform. (Complaint of key clicks from listener.)	Open C101 or C116.	Replace.
	Defective crystal.	Replace.
No sidetone.	Defective neon bulb.	Replace.
No break-in operation.	Receiver B+ relay not making contact.	Readjust contact or replace relay.
No B+ voltage.	Jumper open between pins 2 and 6 on transmitter cable plug.	Repair.

b. The power output of the transmitter is dependent upon the frequency of the signal transmitted. The following table lists the minimum output at various frequencies.

MINIMUM POWER OUTPUT FOR VARIOUS FREQUENCIES

Band	Frequency (mc)	Harmonic of Crystal	Minimum Output (watts)
Low	3.0	Fundamental	9
	4.0	Fundamental	9
	5.0	Fundamental	9
	6.0	Fundamental	9
High	7.0	Fundamental	6
	8.0	Second	6
	10.0	Second	6
	12.0	Second	6
	15.0	Third	6

30. SENDING KEY ADJUSTMENT

a. The sending key spring tension adjustment is the screw below the chassis nearest the knob of the sending key shown in Figure 19. The preferred degree of spring tension depends upon the operator. The spring tension should be sufficient to open the key immediately when the pressure is released and yet not so great as to require the expenditure of unnecessary energy.

b. The sending key gap adjustment is the screw on the chassis to the rear of the spring tension adjustment screw. See Figure 19. If the gap between the contacts is too narrow, it will result in a jittery style of sending. If the gap is too wide, a sluggish sending style will result. A good gap separation is approximately .025 inches.

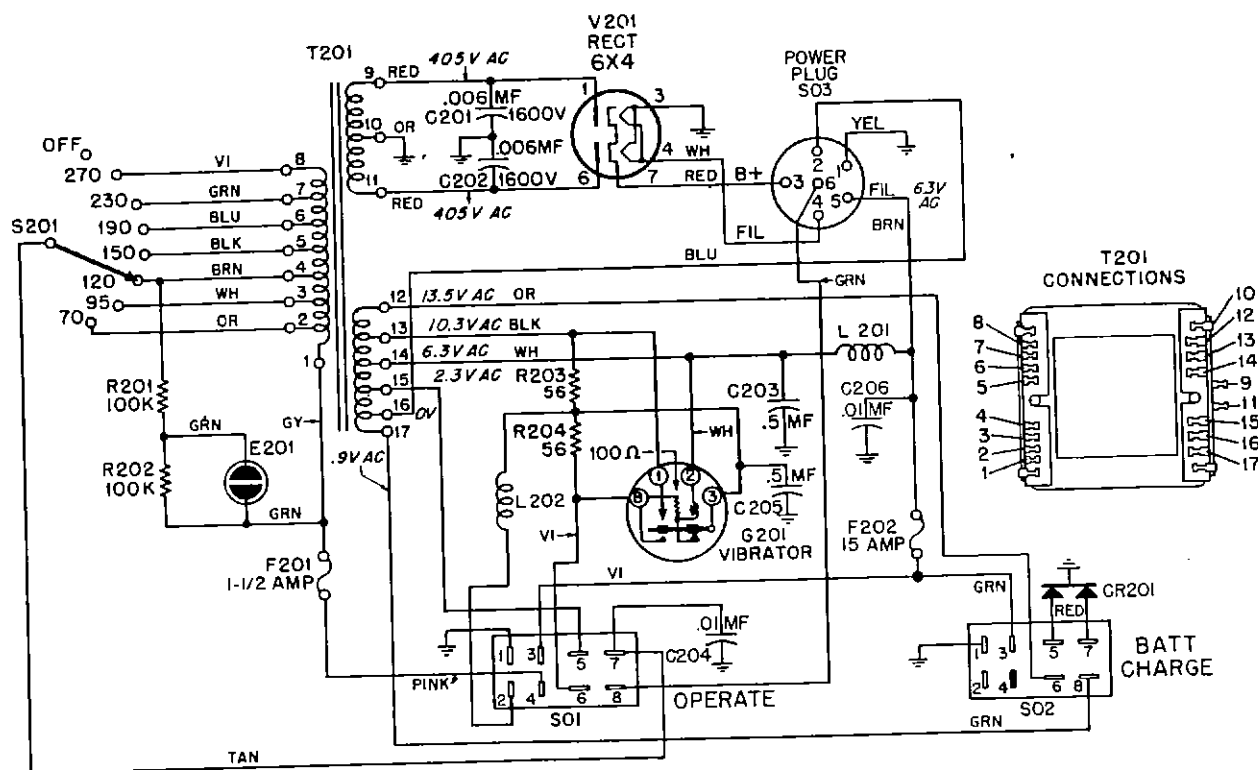
c. Excessive play at the hinge, provided for folding the key into the case, can be taken up by tightening the screw and lock-nut at the pivot point.

SECTION III. POWER SUPPLY RP-6

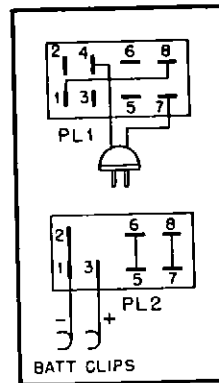
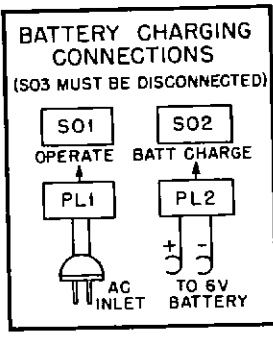
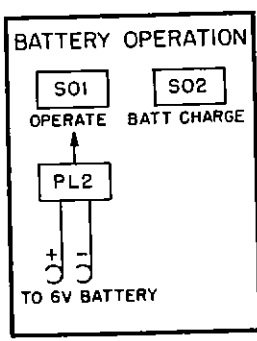
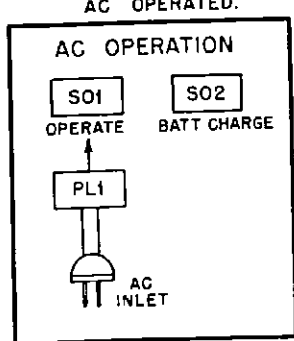
31. **CIRCUIT DESCRIPTION**—(See Schematic Diagram, Figure 20)

a. **AC**—An eight-tap primary on the transformer provides for a wide range of input voltages at frequencies from 40 to 400 cps. The secondary voltage is rectified by a full-wave rectifier tube (6X4) and passed on to the Filter-Accessory Unit RA-6.

b. **Battery**—The 6-volt dc is converted to ac and stepped up by the vibrator and transformer. It is rectified by a type 6X4 rectifier tube and passed on to the Filter-Accessory Unit RA-6. L201, L202, C203, C204, and C205 serve as hash suppressors.



NOTE: VOLTAGE MEASUREMENTS TO GROUND USING A 20,000 OHM/VOLT METER AND ARE DC UNLESS OTHERWISE SPECIFIED. AC OPERATED.



NOTES: ALL PLUGS VIEWED FROM FRONT. RESISTORS ARE IN OHMS UNLESS OTHERWISE SPECIFIED.

Figure 20. Power Supply RP-6, schematic diagram.

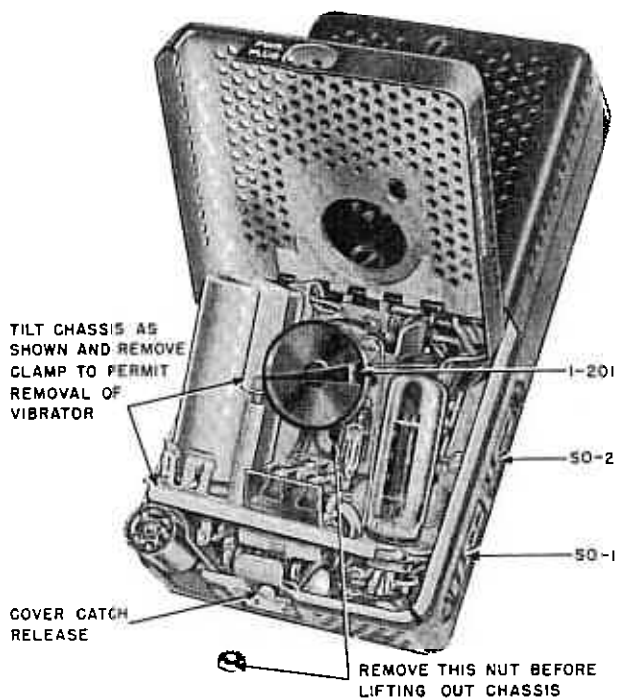


Figure 21. Power Supply RP-6, vibrator replacement.

c. **Battery Charging**—A tap on the low voltage winding of the transformer provides suitable power for charging a battery with the full-wave selenium rectifier (CR201) which is contained in the unit. The charging rate depends upon the charge in the battery. When the electrolyte has a specific gravity of 1.180 the charging current will be at least 3.5 amperes. As the specific gravity increases to 1.280 the charging current gradually drops 0.8 ampere.

32. HOW TO REPLACE VIBRATOR

- a. Loosen the nut shown in Figure 21.
- b. Tilt the chassis up as shown and take off the clamp holding the vibrator in the socket by removing the two screws at the ends of the clamp.
- c. Remove the vibrator by lifting it out.

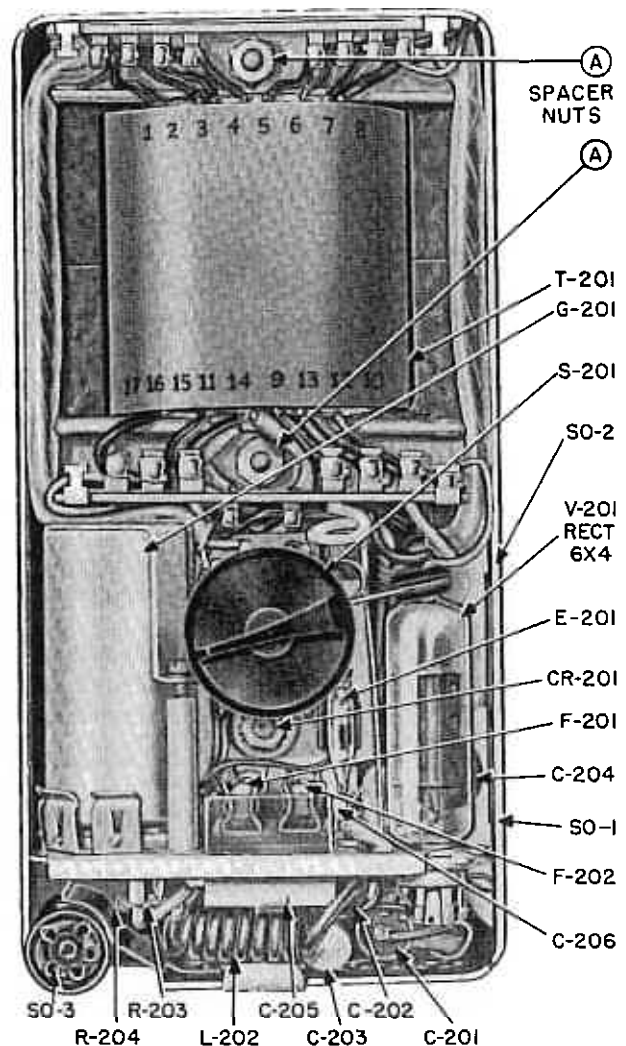


Figure 22. Power Supply RP-6, parts location.

33. HOW TO REPLACE POWER TRANSFORMER (See Figure 22)

- a. Tag and disconnect all leads from transformer terminal strips.
- b. Remove the hex spacer nuts (A, Figure 22).
- c. Lift out transformer.

34. CORRECTIVE MAINTENANCE OF POWER SUPPLY

A trouble-shooting chart for the power supply is supplied as an aid in locating trouble. Voltage and resistance measurements of the defective circuit should ordinarily be sufficient to isolate defective components not specifically mentioned in the trouble-shooting chart that follows.

POWER SUPPLY RP-6 TROUBLE-SHOOTING CHART

SYMPTOM	PROBABLE CAUSE	REMEDY
15 amp fuse blown.	Shorted buffer capacitor C201 or C202.	Replace.
Excessive vibrator hash in receiver.	Worn vibrator G201.	Replace.
	Open capacitor C205.	Replace.
Battery discharges instead of charging under battery charging operation.	Shorted selenium rectifier CR201.	Replace.
Neon bulb E201 fails to light with line voltage applied to proper tap position.	Defective neon bulb E201.	Replace with red-tipped neon bulb.*
Neon bulb E201 lights with line voltage switch set one position higher than correct position.	Defective neon bulb E201.	Replace with red-tipped neon bulb.*
No filament voltage.	Open lead at power plug SO3.	Repair.
No B+ voltage.	Open lead at power plug SO3.	Repair.
1.5 amp fuse blown.	Shorted filter capacitor C301 or C302 in Filter unit.	Replace.
	Shorted rectifier tube 6X4.	Replace.
	Open regulator tube in Filter unit causing excessive receiver voltage.	Replace.
	Open resistor R301, R302, R303 or R304.	Replace.

*Red-tipped neon bulbs are for Power Supply only. (Ionizing Potential 53-55V rms)

SECTION IV. FILTER-ACCESSORY UNIT RA-6

35. CIRCUIT DESCRIPTION—(See Schematic Diagram, Figure 23)

a. **AC Operation**—The Filter-Accessory Unit RA-6 filters the dc from the power supply and delivers it to the transmitter and receiver. Two 5644 (or 5787) voltage regulator tubes provide regulation for the receiver supply. The filter unit provides four output voltages.

- (1) 6.3-v ac at 2.4 amperes for filaments,
- (2) 400-v dc at 75 ma (unregulated) for the transmitter,
- (3) two 90-v dc at 25 ma (regulated) taps for the receiver.

The B supply for the transmitter or the receiver is chosen by a DPDT switch marked RECVR-TRANS. When in the RECVR position, power is applied only to the RECVR. When in the TRANS position, power is applied to the transmitter and also to the receiver when not transmitting through the break-in relay located in the transmitter.

b. **Battery Operation**—Filter-Accessory Unit RA-6 performs the same under battery operation

as under ac. The output voltages are also the same except that the filament voltage is dc instead of ac and is furnished by the battery.

c. **Interlock**—An interlock is provided in PL3 to avoid damage to the rectifier or input filter capacitor should the input power be applied when no load is connected to the power supply output.

If the power is applied to Power Supply RP-6 alone, both the filaments and the cathode of the rectifier are open because SO3 and PL3 are disconnected.

If only Filter-Accessory Unit RA-6 is connected to the power supply, there are two conditions possible:

(1) With the toggle switch set at TRANS the rectifier filaments are connected, but SO5 is disconnected and the cathode circuit is open.

(2) With the toggle switch set at RECVR, the rectifier cathode is connected to the input filter capacitor; however, the filter output is connected to the voltage regulator stages, and the load is sufficient to keep the voltage across the input capacitor at a safe value.

36. HOW TO DISASSEMBLE

a. Remove the two flat head screws from bottom of housing.

b. Remove the three screws on the cover (A, Figure 10).

c. The chassis can then be lifted from the housing and serviced without disconnecting the choke leads.

d. To remove the choke, remove the two binderhead screws on bottom of housing, and lift out.

37. CORRECTIVE MAINTENANCE OF FILTER-ACCESSORY UNIT

A trouble-shooting chart for the filter-accessory unit is supplied as an aid in locating trouble. Voltage and resistance measurements of the defective circuit should ordinarily be sufficient to isolate defective components not specifically mentioned in the trouble-shooting chart that follows.

FILTER-ACCESSORY UNIT RA-6 TROUBLE-SHOOTING CHART

SYMPTOM	PROBABLE CAUSE	REMEDY
Receiver voltage much higher than normal.	Open regulator tube.	Replace.
	Open resistor R301, R302, R303, or R304.	Replace.
No B + voltage.	Broken lead at plug PL3.	Repair.
	Open choke L301.	Replace.
No filament voltage.	Broken lead at plug PL3.	Repair.

SECTION V. PACKAGING

38. UNITS IN PLASTIC POUCH

a. When not in use, or when transporting, the units should be kept in the plastic pouches provided, as shown in Figure 25. The pouches are waterproof if folded in the prescribed manner.

b. There are two sizes of pouches—two large ones for Transmitter RT-6 and Receiver RR-6 and two small ones for the Power Supply RP-6

and Filter-Accessory Unit RA-6. All are used as shown in Figure 25.

39. UNITS IN CLOTH BAG

Several of the additional accessories are contained in a small cloth bag which is not waterproof. They are the hank antenna, the antenna insulators, the battery clamps and the inter-unit connecting cord.

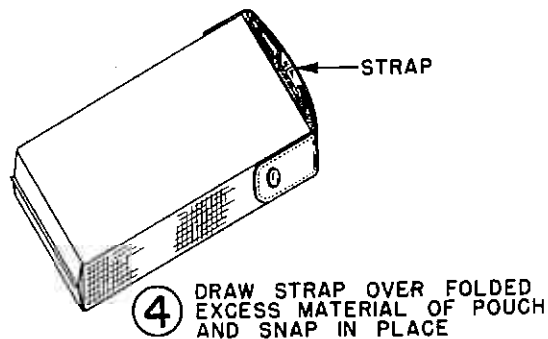
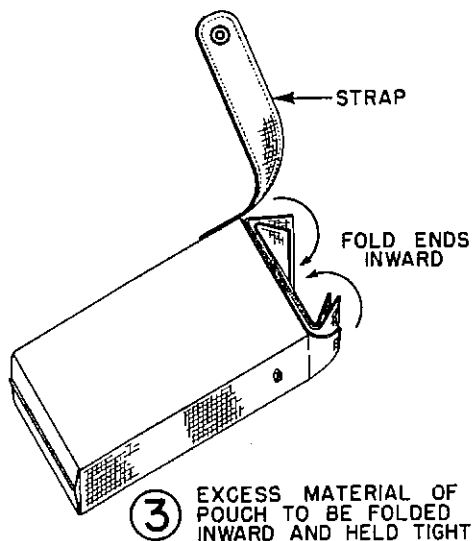
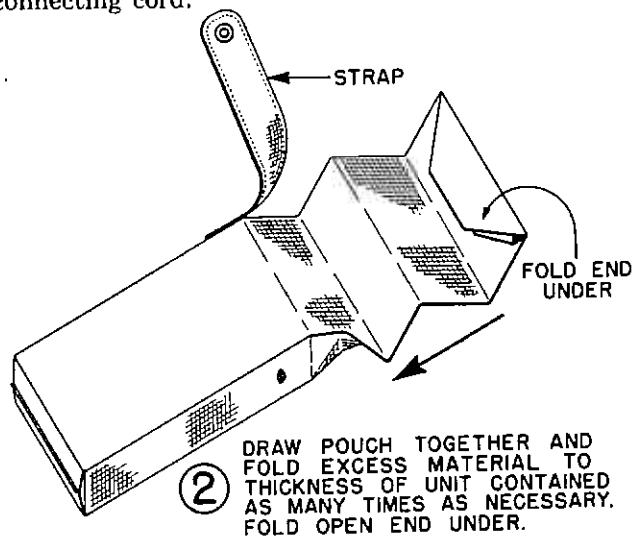
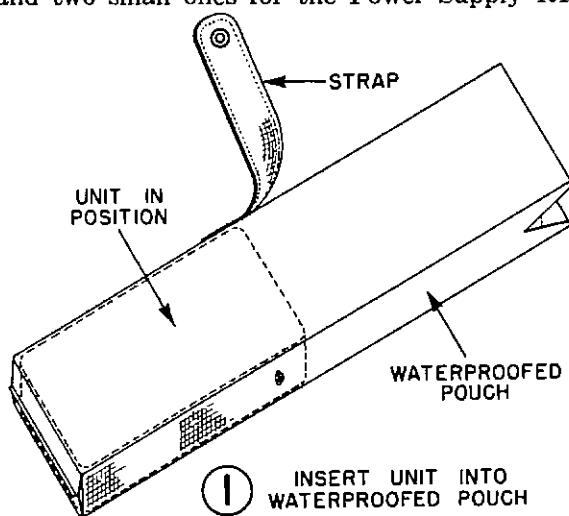


Figure 25. Packaging detail.

CHAPTER 4

REPLACEMENT PARTS LISTS

SECTION I. RECEIVER RR-6

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
C1	921R121	CC30SL470K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 47 uuf $\pm 10\%$; 500 vdcw
C2	921R107	CC20SL220K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 22 uuf $\pm 10\%$; 500 vdcw
C3	921R142		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .001 uf; 500 vdcw
C7	921R109	CC20SL270K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 27 uuf $\pm 10\%$; 500 vdcw
C8	921R104	CC20SL150K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: 15 uuf $\pm 10\%$; 500 vdcw
C9A, C9B, C9C	419D101		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 3 sections; A & C—10 to 186 uuf; B—14 to 190 uuf; includes wormdrive
C10	419A103		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 1.7 to 8.7 uuf
C11	419A103		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 1.7 to 8.7 uuf
C12	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C13	21R115042		CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 100 uuf $\pm 5\%$ N220
C14	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C15	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C16	419A103		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 1.7 to 8.7 uuf
C17	419A103		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 1.7 to 8.7 uuf
C18	921R328	CM20D202J	CAPACITOR, FIXED, MICA DIELECTRIC: 2000 uuf $\pm 5\%$; 300 vdcw
C19	421A137		CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 7.5 uuf ± 0.25 uuf; 500 vdcw
C20	921R705		CAPACITOR, FIXED, MICA DIELECTRIC: 1000 uuf $\pm 5\%$; 500 vdcw
C21	421A137		CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 7.5 uuf ± 0.25 uuf; 500 vdcw

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
C22	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C23	921R463	CC20CJ020C	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 2 uuf ±0.25 uuf; 500 vdcw
C24	921R621	CC20CH010C	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 1 uuf ±0.25 uuf; 500 vdcw
C25	921R101	CC20SL100K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 10 uuf ±10%; 500 vdcw
C26	419A103		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 1.7 to 8.7 uuf
C27	921R622		CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 8.2 uuf ±0.25 uuf; 500 vdcw
C29	419A103		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 1.7 to 8.7 uuf
C30	921R127	CC30SL101K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 100 uuf ±10%; 500 vdcw
C31	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C32	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C33	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C34	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C35	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C36	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C37	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C39	921R142		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .001 uf 500 vdcw
C40	921R123	CC30SL560K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 56 uuf ±10%; 500 vdcw
C41	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C43	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C44	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
C45	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C46	921R121	CC30SL470K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 47 uuf ±10%; 500 vdcw
C47	921R127	CC30SL101K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 100 uuf ±10%; 500 vdcw
C48	921R110	CC20SL330K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 33 uuf ±10%; 500 vdcw
C49	419B102		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 1.7 to 8.7 uuf; special shorting type
C50	921R127	CC30SL101K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 100 uuf ±10%; 500 vdcw
C51	921R109	CC20SL270K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 27 uuf ±10%; 500 vdcw
C52	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C53	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
CR1	448B104 or 448K105 or 448K106		CRYSTAL UNIT, RECTIFYING: germanium type; G.E. type IN48 CRYSTAL UNIT, RECTIFYING: germanium type; Kemtron type IN34 CRYSTAL UNIT, RECTIFYING: germanium type; Sylvania type IN34
I1	436B102		DIAL, BFO CONTROL
I2	436C101		DIAL, TUNING
I3	401V737		INDICATOR, FREQUENCY CHANNEL: with red and blue windows and rack gear
I4	401V484		KNOB ASSEMBLY, ADJUST CALIBRATION: with adjustment screw
I5	438B101		KNOB, RANGE SWITCH
I6	401V752		KNOB ASSEMBLY, VERNIER: complete with brackets, bushings, ten- sion spring, J2
J1	409C153		CONNECTOR, 2-PIN (Antenna and Ground)
J2	409K154		CONNECTOR, 2-PIN (Phones)
L1	424K138		COIL, RADIO FREQUENCY CHOKE: 220 uh
L2	424B164		COIL, RADIO FREQUENCY: 945 uh; tapped; adjustable iron core; beat frequency oscillator
PL6	428A104 or 401B518		CONNECTOR, PLUG: 4 male contacts; plug only CONNECTOR ASSEMBLY, PLUG: 4 male contacts; with cable
R1	906R526	RC20BF563K	RESISTOR, FIXED, COMPOSITION: 56,000 ohms ±10%; ½W; ins

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
R2	906R445	RC20BF681K	RESISTOR, FIXED, COMPOSITION: 680 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R3	906R565	RC20BF474M	RESISTOR, FIXED, COMPOSITION: 470,000 ohms $\pm 20\%$; $\frac{1}{2}W$ ins;
R4	906R488	RC20BF682M	RESISTOR, FIXED, COMPOSITION: 6800 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R5	906R495	RC20BF103M	RESISTOR, FIXED, COMPOSITION: 10,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R6	906R414	RC20BF121K	RESISTOR, FIXED, COMPOSITION: 120 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R7	906R502	RC20BF153M	RESISTOR, FIXED, COMPOSITION: 15,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R8	906R488	RC20BF682M	RESISTOR, FIXED, COMPOSITION: 6800 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R9	906R600	RC20BF335M	RESISTOR, FIXED, COMPOSITION: 3.3 megohms $\pm 20\%$; $\frac{1}{2}W$; ins
R10	906R502	RC20BF153M	RESISTOR, FIXED, COMPOSITION: 15,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R11	906R495	RC20BF103M	RESISTOR, FIXED, COMPOSITION: 10,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R12	906R565	RC20BF474M	RESISTOR, FIXED, COMPOSITION: 470,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R13	906R470	RC20BF272K	RESISTOR, FIXED, COMPOSITION: 2700 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R14	906R526	RC20BF563K	RESISTOR, FIXED, COMPOSITION: 56,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R15	906R526	RC20BF563K	RESISTOR, FIXED, COMPOSITION: 56,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R16	906R488	RC20BF682M	RESISTOR, FIXED, COMPOSITION: 6800 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R17	906R565	RC20BF474M	RESISTOR, FIXED, COMPOSITION: 470,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R18	906R470	RC20BF272K	RESISTOR, FIXED, COMPOSITION: 2700 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R19	906R526	RC20BF563K	RESISTOR, FIXED, COMPOSITION: 56,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R20	906R526	RC20BF563K	RESISTOR, FIXED, COMPOSITION: 56,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R21	906R488	RC20BF682M	RESISTOR, FIXED, COMPOSITION: 6800 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R23	906R526	RC20BF563K	RESISTOR, FIXED, COMPOSITION: 56,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R25	906R526	RC20BF563K	RESISTOR, FIXED, COMPOSITION: 56,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R26	906R554	RC20BF274K	RESISTOR, FIXED, COMPOSITION: 270,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R27	906R431	RC20BF331K	RESISTOR, FIXED, COMPOSITION: 330 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R28	418B105		RESISTOR, VARIABLE, COMPOSITION: 1 megohm $\pm 20\%$; $1/10W$; includes knob
R29	906R488	RC20BF682M	RESISTOR, FIXED, COMPOSITION: 6800 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R30	906R554	RC20BF274K	RESISTOR, FIXED, COMPOSITION: 270,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R31	906R537	RC20BF104M	RESISTOR, FIXED, COMPOSITION: 100,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R32	906R495	RC20BF103M	RESISTOR, FIXED, COMPOSITION: 10,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins
R33	906R565	RC20BF474M	RESISTOR, FIXED, COMPOSITION: 470,000 ohms $\pm 20\%$; $\frac{1}{2}W$; ins

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
R34	906R540	RC20BF124K	RESISTOR, FIXED, COMPOSITION: 120,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
S1	440C102		SWITCH, SLIDE: range switch; with knob
S2	440A103		SWITCH, PUSH: single-pole, single-throw; momentary contact; normally open
T1	424B162		TRANSFORMER, RADIO FREQUENCY: adjustable iron core; LF antenna
T2	424B163		TRANSFORMER, RADIO FREQUENCY: adjustable iron core; HF antenna
T3	424B158		TRANSFORMER, RADIO FREQUENCY: adjustable iron core; LF RF
T4	424B159		TRANSFORMER, RADIO FREQUENCY: adjustable iron core; HF RF
T5	424B160		TRANSFORMER, RADIO FREQUENCY: adjustable iron core; LF Osc
T6	424B161		TRANSFORMER, RADIO FREQUENCY: adjustable iron core; HF Osc
T7	424B121		TRANSFORMER, INTERMEDIATE FREQUENCY: 455 kc; input; iron core; double-tuned; with shield
T8	424B121		TRANSFORMER, INTERMEDIATE FREQUENCY: 455 kc; interstage; iron core; double-tuned; with shield
T9	424B121		TRANSFORMER, INTERMEDIATE FREQUENCY: 455 kc; output; iron core; double-tuned; with shield
T10	425B121		TRANSFORMER, AUDIO FREQUENCY: plate-to-phone coupling type
V1			ELECTRON TUBE: subminiature pentode; 8 term wire type; RMA type 5899
V2			ELECTRON TUBE: subminiature pentode; 8 term wire type; RMA type 5899
V3			ELECTRON TUBE: subminiature pentode; 8 term wire type; RMA type 5899
V4			ELECTRON TUBE: subminiature pentode; 8 term wire type; RMA type 5899
V5			ELECTRON TUBE: subminiature pentode; 8 term wire type; RMA type 5899
V6			ELECTRON TUBE: subminiature triode; 8 term wire type; RMA type 5718
V7			ELECTRON TUBE: subminiature triode; 8 term wire type; RMA type 5718
V8			ELECTRON TUBE: subminiature triode; 8 term wire type; RMA type 5718
X1	409B118		SOCKET, CRYSTAL: with switch
Y1			CRYSTAL UNIT, QUARTZ: plug-in type (not furnished with receiver)
Y2	448A103		CRYSTAL UNIT, QUARTZ: 500 kc

SECTION II. TRANSMITTER RT-6

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
C101	408A102		CAPACITOR, FIXED, METALLIZED PAPER: 1 uf $\pm 20\%$; 200 vdcw
C102	921R110	CC20SL330K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 33 uuf $\pm 10\%$; 500 vdcw
C103	921R142		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .001 uf; 500 vdcw
C104	921R127	CC30SL101K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 100 uuf $\pm 10\%$; 500 vdcw
C105	419B121		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 7.5 uuf to 176 uuf
C106	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C107	921R107	CC20SL220K	CAPACITOR, FIXED, CERAMIC DIELECTRIC: tubular type; 22 uuf $\pm 10\%$; 500 vdcw
C108	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C109	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C110	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C111	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C112	419B104		CAPACITOR, VARIABLE, AIR DIELECTRIC: plate meshing type; 11 uuf to 218 uuf
C114	921R142		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .001 uf; 500 vdcw
C115	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% $+80\%$; 450 vdcw
C116	423A104		CAPACITOR, FIXED, ELECTROLYTIC: Aerovox type SREN; 5 uf; 150 vdcw
E101	465A121		LAMP, GLOW: neon; $\frac{1}{4}W$; ionizing potential 47-55v rms (contractor's color code red or blue)
E102	465A121		LAMP, GLOW: neon; $\frac{1}{4}W$; ionizing potential 47-55v rms (contractor's color code red or blue)
E103	465A113		LAMP, INCANDESCENT: G.E. type 49; 2v; .06 amp; tubular; clear glass; bayonet base
E104	465A121		LAMP, GLOW: neon; $\frac{1}{4}W$; ionizing potential 47-69v rms (contractor's color code red, blue or yellow)
I101	436B125		KNOB; ANT IMPEDANCE MATCHING SWITCH

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
I102	436B156		KNOB; FINAL AMP TUNING
I103	436B127		KNOB; OSC TUNING
J101	409A158		JACK, TELEPHONE, THREE CIRCUIT: accommodates 2-conductor Army plug PL55
J102	409K154		CONNECTOR, 2-pin (Antenna and Ground)
J103	409C153		CONNECTOR, 2-pin (Rec Ant and Monitor)
K101	459C112		RELAY, KEYING, DPDT: switches antenna and B power
L101	424A128		COIL, RADIO FREQUENCY: plate tank; 16.4 uh
L102	424A143		COIL, RADIO FREQUENCY CHOKE
L103	424A155		COIL, RADIO FREQUENCY CHOKE: 100 uh
L104	424B204		COIL, RADIO FREQUENCY: HF plate tank; 5 taps
L105	424B202		COIL, RADIO FREQUENCY: LF plate tank; 5 taps
L106	424B201		COIL, RADIO FREQUENCY CHOKE: 100 uh
LR101	424A156		COIL, RADIO FREQUENCY: 80 uh; wound on 560-ohm $\pm 10\%$ $\frac{1}{2}W$ fixed composition resistor
PL5	428A122		CONNECTOR, PLUG: 6 male contacts
R101	906R536	RC20BF104K	RESISTOR, FIXED, COMPOSITION: 100,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R102	906R529	RC20BF683K	RESISTOR, FIXED, COMPOSITION: 68,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R104	906R547	RC20BF184K	RESISTOR, FIXED, COMPOSITION: 180,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R105	906R781	RC30BF333K	RESISTOR, FIXED, COMPOSITION: 33,000 ohms $\pm 10\%$; 1W; ins
R106	906R585	RC20BF155K	RESISTOR, FIXED, COMPOSITION: 1.5 megohms $\pm 10\%$; $\frac{1}{2}W$; ins
R107	906R778	RC30BF273K	RESISTOR, FIXED, COMPOSITION: 27,000 ohms $\pm 10\%$; 1W; ins
R108	906R960	RC42BE271K	RESISTOR, FIXED, COMPOSITION: 270 ohms $\pm 10\%$; 2W; ins
R109	906R1044	RC42BE273K	RESISTOR, FIXED, COMPOSITION: 27,000 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R110	906R372	RC20BF120K	RESISTOR, FIXED, COMPOSITION: 12 ohms $\pm 10\%$; $\frac{1}{2}W$; ins
R111	906R620	RC20BF106K	RESISTOR, FIXED, COMPOSITION: 10 megohms $\pm 10\%$; $\frac{1}{2}W$; ins
R112	906R988	RC42BE122K	RESISTOR, FIXED, COMPOSITION: 1,200 ohms $\pm 10\%$; 2W; ins
S101	440A123		SWITCH, SLIDE: single-pole, double-throw
S102	440A122		SWITCH, SLIDE: double-pole, double-throw
S103	440B104		SWITCH, ROTARY: special; 5-position with OFF; 2 poles
S104	401V724		KEY ASSEMBLY, TRANSMITTER

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
V101	409A131		ELECTRON TUBE: miniature pentode; 7 pins; RMA type 6AG5
V102			ELECTRON TUBE: pentode; octal; pin type; RMA type 2E26
X101			SOCKET, CRYSTAL
Y101			CRYSTAL UNIT, QUARTZ (not furnished with transmitter)

SECTION III. POWER SUPPLY RP-6

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
C201	408A123		CAPACITOR, FIXED, PAPER DIELECTRIC: .006 uf 1600 vdcw
C202	408A123		CAPACITOR, FIXED, PAPER DIELECTRIC: .006 uf 1600 vdcw
C203	408A121		CAPACITOR, FIXED, PAPER DIELECTRIC: .5 uf 200 vdcw
C204	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
C205	408K107		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .5 uf -20% +80%; 200 vdcw
C206	921R152		CAPACITOR, FIXED, CERAMIC DIELECTRIC: disc type; .01 uf -20% +80%; 450 vdcw
CR201	448C123		RECTIFIER, METALLIC: selenium, full-wave
E201	465A121		LAMP, GLOW: neon; ¼W; ionizing potential 53-55V rms (contractor's color code red)
F201	465A111		FUSE, GLASS TUBULAR: 1.5 amperes; 250V
F202	465K112		FUSE, GLASS TUBULAR: 15 amperes; 32V
G201	448B101		VIBRATOR, NON-SYNCHRONOUS: 115 cps, 6 vdc
I201	436B101		KNOB, LINE VOLTAGE SELECTOR: permanently glued to shaft of S-201
L201	424A157		COIL, RADIO FREQUENCY CHOKE: 6.0 uh
L202			COIL, RADIO FREQUENCY CHOKE: not replaceable—formed by lead wire
R201	906R535	RC20BF104J	RESISTOR, FIXED, COMPOSITION: 100,000 ohms ±5%; ½W; ins
R202	906R535	RC20BF104J	RESISTOR, FIXED, COMPOSITION: 100,000 ohms ±5%; ½W; ins
R203	906R400	RC20BF560	RESISTOR, FIXED, COMPOSITION: 56 ohms ±10%; ½W; ins
R204	906R400	RC20BF560K	RESISTOR, FIXED, COMPOSITION: 56 ohms ±10%; ½W; ins
S201	440B108		SWITCH, ROTARY: 8-position; single-pole; shorting type. Knob I201 must be broken to remove S201
S01, S02	409B121		CONNECTOR ASSEMBLY: consists of two Jones receptacles, one 8-prong (S01) and one 7-prong (S02)

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
S03	409A122		CONNECTOR, PLUG: 6 female contacts
T201	425D137		TRANSFORMER, POWER
V201			ELECTRON TUBE: miniature double diode; RMA type 6X4

SECTION IV. FILTER-ACCESSORY UNIT RA-6

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
C301A, C301B	408B122		CAPACITOR, FIXED, PAPER DIELECTRIC: 2-section; 1.5 x 1.5 uf 600 vdcw
C302	408B106		CAPACITOR, FIXED, PAPER DIELECTRIC: 5 uf; 600 vdcw
F301	465A111		FUSE, GLASS TUBULAR: 1.5-ampere, 250V. Spare for F201
F302	465K112		FUSE, GLASS TUBULAR: 15-ampere, 32V. Spare for F202
HS301	450B101		RECEIVER, EARSET: magnetic type; 2000 ohms impedance; with 2- terminal receptacle
L301	401V375		REACTOR: filter choke; single winding; 4 hy; includes mtg nuts
O301 O302 O303	442A162		RING, RETAINER (SO6, SO5 and PL3)
PL3	428A123		CONNECTOR, PLUG: 6 male contacts
R301	418K128		RESISTOR, FIXED, WIREWOUND: 8000 ohms $\pm 5\%$; 10W
R302	418A127		RESISTOR, FIXED, WIREWOUND: 4000 ohms $\pm 5\%$; 5W
R303	418K128		RESISTOR, FIXED, WIREWOUND: 8000 ohms $\pm 5\%$; 10W
R304	418A127		RESISTOR, FIXED, WIREWOUND: 4000 ohms $\pm 5\%$; 5W
R305	906R578	RC20BF105K	RESISTOR, FIXED, COMPOSITION: 1 megohm $\pm 10\%$; $\frac{1}{2}$ W; ins
S301	440A110 or 440K111		SWITCH, TOGGLE: double-pole, double-throw; 3-amp, 250V
SO5	409A128		CONNECTOR, PLUG: 6 female contacts
SO6	409A129		CONNECTOR, PLUG; 4 female contacts
SO7	409A157		SOCKET, PROTECTIVE (TWO): used to prevent damage to pins of plugs W301 and W302
V301			ELECTRON TUBE: sub-miniature voltage regulator; JAN type 5644
		or	ELECTRON TUBE: sub-miniature voltage regulator; JAN type 5787
V302			ELECTRON TUBE: sub-miniature voltage regulator; JAN type 5644
		or	ELECTRON TUBE: sub-miniature voltage regulator; JAN type 5787

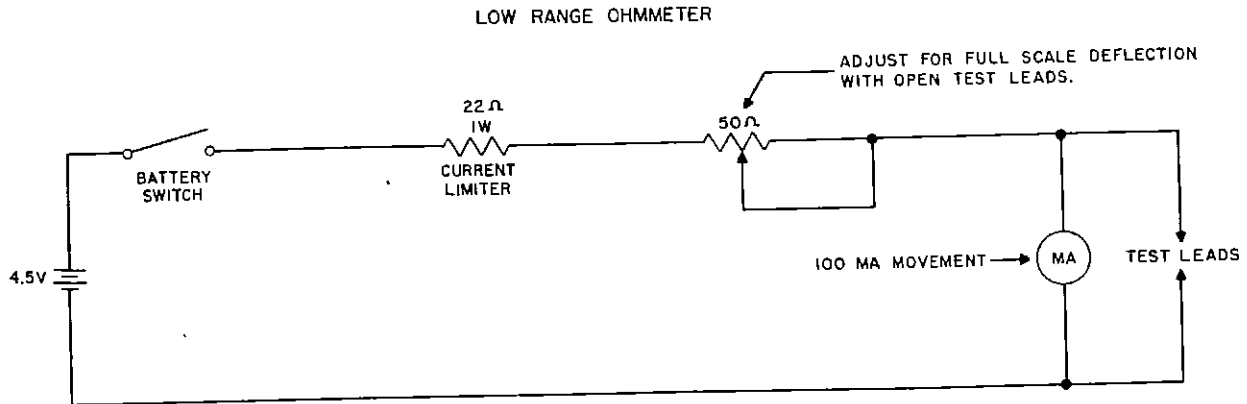
Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
W301	401B363		CABLE ASSEMBLY, AC: 2-conductor; with universal line plug and Jones plug; 6 ft long
W302	401B366		CABLE ASSEMBLY, BATTERY: 2-conductor; one red, one black; with spade lugs and Jones plug; 41 in. long
W303	430B101		CORD, EARSET: 5 ft long; 2-conductor; with two .083 tips and 2-prong male plug
W305	464B274		PLATES, schematics (comp)

SECTION V. ADDITIONAL ACCESSORIES

Ref. No.	Contractor's Drawing & Part Number	JAN Type	Description
E301	451B101		HANK, antenna (100 ft)
E302	414A117		INSULATORS, antenna (two)
E303	465A113		LAMP, INCANDESCENT, G.E. TYPE 49: 2v; .06 amp; tubular; clear glass; bayonet base. Spare for E103
H301	401V376		CLAMPS, battery; with screw (two)
W304	430B143		CORD, INTER-UNIT: consists of two twisted leads, with three Lenz type #550 connectors and one MUELLER #45 battery clip. To connect side-tone and antenna to receiver.

APPENDIX I.

LOW RANGE OHMMETER



- NOTE 1. BATTERY CONSISTS OF THREE 1.5V FLASHLIGHT CELLS IN SERIES.
- NOTE 2. USE HEAVY GAUGE, SHORT TEST LEADS FOR MINIMUM LEAD RESISTANCE.
- NOTE 3. NOTE RESISTANCE OF SHORTED TEST LEADS & SUBTRACT THIS AMOUNT FROM ALL SUBSEQUENT READINGS AS A CORRECTION FACTOR.
- NOTE 4. OPEN SWITCH WHEN NOT IN USE TO PREVENT UNNECESSARY CURRENT DRAIN ON BATTERY.
- NOTE 5. READINGS IN THE METER CALIBRATION TABLE ARE FOR THE ABOVE CIRCUIT ONLY. IF THE CIRCUIT IS ALTERED THE FORMULA MAY NOT APPLY.
- NOTE 6. TO DETERMINE RESISTANCE VALUES NOT LISTED IN TABLE USE THE FOLLOWING FORMULA:

$$R_{\text{MEASURED}} = \left(\frac{I_M}{100 - I_M} \right) R_M$$

WHERE:

I_M = METER READING

R_M = INTERNAL RESISTANCE OF METER

EXAMPLE:
WHEN METER READING IS 3MA

$$R_{\text{MEASURED}} = \left(\frac{3}{100-3} \right) \cdot 1$$

$$R_{\text{MEASURED}} = .03 \text{ OHM}$$

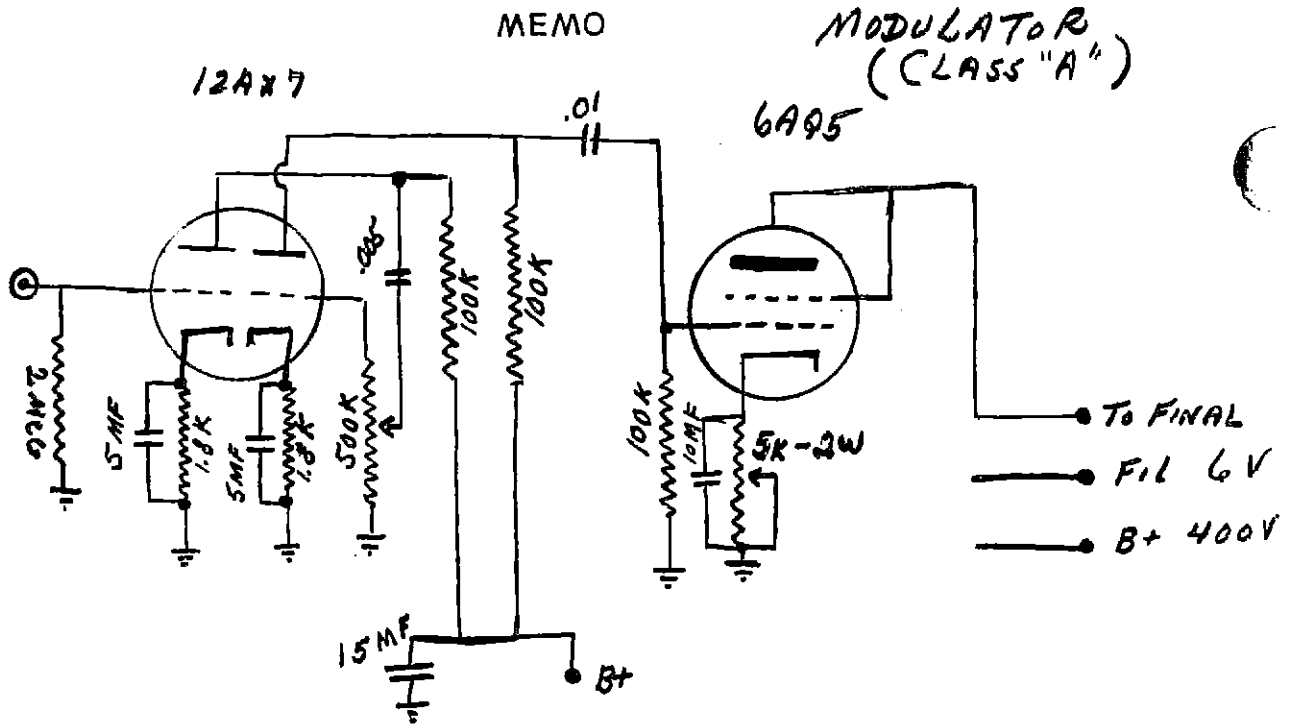
METER CALIBRATION TABLE *

METER READING (MA)	RESISTANCE (OHMS)
0	0
5	.052
10	.11
20	.25
30	.42
40	.66
50	1.0
60	1.5
70	2.3
80	4.0
90	9.0
100	∞

* VALUES CALCULATED FOR METER WITH 1 OHM INTERNAL RESISTANCE. (WESTON MODEL 301)

Figure 26. Low range ohmmeter.

CLAMP TUBE
MODULATOR
(CLASS "A")



ADJUSTMENT:

1. ADJ TRANS AS FOR CW WITH MODULATOR BIASED TO CUT-OFF.
2. WITH TRANS TUNED & LOADED FOR CW ADJUST BIAS ON MODULATOR TIL PLATE CURRENT ON FINAL IS APPROX HALF ORIGINAL CURRENT. EQUIP NOW READY FOR OPERATION, ADJ GAIN AS REQUIRED TO GIVE FULL OUTPUT WITH DIFFERENT MICROPHONES

- NOTE
1. ALL RESISTORS $\frac{1}{2}$ WATT UNLESS SPECIFIED
 2. USE WITH HI Z MIKES XTAL OR DYNAMIC
 3. 6AQ5 TRIODE CONNECTED
 4. PLATE OF 6AQ5 CONNECTED TO JUNCTION OF R-109 AND R-112

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