

ALIGNMENT PROCEDURE

- Use an amplitude modulated generator covering 455 KC to 30 MC.
- Connect the output meter across the speaker voice coil.
- Use a non-metallic alignment tool.
- Use a standard EIA dummy antenna as shown in figure 3.
- Set BFO control to OFF, VOLUME control maximum clockwise, RECEIVE/STANDBY control to RECEIVE, and the BANDSPREAD control to 100.
- Refer to figures 4 and 5 for location of adjustments.

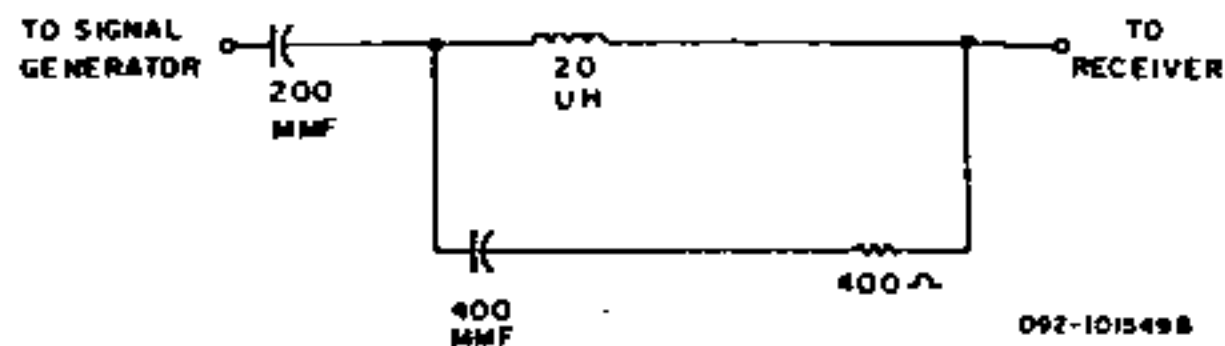


Figure 3. EIA Dummy Antenna

Step	Signal Generator Connections	Generator Frequency	Band Selector Setting	Receiver Dial Setting	Adjust
*1	High side through a .01 mfd capacitor to stator plates of rear section of TUNING capacitor.	455 KC (30% mod.)	1	1.0 MC	A, B, C and D for maximum output. Keep reducing the generator output to keep the output meter below 50 milliwatts.
2	High side through EIA antenna to terminal ANT on rear of chassis. Low side to chassis.	1400 KC (30% mod.)	1	1400 KC	C1 and C24 for maximum output as in step 1.
3	Same as step 2.	600 KC (30% mod.)	1	600 KC	L1 for maximum output as in step 1.
4	Same as step 2.	-	1	-	Repeat steps 2 and 3 until no increase in output can be obtained on either adjustment.
5	Same as step 2.	4.3 MC (30% mod.)	2	4.3 MC	C2 and C25 for maximum output as in step 1.
6	Same as step 2.	1.9 MC (30% mod.)	2	1.9 MC	T2 and L2 for maximum output as in step 1.
7	Same as step 2.	-	2	-	Repeat steps 5 and 6 until no increase in output can be obtained.
8	Same as step 2.	11 MC (30% mod.)	3	11 MC	C3 and C26 for maximum output as in step 1.
9	Same as step 2.	5 MC (30% mod.)	3	5 MC	T3 and L3 for maximum output as in step 1.
10	Same as step 2.	-	3	-	Repeat steps 8 and 9 until no increase in output can be obtained.
11	Same as step 2.	30 MC (30% mod.)	4	30 MC	C4 and C27 for maximum output as in step 1.
12	Same as step 2.	14 MC (30% mod.)	4	14 MC	T4 and L4 for maximum output as in step 1.
13	Same as step 2.	-	4	-	Repeat steps 11 and 12 until no increase in output can be obtained.

*Before beginning IF procedure, rotate AM/CW ratio control to its full counterclockwise position.

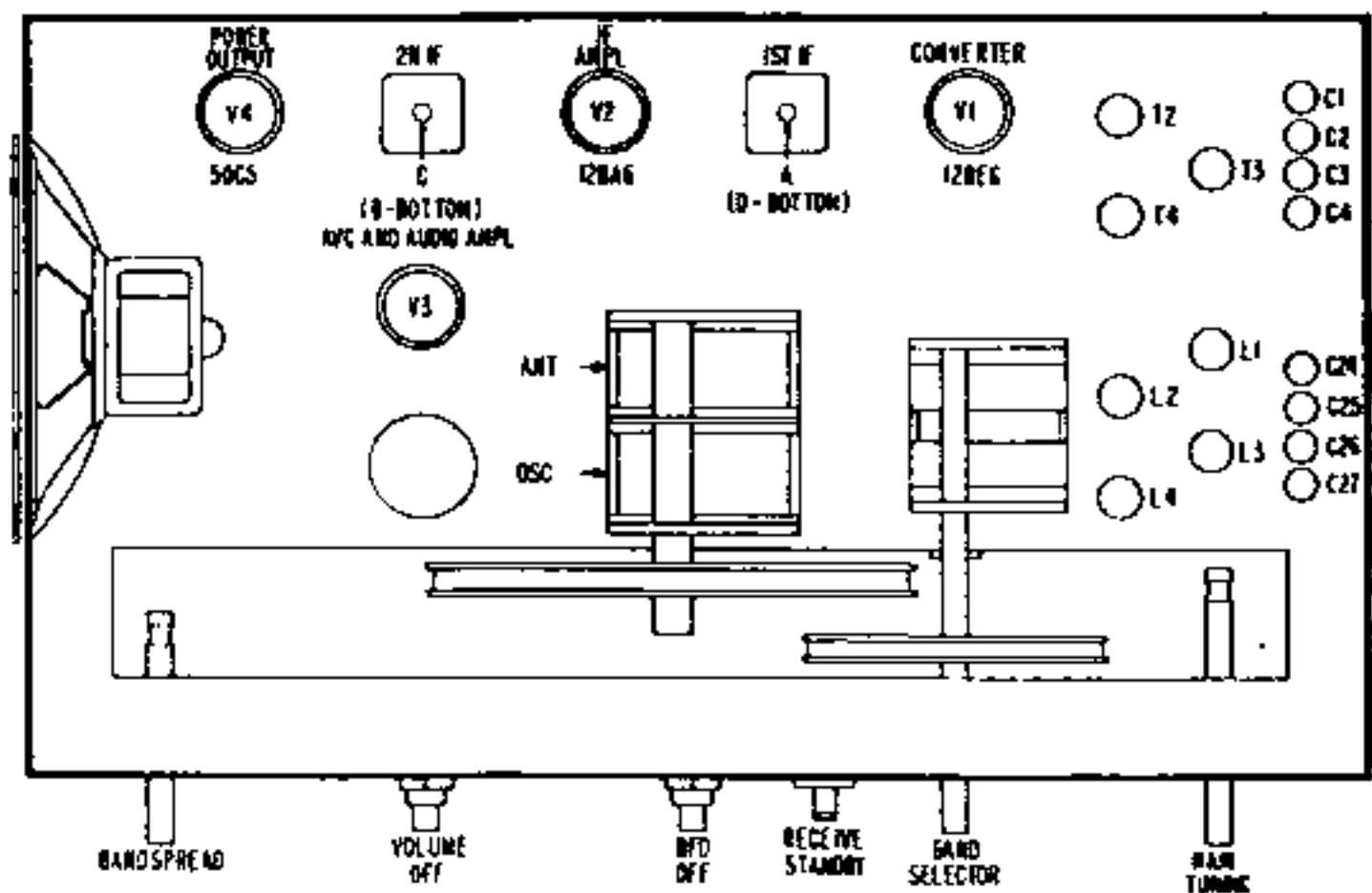


Figure 4. Chassis, Top View

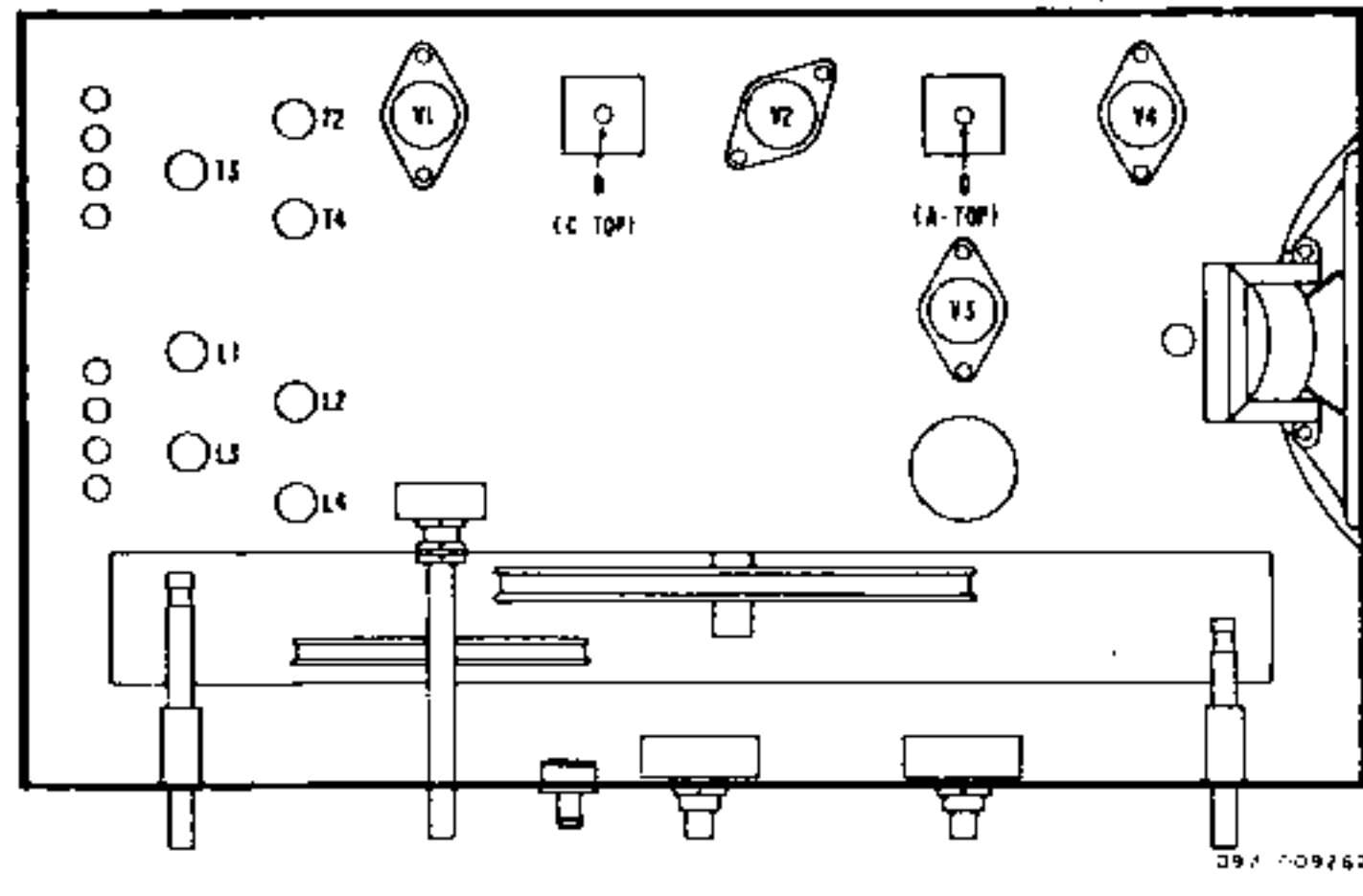


Figure 5. Chassis, Bottom View

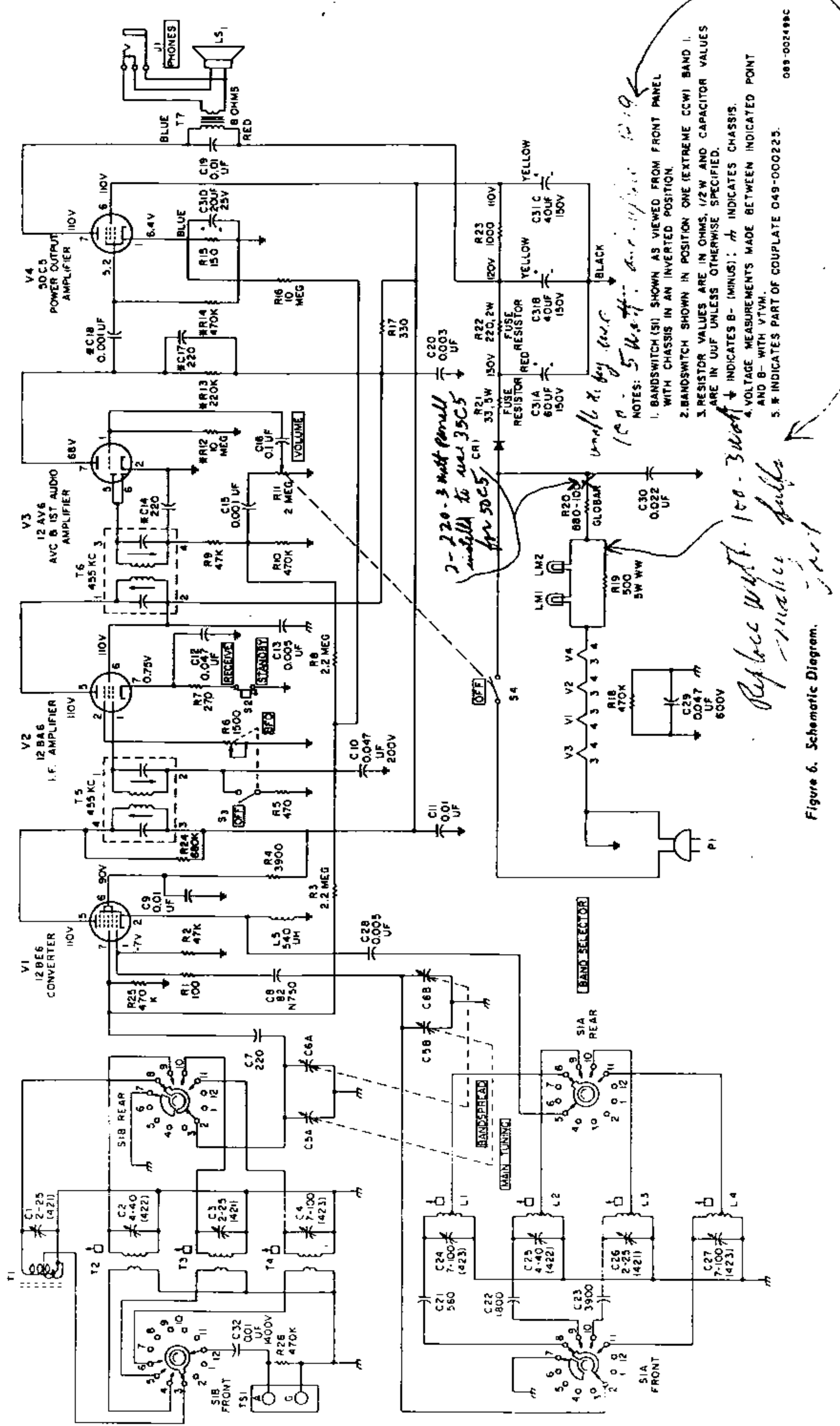
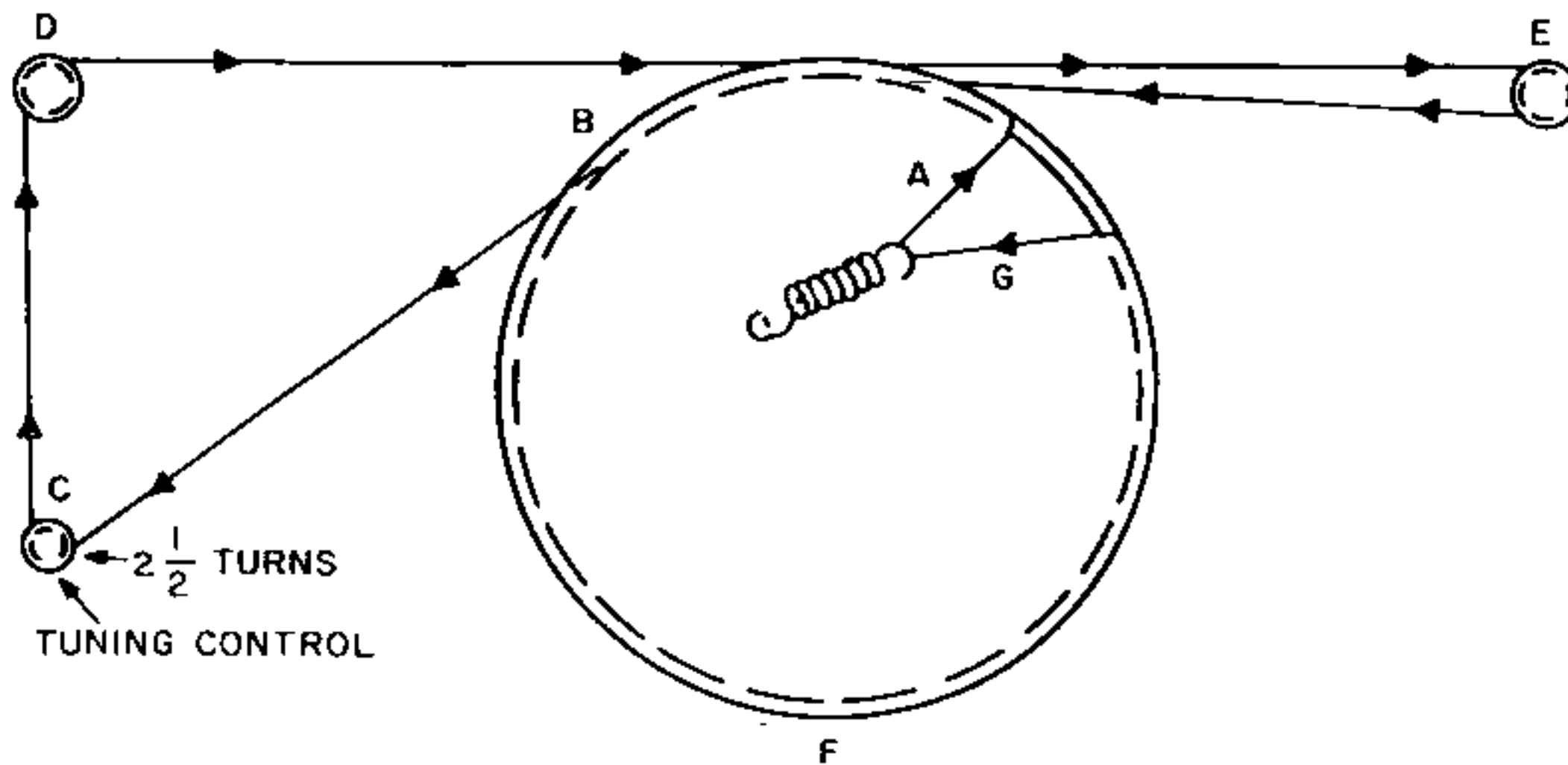


Figure 6. Schematic Diagram.

SERVICE PARTS LIST

Schematic Symbol	Description	Hallcrafters Part Number	Schematic Symbol	Description	Hallcrafters Part Number	Schematic Symbol	Description	Hallcrafters Part Number
CAPACITORS			*RESISTORS (cont.)			TUBES, LAMPS AND RECTIFIERS		
C1, 2, 3, 4	2-25, 4-40, 2-25, 7-100 mmf., Var. Quad Trimmer, Assy; Inc. mtg. bracket	044-000533	R6	1.5K ohm, 30%, 1/4 watt, Variable, BFO control; Inc. Switch S3	025-002024	CR1	Rectifier, Selenium Lamp, Dial type #47	027-000290
C5A, B	MAIN TUNING; Var. Cap.	048-000479	R7	270 ohm	451-252271	LM1, 2	Lamp, Dial type #47	039-100004
C6A, B	BAND SPREAD; Var. Cap.	048-000477	R10, 18, 25, 26	470K ohm	451-252474	V1	12 BE6; Converter	090-900040
C7	220 mmf., 500V, 20%; Cer. Tub.	483-021221	R11	2 megohm, 30%, 1/8 watt Variable, VOLUME Control; Inc. Switch S4	025-002025	V2	12 BA6; IF Amplifier	090-900039
C8	82 mmf., 500V, 10%, N750; Cer. Tub.	491-126820-95	R12, 13, 14	Part of Audio Couplate	-----	V3	12 AV6; AVC and 1st Audio Amplifier	090-901187
C9	.01 mfd., 500V, GMV; Cer. Disc	047-100224	R15	150 ohm	451-252151	V4	50C5; Power Output Amplifier	090-900541
C10	.047 mfd., 200V, 20%; Molded Paper	499-014473	R16	10 megohm	451-252106	MISCELLANEOUS		
C11	.01 mfd., 500V, +80-20%; Cer. Disc	047-100217	R17	330 ohm	451-252331	Antenna, Telescoping		057-000421
C12, 29	.047 mfd., 600V, 20%; Molded Paper	499-034473	R19	500 ohm, 5W, Wirewound	024-001328-06	Bracket, Antenna		067-009150
C13, 28	.005 mfd., 500V, 20%; Cer. Disc	047-100442	R20	880-100 ohm, Gohar	023-000327	Bracket, Dial Plate		087-008766
C14, 17, 18	Part of Audio Couplate	-----	R21	Resistor, Fuse, 33 ohm, 5W	024-001398	Cabinet (Inc. Trim Strip)		150-000981
C15	.001 mfd., 600V, 20%; Molded Paper	499-034102	R22	Resistor, Fuse, 220 ohm, 2W	024-001399	Clip, IF mtg.		076-100385
C16	0.1 mfd., 30%, 100V; Molded Paper	046-001259-05	R23	1K ohm	451-252102	Clip, fuse (antenna mtg.)		076-102724
C19	.01 mfd., 600V, 20%; Molded Paper	499-034103	R24	680K ohm	451-252684	Couplate, Audio		049-000225
C20	.003 mfd., 600V, 20%; Molded Paper	499-034302	*ALL RESISTORS are 10%, 1/2 watt, carbon type, unless otherwise specified.			Dial Scale, Calibrated		083-000982
C21	560 mmf., 5%, 125V; Plastic	505-102561	COILS AND TRANSFORMERS			Dial Cord		038-000049
C22	1800 mmf., 5%, 125V; Plastic	505-102182	T1	Antenna Loop Stick Assembly	150-001606	Escutcheon, trim plate		007-000793
C23	3900 mmf., 5%, 125V; Plastic	505-102392	T2	Coil, RF (band 2)	051-003473	Foot, Front		016-201072
C24, 25, 26, 27	7-100, 4-40, 2-25, 7-100 mmf., Var. Quad Trimmer, Inc. mtg. bracket	044-000534	T3	Coil, RF (band 3)	051-003474	Foot, Rear		016-201073
C30	.022 mfd., 600V, 20%; Molded Paper	499-034223	T4	Coil, RF (band 4)	051-003475	Grommet, nylon plastic (foot and rear panel mtg.)		002-202441
C31A, B, C, D	60-40-40 mfd., 150V; 20 mfd., 25V; Electrolytic	045-000711	T5	Transformer, 1st IF	050-300531	Grommet, nylon plastic (escutcheon mtg.)		002-102453
C32	.01 mfd., 1400V, Spark Gap type; Cer. Disc	047-001309	T6	Transformer, 2nd IF	050-300532	Grommet, nylon plastic (dial scale mtg.)		002-202445
*RESISTORS			T7	Transformer, Audio Output; Part of LS1	-----	Grommet (speaker and tuning capacitor mtg.)		018-100718
R1	100 ohm	451-252101	L1	Coil, Oscillator (band 1)	051-003476	Grommet (capacitor stabilizer plate)		016-100661
R2, 9	47K ohm	451-252473	L2	Coil, Oscillator (band 2)	051-003477	Iron Core		003-004564
R3, 8	2.2 megohm	451-252225	L3	Coil, Oscillator (band 3)	051-003478	Knob, MAIN TUNING and BAND SPREAD		015-001680
R4	3.9K ohm	451-252392	L4	Coil, Oscillator (band 4)	051-003479	Knob, VOLUME and BFO		015-001678
R5	470 ohm	451-252471	L5	540 UH, RF Choke	053-100107	Knob, BAND SELECTOR		015-001679
*RESISTORS			SWITCHES			LS1	Lock, Line Cord	076-200397
*RESISTORS			S1A, B	BAND SELECTOR	060-002526	Speaker, 8 ohm Voice Coil, Inc. T7		085-000210
*RESISTORS			S2	STANDBY - RECEIVE	060-002548	Plate, Dial		063-004908
*RESISTORS			S3	BFO - OFF, Part of R6	-----	Pointer, BAND SPREAD		082-000471
*RESISTORS			S4	VOLUME - OFF, Part of R11	-----	Pointer, MAIN TUNING		082-000472
*RESISTORS			SOCKETS AND CONNECTORS			Rear Panel		068-001250
*RESISTORS			J1	PHONES, jack	036-000339	Ring, Electrolytic mtg.		076-003384
*RESISTORS			TS1	Terminal Board, antenna	088-100020	Ring, Retaining		076-100683
*RESISTORS			PI	Line Cord	087-100078	Spacer, Insulation (escutcheon)		073-003679
*RESISTORS			SOCKETS AND CONNECTORS			Spring, dial cord		075-100012
*RESISTORS			SOCKETS AND CONNECTORS			Shield, Tube (V1)		089-100232
*RESISTORS			SOCKETS AND CONNECTORS			Shield, Base (V1)		076-100402
*RESISTORS			SOCKETS AND CONNECTORS			Shaft, BAND SPREAD		074-002606
*RESISTORS			SOCKETS AND CONNECTORS			Shaft, MAIN TUNING		074-002607



NOTE: TUNING GANG FULLY MESHED

092-009506

Figure 7. Main Tuning Stringing Diagram, Rear View.