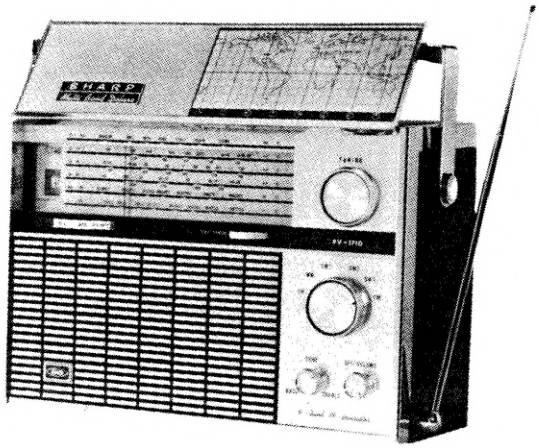
Service Manual



MODEL

FV-1710

SPECIFICATIONS

Circuit:	18-transistor, 10-diode, 4-rectifier, 1-thermistor superheterodyne system with AGC & AFC
Frequency Range:	LW 150~370 KHz MW 530~1600 KHz SW1 1.6~4.3 MHz SW2 3.9~12.0 MHz SW3 12.0~26.5 MHz FM 86.5~108 MHz
Intermediate Frequency:	AM 455 KHz FM 10.7 MHz
Power Supply:	DC 12 Volts (UM-1 battery x 8 pcs.) or AC 110,220,240 Volts 50/60 cycles
Power Output:	1.2 watts (maximum)
Speaker:	6″×4″ Oval P.D.S. 4 ohms
Dimensions:	12″(W)×4 3/4″(D)×8 1/4″(H)
Weight:	11pounds without batteries

TRANSISTOR COMPLEMENT

Q1	2SA234 (B) or (C)	AM Oscillator
Q2	2SA234 (C)	AM RF Amplifier
Q3	2SA234 (C)	FM Mixer
Q4	2SA435 (B)	FM Amplifier
Q5	2SA235 (C)	FM Oscillator
Q6	2SA235 (A)	FM Mixer
Q7	2SA234 (B)	1st IF Amplifier
Q8	2SA234 (A)	2nd IF Amplifier
Q9	2SA234 (A)	3rd IF Amplifier
Q10	2SB75 (B)	Audio Amplifier
Q11	2SB75 (B)	Audio Driver
Q12	2SB77 (B)	Audio Output
Q13	2SB77 (B)	Audio Output
Q14	2SB77 (B)*	Audio Output
Q15	2SB77 (B)	Audio Output
Q16	2SA12 (A)	BFO
Q17	2SB370 (A) or (B)	Power regulator
Q18	2SB370 (A) or (B)	Power regulator

6630

HAYAKAWA ELECTRIC CO., LTD.
OSAKA, JAPAN

GENERAL DESCRIPTION

The circuitry used in this six band portable radio incorporates 18 transistors, 10 diodes, 4 rectifiers and 1 thermistor.

A bar antenna feeds the LW or MW broadcast signal to the converter.

A telescopic antenna feeds the SW or FM broadcast signal to the mixer.

The AM Singal goes through 2 IF amplifiers and 1 diode detector.

The FM signal goes through 3 IF amplifiers and 2 diode detector. (matched pair).

The audio signal then passes through a 6 transistor audio amplifier circuit.

Local oscillator voltage is fed back to the mixer.

An AM AGC voltage is fed back to 1st IF amplifier.

CHASSIS REMOVAL

1. Slide the battery cover lock button to OPEN position and remove the battery cover.
2. Remove the 2 screws retaining the back cover and remove the back cover. Remove all the jacks (Car Ant., Ext. Ant., Phono, Tuner Output, Earphone) and the AC/DC power selector knob from the back cover.
3. Detach the dial cord string from the pointer.
4. Remove the AC power indicator light from its socket.
5. Pull off the 4 knobs on the front of the cabinet.
6. Take out the battery case.
7. Remove 7 chassis mounting screws ⓐ. And the chassis can be removed. Exercise caution to avoid breaking the leads. If necessary, unsolder the leadwires attached to the chassis.

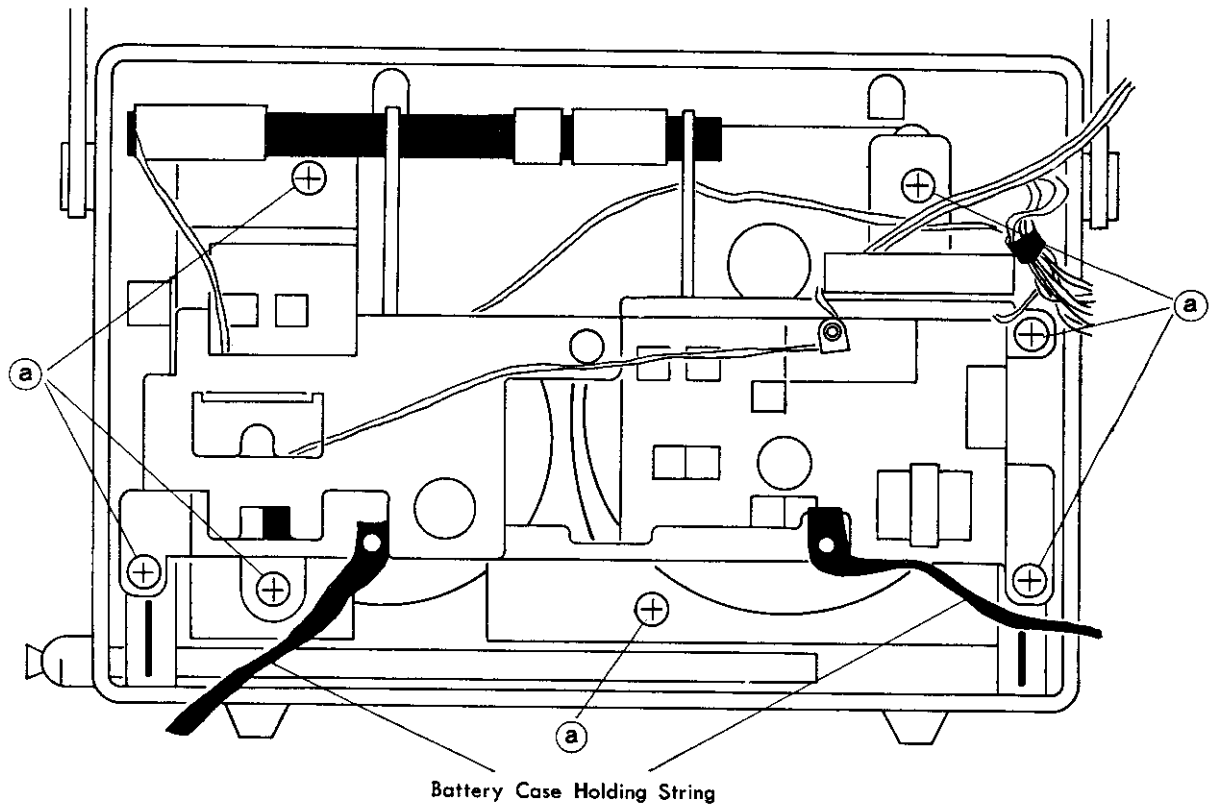


Figure 1

ALIGNMENT INSTRUCTION

Should it become necessary at any time to check the alignment of this receiver, proceed as follows:

1) Connect an output meter across the speaker voice coil lugs.
2) Set volume control for maximum.
3) Attenuate the signals from generator enough to swing the most sensitive range of the output meter.
4) Use a non-metallic alignment tool.
5) Repeat adjustments to insure good results.

ALIGNMENT CHART

AM Alignment

Signal generator				Receiver		Adjust
Step	Band	Connection to receiver	Input signal frequency	Dial setting	Remarks	
1	MW	Connect signal generator through a 10KΩ resistor to the antenna tuning condenser. Ground lead to the receiver chassis.	Exactly 455KC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Adjust for maximum output on the output meter connected to the speaker voice coil lugs.	T-8, T-6 T-2 T-1
2	MW	Use radiating loop, loop of several turns of wire, or place generator lead close to receiver for adequate signal pickup. Connect generator output to one end of this wire.	Exactly 525KC. (400%. 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	L7
3	MW	Same as step 2.	Exactly 1650KC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	C14
4	MW	Same as step 2.	Exactly 600KC. (400%, 30%, AM modulated.)	600KC	See NOTE A.	L1M
5	MW	Same as step 2.	Exactly 600KC. (400%, 30%, AM modulated.)	600KC	Same as step 1.	L14
6	MW	Same as step 2.	Exactly 1400KC. (400%, 30%, AM modulated.)	1400KC	Same as step 1.	C9
7	MW	Same as step 2.	Exactly 1400KC. (400%. 30%, AM modulated.)	1400KC	Same as step 1.	C19
8	MW	Repeat steps 2, 3, 4, 5, 6 and 7 until no further improvement is obtained.				
9	LW	Same as step 2.	Exactly 145KC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	L6
10	LW	Same as step 2.	Exactly 380KC. (400%, 30%, AM modulated.)	Tuning gang fully open. (maximum capacity)	Same as step 1.	C13
11	LW	Same as step 2.	Exactly 180KC. (400%, 30%, AM modulated.)	180KC	Same as step 4.	L1L
12	LW	Same as step 2.	Exactly 180KC. (400%' 30%, AM modulated.)	180KC	Same as step 1.	L13

Signal generator				Receiver		Adjust
Step	Band	Connection to receiver	Input signal frequency	Dial setting	Remarks	
13	LW	Same as step 2.	Exactly 350KC. (400%, 30%, AM modulated.)	350KC	Same as step 1.	C18
14	LW	Same as step 2.	Exactly 350KC. (400%, 30%, AM modulated.)	350KC	Same as step 1.	C8
15	LW	Repeat steps 9, 10, 11, 12, 13 and 14 until no further improvement is obtained.				
16	SW 1	Connect signal generator through a 10KΩ resistor to the external antenna jack. Ground lead to the receiver chassis.	Exactly 1.58MC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	L8
17	SW 1	Same as step 16.	Exactly 4.5MC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	C15
18	SW 1	Same as step 16.	Exactly 1.7MC. (400%, 30%, AM modulated.)	1.7MC	Same as step 1.	L2
19	SW 1	Same as step 16.	Exactly 1.7MC. (400%, 30%, AM modulated.)	1.7MC	Same as step 1.	L15
20	SW 1	Same as step 16.	Exactly 3.7MC. (400%, 30%, AM modulated.)	3.7MC	Same as step 1.	C10
21	SW 1	Same as step 16.	Exactly 3.7MC. (400%, 30%, AM modulated.)	3.7MC	Same as step 1.	C20
22	SW 1	Repeat steps 16, 17, 18, 19, 20 and 21 until no further improvement is obtained.				
23	SW 2	Same as step 16.	Exactly 3.8MC. (400%, 30%, AM modulated.)	Tuning gang fully open. (maximum capacity)	Same as step 1.	L9
24	SW 2	Same as step 16.	Exactly 12.2MC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	C16
25	SW 2	Same as step 16.	Exactly 4.5MC. (400%, 30%, AM modulated.)	4.5MC	Same as step 1.	L16
27	SW 2	Same as step 16.	Exactly 10MC. (400%, 30%, AM modulated.)	10MC	Same as step 1.	C11
28	SW 2	Same as step 16.	Exactly 10MC. (400%, 30% AM modulated.)	10MC	Same as step 1.	C21
29	SW 2	Repeat steps 23, 24, 25, 26, 27 and 28 until no further improvement is obtained.				
30	SW 3	Same as step 16.	Exactly 11.8MC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	L10
31	SW 3	Same as step 16.	Exactly 11.8MC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	C17
32	SW 3	Same as step 16.	Exactly 13MC. (400%, 30%, AM modulated.)	13MC	Same as step 1.	L4
33	SW 3	Same as step 16.	Exactly 13MC. (400%, 30%, AM modulated.)	13MC	Same as step 1.	L17

Signal generator				Receiver		Adjust
Step	Band	Connection to receiver	Input signal frequency	Dial setting	Remarks	
34	SW 3	Same as step 16.	Exactly 23MC. (400%, 30%, AM modulated.)	23MC	Same as step 1.	C12
35	SW 3	Same as step 16.	Exactly 23MC. (400%, 30%, AM modulated.)	23MC	Same as step 1.	C22
36	SW 3	Repeat steps 30, 31, 32, 33, 34 and 35 until no further improvement is obtained.				
37	MW	Same as step 2.	600KC (unmodulated)	600KC	Adjust for maximum beat.	L18

FM Alignment

Signal generator				Receiver		Adjust
Step	Band	Connection to receiver	Input signal frequency	Dial setting	Remarks	
1	FM	Connect signal generator through a 5pF capacitor to FM mixer emitter, test point 1, of Q6. Ground lead to the receiver chassis.	Exactly 10.7MC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Connect a 0.04 mfd condenser between chassis ground and to Q9 collector, test point 5. Connect AC millivolt meter between TP8 and chassis ground.	T-7 T-5, T-3 T-4 For maximum indication.
2	FM	Same as step 1.	Exactly 10.7MC. (Unmodulated)	Same as step 1.	Remove 0.04 mfd. condenser, follow NOTE B.	T-9
3	FM	Connect signal generator through a 100Ω resistor, including output impedance of signal generator to the external antenna jack. Ground lead to the receiver chassis.	Exactly 86MC. (400%, 30%, FM modulated.)	Tuning gang fully closed. (maximum capacity)	Adjust for the maximum indication on the output meter connected across the voice coil lugs.	L11
4	FM	Same as step 3.	Exactly 110MC. (400%, 30%, FM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 3.	C24
5	FM	Same as step 3.	Exactly 88MC. (400%, 30%, FAM modulated).	88MC	Same as step 3.	L5
6	FM	Same as step 3.	Exactly 88MC. (400%, 30%, FM modulated.)	88MC	Same as step 3.	L12
7	FM	Same as step 3.	Exactly 108MC. (400%, 30%, FM modulated.)	108MC	Same as step 3.	C23
8	FM	Same as step 3.	Exactly 108MC. (400%, 30%, FM modulated.)	108MC	Same as step 3.	C25
9	FM	Repeat steps 3, 4, 5, 6, 7 and 8 until no further improvement is obtained.				

CAR ANT. ADJUSTMENT (AM Alignment)

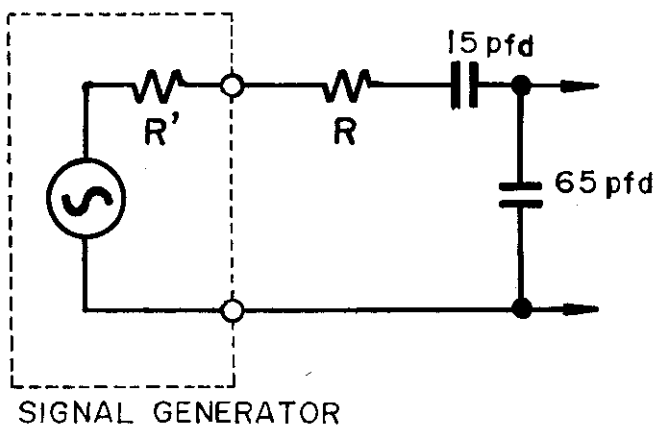
Signal generator				Receiver		Adjust
Step	Band	Connection to receiver	Input signal frequency	Dial setting	Remarks	
1	MW	The S6 should be switched over to Car Antenna and connect signal generator through the Car Antenna dummy (See NOTE C) to the Car Antenna jack.	Exactly 600KC. (400%, 30%, AM modulated.)	600KC	Adjust for maximum output on the output meter connected to the speaker voice coil lugs.	L28
2	MW	Same as step 1.	Exactly 1400KC. (400%, 30%, AM modulated.)	1400KC	Same as step 1.	C120
3	MW	Repeat steps 1 and 2 until no further improvement is obtained.				
4	LW	Same as step 1.	Exactly 180KC. (400%, 30%, AM modulated.)	180KC	Same as step 1.	L27
5	LW	Same as step 1.	Exactly 350KC. (400%, 30%, AM modulated.)	350KC	Same as step 1.	C118
6	LW	Repeat steps 4 and 5 until no further improvement is obtained.				

NOTE

A. Check alignment of receiver antenna coil by bringing a piece of ferrite (such as a coil slug) near the antenna loop stick, then a piece of brass. If ferrite increases output, loop requires more inductance, change loop inductance by sliding the bobbin toward the center of ferrite core to increase, or way to decrease inductance.

B. 1) Connect VTVM (0.1 volts range DC scale) between test point 10 and chassis ground. Set VTVM zero volt center.
2) Adjust discriminator secondary. core (orange) for 0 volt on VTVM.
3) Change signal generator frequency 10.7MC+100KC and −100KC approximately.
4) Adjust discriminator primary Core (green) for balanced peaks. Peak separation should be approximately 200KC.

C. Car ant. Dummy



CAR ANT. DUMMY

Figure 2

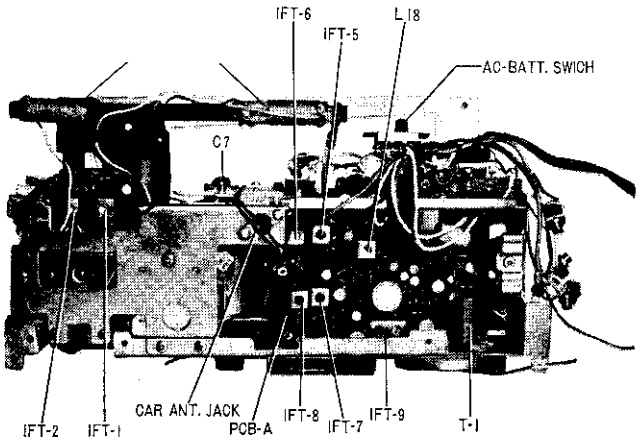


Photo 1 - Back View of Chassis

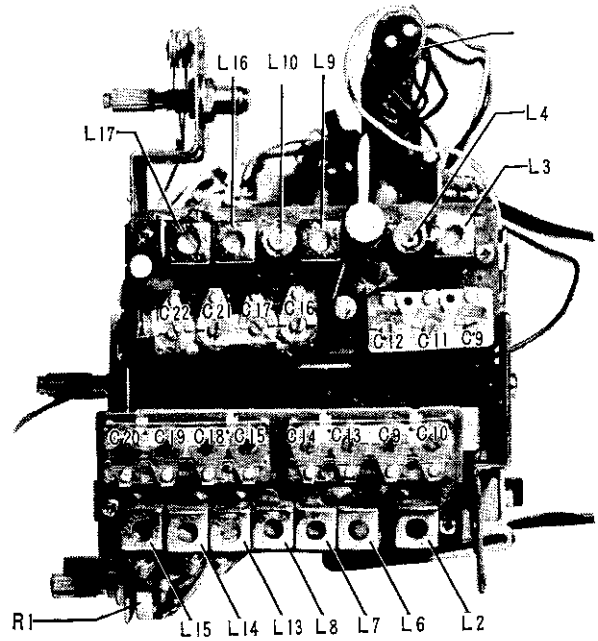


Photo 2 - Side View of Chassis

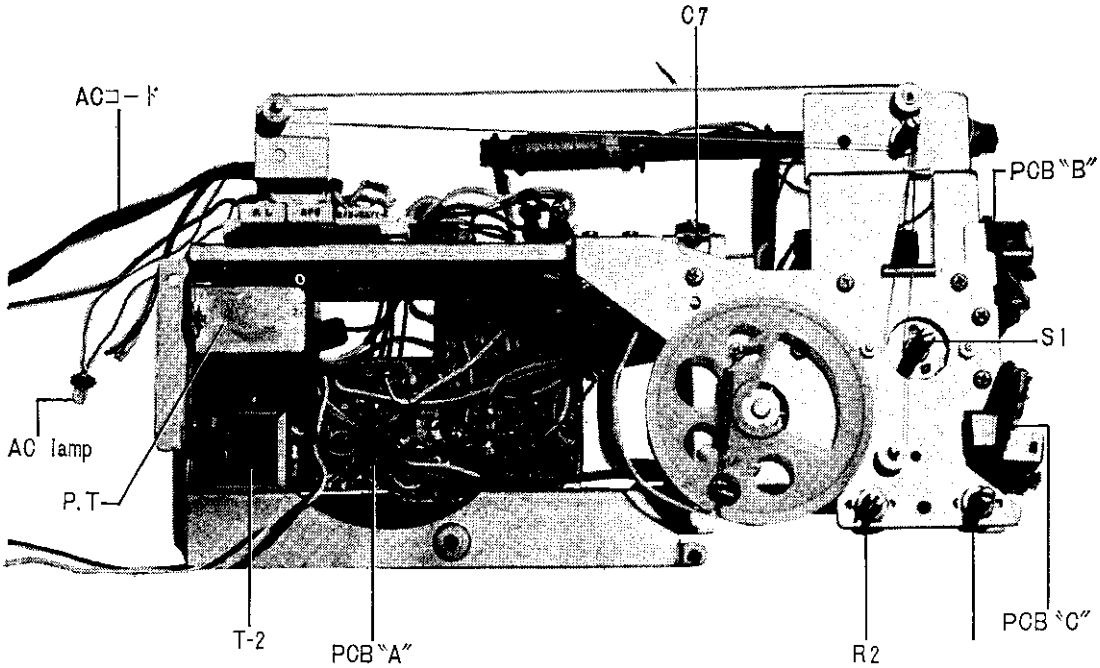


Photo 3 - Front View of Chassis

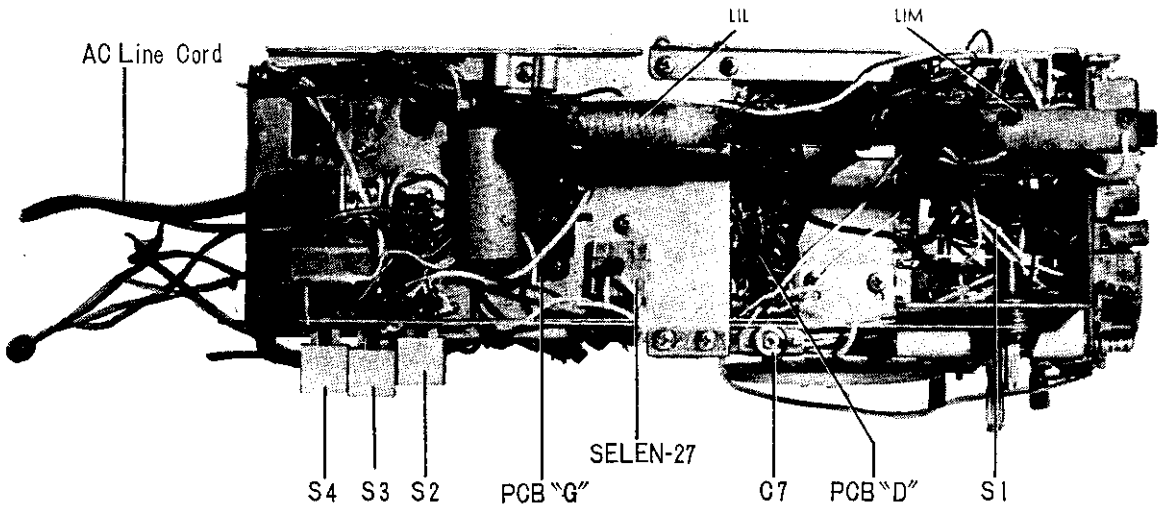


Photo 4 - Top View of Chassis

DIAL CORD STRINGING

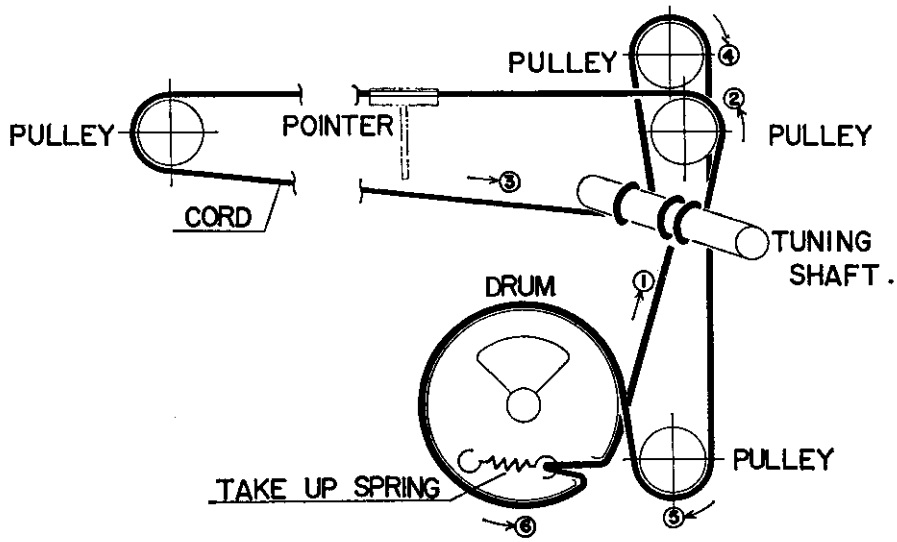


Figure 3

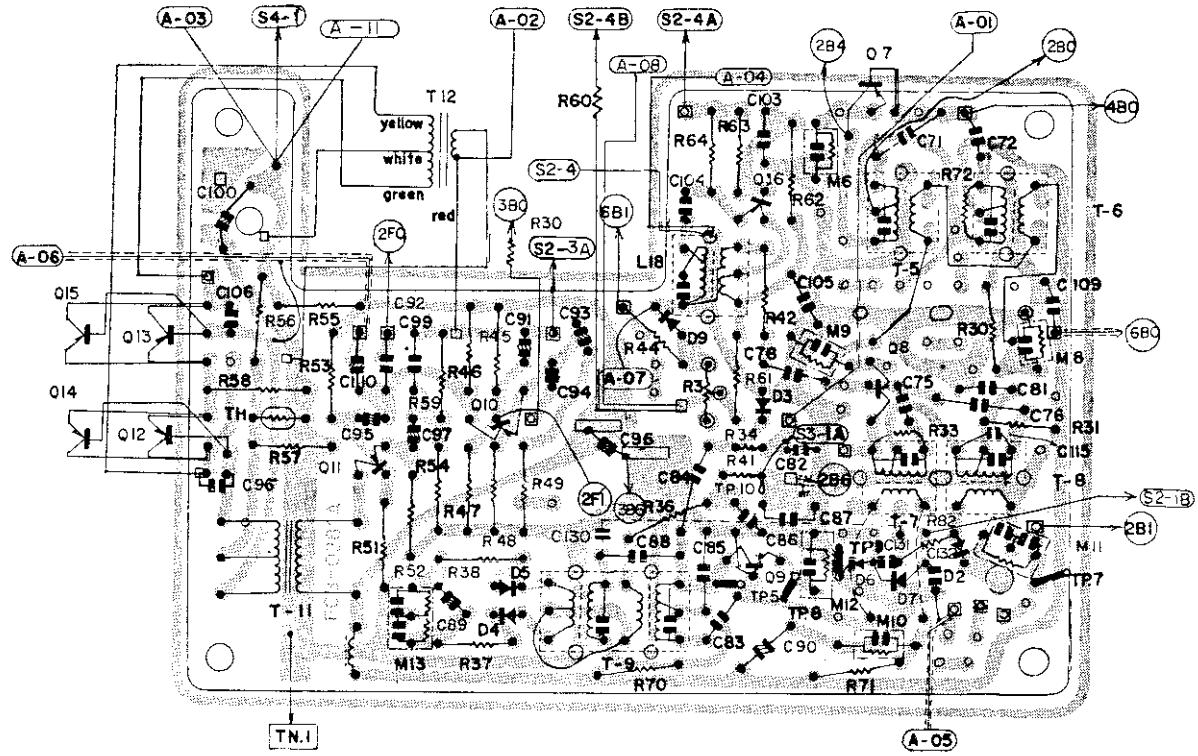
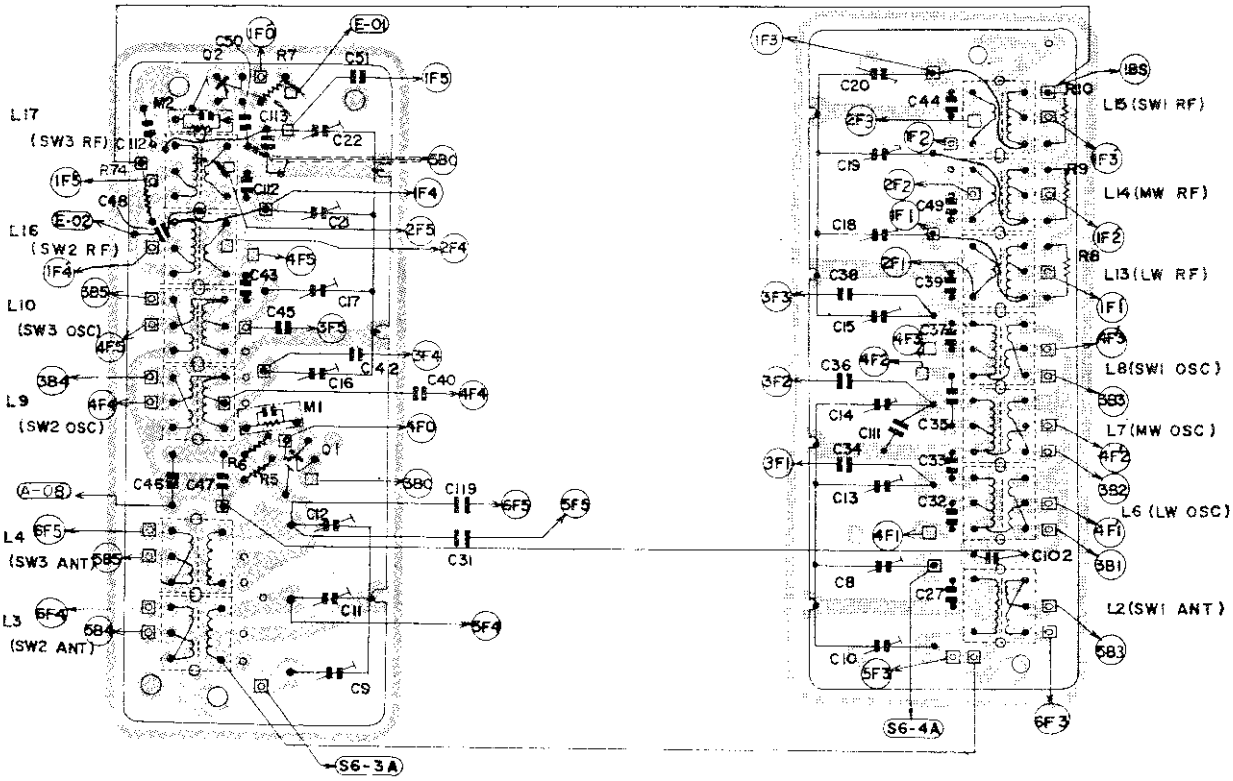


Figure 4 - P.C. Board A



P.C. Board B

P.C. Board C

Figure 5

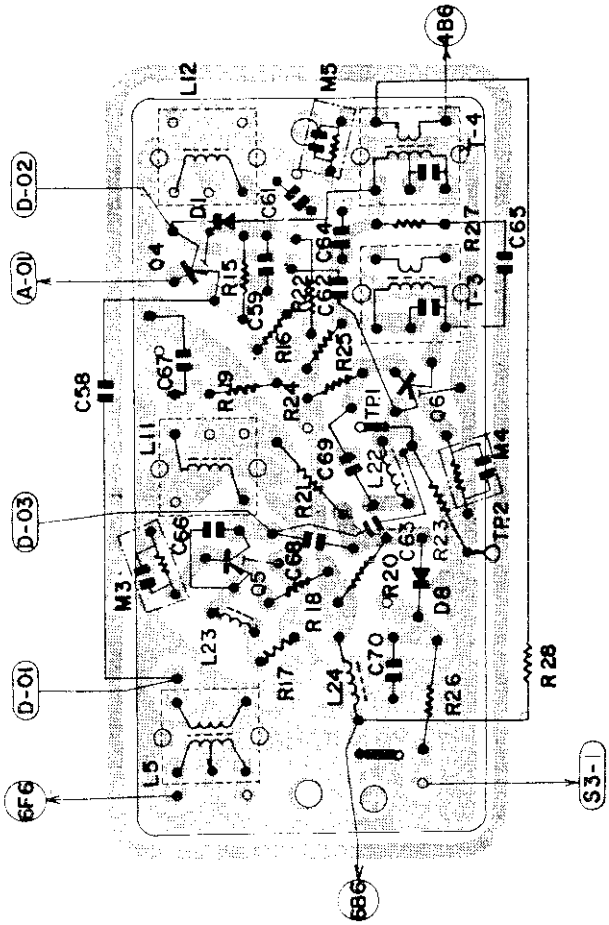


Figure 6 - P.C. Board D

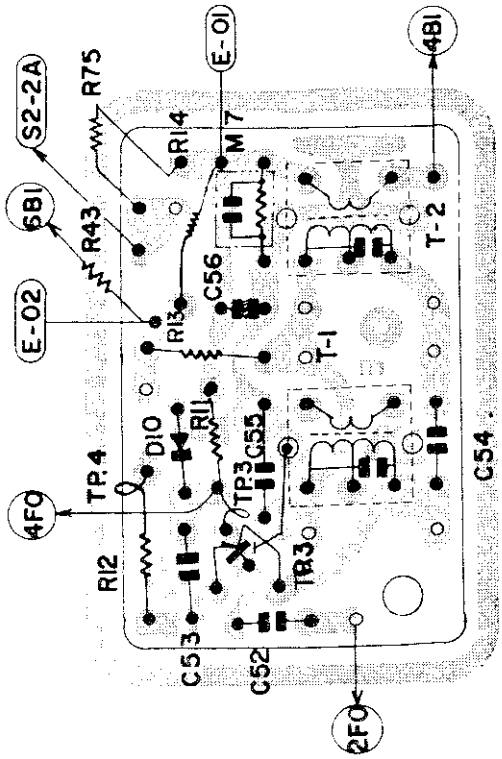


Figure 7 - P.C. Board E

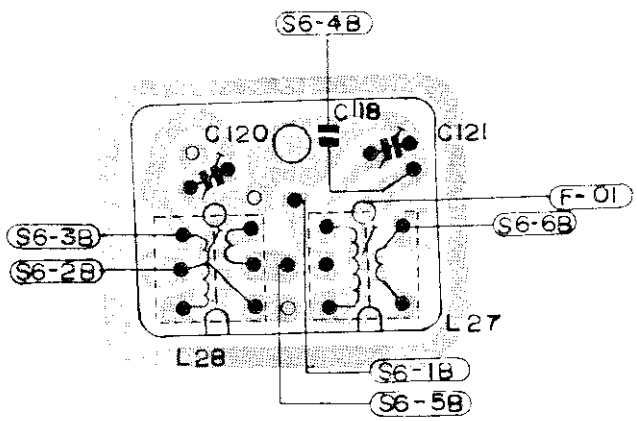


Figure 8 - P.C. Board F

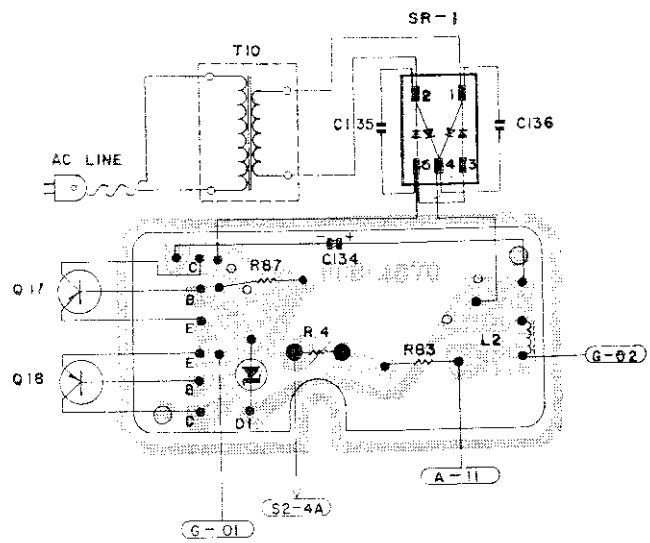
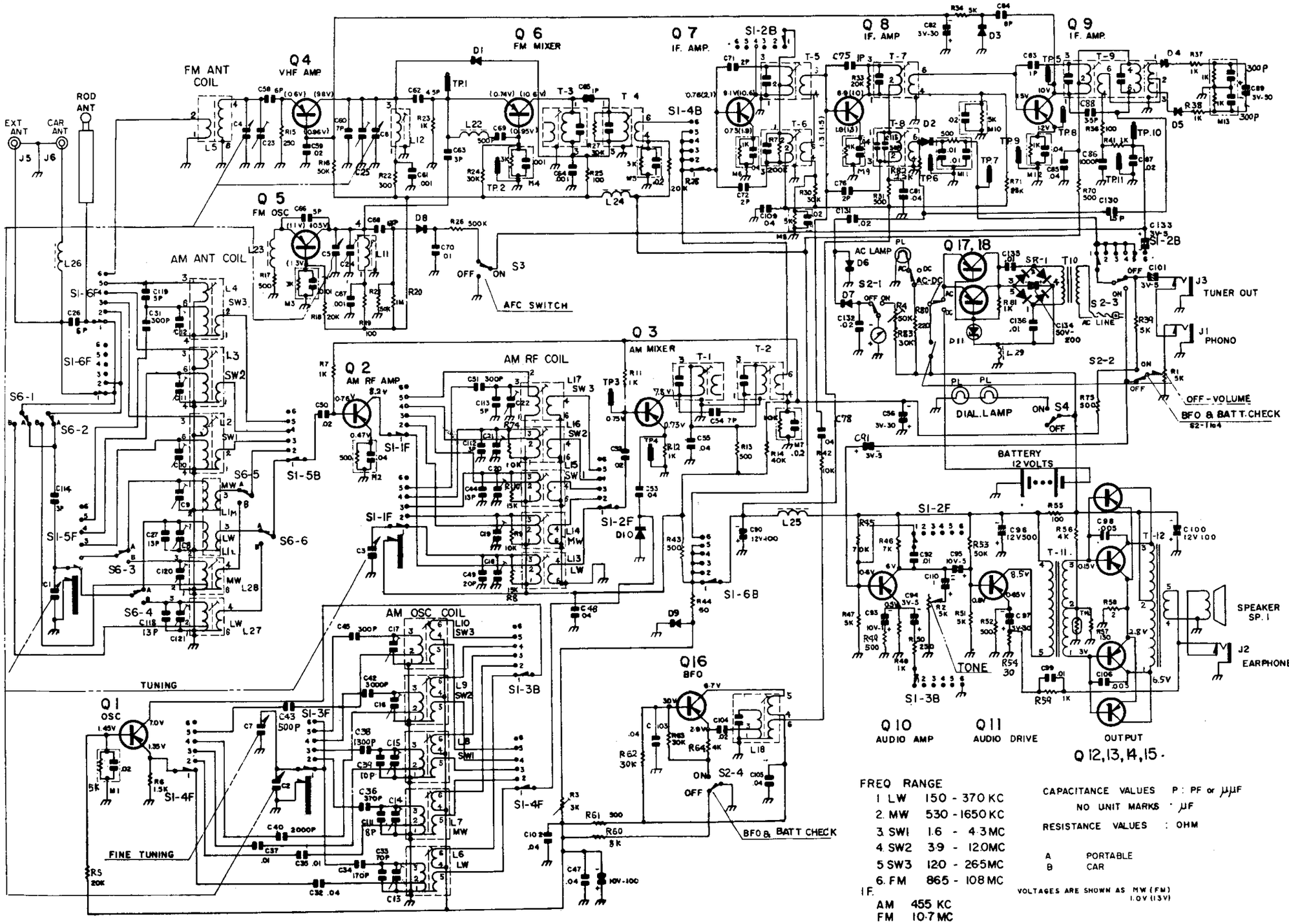


Figure 9 - P.C. Board G



FREQ RANGE

1. LW	150 - 370 KC
2. MW	530 - 1650 KC
3. SW1	1.6 - 4.3 MC
4. SW2	3.9 - 12.0 MC
5. SW3	12.0 - 26.5 MC
6. FM	86.5 - 108 MC

IF.
AM 455 KC
FM 10.7 MC

CAPACITANCE VALUES P : PF or μμF
NO UNIT MARKS : μF
RESISTANCE VALUES : OHM

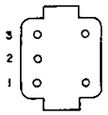
A PORTABLE
B CAR

VOLTAGES ARE SHOWN AS MW (FM)
1.0V (1.3V)

BOTTOM VIEWS

1. Transformer

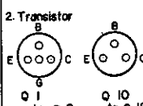
T11, T12



T11	4-6	1-3
IMP	10K ohm	1.5K ohm
R DC	625 ohm	1.07 ohm

T12	1-3	4-5
IMP	350 ohm	4 ohm
R DC	22.5 ohm	0.075 ohm

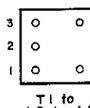
2. Transistor



Q1 to Q9 | Q10 to Q18

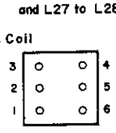
NOTE
E. Emitter
C. Collector
B. Base
G. Ground

3. I.F. Trans. & Coil.



T1 to T9, L2 to L5, L11 to L17, and L27 to L28.

4. Coil



L6 to L10, and L18.

SR-1 (BACK VIEWS)

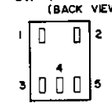


Figure 10 - Schematic Diagram

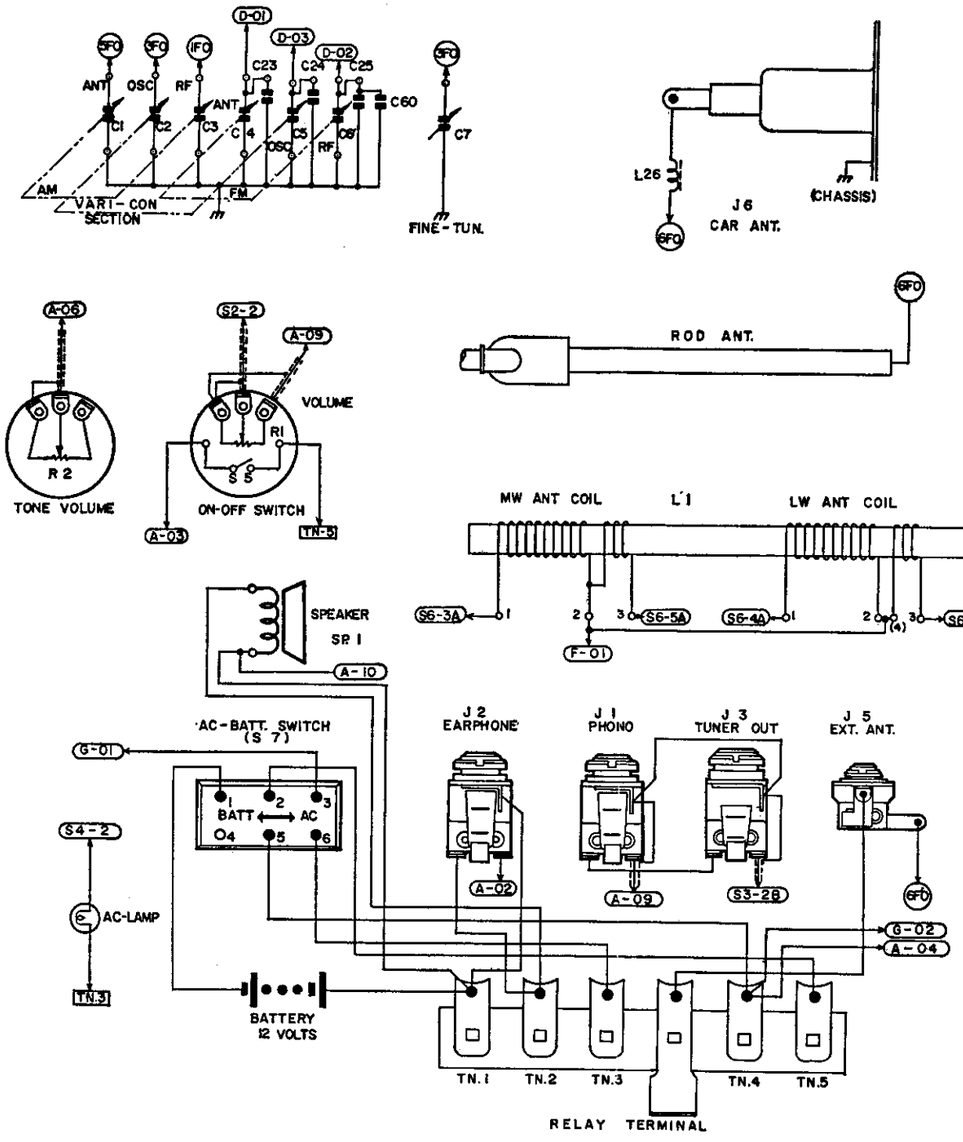


Figure 11 - Connecting Diagrams

SWITCH TERMINAL CONNECTIONS

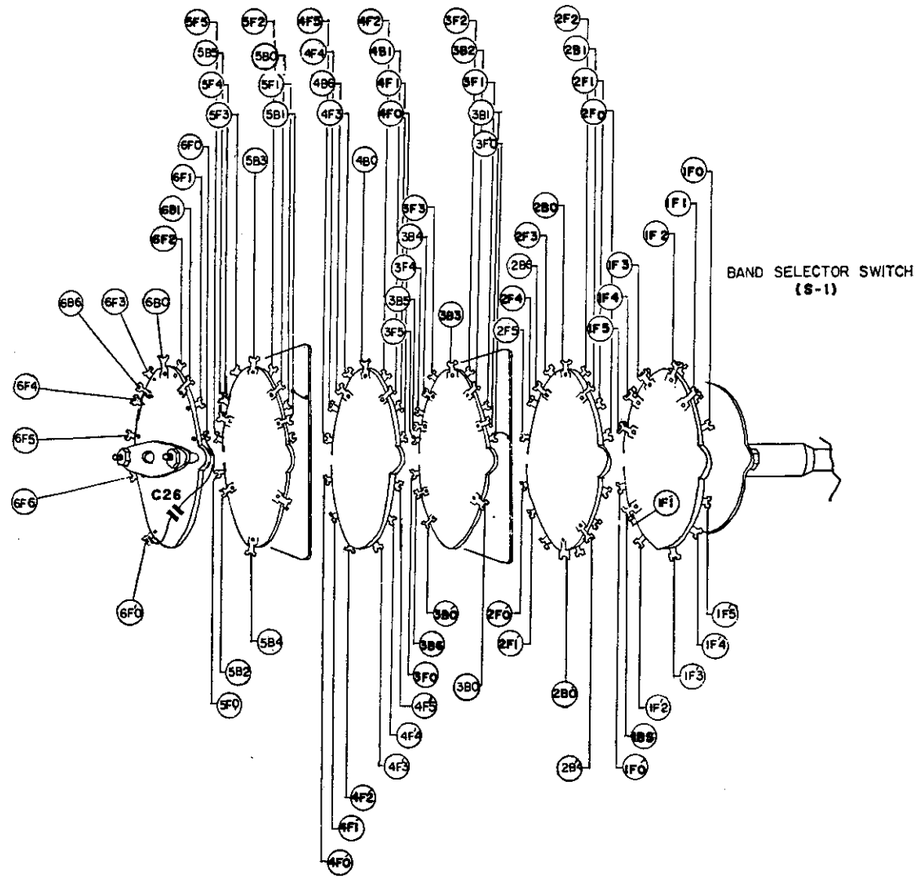


Figure 12 - Band Selector Switch

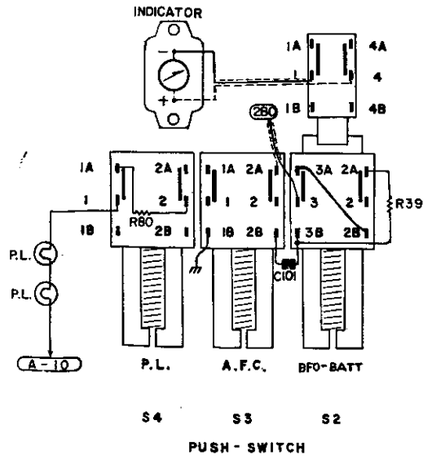


Figure 13

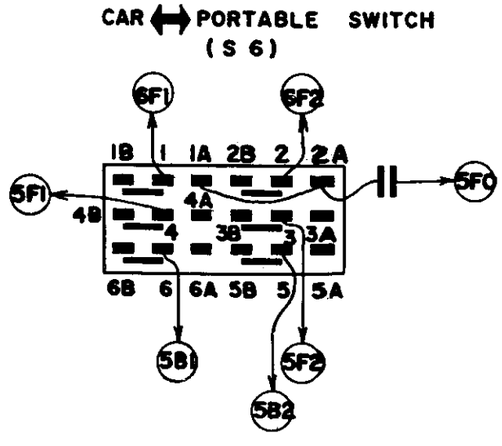


Figure 14 - Antenna Changing Switch

PARTS LIST

CAPACITORS

REF. NO.	PART NO.	DESCRIPTION
C1, C2 C3, C4 C5, C6 C23, C24 C25	1560215500	Variable, Tuning Gang with Trimmers (VC–155)
C7	1560290100	Variable, Fine Tuning (VC–901)
C8, C10 C13, C14 C15, C18 C19, C20	1560283400	Trimmers (TO–834)
C9, C11 C12	1560283200	Trimmers (TO–832)
C26, C58	1552260927	6 pfd, 50V, ± .5 pfd, Discap (D-5-609D)
C27, C44 C68, C118	1552213837	13 pfd, 50V, ±1 pfd, Discap (D-5-138F)
C31, C45 C51	1554230717	300 pfd, 50V, 5%, Discap (T-5-307J)
C32, C53	1556240537	.04 mfd, 50V, 20%, Mylar (ML-5-405M)
C33	1554270817	70 pfd, 50V, 5%, Discap (T-5-708)
C34	1554217717	170 pfd, 50V, 5%, Discap (T-5-177) (T-5-177)
C35, C37 C92, C99	1556210537	.01 mfd, 50V, 20%, Mylar (ML-5-105M)
C36	1558237727	370 pfd, 50V, 10%, Styrol (S-5-377K)
C38	1558213627	1300 pfd, 50V, 10%, Styrol (S-5-136K)
C39, C113	1552210837	10 pfd, 50V, ±1 pfd, Discap (D-5-108F)
C40	1558220627	2000 pfd, 50V, 10%, Styrol (S-5-206K)
C42	1558230627	3000 pfd, 50V, 10%, Styrol (S-5-306K)
C43, C69	1558250727	500 pfd, 50V, 10%, Styrol (S-5-507K)
C46	1561210112	100 mfd, 10V, Electrolytic (CU-1-101X)
C47, C48 C55, C78 C81, C85 C102, C103 C105, C109	155191500	.04 mfd, 30V, $^{+80}_{-20}$%, Discap (K-3-405Z)
C49	1552220817	20 pfd, 50V, 5%, Discap (D-5-208J)
C50, C52 C87, C104	1556220537	.02 mfd, 50V, 20%, Mylar (ML-5-205M)
C54, C60	1552270927	7 pfd, 50V, ± .5 pfd, Discap (D-5-709D)
C56, C82 C97	1561230210	30 mfd, 3V, Electrolytic (CU-03-302X)
C61, C64 C67	1559293900	.001 mfd, 50V, $^{+100}_{-0}$%, Discap (D-5-106P)
C62	1552245927	4.5 pfd, 50V, ± .25 pfd, Discap (D-5-459C)
C63, C112 C114	1552230917	3 pfd, 50V, ± .25 pfd, Discap (D-5-309C)
C65, C75 C83	1552210917	1 pfd, 50V, ± .25 pfd, Discap (D-5-109C)
C66, C113 C119	1552250927	5 pfd, 50V, ± .5 pfd, Discap (D-5-509D)
C70, C135 C136, C137 C138	1559292700	.01 mfd, 30V, $^{+80}_{-20}$%, Discap (K-3-105Z)

REF. NO.	PART NO.	DESCRIPTION
C71, C72 C76	1552220917	2 pfd, 50V, ± .25 pfd, Discap (D-5-209C)
C84, C111	1552280937	8 pfd, 50V, ±1 pfd, Discap (D-5-809F)
C86	1558210627	1000 pfd, 50V, 10%, Styrol (S-5-106K)
C88	1552235917	3.5 pfd, 50V, ± .25 pfd, Discap (D-5-359C)
C89	1561250210	50 mgf, 3V, Electrolytic (CU-03-502X)
C90, C100	1559296600	100 mfd, 12V, Electrolytic
C91, C94 C101, C133	1561250310	5 mfd, 3V, Electrolytic (CU-03-502X)
C93	1561210312	1 mfd, 10V, Electrolytic (CU-1-103X)
C95	1561250312	5 mfd, 10V, Electrolytic (CU-1-503X)
C96	1559299900	500 mfd, 12V, Electrolytic (CU-1.2-501R)
C98, C106	1556250637	.005 mfd, 50V, 20%, Mylar (ML-5-506M)
C110	1559204400	.1 mfd, Electrolytic (Special)
C115	1552230817	30 pfd, 50V, 5%, Discap (D-5-308J)
C120, C121	1560284200	Trimmers (TO-842)
C130	1552215917	1.5 pfd, 50V, ± .25 pfd, Discap (D-5-159C)

RESISTORS

R1	1548274800	5K ohm, Pot., Volume Control with on-off switch (8V-748)
R2	1548277600	5K ohm, Pot., Tone (8V-776)
R3	1548275500	3K ohm, Pot., Oscillator Control (8V-755)
R4	1548272300	50K ohm, Pot., Battery Indicator Control (8V-723)
R5, R28 R33	1543220321	20K ohm, 1/4W, 10%, Carbon (1/4M-20KK)
R6	1543215221	1.5K ohm, 1/4W, 10%, Carbon (1/4M-1.5KK)
R7, R11 R7, R11 R12, R23 R37, R38 R41, R48 R59	1543210221	1K ohm, 1/4W, 10%, Carbon (1/4M-1KK)
R8, R10	1543215321	15K ohm, 1/4W, 10%, Carbon (1/4M-15KK)
R9, R42 R76	1543210321	10K ohm, 1/4W, 10%, Carbon (1/4M-10KK)
R13, R17 R31, R43 R49, R52 R61, R70 R75	1543250121	500 ohm, 1/4W, 10%, Carbon (1/4M-500K)
R14	1543240321	40K ohm, 1/4W, 10%, Carbon (1/4M-40KK)
R15, R50	1543225121	250 ohm, 1/4W, 10%, Carbon (1/4M-250K)
R16, R53	1543250321	50K ohm, 1/4W, 10%, Carbon (1/4M-50KK)
R18, R21 R24, R27 R30, R62 R63, R83	1543230321	30K ohm, 1/4W, 10%, Carbon (1/4M-30KK)
R19, R25 R36, R55	1543210121	100 ohm, 1/4W, 10%, Carbon (1/4M-100K)

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
R20	1543210521	1 Megohm, 1/4W, 10%, Carbon (1/4M-1MK)
R22	1543230121	300 ohm, 1/4W, 10%, Carbon (1/4M-300K)
R26	1543250421	500K ohm, 1/4W, 10%, Carbon (1/4M-500KK)
R34, R39 R47, R51	1543250221	5K ohm, 1/4W, 10%, Carbon (1/4M-5KK)
R44	1543250021	50 ohm, 1/4W, 10%, Carbon (1/4M-50K)
R45	1543270321	70K ohm, 1/4W, 10%, Carbon (1/4M-70KK)
R46	1543270221	7K ohm, 1/4W, 10%, Carbon (1/4M-7KK)
R54	1543230021	30 ohm, 1/4W, 10%, Carbon (1/4M-30K)
R56, R64	1543240211	4K ohm, 1/4W, 5%, Carbon (1/4M-4KJ)
R57	1543213111	130 ohm, 1/4W, 5%, Carbon (1/4M-130J)
R58	1543220821	2 ohm, 1/4W, 10%, Carbon (1/4M-2K)
R60	1543280221	8K ohm, 1/4W, 10%, Carbon (1/4M-8KK)
R71	1543225321	25K ohm, 1/4W, 10%, Carbon (1/4M-25KK)
R72	1543220421	200K ohm, 1/4W, 10%, Carbon (1/4M-200KK)
R80	1543222122	220 ohm, 1/2W, 10%, Carbon (1/2M-220K)
R81	1543210222	1K ohm, 1/2W, 10%, Carbon (1/2M-1KK)
R82	1543222221	2.2K ohm, 1/4W, 10%, Carbon (1/4M-2.2KK)

RACKAGED CIRCUIT

M1, M5	1559231500	Capacitor (PRC-315)
M2	1559230700	Capristor (PRC-307)
M3, M4	1559234400	Capristor (PRC-344)
M6, M9 M12	1559230600	Capristor (PRC-306)
M7	1559234300	Capristor (PRC-343)
M8, M10	1559231500	Capristor (PRC-315)
M11	1559233500	Capristor (PRC-335)
M13	1559233300	Capristor (PRC-333)

REF. NO.	PART NO.	DESCRIPTION

COILS & TRANSFORMERS

COILS & TRANSFORMERS

L1	1507229900	Coil, LW & MW Antenna (7L-299A)
L2	1507229600	Coil, SW1 Antenna (7L-196A)
L3	1507229700	Coil, SW2 Antenna (7L-297A)
L4	1507229800	Coil, SW3 Antenna (7L-298A)
L5	1508210200	Coil, FM Antenna (8L-102A)
L6	1507201400	Coil, LW Oscillator (7L-014B)
L7	1507201500	Coil, MW Oscillator (7L-015B)
L8	1507201600	Coil, SW1 Oscillator (7L-016B)
L9	1507201700	Coil, SW2 Oscillator (7L-017B)
L10	1507201800	Coil, SW3 Oscillator (7L-018B)
L11	1507201900	Coil, FM Oscillator (7L-019B)
L12	1507255500	Coil, FM RF (7L-555C)
L13	1507254900	Coil, LW RF (7L-549C)
L14	1507255000	Coil, MW RF (7L-550C)
L15	1507255100	Coil, SW1 RF (7L-551C)
L16	1507255200	Coil, SW2 RF (7L-553C)
L17	1507255300	Coil, SW3 RF (7L-535C)
L18	1507255400	Coil, BFO (7L-554C)
L21	1507294600	Coil, Loading (7L-946)
L22, L23	1507292500	Coil, Emitter Choke (7L-925)
L24	1507291100	Coil, Filter (7L-911)
L25	1507291800	Coil, Filter (7L-918)
L26	1507292000	Coil, Filter (7L-920)
L27	1507297500	Coil, Battery Choke (7L-975)
L28	1508210900	Coil, MW Car Antenna (8L-109A)
L29	1508210900	Coil, MW Car Antenna (8L-109A)
T1, T2	1507273200	Transformer, 1st AMIF (7IF-732)
T3, T4	1507273500	Transformer, 1st FM IF (7IF-735)
T5	1507274500	Transformer, 2nd FM IF (7IF-745)
T6	1507276500	Transformer, 2nd AM IF (7IF-765)
T7	1507274500	Transformer, 3rd FM IF (7IF-745)
T8	1507273400	Transformer, 3rd AM IF (7IF-734)
T9	1507273900	Transformer, FM Discriminator (7IF-739)
T10	1515277500	Transformer, Power (110V Only) (5T-775)
T10	1515277300	Transformer, Power (220V Only) (5T-773)
T10	1515277700	Transformer, Power (240V Only) (5T-777)
T11	1516280000	Transformer, Audio Driver (6T-800)
T12	1517281200	Transformer, Output (7T-812)

SEMI-CONDUCTOR

SEMECONDUCTORS

Q1	1522214821	Transistor, AM Oscillator (2SA234 B or C)
Q2	1522214831	Transistor, AM RF Amplifier (2SA234C)
Q3	1522214831	Transistor, AM Mixer (2SA234C)
Q4	1522219521	Transistor, FM Amplifier (2SA435B)
Q5	1522214435	Transistor, FM Oscillator (2SA235C)
Q6	1522214411	Transistor, FM Mixer (2SA234A)
Q7	1522214821	Transistor, 1st IF Amplifier (2SA234B)
Q8	1522214811	Transistor, 2nd IF Amplifier (2SA234A)
Q9	1522214811	Transistor, 3rd IF Amplifier (2SA234A)
Q10	1522211221	Transistor, Audio Amplifier (2SB75B)
Q11	1522211221	Transistor, Audio Driver (2SB75B)
Q12, Q13 Q14, Q15	1522211328	Transistor, Output (2SB77B)
Q16	1522210111	Transistor, BFO (2SA12A)
Q17, Q18	1522218111	Transistor, Power regulator (2SB370 A or B)
D1	1522270101	Diode, Stabilizer (IN34A)

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
D2	1522270101	Diode, AM Detector (IN34A)
D3	1522270101	Diode, FM AGC (IN34A)
D4, D5	1522270101	Diode, FM Detector (IN34A)
D6, D7	1522270101	Diode, Detector, Tuning Eye (IN34A) (IN34A)
D8	1522275501	Diode, FM AFC (IS85)
D9	1522273901	Diode, Stabilizer (TR-9GS)
D10	1522270101	Diode, Stabilizer (IN34A)
D11	1527270600	Diode, Power regulator (IS337)
SR1	1523202700	Diode, Rectifier (SELEN-27)
TH	1522280902	Thermistor, AOC(D-IE)

REF. NO.	PART NO.	DESCRIPTION
	1353274300	Drum (DP-743)
	11934820	Battery Cover (B-Buta4070)
J1, J2	1530211800	Jack, Phono & Earphone (J-118)
J3	1530230200	Jack, Tuner Out (J-302)
J5, J6	1530211400	Jack, Ext. Amt. & Car Ant. (J-114)
SP1	1570245100	Speaker (1510P-85A)
	1590241900	Earphone (MR-19)
	1571208700	Antenna, Telescoping Rod (Red-Ant-87) QANTR0048AGZZ =AQ
	1590253100	Pilot Lamp (PL-531)
	1593250100	AC Lamp (3PL-501)
S1	1531226100	Switch, Band Selector (2S-61)
S2, S3		
S4	1531264300	Switch, BFO, AFC & PL (6S-43)
S5	1531264100	Switch, Battery Test (6S-41)
S6	1531246901	Switch, Car-Portable Selector (4S-69)
S7	1531240402	Switch, AC-DC Selector (4S-4)

MISCELLANEOUS

MISCELLANEOUS

	11032241	Cabinet, Front (3Cab-029A)
	11034297	Cabinet, Back (3Cab-4070B)
	11092244	Knob, Tuning (9K-244)
	11092245	Knob, Band Selector (9K-245)
	11092246	Knob, Volume & Tone (9K-246)
	11092247	Push Button, AFC (9K-247)
	11092248	Push Button, BFO & Battery Test (9K-248)
	11092249	Push Button, Pilot Lamp (9K-249)
	11092117	Knob, Fine Tunning (9K-117V)
	11092188	Slide Button, Back Cover Retaining (9K-188)
	11202789	Pointer, Dial (Sisin-029)
	11212963	Dial (Dial-4070)
	11222032	Indication Plate, SHARP (Ind-P-029A)) (Inol-P-029A)
	11242843	Indication Plate, Tuning Knob (Ind-P4070A)
	11222034	Indication Plate, Map (Ind-P-029C)
	11242844	Indication Plate, Band Selector (IND-P4070B)
	11232820	Dial Plate (Dial-P4070)
	11332249	Decoration Metal, Front (Dec-M-029A)
	11332250	Decoration Metal, Dial (Dec-M-029B)
	1133225158	Decoration Metal, Right (Dec-M-029C)
	1133225228	Decora tion Metal, Left (Dec-M-029D)
	11342774	Indication Badge (Ind-B-029)
	11622701	Decoration Cover, Pilot Lamp
	11932389	Handle (Totte-029)
	1303222200	Printed Circuit Board, A (PCB-029A)
	1303222300	Printed Circuit Board, B (PCB-029B)
	1303222400	Printed Circuit Board, C (PCB-029C)
	1303222500	Printed Circuit Board, D (PCB-029D)
	1303222600	Printed Circuit Board, E (PCB-029E)
	1303222900	Printed Circuit Board, F (PCB-029F)
	1303228000	Printed Circuit Board, G (PCB-4070)
	1310202900	Battery Case (B-Case-29)
	1320293000	Socket, Car Antenna (SO-930)
	1320221500	Socket, Pilot Lamp (SO-930)
	1320221500	Socket, Pilot Lamp (SO-215)
	1351279551	Pulley (P-795)
	1351279651	Pulley (P-796)
	1351279751	Pulley (P-797)
	1352276451	Drive Shaft, Tuning (DS-764)

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