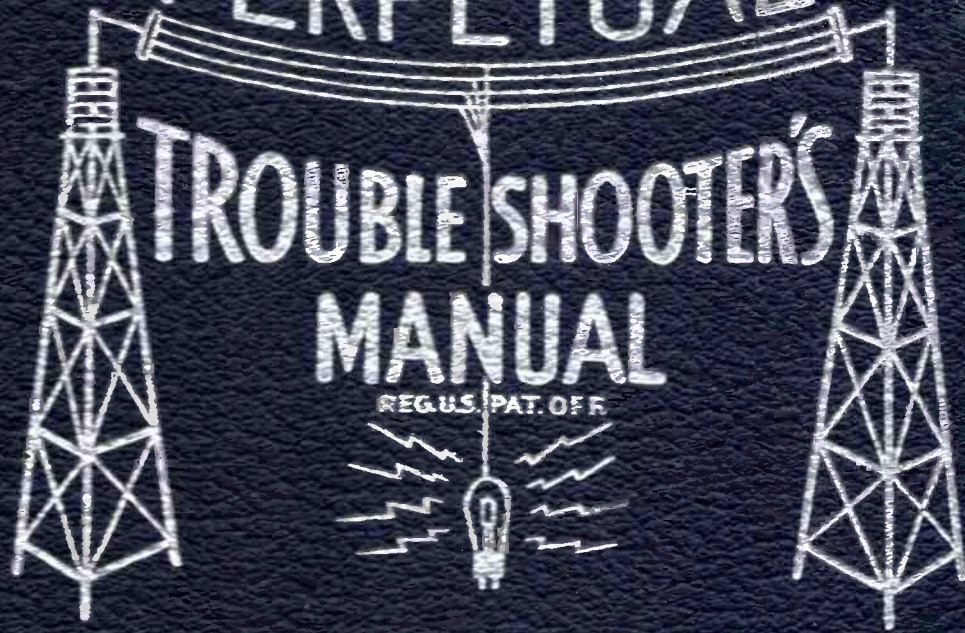


VOLUME XVI

PERPETUAL



TROUBLE SHOOTER'S
MANUAL

REG. U.S. PAT. OFF.

JOHN F. RIDER

PERPETUAL
TROUBLE SHOOTER'S MANUAL

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VOLUME XVI



JOHN F. RIDER PUBLISHER, INC.

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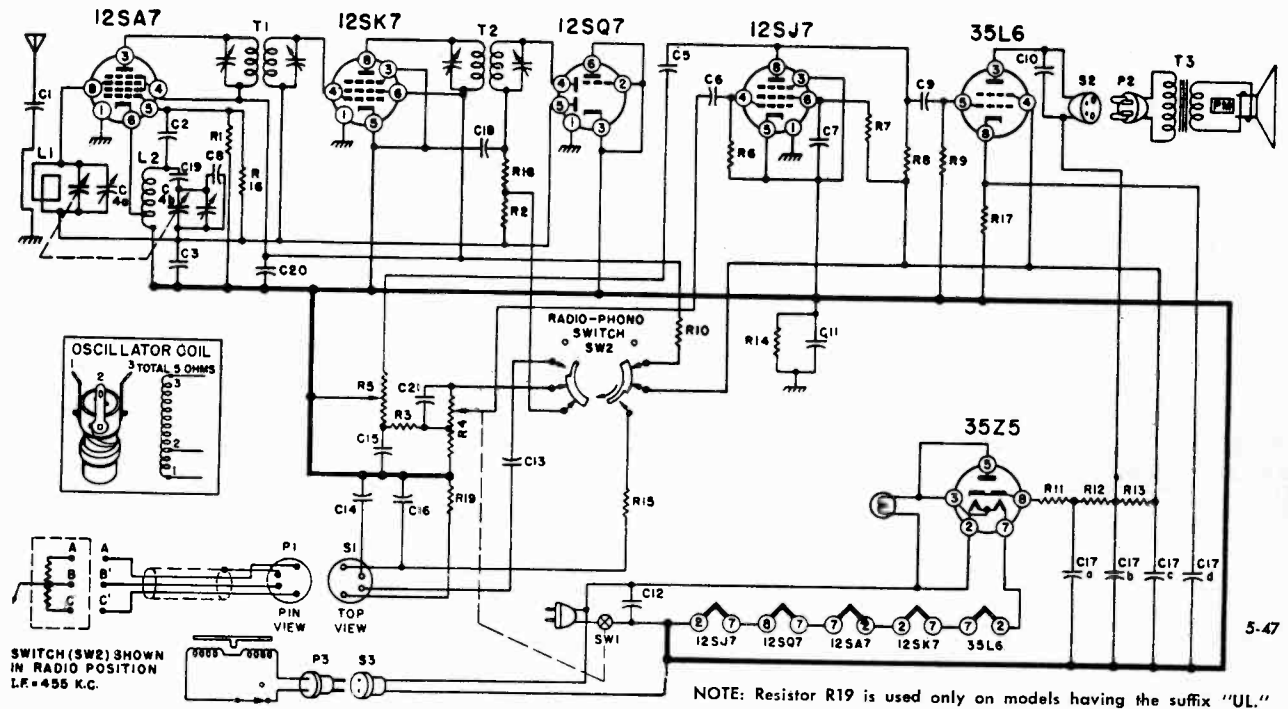
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ADMIRAL CORPORATION

MODEL 7C62, Chassis 6M1
MODELS 7RT41, 7RT42, 7RT43



MODELS 7RT41, 7RT42, 7RT43

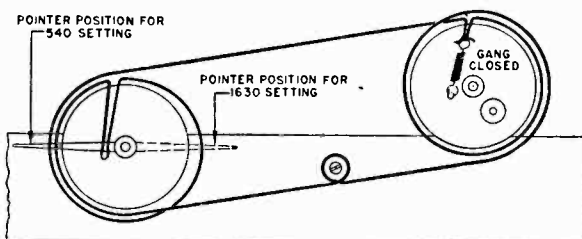
MODEL 7C62

ALIGNMENT PROCEDURE

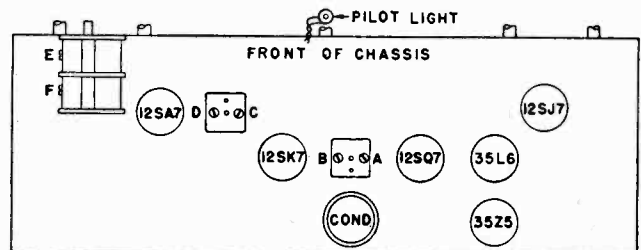
1. Connect Output Meter across Voice Coil.
 2. Turn Receiver Volume Control—full on.
 3. Use lowest Output setting of Signal Generator
 4. Repeat adjustments to insure good results.
- capable of producing adequate Output Meter indication and then proceed in the following sequence.

Connect Signal Generator to—	Dummy Antenna Between Radio and Generator	Set Generator Frequency to—	Set Receiver Dial Frequency to—	Adjust Following Trimmers	Type of Adjustment
Tuning Condenser Antenna Stator	250 mmfd. Condenser	455 K.C.	High frequency end of Dial	A-B—2nd I. F. C-D—1st I. F.	Adjust to maximum Output
Tuning Condenser Antenna Stator	250 mmfd. Condenser	1630 K.C.	High frequency end of Dial	E—Osc.	Adjust to maximum Output
Loop radiator (or place lead from generator close to loop of set to obtain adequate signal)	No actual connection between set and generator.	1400 K.C.	Tune in generator signal	F—Ant.	Adjust to maximum Output

DIAL CORD STRINGING & POINTER SETTING



TOP VIEW



MODEL 7C62
 MODELS 7RT41, 7RT42,
 7RT43

ADMIRAL CORPORATION

MODEL 7RT41, 7RT42, 7RT43

REPLACEMENT PARTS

RESISTORS			CONDENSERS			CABINET PARTS	
Symbol	Description	Part No.	Symbol	Description	Part No.	Description	Part No.
R1	22,000 Ohms, 1/2 Watt	60B 8-223	C11	.18 mfd., 200 Volts, Paper	64A 2-2	Cabinet Body Less Lid (7RT41)	34D 11-11
R2	1 Megohm, 1/2 Watt	60B 8-105	C12	.05 mfd., 400 Volts, Paper	64B 1-22	Cabinet Lid (7RT41)	34D 11-10
R3	27,000 Ohms, 1/2 Watt	60B 8-273	C13	.001 mfd., 600 Volts, Paper	64B 1-15	*Cabinet, Wood (7RT42)	35D 47
R4	1 Megohm Volume Control (Tapped at 500,000 ohms)	75B 2-6	C14	.05 mfd., 400 Volts, Paper	64B 1-25	*Cabinet, Wood, Walnut (7RT43)	35D 48-1
R5	2 Megohm Tone Control and Switch SW1	75B 1-12	C15	.01 mfd., 400 Volts, Paper	64B 1-24	*Cabinet, Wood, Mahogany (7RT43)	35D 48-2
R6	4.7 Megohms, 1/2 Watt	60B 8-475	C16	.1 mfd., 200 Volts, Paper	64B 1-30	Clip, Dial Glass Mounting (7RT43)	18A 12
R7	1.8 Megohms, 1/2 Watt	60B 8-185	C17a	30 mfd., 150 Volts	Elect.....67A 14-1	Dial Scale, Glass (7RT41-7RT42)	21B 35-1
R8	100,000 Ohms, 1/2 Watt	60B 8-104	C17b	30 mfd., 150 Volts		Dial Scale, Glass (7RT43)	21B 33-1
R9	470,000 Ohms, 1/2 Watt	60B 8-474	C17c	20 mfd., 150 Volts		Escutcheon, Overlay (7RT41-7RT42)	23C 23-1
R10	100 Ohms, 1/2 Watt	60B 8-101	C17d	20 mfd., 25 Volts		Grille, Inside	16C 1
R11	33 Ohms, 1 Watt	60B 28-3	C18	250 mmfd. ±20%, Ceramic	65B 6-5	PHONOGRAPH PARTS	
R12	220 Ohms, 1 Watt	60B 28-7	C19	.02 mfd., 200 Volts, Paper	64B 1-24	Note: See record changer manual for complete parts list.	
R13	1,000 Ohms, 1 Watt	60B 28-2	C20	.05 mfd., 400 Volts, Paper	64B 1-22	Cartridge and Needle, Pickup.....A 1372	
R14	150,000 Ohms, 1/2 Watt	60B 8-154	C21	500 mmfd. ±20%, Ceramic	65B 6-6	Centerpost.....G400B137-1	
R15	22,000 Ohms, 1/2 Watt	60B 8-223	COILS, TRANSFORMERS, ETC.			Drive Disc Assembly.....G 400A 179	
R16	10 Megohms, 1/2 Watt	60B 8-106	L1	Antenna, Loop	69B 13	Idler Wheel (407B3 Motor).....G 400A 23	
R17	150 Ohms, 1 Watt	60B 14-151	L2	Coil, Oscillator	69A 14	Idler Wheel (407B1 Motor).....G 400A 57	
R18	100,000 Ohms, 1/2 Watt	60B 8-104	T1	Transformer, 1st I.F.	72B 3	Motor, 60 Cycle 115 Volt A.C.....407B 3-2	
R19	33,000 Ohms, 1/2 Watt	60B 8-333	T2	Transformer, 2nd I.F.	72B 4	Pickup Cable and Plug.....A 1322	
CONDENSERS			T3	Transformer, Output	98A 17	MISCELLANEOUS	
C1	.005 mfd., 600 Volts, Paper	64B 1-12	Speaker (5") & Output Transformer.....78B 19-1			Background, Dial.....22B 9-1	
C2	50 mmfd. ±20%, Ceramic	65B 6-4	SWITCHES, PLUGS & SOCKETS			Bracket, Tuning Shaft.....15A 152	
C3	.1 mfd., 200 Volts, Paper	64B 1-30	P1	Plug, Pickup	88A 8-5	Bracket, Dial.....15B 151	
C4a	Gang, 0 to 420 mmfd.	68B 5	P3	Plug, Motor	88A 8-1	Cord, Dial (48").....50A 1-3	
C4b	Gang, 0 to 162 mmfd.	68B 5	S1	Socket, Phono	88A 8-6	Drum, Dial.....17A 14	
C5	.002 mfd., 600 Volts, Paper	64B 1-14	S3	Phono-Motor Socket & Leads (Female connector)	89A 6-3	Grommet, Rubber.....12A 1-2	
C6	.01 mfd., 400 Volts, Paper	64B 1-25	SW1.....Part of Tone Control R5			Knob.....33A 19-1	
C7	.05 mfd., 400 Volts, Paper	64B 1-22	SW2.....Switch, Radio-Phono.....77A 16-2			Pilot Light =47.....81A 1-8	
C8	15 mmfd. ±20%, Ceramic	65B 6-18				Pilot Light Socket and Leads.....82A 2-3	
C9	.01 mfd., 400 Volts, Paper	64B 1-25				Pointer.....25A 21	
C10	.03 mfd., 400 Volts, Paper	64B 1-23				Pulley, Fibre Dial 1/8"x1/2" O.D.....17A 1-3	

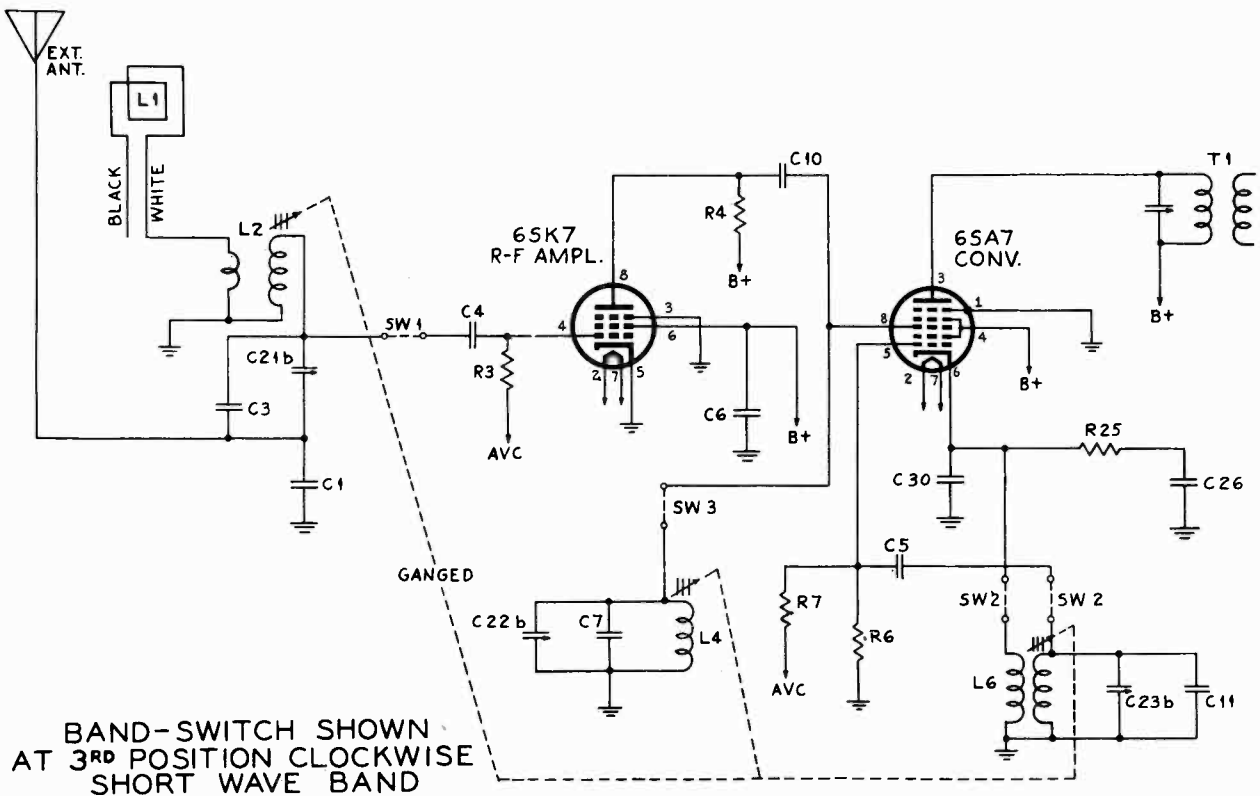
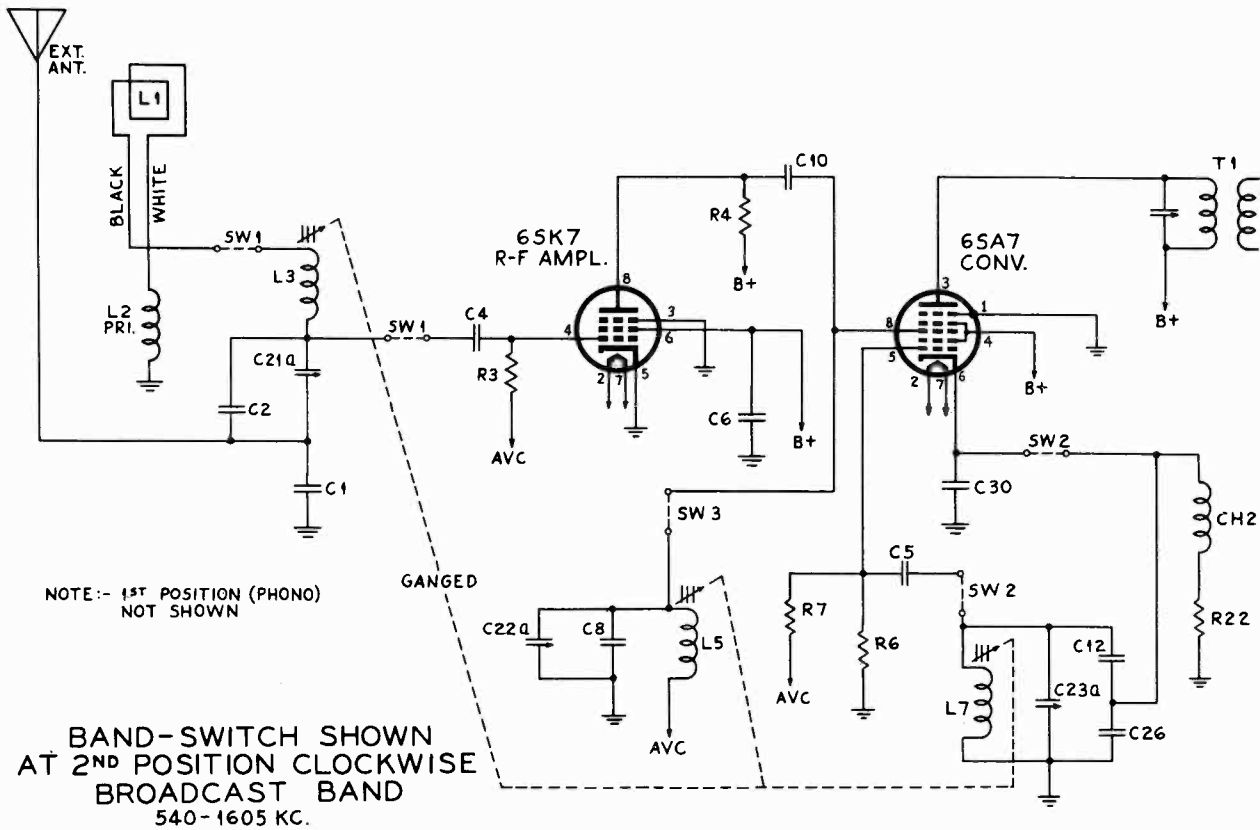
MODEL 7C62

REPLACEMENT PARTS

RESISTORS			CONDENSERS			CABINET PARTS	
Symbol	Description	Part No.	Symbol	Description	Part No.	Description	Part No.
R1	22,000 Ohms, 1/2 Watt	60B 8-223	C9	.01 mfd., 400 Volts, Paper	64B 1-25	Screw, Chassis Mounting	1A 67-17-2
R2	1 Megohm, 1/2 Watt	60B 8-105	C10	.03 mfd., 400 Volts, Paper	64B 1-23	Tie Bar, Tilt Out	15B 126
R3	27,000 Ohm, 1/2 Watt	60B 8-273	C11	.1 mfd., 400 Volts, Paper	64B 1-20	Springs, Tilt Out	19A 15-1
R4	1 Megohm Volume Control and Switch SW1 (Tapped at 500,000 ohms)	75B 2-2	C12	.05 mfd., 400 Volts, Paper	64B 1-22	Escutcheon, Plastic	23C 22-2
R5	2 Megohms, Tone Control	75B 1-8	C13	.001 mfd., 600 Volts, Paper	64B 1-15	Dial Window, Plastic	24B 1
R6	4.7 Megohms, 1/2 Watt	60B 8-475	C14	.05 mfd., 400 Volts, Paper	64B 1-22	*Cabinet, Wood (7C62)	35E 52
R7	1.8 Megohms, 1/2 Watt	60B 8-185	C15	.02 mfd., 400 Volts, Paper	64B 1-24	Hinge Assembly, Record Support Side	AC 118-1
R8	100,000 Ohms, 1/2 Watt	60B 8-104	C16	.1 mfd., 200 Volts, Paper	64B 1-30	Hinge Assembly, Pickup Arm Side	AC 118-2
R9	470,000 Ohms, 1/2 Watt	60B 8-474	C17a	30 mfd., 150 Volts	Elect.....67C 7-46	PHONOGRAPH PARTS	
R10	100 Ohms, 1/2 Watt	60B 8-101	C17b	30 mfd., 150 Volts		Note: See record changer manual for complete parts list.	
R11	33 Ohms, 1 Watt	60B 28-3	C17c	20 mfd., 150 Volts		Cartridge and Needle, Pickup.....A 1372	
R12	220 Ohms, 1 Watt	60B 28-7	C17d	20 mfd., 25 Volts		Centerpost.....G400B137-1	
R13	1,000 Ohms, 1 Watt	60B 28-2	C18	250 mmfd. ±20%, Ceramic	65B 6-5	Drive Disc Assembly.....G 400A 179	
R14	150,000 Ohms, 1/2 Watt	60B 8-154	C19	.02 mfd., 200 Volts, Paper	64B 1-24	Idler Wheel (407B3 Motor).....G 400A 23	
R15	22,000 Ohms, 1/2 Watt	60B 8-223	C20	.05 mfd., 400 Volts, Paper	64B 1-22	Idler Wheel (407B1 Motor).....G 400A 57	
R16	10 Megohms, 1/2 Watt	60B 8-106	C21	500 mmfd. ±20%, Ceramic	65B 6-6	Motor, 60 Cycle 115 Volt, A. C.....407B 3-2	
R17	150 Ohms, 1 Watt	60B 14-151	COILS, TRANSFORMERS, ETC.			Pickup Cable and Plug.....A 1304	
R18	100,000 Ohms, 1/2 Watt	60B 8-104	L1	Antenna, Loop	69B 15	MISCELLANEOUS	
R19	33,000 Ohms, 1/2 Watt	60B 8-333	L2	Coil, Oscillator	69A 14	Compression Ring (For pointer).....18A 5-2	
CONDENSERS			T1	Transformer, 1st I.F.	72B 3	Cord, Dial.....50A 1-3	
C1	.005 mfd., 600 Volts, Paper	64B 1-12	T2	Transformer, 2nd I.F.	72B 4	Grommet, Rubber (For gang cond.).....12A 1-2	
C2	50 mmfd. ±20%, Ceramic	65B 6-4	T3	Transformer, Output	98A 18	Knob.....33A 19-2	
C3	.1 mfd., 200 Volts, Paper	64B 1-30	Speaker (8" PM) & Output Transformer.....78C 20-1			Pilot Light =47.....81A 1-8	
C4a	Gang, 0 to 420 mmfd.	68B 5	SWITCHES, PLUGS & SOCKETS			Pilot Light Socket & Leads.....82A 3-3	
C4b	Gang, 0 to 162 mmfd.	68B 5	P1	Plug, Pickup	88A 8-5	Pointer.....25B 22	
C5	.002 mfd., 600 Volts, Paper	64B 1-14	P2	Plug, Speaker	88A 4	Scale, Dial.....21B 30-2	
C6	.002 mfd., 600 Volts, Paper	64B 1-14	P3	Plug, Motor	88A 8-1	Shaft, Pointer.....28A 16	
C7	.05 mfd., 400 Volts, Paper	64B 1-22	S1	Socket, Phono	88A 8-6	Shaft, Tuning.....28A 10-1	
C8	15 mmfd. ±20%, Ceramic (Used on Model 7C62-N)	65B 6-18	S2	Socket, Speaker	87A 6-1	Spring, Dial Drum Cord Tension.....19B 1-5	
C8	20 mmfd., Mica (Used on Model 7C62-UL)	65B 7-5	S3	Phono-Motor Socket & Leads (Female connector)	89A 6-6	Spring, Tuning Shaft Tension.....19A 18	

MODEL 7C63,

ADMIRAL CORPORATION

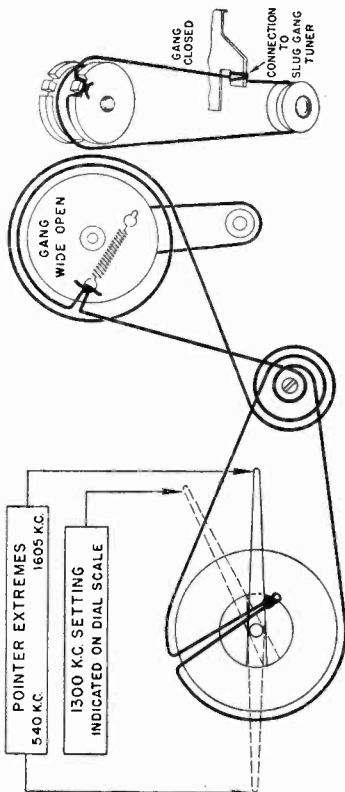


ADMIRAL CORPORATION

ALIGNMENT PROCEDURE

1. Loop must be connected during alignment. Check the set screws that hold the tuning drum to the shaft to see that they are tight and that the drum has not slipped on the shaft. The correct position of the drum can be seen on the strapping diagram.
2. In the closed position the stop on the rear of the dial drum must be against the stop post.
3. With the gang wide open, all slugs should be 1/4 inches out of their coil forms. If there is any serious deviation or if there has been any tampering, turn the adjusting screws until this distance is correct. Be sure both the set and the signal generator are thoroughly warmed up before starting alignment.
4. Turn receiver Volume Control full on.
5. Use lowest output setting of signal generator that gives a satisfactory reading on meter.
6. Proceed in sequence as outlined below.

Step	Connect Signal Generator To	Dummy Antenna Between Radio and Signal Generator	Signal Generator Frequency	Tuning Gang Setting	Adj. Trimmers in Following Order to Fix.
1	Set Band Change Switch to Broadcast Position. 6SA7 Grid (Pin No. 8)	.1MFD.	455 K.C.	Set Pointer to Upper Limit	A, B, C, D
2	Before proceeding to step 3 check pointer travel and slug position as described below.				
3	Black Loop Lead	10 MMFD. If not available wrap several turns of the generator lead around the black loop lead.	1605 K.C.	Set Pointer to Upper Limit	E, F, G
4	Black Loop Lead		1300 K.C.	Set Pointer to 1300 K.C. on Dial Scale	H, I, J
5	Set Band Change Switch to Short Wave Position.				
6	White Loop Lead	400 Ohms	12.5 M.C.	Set Pointer to Upper Limit	K, L, M
7	White Loop Lead	400 Ohms	120 M.C.	Set Pointer to 120 M.C. on Dial Scale	N, O, P



RECORD CHANGER SERVICE DATA

The element in the new Admiral pickup cartridge is made of a special rubber which acts as a high resistance electrical conductor. The resistance varies as the length of the rubber is changed. A needle is clamped to the center of the resistive rubber as shown at "B". (see schematic). A DC voltage is applied at AA'. The voltage drop from "B" to "C" varies as the resistance changes due to the "back and forth" movement of the needle. This varying voltage drop, which is in reality an alternating voltage of audio frequency, is applied through the coupling condenser to the grid of the audio amplifier tube. In case of distortion or low volume on phono operation only, check as follows:

1. Replace cartridge and check operation. If not satisfactory, proceed with tests.
2. With the volume control at maximum, touch the needle with the finger. If a loud hum is heard, then the Do not attempt to repair cartridges or remove the cap on the cartridge assembly as this will void the warranty.

the circuit from the needle to the grid of the audio amplifier tube is not open or shorted. If hum is not heard, check the circuit from "B" to the grid. If a hum is heard, check the voltage across outer terminals "A" and "C" on the bottom of cartridge. Generally it should measure from 80 to 100 volts DC. If it does not, check the circuit for fault. The resistance of the cartridge is not critical, but should measure between 100,000 ohms and 2 megohms.

If the needle is bent, it can be straightened by bending it so that it projects 1/16 inch below the cartridge. It should then be pressed back several times with a flat object.

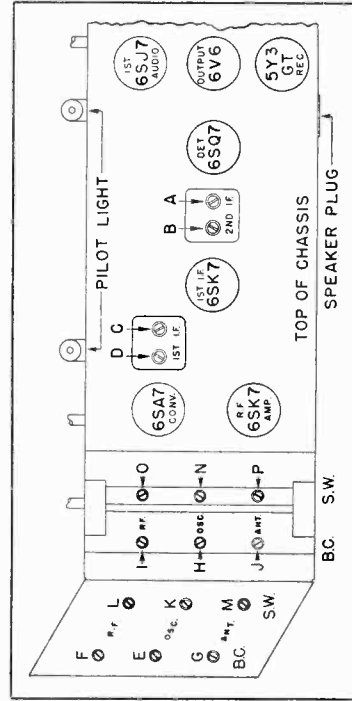
Replace the tuning control knob clockwise until tuning gang is wide open. The pointer should now be at 1605 Kc. (last dial dot). If it is not, grasp the pointer with your hand and move it to 1605 Kc. Then proceed with alignment.

POINTERS ADJUSTMENT

REPLACING TUNING SLUG

Set the gang to its wide open position, unsolder and remove the old slug. Set the slug adjusting screw about half way down. Place the new slug in such a position that 1/8 inches of its length is above the coil form. Solder it in this position making sure that the slug wire is straight. Re-align the set as shown in the chart.

TUBE AND TRIMMER LAYOUTS



ANTENNA CONNECTIONS

In replacing connections to antennas, it is necessary to see that the flat twin parallel conductor is not twisted. The rear parallel conductor should be connected to the rear terminal screw on each loop antenna. The front parallel conductor should be connected to the front terminal screw on each loop antenna.

MODEL 7C63
MODEL 7C73

ADMIRAL CORPORATION

PARTS LIST - 7C63

RESISTORS

SYMBOL	DESCRIPTION	PART NO.
R1	12,000 Ohms, 5 Watt	61A 1-1
R2	2.2 Megohms, Carbon, 1/2 Watt	60B 8-225
R3	470,000 Ohms, 1/2 Watt	60B 8-474
R4	10,000 Ohms, 2 Watt	60B 20-103
R6	22,000 Ohms, 1/2 Watt	60B 8-223
R7	10 Megohms, 1/2 Watt	60B 8-106
R8	1 Megohm, 1/2 Watt	60B 8-105
R9	2 Megohms Tone Control	75B 1-8
R10	27,000 Ohms, 1/2 Watt	60B 8-273
R11	1 Megohm Volume Control and Switch SW4	
	Tapped at 500,000 Ohms	75B 2-2
R12	470,000 Ohms, 1/2 Watt	60B 8-474
R13	470,000 Ohms, 1/2 Watt	60B 8-474
R14	3.3 Megohms, 1/2 Watt	60B 8-335
R15	390 Ohms, 1 Watt	60B 14-391
R16	10 Megohms, 1/2 Watt	60B 8-106
R17	100 Ohms, 1/2 Watt	60B 8-101
R18	220,000 Ohms, 1/2 Watt	60B 8-224
R19	100,000 Ohms, 1/2 Watt	60B 8-104
R20	100,000 Ohms, 1/2 Watt	60B 8-104
R22	100 Ohms, 1/2 Watt	60B 8-101
R23	100,000 Ohms, 1 Watt	60B 14-104
R24	47,000 Ohms, 1/2 Watt	60B 8-473
R25	470 Ohms, 1/2 Watt	60B 8-471

CONDENSERS

SYMBOL	DESCRIPTION	PART NO.
C1	1000 mmfd., Mica	65B 7-33
C2	35 mmfd., Silver Mica 3%	65B 1-31
C3	25 mmfd., Silver Mica 3%	65B 1-28
C4	100 mmfd., Mica	65B 7-17
C5	50 mmfd., Ceramic	65B 6-4
C6	.05 mfd., 400 V.D.C., Paper	64B 1-22
C7	65 mmfd., Silver Mica 3%	65B 1-27
C8	420 mmfd., Silver Mica	65B 1-13
C9	1000 mmfd., Mica	65B 7-33
C10	200 mmfd., Mica 2%	65B 7-5
C11	65 mmfd., Silver Mica 3%	65B 1-27
C12	200 mmfd., Silver Mica, 2%	65B 1-14
C13	.1 mfd., 400 V.D.C., Paper	64B 1-20
C14	250 mmfd., Mica	65B 7-22
C15	1000 mmfd., Mica	65B 7-33
C16	.02 mfd., 400 V.D.C., Paper	64B 1-24

SYMBOL	DESCRIPTION	PART NO.
C17	.01 mfd., 400 V.D.C., Paper	64B 1-25
C18	.005 mfd., 600 V.D.C., Paper	64B 1-12
C19	.01 mfd., 600 V.D.C., Paper	64B 1-10
C20a	30 mfd., 350 V.D.C., Elec.	67C 6-25
C20b	30 mfd., 350 V.D.C., Elec.	
C20c	20 mfd., 25 V.D.C., Elec.	
C21a	3-40 mmfd., Dual Trimmer	66A 1-5
C21b	3-40 mmfd., Dual Trimmer	
C22a	3-40 mmfd., Trimmer	66B 8-1
C22b	3-40 mmfd., Trimmer	66B 8-1
C23a	3-40 mmfd., Trimmer	66B 8-1
C23b	3-40 mmfd., Trimmer	66B 8-1
C24	100 mmfd., Mica	65B 7-17
C26	1,200 mmfd., Mica	65B 5-34
C27	.05 mfd., 200 V.D.C., Paper	64B 1-32
C28	.25 mfd., 200 V.D.C., Paper	64B 1-32
C29	.1 mfd., 400 V.D.C., Paper	64B 1-20
C30	.20 mmfd., Mica	65B 7-5
C31	500 mmfd. ± 20%, Ceramic	65B 6-6

CHOKES, COILS, TRANSFORMERS, Etc.

SYMBOL	DESCRIPTION	PART NO.
L1	Loop Antenna, (Record Support Side)	AD120
L1	Loop Antenna, (Pickup Arm Side)	AD117
L2	Coil, S.W. Antenna	AD116-1
L3	Coil, B. C. Antenna	AC105-2
L4	Coil, S.W., R.F.	AD116-2
L5	Coil, B. C., R.F.	AB100-1
L6	Coil, S.W. Oscillator	AD116-3
L7	Coil, B.C. Oscillator	AC101-1
CH1	Choke, Filter	74A 3
CH2	Coil, Oscillator Choke	AB103-1
T1	Transformer, 1st I.F.	72B 7
T2	Transformer, 2nd I.F.	72B 8
T3	Transformer, Power	80B 1
T4	Transformer, Output	98A 20
	Speaker 10" and Transformer	78B 6

When Ordering Slugs Specify Color Code

Slug, Tuning (B.C.—Osc. & R.F.)	71B 1-3
Slug, Tuning (S.W.—Ant., R.F. & Osc.)	71B 1-9
Slug, Tuning (B.C. Ant.)	71B 1-13

SWITCHES, PLUGS AND SOCKETS

SYMBOL	DESCRIPTION	PART NO.
P1	Plug, Pickup	88A 5-7
P2	Plug, Speaker	88A 4
S1	Phono Socket, Shielded	88A 5-9
S2	Socket, Speaker	87A 6-1
S3	Phono-Motor Socket & Leads	89A 6-8
SW1	Switch, Antenna	76B 1-3
SW2	Switch, Oscillator	76B 1-2
SW3	Switch, R.F.	76B 1-1
SW4	Part of Volume Control R11	

PHONOGRAPH PARTS

Note: See record changer manual for complete parts list.

DESCRIPTION	PART NO.
Cartridge and Needle, Pickup	A1372
Centerpost	G-400B 137-1
Drive Disc Assembly	G-400A 179
Idler Wheel (407B 3 Motor)	G-400A 23
Idler Wheel (407B 1 Motor)	G-400A 57
Motor	407B 3-2
Pickup Cable and Plug	A1305
Tilt Out Hinge Assembly (Record Support Side)	AC118-1
Tilt Out Hinge Assembly (Pickup Arm Side)	AC118-2
Tilt Out Spring	190A 15-1
Tilt Out Tie Bar	15B 126

MISCELLANEOUS

*Cabinet (7C63), Wood	35D 51
Compression Ring-Pointer	18A 5-2
Cord, Dial	50A 1-3
Dial Background Assembly	A1357
Dial Window—Plastic	24B 1
Drum and Hub Assembly, Pointer	A1355
Drum and Hub Assembly, Tuner	A1356
Escutcheon—Plastic Dial	23C 22-1
Handle, Door	37B 10-1
Knob	33A 19-2
Pilot Light No. 47	81A 1-8
Pilot Light Socket	82A 3-8
Pointer, Dial	25B 22
Screw, Escutcheon Mounting	1A 15-6-58
Spring, Dial Cord Tension	19B 1-10
Spring, Tension	19B 1-11
Transmission Line (43")	95A 16-1
Transmission Line (54")	95A 16-2

*Supplied only if old cabinet cannot be repaired. When ordering, describe condition of old cabinet in detail.

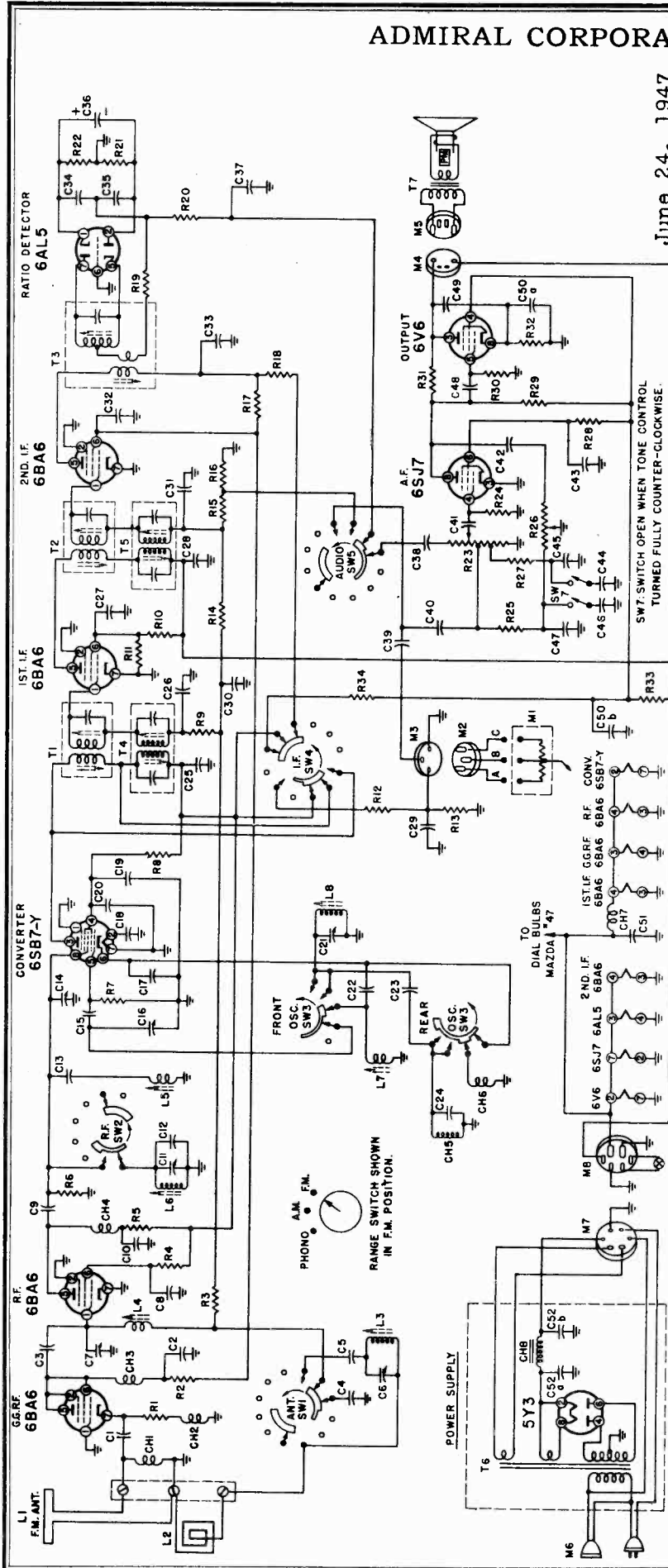
PARTS LIST (CONTD.) - 7C73-9A1

Symbol	COILS, TRANSFORMERS, ETC.	Part No.	Description	TUNER PARTS	Part No.	Description	PHONOGRAPH PARTS	Part No.
CH1	Choke, F.M. Antenna	AB 103-33	Tuning Shaft	28A 17	Tilt Out Spring (2-1/4" long)	19A 16-1		
CH2	Choke, Grounded Grid Cathode	AB 103-36	Slug Travel Bracket, Bushing and Roller Assy. (front)	A1398	Shoulder Eye Bolt (For Tilt Out Spring)	1A87-1		
CH3	Choke, Grounded Grid Plate	AB 103-36	Slug Travel Bracket, Bushing and Roller Assy. (rear)	A1398	Tilt Out Tie Bar	16B 126		
CH4	Choke, R.F. Plate	AB 103-36	Brass Guide Rod (Tuner)	26A 7-2				
CH5	Choke, A.M. Oscillator Cathode	AB 103-1	Cam and Hub for Tuner (front)	A1400				
CH6	Choke, F.M. Oscillator Cathode	AB 103-34	Cam and Hub for Tuner (rear)	A1467				
CH7	Choke, R.F. Plate	Consists of approximately 8 turns of #20 solid hookup wire wound around condenser C61	Spring, Bearing Takeup	19A 16				
			Cable, Drive (for Cam and Hub)	95A 15				
			Spring, Coil (for Cam and Hub)	19B 1-14				
CH8	Choke, Filter	74A 9	Bakelite Plate for slug mounting (1-15/16" x 2-5/8")	32A 36				
L1	Antenna, F.M. Folded Dipole	AB 126	Slug-adjusting Screw	27A 4				
L2	Antenna, A.M. (15')	95A 18	Drum and Hub on Tuner Shaft (includes 1" drum and 3-11/32" drum)	A1401				
L3	Coil, A.M. Antenna (less slug)	AC 106-2						
L4	Coil, F.M.-R.F. (less slug)	AA 122						
L5	Coil, F.M. Converter (less slug)	AA 122						
L6	Coil, A.M. Converter (less slug)	AA 100-1						
L7	Coil, F.M. Oscillator (less slug)	AA 123						
L8	Coil, A.M. Oscillator (less slug)	AC 101-2						
SW1	Switch, Antenna (Second from chassis front)	76C 11-3						
SW2	Switch, R.F. (Fourth from chassis front)	76C 11-5						
SW3	Switch, Oscillator (Third from chassis front)	76C 11-4						
SW4	Switch, I.F. (Farthest from chassis front)	76C 11-6						
SW5	Switch, Audio (Closest to chassis front)	76C 11-2						
SW6	Switch (ON-OFF)	Part of R-25						
SW7	Switch (Tone Control)	Part of R-26						
	Band-Switch Shaft Assembly	76C 11-1						
	Set Screw, #6-32 x 1/4"	1A 5-4						
	Spacers for Shaft Assembly	29A 4-4						
T1	Transformer, 1st I.F. (F.M.)	72B 24						
T2	Transformer, 2nd I.F. (F.M.)	72B 26						
T3	Transformer, Ratio Detector	72B 27						
T4	Transformer, 1st I.F. (A.M.)	72B 25						
T5	Transformer, 2nd I.F. (A.M.)	72B 25						
T6	Transformer, Power	80B 2						
T7	Transformer, Output	98A 22						
	Speaker (12" P.M.) and Output Transformer	78B 21						
	When Ordering Slugs Specify Color Code							
	Slug, Iron Core (F.M.—Osc., Conv., & R.F.)	71B 1-19						
	Slug, Iron Core (A.M.—Osc., Conv.)	71B 1-20						
	Slug, Iron Core (A.M.—Antenna)	71B 1-21						

ADMIRAL CORPORATION

MODEL 7C73, Chassis
9A1, Preliminary

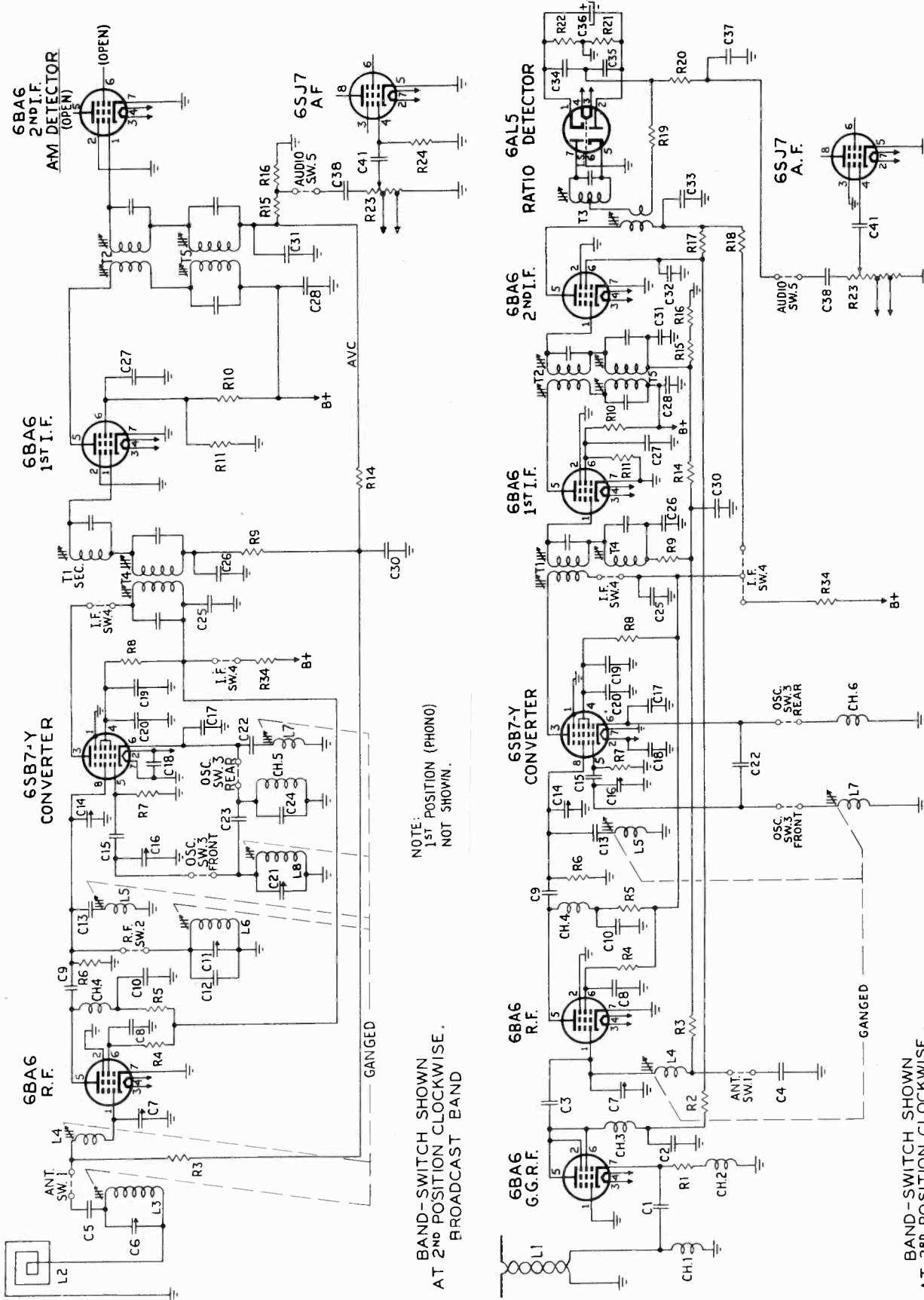
June 24, 1947



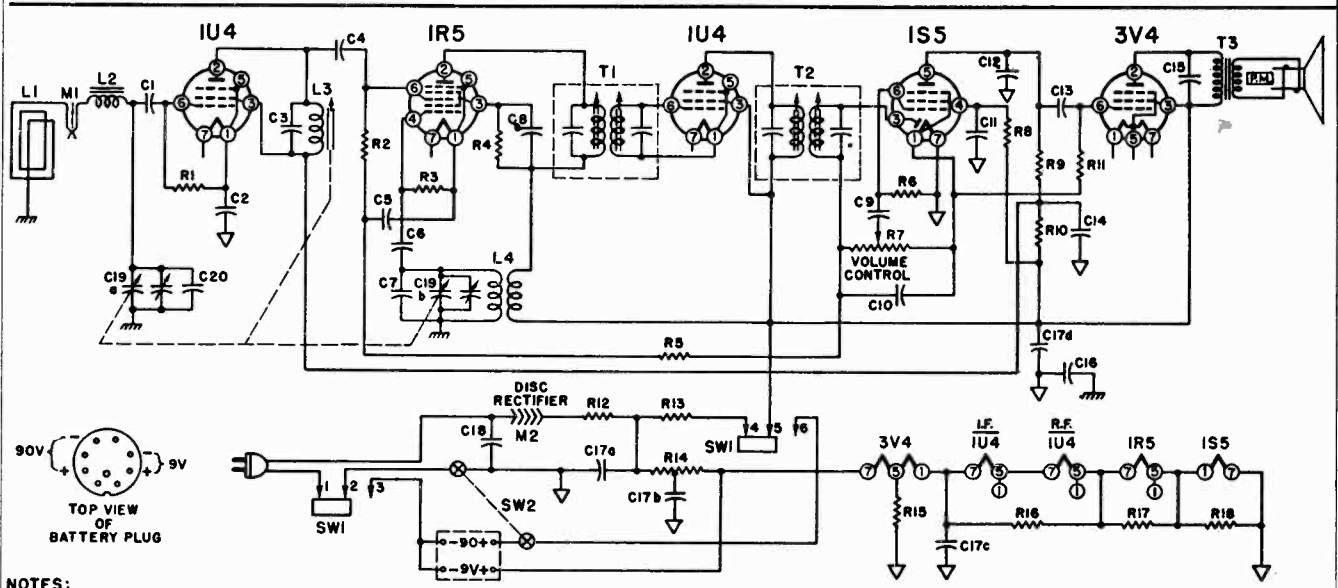
Symbol	Part No.	Symbol	Part No.	Symbol	Part No.
R1...	100 Ohms, 1/2 Watt.	R24...	4.7 Megohms, 1/2 Watt.	C8...	200 mfd., Mica.
R2...	530 Ohms, 1/2 Watt.	R25...	47,000 Ohms, 1/2 Watt.	C9...	35 mfd., Ceramic.
R3...	470,000 Ohms, 1/2 Watt.	R26...	2 Megohms Tone control	C10...	40 mfd., Ceramic.
R4...	39,000 Ohms, 1/2 Watt.		S. D. P. S. r. switch SW7.	C11...	12-170 mfd., Trimmer.
R5...	4,700 Ohms, 1 Watt.	R27...	10,000 Ohms, 1/2 Watt.	C12...	500 mfd., Silver Mica.
R6...	53,000 Ohms, 1/2 Watt.	R28...	470,000 Ohms, 1/2 Watt.	C13...	25mfd., Ceramic.
R7...	47,000 Ohms, 1/2 Watt.	R29...	100,000 Ohms, 1/2 Watt.	C14...	5-12 mfd., Trimmer.
R8...	15,000 Ohms, 1/2 Watt.	R30...	470,000 Ohms, 1/2 Watt.	C15...	50 mfd., Ceramic.
R9...	120,000 Ohms, 1/2 Watt.	R31...	2.2 Megohms, 1/2 Watt.	C16...	5-12 mfd., Trimmer.
R10...	19,000 Ohms, 1 Watt.	R32...	390 Ohms, 1 Watt.	C17...	200 mfd., 5% Ceramic.
R11...	22,000 Ohms, 1 Watt.	R33...	390 Ohms, 2 Watt.	C18...	100 mfd., Ceramic.
R12...	120,000 Ohms, 1/2 Watt.	R34...	100 Ohms, 1/2 Watt.	C19...	500 mfd., Ceramic.
R13...	100,000 Ohms, 1/2 Watt.			C20...	100 mfd., Ceramic.
R14...	470,000 Ohms, 1/2 Watt.			C21...	3-40 mfd., Trimmer.
R15...	220,000 Ohms, 1/2 Watt.			C22...	27 mfd., Ceramic.
R16...	82,000 Ohms, 1/2 Watt.			C23...	180 mfd., 5% Ceramic.
R17...	5,200 Ohms, 2 Watt.			C24...	2000 mfd., Mica.
R18...	2,200 Ohms, 1 Watt.			C25...	.01 mfd., 400 Volts, Paper.
R19...	390 Ohms, 1/2 Watt.			C26...	.01 mfd., 400 Volts, Paper.
R20...	27,000 Ohms, 1/2 Watt.			C27...	.01 mfd., 400 Volts, Paper.
R21...	6,800 Ohms, 1/2 Watt.			C28...	.01 mfd., 400 Volts, Paper.
R22...	6,800 Ohms, 15%, 1/2 Watt.			C29...	.10 mfd., 400 Volts, Paper.
R23...	1 Megohm Volume Control & on-off switch SW6. Tapped at 300,000 and 600,000 Ohms.			C30...	.2 mfd., 400 Volts, Paper.
				C31...	.05 mfd., Mica.
				C32...	.06 mfd., 200 Volts, Paper.
				C33...	.06 mfd., 200 Volts, Paper.
				C34...	100 mfd., Ceramic.
				C35...	100 mfd., Ceramic.
				C36...	4 mfd., 150 Volts, Electrolytic.
				C37...	.005 mfd., 600 Volts, Paper.
				C38...	.005 mfd., 600 Volts, Paper.
				C39...	1000 mfd., Mica.
				C40...	500 mfd., Mica.
				C41...	.005 mfd., 600 Volts, Paper.
				C42...	.005 mfd., 600 Volts, Paper.
				C43...	.05 mfd., 200 Volts, Paper.
				C44...	.05 mfd., 200 Volts, Paper.
				C45...	.01 mfd., 400 Volts, Paper.
				C46...	.005 mfd., 600 Volts, Paper.
				C47...	.005 mfd., 600 Volts, Paper.
				C48...	.01 mfd., 400 Volts, Paper.
				C49...	.002 mfd., 600 Volts, Paper.
				C50...	.002 mfd., 600 Volts, Paper.
				C51...	.01 mfd., 400 Volts, Paper.
				C52...	.01 mfd., 400 Volts, Paper.
				C53...	.01 mfd., 400 Volts, Paper.
				C54...	.01 mfd., 400 Volts, Paper.
				C55...	.01 mfd., 400 Volts, Paper.
				C56...	.01 mfd., 400 Volts, Paper.
				C57...	.01 mfd., 400 Volts, Paper.
				C58...	.01 mfd., 400 Volts, Paper.
				C59...	.01 mfd., 400 Volts, Paper.
				C60...	.01 mfd., 400 Volts, Paper.
				C61...	.01 mfd., 400 Volts, Paper.
				C62...	.01 mfd., 400 Volts, Paper.
				C63...	.01 mfd., 400 Volts, Paper.
				C64...	.01 mfd., 400 Volts, Paper.
				C65...	.01 mfd., 400 Volts, Paper.
				C66...	.01 mfd., 400 Volts, Paper.
				C67...	.01 mfd., 400 Volts, Paper.
				C68...	.01 mfd., 400 Volts, Paper.
				C69...	.01 mfd., 400 Volts, Paper.
				C70...	.01 mfd., 400 Volts, Paper.
				C71...	.01 mfd., 400 Volts, Paper.
				C72...	.01 mfd., 400 Volts, Paper.
				C73...	.01 mfd., 400 Volts, Paper.
				C74...	.01 mfd., 400 Volts, Paper.
				C75...	.01 mfd., 400 Volts, Paper.
				C76...	.01 mfd., 400 Volts, Paper.
				C77...	.01 mfd., 400 Volts, Paper.
				C78...	.01 mfd., 400 Volts, Paper.
				C79...	.01 mfd., 400 Volts, Paper.
				C80...	.01 mfd., 400 Volts, Paper.
				C81...	.01 mfd., 400 Volts, Paper.
				C82...	.01 mfd., 400 Volts, Paper.
				C83...	.01 mfd., 400 Volts, Paper.
				C84...	.01 mfd., 400 Volts, Paper.
				C85...	.01 mfd., 400 Volts, Paper.
				C86...	.01 mfd., 400 Volts, Paper.
				C87...	.01 mfd., 400 Volts, Paper.
				C88...	.01 mfd., 400 Volts, Paper.
				C89...	.01 mfd., 400 Volts, Paper.
				C90...	.01 mfd., 400 Volts, Paper.
				C91...	.01 mfd., 400 Volts, Paper.
				C92...	.01 mfd., 400 Volts, Paper.
				C93...	.01 mfd., 400 Volts, Paper.
				C94...	.01 mfd., 400 Volts, Paper.
				C95...	.01 mfd., 400 Volts, Paper.
				C96...	.01 mfd., 400 Volts, Paper.
				C97...	.01 mfd., 400 Volts, Paper.
				C98...	.01 mfd., 400 Volts, Paper.
				C99...	.01 mfd., 400 Volts, Paper.
				C100...	.01 mfd., 400 Volts, Paper.
				C101...	.01 mfd., 400 Volts, Paper.
				C102...	.01 mfd., 400 Volts, Paper.
				C103...	.01 mfd., 400 Volts, Paper.
				C104...	.01 mfd., 400 Volts, Paper.
				C105...	.01 mfd., 400 Volts, Paper.
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				C114...	.01 mfd., 400 Volts, Paper.
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				C116...	.01 mfd., 400 Volts, Paper.
				C117...	.01 mfd., 400 Volts, Paper.
				C118...	.01 mfd., 400 Volts, Paper.
				C119...	.01 mfd., 400 Volts, Paper.
				C120...	.01 mfd., 400 Volts, Paper.
				C121...	.01 mfd., 400 Volts, Paper.
				C122...	.01 mfd., 400 Volts, Paper.
				C123...	.01 mfd., 400 Volts, Paper.
				C124...	.01 mfd., 400 Volts, Paper.
				C125...	.01 mfd., 400 Volts, Paper.
				C126...	.01 mfd., 400 Volts, Paper.
				C127...	.01 mfd., 400 Volts, Paper.
				C128...	.01 mfd., 400 Volts, Paper.
				C129...	.01 mfd., 400 Volts, Paper.
				C130...	.01 mfd., 400 Volts, Paper.
				C131...	.01 mfd., 400 Volts, Paper.
				C132...	.01 mfd., 400 Volts, Paper.
				C133...	.01 mfd., 400 Volts, Paper.
				C134...	.01 mfd., 400 Volts, Paper.
				C135...	.01 mfd., 400 Volts, Paper.
				C136...	.01 mfd., 400 Volts, Paper.
				C137...	.01 mfd., 400 Volts, Paper.
				C138...	.01 mfd., 400 Volts, Paper.
				C139...	.01 mfd., 400 Volts, Paper.
				C140...	.01 mfd., 400 Volts, Paper.
				C141...	.01 mfd., 400 Volts, Paper.
				C142...	.01 mfd., 400 Volts, Paper.
				C143...	.01 mfd., 400 Volts, Paper.
				C144...	.01 mfd., 400 Volts, Paper.
				C145...	.01 mfd., 400 Volts, Paper.
				C146...	.01 mfd., 400 Volts, Paper.
				C147...	.01 mfd., 400 Volts, Paper.
				C148...	.01 mfd., 400 Volts, Paper.
				C149...	.01 mfd., 400 Volts, Paper.
				C150...	.01 mfd., 400 Volts, Paper.
				C151...	.01 mfd., 400 Volts, Paper.
				C152...	.01 mfd., 400 Volts, Paper.
				C153...	.01 mfd., 400 Volts, Paper.
				C154...	.01 mfd., 400 Volts, Paper.
				C155...	.01 mfd., 400 Volts, Paper.
				C156...	.01 mfd., 400 Volts, Paper.
				C157...	.01 mfd., 400 Volts, Paper.
				C158...	.01 mfd., 400 Volts, Paper.
				C159...	.01 mfd., 400 Volts, Paper.
				C160...	.01 mfd., 400 Volts, Paper.
				C161...	.01 mfd., 400 Volts, Paper.
				C162...	.01 mfd., 400 Volts, Paper.
				C163...	.01 mfd., 400 Volts, Paper.
				C164...	.01 mfd., 400 Volts, Paper.
				C165...	.01 mfd., 400 Volts, Paper.
				C166...	.01 mfd., 400 Volts, Paper.
				C167...	.01 mfd., 400 Volts, Paper.
				C168...	.01 mfd., 400 Volts, Paper.
				C169...	.01 mfd., 400 Volts, Paper.
				C170...	.01 mfd., 400 Volts, Paper.
				C171...	.01 mfd., 400 Volts, Paper.
				C172...	.01 mfd., 400 Volts, Paper.
				C173...	.01 mfd., 400 Volts, Paper.
				C174...	.01 mfd., 400 Volts, Paper.
				C175...	.01 mfd., 400 Volts, Paper.
				C176...	.01 mfd., 400 Volts, Paper.
				C177...	.01 mfd., 400 Volts, Paper.
				C178...	.01 mfd., 400 Volts, Paper.
				C179...	.01 mfd., 400 Volts, Paper.
				C180...	.01 mfd., 400 Volts, Paper.
				C181...	.01 mfd., 400 Volts, Paper.
				C182...	.01 mfd., 400 Volts, Paper.
				C183...	.01 mfd., 400 Volts, Paper.
				C184...	.01 mfd., 400 Volts, Paper.
				C185...	.01 mfd., 400 Volts, Paper.
				C186...	.01 mfd., 400 Volts, Paper.
				C187...	.01 mfd., 400 Volts, Paper.
				C188...	.01 mfd., 400 Volts, Paper.
				C189...	.01 mfd., 400 Volts, Paper.
				C190...	.01 mfd., 400 Volts, Paper.
				C191...	.01 mfd., 400 Volts, Paper.
				C192...	.01 mfd., 400 Volts, Paper.
				C193...	.01 mfd., 400 Volts, Paper.
				C194...	.01 mfd., 400 Volts, Paper.
				C195...	.01 mfd., 400 Volts, Paper.
				C196...	.01 mfd., 400 Volts, Paper.
				C197...	.01 mfd., 400 Volts, Paper.
				C198...	.01 mfd., 400 Volts, Paper.
				C199...	.01 mfd., 400 Volts, Paper.
				C200...	.01 mfd., 400 Volts, Paper.
				C201...	.01 mfd., 400 Volts, Paper.
				C202...	.01 mfd., 400 Volts, Paper.
				C203...	.01 mfd., 400 Volts, Paper.
				C204...	.01 mfd., 400 Volts, Paper.
				C205...	.01 mfd., 400 Volts, Paper.
				C206...	.01 mfd., 400 Volts, Paper.
				C207...	.01 mfd., 400 Volts, Paper.
				C208...	.01 mfd., 400 Volts, Paper.
				C209...	.01 mfd., 400 Volts, Paper.
				C210...	.01 mfd., 400 Volts, Paper.
				C211...	.01 mfd., 400 Volts, Paper.
				C212...	.01 mfd., 400 Volts, Paper.
				C213...	.01 mfd., 400 Volts, Paper.
				C214...	.01 mfd., 400 Volts, Paper.
				C215...	.01 mfd., 400 Volts, Paper.
				C216...	.01 mfd., 400 Volts, Paper.

MODEL 7C73

ADMIRAL CORPORATION



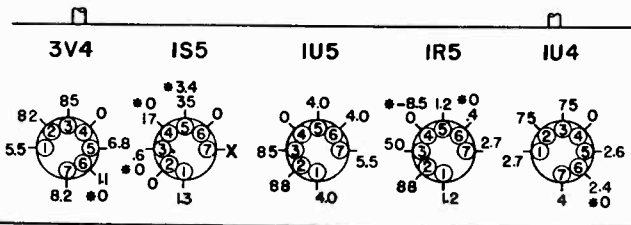
ADMIRAL CORPORATION MODELS 7P32, 7P33, 7P34, Chassis 5H1



NOTES:
 I.F. = 455 K.C.
 COMMON (LINE GROUND) ↓
 CHASSIS GROUND ↓

5-47

VOLTAGE CHART



*Indicates reading taken with 1000 ohm-per-volt meter.

VOLTAGE DATA

- All readings made between Tube Socket Terminals and Terminal No. 7 on the IS5 (Point "X" on Voltage Chart).
- A.C. Voltages measured on a 117 Volt A.C. line.
- Dial turned to low frequency end, no signal.
- All Voltages measured with a VoltOhmyst.
- A second voltage reading (marked with an asterisk *) indicates readings made with a 1000 ohm-per-volt meter when use of this instrument would result in appreciably lower readings.

REPLACEMENT PARTS

Symbol	Description	Part No.
R1	2.2 Megohms, 1/4 Watt	60B 3-225
R2	1 Megohm, 1/4 Watt	60B 3-105
R3	100,000 Ohms, 1/4 Watt	60B 3-104
R4	18,000 Ohms, 1/3 Watt	60B 2-183
R5	3.3 Megohms, 1/4 Watt	60B 2-335
R6	10 Megohms, 1/4 Watt	60B 3-106
R7	1 Megohm Volume Control and Switch SW2 (DPST)	75B 1-18
R8	4.7 Megohms, 1/4 Watt	60B 2-475
R9	470,000 Ohms, 1/4 Watt	60B 3-474
R10	10,000 Ohms, 1/4 Watt	60B 3-103
R11	2.2 Megohms, 1/4 Watt	60B 3-225
R12	47 Ohms, 1 Watt	60B 14-470
R13	2700 Ohms, 1 Watt	60B 14-272
R14	2600 Ohms, 5 Watt	61A 6-1
R15	1500 Ohms, 1/4 Watt	60B 2-152
R16	820 Ohms, 1/4 Watt	60B 2-821
R17	220 Ohms, 1/4 Watt	60B 2-221
R18	150 Ohms, 1/4 Watt	60B 2-151

Symbol	Description	Part No.
C1	250 Mmfd., Mica	65B 7-22
C2	2.5 Mfd., 200 Volts, Paper	64B 1-28
C3	420 Mmfd., Mica	65B 1-13
C4	250 Mmfd., Mica	65B 7-22
C5	.01 Mfd., 400 Volts, Paper	64B 1-25
C6	100 Mmfd., Mica	65B 7-17
C7	15 Mmfd., Ceramic	65B 6-18
C8	.01 Mfd., 400 Volts, Paper	64B 1-25
C9	.01 Mfd., 400 Volts, Paper	64B 1-25
C10	250 Mmfd., Mica	65B 7-22
C11	.01 Mfd., 400 Volts, Paper	64B 1-25

Symbol	Description	Part No.
C12	100 Mmfd., Mica	65B 7-17
C13	.01 Mfd., 400 Volts, Paper	64B 1-25
C14	4 Mfd., 150 Volts, Electrolytic	67A 4-2
C15	.002 Mfd., 600 Volts, Paper	64B 1-14
C16	.18 Mfd., 200 Volts, Paper	64A 2-2
C17a	50 Mfd., 150 Volts, Elect.	67C 7-5
C17b	20 Mfd., 150 Volts, Elect.	
C17c	200 Mfd., 25 Volts, Elect.	
C17d	20 Mfd., 150 Volts, Elect.	
C18	.05 Mfd., 400 Volts, Paper	64B 1-22
C19a	0 to 420 Mmfd., Gang	68B 6
C19b	0 to 162 Mmfd., Gang	
C20	10 Mmfd., Ceramic	65B 6-24

Symbol	Description	Part No.
L1	Antenna, Loop (Part of cabinet — not supplied separately)	
L2	Coil, Loading	AA 121
L3	Coil, R. F.	AB 100-7
L4	Coil, Oscillator	69A 15
P1	Plug, Battery (9 prong)	88A 3-3
SW1	Switch, Power Change	77A 2-4
SW2	Switch, On-Off (Part of volume control R7)	
T1	Transformer, 1st I. F.	72B 28-1
T2	Transformer, 2nd I.F.	72B 28-1
T3	Transformer, Output	98A 21
	Slug, Tuning (R.F.)	71B 1-3
	Adjustment Screw for Slug	27A 4
	Speaker 6" P.M. & Output Transformer	78B 17-3

Description	Part No.	
M1	Jack for External Loop Antenna	
M2	Rectifier, Selenium	93A 1-2
	Buttons, Snap (for dial scale)	13A 1-1-2
	Cabinet (Black 7P32)	35D 58-1
	Cabinet (Black 7P33)	35D 50-1
	Cabinet (Brown 7P34)	35D 50-2
	Cord, Dial	50A 1-3
	Dial Window, Plastic (7P33, 7P34)	24B 2
	Dial Window and Speaker Grill (7P32)	23C 26
	Drum & Cam Assembly	A 1313
	Escutcheon, Plastic (7P33, 7P34)	23D 24
	Grommet (for mounting R.F. coil)	12A 1-12
	Handle, Plastic (7P32, 7P33)	37C 11-1
	Knob (7P32)	33A 18-3
	Knob (7P33, 7P34)	33A 18-1
	Latch, Cover (7P33, 7P34)	37B 2-1
	Mounting Clip (for I.F. transformer)	72B 28-10
	Mounting Plate (for R.F. coil)	32A 40
	Pointer, Dial	25A 24
	Scale, Dial (metal)	21B 44
	Spring	19B 1-13
	Spring, Tension (Dial Cord)	19B 1-5
	Tube Shield	87A 7-7
	Tube Socket	87A 3-2
	Tuner Arm (for R.F. slug tuner)	A1314
	Washer, Felt (3/4") (for knobs)	5A 4-3
	Washer, Spring (for tuner arm)	4A 6-3-0

MODELS 7P32, 7P33, 7P34
MODELS 7T06, 7T12

ADMIRAL CORPORATION

MODELS 7P32, 7P33, 7P34
CHASSIS 5H1

ALIGNMENT PROCEDURE

1. Disconnect Loop Antenna leads from clips on set and remove chassis from cabinet.
2. Make alignment using a battery whenever possible.
3. Connect a fresh battery to the set.

IMPORTANT: Check dial drum position on shaft. Tuner arm should just complete downward travel when gang is fully meshed. At this point, tuner arm should be on short flat part of cam. Check pointer. It should be at last dial scale mark just below 550 K.C. when gang is fully meshed. If not, move pointer on dial cord

Step	Dummy Antenna Used in Series with Signal Generator	Connect High Side Signal Generator to	Signal Generator Frequency	Receiver Gang Setting	Trimmer Designation and Description	Type of Adjustment
(1)	.00025 Mfd. when using A.C. .1 Mfd. when using Battery	Grid of 1A7 (Pin 6)	455 K.C.	Any point where it does not affect Signal	2nd I.F. (A), (B). 1st I.F. (C), (D).	Maximum Deflection Then repeat
(2)	.00025 Mfd. when using A.C. .1 Mfd. when using Battery	Stator lug of rear variable condenser section	1620 K.C.	Tuning Gang Wide Open	Oscillator Trimmer (F)	Maximum Deflection
(3)	.00025 Mfd. when using A.C. .1 Mfd. when using Battery	Stator lug of rear variable condenser section	1400 K.C.	Tune in Generator Signal	R.F. Slug (E)	Maximum Deflection

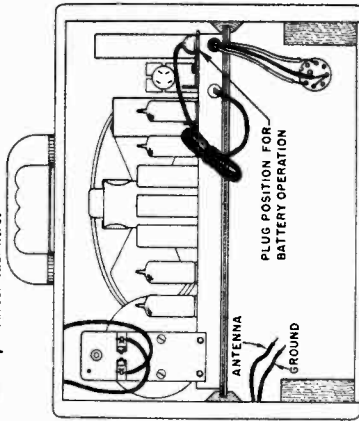
Replace Set in Cabinet

(4)	Antenna and Ground Leads	Tune in Generator Signal	Antenna Trimmer (G)	Maximum Deflection
(5)	.00025 Mfd.	1400 K.C.		

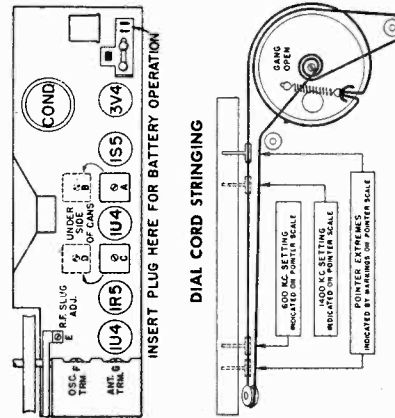
REPLACING R.F. TUNING SLUG

If the R.F. Tuning Slug has to be changed use the flush with the top of the coil. Solder the slug wire to the following procedure. Set the gang condenser to the point where the plates are fully meshed. Screw the slug adjusting screw about halfway down. Place the slug in the coil in such a position that the top of the slug is

INTERNAL ANTENNA CONNECTIONS
Note: Antenna connections cross over as shown above for 7P32 only. The 7P33, 7P34 antenna connections are made to the clip nearest the wire.



TUBE AND TRIMMER LAYOUT



MODELS 7T06, 7T12
CHASSIS 4B1

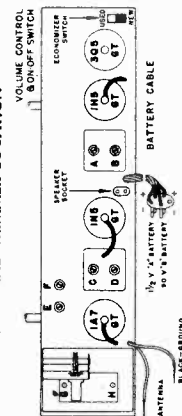
ALIGNMENT PROCEDURE

1. **IMPORTANT**—Check to see that dial pointer reaches each end of dial scale when Station Selector Control is turned from one end to the other.
2. Volume control—Maximum for all adjustments.
3. Connect radio chassis to ground post of signal generator with a short heavy lead.
4. Connect output meter across voice coil of speaker.
5. Connect dummy Antenna value in series with generator output lead, when needed (see below).
6. Allow chassis and signal generator to "heat up" for several minutes.
7. Use lowest Output setting of Signal Generator capable of producing adequate Output Meter indication and then proceed in the following sequence.

Band	Signal Generator Frequency Setting	Connection to Radio Antenna	Receiver Dial Setting	Trimmers Adjusted (In Order Shown)	Trimmer Function	Type of Adjustment
I.F.	455 K.C.	Grid of 1A7 (Cap)	High Frequency end of dial	A-B—2nd I.F.	Output I.F.	Adjust to maximum output
I.F.	455 K.C.	Grid of 1A7 (Cap)	High Frequency end of dial	C-D—1st I.F.	Input I.F.	Adjust to maximum output
Broad-cast	1630 K.C.	Antenna Lead	High Frequency end of dial	E, (See note below) F, (See note below)	Oscillator Antenna	Adjust to maximum output
Broad-cast	1300 K.C.	Antenna Lead	1300 K.C.	G H	Oscillator Antenna	Adjust to maximum output

NOTE: Before adjusting trimmers "E" and "F", make sure that each iron core is $1\frac{1}{2}$ " or more outside of its coil form. If necessary, turn adjustments "G" and "H" to accomplish this.

TUBE AND TRIMMER LOCATION

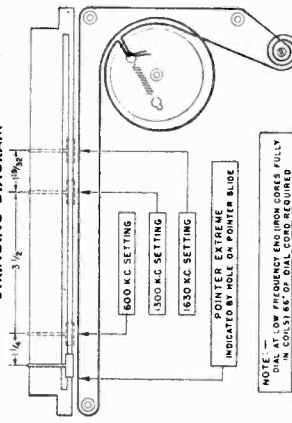


ECONOMIZER SWITCH

The battery economizer switch is located on the top of the chassis, right side.

Always have this Economizer Switch in the "NEW" battery position when first placing radio in operation or when installing a new battery.

STRINGING DIAGRAM



CIRCUIT

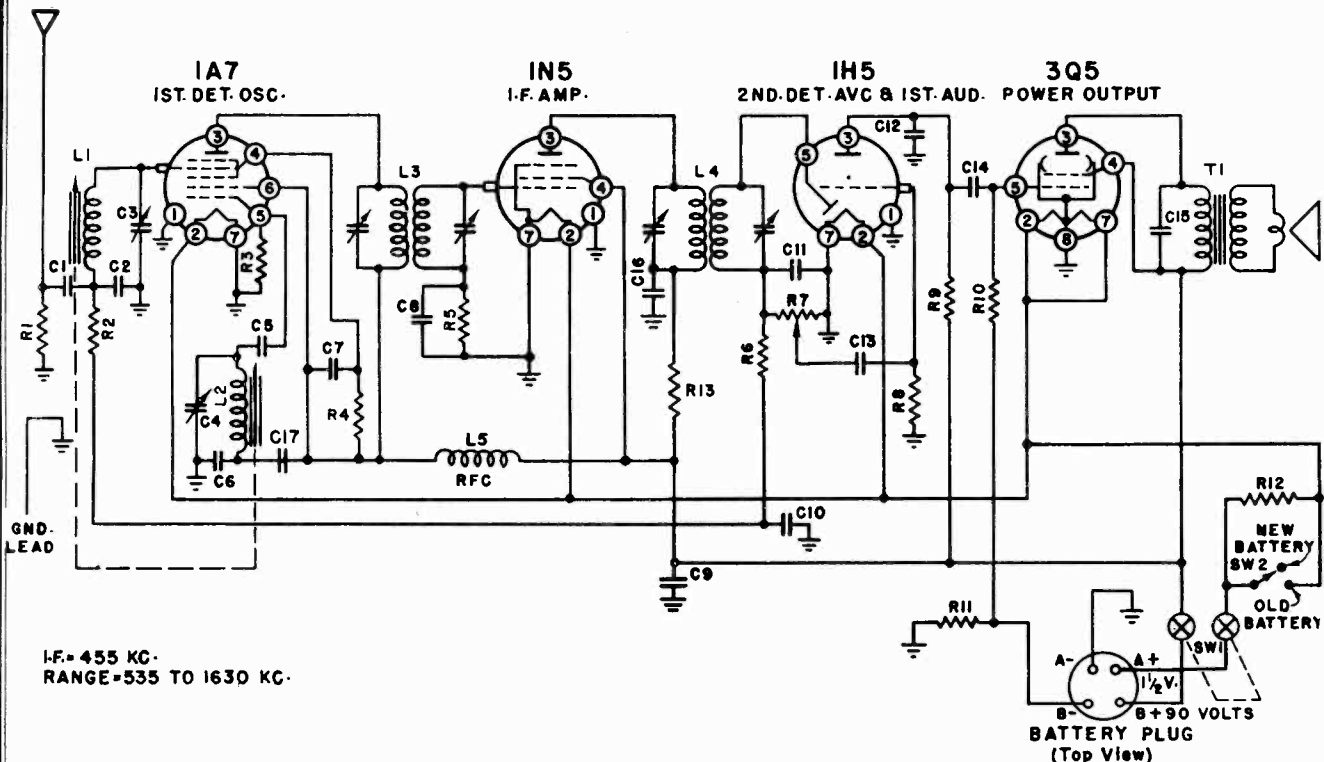
Battery-operated 4 Tube Superheterodyne with Single Tuning Range: 535 KC. to 1630 KC. Covers standard broadcast band, using antenna and ground. Permeability tuning on Antenna and Oscillator circuits. Intermediate Frequency is 455 KC.

POWER SUPPLY

Single unit "AB" battery pack: .90 volt "B", 1 1/2 volt "A." Plug-in connection. Use Ensign AB48, Burgess 17G-1960, Eveready 748, General 60DL-11L, Ray-O-Vac AB-82, Bond 0528 Battery or equivalent.

MODELS 7T06, 7T12,
Chassis 4B1

ADMIRAL CORPORATION

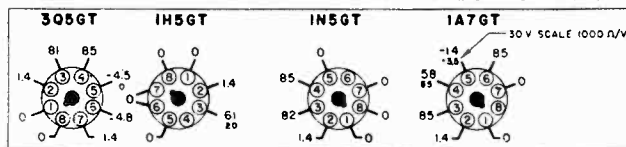


I.F. = 455 KC.
RANGE = 535 TO 1630 KC.

VOLTAGE DATA

All readings made between tube socket terminals and chassis. Voltages indicated have been obtained using a Vacuum Tube Voltmeter. A second voltage reading is shown made with a 1000 ohm-per-volt meter, when use of this instrument would result in appreciably lower readings. Measured with a fresh battery, volume control full on, dial at the high frequency end, no signal.

VOLTAGE CHART



BACK OF CHASSIS

OSCILLATION IN 4B1 RADIO CHASSIS

Occasionally audio oscillation may occur in the 4B1 chassis with the volume control in an intermediate position. Should you encounter this trouble, reverse the leads of the primary of the output transformer or ground the speaker frame to the chassis. The speaker leads and the grid lead of the IH5 should be kept as far as possible from the 3Q5 output tube.

REPLACEMENT PARTS

ISSUE A 1947

CONDENSERS

Symbol	Description	Part No.
C1	.01 mfd., 400 Volts.	64B 1-25
C2	.0008 mfd., Mica	65B 5-31
C3	Trimmer, Antenna	66A 9-1
C4	Trimmer, Oscillator	
C5	.0001 mfd., Mica	65B 7-17
C6	.0008 mfd., Mica	65B 5-31
C7	.01 mfd., 400 Volts.	64B 1-25
C8	.002 mfd., 600 Volts.	64B 1-14
C9	4. mfd., 150 Volts (Elect.)	67A 4-2
C10	.05 mfd., 200 Volts	64B 1-32
C11	.00025 mfd., Mica	65B 7-22
C12	.00025 mfd., Mica	65B 7-22
C13	.01 mfd., 400 Volts.	64B 1-25
C14	.01 mfd., 400 Volts.	64B 1-25
C15	.005 mfd., 600 Volts.	64B 1-12
C16	.01 mfd., 400 Volts.	64B 1-25
C17	.01 mfd., 400 Volts.	64B 1-25

(C17 omitted in early models)

RESISTORS

Symbol	Description	Part No.
R1	15,000 ohm 1/2 Watt	60B 8-153
R2	470,000 ohm 1/4 Watt	60B 2-474
R3	220,000 ohm 1/2 Watt	60B 8-224
R4	33,000 ohm 1/2 Watt	60B 8-333
R5, R8	4,700,000 ohm 1/4 Watt	60B 2-475
R6	2,200,000 ohm 1/4 Watt	60B 2-225
R7	1 meg. Vol. Control	75B 1-1
R9, R10	1,000,000 ohm 1/4 Watt	60B 2-105
R11	390 ohm 1/4 Watt	60B 2-391
R12	.75 ohm 1/2 Watt (wire)	61A 2-1
R13	2200 ohm 1/4 Watt	60B 2-222

TRANSFORMERS and COILS

Symbol	Description	Part No.
L1	Antenna Coil	AC105-1
L2	Oscillator Coil	A1020
L3	1st I.F. Transformer	72B 5
L4	2nd I.F. Transformer	72B 6
L5	Choke Coil (RF)	AB103-1
T1	Output Transformer	98A 5

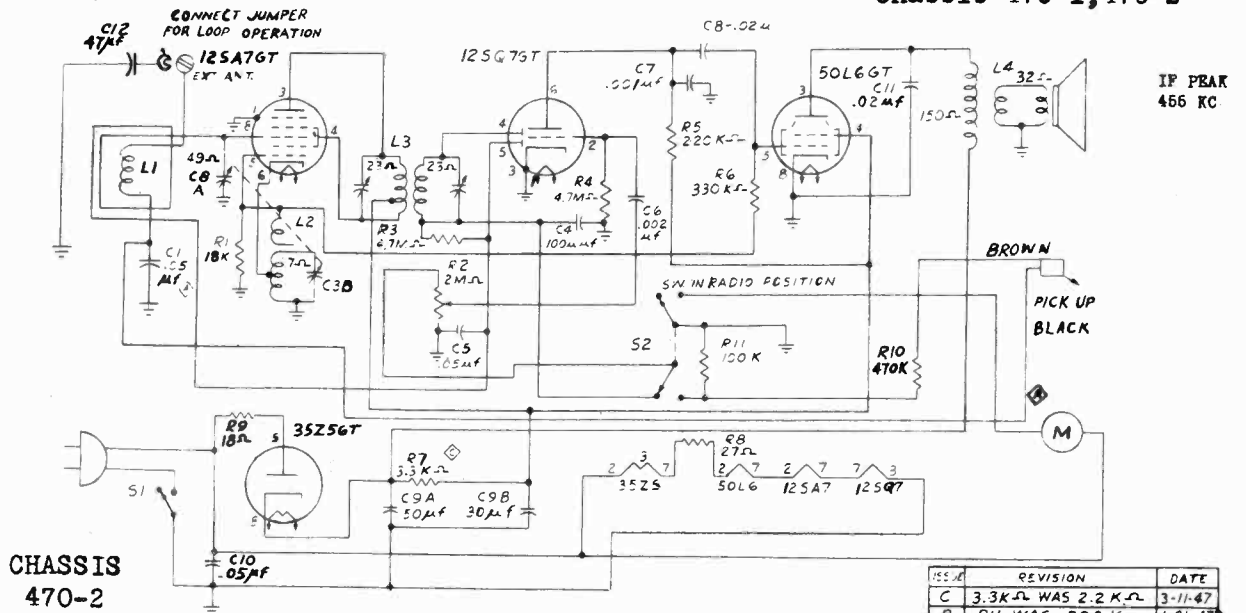
MISCELLANEOUS

Description	Part No.
Background, Dial	X22C 5-1
Cabinet, Plastic (7T12)	34D 10
Cabinet, Wood (7T06)	35D 49
Cable, Battery (complete with plug)	A1026
Cord, Dial (5" on tuner and 66" on dial drive)	50A 1-3
Drum and Hub, Tuning	A1035
Iron Slug, with wire (Osc.)	71B 1-3
Iron Slug, with wire (Ant.)	71B 1-4
Knob	33A 21-3

MISCELLANEOUS

Description	Part No.
Plug, Battery 5 Prong	88A 4-4
Pointer, Dial	25A 9-1
Pulley, Fibre Dial	17A 1-3
Scale, Glass Dial (7T06)	21B 31-1
Scale, Glass Dial (7T12)	21B 32-1
Screw studs (for iron cores)	27A 4
Shaft, Tuning	28A 1-1
Shield, Tube	87A 8
Socket, Octal Tube	87A 5-1
Speaker and Output Transformer	78B 3
Spring, Dial Drum Cord Tension	19B 1-7
Spring, Hairpin (To hold Ant. or Osc. coils)	19A 3-1
Spring, Tuner, back bearing takeup	19A 6
Spring, Tuner, front bearing takeup	19A 5
Spring, Tuner Slide Cord Tension	19B 1-8
Spring, Tuner Slide Pressure	18A 9
Switch, SPST (Economizer) SW2	77B 1-6
Washer, C	4A 4-1
Washer, spring (coils)	4A 6-12-0
Washer, spring (shaft)	4A 6-3-0

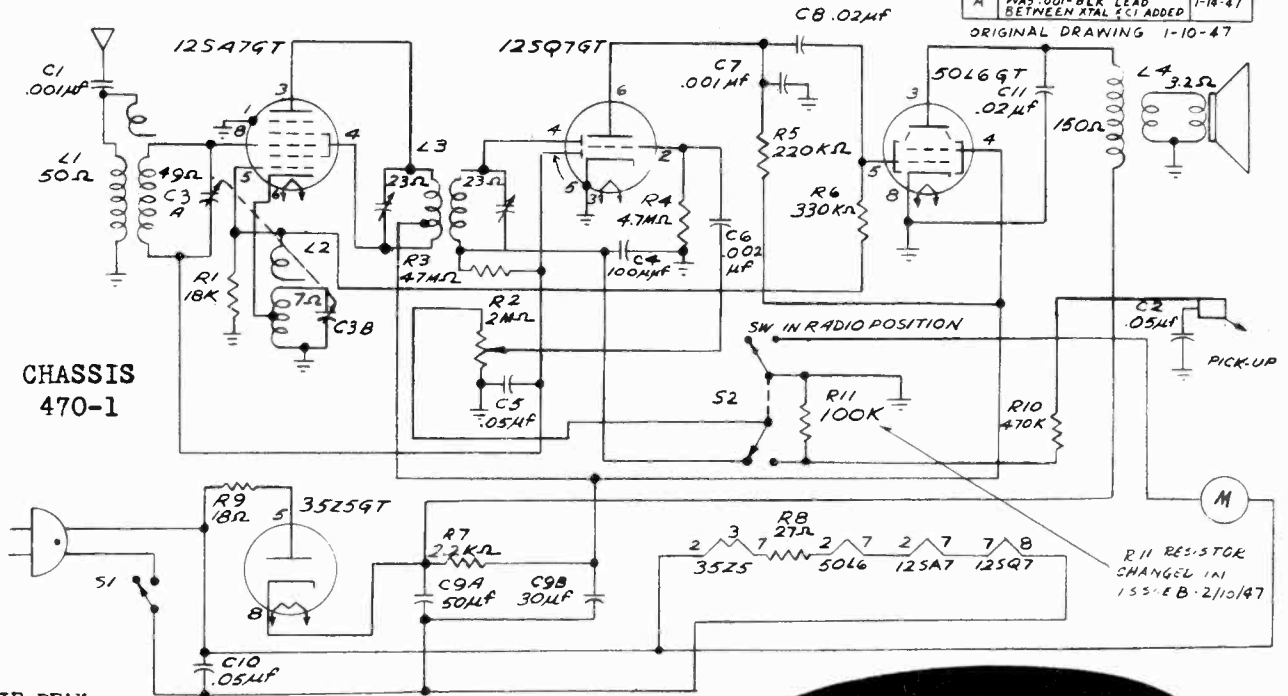
AIR KING PRODUCTS CO., INC. MODEL A-403 COURT JESTER
Chassis 470-1, 470-2



CHASSIS 470-2

ISSUE	REVISION	DATE
C	3.3KΩ WAS 2.2KΩ	3-11-47
B	R11 WAS 220K	1-21-47
A	C2 GROUND REMOVED-C1 WAS .001-BLK LEAD BETWEEN XTAL & C1 ADDED	1-14-47

ORIGINAL DRAWING 1-10-47



CHASSIS 470-1

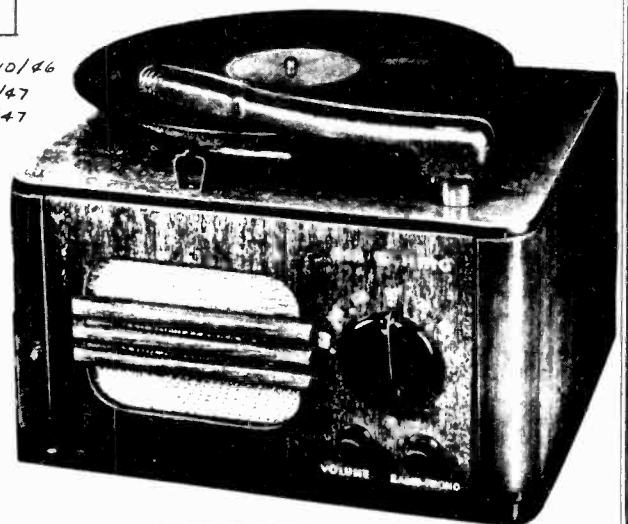
R11 RESISTOR CHANGED IN ISSUE B 2/10/47

IF PEAK 456 KC

- A403** Cabinet, wood brass lid
5R77 Speaker and output transformer
39130 Knob, tuning wood
39161 Knob, (volume, phono-radio)
49307 Instruction book
1-75 Variable condenser
1-75 Electrolytic condenser unit 50-30 mf/150 v
1-49 Volume control 2 meg with switch
29104 Oscillator coil
29105 Antenna coil (chassis 470-1)
3376 I.F. transformer
29105 Loop and loading coil (chassis 470-2)
5559 Line cord
352R Switch radio/phono
6343 Pick-up arm and rest
641P Motor and turntable "M"
 Lifetime needs
 Paper condenser .05 mf 400 v.
 " " .002 200 v.
 " " .02 " "
 " " .05 " "
 " " .001 " "
 Ceramic 100 mmf 500 volts
 16K ohms 1 v.
 4.7 meg ohms 1 v.
 220K " 2 v.
 2200 " 2 v.
 18 " 1 v.
 47 " 1 v.
 330K " 1 v.
 470K " 1 v.

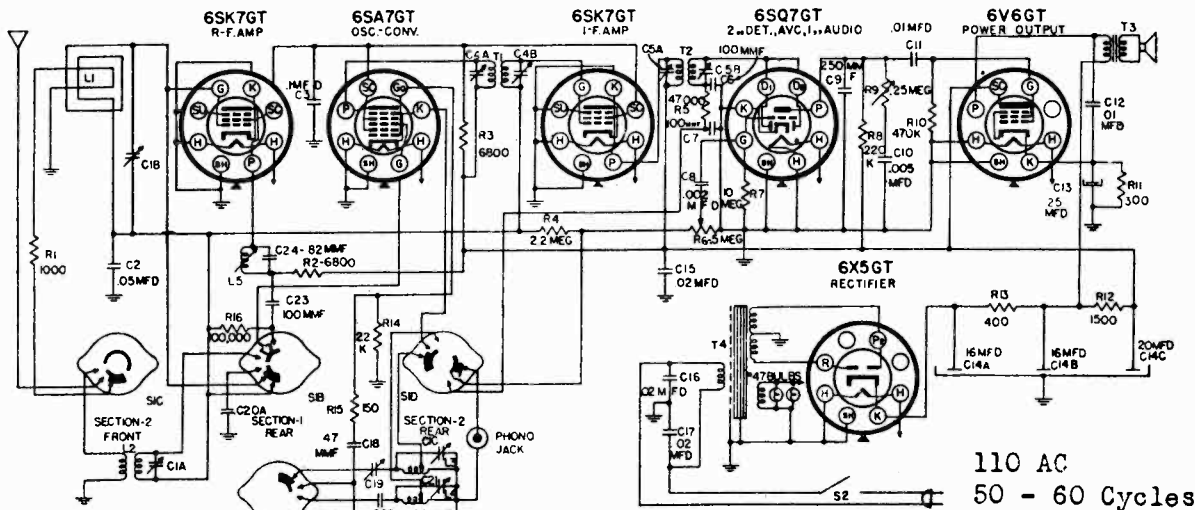
ORIGINAL DWG DATED 12/10/46
 ISSUE A REVISION 1/10/47
 ISSUE B REVISION 2/10/47

PARTS LIST AND
 CABINET ARE THE
 SAME FOR BOTH
 CHASSIS 470-1
 and 470-2



MODELS 4604D, 4604F
Chassis 458-2

AIR KING PRODUCTS CO., INC.



THE POSITIONS OF SWITCH S1 ARE:
POSITION 1 - RECORD PLAYER
POSITION 2 - BROADCAST
POSITION 3 - SHORT WAVE
THE SWITCH IS DRAWN IN POSITION 1
(MARBLES COUNTER-CLOCKWISE)

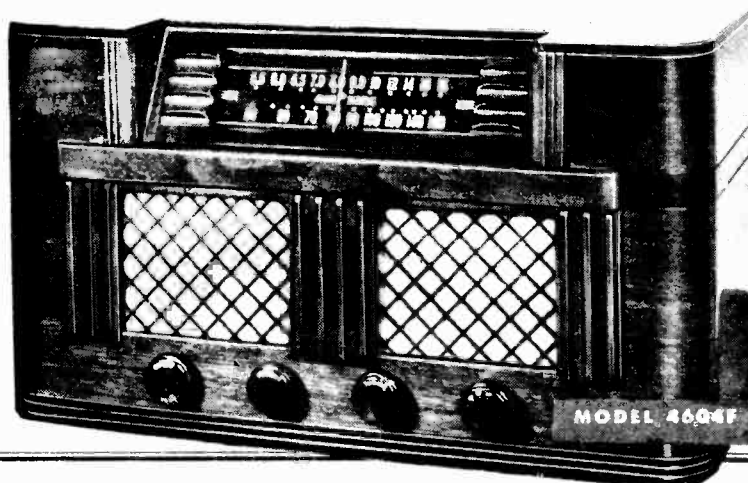
535 - 1640 KC 5.5 - 18 MC IF PEAK 455 KC

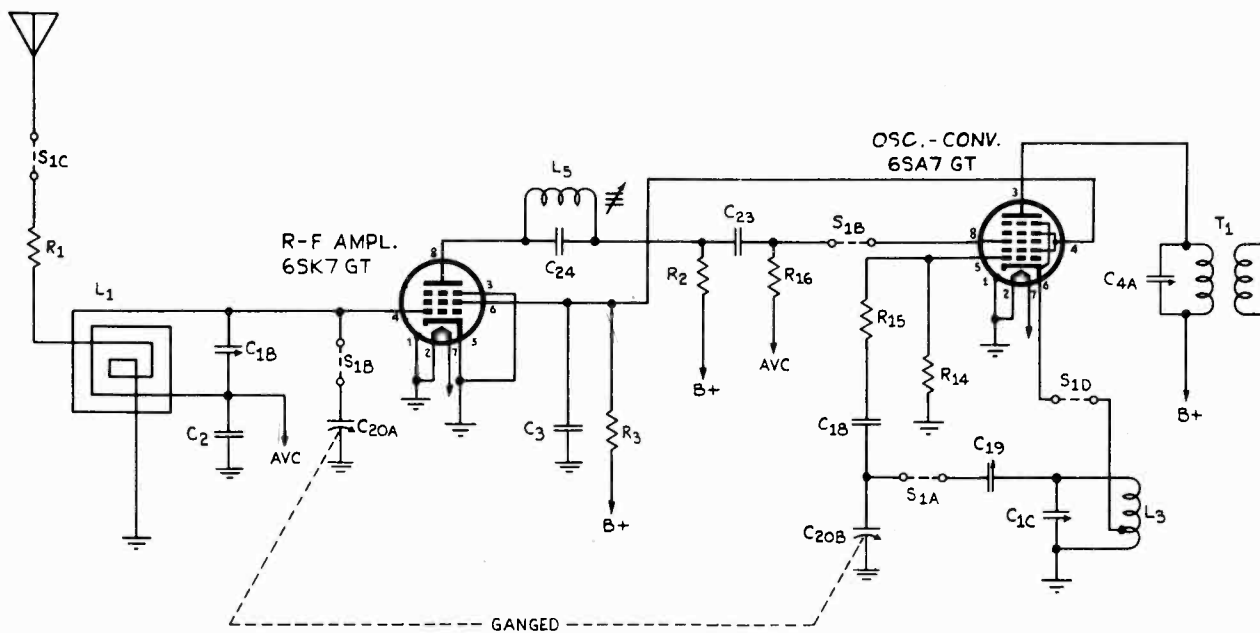
If this receiver is to be operated in conjunction with an external phonograph record player, the pin plug from the phonograph pick-up arm should be inserted in the Phono Input Socket at the back of the receiver chassis. The switch should be placed in the RP position (fully counter-clockwise). Both the volume control and tone control of the receiver function for the record player. These should be set to give the loudness and tone quality desired.

Location Schematic	Part No.	Description
	62189	Cabinet Back
C-20	1668	Condenser, Variable
C14	A20102	Condenser, Electrolytic 20-16-16 mfd. x 350 V.
C13	20105	Condenser, Electrolytic 25 mfd. x 25 VDC.
C1	A1725	Condenser, Trimmer, 3 Section, 3-30mmfd.
C18		Condenser, Mica 47 mmfd.
C6, C7, C23		Condenser, Mica 100 mmfd.
C9		Condenser, Mica 250 mmfd.
C22		Condenser, Mica 5020 mmfd.
C24		Condenser, Mica 82 mmfd.
C2		Condenser, Paper .05 mfd. 600 V.
C3		Condenser, Paper .1 mfd. 400 V.
C8		Condenser, Paper .002 mfd. 400 V.
C10		Condenser, Paper .005 mfd. 400 V.
C11		Condenser, Paper .01 mfd. 600 V.
C12		Condenser, Paper .01 mfd. 800 V.
C15		Condenser, Paper .02 mfd. 400 V.
C16, C17	1975	Condenser, Oil filled metal case .02 mfd. 600V.
R6	2470-A	Control, Volume .5 Meg
R9	2521	Control, Tone .25 Meg with switch
L1	28170	Coil, Loop
L2	28167	Coil, S.W. Antenna

Location Schematic	Part No.	Description
L3	28169	Coil, B.C. Oscillator
L4	23168	Coil, S.W. Oscillator
L5	28175	Coil, Wave Trap
R1		Resistor, 1,000 ohms 1/2 W.
R2, R3		Resistor, 6,800 ohms 2 W.
R14		Resistor, 22,000 ohms 1/2 W.
R4		Resistor, 2.2 Megohms 1/2 W.
R5		Resistor, 47,000 ohms 1/2 W.
R7		Resistor, 10 Meg ohms 1/2 W.
R8		Resistor, 220,000 ohms 1/2 W.
R10		Resistor, 470,000 ohms 1/2 W.
R11		Resistor, 300 ohms 2 W. Wirewound
R12		Resistor, 1500 ohms 2 W. Wirewound
R13		Resistor, 400 ohms 2 W. Wirewound
R15		Resistor, 150 ohms 1/2 W. Wirewound
R16		Resistor, 100,000 ohms 1/2 W.
T1	5866	Speaker, P. M.
T2	3360	Transformer, I.F. Input
T3	1333	Transformer, I.F. Output
T4	1020	Transformer, Power

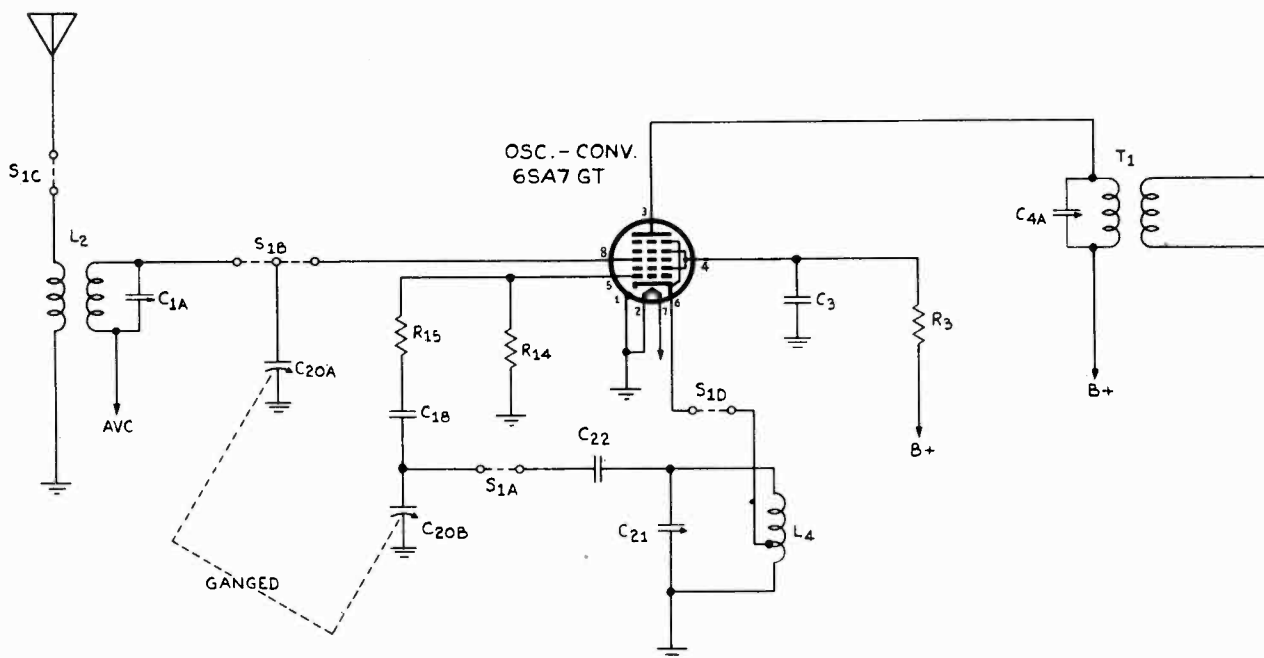
- CD-4604 Cabinet 4604D
- CF-4604 Cabinet 4604F
- 3785A Rotary Bandswitch
- 4675B Drive Shaft Assembly
- 54161 Grommets for mounting Variable Condenser
- 40114 Dial scale
- 4140 Pointer
- 4633 Cord Spring
- Knob Felts
- Back Fastener Clips
- 54170 Antenna-Ground Post
- 24A5 Phono Jack
- Ins 4604 Instruction Book





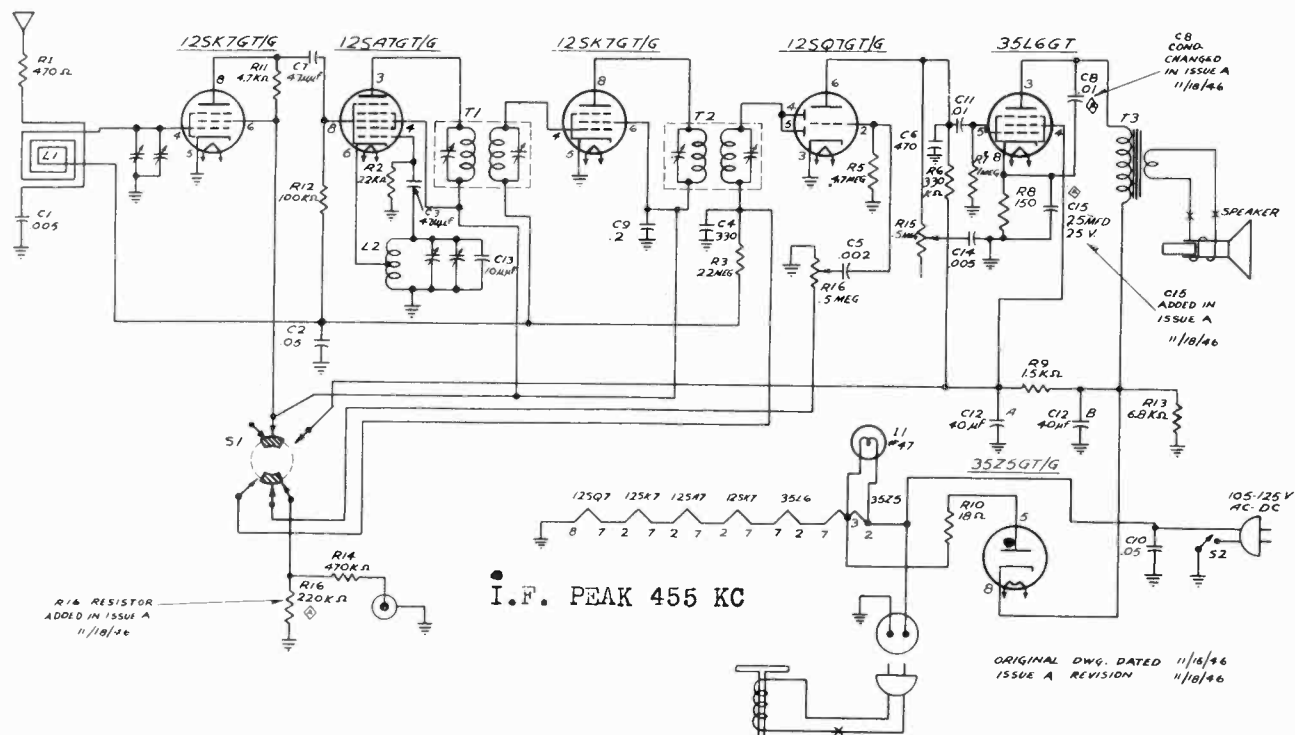
BAND-SWITCH SHOWN
AT 2ND POSITION CLOCKWISE.
BROADCAST BAND
535 - 1640KC.

NOTE:
1ST POSITION (PHONO)
NOT SHOWN.



BAND-SWITCH SHOWN
AT 3RD POSITION CLOCKWISE.
SHORT WAVE BAND
5.5 - 18 MC.

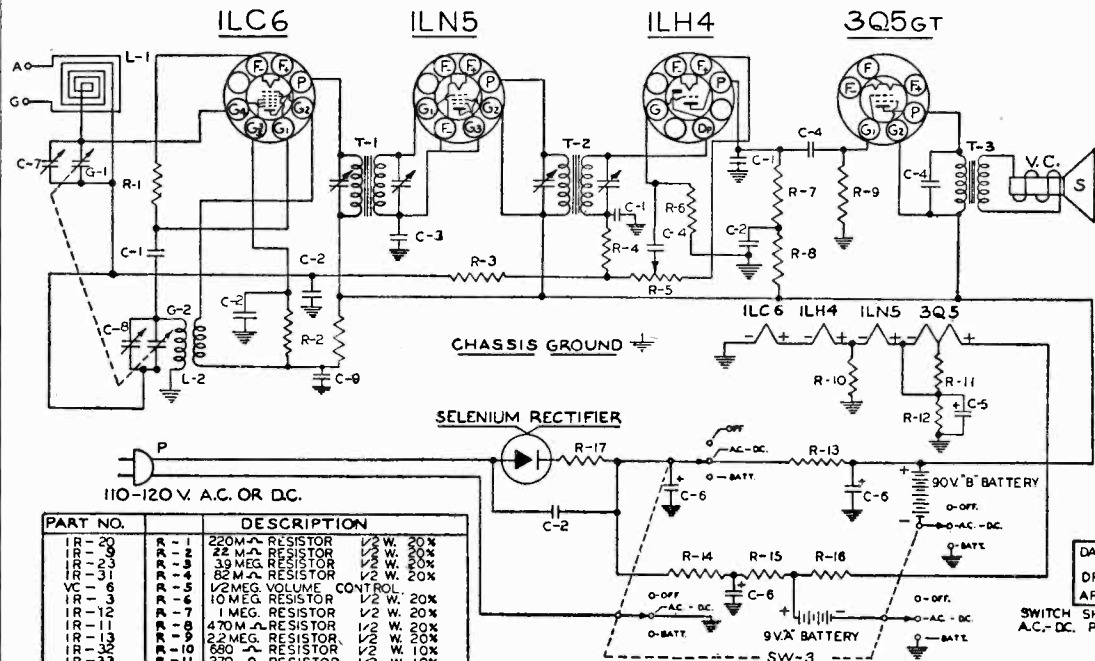
MODEL 4704 CROWN PRINCESS AIR KING PRODUCTS CO., INC.
Chassis 451-2



- 1639 Variable condenser
- 28177 Loop antenna
- 28172 Oscillator coil
- 3329 I.F. input transformer
- 3529 I.F. output transformer
- Electrolytic 40-40 mf, 150 WVDC
- Mica condenser 10 mmf
- " " 47 "
- " " 50 "
- " " 330 "
- " " 470 "
- Paper condenser 200 WVDC .05mf
- " " 400 " .002mf
- " " " " .005mf
- " " " " .01mf
- " " " " .02mf
- " " " " .05mf
- 2477 Volume control
- 2476 Tone control with switch
- 1/4W. carb. resistor 18 ohms
- " " " 470 "
- " " " 4700 "
- " " " 6800 "
- " " " 22000 "
- " " " 100000 "
- " " " 330000 "
- " " " 470000 "
- " " " 2.2meg "
- " " " 4.7meg "
- 1/2W. " " 150 "
- 2W. " " 2200 "

- 4678 Drive shaft
- Pointer
- 1851 Pilot light socket
- 4633 Cord spring
- Grommet (for variable)
- 40177 Lucite dial face
- 62191 Cabinet back
- 39150 Knob,phono-radio
- 39151 Knob, tone
- 39152 Knob, volume
- 39153 Knob, tuning
- Back fastener clips
- 3827A Phono switch
- Lifetime needle
- C4704 Cabinet
- 5870 Speaker w/transformer
- C4704 Record changer assembly

ALLIED RADIO CORP.

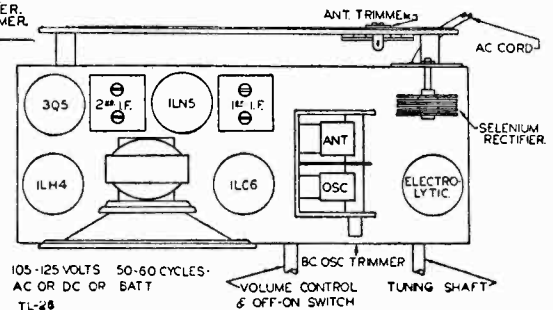


PART NO.	DESCRIPTION
IR-20	220M Ω RESISTOR 1/2 W. 20%
IR-29	22 M Ω RESISTOR 1/2 W. 20%
IR-33	39 MEG. RESISTOR 1/2 W. 20%
IR-31	82 M Ω RESISTOR 1/2 W. 20%
VC-5	1/2 MEG. VOLUME CONTROL
IR-11	10 MEG. RESISTOR 1/2 W. 20%
IR-12	1 MEG. RESISTOR 1/2 W. 20%
IR-11	470M Ω RESISTOR 1/2 W. 20%
IR-353	22 MEG. RESISTOR 1/2 W. 20%
IR-33	680 Ω RESISTOR 1/2 W. 10%
IR-21	270 Ω RESISTOR 1/2 W. 10%
IR-34	330 Ω RESISTOR 1/2 W. 10%
IR-12	1200 Ω RESISTOR 1/2 W. 10%
WR-3	1050 Ω RESISTOR
WR-3	1050 Ω CANDOHM RESISTOR
IR-14	40 Ω RESISTOR
IR-15	75 Ω RESISTOR 2 W. 10%
MC-35	100 MMFD. MICA CONDENSER.
PC-1	.05 MFD. CONDENSER 400 V.
PC-1	.01 MFD. CONDENSER 400 V.
PC-1	.1 MFD. CONDENSER 400V.
PC-1	.005MFD. CONDENSER 600V.

PART NO.	DESCRIPTION
EC-6	70MFD. 10V. ELECTROLYTIC.
TC-7	40-40-40-150V ELECTROLYTIC
TC-6	ANTENNA TRIMMER COND.
GC-2	OSC. TRIMMER COND.
GC-1	GANG CONDENSER.
LL-5	LOOP ANTENNA.
LO-8	OSC. COIL.
LI-3	INPUT I.F. TRANSFORMER.
LI-4	OUTPUT I.F. TRANSFORMER.
CO-1	LINE CORD.

PART NO.	DESCRIPTION
SPK-5	T-3 OUTPUT SPEAKER TRANSFORMER
SR-1	VC-5 VOICE COIL
TU-20	S P.M. SPEAKER.
"A" BATTERY	SW-3 4 POLE, 3-POSITION SW.
"B" BATTERY	SR-1 SELENIUM RECTIFIER

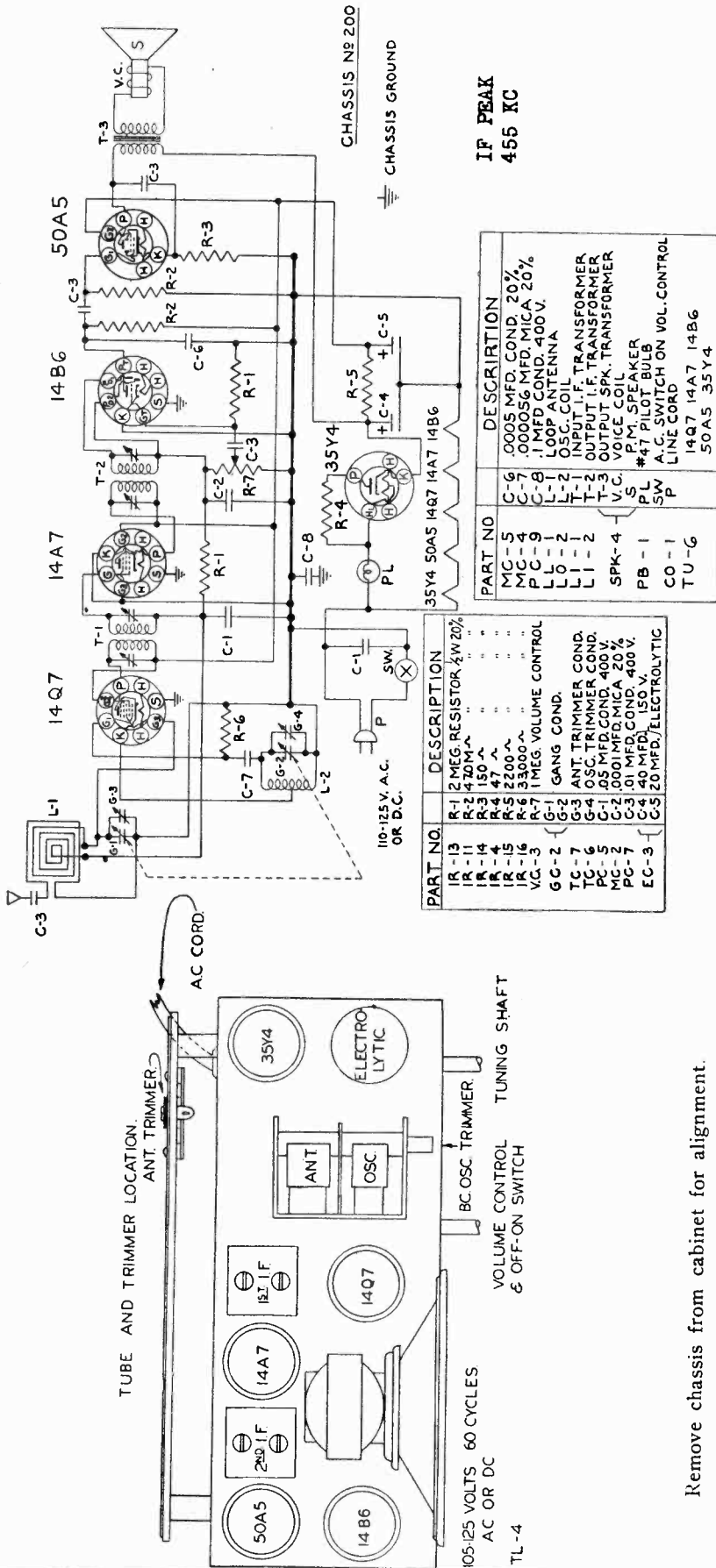
IF PEAK
455 KC



Remove chassis from cabinet for alignment.
 A Signal Generator is required having the following frequencies:
 455 KC, 1400 KC, 1720 KC. An output meter should be connected across the speaker.
FIRST STEP: Connect the hot lead from the generator to the ANT. section of the gang condenser, through a .1 MFD condenser. The ground lead from the generator must be connected to the metal frame of the gang condenser. Turn the gang condenser to complete minimum capacity. Adjust the generator to 455KC and adjust the trimmers of the 1st and 2nd I.F. transformers until a maximum reading is noted on the output meter.
SECOND STEP: With the leads from the generator still connected in the same manner, adjust the Signal Generator to 1720 KC. The OSC. trimmer is located on the top of the oscillator section of the gang condenser. Adjust this trimmer until the 1720 KC signal is tuned in.
THIRD STEP: Remove the hot lead of the generator from the ANT section of the gang condenser. Connect this lead to the antenna lead wire that projects from the back of the loop antenna through a 200 MMFD condenser. Adjust the Signal Generator to 1400 KC. Rotate the tuning control until this signal is tuned in. The ANT trimmer is located on the back of the loop antenna. Adjust this trimmer until a maximum reading is noted on the output meter. No further adjustment should be necessary, unless the set has been damaged, as the coils and condenser in this receiver have been specially handled at the factory to insure proper alignment at the lower frequencies.

MODELS 5B-175, 5B-176
Chassis 200

ALLIED RADIO CORP.



Remove chassis from cabinet for alignment.

A Signal Generator is required having the following frequencies: 455 KC, 1400 KC, 1720 KC. An output meter should be connected across the speaker.

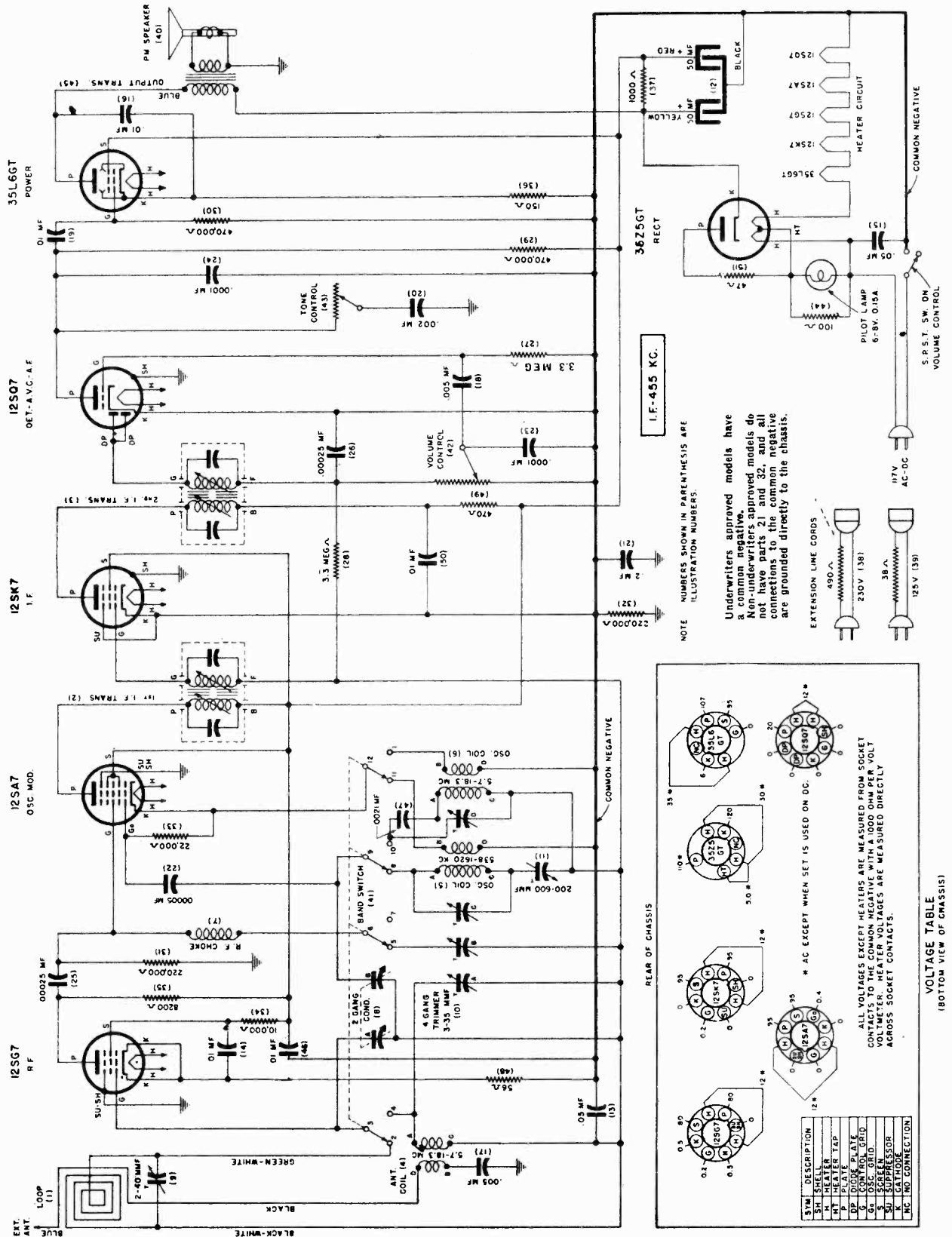
FIRST STEP: Connect the hot lead from the generator to the ANT. section of the gang condenser, through a .1 MFD condenser. The ground lead from the generator must be connected to the metal frame of the gang condenser. Turn the gang condenser to complete minimum capacity. Adjust the generator to 455KC and adjust the trimmers of the 1st and 2nd I.F. transformers until a maximum reading is noted on the output meter.

SECOND STEP: With the leads from the generator still connected in the same manner, adjust the Signal Generator to 1720 KC. The OSC. trimmer is located on the front of the chassis between the volume and tuning controls. Adjust this trimmer until the 1720 KC signal is tuned in.

THIRD STEP: Remove the hot lead of the generator from the ANT section of the gang condenser. Connect this lead to the antenna lead wire that projects from the back of the loop antenna through a 200 MMFD condenser. Adjust the Signal Generator to 1400 KC. Rotate the tuning control until this signal is tuned in. The ANT trimmer is located on the back of the loop antenna. Adjust this trimmer until a maximum reading is noted on the output meter. No further adjustment should be necessary, unless the set has been damaged, as the coils and condenser in this receiver have been specially handled at the factory to insure proper alignment at the lower frequencies.

IF PEAK
455 KC

ALLIED RADIO CORP.



MODEL 6B-122

ALLIED RADIO CORP.

ALIGNMENT PROCEDURE

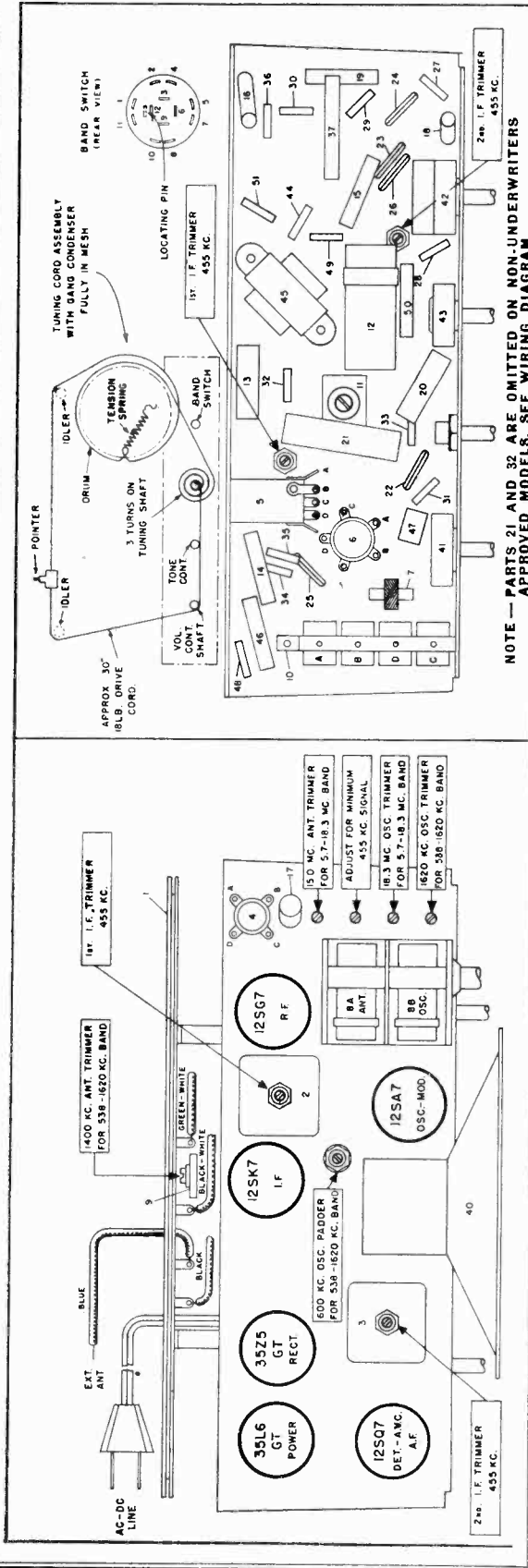
Be sure to follow procedure carefully and in the order given—otherwise the receiver will be insensitive and the dial calibration incorrect. For alignment procedure read tabulations from left to right. Make the adjustment marked (1) first, (2) next, (3) third, etc.

Before starting alignment:

- (a) Check tuning dial adjustment by tuning gang condenser until plates touch maximum capacity stop (completely in mesh) at which point the dial needle must be exactly even with the last line at the low frequency end of the dial calibration. If dial needle does not point exactly to last line move to correct position.
- (b) Use an accurately calibrated test oscillator with some type of output measuring device.
- (c) Place loop antenna in the same position it will be in when set is in the cabinet.

TEST OSCILLATOR			Attach output of test oscillator to:	Refer to parts layout diagram for location of trimmers mentioned below:
Steps	Place band switch for operation on:	Set receiver dial to:		
1	I.F. alignment use 18.3 M.C. band position.	Any point where no interfering signal is received.	0.2 Mfd. condenser.	Adjust each of the second I.F. transformer trimmers for maximum output, then adjust each of the first I.F. transformer trimmers for maximum output.
2	1620 to 538 K.C. Band	Rotato gang condenser to Maximum Capacity	00025 Condenser	Adjust R.F. coil trimmer for <u>minimum</u> 455 K.C. signal.
		Exactly 1620 K.C.		Adjust 1620 K.C. oscillator trimmer for maximum output.
		Approx. 1400 K.C.		While rocking gang condenser adjust 1400 K.C. loop trimmer for maximum output.
3	5.7 to 18.3 M.C. Band	Approx. 600 K.C.		While rocking gang condenser adjust 600 K.C. oscillator padder for maximum output.
		Exactly 18.3 M.C.		Adjust 18.3 M.C. oscillator trimmer for maximum output.
		Approx. 15 M.C.		While rocking gang condenser adjust 15 M.C. antenna trimmer for maximum output.

High side to BLUE Antenna lead. Low side to chassis through a .01 mid. condenser.



ALLIED RADIO CORP.

PARTS LIST

Illus. No.	Part No.	Part Name	Description	Part No.	Part Name	Description
1	20E105	Coil	Antenna Loop	27	27E335	Resistor Carbon, 3.3 Megohm, 1/3 Watt
2	20E21	Coil	1st I. F. Transformer	28	27E335	Resistor Carbon, 3.3 Megohm, 1/3 Watt
3	20E22	Coil	2nd I. F. Transformer	29	27E474	Resistor Carbon, 470,000 Ohm, 1/3 Watt
4	20E72	Coil	Antenna	30	27E474	Resistor Carbon, 470,000 Ohm, 1/3 Watt
5	20E102	Coil	Oscillator, Broadcast Band	31	27E224	Resistor Carbon, 220,000 Ohm, 1/3 Watt
6	20E103	Coil	Oscillator, Short Wave Band	32	27E224	Resistor Carbon, 220,000 Ohm, 1/3 Watt (Und. App'd Only)
7	2E19	Coil	R. F. Choke	33	27E223	Resistor Carbon, 22,000 Ohm, 1/3 Watt
8	24E9	Condenser	Tuning, 2 gang with pulley	34	27E103	Resistor Carbon, 10,000 Ohm, 1/3 Watt
9	24E3	Capacitor	Trimmer, 2-40 MMF (On Loop)	35	27E822	Resistor Carbon, 8,200 Ohm, 1/3 Watt
10	24E15	Capacitor	Trimmer, 4 Gang Strip	36	27E151	Resistor Carbon, 150 Ohm, 1/3 Watt
11	24E16	Capacitor	Padder, 200-600 MMF	37	27E102-3	Resistor Carbon, 1,000 Ohm, 1 Watt
12	25E6	Capacitor	50-50 Mfd. 150 Volt Dry Electrolytic	38		230 Volt Extension Line Cord Used Only in Models Not Having Common Ground
13	23E216	Capacitor	Tubular, .05 Mfd.—200 Volt			125 Volt Extension Line Cord Used Only in Models Not Having Common Ground
14	23E211	Capacitor	Tubular, .01 Mfd.—200 Volt			Elliptical Shape 4" x 6"
15	23E416	Capacitor	Tubular, .05 Mfd.—400 Volt	40	1E1	Speaker
16	23E411	Capacitor	Tubular, .01 Mfd.—400 Volt	41	29E8	Switch
17	23E408	Capacitor	Tubular, .005 Mfd.—400 Volt	42	28E7	Resistor
18	23E208	Capacitor	Tubular, .005 Mfd.—200 Volt	43	28E8	Resistor
19	23E411	Capacitor	Tubular, .01 Mfd.—400 Volt	44	27E101-2	Resistor
20	23E205	Capacitor	Tubular, .002 Mfd.—200 Volt	45	22E8	Transformer
21	23E421	Capacitor	Tubular, 2 Mfd. 400 Volt (Und. App'd Only)	46	23E211	Capacitor
22	23E37	Capacitor	Mica, .00005 Mfd.	47	23E2000	Capacitor
23	23E39	Capacitor	Mica, .0001 Mfd.	48	27E560	Resistor
24	23E39	Capacitor	Mica, .0001 Mfd.	49	27E471	Resistor
25	23E42	Capacitor	Mica, .00025 Mfd.	50	23E211	Capacitor
26	23E42	Capacitor	Mica, .00025 Mfd.	51	27E470-2	Resistor

MISCELLANEOUS PARTS

Part No.	Part Name	Description
40E1	Bulb	6-8 Volt .150 Amp. Dial light, No. 47
7E100	Cabinet	Wood Table Model
7E61	Cabinet Back	For Wood Table Model
65E2	Dial Cord Spring	Tension Spring
4E1	Dial Cord	36" of 18 lb. Drive Cord
68E1	Dial Shaft	Drive Shaft
19E3	Dial Shaft Bearing	Bearing for Drive Shaft
12E103-F10	Dial Shaft Washer	"C" Retainer Washer for Drive Shaft
20E65	Dial Back Plate	Back Plate Assem. less Calibrated Scale
36E28-1	Dial Scale	Calibrated Glass Scale
32E4	Dial Scale Clip	For Mounting Dial Scale
35E13	Dial Pointer	Dial Indicator
9E5	Dial Crystal	Marked "OFF-ON-VOLUME" for Wood Table Cabt.
37E21-10	Knob	Marked "TONE" for Wood Table Cabt.
37E21-11	Knob	Marked "TUNING" for Wood Table Cabt.
37E21-12	Knob	Marked "SW-8C" for Wood Table Cabt.
37E21-13	Knob	

OUTSIDE AERIAL

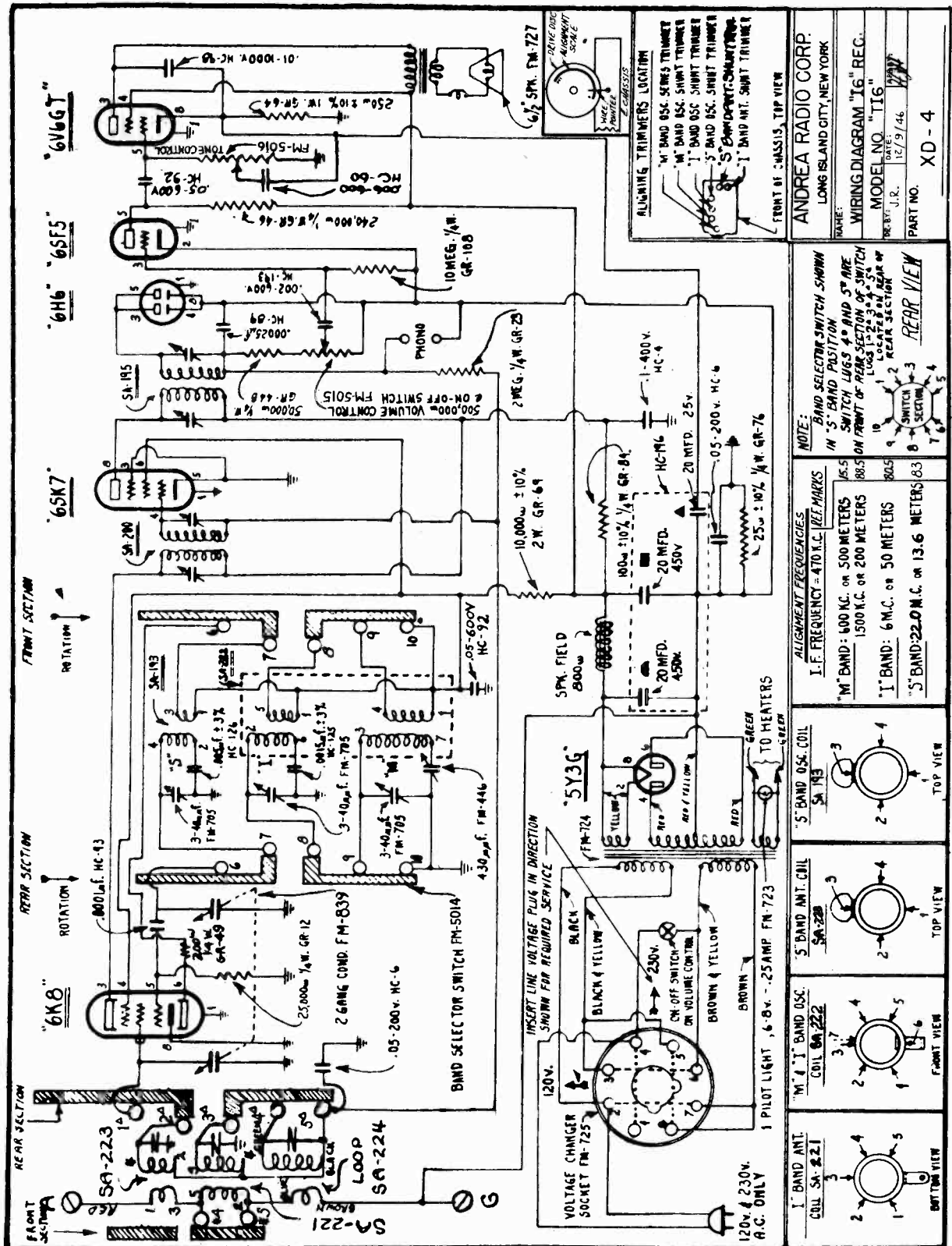
A 50 TO 75 FOOT AERIAL must be connected to the receiver WHEN TUNING FOR SHORT WAVE STATIONS or when the volume of 538-1620 KC band stations is not satisfactory. Attach this external aerial to the blue lead coming out of the rear of the chassis. WARNING—DO NOT ATTACH A GROUND TO THE RADIO—ANY EXTERNAL GROUND CONNECTION TO ANY METAL PART OF THE CHASSIS WILL CAUSE A SHORT AND POSSIBLE DAMAGE.

5.7 - 10.3 M.C. BAND OPERATING INSTRUCTIONS

BE SURE TO ATTACH A REGULAR AERIAL TO BLUE ANTENNA LEAD COMING OUT OF REAR OF CHASSIS WHEN TUNING FOR SHORT WAVE STATIONS.

TURN WAVE BAND SWITCH KNOB to the left hand position. Use section of dial that is calibrated from 5.7 - 18.3 M.C.

ANDREA RADIO CORP.



ALIGNING TRIMMERS LOCATION

M BAND OSC. SERIES TRIMMER
 I BAND OSC. SHORT TRIMMER
 S BAND OSC. SHORT TRIMMER
 S BAND OSC. SHORT TRIMMER
 I BAND ANT. SHORT TRIMMER

FRONT OF CHASSIS, TOP VIEW

ANDREA RADIO CORP.
 LONG ISLAND CITY, NEW YORK

WIRING DIAGRAM "T16" REC.
 MODEL NO. "T16"
 REV. J.R. 11/19/46

PART NO. XD-4

NOTE:

BAND SELECTOR SWITCH SHOWN IN 'S' BAND POSITION

'M' BAND: 600 KC. or 500 METERS
 1500 K.C. or 200 METERS

'I' BAND: 6 M.C. or 50 METERS

'S' BAND: 22.0 M.C. or 13.6 METERS

REAR VIEW

ALIGNMENT FREQUENCIES

I.F. FREQUENCY - 470 K.C. REF. MARKS

65.5
 88.5
 90.5
 83

TOP VIEW

5' BAND OSC. COIL
 SA-193

TOP VIEW

5' BAND ANT. COIL
 SA-228

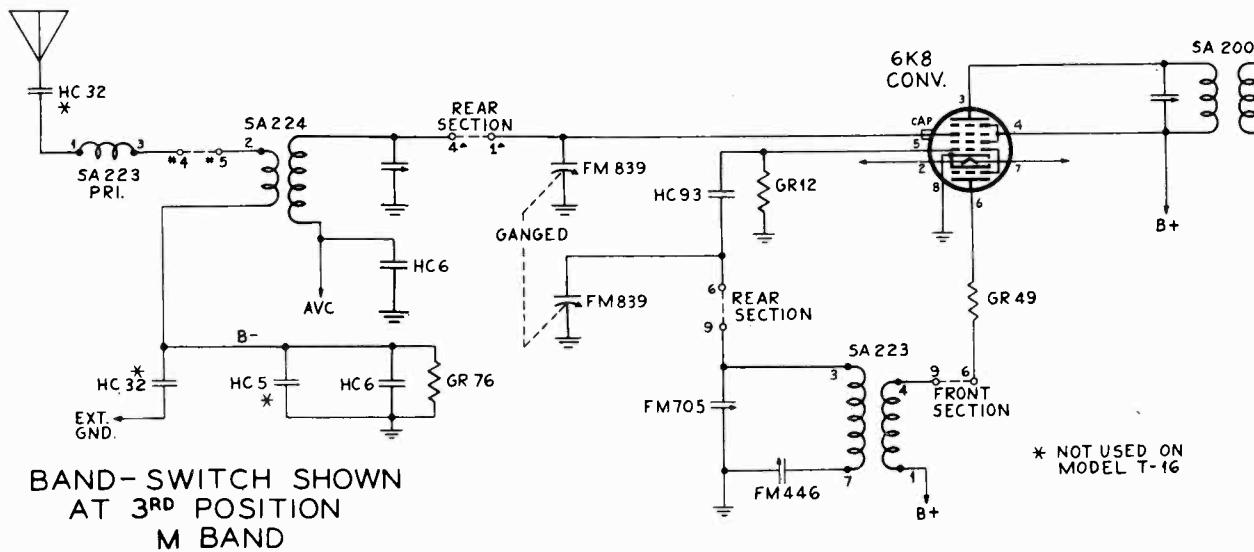
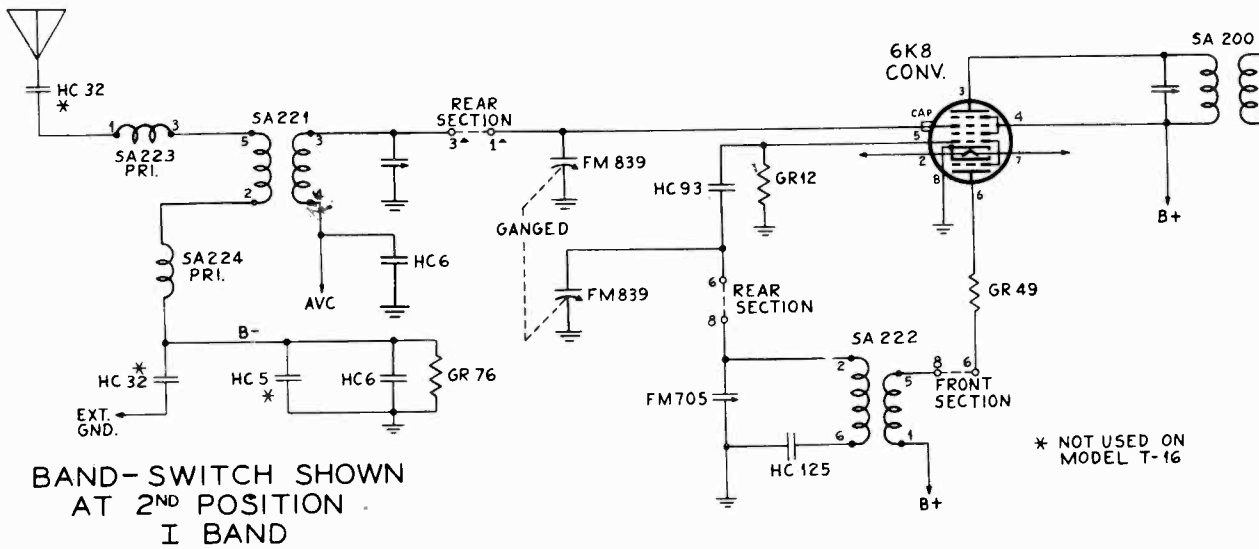
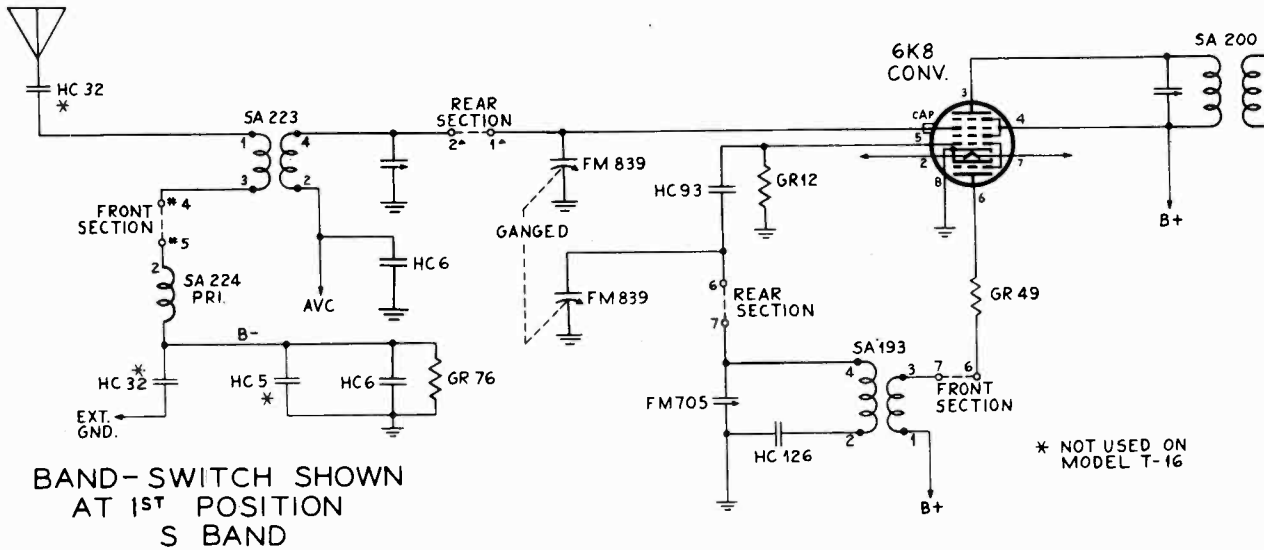
FRONT VIEW

1' BAND ANT. COIL
 SA-221

BOTTOM VIEW

MODEL T-16

ANDREA RADIO CORP.



ANDREA RADIO CORP.

MODEL T-15

FOR OPERATION ON AC - LINE VOLTAGES OF 106-125, 210-240, 50/60 CYCLES

WARNING! Always remove the line plug from the electric outlet before removing the chassis from the cabinet. Also - connect the speaker plug to the receiver before switching on the power. Otherwise, damage will result.

I. F. REALIGNMENT GENERALLY SUITABLE: As a rule, it is not necessary to readjust the short wave oscillator and antenna shunt and series trimmers unless they have been tampered with, or require replacing. Consequently, careful realignment of the I. F. system is all that requires attention, ordinarily. Before making any adjustments, tune in one particular station and note the quality of reception so that you can check the improvement after the I. F. system has been realigned.

USE SIGNAL GENERATOR AND OUTPUT VOLTMETER: For realigning, use a signal generator to supply a modulated carrier of 470, 600, 1,500, 6,000, and 22,000 kc., plus an output voltmeter. Alignment by any other means is not recommended. Your service test generator should be checked frequently for change in calibration by getting a zero beat between the generator and broadcast stations of known frequency.

SPECIAL NOTES: Before proceeding to align the antenna and oscillator circuits bear in mind that these circuits control the accuracy of the main tuning dial calibration particularly the oscillator trimmers. As the main dial is a part of the cabinet, servicing of the chassis can be made without the use of this dial by using the reference alignment scale 0 to 100 divisions attached permanently to the gang condenser drive drum.

The table below indicates the reference dial settings for the required alignment frequencies. You will note that the chassis contains a self-tapping screw located just below the gang condenser drum, the purpose of which, is to enable you to wrap a piece of bare wire and thereby form a pointer to the reference scale. Set the pointer at the zero marking on the reference scale with the gang condenser plates fully meshed (all capacity in) after which rotate the drum to the correct reference setting for proper circuit alignment and procedure in accordance with the Band Alignment instruction. Remove reference pointer before installing in cabinet.

ALIGNMENT FREQ. - KC.	REFERENCE DIAL SETTING
1,500	88.5
600	15.5
6,000	80.5
22,000	85

NOTES ON REALIGNING THE BANDS: During the aligning measurements, the output of the signal generator must be kept low so that it will not cause the AVC circuit in the set to function. In other words, when the volume control on the set is turned to maximum, the output should not show more than .5 volt across the voice coil, or 50 milliwatts in the plate circuit of the output tube.

Generally, at frequencies above 7,000 kc., the signal generator frequency will change with each adjustment of the generator output attenuator control. Hence, the receiver must be returned each time the attenuator is adjusted.

Some generators cause trouble by direct radiation to the set at frequencies above 6 mc. Experience indicates that more accurate alignment is possible when the generator is separated by several feet from the receiver under test, in order to eliminate this direct pickup.

470-KC. I. F. ALIGNMENT: Connect the high-potential lead of the signal generator in series with a .1 mfd. condenser to the grid of the 6X5 tube. Set the generator at 470 kc., and adjust the output until a small deflection is obtained in the output meter. Adjust the trimmers condensers on the top of the 1st and 2nd I.F. transformers (see circuit diagram) for maximum deflection on the output meter. After this adjustment has been made, disconnect the generator from the grid of the 6X5 tube. This completes the alignment of the I.F. system.

***S* BAND ALIGNMENT:**

Connect the high-potential lead from the generator in series with a 400 ohm resistor to the antenna terminal (marked A) on rear of loop, and the low side of the generator to the ground terminal (marked G) on rear of loop. Put the wave band switch at the S position,

adjust the generator to 22,000 kc., and the receiver reference scale to 22.0 mc. Vary the S band oscillator shunt trimmer slowly from maximum to minimum. You will hear the signal at two settings of the trimmer, one nearer the minimum capacity (plates open) and one near the maximum capacity (plates closed). The setting near minimum capacity is correct, because the setting near maximum capacity is at the image frequency.

Now adjust the antenna shunt trimmer. During this adjustment, be sure to rock the gang condenser back and forth SLOWLY each time you make an adjustment of the trimmer. As you continue to do this, you will reach a point where further turning of the trimmer screw, while rocking the gang condenser, will not increase the signal response. This is the correct adjustment.

A simple method of determining if the receiver and generator are tuned for correct alignment is as follows:

Set the signal generator at 22,000 kc. and tune the receiver slowly from 21,000 to 23,000 kc. Two signals should be heard, 940 kc. apart. One will be lower in frequency than 22,000 kc. and the other will be higher. The higher frequency, as indicated on the dial, is the correct aligning frequency, and the lower one is the image.

As a further check, leave the receiver tuned to the higher frequency. Vary slowly, increase the generator frequency from 22,000 kc. to about 23,000 kc. A signal will be heard near 23,000 kc. if all the settings are correct for alignment. If there is no signal, the original settings were on the image frequency. In that case, you must start again from the beginning, in order to be sure of accurate results.

After you have found the correct settings, the image, or lower, frequency response on the receiver will always sound weaker than the true signal.

***I* BAND ALIGNMENT:** With the signal generator connected in accordance with the preceding instructions, set the generator at 6,000 kc., turn the wave band switch to the I position, and adjust the gang reference scale to 6 mc., as set forth in the chart. Following the procedure just described, adjust the I band oscillator shunt trimmer for maximum signal response. Next, adjust the I band antenna shunt trimmer. Rock the gang condenser back and forth slowly as you adjust the trimmer, in accordance with the instructions for the S band adjustment. This completes the adjustment for the I band.

***M* BAND ALIGNMENT:** Replace the 400-ohm resistor in the generator lead by a .0025 mfd. condenser. Set the generator at 1,500 kc., turn the wave band switch to the M position, and set the gang reference scale of the receiver at 1,500 kc., as set forth in the chart. Adjust the M band oscillator shunt trimmer for maximum signal response. Next, adjust the antenna shunt trimmer for maximum response.

This band must be aligned at 600 kc. also. Set the generator accordingly, and tune the receiver to 600 kc., as set forth in the chart. Adjust the M band oscillator series trimmer for maximum response. During this adjustment, be sure to rock the gang condenser for each small change of capacity of the series trimmer. When this adjustment has been completed, recheck the antenna adjustment at 1,500 kc. This completes the adjustment of the M band.

***W* BAND ALIGNMENT:** Replace the 400-ohm resistor in the generator lead by a .0025 mfd. condenser. Set the generator at 1,500 kc., turn the wave band switch to the W position, and set the gang reference scale of the receiver at 1,500 kc., as set forth in the chart. Adjust the W band oscillator shunt trimmer for maximum signal response. Next, adjust the antenna shunt trimmer for maximum response.

This band must be aligned at 600 kc. also. Set the generator accordingly, and tune the receiver to 600 kc., as set forth in the chart. Adjust the M band oscillator series trimmer for maximum response. During this adjustment, be sure to rock the gang condenser for each small change of capacity of the series trimmer. When this adjustment has been completed, recheck the antenna adjustment at 1,500 kc. This completes the adjustment of the M band.

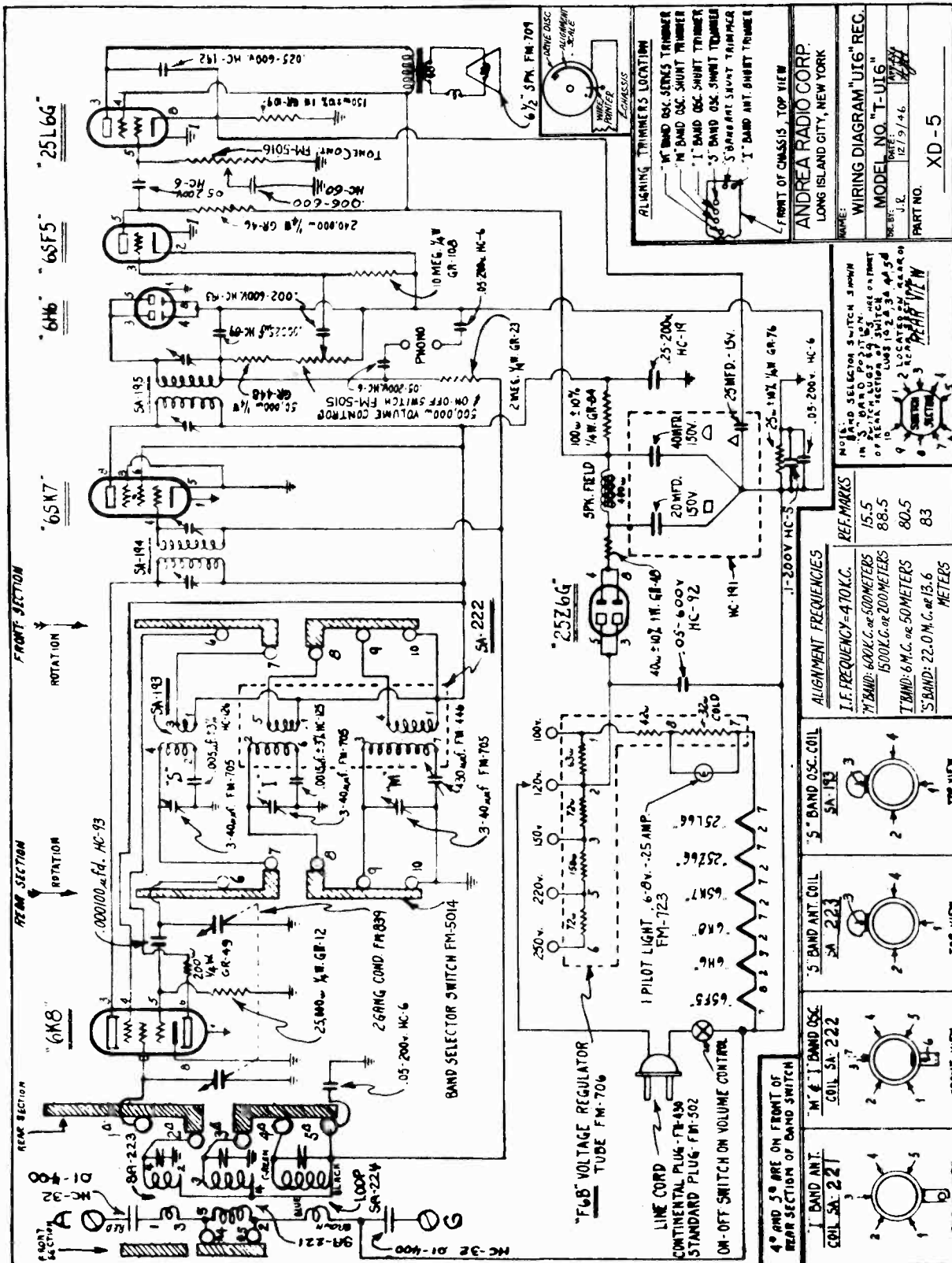
After installing the chassis in the cabinet, turn the tuning knob until the gang condenser plates are completely meshed. Then slide pointer along cord (without opening gang) until the center of the pointer is over the last diamond marking on the left side of the 2.5-7 mc. scale. When the above is followed correctly along with method of alignment, the pointer will match the correct scale calibration throughout.

TUBES:	6X5	Oscillator & Modulator	6SF7	1st Audio
	6Y6GT	Beam Power Output	6X70	Rectifier
	6S6	2nd Detector & AVC	6BE7	I.F. Amplifier

IMPORTANT: If you find it necessary to replace any part in this receiver, bear this in mind! In order to maintain the high performance standards of Andrea Radio receivers, the component parts on all Andrea models are held to exceedingly close tolerance limits. Furthermore, Andrea components are given the exclusive *Millimate Sealed* treatment which protects them from all weather and temperature conditions. Consequently, standard Andrea Radio replacement parts must be used for all service work, for the substitution of ordinary stock items will result in inferior performance.

MODEL T-U16

ANDREA RADIO CORP.



ALIGNED TRIMMERS LOCATION

- "M" BAND OSC. SERIES TRIMMER
- "M" BAND OSC. SHUNT TRIMMER
- "I" BAND OSC. SERIES TRIMMER
- "I" BAND OSC. SHUNT TRIMMER
- "S" BAND OSC. SERIES TRIMMER
- "S" BAND OSC. SHUNT TRIMMER
- "T" BAND ANT. SHUNT TRIMMER

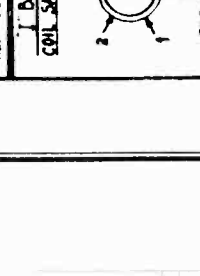
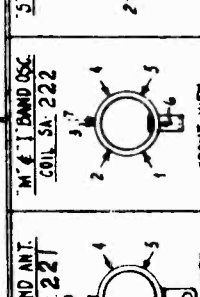
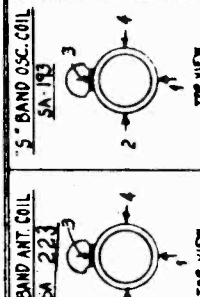
FRONT OF CHASSIS - TOP VIEW

ANDREA RADIO CORP.
LONG ISLAND CITY, NEW YORK

NAME: _____
WIRING DIAGRAM "UIG" REC. _____
MODEL NO. "T-U16" _____
REVISED BY: J.R. DATE: 12/19/46
PART NO. XD-5

NOTES: BAND SELECTOR SWITCH 3 POSITION IN "S" BAND POSITION USE ON FRONT OF REAR SECTION OF CHASSIS TO LOCATE BAND SELECTOR SWITCH 1 2 3 REAR VIEW

ALIGNMENT FREQUENCIES	REF. MARKS
I.F. FREQUENCY = 470 K.C.	15.5
"M" BAND: 600K.C. or 500 METERS	88.5
"I" BAND: 6 M.C. or 50 METERS	80.5
"S" BAND: 22.0 M.C. or 13.6 METERS	83



ANDREA RADIO CORP.

100-120-150-220-250 40/50 CYCLES OR DC
FOR OPERATION ON AC OR DC, LINE VOLTAGES OF 100 TO 250

WARNING! Always remove the line plug from the electric outlet before removing the chassis from the cabinet. Also - connect the speaker plug to the receiver before switching on the power. Otherwise, damage will result.

I. F. ALIGNMENT GENERALLY SUFFICIENT: As a rule, it is not necessary to readjust the short wave oscillator and antenna shunt and series trimmers unless they have been tampered with, or require replacing. Consequently, careful realignment of the I. F. system is all that requires attention, ordinarily. Before making any adjustments, tune in one particular station and note the quality of reception so that you can check the improvement after the I. F. system has been realigned.

USE SIGNAL GENERATOR AND OUTPUT VOLTMETER: For realigning, use a signal generator to supply a modulated carrier of 470, 600, 1,500, 6,000, and 22,000 kc., plus an output voltmeter. Alignment by any other means is not recommended. Your service test generator should be checked frequently for change in calibration by getting a zero beat between the generator and broadcast stations of known frequency.

SPECIAL NOTES: Before proceeding to align the antenna and oscillator circuits bear in mind that these circuits control the accuracy of the main tuning dial calibration particularly the oscillator trimmers. As the main dial is a part of the cabinet, servicing of the chassis can be made without the use of this dial by using the reference alignment scale 0 to 100 divisions attached permanently to the gang condenser drive drum.

The table below indicates the reference dial settings for the required alignment frequencies. You will note that the chassis contains a self-tapping screw located just below the gang condenser drum, the purpose of which, is to enable you to wrap a piece of bare wire and thereby form a pointer to the reference scale. Set the pointer at the zero marking on the reference scale with the gang condenser plates fully meshed (all capacity in) after which rotate the drum to the correct reference setting for proper circuit alignment and procedure in accordance with the Band alignment instruction. Remove reference pointer before installing in cabinet.

ALIGNMENT FREQ. KC.	REFERENCE DIAL SETTING
1,500	85.5
600	15.5
6,000	80.5
22,000	85

NOTES ON REALIGNING THE BANDS: During the aligning measurements, the output of the signal generator must be kept low so that it will not cause the AVC circuit in the set to function. In other words, when the volume control on the set is turned to maximum, the output should not show more than .5 volt across the voice coil, or 50 milliwatts in the plate circuit of the output tube.

Generally, at frequencies above 7,000 kc., the signal generator frequency will change with each adjustment of the generator output attenuator control. Hence the receiver must be returned each time the attenuator is adjusted.

Some generators cause trouble by direct radiation to the set at frequencies above 8 mc. Experience indicates that more accurate alignment is possible when the generator is separated by several feet from the receiver under test, in order to eliminate this direct pickup.

470 KC. I. F. ALIGNMENT: Connect the high-potential lead of the signal generator in series with a .1 mfd. condenser to the grid of the 6L8 tube. Set the generator at 470 kc., and adjust the output until a small deflection is obtained in the output meter. Adjust the trimmer condensers on the top of the 1st and 2nd I. F. transformers (see circuit diagram) for maximum deflection on the output meter. After this adjustment has been made, disconnect the generator from the grid of the 6L8 tube. This completes the alignment of the I. F. system.

"S" BAND ALIGNMENT:

Connect the high-potential lead from the generator in series with a 400 ohm resistor to the antenna terminal (marked A) on rear of loop, and the low side of the generator to the ground terminal (marked G) on rear of loop. Put the wave band switch at the S position, adjust the generator to 22,000 kc., and the receiver to 22.0 mc. Vary the S band oscillator shunt trimmer slowly from maximum to minimum. You will hear the signal at the settings of the trimmer, one nearer the minimum capacity (plates open) and one near the maximum capacity (plates closed). The setting near minimum capacity is correct, because the setting near maximum capacity is at the image frequency.

Now adjust the antenna shunt trimmer. During this adjustment, be sure to rock the gang condenser back and forth slowly each time you make an adjustment of the trimmer. As you continue to do this, you will reach a point where further turning of the trimmer screw, while rocking the gang condenser, will not increase the signal response. This is the correct adjustment.

A simple method of determining if the receiver and generator are tuned for correct alignment is as follows:

Set the signal generator at 22,000 kc., and tune the receiver slowly from 21,000 to 23,000 kc. Two signals should be heard, 940 kc. apart. One will be lower in frequency than 22,000 kc. and the other will be higher. The higher frequency, as indicated on the dial, is the correct aligning frequency and the lower one is the image. Very slowly, increase the generator frequency from 22,000 kc. to about 23,000 kc.

A signal will be heard near 23,000 kc. if all the settings are correct for alignment. If there is no signal, the original settings were on the image frequency. In that case, you must start again from the beginning, in order to be sure of accurate results.

After you have found the correct settings, the image, or lower, frequency response on the receiver will always sound weaker than the true signal.

"I" BAND ALIGNMENT: With the signal generator connected in accordance with the preceding instructions, set the generator at 6,000 kc., turn the wave band switch to the I position, and adjust the dial to 6 mc. Following the procedure just described, adjust the I band oscillator shunt trimmer for maximum signal response. Next, adjust the I band antenna shunt trimmer. Rock the gang condenser back and forth slowly as you adjust the trimmer, in accordance with the instructions for the S band adjustment. This completes the adjustment for the I band.

"M" BAND ALIGNMENT: Replace the 400-ohm resistor in the generator lead by a .00085 mfd. condenser. Set the generator at 1,500 kc., turn the wave band switch to the M position, and set the dial of the receiver at 1,500 kc. Adjust the M band oscillator shunt trimmer for maximum signal response. Next adjust the antenna shunt trimmer for maximum response.

This band must be aligned at 600 kc. also. Set the generator accordingly, and tune the receiver to 600 kc. Adjust the M band oscillator series trimmer for maximum response. During this adjustment, be sure to rock the gang condenser for each small change of capacity of the series trimmer. When this adjustment has been completed, recheck the antenna adjustment at 1,500 kc. This completes the adjustment of the M band.

TUBES: The following tubes are required for this receiver:

6L8 Oscillator and Modulator	25L6G Beam Power Output
6X7 I. F. Amplifier	25Z6G Rectifier
6BE 2nd Detector and AVC	Y6B Ballast Tube
6SF5 1st Audio	

IMPORTANT! If you find it necessary to replace any part in this receiver, bear this in mind: In order to maintain the high performance standards of Andrea Radio receivers, the components parts on all Andrea models are held to exceedingly close tolerance limits. Furthermore, Andrea components are given the exclusive "Climate Sealed" treatment which protects them from all weather and temperature conditions. Consequently, standard Andrea Radio replacement parts must be used for all service work, for the substitution of ordinary, stock items will result in inferior performance.

MODEL FM-4, FM Tuner

ANSLEY RADIO CORP.

Replacement Parts
The F.M. Tuner - Model F.M. 4

Req.	Description	Part No.	List Price
3	I.F. Transformer 4.3 M.C.	8.21A	1.50
1	Discriminator Transformer 4.3 M.C.	8.22A	5.00
1	Antenna Coil	28.39A	1.00
1	Oscillator Coil	28.41A	1.00
1	R.F. Coil	28.40	1.00
1	Pilot Bulb 12-100 M.A.	18.06	.65
	(Dial Assembly	25.63)	
	(Flexible Connecting Shaft)	
	(Flexible Casing	)	7.50
	(Hardware Shaft and Casing)	
1	On-Off Switch	16.12	1.60

Condensers

1	3 Section Variable	6.87A	6.00
17	.01 MFD 400 volt P.T.C.	7.76	.15
2	.0015 MFD Mica MW	6.88	.15
2	.0005 MFD Mica MW	6.10	.15
1	.00025 MFD Mica MO	6.47	.15
2	.0001 MFD Mica MO	6.08	.15
1	.00033 MFD Mica MO	6.89	.15
1	.000022 MFD Mica MO	6.90	.15
3	.00005 MFD Mica MO	6.70	.15
1	.0001 MFD Silver Mica MO	6.91	.35
1	5 MMF Sprague Type 3 Liquid Dielectric Cond.	6.92	.50

Resistors

2	68 Ohms $\frac{1}{2}$ Watt	7.89	.15
2	220 Ohms $\frac{1}{2}$ Watt	7.67	.15
2	330 Ohms $\frac{1}{2}$ Watt	7.73	.15
1	470 Ohms $\frac{1}{2}$ Watt	7.90	.15
4	1000 Ohms $\frac{1}{2}$ Watt	7.47	.15
2	10 K Ohms $\frac{1}{2}$ Watt	7.91	.15
1	22 K Ohms $\frac{1}{2}$ Watt	7.92	.15
1	33 K Ohms $\frac{1}{2}$ Watt	7.93	.15
4	47 K Ohms $\frac{1}{2}$ Watt	7.94	.15
1	68 K Ohms $\frac{1}{2}$ Watt	7.95	.15
4	100 K Ohms $\frac{1}{2}$ Watt	7.14	.15
1	180 K Ohms $\frac{1}{2}$ Watt	7.96	.15
1	220 K Ohms $\frac{1}{2}$ Watt	7.97	.15
4	470 K Ohms $\frac{1}{2}$ Watt	7.98	.15
1	1 Megohm $\frac{1}{2}$ Watt	7.34	.15
1	10 K Ohms 1 Watt	7.59	.15
1	230 Ohm 5 Watt Metal Clad	7.99	1.25

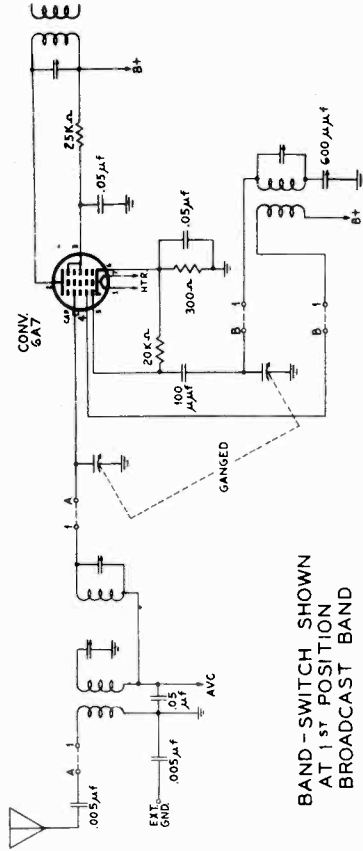
Tubes

1	12K8	34.38
3	14H7	34.39
2	14C7	34.40
1	7A6	34.41

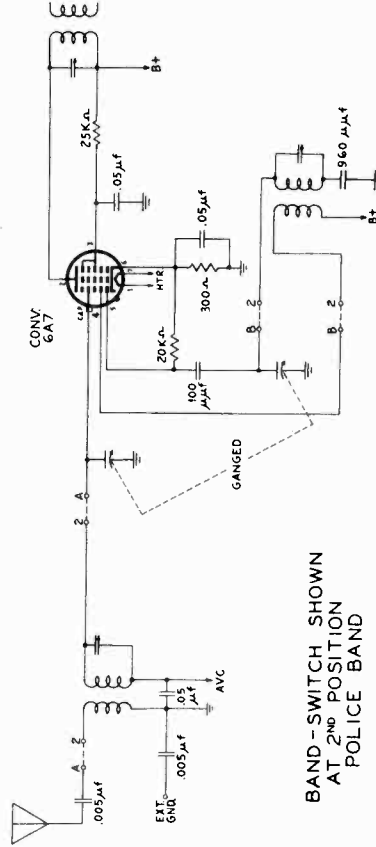
ANSLEY RADIO CORP.

MODELS 677, 678
MODEL 5111

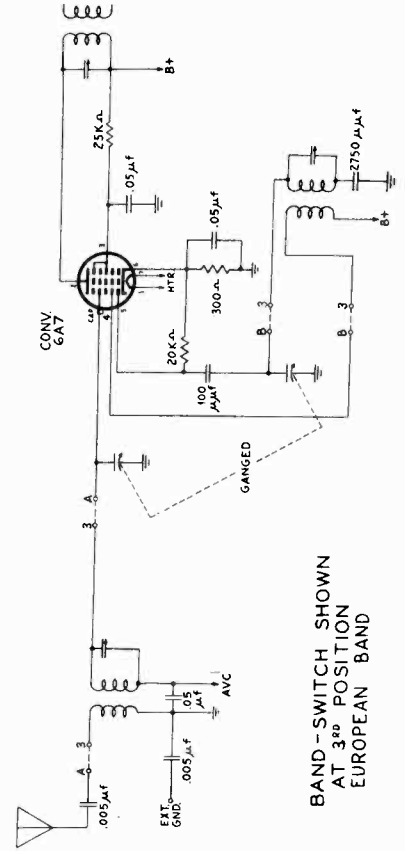
MODEL 5111



BAND - SWITCH SHOWN
AT 1ST POSITION
BROADCAST BAND

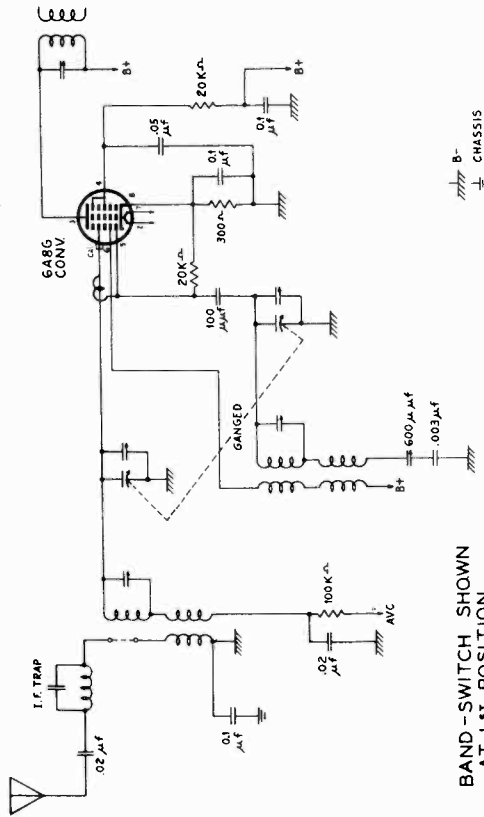


BAND - SWITCH SHOWN
AT 2ND POSITION
POLICE BAND

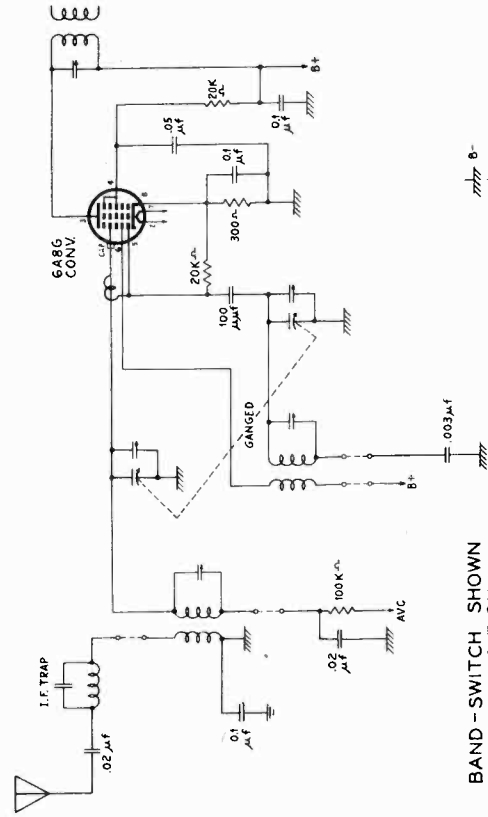


BAND - SWITCH SHOWN
AT 3RD POSITION
EUROPEAN BAND

MODELS 677, 678

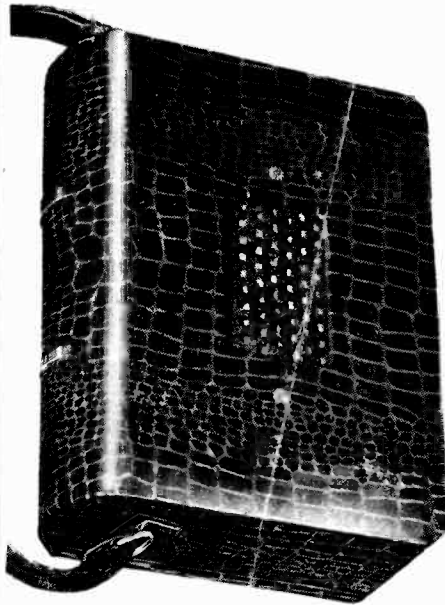


BAND - SWITCH SHOWN
AT 1ST POSITION
BROADCAST BAND

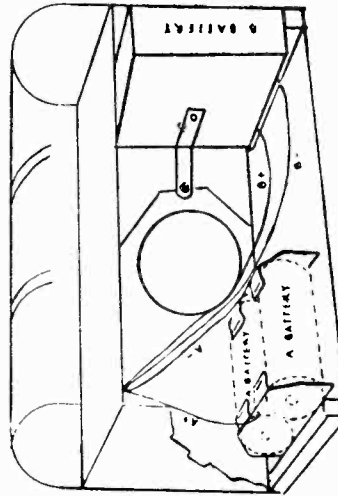


BAND - SWITCH SHOWN
AT 2ND POSITION
SHORT WAVE BAND

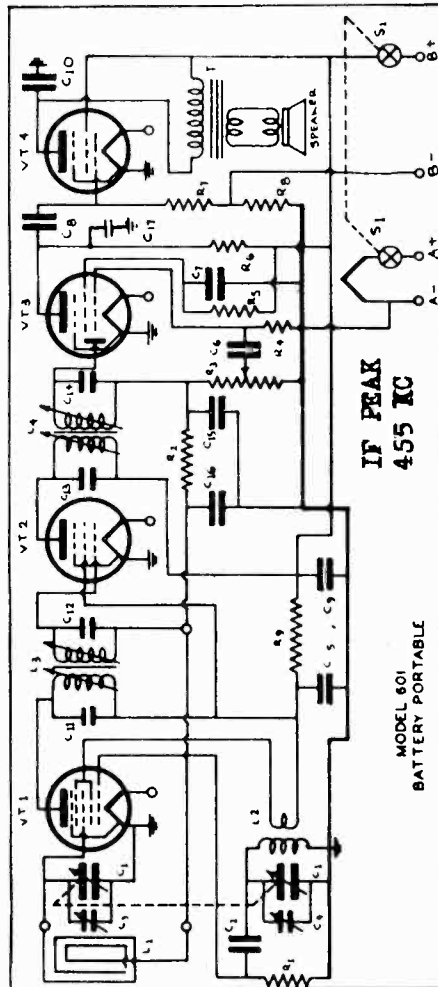
ARC RADIO CORP.



Cut-Away View
Showing Batteries
Placed in Cabinet



NOTE: Nipple end of "A" batteries go to A+. Snap back cover in proper place. Set will not operate with cover open.



Quantity	Item**	Part No.	Description	Price
1.	c1	601-5	Two Gang Variable Condenser	\$2.35
2.	c2, c17	601-43	10 MMF Condenser	.20 each
2.	*c3, c4	601-5	Trimmers, Part of Variable Condenser	0
1.	c15	601-42	.00025 Tubular Condenser	.20
3.	c6, c8, c10	601-41	.002MFD, 200 Volt Tubular Condenser	.20 each
1.	c7, c5, c16	601-44	.05MFD, 200 Volt Tubular Condenser	.20 each
3.	c9	601-10	8MFD, 150 Volt Dry Electrolytic Condenser	.50
4.	*c11, c12, c13, c14	601-3, 3A	Part of I.F. Transformers	0
1.	L1.	601-8	Loop Antenna Assembly	.85
1.	L2.	601-9	Oscillator Coil	.50
1.	L3.	601-3	Double tuned iron core First I.F. Transformer	.95
1.	L4.	601-3A	Double Tuned Iron Core Second I.F. Transformer	.95
1.	T.		Output Transformer	.95
1.	R1.	601-2	100,000 ohm 1/4 Watt Carbon Resistor	.15
1.	R2.	601-16	2.2 Megohm 1/4 Watt Carbon Resistor	.15
1.	R3.	601-17	1 Megohm Volume Control with S1	1.05
1.	R4.	601-18	10 Megohm 1/4 Watt Carbon Resistor	.15
1.	R5.	601-19	4.7 Megohm 1/4 Watt Carbon Resistor	.15
1.	R6.	601-20	1 Megohm 1/4 Watt Carbon Resistor	.15
1.	R7.	601-21	3 Megohm 1/4 Watt Carbon Resistor	.15
1.	R8.	601-22	820 Ohm 1/2 Watt Carbon Resistor	.15
1.	R9.	601-23	5000 Ohm 1/2 Watt Carbon Resistor	.15
1.	*S1.		Double Pole Single Throw Switch	0
1.	V.T.1	601-6	1R5 Tube	2.20
1.	V.T.2	601-55	1T4 Tube	2.20
1.	V.T.3	601-56	1S5 Tube	2.20
1.	V.T.4	601-4	3S4 Tube	2.20
1.	Speaker	601-2	4" Permanent Magnet Dynamic Speaker 1 oz. Alnico No.5	3.00

*NOT SUPPLIED SEPARATELY.

MODEL 601

ARC RADIO CORP.

LOCATION OF COILS AND ADJUSTMENTS

The oscillator coil is located beneath the chassis. The loop is mounted inside the cover with the connection of the loop soldered to snaps on the cover. The trimmers for oscillator coil and loop are mounted on the variable condenser. The IF is permeability tuned, and the slugs are reached from top and bottom of the IF transformer.

The IF transformers are located in cans mounted on top of the chassis. The first IF transformer No. 1455-1R is at the rear right of the chassis. The second IF transformer No. 1455-6 is to the front left of the variable condenser.

NOTE: The top iron core slug is the secondary of each transformer.

A signal generator with frequencies of 455 & 1400 KC is required. An output meter should be used across the voice coil or output transformer for observing maximum response. Always use as weak a test signal as possible when aligning the receiver.

I.F. ALIGNMENT

Connect two jumpers, one to each snap button on cover to other part of snap button on posts of cabinet. This connects the loop.

Swing variable condenser to minimum capacity position. Feed 455KC to the grid of the 1R5 tube through a .01 condenser. Tune secondary of second IF for maximum indication of output meter, then tune primary in similar manner. Tune first IF secondary and then primary.

R.F. ALIGNMENT

Set the dial pointer at 1400KC. Feed 1400 KC from the signal generator into a loop of wire about 12 inches in diameter. Hold this radiating loop approximately one foot away from and parallel to the receiver loop antenna and advance the output of the signal generator until a suitable deflection is obtained on the output meter. First adjust the oscillator and then the antenna trimmer for maximum response.

If the loop antenna has been replaced it may be necessary to adjust the loop inductance. Align at 1400KC. Set the dial at 600KC and feed 600KC to the antenna lead. A portion of the outside turn of loop may be swung to either side of the center to give maximum response. Realign at 1400 KC.

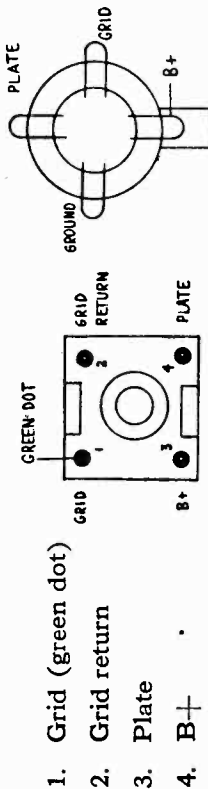
Current drain A Battery-0.220 Amps.
 B Battery-0.008 Amps.
 Frequency Range.....1600 KC to 550 KC

GENERAL NOTES

1. Batteries: The model No. 601 is designed to house the complete set of batteries within the cabinet. The battery complement should be as follows:

Type Battery	No. Req.	Eveready Part No.	Burgess Part No.	Ray-O-Vac Part No.
1 1/2 Volt "A"	2	No. 950	No. 2R	No. 2LP
6 7/2 Volt "B"	1	No. 467	No. XX 45	No. 4367

2. The lug connections for the I.F. transformers and oscillator coil are as follows:



1. Grid (green dot)
2. Grid return
3. Plate
4. B+

3. If replacements are made in the R.F. section of the circuit, the receiver should be carefully re-aligned.

4. The self-contained loop antenna has directional characteristics. It is important therefore, once the station is tuned in, that the cabinet be rotated on its base, back and forth, through a quarter of a circle (90°) and left at the position where the station is received with maximum volume.

TUBE DATA

The tube complement is as follows:

- 1 1R5 oscillator modulator
- 1 1T4 I.F. amplifier
- 1 1S5 2nd detector, AVC, A.F. amplifier
- 1 3S4 beam power output

VOLTAGE ANALYSIS

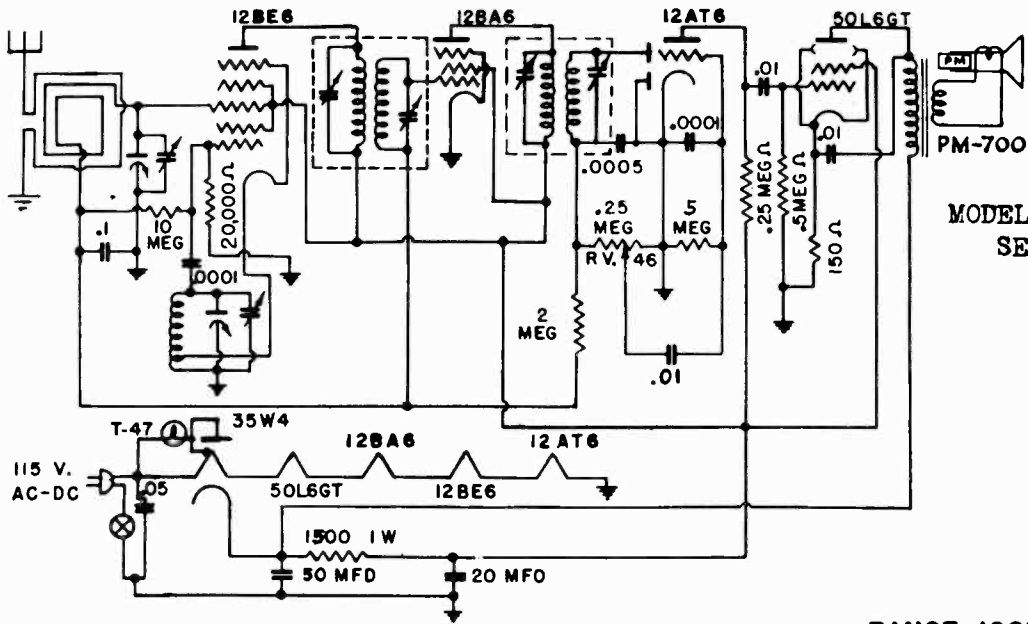
Reading should be taken with a 20,000 OHMS-PER-VOLT meter. Voltages listed are from point indicated to chassis with volume control turned on full and no signal. The battery voltages for these readings are as follows: "A" Battery 1.4 Volts. "B" Battery 60 Volts.

TUBE	PLATE	SCREEN	OSC. PLATE	FIL.
1R5	43 Volts	43 Volts	43 Volts	1.4 Volts
1T4	60 Volts	43 Volts		1.4 Volts
1S5	14 Volts	10 Volts		1.4 Volts
3S4	60 Volts	60 Volts		1.4 Volts

Bias for the 3S4 is obtained across the R8. The voltage drop across this resistor should be 6.9 volts.

MODELS 601,602, Series B
MODELS 601,602, Series C

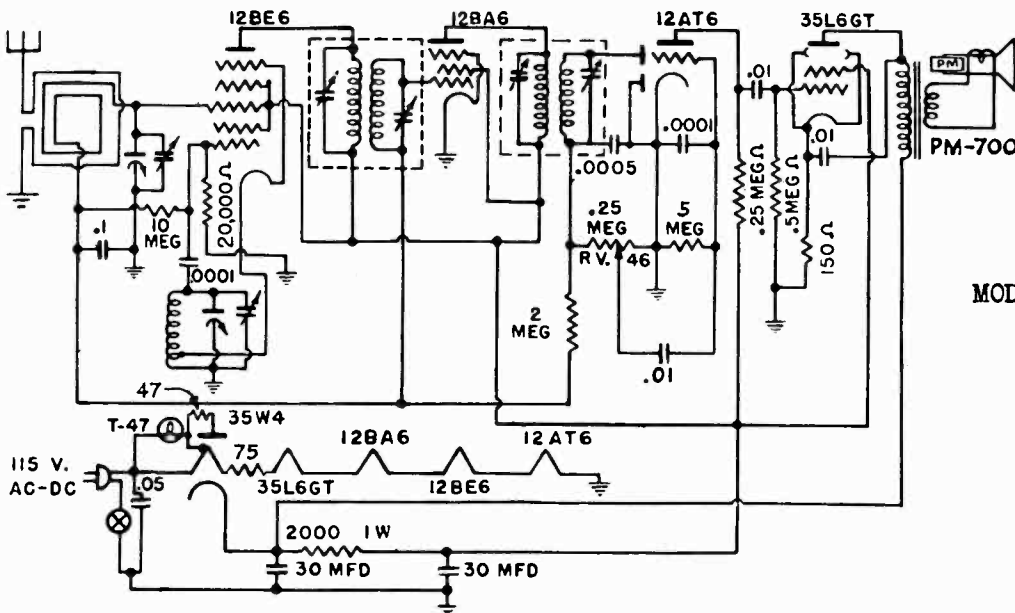
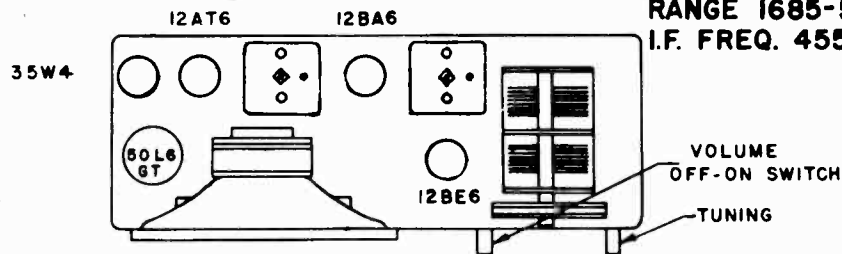
AUTOMATIC RADIO MFG. CO., INC.



2-8-47

MODELS 601, 602
SERIES B

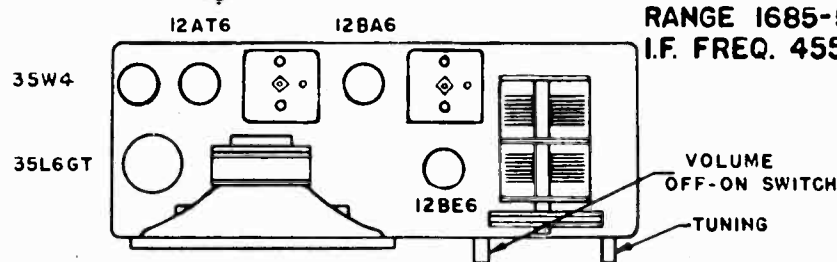
RANGE 1685-538 KC
I.F. FREQ. 455 KC



4-14-47

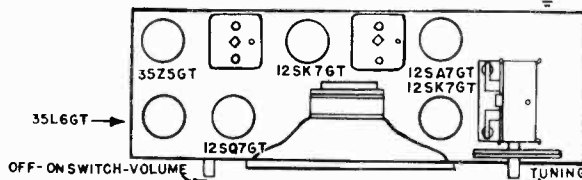
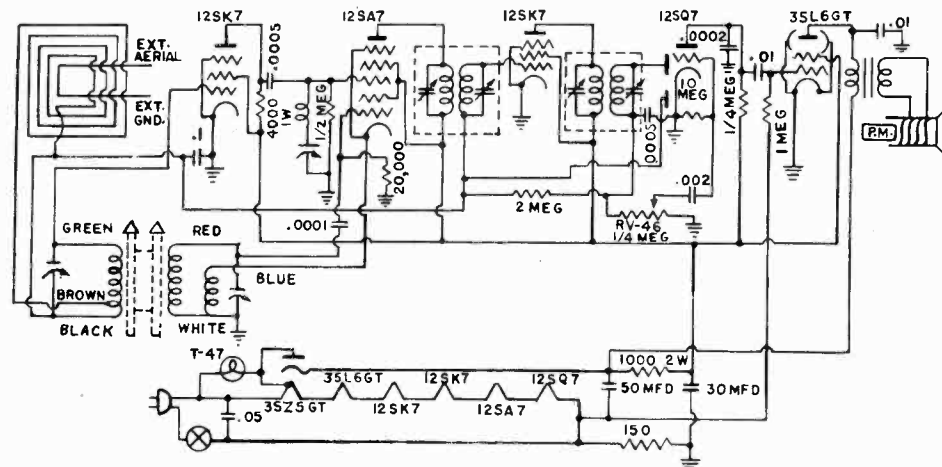
MODELS 601, 602
SERIES C

RANGE 1685-538 KC
I.F. FREQ. 455 KC

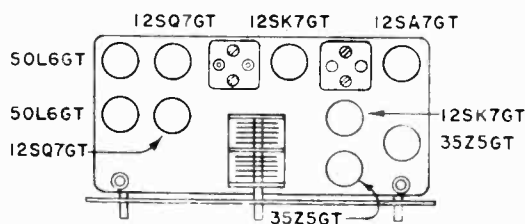
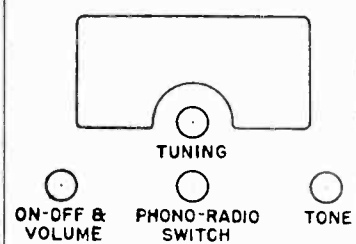
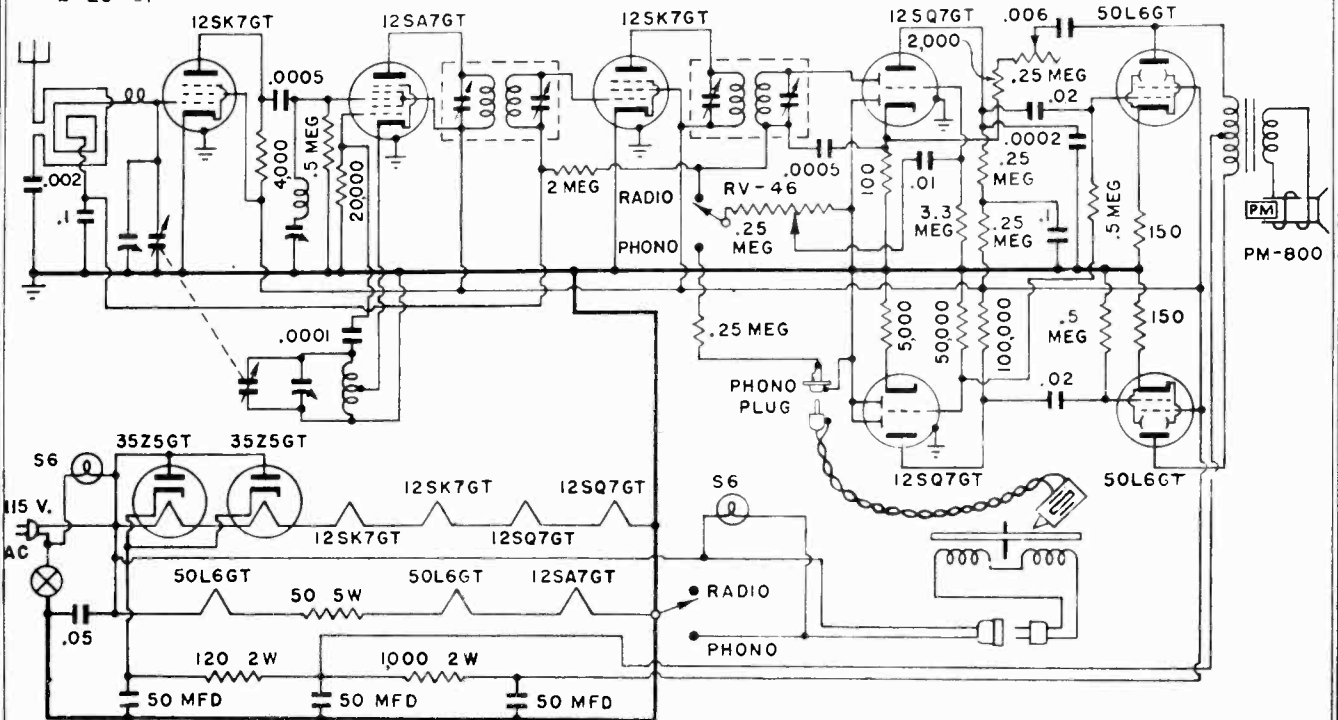


AUTOMATIC RADIO MFG. CO., INC.

MODEL 620
MODEL F-790



2-18-47

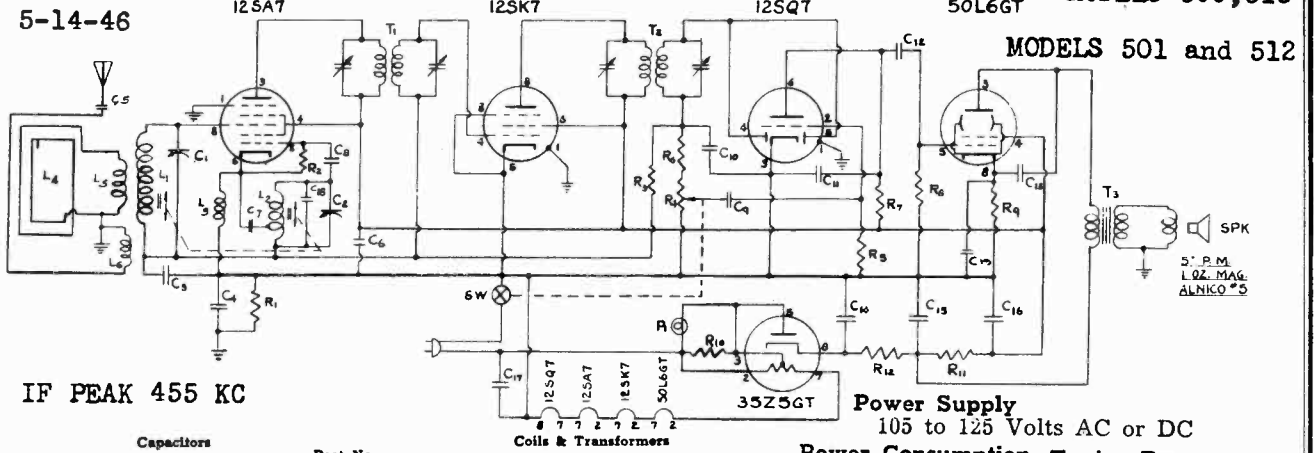


I. F. 455 K.C.
RANGE 1700-540 K.C.

MODEL F-790

AVIOLA RADIO CORP.

MODELS 501, 512
MODELS 509, 518



IF PEAK 455 KC

Capacitors	Part No.
C1 Ant. Trimmer 160 mmf	R-1072-1
C2 Osc. Trimmer 160 mmf	
C3 .05 mf 200 V	12000-05
C4 .1 mf 200 V	12000-01
C5 100 mmf Mica	12010-100
C6 .05 mf 200 V	12000-05
C7 2000 mmf Mica	12012-2000
C8 50 mmf Mica	12010-50
C9 .01 mf 400 V	12002-01
C10 100 mmf Mica	12010-100
C11 250 mmf Mica	12010-250
C12 .01 mf 400 V	12002-01
C13 .03 mf 400 V	12002-03
C14 20 mf 150 V	12104-20-20-20
C15 20 mf 150 V	
C16 20 mf 150 V	
C17 .05 mf 400 V	12002-05
C18 250 mmf Mica	12010-250
C19 10 mf 25 V	12105-10

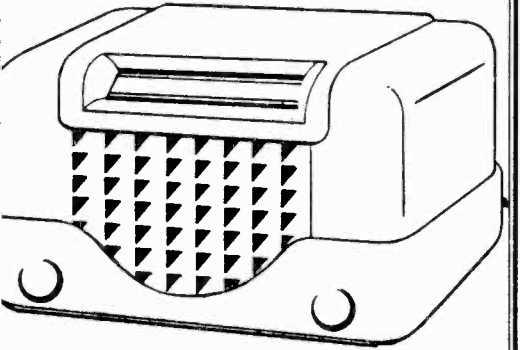
Resistors	Part No.
R1 220,000 1/2 W	11005-224
R2 33,000 1/2 W	11005-333
R3 2.2 Meg. 1/2 W	11005-225
R4 500,000 V. C. & SW	R-1043
R5 6.8 Meg. 1/2 W	11005-685
R6 47,000 1/2 W	11005-473
R7 470,000 1/2 W	11005-474
R8 470,000 1/2 W	11005-474
R9 150 1/2 W	11005-151
R10 150 1/2 W	11005-151
R11 1200 1W	11008-222
R12 100 1/2 W	11005-101

Coils & Transformers	Part No.
L1 R. F. Coil	R-1182
L2 Osc. Coil	R-1183
L3 Tracking Coil	R-1185
L4 Loop	R-1075
L5 Primary Coil	R-1186
T1 1st IF	R-1023-1
T2 2nd IF	R-1023-2
T3 Output Trans.	R-1040-1
L6 Ant. Coil	R-1093

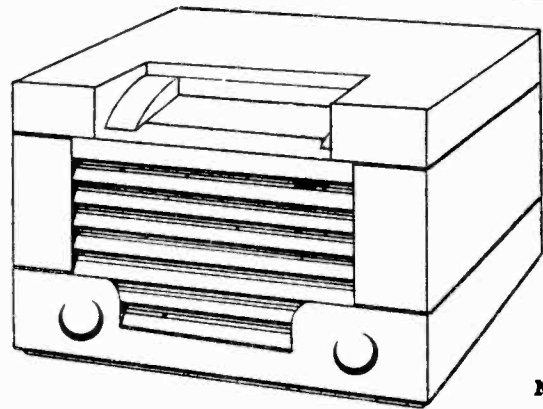
Power Supply
105 to 125 Volts AC or DC
Power Consumption 30 Watts
Tuning Range 540 KC to 1625 KC
Circuit 5 tube superheterodyne. Built in Antenna with provision for connecting external antenna. Do not connect ground to receiver.

Cabinet & Accessories	Part No.
Cabinet Mod. 501—Plastic	R-5000
Cabinet Mod. 512—Wood	R-5004
Knobs	R-1032

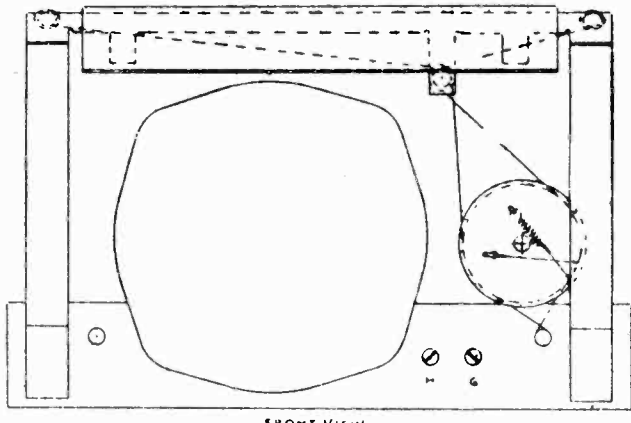
Miscellaneous	Part No.
Spk Speaker	R-1046
P1 Mazda No. 47	R-6005
Pilot Light Socket	R-1098
Dial—Glass	R-1052
Dial—String	10132
Dial—Pointer	R-1255-1
Dial—Spring	10083
Diffusion Screen	R-1194
Pulley	R-1013
Line Cord	10111-1
Tuning Shaft, Model 501 — R-1180, Model 512 — R-1159	
Dial Glass Clip	R-1197



Model 501

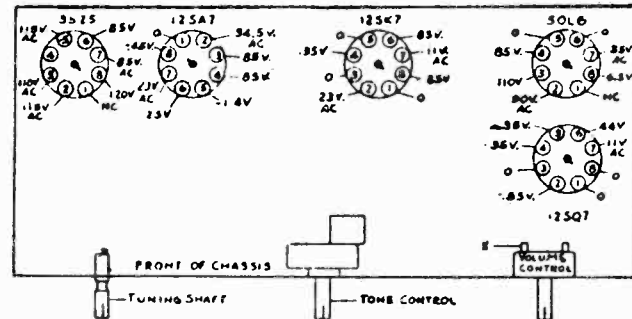


Model 512



FRONT VIEW

MODELS 501, 512; 509, 518



VOLTAGE DIAGRAM (BOTTOM VIEW)

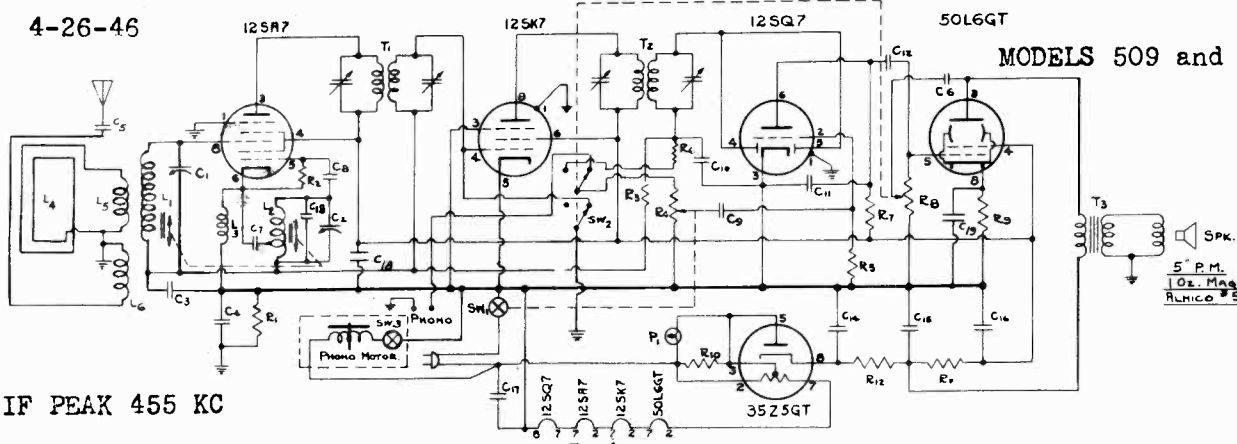
VOLTAGE DATA

Measured in 115 Volt line.
Volume control in maximum position.
Dial tuned to low frequency end — no signal.
Readings taken between tube socket and B—bus—point x on volume control.
Voltages measured with high resistance voltmeter, 20,000 ohm per volt preferable.

MODELS 501,512 MODELS 509,518 AVIOLA RADIO CORP.

4-26-46

MODELS 509 and 518



IF PEAK 455 KC

Capacitors		Coils & Transformers	
Part No.	Part No.	Part No.	Part No.
C1 Ant. Trimmer 160 mmf	R-1027-1	L1 R. F. Coil	R-11162
C2 Osc. Trimmer 160 mmf	12000-05	L2 Osc. Coil	R-11163
C3 .05 mf 200 V	12000-1	L3 Tracking Coil	R-11165
C4 1 mf 200 V	12010-100	L4 Loop	R-10776
C5 100 mmf Mica	12012-1000	L5 Primary Coil	R-11166
C6 1000 mmf Mica	12012-2000	T1 1st IF	R-1025-1
C7 2000 mmf Mica	12010-50	T2 2nd IF	R-1025-2
C8 50 mmf Mica	12002-01	T3 Output Trans.	R-1040-1
C9 .01 mf 400 V	12010-100	L6 Antenna Coil	R-10993
C10 100 mmf Mica	12010-250		
C11 250 mmf Mica	12010-250		
C12 .01 mf 400 V	12010-250		
C13 250 mmf Mica	12010-250		
C14 20 mf 150 V	12104-20-20-20		
C15 20 mf 150 V			
C16 20 mf 150 V			
C17 .05 mf 400 V	12002-05		
C18 .05 mf 200 V	12000-05		
C19 10 mf 25 V	12105-10		

Resistors		Miscellaneous	
Part No.	Part No.	Part No.	Part No.
R1 220,000 1/2 W	11005-224	Spk Speaker	R-1046
R2 33,000 1/2 W	11005-333	P1 Mazda No. 47	R-6005
R3 2.2 Meg. 1/2 W	11005-225	Pilot Light Socket	R-1098
R4 500,000 V. C. & SW	R-1043-2	Dial—Glass	R-1052
R5 8.8 Meg. 1/2 W	11005-685	Dial—String	10132
R6 47,000 1/2 W	11005-473	Dial—Pointer	R-1255-1
R7 220,000 1/2 W	11005-224	Dial—Spring	10083
R8 500,000 T. C.	R-1247	Diffusion Screen	R-1194
R9 150 1/2 W	11005-151	Pulley	R-1013
R10 150 1/2 W	11005-151	Line Cord	10111-1
R11 1200 1W	11006-122	Chassis—Mtg. screw	10019-8-14
R12 330 1W	11008-331	Tuning Shaft	R-1159

Cabinet & Accessories		Phonograph Unit	
Part No.	Part No.	Part No.	Part No.
Cabinet	R-5002	Phono Motor & Turntable Assem.	RC-206 or RC-207
Knobs	R-1051	Pickup Arm Assem.	RC-251
Lid Bracket	R-3056	Motor Switch	RC-148

Specifications: These combinations are available for both 110V-60 Cycle and 50 Cycle AC.

WARNING: DO NOT USE ON DC
Each instrument is shipped operating on 110V-60 Cycle. Additional motor bushings will be supplied to each dealer desiring 50 Cycle operation.

Power Supply
105 to 125 Volts 50 or 60 Cycle AC

Power Consumption
50 Watts AC

Tuning Range
540 KC to 1625 KC

Circuit
5 tube superheterodyne. Built in Antenna with provision for connecting external antenna. Do not connect ground to receiver.

501,512 ALIGNMENT PROCEDURE 509,518

Allow receiver to warm up thoroughly before alignment. Turn volume control to maximum. Connect output meter to voice coil terminals.

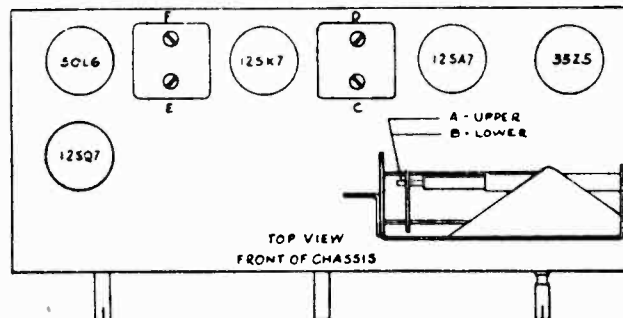
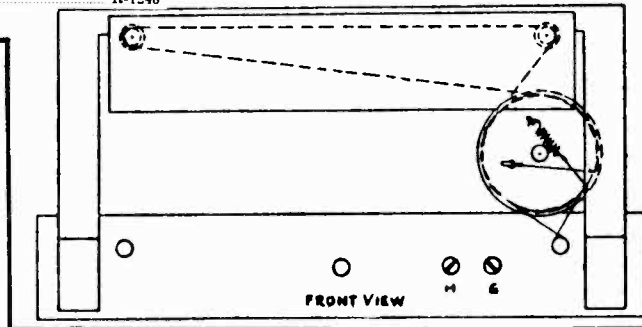
455 IF ALIGNMENT

Tune receiver to high end of dial. Connect signal generator to antenna through .0005 mf condenser. Set generator to 455 KC, tune trimmers E-F-G-D- to maximum output. Always use lowest input from signal generator that provides good output indication.

540 KC to 1640 KC ALIGNMENT

Loosely couple the signal generator to receiver by placing S.G. output lead near the pick-up antenna. (Not connected to it.) Set generator and receiver to 1400 KC.

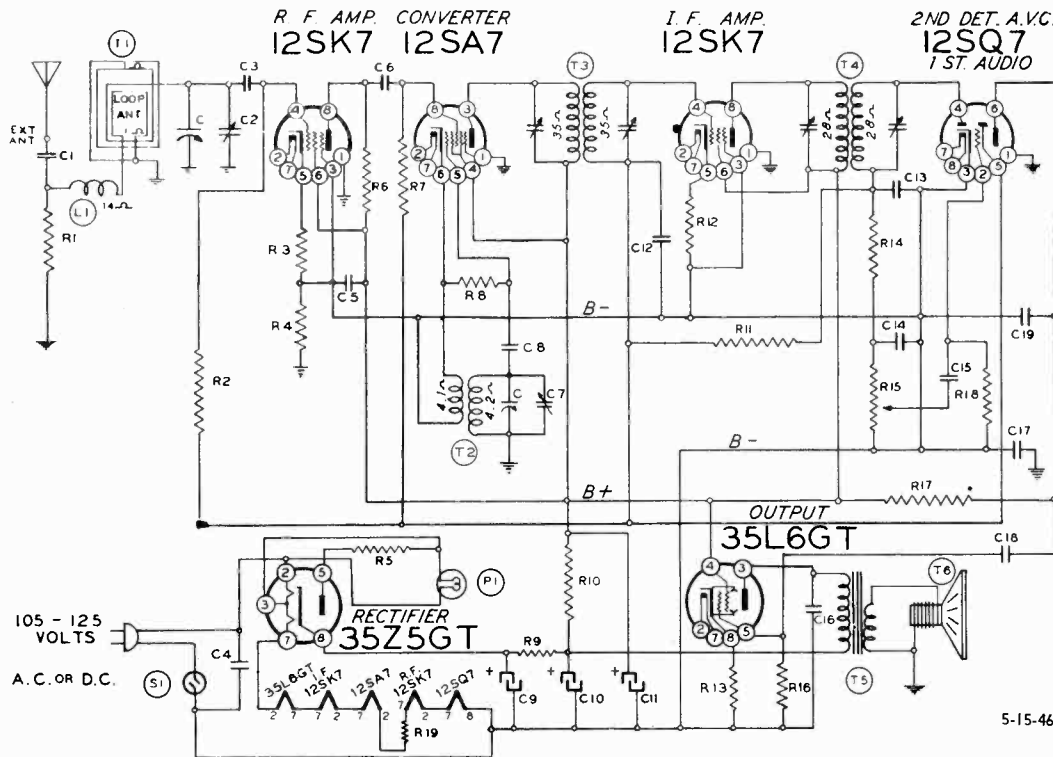
Adjust trimmer H to signal.
Adjust trimmer G to maximum output.
Set generator to 600 KC. Tune receiver to 600 KC. Adjust tuning slug A to signal meter.



Adjust tuning slug B to maximum output. Decrease signal generator output as receiver alignment provides more output to

BELMONT RADIO CORP.

MODEL 6D111, Series B



5-15-46

Tuning range	530 to 1650 Kc.	Selectivity	55 Kc. broad at 1000 x signal at 1000 Kc.
Intermediate frequency	455 Kc.	Power output (in voice coil)	
Power consumption	35 Watts	Undistorted	0.8 watt
Sensitivity (for 0.05 watt output)	10 microvolts average	Maximum	1.0 watt
		Voice coil impedance	3.2 ohms

DIAL PARTS

115448	End plate (right hand bracket)
115448C	End plate (left hand bracket)
115146	Cams
115143	Key washer (13 used on cam shaft)
117528	Brass spacer (one used on cam shaft)
117602	Brass spacer (four used on cam shaft)
131181	Spring washers, for locking collar
117604	Locking collar
117600	Lever shaft
115361	Lever with roller
120283	Return spring for levers
115449B	Dial bracket assembly
112735	Pointer
A-53A-10989	Drive cord, 6 inches used
A-49A-11087	Spring on tuning shaft, for cord
A-3N-11086	Spacer under above spring
120143	Take-up spring for drive cord
B-6D-10241	Dial scale
112659	Crystal, clear, for dial scale
A-2M-7758	Cinch buttons for fastening scale to bracket
117833	Brass spacer (for spacing pointer from dial)

MISCELLANEOUS

10798	Line cord and plug
101218	Volume control and switch, 1 megohm
B-8A-10211	2-gang variable condenser
107249	Pilot light bulb, type T-47
134123	Rubber bumper (bottom of cabinet)
128495B	Cardboard back
131193	Cinch buttons, for fastening back to cabinet
13141	Cinch buttons, to cover trimmer holes in cabinet
128292B-8	Pushbuttons
112784	Station call letters, set
112606	Acetate tabs for call letters
128473-9	Cabinet, bakelite
128496-8	Knob, volume
A-5B-10994-9	Knob, tuning
A-3F-10995	Locking screw for tuning knob
120388	Locking spring for tuning knob
A-2H-10715	Tube shield (for metal-base 12SA7GT)
A-2H-11271	Tube shield (for bakelite-base 12SA7GT)

CONDENSERS

C-8D-10778	C1, C15	.002 x 600 volts, +40%, -15%
1292	C3	.0005, mica, ±20%
1001	C4	.1 x 400 volts, +50%, -10%
1006	C5	.25 x 200 volts, ±20%
1295	C6, C8, C19	.0001, mica, ±20%
11994	C9, C10, C11	Electrolytic (for 60-cycle sets), 40 mfd. x 150 volts, 20 mfd. x 150 volts, 20 mfd. x 150 volts.
A-8C-10946	C9, C10, C11	Electrolytic (for 25-cycle sets), 60 mfd. x 150 volts, 40 mfd. x 150 volts, 40 mfd. x 150 volts.
1009	C12	.05 x 200 volts, ±25%
129161	C13	.05 x 200 volts, ±25%
10026	C14	Dual .0001, mica, +25%, -10%
100110	C16	.02 x 400 volts, ±25%
100106	C17	.2 x 400 volts, +5%, -20%
	C18	.004 x 600 volts, ±10%

RESISTORS *

C-9B1-70	R1	4700 ohms, ½ watt, ±10%
C-9B1-31	R2	1 megohm, ½ watt, ±20%
C-9B1-50	R3	100 ohms, ½ watt, ±10%
C-9B1-26	R4	150,000 ohms, ½ watt, ±20%
C-9B1-42	R5	22 ohms, ½ watt, ±10%
C-9B1-17	R6	4700 ohms, ½ watt, ±20%
C-9B1-25	R7	100,000 ohms, ½ watt, ±20%
C-9B1-23	R8, R14	47,000 ohms, ½ watt, ±20%
C-9B2-53	R9	180 ohms, 1 watt, ±10%
C-9B2-63	R10	1200 ohms, 1 watt, ±10%
C-9B1-34	R11	3.3 megohms, ½ watt, ±20%
C-9B1-52	R12, R13	150 ohms, ½ watt, ±10%
C-9B1-29	R16	470,000 ohms, ½ watt, ±20%
C-9B1-27	R17	220,000 ohms, ½ watt, ±20%
C-9B1-35	R18	4.7 megohms, ½ watt, ±20%
C-9B2-44	R19	33 ohms, 1 watt, ±10%

COILS

12310	L1	Load coil
B-13E-10242	T1	Loop antenna assembly, complete on back
A-13D-10215	T2	Oscillator coil
108140H	T3	Input I.F. coil in can, 455 Kc.
108145	T4	Output I.F. coil in can, 455 Kc.

SOCKETS

121210		8-prong octal tube sockets, molded
121171		8-prong socket for 12SK7, laminated
121216		Socket base, bakelite
107271		Pilot light socket assembly

SPEAKER

114197	T6	5-inch P.M. speaker
105104	T5	Output transformer for speaker

ALIGNMENT PROCEDURE

- No aligning adjustments should be attempted until all other possible causes of trouble have been checked.
- Chassis must be removed from cabinet for proper alignment. Slight adjustments of the oscillator and antenna circuits can be made, without removing the chassis, through two holes provided on the bottom of the cabinet. The two adjustment screws can be reached with a long insulated screwdriver.
- It is important that during alignment the loop antenna

- be maintained at the same distance from the chassis as when the chassis is installed in the cabinet.
- Turn volume control to maximum for all adjustments.
- Connect ground post of signal generator to B- of radio through a 0.1 mfd. condenser.
- Connect dummy antenna valve in series with generator output lead.
- Connect output meter across primary of output transformer.

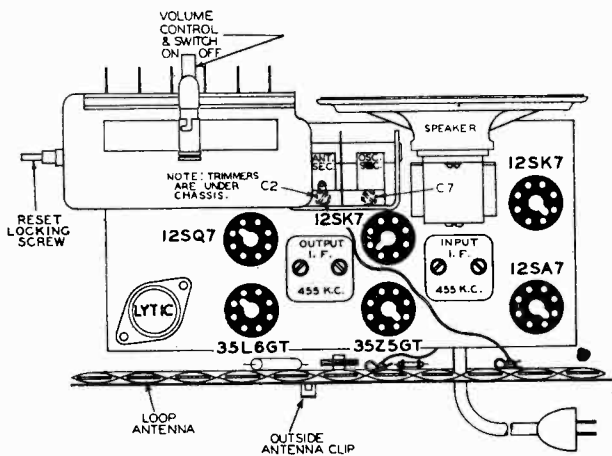
Band	Signal Generator Frequency Setting	Dummy Antenna	Connection to Radio	Tuning Condenser Setting	Adjust for Maximum Output (see chassis view)
I.F.	455 Kc.	0.1 mfd.	Grid of 12SA7	Rotor full open (plates out of mesh)	4 trimmers on input and output I.F. transformers
Broadcast	1650 Kc.	0.1 mfd.	Grid of 12SA7	Rotor full open (plates out of mesh)	Oscillator trimmer C7 on bottom of radio
	1400 Kc.	None	See note A	Set dial at 1400 Kc.	Antenna trimmer C2 on bottom of radio

Note A: Lay output lead of generator in back of loop antenna. Turn up generator output. Loop antenna will pick up energy.

REPLACING DIAL POINTER DRIVE CORD

Six inches of cord are required in the set. Use a piece slightly longer so that knots may be tied at each end. Numbers below correspond to circled numbers in diagram.

1. Rotate tuning knob to extreme clockwise position. This closes tuning condenser. Knob should remain in this position until installation is completed.
2. Tie cord to loop in spring as shown. Wind cord one turn around shaft in direction shown.
3. Pass cord over idler pulley.
4. Pass cord over pointer shaft; wind it one turn around shaft; pass it through key washer; wind it one more turn around shaft.
5. Hook spring over end of dial support. Tie cord to spring. **IMPORTANT:** Before tying knot stretch spring enough so that full contraction of spring will rotate pointer shaft at least one-half turn.
6. Remove dial crystal by removing Cinch buttons.
7. Make sure tuning knob is in extreme clockwise position. Then rotate pointer clockwise, against friction of shaft, until it is in horizontal position, as shown.

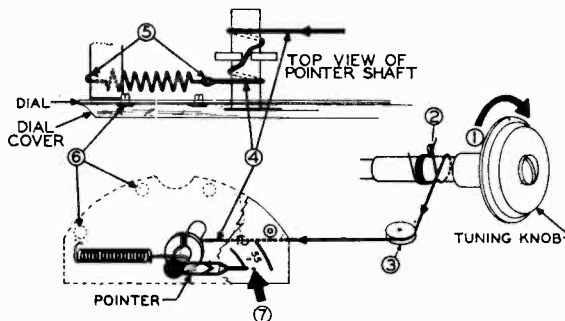


CHASSIS VIEW, SHOWING TUBE LOCATIONS

SETTING THE PUSHBUTTONS

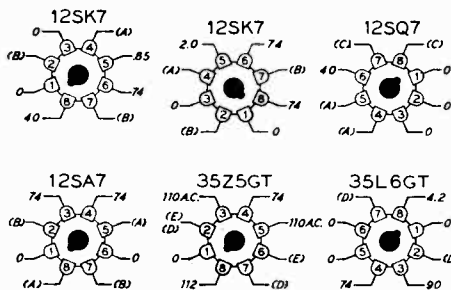
The pushbuttons may be used, after proper adjustment, for the automatic tuning of any six stations which you select. They can be set up in any order.

1. Turn on the radio. Allow it to warm up for at least one minute.
2. Push out the call letters of the six stations from the call-letter sheets supplied with this manual.
3. Insert one call-letter tab in the rectangular opening in each of the pushbuttons, in any sequence. Press an acetate tab (supplied in small envelope) into each of the pushbuttons.
4. With the screwdriver supplied, check to see that the locking screw in the center of the tuning knob (see illustration) is loose. If it is not, turn it several turns to the left (counterclockwise).
5. Press the first pushbutton down all the way. With one hand hold the button down firmly and with the other carefully tune in the desired station. Release the pushbutton.
6. Follow this procedure for each of the five other buttons, adjusting each one for a different station.
7. Rotate the tuning knob on the side of the cabinet as far to the right as it will go. Tighten the locking screw in the center of the knob. **IT IS IMPORTANT THAT THIS SCREW BE TIGHTENED VERY FIRMLY.**
8. The pushbuttons are now properly set for automatic tuning. Any of the six stations may now be tuned in simply by pressing the proper button down as far as it will go. If it is desired to reset any of the buttons for a new station, loosen the locking screw in the center of the tuning knob, set the pushbutton as described above, and re-tighten the locking screw.



A-CANNOT BE MEASURED WITH VOLTMETER.
 B-12 VOLTS A.C. MEASURED ACROSS PINS 2 & 7.
 C-12 VOLTS A.C. MEASURED ACROSS PINS 7 & 8.
 D-30 VOLTS A.C. MEASURED ACROSS PINS 2 & 7.
 E-117 VOLTS A.C. MEASURED ACROSS PINS 2 & 6.

VOLTAGES MEASURED WITH 1000 OHM PER VOLT VOLTMETER BETWEEN SOCKET TERMINALS & B- LINE VOLTAGE 117 VOLTS AC. VOLUME CONTROL AT MINIMUM.

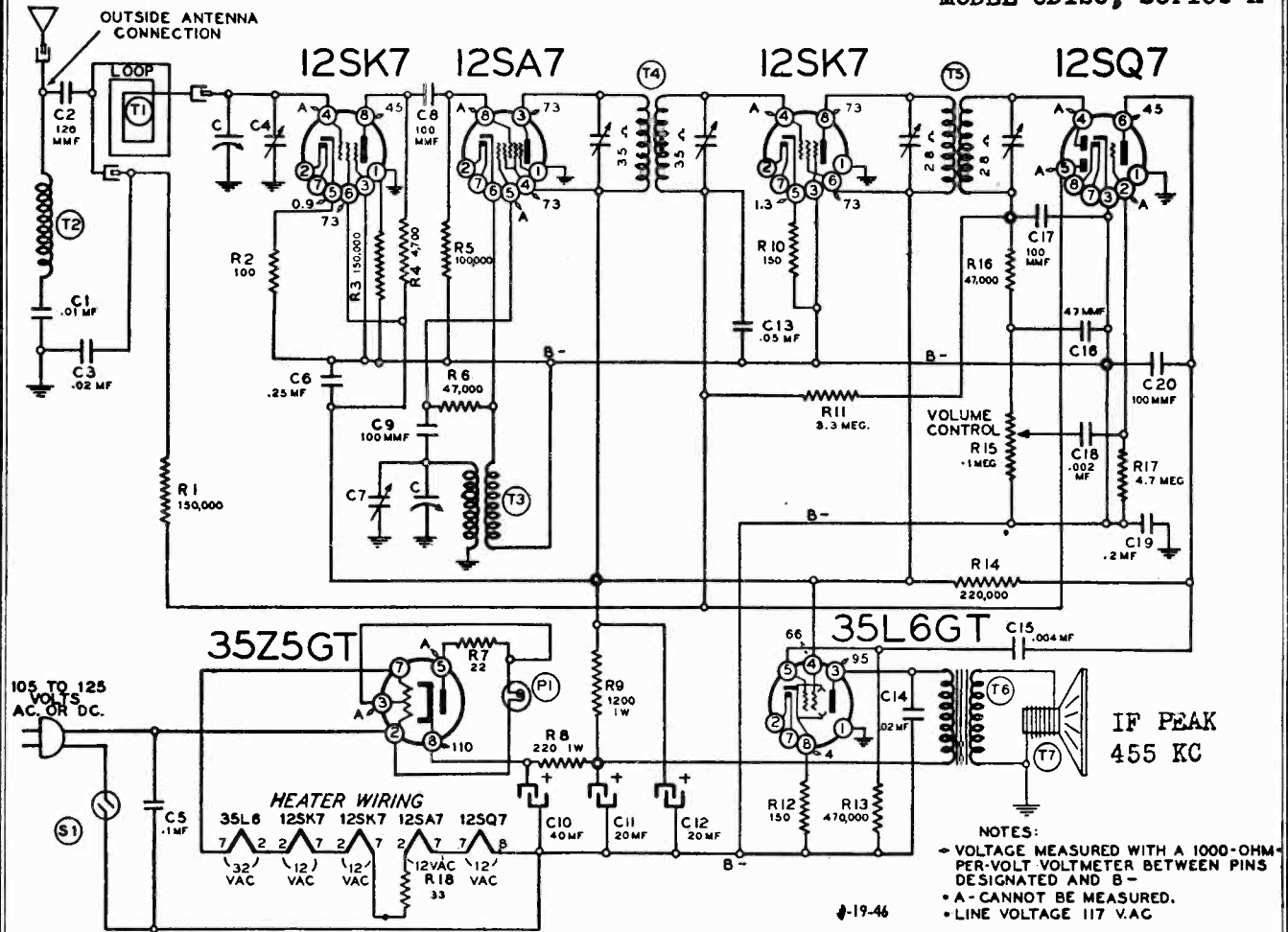


BOTTOM VIEW OF CHASSIS

VOLTAGES AT TUBE SOCKET TERMINALS

BELMONT RADIO CORP.

MODEL 6D120, Series A



NOTES:
 → VOLTAGE MEASURED WITH A 1000-OHM PER-VOLT VOLTMETER BETWEEN PINS DESIGNATED AND B-
 • A- CANNOT BE MEASURED.
 • LINE VOLTAGE 117 V.AC

CAPACITORS*

C2, C4, C7	B-8A-10211	Two-gang, including antenna and oscillator trimmers
C1	C-8D-10761	.01 mf, 400 volts, 20%
C2	C-8F3-114	120 mmf, 500 volts, 10%, mica
C3, C14	C-8D-10774	.02 mf, 400 volts, 20%
C5	C-8D-10760	.1 mf, 400 volts, +20%—10%
C6	C-8D-10775	.25 mf, 200 volts, +20%—10%
C8, C9	C-8F3-8	100 mmf, 500 volts, 20%, mica
C17, C20		
C10, C11, C12	11994 or 11995	Electrolytic for 60 cycles; 40 mf, 20 mf x 150 volts
C13	C-8D-10770	.05 mf, 200 volts, 20%
C15	C-8D-10788	.004 mf, 600 volts, 20%
C16	C-8F3-6	47 mmf, 500 volts, 20%, mica
C18	C-8D-10778	.002 mf, 600 volts, +40%—15%
C19	C-8D-10942	.2 mf, 400 volts, +30%—10%

RESISTORS*

R1, R3	C-9B1-26	150,000 ohms, 1/2 watt, 20%
R2	C-9B1-50	100 ohms, 1/2 watt, 10%
R4	C-9B1-70	4700 ohms, 1/2 watt, 10%
R5	C-9B1-25	100,000 ohms, 1/2 watt, 20%
R6	C-9B1-82	47,000 ohms, 1/2 watt, 10%
R7	C-9B1-42	22 ohms, 1/2 watt, 10%
R8	C-9B2-54	220 ohms, 1 watt, 10%
R9	C-9B2-63	1200 ohms, 1 watt, 10%
R10, R12	C-9B1-52	150 ohms, 1/2 watt, 10%
R11	C-9B1-34	3.3 megohms, 1/2 watt, 20%
R13	C-9B1-29	470,000 ohms, 1/2 watt, 20%
R14	C-9B1-27	220,000 ohms, 1/2 watt, 20%
R15, S1	101193	Volume control (1 megohm) and on-off switch
R16	C-9B1-23	47,000 ohms, 1/2 watt, 20%
R17	C-9B1-35	4.7 megohms, 1/2 watt, 20%
R18	C-9B2-44	53 ohms, 1 watt, 10%

COILS AND TRANSFORMERS

T1, T2	B-212-11062 or B-212-11404	Loop antenna assembly, including capacitors C1 and C2, coil T2, and cardboard back.
T3	A-13D-10215	Oscillator coil
T4	108140C	Input I.F. coil complete in can. Range of trimmers: 56-104 mmf
T5	108145C	Output I.F. coil complete in can. Range of trimmers: 56-104 mmf
T6	10595B	Output transformer

TUNER MECHANICAL PARTS

115146	Cams (6 used on cam shaft)
115145	Key washers (12 used)
117528	Spacer (1 used on shaft)
117602	Spacer (4 used on shaft)
117604	Locking collar
131181	Spring washer for collar
A-3N-11086	Spacer on shaft for drive cord
A-49A-11087	Spring on shaft for drive cord
115361	Cam lever with roller
120283	Return spring for lever
112785	Pointer
A-53A-10989	Drive cord (6 inches)
120143	Tension spring for drive cord
B-6D-10241	Dial scale
or B-6D-10241-1	Dial scale
112659	Crystal for dial scale
B-2M-10383	Snap-in rivets (4) for crystal

MISCELLANEOUS

T7	114191B	Speaker, 5-inch, P.M.
	121171	Socket for tube (6 used)
	10798D	Line cord and plug
P1	107249	Dial lamp, 6-8 volts, T-47
	107271	Socket assembly for dial lamp
	A-2H-11271	Tube shield for bakelite-base 12SA7GT
	A-2H-10715	Tube shield for metal-base 12SA7GT
	128334B-9	Cabinet, ivory
	A-5B-11249-8	Knob, volume, ivory
	B-5B-10994-9	Knob, tuning, ivory
	120388	Locking spring for tuning knob
	A-3F-10095	Locking screw in tuning knob
	12892B-8	Pushbutton, ivory
	134125	Rubber bumper for bottom of cabinet
	131193	Snap-in rivets (4) for mounting back
	112784	Station call letters, 1 set
	112606	Acetate tabs for call letters

NOTE ON TUBE REPLACEMENT
 Replace a defective metal 12SK7 tube with another metal tube. Replace a glass 12SK7 tube with a metal tube or with an exact duplicate of the tube now in the set.

*The values of the resistors and mica capacitors listed above are based on RMA standards. Due to conditions beyond our control, some receivers have been shipped with components of pre-standardized values. This receiver will operate equally well with components of either group. An illustration of the differences follows:

Pre-standardized value—200,000 ohms, 20%, 1/3 watt
 RMA value—220,000 ohms, 20%, 1/2 watt
 Pre-standardized value—50 mmf, 500 volts, 20%
 RMA value—47 mmf, 500 volts, 20%

MODEL 6D120, Series A

BELMONT RADIO CORP.

ALIGNMENT PROCEDURE

(Refer to Chassis View for location of trimmers)

- Output meter across 3.2-ohm output load.
- Align for maximum output. Reduce input as needed to keep output near 0.4 volts.
- Volume control at maximum for all adjustments.
- Connect ground post of signal generator to B— of radio.
- Chassis must be removed from cabinet for proper alignment. Slight adjustments of the oscillator and antenna circuits can be made, without removing the chassis, through two holes provided on the bottom of the cabinet. The screws can be reached with a long screwdriver.

SIGNAL GENERATOR			TUNER SETTING	ADJUST FOR MAXIMUM OUTPUT (in order shown)
Frequency	Dummy Antenna	Connection to Radio		
455 kc	.1 mf	Grid (pin 8) of 12SA7	Plates out of mesh	Trimmers on output and input I.F. cans
1650 kc	.1 mf	Grid (pin 8) of 12SA7	Plates out of mesh	Oscillator trimmer C7 on bottom of gang
1400 kc	200 mmf	See note below	Set dial at 1400 kc	Antenna trimmer C4 on bottom of gang

Note: Lay output lead of generator in back of loop antenna. Turn up generator output. Loop will pick up energy.

SETTING THE PUSHBUTTONS—The pushbuttons may be used, after proper adjustment, for the automatic tuning of any six stations on the standard broadcast band. They can be set up in any order.

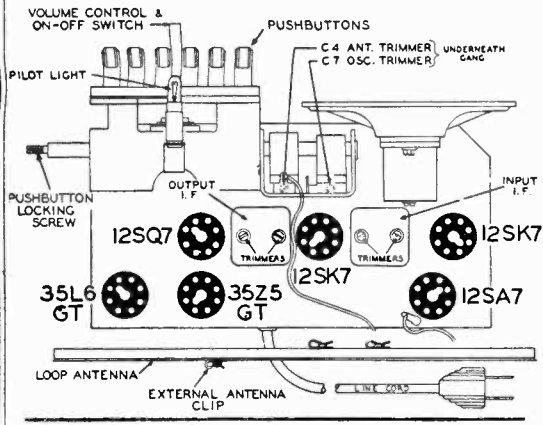
1. Turn on the radio.
2. Push out the call letters of the six stations from the call-letter sheets supplied with this manual.
3. Insert one call-letter tab in the rectangular opening in the front of each pushbutton, in any order. Press an acetate tab (supplied in small envelope) into each of the pushbuttons.
4. With the screwdriver supplied, check to see that the locking screw in the center of the tuning knob (see front view) is loose. If it is not, turn it several turns to the left (counterclockwise).
5. Press the first pushbutton down *all the way*. With one hand hold the button down firmly and with the other carefully tune in the desired station. Release the pushbutton.

knob. IT IS IMPORTANT THAT THIS SCREW BE TIGHTENED VERY FIRMLY.

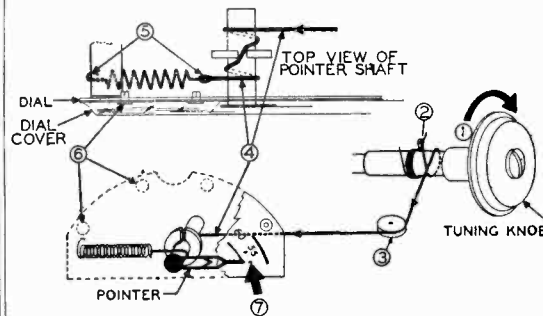
8. The pushbuttons are now properly set for automatic tuning. Any of the six stations may be tuned in simply by pressing the proper button down as far as it will go. If you wish to reset any of the buttons for a new station, loosen the locking screw, set the pushbutton as described above, and re-tighten the locking screw.

DIAL LIGHT—If the dial lamp burns out the set should not be operated until a new lamp has been installed. Failure to heed this caution may result in a burned-out 35Z5GT tube. To replace the lamp, first remove the four buttons which hold the back to the cabinet. On the inside of the back unclip the green, black, and white wires clipped to the back. The Chassis View illustration shows the location of the dial lamp. Pull the lamp bracket toward the rear of the radio. The lamp can now be removed and replaced. Use a 6- to 8-volt lamp, type T-47. When replacing the back on the cabinet, connect the green wire to the green-painted clip, the black wire to the black-painted clip, and the white wire to the unpainted clip.

6. Follow this procedure for each of the five other buttons, setting each one for a different station.
7. Rotate the tuning knob on the side of the cabinet as far to the right as it will go. Tighten the locking screw in the center of the



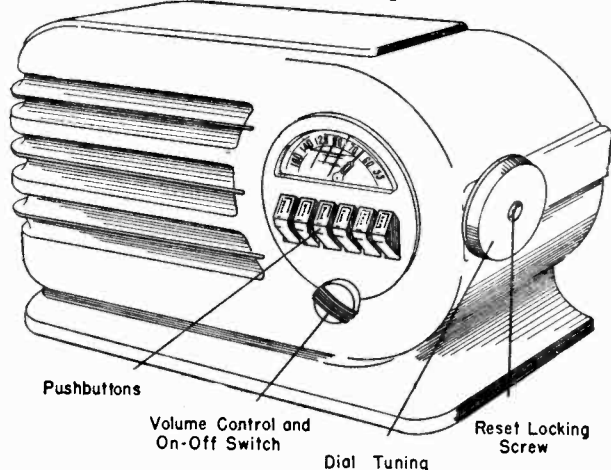
Chassis View



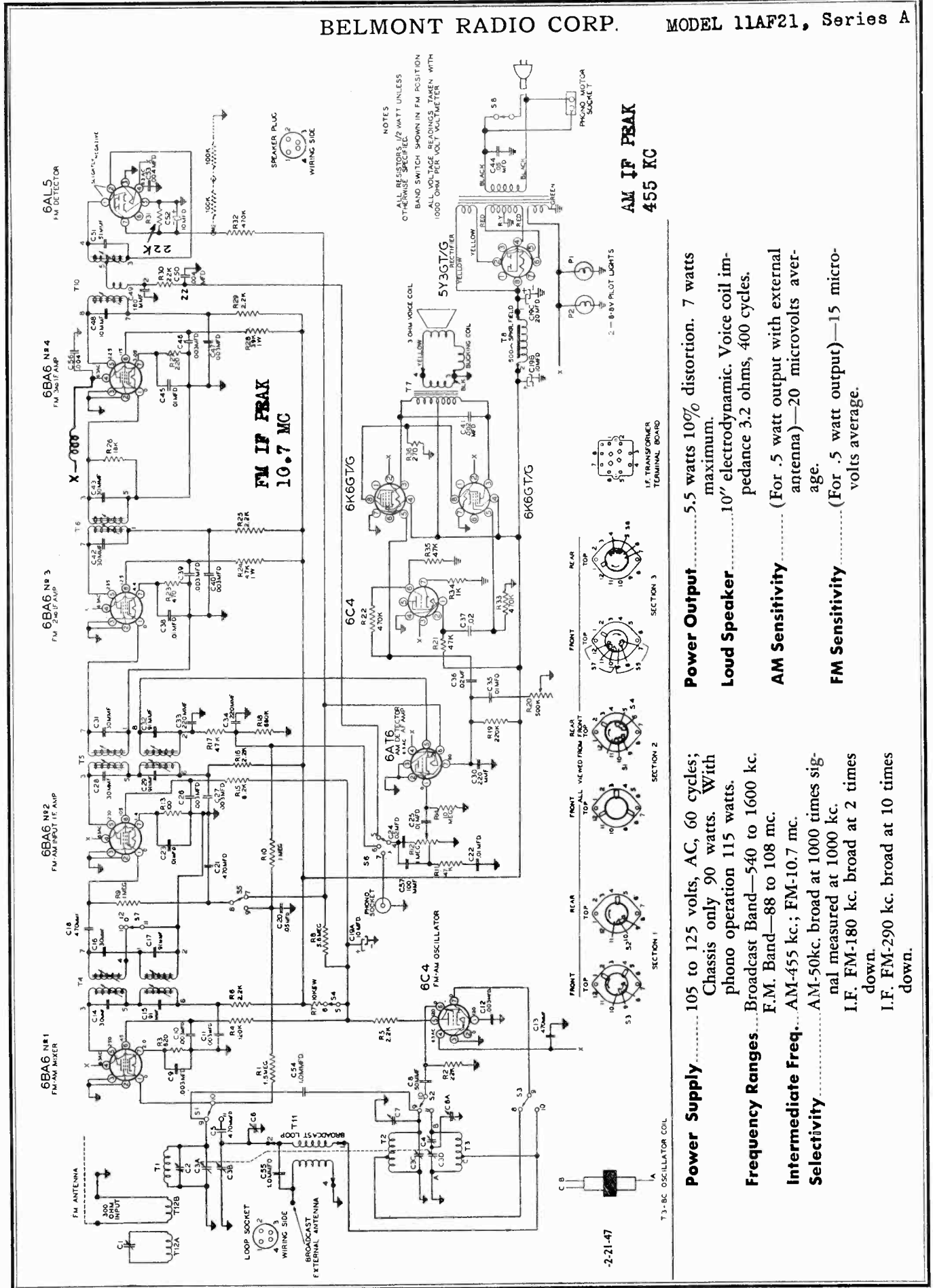
REPLACING DIAL POINTER DRIVE CORD

Six inches of cord are required. Numbers below correspond to circled numbers in diagram.

1. Rotate tuning knob to extreme clockwise position.
2. Tie cord to loop in spring as shown.
3. Pass cord over idler pulley.
4. Pass cord OVER pointer shaft; wind it one turn around shaft; pass it through key washer, then once more around shaft.
5. Hook spring over end of dial support. Tie cord to spring. IMPORTANT: Full contraction of spring must rotate pointer shaft at least one half turn.
6. Remove dial crystal by removing snap-in rivets.
7. Make sure tuning knob is in extreme clockwise position. Then rotate pointer clockwise, against friction of shaft, until it is in a horizontal position, as shown.



BELMONT RADIO CORP. MODEL 11AF21, Series A



AM IF PBAK
455 KC

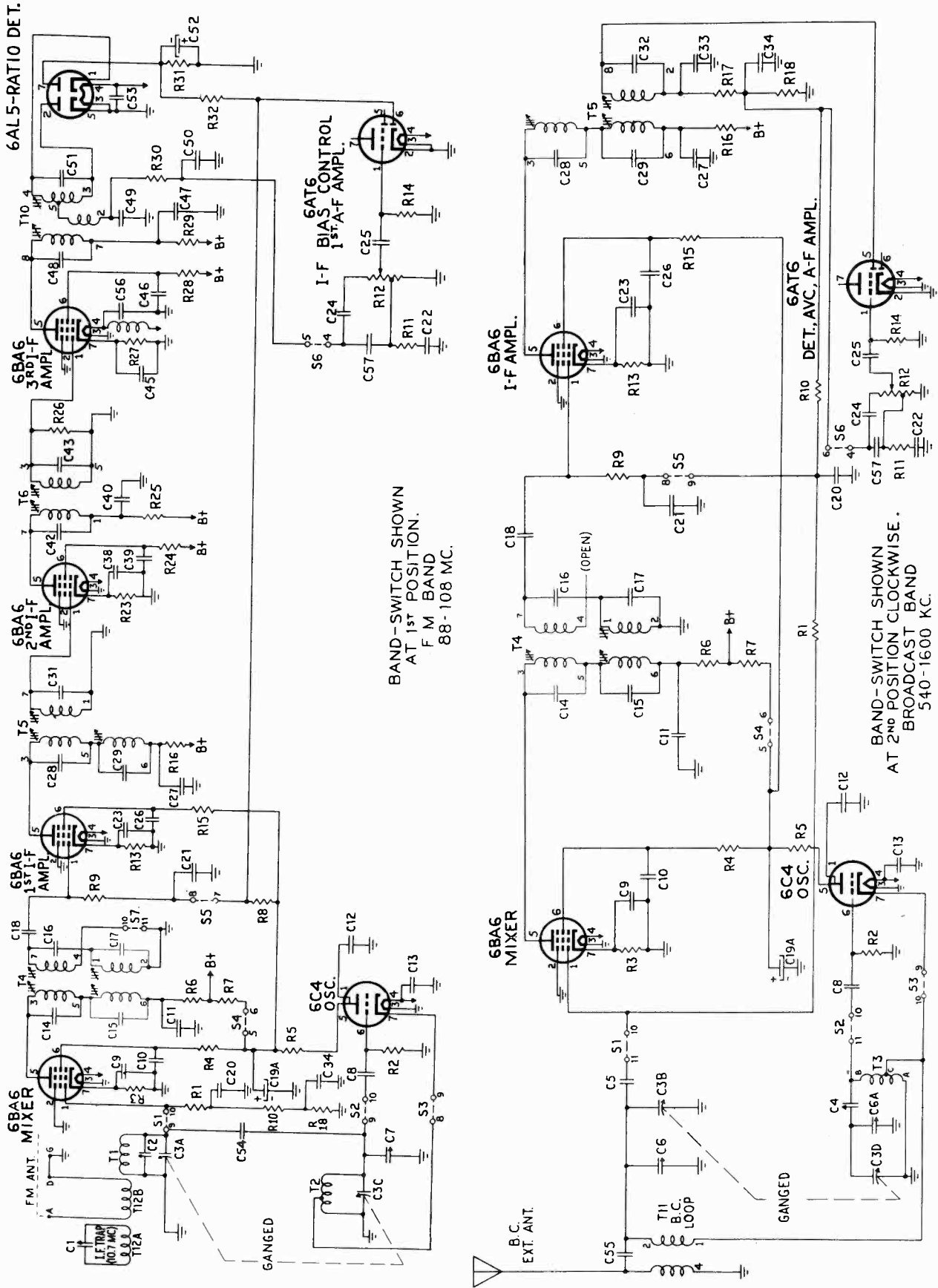
FM IF PBAK
10.7 MC

- Power Output**..... 5.5 watts 10% distortion. 7 watts maximum.
- Loud Speaker**..... 10" electrodynamic. Voice coil impedance 3.2 ohms, 400 cycles.
- AM Sensitivity**..... (For .5 watt output with external antenna)—20 microvolts average.
- FM Sensitivity**..... (For .5 watt output)—15 microvolts average.

- Power Supply**..... 105 to 125 volts, AC, 60 cycles; Chassis only 90 watts. With phono operation 115 watts.
- Frequency Ranges**..... Broadcast Band—540 to 1600 kc. F.M. Band—88 to 108 mc.
- Intermediate Freq.**..... AM-455 kc.; FM-10.7 mc.
- Selectivity**..... AM-50kc. broad at 1000 times signal measured at 1000 kc. I.F. FM-180 kc. broad at 2 times down. I.F. FM-290 kc. broad at 10 times down.

MODEL 11AF21, Series A

BELMONT RADIO CORP.



BELMONT RADIO CORP.

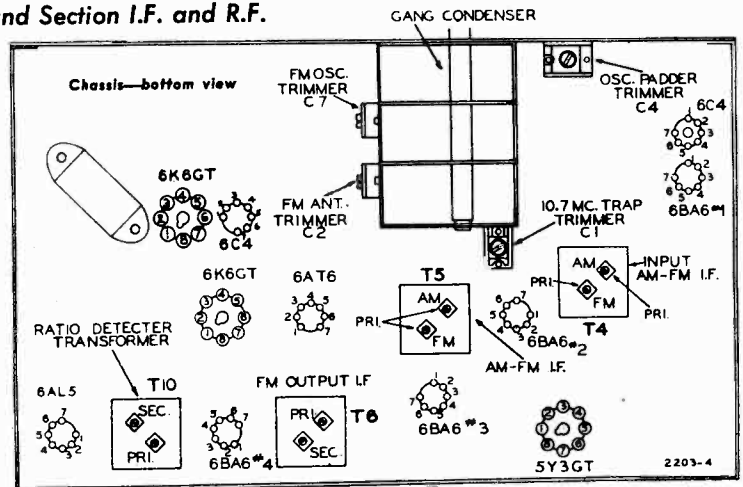
MODEL 11AF21, Series A

ALIGNMENT PROCEDURE

Broadcast Band Section I.F. and R.F.

The alignment procedure below includes the sensitivities at the inputs of various stages. All signal input values are based on an output of 1/2 watt. This may be measured by disconnecting the speaker voice coil and substituting a 3.2-ohm resistor across the secondary winding of the output transformer. A reading of 1.3 volts AC across this resistor will be approximately equivalent to a 1/2-watt output with the speaker connected. The volume control must be set at maximum. The tone control must be set for maximum treble.

The signal source must be an accurately calibrated signal generator capable of supplying the frequencies designated, modulated 30% with a 400-cycle audio signal. A 400 cycle audio signal is required for the audio measurement. Variations in sensitivities of plus or minus 25% are usually permissible.



AM - I. F. ALIGNMENT

Band Switch in AM Position. Tune Set to 1400 Kc. Dummy Antenna .1 Mfd.

Signal Generator Frequency	Connection to Radio	Adjustment to Be Made	Adjust for
455 Kc. Use 2100 microvolts	Pin No. 1 of 6BA6 No. 2 and ground	Primary and Secondary of T5 AM windings. See top and bottom views	Maximum output. Should be 1/2 watt
455 Kc. Use 64 microvolts	Pin No. 1 of 6BA6 No. 1 and ground	Primary and Secondary of T4 AM windings. See top and bottom views	Maximum output. Should be 1/2 watt
400 cycles. Use 63 millivolts	Pin No. 1 of 6AT6 and ground	None	Maximum output. Should be 1/2 watt

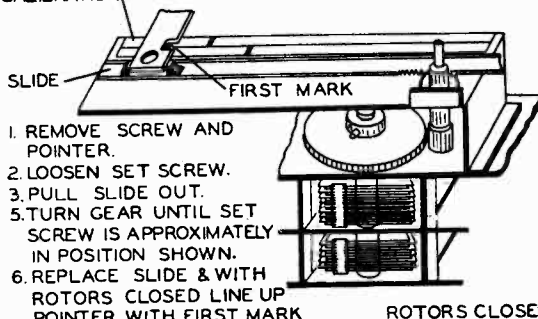
BROADCAST BAND - R. F. ALIGNMENT

Check Pointer so that the inside of the notch is exactly over the first mark to the extreme left when Gang is fully closed. For adjustment loosen set screw on large gear. (see dial mechanism illustration).

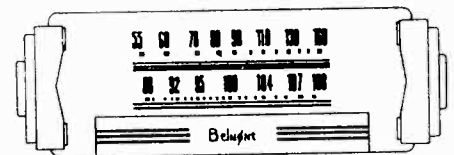
Signal Generator Frequency	Connection to Radio	Dummy Antenna	Adjust
1400 Kc. Use 15 microvolts	Antenna and Ground	200 mmf.	C6A for maximum. 1/2 watt
600 Kc. Use 25 microvolts	Antenna and Ground	200 mmf.	C4 for maximum. 1/2 watt
1400 Kc.	Antenna and Ground	200 mmf.	C6 See Note

NOTE: Recheck first two adjustments after this adjustment because of inter-locking effects.

CALIBRATION



1. REMOVE SCREW AND POINTER.
2. LOOSEN SET SCREW.
3. PULL SLIDE OUT.
5. TURN GEAR UNTIL SET SCREW IS APPROXIMATELY IN POSITION SHOWN.
6. REPLACE SLIDE & WITH ROTORS CLOSED LINE UP POINTER WITH FIRST MARK ON CALIBRATION SCALE
7. TIGHTEN SCREW.



Procedure for disassembly and assembly of dial mechanism

ALIGNMENT PROCEDURE

FM Band Section. I.F. and R.F.

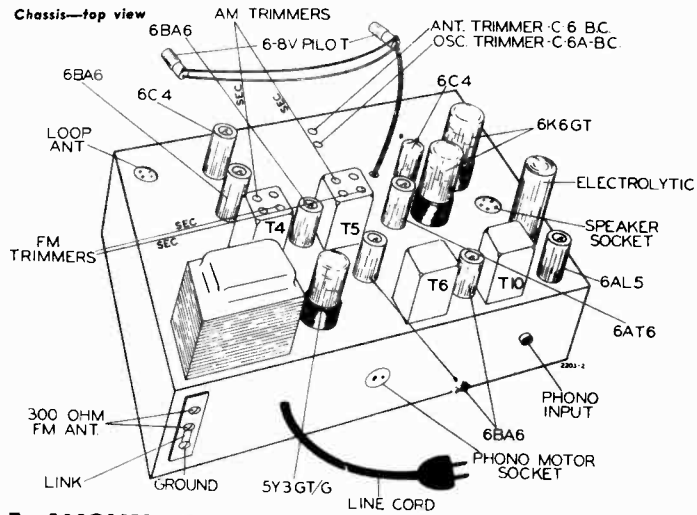
IMPORTANT

No alignment of the FM section of this radio should be attempted unless you are positive that the circuits are in need of adjustment and you have the necessary equipment. All components used in this radio are extremely stable and the tuned circuits should require no adjustment over long periods of time.

NOTE

The following alignment is based on the use of the new Simpson vacuum tube voltmeter which has a "floating ground." In other words, the meter, when used as a vacuum tube voltmeter, can have both the positive and negative sides connected to points above ground and still give true readings.

A standard AM signal generator is required.



FM - I. F. ALIGNMENT

Band Switch in FM Position. Dummy Antenna .1 Mfd.

Signal Generator Frequency	Connection to Radio	Vacuum Tube Volt Meter Connection to Radio	Adjustment to Be Made	Adjust for
10.7 Mc. Use about .1 volt	Pin No. 1 of 6BA6 No. 4 and ground	Pin No. 7 of 6AL5 and ground	Primary of T10	Resonance should be about 3 volts
10.7 Mc. Use about .1 volt	Pin No. 1 of 6BA6 No. 4 and ground	See note "A"	Secondary of T10	Zero. Use zero center scale. See note "B"
10.7 Mc. Use about 4000 microvolts	Pin No. 1 of 6BA6 No. 3 and ground	Pin No. 7 of 6AL5 and ground	Primary and Secondary of T6	Resonance should be about 3 volts
10.7 Mc. Use about 150 microvolts	Pin No. 1 of 6BA6 No. 2 and ground	Pin No. 7 of 6AL5 and ground	Primary and Secondary of 10.7 mc. windings of T5. See top and bottom views.	Resonance should be about 3 volts
10.7 Mc. Use 3000 microvolts	FM Antenna input and ground	Pin No. 7 of 6AL5 and ground	Primary and Secondary of 10.7 mc. windings of T4. See top and bottom views.	Resonance should be about 3 volts See Note "C"
10.7 Mc.	FM Antenna input and ground	Pin No. 7 of 6AL5 and ground	C1	Minimum response. This is a trap circuit

NOTES ON FM-I.F. ALIGNMENT

NOTE "A"—Connect two resistors, 100K OHMS each, from Pin No. 7 of 6AL5 to ground. These resistors must be matched within 5%. Connect as shown in dotted lines on schematic diagram. Connect vacuum tube voltmeter between the mid point of the resistors and point zz.

NOTE "B"—If T10 has been tampered with, it is possible that no cross-

over point will be found at first. Careful adjustment of both primary and secondary is necessary.

GENERAL—Input signals should be adjusted to give approximately 3 volts. The ratio detector is operating at a reasonable level at this point and will give the truest indication of correct alignment with the procedure specified.

NOTE "C"—The input microvolts specified is based on the trap circuits being adjusted.

FM - R. F. ALIGNMENT

Check Pointer so that the inside of the notch is exactly over the first mark to the extreme left when Gang is fully closed. For adjustment loosen set screw on large gear. (see dial mechanism illustration).

Signal Generator Frequency	Connection to Radio	Dummy Antenna	Adjust	Vacuum Tube Volt Meter Connection to Radio	Adjust to
100 Mc. Use about 15 microvolts	FM Antenna lead	300 ohms	C7 Osc. C2 Ant.	Pin No. 7 of 6AL5 and Ground	Resonance about 3 volts

NOTE—If a signal generator with the above fundamental frequency is not available, it is sometimes possible to use harmonics. Use extreme care in picking harmonics. An alternate procedure is to use a local

station carrier of known frequency to align the F.M. Band and to use the vacuum tube volt meter as above for resonance indication. A weak carrier, however, will not produce 3 volts.

REPLACEMENT PARTS LIST

When ordering specify part number, model number, and series

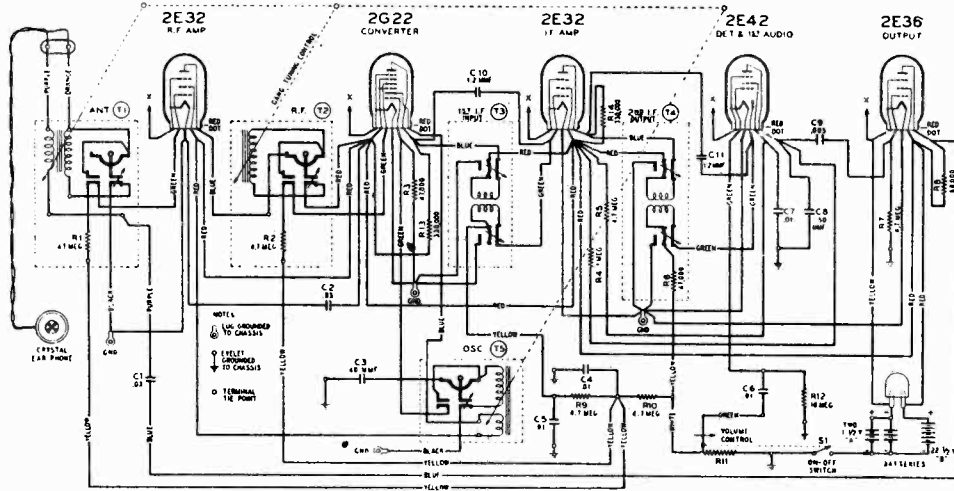
Ref. No.	Part No.	Description	Qty. Used in Set
R.F. TUNER PARTS			
CONDENSERS			
C3A-B-C-D	B-8A-11275	Two gang split stator variable	1
C2	A-8E-12079	Trimmer cond. F.M. antenna	1
C1	A-8E-11506	Trimmer cond. I.F. trap	1
C7	A-8E-11279	Trimmer cond. F.M. osc. trimmer	1
C6, C6A	A-8E-12557	Trimmer cond. B.C. antenna and oscillator	1
C4	A-8E-12177	Padder cond.—B.C. Band	1
C8	C-8G-11484	50 mmf, ±10%, ceramic	1
C55	C-18G-12408	1.0 mmf, ±2 mmf, ceramic	1
C-9-10-11-12	C-8G-11486	3000 mmf, ±20%, ceramic	4
C5-13	C-8F3-12	470 mmf, 500 volts, ±20% mica	2
RESISTORS			
R3	C-9B1-61	820 ohms, 1/2 watt, 10%	1
R12	A-10B-11263	Volume control (1 megohm)	1
R20, S8	A-11A-11262	Tone control (500M ohms) and switch	1
R5, R6	C-9B1-15	2200 ohms, 1/2 watt, 20%	2
R1	C-9B1-32	1.5 megohm, 1/2 watt, 20%	1
R2	C-9B1-78	22K megohms, 1/2 watt, 10%	1
MISCELLANEOUS			
	A-15C-11491	7-prong miniature tube socket with base	1
	A-15A-11276	Miniature tube socket, ceramic	1
	A-2H-12337	Socket shield base	1
	A-2H-11494	Tube shield	2
	200-12862	Spur gear assembly—consists of two gears, two springs and bushing	1
	A-49A-11673	Spring for above assembly	2
S1-2-3-4-5-6-7	B-20A-11261	Band switch and phono-radio switch	1
	B-2C-11188-1	Dial plate assembly with tape guide, bushing, shaft and pinion gears	1
	A-3J-11182	Pinion gear—inner side of plate	1
	A-3J-11183	Pinion gear—outer side of plate	1
	A-3A-11181	Shaft—for pinion gears	1
	B-2J-11190	Rack tape—with teeth and bracket	1
	B-2G-10588-2	Pointer	1
	A-2D-11513	Pointer bracket	1
	A-2J-11041	Pointer tension spring	1
	32F4-10830	B.H.M.S. 4-40 x 1/6 screw, to fasten pointer and bracket to tape bracket	1
COILS			
T2	A-13D-11282	88-108 mc oscillator coil	1
T1	A-13E-11283	88-108 mc antenna coil secondary	1
T12A, T12B	A-13E-11284	88-108 mc antenna coil primary with trap	1
MAIN CHASSIS PARTS			
C52	A-8C-11495	Electrolytic condenser 10 mfd x 150 volts	1
C19A, B, C	A-8C-10272	Electrolytic condenser 10 mfd x 10 mfd x 20 mfd	1
C24, C36, C37	C-8D-10774	.02 mfd x 400 v., 20%, tubular	3
C20	C-8D-10770	.05 mfd x 200 v., 20%, tubular	1
C22	C-8D-11738	.01 mfd x 200 v., 20%, tubular	1
C25, 35	C-8D-10761	.01 mfd x 400 v., 20%, tubular	2
C50, 53, 56	C-8D-10788	.004 mfd x 600 v., 20%, tubular	3
C49	C-8F3-116	180 mmfd x 500 v., 10%, mica	1
C23, 38, 45	C-8F9-20	10K mmfd x 300 v., 20%, mica	3
C21, 18	C-8F3-12	470 mmfd x 500 v., 20%, mica	2
C30, 33, 34	C-8F3-10	220 mmfd x 500 v., 20%, mica	3
C44	C-8J-11388	.05 mfd x 600 v., 20%, molded case paper	1
C26-27-39-40-46-47	C-8G-12449	3000 mmfd, 20%, ceramic-insulated	6
C14, 16, 28, 31, 42, 43	C-8G-12159	30 mmfd, 500 volts, 5%, ceramic	6
C48	C-8G-11789	10 mmfd, 10%, ceramic	1

Ref. No.	Part No.	Description	Qty. Used in Set
C51	C-8G-11891	51 mmfd, 5%, ceramic	1
C15-17	C-8G-12160	91 mmfd, 5%, ceramic	2
C-29-32	C-8F5-224	91 mmfd, 5%, silver mica	2
C41	C-8D-10789	.002 mfd x 600 v., 20%	1
C57	C-8F3-8	100 mmfd x 500 v., 20%, mica	1
RESISTORS			
R4	C-9B1-87	120K ohms, 1/2 watt, 10%	1
R15	C-9B1-73	8200 ohms, 1/2 watt, 10%	1
R26	C-9B1-77	18K ohms, 1/2 watt, 10%	1
R18	C-9B1-96	680K ohms, 1/2 watt, 10%	1
R21, 35	C-9B1-82	47K ohms, 1/2 watt, 10%	2
R28	C-9B2-81	39K ohms, 1 watt, 10%	1
R7	B-9C-11489	10K ohms, 75 watts, 10%, wire-wound	1
R30	C-9B1-78	22K ohms, 1/2 watt, 10%	1
R16, 25, 29	C-9B1-15	2200 ohms, 1/2 watt, 20%	3
R8	C-9B1-107	5.6 megohms, 1/2 watt, 10%	1
R9, 10	C-9B1-31	1 megohm, 1/2 watt, 20%	2
R13	C-9B1-50	100 ohms, 1/2 watt, 10%	1
R11, R17	C-9B1-23	47K ohms, 1/2 watt, 20%	1
R19	C-9B1-27	220K ohms, 1/2 watt, 20%	1
R14	C-9B1-37	10 megohms, 1/2 watt, 20%	1
R27	C-9B1-54	220 ohms, 1/2 watt, 10%	1
R32, 22, 33	C-9B1-94	470K ohms, 1/2 watt, 10%	3
R31	C-9B1-78	22K ohms, 1/2 watt, 10%	1
R23	C-9B1-58	470 ohms, 1/2 watt, 10%	1
R34	C-9B1-62	1000 ohms, 1/2 watt, ±10%	1
R36	C-9B2-55	270 ohms, 1 watt, ±10%	1
COILS			
T3	A-13D-11285	B.C. oscillator coil	1
T4	C-203-11743	Input I.F. coil combination assembly, 455 kc and 10.7 mc	1
T5	C-203-11746	2nd I.F. coil combination assembly, 455 kc and 10.7 mc	1
T6	C-203-11744	3rd I.F. coil assembly, 10.7 mc	1
T10	C-203-11745	Ratio detector I.F. coil assembly, 10.7 mc	1
T11, C55	C-13E-12340	Loop antenna assembly with 1.0 mmfd cond. C-8G-12408	1
TRANSFORMERS			
T7	B-12C-10234-2	Output transformer for speaker	1
T9	B-12A-12254	Power transformer—105-125 volts AC, 60 cycles primary	1
SPEAKER			
T8	B-18B-10617	Electrodynamic speaker, 10-inch, less output transformer	1
MISCELLANEOUS			
	C-6D-12459	Dial scale	1
	B-5C-12457-14	Escutcheon—walnut	2
	B-5C-12457-41	Escutcheon—mahogany	2
	B-5B-10376-14	Knob, "Volume"—walnut	1
	B-5B-11672-14	Knob, "Bandswitch"—walnut	1
	B-5B-10377-14	Knob, "Tuning"—walnut	1
	B-5B-10378-14	Knob, "Tone"—walnut	1
	B-5B-10376-41	Knob, "Volume"—mahogany	1
	B-5B-11672-41	Knob, "Bandswitch"—mahogany	1
	B-5B-10377-41	Knob, "Tuning"—mahogany	1
	B-5B-10378-41	Knob, "Tone"—mahogany	1
	B-47A-12458	Pilot lite assembly	1
P1, P2	A-46A-11739	Pilot lite bulb, 6-8 volt, T-44	2
	A-19B-11009	Socket for phono motor	1
	A-15B-11538	Speaker socket	1
	A-19B-12170	Socket for tone arm lead	1
	A-19B-11272	Antenna socket	1
	A-15B-10440	8-prong, octal, tube socket	3
	A-15C-10717	7-prong, miniature tube socket	6
	A-2H-10718	Shield base	6
	A-2H-10974	Shield can	6
	B-14M-11479	A.C. line cord	1
	A-23A-10344	Line cord lock	1
RECORD CHANGER			
	B-201-12262	Record changer assembly, 115 volts, 60 cycles	1

Note: For list of record changer parts, see Record Changer Manual.

MODELS 5P113, 5P116, 5P117,
Boulevard

BELMONT RADIO CORP.



CAPACITORS

- C1, C2 A-8J-10295 .03 mf, 150 volts, 20%
- C3 A-8G-11083 40 mfm, ±2.5 mfm
- C6, C7 A-8J-10297 .01 mf, 150 volts, 20%
- C8 A-8J-10298 50 mfm, 150 volts, 20%
- C9 A-8J-10296 .005 mf, 150 volts, 20%
- C10, C11 A-13G-11303 1.2 mfm, ±0.2 mfm (two wires)

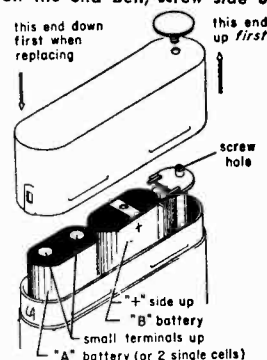
RESISTORS

- R3 C-9B9-82 47,000 ohms, 1/5 watt, 10%
- R4 C-9B3-98 1 megohm, 1/3 watt, 10%
- R5, R7 C-9B3-106 4.7 megohms, 1/3 watt, 10%
- R8 C-9B9-84 68,000 ohms, 1/5 watt, 10%
- R12 C-9B3-37 10 megohms, 1/3 watt, 20%
- R13, R14 C-9B9-92 330,000 ohms, 1/5 watt, 10%

MISCELLANEOUS

- A-48A-10346 Crystal phone
- A-19B-10354 Phone connector and cord
- A-5M-10455 Earpiece (medium)
- A-5M-10455-1 Earpiece (small)
- A-5M-10455-2 Earpiece (large)
- B-2E-10308 End bell, top (Model 5P116)
- B-2E-10308-1 End bell, top (Models 5P113, 5P117)
- B-202-10419 End bell, bottom (Model 5P116)
- B-202-10419-1 End bell, bottom (Models 5P113, 5P117)
- A-5B-10466-2 Knob, tuning (Models 5P113, 5P117)
- A-5B-10466-51 Knob, tuning (Model 5P116)
- A-5B-10806-2 Knob, volume (Models 5P113, 5P117)
- A-5B-10806-51 Knob, volume (Model 5P116)

How to Install Them—Three "A" batteries and one "B" battery are supplied with the Boulevard. The extra "A" batteries are for replacement purposes. Remove the screw on the bottom of the radio and lift off the end bell, screw side up first, as shown in the illustration. (To avoid distorting the end bell, grasp it at the ends, not on the sides. Insert the "A" and "B" batteries in the case exactly as shown, with the "B" battery on the side with the screw hole. (If desired, the wide rubber band supplied with the set may be placed around the batteries to prevent any movement.) Then replace the end bell and the screw.

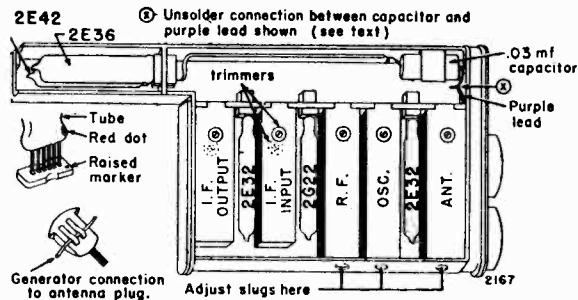


ALIGNMENT PROCEDURE

Output meter must give 1.5-volt deflection without loading output tube. Use any 1½-volt "A" battery and 22½-volt "B" battery which can be connected to set. Keep battery leads short. Unsolder lead between .03 mf output capacitor and purple lead (see illustration). Connect one side of meter to this capacitor terminal, other side to receiver chassis. Be sure to reconnect leads after alignment is completed. Volume control at maximum. Connect ground lead of generator to chassis. Align for maximum output. Reduce input as needed to keep output near 1.5 volts.

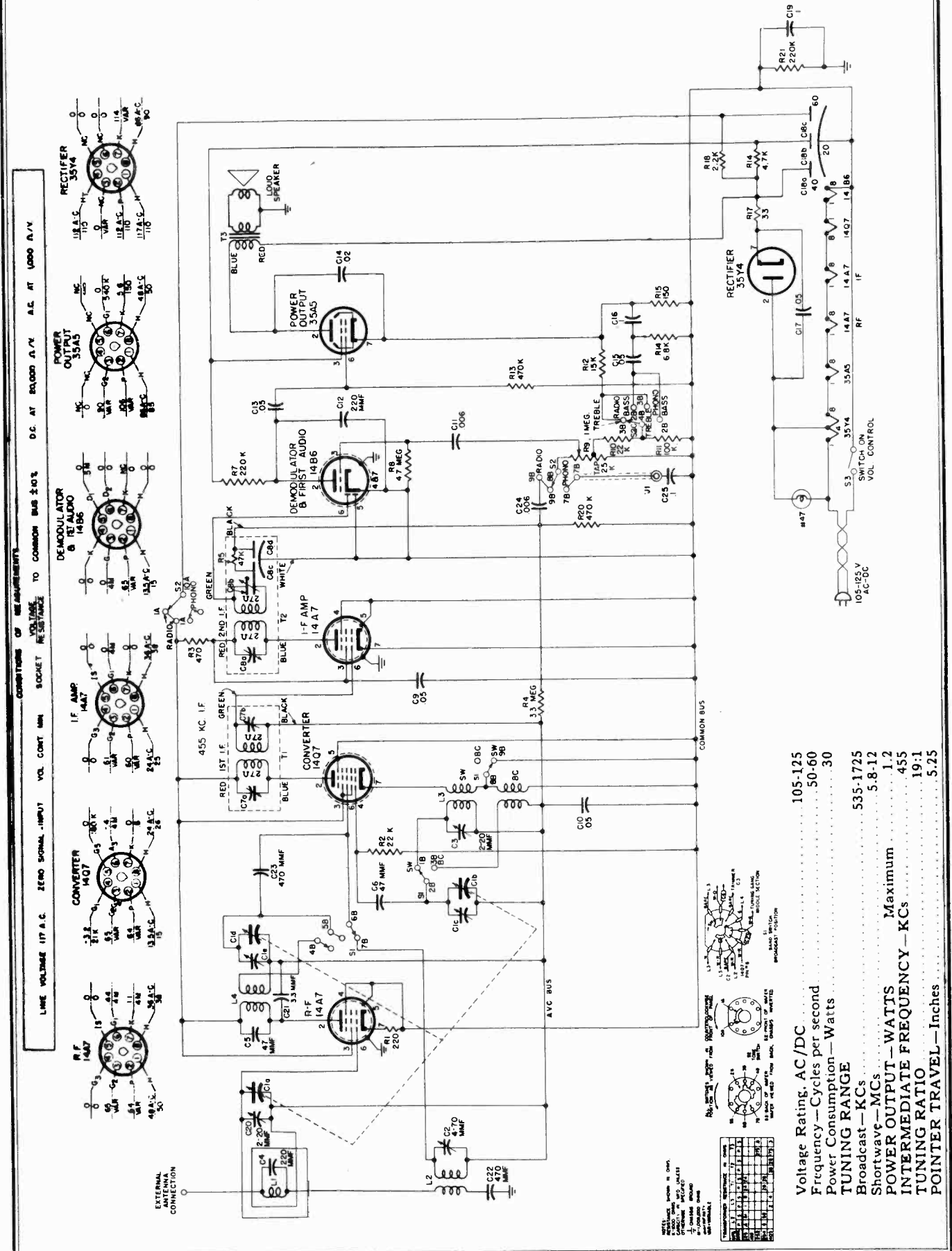
Generator Frequency	Coupling Capacitor	Connection to Set	Adjust for Max. Output
455 kc	.1 mf	Converter 2G22 grid	Trimmers on both I.F. transformers
1625 kc	.1 mf	Converter 2G22 grid	Oscillator trimmer
1400 kc	.1 mf	Converter 2G22 grid	Oscillator tuning slug*
1625 kc	10 mfm	Antenna lead (see illust.)	Osc, ant, rf trimmers
1400 kc	10 mfm	Antenna lead	Antenna, rf tuning slugs*

Repeat this and previous step alternately for best tracking.

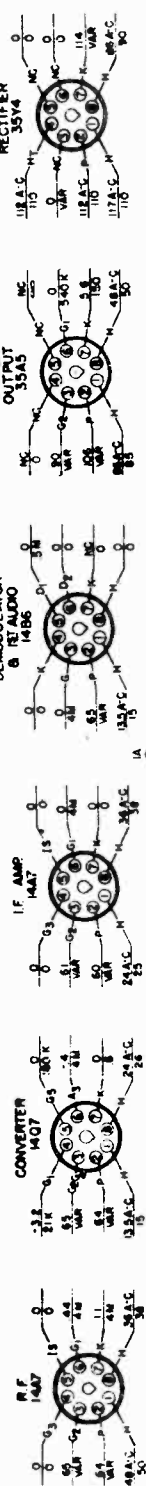


BENDIX RADIO DIV.

MODEL 626-A



CONDITIONS OF MEASUREMENTS
 LINE VOLTAGE 117 A.C. ZERO SIGNAL INPUT VOL. CONT MIN SOCKET RESISTANCE TO COMMON BUS 20% D.C. AT 24000 A/V A.E. AT 1000 A/V



MEASUREMENTS TAKEN IN OPEN CIRCUIT UNLESS OTHERWISE SPECIFIED

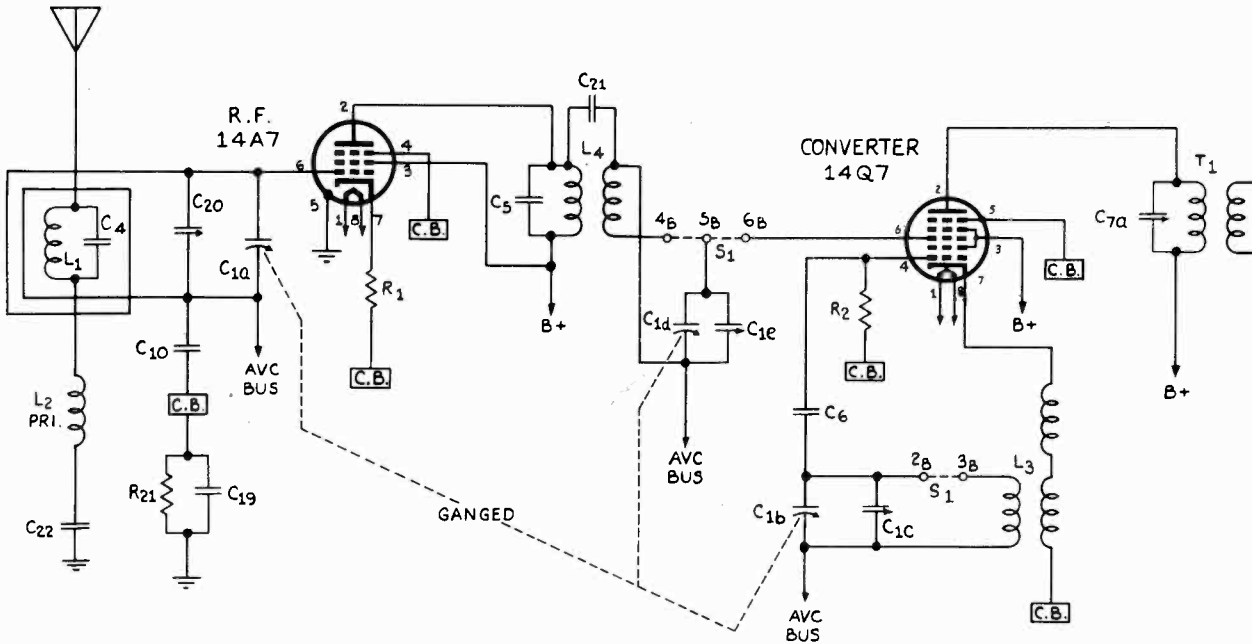
TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Voltage Rating, AC/DC	105-125
Frequency—Cycles per second	50-60
Power Consumption—Watts	30
TUNING RANGE	
Broadcast—KCs	535-1725
Shortwave—MCs	5.8-12
POWER OUTPUT—WATTS	Maximum
INTERMEDIATE FREQUENCY—KCs	455
TUNING RATIO	19:1
POINTER TRAVEL—Inches	5.25

"clarified schematics"

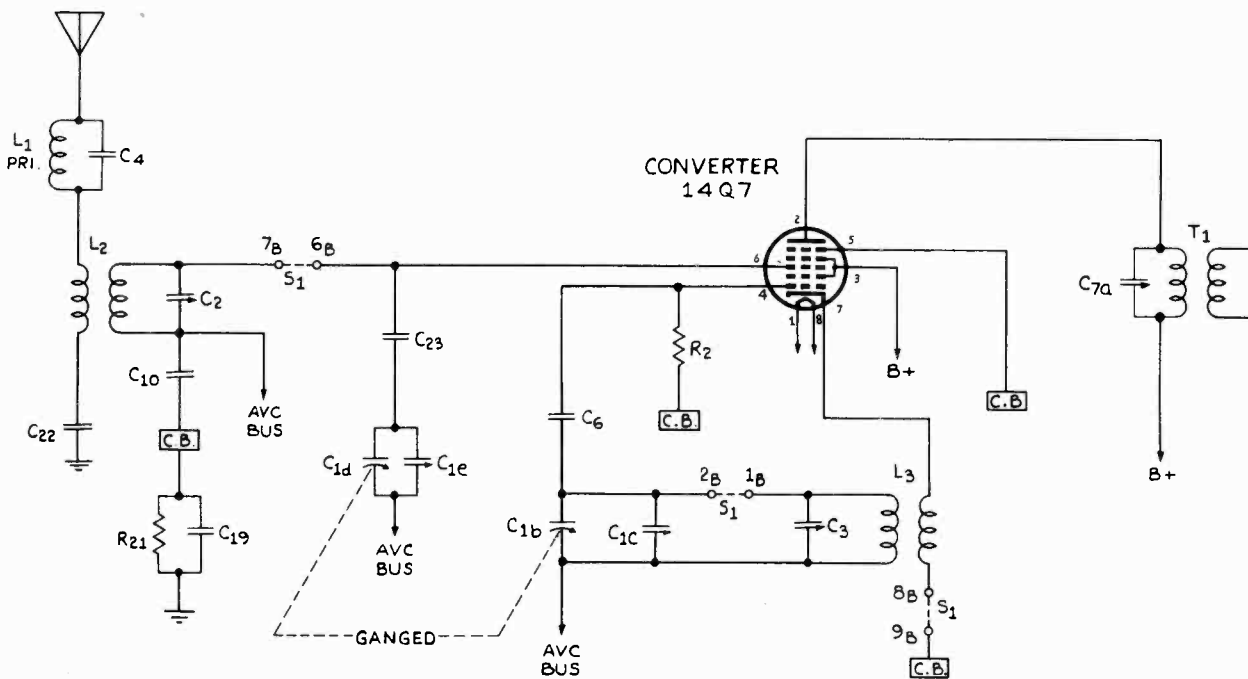
MODEL 626-A

BENDIX RADIO DIV.



BAND-SWITCH SHOWN
AT 1ST POSITION.
BROADCAST BAND
535 - 1725 KC.

C.B. DENOTES COMMON BUS
ABOVE GROUND BY
R₂₁ (220k) & C₁₉ (.1μf)



BAND-SWITCH SHOWN
AT 2ND POSITION.
SHORT WAVE BAND
5.8 - 12 MC.

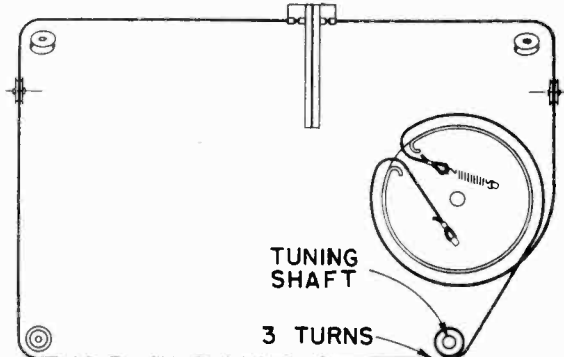
C.B. DENOTES COMMON BUS
ABOVE GROUND BY
R₂₁ (220k) & C₁₉ (.1μf)

BENDIX RADIO DIV.

MODEL 626-A

Stock No.	Description	List Price	Stock No.	Description	List Price
ELECTRICAL COMPONENTS			ELECTRICAL COMPONENTS (continued)		
AL0C01*	ANTENNA—Loop (L1)	2.60	JR1S00†	JACK—Receptacle, 1 Contact, Phono Jack (J1)	.06
CC9A16†	CAPACITOR—Ceramic 3.3 mmf. (C21)	.05	SPEAKER AND COMPONENTS		
CE3A00	CAPACITOR—Electrolytic 40, 20, 60		SP400†	SPEAKER—Oval PM (4 x 6)	5.70
CE3A00†	CAPACITOR—Electrolytic 40, 20, 60 mfd. (C18a, C18b, C18c)	1.86	CS4000†	CONE & VOICE COIL ASS'Y.—Code 252	
CL2A01†	CORD—AC Power	.42	CS4001†	CONE & VOICE COIL ASS'Y.—Code 328	
CM5A14†	CAPACITOR—Mica 47 mmf. (C5, C6)	.18	CS4002†	CONE & VOICE COIL ASS'Y.—Code 270	
CM5A30†	CAPACITOR—Mica 220 mmf. (C4, C12)	.22	CS4006†	CONE & VOICE COIL ASS'Y.—Code 191	
CM5A38†	CAPACITOR—Mica 470 mmf. (C22)	.21	CS4007†	CONE & VOICE COIL ASS'Y.—Code 371	
CM8S50†	CAPACITOR—Mica 470 mmf. 3% (C23)	.47	TA0001†	TRANSFORMER—Output (T3)	.96
CP4T20	CAPACITOR—Paper 400 V .006 mfd. (C11, C24)	.14	MECHANICAL COMPONENTS		
CP4T34†	CAPACITOR—Paper 400V .02 mfd. (C14)	.14	AD0C00	ASSEMBLY—Dial Back Plate	1.04
CP4T40†	CAPACITOR—Paper 400V .05 mfd. (C9, C10, C13, C15, C17)	.16	BT1S00†	BOARD—Terminal Strip 1 Lug 1 Mt	.03
CP4T51†	CAPACITOR—Paper 400V .1 mfd. (C16, C19, C25)	.18	BT2S00	BOARD—Terminal Strip 2 Lugs 1 Mt	.02
CT2A00	CAPACITOR—Trimmer (C2 4.70 mmf., C3 2.20 mmf.)	.46	BT4S01†	BOARD—Terminal Strip 4 Lugs 1 Mt	.05
CV0C00	CAPACITOR—Variable, 3 gang (C1a, C1b, C1c, C1d, C1e)	7.91	CD0C02	CABLE—Dial	.17
LO6H00	COIL—Oscillator (L3)	1.61	GR0S00†	GROMMET—Shockmount Rubber	.04
RC1H16†	RESISTOR—220 ohms 1/4 W Comp. (R1)	.04	HC0C00†	CLIP—Coil Mtg	.65/c
RC1H20†	RESISTOR—470 ohms 1/4 W Comp. (R3)	.04	HC0C02†	CLIP—Coil Mtg	.90/c
RC1H32†	RESISTOR—4700 ohms 1/4 W Comp. (R19)	.04	HC0C03†	CLAMP—Cable (Dial)	.43/c
RC1H34†	RESISTOR—6800 ohms 1/4 W Comp. (R14)	.04	HC0S00†	CLIP—Tuning Shaft Spring	.01
RC1H38†	RESISTOR—15000 ohms 1/4 W Comp. (R12)	.06	HC0T00†	CLAMP—Tube Shield	.01
RC1H40†	RESISTOR—22000 ohms 1/4 W Comp. (R2, R10)	.04	HN9P45†	PALNUT—3/8 x 32	.60/c
RC1H44†	RESISTOR—47000 ohms 1/4 W Comp. (R5)	.04	HR0F00†	RIVET—Plain 13/64 x .121	.40/c
RC1H51†	RESISTOR—100000 ohms 1/4 W Comp. (R11)	.04	HR0P01†	RIVET—Plain .088 x 1/8	.40/c
RC1H54†	RESISTOR—220,000 ohms 1/4 W Comp. (R7, R21)	.04	HR0S01†	RIVET—Shoulder .171 x .118, .083 x .088	.02
RC1H58†	RESISTOR—470,000 ohms 1/4 W Comp. (R13, R20)	.04	HS0C00†	SPRING—Dial Cable	.04
RC1H68†	RESISTOR—3.3 meg. 1/4 W Comp. (R4)	.04	HS0P01†	SPACER—Antenna, Wood	.01
RC1H70†	RESISTOR—4.7 meg. 1/4 W Comp. (R8)	.04	HS6F00†	SLEEVE & SPACER—Tuning Capacitor	.02
RC4G28†	RESISTOR—2200 ohms 2W Comp. (R18)	.14	ID0M06†	INDICATOR—Metal, Dial	.28
RV4S00†	POTENTIOMETER—1 meg. with Switch (R9, S3)	.92	IT0C01	INSULATOR—Elec. Cap., Tube	.04
RW1A06†	RESISTOR—33 ohms WW 1W (R17)	.14	IW0F00†	INSULATOR—Felt Washer	.20/c
RW1B28†	RESISTOR—150 ohms WW 1W (R15)	.08	MB0B00†	BEARING—Bushing (Tuning Shaft)	.18
S00D01	SOCKET—Dial Lamp	.23	MP0F00†	PULLEY—Fiber (Idler)	.02
S09S00†	SOCKET—Loctal Tube	.19	MS0T02†	SHAFT—Tuning	.15
SR2C01	SWITCH—Rotary 2 Pos. 3 Pole (S1)	.70	PI0P01†	PLATE—Insulating, Power Cord	.01
SR4C00†	SWITCH—Rotary 4 Pos. 3 Pole (S2)	.84	SM0T00†	SHIELD—Metal, Tube	.05
T10C01†	TRANSFORMER IF—1st (T1)	3.75	CABINET COMPONENTS		
T10D01†	TRANSFORMER IF—2nd (T2)	2.65	DS0C01	DIAL—Scale	.77
TR6D00	TRANSFORMER RF—Shortwave (L2)	1.26	GC0D02	GASKET—Dial, Cork Strip	.09
TR6L00†	TRANSFORMER BC—RF Interstage (L4)	3.75	HC0D00	CLIP—Dial (Metal) Retainer R.H.	.04
#47†	LAMP—Pilot	.09	HC0D01†	CLIP—Dial Retainer (Metal) L.H.	.03
			HC0S09	CLIP—Spring, Knob, Band Switch	.01
			HK0R00†	CLIP—Spring, Knob	.01
			IT0F00	INSULATOR—Flexible Tubing	.08/ft.
			KB0B03	KNOB—Indexed, Tan	
			KC0B08	KNOB—Plain, Tan	
			KY0B00	KNOB—Brown, Band Switch	.31
			ZP0I00	CABINET—Ivory, Plastic	

*Subject to excise tax /c—Price per hundred Prices subject to change without notice †Used on previous models PRINTED IN U.S.A.



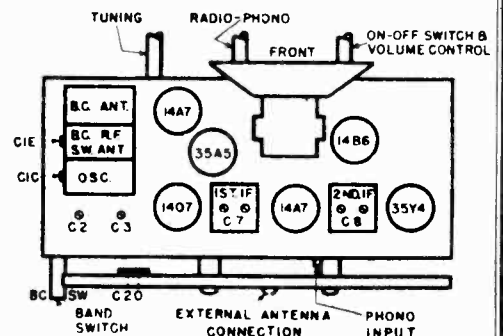
Adjust pointer 2 in. from left end with tuning gang fully meshed

Make adjustments in table for maximum output with output meter connected across voice coil. Always keep input as low as possible for perceptible output.

PRECAUTIONS

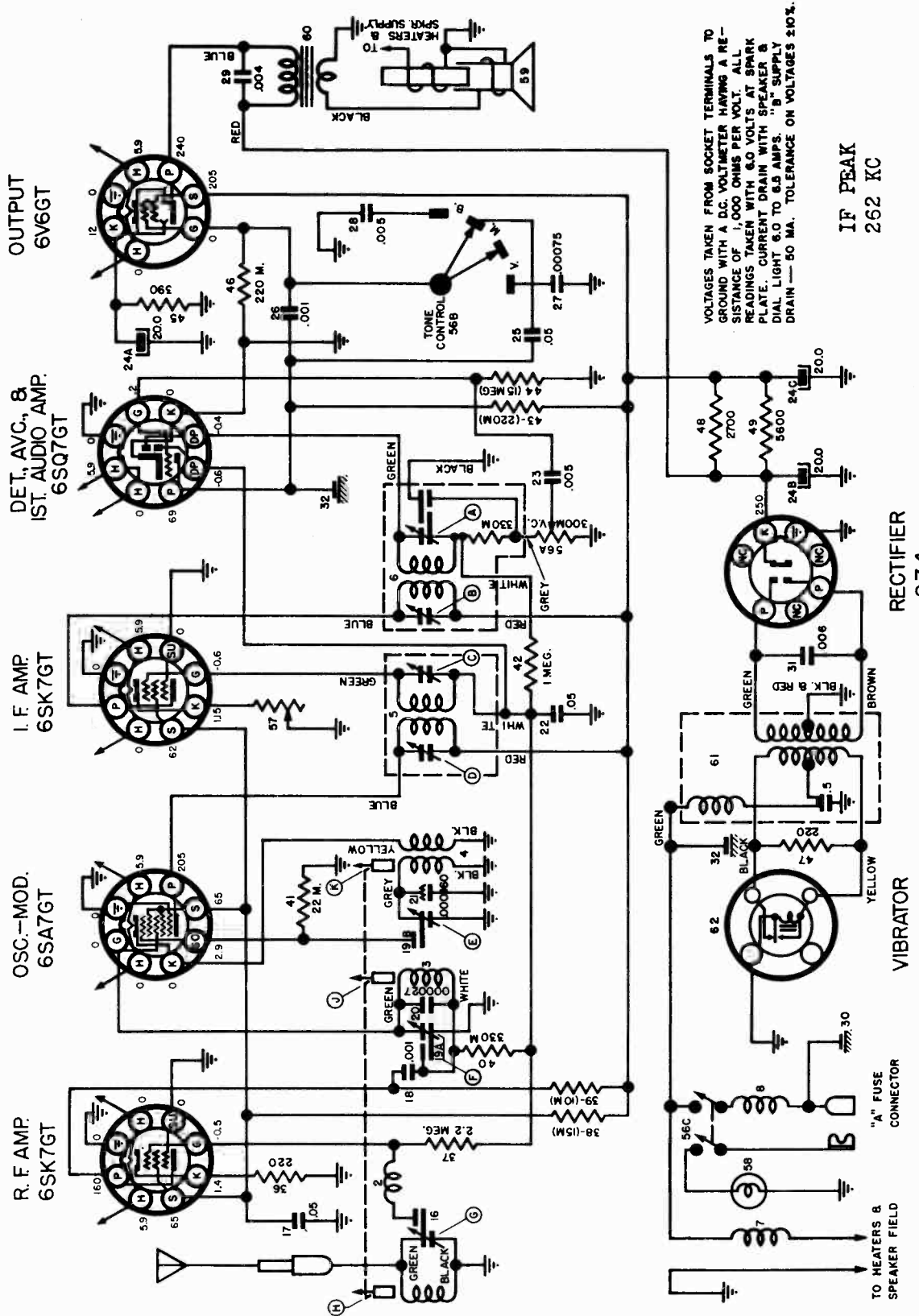
An isolating transformer should be used between the power supply and the receiver if any of the test equipment is AC operated. The use of isolating capacitors is not recommended as AC through the capacitor may introduce hum modulation, and if the capacitors should break down the test instruments will likely be damaged.

CIRCUIT	CONTROL POSITIONS	APPLY	THRU	TO	ADJ
I.F.	Volume—Maximum	455 KC	.01mfd.	Grid	C8b
	Tone—Treble			14A7	C8a
Broadcast	Band Switch—Broadcast	1475 KC	50 mmf.	I.F. Amp.	C7b
	Tuning Condenser—Fully Open			14Q7	C7a
Short Wave	Pointer 4 3/8 in. from left end.	11 MC	400 ohms in series with .01 mfd.	External Antenna	C1c
	Pointer 4 1/2 in. from left end.			Connection	C20
				External Antenna	C3
				Connection	C2



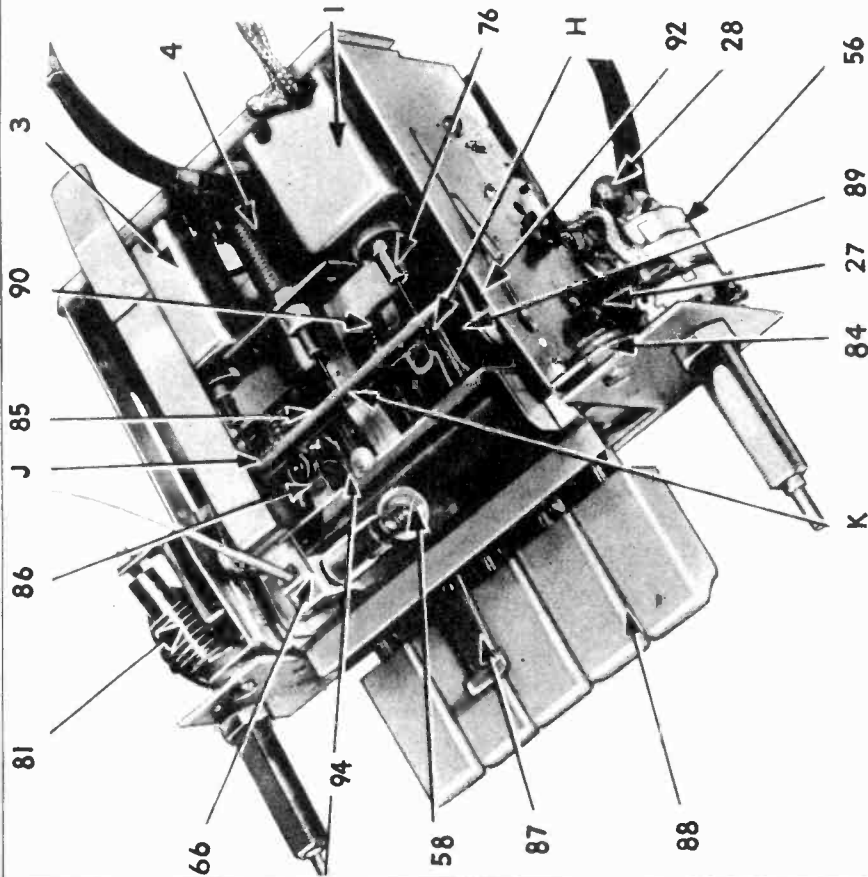
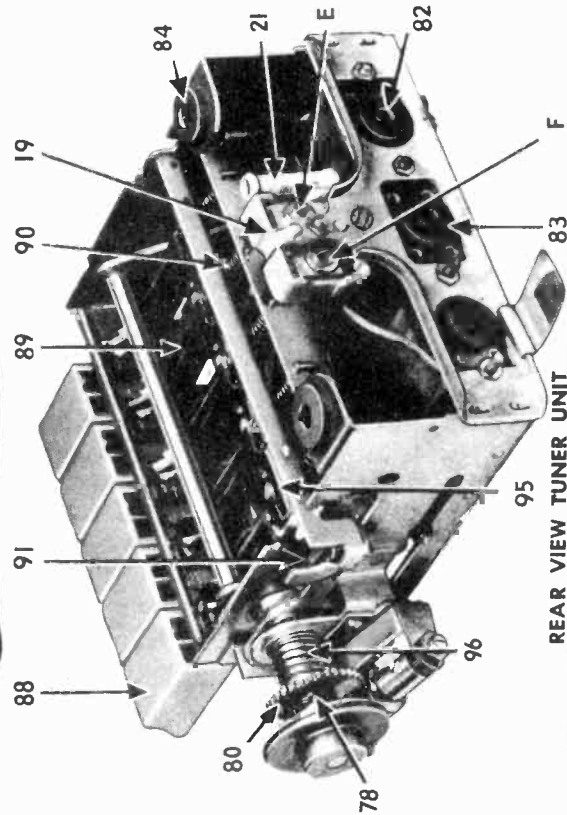
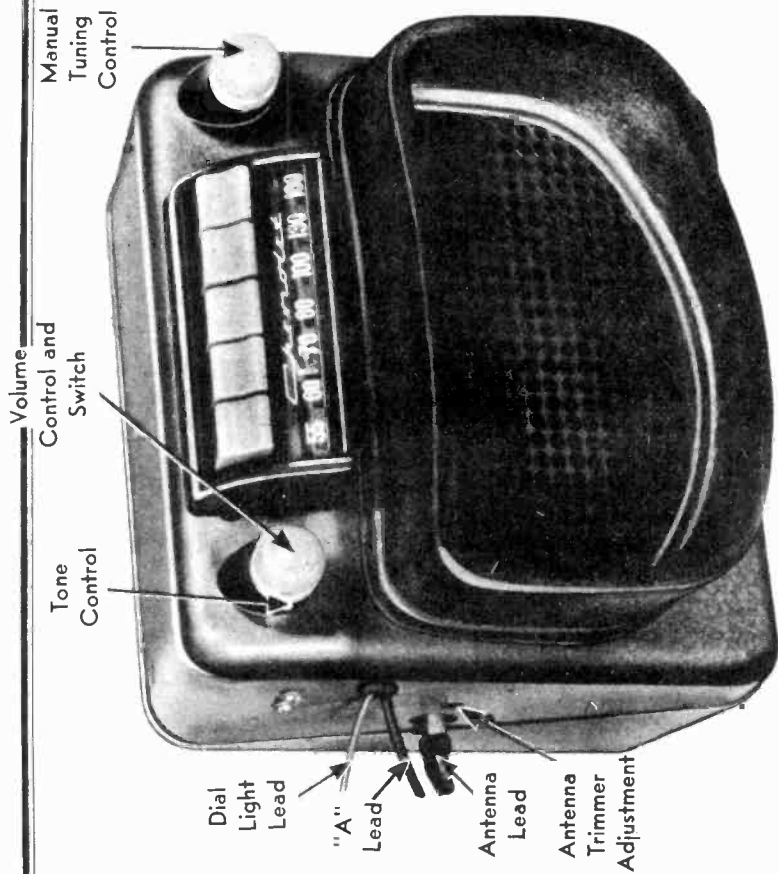
CHEVROLET DIV.-GENERAL MOTORS

MODEL 986067



Antenna Circuit: The antenna circuit is directly coupled to the antenna. The antenna oscillator and R.F. circuits are tuned by means of iron cores. The antenna circuit is adjusted for slight variations in antenna capacity by means of an antenna trimmer located on the side of the receiver case.

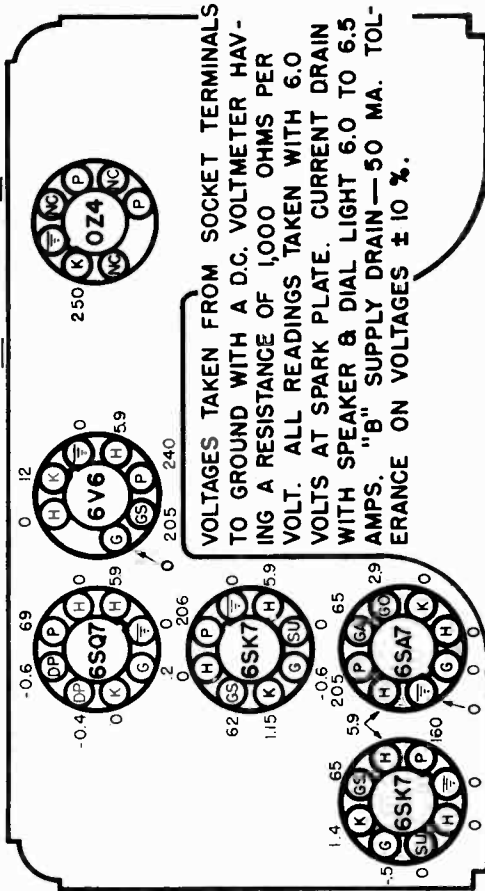
Date 6-1-47



Procedure for Setting Pushbuttons

Turn on the receiver for ten minutes or longer to allow circuits to stabilize.

1. Select your five favorite stations in order of frequency.
2. Pull the button slightly to the left and out approximately one-half inch.
3. Turn the manual control knob until the desired station is tuned in. To secure an accurate set-up, turn the manual tuning knob back and forth until the station is tuned in clearly.
4. Push button in firmly to the end of its travel.
5. Repeat the same procedure to set up the remaining four buttons.



Circuit Alignment

The trimmer condensers in this receiver have been carefully adjusted at the factory and should require no further adjustment (except the antenna trimmer) unless tampered with or a coil replaced. It is advisable not to attempt any adjustment unless it is definitely known that alignment is necessary. Since the iron cores of the tuning unit are sealed in place at the factory, only the trimmer adjustment as outlined under "Capacity Alignment" should be made, unless the coils or cores of the iron core tuning unit are changed. A signal generator and an output meter must be used to align the receiver circuits correctly. To make all alignment adjustments the back cover must be removed.

- Capacity Alignment**
- 1. I.F. Alignment at 262 Kilocycles**
- Connect a 0.1 mfd. condenser between the plate prong of the 6V6GT output tube and one terminal of the output meter, to protect the meter from DC voltages. Connect the other terminal of the output meter to ground.
 - Connect the ground lead of the signal generator to the chassis frame.
 - Connect the signal lead of the signal generator to the grid (G) prong of the 6SA7 tube socket through a 0.1 mfd. condenser.
 - Turn the set volume control on full and rotate the tone control knob to the center of its range. Adjust the signal generator to 262 kilocycles, and tune the receiver to a frequency where no squeals or beat notes may be heard and so that when the tuning control is moved through narrow limits no appreciable change in output is noticeable.
 - Adjust the I.F. trimmers A, B, C, and D for maximum output.

- 2. Aligning at 1615 Kilocycles**
- Connect the signal lead of the signal generator to the receiver antenna connection through a .000070 mfd. condenser.
 - Turn the manual control of the receiver to the stop at the high frequency end of the dial.
 - Set the signal generator to 1615 kilocycles.
 - Adjust the oscillator trimmer "E" for maximum output.
 - Adjust the R.F. trimmer "F" for maximum output.
 - Adjust the antenna trimmer "G" for maximum output.

- 3. Aligning at 1400 Kilocycles**
- Set the signal generator frequency to 1400 kilocycles or the nearest frequency at which there is no interference from radio stations.
 - Tune the receiver to this signal and readjust the R.F. trimmer "F" and antenna trimmer "G" for maximum output. The signal generator output should be as low as possible and still give a satisfactory output meter reading.
- NOTE:** This type tuning circuit does not require alignment at 800 kilocycles.

- 4. Alignment with Car Antenna**
- Antenna trimmer "G" must be adjusted to match the car antenna when receiver is installed. With the antenna fully extended, tune in a weak station, adjust trimmer for maximum volume.
- Capacity and Inductance Alignment**
- This alignment should be used only when there is definite evidence that the iron cores are out of adjustment.

- 1. I.F. Alignment at 262 Kilocycles**
- The same procedure as previously outlined should be followed.

- 2. Aligning at 1615 Kilocycles**
- Connect the signal lead of the signal generator to the set through a .000070 mfd. condenser.
 - Set the signal generator to 1615 kilocycles.
 - Rotate the manual tuning knob until the pointer is against the high frequency stop. Mechanically align the iron cores H, J, and K by setting the oscillator core "K" so that its rear edge is $1\frac{3}{4}$ " from the mounting end of the coil form. (This measurement is readily made by inserting a suitable plug in the mounting end of the coil form.) The antenna core "H" and the R.F. core "J" are aligned in the same way as the oscillator core "H".
 - Adjust the oscillator trimmer "E," the R.F. trimmer "F," and the antenna trimmer "G" for maximum output.
- 3. Aligning at 1400 Kilocycles**
- Adjust the signal generator to 1400 kilocycles or the nearest frequency at which there is no radio station interference.
 - Adjust the R.F. core "J" for maximum output.
 - Adjust the antenna core "H" for maximum output.
- NOTE:** The rear end of iron cores are slotted so the maximum output adjustment can be made with a non-metallic screw driver that fits loosely in the coil form. (No inward force should be used.)
- 4. Realignment at 1615 and 1400 Kilocycles**
- Repeat alignment of trimmers "F" and "G" at 1615 kilocycles.
 - Repeat alignment of cores "H" and "J" at 1400 kilocycles. Do not change adjustment of oscillator core "K".
 - Resal core studs in guide bar with cyptal or household cement.
- 5. Alignment with Car Antenna**
- The same procedure as outlined previously should be followed.

MODEL 986067

CHEVROLET DIV.-GENERAL MOTORS

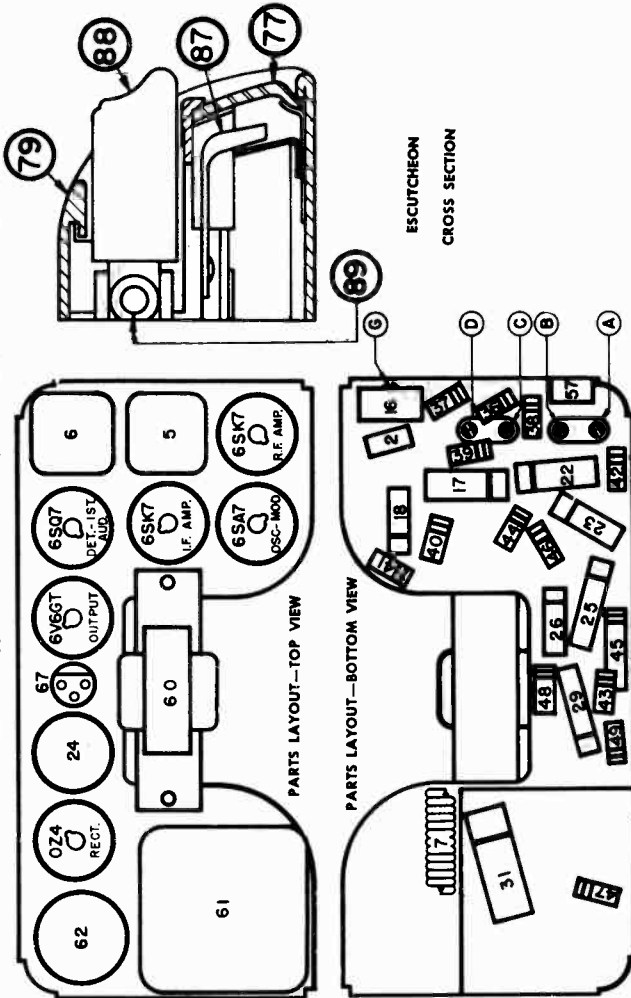
7255985	Push Button (Included in Slide and Push Button Package)	88
1217837	Slide Return Spring	89
7255984	Slide Return Spring	90
7255980	Cam Return Spring	91
7255980	Treadle Bar Connecting Link Spring (Included in Pointer Assembly Connecting Link)	92
7255982	Pointer Connecting Link Spring	94
7255987	Clutch Lever Spring	95
7255991	Clutch Spring	96

Tube Complement

1211924	02A Rectifier (1 required)
1213637	6V6GT Output (1 required)
7237886	6SA7 Oscillator Modulator (1 required)
7237887	6SK7GT R.F. and I.F. Amplifier (2 required)
7237888	6SQ7GT Detector AVC and 1st. Audio (1 required)

Installation Parts

494786	Static Collector (Front Wheel)
1848101	Ammeter Condenser
1068945	Generator Condenser
1910681	Ignition Coil Condenser
7255997	Fuse Holder, 14 Amp.
7255997	Fuse Holder, Tone Control
7255936	Wing Knob
7255936	Control Knob
7255118	Capacitor
1217040	"A" Lead (Includes Fuse Holder)
1888204	Rubber Nipple (Distributor Suppressor)
986121	Static Powder (Tire)
1887829	Distributor Suppressor



The tuning circuits are tuned by varying the inductance of the antenna, R.F. and oscillator coils by means of iron cores which slide in and out of the coils like pistons. The alignment of the cores has been sealed at the factory and further adjustment should not be required unless the coils have been changed or an iron core has been replaced.

Pro-duction Part No.	Part Name	Description—Function	Illu. No.
7256233	Antenna—Coil	Antenna—Coil	1
7240251	Choke	Choke	2
7256233	R.F. Coil	R.F. Coil	3
7256235	Oscillator—Coil	Oscillator—Coil	4
7256011	1st I.F. Transformer Assembly	1st I.F. Transformer Assembly	5
7256012	2nd I.F. Transformer Assembly	2nd I.F. Transformer Assembly	6
7255912	Hash Choke	Hash Choke (inside front cover)	7
7256004	Antenna Trimmer	Antenna Trimmer	8
7256807	Trimmer	Antenna Trimmer	16
7230592	Condenser	Tubular—.05 Mfd. 600 Volt, Screen By Pass	17
7242942	Condenser	Dual Trimmer—.001 Mfd. 600 Volt, R.F. Coupling	18
7242454	Condenser	Molded .000027 Mfd.	19
7256259	Condenser	Temperature Compensating .000160 Mfd.	20
7256243	Condenser	Tubular—.05 Mfd. 600 Volt, AVC By Pass	21
7236841	Condenser	Tubular—.05 Mfd. 600 Volt, Audio Coupling	22
7230767	Condenser	Section A 20 Mfd. 25 Volt, Output By Pass	24
7240724	Condenser	Section B 520 Mfd. 400 Volt, "B" Input Filter	24A
7230592	Condenser	Section C 20 Mfd. 400 Volt, "B" Output Filter	24B
7217790	Condenser	Tubular—.05 Mfd. 600 Volt, Tone Control (Voice)	24C
7230592	Condenser	Tubular—.001 Mfd. 600 Volt, Audio Coupling	25
7230592	Condenser	Tubular—.0075 Mfd. 600 Volt, Tone Control (Music)	26
7232443	Condenser	Tubular—.005 Mfd. 600 Volt, Tone Control (Bass)	27
7241259	Spark Plate	Spark Plate (inside front cover)	28
7240908	Condenser	Tubular—.008 Mfd. 1600 Volt, Buffer	29
1217848	Resistor	Insulated, 220 ohms 1/2 watt, R.F. Amp. Bias	30
7237825	Resistor	Insulated, 2.2 Megohm 1/2 watt, AVC Isolating	31
1211147	Resistor	Insulated, 15,000 ohm 2 watt, Screen Dropping	32
7233653	Resistor	Insulated, 10,000 ohm 1 watt, Plate Dropping	36
1211085	Resistor	Insulated, 330,000 ohm 1/2 watt, AVC Isolating	37
7240732	Resistor	Insulated, 22,000 ohm 1/2 watt, Oscillator Grid	38
7238873	Resistor	Insulated, 1 Megohm 1/2 watt, AVC Isolating	39
1214550	Resistor	Insulated, 220,000 1/2 watt, Plate Dropping	40
1213282	Resistor	Insulated, 15 Megohm 1/2 watt, 6S07 Grid	41
1213479	Resistor	Insulated, 390 ohm 1 watt, Output Tube Bias	42
7236837	Resistor	Insulated, 220 ohm 1/2 watt, 6V6 Grid	43
1216149	Resistor	Insulated, 220 ohm 1 watt, Power Transformer, Primary	44
7240977	Resistor	Insulated, 220 ohm 1/2 watt, 6V6 Grid	45
1214555	Resistor	Insulated, 2700 ohm 2 watt, "B" Filter	46
7242844	Control	Insulated, 5,600 ohm 1 watt "B" Filter	47
7240817	Control	Volume, Tone and Switch	48
1210918	Control	Volume Control, 300,000 ohm	49
7256188	Control	Switch	56A
7242204	Control	Sensitivity Control	56B
125588	Bulb	Dial Lamp	57
7255903	Speaker	Electro Dynamic 6 3/4" x 9 1/4" Elliptical, Less Cable	58
7256009	Transformer	Power Transformer	59
7255881	Vibrator	Non-Synchronous 4 Prong	60
7239142	Cable	Speaker Cable and Plug	61
7255920	Socket	Antenna Socket	62
7239475	Socket	Dial Light Assembly (Less Lamp)	66
1217838	Socket	Tube—Octal	67
7236279	Socket	Speaker Socket	67
1216962	Socket	Vibrator Socket	67
7239125	Socket	Vibrator Socket	67

Tuner Unit Part

7256112	Core	Iron Tuning Core	76
7255998	Dial	Dial (Included in Escutcheon Assembly)	77
7256105	Disc	Clutch Driver Disc	78
7256177	Escutcheon	Escutcheon Assembly	79
7256102	Gear	Gear and Bushing (Tuning)	80
7256100	Gear	Gear and Bracket Worm (Tuning)	81
7244021	Grommet	Antenna & R.F. Coil Grommet	82
7244020	Grommet	Oscillator Coil Grommet	83
7237172	Grommet	Mounting Bracket Grommet	84
7296179	Guide	Guide Bar—Parallel	85
7256271	Link	Pointer Assembly Connecting Link	86
7256125	Pointer	Pointer Assembly	87

MODEL 7G26C

CONCORD RADIO CORP.

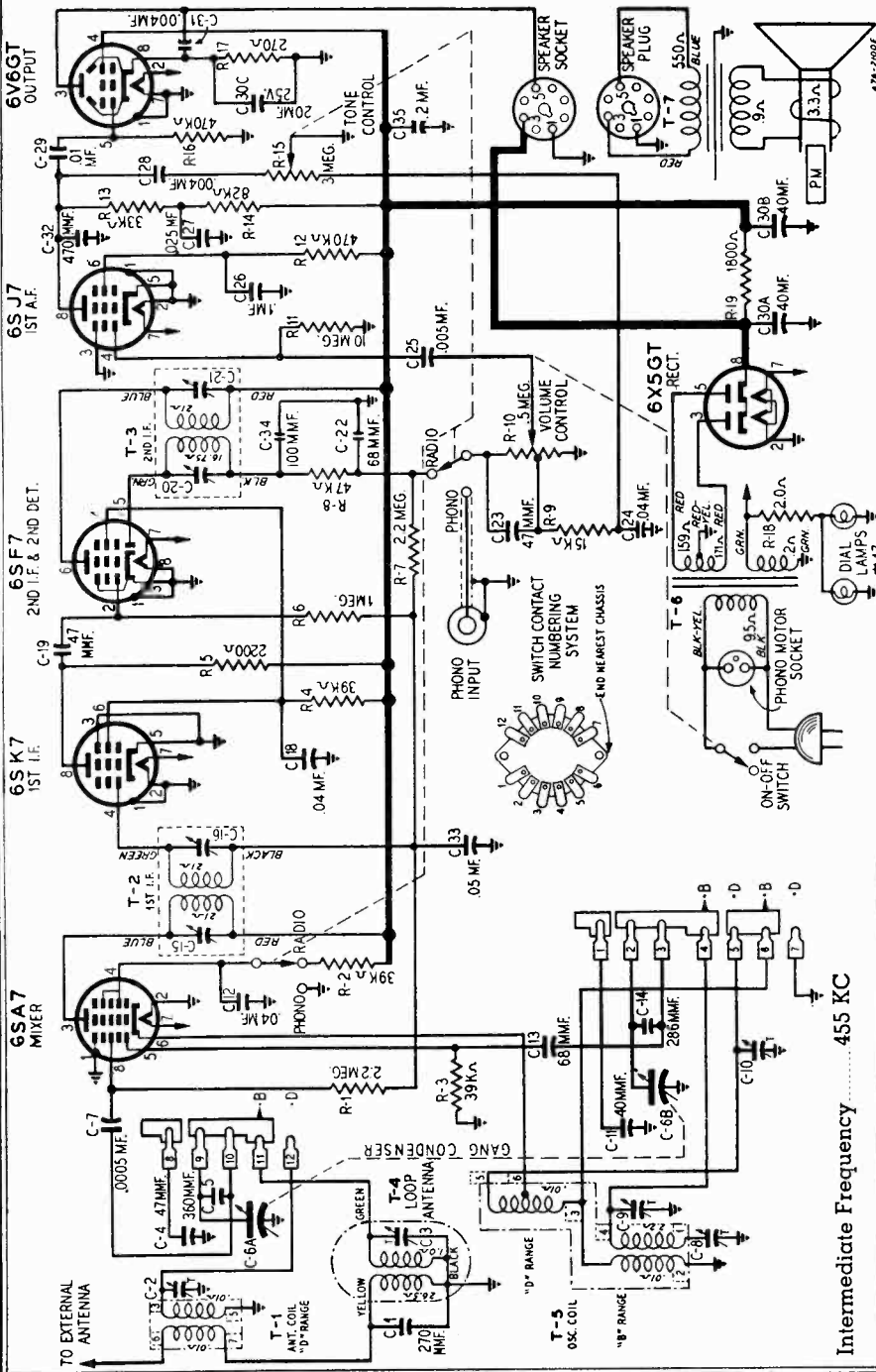
REMOVAL OF CHASSIS FROM CABINET

Before the chassis may be taken from the cabinet, it is necessary to pull off the 4 control knobs, remove the 4 chassis mounting bolts, disconnect the leads running to the loop antenna, record changer and speaker and loosen the screw and remove the black lead fastened to the lower left corner of the chassis.

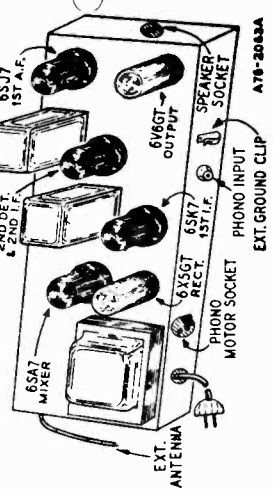
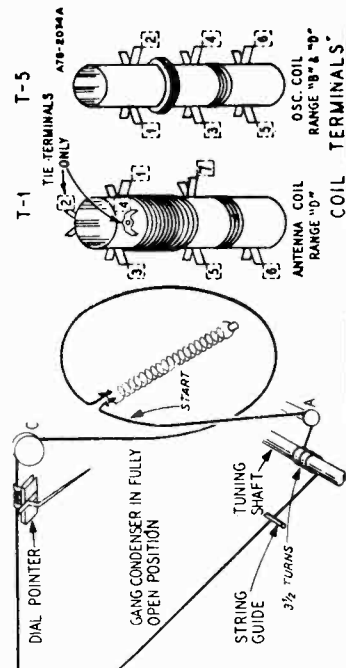
Power Consumption
(at 117 Volts AC) 40 Watts (normal)
58 Watts (phono operating)

Power Output... 4 Watts, Maximum
2.3 Watts, 10% Distortion

Tuning Frequency Range
B Range... 540-1600 Kilocycles
D Range... 9.25-15 Megacycles

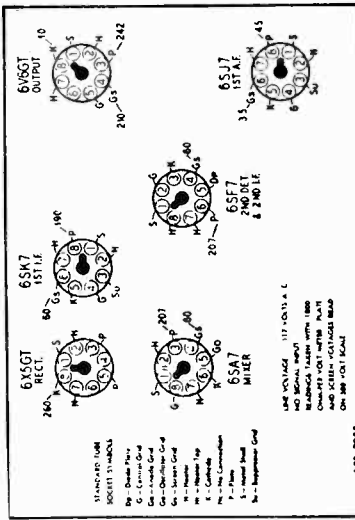


DRIVE CORD REPLACEMENT

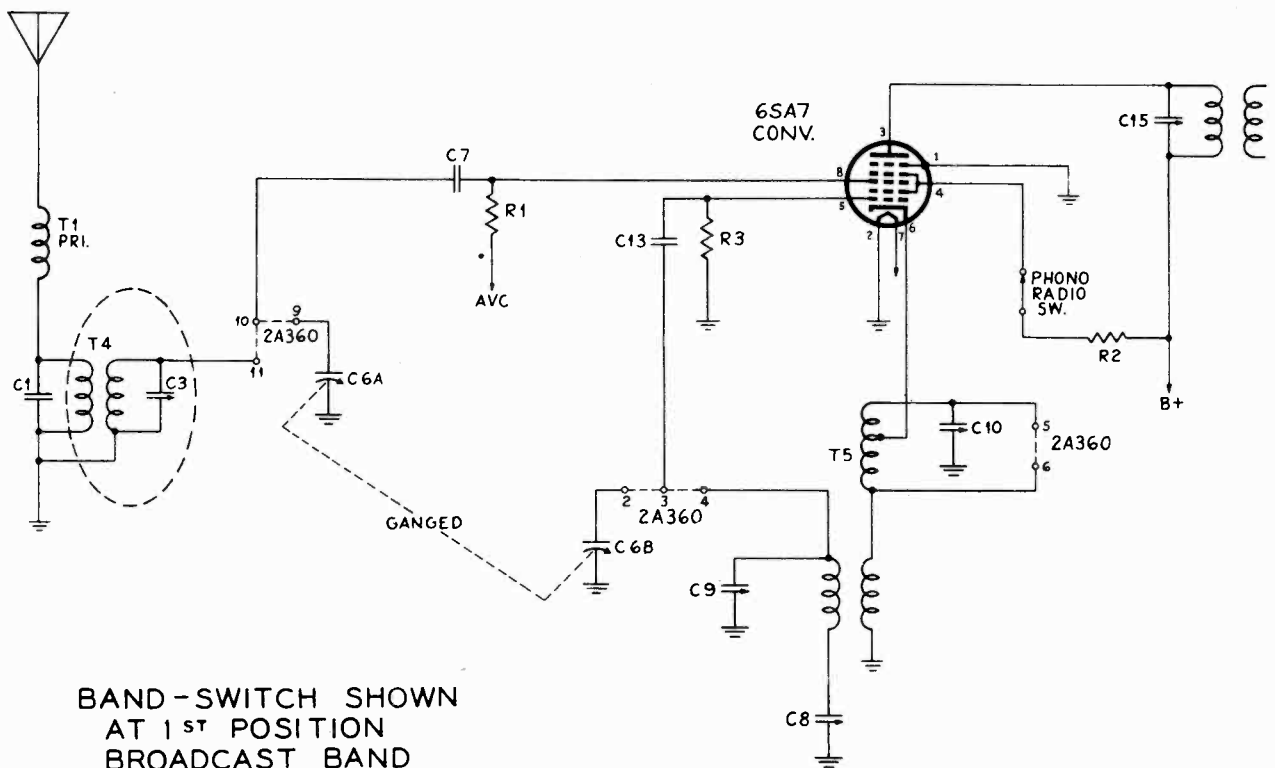


Sensitivity (For 0.5 Watt Output, with External Antenna)
B Range 9 Microvolts Average
D Range 20 Microvolts Average

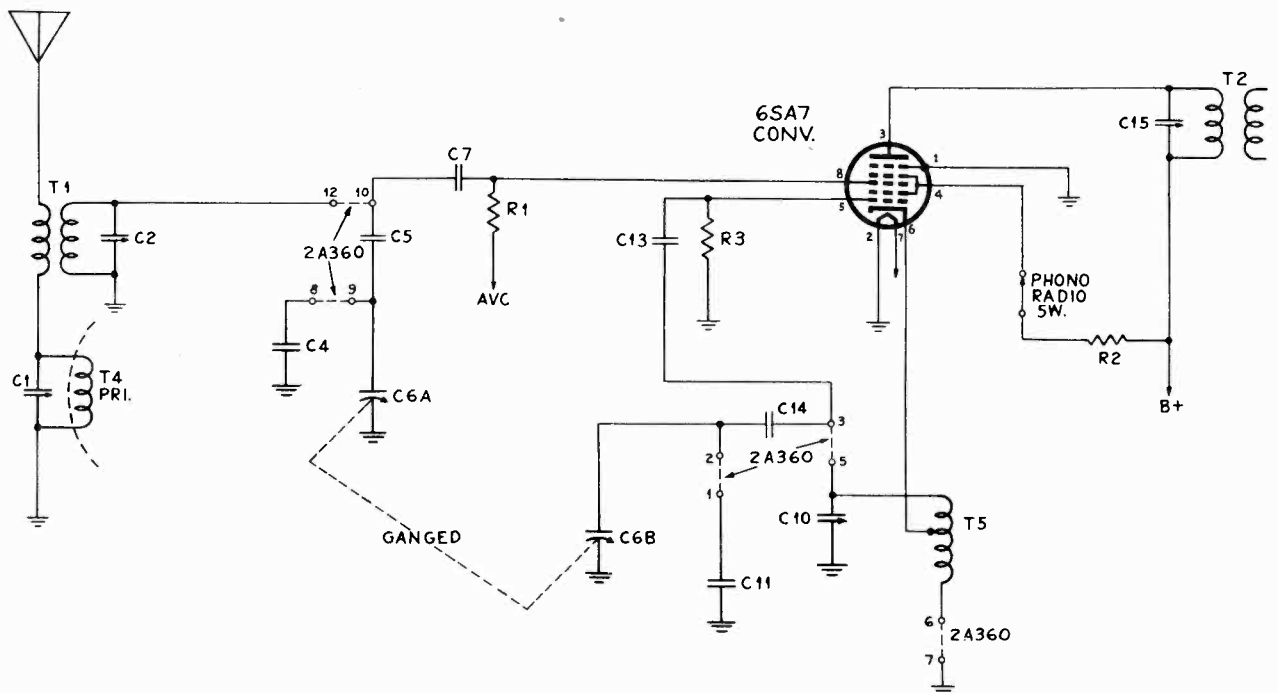
Intermediate Frequency 455 KC



Selectivity
40 KC Broad at 1000 Times Signal



BAND-SWITCH SHOWN
AT 1ST POSITION
BROADCAST BAND
540-1600 KC.



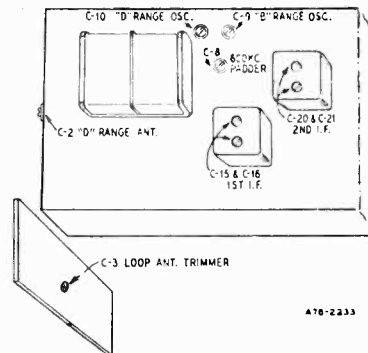
BAND-SWITCH SHOWN
AT 2ND POSITION CLOCKWISE
SHORT WAVE BAND
9.25-15 MC.

ALIGNMENT PROCEDURE

Volume Control—Maximum All Adjustments.
Connect Radio Chassis to Ground Post of Signal Generator with a Short Heavy Lead.
Allow Chassis and Signal Generator to "Heat Up" for several minutes.

The following equipment is required for aligning:
An All Wave Signal Generator which will provide an accurately calibrated signal at the test frequencies as listed.
Output Indicating Meter—Non-Metallic Screwdriver.
Dummy Antennas—.1 mf., 100 mmf., and 400 ohms.

SIGNAL GENERATOR		BAND SWITCH SETTING		CONDENSER SETTING		ADJUST TRIMMERS TO MAXIMUM	
FREQUENCY SETTING	CONNECTION AT RADIO	DUMMY ANTENNA					
I.F.	455 KC	Grid of 6SA7 Pin 8	.1 mf.	B Range	Turn Rotor to Full Open	1st I.F. (C15) & (C16)	2nd I.F. (C20) & (C21)
RANGE B	1620 KC	Antenna Lead	100 mmf.	B Range	Turn Rotor to Full Open	Oscillator Range B (C9)	
	1400 KC	Antenna Lead	100 mmf.	B Range	Tune Rotor to Max. Output See Note A	Ant. Range B (C3)	
	600 KC	Antenna Lead	100 mmf.	B Range	Tune Rotor to Max. Output	Oscillator (C8) See Note B	
Repeat above steps at 1620 and 600 KC until readjusting the oscillator Range B Trimmer (C9) causes no further improvement of output.							
RANGE D	15.6 MC	Antenna Lead	400 Ohm	D Range	Turn Rotor to Full Open	Oscillator Range D (C10)	
	14 MC	Antenna Lead	400 Ohm	D Range	Tune Rotor to Max. Output	Ant. Range D (C2)	
Reassemble chassis in cabinet.							
LOOP RANGE B	1400 KC	Antenna Lead	100 mmf.	B Range	Tune Rotor to Max. Output	Ant. Range B (C3)	



A70-2233

NOTE A—Set pointer at the 1400 KC mark on the dial scale. Attach pointer to drive cord.

NOTE B—Turn rotor back and forth and adjust the trimmer until peak of greatest intensity is obtained.

REPLACEMENT PARTS LIST

NOTICE: There is a Model Number label on the chassis. This label identifies the radio as to chassis, dial and issue letter. When ordering parts or writing, give ALL information appearing on this label.

MISCELLANEOUS

PART NO.	DESCRIPTION
12A442	6" P.M. Speaker complete with Output Transformer
12A436	8" P.M. Speaker complete with Output Transformer Cone and Voice Coil Assembly (Specify part number and letters stamped on speaker) Output Transformer (Specify part number and letters stamped on speaker)
3A303	Tube Socket—Octal (8 prong) Molded
3A304	Phono Motor Socket
3A305	Phono Socket—Single Pin Tip
2A360	Band Change Switch
13X328	Line Cord and Plug Assembly
10A614	Knob (Tuning)
10A615	Knob (Volume)
10A616	Knob (Tone—R.P.)
10A617	Knob (SW-BC)

TRANSFORMERS AND COILS

T-1	9A1812	"D" Range Antenna Coil Assembly
T-2	9A1814	1st I-F Coil Assembly
T-3	9A1815	2nd I-F Coil Assembly
T-4	26A449	"B" Range Loop Antenna Assembly
T-5	9A1813	"B" and "D" Range Oscillator Coil Assembly
T-6	53X282	117 Volt, 60 Cycle, Standard Power Transformer
T-7		Output Transformer (See Miscellaneous)

CAPACITORS

C-1	47X445	270 mmf	Molded
C-2	17A164	5-50 mmf	Trimmer
C-3	17A235	2-12 mmf	Trimmer
C-4	47X473	47 mmf	Silvered Mica
C-5	47X474	360 mmf	Silvered Mica
C-6A, C-6B	14A184	Gang Condenser	
C-7	B66501	.0005 mf 200 V	Tubular
C-8	17A155	350-430 mmf	Trimmer
C-9, C-10	17A109	2.5-35 mmf	Dual Trimmer
C-11	47X472	40 mmf	Silvered Mica
C-12, C-18	D56403	.04 mf 400 V	Tubular
C-13	47X466	68 mmf	Molded
C-14	47X481	286 mmf	Silvered Mica
C-15, C-16	Part of T-2 (1st I-F Coil Assem.)		
C-19, C-23	47X463	47 mmf	Molded
C-20, C-21	Part of T-3 (2nd I-F Coil Assem.)		
C-22	47X471	68 mmf	Molded
C-24	D64403	.04 mf 400 V	Tubular
C-25	D66502	.005 mf 400 V	Tubular
C-26	D67104	10 mf 400 V	Tubular
C-27	D54253	.025 mf 400 V	Tubular
C-28	D56402	.004 mf 400 V	Tubular
C-29	D66103	.01 mf 400 V	Tubular
C-30A		40 mf 450 V	Three Section Electrolytic
C-30B	45X346	40 mf 450 V	
C-30C		20 mf 25 V	
C-31	F66402	.004 mf 600 V	Tubular
C-32	47X505	470 mmf	Molded
C-33	B66503	.05 mf 200 V	Tubular
C-34	47X476	100 mmf	Molded
C-35	D57204	.2 mf 400 V	Tubular

RESISTORS

	OHMS	WATTS	
R-1, R-7	B85225	2.2 meg.	0.5 Carbon
R-2, R-4	C84393	39 K	1.0 Carbon
R-3	B94393	39 K	0.5 Carbon
R-5	B84222	2200	0.5 Carbon
R-6	B85105	1 meg.	0.5 Carbon
R-8	B85473	47 K	0.5 Carbon
R-9	B84153	15 K	0.5 Carbon
R-10	36X357	.5 meg.	Volume Control & Switch
R-11	B85106	10 meg.	0.5 Carbon
R-12, R-16	B85474	470 K	0.5 Carbon
R-13	B84333	33 K	0.5 Carbon
R-14	B84823	82 K	0.5 Carbon
*R-15	40X277	3 meg.	Tone Control & Radio Phono Switch
R-17	C84271	270	1.0 Carbon
R-18	43X213	2.0	0.5 Wire-wound
R-19	D84182	1800	2.0 Carbon

DIAL AND DRIVE ASSEMBLY

6X21	Rubber Grommet	
20X329	Cond. Cushion Stud	Mtg. Gang Condenser
26A443	Dial Bracket Assembly complete with Snacers, Pulleys, Diffusers and Dial Background less Dial Glass	
58X676	Dial Glass	
26A444	Idle Bracket Assembly	
26X486	Drive Shaft	
19X192	"C" Washer (for drive shaft)	
15X163	Pointer	
10X38	Drive Card Assembly or 50" Cord	
28X113	Drive Card Tension Spring	
7X199	Pilot Light Socket Assembly	
4X353	No. 47 Pilot Light	
	Escutcheon	

TYPE F-28A131 RECORD CHANGER PARTS

F-44038	Motor, 60 Cycle, 115 volts
F-59175	Tone Arm (Less Crystal Cartridge)
F-71214	Crystal Cartridge
F-64343	Tone Arm Spring
F-13510	Control Knob Assembly
F-13412	Automatic Stop Switch & Bracket Assembly
F-13435	Turntable
F-13544	Shelf Cover Arm & Record Hold Down Assembly
F-59176	Shelf Cover
F-561333	Shelf Cover Spring
	Needle, Permo No. 100

SUBSTITUTE PARTS

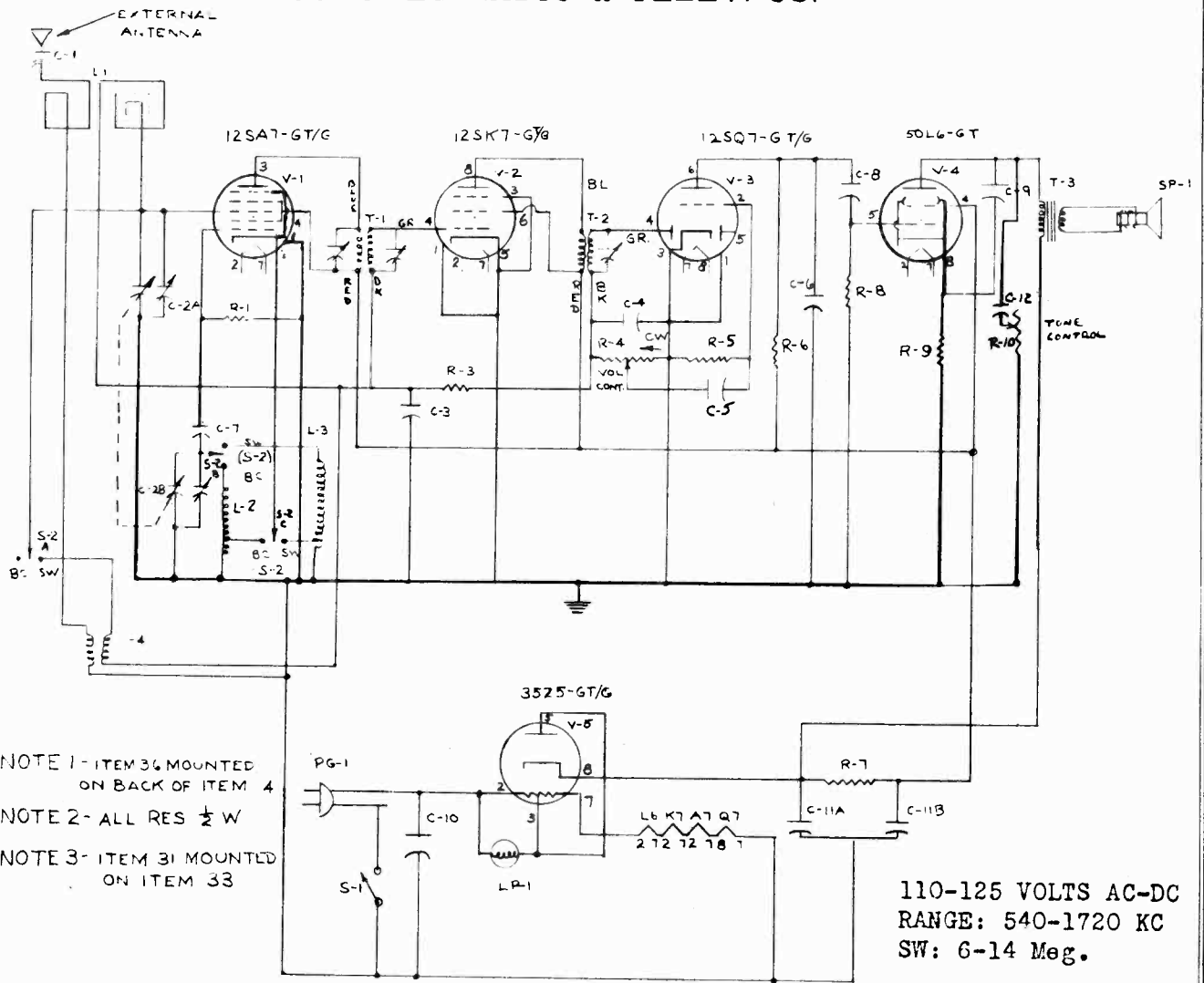
The following parts are used in some receivers only. Check part numbers on old part before ordering and order part originally used in receiver.

*40X282	Tone Control (Substitute for 40X277)
*25X1539	Radio Phono Switch Lever (Use with 40X282)
*2A161	D.P.D.T. Switch (Use with 40X282)

Use only GENUINE factory tested parts to insure service jobs you can depend on and to obtain original set performance.

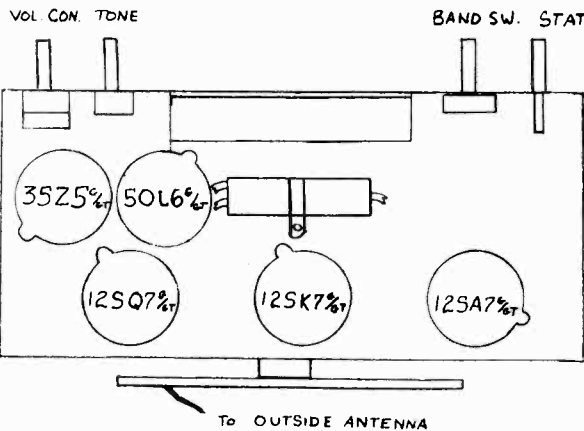
CORONET RADIO & TELEV. CO.

MODEL 1583



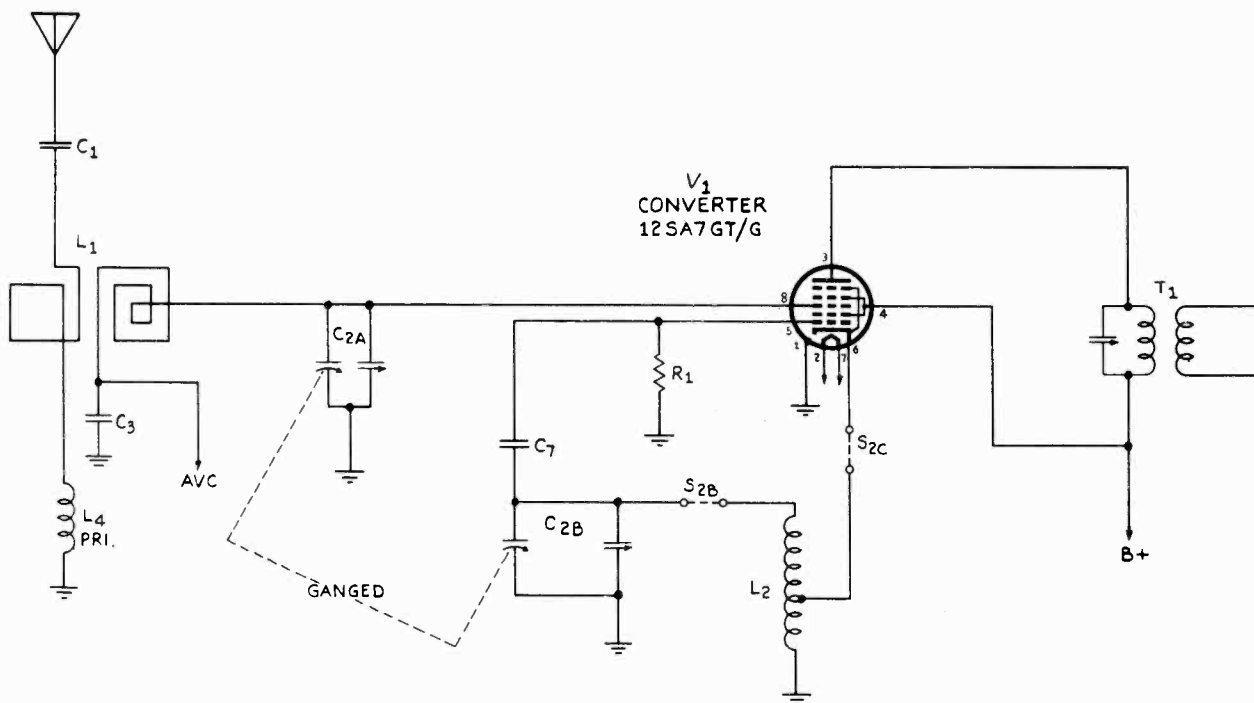
NOTE 1- ITEM 34 MOUNTED ON BACK OF ITEM 4
 NOTE 2- ALL RES 1/2 W
 NOTE 3- ITEM 31 MOUNTED ON ITEM 33

110-125 VOLTS AC-DC
 RANGE: 540-1720 KC
 SW: 6-14 Meg.

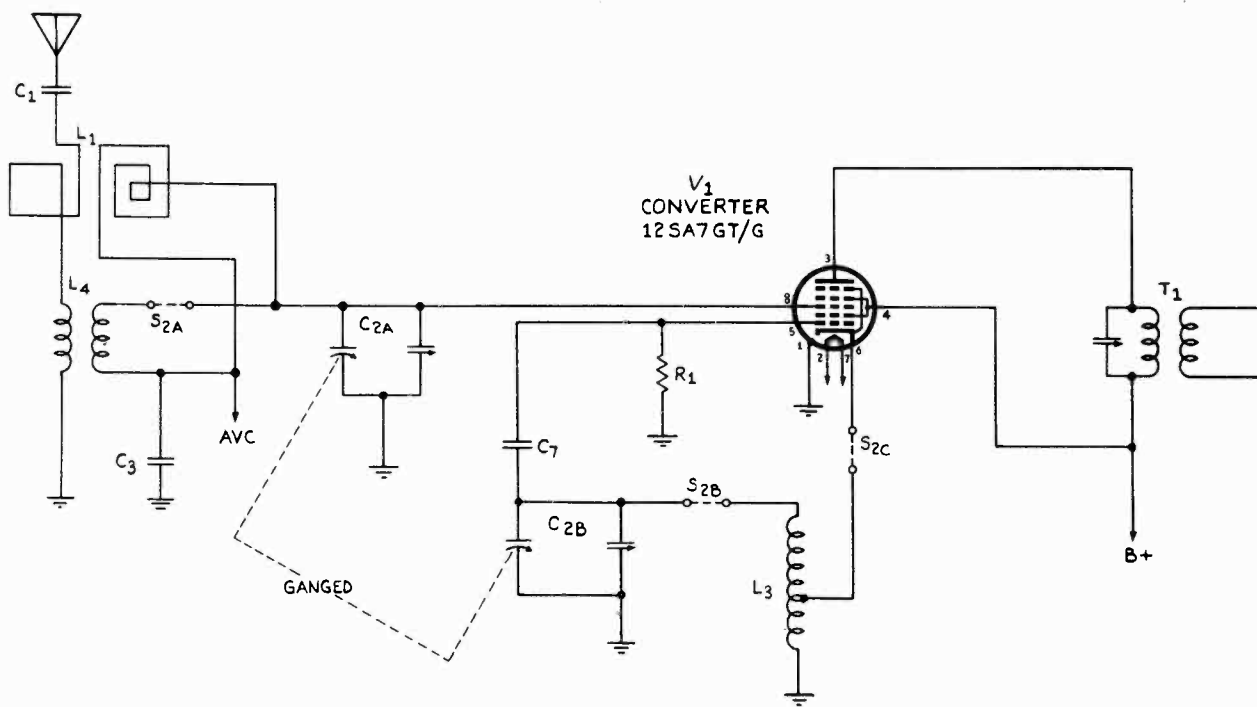


CODE	PART	DESCRIPTION	ITEM
R-1	A-95	Resistor, 22,000 ohms	1
R-3	A-17	" 2.2 meg	2
R-4	A-96	Potentiom'r, 0.5 meg.	3
R-5	A-18	Resistor, 10 meg	4
R-6	A-14	" 0.25 meg	5
R-7	A-98	" 1200 ohm	6
R-8	A-15	" 0.5 meg	7
R-9	A-16	" 140 ohm	8
R-10	A-18	Potentiom'r .1 meg	9
			10
			11

CODE	PART	DESCRIPTION	ITEM
C-1	A-5	Condens'r; 02 meg	200v 12
C-2	A-19	" Tuning	13
C-3	A-7	" .05 mf	200v 14
C-4	A-9	" 250 mmf	" 15
C-5	A-6	" .002 mf	" 16
C-6	A-9	" 250 mmf	" 17
C-7	A-8	" 100 mmf	" 18
C-8	A-5	" .02 mf	" 19
C-9	A-5	" .02 "	400v 20
C-10	A-4	" 0.1 "	200v 21
C-11	A-3	" 50-20mf	150v 22
S-2	A-97	4 pole 2 pos'ion	23
C-12	A-99	Cond. .05 mf	200v 24
L-1	A-1	Internal loop ant.	25
L-2	A-28	B.C. osc. coil	26
L-3	A-98	SW osc. coil	27
L-4	A-98	SW ant. coil	28
T-1	A-10	456 kc. IF xformer	29
T-2	A-11	" "	30
T-3	A-2	Output	" 31
LP-1	A-30	Lamp, 6v, 0.15A.	32
SP-1	A-2	P.M. speaker	33
PG-1	A-55	Power plug	34
S-1	A-96	Power switch	35
V-1	A-22	Vac. tube, 12SA7-6T/G	37
V-2	A-23	" " 12SK7-	38
V-3	A-24	" " 12SQ7	39
V-4	A-25	" " 50L6-GT	40
V-5	A-26	" " 35Z5-6T/G	41



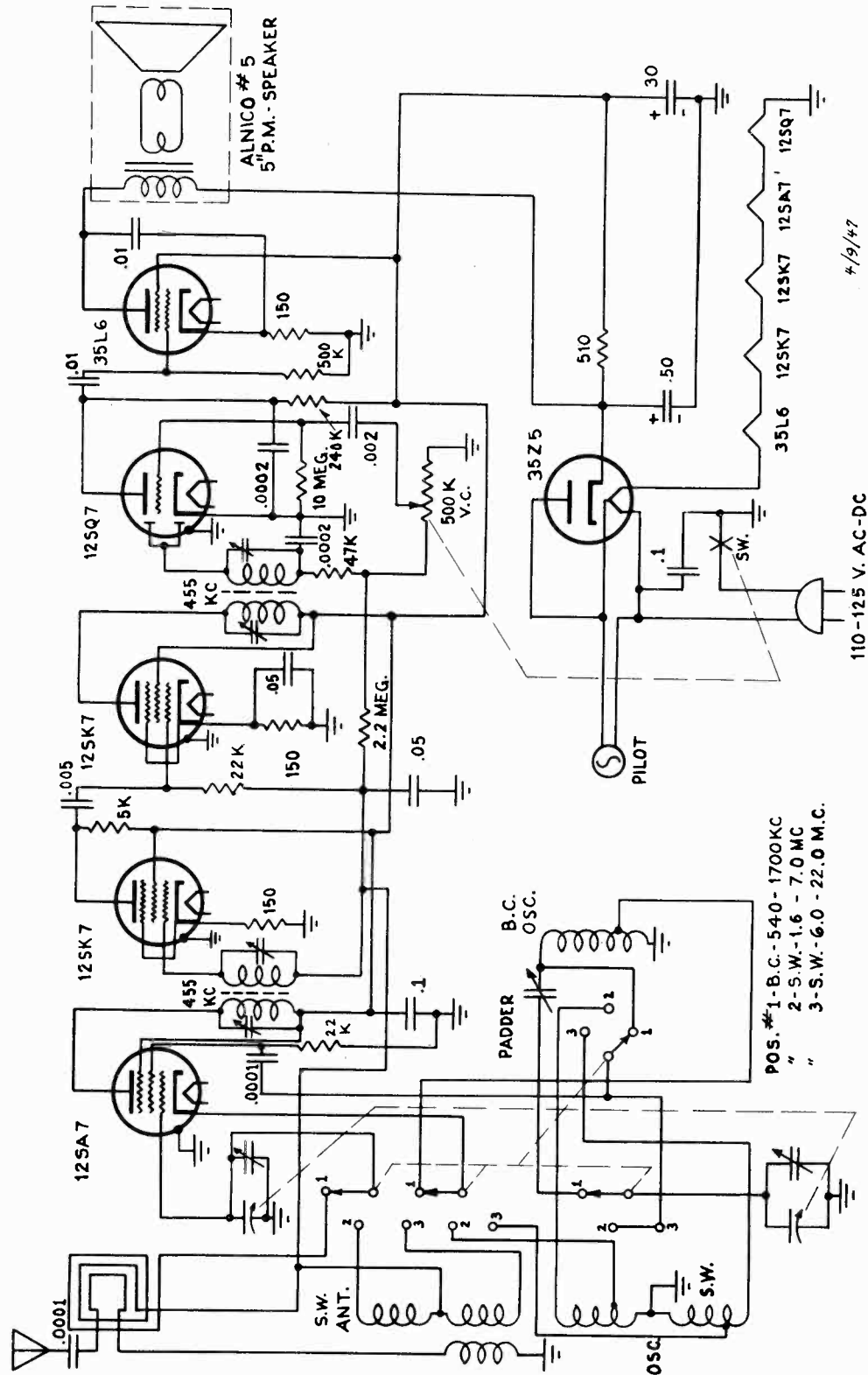
BAND-SWITCH SHOWN AT 1ST POSITION.
BROADCAST BAND
540-1720 KC.



BAND-SWITCH SHOWN AT 2ND POSITION.
SHORT WAVE BAND
6 - 14 MC.

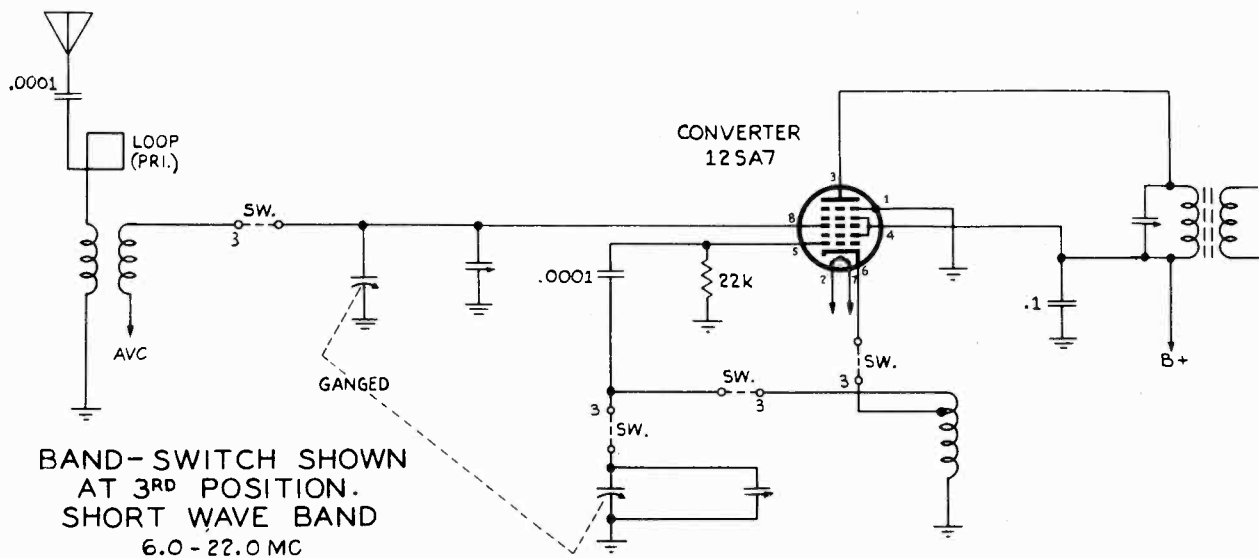
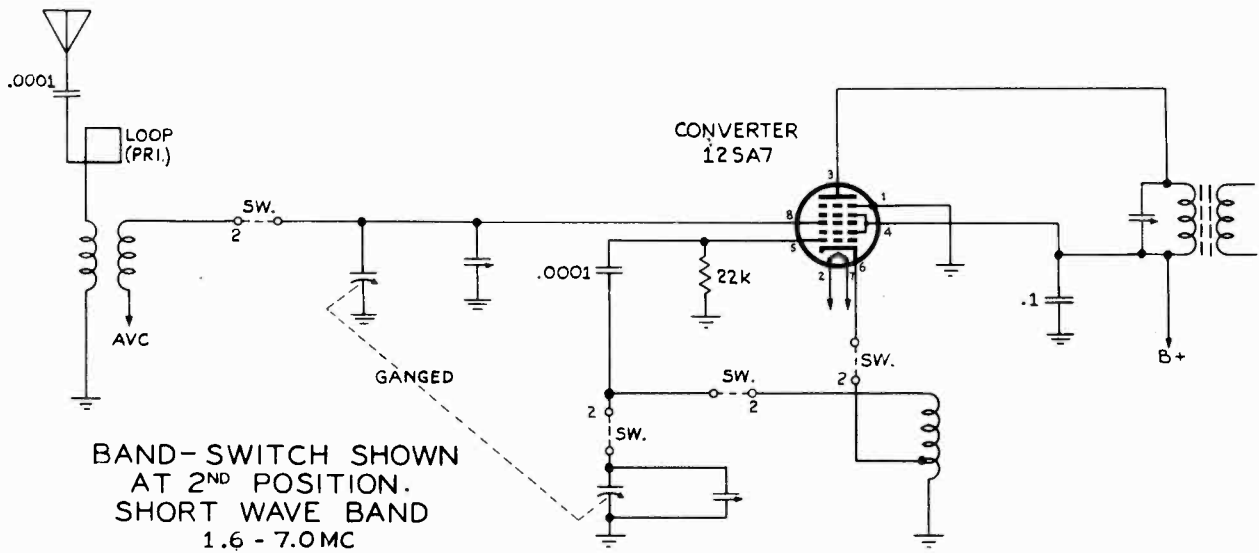
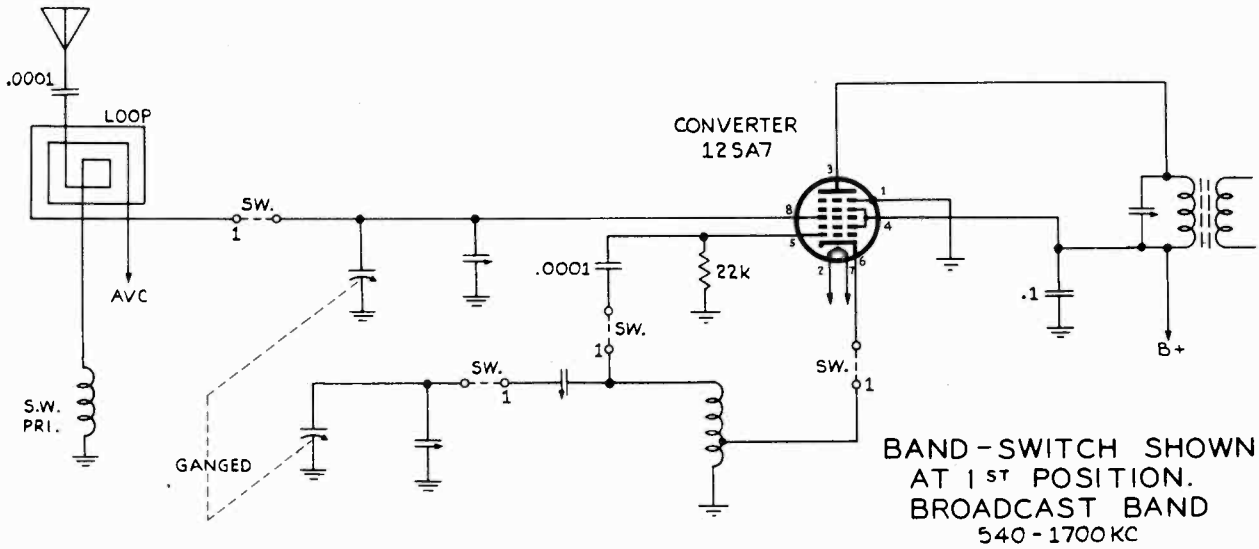
CORONET RADIO & TELEV CO.

MODEL 1701



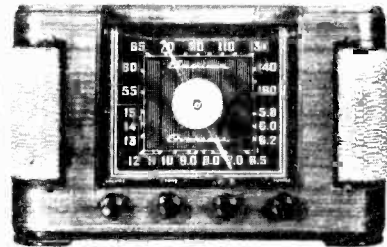
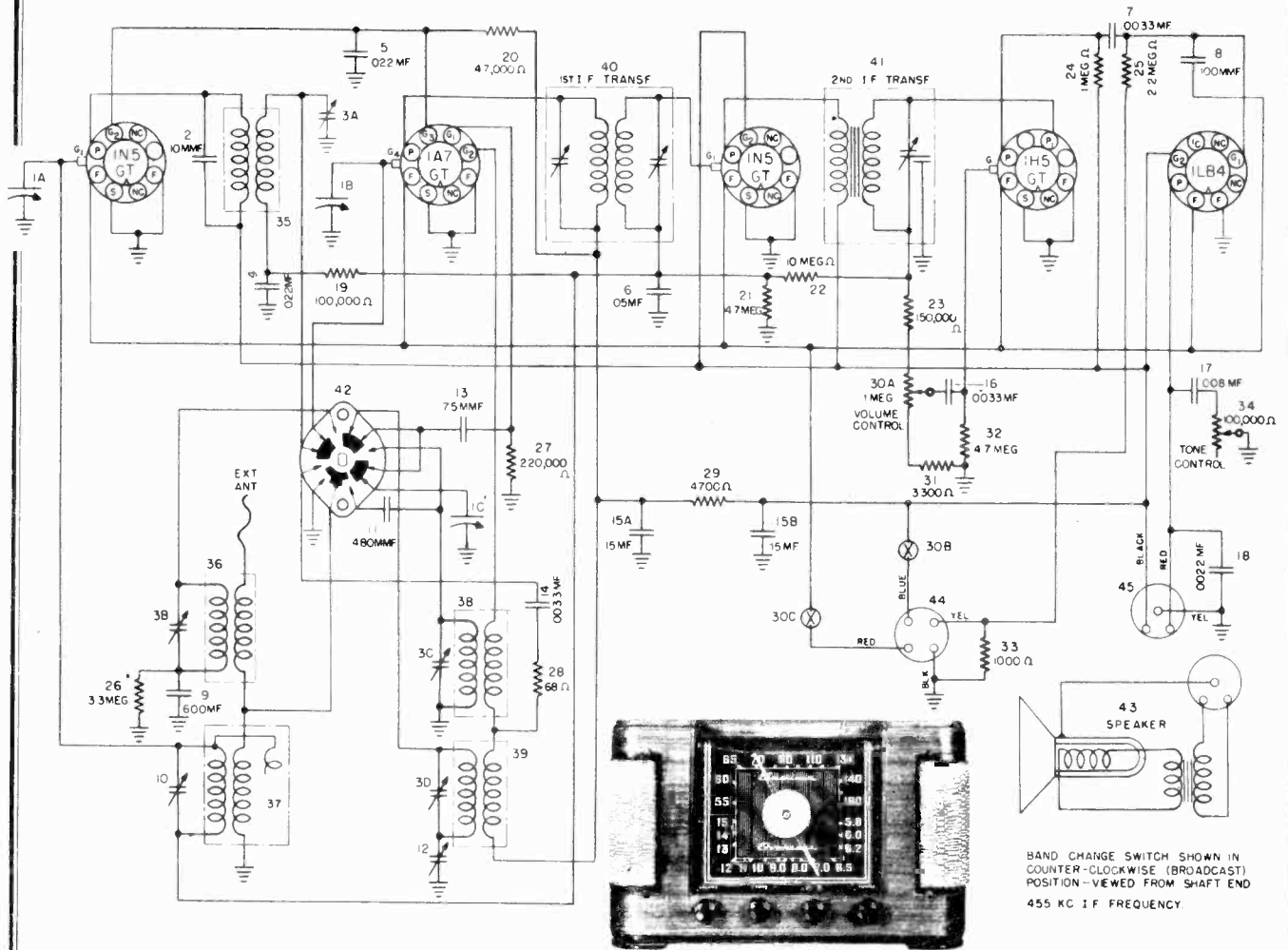
"clarified schematics"

MODEL 1701



CROSLY DIV.
AV CO MFG. CORP.

MODEL 56FC

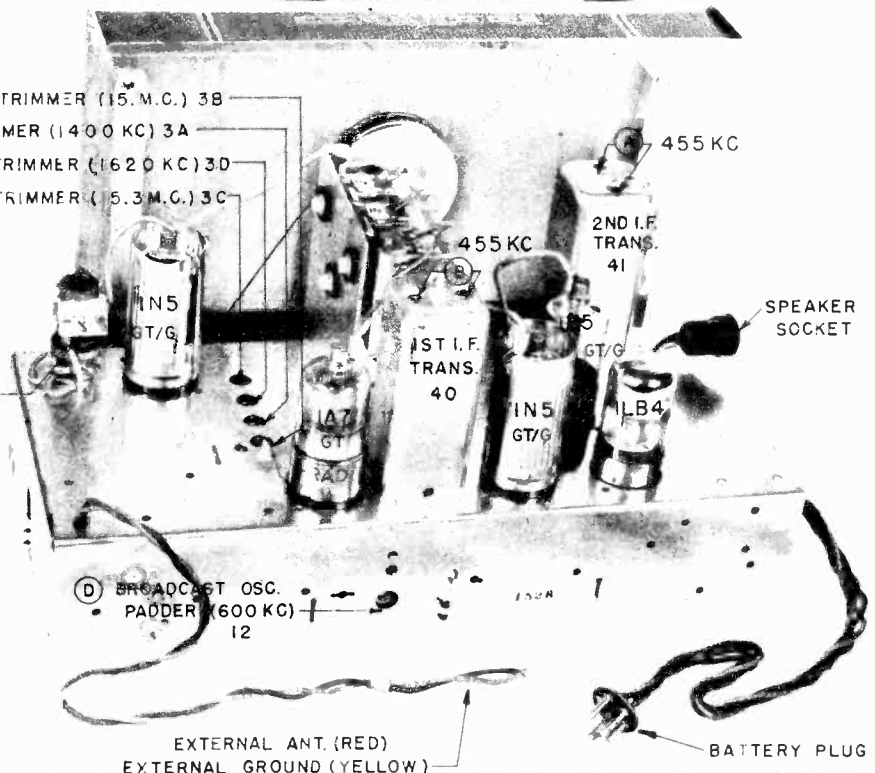


BAND CHANGE SWITCH SHOWN IN COUNTER-CLOCKWISE (BROADCAST) POSITION - VIEWED FROM SHAFT END
455 KC I.F. FREQUENCY

- (H) SHORT WAVE ANT. TRIMMER (15. M.C.) 3B
- (E) INTERSTAGE TRIMMER (1400 KC) 3A
- (C) BROADCAST OSC. TRIMMER (1620 KC) 3D
- (G) SHORT WAVE OSC. TRIMMER (5.3 M.C.) 3C

- (F) BROADCAST ANT. TRIMMER (1400 KC.) 10

- (D) BROADCAST OSC. PADDER (600 KC) 12



October, 1946

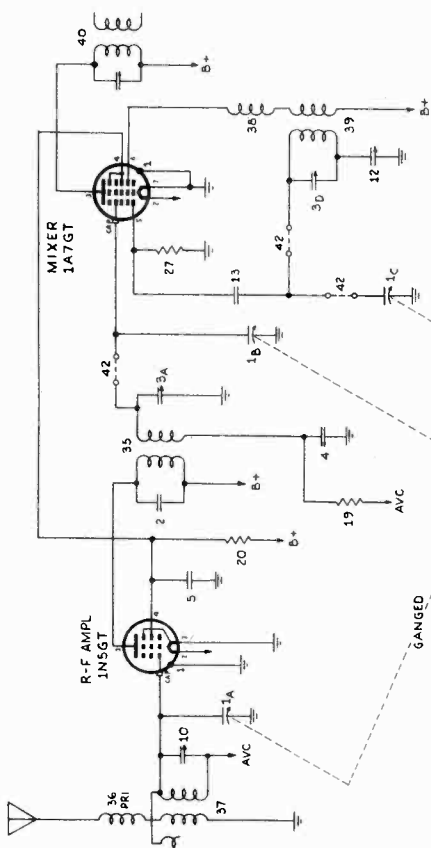
EXTERNAL ANT. (RED)
EXTERNAL GROUND (YELLOW)

BATTERY PLUG

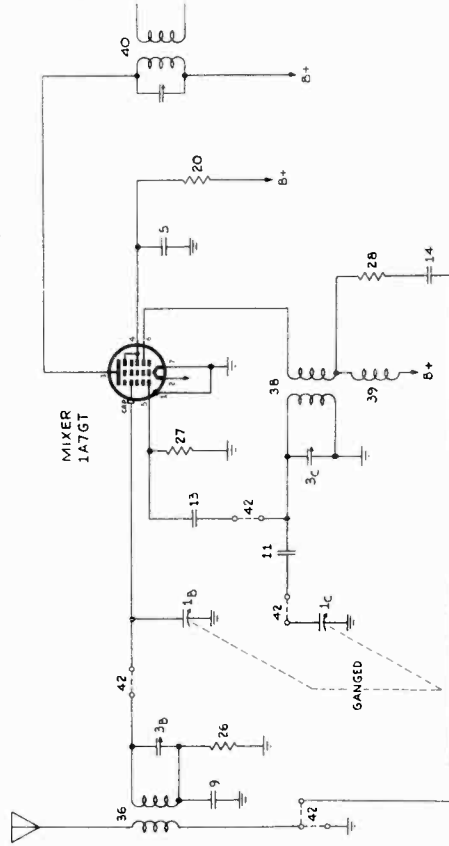
"clarified schematics"

MODEL 56FC
MODEL 56TX-L

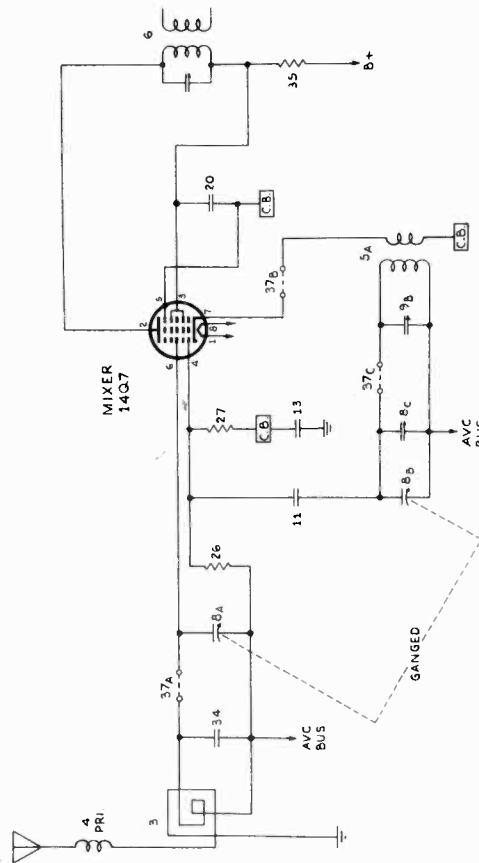
CROSLEY DIV.
AVCOMFG. CORP.



BAND-SWITCH SHOWN
AT 1ST POSITION.
BROADCAST BAND
540-1600KC

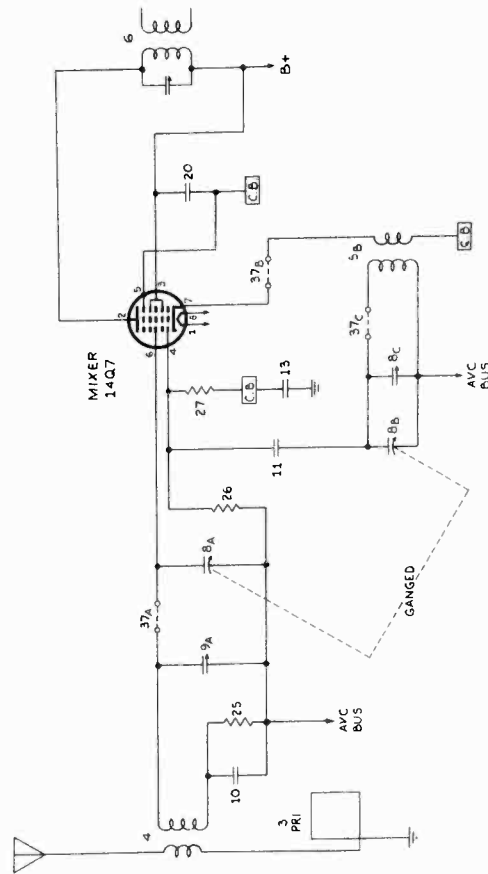


BAND-SWITCH SHOWN
AT 2ND POSITION CLOCKWISE.
SHORT WAVE BAND
5.6 - 15 MC.



BAND-SWITCH SHOWN
AT 1ST POSITION.
BROADCAST BAND
540-1600KC

☐ CB ☐
DENOTES COMMON BUS
ABOVE GROUND BY
C₁₃ (1 μf)



BAND-SWITCH SHOWN
AT 2ND POSITION CLOCKWISE.
SHORT WAVE BAND
5.6 - 15 MC.

☐ CB ☐
DENOTES COMMON BUS
ABOVE GROUND BY
C₁₃ (1 μf)

CROSLEY DIV.
AV COMFG. CORP.

MODEL 56FC

ALIGNMENT PROCEDURE

1. Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.
2. Connect the output meter across the speaker voice coil.
3. The r.f. signal input from the signal generator should be connected to the antenna lead (red) as indicated in the alignment chart. Connect the low side (ground) of the signal generator to the chassis.
4. Turn the volume control on full and adjust the signal generator output to produce approximately mid-scale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

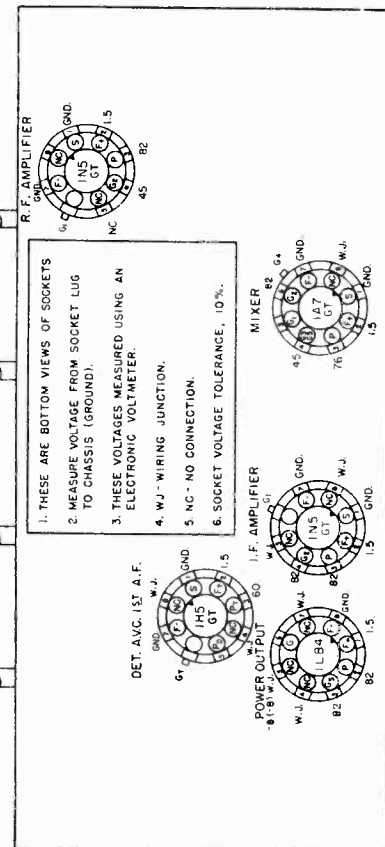
ALIGNMENT CHART

Alignment Sequence	Signal Generator Output			Position of		Adjust for Maximum Output
	Frequency in kc.	In Series with	To	Band Switch	Tuning Dial	
1	455	200 mmf.	Ant.	A	1,620	A & B
2	1,620	200 mmf.	Ant.	A	1,620	C
3	600	200 mmf.	Ant.	A	600	D
4	1,620	200 mmf.	Ant.	A	1,620	C
5	1,400	200 mmf.	Ant.	A	1,400	E & F
6	600	200 mmf.	Ant.	A	600	D
7	15,300	400 ohms	Ant.	O	15,300	G*
8	15,000	400 ohms	Ant.	O	15,000	H

* NOTE: When aligning the short-wave oscillator trimmer (G), be sure that the circuit is aligned at the correct frequency and not at the image frequency which is 910 kilocycles lower as indicated by the receiver dial. To check: Tune in the generator frequency, then increase the generator output and tune in the image frequency. The image frequency should be weaker than the fundamental and audible 910 kilocycles lower on the receiver dial. If the image cannot be tuned in, the oscillator trimmer is adjusted to the wrong peak; i.e., the oscillator trimmer may be adjusted to the image or one of the harmonics instead of the fundamental frequency. The correct peak is the second one heard as the trimmer adjustment screw is opened from the completely closed position.

TYPE: Five-tube, two-band superheterodyne.
 INTERMEDIATE FREQUENCY: 455 kc.
 FREQUENCY RANGE: American Broadcast Band, 540 to 1600 kc. (Selector Switch at A.)
 POWER SUPPLY: Crosley "A-B" Battery Pack, Overseas Short-wave Band, 5.8 to 15 mc. (Selector Switch at 0.)
 VOLTAGE RATING: 1½ v. "A"; 90 v. "B"
 POWER OUTPUT: 170 mw. minimum.

SOCKET VOLTAGE CHART



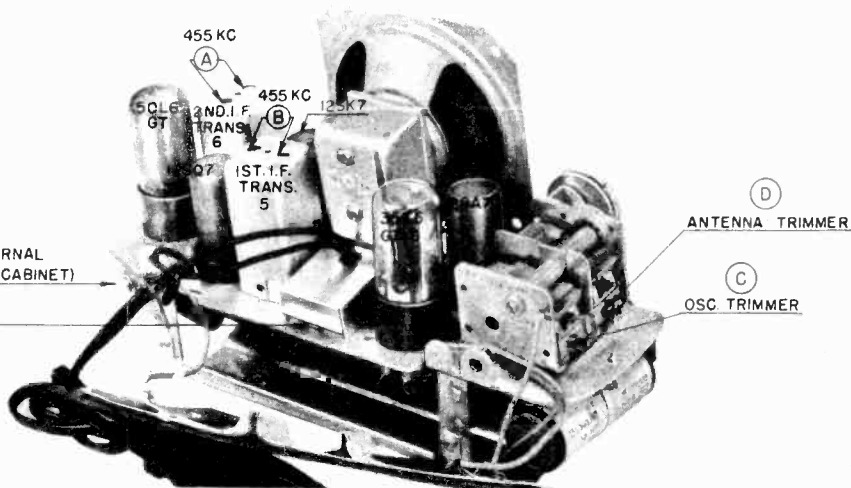
CROSLY DIV.
AVCO MFG. CORP.

MODEL 56TD



TERMINAL FOR EXTERNAL
ANTENNA (BOTTOM OF CABINET)

INTERLOCK SWITCH
32



When using direct current it may be necessary to reverse the position of the power plug in the electric outlet for correct polarity.

Reversing the position of the power plug when alternating current is used may reduce power hum. Under no circumstances should a ground be connected to this receiver.

When checking or replacing tubes or aligning this receiver, the back of the cabinet must be removed. This is accomplished by removing the two screws located near the top of the cabinet back in the louvre recess. Remove the back carefully and do not exert too much pressure. When the back is removed it disengages the interlock safety switch (item 32 on schematic) and cuts off the power to the receiver. To turn on the radio when the back of the cabinet is removed, it is necessary to hold in the lever on the interlock switch and caution should be exercised not to come in contact with exposed wires on the chassis.

ALIGNMENT PROCEDURE

1. Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.
2. Connect the output meter across the speaker voice coil.
3. The r. f. signal input from the signal generator should be connected to the external antenna terminal screw, as indicated in the alignment chart. Connect the signal generator ground through a 0.1 mfd. condenser to—B (pin 3 on 12SK7 tube socket).
4. Turn the volume control on full and adjust the signal generator output to produce approximately mid-scale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

Alignment Sequence	Signal Generator Output			Position of Tuning Dial KC	Adjust for Maximum Outout
	Frequency in KC	In Series with	To		
1	455	200 mmf.	Ant.	1620	A & B
2	1620	200 mmf.	Ant.	1620	C
3	1400	200 mmf.	Ant.	1400	D

CROSLLEY DIV.
AVCO MFG. CORP.

MODEL 56TD
MODEL 56TN-L
MODEL 56TX-L
MODELS 57TQ.56TZ

PARTS LIST—MODEL 56TX-L

Item No.	Part No.	Description	Item No.	Part No.	Description
1	W-48558	Bulb (Dial), Type 47, 6.3 v., 15 amp.	26	39294-38	Resistor, 15 megohm, 1/2 w.
2	C-13200-1	Cable and Plug Assembly	27	39294-21	Resistor, 30,000 ohm, 1/2 w.
3	AC-134618	Antenna Loop Assembly	28	39294-22	Resistor, 47,000 ohm, 1/2 w.
4	W-134618	Antenna Coil	30	39294-23	Resistor, 47,000 ohm, 1/2 w.
5A	AW-134693	Coil (H.F. Oscillator) Two	31	39294-35	Resistor, 47 megohm, 1/2 w.
5B	AW-134693	Coil (H.F. Oscillator) Section	33	W-137367	Resistor, 47 ohm, 1 w.
6	AW-134065	Transformer (2nd I.F.) Two	34	W-137367	Condenser, (Antenna Trimmer)
7A	B-134959	Transformer (2nd I.F.) Section	35	39015-26	Resistor, 1200 ohm, 1 w.
7B	B-134959	Condenser, Variable	37A	W-49772-3	Resistor, 1200 ohm, 1 w.
8A	Part of Item #8B	Condenser (Trimmer)	37B	AB-137005	Switch (Band Change) Section
8B	AB-137005	Condenser (Trimmer)	37C	C-46846-6	Switch (Band Change) Assembly
9A	AB-135088	Condenser (Trimmer)	39A	C-46846-6	Control Volume (1 megohm) Assy.
9B	CC-210885-143	Condenser (Trimmer)	39B	39868-8	Control Volume
10	39004-5	Condenser, 50 mfd., 600 v., Paper	39C	39868-8	Control, Volume
11	39001-17	Condenser, 50 mfd., 600 v., Paper	39D	39868-8	Control, Volume
12	39001-17	Condenser, 50 mfd., 600 v., Paper	39E	39868-8	Control, Volume
13	39001-17	Condenser, 50 mfd., 600 v., Paper	39F	39868-8	Control, Volume
14	39001-17	Condenser, 50 mfd., 600 v., Paper	39G	39868-8	Control, Volume
15	39001-17	Condenser, 50 mfd., 600 v., Paper	39H	39868-8	Control, Volume
16	39001-17	Condenser, 50 mfd., 600 v., Paper	39I	39868-8	Control, Volume
17A	W-134988	Condenser, 60 mfd., 150 v., Electrolytic	39J	39868-8	Control, Volume
17B	W-134988	Condenser, 60 mfd., 150 v., Electrolytic	39K	39868-8	Control, Volume
18	39001-80	Condenser, 02 mfd., 600 v., Paper	39L	39868-8	Control, Volume
19	39001-80	Condenser, 02 mfd., 600 v., Paper	39M	39868-8	Control, Volume
20	39001-80	Condenser, 02 mfd., 600 v., Paper	39N	39868-8	Control, Volume
21	39294-29	Resistor, 470,000 ohm, 1/2 w.	39O	39868-8	Control, Volume
22	39294-29	Resistor, 470,000 ohm, 1/2 w.	39P	39868-8	Control, Volume
23	39294-29	Resistor, 470,000 ohm, 1/2 w.	39Q	39868-8	Control, Volume
24	39294-29	Resistor, 470,000 ohm, 1/2 w.	39R	39868-8	Control, Volume
25	39294-29	Resistor, 470,000 ohm, 1/2 w.	39S	39868-8	Control, Volume
26	39294-29	Resistor, 470,000 ohm, 1/2 w.	39T	39868-8	Control, Volume
27	39294-29	Resistor, 470,000 ohm, 1/2 w.	39U	39868-8	Control, Volume
28	39294-29	Resistor, 470,000 ohm, 1/2 w.	39V	39868-8	Control, Volume

*These parts will replace the original equipment parts.

PARTS LIST—MODEL 56TD

Item No.	Part No.	Description	Item No.	Part No.	Description
1	W-48558	Bulb (Dial), Type 47, 6.3 v., 15 amp.	29	W-137367	Resistor, 47 Ohm, 1 w.
2	C-13200-1	Cable and Plug Assembly	30	39294-23	Resistor, 47,000 ohm, 1/2 w.
3	AC-134618	Antenna Loop and Back Assembly	31	39294-35	Resistor, 47 megohm, 1/2 w.
4	W-134618	Antenna Coil	32	39294-35	Resistor, 47 megohm, 1/2 w.
5	AW-137656	Transformer (1st I.F.) Two	33	39294-35	Resistor, 47 megohm, 1/2 w.
6	AW-137657	Transformer (2nd I.F.) Two	34	39294-35	Resistor, 47 megohm, 1/2 w.
7A	B-136810	Transformer (2nd I.F.) Section	35	39294-35	Resistor, 47 megohm, 1/2 w.
7B	B-136810	Condenser, Variable	36	AD-136807	Speaker, 1.5 Ohm, 1/2 w.
7C	Part of Item #7A	Condenser, Variable	37A	AD-136807	Speaker, 1.5 Ohm, 1/2 w.
7D	Part of Item #7B	Condenser, Trimmer	37B	C-46846-6	Switch (Band Change) Section
7E	Part of Item #7B	Condenser, Trimmer	37C	C-46846-6	Switch (Band Change) Section
8	39001-76	Condenser, 250 mfd., 600 v., Paper	38	Part of Item #8B	B.C. Ant. Trimmer
9	39001-76	Condenser, 250 mfd., 600 v., Paper	39	W-134939	Switch (Tone)
10	39001-76	Condenser, 250 mfd., 600 v., Paper	40	39001-10	Resistor, .0039 mid., 600 v., Paper
11	39001-76	Condenser, 250 mfd., 600 v., Paper	41	39015-26	Resistor, 1200 Ohm, 1 w.
12	39001-76	Condenser, 250 mfd., 600 v., Paper	42	W-135371	Socket (Tube)
13	39001-76	Condenser, 250 mfd., 600 v., Paper	43	W-135371	Face (Dial Assembly (Dial Light))
14	B-226539-53	Condenser, 50 mfd., 500 v., ceramic	44	C-135175	Pointer, Dial
15	B-136767	Speaker	45	B-134576	Pointer, Dial
16	39001-17	Condenser, 50 mfd., 600 v., Paper	46	W-134667	Clip (Dial Pointer)
17	39001-17	Condenser, 50 mfd., 600 v., Paper	47	W-134917	Shaft (Drive)
18	B-136771	Spring, Drive Cord	48	W-134917	Spring, Drive Cord
19	39294-38	Resistor, 15 megohm, 1/2 w.	49	W-134916	Washer, Spring (Drive Shaft)
20	39294-21	Resistor, 30,000 ohm, 1/2 w.	50	W-134916	Washer, Spring (Drive Shaft)
21	39294-34	Resistor, 3.3 megohm, 1/2 w.	51	W-134916	Washer, Spring (Drive Shaft)
22	39294-34	Resistor, 3.3 megohm, 1/2 w.	52	W-134916	Washer, Spring (Drive Shaft)
23	39294-29	Resistor, 470,000 ohm, 1/2 w.	53	W-134916	Washer, Spring (Drive Shaft)
24	39294-29	Resistor, 470,000 ohm, 1/2 w.	54	W-134916	Washer, Spring (Drive Shaft)
25	39294-29	Resistor, 470,000 ohm, 1/2 w.	55	W-134916	Washer, Spring (Drive Shaft)
26	39294-8	Resistor, 150 ohm, 1/2 w.	56	W-134916	Washer, Spring (Drive Shaft)
27	39001-80	Condenser, 02 mfd., 600 v., Paper	57	W-136630	Stud, Trimmer
28	B-135383	Control, Volume (1 megohm) Assy.	58	39294-21	Resistor, 22,000 ohm, 1/2 w.

*These parts will replace the original equipment parts.

PARTS LIST—MODEL 56TN-L

Item No.	Part No.	Description	Item No.	Part No.	Description
1	W-48558	Bulb (Dial Light), Type 47, 6.3 v., 15 amp.	29	W-137367	Resistor, 47 Ohm, 1 w.
2	C-13200-1	Cable and Plug Assembly	30	39294-23	Resistor, 47,000 ohm, 1/2 w.
3	AC-134618	Antenna Loop and Back Assembly	31	39294-35	Resistor, 47 megohm, 1/2 w.
4	W-134618	Antenna Coil	32	39294-35	Resistor, 47 megohm, 1/2 w.
5A	AW-134693	Coil (H.F. Oscillator) Two	33	39294-35	Resistor, 47 megohm, 1/2 w.
5B	AW-134693	Coil (H.F. Oscillator) Section	34	39294-35	Resistor, 47 megohm, 1/2 w.
6	AW-134065	Transformer (2nd I.F.) Two	35	39294-35	Resistor, 47 megohm, 1/2 w.
7	AW-134158	Transformer (2nd I.F.) Section	36	AD-136807	Speaker, 1.5 Ohm, 1/2 w.
8	B-134959	Condenser, Variable	37A	AD-136807	Speaker, 1.5 Ohm, 1/2 w.
9A	Part of Item #9B	Condenser, Variable	37B	C-46846-6	Switch (Band Change) Section
9B	AB-135088	Condenser, Trimmer (H.F. Oscillator)	37C	C-46846-6	Switch (Band Change) Section
10	B-226539-53	Condenser, 50 mfd., 500 v., ceramic	38	Part of Item #8B	B.C. Ant. Trimmer
11	B-136767	Speaker	39	W-134939	Switch (Tone)
12	39001-76	Condenser, 250 mfd., 600 v., Paper	40	39001-10	Resistor, .0039 mid., 600 v., Paper
13	39001-76	Condenser, 250 mfd., 600 v., Paper	41	39015-26	Resistor, 1200 Ohm, 1 w.
14	39001-76	Condenser, 250 mfd., 600 v., Paper	42	W-135371	Socket (Tube)
15	39001-76	Condenser, 250 mfd., 600 v., Paper	43	W-135371	Face (Dial Assembly (Dial Light))
16	39001-76	Condenser, 250 mfd., 600 v., Paper	44	C-135175	Pointer, Dial
17	39001-10	Resistor, 120 V. Section	45	B-134576	Pointer, Dial
18	B-138072	Pointer, Dial	46	W-134667	Clip (Dial Pointer)
19	39001-63	Condenser, .022 mid., 200 v., Paper	47	W-134917	Shaft (Drive)
20	39001-63	Condenser, .022 mid., 200 v., Paper	48	W-134917	Spring, Drive Cord
21	39001-63	Condenser, .022 mid., 200 v., Paper	49	W-134916	Washer, Spring (Drive Shaft)
22	Part of Item #10	Condenser, Trimmer (B.C. Oscillator)	50	W-134916	Washer, Spring (Drive Shaft)
23	39294-11	Resistor, 150 Ohm, 1/2 w.	51	W-134916	Washer, Spring (Drive Shaft)
24	39294-11	Resistor, 150 Ohm, 1/2 w.	52	W-134916	Washer, Spring (Drive Shaft)
25	39294-28	Resistor, 300,000 Ohm, 1/2 w.	53	W-134916	Washer, Spring (Drive Shaft)
26	39294-28	Resistor, 300,000 Ohm, 1/2 w.	54	W-134916	Washer, Spring (Drive Shaft)
27	39294-28	Resistor, 300,000 Ohm, 1/2 w.	55	W-134916	Washer, Spring (Drive Shaft)
28	39294-28	Resistor, 300,000 Ohm, 1/2 w.	56	W-134916	Washer, Spring (Drive Shaft)

*These parts will replace the original equipment parts.

PARTS LIST—MODEL 56TZ, 57TQ

Item No.	Part No.	Description	Item No.	Part No.	Description
1	W-48558	Bulb (Dial), Type 47, 6.3 v., 15 amp.	29	W-137367	Resistor, 47 Ohm, 1 w.
2	C-13200-1	Cable and Plug Assembly	30	39294-23	Resistor, 47,000 ohm, 1/2 w.
3	AC-134618	Antenna Loop Assembly	31	39294-35	Resistor, 47 megohm, 1/2 w.
4	W-134618	Antenna Coil	32	39294-35	Resistor, 47 megohm, 1/2 w.
5A	AW-134693	Coil (H.F. Oscillator) Two	33	39294-35	Resistor, 47 megohm, 1/2 w.
5B	AW-134693	Coil (H.F. Oscillator) Section	34	39294-35	Resistor, 47 megohm, 1/2 w.
6	AW-134065	Transformer (2nd I.F.) Two	35	39294-35	Resistor, 47 megohm, 1/2 w.
7	AW-134158	Transformer (2nd I.F.) Section	36	AD-136807	Speaker, 1.5 Ohm, 1/2 w.
8	B-134959	Condenser, Variable	37A	AD-136807	Speaker, 1.5 Ohm, 1/2 w.
9	AB-135088	Condenser, Trimmer	37B	C-46846-6	Switch (Band Change) Section
10	CC-210885-143	Condenser, Trimmer	37C	C-46846-6	Switch (Band Change) Section
11	39004-5	Condenser, 50 mfd., 600 v., Paper	38	Part of Item #8B	B.C. Ant. Trimmer
12	39001-17	Condenser, 50 mfd., 600 v., Paper	39	W-134939	Switch (Tone)
13	39001-17	Condenser, 50 mfd., 600 v., Paper	40	39001-10	Resistor, .0039 mid., 600 v., Paper
14	39001-17	Condenser, 50 mfd., 600 v., Paper	41	39015-26	Resistor, 1200 Ohm, 1 w.
15	39001-17	Condenser, 50 mfd., 600 v., Paper	42	W-135371	Socket (Tube)
16	39001-17	Condenser, 50 mfd., 600 v., Paper	43	W-135371	Face (Dial Assembly (Dial Light))
17A	W-134988	Condenser, 60 mfd., 150 v., Electrolytic	44	C-135175	Pointer, Dial
17B	W-134988	Condenser, 60 mfd., 150 v., Electrolytic	45	B-134576	Pointer, Dial
18	39001-80	Condenser, 02 mfd., 600 v., Paper	46	W-134667	Clip (Dial Pointer)
19	39001-80	Condenser, 02 mfd., 600 v., Paper	47	W-134917	Shaft (Drive)
20	39001-80	Condenser, 02 mfd., 600 v., Paper	48	W-134917	Spring, Drive Cord
21	39294-29	Resistor, 470,000 ohm, 1/2 w.	49	W-134916	Washer, Spring (Drive Shaft)
22	39294-29	Resistor, 470,000 ohm, 1/2 w.	50	W-134916	Washer, Spring (Drive Shaft)
23	39294-29	Resistor, 470,000 ohm, 1/2 w.	51	W-134916	Washer, Spring (Drive Shaft)
24	39294-29	Resistor, 470,000 ohm, 1/2 w.	52	W-134916	Washer, Spring (Drive Shaft)
25	39294-29	Resistor, 470,000 ohm, 1/2 w.	53	W-134916	Washer, Spring (Drive Shaft)
26	39294-29	Resistor, 470,000 ohm, 1/2 w.	54	W-134916	Washer, Spring (Drive Shaft)
27	39294-29	Resistor, 470,000 ohm, 1/2 w.	55	W-134916	Washer, Spring (Drive Shaft)
28	39294-29	Resistor, 470,000 ohm, 1/2 w.	56	W-134916	Washer, Spring (Drive Shaft)

*These parts will replace the original equipment parts.

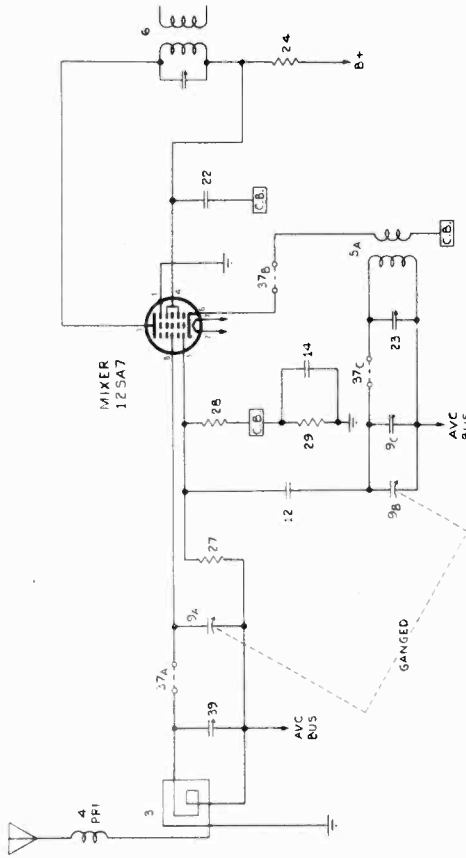
PARTS LIST—MODEL 56TZ, 57TQ

Item No.	Part No.	Description	Item No.	Part No.	Description
1	W-48558	Bulb (Dial), Type 47, 6.3 v., 15 amp.	29	W-137367	Resistor, 47 Ohm, 1 w.
2	C-13200-1	Cable and Plug Assembly	30	39294-23	Resistor, 47,000 ohm, 1/2 w.
3	AC-134618	Antenna Loop Assembly	31	39294-35	Resistor, 47 megohm, 1/2 w.
4	W-134618	Antenna Coil	32	39294-35	Resistor, 47 megohm, 1/2 w.
5A	AW-134693	Coil (H.F. Oscillator) Two	33	39294-35	Resistor, 47 megohm, 1/2 w.
5B	AW-134693	Coil (H.F. Oscillator) Section	34	39294-35	Resistor, 47 megohm, 1/2 w.
6	AW-134065	Transformer (2nd I.F.) Two	35	39294-35	Resistor, 47 megohm, 1/2 w.
7	AW-134158	Transformer (2nd I.F.) Section	36	AD-136807	Speaker, 1.5 Ohm, 1/2 w.
8	B-134959	Condenser, Variable	37A	AD-136807	Speaker, 1.5 Ohm,

"clarified schematics"

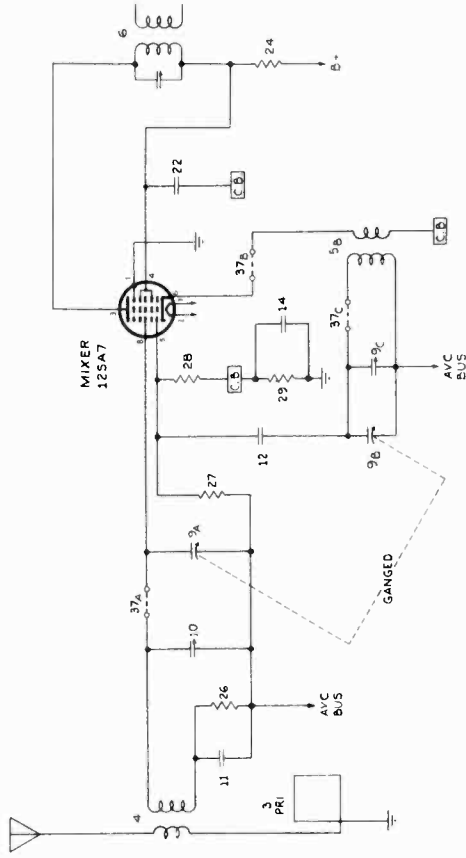
MODELS 56XTA, 56XTW
MODEL 56TN-L

CROSLEY DIV.
AV CO MFG. CORP.



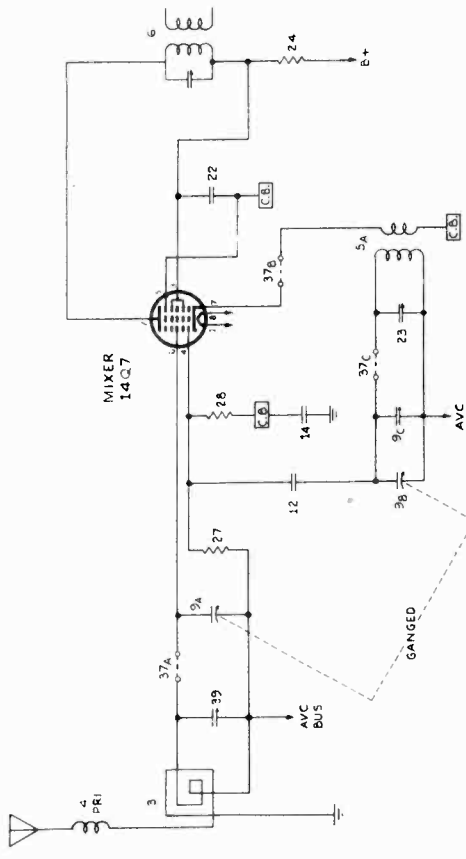
BAND-SWITCH SHOWN
AT 1ST POSITION.
BROADCAST BAND
540-1600KC

Ⓞ DENOTES COMMON BUS
ABOVE GROUND BY
C14 (1.1μf) & R29 (220k)



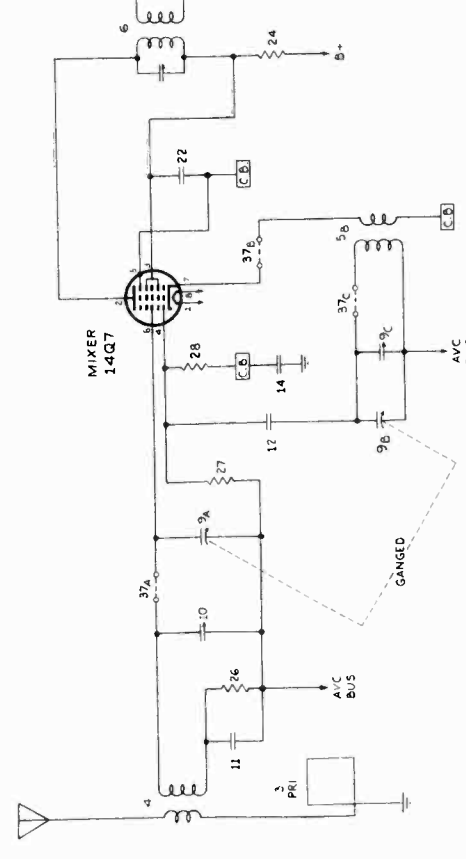
BAND-SWITCH SHOWN
AT 2ND POSITION CLOCKWISE.
SHORT WAVE BAND
5.8 - 15 MC.

Ⓞ DENOTES COMMON BUS
ABOVE GROUND BY
C14 (1.1μf) & R29 (220k)



BAND-SWITCH SHOWN
AT 1ST POSITION.
BROADCAST BAND
540-1600KC

Ⓞ DENOTES COMMON BUS
ABOVE GROUND BY
CAP. 14 (1.1μf)

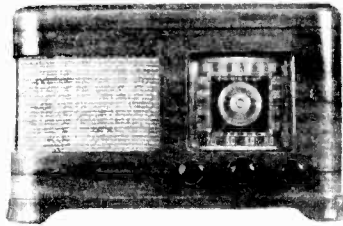


BAND-SWITCH SHOWN
AT 2ND POSITION CLOCKWISE.
SHORT WAVE BAND
5.8 - 15 MC.

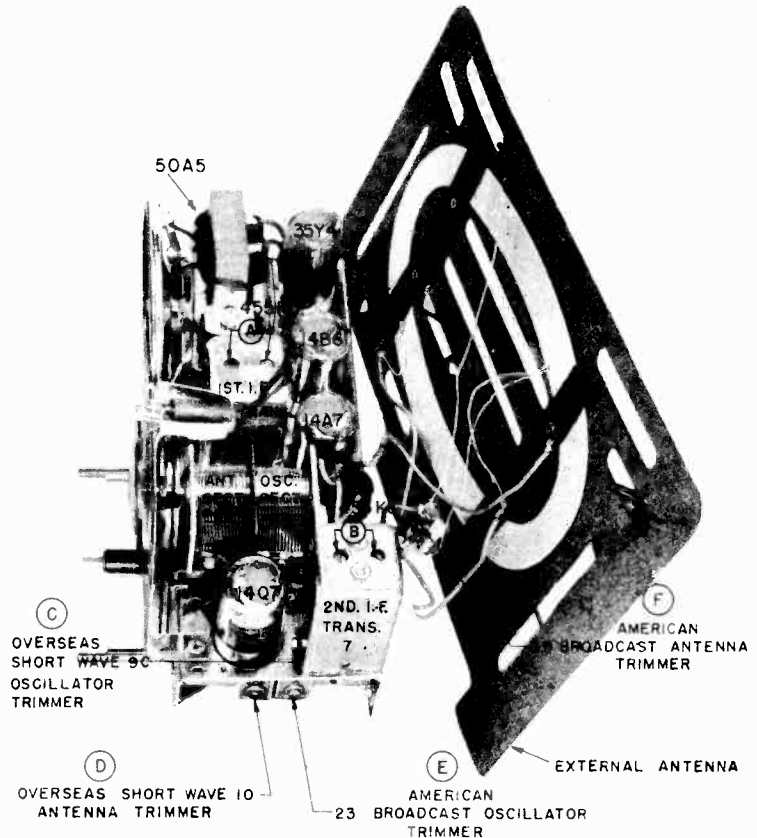
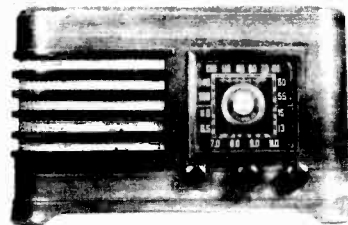
Ⓞ DENOTES COMMON BUS
ABOVE GROUND BY
CAP. 14 (1.1μf)

CROSLY DIV.
AVCOMFG. CORP.

MODEL 56TN-L



Alternate Cabinet Design



1. Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.
2. Connect the output meter across the speaker voice coil.
3. The r.f. signal input from the signal generator should be connected to the external antenna lead. Connect the signal generator ground through a 0.1 mfd. condenser to —B (pin 4 on 14A7 tube socket).
4. Turn the volume control on full and adjust the signal generator output to produce approximately mid-scale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

Alignment Sequence	Signal Generator Output			Position of		Adjust for Maximum Output
	Frequency in kc.	In Series with	To	Band Switch	Tuning Dial	
1	455	200 mmf.	Ant.	A	1,620	A & B
2	15,300	400 ohms	Ant.	O	15,300	C
3	15,000	400 ohms	Ant.	O	15,000	D
4	1,400	200 mmf.	Ant.	A	1,400	E & F

NOTE: When aligning the short-wave oscillator trimmer (C), be sure that the circuit is aligned at the correct frequency and not at the image frequency which is 910 kilocycles lower as indicated by the receiver dial. To check: Tune in the generator frequency, then increase the generator output and tune in the image frequency. The image frequency should be weaker than the fundamental and audible 910 kilocycles lower on the receiver dial. If the image cannot be tuned in, the oscillator trimmer is adjusted to the wrong peak; i.e., the oscillator trimmer may be adjusted to the image or one of the harmonics instead of the fundamental frequency. The correct peak is the second one heard as the trimmer adjustment screw is opened from the completely closed position.

MODELS 57TQ, 56TZ
1st and 2nd Production

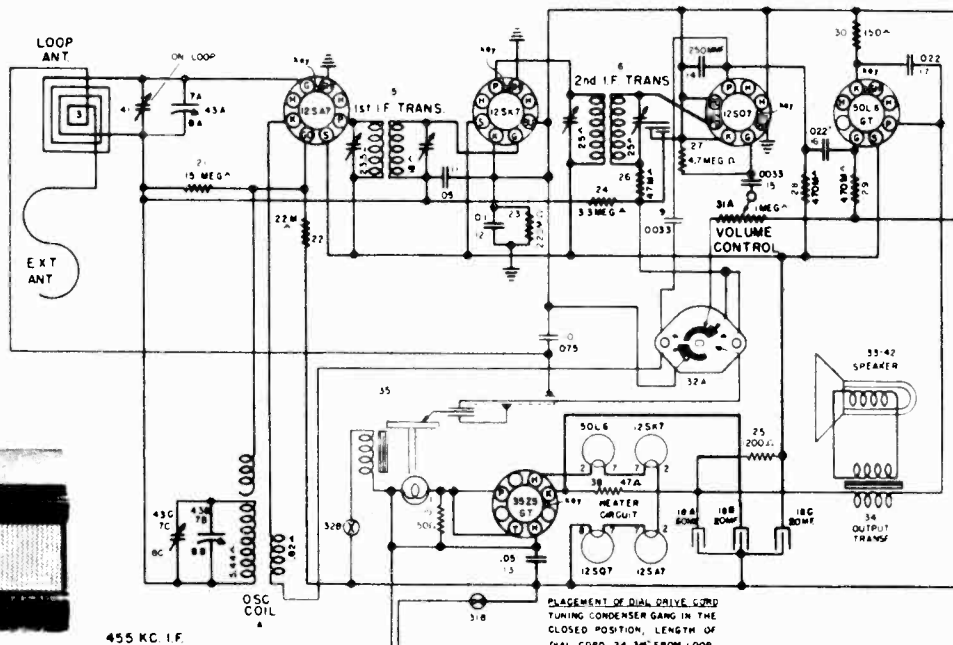
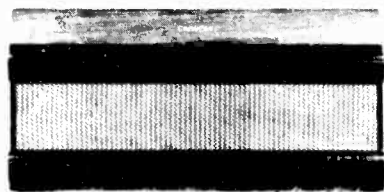
CROSLEY DIV.
AV CO MFG. CORP.

Under no circumstances should a ground be connected to this receiver.

January, 1947

BAND CHANGE SWITCH SHOWN IN EXTREME
COUNTER-CLOCKWISE POSITION. SWITCH
SEQUENCE RADIO NORMAL TONE, RADIO
LOW TONE, PHONO LOW TONE, PHONO
NORMAL TONE.

56TZ



TYPE: Five-tube, single-band, superheterodyne.

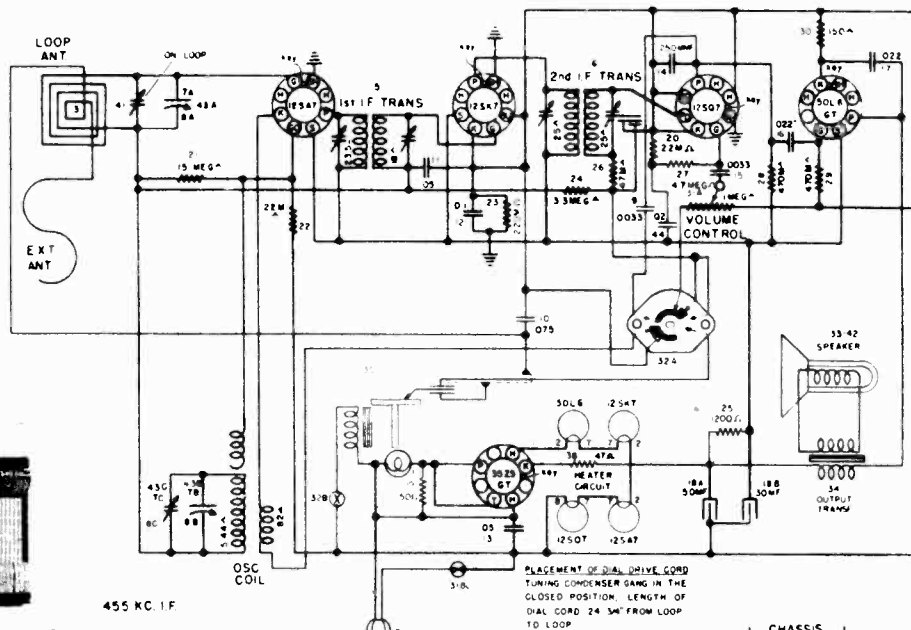
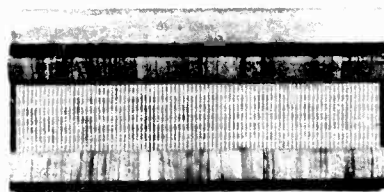
FREQUENCY RANGE: 540 to 1600 kc. (Selector switch at R.)

INTERMEDIATE FREQUENCY: 455 kc.

POWER SUPPLY: 60 cycle a.c. only.

SCHMATIC DIAGRAM—MODELS 56TZ, 57TQ, 1st PRODUCTION

57TQ



VOLTAGE RATING: 105-125 volts.

POWER CONSUMPTION:

Radio position—30 watts.

Phono position—45 watts.

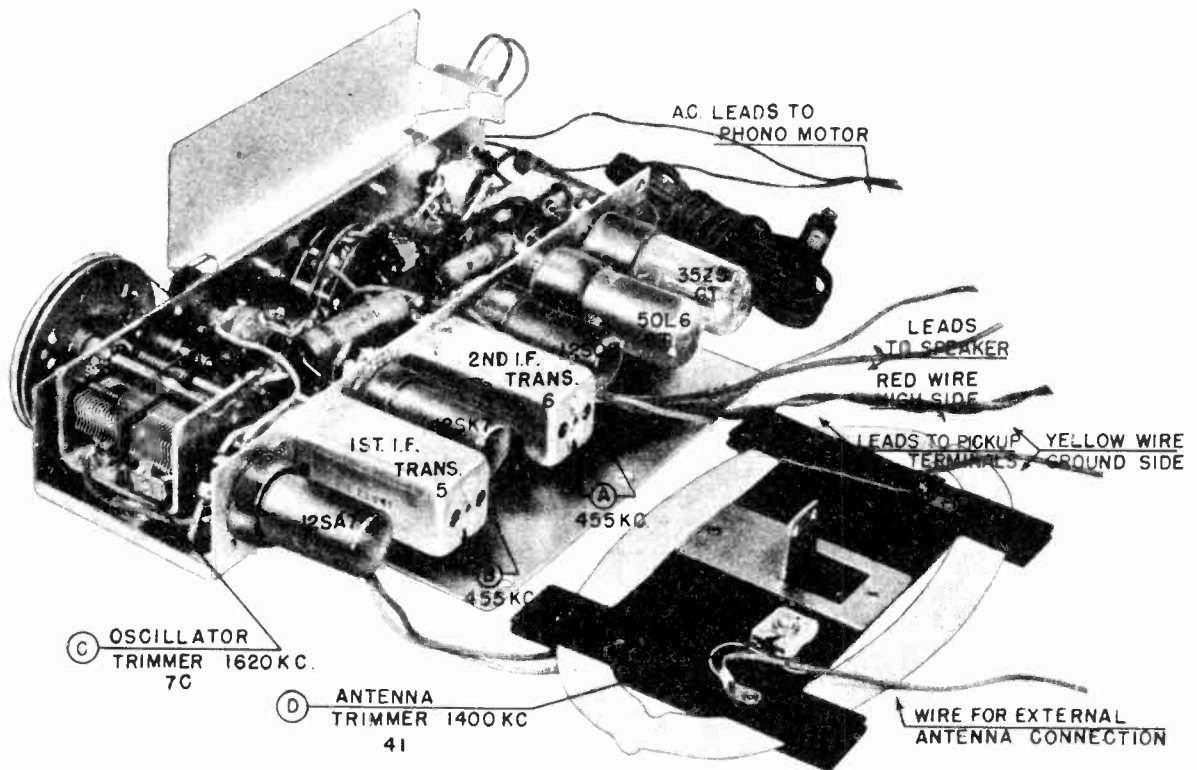
POWER OUTPUT: 1.5 watts maximum.

SCHMATIC DIAGRAM—MODELS 56TZ, 56TQ, 2nd PRODUCTION

For Parts List, see P. 16-5

RECORD CHANGER: V-M 400, RCD. CH. P.15-1

CROSLY DIV.
AV COMFG. CORP.



ALIGNMENT PROCEDURE

Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.

Turn the tone control to the normal tone position.

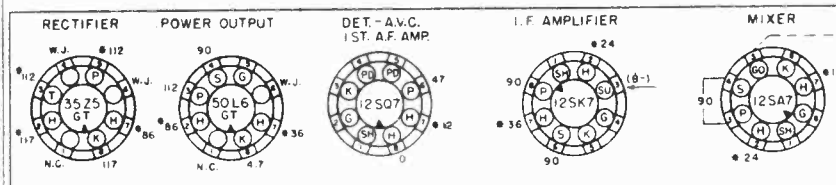
Connect the output meter across the speaker voice coil.

The r.f. signal input from the signal generator should be connected to the external antenna lead. Connect the signal generator ground through a 0.1 mfd. condenser to—B (Pin 3 on 12SK7 tube socket).

Turn volume control on full and adjust the signal generator output to produce approximately mid-scale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

Alignment Sequence	Signal Generator Output			Position of		Adjust for Maximum Output
	Frequency in kc.	In Series with	To	Selector Switch	Tuning-Dial	
1	455	200 mmf.	Ant.	R	1620	A & B
2	1620	200 mmf.	Ant.	R	1620	C
3	1400	200 mmf.	Ant.	R	1400	D

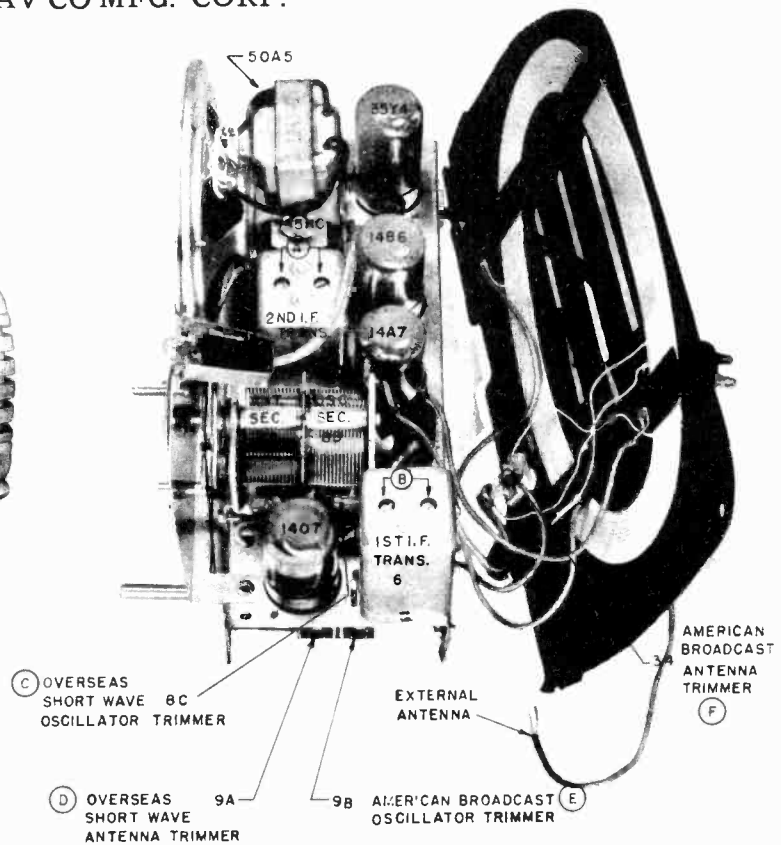
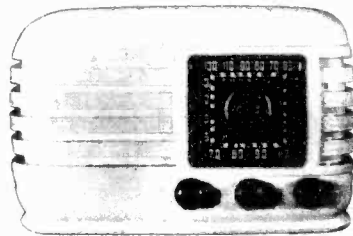
OSCILLATOR GRID VOLTAGE		
BAND	FREQUENCY	VOLTS
AMERICAN	540 KC	-5.5



- NOTES:
1. THESE ARE BOTTOM VIEWS OF TUBE SOCKETS.
 2. MEASURE VOLTAGES FROM SOCKET LUGS TO B—(PIN 3 ON THE 12SK7).
 3. THESE VOLTAGES WERE MEASURED USING AN ELECTRONIC VOLTMETER.
 4. W.J. — WIRING JUNCTION.
 5. N.C. — NO CONNECTION.
 6. * — 60 CYCLE A.C. VOLTAGES.
 7. SOCKET VOLTAGE TOLERANCE, 10%.
 8. LINE VOLTAGE 117 V., 60~ A.C.

CROSLLEY DIV.
AV CO MFG. CORP.

MODEL 56TX-L



1. Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.
2. Connect the output meter across the speaker voice coil.
3. The r.f. signal input from the signal generator should be connected to the external antenna lead. Connect the signal generator ground through a 0.1 mfd. condenser to —B (pin 4 on 14A7 tube socket).
4. Turn the volume control on full and adjust the signal generator output to produce approximately mid-scale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

Alignment Sequence	Signal Generator Output			Position of		Adjust for Maximum Output
	Frequency in kc.	In Series with	To	Band Switch	Tuning Dial	
1	455	200 mmf.	Ant.	Left	1,620	A & B
2	15,300	400 ohms	Ant.	Right	15,300	C
3	15,000	400 ohms	Ant.	Right	15,000	D
4	1,400	200 mmf.	Ant.	Left	1,400	E & F

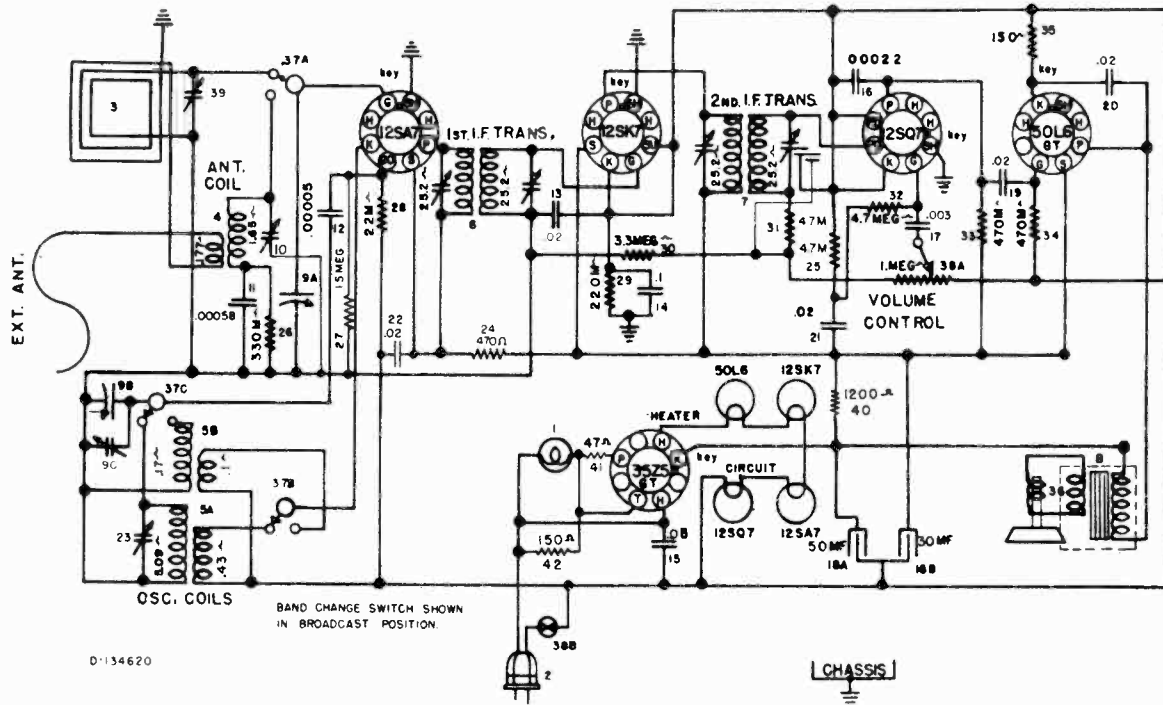
NOTE: When aligning the short-wave oscillator trimmer (C), be sure that the circuit is aligned at the correct frequency and not at the image frequency which is 910 kilocycles lower as indicated by the receiver dial. To check: Tune in the generator frequency, then increase the generator output and tune in the image frequency. The image frequency should be weaker than the fundamental and audible 910 kilocycles lower on the receiver dial. If the image cannot be tuned in, the oscillator trimmer is adjusted to the wrong peak; i.e., the oscillator trimmer may be adjusted to the image or one of the harmonics instead of the fundamental frequency. The correct peak is the second one heard as the trimmer adjustment screw is opened from the completely closed position.

MODELS 56XTA, 56XTW

CROSLY DIV.
AV COMFG. CORP.

Under no circumstances should a ground be connected to this receiver.

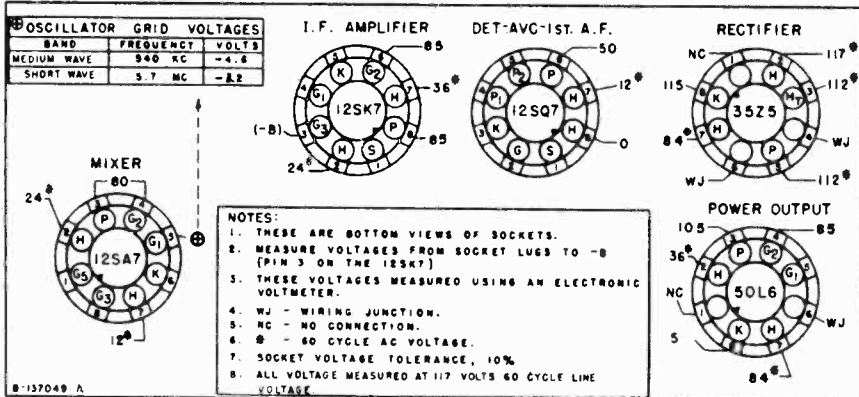
November, 1946



D-134620

455 K.C. I.F.

SOCKET VOLTAGE CHART



B-137049 A

For English translation of Spanish, see Crosley Model 56TX-L

Notas: El diagrama muestra el chasis visto por debajo, medir los voltajes de cada punto a B- (espiga 3 en el 12SK7) todos los valores de voltajes medidos con voltmetro al vacío.

WJ = borne de conexiones

NC = Sin conectar

* = Voltaje C. A.

Tolerancia—10%

Voltaje de línea: 117 voltios, 60 ciclos.

Voltaje de rejilla osciladora: onda media, 540 KC:—4.9
onda corta, 5.7 mc: 3.8

TIPO: Superheterodino, cinco tubos, dos bandas.

FRECUENCIAS: Banda de onda media 540 a 1600 KC (Interrupor de bandas hacia la izquierda)

Banda de onda corta: 5.8 a 15 mc (Interrupor de bandas hacia la derecha)

FRECUENCIA INTERMEDIA: 455 KC.

FUENTE DE ALIMENTACION: Corriente alterna y directa.

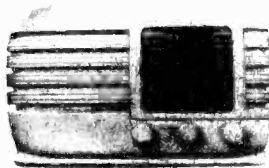
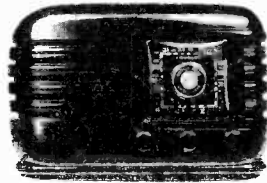
VOLTAJE: 105-125 voltios

CONSUMO: 35 watts.

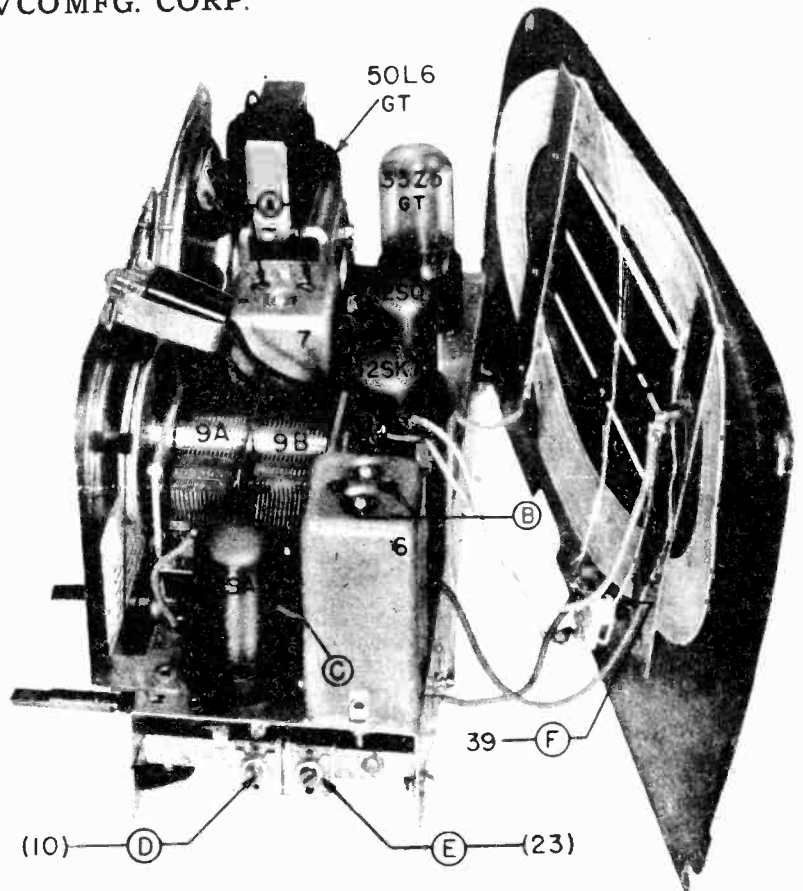
POTENCIA DE SALIDA: 1.5 watts mínima.

CROSLLEY DIV.
AVCOMFG. CORP.

56XTA



56XTW



1. Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.
2. Connect the output meter across the speaker voice coil.
3. The r.f. signal input from the signal generator should be connected to the external antenna lead. Connect the signal generator ground through a 0.1 mfd. condenser to —B (pin 3 on 12SK7 tube socket).
4. Turn the volume control on full and adjust the signal generator output to produce approximately mid-scale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

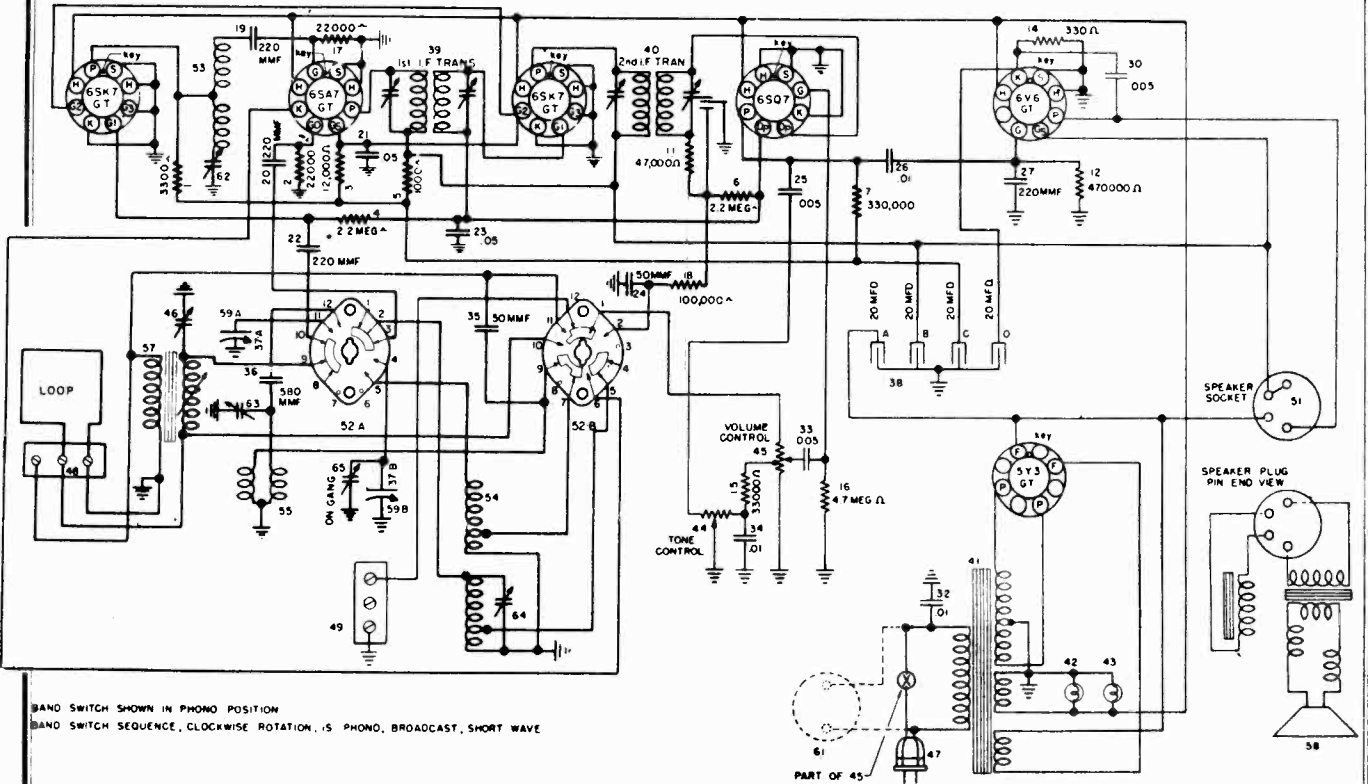
For English translation, see Crosley 56TX-L

Orden de Ajustes	SALIDA DEL OSCILADOR			Interruptor de Bandas	Sintonia Cuadrante	Ajuste a Maximum
	Frecuencia en KC	En serie con	A			
1	455	200 mmfd	Ant	Izquierda	1,620	A y B
2	15,300	400 ohms	Ant	Derecha	15,300	C
3	15,000	400 ohms	Ant	Derecha	15,000	D
4	1,400	200 mmfd	Ant	Izquierda	1,400	E y F

Nota: Cuando ajuste el trimer (C) de onda corta asegúrese que el circuito sea ajustado a la frecuencia correcta y nó en la imagen que es 910 kilociclos más baja en el receptor. Para chequear: Sintonice la frecuencia del oscilador, aumente la salida del oscilador y sintonice la imagen en el receptor, la imagen debe ser más débil que la fundamental y estar 910 KC más abajo. Si no se puede sintonizar la imagen, el trimer del oscilador está mal ajustado, es decir el oscilador quizás esté ajustado a la imagen o algún armónico de ta frecuencia del oscilador. El pico correcto es el segundo que se escuche cuando se abre el tornillo de ajuste después de cerrarlo por completo.

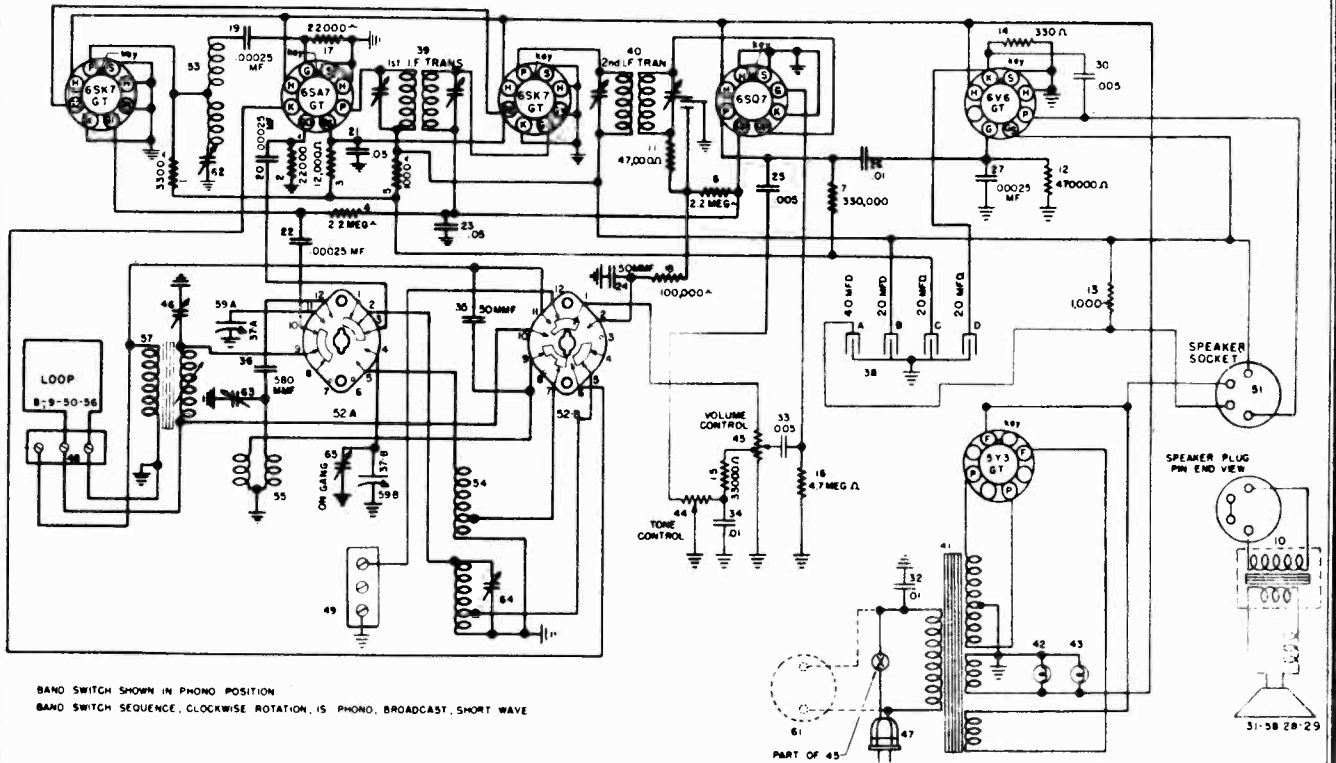
MODELS 66CS, 66CSM
MODEL 66CS(s)

CROSLEY DIV.
AV CO MFG. CORP.



BAND SWITCH SHOWN IN PHONO POSITION
BAND SWITCH SEQUENCE, CLOCKWISE ROTATION, IS PHONO, BROADCAST, SHORT WAVE

September, 1946 SCHEMATIC DIAGRAM—MODELS 66CS, 66CSM



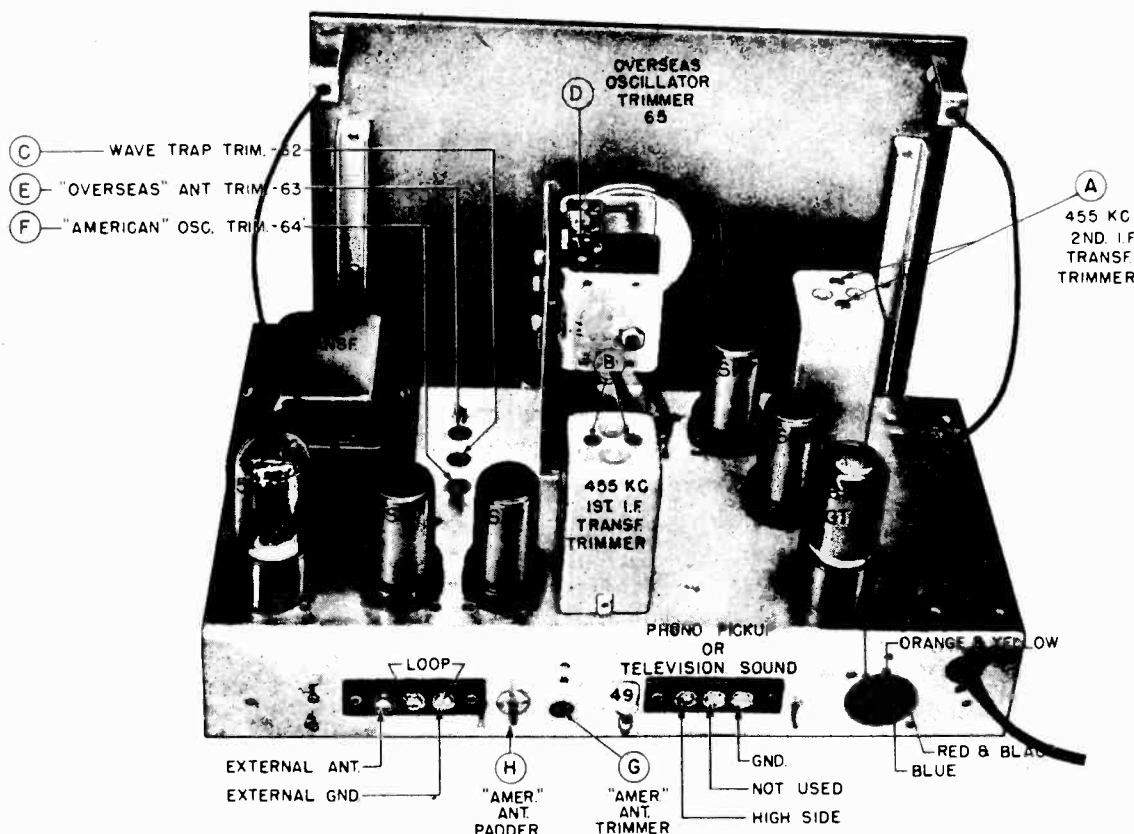
BAND SWITCH SHOWN IN PHONO POSITION
BAND SWITCH SEQUENCE, CLOCKWISE ROTATION, IS PHONO, BROADCAST, SHORT WAVE

December, 1946

MODEL 66CS (s)

CROSLEY DIV.
AV COMFG. CORP.

MODELS 66CS, 66CSM
Model 66CS(s)



1. Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.
2. Connect the output meter across the speaker voice coil.
3. The r. f. signal input from the signal generator should be connected to the external antenna post as indicated in the alignment chart. Connect the low side (ground) of the signal generator to the chassis.
4. Turn the volume control on full and adjust the signal generator output to produce approximately mid-scale deflection of the output meter, but maintain the signal generator output as low as possible to prevent AVC action in the receiver.

Alignment Sequence	Signal Generator Output			Position of		Adjust for Maximum Output
	Frequency in kc.	In Series With	To	Band Switch	Tuning Dial	
1	455	200 mmf.	Ant.	A	1620	A & B
2	455	200 mmf.	Ant.	A	1620	C*
3	15,300	400 ohms	Ant.	O	15,300	D
4	15,000	400 ohms	Ant.	O	15,000	E
5	1620	200 mmf.	Ant.	A	1620	F
6	1400	200 mmf.	Ant.	A	1400	G
7	600	200 mmf.	Ant.	A	600	H
8	1400	200 mmf.	Ant.	A	1400	Recheck G

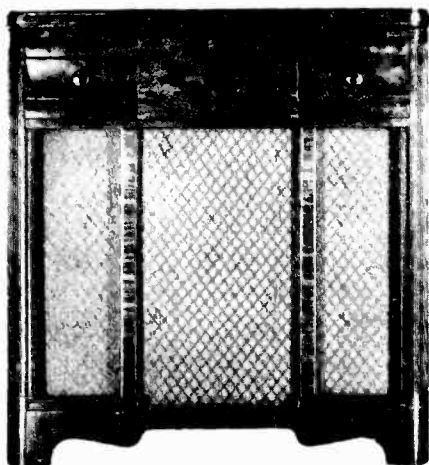
*Adjust for Minimum Output (Wave Trap).

NOTE: When aligning the "Overseas" oscillator trimmer (D), be sure that the circuit is aligned at the correct frequency and not at the image frequency which is 910 kilocycles lower as indicated by the receiver dial. To check: tune in the generator frequency, then increase the generator output and tune in the image frequency. The image frequency should be weaker than the fundamental and audible 910 kilocycles lower on the receiver dial. If the image cannot be tuned in, the oscillator trimmer is adjusted to the wrong peak of the trimmer from the closed position.

MODELS 66CS, 66CSM
MODEL 66CS(s)

CROSLLEY DIV.
AV CO MFG. CORP.

66CS



66CSM

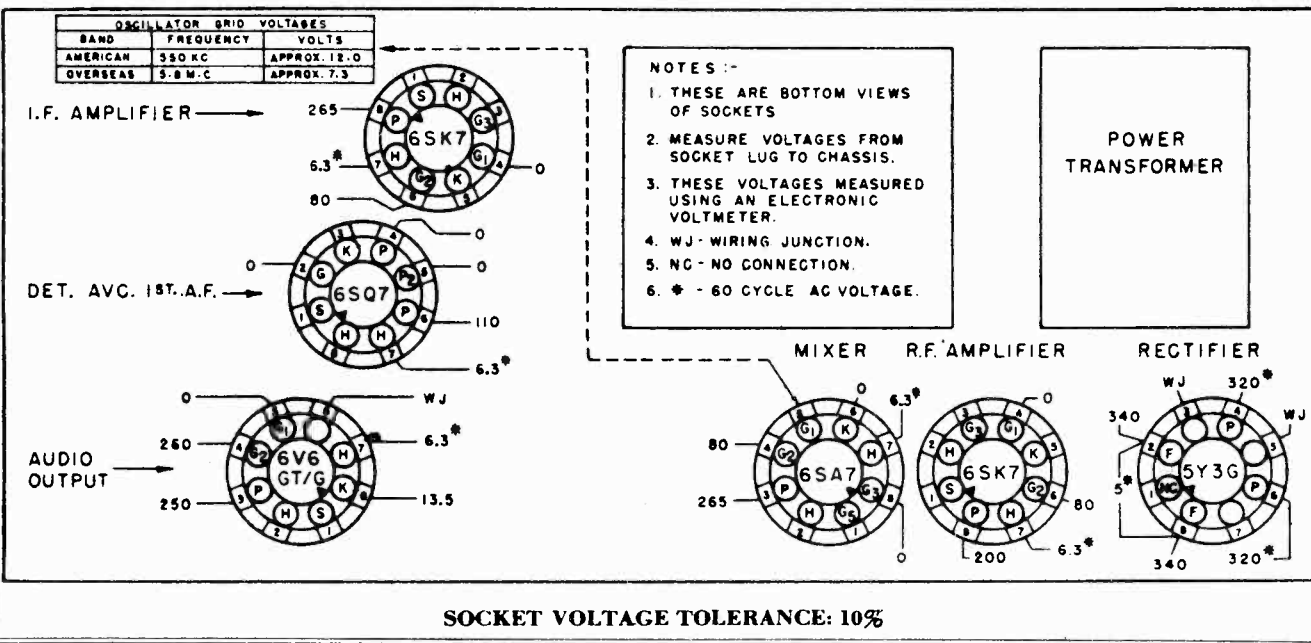


TYPE: Six-tube, two-band, superheterodyne.
FREQUENCY RANGE: American Broadcast Band, 540 to 1600 kc. (Selector Switch at A.)
 Overseas Short-wave Band, 5.8- to 15 mc. (Selector Switch at 0.)
INTERMEDIATE FREQUENCY: 455 kc.
POWER SUPPLY: 60 cycle a. c. only.
VOLTAGE RATING: 105-125 volts.
POWER CONSUMPTION: 60 watts maximum.
POWER OUTPUT: 4.5 watts minimum.
VOLTAGE DROP ACROSS SPEAKER FIELD: 76 volts.
RESISTANCE OF SPEAKER FIELD: 900 ohms.

TUBE COMPLEMENT:

Type	Function
6SA7 (GT/G)	Mixer
6SK7 (GT/G)	R. F. Amplifier
6SK7 (GT/G)	I. F. Amplifier
6SQ7 (GT/G)	Detector, AVC, 1st A.F. Amplifier
6V6 (GT/G)	A. F. Power Output
5Y3 GT/G	Rectifier

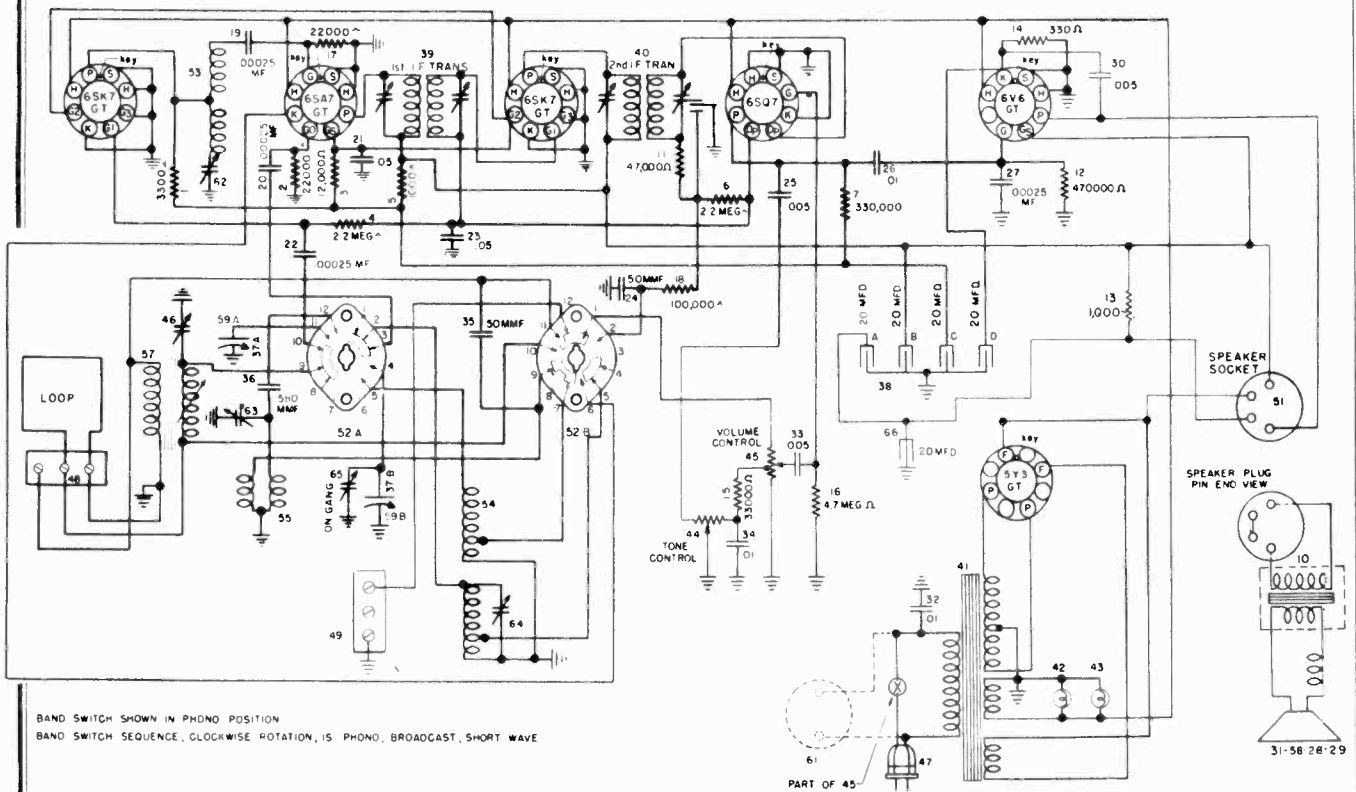
DIAL BULB: Type 51, 7.5 volts, .25 amp.



SOCKET VOLTAGE TOLERANCE: 10%

MODEL 66TC-S

CROSLEY DIV.
AVCO MFG. CORP.



BAND SWITCH SHOWN IN PHONO POSITION
BAND SWITCH SEQUENCE, CLOCKWISE ROTATION, IS PHONO, BROADCAST, SHORT WAVE

TYPE: Six-tube, two-band superheterodyne with terminals provided for record player or television sound.

FREQUENCY RANGE: American Broadcast Band: 540 to 1600 kc. (Selector switch at A.)

Overseas Short-wave Band: 5.8 to 15 mc. (Selector switch at 0.)

INTERMEDIATE FREQUENCY: 455 kc.

POWER SUPPLY: 60 cycle a.c. only.

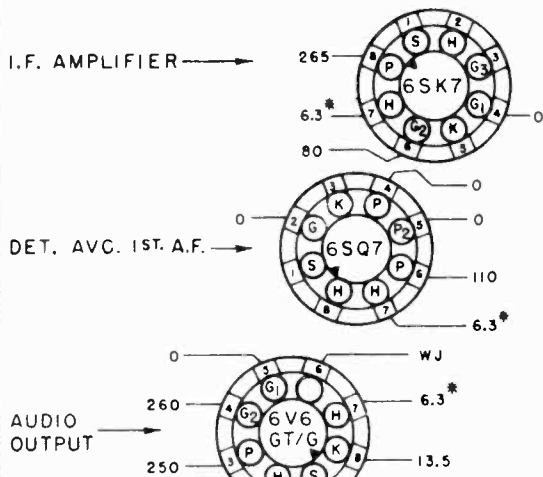
VOLTAGE RATING: 110-120 volts.

POWER CONSUMPTION: 60 watts maximum.

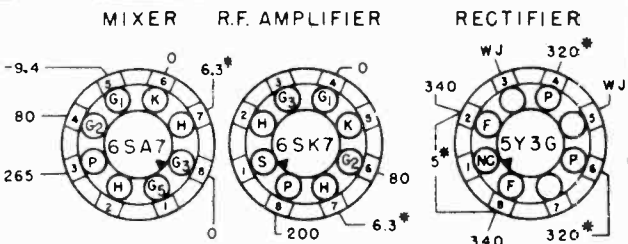
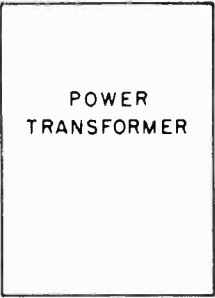
POWER OUTPUT: 4.5 watts minimum.

VOLTAGE DROP ACROSS SPEAKER FIELD: 76 volts. WITH E.M. SPEAKER

RESISTANCE OF SPEAKER FIELD: 900 ohms.



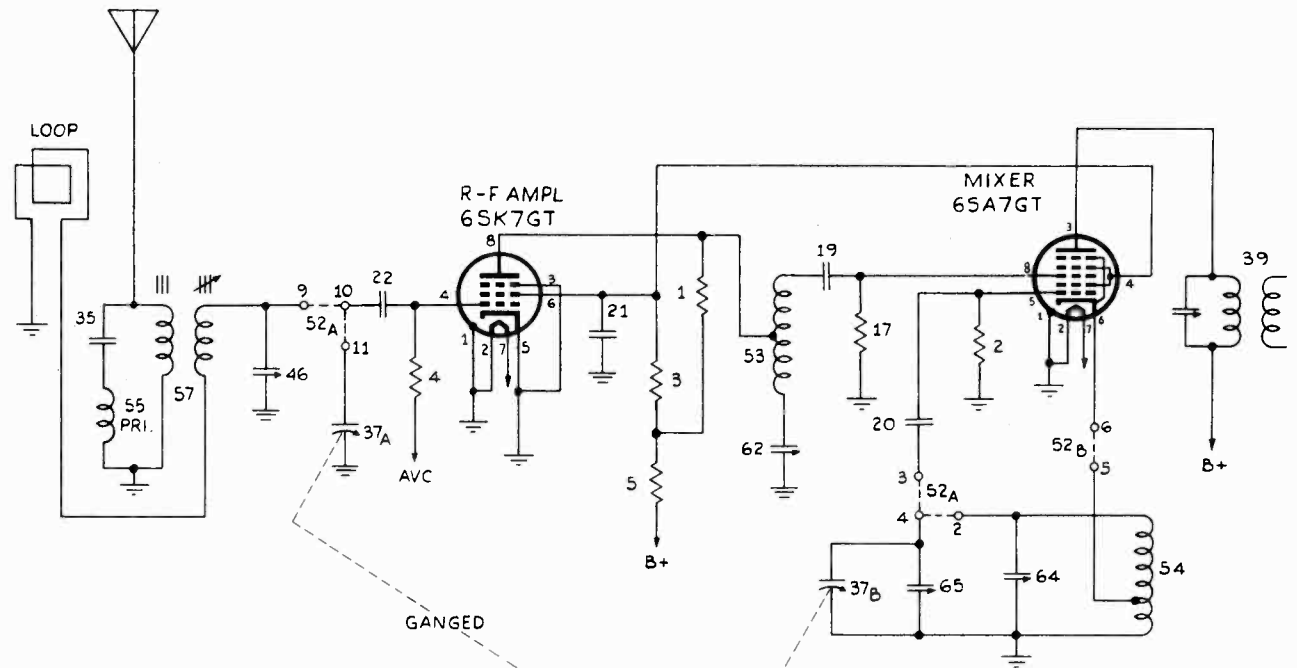
- NOTES:-**
1. THESE ARE BOTTOM VIEWS OF SOCKETS.
 2. MEASURE VOLTAGES FROM SOCKET LUG TO CHASSIS.
 3. THESE VOLTAGES MEASURED USING AN ELECTRONIC VOLTMETER.
 4. WJ - WIRING JUNCTION.
 5. NC - NO CONNECTION.
 6. * - 60 CYCLE AC VOLTAGE.



Socket Voltage Tolerance: 10%

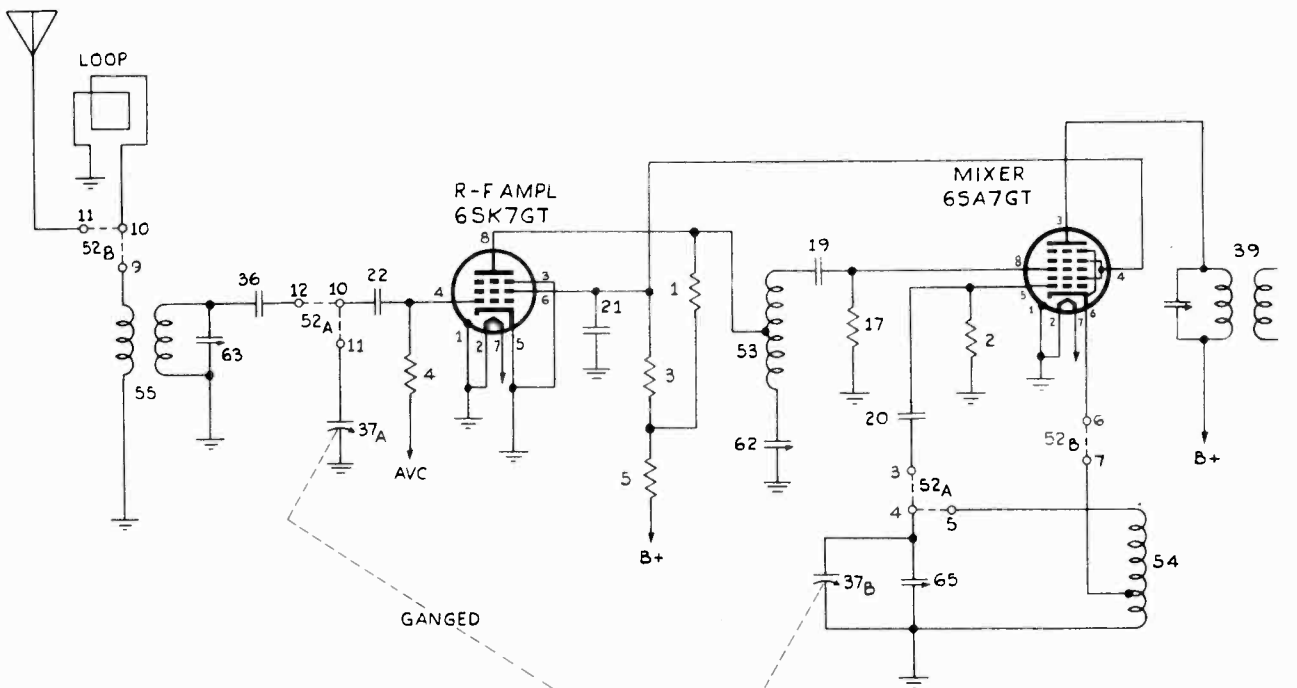
CROSLY DIV.
AVCO MFG. CORP.

MODEL 66TC-3



BAND-SWITCH SHOWN
AT 2ND POSITION CLOCKWISE.
BROADCAST BAND
540 - 1600 KC

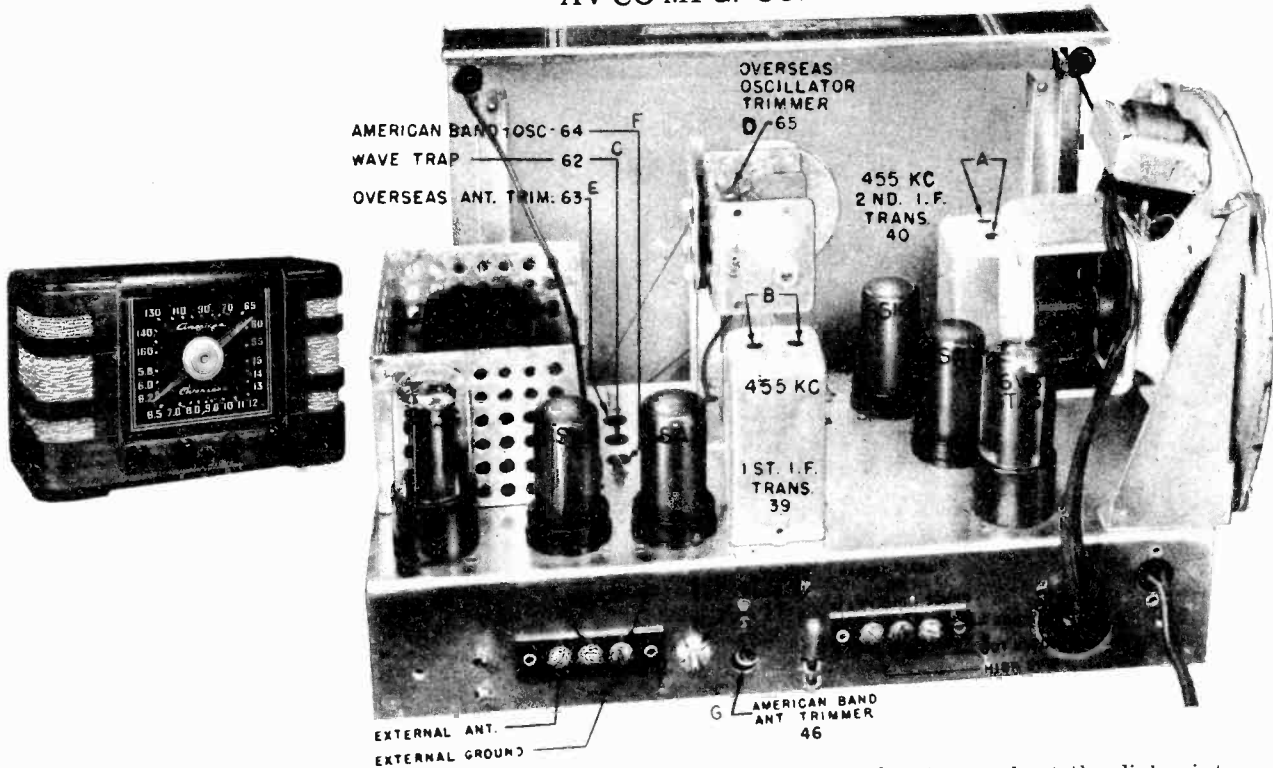
NOTE:
1ST POSITION (PHONO)
NOT SHOWN



BAND-SWITCH SHOWN
AT 3RD POSITION CLOCKWISE.
SHORT WAVE BAND
5.8 - 15 MC

MODEL 66TC-S

CROSLEY DIV.
AVCO MFG. CORP.



1. Turn the tuning capacitor to the completely closed position against the stop, and set the dial pointer to the reference line at the end of the dial scale.
2. Turn the tone control to the high or treble position.
3. Connect the output meter across the speaker voice coil.
4. The r.f. signal input from the signal generator should be connected to the external antenna post. Connect the signal generator ground to the chassis.
5. Turn the volume control on full, and adjust the signal generator output to produce approximately mid-scale deflection of the output meter, but maintain signal generator output as low as possible to prevent AVC action in the receiver.

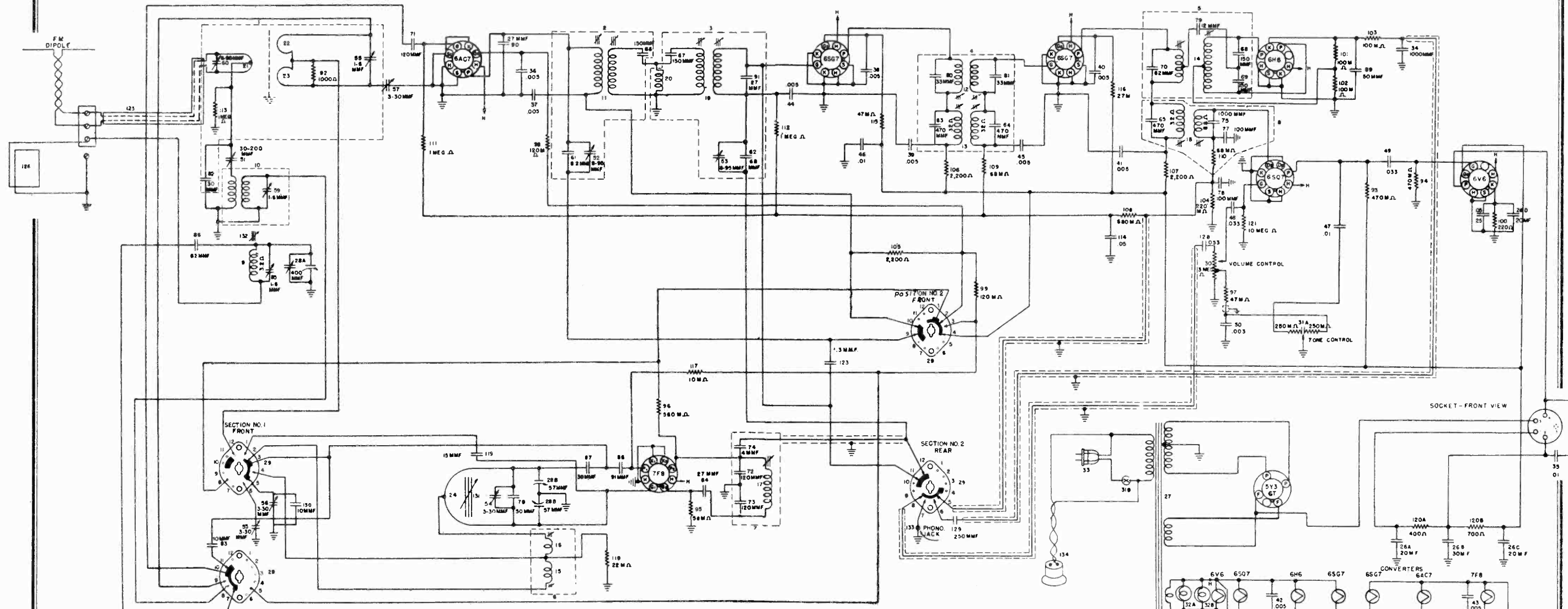
Alignment Sequence	Signal Generator Output			Position of		Adjust for Maximum Output
	Frequency in kc.	In Series with	To	Band Switch	Tuning Dial	
1	455	200 mmf	Ant.	A	1620	A & B
2	455	200 mmf	Ant.	A	1620	C*
3	15,300	400 ohms	Ant.	O	15,300	D
4	15,000	400 ohms	Ant.	O	15,000	E
5	1620	200 mmf	Ant.	A	1620	F
6	1400	200 mmf	Ant.	A	1400	G
7	600	200 mmf	Ant.	A	600	H

*Adjust for minimum output (wavetrap).

NOTE: When aligning the short-wave oscillator trimmer (D), be sure that the circuit is aligned at the correct frequency and not at the image frequency which is 910 kilocycles lower as indicated by the receiver dial. To check: Tune in the generator frequency, then increase the generator output and tune in the image frequency. The image frequency should be weaker than the fundamental and audible 910 kilocycles lower on the receiver dial. If the image cannot be tuned in, the oscillator trimmer is adjusted to the wrong peak; i.e., the oscillator trimmer may be adjusted to the image or one of the harmonics instead of the fundamental frequency. The correct peak is the second one heard as the trimmer adjustment screw is opened from the completely closed position.

November, 1946

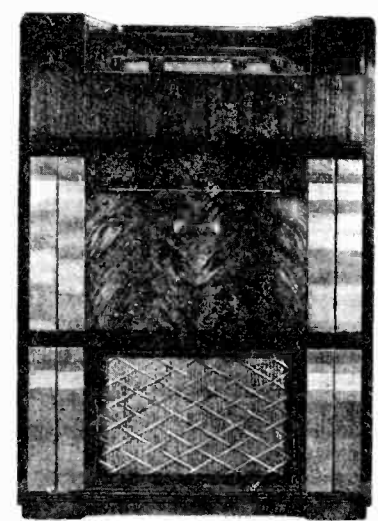
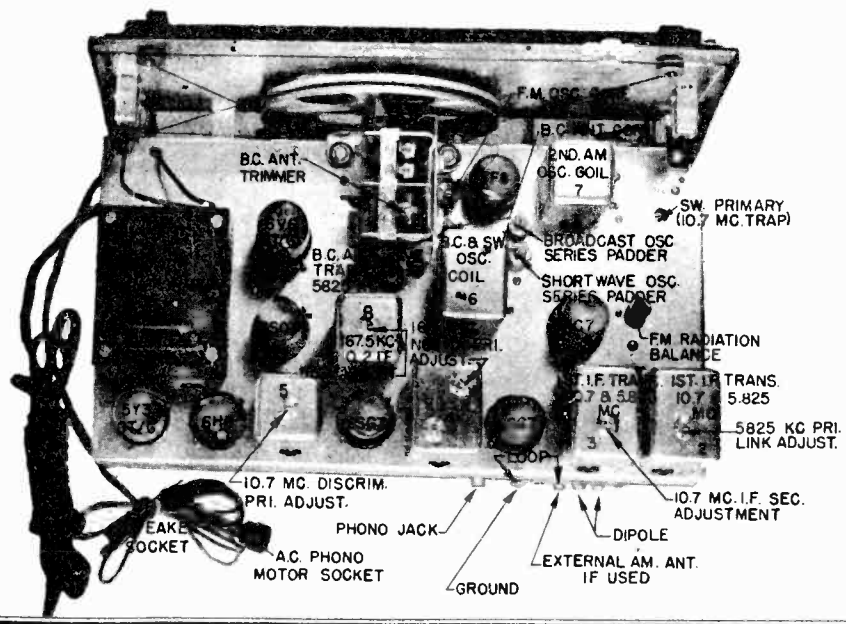
CROSLY DIV.
 A V COMFG. CORP.



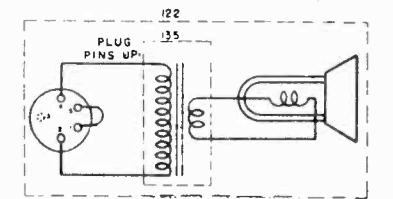
NOTE
 RANGE SWITCH SHOWN IN BROADCAST POSITION
 SHORT WAVE, FREQUENCY MODULATION AND PHONO
 POSITIONS SUCCESSIVELY CLOCKWISE.

TUBE COMPLEMENT

Type	Function
6AC7	1st A.M. Mixer—FM Mixer
7F8	1st and 2nd A.M. OSC.— F.M. OSC.
6SG7	2nd A.M. Mixer— 1st I. F. Ampl. F.M.
6SG7	I. F. Ampl. A. M., 2nd I. F. Ampl. F. M.
6H6	F. M. Detector (Discriminator)
6SQ7	A. M. Det. AVC, 1st A. F. Ampl.
6V6 GT/G	Output
5Y3 GT/G	Rectifier



Model 86CR Uses Walnut Cabinet
 Model 86CS Uses Mahogany Cabinet

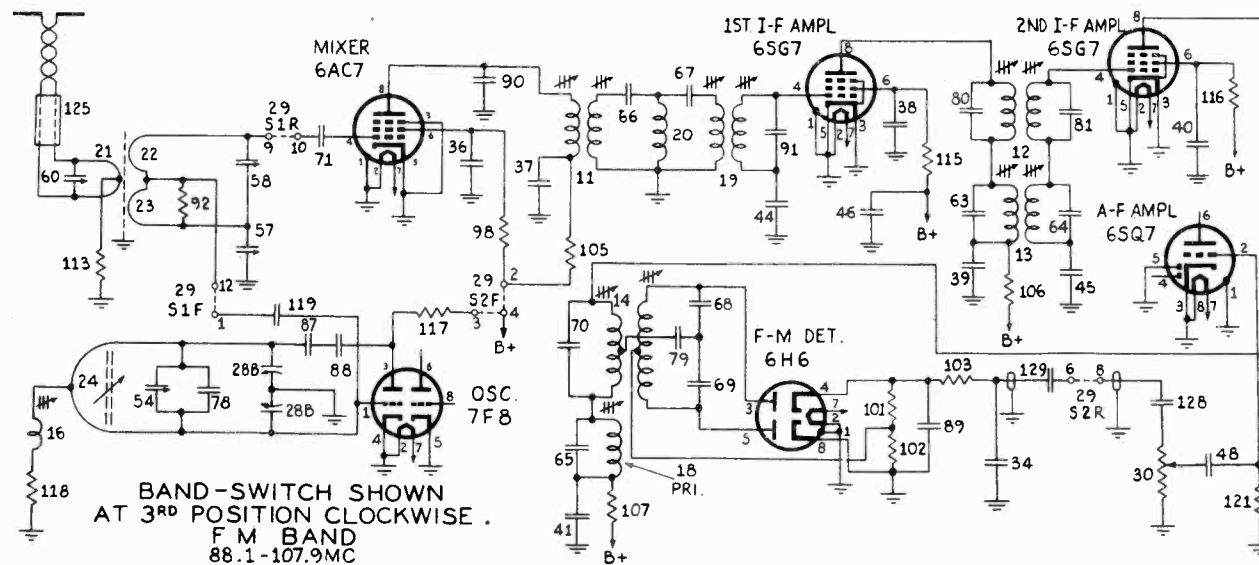
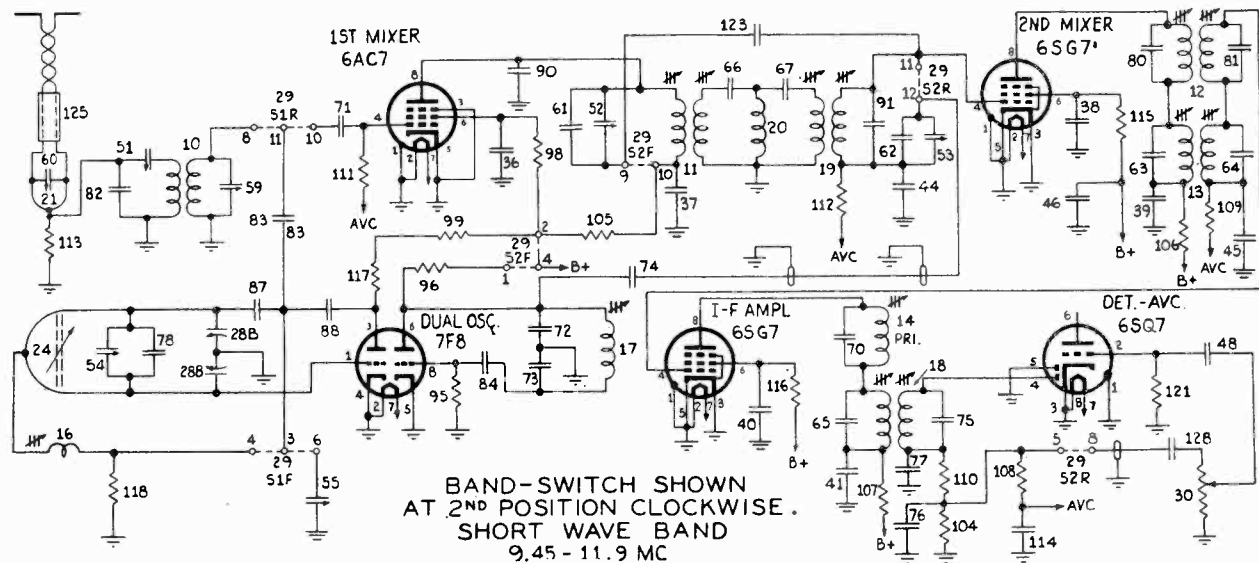
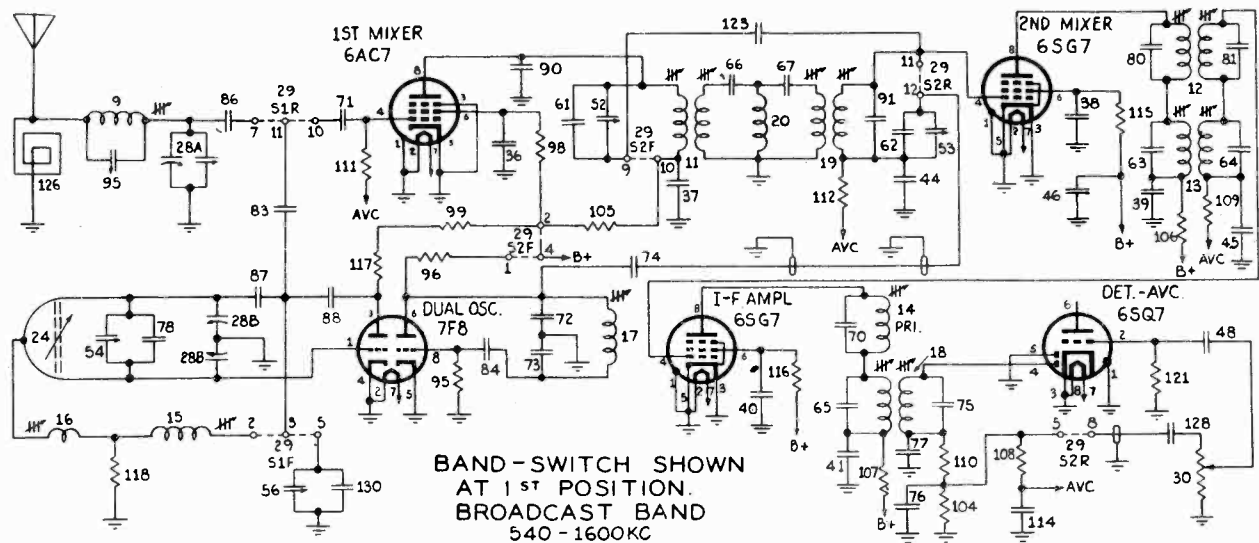


Band: 88.1 to 107.9 mc. Channel 201 to 300 (Selector Switch at FM position).
INTERMEDIATE FREQUENCY: Broadcast Band: 167.5 and 5825 kc
FREQUENCY MODULATION BAND: 10.7 mc.
POWER SUPPLY: 60 cycle a.c. only.
VOLTAGE RATING: 105-125 volts.
POWER CONSUMPTION: 85 watts maximum at normal power supply voltage (117), 20 watts additional for record changer.
POWER OUTPUT: 80 watts minimum at 3.2. ohm load.

TYPE: Eight-tube, three-band, Superheterodyne.
FREQUENCY RANGE: American Broadcast Band, 540 to 1600 kc. (Selector Switch at AM position). Overseas Short-Wave Band: 9.45 to 11.9 mc. (Selector Switch at SW position). Frequency Modulated

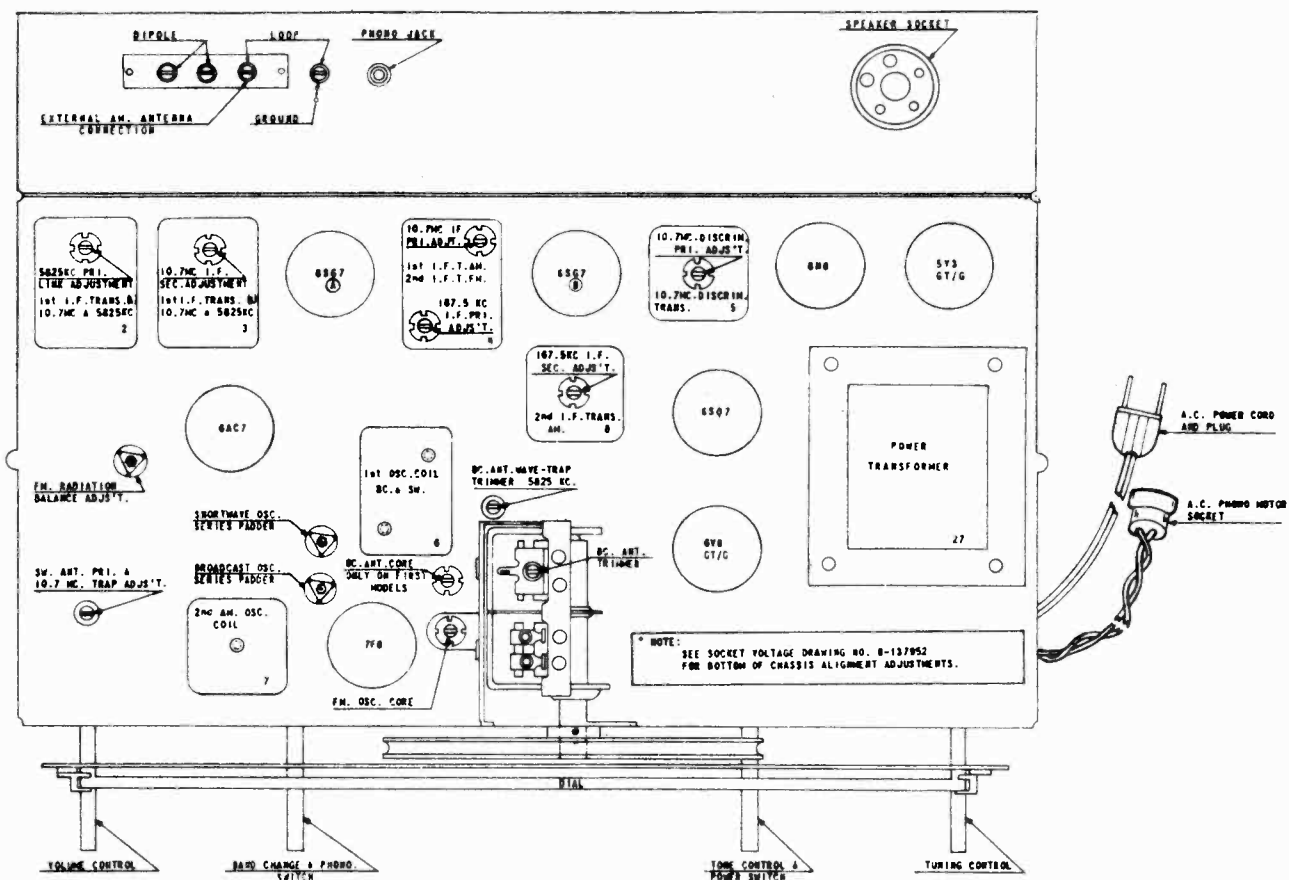
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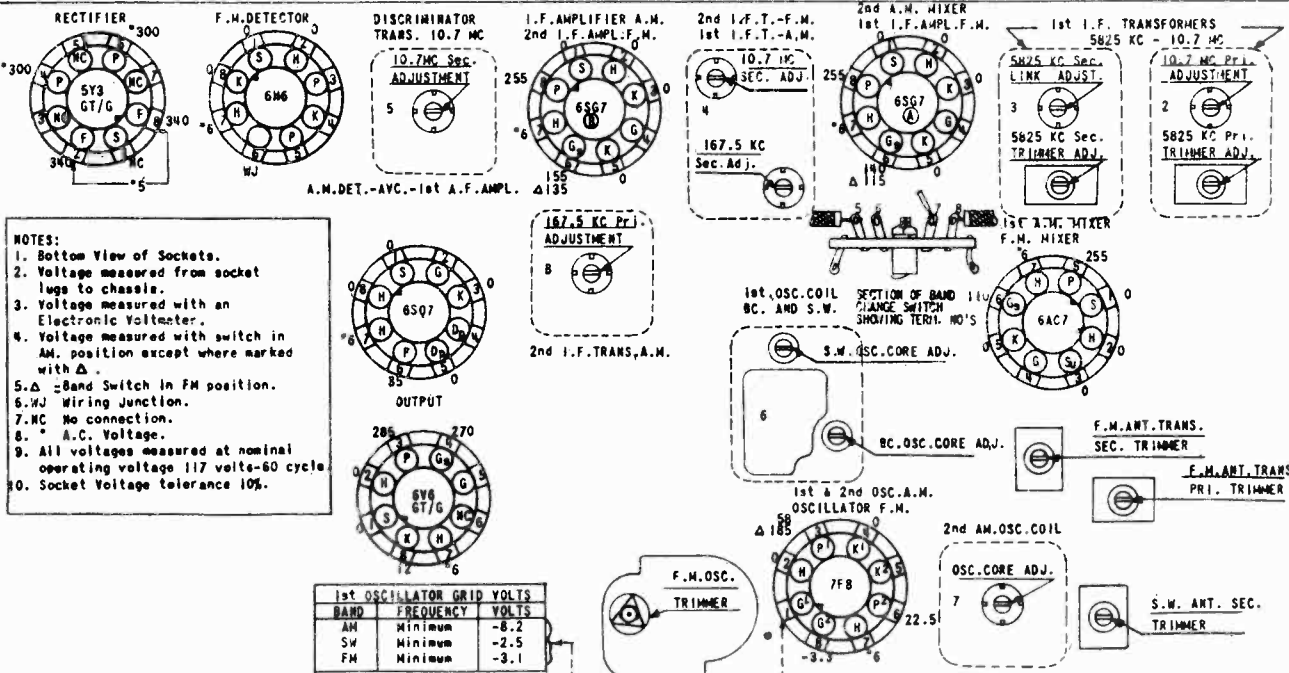


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SOCKET VOLTAGE CHART



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ALIGNMENT CHART (Output Meter Method)

Alignment Sequence	Signal Frequency	Generator Output in Series with	To	Position of Range Tuning Dial Switch or Tuning Cap.		Adjust	Osc. Freq.	Remarks
1.	167.5 KC.	0.1 MFD	2nd I.F. Grid 6SG7 B	S. W.	Open	2nd I.F. Trans. 8	.....	.....
2.	167.5 KC.	0.1 MFD	1st I.F. Grid 6SG7 A	S. W.	Open	1st I.F. Trans. 4	.....	.....
3.	10.7 MC.	30 MMF	2nd I.F. Grid 6SG7 B	F. M.	Open	Discriminator Trans. 5	.....	.....
4.	10.7 MC.	30 MMF	1st I.F. Grid 6SG7 A	F. M.	Open	2nd I.F. 10.7 Trans. 4	.....	.....
5.	10.7 MC.	30 MMF	See Procedure	F. M.	Open	1st I.F. 10.7 Trans. 2 & 3	.....	Signal Generator Ground Connection as Short as Possible
6.	5825 KC.	30 MMF	1st I.F. Grid 6SG7 A	S. W.	Open	2nd A.M. Osc. Core 7	167.5 KC. Above	.....
7.	5825 KC.	30 MMF	*Link Coupling on 10.7 I.F. 2	S. W.	Open	5825 KC. I.F. Trans. 3	167.5 KC. Above	*Short Lead Between Transformers 2 & 3
8.	5825 KC.	30 MMF	6AC7 Grid	S. W.	Open	5825 KC. I.F. Trans. 2	167.5 KC. Above	.....
9.	100 MC.	78 ohm Dummy	F.M. Dipole Ant. Terms.	F. M.	Channel 261	Osc. Core & Trim. F.M. Ant. Trims. Pri. & Sec.	10.7 MC. Above	See Circuit Under the Title "Alignment Equipment"
10.	87.9 MC.	78 ohm Dummy	F.M. Dipole Ant. Terms.	F. M.	Closed	F.M. Osc. Core	10.7 MC. Above	.....
11.	107.9 MC.	78 ohm Dummy	F.M. Dipole Ant. Terms.	F. M.	Channel 300	F.M. Osc. Trimmer	10.7 MC. Above	.....
12.	Disconnect Generator Connect Field Strength Meter			F. M.	Channel 215	Radiation Bal. Trimmer (Null Point)	.....	See Paragraph on Field Strength Meter, Under "Alignment Equip."
13.	9.6 MC.	30 MMF	One FM. Ant. Term.	S. W.	9.6 MC.	S.W. Oscillator Series Padder	5825 KC. Above	Disconnect Field Strength Meter Connect Signal Generator
14.	11.8 MC.	30 MMF	One FM. Ant. Term.	S. W.	11.8 MC.	S. W. Oscillator Core	5825 KC. Above	.....
15.	10.7 MC.	30 MMF	One F.M. Ant. Term.	S. W.	10.7 MC.	S. W. Ant. Pri. & Sec. Padder	.....	.....
16.	10.7 MC.	30 MMF	One F.M. Ant. Term.	F. M.	10.7 MC.	S. W. Primary (10.7 MC. Trap)	.....	Adjust for Null Point
17.	535 KC.	30 MMF	Hi. Side of Dummy Loop	B. C.	Closed	B. C. Oscillator Series Padder	5825 KC. Above	.....
18.	1620 KC.	30 MMF	Hi. Side of Dummy Loop	B. C.	Open	B. C. Oscillator Core	5825 KC. Above	.....
19.	1400 KC.	30 MMF	Hi. Side of Dummy Loop	B. C.	1400 KC.	B. C. Antenna Trimmer	.....	.....
20.	600 KC.	30 MMF	Hi. Side of Dummy Loop	B. C.	600 KC.	B. C. Antenna Core	.....	First Models Only. Omitted in Later Mod
21.	5825 KC.	30 MMF	Hi. Side of Dummy Loop	B. C.	1400 KC.	B. C. Wave Trap Trimmer	.....	Adjust for Null Point

ALIGNMENT PROCEDURE

1. This receiver has been aligned at the factory for best performance, and no attempt should be made to re-align this receiver unless the proper test equipment is available.
2. Turn the tuning condenser to full mesh, against stop, and set the dial pointer to reference point which is Channel 200 on the dial.
3. Set tone control knob to the treble position, (extreme right).
4. When output meter is used, connect across voice coil: (3.2 ohms).
5. Feed an R. F. Signal modulated 30% at 400 cycles to the receiver as indicated on the alignment chart; connect signal generator ground terminal to the chassis of the receiver, except where noted.
6. When F. M. Signal generator is used, a 30% modulated signal is equal to 22.5 kilocycles deviation.
7. Turn volume control knob to maximum clockwise position and adjust signal generator output to produce a noticeable output meter reading, (approx. 500 mw.). Keep signal generator output as low as possible to prevent excessive AVC action in the receiver.
8. The low impedance "Signal Web" antenna should remain connected at all times.

ALIGNMENT EQUIPMENT

FOR OUTPUT METER ALIGNMENT

Signal Generator AM with 400 cycle modulated signal to cover 167.5 KC to 108 MC.
Suitable output meter.
Field strength meter.

DUMMY ANTENNAS TO BE USED WITH GENERATOR OUTPUT:

- 0.1 mfd. condenser
- 30 mmf. condenser
- 78 ohm dummy antenna (2) 39 ohm carbon resistors

DUMMY LOOP ANTENNA:

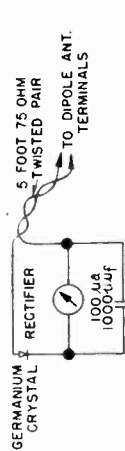
14.7 uh inductance shunted by a 70 uuf condenser (to replace low impedance "Signal Web" when chassis is removed from cabinet).

SHUNTS:

5000 ohm carbon resistor in series with a 0.1 mfd. condenser.
Hairpin shorting shunt composed of 2" of No. 14 bare tinned wire.

FIELD STRENGTH METER:

The Field Strength Meter may consist of a D. C. 100 microampere (full scale) meter shunted by a 1000 uf mica by-pass condenser; a crystal rectifier is connected in series with the meter and a five foot, 75 ohm twisted pair for leads. The open end of the twisted pair is connected to the dipole antenna terminals. Circuit for the field strength meter is given below:



NOTE: Connect condenser directly across meter terminals and crystal directly to one meter terminal, so leads are as short as possible.

OUTPUT METER ALIGNMENT

Use this procedure in conjunction with alignment chart. Sequence numbers correspond to numbers on alignment chart. Refer to alignment chart first for connection of signal generator and control settings, then follow procedure

167.5 KC I. F. TRANSFORMER ALIGNMENT: (For maximum output)

1. (a) Shunt primary of transformer No. 8 with a 5000 ohm resistor in series with a 0.1 mfd. condenser from ground to link between transformers No. 5 and 8. Adjust secondary of 2nd I. F. Transformer No. 8 (above chassis).
(b) Shunt secondary of transformer No. 8 with a 5000 ohm resistor in series with a 0.1 mfd. condenser from diode plate (Pin No. 4) of the 6SG7 to shielded lead junction on transformer and adjust primary of 2nd I. F. Transformer No. 8 (bottom of chassis).
2. (a) Connect signal generator to grid of 1st I. F. 6SG7 (A).
(b) Shunt primary of transformer No. 4 with a 5000 ohm resistor in series with a 0.1 mfd. condenser from plate of the 6SG7 (A) to the transformer side of the 2200 ohm resistor (106). Adjust secondary of 1st I. F. Transformer No. 4 (bottom of chassis).
(c) Shunt secondary of transformer No. 4 with a 5000 ohm resistor in series with a 0.1 mfd. condenser from the grid of the 6SG7 (B) to transformer side of the 68,000 ohm resistor (109). Adjust primary of 1st I. F. Transformer No. 4 (top of chassis).

10.7 MC. DISCRIMINATOR TRANSFORMER ALIGNMENT:

3. (a) Adjust discriminator transformer No. 5 secondary (bottom of chassis) padder for null point.
(b) Tune signal generator for maximum output meter reading, approximately 75 to 100 KC. off of the 10.7 megacycle null point and note output meter reading. Retune signal generator to the opposite side of the 10.7 megacycle null point to maximum reading on the output meter reading. If the two readings are not equal, adjust discriminator primary padder until equal output meter readings and equal peak spacing are obtained on both sides of the 10.7 megacycle null point.

10.7 MC. I. F. TRANSFORMER ALIGNMENT:

4. (a) Set signal generator to peak on high side of 10.7 MC. and adjust 10.7 MC. primary (top) and secondary (bottom) of transformer No. 4 for maximum output and note output meter reading.
(b) Set signal generator to peak on low side of 10.7 MC. and note output meter reading. If readings are unequal, readjust primary and secondary slightly until output meter readings and peak spacings are equal on both sides of the 10.7 MC. null point.
5. (a) Connect signal generator output to either lug of the F. M. ANTENNA Transformer Primary Trimmer (80). Connect signal generator ground to the receiver chassis at a point close to the trimmer to keep lead lengths to a minimum. Shielded cable of generator output should not be draped near under side of chassis.
(b) Set signal generator to peak on high side of 10.7 MC. and adjust 10.7 MC. primary on transformer No. 2 (bottom of chassis), and 10.7 MC. secondary on transformer No. 3 (top of chassis) for maximum output, and note reading on output meter.
(c) Set signal generator to peak on low side of 10.7 MC. and note output meter reading. If meter readings are not equal, readjust primary and secondary until equal readings are obtained on the peaks on both sides of 10.7 MC. Peaks should appear approximately 80 KC. on each side of 10.7 MC.

5825 KC. I. F. TRANSFORMER ALIGNMENT:

6. (a) Turn core adjustment screw on bottom of 2nd A. M. Oscillator Coil No. 7 until core is out of coil. DO NOT USE FORCE.
(b) Turn core adjustment in until first peak (maximum output) is obtained.
7. (a) Connect signal generator output to link coupling (see chart).
(b) Adjust 5825 KC. secondary trimmer and 5825 KC. secondary link adjustment on bottom of 1st I. F. Transformer No. 3 and retune 2nd A. M. Oscillator coil No. 7; adjust alternately for maximum output.
8. (a) Connect signal generator output to 6AC7 grid (see chart).
(b) Adjust 5825 KC. primary trimmer on bottom and 5825 KC. primary link adjustment on top of 1st I. F. Transformer No. 2 for maximum output.

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FREQUENCY MODULATED BAND ALIGNMENT:

9. (a) Pre-set F. M. Oscillator iron core (131) located on the top of the chassis to midway position.
- (b) Pre-set F. M. radiation balance adjustment (57) on top of the chassis to approximately two turns from the closed position.
- (c) Set signal generator to 100 megacycles A. M. modulated at 400 cycles.
- (d) Set dial pointer to channel 261 (100 MC).
- (e) Adjust F. M. oscillator trimmer (54) (bottom of chassis) to maximum output (on sets without oscillator trimmer, adjust oscillator core) but keep signal generator output as low as possible.
- (f) Short circuit F. M. Antenna primary trimmer (60) with hairpin shorting shunt.
- (g) Adjust F. M. Antenna secondary trimmer (58) on bottom of chassis for maximum output.
- (h) Transfer shorting shunt to F. M. Antenna secondary trimmer (58), and adjust F. M. Antenna primary trimmer (60) for maximum output.
- (i) Remove shorting shunt.

NOTE: ON SETS WITHOUT OSCILLATOR TRIMMER CONDENSER, OMIT STEPS 10 AND 11.

10. (a) Set signal generator to 87.9 MC. amplitude modulated at 400 cycles.
- (b) If set does not tune to 87.9 MC. (Channel 200) adjust F. M. Oscillator core in slowly until 87.9 MC. signal is tuned in.
11. (a) Set signal generator to 107.9 MC. amplitude modulated at 400 cycles.
- (b) Set dial pointer to channel 300 and adjust F. M. Oscillator trimmer (54) for maximum output.
- (c) Repeat steps 10 and 11 until frequency shift stops.

NOTE: TOO MUCH COVERAGE ON F. M. BAND INDICATES CAPACITY OF OSCILLATOR TRIMMER CONDENSER SET TOO HIGH.

F. M. RADIATION BALANCE ADJUSTMENT:

12. (a) Disconnect signal generator and connect Field Strength Meter to the dipole antenna terminals. (See paragraph on Field Strength Meter under title "Alignment Equipment".)
- (b) Set dial pointer to channel 215.
- (c) Adjust F. M. Radiation Balance Trimmer (57) (on top of chassis) to null point. If this trimmer adjustment is changed more than a quarter turn repeat step 9 (f) to (i), and 12.

SHORTWAVE ALIGNMENT:

13. (a) Set signal generator to 9.6 MC. Amplitude Modulated at 400 cycles.
- (b) Turn volume control to maximum.
- (c) Adjust shortwave oscillator series padder (55) on top of chassis for maximum output with dial pointer set at 9.6 MC.
14. (a) Set signal generator to 11.8 MC. Amplitude Modulated at 400 cycles.
- (b) Set dial pointer to 11.8 MC.
- (c) Adjust shortwave oscillator core on bottom of chassis for maximum output.
- Repeat steps 13 (a) and (c) and 14 (a), (b) and (c) until dial tracks at 9.6 and 11.8 MC.
15. (a) Set signal generator to 10.7 MC. Amplitude Modulated at 400 cycles.
- (b) Shunt shortwave Antenna Primary Padder (51) (lug connected to coil) to chassis with shorting clip.
- (c) Retune set to 10.7 MC. signal, increase signal generator output if necessary.
- (d) Adjust shortwave antenna secondary trimmer (59) for maximum output while rocking gang.
- (e) Remove shorting clip.
- (f) Shunt across shortwave antenna secondary trimmer (59) with shorting clip.
- (g) Retune radio to 10.7 MC. signal, increase signal generator output, if necessary.
- (h) Adjust SW. antenna primary padder (51) (top of chassis) for maximum output while rocking gang.
- (i) Remove shorting clip.

WAVE TRAP ADJUSTMENT (10.7 MC.):

16. (a) Turn band switch to F. M. position.
- (b) Connect field strength meter from signal generator side of 30 mmf. cond. to chassis.
- (c) Increase or decrease signal generator output until field strength meter reads between 10 and 15 microvolts.
- (d) Adjust SW. Antenna primary padder (51) for lowest reading on Field Strength Meter. Make this adjustment slowly, otherwise the dip may be passed unnoticed when a highly damped meter is used.
- (e) Disconnect Field Strength Meter.

BROADCAST BAND ALIGNMENT:

17. (a) Connect dummy loop (14.7 uh) to Signal Web terminal and ground terminal.
- (b) Connect Signal Generator in series with a 30 mmf. condenser to high side of dummy loop.
- (c) Pre-set Broadcast Antenna Wave Trap (85) on top of chassis to approximately two turns from the closed position.
- (d) Set signal generator to 535 KC. Amplitude Modulated.
- (e) Set dial pointer to 535 KC. (tuning condenser gang closed).
- (f) Adjust Broadcast Oscillator Series Padder (56), on top of chassis, for maximum output.
18. (a) Set signal generator to 1620 K.C.
- (b) Set dial pointer to 1620 K.C. (tuning condenser gang to minimum capacity, but not against stop).
- (c) Adjust Broadcast Oscillator core on the bottom of chassis for maximum output.
- (d) Repeat steps 17 (d) to 18 (c) until frequency shift stops.

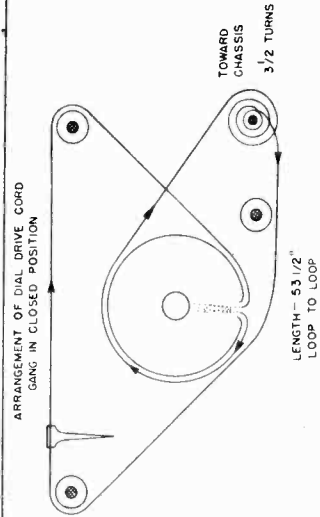
19. (a) Set signal generator to 1400 K.C.
- (b) Tune receiver to 1400 K.C. maximum output.
- (c) Adjust Broadcast Antenna Trimmer on top of tuning condenser gang for maximum output.
20. (a) Set signal generator to 600 K.C.
- (b) Tune receiver to 600 K.C. maximum output.
- (c) Adjust Broadcast Antenna Core (132), on top of chassis, for maximum output while rocking gang.

NOTE: B. C. ANTENNA CORE IN FIRST MODELS ONLY. OMIT STEP 20 WHEN ALIGNING LATER MODELS.

5825 KC. WAVE TRAP ADJUSTMENTS:

21. (a) Set signal generator to 5825 KC. Amplitude Modulated.
- (b) Set dial pointer to approximately 1400 KC. and retune signal generator to maximum output.
- (c) Adjust signal generator output to approximately midscale reading on output meter.
- (d) Adjust Broadcast Antenna Wave Trap Trimmer (85) for lowest reading on output meter.

NOTE: All air trimmers should be locked in position by applying a drop of household cement on the screw threads.



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Item No.	Part No.	Description	Item No.	Part No.	Description	Item No.	Part No.	Description	Item No.	Part No.	Description	Item No.	Part No.	Description	Part No.	Description	Part No.	Description
1	AC-136171	Transformer Assy. (F. M. Antenna)	53	Part of Item #3	Condenser, Trimmer (5.825 mc. Second-ary)	108	39294-30	Resistor, 680,000 ohm, 1/2 w.	108	39294-30	Resistor, 680,000 ohm, 1/2 w.	108	39294-30	Resistor, 680,000 ohm, 1/2 w.	D-136252	Dial Glass		
2	AC-136284	Transformer, 10.7 MC. and 5.825 MC. I. F. (A)	54	W-136954	Condenser, Air Trimmer (F. M. Ant.)	109	39294-24	Resistor, 68,000 ohm, 1/2 w.	109	39294-24	Resistor, 68,000 ohm, 1/2 w.	109	39294-24	Resistor, 68,000 ohm, 1/2 w.	W-136201	Clip, Dial Glass		
3	AC-136081	Transformer, 10.7 MC. and 5.825 MC. I. F. (B)	55	W-136984	Condenser, Air Trimmer (S. W. Osc. Series, Padder)	111	39294-31	Resistor, 1 megohm, 1/2 w.	111	39294-31	Resistor, 1 megohm, 1/2 w.	111	39294-31	Resistor, 1 megohm, 1/2 w.	W-136176	Cushion, Rubber (Dial Glass)		
4	AC-136276	Transformer, 10.7 MC and 167.5 KC. I. F.	56	W-136984	Condenser, Air Trimmer (B. C. Osc. Series, Padder)	112	39294-31	Resistor, 1 megohm, 1/2 w.	112	39294-31	Resistor, 1 megohm, 1/2 w.	112	39294-31	Resistor, 1 megohm, 1/2 w.	W-51071	Pointer, Dial		
5	AC-136260	Transformer, 10.7 MC. Discriminator	57	W-136984	Condenser, Air Trimmer (F. M. Radiation Balance)	114	39001-17	Resistor, .05 mfd., 600v., paper	114	39001-17	Resistor, .05 mfd., 600v., paper	114	39001-17	Resistor, .05 mfd., 600v., paper	W-136178	Spring, Dial Drive Cord		
6	AC-136509	Coil Assy. 1st Oscillator (B.C. & S.W.)	58	Part of Item #1	Condenser, Trimmer (F. M. Ant. Second-ary)	116	39014-42	Resistor, 47,000 ohm, 1/2 w.	116	39014-42	Resistor, 47,000 ohm, 1/2 w.	116	39014-42	Resistor, 47,000 ohm, 1/2 w.	W-136916	Ring, Shaft Retaining		
7	AC-136281	Transformer, 167.5 KC., Diode	59	Part of Item #10	Condenser, Trimmer (S. W. Ant. Second-ary)	117	39015-37	Resistor, 10,000 ohm, 1/2 w.	117	39015-37	Resistor, 10,000 ohm, 1/2 w.	117	39015-37	Resistor, 10,000 ohm, 1/2 w.	W-136979	Washer, Spring		
8	AW-136851	Coil B.C. Antenna	60	Part of Item #10	Condenser, Trimmer (S. W. Ant. Second-ary)	118	39014-41	Resistor, 22,000 ohm, 1/2 w.	118	39014-41	Resistor, 22,000 ohm, 1/2 w.	118	39014-41	Resistor, 22,000 ohm, 1/2 w.	W-131154-1	Pulley, Idler (Large Stud)		
9	AB-136444	Coil Assy. S. W. Antenna	61	Part of Item #1	Condenser, Trimmer (F. M. Ant. Primary)	119	B-226638-59	Resistor (Wirewound), 400 ohm, 4 w., Two	119	B-226638-59	Resistor (Wirewound), 400 ohm, 4 w., Two	119	B-226638-59	Resistor (Wirewound), 400 ohm, 4 w., Two	AB-136243	Pulley, Idler (Small Stud)		
10	Part of Item #2	Coil Assy.	62	Part of Item #1	Condenser, 82 mfd., 300v., ceramic	120	W-137021	Resistor (Wirewound), 700 ohm, 4 w., Sect.	120	W-137021	Resistor (Wirewound), 700 ohm, 4 w., Sect.	120	W-137021	Resistor (Wirewound), 700 ohm, 4 w., Sect.	C-136222	Cotter, External		
11	Part of Item #4	Coil Assy.	63	Part of Item #3	Condenser, 670 mfd., 300v., mica	121	39294-37	Resistor (Wirewound), 700 ohm, 4 w., Two	121	39294-37	Resistor (Wirewound), 700 ohm, 4 w., Two	121	39294-37	Resistor (Wirewound), 700 ohm, 4 w., Two	W-134055	Bracket, Variable Condenser Mtg.		
12	Part of Item #5	Coil Assy.	64	Part of Item #3	Condenser, 470 mfd., 300v., mica	122	C-135874	Resistor, 10 megohm, 1/2 w.	122	C-135874	Resistor, 10 megohm, 1/2 w.	122	C-135874	Resistor, 10 megohm, 1/2 w.	W-134055	Grommet, Variable Condenser Mtg.		
13	Part of Item #6	Coil Assy.	65	Part of Item #4	Condenser, 470 mfd., 300v., mica	123	AW-136911	Speaker & Transformer Assy.	123	AW-136911	Speaker & Transformer Assy.	123	AW-136911	Speaker & Transformer Assy.	W-136111	Screw, Chassis Mtg. (Front)		
14	Part of Item #6	Coil Assy.	66	Part of Item #4	Condenser, 470 mfd., 300v., mica	124	39019-3	Terminal Board	124	39019-3	Terminal Board	124	39019-3	Terminal Board	W-45580	Screw, Chassis Mtg. (Rear)		
15	Part of Item #7	Coil Assy.	67	Part of Item #5	Condenser, 160 mfd., 500v., mica	125	W-137143	Transmission Line, 75 ohm	125	W-137143	Transmission Line, 75 ohm	125	W-137143	Transmission Line, 75 ohm	W-137199	Nut, Tee (Chassis Mtg.)		
16	Part of Item #7	Coil Assy.	68	Part of Item #5	Condenser, 150 mfd., 500v., mica	126	AW-137220	Loop Assy. Antenna	126	AW-137220	Loop Assy. Antenna	126	AW-137220	Loop Assy. Antenna	R-137010	Cabinet (86CR)		
17	Part of Item #7	Coil Assy.	69	Part of Item #5	Condenser, 150 mfd., 500v., mica	127	39001-73	Condenser, .05 mfd., 600v., paper	127	39001-73	Condenser, .05 mfd., 600v., paper	127	39001-73	Condenser, .05 mfd., 600v., paper	R-137277	Cabinet (86CS)		
18	Part of Item #7	Coil Assy.	70	Part of Item #5	Condenser, 62 mfd., 500v., mica	128	B-226638-49	Condenser, 250 mfd., 600 v., paper	128	B-226638-49	Condenser, 250 mfd., 600 v., paper	128	B-226638-49	Condenser, 250 mfd., 600 v., paper	R-137201	Pull, Drawer		
19	Part of Item #7	Coil Assy.	71	B-226638-39	Condenser, 120 mfd., 300v., ceramic	131	39012-59	Iron Core (F. M. Osc.)	131	39012-59	Iron Core (F. M. Osc.)	131	39012-59	Iron Core (F. M. Osc.)	W-137022	Knob, 86CR (Band Switch, or Tone Control)		
20	Part of Item #7	Coil Assy.	72	Part of Item #7	Condenser, 120 mfd., 300v., ceramic	132	39012-60	Iron Core (B. C. Ant.)	132	39012-60	Iron Core (B. C. Ant.)	132	39012-60	Iron Core (B. C. Ant.)	W-137350	Knob, 86CS (Band Switch, or Tone Control)		
21	Part of Item #1	Coil Assy.	73	Part of Item #7	Condenser, 120 mfd., 300v., ceramic	134	W-137213	Connector, Phone Pickup	134	W-137213	Connector, Phone Pickup	134	W-137213	Connector, Phone Pickup	W-135309	Knob, 86CR (Dial Tuning, or Volume Control)		
22	W-48558	Condenser, .05 mfd., 600v., paper	74	Part of Item #7	Condenser, 1000 mfd., 500v., mica	135	B-138131-2	Transformer (only), Output	135	B-138131-2	Transformer (only), Output	135	B-138131-2	Transformer (only), Output	W-137349	Knob, 86CS (Dial Tuning, or Volume Control)		
23	W-136179	Coil F. M. Oscillator	75	Part of Item #8	Condenser, 100 mfd., 500v., mica		39232-5	Socket, Tube (6A6T, 6S6T)		39232-5	Socket, Tube (6A6T, 6S6T)		39232-5	Socket, Tube (6A6T, 6S6T)	D-134945-1	Record Changer (Model "K")		
24	Part of Item #1	Coil Assy.	76	Part of Item #8	Condenser, 100 mfd., 500v., mica		W-136470	Socket, Tube (7F8)		W-136470	Socket, Tube (7F8)		W-136470	Socket, Tube (7F8)	AW-137388	Shielded Wire & Plug Assy. (Phone.)		
25	39001-17	Condenser, .05 mfd., 600v., paper	77	Part of Item #8	Condenser, 100 mfd., 500v., mica		39232-9	Socket, Tube (6SQ7)		39232-9	Socket, Tube (6SQ7)		39232-9	Socket, Tube (6SQ7)	W-134956	Nut, Tee (Record Changer Mtg.)		
26	B-135336	Transformer, Variable (Section 230 040 ohm)	78	Part of Item #5	Condenser, 33 mfd., 500v., ceramic		39232-1	Socket, Tube (6V6GT/G)		39232-1	Socket, Tube (6V6GT/G)		39232-1	Socket, Tube (6V6GT/G)	AW-137232	Screw and Washer Assy. (Record Changer Mtg.)		
27	W-136179	Coil F. M. Oscillator	79	Part of Item #5	Condenser, 30 mfd., 500v., mica		W-211101	Socket, Dial Light		W-211101	Socket, Dial Light		W-211101	Socket, Dial Light	C-137173	Album, 86CR (12" Record)		
28	AC-135946	Condenser, Variable (Section 230 040 ohm)	80	Part of Item #5	Condenser, 27 mfd., 500v., ceramic		W-132965-2	Ring, Retaining (7F8 Socket)		W-132965-2	Ring, Retaining (7F8 Socket)		W-132965-2	Ring, Retaining (7F8 Socket)	C-137236	Album, 86CS (12" Record)		
29	C-136161	Switch, Band Change	81	Part of Item #5	Condenser, Trimmer (B. C. Ant. Wave Trap)		AC-136204	Background, Dial		AC-136204	Background, Dial		AC-136204	Background, Dial	C-137294	Album, 86CS (10" Record)		
30	B-135783	Control, Volume (3 megohm, Tapped)	82	Part of Item #1	Resistor, 1,000 ohm, 1/2 w.										AB-134935	Needle, Floating Jewel Assy.		
31	B-135784	Control, Tone	83	Part of Item #1	Resistor, 470,000 ohm, 1/2 w.													
32	W-48558	Bulb (Dial), Type 47, 6.3v., 15 amp.	84	Part of Item #1	Resistor, 470,000 ohm, 1/2 w.													
33	C-132300-2	Cable and Plug, Power	85	Part of Item #1	Resistor, 56,000 ohm, 1/2 w.													
34	39001-17	Condenser, .01 mfd., 600v., paper	86	B-226638-27	Condenser, 82 mfd., 500v., ceramic													
35	39001-13	Condenser, .01 mfd., 600v., paper	87	B-226638-51	Condenser, 39 mfd., 300v., ceramic													
36	39001-11	Condenser, .005 mfd., 600v., paper	88	GC-210685-183	Condenser, 91 mfd., 300v., ceramic													
37	39001-11	Condenser, .005 mfd., 600v., paper	89	B-226638-35	Condenser, 50 mfd., 500v., mica													
38	39001-11	Condenser, .005 mfd., 600v., paper	90	Part of Item #3	Condenser, 27 mfd., 500v., ceramic													
39	39001-11	Condenser, .005 mfd., 600v., paper	91	Part of Item #3	Resistor, 1,000 ohm, 1/2 w.													
40	39001-11	Condenser, .005 mfd., 600v., paper	92	Part of Item #1	Resistor, 470,000 ohm, 1/2 w.													
41	39001-11	Condenser, .005 mfd., 600v., paper	93	39014-57	Resistor, 470,000 ohm, 1/2 w.													
42	39001-11	Condenser, .005 mfd., 600v., paper	94	39014-57	Resistor, 470,000 ohm, 1/2 w.													
43	39001-11	Condenser, .005 mfd., 600v., paper	95	39014-46	Resistor, 56,000 ohm, 1/2 w.													
44	39001-11	Condenser, .005 mfd., 600v., paper	96	39014-46	Resistor, 56,000 ohm, 1/2 w.													
45	39001-11	Condenser, .005 mfd., 600v., paper	97	39014-45	Resistor, 47,000 ohm, 1/2 w.													
46	39001-11	Condenser, .005 mfd., 600v., paper	98	39014-50	Resistor, 120,000 ohm, 1/2 w.													
47	39001-11	Condenser, .005 mfd., 600v., paper	99	39015-17	Resistor, 120,000 ohm, 1/2 w.													
48	39001-13	Condenser, .01 mfd., 600v., paper	100	39294-25	Resistor, 220 ohm, 1 w.													
49	39001-13	Condenser, .01 mfd., 600v., paper	101	39294-25	Resistor, 100,000 ohm, 1/2 w.													
50	39001-17	Condenser, .05 mfd., 600v., paper	102	39294-25	Resistor, 100,000 ohm, 1/2 w.													
51	39001-17	Condenser, .05 mfd., 600v., paper	103	39294-25	Resistor, 100,000 ohm, 1/2 w.													
52	C-137219-1	Condenser, Trimmer (S. W. Ant. Prim.)	104	39294-15	Resistor, 220,000 ohm, 1/2 w.													
			105	39294-15	Resistor, 220,000 ohm, 1/2 w.													
			106	39294-15	Resistor, 220,000 ohm, 1/2 w.													
			107	39294-15	Resistor, 220,000 ohm, 1/2 w.													

*These parts will replace the original equipment parts.

CHANNEL NUMBERS TO MEGACYCLES
Cross index between channel calibrations on the dial and frequency in megacycles follow:

Channel No.	Frequency in Megacycles
200	87.9
205	88.9
210	89.9
215	90.9
220	91.9
225	92.9
230	93.9
235	94.9
240	95.9
245	96.9
250	97.9
255	98.9
260	99.9
265	100.9
270	101.9
275	102.9
280	103.9
285	104.9
290	105.9
295	106.0
300	107.9

To find the frequency in megacycles for CHANNEL NUMBERS between those given above, add 2 megacycle for every one added to the CHANNEL NUMBER; for example Channel 204 would be 88.7 megacycles and 251 would be 98.1 megacycles.