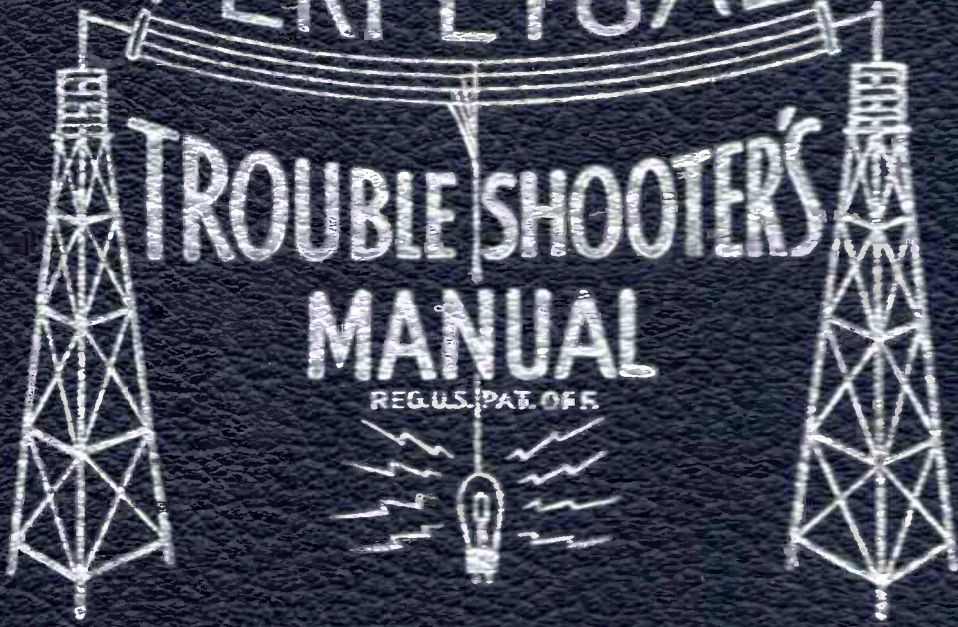


VOLUME XV

PERPETUAL

TRUBLE SHOOTER'S
MANUAL

REG. U.S. PAT. OFF.



JOHN F. RIDER

PERPETUAL
TROUBLE SHOOTER'S MANUAL

Reg. U.S. Pat. Off.

VOLUME XV



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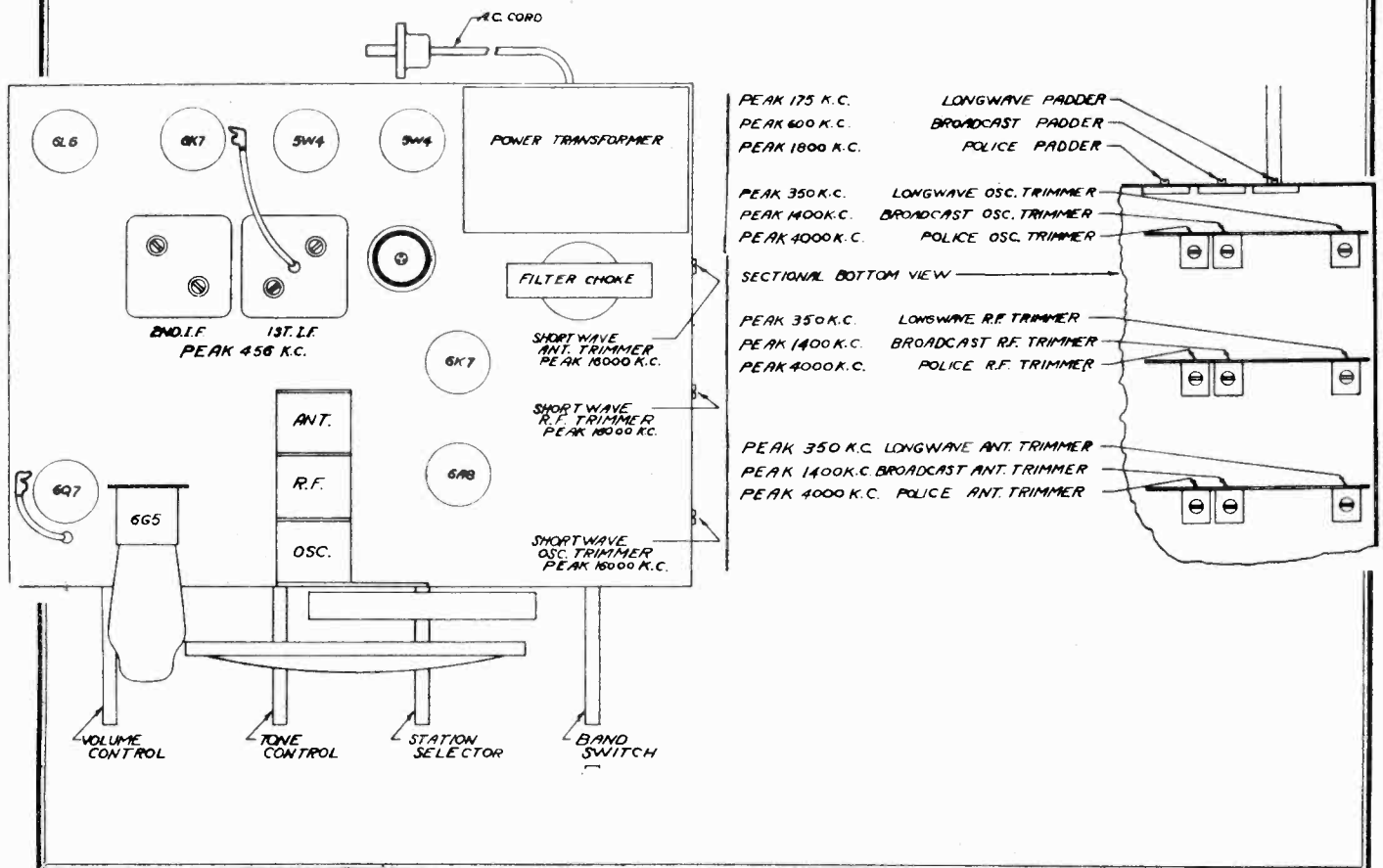
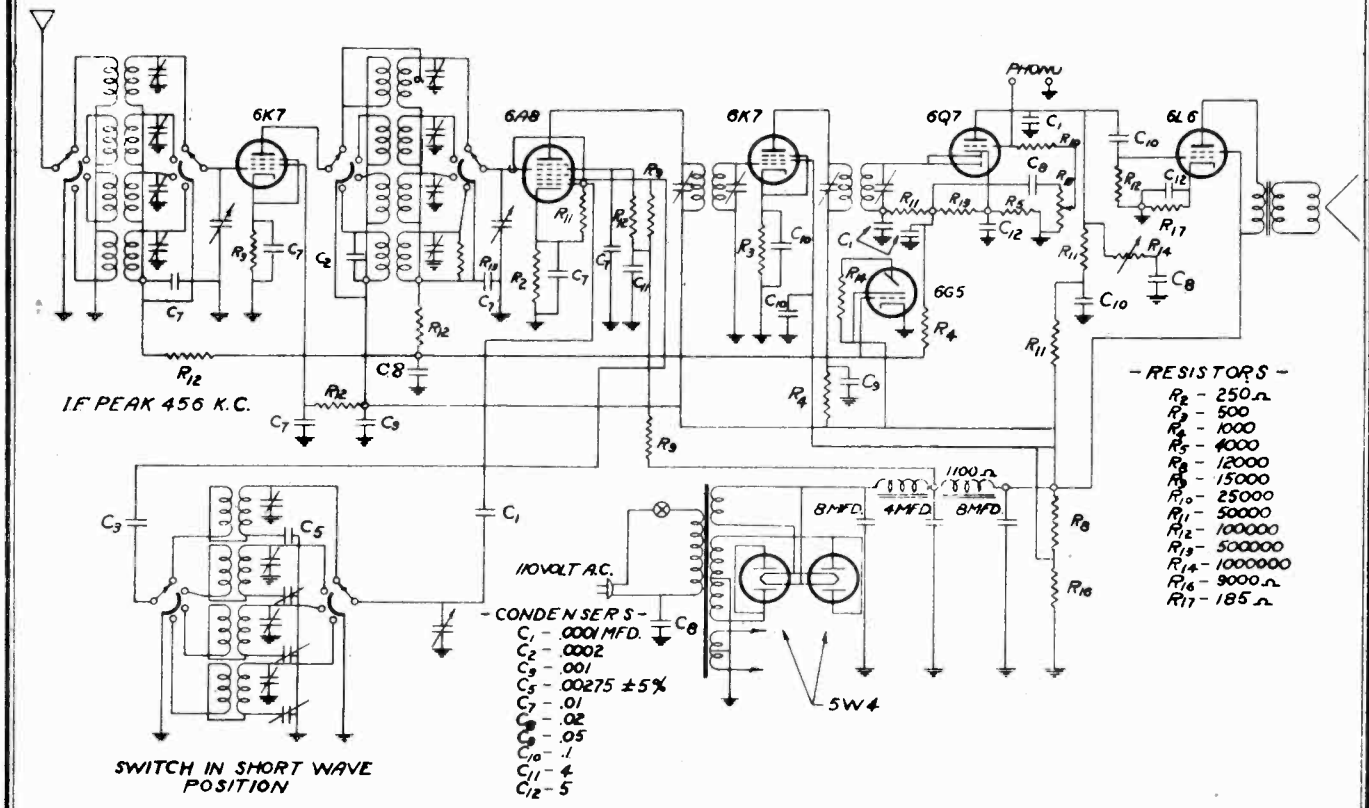
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ADMIRAL CORPORATION

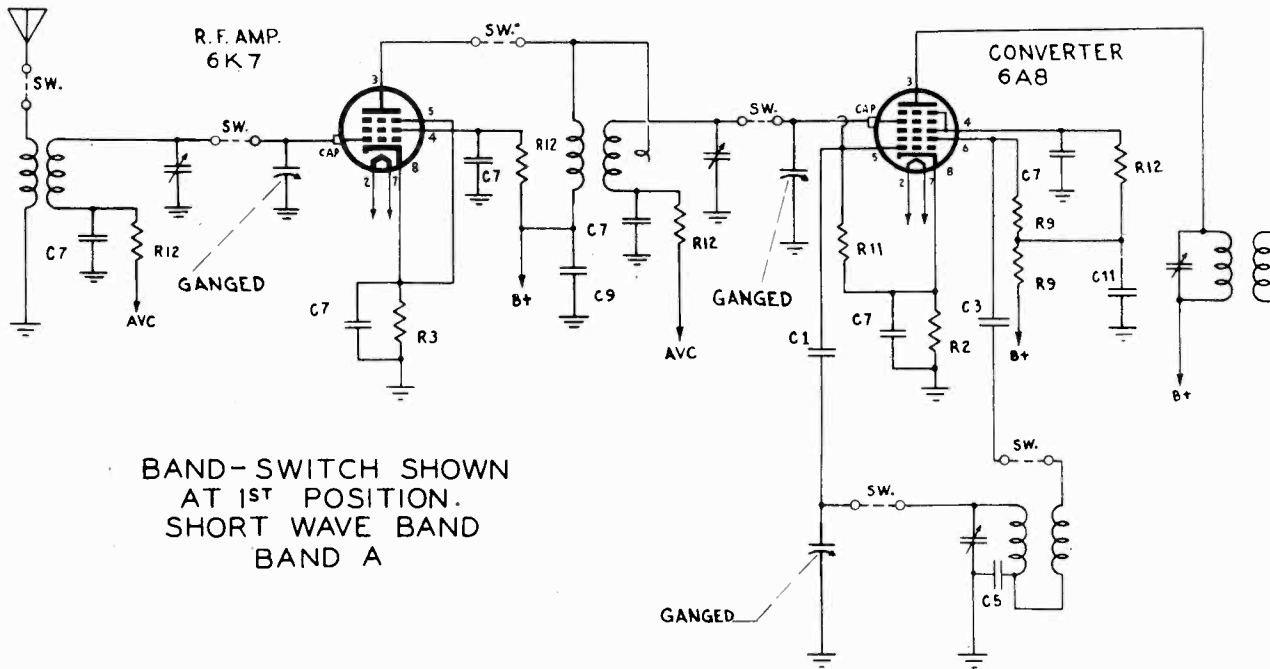
MODEL AM3



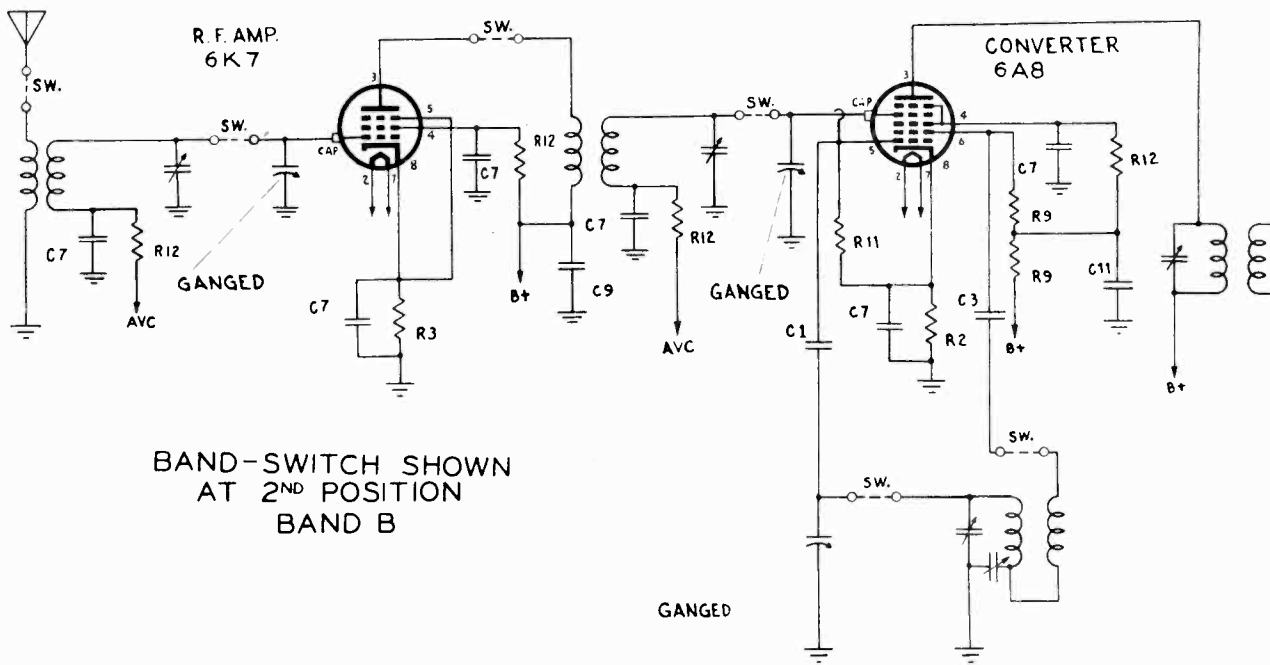
"clarified schematics"

MODEL AM3
MODEL AM6

ADMIRAL CORPORATION



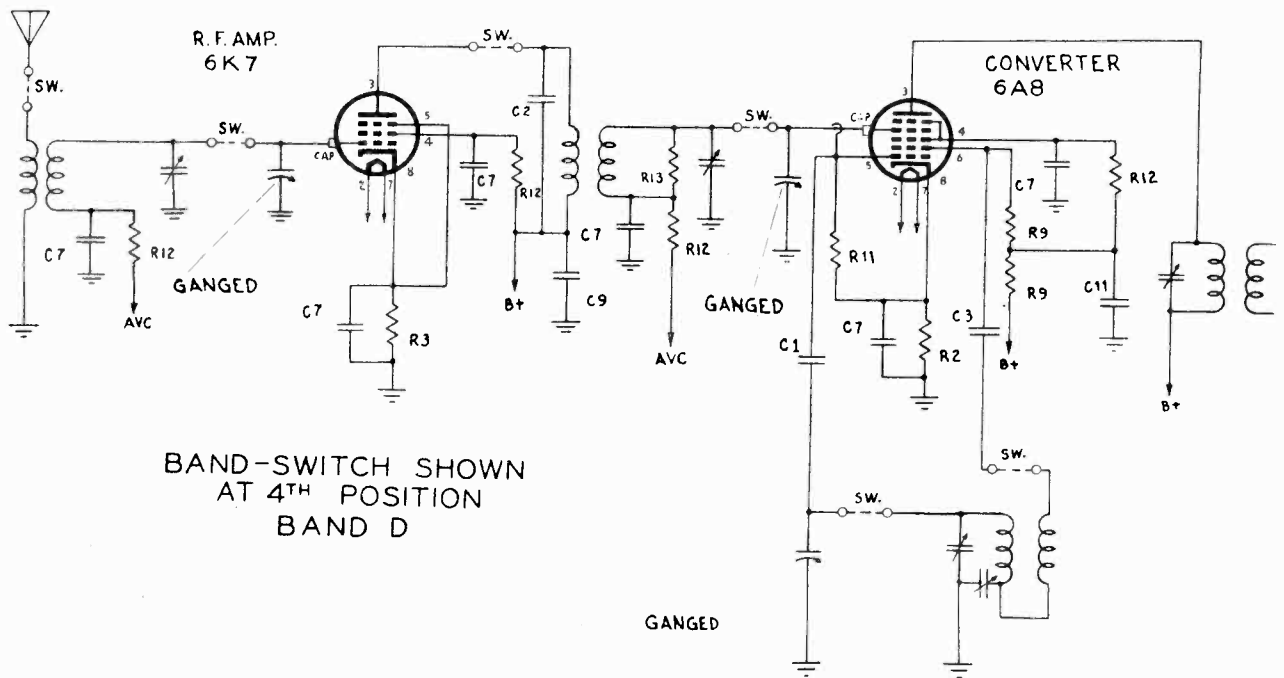
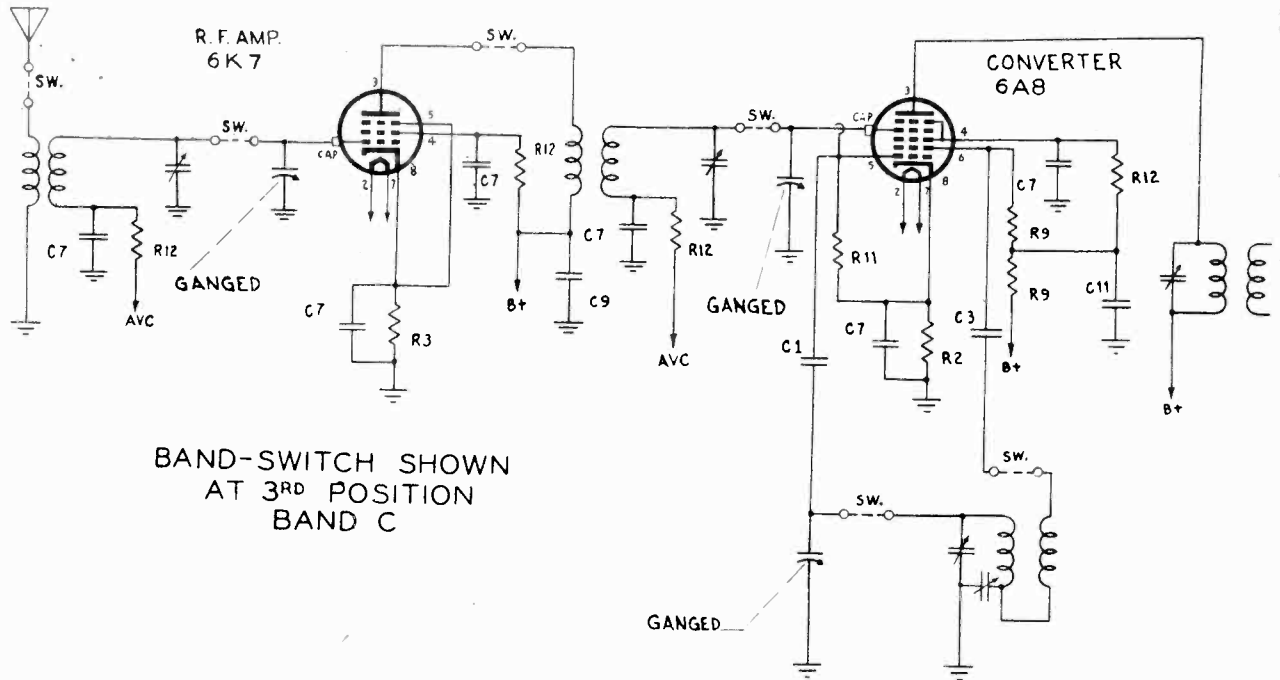
BAND-SWITCH SHOWN
AT 1ST POSITION.
SHORT WAVE
BAND A



BAND-SWITCH SHOWN
AT 2ND POSITION
BAND B

ADMIRAL CORPORATION

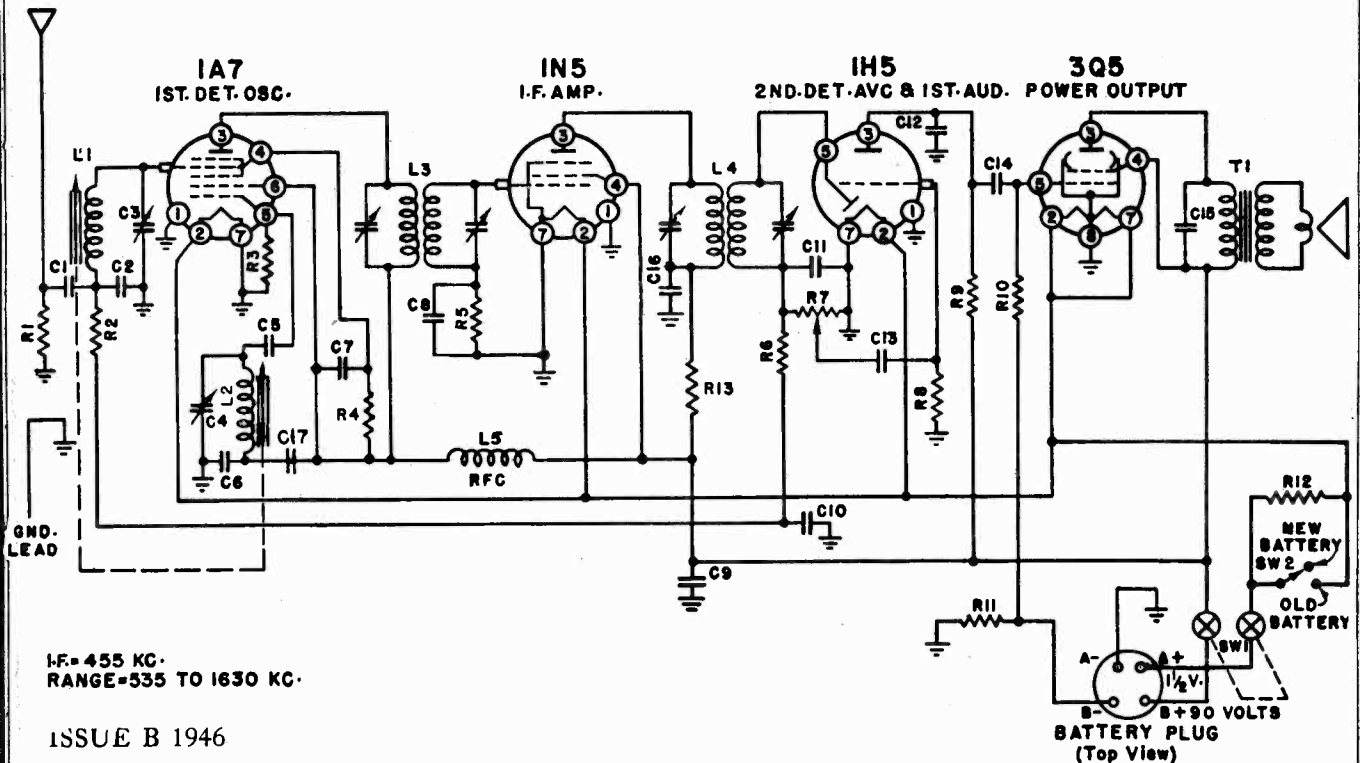
MODEL AM3
MODEL AM6



MODEL 4A1

Issue B

ADMIRAL CORPORATION

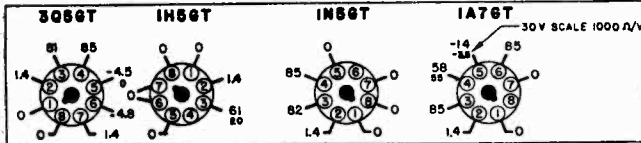


I.F. = 455 KC.
RANGE = 535 TO 1630 KC.

ISSUE B 1946

VOLTAGE CHART

BOTTOM VIEW



BACK OF CHASSIS

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 appreciable lower readings. Measured with a fresh battery, volume control full on, dial at the high frequency end, no signal.

OSCILLATION IN 4A1 BATTERY RADIO CHASSIS

Occasionally audio oscillation may occur in the 4A1 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 1H5 should be kept as far as possible from the 3Q5 output tube.

REPLACEMENT PARTS

CONDENSERS

Symbol	Description	Part No.
C1	.01 mfd. 400 Volts	64B1-25
C2	.0008 mfd., Mica	65B5-31
C3	Trimmer, Antenna	66A21-1
C4	Trimmer, Oscillator	
C5	.0001 mfd., Mica	65B7-17
C6	.0008 mfd., Mica	65B5-31
C7	.01 mfd., 400 Volts	64B1-25
C8	.002 mfd., 600 Volts	64B1-14
C9	4. mfd., 150 Volts (Elect)	67A4-2
C10	.05 mfd., 200 Volts	64B1-32
C11	.00025 mfd., Mica	65B7-22
C12	.00025 mfd., Mica	65B7-22
C13	.01 mfd., 400 Volts	64B1-25
C14	.01 mfd., 400 Volts	64B1-25
C15	.005 mfd., 600 Volts	64B1-12
C16	.01 mfd., 400 Volts	64B1-25
C17	.01 mfd., 400 Volts	64B1-25

RESISTORS

Symbol	Description	Part No.
R1	15,000 ohm 1/2 w	60B8-153
R2	470,000 ohm 1/4 w	60B2-474
R3	220,000 ohm 1/4 w	60B8-224
R4	33,000 ohm 1/4 w	60B8-333
R5, R8	4,700,000 ohm 1/4 w	60B2-475
R6	2,200,000 ohm 1/4 w	60B2-225
R7	1 meg. Vol. Control	75B1-1
R9, R10	1,000,000 ohm 1/4 w	60B2-105
R11	390 ohm 1/4 w	60B2-391
R12	.75 ohm 1/2 w (wire)	61A2-1
R13	2200 ohm 1/4 w	60B2-222

TRANSFORMERS and COILS

Symbol	Description	Part No.
L1	Antenna Coil	AC105-1
L2	Oscillator Coil	A1020
L3	1st I.F. Transformer	72B5
L4	2nd I.F. Transformer	72B6
L5	Choke Coil (RF)	AB103-1
T1	Output Transformer	*

*Specify all numbers appearing on Output Trans. as well as speaker when ordering.

MISCELLANEOUS

Description	Part No.
Background, Dial	X22B1-1
Cable, Battery (complete with plug)	A1026
Cap, Grid	90A1-2
Cord, Dial (5" on tuner and 53" on dial drive)	50A1-3
Drum and Hub, Tuning	A1035
Iron Slug, with wire (Osc.)	71B1-3
Iron Slug, with wire (Ant.)	71B1-4
Knob	33A1-2

MISCELLANEOUS

Description	Part No.
Plug, Battery 5 Prong	88A4-4
Pointer, Dial	25A3
Pulley, Fibre Dial	17A1-3
Scale, Glass Dial	21B6-1
Screw studs (for iron cores)	27A4
Shield, Tube	87A8
Shaft, Tuning	28A1-1
Socket, octal tube	87A5-1
Speaker and output Transformer	78B3
Spring, Dial Drum Cord Tension	19A1-5
Spring, Tuner slide cord tension	19A1-4
Spring, Tuner slide pressure	18A9
Spring, Tuner, front bearing takeup	19A5
Spring, Tuner, back bearing takeup	19A6
Spring, Hairpin (To hold Ant-Osc. coils)	19A3-1
Switch, SPST (Economizer) SW2	77B1-6
Washer, C	4A4-1
Washer, spring (shaft)	4A6-3-0
Washer, spring (coils)	4A6-12-0

ADMIRAL CORPORATION

MODEL 4A1
Issue B

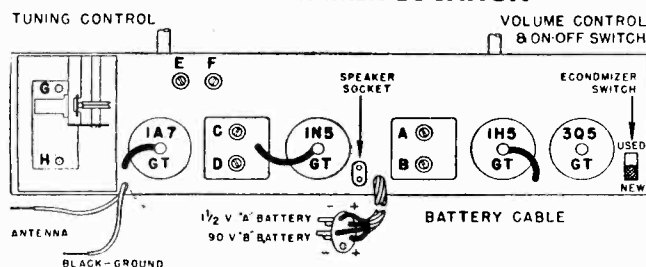
ALIGNMENT PROCEDURE

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		Connection to Radio	Receiver Dial Setting	Trimmers Adjusted (In Order Shown)	Trimmer Function	Type of Adjustment
	Frequency Setting	Dummy Antenna					
I.F.	455 KC.	.1 mfd.	Grid of 1A7 (Cap)	High Frequency end of dial	C-D—2nd I.F.	Output I.F.	Adjust to maximum output
I.F.	455 KC.	.1 mfd.	Grid of 1A7 (Cap)	High Frequency end of dial	A-B—1st I.F.	Input I.F.	Adjust to maximum output
Broad-cast	1630 KC.	.00020 mfd. Mica	Antenna Lead	High Frequency end of dial	E-(See note below) F-(See note below)	Oscillator Antenna	Adjust to maximum output
Broad-cast	1300 KC.	.00020 mfd. Mica	Antenna Lead	1300 KC.	G H	Oscillator Antenna	Adjust to maximum output

NOTE: Before adjusting trimmers "E" and "F," make sure that each iron core is 1 1/8" or more outside of its coil form. If necessary, turn adjustments "G" and "H" to accomplish this.

TUBE AND TRIMMER LOCATION



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 Ant. and Osc. circuits. I.F. 455 KC.

POWER SUPPLY

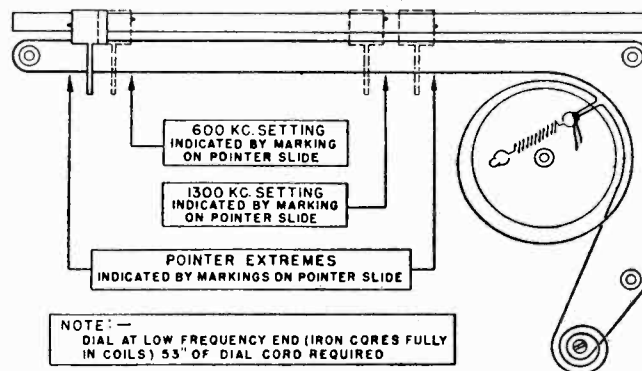
Single unit "AB" battery pack. 90 volt "B" 1 1/2 volt "A." Plug in connection. Use Ensign AB48, Burgess 17G-D60, Eveready 748, General 60DL-11L, Ray-O-Vac AB-82, or Bond 0528 Battery or Equivalent.

ECONOMIZER SWITCH

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

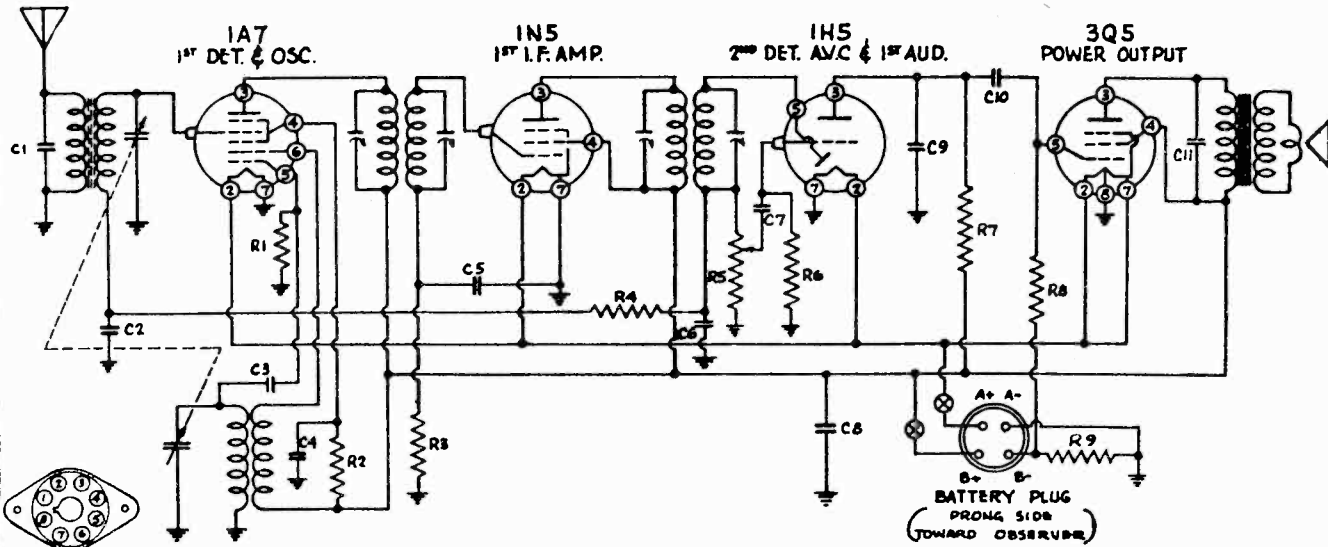
Always have this Economizer Switch in the "NEW" battery position when first placing radio in operation or when installing a new battery.

STRINGING DIAGRAM



MODEL C4

ADMIRAL CORPORATION



I.F. = 455 K.C.

RESISTORS			CONDENSERS		
No.	Ohms	Watts	No.	Capacity (Mfd.)	Volts
R1	200,000	1/2	R6	15,000,000	1/2
R2	50,000	1/2	R7	1,000,000	1/2
R3	5,000,000	1/2	R8	2,000,000	1/2
R4	2,000,000	1/2	R9	440-10%	1/2
R5	1,000,000	V.C.	C1	.00005	Mica
			C2	.05	200
			C3	.00005	Mica
			C4	.05	200
			C5	.001	200
			C6	.0001	Mica
			C7	.00005	Mica
			C8	.01	400
			C9	6.0 (Elect.)	150
			C10	.00025	Mica
			C11	.005	400
			C12	.002	500

PAPER CONDENSERS

- P3203 .001 mfd. 600 volt.....
- P1193 .002 mfd. 400 volt.....
- P1322 .005 mfd. 600 volt.....
- P164 .01 mfd. 400 volt.....
- P148 .05 mfd. 200 volt.....

MICA CONDENSERS

- P1382 .00005 mfd.
- P617 .00025 mfd.
- P480 .0001 mfd.

ELECTROLYTIC CONDENSERS

- P3024 6 mfd. 150 volt.....

VARIABLE CONDENSERS

- P4310 Gang condenser

RESISTORS

- P3817 440 ohm 1/2 watt.....
- P3853 50,000 ohm 1/2 watt.....
- P3864 200,000 ohm 1/2 watt.....
- P3882 1,000,000 ohm 1/2 watt.....
- P3883 2,000,000 ohm 1/2 watt.....
- P3886 5,000,000 ohm 1/2 watt.....
- P3891 15,000,000 ohm 1/2 watt.....

VARIABLE RESISTORS

- P4309 Volume control and switch...

TRANSFORMERS AND COILS

- G6274 Antenna coil assembly
- P4308 Oscillator coil
- P4323 1st I.F. transformer
- P3980 2nd I.F. transformer

MISCELLANEOUS

- P3005 Tube socket

- P1957 Battery plug

- P3571 Tube shield

- P4127 Drive shaft

- P1399 Horseshoe washer

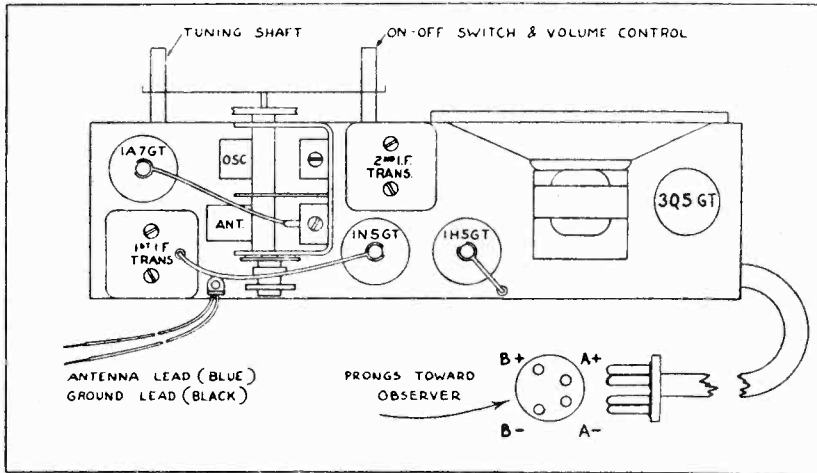
- P2925 Cord tension spring

- P470 Grid clip

- P4925 Speaker and output transformer

- P2149 Chassis mounting bolt, 1/2 doz.

- P2863 Battery adapter cable



ADMIRAL CORPORATION

MODEL C4
MODEL D4, Late

ALIGNMENT DATA

MODEL C4

SERVICE INFORMATION

GENERAL DATA

The alignment of this receiver requires the use of a signal generator that will cover the frequencies of 455, 600, 1400, and 1730, and an output meter to be connected across the primary or secondary of the output transformer. If possible, all alignments should be made with the volume control on maximum and the signal generator output as low as possible, to prevent the AVC from operating and giving false readings.

I.F. ALIGNMENT

Adjust the signal generator to 455 KC and connect the output to the grid of the first detector tube (1A7) thru a .05 or .1 mfd. condenser. The ground of the signal generator should be connected to the chassis ground. Align all I.F. trimmers to peak or maximum reading on the output meter.

BROADCAST BAND ALIGNMENT

Connect the output of the signal generator to the antenna and ground leads of the set through a .0002 condenser and adjust the signal generator to 1730 KC. Set the gang condenser to minimum capacity and adjust the oscillator trimmer to receive this signal. After this has been carefully done, the next step is to set the signal generator to 1400 KC and after tuning in the signal adjust the antenna trimmer to peak. The antenna and oscillator trimmers are located on the gang condenser. The trimmer toward the front on the gang condenser is the oscillator trimmer and the one toward the rear the antenna trimmer. This is all that is necessary for the alignment unless the plates of the gang condenser have been bent out of shape. In case of bent plates, set the signal generator and the receiver to 600 KC and bend the plates into the position for maximum sensitivity over the tuning range.

ALIGNMENT DATA

MODEL D4 Late

SERVICE INFORMATION

GENERAL DATA

The alignment of this receiver requires the use of a signal generator that will cover the frequencies of 455, 600, 1400 and 1730, and an output meter to be connected across the primary or secondary of the output transformer. If possible, all alignments should be made with the volume control on maximum and the signal generator output as low as possible, to prevent the AVC from operating and giving false readings.

I.F. ALIGNMENT

Remove the chassis from the cabinet, adjust the signal generator to 455 KC and connect the output to the grid of the first detector tube (1A7) thru a .05 or .1 mfd. condenser. The ground of the signal generator should be connected to the chassis ground. Align all I.F. trimmers to peak or maximum reading on the output meter.

BROADCAST BAND ALIGNMENT

Re-install the receiver completely in its cabinet. Connect the output of the signal generator to the antenna and ground terminals of the set through a .0002 condenser and adjust the signal generator to 1730 KC. Set the gang condenser to minimum capacity and adjust the gang condenser trimmer (oscillator) to receive this signal. After this has been carefully done, the next step is to set the signal generator to 1400 KC and after tuning in the signal adjust the antenna trimmer to peak. The antenna and oscillator trimmers are located on the gang condenser. The trimmer toward the front on the gang condenser is the oscillator trimmer and the one toward the rear the antenna trimmer. This is all that is necessary for the alignment unless the plates of the gang condenser have been bent out of shape. In case of bent plates, set the signal generator and the receiver to 600 KC and bend the plates into the position for maximum sensitivity over the tuning range.

Speaker (Part No. P4925) 5" PM Type

D.C. voice coil resistance.....3.1 ohms

Voice coil impedance at 400 cycles.....3.5 ohms

Antenna Coil (Part No. G-6274)

Looking at the connection end starting at the chassis in a clockwise direction the terminals are: No. 1, AVC; No. 2, grid; No. 3, Ant.; No. 4, ground. No. 4 is grounded to the mounting bracket.

Primary—No. 3 and No. 4—Resistance 24.6 ohms.

Secondary—No. 1 and No. 2—Resistance 2.2 ohms.

A gimmik coil of 5.5 mmfd. connects to terminals No. 2 and No. 3.

Oscillator Coil (Part No. P4308) (Red & Brown Dots)

Looking at the connection end (with dots) starting at the chassis in a clockwise direction the terminals are: No. 1, grid; No. 2, plate; No. 3, B+; No. 4, ground.

Primary—No. 2 and No. 3—Resistance 2.2 ohms.

Secondary—No. 4 and No. 1—Resistance 5.7 ohms.

First I.F. Transformer (Part No. P4323)

Primary—Blue white, plate; red white, B+ — Resistance 12.1 ohms

Secondary—White, grid; black white, AVC — Resistance 24.9 ohms

Second I.F. Transformer (Part No. P3980)

Primary—Blue white, plate; red white, B+ — Resistance 15.1 ohms

Secondary—White, grid; black white, AVC — Resistance 11.8 ohms

Speaker (Part No. P4040) 6" PM Type

D.C. voice coil resistance.....2.6 ohms

Voice coil impedance at 400 cycles.....3.0 ohms

Antenna Coil (Part No. G-5724)

Looking at the connection end starting at the chassis in a clockwise direction the terminals are: No. 1, AVC; No. 2, grid; No. 3, Ant.; No. 4, ground. No. 4 is grounded to the mounting bracket.

Primary—No. 3 and No. 4—Resistance 24.6 ohms.

Secondary—No. 1 and No. 2—Resistance 2.2 ohms.

A gimmik coil of 5.5 mmfd. connects to terminals No. 2 and No. 3.

Oscillator Coil (Part No. 2412) (Red Dot)

Looking at the connection end (with dot) starting at the chassis in a clockwise direction the terminals are: No. 1, grid; No. 2, plate; No. 3, B+; No. 4, ground.

Primary—No. 2 and No. 3—Resistance 2.2 ohms.

Secondary—No. 4 and No. 1—Resistance 5.3 ohms.

First I.F. Transformer (Part No. P3048)

Primary—Blue white, plate; red white B+ — Resistance 12.1 ohms

Secondary—White, grid; black white, AVC — Resistance 24.9 ohms

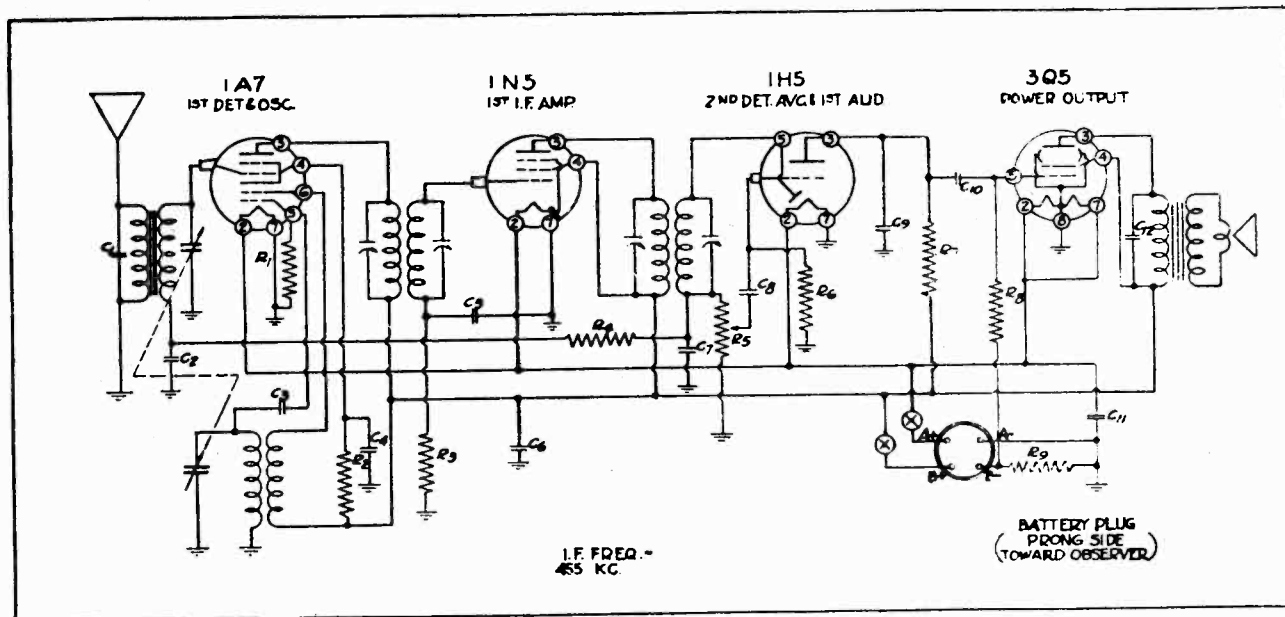
Second I.F. Transformer (Part No. P2606)

Primary—Blue white, plate; red white B+ — Resistance 15.1 ohms

Secondary—White, grid; black white, AVC — Resistance 11.8 ohms

MODEL D4, Late

ADMIRAL CORPORATION



RESISTORS

No.	Ohms	Watts
R1	200,000	1/2
R2	70,000	1/2
R3	5 Meg.	1/2
R4	1 Meg.	1/2
R5	500,000	V.C.

No.	Ohms	Watts
R6	5 Meg.	1/4
R7	250,000	1/4
R8	500,000	1/4
R9	440	10% 1/4

CONDENSERS

No.	Capacity (Mfd.)	Volts
C1	.00005	Mica
C2	.05	200
C3	.00005	Mica
C4	.1	200
C5	.002	400
C6	.001	200

No.	Capacity (Mfd.)	Volts
C7	.00025	Mica
C8	.01	400
C9	.00025	Mica
C10	.01	400
C11	20 (Elect.)	25
C12	.005	400

PAPER CONDENSERS

P1193	.002 mfd.	400 volt.
P1322	.005 mfd.	600 volt.
P164	.01 mfd.	400 volt.
P148	.05 mfd.	200 volt.
P142	.1 mfd.	200 volt.

MICA CONDENSERS

P1382	.00005 mfd.
P817	.00025 mfd.

ELECTROLYTIC CONDENSERS

P2602	20 mfd.	25 volt.
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VARIABLE CONDENSERS

P2596	Gang condenser
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RESISTORS

P3817	440 ohm	1/2 watt.
P3857	70,000 ohm	1/2 watt.
P3864	200,000 ohm	1/2 watt.
P3868	250,000 ohm	1/2 watt.
P3876	500,000 ohm	1/2 watt.
P3882	1,000,000 ohm	1/2 watt.
P3886	5,000,000 ohm	1/2 watt.

VARIABLE RESISTORS

P2600	Volume control and switch
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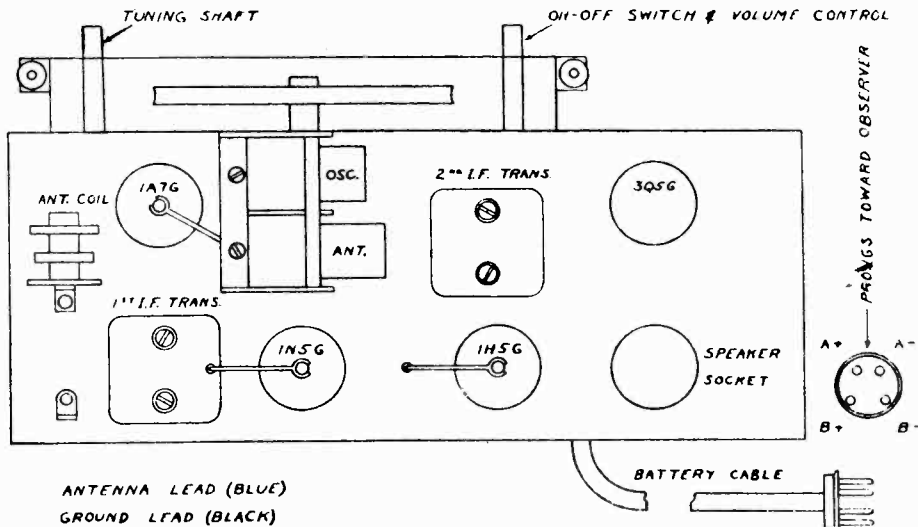
TRANSFORMERS AND COILS

G5724	Antenna coil assembly
P2412	Oscillator coil
P3048	1st I.F. transformer
P2606	2nd I.F. transformer

MISCELLANEOUS

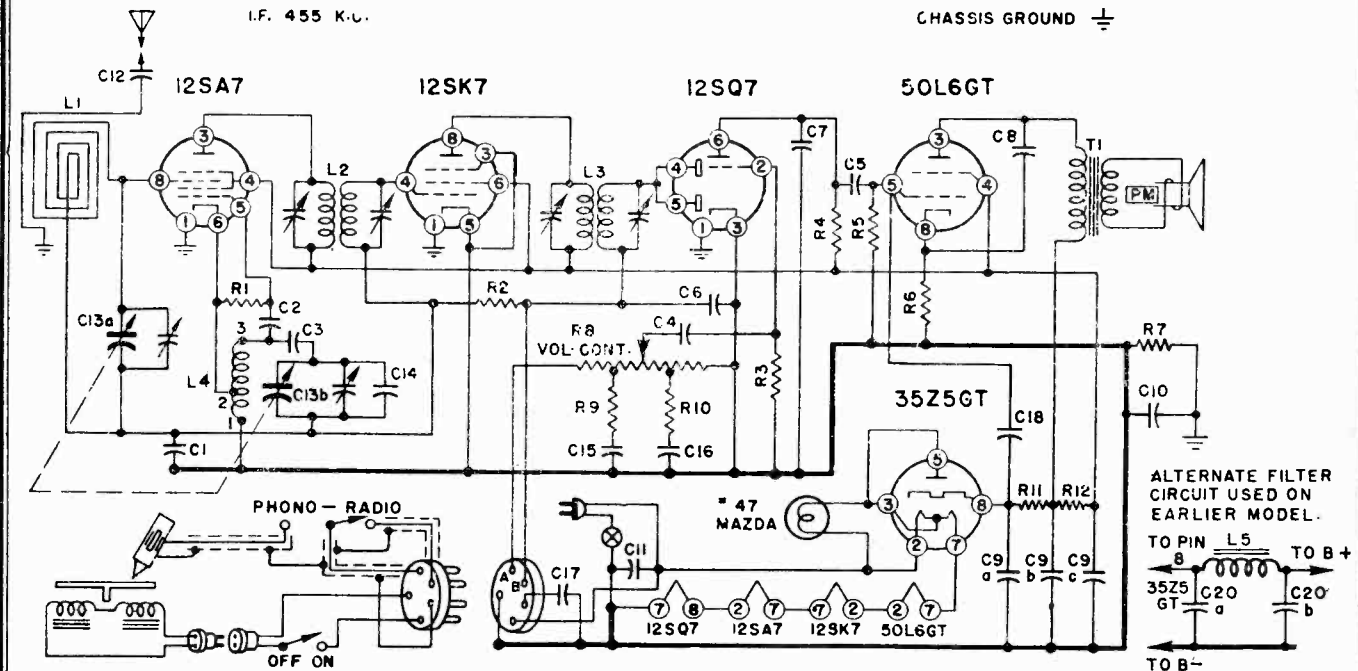
P3005	Tube socket
P2243	Drive shaft
P1587	Spring washer
P1399	Horseshoe washer
P2078	Cord tension spring
P4032	Dial pointer

P945	Speaker socket
P533	Tube shield base
P3571	Tube shield
P1957	Battery plug
P470	Grid clip
P3156	Dial background
P3993	Tenite escutcheon
P4033	Metal escutcheon, dial glass and dial scale
P4040	6" PM speaker
P3389	Knob, push on type
P3520	Knob, set screw type
P2863	Battery adapter cable



ADMIRAL CORPORATION

MODEL 5B1 Phono
Issue A



NOTE: 1. In later production R11 and C9a are disconnected from pin No. 8 of the 35Z5 and a 33-ohm 1-watt resistor (R13) is connected between pin No. 8 and the junction of R11 and C9a. In these sets, condenser C18 was deleted.

2. The jumper between pins 4 and 5 on the 12SQ7 is removed and one pin is connected to the secondary of the second I.F. (L3) and the other pin is connected directly to the junction point of R2 and the secondary of the 1st I.F. (L2).

NOTE: Connect points "A" and "B" with jumper when testing chassis with phono plug removed.

ISSUE A 1946

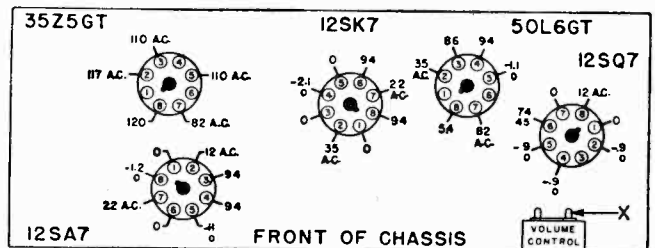
CONDENSERS

Symbol	Capacity	Type
C1	.1	mfd. 200 V.
C2	.00005	mfd. Mica
C3	.02	mfd. 400 V.
C4	.01	mfd. 400 V.
C5	.01	mfd. 400 V.
C6	.00025	mfd. Mica
C7	.0005	mfd. Mica
C8	.02	mfd. 400 V.
C9a	.30	mfd. (Elect.) 150 V.
C9b	.30	mfd. (Elect.) 150 V.
C9c	.20	mfd. (Elect.) 150 V.
C10	.2	mfd. 400 V.
C11	.05	mfd. 400 V.
C12	.005	mfd. 600 V.
C13a	.00042	mfd. (max.) Var.
C13b	.00018	mfd. (max.) Var.
C14	.00002	mfd. Mica
C15	.01	mfd. 400 V.
C16	.01	mfd. 400 V.
C17	.2	mfd. 400 V.
C18	.000035	mfd. Mica
C20a	.30	mfd. 150 V.
C20b	.50	mfd. 150 V.

RESISTORS

Symbol	Resistance	Type
R1	22,000 ohms	C $\frac{1}{2}$ W
R2	1 megohm	C $\frac{1}{2}$ W
R3	10 megohms	C $\frac{1}{2}$ W
R4	220,000 ohms	C $\frac{1}{2}$ W
R5	470,000 ohms	C $\frac{1}{2}$ W
R6	150 ohms	C $\frac{1}{2}$ W
R7	150,000 ohms	C $\frac{1}{2}$ W
R8	$\frac{1}{2}$ megohm Volume Control. Tapped at 100,000 and 200,000 ohms from start.	C $\frac{1}{2}$ W
R9	47,000 ohms	C $\frac{1}{2}$ W
R10	27,000 ohms	C $\frac{1}{2}$ W
R11	150 ohms	C1W
R12	1,000 ohms	C1W
R13	33 ohms	C1W

VOLTAGE DATA

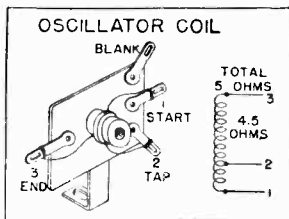


Bottom View of Chassis, Showing Voltages

- All readings made between Tube Socket Terminals and Switch Lug on volume control (Point "X" on drawing).
- Measured on a 117 Volt A.C. line.
- Volume control full on.
- Dial tuned to low frequency end, no signal.
- Voltages obtained on 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.

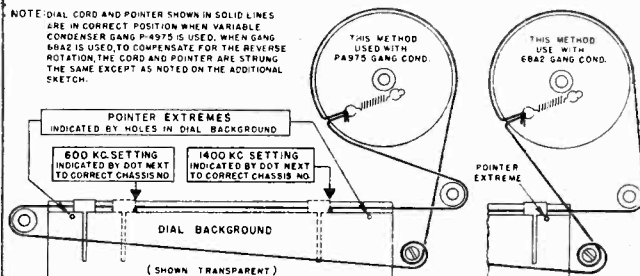
COILS

Symbol	Description
L1	Loop
L2	1st I. F. Trans.
L3	2nd I. F. Trans.
L4	Osc. Coil
L5	Choke, Filter



POINTER SETTINGS AND DIAL CORD STRINGING

NOTE: DIAL CORD AND POINTER SHOWN IN SOLID LINES ARE IN CORRECT POSITION WHEN VARIABLE CONDENSER GANG PA975 IS USED. WHEN GANG BR42 IS USED TO COMPENSATE FOR THE REVERSE ROTATION, THE CORD AND POINTER ARE STRUNG THE SAME EXCEPT AS NOTED ON THE ADDITIONAL SKETCH.



RECORD CHANGER SERVICE DATA

Complete service information and parts list are covered by a separate service manual. Check record changer for model number. The RC150 was used by all models having serial numbers below 500,000.

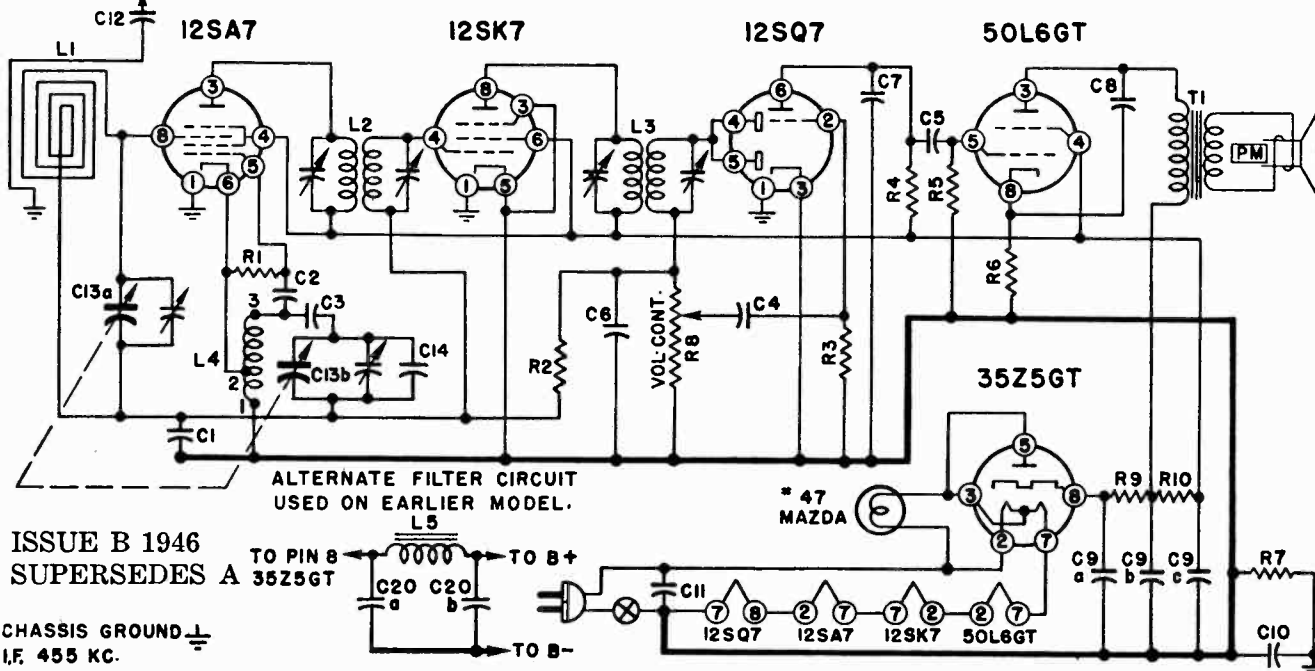
RADIO RECEPTION DURING PHONO

It is normal for strong radio stations to be heard faintly when switched to PHONO, unless the radio dial is tuned between stations. This interference can sometimes be reduced by moving condenser C4 as far from the 12SQ7 socket and as close to the chassis as possible. Also move the I.F. transformer wire, connected to pin 4 or 5 of 12SQ7, as far from condenser C4 and as close to the chassis as possible.

MODEL 5B1, Issue B

Non-Phono

ADMIRAL CORPORATION



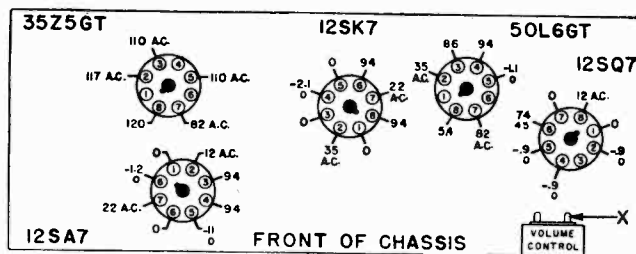
ISSUE B 1946
SUPERSEDES A

CHASSIS GROUND \perp
I.F. 455 KC.

NOTE: 1. In later production R9 and C9a are disconnected from pin No. 8 of the 35Z5 and a 33-ohm 1-watt resistor (R11) is connected between pin No. 8 and the junction of R9 and C9a.

2. The jumper between pins 4 and 5 on the 12SQ7 is removed and one pin is connected to the secondary of the second I.F. (L3) and the other pin is connected directly to the junction point of R2 and the secondary of the 1st I.F. (2).

VOLTAGE DATA:—



Bottom View of Chassis, Showing Voltages

- All readings made between Tube Socket Terminals and Switch Lug on volume control (Point "X" on drawing).
- Measured on a 117 Volt A.C. line.
- Volume control full on.
- Dial tuned to low frequency end, no signal.
- Voltages indicated obtained on 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.

CONDENSERS

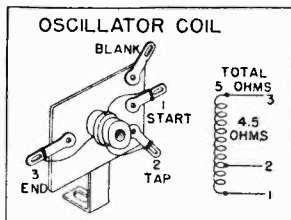
Symbol	Capacity	Type
C1	.1 mfd.	200 V
C2	.00005 mfd.	Mica
C3	.02 mfd.	400 V
C4	.01 mfd.	400 V
C5	.01 mfd.	400 V
C6	.00025 mfd.	Mica
C7	.0005 mfd.	Mica
C8	.02 mfd.	400 V
C9a	.30 mfd. (Elect.)	150 V
C9b	.30 mfd. (Elect.)	150 V
C9c	.20 mfd. (Elect.)	150 V
C10	.2 mfd.	400 V
C11	.05 mfd.	400 V
C12	.005 mfd.	600 V
C13a	.00042 mfd. (max.)	Var.
C13b	.00018 mfd. (max.)	Var.
C14	.00002 mfd.	Mica
C20a	.30 mfd. (Elect.)	150 V
C20b	.50 mfd. (Elect.)	150 V

RESISTORS

Symbol	Resistance	Type
R1	22,000 ohms	C $\frac{1}{2}$ W
R2	470,000 ohms	C $\frac{1}{2}$ W
R3	10 meg ohms	C $\frac{1}{2}$ W
R4	220,000 ohms	C $\frac{1}{2}$ W
R5	470,000 ohms	C $\frac{1}{2}$ W
R6	150 ohms	C $\frac{1}{2}$ W
R7	150,000 ohms	C $\frac{1}{2}$ W
R8	1 meg ohm	Volume Control
R9	150 ohms	C1W
R10	1,000 ohms	C1W
R11	33 ohms	C1W

COILS

Symbol	Description
L1	Loop
L2	1st I. F. Trans.
L3	2nd I. F. Trans.
L4	Osc. Coil
L5	Choke, Filter



SPECIFICATIONS

POWER SUPPLY:—

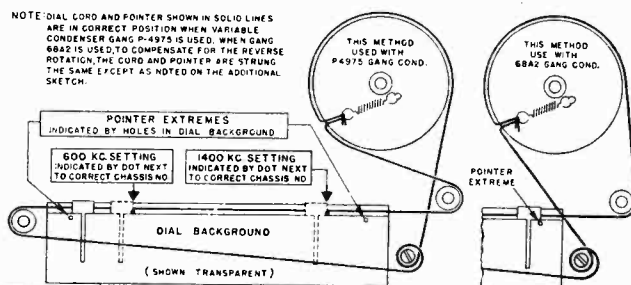
110-120 Volts A.C. or D.C. U.L. approved.
Frequency—50 to 60 cycles
Power consumption—30 watts

CIRCUIT:—

Chassis 5B1 A.C.—D.C. 5 Tube Superheterodyne with single tuning range, 540 Kc. to 1630 Kc., covering standard broadcast band; built-in AEROSCOPE loop antenna, with provision for connecting an external antenna.

POINTER SETTINGS AND DIAL CORD STRINGING

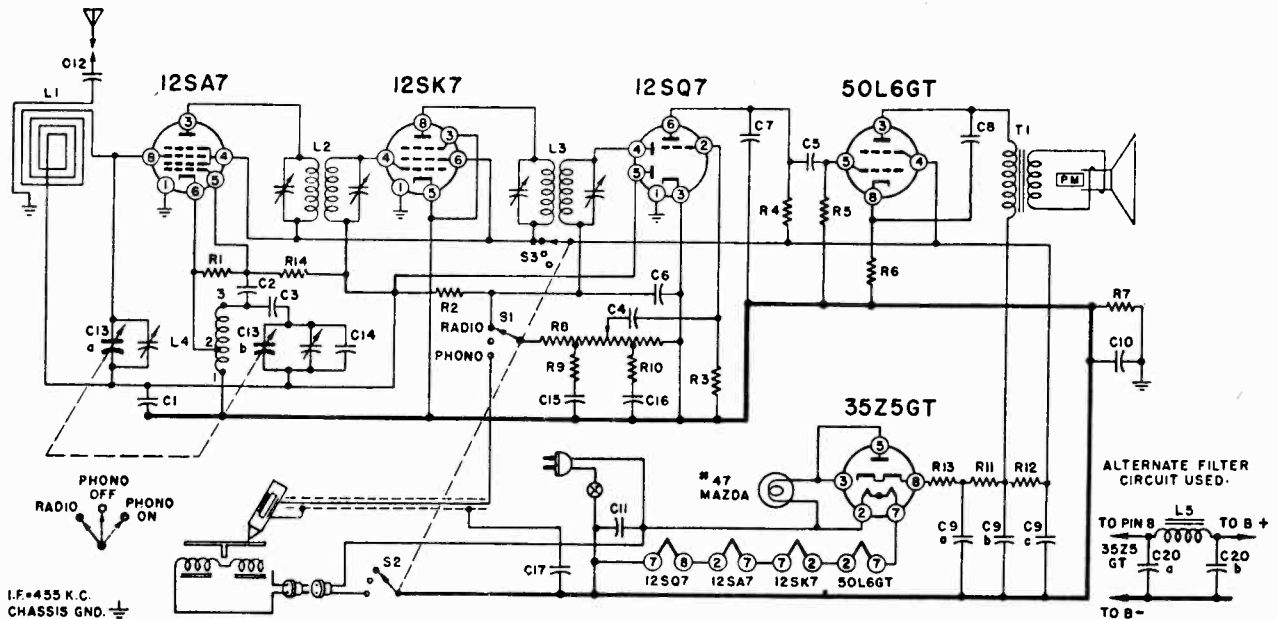
NOTE: DIAL CORD AND POINTER SHOWN IN SOLID LINES ARE IN CORRECT POSITION WHEN VARIABLE CONDENSER GANG P-4975 IS USED. WHEN GANG 6842 IS USED, TO COMPENSATE FOR THE REVERSE ROTATION, THE CORD AND POINTER ARE STRUNG THE SAME EXCEPT AS NOTED ON THE ADDITIONAL SKETCH.



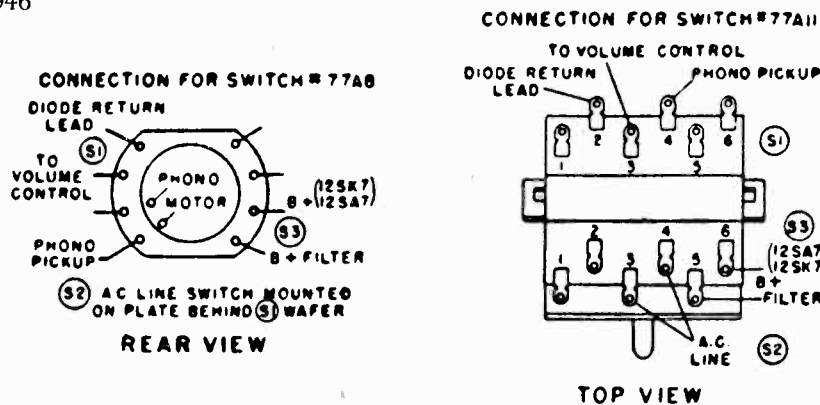
For Alignment and Parts, see P.15-12

ADMIRAL CORPORATION

MODEL 5B1A
Issue B



ISSUE B 1946



REPLACEMENT PARTS

CONDENSERS			RESISTORS			MISCELLANEOUS	
Symbol	Description	Part Number	Symbol	Description	Part Number	Description	Part Number
C1	.1 mfd., 200 Volts	64B1-30	R8	1/2 Megohm, Volume Control and Switch. Tapped at approximately 100,000 and 200,000 ohms from start.	75B3-2	Background, Dial.....	22B7-1
C2	50 mmfd., Mica	65B7-11	R9	47,000 Ohms, 1/2 Watt	60B8-473	Buttons, Snap (Dial).....	13A1-3-2
C3	.02 mfd., 400 Volts	64B1-24	R10	27,000 Ohms, 1/2 Watt	60B8-273	Cabinet Body less cover (6RT41A Mahogany).....	34D2-11
C4	.01 mfd., 400 Volts	65A3-10	R11	150 Ohms, 1 Watt	60B28-1	Cabinet Cover (6RT41A Mahogany).....	34D2-10
C5	.01 mfd., 400 Volts	65A3-10	R12	1,000 Ohms, 1 Watt	60B28-2	Cover Support.....	37A1-1
C6	250 mmfd., Mica	65B7-22	R13	33 Ohms, 1 Watt	60B28-3	Dial Scale.....	21B4-1
C7	500 mmfd., Mica	65B7-27	R14	10 Meg., 1/2 Watt	60B9-106	Drum and Hub Assembly.....	A1012
C8	.02 mfd., 400 Volts	64B1-24	TRANSFORMERS and COILS			Grommet, Rubber Insulating.....	12A1-1
C9a	30 mfd., 150 V. } Electrolytic	67A8				L1	Antenna, Loop	69B6	Grommet, Rubber for Drum.....	12A1-2
C9b	30 mfd., 150 V. }		L2	Transformer, 1st I. F.	72B3	Knob, Tuning, Volume Control.....	33A1-2
C9c	20 mfd., 150 V. }		L3	Transformer, 2nd I. F.	72B4	Knob, Radio-Phono Switch.....	33A11-5
C10	.1 mfd., 400 Volts	64B1-20	L4	Oscillator, Coil	69A5	Pilot Light No. 47.....	81A1-8
C11	.05 mfd., 400 Volts	64B1-22	L5	Choke Coil (Filter)	74A1	Pilot Light Socket and Leads.....	82A2-1
C12	.005 mfd., 600 Volts	64B1-12	T1	Transformer, Output	98A4	Plug, Button.....	13A2-1-57
C13a	.00042 mfd., Gang }	68A2 or P4975	PHONOGRAPH PARTS			Plug, Alden (Motor Leads).....	88A8-1
C13b	.00018 mfd., Gang }					See Record Changer Service Manual for Detailed Parts List.		Pointer.....	25A1-2
C14	15 mmfd., Mica	65B5-3	Description			Pulley, Fibre Dial.....	17A1-3
C15	.01 mfd., 400 Volts	65A3-10				Centerpost.....	G400A12	Shaft, Tuning.....	28A1-1
C16	.01 mfd., 400 Volts	65A3-10	Crystal Cartridge.....	409A1	Socket and Leads (Alden).....	89A6-2	
C17	.05 mfd., 400 Volts	64B1-22	Idler Wheel (407B3 Motor).....	G400A23	Socket, Octal Tube.....	87A5-1	
C20a	30 mfd., 150 V. } Electrolytic	67A3	Idler Wheel (407B2 Motor).....	G400A59	Speaker, 5" PM & Output Transformer	78B13-1	
C20b	50 mfd., 150 V. }		Idler Wheel (407B1 Motor).....	G400A57	Spring, Dial Cord Tension.....	19B1-7	
RESISTORS			Motor, 60 cycle 115 volt, A.C. (Types 407B1 & 407B2 also used).....	407B3	Switch Rotary Radio-Phono.....	77A8	
R1	22,000 Ohms, 1/2 Watt	60B8-223				Transformer, Output.....	98A4
R2	1 Megohm, 1/2 Watt	60B8-105				Washer, Flat Insulating.....	5A1-G
R3	10 Megohm, 1/2 Watt	60B8-106				Washer, Offset Insulating.....	5A2-5
R4	220,000 Ohms, 1/2 Watt	60B8-224				Washer, Spring.....	4A6-3-0
R5	470,000 Ohms, 1/2 Watt	60B8-474					
R6	150 Ohms, 1/2 Watt	60B8-151					
R7	150,000 Ohms, 1/2 Watt	60B8-154					

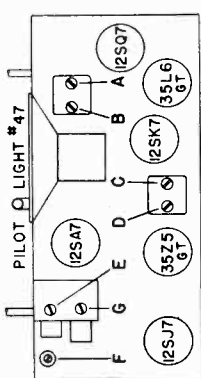
MODEL 5B1
MODEL 5B1A
MODEL 6A1, Issue B

ADMIRAL CORPORATION

R. F. SLUG POSITION

If the tuned coil slug needs replacing or re-positioning, first see that the dial drum is in its proper position. Then with the threaded stud half-way through the bakelite, note that the top of the slug is flush with the top of coil form. Then re-align.

TOP VIEW TUBE & TRIMMER LOCATION



BACK OF CHASSIS

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
12SA7	250 mmfd. Mica Condenser	455 KC.	High frequency end of Dial	A and B—2nd I. F. C and D—1st I. F.	Adjust to maximum Output
External Antenna Wire on Loop	250 mmfd. Mica Condenser	1600 KC.	High frequency end of Dial	E—Osc.	Adjust to maximum Output
External Antenna Wire on Loop	250 mmfd. Mica Condenser	1400 KC.	Tune in Generator signal	F—R. F. (Iron Core)	Note Below
Loop radiator (or place pickup lead between set and generator. Close to loop of set to obtain adequate signal).	No actual connection between set and generator.	1400 KC.	Tune in Generator signal	G—Ant.	Adjust to maximum Output

NOTE: Adjustment F is the threaded stud at the top end of the slug wire. Screw stud up or down in the bakelite for maximum output. Alignment is correct if the output is reduced when the position of the lever arm is changed slightly in either direction (up or down).

DIAL DRUM POSITION

If the dial drum position is disturbed, it should be carefully re-positioned to insure correct tuning of the permeability tuned coil. When the ganged condenser is fully open, the drum will be properly positioned if the center of the condenser shaft and the dial cable hole on the drum are in a straight line. The dial cable hole on the drum end of the dial cable should be on the left side (looking at front) of the chassis.

ALIGNMENT PROCEDURE

1. Be sure Radio Receiver and Signal Generator are thoroughly warmed up before starting alignment procedure.
2. Check setting of Pointer Extremes and note correct C-100 C. positions on Dial Background. (See Dial Diagram on next side, and note correct C-100 C. positions on next side, and note correct C-100 C. positions on next side.)
3. Connect Output Meter across Voice Coil.
4. Turn Receiver Volume Control full on.
5. Use lowest Output setting of Signal Generator capable of producing adequate Output Meter indication and then proceed as outlined in chart below.
6. Repeat adjustments to insure final overall maximum results.

MODEL 5B1A ALIGNMENT PROCEDURE

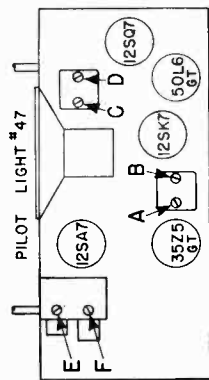
1. Be sure Radio Receiver and Signal Generator are thoroughly warmed up before starting alignment procedure.
2. Check setting of Pointer Extremes and note correct 600 K.C. and 1400 K.C. positions on Dial Background. (See Dial Diagram)
3. Connect Output Meter across Voice Coil.
4. Turn Receiver Volume Control—full on.
5. Use lowest Output setting of Signal Generator capable of producing adequate Output Meter indication and then proceed in the following sequence.
6. Repeat adjustments to insure final overall maximum results.

BACK OF CHASSIS

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
12SA7	250 mmfd. Mica Condenser	455 KC.	High frequency end of Dial	C—D 2nd I. F. A—B 1st I. F.	Adjust to maximum Output
External Antenna Wire on Loop	250 mmfd. Mica Condenser	1600 KC.	High frequency end of Dial	E—Osc.	Adjust to maximum Output
External Antenna Wire on Loop	250 mmfd. Mica Condenser	1400 KC.	Tune in generator signal	F—Ant. (See Note)	Adjust to maximum Output

NOTE: Antenna trimmer "F" must be aligned after chassis and loop are mounted in the cabinet. This adjustment can be made by lifting up the top cover and removing the plug button which is directly above trimmer "F."

TOP VIEW



BACK OF CHASSIS

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
12SA7	250 mmfd. Mica Condenser	455 KC.	High frequency end of Dial	C—D 2nd I. F. A—B 1st I. F.	Adjust to maximum Output
External Antenna Wire on Loop	250 mmfd. Mica Condenser	1600 KC.	High frequency end of Dial	E—Osc.	Adjust to maximum Output
External Antenna Wire on Loop	250 mmfd. Mica Condenser	1400 KC.	Tune in generator signal	F—Ant. (See Note)	Adjust to maximum Output

NOTE: Antenna trimmer "F" must be aligned after chassis and loop are mounted in the cabinet. This adjustment can be made by lifting up the top cover and removing the plug button which is directly above trimmer "F."

MODEL 5B1 - PHONO REPLACEMENT PARTS

Part No.	Symbol	Description
6481-12	C12	0.05 mfd. 400 V.
6481-13	C13	0.05 mfd. 400 V.
6481-14	C14	0.05 mfd. 400 V.
6481-15	C15	0.05 mfd. 400 V.
6481-16	C16	0.05 mfd. 400 V.
6481-17	C17	0.05 mfd. 400 V.
6481-18	C18	0.05 mfd. 400 V.
6481-19	C19	0.05 mfd. 400 V.
6481-20	C20	0.05 mfd. 400 V.
6481-21	C21	0.05 mfd. 400 V.
6481-22	C22	0.05 mfd. 400 V.
6481-23	C23	0.05 mfd. 400 V.
6481-24	C24	0.05 mfd. 400 V.
6481-25	C25	0.05 mfd. 400 V.
6481-26	C26	0.05 mfd. 400 V.
6481-27	C27	0.05 mfd. 400 V.
6481-28	C28	0.05 mfd. 400 V.
6481-29	C29	0.05 mfd. 400 V.
6481-30	C30	0.05 mfd. 400 V.
6481-31	C31	0.05 mfd. 400 V.
6481-32	C32	0.05 mfd. 400 V.
6481-33	C33	0.05 mfd. 400 V.
6481-34	C34	0.05 mfd. 400 V.
6481-35	C35	0.05 mfd. 400 V.
6481-36	C36	0.05 mfd. 400 V.
6481-37	C37	0.05 mfd. 400 V.
6481-38	C38	0.05 mfd. 400 V.
6481-39	C39	0.05 mfd. 400 V.
6481-40	C40	0.05 mfd. 400 V.
6481-41	C41	0.05 mfd. 400 V.
6481-42	C42	0.05 mfd. 400 V.
6481-43	C43	0.05 mfd. 400 V.
6481-44	C44	0.05 mfd. 400 V.
6481-45	C45	0.05 mfd. 400 V.
6481-46	C46	0.05 mfd. 400 V.
6481-47	C47	0.05 mfd. 400 V.
6481-48	C48	0.05 mfd. 400 V.
6481-49	C49	0.05 mfd. 400 V.
6481-50	C50	0.05 mfd. 400 V.
6481-51	C51	0.05 mfd. 400 V.
6481-52	C52	0.05 mfd. 400 V.
6481-53	C53	0.05 mfd. 400 V.
6481-54	C54	0.05 mfd. 400 V.
6481-55	C55	0.05 mfd. 400 V.
6481-56	C56	0.05 mfd. 400 V.
6481-57	C57	0.05 mfd. 400 V.
6481-58	C58	0.05 mfd. 400 V.
6481-59	C59	0.05 mfd. 400 V.
6481-60	C60	0.05 mfd. 400 V.
6481-61	C61	0.05 mfd. 400 V.
6481-62	C62	0.05 mfd. 400 V.
6481-63	C63	0.05 mfd. 400 V.
6481-64	C64	0.05 mfd. 400 V.
6481-65	C65	0.05 mfd. 400 V.
6481-66	C66	0.05 mfd. 400 V.
6481-67	C67	0.05 mfd. 400 V.
6481-68	C68	0.05 mfd. 400 V.
6481-69	C69	0.05 mfd. 400 V.
6481-70	C70	0.05 mfd. 400 V.
6481-71	C71	0.05 mfd. 400 V.
6481-72	C72	0.05 mfd. 400 V.
6481-73	C73	0.05 mfd. 400 V.
6481-74	C74	0.05 mfd. 400 V.
6481-75	C75	0.05 mfd. 400 V.
6481-76	C76	0.05 mfd. 400 V.
6481-77	C77	0.05 mfd. 400 V.
6481-78	C78	0.05 mfd. 400 V.
6481-79	C79	0.05 mfd. 400 V.
6481-80	C80	0.05 mfd. 400 V.
6481-81	C81	0.05 mfd. 400 V.
6481-82	C82	0.05 mfd. 400 V.
6481-83	C83	0.05 mfd. 400 V.
6481-84	C84	0.05 mfd. 400 V.
6481-85	C85	0.05 mfd. 400 V.
6481-86	C86	0.05 mfd. 400 V.
6481-87	C87	0.05 mfd. 400 V.
6481-88	C88	0.05 mfd. 400 V.
6481-89	C89	0.05 mfd. 400 V.
6481-90	C90	0.05 mfd. 400 V.
6481-91	C91	0.05 mfd. 400 V.
6481-92	C92	0.05 mfd. 400 V.
6481-93	C93	0.05 mfd. 400 V.
6481-94	C94	0.05 mfd. 400 V.
6481-95	C95	0.05 mfd. 400 V.
6481-96	C96	0.05 mfd. 400 V.
6481-97	C97	0.05 mfd. 400 V.
6481-98	C98	0.05 mfd. 400 V.
6481-99	C99	0.05 mfd. 400 V.
6481-100	C100	0.05 mfd. 400 V.

MODEL 5B1 - NON-PHONO

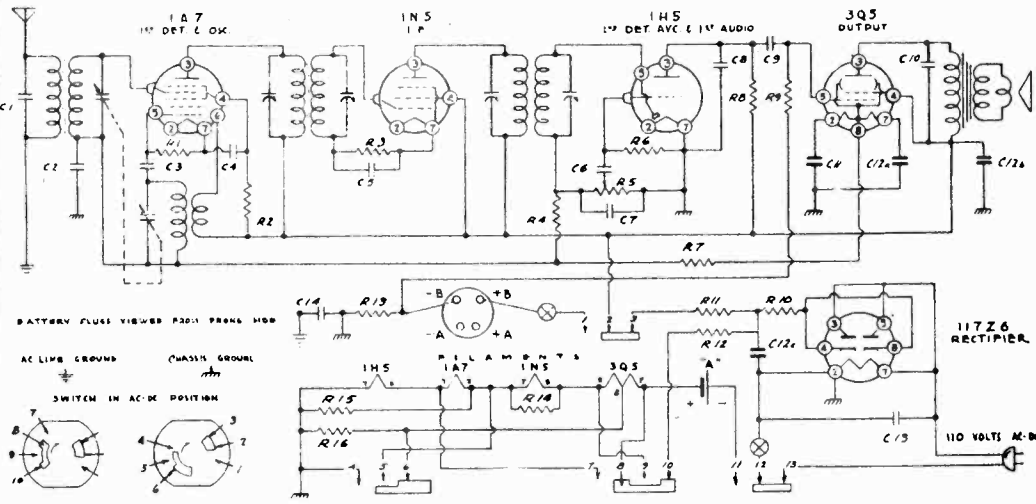
Part No.	Symbol	Description
6082-3	R11	33 ohm ±10% 1 W.
6082-4	R12	150 ohm ±10% 1 W.
6082-5	R13	150 ohm ±10% 1 W.
6082-6	R14	150 ohm ±10% 1 W.
6082-7	R15	150 ohm ±10% 1 W.
6082-8	R16	150 ohm ±10% 1 W.
6082-9	R17	150 ohm ±10% 1 W.
6082-10	R18	150 ohm ±10% 1 W.
6082-11	R19	150 ohm ±10% 1 W.
6082-12	R20	150 ohm ±10% 1 W.
6082-13	R21	150 ohm ±10% 1 W.
6082-14	R22	150 ohm ±10% 1 W.
6082-15	R23	150 ohm ±10% 1 W.
6082-16	R24	150 ohm ±10% 1 W.
6082-17	R25	150 ohm ±10% 1 W.
6082-18	R26	150 ohm ±10% 1 W.
6082-19	R27	150 ohm ±10% 1 W.
6082-20	R28	150 ohm ±10% 1 W.
6082-21	R29	150 ohm ±10% 1 W.
6082-22	R30	150 ohm ±10% 1 W.
6082-23	R31	150 ohm ±10% 1 W.
6082-24	R32	150 ohm ±10% 1 W.
6082-25	R33	150 ohm ±10% 1 W.
6082-26	R34	150 ohm ±10% 1 W.
6082-27	R35	150 ohm ±10% 1 W.
6082-28	R36	150 ohm ±10% 1 W.
6082-29	R37	150 ohm ±10% 1 W.
6082-30	R38	150 ohm ±10% 1 W.
6082-31	R39	150 ohm ±10% 1 W.
6082-32	R40	150 ohm ±10% 1 W.
6082-33	R41	150 ohm ±10% 1 W.
6082-34	R42	150 ohm ±10% 1 W.
6082-35	R43	150 ohm ±10% 1 W.
6082-36	R44	150 ohm ±10% 1 W.
6082-37	R45	150 ohm ±10% 1 W.
6082-38	R46	150 ohm ±10% 1 W.
6082-39	R47	150 ohm ±10% 1 W.
6082-40	R48	150 ohm ±10% 1 W.
6082-41	R49	150 ohm ±10% 1 W.
6082-42	R50	150 ohm ±10% 1 W.
6082-43	R51	150 ohm ±10% 1 W.
6082-44	R52	150 ohm ±10% 1 W.
6082-45	R53	150 ohm ±10% 1 W.
6082-46	R54	150 ohm ±10% 1 W.
6082-47	R55	150 ohm ±10% 1 W.
6082-48	R56	150 ohm ±10% 1 W.
6082-49	R57	150 ohm ±10% 1 W.
6082-50	R58	150 ohm ±10% 1 W.
6082-51	R59	150 ohm ±10% 1 W.
6082-52	R60	150 ohm ±10% 1 W.
6082-53	R61	150 ohm ±10% 1 W.
6082-54	R62	150 ohm ±10% 1 W.
6082-55	R63	150 ohm ±10% 1 W.
6082-56	R64	150 ohm ±10% 1 W.
6082-57	R65	150 ohm ±10% 1 W.
6082-58	R66	150 ohm ±10% 1 W.
6082-59	R67	150 ohm ±10% 1 W.
6082-60	R68	150 ohm ±10% 1 W.
6082-61	R69	150 ohm ±10% 1 W.
6082-62	R70	150 ohm ±10% 1 W.
6082-63	R71	150 ohm ±10% 1 W.
6082-64	R72	150 ohm ±10% 1 W.
6082-65	R73	150 ohm ±10% 1 W.
6082-66	R74	150 ohm ±10% 1 W.
6082-67	R75	150 ohm ±10% 1 W.
6082-68	R76	150 ohm ±10% 1 W.
6082-69	R77	150 ohm ±10% 1 W.
6082-70	R78	150 ohm ±10% 1 W.
6082-71	R79	150 ohm ±10% 1 W.
6082-72	R80	150 ohm ±10% 1 W.
6082-73	R81	150 ohm ±10% 1 W.
6082-74	R82	150 ohm ±10% 1 W.
6082-75	R83	150 ohm ±10% 1 W.
6082-76	R84	150 ohm ±10% 1 W.
6082-77	R85	150 ohm ±10% 1 W.
6082-78	R86	150 ohm ±10% 1 W.
6082-79	R87	150 ohm ±10% 1 W.
6082-80	R88	150 ohm ±10% 1 W.
6082-81	R89	150 ohm ±10% 1 W.
6082-82	R90	150 ohm ±10% 1 W.
6082-83	R91	150 ohm ±10% 1 W.
6082-84	R92	150 ohm ±10% 1 W.
6082-85	R93	150 ohm ±10% 1 W.
6082-86	R94	150 ohm ±10% 1 W.
6082-87	R95	150 ohm ±10% 1 W.
6082-88	R96	150 ohm ±10% 1 W.
6082-89	R97	150 ohm ±10% 1 W.
6082-90	R98	150 ohm ±10% 1 W.
6082-91	R99	150 ohm ±10% 1 W.
6082-92	R100	150 ohm ±10% 1 W.

REPLACEMENT PARTS

Part No.	Symbol	Description
6481-12	C12	0.05 mfd. 400 V.
6481-13	C13	0.05 mfd. 400 V.
6481-14	C14	0.05 mfd. 400 V.
6481-15	C15	0.05 mfd. 400 V.
6481-16	C16	0.05 mfd. 400 V.
6481-17	C17	0.05 mfd. 400 V.
6481-18	C18	0.05 mfd. 400 V.
6481-19	C19	0.05 mfd. 400 V.
6481-20	C20	0.05 mfd. 400 V.
6481-21	C21	0.05 mfd. 400 V.
6481-22	C22	0.05 mfd. 400 V.
6481-23	C23	0.05 mfd. 400 V.
6481-24	C24	0.05 mfd. 400 V.
6481-25	C25	0.05 mfd. 400 V.
6481-26	C26	0.05 mfd. 400 V.
6481-27	C27	0.05 mfd. 400 V.
6481-28	C28	0.05 mfd. 400 V.
6481-29	C29	0.05 mfd. 400 V.
6481-30	C30	0.05 mfd. 400 V.
6481-31	C31	0.05 mfd. 400 V.
6481-32	C32	0.05 mfd. 400 V.
6481-33	C33	0.05 mfd

MODEL E5

ADMIRAL CORPORATION



MISCELLANEOUS

- P3005 Tube socket
- P3783 Mounting base (for P4860)
- P1957 Battery plug
- P3571 Tube shield
- P4127 Drive shaft
- Dial cord (per yard)
- P1587 Spring washer
- P1399 Horseshoe washer
- P2925 Cord tension spring
- P470 Grid clip
- Dial scale: order by name and model number
- P1585 Snap button, for dial scale, dozen
- Dial glass: order by name and model number
- Pointer: order by name, model number and color
- Knobs: order by name, model number and color
- P4925 Speaker and output transformer
- P4953 Power change switch
- P2215 Line cord
- P2149 Chassis mounting bolt, 1/2 doz.
- P2863 Battery adapter cable

RESISTORS

CONDENSERS

No.	Ohms.	Watt.	No.	Capacity (Mfd.)	Volts
R1	200,000	1/2	C1	.00005	Mica
R2	50,000		C2	.05	200
R3	5,000,000		C3	.00005	Mica
R4	3,000,000 V. C.		C4	.01	400
R5	1,000,000		C5	.001	600
R6	15,000,000		C6	.001	600
R7	10,000,000		C7	.00025	Mica
R8	1,000,000		C8	.00025	Mica
R9	2,000,000		C9	.01	400
R10	30		C10	.002	600
R11	3,500		C11	100.	10
R12	2,600		C12a	100.	25
R13	440		C12b	50.	150
R14	300		C12c	30.	150
R15	300		C13	.05	400
R16	3,000		C14	.25	200

I.F. 455 Kc.

PAPER CONDENSERS

P3203	.001 mfd.	600 volt.
P904	.002 mfd.	600 volt.
P164	.01 mfd.	400 volt.
P148	.05 mfd.	200 volt.
P334	.05 mfd.	400 volt.
P141	.25 mfd.	200 volt.

MICA CONDENSERS

P1382	.00005 mfd.	mica.
P817	.00025 mfd.	mica.

ELECTROLYTIC CONDENSERS

P4831	100 mfd.	10 volt.
P4860	Lug type	{ 30 mfd. 150 volt 50 mfd. 150 volt
P4860A	Lead type	100 mfd. 25 volt.

RESISTORS

P2436	30 ohms	wire wound
P3813	300 ohms	1/2 watt
P3817	440 ohms	1/2 watt
P4952	2,600 ohms	8 watt wire wound
P3833	3,000 ohms	1/2 watt
P3834	3,500 ohms	1/2 watt
P3853	50,000 ohms	1/2 watt
P3864	200,000 ohms	1/2 watt
P3882	1,000,000 ohms	1/2 watt
P3883	2,000,000 ohms	1/2 watt
P3884	3,000,000 ohms	1/2 watt
P3886	5,000,000 ohms	1/2 watt
P3889	10,000,000 ohms	1/2 watt
P3891	15,000,000 ohms	1/2 watt

TRANSFORMERS AND COILS

G6464	Antenna coil assembly
P4308	Oscillator coil
P4323	1st I.F. transformer
P3980	2nd I.F. transformer

ALIGNMENT DATA

GENERAL DATA

The alignment of this receiver requires the use of a signal generator that will cover the frequencies of 455, 600, 1400, and 1730, and an output meter to be connected across the primary or secondary of the output transformer. If possible, all alignments should be made with the volume control on maximum and the signal generator output as low as possible, to prevent the AVC from operating and giving false readings.

I.F. ALIGNMENT

Adjust the signal generator to 455 KC and connect the output to the grid of the first detector tube (1A7) through a .05 or .1 mfd. condenser. The ground of the signal generator can be connected to the chassis ground. Align all I.F. trimmers to peak or maximum reading on the output meter.

BROADCAST BAND ALIGNMENT

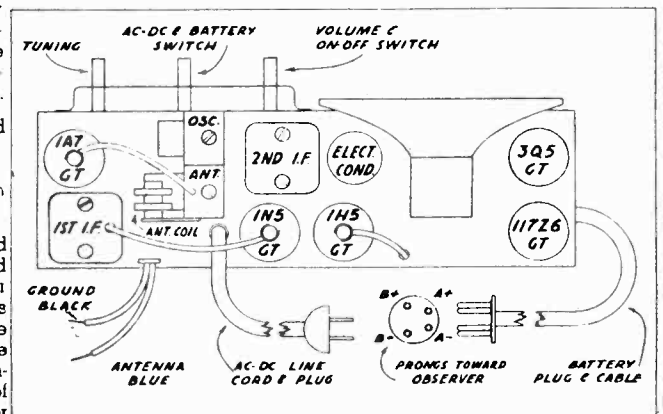
Adjust the signal generator to 1730 KC and connect the output to the antenna lead (Blue) through a .0002 mfd. mica condenser. Set the gang condenser to minimum capacity and adjust the oscillator trimmer to receive this signal. After this has been carefully done, the next step is to set the signal generator to 1400 KC and after tuning in the signal adjust the antenna trimmer to peak. This is all that is necessary for the alignment unless the plates of the gang condenser have been bent out of shape. In case of bent plates, set the signal generator and the receiver to 600 KC and bend the plates into the position for maximum output.

VARIABLE CONDENSERS

P4310	Gang condenser
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VARIABLE RESISTORS

P4309	Volume control and switch
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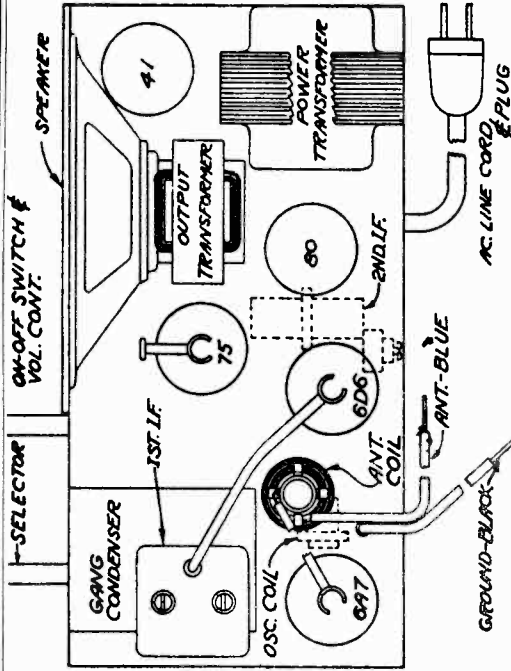


BATTERY OPERATION

This receiver is designed to operate on a single unit General 60B-6L or Burgess 6TA-60. The battery will fit inside the cabinet in back of the chassis.

MODELS 5F, 5F-PH

ADMIRAL CORPORATION



CORRECT ALIGNMENT PROCEDURE
The intermediate frequency (I.F.) stage should be aligned properly as the first step.

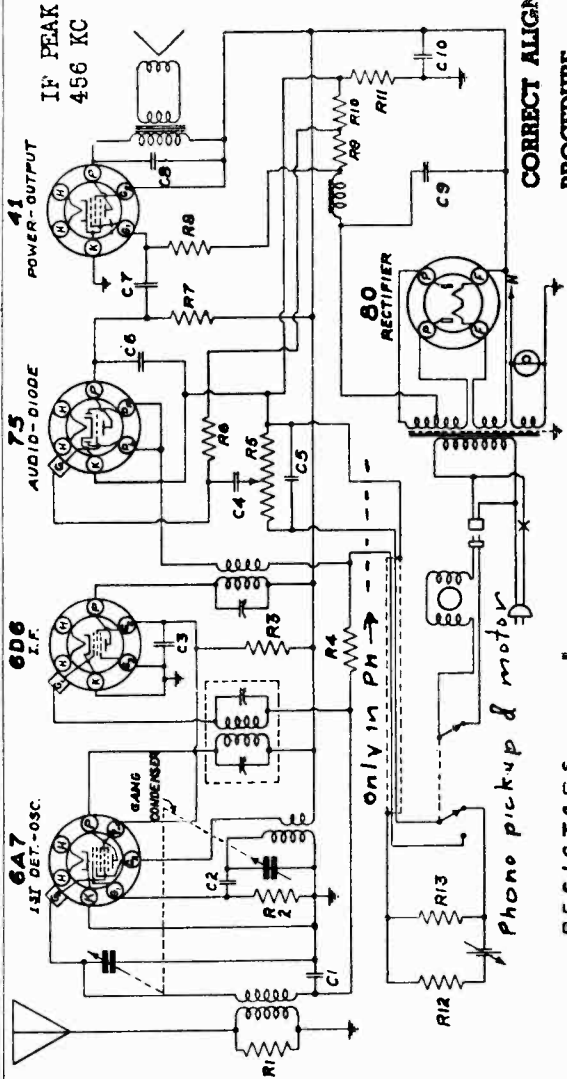
After the I.F. transformers have been properly adjusted and peaked, the Broadcast Band alignment should be the next procedure

I.F. ALIGNMENT

Adjust the test oscillator to 456 KC and connect the output to the grid of the first detector tube (6A7) through a .05 or .1 mfd. condenser. The ground on the test oscillator can be connected to the chassis ground. Align all three I.F. trimmers to peak or maximum reading on the output meter.

BROADCAST BAND ALIGNMENT

Adjust the oscillator to 1730 KC and connect the output to the antenna lead, through a .0002 mfd. mica condenser. Set the gang condenser to minimum capacity and adjust the gang condenser trimmer (oscillator) to receive this signal. After this has been carefully done, the next step is to set the generator to 1400 KC and after tuning in the signal adjust the antenna trimmer to peak. This is all that is necessary for the alignment unless the plates of the gang condenser have been bent out of shape. In case of bent plates, set the test oscillator and the receiver to 600 KC and bend the plates into the position for maximum output.



RESISTORS		CAPACITORS	
NO.	OHMS	NO.	TYPE
R1	15,000	R6	MFD. .00025
R2	50,000	R7	MICA .01
R3	15,000	R8	MICA .01
R4	2,000,000	R9	MICA .01
R5	500,000	R10	MICA .01
R6	2,000,000	R11	MICA .01
R7	2,000,000	R12	MICA .01

TRANSFORMERS AND COILS

- P2484 1st I.F. Transformer
- P2393 Antenna Coil
- P2485 2nd I.F. Transformer
- P2488 Oscillator Coil
- P2453 Power Transformer

MISCELLANEOUS

- P2450 Volume Control and Switch
- P506 6A7 Tube Socket
- P536 6D6 Tube Socket
- P521 75 Tube Socket
- P1277 41 Tube Socket
- P492 80 Tube Socket
- P531 Tube Shield Cap
- P530 Tube Shield
- P533 Tube Shield Base
- P929 AC Line Cord
- G5648 Dial and Drive Assembly
- P1503 Pilot Light Socket
- P1504 Pilot Light
- P2454 Speaker and Output Transformer
- P2459 Walnut Knobs
- P2460 Ivory Knobs

PAPER CONDENSERS

- P164 .01 Mfd. 400 V.
- P142 .10 Mfd. 200 V.
- P276 .10 Mfd. 400 V.

CARBON RESISTORS

- P258 15,000 Ohm 1/4 Watt
- P2186 2,000,000 Ohm 1/4 Watt
- P2340 40 Ohm 1/4 Watt ±10%
- P1880 225 Ohm 1/4 Watt ±10%
- P2488 170 Ohm 1/4 Watt ±10%
- P137 500,000 Ohm 1/4 Watt
- P1220 200,000 Ohm 1/4 Watt
- P1114 2,000,000 Ohm 1/4 Watt
- P417 500,000 Ohm 1/4 Watt

MOULDED MICA CONDENSERS

- P480 .0001 Mfd. Mica
- P817 .00025 Mfd. Mica

ELECTROLYTIC CONDENSERS

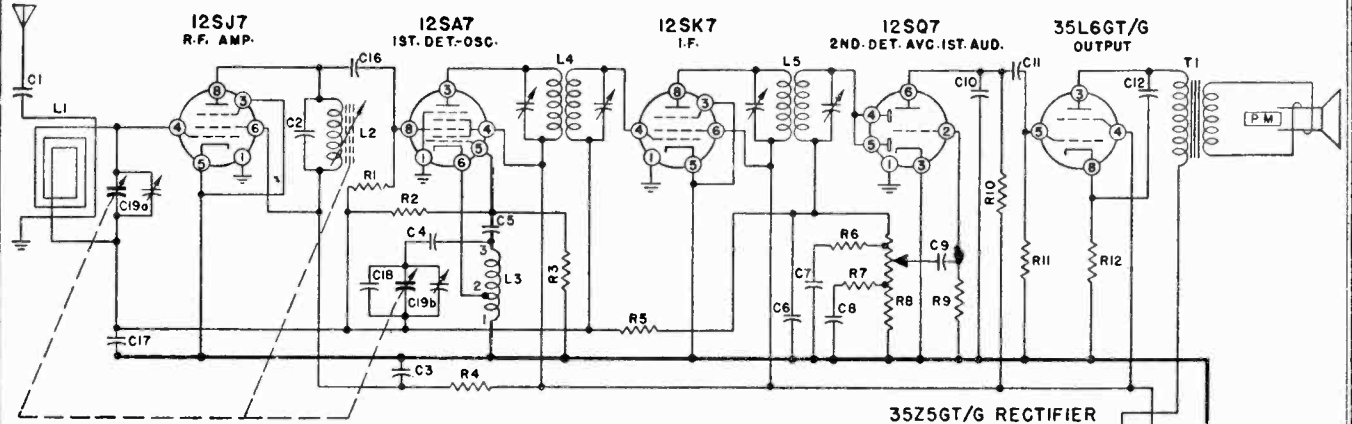
- P2458 8 Mfd. 300 W. V.

ADJUSTABLE CONDENSERS

- P2448 Gang Condenser

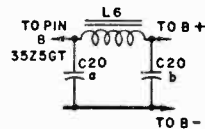
Reduce to 9%

ADMIRAL CORPORATION

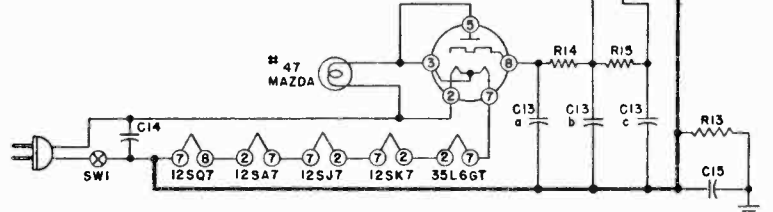


ISSUE B 1946
SUPERSEDES ISSUE A

ALTERNATE FILTER CIRCUIT
USED ON EARLIER MODEL.



CHASSIS GROUND \perp
I.F. 455 K.C.

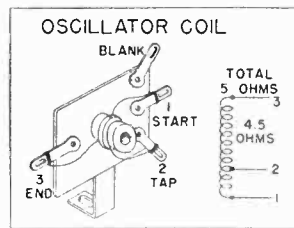


NOTE: 1. In later production R14 and C13a are disconnected from pin #8 of the 35Z5 and a 33-ohm 1W resistor (R16) is connected from pin #8 to the junction of R14 and C13a. 2. The jumper between pins 4 and 5 on the 12SQ7 is removed and one pin is connected to the secondary of the second I.F. (L5) and the other pin is connected directly to the junction point of R5 and the secondary of the 1st I.F. (L4).

Symbol	Capacity	Type
C-1.....	.005 mfd	.....600 V.
C-2.....	785.	mmfd .....Mica
C-3.....	.05 mfd	.....400 V.
C-4.....	.02 mfd	.....400 V.
C-5.....	50.	mmfd .....Mica
C-6.....	250.	mmfd .....Mica
C-7.....	.01 mfd	.....400 V.
C-8.....	.01 mfd	.....400 V.
C-9.....	.01 mfd	.....400 V.
C-10.....	500.	mmfd .....Mica
C-11.....	.01 mfd	.....400 V.
C-12.....	.02 mfd	.....400 V.
C-13a.....	30. mfd	Elect....150 V.
C-13b.....	30. mfd	Elect....150 V.
C-13c.....	20. mfd	Elect....150 V.
C-14.....	.05 mfd	.....400 V.
C-15.....	2 mfd	.....400 V.
C-16.....	250.	mmfd .....Mica
C-17.....	.1 mfd	.....200 V.
C-18.....	20. mmfd	.....Mica
C-19a.....	420. mmfd	(max.)..Var.
C-19b.....	180. mmfd	(max.)..Var.
C-20a.....	30. mfd	Elect....150 V.
C-20b.....	50. mfd	Elect....150 V.

Symbol	Resistance	Type
R-1.....	10,000 ohms	.....C1/2W
R-2.....	10 meg ohm	.....C1/2W
R-3.....	22,000 ohms	.....C1/2W
R-4.....	100 ohms	.....C1/2W
R-5.....	1 meg ohm	.....C1/2W
R-6.....	47,000 ohms	.....C1/2W
R-7.....	27,000 ohms	.....C1/2W
R-8.....	500,000 ohm	Volume Control, (Tapped at 1/3 and 2/3 of Rotation which is 100,000 ohms from the start, due to the taper).
R-9.....	5 meg ohm	.....C1/2W
R-10.....	270,000 ohms	.....C1/2W
R-11.....	470,000 ohms	.....C1/2W
R-12.....	150 ohms	.....C1/2W
R-13.....	150,000 ohms	.....C1/2W
R-14.....	150 ohms	.....C1W
R-15.....	1,000 ohms	.....C1W
R-16.....	33 ohms	.....C1W

Symbol	Description
L-1.....	(Sec. 2.3 ohms).....Loop
L-2.....	(2.5 ohms).....R. F. Coil
L-3.....	.....Osc. Coil
L-4.....	.....1st I. F. Trans.
L-5.....	.....2nd I. F. Trans.
L-6.....	(325 ohms).....Choke, Filter

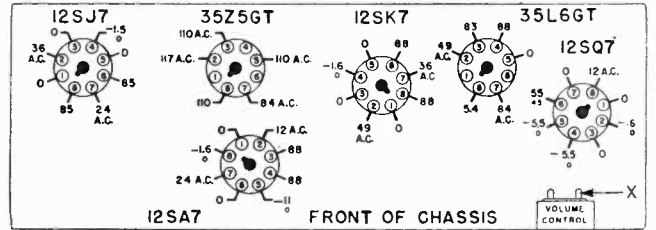


SPECIFICATIONS

POWER SUPPLY:—
110-120 Volts A.C. or D.C.
Frequency 50-60 cycles.
Power Consumption—30 watts.

CIRCUIT:—
Chassis 6A1 A.C.—D.C. 6 Tube Superheterodyne, with R.F. stage; Single tuning range, 540 Kc. to 1630 Kc., covering standard broadcast band; built-in AEROSCOPE loop antenna, with provision for connecting an external antenna.

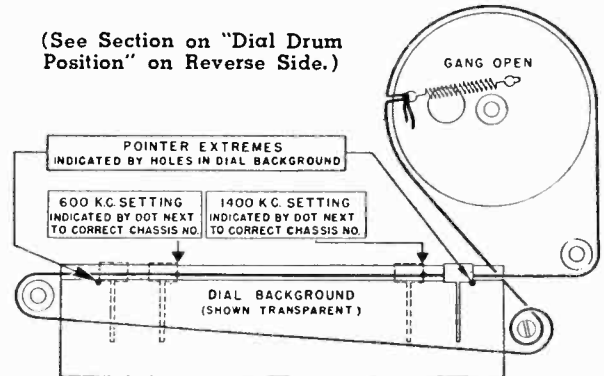
VOLTAGE DATA:—



Bottom View of Chassis, Showing Voltages.

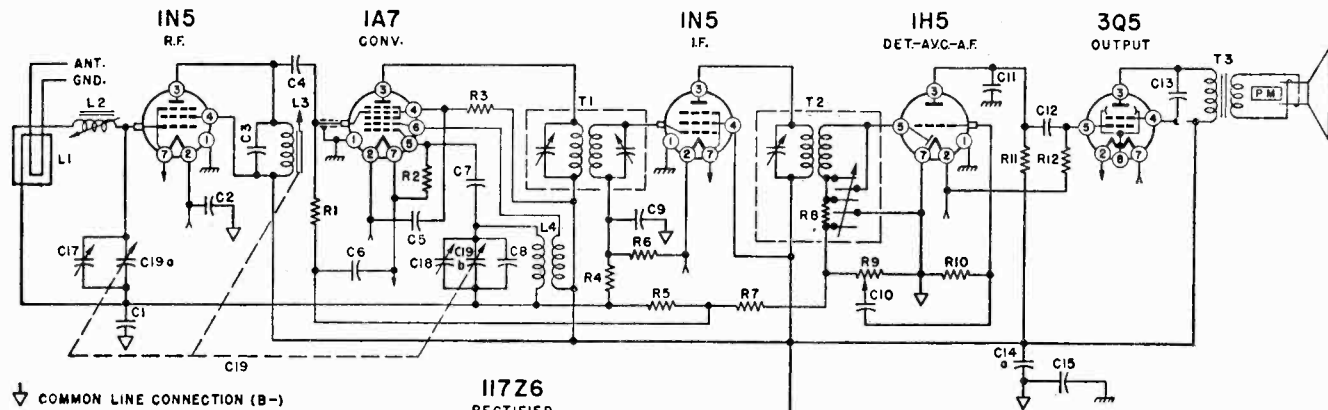
- All readings made between Tube Socket Terminals and Switch Lug on volume control (Point "X" on drawing).
- Measured on a 117 Volt A.C. line.
- Volume control full on.
- Dial tuned to low frequency end, no signal.
- Voltages indicated obtained on Vacuum Tube voltmeter.
- A same voltage reading is shown made with a 1000 ohm-per-volt meter when use of this instrument would result in appreciably lower readings.

POINTER SETTINGS AND DIAL CORD STRINGING

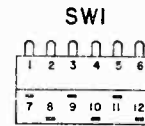
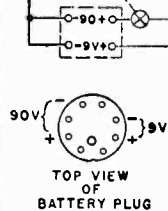
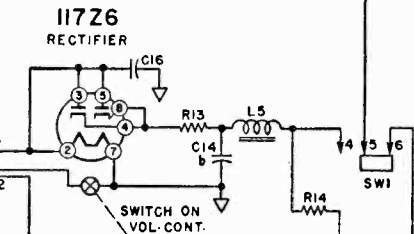
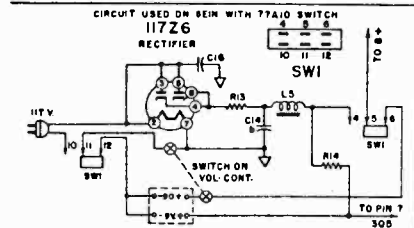
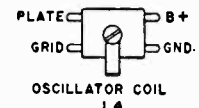


MODELS 6E1, 6E1N

ADMIRAL CORPORATION



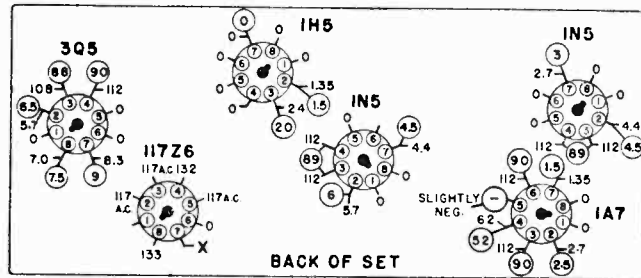
▽ COMMON LINE CONNECTION (B-)
 ⚡ CHASSIS GROUND



NOTES: I.F. = 455 K.C.
 Power change switch (SW1) shown in battery operation position. In earlier models (L2) was fixed.

ISSUE A 1946

VOLTAGE CHART



VOLTAGE DATA

1. Voltage readings circled (O) are for Battery Operation.
2. All reading made between Tube Socket Terminals and Terminal No. 7 on the 117Z6 (Point (X) on Voltage Chart).
3. A.C. Voltages measured on a 117 Volt A.C. line.
4. Battery Voltages measured with a fresh battery.
5. Dial turned to low frequency end, no signal.
6. All Voltages measured with a 1000 ohm per volt meter.

CONDENSERS

Symbol	Description	Part No.
C1	.05 Mfd. 200 Volt Paper	64B1-32
C2	.25 Mfd. 200 Volt Paper	64B1-28
C3	.00042 Mfd. Mica	65B1-9
C4-C11	.00025 Mfd. Mica	65B5-22
C5, C6, C9, C10, C12	.01 Mfd. 400 Volt Paper	64B1-25
C7	.00005 Mfd. Mica	65B5-11
C8	.000015 Mfd. Mica	65B5-3
C13	.002 Mfd. 600 Volt Paper	64B1-9
C14a	50 Mfd. 150 Volt	Elect. 67C7-42
C14b	30 Mfd. 150 Volt	
C14c	100 Mfd. 25 Volt	
C15	.2 Mfd. 400 Volt Paper	64A2-1
C16	.05 Mfd. 400 Volt Paper	64B1-22
C17	Antenna Trimmer	66A12-5
C18	Oscillator Trimmer (Part of Gang)	
C19 { C19a, C19b }	Condenser Gang	68B4

RESISTORS

R1	100,000 Ohms 1/2 Watt Carbon	60B8-104
R2	220,000 Ohms 1/2 Watt Carbon	60B8-224
R3	47,000 Ohms 1/2 Watt Carbon	60B8-473
R4, R5	4.7 Megohms 1/2 Watt Carbon	60B2-475

RESISTORS

Symbol	Description	Part No.
R6	4.7 Megohms 1/2 Watt Carbon	60B2-475
R7	3.3 Megohms 1/2 Watt Carbon	60B2-335
R8	50,000 Ohms 1/2 Watt Carbon	60B8-503
R9	1 Megohm Volume Control	75B1-100
R10	15 Megohms 1/2 Watt Carbon	60B2-156
R11	1 Megohm 1/2 Watt Carbon	60B2-105
R12	2.2 Megohms 1/2 Watt Carbon	60B2-225
R13	22 Ohms Wire Wound 1/2 watt	61A2-2
R14	2,450 Ohms Wire Wound 5 watt	61A3-5
R16	1,500 Ohms 1/2 Watt Carbon	60B8-152
R17	560 Ohms 1/2 Watt Carbon	60B8-561
R18	220 Ohms 1/2 Watt Carbon	60B8-221
R19	120 Ohms 1/2 Watt Carbon	60B8-121

COILS & TRANSFORMERS

L2	{ Coil, Loop Loading, (fixed) (early) Coil, Loop Loading, (variable) (late)	AA114
L3	{ Iron Slug for plate coil Coil, Plate	71B1-3
L4	Oscillator Coil	70A1-30
L5	Choke Filter	69A7
T1	1st I.F. Transformer	74A5
T2	2nd I.F. Transformer	72B9-2
T3	Transformer, Output	

COILS & TRANSFORMERS

Symbol	Description	Part No.
T2	2nd I.F. Transformer	72B10-2
T3	Transformer, Output (When ordering furnish all numbers appearing on both the speaker and the transformer.)	
SW1	{ Switch, Power Change (6E1) { Switch, Power Change (6E1N)	77A6 77A10

MISCELLANEOUS

Dial background	21A18-2
Dial Cord, 12"	50A1-3
Dial Cord Tension Spring	19A1-2
Dial Scale, Glass	23C11-1
Escutcheon	23C11-2
Knob, Tuning	33A14-4
Knob, Volume	33A14-3
Plug, Battery (9 prong)	88A3-3
Pointer, Tan Tenite	25A14-2
Rubber liner for Dial Scale	23C11-3
Speaker Grill	36A2
Speaker & Output Transformer	78B8
Tube Shields	87A8

ADMIRAL CORPORATION

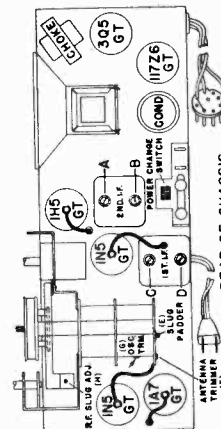
ALIGNMENT PROCEDURE

1. Be sure both set and signal generator are thoroughly warmed up before starting alignment.
2. Make alignment using a battery whenever possible.
3. Disconnect Loop Antenna leads from clips on set and remove chassis from cabinet.
4. Connect a 50,000 ohm carbon resistor across the two clips from which the Loop Antenna was removed.
5. Connect Output Meter across the Voice Coil.
6. Connect a fresh battery to the set.
7. Turn receiver Volume Control full on.

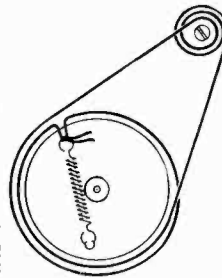
DUMMY ANTENNA USED IN SERIES WITH SIGNAL GENERATOR	CONNECT HIGH SIDE SIGNAL GENERATOR TO	SIGNAL GENERATOR FREQUENCY	RECEIVER GANG SETTING	TRIMMER DESIGNATION AND DESCRIPTION	TYPE OF ADJUSTMENT
(1) .00025 Mfd. when using A.C. when using battery	Grid Cap 1A7	455 K.C.	Any point where it does not affect 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	Grid Cap 1N5	1620 K.C.	Tuning Gang Wide Open	Oscillator Trimmer (G)	Maximum Deflection
(3) .00025 Mfd. when using A.C. 1 Mfd. when using Battery	Grid Cap 1N5	1400 K.C.	Tune in Generator Signal	R.F. Slug (H)	Maximum Deflection
(4)	Replace Set in Cabinet				
(5) .00025 Mfd.	Antenna and Ground Leads	1400 K.C.	Tune in Generator Signal	Antenna Trimmer (F)	Maximum Deflection
(6) Disregard the next two steps if the set being aligned is one of the earlier models with a fixed loop loading coil (L2)					
(7) .00025 Mfd.	Antenna and Ground Leads	600 K.C.	Tune in Generator Signal	Loop Loading Coil Slug (E)	Maximum Deflection
(8) .00025 Mfd.	Antenna and Ground Leads	1400 K.C.	Tune in Generator Signal	Reset Antenna Trimmer (F)	Maximum Deflection

Seal adjusting screw on the loop loading coil with any quick drying cement.

TUBE AND TRIMMER LAYOUT



DIAL CORD STRINGING



CIRCUIT CHANGE TO ELIMINATE HUM IN PORTABLE 6E1 CHASSIS

Early production 6E1 chassis sometimes have a rough modulation hum whenever the user's hand is near to or touches certain parts of the cabinet. This happens only when the set is operated on AC power lines.

In most cases this hum can be eliminated or greatly reduced by reversing the power cord plug at the electric outlet. However, we have reports that some sets in some locations still hum excessively even though the line cord plug is reversed.

As soon as this condition was discovered, we changed the circuit slightly on our production line. This change completely eliminates the difficulty. The change is as follows:

The low ends of the loop aerial and variable condenser are disconnected from the AVC circuit and connected to the chassis. A .00025 mica condenser is connected in series with the grid of the 1N5 R.F. tube, and the grid is connected to the AVC circuit through a one megohm resistor.

If any sets are giving this trouble in the field, the circuit change can be easily made without removing the chassis by mounting a small terminal strip for the new parts on the back of the plate which is on the gang condenser. The procedure is as follows:

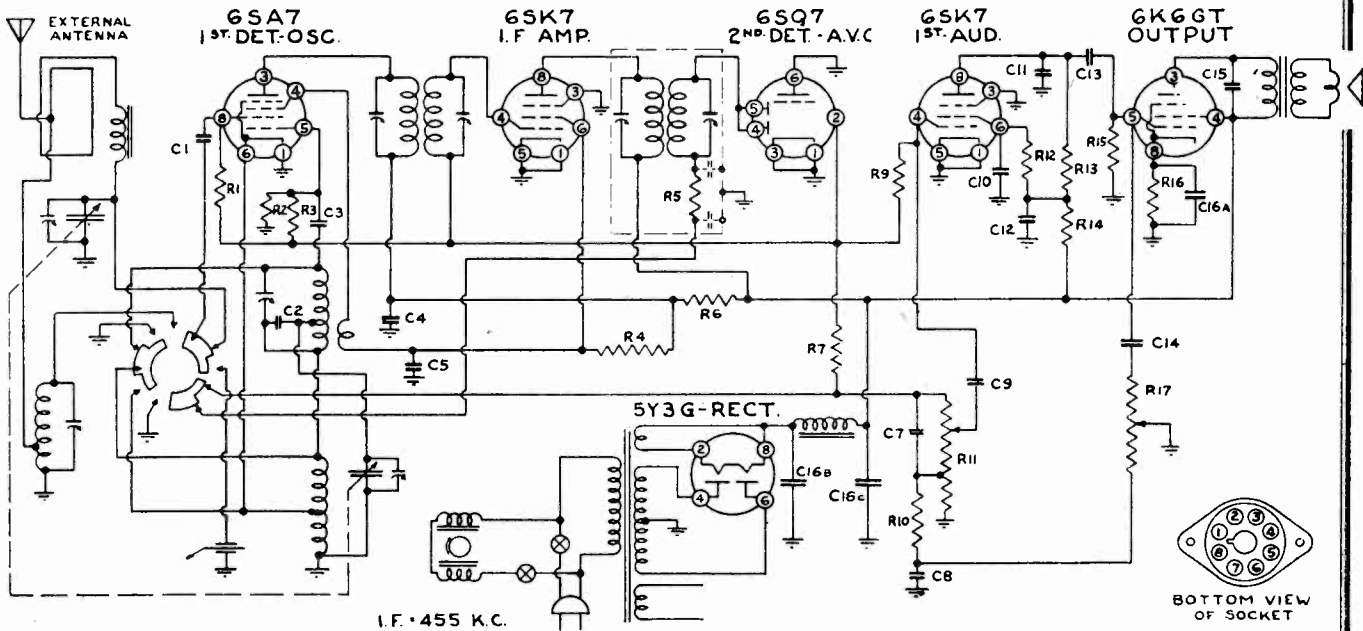
1. Remove the 1A7GT tube.
2. Remove the left hand screw that holds the mounting plate to the gang condenser. Install the terminal strip with this screw.
3. Mount the condenser (.00025 mfd.) and resistor (1 meg.) on strip. Connect them in series.
4. Remove the green grid lead of the 1N5GT tube from the trimmer condenser and connect it to the junction of the .00025 mfd. condenser and the 1 megohm resistor.
5. Connect the other end of the .00025 mfd. condenser to the trimmer terminal from which the green lead was removed.
6. Disconnect the orange wire that now goes to the lug on the tuning condenser and connect it to the open end of the 1 meg. resistor.
7. Connect a short wire from the tuning condenser stator to chassis.

REPLACING R.F. TUNING SLUG

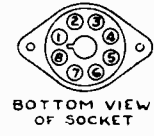
If the R.F. Tuning Slug has to be changed use the following procedure. Set the gang condenser to the point where the plates are fully meshed. Screw the slug adjusting screw about halfway down. Place the slug in the coil in such a position that the top of the slug is flush with the top of the coil. Solder the slug wire to the adjusting screw. Be sure that the position of the slug does not change during the soldering and that the slug wire is straight. Proceed to realign the set as shown in the chart.

MODEL M6

ADMIRAL CORPORATION



I.F. 455 K.C.



RESISTORS

No.	Ohms	Watts	No.	Ohms	Watts
R1	2,000,000	1/2	R10	20,000	1/2
R2	20,000	1/2	R11	500,000	V.C.
R3	10,000,000	1/2	R12	1,000,000	1/2
R4	15,000	1	R13	200,000	1/2
R5	70,000	1/2	R14	50,000	1/2
R6	100,000	1/2	R15	500,000	1/2
R7	1,000,000	1/2	R16	600,000	1/2
R8	1,000,000	1/2	R17	500,000	T.C.
R9	1,000,000	1/2			

CONDENSERS

No.	Capacity (Mfd.)	Volts	No.	Capacity (Mfd.)	Volts
C1	.00025	Mica	C10	.05	400
C2	.00025-5%	Mica	C11	.00025	Mica
C3	.00005	Mica	C12	.1	400
C4	.05	400	C13	.01	400
C5	.05	400	C14	.002	400
C6	.05	200	C15	.005	400
C7	.00025	Mica	C16a	20.	25
C8	.02	200	C16b	20.	350
C9	.01	400	C16c	20.	350

R8 and C6 were used only on early models.

Speaker (Part No. P5078) 10" Dyn.

D.C. voice coil resistance.....3.7 ohms
Field coil (hot)1000 ohms

B.C. and S.W. Oscillator Coil (Part No. P4804)

Looking at the mounting strip end in a clockwise direction starting at the chassis, the terminals are: No. 1, S.W. pri.; No. 2, B.C. pri.; other end, No. 3, B.C. tap; No. 4, S.W. pri.; No. 5, S.W. sec.; No. 6, S.W. sec. tap; No. 7, S.W. and B.C. sec:

S.W. Primary—No. 4 and No. 1—
Resistance2 ohm

S.W. Secondary—No. 7 and No. 5—
Resistance11 ohm

B.C. Primary—No. 2 and No. 3—
Resistance3 ohm

B.C. Secondary—No. 3 and No. 7—
Resistance 3.7 ohms

First L.F. Transformer (Part No. P-4108)

Primary—Blue, plate; red, B+
Resistance18.2 ohms

Secondary—White, grid; black, AVC
Resistance15.1 ohms

Second L.F. Transformer (Part No. P-4858)

Primary—Blue, plate; red, B+
Resistance20.8 ohms

Secondary—White, diode; other end inside can
Resistance17.4 ohms

VOLTAGE CHART

All voltages measured with a 20,000 ohm per volt meter on the 300 volt scale. Line voltage 117 volts A.C. Volume control maximum and no signal tuned in. Power consumption 70 watts.

6SA7 TUBE

Plate (3) to ground..... 270
Screen (4) to ground..... 105

6SK7 (L.F.) TUBE

Plate (8) to ground..... 270
Screen (6) to ground..... 105

6SK7 (A.F.) TUBE

Plate (8) to ground..... 64
Screen (6) to ground..... 23

6K6GT TUBE

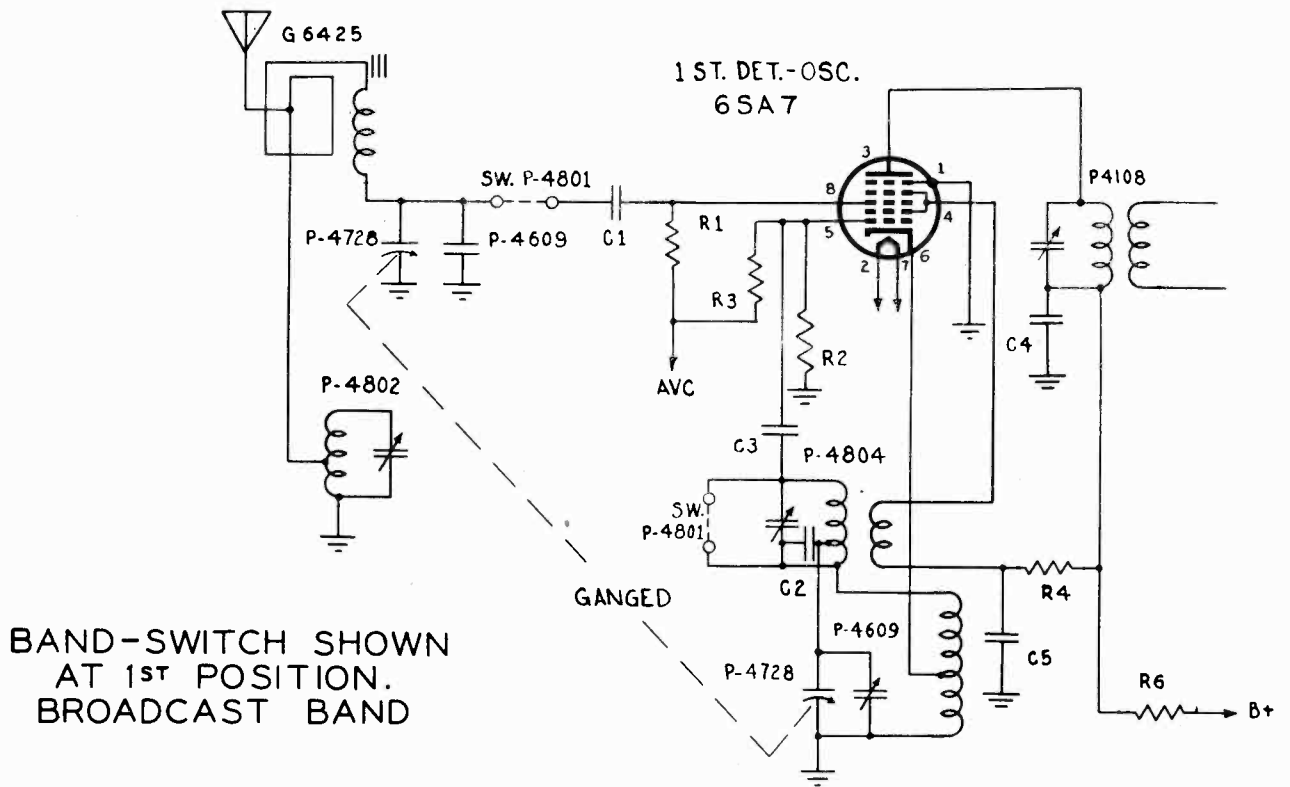
Plate (3) to ground..... 270
Screen (4) to ground..... 245
Cathode (8) to ground..... 19

6X5GT TUBE

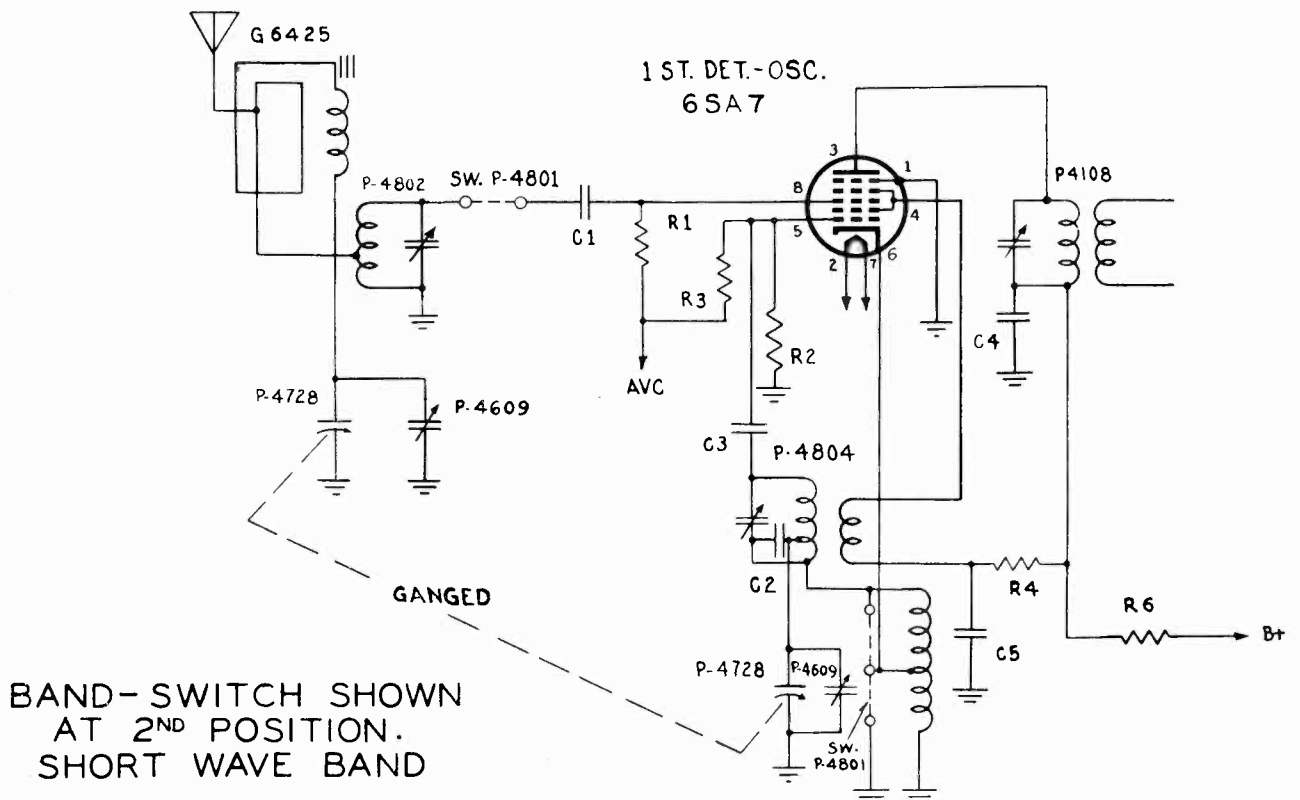
Filament (8) to ground..... 340

ADMIRAL CORPORATION

MODEL M6



BAND-SWITCH SHOWN
AT 1ST POSITION.
BROADCAST BAND



BAND-SWITCH SHOWN
AT 2ND POSITION.
SHORT WAVE BAND

MODEL M6

ADMIRAL CORPORATION

ALIGNMENT DATA

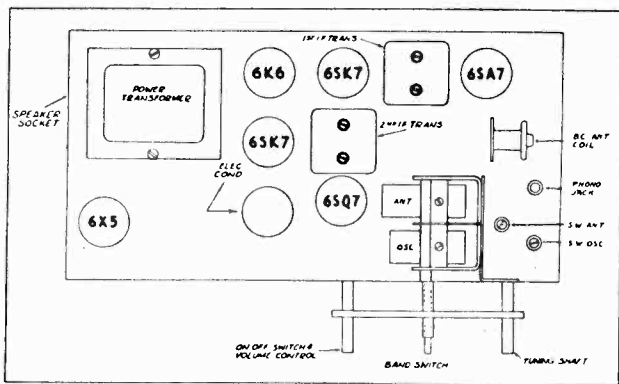


Fig. 2—Top View of Chassis

made with the volume control in the maximum position, to prevent the AVC from operating and giving false readings.

I.F. ALIGNMENT

Adjust the signal generator to 455 KC and connect the output to the grid of the first detector tube (6SA7) through a .05 or .1 mfd. condenser. Align all I. F. trimmers to peak or maximum reading on the output meter.

B.C. AND S.W. BAND ALIGNMENT

Disconnect loop leads and set the band switch to the broadcast position. Adjust signal generator to 1630 K.C. and connect thru a .0002 mfd. mica condenser to the green loop lead. Set the gang condenser to minimum capacity and adjust the B.C. oscillator trimmer (see fig. 2) to receive this signal. Set the band switch to the short wave position, adjust the signal generator to exactly 9,500 K.C. and connect thru a 400 ohm resistor to the green loop lead. Set the dial pointer at 9.5 megacycles and carefully peak S.W. oscillator trimmer and then peak S.W. antenna trimmer. Re-install chassis in cabinet and connect loop leads. Set the band switch to the broadcast position. Adjust the signal generator to 1400 K.C. and connect the output to a shielded loop radiator and place this loop about two feet from the loop antenna. If no loop radiator is available the output of the signal generator should be connected to the green loop lead thru a .0002 mfd. mica condenser. Tune signal and carefully peak the B.C. antenna trimmer.

All of the adjustments have been very carefully set with signal generators at the factory and require no further adjustment, unless it becomes necessary to replace a coil or transformer, or if the adjustments have been tampered with in the field. Under no circumstances attempt any adjustments without first making certain that adjustment is necessary and only after voltages, tubes and condensers have been checked and found to be normal.

The alignment of this receiver requires the use of a signal generator that will cover the frequencies of 455, 1400, 1630 and 9500 kc., and an output meter to be connected across the primary or secondary of the output transformer. All alignments should be

PAPER CONDENSERS

P904	.002 mfd.	600 volt.....
P1322	.005 mfd.	600 volt.....
P164	.01 mfd.	400 volt.....
P393	.02 mfd.	200 volt.....
P148	.05 mfd.	200 volt.....
P334	.05 mfd.	400 volt.....
P276	.1 mfd.	400 volt.....

MICA CONDENSERS

P1382	.00005 mfd.	.....
P817	.00025 mfd.	.....
P4806	.00025 mfd.	5%.....

ELECTROLYTIC CONDENSERS

P4130	{ 20 mfd. 25 volt } { 20 mfd. 350 volt } { 20 mfd. 350 volt }
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VARIABLE CONDENSERS

P4728	Gang condenser
P4609	Trimmer condenser

RESISTORS

P3800	100 ohm	½ watt.....
P3821	600 ohm	½ watt.....
P4807	15,000 ohm	1 watt.....
P3844	20,000 ohm	½ watt.....
P3853	50,000 ohm	½ watt.....
P3964	200,000 ohm	½ watt.....

P3876	500,000 ohm	½ watt.....
P3882	1,000,000 ohm	½ watt.....
P3883	2,000,000 ohm	½ watt.....
P3889	10,000,000 ohm	½ watt.....

VARIABLE RESISTORS

P4089	Volume control and switch	.....
P4729	Tone control	.....
RC4010	Record changer mounting spring	.....
RC7017	Record changer mounting screw	.....
RC6008	Needle	.....
RC3020	Center post	.....
RC50	Record changer (60 cycle)	.....
RC51	Record changer (50 cycle)	.....
P3948	Chassis mounting screw	.....

TRANSFORMERS AND COILS

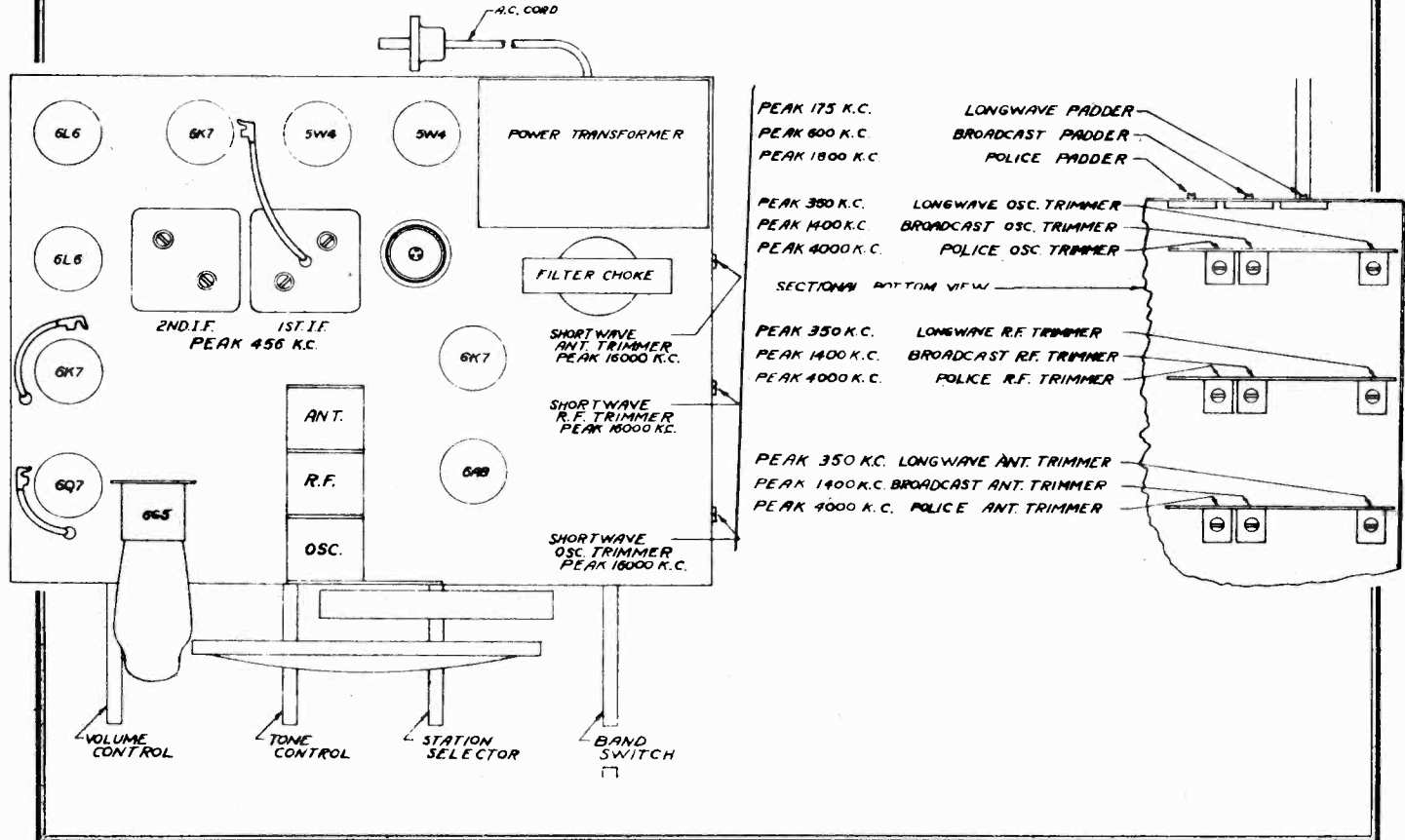
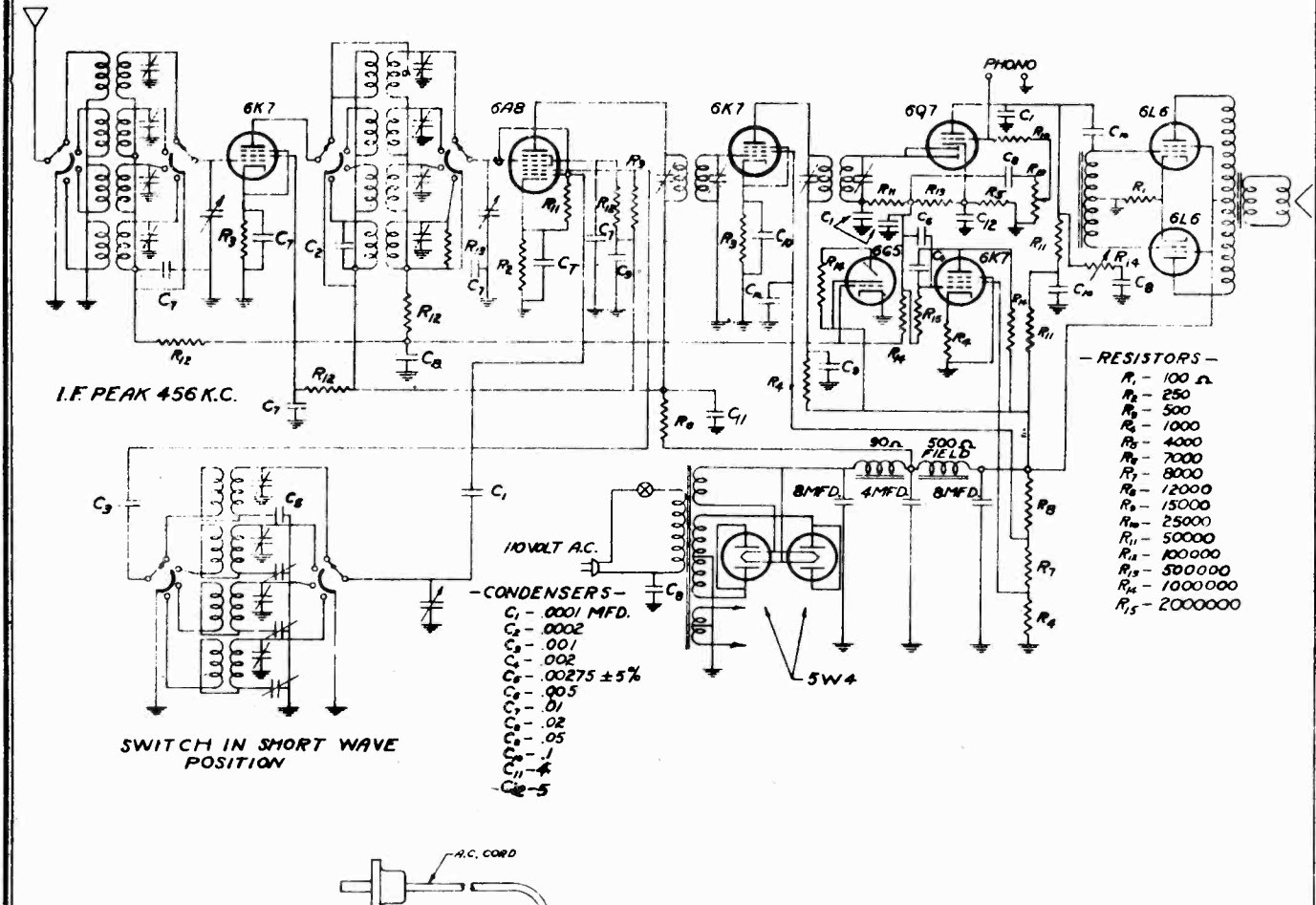
G6425	B.C. antenna coil	.....
P4802	S.W. antenna coil	.....
P4804	B.C. and S.W. oscillator coil	.....
P4108	1st I.F. transformer	.....
P4858	2nd I.F. transformer	.....
P3926	Filter choke	.....
P4512	Power transformer (60 cycle)	.....
P4513	Power transformer (50 cycle)	.....

MISCELLANEOUS

P3005	Tube socket	.....
P945	Speaker socket	.....
P4138	Electrolytic mounting base	.....
P4404	Phono jack	.....
P929	Line cord	.....
P3557	Line cord clamp	.....
P4800	Dial background	.....
	Pointer; order by name and model number	.....
P4179	Drive shaft	.....
P1399	Horseshoe washer (for drive shaft)	.....
P1587	Spring washer (for drive shaft)	.....
P2925	Takeup spring	.....
	Knobs; order by name and model number	.....
P4205	Band switch lever	.....
P4197	Pilot light socket	.....
P1713	Pilot light bulb	.....
P4248	Pilot light reflector	.....
P4801	Band switch	.....
P4805	10" PM speaker and output transformer
P4784	Phono cable
P4542	Phono motor AC cord

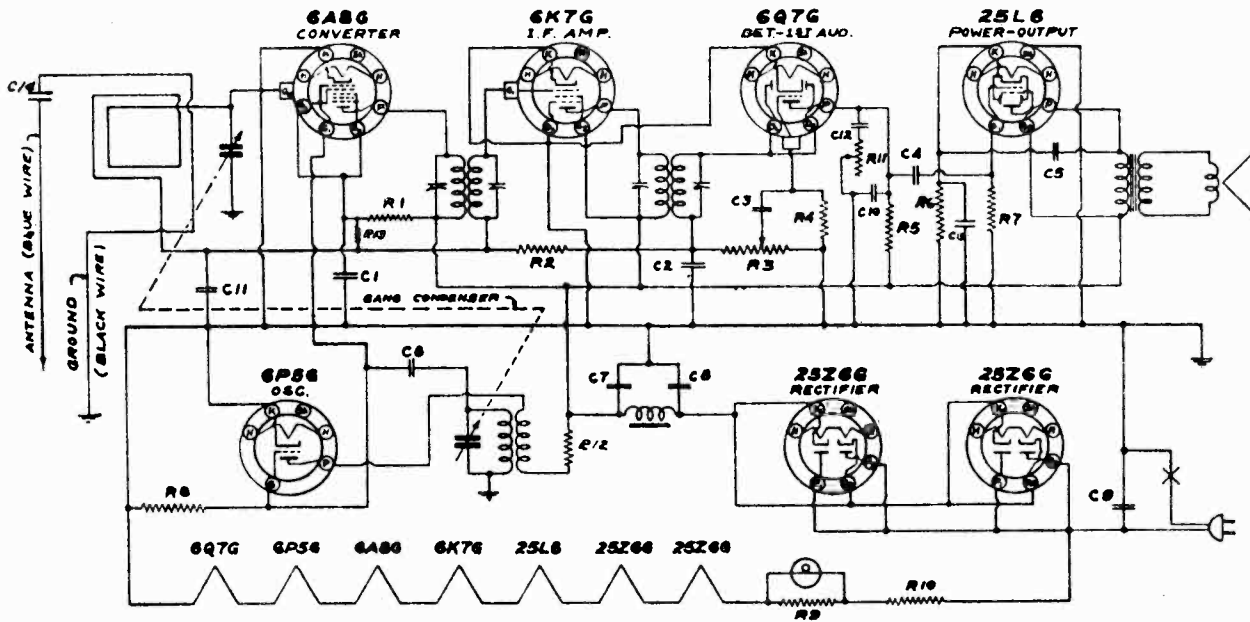
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MODEL AM6



MODEL 7K

ADMIRAL CORPORATION



CAPACITORS

NO.	MEGA	VOLTS	NO.	MEGA	VOLTS
C1	.01	400	C9	.05	400
C2	.00025	400	C10	.0005	MICA
C3	.01	400	C11	.05	200
C4	.01	400	C12	.005	600
C5	.005	600	C13	20.0	25
C6	.00005	MICA	C14	.001	400
C7	20.0	150			

RESISTORS

NO.	OHMS	WATTS	NO.	OHMS	WATTS
R1	1/2,000	1/2	R7	1/2 MEG	1/2
R2	2 MEG	1/2	R8	50,000	1/2
R3	1/2 MEG VOL. CONT.		R9	50	7
R4	5 MEG.	1/2	R10	42	7
R5	250,000.	1/2	R11	500,000	TONE C.
R6	150	1/2	R12	1000	1/2
			R13	15 MEG	1/2

I. F. - 455 K.C.

SCHEMATIC DIAGRAM
MODEL 7K

SERVICE INFORMATION

Speaker (Part No. P3284)

Field resistance450 ohms
D.C. voice coil resistance 4.6 ohms
Voice coil impedance at 400 cycles 5 ohms

Oscillator Coil (Part No. P3682)

Looking at the connection end (with dot) in a clockwise direction starting at the chassis the terminals are No. 1, grid;
Primary—No. 2 and No. 3—Resistance 1.5 ohms.
Secondary—No. 4 and No. 1—Resistance 4.5 ohms.

First I.F. Transformer (Part No. P3282)

Primary—Blue white, plate; red white B+—Resistance 24.2 ohms.
Secondary—White, grid; black white, AVC—Resistance 23.6 ohms.

Second I.F. Transformer (Part No. P3283)

Primary—Blue white, plate; red white, B+—Resistance 11.9 ohms.
Secondary—White, grid; black white, AVC—Resistance 16.9 ohms.

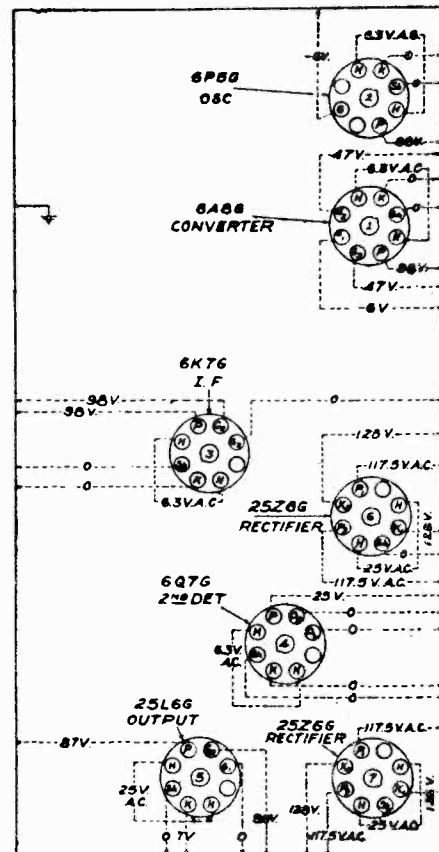
Electrolytic Condenser (Part No. P3531)

Red, 20 mfd., 150 volt; green, 20 mfd., 150 volt; yellow, 20 mfd., 25 volt; black, negative for all three sections.

Loop Antenna

Since the loop antenna acts also as the antenna coil the set will not operate with the loop antenna disconnected.

VOLTAGES AT SOCKETS



Bottom View of Chassis

ADMIRAL CORPORATION

MODEL 7K

ALIGNMENT PROCEDURE

- Volume control—Maximum all adjustments.
- Connect radio chassis to ground post of signal generator with a short heavy lead.
- Connect dummy antenna value in series with generator output lead.
- Connect output meter across primary of output transformer.
- 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 mfd., 200 mmf.

BAND	SIGNAL GENERATOR Frequency Setting	Dummy Antenna	Connection to Radio	Variable Condenser Setting	Trimmers Adjusted (In Order Shown)	Trimmer Function	Adjustment
I. F.	455 KC.	.1 MFD.	Grid of 6K7G I.F. tube	Rotor full open (Plates out of mesh)	Two trimmers on top (See Fig. 2)	Output I.F.	Adjust to maximum output
	455 KC.	.1 MFD.	Grid of 6A8G tube	Rotor full open (Plates out of mesh)	Two trimmers on top (See Fig. 2)	Input I.F.	Adjust to maximum output
BROAD-CAST	1730 KC.	200 mmf.	Antenna lead	Rotor full open (Plates out of mesh)	Trimmer—Top of Left section of gang (See Fig. 2)	Oscillator	Adjust to maximum output
	1400 KC.	200 mmf.	Antenna lead	Set dial at 1400 KC.	Trimmer—Top of Right section of gang (See Fig. 2)	Antenna	Adjust to maximum output

This is all that is necessary for the alignment unless the plates of the gang have been bent out of shape. In case of bent plates, set the signal generator and receiver to 600 KC and bend the plates into the position for maximum output. Attenuate the signal from the signal generator to prevent the leveling off-action of the AVC. After each band is completed, repeat the procedure as a final check.

FREQUENCY RANGE

540 to 1630 KC

Power output 1 watt undistorted—1.7 watts maximum.

Intermediate Frequency 455 KC.

Power Consumption—50 watts.

REPLACEMENT PARTS LIST

PAPER CONDENSERS

- P3203 C14 .001 mfd. 600 volt.....
- P1322 C5, C12 .005 mfd. 600 volt.....
- P334 C9 .05 mfd. 400 volt.....
- P148 C11 .05 mfd. 200 volt.....
- P164 C1, C3, C4 .01 mfd. 400 volt.....

MICA CONDENSERS

- P817 C2 .00025 mfd.
- P1382 C6 .00005 mfd.
- P336 C10 .0005 mfd.

ELECTROLYTIC CONDENSERS

- P3531 C7, C8, & C13 { 20 mfd. 150 volt.....
- { 20 mfd. 150 volt.....
- { 20 mfd. 25 volt.....

VARIABLE CONDENSERS

- P3522 Gang Condenser and Tuner.....

RESISTORS

- P3444 R9 30 ohm 7 watt.....
- P3277 R10 42 ohm 7 watt.....
- P3803 R6 150 ohm ¼ watt 10%.....
- P3828 R12 1,000 ohm ¼ watt.....
- P3841 R1 10,000 ohm ¼ watt.....
- P3853 R8 50,000 ohm ¼ watt.....
- P3868 R5 250,000 ohm ¼ watt.....
- P3876 R7 500,000 ohm ¼ watt.....
- P3883 R2 2,000,000 ohm ¼ watt.....
- P3886 R4 5,000,000 ohm ¼ watt.....
- P3891 R13 15,000,000 ohm ¼ watt.....

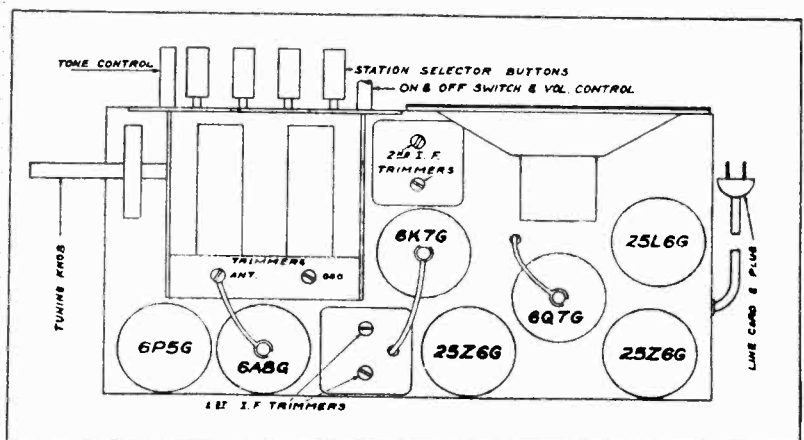
VARIABLE RESISTORS

- P3527 R3 Volume Control and Switch.....
- P3528 R11 Tone Control.....

TRANSFORMERS AND COILS

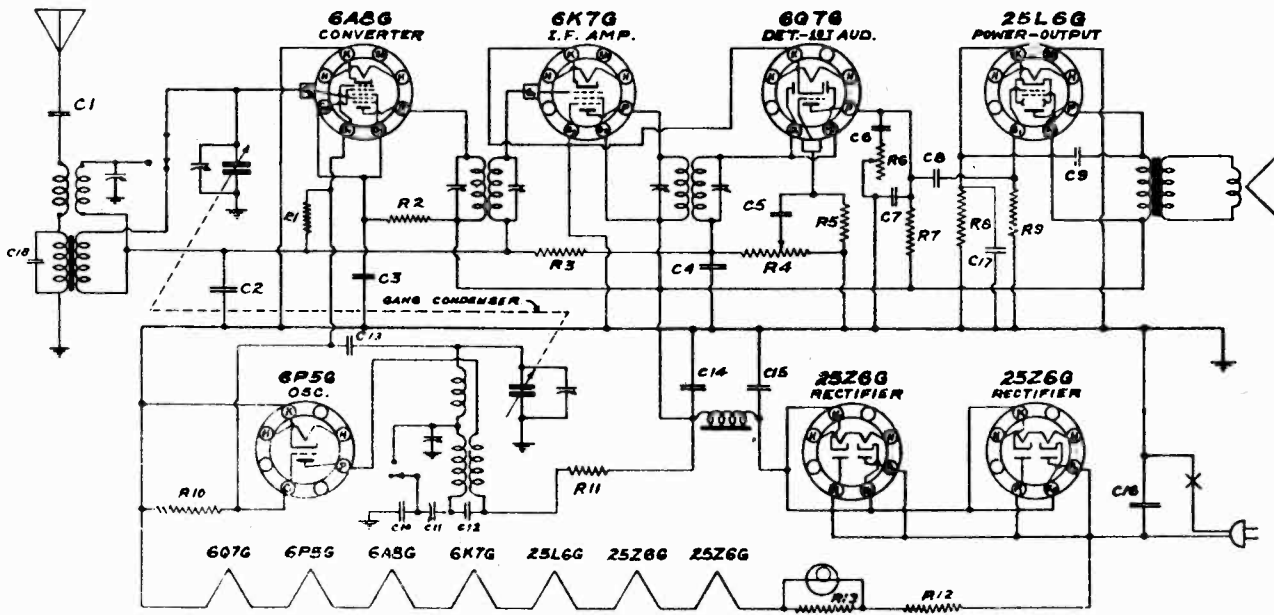
- P3682 Oscillator Coil.....
- P3282 1st I. F. Transformer.....
- P3283 2nd I. F. Transformer.....
- P3278 Output Transformer.....

- P2294 Pulley for Dial Bracket.....
- P2325 Dial Takeup Spring.....
- P3525 Dial Background.....
- P2965 Dial Pointer.....
- P470 Grid Clip.....
- P1713 Pilot Light Bulb.....
- P3681 Pilot Light Socket.....
- G6081 Loop Antenna Assembly.....
- P3284 Speaker.....
- P3088 Rubber Speaker Ring.....
- P3096 Call Letter Sheet.....
- P3073 Push Button.....
- P3078 Felt Washer (For Push Buttons).....
- P3644 Tuning Knob.....
- P3358 Volume or Tone Knob.....
- P3684 Escutcheon.....
- P3089 Dial Clip.....
- P3090 Escutcheon Screw.....
- P3685 Dial Scale.....
- P3635 Pressed Paper Back.....
- P3673 Chassis Mounting Screw.....



MODEL 7KS

ADMIRAL CORPORATION



CAPACITORS

N ^o	MFDs	VOLTS	N ^o	MFDs	VOLTS
C1	.002	600	C10	.0022 ±5% MICA	600
C2	.05	400	C11	.00062 VAR. PAD.	600
C3	.01	400	C12	.005	600
C4	.00025	MICA	C13	.00005 MICA	150
C5	.01	400	C14	25.0	150
C6	.005	600	C15	25.0	150
C7	.0005	MICA	C16	.05	400
C8	.01	400	C17	20.0	25
C9	.005	600	C18	.00005 MICA	600

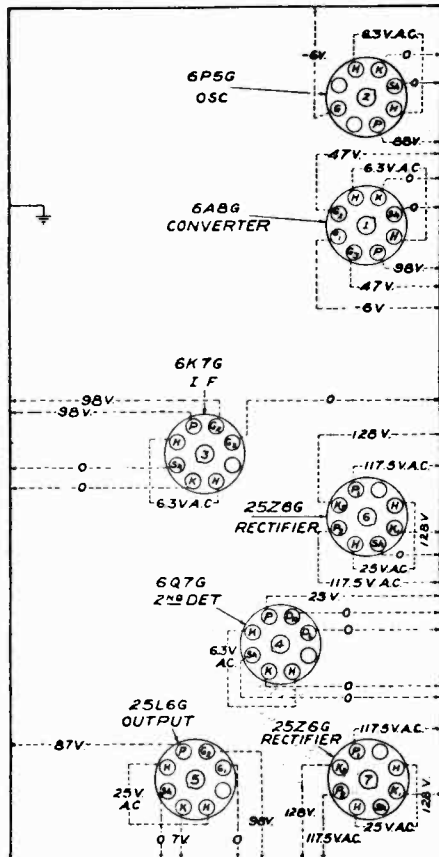
RESISTORS

N ^o	OHMS	WATTS	N ^o	OHMS	WATTS
R1	15 Meg.	1/2	R8	150	1/2
R2	10K	1/2	R9	1/2 Meg.	1/2
R3	2 Meg.	1/2	R10	50K	1/2
R4	1/2 Meg.	V.C.	R11	10K	1/2
R5	5 Meg.	1/2	R12	42	7
R6	1/2 Meg.	T.C.	R13	30	7
R7	1/2 Meg.	1/2			

SWITCHES IN BROADCAST POSITION

I. F. 455 K. C.

VOLTAGES AT SOCKETS



Bottom View of Chassis

Speaker (Part No. P3638)

Field resistance 300 ohms
 D.C. voice coil resistance 4.6 ohms
 Voice coil impedance at 400 cycles 5 ohms

Antenna Coil (Part No. G5960).

Looking at the connection end starting at the mounting strip in a clockwise direction the terminals are: No. 1, (not used); No. 2, AVC; No. 3, grid; No. 4, antenna; No. 5, ground (grounded directly to mounting strip).
 Primary—No. 4 and No. 5—Resistance 26 ohms.
 Secondary—No. 2 and No. 3—Resistance 2 ohms.

Short Wave Antenna Coil (Part No. P3702)

Looking at the connection end starting at the mounting strip in a clockwise direction the terminals are: No. 1, grid; No. 2, ant.; No. 3, ground; No. 4 (on other end), AVC.
 Primary—No. 2 and No. 3—Resistance .03 ohm
 Secondary—No. 1 and No. 4—Resistance .1 ohm

Oscillator Coil (Part No. P3700)

Looking at the end with mounting strip, starting at the mounting strip in a clockwise direction the terminals are: No. 1, padder; No. 2, R+; No. 3, (not used); No. 4, switch; No. 5, plate; No. 6, grid.
 Primary—No. 2 and No. 5—Resistance .85 ohm
 Short Wave Secondary—No. 4 and No. 6—Resistance .07 ohm
 Broadcast Secondary—No. 1 and No. 4—Resistance 5.1 ohms.

First I.F. Transformer (Part No. P3282)

Primary—Blue, white, plate; red white B+—Resistance 24.2 ohms.
 Secondary—White, grid; black white, AVC—Resistance 23.6 ohms.

Second I.F. Transformer (Part No. P3283)

Primary—Blue white, plate; red white, B+—Resistance 11.9 ohms.
 Secondary—White, grid; black white, AVC—Resistance 16.9 ohms.

Electrolytic Condenser (Part No. P3531)

Red, 20 mfd., 150 volt; green, 20 mfd., 150 volt; yellow, 20 mfd., 25 volt; black, negative for all three sections.

MODEL 7KS

ADMIRAL CORPORATION

VARIABLE RESISTORS

Volume control P-3527 R4
Tone control P-3528 R6

PAPER CONDENSERS

P-1322 C6, C9
C12
P-334 C2, C16
C3, C5
P-164 C8
C8
P-1193 C1

MICA CONDENSERS

P-817 C4
P-1382 C13, C18
P-3297 C10
P-336 C7

ELECTROLYTIC CONDENSERS

P-3531 C14
C15
C17

VARIABLE CONDENSERS

P-3699
P-3299
P-3173 C11

RESISTORS

P-3444 R13
P-3277 R12
P-2319 R1
P-3803 R8
P-3841 R2, R11
P-3853 R10
P-3868 R7
P-3876 R9
P-3883 R3
P-3886 R5
P-3891 R1

VARIABLE RESISTORS

Volume control P-3527 R4
Tone control P-3528 R6

TRANSFORMERS AND COILS

Antenna coil assembly G-5960
Short Wave Antenna Coil P-3702
Oscillator coil P-3700
1st IF transformer P-3282
2nd IF transformer P-3283

Tube socket (octal) P-3005
Tube shield base P-1456
Tube shield P-2215
Line cord P-3557
Line cord clamp P-2294
Pulley for dial bracket P-2325
Dial takeup spring P-3525
Dial background P-2965
Dial pointer P-470
Grid clip P-2955
Band switch P-3681
Pilot light bulb P-3638
Pilot light socket P-3088
Speaker & output transformer P-3096
Rubber speaker ring P-3078
Call letter sheet P-3073
Push button P-3078
Felt washer (for push buttons) P-3644
Tuning knob P-3358
Volume or tone knob P-3684
Escutcheon P-3089
Escutcheon screw P-3090
Dial Scale P-3703
Chassis mounting screw P-3673

PAPER CONDENSERS

.005 mfd. 600 volt C6, C9
.05 mfd. 400 volt C12
C2, C16
C3, C5
01 mfd. 400 volt C8
.002 mfd. 600 volt C8
P-1193 C1

MICA CONDENSERS

.00025 mfd. C4
.00005 mfd. C13, C18
.0022 mfd. 5% C10
.0005 mfd. C7

ELECTROLYTIC CONDENSERS

20 mfd. 150 volt C14
20 mfd. 150 volt C15
20 mfd. 25 volt C17

VARIABLE CONDENSERS

Gang condenser & tuner P-3699
Double trimmer attrip P-3299
Padding condenser P-3173 C11

RESISTORS

30 ohm 7 watt P-3444 R13
42 ohm 7 watt P-3277 R12
60 ohm (wire wound) P-2319 R1
150 ohm 1/4 watt 10% P-3803 R8
10,000 ohm 1/4 watt P-3841 R2, R11
50,000 ohm 1/4 watt P-3853 R10
250,000 ohm 1/4 watt P-3868 R7
500,000 ohm 1/4 watt P-3876 R9
2,000,000 ohm 1/4 watt P-3883 R3
5,000,000 ohm 1/4 watt P-3886 R5
15,000,000 ohm 1/4 watt P-3891 R1

TRANSFORMERS AND COILS

Antenna coil assembly G-5960
Short Wave Antenna Coil P-3702
Oscillator coil P-3700
1st IF transformer P-3282
2nd IF transformer P-3283

Tube socket (octal) P-3005
Tube shield base P-1456
Tube shield P-2215
Line cord P-3557
Line cord clamp P-2294
Pulley for dial bracket P-2325
Dial takeup spring P-3525
Dial background P-2965
Dial pointer P-470
Grid clip P-2955
Band switch P-3681
Pilot light bulb P-3638
Pilot light socket P-3088
Speaker & output transformer P-3096
Rubber speaker ring P-3078
Call letter sheet P-3073
Push button P-3078
Felt washer (for push buttons) P-3644
Tuning knob P-3358
Volume or tone knob P-3684
Escutcheon P-3089
Escutcheon screw P-3090
Dial Scale P-3703
Chassis mounting screw P-3673

PROCEDURE FOR SETTING UP PUSH BUTTONS

There are four push buttons by means of which four stations may be selected (See Fig. 1). Make a list of four stations tuned in regularly. Loosen one of the push buttons by turning the push button knob counter clockwise a half turn or less and push it in; while holding the button in, tune in a desired station by means of the station selector wheel. Turn the selector very slowly back and forth until the signal is clearest. Now while holding the push button in, tighten it by turning clockwise. Release the push button and turn the station selector to one end of the dial; then check the button by pushing it in and if the station is tuned to the center of the area on the dial covered by the station the adjustment is correct.

Release the push button and loosen another push button and repeat the above procedure, doing this for the remaining buttons.

If it is desired to change a button to a different station simply loosen the push button and reset.

Punch the desired station call letter tabs from the set of sheets supplied and insert them into the recesses above the push button.

The dial is now set up for quick tuning and all that is necessary is to push the button under the desired station all the way in and then release.

which is known to be good until the defective unit is located. Failure to operate, noisy or weak reception is usually due to defective tubes, the tubes making poor contact with sockets or grid clips making poor contact with the caps of the tubes.

ALIGNING INSTRUCTIONS

All of the adjustments have been very carefully set with signal generators at the factory and require no further adjustment, unless it becomes necessary to replace a coil or transformer, or if the adjustments have been tampered with in the field. Under no circumstances attempt any adjustments with out first making certain that adjustments are necessary and only after voltages, tubes and condensers have been checked and found to be normal. To properly re-align this receiver, a signal generator as well as an output meter, must be used.

ALIGNMENT PROCEDURE

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 mfd., 200 mmf., 400 ohms.

BAND	SIGNAL GENERATOR Frequency Setting	Connecting dummy antenna	Variable Condenser Setting	Trimmers Adjusted (In Order Shown)	Tolerance Elements	Adjustment
I. F.	455 KC.	.1 Mfd. 6K7G I.F. tube	Rotor full open (Plates out of mesh)	Two trimmers on top side of chassis, 3rd from front	Output I. F.	Adjust to maximum output
	455 KC.	.1 Mfd. 6A8G tube	Rotor full open (Plates out of mesh)	Two trimmers on top side of chassis, 2nd from front	Input I. F.	Adjust to maximum output
SHORT WAVE	18,100 KC.	400 ohms Antenna lead	Rotor full open (Plates out of mesh)	Trimmer—Top of left section of gang (See Fig. 2)	Short Wave Oscillator	Adjust to receive signal
	16,000 KC.	400 ohms Antenna lead	Tune signal	Trimmer—On right side of chassis, 2nd from front	Short Wave Antenna	Adjust to maximum output
	1730 KC.	200 Mmf. Antenna lead	Rotor full open (Plates out of mesh)	Trimmer—On right side of chassis, 2nd from front	Broadcast Oscillator	Adjust to maximum output
BROAD-CAST	1400 KC.	200 Mmf. Antenna lead	Set dial at 1400 KC.	Trimmer—Top of right section of gang (See Fig. 2)	Broadcast Antenna	Adjust to maximum output
	600 KC.	200 Mmf. Antenna lead	Set dial at 600 KC.	Trimmer—On right side of chassis, 1st from front	Oscillator Series Fed.	Adjust to maximum output, see Note A

Note "A"—Turn the dial back and forth slightly (rock) and adjust trimmer until the peak of intensity is obtained. Attenuate the signal from the signal generator to prevent the leveling-off action of the A.V.C.

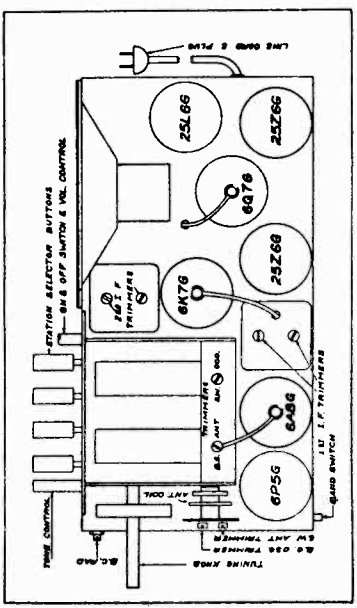
Do not bend variable condenser to correct tracking.

Frequency Range—535 to 1730 and 5,700 to 18,100 K.C.
Power output 1 watt undistorted—1.7 watts maximum.
Intermediate Frequency 455 K.C.
Power Consumption—50 watts.

TUBE COMPLEMENT

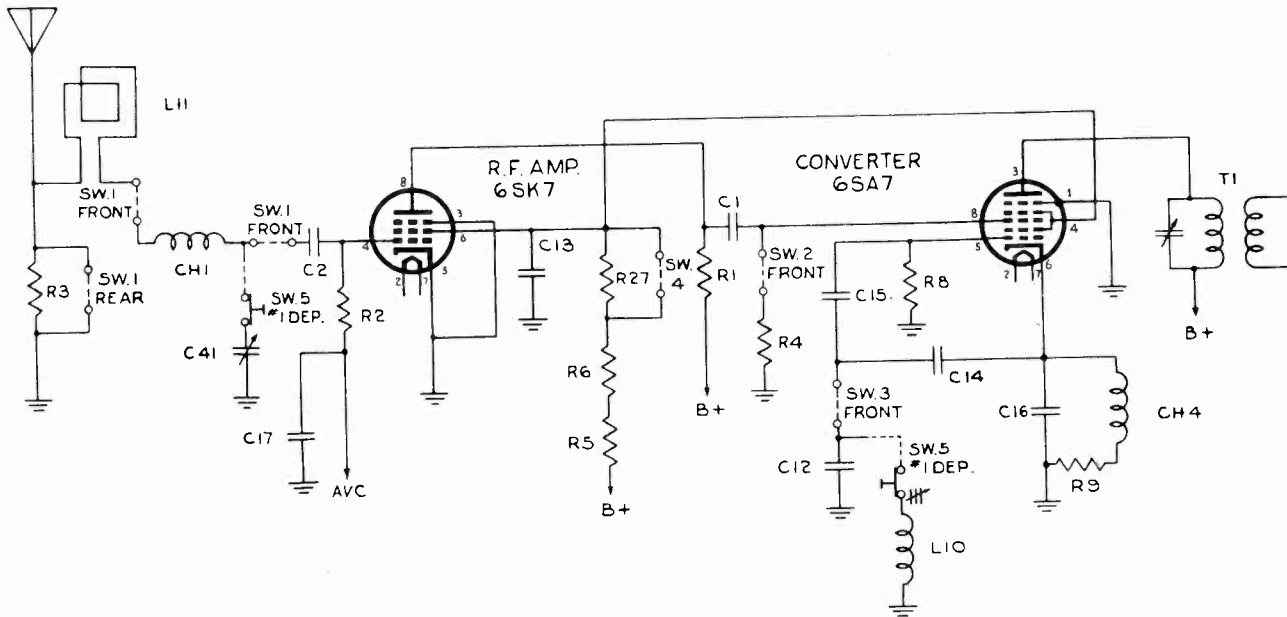
The tube complement of this receiver consists of the following tubes:

- 1—Type 6A8G—Pentagrid Converter (First Detector)
- 1—Type 6P5G—Triode Amplifier (Oscillator)
- 1—Type 6K7G—Remote cut-off Pentode as an IF Amplifier (455 KC).
- 1—Type 6Q7G—Duplex Diode Triode Second Detector, A.V.C. and First Audio.
- 1—Type 25L6G—Tetrode Power Amplifier.
- 2—Type 25Z6G—Twin Diode High Vacuum Rectifiers.

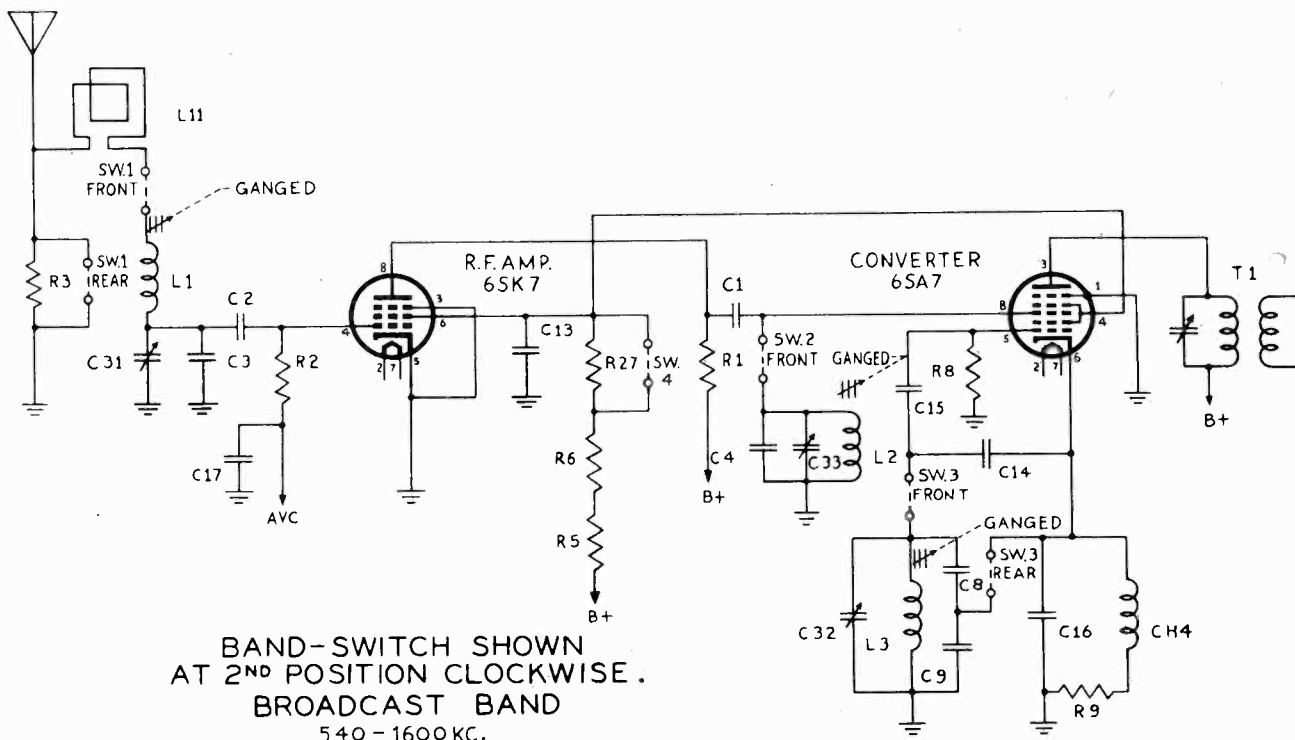


MODEL 10A1

ADMIRAL CORPORATION



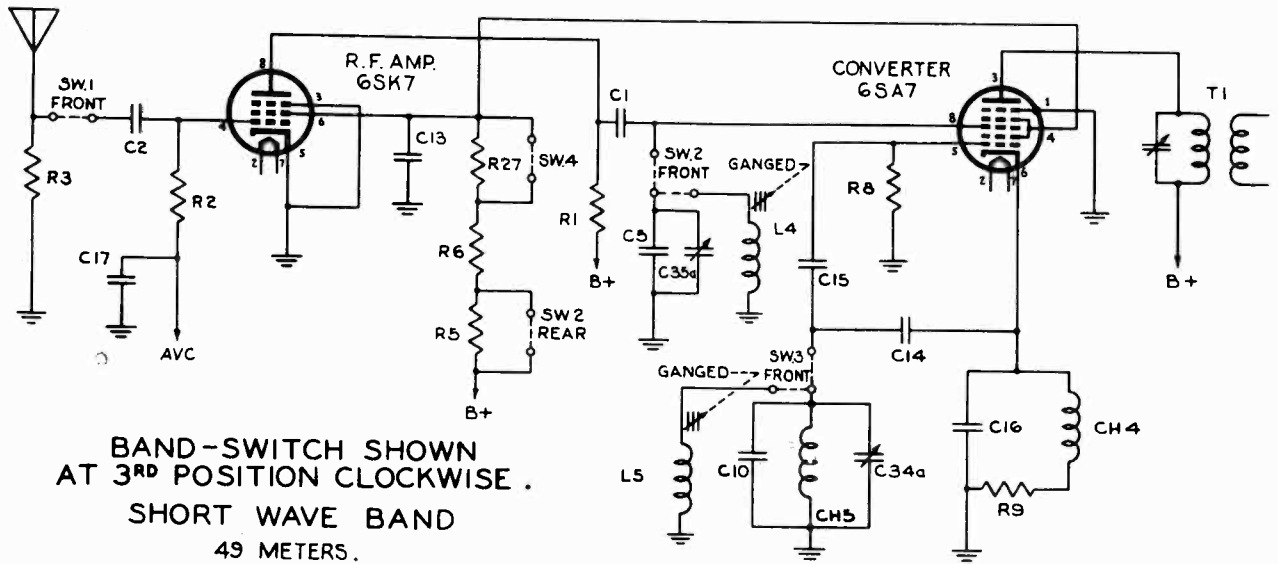
BAND-SWITCH SHOWN
AT 1ST POSITION.
PUSH BUTTON TUNING
(BUTTON #1 DEPRESSED)
795-1600 KC.



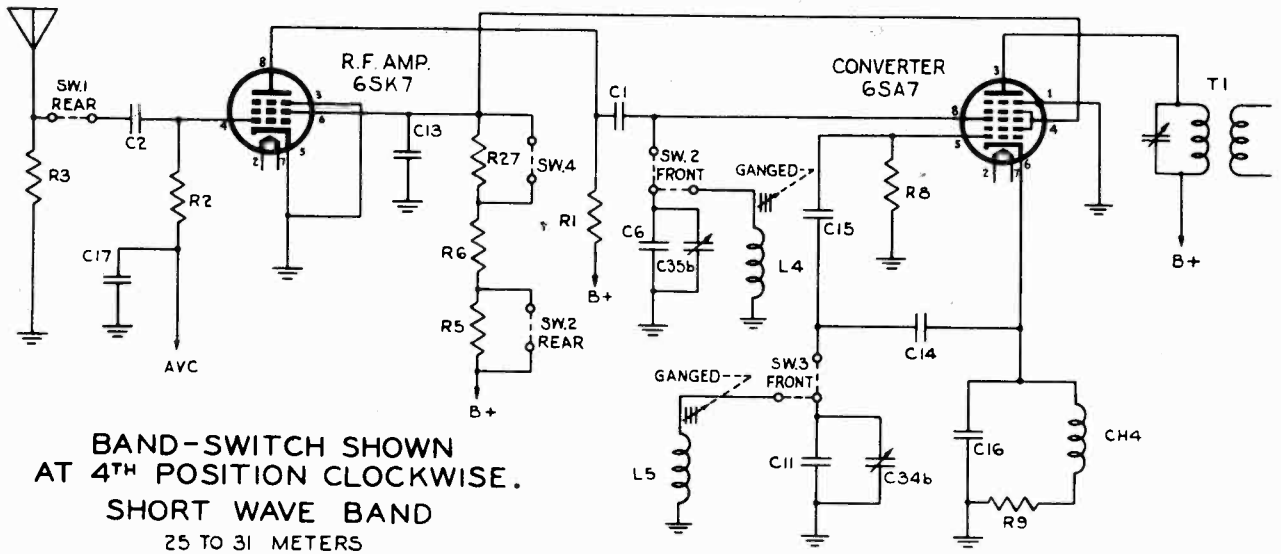
BAND-SWITCH SHOWN
AT 2ND POSITION CLOCKWISE.
BROADCAST BAND
540-1600 KC.

ADMIRAL CORPORATION

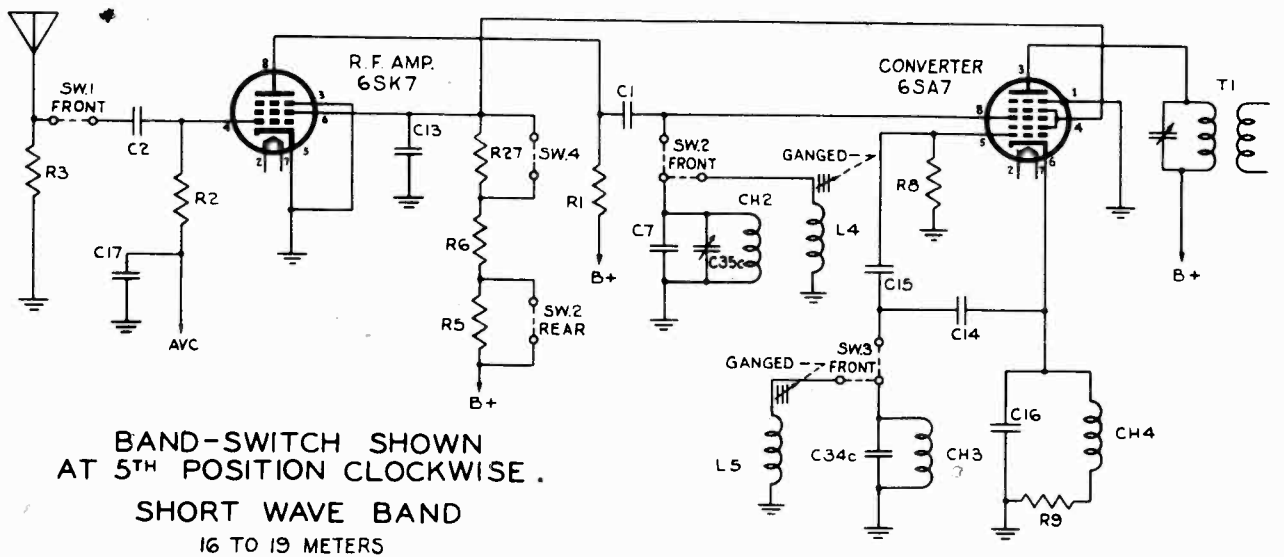
MODEL 10A1



BAND-SWITCH SHOWN AT 3RD POSITION CLOCKWISE. SHORT WAVE BAND 49 METERS.



BAND-SWITCH SHOWN AT 4TH POSITION CLOCKWISE. SHORT WAVE BAND 25 TO 31 METERS

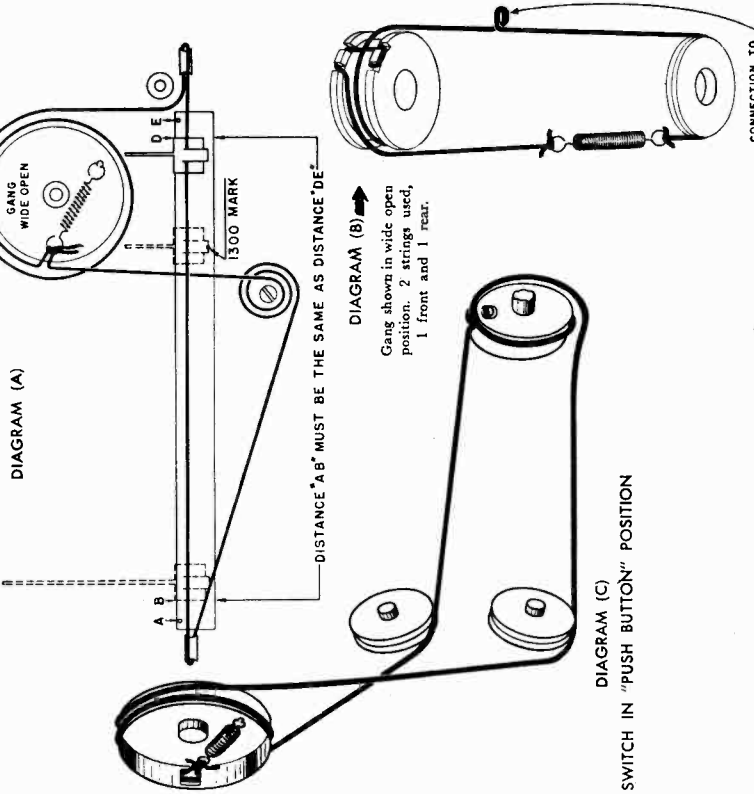


BAND-SWITCH SHOWN AT 5TH POSITION CLOCKWISE. SHORT WAVE BAND 16 TO 19 METERS

MODEL 10A1

ADMIRAL CORPORATION

STRINGING DIAGRAMS



CONNECTION TO SLUG GANG TUNER

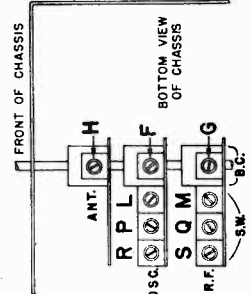
POINTER ADJUSTMENT

Move the dial pointer by means of the tuning control knob to see that it reaches the upper and lower limits as shown on stringing diagram (A). Turn the upper limit pointer down and the lower limit pointer up until the distance from A to B is the same as the distance from D to E. The pointer should be checked again at the upper and lower limit to be sure that it is right. Take care to see that the pointer does not slip during this operation. Reclamp the pointer slide tightly to the string and seal with any quick-drying cement. Set the tuning gang wide open and proceed with operation 3.

REPLACING TUNING SLUG

If it becomes necessary to change a tuning slug proceed in the following manner: 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 3/8 inches of its length is above the coil form. Solder it in this position making sure that it does not slip during the operation and that the slug wire is straight. Proceed to realign the set as shown in the chart.

TRIMMER LAYOUTS



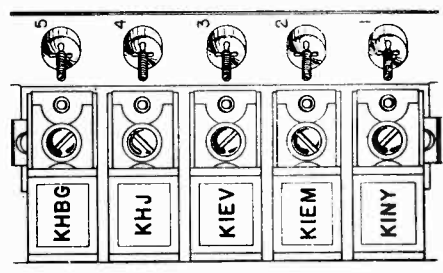
ALIGNMENT PROCEDURE

1. Loop must be connected during alignment. Check the tuning drum to see that the strings are tight and the drum is not slipped on the shaft. The correct position of the drum can be seen on stringing diagram (A).
2. In the wide open 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 3/8 inches out of their coil form. If there is any serious deviation, proceed in sequence as outlined below.

STEP	SIGNAL GENERATOR	DUMMY ANTENNA BETWEEN RADIO AND SIGNAL GENERATOR	SIGNAL GENERATOR FREQUENCY	TUNING GANG SETTING	ADJ. TRIMMERS IN FOLLOWING ORDER TO MAX.
1	6SA7 Grid (Pin #8)	.1 MFD.	455 K.C.	Pointer to upper limit	E, D, C, B, A
2	Before proceeding to step 3 check pointer travel as outlined under paragraph below headed "Pointer Adjustment."				
3	White Loop Lead	10 MMFD. If not available, wrap around generator lead around the white loop lead.	1605 K.C.	Pointer to upper limit	F, G, H
4	White Loop Lead		1300 K.C.	Set Pointer to 1300 mark on slide rail (See Dial Diagram A).	I, J, K
5	Set Band Change Switch to 49 Meter Position.				
6	White Loop Lead	400 Ohms	7.5 Mc.	Pointer to upper limit	L, M
7	White Loop Lead	400 Ohms	7.2 Mc.	Set Pointer to 1300 mark on slide rail	N, O
8	Set Band Change Switch to 31-25 Meter Position.				
9	White Loop Lead	400 Ohms	12.5 Mc.	Pointer to upper limit	P, Q
10	Set Band Change Switch to 19-16 Meter Position.				
11	White Loop Lead	400 Ohms	18.0 Mc.	Pointer to upper limit	R, S

PROCEDURE FOR SETTING UP PUSH BUTTONS

Push Button	Frequency Range
1	795 K.C. - 1600 K.C.
2 & 3	635 K.C. - 1430 K.C.
4 & 5	340 K.C. - 1260 K.C.



Remove the escutcheon covering the push button control unit. Pick the first of the 5 chosen stations. This should be of the proper frequency for button number 5. Set the band switch to broadcast and accurately tune in the station. Now turn the band switch to the push button position and adjust slug screw number 5 until the same station comes in with its loudest volume, which is adjacent and to the left of volume control adjustment. Again bring the station to its maximum volume. Set the rest of the push buttons in a like manner, one for each of the stations chosen.

Note: Since each oscillator (slug) in the push button unit will tune over the entire broadcast band, (540 K.C.-1600 K.C.), care should be taken to set up stations within the frequency ranges associated with each button.

ADMIRAL CORPORATION

REPLACEMENT PARTS

RESISTORS

Symbol	Description	Part Number
R1	10,000 Ohms, 1 Watt	60B14-103
R2	470,000 Ohms, 1/2 Watt	60B8-474
R3	47,000 Ohms, 1/2 Watt	60B8-473
R4	470,000 Ohms, 1/2 Watt	60B8-474
R5	8,200 Ohms, 1 Watt	60B14-822
R6	10,000 Ohms, 5 Watt	61A1-3
R8	22,000 Ohms, 1/2 Watt	60B8-223
R9	100 Ohms, 1/2 Watt	60B8-101
R10	1,500 Ohms, 1/2 Watt	60B8-152
R11	1,500 Ohms, 1/2 Watt	60B8-152
R12	470 Ohms, 1/2 Watt	60B8-471
R13	1,000 Ohms, 1/2 Watt	60B8-102
R14	470,000 Ohms, 1/2 Watt	60B8-474
R15	47,000 Ohms, 1/2 Watt	60B8-473
R16	270,000 Ohms, 1/2 Watt	60B8-274
R17	1.0 Megohm, 1/2 Watt	60B8-105
R18	270,000 Ohms, 1/2 Watt	60B8-274
R19	1,000 Ohms, 1/2 Watt	60B8-102
R20	270,000 Ohms, 1/2 Watt	60B8-274
R21	470,000 Ohms, 1/2 Watt	60B8-474
R22	470,000 Ohms, 1/2 Watt	60B8-474
R23	470,000 Ohms, 1/2 Watt	60B8-474
R24	270 Ohms, 2 Watt	60B20-271
R25	47,000 Ohms, 1/2 Watt	60B8-473
R26	100,000 Ohms, 1/2 Watt	60B8-104
R27	150,000 Ohms, 1/2 Watt	60B8-154
R28	1 Megohm Volume Control	75B3-3
R29	1 Megohm, 1/2 Watt	60B8-105
R30	1 Megohm, 1/2 Watt	60B8-105

L1	Coil, Tuning (Antenna B.C.)	AC105-2
L2	Coil, Tuning (B.C., R.F.)	AB100-1
L3	Coil, Tuning (B.C., Oscillator)	AC101-2
L4	Coil, Tuning (S.W., R.F.)	AD102-2
L5	Coil, Tuning (S.W., Oscillator)	AD102-4
L6		
L7		
L8		
L9		
L10	Coils, Push Button, Tuning	AB100-4
L11	Loop (B.C. Antenna)	AC112
T1	Transformer, 1st I.F.	72B7
T2	Transformer, 2nd I.F.	72B12
T3	Transformer, 3rd I.F.	72B8
T4	Transformer, Power	80B2
T5	Transformer, Output	79A1

SWITCHES, PLUGS & SOCKETS

SW1	Switch, Antenna Circuit	76B6-2
SW2	Switch, R.F. Circuit	76B6-4
SW3	Switch, Oscillator Circuit	76B6-3
SW4	Switch, Phono Radio	76A3
SW5	Switch in Station Selector Unit	76B5
SW6	Switch in Tone Control Unit	76B4
S1	Socket, Station Selector Unit	87A4-1
P1	Plug, Station Selector Unit	88A3-1
S2	Socket, Tone Control Unit	87A4-1
P2	Plug, Tone Control Unit	88A3-1
S3	Socket, Speaker	87A6-1
P3	Plug, Speaker	98A2
S4	Socket, Phono Connector	88A1
S5	Phono Motor Cord & Socket	89A6-9

CONDENSERS

Symbol	Description	Part Number
C1	20 mmfd. Mica	65B7-5
C2	200 mmfd. Mica	65B7-21
C3	35 mmfd. Silver Mica	65B1-30
C4	390 mmfd. Silver Mica	65B1-34
C5	250 mmfd. Silver Mica	65B1-35
C6	65 mmfd. Silver Mica	65B1-27
C7	40 mmfd. Silver Mica	65B1-36
C8	140 mmfd. Silver Mica	65B1-26
C9	1000 mmfd. Mica	65B7-33
C10	200 mmfd. Silver Mica	65B1-14
C11	15 mmfd. Silver Mica	65B5-3
C12	60 mmfd. Silver Mica	65B5-13
C13	.1 mfd. 400 Volts	64B1-20
C14	50 mmfd. Mica	65B5-11
C15	50 mmfd. Mica	65B5-11
C16	250 mmfd. Mica	65B5-22
C17	.05 mfd. 200 Volts	64B1-32
C18	20 mmfd. Mica	65B5-5
C20	.1 mfd. 400 Volts	64B1-20
C21	50 mmfd. Mica	65B5-11
C22	50 mmfd. Mica	65B5-11
C23	.002 mfd. 600 Volts	64B1-14
C24	500 mmfd. Mica	65B5-27
C25	.005 mfd. 600 Volts	64B1-12
C26	.005 mfd. 600 Volts	64B1-12
C27	.005 mfd. 600 Volts	64B1-12
C28	.005 mfd. 600 Volts	64B1-12
C29	250 mmfd. Mica	65B5-22
C30a	30 mfd. 350 Volts	Electrolytic 67C6-25
C30b	30 mfd. 350 Volts	
C30c	20 mfd. 25 Volts	
C31	3-40 mmfd. Trimmer	66A12-5
C32	3-40 mmfd. Trimmer	
C33	3-40 mmfd. Trimmer	
C34a	3-40 mmfd. Trimmer	66B8-3
C34b	3-40 mmfd. Trimmer	
C34c	3-40 mmfd. Trimmer	
C35a	3-40 mmfd. Trimmer	66B8-3
C35b	3-40 mmfd. Trimmer	
C35c	3-40 mmfd. Trimmer	
C36	.002 mfd., 600 Volts	64B1-14
C37	.001 mfd., 600 Volts	64B1-15
C38	.005 mfd., 600 Volts	64B1-12
C39	.01 mfd., 400 Volts	64B1-25
C40	.005 mfd., 600 Volts	64B1-12
C41	12-170 mmfd. Trimmer	66A12-1
C42	25-290 mmfd. Trimmer	66A12-2
C43		
C44	40-400 mmfd. Trimmer	66A12-3
C45		
C46	.002-600 volts	64B1-14

CABINET & SLIDE-A-WAY PARTS

Left Door Bracket	15B70-1
Right Door Bracket	15B70-2
Slide Rail	15A71
Bracket Stop	15A72
Hub, Door Bracket	27A13
Roller, Door Bracket	27A14
Hub, Slide Roller (Slide-A-Way)	27A11
Roller, Slide (Slide-A-Way)	27A12
Bracket Assembly (Slide-A-Way)	G400C42
Switch & Cover (Slide-A-Way)	77B1-44
Plug, Alden 20" Leads (Slide-A-Way)	89A6-18
Escutcheon, Cover Plate (left)	23B4-1
Escutcheon, Cover Plate (right)	23B4-2
Escutcheon, Dial Mounting	23C3
Escutcheon, Lower Rail	23B5-2
Escutcheon, Switch (Slide-A-Way)	401A67

PHONOGRAPH PARTS

See Record Changer Service Manual for Detailed List

Centerpost	G400A12-2
Crystal Cartridge	409A1
Idler Wheel (407B3 Motor)	G400A23
Idler Wheel (407B2 Motor)	G400A59
Idler Wheel (407B1 Motor)	G400A57
Plug, Phonograph Output	88A2-1

MISCELLANEOUS

Bulbs, Pilot Light, Mazda No. 47	81A1-8
Dial Cord, 100 inches	50A1-3
Dial, Scale Glass	21C21
Drum, Band Indicator	A1200
Drum, Dial Tuning	A1194
Knobs (Walnut)	33A12-1
Letter, Call Push Button	42A1
Plug, Coil Mounting	32A3-1
Pointer, Dial	25A6-1
Push Button, Numbers 1 and 5	33B6-1
Push Button, Numbers 2 and 4	33B6-2
Push Button, Number 3	33B6-3

When Ordering Slugs Specify Color Code

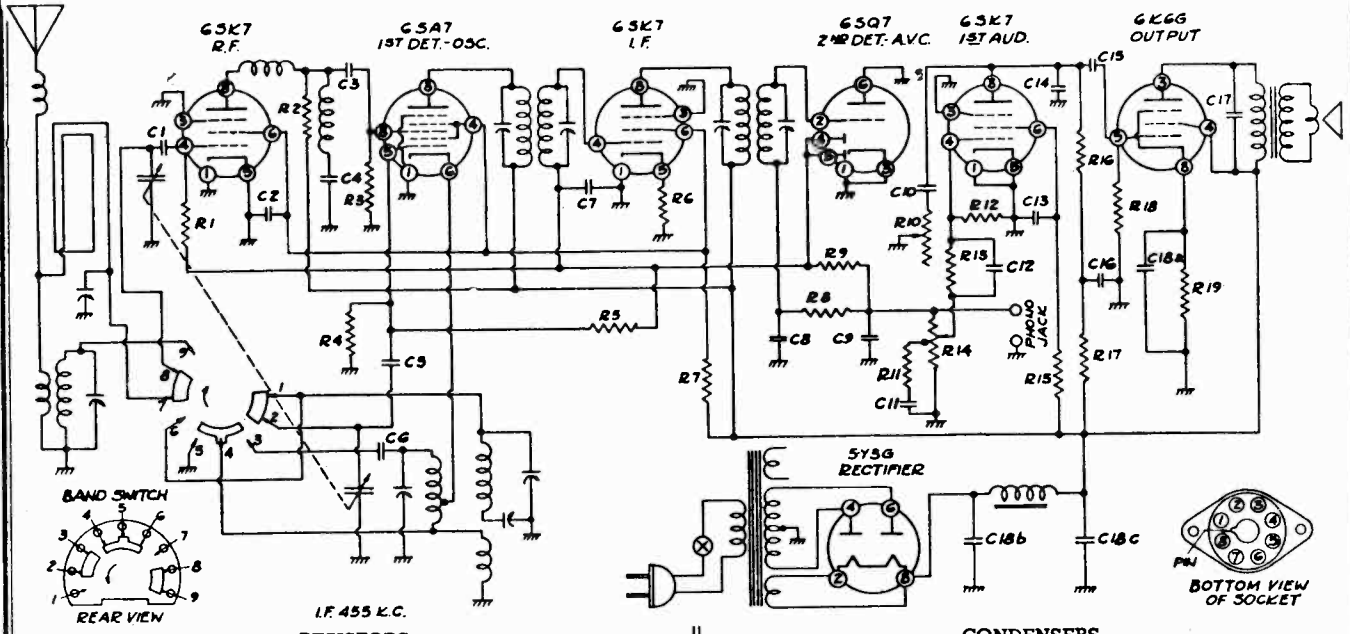
Slug, Tuning (B.C., R.F.) (B.C., Osc.)	71B1-3
Slug, Tuning (B.C. Antenna)	71B1-13
Slug, Tuning (S.W., R.F.) (S.W., Osc.)	71B1-9
Slug, Push Button Unit	71B1-14
Socket, Pilot Light	82A2-1
Speaker, 10" Dynamic	78B12
Spring, Hairpin for mounting coils	19A3-1
Stud, Slug Adjusting	27A4
Tube, Pilot Light Cover	82A5-1

CHOKES, COILS & TRANSFORMERS

Symbol	Description	Part Number
CH1	Choke, Antenna	AB103-6
CH2	Choke, R.F. S.W.	AB103-31
CH3	Choke, Oscillator, S. W.	AB103-31
CH4	Choke, Oscillator, Cathode	AB103-1
CH5	Choke, Oscillator, 49 Meter Shunt	AB103-5

MODEL A77

ADMIRAL CORPORATION



IF 455 K.C.

RESISTORS

No.	Ohms	Watts	No.	Ohms	Watts
R1	500,000	1/4	R11	15,000	1/4
R2	2,500	1/2	R12	2,000,000	1/4
R3	100,000	1/2	R13	2,000,000	1/4
R4	25,000	1/2	R14	500,000	V.C.
R5	5,000,000	1/4	R15	2,000,000	1/4
R6	100	1/4	R16	250,000	1/4
R7	15,000	2	R17	50,000	1/4
R8	50,000	1/4	R18	500,000	1/4
R9	1,000,000	1/4	R19	600-10%	1/2
R10	500,000	T.C.			

PAPER CONDENSERS

P1193	.002 mfd.	600 volt
P1322	.005 mfd.	600 volt
P164	.01 mfd.	400 volt
P148	.05 mfd.	200 volt
P334	.05 mfd.	400 volt
P1789	.25 mfd.	400 volt

MICA CONDENSERS

P1382	.00005 mfd.
P3640	.00006 mfd. 5%
P480	.0001 mfd.
P817	.00025 mfd.
P2565	.003 mfd. 5%

ELECTROLYTIC CONDENSERS

P4264	20 mfd.	25 volt
	30 mfd.	350 volt
	30 mfd.	350 volt

VARIABLE CONDENSERS

P4191	Gang condenser
P3734	Trimmer condenser
P3299	Trimmer condenser
P3173	Padding condenser

RESISTORS

P3800	100 ohm	1/2 watt
P3821	600 ohm	1/2 watt
P3832	2,500 ohm	1/2 watt
P3843	15,000 ohm	1/2 watt
P1944	15,000 ohm	2 watt
P3845	25,000 ohm	1/2 watt
P3853	50,000 ohm	1/2 watt
P3860	100,000 ohm	1/2 watt
P3868	250,000 ohm	1/2 watt
P3876	500,000 ohm	1/2 watt
P3882	1,000,000 ohm	1/2 watt
P3883	2,000,000 ohm	1/2 watt
P3886	5,000,000 ohm	1/2 watt

VARIABLE RESISTORS

P4089	Volume control and switch
P4183	Tone control

TRANSFORMERS AND COILS

G6252	Loop antenna assembly
P3198	S. W. antenna coil
P4194	B. C. and S. W. oscillator coil
G6185	Wave trap coil
P4108	1st I.F. transformer
P4109	2nd I.F. transformer
G6186	Short wave choke
P3926	Iron core filter choke
P4265	Power transformer

MISCELLANEOUS

P4186	Push button shaft
P4114	Call letter tab sheet
P4192	Band switch
P4283	Speaker and output transformer

CONDENSERS

No.	Capacity (Mfd.)	Volts	No.	Capacity (Mfd.)	Volts
C1	.0001	Mica	C11	.05	200
C2	.05	400	C12	.05	200
C3	.0001	Mica	C13	.25	400
C4	.00006-5%	Mica	C14	.00025	Mica
C5	.0001	Mica	C15	.01	400
C6	.003-5%	Mica	C16	.25	400
C7	.05	200	C17	.002	600
C8	.00005	Mica	C18a	20.	25
C9	.0001	Mica	C18b	30.	350
C10	.002	600	C18c	30.	350

P4196	Dial pointer
G6181	Pointer shaft and pulley
P4091	Horseshoe washer (pointer shaft)
P2325	Take up spring (pointer)
P4105	Fibre pulley
P4185	Dial background
P4197	Pilot light socket
P1713	Pilot light bulb
P4248	Pilot light reflector
P4101	Drive shaft
P1399	Horseshoe washer (drive shaft)
P3375	Takeup spring (drive)
P945	Speaker socket
P4138	Electrolytic mounting base

All voltages measured with a 1,000 ohm per volt meter on the 300 volt scale. Line voltage 117 volts A.C. Volume control maximum and no signal tuned in. Power consumption 60 watts.

6SK7 (RF) TUBE

Plate (8) to ground	208
Screen (6) to ground	93

6SA7 TUBE

Plate (3) to ground	255
Screen (4) to ground	93

6SK7 (IF) TUBE

Plate (8) to ground	255
Screen (6) to ground	93

6SK7 (AF) TUBE

Plate (8) to ground	20
Screen (6) to ground	10

6K6G TUBE

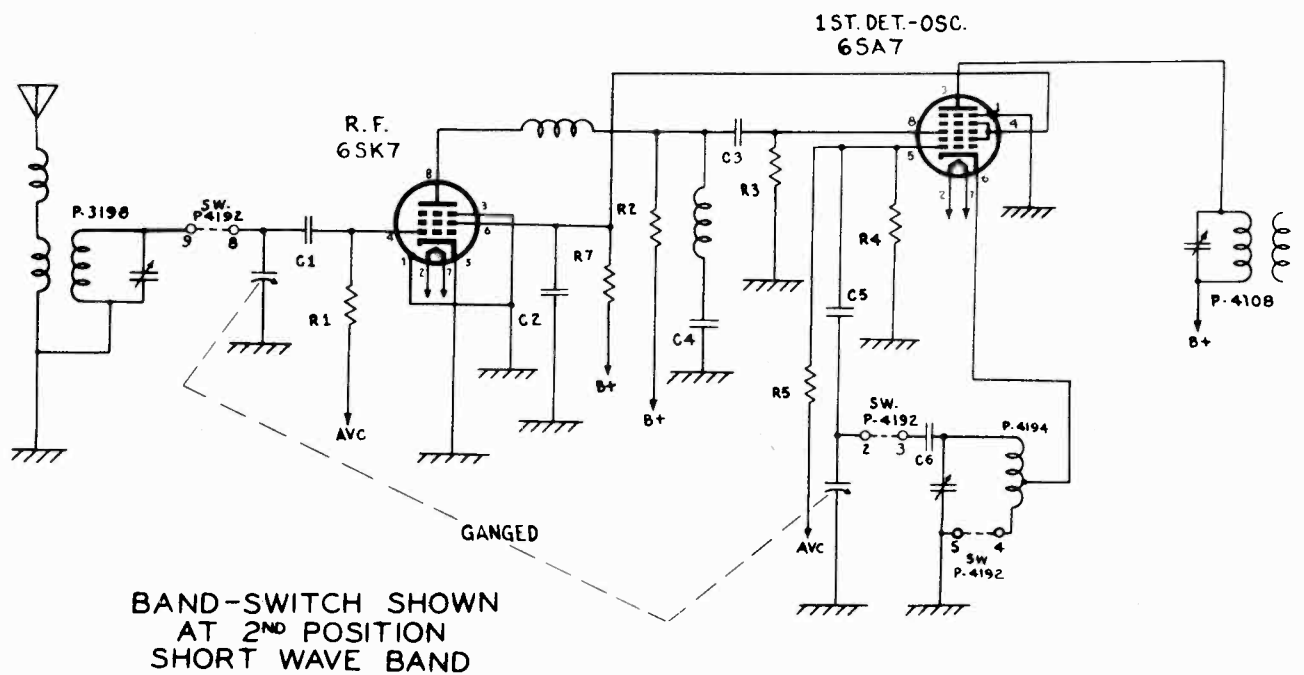
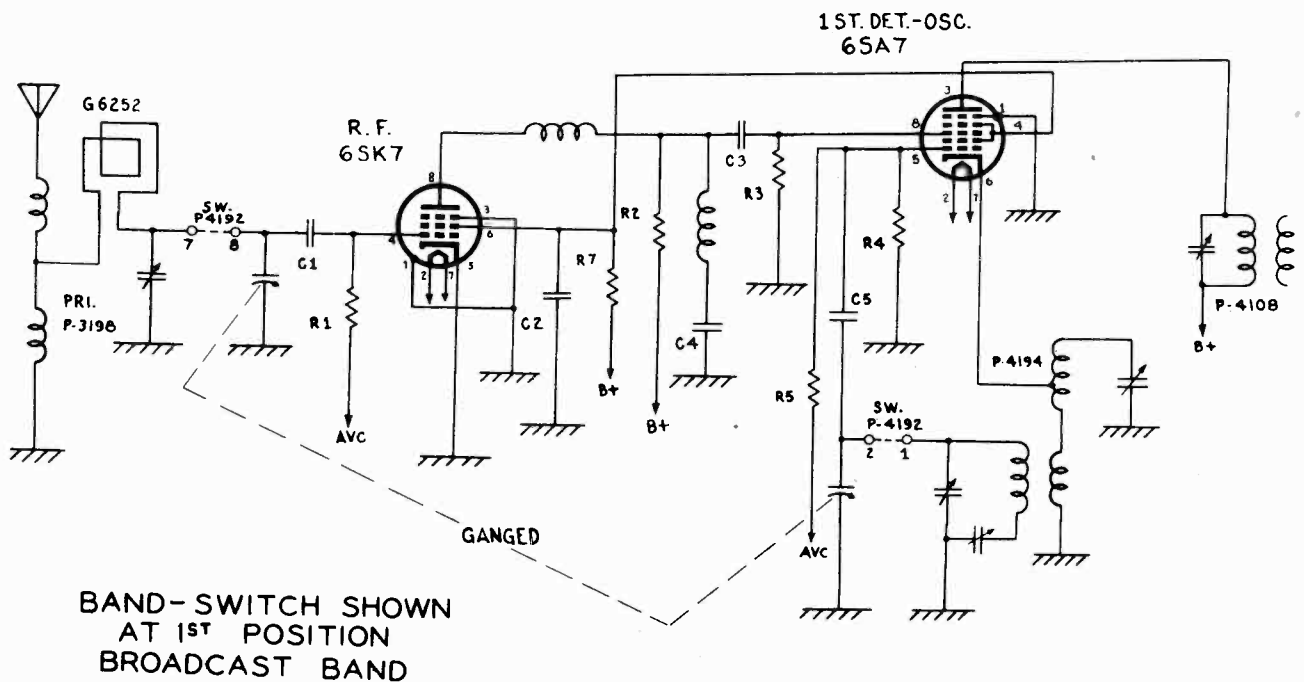
Plate (3) to ground	240
Screen (4) to ground	258
Cathode (8) to ground	18

5Y3G TUBE

Filament (8) to ground	266
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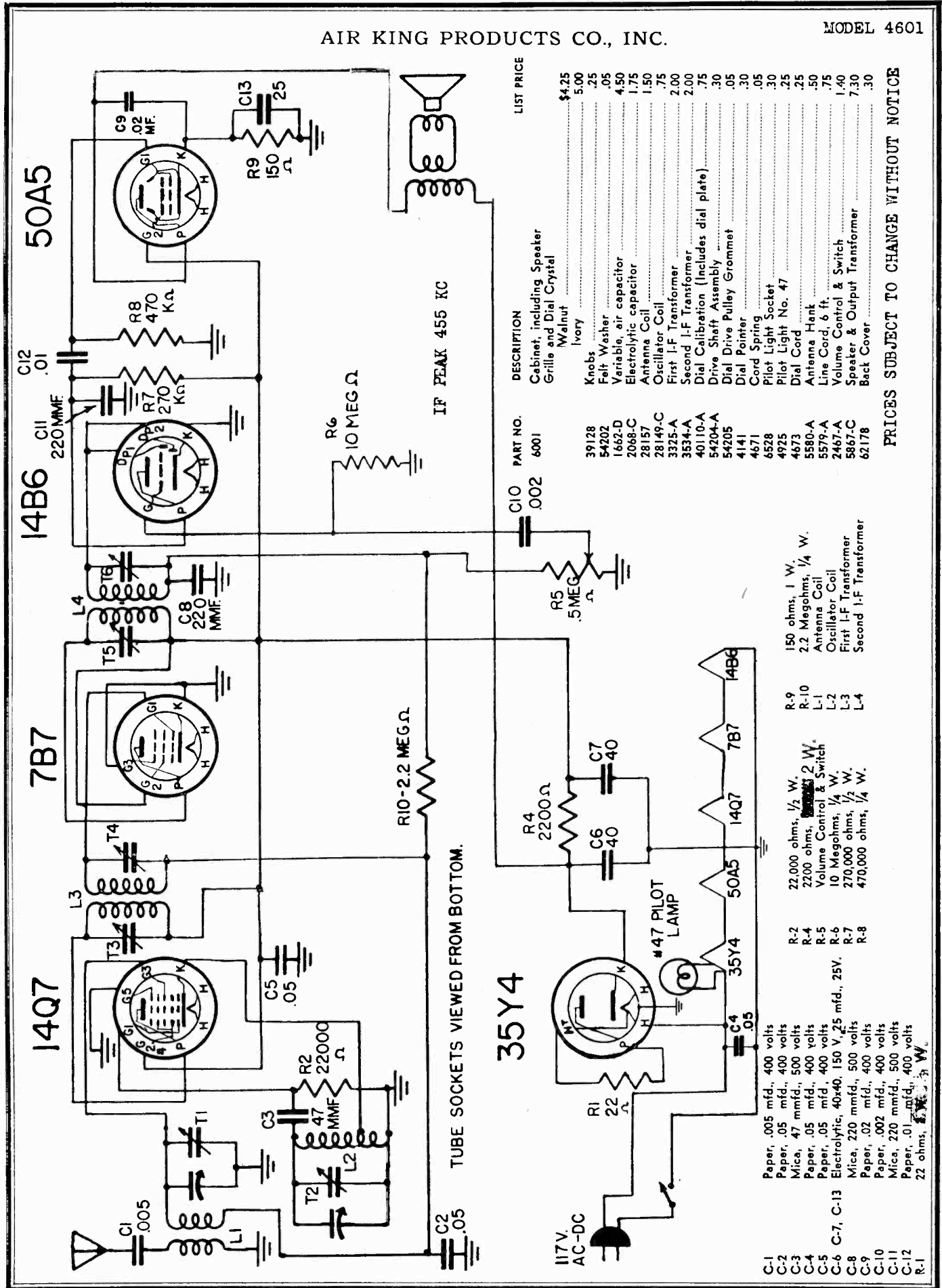
ADMIRAL CORPORATION

MODEL A77



AIR KING PRODUCTS CO., INC.

MODEL 4601

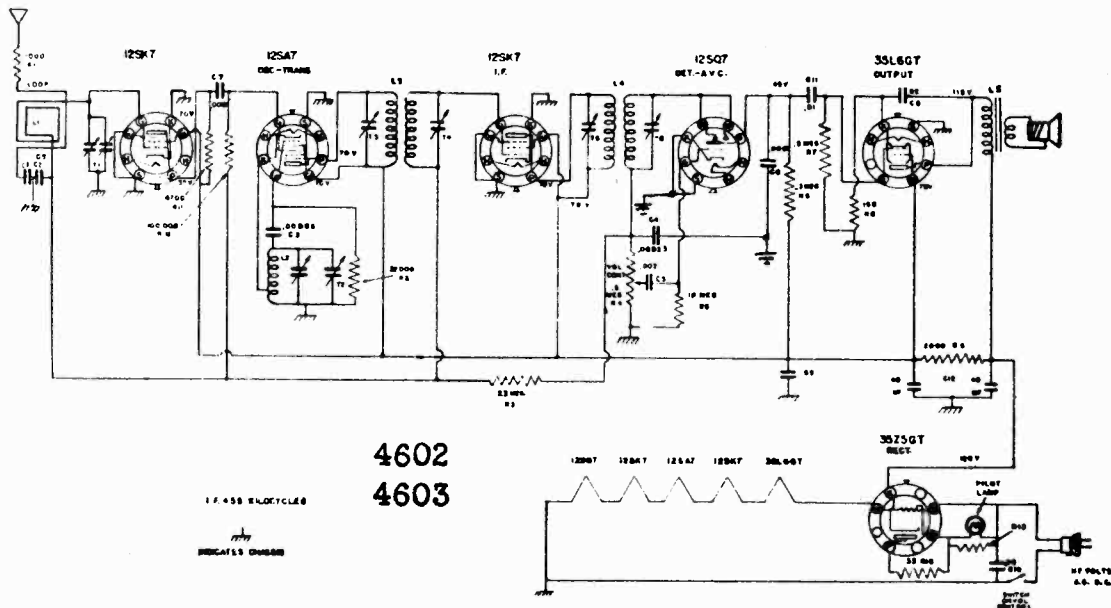


DESCRIPTION	LIST PRICE
Cabinet, including Speaker	\$4.25
Grille and Dial Crystal	5.00
Walnut	.25
Ivory	.05
Knobs	4.50
Felt Washer	.75
Variable, air capacitor	1.50
Electrolytic capacitor	.75
Antenna Coil	2.00
Oscillator Coil	2.00
First I-F Transformer	.75
Second I-F Transformer	2.00
Dial Calibration (Includes dial plate)	.75
Drive Shaft Assembly	.30
Dial Drive Pulley Grommet	.05
Dial Pointer	.30
Cord Spring	.05
Pilot Light Socket	.30
Pilot Light No. 47	.25
Dial Cord	.25
Antenna Hook	.50
Line Cord, 6 ft.	.75
Volume Control & Switch	1.40
Speaker & Output Transformer	7.30
Back Cover	.30

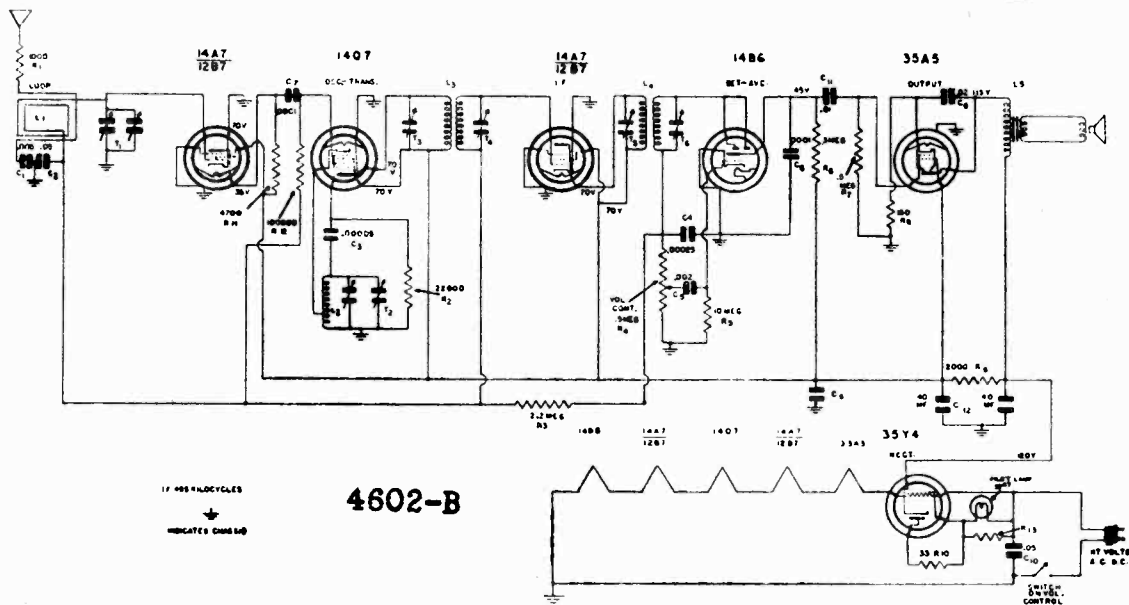
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

MODELS 4602, 4603
MODEL 4602B

AIR KING PRODUCTS CO., INC.



4602
4603



4602-B

ALIGNMENT PROCEDURE

- Output meter connections..... Across primary output transformer
- Connection of generator ground..... Chassis
- Generator modulation..... App. 30% @ 400 cycles
- Position of volume control..... Fully Clockwise

	4602 4603	4602-B		
POSITION OF DIAL POINTER	540 kc 1500 kc	GENERATOR FREQUENCY 455 kc 1500 kc	GENERATOR CONNECTION 12SA7GT * * *	GENERATOR CONNECTION 14Q7 * * *
			TRIMMERS ADJUSTED T3, T4, T5, T6 T2, T1	TRIMMER FUNCTION I. F. Osc., R. F.

See Note Below See Note Below

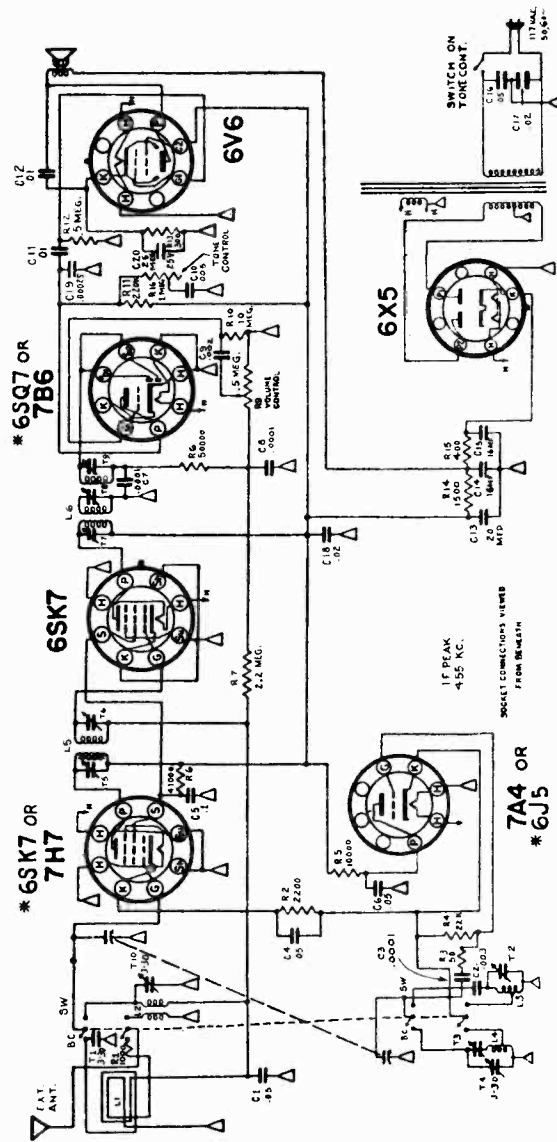
***Run a wire from the output terminal of the generator near the receiver. However, no connection is made between the signal generator and the receiver.

AIR KING PRODUCTS CO., INC.

Schematic Location Part No. Description

- L1 457 Cabinet, back
- L2 42172 Cover loop
- L3 28135 Coil, SW - Ant
- L4 28137 Coil, SW osc with trimmer
- C1 28138 Coil, BC osc with trimmer
- C4, C6, C16 28136 Condenser, .05 mfd, 400 volts
- C5 Condenser, .002 mfd, 400 volts
- C9 Condenser, .005 mfd, 400 volts
- C10 Condenser, .01 mfd, 400 volts
- C11 Condenser, .02 mfd, 400 volts
- C12 Condenser, .02 mfd, 800 volts
- C13, C14, C15 Condenser, Mica, .0025 - 400 volts
- C17 Condenser, Mica, .003 - 400 volts
- C18, C19 Variable condenser
- C20 1655 Condensers, electrolytic, 20 mfd, 16 mfd, 350 volts
- T1, T10, T4 20105 Condensers, electrolytic, 25 mf, 25 v
- T2 1725 3-30 mmfd
- R9 2470 Control, volume, .5 megohm
- R16 2521 Control, tone, .25 megohm with switch
- 8581 Cord, power
- 4579 Dial cord
- 40109 Dial scale
- 4140 Dial pointer
- 4633 Knob, tone, off-on
- 39139 Knob, SW - BC
- 39140 Knob, tuning
- 39141 Knob, volume
- 4911 Lamp, dial #47 (2)
- R1 1000 ohm, 1/2 watt
- R2 2200 ohm, 1/2 watt
- R3 47 ohm, 1/2 watt
- R4 22,000 ohm, 1/2 watt
- R5 10,000 ohm, 1/2 watt
- R6 2.2 megohm, 1/2 watt
- R7 47,000 ohm, 1/2 watt
- R8 220,000 ohm, 1/2 watt
- R11 300 ohm, 1 watt, wire wound
- R13 1500 ohm, 1 watt, wire wound
- R14 400 ohm, 1 watt, wire wound
- R15 10 megohm, 1/2 watt
- R10 5 megohm, 1/2 watt
- 8107 Socket, pilot lamp (2)
- 3784 Switch, band, BC - SW
- 5866 Speaker, 5" output transformer
- 1087 Transformer, power **
- 3253 Transformer, I.F. Input
- 3523 Transformer, I.F. Output

L5 ** For 115 - 230 volt operation use transformer #1090

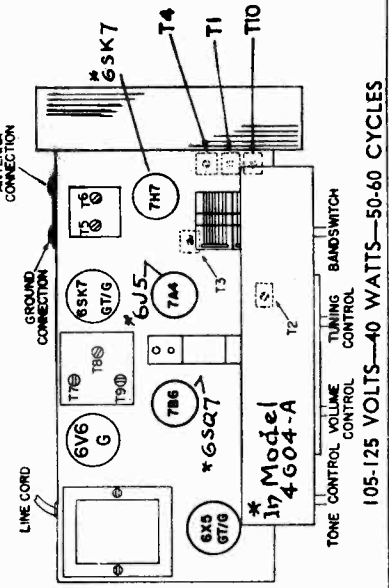


ALIGNMENT PROCEDURE

- Output meter connection.....Across voice coil
- Output meter reading to indicate 1/2 watt.....1.25V for 3.2 Ohm voice coil
- Connection of generator ground.....Receiver chassis
- Generator modulation.....Approximately 30% @ 400 cycles
- Position of volume control.....Fully clockwise
- Position of tone control.....High position

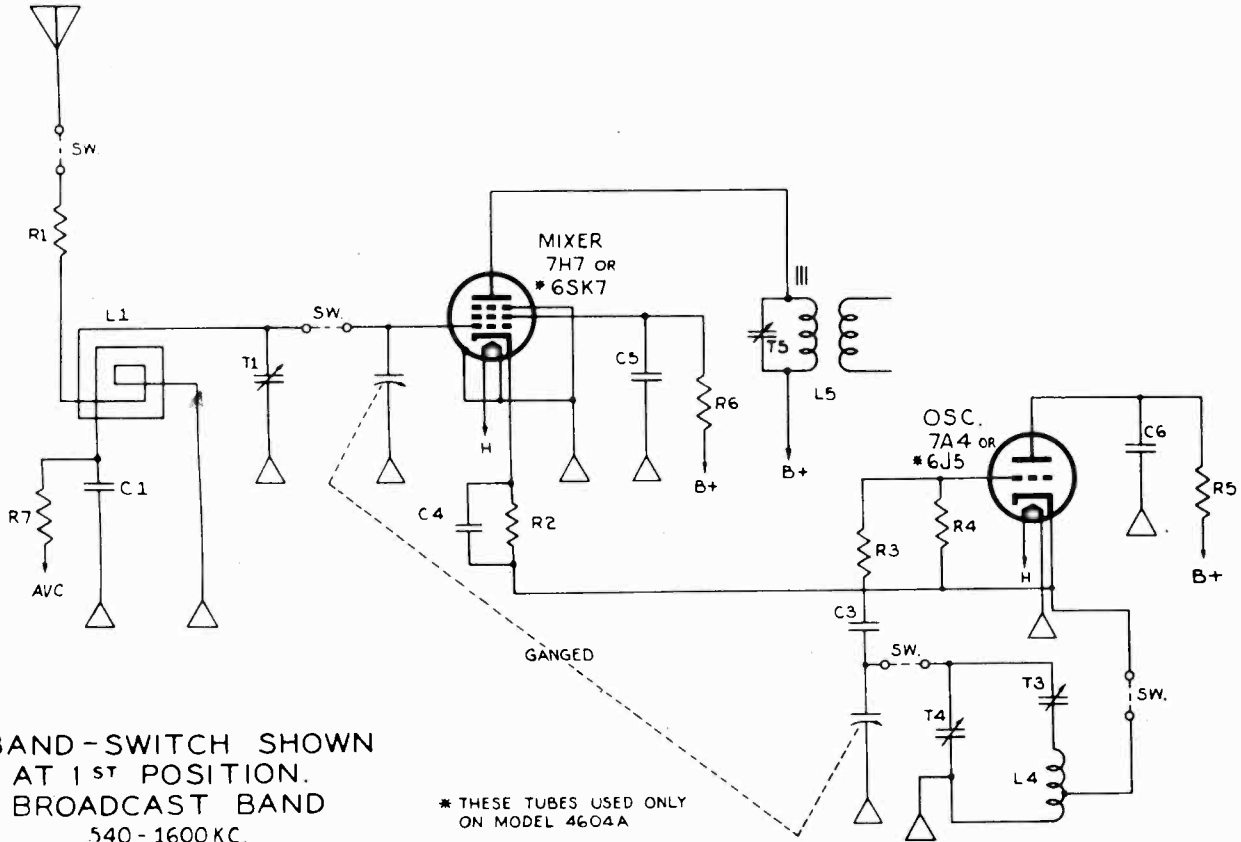
WAVE BAND SW.	POSITION OF DIAL POINTER	GEN. FREQ.	GEN. CONN.	DUMMY ANT.	TRIMMERS ADJ. IN ORDER SHOW	TRIMMER FUNCT.
B. C.	540 kc	455 kc	.1 mfd	T9-T7-T8-T6-T5	T4-T1	I. F.
	1500 kc	1500 kc	* note	T3-Rock Var. Cond.	T2 **	Osc. - Ant.
	600 kc	600 kc	* note	Readjust T4		Osc. - Padder
S. W.	1500 kc	1500 kc	* note			Osc.
	18 mc	18 mc	Ant. Post RMA Standard All Wave			Osc.
	16 mc	16 mc	Ant. Post RMA Standard All Wave			Ant.

NOTE: ** If two peaks can be had the correct one is with the trimmer screw further out, the other peak is the image. * Connect a piece of insulated wire to the generator output terminal and place the wire near the loop. Do not make a direct connection.



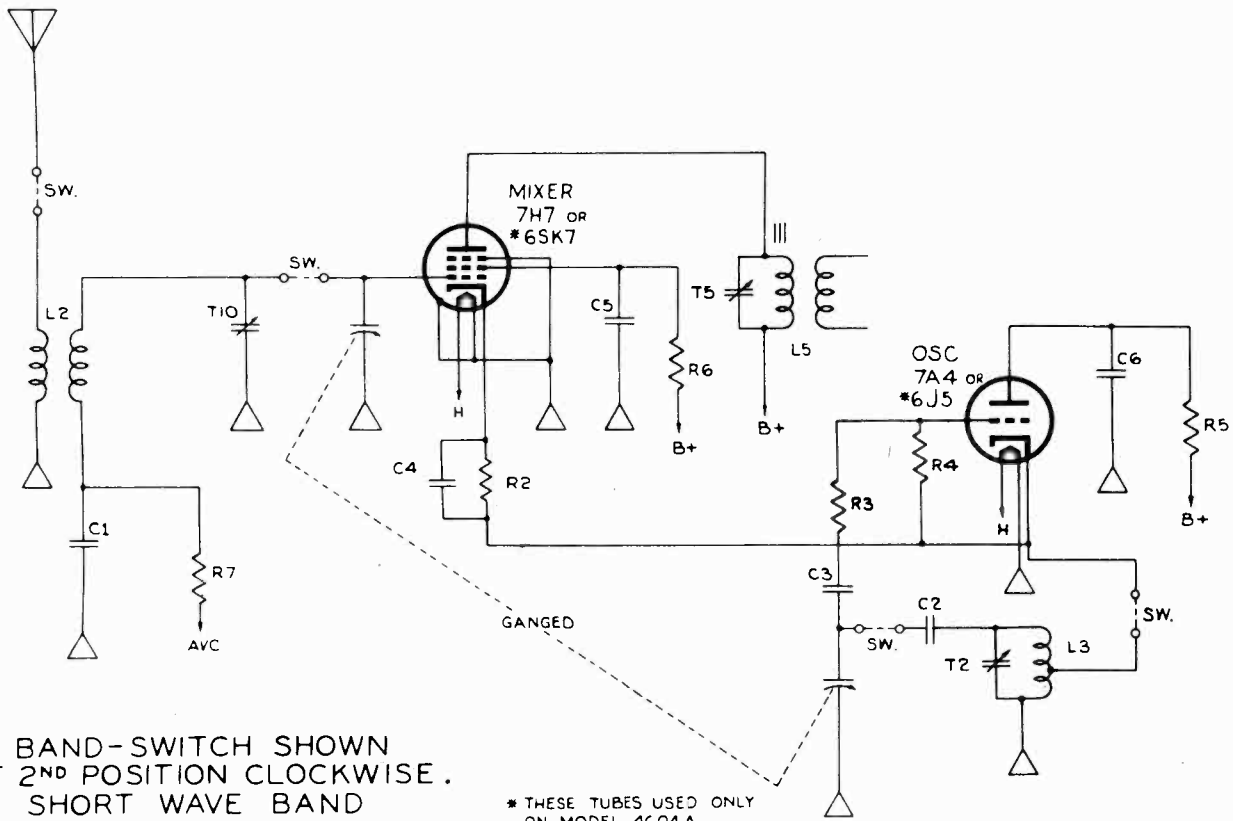
MODELS 4604, 4604A

AIR KING PRODUCTS CO., INC.



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

* THESE TUBES USED ONLY ON MODEL 4604A

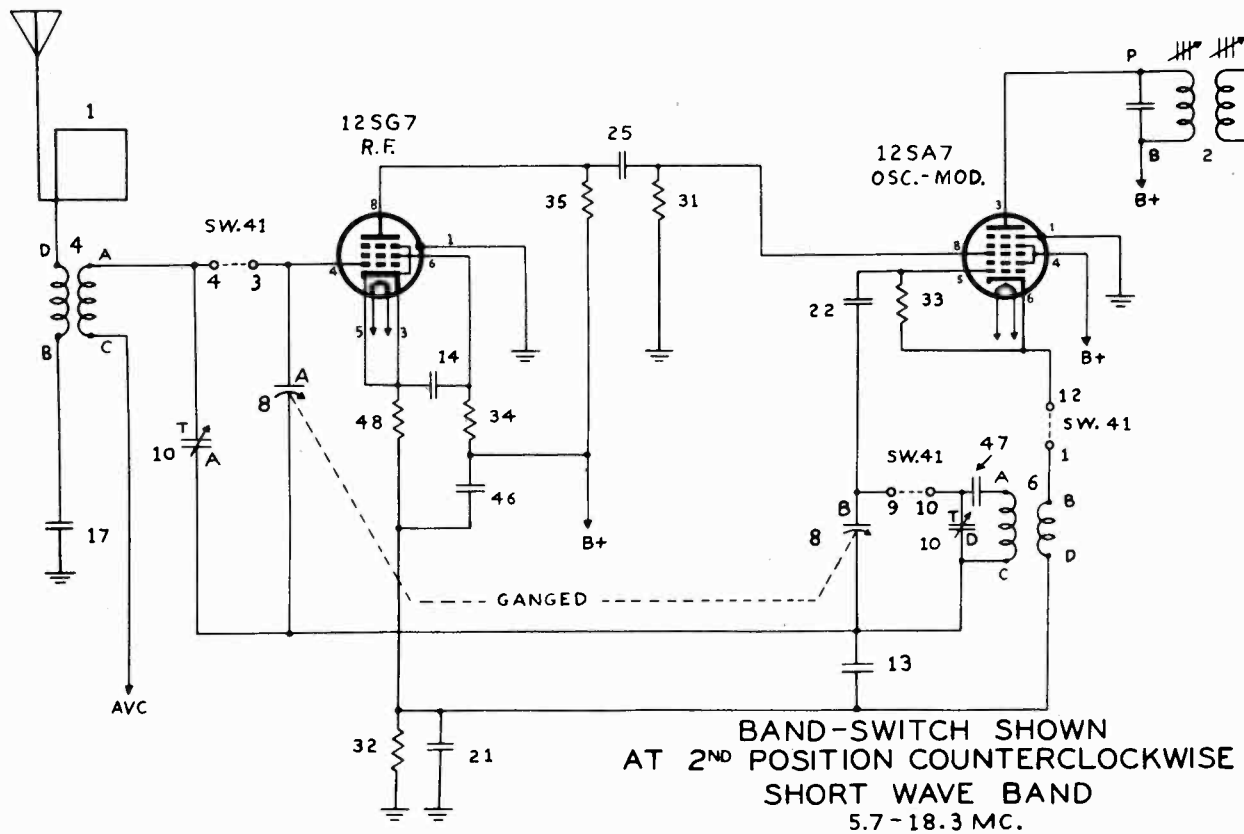
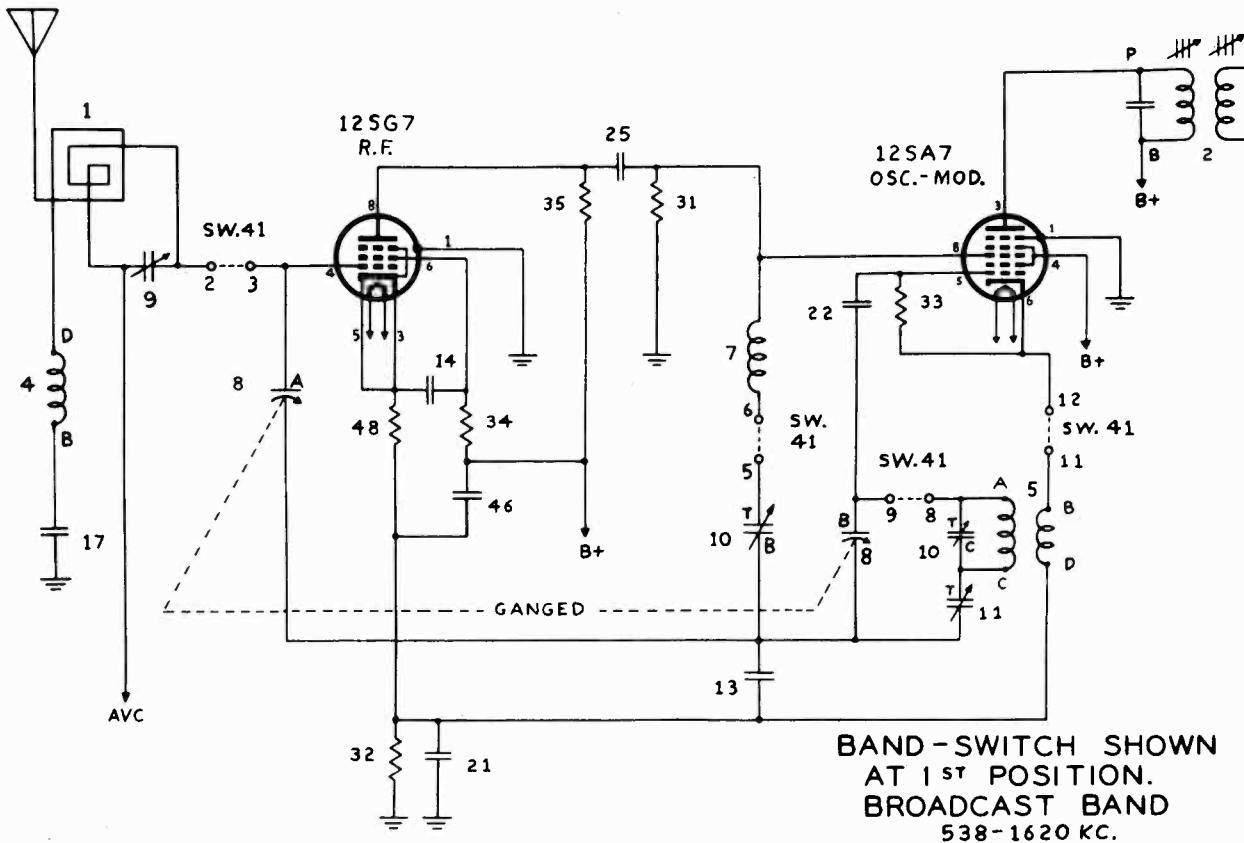


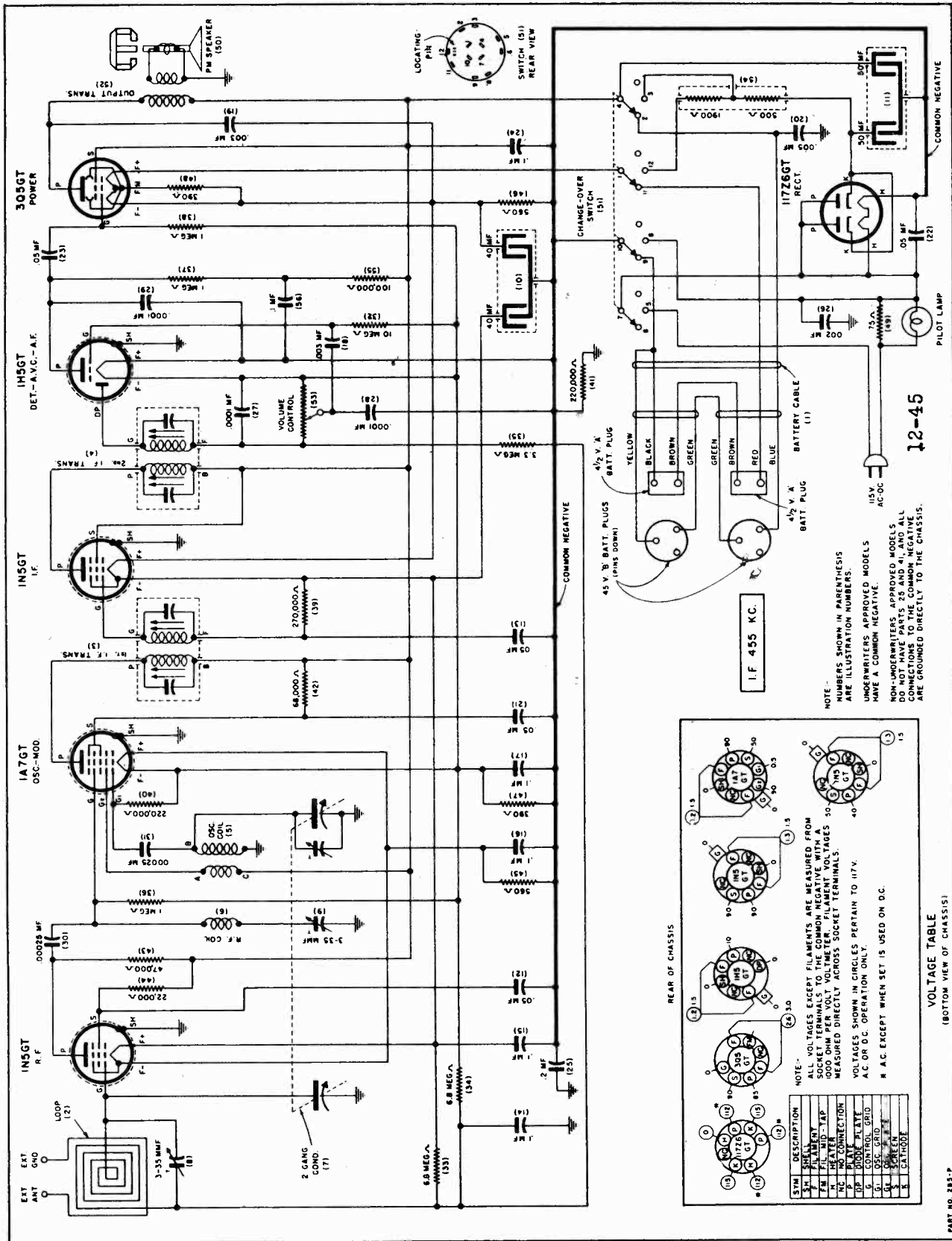
BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE. SHORT WAVE BAND 6 - 10 MC.

* THESE TUBES USED ONLY ON MODEL 4604A

MODEL 6A-122

ALLIED RADIO CORP.





NOTE - NUMBERS SHOWN IN PARENTHESIS ARE ILLUSTRATION NUMBERS. UNDERWRITERS APPROVED MODELS NON-UNDERWRITERS APPROVED MODELS DO NOT HAVE PARTS 25 AND 41 AND ALL CONNECTIONS TO THE COMMON NEGATIVE ARE GROUNDED DIRECTLY TO THE CHASSIS.

REAR OF CHASSIS

NOTE - ALL SOCKET PLACES EXCEPT FILAMENT ARE MEASURED FROM ALL SOCKET TERMINALS TO THE COMMON NEGATIVE WITH A 1000 OHM PER VOLT VOLTMETER. FILAMENT VOLTAGES SO MEASURED DIRECTLY ACROSS SOCKET TERMINALS. VOLTAGES SHOWN IN CIRCLES PERTAIN TO 117V. A.C. OR D.C. OPERATION ONLY. * A.C. EXCEPT WHEN SET IS USED ON D.C.

SYM.	DESCRIPTION
1A	1A7GT
1N	1N5GT
3Q	3Q5GT
11	117Z6GT
12	12-45
15	150-ohm
PM	PM SPEAKER
117	117Z6GT
12	12-45
15	150-ohm
PM	PM SPEAKER
117	117Z6GT
12	12-45
15	150-ohm
PM	PM SPEAKER

VOLTAGE TABLE
(BOTTOM VIEW OF CHASSIS)

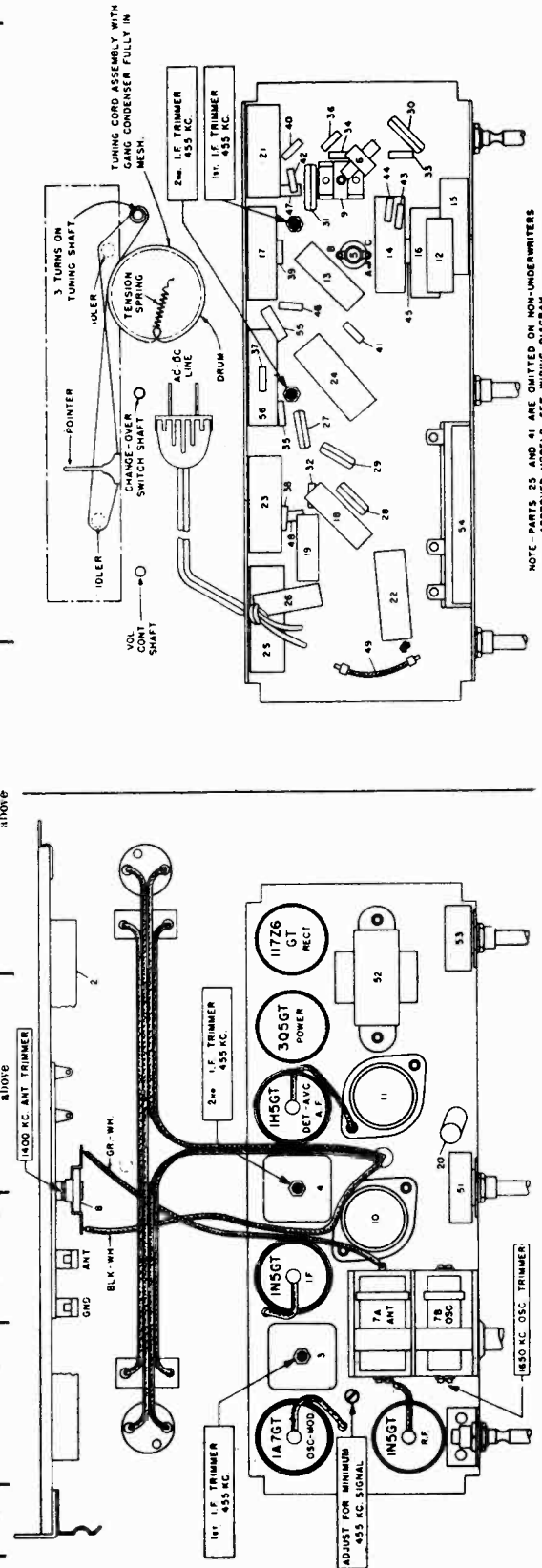
PART NO. 285-P

ALLIED RADIO CORP.

- 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) **WHEN ADJUSTING 1650 KC OSCILLATOR TRIMMER AND 455 KC TRIMMER** remove chassis from cabinet and disconnect the white-green and white-black loop connection wires from the 1400 KC loop antenna trimmer. Attach a 1 megohm resistor across these wires and feed output of test oscillator across the 1 megohm resistor.
 - (d) **THE 1400 KC LOOP ANTENNA TRIMMER** is accessible through hole in cabinet back. It should be adjusted only after all other adjustments have been made and with the set mounted in the cabinet and the back **IN CLOSED** position. When aligning the 1400 KC trimmer connect test oscillator output to the "ANT" and "GND" clips that are attached to the inside of the cabinet back.

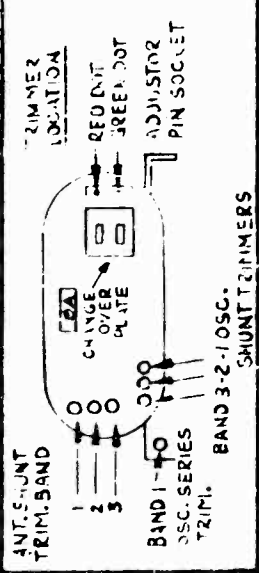
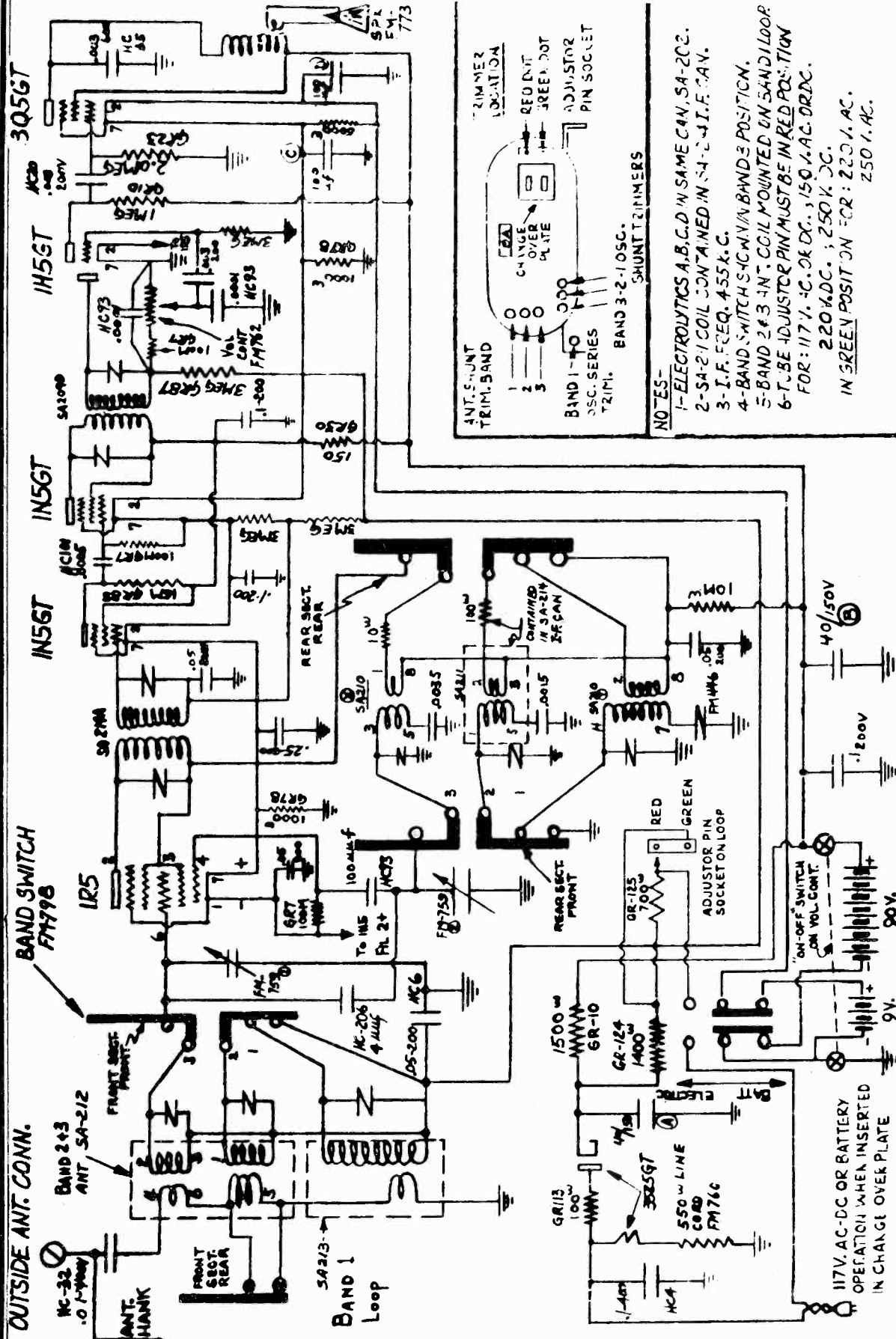
TEST OSCILLATOR

Steps	Set receiver dial to:	Adjust test oscillator frequency to:	Use dummy antenna in series with output of test oscillator consisting of:	Attach output of test oscillator to	Refer to parts layout diagram for location of trimmers mentioned below:
1	Any point where no interfering signal is received	Exactly 455 K. C.	0.2 Mfd. Condenser	High side to grid of 1A7GT tube, Low side to chassis (if non-Underwriter Approved) or Common Negative (if Underwriter Approved).	Adjust each of the 2nd I.F. transformer trimmer adjustment screws for maximum output, then adjust each of the 1st I.F. transformer trimmer adjustment screws for maximum output.
2	Rotate gang condenser to maximum capacity	Exactly 455 K. C.	See paragraph (C) above	See paragraph (C) above	Adjust R. F. coil trimmer for <u>minimum</u> 455 K. C. signal.
3	Rotate gang condenser to minimum capacity	Exactly 1650 K. C.	See paragraph (D) above	See paragraph (D) above	Adjust 1650 K. C. oscillator trimmer for maximum output.
4	Approximately 1400 K. C.	Approx. 1400 K. C.	See paragraph (D) above	See paragraph (D) above	Adjust 1400 K. C. antenna trimmer for maximum output.



NOTE-PARTS 25 AND 41 ARE OMITTED ON NON-UNDERWRITERS APPROVED MODELS, SEE WIRING DIAGRAM

ANDREA RADIO CORP.



- NO TES-
- 1- ELECTROLYTICS A, B, C, D IN SAME CAN, SA-202.
 - 2- SA-2-1 COIL CONTAINED IN SA-2-1 I.F. CAN.
 - 3- I.F. FREQ. 455 K.C.
 - 4- BAND SWITCH SWG W/IN BAND 3 POSITION.
 - 5- BAND 2 & 3 ANT. COIL MOUNTED ON SAND I LOOP.
 - 6- TUBE ADJUSTOR PIN MUST BE IN RED POSITION FOR: 117 V. A.C. OR D.C., 150 V. A.C. OR D.C. 220 V. D.C., 250 V. D.C. IN GREEN POSITION FOR: 220 V. A.C. 250 V. A.C.

ANDREA RADIO CORP.	DATE: 5 DEC. 1945
DESIGNED BY: [blank]	PART NO. XD-3
DRAWN BY: [blank]	REV. 10-27-46

OUTSIDE ANT. CONN.

BAND 2 & 3 ANT SA-212

FRONT SECT. FRONT REAR

SA213-1 Loop

REAR SECT. REAR

REAR SECT. FRONT

ADJUSTOR PIN SOCKET ON LOOP

ON-OFF SWITCH ON VOL. CONT.

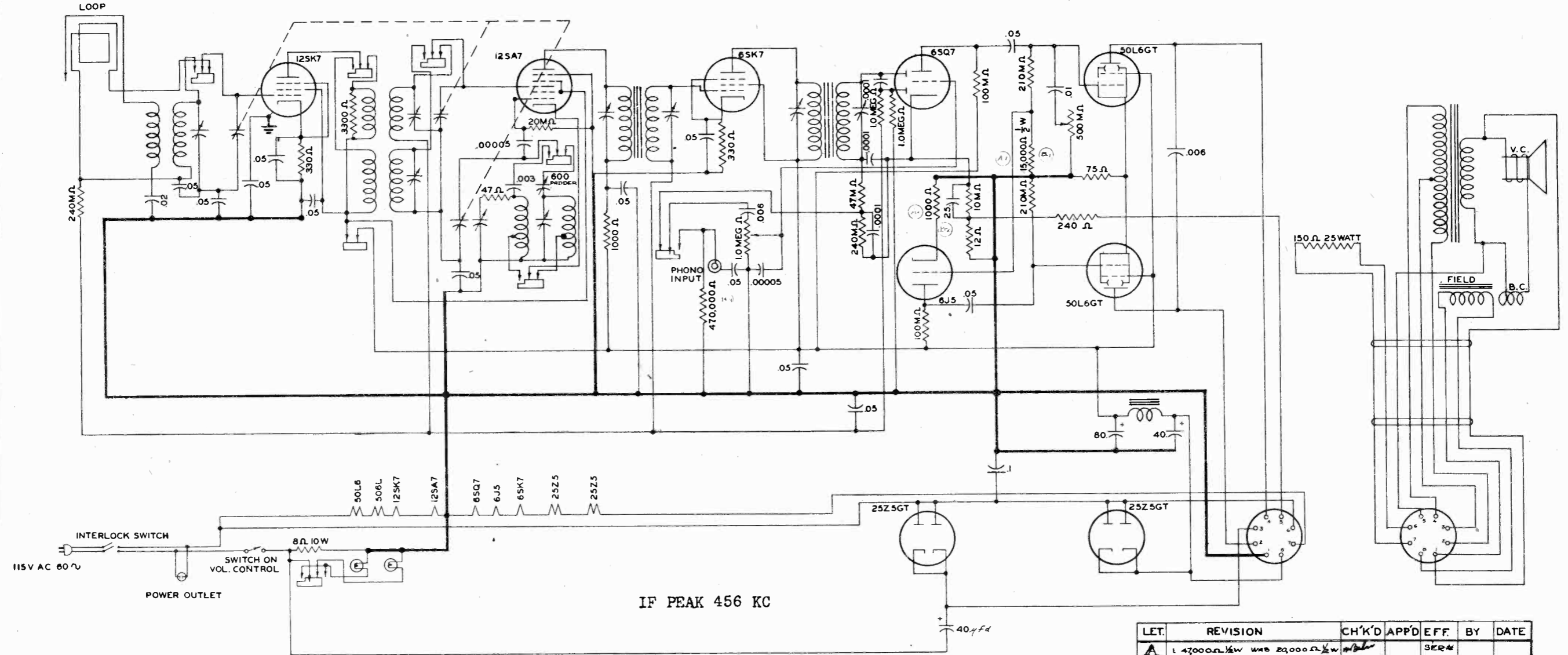
117V. AC-DC OR BATTERY OPERATION WHEN INSERTED IN CHARGE OVER PLATE

SA-212 BAND 2 AND 3 ANTENNA COIL

SA-211 BAND 2 OSCILLATOR COIL (NO CONNECTION TO LUG 4)

SA-210 BAND 1 AND 3 OSCILLATOR COIL

ANSLEY RADIO CORP.



IF PEAK 456 KC

LET.	REVISION	CHK'D	APP'D	EFF.	BY	DATE
A	1. 470,000 Ω 1/2 W WAS 20,000 Ω 1/2 W 2. DELETE 25 μF CATHODE BY-PASS CONDENSER	<i>m. Calhoun</i>	<i>W. W. ...</i>	SER# A1700	H. H.	9/3/40
B	1. 15,000 Ω 1/2 W WAS 47,000 Ω 1/2 W 2. 100,000 Ω 1/2 W WAS 500,000 Ω 1/2 W 3. ADD 470,000 Ω 1/2 W	<i>m. Calhoun</i>	<i>W. W. ...</i>	SER# A-2701	H. H.	9/5/40

VALUE	QUAN.	DESCRIPTION	PART NO.
.00005	2	CAPACITOR MICA	CM-1
.0001	3	MICA	CM-4
.003	1	MICA	CM-5
.006	2	MICA	CP-9
.01	1	PAPER	CP-3
.02	1	DOMINO	CP-13
.05	7	PAPER	CP-6
.1	1	PAPER	CP-10
40 X 80	1	ELECTROLYTIC	CE-4
40 MFD	1	ELECTROLYTIC	CE-5
25 MFD	1	ELECTROLYTIC	CE-2
.05 MFD	6	CAPACITOR DOMINO	CM-11
200 TO 600 MMFD	1	PADDER CONDENSER	CT-4
4 TO 35 MMFD	1	5 GANG TRIMMER COND.	CT-5
0 TO 420 MMFD	1	3 GANG VARIABLE COND.	CV-3
1.0 MEGOHM	2	RESISTOR	RM-2
8 Ω 10 W	1		RW-9
12 Ω 1/2 WATT	1		RW-19
240 Ω 1/2 WATT	1		RM-19
75 Ω 2 WATT	1		RW-12
150 Ω 25 WATT	1		RW-15
330 Ω 1/2 WATT	2		RW-14
1000 Ω	2		RM-9
3300 Ω	1		RM-15
10,000 Ω	1		RM-13
15,000 Ω	1		RM-23
20,000 Ω	1		RM-7
47,000 Ω	1		RM-6
100,000	2		RM-5
210,000	2		RM-4
240,000	2		RM-3
470,000 1/2 WATT	1	RESISTOR	RM-20
10 H 350 OHM DC	1	LOOP ANTENNA	LP-6
8" 10 WATT	1	FILTER REACTOR	LI-1
#47	2	DYNAMIC SPEAKER	QS-4
12SK7	1	PILOT LIGHTS	IL-2
12SA7	1	TUBE	V-15
6SK7	1		V-17
6SK7	1		V-5
6SQ7	1		V-7
50L6GT	2		V-18
6J5	1		V-3
25Z5GT	2	TUBE	V-2
1.0 MEGOHM	1	POWER OUTLET	PP-1
	1	VOLUME CONTROL SWITCH	RP-7

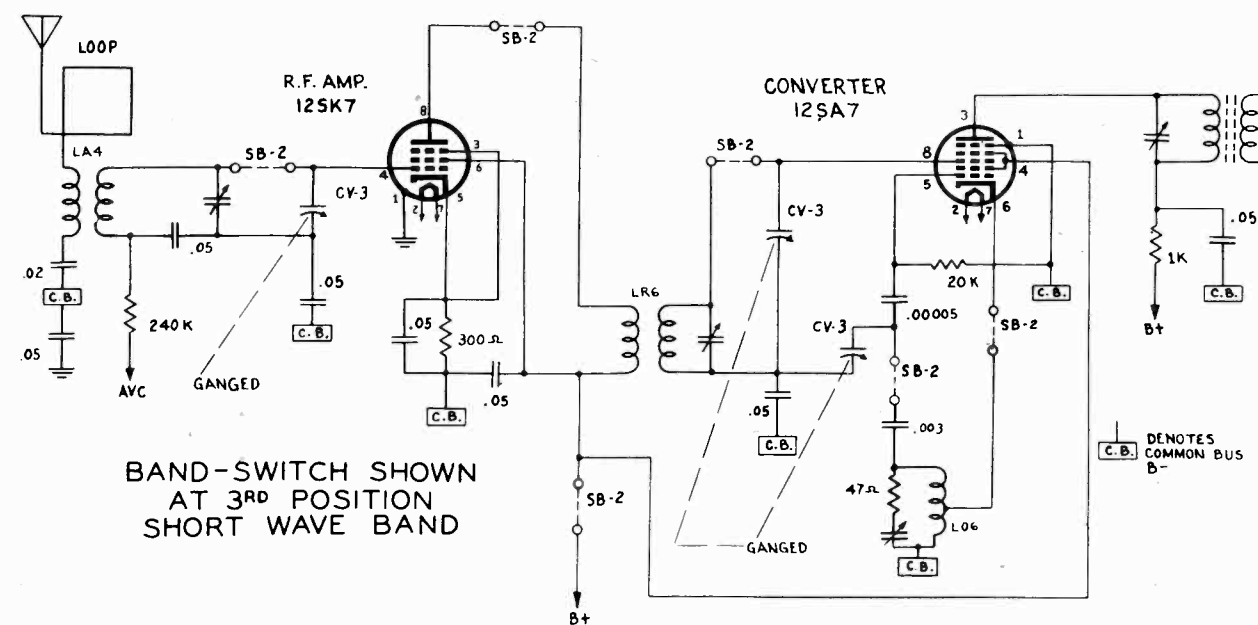
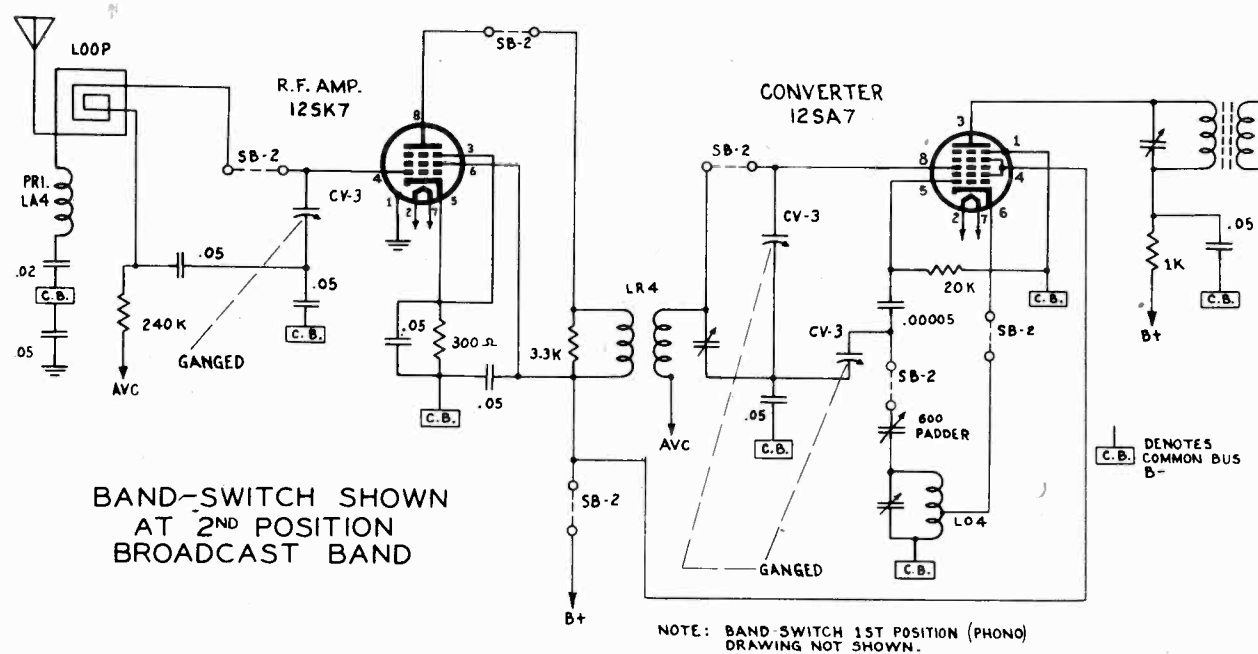
NOTE:

- BAND SWITCH IN BROADCAST POSITION.
- ALL CAPACITORS ARE MARKED IN MICROFARADS.
- IN SERIAL NO'S. 3701 THRU 4700 THE VOLUME CONTROL, NORMALLY A 1 MEGOHM POTENTIOMETER, IS .5 MEGOHM AND THE 470,000 Ω 1/2 W RESISTOR ACROSS THE PHONO JACK TO BUS IS 1 MEGOHM 1/2 W.

	1	PHONO INPUT JACK	J-2
500,000 Ω	1	TONE CONTROL	RP-8
	1	BAND CHANGE SWITCH	SB-2
	1	INTERLOCK SWITCH	SP-2
	1	I.F. TRANS. W/TRIMMER	TI-1
	1	I.F. TRANS. W/TRIMMER	TI-3
	1	BROADCAST OSC. COIL	LO-4
	1	SHORTWAVE OSC. COIL	LO-6
	1	BROADCAST R.F. COIL	LR-4
	1	SHORTWAVE R.F. COIL	LR-6
	1	SHORTWAVE R.F. COIL	LA-4

ANSLEY RADIO CORP.

MODEL 32



ANSLEY RADIO CORP.

MODEL 32

Alignment Instructions - Model 32

1. It is not necessary to remove the RF and IF/Audio Chassis from the housing to align the RF section. The IF section can be aligned, while in the case, by using an offset screwdriver.
2. After removing the metal case from the cabinet, the interlock switch, located on the IF/Audio chassis, must be closed. This can be done by jamming a wooden block between the chassis and the switch button.
3. Connect output meter across the voice coil. The simplest way of accomplishing this is to clip the meter leads on pins # 1 & 5 of the speaker plug socket - on the underside of the chassis.
4. Insert power plug in socket and turn volume control switch on.
5. Padder adjustments can be made by inserting a long thin - insulated shank - screwdriver, from the front, up under the RF chassis to the padder adjustment screw. Trimmer adjustments can be made directly from the front of the set. Location of the various trimmers from left to right (facing front of set) is as follows: SW Ant. Trimmer, SW RF Coil Trimmer, BC RF Coil Trimmer, SW Oscillator Coil Trimmer and BC Oscillator Coil Trimmer.
6. It is not necessary to connect the loop when aligning the set. To align the Broadcast band, connect the signal generator output across the green wire on the antenna terminal strip and bus. To align the Short Wave band, connect signal generator across the blue wire on the antenna terminal strip and bus.
7. Align set in accordance with the table below (Note: Signal generator should be set for 400 cycle 30% modulated output, receiver volume control is set at maximum, and all adjustments are made for maximum reading).

Dummy Antenna	Sig.Gen. Connection	Sig.Gen. Frequency	Band Sw. Position	Tuning Points	Remarks
.05 MFD	Mixer Grid and Bus	456KC	BC	IF Trimmers	Tuning Cond. at Max.
.05 MFD	Green Wire and Bus	620KC	BC	BC OSC Padder	Set Dial at 62 See Below **
.05 MFD	Green Wire and Bus	1620KC	BC	BC OSC Trimmer	Set Dial at 162 See Below **
.05 MFD	Green Wire and Bus	1620 KC	BC	BC RF Trimmer	Set Dial at 162 See Below *
400 ohms	Blue Wire and Bus	17.6	SW	SW OSC Trimmer	Set Dial at 17.6
400 ohms	Blue Wire and Bus	17.6	SW	SW RF Ant. Trimmers	Set Dial at 17.6 See Below *

* When aligning the SW band use caution not to align on the image frequency, which will be found lower on the dial.

** Repeat these steps as often as necessary until both ends of Broadcast Band are tracking perfectly.

8. Tracking Check Points are:

BC - 620KC	SW - 6.7 MC
BC - 1120KC	SW - 12.2 MC
BC - 1620KC	SW - 17.6 MC

MODELS 41,41A

ANSLEY RADIO CORP.

Alignment Instructions - Model 41 & 41A (Paneltone)

To align the Models 41 & 41A, it is not necessary to remove the chassis from the panel. However, the interlock switch - located on the rectifier chassis must be closed. This can best be done by using a U clamp placed over the button and body of the switch. Such a clamp can be made of a piece of steel 3" x 3/4" x 3/32" bent to form a U with a width of 1 3/8".

To align the IF stages proceed as follows:

- a. Connect signal generator across Mixer trimmer and chassis. Signal generator should be set for 456 kc, 400 cycle, 30% modulated output. The mixer section of the tuning condenser is the section nearest the tuning dial.
- b. Connect output meter across voice coil.
- c. Turn set on.
- d. Adjust IF trimmers for maximum output.

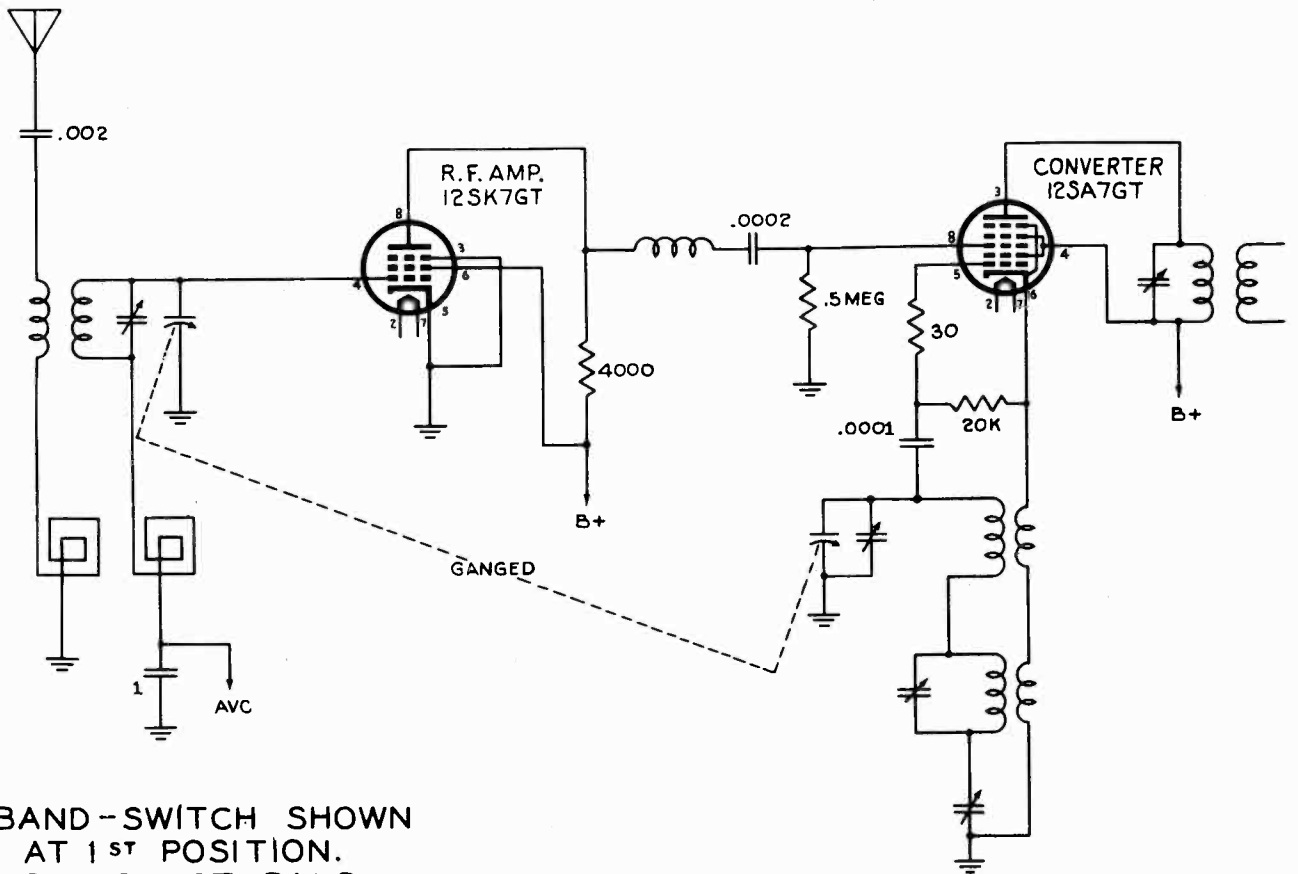
To align the RF section proceed as follows:

- a. Connect signal generator across antenna and ground terminals. Set generator for 620 kc. output (400 cycles, 30% modulated).
- b. Set tuning dial at 62.
- c. Peak oscillator padder at 620 kc. The oscillator padder is located directly under the tuning dial therefore it is necessary to tune the padder from the underside of the chassis, using either a flexible shaft or offset screwdriver.
- d. Retune signal generator for 1670 kc. output and set tuning dial at 167.
- e. Peak Oscillator and Mixer trimmers at 1670 kcs.
- f. Repeat steps a, b, c, d, & e as often as necessary until set is tracking correctly.
- g. Peak Antenna Trimmer at 1670 kcs.

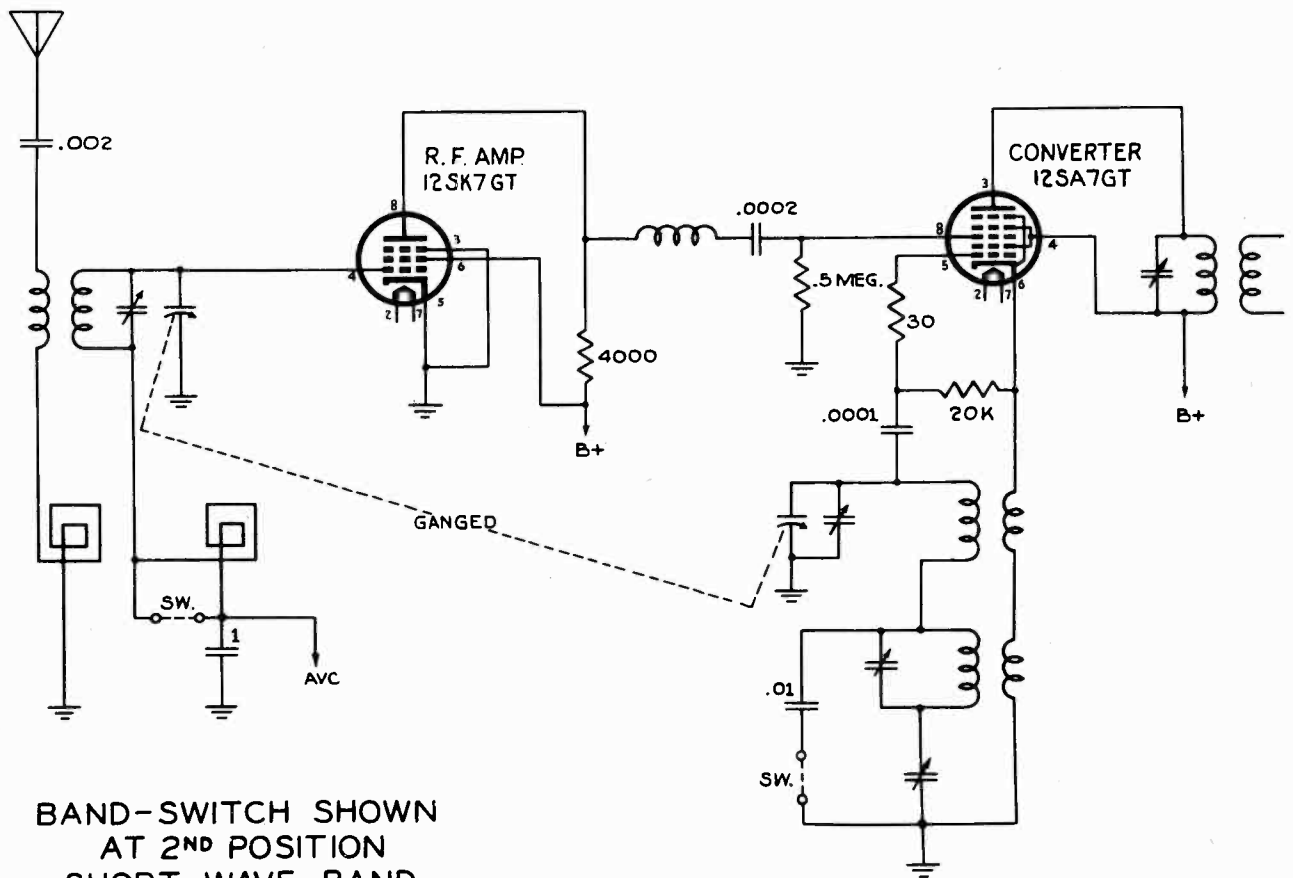
Tracking check points are:- 620, 1140, and 1670 kcs.

Oscillations which develop during alignment of the RF section can usually be cured by keeping the lead from the Antenna Tuning Condenser to the Antenna coil close to the chassis.

AUTOMATIC RADIO MFG. CO., INC.



BAND-SWITCH SHOWN AT 1ST POSITION. BROADCAST BAND



BAND-SWITCH SHOWN AT 2ND POSITION SHORT WAVE BAND

MODELS 601,602
 MODEL 611
 MODEL 612X
 MODEL 613X
 MODELS 614X,616X
 MODEL 640
 MODEL 650
 MODEL 670
 MODEL 677

AUTOMATIC RADIO MFG. CO., INC.

ALIGNMENT DATA

Models 601, 611, and 640 are aligned the same as the models listed below except no wave trap and no 12SK7 R. F. stage. I. F. and oscillator range setting to be all done from grid of the 12SA7 tube.

MODELS 612X, 613X, 614X, 616X, 650, 670, and 677

1. Connect signal generator, set at 455 KC, through a .1 mfd coupling condenser to the grid of the 12SA7GT tube.
2. Connect an output meter across speaker voice coil.
3. Adjust trimmers on I. F. transformers for a maximum output as indicated on the output meter.

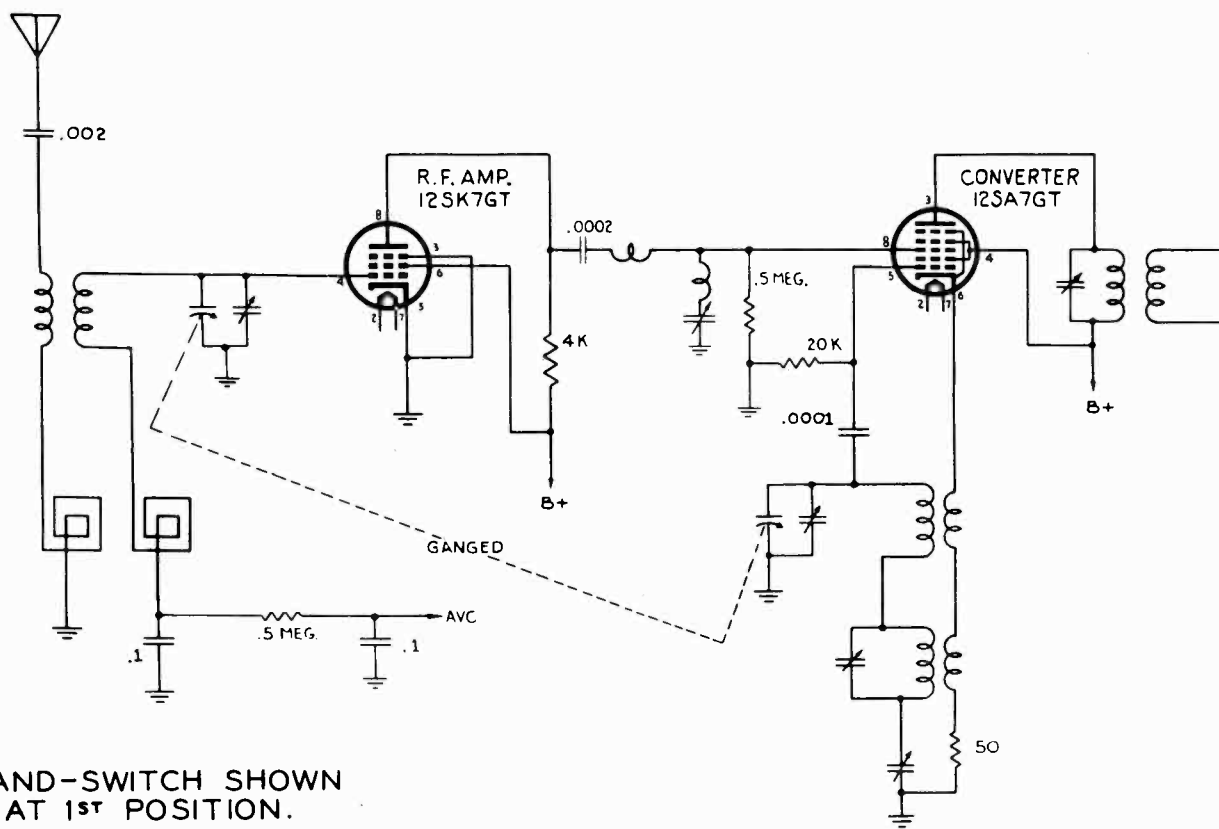
NOTE:

- a. Volume Control should be set at the full position.
- b. Keep signal generator output at a low value so that receiver AVC action will not affect alignment.
4. Connect signal generator, still set at 455 KC, to grid of 12SK7 R. F. tube.
5. Adjust wave trap trimmer, located under chassis, for minimum output.
6. Set signal generator to 1685 KC.
7. Turn tuning condenser to the minimum capacity position, plates out.
8. Adjust front (oscillator) trimmer on tuning condenser until generator signal is picked up.
9. Set signal generator to 1400 KC.
10. Connect output leads of signal generator in the form of a single turn loop and place this loop several inches away from the receiver loop antenna.
11. Tune receiver until generator signal is picked up. (It may be necessary to adjust the signal generator output to a maximum in order for the receiver to pick the signal up in this fashion.)
12. Adjust rear (antenna) trimmer on tuning condenser for maximum output.

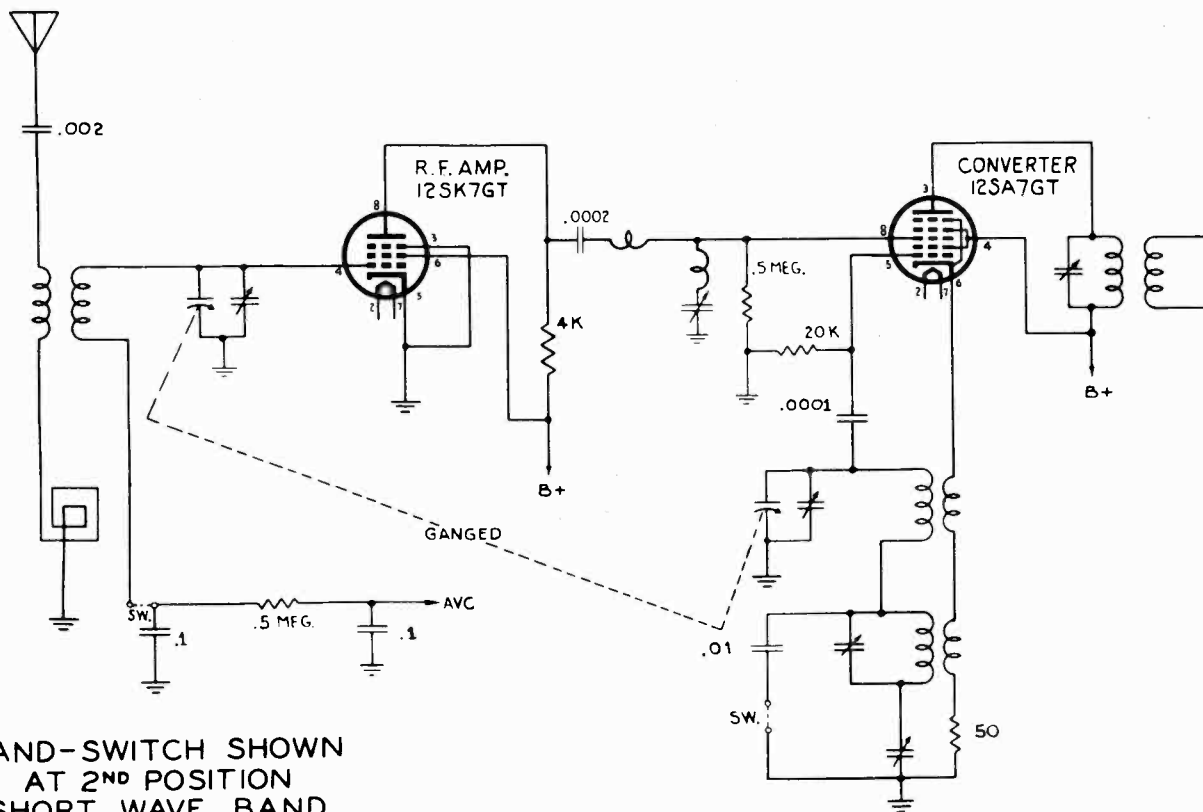
"clarified schematics"

MODELS 660, 662, 666

AUTOMATIC RADIO MFG. CO., INC.



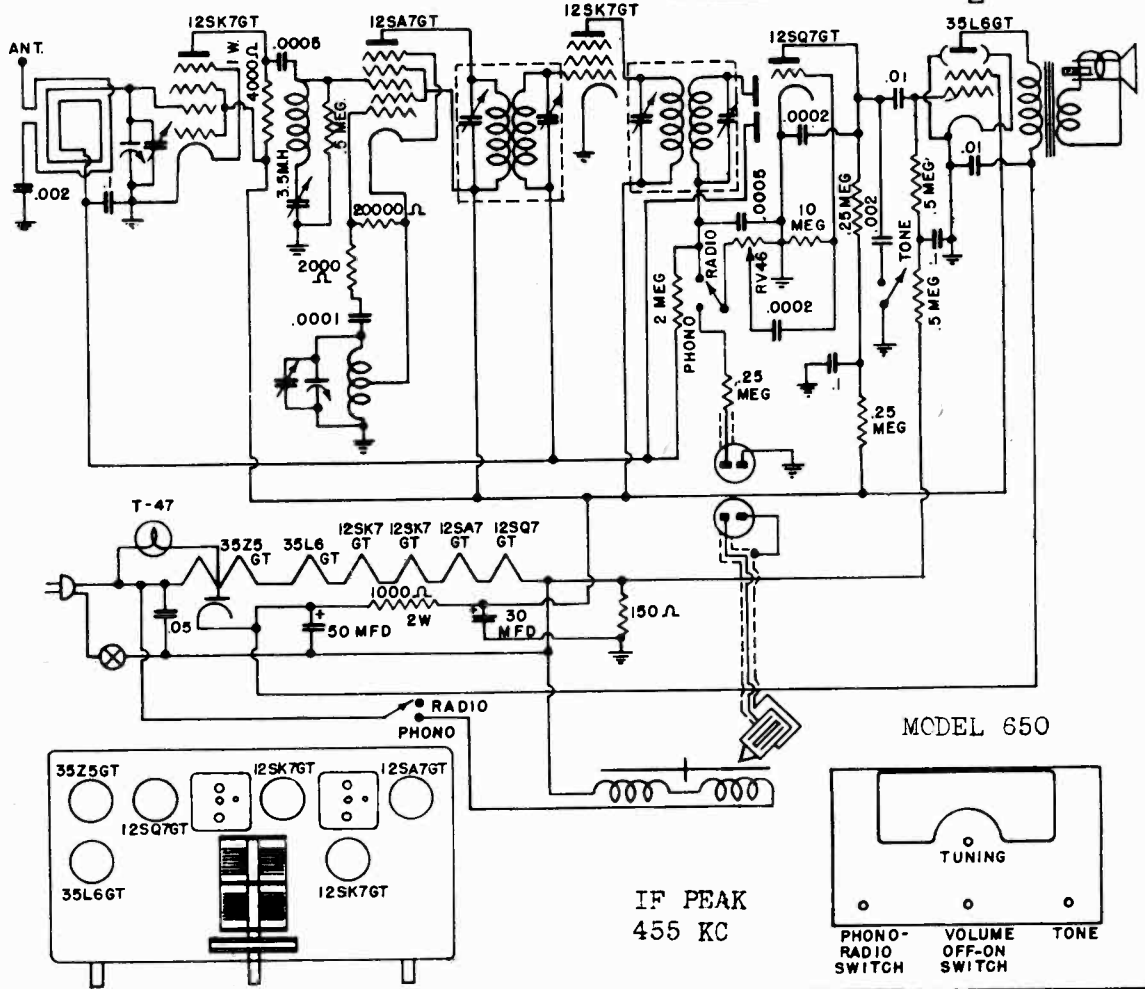
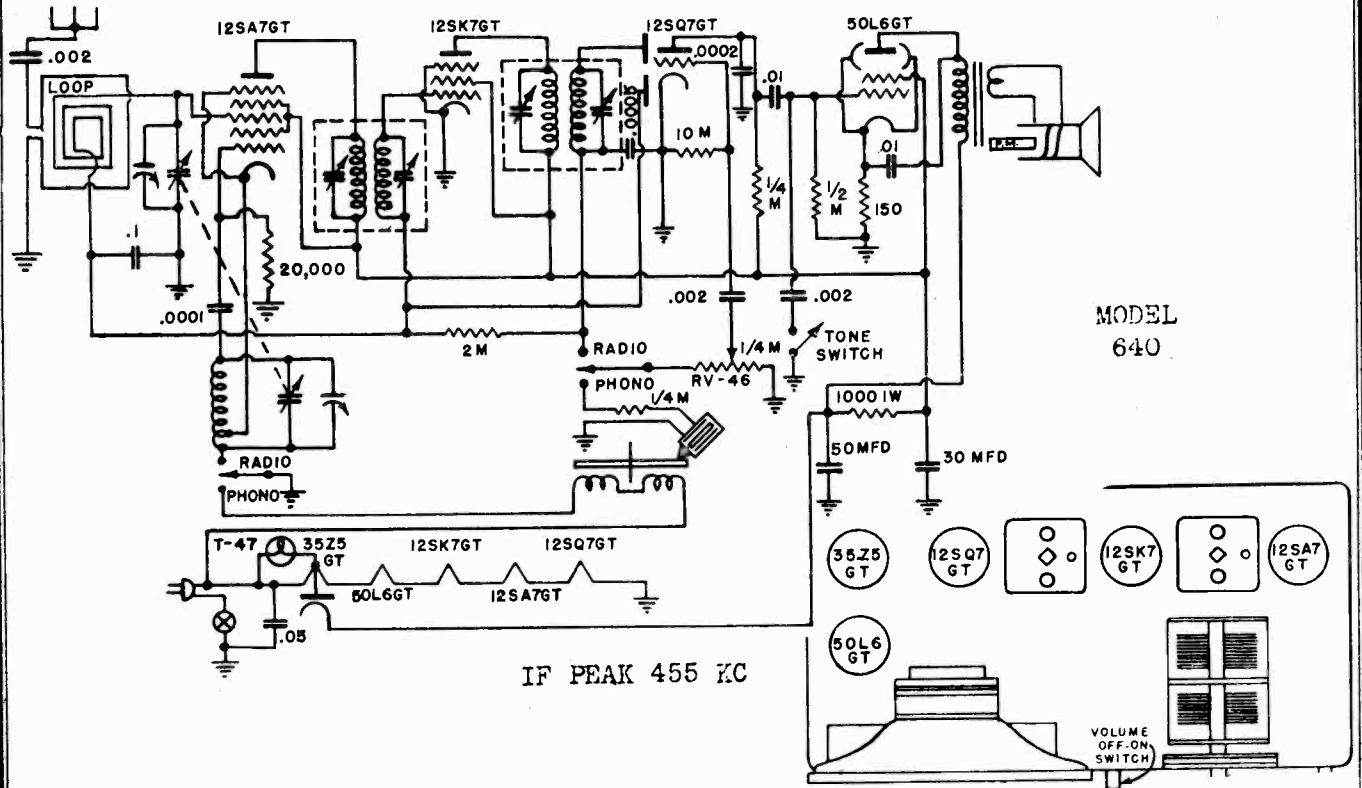
BAND-SWITCH SHOWN AT 1ST POSITION. BROADCAST BAND



BAND-SWITCH SHOWN AT 2ND POSITION SHORT WAVE BAND 5.7 TO 22.5 MC.

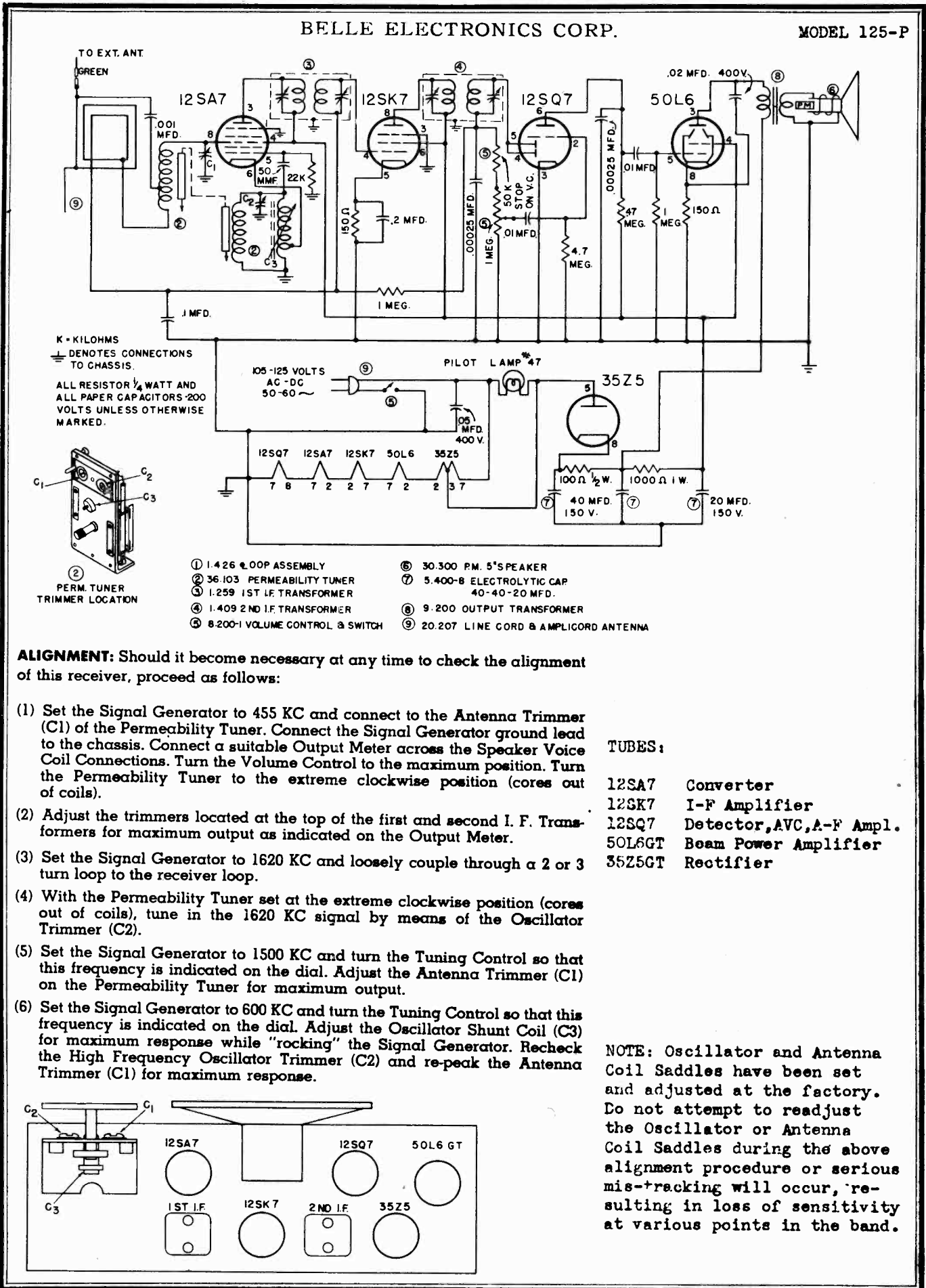
MODEL 640
MODEL 650

AUTOMATIC RADIO MFG. CO., INC.

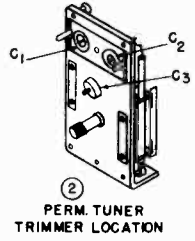


BELLE ELECTRONICS CORP.

MODEL 125-P



K = KILOHMS
 ≡ DENOTES CONNECTIONS TO CHASSIS.
 ALL RESISTOR 1/4 WATT AND ALL PAPER CAPACITORS 200 VOLTS UNLESS OTHERWISE MARKED.



- ① 1.426 μ .00P ASSEMBLY
- ② 36.103 PERMEABILITY TUNER
- ③ 1.259 1ST I.F. TRANSFORMER
- ④ 1.409 2ND I.F. TRANSFORMER
- ⑤ 8.200-1 VOLUME CONTROL & SWITCH
- ⑥ 30.300 P.M. 5\"/>

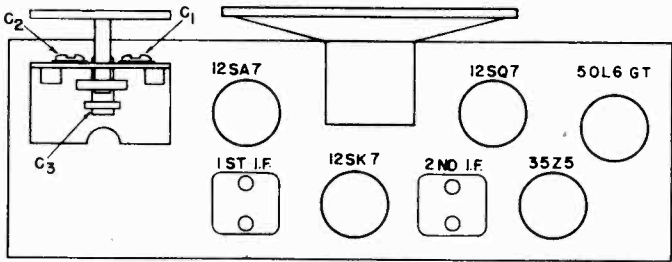
ALIGNMENT: Should it become necessary at any time to check the alignment of this receiver, proceed as follows:

- (1) Set the Signal Generator to 455 KC and connect to the Antenna Trimmer (C1) of the Permeability Tuner. Connect the Signal Generator ground lead to the chassis. Connect a suitable Output Meter across the Speaker Voice Coil Connections. Turn the Volume Control to the maximum position. Turn the Permeability Tuner to the extreme clockwise position (cores out of coils).
- (2) Adjust the trimmers located at the top of the first and second I. F. Transformers for maximum output as indicated on the Output Meter.
- (3) Set the Signal Generator to 1620 KC and loosely couple through a 2 or 3 turn loop to the receiver loop.
- (4) With the Permeability Tuner set at the extreme clockwise position (cores out of coils), tune in the 1620 KC signal by means of the Oscillator Trimmer (C2).
- (5) Set the Signal Generator to 1500 KC and turn the Tuning Control so that this frequency is indicated on the dial. Adjust the Antenna Trimmer (C1) on the Permeability Tuner for maximum output.
- (6) Set the Signal Generator to 600 KC and turn the Tuning Control so that this frequency is indicated on the dial. Adjust the Oscillator Shunt Coil (C3) for maximum response while "rocking" the Signal Generator. Recheck the High Frequency Oscillator Trimmer (C2) and re-peak the Antenna Trimmer (C1) for maximum response.

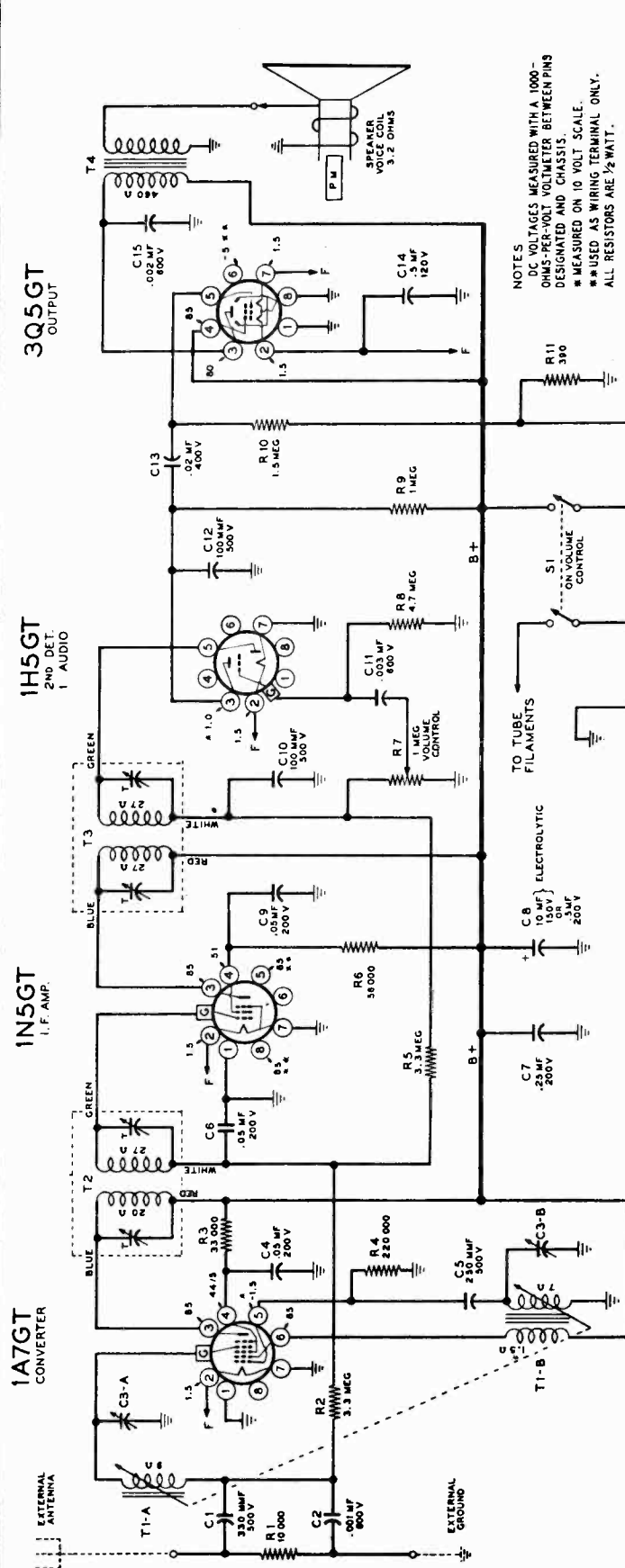
TUBES:

- 12SA7 Converter
- 12SK7 I-F Amplifier
- 12SQ7 Detector, AVC, A-F Ampl.
- 50L6GT Beam Power Amplifier
- 35Z5GT Rectifier

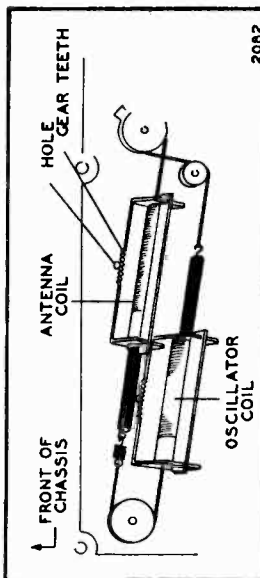
NOTE: Oscillator and Antenna Coil Saddles have been set and adjusted at the factory. Do not attempt to readjust the Oscillator or Antenna Coil Saddles during the above alignment procedure or serious mis-tracking will occur, resulting in loss of sensitivity at various points in the band.



BELMONT RADIO CORP.



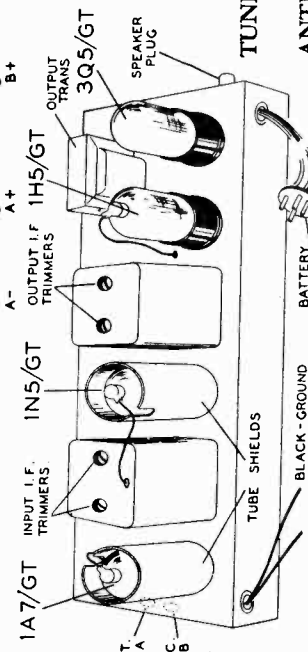
NOTES
 DC VOLTAGES MEASURED WITH A 1000-
 OHMS-PER-VOLT VOLTMETER BETWEEN PINS
 DESIGNATED AND CHASSIS.
 * MEASURED ON 10 VOLT SCALE.
 ** USED AS WIRING TERMINAL ONLY.
 ALL RESISTORS ARE 1/2 WATT.



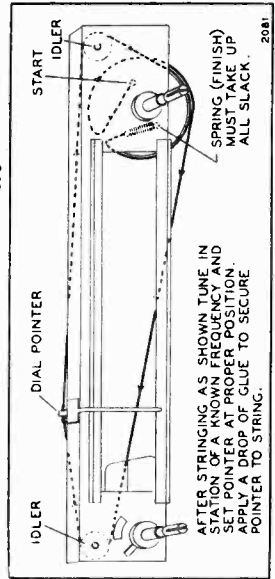
View of Coil Assembly

The antenna coil assembly is movable left or right. When making the adjustment as required in the alignment procedure, move the coil assembly very slowly, either by hand or by pivoting one edge of a screwdriver blade in the hole and engaging the blade in the gear teeth of the coil form.

- POWER SUPPLY**.....A Battery—1.5 volts, 250 ma.
 B Battery—90 volts, 14 ma.
- FREQUENCY RANGE**.....535 to 1720 kc.
INTERMEDIATE FREQ......455 kc.



- TUNING**.....Two permeability-tuned circuits.
ANTENNA.....External only. Also external ground.
SPEAKER.....5-inch; P.M., 1.5-ounce magnet; voice coil impedance 3.2 ohms.
POWER OUTPUT.....160 milliwatts undistorted.
 250 milliwatts maximum.
SENSITIVITY.....20 microvolts average for 50-milliwatt output.
SELECTIVITY.....48 kc broad at 1000 times signal at 1000 kc.



Replacement of Dial Pointer Drive Cord

MODEL 4B17
 MODELS 4B112, 4B113

BELMONT RADIO CORP.

ALIGNMENT INSTRUCTIONS FOR MODELS 4B17, 4B112, 4B113

- 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 radio chassis.

SIGNAL GENERATOR			TUNER SETTING	ADJUST FOR MAXIMUM OUTPUT (in order shown)
Frequency	Dummy Antenna	Connection to Radio		
455 kc	.1 mf	Grid (top cap) of 1A7GT	Iron cores all the way out	Trimmers on output and input I.F. cans
1720 KC, 4B17 1700 kc, 4B112, 4B113	.1 mf	Grid (top cap) of 1A7GT	Iron cores all the way out	Oscillator trimmer C3-B
1720 KC, 4B17 1700 kc, 4B112, 4B113	200 mmf	Antenna lead	Iron cores all the way out	Antenna trimmer C3-A
1400 kc	200 mmf	Antenna lead	Turn dial to 1400 kc	Adjust position of antenna coil (see coil view)*

* This adjustment and the previous adjustment are interlocking; therefore repeat the two adjustments alternately for best results.

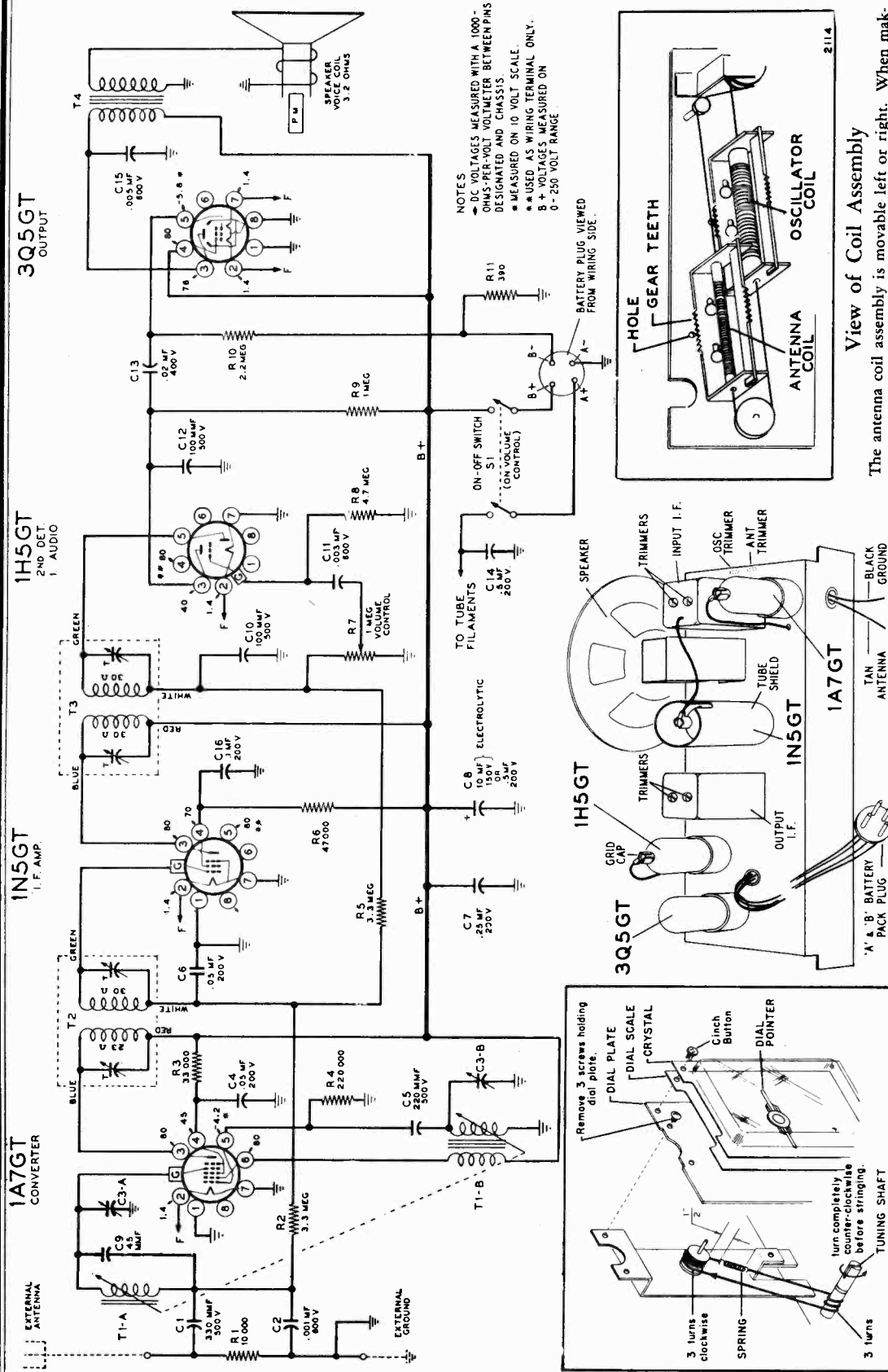
MODEL 4B17

REPLACEMENT PARTS LIST

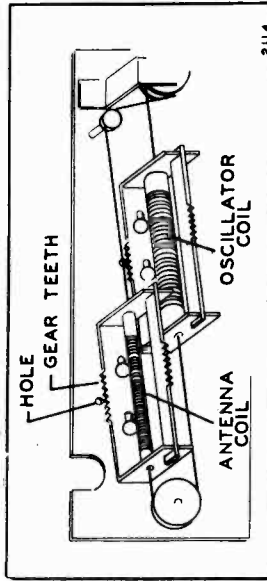
MODELS 4B112, 4B113

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CAPACITORS *			CAPACITORS *		
C1	C-8F3-11	330 mmf, 20%, mica	C1	C-8F3-11	330 mmf, 20%, mica
C2	C-8D-10929	.001 mf, 600 volts, 10%	C2	C-8D-10787	.001, 600 volts, 20%
C3-A, B	A-8H-10807	Dual trimmer; antenna (42-78 mmf) and oscillator (84-156 mmf)	C3-A, B	124165	Dual trimmer, antenna and oscillator. Range of each: 84-156 mmf
C4, C6, C9	C-8D-10770	.05 mf, 200 volts, 20%	C4, C6	C-8D-10770	.05 mf, 200 volts, 20%
C5	C-8F3-10	220 mmf, 20%, mica	C5	C-8F3-10	220 mmf, 20%, mica
C7	C-8D-10775	.25 mf, 200 volts, +20%—10%	C7	C-8D-10775	.25 mf, 200 volts, +20%—10%
C8	C-8D-11270	.5 mf, 200 volts, +20%—10%	C8	C-8D-11270	.5 mf, 200 volts, +20%—10%
	or			119117	10 mf, 150 volts, electrolytic
	119117	10 mf, 150 volts, electrolytic	C9	129177	45 mmf, 5%, ceramicon
C10, C12	C-8F3-113	100 mmf, 10%, mica	C10, C12	C-8F3-8	100 mmf, 20%, mica
C11	C-8D-10786	.003 mf, 600 volts, 20%	C11	C-8D-11013	.003 mf, 600 volts, 10%
C13	C-8D-10774	.02 mf, 400 volts, 20%	C13	C-8D-10774	.02 mf, 400 volts, 20%
C14	10017	.5 mf, 120 volts, +50%—10%	C14	C-8D-11270	.5 mf, 200 volts, +20%—10%
C15	C-8D-10784	.002 mf, 600 volts, 25%	C15	C-8D-10935	.005 mf, 600 volts, +40%—15%
			C16	C-8D-10771	.1 mf, 200 volts, +20%—10%
RESISTORS *			RESISTORS *		
R1	C-9B1-19	10,000 ohms, 1/2 watt, 20%	R1	C-9B1-19	10,000 ohms, 1/2 watt, 20%
R2, R5	C-9B1-34	3.3 megohms, 1/2 watt, 20%	R2, R5	C-9B1-34	3.3 megohms, 1/2 watt, 20%
R3	C-9B1-80	33,000 ohms, 1/2 watt, 10%	R3	C-9B1-80	33,000 ohms, 1/2 watt, 10%
R4	C-9B1-27	220,000 ohms, 1/2 watt, 20%	R4	C-9B1-27	220,000 ohms, 1/2 watt, 20%
R6	C-9B1-83	56,000 ohms, 1/2 watt, 10%	R6	C-9B1-82	47,000 ohms, 1/2 watt, 10%
R7, S1	A-10A-10155	Volume control (1 megohm) and on-off switch	R7, S1	101250	Volume control (1 megohm) and on-off switch
R8	C-9B1-35	4.7 megohms, 1/2 watt, 20%	R8	C-9B1-35	4.7 megohms, 1/2 watt, 20%
R9	C-9B1-31	1 megohm, 1/2 watt, 20%	R9	C-9B1-31	1 megohm, 1/2 watt, 20%
R10	C-9B1-32	1.5 megohms, 1/2 watt, 20%	R10	C-9B1-33	2.2 megohms, 1/2 watt, 20%
R11	C-9B1-57	390 ohms, 1/2 watt, 10%	R11	C-9B1-57	390 ohms, 1/2 watt, 10%
TRANSFORMERS AND COILS			COILS AND TRANSFORMERS		
T1-A, B	C-211-10171	Tuning assembly complete, including antenna and oscillator coils	T1-A, B	1364	Tuning assembly complete, including antenna and oscillator coils
T2	108202C	Input I.F. coil, complete in can (range of trimmers: pri. 60-110 mmf, sec. 40-70 mmf)	T2	108202	Input I.F. coil complete in can. Range of trimmers: primary, 60-110 mmf; secondary, 40-70 mmf
T3	108153D	Output I.F. coil, complete in can (range of trimmers: 40-70 mmf each)	T3	108153B	Output I.F. coil complete in can. Range of trimmers: 40-70 mmf ea.
T4	10591B	Output transformer	T4	10591B	Output transformer
MISCELLANEOUS			MISCELLANEOUS		
B-18A-10164	121210	Speaker, 5", P.M. Socket, for tubes (4 used)	114238	121210	Speaker, 5-inch, P.M. Tube socket
A-55A-7386-1	10724	Connector, for speaker plug. Plug, on speaker leads	115396	107361	Tube shield Battery cable assembly
B-14A-10152	A-2G-10162	Battery cable assembly. Pointer, for dial	128621-18	128621-9	Cabinet, walnut Cabinet, ivory
A-5B-10170-1	115396	Tube shield (for 1N5GT, 1A7GT)	128523-17	128523-8	Knob, walnut Knob, ivory
B-6D-10618	A-5B-10170-1	Dial scale. Knob (volume control, tuning)	128626B	128626	Back for cabinet, walnut Back for cabinet, ivory
B-2M-7758	A-6D-10163	Snap-in rivet for dial scale. Crystal for dial	131356	112920	Tee-pins for securing back Dial scale
A-6D-10163	A-2F-10165	On-off indicator	112914	13143	Snap-in rivets for dial scale Crystal for dial
A-2F-10165	A-49A-10173	Spring for on-off indicator	112908B	112915	Pointer Cord for dial pointer drive
A-49A-10173	A-3A-10156	Spring for on-off indicator. Tuning shaft	120184	120184	Spring for drive cord On-off indicator
A-3A-10156	A-53A-10576	Cord, for dial pointer drive (32")	120405	120405	Spring for indicator Trip for indicator
A-53A-10576	A-49A-11324	Spring for dial pointer drive cord	120409		

BELMONT RADIO CORP.

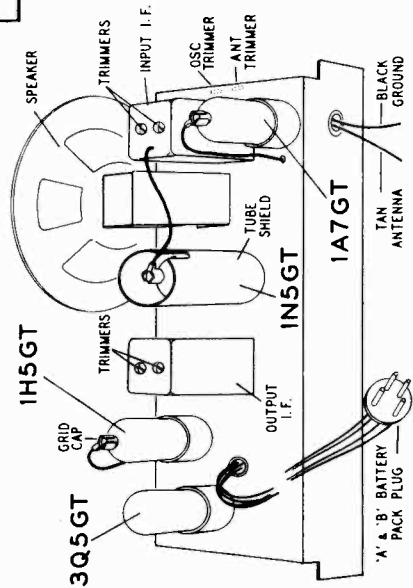


NOTES
 → DC VOLTAGES MEASURED WITH A 1000-
 OHMS-PER-VOLT VOLTMETER BETWEEN PINS
 DESIGNATED AND CHASSIS.
 * MEASURED ON 10 VOLT SCALE.
 ** USED AS WIRING TERMINAL ONLY.
 B+ VOLTAGES MEASURED ON
 0-250 VOLT RANGE



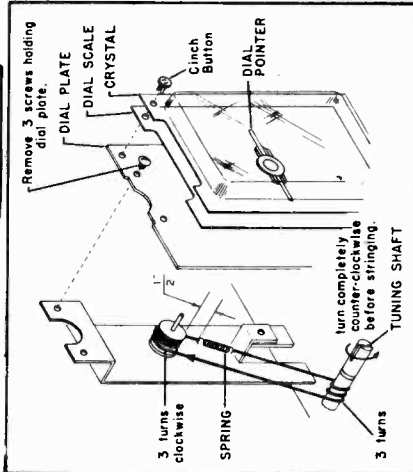
View of Coil Assembly

The antenna coil assembly is movable left or right. When making the adjustment as required in the alignment procedure, move the coil assembly very slowly, either by hand or by pivoting one edge of a screwdriver blade in the hole and engaging the blade in the gear teeth of the coil form.



View of Chassis

POWER SUPPLY A Battery—1.5 volts, 250 ma.
 B Battery—90 volts, 14 ma.
 FREQUENCY RANGE 540 to 1700 kc.
 INTERMEDIATE FREQ 455 kc.
 TUNING Two permeability-tuned circuits.
 ANTENNA External only. Also external ground.

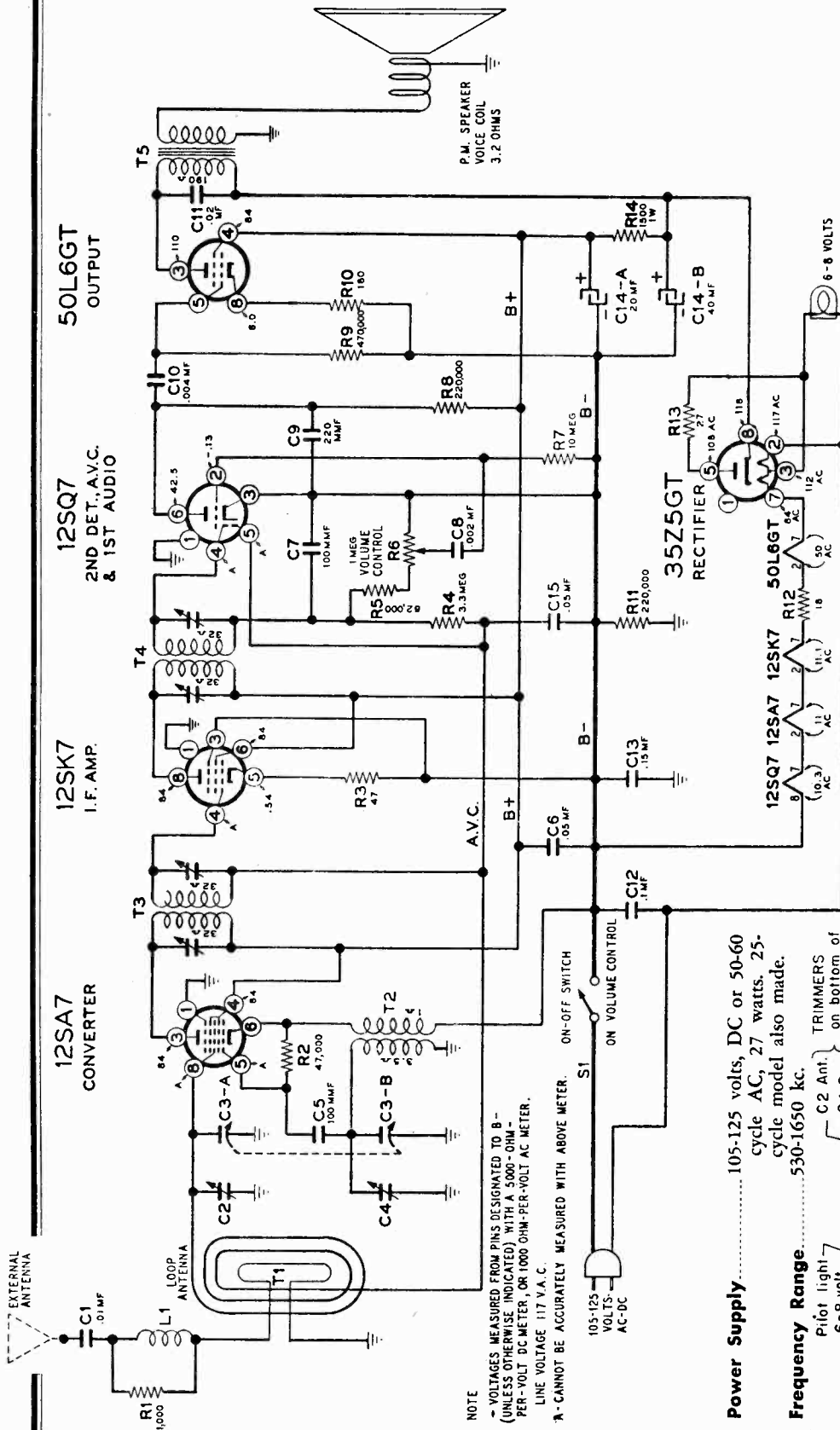


Replacement of Dial Pointer Drive Cord

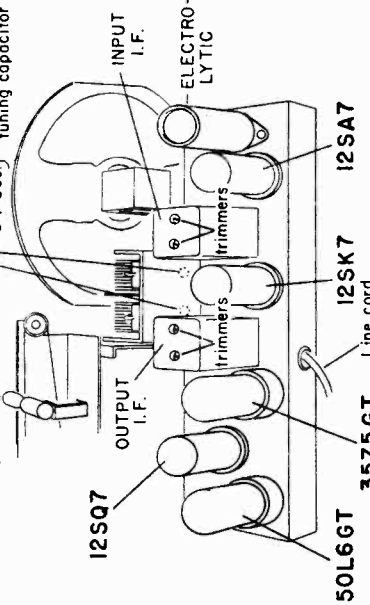
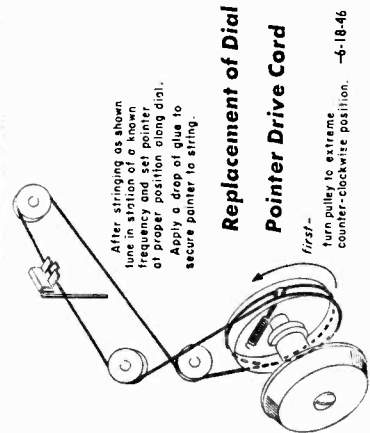
SENSITIVITY 30 microvolts average for 50-milliwatt output.
 SELECTIVITY 48 kc broad at 1000 times signal at 1000 kc.

MODEL 5D128

BELMONT RADIO CORP.



- Intermediate Freq Antenna 455 kc.
- Built-in loop; provisions also for external antenna connection.
- Tuning Speaker Two-gang capacitor.
- 5-inch, P.M., voice coil impedance 3.2 ohms.
- Power Output 0.94 watt undistorted.
- 1.4 watts maximum.
- Sensitivity 30 microvolts average for 50-milli watt output.
- Selectivity 52 kc broad at 1000 times signal at 1000 kc.



Power Supply 105-125 volts, DC or 50-60 cycle AC, 27 watts, 25-cycle model also made.

Frequency Range 530-1650 kc.

Pilot light 6-8 volt

C2 Ant. TRIMMERS on bottom of tuning capacitor

C4 Osc

BELMONT RADIO CORP.

ALIGNMENT PROCEDURE

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

SIGNAL GENERATOR			TUNER SETTING	ADJUST TRIMMERS TO MAXIMUM OUTPUT (in order shown)
Frequency	Coupling Capacitor	Connection to Radio		
455 kc	.1 mf	12SA7 grid	Rotor full open (plates out of mesh)	Input and output trimmers on IF cans
1650 kc	.1 mf	12SA7 grid	Rotor full open (plates out of mesh)	Oscillator trimmer C4
1400 kc†	None	See note below	1400 kc	Antenna trimmer C2

† For this adjustment chassis should be remounted in cabinet and loop connected. Lay generator lead near loop and turn up output. Loop will pick up energy. Antenna trimmer can be reached through a hole in the bottom of the cabinet.

REPLACEMENT PARTS LIST

When ordering parts, specify part number, model number, and series

Ref. No.	Part No.	Description
CAPACITORS		
C1	C-8D-10761	.01 mf, 400 volts, 20%
C3A, B	B-8A-10754	Two-gang, including antenna and oscillator trimmers. Range of gang: 11-388 mmf (ant.) and 8.5-152 mmf (osc.)
C5, C7	C-8F3-8	100 mmf, 20%, mica
C6, C15	C-8D-10770	.05 mf, 200 volts, 20%
C8	C-8D-10789	.002 mf, 600 volts, 20%
C9	C-8F3-10	220 mmf, 20%, mica
C10	C-8D-10788	.004 mf, 600 volts, 20%
C11	C-8D-10774	.02 mf, 400 volts, 20%
C12	C-8D-10760	.1 mf, 400 volts, +20%—10%
C13	C-8D-10953	.15 mf, 400 volts, +20%—10%
C14A, B	11992 or 11993	Electrolytic, 60 cycles, 40 mf-20 mf, 150 volts or Electrolytic, 25 cycles, 60 mf-40 mf, 150 volts
RESISTORS*		
R1	C-9B1-13	1000 ohms, 1/2 watt, 20%
R2	C-9B1-82	47,000 ohms, 1/2 watt, 10%
R3	C-9B1-46	47 ohms, 1/2 watt, 10%
R4	C-9B1-34	3.3 megohms, 1/2 watt, 20%
R5	C-9B1-85	82,000 ohms, 1/2 watt, 10%
R6, S1	101198	Volume control (1 megohm) and on-off switch
R7	C-9B1-37	10 megohms, 1/2 watt, 20%
R8, R11	C-9B1-27	220,000 ohms, 1/2 watt, 20%
R9	C-9B1-29	470,000 ohms, 1/2 watt, 20%
R10	C-9B1-53	180 ohms, 1/2 watt, 10%
R12	C-9B1-41	18 ohms, 1/2 watt, 10%
R13	C-9B1-43	27 ohms, 1/2 watt, 10%
R14	C-9B2-64	1500 ohms, 1 watt, 10%

Ref. No.	Part No.	Description
COILS AND TRANSFORMERS		
L1	12311	Load coil
T1	C-212-10895	Loop antenna assembly, including coil L1, resistor R1, and capacitor C1
T2	A-13D-10748	Oscillator coil
T3	B-13B-10091	Input I.F. transformer, complete in can. Range of trimmers: 45-85 mmf each

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.

Ref. No.	Part No.	Description
T4	B-13B-10812	Output I.F. transformer complete in can. Range of trimmers: 56-104 mmf each
T5	B-12C-10735	Output transformer

Ref. No.	Part No.	Description
DIAL AND TUNING PARTS		
	B-5B-10994.9	Tuning knob
	128523-8	Volume knob
	A-3F-10995	Locking screw for tuning knob
	120388	Locking spring for tuning knob
	128292B-8	Pushbutton
	A-6D-10758	Dial scale
	112857	Dial crystal
	112745	Dial pointer
	131211	Snap-in rivets for dial scale and crystal
	115361R	Lever and roller (roller faces away from gang)
	115361L	Lever and roller (roller faces gang)
	120283	Return spring for lever
	115146	Cams
	115143	Keywasher (11 used)
	1209	Cord for dial pointer drive (15")
	120285	Spring for drive cord

Ref. No.	Part No.	Description
MISCELLANEOUS		
	114201	Speaker, 5-inch, P.M.
	A-15B-10440	Tube socket (all tubes but 12SK7)
	121171	Tube socket (for 12SK7)
	B-15B-10076	Socket for electrolytic
	10798	Line cord and plug
	107249	Pilot light, type T-47
	107342	Pilot light socket assembly
	128561-9	Cabinet
	131193	Snap-in rivets, for cabinet back
	134123	Rubber foot
	112784	Set of call letters
	112606	Acetate tabs for pushbuttons

* The values of the resistors listed above are based on RMA standards, equally well with resistors of either group. An illustration of the difference follows: Pre-standardized value—200,000 ohms, 1/2 watt, 10% with resistors of pre-standardized values. This receiver will operate RMA value—220,000 ohms, 1/2 watt, 10%

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 it is necessary to remove the back (see under "Tubes" below). Use only a type T-47 lamp for replacement.

TUBES—Tubes which have weakened with age may cause poor or erratic reception; therefore have the tubes tested periodically and replace those which are weak. To reach the tubes, pry off the four snap-in rivets which secure the back to the cabinet. Take care not to break the connections of the three wires to the loop antenna

on the inside of the back. Tubes are removed most easily by rocking them back and forth gently while lifting. When replacing tubes, refer to the Chassis View to make sure that the replacements are properly made. **IMPORTANT:** See note in parts list concerning tube replacement.

SETTING THE PUSHBUTTONS—The pushbuttons may be used, after proper adjustment, for the automatic tuning of any five 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 five 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.

6. Follow this procedure for each of the four 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 knob. *It is important that this screw be tightened very firmly.*

8. The pushbuttons are now properly set for automatic tuning. Any of the five 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.

REMOVAL OF CHASSIS—If for any reason you wish to remove the radio chassis from the cabinet, proceed as follows: First be sure the line cord is disconnected from the house power receptacle. Then take off the back as described under "Tubes" above.

Pull the volume control knob off its shaft. Unscrew the locking screw in the center of the tuning knob and pull the knob off its shaft. Remove the four chassis mounting screws from the bottom of the cabinet. The chassis can now be slipped out.

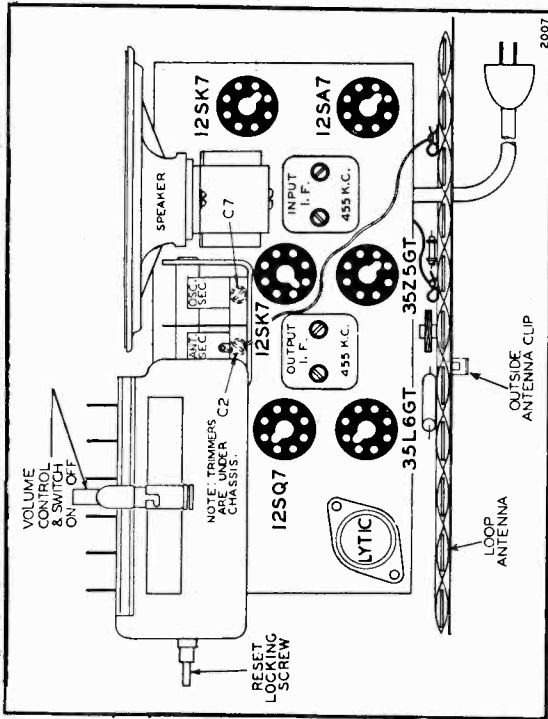
After the chassis is replaced the automatic pushbuttons will probably have to be reset.

ANTENNA AND GROUND—If an external antenna is used, check it periodically to make sure that all connections are clean and tight and that the antenna is insulated from the ground at all points.

MODEL 6D111

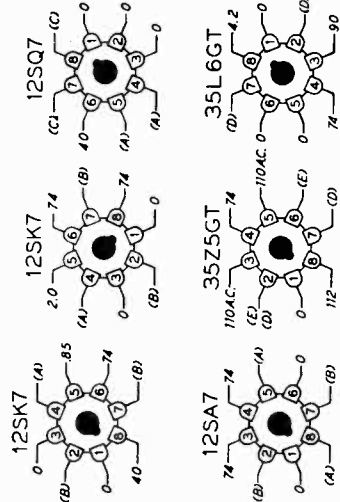
Series A

BELMONT RADIO CORP.



CHASSIS VIEW, SHOWING TUBE LOCATIONS

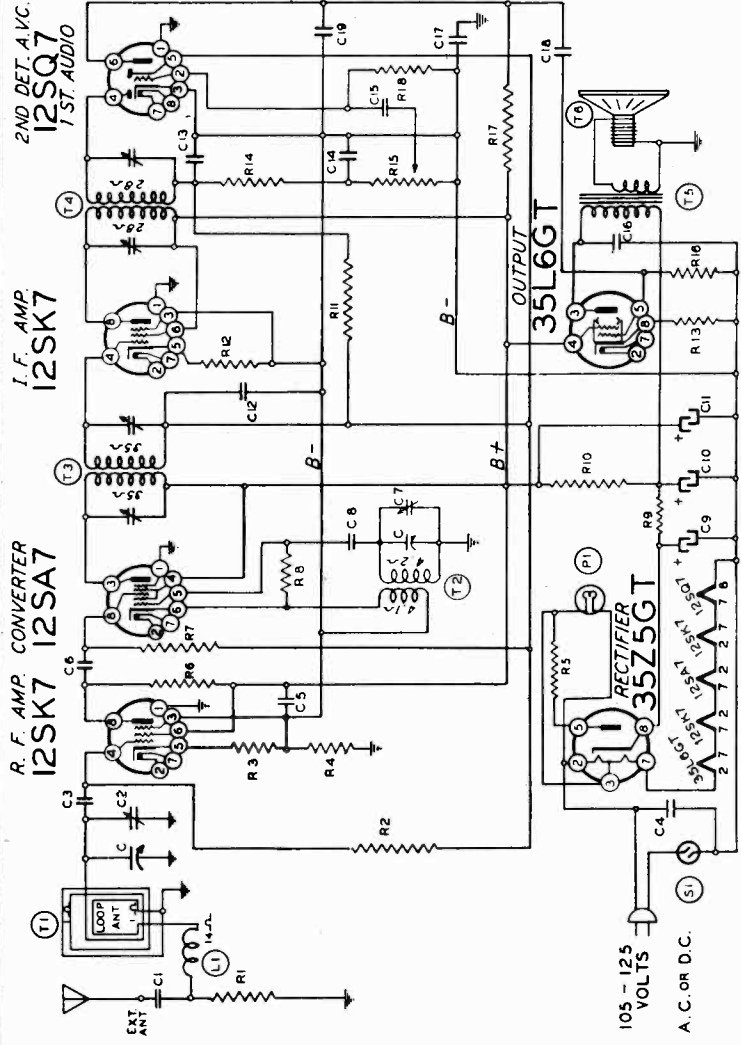
VOLTAGES MEASURED WITH 1000 OHM PER DIV. VOLTMETER BE- TWEEN SOCKET TERMINALS:
 A- CANNOT BE MEASURED WITH VOLTMETER.
 B- 12 VOLTS A.C. MEASURED ACROSS PINS 2 & 7.
 C- 12 VOLTS A.C. MEASURED ACROSS PINS 7 & 6.
 D- 30 VOLTS A.C. MEASURED ACROSS PINS 2 & 7.
 E- 117 VOLTS A.C. MEASURED ACROSS PINS 2 & 6.



BOTTOM VIEW OF CHASSIS

VOLTAGES AT TUBE SOCKET TERMINALS

Selectivity	55 Kc. broad at 1000 x signal at 1000 Kc.
Power output (in voice coil)	Undistorted 0.8 watt
	Maximum 1.0 watt
Voice coil impedance	3.2 ohms



RESISTORS

- R1 4700 ohms, 1/2 w., ±10%
- R2 1 megohm, 1/2 w., ±20%
- R3 150,000 ohms, 1/2 w., ±10%
- R4 22 ohms, 1/2 w., ±10%
- R5 4700 ohms, 1/2 w., ±20%
- R6 100,000 ohms, 1/2 w., ±20%
- R7 47,000 ohms, 1/2 w., ±20%
- R8 130 ohms, 1 w., ±10%
- R9 1200 ohms, 1 w., ±10%
- R10 3.3 megohms, 1/2 w., ±20%
- R11 390 ohms, 1/2 w., ±10%
- R12 150 ohms, 1/2 w., ±10%
- R13 47,000 ohms, 1/2 w., ±20%
- R14 470,000 ohms, 1/2 w., ±20%
- R15 470,000 ohms, 1/2 w., ±20%
- R16 220,000 ohms, 1/2 w., ±20%
- R17 4.7 megohms, 1/2 w., ±20%
- R18 4.7 megohms, 1/2 w., ±20%

MISCELLANEOUS

- L1 Loading coil
- P1 Pilot light bulb, type T-47
- S1 On-off switch on volume control
- T1 Loop antenna, complete
- T2 Oscillator coil
- T3 Input I.F. coil, 455 Kc.
- T4 Output I.F. coil, 455 Kc.
- T5 Output transformer for speaker
- T6 5-inch P.M. speaker

CONDENSERS

- C1 2 gang variable
- C2 .002 x 600 volts
- C3 Antenna trimmer on gang
- C4 .0005 mica
- C5 1 x 400 volts
- C6 .25 x 200 volts
- C7 .0001 mica
- C8 Oscillator trimmer on gang

Sensitivity (for 0.05 watt output)	10 microvolts average
Intermediate frequency	455 Kc.
Power consumption	35 Watts

BELMONT RADIO CORP.

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 knot at one end of cord and place it in key washer as shown. Wind cord one turn around shaft in direction shown.

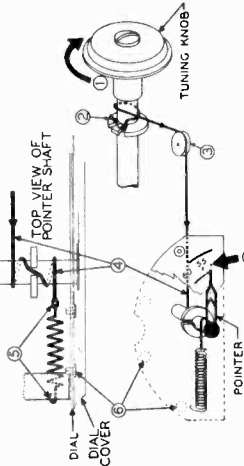
3. Pass cord over idler pulley.

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.



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. Press an acetate tab (supplied in small envelope) into each of the pushbuttons.
3. Insert one call-letter tab in the rectangular opening in each of the pushbuttons, in any sequence.
4. 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). A coin may be used for this purpose.
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.**

ALIGNMENT PROCEDURE

- No aligning adjustments should be attempted until all other possible causes of trouble have been checked.
- 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 antenna lead to antenna value in series with generator.
- 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.

REPLACEMENT PARTS LIST

When ordering parts, specify part number, schematic symbol when applicable, receiver model number, and series. Use only genuine factory replacement parts.

Part No.	Schematic Symbol	Description
10025	C1, C15	.002 x 500 volts, ±25%
10026	C2	.0005 mfd., ±20%
10027	C3	.001 mfd., ±20%
1006	C4	.25 x 200 volts, ±20%
1285	C5	.001 mfd., ±20%
11894	C6, C8, C19	Electrolytic (for 60-cycle a.c.)
	C9, C10, C11	Electrolytic (for 25-cycle a.c.)
11895	C9, C10, C11	60 mfd. x 150 volts, 40 mfd. x 150 volts, 20 mfd. x 150 volts
1009	C12	500 ohms, ±10%
139161	C13, C14	Dual 400L mica, ±10%
10025	C15	.02 x 450 volts, ±20%
10010	C16	.02 x 400 volts, ±20%
100106	C16	.08 x 400 volts, ±10%
A-9B1-70	R1	4700 ohms, 1/2 watt, ±10%
A-9B1-71	R2	200 ohms, 1/2 watt, ±20%
A-9B1-50	R3	100 ohms, 1/2 watt, ±10%
A-9B1-26	R4	150,000 ohms, 1/2 watt, ±20%
A-9B1-42	R5	25 ohms, 1/2 watt, ±10%
A-9B1-43	R6	25 ohms, 1/2 watt, ±10%
A-9B1-27	R7	100,000 ohms, 1/2 watt, ±20%
A-9B1-23	R8, R14	47,000 ohms, 1/2 watt, ±20%
A-9B2-53	R9	180 ohms, 1 watt, ±10%
A-9B2-54	R10	300 ohms, 1 watt, ±10%
A-9B1-57	R11	330 ohms, 1/2 watt, ±10%
A-9B1-52	R12	150 ohms, 1/2 watt, ±10%
A-9B1-29	R13	100,000 ohms, 1/2 watt, ±20%
A-9B1-25	R14	27,000 ohms, 1/2 watt, ±20%
A-9B1-35	R15	4.7 megohms, 1/2 watt, ±20%
12310	L1	Loop antenna assembly, complete on back
B-13E-10242	T1	Oscillator coil in can, 455 Kc.
A-13D-10215	T2	Oscillator coil in can, 455 Kc.
108140	T3	Output I.F. coil in can, 455 Kc.
108146	T4	Output I.F. coil in can, 455 Kc.
151210	S1	8-prong metal tube sockets, molded
121171	S2	Socket for 12SK7
121216	S3	Socket base, bakelite
107271	S4	Pilot light socket assembly
114197	S5	5-inch P.M. speaker for speaker
105104	T5	Output transformer for speaker
115448	T6	End plate (right hand bracket)
115448C	T7	End plate (left hand bracket)
115446	T8	Chassis

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

Part No.	Schematic Symbol	Description
115143	(Cont.)	Key washer (13 used on cam shaft)
117528		Brass spacer (one used on cam shaft)
117902		Brass spacer (four used on cam shaft)
131181		Spring washers, for locking collar
117094		Locking collar
117392		Brass spacer (next to locking collar)
115592		Key washer (holds drive cord on and off pointer shaft)
117600		Lever with roller
115261		Return spring for levers
120283		Dial bracket assembly
115443B		Drive cord, 6 inches used
12043		Take-up spring for drive cord
B-5D-10241		Dial scale
115359		Chin buttons, for dial scale
A-234-7158		Chin buttons for fastening scale to bracket
117566-1		Brass spacer (at end of tuner from dial)
117833		Brass spacer (for spacing pointer from dial)
10788	R15	Volume control and switch
101218	P1	1 megohm potentiometer, Type T-47
B-5A-1211		Chassis screws, No. 6 x 1/2, hex. head
132100		Line cord and plug
134123		Volume control knob
128292-8		Trimmer potentiometer, Type T-47
117374		Station call for seal letters
128473-18		Cabinet, bakelite, walnut
128473-9		Cabinet, bakelite, ivory
128496-17		Knob, volume, walnut
128292-5		Knob, tuning, walnut
128277-9		Locking screw for tuning knob
117421		Locking spring for tuning knob
120388		Locking spring for tuning knob

Part No.	Schematic Symbol	Description
10788	R15	Volume control and switch
101218	P1	1 megohm potentiometer, Type T-47
B-5A-1211		Chassis screws, No. 6 x 1/2, hex. head
132100		Line cord and plug
134123		Volume control knob
128292-8		Trimmer potentiometer, Type T-47
117374		Station call for seal letters
128473-18		Cabinet, bakelite, walnut
128473-9		Cabinet, bakelite, ivory
128496-17		Knob, volume, walnut
128292-5		Knob, tuning, walnut
128277-9		Locking screw for tuning knob
117421		Locking spring for tuning knob
120388		Locking spring for tuning knob

MISCELLANEOUS

Part No.	Schematic Symbol	Description
10788	R15	Volume control and switch
101218	P1	1 megohm potentiometer, Type T-47
B-5A-1211		Chassis screws, No. 6 x 1/2, hex. head
132100		Line cord and plug
134123		Volume control knob
128292-8		Trimmer potentiometer, Type T-47
117374		Station call for seal letters
128473-18		Cabinet, bakelite, walnut
128473-9		Cabinet, bakelite, ivory
128496-17		Knob, volume, walnut
128292-5		Knob, tuning, walnut
128277-9		Locking screw for tuning knob
117421		Locking spring for tuning knob
120388		Locking spring for tuning knob

BELMONT RADIO CORP.

MODEL 8A59

6K6GT
OUTPUT

6J5GT
INVERTER

6SQ7
2ND DET., A.V.C.
& 1ST AUDIO

6SK7
I.F. AMP.

5Y3GT
RECTIFIER

6K6GT
OUTPUT

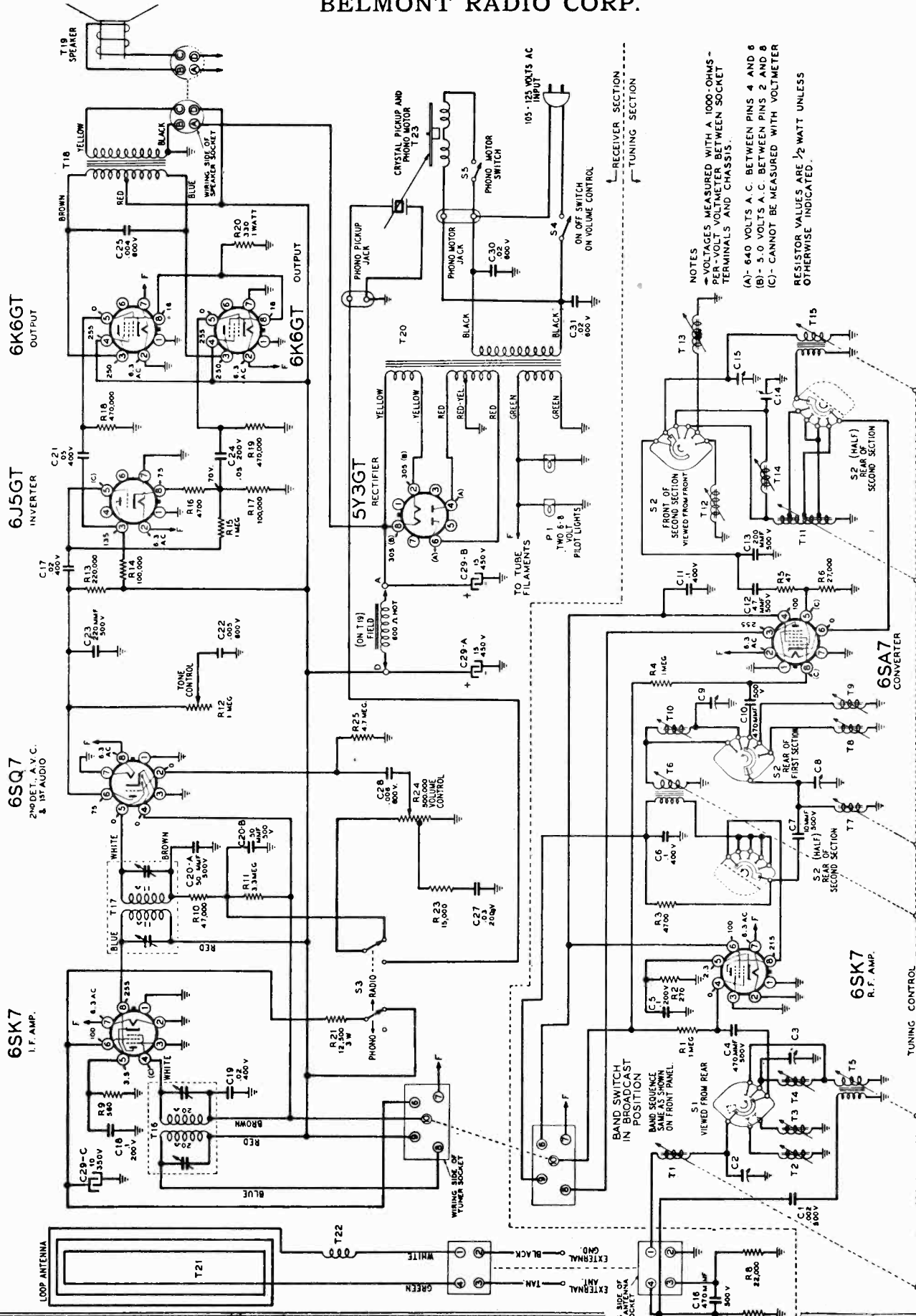
6J5GT
INVERTER

6SQ7
2ND DET., A.V.C.
& 1ST AUDIO

6SK7
R.F. AMP.

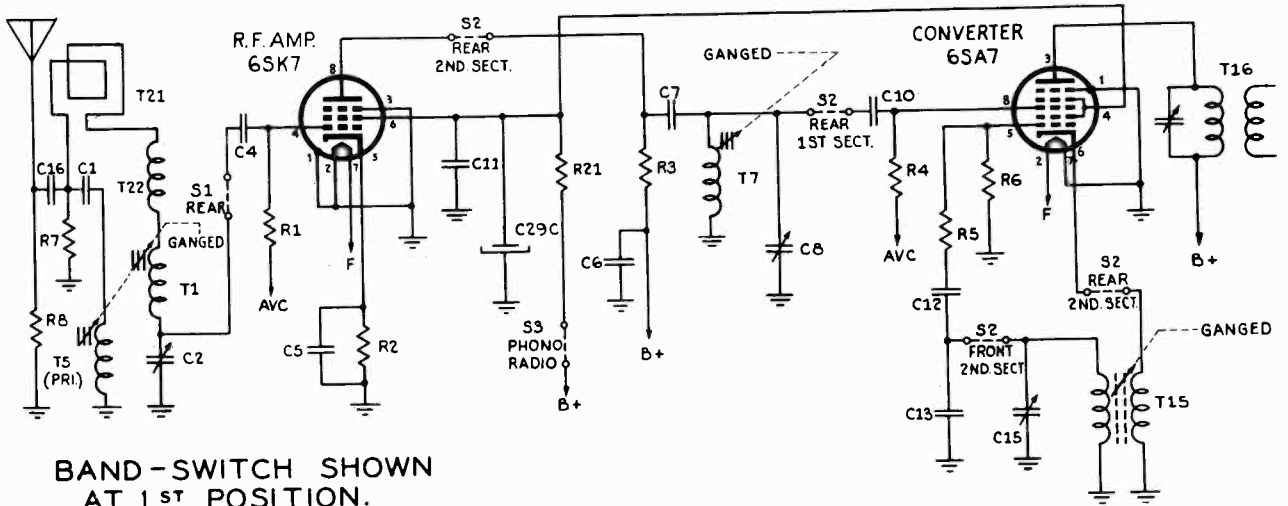
6SA7
CONVERTER

6SK7
R.F. AMP.

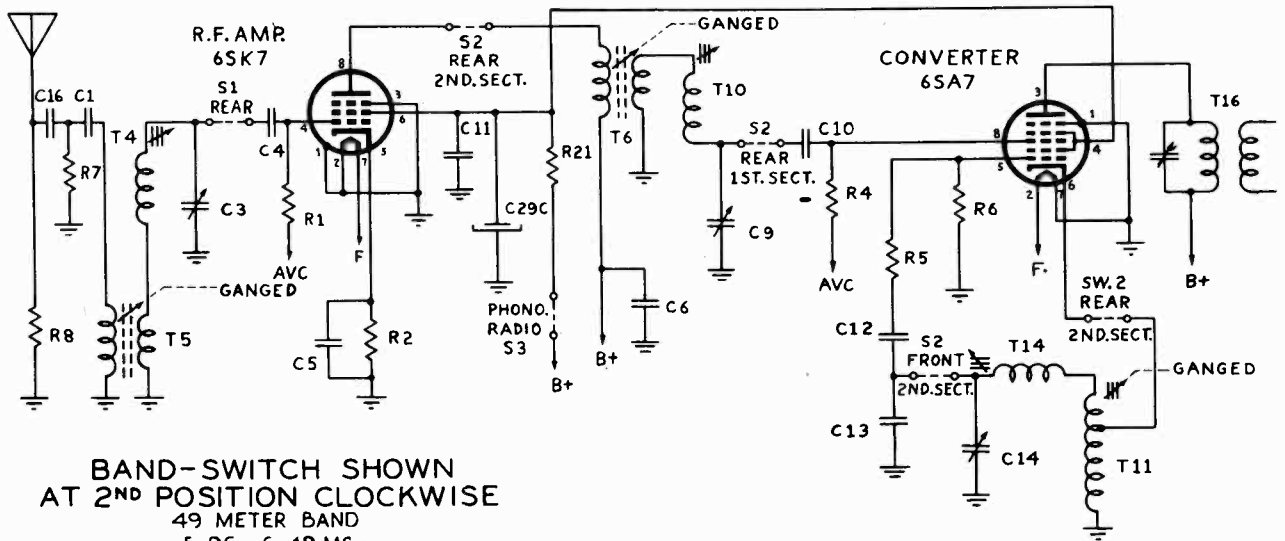


NOTES
 → VOLTAGES MEASURED WITH A 1000 OHMS - PER-VOLT VOLTMETER BETWEEN SOCKET TERMINALS AND CHASSIS.
 (A)- 640 VOLTS A.C. BETWEEN PINS 4 AND 6
 (B)- 5.0 VOLTS A.C. BETWEEN PINS 2 AND 8
 (C)- CANNOT BE MEASURED WITH VOLTMETER
 RESISTOR VALUES ARE 1/2 WATT UNLESS OTHERWISE INDICATED.

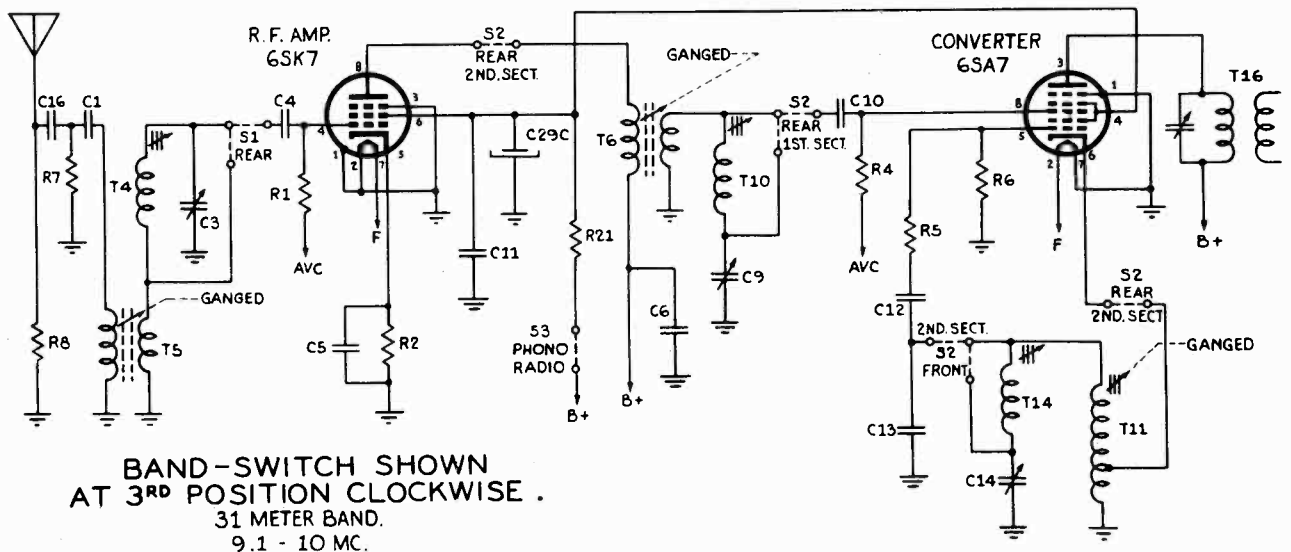
5-10-46



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



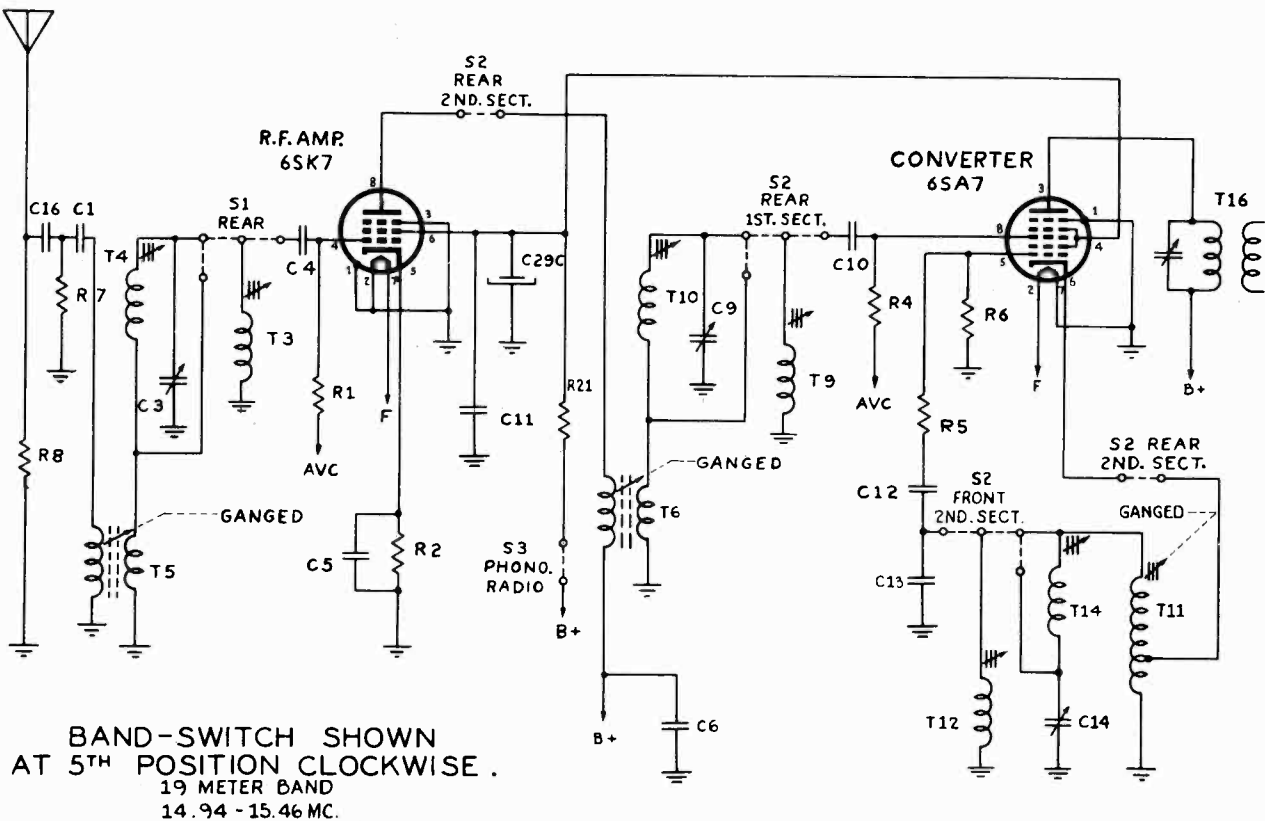
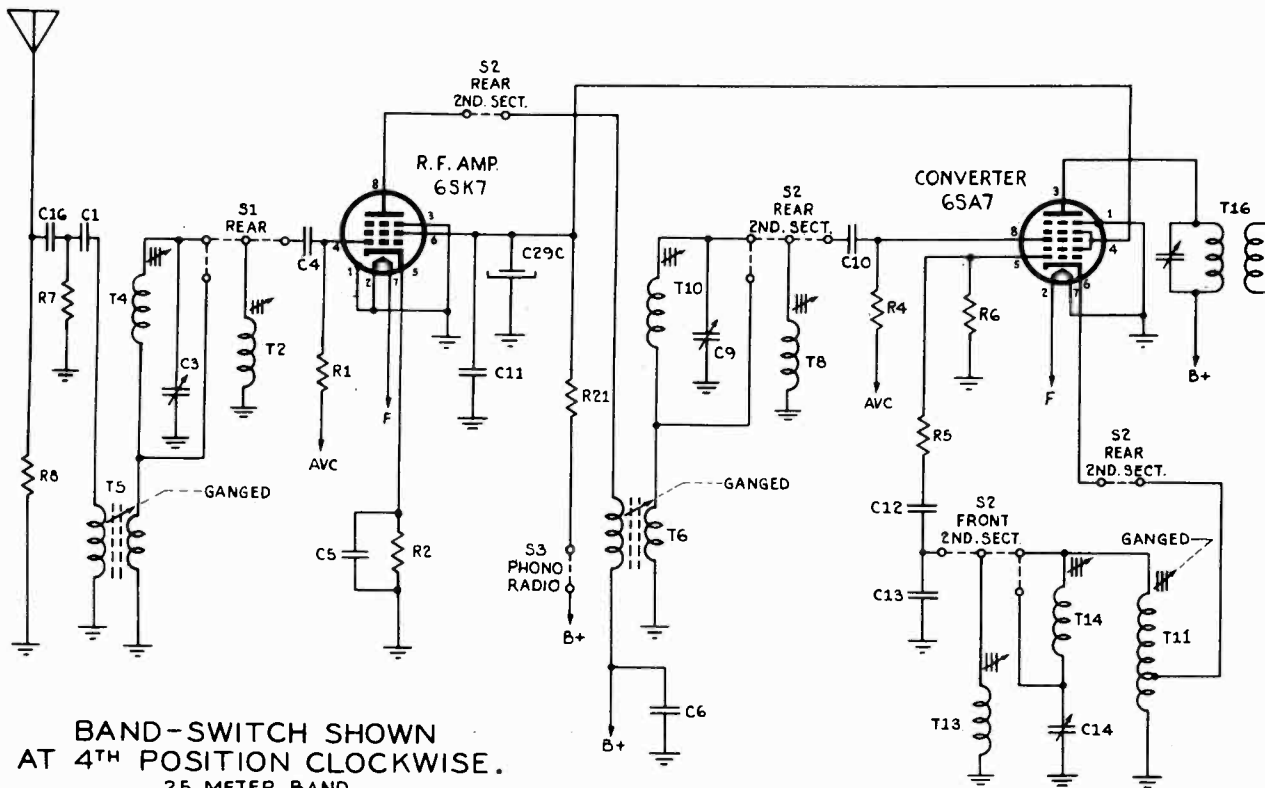
BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE 49 METER BAND 5.96 - 6.19 MC.



BAND-SWITCH SHOWN AT 3RD POSITION CLOCKWISE. 31 METER BAND. 9.1 - 10 MC.

MODEL 8A59

BELMONT RADIO CORP.



BELMONT RADIO CORP.

MECHANICAL ADJUSTMENT—The core tuning bar (see illustration of iron cores) and dial pointer must be adjusted mechanically before any electrical alignment is attempted. Rotate the manual tuning control until the core bar is farthest from the coils. For proper adjustment the bar should be approximately 1/32 of an inch from the two rod guide angles.

With the core bar in this position, adjust the dial pointer to coincide with 1600 kc on the dial scale.

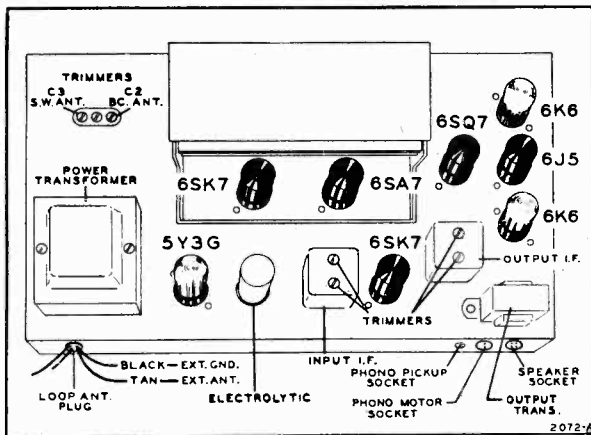
Rotate each of the three broadcast coils (see illustration) until the end of the coil is 1-5/32" from the end of the coil form. Rotate the three 9-mc coils until this dimension is 1-1/16" for these coils. After these adjustments have been made, the unit can be aligned electrically.

ELECTRICAL ADJUSTMENT—To align the set make the following preliminary adjustments: Set the tone pushbutton for treble tone; set the volume control at maximum; connect the ground post of the signal generator to the radio chassis; connect the output meter across a 3.2-ohm output load; and allow the receiver and signal generator to warm up for several minutes.

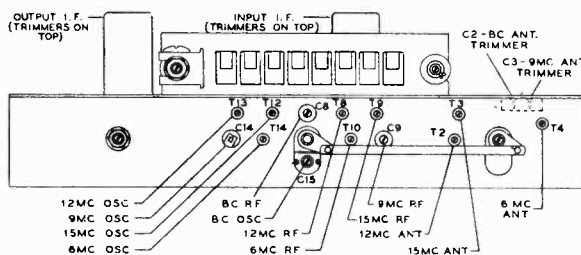
Align the set according to the sequence given in the chart. The indicated dummy antenna is to be connected in series between the signal generator output lead and the receiver. Adjust the set for maximum output; reduce the input as needed to keep the output near 1.3 volts.

Locations of all the trimmers and coils are shown in the illustrations below. After adjustment, seal the coil cores with collodion or a similar substance (do not use cement).

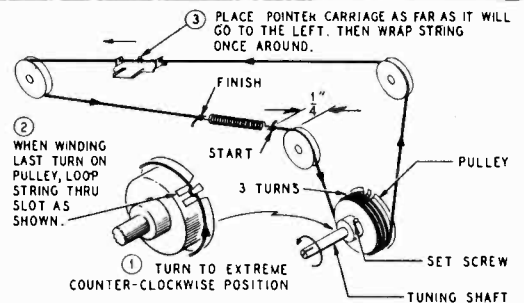
BAND SWITCH SETTING	SIGNAL GENERATOR			DIAL POINTER SETTING	ADJUST TO MAXIMUM OUTPUT (in order shown)
	Frequency	Coupling Capacitor	Connection to Radio		
Broadcast (for I. F.)	455 kc	.1 mf	Grid (pin 8) of converter (6SA7)	1600 kc	Trimmers on output and input I. F. cans
Broadcast	1600 kc	200 mmf	Antenna lead	1600 kc	BC Osc. trimmer C15 BC R. F. trimmer C8 BC Ant. trimmer C2
	1400 kc	200 mmf	Antenna lead	1400 kc	Rotate cores of BC R. F. coil T7 and BC Ant. coil T1
31 Meter	9.6 mc	400 ohms	Antenna lead	9.6 mc	9 mc Osc. trimmer C14 9 mc R. F. trimmer C9 9 mc Ant. trimmer C3
49 Meter	6.1 mc	400 ohms	Antenna lead	6.1 mc	6 mc Osc. coil T14 6 mc R. F. coil T10 6 mc Ant. coil T4
25 Meter	11.8 mc	400 ohms	Antenna lead	11.8 mc	12 mc. Osc. coil T13 12 mc R. F. coil T8 12 mc Ant. coil T2
19 Meter	15.2 mc	400 ohms	Antenna lead	15.2 mc	15 mc Osc. coil T12 15 mc R. F. coil T9 15 mc Ant. coil T3



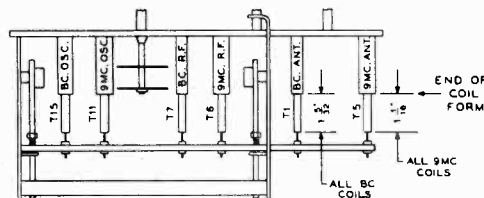
Chassis View



Coils and Trimmers



- WHEN FINISHED WITH STRINGING, SPRING MUST BE 1/2" FROM IDLER AS SHOWN. TO DO THIS:
- LOOSEN SET SCREW ON PULLEY.
 - HOLD TUNING SHAFT FIRM IN POSITION INDICATED AND TURN PULLEY BY HAND UNTIL SPRING IS 1/2" AWAY FROM IDLER.
 - TIGHTEN SET SCREW. NOW SPRING SHOULD TRAVEL BACK AND FORTH WITHOUT TOUCHING THE IDLERS.
 - REPLACE CHASSIS IN CABINET. REPLACE POINTER ON CARRIAGE. TUNE IN STATION OF KNOWN FREQUENCY. HOLD TUNING SHAFT FIRM AND SLIDE POINTER TO CORRECT POSITION ALONG DIAL.
 - GLUE POINTER TO STRING.



MODEL 8A59

BELMONT RADIO CORP.

REPLACEMENT PARTS LIST

When ordering parts, specify part number, model number, and series

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
REMOVABLE TUNER ASSEMBLY								
CAPACITORS*								
C1	B-8F-10767	.002 mf, 500 volts, 10%, mica	C16	C-8E3-12	470 mmf, 20%, mica	T18	B-1-C-10234	Output transformer
C2, C3	124143	Dual, (95-175 mmf) anl. trim. mers	C17, C19	C-8D-10774	.02 mf, 400 volts, 20%	T20	100202B	Power transformer
C4, C10	B-8F3-121	470 mmf, 500 volts, 10%, mica	C18	C-8D-10771	.1 mf, 200 volts, +20%—10%	SOCKETS		
C5	C-8D-10771	.1 mf, 400 volts, +20%—10%	C20-A	129165B	Dual, 50 mmf each section, mica, 20%	121200		Socket, 4-terminal, for loop antenna
C6, C11	B-8F5-101	10 mmf, 500 volts, 10%, silver mica	C21	C-8D-10813	.05 mf, 400 volts, 20%	121209		Socket, 5-terminal, for speaker
C7		Broadcast RF trimmer (120-200 mmf) trimmer (60-110 mmf)	C22	C-8D-10935	220 mmf, 20%, mica	121280		Socket, 4-terminal, for phono pickup
C8	A-8G-7205	47 mmf, 500 volts, 10%, mica	C23	C-8F3-10	200 mmf, 200 volts, 20%	121199		Socket, 2-terminal, for phono motor
C9	B-8F3-109	47 mmf, 500 volts, 10%, mica	C24	C-8D-10780	100 mmf, 200 volts, 20%	121210		Socket, octal, molded (all tubes except 6SK7, IF amp)
C12	B-8F1-10763	200 mmf, 500 volts, 5%, silver mica	C25	C-8D-10788	400 mmf, 200 volts, 20%	121273		Socket, octal, laminated (for 6SK7, IF amplifier)
C14	124145	9 mc oscillator trimmer (7-35 mmf) mica	C26	C-8D-10785	600 mf, 600 volts, 20%	B-47A-10808		Socket assembly for dial light
C15	124144	Broadcast oscillator trimmer (15-27 mmf)	MISCELLANEOUS			MISCELLANEOUS		
R1, R4	C-9B1-31	1 megohm, 1/2 watt, 20%	B-20A-10964	Band switch, antenna	T19	B-1R-10617	Speaker, 10-inch, electrodynamic	
R2	C-9B1-55	270 ohms, 1/2 watt, 10%	B-21D-11210	Socket, molded, for 6SK7GT	T21	A-16A-11113	1.5-mc antenna coil (500 ohms)	
R3	C-9B1-70	4700 ohms, 1/2 watt, 10%	B-12-11200	Tone control, for 6SK7GT	T22	A-19A-11322	Choke on loop antenna lead	
R5	C-9B1-46	47 ohms, 1/2 watt, 10%	120593	Spring, intermediate link, under ends of treadle bar	107401		Phono motor cable assembly	
R6	C-9B1-79	27,000 ohms, 1/2 watt, 10%	131251	Washer, "C", on slug tuning bar	10724		Connector, for phono pickup leads	
Tubes are coded and guaranteed by the tube manufacturer. Better service can be rendered on adjustments if defective tubes are returned to the manufacturer rather than through our factory. We cannot supply speaker cones or fields separately. We can replace or replace a damaged speaker if it is returned to our factory, transportation charges prepaid.								
*The values of all resistors listed above are based on RMA standards. Due to conditions beyond our control, some resistors may vary slightly from the values listed. This receiver will operate equally well with resistors of either group. An illustration of the difference follows: 1/2 watt, 10% standard—1,000 ohms, ±10%, 1/2 watt 12MA value—1,000 ohms, ±10%, 1/2 watt								
COILS (complete with cores)								
T1	111195	Broadcast antenna coil	R7, R8	C-9B1-21	22,000 ohms, 1/2 watt, 20%	RECORD CHANGER		
T2	111191	15-mc antenna coil	R9	C-9B1-29	400 ohms, 1/2 watt, 10%	D-21H-10417	Model 204 (with automatic stop)	
T3	111192	15-mc antenna coil	R10	C-9B1-23	270 ohms, 1/2 watt, 10%	D-21H-10132	Model 205	
T4	111189	9-mc antenna coil	R11	C-9B1-34	3.3 megohms, 1/2 watt, 20%	SETTING THE PUSHBUTTONS—The 5 pushbuttons may be used, after proper adjustment, for the automatic tuning of any six stations which you select. All the stations need not be in the same band, but probably you will want to set them up in the standard broadcast band. Proceed as follows:		
T5	111190	9-mc antenna coil	R12, S3	125180	Tone control (1 megohm) and radio-phono switch	1. Turn the radio on and turn the band switch to the "B.C." position.		
T6	10959	9-mc RF coil	R13	C-9B1-27	220,000 ohms, 1/2 watt, 20%	2. From the call-letter sheets supplied with this manual, push out the call letters of your favorite six stations. Drop these into the six pushbuttons, preferably but not necessarily in order of frequency (as listed in your newspaper).		
T7	10962	Broadcast RF coil	R14, R17	C-9B1-86	1 megohm, 1/2 watt, 10%	3. Next pull a button out as far as it will come.		
T8	10960	12-mc RF coil	R15	C-9B1-31	1 megohm, 1/2 watt, 20%	4. Very carefully tune in the station corresponding to the pushbutton call letters.		
T9	10964	9-mc RF coil	R16	C-9B1-70	4700 ohms, 1/2 watt, 10%			
T10	10958	9-mc oscillator coil	R18, R19	C-9B1-29	470,000 ohms, 1/2 watt, 20%			
T11	110159	15-mc oscillator coil	R20	C-9B2-56	3.0 ohms, 1/2 watt, 10%			
T12	110157	15-mc oscillator coil	R21	10662	12,500 ohms, 3 watts, 10%			
T13	110158	6-mc oscillator coil	R22	C-9B1-20	1,000 ohms, 1/2 watt, 20%			
T14	110156	6-mc oscillator coil	R23, S4	A-10A-10586	Volume control (500,000 ohms)			
T15	110161	Broadcast oscillator coil	R25	C-9B1-35	4.7 megohms, 1/2 watt, 20%			
S1	B-20A-10964	Band switch, antenna	T16			COILS AND TRANSFORMERS		
S2	B-20A-10965	Socket, molded, for 6SK7GT	T17			Input IF coil complete in can (Range of trimmers: 110-210 mmf)		
MISCELLANEOUS								
Band switch, oscillator and RF socket, laminated, for 6SK7GT								
Tone control, for 6SK7GT								
Spring, intermediate link, under ends of treadle bar								
Washer, "C", on slug tuning bar								
Gear segment								
Spring clip, for coils								
Washer, "C", for 9-mc coils								
Grommet for core mounting (all broadcast and 9-mc coils)								
Grommet for coil mounting (broadcast RF and antenna coils)								
Grommet for coil mounting (broadcast oscillator for all 9-mc coils)								
Grommet for all 9-mc coils								
Pushrod assembly								
Spring, pushrod return								
Plug, 3-prong								
Pushbutton, walnut								
Pushbutton, mahogany								
Washer, "C", on end plate								
POWER OUTPUT 105 to 125 volts AC, 60 cycles; 95 watts (118 watts with phono motor operating).								
SENSITIVITY 4 microvolts average for 1/2 watt output.								
SELECTIVITY 35 kc. broad at 1000 times signal at 1000 kc.								
TUBE AND LAMP COMPLEMENT 6SK7, tuned RF amplifier; 6SA7, converter; 6SQ7, detector, AVC, 1st audio; 6J5GT, phase inverter; 6K6GT, push-pull output; 6K6GT, push-pull output; 5Y3G, rectifier; T-44, dial lamp (2 used)								
FREQUENCY RANGES Broadcast band—540 to 1600 kc.; 49-meter band—5.96 to 6.19 mc.; 31-meter band—9.1 to 10 mc.; 25-meter band—11.45 to 12.16 mc.; 19-meter band—14.94 to 15.46 mc.; 455 kc.								
INTERMEDIATE FREQ. All bands permeability-tuned.								
TUNING Built-in, provisions also for external antenna and ground.								
SPEAKER 10" electrodynamic. Voice coil impedance 3.2 ohms.								

NOTE: Before removing chassis, take off escutcheon and pull pointer from pointer carriage.

ELECTRICAL SPECIFICATIONS

Power Supply	105 to 125 volts AC, 60 cycles; 95 watts (118 watts with phono motor operating).
Frequency Ranges	Broadcast band—540 to 1600 kc.; 49-meter band—5.96 to 6.19 mc.; 31-meter band—9.1 to 10 mc.; 25-meter band—11.45 to 12.16 mc.; 19-meter band—14.94 to 15.46 mc.; 455 kc.
Intermediate Freq.	All bands permeability-tuned.
Tuning	Built-in, provisions also for external antenna and ground.
Antenna	
Speaker	10" electrodynamic. Voice coil impedance 3.2 ohms.

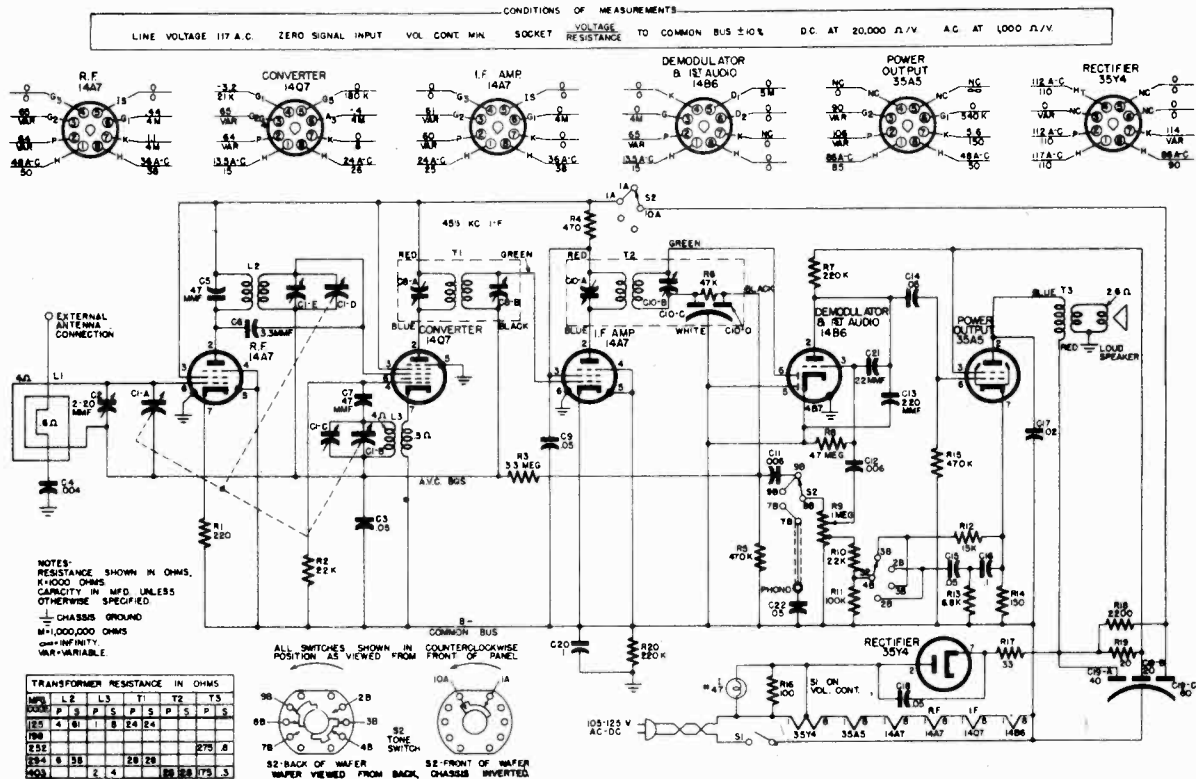
MODELS 526A, -B, -C, -D, -E
Preliminary

BENDIX RADIO DIV.

REPLACEMENT PARTS LIST

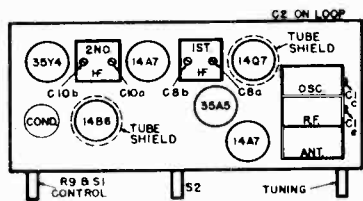
Stock No.	Description	List Price	Stock No.	Description	List Price
PARTS COMMON TO MODEL 0626A & B					
ALOC00	ANTENNA - Loop Assembly (L1).....		BTIT00	POST - Binding (Base Plate).....	
CE2A00	CAPACITOR - Electrolytic - 40-40-150 W.V. (C17A, C17B).....		BZ0D00	BAFFLE - Corrugated Paper Speaker.....	
CI2A00	CORD - AC Power.....		DSOA03	DIAL - Plastic Scale (54-170).....	
CM5A14	CAPACITOR - 47 mmf. mica (C5).....		FZOR00	FOOT - Rubber (Vinylite) Mtg.....	
CM5A34	CAPACITOR - 330 mmf. mica (C13).....		HKOR00	RING - Knob Retainer Spring (.015).....	
CM5A46	CAPACITOR - .001 mmf mica 500 V.D.C. (C19)..		HPOB00	PLATE - Base Assy.....	
CP4T20	CAPACITOR - .006 mfd. - 400 V.D.C. Paper (C14).....		HZOS00	STUD - Trimount.....	
CP4T31	CAPACITOR - .01 mfd. - 400 V.D.C. Paper (C15).....		IDOM00	INDICATOR - Metal Dial (Pointer).....	
CP4T40	CAPACITOR - .05 mfd. - 400 V.D.C. Paper (C6)		PIOB01	PLATE - Asbestos Base Insulator.....	
CP4T51	CAPACITOR - .1 mfd. - 400 V.D.C. Paper (C18)		PARTS FOR MODEL 0626A		
CP6T16	CAPACITOR - .004 mfd. - 600 V.D.C. Paper (C1, C12).....		KCOB01	KNOB - Mottled Brown - Push on.....	
CP6T40	CAPACITOR - .05 mfd. - 600 V.D.C. Paper (C16)		ZPOB01	CABINET - Mottled Brown Plastic.....	
CVOB01	CAPACITOR - Variable (C2A, C2B, C3RF - 25 mmf max. C4 Osc. 25 mmf. max.).....		PARTS FOR MODEL 0626B		
IO1B00	COIL - Oscillator (L2).....		KCOB03	KNOB - Mottled Brown - Push On.....	
RC1H40	RESISTOR - 22 K ohms, 1/4 W. Comp. (R2).....		ZPO101	CABINET - Ivory Plastic.....	
RC1H54	RESISTOR - 220 K ohms, 1/4 W. Comp. (R5,R12)		PARTS COMMON TO MODELS 0626C & D		
RC1H58	RESISTOR - 470 K ohms, 1/4 W. Comp. (R7)....		BZOB00	BACK - Teakwood - Catalin Cabinet.....	
RC1H68	RESISTOR - 3.3 meg. 1/4 W. Comp. (R3).....		GFSO00	GASKET - Felt 3/16" X 3-1/4" ID (spkr.).....	
RC1H70	RESISTOR - 4.7 meg. 1/4 W. Comp. (R6).....		FZOR01	FOOT - Cabinet (Rubber).....	
RC1H76	RESISTOR - 15 meg. 1/4 W. Comp. (R1).....		GROD00	GASKET - Rubber Dial (1/16" X 1/8" X 4").....	
RC3H12	RESISTOR - 100 ohms, 1 W. Comp. (R9).....		GROD01	GASKET - Rubber Dial (3/16" X 1/32" X 1/4")..	
RC4G28	RESISTOR - 2200 ohms, 2 W. Comp. (R11).....		HKOC00	CLIP - Knob Retainer Spring.....	
RVOS00	POTENTIOMETER - with switch - 500 K ohms (R4)		HZOS01	STUD - Trimount.....	
RW1A06	RESISTOR - 33 ohms, 1 W. W. W. (R10).....		IDOM01	INDICATOR - Metal Dial (Pointer).....	
RW1B14	RESISTOR - 150 ohms, 1 W.W.W. (R8).....		PARTS FOR MODEL 0626C		
SOOD00	SOCKET - Dial Lamp.....		DSOA00	DIAL - Glass Scale (54 - 170).....	
SO8S00	SOCKET - Octal Tube.....		DXOR00	RETAINER - Dial, R.H. (Trim).....	
TIOC00	TRANS. - Converter I.F. (1st).....		DXOR01	RETAINER - Dial, L.H. (Trim).....	
TIOD00	TRANS. - Diode I.F. (2nd).....		KCOG00	KNOB - Plain Push-on (Green).....	
SPEAKER AND COMPONENTS					
S14R00	SPEAKER - 4" P.M.....		ZCOG00	CABINET - Green & Black Catalin.....	
CS4R00	CONE - 4" Cone & V.C. Assy. - Spkr. SP4R00, Code 252.....		PARTS FOR MODEL 0626D		
CS4R01	CONE - 4" Cone & V.C. Assy. - Spkr. SP4R00, Code 328.....		DSOA05	DIAL - Glass (54 - 170).....	
CS4R02	CONE - 4" Cone & V.C. Assy. - Spkr. SP4R00, Code 277.....		DXOR02	RETAINER - Dial, R.H. (Trim).....	
CS4R03	CONE - 4" Cone & V.C. Assy. - Spkr. SP4R00, Code 258.....		DXOR03	RETAINER - Dial, L.H. (Trim).....	
CS4R04	CONE - 4" Cone & V.C. Assy. - Spkr. SP4R00, Code 191.....		KCOO01	KNOB - Brown Push-ON.....	
TA0000	TRANSFORMER - Output Trans.....		ZCOB00	CABINET - Two-Tone Brown Catalin.....	
MECHANICAL COMPONENTS					
ADOB00	PLATE ASSEMBLY - Dial Back.....		PARTS FOR MODEL 0626E		
BT4S00	BOARD - Strip Terminal - 4 lugs.....		BZOB01	BACK - Cabinet Teakwood.....	
CDOC01	CABLE - Dial 40 $\frac{1}{2}$ ".....		BZOD00	BAFFLE - Corrugated Card Board.....	
GROS00	GROMMET - Cond. Shockmount.....		BZOD02	BAFFLE - Paper.....	
HBOA00	BRACKET - Loop Antenna.....		DSOA07	DIAL GLASS (54-170 K.C.).....	
HCOC03	CLAMP - Cable Dial.....		DXOR06	RETAINER - Metal Dial.....	
HCOS00	CLIP - Tuning Shaft Spring.....		FZOR02	FOOT - Black Rubber.....	
HNOPO0	NUT 3/8 X 32 Palnut.....		GFSO06	GASKET - Blk. Felt (1/16 X 1/4 X 5/8).....	
HR0S02	RIVET - Shoulder (.218).....		GFSO07	GASKET - Blk. Felt (1/16 X 3/16 X 8 $\frac{1}{2}$).....	
HSOC00	SPRING - Dial Cable Tension.....		GFSO08	GASKET - Blk. Felt (1/16 X 1/4 X 13/16).....	
HSGF00	SLEEVE - Spacer - Tuning Cond. Mtg.....		GZOC01	GRILL-CLOTH - (Dk. Br.).....	
ITOC00	TUBE - Capacitor Insulating.....		HKOR00	RING - Retainer Spring (.015).....	
MPOF00	PULLEY - Idler (Fiber).....		IDOM03	INDICATOR - Metal Dial Pointer.....	
MSOT00	SHAFT TUNING.....		KCOB07	KNOB - Dk. Mottled Brown (Cont'l).....	
PIOC00	PLATE - Mounting Elect. Cap.....		PIOB01	PLATE - Asbestos Base Insulator.....	
PIOP00	PLATE - Power Cord Insulator.....		ZW5A00	CABINET ASS'Y - (Wood) BW76.....	

BENDIX RADIO DIV.



- Power Consumption-Watts..... 30
- TUNING RANGE—FREQUENCY IN KC 535-1725
- INTERMEDIATE FREQUENCY (KC)..... 455
- MAXIMUM POWER OUTPUT IN WATTS 1.2
- LOUD SPEAKER—PM-OVAL
 Cone diameter— inches..... 4x6
 Voice Coil Impedance (ohms at 400 cycles)..... 3.2

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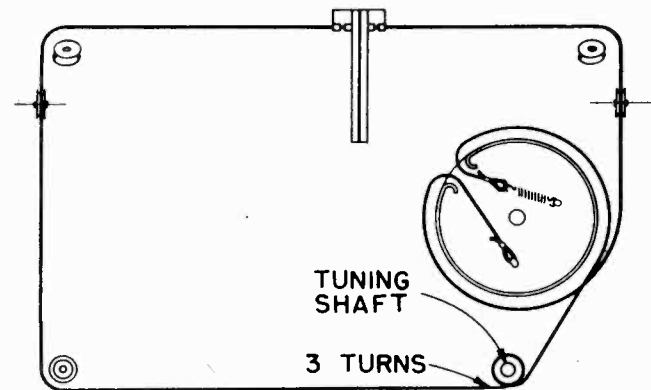


Alignment Procedure

Connect line cord plug to 117 volt, 60 cycles AC power source. Set volume control at maximum clockwise position and tone control (S2) in counterclockwise position. Connect output meter across voice coil. Adjust dial pointer by turning tuning control fully counterclockwise and sliding dial pointer on dial cord until it is exactly 2 3/16" from left end of dial back plate. Make all adjustments in order given in table and for maximum output. Dial Pointer Positions given measured from left hand end of dial back plate. Keep input as low as possible at all times.

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 Aligned	Input Freq.	Dial Pointer Position	Adjustments
IF	*455 KC	Max. to right	C10b, C10a C8b, C8a
OSC.	**1475 KC	6 3/4"	C1c
RF	**1475 KC **965 KC **580 KC	6 3/4" 5 2-23/32"	C1e, C2 Check Calib.

* Applied to Antenna input .1 mfd. or less.

** Applied to Antenna input through 50 mmf. or less.

MODELS 636A, -C, -D
MODEL 736B

BENDIX RADIO DIV.

Stock No.	Description	List Price
RC1H58†	RESISTOR—470,000 ohms, 1/2 W Comp. (R4, R14, R17, R27)	.04
RC1H63†	RESISTOR—1 meg, 1/2 W Comp. (R1, R7)	.04
RC1H74	RESISTOR—10 meg, 1/2 W Comp. (R6)	.14
RC4G36†	POTENTIOMETER—1 meg, with Switch (P2, P5)	.08
RV4S04	RESISTOR—150 ohms, WW, 1W (R16)	.11
RW1B14†	SOCKET—Octal Tube	.13
SOB002	SWITCH—Rotary 4 Pos. (Band)	2.64
SR4E00	SWITCH—Rotary 6 Pos. (Tone Cont'l)	1.02
SR6C01	TRANSFORMER IF—1st (T3)	2.32
T10D04	TRANSFORMER IF—2nd (T4)	2.95
T10F01	POWER TRANSFORMER—(T6)	1.25
TR6L04	TRANSFORMER—Short Wave Antenna (T2)	1.68
TR7100	LAMP—Pilot	.09
24†		

PUSHBUTTON ASSY & COMPONENTS

Stock No.	Description	List Price
AB0C00	ASSY Y—Complete Pushbutton Ass'y	9.50
BT3R00	BOARD—Receptacle Terminal	.42
C4M8S7	CAPACITOR—360 mmf, 500V (C31)	.18
CT1A02	CAPACITOR—Auto Tune 4.70 mmf. (C-37)	.22
CT1A03	CAPACITOR—Auto Tune 1.20 mmf. (C36)	.28
CT1A04	CAPACITOR Auto Tune (C34, C35)	.34
CT1A05	CAPACITOR—Auto Tune 120,580 mmf. (C33)	.41
HC0C00	BRACKET—Pushbutton, mtg.	.02
HK0D06	FASTENER—Coil, Pushbutton Clip mtg. (Auto Tune)	.58
L70A00	COIL—Auto Tune Blue Dot (540-945 KC)	.58
L70A01	COIL—Auto Tune White Dot (540-945 KC) (L2, L3)	.58
L70A02	COIL—Auto Tune Red Dot (900-1600KC)	.58
SSP000	SWITCH—Pushbutton	2.52
ST0100	SLUG—Iron Tuning	.12

MODEL 736-B

Stock No.	Description	List Price
AL020*	ANTENNA—Loop (T1)	4.49
CC9A01	CAPACITOR—Ceramic 10 mmf. (C38)	.19
CC9A02	CAPACITOR—Ceramic 3.3 mmf. 500 V (C7)	.05
CE2A01	CAPACITOR—Electric 150 V (C14, C15, C22)	1.96
CM3A46	CAPACITOR—Mica .001 mid. 300V (C27)	.43
CM5A14	CAPACITOR—Mica 47 mmf. 500 V (C6)	.18
CM5A30†	CAPACITOR—Mica 220 mmf. 500V (C3)	.22
CM5A38	CAPACITOR—Mica 470 mmf. 500V (C3)	.21
CM6A14	CAPACITOR—Mica 47 mmf. 500 V (C5)	.41
CM8S57	CAPACITOR—360 mmf. (C21)	.51
CM8S59	CAPACITOR—Paper 2 mid. 200 V (C28)	.24
CP4T31†	CAPACITOR—Paper 01 mid. 400 V (C15, C17, C26)	.13
CP4T34†	CAPACITOR—Paper 02 mid. 400V (C5, C39)	.14
CP4T40†	CAPACITOR—Paper 002 mid. 600V (C30)	.16
CP6T12	CAPACITOR—Paper 005 mid. (C29, C32)	.39
CP6T18†	CAPACITOR—Paper 01 mid. 600V (C18)	.16
CT1A00	TRIMMER & BRACKET—1.6—18 mmf. (C8)	.31
CT5A00	TRIMMER—Strip (C19, C20, C23, C24, C25)	1.33
CL2A05	CORD—A.C. Power	.19
CV0C03	CAPACITOR—0.3 mid. (C39)	.69
CP4C00	PLUG—Connector, 4 Contact Antenna (J7)	.34
JR1S00	JACK—Receptacle, 1 Contact, Phono Jack (J1)	.06
JR2004	JACK—Receptacle, 2 contacts, Speaker (J2)	.51
JR3C00	JACK—Receptacle, 5 contacts, Speaker (J2)	1.01
L07J00	OSCILLATOR—Coil (T7)	.04
RC1G16	RESISTOR—220 ohms, 1/2 W Comp. (R2)	.04
RC1G20	RESISTOR—170 ohms, 1/2 W Comp. (R2)	.04
RC1G28	RESISTOR—2200 ohms, 1/2 W Comp. (R11)	.06
RC1G31†	RESISTOR—4700 ohms, 1/2 W Comp. (R3, R24)	.04
RC1G37	RESISTOR—22,000 ohms, 1/2 W Comp. (R5, R23)	.04
RC1G40†	RESISTOR—47,000 ohms, 1/2 W Comp. (R8, R19)	.04
RC1G54	RESISTOR—220,000 ohms, 1/2 W Comp. (R10, R12, R31, R32)	.04
RC1H00	RESISTOR—10 ohms, 1/2 W Comp. (R28)	.04
RC1H51†	RESISTOR—100,000 ohms, 1/2 W Comp. (R26)	.04

ELECTRICAL COMPONENTS

Stock No.	Description	List Price
AD0C00	ASSEMBLY—Dial Back Plate	.39
BT1S00†	BOARD—Terminal Strip and 1 Lug	.02
BT2S00	BOARD—Terminal Strip and 2 Lugs	.05
BT3S00	BOARD—Terminal Strip and 4 Lugs	.05
CD0C06	CABLE—Dial	.19
FC0R00	FOOT—Chassis Mtg.	.09
GR0S01	GROMMET—Tuning Condenser Shockmount	.03
H80M02	BRACKET—Oc. Coil Mounting	.06
HC0C00	CLIP—Oc. & R. Coil Mtg.	.04
H0S002	CLIP—Tuning Shaft Spring	30/c
H0R000	RING—Knob Retainer Spring	.01
H0R001	RING—Knob Retainer Spring	.01
HNH25	NUT—Hex #8 x 32	.60/c
HNH45	PIN—Threaded Rear Chassis Mounting	.07
HRP000	SPRING—Dial Cable	.04
H80S01	INDICATOR—Lucite Tuning	.01
H80F00	INDICATOR—Lucite Tuning	.66
ID0L01	BEARING—Tuning Shaft	1.18
MB0T00	LINK—Band Switch	.02
ML0M01	PULLEY—Fiber Dial Cord	.29
MS0S00	SHAFT—Band Switch Control	.29
PL0P00	PLATE—Power Cord Insulator	.01

MECHANICAL COMPONENTS

Stock No.	Description	List Price
AD0C00	ASSEMBLY—Dial Back	.39
BT1S00	BOARD—Terminal 1 lug	.02
BT2S00	BOARD—Terminal 2 lugs	.05
BT3S00	BOARD—Terminal 4 lugs	.05
CD0C02	CABLE—Dial (47 13/16")	.17
GR0S00	GROMMET—Variable Capacitor shockmount	.04
H80A01	BRACKET—Loop	.03
HC0C00	CLIP—Coil mtg	.05
HC0S00	CLAMP—Dial Cable	.43
HC0S00	CLIP—Tuning shaft spring	.01
HC0T00	CLAMP—Tube Shield	.01
HNH25	NUT—3/8 x 32 Pal nut	.60

SPEAKER AND COMPONENTS

Stock No.	Description	List Price
SP4000	Speaker—4" x 6" P.M. Oval	5.70
CS4000	CONE & V.C. ASSY. for SP4000 Code 252	
CS4001	CONE & V.C. ASSY. for SP4000 Code 278	
CS4002	CONE & V.C. ASSY. for SP4000 Code 191	
CS4006	CONE & V.C. ASSY. for SP4000 Code 371	
CS4007	TRANSFORMER—Audio Output (T3)	.96
TA0001		

Mechanical Components

Stock No.	Description	List Price
AD0C00	ASSEMBLY—Dial Back	.39
BT1S00	BOARD—Terminal 1 lug	.02
BT2S00	BOARD—Terminal 2 lugs	.05
BT3S00	BOARD—Terminal 4 lugs	.05
CD0C02	CABLE—Dial (47 13/16")	.17
GR0S00	GROMMET—Variable Capacitor shockmount	.04
H80A01	BRACKET—Loop	.03
HC0C00	CLIP—Coil mtg	.05
HC0S00	CLAMP—Dial Cable	.43
HC0S00	CLIP—Tuning shaft spring	.01
HC0T00	CLAMP—Tube Shield	.01
HNH25	NUT—3/8 x 32 Pal nut	.60

Speaker and Components

Stock No.	Description	List Price
SE0R00*	SPEAKER—Electrodynam. 10"	9.58
SR000*	CONE & V.C. ASSY.—Code 91	
TA0005	T TRANSFORMER—Output (T5)	2.28

Speaker and Components

Stock No.	Description	List Price
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SR000*	CONE & V.C. ASSY.—Code 91	
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TA0005	T TRANSFORMER—Output (T5)	2.28

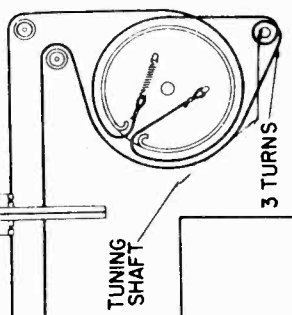
Speaker and Components

Stock No.	Description	List Price
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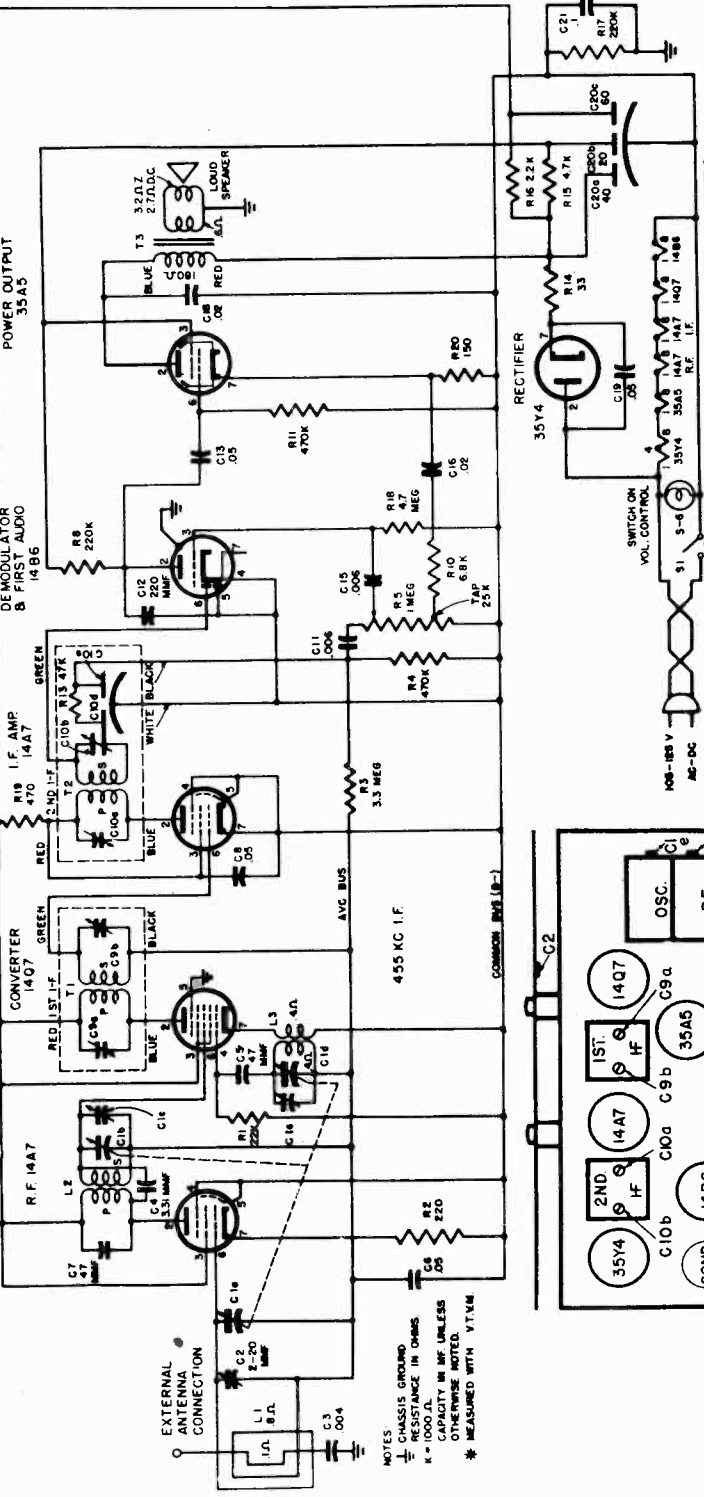
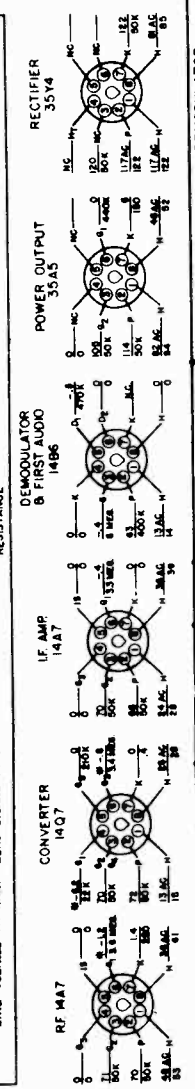
BENDIX RADIO DIV.

MODEL 646A
Preliminary

CONDITION OF MEASUREMENTS
LINE VOLTAGE 117 VAC. ZERO SIGNAL INPUT VOL. CONT. MIN. SOCKET RESISTANCE TO COMMON BUS ±10% DC AT 20000 D.V. A.C. AT 1000 D.V.



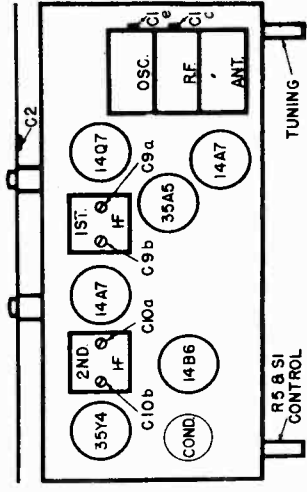
DIAL STRINGING DIAGRAM



NOTES
 1. CHASSIS GROUND
 2. RESISTANCE IN OHMS
 K = CAPACITY IN MF UNLESS OTHERWISE NOTED.
 * MEASURED WITH VTVM

Circuit Aligned	Input Freq.	Dial Pointer Position	Adjustments	
			Components	Notes
IF	*455 KC	Max. to right	C10B, C10A	
OSC.	**1550 KC	6-21/32"	C9B, C9A	
RF	**9605 KC	6-21/32"	C1e, C2	
	**564 KC	4-29/32	Check	
		2-23/32	Calib.	

MEG CODE	TRANSFORMER RESISTANCE IN Ω				
	L2	T1	P	S	T2
304	58	27	27	24	24
403	63	35	15	15	15
198			24	24	
185					



Alignment Procedure

Connect line cord plug to 117 volt AC power source. Set volume control at maximum and connect output meter across voice coil. Adjust dial pointer by turning tuning control fully counterclockwise and sliding dial pointer on dial cord until it is exactly 2-3/32" from left end of dial back plate. Make all adjustments in order given in table and for maximum output. Dial pointer position given in table and for maximum left hand end of dial back plate. Keep input as low as possible at all times.
 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.

* Applied to Antenna input through .1 mfd. or less.
 ** Applied to Antenna input through 50 mmf. or less.

and if the capacitors should break down the test instruments will likely be damaged.

MODEL 646A
Preliminary

BENDIX RADIO DIV.

Power				
Voltage Rating, AC or DC	105 - 125	MAXIMUM POWER OUTPUT IN WATTS		i.2
Frequency - Cycles per second	50 - 60			
Power Consumption - Watts	37	LOUD SPEAKER - PM		
		Cone diameter - inches		6
TUNING RANGE - FREQUENCY IN KC	535 - 1725	Voice Coil Impedance (ohms at 400 cycles)		3.2
INTERMEDIATE FREQUENCY (KC)	455			

REPLACEMENT PARTS LIST

Stock No.	Description	List Price	Stock No.	Description	List Price
ELECTRICAL COMPONENTS					
ALOC03*	ANTENNA - Loop	1.95	HN9P45	PALNUT - 3/8 X 32.....	.01
CC9A16	CAPACITOR - Ceramic 3.3 mmf. (C4).....	.05	HR0S01	RIVET - Shoulder .....	.02
CE3A00	CAPACITOR - Electrolytic (20-40-60 mfd.)....	1.86	HSOC00	SPRING - Coil.....	.04
	150V.D.C. (C20A, B, C)		HSOP01	SPACER - Antenna.....	.01
CL2A01	CORD - A.C. Power Line.....	.47	HS6F00	SLEEVE - Spacer Flared.....	.02
CM5A14	CAPACITOR - Mica 47 mmf. (C5,C7).....	.19	HS6S01	SCREW - Self-Tapping 6 X 1/4.....	.32/C
CM5A30	CAPACITOR - Mica 220 mmf. 500V (C12) .....	.55	IDOM05	INDICATOR - Metal Dial.....	.33
CP4T20	CAPACITOR - Paper .006 mfd. 400V (C11,C15) ..	.15	ITOC01	TUBE - Insulating (Cap).....	.04
CP4T34	CAPACITOR - Paper .02 mfd. 400V (C16,C18) ...	.14	MPOF00	PULLEY - Idler (Fiber).....	.02
CP4T40	CAPACITOR - Paper .05 mfd. 400V (C6,C8,C13, C19) .....	.16	MSOT04	SHAFT - Steel Tuning.....	.16
CP4T51	CAPACITOR - Paper .1 mfd. 400V (C21).....	.18	PIOC00	PLATE - Insulator Mtg.....	.02
CP6T16	CAPACITOR - Paper .004 mfd. 600V (C3).....	.29	PIOPO0	PLATE - Insulating Power Cord.....	.01
CT2A01	TRIMMER - 2-20 mmfd. (C2)		SMOT00	SHIELD - Metal Tubing.....	.05
CV0C00	CAPACITOR - Variable (C1a,1b,1d).....	7.50	SPEAKER AND COMPONENTS		
LOGB00	OSCILLATOR - Coil Ass'y. (L3).....	.94	SP6R00*	SPEAKER - 6 P.M. less transf.....	5.79
RC1H16	RESISTOR - 220Ω 1/2W Comp. (R2).....	.04	CS6R00	CONE & V.C. ASS'Y - Code 285.....	
RC1H20	RESISTOR - 470Ω 1/2W Comp. (R19).....	.04	CS6R01	CONE & V.C. ASS'Y - Code 159.....	
RC1H32	RESISTOR - 4700Ω 1/2W Comp. (R15).....	.04	CS6R02	CONE & V.C. ASS'Y - Code 270.....	
RC1H34	RESISTOR - 6800Ω 1/2W Comp. (R10).....	.04	CS6R03	CONE & V.C. ASS'Y - Code 258.....	
RC1H40	RESISTOR - 22KΩ 1/2W Comp. (R1).....	.04	CS6R04	CONE & V.C. ASS'Y - Code 191.....	
RC1H54	RESISTOR - 220KΩ 1/2W Comp. (R17, R8).....	.04	CS6R05	CONE & V.C. ASS'Y - Code 188.....	
RC1H58	RESISTOR - 470KΩ 1/2W Comp. (R4, R11).....	.04	CS6R06	CONE & V.C. ASS'Y - Code 371.....	
RC1H68	RESISTOR - 3.3 Meg. 1/2W Comp. (R3).....	.04	TA0003	TRANSFORMER - Output (T3).....	1.95
RC1H70	RESISTOR - 4.7 Meg. 1/2W Comp. (R18).....	.04	CABINET COMPONENTS		
RC4G28	RESISTOR - 2200Ω 2W Comp. (R16).....	.14	BZ0D04	BAFFLE - Board (wood).....	
RV4S02	POTENTIOMETER - with switch 1 Meg. (R5).....	.94	DS0A04	DIAL - Glass (54-170).....	4.80
RW1B14	RESISTOR - 150Ω 1W.W.W. (R20).....	.08	GF0S04	GASKET - Felt (1/16 X 1/4 X 3-3/4) ..	.01
RW2A06	RESISTOR - 33Ω 2W.W.W. (R14).....	.10	GZ0C02	GRILLE - Cloth.....	
SO0D03	SOCKET - Dial Light.....	.40	HC0C04	CLAMP - Dial Light.....	.05
SO9S00	SOCKET - Locktal Tube.....	.15	HK0R00	RING - Knob Retainer Spring.....	.01
TI0C01	I. F. TRANSFORMER - 1st (T1).....	3.00	HS6W25	SCREW - #6 X 5/8" F.H. (Statuary Br.	.65/C
TI0D01	I. F. TRANSFORMER - 2nd (T2).....	2.43	HS6W26	SCREW - #6 X 1/2" F.H. (Statuary Br.	.60/C
TR6L00	R. F. TRANSFORMER ASS'Y. - Interstage (L2) ..	3.75	HS8S50	SCREW - Self-Tapping #8 X1" .....	.56/C
MECHANICAL COMPONENTS					
AD0C03	PLATE ASS'Y - Dial Back .....	.89	HS8W51	SCREW - Wood F.H. #8 (Red iridete)....	
BT1S00	TERMINAL STRIP - 1 Soldering Lug.....	.02	HW8C00	WASHER - #8 Cup Type (D.K. oxidized)...	
BT2S00	TERMINAL STRIP - 2 Soldering Lugs.....	.02	HZ0G00	GLIDE - Metal N.P.....	.05
BT4S01	TERMINAL STRIP - 4 Soldering Lugs.....	.05	HZ0H01	HINGE - Table (D.K. oxidized)....	.08
CD0C03	CABLE - Dial (47 3/8").....	.18	HZ0L01	SUPPORT - Table Drop Leaf.....	1.08/pr
GRO500	GROMMET - Cap Shockmount.....	.04	JR2S01	RECEPTACLE - 2 contacts.....	.36
HBOA01	BRACKET - Loop.....	.03	KY0M00	KNOB - Control (Engl. Antique)....	.38
HC0C00	CLIP - Coil Mtg.....	.01	KY0M01	KNOB - Dummy (Engl. Antique)....	.38
HC0C03	CLAMP - Cable .....	.04	PIOB00	PLATE - Asbestos Insulator.....	.05
HC0S00	CLIP - Spring .....	.01	PIOB02	PLATE - Asbestos Insulator.....	.01
HCOT00	CLAMP - Tube Shield.....	.01	WFOZ00	WASHER - Felt.....	.16/c
			XS0Z00	REFLECTOR - Strip Ass'y.....	
			ZW6A04*	CABINET - Mahogany.....	57.00

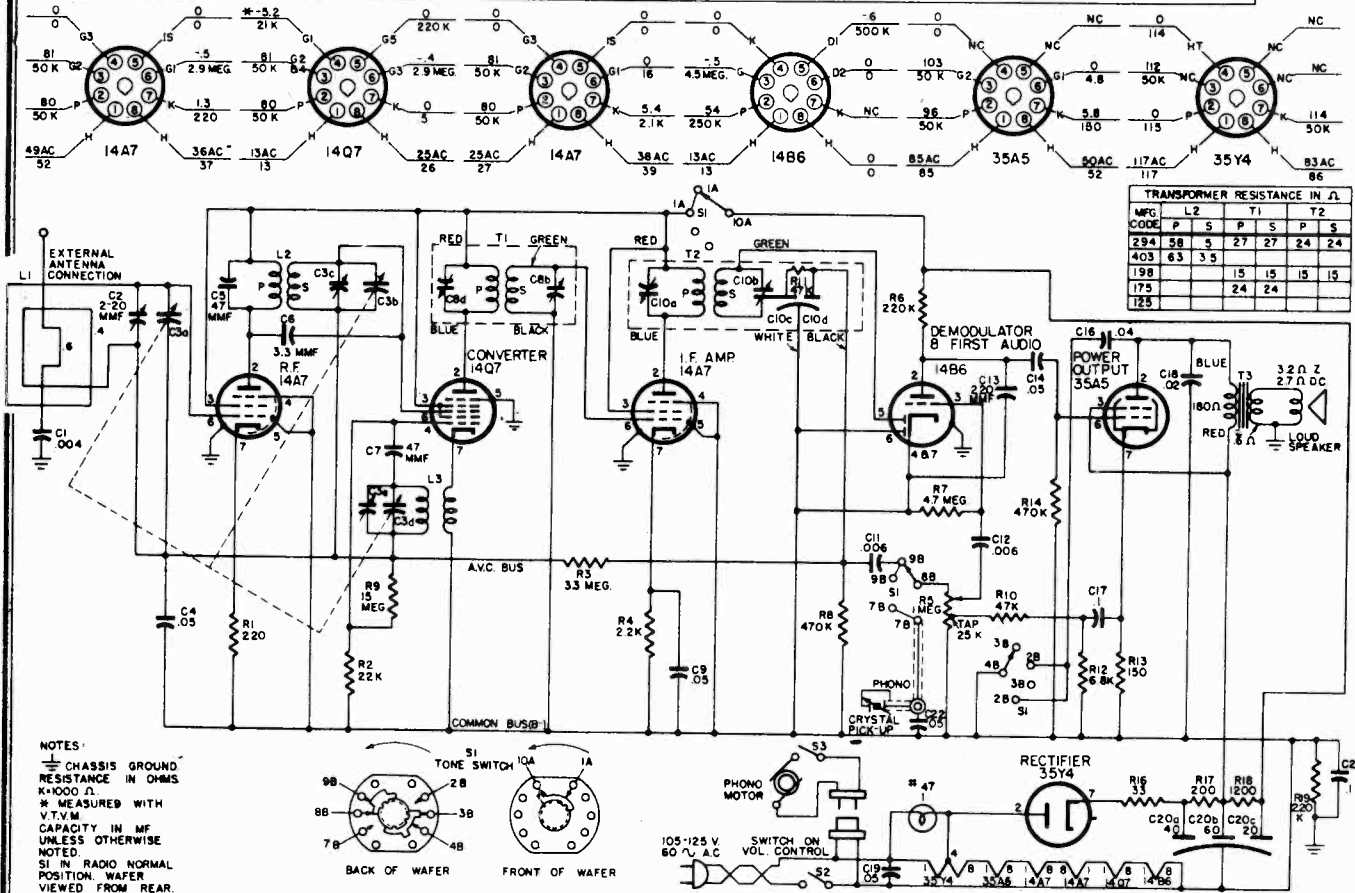
(Prices subject to change without notice)

* Subject to excise tax

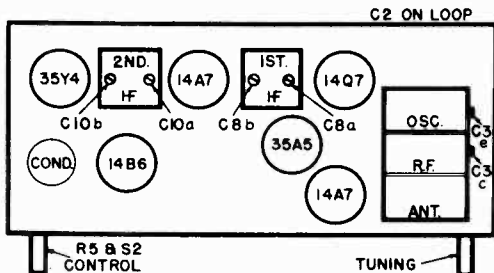
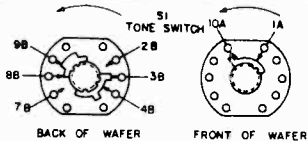
BENDIX RADIO DIV.

MODEL 656A
Preliminary

CONDITION OF MEASUREMENTS
LINE VOLTAGE 117 V.A.C. ZERO SIGNAL INPUT VOL. CONT. MIN. SOCKET VOLTAGE RESISTANCE TO COMMON BUS ± 10% D.C. AT 20,000 Ω/V. A.C. AT 1000 Ω/V.



NOTES:
 ⚡ CHASSIS GROUND
 RESISTANCE IN OHMS
 K=1000 Ω
 * MEASURED WITH
 V.T.V.M
 CAPACITY IN MF
 UNLESS OTHERWISE
 NOTED.
 S1 IN RADIO NORMAL
 POSITION, WAFER
 VIEWED FROM REAR.



Power
 Voltage Rating, 60 cycles AC 105-125
 Power Consumption—Watts 65
 Tuning Range—Frequency in KCS 535-1725
 Intermediate Frequency—KCS 455
 Maximum Power Output—Watts 1.2
Loud Speaker—PM
 Cone Diameter—Inches 6
 Voice Coil Impedance (ohms at 400 cycles) 3.2

Alignment Procedure

Connect line cord plug to 117 volt AC power source. Set volume control at maximum and tone control in radio normal position. Connect output meter across voice coil. Adjust dial pointer by turning tuning control fully counterclockwise and sliding dial pointer on dial cord until it is exactly 2 3/8" from left end of dial back plate. Make all adjustments in order given in table and for maximum output. Dial pointer position given in inches measured from left hand end of dial back plate. Keep input as low as possible at all times.

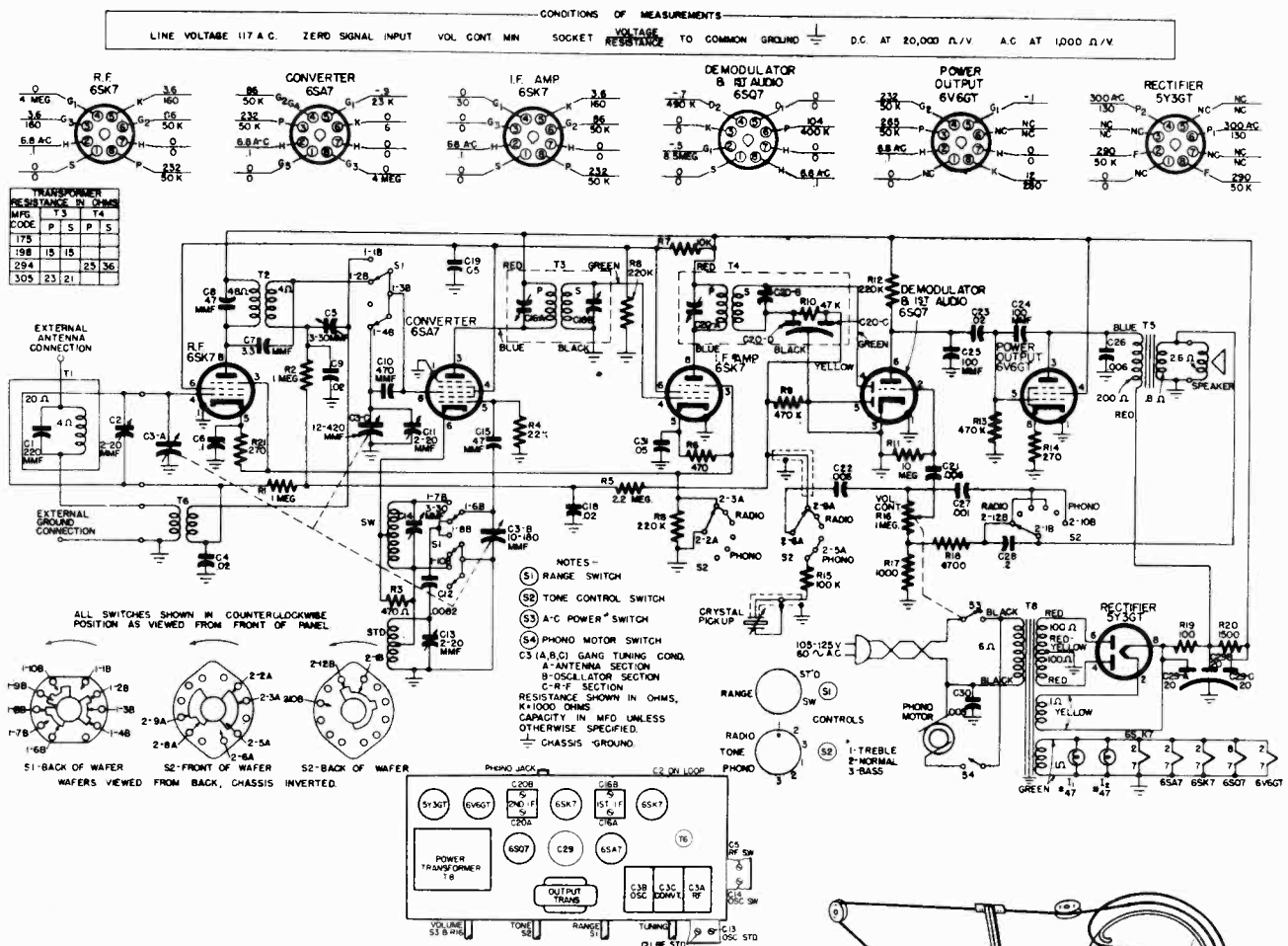
Precautions

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 Aligned	Input Frequency	Dial Pointer Position	Adjustments
IF	*455 KC	Max. to right	C10b, C10a C8b, C8a
OSC	**1550 KC	7	C3e
RF	**1550 KC ** 965 KC ** 580 KC	7 5 1/4 3 1/16	C3e, C2 Check Calib.

*Applied to antenna input through .1 mfd. or less.
 **Applied to antenna input through 50 mmf. or less.

BENDIX RADIO DIV.



Power
 Voltage Rating, 60 cycles AC 105-125
 Power Consumption, including record changer — Watts 95

Tuning Range
 Standard Broadcast—Frequency in KCS 540-1620
 Shortwave—Frequency in MCS 6-12
 Intermediate Frequency—KCS 455
 Maximum Power Output—Watts 4

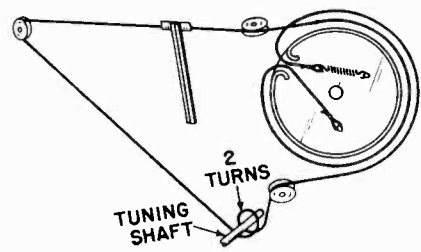
LOUD SPEAKER—Electro dynamic Cone diameter— inches 6
 Voice Coil Impedance—(ohms of 400 cycles) 3.2

Alignment Procedure

Connect line cord plug to 117 volt, 60 cycles AC power source. Set volume control at maximum clockwise position and tone control (S2) in counterclockwise (Radio 1) position. Connect output meter across voice coil. Adjust dial pointer by turning tuning control fully counterclockwise and sliding dial pointer on dial cord until it is exactly 2 3/4" from left end of dial back plate. Make all adjustments in order given in table and for maximum output. Dial Pointer Positions given measured from left hand end of dial back plate. Keep input as low as possible at all times. Range switch (S1) in ST'D position except as noted in table.

Circuit Aligned	Input Frequency	Dial Pointer Position	Adjustments
IF	* 455KCS	Max. to right	C20B, C20A C16B, C16A
OSC Broadcast	**1475KCS	7 3/4"	C13
RF Broadcast	**1475KCS **965KCS **580KCS	7 3/4" 5 15/16" 3 3/8"	C11, C2 Check Calib.
+OSC Shortwave	**11MCS	7 3/4"	C14
+RF Shortwave	**11MCS 9MCS 6MCS	7 3/4" 6 9/16" 3 1/2"	C5 Check Calib.

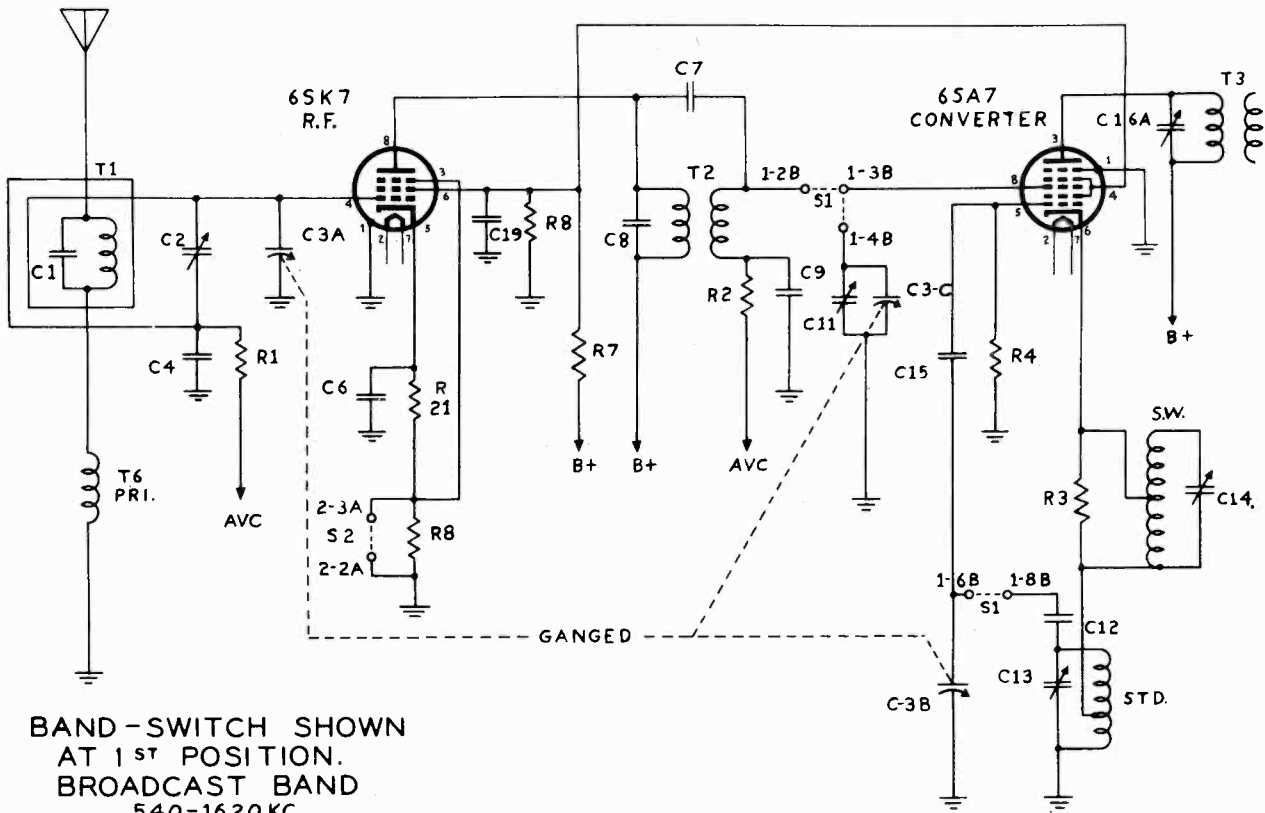
*Applied to antenna through .1 mfd. or less.
 **Applied to antenna through 200 mfd. or less.
 +Range switch (S1) in SW position.



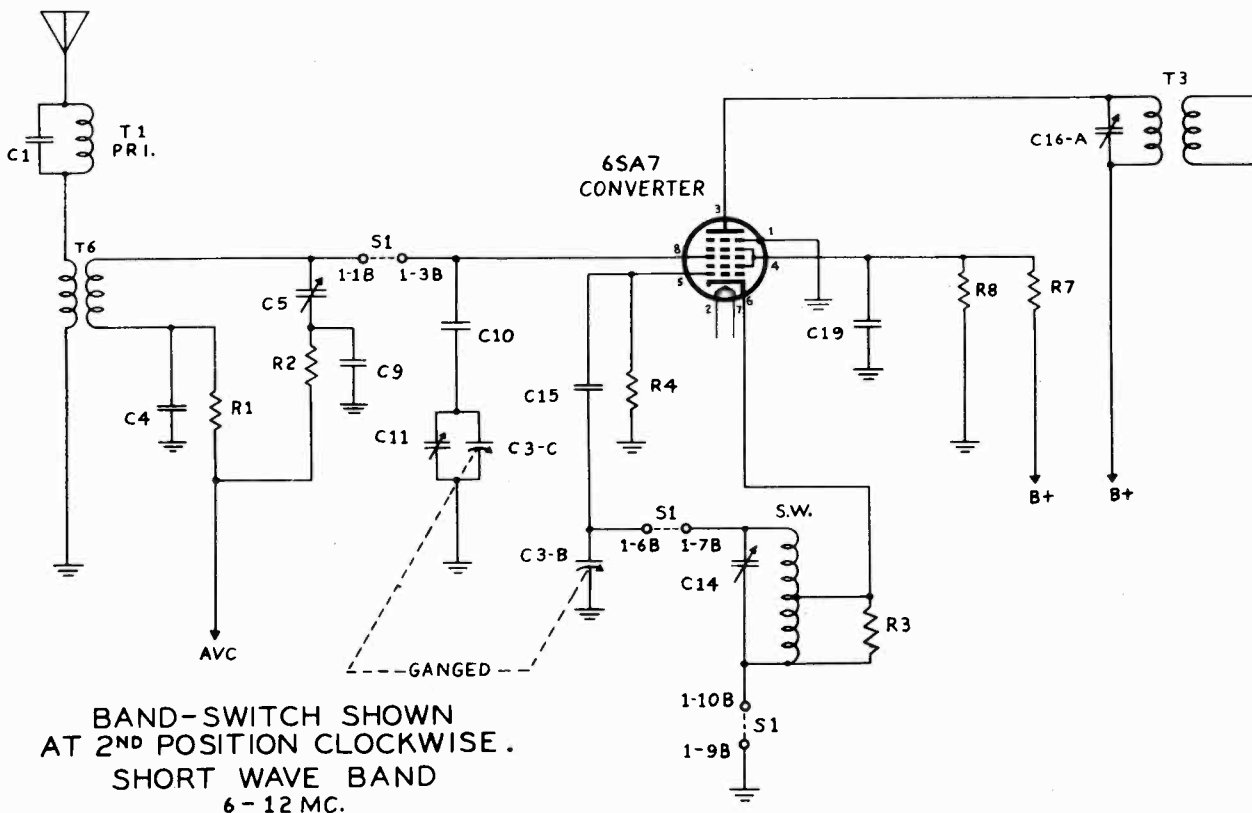
"clarified schematics"

MODELS 676B, -C, -D

BENDIX RADIO DIV.



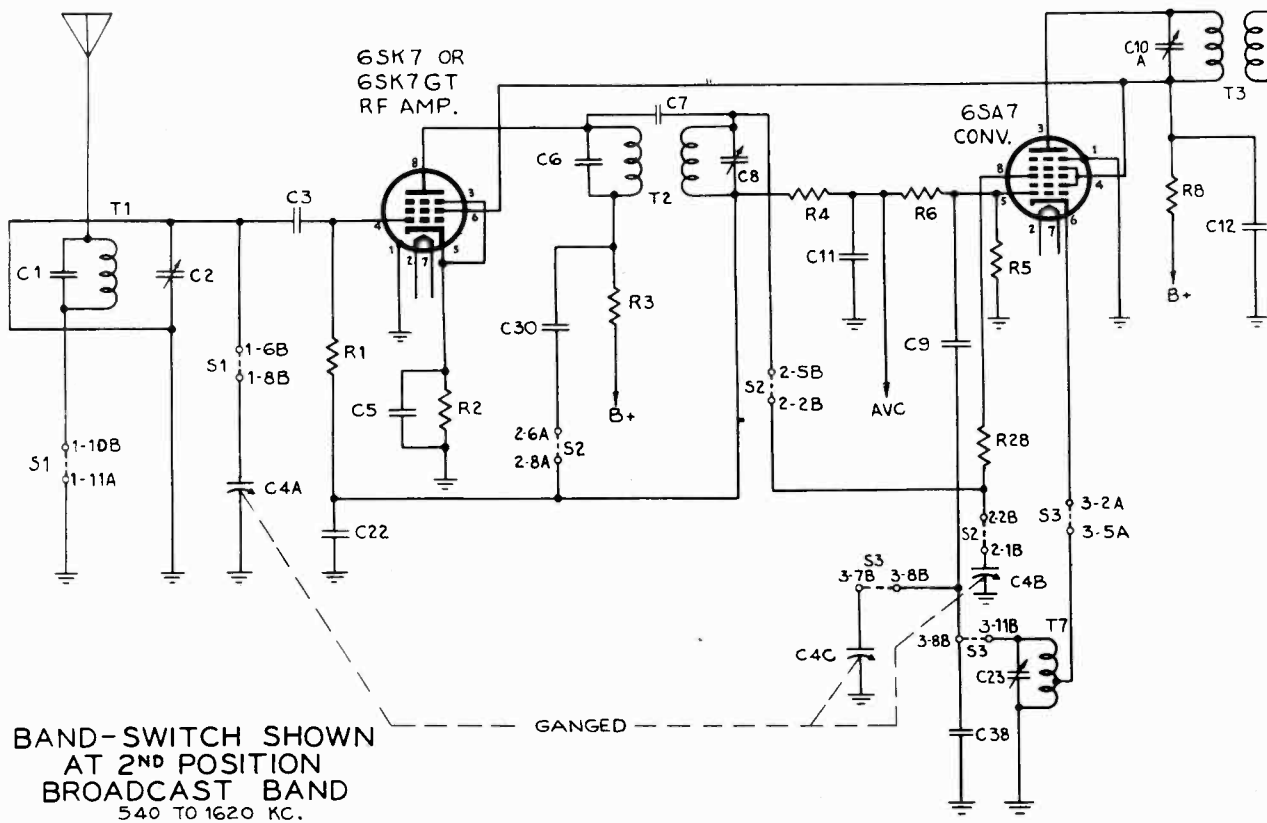
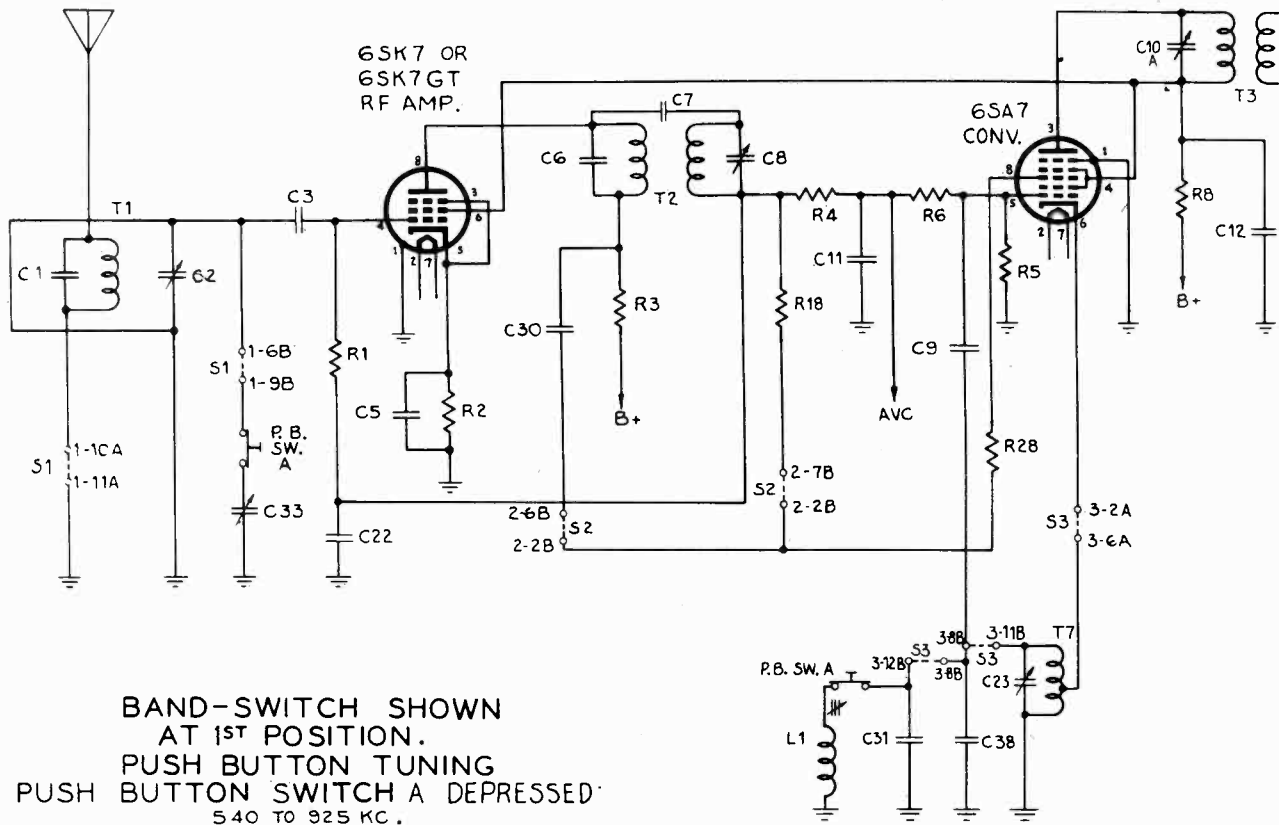
BAND-SWITCH SHOWN AT 1ST POSITION. BROADCAST BAND 540-1620 KC.



BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE. SHORT WAVE BAND 6-12 MC.

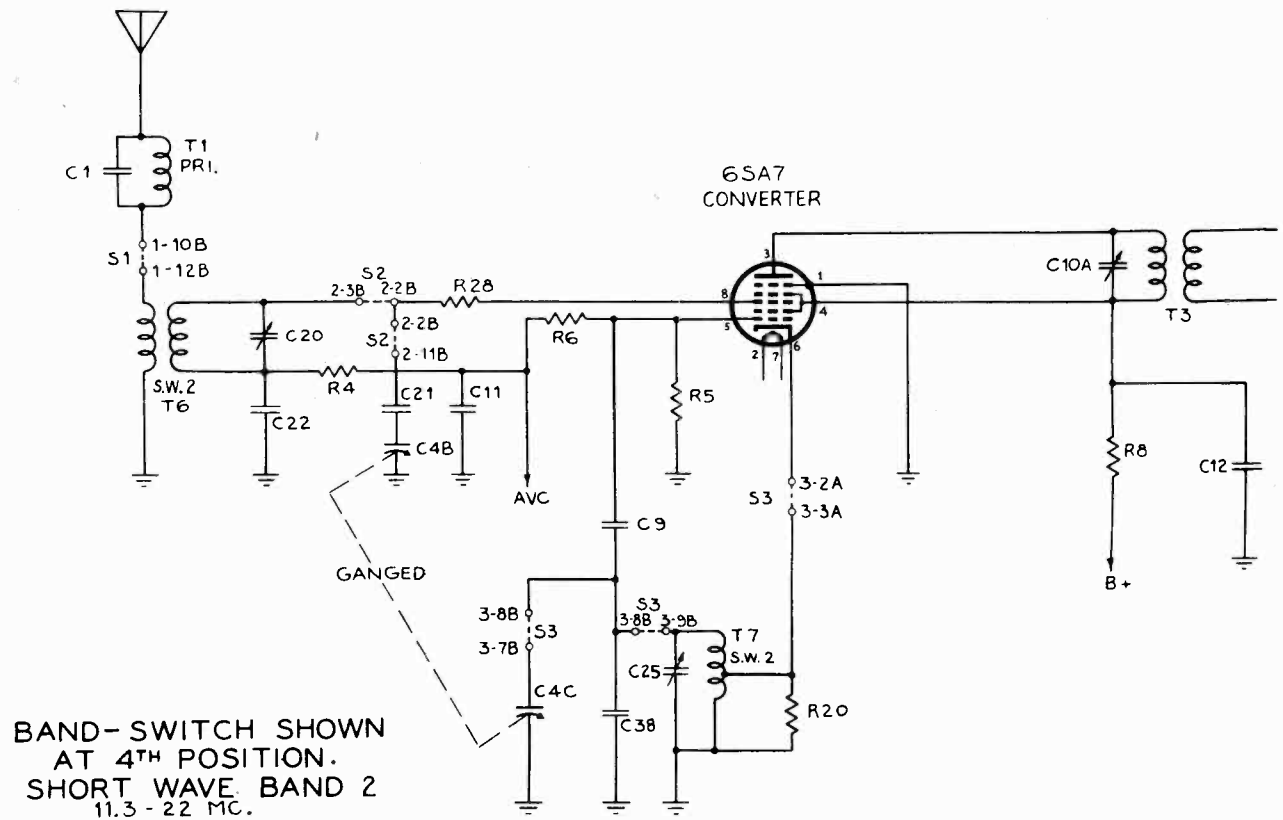
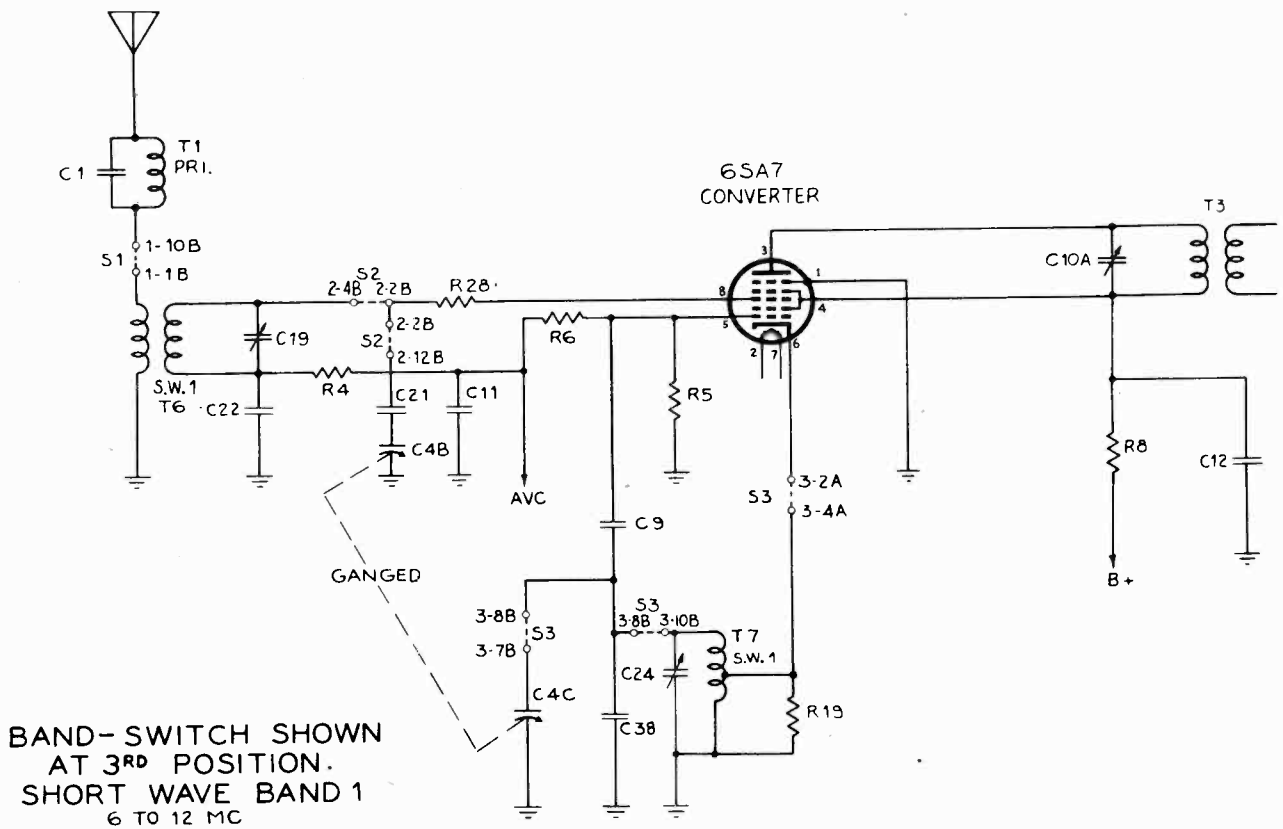
MODEL 736B

BENDIX RADIO DIV.



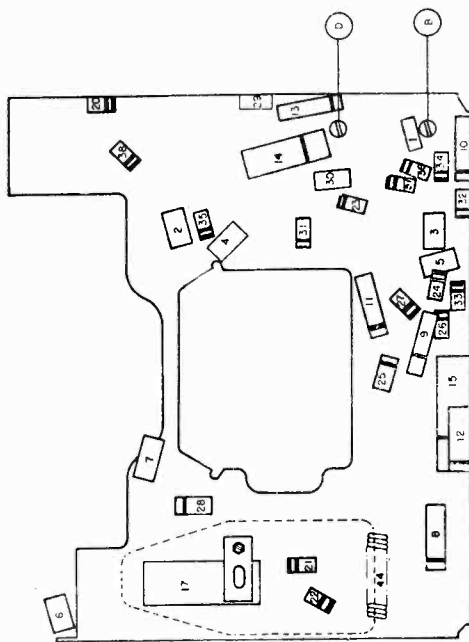
BENDIX RADIO DIV.

MODEL 736B

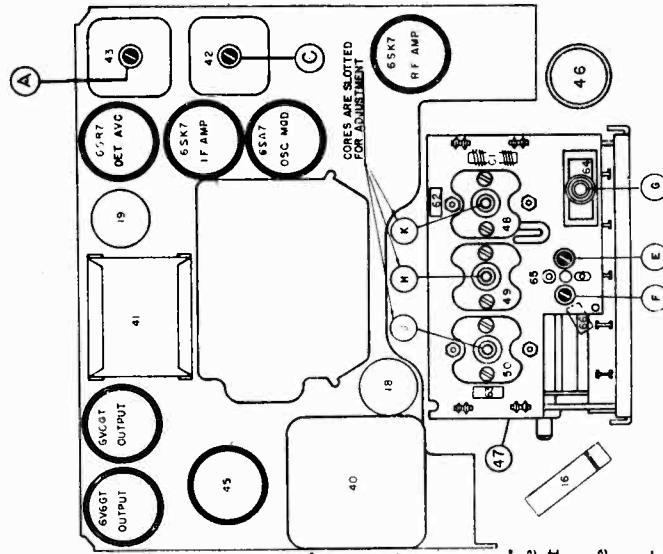


MODELS 980744,
980745

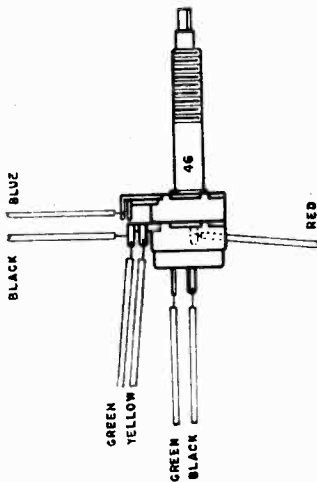
BUICK DIV.-GENERAL MOTORS



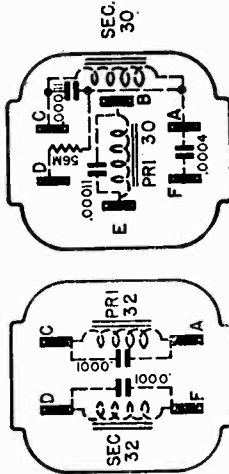
PARTS LAYOUT—CHASSIS VIEW



PARTS LAYOUT—TUBE VIEW

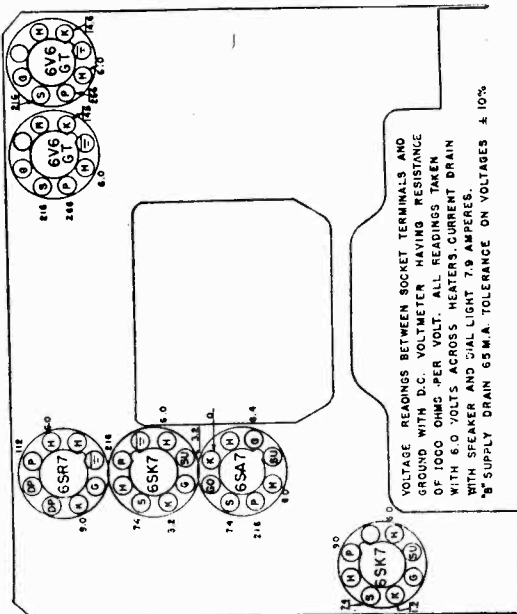


DUAL CONTROL



1st I.F. TRANS.

2nd I.F. TRANS.



TUBE SOCKET VOLTAGE CHART

VOLTAGE READINGS BETWEEN SOCKET TERMINALS AND GROUND WITH D.C. VOLTMETER HAVING RESISTANCE OF 1000 OHM PER VOLT. ALL READINGS TAKEN WITH 6.0 VOLTS ACROSS HEATERS. CURRENT DRAIN WITH SPEAKER AND DIAL LIGHT 7.9 AMPERES. *B SUPPLY DRAIN 65 M.A. TOLERANCE ON VOLTAGES ± 10%.

ALIGNMENT PROCEDURE

Volume Control Maximum.

Signal Generator output minimum for satisfactory output indication.

Series Condenser or Dummy Antenna	Connect To	Tune Receiver To	Signal Generator Frequency	Adjust Screws In Order
0.1 Mfd. *.000060 Mfd.	6SA7 Pin #8 Antenna Connector	No Broadcast Sig. Extreme Hi. Freq. End of Dial	262 KC 1615 KC	A B C D E F G
**-.000060 Mfd.	Antenna Connector	Signal Generator	1430 KC	**J K

*Before making this adjustment turn core screws J, K, H by means of a bakelite screwdriver, so that the rear end of the cores are 1/16" from the rear of the coil form. The purpose of this adjustment is to set the cores at the correct starting point with respect to the windings.

**Cores J and K are adjusted by means of a bakelite screwdriver through the rear end of the coils. There must not be any metal in part of screwdriver inserted in the coil.

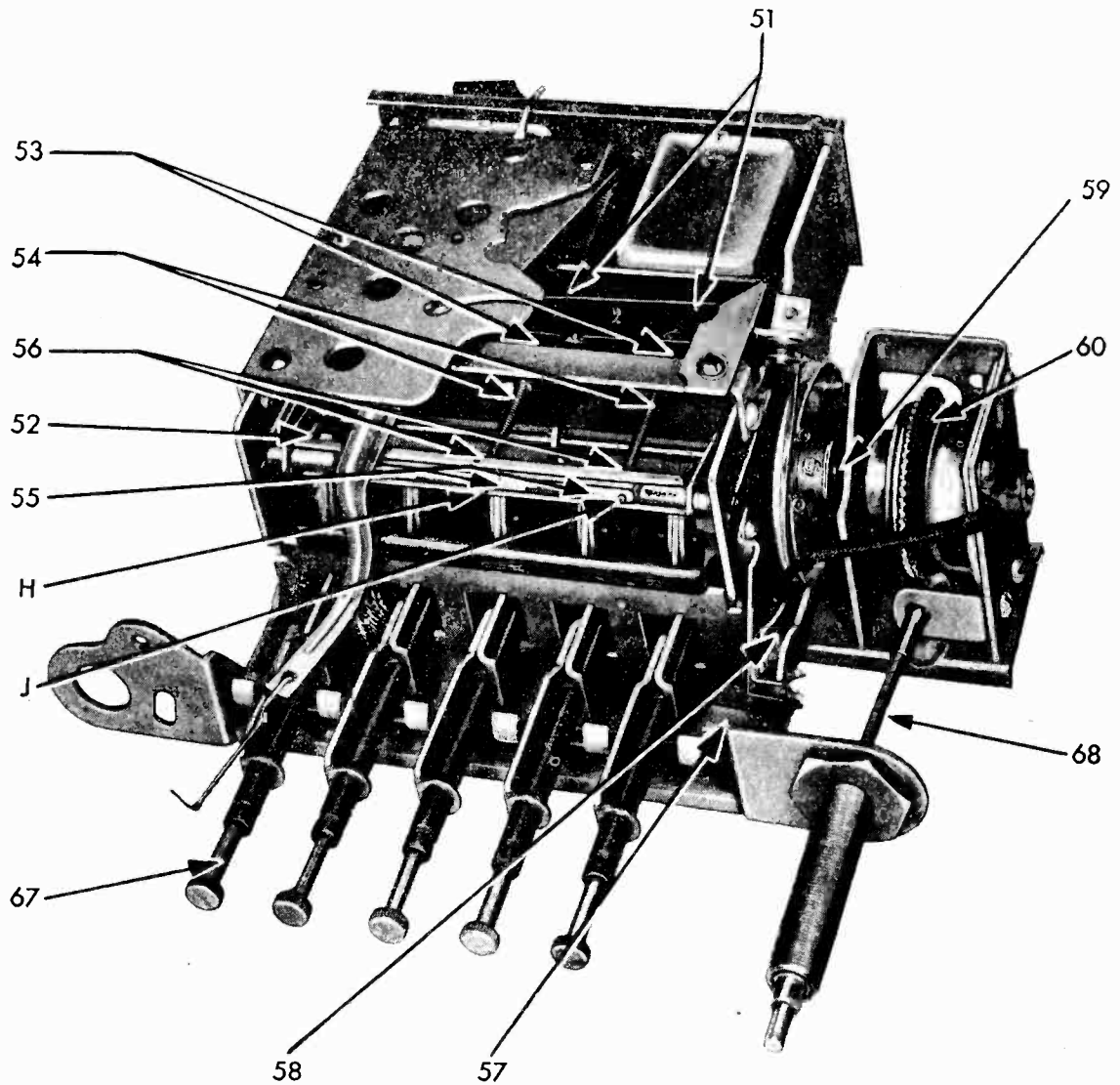
***Should it be necessary to calibrate the pointer after this adjustment, tune signal generator to 1300 KC and the receiver to the signal. Loosen dial cord pulley set screws and adjust pointer to 1300 KC. Tighten set screws.

Adjust trimmer G to match car antenna (at approx. 1400 KC) when radio is installed.

BUICK DIV.-GENERAL MOTORS

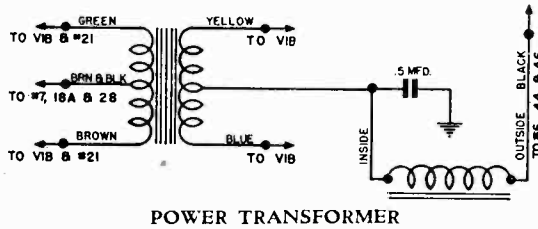
MODELS 980744,
980745

ESCUTCHEON CROSS SECTION

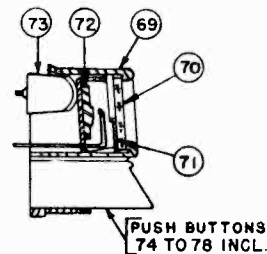


TUNER PICTURE

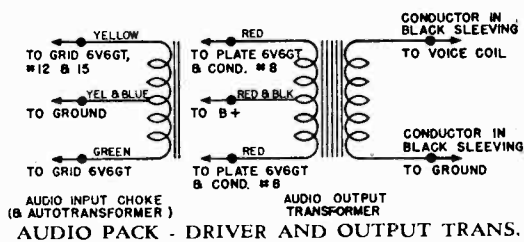
TRANSFORMER CONNECTIONS



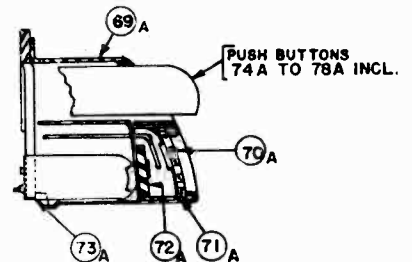
POWER TRANSFORMER



MODEL 980744



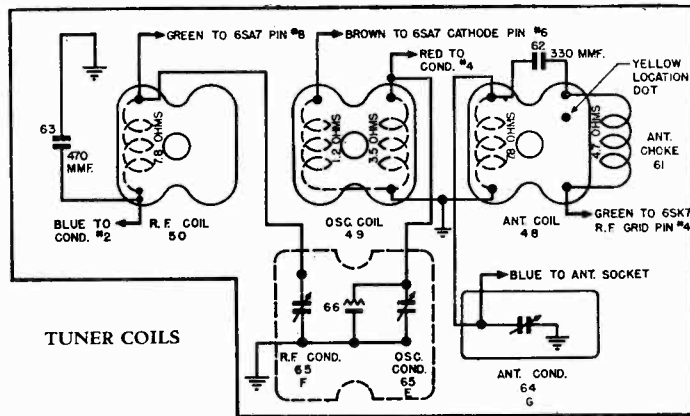
AUDIO PACK - DRIVER AND OUTPUT TRANS.



MODEL 980745

MODELS 980744,
980745

BUICK DIV.-GENERAL MOTORS



TUNER COILS

Illus. Service
No. Parts No.

DESCRIPTION

CONDENSERS

1	7233313	.000047 Mfd. Molded
2	1215188	.000056 Mfd. Molded
3	7240577	.000120 Mfd. Molded
4	7230893	.000150 Mfd. Molded
5	7236105	.000220 Mfd. Molded
6	7240566	.000560 Mfd. Mica
7	7240566	.000560 Mfd. Mica
Alt. for 6 & 7	7255665	.000560 Mfd. Mica—Molded
8	7236134	.0015 Mfd. 800 V. Tubular
9	7240578	.0025 Mfd. 400 V. Tubular
10	7230912	.005 Mfd. 600 V. Tubular
11	1208600	.01 Mfd. 600 V. Tubular
12	1211232	.025 Mfd. 400 V. Tubular
13	7230592	.05 Mfd. 600 V. Tubular
14	1207908	.1 Mfd. 400 V. Tubular
15	7240579	.2 Mfd. 400 V. Tubular
16	7236621	.5 Mfd. 200 V. Tubular
17	7236075	.015 x .015 1500 V. Dual Tubular
18	7240612	Electrolytic—2 Section 20-20 Mfd. 400 V.
19	7238553	Electrolytic—3 Section 20-20-20 Mfd. 25 V.
62	7232957	.000330 Mfd. Molded
63	7238879	.000470 Mfd. Molded
64	7242984	Antenna Trimmer
65	7244037	Dual Trimmer
66	7255725	Compensating

Included in Tuner Assembly Complete

RESISTORS

20	1213217	100 Ohms 1/2 W. Insulated
21	1213217	100 Ohms 1/2 W. Insulated
22	1213217	100 Ohms 1/2 W. Insulated
23	1213224	330 Ohms 1/2 W. Insulated
24	1213224	330 Ohms 1/2 W. Insulated
25	1214572	330 Ohms 2 W. Insulated
26	1214543	680 Ohms 1/2 W. Insulated
27	1213237	1500 Ohms 1/2 W. Insulated
28	1214573	1800 Ohms 2 W. Insulated
29	7237595	15,000 Ohms 1 W. Insulated
30	7233653	15,000 Ohms 2 W. Insulated
31	1214550	22,000 Ohms 1/2 W. Insulated
32	1213342	27,000 Ohms 1 W. Insulated
33	1213844	68,000 Ohms 1/2 W. Insulated
34	1214555	220,000 Ohms 1/2 W. Insulated
35	1214557	330,000 Ohms 1/2 W. Insulated
36	1213282	1 Megohm 1/2 W. Insulated
37	1213282	1 Megohm 1/2 W. Insulated
38	1214563	2.2 Megohm 1/2 W. Insulated

MOUNTING AND INSTALLATION PARTS

7255666	Control Knob Kit
	Tuning Knobs—2
	Dummy Knob
	Tone Control Knob
	Washers—2
	Hex. Nuts—2
1321177	"A" Lead Cable Assembly—Model 980744
1321178	"A" Lead Cable Assembly—Model 980745
120151	Fuse
1286759	Static Collector Assembly
1880659	Generator Condenser
1207820	Distributor Suppressor
1853686	Suppressor Adaptor
1324056	Bracket—R. H.—Model 980744
1324057	Bracket—L. H.—Model 980744
1323926	Bracket—R. H.—Model 980745
1323927	Bracket—L. H.—Model 980745
1320624	Washer
120380	Lockwasher
120375	Hex. Nut
123291	Screw

MISCELLANEOUS ELECTRICAL PARTS

39	7240469	Speaker—8" Electrodynamc
40	7240519	Power Transformer Assembly
41	7240464	Audio Pack-Driver and Output Transformer Assembly
42	7238546	First I. F. Transformer Assembly
43	7240467	Second I. F. Transformer Assembly
44	7241708	"A" Filter Choke
45	8630	Vibrator—Synchronous
46	7241967	Volume & Tone Control with Switch—Model 980744
46A	7241928	Volume & Tone Control with Switch—Model 980745
61	7240251	Antenna Choke Coil (Included in Tuner Assembly Complete)

Illus. Service
No. Parts No.

DESCRIPTION
TUNER, DIAL, AND ESCUTCHEON PARTS

47	7244052	Tuner Assembly Complete—Model 980744
47A	7244027	Tuner Assembly Complete—Model 980745
48	7244056	Antenna Coil Assembly
49	7244058	Oscillator Coil Assembly
50	7244057	R. F. Coil Assembly
51	7255779	Grommet
52	7244034	Spring—Connecting Link
	7256014	Iron Core Parts Package
53		Iron Core
54		Spring—Core Tension
55		Nut—Core Coupling
56		Washer
57	7240410	Declutching Switch Lever Assembly
	7242961	Shaft—Declutching Switch Lever
	7242962	Spring—Declutching Switch Lever
	7255698	Retainer Spring
58	7240397	Switch Assembly—Declutching
59	7240396	Drive Drum Assembly
60	7240471	Clutch Assembly Complete
	7237174	Universal Joint Spring
61	7240251	Antenna Choke Coil
62	7232957	Condenser—.000330 Mfd. Molded
63	7238879	Condenser—.000470 Mfd. Molded
64	7242984	Antenna Trimmer Condenser
65	7244037	Dual Trimmer Condenser
66	7255725	Compensating Condenser
	7242167	Cord and Spring Assembly
	7242168	Cord and Link Assembly
67	7240368	Reset Screw Assembly
68	7241981	Tuning Shaft Assembly
69	7241966	Escutcheon
70	7242981	Dial
71	7240509	Dial Shield
72	7240509	Backplate Assembly
73	7238513	Dial Clamp
74	7242221	Button Assembly "B"
75	7242222	Button Assembly "U"
76	7242223	Button Assembly "I"
77	7242224	Button Assembly "C"
78	7242225	Button Assembly "K"
	7242005	Cord and Spring Assembly
	7242006	Cord and Link Assembly
67A	7241982	Reset Screw Assembly
68A	7241980	Tuning Shaft Assembly
69A	7242039	Escutcheon Assembly
70A	7244046	Dial
71A	7241992	Dial Shield
72A	7241987	Backplate Assembly
73A	7242093	Dial Clamp
74A	7242226	Button Assembly "B"
75A	7242227	Button Assembly "U"
76A	7242228	Button Assembly "I"
77A	7242229	Button Assembly "C"
78A	7242230	Button Assembly "K"

Parts Included in Tuner Assembly Complete, Part No. 7244052, Model 980744, Which Are Also Serviced Separately.

Parts Included in Tuner Assembly Complete, Part No. 7244027, Model 980745, Which Are Also Serviced Separately.

TUBE COMPLEMENT

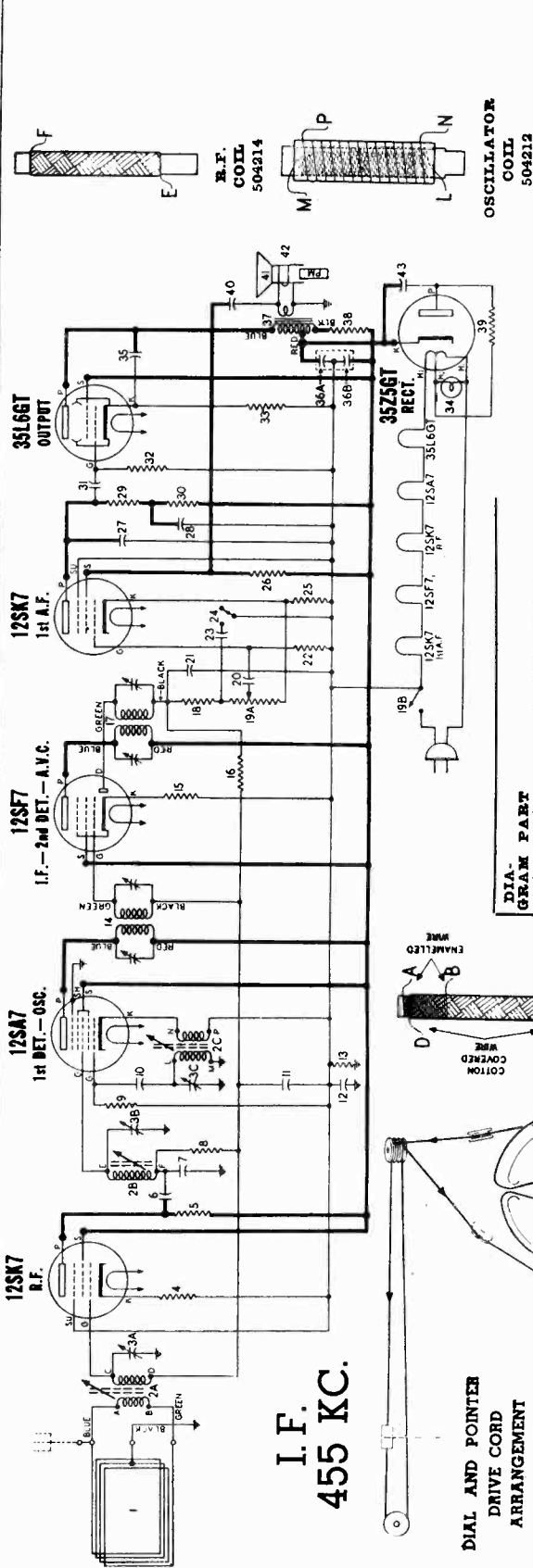
6V6GT	Push-Pull Output
6SR7	Detector, A. V. C. and First Audio
6SK7	I. F. Amplifier
6SK7	R. F. Amplifier
6SA7	Oscillator Modulator

MISCELLANEOUS PARTS

7242034	"A" Lead Connector Assembly
7242035	Antenna Lead Connector Assembly
7238539	Vibrator Socket
7236279	Dial Tube Socket
7240408	Dial Light Assembly (Includes Dial Lamp)
125588	Bulb—Dial Lamp

BUTLER BROS.

MODELS N5-RD-250, Chas. 9022N;
N5-RD-251, Chas. 9022H

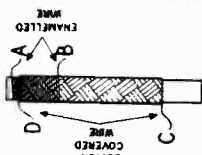


I.F.
455 KC.

DIAL AND POINTER
DRIVE CORD
ARRANGEMENT

To string dial cord, turn the main drive drum to maximum counter-clockwise position and use following parts:

- 114955 Clip on end of cord
- 117057 Cord (55 inches)
- 119087 Ring for dial cord
- 161384 Tension Spring



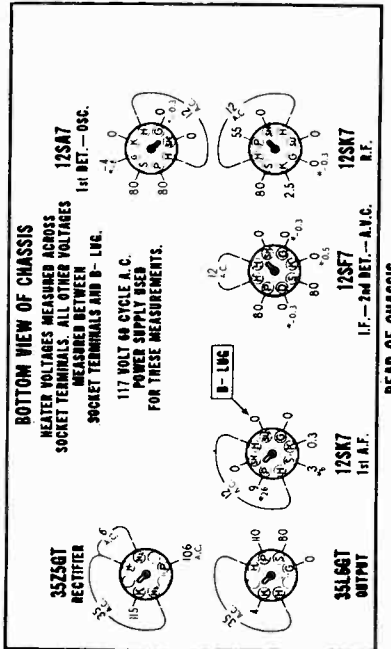
ANTENNA
COUPLING COIL
504210

Lettered terminals in illustrations correspond to similarly lettered terminals on the circuit diagram.

SOCKET VOLTAGES

Measured with voltmeter having sensitivity of 1000 ohms per volt except where indicated by (*).

VOLUME ON FULL WITH NO SIGNAL DIAL TUNED TO 540 KC.



REAR OF CHASSIS

*—Measured with vacuum tube voltmeter

DIA-GRAM PART NO. DESCRIPTION

DIA-GRAM PART NO.	DESCRIPTION
3 A, B, C 504086	Condenser trimmer assembly
A	10 to 160 Mmfd.
B	20 to 270 Mmfd.
C	20 to 270 Mmfd.
6	Condenser—mica 260 Mmfd. 500 volt
7	Condenser—mica 1,000 Mmfd. 500 volt
10	Condenser—mica 500 Mmfd. 500 volt
11	Condenser—1 Mid. 200 volt
12	Condenser—2 Mid. 400 volt
20	Condenser—.002 Mid. 400 volt
21	Condenser—.004 Mid. 400 volt
22	Condenser—.008 Mid. 400 volt
23	Condenser—.01 Mid. 400 volt
27	Condenser—.05 Mid. 200 volt
28	Condenser—.05 Mid. 200 volt
31	Condenser—.004 Mid. 400 volt
35	Condenser—.01 Mid. 400 volt
36 A, B	Condenser—electrolytic
A	40 Mfd. 150 volt
B	20 Mfd. 150 volt
40	Condenser—.02 Mid. 400 volt
43	Condenser—.05 Mid. 400 volt
4	Resistor—carbon 390 ohms 1/4 watt
5	Resistor—carbon 470,000 ohms 1/4 watt
8	Resistor—carbon 470,000 ohms 1/4 watt
9	Resistor—carbon 22,000 ohms 1/4 watt
13	Resistor—carbon 220,000 ohms 1/4 watt
15	Resistor—carbon 47 ohms 1/4 watt
16	Resistor—carbon 3.3 Meg. 1/4 watt
18 A, B	Volume control 500,000 ohms (with switch)
22	Resistor—carbon 10 Meg. 1/4 watt
25	Resistor—carbon 220 ohms 1/4 watt
26	Resistor—carbon 220 ohms 1/4 watt
29, 30	Resistor—carbon 220,000 ohms 1/4 watt
32	Resistor—carbon 470,000 ohms 1/4 watt
33	Resistor—carbon 130 ohms 1/4 watt
38	Resistor—carbon 1500 ohms 1 watt
39	Resistor—carbon 33 ohms 1/2 watt
1	Loop antenna
2 A, B, C	Tuning unit, complete assembly
2 A	Coil—antenna (less slug)
2 B	Coil—R.F. (less slug)
2 C	Coil—oscillator (less slug)
14	504211 Slug core for Ant. coil (yellow end)
17	504213 Slug core for Osc. coil (white end)
37	504215 Slug core for R.F. coil (purple end)
17	502102 Transformer—1st I.F.
17	502103 Transformer—2nd I.F.
37	502213 Transformer—output (for R-502998 spkr.)
37	502904 Transformer—output (for A-502998 spkr.)
37	504244 Transformer—output (for W-502998 spkr.)
24	500546 Switch—tone control
34	502473 Lamp—dial (Mazda 47) 6.8 V. 150 Ma.
41	502214 Cone & voice coil for R-502998 spkr.
41	502903 Cone & voice coil for A-502998 spkr.
42	504245 Cone & voice coil for W-502998 spkr.
42	502998 Speaker—P.M. dynamic (5 inch)
502185	MISCELLANEOUS PARTS
116487	Back for cabinet
502556	Base for mtg. electrolytic condenser
502557	Cabinet—ivory (Model 9022-H)
500481	Cabinet—mahogany (Model 9022-N)
500482	Clamp—dial scale mtg.
500485	Clip—retainer for cabinet back
117057	Connector—for antenna leads
500324	Cord—dial drive (35 in. required)
504145	Cord—cardboard, for elect. cond.
501186	Dial scale—plastic
502551	Grounding plates (under I.F. trans. can)
502567	Knob—mahogany (Model 9022-H)
81145	Pointer
81145	Retaining ring for tuning shaft
85078	Rubber grommet; Ant. & R.F. coil mtg.
504045	Rubber grommet; Osc. coil mtg.
119087	Ring for dial cord
117064	Screw—No. 8 x 7/32
114628	Screw—No. 8 x 1/2 chassis mtg.
502173	Shaft—tuning control
116690	Socket—octal base
160392	Socket—octal (rectifier)
500499	Socket—dial lamp (with leads)
504012	Spring for tuning slug drive cord
161384	Spring—dial cord tension
111456	Washer—spring washer for tuning shaft

MODELS N5-RD-250, Chas. 9022N;
N5-RD-251, Chas. 9022H

BUTLER BROS.

ALIGNMENT PROCEDURE

1. Remove chassis and loop from cabinet. Solder approximately 8" of insulated wire to any B— connection (see voltage chart on opposite side for convenient B— location). Then reinstall chassis and loop in cabinet. The B— lead should extend from under the chassis at the back.
2. Connect ground lead of signal generator to B— lead.
3. Connect output meter across the speaker voice coil (terminals at back of speaker.)
4. Turn the tuning control knob clockwise as far as it will go (tuner mechanism is now in maximum open position with tuning slugs almost completely withdrawn from coils). Dial pointer should then point to 1600 Kc mark on scale. If it is set incorrectly, release pointer clip on dial cord and reposition pointer.
5. Set volume control at maximum volume position and use a weak signal from the signal generator.

DUMMY ANT. IN SERIES WITH SIGNAL GENERATOR	CONNECT HIGH SIDE OF GENERATOR TO	SIGNAL GENERATOR FREQUENCY	RECEIVER DIAL SETTING	TRIMMER NUMBER	TRIMMER DESCRIPTION	TYPE OF ADJUSTMENT
.1 MFD. Condenser	Ungrounded terminal of trimmer No. 6 (see Fig. 2 below for location of trimmer.)	455 KC	Any point where it does not affect the signal.	1-2	2nd I.F.	Adjust for maximum output. Then repeat adjustment.
				3-4	1st I.F.	
300 MMFD. Mica Condenser	External Antenna Clip on Loop Frame	1600 KC	1600 KC	5	Broadcast Oscillator (Shunt)	Adjust for maximum output.
300 MMFD. Mica Condenser	External Antenna Clip on Loop Frame	1600 KC	Tune to 1600 KC generator signal	6	Broadcast R.F.	Adjust for maximum output.
				7	Broadcast Antenna	Adjust for maximum output.
300 MMFD. Mica Condenser	External Antenna Clip on Loop Frame	1400 KC	Tune to 1400 KC generator signal	Ant. coil tuning slug		Adjust position of slug for maximum output.
				R.F. coil tuning slug		Adjust position of slug for maximum output.
300 MMFD. Mica Condenser	External Antenna Clip on Loop Frame	1600 KC	Tune to 1600 KC generator signal	6	Broadcast R.F.	Recheck adjustment for maximum output.
				7	Broadcast Antenna	Recheck adjustment for maximum output.

Apply a coating of speaker cement at top of each tuning core stem to prevent movement.

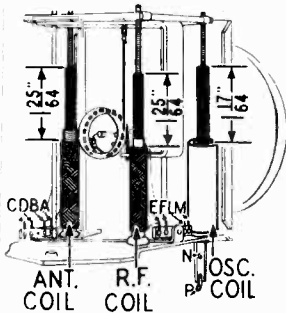


FIG. 1
SLUG TUNER ASSEMBLY (Drive Parts)
117057 Cord (8")
114955 Clip on cord
504012 Spring

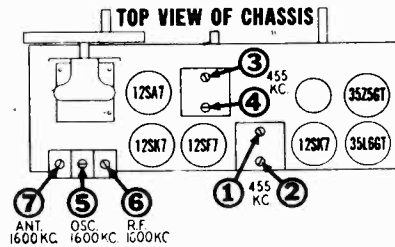


FIG. 2

AUDIO OSCILLATION

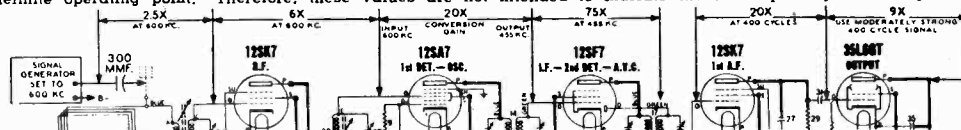
The audio system of this receiver utilizes a two stage type of inverse feed-back arrangement and, should it ever be necessary to replace the speaker or output transformer, it is important to maintain a definite phase relationship in the feed-back circuit. If the connections to the output transformer are reversed or if the feed-back connection is made to the wrong side of the output transformer secondary, the system will become regenerative instead of degenerative. Under those conditions audio oscillation may result. If that occurs, oscillation can be prevented by reversing the connections to the secondary of the output transformer.

APPROXIMATE STAGE GAIN DATA

Be sure R.F. and I.F. stages are accurately aligned before measuring gain. R.F. gains can be measured with a "channel" type instrument containing a tuned and calibrated R.F. amplifier. A vacuum tube voltmeter may be used for audio gain measurements. Observe following precautions:

1. For all gain measurements connect signal generator as shown. Use 600 KC. signal with 400 cycle modulation (use nearby frequency if local station interferes.)
2. For R.F. and I.F. measurements connect negative terminal of a 3 volt battery (two 1 1/2 volt cells in series) to A.V.C. lead and positive terminal to B—. This provides a definite operating point. **IMPORTANT:** Disconnect battery when measuring audio stage gains.
3. Be sure radio is carefully tuned to generator signal (use weak signal for sharp tuning.)
4. When using a "channel" type instrument carefully tune it for maximum output at desired frequency before making measurements.

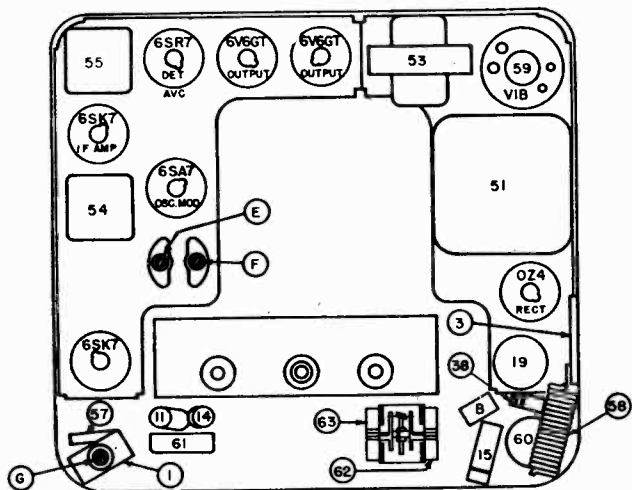
The R.F. and I.F. stage gains shown below are less than under normal operating conditions due to the use of 3 volts fixed bias in order to establish a definite operating point. Therefore, these values are not intended to indicate the full capability of a stage.



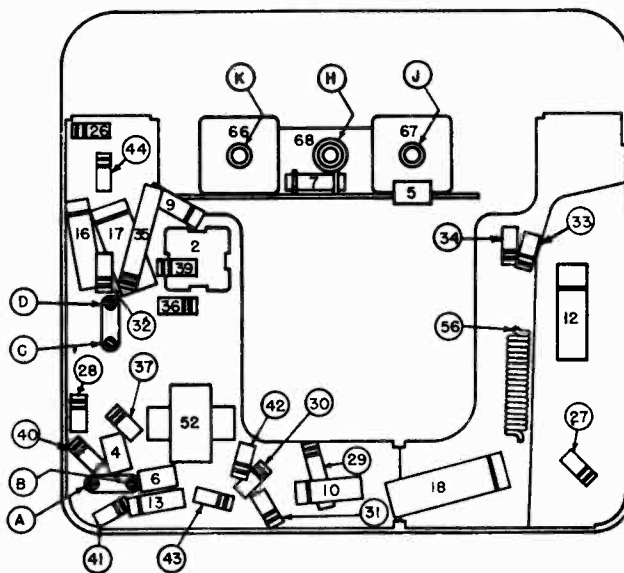
Differences in tube characteristics, tolerance of parts, adjustment of tuned circuits, and variations of line voltage will influence stage gain. Accuracy of measurements is dependent upon careful tuning of receiver to generator signal and experience in using your test equipment. These factors may create considerable variation in gain measurements.

MODEL 7253207

CADILLAC DIV.-GENERAL MOTORS



PARTS LAYOUT—TUBE VIEW



PARTS LAYOUT—CHASSIS VIEW

PUSH BUTTON SET-UP

Push button in and latch. Turn button until desired station is brought in. Do not hold button in beyond normal latching position while adjusting.

ALIGNMENT PROCEDURE

Volume Control Maximum.

Signal Generator output minimum for satisfactory output indications.

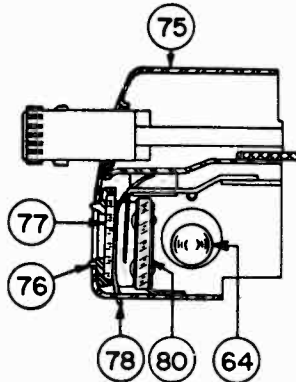
Series Condenser or Dummy Antenna	Connect To	Signal Generator Frequency	Adjust Screws In Order
0.1 Mfd	Pin #8 of 6SA7	262 KC	A B C D
.000070 Mfd	Antenna Connector	1615 KC	E
.000070 Mfd	Antenna Connector	1430 KC	F G

Adjust trimmer G to match car antenna (1430 KC) when radio is installed.

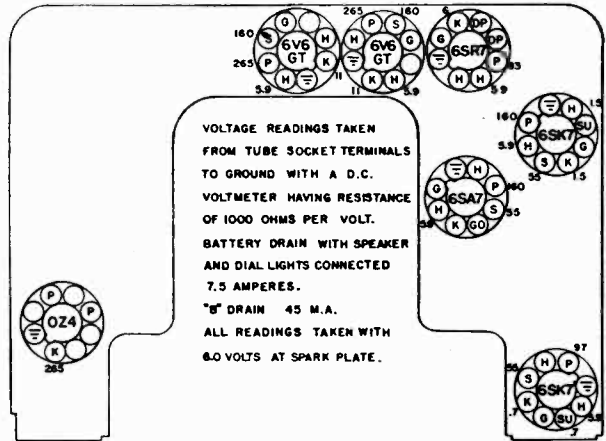
SPECIAL INSTRUCTIONS

Alignment of Iron Cores: Tune to stop at H. F. end of dial. Adjust cores H, J and K to extend $1\frac{5}{32}$ " from end of their coil forms. Adjust trimmers E, F and G (SG at 1615 KC). Adjust cores J and K (SG at 1430 KC). Repeat alignment adjustment of trimmers at 1615 KC. and of cores J and K at 1430 KC.

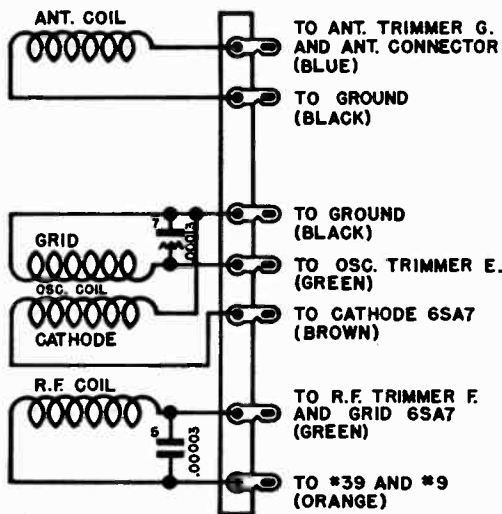
CADILLAC DIV.-GENERAL MOTORS



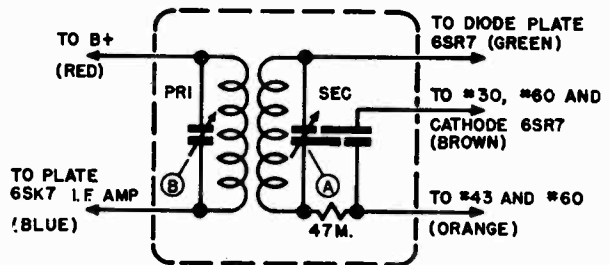
ESCUTCHEON
CROSS SECTION



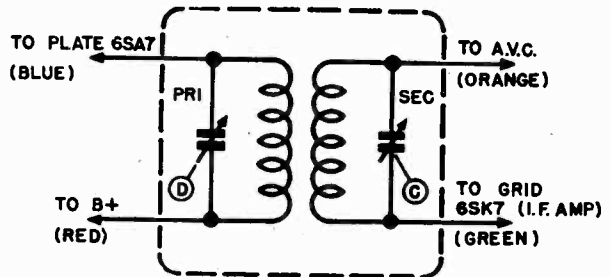
TUBE SOCKET VOLTAGE CHART



TUNER COILS

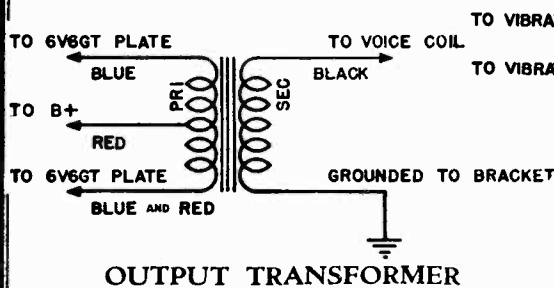


SECOND I. F. TRANSFORMER

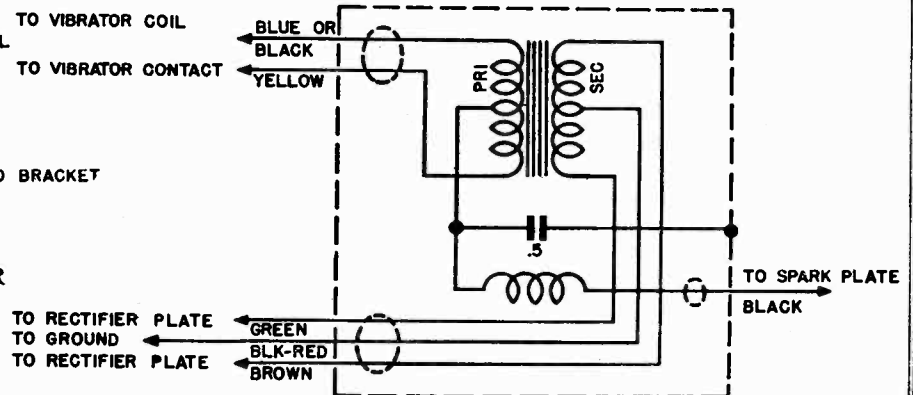


FIRST I. F. TRANSFORMER

COIL CONNECTIONS



OUTPUT TRANSFORMER



POWER TRANSFORMER

MODEL 7253207

CADILLAC DIV -GENERAL MOTORS

GENERAL

MOUNTING—All 1946 Cadillac Cars.

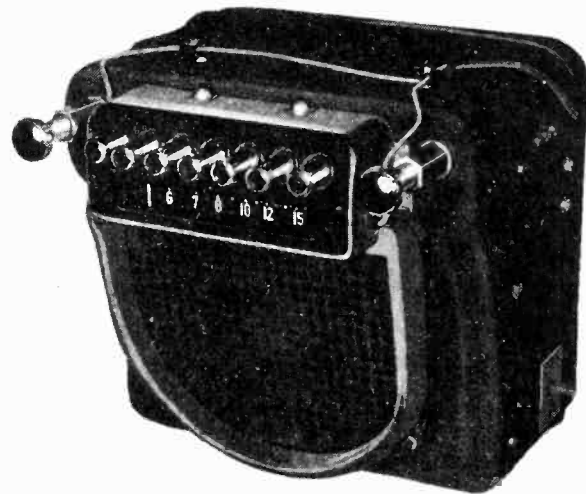
TUBES—Seven—6SK7 (2), 6SA7, 6SR7,
6V6GT (2), 0Z4.

SPEAKER—8" Dynamic.

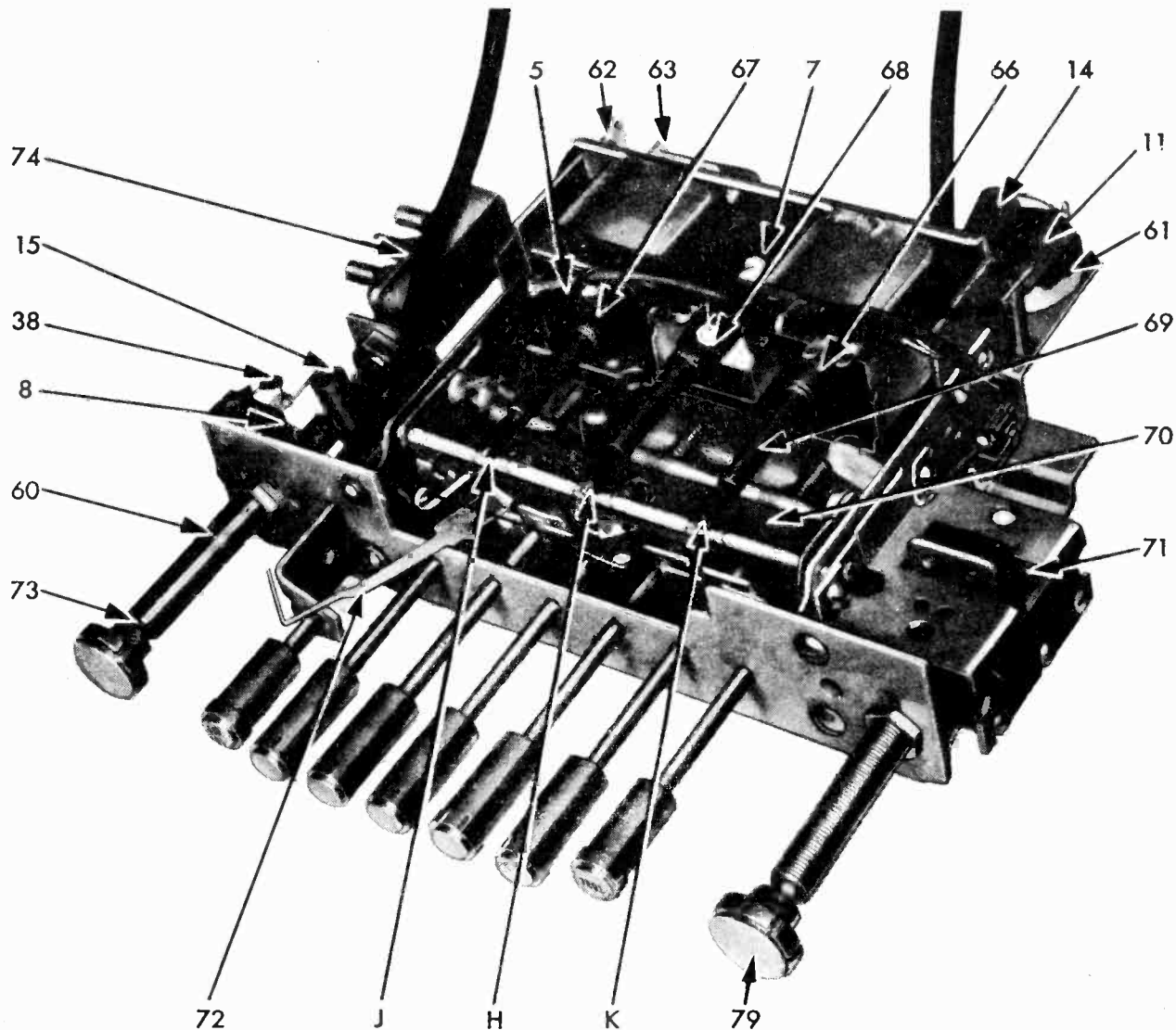
TUNING—Manual and 5 P. B.

CAR ANTENNA CAPACITY—.000065 to .000075
Mfd.

TUNING RANGE—550 - 1600 KC.



MODEL 7253207



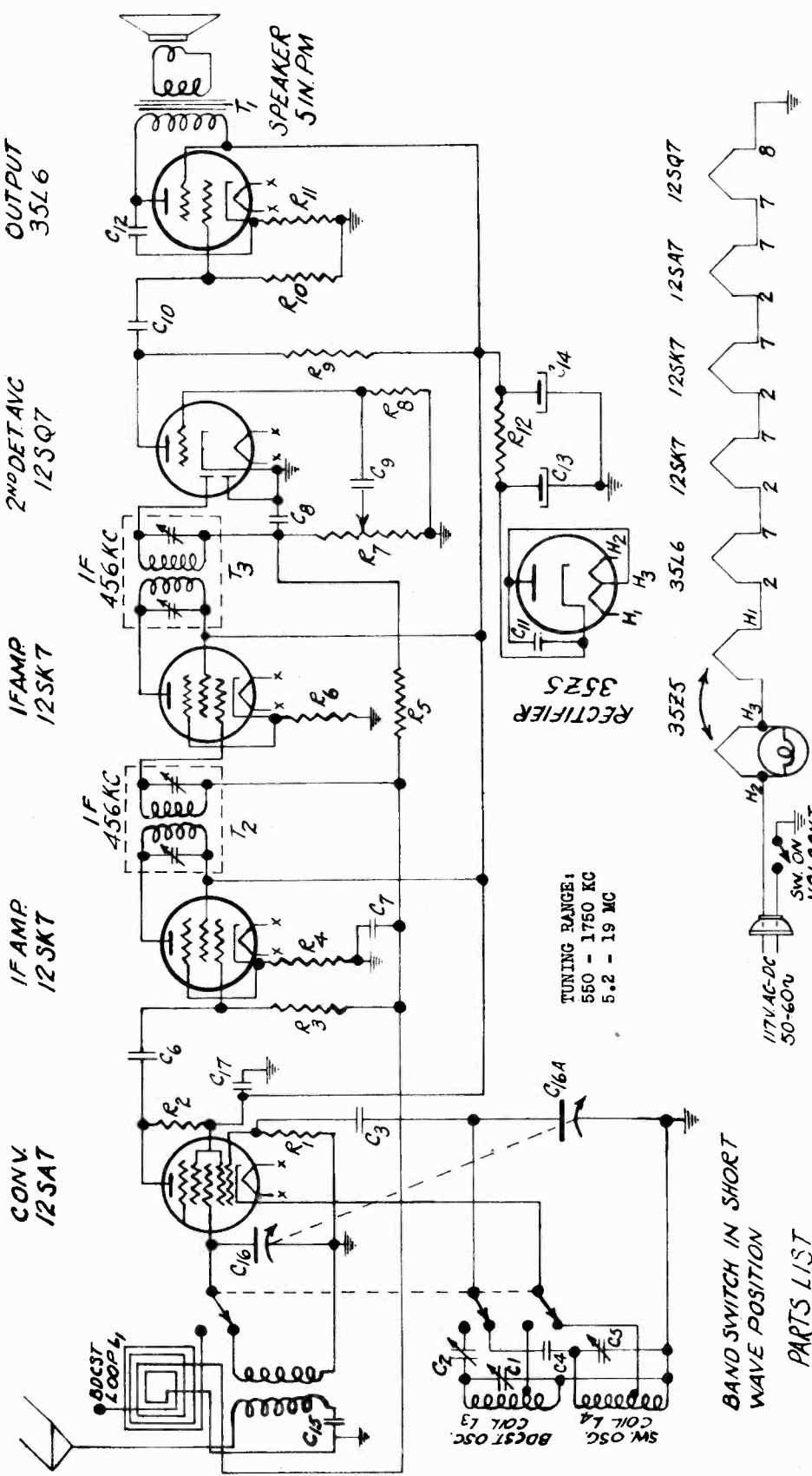
TUNER PICTURE

CADILLAC DIV.-GENERAL MOTORS

Illus. No.	Service Part No.	Description	Illus. No.	Service Part No.	Description
CONDENSERS					
1	7242472	Antenna Trimmer	62	7242520	Cord Assembly (Includes Cord)
2	7242454	Dual Trimmer	63	7242513	Switch and Guide Bracket Assembly
3	7241259	Spark Plate Assembly	64	7242537	Spring—Switch Coupling
4	1215189	000010 Mfd. Molded	65	7242482	Lamp Switch and Bracket Assembly
5	1213016	000030 Mfd. Molded (Included in Tuner Assy.)	66	7242482	Tone Control Switch Assembly (Includes III, 11 and 14)
6	1210275	000100 Mfd. Molded	67	7242479	Condenser—.005 Mfd. 1000 V. Tubular
7	7237839	000130 Compensating (Included in Tuner Assy.)	68	7242578	Condenser—.02 Mfd. 600 V. Tubular
8	7230893	000150 Mfd. Molded (Included in Tuner Assy.)	69	7241045	Resistor—33,000 Ohms 1/2 W. Insulated
9	1212097	.001 Mfd. 800 V. Tubular	70	7240893	Escutcheon
10	72356134	.0015 Mfd. 800 V. Tubular	71	7242392	Frame—Dial Glass
11	7240906	.005 Mfd. 1000 V. Tubular (Included in Tone Control Switch Assembly)	72	7242529	Dial Glass
12	7240906	.006 Mfd. 1600 V. Tubular	73	7242502	Retainer Spring
13	1208600	.01 Mfd. 600 V. Tubular	74	7240812	Knob Assembly
14	7237719	.015 Mfd. 600 V. Tubular (Included in Tone Control Switch Assembly)	75	7244226	Calibration Dial Assembly (Includes Dial Lamp)
15	1212099	.02 Mfd. 600 V. Tubular (Included in Tuner Assembly)	76	7236481	Dial Lamp Bulb
16	7230592	.05 Mfd. 600 V. Tubular	77	5274994	
17	1207908	.01 Mfd. 400 V. Tubular	78	1213016	
18	7242404	.02 Mfd. 400 V. Tubular	79	7237839	
19	7240724	Electrolytic 3 Section	80	7230893	
19A		20 Mfd. 25 V.		1212099	
19B		20 Mfd. 400 V.		1213845	
19C		20 Mfd. 400 V.		7242393	
RESISTORS					
26	1213217	100 Ohms 1/2 W. Insulated	5	7237887	R. F. Amplifier
27	7237094	220 Ohms 1/2 W. Insulated	6	7237886	Oscillator Modulator
28	1213324	330 Ohms 1/2 W. Insulated	6SA7	6SK7	J. F. Amplifier
29	7233771	330 Ohms 1 W. Insulated	6SR7	6V6GT	Det. A. V. C. and First Audio
30	1213323	330 Ohms 1 W. Insulated	6Z4		Rectifier
31	1213323	1,000 Ohms 1/2 W. Insulated	TUBE COMPLEMENT		
32	1211082	10,000 Ohms 1/2 W. Insulated	R. F. Amplifier		
33	7237094	10,000 Ohms 1 W. Insulated	Oscillator Modulator		
34	7237094	10,000 Ohms 2 W. Insulated	J. F. Amplifier		
35	7237094	10,000 Ohms 2 W. Insulated	Det. A. V. C. and First Audio		
36	7237094	22,000 Ohms 1/2 W. Insulated	Push Pull Output		
37	1213320	22,000 Ohms 1 W. Insulated	Rectifier		
38	1213842	33,000 Ohms 1/2 W. Insulated (Included in Tuner Assy.)			
39	1213845	120,000 Ohms 1/2 W. Insulated			
40	1213271	1 Megohm 1/2 W. Insulated			
41	1213282	1 Megohm 1/2 W. Insulated			
42	1213282	1.5 Megohm 1/2 W. Insulated			
43	1213283	1.5 Megohm 1/2 W. Insulated			
44	1214563	2.2 Megohm 1/2 W. Insulated			
MISCELLANEOUS ELECTRICAL PARTS					
50	7242556	Speaker—8" P. M. (Use only with #7242474 Trans.)	50	7242412	Bracket—Radio Support
51	7242557	Speaker—8" Electrodynamic (Use only with #7242558 Trans.)	51	1880659	Generator Condenser
52	7242312	Power Transformer Assembly	52	1879526	Coil Condenser
53	7242474	Input Transformer Assembly	53	1435482	Distributor Suppressor
53A	7242558	Output Transformer Assembly (Use only with #7242556, Speaker)	54	7235849	Spark Plug Suppressor
54	7242079	Output Transformer Assembly (Use only with #7242557, Speaker)	55	1207811	Spark Plug Suppressor
55	7242533	Second I. F. Transformer Assembly Complete	56	7240138	Front Wheel Static Collector
56	7241708	"A" Filter Choke	57	7242886	Grounding Spring
57	7240251	Antenna Choke Coil	58	5274049	Ground Strap
58	7241701	"A" Spark Choke	59	7240765	Serrated Washer
59	8638	Vibrator—Non Synchronous	60	7240808	Insulating Ferrule
60	7242296	Volume Control (Included in Tuner Assembly)	61	7238495	"A" Lead Assembly
61	7242482	Tone Control Switch Assembly (Included in Tuner Assembly)	62	1475855	Fuse
62	7242529	Switch and Guide Bracket Assembly (Included in Tuner Assembly)	63	7231585	Escutcheon Assembly—Control Knob
63	7242537	Lamp Switch and Bracket Assembly (Included in Tuner Assembly)	64	1305217	Hex Nut
64	7242560	Dial Lamp and Lead Assembly (Includes Lamp Bulb 187189)			
64	187189	Lamp Bulb			
MISCELLANEOUS CHASSIS PARTS					
5274994		Volume Control Cable (Included in Tuner Assembly)			
7242478		"A" Lead and Connector—Set to Fuse			
7239475		Antenna Connector Socket			
7236279		Oral Base Tube Socket			
7233944		Vibrator Socket			

CARR-NAGY CORP.

MODEL 100-62



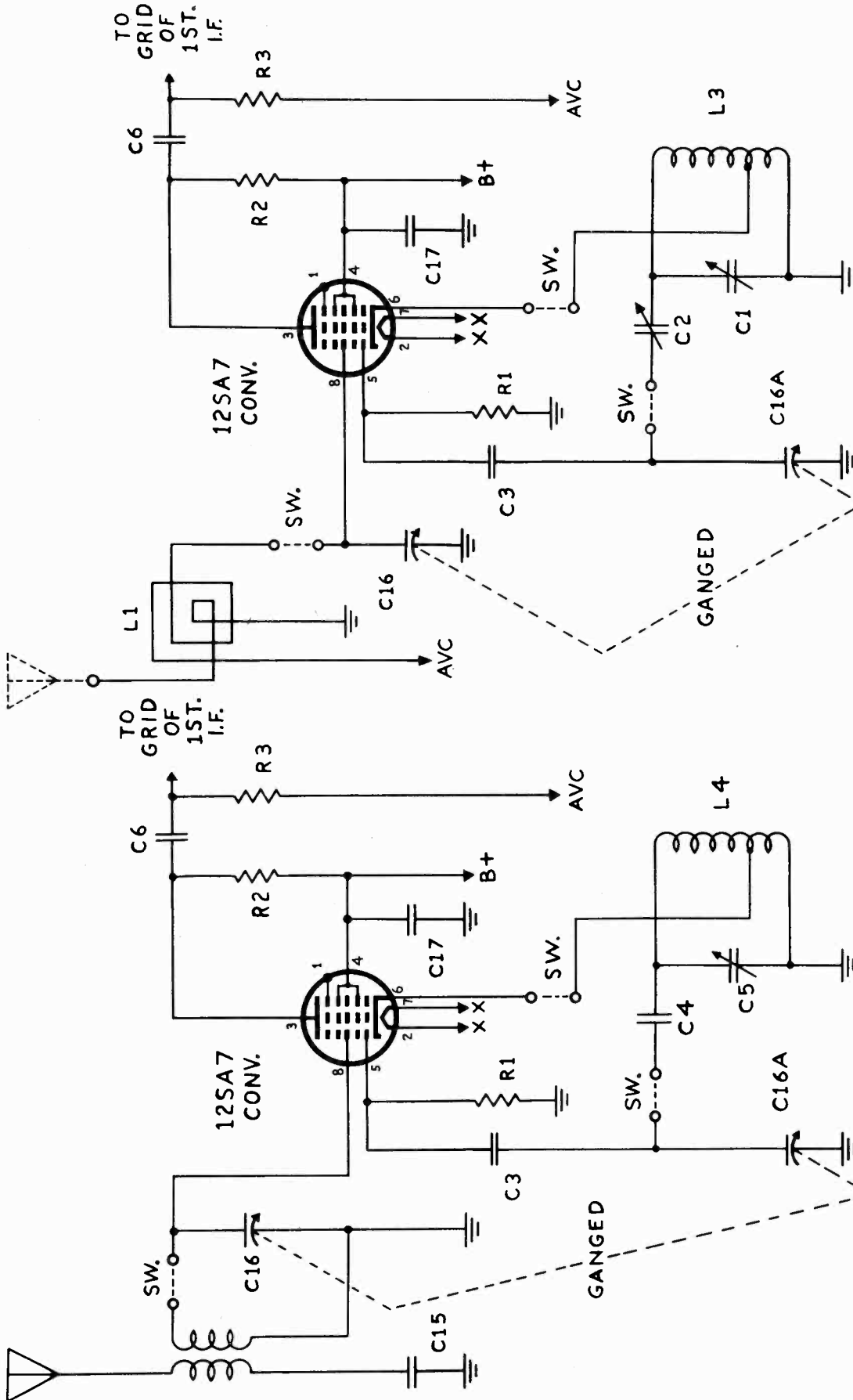
SCHEMATIC 6 TUBE SUPERHETERODYNE			
MAT	DATE 8-15-46	CHK	
FIN	SCALE	ENGINEER	
	DRAWN D. OMBROSI	APPROVED	
CARR-NAGY 100-62		CORP. NEW YORK	

- PARTS LIST
- R1-20,000Ω 1/4W
 - R2-30,000Ω 1/4W
 - R3-30,000Ω 1/4W
 - R4-300Ω 1/4W
 - R5-2 MEG Ω 1/4W
 - R6-300Ω 1/4W
 - R7-5 MEG Ω 1/4W
 - R8-10 MEG Ω 1/4W
 - R9-25 MEG Ω 1/4W
 - R10-5 MEG Ω 1/4W
 - R11-150Ω 1/2W
 - R12-500Ω 2 W

- PARTS LIST
- C1-3-30μuf
 - C2-150-450μuf
 - C3-50μuf
 - C4-.01μuf
 - C5-3-30μuf
 - C6-100μuf
 - C7-.01μuf
 - C8-500μuf
 - C9-.005μuf
 - C10-.005μuf
 - C11-.01μuf
 - C12-.05μuf
 - C13-50μuf 150V D.C.
 - C14-30μuf 150V D.C.
 - C15-100μuf
 - C16-10A-353μuf
 - C17-.1μuf

MODEL 100-62

CARR-NAGY CORP.

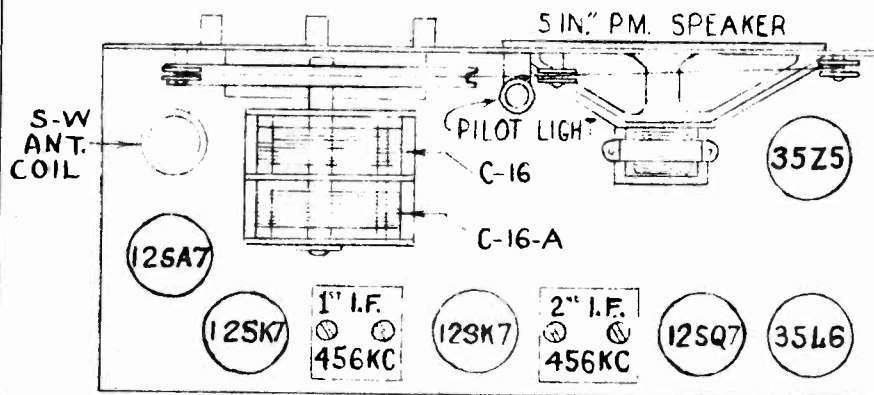
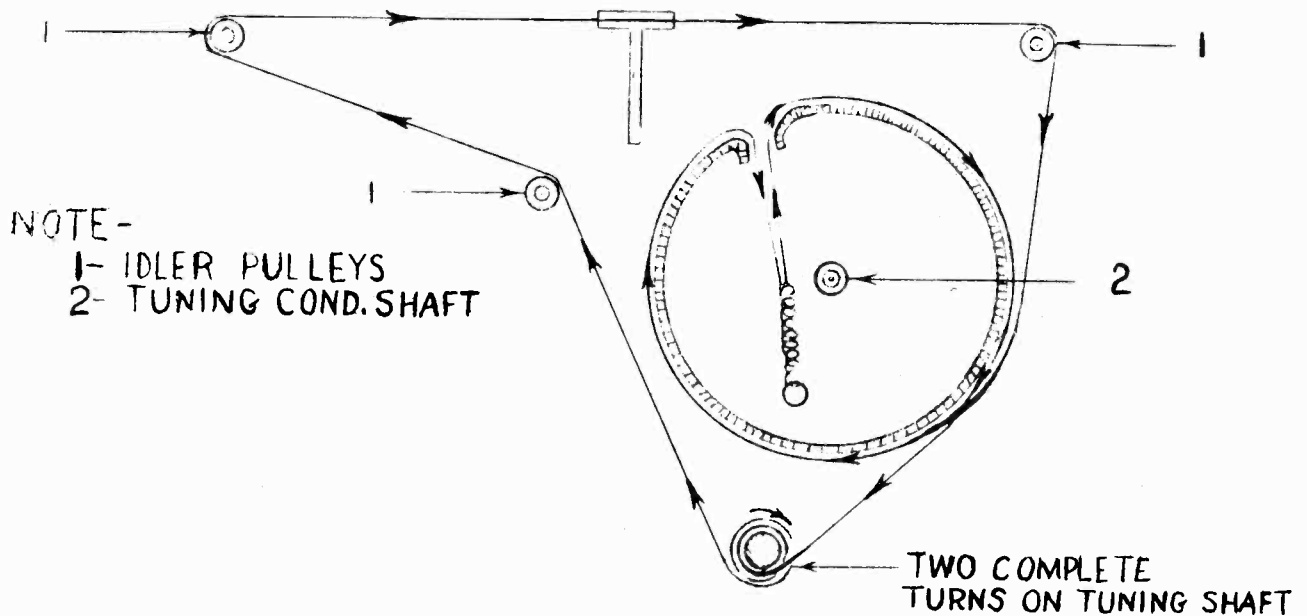


BAND - SWITCH SHOWN AT 2ND POSITION. BROADCAST BAND 550-1750 KC.

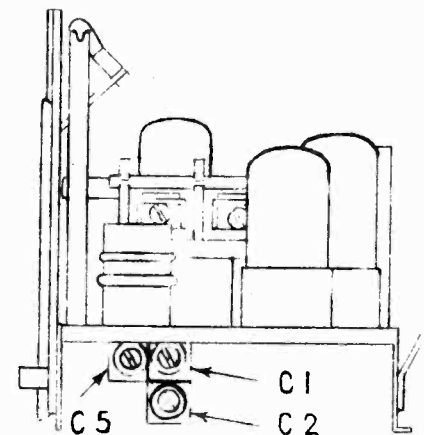
BAND - SWITCH SHOWN AT 1ST POSITION. SHORT WAVE BAND 5.2-19 MC.

CARR-NAGY CORP.

MODEL 100-62



TOP VIEW



SIDE VIEW

ALIGNMENT PROCEDURE: Volume control - full on.

I-F ADJUSTMENT: Set Signal Generator at 456 kc. and connect it through a 0.1-mf condenser to pin No.4 of 2nd i-f tube, 12SK7. Peak for maximum response.

Connect generator lead to pin No.4 of 1st i-f tube, 12SK7 and peak first i-f transformer for maximum response.

Repeat above procedure.

OSCILLATOR TRACKING ADJUSTMENT: Set Signal Generator to 600 kc and connect it to independent loop antenna. Place this loop near loop in receiver. Set dial pointer to 600 kc on scale. Adjust C-2 for maximum response, while rocking gang condenser each side of frequency.

R-F ALIGNMENT: Set Signal Generator to 1600 kc. Set dial pointer to 1600 kc on scale. Adjust C-1 for maximum response.

Disconnect generator lead from loop and connect to Short-Wave Antenna coil primary.

Set frequency of generator to 18 mc. Set dial pointer to 18 mc on SW scale. Turn Band Switch to "SW" position.

Adjust C-5 for maximum response.

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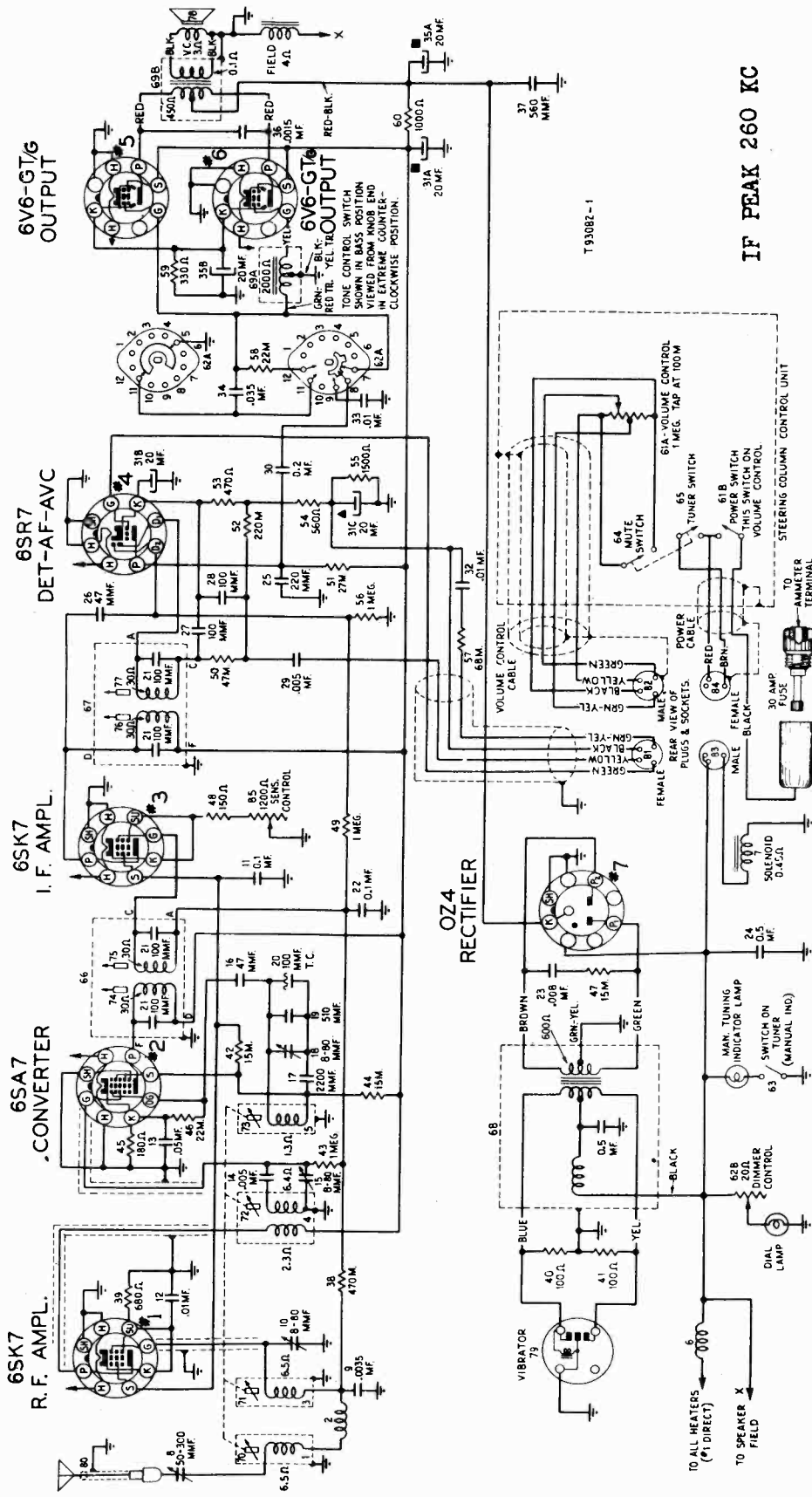


FIG. 1—CIRCUIT DIAGRAM—RADIO

Antenna System: There are two antenna systems available for use with this receiver; the cowl rod antenna, and the telescopic reel type antenna. Either of these antennas will operate efficiently with this Chevrolet radio. After installation, the adjustment described in Paragraph 1 should be made.

Date 5-1-46

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.035 mf. condenser (34) shunts the output of the 6SR7 a. f. amplifier stage, bypassing a large portion of the high audio frequencies to ground, and resulting in minimum high audio frequency response. In the "Soft" position a .01 mf. condenser (33) shunts the output of the 6SR7, but due to it being lower in capacity than 34, the reduction of high frequency response is not so pronounced as in the "Bass" position. In the "Music" position, no shunting capacity is employed, thus resulting in a maximum of high and low frequency response.

In the "Voice" position, the output of the 6SR7 is shunted to ground with a .01 mfd. condenser (33), thus bypassing some of the high frequencies. Simultaneously, a parallel combination of a 22,000 ohm resistor (58), and a .035 mfd. condenser (34) is placed in series with the output of the 6SR7, resulting in reduced low frequency response, thus some attenuation of both high and low frequencies is accomplished, and optimum tone balance for speech programs is reached.

1. Adjusting Antenna Compensating Condenser

This adjustment should be made after the receiver has been properly installed in the car. Tune the receiver to a weak signal at the high frequency end of the band, at about 1200 kilocycles. This signal should be just audible with the volume control on full. Adjust the antenna compensating condenser (8) for maximum signal strength.

Note: When making this adjustment, be sure that the antenna is fully extended.

2. Circuit Alignment

The adjustable condensers and cores in the tuned circuits of this receiver have been carefully adjusted at the factory, and should require no further adjustment unless tempering has occurred, or a defective unit has been replaced. Should the receiver require re-alignment, the following procedure is recommended:

1. Aligning the IF Stages at 260 KC. (Refer to Figure 7 for location of adjusting screws, etc.)

- Connect an output meter across the voice coil of the speaker; or connect one terminal of the output meter in series with a .01 mf. condenser to the plate of one of the 6V6 output tubes, and the other terminal of the output meter to the chassis frame.
- Connect output lead of the signal generator through a 0.1 mf. condenser to the grid (pin No. 4) of the 6SK7 IF tube, and the ground lead of the signal generator to the receiver chassis. Set the signal generator to 260 KC.

NOTE: It is important that the signal generator output be kept as low as possible to avoid AVC action in the receiver.

- Turn receiver volume control full ON.
 - Tune receiver dial off any broadcast signal which may be present.
- NOTE:** It is more satisfactory to eliminate the possibility of RF-IF beat-note interference by suppressing the oscillator section of the 6SA7 completely. This may be accomplished by temporarily connecting a .01 mf. (or larger) condenser from the 6SA7 oscillator grid (pin No. 5) to the receiver chassis.
- Set sensitivity control 85 to mid position.
 - Adjust 2nd IF transformer cores 77 and 76 for maximum output meter reading.
 - Connect the signal generator output through the 0.1 mf. condenser to the 6SA7 signal grid (pin No. 8), and adjust the 1st IF transformer core screws 73 and 74 for maximum reading.

CONT'D

Circuit Description

The circuit used in this receiver is a conventional superheterodyne type with a stage of tuned RF amplification utilizing a 6SK7 tube, a 6SA7 converter, a 6SK7 IF amplifier, a 6SR7 second detector, audio amplifier and automatic volume control, a push-pull output stage, utilizing two 6V6GT/G tubes, and a rectifier, the rectifier socket being so wired as to permit optional use of either a 0Z4 or a 6X5 type.

The input circuit of the 6SK7 RF amplifier consists of permeability tuned antenna and R.F. coils, with a variable trimmer condenser (10) connected in parallel with the R.F. coil. Connected in series with the antenna lead is a variable trimmer condenser (8) which functions to compensate for slight variations in capacity of the antenna and the shielded antenna cable. The tuned input circuit is kept above ground d.c. potential, to permit application of AVC voltage to the 6SK7 grid. A 680 ohm resistor (39) is in series with the cathode to furnish residual bias for the tube. The output is inductively coupled to the grid circuit of the 6SA7 converter.

The 6SA7 converter has in its input circuit a permeability tuned coil (4) isolated by a blocking condenser (14), and shunted by a variable trimmer (15). AVC voltage is applied to the 6SA7 grid through a 1 Meg. resistor (43). The 180 ohm resistor (45) in series with the cathode is used to furnish residual bias. The oscillator portion of the 6SA7 is a modified Colpitts circuit, consisting of the oscillator coil (5), a fixed series padder condenser (17), and shunt condensers (18, 19 and 20); 20 is a negative temperature coefficient condenser employed to minimize oscillator drift due to temperature variations.

The 260 KC output from the 6SA7 is coupled to the 6SK7 IF amplifier by means of a permeability tuned IF transformer (66).

The 1200 ohm potentiometer (85) in the 6SK7 cathode circuit is a sensitivity control, factory adjusted for standard I.F. amplifier gain. By means of another permeability tuned I.F. transformer (67) the output of the 6SK7 is coupled to the signal diode of the 6SR7 2nd detector. Some signal from the 6SK7 I.F. amplifier plate is coupled to the AVC diode plate of the 6SK7 through a 47 mfd. condenser (26). The triode section of the 6SK7 is used for audio amplification.

The AVC voltage is developed across the 1 meg. resistor (56). Since the cathode of the 6SR7 is at a positive potential equal to the sum of the voltage drops in the cathode resistors (53, 54, 55), no AVC voltage is developed until the signal exceeds the 6SR7 cathode potential. The audio signal developed across a 220 M resistor (52) is effectively placed in shunt with the manual volume control (61A). A portion of the audio voltage appearing across the volume control is applied to the grid of the triode section of the 6SR7. Tone compensation is accomplished by means of a tap on the volume control and the compensating resistor and condenser combination (32, 57). A muting switch (64) is mechanically coupled to the tuner switch, and electrically connected in shunt with the volume control, such that when the tuner switch is operated, the audio input to the 6SR7 grid is shorted, and thus the receiver is silent during tuning.

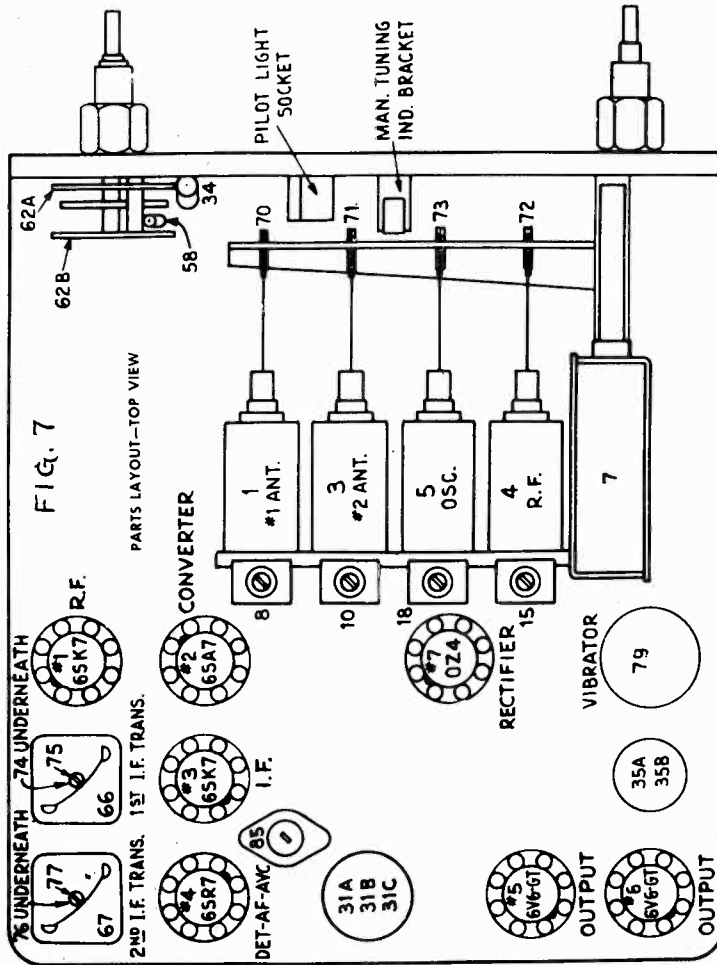
The amplified audio signal from the 6SR7 triode plate is applied to the 6V6GT/G output tubes by way of a four position tone control switch (62A). Phase inversion is accomplished in the center-tapped reactor (69A).

Bias for the 6V6GT/G tubes is obtained through the 330 ohm cathode resistor (59) which is bypassed by a 20 mfd. condenser (35B). The output signal is fed to the speaker by the output transformer (69B).

Tone Control

The four positions of the tone control are: Bass, Soft, Music and Voice. The tone control and its tone compensating network in the circuit are between the audio amplifier and the output stage, as shown in Figure 2. When the switch is in the "Bass" position, a

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These cores are coded with a spot of red, yellow, or green paint on the stud end of the core. As these cores are supplied in matched sets, they positively should not be replaced individually. To replace the cores, proceed as follows:

- Remove the escutcheon by removing its four attaching screws.
- Remove the fibre light baffle from the face plate by disengaging the lower part of the baffle from the lances which secure the baffle to the face plate. The baffle can then be moved downward and removed. Care should be exercised that the dial pointer is not bent.
- Using a small thin-bladed screw driver, turn the core adjustment screw in a clockwise direction until the screw is disengaged from the core carriage. The tuning core can then be removed by carefully pushing it out through the rear of the coil.
- Care should be exercised that undue pressure is not applied to the new core when the adjustment screw is engaged into the core carriage.

4. Removal of R.F. Coil Assembly

- Remove 65A7 and 65K7 tubes.
- Unsolder the shielded antenna lead to the trimmer condenser (8) and the ground connection from tuner frame to chassis.

2. Aligning the RF, Detector and Oscillator Circuits. (Refer to Figure 7 for location of adjusting screws, etc.)

NOTE: In the following outline of RF, Det. and Osc. circuit alignment, it is important that the output of the signal generator be kept at the minimum level required to obtain a reasonable indication on the output meter. This is to avoid AVC action and resultant broad peaking of the circuits.

- Tune receiver dial to the extreme high frequency end of the band.
- Turn each of the core adjustment screws 70, 71, 72, 73, several turns in a counterclockwise direction until the threaded stud extends $\frac{1}{8}$ " through the core bar. This is done in order to remove the cores from the coil windings so that the cores will have no effect on the frequency of the circuits during initial trimmer adjustments.
- Connect the output of the signal generator to the antenna input socket through a 72 mmf. condenser.
- Set frequency of signal generator to 1645 KC., and peak trimmers 18, 15, 10, 8, reducing signal generator output as needed to prevent AVC action.
- Without changing the receiver dial setting, change frequency of signal generator to 1620 KC., then adjust core screws 73, 72, 71, 70 for maximum signal output.
- Change frequency of signal generator to 1200 KC., and tune receiver dial for maximum signal output at 1200 KC.
- Re-adjust core screws 72, 71, 70 for maximum signal output.
- Change frequency of signal generator to 600 KC and tune receiver dial for maximum signal output at 600 KC.
- Re-adjust trimmers 15, 10, 8 for maximum signal output.
- Reset frequency of signal generator to 1200 KC and tune receiver for maximum signal output at 1200 KC.
- Re-adjust core screws 72, 71, 70 for maximum signal output.

(1) A tabulated summary of the foregoing procedure is given below:

Serial Condenser (Dummy Antenna)	Connect To	Signal Generator Frequency	Tune Receiver To	Adjust Screws in Order Shown
0.1 MF.	65K7 1F Grid (Pin 4)	260 K.C.	*Quiet point in Broadcast Band	77, 76
	65A7 Grid (Pin 8)		*Quiet point in Broadcast Band	75, 74
72 mmf.	Antenna Socket	1645 K.C.	Extreme high frequency end	18, 15, 10, 8
72 mmf.	Antenna Socket	1620 K.C.	Extreme high frequency end	73, 72, 71, 70
72 mmf.	Antenna Socket	1200 K.C.	Signal Generator	72, 71, 70
72 mmf.	Antenna Socket	600 K.C.	Signal Generator	15, 10, 8
72 mmf.	Antenna Socket	1200 K.C.	Signal Generator	72, 71, 70

*Or connect a 0.01 mf., or larger, capacitor between the oscillator grid (pin No. 5 of 65A7 converter) and chassis frame.

3. Tuning Cores in RF Tuned Circuits (Method of Replacement)

In order to provide optimum tracking over the tuning range and thus insure highest sensitivity at all frequencies, matched tuning cores are used in items 70, 71, 72, 73.

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8. Removal of Tuning Shaft Clutch Assembly

- Remove turret assembly as outlined in Paragraph 7.
- Remove the "C" washer, spring retaining washer and spring from the front of the tuning shaft.
- Remove the tuning shaft assembly from the rear of the tuning shaft bushing.
- Replace with a new tuning shaft assembly.

9. Removal of Dial Pointer Assembly

- Remove the escutcheon by removing its four attaching screws.
- Remove the dial face plate by removing its two attaching screws.
- Remove the two screws which fasten the pointer assembly to the tuner frame.
- Carefully remove the pointer-assembly through the front of the receiver.

10. Removal of Solenoid Coil and Bracket Assembly

- Remove screw, lock and flat washer and fibre washers from front of plunger.
- Unsolder coil lead at solder lug on terminal.
- Using a long thin bladed screw driver, remove the two screws which fasten the solenoid bracket to the tuner frame by inserting the blade between the RF coil shield and underside of the solenoid. Be careful not to bend the RF coil shield down and thereby possibly injure the RF coil and tuning core.

11. Erratic Tuning

- Weak core carriage spring. Replace spring if weak.
- Weak turret return leaf spring. Spring is located at rear of turret shaft. Replace with new spring.
- Lack of lubricating at turret shaft front bushing and at rear bracket.
- Bent turret guide shaft.
- Damaged turret setup screw threads. Replace turret assembly.
- Inability to adjust pre-set positions or tune manually may be due to the tuning shaft clutch slipping. Correct by replacing tuning shaft and clutch assembly.

12. Dial Pointer Sticks

- This is sometimes caused by lack of lubrication on the pointer assembly and core carriage guide shaft. Use a very light lubrication which is not affected by low temperature conditions.
- Bent core carriage guide shaft.
- Pointer rubbing on the inside surface of the escutcheon. This can be corrected by moving the pointer back slightly after loosening the screw provided in the pointer holder.
- Weak pointer return spring. This spring is located underneath the assembly in a central location. Replace spring.

13. Solenoid Armature Sticks

- Improper adjustment of the armature adjusting screw. To adjust, turn this screw out of the core several turns, then manually push the armature into the core as far as it will go. Then turn the adjustment screw "in" until it contacts the armature. Then turn the screw out six turns and lock it with the lock nut provided.

CONT'D

(c) Unsolder the four leads from the chassis to the R.F. and oscillator coils.

(d) Remove the two screws located at the top rear of the tuner frame, located near the shielded antenna lead.

(e) Remove the three screws through the holes provided in the chassis (bottom side); two located directly behind the speaker field, and one at the rear of the vibrator transformer can.

(f) The assembly can then be removed by carefully moving toward the rear of the chassis to disengage the coils from the tuning cores.

NOTE: Only in rare cases will it be necessary to remove the entire coil assembly inasmuch as the cores, coils, and coil shield cans can quite easily be removed individually.

5. Removal of R.F. Coils

- Remove bottom cover of the receiver.
- Remove 6SA7, 6SK7, and OZ4 tubes.
- Adjust dial pointer to 600 KC.
- Unsolder the leads from the base lugs of coil or coils to be changed.
- Remove the two screws fastening the fibre coil base to the coil bracket.
- Very carefully remove the coil by pulling toward the rear of the chassis until the coil is disengaged from the tuning core.

6. Removal of Tuner Assembly

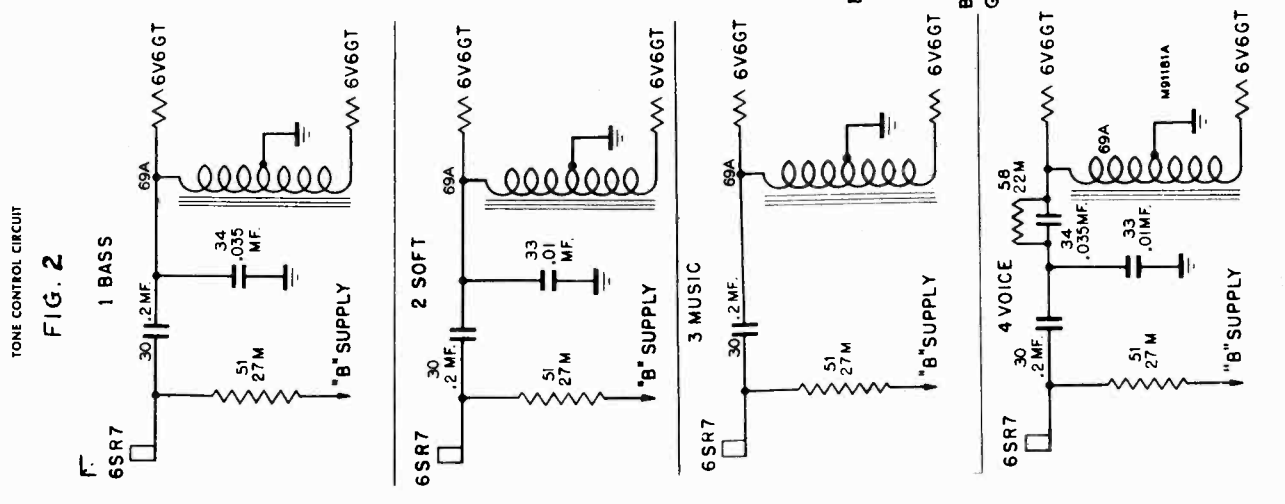
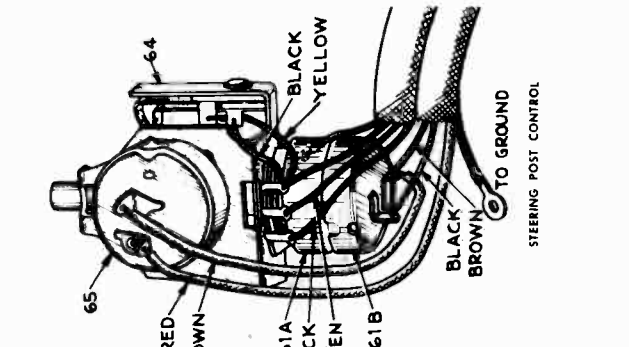
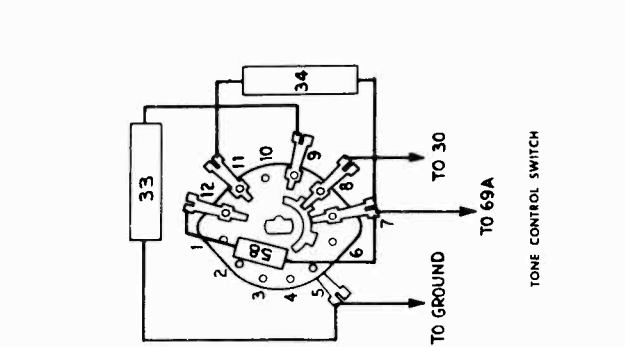
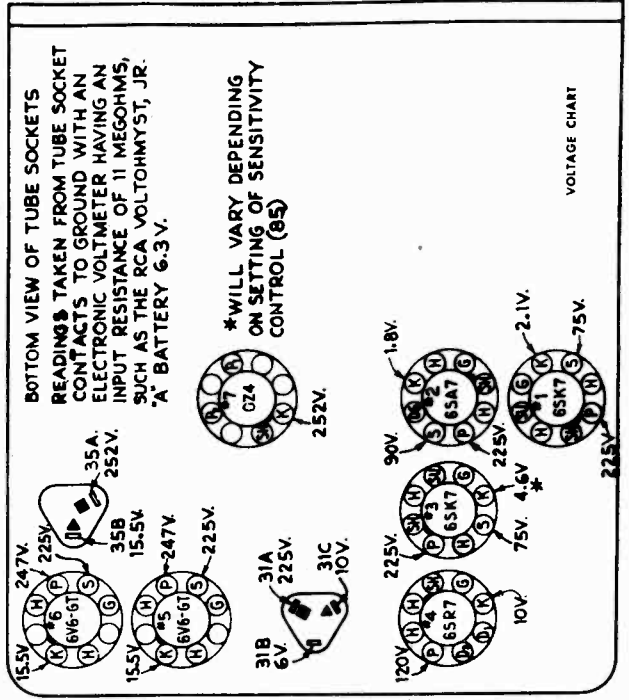
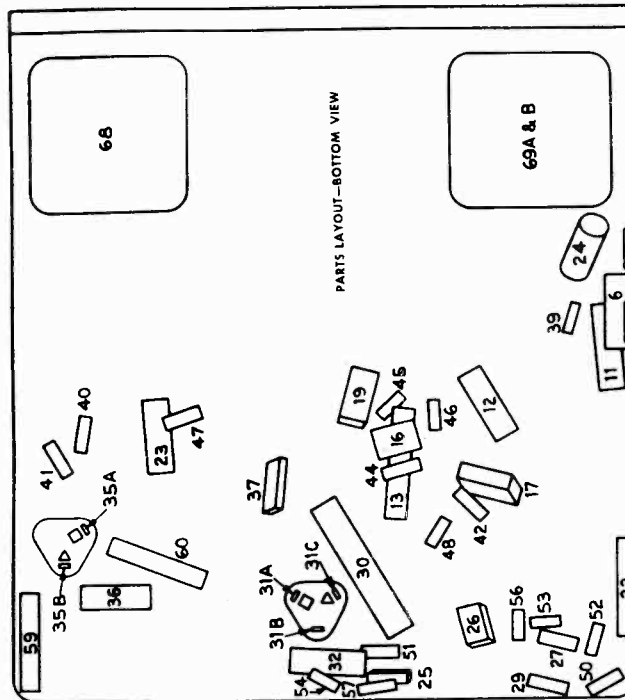
- Remove screw from tuner frame located at rear of turret assembly.
- Remove 6SA7, 6SK7 IF, and OZ4 tubes and vibrator.
- Unsolder ground lead from tone control assembly to chassis and disengage the tone control from the tuner assembly.
- Unsolder leads from chassis to RF and oscillator coils and ground strap from tuner frame to chassis.
- Remove the two $\frac{1}{2}$ " x 28 hex. nuts from the tuning and tone control bushings on the front of the receiver.
- The tuner unit can then be removed by lifting the assembly backwards and upwards from the chassis.

7. Removal of Turret Assembly

- Remove tuner as described above. (Paragraph 6.)
- Remove solenoid coil and bracket assembly as described in Paragraph 10.
- Remove the two screws which fasten the rear turret and core carriage shaft bracket to the tuner frame and remove core carriage return spring.
- Carefully note locations of the felt washers, then remove the core carriage shaft from the rear of the tuner.
- Carefully push the core carriage toward the coil shields as far as possible.
- Carefully move the turret assembly back and forth until the front portion of the shaft is disengaged from the shaft housing. The assembly can then be removed upward and out at the front of the tuner.

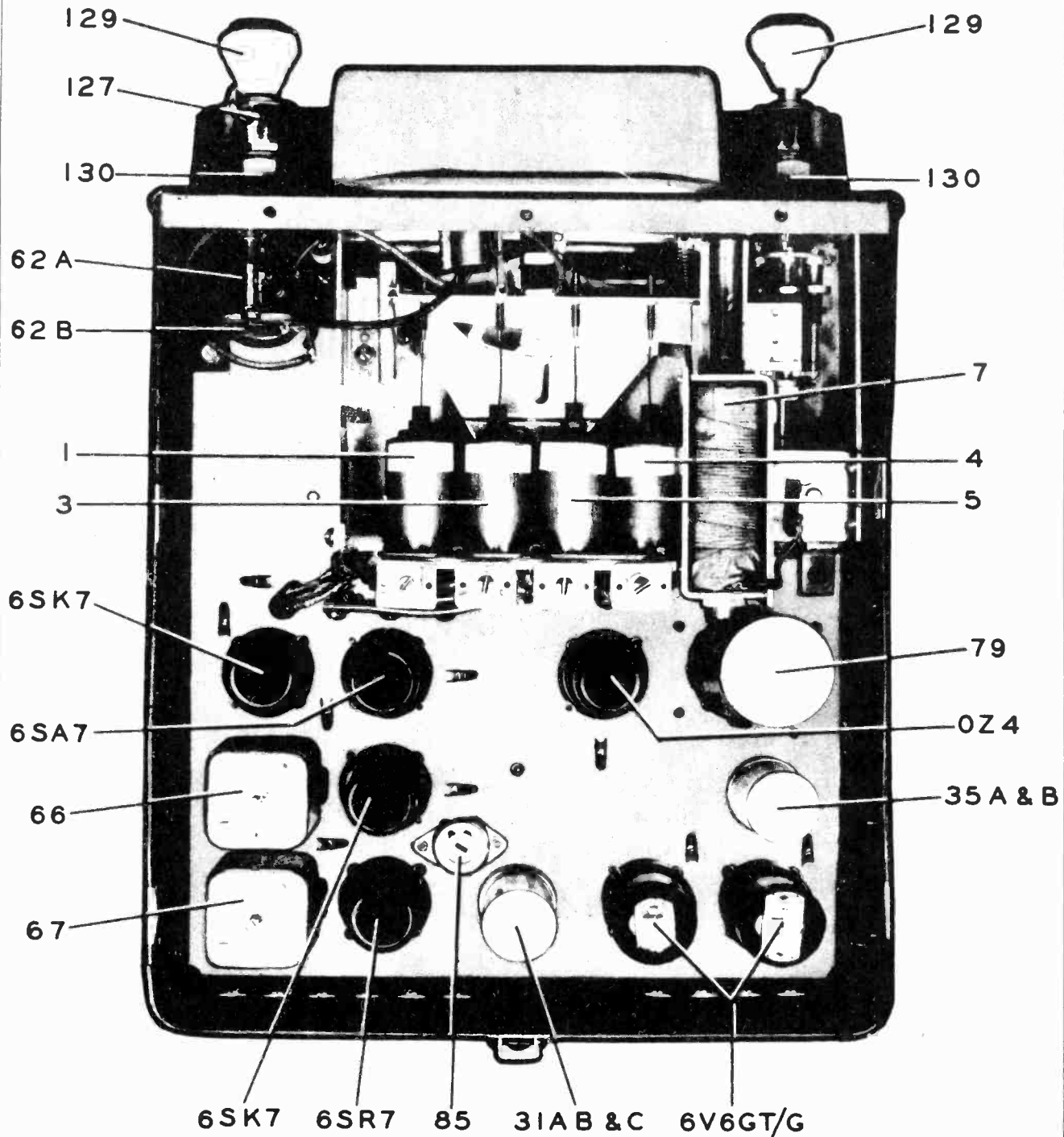
NOTE: Extreme care should be exercised during the above operations to prevent damage to the tuning cores and RF coils.

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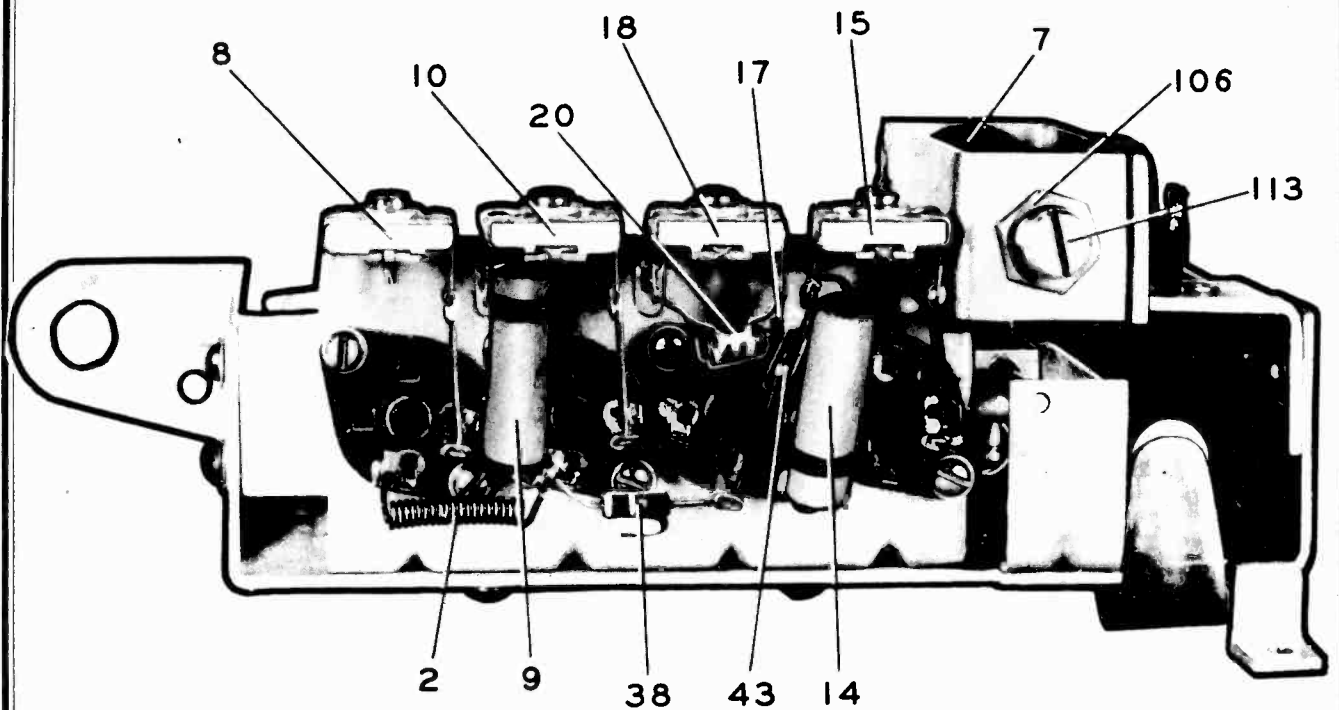
MODEL 985986

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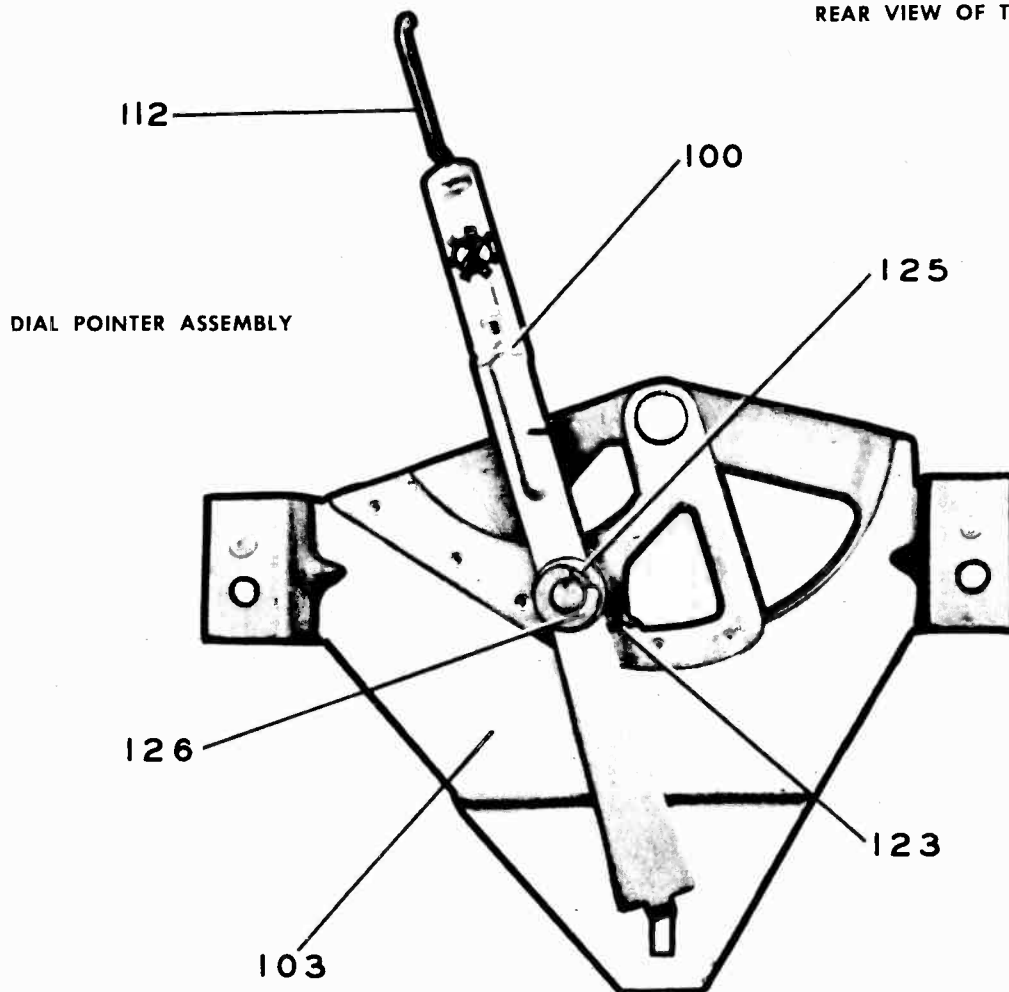


TOP VIEW

CHEVROLET DIV.-GENERAL MOTORS



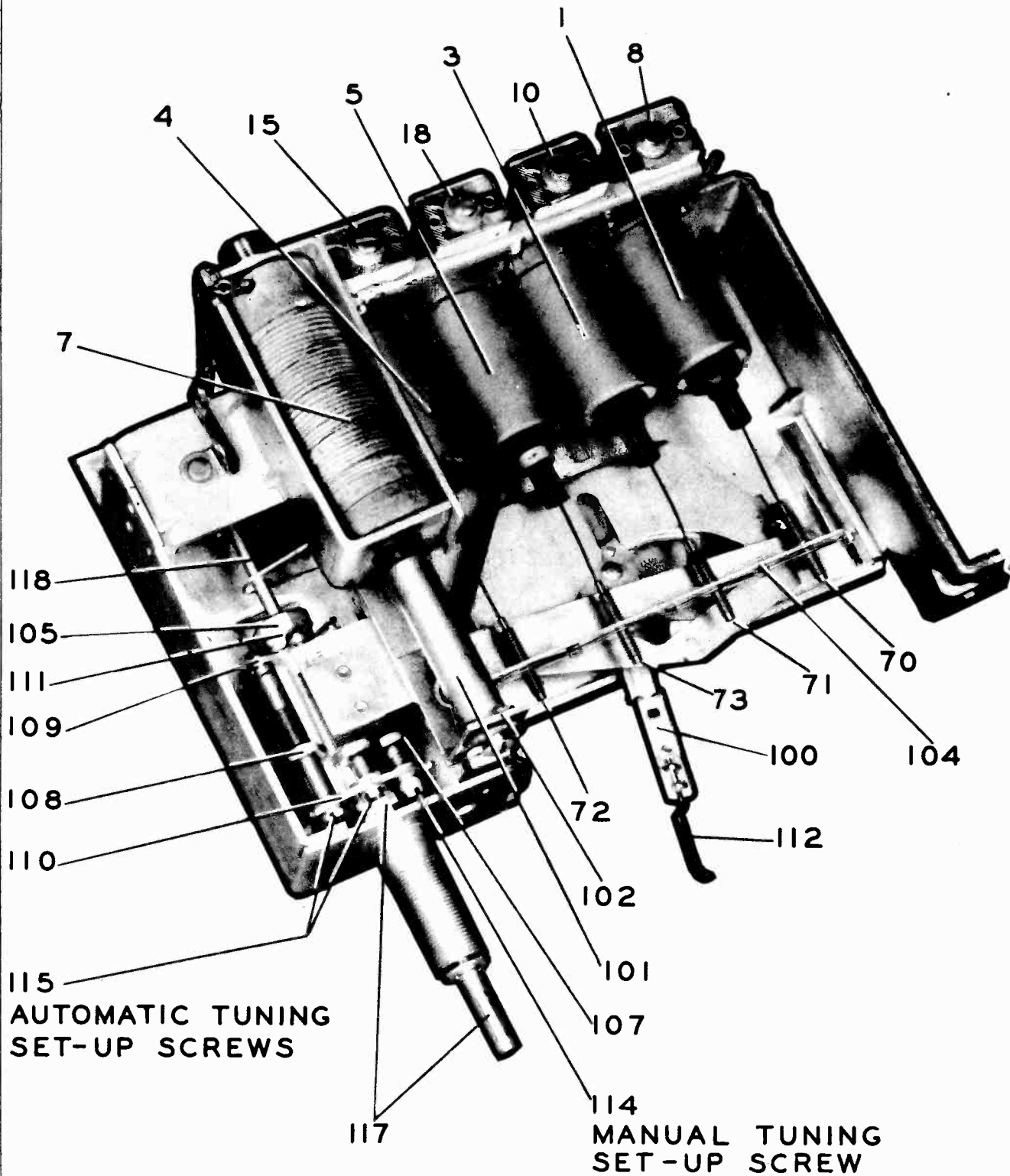
REAR VIEW OF TUNER



DIAL POINTER ASSEMBLY

MODEL 985986

CHEVROLET DIV.-GENERAL MOTORS



TOP VIEW OF TUNER

CHEVROLET DIV.-GENERAL MOTORS

Pro- duction Part No.	Service Part No.	Part Name	Description—Function	Illus. No.	Pro- duction Part No.	Service Part No.	Part Name	Description—Function	Illus. No.
1215800		Coil	Antenna coil and terminal board less shield can.	1	1213217	1211000	Resistor	Insulated—100 ohms, 1/2 w., Vibrator suppressor.	40
1215801		Coil	Choke coil-ignition filter.	2	1213217	1211000	Resistor	Insulated—100 ohms, 1/2 w., Vibrator suppressor.	41
1215800		Coil	Antenna coil and terminal board less shield can.	3	1211089		Resistor	Insulated—15,000 ohms, 1/2 w., R.F. & I.F. screen dropping.	42
1215802		Coil	R.F. coil and terminal board less shield can.	4			Resistor	Insulated—1 megohm, 1/2 w., Converter tube, AVC filter.	43
1216804		Coil	Choke coil.	5	1209885		Resistor	Insulated—15,000 ohms, 2 w., Oscillator screen.	44
1216852		Coil	Solenoid coil.	6	7233653		Resistor	Insulated—200 ohms, 1/2 watt, Converter tube cathode.	45
1215074		Condenser	Trimmer—50-300 mmf.	7	1215559	1211006	Resistor	Insulated—22,000 ohms, 1/2 w., oscillator grid.	46
1216636		Condenser	Tubular—.0035 mfd., 700 volts, RF AVC.	9	1211192	1215182	Resistor	Insulated—15,000 ohms, 1/2 w., OZ4 buffer.	47
1214456		Condenser	Antenna Coil Trimmer—8-80 mmf.	10	1211089		Resistor	Insulated—150 ohms, 1/2 w., I.F. (6SK7) cathode.	48
1207908		Condenser	Tubular—.01 mfd., 400 volts, R.F. screen.	11	1213220	1211003	Resistor	Insulated—1 megohm, 1/2 w., AVC filter.	49
1208600		Condenser	Tubular—.01 mfd., 600 volts, R.F. cathode.	12	1209885		Resistor	Insulated—50,000 ohms, 1/2 w., Audio filter.	50
7230592		Condenser	Tubular—.05 mfd., 600 volts, converter cathode.	13	1211193	1210116	Resistor	Insulated—27,000 ohms, 1 w., 6SR7 plate load.	51
7230912		Condenser	Tubular—.005 mfd., 800 volts, converter grid blocking.	14	1213242		Resistor	Insulated 220,000 ohms, 1/2 w., Diode load.	52
1214456		Condenser	R.F. Coil Trimmer—8-80 mmf.	15	1214570	1210119	Resistor	Insulated—470 ohms, 1/2 w., Squelch.	53
7233313		Condenser	Moulded .00047 mfd., oscillator grid blocking.	16	1214575	1213486	Resistor	Insulated—560 ohms, 1/2 w., 6SR7 bias.	54
1216883		Condenser	Moulded—.0022 mfd., oscillator pad.	17	7233314		Resistor	Insulated—1500 ohms, 1/2 w., AVC delay.	55
1214456		Condenser	Oscillator Coil Trimmer—8-80 mmf.	18	1211041		Resistor	Insulated—1 megohm, 1/2 w., AVC developer.	56
1216881		Condenser	Moulded—.00051 mfd., oscillator grid tuning.	19	1209885		Resistor	Insulated—68,000 ohms, 1/2 w., Tone compensator.	57
1216120	1214932	Condenser	Ceramic—.0001 mfd., oscillator grid temperature compensator.	20	1210882	1215182	Resistor	Insulated—20,000 ohms, 2 w., 6 V6GT.	58
1210275		Condenser	Mica—.0001 mfd., I.F. circuit (See Ill. 66 and 67).	21	1214572		Resistor	Insulated—1000 ohms, 2 w., "B" filter.	59
1207908		Condenser	Tubular—.01 mfd., 400 volts AVC filter.	22	1215183		Resistor	Insulated—1000 ohms, 2 w., "B" filter.	60
1215191		Condenser	Tubular—.008 mfd., volts, .024 buffer.	23	1215610		Control	Volume Control—Steering post includes: A—Volume control. B—Power switch.	61
1212100		Condenser	Tubular—.05 mfd., 400 volts, 6 volt by-pass.	24			Switch	Tone Control—Switch—Includes: A—Tone control switch. B—Dimmer Control switch.	62
7238792	1209055	Condenser	Moulded—.00022 mfd., Audio plate by-pass.	25			Switch	Manual indicator lamp switch.	63
7233313		Condenser	Moulded—.00047 mfd., AVC source.	26	1217035		Switch	Muting switch.	64
1210275		Condenser	Moulded—.0001 mfd., Diode lead by-pass.	27			Switch	Steering post tuning switch.	65
1210275		Condenser	Moulded—.0001 mfd., Audio filter.	28			Transformer	First I.F. transformer.	66
7230912		Condenser	Tubular—.005 mfd., 600 volts, audio coupling.	29	1216844		Transformer	Second I.F. transformer.	67
7240579	7235836	Condenser	Tubular—.02 mfd., 400 volts, audio coupling.	30	1216859		Transformer	Vibrating transformer.	68
1214490		Condenser	Electrolytic A—20 mfd., 350 volts—"B" filter. B—20 mfd., 25 volts—cathode by-pass. C—20 mfd., 25 volts—delay resistor by-pass.	31	1216064		Transformer	Audio transformer.	
1208600		Condenser	Tubular—.01 mfd., 800 volts, Tone compensator.	32	1214491		Transformer	A—Driver. B—Output.	69
1208600		Condenser	Tubular—.01 mfd., 200 volts, Tone control.	33	1216628		Core	Tuning core for coils—yellow.	70
1216641	7242448	Condenser	Tubular—.035 mfd., 400 volts, Tone Control.	34	1216629		Core	Tuning core for coils—yellow.	71
1214489		Condenser	Electrolytic.	35			Core	Tuning core for coils—yellow.	72
1216880		Condenser	Tubular—.0015 mfd., 1500 volts, output plate.	36	1217045		Core	Tuning core for coils—yellow.	73
1216882		Condenser	Moulded—.00051 mfd., R.F. by-pass.	37	1217045		Core	Tuning core for coils—green.	70
7240588	1210470	Resistor	Insulated—500,000 ohms, 1/2 w. R.F. (6SK7) AVC filter.	38	1217046		Core	Tuning core for coils—green.	71
1214543	1211222	Resistor	Insulated—500 ohms, 1/2 w., R.F. (6SK7) cathode.	39	1217046		Core	Tuning core for coils—green.	72

MODEL 985986

CHEVROLET DIV.-GENERAL MOTORS

Steering Post Control Miscellaneous Parts

No.	Description—Function	Part Name	Service
73	Tuning core for coils—green	Core	1217046
70	Tuning core for coils—red	Core	1217047
71	Tuning core for coils—red	Core	1217047
72	Tuning core for coils—red	Core	1217047
73	Tuning core for coils—red	Core	1217047
78	Complete elliptical speaker	Speaker	1216627
79	Plug-in vibrator	Vibrator	1215198
85	Sensitivity control	Control	1215179
Chassis Miscellaneous Parts			
80	Antenna lead-in cable and socket	Cable	1216867
131	Dial Assembly	Dial	1217033
130	Escutcheon	Escutcheon	1216868
130	Mazda 65	Lamp	125588
83	Hex nut (1/2-28 x 2 1/4") for tone switch tuning shaft	Nut	1216842
81	Felt pad for dial window glass	Pad	1216866
101	Power cable socket (3 prong male)	Socket	1216231
102	Tube socket	Socket	1213439
103	Volume control cable socket (4 contact)	Socket	1216224
104	Dial glass window only	Window	1216860
Tuner Miscellaneous Parts			
105	Armature	Armature	1216843
106	Actuating bracket for solenoid armature	Bracket	1216861
107	Pointer assembly mounting bracket and cam	Bracket	1216846
108	Tuning coil carriage	Carriage	1216845
109	Hex nut on rear of turret shaft to lock rear plate and spring plate	Nut	1216840
110	Locknut for solenoid pole piece	Nut	1216865
111	Manual tuning nut (1.640 dia. triple thread)	Nut	1216838
112	Stop-nut for set-up screw (No. 8-32)	Nut	1216837
113	Turret rear plate	Plate	1216836
114	Turret front plate	Plate	1216839
115	Turret spring plate	Plate	1216828
116	Dial pointer and holder	Pointer	1216848
117	Solenoid pole piece	Pole Piece	1216835
118	Manual tuning screw (1.640 dia. triple thread)	Screw	1216834
119	Set-up screw (No. 8-32)	Screw	1217028
120	Tuning coil core carriage guide shaft	Shaft	1216851
121	Tuning knob shaft and key	Shaft	1216841
122	Turret shaft	Shaft	1216862
123	Flat bakelite spacer for mounting solenoid armature in front of bracket	Spacer	1216863
124	Shoulder bakelite spacer for mounting solenoid armature in rear of bracket	Spacer	1216847
125	Tuning screw spacer (fiber)	Spacer	1216853
126	Coil core carriage return spring	Spring	1216849
127	Pointer return spring	Spring	1216855
128	Tuning shaft return spring	Spring	1216856
129	Turret return spring	Spring	1216833
130	Bearing washer for pointer arm	Washer	1214609
131	"C" washer for mounting pointer arm to bracket and cam	Washer	

Installation Parts

No.	Description—Function	Part Name	Service
1216221	Volume control cable socket (4 contact)	Socket	1216221
1216222	No. 4 x 3/8" binder head screw for steering post housing cover	Screw	1216228
1216223	No. 2 x 3/8" self-tapping screw to fasten sleeve to volume control shaft	Screw	111583
1216224	No. 10-32 x 1 1/4" oval head screw to fasten steering post control to steering column	Screw	100978
1216225	Steering post control flexible shaft and knob	Shaft	1216222
1216226	Steering post tuning shaft actuating sleeve	Sleeve	1216221
1216227	Fuse connector spring	Spring	1836876
1216228	Steering post actuating sleeve spring	Spring	1216223
1216229	No. 6 internal lockwasher for volume control bracket screws	Washer	115543
1216230	Steering Post Control Assembly	Steering Post Control Assembly	1216721
Cover—Cable			
1216634	Receiver Installation Kit	Kit	1215227
605052	Brace—Lower (1)	Brace	605052
605053	Brace—Upper (1)	Brace	605053
604273	Washer—Serrated (1)	Washer	604273
120518	Bolt—hex. hd. 3/8-24 x 2 (1)	Bolt	120518
134556	Joint—Carriage 1/4-20 x 3/4 (2)	Joint	134556
124818	Nut—hex. 3/8-18* (1)	Nut	124818
604275	Nut—hex. 3/8-20* (2)	Nut	604275
609635	Knob Kit	Kit	609635
605070	Mounting nut 1/2-28* (2)	Nut	605070
605319	Knob-wing (1)	Knob-wing	605319
7242249	Knob—Dummy (1)	Knob	7242249
1882272	Washer (2)	Washer	1882272
1882054	Spring Washer (1)	Spring Washer	1882054
1887829	Control Knob (2)	Control Knob	1887829
1888204	Suppressor Kit	Kit	1888204
986035	Condenser—Ignition Coil (.03 mfd.) (1)	Condenser	986035
605302	Clip—Ground (1)	Clip	605302
494786	Washer—Ignition Coil Condenser (1)	Washer	494786
606347	Suppressor—Distributor (1)	Suppressor	606347
120614	Adapter—Distributor (1)	Adapter	120614
	Power—Tire static (1)	Power	
	Condenser—Generator (0.1 mfd.) (1)	Condenser	
	Static Collector Kit	Kit	
	Static collector (2)	Static collector	
	Steering Post Control Mounting Kit	Kit	
	Spring (1)	Spring	
	Nut—10-32* (1)	Nut	

MCDEL 600

Chrysler MoPar

Universal

COLONIAL RADIO CORP

CIRCUIT ALIGNMENT

1. Alignment of I. F. at 455 KC.
 - (a) Connect test oscillator lead through a .1 mfd. capacitor to the control grid of the 6SA7GT tube (see parts layout - terminal "X" on gang capacitor).
 - (b) Connect ground terminal of test oscillator to set chassis.
 - (c) If a conventional output meter is used, connect across the speaker voice coil or secondary of the output transformer.
 - (d) Turn volume control to maximum.
 - (e) Set test oscillator to exactly 455 KC.
 - (f) Adjust all of the trimmers on the I. F. transformers (see parts layout - Items 4 and 5) for maximum. These adjustments should be made several times keeping the output of the test oscillator as low as is consistent with obtaining a readable indication on the output meter.
2. Alignment at 1520 KC.
 - (a) Leave the test oscillator leads connected the same as for aligning I. F. circuits.
 - (b) Turn rotor plates of gang capacitor all the way out against the high frequency stop.
 - (c) Set test oscillator to 1520 KC.
 - (d) Adjust the oscillator trimmer (see parts layout - Item 25) for maximum output. (It is very important that this frequency be set accurately as a slight missetting will cause the receiver to be out of track over the high frequency end of the dial).
3. Alignment of Antenna Stage.
 - (a) Remove the signal lead of the test oscillator from the grid of the 6SA7GT tube and connect to the antenna terminal of the receiver through a .00005 mfd. capacitor connected in place of the .01 capacitor previously used. (It is very important that a .00005 mfd. capacitor be used when aligning the antenna stage of these receivers in order that this circuit can be made to track properly.
 - (b) Set the test oscillator to 1400 KC.
 - (c) Turn the station selector knob until this frequency is tuned in with maximum output, again keeping the input signal at a low value.
 - (d) Adjust the antenna trimmer (see parts layout - Item 22) for maximum output.
4. Alignment at 600 KC.
 - (a) Set the test oscillator at 600 KC.
 - (b) Turn the station selector knob until the signal from the test oscillator is tuned in with maximum output.
 - (c) Maintain a low input signal and adjust the oscillator padding capacitor (Item 23) while turning the station selector knob back and forth tuning through the 600 KC signal. This operation should be continued until no further increase in output can be obtained.
 - (d) After the above operation, turn the station selector knob until the rotor plates of the variable capacitors are against the high frequency stop. Check the 1520 KC setting and if necessary readjust the oscillator trimmer. Return to 1400 KC repeating operation 3b, 3c, 3d above.

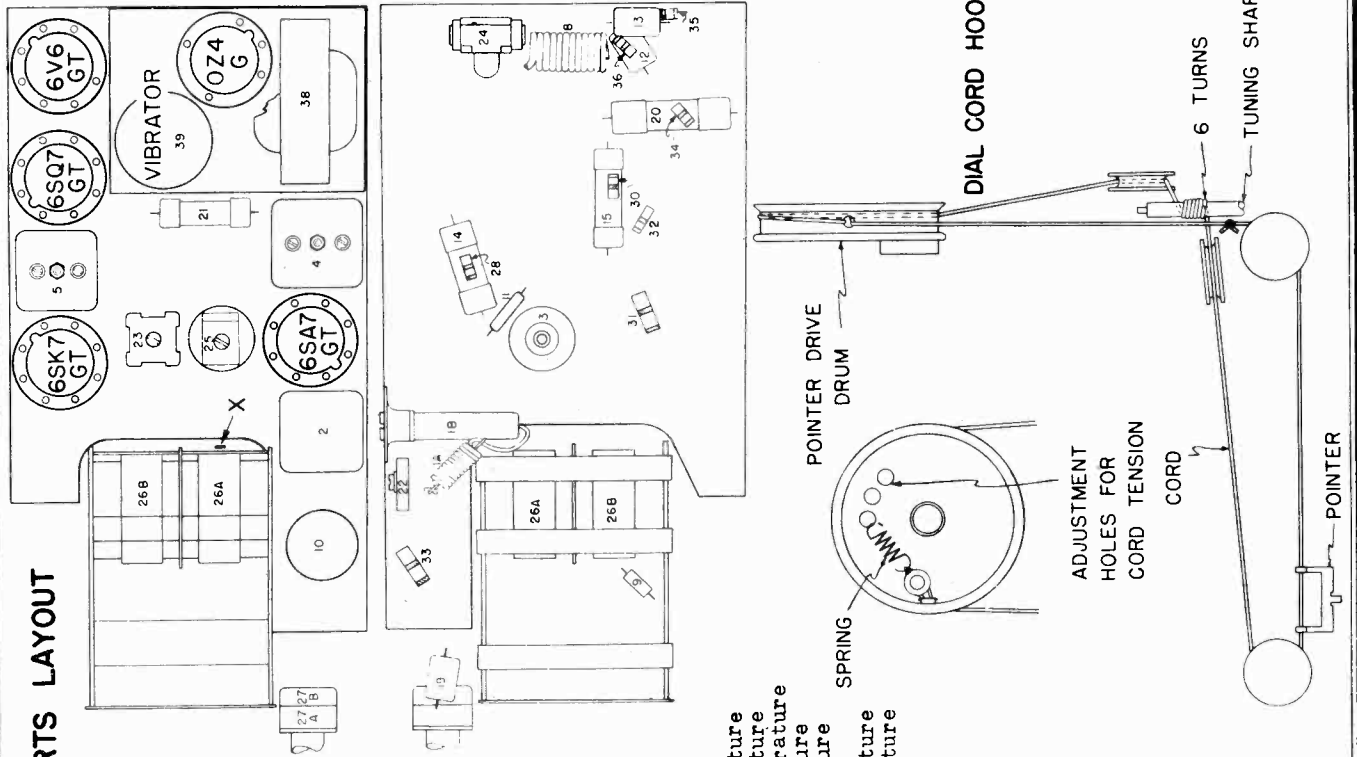
IMPORTANT NOTE

When the entire alignment procedure has been accomplished accurately, the receiver should be uniformly sensitive over the entire frequency range.

COLONIAL RADIO CORP.

MODEL 600
Chrysler MoPar
Universal

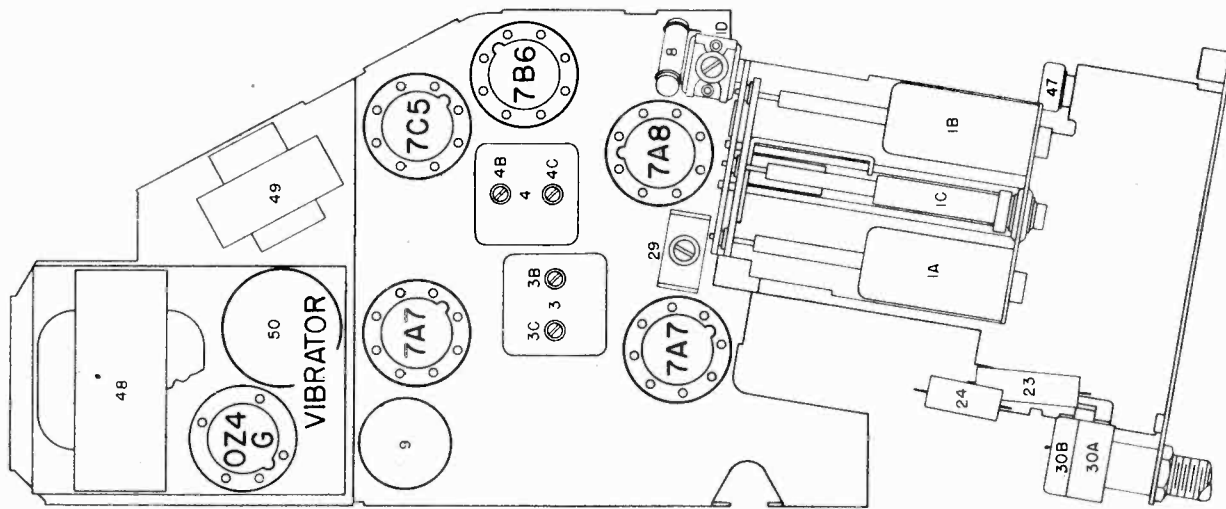
PARTS LAYOUT



PARTS LIST

Schematic Location	Colonial Part No.	Part Name	Description
1	R15986G	Coil Assembly	Antenna, Filter and Choke
2	R42229	Coil Assembly	Antenna Choke Connector and Filter Assembly
3	R41041	Coil	Antenna Transformer
4	R42230	Coil Assembly	Antenna Coil Capacitor AVC Blocking Resistor AVC Filter Oscillator
5	R42231	Coil Assembly	1st I. F. I. F. Transformer Primary Trimmer Secondary Trimmer 2nd I. F. I. F. Transformer Primary Trimmer Secondary Trimmer
6	R5114CM	Coil Assembly	I. F. Transformer
7	R9044E	Coil Assembly	Primary Trimmer
8	R5220CH	Coil	Secondary Trimmer
9	R42261	Capacitor	68,000 Ohm Diode Filter
10	R42260	Capacitor	Hash Choke Filament Choke Spark Choke .000015 Mfd. Compensating Electrolytic
11	R14255	Capacitor	10 Mfd. - 350 Volt
12	R20548	Capacitor	15 Mfd. - 300 Volt
13	R42204	Capacitor	20 Mfd. - 25 Volt
14	R42204	Capacitor	.00005 Mfd. Mica
15	R42211	Capacitor	.00025 Mfd. Mica
16	R21019	Capacitor	.05 Mfd. 200 Volt - High Temperature
17	R21019	Capacitor	.05 Mfd. 200 Volt - High Temperature
18	R40122	Capacitor	.04 Mfd. 1500 Volt - High Temperature
19	R42225	Capacitor	.5 Mfd. 100 Volt - High Temperature
20	R42304	Capacitor	.5 Mfd. 100 Volt - High Temperature
21	R41046	Capacitor	.0005 Mfd. Mica
22	R42235	Capacitor	.05 Mfd. 400 Volt - High Temperature
23	R42271	Capacitor	.01 Mfd. 600 Volt - High Temperature
24	R41481	Capacitor	Antenna Padder
25	R42218	Capacitor	Oscillator Padder
26	R41996	Control	Spark Plate
27A	XY32231	Resistor	Oscillator Trimmer
27B	ZY31512	Resistor	Tuner Unit
28	XY31052	Resistor	Volume and On-Off
29	ZY32731	Resistor	Volume Control 500,000 Ohm
30	XY31562	Resistor	On-Off Switch
31	ZY32721	Resistor	22,000 Ohm 1/3 Watt
32	XY31052	Resistor	150 Ohm 1 Watt
33	ZY32711	Resistor	1 Megohm 1/3 Watt
34	XY31541	Resistor	27,000 Ohm 1 Watt
35	ZY32711	Resistor	15 Megohm 1/3 Watt
36	XY31541	Resistor	2,700 Ohm 1 Watt
37	R42391	Speaker	1 Megohm 1/3 Watt
38	R42232	Transformer	270 Ohm 1 Watt
39	R42697	Vibrator	150,000 Ohm 1/3 Watt Dynamic with Output Transformer Power Supply Plug In

COLONIAL RADIO CORP.



All capacity adjustments, with the exception of the antenna matching capacitor, are carefully made at the factory and should require no further adjustment. The iron cores in the permeability tuning unit are set at the time the receiver is originally calibrated, and are sealed to eliminate possibility of turning due to vibration. No adjustment of these cores should be necessary unless a core or coil must be replaced. If realignment is found to be necessary the circuits can be properly adjusted only with the use of a calibrated test oscillator or signal generator and an output meter using the procedure outlined below:

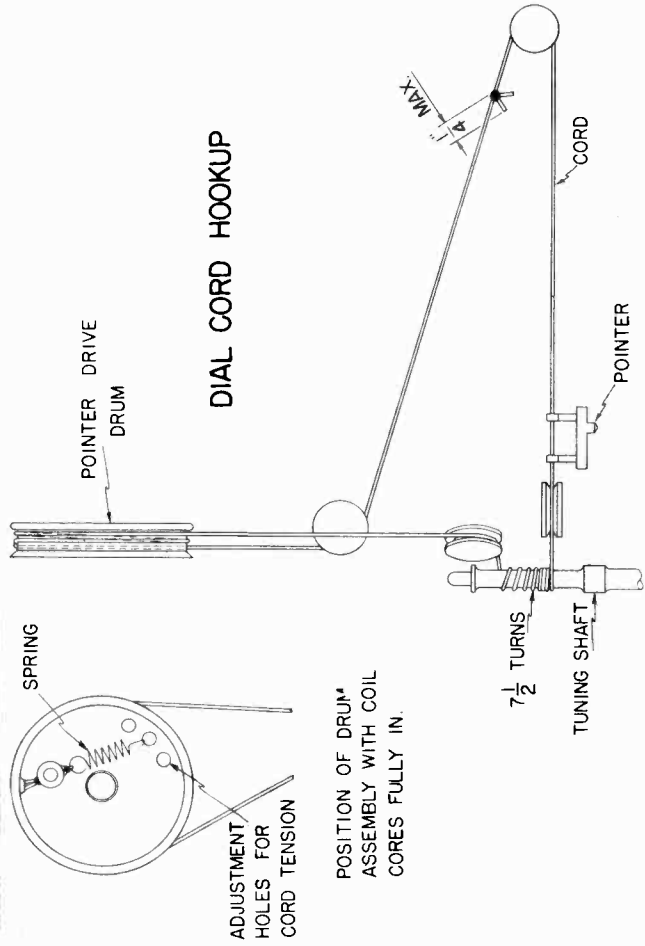
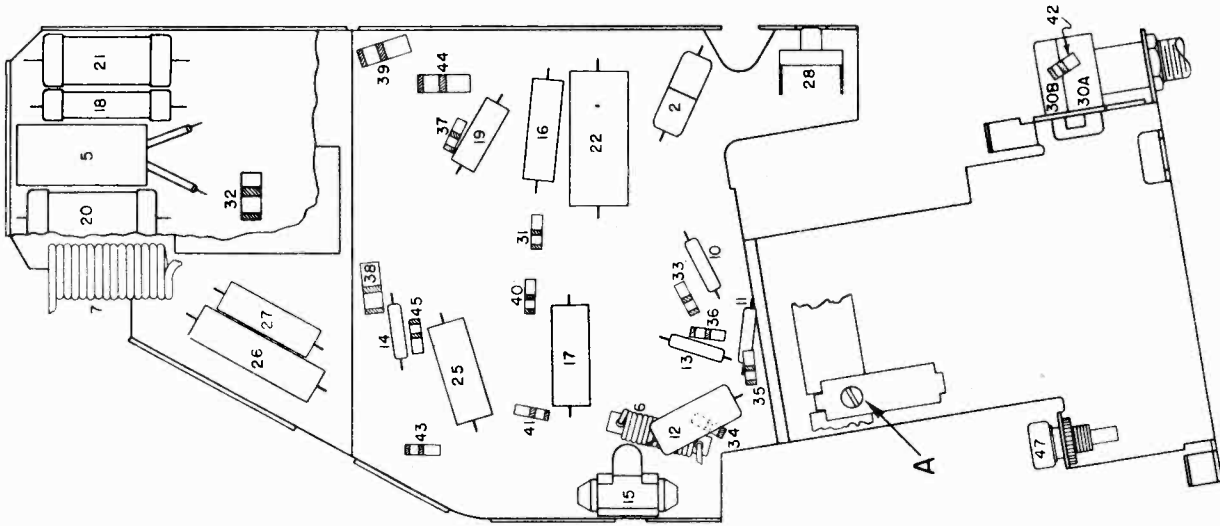
1. Alignment of I. F. at 260 KC.
 - (a) Connect test oscillator lead through a .1 mfd. capacitor to the control grid of the 7A8 oscillator tube (see parts layout - hot terminal of Item 29).
 - (b) Connect ground terminal of test oscillator to set chassis.
 - (c) If a conventional output meter is used, connect across the speaker voice coil or secondary of the output transformer.
 - (d) Turn volume control to maximum.
 - (e) Set test oscillator at exactly 260 KC.
 - (f) Adjust padders 3B and 3C on first I. F. transformer and 4B and 4C on second I. F. transformer for maximum output. These adjustments should be made several times, keeping the output of the test oscillator as low as is consistent with obtaining a readable indication on the output meter.
2. Alignment at 1610 KC.
 - (a) Remove the signal lead of the test oscillator from the grid of the 7A8 tube and connect to the antenna terminal of the receiver through a .00005 mfd. MICA CAPACITOR connected in place of the .1 mfd. capacitor previously used. (It is very important that a .00005 mfd. mica capacitor be used when aligning the antenna stage of these receivers in order that this circuit can be made to track properly).
 - (b) Remove high frequency stop (see parts layout - Illustration "A"). This is no longer required.
 - (c) Set the test oscillator to 1610 Kilocycles.
 - (d) Turn station selector knob clockwise to the high frequency stop (1610 KC). Adjust the oscillator trimmer capacitor (see parts layout - Item 1D) for maximum output. (It is very important that this frequency be set accurately as a slight missetting will cause the receiver to be out of track over the high frequency end of the dial).
 - (e) Set test oscillator to 1410 KC and tune receiver to this frequency. (Do not readjust oscillator trimmer).
 - (f) Adjust the R. F. trimmer capacitor (see parts layout - Item 29) for maximum output.
 - (g) Adjust the antenna trimmer capacitor (see parts layout - Item 28) for maximum output. With the type of permeability tuning employed, the usual low frequency adjustments are not necessary.

MODEL 629

Chrysler MoPar 600

COLONIAL RADIO CORP.

PARTS LAYOUT



Schematic Location	Colonial Part No.	Part Name	Description
1	R43699	Coil Assembly	Chrysler, DeSoto, Plymouth Antenna Coil & Core) Not to be R. F. Coil & Core) serviced Oscillator Coil & Core) individually Oscillator Trimmer Dodge Only
1	R44664	Coil Assembly	Antenna Coil & Core) Not to be R. F. Coil & Core) serviced Oscillator Coil & Core) individually Oscillator Trimmer
2	R43382	Coil	Antenna Choke
3	R43775	Coil Assembly	1st I. F. I. F. Transformer Primary Trimmer Secondary Trimmer
4	R43776	Coil Assembly	2nd I. F. I. F. Transformer Primary Trimmer Secondary Trimmer
5	R9044E	Coil Assembly	47000 Ohm Diode Filter
6	R5115E	Coil Assembly	Hash Choke
7	R5220CH	Coil	Filement Choke
8	R43380	Capacitor	Spark Choke
9	R43691	Capacitor	.00035 Mfd. Compensating Electrolytic
9A			10 Mfd. 350 Volts
9B			15 Mfd. 350 Volts
9C			20 Mfd. 20 Volts

COLONIAL RADIO CORP

Schematic Location	Colonial Part No.	Part Name	Description
10	R41777	Capacitor	.0001 Mfd. Mica
11	R43685	Capacitor	.003 Mfd. Mica
12	R44561	Capacitor	.0035 Mfd. Mica
13	R40122	Capacitor	.0005 Mfd. Mica
14	R20548	Capacitor	.0025 Mfd. Mica
15	R43696	Capacitor	Dual
15A			.00025 Mfd. Mica
15B			.00025 Mfd. Mica
16	R42204	Capacitor	.05 Mfd. 200 Volt - High Temperature
17	R42204	Capacitor	.05 Mfd. 200 Volt - High Temperature
18	R42211	Capacitor	.004 Mfd. 1500 Volt - High Temperature
19	R41478	Capacitor	.01 Mfd. 200 Volt - High Temperature
20	R21019	Capacitor	.5 Mfd. 100 Volt - High Temperature
21	R21019	Capacitor	.5 Mfd. 100 Volt - High Temperature
22	R41377	Capacitor	.25 Mfd. 200 Volt - High Temperature
23	R42878	Capacitor	.005 Mfd. 400 Volt - High Temperature
24	R42206	Capacitor	.01 Mfd. 100 Volt - High Temperature
25	R43661	Capacitor	.05 Mfd. 200 Volt - High Temperature
26	R43786	Capacitor	.02 Mfd. 600 Volt - High Temperature
27	R42445	Capacitor	.007 Mfd. 600 Volt - High Temperature
28	R43695	Capacitor	Antenna Trimmer
29	R43694	Capacitor	R. F. Trimmer
30	R44662	Control	Chrysler, DeSoto, with Tuning Clutch, Dodge
30A			Volume Control 300,000 Ohm
30B			On-Off Switch
30	R43689	Control	Chrysler, DeSoto without Tuning Clutch, and Plymouth
30A			Volume Control 300,000 Ohm
30B			On-Off Switch
31	XV31052	Resistor	1 Megohm 1/3 Watt
32	ZV31512	Resistor	150 Ohm 1/2 Watt
33	WV32231	Resistor	22,000 Ohm 1/2 Watt
34	YV31052	Resistor	1 Megohm 1/3 Watt
35	YV4732	Resistor	47,000 Ohm 1/3 Watt
36	YV35631	Resistor	56,000 Ohm 1/3 Watt
37	XV33921	Resistor	3,900 Ohm 1/3 Watt
38	ZV35631	Resistor	56,000 Ohm 1/2 Watt
39	ZV3721	Resistor	2,700 Ohm 1/2 Watt
40	XV31052	Resistor	1 Megohm 1/3 Watt
41	YV31562	Resistor	15 Megohm 1/3 Watt
42	YV36831	Resistor	68,000 Ohm 1/3 Watt
43	XV31052	Resistor	1 Megohm 1/3 Watt
44	ZV32711	Resistor	270 Ohm 1/2 Watt
45	XV31541	Resistor	150,000 Ohm 1/3 Watt
46	R45914	Speaker	7" Dynamic
47	R43693	Switch	Tone Control
48	R43787	Transformer	Power Supply
49	R43692	Transformer	Audio Output
49	R43697	Vibrator	Plug In
49	R43679	Button	Tone, Chrysler, DeSoto, Dodge
49	R44080	Button	Tone, Plymouth
50	R43687-1	Button	Push, with Adjusting Screw, Chrysler, and DeSoto
R44077A	Button	Push with Adjusting Screw, Plymouth	
R44449-1	Button	1st Push with Adjusting Screw, Dodge	
R44449-2	Button	2nd Push with Adjusting Screw, Dodge	
R44449-3	Button	3rd Push with Adjusting Screw, Dodge	
R44449-4	Button	4th Push with Adjusting Screw, Dodge	
R43688	Cable	Speaker Section with Covers	
R43648D	Case	Antenna	
R43785	Connector	Station, Chrysler, DeSoto, Plymouth	
R43681	Dial	Station, Dodge	
R44428	Dial	Chrysler, DeSoto, Plymouth, No Clutch	
R43673	Escutcheon	Chrysler, DeSoto, with Clutch	
R44777	Escutcheon	Dodge	
R44444	Escutcheon		

COLONIAL RADIO CORP.

All capacity adjustments, with the exception of the antenna matching capacitor, are carefully made at the factory and should require no further adjustment. The iron cores in the permeability tuning unit are set at the time the receiver is originally calibrated, and are sealed to eliminate possibility of turning due to vibration. No adjustment of these cores should be necessary unless a core or coil must be replaced. If realignment is found to be necessary the circuits can be properly adjusted only with the use of a calibrated test oscillator or signal generator and an output meter using the procedure outlined below.

1. Alignment of I. F. at 260 KC.

- (a) Connect test oscillator lead through a .1 mfd. capacitor to the control grid of the 7Q7 oscillator tube (see parts layout - hot terminal of item 30).
- (b) Connect ground terminal of test oscillator to set chassis.
- (c) If a conventional output meter is used, connect across the speaker voice coil or secondary of the output transformer.
- (d) Turn volume control to maximum.
- (e) Set test oscillator at exactly 260 KC.
- (f) Adjust padders 4B and 4C on first I. F. transformer and 5B and 5C on second I. F. transformer for maximum output. These adjustments should be made several times, keeping the output of the test oscillator as low as is consistent with obtaining a readable indication on the output meter.

2. Alignment at 1610 KC.

- (a) Remove the signal lead of the test oscillator from the grid of the 7Q7 tube and connect to the antenna terminal of the receiver through a .00006 mfd. MICA CAPACITOR connected in place of the .1 mfd. capacitor previously used. (It is very important that a .00006 mfd. mica capacitor be used when aligning the antenna stage of these receivers in order that this circuit can be made to track properly).
- (b) Set the test oscillator to 1610 Kilocycles.
- (c) Turn station selector knob clockwise to the high frequency stop (1610 KC). Adjust the oscillator trimmer capacitor (see parts layout - item 31) for maximum output. (It is very important that this frequency be set accurately as a slight missetting will cause the receiver to be out of track over the high frequency end of the dial).
- (d) Set test oscillator to 1410 KC and tune receiver to this frequency. (Do not readjust oscillator trimmer).
- (e) Adjust the R. F. trimmer capacitor (see parts layout - item 30) for maximum output.
- (f) Adjust the antenna trimmer capacitor (see parts layout - item 29) for maximum output.

IMPORTANT NOTE

With the type of permeability tuning employed, the usual low frequency adjustments are not necessary.

When the entire alignment procedure has been accomplished accurately, the receiver should be uniformly sensitive over the entire frequency range.

CIRCUIT DESCRIPTION

A special compensating capacitor in the oscillator circuit minimizes frequency drift due to normal variations in car voltage and temperature. The antenna, high gain radio and oscillator circuits are tuned by varying the inductance of the coils with special iron cores (permeability tuning). Frequency range 540 KC. to 1610 KC.

The circuit employed is of the conventional superheterodyne type with an intermediate frequency of 260 KC.

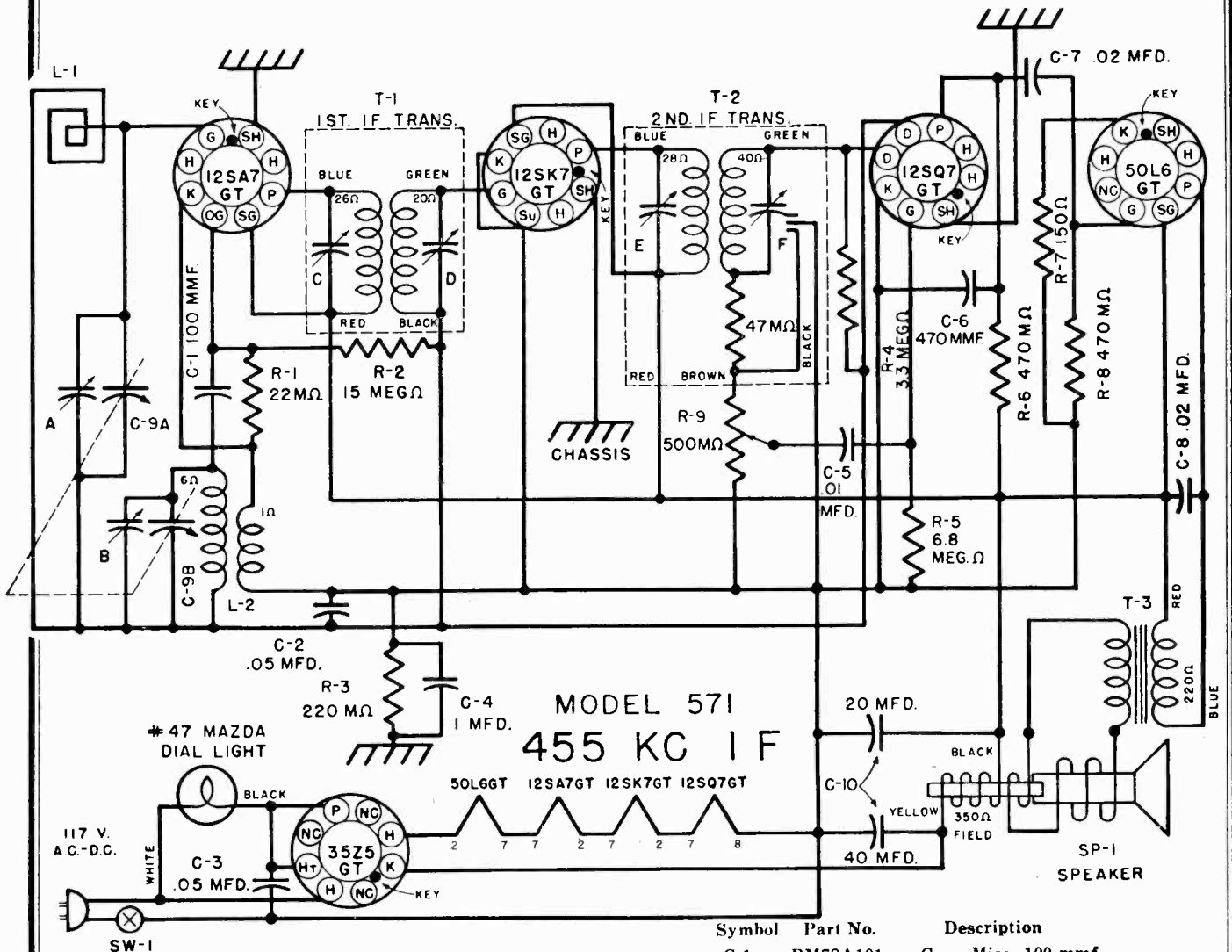
The triode section of the second detector is a driver resistance coupled to the 7C5 audio output tube.

POWER SUPPLY

The power supply uses a gaseous rectifier tube, 0Z4G, in conjunction with a primary four prong, plug in, full wave vibrator.

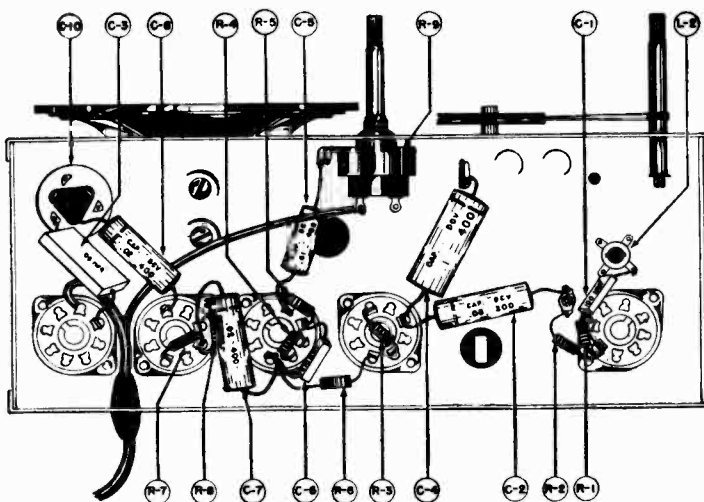
CONCORD RADIO CORP.

MODEL 6D51B, Ch. 571;
 MODEL 6D51I, Ch. 571A;
 MODEL 6D51W, Ch. 571B



MODEL 571
 455 KC 1 F

ALL TUBE SOCKETS SHOWN FROM PIN END VIEW



Parts Layout
 Chassis Models 571, 571A
 and 571B

Symbol	Part No.	Description
C-1	BM78A101	Cap., Mica, 100 mmf.
C-2	BD210503	Cap., Paper, .05 mfd., 200 v.
C-3	BC31B503	Cap., Mold., Paper, .05 mfd.
C-4	BD410104	Cap., Paper, .1 mfd., 400 v.
C-5	BD410103	Cap., Paper, .01 mfd., 400 v.
C-6	BM78A471	Cap., Mica, 470 mmf.
C-7, 8	BD410203	Cap., Paper, .02 mfd., 400 v.
C-9	C-51155-1	Cap., Variable, 2 Section
C-10	A-8948	Cap., Electro., 40-20 mfd., 150 v.
L-2	B-51159	Coil, Osc. Assembly
R-1	BR17B223	Resistor, 22M ohm 1/3 w.
R-2	BR17B156	Resistor, 15 meg. 1/3 w.
R-3	BR17B224	Resistor, 220M ohm 1/3 w.
R-4	BR17B335	Resistor, 3.3 meg. 1/3 w.
R-5	BR17B685	Resistor, 6.8 meg. 1/3 w.
R-6, 8	BR17B474	Resistor, 470M ohm 1/3 w.
R-7	BR16C151	Resistor, 150 ohm. 1/2 w.
R-9	B-9051-1	Control, Vol. & Sw. 500M ohm.
T-1	B-51010-1	Trans., Assembly, 1st IF
T-2	B-51011-1	Trans., Assembly, 2nd IF
SP-1	C-51014	Speaker, 5" Dynamic, 350 ohm.
	A-2163	Cable, Drive
	A-6158	Lamp, Pilot No. 47 Mazda 6.3 v.
	A-51160-1	Cord, AC-DC Line, 6 ft.
	B-51162-1	Shaft, Drive
	A-51163	Clip, Spring
	B-51177	Brkt. Assy., Dial (571A-571B only)
	A-51202	Link, Insulating
	A-51206	Arm, Dial Drive
	B-51330-1	Channel, Rubber (571 only)
	A-51331	Spring, Dial Bracket
	C-51335	Bracket, Dial (571 only)
	A-51787	Spring, Cable

MODEL 6D51B, Ch. 571;
 MODEL 6D51I, Ch. 571A;
 MODEL 6D51W, Ch. 571B

CONCORD RADIO CORP.

Electrical and Mechanical Specifications

Frequency Range.....540-1600 kc.	Power Output (Undistorted)..... .75 watts
Intermediate Frequency.....455 kc.	Power Output (Maximum)..... 1.5 watts
Power Supply.....105-125 volts AC-DC	Tuning Drive Ratio.....3 to 1
Loudspeaker.....Dynamic	Weight 7¼ lbs. (net).....10 lbs. (shipping)
V.C. Impedance.....3.5 ohms at 400 cycles	
1—12SA7GT Oscillator and Mixer tube	1—12SK7GT IF Amplifier tube
1—50L6GT Power Output tube	1—35Z5GT Rectifier tube

1—12SQ7GT Second Detector and First Audio tube

NOTE: The above glass tubes are interchangeable with their metal equivalent.

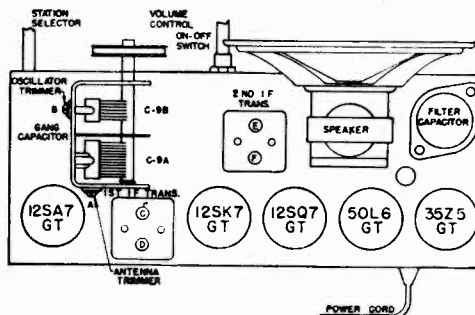
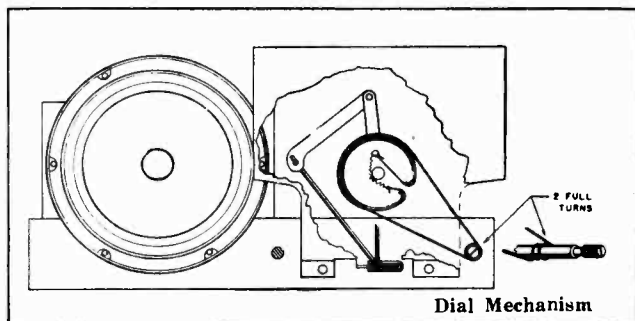
ALIGNMENT PROCEDURE

The following equipment is necessary to properly align this chassis:

1. A signal generator which will provide an accurately calibrated signal at the frequencies listed.
2. An output meter.
3. A non-metallic screwdriver.
4. Dummy antenna: — .1 mfd., — RMA loop.

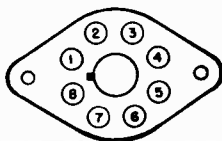
NOTE: Intermediate Frequency and Oscillator adjustments may be made with the loop disconnected provided a resistor of 10,000 to 50,000 ohms is substituted to close the 12SA7GT grid circuit. The loop alignment must be done with the loop and chassis mounted in operating position in the cabinet. A single turn loosely coupled to loop may be substituted for RMA loop.

GENERATOR	CONNECTION AT RADIO	DUMMY ANTENNA	DIAL	TO TUNE TRIMMERS	REMARKS
IF 455 kc.	12SA7GT grid	.1 mfd.	HF end	IF trimmers C D E F	Tune to max.
1620 kc.	Through loop	RMA loop	HF end	Osc. trimmer B	Set limit of band
1400 kc.	Through loop	RMA loop	1400 kc.	Ant. trimmer A	Tune to max.



SOCKET VOLTAGES

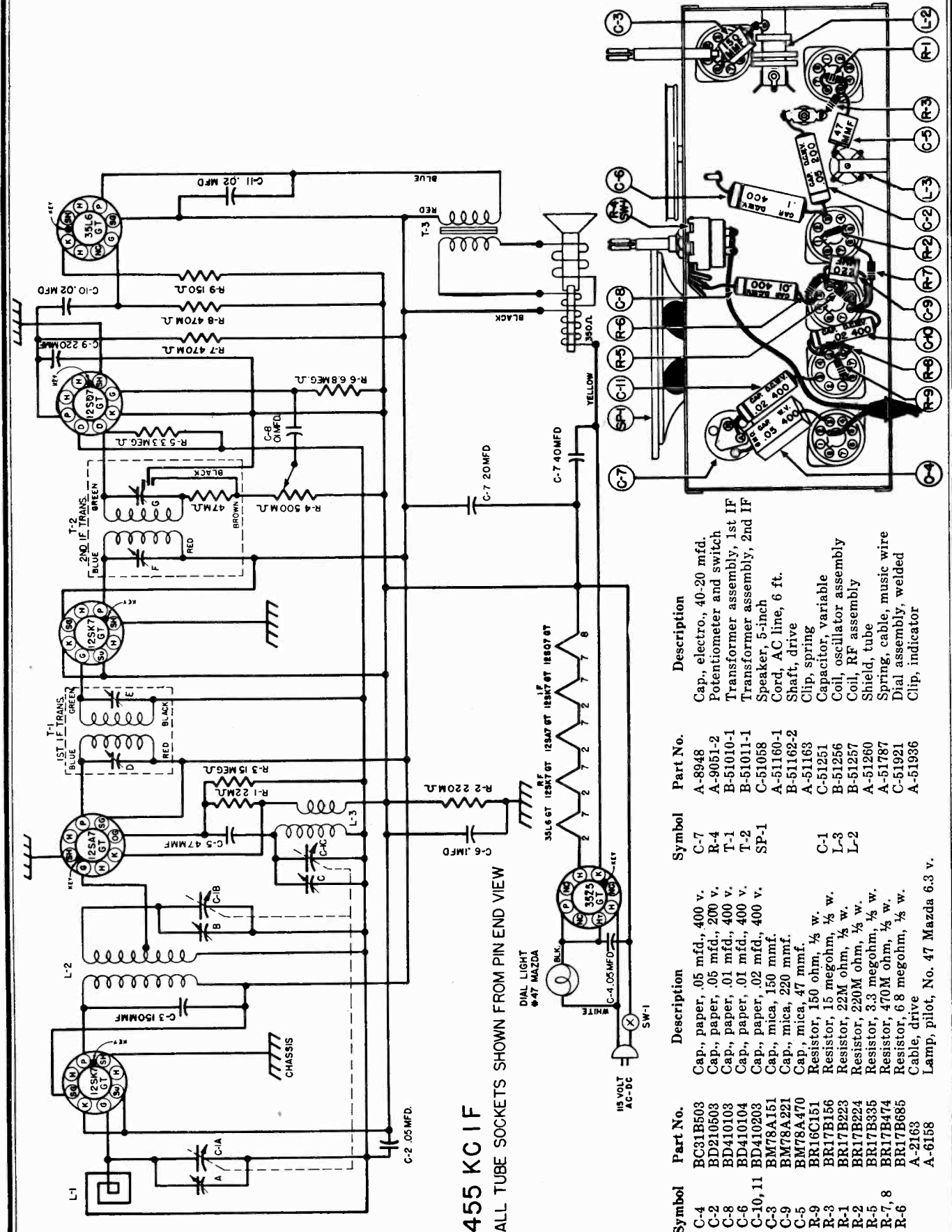
TUBE	POSITION	1	2	3	4	5	6	7	8
12SA7GT	Osc. and Mixer	0	37.5 AC	99	99	4.2	0	24.5 AC	0
12SK7GT	IF Amplifier	0	24.5 AC	0	0	0	99	12.5 AC	99
12SQ7GT	2nd Det.—1st Audio	0	0	0	0	0	16	12.5 AC	0
50L6GT	Power Output	0	85 AC	91.5	99	0	0	37.5 AC	5.9
35Z5GT	Rectifier	0	117 AC	112 AC	0	112 AC	0	85 AC	112



NOTE: All DC voltages measured with a 1000 ohm per volt meter from ON-OFF switch (—B) to socket contact indicated. All AC voltages are measured from ON-OFF switch (—B) to socket contact indicated. All voltages are positive DC unless otherwise marked. Volume control full on. Line voltage 117 volts AC.

CONCORD RADIO CORP.

MODELS 6D61B, 6D61X,
Ch. 579



455 KC IF

ALL TUBE SOCKETS SHOWN FROM PIN END VIEW

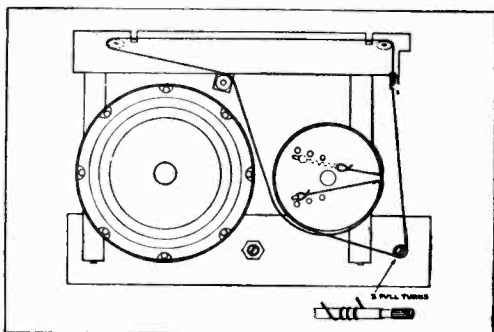
Symbol	Part No.	Description	Symbol	Part No.	Description
C-4	BC31B503	Cap., paper, .05 mfd., 400 v.	C-7	A-8948	Cap., electro, 40-20 mfd.
C-2	BD210503	Cap., paper, .05 mfd., 200 v.	R-4	A-9051-2	Potentiometer and switch
C-8	BD410103	Cap., paper, .01 mfd., 400 v.	T-1	B-51010-1	Transformer assembly, 1st IF
C-6	BD410104	Cap., paper, .01 mfd., 400 v.	T-2	B-51011-1	Transformer assembly, 2nd IF
C-10, 11	BD410203	Cap., paper, .02 mfd., 400 v.	SP-1	C-51058	Speaker, 5-inch
C-3	BM78A151	Cap., mica, 150 mmf.	A-51160-1	A-51160-1	Cord, AC line, 6 ft.
C-9	BM78A221	Cap., mica, 220 mmf.	A-51162-2	A-51162-2	Shaft, drive
C-5	BM78A470	Cap., mica, 47 mmf.	A-51163	A-51163	Clip, spring
R-9	BR16C151	Resistor, 150 ohm, 1/2 w.	C-1	C-51251	Capacitor, variable
R-3	BR17B156	Resistor, 15 megohm, 1/2 w.	L-3	B-51256	Coil, oscillator assembly
R-1	BR17B223	Resistor, 22M ohm, 1/2 w.	L-2	B-51257	Coil, RF assembly
R-2	BR17B224	Resistor, 220M ohm, 1/2 w.	A-51260	A-51260	Shield, tube
R-5	BR17B335	Resistor, 3.3 megohm, 1/2 w.	A-51787	A-51787	Spring, cable, music wire
R-7, 8	BR17B474	Resistor, 470M ohm, 1/2 w.	C-51921	C-51921	Dial assembly, welded
R-6	BR17B685	Resistor, 6.8 megohm, 1/2 w.	A-51936	A-51936	Clip, indicator
A-2163	A-2163	Cable, drive			
A-6158	A-6158	Lamp, pilot, No. 47 Mazda 6.3 v.			

MODELS 6D61B, 6D61X,
Ch. 579

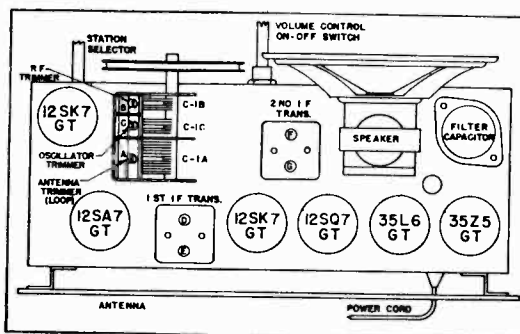
CONCORD RADIO CORP.

Frequency Range 540-1600 kc. V.C. Impedance 3.5 ohms at 400 cycles
 Intermediate Frequency 455 kc. Power Output (Undistorted)65 watts
 Power Supply 105-125 volts AC-DC Power Output (Maximum) 1.4 watts
 Loudspeaker Dynamic Tuning Drive Ratio 6 to 1
 1—12SK7GT RF Amplifier tube 1—12SQ7GT Detector and 1st Audio tube
 1—12SA7GT Converter tube 1—35L6GT Output tube
 1—12SK7GT IF Amplifier tube 1—35Z5GT Rectifier tube

NOTE: The above glass tubes are interchangeable with their metal equivalent.



Dial Mechanism



Tube Layout

The following equipment is necessary to properly align this chassis:

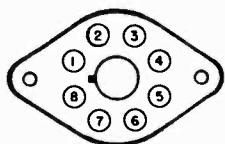
1. A signal generator which will provide an accurately calibrated signal at the frequencies listed.
2. An output meter.
3. A non-metallic screwdriver.
4. Dummy antenna: .1 mfd. — RMA loop.

NOTE: Intermediate Frequency and Oscillator adjustments may be made with the loop disconnected provided a resistor of 10,000 to 50,000 ohms is substituted to close the 12SK7GT grid circuit. The loop alignment must be done with the loop and chassis mounted in operating position in the cabinet. A single turn loop coupled to loop may be substituted for RMA loop.

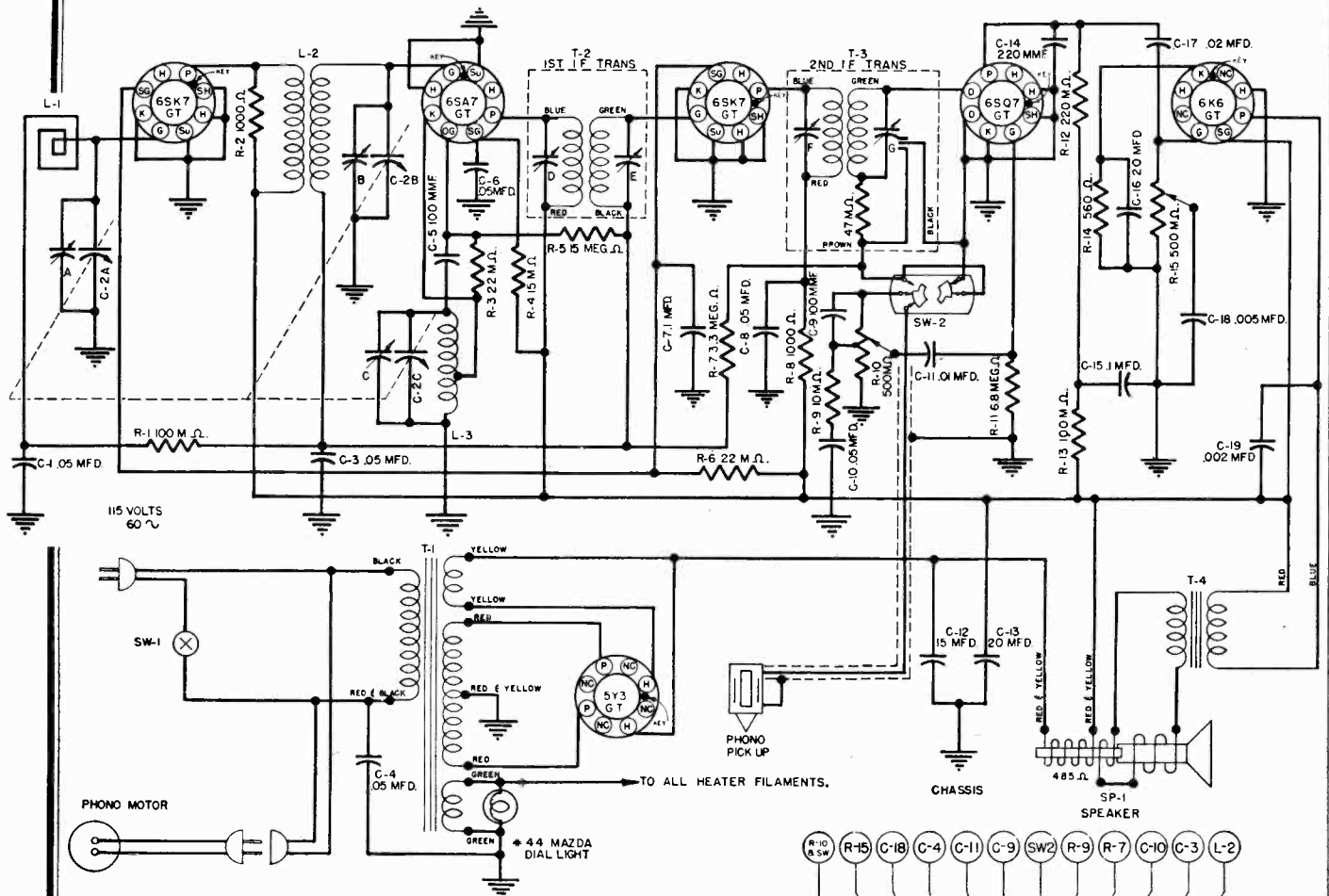
CONNECT TEST OSCILLATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	SET DIAL AT	TRIMMERS	PURPOSE
12SA7GT grid	.1 mfd.	455 kc.	HF end	D E F G	Align IF
12SK7GT RF grid	.1 mfd.	1620 kc.	HF end	C	Set limit of band
12SK7GT RF grid	.1 mfd.	1400 kc.	1400 kc.	B	Align RF
RMA loop	Through loop	1400 kc.	1400 kc.	A	Align antenna

TUBE	POSITION	1	2	3	4	5	6	7	8
12SK7GT	RF Amplifier	0	50 AC	0	0	0	97	38 AC	97
12SA7GT	Converter	0	25 AC	97	97	-6	0	38 AC	0
12SK7GT	IF Amplifier	0	25 AC	0	0	0	97	12 AC	97
12SQ7GT	Detector, 1st Audio	0	0	0	0	0	30	12 AC	0
35L6GT	Output	0	85 AC	92	97	0	0	50 AC	5.7
35Z5GT	Rectifier	0	117 AC	112 AC	0	112 AC	0	86 AC	125

NOTE: All DC voltages measured with a 1000 ohm-per-volt meter from ON-OFF switch (-B) to socket contact indicated. All AC voltages are measured from ON-OFF switch (-B) to socket contact indicated. All voltages are positive DC unless otherwise marked. Volume Control full on. No signal. Line voltage 117 volts AC.



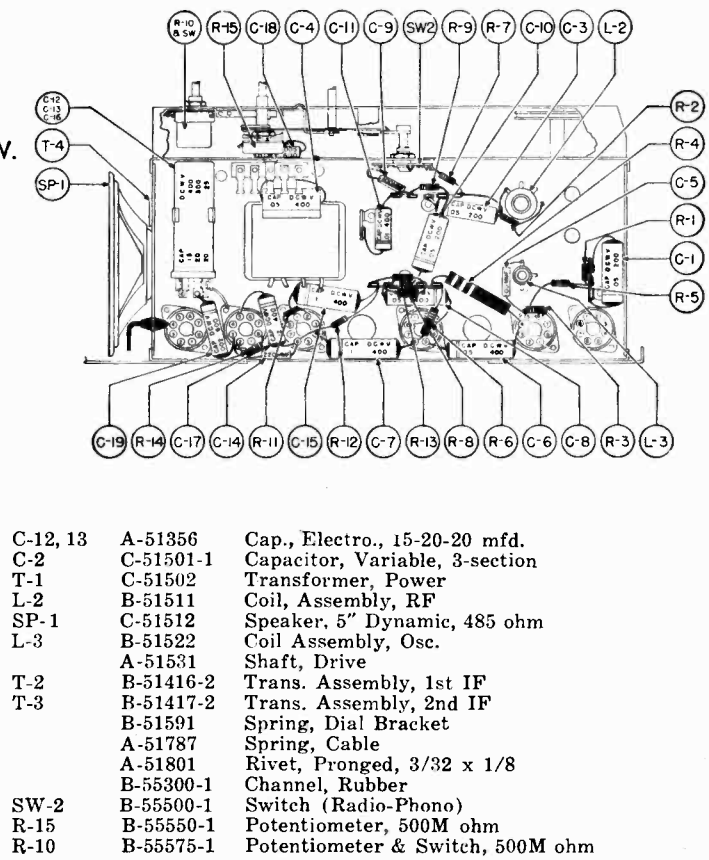
CONCORD RADIO CORP.



455 KC IF

ALL TUBE SOCKETS SHOWN FROM PIN END VIEW.
ALL SWITCHES SHOWN IN COUNTERCLOCKWISE POSITION, SHAFT END VIEW.

Symbol	Part No.	Description
C-4	BC31B503	Cap., Molded, .05 mfd., 400 v.
C-1, 3, 10	BD210503	Cap., Paper, .05 mfd., 200 v.
C-11	BD410103	Cap., Paper, .01 mfd., 400 v.
C-7, 15	BD410104	Cap., Paper, .1 mfd., 400 v.
C-17	BD410203	Cap., Paper, .02 mfd., 400 v.
C-6, 8	BD410503	Cap., Paper, .05 mfd., 400 v.
C-19	BD610202	Cap., Paper, .002 mfd., 600 v.
C-18	BD610502	Cap., Paper, .005 mfd., 600 v.
C-5, 9	BM78A101	Cap., Mica, 100 mmf.
C-14	BM78A221	Cap., Mica, 220 mmf.
R-14	BR16E501	Resistor, 560 ohm, 1 w.
R-2, 8	BR17B102	Resistor, 1000 ohm, 1/2 w.
R-9	BR17B103	Resistor, 10M ohm, 1/2 w.
R-1, 13	BR17B104	Resistor, 100M ohm, 1/2 w.
R-5	BR17B156	Resistor, 15 meg., 1/2 w.
R-3	BR17B223	Resistor, 22M ohm, 1/2 w.
R-12	BR17B224	Resistor, 220M ohm, 1/2 w.
R-7	BR17B335	Resistor, 3.3 meg., 1/2 w.
R-11	BR17B685	Resistor, 6.8 meg., 1/2 w.
R-6	BR17E223	Resistor, 22M ohm, 1 w.
R-4	BR17G153	Resistor, 15M ohm, 2 w.
	A-2163	Cable, Dial
	A-3123	Clamp, Cable
	A-9285	Lamp, Pilot, Mazda No. 44
	A-51160-3	Cord, Power, 6 ft.
	A-51163	Clip, Spring



CONCORD RADIO CORP.

- 1—6SK7GT..... RF Amplifier tube
- 1—6SA7GT..... Converter tube
- 1—6SK7GT..... IF Amplifier tube
- 1—6SQ7GT..... Detector—AVC—1st Audio tube
- 1—6K6GT..... Power Output tube
- 1—5Y3GT..... Rectifier tube

NOTE: The above glass tubes are interchangeable with their metal equivalent.

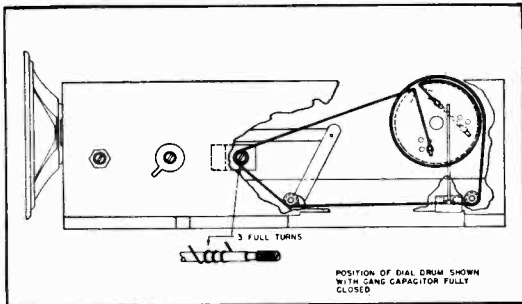
Frequency Range..... 540-1600 kc. V.C. Impedance..... 3.5 ohms at 400 cycles
 Intermediate Frequency..... 455 kc. Power Output (Undistorted)..... 1 watt
 Power Supply..... 105-125 volts, 60 cycle A.C. Power Output (Maximum)..... 4 watts
 Loudspeaker..... Electrodynamic Tuning Drive Ratio..... 4¾ to 1

ALIGNMENT PROCEDURE

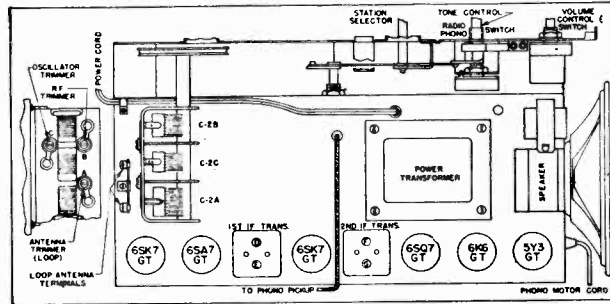
The following equipment is necessary to properly align this chassis:

1. A signal generator which will provide an accurately calibrated signal at the frequencies listed.
2. An output meter.
3. A non-metallic screwdriver.
4. Dummy antenna: — .1 mfd. — RMA loop.

CONNECT GENERATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	BAND	SET DIAL AT	TRIMMERS	PURPOSE
6SA7GT grid	.1 mfd	455 kc.	Broadcast	HF end	D E F G	Align IF
6SK7GT RF grid	.1 mfd	1620 kc.	Broadcast	HF end	C	Set limit of band
6SK7GT RF grid	.1 mfd	1400 kc.	Broadcast	1400 kc.	B	Align RF
RMA loop	Through loop	1400 kc.	Broadcast	1400 kc.	A	Align antenna



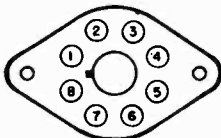
Dial Mechanism



Tube Layout

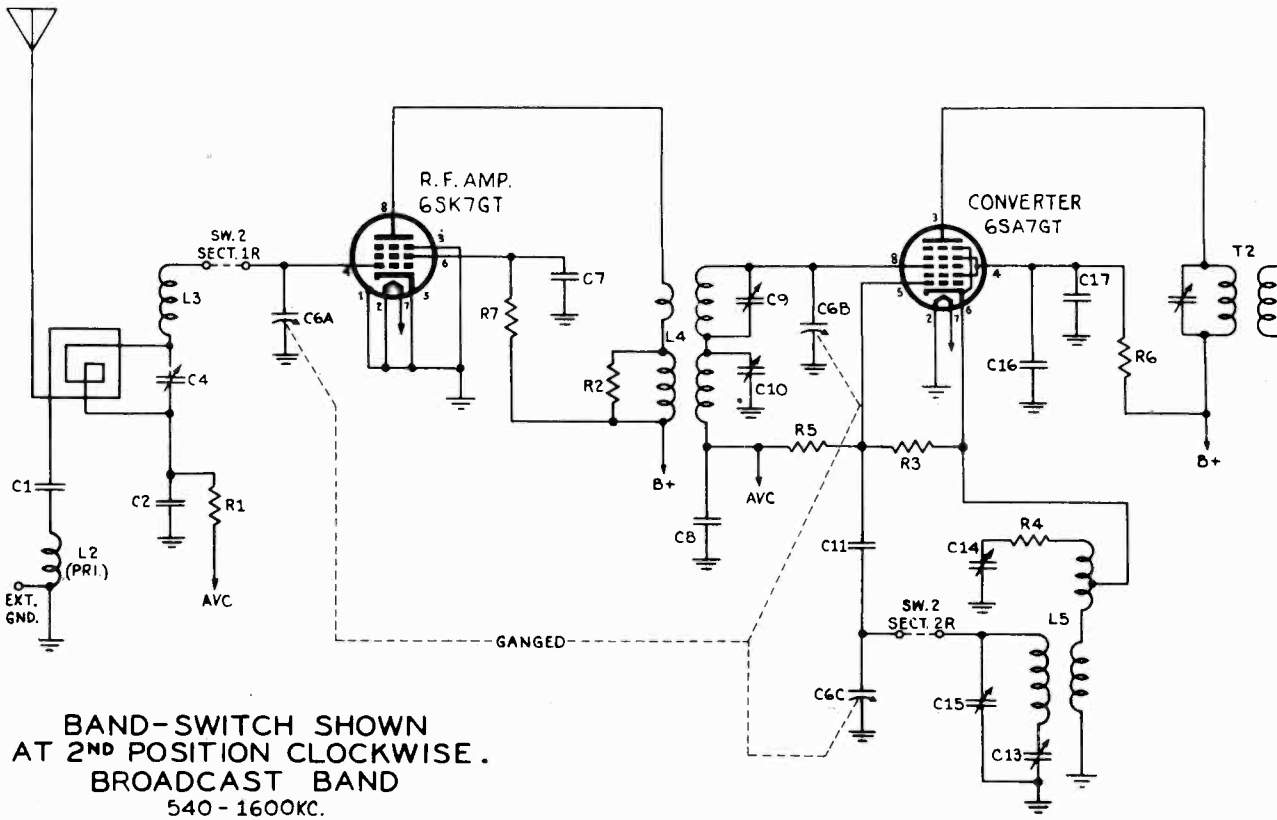
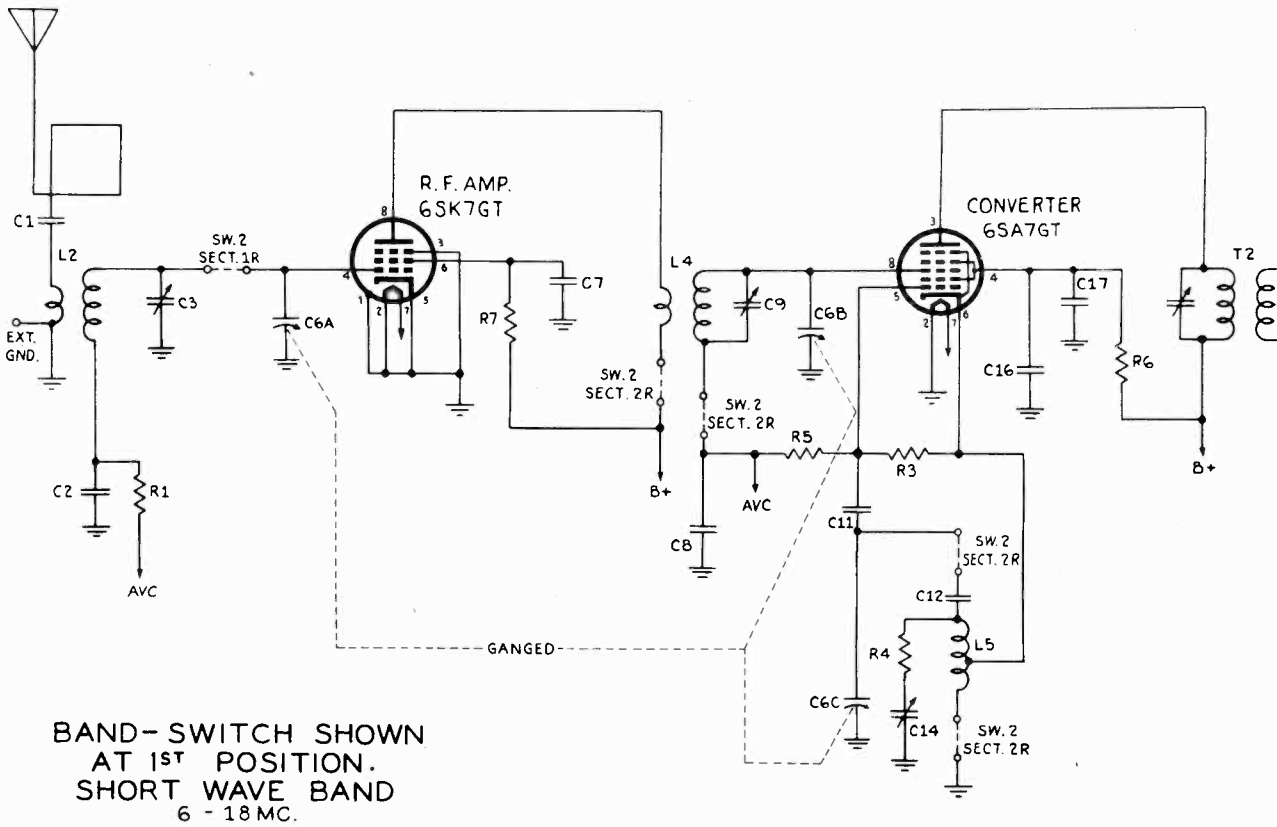
TUBE	POSITION	1	2	3	4	5	6	7	8
6SK7GT	RF Amplifier	0	0	0	0	0	93	6.3 AC	270
6SA7GT	Converter	0	6.3 AC	270	113	-7.5	0	0	0
6SK7GT	IF Amplifier	0	0	0	0	0	93	6.3 AC	260
6SQ7GT	Detector—AVC—1st Audio	0	0	0	0	0	88	6.3 AC	0
6K6GT	Power Output	0	0	250	270	0	175	6.3 AC	19
5Y3GT	Rectifier	0	310	0	290 AC	0	290 AC	0	310

NOTE: All voltages measured from chassis to socket contact indicated.
 DC voltages measured with a 1000 ohm-per-volt meter.
 All voltages are positive DC unless otherwise marked.
 Volume control full on. No signal.
 Tone Control in clockwise position.
 Line Voltage 117 volts AC.



MODEL 6D62W, Ch. 572

CONCORD RADIO CORP.



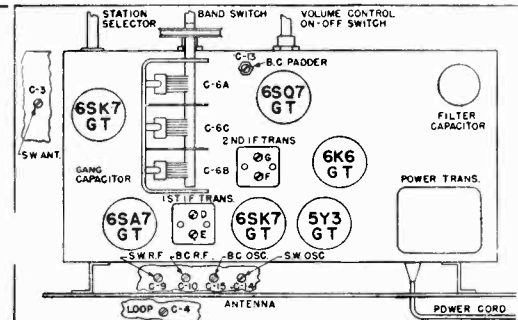
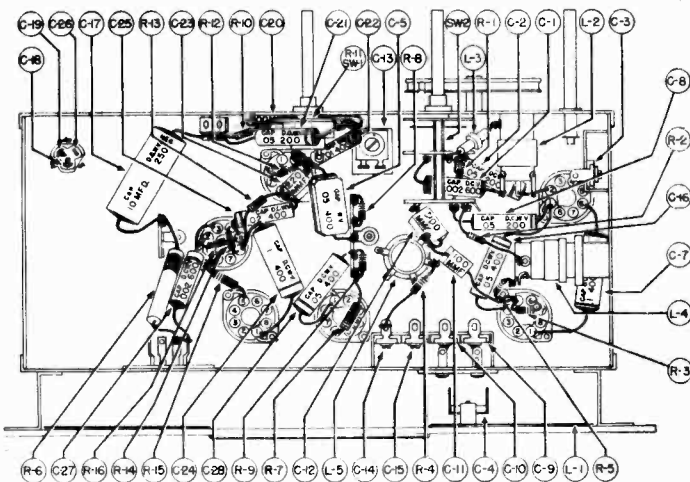
CONCORD RADIO CORP.

Frequency Range.....	540-1600 kc., 6-18 mc.	Power Output (Undistorted).....	1 watt
Intermediate Frequency.....	455 kc.	Power Output (Maximum).....	4 watts
Power Supply.....	105-125 volts, 60 cycle AC	Weight 15¾ lbs. (net).....	18½ lbs. (shipping)
Loudspeaker Type.....	5" Electro Dynamic	Tuning Drive Ratio.....	6 to 1
V.C. Impedance.....	3.2 ohms		
1—6SK7GT.....	RF Amplifier tube	1—6SQ7GT.....	Detector—AVC—Audio tube
1—6SA7GT.....	Converter tube	1—6K6GT.....	Power Output tube
1—6SK7GT.....	IF Amplifier tube	1—5Y3GT.....	Rectifier tube

The following equipment is necessary to properly align this chassis:

- 1. A signal generator which will provide an accurately calibrated signal at the frequencies listed.
- 2. An output meter.
- 3. A non-metallic screwdriver.
- 4. Dummy antenna: .1 mfd. — 400 ohm resistor—RMA loop.

CONNECT TEST OSCILLATOR TO	DUMMY ANTENNA	INPUT SIGNAL FREQUENCY	BAND	SET DIAL AT	TRIMMERS	PURPOSE
6SA7GT grid	.1 mfd.	455 kc.	Broadcast	HF end	D E F G	Align IF
6SK7GT RF grid	.1 mfd.	18.3 mc.	Short wave	HF end	C-14	Set limit of band
6SK7GT RF grid	.1 mfd.	16 mc.	Short wave	16 mc.	C-9	Align RF
Antenna post	400 ohms	16 mc.	Short wave	16 mc.	C-3	Align antenna
6SK7GT RF grid	.1 mfd.	1620 kc.	Broadcast	HF end	C-15	Set limit of band
6SK7GT RF grid	.1 mfd.	1400 kc.	Broadcast	1400 kc.	C-10	Align RF
6SK7GT RF grid	.1 mfd.	600 kc.	Broadcast	600 kc.	C-13	Rock gang and adjust to max.
RMA loop	Through loop	1400 kc.	Broadcast	1400 kc.	C-4	Align antenna

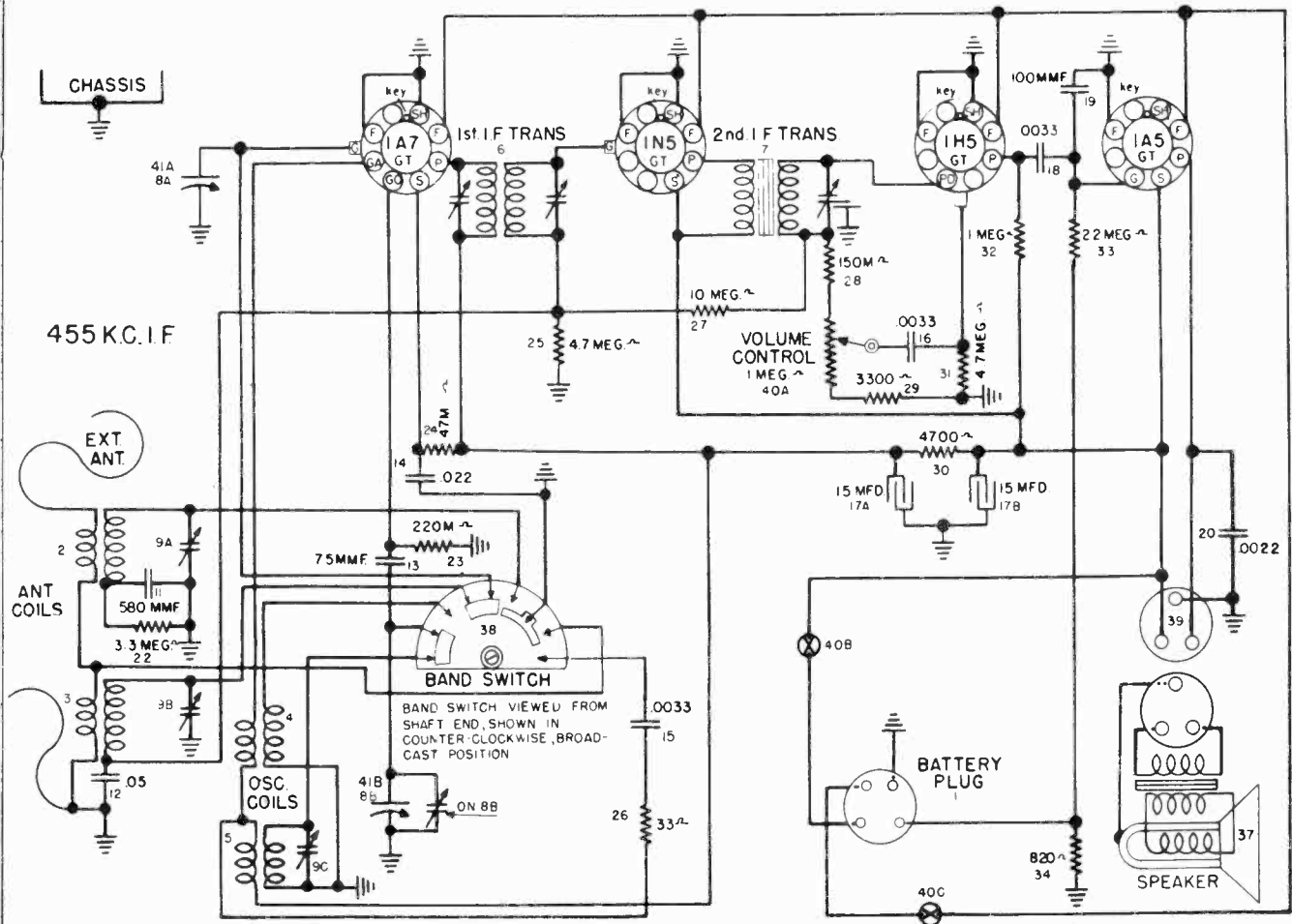


Symbol	Part No.	Description
C-5	BC31B503	Cap., .05 mfd., 400 v. paper
C-2, 8, 21	BD210503	Cap., .05 mfd., 200 v. paper
C-22	BD410103	Cap., .01 mfd., 400 v. paper
C-7, 24	BD410104	Cap., .1 mfd., 400 v. paper
C-25	BD410203	Cap., .02 mfd., 400 v. paper
C-16, 28	BD410503	Cap., .05 mfd., 400 v. paper
C-1, 27	BD610202	Cap., .002 mfd., 600 v. paper
C-12	BM58D512	Cap., 5100 mmf., mica
C-11, 20	BM78A101	Cap., 100 mmf., mica
C-23	BM78A221	Cap., 220 mmf., mica
R-15	BR16E561	Resistor, 560 ohm, 1 w.
R-2, 9	BR17B102	Resistor, 1000 ohm, ½ w.
R-10	BR17B103	Resistor, 10M ohm, ½ w.
R-1, 14	BR17B104	Resistor, 100M ohm, ½ w.
R-4	BR17B150	Resistor, 15 ohm, ½ w.
R-5	BR17B156	Resistor, 15 meg., ½ w.
R-3	BR17B223	Resistor, 22M ohm, ½ w.
R-13	BR17B224	Resistor, 220M ohm, ½ w.
R-8	BR17B335	Resistor, 3.3 meg, ½ w.

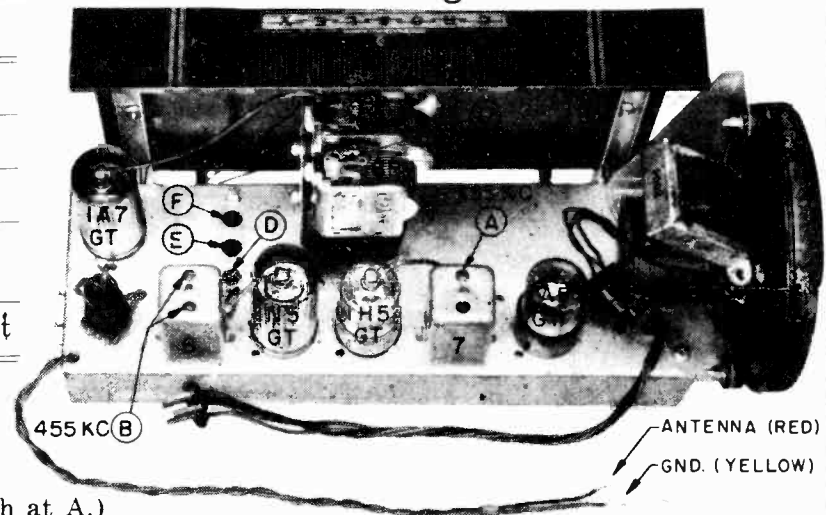
R-16	BR17B474	Resistor, 470M ohm, ½ w.
R-12	BR17B685	Resistor, 68 meg., ½ w.
R-7	BR17E223	Resistor, 22M ohm, 1 w.
R-6	BR17G153	Resistor, 15M ohm, 2 w.
	A-2163	Cable, drive
	A-9285	Lamp, pilot, Mazda No. 44
	A-51160-1	Cord, power, 6 ft.
	B-51162-3	Shaft, drive
	A-51163	Clip, spring
	A-51260	Shield, tube
C-18,19,26	A-51356	Cap., electro., 15-20-20 mfd.
C-6	C-51401-1	Capacitor, variable
SP-1	C-51413	Speaker assembly, 5-inch
T-2	B-51416-1	Trans. assembly, 1st IF
T-3	B-51417-1	Trans. assembly, 2nd IF
C-17	A-51419	Cap., electro., 10 mfd., 250 v.
L-5	B-51420	Coil assembly, oscillator
T-1	C-51421	Transformer, power
L-3	B-51422	Coil assembly, antenna loading
L-4	B-51425	Coil assembly, RF
C-13	B-51428-5	Capacitor, padder
L-2	B-51430	Coil assembly, SW antenna
SW-2	B-51435-1	Switch assembly, 2-band
R-11	B-51445-1	Control, Pot. & switch 500,000 ohm.
C-9, 10, 14, 15	A-51656	Cap. assembly, trimmer (4)
C-3	A-51657	Cap. assembly, trimmer (spec.)
	A-51787	Spring, cable
C-4	B-51859-1	Cap. assembly, Ant.—BC

THE CROSLY CORP.

MODELS 46FA, 46FB



Type	Function
1A7GT/G	Mixer
1N5GT/G	I.F. Amplifier
1H5GT/G	Detector, AVC, 1st A.F. Amplifier
1A5GT/G	A.F. Power Output



FREQUENCY RANGE: American Band, 540 to 1600 kc. (Selector Switch at A.)

Overseas Short-wave Band, 5.8 to 15 mc. (Selector Switch at 0.)

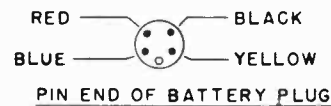
INTERMEDIATE FREQUENCY: 455 kc.

POWER SUPPLY: Crosley "A-B" Battery Pack, CR69.

VOLTAGE RATING: 11½ v. "A"; 90 v. "B"

POWER OUTPUT: 120 mw. minimum.

- (A) - 2ND. I.F. TRIMMER
- (B) - 1ST. I.F. TRIMMER
- (C) - "OVERSEAS" OSC. TRIM.
- (D) - "OVERSEAS" ANT. TRIM.
- (E) - "AMERICAN" OSC. TRIM.
- (F) - "AMERICAN" ANT. TRIM.



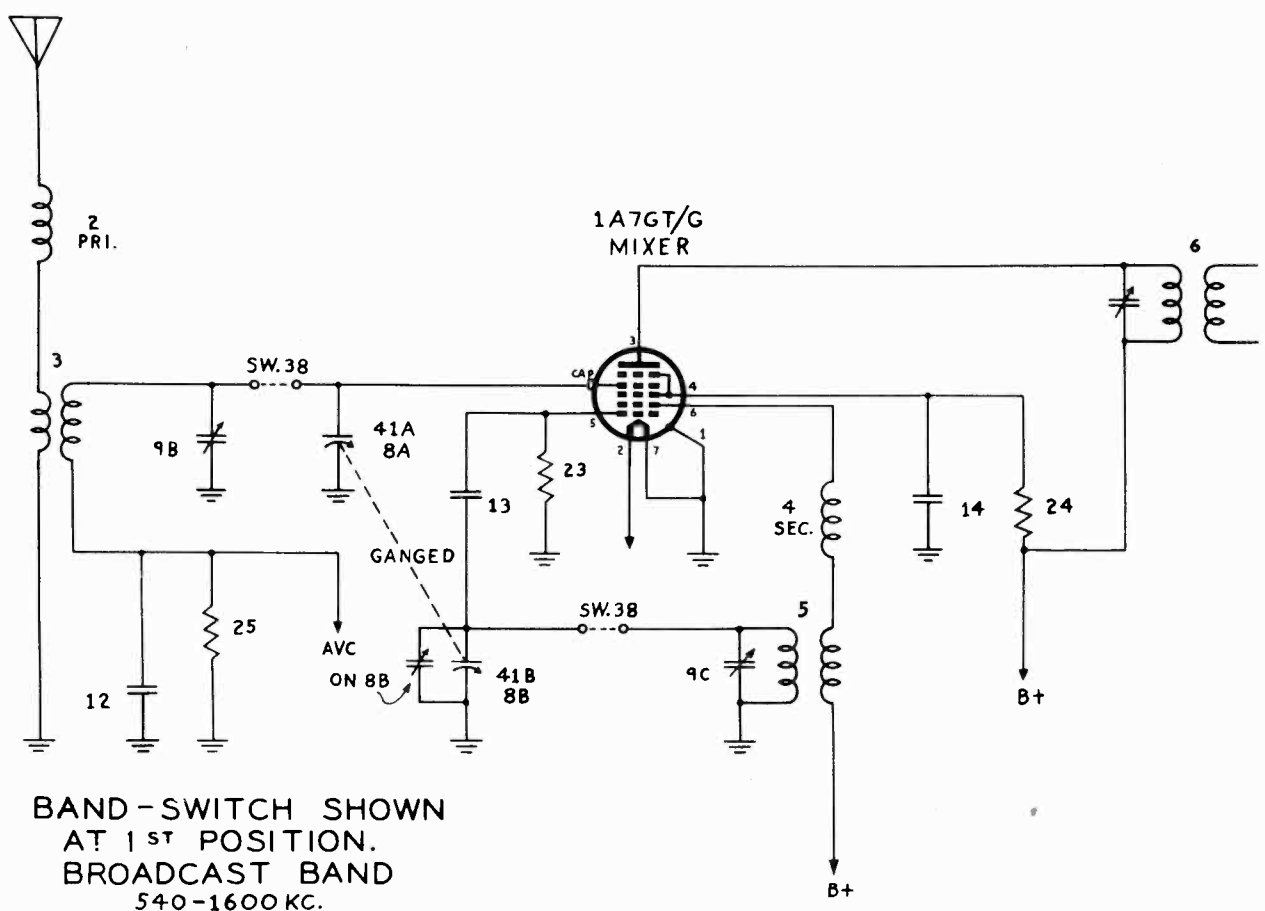
Speaker mounted on cabinet on Model 46FB

For satisfactory operation it is necessary that an antenna and ground be connected to this receiver.

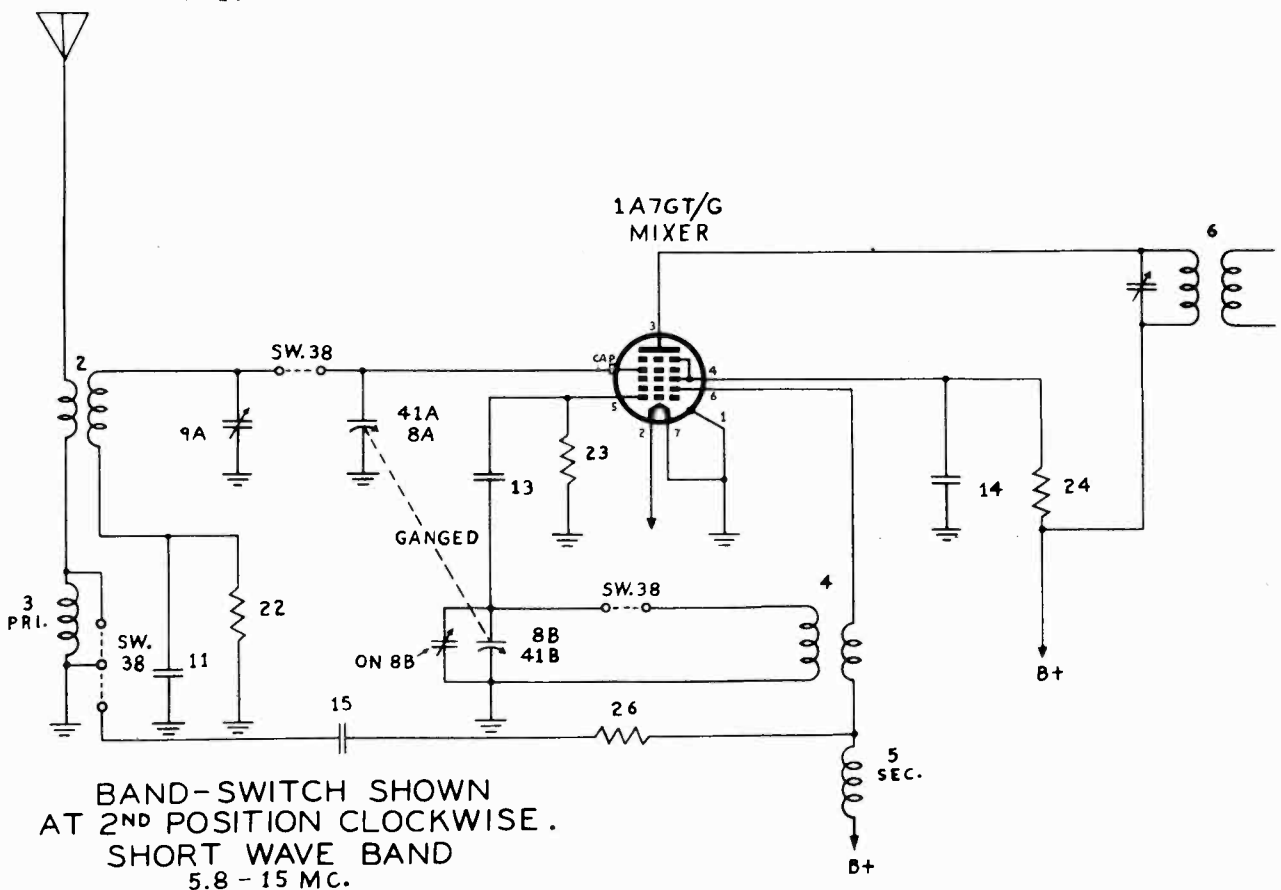
"clarified schematics"

MODELS 46FA, 46FB

THE CROSLLEY CORP.



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



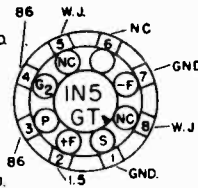
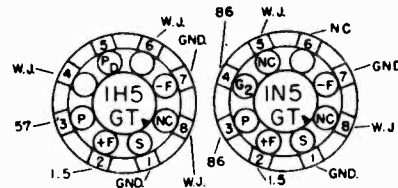
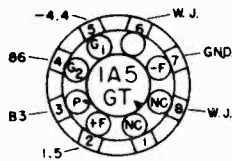
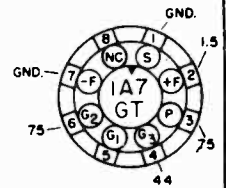
BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE. SHORT WAVE BAND 5.8 - 15 MC.

THE CROSLEY CORP.

SOCKET VOLTAGE CHART

NOTES: -

- 1. THESE ARE BOTTOM VIEWS OF SOCKETS.
- 2. MEASURE VOLTAGES FROM SOCKET LUGS TO CHASSIS (-B, -A, GROUND).
- 3. THESE VOLTAGES MEASURED USING AN ELECTRONIC VOLTMETER.
- 4. W.J. - WIRING JUNCTION.
- 5. NC - NO CONNECTION.
- 6. SOCKET VOLTAGE TOLERANCE, 10%.



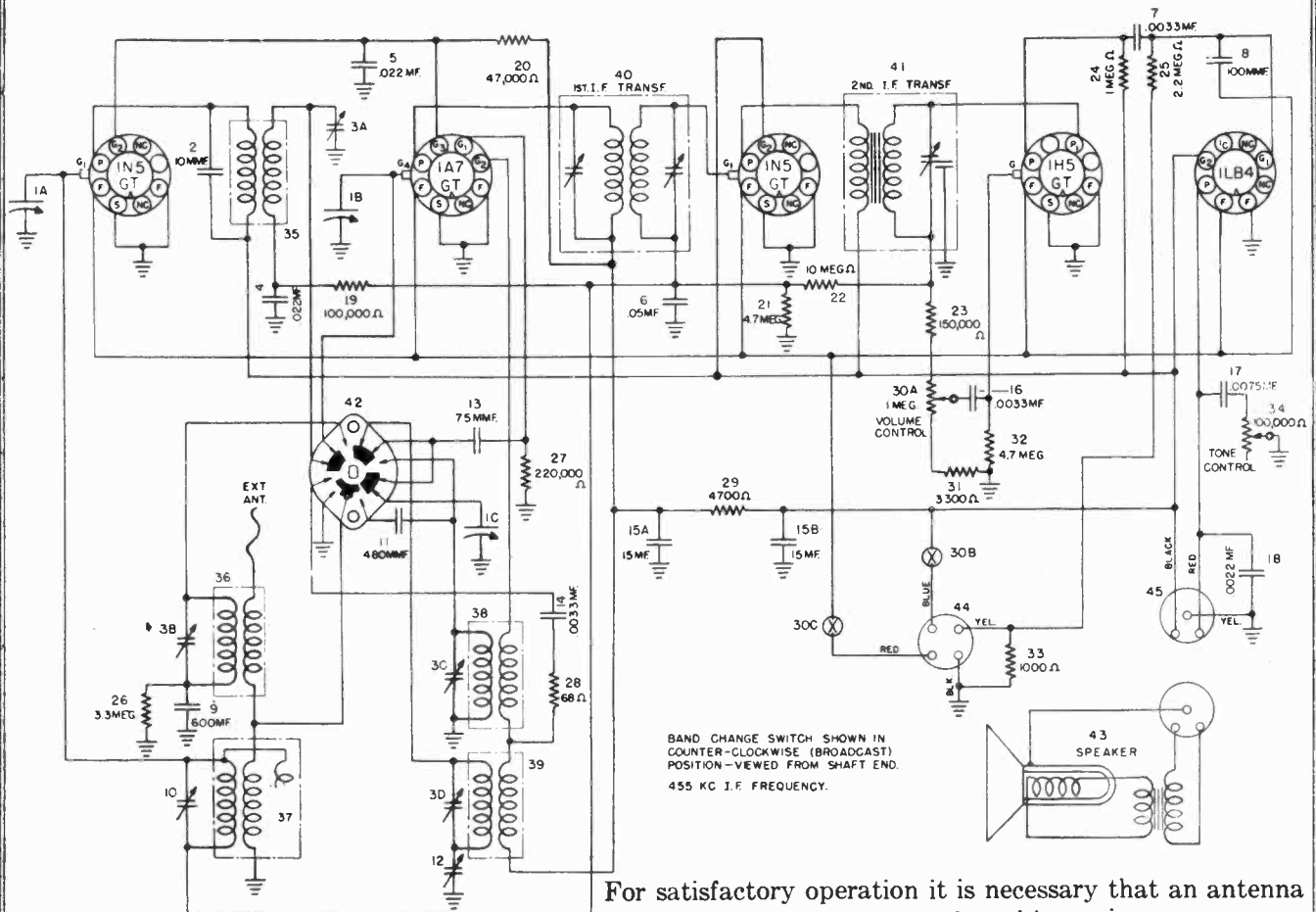
ALIGNMENT PROCEDURE

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 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	1,620	200 mmf.	Ant.	A	1,620	E
5	1,400	200 mmf.	Ant.	A	1,400	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.

THE CROSLY CORP.



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

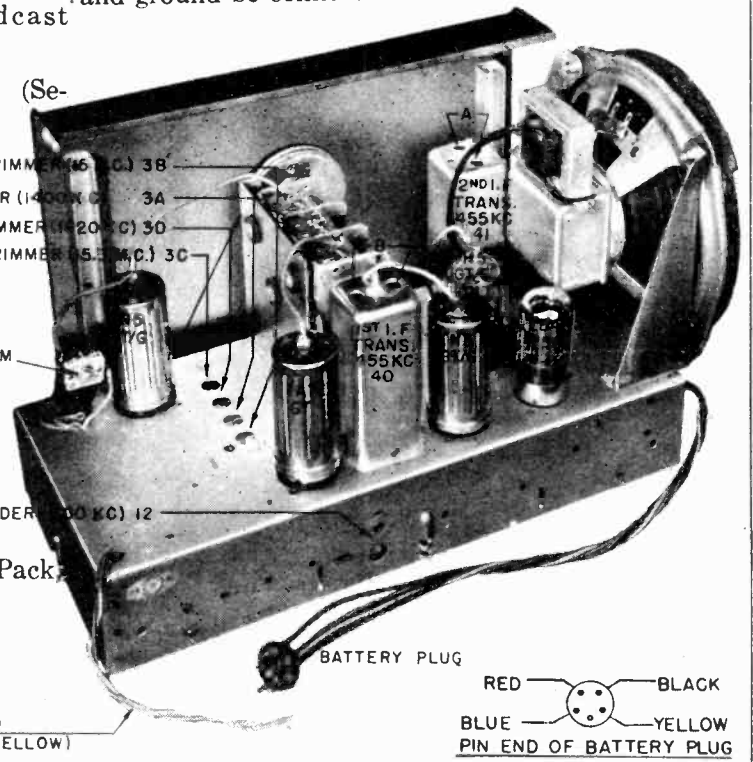
For satisfactory operation it is necessary that an antenna and ground be connected to this receiver.

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 O.)

Type	Function
1A7GT/G	Mixer
1N5GT/G	I. F. Amplifier,
1N5GT/G	R. F. Amplifier
1H5GT/G	Detector, AVC 1st A. F. Amplifier
1LB4	A. F. Power Output

- (H) SHORT WAVE ANT. TRIMMER (16 KC) 38
- (E) INTERSTAGE TRIMMER (1400 KC) 3A
- (C) BROADCAST OSC. TRIMMER (120 KC) 30
- (G) SHORT WAVE OSC. TRIMMER (5.5 KC) 3C
- (F) BROADCAST ANT. TRIM (1400 KC) 10
- (D) BROADCAST OSC. PADDER (100 KC) 12



POWER SUPPLY: Crosley "A-B" Battery Pack CR69.

VOLTAGE RATING: 1½ v. "A"; 90 v. "B".

POWER OUTPUT: 170 mw. minimum.

EXT. ANT. (RED)
EXT. GROUND (YELLOW)

RED — BLACK
BLUE — YELLOW
PIN END OF BATTERY PLUG

FEBRUARY, 1946

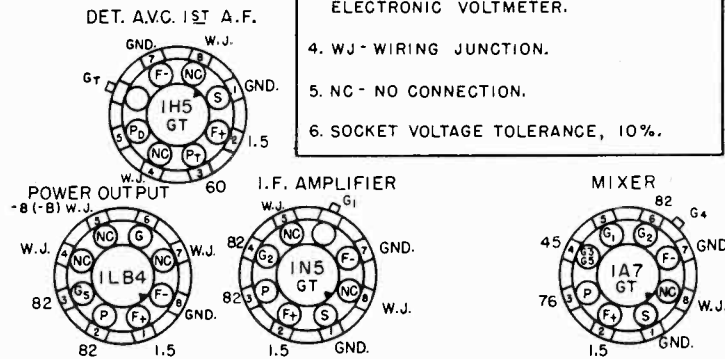
Speaker mounted on cabinet on Model 56FB

THE CROSLEY CORP.

MODELS 56FA, 56FB

SOCKET VOLTAGE CHART

1. THESE ARE BOTTOM VIEWS OF SOCKETS
2. MEASURE VOLTAGE FROM SOCKET LUG TO CHASSIS (GROUND).
3. THESE VOLTAGES MEASURED USING AN ELECTRONIC VOLTMETER.
4. W.J - WIRING JUNCTION.
5. NC - NO CONNECTION.
6. SOCKET VOLTAGE TOLERANCE, 10%.



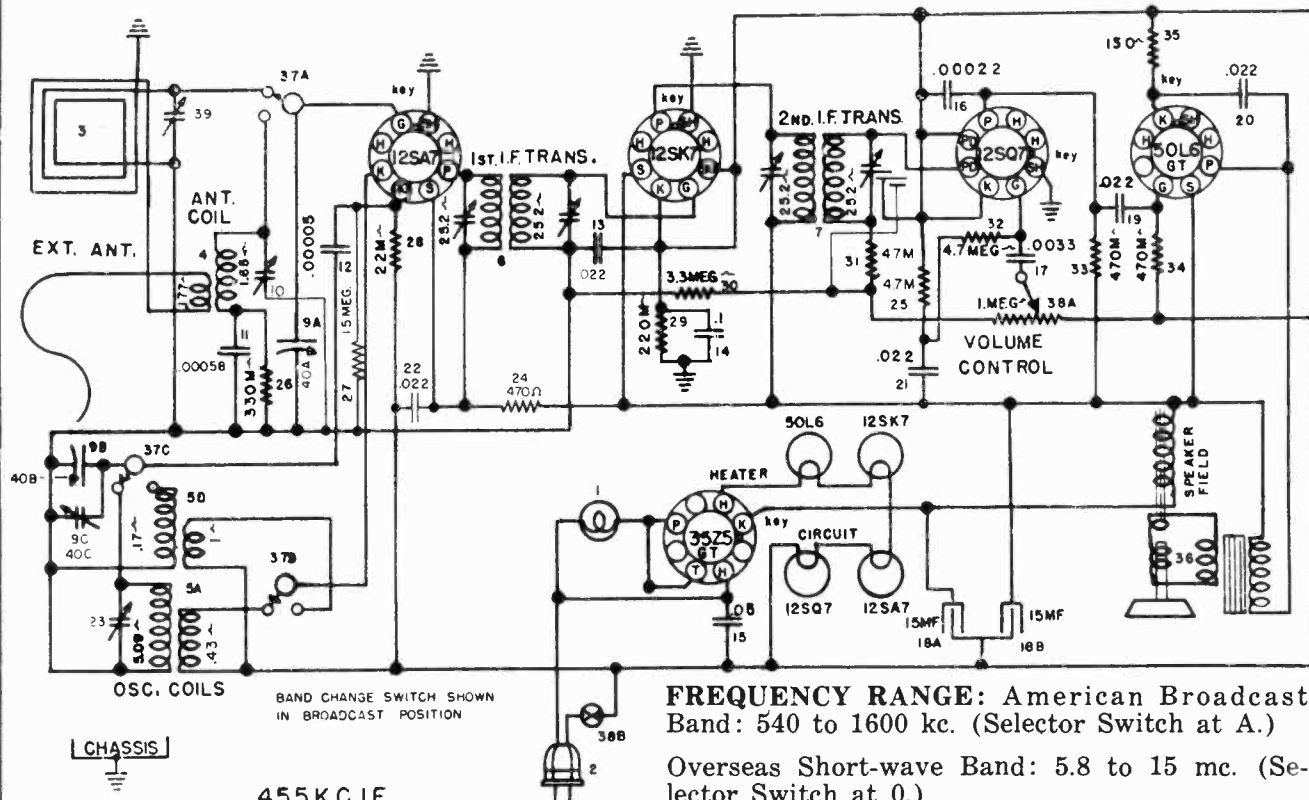
1. Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.
2. Connect the output meter across the speaker voice coil.
3. The r.f. signal input from the signal generator should be connected to the antenna 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 Sequence	Signal Generator Output			Position of		
	Frequency in kc.	In Series with	To	Band Switch	Tuning Dial	Adjust for Maximum Output
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.

MODELS 56TA, 56TC,
56TW

THE CROSLEY CORP.



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.)

RESISTANCE OF SPEAKER FIELD: 450 ohms.

INTERMEDIATE FREQUENCY: 455 kc.

SPEAKER FIELD CURRENT: 60 ma.

POWER SUPPLY: a.c.—d.c.

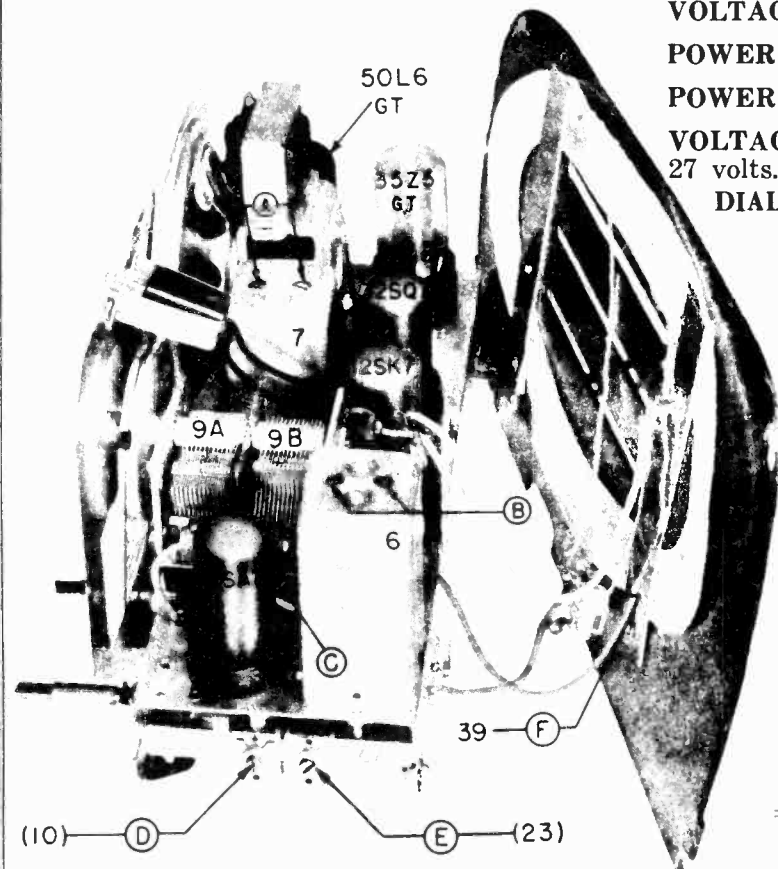
VOLTAGE RATING: 105-125 volts.

POWER CONSUMPTION: 35 watts nominal.

POWER OUTPUT: 1 watt maximum.

VOLTAGE DROP ACROSS SPEAKER FIELD: 27 volts.

DIAL BULB: Type 47, 6.3 volts, .15 amp.



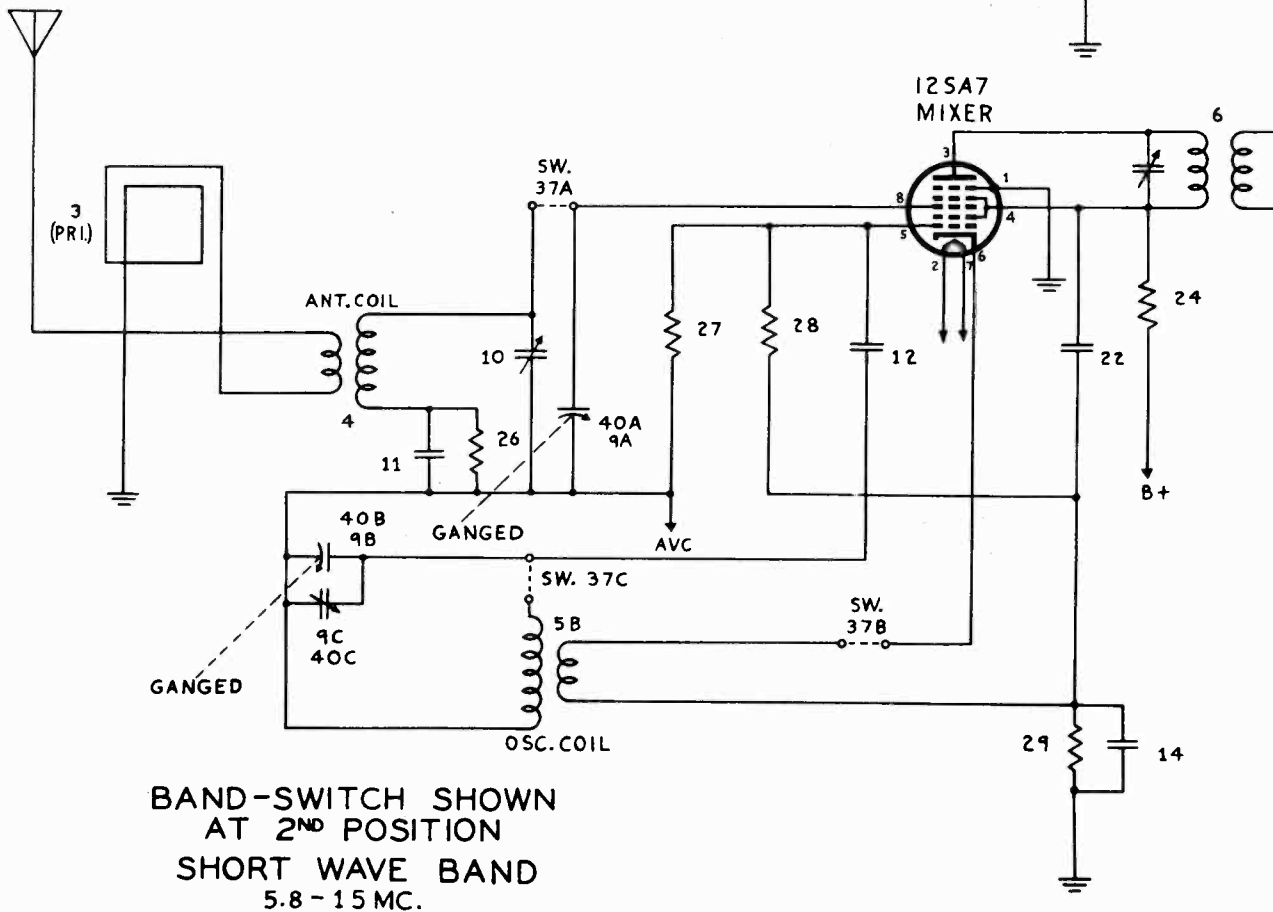
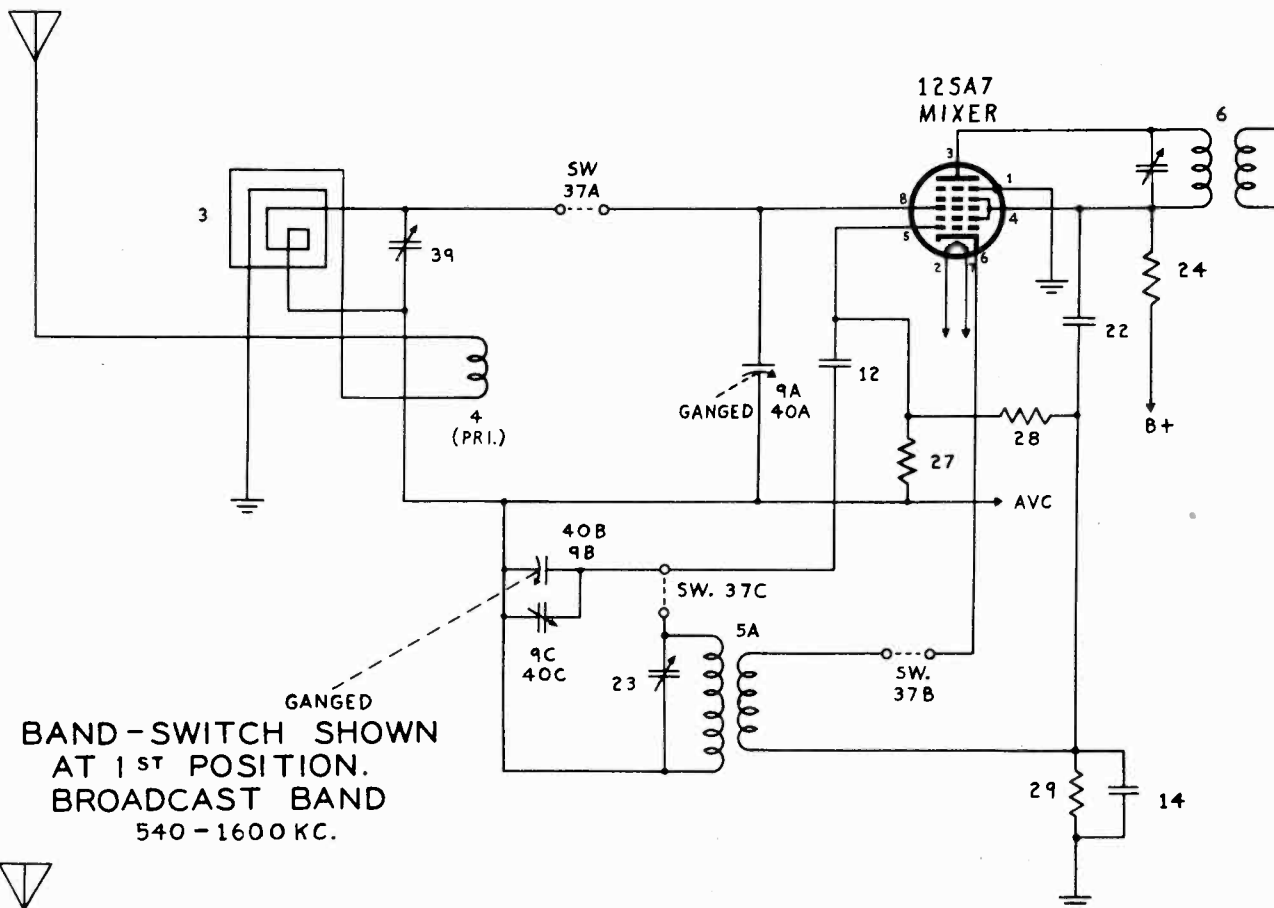
CHASSIS, SIDE VIEW—

—MODELS 56TA, 56TW, 56TC

Type	Function
12SA7 (or GT/G)	Mixer
12SK7 (or GT/G)	I.F. Amplifier
12SQ7 (or GT/G)	Detector, AVC, 1st A.F. Amplifier
50L6GT	A.F. Power Output
35Z5GT/G	Rectifier

THE CROSLY CORP.

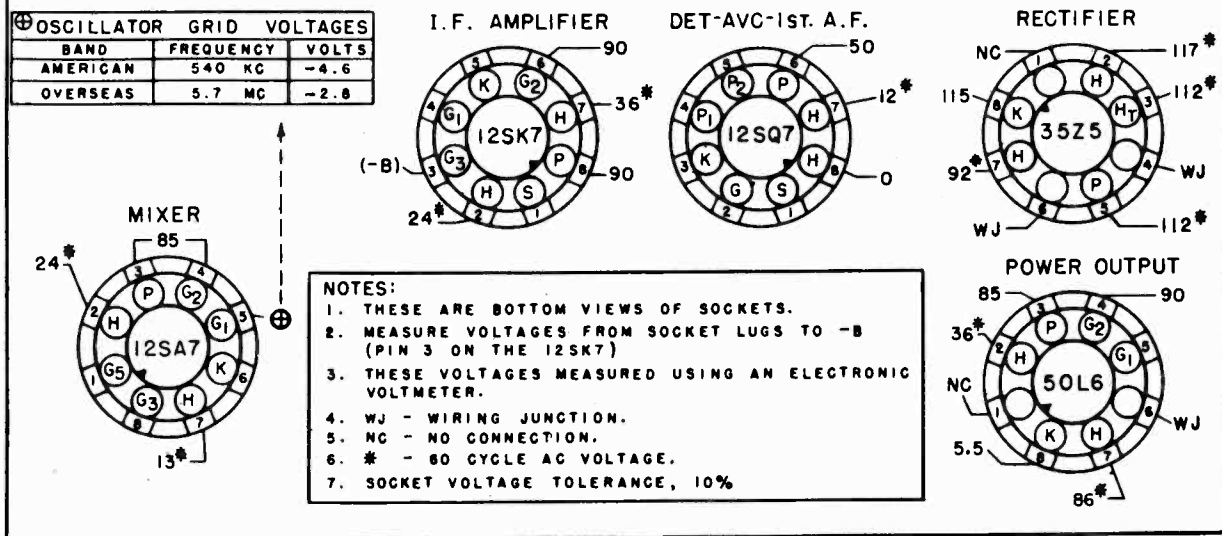
MODELS 56TA, 56TC,
56TW



MODELS 56TA, 56TC, 56TW
 MODELS 56TA-L, 56TC-L,
 56TW-L

THE CROSLLEY CORP.

MODELS 56TA, 56TW, 56TC



ALIGNMENT PROCEDURE

MODELS 56TA, 56TW, 56TC

-MODELS 56TA-L, 56TW-L, 56TC-L

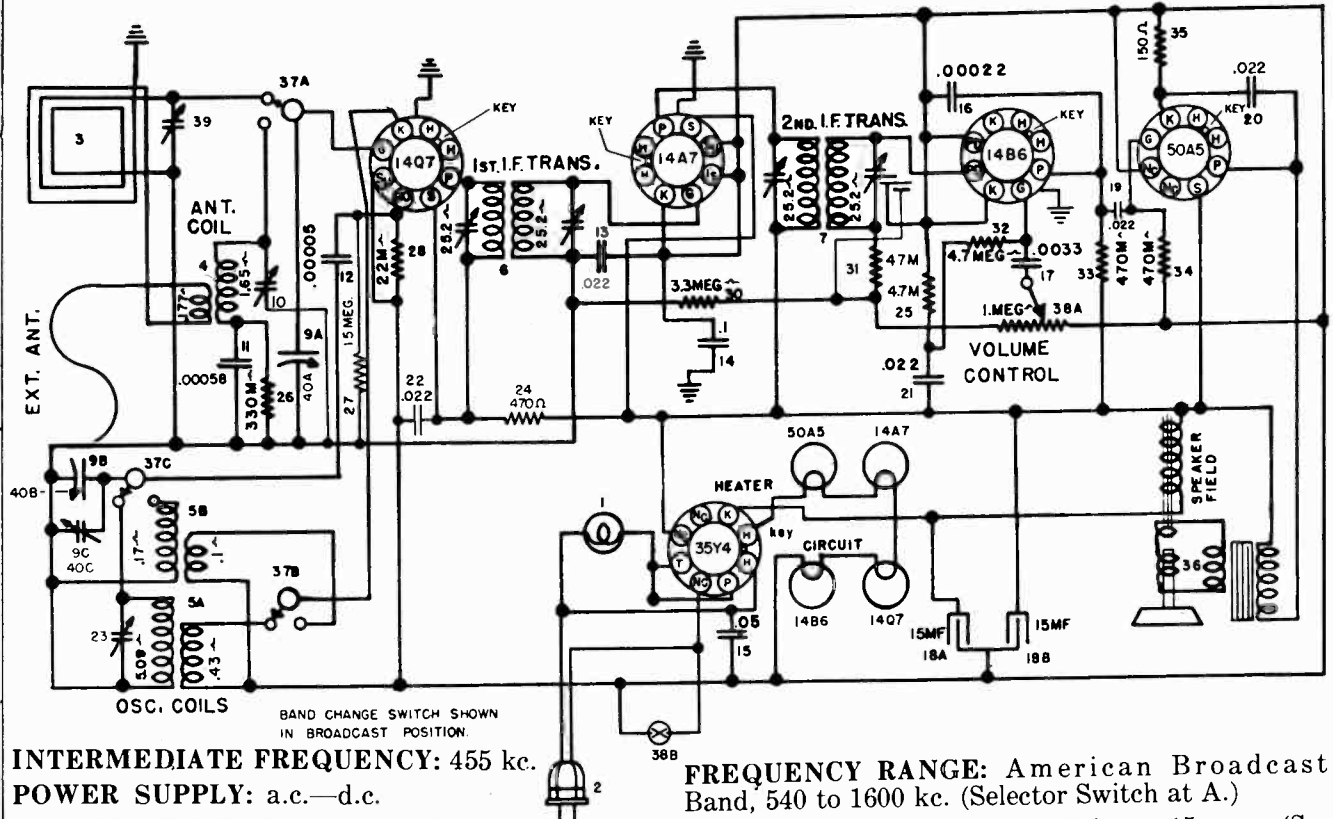
1. Turn the tuning condenser to the completely closed position against the stop and set the dial pointer to the reference line at the end of the dial scale.
2. Connect the output meter across the speaker voice coil.
3. The r.f. signal input from the signal generator should be connected to the external antenna lead. Connect the signal generator ground through a 0.1 mfd. condenser to -B (pin 3 on 12SK7 tube socket Models 56TA, 56TW, 56TC) (pin 4 on 14A7 tube socket Models 56TA-L, 56TW-L, 56TC-L).
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 56TA-L, 56TC-L,
56TW-L

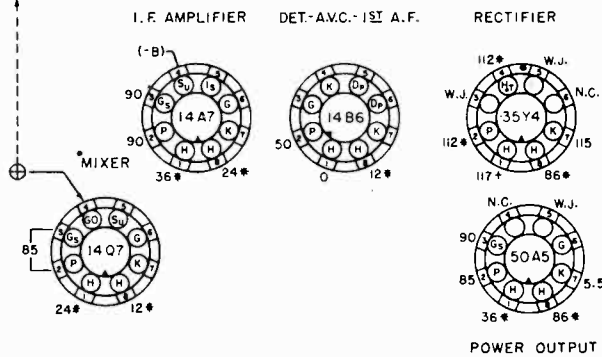
THE CROSLY CORP.



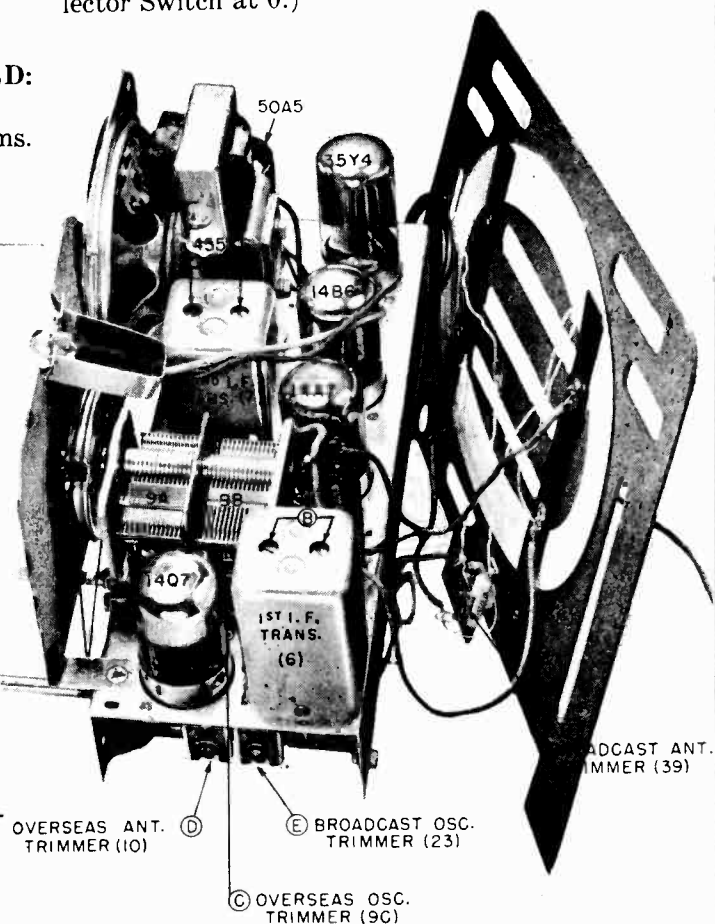
INTERMEDIATE FREQUENCY: 455 kc.
POWER SUPPLY: a.c.—d.c.
VOLTAGE RATING: 105-125 volts.
POWER CONSUMPTION: 35 watts nominal.
POWER OUTPUT: 1 watt minimum.
VOLTAGE DROP ACROSS SPEAKER FIELD: 27 volts.
RESISTANCE OF SPEAKER FIELD: 450 ohms.
DIAL BULB: Type 47, 6.3 volts, .15 amp.

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.)

⊕ OSCILLATOR GRID VOLTAGES		
BAND	FREQUENCY	VOLTS
AMERICAN	550 KC	-4.6
OVERSEAS	5.8	-2.8



NOTES:
 1. THESE ARE BOTTOM VIEWS OF TUBE SOCKETS.
 2. MEASURE VOLTAGES FROM SOCKET LUGS TO -B (PIN 4 ON THE 14A7).
 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%.

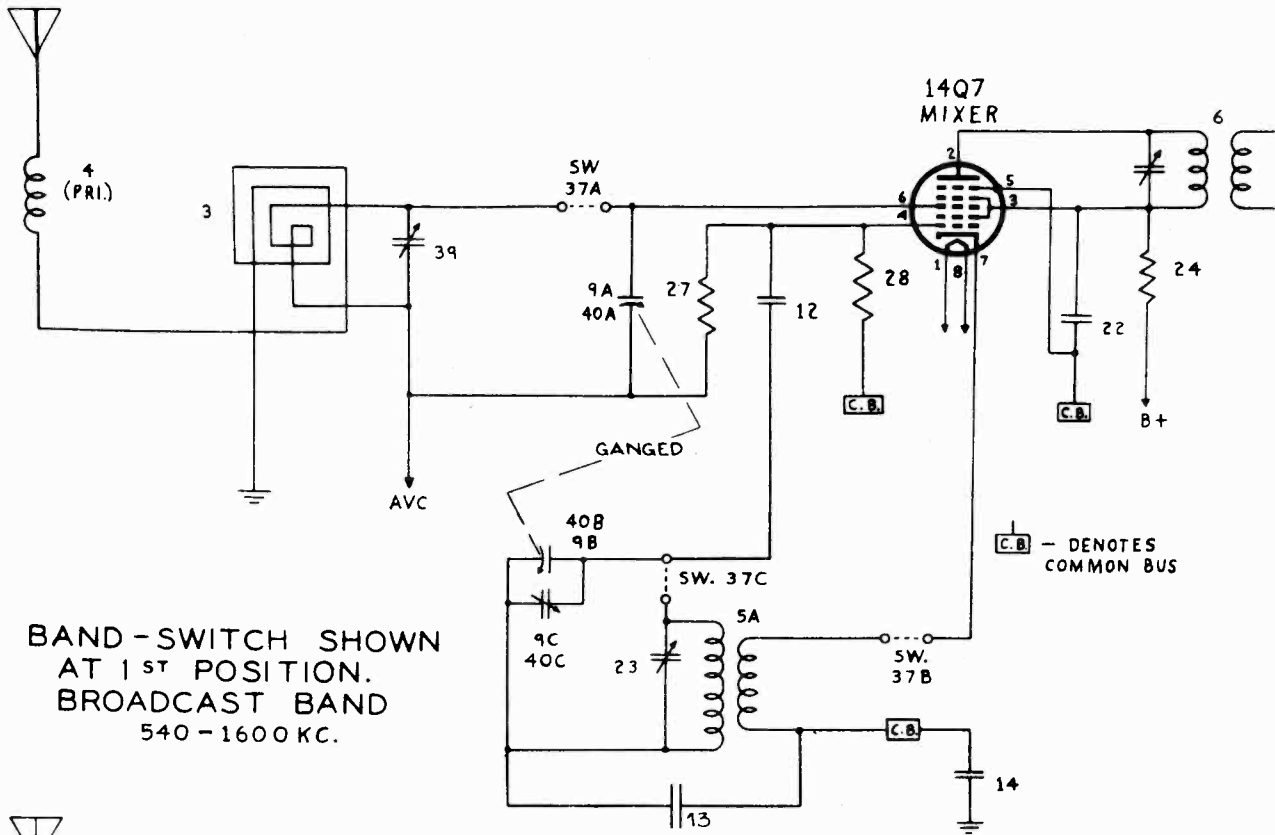


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For Alignment, see P.15-10
 For Parts List, see P.15-13

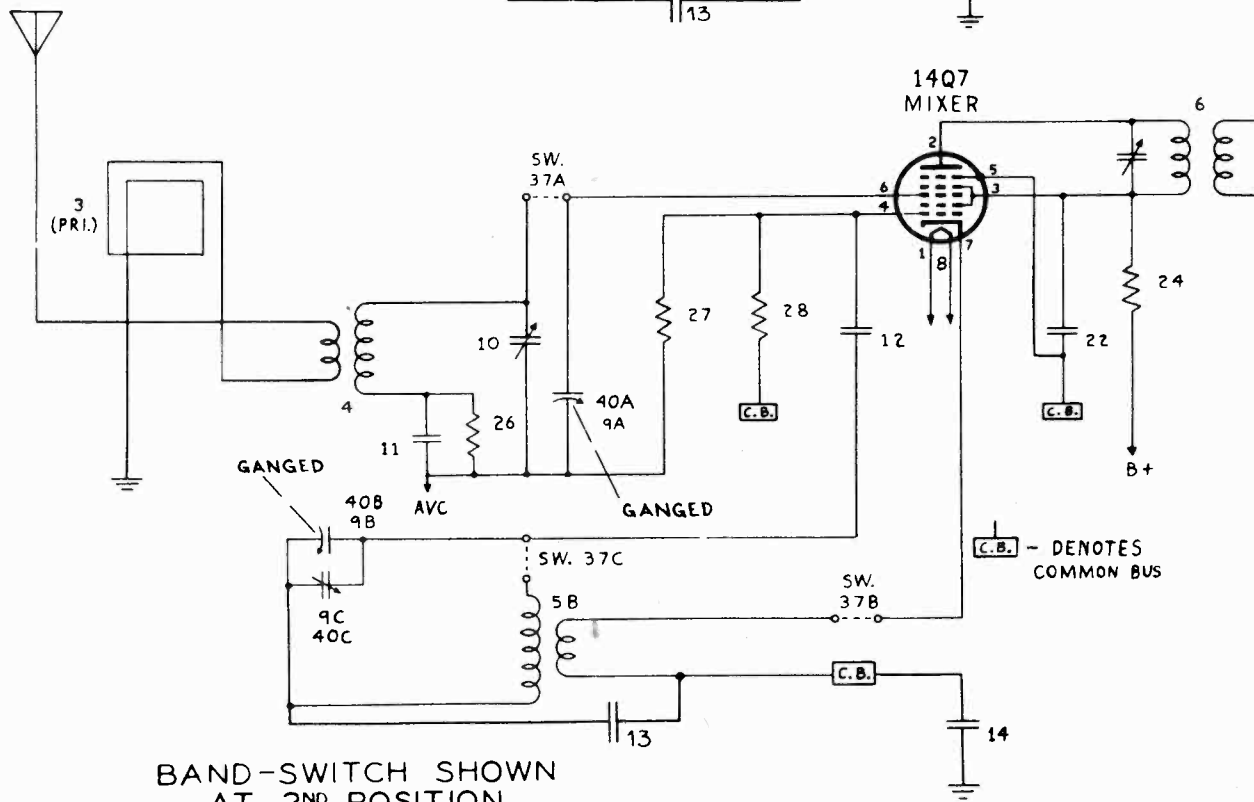
MODELS 56TA-L, 56TC-L,
56TW-L

THE CROSLLEY CORP.



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

C.B. - DENOTES
COMMON BUS



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

C.B. - DENOTES
COMMON BUS

THE CROSLEY CORP.

MODELS 56TA, 56TC, 56TW
MODELS 56TA-L, 56TC-L,
56TW-L

MODELS 56TA, 56TW, 56TC

Item No.	Part No.	Description
1	W-48858	Dial Light, 6.3 V.
2	C-132300-1	Power Cable and Plug
3		Ant. Loop (Part of Antenna Loop and Back Assembly. See Cabinet Parts.)
4	AW-134994	H. F. Ant. Coil (Dual)
5A	AW-134993	H. F. Osc. Coil (Dual)
5B		H. F. Osc. Coil (Coil)
6	AW-134065	1st I. F. Transformer
7	AW-134158	2nd I. F. Transformer
9A	B-134995	Variable Condenser } Two
9B		Variable Condenser } Section
10	AB-135088	H. F. Ant. Trimmer
11	GC-210685-143	Condenser, 580 mmf., 300 V. Mica
12	39004-5	Condenser, 50 mmf., Mica
13	39001-63	Condenser, .022 mfd., 200 V. Paper
14	39001-67	Condenser, 1 mfd., 200 V. Paper
15	39001-65	Condenser, .05 mfd., 200 V. Paper
16	39004-9	Condenser, 220 mmf., Mica
17	39001-10	Condenser, .0033 mfd., 600 V. Paper
18A	W-134177	Condenser, 15 mfd., 140 V. } Two
18B		Condenser, 15 mfd., 120 V. } Section
		Condenser, .022 mfd., 200 V. } Elect.
		Condenser, .022 mfd., 200 V. } Filter

MODELS 56TA-L, 56TW-L, 56TC-L

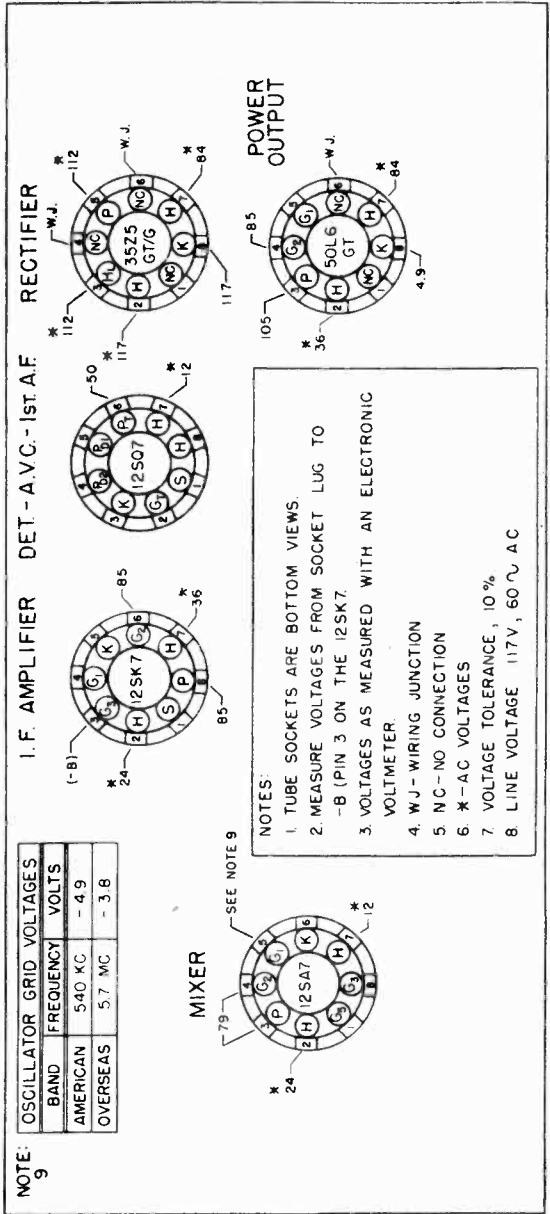
Item No.	Part No.	Description
1	W-48858	Dial Light, 6.3 v.
2	C-132300-1	Power Cable and Plug
3		Ant. Loop (Part of Antenna Loop and Back Assembly. See Cabinet Parts.)
4	AW-134994	H. F. Ant. Coil (Dual)
5A	AW-134993	B. C. Osc. Coil (Coil)
5B		H. F. Osc. Coil (Coil)
6	AW-134065	1st I. F. Transformer
7	AW-134158	2nd I. F. Transformer
9A	B-134995	Variable Condenser } Two
9B		Variable Condenser } Section
10	AB-135088	H. F. Ant. Trimmer
11	GC-210685-143	Condenser, 580 mmf., 300 v., Mica
12	39004-5	Condenser, 50 mmf., 500 v., Mica
13	39001-63	Condenser, .022 mfd., 200 v., Paper
14	39001-67	Condenser, 1 mfd., 200 v., Paper
15	39001-65	Condenser, .05 mfd., 200 v., Paper
16	39004-9	Condenser, 220 mmf., 500 v., Mica
17	39001-10	Condenser, .0033 mfd., 600 v., Paper
18A	W-134177	Condenser, 15 mfd., 140 v. } Two
18B		Condenser, 15 mfd., 120 v. } Section
19	39001-63	Condenser, .022 mfd., 200 v., Paper
20	39001-63	Condenser, .022 mfd., 200 v., Paper

Item No.	Part No.	Description
21	39001-63	Condenser, .022 mfd., 200 v., Paper
22	39001-63	Condenser, .022 mfd., 200 v., Paper
23	Part of Item #10	B. C. Osc. Trimmer
24	39281-17	Resistor, 470 Ohm, 1/2 w.
25	39281-28	Resistor, 330,000 Ohm, 1/2 w.
26	39281-28	Resistor, 330,000 Ohm, 1/2 w.
27	39281-38	Resistor, 15 Megohm, 1/2 w.
28	39281-21	Resistor, 22,000 Ohm, 1/2 w.
30	39281-34	Resistor, 3.3 Megohm, 1/2 w.
31	39281-23	Resistor, 47,000 Ohm, 1/2 w.
32	39281-35	Resistor, 4.7 Megohm, 1/2 w.
33	39281-29	Resistor, 470,000 Ohm, 1/2 w.
34	39281-8	Resistor, 150 Ohm, 1/2 w.
35	GC-49675-9	Speaker
36	49772-3	Band Change Switch } Three
37A		Band Change Switch } Section
37B		Band Change Switch } Section
37C		Control, Volume (1 Megohm) } Assy.
38A	C-46846-6	Switch (Power)
38B	Part of Item #3	B. C. Ant. Trimmer
39	W-47577	Cable Lock Plate
	C-135175	Dial Face
	B-134570	Dial Pointer
	W-134667	Dial Pointer Clip
	W-51752	Dial Cord Spring
	39017-4	Dial Light Socket Assembly
	W-134917	Drive Shaft
	W-51071	Retaining Ring
	W-134916	Spring Washer
	W-136371	Tube Socket
	W-49770	Trimount Stud (Dial Face and Chassis Bottom Cover)
	W-134055	Grommet
	W-135164	Rubber Bumper
	W-46662	Palnut (3/8-32)
	D-132136-1	Plastic Cabinet—Brown (56TA-L)
	AW-134738	Plastic Cabinet—Ivory (56TW-L)
	D-134586	Wood Cabinet (56TC-L)
	AC-134618	Ant. Loop and Back Assembly (56TA-L, 56TW-L)
	AC-134288	Ant. Loop and Back Assembly (56TC-L)
	B-134610	Dial Lens
	W-134882	Knob (56TA-L, 56TC-L)
	W-134883	Knob (56TW-L)
	39220-32	Mounting Screw
	W-136630	Trimount Stud (Dial Lens, 56TA-L, 56TW-L)
	W-132124	Trimount Stud (Ant. Loop and Back Assembly, 56TA, 56TW)

Figures in first column correspond to figures in Schematic Diagram

THE CROSLLEY CORP.

MODEL 56TX



NOTE:
9

BAND	FREQUENCY	VOLTS
AMERICAN	540 KC	- 4.9
OVERSEAS	5.7 MC	- 3.8

Item No.	Part No.	Description
1	W-48858	Bulb (Dial Light), Type 47, 6.3v., .15 amp.
2	C-132300-1	Cable and Plug (power)
3	AC-134618	Antenna Loop Assembly
4	AW-134994	Coil (R.C. Oscillator) Two Section
5A	AW-134993	Coil (H.F. Oscillator) Section
5B		
6	AW-134065	Transformer (1st I.F.)
7	AW-134158	Transformer (2nd I.F.)
8A	B-134995	Condenser (Variable) Two Section
8B		
8C		
9A	Part of Item #8B	Condenser (Trimmer) Two Section
9B	AB-135088	Condenser (Trimmer) Section
10	GC-210685-143	Condenser, 50 mmf., 300v., Mica
11	39004-5	Condenser, 50 mmf., 500v., Mica
12	39001-65	Condenser, .05 mfd., 200v., Paper
13	39001-67	Condenser, .1 mfd., 200v., Paper
14	39001-65	Condenser, .05 mfd., 200v., Paper
15	39004-9	Condenser, 220 mmf., 500v., Mica
16	39001-10	Condenser, 3300 mmf., 600v., Paper
17A	W-134988	Condenser, 60 mfd., 150 w.v. Section
17B		Condenser, 20 mfd., 100 w.v. Section
18	39001-63	Condenser, .022 mfd., 200v., Paper
19	39001-63	Condenser, .022 mfd., 200v., Paper
20	39001-63	Condenser, .022 mfd., 200v., Paper
21	39281-29	Resistor, 470,000 ohms, 1/2 w.
22	39281-29	Resistor, 470,000 ohms, 1/2 w.
23	39281-8	Resistor, 150 ohm, 1/2 w.
24	39281-7	Resistor, 100 ohm, 1/2 w.
25	39281-28	Resistor, 330,000 ohm, 1/2 w.
26	39281-38	Resistor, 15 megohm, 1/2 w.
27	39281-21	Resistor, 22,000 ohm, 1/2 w.
28	39281-27	Resistor, 220,000 ohm, 1/2 w.
29	39281-34	Resistor, 3.3 megohm, 1/2 w.
30	39281-23	Resistor, 47,000 ohm, 1/2 w.
31	39281-35	Resistor, 4.7 megohm, 1/2 w.
34	Part of Item #3	Condenser (Antenna Trimmer)
35	39281-11	Resistor, 470 ohm, 1/2 w.
36	39015-26	Resistor, 4200 ohm, 1 w.
37A	W-49772-3	Switch (Band Change) Three Section
37B		Switch (Band Change) Section
37C		Switch (Band Change) Section
38	B-134942	Speaker
39A	C-46846-6	Control, Volume (1 megohm) Assembly
39B		Switch (power)
		Transformer (Output)
	B-134940	Socket (Tube)
	G-39204	Socket Assembly (Dial Light)
	39017-4	Face (Dial)
	C-135175	Pointer (Dial)
	B-134952	Clip (Dial Pointer)
	W-134667	Shaft (Drive)
	W-134917	Ring (Retaining)
	W-51071	Washer (Spring)
	W-134916	Spring (Dial Cord)
	51752	Grommet
	W-134055	Cabinet
	AW-134738	Lens (Dial)
	B-134610	Knob
	W-134883	Stud, Trimount
	W-136630	Stud, Trimount
	W-132124	Stud, Trimount

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

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.

THE CROSLEY 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.

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 post as indicated in the alignment chart. Connect the low side (ground) of the signal generator to the chassis.

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.

SOCKET VOLTAGE CHART

NOTE: OSCILLATOR GRID VOLTAGES

BAND	FREQUENCY	VOLTS
AMERICAN	550 KC	APPROX. 12.0
OVERSEAS	5.8 M.C.	APPROX. 7.5

NOTES :-

- THESE ARE BOTTOM VIEWS OF SOCKETS
- MEASURE VOLTAGES FROM SOCKET LUG TO CHASSIS.
- THESE VOLTAGES MEASURED USING AN ELECTRONIC VOLTMETER.
- WJ - WIRING JUNCTION.
- NC - NO CONNECTION.
- * - 60 CYCLE AC VOLTAGE.

I.F. AMPLIFIER → 265 6.3* 80

DET. AVC. 1ST. A.F. → 0 110 6.3*

AUDIO OUTPUT → 260 250 6.3* 13.5

MIXER

R.F. AMPLIFIER

RECTIFIER

POWER TRANSFORMER

MODELS 66CA, 66CP, 66CQ

THE CROSLLEY CORP.

FREQUENCY RANGE: American Broadcast Band, **POWER CONSUMPTION:** 60 watts maximum.
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 OUPUT: 4.5 watts minimum.

VOLTAGE DROP ACROSS SPEAKER FIELD:
76 volts.

RESISTANCE OF SPEAKER FIELD: 900 ohms.

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

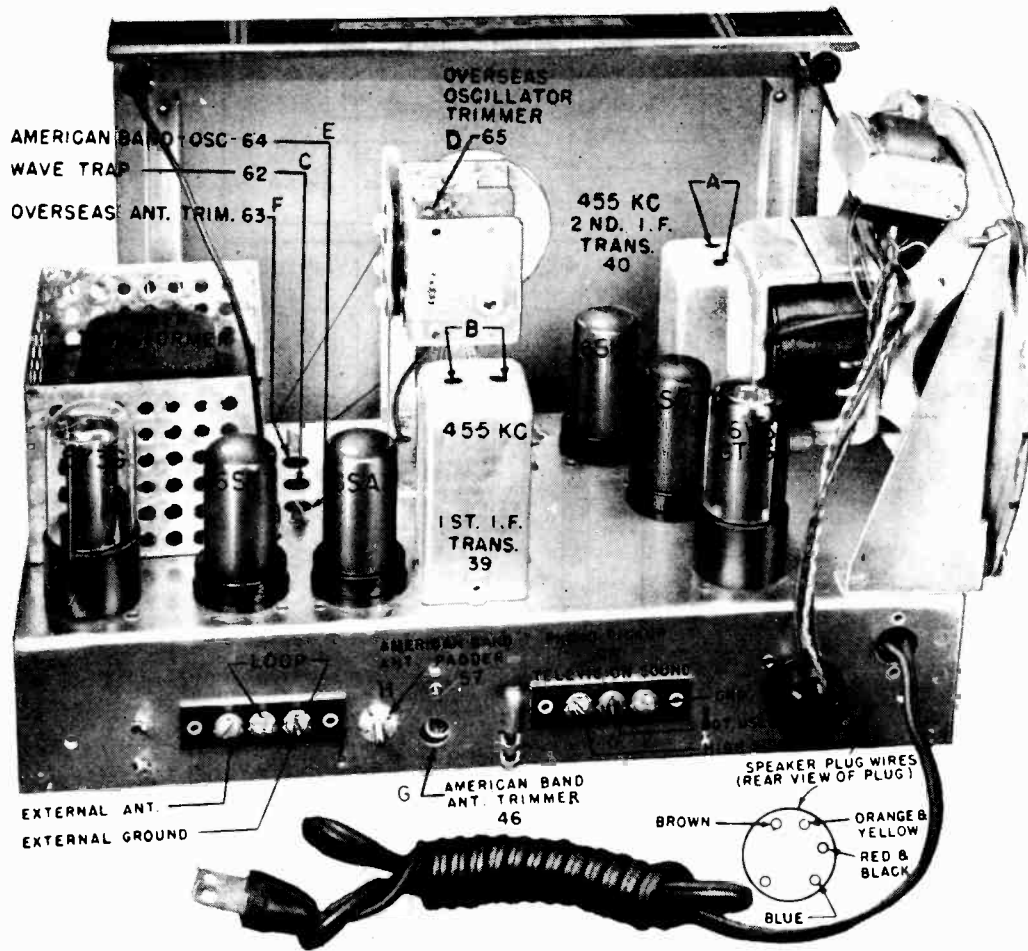
PARTS LIST—MODELS 66CA, 66CP, 66CQ

Figures in first column correspond to figures in Schematic Diagram.

Item No.	Part Number	Description	Item No.	Part Number	Description
1	39281-16	Resistor, 3300 ohm, $\frac{1}{2}$ w.	54	AW-135908	Oscillator Coil Assembly
2	39281-21	Resistor, 22,000 ohm, $\frac{1}{2}$ w.	55	AW-135909	Antenna Coil Assembly
3	39016-38	Resistor, 12,000 ohm, 2 w.	57	AW-135910	Antenna Loading Coil Assembly
4	39281-33	Resistor, 2.2 megohm, $\frac{1}{2}$ w.	58	B-134700	Speaker
5	39040-13	Resistor, 1,000 ohm, 1 w.	62	B-132386-7	Condenser (Trimmer) } Three
6	39281-33	Resistor, 2.2 megohm, $\frac{1}{2}$ w.	63		Condenser (Trimmer) } Section
7	39281-28	Resistor, 330,000 ohm, $\frac{1}{2}$ w.	64		Condenser (Trimmer) } Assembly
11	39281-23	Resistor, 47,000 ohm, $\frac{1}{2}$ w.		G-39012-8	Core (Iron)
12	39281-29	Resistor, 470,000 ohm, $\frac{1}{2}$ w.		G-39204	Socket (Tube)
14	39015-19	Resistor, 330 ohm, 1 w.		39017-3	Socket (Dial Light)
15	39281-22	Resistor, 33,000 ohm, $\frac{1}{2}$ w.		AW-134793	Dial Face Assembly
16	39281-35	Resistor, 4.7 megohm, $\frac{1}{2}$ w.		B-134571	Pointer (Dial)
17	39281-21	Resistor, 22,000 ohm, $\frac{1}{2}$ w.		W-134667	Clip (Dial Pointer)
18	39281-25	Resistor, 100,000 ohm, $\frac{1}{2}$ w.		W-51752	Spring (Dial Cord)
19	39004-9	Condenser, 220 mmf., 500 v., Mica		W-134917	Shaft (Drive)
20	39004-9	Condenser, 220 mmf., 500 v., Mica		W-51071	Ring (Retaining)
21	39001-41	Condenser, .05 mfd., 400 v., Paper		W-134916	Washer (Spring)
22	39004-9	Condenser, 220 mmf., 500 v., Mica		W-132366-2	Nut (Iron Core Locking)
23	39001-65	Condenser, .05 mfd., 200 v., Paper		39196-29	Screw (Dial Mtg.)
24	39004-5	Condenser, 50 mmf., 500 v., Mica		W-134055	Grommet (Variable Condenser Mtg.)
25	39001-11	Condenser, .005 mfd., 600 v., Paper		R-135237	Cabinet (66CA)
26	39001-37	Condenser, .01 mfd., 400 v., Paper		R-134957	Cabinet (66CP)
27	39004-9	Condenser, 220 mmf., 500 v., Mica		R-134350	Cabinet (66CQ)
30	39001-11	Condenser, .005 mfd., 600 v., Paper		C-134773	Lens (Dial)
32	W-30805	Condenser, .01 mfd., 400 v., Paper		AC-135299	Antenna Loop Assembly (66CA)
33	39001-11	Condenser, .005 mfd., 600 v., Paper		AC-134782	Antenna Loop Assembly (66CP)
34	39001-61	Condenser, .01 mfd., 200 v., Paper		AC-135100	Antenna Loop Assembly (66CQ)
35	39004-5	Condenser, 50 mmf., 500 v., Mica		D-134945-1	Record Changer (66CP)
36	GC-210685-143	Condenser, 580 mmf., 300 v., Mica		D-135039	Record Changer (66CQ)
37A	B-134995	Condenser (variable) } Two		AB-134935	Floating Jewel Needle Asser.bly (66CP, 66CQ)
37B		Condenser (variable) } Section		W-134959	Cable, Phono (66CP)
38A	B-132807	Condenser, 20 mfd., 360 v.v. } Four		W-135128	Cable, Phono (66CQ)
38B		Condenser, 20 mfd., 275 w.v. } Section		W-130197	Knob (66CA, 66CQ)
38C		Condenser, 20 mfd., 245 w.v. } Elect.		W-135248	Knob (66CP)
38D		Condenser, 20 mfd., 25 w.v. } Filter		W-45056	Rubber Mtg. (66CA, 66CQ Chassis Mtg.)
39	AW-134065	Transformer (1st I. F.)		W-45580	Rubber Mtg. (66CA, 66CP, 66CQ Speaker Mtg., 66CP Chassis Mtg.)
40	AW-134158	Transformer (2nd I. F.)		W-136539	Lid Support, Cabinet (66CP, 66CQ)
41	B-134625	Transformer (Power)			
42	W-43567	Bulb (Dial Light, Type 51, 7.5 v., .25 amp.)			
43	W-43567	Bulb (Dial Light, Type 51, 7.5 v., .25 amp.)			
44	B-135651	Control, Tone (3 megohm)			
45	B-135859	Control, Volume (1 megohm) & Switch			
46	W-132267-1	Condenser (Trimmer)			
47	B-132300-1	Cable and Plug (Power)			
48	39019-3	Terminal Board Assembly			
49	39019-3	Terminal Board Assembly			
51	W-134968-1	Socket (Speaker)			
52A	B-134639	Switch (Band Change) } Two			
52B		Switch (Band Change) } Section			
53	AW-135907	R. F. Coil Assembly			

MODELS 66TA, 66TC, 66TW

THE CROSLEY CORP.



CHASSIS, REAR VIEW - MODELS 66TA, 66TW, 66TC

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.

THE CROSLY CORP. ALIGNMENT PROCEDURE

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.

Turn the tone control to the high or treble 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 post. Connect the signal generator ground to the chassis.

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.

CHASSIS PARTS

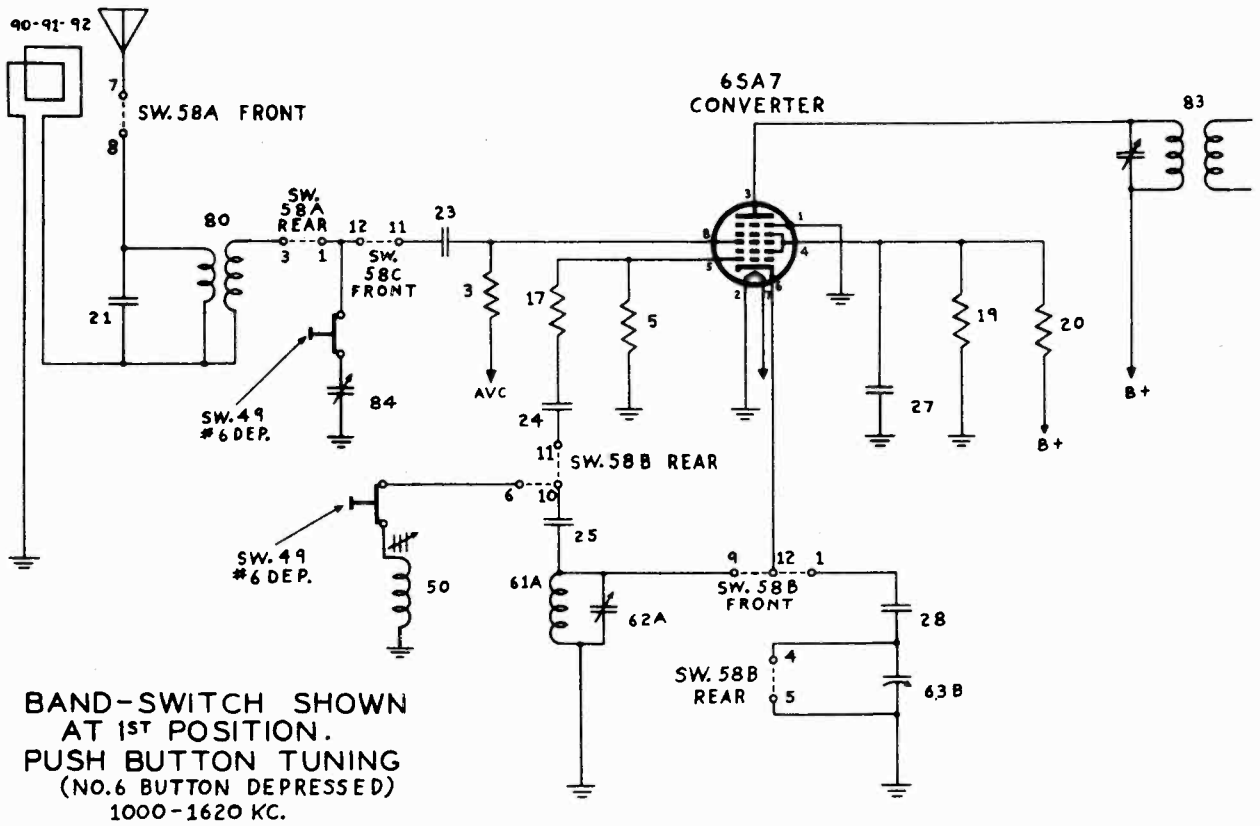
MECHANICAL PARTS

Item No.	Part No.	Description	Item No.	Part No.	Description
1	39281-16	Resistor, 3,300 Ohm, 1/2 W.		W-47577	Cable Lock Plate
2	39281-21	Resistor, 22,000 Ohm, 1/2 W.		AW-134807	Dial Face Assembly
3	39016-38	Resistor, 12,000 Ohm, 2 W.		W-51752	Dial Cord Spring
4	39281-33	Resistor, 2.2 Megohm, 1/2 W.		B-134571	Dial Pointer
5	39040-13	Resistor, 1,000 Ohm, 1 W.		G-39012-8	Iron Core
6	39281-33	Resistor, 2.2 Megohm, 1/2 W.		W-132366-2	Locking Nut
7	39281-28	Resistor, 330,000 Ohm, 1/2 W.		W-134667	Dial Pointer Clip
11	39281-23	Resistor, 47,000 Ohm, 1/2 W.		39017-3	Dial Light Socket
12	39281-29	Resistor, 470,000 Ohm, 1/2 W.		G-39204	Tube Socket
14	39015-19	Resistor, 330 Ohm, 1 W.		39196-29	Screw, Dial Mounting
15	39281-22	Resistor, 33,000 Ohm, 1/2 W.		W-46662	Palnut 3/8-32
16	39281-35	Resistor, 4.7 Megohm, 1/2 W.		W-134055	Grommet
17	39281-21	Resistor, 22,000 Ohm, 1/2 W.		B-134896	Transformer Shield
18	39281-25	Resistor, 100,000 Ohm, 1/2 W.		W-134917	Drive Shaft
19	39004-9	Condenser, 220 mmf., Mica		W-51071	Retaining Ring
20	39004-9	Condenser, 220 mmf., Mica		W-134916	Spring Washer
21	39001-41	Condenser, .05 mfd., 400 V., Paper			
22	39004-9	Condenser, 220 mmf., Mica			
23	39001-65	Condenser, .05 mfd., 200 V., Paper			
24	39004-5	Condenser, 50 mmf., Mica			
25	39001-11	Condenser, .005 mfd., 600 V., Paper			
26	39001-37	Condenser, .01 mfd., 400 V., Paper			
27	39004-9	Condenser, 220 mmf., Mica			
30	39001-11	Condenser, .005 mfd., 600 V., Paper			
32	W-30805	Condenser, .01 mfd., 400 V., Paper			
33	39001-11	Condenser, .005 mfd., 600 V., Paper			
34	39001-61	Condenser, .01 mfd., 200 V., Paper			
35	39004-5	Condenser, 50 mmf., Mica			
36	GC-210685-143	Condenser, 580 mmf., Mica			
37A	B-134995	Variable Condenser		R-134592	Plastic Cabinet—Brown (66TA)
37B		Variable Condenser		AW-134737	Plastic Cabinet—Ivory (66TW)
38A	D-132807	Condenser, 20 mfd., 360 W.V.)		R-135025	Wood Cabinet (66TC)
38B		Condenser, 20 mfd., 275 W.V.)	Four	AC-134673	Antenna Loop and Back Assembly (66TA, 66TW)
38C		Condenser, 20 mfd., 245 W.V.)	Elect.		
38D		Condenser, 20 mfd., 25 W.V.)	Filter	AC-134672	Antenna Loop and Back Assembly (66TC)
39	AW-134065	1st I. F. Coil Assembly		C-132688	Dial Lens (66TA, 66TW, 66TC)
40	AW-134158	2nd I. F. Coil Assembly		W-132709	Grille Cloth (66TA)
41	B-134625	Power Transformer		W-132766	Grille Cloth (66TW)
42	W-43567	Dial Light, Type 51, 7.5 V., -0.2 Amp.		W-130197	Knob (66TA, 66TC)
43	W-43567	Dial Light, Type 51, 7.5 V., 0.2 Amp.		W-134635	Knob (66TW)
44	B-135651	Tone Control, 3 Megohm		W-136630	Trimount Stud (66TA, 66TW)
45	B-135859	Volume Control (1 Megohm) and Switch		W-132124	Trimount Stud (66TA, 66TW)
46	W-132267-1	Condenser (Trimmer)		39220-38	Screw Mounting—8 x 1 1/4 Hex. Hd. (66TA, 66TW, 66TC)
47	B-132300-1	Cable and Plug		W-45580	Rubber Mounting (66TC)
48	39019-3	Terminal Board Assembly		W-133584	Rubber Washer (66TA, 66TW Chassis Mtg.)
49	39019-3	Terminal Board Assembly			
51	W-134968-1	Speaker Socket			
52A	B-134639	Two Section Band			
52B		Change Switch			
53	AW-135907	R. F. Coil Assembly			
54	AW-135908	Oscillator Coil Assembly			
55	AW-135909	Antenna Coil Assembly			
56	C-135374	Speaker			
57	AW-135910	Antenna Loading Coil Assembly			
62	B-132386-7	Three Section			
63		Trimmer			
64		Condenser			

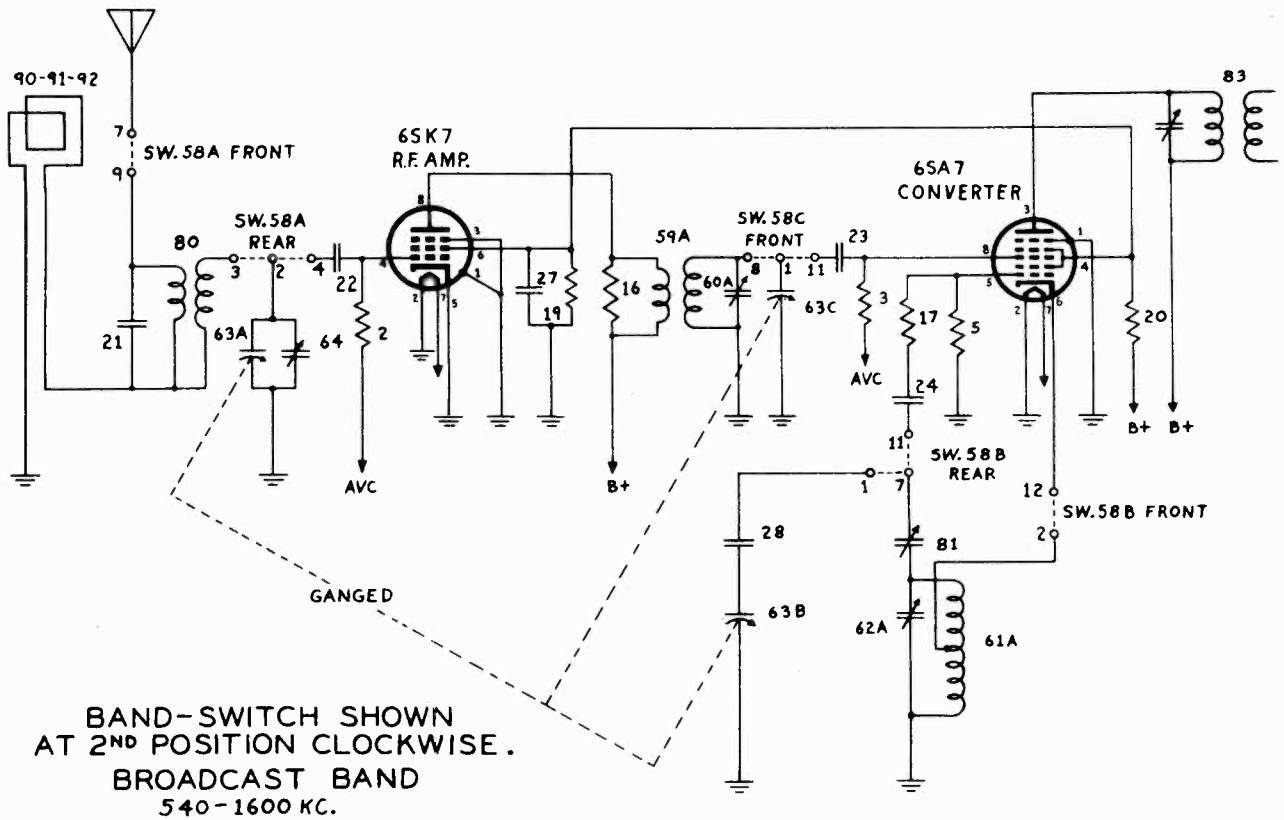
CABINET PARTS

Figures in first column correspond to figures in Schematic Diagram

THE CROSLLEY CORP.



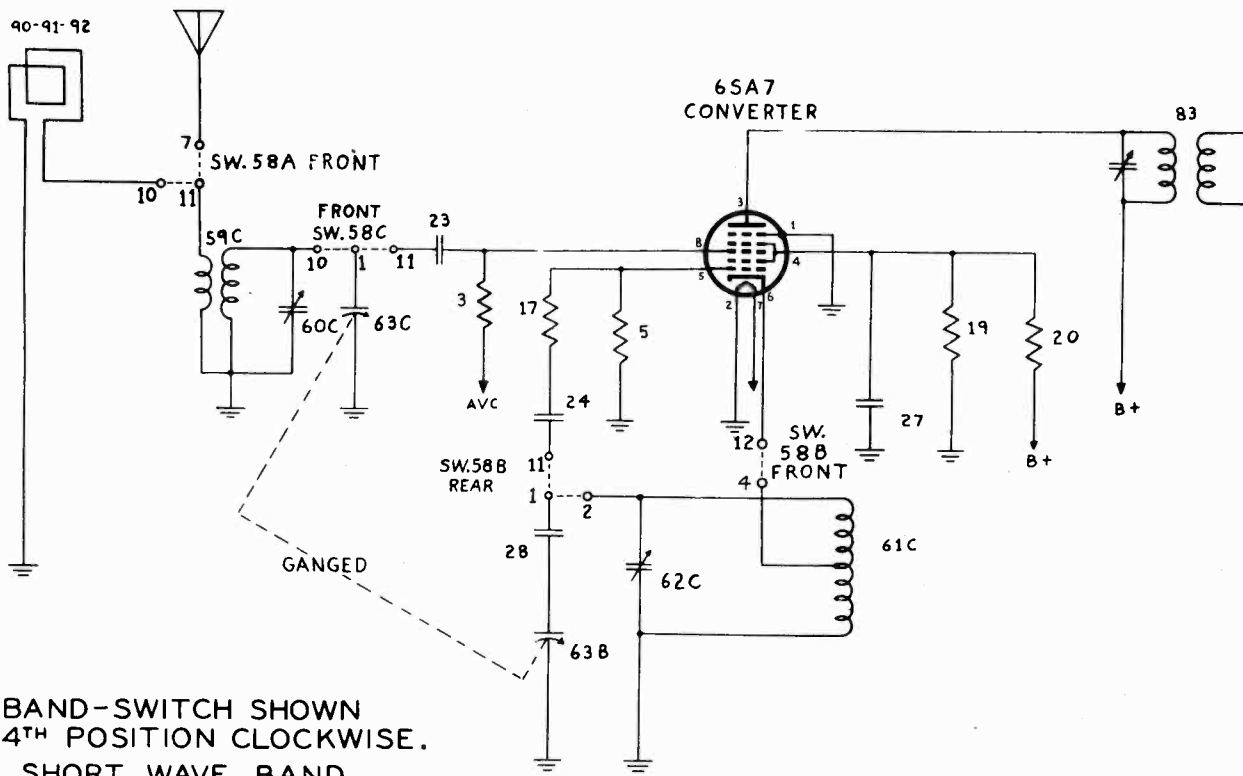
BAND-SWITCH SHOWN AT 1ST POSITION. PUSH BUTTON TUNING (NO.6 BUTTON DEPRESSED) 1000-1620 KC.



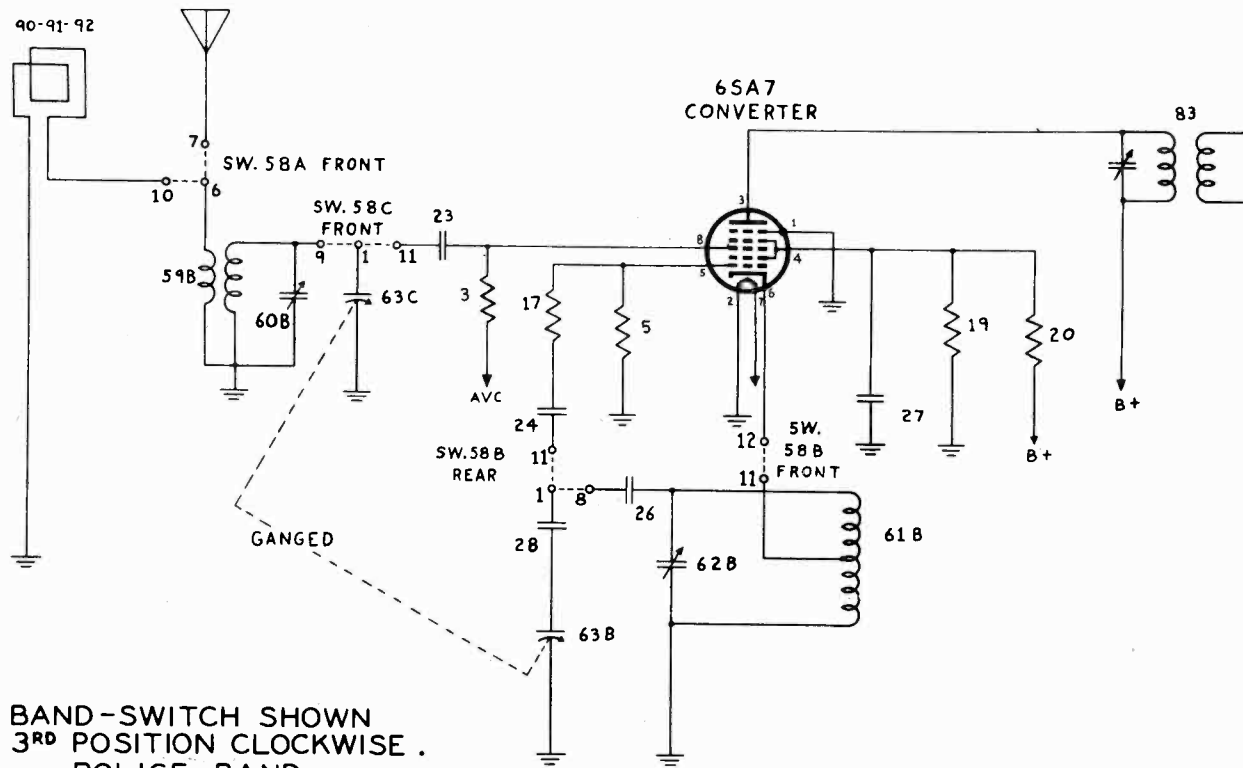
BAND-SWITCH SHOWN AT 2ND POSITION CLOCKWISE. BROADCAST BAND 540-1600 KC.

MODEL 106CP

THE CROSLLEY CORP.



BAND-SWITCH SHOWN
AT 4TH POSITION CLOCKWISE.
SHORT WAVE BAND
5.8 - 18 MC



BAND-SWITCH SHOWN
AT 3RD POSITION CLOCKWISE.
POLICE BAND
2.2 - 6 MC.

THE CROSLY CORP.

ALIGNMENT PROCEDURE

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.

Set the tone control buttons all the way out.

NOTE: If the chassis is removed from the cabinet, connect the shorting bar from the volume control (67A) to the coupling capacitor (34) on the tone unit socket.

Connect the output meter across the speaker output transformer connections on the 6K6 tubes.

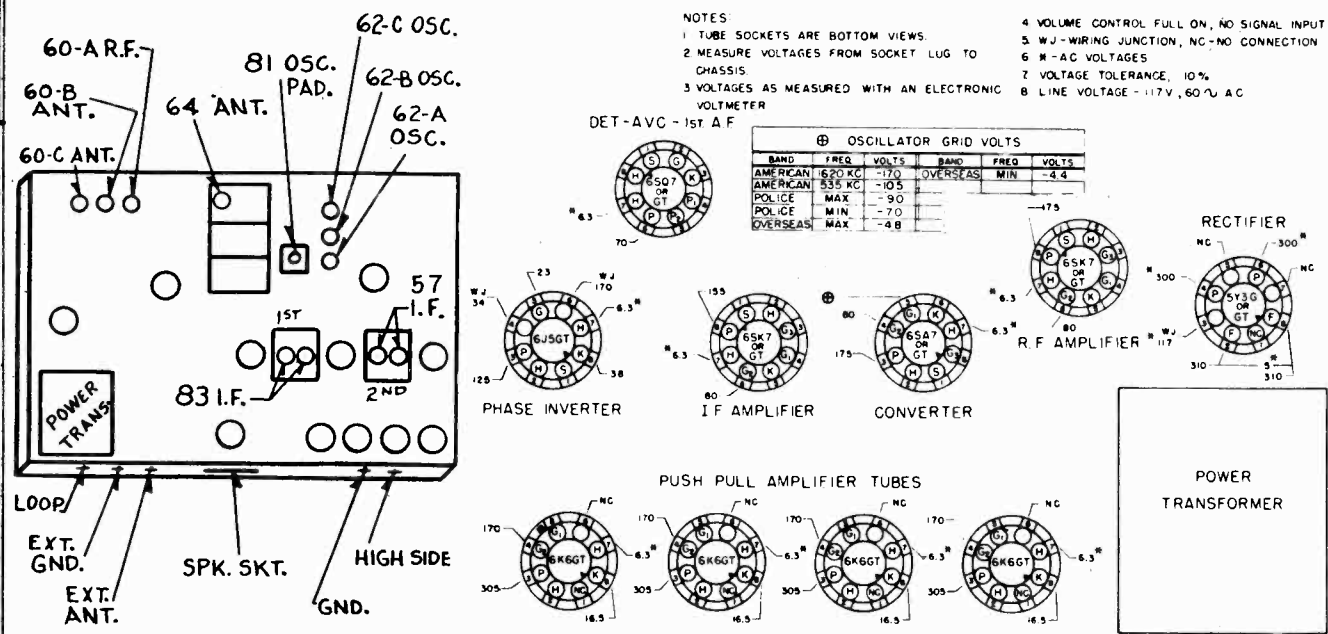
The r. f. signal input from the signal generator should be connected as indicated in the alignment chart. Connect the low side (ground) of the signal generator to the chassis.

Turn the volume control on full and adjust the signal generator output to produce a noticeable output meter reading.

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.	Rear Gang Section	American BC	Fully Open	57 & 83
2	1400	200 mmf.	Ext. Ant.	American BC	1400	62-A
3	1400	200 mmf.	Ext. Ant.	American BC	1400	60-A&64
4	600	200 mmf.	Ext. Ant.	American BC	600	81
5	6500	400 ohms	Ext. Ant.	Police	Fully Open	62-B
6	6000	400 ohms	Ext. Ant.	Police	6000	60-B
*7	18,300	400 ohms	Ext. Ant.	Overseas	Fully Open	62 C
8	18,000	400 ohms	Ext. Ant.	Overseas	18,000	60-C

The American Broadcast Band must be aligned with the loop antenna connected.

*NOTE: When aligning the short-wave oscillator trimmer (62C), 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 receiving 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.



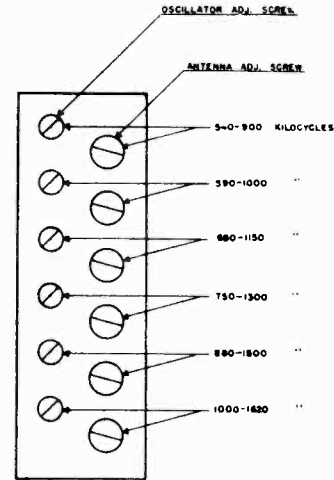
MODEL 106CP

THE CROSLEY CORP.

Each of the six push buttons, for automatic tuning, has two adjusting screws by which it may be set to any nearby American broadcast station whose frequency in kilocycles is within the kilocycle range covered by that button. To gain access to these screws, carefully pry off the push button cover.

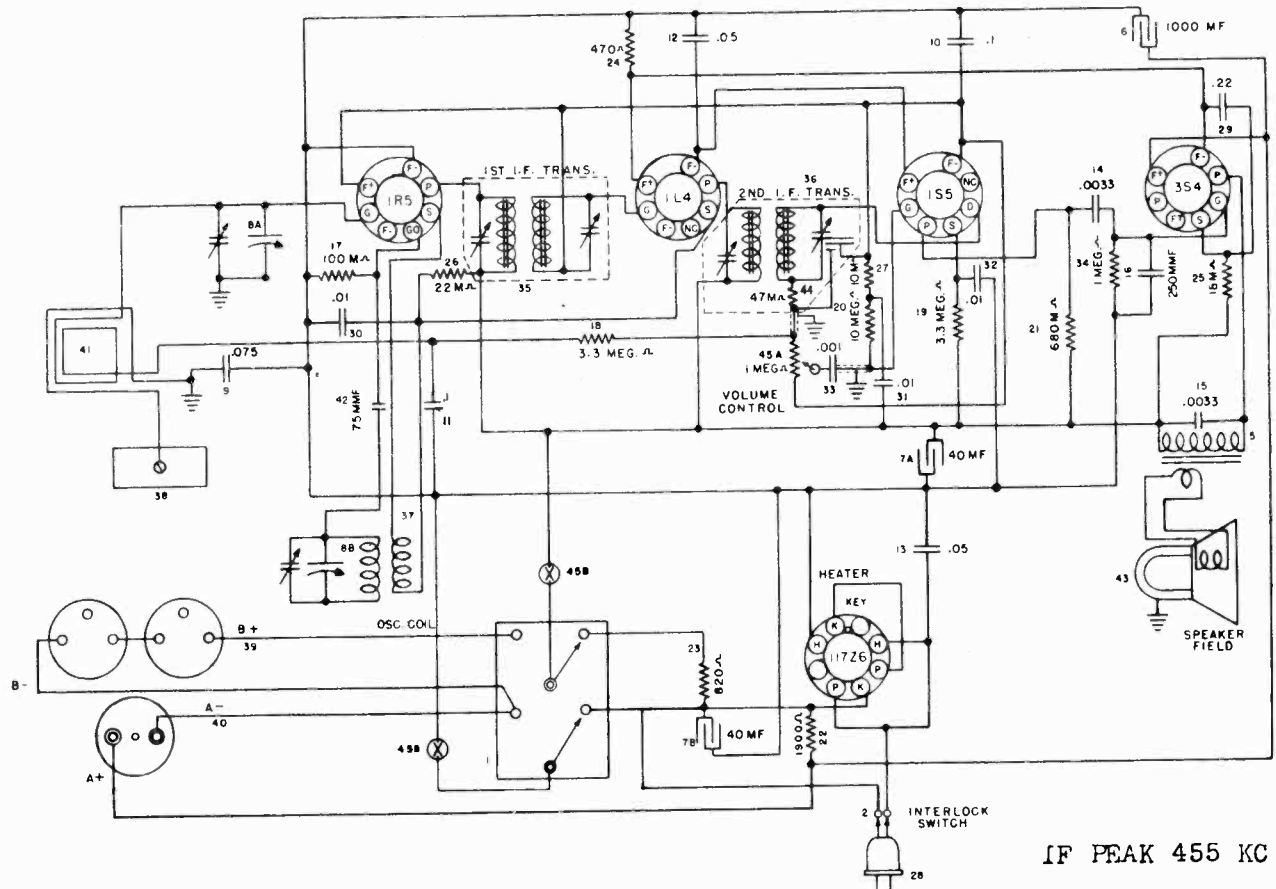
To set the top push button to a desired position, proceed as follows:

1. Turn the ANTENNA ADJ. SCREW clockwise until moderately tight, then turn the OSCILLATOR ADJ. SCREW counter-clockwise until the threaded portion extends approximately 3/4 inch. Use a small screw-driver and do not exert pressure.
2. Turn the band selector switch to the "AMERICAN" position and manually tune in the station to which the push button is to be set. The frequency of the station selected must be between 540 and 900 kilocycles. Carefully adjust the tuning control to the point of clearest reception.
3. Turn the band selector switch to the "AUTOMATIC" position and slowly turn the OSCILLATOR ADJ. SCREW clockwise until the same station is heard. Adjust the screw for the maximum volume.
4. Adjust the ANTENNA ADJ. SCREW for the maximum volume.
5. Turn the band selector switch from "AUTOMATIC" to "AMERICAN" and back again to check if the adjustment has been correctly made. There should be no change in tone quality when switched from one to the other.
6. Place the tab with the call letters of the station, to which the push button has been set, in a celluloid "V" and slide it into the button from the side.
7. The remaining push buttons may be set in a similar manner.
No adjustment of master tone control push buttons is required.



Item No.	Part No.	DESCRIPTION	Item No.	Part No.	DESCRIPTION
1	39281-33	Resistor, 2.2 megohm, 1/2 w.	63A	B-135036	Condenser (Variable) Three
2	39281-33	Resistor, 2.2 megohm, 1/2 w.	63B		Condenser (Variable) Section
3	39281-31	Resistor, 1.0 megohm, 1/2 w.	63C		Condenser (Variable) Assembly
4	39281-31	Resistor, 1.0 megohm, 1/2 w.	64	Part of Item 63A	Condenser (Trimmer)
5	39281-23	Resistor, 47,000 ohm, 1/2 w.	65	W-47133	Socket (Station Selector Unit)
6	39281-23	Resistor, 47,000 ohm, 1/2 w.	66	B-135049	Switch (Radio-Phono.)
7	39281-29	Resistor, 470,000 ohm, 1/2 w.	67A	B-132299-3	Control, Volume (1 megohm) } Assembly
8	39281-37	Resistor, 10 megohm 1/2 w.	67B		Switch, Power
9	39281-28	Resistor, 330,000 ohm, 1/2 w.	68	D-134946-1	Record Changer
10	39281-28	Resistor, 330,000 ohm, 1/2 w.	69	C-132300-1	Cable and Plug (power)
11	39281-28	Resistor, 330,000 ohm, 1/2 w.	70	W-43567	Bulb (Dial) Type 51, 7.5 v., 25 amp.
12	39281-16	Resistor, 3,300 ohm, 1/2 w.	71	W-43567	Bulb (Dial) Type 51, 7.5 v., 25 amp.
13	39281-22	Resistor, 33,000 ohm, 1/2 w.	72	GC-131880-7	Speaker
14	39281-15	Resistor, 2,200 ohm, 1/2 w.	73	W-134968-1	Socket (Speaker)
15	39281-24	Resistor, 68,000 ohm, 1/2 w.	74A	W-134999	Condenser, 20 mfd., 400 v.v. } Three
16	39281-11	Resistor, 470 ohm, 1/2 w.	74B		Condenser, 20 mfd., 300 v.v. Section Elect
17	39281-7	Resistor, 100 ohm, 1/2 w.	74C		Condenser, 20 mfd., 25 v.v. } Filter
18	39244-19	Resistor, 330 ohm, 2 w.	75	B-135018	Transformer (power)
19	39016-33	Resistor, 4,700 ohm, 2 w.	76	W-135174	Cable and Plug (Phono.)
20	W-132458	Resistor, 4,000 ohm, 3 w.	77	39019-2	Terminal Board (Phono.)
21	B-226638-53	Condenser, 50 mmf., 500 v., Ceramic	78	39019-3	Terminal Board (Antenna)
22	B-226638-54	Condenser, 75 mmf., 500 v., Ceramic	80	AW-135028	Coil (Antenna Loading)
23	39001-73	Condenser, 250 mmf., 500 v., Paper	81	W-49652-3	Condenser (Padder)
24	39004-7	Condenser, 100 mmf., 500 v., Mica	82	W-132303	Socket (Tone Control Unit)
25	G-131502-20	Condenser, 680 mmf., 400 v., Silver, Mica	83	AW-135024	Transformer (1st I.F.)
26	GC-210685-171	Condenser, .0082 mfd., 300 v., Mica	84	Part of AW-132427	Condenser (Trimmer)
27	39001-41	Condenser, .05 mfd., 400 v., Paper	85	Part of AW-132427	Condenser (Trimmer)
28	GC-210685-168	Condenser, .0033 mfd., 500 v., Mica	86	Part of AW-132427	Condenser (Trimmer)
29	39001-65	Condenser, .05 mfd., 200 v., Paper	87	Part of AW-132427	Condenser (Trimmer)
30	39001-39	Condenser, .022 mfd., 400 v., Paper	88	Part of AW-132427	Condenser (Trimmer)
31	W-30805	Condenser, .01 mfd., 400 v., Paper	89	Part of AW-132427	Condenser (Trimmer)
33	39001-73	Condenser, 250 mmf., 500 v., Paper	90	AC-135157	Antenna Loop Assembly
34	39001-12	Condenser, .0075 mfd., 600 v., Paper	93	39281-31	Resistor, 1.0 megohm, 1/2 w.
35	39001-39	Condenser, .022 mfd., 400 v., Paper	94	39281-27	Resistor, 220,000 ohm, 1/2 w.
36	39001-39	Condenser, .022 mfd., 400 v., Paper	95	39001-11	Condenser, .025 mfd., 600 v., Paper
37	39001-39	Condenser, .022 mfd., 400 v., Paper	**96	G-39012-7	Iron Core (P.B. Osc. Coils)
38	39001-13	Condenser, .01 mfd., 600 v., Paper	**97	G-39012-7	Iron Core (P.B. Osc. Coils)
39	39001-10	Condenser, .0033 mfd., 600 v., Paper	**98	G-39012-7	Iron Core (P.B. Osc. Coils)
40	39001-10	Condenser, .0033 mfd., 600 v., Paper	**99	G-39012-7	Iron Core (P.B. Osc. Coils)
**42	39281-27	Resistor, 220,000 ohm, 1/2 w.	**100	G-39012-7	Iron Core (P.B. Osc. Coils)
**43	39001-10	Condenser, .0033 mfd., 600 v., Paper	**101	G-39012-7	Iron Core (P.B. Osc. Coils)
**44	39001-10	Condenser, .0033 mfd., 600 v., Paper	**	W-132366-2	Locking Nut (P.B. Iron Cores)
**45	39001-10	Condenser, .0033 mfd., 600 v., Paper		G-39204	Socket (Tube)
**46	39001-11	Condenser, .005 mfd., 600 v., Paper		AW-135042	Face (Dial Assembly)
**47	AG-132437-5	Cable & Plug Assembly (Tone Control Unit)		W-51752	Spring (Drive Cord)
*	AW-135072	Switch & Bracket Assembly (P.B. Tone Control)		AW-134979	Flywheel Adapter Assembly
**48	AW-134068	Tone Control Push Button Unit		AB-135052	Toggle Arm & Link Assembly (Phono. Switch)
**	AW-132427	Switch, Bracket & Trimmer As'y (P.B. Sta. Selector)		AW-135053	Toggle Arm & Link Assembly (Band Switch)
49	AW-134067	Station Selector Push Button Unit		W-49829	Spring (Lock)
**50	AW-134091	Oscillator Coil (1000 to 1620 kc.) P.B. No. 6		B-134572	Pointer (Dial)
**51	AW-134090	Oscillator Coil (880 to 1500 kc.) P.B. No. 5		W-134064	Clip (Dial Pointer)
**52	AW-134231	Oscillator Coil (750 to 1300 kc.) P.B. No. 4		W-134977	Shaft (Drive)
**53	AW-134230	Oscillator Coil (680 to 1150 kc.) P.B. No. 3		39017-3	Socket Assembly (Dial Light)
**54	AW-134089	Oscillator Coil (590 to 1000 kc.) P.B. No. 2		W-134055	Grommet
**55	AW-134092	Oscillator Coil (540 to 900 kc.) P.B. No. 1		R-135022	Cabinet
**56	AG-132437-2	Cable & Plug Assembly (Station Selector, P.B. Unit)		AD-134762	Dial Glass and Escutcheon
57	AW-134066	Transformer (2nd I.F.) **Part of Item 48		C-134929	Plate (R.H. Push Button)
58A	B-134054	Switch (Band Change) Three **Part of Item 49		C-134745	Plate (L.H. Push Button)
58B		Switch (Band Change) Section		B-134763	Button, Tone (2 Bass)
58C		Switch (Band Change) Assembly		B-134764	Button, Tone (1 Bass)
59A	AW-135031	Coil, R.F. (B.C.) } Three		B-134765	Button, Tone (3 Bass)
59B		Coil, Ant. (Police) } Section		B-134766	Button, Tone (3 Treble)
59C		Coil, Ant. (S.W.) } Assembly		B-134767	Button, Tone (1 Treble)
60A	B-132386-5	Condenser (Trimmer) } Three		B-134768	Button, Tone (2 Treble)
60B		Condenser (Trimmer) } Section		B-134769	Button (Station)
60C		Condenser (Trimmer) } Assembly		W-134074-3	Knob (Large)
61A	AW-135033	Coil, Oscillator } Three		W-134951	Knob (Small)
61B		Coil, Oscillator } Section		W-43580	Grommet
61C		Coil, Oscillator } Assembly		W-132322	Spring, Chassis Mtg. (Top)
62A	B-132386-5	Condenser (Trimmer) } Three		W-132323	Spring, Chassis Mtg. (Bottom)
62B		Condenser (Trimmer) } Section		AB-134935	Needle, Floating Jewel Assembly
62C		Condenser (Trimmer) } Assembly		W-135129	Screw (No. 10-24x2 1/4 Hex. Hd. Pilot Pt. Mach.)
				W-132434-3	Call Letter Sheet
				W-134140-1	Call Letter Cover

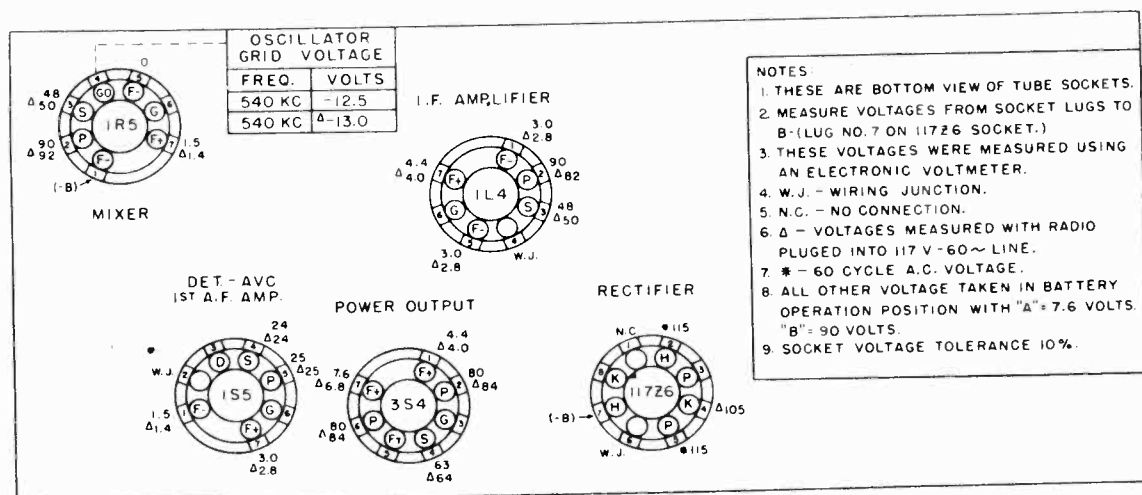
THE CROSLY CORP.



IF PEAK 455 KC

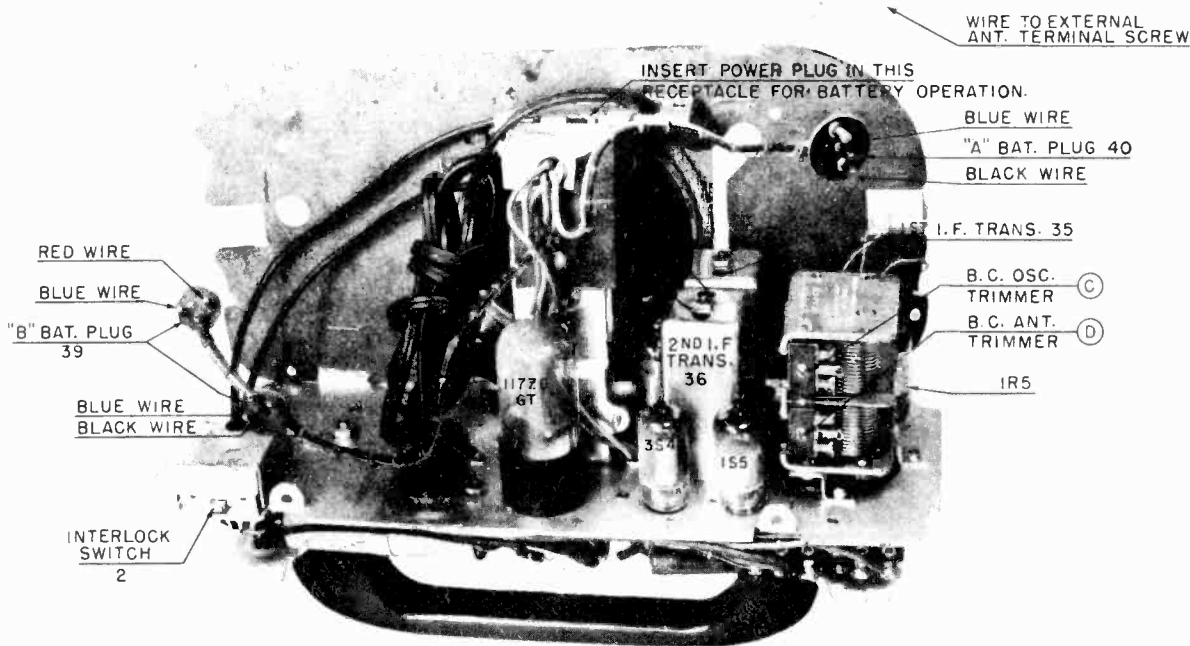
SCHEMATIC DIAGRAM—MODELS 56PA and 56PB

SOCKET VOLTAGE CHART



October, 1946

THE CROSLEY CORP.



CHASSIS VIEW—MODELS 56PA and 56PB

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. Connect the high side of the signal generator to the external antenna wire of the loop, that connects to the terminal screw on the bottom of the cabinet, as indicated in the alignment chart. Connect signal generator ground through a 0.1 mt. condenser to B—. (No. 1 pin on 1R5 tube).
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

*NOTE: Batteries should be placed against battery stop in front half of cabinet when making loop alignment to avoid error due to capacity effect of batteries. If receiver is to be used on AC or DC only (without batteries) it will be necessary to realign loop adjustment "D" for maximum output, after batteries have been removed.

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VOLTAGE RATING: AC-DC, 110 to 120 volts.
 Battery "A" 7½ volts "B" 90 volts.
POWER OUTPUT: 180 M.W. maximum.
POWER CONSUMPTION: 25 watts.
BATTERIES USED: one Crosley CR 90, 7.5 volt
 "A" Battery. Two Crosley CR 77, 45 volt "B"
 Batteries.

TYPE: Five-tube, combination, battery Portable
 and AC-DC Superheterodyne.
FREQUENCY RANGE: 540 to 1600 kilocycles.
INTERMEDIATE FREQUENCY: 455 kc.
POWER SUPPLY: AC-DC or BATTERY.

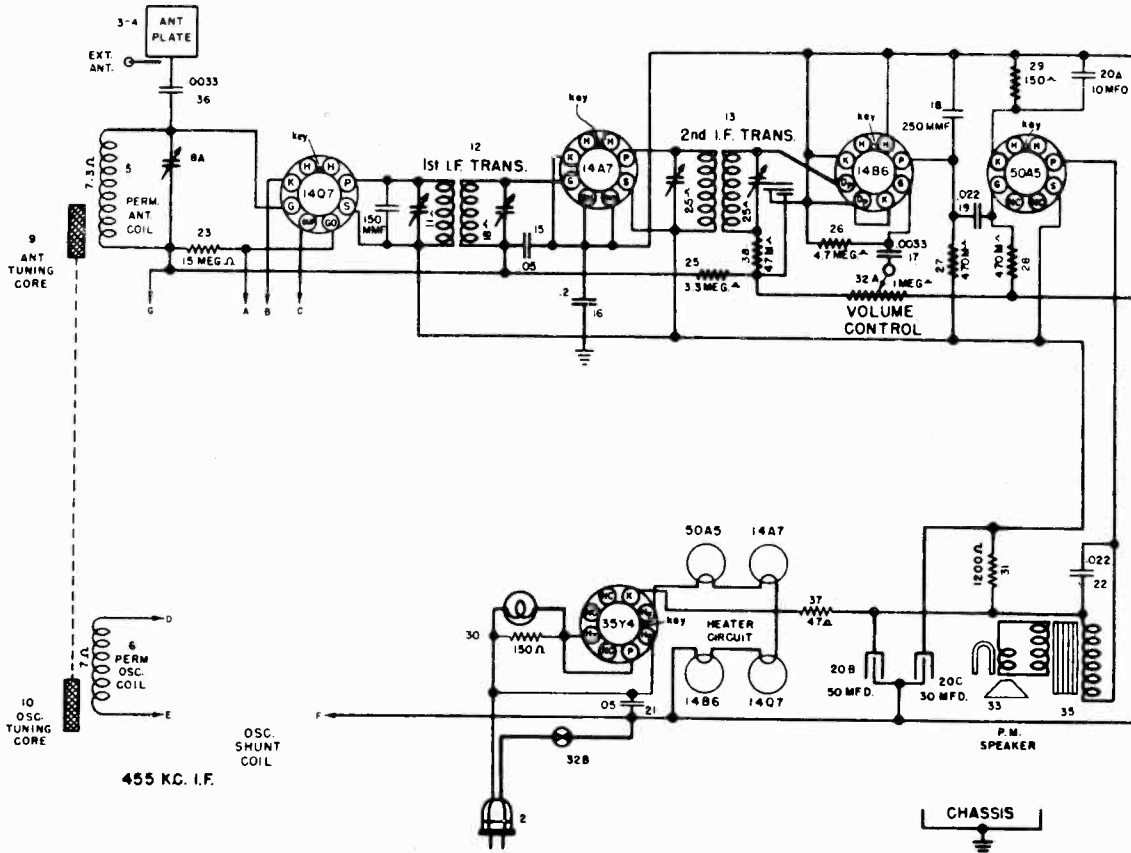
PARTS LIST—MODELS 56PA, 56PB

Item No.	Part No.	Description	Item No.	Part No.	Description
1	W-135359	Switch (A.C., D.C. or Battery)	38	39017-7	Terminal Board
2	W-135355	Transformer (Interlock)	39	W-47353	Plug ("B" Cable)
5	B-135378	Transformer (Output)	40	W-136099	Plug ("A" Cable)
6	B-135459	Condenser, 1000 mfd., 10 w. v., Elect.	41	AC-136082	Antenna loop and Back Assembly
7A	B-135555	Condenser, 40 mfd., 100 w.v. Two Section	42	B-226638-54	Speaker 75 mmf., 500 v., ceramic
7B	B-135555	Condenser, 40 mfd., 150 w.v. Elect. Filter	43	AD-136156	Resistor (Less Transformer)
8A	AB-136366	Condenser, Variable Two	44	Part of Item 36	Resistor 47,000 ohm, ½ w.
8B		Condenser, Variable Section	45A	B-135353	Control, Volume (1 megohm) } Assembly
9	39001-17	Condenser, .05 mfd., 600 v., paper.	45B		Switch (Power)
10	39001-19	Condenser, .1 mfd., 600 v., paper		39368-14	Control (Volume)
11	39001-19	Condenser, .1 mfd., 600 v., paper		39369-2	Switch (Power)
12	39001-17	Condenser, .05 mfd., 600 v., paper		39232	Socket (Tube) 117Z6
13	39001-17	Condenser, .05 mfd., 600 v., paper		W-131346	Socket (Tube)
14	39001-76	Condenser, .003 mfd., 600 v., paper		AB-135453	Background Assembly (Dial)
15	39001-76	Condenser, .003 mfd., 600 v., paper		W-51535	Pulley, Idler (Dial Cord)
16	39001-73	Condenser, 250 mmf., 600 v., paper		B-135307	Pointer (Dial)
17	39294-25	Resistor, 100,000 ohm, ½ w.		W-51752	Spring (Dial Cord)
18	39294-34	Resistor, 3.3 megohm, ½ w.		W-136630	Trimount Stud
19	39294-34	Resistor, 3.3 megohm, ½ w.		W-48200	Trimount Stud
20	39294-37	Resistor, 10 megohm, ½ w.		B-134926	Cover (Switch)
21	39294-30	Resistor, 680,000 ohm, ½ w.		W-135349	Insulator (Switch Cover)
22	W-132502	Resistor, 1900 ohm, 5w. (Candohm)		R-134910	Cabinet Half (Back, 56PA)
23	39014-24	Resistor, 820 ohm, ½ w.		R-134911	Cabinet Half (Front, 56PA)
24	39294-11	Resistor, 470 ohm, ½ w.		R-135305	Cabinet Half (Front, 56PB)
25	39014-40	Resistor, 18,000 ohm, ½ w.		C-135318	Cabinet Half (Back, 56PB)
26	39294-21	Resistor, 22,000 ohm, ½ w.		W-135571	Handle (56PA)
27	39294-19	Resistor, 10,000 ohm, ½ w.		C-135595	Handle (56PB)
28	C-132300-3	Cable and Plug (Power)		W-135571	Insert (Handle)
29	39001-87	Condenser, .25 mfd., 600 v., paper		W-135342	Screw, Special (56PA Cabinet)
30	39001-13	Condenser, .01 mfd., 600 v., paper		W-136053	Screw, Special (56PB Cabinet)
31	39001-13	Condenser, .01 mfd., 600 v., paper		B-135376	Dial Glass (56PA)
32	39001-13	Condenser, .01 mfd., 600 v., paper		B-137229	Dial Glass (56PB)
33	39001-7	Condenser, .001 mfd., 600 v., paper		W-135345	Knob (56PA)
34	39294-31	Resistor, 1.0 megohm, ½ w.		W-135590	Knob (56PB)
35	AW-135774	Transformer (1st. I.F.)		1-CR 90	"A" Battery
36	AW-135769	Transformer (2nd. I.F.)		2-CR 77	"B" Battery
37	AW-135620	Coil (Oscillator)			

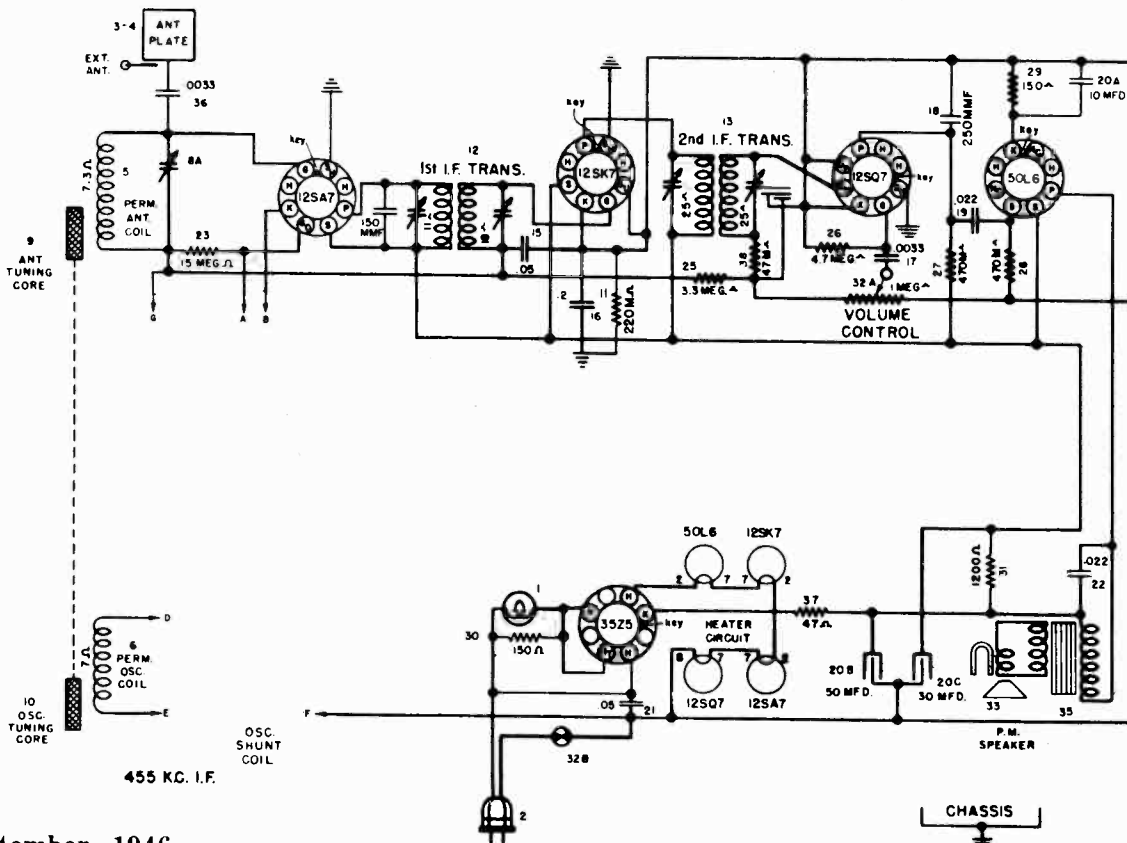
*These parts will replace the original equipment parts.

MODELS 56TG, 56TH, 56TJ
56TG-0, 56TH-0, 56TJ-0

THE CROSLEY CORP.



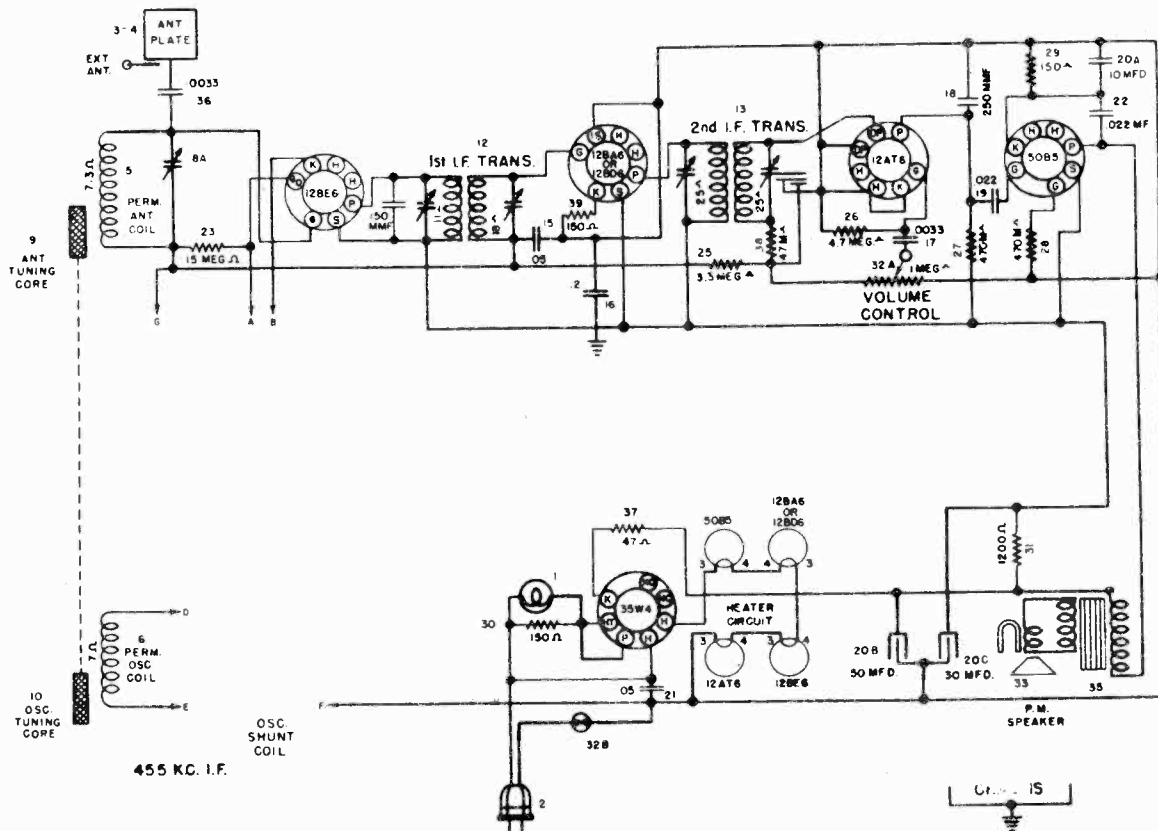
SCHMATIC DIAGRAM—MODEL 56TG, 56TH, 56TJ (LOCTAL)



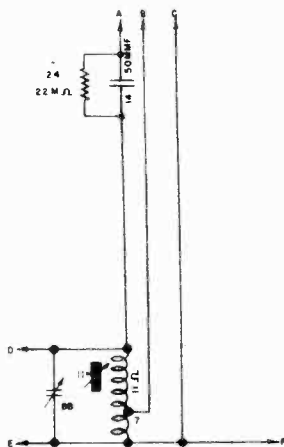
SCHMATIC DIAGRAM—MODEL 56TG-0, 56TH-0, 56TJ-0 (OCTAL)

September, 1946

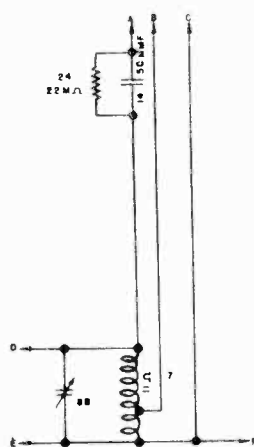
THE CROSLY CORP.



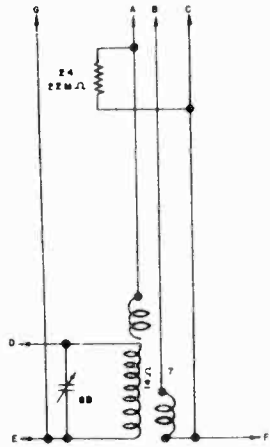
SCHMATIC DIAGRAM—MODEL 56TG-M, 56TH-M, 56TJ-M (MINIATURE)



THE ABOVE OSCILLATOR SHUNT COIL IS USED IN THE FIRST PRODUCTION MODELS. IT IS MOUNTED ON THE PERMEABILITY TUNER AND USES AN ADJUSTABLE IRON CORE. "C" IS NOT USED WITH A MINIATURE OR AN OCTAL TUBE.



THIS OSCILLATOR SHUNT COIL IS USED IN THE SECOND PRODUCTION MODELS. IT IS MOUNTED ON THE REAR OF THE PERMEABILITY TUNER AND DOES NOT USE AN ADJUSTABLE IRON CORE. "C" IS NOT USED WITH A MINIATURE OR AN OCTAL TUBE.



THIS OSCILLATOR SHUNT COIL IS USED IN THE THIRD PRODUCTION MODELS. IT IS MOUNTED UNDER THE CHASSIS AND DOES NOT USE AN ADJUSTABLE IRON CORE. "C" IS NOT USED WITH A MINIATURE OR AN OCTAL TUBE.

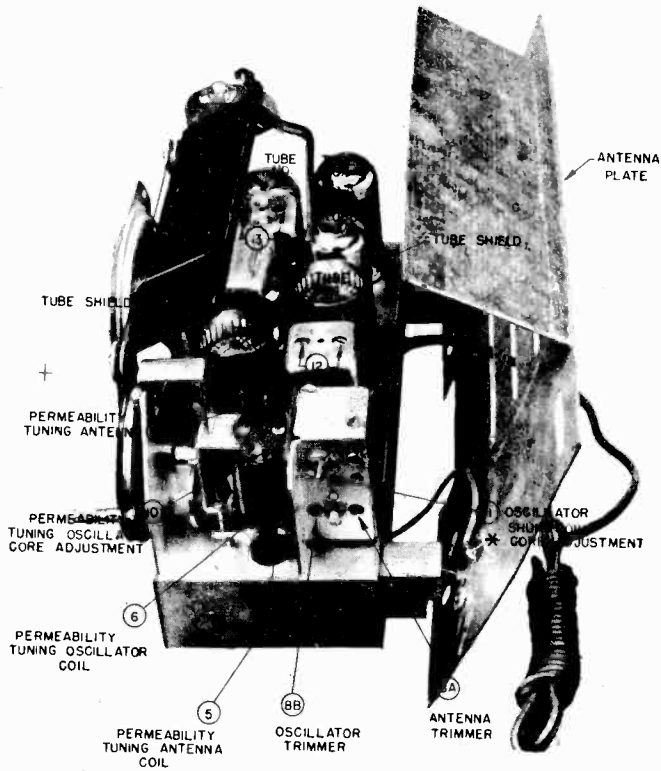
OSCILLATOR SHUNT COIL CHARTS

To check circuits and parts find the socket in the preceding SCHEMATIC DIAGRAMS which correspond to the socket in the radio. Connection "G" is used only on 3rd production sets. To check the oscillator shunt coil circuit, choose the circuit (which corresponds to the radio being serviced) from the 3 circuits shown above.

MODELS 56TG, 56TH, 56TJ

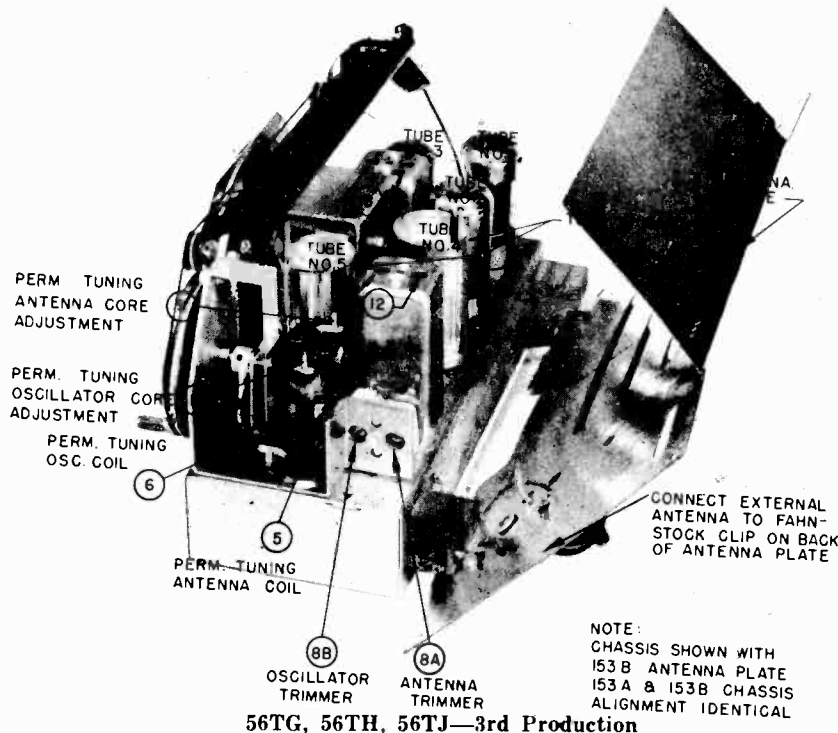
1st, 2nd Production
3rd Production

THE CROSLEY CORP.
CHASSIS SIDE VIEWS



*The second production models do not have an Oscillator Shunt Core. The alignment procedure is identical to the 3rd production procedure.

56TG, 56TH, 56TJ—1st and 2nd Production



56TG, 56TH, 56TJ—3rd Production

The tube numbers 1, 2, 3, 4, 5, which are not circled in the above charts, correspond to the tube numbers in the first column of the TUBE COMPLEMENT COMPARISON CHART shown on page 1.

THE CROSLLEY CORP.

MODELS 56TG, 56TH, 56TJ.
56TG-O, 56TH-O, 56TJ-O,
56TG-M, 56TH-M, 56TJ-M

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.
 5. Set the signal generator to 455 Kc. Set the receiver dial pointer against the stop at the high frequency (1600 Kc.) end of the dial. Adjust the 2nd I.F. trimmers (13) and the 1st I.F. trimmers (12) for maximum output. (See CHASSIS SIDE VIEW at bottom of P. 15-34 for adjustment locations.)
 6. Set the dial pointer against the stop at the low frequency (540 Kc.) end of the dial. Pre-set the antenna tuning core (9) and the oscillator tuning core (10) so that the top of each core is approximately 1/16-inch below the upper edge of the coil form.
 7. Set the signal generator to 535 Kc. and with the dial pointer against the stop at the 540 Kc. end of dial, adjust the oscillator trimmer (8B) for maximum output.
 8. Set the signal generator to 1620 Kc. Set the dial pointer against the stop at the high frequency (1600 Kc.) end of the dial. Adjust the oscillator tuning core (10) for maximum output.
- NOTE: Repeat steps 7 and 8 until the correct dial calibration is obtained.
9. Tune both the signal generator and the receiver to 600 Kc. and adjust the antenna trimmer (8A) for maximum output.
 10. Tune both the signal generator and the receiver to 1400 Kc. and adjust the antenna tuning core (9) for maximum output.
- NOTE: Repeat steps 9 and 10 until the antenna trimmer (8A) is properly adjusted for maximum output at 1400 Kc. as it is at 600 Kc.
- When the receiver is to be used without an external antenna, disconnect the signal generator output from the receiver. Tune in a weak signal between 1400 Kc. and 1000 Kc. and adjust the antenna trimmer (8A) for maximum output.

8. With the dial pointer set against the stop at the 540 Kc. end of the dial, adjust the oscillator iron core (10) to its minimum frequency.

9. Set the signal generator to 535 Kc. and adjust the oscillator shunt core (11) for maximum output.

10. Set the dial pointer against the stop at the high frequency (1600 Kc.) end of dial. Set the signal generator to 1620 Kc. and adjust the oscillator trimmer (8B), for maximum output.

NOTE: Repeat steps 9 and 10 until correct dial calibration is obtained.

11. Tune both the receiver and the signal generator to 1400 Kc. Adjust the antenna trimmer (8A) for maximum output.

12. Tune both the receiver and the signal generator to 600 Kc. Adjust the antenna trimmer (8A) for maximum output.

NOTE: If it is necessary to adjust trimmer (8A) closer together, the antenna inductance change is too small and must be increased by adjusting the antenna core (9), farther out of the antenna coil.

If it is necessary to adjust trimmer (8A) farther apart, the antenna inductance change is too great and must be reduced by adjusting the antenna core (9), farther into the antenna coil.

13. Repeat steps 11 and 12 until (8A) is properly adjusted for maximum output at 600 Kc., as it is at 1400 Kc.

ALIGNMENT PROCEDURE (2nd and 3rd Production Models)

1. With the tuning knob turned to the extreme right against the stop, set the dial pointer to the last reference line at the 540 Kc. end of the dial.

2. Connect the output of a signal generator directly to the receiver antenna clip. Connect the ground of the signal generator through a .01 mfd. condenser to the receiver chassis.

3. Connect the output meter across the speaker voice coil.

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 the receiver.

ALIGNMENT PROCEDURE (1st Production Models)

1. With the tuning knob turned to the extreme right against the stop, set the dial pointer to the last reference line at the 540 kilocycle end of the dial.

2. Connect the output of a signal generator directly to the receiver antenna clip. Connect the ground of the signal generator through a .01 mfd. condenser to the receiver chassis.

3. Connect the output meter across the speaker voice coil.

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.

5. Set the signal generator to 455 Kc. Set the receiver dial pointer against the stop at 1600 Kc. end of the dial. Adjust the 2nd I.F. trimmers (13) and the 1st I.F. trimmers (12), for maximum output. (See CHASSIS SIDE VIEW at top of P. 15-34 for adjustment locations.)

6. Open oscillator trimmer (8B) approximately one-half turn from the closed position. Adjust oscillator shunt core (11) to its extreme outer position.

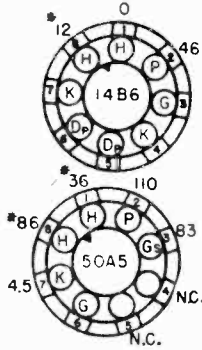
7. Set the dial pointer against the stop at the low frequency (540 Kc.) end of the dial. Tune the signal generator until the signal is heard in speaker of the receiver. The frequency of this signal from the signal generator should be between 500 Kc. and 800 Kc.

NOTE: Check to make sure the circuit is aligned at the correct frequency and not the image frequency which is a weaker signal, 910 Kc. higher as indicated by the receiver dial.

MODELS 56TG, 56TH, 56TJ,
56TG-O, 56TH-O, 56TJ-O,
56TG-M, 56TH-M, 56TJ-M

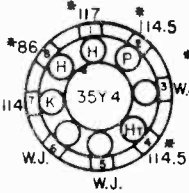
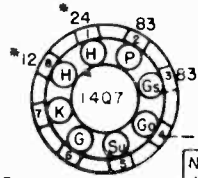
THE CROSLEY CORP.
SOCKET VOLTAGE CHARTS

DET.- AVC-1ST AF. AMPLIFIER

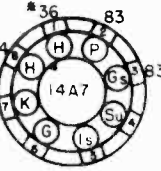


POWER OUTPUT

MIXER



RECTIFIER



I.F. AMPLIFIER

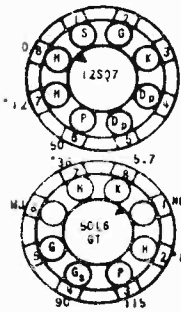
OSCILLATOR GRID VOLTAGE		
BAND	FREQUENCY	VOLTS
AMERICAN	550 KC	-8.4

NOTES:

1. THESE ARE BOTTOM VIEWS OF TUBE SOCKETS.
2. MEASURE VOLTAGES FROM SOCKET LUGS TO -B (PIN 4 ON THE 14A7)
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. SOCKET VOLTAGES MEASURED USING 117 VOLTS, 60 CYCLE LINE VOLTAGE.

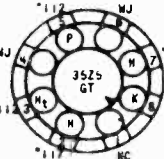
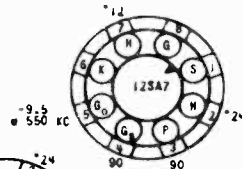
56TG, 56TH, 56TJ (LOCTAL)

DET.- A.V.C. - 1ST A.F. AMPLIFIER

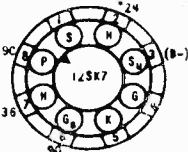


POWER OUTPUT

MIXER



RECTIFIER



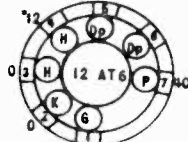
I. F. AMPLIFIER

NOTES:

1. BOTTOM VIEW OF SOCKETS.
2. MEASURE VOLTAGE FROM SOCKET LUGS TO -B (PIN 3 ON THE 12SK7).
3. VOLTAGES MEASURED WITH AN ELECTRONIC VOLTMETER.
4. W.J. = WIRING JUNCTION.
5. N.C. = NO CONNECTION
6. * - 60 CYCLE A.C. VOLTAGES.
7. SOCKET VOLTAGES MEASURED USING 117 VOLTS, 60 CYCLE POWER SUPPLY.
8. SOCKET VOLTAGE TOLERANCE 10%.

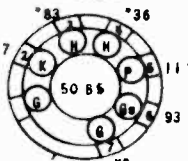
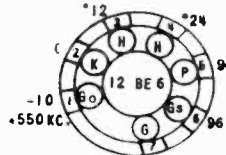
56TG-O, 56TH-O, 56TJ-O (OCTAL)

DET. - AVC-1ST A.F. AMPLIFIER

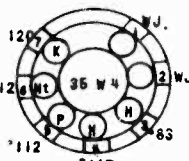


POWER-OUTPUT

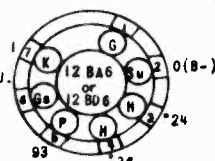
CONVERTER



RECTIFIER



I.F. AMPLIFIER



NOTES:

1. These are bottom views of tube sockets.
2. Measure voltages from socket lugs to -B (Pin 2 on the 12 BA6 or 12B06).
3. These voltages were measured with an electronic voltmeter.
4. W.J. - Wiring Junction
5. N.C. - No Connection.
6. * - 60 Cycle A.C. Voltage
7. Socket Voltage Tolerance 10%
8. Socket Voltages Measured at normal line Voltage. (117 Volts- 60 Cycle)

56TG-M, 56TH-M, 56TJ-M (MINIATURE)

NOTE: To check voltages, find the socket in the above charts which corresponds to the socket in the radio.

THE CROSLEY CORP.

MODELS 56TG, 56TH, 56TJ,
56TG-O, 56TH-O, 56TJ-O,
56TG-M, 56TH-M, 56TJ-M

FREQUENCY RANGE: 540 to 1600 Kc.
INTERMEDIATE FREQUENCY: 455 Kc.
POWER SUPPLY: a.c.-d.c.

VOLTAGE RATING: 105-125 volts.
POWER CONSUMPTION: 35 watts nominal.
POWER OUTPUT: 1.75 watts minimum.

PARTS LIST

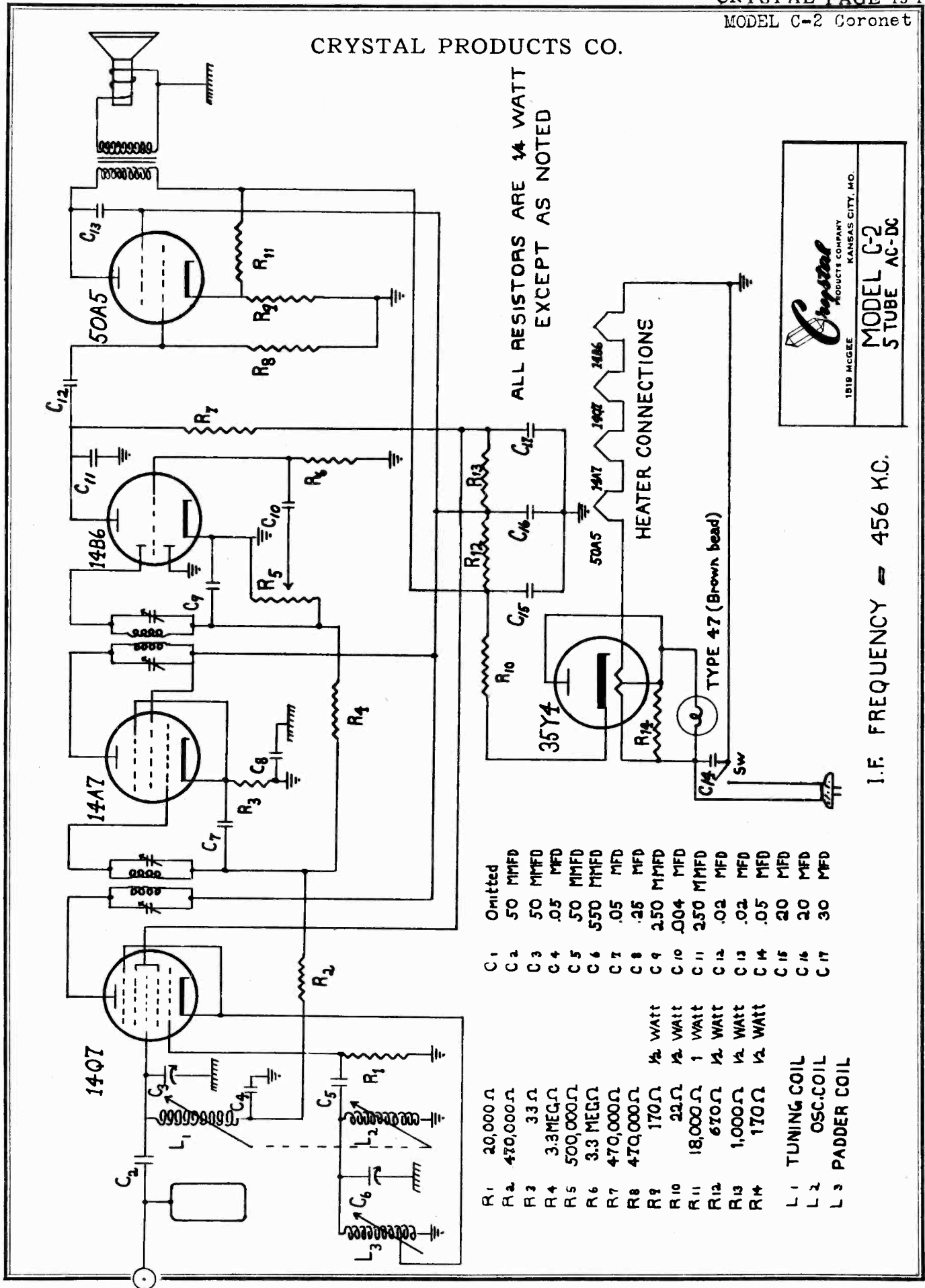
MODEL 56TG, 56TG-O, 56TG-O1234, 56TG-M, 56TG(M12), 56TG-O(M12), 56TG(M12)034
MODEL 56TH, 56TH-O, 56TH-O1234, 56TH-M, 56TH(M12), 56TH-O(M12), 56TH(M12)034
MODEL 56TJ, 56TJ-O, 56TJ-O1234, 56TJ-M, 56TJ(M12), 56TJ-O(M12), 56TJ(M12)034

Figures in first column correspond to figures in Schematic Diagram

ITEM No.	PART No.	DESCRIPTION	ITEM No.	PART No.	
1	W-48858	Bulb (dial), Type 47, 6.3 v., 15 amp.	37	*W-137367	Resistor, 47 ohm, 1 w. (2nd and 3rd Production)
2	C-132300-1	Cord and Plug (Power)	38	Part of Item #13	Resistor, 47,000 ohm, ½ w.
3	AW-136476	Ant. Plate (56TJ Series)	39	39294-8	Resistor, 150 ohm, ½ w. (56TG-M, 56TH-M, 56TJ-M)
4	AW-136574	Ant. Plate (56TG, 56TH Series)		W-135371	Socket, Octal Tube
5	AW-136438	Coil, Ant. Tuning		W-131346	Socket, Miniature Tube
6	AW-136657	Coil, Osc. Tuning		39204	Socket, Octal Tube
7	*AW-136658	Coil, Osc. Shunt (Part of AD-136695, 1st Production)		39017-5	Socket, Dial Light
7	*AW-137532	Coil, Osc. Shunt (Part of AD-136695-H, 2nd Production)		W-46447-1	Shield, Tube
7	*AW137720	Coil, Osc. Shunt (3rd Production)		*AD-136695	Permeability Tuner, Complete Assy. (1st Production)
8A	W-136699	Trimmer, Ant.		*AD-136695-H	Permeability Tuner, Complete Assy. (2nd Production)
8B		Trimmer, Osc.		*AW-137722	Permeability Tuner, Complete Assy. (3rd Production)
9	G-39012-49	Iron Core, Ant. Tuning		AW-137689	Slide Assy. Permeability Tuner
10	G-39012-49	Iron Core, Osc. Tuning		AW-137688	Hub and Cam Assy., Permeability Tuner
11	*G39012-48	Iron Core, Osc. Shunt (Part of AD-136695, 1st Production)		W-136520	Spring, Retractor (Permeability Tuner)
11	39294-27	Resistor, 220,000 ohm, ½ w. (56TG-O, 56TH-O, 56TJ-O)		W-136533	Grommet, Ant. Coil Mtg. (Permeability Tuner)
12	AW-137658	Transformer, 1st I.F.		W-45580	Grommet, Osc. Coil Mtg. (Permeability Tuner)
13	AW-137667	Transformer, 2nd I.F.		*W-132366-2	Nut, Iron Core Locking (Part of AD-136695, 1st Production)
14	*B-226638-53	Condenser, 50 mmf. (1st and 2nd Production)		W-51993	Fastener, Iron Core
15	39001-65	Condenser, .05 mfd., 200 v., paper		W-52063	Spring, Iron Core
16	39001-105	Condenser, .2 mfd., 200 v., paper		AB-135135	Plate Assy., Dial
17	39001-10	Condenser, 3300 mmf., 200 v., paper		W-135074	Pulley, Idler
18	39001-73	Condenser, 250 mmf., 600 v., paper		B-135094	Pointer, Dial
19	39001-63	Condenser, .022 mfd., 200 v., paper		B-135075	Shaft, Drive
20A	B-136769	Condenser, 10 mfd., 25 v. } Three		W-134916	Washer, Spring
20B		Condenser, 50 mfd., 150 v. } Section		W-51071	Ring Retaining
20C		Condenser, 30 mfd., 150 v. } Filter		W-136630	Trimount Stud
21	39001-65	Condenser, .05 mfd., 200 v., paper		W-131154-1	Cotter, External
22	39001-63	Condenser, .022 mfd., 200 v., paper		D-137263	Cabinet (56TJ Series)
23	39294-38	Resistor, 15 megohm, ½ w.		R-135404	Cabinet (56TG Series)
24	39294-21	Resistor, 22,000 ohm, ½ w.		AB-135446	Cabinet and Handle Assy. (56TH Series)
25	39294-34	Resistor, 3.3 megohm, ½ w.		B-135403	Handle (Part of AB-135446)
26	39294-35	Resistor, 4.7 megohm, ½ w.		AW-135444	Cabinet (Part of AB-135446)
27	39294-29	Resistor, 470,000 ohm, ½ w.		B-136633	Dial Glass
28	39294-29	Resistor, 470,000 ohm, ½ w.		W-135455	Knob (56TG, 56TJ Series)
29	39294-8	Resistor, 150 ohm, ½ w.		W-135454	Knob (56TH Series)
30	39294-8	Resistor, 150 ohm, ½ w.		W-132124	Trimount Stud (56TH, 56TG Series)
31	39015-26	Resistor, 1200 ohm, 1 w.			
32A	C-135127	Control, Volume (1 megohm) } Assembly			
32B		Switch (Power) }			
33	B-136768	Speaker			
35	B-135077	Transformer (Output)			
36	*39001-10	Condenser, 3300 mmf., 200 v., paper (2nd and 3rd Production)			

*1st Production models are identified by the adjustable Iron Core in the Oscillator Shunt Coil which is mounted on rear of the Tuner. 2nd Production models do not have the adjustable Iron Core in the Oscillator Shunt Coil which is mounted on the rear of the Tuner. 3rd Production models do not have the adjustable Iron Core in the Oscillator Shunt Coil which is mounted under the chassis.

CRYSTAL PRODUCTS CO.



ALL RESISTORS ARE 1/4 WATT
EXCEPT AS NOTED

HEATER CONNECTIONS
TYPE 47 (Brown bead)

C 1	Omitted	50 MMFD
C 2	20,000 Ω	50 MMFD
C 3	470,000 Ω	.05 MFD
C 4	33 Ω	50 MMFD
C 5	3.3 MEGΩ	550 MMFD
C 6	500,000 Ω	.05 MFD
C 7	3.3 MEGΩ	.25 MFD
C 8	470,000 Ω	2.50 MMFD
C 9	470,000 Ω	.04 MFD
C 10	170 Ω	2.50 MMFD
C 11	22 Ω	.02 MFD
C 12	18,000 Ω	.02 MFD
C 13	670 Ω	.05 MFD
C 14	1,000 Ω	20 MFD
C 15	170 Ω	20 MFD
C 16	170 Ω	20 MFD
C 17	30 MFD	30 MFD

R 1	20,000 Ω	1/2 WATT
R 2	470,000 Ω	1/2 WATT
R 3	33 Ω	1 WATT
R 4	3.3 MEGΩ	1 WATT
R 5	500,000 Ω	1/2 WATT
R 6	3.3 MEGΩ	1/2 WATT
R 7	470,000 Ω	1/2 WATT
R 8	470,000 Ω	1/2 WATT
R 9	170 Ω	1/2 WATT
R 10	22 Ω	1/2 WATT
R 11	18,000 Ω	1/2 WATT
R 12	670 Ω	1/2 WATT
R 13	1,000 Ω	1/2 WATT
R 14	170 Ω	1/2 WATT

L 1	TUNING COIL
L 2	OSC. COIL
L 3	PADDER COIL

Crystal
PRODUCTS COMPANY
KANSAS CITY, MO.

MODEL C-2
5 TUBE AC-DC

I.F. FREQUENCY = 456 K.C.

MODEL C-2 Coronet

CRYSTAL PRODUCTS CO.

CORONET MODEL C-2 PARTS

- | | | |
|--|---|-------------------------------|
| C-1—Omitted | C-11—250 mmfd. mica capacitor | R-6—3.3 meg., ¼ w resistor |
| C-2—50 mmfd. mica capacitor | C-12—.02 mfd., 600v paper capacitor | R-7—470,000 ohm, ¼ w resistor |
| C-3—50 mmf. nominal trimmer, range 55-75 | C-13—.02 mfd., 600v paper capacitor | R-8—470,000 ohm, ¼ w resistor |
| C-4—.05 mfd., 400v paper capacitor | C-14—.05 mfd., 400v paper capacitor | R-9—170 ohm, ½ w resistor |
| C-5—50 mmfd. mica capacitor | C-15, C-16, C-17—20-20-30 mfd., 150v electrolytic condenser | R-10—22 ohm, ½ w resistor |
| C-6—Nominal 550 mmf. range 450-700 trimmer | R-1—20,000 ohm, ¼ w resistor | R-11—18,000 ohm, ½ w resistor |
| C-7—.05 mfd., 400v paper capacitor | R-2—470,000 ohm, ¼ w resistor | R-12—670 ohm, ½ w resistor |
| C-8—.25 mfd., 200v paper capacitor | R-3—33 ohm, ¼ w resistor | R-13—1,000 ohm, ½ w resistor |
| C-9—250 mmfd. mica capacitor | R-4—3.3 meg., ¼ w resistor | R-14—170 ohm, ½ w resistor |
| C-10—.004 mfd., 200v paper capacitor | R-5—500,000 ohm standard taper potentiometer | L-1—Antenna Tuning |
| | | L-2—Oscillator Tuning |
| | | L-3—Oscillator Padder |

Line Cord 560 ohm for 220-volt operation.

TECHNICAL DATA

Tuning range.....	540 to 1700 Kc.
Intermediate frequency.....	456 Kc.
Power consumption.....	.35 watts
Sensitivity (for 0.05 watt output).....	15 microvolts average
Power output (in voice coil)	
Undistorted	0.8 watts
Maximum	1.0 watts
Voice coil impedance.....	3.2 ohms

ALIGNMENT PROCEDURE

- No aligning adjustments should be attempted until all other possible causes of trouble have been checked.
- Turn volume control to maximum for all adjustments.
- Keep signal generator output low as possible.
- Connect ground post of signal generator to chassis of radio through an 0.1 mfd. condenser.
- Connect signal generator output leads to antenna leads.
- Connect output meter across secondary of output transformers.

Band	Signal Generator Frequency Setting	Dummy Antenna	Connection to Radio	Tuning Condenser Setting	Adjust for Maximum Output
I.F.	456 Kc.	0.1 mfd.	Grid of 14Q7	Slugs out of coil 1700 Kc.	4 trimmers on input and output transformers
Broadcast	1700 Kc.	Antenna lead		Slugs out of coil 1700 Kc.	Osc. slugs, L2, L1, and C6
Broadcast	600 Kc.	Antenna lead		Slugs in coil 600 Kc.	L3
Broadcast	1400 Kc.	Antenna lead		Set dial at 1400 Kc.	C3

FINAL ADJUSTMENT

With the top off the radio, place the band around the set and connect antenna lead to the band and adjust C-3 for greatest noise level at 800 Kc.