# SERVICE NOTES.

# STROMBERG-CARLSON NOS. 955 AND/1055 RADIO RECEIVERS

STROMBERG-CARLSON TELEPHONE MANUFACTURING COMPANY ROCHESTER, NEW YORK

### IDENTIFICATION TABLE

	ograph pment
	Lucie
955-PF 50-60 Cycles 34033 34038 $\left\{\begin{array}{lll} 34036 \text{ Lo-F} \\ 33765 \text{ Hi-F} \end{array}\right\}$	989
1055-PSM 50-60 Cycles 34033 34649 { 34036 Lo-F } 33765 Hi-F }	989
1055-PSW 50-60 Cycles 34033 34648 $\left\{\begin{array}{lll} 34036 \text{ Lo-F} \\ 33765 \text{ Hi-F} \end{array}\right\}$	989
SPECIFICATIONS	
	_
Tuning Ranges Standard Broadcast 540 to 1600 Kiles  Tuning Ranges Short Wave 8.8 to 12 Megacycles Short Wave 14.4 to 18 Megacycles Frequency Modulation 42 to 50 Meg	
Voltage Rating 105 to 12	Volts
Type of CircuitSuperheterodyne with Automatic Tuning and Electromatic Range	e Shift
Number of Tubes—20	
1—6AB7 or 6SG7 R. F. Amplifier 1—6SC7 Driver and Inverter	
1—6AC7 or 1—7V7 Modulator 1—6U5 Tuning Indicator	Φ
1—6SA7 Oscillator	
1—6AB7 or 6SG7 1st I. F. Amplifier 2—6L6G Power Output	
1—6AC7 2nd I. F. Amplifier 1—5U4G Rectifier	
1—6SJ7 1st Limiter	
1—6SJ7 1st Elimiter 1—6SJ7 2nd Limiter	
1—6837 Zha Ellintei 1—6H6 Discriminator	
1—6507 or 6507GT A. M. Demodulator, F. M. "Q" 1—5U4G Rectifier	
1—6SQ7 or 6SQ7GT A. M. Demodulator, F. M. "Q" 1—5U4G Rectifier 1—6SQ7 or 6SQ7GT 1st Audio Amplifier 1—5Y3G Rectifier	
Input Power Rating, 955-PF Phono	Motor
Intermediate Frequency {4.55 Kilocycles (Amplitude Modu	lation) lation)
Speaker Field Coil Resistance—Low Frequency Speaker ( no mogacycles (110 quoncy moda	Ohms
Low Frequency Speaker12	Ohms
Speaker Voice Coil Impedance { Low Frequency Speaker12	Ohms
Power Output30 Watts at 10% Dis	

#### FEATURES

GENERAL. These are three-gang, four range receivers, providing reception of both A. M. and F. M. stations. The Armstrong Wide Swing Frequency Modulation System used in these receivers is outstanding in that substantially static-free reception is obtained, plus a degree of high fidelity which has heretofore been unobtainable in any other radio system. The two Spread Band short-wave ranges used in these receivers are designed to allow full dial coverage; thus international short-wave stations may now be tuned in with greater ease than was heretofore possible. An "Electromatic Range Shift" which gives automatic and noiseless range selection is provided in these receivers. The power transformer has an electrostatic shield which reduces line noise to a minimum. Efficient compensator circuits are provided to prevent oscillator drift.

PUSH BUTTON TUNING. Twelve push buttons are provided in these receivers. Eight buttons are for set-

ting up standard broadcast or F. M. stations, two buttons are for switching to the "Short Wave Ranges", and the other two buttons are for switching to "Radio" or "Phono".

PHONOGRAPH OPERATION. The 955-PF and 1055-PSM and PSW Phonograph Models are equipped with an automatic record changer using a one ounce sapphire pick-up in conjunction with specially equalized circuits. This type of pick-up eliminates the frequent changing of needles and reduces record wear to a minimum. This record player shifts and plays the standard 10 or 12 inch records.

TELEVISION. A jack is provided on the back of the chassis into which a television receiver may be plugged. Switching to "Phono" makes the audio amplifier and loud speaker available for use with television receivers designed for this type of sound reproduction.

### ACCESSORIES

ANTENNA. These receivers are provided with two separate built-in antennas; a loop antenna for the broadcast, and a special antenna for the F. M. and short-wave ranges. In many locations where signal strengths are good, no other antenna connections are necessary.

However, no antenna system can pick up and deliver to the receiver more signal than is present where the antenna is located. There is always more signal higher above the ground, and away from all interfering objects. Therefore, in some locations an out-ofdoors antenna system which can be located in an area of greater signal strength may be required.

An ordinary "L" type antenna will give improved results when properly located. Other ordinary types of antenna systems may also prove satisfactory; however, an antenna system utilizing the ordinary type of

shielded lead-in must never be used for short-wave or frequency modulation reception.

The best all-purpose antenna for use with these receivers is the Stromberg-Carlson No. 6 Antenna which has been specially designed for use with Stromberg-Carlson F. M. receivers. This antenna system provides efficient pick-up on all frequency ranges and in addition reduces extraneous noise. Any authorized Stromberg-Carlson dealer can supply this antenna which comes in kit form together with complete instructions for installation.

In certain locations, particularly to improve the reception of distant or weak F. M. signals, a di-pole antenna system may be required. This type antenna system is more suitable for these locations because it is easiest to install high above the surrounding terrain or buildings and may be easily rotated in a direction

most favorable for reception of signals from the desired station. Therefore, to obtain the best results the di-pole should be mounted as high as possible above near-by objects.

The proper connections for various types of antennas are shown below.

HEADSET ATTACHMENT. Headphones can be very simply attached to these receivers. Ask for Pc-28303 Headset Package Assembly, which comes complete with headphones and installation instructions.

CARE OF THE CABINET. The finish of Stromberg-

Carlson cabinets should be protected by using Stromberg-Carlson cabinet polish regularly. It is available in pint cans designated as Pc-28601.

Nicks and scratches of most kinds can be repaired quickly and easily by proper use of the Pc-26962 Touch-up Kit. Complete instructions are provided with each kit.

ADJUSTING THE DIAL LAMP. To obtain the proper illumination of the dial, slide the two dial lamp sockets on their mounting brackets to the position where maximum illumination of the dial is obtained.

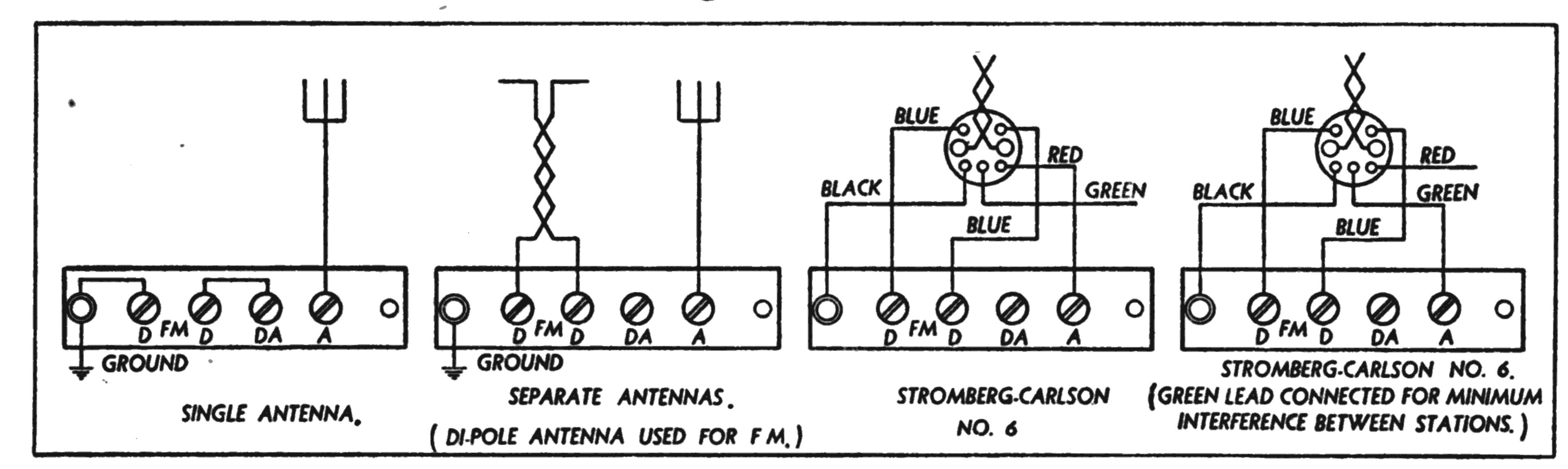


Fig. 1

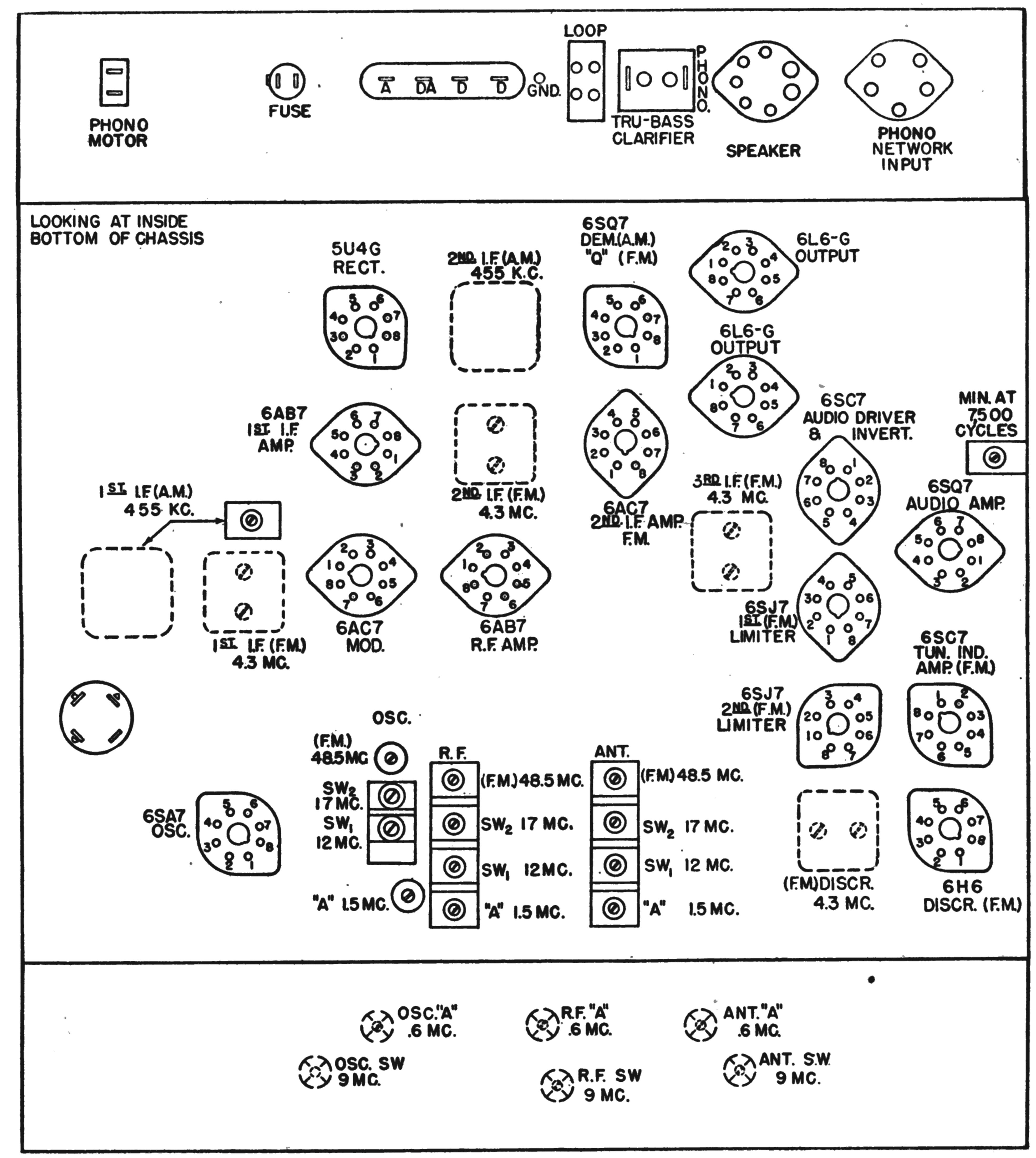


Fig. 2—Location Chart—Tuner

# INSTRUCTIONS FOR SETTING UP PUSH BUTTONS

IMPORTANT. The eight selected broadcast stations should be local or favorite stations which give good reception at all times. Set up stations in the daytime

to avoid unnecessary interference. Allow the set to run for about twenty minutes before setting up stations. Always use the tuning indicator unit when setting up stations in order to determine when the station is correctly tuned in.

- 1. Turn the receiver "on".
- 2. Push in the button designated, "Radio".
- 3. Decide which buttons are to be used for F. M. stations and which for standard broadcast stations. (Button No. 1 is the extreme right-hand button.)

NOTE: All station buttons may be used for either the F. M. or standard broadcast range, but if it is desired to tune in both F. M. stations and standard broadcast stations either manually or with push buttons, at least one station button must be set up for each range. In order that the push buttons may be set up for either A. M. or F. M. stations we have provided a terminal strip in the rear of the chassis which has ten screw type terminals. The F. M. connection is on the left end (facing the rear of the chassis), the A. M. connection on the right. See Fig. 3. It is possible, therefore, to connect any one of the eight push button terminals for either A. M. or F. M. operation by merely connecting the push button terminals required for F. M. operation to the terminal marked F. M. and the buttons to be used on the A. M. band to terminal marked A. M. When the sets leave our factory terminals one and two are connected for F. M., the other six for

- 4. Turn the Volume control to about three-quarters of its maximum rotation (in clockwise directions).
- 5. Pull the eight station push buttons off their levers.
- 6. Remove the station identification tabs from the sheets which will be found in the envelope stapled to the cabinet. For stations located in the standard broadcast range, call letters are provided; for identification of F. M. stations,

assigned channel numbers from 21 to 99 are provided for the push buttons. Push buttons set up for F. M. stations should be designated by inserting the appropriate channel number tabs.

For example, assume that a local F. M. station's call is W51R. This indicates that its assigned frequency is 45.1 megacycles. Therefore, the channel number tab, 51, which corresponds to the last two numbers of the assigned frequency would be inserted in the push button. Channel numbers for F. M. stations will not be repeated in the same or nearby localities; thus the tabs provided will always be suitable for these stations. Insert the station identification tabs part way in the slots at the sides of the buttons. Next insert a transparent tab in each slot in front of the station identification tabs. Then push both the transparent tab and the station identification tabs all the way into the slot.

- 7. Loosen the set screw of the lever to be set up.
- 8. Push in the lever and manually tune in the desired station, observing the tuning indicator in order to obtain exact resonance.

  IMPORTANT. For accurate set up, it is essential that the lever be pushed in, in the same manner and with the same amount of pressure as will be used in the normal operation of the push buttons.
- 9. Tighten the set screw. Be sure not to disturb the adjustment in any way while tightening the screw.
- 10. Place the proper button on the lever.
- 11. Check the accuracy of the adjustment by detuning the station and retuning with this button several times, pushing the button with an even pressure. Readjust if necessary.
- 12. Set up the other seven stations in the same manner.

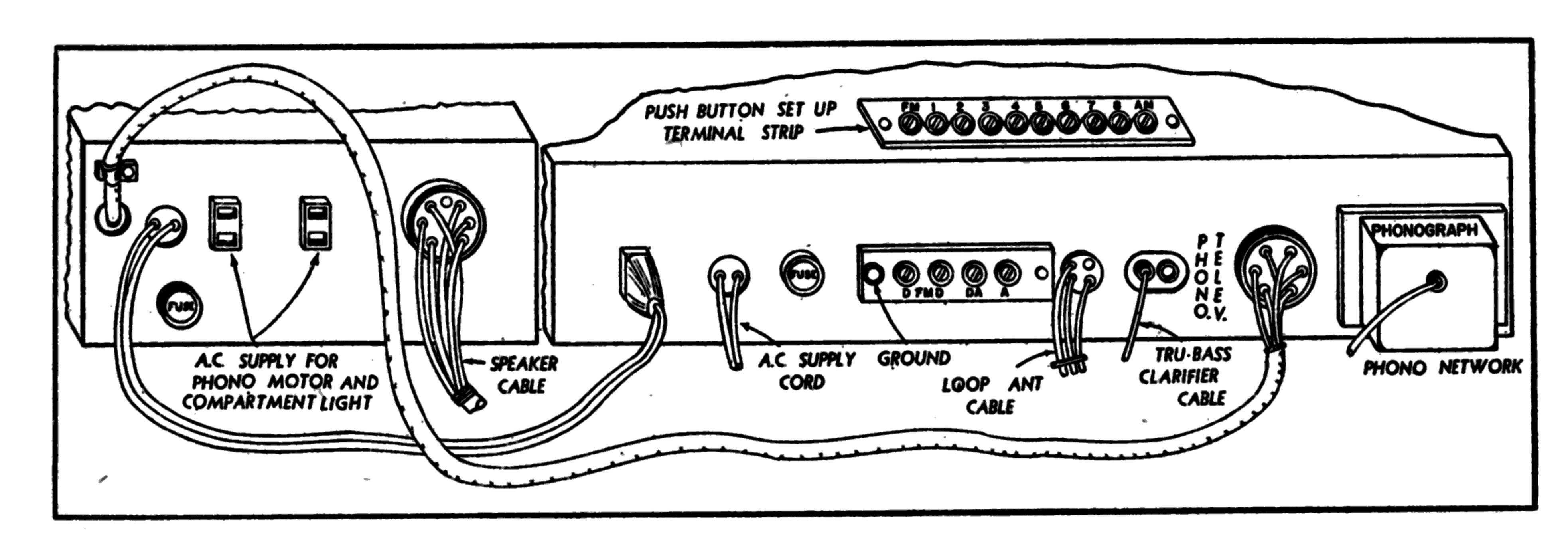


Fig. 3—Showing Typical Wiring of Push Button Set-up Terminal Strip

# ALIGNING INFORMATION

# Never Realign Unless Absolutely Necessary

GENERAL. All aligning adjustments are carefully made at the factory with special equipment which is designed for aligning Frequency Modulation receivers. The limitations of commercial oscillographs and other ordinary test equipment are such that alignment should not be attempted in the field unless absolutely necessary.

If alignment is attempted, it will not be successful unless the instructions which follow are adhered to exactly.

The following equipment will be required:

- 1. Standard signal generator.
- 2. F. M. signal generator with wide band sweep circuit.
- 3. Oscillograph.
- 4. Volt ohnyst or equivalent.

See location chart on Page 2 for location of all aligners.

#### ALIGNING PROCEDURE (AMP. MOD.)

- I. Intermediate Frequency Adjustments (A. M.)
  - 1. Set the range switch to standard broadcast position.
  - 2. Tune set to 1000 kc.
  - 3. Connect the ground terminal of the signal generator to the ground terminal of the chassis.
  - 4. Introduce a modulated signal of 455 kilocycles to the grid of the modulator tube, using a 0.1 mf. Capacitor in series with the output lead of the signal generator.
  - 5. Adjust the following I. F. aligners for maximum output.

- A. Secondary of second I. F. transformer.
- B. Primary of second I. F. transformer.
- C. Secondary of first I. F. transformer. D. Primary of first I. F. transformer.
- E. Tertiary of first I. F. circuit.

#### II. Radio Frequency Adjustments (A. M.) Standard Broadcast Range (A Band)

- 1. Replace the 0.1 mf. capacitor in series with the output lead of the signal generator with a 200 mmf. capacitor and connect it to the antenna terminal of the chassis. Be sure loop antenna is plugged in.
- 2. Set the signal generator frequency and the receiver tuning dial to 600 kc.
- 3. Set the range switch to the standard broadcast range (A Band).
- 4. Adjust the 600 kc. oscillator and R. F. aligners (iron cores) for maximum signal.
- 5. Set the signal generator frequency and the receiver tuning dial to 1500 kc.
- 6. Adjust the 1500 kc. oscillator, R. F. and antenna aligning capacitors for maximum signal.
- 7. Repeat operations five and six.

# 1st Short Wave Spread Band (Red)

- 1. Replace the 0.1 mf. capacitor in series with the output lead from the signal generator with a 400 ohm carbon type resistor and connect it to the antenna terminal of the chassis.
- 2. Ground the F. M. dipole terminal which is nearest the ground binding post.
- 3. Switch to Red Band.
- 4. Set the signal generator frequency and the receiver tuning dial to 12 megacycles.
- 5. Adjust the oscillator R. F. and antenna aligning capacitors for maximum signal.
- 6. Set pointer to 9.0 megacycles on dial and adjust oscillator, R. F. and antenna iron cores for a maximum.
- 7. Repeat operations 3, 4 and 5.

# 2nd Short Wave Spread Band (Green)

- 1. Leave the signal generator connected in the same manner.
- 2. Switch to Green Band.
- 3. Set the signal generator frequency and the receiver tuning dial to 17 megacycles.
- 4. Adjust the oscillator, R. F. and antenna trimmers for maximum signal.

#### ALIGNING PROCEDURE (FREQ. MOD.)

## I. Intermediate Frequency Adjustments (F. M.)

Note: All I. F. adjustments are made using a wide band sweep signal generator with a sweep circuit of plus or minus 300 kilocycles.

- 1. Switch to F. M. band.
- 2. Tune the set to the extreme high frequency end of the dial (50 megacycles).
- 3. Connect a volt ohmyst or equivalent between ground and terminal 6 of the 6SQ7 "Q" tube socket.
- 4. Connect the oscillograph between same points as Volt Ohmyst.
- 5. Connect the ground terminal of the wide band sweep signal generator to the ground terminal of the 6AC7 second I. F. tube socket.
- 6. Introduce a signal of 4.3 megacycles to the grid of the 6AC7 second I. F. tube socket (terminal No. 4), using a 0.1 mf. capacitor in series

- with the output lead of the signal generator. Maintain a reading of about two volts on the Volt Ohmyst.
- 7. Adjust the secondary and primary of the third I. F. transformer for maximum reading.
- 8. Connect the output lead of the wide band sweep signal generator and the 0.1 microfarad capacitor in series with it to the grid of the first I. F. tube socket terminal No. 4.
- 9. Connect the ground lead of the signal generator to the ground terminal of the first I. F. tube socket.
- 10. Adjust the second I. F. transformer in the same manner.
- 11. Connect the output lead of the wide band sweep signal generator with the 0.1 microfarad capacitor in series with it to the grid of the Modulator tube.
- 12. Adjust the first I. F. transformer in the same manner.

#### II. Discriminator Adjustments (F. M.)

- 1. Connect the ground terminal of the standard unmodulated signal generator to the ground terminal of the first I. F. tube socket.
- 2. Connect the output lead of the unmodulated standard signal generator to the grid of the first I. F. tube (terminal No. 4) using a 0.1 microfarad capacitor in series with the output lead of the standard signal generator.
- 3. Place "Q" switch in position where white dot does not show.
- 4. Ground terminal 8 of 6H6 socket.
- 5. Connect the Volt Ohmyst across one half of the discriminator load (from ground to the junction of the two .1 megohm resistors R-66 and R-67).
- 6. Set the attenuator of the standard signal generator for maximum output.
- 7. Adjust the primary of the discriminator transformer for maximum reading.
- 8. Connect the volt ohmyst across the whole discriminator load (from ground to the junction of R-66, 0.1 megohm resistor and C-70 .04 mf. capacitor).
- 9. Adjust the secondary of the discriminator transformer for center "O" reading.
- 10. Vary the frequency of the standard signal generator making sure that the voltage peaks, which should be of the same magnitude, are the same number of kilocycles off on either side of resonance. Any departure from these conditions may be corrected by a slight readjustment of the primary.
- 11. Remove ground from terminal 8 of 6H6 tube socket.

#### Radio Frequency Adjustments (F. M.)

- 1. Set the signal generator frequency and the receiver tuning dial to 48.5 megacycles.
- 2. Connect a wire between the ground binding post and the nearest F. M. dipole connection.
- 3. Replace the 0.1 microfarad capacitor in series with the output lead from the signal generator with a 100 ohm resistor and connect it to the other F. M. terminal on the back of the chassis.
- 4. Connect Volt Ohmyst between ground and terminal No. 6 of the 6SQ7, "Q" tube socket.
- 5. Adjust the oscillator aligner (Air trimmer) for maximum signal.
- 6. Adjust the R. F. and antenna aligners for maximum signal.

4

## NORMAL VOLTAGE READINGS

NOTE: These receivers use either a 6AC7 or 7V7 tube in the modulator stage. (See wiring diagram on Page 6.)

Take all readings with chassis operating and tuned manually to 1000 kc. or 47 megacycles—no signal.

Use a line voltage of 120 volts or make allowance for the variation.

Use a good high resistance voltmeter having a resistance of at least 1000 ohms per volt.

Take all DC readings on the 500 volt scale, except when an asterisk appears.

Read from indicated terminals to chassis base.

See location chart on Page 2 for position of terminals. AC voltages are indicated by italics.

#### VOLTAGE READING TUNER CHASSIS AT 120 V. LINE.

Type	Function	1	2	3	4	5	6	7	8
		0	0	0		0.8*	122	6.2	272
†† 6AB7	R. F. Amplister	0	0	0		0.8*	114	6.2	272
		0	0	0		1.8*	101	6.2	275
†† 6AC7	Modulator	0	0	0		1.8*	112	6.2	275
		0	6.2	101	101		0	0	101
6SA7	Oscillator	0	6.2	95	95		0	0	95
		0	0	0		1.4*	200	6.2	266
†† 6AB7	1st I. F. Amp.	0	0	0		1.4*	200	6.2	266
		0	0	0		1.2*	165	6.2	263
6AC7	2nd I. F. Amp.	0	0	0		1.2*	158	6.2	263
		0	0	0		3.5*	63	6.2	227
6SJ7	1st Limiter	0	0	0		0	35	6.2	45
		0	0	70	26	70	110	6.2	235†
6SJ7	2nd Limiter	0	0	47	45*	47	100	6.2	235†
		0	0					·6.2	
6H6	Discriminator	0	0					6.2	
	A. M. Detector	. 0		0		0	0.6‡	6.2	0
6SQ7	F. M. "Q"	0		0		0	0.5	6.2	0
		0	<del></del>	1.2*		0	113	6.2	0
6SQ7	1st Audio Amp.	0		1.2*		0	113	6.2	0
		0	86			86	1.0*	6.2	0
6SC7	Driver and Inverter	0	86			86	1.0*	6.2	0
		0	0	268	276		85	6.2	16
6L6G	Power Output (2)	0	0	268	276		85	6.2	16
			36.4		365		365		364
5U4G	Rectifier		36.4		365		<b>3</b> 65		364
		6.2	50		275	20	0		
6U5	Tuning Indicator	6.2	50		275	20	0		
	F. M. Tuning Ind.	0	. 0			0	0	6.2	0
6SC7	Amplisier	0	50			50	0.8*	6.2	0
		276	0	0	364			343	
	Speaker Socket	276	0	0	364			343	

#### †† WHERE THE FOLLOWING TUBES ARE USED IN THESE STAGES THE VOLTAGES LISTED APPLY

Tube	Function	1	2	3	4	5	6	7	8
		0	270	77	0	0		2.8*	6.2
<b>7V7</b>	Modulator	0	275	72	0	0		2.6*	6.2
		0	0	1.5 *		1.5*	145	6.2	270
6SG7	R. F. Amplisier	0	0	1.6*		1.6*	140	6.2	260
		0	0	2.0*	\	2.0*	135	6.2	260
6SG7	1st I. F. Amp.	0	0	2.0*		2.0*	132	6.2	260


Upper values are for Broadcast Band. Lower values are for F. M. Band.

\* Use 10 volt scale. All others except AC on 500 volt scale. 1000 ohm per voltmeter used on DC. † Value is for white dot showing on "Q" switch, with white dot not showing these values change to 100 volts. ‡ Value shown is for white dot showing; white dot not showing, value is zero. Rectifier filament voltage is 4.6 volts.

# POWER AMPLIFIER VOLTAGE TABLE


Tube	Function	1	2	3	4	5	6	7	8
6L6G	Output (2)	0	0	386	290	27	386	6.2	0
5U4G	Rectifier		390		335	•	335		390
5 <b>Y</b> 3G	Rectifier		292		275		275		292
Speaker Socket		276	0	0	364	364		343	

Rectifier Filament 4.75 Volts AC Rectifier Filament 4.75 Volts AC




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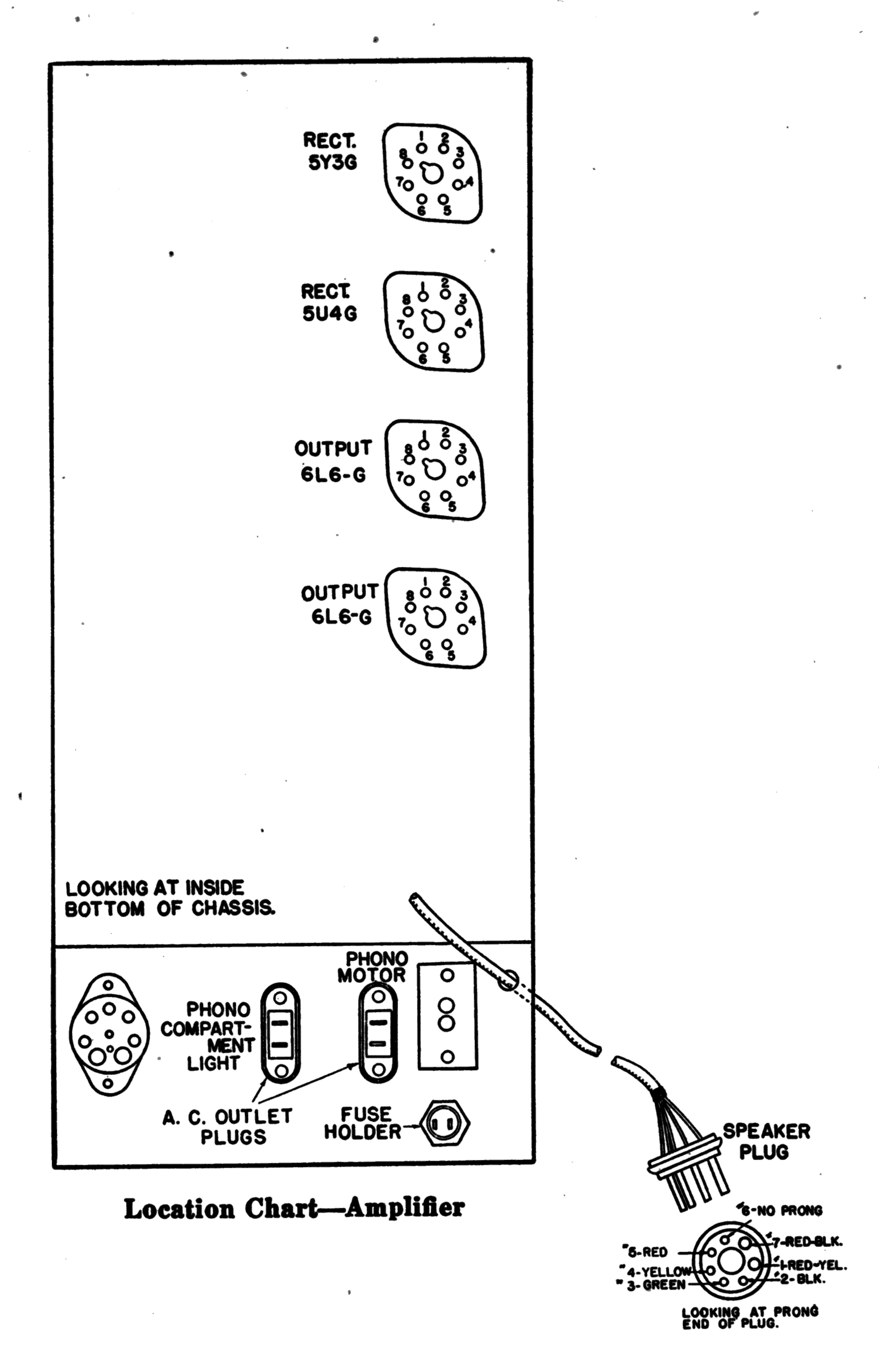
Wiring Diagram

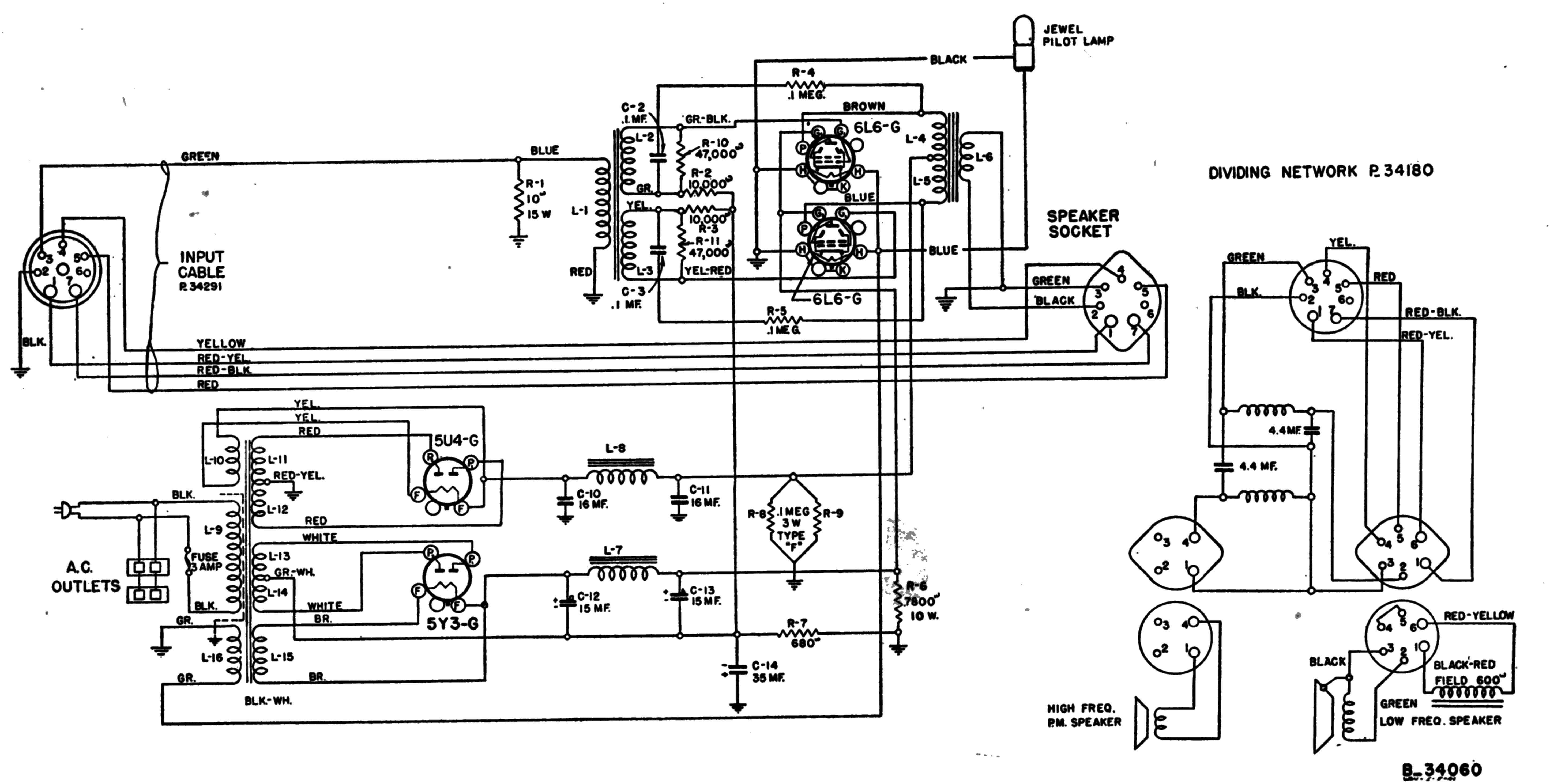


Wiring Diagram



Tuner Schematic





Amplisier Schematic

#### CONTINUTY TEST

NOTE: These receivers use either a 6AC7 or 7V7 tube in the modulator stage. (See wiring diagram on Page 6.)

Remove all tubes and disconnect all plugs from the chassis before checking continuity.

Use a good meter capable of measuring accurately up to several megohms.

The resistances given are often approximate, owing to electrolytic capacitors in the circuit. When this is the case, be sure to reverse the test leads and read the highest resistance.

Read from indicated terminals to chassis base unless otherwise specified.

See location chart on Page 2 for position and numbering of terminals.

				TERM	INALS OF	SOCKET	S		
Tube	Circuit	1	2	3	4	5	6	7	8
6SG7	R. F. Amp.	S	S	150¶	125¶	125¶	40,000¶	S.	40,0001
7V7	Modulator	S	40,000¶	200,000¶	·S	S	500,000¶	2000	S
6SA7	Oscillator	S	S	40,000¶	40,000¶	50,000¶	S	S	40,000¶
6SG7	1st I. F. Amp.	S	S	S	700,000¶	150¶	40,000¶	S	40,000¶
6AC7	2nd I. F. Amp. (F. M.)	S	S	S	500,000¶	150¶	30,0001	S	40,000¶
6SJ7	1st Limiter (F. M.)	S	S	S	20,0001	0	25,000¶	S	140,000¶
6SJ7	2nd Limiter (F. M.)	S	S	10,000¶	1.75M	10,000¶	15,000¶	S	150,000¶
6SQ7	Demodulator	·S	40,000¶	S	100,000¶	S	1.5M	S	S
6H6	Discriminator (F. M.)	S	S	600,000¶	600,000¶	600,0001	1500¶	S	600,0001
6SC7	Audio Driver-Invert.	S	300,000¶	17,000¶	2M	300,000¶	1500¶	S	S
6SQ7	Audio Amplifier	S	600¶	6000¶	1M	S	150,000¶	S	S
6SC7	Tuning Ind. Amp.	S	0	1M	1M	0	70001	S	S
6L6G	Output	S	S	40,000¶	40,000¶	500,000¶	300,0001	S	S
6L6G	Output	S	S	40,000¶	40,000¶	500,000¶	300,000¶	S	S
5U4G	Rectifier	0	40,000¶	0	25¶	0	25¶	0	40,0001
6U5	Tuning Indicator	S	1M	1M	40,000¶	S	S		

Symbols shown on chart are as follows: \( \text{\pinhons} = 0 \) ohms; \( \text{M-megohms} : \( \text{S-short} : 0 \) open.

Other tests not shown on chart: Antenna and ground terminals to chassis base:	F. M. band "Ope D. A. All bands "Ope D. All bands "Ope	n"
A. Broadcast band 8 Ohms Short Wave band "Short"	D. All bands "Ope Ground terminal "Shor	n"

# REPLACEMENT PARTS

Capacitors		Resistors—Continu	1ed
Piece Circuit		Piece Circuit	
No. Designation	Part	No. Designation	Part
	. 10 mmf. Capacitor	34051 R-1, 2, 3	Voltage Divider Resistor
24402 C-77, 78, 99 .	. 1 mf. Capcaitor	26333 R-12, 13, 14, 15,	
24405 C-70, 71, 73, 74	04 mf. Capacitor	16, 17	1,000 Ohm Resistor
24994 C-72, 76, 79 .	05 mf. Capacitor		22 Ohm Resistor
25130 C-00, 70	250 mmf. Capacitor	26323 R-9	150 Ohm Resistor
27101 C-109, 110 .	. 200 mmf. Capacitor		120 Ohm Resistor
27108 C-93, 94	Dual .05 mf. Capacitor		1,200 Ohm Resistor
27305 C-45, 48, 49, 50	, En me Canaditan	26335 K-ZU, ZI	1,500 Ohm Resistor
27999 C-52.53	50 mmf. Capacitor	26343 R-22	6,800 Ohm Resistor
28568 C-54	. 100 mmf. Capacitor	26341 R-23, 24, 25, 26.	4,700 Ohm Resistor
28859 RC-1.	. Compensator, A Band	•	15,000 Ohm Resistor
<del></del>	. 300 mmf. Capacitor	26349 R-32	22,000 Ohm Resistor 47,000 Ohm Resistor
29359 C-114, 115 . 29371 C-60, 61, 62, 92	. 75 mmf. Capacitor	26355 R-36	68,000 Ohm Resistor
29283 C-47	. 15 mmf. Capacitor	26366 R-37	.56 Megohm Resistor
<del></del>	25 mf. Capacitor	26356 R-38	
30322 C-69	005 mf. Capacitor	26357 R-40, 43, 44, 45,	
30854 C-63	002 mf. Capacitor		.1 Megohm Resistor
30567 C-19	. Aligning Capacitor, I Chit	26362 R-50, 51, 52, 53,	
31377 RC-3	. Compensator Short Wave	54	.27 Megohm Resistor
31467 C-55	. 120 mmf. Capacitor	26365 R-55, 56, 57, 58,	
31480 C-81, 82, 83, 84	ł,		.47 Megohm Resistor
85, 86, 87, 88, 89	Dual .01 mf. Capacitor	26369 R-61, 62, 39, 64, 65 71 A1 60	1 Megohm Resistor
90, 97, 98 31481 C-64, 65, 66, 67			.22 Megohm Resistor
91.96	01 mf. Capacitor		1.15 Megohm Resistor
33524 C-18	. Aligning Capacitor, 1 Unit	26342 R-75	5,600 Ohm Resistor
33560 RC-4, 5	. Compensator, A Band	33543 R-74	10,000 Ohm Resistor
33728 C-39, 40, 41, 42	, Variable Capacitor	34114 R-1	10 Ohm (W. W.) Resistor
43, 44 33736 RC-2	Compensator, F. M. Band	34113 R-6, 7	"B" Stick Resistor
33739 C-1. 107	Electrolytic Capacitor	34290 R-4, 5	.1 Megohm "E" Resistor
33754 C-101, 103 .	. 100 mmf. Capacitor	31523 R-8, 9	.1 Megohm "F" Resistor
33843 C-100, 102 .	. 605 mmf. Capacitor	Controls and Knob	S
33904 C-105	. 410 mmf. Capacitor	27628	Felt Washers for Knobs, per doz.
34050 C-2, 3, 4, 5 . 34052 C-6, 7, 8, 9 .	Electrolytic Capacitor	32130	Drive Cord for Variable Capacitor
34058 C-22	. 86 mmf. Capacitor	32156	Push Button for Stations
34059 C-20, 21	. Aligning Capacitor, 2 Unit	33364	Knob
34060 C-10, 11, 12, 1	3 - Alimeia	33583	
C-14, 15, 16, 1	7 Aligning Capacitor, 4 Unit Electrolytic Capacitor	<del>-</del> <del>-</del>	Off-On Switch and Volume
34116 C-12, 13, 14 . 24122 C-10, 11	Electrolytic Capacitor		Control
		Miscellaneous	
Coils, Transforme		32047	4-Prong Loop Socket
30332 L-46	Discriminator Choke		5-Prong Socket
32800 L-31	Coil Link		8-Prong Socket 8-Prong Socket
33729 T37.38	1st I. F. Transformer, F. M		8-Prong Socket
33730 L-39, 40 .	2nd I. F. Transformer, F. M	32048	AC Outlet Socket
22721 T_41.42	. 3rd I. F. Transformer, F. M		Phono Jack
33732 L-43, 44, 45 .	Discriminator, I. F. Transformer, F. M.		Phono Plug
33737 L-33, 34	1st I. F. Transformer, A. M.	33218	Power Supply Cord
33738 L-35, 36	2nd I. F. Transformer, A. M		Dial Pointer
33742 L-16, 17	R. F. Coil, A Band	34057	Dial Glass
33743 L-18, 19	Oscillator Coil, A Band	33510	Drive Assembly
33744 L-20, 21	R. F. Coil, Short Wave	34068	Eye Cable Assembly
33745 L-22	Oscillator Coil, Short Wave	29956	Pilot Lamp
33747 L-26, 27	. Antenna Coil, F. M	25156	Fuse
33748 L-28	. R. F. Coil, F. M	27958	Fuse Holder
33749 L-29, 30	Oscillator Coil, F. M	33943	Binding Post, D-D, DA-A.
	. 60 Cycle Power Transformer	33505	Binding Post, F. M., A. M
33963	Cone for P-33963 Speaker	33325	8-Prong Tube Socket
34053 L-47, 48, 49 .	. Output Transformer	30152	7-Prong Tube Socket
34055 L-7	. "B" Choke	24507	A. C. Supply Cord
34294 L-25	. Filter Assembly Low Bass	34291	Cable Assembly
34510 L-14, 15 34080 L-9, L-16 .	. Antenna Com, A Dand		Socket Assembly
34000 L-7, L-10 . 30233 L-7	. Filter Choke Assembly	34170 · · · · · · · · · · · · · · · · · · ·	Dividing Network Assembly
27604 L-8	. Filter Choke Assembly	33859	Loop Assembly
34086 L-1, 2, 3.	Input Transformer	34233	Phono Network Assembly
34088 L-4, 5, 6	Output Transformer	Tools and Accesso	ries
33765	. Hil-r Speaker	SD29	Phillips No. 1 Screwdriver
	• • • • • • • • • • • • •	24608	Aligning Tool
Resistors		28601	Cabinet Polish
26345 R-27, 28, 29, 3	),	2070Z	Furniture Touch-up Kit Headphone Package Assembly .
73.	. 10,000 Ohm Resistor		