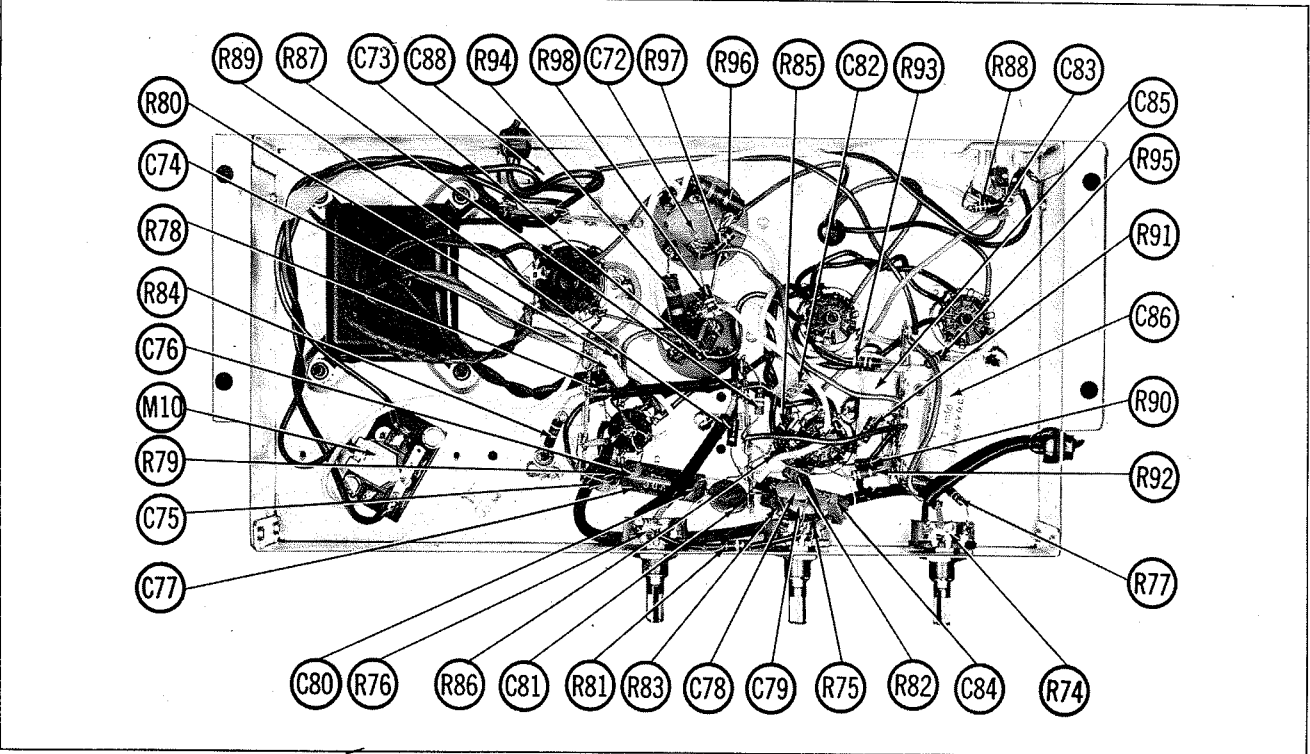


RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6DT8	†1200Ω	68K	1500Ω	.1Ω	0Ω	†1200Ω	0Ω	68Ω	0Ω
V2	12AT7	†1200Ω	10K	.1Ω	0Ω	0Ω	†1200Ω	470K * 1.7meg	560Ω	.1Ω
V3	6AU6	.2Ω	0Ω	0Ω	.1Ω	†1200Ω	†40K	150Ω		
V4	6BE6	22K	.7Ω	.1Ω	0Ω	†2100Ω	†23K	1.5meg		
V5	6BA6	.7Ω	0Ω	0Ω	.1Ω	†1200Ω	†34K	68Ω		
V6	6AU6	350K	0Ω	0Ω	.1Ω	†20K	†20K	0Ω		
V7	6AL5	130K	90K	0Ω	.1Ω	0Ω	0Ω	90K		
V8	ECC83 12AX7	†115K	470K	1000Ω	.1Ω	.1Ω	†230K	470K	2200Ω	0Ω
V9	12AX7	300K	1meg	1200Ω	.1Ω	.1Ω	†170K	1.1meg	150K	0Ω
V10	6BQ5	470K	470K	130Ω	.1Ω	0Ω	NC	†345Ω	NC	†125Ω
V11	6BQ5	470K	470K	130Ω	.1Ω	0Ω	NC	†335Ω	NC	†125Ω
V12	GZ34 5AR4	NC	¶	NC	36Ω	NC	33Ω	NC	¶	
V13	6AV6	470K	2200Ω	.1Ω	.1Ω	0Ω	0Ω	††330K		
V14	12AX7	300K	1meg	1200Ω	.1Ω	.1Ω	†170K	1.1meg	150K	.1Ω
V15	6BQ5	470K	470K	130Ω	.1Ω	.1Ω	NC	†320Ω	NC	†130Ω
V16	6BQ5	470K	470K	130Ω	.1Ω	.1Ω	NC	†330Ω	NC	†130Ω
V17	5Y3GT	NC	¶	NC	97Ω	NC	105Ω	NC	¶	

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT
ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED
* MEASURED IN "AM" POSITION
† MEASURED IN "FM-AFC" POSITION
◆ MEASURED FROM PIN 8 OF V9
† MEASURED FROM PIN 8 OF V12
■ MEASURED FROM PIN 8 OF V14
†† MEASURED FROM PIN 8 OF V17
NC NO CONNECTION



AMP CHASSIS—BOTTOM VIEW

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
Output of signal generator should be no higher than necessary to obtain an output reading. Suggested alignment tools: A1 thru A4 and A7 thru A14.....GENERAL CEMENT #5087, 8727 WALSCO #2515 A5 and A6.....GENERAL CEMENT #5000, 5003, 5014, 5015, 5016, 8276, 8290 WALSCO #2512, 2515, 2522, 2523, 2525, 2537 A15 and A16.....GENERAL CEMENT #8271, 8274 WALSCO #2524, 2527	

AM ALIGNMENT

Turn loudness fully clockwise, bass and treble to mid-range.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. .1mfd	High side to pin 7 (grid) of 6BE6 (V4). Low side to chassis.	455KC (400% Mod)	AM	Tuning gang fully open	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Loop	1620KC	"	"	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.	"	1400KC	"	1400KC	"	A6	Adjust for maximum output.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Turn loudness to minimum, bass and treble to mid-range.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4. Two 150Ω Carbon Resistors	Across FM antenna terminals with 150Ω in each lead.	10.7MC (Unmod)	FM	Tuning gang fully open	DC probe thru 10K to point Ⓢ. Common to chassis.	A7, A8, A9, A10, A11, A12, A13	Adjust for maximum deflection.
5. "	"	"	"	"	DC probe to point Ⓢ. Common to chassis.	A14	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120v sawtooth voltage in scope for horizontal deflection.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
4. Two 150Ω Carbon Resistors	Across FM antenna terminals with 150Ω in each lead.	10.7MC (450KC Swp)	FM	Point of non-interference near high freq. end of dial.	Vert. Amp. to point Ⓢ. Low side to chassis.	A7, A8, A9, A10, A11, A12, A13	Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
5. "	"	"	"	"	Vert. Amp. to point Ⓢ. Low side to chassis.	A14	Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A7 for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
6. Two 150Ω Carbon Resistors	Across FM antenna terminals with 150Ω in each lead.	98MC (Unmod)	FM	98MC	DC probe thru 10K to point Ⓢ. Common to chassis.	A15, A16	Adjust for maximum deflection. After adjusting, cement cores.

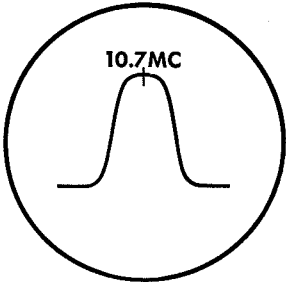


FIG. 1

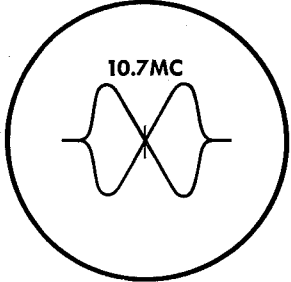
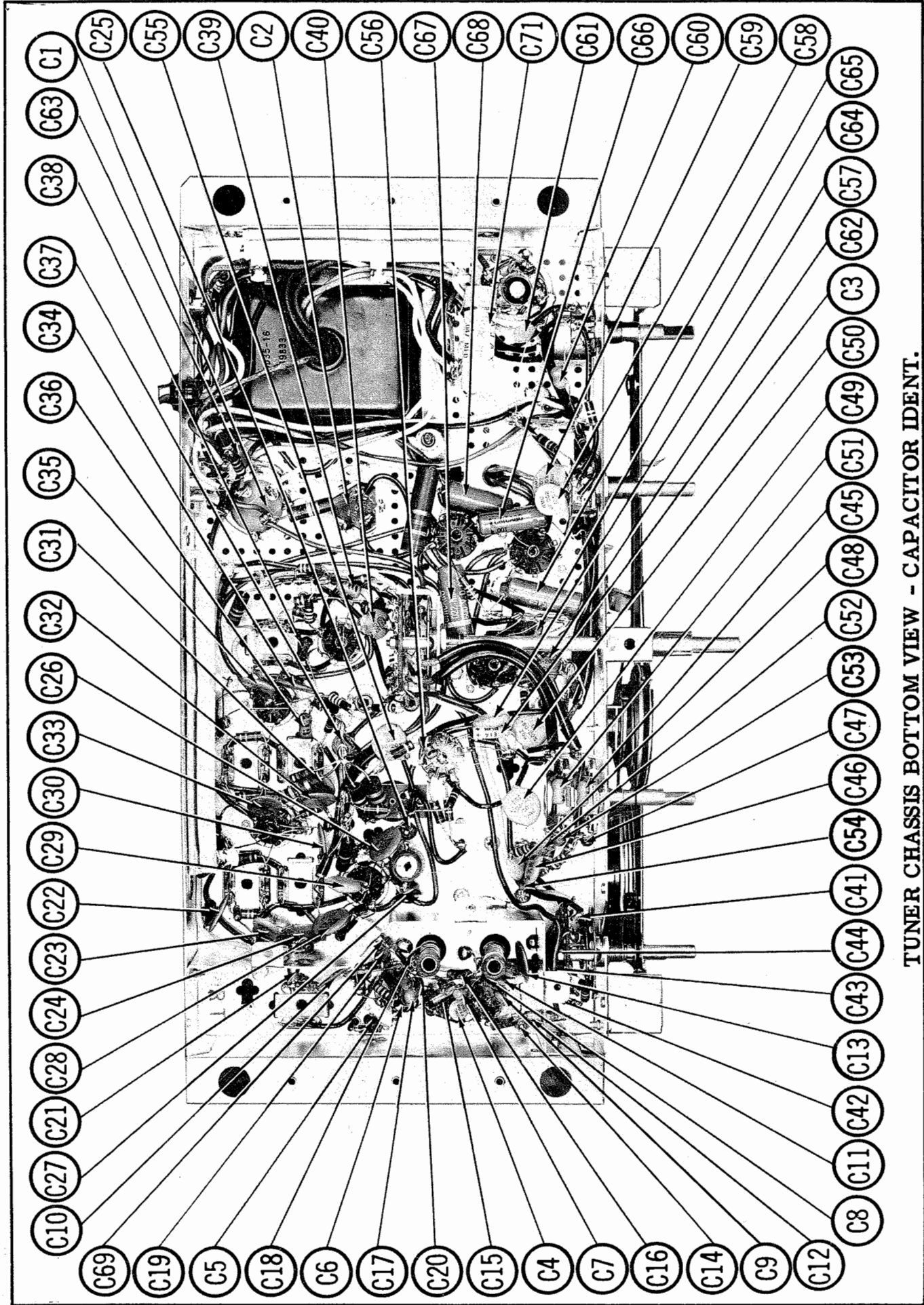
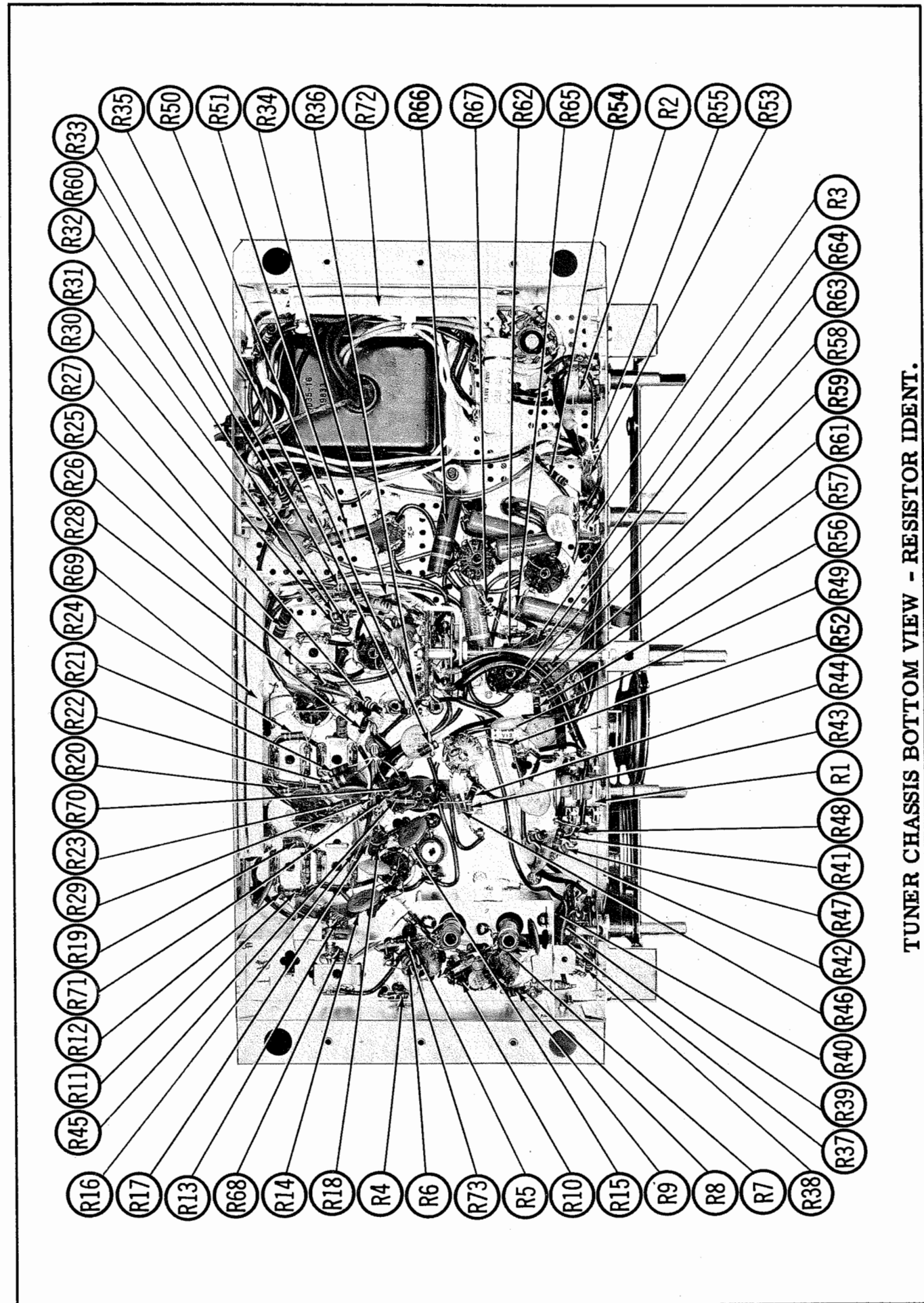


FIG. 2

ADMIRAL MODELS 55642, 55643, 55644, 55649, 55654, 55671, 632, 633, 634, 642, 643, 644, 649, 654, 662, 663, 664, 671 (Ch. 514A, 12B1, 12B1A)



TUNER CHASSIS BOTTOM VIEW - CAPACITOR IDENT.



TUNER CHASSIS BOTTOM VIEW - RESISTOR IDENT.

TUNER PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	FM RF Amp. - FM Mixer	6DT8	
V2	1st FM Osc. - FM AFC	12AX7	
V3	1st FM IF Amplifier	6AU6	
V4	2nd FM Converter	6BE6	
V5	2nd FM-1st AM IF Amp.	6BA8	
V6	FM Limiter-AM Det. -AFC	6AU6	
V7	Discriminator	6AL5	

Ⓛ Some versions may use 6L34/6BQ5 in this application

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	NOTES
C1A	40 350	67D7-37	AFH3-29-50	D0034	FP375.5	TMQ-120
C1B	40 350					
C1C	40 350					
C2A	40 300	67D7-36	AFH3-138	B0652	FP146	TWS-37
C2B	40 300				TC39	TD-50-50
C3	10 6	67B35-7	PWE6010	NLW10-6	TT6X10	ML10-6

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	NOTES
C4A10000						
C5	1000					
C6	1000					
C7	1000					
C8	1000					
C9	1000					
C10	10000					
C11	10					
C12	1000					
C13	10000					
C14	1000					
C15	1000					
C16	2					
C17	220					
C18	17					
C19	1000					
C20	1000					
C21	1000					
C22	10000					
C23	10000					
C24	5000					
C25	10000					
C26	10000					
C27	47					
C28	100000					
C29	100000					
C30	100000					
C31	100000					

CAPACITORS (cont)

ITEM No.	RATING	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	NOTES
C32	10000					
C33	5000					
C34	10000					
C35	5000					
C36	220					
C37	2000					
C38	47					
C39	220					
C40	5000					
C41	10000					
C42	1000					
C43	1000					
C44	1000					
C45	220					
C46	4700					
C47	100					
C48	4700					
C49	20000					
C50	20000					
C51	220					
C52	4700					
C53	100					
C54	4700					
C55	20000					
C56	100					
C57	20000					
C58	2000					
C59	2000					
C60	220					
C61	1500					
C62	20000					
C63	20					
C64	20000					
C65	1022					
C66	1001					
C67	1022					
C68	1001					
C69	4.0					
C70	1000					
C71	1047					

Ⓛ C23 and C24 may be a dual 4000mmf in this application (Part #65A17-1)
Ⓛ C32 and C33 may be a dual 4000mmf in this application (Part #65A17-1)
Ⓛ C34 and C35 may be a dual 4000mmf in this application (Part #65A17-1)
Ⓛ Some versions may use 5000mmf in this application (Part #65D10-1)
Ⓛ Some versions may use 10mfd in this application (Part #64C25-32)
Ⓛ Not used in some versions

CONTROLS

ITEM No.	RATING	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	NOTES
R1A	500K					
R2A	1Meg					
R3A	1Meg					

Ⓛ "STA-LOC" equivalent: FA55DT334, RU55DT334, CS8500
Ⓛ Taps @ 125K and 330K.

TUNER PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	NOTES
R4	68Ω					
R5	10Ω					
R6	68K					
R7	10K					
R8	470K					
R9	100Ω					
R10	500Ω					
R11	75K 5%					
R12	100Ω					
R13	39K					
R14	50Ω					
R15	22K					
R16	22K					
R17	75K 5%					
R18	75K 5%					
R19	10K					
R20	10K					
R21	10K					
R22	32K					
R23	32K					
R24	32K					
R25	22K					
R26	22K					
R27	100K					
R28	300K					
R29	100K 5%					
R30	100K 5%					
R31	100K 5%					
R32	330K					
R33	47K					
R34	100K					
R35	390K					
R36	390K					
R37	68K					
R38	180K					
R39	68K					

Note 1. Not used in some versions.
Note 2. Initial production versions use 15K 1W in this application (Part #60B14-123).
Note 3. Some versions may use 39K 2W in this application (Part #60B20-398).
Note 4. Some versions may use 390K in this application (Part #60B8-394).
Note 5. Some versions may use 100K in this application (Part #60B8-104).

COILS (RF-IF)

ITEM No.	USE	ADIRAL PART No.	Gromer PART No.	Meissner PART No.	Miller PART No.	Notes
L1	FM Ant. Trans.	700B35				
L2	RF Choke	73B31-6				
L3	FM RF Coil	69B233-2				
L4	FU. Choke	73B31-5				
L5	Cathode Choke	69B233-1				
L6	FM Osc. Coil	73B31-5				
L7	RF Choke	69B233-1				
L8	Loopstick	69B233-1				
L9	Ant. Trans.	69B233-1				
L10	1st FM IF Trans.	72D28-72				
L11	1st FM IF Trans.	72D28-70				
L12	2nd FM IF Trans.	72D28-68				
L13	2nd FM IF Trans.	72D28-61				
L14	3rd FM IF Trans.	72D28-56				
L15	Discriminator	72D28-73				
L16	FIL Choke	73A2-14				
L17	FIL Choke	73A2-14				

* Parallel with line resistor

* Diagonal pri. winding

TRANSFORMER (POWER)

ITEM No.	RATING	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	NOTES
T1	117V Ⓛ					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	NOTES
T2	800Ω 16Ω CT					

FUSES

ITEM No.	TYPE	RATING	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	NOTES
M1	2" of #27 wire						

PHONO CARTRIDGE

ITEM No.	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	REMARKS
M2	408C34-1 Ⓛ				

PHONO NEEDLE

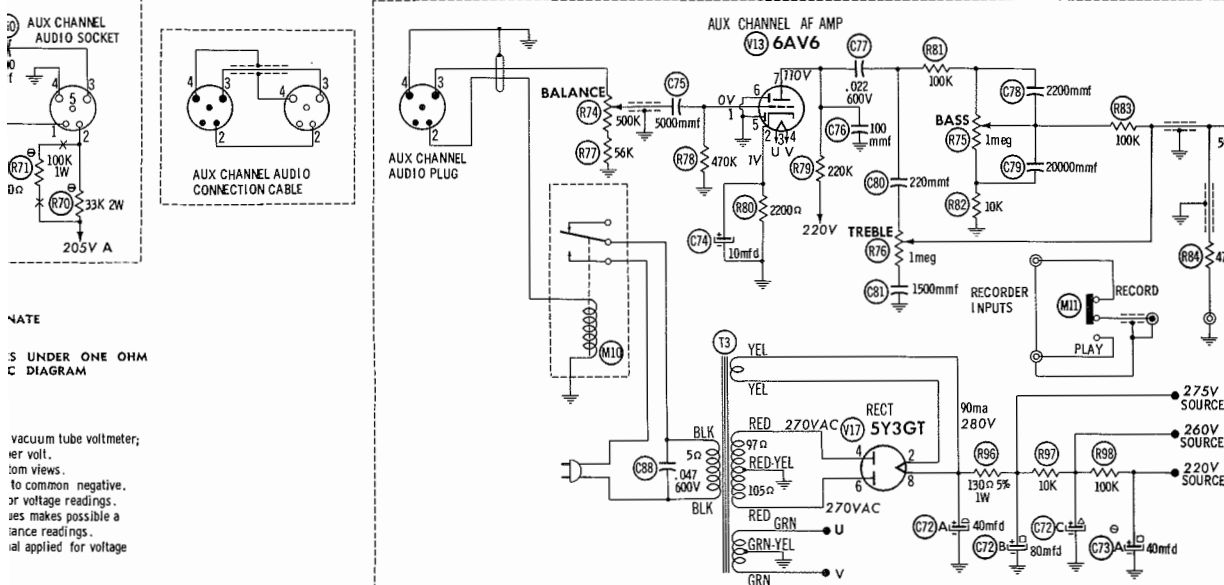
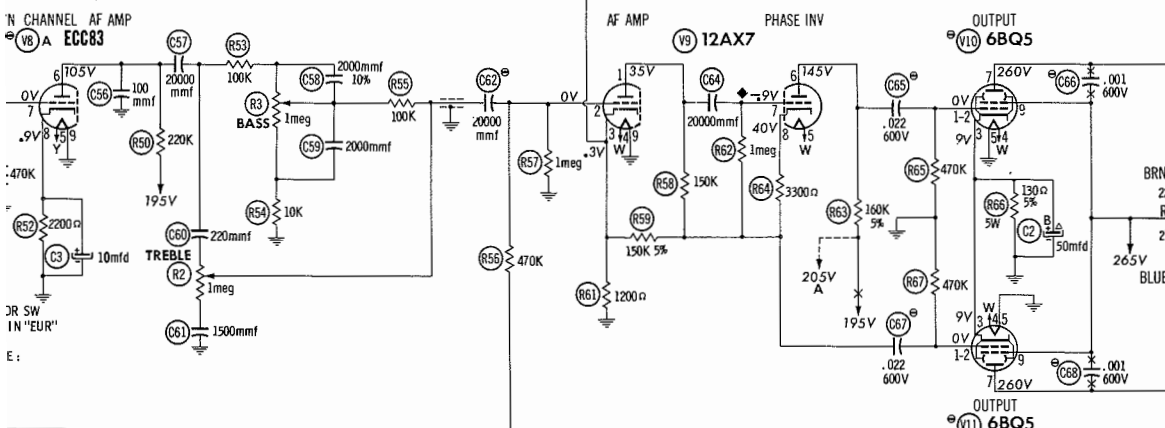
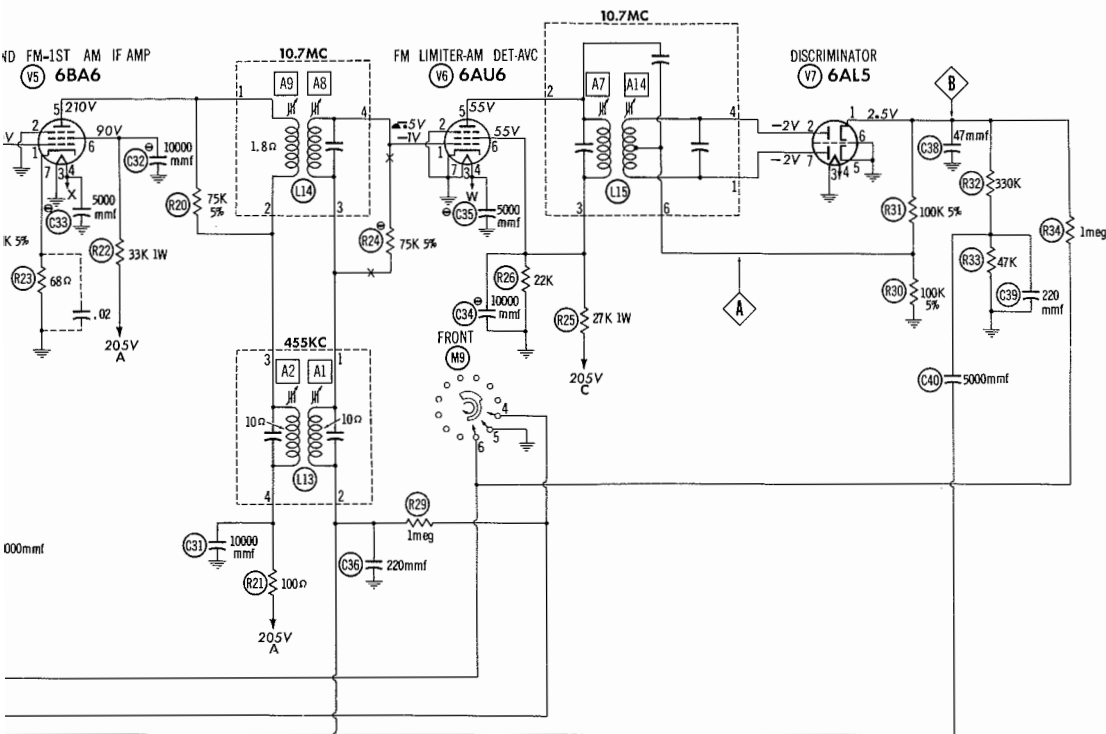
(FOR REPLACEMENT IN ORIGINAL EQUIPMENT CARTRIDGE)

ITEM No.	ADIRAL PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	REPLACEMENT DATA	REMARKS
M3	98C95-1 or 98C95-2				

* Includes cartridge ↑ Jewel • Diamond

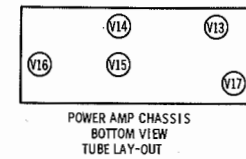
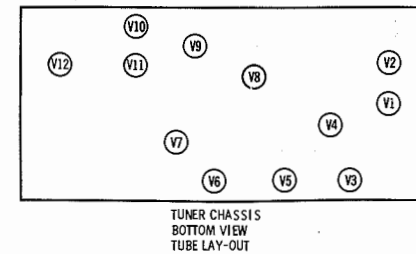
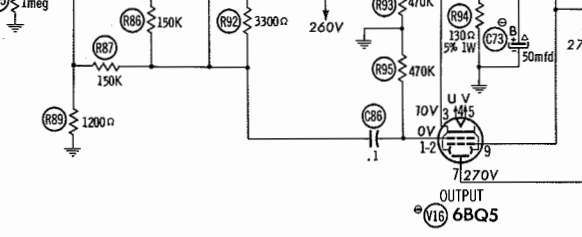
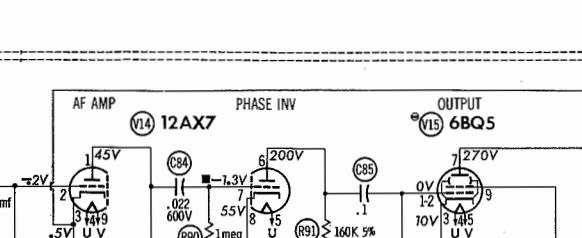
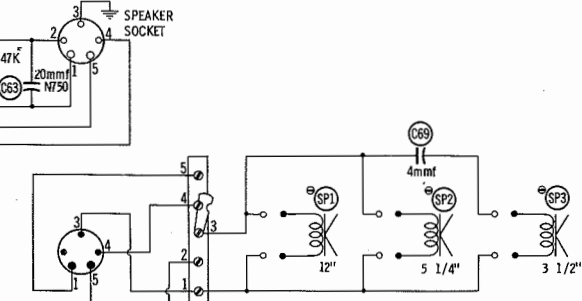
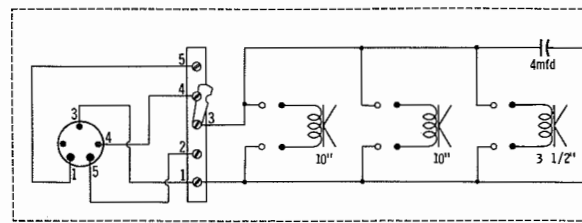
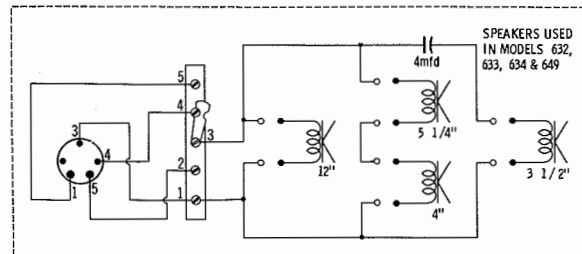
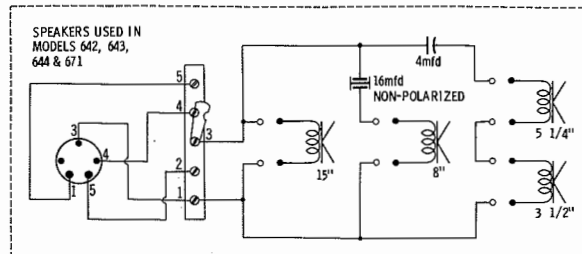
MISCELLANEOUS

ITEM No.	PART NAME	ADIRAL PART No.	NOTES
M4	Lamp	81A1-8	#1847 (Alternate #47)
M5	Lamp	81A1-8	#1847 (Alternate #47)
M6	Lamp	81A1-8	#1847 (Alternate #47)
M7	Tuning Cap.	68B71-1	not used in all versions
M8	Switch	77B86-1	AM, 2 gang (Ant. 12-35mmf, Osc. 8-104mmf)
M9	Switch	77B84-1	Record Compensator (4 Position, Rotary Water Type) Selector (5 Position, Rotary Water Type)



NOTE
S UNDER ONE OHM
C DIAGRAM

vacuum tube volt-
meter.
er volt.
om views.
to common negative.
or voltage readings.
ues makes possible a
ance readings.
al applied for voltage



ADMIRAL MODELS S5642, S5643, S5644, S5649,
S5654, S5671, 632, 633, 634, 642, 643, 644, 649,
654, 662, 663, 664, 671 (Ch. 5T4A, 12B1, 12B1A)

ITEM No.	USE	TYPE	NOTES
V13	Aux. Channel AF Amp.	6AV6	
V14	Aux. Channel AF Amp. - Aux. Channel Phase Inv.	12AX7	

① Some versions may use EL84/6BQ5 in this application

ELECTROLYTIC CAPACITORS

REPLACEMENT DATA			
ITEM No.	RATING	ADMIRAL PART No.	NOTES
C72A	CAP. 350	6TD7-37	
C72B	40	AFH3-28-50	
C72C	40	AFH3-138	
C73A	40	6TC7-36 ①	
C74	40	PW86010	

① Alternate Part #6TD7-38

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

REPLACEMENT DATA			
ITEM No.	RATING	ADMIRAL PART No.	NOTES
C75	5000	6ED10-188	
C76	100	6ED10-188	
C77	102	6ED10-188	
C78	2000	6ED10-188	
C79	220	6ED10-188	
C80	220	6ED10-188	
C81	500	6ED10-188	
C82	5000	6ED10-188	
C83	35	6ED10-188	
C84	0.022	6ED10-188	
C85	1	6ED10-188	
C86	1	6ED10-188	
C87	4.0	6ED10-188	
C88	0.047	6ED10-188	

CONTROLS

REPLACEMENT DATA			
ITEM No.	RATING	ADMIRAL PART No.	NOTES
R74A	500K	75D1-119	
R75A	1Meg	75D1-116	
R76A	1Meg	75D1-116	

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

REPLACEMENT DATA			
ITEM No.	RATING	ADMIRAL PART No.	NOTES
R77	56K	60B8-563	
R78	470K	60B8-474	
R79	220K	60B8-224	
R80	2200K	60B8-222	
R81	100K	60B8-104	
R82	10K	60B8-103	
R83	100K	60B8-104	
R84	470K	60B8-474	
R85	1Meg	60B8-105	
R86	150K	60B8-154	
R87	150K	60B8-154	

REPLACEMENT DATA			
ITEM No.	RATING	ADMIRAL PART No.	NOTES
T3	SEC. 1 540 VCT SEC. 2 5V @ 2A SEC. 3 6.3 VCT @ 1.5A	80C66-1 ①	

TRANSFORMER (AUDIO OUTPUT)

REPLACEMENT DATA			
ITEM No.	IMPEDANCE	ADMIRAL PART No.	NOTES
T4	3000 ②	79D56-13	

SPEAKER

REPLACEMENT DATA			
ITEM No.	TYPE	ADMIRAL PART No.	NOTES
SP1	12"	78C153-1 ①	
SP2	5 1/4"	78C150-3 ②	
SP3	3 1/2"	78C148-1 ③	
SP4	3 1/2"	78C150-3 ④	
SP5	5 1/4"	78C148-1 ⑤	
SP6	3 1/2"	78C150-3 ⑥	

MISCELLANEOUS

REPLACEMENT DATA			
ITEM No.	PART NAME	ADMIRAL PART No.	NOTES
M10	Relay	83B22-1	
M11	Switch	77A20-3	
M12	Switch	408A1	
M13	Motor	407D29	

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

REPLACEMENT DATA			
NAME	PART NO.	DESCRIPTION	
Knob	33C299-1	Tuning, Models 632, 633, 634, 642, 643, 644	
Knob	33B299-1	Tuning, Models 649, 654, 662, 663, 664, 671	
Knob	33C254-5	Volume-On-Off, Treble, Bass, Loudness, Record Compensator	
Knob	33C254-17	Selector	
Knob	403A63-4	Control, Record Changer	
Knob	33C254-13	Balance, (Auxiliary Chassis)	
Knob	33C254-14	Bass (Auxiliary Chassis)	
Knob	33C254-15	Treble (Auxiliary Chassis)	

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
Power Cord Use BELDEN No. 8524 (Stranded) Available in Ten Colors
Low-Loss Shielded Lead (Interconnecting) Use BELDEN No. 1725-K (7 1/2 Ft. Length)
Phone Pick-up Arm Cable Use BELDEN No. 8430 (Two Conductor - Twisted)

FOLDER SET 447



ADMIRAL MODELS SS642, SS643, SS644, SS649, SS654, SS671, 632, 633, 634, 642, 643, 644, 649, 654, 662, 663, 664, 671 (Ch. 5T4A, 12B1, 12B1A)

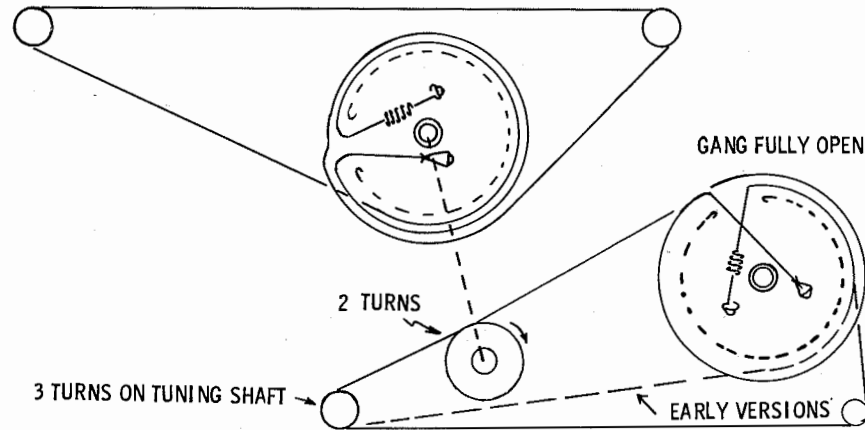


ADMIRAL MODELS SS642, SS643, SS644, SS649, SS654, SS671, 632, 633, 634, 642, 643, 644, 649, 654, 662, 663, 664, 671 (Ch. 5T4A, 12B1, 12B1A)

TRADE NAME	Admiral Models 632, 633, 634, 642, 643, 644, 654, 671 (Receiver Chassis 12B1) 649 (Receiver Chassis 12B1 or 12B1A) 662, 663, 664 (Receiver Chassis 12B1, Amp. Chassis 5T4A) SS642, SS643, SS644, SS649, SS654, SS671 (Amp. Chassis 5T4A)	
MANUFACTURER	Admiral Corp., 3800 W. Cortland St., Chicago 47, Illinois	
TYPE SET	AC Operated FM-AM Receiver With 4 Speed Automatic Record Changer (Models 662, 663, 664 Include Amplifier for Stereo Operation; Other Models may use SS series for Stereo Conversion)	
TUBES	RECEIVER: 12	AMP: 5
POWER SUPPLY	110 - 120 Volts AC, 60 Cycles	RATING 94 Watts, .85 Amp. @117 Volts AC (Chassis 12B1) 68 Watts, .65 Amp. @117 Volts AC (Chassis 5T4A)
TUNING RANGE - BROADCAST	530 - 1620KC	FREQ. MOD. 88-108MC

RECORD CHANGERS RC688-16S, RC688-17S, RC688-18S MAY BE USED. FOR SERVICE INFORMATION - SEE SIMILAR ADMIRAL RC607-1 - PHOTOFACT SET 398 FOLDER 7

DIAL CORD STRINGING



HOWARD W. SAMs & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of J74

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1959 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

ADMIRAL MODELS SS642, SS643, SS644, SS649, SS654, SS671, 632, 633, 634, 642, 643, 644, 649, 654, 662, 663, 664, 671 (Ch. 5T4A, 12B1, 12B1A)

SET 447 FOLDER 4

