

PHOTOFACT® Folder

with CIRCUITRACE®

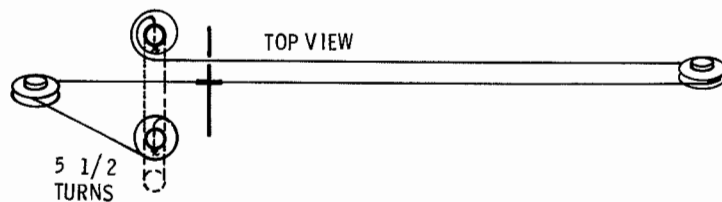
ADMIRAL CHASSIS  
3PA7, 7N2, 7N2A

MODEL Y4461

TRADE NAME Admiral Models Y4461, Y4462, Y4463, Y4481, Y4482, Y4483, Y4499 (Tuner Ch. 7N2, Amp. Ch. 3PA7)  
Y4461A, Y4462A, Y4463A, Y4481A, Y4482A, Y4483A, Y4499A (Tuner Ch. 7N2A, Amp. Ch. 3PA7)  
MANUFACTURER Admiral Sales Corp., National Service Div., 903 Morrissey Dr., P. O. Box 845, Bloomington, Ill.  
TYPE SET AC Operated 7 Tube AM-FM Tuner, 3 Tube Stereo Amplifier With 4 Speed Automatic Record Changer  
POWER SUPPLY 105-120 Volts AC 60 Cycle RATING 78 Watts, .74 Amp. @ 117 Volts AC  
TUNING RANGE-BROADCAST 535-1620KC FREQ. MOD. 88-108MC

FOR SERVICE INFORMATION ON ADMIRAL RECORD CHANGER RC7D0 B-28 W SEE ADMIRAL RC7 SERIES-PHOTOFACT  
SET 529 FOLDER 3

## DRIVE CORD STRINGING



HOWARD W. SAMS &amp; CO., INC. Indianapolis 6, Indiana

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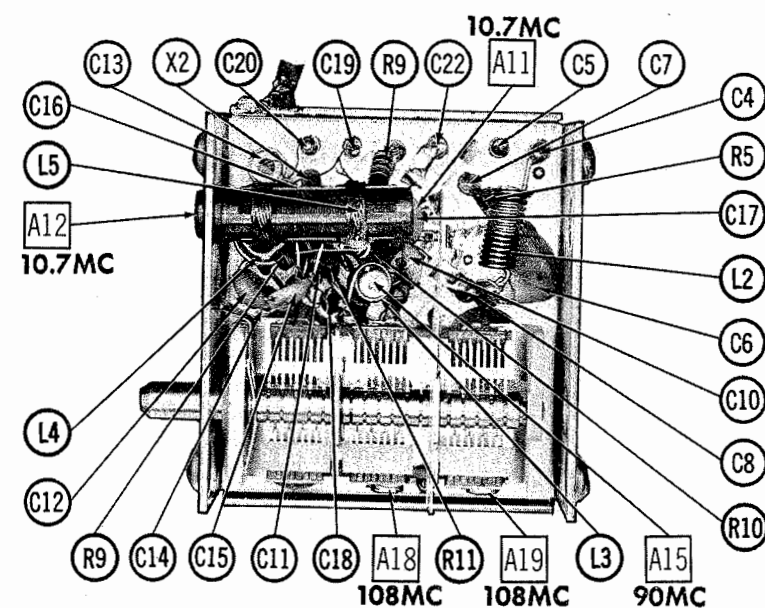
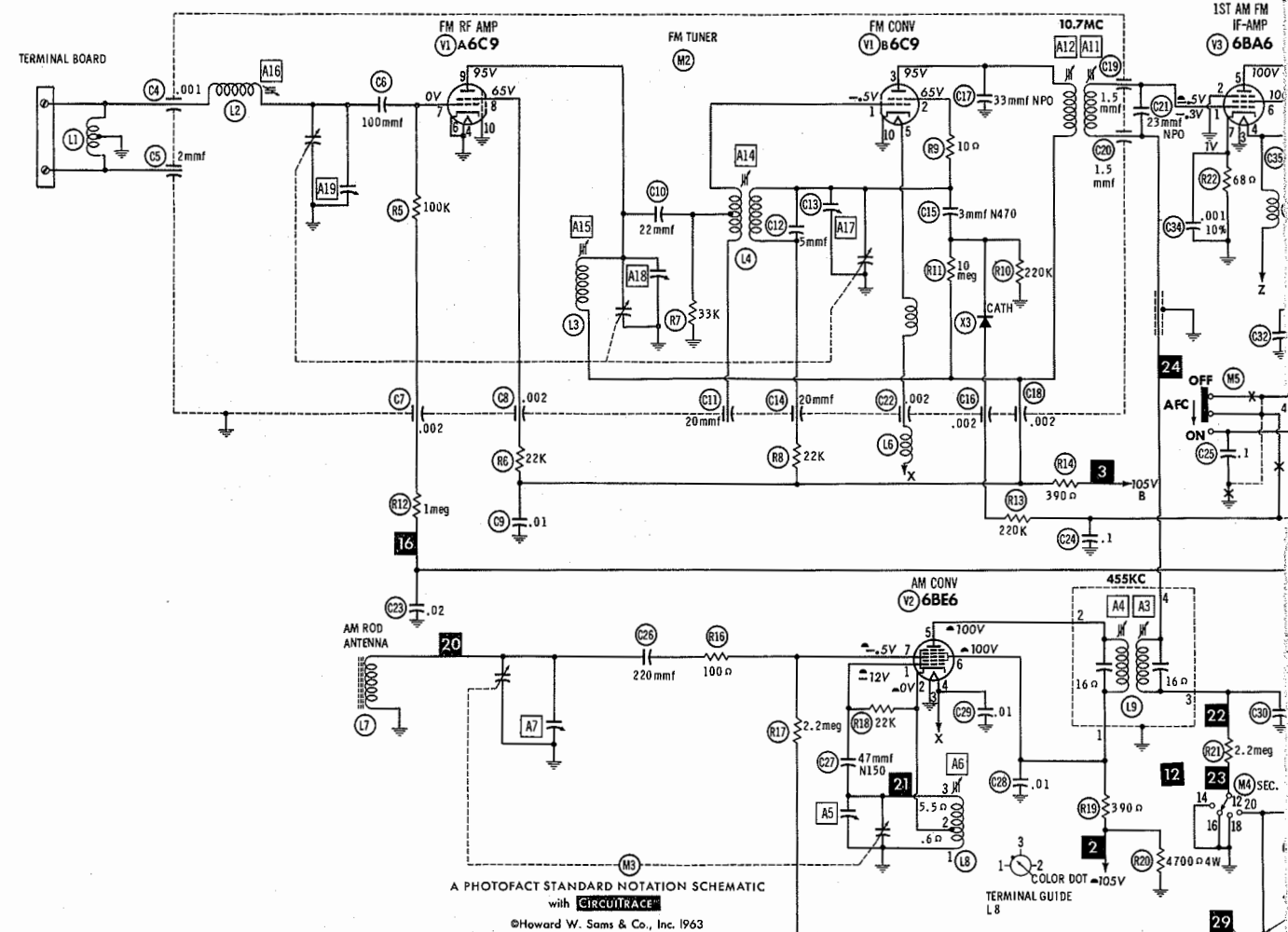
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DATE 7 -63

SET 644 FOLDER 4

ADMIRAL CHASSIS  
3PA7, 7N2, 7N2A

SET 644 FOLDER 4



C77

R57

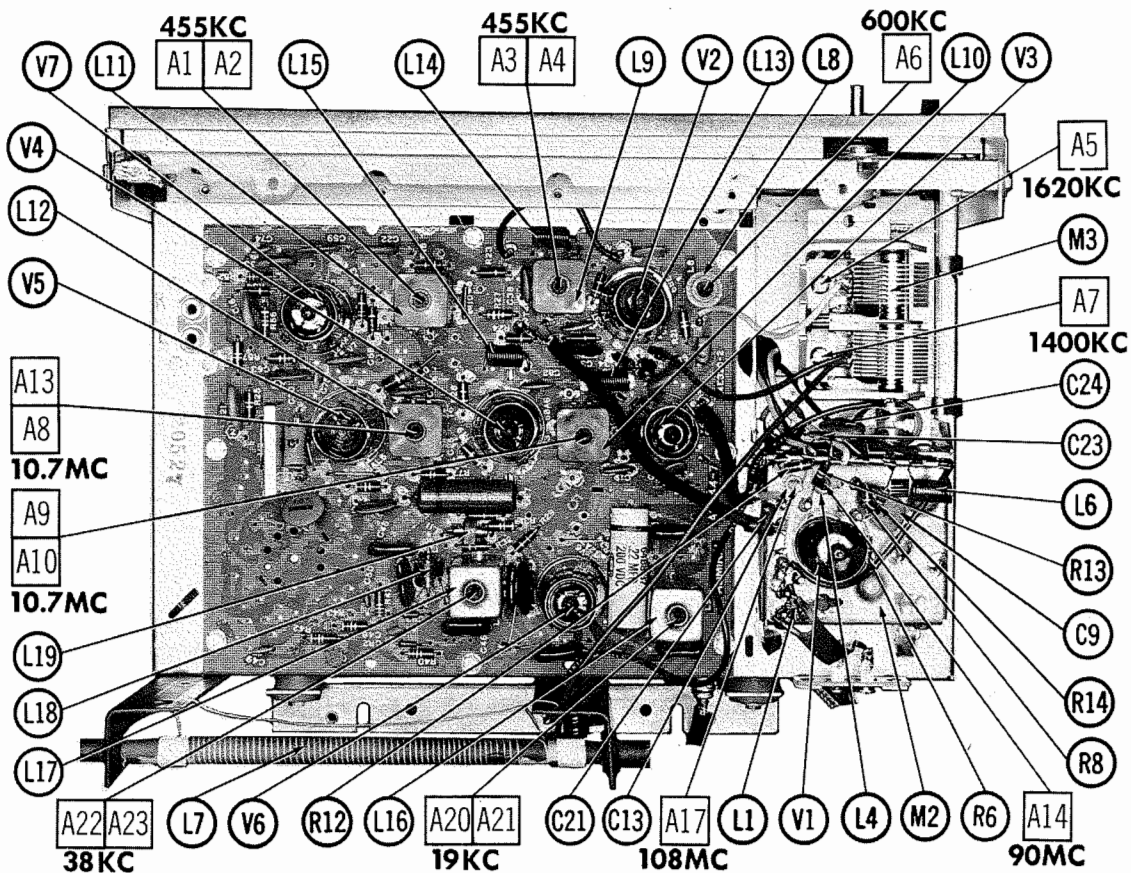
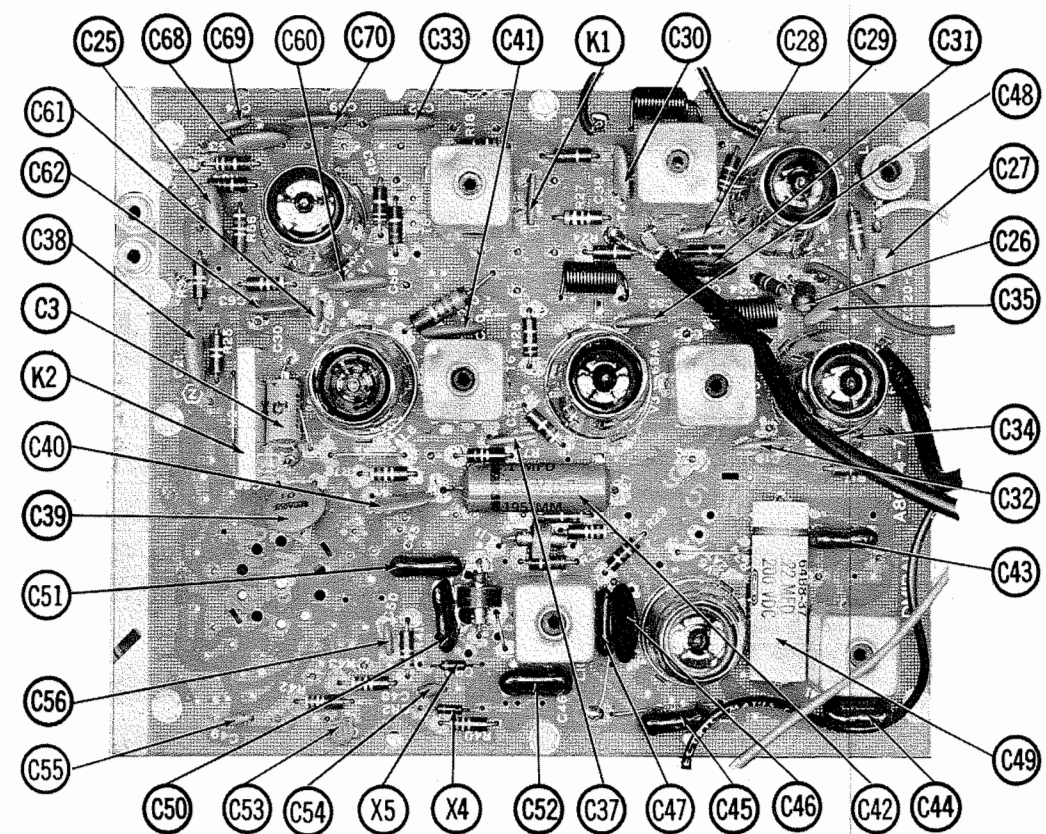
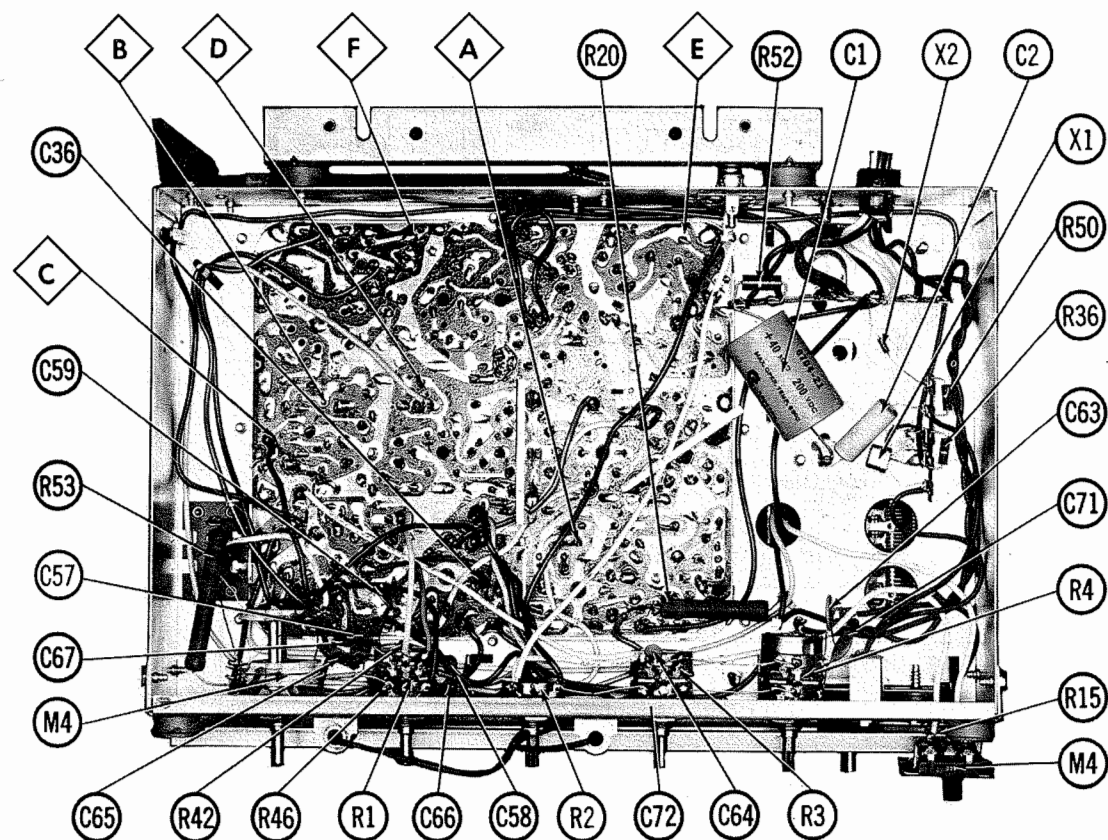
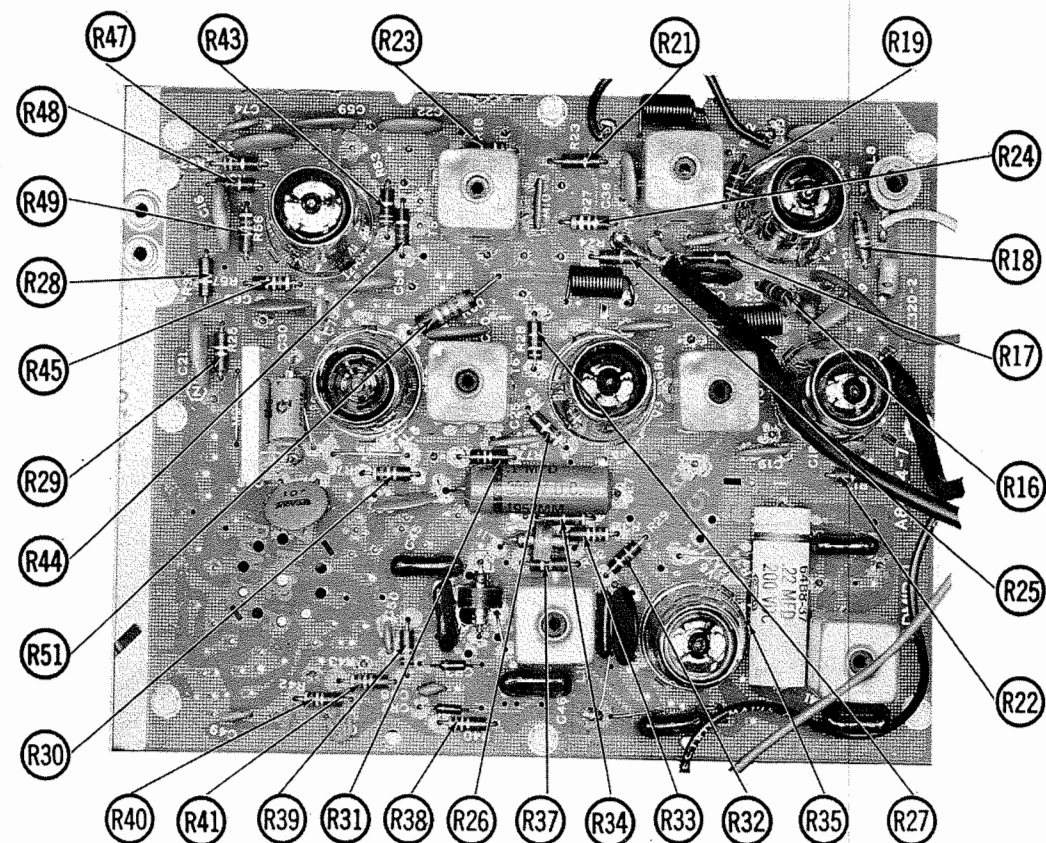
R58

R56

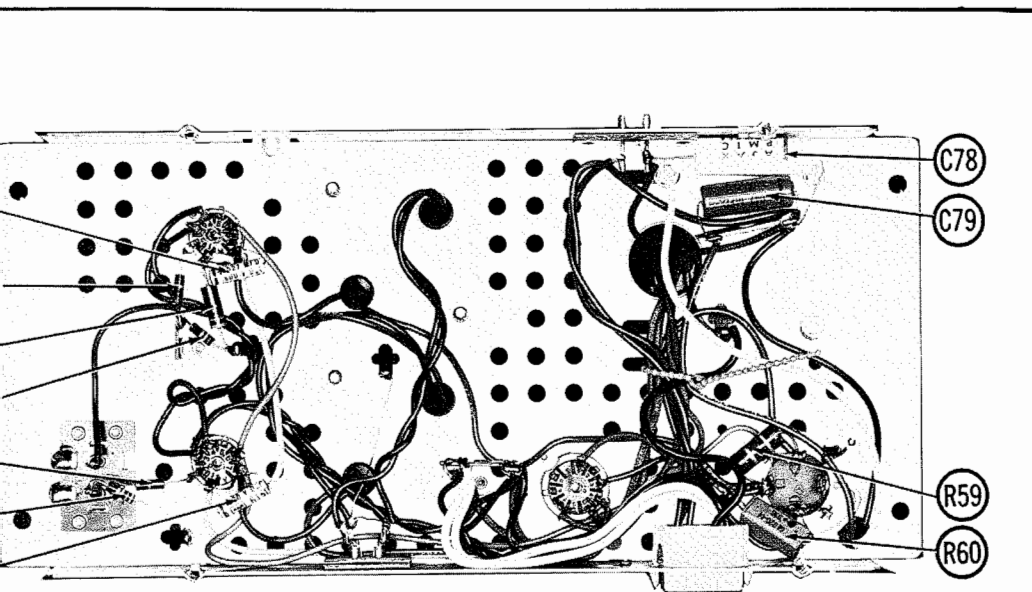
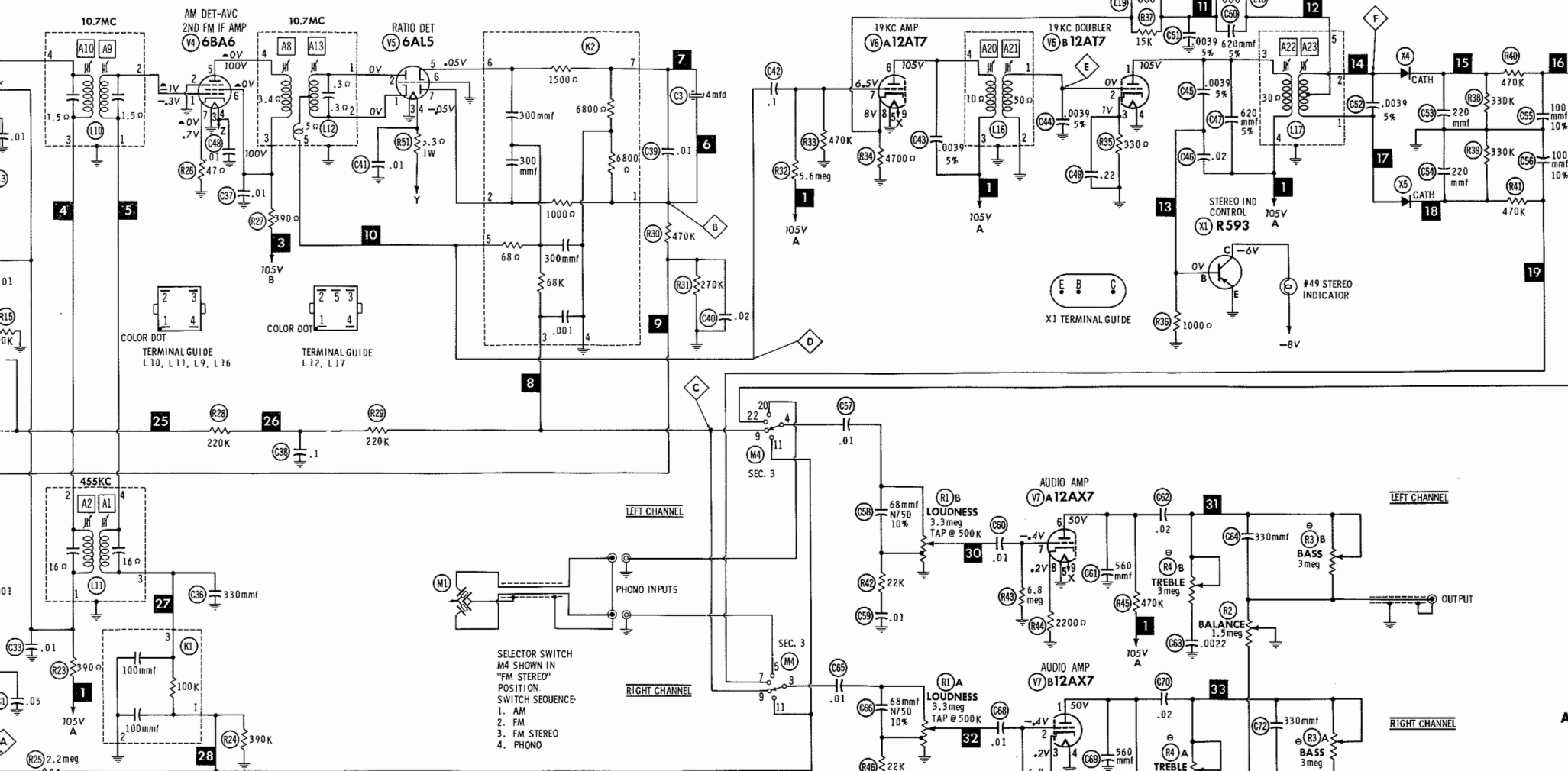
R55

R54

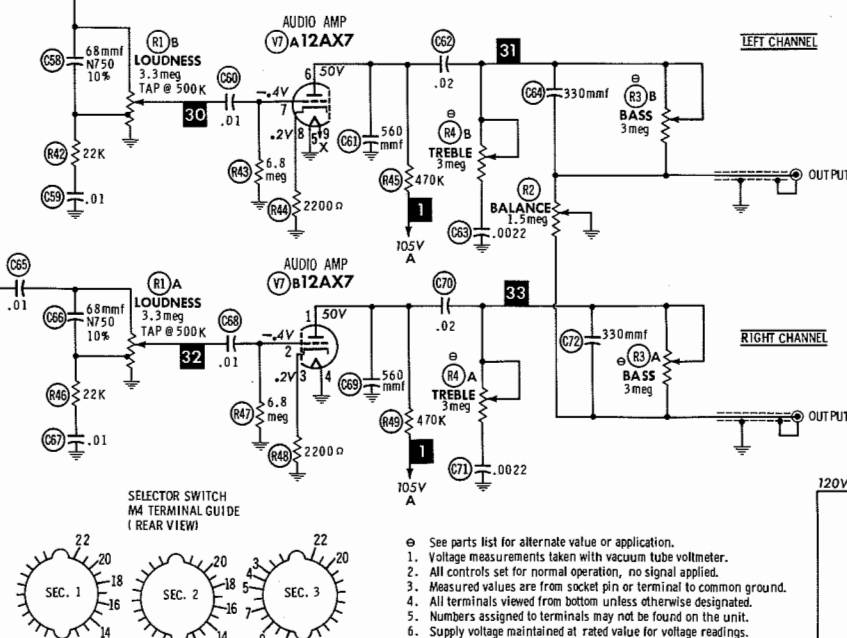
C76







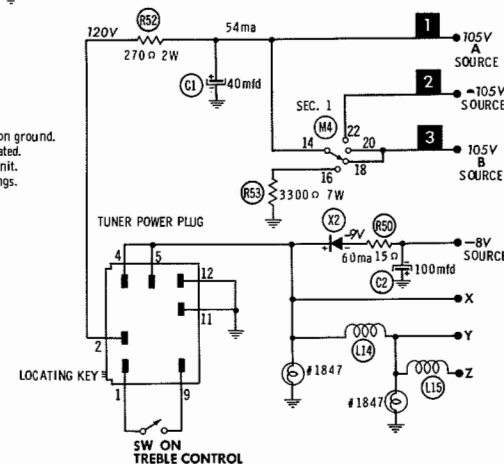
AMP CHASSIS— BOTTOM VIEW

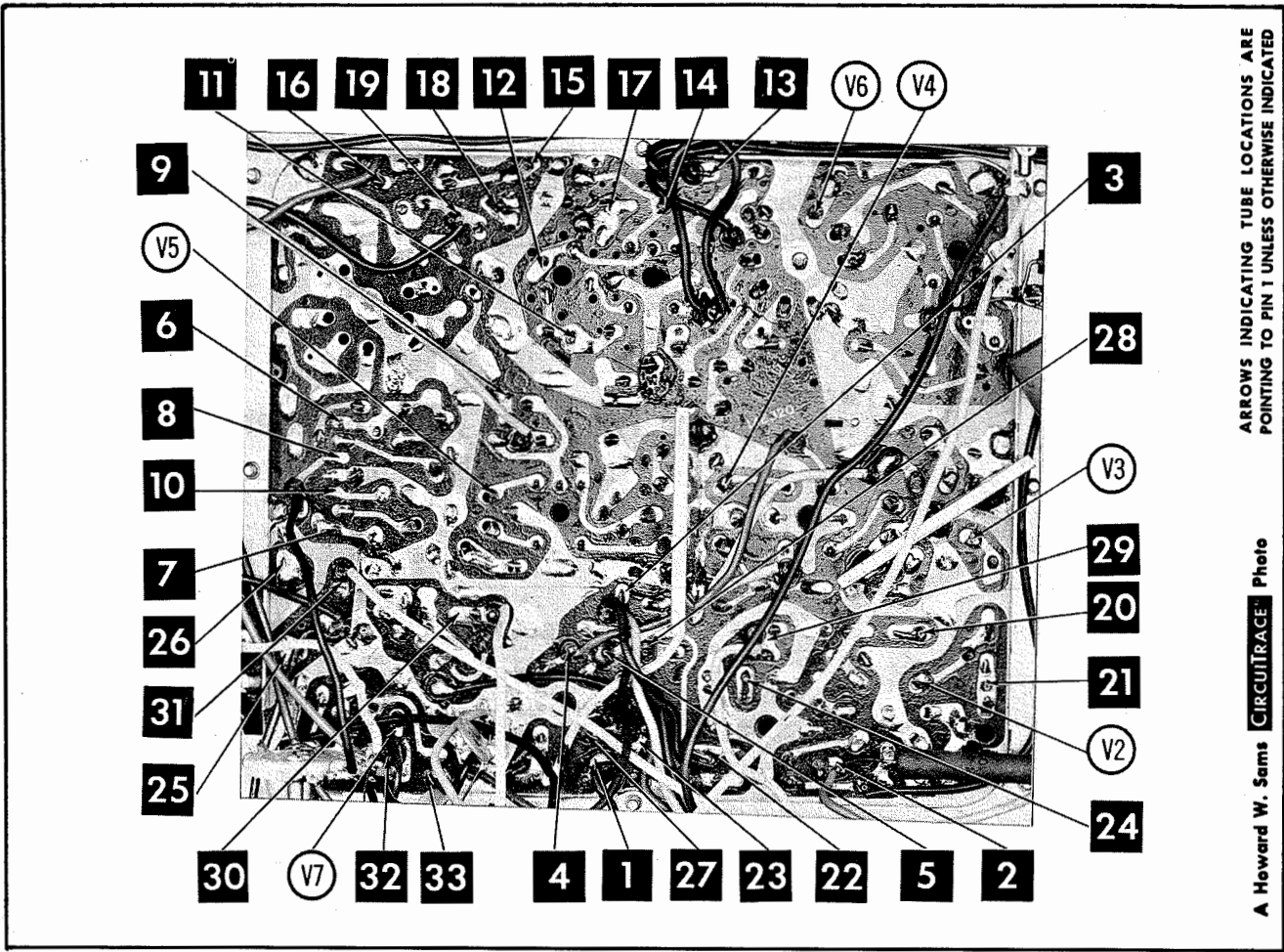


RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10
V1	6C9	33K	123K	1660Ω	FIL	FIL	0Ω	1.3 meg	122K	1660Ω	0Ω
V2	6BE6	22K	1.8Ω	FIL	FIL	1660Ω	1660Ω	4.6 meg			
V3	6BA6	4.6 meg	2.2 meg	FIL	FIL	1660Ω	1660Ω	68Ω			
V4	6BA6	480K	420K	FIL	FIL	1660Ω	1660Ω	47Ω			
V5	6AL5	1N	1N	FIL	FIL	8300Ω	0Ω	7800Ω			
V6	12AT7	1300Ω	50Ω	330Ω	FIL	FIL	1280Ω	470K	4700Ω	FIL	
V7	12AX7	1470K	6.8 meg	2200Ω	FIL	FIL	1470K	6.8 meg	2200Ω	FIL	

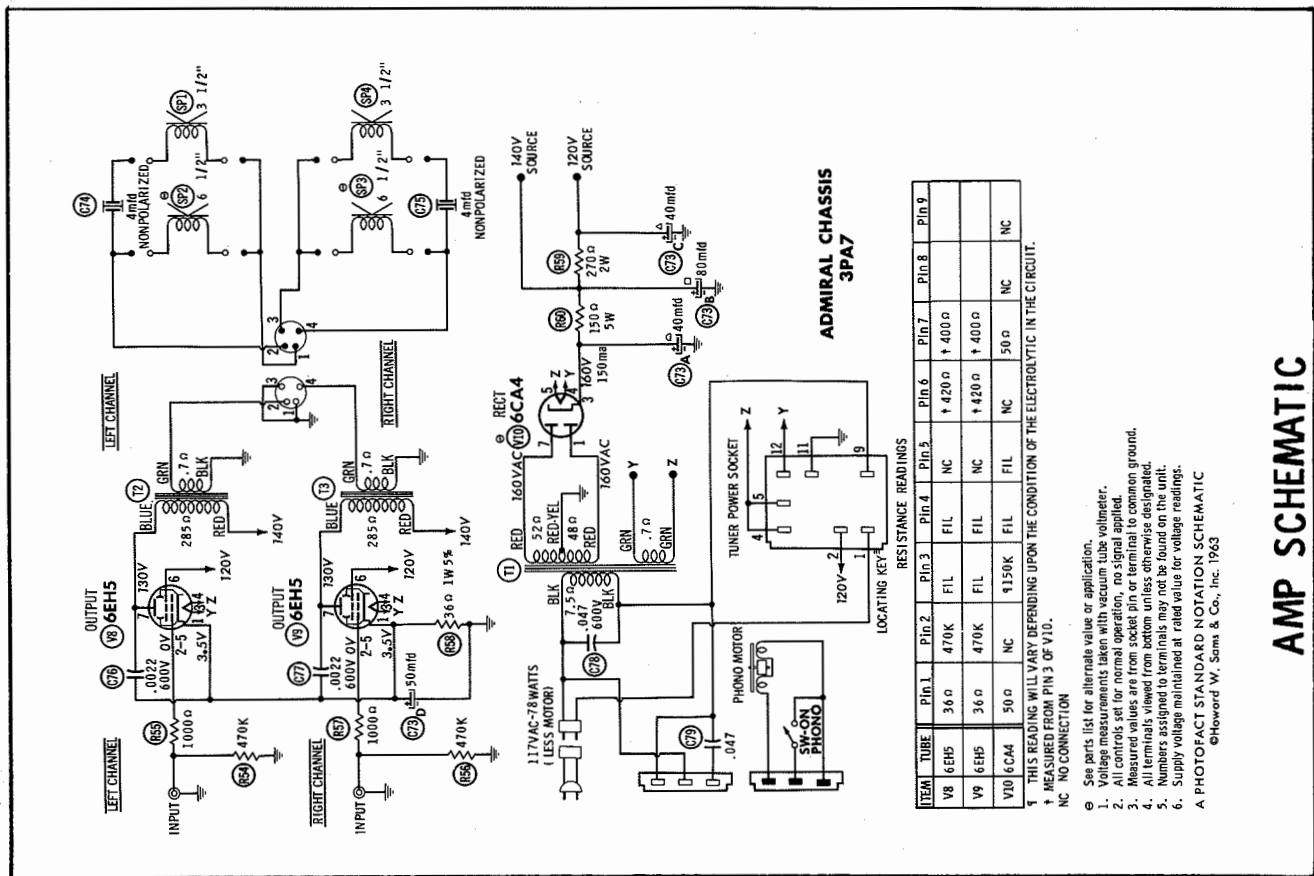
ALL MEASUREMENTS MADE IN "FM STEREO" POSITION UNLESS OTHERWISE DESIGNATED.  
F. MEASURED FROM PIN 2 OF POWER PLUG.  
NC. NO CONNECTION.





ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

A Howard W. Sams CIRCUITRACE® Photo



## ALIGNMENT INSTRUCTIONS

Use only enough generator output to provide a usable indication.  
Suggested alignment tools  
A1 Thru A4 A6, A8, A9, A10 GENERAL CEMENT #8282, 8606, 9302  
A13, A20 Thru A23 WALSCO #2543, 2544, 2588  
A5, A7, A11, A12, A14 Thru A19 GENERAL CEMENT #8290, 8868, 9087  
A19 WALSCO #2525, 2528, 2587

### AM ALIGNMENT - SELECTOR IN AM POSITION

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. High side thru .1mfd to pin 7 (grid) of AM Converter, low side to chassis.	455KC (Unmod.)	(AM) Tuning gang fully open.	DC probe of VTVM to point (A), common to chassis.	A1, A2, A3, A4	Adjust for maximum.
2. Fashion loop of several turns of wire and radiate signal into loop of receiver.	1620 KC	1620 KC	"	A5	"
3. "	600 KC	600 KC	"	A6	"
4. "	1400 KC	1400 KC	"	A7	"

### FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM - SELECTOR IN FM POSITION

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
5. High side to ungrounded tube shield over V1, low side to chassis.	10.7 MC (Unmod.)	(FM) Point of non-interference.	DC probe of VTVM to point (B), common to chassis.	A8, A9, A10, A11, A12	Adjust for maximum.
6. "	"	"	DC probe of VTVM to point (C), common to chassis.	A13	"

### FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE - SELECTOR IN FM POSITION

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

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
5. High side to ungrounded tube shield over V1, low side to chassis.	10.7 MC (450KC Swp.)	(FM) Point of non-interference.	Vert. Input of scope to point (B), low side to chassis.	A8, A9, A10, A11, A12	Disconnect stabilizing capacitor C3. Adjust for maximum gain and symmetry of response similar to Fig. 1 with marker as shown. Reconnect C3.
6. "	"	"	Vert. Input to point (C), low side to chassis.	A13	Adjust to place marker at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A8 for maximum amplitude and straightness of crossover lines.

### FM RF ALIGNMENT - SELECTOR IN FM POSITION

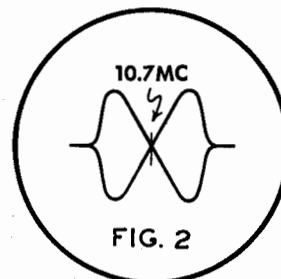
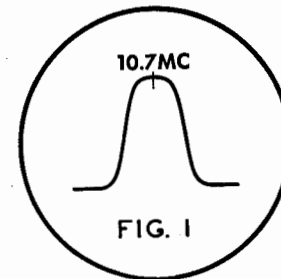
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
7. Across FM antenna terminals with 120Ω in each lead.	90 MC (Unmod.)	(FM) 90 MC	DC probe of VTVM to point (D), common to chassis.	A14, A15, A16	Adjust for maximum.
8. "	108 MC	108 MC	"	A17, A18, A19	"

### MULTIPLEX ALIGNMENT USING FM STEREO GENERATOR

SIGNAL GENERATOR	CONNECT SCOPE	ADJUST	REMARKS
9. 19KC to point (D) low side to chassis.	Vert. Input to point (E) thru 47K, low side to chassis.	A20, A21	Adjust for maximum.
10. "	Vert. Input to point (F) thru 47K, low side to chassis.	A22, A23	"

### MULTIPLEX ALIGNMENT USING AIR SIGNAL. MAKE CERTAIN FM SECTION IS PROPERLY ALIGNED.

SIGNAL GENERATOR	CONNECT SCOPE	ADJUST	REMARKS
9. Tune in strong FM Stereo signal.	Vert. Input to point (E) thru 47K, low side to chassis.	A20, A21	Adjust for maximum.
10. "	Vert. Input to point (F) thru 47K, low side to chassis.	A22, A23	"



ADMIRAL CHASSIS  
3PA7, 7N2, 7N2A

FOLDER 4

## TUNER PARTS LIST AND DESCRIPTION

### TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	FM RF Amp. -FM Conv.	6C9	V5	Ratio Det.	6AL5
V2	AM Conv.	6BE6	V6	19KC Amp. -19KC Doubler	12AT7
V3	1st FM IF -AM IF Amp.	6BA6	V7	AF Amp.	12AX7
V4	2nd FM IF Amp. -AM Det. -AVC	6BA6			

### TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	R593 (57D1-76)	Indicator Control	DS25	GE1	2N218	Used in chassis 7N2A.

### POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS			NOTES
			MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	
X2	.060A	93B27 2	A50	1N3193	2F4	HV Rectifier AFC MPX Detector MPX Detector
X3		1N3182				
X4		93B27-3				
X5		93B27-3				

### ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	ADMIRAL PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	40	200	67D4-21	PRS1580	BR40-250	QTI-14	TC-58	TD-40-250	TVA-1511
C2	100	10	67D35-9	PTT46	NLW100-10	MTI-19	TT-12X100	MLV100-10	TE-U119, 3
C3	4	50	67D4-54	PRS1400	BBR4-50	MTI-3	TT50X4	TD-4-50	TE-1302, 1

### FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOPART No.	MALLORY PART No.	SPRAGUE PART No.
C4	.001		EF-001	MFT-1000		CCF-102	CT280A	
C5	2							
C6	100		DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C7	.002							
C8	.002							
C9	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C10	22		DI-22	DD-220	L10Q22	CCD-220	GP422	10TS-Q22
C11	20							
C12	5		DI-5	DD-050	L10V5	CCD-050	GP550	10TS-V50
C13								
C14	20							
C15	3	N470						
C16	.002							
C17	33	NPO	NPO-DI33	DTZ-33	C10Q33C	CCTO-330	CNO-433	10TCC-Q33
C18	.002							
C19	1.5							
C20	1.5							
C21	23	NPO	#65D6-160					
C22	.002							
C23	.02		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C24	.1	75V	TTD-1	DDA-104	CUB2P1	1DP-2-104	BR-010	TH-P10
C25	.1	50V	TTD-1	CK-104	H-05P1	1DP-2-104	TA-010	TG-P10
C26	220		SI220	D6-221	L10T22	CCD-221	B-322	10TS-T22
C27	47	N150	#65D6-163					
C28	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C29	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C30	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C31	.05	50V	TTD-05	CK-503	H-05S5	1DP-2-503	TA-150	TG-S50
C32	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C33	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C34	.001	10%	DI-1000	DD-102	5R5D1	CCD-102	GP210	10TS-D10
C35	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C36	330		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33
C37	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C38	.1	50V	TTD-1	CK-104	H-05P1	1DP-2-104	TA-010	TG-P10
C39	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C40	.02		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C41	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C42	.1	200V	P288N-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2TM-P10
C43	.0039	5%	1464-0039	CPR-3900J	IR5D39	CM-20B-392J	MS-239	MS-239
C44	.0039	5%	1464-0039	CPR-3900J	IR5D39	CM-20B-392J	MS-239	MS-239
C45	.0039	5%	1464-0039	CPR-3900J	IR5D39	CM-20B-392J	MS-239	MS-239
C46	.02		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C47	.620	5%	1469-00062	CPR-620J	5R5T62	CM-20B-621J	MS-362	MS-362
C48	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C49	.22	200 V	P288N-22	DF-104	CUB2P22	2DP-2-224	GEM-2022	2TM-P22
C50	.620	5%	1469-00062	CPR-3900J	IR5D39	CM-20B-621J	MS-362	MS-362
C51	.0039	5%	1464-0039	CPR-3900J	IR5D39	CM-20B-392J	MS-239	MS-239
C52	.0039	5%	1464-0039	CPR-3900J	IR5D39	CM-20B-392J	MS-239	MS-239
C53	220		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C54	220		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C55	100	10%	DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C56	100	10%	DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C57	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C58	.68	N750	N750-D168	DTN-68	C10Q68U	CCTN-680	CN7-468	10TCU-Q68
C59	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C60	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C61	.50		DI-500	DD-501	L10T50	CCD-501	B-350	10TS-T50
C62	.02		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C63	.0022		BPD-0022	DD-222	L10D22	CCD-222	B-222	10TS-D22
C64	.330		DI-330	DD-331	L10T33	CCD-331	B-333	10TS-T33
C65	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C66	.68	N750	N750-D168	DTN-68	C10Q68U	CCTN-680	CN7-468	10TCU-Q68
C67	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C68	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10

### FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOPART PART No.	MALLORY PART No.	SPRAGUE PART No.
C69	.560		DI-560	DD-561	L10T56	CCD-561	B-356	10TS-T56
C70	.02		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C71	.0022		BPD-0022	DD-222	L10D22	CCD-222	B-222	10TS-D22
C72	.330		DI-330	DD-331	L10T33	CCD-331	B-333	10TS-T33

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.  
# Admiral Part Number.

### CONTROLS

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

ITEM No.	USE	RESIST- ANCE	REPLACEMENT DATA				
			ADMIRAL PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1A	Loudness, Right	3.3meg	75D46-34	F59-3.3meg③			
B	Loudness, Left	500K Tap		R59-3.3meg③			
R2	Balance	3.3meg	75D1-140	AB-742, AK-33, or (F1-1.5meg, SFS212)	A47-1.5meg-S, RS-3/16	BLI-138, SK9, or (BU1, CF18, SS4, DC1)*	U-155, DS-37, or (UA155L, SD3500)
		1.5meg					
R3A	Bass, Right	3meg	75D46-35①	F3-3meg, R3-3meg, TFS212		BLI-140, SK9, QCM or (BU1, SC2L, SS4, DC1)*	
B	Bass, Left	3meg					
R4A	Treble, Right	3meg	75D46-36②	F2-3meg, R2-3meg, TFS212, KR-1		MB13-340, SK9, QCM, 76-l or (BU1, SC17, SS4, GC)*	FA36A, RU36A, SL45, US41
B	Treble, Left	3meg					
	Switch						

\* "SNAPTROL"  
① #75D46-37 Used in Chassis 7N2.  
② #75D46-38 Used in Chassis 7N2.  
③ Do Not use Tap #2.

### RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS
R20	4700Ω 4W	PW5-4700	5W-SQ-4700	

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS
R53	3300Ω 7W	PW10-3300	7W-SQ-3300	

### COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	ADMIRAL PART No.	REPLACEMENT DATA
K1	Diode RF Filter	100mmf, 100mmf, 100K	63A3-2	Aerovox PA-655 Centralab PC-326 Sprague D-4 Aerovox PA-694 Centralab PC-342 Sprague C-12
K2	Ratio Det. Network	300mmf, 300mmf, 300mmf, .001mf, 63D6-25 1500Ω, 1000Ω, 6800Ω, 6800Ω, 68K		

### COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		ADMIRAL PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	FM Ant. Matching						
L2	FM Ant.						
L3	FM RF						
L4	FM Osc.						
L5	1st FM IF						
L6	Fl. Choke						
L7	Loopstick	69B229-3	BC-418	705-A	RTC-8915	T532	
L8	AM Osc.	69C243-4					
L9	1st AM IF	72D227-2	BC-356	13-PC1	RTC-8641	T614	
L10	2nd FM IF	72D225-3	FM-256	1463-PC	RTC-9046	T654	
L11	2nd AM IF	72D227-2	BC-357	13-PC2	RTC-8641	T614	
L12	Ratio Det.	72D196-5	FM-257	1465-PC	RTC-9053	T659	
L13	Fl. Choke	73D37-2	BC-562	4604	RTC-8516	T856	
L14	Fl. Choke	73D37-2	BC-562	4604	RTC-8516	T856	
L15	Fl. Choke	73D37-2	BC-562	4604	RTC-8516	T856	
L16	19KC Bandpass						
L17	38KC Doubler						
L18	RF Choke (10mh)	73B8-12	BC-553	70F102A1	RTC-8534	T882	
L19	RF Choke	73B8-14	BC-552	70F473A1	RTC-9167	T881	

### PHONO CARTRIDGE & NEEDLES

\*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA								NOTES	
	ADMIRAL PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.			
	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*		
M1	409C44-1	98C95-18 (LP)†	133	N50 ††	26	2604	18TAS	N-18T5††	Used in all models of Y4400A Series † Sapphire ††Dual Sapphire	
		2605								
	98C95-17 (78)†									
										Replacement styli for original cartridge
409C44-2	98C95-19 (LP)•		N326-7S (LP) N326-3S (78)		2677 2678				•Used in all models of Y4480A Series.	

### MISCELLANEOUS

ITEM No.	PART NAME	ADMIRAL PART No.	NOTES
M2	FM Tuner	53D4-1	Complete
M3	AM Tuning Gang	68B91-1	2 Gang
M4	Switch	77B129-1	Function
M5	Switch	77B1-51	AFC

### CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Dial Scale	24D49-1	Cabinet, Walnut Model Y4481A	35E740-1
Dial Pointer	25B80-1	Cabinet, Mahogany Model Y4482A	35E740-2
Knob, Preference Controls	33D432-14	Cabinet, Blonde Model Y4483A	35E740-3
Knob, Tuning	33D432-13	Cabinet, Cherrywood Model Y4498A	35E746-9
Cabinet, Walnut Model Y4481A	35E731-1	Legs, Walnut Model Y4481A	35E731-51
Cabinet, Mahogany Model Y4482A	35E731-2	Legs, Mahogany Model Y4482A	35E731-52
Cabinet, Blonde Model Y4483A	35E731-3	Legs, Blonde Model Y4483A	35E731-53

## AMP PARTS LIST AND DESCRIPTION

### TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V8	Output	6EH5	V10	Rectifier	6CA4 (EZ81)*
V9	Output	6EH5			

\* Alternate

### ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	ADMIRAL PART No.	AEROVOX PART No.	CORNELL-DUBUIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C73A	▲ 40	200	67D7~118	AFH4-79-40	DI1004	XC4-82	FP412. 2	TMQ4664	TVL~4738. 6
B	■ 60	150							
C	▲ 40	150							
D	50	25							
C74	4	16 NP							
C75	4	16 NP	PR57405	BBR4-150	NPQT-1	TC-N504	TVANS-1150*		