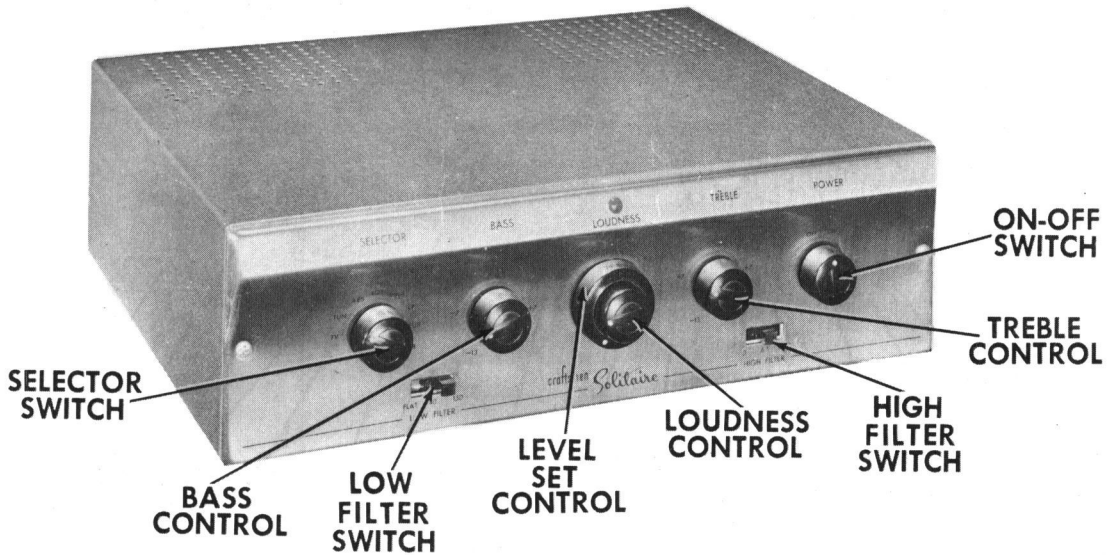




CRAFTSMEN
MODEL C250 "Solitaire"



CRAFTSMEN
MODEL C250 "Solitaire"

TRADE NAME	Craftsmen Model C250 "Solitaire"
MANUFACTURER	Radio Craftsmen, Inc., 4401 N. Ravenswood Ave., Chicago, Ill.
TYPE SET	AC Operated 5 Channel 20 Watt Audio Amplifier With Preamplifier & Equalizer
TUBES (Seven)	Types: 12AX7 Phono Preamp. -Cath. Follower, 12AX7, Preamp. -AF Amp., 6U8 AF Amp. - Cath. Follower, 6SL7GT AF Amp. -Phase Inv., (2) 6L6G Output, 5V4G Rectifier
POWER SUPPLY	110-120 Volts AC-60 Cycles
RATING	.92 Amp. @ 117 Volts AC

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

ITEM No.	USE	REPLACEMENT DATA		RETMA BASE TYPE	NOTES
		CRAFTSMEN PART No.	STANDARD REPLACEMENT		
V1	Phono Preamp. - Cathode Follower	12AX7	12AX7	9A	
V2	Preamp. - AF Amp.	12AX7	12AX7	9A	
V3	AF Amp. - Cathode Follower	6U8	6U8	9AE	
V4	AF Amp. - Phase Inv.	6SL7GT	6SL7GT	8BD	
V5	Audio Output	6L6	6L6	7S	
V6	Audio Output	6L6	6L6	7S	
V7	Rectifier	5V4G	5V4G	5L	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	CRAFTSMEN PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	
CLA	40	450		FP378	TM-3130	T-180	
B	60	450					
C	20	400					
C2A	40	350			TM-3131	Q-185	
B	40	300					
C	30	250					
C3	25	25		TC26	TD-25-25	FM-0225	
C4	100	50		TC3501	TD-100-50	MTH-5010	

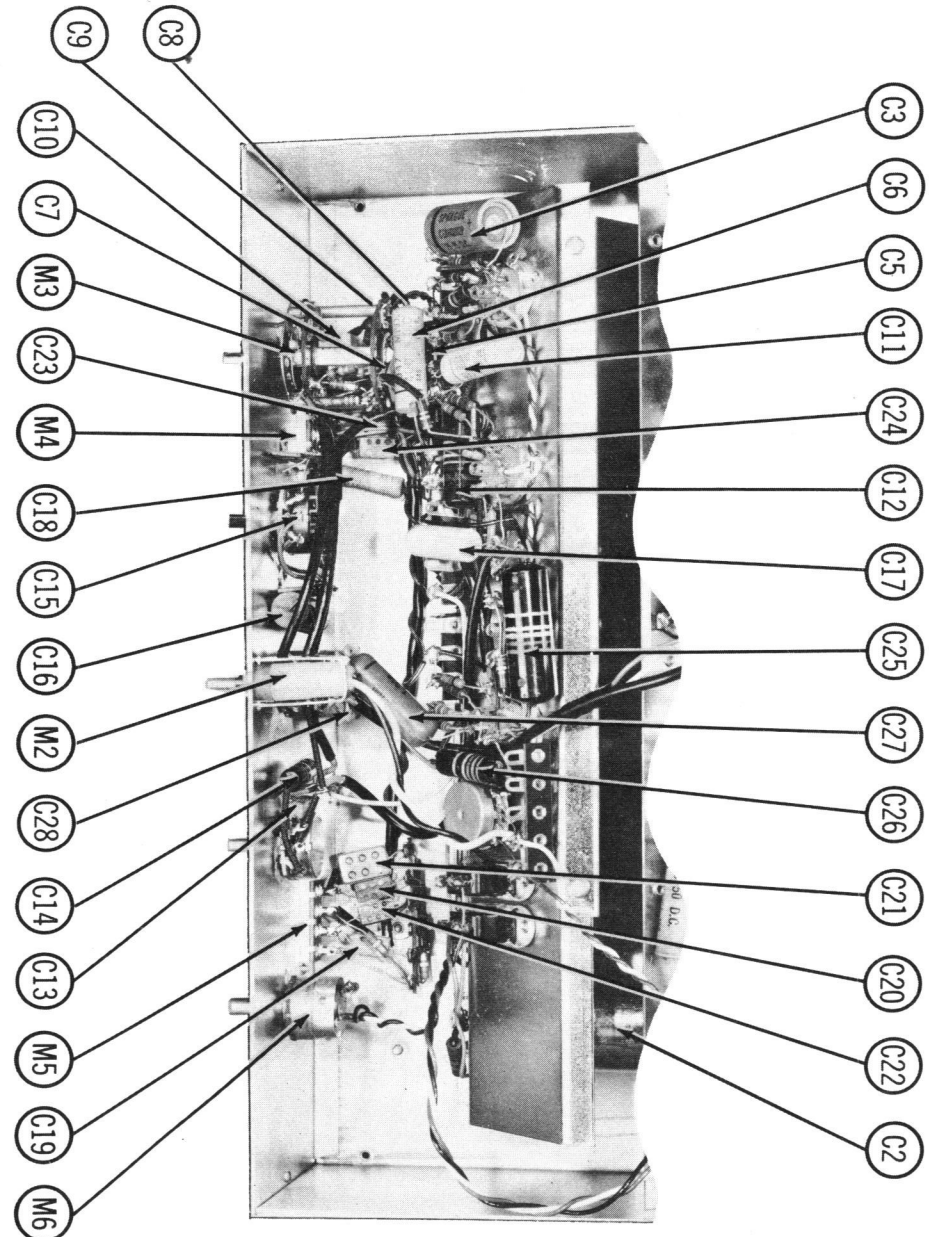
FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	CRAFTSMEN PART No.	CENTRALAB PART No.	ERIE PART No.	MALLORY PART No.	
C5	.1	400				PT4147	
C6	.047	400		DF-503		MCE457	
C7	2000	500					
C8	470	500					
C9	100			D6-101	801-101	UC-531	
C10	1500						
C11	.033	400		DF-303		PT4133	
C12	.1	400				PT401	
C13	330	500					
C14	.0033	400					
C15	.0056	400					
C16	.056	400					
C17	.033	400		DF-303		PT4133	
C18	.0018	400		D6-182	GP2-333-182		
C19	330	500					
C20	390	500					
C21	560	500					
C22	100	500		TCZ-100	NPO-337-101	MCE235	
C23	560	500					
C24	390	500					
C25	.22	400					
C26	.033	400					
C27	.1	200		DF-104		PT401	
C28A	200						
B	100						
C	4500						
D	4500						
C29	100	500		TCZ-100	NPO-337-101	MCE235	
C30	150	500		TCZ-150	NPO-334-151	MCE236	
C31	.033	400					
C32	.1	400					
C33	.1	400					
C34	.01	400					
C35	.01	600					

♦ Items C28A, C28B, C28C, C28D, R42A, R42B and volume control are combined in one unit.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	CRAFTSMEN PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.		MALLORY PART No.
R1A	500KΩ	½	26S056	Q13-133	A47-500K-S	B-60	U-48	Bass Attach to R1A. Level Set - Panel Loudness tapped at 400K & 800K-rear. See note.
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	
R2A	500KΩ	½	26S058					Treble Attach to R3A. Hum Null Attach to R4A.
B	1Meg With 90KΩ Stop							
R3A	500KΩ	½	26S056	Q13-133	A47-500K-S	B-60	U-48	Treble Attach to R3A. Hum Null Attach to R4A.
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	
R4A	5000Ω	½	26S045-25CL	Q11-114	A47-5000-S	BX-14	SU-14	Hum Null Attach to R4A.
B	Shaft		Not Req.	RQ	FKS-1/4	Not Req.	Not Req.	

Note-Control has a special printed circuit network that contains R42A, R42B, C28A, C28B, C28C & C28D in this unit.

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		NOTES	ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	CRAFTSMEN PART No.	IRC PART No.			CRAFTSMEN PART No.	IRC PART No.			
R5	22KΩ	½		BTS-22K		R32	220KΩ 5%	½		BTS-220K 5%	
R6	680Ω	½		BTS-680		R33	1Meg 5%	½		BTS-1Meg 5%	
R7	82KΩ 5%	1		BTA-82K 5%		R34	1200Ω 5%	½		BTS-1200 5%	
R8	150KΩ 5%	½		BTS-150K 5%		R35	680KΩ	½		BTS-680K	
R9	150KΩ 5%	½		BTS-150K 5%		R36	150KΩ	½		BTS-150K	
R10	3.6Meg 5%	½		BTS-3.6Meg 5%		R37	470KΩ	½		BTS-470K	
R11	1Meg 5%	½		BTS-1Meg 5%		R38	3300Ω	½		BTS-3300	
R12	1Meg	½		BTS-1Meg		R39	22KΩ	½		BTS-22K	
R13	1800Ω	½		BTS-1800		R40	5600Ω	1		BTA-5600	
R14	120KΩ	½		BTS-120K		R41	6800Ω	1		BTA-6800	
R15	56KΩ 5%	½		BTS-56K 5%		R42A	50KΩ	½		BTS-47K	
R16	43KΩ 5%	½		BTS-43K 5%		B	50KΩ	½		BTS-47K	
R17	15KΩ 5%	½		BTS-15K 5%		R43	3300Ω 5%	½		BTS-3300 5%	
R18	20KΩ 5%	½		BTS-20K 5%		R44	10KΩ 5%	½		BTS-10K 5%	
R19	15KΩ 5%	½		BTS-15K 5%		R45	220KΩ	½		BTS-220K	
R20	470KΩ	½		BTS-470K		R46	8200Ω	½		BTS-8200	
R21	470Ω	½		BTS-470		R47	1Meg	½		BTS-1Meg	
R22	22KΩ	½		BTS-22K		R48	4700Ω	½		BTS-4700	
R23	22KΩ	½		BTS-22K		R49	100KΩ	½		BTS-100K	
R24	47KΩ 5%	½		BTS-47K 5%		R50	100KΩ	½		BTS-100K	
R25	4700Ω 5%	½		BTS-4700 5%		R51	180Ω	½		BTS-180	
R26	47KΩ	½		BTS-47K		R52	150KΩ	½		BTS-150K	
R27	1500Ω 5%	½		BTS-1500 5%		R53	1000Ω	½		BTS-1000	
R28	390KΩ 5%	½		BTS-390K 5%		R54	150KΩ	½		BTS-150K	
R29	150KΩ	½		BTS-150K		R55	1000Ω	½		BTS-1000	
R30	220KΩ 5%	½		BTS-220K 5%		R56	350Ω	10		PW10-350	
R31	220KΩ 5%	½		BTS-220K 5%		R57	27KΩ	½		BTS-27K	
						R58	100Ω	7		PW7-100	

♦ Items 42A, 42B, C28A, C28B, C28C, C28D and loudness control are combined in one unit.

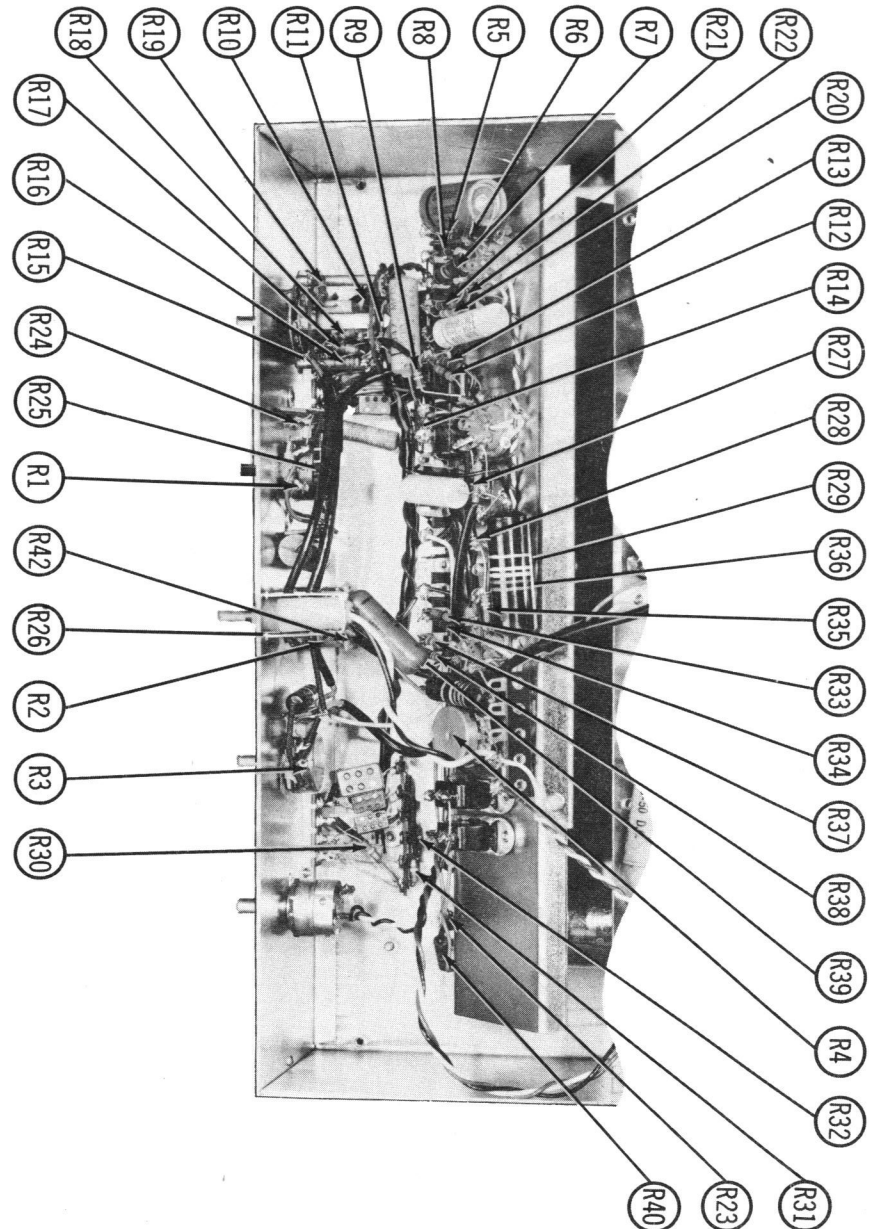
TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	SEC. 3	CRAFTSMEN PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC Ⓢ .92A	740VCT Ⓢ .120ADC	5VAC Ⓢ 2A	6.3VAC Ⓢ 3.3A						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES	
	PRI.	SEC.	CRAFTSMEN PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
T2	6.4KΩ CT Tap Ⓢ 220Ω CT	16Ω Tap Ⓢ 8Ω							

CHASSIS—BOTTOM VIEW



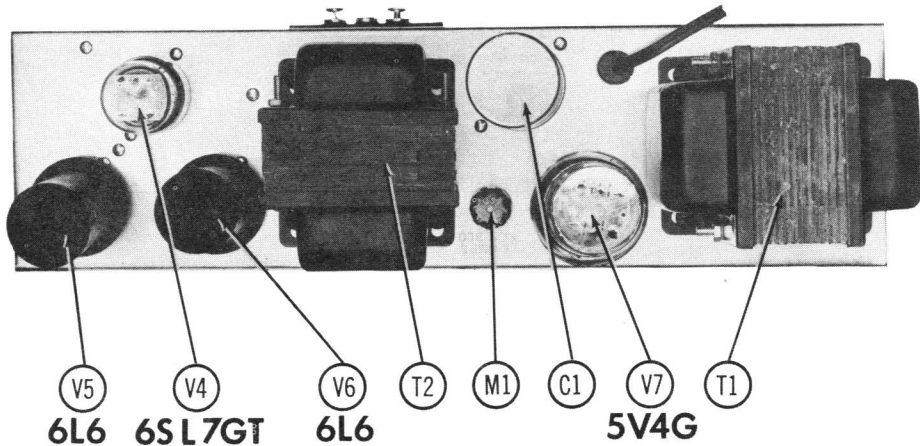
PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

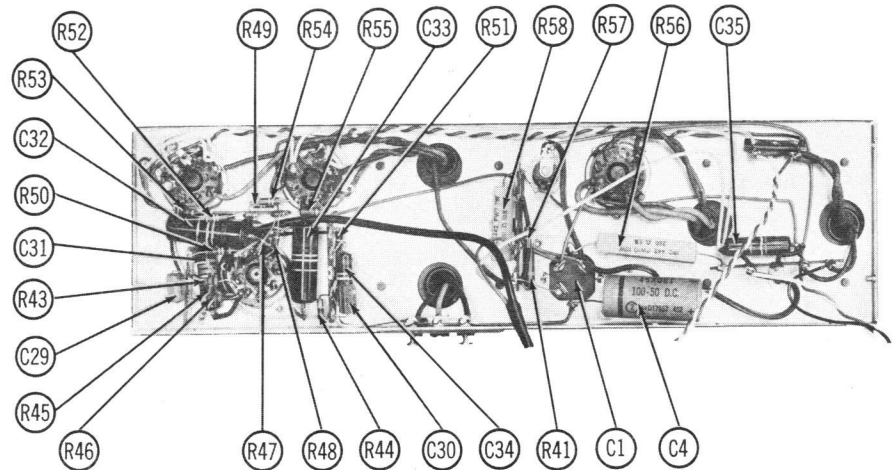
ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			CRAFTSMEN PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	3AG S/B	1½A 125V			31301.5 (3AG S/B 1½A)	342008	MDL 1½	HKP

MISCELLANEOUS

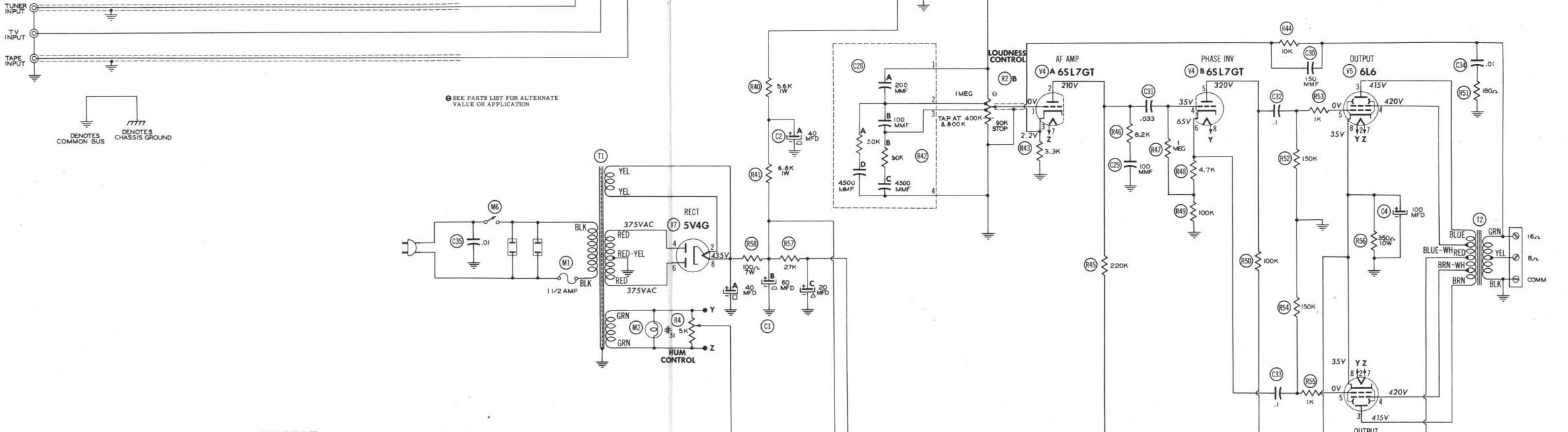
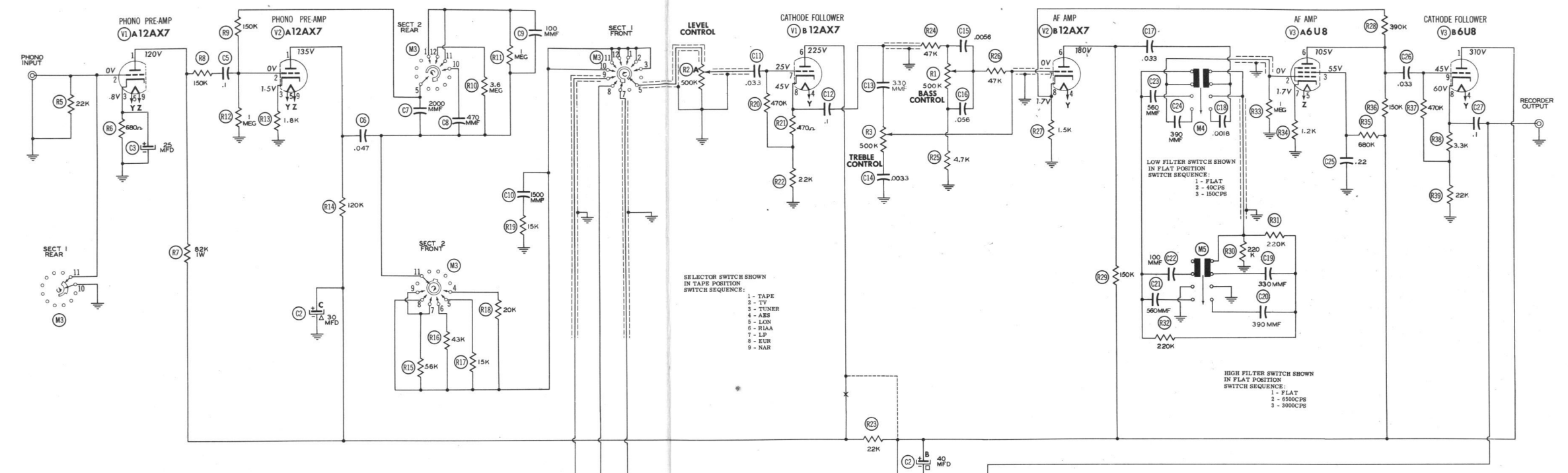
ITEM No.	PART NAME	CRAFTSMEN PART No.	NOTES
M2	Pilot Light		#51
M3	Switch		Selector & Phono Compensation (Rotary-Wafer Type)
M4	Switch		Low Filter (3 Position-Slide Type)
M5	Switch		High Filter (3 Position-Slide Type)
M6	Switch	608023	Power (On-Off)



POWER CH. TOP VIEW



POWER CH. BOTTOM VIEW



RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AX7	194.5KΩ	22KΩ	680Ω	1.1KΩ	1.1KΩ	132.5KΩ	492KΩ	22.4KΩ	1.1KΩ
V2	12AX7	1192.5KΩ	1Meg	1.8KΩ	1.1KΩ	1.1KΩ	1162.5KΩ	51.7KΩ	1.5KΩ	1.1KΩ
V3	6U8	112.5KΩ	4420KΩ	1784KΩ	1.1KΩ	1.1KΩ	1162.5KΩ	1.2KΩ	35.8KΩ	492KΩ
V4	6SL7GT	70KΩ	1247KΩ	3.3KΩ	1.1Meg	1127KΩ	104KΩ	1.1KΩ	1.1KΩ	
V5	6L6	TP	1.1KΩ	1320Ω	1300Ω	151KΩ	TP	1.1KΩ	390Ω	
V6	6L6	TP	1.1KΩ	1320Ω	1300Ω	151KΩ	TP	1.1KΩ	390Ω	
V7	5V4G	NC	300KΩ	NC	90Ω	NC	90Ω	NC	300KΩ	

ALL MEASUREMENTS WITH SELECTOR SWITCH IN FULL CLOCKWISE POSITION.
 *5.3VAC MEASURED ACROSS FILAMENT.
 †MEASURED FROM PIN 2 OF V2.
 ‡LOW FILTER SWITCH IN FLAT POSITION.
 TP-TIE POINT.
 NC-NO CONNECTION.

- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common negative.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance on component values makes possible a variation of ±1% in voltage and resistance readings.
- All controls at minimum, proper output load connected.