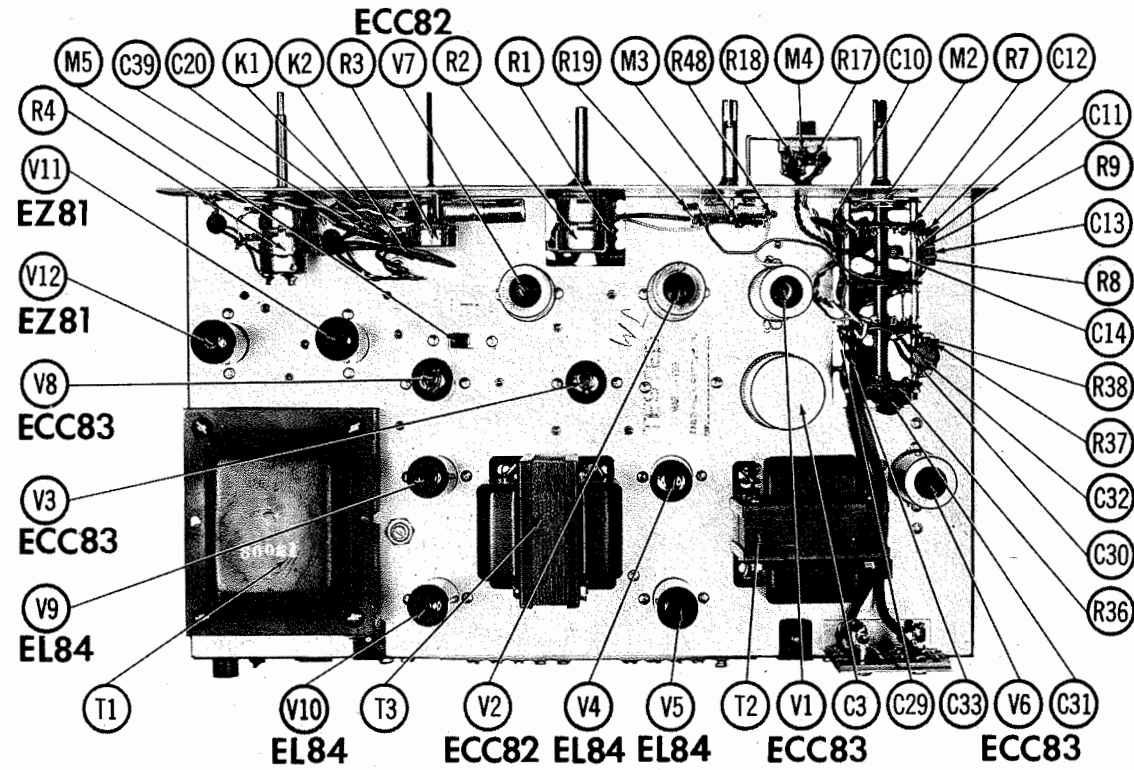




EICO  
MODEL HF-81

TRADE NAME	Eico Model HF-81		
MANUFACTURER	Electronic Instrument Co., Inc., 33-00 Northern Blvd., Long Island City 1, N. Y.		
TYPE SET	AC Operated 12 Tube Stereo Amplifier		
POWER SUPPLY	110-120 Volts AC, 60 Cycles	RATING	125 Watts, 1.2 Amp. @ 117 Volts AC

EICO  
MODEL HF-81



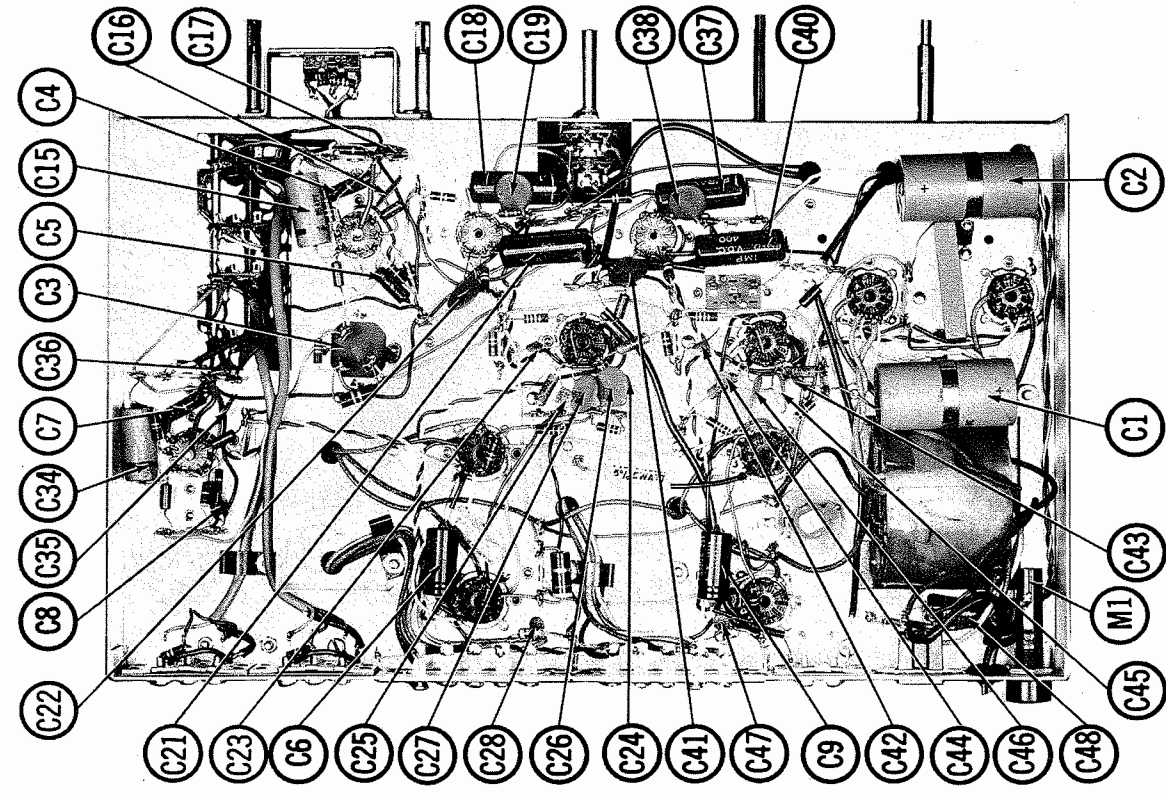
SET 481  
FOLDER 5

**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

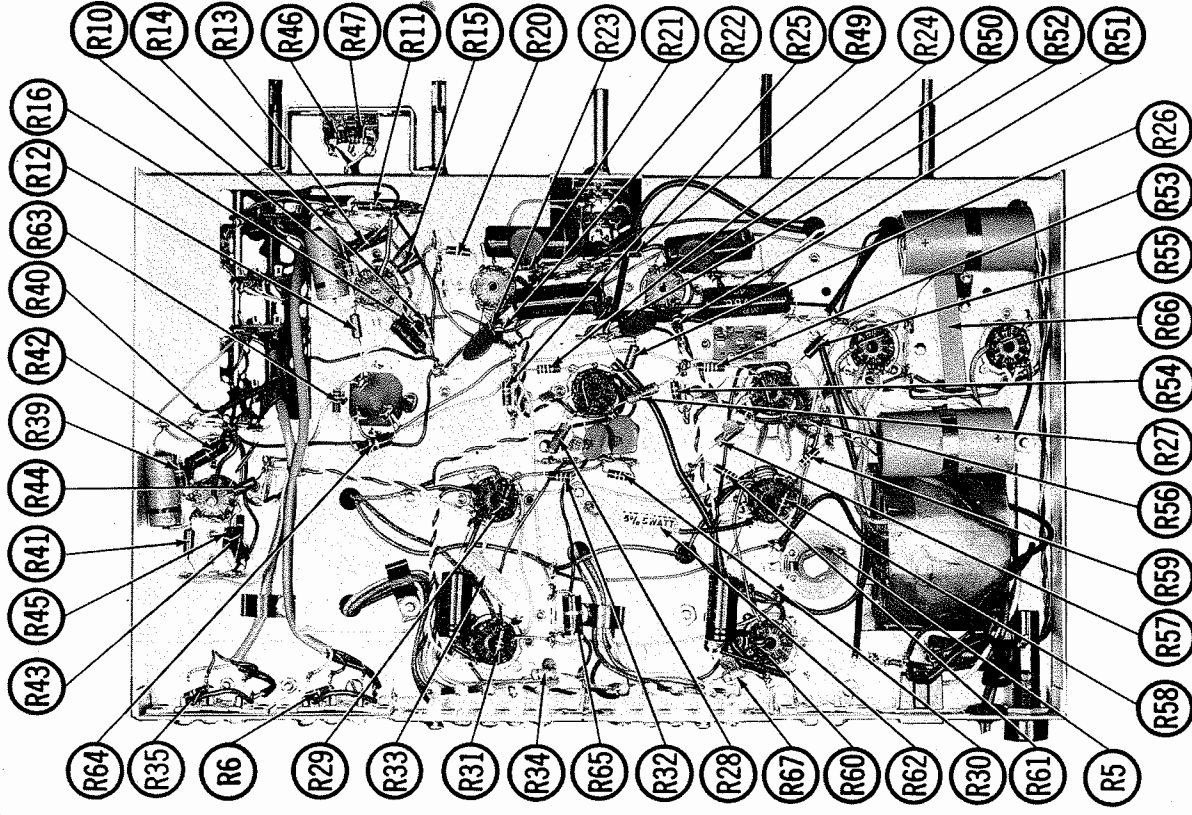
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of JV629

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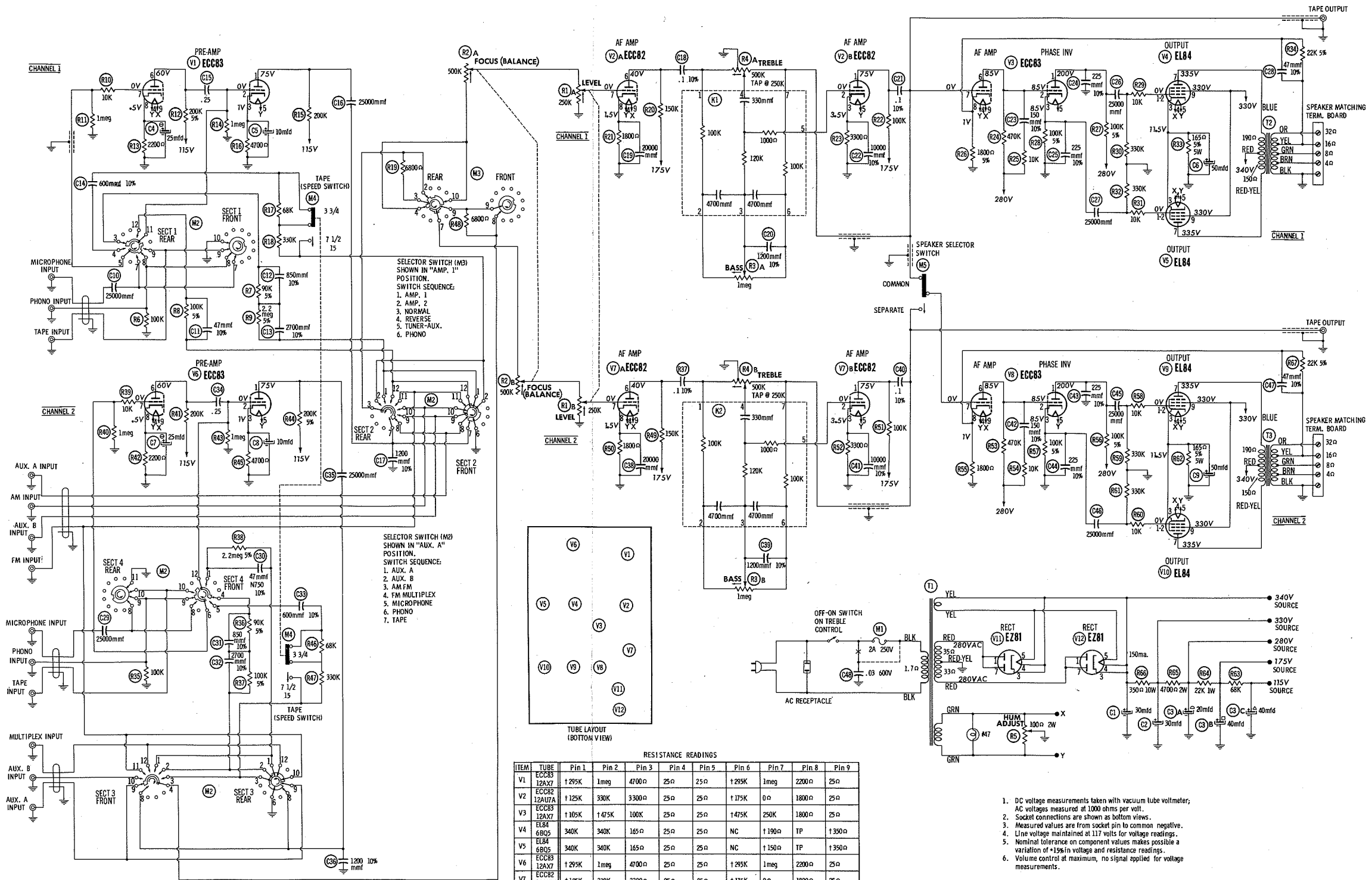




CHASSIS BOTTOM VIEW  
CAPACITOR & MISC. IDENT.

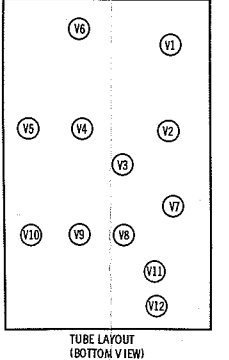


CHASSIS BOTTOM VIEW - RESISTOR IDENT.



SELECTOR SWITCH (M3)  
SHOWN IN "AMP. 1"  
POSITION.  
SWITCH SEQUENCE:  
1. AMP. 1  
2. AMP. 2  
3. NORMAL  
4. REVERSE  
5. TUNER-AUX.  
6. PHONO

SELECTOR SWITCH (M2)  
SHOWN IN "AUX. A"  
POSITION.  
SWITCH SEQUENCE:  
1. AUX. A  
2. AUX. B  
3. AM FM  
4. FM MULTIPLEX  
5. MICROPHONE  
6. PHONO  
7. TAPE



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC83 12AX7	1.295K	1meg	4700Ω	25Ω	25Ω	1.295K	1meg	2200Ω	25Ω
V2	ECC82 12AU7A	1.125K	330K	3300Ω	25Ω	25Ω	1.175K	0Ω	1800Ω	25Ω
V3	ECC83 12AX7	1.105K	1.475K	100K	25Ω	25Ω	1.475K	250K	1800Ω	25Ω
V4	EL84 6BQ5	340K	340K	165Ω	25Ω	25Ω	NC	1.190Ω	TP	1.350Ω
V5	EL84 6BQ5	340K	340K	165Ω	25Ω	25Ω	NC	1.150Ω	TP	1.350Ω
V6	ECC83 12AX7	1.295K	1meg	4700Ω	25Ω	25Ω	1.295K	1meg	2200Ω	25Ω
V7	ECC82 12AU7A	1.125K	330K	3300Ω	25Ω	25Ω	1.175K	0Ω	1800Ω	25Ω
V8	ECC83 12AX7	1.105K	1.475K	100K	25Ω	25Ω	1.475K	250K	1800Ω	25Ω
V9	EL84 6BQ5	340K	340K	165Ω	25Ω	25Ω	TP	1.190Ω	TP	1.350Ω
V10	EL84 6BQ5	340K	340K	165Ω	25Ω	25Ω	TP	1.150Ω	NC	1.350Ω
V11	EZ81 6CA4	35Ω	NC	1	1	1	NC	35Ω	NC	NC
V12	EZ81 6CA4	33Ω	NC	1	1	1	NC	33Ω	NC	NC

1 THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.  
 † MEASURED FROM PIN 3 OF V12.  
 NC NO CONNECTION  
 TP TIE POINT

1. DC voltage measurements taken with vacuum tube voltmeter, AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of +15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM  
 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

## PARTS LIST AND DESCRIPTIONS

### TUBES

CBS		GENERAL ELECTRIC		RAYTHEON		SYLVANIA	
ITEM No.	USE	ITEM No.	TYPE	USE	ITEM No.	TYPE	TYPE
V1	Channel 1 Preamp.	ECC88/12AX7		Channel 2 AF Amp.	ECC88/12AU7A		
V2	Channel 1 AF Amp.	ECC88/12AU7A		Channel 2 AF Amp. - Phase Inverter	ECC88/12AX7		
V3	Channel 1 AF Amp. - Phase Inverter	ECC88/12AX7		Channel 2 Output	EL84/6EQ5		
V4	Channel 1 Output	EL84/6EQ5		Channel 2 Output	EL84/6EQ5		
V5	Channel 1 Preamp.	EL84/6EQ5		Rectifier	EZ81/6CA4		
V6	Channel 2 Preamp.	ECC88/12AX7		Rectifier	EZ81/6CA4		

### FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOC PART No.
C41	10000		DI-10000	DD-151	PM681	CCD-103
C42	150	10%	DI-150	DD-221	L10T15	CCD-151
C43	225	10%	DI-220	DD-221	L10T22	CCD-221
C44	225	10%	DI-220	DD-221	L10T22	CCD-221
C45	25000				ST16825	GDP-3-253
C46	25000				ST16825	GDP-3-253
C47	47	10%	DI-47	DD-470	L10Q47	CCD-470
C48	.03 800V		P688N-03	DD-303	CUB683	GDP-3-303

## ELECTROLYTIC CAPACITORS

ITEM No.	CAP.	VOLT.	RATING	REPLACEMENT DATA				NOTES
				AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C1	30	400	10%	PRS1740	BR3045	TC77	TD-30-450	
C2	30	400	10%	PRS1740	BR3045	TC77	TD-30-450	
C3A	20	400	10%	AFH3-43-50	C0330	FP376-9	TMT-39	
C3B	40	350	10%					
C4	25	10	10%	XP100-25	NLW25-10	TT10X25	TD-25-25	
C5	10	6	10%	XP100-25	NLW10-6	TT10X10	ML10-6	
C6	50	25	10%	XP100-25	NLW50-40	TT10X25	TD-50-25	
C7	25	10	10%	XP100-25	NLW25-10	TT10X25	TD-25-25	
C8	50	25	10%	XP100-25	NLW50-40	TT10X25	TD-50-25	
C9	50	25	10%	XP100-25	NLW50-40	TT10X25	TD-50-25	

① 25mfd @ 6V may be used in some versions (#23020).

## FIXED CAPACITORS

Capacity values given in mfd. for mica and ceramic capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				SPRAGUE PART No.
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	ELMENCOC PART No.	MALLORY PART No.	
C10	25000		DI-47	DD-470	ST6825	GEM-6125	
C11	650	10%	DI-820	DD-821	L10Q47	GP447	
C12	2700	10%	DI-2700	DD-821	RR5727	GP382	
C13	600	10%	P288N-25	DD-601	IR576	GEM-16225	
C14	25 200V			DD-601	CUB625	GP380	
C15	25000			DD-122	IR5D12	GEM-2025	
C16	1200	10%	DI-1200	DD-122	ST6825	GEM-6125	
C17	1.1 400V	10%	V84C4PI-10%	DD-122	PM4P1	GP212	
C18	2000	10%	DI-2000	DD-203	BYB652	GP120	
C19	1200	10%	DI-1200	DD-122	IR5D12	GP212	
C20	1.1 400V	10%	V84C4PI-10%	DD-122	PM4P1	GP120	
C21	10000	10%	DI-10000	DD-151	PM681	GEM-1611	
C22	10000	10%	DI-10000	DD-151	L10T15	GP315	
C23	225	10%	DI-220	DD-221	L10T22	GP322	
C24	225	10%	DI-220	DD-221	L10T22	GP322	
C25	225	10%	DI-220	DD-221	L10T22	GP322	
C26	25000			DD-470	ST6825	GEM-6125	
C27	25000			DD-470	ST6825	GEM-6125	
C28	47	10%	DI-47	DD-470	L10Q47	GP447	
C29	25000			DTN-47	CI0Q47U	CNT-447	
C30	47 N750	10%	DI-47	DD-470	ST6825	GEM-6125	
C31	850	10%	DI-820	DD-821	IR576	GP382	
C32	2700	10%	DI-2700	DD-821	RR5727	GP382	
C33	800	10%	DI-880	DD-601	CUB625	GEM-1625	
C34	25 200V			DD-601	IR5D12	GEM-2025	
C35	25000			DD-122	IR5D12	GEM-6125	
C36	1200	10%	DI-1200	DD-122	ST6825	GEM-6125	
C37	1.1 400V	10%	V84C4PI-10%	DD-122	PM4P1	GP120	
C38	20000	10%	DI-2000	DD-203	BYB652	GP120	
C39	1200	10%	DI-1200	DD-122	IR5D12	GP212	
C40	1.1 400V	10%	V84C4PI-10%	DD-122	PM4P1	GP120	

## CONTROLS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				INSTALLATION NOTES
			EICO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	
R1A	250K		18046	AB-51	AD4F-250K-2	FA254A	
R1B	250K			SR-3	RS-3/16	R1954	
R1C	250K			SR-3	RS-3/16	DS97	
R2A	500K		18045	AB-59	AD4F-500K-2	FB55L	
R2B	500K			SR-59	Not Req.	R1955U	
R2C	500K			SR-59	RS-3/16	DS97	
R3A	500K		18048	FL-51	QJ-1148R	UF-4086	
R3B	500K			FL-51			
R4A	250K Tap		18047	F8-42			
R4B	250K Tap			R4-42			
R5A	100K		19009	WN-101		R100L	
R5B	100K			Not Req.		Not Req.	

† "Concentrikitt" Equivalent: K-15 Kit with base elements & shafts: B11-137, P13-116 (Panel)  
Not available as a factory assembled unit.

‡ "Concentrikitt" Equivalent: K-15 Kit with base elements & shafts: B19-133X, P13-116 (Panel)  
B19-133X, R1-126 (Rear)  
76-1

§ "STA-LOC" Equivalent: FA16L, RUI6L, OSI500A, ISI875.  
\* Use CS887 bushing.

## RESISTORS

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

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R7	90K	5%	R9	10K		R10	10K	
R8	100K	5%	R11	1meg		R12	220K	5%
R9	2.2meg	5%	R13	20K		R14	10K	
R10	10K		R15	47000		R16	68K	
R11	1meg		R17	100K	5%	R18	390K	
R12	220K	5%	R19	68000		R20	150K	
R13	20K		R21	18000		R22	100K	
R14	10K		R23	33000		R24	470K	
R15	47000		R25	10K		R26	18000	5%
R16	68K		R27	100K	5%	R28	100K	5%
R17	100K	5%	R29	10K		R30	10K	
R18	390K		R31	10K		R32	330K	
R19	68000		R33	1650	5% 5W	R34	22K	5%
R20	150K		R35	100K		R36	90K	5%
R21	18000		R37	100K	5%	R38	2.2meg	5%
R22	100K		R39	10K		R40	1meg	
R23	33000		R41	200K		R42	22000	
R24	470K		R43	1meg		R44	200K	5%
R25	10K		R45	47000		R46	68K	
R26	18000	5%	R47	330K		R48	68000	

## PARTS LIST AND DESCRIPTIONS (Continued)

### COMPONENT COMBINATIONS

ITEM No.	USE	EICO PART No.	REPLACEMENT DATA
K1	Tone Compensator	29751	Sprague TC-24
K2	Tone Compensator	29751	Sprague TC-24

### FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA		
			EICO PART No.	LITTELFUSE PART No.	BUSS PART No.
M1	3AG	2A 250V	FUSE 91000	HOLDER 341001	FUSE AGC 2

### TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA			
		EICO PART No.	Holderson PART No.	Merit PART No.	Rom PART No.
		SEC. 1	SEC. 2	SEC. 3	SEC. 4
T1	117V ① 1.2A	30021			
	6.3V ② 5.4A				

### TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA				NOTES
		EICO PART No.	Holderson PART No.	Merit PART No.	Rom PART No.	
		FRI.	SEC.	FRI.	SEC.	
T2	75000 CT	32013				
T3	75000 CT	32013				

## MISCELLANEOUS

ITEM No.	PART NAME	EICO PART No.	NOTES
M2	Switch	60057	Input Selector (Rotary Water Type)
M3	Switch	60065	Function Selector (Rotary Type)
M4	Switch	62000	Tape (DPDT, Slide Type)
M5	Switch	62002	Speaker Selector (SPDT, Slide Type)

## CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	53018	Input Selector, Function Selector, Level, Focus
Knob	53017	Amp. 1, Bass, Treble
Knob	53016	Amp. 2, Off-On, Bass

## WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors  
8524 (Stranded) Available in Ten Colors  
Power Cord ..... Use BELDEN No. 1725-K (7/8 Ft. Length)