

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA		REMARKS
		WORKMAN PART No.	REMARKS	
R11	47K			
R12	100K			
R13	4meg			
R14	200K			
R15	1meg			
R16	22K			
R17	200K			
R18	2400Ω			
R19	68K			
R20	1.5meg			
R21	40K			
R22	1200Ω			
R23	680K			
R24	150K			
R25	6800Ω			
R26	2700Ω			
R27	33K			
R28	220K			
R29	1500Ω			
R30	470K			
R31	33K			
R32	1000Ω			
R33	470K			
R34	200K			
R35	1000Ω			
R36	100Ω			
R37	6000Ω			
R38	1meg			
R39	28750Ω 5% 1W			
R40	18K 1W			
R41	33K 1W			
R42	4700Ω			
R43	150K			
R44	100K			
R45	10Ω			
R46	4700Ω			
R47	150K			
R48	100K			
R49	100Ω			
R50	5300Ω			
R51	200K			
R52	47K			
R53	100K			
R54	4meg			
R55	22K			
R56	1meg			
R57	200K			

Note 1. Values reversed in some versions.

TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA		REMARKS
		WORKMAN PART No.	REMARKS	
T1	175V @ 1.4A ① 270VCT ② 170V ③ 100V ④ 80V ⑤ 001A	30048		
	SEC. 3 6.3V @ 3.6A SEC. 4 6.3V @ 3.2A			

ITEM No.	IMPEDANCE	REPLACEMENT DATA		REMARKS
		WORKMAN PART No.	REMARKS	
T2	6500Ω CT 16Ω Tap @ 80, 4Ω 16Ω Tap @ 80, 4Ω	32021		
T3	6500Ω CT 16Ω Tap @ 80, 4Ω	32021		

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	EICO PART No.	REPLACEMENT DATA
K1	Tone Comp.		28751	
K2	Tone Comp.		28751	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA		REMARKS
			WORKMAN PART No.	REMARKS	
M1	3AG	3A 250V	91005		
			97800		
			313003 (9AG 3A 250V)		
			342001		
			AGC 3		
			HKCP		

MISCELLANEOUS

ITEM No.	PART NAME	EICO PART No.	NOTES
M2	Switch	80074	Function (Rotary Water Type)
M3	Switch	80083	Mode (Rotary Water Type)
M4	Switch	62012	Tape Equal (DPDT Slide Type)
M5	Switch	62012	Tape Monitor (DPDT Slide Type)
M6	Switch	62014	Loudness (4PDT Slide Type)
M7	Switch	62014	Lo Filter (4PDT Slide Type)
M8	Switch	62014	Hi Filter (4PDT Slide Type)
M9	Switch	62014	Balance Check (4PDT Slide Type)
M10	Switch	62012	Phase (Speaker) (DPDT Slide Type)

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

NAME	PART NO.	DESCRIPTION
Jewel Knob	97717	Pilot Light
Knob	53049	Level, Balance, Mode, Selector
Knob	53048	Outer, Bass, Treble
Knob	53047	Inner, Bass, Treble
Front Panel	80091	

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in 12 Colors
Power Cord Use BELDEN No. 17006 (Plastic) or 17196 (Rubber) - 6 Ft.
Power Cord (Interlock Type) Use BELDEN No. 17009 (Plastic) or 17199 (Rubber) - 6 Ft.
Power Cord (Interlock Type) Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)

EICO MODEL ST-70

FOLDER 6
SET 579



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 LV135

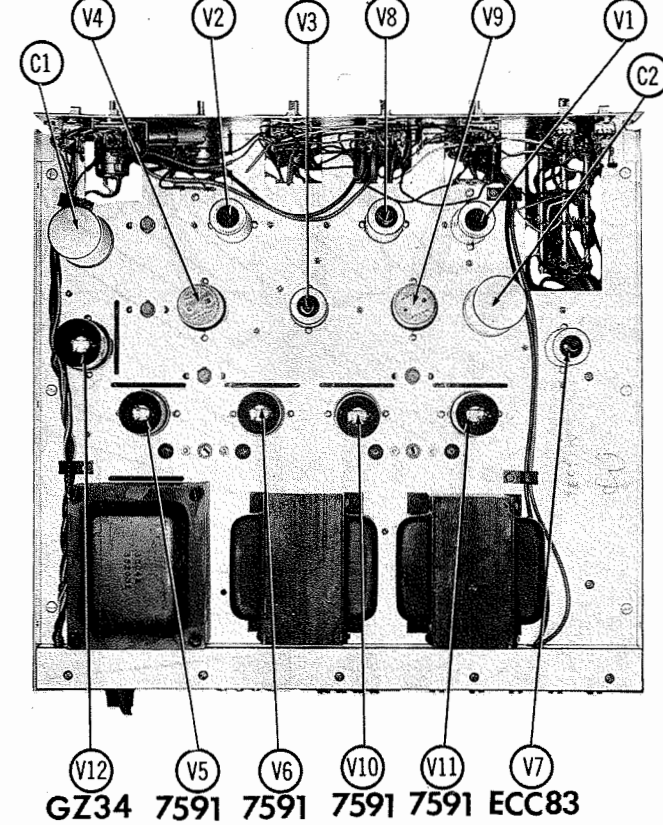
PHOTOFACT® Folder



EICO MODEL ST-70

TRADE NAME	Eico Model ST-70
MANUFACTURER	Electronic Instrument Co., Inc., 3300 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 150 Watts, 1.4 Amp. @117 Volts DC

6SN7GTB 7247 ECC83 7247 6SN7GTB ECC83



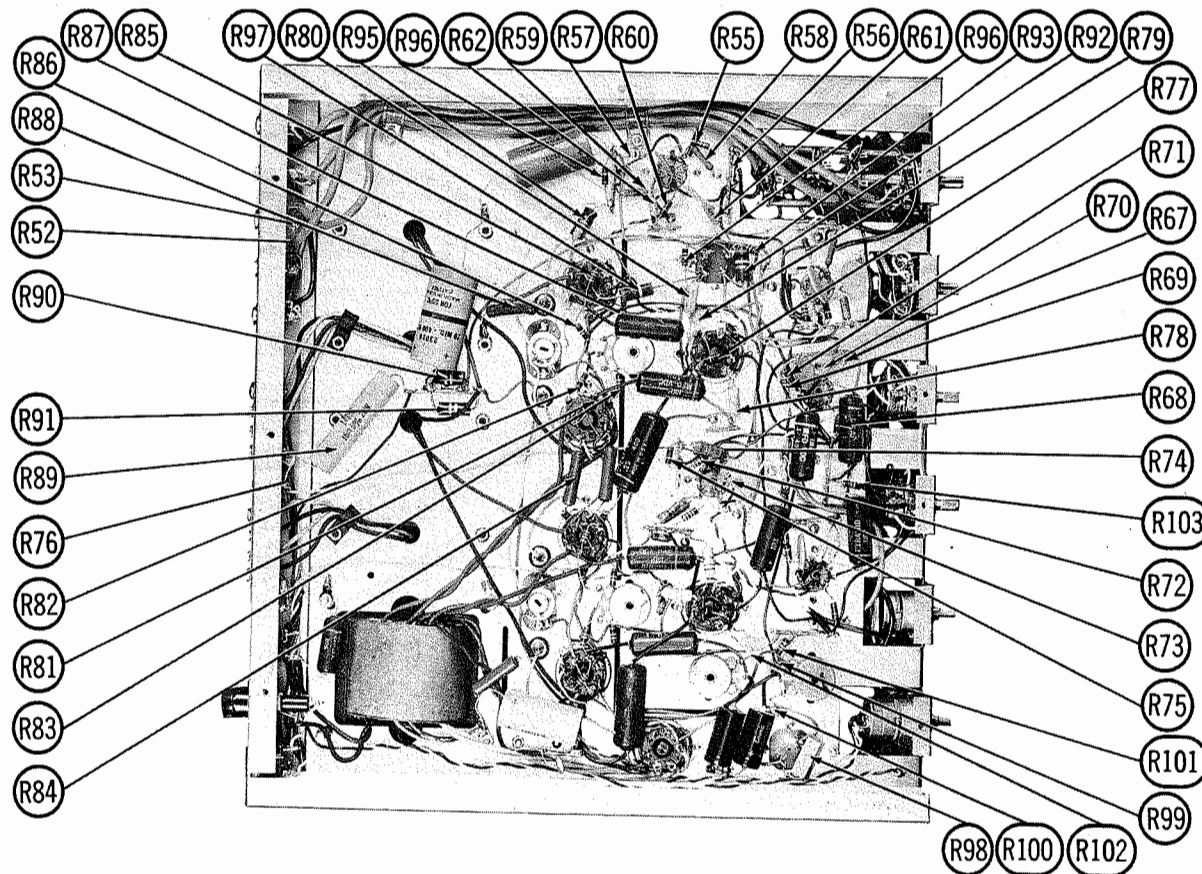
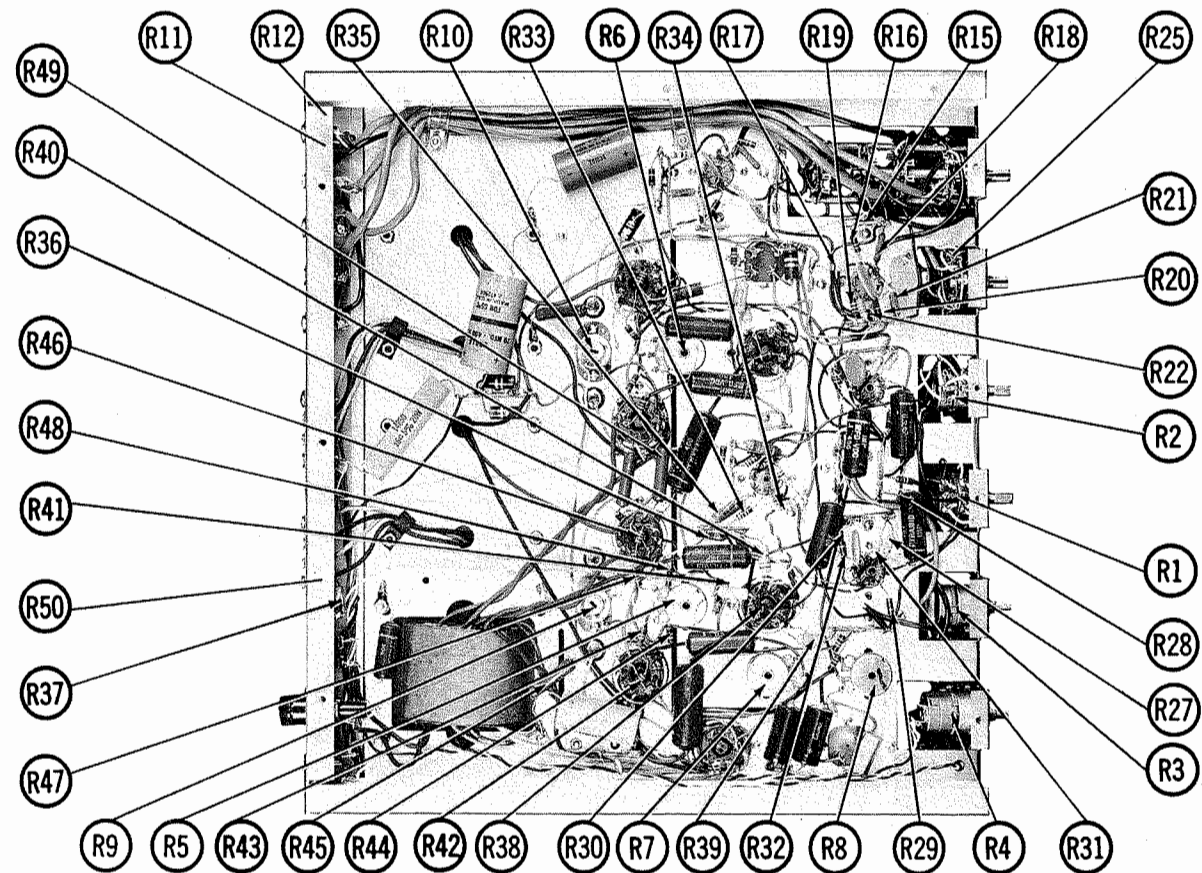
ADJUSTMENTS

BALANCE AND BIAS ADJUSTMENT

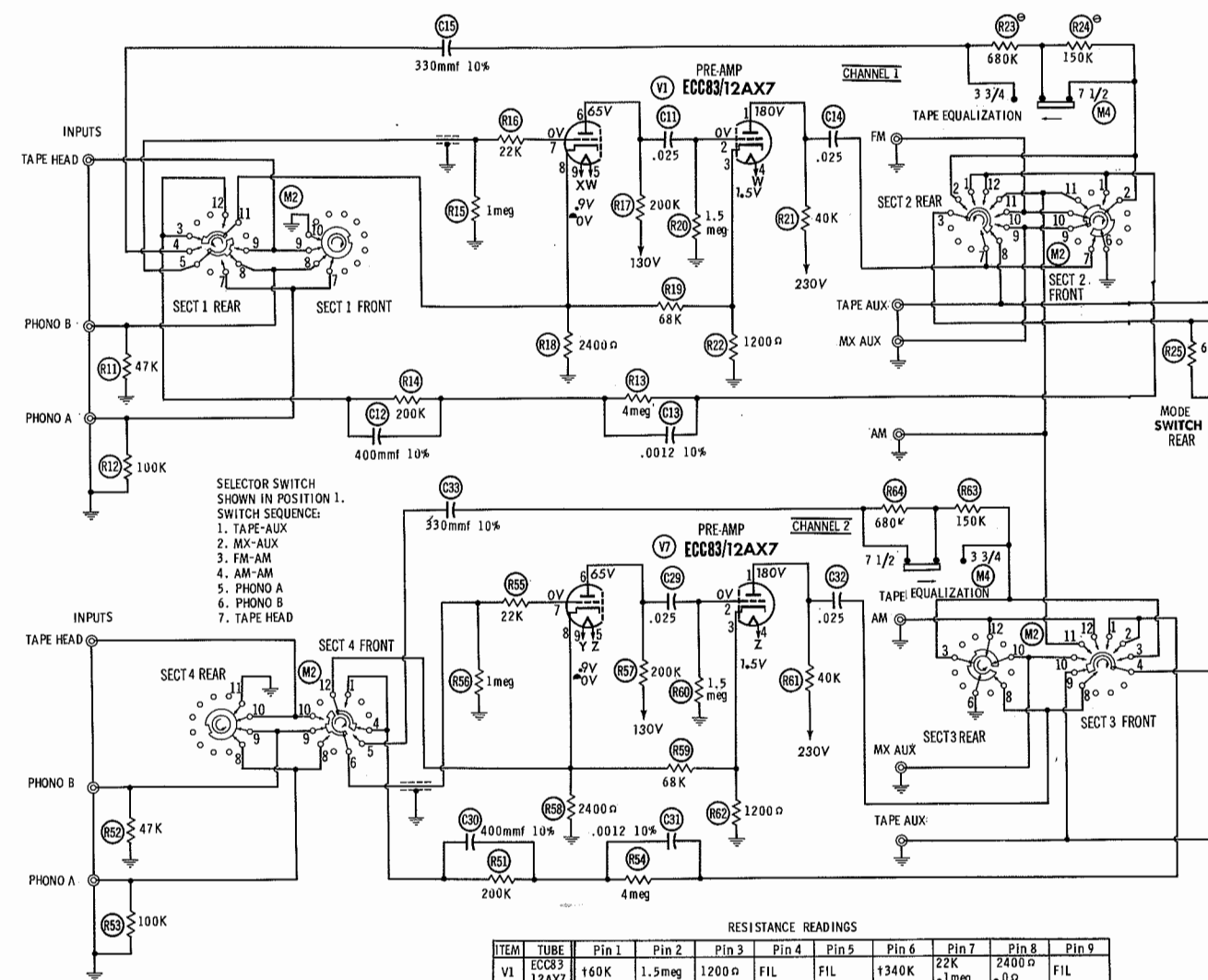
Set both Output Balance controls (R5, R6) and both Bias controls to the center of their ranges. Connect speakers or suitable load. Turn on amplifier and set Level control to minimum.

Connect leads of VTVM (3VDC range or lower) to the pair of meter jacks for channel 1. (Leads may need to be reversed). Adjust Balance control (R5) for zero, or minimum. Remove VTVM and connect to the pair of meter jacks for channel 2. Adjust Output Balance (R6) for zero, or minimum.

Connect the DC probe of VTVM (3VDC range or lower) to either meter jack of the pair for channel 1, common lead to chassis. Adjust Bias (R7) for .38V. Remove DC probe and connect to either meter jack of the pair for channel 2. Adjust Bias R8 for .38V.



CHASSIS BOTTOM VIEW-RESISTOR IDENT.



SELECTOR SWITCH SHOWN IN POSITION 1.
SWITCH SEQUENCE:
1. TAPE-AUX
2. MX-AUX
3. FM-AM
4. AM-AM
5. PHONO A
6. PHONO B
7. TAPE HEAD

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	160K	1.5meg	1200Ω	FIL	FIL	1340K	22K 1meg	2400Ω 0Ω	FIL
V2	7247	163K	0Ω	1500Ω	FIL	FIL	163K	220K 470K	1000Ω	FIL
V3	ECC83 12AX7	1345K	200K 470K	1100Ω	FIL	FIL	1345K	200K 470K	1100Ω	FIL
V4	6SN7GTB	1345K	133K	18K	1.3meg	137K	18K	FIL	FIL	
V5	7591	TP	FIL	1120Ω	11800Ω	10Ω	200K	FIL	11800Ω	
V6	7591	TP	FIL	1130Ω	11800Ω	10Ω	200K	FIL	11800Ω	
V7	ECC83 12AX7	160K	1.5meg	1200Ω	FIL	FIL	1340K	22K 1meg	2400Ω 0Ω	FIL
V8	7247	163K	0Ω	1500Ω	FIL	FIL	163K	220K 470K	1000Ω	FIL
V9	6SN7GTB	1345K	133K	18K	1.3meg	137K	18K	FIL	FIL	
V10	7591	TP	FIL	1120Ω	11800Ω	10Ω	200K	FIL	11800Ω	
V11	7591	TP	FIL	1130Ω	11800Ω	10Ω	200K	FIL	11800Ω	
V12	GZ34 5AR4	NC	†	NC	24Ω	NC	33Ω	NC	†	

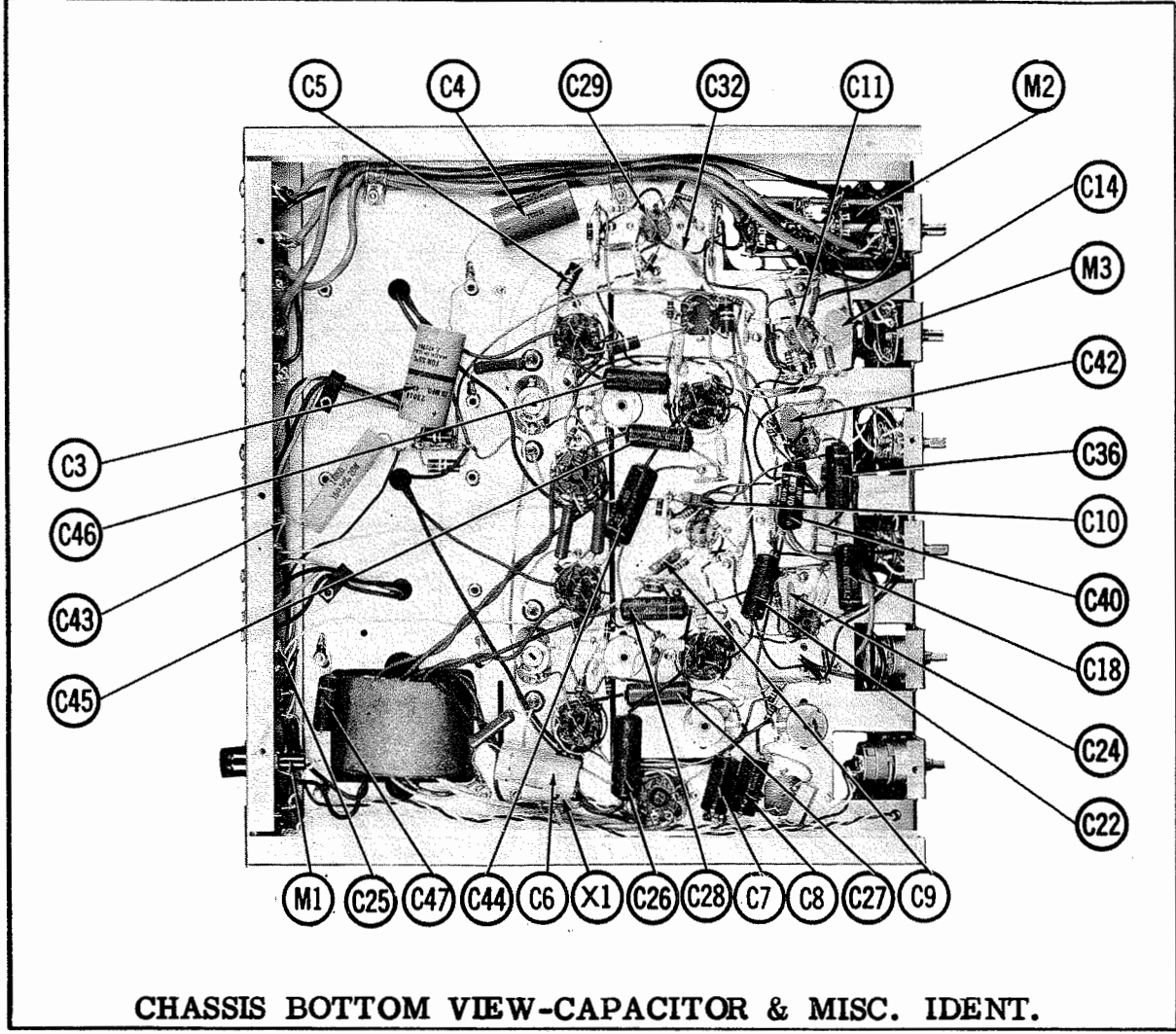
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

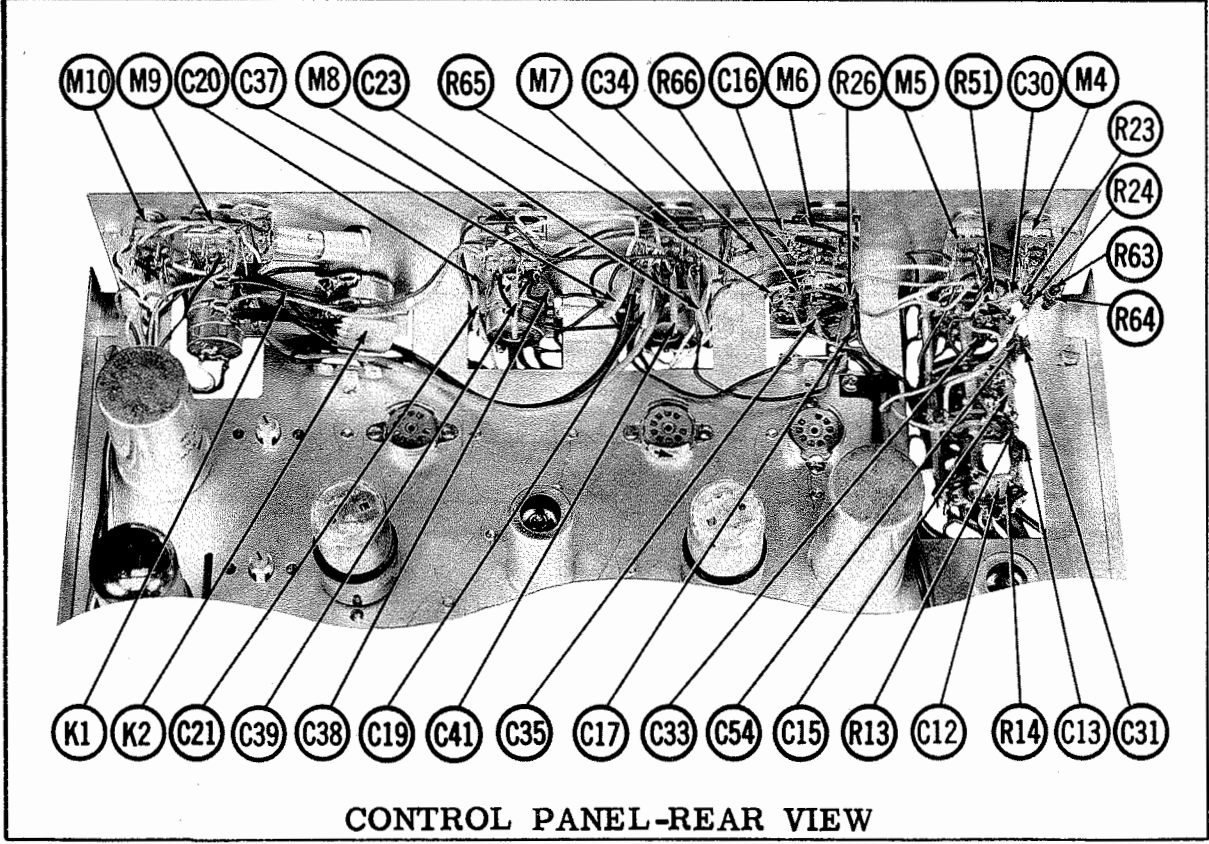
- DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common ground.
- Line voltage maintained at 117 volts for voltage readings.
- Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
- All controls at minimum, proper output load connected.

A PHOTOFAC STANDARD NOTATION SCHEMATIC
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† THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
ALL MEASUREMENTS MADE IN CHANNEL #1 "TAPE-AUX" POSITION WITH ALL FILTERS OFF UNLESS OTHERWISE DESIGNATED.
■ MEASURED IN "MX-AUX" POSITION.
▲ MEASURED WITH "LO FILTER" ON.
† MEASURED FROM PIN 8 OF V12.
NC NO CONNECTION TP TIE POINT



CHASSIS BOTTOM VIEW-CAPACITOR & MISC. IDENT.



CONTROL PANEL-REAR VIEW

PARTS LIST AND DESCRIPTIONS

ITEM No.	GENERAL ELECTRIC		RAYTHEON		SYLVANIA	
	ITEM No.	TYPE	ITEM No.	USE	ITEM No.	TYPE
V1		Channel 1 Presamp.	ECC83/12AX7	Channel 2 Presamp.		ECC83/12AX7
V2		Channel 1 AF Amp.	7247 (12DW7)*	Channel 2 AF Amp.		7247 (12DW7)*
V3		Ch. 2 AF Amp.	ECC83/12AX7	Channel 2 phase Inv.		6SN7GTB
V4		Channel 1 Phase Inv.	6SN7GTB	Channel 2 Output		7591
V5		Channel 1 Output	7591	Rectifier		GZ34/5AR4
V6		Channel 2 Output	7591			

* Alternate

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES		NOTES
			SARKES TARZIAN PART No.	RCA PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
X1	.001A	93005	1N1783	20H			Bias Rectifier

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILER PART No.	ELEMENCO PART No.			
C26	.25 400V 10%		V84C4P1	DD-401	PM4P25	4DP-5-254	GEM-4025	MALLOY PART No.	SPRAGUE PART No.
C27	.1 400V 10%	#22517	V84C4P1	DD-122	PM4P1	4DP-3-104	GEM-1001		
C28	.025		DI-1200	DD-122	PM4P1	4DP-3-104	GP940		
C30	400 10%		DI-330	DD-331	LI0T33	CCD-401	GP212		
C31	.0012 10%	#22517	DI-330	DD-331	LI0T33	CCD-122	GP212		
C32	.025		DI-330	DD-331	LI0T33	CCD-331	GP212		
C33	330 10%		N750-DI 68	DTN-68	C10Q88U	CCTN-680	CNT-468		
C34	68 10%	#22580	V84C4P1	DD-153	BYA10D15	4DP-3-104	GEM-1001		
C35	.2 10V		BPD-015	DD-153	BYA10D15	CCD-153	GP115		
C36	.1 400V 10%		BPD-015	DD-153	BYA10D15	CCD-153	GP115		
C37	.015		BPD-015	DD-153	BYA10D15	CCD-153	GP115		
C38	.0068 10%		DI-4800	DD-502	BYA10D5	CCD-502	GP250		
C39	.005		DI-4800	DD-502	BYA10D5	CCD-502	GP250		
C40	.1 400V 10%		V84C4P1	DD-153	BYA10D5	CCD-153	GP115		
C41	.009 10%	#22548	V84C4P1	DD-153	BYA10D5	CCD-153	GP115		
C42	.015		BPD-015	DD-121	PM4P1	4DP-3-104	GEM-1001		
C43	125 10%		BPD-015	DD-121	PM4P1	4DP-3-104	GEM-1001		
C44	.25 400V 10%		V84C4P1	DD-153	BYA10D5	CCD-153	GP115		
C45	.1 400V 10%		V84C4P1	DD-153	BYA10D5	CCD-153	GP115		
C46	.1 400V 10%		V84C4P1	DD-153	BYA10D5	CCD-153	GP115		
C47	.03 600V		P88RN-03	DD-303	CUB8S3	8DP-3-303	GEM-813		

* Eico Part Number.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	EICO PART No.	REPLACEMENT DATA						
			AEROVOX PART No.	CORNELL-DUBILER PART No.	GENERAL ELECTRIC PART No.	MALLOY PART No.			
C1A	.40	24008	AFH2-7-90	B0510	XC4-51	FP999, 5	TMD-2770	FP999, 5	TVL-2839
C2A	.40	24012	AFH4-15-30	C0270		FP444, 95	TMT-3724	TMT-3724	TVL-4769, 4
C3	.20			BR4045			TD-40-450	TD-40-450	
C4	.30	23016	PR5140	BR3045	QTI-12	TC77	TD-30-450	TD-30-450	TVA-4711
C5	.18	23003	PR5640	BR3635	QTI-6	TC64	TD-16-350	TD-16-350	TVA-1607
C6	.10	23001	PTT79	NLW10-25	MTI-5	TC22	MLV10-25	MLV10-25	TE-1204
C7	.50	23015	PR5480	BR5015	QTI-17	TC49	TD-50-150	TD-50-150	TVA-1414
C8	.50	23011	PR5150	BR5015	QTI-15	TC39	TD-50-50	TD-50-50	TVA-1308
C9	.25	23020	PTT26	NLW25-10	MTI-10	TC28	MLV25-6	MLV25-6	TE-1091
C10	.25	23020	PTT26	NLW25-10	MTI-10	TC28	MLV25-6	MLV25-6	TE-1091

① Some versions may use Part #23041 in this application.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA						
			EICO PART No.	CENTRALAB PART No.	CORNELL-DUBILER PART No.	ELEMENCO PART No.			
R1A	Level, Channel 1	250K	18069						
B	Level, Channel 2	25K Tap							
R2A	Balance, Channel 1	25K Tap	18068	B-744, SR-68					
R3A	Balance, Channel 2	750K	18071	FI-51, R2-51					
R4A	Bass, Channel 1	Imag	18070	FI-40, R2-40, KR-1					
B	Treble, Channel 1 (Power Off-On)	500K							
R5	Output Balance, Ch. 1	50K	18029	EK-31					BH7-50K-S
R6	Output Balance, Ch. 2	50K	18029	EK-31					BH7-50K-S
R7	Output Bias, Ch. 1	50K	18029	EK-31					BH7-50K-S
R8	Output Bias, Ch. 2	50K	18029	EK-31					BH7-50K-S
R9	Hum Adj., Channel 1	1000 2W	19016	WN-101					A43-100, FKS-1/4
R10	Hum Adj., Channel 2	1000 2W	19016	WN-101					A43-100, FKS-1/4

† "CONCENTRIK" Equivalent: K-15 Kit with Base Elements and Shafts: (Not available as a factory assembled unit).

†† "CONCENTRIK" Equivalent: K-15 Kit with Base Elements and Shafts: (Not available as a factory assembled unit).

††† "STA-LOC" Equivalent: FA6L, RU18L, OS602, IS675

†††† "STA-LOC" Equivalent: FA65L, RU55L, OS600, IS675, US41

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILER PART No.	ELEMENCO PART No.			
C12	.025	#22517	DI-390	DD-401	LI0T33	CCD-401	GP340	GP340	5HK-S25
C13	.400 10%		DI-1200	DD-122	DTN-68	CCD-122	GP212	GP212	10TS-T10
C14	.025		DI-330	DD-331	DTN-68	CCD-122	GP212	GP212	10TS-T10
C15	.330 10%		N750-DI 68	DTN-68	C10Q88U	CCD-122	GP212	GP212	5HK-S25
C16	.68 N750 10%		N750-DI 68	DTN-68	C10Q88U	CCD-122	GP212	GP212	10TS-T33
C17	.2 10V		V84C4P1	DD-331	LI0T33	CCD-331	CNT-468	CNT-468	10TCS-688
C18	.1 400V 10%		V84C4P1	DD-331	LI0T33	CCD-331	CNT-468	CNT-468	10TCS-688
C19	.015	#22580	BPD-015	DD-153	BYA10S15	4DP-3-104	GEM-1001	GEM-1001	4TM-P10
C20	.005		BPD-015	DD-153	BYA10S15	4DP-3-104	GEM-1001	GEM-1001	4TM-P10
C21	.0068 10%		BPD-015	DD-153	BYA10S15	4DP-3-104	GEM-1001	GEM-1001	4TM-P10
C22	.1 400V 10%		V84C4P1	DD-153	BYA10S15	4DP-3-104	GEM-1001	GEM-1001	4TM-P10
C23	.009 10%	#22548	BPD-015	DD-153	BYA10S15	4DP-3-104	GEM-1001	GEM-1001	4TM-P10
C24	.015		BPD-015	DD-153	BYA10S15	4DP-3-104	GEM-1001	GEM-1001	4TM-P10
C25	125 10%		DI-120	DD-121	LI0T12	CCD-121	GP115	GP115	5HK-S15

