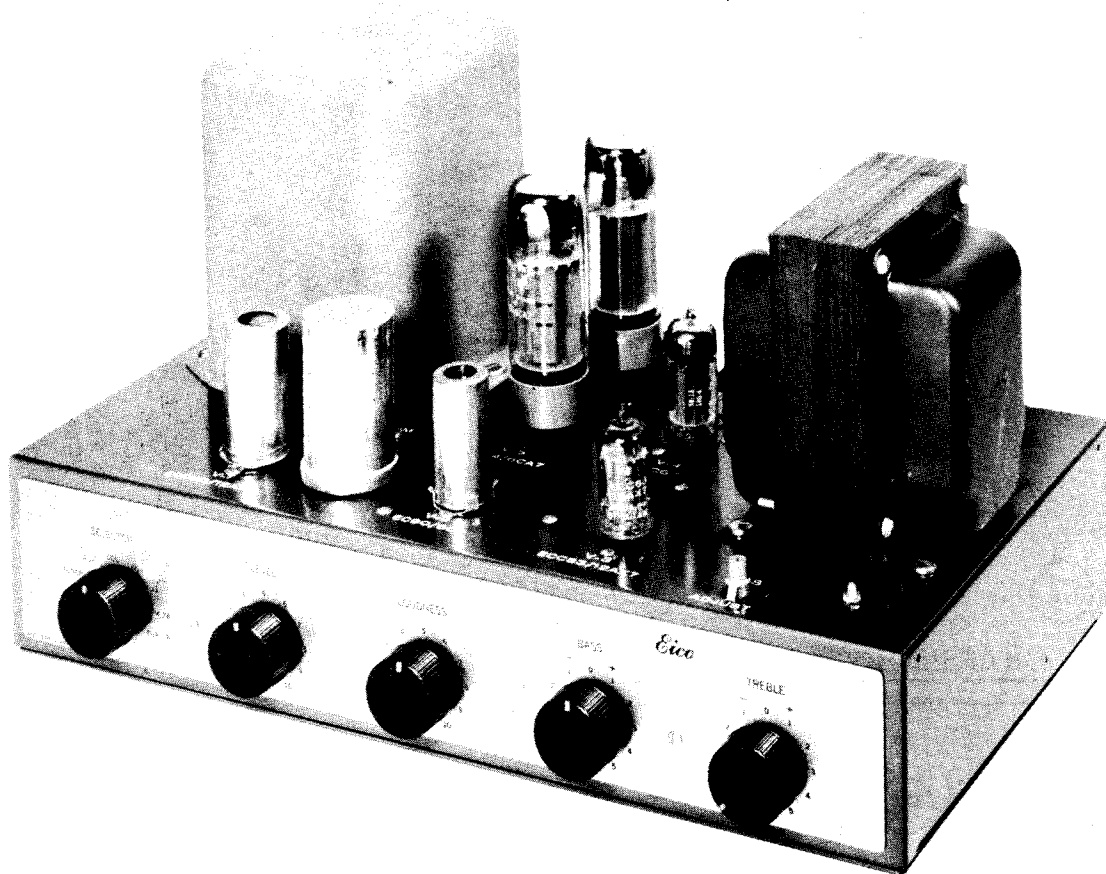




EICO  
MODEL HF-52



EICO  
MODEL HF-52

TRADE NAME	Eico Model HF-52		
MANUFACTURER	Electronic Instrument Co., Inc., 33-00 Northern Blvd., Long Island City 1, N. Y.		
TYPE SET	AC Operated 7 Tube Audio Amplifier		
POWER SUPPLY	110-120 Volts AC, 60 Cycles	RATING	150 Watts, 1.45 Amp. @ 117 Volts AC

## ADJUSTMENTS

### BIAS ADJUSTMENT

Connect DC probe of VTVM to point A Common to chassis. Adjust Bias (R6) for -47 volts on VTVM.

### BALANCE ADJUSTMENT

Connect VTVM across meter jacks on rear apron. Use lowest DC scale. Adjust Balance (R5) for zero or MINIMUM deflection.

### FINAL BIAS ADJUSTMENT

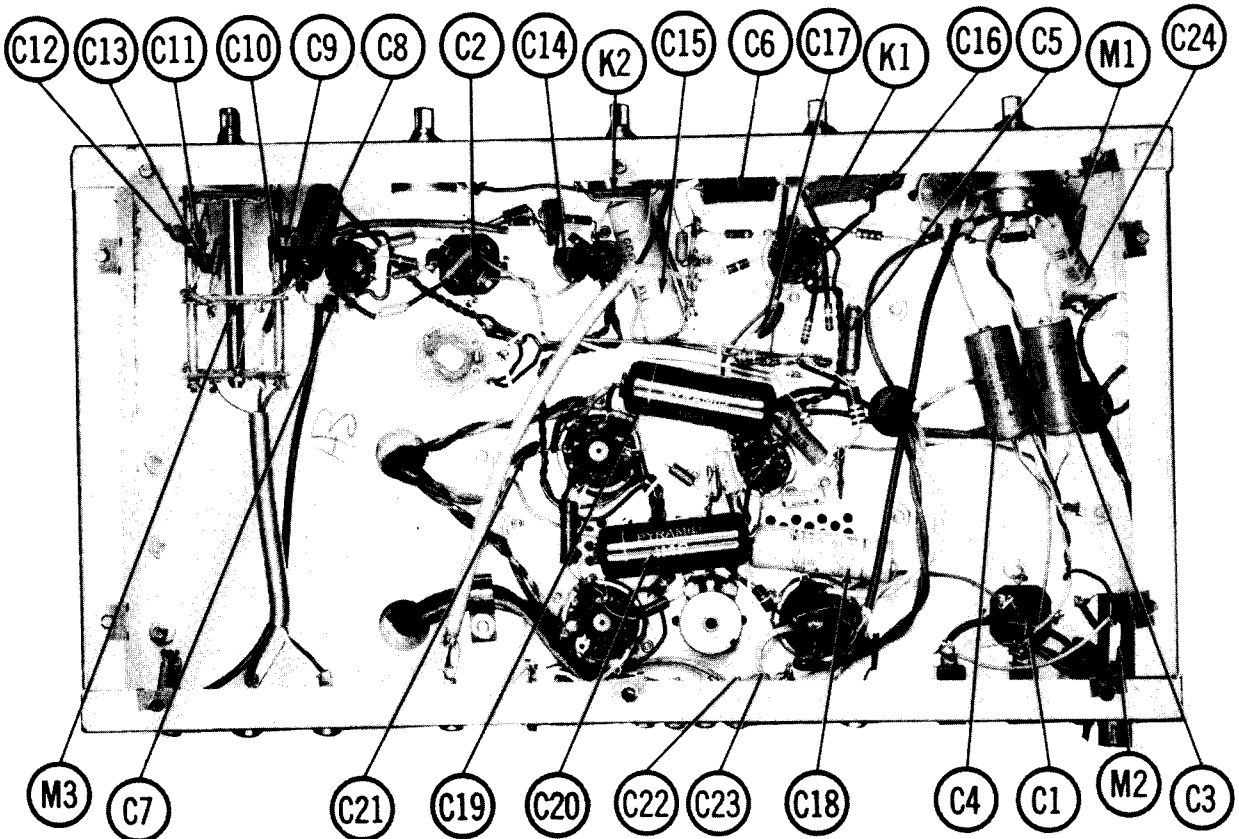
Connect DC probe of VTVM to either meter jack. Common to chassis. Adjust Bias (R6) for .65 volts.

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

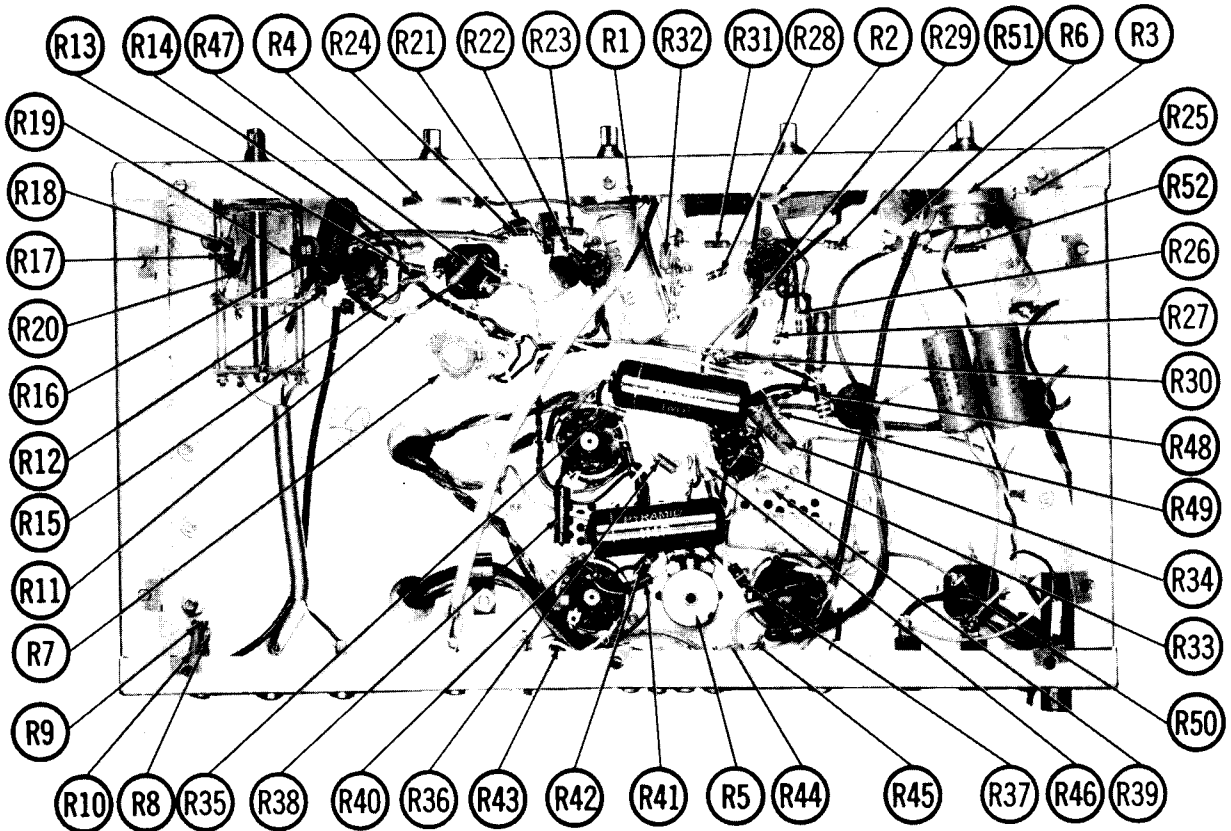


The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of JX632

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. © 1960 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



CHASSIS BOTTOM VIEW - CAPACITOR & MISC. IDENT.



CHASSIS BOTTOM VIEW - RESISTOR IDENT.

# PARTS LIST AND DESCRIPTIONS TUBES

# CHASSIS—TOP VIEW

CBS		GENERAL ELECTRIC		RAYTHEON		SYLVANIA	
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE		
V1	Phono Pre-amplifier	ECC83 (12AX7) *	V5	Output	EL34 (6CA7) *		
V2	AF Amplifier	EC90 (6C4) *	V6	Output	EL34 (6CA7) *		
V3	AF Amplifier	ECC83 (12AX7) *	V7	Rectifier	GZ34 (5AR4) *		
V4	AF Amp. - Phase Inverter	6CG7					

\* Alternate

## ELECTROLYTIC CAPACITORS

RATING		REPLACEMENT DATA	
ITEM No.	CAP. VOLT.	EICO PART No.	REPLACEMENT DATA
C1A	.40 500	24003	FR284
C1B	.25 500		TC22
C2A	.20 450		FP474.5
C2B	.20 450		TC29
C2C	.10 350		TC49
C2D	.10 350		TC49
C3	50 150		TC22
C4	50 150		TC22
C5	10 25		TC29
C6	10 25		TC29

① Alternate 20mfd @ 500V, 40mfd @ 500V may be used in some versions (Part #24008).

## FIXED CAPACITORS

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

RATING		REPLACEMENT DATA	
ITEM No.	CAP. VOLT.	REMARKS	REPLACEMENT DATA
C7	10000		BYA10S1
C8	.1 400V		CUB4P1
C9	850 10%		PM6D33
C10	3300 10%		PM6T5
C11	5000 10%		PM6D3
C12	500 10%		PM4P25
C13	2700 10%		PM4P1
C14	25000		CUB4P25
C15	.25 400V 10%		PM6P25
C16	.1 400V 10%		PM6P25
C17	100 N220 5%		PM6P25
C18	.25 400V 10%		PM6P25
C19	.25 600V 10%		PM6P25
C20	.25 600V 10%		PM6P25
C21	750 1000V 10%		PM6P25
C22	500 10%		PM6P25
C23	225 10%		PM6P25
C24	.03 600V		PM6P25

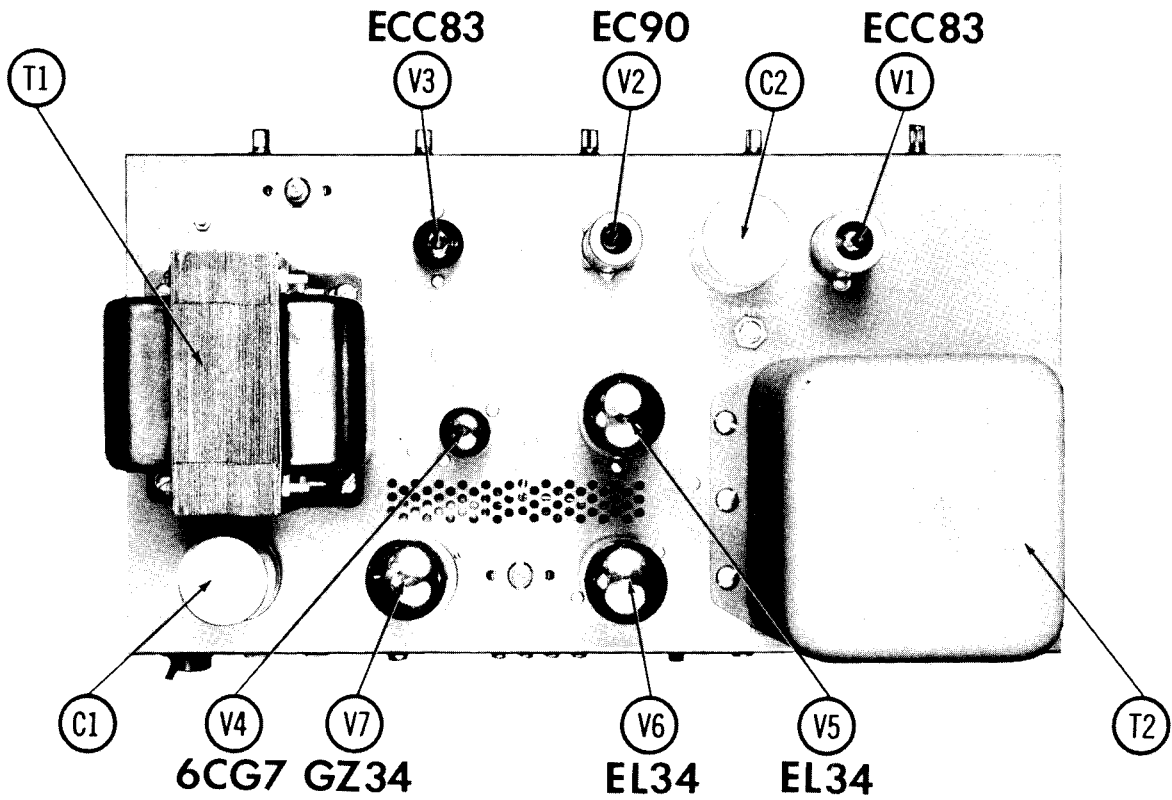
\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

## CONTROLS

RATING		REPLACEMENT DATA	
ITEM No.	RESIST. ANCE	REMARKS	REPLACEMENT DATA
R1A	500K *		C1-60 †
R1B	Shaft		Not Req.
R2A	100K		B-69
R2B	Shaft		Not Req.
R3A	500K		Not Req.
R3B	250K tap		Not Req.
R3C	Switch		Not Req.
R4A	100K		ER-1
R4B	Shaft		B-41
R5	50K		Not Req.
R6A	10K		KSS-3
R6B	Shaft		B47-50K-S
R7A	100Ω		B47-10K-S
R7B	Shaft		AK-1
R7C	Shaft		WN-101

\* Taps @ 150K, 300K.

† Includes K2.



B	Shaft		Not Req.		SK1				
R2A	1meg	18020	B-69	A47-1meg-S	Q11-137	U54			Bass
B	Shaft		Not Req.	KSS-3	Not Req.	Not Req.			
R3A	500K	18008	BT-65	A47F5-500K	Q19-133X	UT-43I			Treble
B	250K tap								
C	Shaft		Not Req.	KSS-3	Not Req.	Not Req.			
R4A	100K	18031	KR-1	SWE-12	76-1	US-26			Power Off-On Level
B	100K		B-4I	A47-100K-Z	Q13-128	U39			
R5	50K	18029	Not Req.	KSS-3	Not Req.	Not Req.			
R6A	10K	18015	EX-3I	B47-50K-S	Q11-123	PTA54L			Balance Adjust
B	Shaft		AB-14	B47-10K-S	Q11-116	U20			Blas Adjust
R7A	100Ω	19009	AK-1	Not Req.	Not Req.	Not Req.			
B	Shaft		WN-101	A43-100	W11-084	R100L			Hum Adjust
B	Shaft		Not Req.	FKS-1/4	SK5	Not Req.			

\* Taps @ 150K, 300K.

† Includes K2.

(T2)

## PARTS LIST AND DESCRIPTIONS (Continued)

### RESISTORS

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

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R8	68K		R23	2200Ω		R38	10Ω 1% 1W	
R9	120K		R24	47K		R39	33K 5%	
R10	68K		R25	100K		R40	1000Ω	
R11	200K 5%		R26	100K		R41	180K 5%	
R12	1800Ω		R27	3300Ω		R42	100K 5%	
R13	2.2 meg		R28	4700Ω		R43	10Ω 1% 1W	
R14	200K 5%		R29	220K		R44	3000Ω 5%	
R15	2200Ω		R30	3300Ω		R45	3000Ω 5%	
R16	90K 5%		R31	1000Ω		R46	18K 5% 1W	
R17	100K 5%		R32	100Ω 5%		R47	68K	
R18	4.7 meg 5%		R33	1meg		R48	33K 1W	
R19	560K 5%		R34	28.75K 5% 1W		R49	150K	
R20	2.2 meg 5%		R35	1000Ω		R50	15K 1W	
R21	2.2 meg		R36	180K 5%		R51	33K	
R22	1meg		R37	100K 5%		R52	22K	

### TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	EICO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	
T2	4500Ω	16Ω	32007						
	CT	Tap @							
	Screen	8Ω, 4Ω							
	Tap @								
	800Ω								
	CT								

### RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA					NOTES
	CURRENT (Measured)	EICO PART No.	INTERNATIONAL PART No.	ITT PART No.	SARKES TARZIAN PART No.	SYLVANIA PART No.	
M1	.005A	93003 *	RS050 *	1234AH *	50 *		* Selenium Type

### COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	EICO PART No.	REPLACEMENT DATA
K1	Tone Compensator	330mmf, 4700mmf, 4700mmf, 1000Ω, 100K, 100K, 120K	29751	Sprague TC-24
K2	Loudness Compensator	100mmf, 200mmf, 4500mmf, 4500mmf, 50K, 50K	(Part of R1)	Aerovox PA-682 Centralab PC-324 Sprague TC-4

### FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			EICO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	3AG	3A 250V	91005	97800	312003	342001	AGC 3	HKP
					(3AG 3A 250V)			

### TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA						
	PRI.	SEC. 1	SEC. 2	EICO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	125V	780VCT	5V	30020	24R38 ①			P-4004 ①	24R38 ①	
	① L15A	① .140A	① 1.9A							
	Tap @ 117V	Tap @ 75V								
	① L45A	① .005A								
	SEC. 3	SEC. 4	SEC. 5							
	6.3V									
	① 4.2A									

① Parallel and phase 6.3V Filament Windings. Tape and ignore 2.5V and center tap on 5V and 6.3V Windings.

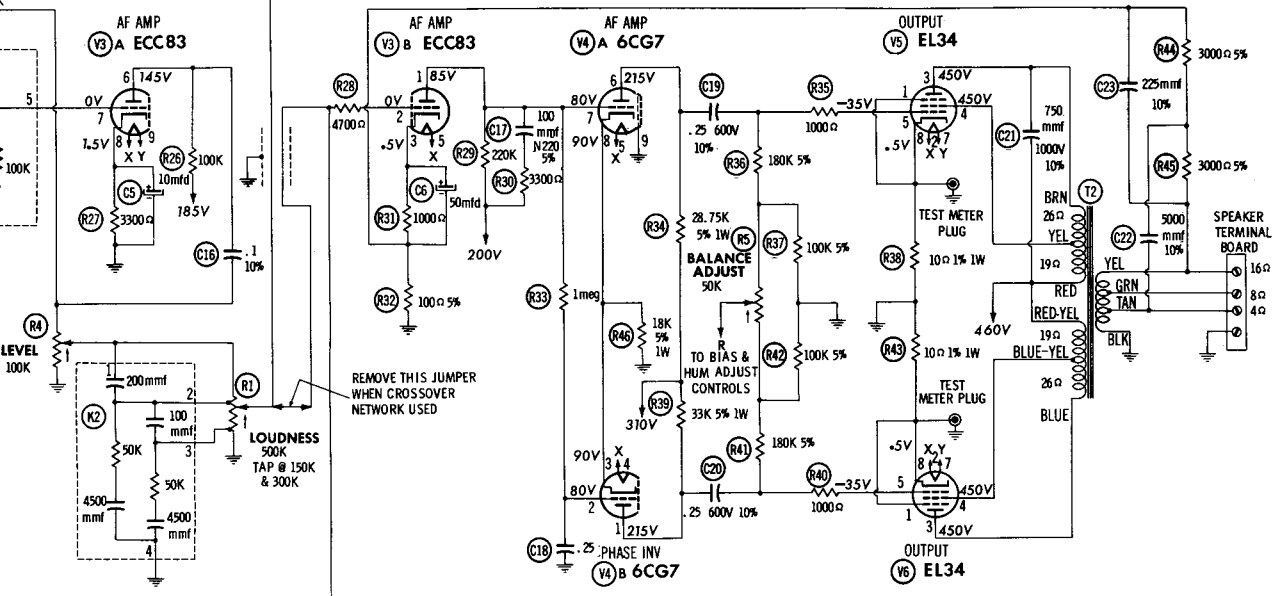
### MISCELLANEOUS

ITEM No.	PART NAME	EICO PART No.	NOTES
M3	Switch	60038	Selector (Rotary Wafer Type)

### WIRING DATA

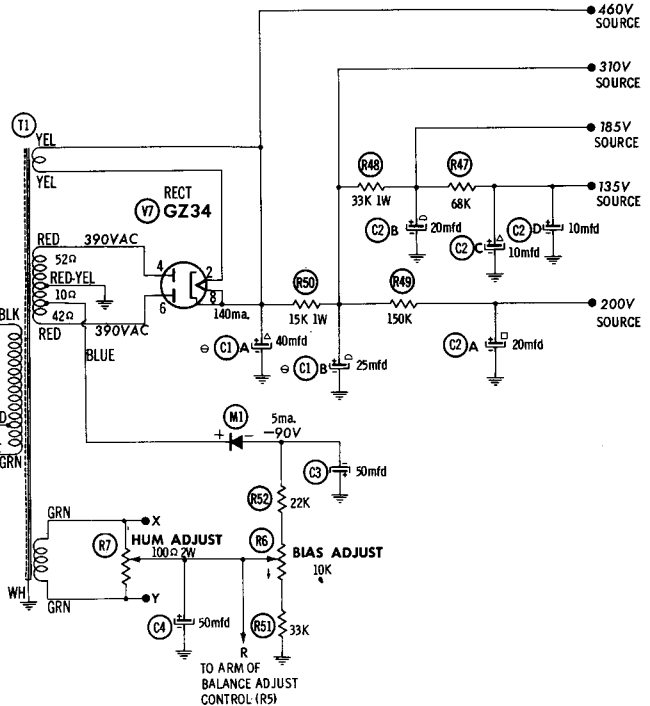
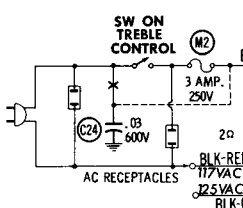
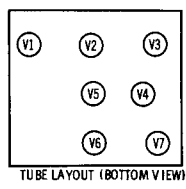
General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors  
8524 (Stranded) Available in Ten Colors  
Power Cord ..... Use BELDEN No. 1765-B (6 Ft. Length)  
1725-K (7½ Ft. Length)

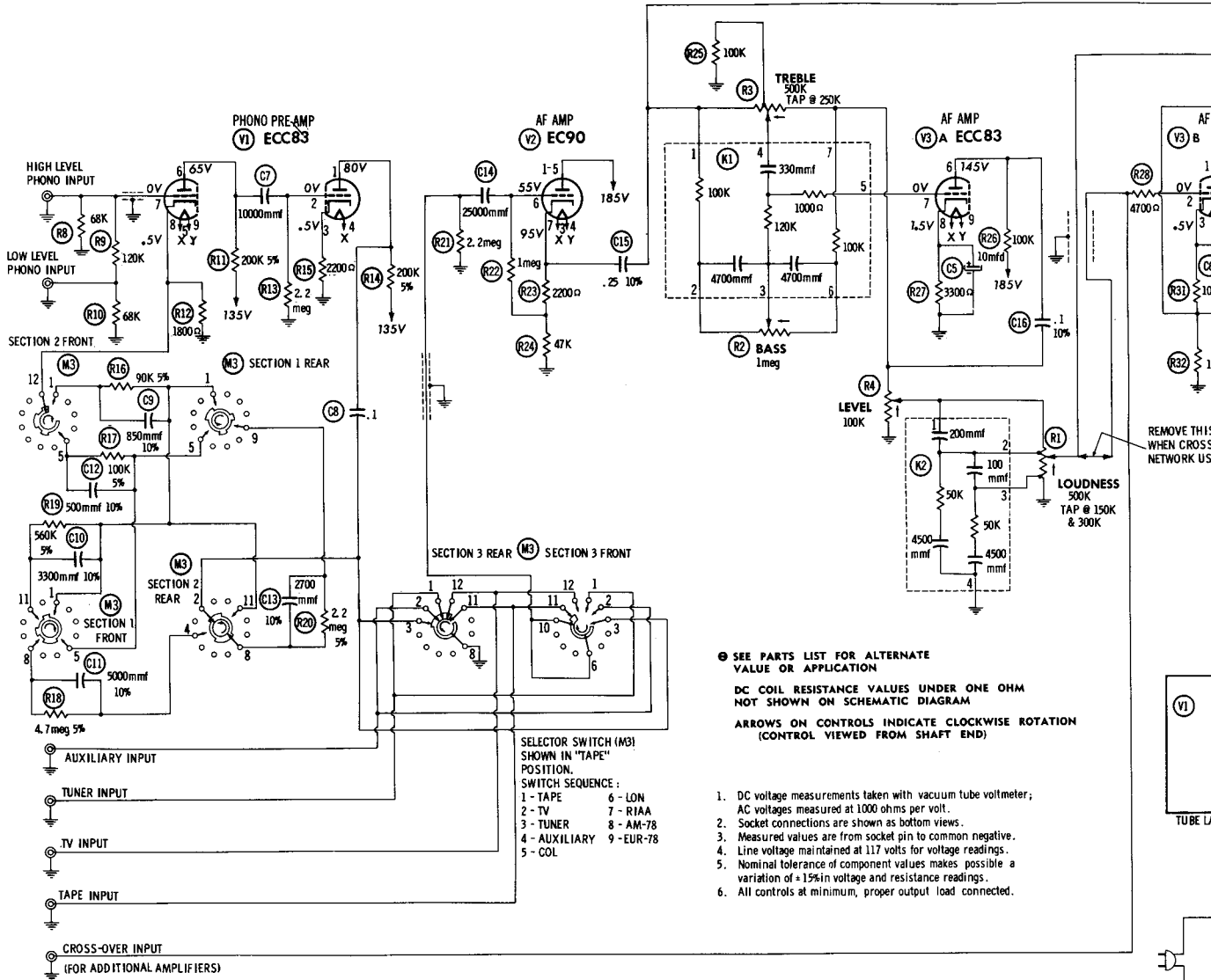
TAPE OUTPUT  
CROSS-OVER OUTPUT



FOR ALTERNATE  
LOCATION  
RESISTANCE VALUES UNDER ONE OHM  
SCHEMATIC DIAGRAM  
CONTROLS INDICATE CLOCKWISE ROTATION  
(VIEWED FROM SHAFT END)

Measurements taken with vacuum tube voltmeter,  
resistors at 1000 ohms per volt.  
Resistors are shown as bottom views.  
Capacitors are shown at 117 volts for voltage readings.  
Component values makes possible a  
voltage and resistance readings.  
Proper output load connected.





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC83	†315K	2.2meg	2200Ω	25K	25K	†315K	55K	1800Ω	25K
V2	EC90	†48K	NC	25K	25K	†48K	1meg	49K		
V3	ECC83	†385K	4700Ω	1100Ω	25K	25K	†148K	270K	3300Ω	25K
V4	6CG7	†48K	†1.3meg	18K	25K	25K	†44K	†385K	18K	NC
V5	EL34	10Ω	25K	†45Ω	†19Ω	220K	TP	25K	10Ω	
V6	EL34	10Ω	25K	†45Ω	†19Ω	220K	TP	25K	10Ω	
V7	GZ34	NC	†	52Ω	NC	52Ω	NC	†		

† MEASURED FROM PIN 8 OF V7.  
 NC NO CONNECTION  
 TP TIE POINT