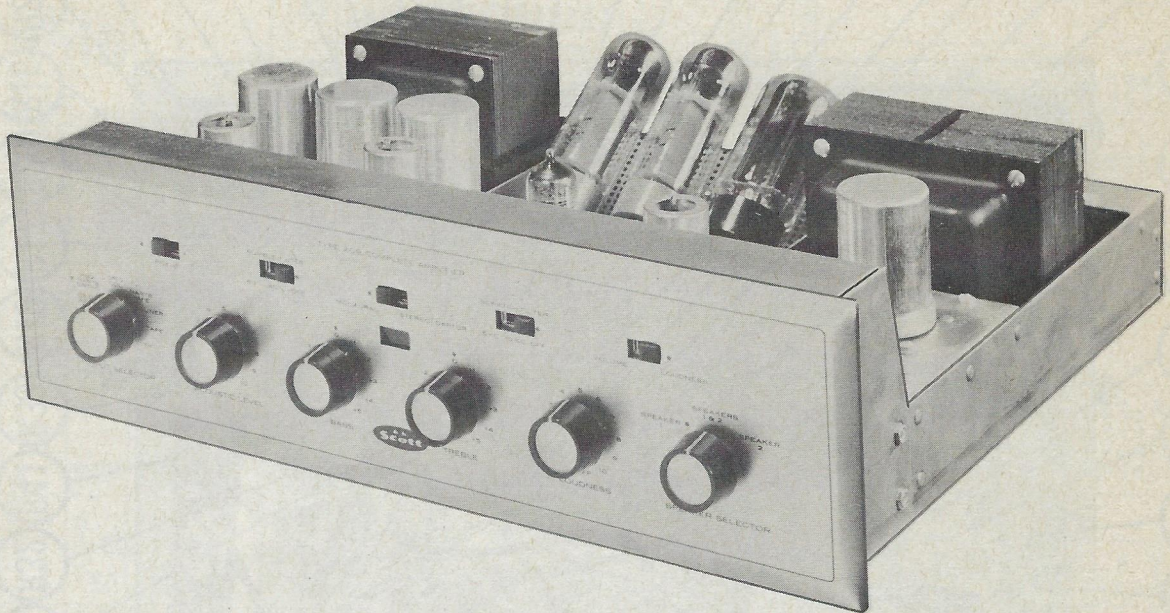




H. H. SCOTT
MODEL 209



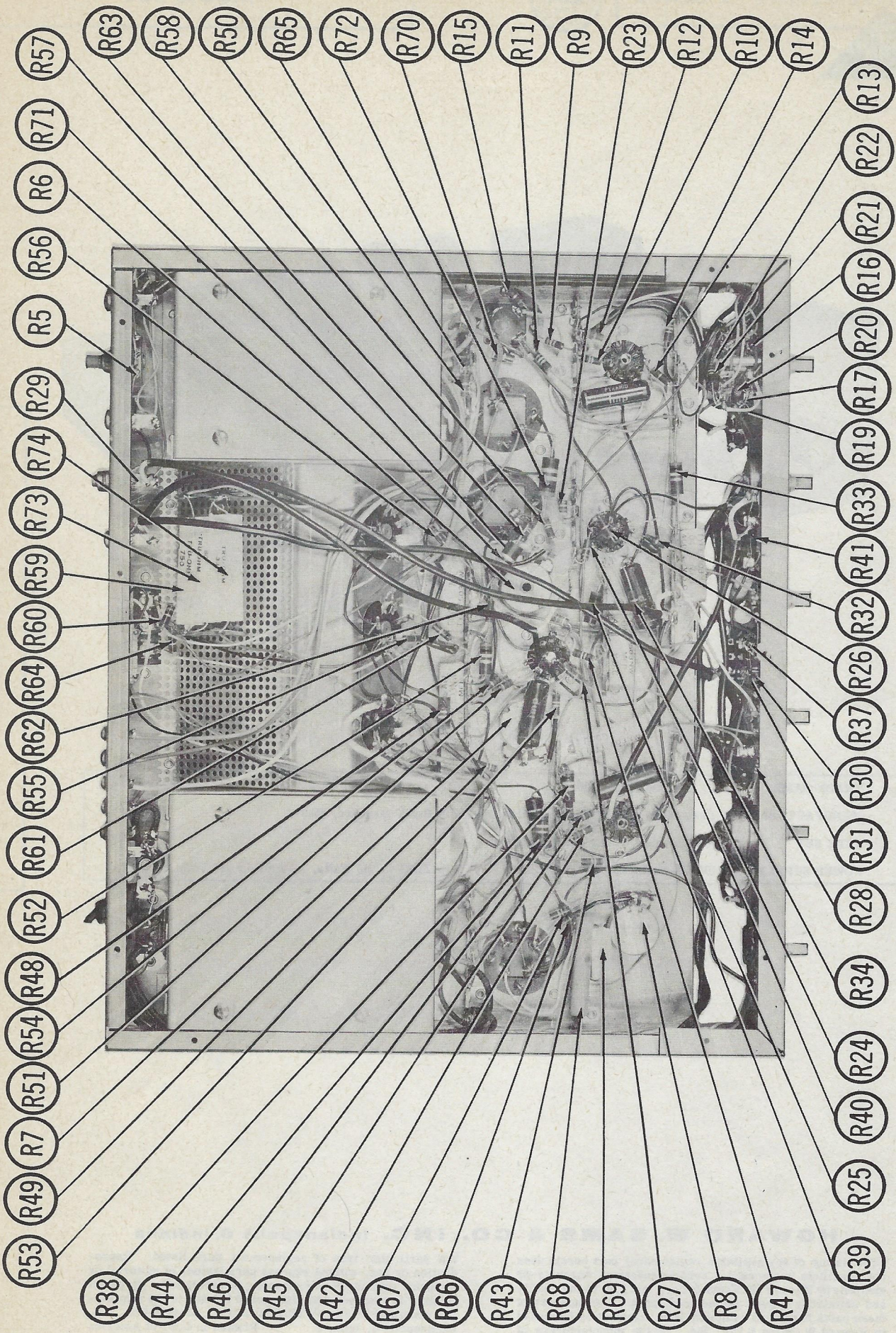
H. H. SCOTT
MODEL 209

TRADE NAME	H. H. Scott Model 209		
MANUFACTURER	Hermon Hosmer Scott, Inc., 111 Powder Mill Road, Maynard, Mass.		
TYPE SET	AC Operated 7 Tube Audio Amplifier		
POWER SUPPLY	105-125 Volts AC, 50-60 Cycles	RATING	115 Watts, 1.1 Amp. @ 117 Volts AC

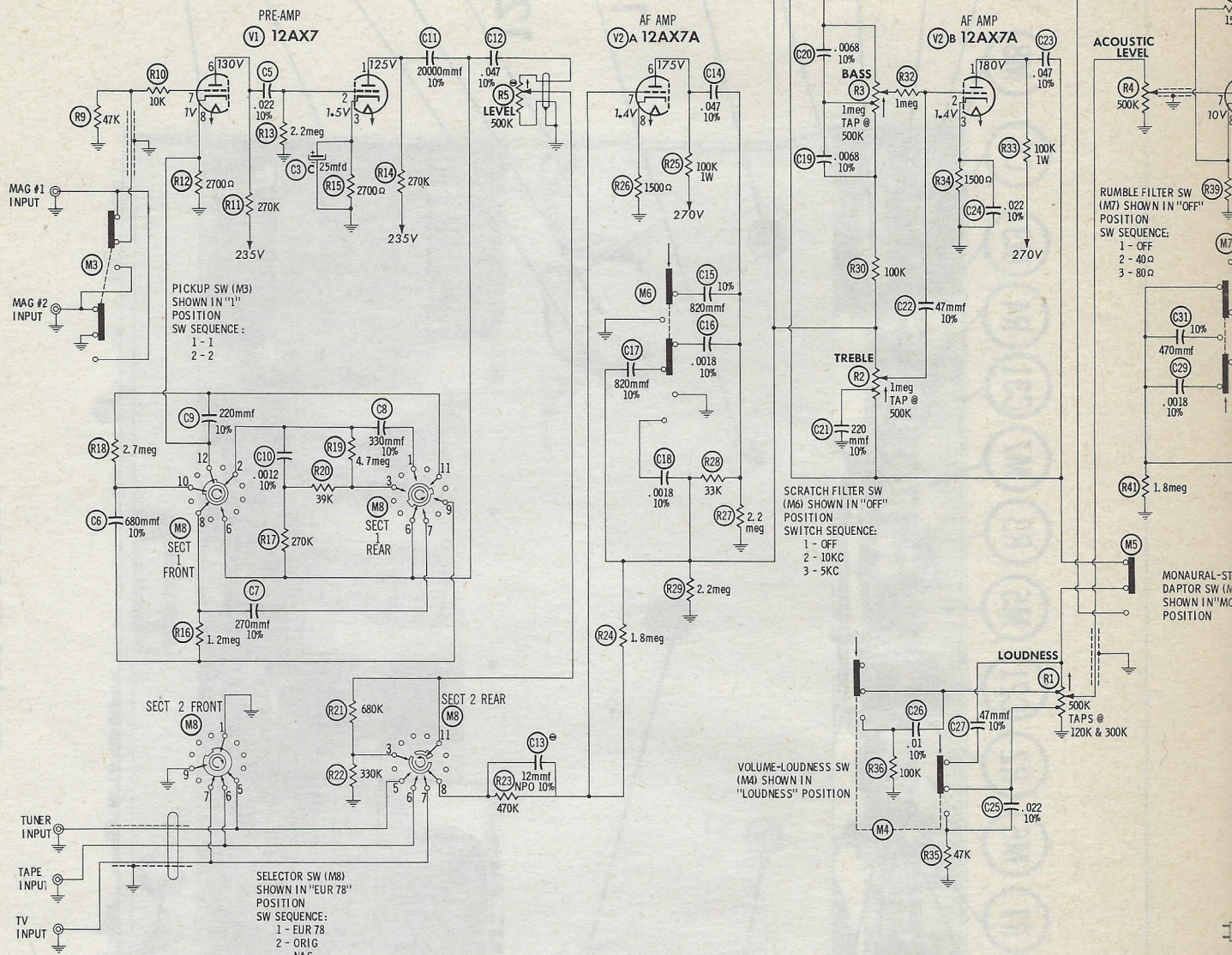
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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

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CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION



PICKUP SW (M3) SHOWN IN "1" POSITION SW SEQUENCE:
1 - 1
2 - 2

SELECTOR SW (M8) SHOWN IN "EUR 78" POSITION SW SEQUENCE:
1 - EUR 78
2 - ORIG NAS
3 - RIAA NARTB
4 - ORIG COL
5 - NARTB TAPE
6 - TUNER
7 - TAPE
8 - TV

SCRATCH FILTER SW (M6) SHOWN IN "OFF" POSITION SWITCH SEQUENCE:
1 - OFF
2 - 10KC
3 - 5KC

VOLUME-LOUDNESS SW (M4) SHOWN IN "LOUDNESS" POSITION

RUMBLE FILTER SW (M7) SHOWN IN "OFF" POSITION SW SEQUENCE:
1 - OFF
2 - 40Ω
3 - 80Ω

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 of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V1	12AX7	†340K	2.2meg	2700Ω	12Ω	0Ω	†340K	57K	2700Ω
V2	12AX7A	†120K	1.6meg	1500Ω	12Ω	24Ω	†120K	600K	1500Ω
V3	12AU7	†100K	1.8meg	1800Ω	36Ω	24Ω	†120K	0Ω	8200Ω
V4	12AX7A	†120K	2.2meg	1500Ω	0Ω	0Ω	†120K	2.4meg	1700Ω
V5	6CA7 EL34	0Ω	0Ω	†195Ω	†860Ω	190K	NC	.1Ω	0Ω
V6	6CA7 EL34	0Ω	0Ω	†195Ω	†860Ω	190K	TP	.1Ω	0Ω
V7	5U4GA	NC	†	TP	65Ω	NC	60Ω	TP	†

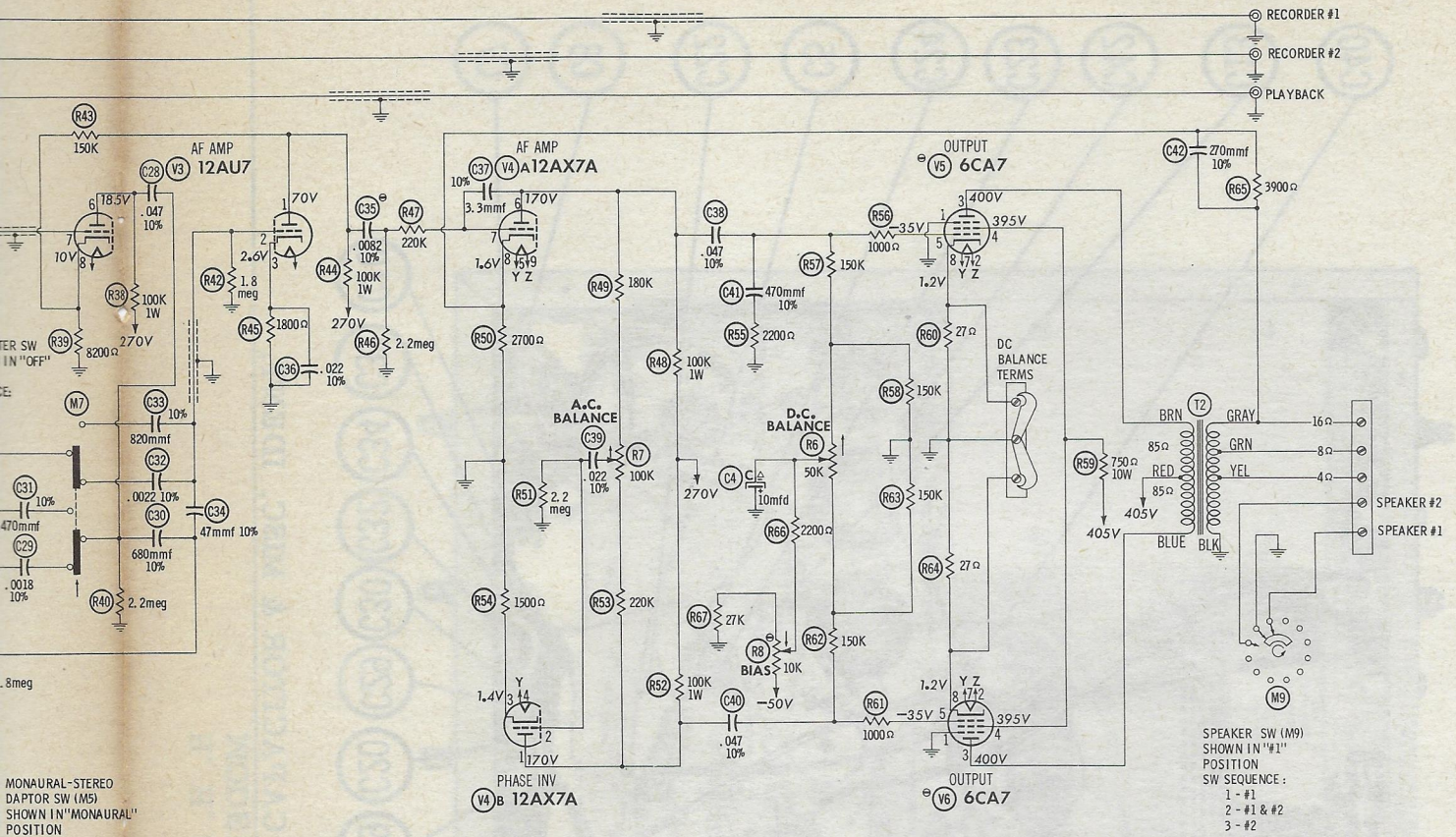
ALL MEASUREMENTS TAKEN IN "EUR" POSITION.

† THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE C

† MEASURED FROM PIN 2 OF V7.

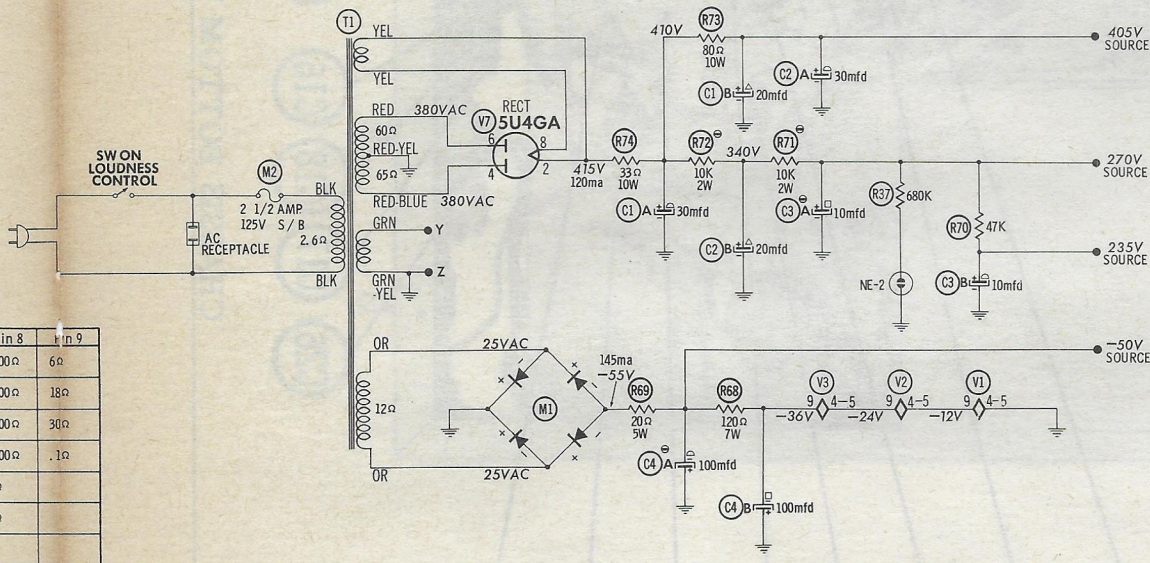
NC NO CONNECTION

TP TIE POINT



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.

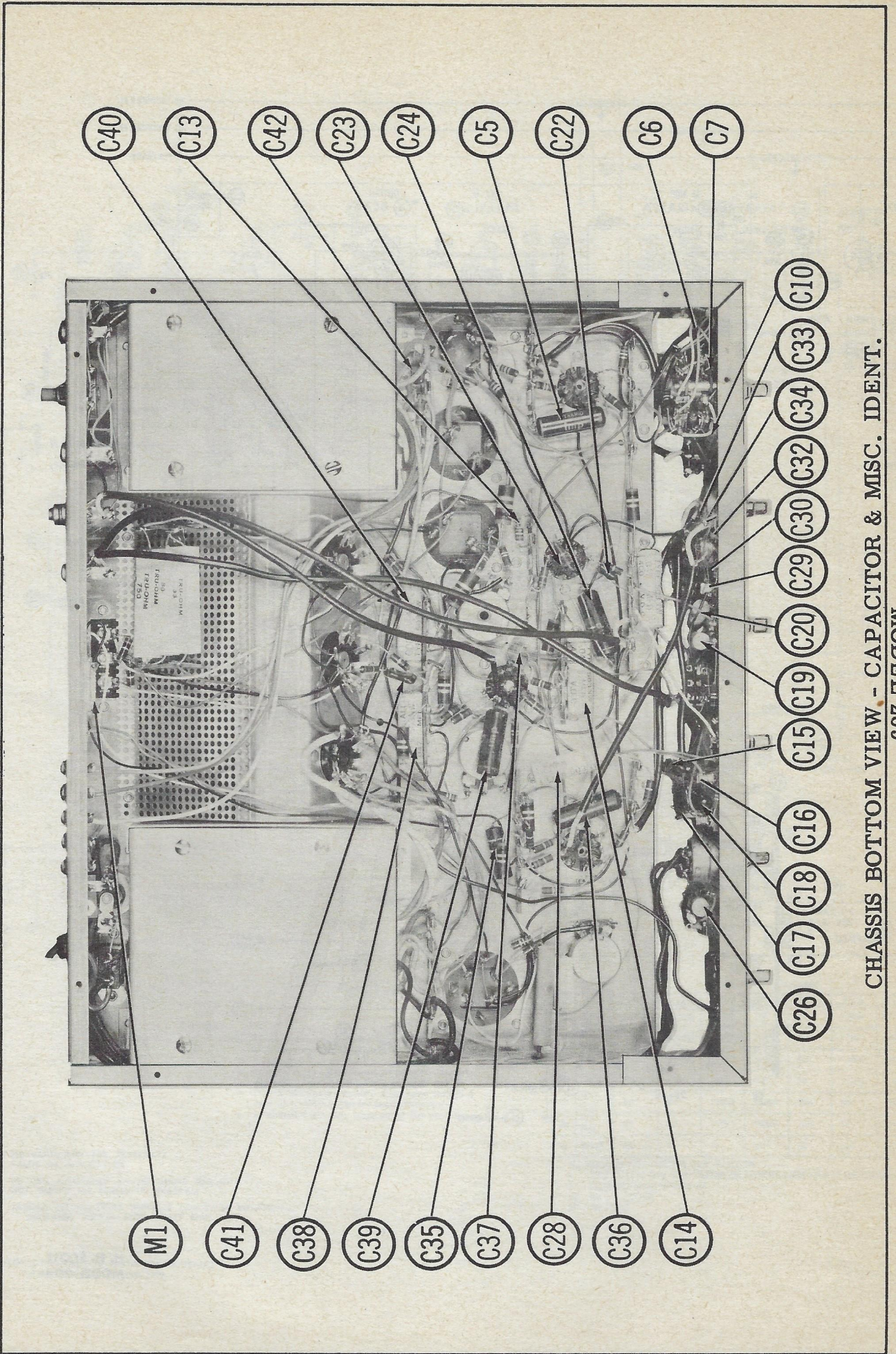
MONAURAL-STEREO
DAPTOR SW (M5)
SHOWN IN "MONAURAL"
POSITION



Pin 7	Pin 8	Pin 9
7K	2700Ω	6Ω
100K	1500Ω	18Ω
10K	8200Ω	30Ω
4meg	1700Ω	.1Ω
1Ω	0Ω	
1Ω	0Ω	
P	9	

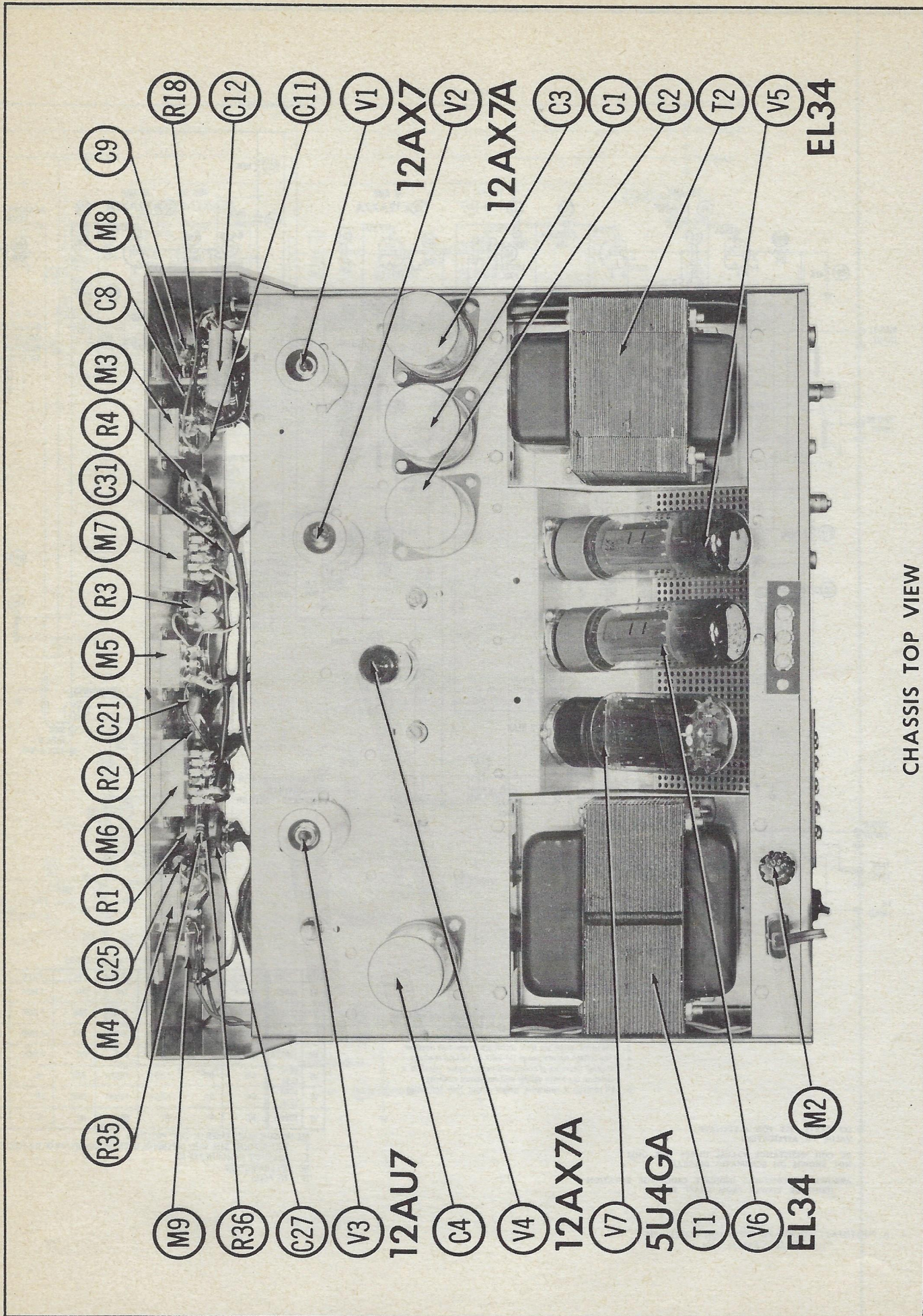
POLYTRIC IN THE CIRCUIT.

H. H. SCOTT
MODEL 209



CHASSIS BOTTOM VIEW - CAPACITOR & MISC. IDENT.

H. H. SCOTT
 MODEL 209
 L. LOOS 'H'



CHASSIS TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, PENNSYLVANIA)

ITEM No.	USE	TYPE	NOTES	ITEM No.	USE	TYPE	NOTES
V1	Mag Pre-amplifier	12AX7		V5	Output	6CA7/EL34	
V2	AF Amplifier	12AX7A		V6	Output	6CA7/EL34	
V3	AF Amplifier	12AU7		V7	Rectifier	5U4GA	
V4	AF Amp. - Phase Inv.	12AX7A					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		H. H. Scott PART No.	REPLACEMENT DATA			NOTES
	CAP.	VOLT.		CORNELL-DUBILIER PART No.	AEROVOX PART No.	MALLORY PART No.	
C1A	.30	475	CEC-30-20-475	B0486	FP283	JL-368	TYLS-2826 *
C1B	.20	475	CEC-30-20-475	BR1250	FP283	JL-333	TYLS-2826 *
C2A	.30	475	CEC-30-20-475	B0486	FP283	JL-382	TYLS-4914.2 *
C2B	.20	475	CEC-30-20-475	BR1250	FP283	JL-382	TYLS-4914.2 *
C3A	.10	475	CEC-2X10-2X25 ①	D0504	FP376.6	JL-382	TYLS-4914.2 *
C3B	.10	475	CEC-2X10-2X25 ①		TC26		
C3C	.25	25	CEC-2X10-10CP ②				
C3D	.25	25	CEC-2X10-10CP ②				
C4A	.100	75					
C4B	.100	75					
C4C	.100	75					

① C3D is not used.

② Common Positive Unit.

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

FIXED CAPACITORS

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

ITEM No.	RATING		H. H. Scott TOL	REPLACEMENT DATA			NOTES
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
C5	.022	400	10%	CPM-.022	D6-681	JL-368	5BF-S22
C6	.680	400	10%	CM20-680	IR5T68	JL-368	MS-368
C7	.270	400	10%	CM15-270	IR5T27	JL-368	MS-327
C8	.330	400	10%	CM15-330	5R5T33	JL-333	MS-333
C9	.220	400	10%	CM15-220	1469-00033	JL-333	MS-333
C10	.0012	400	10%	CPM-.0012	1469-00022	JL-333	MS-333
C11	.00200	400	10%	CC-.02	22R5T22	JL-333	BF-D12
C12	.047	400	10%	CPM-.047	PM4S47	CNO-447	5CA-S28 10%*
C13	.047	400	10%	CPM-.047	C10Q12C	CNO-412	5TCC-Q12S 10%*
C14	.047	400	10%	CM20-820	PM4S47	JL-382	5BF-S47
C15	.820	400	10%	CPM-.0018	IR5T62	JL-382	5BF-S47
C16	.0018	400	10%	CPM-.0018	PM4S47	JL-382	5BF-S47
C17	.0018	400	10%	CPM-.0018	IR5T62	JL-382	5BF-S47
C18	.0068	400	10%	CPM-.0068	PM6D68	GTM-4268	5BF-D68
C19	.0068	400	10%	CPM-.0068	PM6D68	GTM-4268	5BF-D68
C20	.0068	400	10%	CPM-.0068	22R5Q47	JL-322	MS-447
C21	.220	400	10%	CM15-220	22R5Q47	CNO-447	MS-447
C22	.47	400	10%	CM15-47	PM4S47	CNO-447	5BF-S22
C23	.047	400	10%	CPM-.047	PM4S22	CNO-447	5BF-S22
C24	.022	400	10%	CPM-.022	PM4S22	CNO-447	5BF-S22
C25	.022	400	10%	CPM-.022	PM4S22	CNO-447	5BF-S22
C26	.01	400	10%	CPM-.01	PM4S1	GEM-1611	5BF-S1
C27	.47	400	10%	CM15-47	22R5Q47	CNO-447	MS-447
C28	.047	400	10%	CPM-.047	PM4S47	CNO-447	5BF-S47
C29	.0018	400	10%	CPM-.0018	IR5T68	JL-368	5BF-D18
C30	.680	400	10%	CM20-680	5R5T47	JL-347	MS-368
C31	.470	400	10%	CM30-470	PM4D22	JL-347	MS-368
C32	.0022	400	10%	CPM-.0022	IR5T82	JL-382	5BF-D22
C33	.820	400	10%	CM20-820	22R5Q47	GEM-16282	MS-447
C34	.47	400	10%	CM15-47	22R5Q47	GEM-16282	MS-447
C35	.0082	400	10%	CPM-.0082	NPO-SI 3.3	ZT-5533	5TCCB-V33S 10%*
C36	.022	400	10%	CPM-.022	CM15V33C	PM4S47	5BF-S47
C37	.022	400	10%	CPM-.022	PM4S47	PM4S22	5BF-S47
C38	.047	400	10%	CPM-.047	PM4S22	PM4S22	5BF-S22
C39	.022	400	10%	CPM-.022	PM4S22	PM4S22	5BF-S22

CAPACITORS (cont)

ITEM No.	RATING		H. H. Scott TOL	REPLACEMENT DATA			NOTES
	CAP.	VOLT.		AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
C40	.047	400	10%	CPM-.047	D6-471	JL-347	5BF-S47
C41	470	10%	10%	CM20-470	5R5T47	JL-347	MS-347
C42	270	10%	10%	CM15-270	5R5T27	JL-347	MS-327

① Not used in some versions.

② Some versions may use a 22mmf 10% in this application (Part #CM15-22).

③ Some versions may use a .047 @ 400V 10% in this application (Part #CPM-.047).

CONTROLS

ITEM No.	RATING		H. H. Scott PART No.	REPLACEMENT DATA			INSTALLATION NOTES
	RESIST-ANCE	WATTS		CLEARALAB PART No.	IRC PART No.	MALLORY PART No.	
R1A	500K	1/2	RCV-500KTT	BT-160	Q18-138XX	UDT-283	Loudness, Tap @ 120K & 300K
R2A	1meg	1/2	RCV-1MT-3F	KR-1	Q19-137X	US-26	Treble, Tap @ 500K
R3A	1meg	1/2	RCV-1MT-3F	BT-71	Q19-137X	UT-443	Bass, Tap @ 500K
R4A	500K	1/2	RCV-500K-3F	Not Req.	Q19-137X	UT-443	Acoustic Level
R5A	500K	1/2	RCV-500K-3F	Not Req.	Q11-133	U50	Level Note 1
R6A	50K	1/2	RCV-50K-P	FXS-1/4	Q11-123	Not Req.	D. C. Balance
R7A	100K	1/2	RCV-100K-P	Not Req.	Q11-128	U91	A. C. Balance
R8A	10K	1/2	RCV-10K-S	Not Req.	Q11-116	U20	Bias Adjustment Note 2
R9	47K	1/2	RCV-47K	B-14	Not Req.	Not Req.	

Note 1. Some versions may use Part #RCV-500K-P.

Note 2. Some versions may use Part #RCV-10K-P.

RESISTORS

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

ITEM No.	RATING		H. H. Scott PART No.	NOTES	ITEM No.	RATING		H. H. Scott PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R9	47K	1/2	RCV-47K		R37	680K	1	RC21-680K	
R10	10K	1/2	RC21-10K		R38	100K	1	RC31-100K	
R11	270K	1/2	RC21-270K		R39	8200Ω		RC21-8.2K	
R12	2700Ω	1/2	RC21-2.7K		R40	2.2meg		RC21-2.2M	
R13	2.2meg	1/2	RC21-2.2M		R41	1.8meg		RC21-1.8M	
R14	270K	1/2	RC21-270K		R42	1.8meg		RC21-1.8M	
R15	2700Ω	1/2	RC21-2.7K		R43	150K	1	RC21-150K	
R16	1.2meg	1/2	RC21-1.2M		R44	100K	1	RC31-100K	
R17	270K	1/2	RC21-270K		R45	1800Ω		RC21-1.8K	
R18	2.7meg	1/2	RC21-2.7M		R46	2.2meg		RC21-2.2M	
R19	4.7meg	1/2	RC21-4.7M		R47	220K	1	RC21-220K	
R20	39K	1/2	RC21-39K		R48	100K	1	RC31-100K	
R21	680K	1/2	RC21-680K		R49	180K	1	RC21-180K	
R22	330K	1/2	RC21-330K		R50	2700Ω		RC21-2.7K	
R23	470K	1/2	RC21-470K		R51	2.2meg		RC21-2.2M	
R24	1.8meg	1/2	RC21-1.8M		R52	100K	1	RC31-100K	
R25	100K	1/2	RC31-100K		R53	220K		RC21-220K	
R26	1500Ω	1/2	RC21-1.5K		R54	1500Ω		RC21-1.5K	
R27	2.2meg	1/2	RC21-2.2M		R55	2200Ω		RC21-2.2K	
R28	33K	1/2	RC21-33K		R56	1000Ω		RC21-1K	
R29	2.2meg	1/2	RC21-2.2M		R57	150K		RC21-150K	
R30	100K	1/2	RC21-100K		R58	150K		RC21-150K	
R31	100K	1/2	RC21-100K		R59	750Ω		RW10-750	
R32	1meg	1/2	RC21-1M		R60	27Ω	10	RC21-27	
R33	100K	1/2	RC21-100K		R61	1000Ω		RC21-1K	
R34	1500Ω	1/2	RC21-1.5K		R62	150K		RC21-150K	
R35	47K	1/2	RC21-47K		R63	150K		RC21-150K	
R36	100K	1/2	RC21-100K		R64	27Ω		RC21-27	

PARTS LIST AND DESCRIPTIONS (cont)

RESISTORS (cont)

ITEM No.	RATING		H. H. Scott PART No.	NOTES	ITEM No.	RATING		H. H. Scott PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R65	3900Ω		RC21-3, 9K		R70	47K		RC21-47K	Note 1
R66	2200Ω		RC21-2, 2K		R71	10K	2	RC41-10K	Note 1
R67	27K		RC21-27K		R72	10K	2	RC41-10K	
R68	120Ω	7	RW7-120		R73	80Ω	10	RW10-80	
R69	20Ω	5	RW5-20		R74	33Ω	10	RW10-33	

Note 1. Some versions may use 4700Ω 2W in this application (Part #RC41-4, 7K).

TRANSFORMER (POWER)

ITEM No.	RATING		H. H. Scott PART No.	Halldorson PART No.	REPLACEMENT DATA			Thordarson PART No.	Triad PART No.
	PRI.	SEC.			Merit PART No.	Ram PART No.	Slancor PART No.		
T1	117V	780VCT	5V	TR-12-3					
	① 1.1A	③ .120A	③ 3A						
	SEC. 3	SEC. 4	SEC. 5						
	51V	6.3V							
	② .142A	③ 3.3A							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		H. H. Scott PART No.	Halldorson PART No.	REPLACEMENT DATA			Thordarson PART No.	Triad PART No.	NOTES
	PRI.	SEC.			Merit PART No.	Ram PART No.	Slancor PART No.			
T2	4400Ω	16Ω	TRA-10-16							
	8Ω	16Ω								

SELENIUM RECTIFIER

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA		NOTES
		FEDERAL PART No.	SARKES FARZIAN PART No.	
M1	.142A	SR-60/150	F2 ①	① Sillicon, 4 used

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA		BUSS PART No.			
			H. H. Scott PART No.	LITTELFUSE PART No.				
			HOLDER	FUSE		HOLDER	FUSE	
M2	3AG	2½A 125V S/B		31302.5 (3AG 2½A 125V S/B)	MDL2½	HOLDER	HOLDER	HKP-CC

MISCELLANEOUS

ITEM No.	PART NAME	H. H. Scott PART No.	NOTES
M3	Switch	SS-22	Pickup Selector, DDDT (Slide Type)
M4	Switch	SS-22	Loudness-Volume, DDDT (Slide Type)
M5	Switch	SS-22	Tape Monitor, DDDT (Slide Type)
M6	Switch	SS-23	Scratch Filter, DP3T (Slide Type)
M7	Switch	SS-23	Rumble Filter, DP3T (Slide Type)
M8	Switch	SRW-59	Input Selector (Rotary Water Type)
M9	Switch	SRW-13-6	Speaker Selector (Rotary Water Type)

ADJUSTMENTS

BIAS VOLTAGE AND DC BALANCE ADJUSTMENTS

- Remove the shorting links on the DC Bal. strip on top of the chassis near the rear apron. Connect a DC voltmeter across the two outside terminals and adjust the DC Balance Control (R6) until the meter reads zero.
- Connect the DC meter between one of the outside terminals and the center one. Adjust the Bias and the other outside terminal to make sure they read the same.
- Replace the shorting links.

AC BALANCE ADJUSTMENT

- Connect the output of an audio generator to the proper input jack.
- Set all tone controls to their flat position; all rumble and scratch filters including the dynaural, off; and the Loudness Volume switch to Volume.
- Connect a resistive load to the proper output terminals and connect scope across load. (Make sure ground lead of scope is connected to ground terminal of strip.)
- Turn all equipment on.
- If Amplifier is to be used in laboratory at fixed frequency, set generator to that frequency. Otherwise set to 1000 cycles.
- Increase the output of the generator until the sinewave just begins to clip. With screwdriver, adjust the AC Balance control (R7) until the clipping is even on the top and bottom halves of the cycle. It may be necessary to slightly increase the generator output as the control is adjusted. DO NOT overdrive the amplifier so that most of the sinewave is clipped. This adjustment should be made with as little clipping as possible.
- If the clipping cannot be made symmetrical, check the output tubes to see if they are seriously unmatched.

CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	KN-P-5W	Level Control, Small
Knob	KN-R-5W	Front Panel, 5 used
Front Panel	N-209-1	

WIRING DATA

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