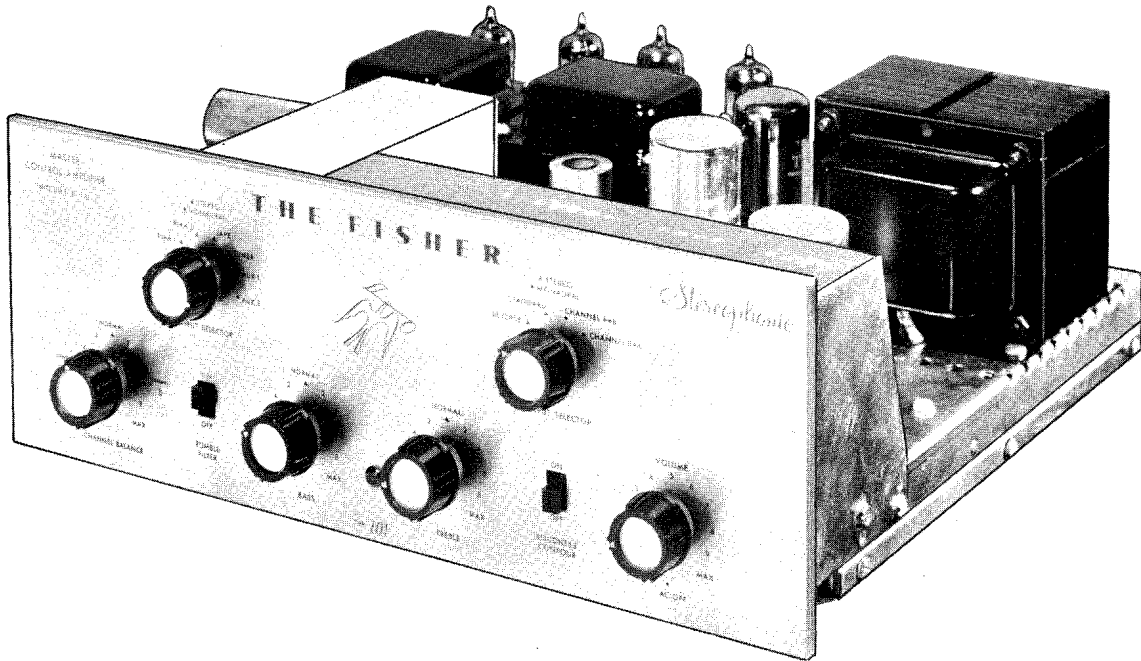




FISHER
MODEL X-101



FISHER
MODEL X-101

TRADE NAME	Fisher Model X-101		
MANUFACTURER	Fisher Radio Corp., 21-21 44th Drive, Long Island City 1, N. Y.		
TYPE SET	AC Operated 11 Tube Stereo Amplifier		
POWER SUPPLY	105-125 Volts AC, 50-60 Cycles	RATING	150 Watts, 1.4 Amp. @ 117 Volts AC

ADJUSTMENTS

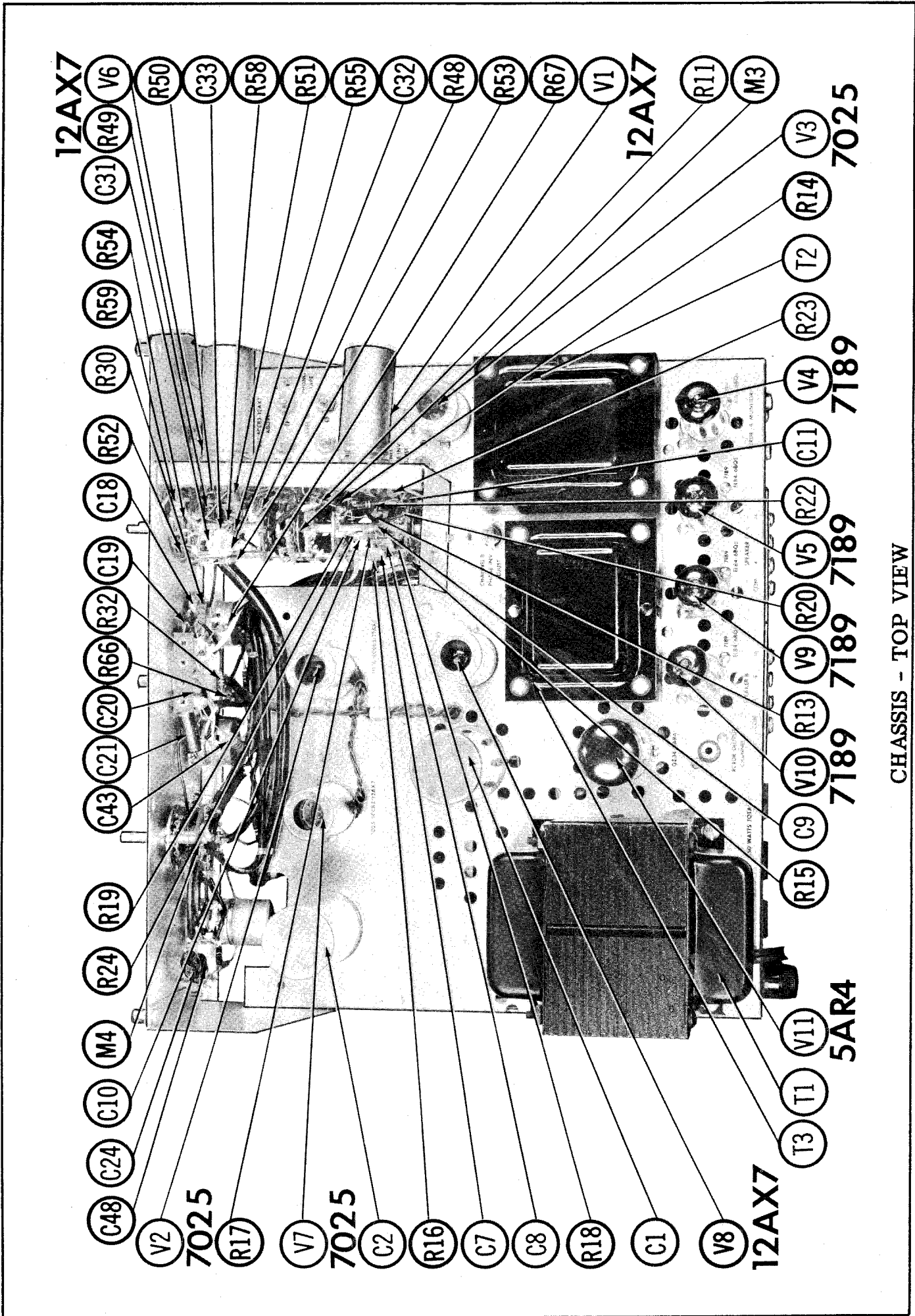
PHASE INVERTER BALANCE ADJUSTMENT (R5 and R6)

1. Connect an accurately calibrated, low distortion audio generator to the Channel A Tuner input receptacle.
2. Connect a 16Ω 100W resistor across the Channel A 16Ω and ground speaker terminals.
3. Connect either a harmonic or intermodulation distortion analyzer across the resistor.
4. Set the generator to 1000% with an output slightly below the clipping point of the amplifier output. Keep generator output constant.
5. Adjust Phase Inverter Balance (R5) for minimum distortion.
6. Repeat above procedure for Channel B.

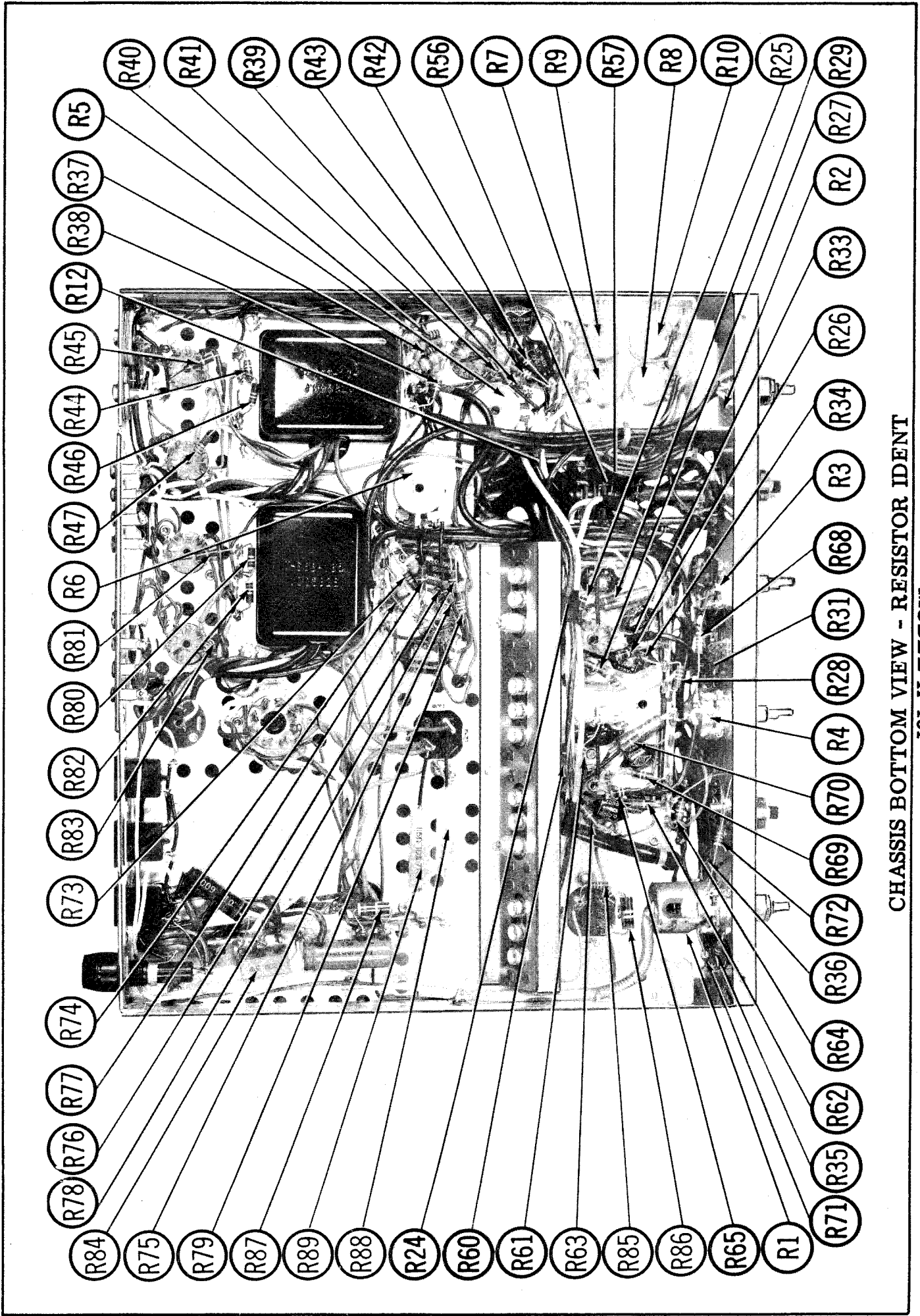
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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 J26

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. © 1959 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

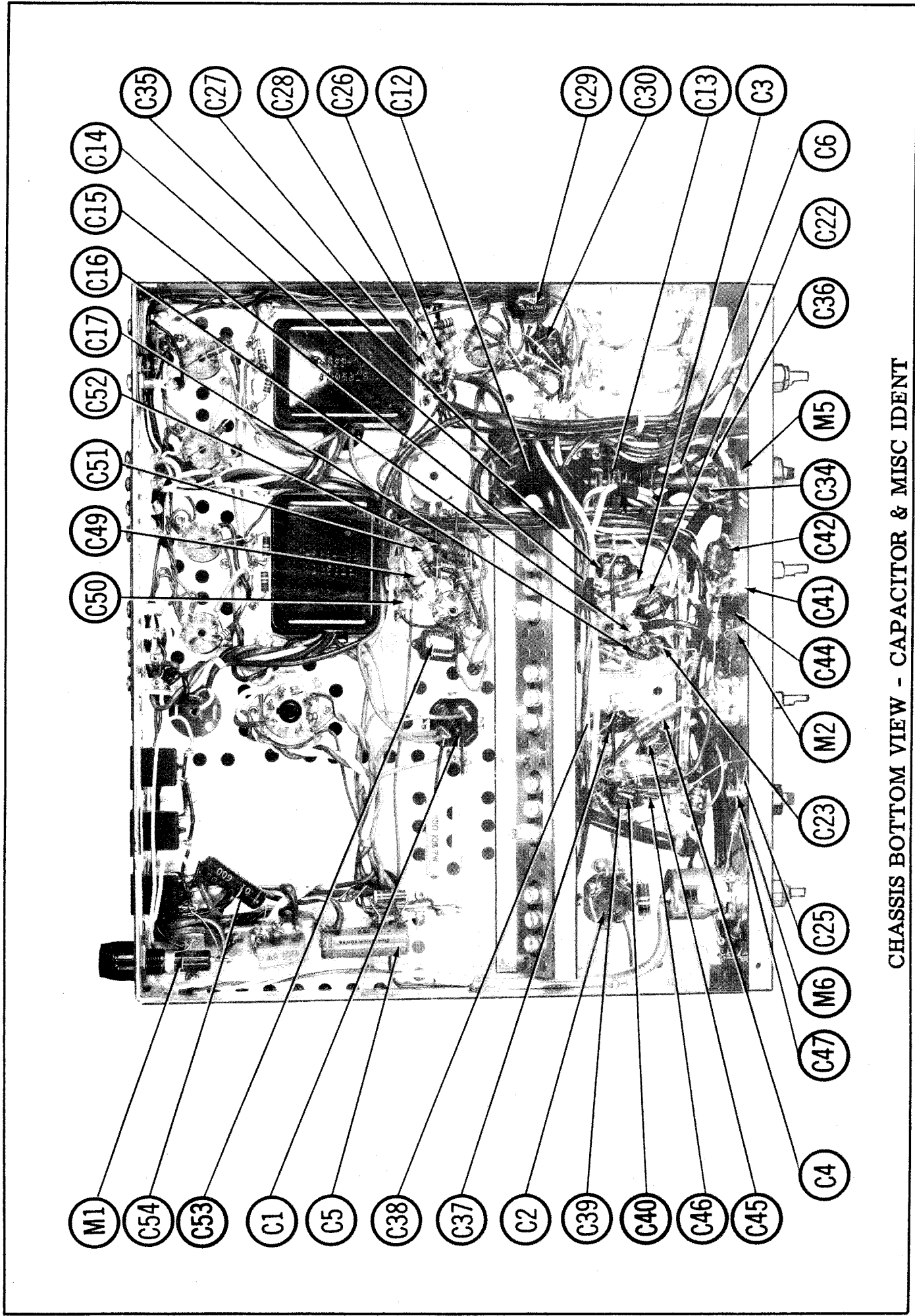


CHASSIS - TOP VIEW

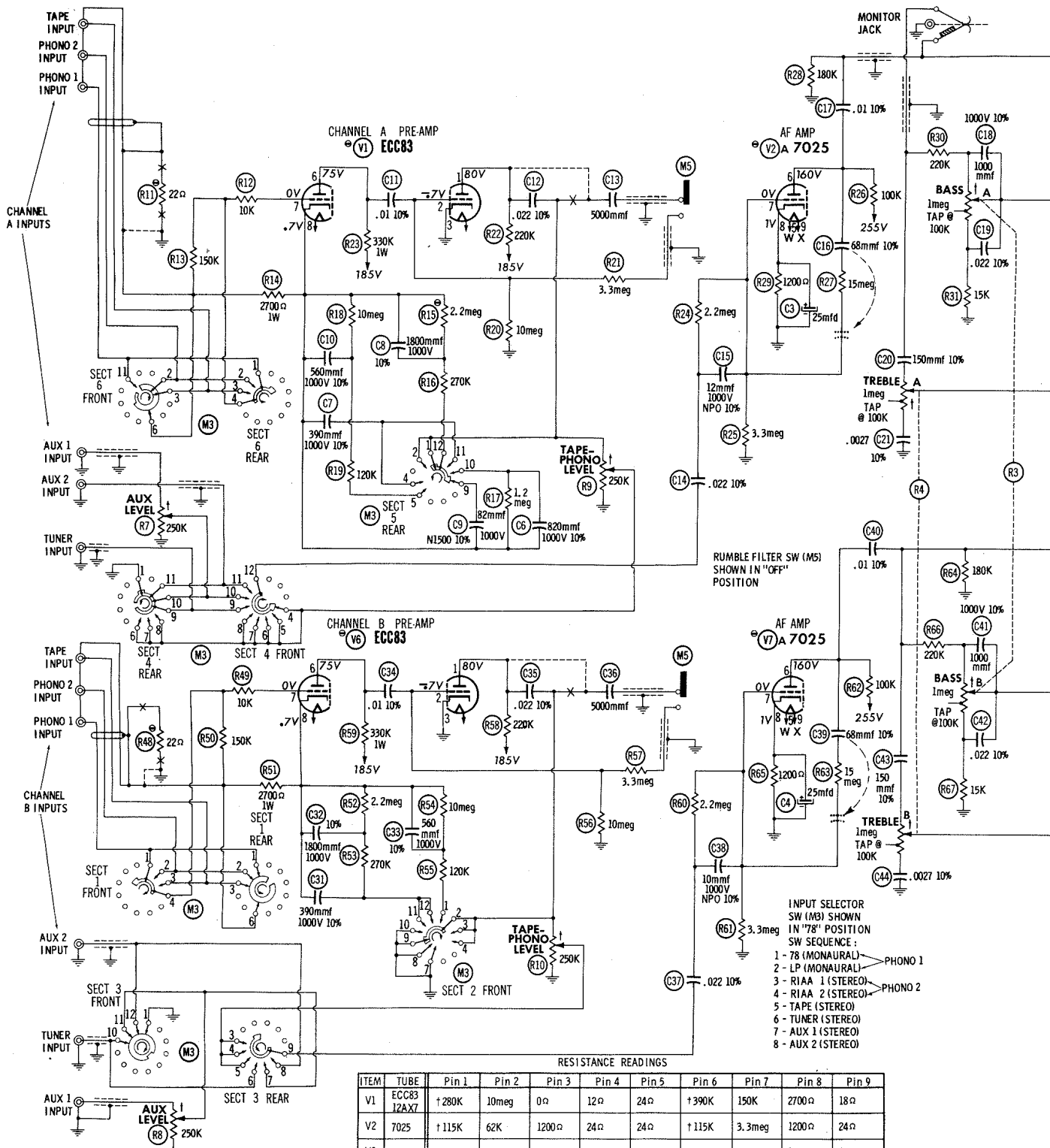


CHASSIS BOTTOM VIEW - RESISTOR IDENT

FISHER
MODEL X-101



CHASSIS BOTTOM VIEW - CAPACITOR & MISC IDENT



- INPUT SELECTOR SW (M3) SHOWN IN "78" POSITION
SW SEQUENCE:
- 1 - 78 (MONAURAL) - PHONO 1
 - 2 - LP (MONAURAL)
 - 3 - RIAA 1 (STEREO)
 - 4 - RIAA 2 (STEREO) - PHONO 2
 - 5 - TAPE (STEREO)
 - 6 - TUNER (STEREO)
 - 7 - AUX 1 (STEREO)
 - 8 - AUX 2 (STEREO)

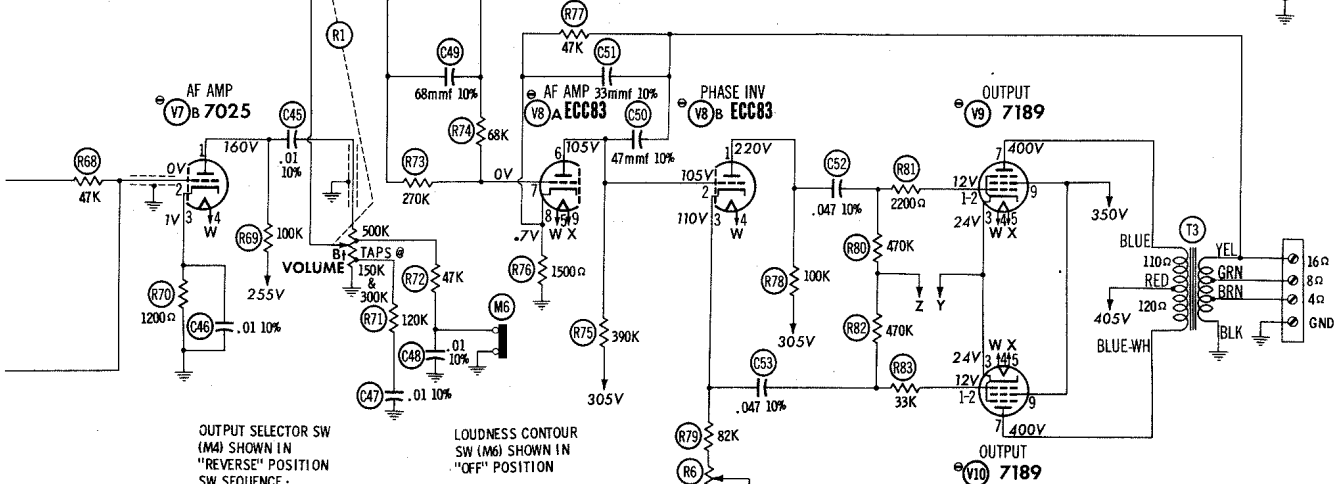
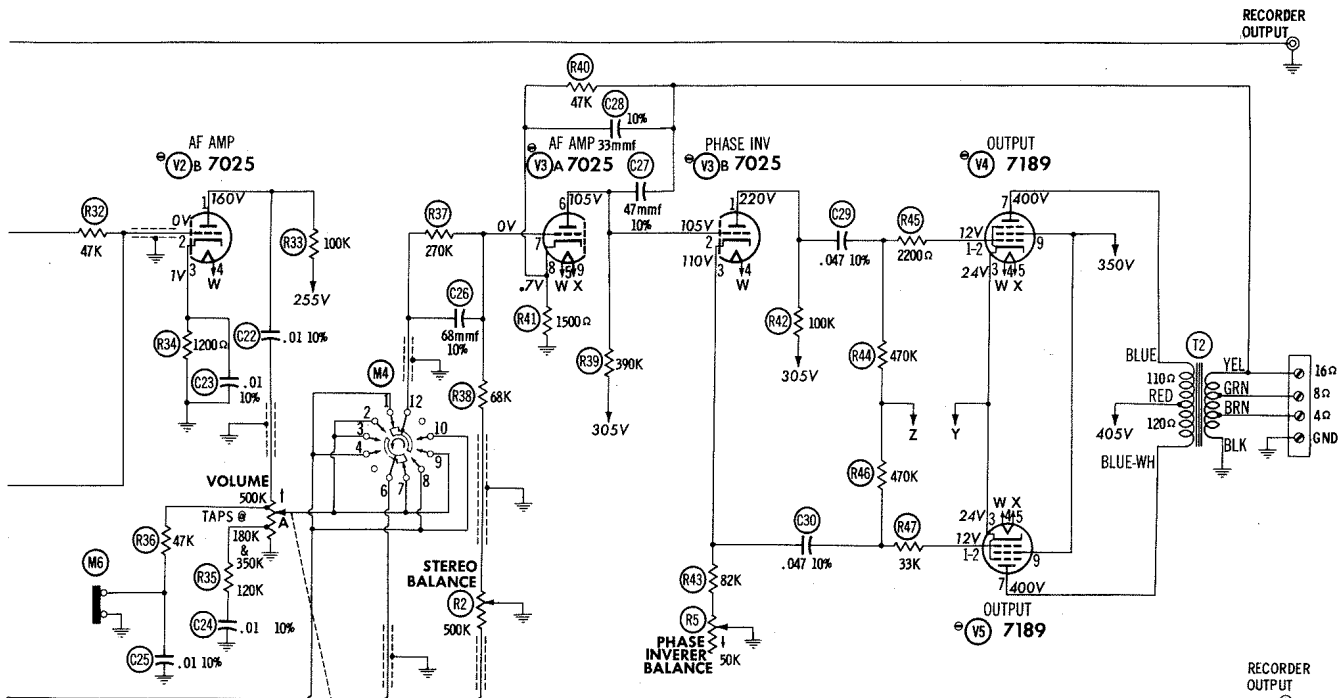
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC83 12AX7	†280K	10meg	0Ω	12Ω	24Ω	†390K	150K	2700Ω	18Ω
V2	7025	†115K	62K	1200Ω	24Ω	24Ω	†115K	3.3meg	1200Ω	24Ω
V3	7025	†105K	†390K	110K	24Ω	24Ω	†390K	180K	1500Ω	24Ω
V4	7189	470K	470K	24Ω	24Ω	24Ω	NC	†225Ω	NC	†2300Ω
V5	7189	470K	470K	24Ω	24Ω	24Ω	NC	†235Ω	NC	†2300Ω
V6	ECC83 12AX7	†280K	10meg	0Ω	0Ω	12Ω	†390K	150K	2700Ω	6Ω
V7	7025	†115K	62K	1200Ω	24Ω	24Ω	†115K	3.3meg	1200Ω	24Ω
V8	ECC83 12AX7	†105K	†390K	100K	24Ω	24Ω	†390K	60K	1500Ω	24Ω
V9	7189	470K	470K	24Ω	24Ω	24Ω	NC	†225Ω	NC	†2300Ω
V10	7189	470K	470K	24Ω	24Ω	24Ω	NC	†235Ω	NC	†2300Ω
V11	GZ34 5AR4	NC	†	NC	37Ω	NC	35Ω	NC	†	†

† THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
 † MEASURED FROM PIN 8 OF V11.
 NC NO CONNECTION.

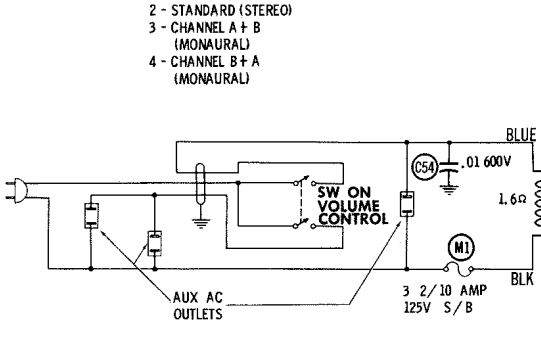
1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component 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)

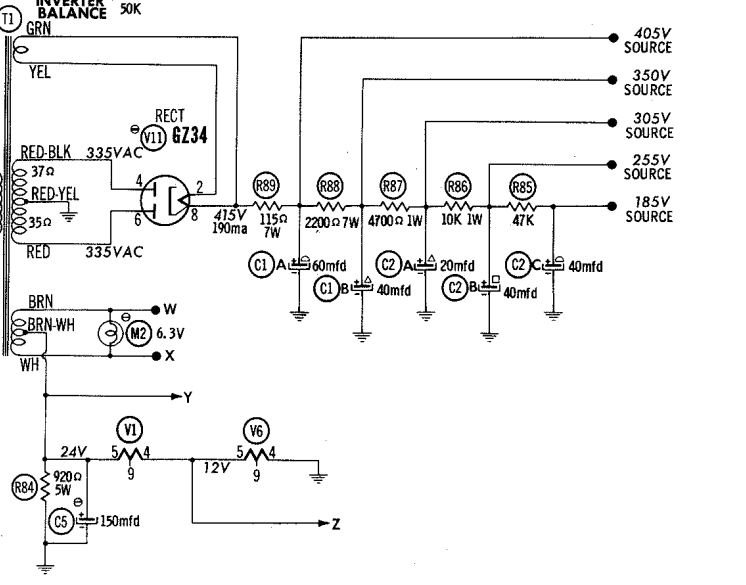


OUTPUT SELECTOR SW (M4) SHOWN IN "REVERSE" POSITION
SW SEQUENCE:
1 - REVERSE (STEREO)
2 - STANDARD (STEREO)
3 - CHANNEL A + B (MONAURAL)
4 - CHANNEL B + A (MONAURAL)

LOUDNESS CONTOUR SW (M6) SHOWN IN "OFF" POSITION



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.



PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	USE	TYPE
V1	Channel A Pre-amplifier	ECC83/12AX7	Channel B Pre-amplifier	ECC83/12AX7
V2	Channel A AF Amplifier	7025	Channel B AF Amplifier	7025
V3	Phase Inverter	7189	Phase Inverter	7189
V4	Channel A Output	7189	Channel B Output	7189
V5	Channel A Output	7189	Channel B Output	7189

① Alternate Type 7025. ② Alternate Type ECC83/12AX7. ③ Alternate Type EL84/6BQ5.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SPRAGUE PART No.	
CLA	.60	450	C663-136	AFH2-58	A0500	TMD-56	TVL-2766
CB	.40	450	C563-127	AFH3-43-90	BR4045	TMT-39	TVL-3786
C2A	.40	450			BR2045		
C3	.25	450			BR25-6	TD-25-25	TVA-1205
C4	.25	450			BR226-6	TD-25-25	TVA-1205
C5	150	30			BR1505	TD-150-50	TVA-1311

① Some versions may use 100mfd @ 100V in this application (Part #C663-143).

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		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SPRAGUE PART No.	
C6	820	1000	C50072-7		MD-391	JL-382	10HKB-T82S 10%*
C7	390	1000	C50072-8		MD-561	JL-218	10GAB-T39S 10%*
C8	1800	1000	C50070-7			JL-356	10HKB-D18S 10%*
C9	82	1000	C50072-14			GEM-161	10GAB-T56S 10%*
C10	.50	250	C50074-25			B-250	4TM-S1S 10%*
C11	.01	250	C50089-1			BYA10D5	5HK-D5 10%*
C12	.022	250	C50074-26				4TM-S22S 10%*
C13	5000	250	C50070-2			CNO-412	5TCC-Q68S 10%*
C14	.022	1000	CC21GP680K5			CNO-468	4TM-S1S 10%*
C15	.01	250	C50074-25			GEM-161	10HKB-D18S 10%*
C16	.01	250	C50072-3			JL-210	5TCC-Q47S 10%*
C17	.01	250	C50074-26				5TCC-Q43S 10%*
C18	1000	1000	C50074-25			CTA6Q68C	6TM-S47S 10%*
C19	.022	250	C50074-26			CTA6Q68C	6TM-S47S 10%*
C20	150	1000	CC21GP151K5			JL-315	5TCC-T15S 10%*
C21	.0027	200	C50074-25			GEM-161	4TM-D27S 10%*
C22	.01	250	C50074-25			GEM-161	4TM-S1S 10%*
C23	.01	250	C50074-25			GEM-161	4TM-S1S 10%*
C24	.01	250	C50074-25			GEM-161	4TM-S1S 10%*
C25	.01	250	C50074-25			GEM-161	4TM-S1S 10%*
C26	.01	250	CC21GP680K5			CNO-468	5TCC-Q68S 10%*
C27	.47	500	CC21GP47K5			CNO-447	5TCC-Q47S 10%*
C28	.33	500	CC21GP330K5			CNO-433	5TCC-Q43S 10%*
C29	.047	500	C50074-37				6TM-S47S 10%*
C30	.047	500	C50072-6			MD-391	6TM-S47S 10%*
C31	390	1000	C50072-6			JL-218	10HKB-T39S 10%*
C32	1800	1000	C50072-6			JL-356	10GAB-T56S 10%*
C33	560	1000	C50072-14			GEM-161	10HKB-D18S 10%*
C34	.01	125	C50074-25				4TM-S1S 10%*
C35	.01	125	C50074-25				4TM-S1S 10%*
C36	.022	250	C50089-1			B-250	4TM-S22S 10%*
C37	5000	250	C50074-26				5HK-D5 10%*
C38	.01	1000	C50070-1			CNO-410	4TM-S22S 10%*
C39	.68	1000	CC21GP680K5			CNO-468	5TCC-Q68S 10%*

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA				NOTES
	CAP.	VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SPRAGUE PART No.	
C40	.01	250	C50074-25			4TM-S1S	10%*
C41	1000	1000	C50072-3			GEM-161	10%*
C42	.022	250	C50074-26			JL-210	10%*
C43	150	1000	CC21GP151K5			JL-315	10%*
C44	.0027	200	C68P272K2			CTA6T15C	10%*
C45	.01	250	C50074-25				10%*
C46	.01	250	C50074-25				10%*
C47	.01	250	C50074-25				10%*
C48	.01	250	C50074-25				10%*
C49	.68	1000	CC21GP680K5			CNO-468	10%*
C50	.47	1000	CC21GP47K5			CNO-447	10%*
C51	.33	1000	CC21GP330K5			CNO-433	10%*
C52	.047	500	C50074-37				10%*
C53	.047	500	C50074-37				10%*
C54	.01	600	C2747			P688N-01	10%*

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

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES
	RESISTANCE	WATTS	FISHER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	
RIA	500K	1/2	R663-138				Volume, Channel A, Taps @ 180K, 350K
B	500K	1/2					Volume, Channel B, Taps @ 150K, 300K
C	Switch		R663-131				Stereo Balance
R2	500K	1/2	R663-134				Bas. Channel A, Tap @ 100K, Not used
R3A	1meg	1/2					Bas. Channel B, Tap @ 100K, Not used
B	1meg	1/2					Treble, Channel A, Tap @ 100K, Not used
C	Shaft						Treble, Channel B, Tap @ 100K, Not used
R4A	1meg	1/2					Phase Inverter, Channel A
B	1meg	1/2					Phase Inverter, Channel B
C	Shaft						Aux. Level Set, Chan. A
R5A	50K	1/2					Aux. Level Set, Chan. B
R6A	50K	1/2					Tape-Phono Level Set, Chan. A
B	Shaft						Tape-Phono Level Set, Chan. B
R7	250K	1/10					
R8	250K	1/10					
R9	250K	1/10					
R10	250K	1/10					

* "STA-LOC" Equivalent: FA16A, RUI6A, CS8900.

RESISTORS

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

ITEM No.	RATING		NOTES		FISHER PART No.	FISHER PART No.	NOTES
	OHMS	WATT	ITEM No.	RATING OHMS			
R11	220		RC20BF220K				
R12	10K		RC20BF103K				
R13	1500		RC20BF154K				
R14	2700Ω	1	RC20BF272K				
R15	2.2meg		RC20BF225K				
R16	270K		RC20BF274K				
R17	1.2meg		RC20BF126K				
R18	10meg		RC20BF106K				
R19	120K		RC20BF124K				
R20	10meg		RC20BF106K				
R21	3.3meg		RC20BF335K				
R22	220K		RC20BF224K				
R23	330K		RC20BF334K				
R24	2.2meg		RC20BF225K				
R25	3.3meg		RC20BF335K				
R26	100K		RC20BF104K				
R27	15meg		RC20BF156K				
R28	180K		RC20BF184K				
R29	1200Ω		RC20BF124K				
R30	220K		RC20BF224K				

FISHER MODEL X-101

FOLDER 7

PARTS LIST AND DESCRIPTIONS (Con't)

MISCELLANEOUS

ITEM No.	PART NAME	FISHER PART No.	NOTES
M2	Lamp	A5018	6.3V (JALUX)
M3	Lamp	1588-120	(Used in early versions)
M4	Switch	S663-132	Input Selector (8 Position, Rotary Wafer Type)
M5	Switch	S663-130	Output Selector (4 Position, Rotary Wafer Type)
M6	Switch	S663-133	Rumble Filter On-Off (SPDT, Slide Type)
	Switch	S663-133	Loudness Contour On-Off (SPDT, Slide Type)

CABINETS & CABINET PARTS

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

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors
Power Cord	8524 (Stranded) Available in Ten Colors
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 1765-B (6 Ft. Length)
Photo Pick-up Arm Cable	1725-K (7½ Ft. Length)
	Use BELDEN No. 8401
	Use BELDEN No. 8430 (Two Conductor - Twisted)

RESISTORS (cont)

ITEM No.	RATING		FISHER PART No.	NOTES	ITEM No.	RATING		FISHER PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R31	15K		RC20BF153K		R61	3.3meg		RC20BF335K	
R32	47K		RC20BF475K		R62	100K		RC20BF104K	
R33	100K		RC20BF104K		R63	15meg		RC20BF156K	
R34	1200Ω		RC20BF12K		R64	180K		RC20BF184K	
R35	120K		RC20BF124K		R65	1200Ω		RC20BF122K	
R36	47K		RC20BF475K		R66	220K		RC20BF224K	
R37	270K		RC20BF274K		R67	15K		RC20BF153K	
R38	68K		RC20BF683K		R68	47K		RC20BF473K	
R39	390K		RC20BF394K		R69	100K		RC20BF104K	
R40	47K		RC20BF473K		R70	1200Ω		RC20BF122K	
R41	1500Ω		RC20BF15K		R71	120K		RC20BF124K	
R42	100K		RC20BF104K		R72	47K		RC20BF473K	
R43	82K		RC20BF823K		R73	270K		RC20BF274K	
R44	470K		RC20BF474K		R74	68K		RC20BF683K	
R45	2200Ω		RC20BF224K		R75	390K		RC20BF394K	
R46	470K		RC20BF474K		R76	1500Ω		RC20BF152K	
R47	33K		RC20BF333K		R77	47K		RC20BF473K	
R48	22Ω		RC20BF220K		R78	100K		RC20BF104K	
R49	10K		RC20BF104K		R79	82K		RC20BF823K	
R50	150K		RC20BF154K		R80	470K		RC20BF474K	
R51	2700Ω	1	RC20BF274K		R81	2200Ω		RC20BF222K	
R52	2.2meg		RC20BF225K		R82	470K		RC20BF474K	
R53	270K		RC20BF274K		R83	33K	5	RC20BF333K	
R54	10meg		RC20BF106K		R84	920Ω		R592-167	
R55	120K		RC20BF124K		R85	47K		RC20BF473K	
R56	10meg		RC20BF106K		R86	10K	1	RC30BF103K	
R57	3.3meg		RC20BF335K		R87	4700Ω	7	RC30BF472K	
R58	220K		RC20BF224K		R88	2200Ω	7	R663-146	
R59	330K	1	RC20BF334K		R89	115Ω	7	R663-205	
R60	2.2meg		RC20BF225K						

① Not used in some versions.
② Some versions may use 3.3meg in this application (Part #RC20BF335K).

TRANSFORMER (POWER)

ITEM No.	RATING		REPLACEMENT DATA				
	PRI.	SEC.	FISHER PART No.	Holdson PART No.	Merit PART No.	Stancor PART No.	Triad PART No.
T1	117V ② 1.4A	5V ③ .190A	T663-115				
	SEC. 3	SEC. 4					
	6.3VCT ④ 4.2A						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
	PRI.	SEC.	FISHER PART No.	Holdson PART No.	Merit PART No.	Stancor PART No.	
T2	7500Ω CT	16Ω Tap @ 80, 40	T663-135				
T3	7500Ω CT	16Ω Tap @ 80, 40	T663-114				

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			
			FISHER PART No.	Holder	FUSE	BUSS PART No.
M1	3AG	3 2/10A 125V S/B	F3319		3303.2 (3 2/10A 125V S/B)	MDX3 2/10 HKP