



FISHER MODEL
X-202-B



MODEL X-202-B

FISHER MODEL
X-202-B

TRADE NAME	Fisher Model X-202-B (Serial #40001-49999 Inclusive)		
MANUFACTURER	Fisher Radio Corp., 91-91 44th Drive, Long Island City 1, N. Y.		
TYPE SET	AC Operated 12 Tube Stereo Amplifier		
POWER SUPPLY	105 - 120 Volts AC, 50-60 Cycles	RATING	150 Watts, 1.5 Amp. @117 Volts AC

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



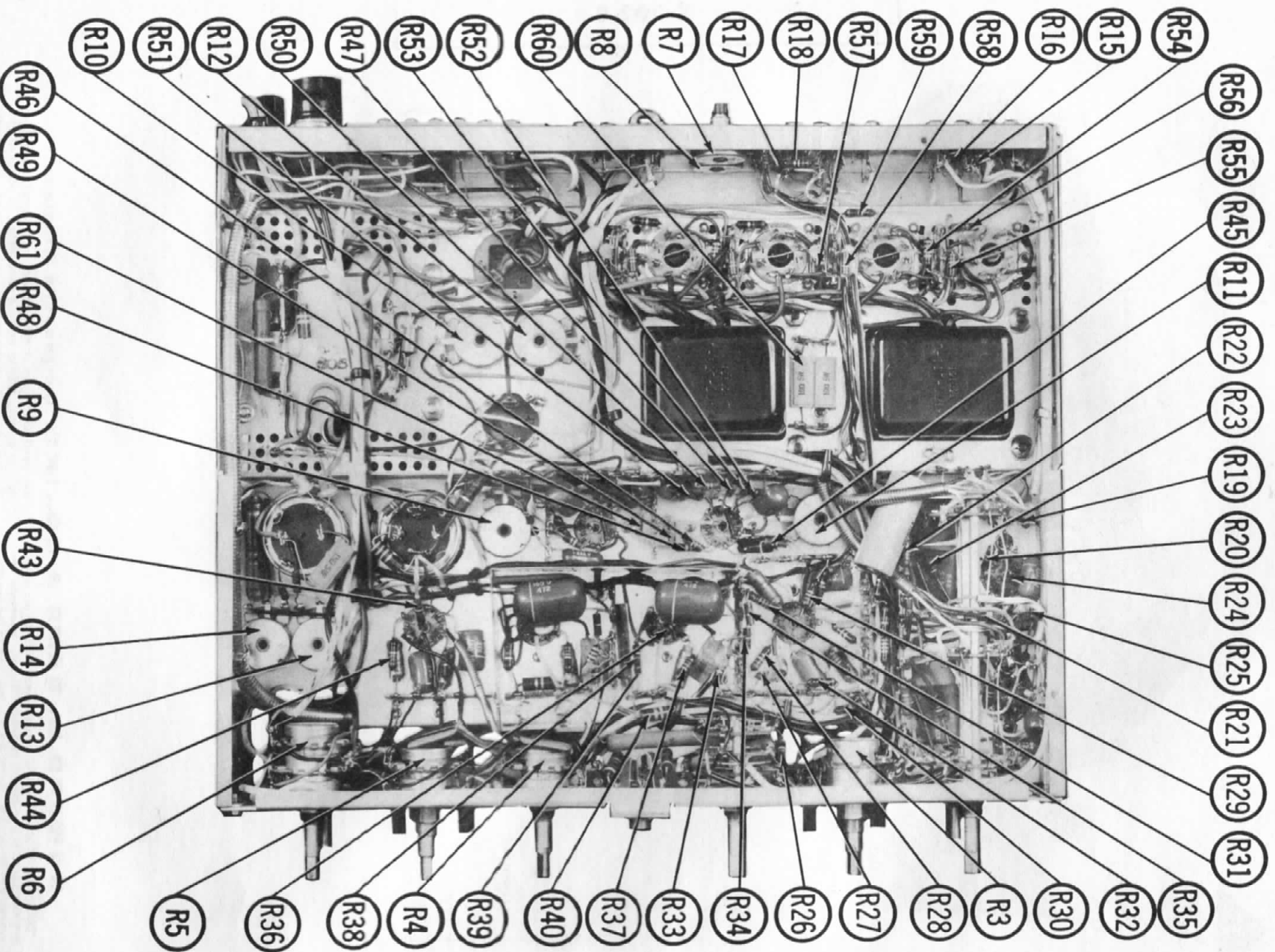
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of LV515

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. © 1962 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

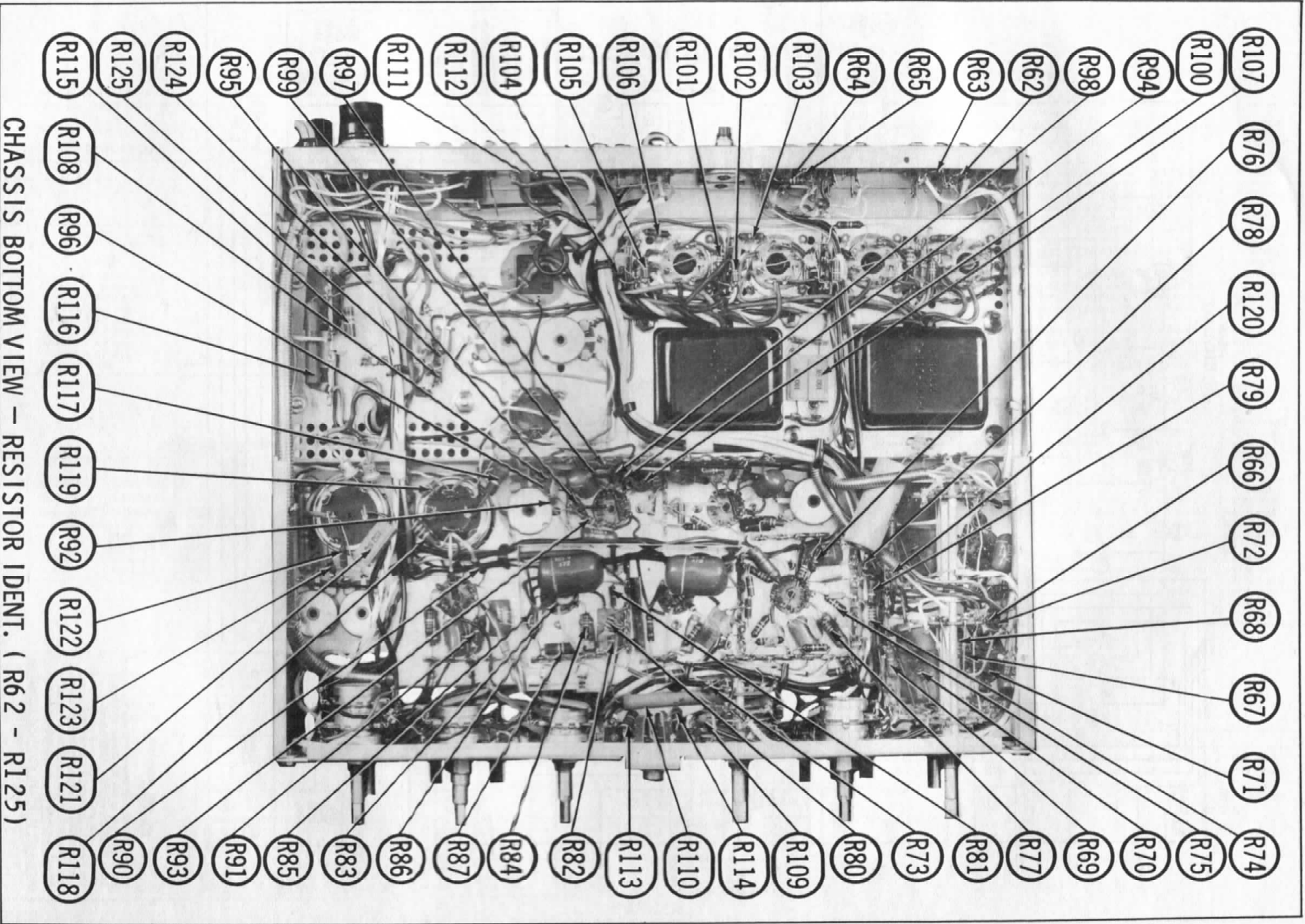
DATE 12 - 62

SET 611

FOLDER 6



CHASSIS BOTTOM VIEW - RESISTOR IDENT. (R3-R61)



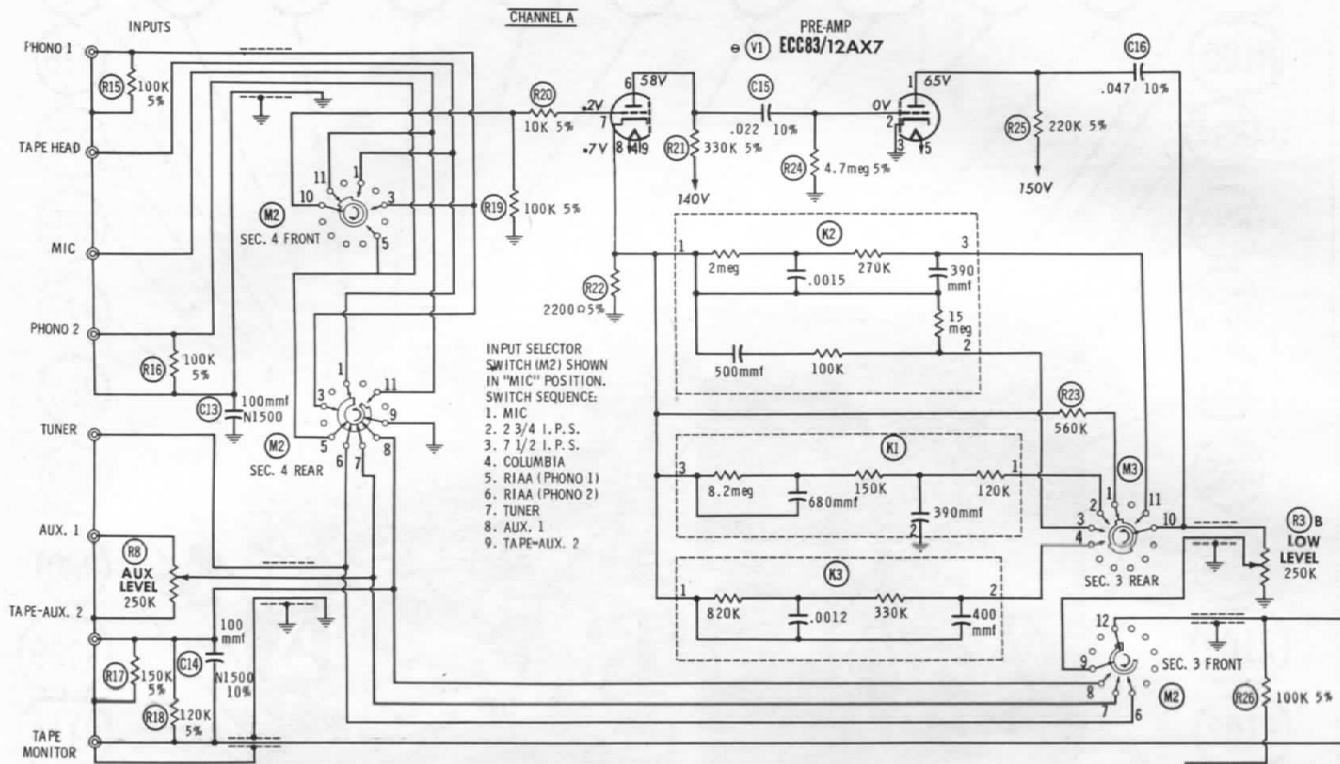
CHASSIS BOTTOM VIEW -- RESISTOR IDENT. (R62 - R125)

SET 611 FOLDER 6

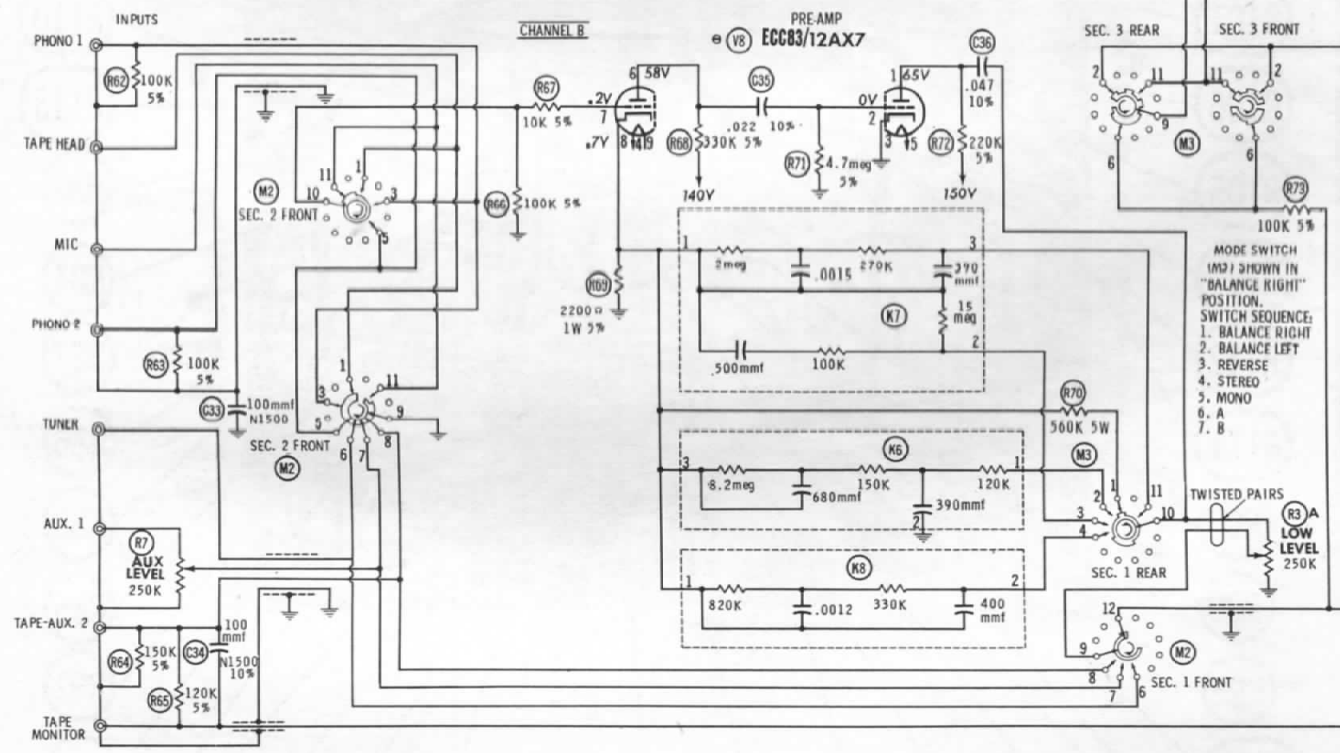
PAGE 3

FISHER
MODEL X-202-B

FOLDER 6

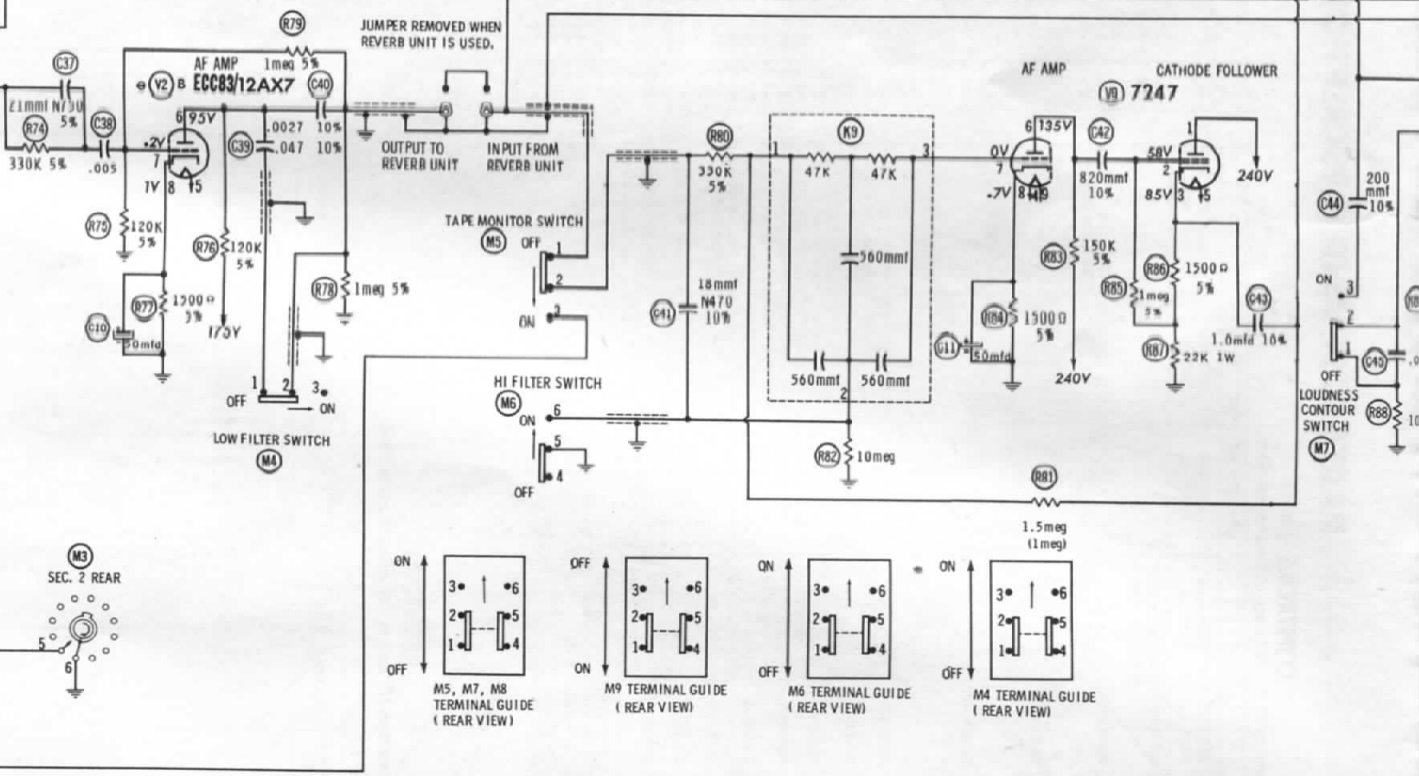
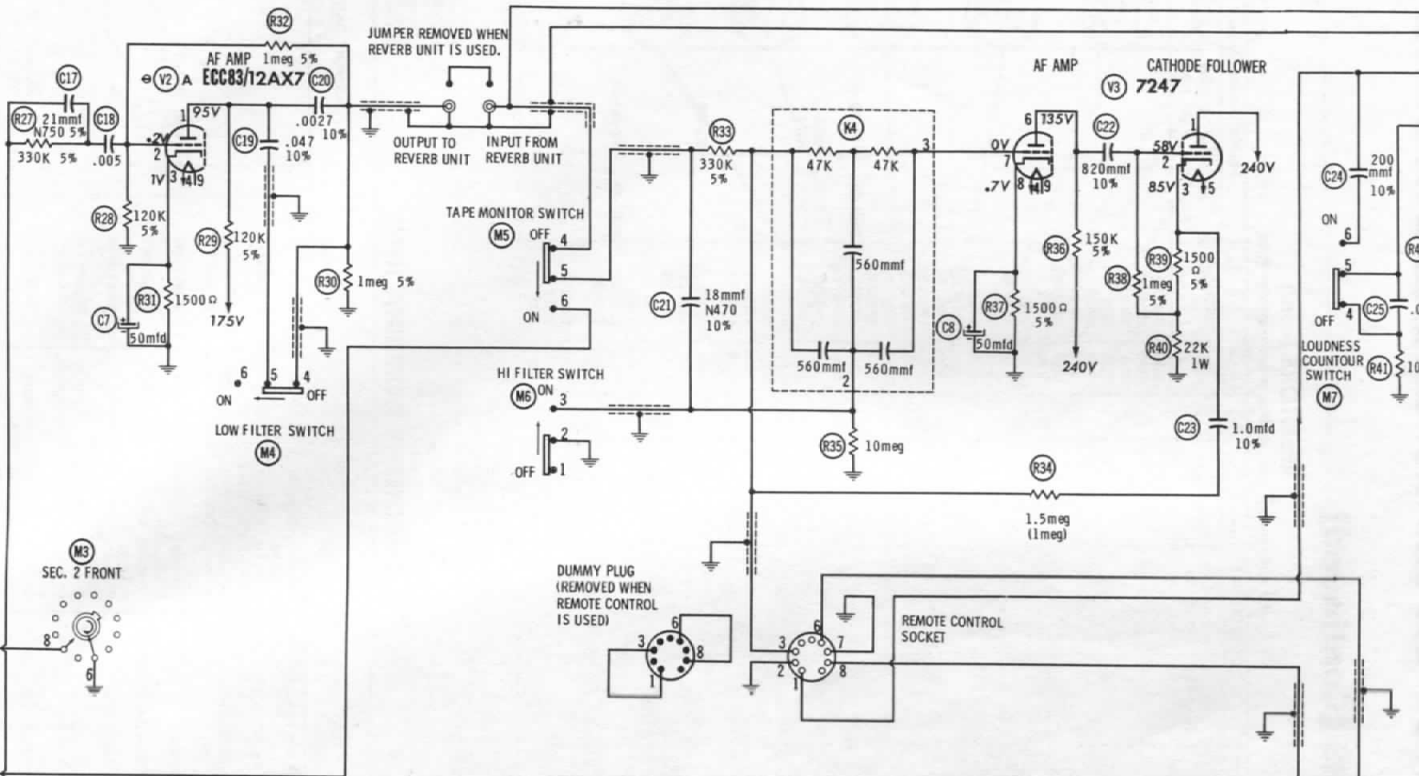


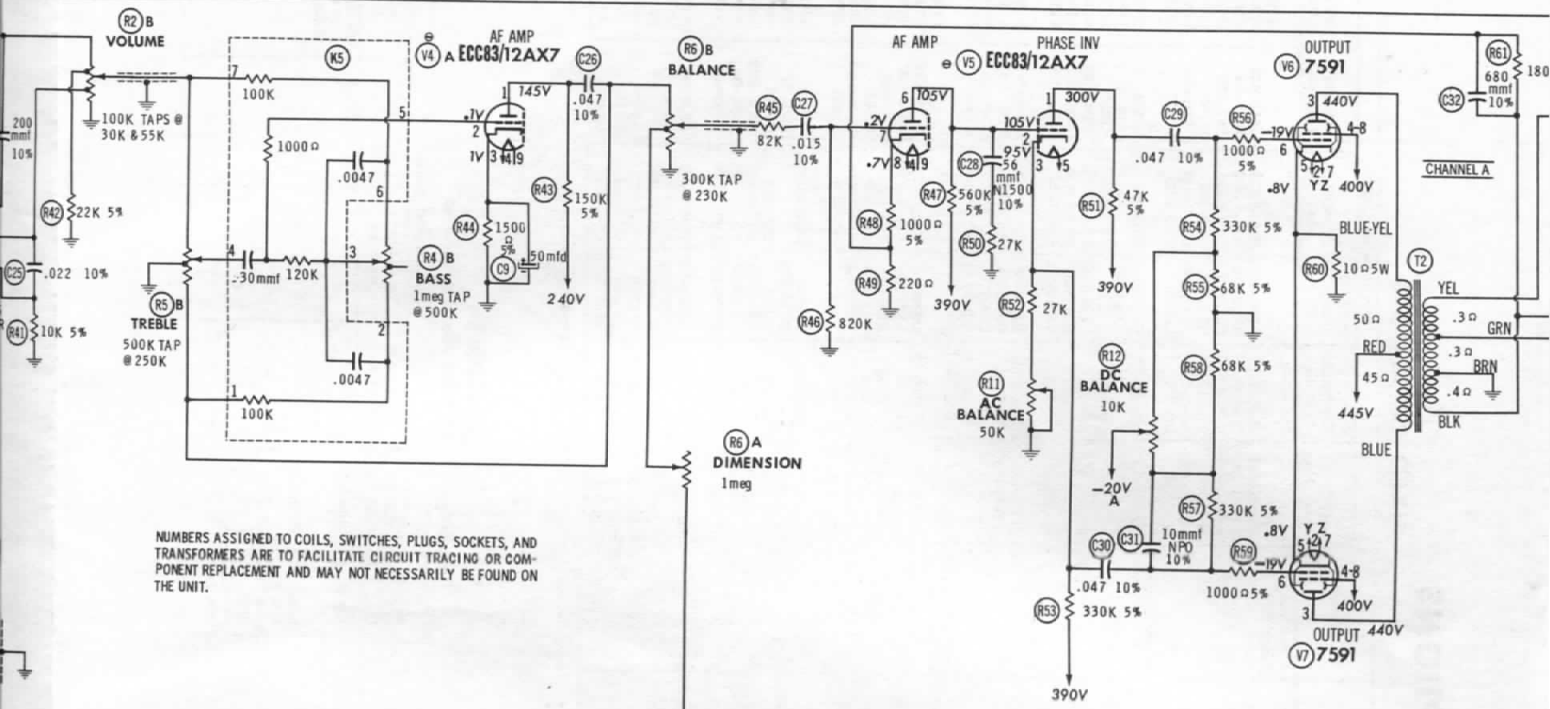
INPUT SELECTOR SWITCH (M2) SHOWN IN "MIC" POSITION. SWITCH SEQUENCE:
 1. MIC
 2. 2 3/4 I.P.S.
 3. 7 1/2 I.P.S.
 4. COLUMBIA
 5. RIAA (PHONO 1)
 6. RIAA (PHONO 2)
 7. TUNER
 8. AUX. 1
 9. TAPE-AUX. 2



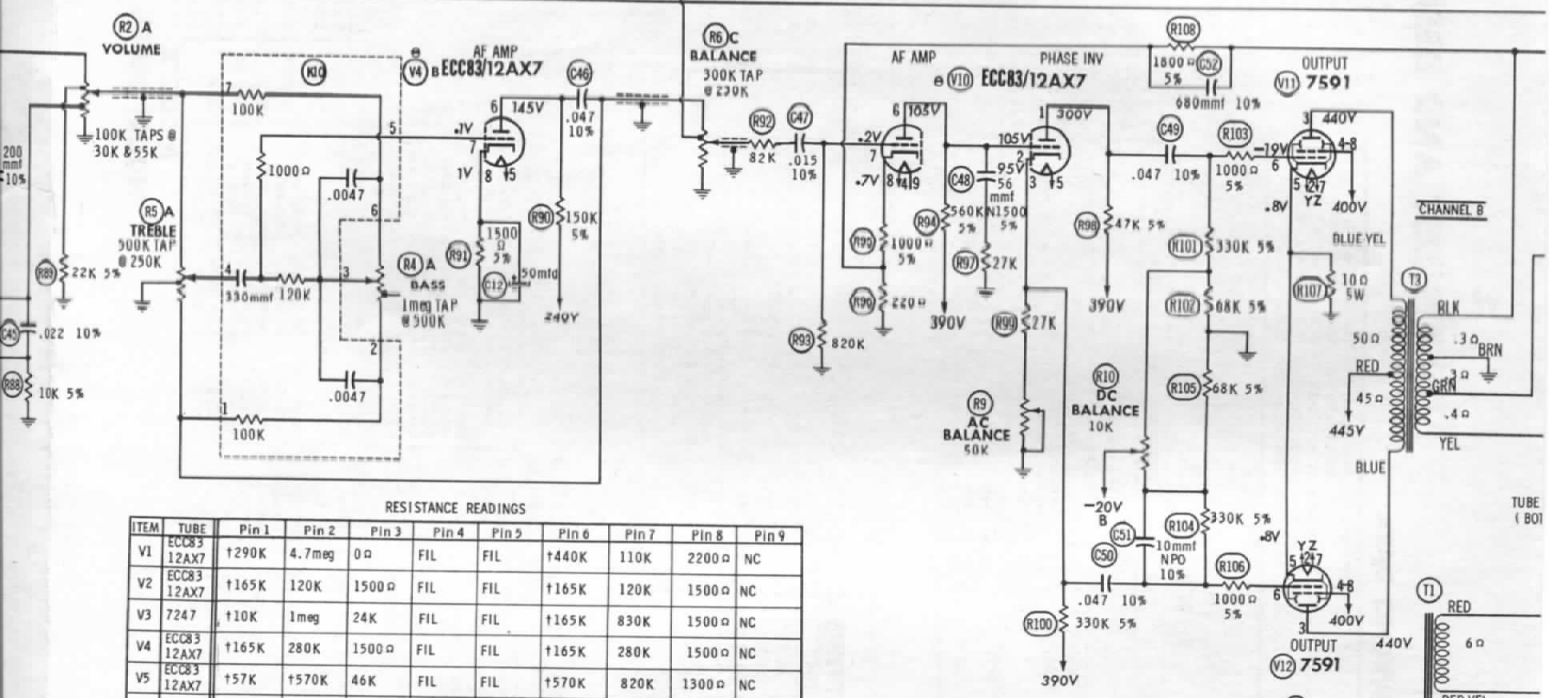
MODE SWITCH (M2) SHOWN IN "BALANCE RIGHT" POSITION. SWITCH SEQUENCE:
 1. BALANCE RIGHT
 2. BALANCE LEFT
 3. REVERSE
 4. STEREO
 5. MONO
 6. A
 7. B

- ⊙ 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 pins 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 PHOTOFACIT STANDARD NOTATION SCHEMATIC
 © Howard W. Sams & Co., Inc. 1962





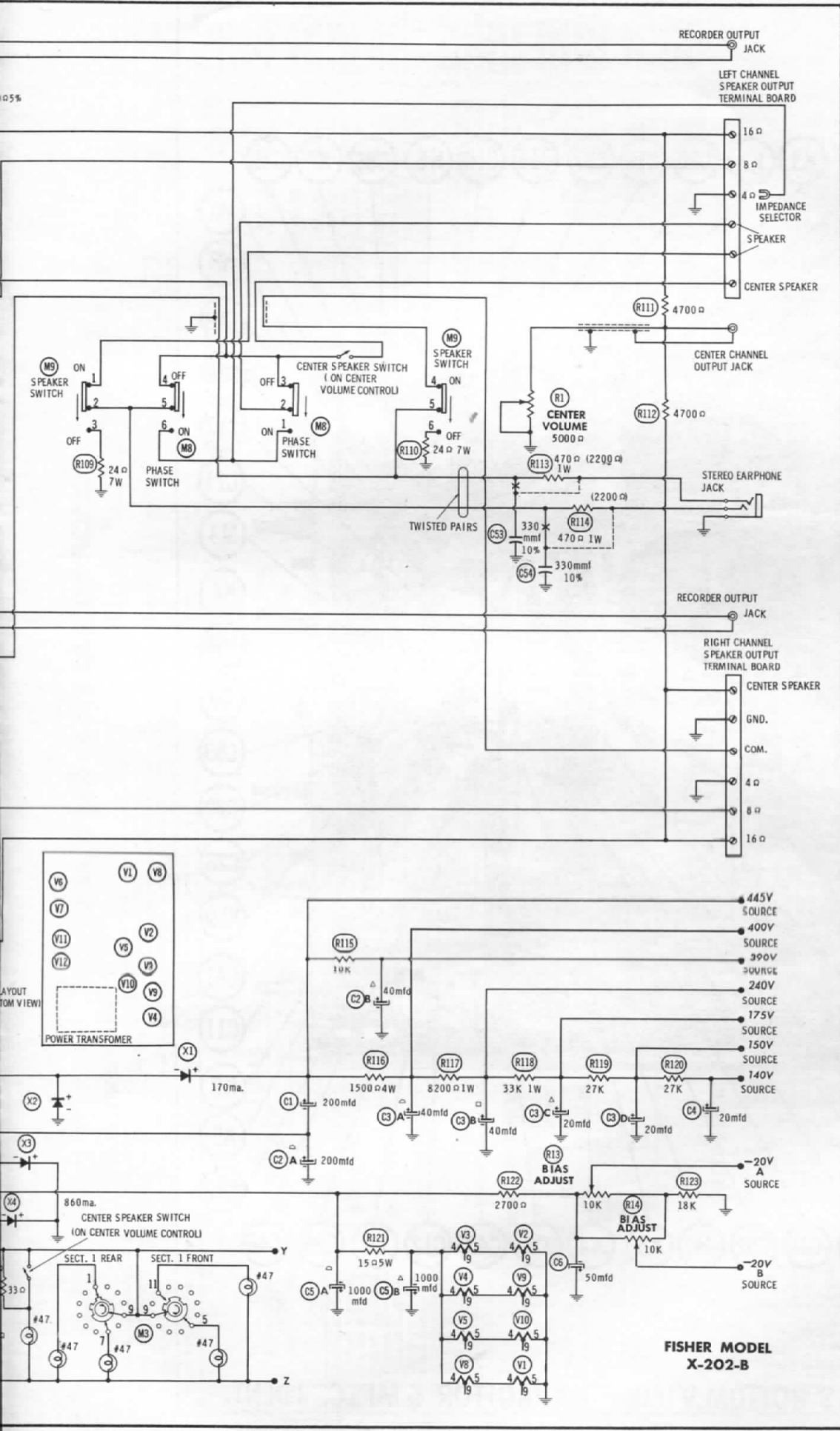
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.



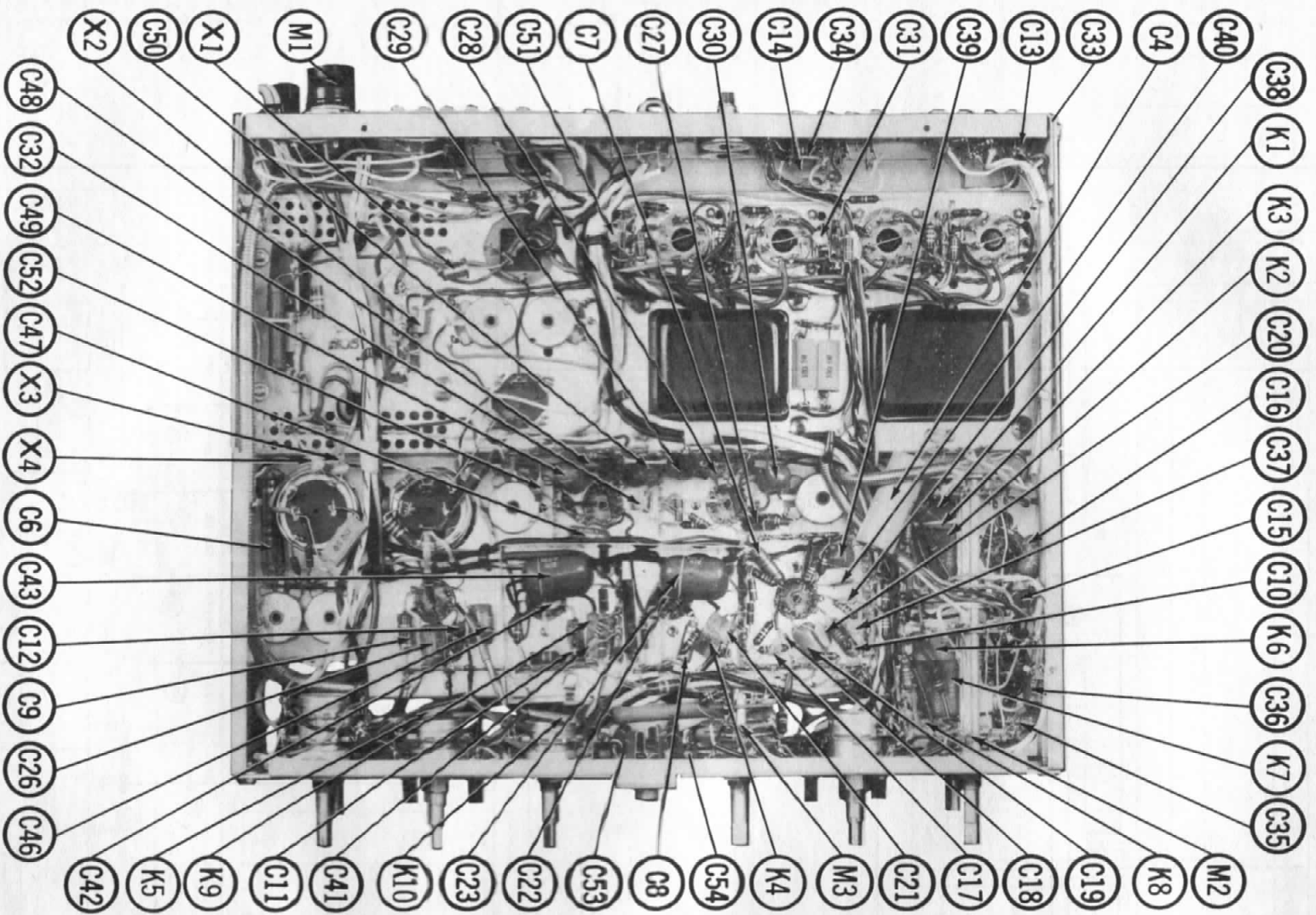
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC83 12AX7	†290K	4.7meg	0Ω	FIL	FIL	†440K	110K	2200Ω	NC
V2	ECC83 12AX7	†165K	120K	1500Ω	FIL	FIL	†165K	120K	1500Ω	NC
V3	7247	†10K	1meg	24K	FIL	FIL	†165K	830K	1500Ω	NC
V4	ECC83 12AX7	†165K	280K	1500Ω	FIL	FIL	†165K	280K	1500Ω	NC
V5	ECC83 12AX7	†57K	†570K	46K	FIL	FIL	†570K	820K	1300Ω	NC
V6	7591	NC	FIL	†50Ω	†1500Ω	10Ω	360K	FIL	†1500Ω	
V7	7591	NC	FIL	†50Ω	†1500Ω	10Ω	360K	FIL	†1500Ω	
V8	ECC83 12AX7	†290K	4.7meg	0Ω	FIL	FIL	†440K	110K	2200Ω	NC
V9	7247	†10K	1meg	24K	FIL	FIL	†165K	820K	1500Ω	NC
V10	ECC83 12AX7	†57K	†570K	46K	FIL	FIL	†570K	820K	1300Ω	NC
V11	7591	NC	FIL	†50Ω	†1500Ω	10Ω	360K	FIL	†1500Ω	
V12	7591	NC	FIL	†50Ω	†1500Ω	10Ω	360K	FIL	†1500Ω	

† MEASURED FROM JUNCTION OF X1 & R116. NC NO CONNECTION. ADJUST R13 AND R14 FOR .8VDC ON PIN 5 OF V6, V7, V11 & V12.



FISHER MODEL X-202-B



CHASSIS BOTTOM VIEW - CAPACITOR & MISC. IDENT.

PARTS LIST AND DESCRIPTIONS

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in 12 Colors 8524 (Stranded) Available in 12 Colors
Power Cord	Use BELDEN No. 17106 (Plastic) or 17126 (Rubber) - 6 Ft. 17106 (Plastic) or 17126 (Rubber) - 9 Ft.
Power Cord (Interlock Type)	Use BELDEN No. 8874 (Rubber) or 8895 (Plastic)

TUBES

* AMPEREX *		GENERAL ELECTRIC		RCA		RAYTHEON		SYLVANIA	
ITEM No.	USE	TYPE		ITEM No.	USE	TYPE			
V1	Channel A Preamp.	ECC83/12AX7 (7025)*		V6	Channel A Output	7591			
V2	Channel A AF Amp.	ECC83/12AX7 (7025)*		V7	Channel A Output	7591			
V3	Channel A AF Amp.	7247		V8	Channel B Preamp.	ECC83/12AX7 (7025)*			
V4	Channel A AF Amp.	ECC83/12AX7 (7025)*		V9	Channel B AF Amp.	7247			
V5	Channel B AF Amp.	ECC83/12AX7 (7025)*		V10	Channel B AF Amp.	ECC83/12AX7 (7025)*			
	Phase Inverter	ECC83/12AX7 (7025)*		V11	Channel B Output	7591			
				V12	Channel B Output	7591			

* Alternate

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES	NOTES
			RCA PART No.	SARKES TARZIAN PART No.	RAYTHEON PART No.	
X1	.170A	SR806-126	IN547	60H		Silicon, HV Rectifier (SD600)
X2	.170A	SR806-126	IN547	60H		Silicon, HV Rectifier (SD600)
X3	.860A	SR851-122	IN538	10H		Silicon, LV Rectifier (5295)
X4	.860A	SR851-122	IN538	10H		Silicon, LV Rectifier (5295)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	FISHER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	200	250	C50180-20	AFH1-37-30	XA0318	XC1-21	WP132	TMS-1490	TVL-1547
C2A	200	250	C50180-19	AFH1-31-85	B0520		WP132	TMD-2775	TVL-1944
B	40	500		PRSI840	BR200-250		TC 64	TD-200-300	TVA-1575
C3A	40	450	C50180-12	AFH4-92-50	DO130	XC4-55	FP447A	TMQ-4616	TVL-1764
B	40	400		PRSI735	BR20-350			TD-40-450	TVA-1730
C	20	300							
D	20	300							
C4	20	250	C746-145	PRSI570	BR20-250	QTI-9	TC55	TD-20-250	TVA-1508
C5A	1000	35	C50180-37						
B	1000	35							
C6	50	70	C50283-2	PRSI480	BR50-150	QTI-17	TC49	TD-50-150	TVA-1414
C7	50	3	C50283-1	PTT12	NLW50-3	MTI-15	TT3X50	MLV50-3	TE-1058
C8	50	3	C50283-1	PTT12	NLW50-3	MTI-15	TT3X50	MLV50-3	TE-1058
C9	50	3	C50283-1	PTT12	NLW50-3	MTI-15	TT3X50	MLV50-3	TE-1058
C10	50	3	C50283-1	PTT12	NLW50-3	MTI-15	TT3X50	MLV50-3	TE-1058
C11	50	3	C50283-1	PTT12	NLW50-3	MTI-15	TT3X50	MLV50-3	TE-1058
C12	50	3	C50283-1	PTT12	NLW50-3	MTI-15	TT3X50	MLV50-3	TE-1058

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C13	100 N1500	#C50070-5		TCL-100					
C14	100 N1500 10%	#C50070-6							
C15	.022 400V 10%		P488N-022	DD-203	DPMS4S22	4DP-2-223	GEM-4122		10TCP-T10
C16	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S22
C17	21 N750 5%		N750-DI 22	DTN-22	C10Q22U	CCTN-220	CN7-422		4TM-S47
C18	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250		10TCU-Q22
C19	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		5HK-D50
C20	.0027 10%		DI-2700	DD-272	L10D27	CCD-272	GP227		4TM-S47
C21	18 N470 10%	#C50070-13							10TS-D27
C22	820 10%		DI-820	DD-821	L10T82	CCD-821	GP382		10TS-T82
C23	1.0mfd 150V 10%		P288N-1.0		DPMS2W1		GEM-21		4TM-S22
C24	200 10%		DI-200	DD-201	L10T2	CCD-201	GP320		2TM-M1
C25	.022 250V 10%		P488N-022	DD-203	DPMS4S22	4DP-2-223	GEM-4122		10TS-T20
C26	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S22
C27	.015 250V 10%		P488N-015	DD-203	DPMS4S15	4DP-1-153	GEM-4115		4TM-S47
C28	56 N1500 10%	#C50070-22							4TM-S15
C29	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S47
C30	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S47
C31	10 NPO 10%		NPO-DI 10	DTZ-10	C10QC	CCTO-100	CNO-410		10TCC-Q10
C32	680 10%	#C50070-5	DI-680	DD-681	L10T68	CCD-681	GP368		10TS-T68
C33	100 N1500	#C50070-6		TCL-100					10TCP-T10
C34	100 N1500 10%								4TM-S22
C35	.022 400V 10%		P488N-022	DD-203	DPMS4S22	4DP-2-223	GEM-4122		4TM-S47
C36	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S47
C37	21 N750 5%		N750-DI 22	DTN-22	C10Q22U	CCTN-220	CN7-422		10TCU-Q22
C38	.005		BPD-005	DD-502	BYA10D5	CCD-502	B-250		5HK-D50
C39	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S47
C40	.0027 10%		DI-2700	DD-272	L10D27	CCD-272	GP227		10TS-D27
C41	18 N470 10%	#C50070-13							10TS-T82
C42	820 10%		DI-820	DD-821	L10T82	CCD-821	GP382		10TS-T82
C43	1.0mfd 150V 10%		P288N-1.0		DPMS2W1		GEM-21		2TM-M1
C44	200 10%		DI-200	DD-201	L10T2	CCD-201	GP320		10TS-T20
C45	.022 250V 10%		P488N-022	DD-203	DPMS4S22	4DP-2-223	GEM-4122		4TM-S22
C46	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S47
C47	.015 250V 10%	#C50070-22	P488N-015	DD-203	DPMS4S15	4DP-1-153	GEM-4115		4TM-S15
C48	56 N1500 5%								4TM-S47
C49	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S47
C50	.047 400V 10%		P488N-047	DD-503	DPMS4S47	4DP-3-473	GEM-4147		4TM-S47
C51	10 NPO 10%		NPO-DI 10	DTZ-10	C10QC	CCTO-100	CNO-410		10TCC-Q10
C52	680 10%		DI-680	DD-681	L10T68	CCD-681	GP368		10TS-T68
C53	330 10%		DI-330	DD-331	L10T33	CCD-331	GP333		10TS-T33
C54	330 10%		DI-330	DD-331	L10T33	CCD-331	GP333		10TS-T33

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

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			FISHER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	Center Volume, Center Speaker Switch	5000Ω	R50160-88	B-11, KR-2, or (F2-5000, KR-2, SFS212)		Q13-144, 76-2		U2, US27, or (UA53A, SF1000, US42)
R2A	Volume, B	100K, 30K & 55K Taps	R50160-84					
B	Volume, A	100K, 30K & 55K Taps						
	Power, On-Off Switch							

SET 611

FOLDER 6

PAGE 9

FOLDER 6

FISHER MODEL X-202-B

PARTS LIST

AND DESCRIPTIONS (Continued)

CONTROLS (cont)

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

RESISTANCE	REPLACEMENT DATA				
	FISHER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS PART No.	MALLORY PART No.
250K 250K	R50160-99	F2-250K, FFS100 R2-250K, RFS106			
1meg, 500K Tap	R50160-87	AK-31 F11-1meg, FFS015		† Q1-1	FBI6T55, RUI6T55 OS937A, IS11L2
1meg, 500K Tap	R50160-85	R11-1meg, RFS105			
500K 250K Tap	R50160-100				
500K, 250K Tap	R50103-1	B-50, or (F1-250K, SN010)	A47-250K-S, FKS-1/4	B11-131	SU46 or (UA254, SN100)
250K	R50103-1	B-50, or (F1-250K, SN010)	A47-250K-S, FKS-1/4	B11-131	SU46 or (UA254, SN100)
50K	R50103-3	BX-31 or (F1-50K, SN010)	A47-50K-S, FKS-1/4	B11-121	SU35 or (UA54L, SN100)
10K	R50103-5	B-14, or (F1-10K, SN010)	A47-10K-S, FKS-1/4	B11-111	SU20, or (U2)
50K	R50103-3	BX-31 or (F1-50K, SN010)	A47-50K-S, FKS-1/4	B11-121	SU35 or (UA54L, SN100)
10K	R50103-5	B-14, or (F1-10K, SN010)	A47-10K-S, FKS-1/4	B11-111	SU20, or (U2)
10K	R50103-5	B-14, or (F1-10K, SN010)	A47-10K-S, FKS-1/4	B11-111	SU20, or (U2)
10K	R50103-5	B-14, or (F1-10K, SN010)	A47-10K-S, FKS-1/4	B11-111	SU20, or (U2)

† Equivalent: BU5, CF47T, CR36T, SF5, SR5, DC1
 † Equivalent: K-6 Kit with Base Elements and Shafts:
 as a factory assembled unit.
 B19-137X, P14-029 (Panel)
 B19-137X, R1-108 (Rear)

RESISTORS (cont)

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

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R51	47K 5%				R89	22K 5%			
R52	27K				R90	150K 5%			
R53	330K 5%				R91	1500Ω 5%			
R54	330K 5%				R92	82K			
R55	68K 5%				R93	820K			
R56	1000Ω 5%				R94	560K 5%			
R57	330K 5%				R95	1000Ω 5%			
R58	68K 5%				R96	220Ω			
R59	1000Ω 5%				R97	27K			
R60	10Ω 5W	PW5-10	5W-SQ-10		R98	47K 5%			
R61	1800Ω 5%				R99	27K			
R62	100K 5%				R100	330K 5%			
R63	100K 5%				R101	330K 5%			
R64	150K 5%				R102	68K 5%			
R65	120K 5%				R103	1000Ω 5%			
R66	100K 5%				R104	330K 5%			
R67	10K 5%				R105	68K 5%			
R68	330K 5%				R106	1000Ω 5%			
R69	2200Ω 1W 5%				R107	10Ω 5W	PW5-10	5W-SQ-10	
R70	560K 5W				R108	1800Ω 5%			
R71	4, 1meg 5%				R109	24Ω 7W		7G24	
R72	220K 5%				R110	24Ω 7W		7G24	
R73	100K 5%				R111	4700Ω			
R74	330K 5%				R112	4700Ω			
R75	120K 5%				R113	4700Ω 1W			(2200Ω) †
R76	120K 5%				R114	4700Ω 1W			(2200Ω) †
R77	1500Ω 5%				R115	10K			
R78	1meg 5%				R116	1500Ω 4W		4G1500	
R79	1meg 5%				R117	8200Ω 1W			
R80	330K 5%				R118	33K 1W			
R81	1.5meg			(1meg) †	R119	27K			
R82	10meg				R120	27K			
R83	150K 5%				R121	15Ω 5W	PW5-15	5W-SQ-15	
R84	1500Ω 5%				R122	2700Ω			
R85	1meg 5%				R123	18K			
R86	1500Ω 5%				R124	220Ω			
R87	22K 1W				R125	220Ω			
R88	10K 5%				R126	33Ω			

† Alternate Value.

RESISTORS

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

REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA		
WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
		R33	330K 5%			
		R34	1.5meg			(1meg) †
		R35	10meg			
		R36	150K 5%			
		R37	1500Ω 5%			
		R38	1meg 5%			
		R39	1500Ω 5%			
		R40	22K 1W			
		R41	10K 5%			
		R42	22K 5%			
		R43	150K 5%			
		R44	1500Ω 5%			
		R45	82K			
		R46	820K			
		R47	560K 5%			
		R48	1000Ω 5%			
		R49	220Ω			
		R50	27K			

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	FISHER PART No.	REPLACEMENT DATA
K1	3 3/4" Tape Equalization	390mmf, 680mmf, 120K, 150K, 8.2meg	PC50187-7	
K2	RIAA, Tape 7 1/2"	390mmf, 500mmf, .0015mfd, 100K, 270K, 2meg, 15meg	PC50187-3	
K3	Col. Equalization	400mmf, .0012mfd, 330K, 820K	PC50187-6	
K4	High Filter	560mmf, 560mmf, 560mmf, 47K, 47K	PC50187-5	
K5	Tone Control	330mmf, .0047mfd, .0047mfd, 1000Ω, 100K, 100K, 120K	PC657-140	Centralab Sprague PC-190 TC-24
K6	3 3/4" Tape Equalization	390mmf, 680mmf, 120K, 150K, 8.2meg	PC50187-7	
K7	RIAA, Tape 7 1/2"	390mmf, 500mmf, .0015mfd, 100K, 270K, 2meg, 15meg	PC50187-3	
K8	Col. Equalization	400mmf, .0012mfd, 330K, 820K	PC50187-6	
K9	High Filter	560mmf, 560mmf, 560mmf, 47K, 47K	PC50187-5	
K10	Tone Control	330mmf, .0047mfd, .0047mfd, 1000Ω, 100K, 100K, 120K	PC657-140	Centralab Sprague PC-190 TC-24

NOTES

NOTES

COLLIDER

CHASSIS—TOP VIEW

