



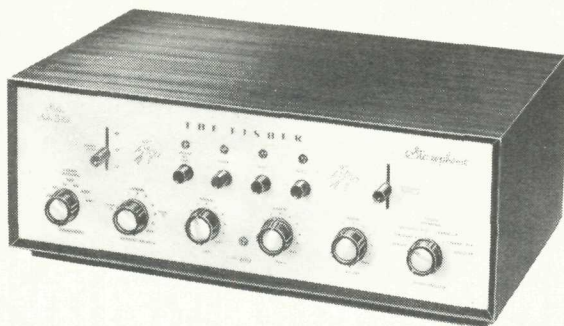
*Stereophonic*

**THE FISHER "400"**

**SERVICE**

**MANUAL**

MODEL 400-C



**CHASSIS SERIAL NUMBERS  
30001 - 39999 INCLUSIVE**

PRICE: \$1.00

**FISHER RADIO CORPORATION • NEW YORK**

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# PARTS DESCRIPTION LIST

## CAPACITORS

20% tolerance for all capacitors, unless noted otherwise.

SYMBOL	ORDER NO.	DESCRIPTION
C1	C-50089-1	Two in parallel: Ceramic disc, .005 uf, 500V
C2	C-50072-20	Ceramic, 220 uf, 10%, 1000V
C3	C-50074-25	Ceramic disc, 820 uf, 10%, 1000V
C4	C-50072-6	Ceramic disc, 390 uf, 10%, 1000V
C5	C-50072-8	Ceramic disc, 1800 uf, 10%, 1000V
C6	C-50072-14	Ceramic disc, 560 uf, 10%, 1000V
C7	C-50074-18	Molded, .022 uf, 10%, 125V
C8	C-50089-1	Ceramic disc, .005 uf, 500V
C9	C-657-126	Electrolytic, four section: C9: 10 uf, 200V C18: 30 uf, 300V C32: 10 uf, 200V C42: 30 uf, 300V
C10	C-50074-25	Molded, .01 uf, 10%, 250V
C11, 12	C-50089-1	Ceramic disc, .005 uf, 500V
C13, 14	C-50074-25	Molded, .01 uf, 10%, 250V
C15	C-50074-27	Molded, .047 uf, 10%, 250V
C16	C-50074-29	Molded, 0.47 uf, 250V
C17	C-50074-26	Molded, .022 uf, 10%, 250V
C18	Part of C9	Electrolytic section, 30 uf
C19	C-639-114	Electrolytic, 25 uf, 6V
C20	C-50072-4	Ceramic disc, 1200 uf, 1000V
C21	C-50072-16	Ceramic disc, 270 uf, 10%, 1000V
C22	C-50074-28	Molded, 0.1 uf, 10%, 250V
C23	C-639-114	Electrolytic, 25 uf, 6V
C24	C-50074-22	Molded, .027 uf, 10%, 250V
C25	CC20C1150K5	Ceramic, 1.5 uf, NPO, 10%, 500V
C26	C-50074-29	Molded, 0.47 uf, 250V
C27	C-50072-14	Ceramic disc, 560 uf, 10%, 1000V
C28	C-50072-8	Ceramic disc, 1800 uf, 10%, 1000V
C29	C-50072-6	Ceramic disc, 390 uf, 10%, 1000V
C30	C-50089-1	Two in parallel: Ceramic disc, .005 uf, 500V
C31	C-50074-26	Molded, .022 uf, 10%, 250V
C32	Part of C9	Electrolytic section, 10 uf
C33	C-50089-1	Ceramic disc, .005 uf, 500V
C34	C-50074-25	Molded, .01 uf, 10%, 250V
C35, 36	C-50089-1	Ceramic disc, .005 uf, 500V
C37, 38	C-50074-25	Molded, .01 uf, 10%, 250V
C39	C-50074-26	Molded, .022 uf, 10%, 250V
C40	C-50074-29	Molded, 0.47 uf, 250V
C41	C-50074-27	Molded, .047 uf, 10%, 250V
C42	Part of C9	Electrolytic section, 30 uf
C43	C-639-114	Electrolytic, 25 uf, 6V
C44	C-50074-28	Molded, 0.1 uf, 10%, 250V
C45	C-50074-22	Molded, .027 uf, 10%, 250V
C46	CC20C1080D5	Ceramic, 8 uf + 0.5 uf NPO, 500V
C47	C-639-114	Electrolytic, 25 uf, 6V
C48	C-50074-29	Molded, 0.47 uf, 250V
C49	C-657-125	Electrolytic, three-section: C49-A: 30 uf, 400V C49-B: 30 uf, 350V C49-C: 30 uf, 350V
C50	C-546-116	Electrolytic, two-section: C50-A: 1000 uf, 30V C50-B: 1000 uf, 30V

Note: Use C-546-116 to replace C-552-106 used on some units.

C51-59 —  
C60, 61 C-50070-6  
Ceramic, 100 uf, N1500, 10%, 1000V

## RESISTORS AND POTENTIOMETERS

In ohms, 10% tolerance, 1/2 watt, unless otherwise noted. K = Kiloohm, M = Megohm.

SYMBOL	ORDER NO.	DESCRIPTION
R1	RC20BF104K	Composition, 100K
R2	RC30BF334K	Composition, 330K, 1W
R3	RC30BF222K	Composition, 220K, 1W
R4	RC20BF224K	Composition, 220K
R5	RC20BF106K	Composition, 10M
R6	RC20BF125K	Composition, 1.2M
R7	RC20BF224K	Composition, 220K
R8	RC20BF225K	Composition, 2.2M
R9	RC20BF124K	Composition, 120K
R10	RC20BF394K	Composition, 390K
R11	R-657-134	Potentiometer, 250K, level set
R12	RC20BF103K	Composition, 10K
R13	R-657-134	Potentiometer, 250K, level set
R14	RC20BF335K	Composition, 3.3M
R15, 16	RC20BF225K	Composition, 2.2M
R17	RC20BF105K	Composition, 1M
R18	RC20BF104K	Composition, 100K
R19	RC20BF224K	Composition, 220K
R20	RC20BF225K	Composition, 220K
R21	RC20BF225K	Composition, 2.2M
R22	RC20BF273K	Composition, 27K
R23	RC30BF563K	Composition, 56K, 1W
R24	R-730-118	Potentiometer, dual, volume: R24-A: 100K R24-B: 100K
R25	RC20BF103K	Composition, 10K
R26	RC20BF472K	Composition, 470K
R27	RC20BF822K	Composition, 820K
R28	RC20BF183K	Composition, 18K
R29	R-657-136	Potentiometer, dual, boss: R29-A: 1M R29-B: 1M
R30	RC20BF474K	Composition, 470K
R31	RC20BF104K	Composition, 100K
R32	RC20BF152K	Composition, 150K
R33	RC20BF103K	Composition, 10K
R34	RC30BF473K	Composition, 47K, 1W
R35	RC20BF331K	Composition, 330K
R36	RC20BF474K	Composition, 470K
R37	RC20BF334K	Composition, 330K
R38	R-657-154	Potentiometer, dual, channel balance: R38-A: 25K R38-B: 25K
R39	RC20BF822K	Composition, 820K
R40	R-657-134	Potentiometer, 250K, level set
R41	RC20BF103K	Composition, 10K
R42	RC20BF394K	Composition, 390K
R43	RC20BF124K	Composition, 120K
R44	RC20BF225K	Composition, 2.2M
R45	RC20BF224K	Composition, 220K
R46	R-657-134	Potentiometer, 250K, level set
R47	RC20BF335K	Composition, 3.3M
R48	RC20BF104K	Composition, 100K
R49	RC30BF334K	Composition, 330K, 1W
R50	RC30BF222K	Composition, 220K, 1W
R51	RC20BF106K	Composition, 10M
R52	RC20BF224K	Composition, 220K
R53, 54	RC20BF225K	Composition, 2.2M
R55	RC20BF105K	Composition, 1M
R56	RC20BF104K	Composition, 100K
R57	RC20BF225K	Composition, 2.2M
R58	RC20BF272K	Composition, 270K
R59	RC20BF273K	Composition, 27K
R60	RC20BF224K	Composition, 220K
R61	RC30BF563K	Composition, 56K, 1W
R62	RC20BF183K	Composition, 18K

R63 RC20BF822K Composition, 820K  
R64 RC20BF103K Composition, 10K  
R65 RC20BF472K Composition, 470K  
R66 R-657-133 Potentiometer, dual, treble:  
R66-A: 500K  
R66-B: 500K

SYMBOL	ORDER NO.	DESCRIPTION
R67	RC20BF104K	Composition, 100K
R68	RC20BF152K	Composition, 150K
R69	RC20BF103K	Composition, 10K
R70	RC30BF473K	Composition, 47K, 1W
R71	RC20BF331K	Composition, 330K
R72	RC20BF474K	Composition, 470K
R73	RC20BF334K	Composition, 330K
R74	RC20BF822K	Composition, 820K
R75, 76	RC30BF122K	Composition, 1200, 1W
R77	RC40BF100K	Composition, 10, 2W
R78, 79	RC20BF104K	Composition, 100K

## MISCELLANEOUS

SYMBOL	ORDER NO.	DESCRIPTION
F1	F-3297	Fuse, 0.5 ampere
I1-5	A-50118	Lamp, channel indicator, AC pilot
J1-4	J-50081-2	Jack, dual
J3-7	J-50081-3	Jack, triple
J8, 10	J-50081-1	Jack, dual
J9	J-50088	Jack, shorting, monitor
J11-13	J-50081-3	Jack, triple
J14-17	J-50081-1	Jack, dual
J18	J-50088	Jack, shorting, monitor
J19, 20	J-5088-1	Jack, dual
J21-24	J-546-129	Receptacle, auxiliary AC
PCI, 2	PC-657-140	Printed ctrl, tone control
S1	S-657-131	Switch, equalization selector
S2	S-657-132	Switch, rumble, filter
S3	S-657-138	Switch, loudness contour
S4	S-657-150	Switch, output selector
S5-8	S-657-129	Switch assembly, four pushbuttons, input channel selector
SR1	SR-50093	Selenium rectifier, filament supply
T1	T-657-115	Transformer, power
—	AS-50004-1	Shielded cable, 4 feet, with molded plugs
—	P-1031	Plug, standard RETMA

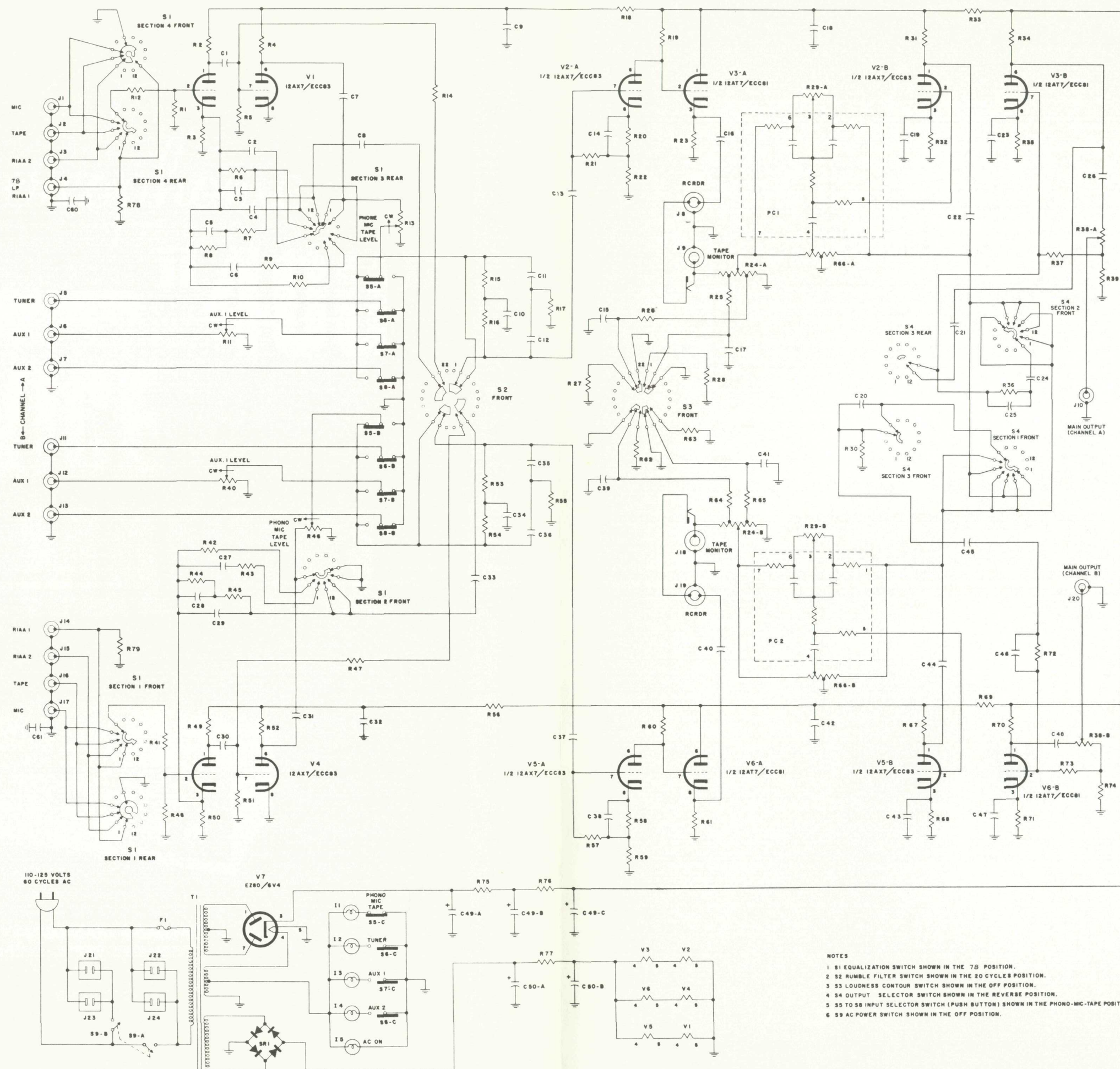
## MECHANICAL PARTS

ORDER NO.	DESCRIPTION
1-50147-1	Jewel, red, AC pilot
1-50147-4	Jewel, green, channel indicator
A-50007	Retaining ring, jewel
E-50108-22	Knob, with gold triangle
E-546-108	Knob, pushbutton
E-546-135	Knob, lever
X-1036	Fuse holder, with cover
E-3287	Tube shield
AS-657-143	Bottom cover

## MOUNTING HARDWARE

ORDER NO.	DESCRIPTION
H1215383AA	1/2-inch shelf mounting: Machine screw, 1-inch/8-32/RH, four required
A-657-147	3/4-inch shelf mounting: Stand-off washer, 1/2-inch, four required
H1215383AA	Machine screw, 1-inch/8-32/RH, four required
H101W106AA	Flat washer, four required
Leg mounting, without cabinet:	
H-657-145	Plastic leg, four required
H1215378AA	Machine screw, 1/2-inch/8-32/RH, four required

**SCHEMATIC DIAGRAM • MODEL 400-C**



- NOTES
- 1 S1 EQUALIZATION SWITCH SHOWN IN THE 7B POSITION.
  - 2 S2 RUMBLE FILTER SWITCH SHOWN IN THE 20 CYCLES POSITION.
  - 3 S3 LOUDNESS CONTOUR SWITCH SHOWN IN THE OFF POSITION.
  - 4 S4 OUTPUT SELECTOR SWITCH SHOWN IN THE REVERSE POSITION.
  - 5 S5 TO S8 INPUT SELECTOR SWITCH (PUSH BUTTON) SHOWN IN THE PHONO-MC-TAPE POSITION.
  - 6 S9 AC POWER SWITCH SHOWN IN THE OFF POSITION.

# VOLTAGE AND RESISTANCE MEASUREMENTS

## Voltage Reference Chart

Set line voltage at 117 volts AC, 50-60 cycles. All readings are in DC volts with respect to chassis ground. Allow 15-minute instrument warm-up before taking measurements.

SYMBOL TUBES	TUBE SOCKET TERMINAL NUMBERS								
	1	2	3	4	5	6	7	8	9a
V1	85	0	P	12.6	0	90	N	0	6.3
V2	170	0	1.3	12.6	0	155	N	15	6.3
V3	265	155	155	25.2	12.5	125	0	1.3	18.9
V4	85	0	P	12.6	0	90	N	0	6.3
V5	170	0	1.3	25.2	12.6	155	6.3	15	18.9
V6	125	0	1.3	25.2	12.6	265	155	155	18.9
V7	300 AC	X	365	6.3 AC	0	X	300 AC	X	X
SUPPLY CAPACITORS	TERMINAL SYMBOLS	VOLTAGE	CHART NOTES						
C9	▲	185	AC	Reading in AC volts					
C18c	■	265	N	Less than 1 volt DC, negative					
C32c	—	185	P	Less than 1 volt DC, positive					
C42c	◐	265	X	No connection					
C49-A	◑	365	a	Dual-filament junction, V1-V6					
C49-B	■	340	c	Sections of C9 (See parts list)					
C49-C	▲	320							
C50-A	▲	30							
C50-B	◑	25							

All readings below taken with a vacuum-tube voltohmmeter with respect to chassis ground. All input selector pushbuttons out, and level set adjustments at minimum. Volume control at minimum. Bass, treble, and channel balance controls at mid-position. Loudness contour control off. Rumble filter at 20 cycles. Equalization selector at RIAA 1. Output selector at STANDARD.

## Resistance Reference Chart

Disconnect the chassis AC power cord. Discharge all electrolytic capacitors to chassis ground through a 100-ohm resistor. Disconnect all cables to associated equipment. Readings are in ohms with respect to chassis ground.

SYMBOL TUBES	TUBE SOCKET TERMINAL NUMBERS								
	1	2	3	4	5	6	7	8	9a
V1	350K+	100K	2700	12+	0	350K+	10M	0	8+
V2	350K+	450K	1500	12+	0	350K+	2.2M	30K	8+
V3	350K+	350K+	56K	12+	12+	350K+	340K	330	12+
V4	350K+	100Kb	2700	12+	0	350K+	10M	0	8+
V5	350K+	450K	1500	12+	12+	350K+	2.2M	30K	12+
V6	350K+	340K	330	12+	12+	350K+	350K+	56K	12+
V7	135	X	350K+	L	0	X	135	X	X
SUPPLY CAPACITORS	TERMINAL SYMBOLS	RESISTANCE	CHART NOTES						
C9	▲	350K+	K	Kilohm					
C18c	■	350K+	L	Less than 1 ohm					
C32c	—	350K+	M	Megohm					
C42c	◐	350K+	X	No connection					
C49-A	◑	350K+	+	Minimum reading, rising as electrolytic capacitors charge.					
C49-B	■	350K+	a	Dual-filament junction, V1-V6					
C49-C	▲	350K+	b	9K reading with equalization selector in EUR or LP position.					
C50-A	▲	21+	c	Sections of C9 (See parts list)					
C50-B	◑	12+							

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