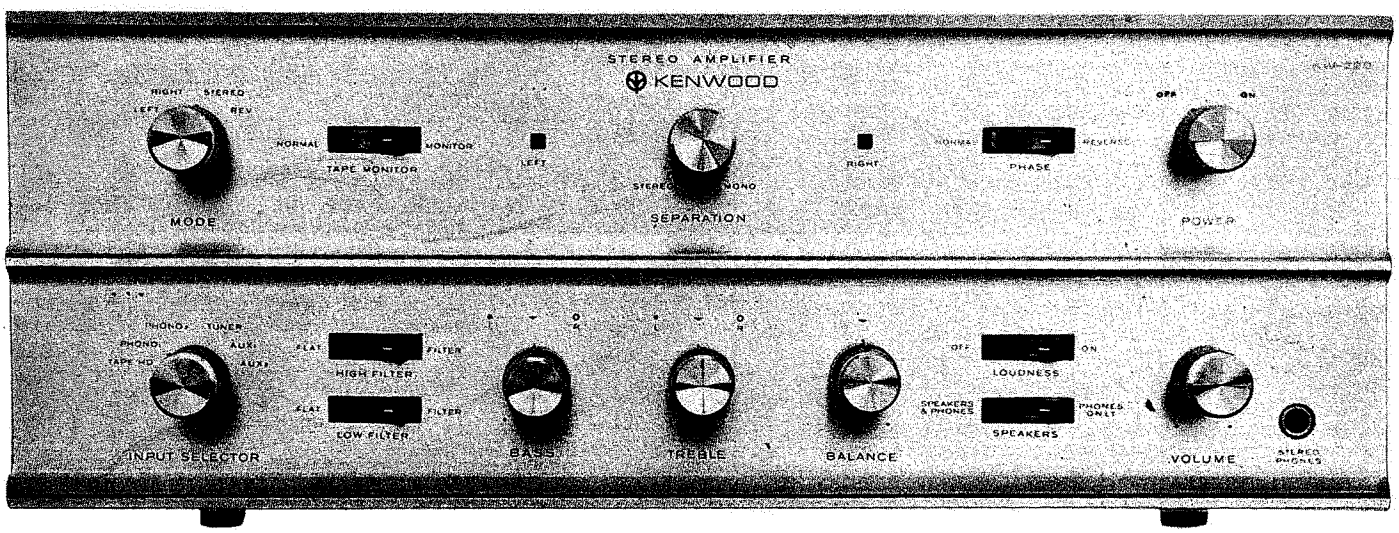
SERVICE MANUAL

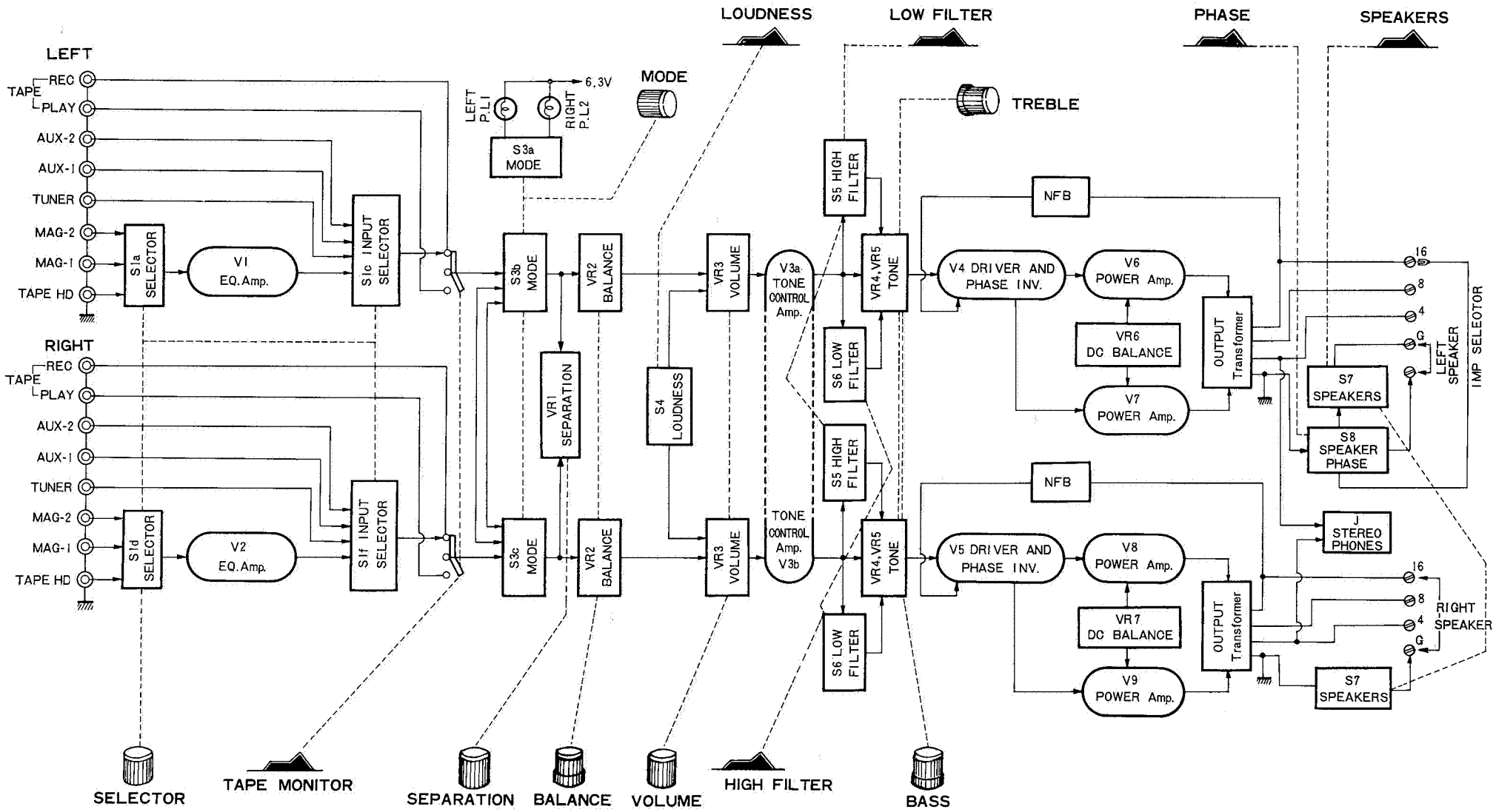
KENWOOD



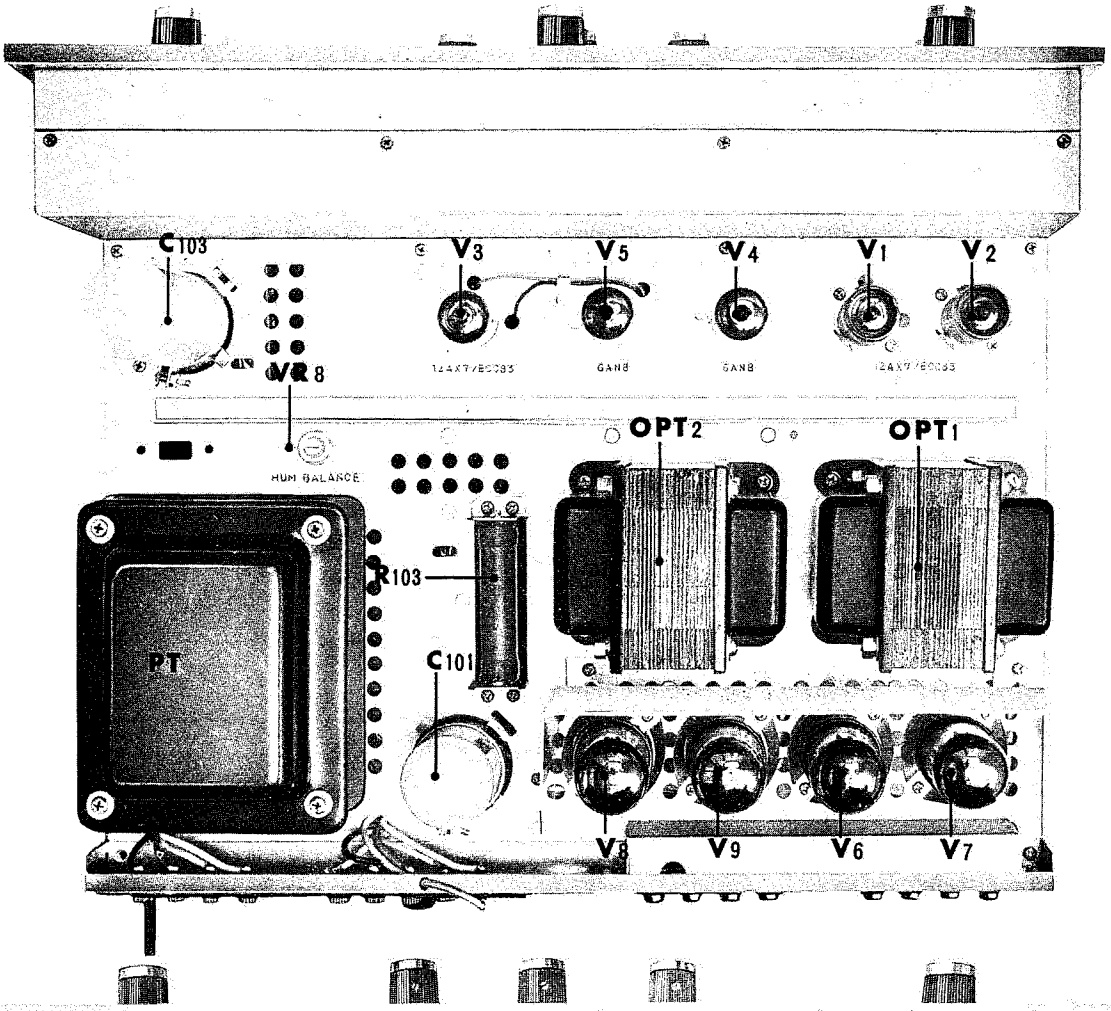
MODEL KW-220

INTEGRATED STEREO AMPLIFIER

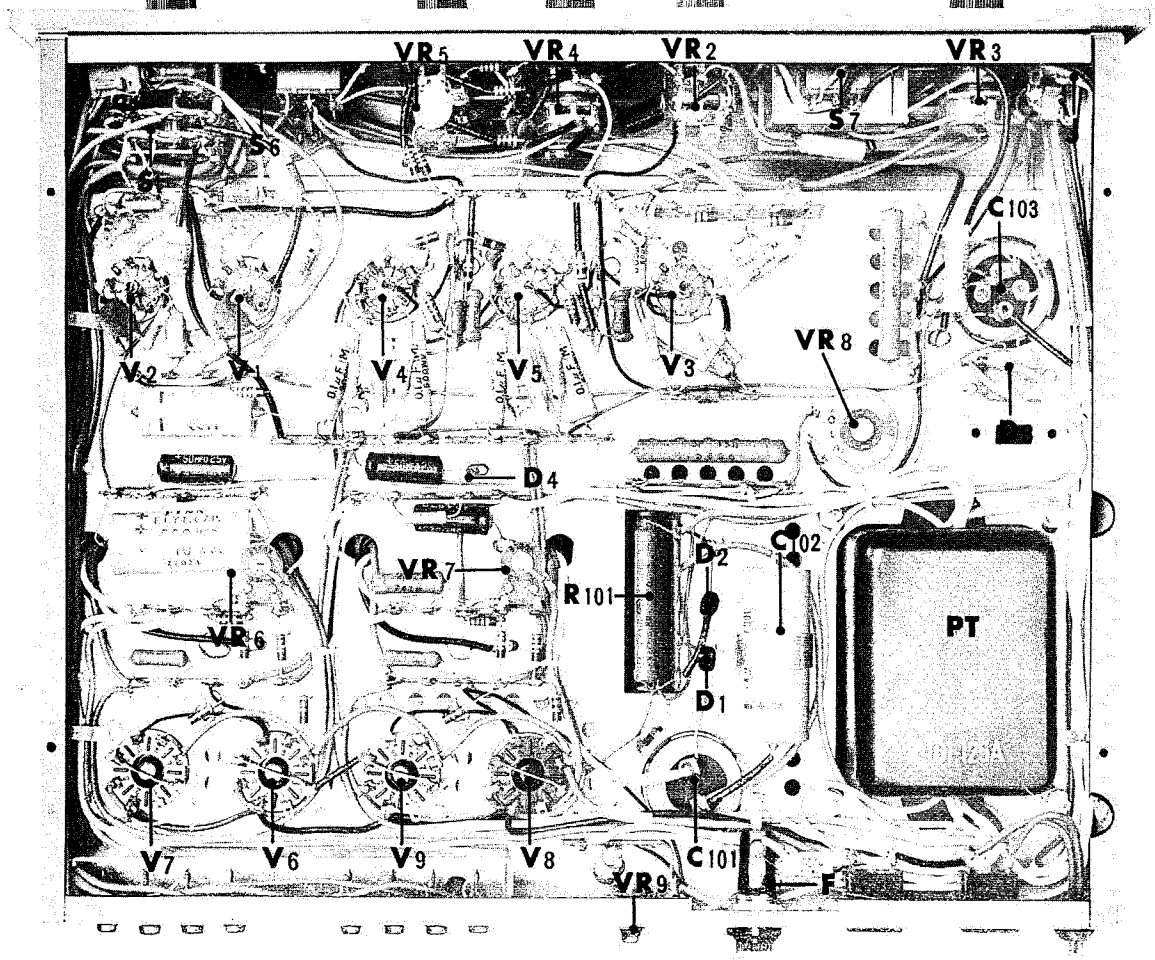
BLOCK DIAGRAM



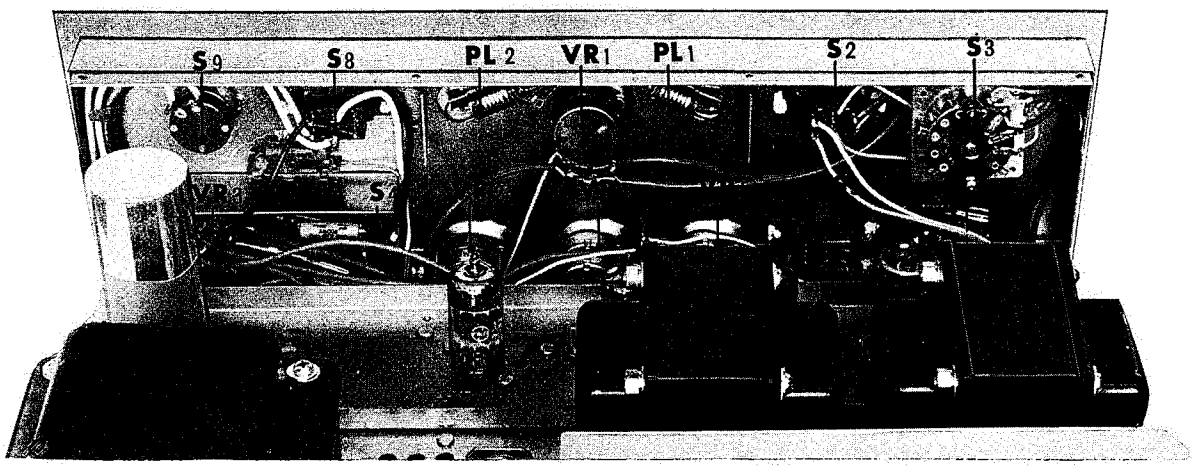
■ CHASSIS-TOP VIEW



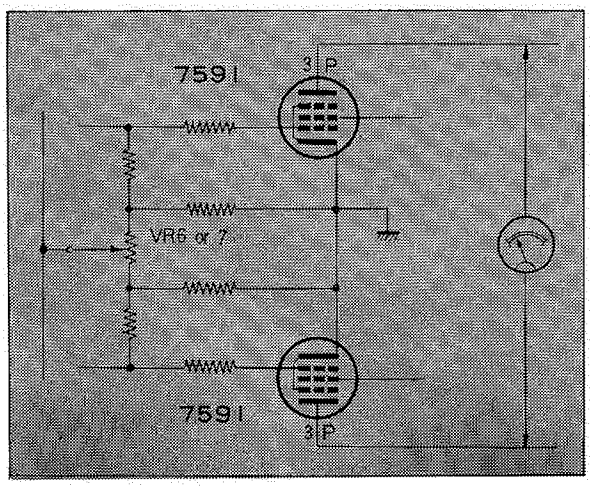
CHASSIS-BOTTOM VIEW ■

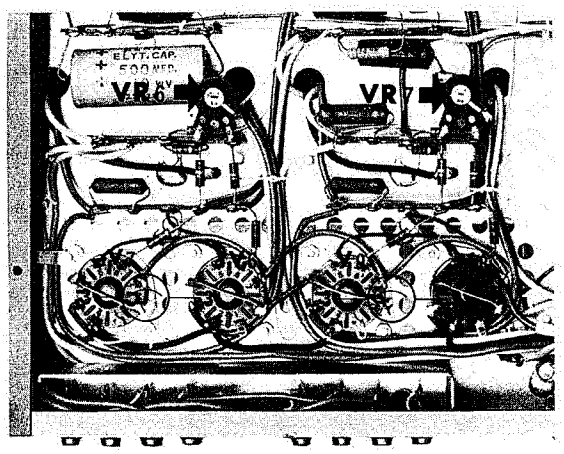


■ CHASSIS TOP VIEW



■ DC BALANCE ADJUSTMENT





DC Balance Adjustment

Set the tester or ammeter at about 10 milliamperes range to measure the current between the two 7591 plates. Adjust VR6 for zero reading; however a reading of 3 milliamperes or less is satisfactory.

PARTS DESCRIPTION LIST

■CAPACITORS

SYMBOL NO.	DESCRIPTION
C1, 11, 19, 51, 61, 69	Electrolytic Tubular 25mfd. 10V
C2,52	Ceramic 0.01mfd. +100—0%
C3,53, 109	Paper Tubular 0.01mfd. ±20%
C4,C54	Ceramic 0.002mfd. ±20%
C7,57	Metalized Paper 0.1mfd. ±20%
C8, 16, 58, 66	Ceramic 560mmfd. ±20%
C9, 15, 21, 24, 59, 65 71, 74	Ceramic 100mmfd. ±10% 〃 〃
C10, 60	Paper Tubular 0.02mfd. ±20%
C12, 62	Paper Tubular 0.05mfd. ±20%
C13, 14, 63, 64	Ceramic 0.001mfd. ±20%
C17, 67	Ceramic 730mmfd. ±20%
C18, 68	Ceramic 0.003mfd. ±20%
C20, C70	Electrolytic Tubular 1mfd. 150V
C22, 23, 72, 73	Paper Tubular 0.1mfd. ±20%
C101, 102	Electrolytic Tubular 100mfd. 250V
C103	Electrolylic 3-Section 40mfd. 450V
C104	Electrolytic Tubular 40mfd. 150V
C105, 107, 108	Electrolytic Tubular 50mfd. 25V
C106	Electrolytic Tubular 500mfd. 10V

■ RESISTORS

SYMBOL NO.	DESCRIPTION			
R1, 51	Dep. Carbon	47K	±10%	1/3W
R2, 52	Dep. Carbon	1.5K	±10%	1/3W
R3, 53	Cep. Corbon	2.2K	±10%	1/3W
R4, 23, 54, 73	Dep. Carbon	270K	±10%	1/3W
R5, 8, 55, 58	Dep. Carbon	3.3M	±20%	1/3W
R6, 56	Dep. Carbon	68K	±10%	1/2W
R7, 57	Dep. Carbon	33K	±10%	1/3W
R10, 60	Dep. Carbon	1M	±20%	1/3W
R11, 18, 61, 68, 106	Composition	68K	±10%	1/2W
R12, 31, 32, 62, 81, 82	Composition	33K	±10%	1/2W
R13, 63	Dep. Carbon	3.3K	±10%	1/3W
R14, 64	Dep. Carbon	100K	±10%	1/2W
R15, 16, 65, 66	Composition	4.7M	±20%	1/2W
R17, 67	Composition	330K	±10%	1/2W
R19, 69	Composition	150K	±10%	1/2W
R20, 70	Dep. Carbon	1.2K	±10%	1/3W
R21, 71	Composition	100ohm	±10%	1/2W
R22, 72	Composition	1M	±20%	1/2W
R24, 74	Dep. Carbon	4.7K	±10%	1/3W
R25, 26, 75, 76	Dep. Carbon	56K	±10%	1/2W
R27, 28, 77, 78	Composition	220K	±10%	1/2W
R29, 30, 79, 80	Composition	1.5K	±20%	1/2W
R33, 83	Dep. Carbon	5.6K	±10%	1/2W
R34, 84	Wirewound	56ohm	± 5 %	4W
R35, 85	Wirewound	56ohm	± 5 %	2W
R38, 88	Composition	10K	±10%	1/2W
R101	Wirewound	5ohm	± 5 %	8W
R102	Wirewound	1K	± 5 %	8W
R103	Wirewound	10K	± 5 %	20W
R104	Dep. Carbon	8.2K	±10%	1W
R105	Composition	22K	±20%	1/2W
R107	Wirewound	15ohm	± 5 %	8W
R108	Composition	4.3K	± 5 %	1/2W

■PRINTED CIRCUITS

SYMBOL NO.	DESCRIPTION	PART NO.
PC1	R9, 68K, C5, 0.001mfd. C6, 0.003 mfd Equalization	R15—09
PC2	R59, 68K, C55, 0.001mfd. C56 0.003mfd. Equalization	R15—09

■TUBES / DIODES

SYMBOL NO.	DESCRIPTION
V1	12AX7/ECC83 Channel L EQ. Amp.
V2	12AX7/ECC83 Channel R EQ. Amp.
V3	12AX7/ECC83 Channel L·R Tone Control
V4	6AN8 Channel L DRIVER & PHASE INV
V5	6AN8 Channel R DRIVER & PHASE INV
V6,7	7591 Channel L POWER Amp.
V8,9	7591 Channel R POWER Amp.
D1,2	FR 1K B+ Rect.
D3,	KC1.3C1/2 V1, 2 Heater DC Rect.
D4	SM-150S DC Bias Rect.

■POTENTIOMETERS

SYMBOL NO.	DESCRIPTION	PART NO.
VR1	Dual, 1M (C) SEPARATION	R02—0139
VR2	Dual, 1M (A・C) BALANCE	R02—0134
VR3	Dual, 1M (B) VOLUME	R02—2112
VR4	Dual, 1M (A) TREBLE	R04—0201
VR5	Dual, 1M (A) BASS	R04—0201
VR6	1K, (B) DC Balance	R10—06
VR7	1K, (B) DC Balance	R10—06
VR8	100ohm (B) HUM BALANCE TYPE H30	R10—01
VR9	100ohm (B) HUM BALANCE TYPE H30	R10—01

■SWITCHES

SYMBOL NO.	DESCRIPTION	PART NO.
S1 a~f	Rotary, INPUT SELECTOR Y-3・6・6	S03—536
S2	See Saw, TAPE MONITOR	S10—22V
S3 a~f	Rotary, MODE Y-2・5・4	S03—310
S4	See Saw, LOUDNESS	S10—22V
S5	See Saw, HIGH FILTER	S10—22V
S6	See Saw, LOW FILTER	S10—22V
S7	See Saw, SPEAKERS	S10—22V
S8	See Saw, PHASE	S10—22V
S9	POWER	S12—16V

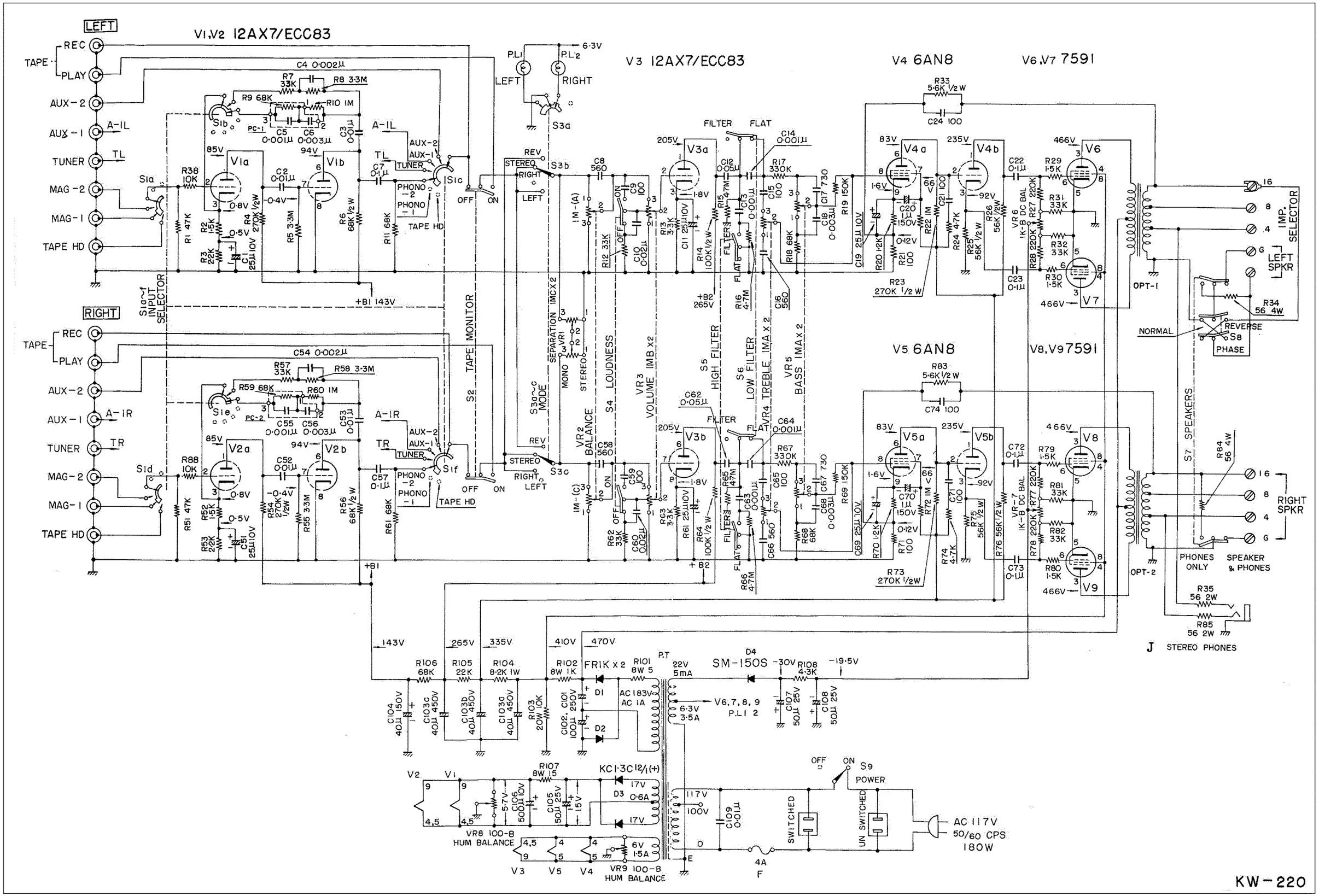
■TRANSFORMERS

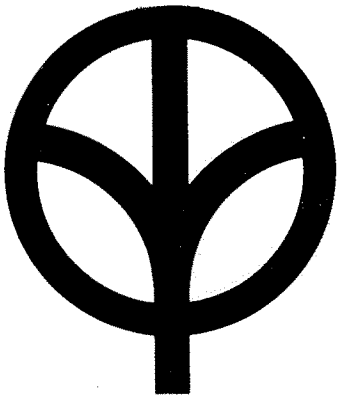
SYMBOL NO.	DESCRIPTION	PART NO.
OPT1	Channel L OUTPUT	T02—49
OPT2	Channel R OUTPUT	T02—49
PT	Power	T01—125A

■MISCELLANEOUS

SYMBOL NO.	DESCRIPTION	PART NO.
PL1	6~8V 0.15A	S16—01
PL2	6~8V 0.15A	S16—01
F	4Amp.	S17—04
——	Jewel Red×2	A53—13
J	Storeo Phone Jack	E16—08
——	Knob, INPUT SELECTOR, MODE, SEPARATION POWER, VOLUME	S14—174
——	Knob, BASS, TREBLE Dual Front	S14—173
——	Knob, BASS, TREBLE Dual Back	S14—175
——	Knob, BALANCE Dual Front	S14—173
——	Knob, BALANCE Dual Back	S14—176

SCHEMATIC DIAGRAM





KENWOOD

KENWOOD ELECTRONICS, INC.

NEW YORK LOS ANGELES

PRINTED IN JAPAN