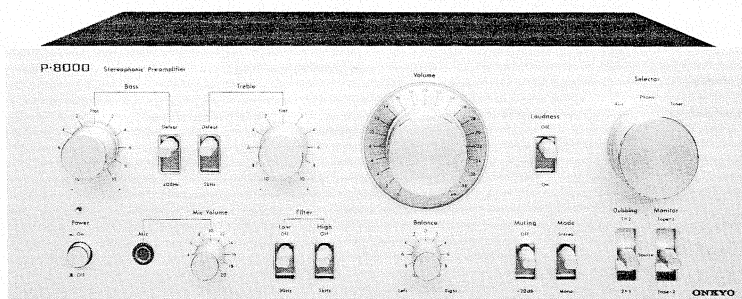


ONKYO® SERVICE MANUAL

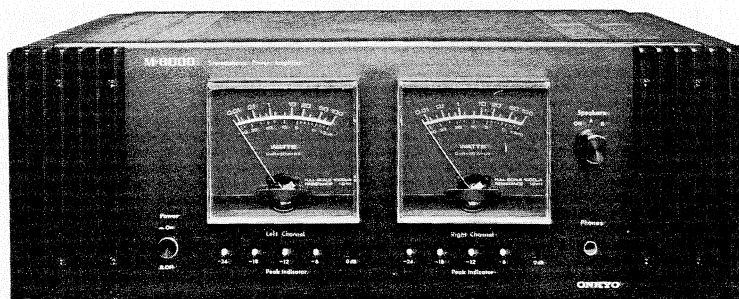
STEREO PREAMPLIFIER

MODEL P-8000



STEREO POWER AMPLIFIER

MODEL M-8000



ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

Model P-8000

Total Harmonic Distortion:	0.01% at rated output	Loudness Switch:	+6 dB at 70 Hz +4.5 dB at 10 kHz
Rated Output Voltage:	1 V/50 kohms load	High Filter:	5 kHz 6 dB/oct.
Outputs:	OUTPUT —1 and —2 TAPE REC OUT —1 and —2 AC OUTLET (UNSWITCHED X 3)	Low Filter:	30 Hz 6 dB/oct.
Inputs:	PHONO TUNER AUX TAPE PLAY —1 and —2 MIC	Muting:	—20 dB
Sensitivity & Impedance:	PHONO: 3.5 mV/50 kohms TUNER: 150 mV/50 kohms AUX: 150 mV/50 kohms TAPE PLAY: 150 mV/50 kohms TAPE REC: 150 mV/2.2 kohms (PHONO) MIC: 8 mV/50 kohms	Signal to Noise Ratio:	PHONO: 76 dB (IHF A NETWORK) TUNER/AUX/PLAY: 96 dB (IHF A NETWORK) MIC: 84 dB (IHF A NETWORK)
Intermodulation Dist. :	0.01% at rated output	Semiconductors:	5 ICs, 2 FETs, 5 Transistors, 4 Diodes
RIAA Deviation:	±0.5 dB, 30 — 15,000 Hz	Power Supply Rating:	ac 220 volts 50/60 Hz
Phono Overload:	250 mV RMS at 1 kHz, THD 0.1% 1250 mV RMS at 10 kHz, THD 0.1%	Dimensions:	418 W x 150 H x 305 D mm. 16-1/2" x 5-15/16" x 12"
Tone Controls:	BASS: ±9 dB at 100 Hz TREBLE: ±9 dB at 10 kHz	Weight:	4.5 kg (9.9 lbs)

Specifications and features are subject to change without notice.

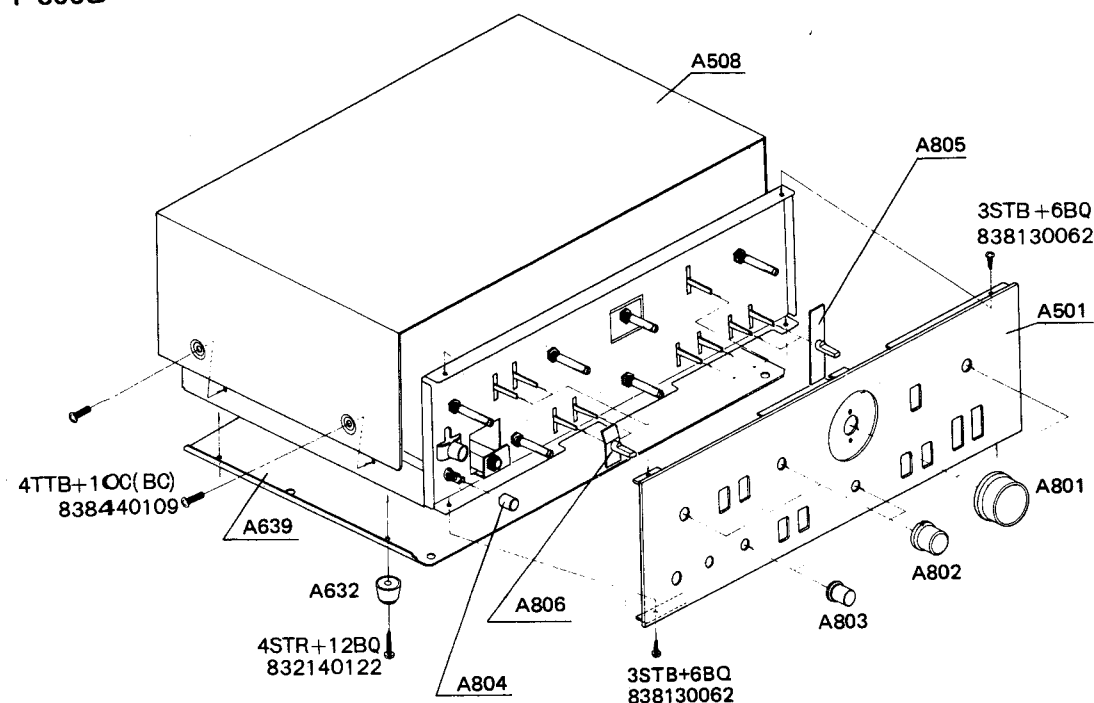
Model M-8000

Dynamic Output Power:	160 watts total at 8 ohms, 0.1% THD.	Outputs:	SPEAKER A and B HEADPHONE TAPE REC OUT (for MIC MIXING) AC OUTLET x 1 (UNSWITCHED) MAIN INPUT
Continuous Output Power:	55 watts per channel, at 8 ohms, both channels driven, 1 kHz, 0.1% THD. 50 watts per channel, at 8 ohms, both channels driven, 20 - 20,000 Hz, 0.1% THD.	Input:	
Total Harmonic Distortion:	0.1% at rated power 0.02% at 1 watt output	Semiconductors:	2 ICs, 17 Transistors, 28 Diodes
IM Distortion:	0.1% at rated power	Power Supply Rating:	ac 220 volts 50/60 Hz
Damping Factor:	50 at 8 ohms	Dimensions:	418 W x 152 H x 274 D mm 16-1/2" x 6" x 10-13/16"
Frequency Response:	+0, —1.5 dB at 4 Hz — 100 kHz	Weight:	10 kg (22 lbs)
Power Bandwidth:	5 — 30,000 Hz (0.1% THD, —3 dB)		
Input Sensitivity and Impedance:	1 V/50 kohms		
Signal to Noise Ratio:	110 dB (IHF A NETWORK)		
Power Meters:	0 dB = 50 watts/8 ohms 0.01 — 100 watts		
Peak Power Indicators:	0 dB = 50 watts/8 ohms —24 dB, —18 dB, —12 dB, —6 dB, 0 dB		

Specifications and features are subject to change without notice.

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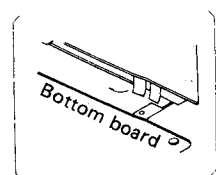
EXPLODED VIEW
Model P-8000



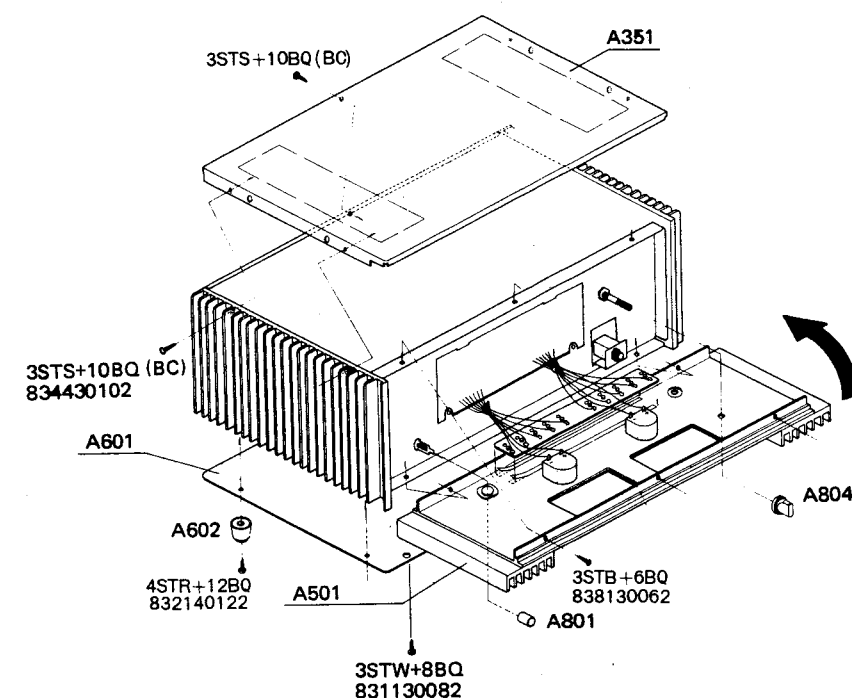
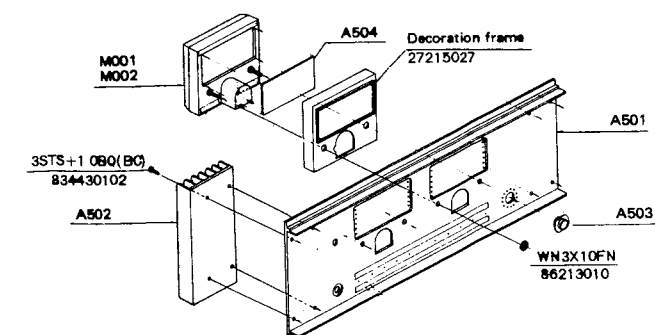
PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION	CIRCUIT NO.	PARTS NO.	DESCRIPTION
	127995551	NAAF-455 (1), Preampli p.c.b.	A501	27210142	Front panel
	127995552	NAAF-455 (2), Loudness p.c.b.	A502	27267021A	Power switch guide
	127995553	NAAF-455 (3), Tone ampli. p.c.b.	A503	28165019	Facet
PL001	210009	RM5-12V30-A, Power indicator lamp	A504	27262025	Plate
T901	230262	NPT-633G, Power transformer	A508	28184026	Ampli. cover
C002	3500052	PME271Y510, IS capacitor	A509	28140024	Cushion for A508
S1	25030067	NRS-133-35F, Source selector switch	A510	838440109	4TTB+10C(BC), Screw for A508
S11	25035064	NPS-121-L29P, Power switch	A801	28320356	Volume knob
P001	25045022	NPJ-6PRBL01, Phono, Tuner/Aux. input terminal	A802	28320357	Tone knob
P002, P003	25045025	NPJ-4PRBL03, Tape input/output terminal	A803	28320358	Balance knob
P004	25045025	NPJ-4PRBL03, Pre. output terminal	A804	28320326	Power knob
P005	25060008	Ground terminal	A805	28320360	Lever knob
P006	250051	HJ-631S-H2, Mic. jack	A806	28320361	Lever knob
P007	25050020	NSTC-6P02, AC outlet		27110050	Front bracket
P008	253083	AS-CEE, Power supply cord		27115001G	Side bracket
A015	25065018	Stopper for P008	A631	27170032A	Bottom board
	27120134	Back panel	A632	280379	Leg
			A633	832140122	4STR+12BQ, Tapping screw for A632
			A634	831130082	3STW+8BQ, Tapping screw for A631

Caution: Push the feather of lever knob in the direction of arrow mark when install the bottom board.



EXPLODED VIEW
Model M-8000

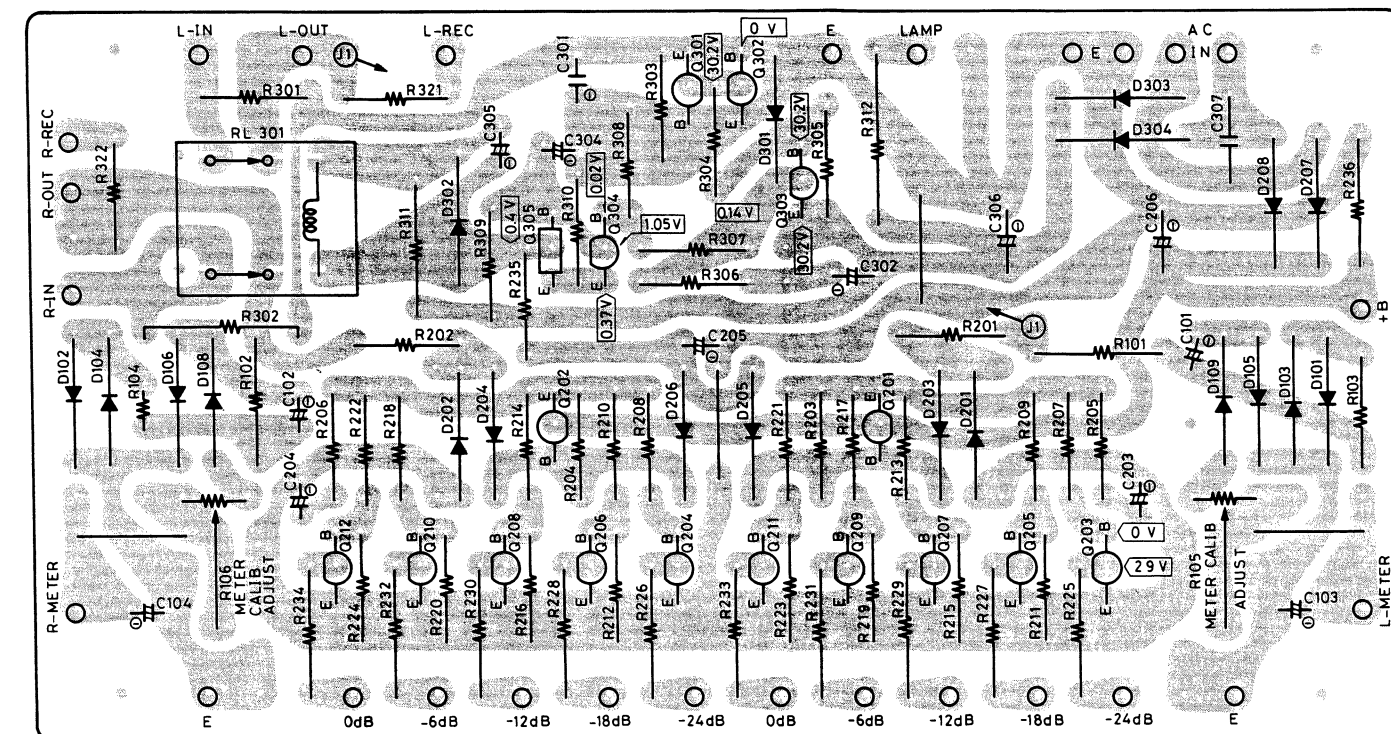


PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION	CIRCUIT NO.	PARTS NO.	DESCRIPTION
	12739563	NAMA-463, Power ampli. p.c.b.	F001a	250143	Fuseholder
	12739564	NADIP-464, Protection, Peak/Meter circuit p.c.b.	F001	252056	3A-TL, Fuse
	12739565	NADIS-465, Peak indicator L.E.D. p.c.b.	A001	27110054	Front bracket
	12739566	NAPL-466, Lamp p.c.b.	A003	27250014	Lamp case
Q001, Q002	222015	STK-084, Power ampli. IC	A015	27160032	Radiator (R)
T001, T002	230263	NPT-636G, Power transformer	A016	27160033	Radiator (L)
C001	3500052	PME271Y510, IS capacitor	A017	27130118A	PC bracket
R001, R002	441723314	330Ω, 2W, Metal oxide film resistor	A024	27120133	Back panel
S001	25035035	NPS-111-L01P, Power switch	A351	28184036	Top cover
S002	25030079	NRS-123-35Y, Speaker selector switch	A501	12739121	Front panel ass'y
P001	25045025	NPJ-4PRBL03, Input/Output terminal	A502	27160034	Radiator (S)
P003, P004	25060026	NTM-4PRMN03, Speaker terminal	A503	27215027	End cap
P005	250078	XG-7716, Stereo headphone jack	A504	28133006	Back plate
P008	250010A	MD-10, AC outlet	A505	27267023	Power switch guide
	253083	AS-CEE, Power supply cord	A601	27170038	Bottom board
	25065018	Stopper for power supply cord	A602	280379	Leg
M001, M002	243081	NIND-1000S81, VU meter	A801	28320218	Power switch knob
			A804	8320233	Speaker selector knob

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METER AND PROTECTION CIRCUIT PC BOARD VIEW FROM BOTTOM SIDE



CIRCUIT NO.	PARTS NO.	DESCRIPTION
D207, D208 D302-D304	223848	GP-08B
Capacitors		
C101, C102	352741001	10μF, 16V, Elect.
C103, C104	352733301	33μF, 10V, Elect.
C203, C204	352780221	2.2μF, 50V, Elect.
C205	352780331	3.3μF, 50V, Elect.
C206	352722211	220μF, 6.3V, Elect.
C301	352722211	220μF, 6.3V, Elect.
C302	352782201	22μF, 50V, Elect.
C304, C305	352780331	3.3μF, 50V, Elect.
C306	352764711	470μF, 35V, Elect.
Resistors		
R101, R102	441621024	1kΩ, 1W, Metal oxide film
R105, R106	5225018	N10HR1KBC, Semi-fixed
R236	441621524	1.5kΩ, 1W, Metal oxide film
R311	441621814	180Ω, 1W, Metal oxide
R312	441724304	43Ω, 2W, Metal oxide film
Relay		
RL301	25065040	NRL-2P5A-DC24-03

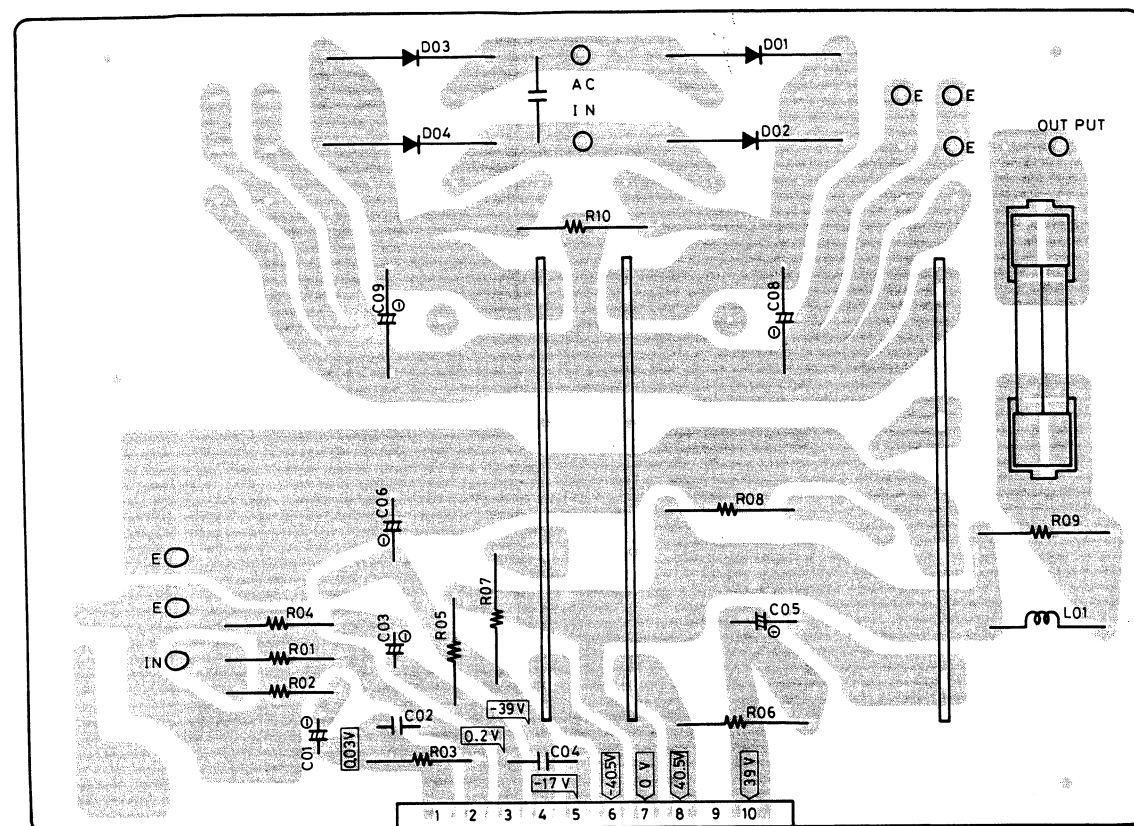
PEAK INDICATOR PC BOARD – PARTS LIST

L.E.D.		
D401-D410	225010	SEL103R

LAMP PC BOARD – PARTS LIST

PL501, PL502	210038	150mA, 12V, Lamp
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POWER AMPLI. PC BOARD VIEW FROM BOTTOM SIDE



POWER AMPLI. PC BOARD – PARTS LIST

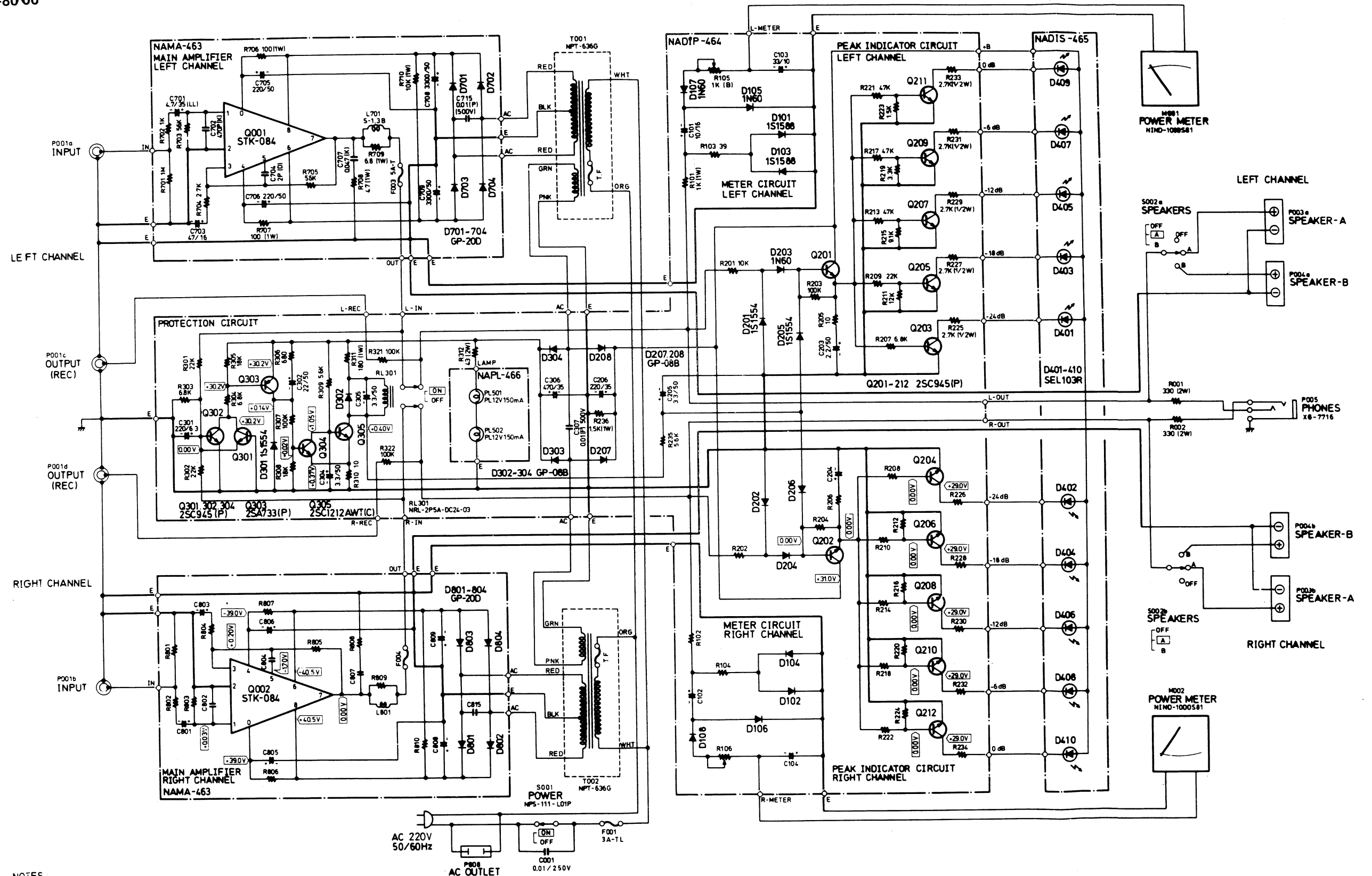
CIRCUIT NO.	PARTS NO.	DESCRIPTION
ICs		
Q001, Q002	222015	STK-084
Diodes		
D01-D04	223845	GP-20D
Coil		
L01	231001	S-1.3B
Capacitors		
C01	392860477	4.7μF, 35V, LL
C03	352744701	47μF, 16V, Elect.
C05, C06	352782211	220μF, 50V, Elect.
C08, C09	3504106	3,300μF, 50V, Elect.
Resistors		
R06, R07	441621014	100Ω, 1W, Metal oxide film resistor
R08	451630474	4.7Ω, 2W, Metal
R09	451630684	6.8Ω, 1W, Metal
R10	441621034	10kΩ, 1W, Metal oxide film resistor
Fuse		
F003, F004	252020	5A-T

PROTECTION, PEAK/METER CIRCUIT PC BOARD – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
Fuseholder		
	250113	SN5051
Ground plate		
	27300087	
Transistors		
Q201-Q212		
Q301, Q302, Q304	2210743	2SC945(L) (P)
Q303	2210803	2SA733(P)
Q305	2210863	2SC1212AWT(C)
Diodes		
D101-D104	223119	1S1588
D105-D108	223103	1N60
D203, D204		
D201, D202, D205, D206, D301	223106	1S1554

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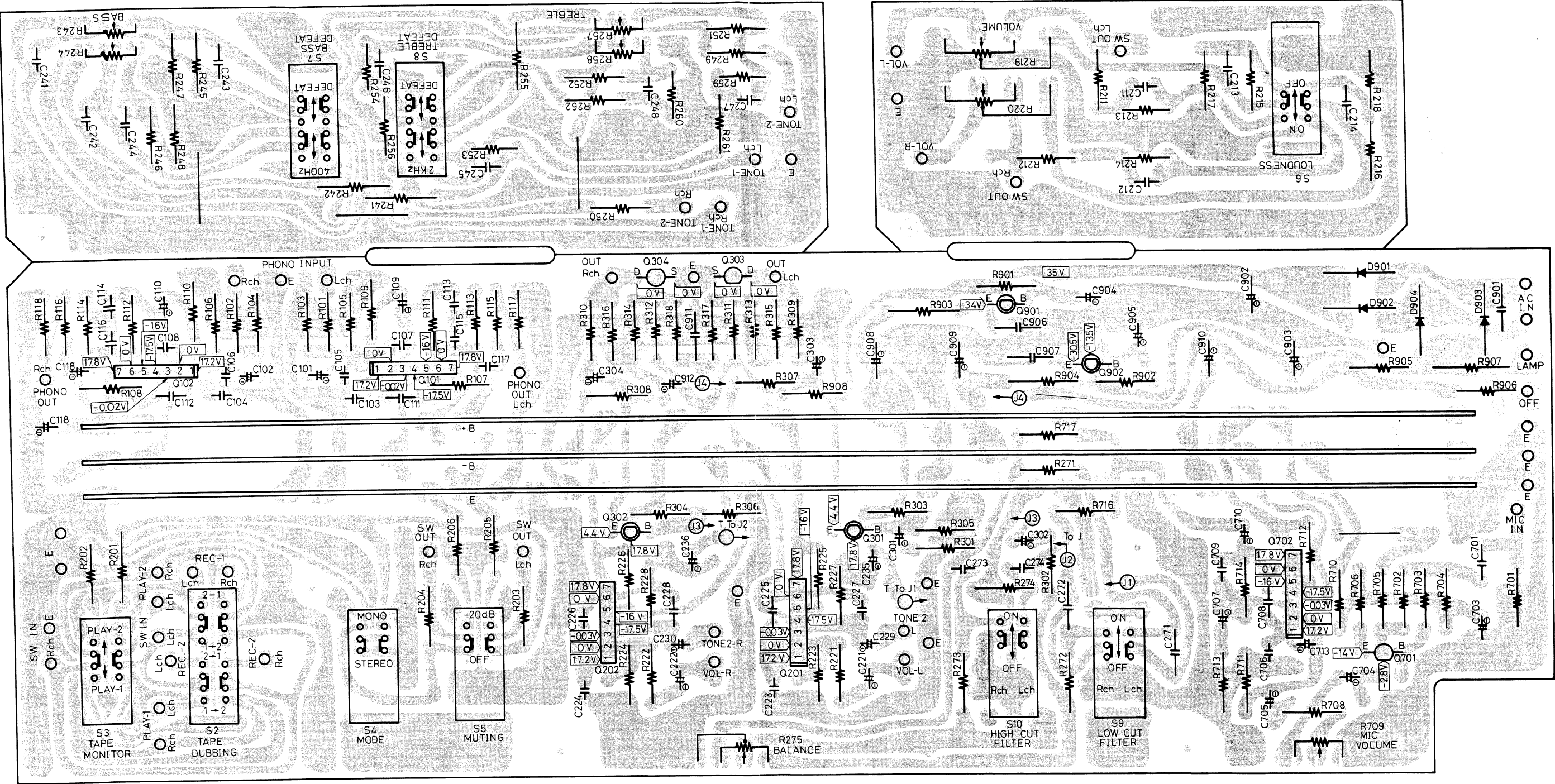
SCHEMATIC DIAGRAM MODEL M-8000



- NOTES:
- ALL RESISTORS ARE IN OHMS $\pm 5\%$ 1/4W.
 - ALL CAPACITORS ARE IN μF 50V.
 - ALL ELECTROLYTIC CAPACITORS (—) ARE IN $\mu F/WV$.
 - DC VOLTAGES (V) ARE MEASURED WITH C.T. (20K Ω /V) TO CHASSIS AT NO SIGNAL APPLIED.
 - UNLESS OTHERWISE SPECIFIED.

ONKYO CORPORATION

PREAMPLI. PC BOARD VIEW FROM BOTTOM SIDE



PREAMPLI. PC BOARD – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION	CIRCUIT NO.	PARTS NO.	DESCRIPTION
		ICs			Capacitors
Q101, Q102	222422	TA-7136P(ONK)	C101, C102	352780101	1μF, 50V, Elect.
Q201, Q202, Q702	222423	TA-7136P	C109, C110	352721011	100μF, 6.3V, Elect.
		Transistors	C117, C118	392884797	0.47μF, 50V, LL
Q301, Q302	2210675	2SC1681(GR)	C221, C222	352751021	1,000μF, 25V, Elect.
Q303, Q304	2211293	2SK68(M), F.E.T.	C229, C230	352780101	1μF, 50V, Elect.
Q701	2210136	2SC1312-31(F)	C271, C272	374121045	0.1μF, 50V, DE
Q901	2210064	2SC734(Y)	C301, C302	392884797	0.47μF, 50V, LL
Q902	2210074	2SA561(Y)	C303, C304	390980107	1μF, 50V, LM
		Diodes	C701	374125637	0.056μF, 50V, DE
			C703	352754701	47μF, 25V, LL
			C704	392884797	0.47μF, 50V, LL
					Resistors
			C707	352780331	3.3μF, 50V, Elect.
			C710	352733301	33μF, 10V, Elect.
			C902, C903	352782211	220μF, 50V, Elect.
			C904, C905	352781011	100μF, 50V, Elect.
			C908, C909	352751021	1,000μF, 25V, Elect.
			C910	352763311	330μF, 35V, Elect.
			C912	352780471	4.7μF, 50V, Elect.
					Resistors
			R275, R276	5104056	N16RL250KWTP35, Balance control variable
			R707	5104024	N16RL100KA35, Mic. level trol variable
					Ω, 1W, Metal oxide film

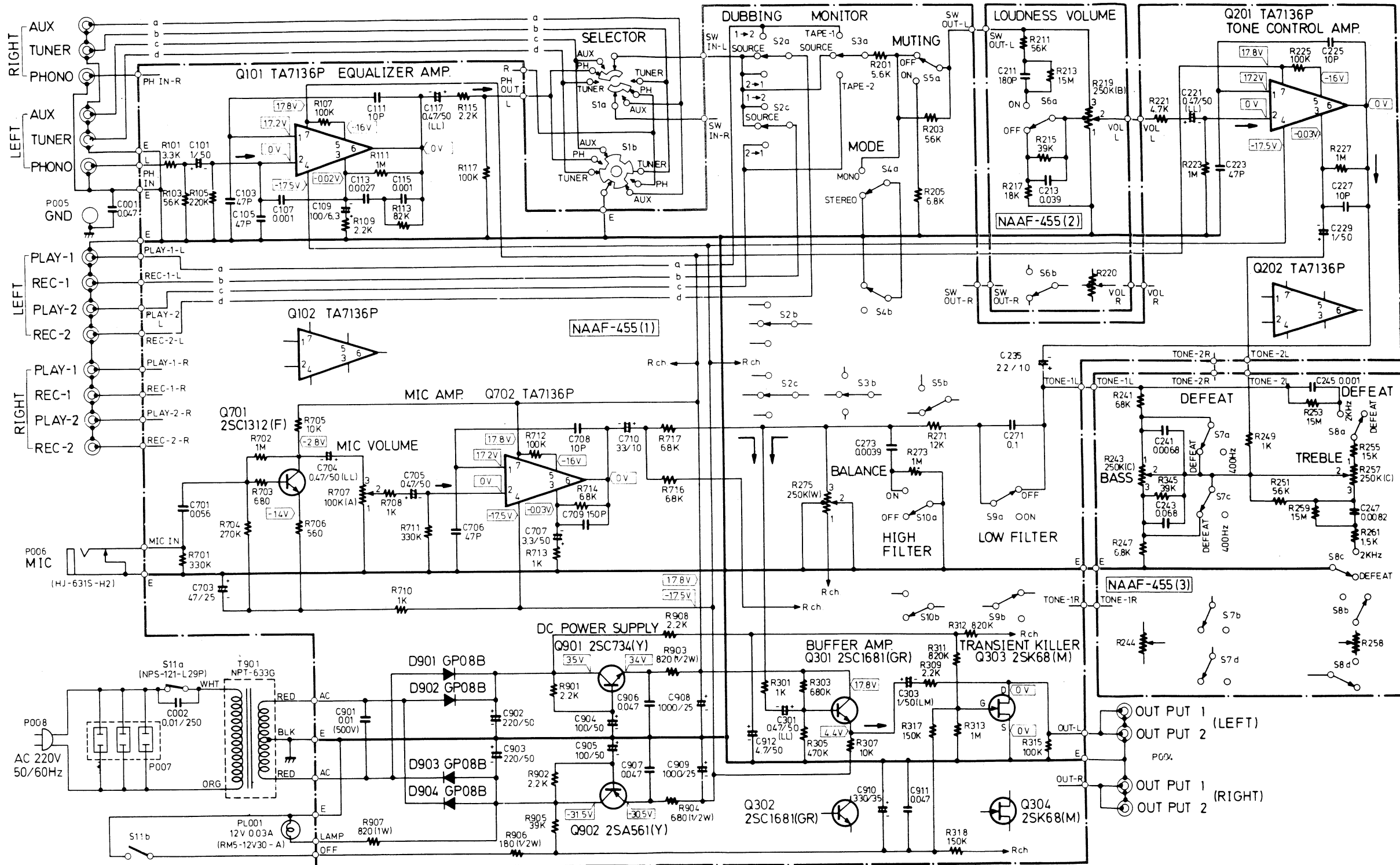
CIRCUIT NO.	PARTS NO.	DESCRIPTION
		Switches
S2	25040042	NLS-143-2715-L18, Tape dubbing
S3	25040041	NLS-123-2715-L17, Tape monitor
S4, S5, S9, S10	25040026	NLS-122-2715-L04, Mode, Muting, Low-cut/High-cut filter
	27300083	Plate
		LOUDNESS CIRCUIT PC BOARD-PARTS LIST
		Capacitor
R213, R214	374123935	0.039μF, 50V, DE
		Resistor
R219, R220	5172045	N24RGL41C250KBTP35, Volume control variable
		Switch
S6	25040024	NLS-122-2715-L01, Loudness

TONE CONTROL CIRCUIT PC BOARD – PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
		Capacitor
C243, C244	374126835	0.068μF, 50V, DE
		Variable resistor
R243, R244	5104030	N16RGC250KC35, Bass control
R257, R258	5104030	N16RGC250KC35, Treble control
		Switches
S7, S8	25040027	NLS-142-2715-L05, Tone defeat

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SCHEMATIC DIAGRAM
MODEL P-8000



- Q101 Q102
Q201 Q202
Q702
TA7136P
- Q701
2SC1312(F)
- Q901 2SC734(Y)
Q902 2SA561(Y)
Q301 Q302
2SC1681(GR)
- Q303 Q304
2SK68(M)

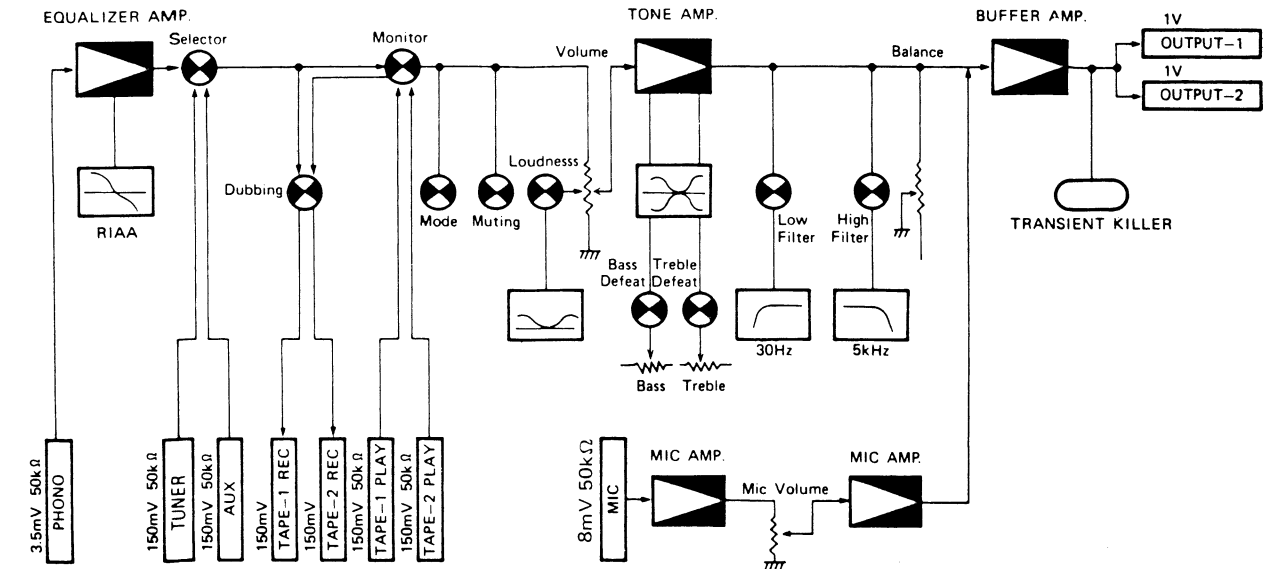
NOTES:
• ALL RESISTORS ARE IN OHMS 1/4WATTS, UNLESS OTHERWISE NOTED.
• ALL CAPACITORS ARE IN μ F 50WV UNLESS OTHERWISE NOTED.
• ELECTROLYTIC CAPACITORS (---) ARE IN μ F/WV.
• VOLTAGE ARE MEASURED WITH DC VOLT-METER (20K Ω /V) (NO INPUT SIGNAL).
• CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

S1	SELECTOR	AUX [PH] TUNER	S7	DEFEAT	[DEFEAT] 400Hz
S2	DUBBING	1 $\rightarrow$ 2 [SOURCE] 2 $\rightarrow$ 1	S8	DEFEAT	[DEFEAT] 2KHz
S3	MONITOR	TAPE-1 [SOURCE] TAPE-2	S9	LOW FILTER	[OFF] 30Hz
S4	MODE	[STEREO] MONO	S10	HIGH FILTER	[OFF] 5KHz
S5	MUTING	[OFF] -20dB	S11	POWER	[ON] OFF
S6	LOUDNESS	[OFF] ON			

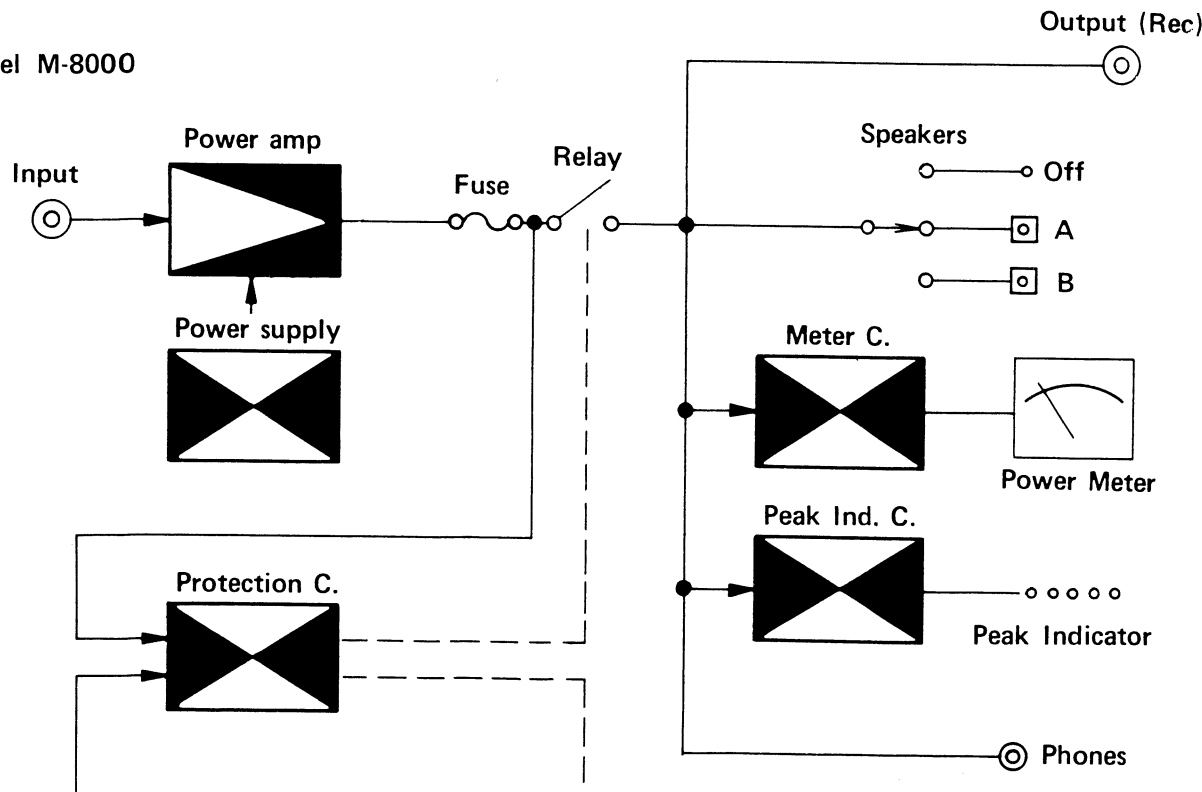
ONKYO CORPORATION

P - 8000	I 8000
VI - 8000	VI 8000

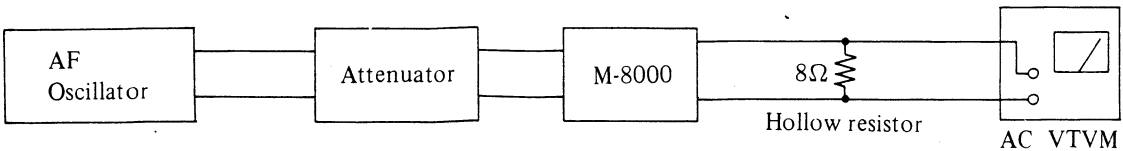
BLOCK DIAGRAM Model P-8000



Model M-8000

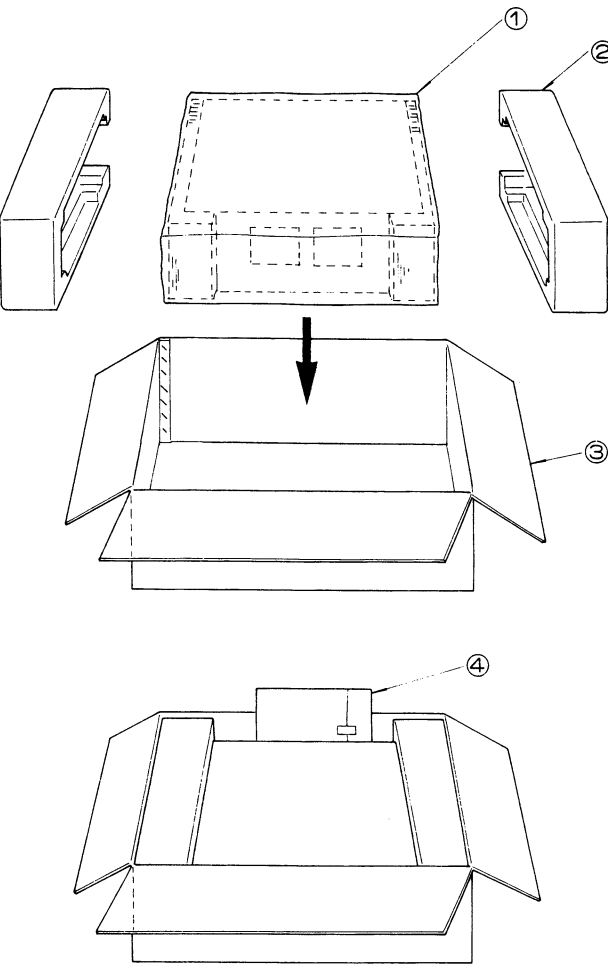


OUTPUT INDICATOR METER ADJUSTMENT



1. Set the AF oscillator to 1 kHz.
2. Adjust the output voltage to 2.8V with the attenuator.
3. Adjust the semi-fixed resistor of R105 (R106) until the VU meter pointer deflects to the 1W mark on the meter.

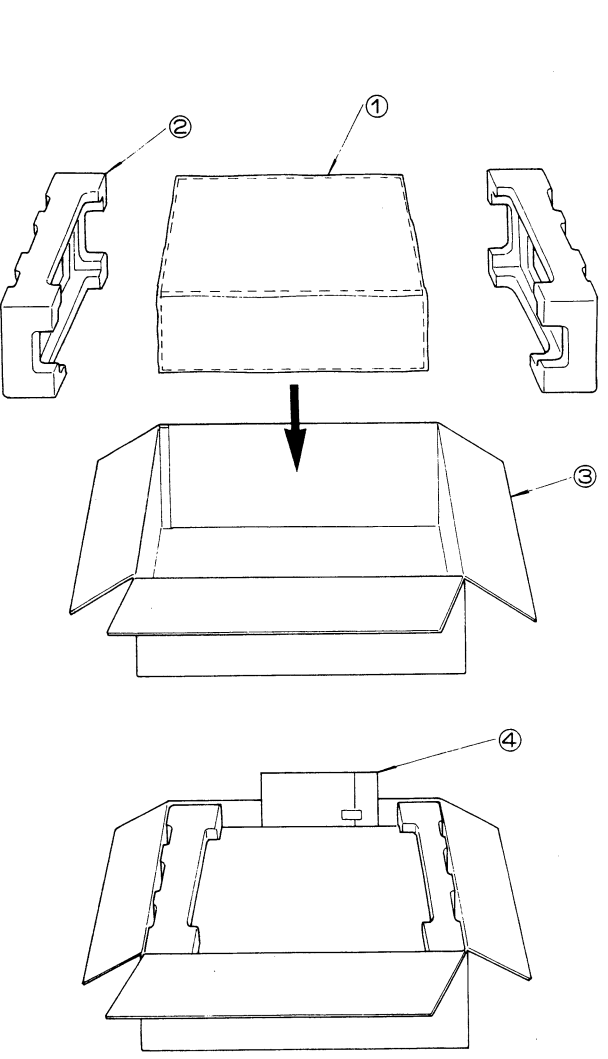
PACKING PROCEDURES Model M-8000



REF. NO.	PARTS NO.	DESCRIPTION
1	29095016	670 x 1,000mm, Protection sheet
2	29090251	Pad
3	29050211	Carton box
4	29100006	350 x 250mm, Poly bag
	29340291-1	Instruction manual
	253074	Connection cord
	29365005-2	Warranty card (G)

Note: (G): Only Germany model

Model P-8000



REF. NO.	PARTS NO.	DESCRIPTION
1	2905016	670 x 1,000mm, Protection sheet
2	29090124A	Pad
3	29050212	Carton box
4	29100005	220 x 330mm, Poly bag
	29340290-1	Instruction manual
	29365005-2	Warranty card (G)

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