

ONKYO® SERVICE MANUAL

INTEGRATED

STEREO AMPLIFIER

MODEL A-06

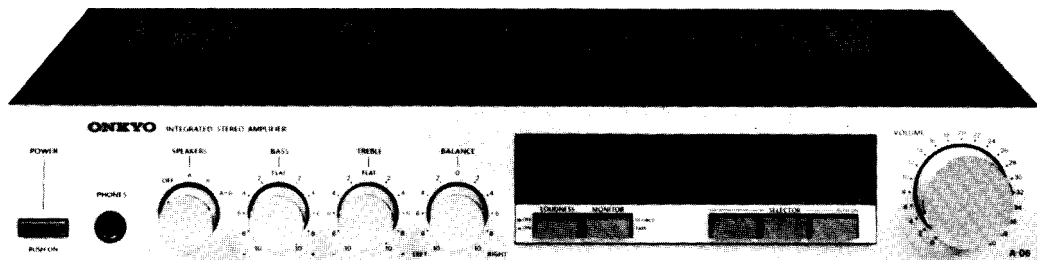


TABLE OF CONTENTS

Item	Page
Specifications	2
Block diagram	2
Precautions	4
Exploded view	5
Component location	6
Printed circuit board view from component side	7
Schematic diagram	9
Printed circuit board — Parts list	11
Packing procedures	12



SPECIFICATIONS

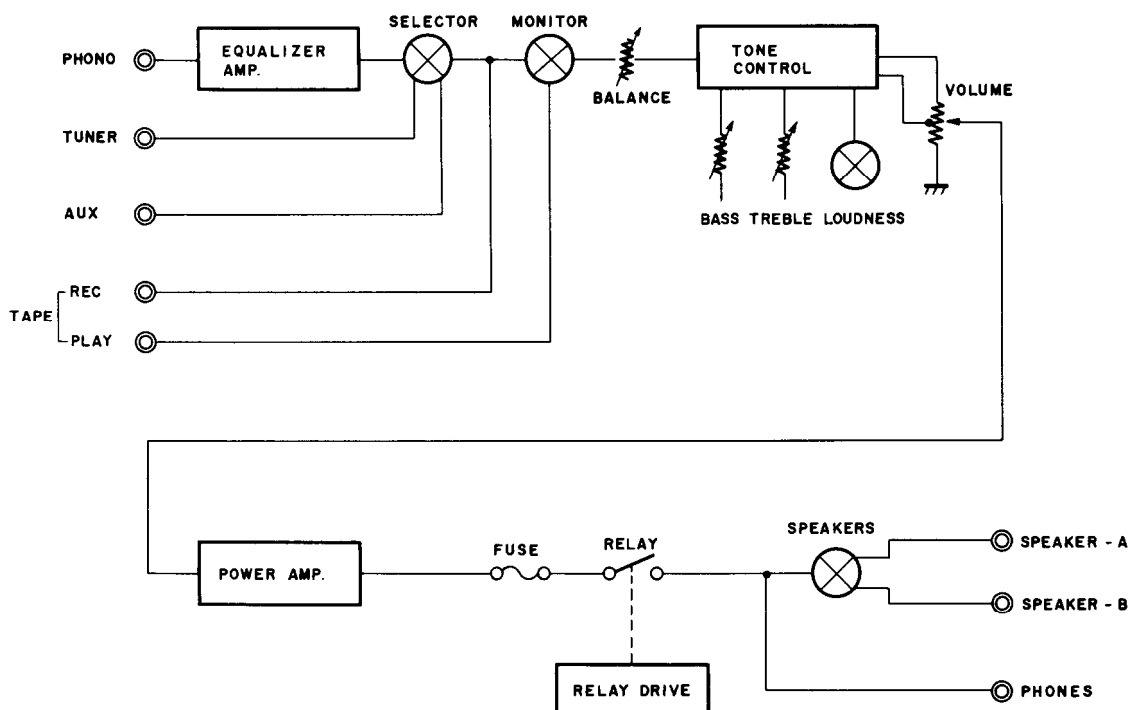
Music Power Output :	2 x 45 watts at 4 ohms, 1 kHz (DIN) 2 x 40 watts at 8 ohms, 1 kHz (DIN)
Continuous Power Output :	2 x 40 watts at 4 ohms, 1 kHz (DIN) 2 x 37 watts at 8 ohms, 1 kHz (DIN) 30 watts per channel min. RMS at 8 ohms both channels driven, from 20 Hz to 20 kHz, with no more than 0.08% THD.
Total Harmonic Distortion :	0.08% at rated power
IM Distortion :	0.08% at rated power
Damping Factor :	40 at 8 ohms.
Frequency Response :	15 — 30,000 Hz, ± 1 dB
Sensitivity and Impedance :	Phono : 2.5mV/50 kohms AUX/Tuner : 150 mV/50 kohms Tape Play : 150 mV/50 kohms Tape Rec : 150 mV/3.5 kohms (Phono)
Phono Overload :	150 mV RMS at 1 kHz, 0.08% THD.
Bass Control :	± 7 dB at 100 Hz
Treble Control :	± 8 dB at 10,000 Hz
Signal to Noise Ratio :	Phono : 75 dB (IHF A-202, 5 mV input, 1 watt output) Tuner & Tape : 80 dB (IHF A-202, 0.5 V input, 1 watt output)
Loudness :	+6 dB at 70 Hz +6 dB at 10 kHz

General

Power Supply :	European model AC 220 V 50 Hz U.S.A and Canadian model AC 120 V 60 Hz British and Australian model AC 240 V 50 Hz Universal model AC 120/220V 50/60Hz
Semiconductors :	2 ICs, 2 transistors, 10 diodes, 5 LEDs
Dimensions :	418(W) x 72(H) x 281(D) mm 16-1/2" x 2-7/8" x 11"
Weight :	5,9 kgs, 13,0 lbs

Specifications and features are subject to change without notice.

BLOCK DIAGRAM



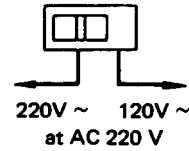
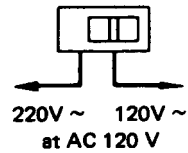
PRECAUTIONS

1. For continued protection against fire hazard, replace only with same type and same rating fuse.

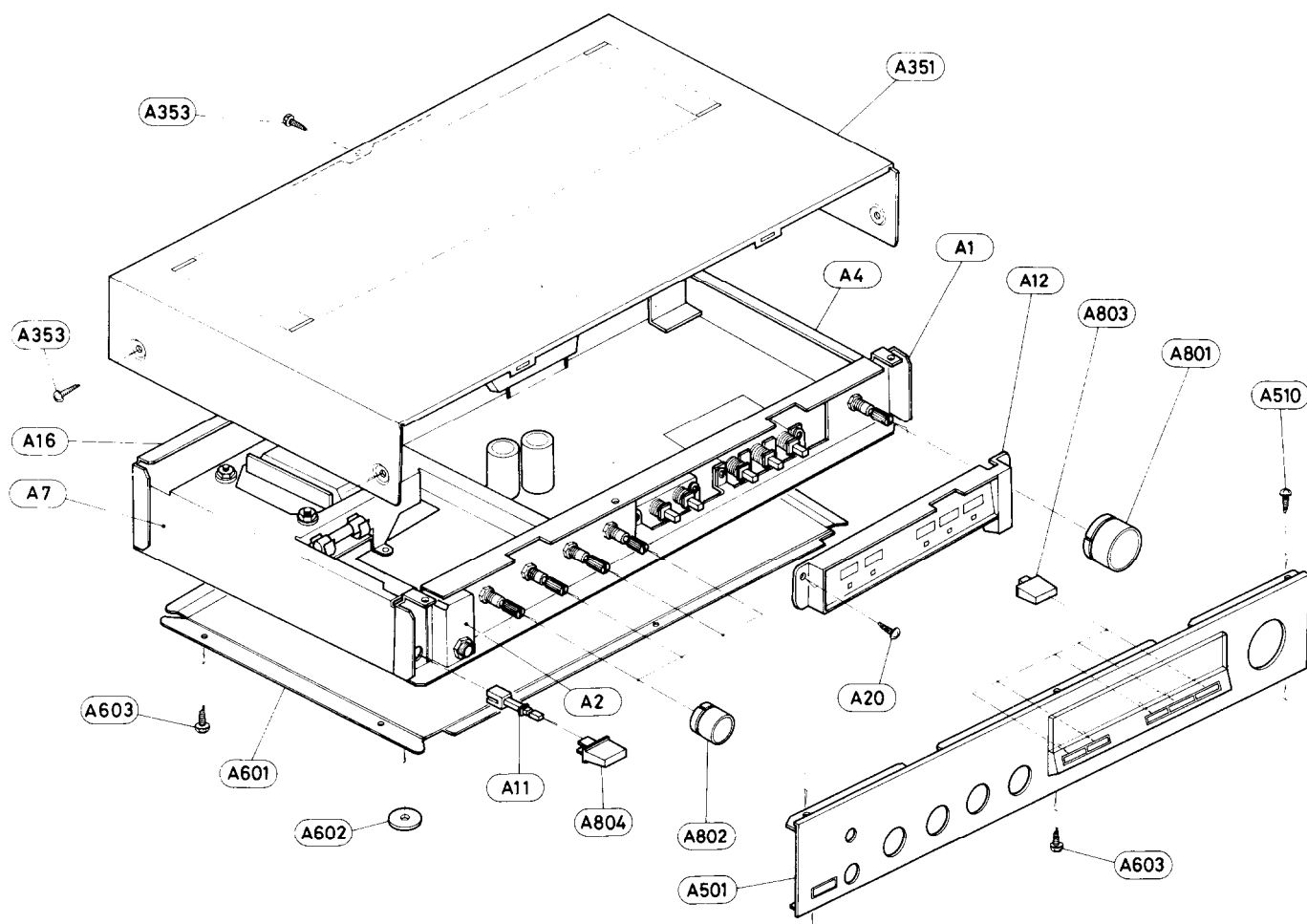
CIRCUIT NO.	PARTS NO.	DESCRIPTION
F901	252048	3A (ST-6), AC fuse (D)
F901	252074	2A-SE-EAK, AC fuse (G)
F901	252002	2A-T, AC fuse (Q)
F901	252003	3A-T, AC fuse (W)
F902	252074	2A-SE-EAK, AC fuse (W)
F501, F601	252006	4A (SS-2), Speaker protection fuse (D)
F501, F601	252014	4A-T, Speaker protection fuse (W/Q)
F501, F601	252076	3.15A-SE-EAK, Speaker protection fuse (G)

2. Voltage Selector (rear panel)

Some models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on. Voltage is changed by sliding the groove in the switch with a screwdriver or similar instrument to the right or left position. Confirm that the switch has been moved all the way to the right or left before turning the power switch on. If there is no voltage selector switch on the unit you have purchased, it can only be used in areas where the power supply voltage is the same as that of the unit.



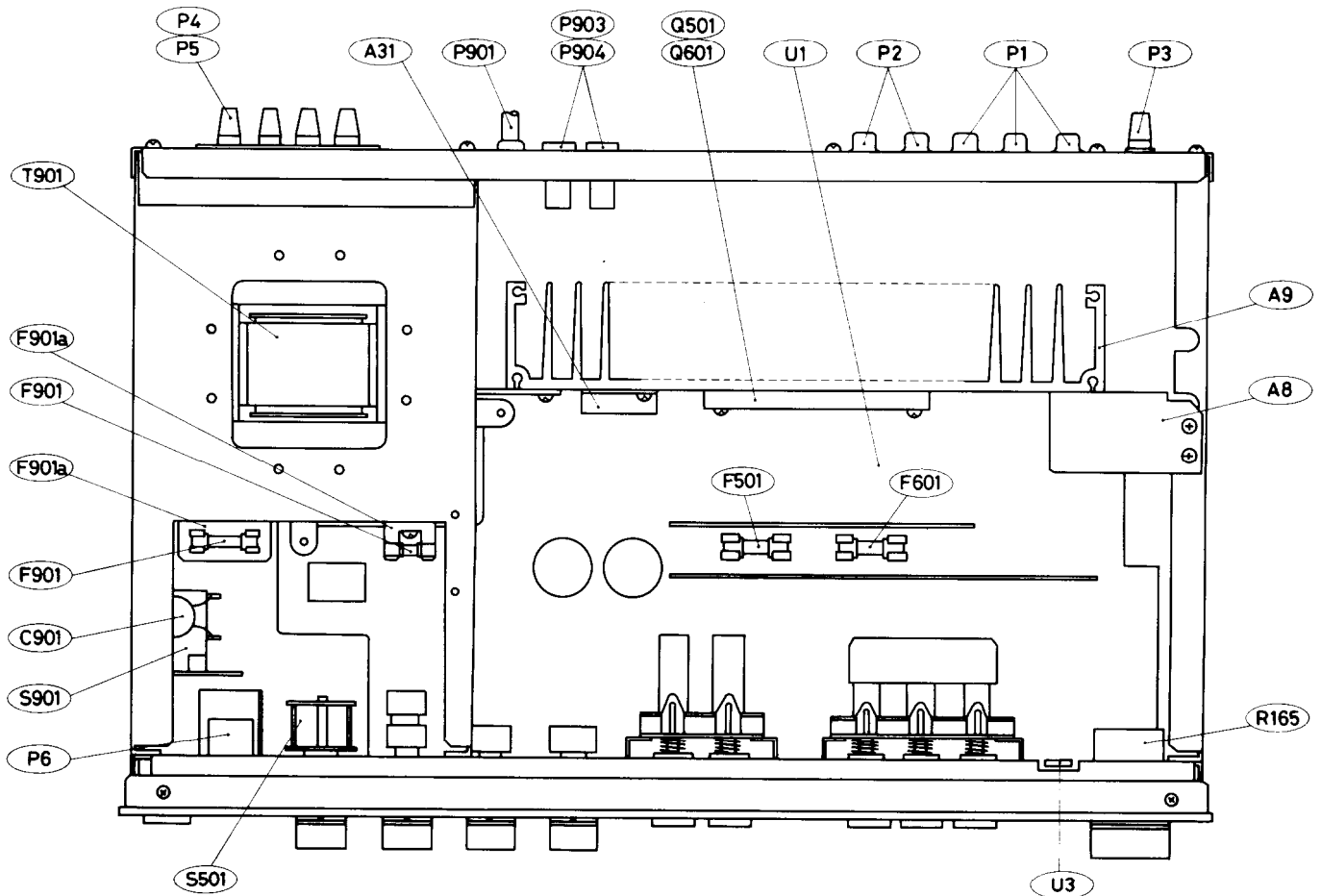
EXPLODED VIEW



PARTS LIST

REF. NO.	PARTS NO.	DESCRIPTION
A1	27110171	Front bracket
A2	27140503	Bracket, headphone
A4	27115045E	Side bracket
A6	27140526	Bracket, switch
A7	27130313	Bracket, power transformer
A8	27140446	Bracket, pc board
A9	27160106	Radiator
A11	27260062	Shaft
A12	12689901	Holder ass'y
A16	27120400	Back panel (D)
	27120401	Back panel (G)
	27120402	Back panel (W)
	27120406	Back panel (Q)
A20	834130088	3TTS + 8B, Tapping screw
A351	28184113	Top cover
A352	28140020	t4x10x40mm, Cushion
A353	834430068	3TTS + 6B(BC), Tapping screw
A501	12448121	Front panel ass'y
A502	28191089	Clear plate
A503	27267121	Guide, selector
A504	27267109	Guide, power
A505	27262110	Plate
A510	834130068	3TTS + 6B, Tapping screw
A601	27170094B	Bottom board
A602	27175011C	Leg
A603	831130068	3TTW + 6B, Tapping screw
A604	834140108	4TTS + 10B, Tapping screw
A801	28320543-1	Knob, volume
A802	28320544-1	Knob, tone
A803	28320572	Knob, selector
A804	28320573	Knob, push
C901	3500065A	0.01 μ F, 400V, Capacitor IS
C901a	27300080	Cover, capacitor
F501, F601	252059	4A(SS-2), Speaker protection fuse (D)
	252076	3.15A-SE-EAK, Speaker protection fuse (G)
	252014	4A-T, Speaker protection fuse (W/Q)
F901	252048	3A(ST-6), Primary fuse (D)
F901	252003	3A-T, Primary fuse (W)
F902	252074	2A-SE-EAK, Primary fuse (W)
F901	252074	2A-SE-EAK, Primary fuse (G)
F901	250002	2A-T, Primary fuse (Q)
F901a	25050082	SN-1152, Fuse holder (D)
F901a	250143	FF-1S4, Fuse holder (W/Q)
	25065096	NPE-073, Fuse holder (G/W)
P001	25045022	NPJ-6PRBL01, Phone/tuner/aux. terminal

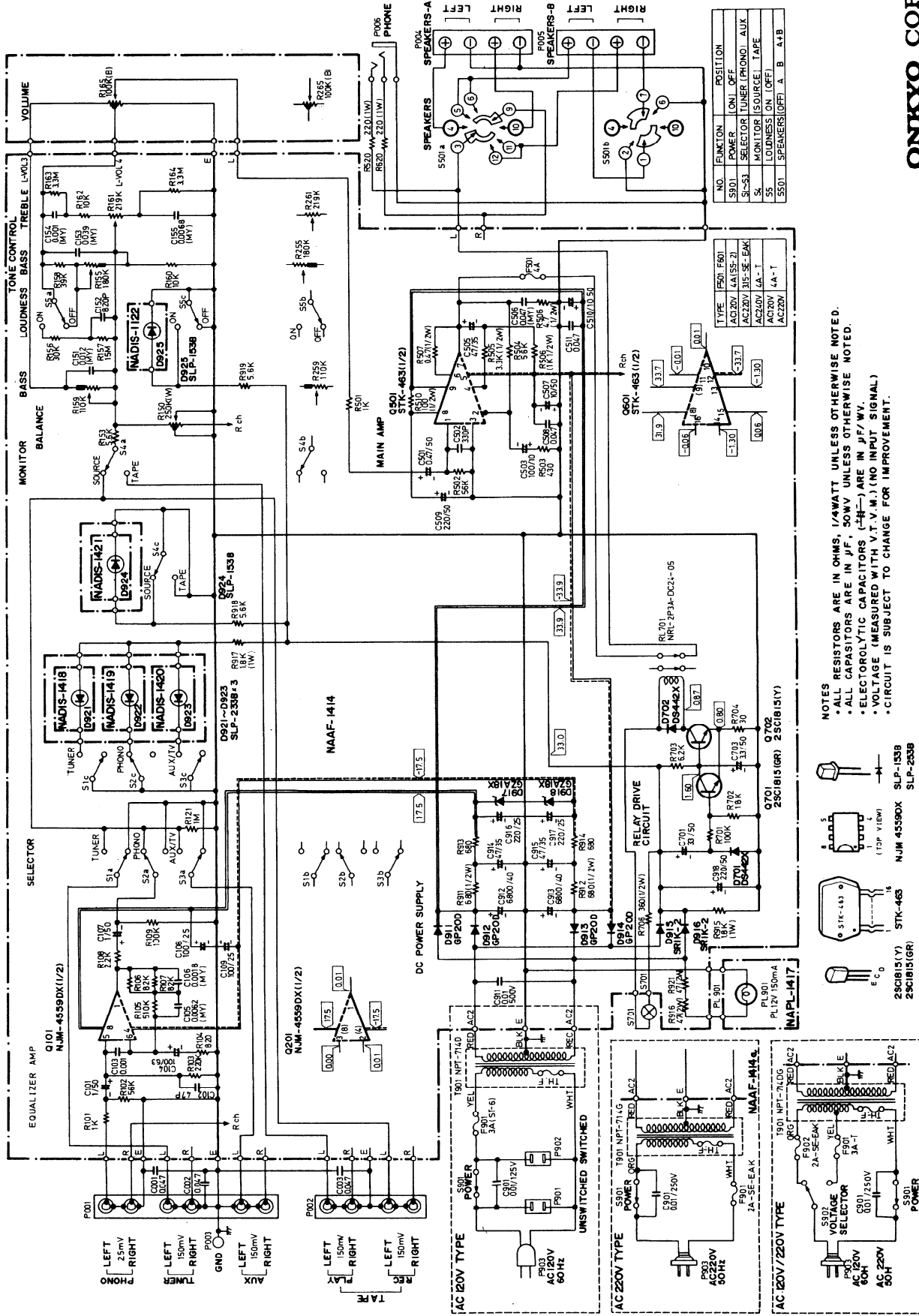
COMPONENT LOCATION



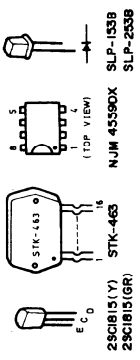
REF. NO.	PARTS NO.	DESCRIPTION			
P002	25045025	NPJ-4PRBL03, Tape input/output terminal	T901	230424-1	NPT-714D, Power transformer (D)
				230425	NPT-714G, Power transformer (G)
P003	25060044	Ground terminal		230426	NPT-714DG, Power transformer (W)
P003a	87613010	W3x10F, Washer		230429	NPT-714Q, Power transformer (Q)
P004, P005	25060038	NTM-4PRMN09, Speaker terminal	U1	12448514	NAAF-1414, Pre., and power amplifier pc board ass'y (D/W/Q)
P006	25045112	HLJ-0109-01-010, Headphone terminal		12454514A	NAAF-1414a, Pre., and power amplifier pc board ass'y (G)
P901	253112	AS-UC-4, Power supply cable (D)		12448517	NAPL-1417, Power indicator pc board ass'y
	253083	AS-CEE, Power supply cable (G/W)	U3	12448517	NAPL-1417, Power indicator pc board ass'y
	253077-1	Power supply cable (Q)	U4	12448518	NADIS-1418, Tuner indicator pc board ass'y
P901a	270280	SR-4K-4, Strainrelief (D/G/W)		12448519	NADIS-1419, Phono indicator pc board ass'y
	27300349	SR-6W-1, Strainrelief (Q)	U4	12448518	NADIS-1418, Tuner indicator pc board ass'y
Q501, Q601	222020	STK-463, Power amplifier IC	U5	12448519	NADIS-1419, Phono indicator pc board ass'y
R165, R265	5147013	N16RG100KBT35, Volume control variable resistor	U5	12448519	NADIS-1419, Phono indicator pc board ass'y
S501	25030197	NRS-144-30F, Speaker selector switch	U6	12448520	NADIS-1420, Aux. indicator pc board ass'y
S701	25065127	1P-105A-100, Thermal switch		12448521	NADIS-1421, Tape indicator pc board ass'y
S901	25035321 or	NPS-111-L285P, or	U7	12448521	NADIS-1421, Tape indicator pc board ass'y
	25035135	NPS-111-L100P, Power switch (D)	U8	12448522	NADIS-1422, Loudness indicator pc board ass'y
	25035322 or	NPS-111-L286P, or			
	25035176	NPS-111-L140, Power switch (G/W)			
	25035136	NPS-121-L101P, Power switch (Q)			
S902	25065123	NSS-1258P, Voltage selector switch (W)			

Note ; D: Only 120V model G: Only 220V model
W: Only 120/220V model Q: Only Australia model

SCHEMATIC DIAGRAM



- NOTES**
- ALL RESISTORS ARE IN OHMS, 1/4WATT UNLESS OTHERWISE NOTED.
 - ALL CAPACITORS ARE IN μ F, 50V UNLESS OTHERWISE NOTED.
 - ELECTROLYTIC CAPACITORS (—E—) ARE IN μ F/WV.
 - VOLTAGE (MEASURED WITH V.T.V.M.) (NO INPUT SIGNAL)
 - CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.



PRINTED CIRCUIT BOARD-PARTS LIST

MAIN, AND TONE AND EQUALIZER AMPLIFIER PC BOARD (NAAF-1414) — PART LIST

CIRCUIT NO. PARTS NO. DESCRIPTION

Q101, Q201

ICs

222534
or 222646

NJM4559DX
or TL4558P-B

Fuseholders

250113 SN-5051
25050065 YSH403T(G)(Q)

Q701
Q702

Transistors

2211255
2211254

2SC1815 (GR)
2SC1815 (Y)

Terminals

27300236
27300237

D701, D702
D911-D914
D915, D916
D917, D918

Diodes

223133
223845F
223804
2241191
or 2241193

DS-442X
GP-20DL
SRIK-2
GZA18X
or GZA18Y

POWER INDICATOR PC BOARD (NAPL-1417)-PARTS LIST

CIRCUIT NO. PARTS NO. DESCRIPTION
210065B PL12V150mA, Lamp

C101, C201
C104, C204
C107, C207
C108, C109
C501, C601
C503, C603
C505, C605
C507, C607
C509
C510
C701
C703
C912, C913
C914, C915
C916, C917
C918

Capacitors

352780109
352721019
35278010
352751019
352784799
352731019
352764709
352781009
352782219
352781009
352783309
352780339
3504170
352764709
352752219
352782219

1 μ F, 50V, Elect
100 μ F, 6.3V, Elect
1 μ F, 50V, Elect
100 μ F, 25V, Elect
0.47 μ F, 50V, Elect
100 μ F, 10V, Elect
47 μ F, 35V, Elect
10 μ F, 50V, Elect
220 μ F, 50V, Elect
10 μ F, 50V, Elect
33 μ F, 50V, Elect
3.3 μ F, 50V, Elect
6800 μ F, 40V, Elect
47 μ F, 35V, Elect
220 μ F, 25V, Elect
220 μ F, 50V, Elect

TUNER INDICATOR PC BOARD (NADIS-1418)-PARTS LIST

CIRCUIT NO. PARTS NO. DESCRIPTION
225085 SLP-253B, LED

PHONO INDICATOR PC BOARD (NADIS-1419)-PARTS LIST

CIRCUIT NO. PARTS NO. DESCRIPTION
225085 SLP-253B, LED

AUX. INDICATOR PC BOARD (NADIS-1420)-PARTS LIST

CIRCUIT NO. PARTS NO. DESCRIPTION
225085 SLP-253B, LED

TAPE INDICATOR PC BOARD (NADIS-1421)-PARTS LIST

CIRCUIT NO. PARTS NO. DESCRIPTION
225084 SLP-153B, LED

LOUDNESS INDICATOR PC BOARD (NADIS-1422)-PARTS LIST

CIRCUIT NO. PARTS NO. DESCRIPTION
225084 SLP-153B, LED

R150

Resistors

5146034

N16RLC250KWT30
Variable, Balance control

R155, R159
R255, R259
R161, R261

5148073
5148074

N16RQMC110K180K30
Variable, Bass control
N16RGMC219K30
Variable, Treble control

R505, R605
R506, R606
R507, R607
R508, R608
R510
R706
R911, R912
R915, R917
R916, R921

441523324
441521024
441624794
441520474
441521014
441523614
441526814
441621824
441724704

3.3k Ω , 1/2W, Metal oxide film
1k Ω , 1/2W, Metal oxide film
0.47 Ω , 1W, Metal oxide film
4.7 Ω , 1/2W, Metal oxide film
100 Ω , 1/2W, Metal oxide film
360 Ω , 1/2W, Metal oxide film
680 Ω , 1/2W, Metal oxide film
1.8k Ω , 1W, Metal oxide film
47 Ω , 2W, Metal oxide film

RL701

Relay

25065108

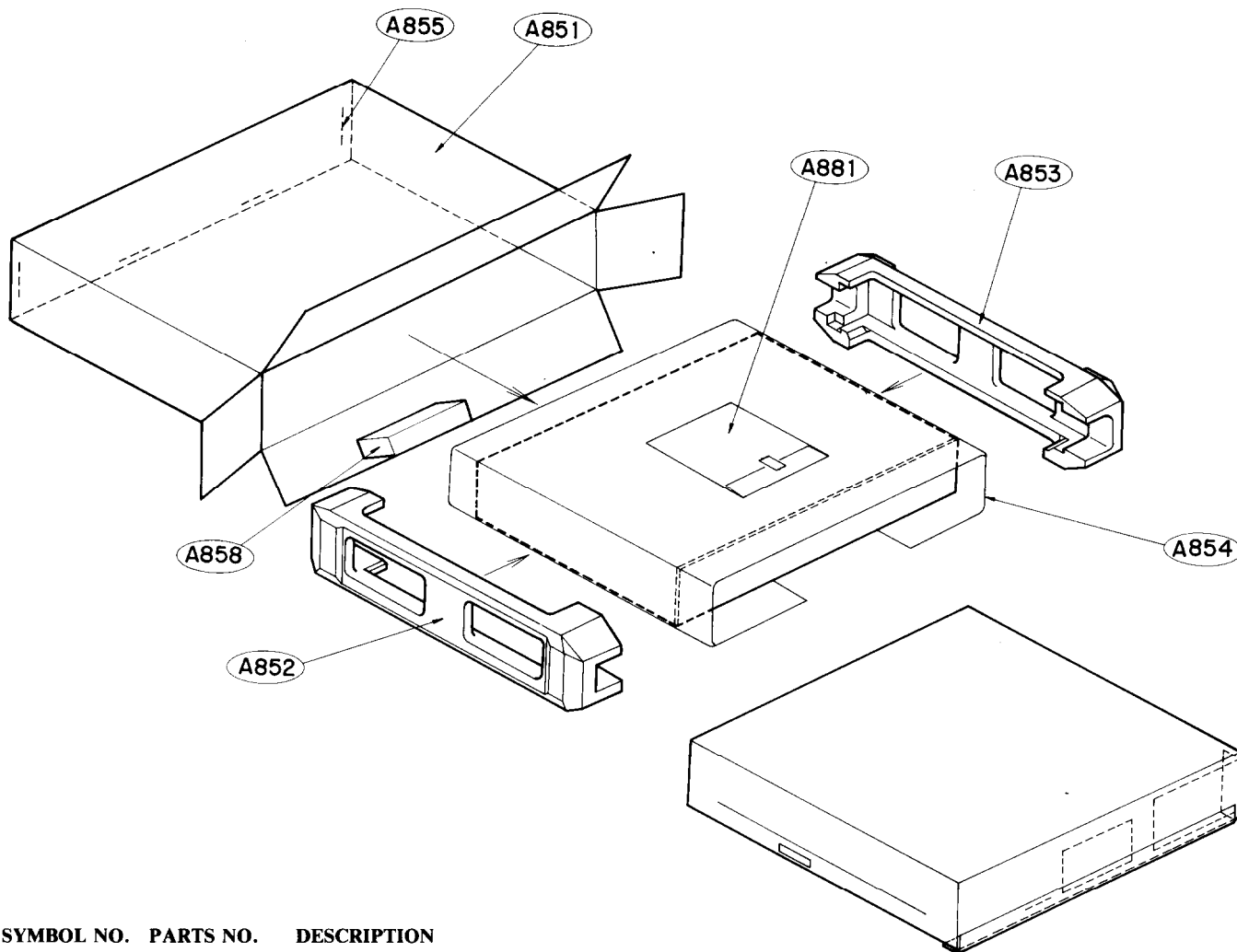
NRL-2P3A-DC24-05, Speaker

S1—S3
S4, S5

25035258
25035259

NPS-342-L222, Selector
NPS-242-L223, Tape
monitor/Loudness

PACKING PROCEDURES



SYMBOL NO.	PARTS NO.	DESCRIPTION	
A851	29050562	Master carton box	
A852	29090532A	Pad, left	
A853	29090533C	Pad, right	
A854	29100051	420x750mm, Poly bag	
A855	282301	Sealing hook	
A856	260012	W = 50mm, Damplon tape	
A858	29090617	Pad	
	29360566	Label C(U)	
	29360567	Label (U)	
A881		Accessory bag ass'y	
	29340613	Instruction manual(D)(U)	Note
	29340614	Instruction manual(W)(G)(V)(Q)	(U) : Only U.S.A. model
	29365006-3	Warranty card(U)	(V) : Only West Germany
	29365005-3	Warranty card(V)	(D) : Only 120V model
	29358002	Service station list(U)	(G) : Only 220V model
	25055040	Conversion plug(W)	(W) : Only 120V/220V model
	29100006	350 x 250mm, Poly bag	(Q) : Only 240V model

ONKYO CORPORATION

International Division : No. 24 Mori Bldg., 23-5, 3-chome, Nishi-Shinbashi, Minato-ku, Tokyo, Japan
 Telex : 2423551 ONKYO J. Phone : 03-432-6981

ONKYO U.S.A. CORPORATION

Eastern Office : 200 Williams Drive, Ramsey, N.J. 07446 Tel. 201-825-7950
 Midwest Office : 2406 Martin Lane Rolling Meadows, Ill 60008 Tel. 312-577-4300
 Western Office : 8607 Canoga Ave., Canoga Park, CA, 91304 Tel. 213-341-8114

ONKYO DEUTSCHLAND GMBH, ELECTRONICS

8034 München-Germering. Industriestrasse 18, West Germany. Telex: 521726 Telefon: (089)-84-3071