

ONKYO SERVICE MANUAL

STEREO GRAPHIC EQUALIZER

MODEL PE-33

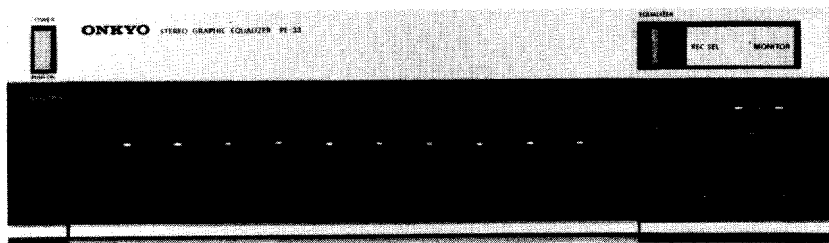


TABLE OF CONTENTS

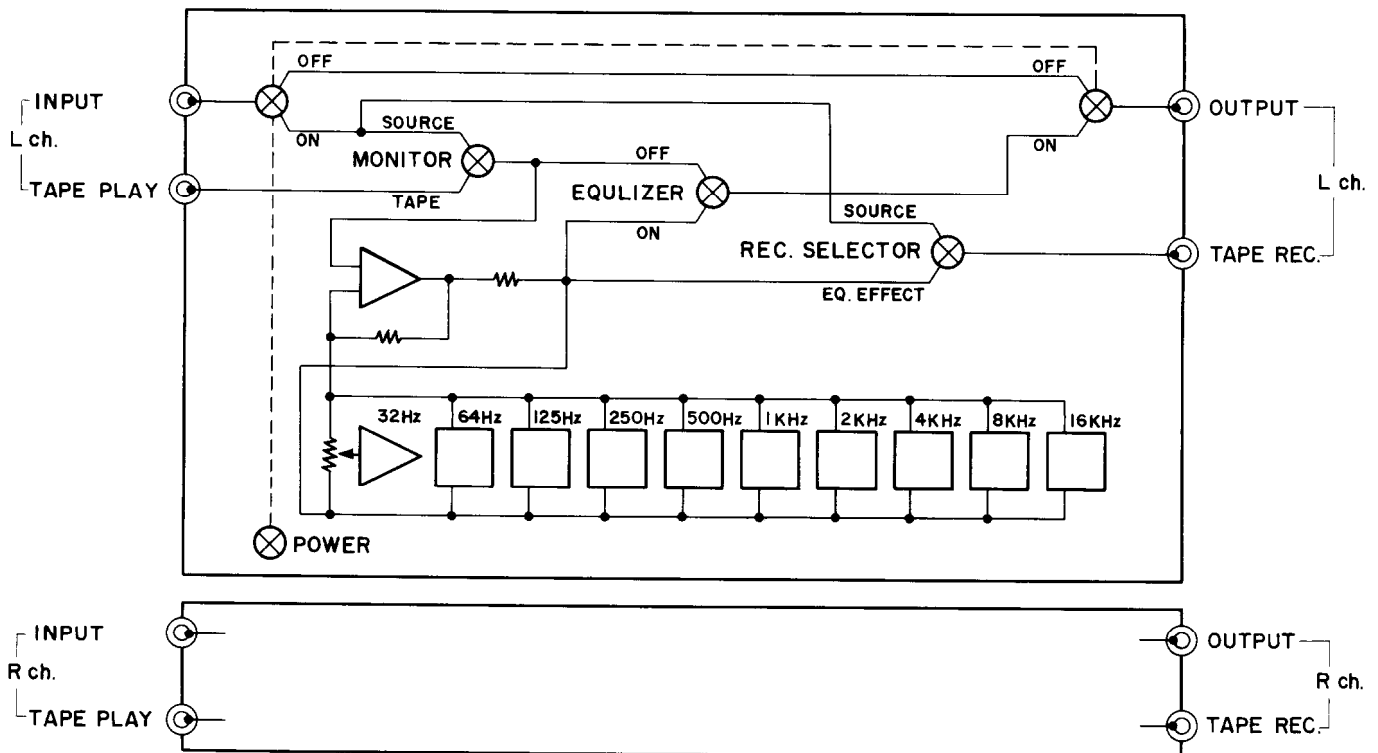
Item	Page
Specifications	2
Block diagram	2
Precaution	3
Exploded view	4
Component location	5
Printed circuit board view from component side	6
Schematic diagram	9
Printed circuit board-parts	11
Packing procedures	12

ONKYO
AUDIO COMPONENTS

SPECIFICATIONS

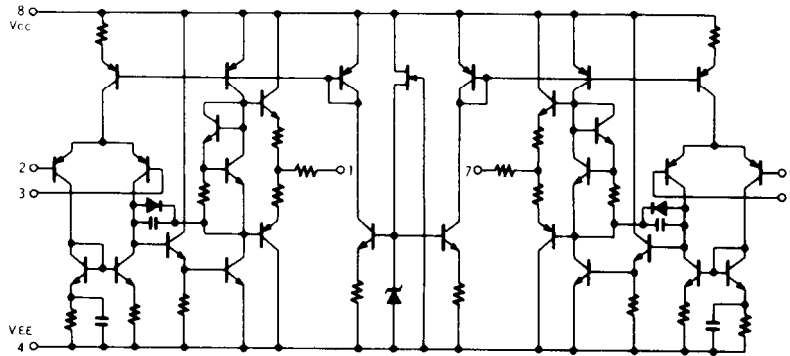
Input:	Input sensitivity (FLAT): 150 mV Input impedance: 50 kohms
Output:	Output voltage (FLAT): 150 mV Output impedance: 3.0 kohms
Max. input:	5 volts, 20 Hz – 20 kHz, 0.05% THD
Frequency response:	+0, –0.5 dB at 10 Hz – 50 kHz
Total harmonic distortion:	Less than 0.01% at 20 Hz – 20 kHz, 1.5 V output (FLAT)
Signal-to-noise ratio:	100 dB, 1.5V output, IHF-A input short
Adjustable range:	± 12 dB
Gain:	0 dB
Semiconductors:	13 ICs, 30 diodes, 6 Transistors
AC outlet:	200 watts (UNSWITCHED) (USA, Canada Model only)
Power supply:	AC 120V, 60 Hz (USA, Canada) AC 240V, 50 Hz (Australia, U.K.) AC 120V/220V, 50/60 Hz (Europe, others)
Dimensions (W x H x D):	330 x 101 x 233 mm
Weight:	2.6 kg (5.7 lbs.)

BLOCK DIAGRAM

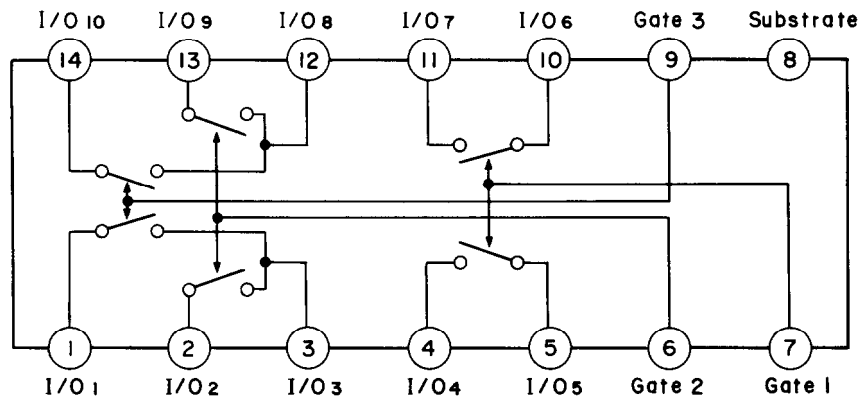


IC BLOCK DIAGRAM

NJM4558, NJM4559



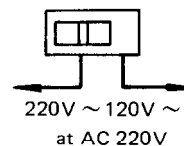
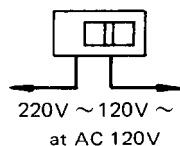
CX770A



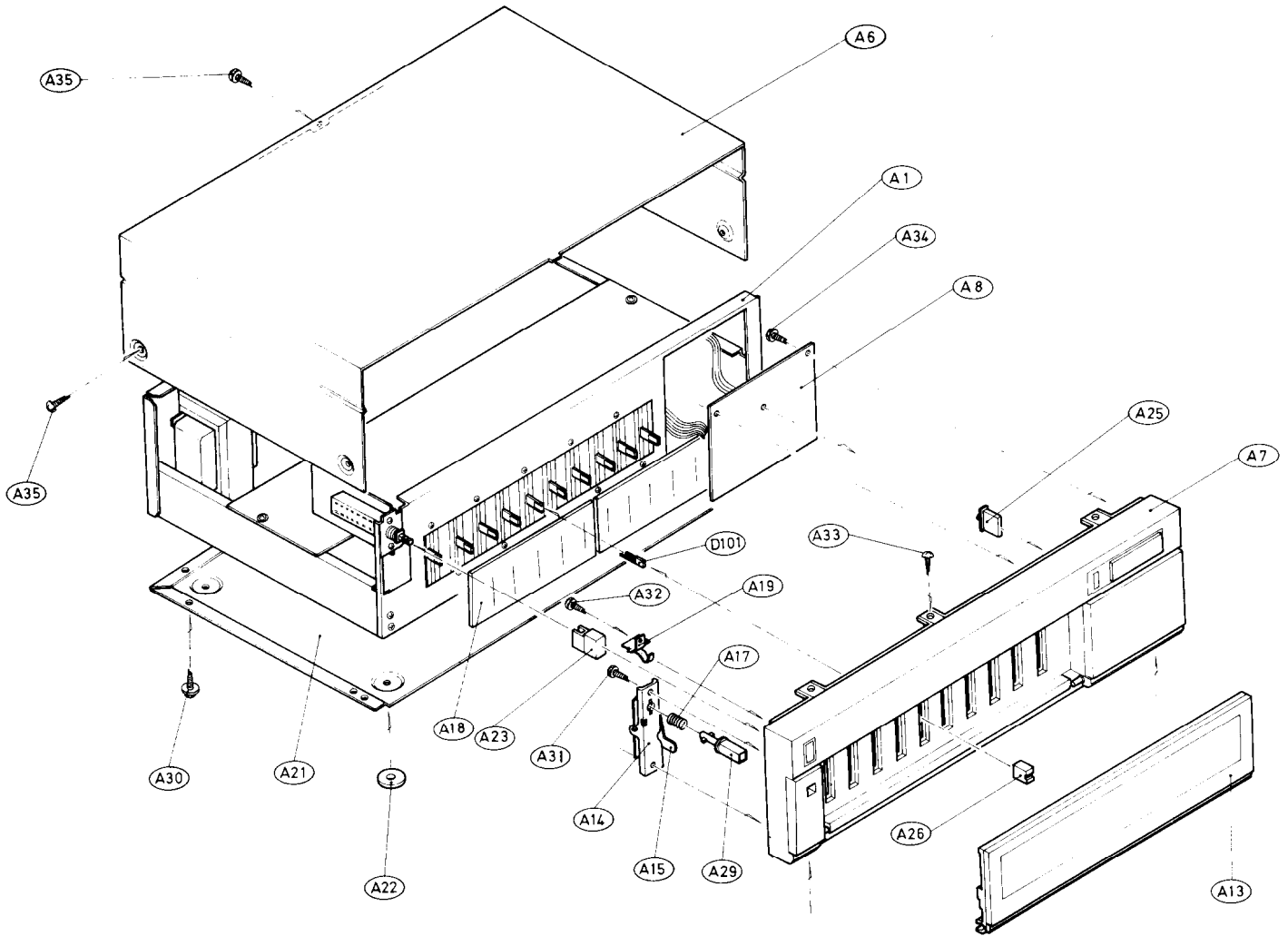
PRECAUTION

1. 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.



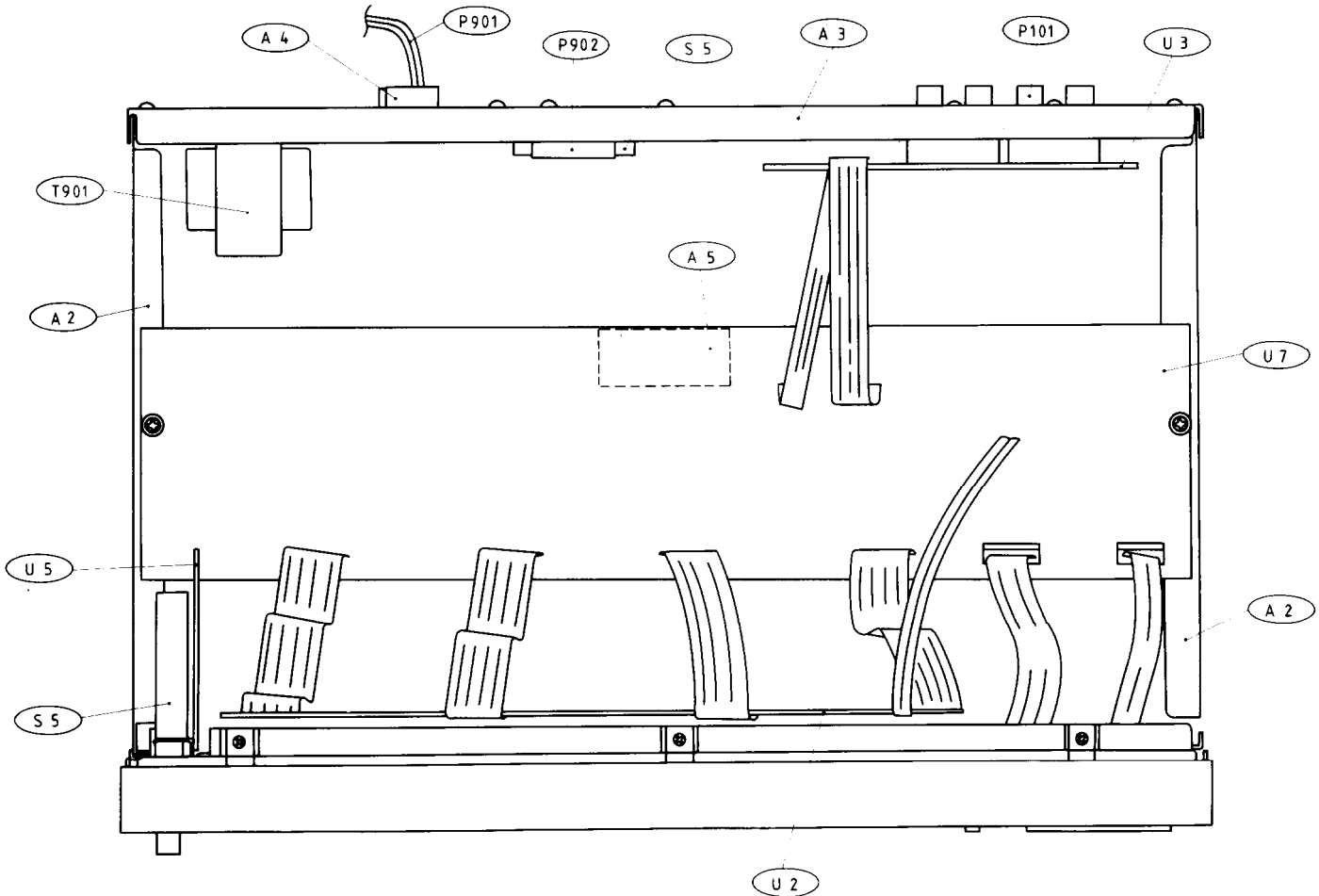
EXPLODED VIEW



REF. NO.	PARTS NO.	DESCRIPTION
A1	27110168	Front bracket
A2	27115117	Side bracket
A3	27120433	Back panel (W)
	27120434	Back panel (Q)
A4	28190008	Strainrelief (W)
	28190009	Strainrelief (Q)
A5	28140443	Cushion
A6	28184135	Top cover
A7	19820121	Front panel ass'y
A8	28130149	Dial plate
A13	19967901	Door ass'y
A14	27140624	Bracket

REF. NO.	PARTS NO.	DESCRIPTION
A15	27140625A	Bracket
A16	27180113	Spring
A17	27180021	Spring
A18	28140416	Cushion
A19	27140665	Bracket
A21	27170120A	Bottom board
A22	27175011C	Leg
A23	28320732	Knob, Power switch
A25	28320739	Knob, Equalizer
A26	28320788	Knob ass'y
A29	28320733	Knob, Door
A30	831130068	3TTW+6B, Tapping screw

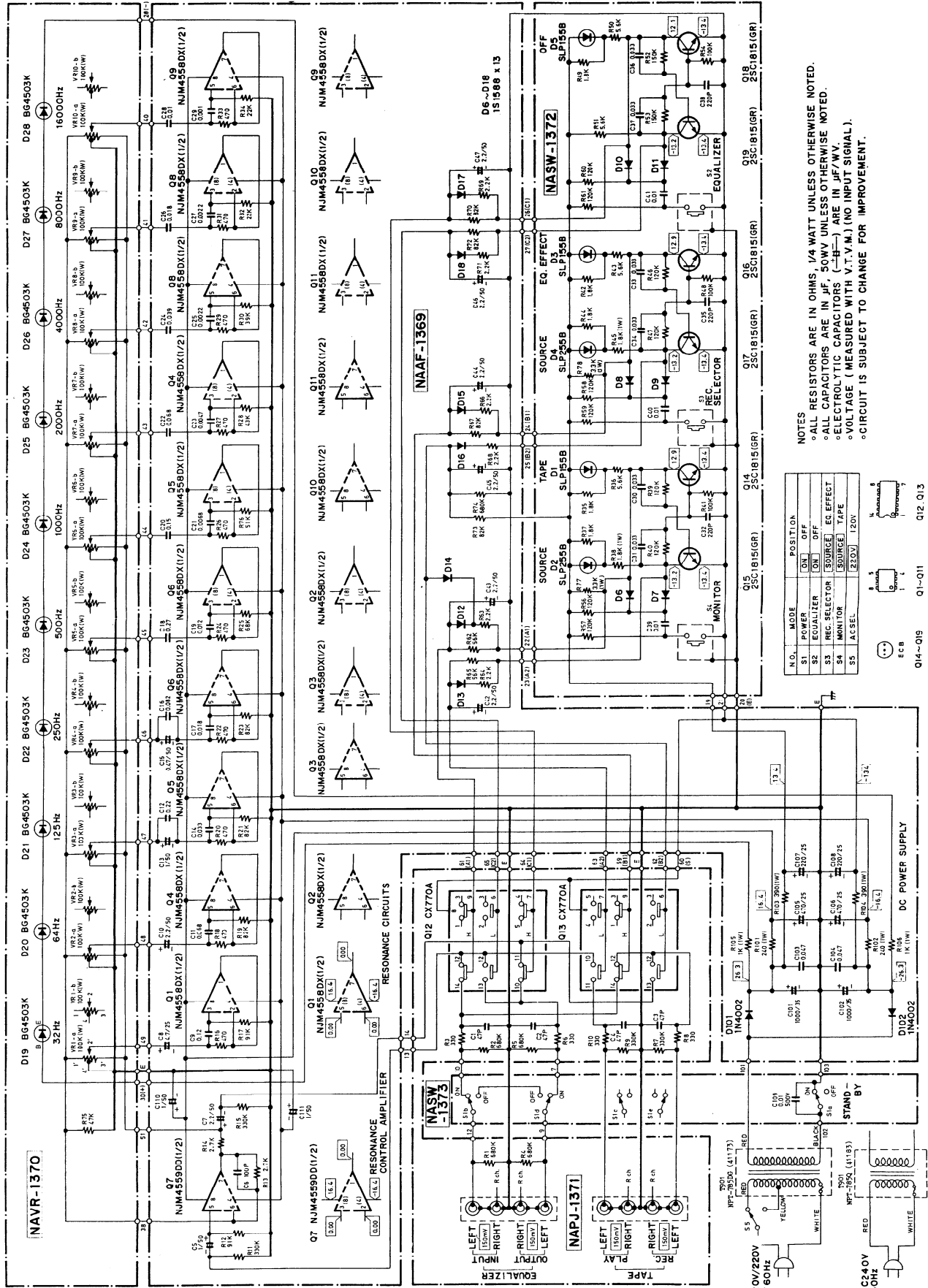
COMPONENT LOCATION



REF. NO.	PARTS NO.	DESCRIPTION	REF. NO.	PARTS NO.	DESCRIPTION
A31	833130080	3TTP+8P, Tapping screw	T901	230629	NPT-785DG, Power transformer (W)
A32	833126060	2.6TTP+6P, Tapping screw		230631	NPT-785Q, Power transformer (Q)
A33	834130068	3TTS+6B, Tapping screw	D101	225118	4503K-5, LED
A34	834126088	2.6TTS+8B, Tapping screw	U1	19967569	NAAF-1369, Main pc board ass'y
A35	834430068	3TTS+6B (BC), Tapping screw	U2	19967570	NAVR-1370, Level control pc board ass'y
S5	25065195	NSS-1288P, Voltage selector switch (W)	U3	19967571	NAPJ-1371, Input/Output pc board ass'y
P101	25045108	NPJ-4PDBL47, Input/Output terminal	U4	19967572	NASWL-1372, Switch control circuit pc board ass'y
P901	253083	AS-CEE, Power supply cable (W)	U5	19967573	NASW-1373, Stand-by switch pc board ass'y
P902	253077-1	Power supply cable (Q)			
	25060055	NTM-2PMN22, Terminal			

NOTE (W) : Only 120V/220V model
(Q) : Only Australia model

SCHEMATIC DIAGRAM



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

N.O.	MODE	POSITION
S1	POWER	ON OFF
S2	EQUALIZER	ON OFF
S3	REC. SELECTOR	[SOURCE] [EQ EFFECT]
S4	MONITOR	[SOURCE] TAPE
S5	AC SEL.	230V 120V

Q14-Q15
 Q14-015
 Q1-Q11
 Q12-Q13

PRINTED CIRCUIT BOARD-PARTS LIST

MAIN PC BOARD (NAAF-1369)-PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	ICs	
Q1-Q6	222502	NJM4558DX
Q8-Q11		
Q7	222534	NJM4559DX (NJM4559DD)
	Diodes	
D12-D18	223119	1S1588
D101, D102	223804	SR1K-2 (IN4002)
	Capacitors	
C5, C13, C110	352780109	1 μ F, 50V, Elect.
C111, C205, C213		
C7, C10, C207	352780229	2.2 μ F, 50V, Elect.
C42-C47, C210		
C8, C208	352750479	4.7 μ F, 25V, Elect.
C15, C215	352784799	0.47 μ F, 50V, Elect.
C101, C102	352761029	1000 μ F, 35V, Elect.
C105, C106	352754719	470 μ F, 25V, Elect.
C107, C108	352752219	220 μ F, 25V, Elect.
	Resistors	
R77, R78	441623324	3.3k Ω , 1W, Metal oxide film
R103, R104	441623914	390 Ω , 1W, Metal oxide film
R101, R102	441622414	240 Ω , 1W, Metal oxide film
R105, R106	441621024	1k Ω , 1W, Metal oxide film
	Socket	
	25050125	NSCT-6P28, Socket
	25050126	NSCT-3P29, Socket

LEVEL CONTROL PC BOARD (NAVR-1370)-PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
VR1-VR10	6142010	N30LGPC100KWTP15F, Slide variable resistor
D19-D28	225118	BG-4503K-5, LED

INPUT/OUTPUT PC BOARD (NAPJ-1371)-PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
Q12, Q13	222672	CX-770, IC
P101	25045108	NPJ-4PDBL47, Input/Output terminal

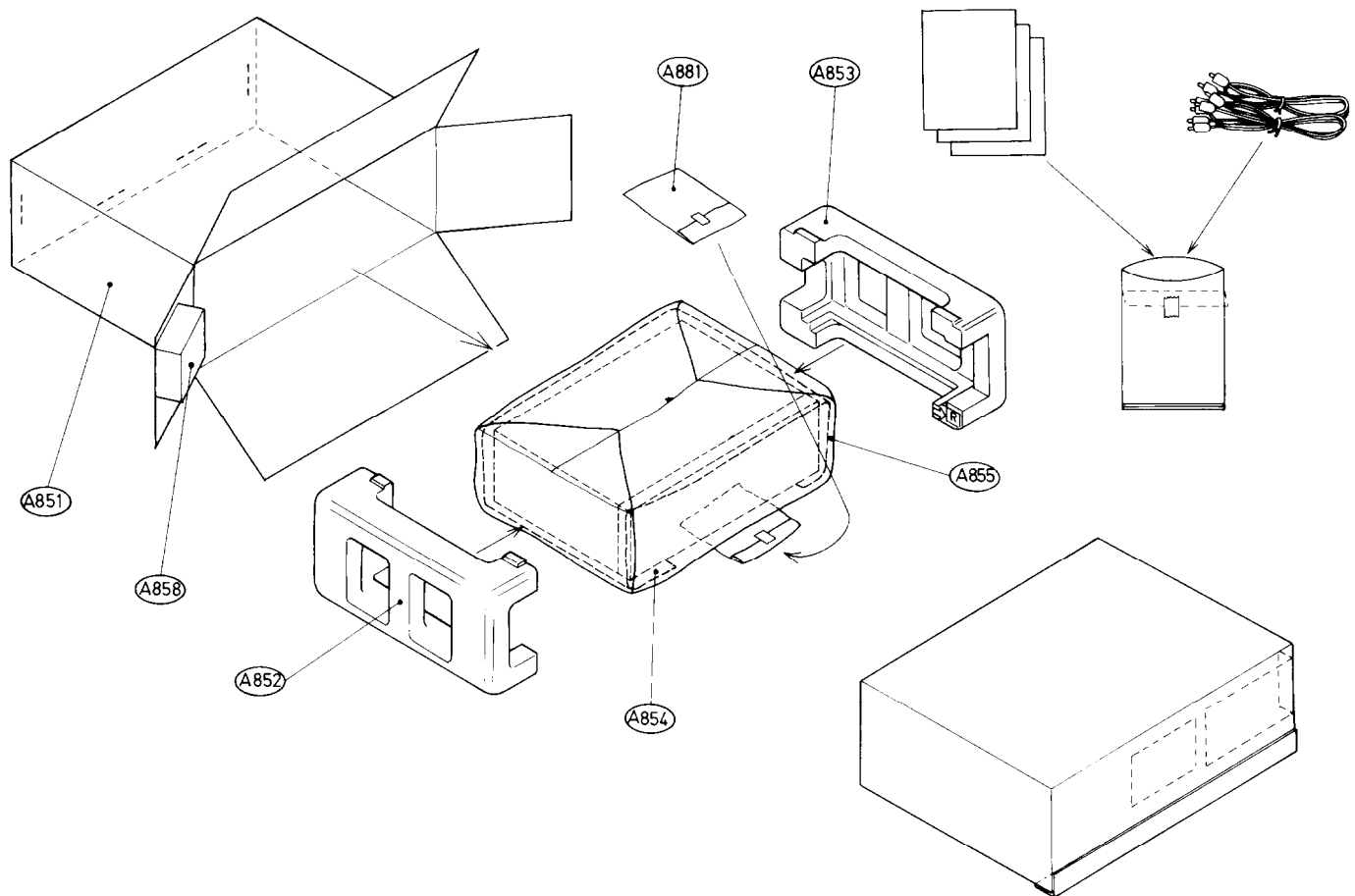
SWITCH CONTROL CIRCUIT PC BOARD (NASWL-1372)-PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
Q14-Q19	2211255	2SC1815 (GR), Transistor
D1, D5, D3	225082	SLP-155B, LED
D2, D4		
D6-D11	223119	1S1588, Diodes
R38, R45	441621824	1.8k Ω , 1W, Metal oxide film
S2-S4	35035291	NPS-111-S257, Equalizer/Rec. selector/Monitor switch

STAND-BY SWITCH PC BOARD (NASW-1373)-PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
S1	25035317	NPS-162-L281, Stand-by switch

PACKING PROCEDURES



SYMBOL NO.	PARTS NO.	DESCRIPTION
A851	29050581	Master carton box
A852	29090666	Pad, left
A853	29090667	Pad, right
A854	29095114-1	Protection sheet
A855	29100064	400x600mm, Poly bag
A858	29090679	Pad

SYMBOL NO.	PARTS NO.	DESCRIPTION
A881		Accessory bag ass'y
	29340634	Instruction manual
	2010034	Connection cable
	29365005-3	Warranty card (V)
	25055040	CV-K-2, Conversion plug (W)

NOTE (V) : Only West Germany model
(W) : Only 120V/220V 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