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# ONKYO® SERVICE MANUAL

## Integrated Stereo Amplifier MODEL A-8037

### Silver and Black models

UDN, UD	120V AC, 60Hz
UG	220V AC, 50Hz
UW	120V or 220V AC, 50/60Hz

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

### TABLE OF CONTENTS

Item	Page
Specifications	2
Block diagram	3
Precautions	4
Exploded view parts list	4
Exploded view	5
Printed circuit board parts list	6
Front panel facilities	8
System connections	8
Packing procedures	9
IC block diagram	10
Schematic diagram	11, 15
Printed circuit board view	13, 17

**ONKYO®**  
**AUDIO COMPONENTS**

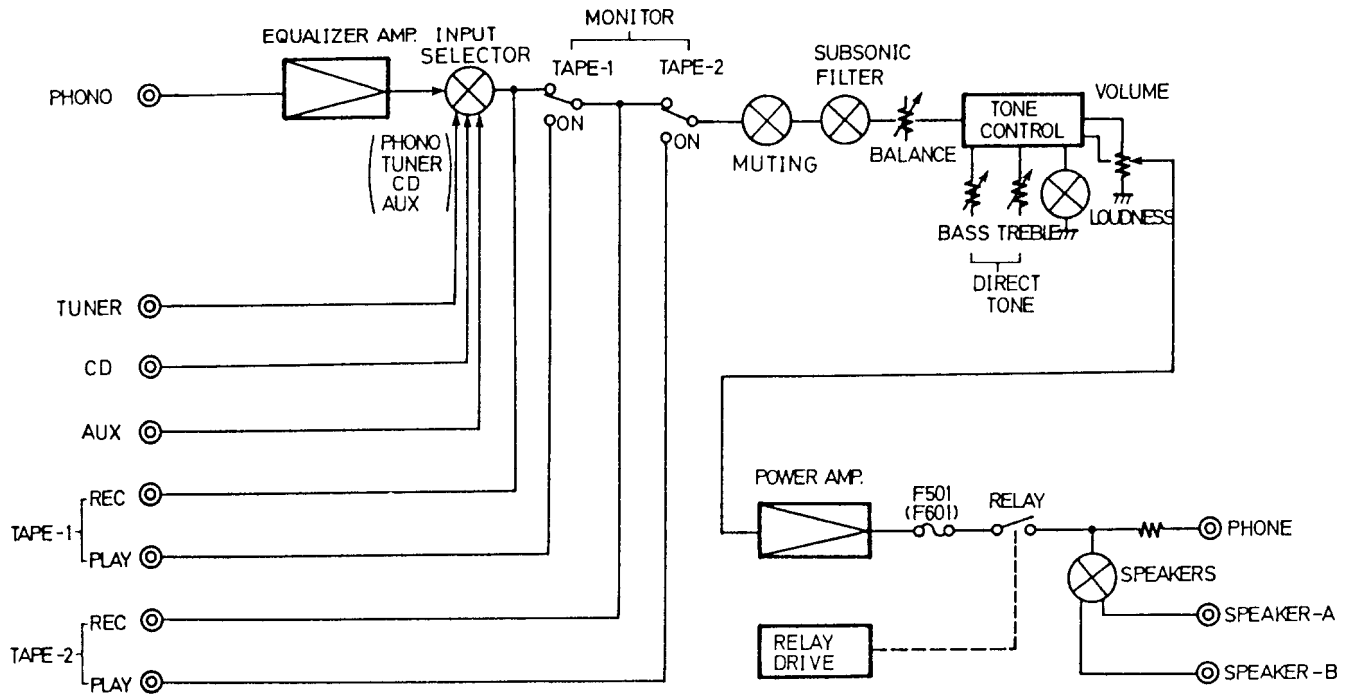
## SPECIFICATIONS

Power Output:	50 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.06% THD.
Total Harmonic Distortion:	0.06% at 50 watts
IM Distortion:	0.06% at 50 watts
Damping Factor:	40 at 8 ohms
Frequency Response:	15 – 30,000Hz $\pm$ 1dB
Sensitivity and Impedance:	Phono: 2.5mV/50 kohms Tuner/CD/AUX: 150mV/50 kohms Tape Play: 150mV/50 kohms Tape Rec: 150mV/3.5 kohms (phono)
Phono Overload:	150mV RMS at 1kHz, 0.06% THD
Bass Control:	$\pm$ 7dB at 100Hz
Treble Control:	$\pm$ 8dB at 10,000Hz
Signal to Noise Ratio:	Phono: 75dB (IHF A-202, 5mV input, 1 watt output) Tuner & Tape: 80dB (IHF A-202, 0.5V input, 1 watt output)
Loudness Control:	+6dB at 70Hz/+5dB at 10kHz
Subsonic Filter:	15Hz (6dB/Octave)
<b>General</b>	
Power Supply:	AC 120V, 60Hz (D model) AC 220V, 50Hz (G model) AC 120V or 220V 50/60Hz (W model)
Semiconductors:	IC: 2 TR: 2 Diode: 13 LEDs: 6
Dimensions:	435 (W) $\times$ 112 (H) $\times$ 278 (D)mm 17-1/8" $\times$ 4-7/16" $\times$ 10-15/16"
Weight:	6.6kg. (14.5lbs.)

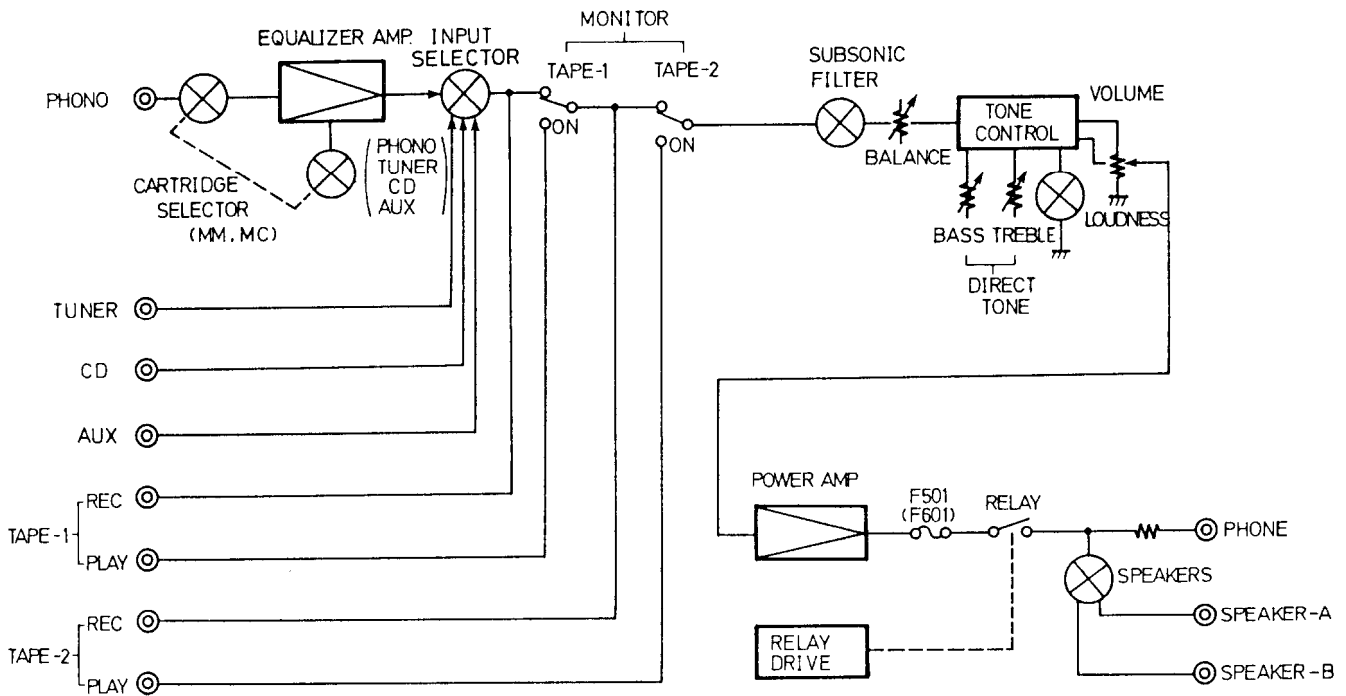
Specifications and features are subject to change without notice.

# BLOCK DIAGRAM

120V, 120V/220V Model



220V Model



# PRECAUTIONS

## 1. Replacing the fuses

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

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252049	4A (ST-6), Primary fuse (120V model, 120V/220V model)
F902	252074	2A-SE-EAK, Primary fuse (220V model, 120V/220V model)
F905, F906	252078	5A-SE-EAK, Secondary fuse (220V model)
F501, F601	252059	4A (SS-2), Speaker fuse (120V model, 120V/220V model)
	252077	4A-SE-EAK, Speaker fuse (220V model)

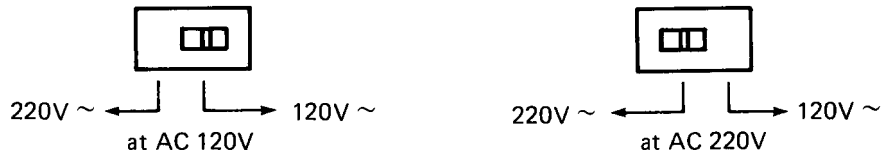
## 3. Insulation resistance measurement (Only U.S.A. model)

Connect the insulating-resistance tester between the plug of power supply cable and the terminal GND on the back panel.

Specification; More than 10MΩ at 500V

## 4. Voltage selector (rear panel)

Worldwide 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 up or down position. Confirm that the switch has been moved all the way to the up or down 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.



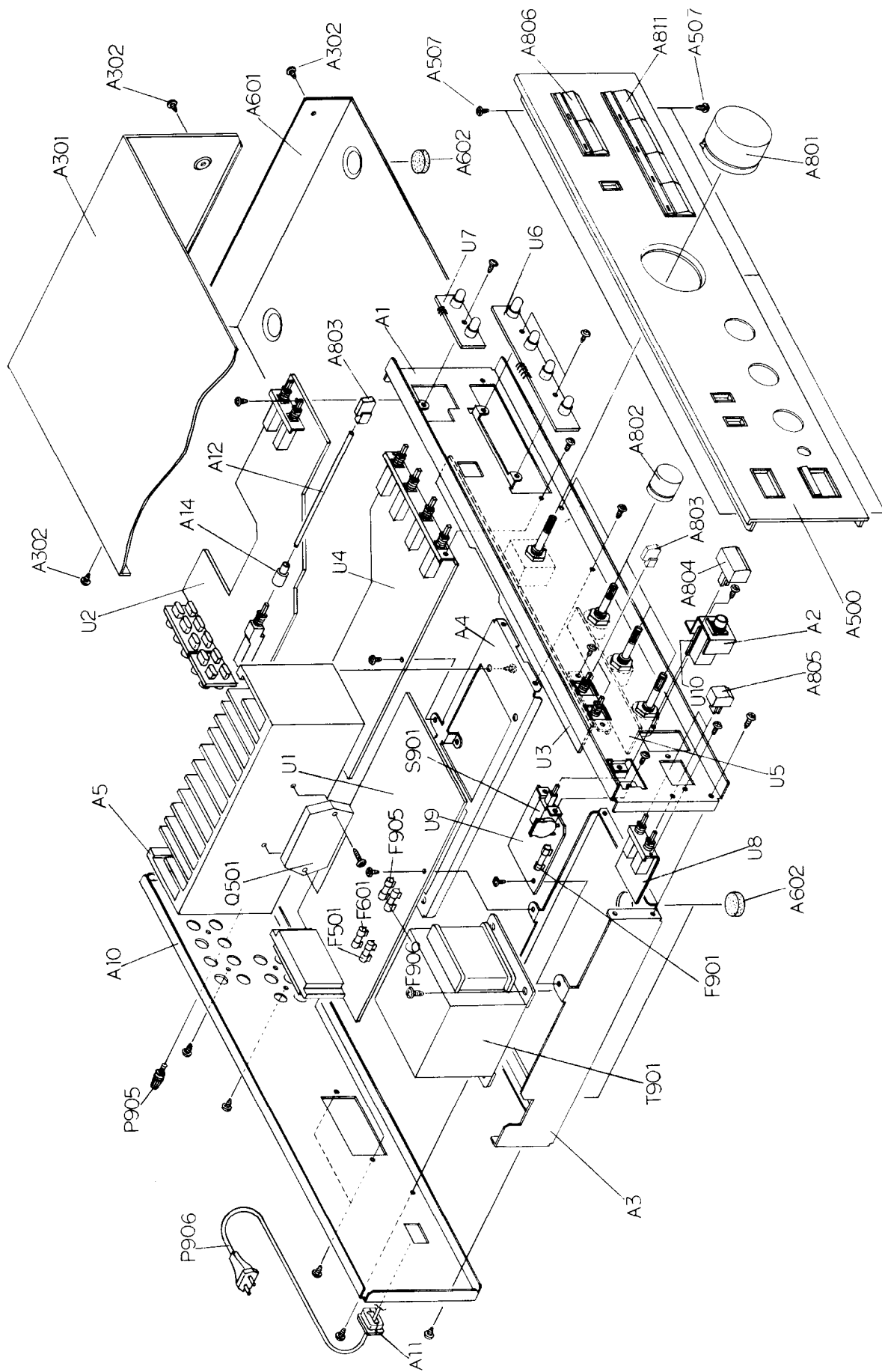
# CHASSIS-EXPLODED VIEW-PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
A1	27110246A	Front bracket	F501, F601	252059	4A (SS-2), Speaker fuse [D] [W]
A2	27140995A	Bracket, HP		252077	4A-SE-EAK, Speaker fuse [G]
A3	27130393	Bracket, L	△ F901	252049	4A (ST-6), Primary fuse [D] [W]
A4	27130394A	Bracket, H	△ F902	252074	2A-SE-EAK, Primary fuse [G] [W]
A5	27160171	Radiator	F905, F906	252078	5A-SE-EAK, Secondary fuse [G]
A10	27120701A	Back panel [D]	U1	17948533	NAAF-2333, Power amplifier pc board ass'y [D] [W]
	27120702A	Back panel [G]		17952533B	NAAF-2333B, Power amplifier pc board ass'y [G]
	27120704A	Back panel [W]	U2	17948534	NAEQ-2334, Equalizer amplifier pc board ass'y [D] [W]
△ A11	27300750	Strainrelief		179525334B	NAEQ-2334B, Equalizer amplifier pc board ass'y [G]
A12	27260174A	Shaft [G]	U3	17948535	NAVR-2335, Muting/Subsonic/Loudness switch pc board ass'y [D] [W]
A14	28320135	Joint		17952535A	NAVR-2335A, Subsonic/Loudness switch pc board ass'y [G]
A301	28184279	Top cover	U4	17948536	NASW-2336, Input selector switch pc board ass'y [D] [W]
	2818428D	Top cover [Black]		17954536A	NASW-2336A, Input selector switch pc board ass'y [G]
A302	834430068	3TTS+6B (BC), Tapping screw	U5	17948537	NATC-2337, Tone controle pc board ass'y
A500	17948121	Front panel ass'y [D] [W]	U6	17948538	NALED-2338, LED display pc board ass'y
	17928121	Front panel ass'y [D, Black] [W, Black]	U7	17948539	NALED-2339, LED display pc board ass'y
	17954121	Front panel ass'y [G]	U8	17948540	NASW-2340, Speaker switch pc board ass'y
	17934121	Front panel ass'y [G, Black]	U9	17948541	NASW-2341, Power switch pc board ass'y [D]
A507	834430068	3TTS+6B (BC), Tapping screw		17954541A	NASW-2341A, Power switch pc board ass'y [G]
A601	27170202A	Bottom board		17950541B	NASW-2341B, Power switch pc board ass'y [W]
A602	27175039	Bottom leg	U10	17948542	NAHP-2342, Headphone jack pc board ass'y
A603	834430068	3TTS+6B (BC), Tapping screw			
A801	28322051A	Knob, VOL			
	28322058A	Knob, VOL [Black]			
A802	28322052	Knob, TONE			
	28322059	Knob, TONE [Black]			
A803	28322066A	Knob, PUSH			
	28322067A	Knob, PUSH [Black]			
A804	28321928	Knob, POWER			
	28321905A	Knob, POWER [Black]			
A805	28322053A	Knob, SP			
	28322060A	Knob, SP [Black]			
A806	28322054A	Knob ass'y, TAPE			
	28322061A	Knob ass'y, TAPE [Black]			
A811	28322056A	Knob ass'y, SEL			
	28322063A	Knob ass'y, SEL [Black]			
Q501 (Q601)	22036	STK-4893, IC			
△ T901	230880	NPT-878D, Power transformer [D]			
	230883	NPT-878G, Power transformer [G]			
	230884	NPT-878DG, Power transformer [W]			
△ S901	25035398	NPS-111-L362P, Power switch			
△ S902	25065123	NPS-1258P, Slide switch [W]			
P905	25060044	Ground terminal			
△ P906	253112	AS US-4#18, Power supply cable [D]			
	253128	AS-CEE, Power supply cable [G]			
	253092-1	AS-CEE-2, Power supply cable [W]			
△ P907	25050139	NSCT-6P38, AC outlet [D]			

NOTE: [D]: Only 120V model  
[G]: Only 220V model  
[W]: Only 120V/220V model  
[BLACK]: Only Black model

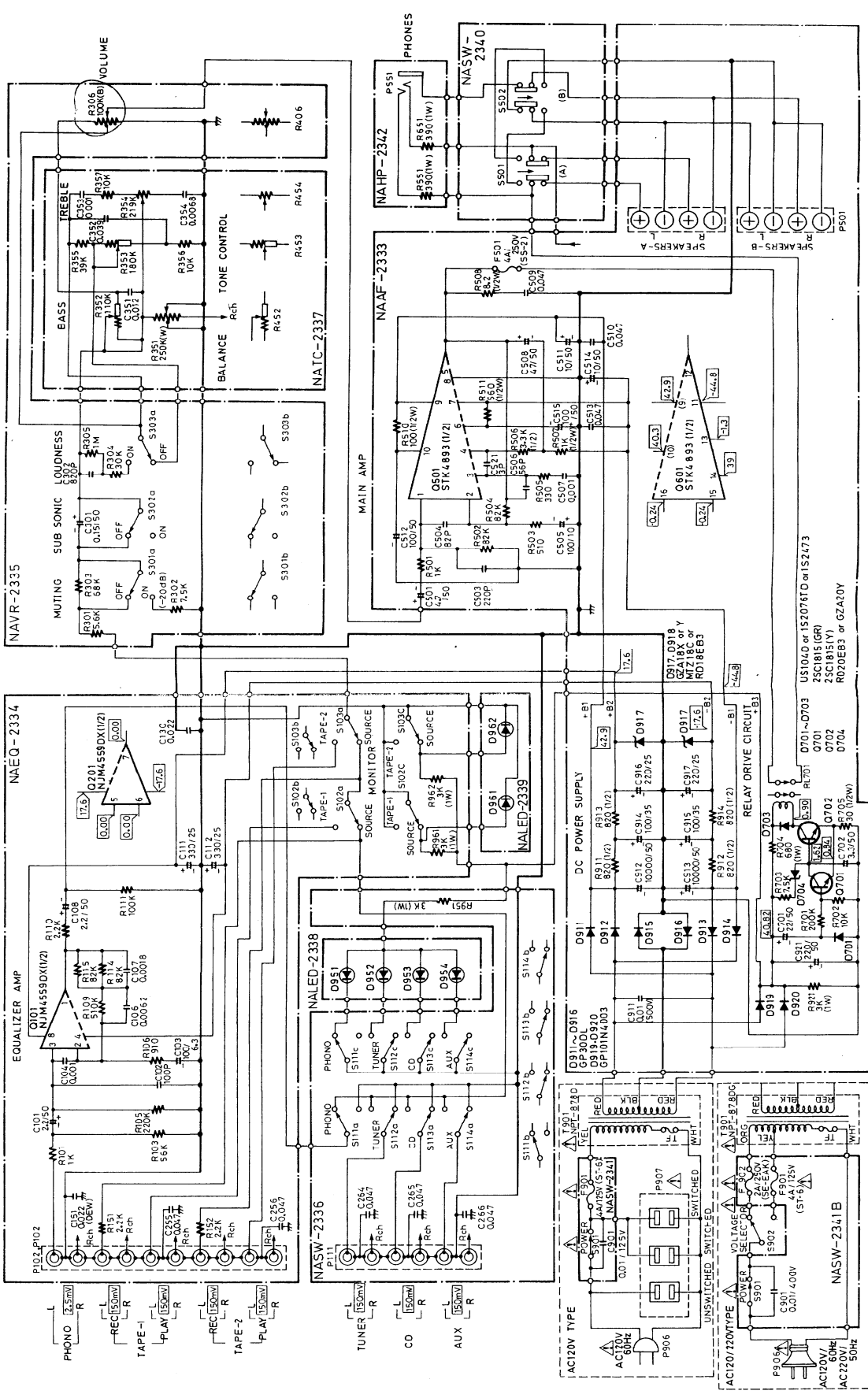
NOTE: THE COMPONENTS IDENTIFIED BY MARK △ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PARTS NUMBER SPECIFIED.

**CHASSIS-EXPLODED VIEW**



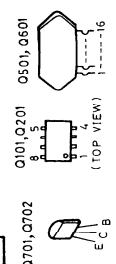
# SCHEMATIC DIAGRAM

(120V Model, 120V/220V Model)



**NOTES**

- \* ALL RESISTORS ARE IN OHMS 1/4 WATT or 1/8 WATT UNLESS OTHERWISE NOTED.
- \* ELECTROLYTIC CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE NOTED.
- \* ALL DIODES ARE 1N270B or 1N2706 or 1N5706 or 1N5706A UNLESS OTHERWISE NOTED.
- \* WITH MINIMUM VOLUME IS DC VOLTAGE STOP MODE.
- \* THE COMPONENTS IDENTIFIED BY MARK ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.



NO.	FUNCTION	POSITION	NO.	FUNCTION	POSITION
S90	POWER	OFF	S103	LOUDNESS	OFF ON
S102	MONITOR	SOURCE TAPE-1	S501	SPEAKERS A	OFF B
S101	MONITOR	SOURCE TAPE-2	S502	SPEAKERS B	OFF B
S301	MUTING	OFF	S503	VOLUME SELECTOR	PHI THIN CD AUX
S302	SUBSONIC	OFF ON	S1131A	SELECTOR	PHI THIN CD AUX

# PRINTED CIRCUIT BOARD PARTS LIST

## POWER AMP. & POWER SUPPLY (NAAF-2333, NAAF-2333B) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Transistors</b>	
Q701	2211255	2SC1815GR
Q702	2211254	2SC1815Y
	<b>Diodes</b>	
D701, D703	223150 or 223145 or 223124	US1040 or 1S2076TD or 1S2473
D704	2239733 or 2241212	RD20EB3 or GZA20Y
D911 ~ D916	223863	GP-30DL
D917, D918	2243273 or 2241191 or 2241192 or 2239713	MTZ18C or GZA-18X or GZA-18Y or RD18EB3
D919, D920	223880	GP101N4003
	<b>Coils</b>	
L501, L601	231001	S-1.3B [G]
	<b>Capacitors</b>	
C501, C601	352780479	4.7 $\mu$ F, 50V, Elect.
C505, C605	3500080	100 $\mu$ F, 10V, Elect.
C508, C608	352784709	47 $\mu$ F, 50V, Elect.
C509, C609	371124735	0.047 $\mu$ F, 50V, Mylar
C511, C514	352781009	10 $\mu$ F, 50V, Elect.
C512, C515	352781019	100 $\mu$ F, 50V, Elect.
C701	352782209	22 $\mu$ F, 50V, Elect.
C702	352780339	3.3 $\mu$ F, 50V, Elect.
C912, C913	3504178	10000 $\mu$ F, 50V, Elect.
C914, C915	352761019	100 $\mu$ F, 35V, Elect.
C916, C917	352752219	220 $\mu$ F, 25V, Elect.
C921	352782219	220 $\mu$ F, 50V, Elect.
	<b>Resistors</b>	
R506, R606	441523324	3.3k $\Omega$ , 1/2W, Metal oxide film
R507, R607	441521024	1k $\Omega$ , 1/2W, Metal oxide film
R508, R608	441520824	8.2 $\Omega$ , 1/2W, Metal oxide film
R509, R609	441520474	4.7 $\Omega$ , 1/2W, Metal oxide film [G]
R510	441521014	100 $\Omega$ , 1/2W, Metal oxide film
R511	441525614	560 $\Omega$ , 1/2W, Metal oxide film
R704	441626814	680 $\Omega$ , 1W, Metal oxide film
R705	441523004	30 $\Omega$ , 1/2W, Metal oxide film
R911 ~ R914	441528214	820 $\Omega$ , 1/2W, Metal oxide film [D] [W]
R911 ~ R914	441526214	620 $\Omega$ , 1/2W, Metal oxide film [G]
R921	441623024	3k $\Omega$ , 1W, Metal oxide film
	<b>Relay</b>	
RL701	25065134	NRL-2P5A-DC24-05
	<b>Terminal</b>	
P501	25060058	NTM-8PDML25

## CIRCUIT NO. PART NO. DESCRIPTION

### Fuse holderes

250113	SN5051 [D] [W]
25050065	YSH403T [G]

## EQUALIZER AMPLIFIER PC BOARD (NAEQ-2334) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>IC</b>	
Q101 (Q201)	222534	NJM-4559DX
	<b>Capacitors</b>	
C101, C201	352780229	2.2 $\mu$ F, 50V, Elect.
C103, C203	352721019	100 $\mu$ F, 6.3V, Elect.
C106, C206	371126224	6200pF, 50V, Mylar
C107, C207	371121824	1800pF, 50V, Mylar
C108, C208	352780229	2.2 $\mu$ F, 50V, Elect.
C111, C112	352753319	330 $\mu$ F, 25V, Elect.
C151	379122235	0.022 $\mu$ F, 50V, DEW
	<b>Resistors</b>	
R961, R962	441623024	3.0k $\Omega$ , 1W, Metal oxide film
	<b>Switch</b>	
S102 (S103)	25035478	NPS-242-L440
	<b>Input terminals</b>	
P101	25045143	NPI-6PDBL56, 6P
P102	25045142	NPI-4PDBL55, 4P
	<b>Socket</b>	
	25050140	NJPS-3P-S

## EQUALIZER AMPLIFIER PC BOARD (NAEQ-2334B) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>IC</b>	
Q101 (Q201)	222605	TA-7322P
	<b>Coils</b>	
L101, L201	231030	NCH-1070
	<b>Capacitors</b>	
C101, C201	392850477	4.7 $\mu$ F, 25V, Elect.
C103, C203	352723319	330 $\mu$ F, 6.3V, Elect.
C106, C206	371126824	6800pF, 50V, Mylar
C107, C207	371122034	0.02 $\mu$ F, 50V, Mylar
C108, C208	392880107	1 $\mu$ F, 50V, Elect.
C111, C112	352751019	100 $\mu$ F, 25V, Elect.
C151	379124735	0.047 $\mu$ F, 50V, DEW
C209, C210	352780339	3.3 $\mu$ F, 50V, Elect.
	<b>Resistors</b>	
R961, R962	441623024	3.0k $\Omega$ , 1W, Metal oxide film
	<b>Switches</b>	
S101	25035475	NPS-162-L437
S102 (S103)	25035478	NPS-242-L440



CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Input terminal</b>	
P101	25045143	NPJ-6PDBL56, 6P
P102	25045142	NPJ-4PDBL55, 4P
	<b>Socket</b>	
	25050140	NJPS-3P-S

#### MUTING SWITCH PC BOARD (NAVR-2335) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
C301, C401	352781599	0.15 $\mu$ F, 50V, Capacitor Elect.
R306 (R406)	5148099	N16RGM100KBTP35, Variable resistor
S301	25035372	NPS-122-L336, Muting switch
S302 (S303)	25035376	NPS-222, L340, Subsonic/ Loudness switch

#### MUTING SWITCH PC BOARD (NAVR-2335A) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
C301, C401	352781599	0.15 $\mu$ F, 50V, Capacitor Elect.
R306 (R406)	5148099	N16RGM100KBTP35, Variable resistor
S302, S303	25035376	NPS-222-L340, Subsonic/ Loudness switch

#### INPUT SELECTOR SWITCH PC BOARD (NASW-2336, NASW-2336A) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
R951	44163024	3.0k $\Omega$ , 1W, Metal oxide film resistor
S111 (S112, S113, S114)	25035476	NPS-442-L438, Selector switch
P111	25045143	NPJ-6PDBL56, Input terminal

#### TONE CONTROL PC BOARD (NATC-2337) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Capacitors</b>	
C351, C451	371121235	0.012 $\mu$ F, 50V, Mylar
C352, C452	371123935	0.039 $\mu$ F, 50V, Mylar
C353, C453	371121025	1000pF, 50V, Mylar
C354, C454	371126825	6800pF, 50V, Mylar
	<b>Resistors</b>	
R351 (R451)	5146052	N16RLC250KWTP35, Variable
R352 (R353, R452, R453)	5148104	N16RQMC110K180K35, Variable
R354 (R454)	5148105	N16RGMC219K35, Variable

#### LED DISPLAY PC BOARD (NALED-2338) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>LEDs</b>	
D951 ~ D954	225174 or 225173	SLR55MC3N or SLR55MC3M
	<b>Etc.</b>	
	27270071	Spacer, LED







#### LED DISPLAY PC BOARD (NALED-2339) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>LEDs</b>	
D961, D962	225167RB or 225167RC	GL-5HY10-RB or GL-5HY10-RC
	<b>Etc.</b>	
	27270071	Spacer, LED

#### SPEAKER SWITCH PC BOARD (NASW-2340) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Switch</b>	
S501 (S502)	25035477	NPS-222-L439


#### POWER SWITCH PC BOARD (NASW-2341, NASW-2341A, NASW-2341B) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
 C901	3500065A	0.01 $\mu$ F, AC400V, Capacitor
 C901a	27300601	SB-1925, Capacitor cover
 S901	25035398	NPS-111-L362P, Power switch
	250113	SN5051, Fuse holder [D] [W]
	25050065	YSH403T, Fuse holder [G] [W]
	25060092	NTM-1533, Terminal [G] [W]

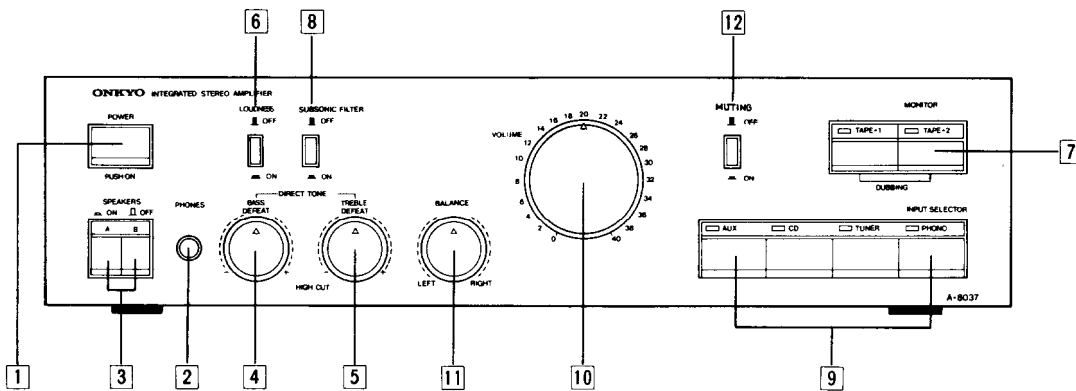
#### HEADPHONE JACK PC BOARD (NAHP-2342) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
R551, R651	441623914	390 $\Omega$ , 1W, Metal oxide film resistor
P551	25045139	HLJ0540-01-010, Headphone jack

**NOTE:** [D]: Only 120V model  
[G]: Only 220V model  
[W]: Only 120V/220V model

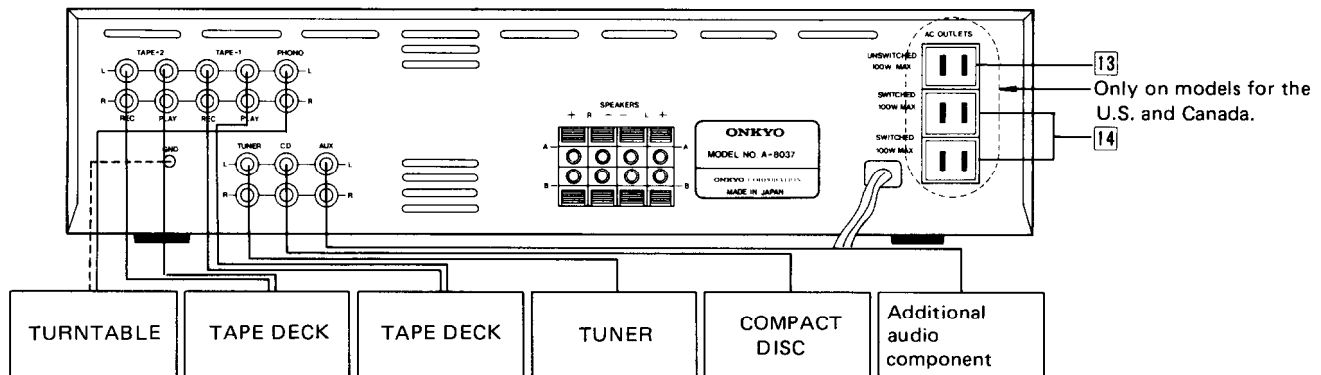
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## FRONT PANEL FACILITIES



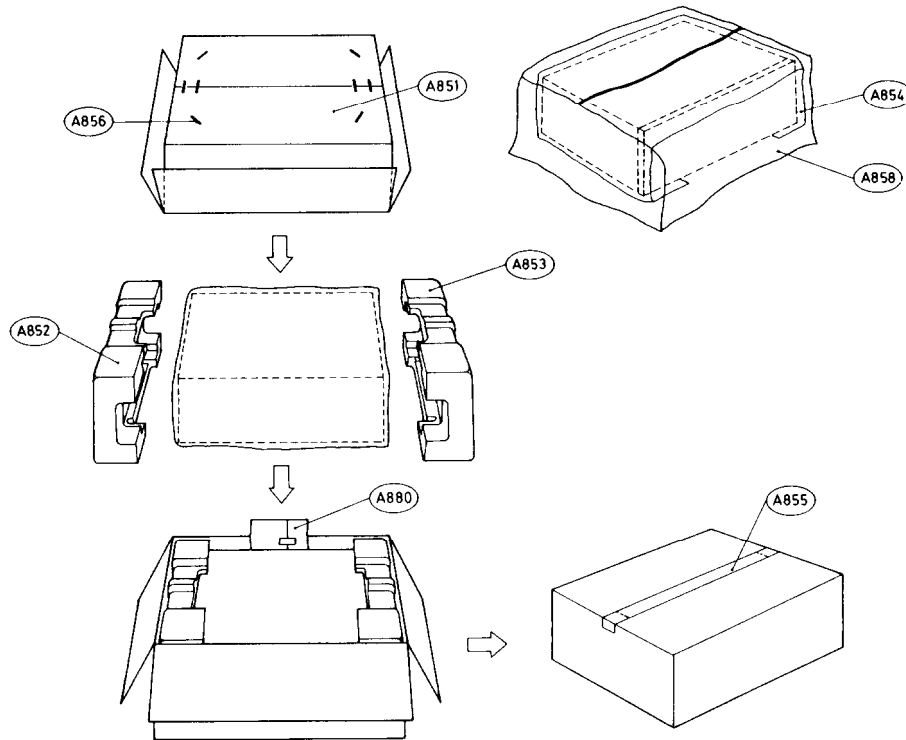
1. Power switch (POWER)
2. Headphone jack (PHONES)
3. Speaker selector (SPEAKERS)
4. Bass control (BASS)
5. Treble control (TREBLE)
6. Loudness control (LOUDNESS)
7. Tape monitor switch and indicator (MONITOR)
8. Subsonic filter (SUBSONIC FILTER)
9. Input selector switches and indicators (INPUT SELECTOR)
10. Volume control (VOLUME)
11. Balance control (BALANCE)
12. Audio muting (MUTING)  
(Only 120V, 120V/220V models)
12. Cartridge selector (CARTRIDGE) (Only 220V models)

## SYSTEM CONNECTIONS



13. AC outlet (UNSWITCHED) (Only 120V models)
14. AC outlet (SWITCHED) (Only 120V models)

# PACKING PROCEDURES

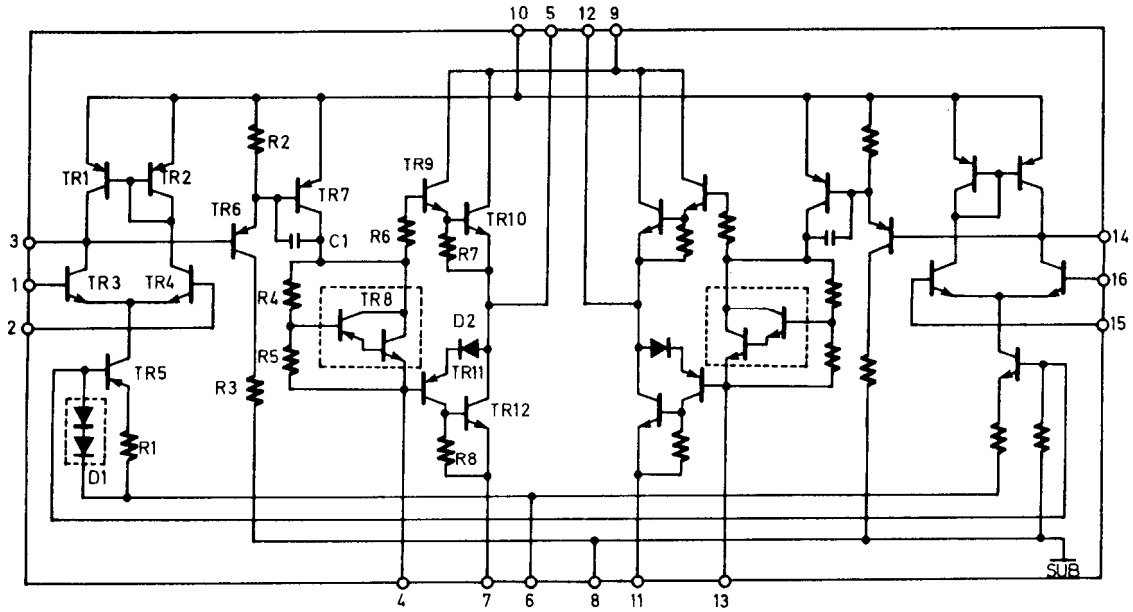


REF. NO.	PART NO.	DESCRIPTION
A851	29051106	Master carton box
	29051107	Master carton box [BLACK]
A852	29090746A	Pad, left
A853	29090747C	Pad, right
A854	29095380	800 x 500, Protection sheet
	29095012-1	800 x 500, Protection sheet [BLACK]
A855	260012	Damplon tape
A856	282301	Sealing hook
A858	29100063	750 x 580, Poly bag
A880	Accessory bag ass'y	
	29340872	Instruction manual [D]
	29340873	Instruction manual [G] [W]
	29365006-7	Warranty card [U]
	29358002C	Service station list [U]
	29100006	350 x 250, Poly bag
	25055018	CV-K-1, Conversion plug [W]

**NOTE:** [U]: Only U.S.A. model  
 [D]: Only 120V model  
 [G]: Only 220V model  
 [W]: Only 120V/220V model  
 [BLACK]: Black model

# IC BLOCK DIAGRAM

STK-4893



NJM-4559DX

