

ONKYO® SERVICE MANUAL

Integrated Stereo Amplifier MODEL A-8067

Silver and Black models

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

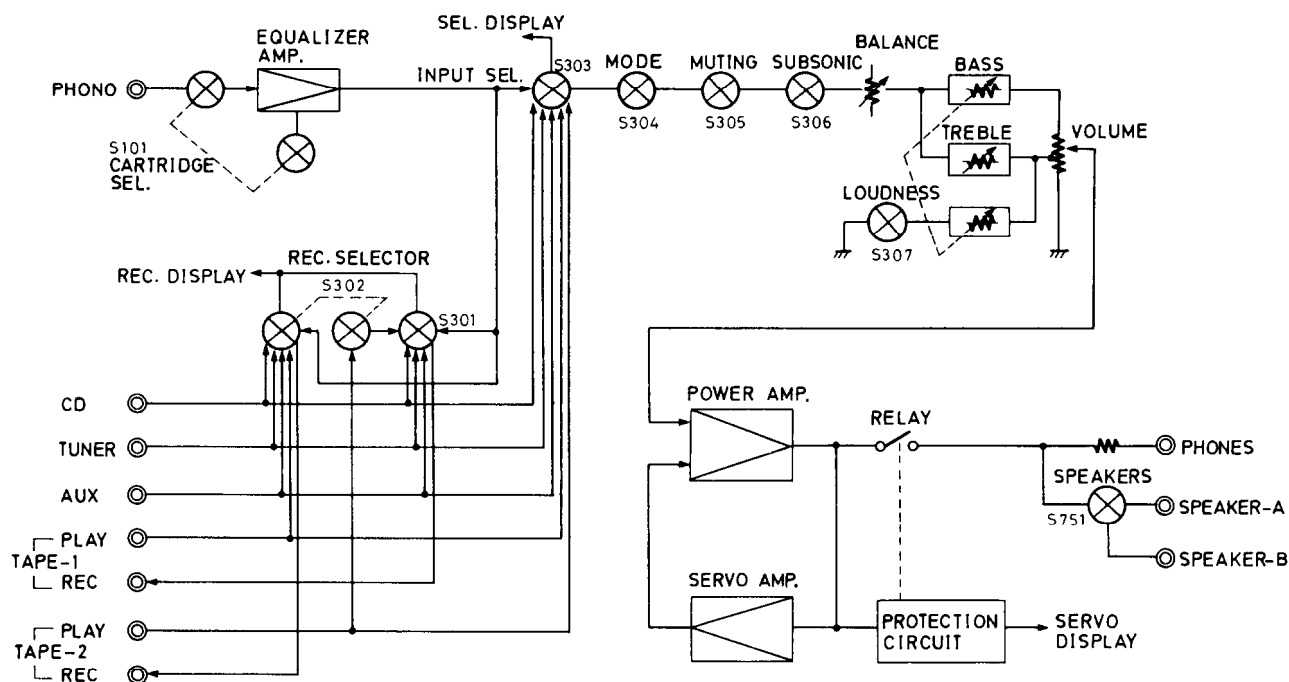
ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

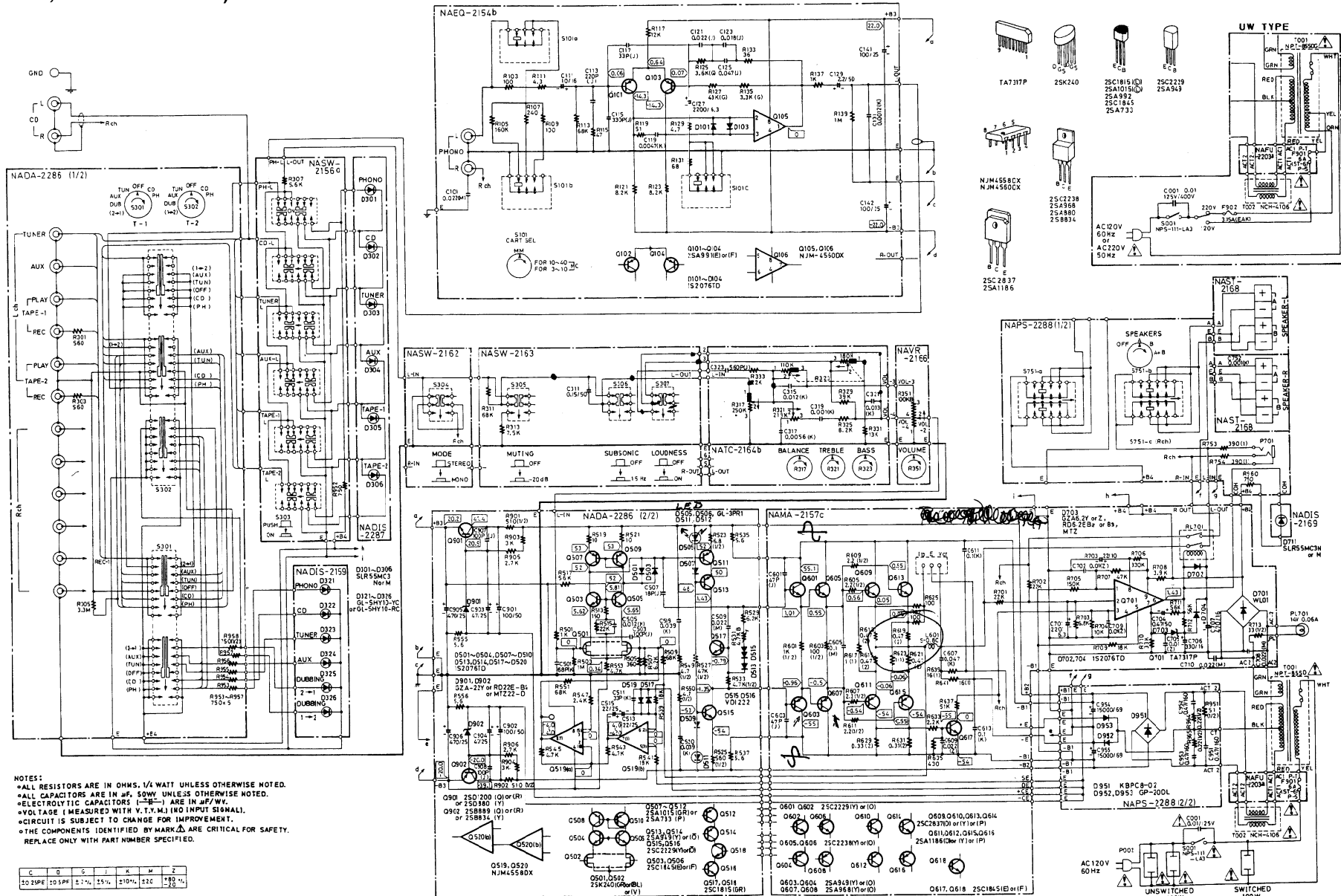
Power Output:	80 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz with no more than 0.015% THD.
Total Harmonic Distortion:	0.015% at rated power
IM Distortion:	0.005% at rated power
Damping Factor:	50 at 8 ohms
Frequency Response:	2–50,000Hz $\pm$ 1dB
RIAA Deviation (MM):	20–20,000Hz $\pm$ 0.3dB
Sensitivity and Impedance:	Phono (MM): 2.5mV/50 kohms Phono (MC): 160 μ V/100/220 ohms Tuner: 150mV/50 kohms Tape Play: 150mV/50 kohms Tape Rec: 150mV/1.5 kohms (phono)
Phono Overload:	200mV RMS at 1kHz, 0.015% THD
Bass Control:	$\pm$ 8dB at 70Hz
Treble Control:	$\pm$ 8dB at 20,000Hz
Signal to Noise Ratio:	Phono (MM): 80dB (IHF A-202, 5mV input, 1 watt output) Phono (MC): 72dB (IHF A-202, 0.5mV input, 1 watt output) Tuner & Tape: 84dB (IHF A-202, 0.5V input, 1 watt output)
Muting:	–20dB
Loudness Control:	+6dB at 70Hz, +5dB at 20kHz
Subsonic Filter:	15Hz (6dB/Octave)
High Cut (TREBLE MIN):	6kHz (6dB/Octave)
Power Supply:	AC 120V, 60Hz [D model] AC 220V, 50Hz [G model] AC 120V or 220V, 50/60Hz [W model]
Semiconductors:	IC: 5 TR: 42 Diode: 46
Dimensions:	435(W) $\times$ 144(H) $\times$ 391(D) mm 17-1/8" $\times$ 5-5/8" $\times$ 15-3/8"
Weight:	12kg. (26.5 lbs.)

Specifications and features are subject to change without notice.

BLOCK DIAGRAM



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



PRECAUTIONS

1. Replacing the fuses

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

CIRCUIT NO.	PARTS NO.	DESCRIPTION
F901	252051	6A (ST-6), Primary fuse (120V model)
F901	252076	3.15A-SE-EAK, Primary fuse (220V, 120V/220V model)
F701	252070	1A-SE-EAK, Secondary fuse (220V model)

2. Replacing the lamp

This unit uses the lamp listed below.

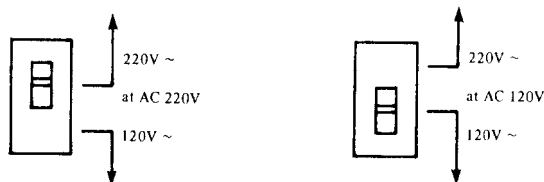
CIRCUIT NO.	PARTS NO.	DESCRIPTION
PL701	210172	PL14V0.06AW-2.0

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; 500V more than $10M\Omega$.

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.



MAIN AMPLIFIER ADJUSTMENT

Set the all control knobs to standard position

Standard knob position

INPUT SELECTOR	CD
CARTRIDGE SELECTOR	MM
REC. SELECTOR	OFF
MODE	STEREO
MUTING	OFF
SUBSONIC FILTER	OFF
BALANCE	Center
VOLUME	Minimum
LOUDNESS	OFF
BASS	DEFEAT
TREBLE	DEFEAT
SPEAKERS	A

IDLING CURRENT ADJUSTMENT

1. Connect the DC voltmeter between I_{ID} and V_{CT} terminals.
2. Adjust the voltage to $15V \pm 5mV$ with semi-fixed resistor of R531 and R532.

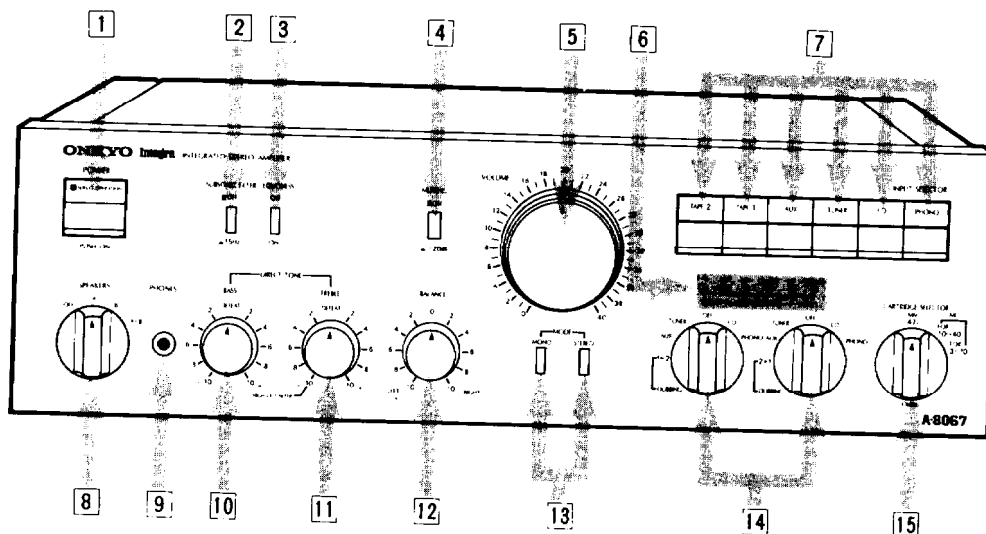
NOTES.

Adjust after switching on for 5 minutes.

VOLUME Minimum

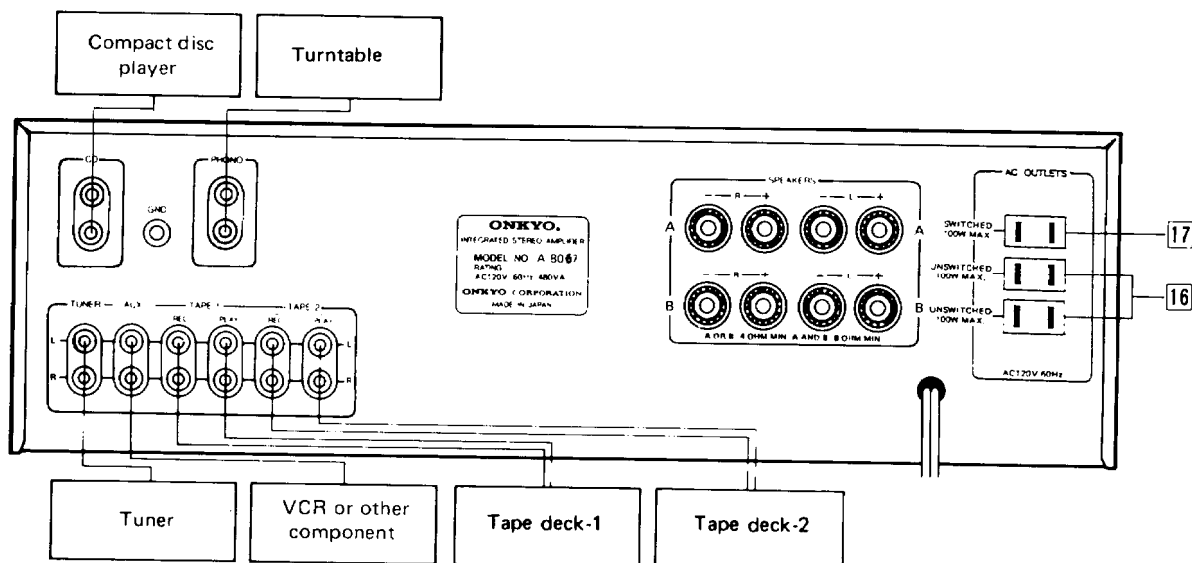
LOAD Open

FRONT PANEL FACILITIES

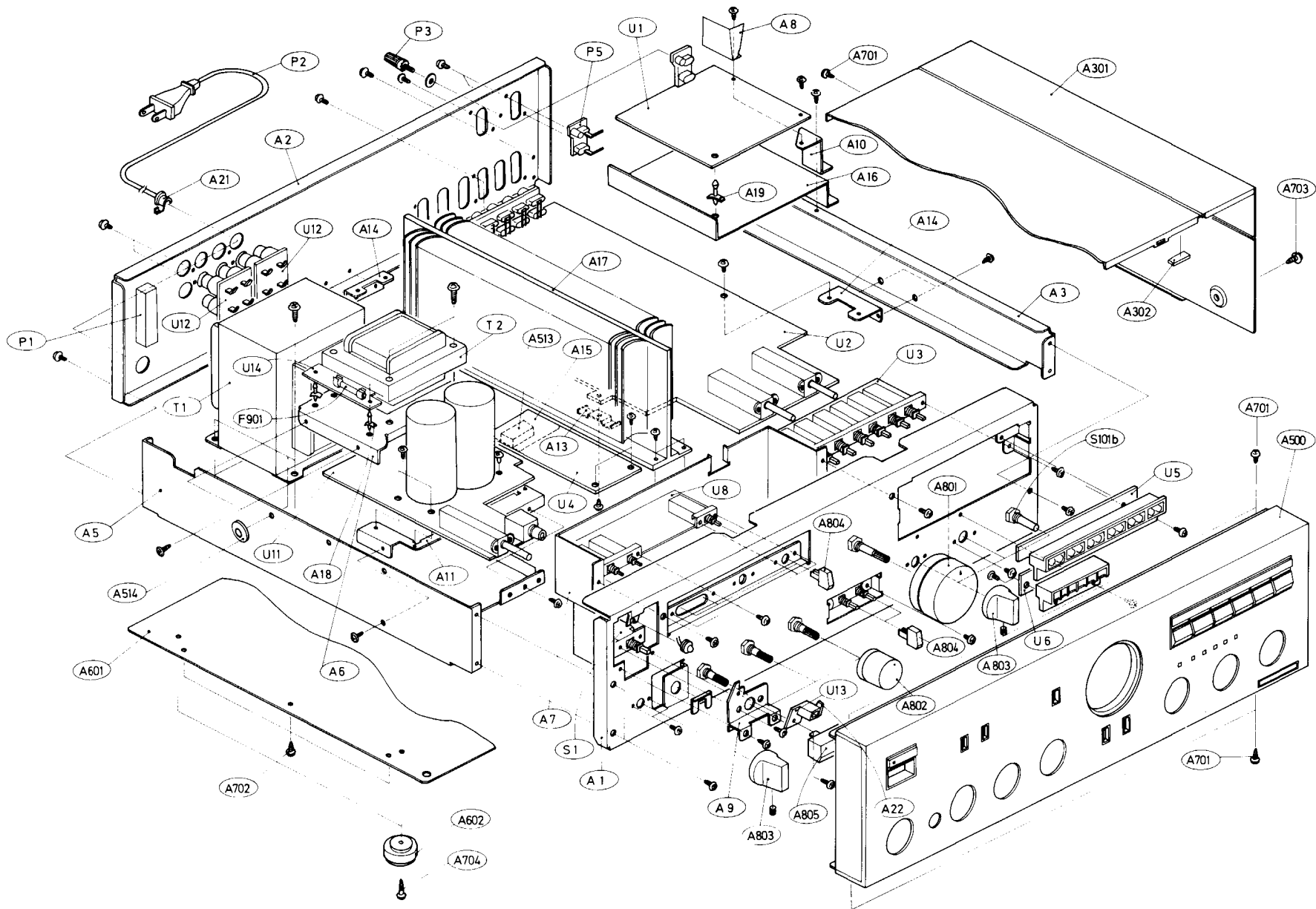


1. Power switch (POWER)
2. Subsonic filter (SUBSONIC FILTER)
3. Loudness control (LOUDNESS)
4. Muting switch (MUTING)
5. Volume control (VOLUME)
6. Recording mode indicator
7. Input selector switches (INPUT SELECTOR)
8. Speaker selector (SPEAKERS)
9. Headphones jack (PHONES)
10. Bass control (BASS)
11. Treble control (TREBLE)
12. Balance control (BALANCE)
13. Mode selector (MODE)
14. Recording source selectors (REC. SELECTOR)
15. Cartridge selector (CARTRIDGE SELECTOR)

SYSTEM CONNECTIONS



CHASSIS-EXPLODED VIEW



CHASSIS-EXPLODED VIEW-PARTS LIST

REF. NO.	PARTS NO.	DESCRIPTION	REF. NO.	PARTS NO.	DESCRIPTION	REF. NO.	PARTS NO.	DESCRIPTION
A1	27110227C	Front bracket	A803	28321726A	Knob (SP)		12034554C	NAEQ-2154c, Equalizer amplifier pc board ass'y [G]
A2	27120664A	Back panel [D]		28321908	Knob (SP), [BLACK] [D]			
	27120665A	Back panel [G]		28322010	Knob (SP), [BLACK] [G] [W]	U2	12028586	NADA-2286, Power amplifier pc board ass'y 1 [D] [W]
	27120667A	Back panel [W]	A804	28322023	Knob (PUSH)		12034586A	NADA-2286a, Power amplifier pc board ass'y 1 [G]
A3	27115132C	Side bracket (R)		28321909	Knob (PUSH), [BLACK]			
A5	27130371A	Bracket (L)	A805	28321904	Knob (POW)	U3	12028556A	NASW-2156a, Input selector switch pc board ass'y [D] [W]
A6	27130386	Bracket (TP)		28321905B	Knob (POW), [BLACK]		12034556B	NASW-2156b, Input selector switch pc board ass'y [G]
A7	27130370	Bracket, shield	Q609, Q610	2201533	2SC2837 (O), Transistors			
A8	27130392	Shield plate (EQ)	Q613, Q614	2201534 or 2201535	2SC2837 (Y) or 2SC2837 (P)	U4	12028557C	NAMA-2157c, Power amplifier pc board ass'y 2 [D] [W]
A9	27140944B	Bracket (POW)	Q611, Q612	2201523	2SA1186 (O), Transistors		12034557D	NAMA-2157d, Power amplifier pc board ass'y 2 [G]
A10	27140819	Bracket (PC)	Q615, Q616	2201524 or 2201525	2SA1186 (Y) or 2SA1186 (P)	U5	12028587	NADIS-2287, LED pc board ass'y
A11	27140945	Bracket (K)	△ T1	230872	NPT-855D, Power transformer [D]	U6	12913559	NADIS-2159, LED pc board ass'y
A13	27140948	Bracket (TR)		230873	NPT-855G, Power transformer [G]	U7	12913562	NASW-2162, Mode switch pc board ass'y
A14	27140693	Bracket (BP)		230874	NPT-855DG, Power transformer [W]	U8	12913563	NASW-2163, Switch circuit pc board ass'y
A15	28175105	Insulator plate (H)	△ T2	231061	NCH4106, Choke coil	U9	12028564B	NATC-2164b, Tone controle pc board ass'y
A16	27150168A	Shield plate (B)	△ S1	25035015A	NPS-111LA3, Power switch	U10	12913566	NAVR-2166, Volume controle pc board ass'y
A17	27160154	Radiator	△ C1	3500065A	0.01μF, AC400V, Capacitor	U11	12028588	NAPS-2288, Speaker switch & Power supply pc board ass'y
A18	27190349	Holder (PC)	S101b	25030262	NRSM-103-30BU, Cartridge selector, operation section	U12	12913568	NATS-2168, Speaker terminal pc board ass'y [D] [W]
A19	27190011	LCBS-8NS, Holder	△ P1	25050139	NSCT-6P38, AC outlet [D]		12034568A	NATS-2168a, Speaker terminal pc board ass'y [G]
A21	27300750	Strainrelief		25108010	LG-2C, Terminal [G] [W]	U13	12913569	NADIS-2169, LED pc board ass'y
A22	28140457	Cushion	△ P2	25065123	NSS-1258P, Slide switch [W]	U14	12028503F	NAFU-2203f, Fuse pc board ass'y [D]
A301	28184269	Top cover		253112	AS-UC-4 #18, Power supply cable [D]		12034503B	NAFU-2203b, Fuse pc board ass'y
	28184270	Top cover [BLACK]		253127	AS-CEE, Power supply cable [G]		12030503G	NAFU-2203g, Fuse pc board ass'y [W]
A302	28140020	4 x 10 x 40, Cushion		253092-1	AS-CEE-2, Power supply cable [W]			
A500	12028121	Front panel ass'y	P3	25060044	Ground terminal			
	12008121	Front panel ass'y [BLACK]	P5	25045086	NPJ-2PRBL43, Input terminal			
	28140570A	Cushion, input selector switch [BLACK]	△ F901	252051	ST-6, 6A, Primary fuse [D]			
	28140532A	Cushion, Rec selector switch [BLACK]		252076	3.15A-SE-EAK, Primary fuse [G] [W]			
	28140205A	Cushion, Tone controle switch [BLACK]		25050211	H0445, Fuse holder [W]			
	28140185	Cushion, speaker switch [BLACK]	F701	252070	1A-SE-EAK, Secondary fuse [G]			
	28140206B	Cushion, volume [BLACK]	U1	12028554B	NAEQ-2154b, Equalizer amplifier pc board ass'y [D] [W]			
A513	28140265	Cushion						
A514	27175011C	Leg						
A601	27170187B	Bottom board						
A602	27175044	Bottom leg						
A701	834430068	3TTS+6B (BC), Tapping screw						
A702	831430088	3TTW+8B (BC), Tapping screw						
A703	838440089	4TTB+8C (BC), Tapping screw						
A704	834430168	3TTS+16B (BC), Tapping screw						
A801	28321731A	Knob (VOL)						
	28321906	Knob (VOL), [BLACK]						
A802	28321723	Knob (BAL)						
	283220101	Knob (BAL), [BLACK]						

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

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

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

PRINTED CIRCUIT BOARD PARTS LIST

EQUALIZER AMPLIFIER PC BOARD (NAEQ-2154b) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q105, Q106	222570	NJM4560DX
Transistors		
Q101~Q104	2211783	2SA991 (E) or
	2211782	2SA991 (F)
Diodes		
D101~D104	223145	1S2076TD
Capacitors		
C101	379122237	0.022 μ F (M), 50V, DEW
C111, C112	392841007	10 μ F, 16V, Elect.
C113, 114	372122214	220pF, 50V, Styrene
C115, 116	372124705	47pF, 50V, Styrene
C119, C120	379124725	0.0047 μ F, 50V, DEW
C121, C122	379122234	0.022 μ F (J), 50V, DEW
C123, C124	379121834	0.018 μ F, 50V, DEW
C125, C126	379124734	0.047 μ F, 50V, DEW
C127, C128	352722229	2200 μ F, 6.3V, Elect.
C129, C130	392880227	2.2 μ F, 50V, Elect.
C131, C132	379121225	0.0012 μ F, 50V, DEW
C141, C142	392851017	100 μ F, 25V, Elect.
Etc.		
S101a	25065229	NSS-63100, Remote switch
	25045034	NPJ-2PDBL10, INPUT Terminal

EQUALIZER AMPLIFIER PC BOARD (NAEQ-2154c) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q105, Q106	222570	NJM4560DX
Transistors		
Q101~Q104	2211783	2SA991 (E) or
	2211782	2SA991 (F)
Diodes		
D101~D104	223145	1S2076TD
Capacitors		
C101	379121037	0.01 μ F, 50V, DEW
C103, C104	372123314	330pF, 50V, Styrene
C107~C110	379128225	0.0082, 50V, DEW
C111, C112	392841007	10 μ F, 16V, Elect.
C115, C116	372122214	220pF, 50V, Styrene
C119, C120	379124725	0.0047 μ F, 50V, DEW
C121, C122	379122234	0.022 μ F (J), 50V, DEW
C123, C124	379121834	0.018 μ F, 50V, DEW
C125, C126	379124734	0.047 μ F, 50V, DEW
C127, C128	352722229	2200 μ F, 6.3V, Elect.
C129, C130	392880227	2.2 μ F, 50V, Elect.
C131, C132	379121225	0.0012 μ F, 50V, DEW
C141, C142	392851017	100 μ F, 25V, Elect.
Coils		
L101, L102	231030	NCH-1070
Etc.		
S101a	25065229	NSS-63100, Remote switch
	25045034	NPJ-2PDBL10, INPUT Terminal

POWER AMPLIFIER PC BOARD 1 (NADA-2286, NADA-2286a) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q519, Q520	222502	NJM4558DX
Transistors		
Q501, Q502	2211915	2SK240 (GR) or
	2211916	2SK240 (BL) or
	2211917	2SK240 (V)
Q503~Q506	2211733	2SC1845 (E) or
	2211732	2SC1845 (F)
Q507~Q512	2211455	2SA1015 (GR) or
	2210803	2SA733 (P)
Q513, Q514	2211354	2SA949 (Y) or
	2211353	2SA949 (O)
Q515, Q516	2211634	2SC2229 (Y) or
	2211633	2SC2229 (O)
Q517, Q518	2211255	2SC1815 (GR)
Q901	2201512	2SD1200 (Q) or
	2201513	2SD1200 (R) or
	2201074	2SD880 (Y)
Q902	2201502	2SB889 (Q) or
	2201503	2SB889 (R) or
	2201244	2SB834 (Y)
Diodes		
D501~D504	223145	1S2076TD
D507~D510		
D513, D514,		
D517		
D518~D520		
D505, D506,	225126	GL-3PR1, LED
D511, D512		
D515, D516	4000068	VD1222, Varistor
D901, D902	2241232	GZA-22Y or
	2239754	RD22E-B4 or
	2243294	MTZ22-D, Zener
Capacitors		
C301~C308	372121014	100pF, 50V, Styrene
C503, C504		
C501, C502	372126805	68pF, 50V, Styrene
C505, C506	379121235	0.012 μ F, 50V, DEW
C509, C510	379122237	0.022 μ F, 50V, DEW
C511, C512	372123305	33pF, 50V, Styrene
C513~C516	352752209	22 μ F, 25V, Elect.
C519, C520	379123935	0.039 μ F, 50V, DEW
C901, C902	352781019	100 μ F, 50V, Elect.
C903, C904	352754709	47 μ F, 25V, Elect.
C905, C906	352754719	470 μ F, 25V, Elect.
Resistors		
R523, R524	442520684	6.8 Ω , 1/2W, Metal oxide film
R525, R526	442525614	560 Ω , 1/2W, Metal oxide film
R527, R528	442524734	47k Ω , 1/2W, Metal oxide film
R531, R532	5225072	N10HR4.7KBDM, Semi-fixed
R533, R534	442523724	4.7k Ω , 1/2W, Metal oxide film
R549, R550	442520474	4.7 Ω , 1/2W, Metal oxide film
R901, R902	441525114	510 Ω , 1/2W, Metal oxide film
R958	442527514	750 Ω , 1/2W, Metal oxide film
Etc.		
S301	25030195	NRSM-146-30SS, Switch
S302	25030258	NRSM-166-30SS, Switch
	25045137	NPJ-6PDBL52, INPUT Terminal
P304, P306	25050140	NJPS-3P-S, Socket

INPUT SELECTOR SWITCH PC BOARD (NASW-2156a) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
S303	25035442	NPS-642-L406, Switch
P303, P305	25050140	NJPS-3P-S, Sockets

INPUT SELECTOR SWITCH PC BOARD (NASW-2156b) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
C331, C332	372122214	220pF, 50V, Capacitors, Styrene
S303	25035442	NPS-642-L406, Switch
P303, P305	25050140	NJPS-3P-S, Sockets

POWER AMPLIFIER PC BOARD 2 (NAMA-2157c, NAMA-2157d) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
Q701	IC	
	222584	TA7317P
Q601, Q602	Transistors	
	2211634	2SC2229 (Y) or
Q603, Q604	2211633	2SC2229 (O)
	2211354	2SA949 (Y) or
Q605, Q606	2211353	2SA949 (O)
	2200864	2SC2238 (Y) or
Q607, Q608	2200863	2SC2238 (O)
	2200874	2SA968 (Y) or
Q617, Q618	2200873	2SA968 (O)
	2211733	2SC1845 (E) or
	2211732	2SC1845 (F)
D701	Diodes	
	223862	WL-01
D702, D704	223145	1S2076TD
D703	2240972	GZA6.2Y,
	2240973	GZA6.2Z,
	2239492	RD6.2E-B2,
	2239493	RD6.2E-B3,
	2243162	MTZ6.2-B or
	2243163	MTZ6.2-C, Zener
L601, L602	Coils	
	231015	S-0.8C
L603, L604	230904	B-20L-44, Core (FR)
C605, C606	Capacitors	
	379121047	0.1μF, 50V, DEW
	379124735	0.047μF, 50V, DEW
	379121045	0.1μF, 50V, DEW
	C701	220μF, 6.3V, Elect.
	C703	22μF, 10V, Elect.
	C704	0.47μF, 50V, Elect.
	C706	330μF, 16V, Elect.
	C707	470μF, 16V, Elect.
	C708, C710	0.022μF, 50V, DEW
R601, C602	Resistors	
	442521024	1kΩ, 1/2W, Metal oxide film
	442521014	100Ω, 1/2W, Metal oxide film
	442520224	2.2Ω, 1/2W, Metal oxide film
	4000063	0.47Ω, 2W, Metal plate
	R617, R618	1Ω, 1W, Metal oxide film
	R623, R624	
	4000061	0.33Ω, 2W, Metal plate
	441621604	16Ω, 1W, Metal oxide film
	442523304	33Ω, 1/2W, Metal oxide film
PL701	Etc.	
	210172	PL14V 0.06A W-2.0, Lamp
RL701	25065036	NRL-4P3A-DC12-01, Relay

LED CIRCUIT PC BOARD (NADIS-2287) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
D301 ~ D306	225174	SLR55MC3N or
	225173	SLR55MC3M, LED
	27190316A	Holder LED

LED CIRCUIT PC BOARD (NADIS-2159) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
D321 ~ D326	225167RB or	GL-5HY10-RB or
	225167RC	GL-5HY10-RC, LED
	27190317	Holder LED

MODE SWITCH PC BOARD (NASW-2162) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
S304	25035443	NPS-122-100-L407, Switch

SWITCH CIRCUIT PC BOARD (NASW-2163) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
C311, C312	352781599	0.15μF, 50V, Capacitor, Elect.
S305	25035266	NPS-122-L230, Switch
S306, (S307)	25035265	NPS-222-L229, Switch

TONE CONTROLE PC BOARD (NATC-2164b) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
C315, C316	Capacitors	
	379121235	0.012μF, 50V, DEW
	379125625	0.0056μF, 50V, DEW
	379121025	0.001μF, 50V, DEW
	379123335	0.033μF, 50V, DEW
R317	Resistors	
	5148044	N16RGM250KMN30, Variable
	5148046A	N16RGM11C219K30, Variable
	5148045A	N16RQM11C110K180K30, Variable

VOLUME CONTROL PC BOARD (NAVR-2166) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
R351	5172062	N16RGL100KBTP30, Variable resistor

SPEAKER SWITCH & POWER SUPPLY PC BOARD (NAPS-2288) — PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
D951	Diodes	
	223884	KBPC8-02
	223845	GP-20DL
C951 ~ C953	Capacitors	
	380504745	0.47μF, 160V, CF
C954, C955	3504174	15000μF, 69V, Elect.
R753, R754	Resistors	
	441623914	390Ω, 1W, Metal oxide film
R951	442525104	51Ω, 1/2W, Metal oxide film
R964, R965	441522294	0.22Ω, 1/2W, Metal oxide film
	Etc.	
	25030257	NRSM-164-30SS, Switch
	25045164	HLJ4317-01-3020, Headphone jack
	27300731	Plate (C)
	27300732	Plate (P)

SPEAKER TERMINAL PC BOARD (NATS-2168) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	25060039	NTM-4PDMN10, Terminal

SPEAKER TERMINAL PC BOARD (NATS-2168a) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
C751, C753	379121025	0.001 μ F, 50V, Capacitor DEW
	25060039	NTM-4PDMN10, Terminal

LED CIRCUIT PC BOARD (NADIS-2169) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
D711	225174	SLR55MC3N, LED
	225173	SLR55MC3M, LED
	27190319A	Holder LED

FUSE PC BOARD (NAFU-2203f) – PARTS LIST

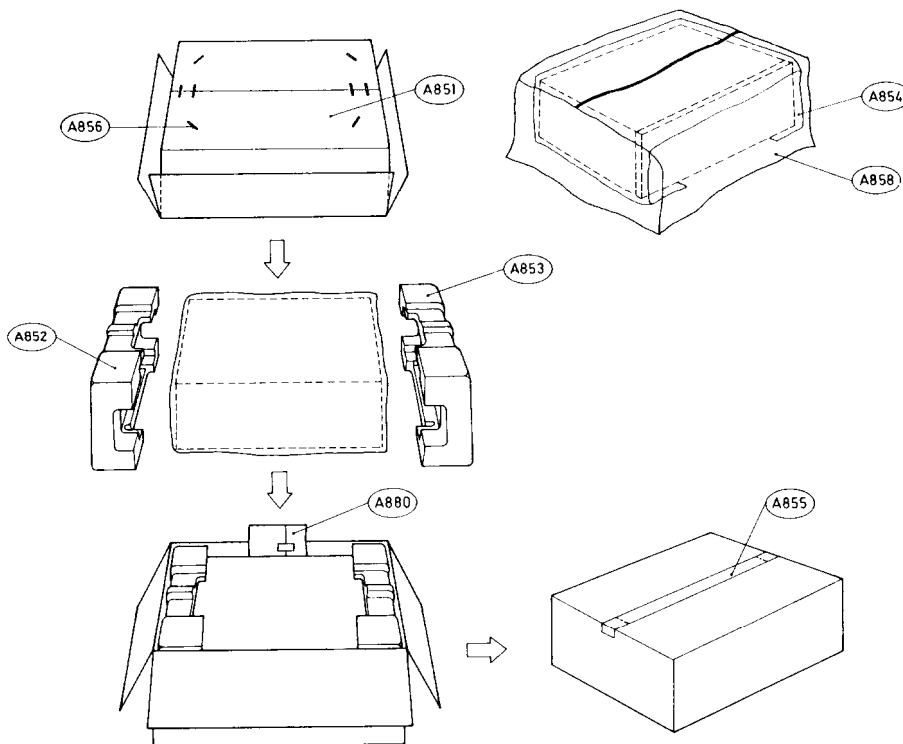
CIRCUIT NO.	PART NO.	DESCRIPTION
	250113	S-N5051, Fuse holder
	29355118	Label

FUSE PC BOARD (NAFU-2203b) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	25050065	YSH403T, Fuse holder

FUSE PC BOARD (NAFU-2203g) – PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	250113	S-N5051, Fuse holder
	29360783	6A/125V, Label

PACKING PROCEDURES

REF. NO.	PART NO.	DESCRIPTION
A851	29051060A	Master carton box
	29051061A	Master carton box [BLACK]
A852	29090488C	Pad, left
A853	29090489B	Pad, right
A854	29095012-1	500×800, Protection sheet
A855	260021	Damplon tape
A856	282301	Sealing hook
A858	29100038A	720×950, Poly bag
A880	Accessary bag ass'y	
	29340845	Instruction manual [D]
	29340846	Instruction manual [G] [W]

29365006-6	Warranty card [U]
29358002C	Service station list [U]
29360778	Label, flush [U]
29100006A	350×250, Poly bag
25055018	CV-K-1, Conversion plug [W]

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