


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 |

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.

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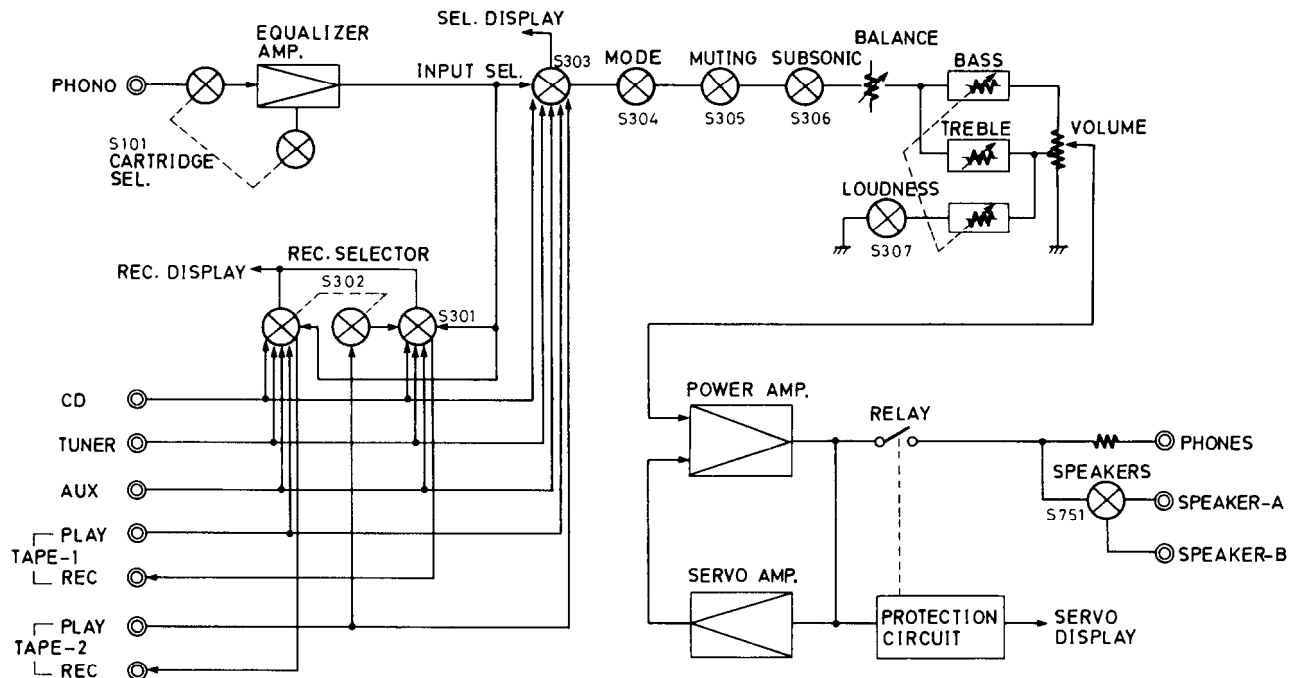
ONKYO®
AUDIO COMPONENTS

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 ± 1dB |
| RIAA Deviation (MM): | 20–20,000Hz ± 0.3dB |
| Sensitivity and Impedance: | Phono (MM): 2.5mV/50 kohms Phono (MC): 160µV/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: | ± 8dB at 70Hz |
| Treble Control: | ± 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) x 144(H) x 391(D) mm 17-1/8" x 5-5/8" x 15-3/8" |
| Weight: | 12kg. (26.5 lbs.) |

Specifications and features are subject to change without notice.

BLOCK DIAGRAM



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.

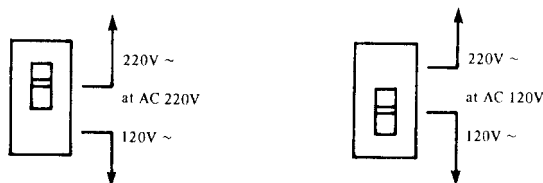
| CIRCUIT NO. | PARTS NO. | DESCRIPTION |
|-------------|-----------|-----------------|
| PL701 | 210172 | PL14V0.06AW-2.0 |

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 Ω .

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 |

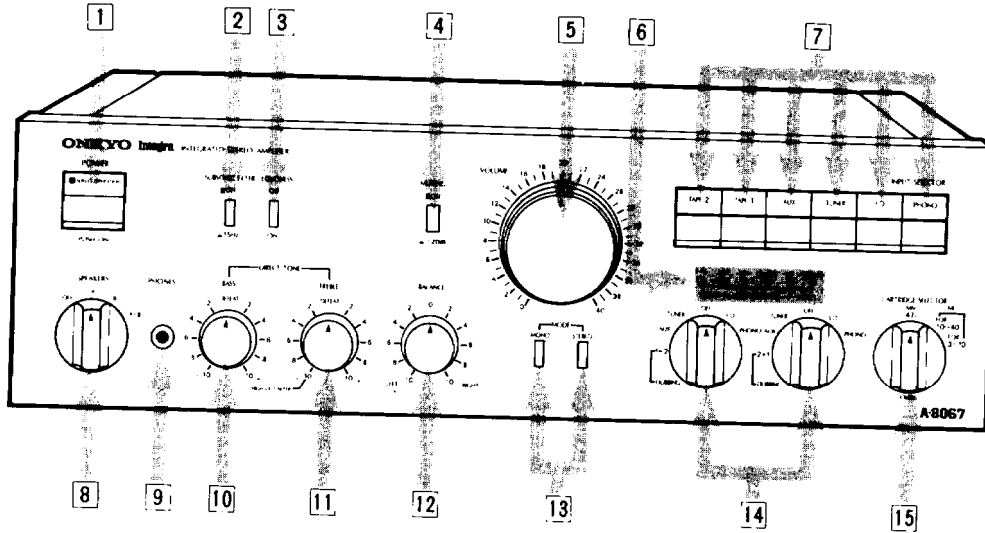
IDLING CURRENT ADJUSTMENT

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.

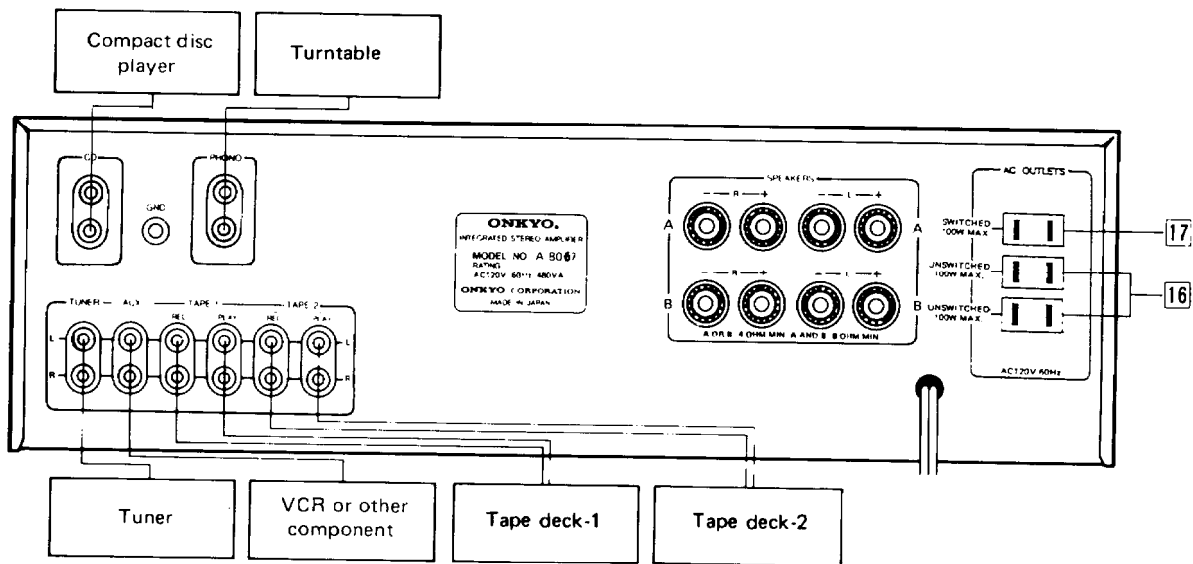
- Adjust after switching on for 5 minutes.
- VOLUME Minimum
- LOAD Open

FRONT PANEL FACILITIES

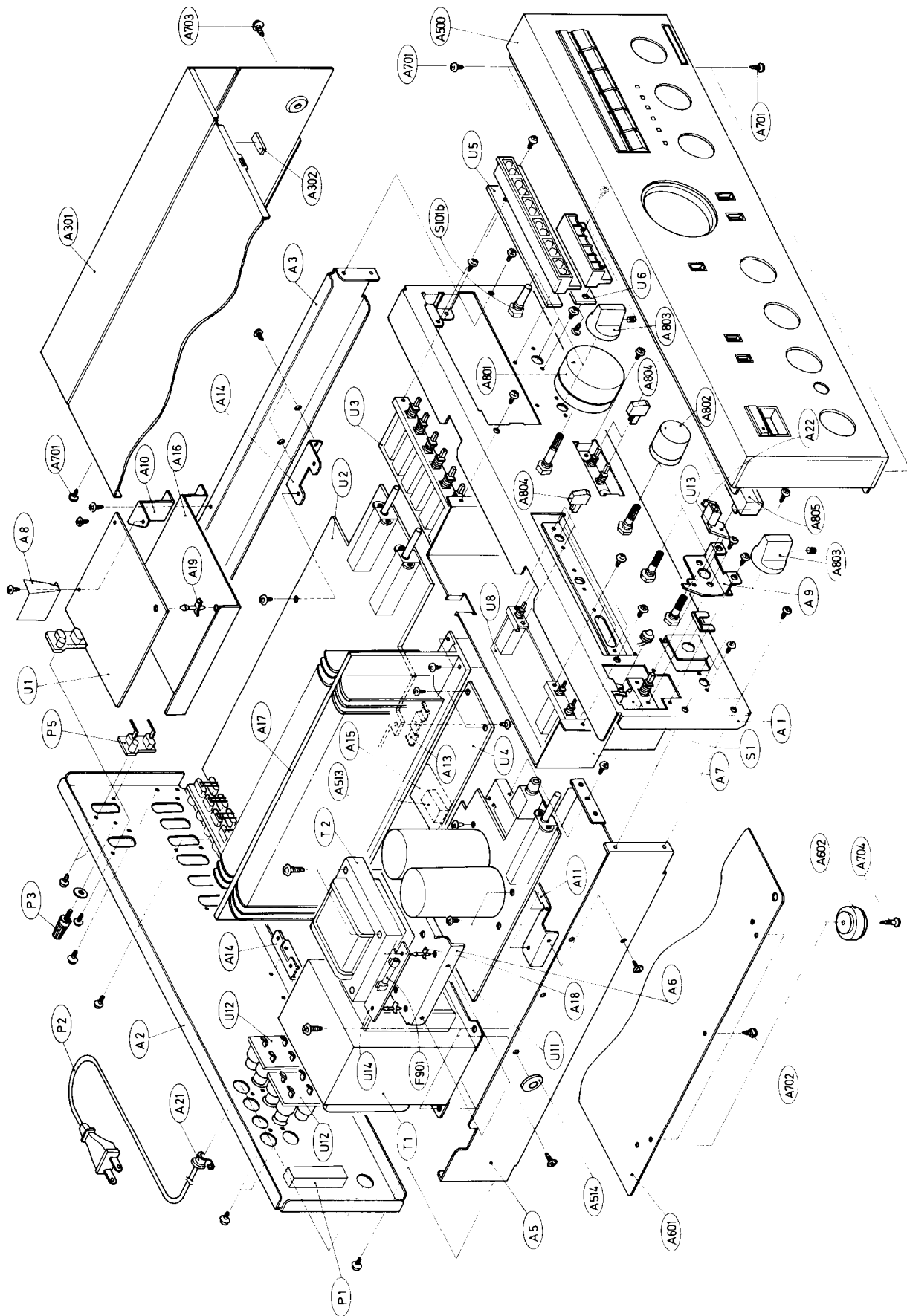


- | | |
|---|--|
| 1. Power switch (POWER) | 9. Headphones jack (PHONES) |
| 2. Subsonic filter (SUBSONIC FILTER) | 10. Bass control (BASS) |
| 3. Loudness control (LOUDNESS) | 11. Treble control (TREBLE) |
| 4. Muting switch (MUTING) | 12. Balance control (BALANCE) |
| 5. Volume control (VOLUME) | 13.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

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) | U2 | 12028586 | pc board ass'y [G] |
| A2 | 27120664A | Back panel [D] | A804 | 28321908 | Knob (SP), [BLACK] [D] | | | NADA-2286, Power amplifier pc board ass'y 1 [D] [W] |
| | 27120665A | Back panel [G] | | 28322010 | Knob (SP), [BLACK] [G] [W] | | | NADA-2286a, Power amplifier pc board ass'y 1 [G] |
| A3 | 27120667A | Back panel [W] | A805 | 28322023 | Knob (PUSH) | U3 | 12028556A | NASW-2156a, Input selector switch pc board ass'y [D] [W] |
| A4 | 27115132C | Side bracket (R) | | 28321909 | Knob (PUSH), [BLACK] | | | NASW-2156b, Input selector switch pc board ass'y [G] |
| A5 | 27130371A | Bracket (L) | | 28321904 | Knob (POW) | | | NAMA-2157c, Power amplifier pc board ass'y 2 [D] [W] |
| A6 | 27130386 | Bracket (TP) | Q609, Q610 | 2201533 | Knob (POW), [BLACK] | U5 | 12028587 | NAMA-2157d, Power amplifier pc board ass'y 2 [G] |
| A7 | 27130370 | Bracket, shield | Q613, Q614 | 2201534 or 2201535 | 2SC2837 (O), Transistors | U6 | 12913559 | NADIS-2287, LED pc board ass'y |
| A8 | 27130392 | Shield plate (EQ) | Q615, Q616 | 2201524 or 2201525 | 2SA1186 (O), Transistors | U7 | 12913562 | NADIS-2159, LED pc board ass'y |
| A9 | 27140944B | Bracket (POW) | | 230872 | 2SA1186 (Y) or NPT-855D, Power transformer [D] | U8 | 12913563 | NASW-2162, Mode switch pc board ass'y |
| A10 | 27140819 | Bracket (PC) | | 230873 | 2SA1186 (P) NPT-855G, Power transformer [G] | U9 | 12028564B | NATC-2164b, Tone controle pc board ass'y |
| A11 | 27140945 | Bracket (K) | | 230874 | NPT-855DG, Power transformer [W] | U10 | 12913566 | NAV-2166, Volume controle pc board ass'y |
| A13 | 27140948 | Bracket (TR) | | 231061 | NCH-4106, Choke coil [W] | U11 | 12028588 | NAPS-2288, Speaker switch & Power supply pc board ass'y |
| A14 | 27140693 | Bracket (BP) | | 25035015A | NPS-1111LA3, Power switch | U12 | 12913568 | NATS-2168, Speaker terminal pc board ass'y [D] [W] |
| A15 | 28175105 | Insulator plate (H) | | 3500065A | 0.01µF, AC400V, Capacitor | U13 | 12913569 | NADIS-2169, LED pc board ass'y |
| A16 | 27150168A | Shield plate (B) | | 25030262 | NRSM-103-30BU, Cartridge selector, operation section | U14 | 12028503F | NAFU-2203f, Fuse pc board ass'y [D] |
| A17 | 27160154 | Radiator | | 25050139 | NSCT-6P38, AC outlet [D] | | | NAFU-2203g, Fuse pc board ass'y [W] |
| A18 | 27190349 | Holder (PC) | | 25108010 | LG-2C, Terminal [G] [W] | | | |
| A19 | 27190011 | LCBS-8NS, Holder | | 25065123 | NSS-1258P, Slide switch [W] | | | |
| A21 | 27300750 | Strainrelief | | 253112 | AS-UC-4 #18, Power supply cable [D] | | | |
| A22 | 28140457 | Cushion | | 253127 | AS-CEE, Power supply cable [G] | | | |
| A301 | 28184269 | Top cover | | 253092-1 | AS-CEE-2, Power supply cable [W] | | | |
| A302 | 28184270 | Top cover [BLACK] | | 25060044 | Ground terminal | | | |
| A500 | 28140020 | 4 x 10 x 40, Cushion | | 25045086 | NPI-2PRBL43, Input terminal | | | |
| | 12028121 | Front panel ass'y | | 252051 | ST-6, 6A, Primary fuse [D] | | | |
| | 12008121 | Front panel ass'y [BLACK] | | 252076 | 3.15A-SE-EAK, Primary fuse [G] [W] | | | |
| | 28140570A | Cushion, input selector switch [BLACK] | | 25050211 | H0445, Fuse holder [W] | | | |
| | 28140532A | Cushion, Rec selector switch [BLACK] | | 252070 | 1A-SE-EAK, Secondary fuse [G] | | | |
| | 28140205A | Cushion, Tone controle switch [BLACK] | | 12028554B | NAEQ-2154b, Equalizer amplifier pc board ass'y [D] [W] | | | |
| | 28140185 | Cushion, speaker switch [BLACK] | | | | | | |
| A513 | 28140206B | Cushion, volume [BLACK] | | | | | | |
| A514 | 28140265 | Cushion | | | | | | |
| A601 | 27170187B | Leg | | | | | | |
| A602 | 27175044 | Bottom board | | | | | | |
| 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: THE COMPONENTS IDENTIFIED BY MARK Δ 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 2211782 | 2SA991 (E) or 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 25045034 | NSS-63100, Remote switch 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 2211782 | 2SA991 (E) or 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 25045034 | NSS-63100, Remote switch 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 2211916 2211917 | 2SK240 (GR) or 2SK240 (BL) or 2SK240 (V) |
| Q503~Q506 | 2211733 2211732 | 2SC1845 (E) or 2SC1845 (F) |
| Q507~Q512 | 2211455 2210803 | 2SA1015 (GR) or 2SA733 (P) |
| Q513, Q514 | 2211354 2211353 | 2SA949 (Y) or 2SA949 (O) |
| Q515, Q516 | 2211634 2211633 | 2SC2229 (Y) or 2SC2229 (O) |
| Q517, Q518 | 2211255 | 2SC1815 (GR) |
| Q901 | 2201512 2201513 2201074 | 2SD1200 (Q) or 2SD1200 (R) or 2SD880 (Y) |
| Q902 | 2201502 2201503 2201244 | 2SB889 (Q) or 2SB889 (R) or 2SB834 (Y) |
| | Diodes | |
| D501~D504 D507~D510 D513, D514, D517 D518~D520 | 223145 | 1S2076TD |
| D505, D506, D511, D512 D515, D516 D901, D902 | 225126 4000068 2241232 2239754 2243294 | GL-3PR1, LED VD1222, Varistor GZA-22Y or RD22E-B4 or MTZ22-D, Zener |
| | Capacitors | |
| C301~C308 C503, C504 C501, C502 C505, C506 C509, C510 C511, C512 C513~C516 C519, C520 C901, C902 C903, C904 C905, C906 | 372121014 372126805 379121235 379122237 372123305 352752209 379123935 352781019 352754709 352754719 | 100pF, 50V, Styrene 68pF, 50V, Styrene 0.012 μ F, 50V, DEW 0.022 μ F, 50V, DEW 33pF, 50V, Styrene 22 μ F, 25V, Elect. 0.039 μ F, 50V, DEW 100 μ F, 50V, Elect. 47 μ F, 25V, Elect. 470 μ F, 25V, Elect. |
| | Resistors | |
| R523, R524 R525, R526 R527, R528 R531, R532 R533, R534 R549, R550 R901, R902 R958 | 442520684 442525614 442524734 5225072 442523724 442520474 441525114 442527514 | 6.8 Ω , 1/2W, Metal oxide film 560 Ω , 1/2W, Metal oxide film 47k Ω , 1/2W, Metal oxide film N10HR4.7KBDM, Semi-fixed 4.7k Ω , 1/2W, Metal oxide film 4.7 Ω , 1/2W, Metal oxide film 510 Ω , 1/2W, Metal oxide film 750 Ω , 1/2W, Metal oxide film |
| | Etc. | |
| S301 S302 P304, P306 | 25030195 25030258 25045137 25050140 | NRSM-146-30SS, Switch NRSM-166-30SS, Switch NPJ-6PDBL52, INPUT Terminal 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 |
|-------------|--------------------|---------------------------------------|
| | IC | |
| Q701 | 222584 | TA7317P |
| | Transistors | |
| Q601, Q602 | 2211634 | 2SC2229 (Y) or |
| | 2211633 | 2SC2229 (O) |
| Q603, Q604 | 2211354 | 2SA949 (Y) or |
| | 2211353 | 2SA949 (O) |
| Q605, Q606 | 2200864 | 2SC2238 (Y) or |
| | 2200863 | 2SC2238 (O) |
| Q607, Q608 | 2200874 | 2SA968 (Y) or |
| | 2200873 | 2SA968 (O) |
| Q617, Q618 | 2211733 | 2SC1845 (E) or |
| | 2211732 | 2SC1845 (F) |
| | Diodes | |
| D701 | 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 |
| | Coils | |
| L601, L602 | 231015 | S-0.8C |
| L603, L604 | 230904 | B-20L-44, Core (FR) |
| | Capacitors | |
| C605, C606 | 379121047 | 0.1 μ F, 50V, DEW |
| C607, C608 | 379124735 | 0.047 μ F, 50V, DEW |
| C611 ~ C614 | 379121045 | 0.1 μ F, 50V, DEW |
| C701 | 352722219 | 220 μ F, 6.3V, Elect. |
| C703 | 352732209 | 22 μ F, 10V, Elect. |
| C704 | 352784799 | 0.47 μ F, 50V, Elect. |
| C706 | 352743319 | 330 μ F, 16V, Elect. |
| C707 | 352744719 | 470 μ F, 16V, Elect. |
| C708, C710 | 379122237 | 0.022 μ F, 50V, DEW |
| | Resistors | |
| R601, C602 | 442521024 | 1k Ω , 1/2W, Metal oxide film |
| R603, R604 | 442521014 | 100 Ω , 1/2W, Metal oxide film |
| R605 ~ R612 | 442520224 | 2.2 Ω , 1/2W, Metal oxide film |
| R613 ~ R616 | 4000063 | 0.47 Ω , 2W, Metal plate |
| R619 ~ R622 | | |
| R617, R618 | 441620104 | 1 Ω , 1W, Metal oxide film |
| R623, R624 | | |
| R629 ~ R632 | 4000061 | 0.33 Ω , 2W, Metal plate |
| R639 ~ R642 | 441621604 | 16 Ω , 1W, Metal oxide film |
| R713 | 442523304 | 33 Ω , 1/2W, Metal oxide film |
| | Etc. | |
| PL701 | 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 | 0.15 μ F, 50V, Capacitor, Elect. |
| S305 | 25035266 | NPS-122-L230, Switch |
| S306, (S307) | 25035265 | NPS-222-L229, Switch |

TOUR CONTROLE PC BOARD (NATC-2164b) – PARTS LIST

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|-------------------|-------------------------------|
| | Capacitors | |
| C315, C316 | 379121235 | 0.012 μ F, 50V, DEW |
| C317, C318 | 379125625 | 0.0056 μ F, 50V, DEW |
| C319, C320 | 379121025 | 0.001 μ F, 50V, DEW |
| C321, C322 | 379123335 | 0.033 μ F, 50V, DEW |
| | Resistors | |
| R317 | 5148044 | N16RGMC250KMN30, Variable |
| R321 | 5148046A | N16RGM11C219K30, Variable |
| R323 | 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 |
|-------------|-------------------|--|
| | Diodes | |
| D951 | 223884 | KBPC8-02 |
| | 223845 | GP-20DL |
| | Capacitors | |
| C951 ~ C953 | 380504745 | 0.47 μ F, 160V, CF |
| C954, C955 | 3504174 | 15000 μ F, 69V, Elect. |
| | Resistors | |
| R753, R754 | 441623914 | 390 Ω , 1W, Metal oxide film |
| R951 | 442525104 | 51 Ω , 1/2W, Metal oxide film |
| R964, R965 | 441522294 | 0.22 Ω , 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 | 0.001μF, 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 |

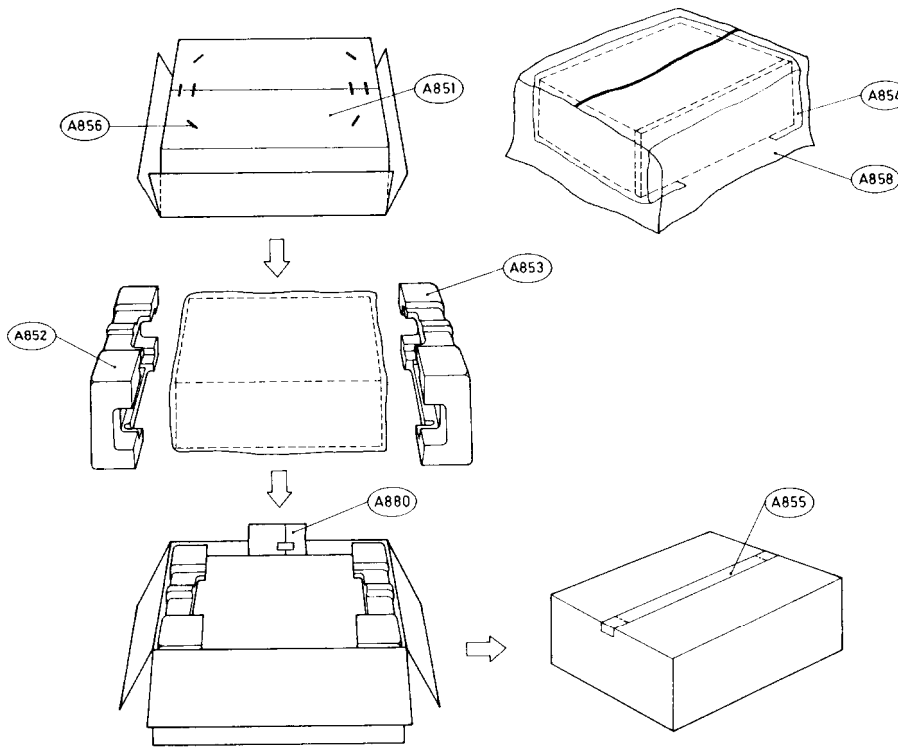
FUSE PC BOARD (NAFU-2203b) – PARTS LIST

| 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 | 29365006-6 | Warranty card [U] |
| | 29051061A | Master carton box [BLACK] | 29358002C | Service station list [U] |
| A852 | 29090488C | Pad, left | 29360778 | Label, flush [U] |
| A853 | 29090489B | Pad, right | 29100006A | 350x250, Poly bag |
| A854 | 29095012-1 | 500x800, Protection sheet | 25055018 | CV-K-1, Conversion plug [W] |
| A855 | 260021 | Damplon tape | | |
| A856 | 282301 | Sealing hook | | |
| A858 | 29100038A | 720x950, Poly bag | | |
| A880 | Accessory bag ass'y | | | |
| | 29340845 | Instruction manual [D] | | |
| | 29340846 | Instruction manual [G][W] | | |

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

