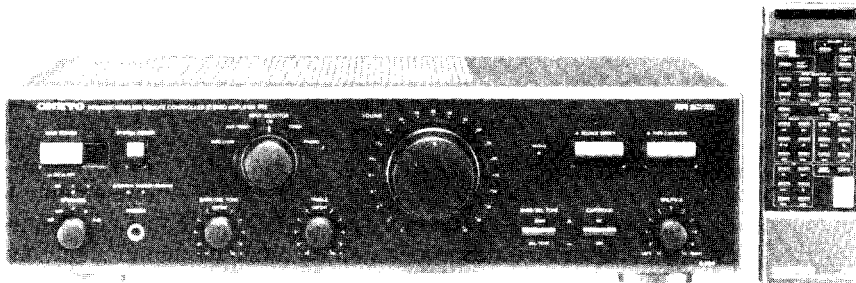


ONKYO® SERVICE MANUAL

Integrated Stereo Amplifier MODEL A-803



Black and Silver models

| | |
|----|-------------------------|
| UD | 120V AC, 60Hz |
| UP | 230V AC, 50Hz |
| UW | 120V/220V AC, 50Hz/60Hz |

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ 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

| | |
|--|----|
| Specifications | 2 |
| Precautions | 2 |
| Adjustment procedures | 3 |
| IC block diagram | 4 |
| Chassis exploded view | 9 |
| Front panel facilities | 11 |
| System connections | 11 |
| Printed circuit board parts list | 12 |
| Block diagram | 15 |
| Schematic diagram | 17 |
| Parts list of packing | 25 |

ONKYO
AUDIO COMPONENTS

SPECIFICATIONS

| | |
|--------------------------------|---|
| Power Output: | 60 watts per channel, min RMS, at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.06% THD. 2 × 100 watts at 4 ohms, 1 kHz(DIN) 2 × 70 watts at 8 ohms, 1 kHz(DIN) |
| Total Harmonic Distortion | 0.06% at rated power |
| IM Distortion | 0.06% at rated power |
| Damping Factor: | 40 at 8 ohms |
| Frequency and Response: | 15–30,000 Hz ±1 dB |
| Input Sensitivity/Impedance: | Phono (MM): 2.5 mV/50 kohms Phono (MC): 350 μV/220 ohms Tuner/CD/AUX, Video: 150 mV/50 kohms Source Direct: 150 mV/50 kohms Tape/Play: 150 mV/50 kohms |
| Output Sensitivity/Impedance: | Tape/Rec: 150 mV/3 kohms (phono) |
| Phono Overload: | 135 mV RMS at 1 kHz, 0.1% THD (MM) (REC) |
| Bass Control: | ±10 dB at 100 Hz |
| Treble Control: | ±10 dB at 10,000 Hz |
| Selective Tone Control: | ±15 dB at 50 Hz/±6 dB at 10 kHz |
| Signal to Noise Ratio (IHF-A): | Phono (MM): 80 dB (5 mV input) Phono (MC): 70 dB (0.5 mV input) Source Direct (CD): 102 dB |

General

| | |
|---------------|--|
| Power Supply: | U.S.A & Canadian models: AC 120V, 60Hz European models (except U.K.): AC 230V, 50Hz U.K. & Australian models: AC 240V, 50Hz Worldwide models: AC 120 and 220V switchable, 50/60Hz |
|---------------|--|

| | |
|-----------------------------|--|
| Dimensions (W) × (H) × (D): | 455 × 120 × 330 mm 17-15/16" × 4-3/4" × 13" |
|-----------------------------|--|

| | |
|---------|-------------------|
| Weight: | 7.3 kg, 16.1 lbs. |
|---------|-------------------|

Remote Control Transmitter RC-200S/205S

| | |
|-------------------------|--|
| Transmitter: | Infrared |
| Signal range: | Approx. 5 meters, 16ft |
| Power supply: | Two "AA" batteries (1.5 V × 2) |
| Dimensions (W × H × D): | 64 × 18 × 176 mm 2-1/2" × 11/16" × 6-15/16" |
| Weight: | 130 grams, 4.6 oz. (including batteries) |

Specifications and features are subject to change without notice.

PRECAUTIONS

1. Replacing the fuses

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

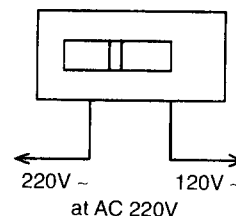
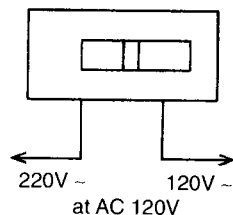
| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|----------|--|
| F901 | 252050 | 5A ST-6, Primary fuse (120V,120V/220V model) |
| F901 | 252075 | 2.5A-SE-EAK, Primary fuse (230V model) |
| F902 | 252075 | 2.5A-SE-EAK, Primary fuse (230V,120V/220V model) |

2. 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.
Specifications; More than 10 MΩ at 500V.

3. 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 to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on. Models without a voltage selector can only be used in areas where the power supply is the same as that of the unit.



ADJUSTMENT PROCEDURES

Adjustments and Checking the Protection Circuitry

1. Preparations

- 1) Place the unit on the workbench. (There should be about 15 mm of space between the base plate of the unit and the work surface.)
- 2) Set up the unit as follows.
 - (1) No load
 - (2) No signal
 - (3) Volume turned all the way down
 - (4) Speaker switch OFF
 - (5) Power switch OFF

Note) Check the following points before making adjustments

- (1) The power switch should be OFF.
- (2) The interior of the unit should not be warm.

2. Idling current adjustment

- 1) Turn the power switch ON and allow the unit to warm up for about 10 minutes.
 - (1) Adjust R531 (R532) so that the voltage at test point VCT-ID on the NAAF-4169 circuit board is $9.5\text{mV} \pm 3.5\text{mV}$

3. Check of operation of protection circuitry

- 1) Check of operation of protection relay.
 - (1) Confirm that the relay turns ON approximately 5 seconds after the power switch is turned ON.
 - (2) The relay should turn OFF approximately 0.5 seconds after the power switch is turned OFF.
- 2) Check of DC detection
 - (1) Turn the power on with no load.
 - (2) After the speaker relay turns ON, apply DC +1.5V to the CD input terminals. Confirm that the relay turns OFF.
 - (3) Confirm that operation is the same as (2) above when an input of DC -1.5V is applied.

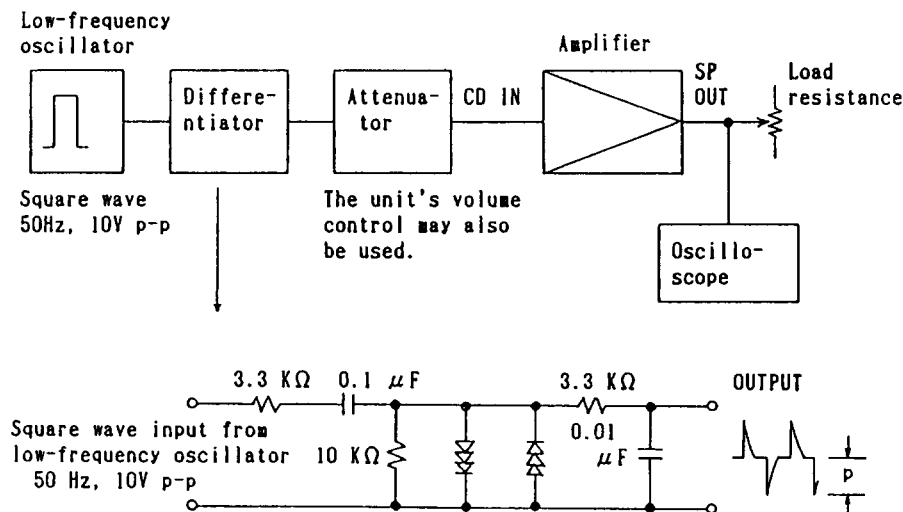
Note) Under no circumstances connect a load or short the speaker terminals when performing the above test.

3) Confirmation of current detection operation

- (1) Signal input from the circuit illustrated below with no load.
- (2) Confirm that the speaker relay does not turn OFF even when a 2 ohm load is connected when a peak value of 35Vp is output.
- (3) Next, confirm that when a 1 ohm load is connected the speaker relay switches OFF and ON a couple of times and then stays OFF.

Note) The period before that relay stays OFF should not last for more than 10 second.

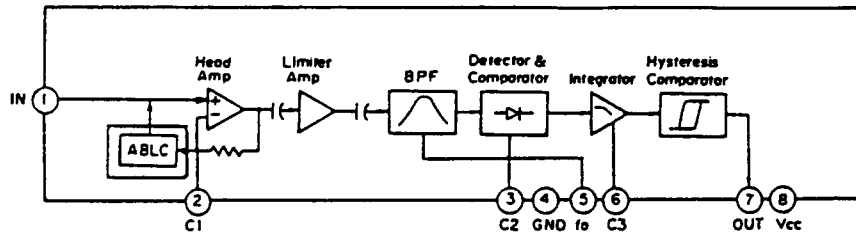
Relay OFF status can be canceled by switching the power OFF.



NOTE) Semi-fixed resistors enclosed in parentheses () are for the right channel.

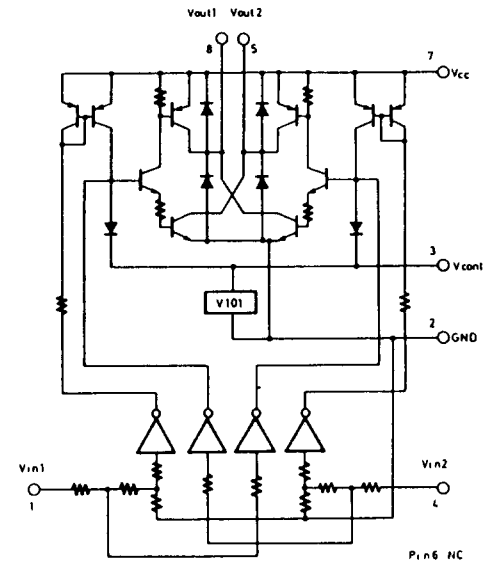
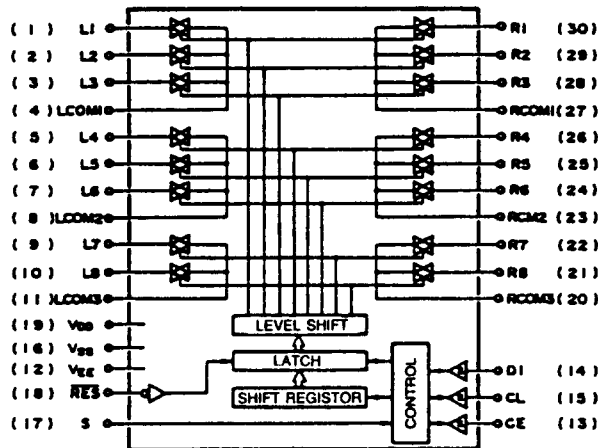
CX20106A (Preamplifier)

1. IN: Input terminal
2. C1: Frequency response and gain setting terminal of head amplifier
3. C2: Connect to the capacitor for detector
4. GND: Ground terminal
5. fo: Center frequency setting terminal of BPF
6. C3: Connect to the capacitor for integrator
7. OUT: Output terminal
8. Vcc: Power supply terminal



LB1639 (Motor Drive)

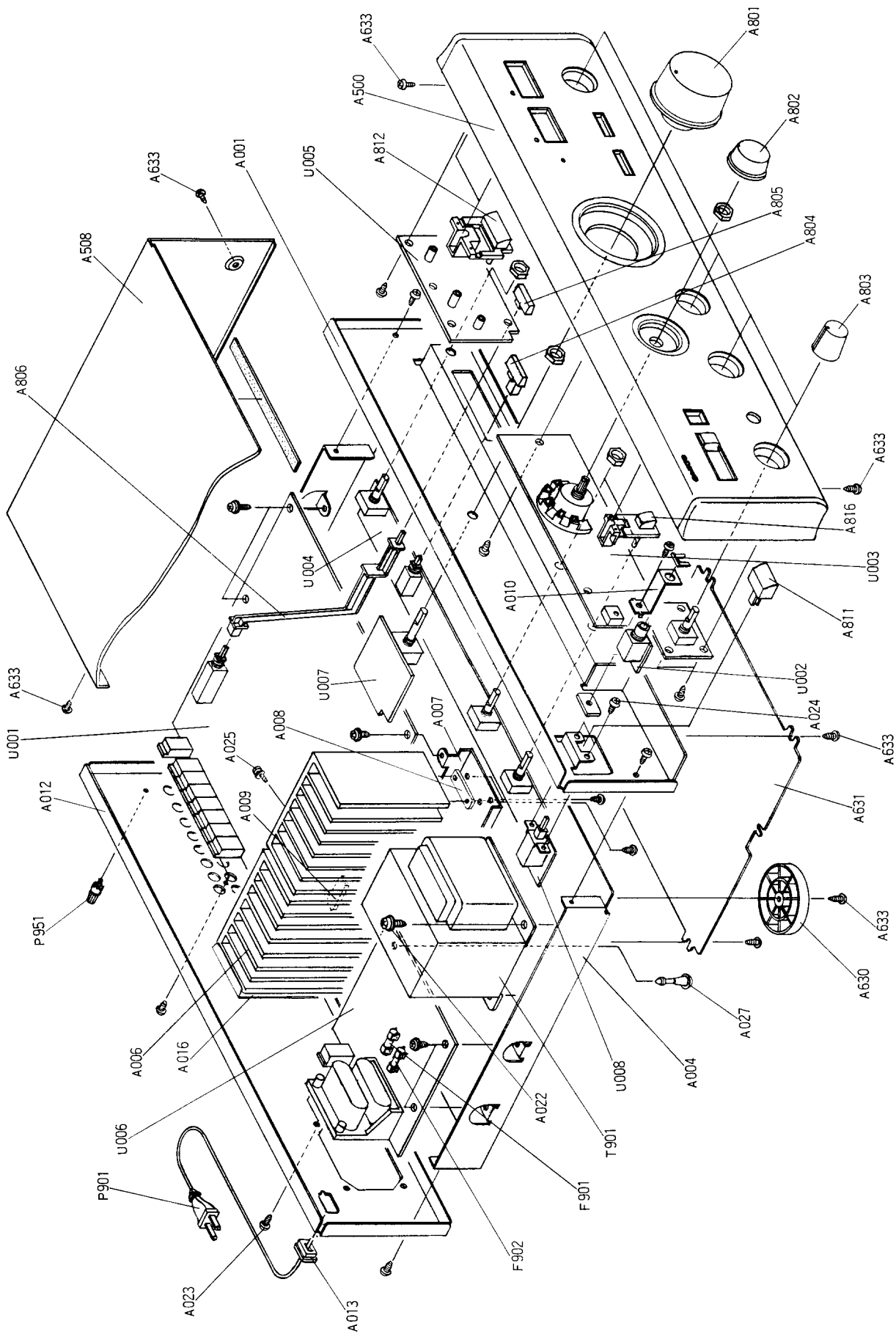
LC7822N (Analog Switch)



TRUTH TABLE

| IN 1 | IN 2 | OUT 1 | OUT 2 | MOTOR |
|------|------|-------|-------|---------|
| H | L | H | L | Normal |
| L | H | L | H | Reverse |
| H | H | OFF | OFF | Wait |
| L | L | OFF | OFF | Wait |

CHASSIS-EXPLODED VIEW



CHASSIS-EXPLODED VIEW PARTS LIST

| REF.NO. | PART NO. | DESCRIPTION | REF.NO. | PART NO. | DESCRIPTION | |
|-----------|-------------------------------------|---|-------------|------------|--|--|
| A001 | 27110632A | FRONT BRACKET | △ T901 | 2300648 | NPT-1106DG, POWER TRANSFORMER [W] | |
| A004 | 27100237 | CHASSIS | △ P901 | 253123 | AS-UC-6 #18 or [D] | |
| A006 | 27160277B | HEATSINK | | 253146 | AS-UC-6 #18 or | |
| A007 | 27130652A | BRACKET (HE) | | 253161 | AS-UC-6 #18, POWER SUPPLY CABLE | |
| A008 | 27190840A | HOLDER (HE-L) | △ P901 | 253149 | AS-CEE, POWER SUPPLY CABLE [P,W] | |
| A009 | 27190841 | HOLDER (HE-S) | | P951 | 25060044 | GROUND TERMINAL |
| A010 | 27141420 | BRACKET (HP) | △ S902 | 25065287 | NSS-2213P, SLIDE SWITCH [W] | |
| A012 | 27121424 | BACK PLATE [D] | △ F901 | 252050 | 5A(ST-6), FUSE [D,W] | |
| A012 | 27121425 | BACK PLATE [P] | △ F901,F902 | 252075 | 2.5A-SE-EAK, FUSE [P,W] | |
| A012 | 27121427 | BACK PLATE [W] | U001 | 1A270569-1 | NAAF-4169-1, INPUT TERMINAL CIRCUIT PC BOARD ASS'Y [D] | |
| A013 | 27300750 | BUSHING (CABLE) | | U001 | 1A270569-1A | NAAF-4169-1A, INPUT TERMINAL CIRCUIT PC BOARD ASS'Y [P, W] |
| A016 | 28175183 | INSULATING PLATE [D] | | U002 | 1A270570-1 | NAETC-4170-1, PHONES CIRCUIT PC BOARD ASS'Y |
| A022 | 830440089 | 4TTC+8CBC, TAPPING SCREW | | U003 | 1A270571-1 | NADG-4171-1, SYSTEM CONTROL CIRCUIT PC BOARD ASS'Y [D] |
| A023 | 833430080 | 3TTP+8PBC, TAPPING SCREW | | U003 | 1A270571-1A | NADG-4171-1A, SYSTEM CONTROL CIRCUIT PC BOARD ASS'Y [P, W] |
| A025 | 801433 | 3SMS8WSW+14BBC, SPECIAL SCREW | | U004 | 1A270572-1 | NAAF-4172-1, TONE CONTROL CIRCUIT PC BOARD ASS'Y [D] |
| A027 | 27190657 | KGLS-18RT, HOLDER | | U004 | 1A270572-1A | NAAF-4172-1A, TONE CONTROL CIRCUIT PC BOARD ASS'Y [P, W] |
| A500 | 1A270121 | FRONT PANEL ASS'Y [BLK] | | U005 | 1A270573-1 | NASW-4173-1, TAPE-2 AND DIRECT SWITCH CIRCUIT PC BOARD ASS'Y |
| (A502) | 28135199 | NAME PLATE | | U006 | 1A270574-1 | NAPS-4174-1, POWER SUPPLY CIRCUIT PC BOARD ASS'Y [D] |
| (A504) | 28125226 | END CAP (L) | | U006 | 1A270574-1A | NAPS-4174-1A, POWER SUPPLY CIRCUIT PC BOARD ASS'Y [P] |
| (A505) | 28125227 | END CAP (R) | | U006 | 1A270574-1B | NAPS-4174-1B, POWER SUPPLY CIRCUIT PC BOARD ASS'Y [W] |
| (A511) | 27267723 | GUIDE (VOL) [BLK] | | U007 | 1A270575-1 | NAETC-4175-1, VOLUME CONTROL CIRCUIT PC BOARD ASS'Y |
| (A512) | 27267725 | GUIDE ASS'Y (SEL) [BLK] | | U008 | 1A270577-1 | NASW-4177-1, POWER SWITCH CIRCUIT PC BOARD ASS'Y [D] |
| (A518) | 27267710B | GUIDE (DIR) [BLK] | | U008 | 1A270577-1A | NASW-4177-1A, POWER SWITCH CIRCUIT PC BOARD ASS'Y [P, W] |
| (A520) | 27267714B | GUIDE (POW) [BLK] | | U009 | 1A270578-1 | NAETC-4178-1, AC SOCKET CIRCUIT PC BOARD ASS'Y |
| (A820) | 28191593 | CLEAR PLATE | | | | |
| (A821) | 28198742 | PACKET | | | | |
| A500 | 1A271121 | FRONT PANEL ASS'Y [SIL] | | | | |
| (A511) | 27267724 | GUIDE (VOL) [SIL] | | | | |
| (A512) | 27267726 | GUIDE ASS'Y (SEL) [SIL] | | | | |
| (A518) | 27267711B | GUIDE (DIR) [SIL] | | | | |
| (A520) | 27267715B | GUIDE (POW) [SIL] | | | | |
| A508 | 28184484A | TOP COVER | | | | |
| A630 | 27175254 | BOTTOM LEG ASS'Y | | | | |
| A631 | 27170279 | BOTTOM BOARD | | | | |
| A633 | 834430088 | 3TTS+8BBC, TAPPING SCREW | | | | |
| A801 | 28324317 | KNOB (VOL) [BLK] | | | | |
| A801 | 28324318 | KNOB (VOL) [SIL] | | | | |
| A802 | 28324315 | KNOB (SEL) [BLK] | | | | |
| A802 | 28324316 | KNOB (SEL) [SIL] | | | | |
| A803 | 28324252-1 | KNOB (TON) [BLK] | | | | |
| A803 | 28324252-2 | KNOB (TON) [SIL] | | | | |
| A804 | 28324323A | KNOB (ST) [BLK] | | | | |
| A804 | 28324324A | KNOB (ST) [SIL] | | | | |
| A805 | 28324251 | KNOB (SOR) [BLK] | | | | |
| A805 | 28324251-1 | KNOB (SOR) [SIL] | | | | |
| A806 | 27273138A | JOINT (M) | | | | |
| A811 | 28324140 | KNOB (POW) [BLK] | | | | |
| A811 | 28324184 | KNOB (POW) [SIL] | | | | |
| A812 | 28324319 | KNOB ASS'Y (DIR) [BLK] | | | | |
| A812 | 28324320 | KNOB ASS'Y (DIR) [SIL] | | | | |
| A816 | 28324321 | KNOB ASS'Y (S-POW) [BLK] | | | | |
| A816 | 28324322 | KNOB ASS'Y (S-POW) [SIL] | | | | |
| Q521,Q522 | 2201703 or 2201704 or 2201706 | 2SC3855-O or 2SC3855-Y or 2SC3855-P, TRANSISTOR | | | | |
| Q523,Q524 | 2201693 or 2201694 or 2201696 | 2SA1491-O or 2SA1491-Y or 2SA1491-P, TRANSISTOR | | | | |
| △ T901 | 2300646 | NPT-1106D, POWER TRANSFORMER [D] | | | | |
| △ T901 | 2300647 | NPT-1106P, POWER TRANSFORMER [P] | | | | |

NOTE [D]: ONLY 120V MODEL
[P]: ONLY 230V MODEL
[W]: ONLY 120V/220V MODEL
[BLK]: ONLY BLACK MODEL
[SIL]: ONLY SILVER MODEL

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

PRINTED CIRCUIT BOARD PARTS LIST

INPUT TERMINAL CIRCUIT PC BOARD (NAAF-4169-1, NAAF-4169-1A)

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|--------------------|-----------------------|----------------------------------|
| ICs | | |
| Q105 | 22240191 | NJM4565D-D |
| Q201 | 22240270 | LC7822N |
| Q202 | 22240025 | LC4966 |
| Transistors | | |
| Q101-Q104 | 2211782 or 2211783 | 2SA991-F or 2SA991-E |
| Q203 | 221282 | DTC144ES |
| Q204 | 2212600 | DTA124ES |
| Q205 | 2213290 | DTC114ES |
| Q501,Q503 | 2213677 or 2213678 | 2SC3067-G or 2SC3067-H |
| Q505-Q508 | 2211455 | 2SA1015-GR |
| Q509,Q510 | 2211732 or 2211733 | 2SC1845-F or 2SC1845-E |
| Q511,Q512 | 2211255 | 2SC1815-GR |
| Q513,Q514 | 2211353 or 2211354 | 2SA949-O or 2SA949-Y |
| Q515,Q516 | 2211633 or 2211634 | 2SC2229-O or 2SC2229-Y |
| Q517,Q518 | 2212653 or 2212654 | 2SC3421-O or 2SC3421-Y |
| Q519,Q520 | 2212643 or 2212644 | 2SA1358-O or 2SA1358-Y |
| Q525,Q526 | 2211732 or 2211733 | 2SC1845-F or 2SC1845-E |
| Q528,Q529 | 2211792 or 2211793 | 2SA992-F or 2SA992-E |
| Q530,Q531 | 2211183 | 2SC1740-R |
| Q601-Q603 | 2213650 | DTD113ZS |
| Q604 | 2213510 | DTA114ES |
| Q605 | 2213290 | DTC114ES |
| Diodes | | |
| D101-D104 | 223163 | 1SS133 |
| D501-D504 | | |
| D601-D603 | | |
| D551 | 224450512 | MTZ5.1B, Zener |
| D911 | 22380038 | RBV602 |
| D912,D913 | 224451503 | MTZ15C |
| Coils | | |
| L101,L102 | 231133 | NCH-1188 [P,W] |
| L501,L502 | 231176 | S-1.3C |
| Capacitors | | |
| C101,C102 | 373301014 | 100 pF, 125V, Styrene (PP) [P,W] |
| C103,C104 | 374722224 | 2200 pF, 50V, Film (TF) [P,W] |
| C105,C106 | 393180477 | 4.7 μ F, 50V, Elect. |
| C107,C108 | 373302214 | 220 pF, 125V, Styrene (PP) |
| C111,C112 | 374728224 | 8200 pF, 50V, Film (TF) |
| C113,C114 | 354724719 | 470 μ F, 6.3V, Elect. |
| C115,C116 | 371121134 | 0.011 μ F, 50V, Mylar |
| C117,C118 | 371123034 | 0.03 μ F, 50V, Mylar |
| C119,C120 | 393180477 | 4.7 μ F, 50V, Elect. |
| C121,C122 | 374721224 | 1200 pF, 50V, Film (TF) |
| C132,C133 | 354741019 | 100 μ F, 16V, Elect. |
| C261-C263 | 354780339 | 3.3 μ F, 50V, Elect. |
| C501,C502 | 393180477 | 4.7 μ F, 50V, Elect. |
| C503,C504 | 373301014 | 100 pF, 125V, Styrene (PP) |
| C507,C508 | 374721024 | 1000 pF, 50V, Film (TF) |
| C509,C510 | 354722219 | 220 μ F, 6.3V, Elect. |

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-----------------------|-----------------------|---|
| C511,C512 | 354780339 | 3.3 μ F, 50V, Elect. |
| C517-C520 | 374722234 | 0.022 μ F, 50V, Film (TF) |
| C525,C526 | 374724734 | 0.047 μ F, 50V, Film (TF) |
| C537,C538 | | |
| C529-C532 | 354781019 | 100 μ F, 50V, Elect. |
| C541-C544 | 374721024 | 1000 pF, 50V, Film (TF) [P,W] |
| C554 | 354780479 | 4.7 μ F, 50V, Elect. |
| C555 | 354722219 | 220 μ F, 6.3V, Elect. |
| C914,C915 | 3504206 | 10000 μ F, 50V, Elect. |
| C916,C917 | 354761019 | 100 μ F, 35V, Elect. |
| C918,C919 | 354742219 | 220 μ F, 16V, Elect. |
| Resistors | | |
| R527,R528 | 442522704 | 27 Ω , 1/2W, Metal oxide film |
| R529,R530 | 442529104 | 91 Ω , 1/2W, Metal oxide film |
| R531,R532 | 5210062 or 5210216 | N06HR4.7KBD or N06HR5KBD, Semi-fixed |
| R535,R536 | 442522714 | 270 Ω , 1/2W, Metal oxide film |
| R537,R538 | 441720104 | 1 Ω , 2W, Metal oxide film |
| R539-R542 | 4000080 | 0.47 Ω , 5W, Metal plate |
| R543-R546 | 442520224 | 2.2 Ω , 1/2W, Metal oxide film |
| R553-R556 | | |
| R547,R548 | 442520824 | 8.2 Ω , 1/2W, Metal oxide film |
| R549,R550 | 442520564 | 5.6 Ω , 1/2W, Metal oxide film |
| R601,R602 | 441627514 | 750 Ω , 1W, Metal oxide film |
| R603 | 442522724 | 2.7 k Ω , 1/2W, Metal oxide film |
| R911,R913 | 441623914 | 390 Ω , 1W, Metal oxide film |
| R912,R914 | 441624314 | 430 Ω , 1W, Metal oxide film |
| Switch | | |
| S101 | 25035631 | NPS-142-L587 |
| Relaies | | |
| RL601,RL602 | 25065339 | NRL-2P5A-DC24V-46 |
| RL603 | 25065396 | NRL-2P1.25A-DC24-067 |
| Jumper sockets | | |
| JL201a,JL501a | 25050267 | NSCT-3P95 |
| JL301a | 25050273 | NSCT-9P101 |
| Terminals | | |
| P101 | 25045333 | NPJ-2PDBL185 |
| P201 | 25045300 | NPJ-6PDBL159 |
| P202,P203 | 25045303 | NPJ-4PDBL162 |
| P501 | 25060125 | NTM-8PDMN058 |
| Bracket | | |
| | 27141059 | Ground |

PHONES CIRCUIT PC BOARD (NAETC-4170-1)

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|--------------------|-----------|-------------------------------------|
| Resistors | | |
| R571,R572 | 441623914 | 390 Ω , 1W, Metal oxide film |
| Stereo jack | | |
| P571 | 25045255 | VKB26-5009 |
| Heatsink | | |
| | 27160166 | |

SYSTEM CONTROL CIRCUIT PC BOARD (NADG-4171-1, NADG-4171-1A)

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-----------------------------|----------|-------------|
| Photo receiving unit | | |
| U751 | 24130003 | GP1U50XS |

| CIRCUIT NO. | PART NO. | DESCRIPTION | TAPE-2 AND DIRECT SWITCH CIRCUIT PC BOARD (NASW-4173-1) | | |
|--|-----------------------|-------------------------------|--|-----------------------|--|
| | | | CIRCUIT NO. | PART NO. | DESCRIPTION |
| | ICs | | | Transistor | |
| Q351 | 22240322 | LB1639 | Q707 | 2213290 | DTC114ES |
| Q701 | 22240431 | LC65204A-4605 | | Diodes | |
| Q751,Q752 | 22240376 | MPD17103CX-528 | D710,D711 D720 | 22514DX2 | SEL2913K-DX2, LED |
| | Transistors | | | Switches | |
| Q702 | 2211455 or 2213074 | 2SA1015-GR or 2SA933-R | S703,S704 | 25035548 | NPS-111-S510 |
| Q703 | 2213284 | 2SC1740S-R | | Holder | |
| Q704~Q706 | 2213290 | DTC114ES | | 27190811 (LED) | |
| Q708 | | | | | |
| | Diodes | | POWER SUPPLY CIRCUIT PC BOARD (NAPS-4174-1, NAPS-4174-1A, NAPS-4174-1B) | | |
| D701~D708 | 223163 | 1SS133 | CIRCUIT NO. | PART NO. | DESCRIPTION |
| D751~D764 | | | | ICs | |
| D709 | 224450562 | MTZ5.6B, Zener | Q801 | 22240345 | CX20106A |
| D712~D722 | 225142DX2 | SEL2913K-DX2, LED | Q804 | 222780053 | 78L05 |
| | Osc.element | | | Transistors | |
| X701 | 3010150 | CST4.00MGW | Q753 | 221282 | DTC144ES [D] |
| X751,X752 | 3010154 | CST8.00MT | Q802 | 2213290 | DTC114ES |
| | Capacitors | | Q803 | 2213510 | DTA114ES |
| C352,C703 C752 | 354741009 | 10 μ F, 16V, Elect. | Q901 | 2213650 | DTD113ZS |
| C701 | 3000051 | 0.047 F, 5.5V, Super | Q931 | 2201754 or 2201755 | 2SD1913-R or 2SD1913-S |
| C704 | 354780109 | 1 μ F, 50V, Elect. | | Diode | |
| C753 | 354780339 | 3.3 μ F, 50V, Elect. | D801,D803 D804,D901 | 223163 | 1SS133 |
| | Resistors | | D931~D934 | 22380032 | 1SR139-100 |
| R701 | 49163103404 | 10 K Ω *4, Network | D936,D937 | | |
| | Switches | | D935 | 224450623 | MTZ6.2C, Zener |
| S701 | 25030345 | NRS-1112-15SRM | D938 | 224450512 | MTZ5.1B |
| S702 | 25030346 | NRSF-115-25SRB | | Capacitors | |
| S705 | 25035548 | NPS-111-S510 | C802 | 354780229 | 2.2 μ F, 50V, Elect. |
| | Holders | | C803 | 354780109 | 1 μ F, 50V, Elect. |
| | 27190836 | (LED-5) | C804 | 354780339 | 3.3 μ F, 50V, Elect. |
| | 27190811 | (LED) | C806 | 354721019 | 100 μ F, 6.3V, Elect. |
| | | | C808 | 354741009 | 10 μ F, 16V, Elect. |
| TONE CONTROL CIRCUIT PC BOARD (NAAF-4172-1, NAAF-4172-1A) | | | C902 | 3500065A | 0.01 μ F, AC400V/125V, Film (IS) |
| CIRCUIT NO. | PART NO. | DESCRIPTION | C903 | 374721034 | 0.01 μ F, 50V, Film (TF) |
| | ICs | | C931 | 354742229 | 2200 μ F, 16V, Elect. |
| Q301,Q321 | 22240050 | MPC4570C | C932,C934 | 354741019 | 100 μ F, 16V, Elect. |
| | Capacitors | | C935 | 354721019 | 100 μ F, 6.3V, Elect. |
| C301,C302 | 354780109 | 1 μ F, 50V, Elect. | C936 | 354742209 | 22 μ F, 16V, Elect. |
| C325,C326 | | | C937 | 374721034 | 0.01 μ F, 50V, Film (TF) |
| C305,C306 | 354780229 | 2.2 μ F, 50V, Elect. | | Resistors | |
| C323,C324 | | | R931 | 441622204 | 22 Ω , 1W, Metal oxide film |
| C321,C322 | 374728224 | 8200 pF, 50V, Film (TF) | R932,R935 | 442521024 | 1 K Ω , 1/2W, Metal oxide film |
| C327,C328 | 374723934 | 0.039 μ F, 50V, Film (TF) | R933 | 442524714 | 470 Ω , 1/2W, Metal oxide film |
| C331,C332 | 374722234 | 0.022 μ F, 50V, Film (TF) | R934 | 442521224 | 1.2 K Ω , 1/2W, Metal oxide film |
| C391,C392 | 354780339 | 3.3 μ F, 50V, Elect. | R936 | 442520224 | 2.2 Ω , 1/2W, Metal oxide film |
| | Resistors | | R937 | 442525604 | 56 Ω , 1/2W, Metal oxide film [D] |
| R315 | 5104292A | N11RGLC250KWT25Z, Variable | R937 | 442522704 | 27 Ω , 1/2W, Metal oxide film [P,W] |
| R321(R322) | 5104291A | N14RLC100KWT25Z, Variable | | Mini jack | |
| R335(R336) | | | P801 | 25045293 | HSJ-1003-01-012 |
| | Switch | | P802 | 25045172 | HSJ-1003-01-020 |
| S321 | 25035480 | NPS-142-L442 | | Relay | |
| | | | RL901 | 25065269 | NRL-1P5A-DC12V-36ZA [D] |

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-----------------------|------------|-------------------------|
| RL901 | 25065248 | NRL-1P15A-DC12-29 [P,W] |
| Jumper sockets | | |
| JL701a | 25050272 | NSCT-8P100 |
| JL702a | 25050273 | NSCT-9P101 |
| JL721a | 25050268 | NSCT-4P96 |
| JL722a | 25050271 | NSCT-7P99 |
| Socket | | |
| ⚠ P902 | 25050551 | NSCT-6P362 [P,W] |
| Fuse holder | | |
| ⚠ F901a | 250113 | SN5051 [D,W] |
| ⚠ F901a | 25050065 | YSH403T [P] |
| ⚠ F902a | 25050065 | YSH403T [P,W] |
| Fuse label | | |
| ⚠ F901b | 29360462 | 5A/125V [D,W] |
| ⚠ F901b | 29360405 | T2.5A/250V [P] |
| ⚠ F901c | 29360462-1 | Label [D] |

VOLUME CONTROL CIRCUIT PC BOARD (NAETC-4175-1)

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|----------------------|-----------|-------------------------|
| Transistors | | |
| Q353,Q354 | 2212286 | or 2SC2878-B or |
| | 2212285 | 2SC2878-A |
| Capacitors | | |
| C355,C356 | 354780109 | 1 μ F, 50V, Elect. |
| Resistors | | |
| R351(R352) | 5104234 | N16RGM50KA30F, Variable |
| Jumper socket | | |
| JL704 | 25050281 | NSCT-4P109 |

POWER SWITCH CIRCUIT PC BOARD (NASW-4177-1, NASW-4177-1A)

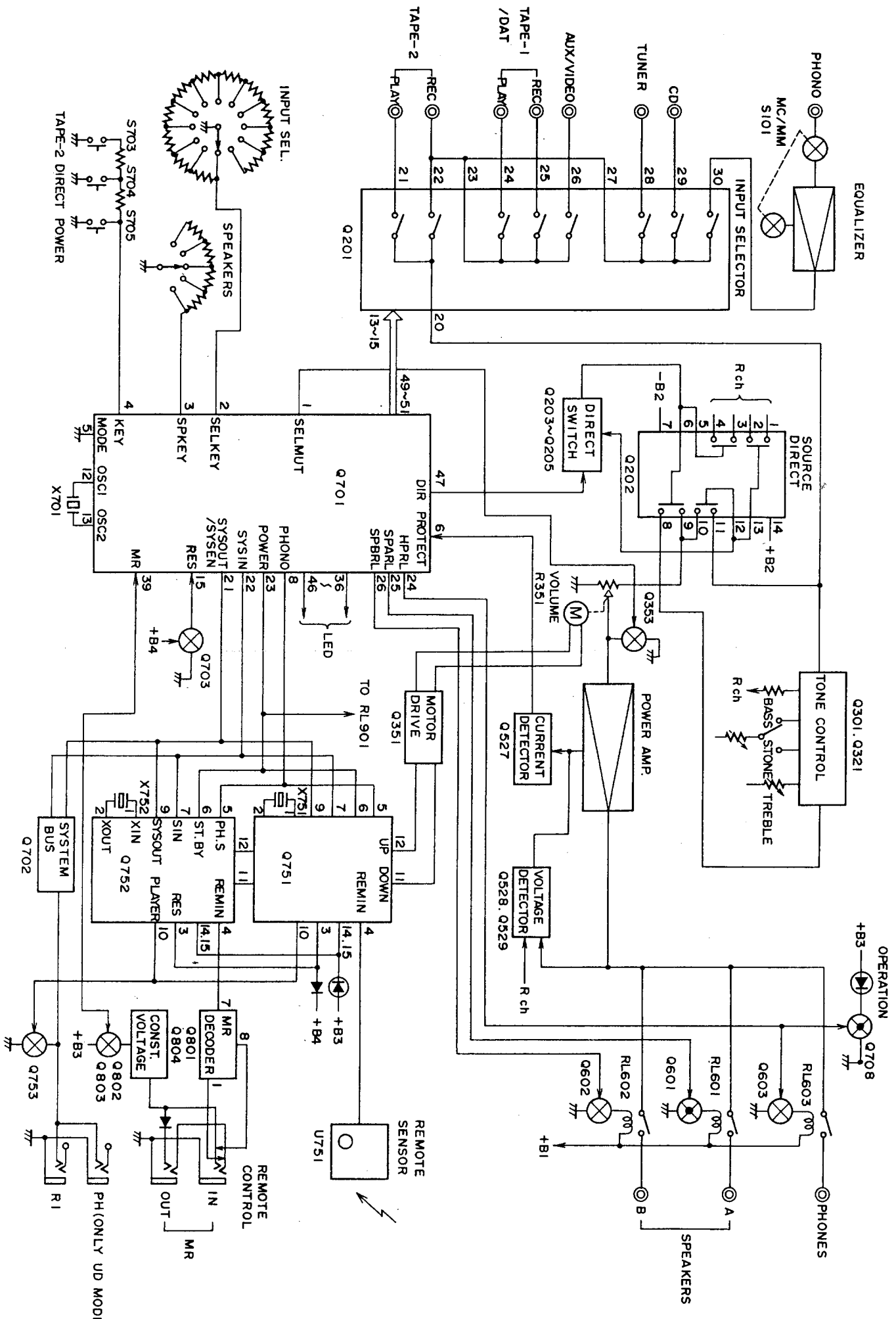
| CIRCUIT NO. | PART NO. | DESCRIPTION |
|------------------|----------|--------------------------------------|
| Capacitor | | |
| ⚠ C901 | 3500065A | 0.01 μ F, AC400V/125V, Film (IS) |
| Switch | | |
| ⚠ S901 | 25035550 | NPS-111-L512P |

AC SOCKET CIRCUIT PC BOARD (NAETC-4178-1)

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|---------------|----------|-----------------------|
| Socket | | |
| ⚠ P903 | 25050388 | NSCT-6P215, AC Socket |

NOTE: [D]: Only 120V models
[P]: Only 230V models
[W]: Only 120V/220V models

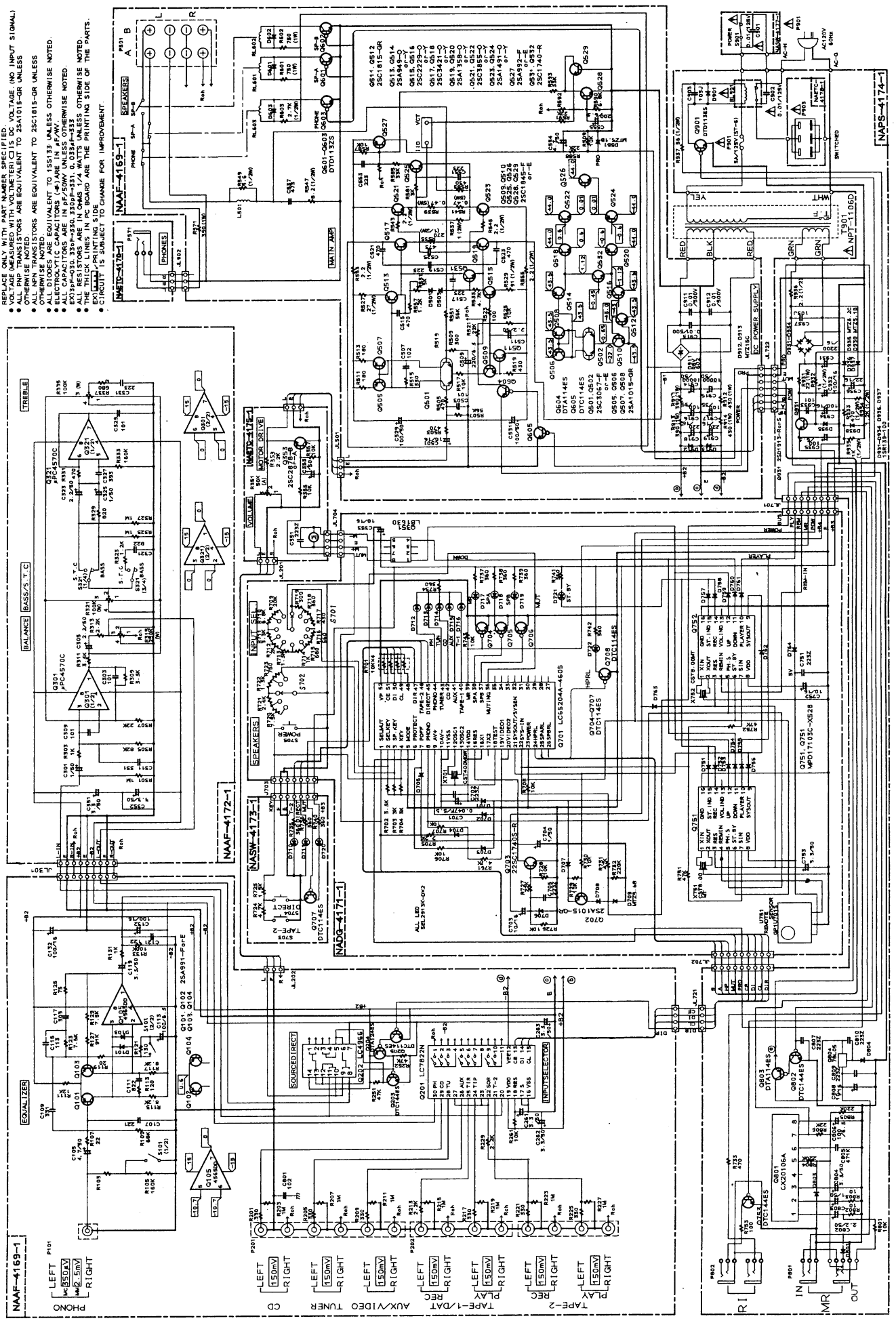
NOTE:
THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL
FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY
WITH PART NUMBER SPECIFIED.



SCHEMATIC DIAGRAM

ODEL A-803 (120V)

NOTE:
 • THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR SAFETY.
 • REPLACE ONLY WITH PART NUMBER SPECIFIED.
 • VOLTAGE MEASURED WITH VOLTMETER C1 IS DC VOLTAGE (NO INPUT SIGNAL).
 • RESISTORS ARE EQUIVALENT TO 25A1815-OR UNLESS OTHERWISE NOTED.
 • ALL MPN TRANSISTORS ARE EQUIVALENT TO 25C1815-OR UNLESS OTHERWISE NOTED.
 • ALL DIODES ARE EQUIVALENT TO 15S133 UNLESS OTHERWISE NOTED.
 • ELECTROLYTIC CAPACITORS (E) ARE IN μF/WV. UNLESS OTHERWISE NOTED.
 • ALL CAPACITORS ARE IN P/F/50V UNLESS OTHERWISE NOTED.
 • ALL RESISTORS ARE IN OHMS 1/4 WATTS UNLESS OTHERWISE NOTED.
 • THE THICK LINES IN PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
 • CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.



NAPS-4174-1

PART LIST OF PACKING

| REF.NO. | PART NO. | DESCRIPTION |
|----------------------------|------------|---------------------------------------|
| A851 | 29052181 | MASTER CARTON BOX [BLK] |
| A851 | 29052181-3 | MASTER CARTON BOX [SIL] |
| A852 | 29091470 | PAD, LEFT |
| A853 | 29091471 | PAD, RIGHT |
| A855 | 29095378 | PROTECTION SEET |
| A856 | 29100105 | 620 × 550mm, POLY-VINYL BAG |
| A857 | 282301 | SEALING HOOK |
| A858 | 29110071 | W=50 mm, DAMPLON TAPE |
| A874 | 261504 | W=30 mm, PAPER TAPE |
| | 29360778 | LABEL (FLASH) [N] |
| ACCESSARY BAG ASS'Y | | |
| A901 | 29341612 | INSTRUCTION MANUAL [D] |
| | 29341614 | INSTRUCTION MANUAL [P,W] |
| | 29365019A | WARRANTY CARD [N] |
| | 29365024A | WARRANTY CARD [F] |
| | 29100107 | POLY-VINYL BAG (WARRANTY) [F] |
| | 29358002J | SERVICE STATION LIST [N] |
| A902 | 29100097 | 250 × 350, POLY-VINYL BAG |
| A904 | 2010200 | 3.5 MINI CABLE |
| A906 | 24140200 | RC-200S, REMOTE CONTROL UNIT [D] |
| A906 | 24140205 | RC-205S, REMOTE CONTROL UNIT [P,W] |
| A907 | 3010054 | UM-3, TOW BATTERIES |
| | 25055018 | CV-K-1, CONVERSION PLUG [W] |

NOTE: [D]: ONLY 120V MODEL
[P]: ONLY 230V MODEL
[W]: ONLY 120V/220V MODEL
[N]: ONLY U.S.A. MODEL
[F]: ONLY FRENCH MODEL
[BLK]: ONLY BLACK MODEL
[SIL]: ONLY SILVER MODEL