Ref. No. 3752
092002

# ONKYO SERVICE MANUAL

## Powered sub-woofer with built-in 6ch amplifier

## MODEL SWA-155X

**Black and Silver models**

| | |
|---|---|
| DT,DS | 120V AC, 50/60Hz |
| GQ,GT | 230-240V AC, 50Hz |

### 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 PART 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.**

ONKYO®
IMAGINATIVE SIGHT & SOUND

# SPECIFICATIONS

## ■ SWA-155X (subwoofer)

INPUT: RCA L/R/C/SL/SR/ subwoofer (500 mV/47 kΩ)

**AMPLIFIER SECTION**

| | | |
|---|---|---|
| Power output | Front: | 15 W x 2 (6 Ω /EIAJ) |
| | Center: | 15 W (6 Ω /EIAJ) |
| | Surround: | 15 W x 2 (6 Ω /EIAJ) |
| | Subwoofer: | 25 W (3 Ω /EIAJ) |
| | Front: | 11 W x 2 (6 Ω /DIN) |
| | Center: | 11 W (6 Ω /DIN) |
| | Surround: | 11 W x 2 (6 Ω /DIN) |
| | Subwoofer: | 20 W (3 Ω /DIN) |

Total harmonic distortion: 0.1% (Output: 5 W)
Signal-to-noise ratio: 100 dB (STEREO: IHF A 0.5 V input)

**SPEAKER SECTION**

Type: J'DRIVE system, 16 cm OMF cone

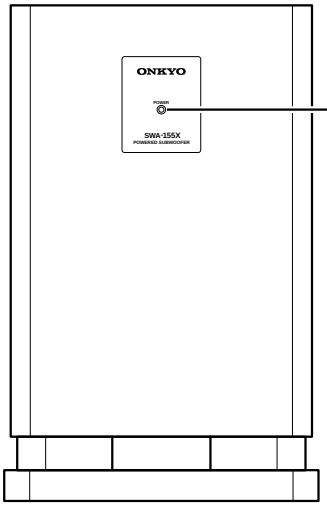
**GENERAL**

| | |
|---|---|
| Power supply | AC 120 V, 60 Hz |
| | AC 220–230 V, 50/60 Hz |
| | AC 230–240 V, 50 Hz |

Power consumption: 65 W
Power consumption (Max.): 135 W
Dimensions (W x H x D):185 mm x 299 mm x 312 mm
Weight: 8 kg
Others: Magnetic shielding (EIAJ)

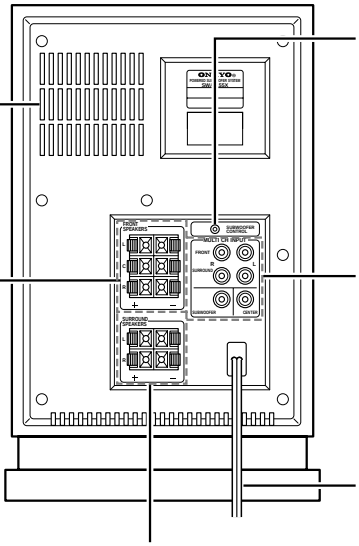
# PANEL VIEW

## Subwoofer SWA-155X (front panel)




**POWER indicator**
Lights up green when the power is turned on.

## Subwoofer SWA-155X (rear panel)



**Cooling fan**
This fan starts rotating when the output exceeds a certain threshold to release the heat inside the subwoofer.

**FRONT SPEAKERS connectors**
Connect the D-M7 front L/R speakers to the L/R connectors and the D-M3 center speaker to the C connector.

**SUBWOOFER CONTROL jack**
Connect this jack to the PDR-155 SUBWOOFER CONTROL jack.

**MULTI CH INPUT jacks**
Connect these jacks to the PDR-155 MULTI CH OUTPUT jacks.

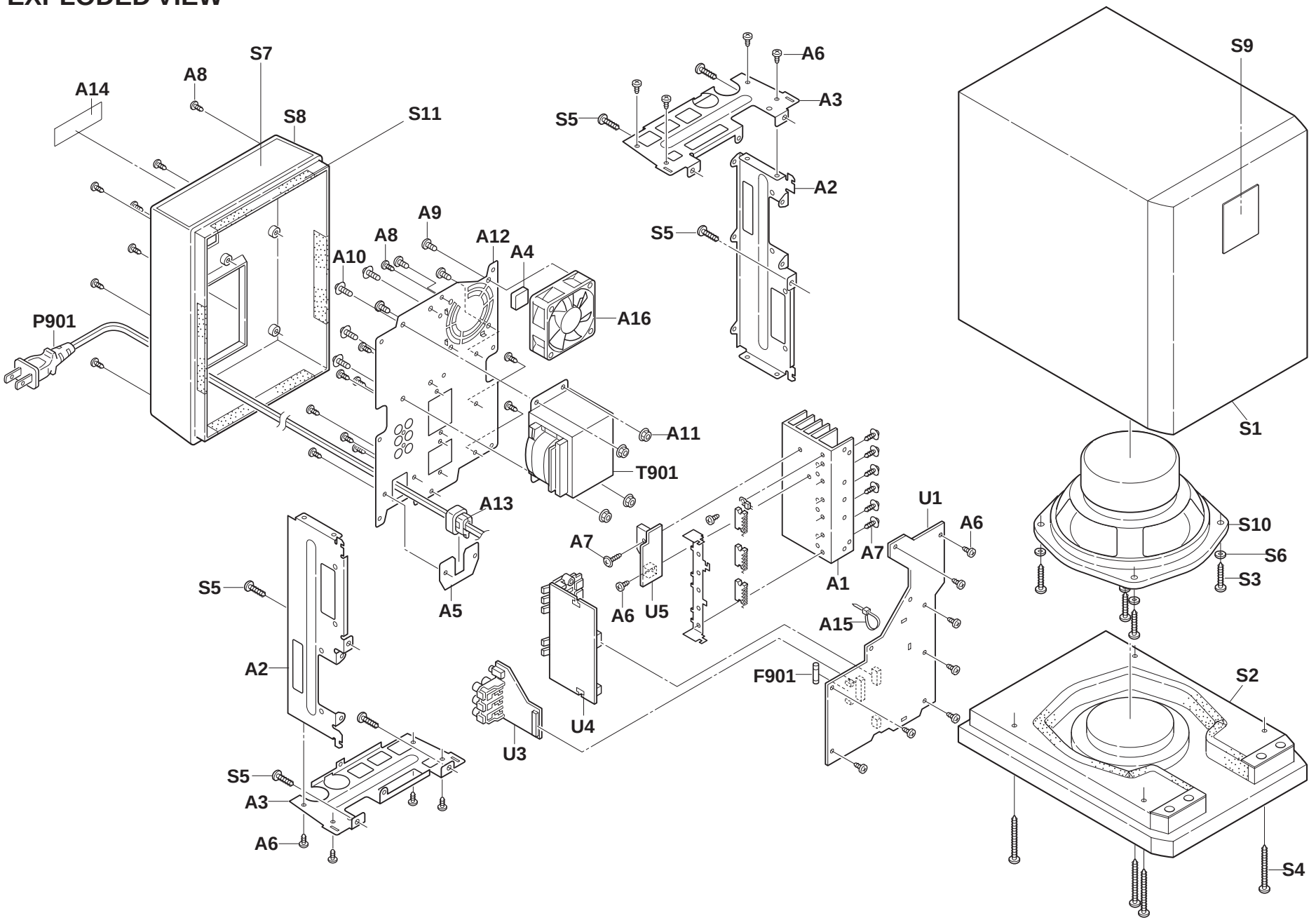
**Power cable**

**SURROUND SPEAKERS connectors**
Connect the D-M3 left/right surround speakers here.

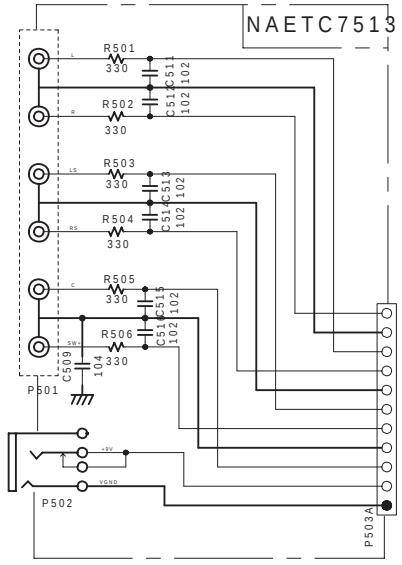
| A | B | C | D | E |
|---|---|---|---|---|

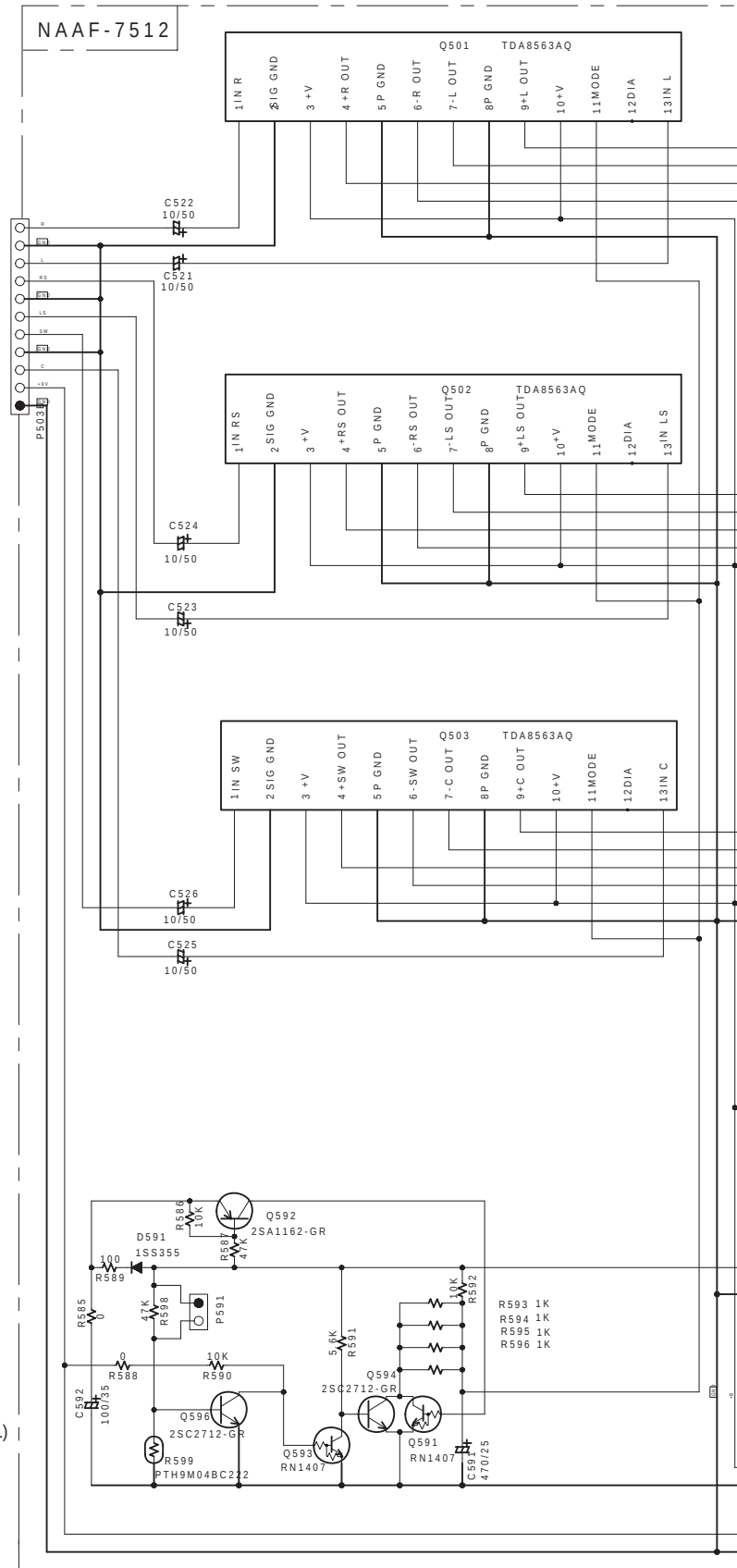
1
2
3
4

## EXPLODED VIEW



# SCHEMATIC DIAGRAM

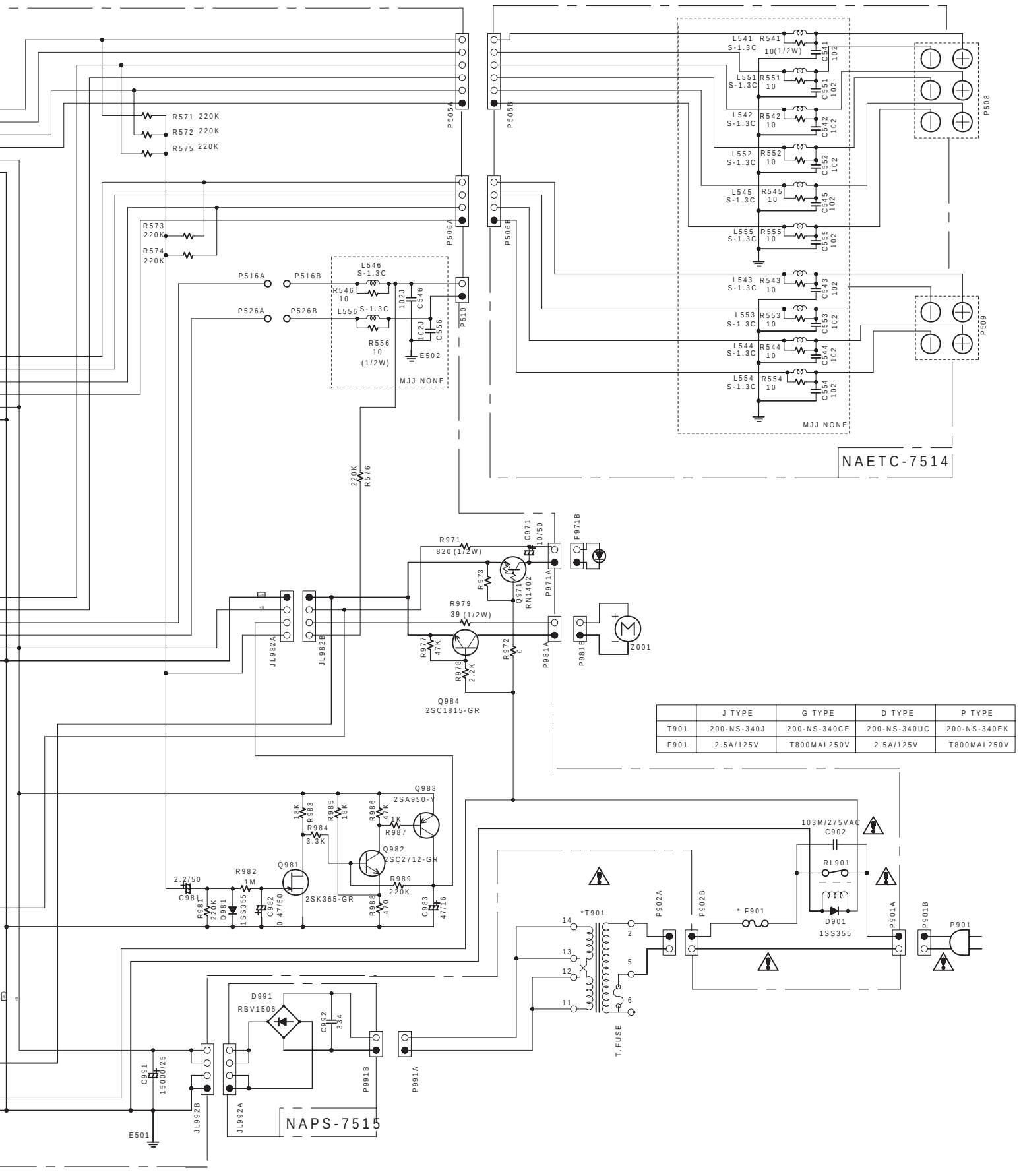



**NOTE**

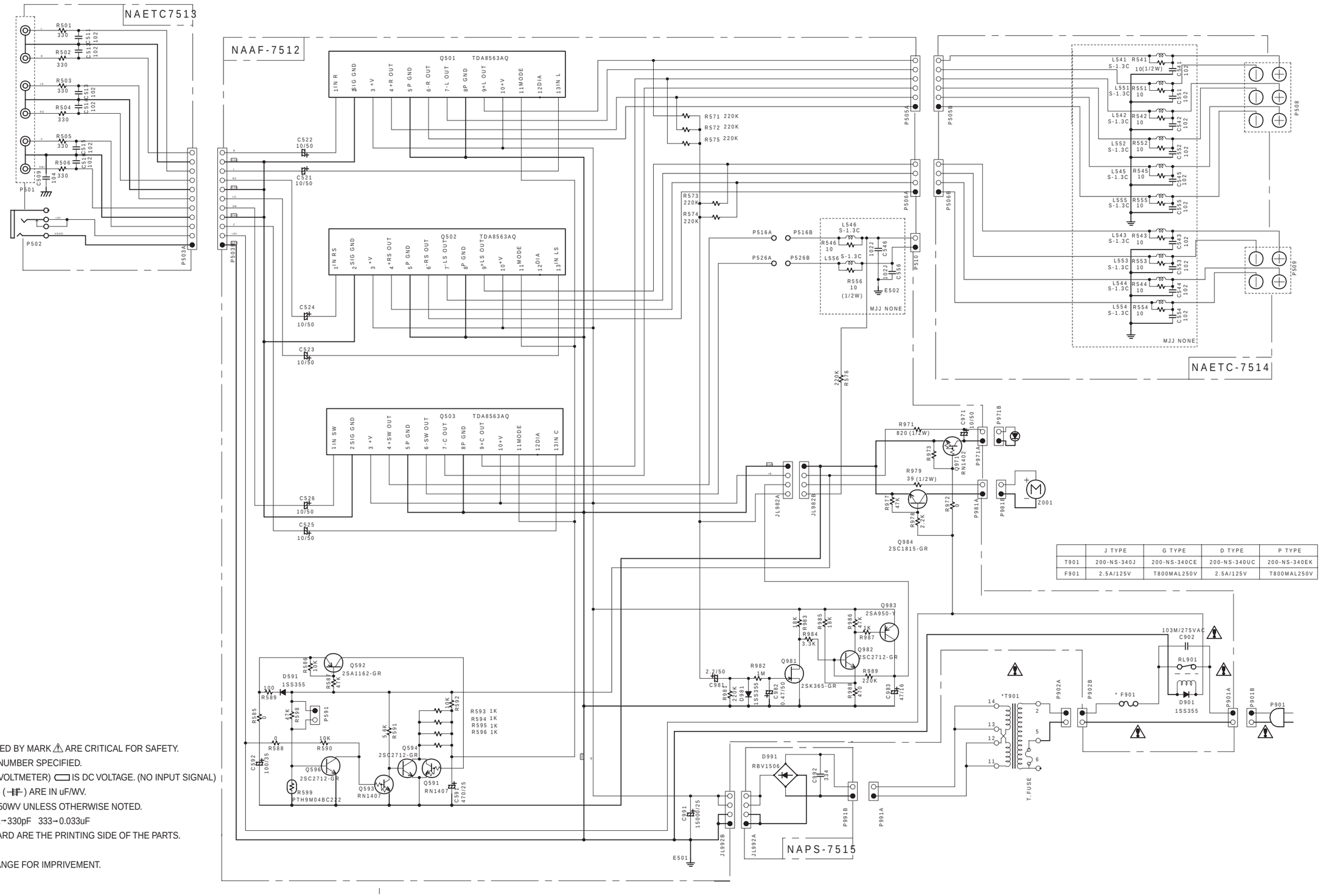
- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE. (NO INPUT SIGNAL)
- ELECTROLYTIC CAPACITORS ( ⊣‖⊢ ) ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
  EX) 030→3pF 330→33pF 331→330pF 333→0.033uF
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▭ ← PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPRIVEMENT.

E F G H




| | J TYPE | G TYPE | D TYPE | P TYPE |
|---|---|---|---|---|
| T901 | 200-NS-340J | 200-NS-340CE | 200-NS-340UC | 200-NS-340EK |
| F901 | 2.5A/125V | T800MAL250V | 2.5A/125V | T800MAL250V |

# SCHEMATIC DIAGRAM

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  EX) 030→3pF 330→33pF 331→330pF 333→0.033uF
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
  EX) ▭ ←PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPRIVEMENT.

| SWA-155X Parts list | | | | | | | |
|---|---|---|---|---|---|---|---|
| REF. No. | Description | | Part No. | DESTINATION | | | |
| | | | | UDS | UDT | UGQ | UGT |
| **Circuit board section** | | | | | | | |
| C509 | C-CERA C | CK725F1E-104Z1 | 332161040R1 | O | O | O | O |
| C511-C516 | C-CERA C | CC725CH1E-102J1 or | 342111024R1 or | O | O | O | O |
| | | CC725CH1H-102J1 or | 342101024R1 or | O | O | O | O |
| | | CC725CH1E-102K1 | 342111025R1 | O | O | O | O |
| C521-C526 | VX C | CE04W50V10M | 393381009 | O | O | O | O |
| C541-C546<br>C551-C556 | C-CERA C | CC725CH1E-102J1 | 342111024R1 | O | O | O | O |
| C591 | VR C | CE04W25V-470M(VR) | 394654717 | O | O | O | O |
| C592 | VR C | CE04W35V-100M(VR) | 394661017 | O | O | O | O |
| C902 | IS C | DE1607F103-KH | 3300031 | O | O | O | O |
| C971 | VR C | CE04W50V-10M(VR) | 394681007 | O | O | O | O |
| C981 | VR C | CE04W50V-2.2M(VR) | 39468022 | O | O | O | O |
| C982 | VR C | CE04W50V-0.47M(VR) | 394684797 | O | O | O | O |
| C983 | VR C | CE04W25V-47M(VR) | 394654707 | O | O | O | O |
| C991 | ELECT C | SMH 15000 $\mu$ F/25V or | - or | O | O | O | O |
| | | 13000uF/25V | 3504168 | O | O | O | O |
| C992 | TF C | ECQ-V50V-334J | 374723344 | O | O | O | O |
| D591 D901 | C-DIODE | 1SS352 or | 223234R2 or | O | O | O | O |
| D981 | | 1SS355 | 223269R2 | O | O | O | O |
| D991 | DIODE | RBV-1506 or | 22380044 or | O | O | O | O |
| | | D15XB60 | 22380309 | O | O | O | O |
| E501 | RETAINER | | - | O | O | O | O |
| E903 | TRM | NTM-1P233 (M1969) | 25060302 | O | O | O | O |
| F901A,B | FUSE HOL | NSCT-1P2031 | 25052133 | O | O | O | O |
| F901C | F SPEC SHT | Fuse description sheet (T800mAL250V) | 29362519 | - | - | O | O |
| JL982 | JUMPER LEAD | JL4 250 B | 4J250606B15 | O | O | O | O |
| JL982A,B | WIRE HOL | NSCT-4P875 | 25051088 | O | O | O | O |
| JL992 | JUMPER LEAD | JL4 200 H | 4J200606H | O | O | O | O |
| JL992A,B | WIRE HOL | NSCT-4P895 or | 25051108 or | O | O | O | O |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | NSCT-4P875 | 25051088 | O | O | O | O |
| L541-L546<br>L551-L556 | S COIL | S-1.3C | 231176 | O | O | O | O |
| P501 | PIN JACK | NPJ-6PWRLGGP493 | 25045697 | O | O | O | O |
| P502 | ST JACK | LGY2502-0200C | 25045696 | O | O | O | O |
| P503A | SOCKET | NSCT-11P1026 | 25051236 | O | O | O | O |
| P503B | PLUG | NPLG-11P663 | 25055707 | O | O | O | O |
| P505A | SOCKET | NSCT-6P2452 | 25052555 | O | O | O | O |
| P505B | PLUG | NPLG-6P1030 | 25056091 | O | O | O | O |
| P506A | SOCKET | NSCT-4P2450 | 25052553 | O | O | O | O |
| P506B | PLUG | NPLG-4P1028 | 25056089 | O | O | O | O |
| P508 | TRM | NTM-6PDML256 | 25060325 | O | O | O | O |
| P509 | TRM | NTM-4PDML252 | 25060321 | O | O | O | O |
| P510 | PLUG | NPLG-2P158 | 25055174 | O | O | O | O |
| P516 | CRIMP AS | CRIMP AS | 2065525181UL | O | O | O | O |
| P526 | CRIMP AS | CRIMP AS | 2065525203UL | O | O | O | O |
| P591 | PLUG | NPLG-2P645 | 25055689 | O | O | O | O |
| P599 | WS CLAMP | CP-1S | 260224 | O | O | O | O |
| P901A | PLUG | NPLG-2P631 | 25055675 | O | O | O | O |
| P902B P991B | PLUG | NPLG-2P632 | 25055676 | O | O | O | O |
| P971A | PLUG | NPLG-2P349 | 25055366 | O | O | O | O |
| P981A | P PLUG | NPLG-2P568 | 25055600 | O | O | O | O |
| Q501 Q502<br>Q503 | IC | TDA8563AQ | 22241679 | O | O | O | O |
| Q501A | BRACKET | (TR) | 27130865 | O | O | O | O |
| Q591,Q593 | TRANSISTOR | RN1407 or | 2216260R2 or | O | O | O | O |
| | | KRC107S | 2216340R2 | O | O | O | O |
| Q592 | TRANSISTOR | 2SA1162-GR or | 2214375R2 or | O | O | O | O |
| | | KTA1504-GR | 2216185R2 | O | O | O | O |
| Q594 Q596<br>Q982 | TRANSISTOR | 2SC2712-GR or | 2213145R2 or | O | O | O | O |
| | | KTC3875-GR | 2216175R2 | O | O | O | O |
| Q971 | TRANSISTOR | RN1402 or | 2214470R2 or | O | O | O | O |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | KRC102S | 2216190R2 | O | O | O | O |
| Q981 | TRANSISTOR | 2SK365-GR | 2212445 | O | O | O | O |
| Q983 | TRANSISTOR | 2SA950-Y | 2211504 | O | O | O | O |
| Q984 | TRANSISTOR | 2SC1815-GR or | 2211255 or | O | O | O | O |
| | | KTC3198-Gr | 2215985 | O | O | O | O |
| R501-R506 | C-CARBON R | RN72K1J-331JE | 435033314R1 | O | O | O | O |
| R509,R585 R588,R972 | C-CARBON R | RN72K1J-000JE | 435030004R1 | O | O | O | O |
| R541-R546 R551-R556 | METAL O R | RS1/2WBJ-10 | 443521004 | O | O | O | O |
| R571-R576 R981,R989 | C-CARBON R | RN72K1J-224JE | 435032244R1 | O | O | O | O |
| R586,R590 | C-CARBON R | RN72K1J-103JE | 435031034R1 | O | O | O | O |
| R587,R598 R977,R986 | C-CARBON R | RN72K1J-473JE | 435034734R1 | O | O | O | O |
| R589 | C-CARBON R | RN72K1J-101JE | 435031014R1 | O | O | O | O |
| R591 | C-CARBON R | RN72K1J-562JE | 435035624R1 | O | O | O | O |
| R593,R594 R595,R596 | C-CARBON R | RN72K1J-102JE | 435031024R1 | O | O | O | O |
| R599 | THERMISTOR | PTH9M04BC222TS2 F333 | 4000150 | O | O | O | O |
| R971 | METAL O R | RS1/2WBJ-820 | 443528214 | O | O | O | O |
| R978 | C-CARBON R | RN72K1J-222JE | 435032224R1 | O | O | O | O |
| R979 | METAL O R | RS1/2WBJ-39 | 443523904 | O | O | O | O |
| R982 | C-CARBON R | RN72K1J-105JE | 435031054R1 | O | O | O | O |
| R983,R985 | C-CARBON R | RN72K1J-183JE | 435031834R1 | O | O | O | O |
| R984 | C-CARBON R | RN72K1J-332JE | 435033324R1 | O | O | O | O |
| R988 | C-CARBON R | RN72K1J-471JE | 435034714R1 | O | O | O | O |
| RL901 | RELAY | NRL-1P5A-DC9-150 | 25065601 | O | O | O | O |

| **Exploded view section** | | | | | | | |
|---|---|---|---|---|---|---|---|
| A1 | HEAT SINK | | 27160506 | O | O | O | O |
| A2 | BRACKET(LR) | | 27130881 | O | O | O | O |
| A3 | BRACKET(BT) | | 27130882 | O | O | O | O |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| A4 | CUSHION | 10x10xt0.5 | 28141464 | O | O | O | O |
| A5 | RETAINER | AC CORD | 27141822 | O | O | O | O |
| A6 | SCREW | 3TTB+8B | 838130088 | O | O | O | O |
| A7 | SCREW | 3SMS8W.SW+14B(BC) | 801433 | O | O | O | O |
| A8 | SCREW | 3TTB+8B(BC) | 838430088 | O | O | O | O |
| A9 | SCREW | 5TTB+10B(BC) | 838450108 | O | O | O | O |
| A10 | SCREW | 4TTC+10C(BC) | 830440109 | O | O | O | O |
| A11 | NUT | FWN4*10FN | 86414010 | O | O | O | O |
| A12 | REAR PANEL | | - | O | O | - | - |
| | | | - | - | - | O | O |
| A13 | BUSHING | S-RELIEF #2271 | 27300750 | O | O | O | O |
| A14 | SERIAL LABEL | | - | O | O | O | O |
| A15 | WIRE TIE | BINDER(CLAMPER) UL | 260208 | O | O | O | O |
| S1 | CABINET AS | BOX + ACOUSTIC SPONG + BUTYL + LED CORD AS + SP CORD AS | 505-1HTP-DR7 | O | O | O | O |
| S10 | SPEAKER UNIT | for SUBWOOFER | W16146B | O | O | O | O |
| S11 | PACKING | 130x35x1t | 429-NS-323A | O | O | O | O |
| S2 | BOTTOM BOARD AS | BOTTOM BOARD + DISK BOARD $\phi$ 80 + DISK BOARD $\phi$ 108 + ED BOARD + SPONGE | 516-HTP-DR7 | O | O | O | O |
| S3 | WOOD SCREW | BIND HEAD 4x20(BC) TAPPING(A) | 300-B8402000 | O | O | O | O |
| S4 | WOOD SCREW | BIND HEAD 4x50(BC) TAPPING(A) | 300-B8405000 | O | O | O | O |
| S5 | WOOD SCREW | BIND HEAD 4x16(BC) TAPPING(A) | 300-B8401600 | O | O | O | O |
| S6 | RUBBER WASHER | $\phi$ 7x $\phi$ 3.9x1t | 430-NS-291 | O | O | O | O |
| S7 | PLATE | PVC 1t BLACK | 410-NS-323 | O | O | O | O |
| S8 | COVER | | 400-1CNS-323 | O | O | O | O |
| S9 | FRONT PLATE | W/PRINTED | 410-FSWA-155X | O | O | O | O |
| U1 | PWB | NCAF-7512 | - | O | O | O | O |
| U3 | PWB | NCETC-7513 | - | O | O | O | O |
| U4 | PWB | NCETC-7514 | - | O | O | O | O |
| U5 | PWB | NCPS-7515 | - | O | O | O | O |
| F901 | FUSE | 2.5A-UL/T-237 | 252160 | O | O | - | - |
| | | 800mA-SE-EAK-FUSE | 252069 | - | - | O | O |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| T901 | P TRANS | NPT-1441G | 200-NS340CE | - | - | O | O |
| | | NPT-1441D | 200-NS-340UC | O | O | - | - |
| P901 | AC CORD | AS-UC-2 | 253332HIT | O | O | - | - |
| | | AS-CEE | 253335HIT | - | - | - | O |
| | | AS-BS | 253198HIT | - | - | O | - |

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