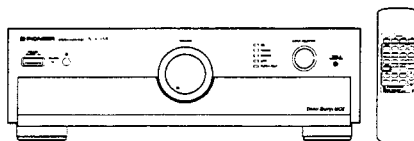


Service Manual

PIONEER
The Art of Entertainment



The illustration shows model A-605R.

ORDER NO.
RRV 1594

STEREO AMPLIFIER

A-605R

A-605R-G

A-505R

A-405R

A-405R-G

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

| Type | Model | | | | | Power Requirement | The voltage can be converted by the following method. |
|-------|--------|----------|--------|--------|----------|-----------------------------|---|
| | A-605R | A-605R-G | A-505R | A-405R | A-405R-G | | |
| HY/EW | ○ | ○ | ○ | ○ | ○ | AC220 - 230V | _____ |
| HY/GR | ○ | - | ○ | ○ | - | AC220 - 230V | _____ |
| SD | ○ | - | - | - | - | AC110V/120 - 127V/220V/240V | With the voltage selector |
| HV | ○ | - | - | ○ | - | AC230V | _____ |

CONTENTS

| | |
|--|----|
| 1. EXPLODED VIEWS AND PARTS LIST | 2 |
| 2. PACKING AND PARTS LIST | 5 |
| 3. SCHEMATIC AND PCB CONNECTION DIAGRAMS | 6 |
| 4. PCB PARTS LIST | 21 |
| 5. ADJUSTMENTS | 24 |
| 6. IC INFORMATION | 25 |
| 7. BLOCK DIAGRAM | 26 |
| 8. FOR A-605R/HY/GR, SD, HV, A-605R-G/HY/EW, A-505R/HY/EW, HY/GR, A-405R/HY/EW, HY/GR, HV AND A-405R-G/HY/EW TYPES | 27 |
| 9. PANEL FACILITIES | 32 |
| 10. SPECIFICATIONS | 35 |

PIONEER ELECTRONIC CORPORATION

4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan

PIONEER ELECTRONICS SERVICE, INC. P.O.Box 1760, Long Beach, CA 90801-1760, U.S.A.

PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium

PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

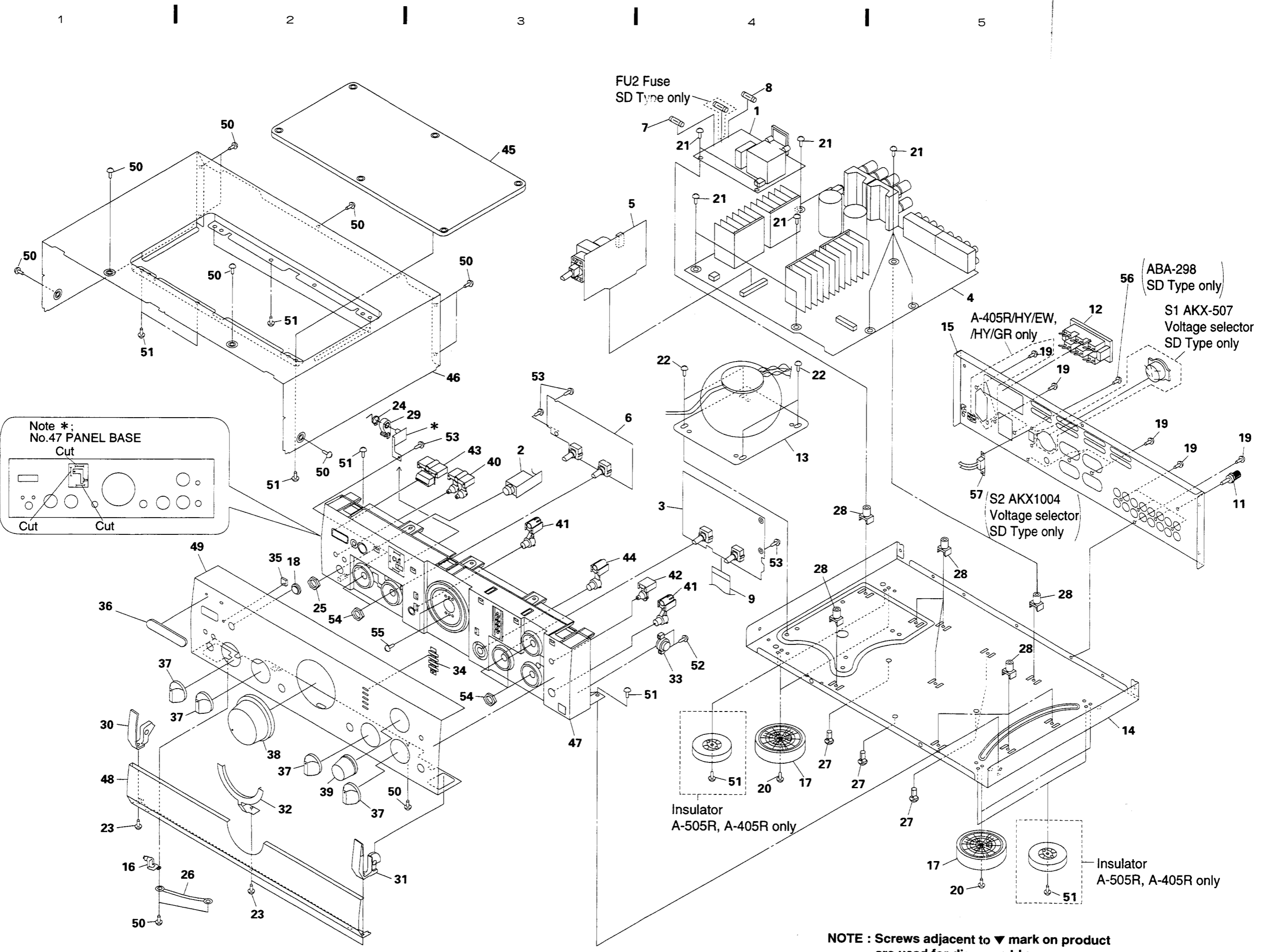
1. EXPLODED VIEWS AND PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List (for A-605R/HY/EW)

| Mark | No. | Description | Parts No. | Mark | No. | Description | Parts No. |
|----------|-----|----------------------|-----------|----------|-----|---------------------|--------------|
| | 1 | AC PRIMARY ASSY | AWZ7944 | | 31 | HINGE R | AMR7116 |
| NSP | 2 | HEADPHONE ASSY | AWZ7947 | | 32 | PANEL STOPPER MOULD | AMR7117 |
| | 3 | FRONT R ASSY | AWZ8398 | | 33 | DUMPER | AXA7036 |
| | 4 | AF ASSY | AWZ7932 | | 34 | LED LENS | AAK7260 |
| | 5 | VOLUME ASSY | AWZ7941 | | 35 | LED LENS | PNW2019 |
| | 6 | FRONT L ASSY | AWZ8397 | | 36 | NAME PLATE | VAM1032 |
| Δ | 7 | FU3 FUSE (T500mA) | AEK1051 | | 37 | ROTARY KNOB C | AAB7089 |
| Δ | 8 | FU1 FUSE (T2A) | AEK1057 | | 38 | ROTARY KNOB L | AAB7090 |
| | 9 | J1 FLEXIBLE CABLE | ADD1114 | | 39 | ROTARY KNOB B | AAB7091 |
| | 10 | | | | 40 | SPEAKER BUTTON | AAD7290 |
| | 11 | TERMINAL SCREW | AKE - 031 | | 41 | SELFILLMI BUTTON A | AAD7291 |
| Δ | 12 | AC SOKET 3 - P | AKP - 502 | | 42 | SELFILLMI BUTTON B | AAD7292 |
| Δ | 13 | T1 POWER TRANSFORMER | ATS7128 | | 43 | POWER BUTTON | AAD7293 |
| NSP | 14 | CHASSIS | ANA7048 | | 44 | MUTING BUTTION | AAD7294 |
| | 15 | REAR PANEL | ANC7424 | | 45 | TOP COVER | AME1086 |
| | 16 | POCKET HOLDER ASSY | ANG1864 | | 46 | METAL BONNET | ANE7119 |
| | 17 | FOOT | AMR1159 | | 47 | PANEL BASE | AMB7362 |
| | 18 | REMOCON WINDOW | AAK2457 | | 48 | DOOR PANEL | ANB7050 |
| | 19 | SCREW | ABA - 298 | | 49 | FRONT PANEL | ANB7052 |
| | 20 | SCREW (STEEL) | ABA1004 | | 50 | SCREW | BBT30P080FZK |
| | 21 | SCREW | ABA1018 | | 51 | SCREW | BBZ30P080FMC |
| | 22 | SCREW (STEEL) | ABA1053 | | 52 | SCREW | BPZ20P080FMC |
| | 23 | SCREW | ABA7023 | | 53 | SCREW | BPZ26P080FMC |
| | 24 | POCKET SPRING | ABH7114 | | 54 | NUT | NK90FUC |
| | 25 | NUT | ABN - 065 | | 55 | SCREW | VMZ30P060FMC |
| NSP | 26 | CORD WITH PLUG | ADH1003 | | 56 | SCREW | BMZ30P080FZK |
| NSP | 27 | PCB HOLDER | AEC7057 | Δ | 57 | SWITCH (MAIN POWER) | ASH - 501 |
| NSP | 28 | PCB MOULD | AMR1525 | | | | |
| | 29 | POCKET LOCK | AMR2587 | | | | |
| | 30 | HINGE L | AMR7115 | | | | |



Note *:
 No.47 PANEL BASE
 Cut

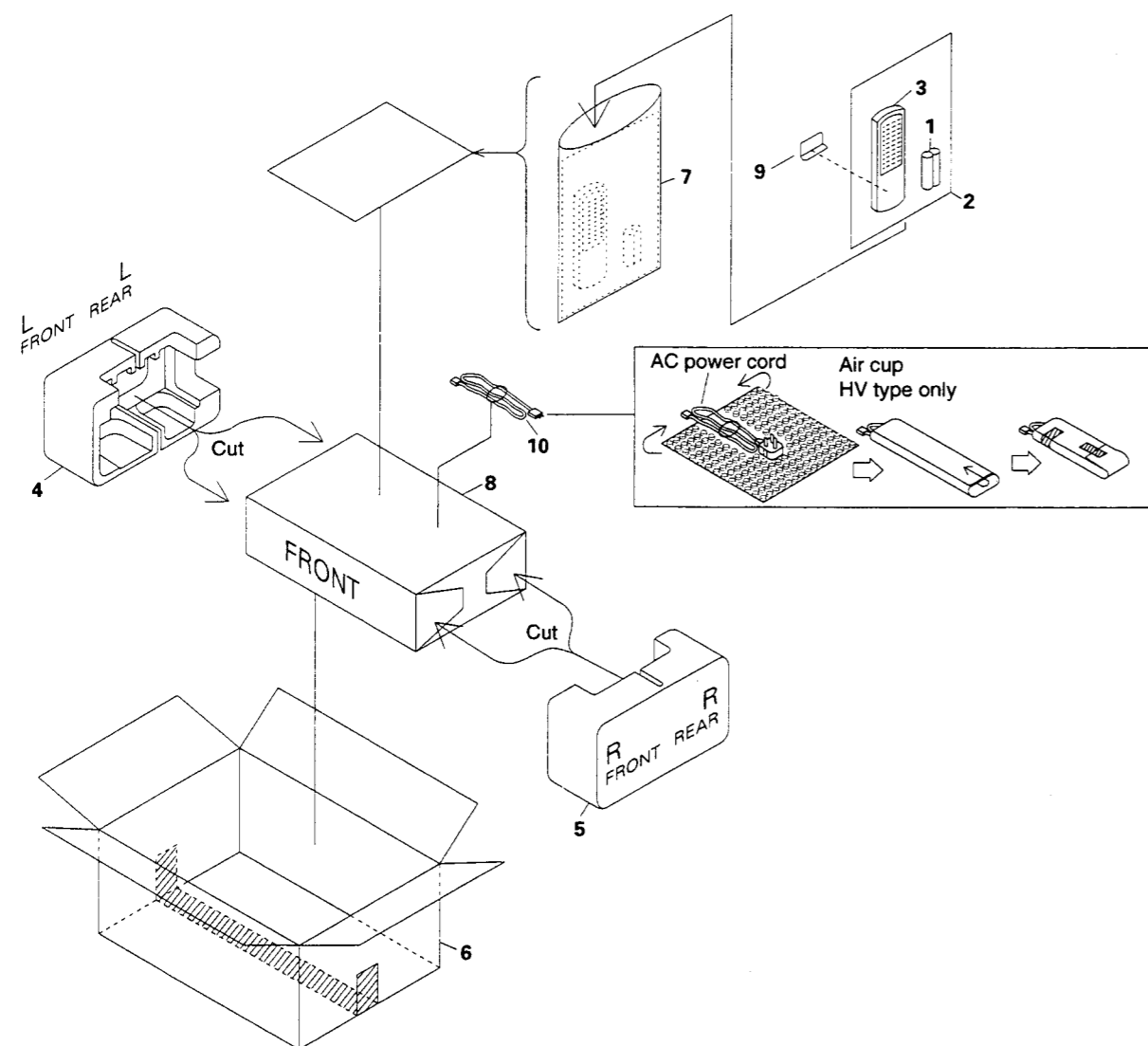
Cut Cut

NOTE : Screws adjacent to ▼ mark on product
 are used for disassembly.

2. PACKING AND PARTS LIST

Parts List (for A-605R/HY/EW)

| Mark | No. | Description | Parts No. |
|------|-----|--|-----------|
| NSP | 1 | BATTERY (R6P, AA) | AEX - 010 |
| | 2 | OPERATING INSTRUCTIONS (English/German/French/Italian/ Swedish/Spanish/Dutch/Portuguese) | ARE7077 |
| | 3 | REMOTE CONTROL UNIT (CU - A013) | AXD7053 |
| | 4 | SIDE PROTECTOR L | AHA7127 |
| | 5 | SIDE PROTECTOR R | AHA7128 |
| | 6 | PACKING CASE | AHD7308 |
| NSP | 7 | LITERATURE BAG | AHG - 117 |
| | 8 | PACKING SHEET | AHG1016 |
| | 9 | BATTERY COVER | AZN2249 |
| △ | 10 | AC POWER CORD | ADG1154 |



3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

3. **RESISTORS:**
Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.

4. **CAPACITORS:**
Unit: p:pF or μ:μF unless otherwise noted.
Ratings: capacitor (μF)/voltage(V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.

5. **COILS:**
Unit: m:mH or μ:μH unless otherwise noted.

6. **VOLTAGE AND CURRENT:**
V: Signal voltage at rated output.
V: or ← V:
DC voltage (V) at no input signal unless otherwise noted.
Value in () is DC voltage at rated power.
mA or ← mA:
DC current at no input signal unless otherwise noted.

7. **OTHERS:**
• ⊕ or ⊙ : Adjusting point.
• ◀ : Measurement point.
• The △ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. **SCH-□ ON THE SCHEMATIC DIAGRAM:**
• SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

9. **SWITCHES** (Underline indicates switch position):

FRONT L ASSY
S701 : POWER STANDBY/ON
S702 : LOUDNESS
S703 : SPEAKER A
S704 : SPEAKER B

FRONT R ASSY
S601 : INPUT SELECTOR
S602 : REC SELECTOR(SOURCE/OFF/CD/TUNER)
S603 : TAPE2 MONITOR
S604 : DIRECT
S605 : MUTING

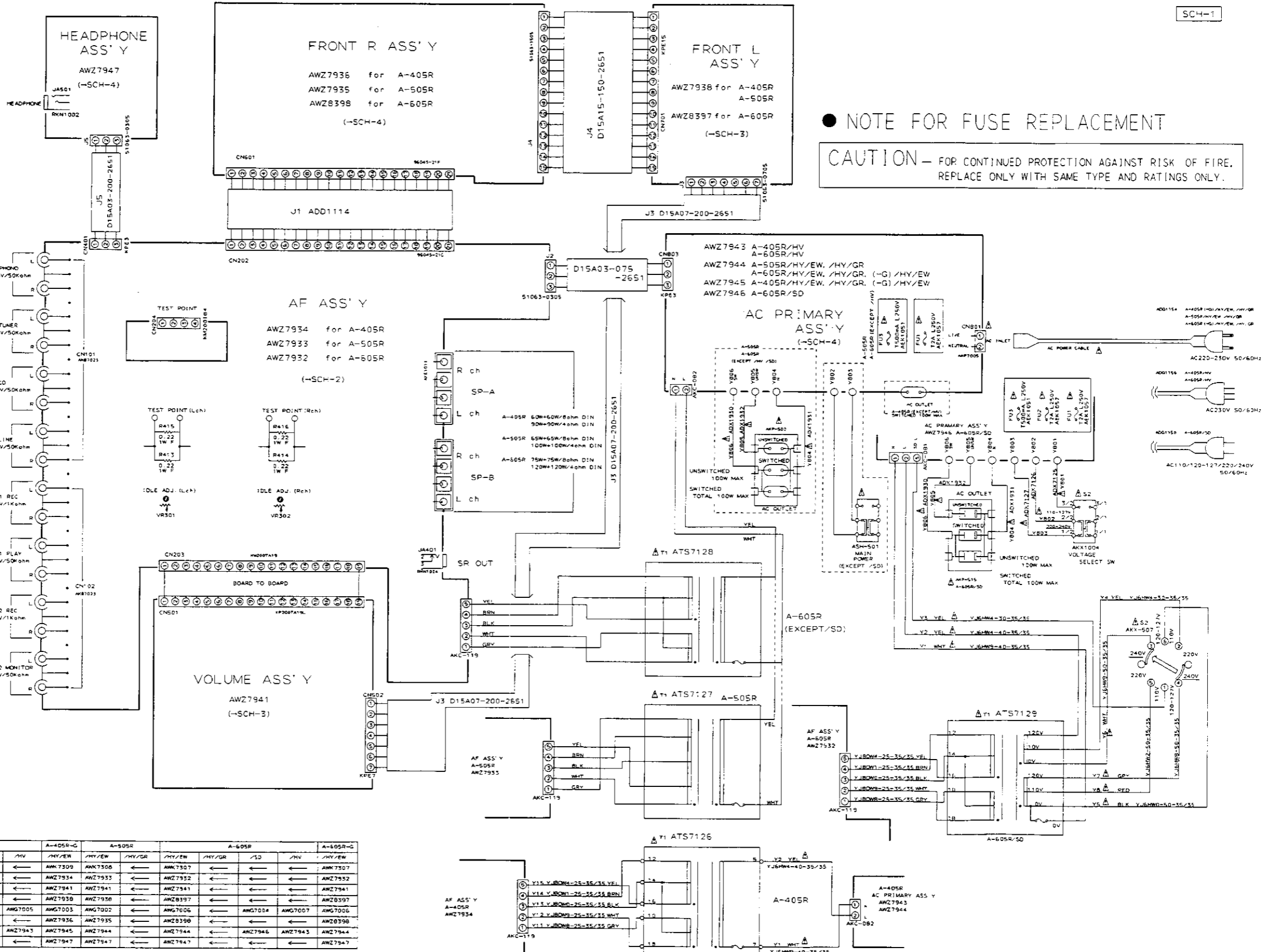
NOTE FOR PCB DIAGRAMS

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

| Symbol in PCB Diagrams | Symbol in Schematic Diagrams | Part Name |
|------------------------|------------------------------|--------------------------|
| | | Transistor |
| | | Transistor with resistor |
| | | Field effect transistor |
| | | Resistor array |
| | | 3-terminal regulator |

3.1 OVERALL WIRING DIAGRAM

SCH-1



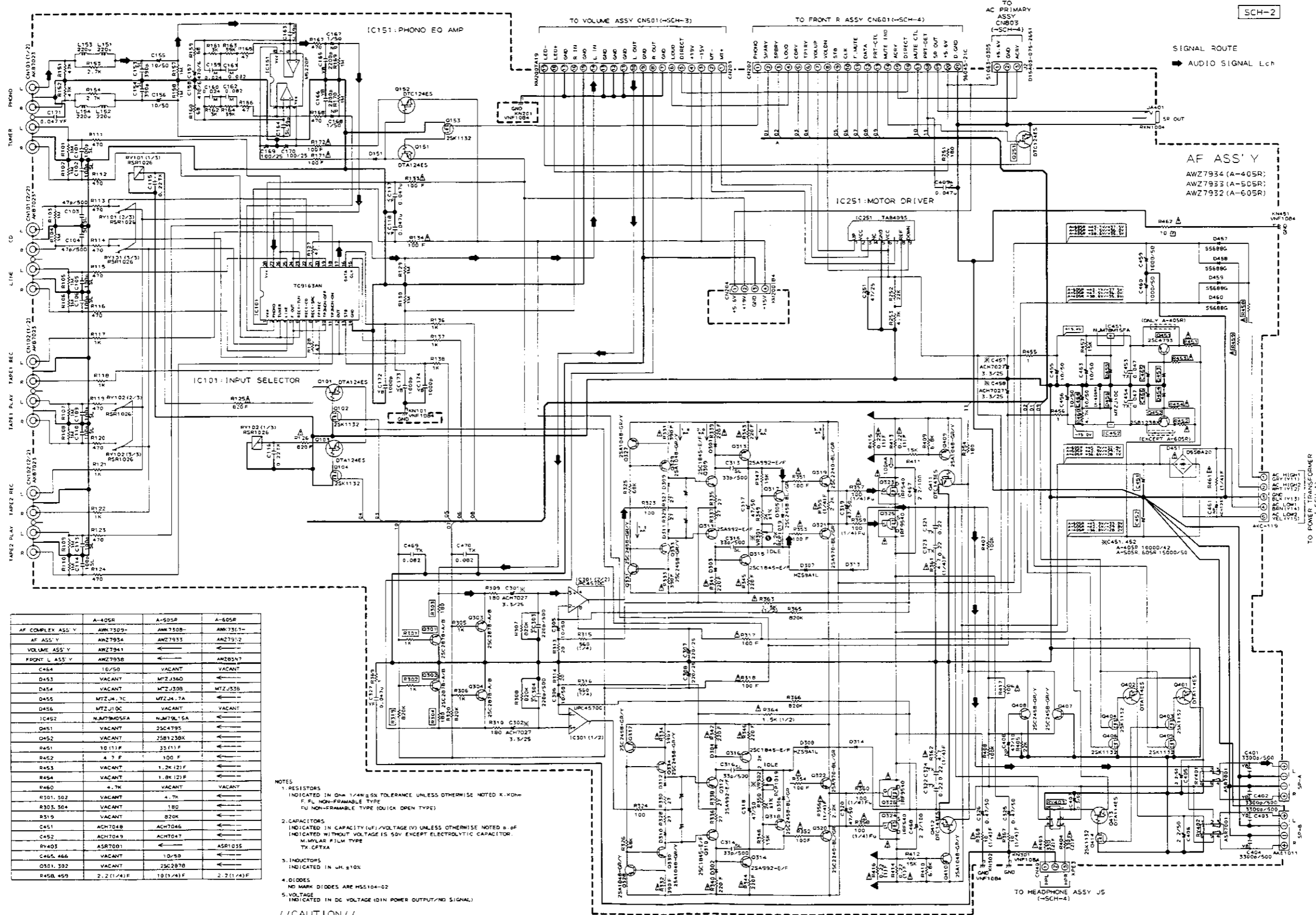
OVERALL WIRING DIAGRAM

OVERALL WIRING DIAGRAM

SCH-1

SCH-1

3.2 AF ASSEMBLY



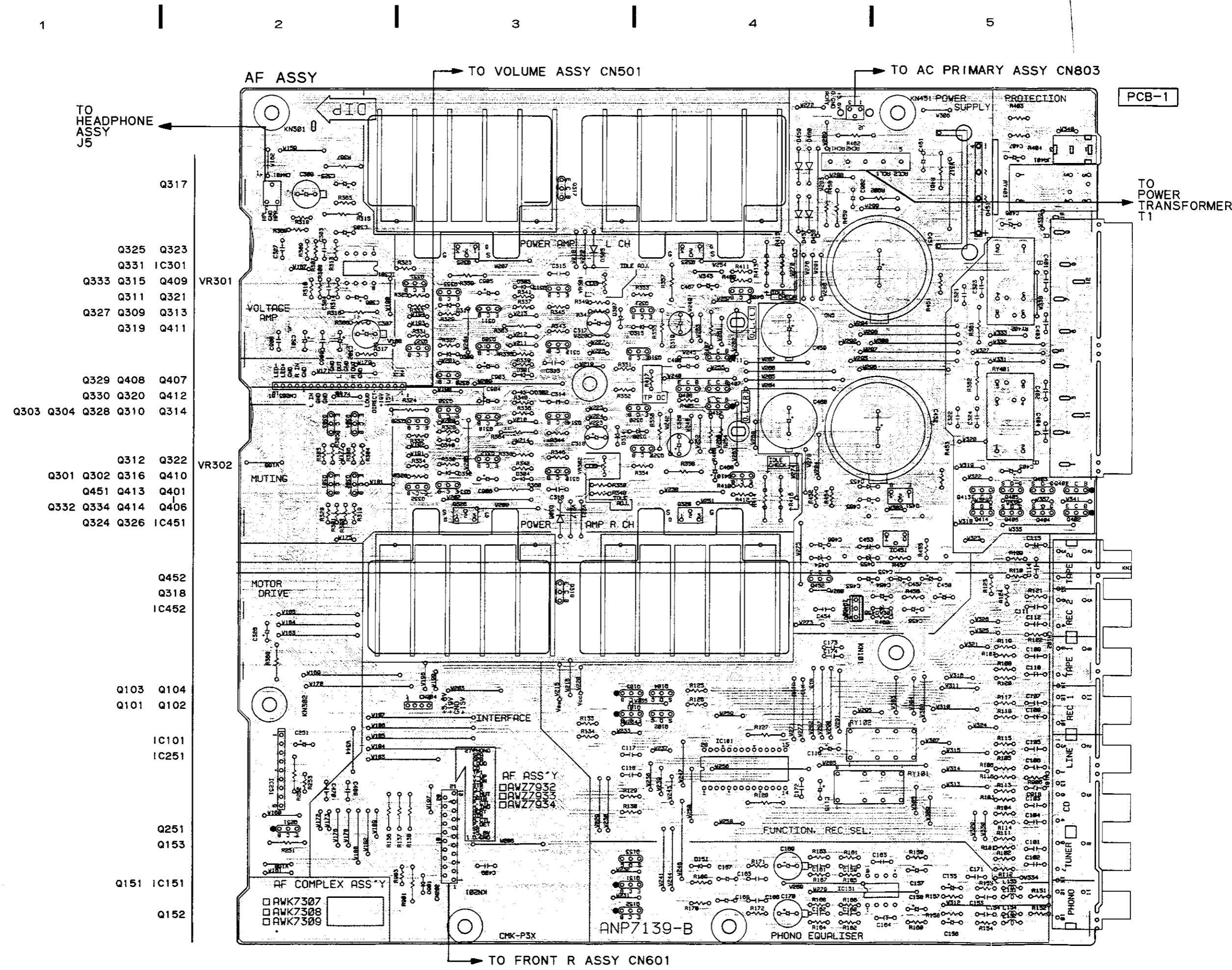
| | A-405R | A-505R | A-605R |
|------------------|--------------|-------------|----------|
| AF COMPLEX ASS'Y | AWK7309- | AWK7308- | AWK7307- |
| AF ASS'Y | AWZ7934 | AWZ7933 | AWZ7932 |
| VOLUME ASS'Y | AWZ7941 | | |
| FRONT L ASS'Y | AWZ7938 | | AWZ8547 |
| C454 | 16/50 | VACANT | VACANT |
| D453 | VACANT | MTZ3560 | |
| D454 | VACANT | MTZ3588 | MTZ3538 |
| D455 | MTZ357C | MTZ357A | |
| D456 | MTZ3570C | VACANT | VACANT |
| IC452 | N.M.P.7905FA | N.M.P.7915A | |
| Q451 | VACANT | 25C4795 | |
| Q452 | VACANT | 25B1238X | |
| R451 | 10 (1/4)F | 35 (1/4)F | |
| R452 | 4.7 F | 100 F | |
| R453 | VACANT | 1.2K (2)F | |
| R454 | VACANT | 1.8K (2)F | |
| R460 | 4.7K | VACANT | VACANT |
| R501, 502 | VACANT | 4.7K | |
| R503, 504 | VACANT | 18Ω | |
| R519 | VACANT | 820K | |
| C451 | ACH704B | ACH704E | |
| C452 | ACH704A | ACH704T | |
| R403 | ASR7001 | | ASR1035 |
| C465, 466 | VACANT | 10/50 | |
| O501, 502 | VACANT | 25C287B | |
| R45B, 459 | 2.2 (1/4)F | 10 (1/4)F | |

NOTES:
 1. RESISTORS
 INDICATED IN OHM 1/4W ±5% TOLERANCE UNLESS OTHERWISE NOTED. X, NON-FIL, NON-FRAGILE TYPE
 FU, NON-FRAGILE TYPE (QUICK OPEN TYPE)
 2. CAPACITORS
 INDICATED IN CAPACITY (UF), VOLTAGE (V) UNLESS OTHERWISE NOTED. B, OF
 INDICATED WITHOUT VOLTAGE IS 50V EXCEPT ELECTROLYTIC CAPACITOR.
 M, MYLAR FILM TYPE
 TX, CPTX
 3. INDUCTORS
 INDICATED IN UH ±10%
 4. DIODES
 NO MARK DIODES ARE HSS104-02
 5. VOLTAGE
 INDICATED IN DC VOLTAGE (DIN POWER OUTPUT/NO SIGNAL)
 // CAUTION //
 HEATSINKS (Q523-526) DC LEVEL IS EQUAL TO +B OR -B.
 DON'T TOUCH OR YOU WILL BE ELECTRICALLY SHOCKED.

SCH-2

AF ASSY

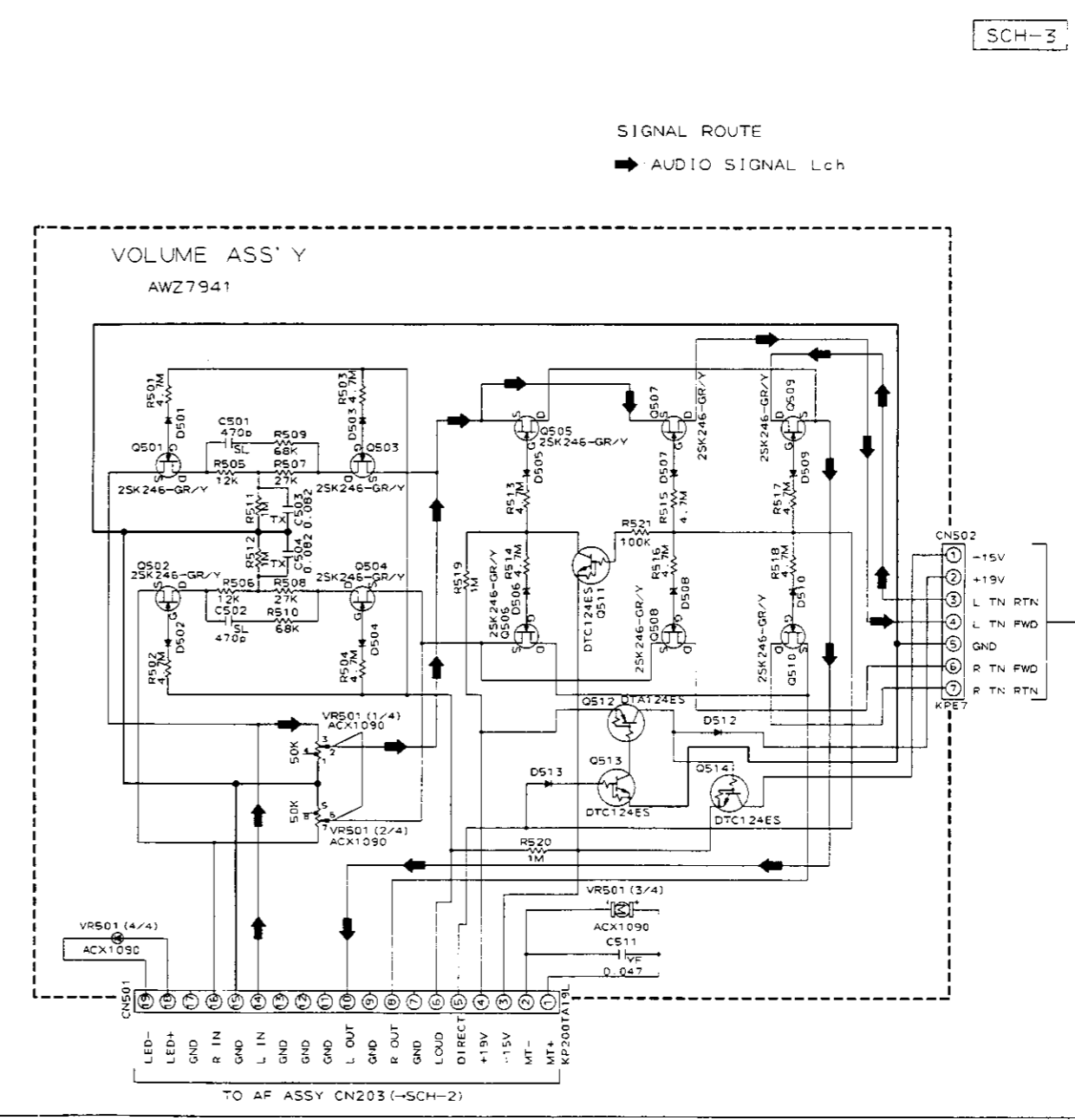
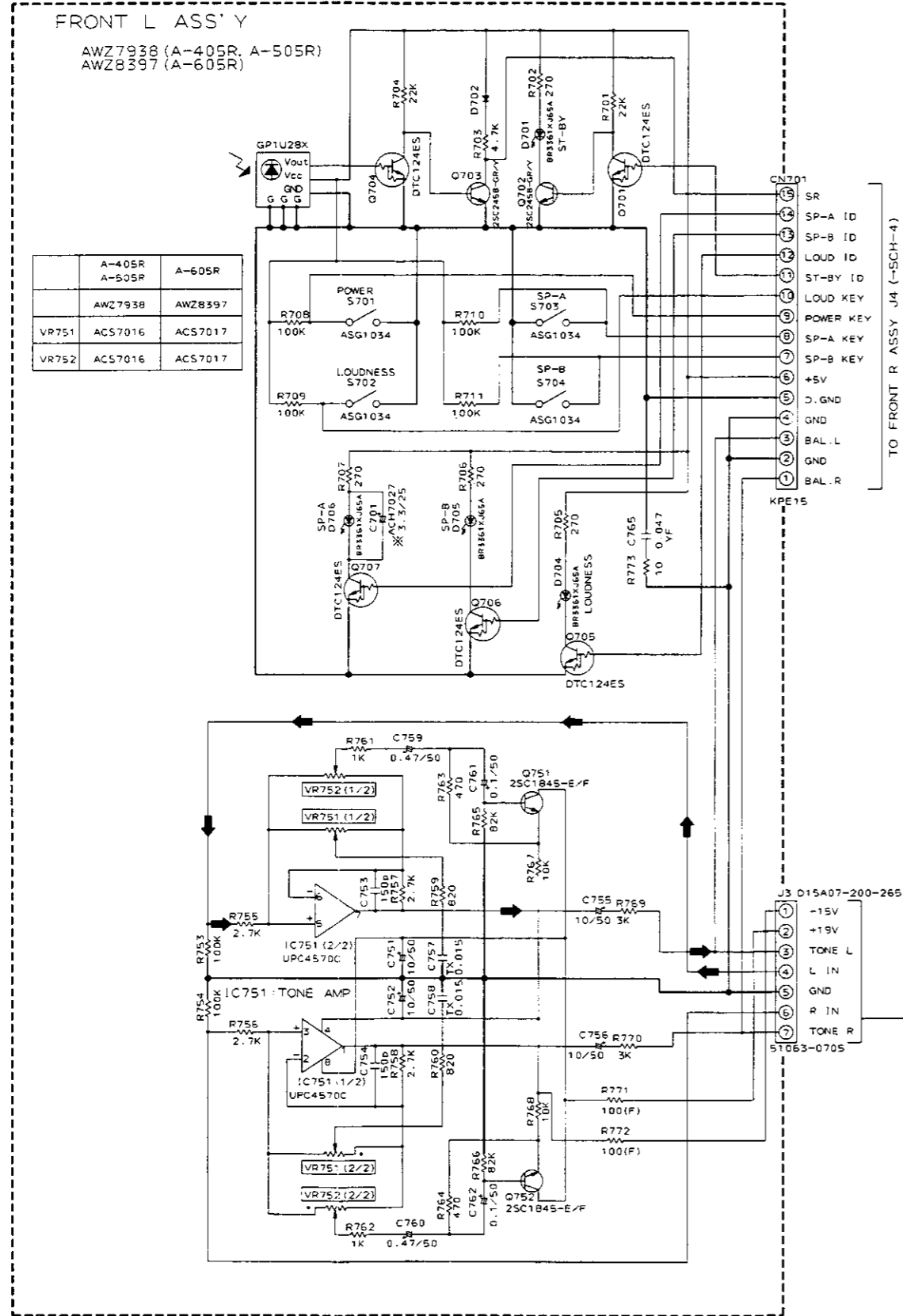
AF ASSY
 SCH-2



- TO HEADPHONE ASSY J5
- Q317
- Q325 Q323
- Q331 IC301
- Q333 Q315 Q409
- Q311 Q321
- Q327 Q309 Q313
- Q319 Q411
- Q329 Q408 Q407
- Q330 Q320 Q412
- Q303 Q304 Q328 Q310 Q314
- Q312 Q322
- Q301 Q302 Q316 Q410
- Q451 Q413 Q401
- Q332 Q334 Q414 Q406
- Q324 Q326 IC451
- Q452
- Q318
- IC452
- Q103 Q104
- Q101 Q102
- IC101
- IC251
- Q251
- Q153
- Q151 IC151
- Q152

• This diagram is viewed from the mounted parts side. • The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

3.3 FRONT L AND VOLUME ASSEMBLIES



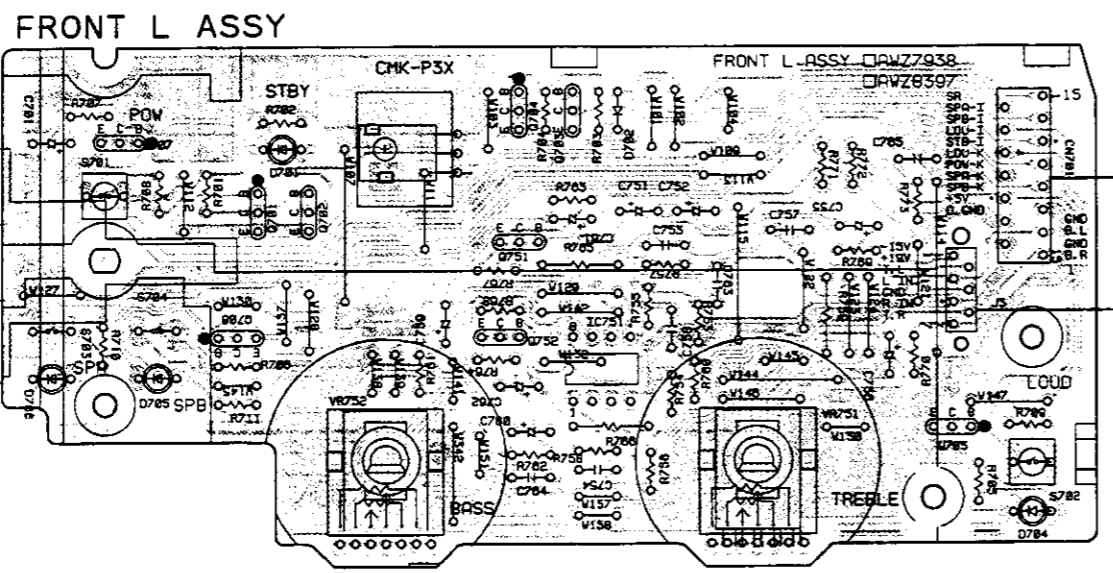
- NOTES
- RESISTORS
 INDICATED IN Ohm 1/4W ±5% TOLERANCE UNLESS OTHERWISE NOTED K, Kohm
 F, FL, NON-FRAMABLE TYPE
 - CAPACITORS
 INDICATED IN CAPACITY (uF)/VOLTAGE (V) UNLESS OTHERWISE NOTED u, uF
 INDICATED WITHOUT VOLTAGE IS 50V EXCEPT ELECTROLYTIC CAPACITOR.
 M, MYLAR FILM TYPE
 TX, CFTXA
 - DIODES
 NO MARK DIODES ARE HSS104-02

SCH-3 FRONT L ASSY, VOLUME ASSY

FRONT L ASSY, VOLUME ASSY SCH-3

A

A



PCB-2

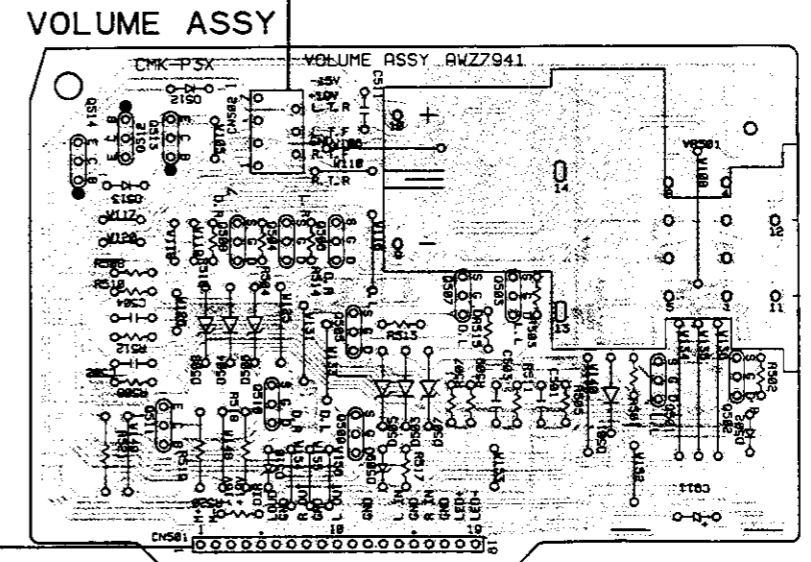
B

B

Q707 Q701 Q702 Q704 Q703 Q705
 Q706 Q751 IC751
 Q752

C

C



Q511-Q514 Q508 Q504 Q507 Q503 Q501 Q502
 Q510 Q506
 Q505
 Q509

- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

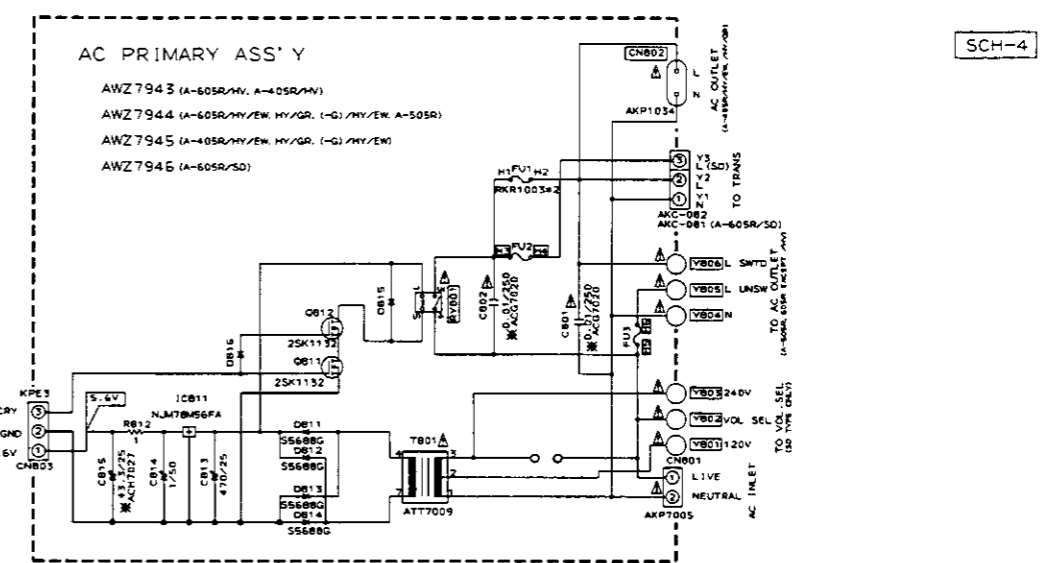
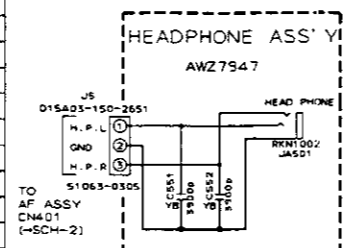
D

D

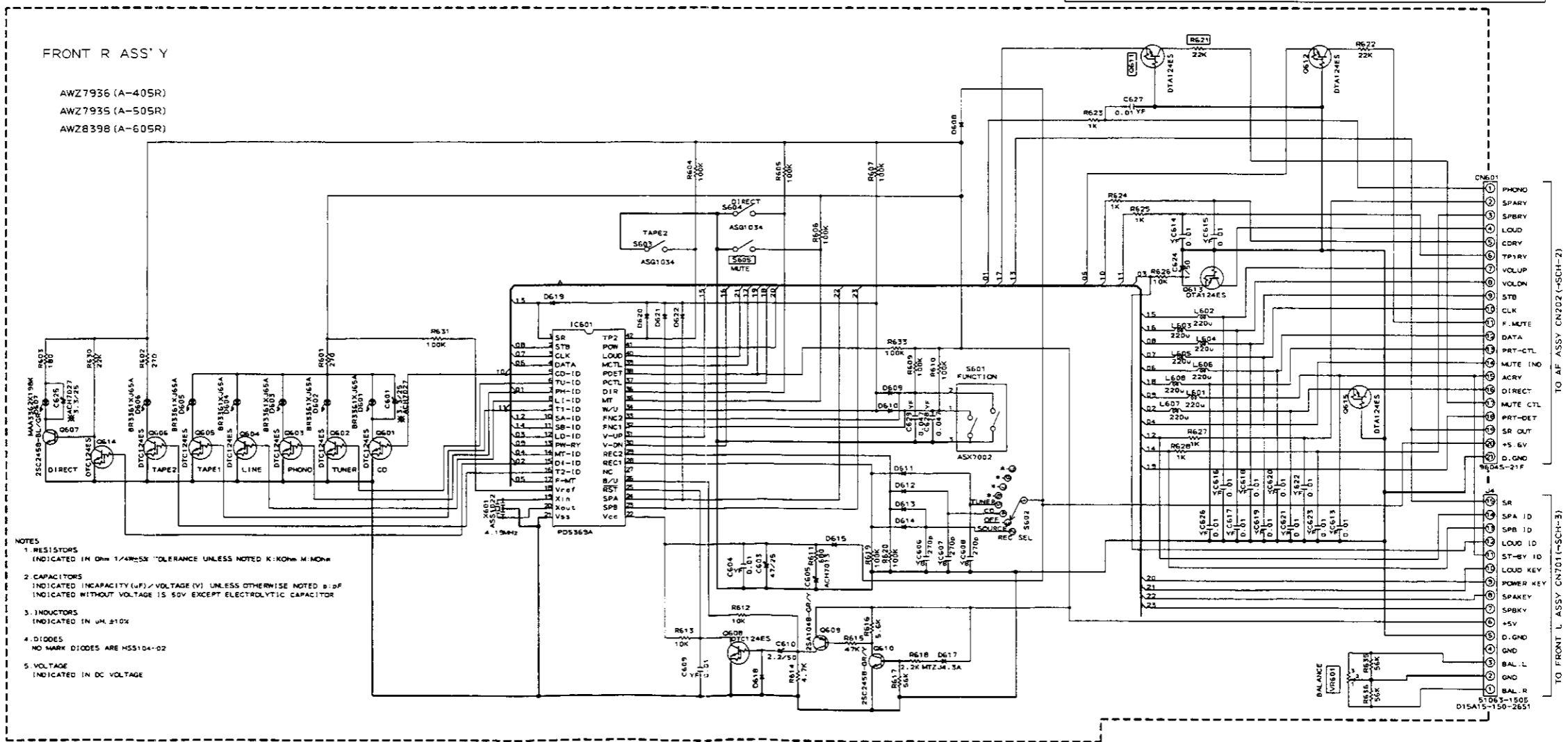
ANP7139-B

3.4 FRONT R, HEADPHONE, AC PRIMARY ASSEMBLIES

| | A-405R | | A-505R | | A-605R | |
|------------------|--------------|----------|--------------|--------------|----------|----------|
| | /HY/EN/RY/GR | /HY | /HY/EN/RY/GR | /HY/EN/RY/GR | /HY | /SD |
| CONTROL ASS'Y | AWZ7003- | AWZ7005- | AWZ7002- | AWZ7006- | AWZ7007- | AWZ7004- |
| FRONT R ASS'Y | AWZ7936 | ← | AWZ7935 | AWZ8398 | ← | ← |
| AC PRIMARY ASS'Y | AWZ7945 | AWZ7943 | AWZ7944 | ← | AWZ7943 | AWZ7946 |
| HEADPHONE ASS'Y | AWZ7947 | ← | ← | ← | ← | ← |
| S605 | VACANT | VACANT | ASG1054 | ← | ← | ← |
| CN802 | AKP1034 | VACANT | VACANT | VACANT | VACANT | VACANT |
| RY801 | ASR1044 | ← | ← | ← | ← | ASR1056 |
| YB01 | VACANT | VACANT | VACANT | VACANT | VACANT | ADX1125 |
| YB02 | VACANT | VACANT | VACANT | VACANT | VACANT | ADX1126 |
| YB03 | VACANT | VACANT | VACANT | VACANT | VACANT | ADX1127 |
| YB04 | VACANT | VACANT | ADX1950 | ← | VACANT | ADX1950 |
| YB05 | VACANT | VACANT | ADX1952 | ← | VACANT | ADX1952 |
| YB06 | VACANT | VACANT | ADX1951 | ← | VACANT | ADX1951 |
| H3, H4 | VACANT | VACANT | VACANT | VACANT | VACANT | RKR1005 |
| H5, H6 | VACANT | VACANT | RKR1005 | ← | VACANT | RKR1005 |
| R621 | VACANT | VACANT | 22K | ← | ← | ← |
| D611 | VACANT | VACANT | DTA124E5 | ← | ← | ← |
| S602 | ASD7001 | ← | ← | ASD7009 | ← | ← |
| VR601 | ACS7014 | ← | ← | ACS7015 | ← | ← |



NOTE FOR FUSE REPLACEMENT
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.



- NOTES
- RESISTORS INDICATED IN OHM 1/4W/5% TOLERANCE UNLESS NOTED K:KOHM M:MOHM
 - CAPACITORS INDICATED IN CAPACITY (UF)/VOLTAGE (V) UNLESS OTHERWISE NOTED B:BF INDICATED WITHOUT VOLTAGE IS 50V EXCEPT ELECTROLYTIC CAPACITOR
 - INDUCTORS INDICATED IN UH .510X
 - DIODES NO MARK DIODES ARE H55104-02
 - VOLTAGE INDICATED IN DC VOLTAGE

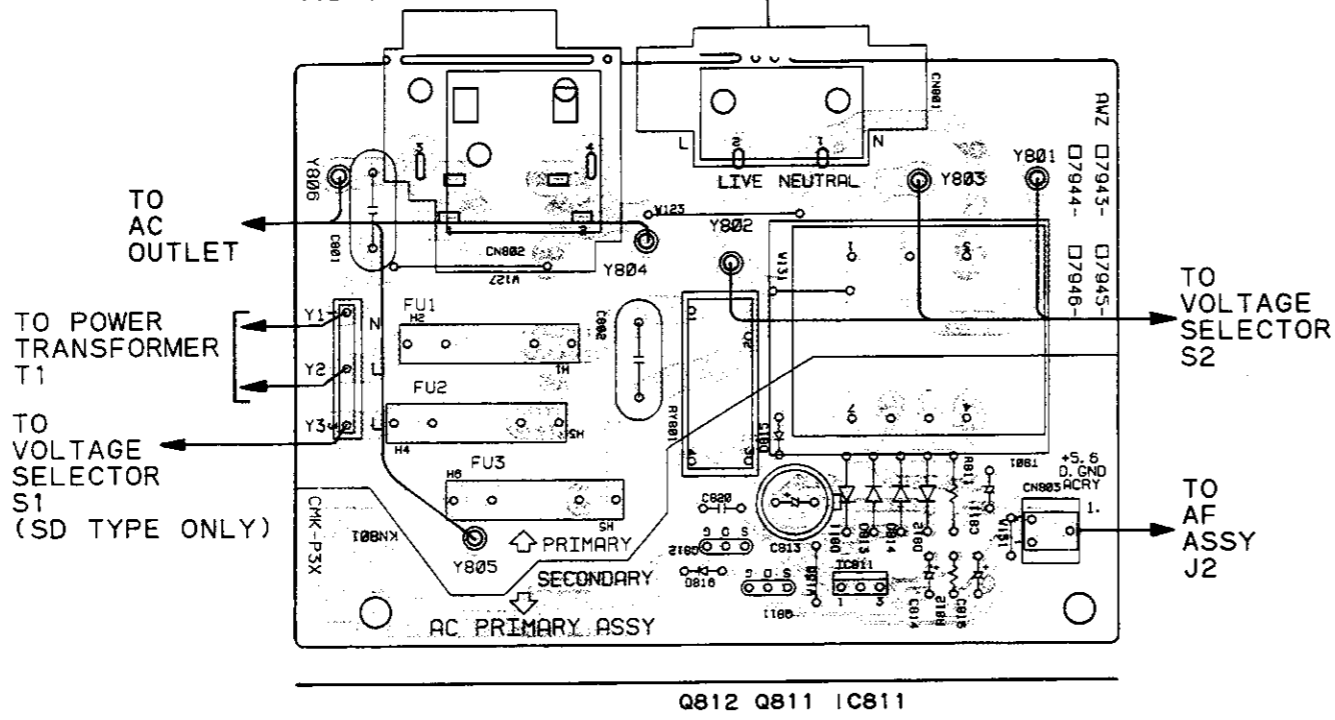
SCH-4

FRONT R ASSY,
 HEADPHONE ASSY,
 AC PRIMARY ASSY

FRONT R ASSY,
 HEADPHONE ASSY,
 AC PRIMARY ASSY

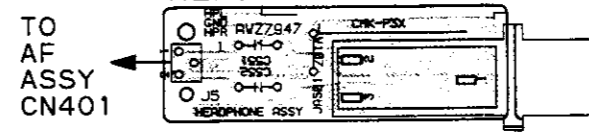
SCH-4

AC PRIMARY ASSY



PCB-3

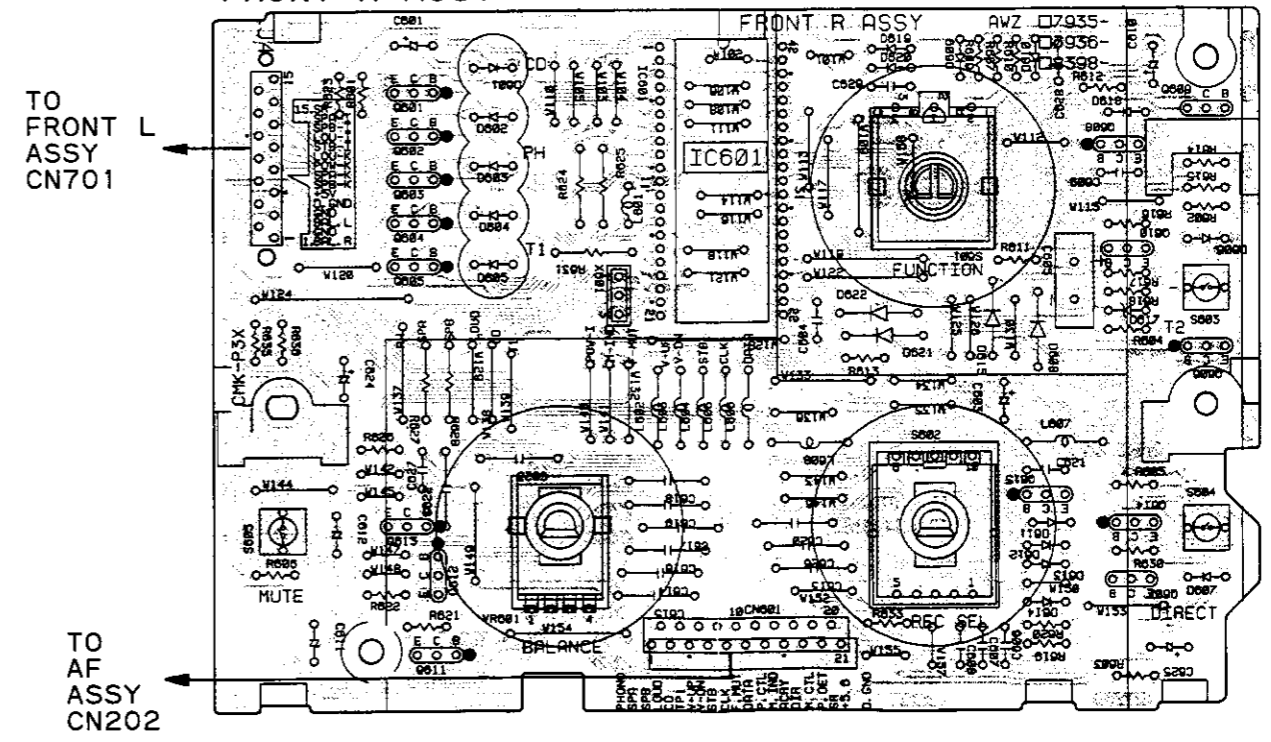
HEADPHONE ASSY



TO AF ASSY CN401

Q812 Q811 IC811

FRONT R ASSY



TO FRONT L ASSY CN701

TO AF ASSY CN202

Q601-Q605 IC601 Q615 Q608 Q609
 Q613 Q612 Q611 Q610 Q606
 Q614 Q607

- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

4. PCB PARTS LIST

(for A-605R/HY/EW)

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10¹ → 561 RD1/4PU561J
 47kΩ → 47 × 10³ → 473 RD1/4PU473J
 0.5Ω → 0R5 RN2H0R5K
 1Ω → 1R0 RS1P1R0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10¹ → 5621 RNI/4PC5621F

| Mark No. | Description | Parts No. | Mark No. | Description | Parts No. |
|----------------------------|----------------------------|-------------|----------|-------------|-----------|
| LIST OF ASSEMBLIES | | | | | |
| NSP | CONTROL ASSY | AWG7006 | | | |
| | ├ AC PRIMARY ASSY | AWZ7944 | | | |
| NSP | ├ HEADPHONE ASSY | AWZ7947 | | | |
| | └ FRONT R ASSY | AWZ8398 | | | |
| NSP | AF COMPLEX ASSY | AWK7307 | | | |
| | ├ AF ASSY | AWZ7932 | | | |
| | ├ VOLUME ASSY | AWZ7941 | | | |
| | └ FRONT L ASSY | AWZ8397 | | | |
| AC PRIMARY ASSY | | | | | |
| SEMICONDUCTORS | | | | | |
| | IC811 | NJM78M56FA | | | |
| | Q811, Q812 | 2SK1132 | | | |
| | D815, D816 | HSS104-02 | | | |
| | D811 - D814 | S5688G | | | |
| TRANSFORMERS | | | | | |
| Δ | T801 | ATT7009 | | | |
| SWITCHES AND RELAYS | | | | | |
| Δ | RY801 | ASR1044 | | | |
| CAPACITORS | | | | | |
| Δ | C801, C802 (10000pF/250V) | ACG7020 | | | |
| | C815 (3.3μF/25V) | ACH7027 | | | |
| | C814 | CEAS010M50 | | | |
| | C813 | CEAS471M25 | | | |
| RESISTORS | | | | | |
| | All Resistors | RD1/4PU□□□J | | | |
| OTHERS | | | | | |
| Δ | CN801 AC INLET | AKP7005 | | | |
| | CN803 CONNECTOR(3P) | KPE3 | | | |
| | H1, H2, H5, H6 FUSE HOLDER | RKR1003 | | | |
| HEADPHONE ASSY | | | | | |
| CAPACITORS | | | | | |
| | C551, C552 | CKCYB392K50 | | | |

| Mark No. | Description | Parts No. | Mark No. | Description | Parts No. |
|----------------------------|------------------------------------|-----------------------------|------------------------------|-------------------------------|--------------|
| OTHERS | | | | | |
| | CN601 CABLE HOLDER(15P) CONNECTOR | 51063 - 1505 9604S - 21F | C103, C104 | CCCSL470K500 | |
| AF ASSY | | | | | |
| SEMICONDUCTORS | | | | | |
| | IC151 | M5220P | C167, C168 | CEANP010M50 | |
| | IC451 | NJM78M15FA | C408 | CEANP470M10 | |
| | IC452 | NJM79L15A | C155, C156, C305, C306 | CEAS100M50 | |
| | IC251 | TA8409S | C455, C456, C463, C465, C466 | CEAS100M50 | |
| | IC101 | TC9163AN | C169, C170 | CEAS101M25 | |
| | IC301 | UPC4570C | C459, C460 | CEAS102M50 | |
| | Q327 - Q330, Q409, Q410 | 2SA1048 | C307, C308 | CEAS221M25 | |
| | Q321, Q322 | 2SA970 | C405 - C407 | CEAS2R2M50 | |
| | Q311 - Q314 | 2SA992 | C467, C468 | CEAS2R2M100 | |
| | Q452 | 2SB1238X | C251 | CEAS470M25 | |
| | Q309, Q310, Q315, Q316 | 2SC1845 | C317 - C320 | CEAS470M50 | |
| | Q319, Q320 | 2SC2240 | C157, C158 | CEAS471M6 | |
| | Q317, Q318, Q331 - Q334 | 2SC2458 | C325, C326 | CEASR47M50 | |
| | Q407, Q408 | 2SC2458 | C115, C116, C321 - C324 | CFTXA224J50 | |
| | Q301 - Q304 | 2SC2878 | C469, C470 | CFTXA823J50 | |
| | Q451 | 2SC4793 | C165, C166 | CKCYB222K50 | |
| | Q102, Q104, Q153, Q403 - Q406 | 2SK1132 | C401 - C404 | CKCYB332K500 | |
| | Q414 | 2SK1132 | C117, C118, C171, C327, C409 | CKCYF473Z50 | |
| | Q401, Q402, Q413 | DTA114ES | C453, C454 | CKCYF473Z50 | |
| | Q101, Q103, Q151 | DTA124ES | C172 - C174 | CKPUYB102K50 | |
| | Q152, Q251 | DTC124ES | C159, C160 | CQMA243J50 | |
| | Q411, Q412 | DTC143ES | C161, C162 | CQMA823J50 | |
| | Q323, Q324 | IRF540 | RESISTORS | | |
| | Q325, Q326 | IRF9540 | Δ | R363, R364 | RD1/2PM152J |
| | D451 | D5SBA20 | Δ | R133, R134, R171, R172 | RD1/4MUF101J |
| | D151, D301 - D306, D309 - D314 | HSS104-02 | Δ | R317, R318, R351 - R354, R417 | RD1/4MUF101J |
| | D307, D308 | HZS9AIL | Δ | R452 | RD1/4MUF101J |
| | D454 | MTZJ33B | Δ | R339 - R346 | RD1/4MUF221J |
| | D453 | MTZJ36D | Δ | R331 - R334 | RD1/4MUF391J |
| | D455 | MTZJ4.7A | Δ | R125, R126 | RD1/4MUF821J |
| | D457 - D460 | S5688G | Δ | R315, R316 | RD1/4PM561J |
| COILS AND FILTERS | | | | | |
| | L151 - L154 | LAU221J | Δ | R367, R368 | RD1/4PMF100J |
| SWITCHES AND RELAYS | | | | | |
| | RY403 | ASR1035 | Δ | R355, R356 | RD1/4PMF222J |
| | RY401, RY402 | ASR7001 | Δ | R458, R459 | RD1/4PMF2R2J |
| | RY101, RY102 (12V/960Ω) | RSR1026 | Δ | R461 | RD1/4PMF470J |
| CAPACITORS | | | | | |
| | C461 (1μF/100V) | ACH1237 | Δ | R361, R362 | RD1/4PMF4R7J |
| | C301, C302, C457, C458 (3.3μF/25V) | ACH7027 | Δ | R462 | RD1/4PU100J |
| | C451 (15000pF/42V) | ACH7046 | Δ | R357 - R360 | RFA1/4PS101J |
| | C452 (15000pF/42V) | ACH7047 | Δ | R349, R350 | RNI/6PQ2001F |
| | C101, C102, C105, C106 | CCCSL101J50 | Δ | R451 | RS1MMF330J |
| | C109, C110, C113, C114 | CCCSL101J50 | Δ | R413 - R416 | RS1MMF22J |
| | C303, C304 | CCCSL221K500 | Δ | R453 | RS2MMF122J |
| | C313 - C316 | CCCSL330K500 | Δ | R454 | RS2MMF182J |
| | C163, C164 | CCCSL390J50 | Δ | R403, R404 | RS2MMF331J |
| | C153, C154 | CCCSL391J50 | Δ | VR301, VR302 (2.2kΩ, 0.1W) | RCP1019 |
| OTHERS | | | | | |
| | CN202 CABLE HOLDER(3P) CONNECTOR | 51063 - 0305 9604S - 21C | Other Resistors | | |
| | SCREW | ABA - 298 | RD1/4PU□□□J | | |
| | SCREW (STEEL) | ABA1007 | | | |
| | SCREW | ABA1052 | | | |
| | CN101, CN102 PIN JACK(8P) | AKB7023 | | | |
| | SPEAKER TERMINAL 8 - P | AKE1011 | | | |
| | HEAT SINK FITTING | ANG7095 | | | |
| | HEAT SINK B | ANH1021 | | | |
| | HEAT SINK | ANH1150 | | | |

| Mark No. | Description | Parts No. |
|---------------------|---------------------|-----------------|
| | HEAT SINK L | ANH7044 |
| J2 | JUMPER WIRE | D15A03-075-2651 |
| CN204 | 4P PLUG | KM200IB4 |
| CN203 | 19P PLUG | KM200TA19 |
| CN401 | CONNECTOR(3P) | KPE3 |
| JA401 | JACK | RKN1004 |
| | PCB BINDER | VEF1040 |
| KN101, KN201 | EARTH METAL FITTING | VNF1084 |
| KN301, KN302, KN451 | EARTH METAL FITTING | VNF1084 |

VOLUME ASSY

SEMICONDUCTORS

| | |
|-------------------------|-------------|
| Q501 - Q510 | 2SK246 |
| Q512 | DTA124ES |
| Q511, Q513, Q514 | DTC124ES |
| D501 - D504, D512, D513 | HSS104 - 02 |
| D505 - D510 | HSS104 - 02 |

CAPACITORS

| | |
|------------|-------------|
| C501, C502 | CCCSL471J50 |
| C503, C504 | CFTXA823J50 |
| C511 | CKCYF473Z50 |

RESISTORS

| | | |
|-------|-------------------|-------------|
| VR501 | VARIABLE RESISTOR | ACX1090 |
| | Other Resistors | RD1/4PU□□□J |

OTHERS

| | | |
|-------|---------------|------------|
| CN501 | 19P SOCKET | KP200TA19L |
| CN502 | CONNECTOR(7P) | KPE7 |

FRONT L ASSY

SEMICONDUCTORS

| | |
|-------------------|-------------|
| IC751 | UPC4570C |
| Q751, Q752 | 2SC1845 |
| Q702, Q703 | 2SC2458 |
| Q701, Q704 - Q707 | DTC124ES |
| D701, D704 - D706 | BR3361XJ65A |
| D702 | HSS104 - 02 |

SWITCHES AND RELAYS

| | |
|-------------|---------|
| S701 - S704 | ASG1034 |
|-------------|---------|

CAPACITORS

| | |
|------------------------|-------------|
| C701 (3.3μF/25V) | ACH7027 |
| C753, C754 | CCCSL151J50 |
| C751, C752, C755, C756 | CEAS100M50 |
| C761, C762 | CEASR10M50 |
| C759, C760 | CEASR47M50 |
| C757, C758 | CFTXA153J50 |
| C765 | CKCYF473Z50 |

RESISTORS

| | |
|----------------------------|--------------|
| R771, R772 | RD1/4MUF101J |
| VR751, VR752 (30kΩ - B5X2) | ACS7017 |
| Other Resistors | RD1/4PU□□□J |

OTHERS

| | | |
|-------|------------------------------------|-----------------------|
| CN701 | CABLE HOLDER(7P) CONNECTOR(15P) | 51063 - 0705 KPE15 |
|-------|------------------------------------|-----------------------|

5. ADJUSTMENTS

1) IDLE CURRENT ADJUSTMENT

1. Connect the measuring instrument as Fig.5-1. (R413 or R414)
2. Set the VOLUME CONTROL to minimum, BASS TONE CONTROL to center, TREBLE TONE CONTROL to center, BALANCE CONTROL to center and REC SELECTOR SWITCH to off. Set VR301 and VR302 to minimum.
3. Set the POWER switch to ON.
4. Adjust VR301 (VR302) so that the voltage between both sides of R413 (R414) becomes $16\text{mV} \pm 1\text{mV}$. (Within 10 seconds from when the relay is turned ON)
5. Ages for 7 minutes.
6. Adjust VR301 (VR302) so that the voltage between both sides of R413 (R414) becomes $11\text{mV} \pm 1\text{mV}$.

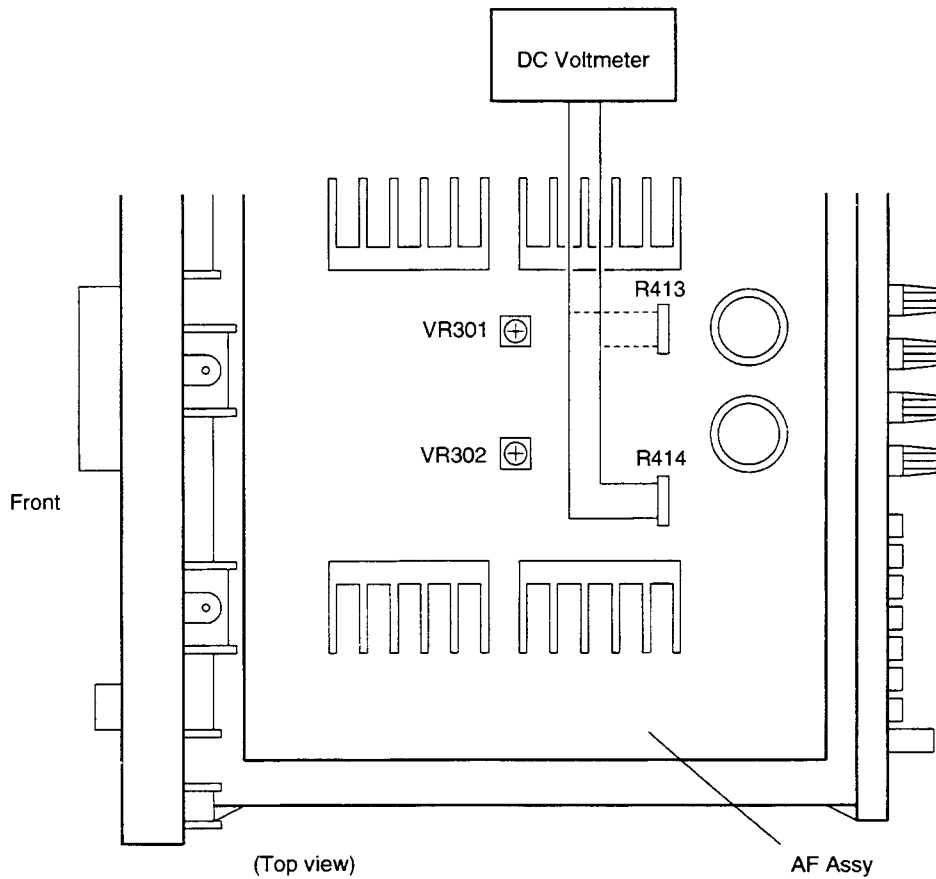
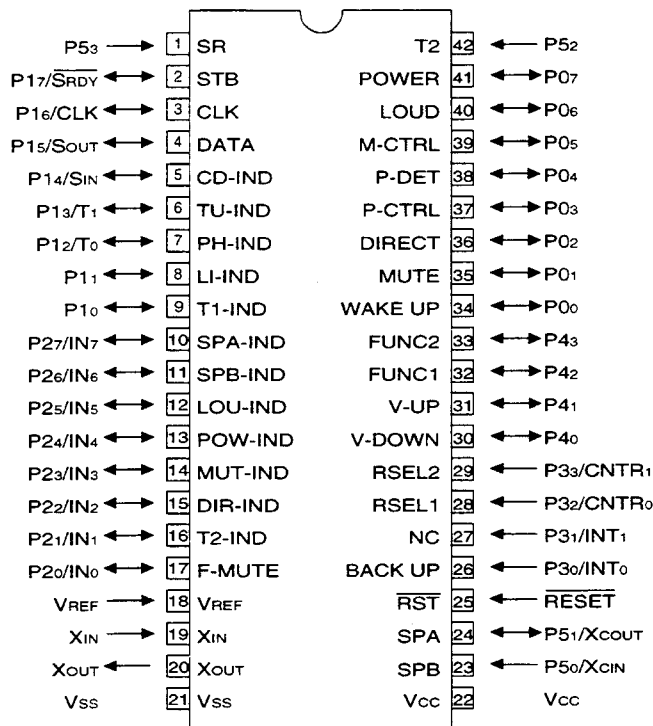


Fig.5-1 Adjustment Method

6. IC INFORMATION

- PD5369A (FRONT R ASSY : IC601)
- REMOTE CONTROL AMP MICROCOMPUTER
- Pin Assignment (Top view)

● The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

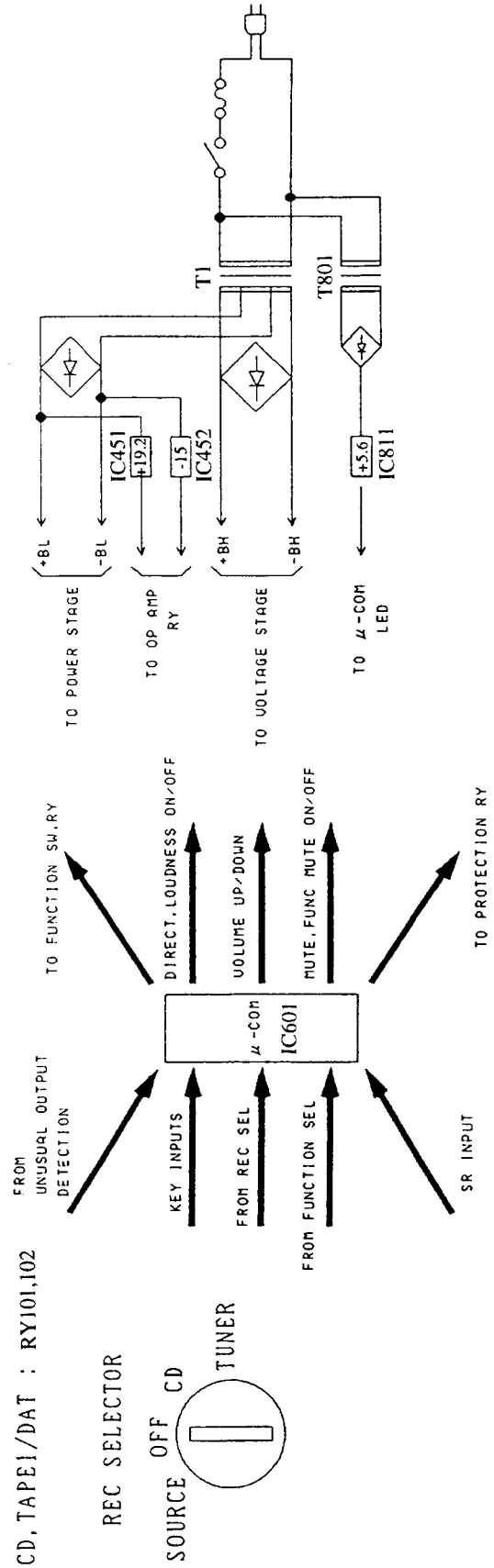
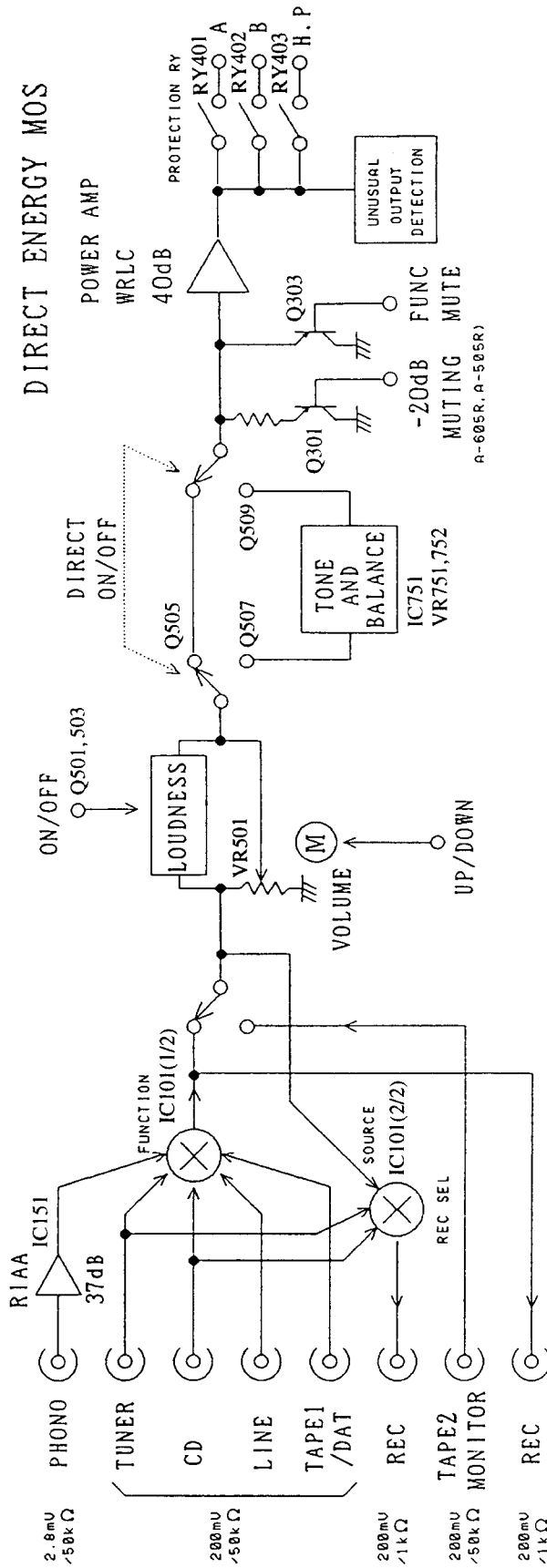


● Pin Function

| No. | Pin name | I/O | Function |
|-----|----------------------------------|-----|--|
| 1 | P5 ₃ | I | Remote control signal input pin. |
| 2 | P1 ₇ /SRDY | O | STB for TC9163N. |
| 3 | P1 ₆ /CLK | O | CLOCK for TC9163N. |
| 4 | P1 ₅ /SOUT | O | DATA for TC9163N. |
| 5 | P1 ₄ /SIN | O | CD INDICATOR. |
| 6 | P1 ₃ /T ₁ | O | TUNER INDICATOR. |
| 7 | P1 ₂ /T ₀ | O | PHONO INDICATOR. |
| 8 | P1 ₁ | O | LINE INDICATOR. |
| 9 | P1 ₀ | O | TAPE1 INDICATOR. |
| 10 | P2 ₇ /IN ₇ | O | SPEAKER-A INDICATOR. |
| 11 | P2 ₆ /IN ₆ | O | SPEAKER-B INDICATOR. |
| 12 | P2 ₅ /IN ₅ | O | LOUDNESS INDICATOR. |
| 13 | P2 ₄ /IN ₄ | O | POWER (STAND-BY) INDICATOR. |
| 14 | P2 ₃ /IN ₃ | O | MUTE INDICATOR. MUTE ON : Repeats H and L every 1 second. Normal : "H" |
| 15 | P2 ₂ /IN ₂ | O | DIRECT INDICATOR. |
| 16 | P2 ₁ /IN ₁ | O | TAPE2 INDICATOR. |
| 17 | P2 ₀ /IN ₀ | O | FUNCTION switch MUTE. |
| 18 | VREF | I | Pulls up to 5V. |
| 19 | XIN | I | 4.19MHz. |
| 20 | XOUT | O | Ceramic vibrating and connecting terminal. |
| 21 | VSS | - | Digital GND. |
| 22 | VCC | - | Power supply +5V. |
| 23 | P5 ₀ /XCIN | I | SPEAKER-B KEY input. |

| No. | Pin name | I/O | Function |
|-----|------------------------------------|-----|--|
| 24 | P5 ₁ /XCOUT | I | SPEAKER-A KEY input. |
| 25 | RESET | I | Reset pin. |
| 26 | P3 ₀ /INT ₀ | I | BACK UP detection pin. interrupt specification. |
| 27 | P3 ₁ /INT ₁ | O | Not used. |
| 28 | P3 ₂ /CNTR ₀ | I | REC selector input 1. |
| 29 | P3 ₃ /CNTR ₁ | I | REC selector input 2. interrupt specification. |
| 30 | P4 ₀ | O | Volume DOWN data output. |
| 31 | P4 ₁ | O | Volume UP data output. |
| 32 | P4 ₂ | I | FUNCTION selector input 1. |
| 33 | P4 ₃ | I | FUNCTION selector input 2. |
| 34 | P0 ₀ | I | WAKE UP input. Key on wake up specification. |
| 35 | P0 ₁ | I | MUTE KEY input. Key on wake up specification. |
| 36 | P0 ₂ | I | DIRECT KEY input. Key on wake up specification. |
| 37 | P0 ₃ | O | Protection control pin. |
| 38 | P0 ₄ | I | Output error detection pin |
| 39 | P0 ₅ | O | MUTING control pin. |
| 40 | P0 ₆ | I | LOUDNESS KEY input. Key on wake up specification. |
| 41 | P0 ₇ | I | POWER KEY input. Key on wake up specification. |
| 42 | P5 ₂ | I | TAPE2 KEY input. |

7. BLOCK DIAGRAM



8. FOR A-605R/HY/GR, SD, HV, A-605R-G/HY/EW, A-505R/HY/EW, HY/GR, A-405R/HY/EW, HY/GR, HV AND A-405R-G/HY/EW TYPES

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

8.1 FOR A-605R/HY/GR, SD, HV AND A-605R-G/HY/EW

A-605R/HY/GR, SD, HV, A-605-G/HY/EW and A-605R/HY/EW have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | | | | Remarks |
|----------|---|---------------|---------------|--------------|--------------|-----------------|---------|
| | | A-605R /HY/EW | A-605R /HY/GR | A-605R /SD | A-605R /HV | A-605R-G /HY/EW | |
| NSP | CONTROL assembly | AWG7006 | AWG7006 | AWG7004 | AWG7007 | AWG7006 | |
| | AC PRIMARY assembly | AWZ7944 | AWZ7944 | AWZ7946 | AWZ7943 | AWZ7944 | |
| Δ | FU3 Fuse (T500mA) | AEK1051 | AEK1051 | AEK1051 | Not used | AEK1051 | *1 |
| Δ | FU2 Fuse (T2A) | Not used | Not used | AEK1057 | Not used | Not used | |
| Δ | AC power cord | ADG1154 | ADG1154 | ADG1158 | ADG1156 | ADG1154 | |
| Δ | Fuse (T5A) (With in AC pulg) | Not used | Not used | Not used | AEK1046 | Not used | |
| Δ | AC socket 3 – P | AKP – 502 | AKP – 502 | AKP – 515 | Not used | AKP – 502 | |
| Δ | T1 Power transformer (AC220 – 230V) | ATS7128 | ATS7128 | Not used | ATS7128 | ATS7128 | |
| Δ | T1 Power transformer (AC110V/120 – 127V/220V/240V) | Not used | Not used | ATS7129 | Not used | Not used | |
| Δ | Swith (Main power) | ASH – 501 | ASH – 501 | Not used | ASH – 501 | ASH – 501 | |
| Δ | Voltage selector S1 (AC110V/120 – 127V/220V/240V) | Not used | Not used | AKX – 507 | Not used | Not used | *1 |
| Δ | Voltage selector S2 (AC110 – 127V/220V – 240V) | Not used | Not used | AKX1004 | Not used | Not used | *1 |
| | Rear panel | ANC7424 | ANC7424 | ANC7425 | ANC7426 | ANC7424 | |
| | Hinge L | AMR7115 | AMR7115 | AMR7115 | AMR7115 | AMR7118 | |
| | Hinge R | AMR7116 | AMR7116 | AMR7116 | AMR7116 | AMR7119 | |
| | Panel stopper mould | AMR7117 | AMR7117 | AMR7117 | AMR7117 | AMR7120 | |
| | Name plate | VAM1032 | VAM1032 | VAM1032 | VAM1032 | VAM1051 | |
| | Rotary knob C | AAB7089 | AAB7089 | AAB7089 | AAB7089 | AAB7094 | |
| | Rotary knob L | AAB7090 | AAB7090 | AAB7090 | AAB7090 | AAB7096 | |
| | Rotary knob B | AAB7091 | AAB7091 | AAB7091 | AAB7091 | AAB7095 | |
| | Speaker button | AAD7290 | AAD7290 | AAD7290 | AAD7290 | AAD7298 | |
| | Selfillmi button A | AAD7291 | AAD7291 | AAD7291 | AAD7291 | AAD7299 | |
| | Selfillmi button B | AAD7292 | AAD7292 | AAD7292 | AAD7292 | AAD7300 | |
| | Power button | AAD7293 | AAD7293 | AAD7293 | AAD7293 | AAD7301 | |
| | Muting button | AAD7294 | AAD7294 | AAD7294 | AAD7294 | AAD7302 | |
| | Top cover | AME1086 | AME1086 | AME1086 | AME1086 | AME7370 | |
| | Metal bonnet | ANE7119 | ANE7119 | ANE7119 | ANE7119 | ANE7128 | |
| | Panel base | AMB7362 | AMB7362 | AMB7362 | AMB7362 | AMB7369 | |
| | Door panel | ANB7050 | ANB7050 | ANB7050 | ANB7050 | ANB7056 | |
| | Front panel | ANB7052 | ANB7052 | ANB7052 | ANB7052 | ANB7057 | |
| | Screw (For bonnet) | BBT30P080FZK | BBT30P080FZK | BBT30P080FZK | BBT30P080FZK | BBT30P080FNI | |
| | Operating instructions (English/French/German/Italian/Swedish/Spanish/Dutch/Portuguese) | ARE7077 | Not used | Not used | Not used | ARE7077 | |

| Mark | Symbol & Description | Part No. | | | | | Remarks |
|---------|--|---------------|---------------|------------|------------|-----------------|---------|
| | | A-605R /HY/EW | A-605R /HY/GR | A-605R /SD | A-605R /HV | A-605R-G /HY/EW | |
| NSP | Operating instructions (German) | Not used | ARC7125 | Not used | Not used | Not used | *2 |
| | Operating instructions (English/Spanish/Chinese) | Not used | Not used | ARE7078 | Not used | Not used | |
| | Operating instructions (English) | Not used | Not used | Not used | ARB7080 | Not used | |
| | Remote control unit (CU – A013) | AXD7053 | AXD7053 | AXD7053 | AXD7053 | Not used | |
| | Remote control unit (CU – A015) | Not used | Not used | Not used | Not used | AXD7054 | |
| | Packing case | AHD7308 | AHD7308 | AHD7326 | AHD7308 | AHD7315 | |
| | Battery cover | AZN2249 | AZN2249 | AZN2249 | AZN2249 | AZN2250 | |
| Air cap | Not used | Not used | Not used | AHG1087 | Not used | | |

Notes *1 : Refer to page 4.
*2 : Refer to page 5.

AC PRIMARY ASSEMBLY

AWZ7946, AWZ7943 and AWZ7944 have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | | Remarks |
|------|---|--------------------------------|-------------------------------|---------------------------------|---------|
| | | AWZ7944 | AWZ7946 | AWZ7943 | |
| △ | RY801 H3, H4 Fuse holder H5, H6 Fuse holder | ASR1044 Not used RKR1003 | ASR1036 RKR1003 RKR1003 | ASR1044 Not used Not used | *3 |

Note *3 : Refer to SCH-4.

8.2 FOR A-505R/HY/EW AND HY/GR

A-505R/HY/EW, HY/GR and A-605R/HY/EW have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | | Remarks |
|------|-------------------------------------|---------------|---------------|---------------|---------|
| | | A-605R /HY/EW | A-505R /HY/EW | A-505R /HY/GR | |
| NSP | CONTROL assembly | AWG7006 | AWG7002 | AWG7002 | *4 |
| | FRONT R assembly | AWZ8398 | AWZ7935 | AWZ7935 | |
| NSP | AF COMPLEX assembly | AWK7307 | AWK7308 | AWK7308 | |
| | AF assembly | AWZ7932 | AWZ7933 | AWZ7933 | |
| | FRONT L assembly | AWZ8397 | AWZ7938 | AWZ7938 | |
| △ | T1 Power transformer (AC220 – 230V) | ATS7128 | ATS7127 | ATS7127 | |
| | Pocket holder assembly | ANG1864 | Not used | Not used | |
| | Foot | AMR1159 | Not used | Not used | |
| | Insulator | Not used | PNW1912 | PNW1912 | |
| NSP | Screw (STEEL) (For foot) | ABA1004 | Not used | Not used | |
| | Screw (For door panel) | ABA7023 | Not used | Not used | |
| | Pocket spring | ABH7114 | Not used | Not used | |
| | Cord with plug | ADH1003 | Not used | Not used | |
| | Pocket lock | AMR2587 | Not used | Not used | |
| | Hinge L | AMR7115 | Not used | Not used | |
| | Hinge R | AMR7116 | Not used | Not used | |
| | Panel stopper mould | AMR7117 | Not used | Not used | |
| | Dumper | AXA7036 | Not used | Not used | |
| | Rotary knob C | AAB7089 | Not used | Not used | |

| Mark | Symbol & Description | Part No. | | | Remarks |
|------|---|---|--|--|-------------------|
| | | A-605R /HY/EW | A-505R /HY/EW | A-505R /HY/GR | |
| | Rotary knob A Rotary knob L Top cover Metal bonnet Door panel Front panel Screw (For dumper) Operating instructions (English/French/German/Italian/ Swedish/Spanish/Dutch/Portuguese) Operating instructions (German) Packing case | Not used AAB7090 AME1086 ANE7119 ANB7050 ANB7052 BPZ20P080FMC ARE7077 Not used AHD7308 | AAB7088 AAB7087 Not used ANE7118 Not used ANB7051 Not used ARE7077 Not used AHD7307 | AAB7088 AAB7087 Not used ANE7118 Not used ANB7051 Not used Not used ARC7125 AHD7307 | For rotary knob C |

Note *4 : Refer to page 4.

FRONT R ASSEMBLY

AWZ7935 and AWZ8398 have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | Remarks |
|------|---------------------------|--------------------|--------------------|---------|
| | | AWZ8398 | AWZ7935 | |
| | S602 VR601 (500kΩ - B) | ASD7009 ACS7015 | ASD7001 ACS7014 | |

AF ASSEMBLY

AWZ7933 and AWZ7932 have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | Remarks |
|------|--|--|---|-----------------|
| | | AWZ7932 | AWZ7933 | |
| △ | D454 R458, R459 RY403 Heat sink fitting Heat sink L Heat sink M | MTZJ33B RD1/4PMF2R2J ASR1035 ANG7095 ANH7044 Not used | MTZJ30B RD1/4PMF100J ASR7001 Not used Not used ANH7043 | For heat sink L |

FRONT L ASSEMBLY

AWZ7938 and AWZ8397 have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | Remarks |
|------|----------------------------|----------|---------|---------|
| | | AWZ8397 | AWZ7938 | |
| | VR751, VR752 (30kΩ - B5X2) | ACS7017 | ACS7016 | |

8.3 FOR A-405R/HY/EW, HY/GR, HV AND A-405R-G/HY/EW

A-405R/HY/EW, HY/GR, HV, A-405-G/HY/EW and A-605R/HY/EW have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | | | | Remarks |
|------|--|------------------|------------------|------------------|---------------|--------------------|---------|
| | | A-605R /HY/EW | A-405R /HY/EW | A-405R /HY/GR | A-405R /HV | A-405R-G /HY/EW | |
| NSP | CONTROL assembly | AWG7006 | AWG7003 | AWG7003 | AWG7005 | AWG7003 | |
| | AC PRIMARY assembly | AWZ7944 | AWZ7945 | AWZ7945 | AWZ7943 | AWZ7945 | |
| | FRONT R assembly | AWZ8398 | AWZ7936 | AWZ7936 | AWZ7936 | AWZ7936 | |
| NSP | AF COMPLEX assembly | AWK7307 | AWK7309 | AWK7309 | AWK7309 | AWK7309 | |
| | AF assembly | AWZ7932 | AWZ7934 | AWZ7934 | AWZ7934 | AWZ7934 | |
| △ | FRONT L assembly | AWZ8397 | AWZ7938 | AWZ7938 | AWZ7938 | AWZ7938 | |
| △ | FU3 Fuse (T500mA) | AEK1051 | Not used | Not used | Not used | Not used | |
| △ | AC power cord | ADG1154 | ADG1154 | ADG1154 | ADG1156 | ADG1154 | |
| △ | Fuse (T5A) (With in AC pulg) | Not used | Not used | Not used | AEK1046 | Not used | |
| △ | AC socket 3 – P | AKP – 502 | Not used | Not used | Not used | Not used | |
| △ | T1 Power transformer (AC220 – 230V) | ATS7128 | ATS7126 | ATS7126 | ATS7126 | ATS7126 | |
| | Rear panel | ANC7424 | ANC7423 | ANC7423 | ANC7426 | ANC7423 | |
| | Pocket holder assembly | ANG1864 | Not used | Not used | Not used | Not used | |
| | Foot | AMR1159 | Not used | Not used | Not used | Not used | |
| | Insurator | Not used | PNW1912 | PNW1912 | PNW1912 | PNW1912 | *5 |
| | Screw (STEEL) (For foot) | ABA1004 | Not used | Not used | Not used | Not used | |
| | Screw (For door panel) | ABA7023 | Not used | Not used | Not used | Not used | |
| | Pocket spring | ABH7114 | Not used | Not used | Not used | Not used | |
| NSP | Cord with plug | ADH1003 | Not used | Not used | Not used | Not used | |
| | Pocket lock | AMR2587 | Not used | Not used | Not used | Not used | |
| | Hinge L | AMR7115 | Not used | Not used | Not used | Not used | |
| | Hinge R | AMR7116 | Not used | Not used | Not used | Not used | |
| | Panel stopper mould | AMR7117 | Not used | Not used | Not used | Not used | |
| | Dumper | AXA7036 | Not used | Not used | Not used | Not used | |
| | Name plate | VAM1032 | VAM1032 | VAM1032 | VAM1032 | VAM1051 | |
| | Rotary knob C | AAB7089 | Not used | Not used | Not used | Not used | |
| | Rotary knob A (For rotary knob C) | Not used | AAB7088 | AAB7088 | AAB7088 | AAB7093 | |
| | Rotary knob L | AAB7090 | AAB7087 | AAB7087 | AAB7087 | AAB7097 | |
| | Rotary knob B | AAB7091 | AAB7091 | AAB7091 | AAB7091 | AAB7095 | |
| | Speaker button | AAD7290 | AAD7290 | AAD7290 | AAD7290 | AAD7298 | |
| | Selfillmi button A | AAD7291 | AAD7291 | AAD7291 | AAD7291 | AAD7299 | |
| | Selfillmi button B | AAD7292 | AAD7292 | AAD7292 | AAD7292 | AAD7300 | |
| | Power button | AAD7293 | AAD7293 | AAD7293 | AAD7293 | AAD7301 | |
| | Muting button | AAD7294 | Not used | Not used | Not used | Not used | |
| | Top cover | AME1086 | Not used | Not used | Not used | Not used | |
| | Metal bonnet | ANE7119 | ANE7118 | ANE7118 | ANE7118 | ANE7127 | |
| | Panel base | AMB7362 | AMB7362 | AMB7362 | AMB7362 | AMB7369 | |
| | Door panel | ANB7050 | Not used | Not used | Not used | Not used | |
| | Front panel | ANB7052 | ANB7049 | ANB7049 | ANB7049 | ANB7058 | |
| | Screw (For dumper) | BPZ20P080FMC | Not used | Not used | Not used | Not used | |
| | Screw (For bonnet) | BBT30P080FZK | BBT30P080FZK | BBT30P080FZK | BBT30P080FZK | BBT30P080FNI | |
| | Operating instructions (English/French/German/Italian/ Swedish/Spanish/Dutch/Portuguese) | ARE7077 | ARE7077 | Not used | Not used | ARE7077 | |
| | Operating instructions (German) | Not used | Not used | ARC7125 | Not used | Not used | |
| | Operating instructions (English) | Not used | Not used | Not used | ARB7080 | Not used | |
| | Remote control unit (CU – A013) | AXD7053 | AXD7053 | AXD7053 | AXD7053 | Not used | |
| | Remote control unit (CU – A015) | Not used | Not used | Not used | Not used | AXD7054 | |
| | Packing case | AHD7308 | AHD7306 | AHD7306 | AHD7306 | AHD7316 | |
| | Battery cover | AZN2249 | AZN2249 | AZN2249 | AZN2249 | AZN2250 | |
| NSP | Air cap | Not used | Not used | Not used | AHG1087 | Not used | *6 |

Notes *5 : Refer to page 4.
*6 : Refer to page 5.

AC PRIMARY ASSEMBLY

AWZ7945, AWZ7943 and AWZ7944 have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | | Remarks |
|------|---|---------------------|---------------------|----------------------|---------|
| | | AWZ7944 | AWZ7945 | AWZ7943 | |
| △ | CN802 AC socket 1 – P H5, H6 Fuse holder | Not used RKR1003 | AKP1034 Not used | Not used Not used | |

FRONT R ASSEMBLY

AWZ7936 and AWZ8398 have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | Remarks |
|------|---|--|--|---------|
| | | AWZ8398 | AWZ7936 | |
| | Q611 R621 S602 S605 VR601 (500kΩ – B) | DTA124ES RD1/4PU223J ASD7009 ASG1034 ACS7015 | Not used Not used ASD7001 Not used ACS7014 | |

AF ASSEMBLY

AWZ7934 and AWZ7932 have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | Remarks |
|------------------|---|---|--|-----------------|
| | | AWZ7932 | AWZ7934 | |
| | C451 C452 C464 C465, C466 D453 | ACH7046 (15000µF/50V) ACH7047 (15000µF/50V) Not used CEAS100M50 MTZJ36D | ACH7048 (10000µF/42V) ACH7049 (10000µF/42V) CEAS100M50 Not used Not used | *7 |
| | D454 D455 D456 IC452 Q301, Q302 | MTZJ33B MTZJ4.7A Not used NJM79L15A 2SC2878 | Not used MTZJ4.7C MTZJ10C NJM79M05FA Not used | *7 |
| | Q451 Q452 R301, R302 R303, R304 R319 | 2SC4793 2SB1238X RD1/4PU102J RD1/4PU181J RD1/4PU824J | Not used Not used Not used Not used Not used | |
| △ △ △ △ | R451 R452 R453 R454 R460 | RS1MMF330J RD1/4MUF101J RS2MMF122J RS2MMF182J Not used | RS1MMF100J RD1/4MUF4R7J Not used Not used RD1/4PU472J | *7 |
| | RY403 Heat sink fitting Heat sink Heat sink L Heat sink M | ASR1035 ANG7095 ANH1150 ANH7044 Not used | ASR7001 Not used Not used Not used ANH – 697 | For heat sink |
| | Heat sink S | Not used | ANH7042 | For heat sink L |

Note *7 : Refer to SCH-2.

FRONT L ASSEMBLY

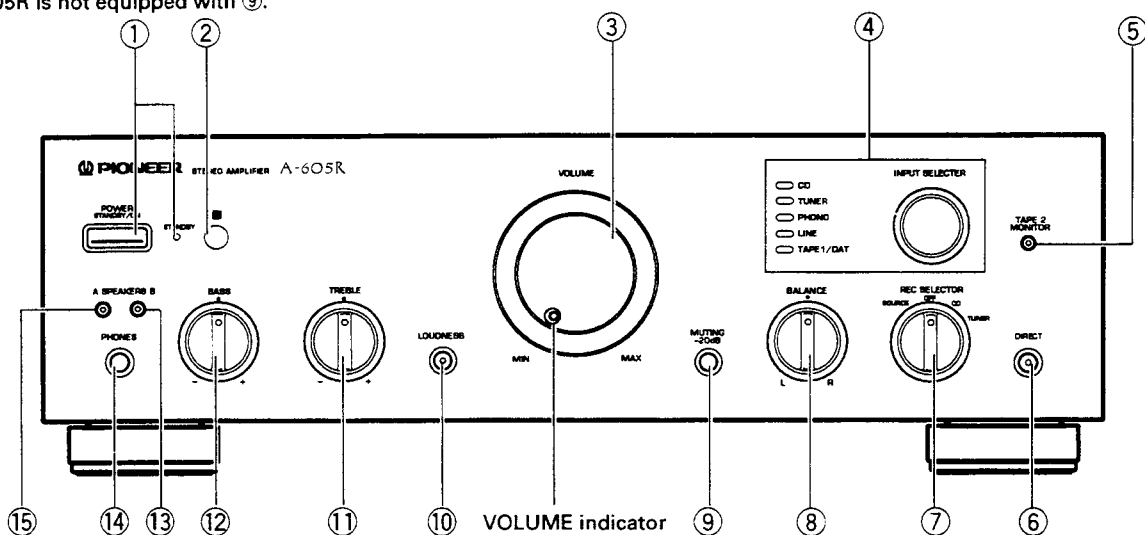
AWZ7938 and AWZ8397 have the same construction except for the following:

| Mark | Symbol & Description | Part No. | | Remarks |
|------|----------------------------|----------|---------|---------|
| | | AWZ8397 | AWZ7938 | |
| | VR751, VR752 (30kΩ - B5X2) | ACS7017 | ACS7016 | |

9. PANEL FACILITIES

[FRONT PANEL]

The illustration shows mode A-605R.
The illustration shows the hinged panel open.
Model A-405R is not equipped with ⑨.



① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

ON : When set to the ON position, power is supplied and the unit becomes operational.

STANDBY : When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. When the STANDBY indicator lights, the unit is in STANDBY.

NOTE:

When performing timer recording with this unit, be sure to set the POWER STANDBY/ON switch to ON.

② Remote control sensor window

③ VOLUME control

Use to adjust the volume level.

NOTE:

The TONE effect functions regardless of volume levels.

④ INPUT SELECTOR knob/indicators

Turn the knob clockwise or counterclockwise so that the indicator lights for your desired input source. Turning the knob clockwise cause the lit indicator to rise. Turning counterclockwise causes it to fall.

CD : For compact disc playback with a CD player.

TUNER : For AM or FM broadcast reception with a tuner.

PHONO : For record playback with a turntable.

LINE : Set to this position when listening to a program from a component connected to the LINE terminals.

TAPE 1/DAT : For playback with a cassette deck or digital audio cassette deck connected to the TAPE 1/DAT terminals.

⑤ TAPE 2 MONITOR button/indicator

Use when there is an adaptor component (graphic equalizer, etc.) or cassette deck connected to the TAPE 2 MONITOR terminals.

Off : Indicator goes out when not in use.

On : Indicator lights when using the adaptor component or listening to the cassette deck.

NOTE:

When no connections are made to the TAPE 2 MONITOR terminals, or when they are not in use, be sure to set this switch to the off position. (No sound will be heard if it is set to the on position.)

⑥ DIRECT button/indicator

Use this button when you do not wish to pass the output from input terminal equipment through the various frequency adjusting circuits (BASS, TREBLE, BALANCE, LOUDNESS).

On : The indicator lights. The signals input through the input terminals are reproduced without passing through the various frequency adjusting circuits. This results in flat, pure sound which is a more faithful reproduction of the input source.

Off : The indicator goes out. The signal passes through the various frequency adjusting circuits.

⑦ REC SELECTOR switch (For TAPE 1/DAT terminals)

When this switch is set to a position other than SOURCE or OFF, the equipment selected by the REC SELECTOR switch can be recorded, irrespective of the INPUT SELECTOR knob and the DIRECT button settings (TAPE 1/DAT terminals).

SOURCE : To record from the equipment selected by the INPUT SELECTOR knob.

OFF : In this position, nothing from the REC terminals of TAPE 1/DAT is output. Set to this position when not recording; the cassette deck will be disconnected, improving sound quality.

CD : To record from the equipment connected to the CD terminals.

TUNER : To record from the equipment connected to the TUNER terminals.

NOTE:

The function selected using the INPUT SELECTOR knob will be recorded irrespective of the position of the REC SELECTOR switch (TAPE 2 MONITOR terminals).

⑧ BALANCE control

Should normally be left in the center position. Adjust the balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the L (left) position and if the left side is louder, turn toward the R (right) position.

NOTE:

This control does not operate when the DIRECT button is in the on position.

⑨ MUTING button/indicator (A-605R and A-505R only)

Use to temporarily lower sound volume.

On : The VOLUME indicator flashes. The sound volume is lowered to one-tenth (-20dB).

Off : The VOLUME indicator lights. The sound will return to its previous volume.

⑩ LOUDNESS button/indicator

Use when listening at low volume level.

On : The indicator lights. Boosts low and high frequencies to give added punch to playback even at low volume level.

Off : The indicator goes out. Should normally be left in this position.

NOTE:

This button does not operate when the DIRECT button is in the on position.

⑪ TREBLE tone control

Use to adjust the high-frequency tone. The center position is the flat (normal) position. When turned to the right, the high-frequency tone is emphasized; when turned to the left, the high-frequency tone is de-emphasized.

NOTE:

This control does not operate when the DIRECT button is in the on position.

⑫ BASS tone control

Use to adjust the low-frequency tone. The center position is the flat (normal) position. When turned to the right, the low-frequency tone is emphasized; when turned to the left, the low-frequency tone is de-emphasized.

NOTE:

This control does not operate when the DIRECT button is in the on position.

⑬ SPEAKERS B selector button/indicator

Use this button to listen to the speaker system connected to the SPEAKERS B terminals.

On : The indicator lights. Sound is heard from the speaker system.

Off : The indicator goes out. No sound is heard from the speaker system. Set to this position when listening with headphones.

⑭ PHONES jack

When using headphones, insert the plug into this jack.

⑮ SPEAKERS A selector button/indicator

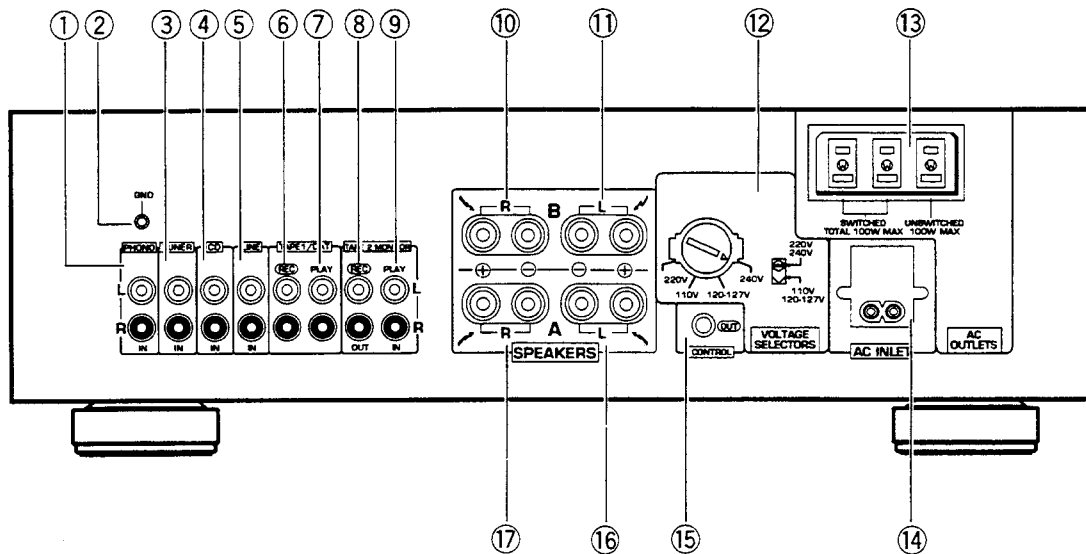
Use this button to listen to the speaker system connected to the SPEAKERS A terminals.


On : The indicator lights. Sound is heard from the speaker system.

Off : The indicator goes out. No sound is heard from the speaker system. Set to this position when listening with headphones.

[REAR PANEL]

Illustration shows Multi-voltage model.



- | | |
|--|--|
| <ul style="list-style-type: none"> ① PHONO terminals ② GND (Turntable ground) terminal ③ TUNER terminals ④ CD terminals ⑤ LINE terminals ⑥ TAPE 1/DAT REC terminals ⑦ TAPE 1/DAT PLAY terminals ⑧ TAPE 2 MONITOR REC (OUT) terminals ⑨ TAPE 2 MONITOR PLAY (IN) terminals | <ul style="list-style-type: none"> ⑩ SPEAKERS B terminals (Right channel) ⑪ SPEAKERS B terminals (Left channel) ⑫ VOLTAGE SELECTORS ⑬ AC OUTLETS ⑭ AC INLET jack Connect one end of the power cord to here and the other end to an AC wall socket, or the AC outlet of an audio timer. If you are going to be away from home for a long period of time, disconnect the unit from the wall socket. ⑮ CONTROL OUT jack This jack is for outputting control signals when operating other components bearing the  mark with the amplifier's remote control unit. ⑯ SPEAKERS A terminals (Left channel) ⑰ SPEAKERS A terminals (Right channel) |
|--|--|

CAUTION:
DO NOT CONNECT MONITOR OR TV SET TO THE AC OUTLET.

10. SPECIFICATIONS

Amplifier Section

Continuous power output

(both channels driven at 20 Hz to 20 kHz)**

[A-605R]

T.H.D. 0.06 %, 8 Ω 60 W + 60 W*

T.H.D. 0.09 %, 4 Ω 90 W + 90 W*

[A-405R]

T.H.D. 0.06 %, 8 Ω 45 W + 45 W*

T.H.D. 0.09 %, 4 Ω 65 W + 65 W*

DIN Continuous power output (both channels driven at 1 kHz)

[A-605R]

T.H.D. 1.0 %, 8 Ω 75 W + 75 W

T.H.D. 1.0 %, 4 Ω 120 W + 120 W

[A-405R]

T.H.D. 1.0 %, 8 Ω 60 W + 60 W

T.H.D. 1.0 %, 4 Ω 90 W + 90 W

Dynamic power output (on EIA dynamic test signal)

[A-605R]

4 Ω/ 2 Ω 140 W/ 190 W

[A-405R]

4 Ω/ 2 Ω 100 W/ 115 W

Total harmonic distortion**

20 Hz to 20 kHz, 30 W, 8 Ω 0.05 %*

Input sensitivity/ impedance

PHONO (MM) 2.8 mV/ 50 kΩ

CD, TUNER, LINE, TAPE 1/DAT,

TAPE 2 MONITOR 200 mV/ 50 kΩ

PHONO overload level (MM)

1 kHz, T.H.D. 0.1 % 150 mV

Output level/ impedance

TAPE 1/DAT, TAPE 2 MONITOR output

..... 200 mV/ 1 kΩ

Frequency response

PHONO (MM) 20 Hz to 20 kHz ± 0.5 dB

CD, TUNER, LINE, TAPE 1/DAT,

TAPE 2 MONITOR 5 Hz to 150 kHz ± 0.5 dB*

Tone control

BASS ± 8 dB (100 Hz)

TREBLE ± 8 dB (10 kHz)

Loudness contour (volume control set at - 30 dB position)

..... + 5 dB (100 Hz)/ + 3 dB (10 kHz)

Signal-to-Noise ratio (IHF short circuit, A network)

[A-605R]

PHONO (MM, 5 mV input) 88 dB*

CD, TUNER, LINE, TAPE 1/DAT,

TAPE 2 MONITOR 108 dB*

[A-405R]

PHONO (MM, 5 mV input) 86 dB*

CD, TUNER, LINE, TAPE 1/DAT,

TAPE 2 MONITOR 106 dB*

Signal-to-Noise ratio (DIN, continuous power/ 50 mW)

PHONO (MM) 71 dB/ 67 dB*

CD, TUNER, LINE, TAPE 1/DAT,

TAPE 2 MONITOR 95 dB/ 71 dB*

MUTING (volume control set at - 30 dB position)

[A-605R and A-505R only] - 20 dB

Power Supply/ Miscellaneous

Power requirements AC 230 Volts, 50/ 60 Hz

Power consumption

[A-605R] 550 W

[A-405R] 380 W

Dimensions (including knobs and other protruding parts)

[A-605R] 420 (W) × 344 (D) × 132 (H) mm

[A-405R] 420 (W) × 344 (D) × 125 (H) mm

Weight (without package)

[A-605R] 6.6 kg

[A-405R] 6.5 kg

Accessories

Remote control unit 1

Batteries (AA/R6P) 2

Operating instructions 1

Power cord 1

NOTE:

Specifications and design subject to possible modification without notice, due to improvements.

* Measured with the DIRECT button set to on.

** Measured by Audio Spectrum Analyzer.

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.