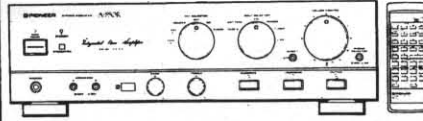


# Service Manual



The above illustration shows the model A-550R.

ORDER NO.  
ARP2305

## STEREO AMPLIFIER

# A-550R

## A-550R-S

## A-450R

A - 550R, A - 550R - S AND A - 450R HAVE THE FOLLOWING :

| Type | Model    |              |          | Power Requirement                 | Remarks |
|------|----------|--------------|----------|-----------------------------------|---------|
|      | A - 550R | A - 550R - S | A - 450R |                                   |         |
| HE   | ○        | —            | ○        | AC220V - 230V, 240V (Switchable)* |         |
| HEWZ | ○        | ○            | ○        | AC220V - 230V, 240V (Switchable)* |         |

\* Change the connection of the power transformer's primary wiring.

- This manual is applicable to the A - 550R/HE, HEWZ, A - 550R - S/HEWZ, A - 450R/HE and HEWZ types.
- The A - 550R - S is the same as the A - 550R except for color.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

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## 1. EXPLODED VIEWS, PACKING AND PARTS LIST

### NOTES:

- The parts with an encircled number are generally unavailable because they are not in our Master Spare Parts List.
- The  $\Delta$  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.

### 1.1 PARTS LIST OF A - 550R AND A - 550R - S TYPES

| Mark     | No. | Description  | Parts No. | Mark     | No. | Description   | Parts No. |
|----------|-----|--|-----------|----------|-----|---|-----------|
|          | 1   | ROTARY KNOB S (BASS, TREBLE)                                       | AAB1155   |          | 26  | CUSHION (RUBBER)  | AEB1074   |
|          | 1   | ROTARY KNOB S (BASS, TREBLE) (A - 550R - S type)                   | AAB1238   |          | 27  | CUSHION C (RUBBER)  | AEB - 270 |
|          | 2   | ROTARY KNOB L (VOLUME CONTROL)                                     | AAB1160   |          | 28  | NYLON BINDER  | AEC - 093 |
|          | 2   | ROTARY KNOB L (VOLUME CONTROL) (A - 550R - S type)                 | AAB1161   |          | 29  | RIVET   | AEC - 441 |
|          | 3   | ROTARY KNOB R (PLS)  | AAB1162   |          | 30  | STRAIN RELIEF   | AEC - 882 |
|          | 3   | ROTARY KNOB R (A - 550R - S type)                                  | AAB1163   |          | 31  | .....   |           |
|          | 4   | ROTARY KNOB M (REC/INPUT SELECTOR)                                 | AAB1231   | ⊙        | 32  | LED ASSEMBLY  | AWZ3495   |
|          | 4   | ROTARY KNOB M (REC/INPUT SELECTOR) (A - 550R - S type)             | AAB1236   |          | 33  | CONTROL ASSEMBLY  | AWZ3496   |
|          | 5   | PUSH KNOB (STANDBY)  | AAD1246   |          | 34  | ROTARY FUNC. ASSEMBLY   | AWZ3497   |
|          | 5   | PUSH KNOB (STANDBY) (A - 550R - S type)                            | AAD2033   |          | 35  | DRY CELL BATTERY (R03, AAA)   | AEX - 021 |
|          | 6   | PUSH KNOB C (SPEAKERS, DIRECT, PHONO SELECTOR)                     | AAD1366   |          | 36  | STYROL PROTECTOR  | AHA1335   |
|          | 6   | PUSH KNOB C (SPEAKERS, DIRECT, PHONO SELECTOR) (A - 550R - S type) | AAD1367   | $\Delta$ | 37  | PACKING CASE  | AHD2130   |
|          | 7   | PUSH KNOB (SUBSONIC, LOUDNESS)                                     | AAD1536   |          | 37  | PACKING CASE (A - 550R - S type)  | AHD2131   |
|          | 7   | PUSH KNOB (SUBSONIC, LOUDNESS) (A - 550R - S type)                 | AAD1538   |          | 38  | EYE ASSEMBLY  | AWZ3498   |
|          | 8   | POWER KNOB   | AAD1984   |          | 39  | PACKING SHEET   | AHG1016   |
|          | 8   | POWER KNOB (A - 550R - S type)                                     | AAD2040   |          | 40  | TERMINAL SCREW  | AKE - 031 |
|          | 9   | TACT KNOB (MUTING)   | AAD2003   |          | 41  | PLUG  | AKM1004   |
|          | 9   | TACT KNOB (MUTING) (A - 550R - S type)                             | AAD2032   |          | 42  | AC SOCKET 3 - P   | AKP - 502 |
|          | 10  | SENSOR WINDOW  | AAK1783   |          | 43  | PANEL BASE  | AMB1651   |
|          | 11  | POWER SW ASSEMBLY  | AWZ3493   |          | 43  | PANEL BASE (A - 550R - S type)  | AMB1652   |
|          | 12  | NAME PLATE (METAL)   | AAM1029   |          | 44  | INDICATING LENS   | AMR1160   |
|          | 13  | SCREW  | ABA - 298 |          | 45  | INSULATOR ASSY  | AMR2140   |
|          | 14  | SCREW (STEEL)  | ABA1009   |          | 46  | ARM   | AMR2142   |
|          | 15  | SCREW (STEEL)  | ABA1011   |          | 47  | MICA SHEET  | AMR2295   |
|          | 16  | SCREW (STEEL)  | ABA1016   |          | 48  | CHASSIS   | ANA1065   |
|          | 17  | SCREW (STEEL)  | ABA1047   |          | 49  | FRONT PANEL   | ANB1462   |
|          | 18  | SCREW (STEEL)  | ABA1048   |          | 49  | FRONT PANEL (A - 550R - S type)   | ANB1477   |
|          | 19  | SCREW (STEEL)  | ABA1050   |          | 50  | REAR PANEL  | ANC1712   |
|          | 20  | SCREW  | ABA1082   |          | 51  | SHIELD ASSEMBLY   | AWZ2860   |
|          | 21  | BUSH   | ABF1018   |          | 52  | BOTTOM PLATE  | ANF1085   |
|          | 22  | SPRING   | ABH - 052 |          | 53  | PCB HOLDER  | ANG1198   |
|          | 23  | SPRING   | ABH1034   |          | 54  | HEAT SINK HOLDER  | ANG1340   |
|          | 24  | NUT  | ABN - 065 |          | 55  | PCB HOLDER  | ANG1580   |
| $\Delta$ | 25  | AC POWER CORD  | ADG1049   |          | 56  | HEAT SINK   | ANH1259   |
|          |     |  |           |          | 57  | SUB HEAT SINK   | ANH1325   |
|          |     |  |           |          | 58  | ROD   | ANR - 879 |
|          |     |  |           |          | 59  | OPERATING INSTRUCTIONS (English, French, German, Italian, Dutch, Swedish, Spanish, Portugues) (HE type) | ARE1201   |
|          |     |  |           |          | 59  | OPERATING INSTRUCTIONS (German) (HEWZ type)   | ARC1278   |
|          |     |  |           |          | 60  | HEADPHONE ASSEMBLY  | AWZ3484   |
|          |     |  |           | ⊙        | 61  | AF COMPLEX ASSEMBLY   | AWZ3487   |
|          |     |  |           | ⊙        | 62  | TONE ASSEMBLY   | AWZ3491   |

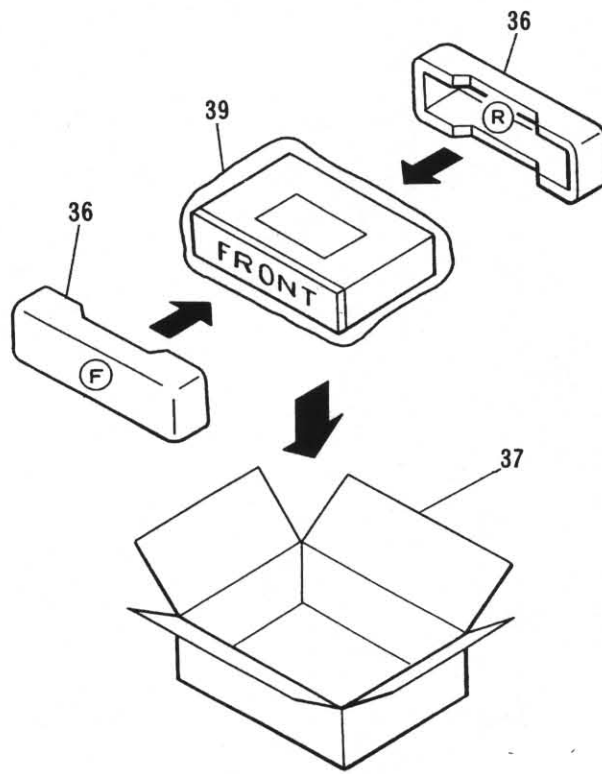
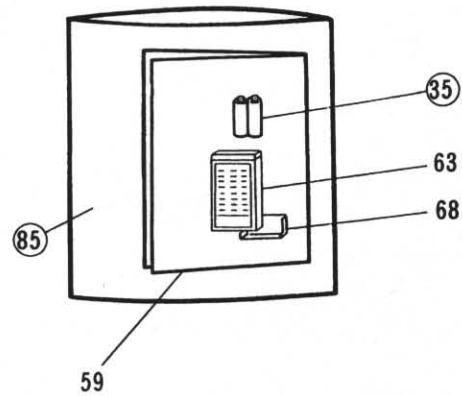
| Mark | No. | Description  | Parts No.    |
|------|-----|--|--------------|
|      | 63  | REMOTE CONTROL UNIT (CU - A001)                        | AXD1211      |
|      | 64  | BONNET CASE  | AZN1799      |
|      | 64  | BONNET CASE (A - 550R - S type)                        | AZN1800      |
|      | 65  | SCREW  | BBT30P060FZK |
|      | 65  | SCREW (A - 550R - S type)                              | ABA - 274    |
|      | 66  | SCREW  | BBT30P080FZK |
|      | 67  | NUTS   | NK90FZB      |
|      | 68  | BATTERY COVER  | PZN1001      |
|      | 69  | SCREW  | VMZ30P060FCU |
| △    | 70  | POLYESTER CAPACITOR (C1)                               | CQMXA104J100 |
| △    | 71  | FUSE (T2.5A, FU1)                                      | AEK - 512    |
| △    | 72  | TRANSISTOR (Q1)  | 2SC3281      |
| △    | 73  | TRANSISTOR (Q2)  | 2SC3281      |
| △    | 74  | TRANSISTOR (Q3)  | 2SA1302      |
| △    | 75  | TRANSISTOR (Q4)  | 2SA1302      |
| △    | 76  | TRANSISTOR (Q5)  | 2SC4137      |
| △    | 77  | TRANSISTOR (Q6)  | 2SC4137      |
| △    | 78  | CARBON FILM RESISTOR (R3)                              | RD1/4PM010J  |
|      | 79  | SWITCH (S2)  | ASU1036      |
| △    | 80  | POWER TRANSFORMER (T1)                                 | ATS1368      |
|      | 81  | FUSE ASSEMBLY  | AWZ3516      |
| △    | 82  | CARBON FILM RESISTOR (R1, RD1/4PMF100J HEWZ type only) |              |
| △    | 83  | CARBON FILM RESISTOR (R2, RD1/4PMF100J HEWZ type only) |              |
|      | 84  | BINDER   | AEF1004      |
|      | 85  | VINYL BAG  | AHG - 117    |

## 1.2 PARTS LIST OF A - 450R TYPE

| Mark | No. | Description                                    | Parts No.    |
|------|-----|--|--------------|
|      | 1   | ROTARY KNOB S (BASS, TREBLE)                   | AAB1155      |
|      | 2   | ROTARY KNOB L (VOLUME CONTROL)                 | AAB1160      |
|      | 3   | ROTARY KNOB R (PLS)                            | AAB1162      |
|      | 4   | ROTARY KNOB M (REC/INPUT SELECTOR)             | AAB1237      |
|      | 5   | PUSH KNOB (STANDBY)                            | AAD1246      |
|      | 6   | PUSH KNOB C (SPEAKERS, DIRECT, PHONO SELECTOR) | AAD1366      |
|      | 7   | PUSH KNOB (SUBSONIC, LOUDNESS)                 | AAD1536      |
|      | 8   | POWER KNOB                                     | AAD1984      |
|      | 9   | TACT KNOB (MUTING)                             | AAD2003      |
|      | 10  | SENSOR WINDOW                                  | AAK1783      |
|      | 11  | POWER SW ASSEMBLY                              | AWZ3493 = NS |
|      | 12  | NAME PLATE (METAL)                             | AAM1029      |
|      | 13  | SCREW  | ABA - 298    |
|      | 14  | SCREW (STEEL)                                  | ABA1009      |
|      | 15  | SCREW (STEEL)                                  | ABA1011      |
|      | 16  | SCREW (STEEL)                                  | ABA1016      |
|      | 17  | SCREW (HE type only)                           | ABA1047      |
|      | 18  | SCREW (STEEL)                                  | ABA1048      |
|      | 19  | SCREW (STEEL)                                  | ABA1050      |
|      | 20  | SCREW  | ABA1082      |
|      | 21  | .....  |              |
|      | 22  | SPRING   | ABH - 052    |
|      | 23  | SPRING   | ABH1034      |
|      | 24  | NUT  | ABN - 065    |
| △    | 25  | AC POWER CORD                                  | ADG1049      |
|      | 26  | CUSHION (RUBBER)                               | AEB1074      |
|      | 27  | CUSHION C (RUBBER)                             | AEB - 270    |
|      | 28  | NYLON BINDER                                   | AEC - 093    |
|      | 29  | RIVET  | AEC - 441    |
|      | 30  | STRAIN RELIEF                                  | AEC - 882    |
|      | 31  | .....  |              |
|      | 32  | LED ASSEMBLY                                   | AWZ3495      |
| ●    | 33  | CONTROL ASSEMBLY                               | AWZ3496      |
|      | 34  | ROTARY FUNC. ASSEMBLY                          | AWZ3497      |
|      | 35  | DRY CELL BATTERY (R03, AAA)                    | AEX - 021    |
|      | 36  | STYROL PROTECTOR                               | AHA1335      |
|      | 37  | PACKING CASE                                   | AHD2132      |
|      | 38  | EYE ASSEMBLY                                   | AWZ3498      |
|      | 39  | PACKING SHEET                                  | AHG1016      |
|      | 40  | TERMINAL SCREW                                 | AKE - 031    |
|      | 41  | PLUG   | AKM1004      |
| △    | 42  | AC SOCKET 3-P                                  | AKP - 502    |
|      | 43  | PANEL BASE                                     | AMB1651      |
|      | 44  | INDICATING LENS                                | AMR1160      |
|      | 45  | INSULATOR ASSY                                 | AMR2140      |
|      | 46  | .....  |              |
|      | 47  | MICA SHEET                                     | AEE1014      |
|      | 48  | CHASSIS  | ANA1065      |

| Mark | No. | Description  | Parts No.    |
|------|-----|--|--------------|
|      | 49  | FRONT PANEL  | ANB1463      |
|      | 50  | REAR PANEL   | ANC1712      |
|      | 51  | SHIELD ASSEMBLY  | AWZ2860      |
|      | 52  | BOTTOM PLATE   | ANF1085      |
|      | 53  | PCB HOLDER   | ANG1198      |
|      | 54  | HEAT SINK HOLDER   | ANG1340      |
|      | 55  | PCB HOLDER   | ANG1580      |
|      | 56  | HEAT SINK  | ANH1333      |
|      | 57  | .....  |              |
|      | 58  | ROD  | ANR-879      |
|      | 59  | OPERATING INSTRUCTIONS<br>(English, French, German,<br>Italian, Dutch, Swedish, Spanish,<br>Portugues) (HE type) | ARE1201      |
|      | 59  | OPERATING INSTRUCTIONS<br>(German) (HEWZ type)   | ARC1278      |
|      | 60  | HEADPHONE ASSEMBLY   | AWZ3484      |
| ●    | 61  | AF COMPLEX ASSEMBLY  | AWZ3489      |
| ●    | 62  | TONE ASSEMBLY  | AWZ3492      |
|      | 63  | REMOTE CONTROL UNIT<br>(CU-A001)   | AXD1211      |
|      | 64  | BONNET CASE  | AZN1799      |
|      | 65  | SCREW  | BBT30P060FZK |
|      | 66  | SCREW  | BBT30P080FZK |
|      | 67  | NUTS   | NK90FZB      |
|      | 68  | BATTERY COVER  | PZN1001      |
|      | 69  | SCREW  | VMZ30P060FCU |
| △    | 70  | POLYESTER CAPACITOR<br>(C1) (HE type)  | CQMXA473J100 |
| △    | 70  | POLYESTER CAPACITOR<br>(C1) (HEWZ type)  | CQMXA104J100 |
| △    | 71  | FUSE (T2.5A, FU1)  | AEK-512      |
| △    | 72  | TRANSISTOR (Q1)  | 2SC3281N     |
| △    | 73  | TRANSISTOR (Q2)  | 2SC3281N     |
| △    | 74  | TRANSISTOR (Q3)  | 2SA1264N     |
| △    | 75  | TRANSISTOR (Q4)  | 2SA1264N     |
| △    | 76  | TRANSISTOR (Q5)  | 2SC4137      |
| △    | 77  | TRANSISTOR (Q6)  | 2SC4137      |
| △    | 78  | CARBON FILM RESISTOR (R3)  | RD1/4PM010J  |
| △    | 79  | SWITCH (S2)  | ASU1036      |
| △    | 80  | POWER TRANSFORMER (T1)   | ATS1367      |
|      | 81  | FUSE ASSEMBLY  | AWZ3516      |
| △    | 82  | CARBON FILM RESISTOR (R1,<br>HEWZ type only)   | RD1/4PMF100J |
| △    | 83  | CARBON FILM RESISTOR (R2,<br>HEWZ type only)   | RD1/4PMF100J |
|      | 84  | BINDER   | AEF1004      |
|      | 85  | VINYL BAG  | AHG-117      |

### 1.3 PACKING



A

B

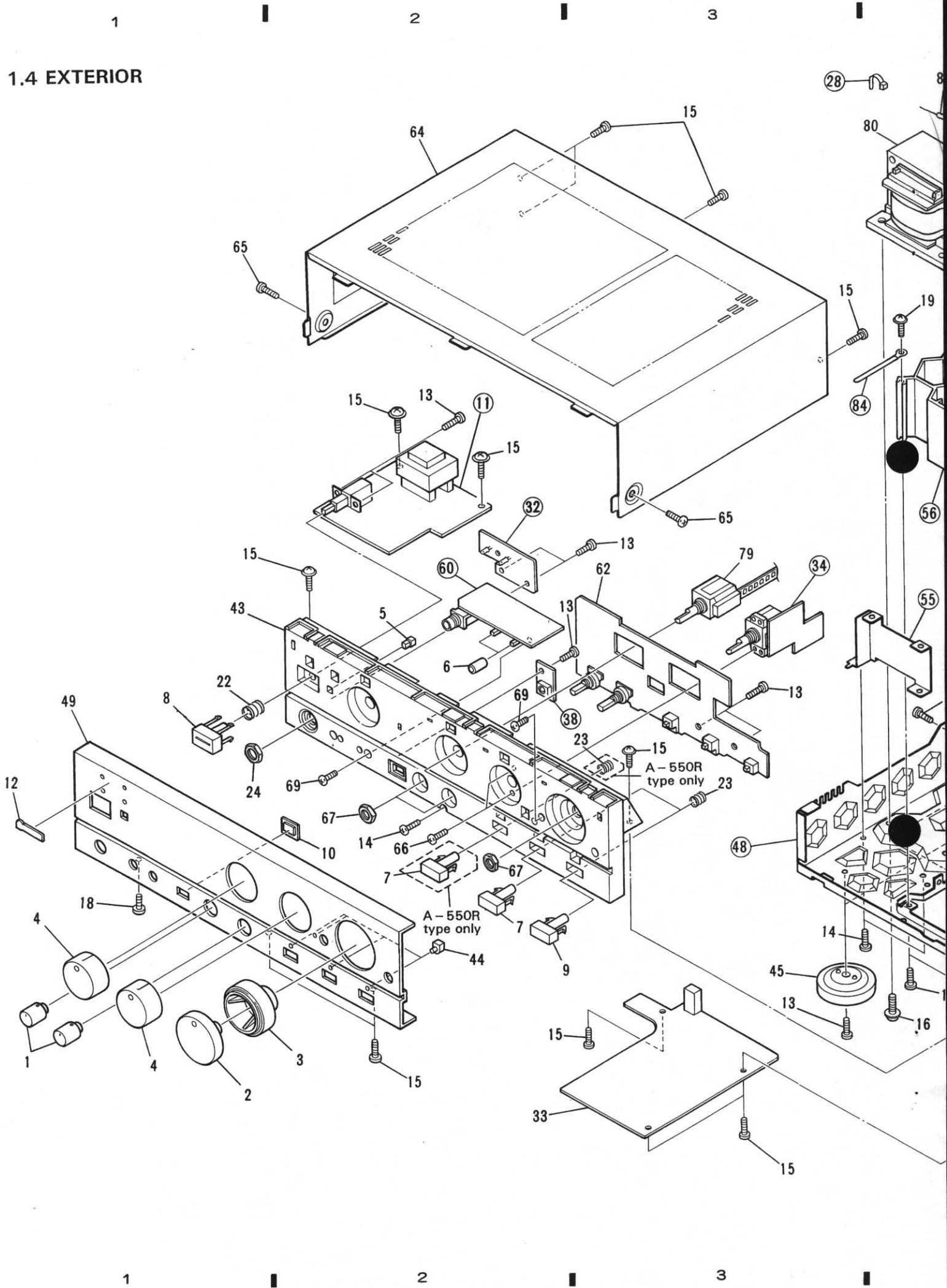
C

D

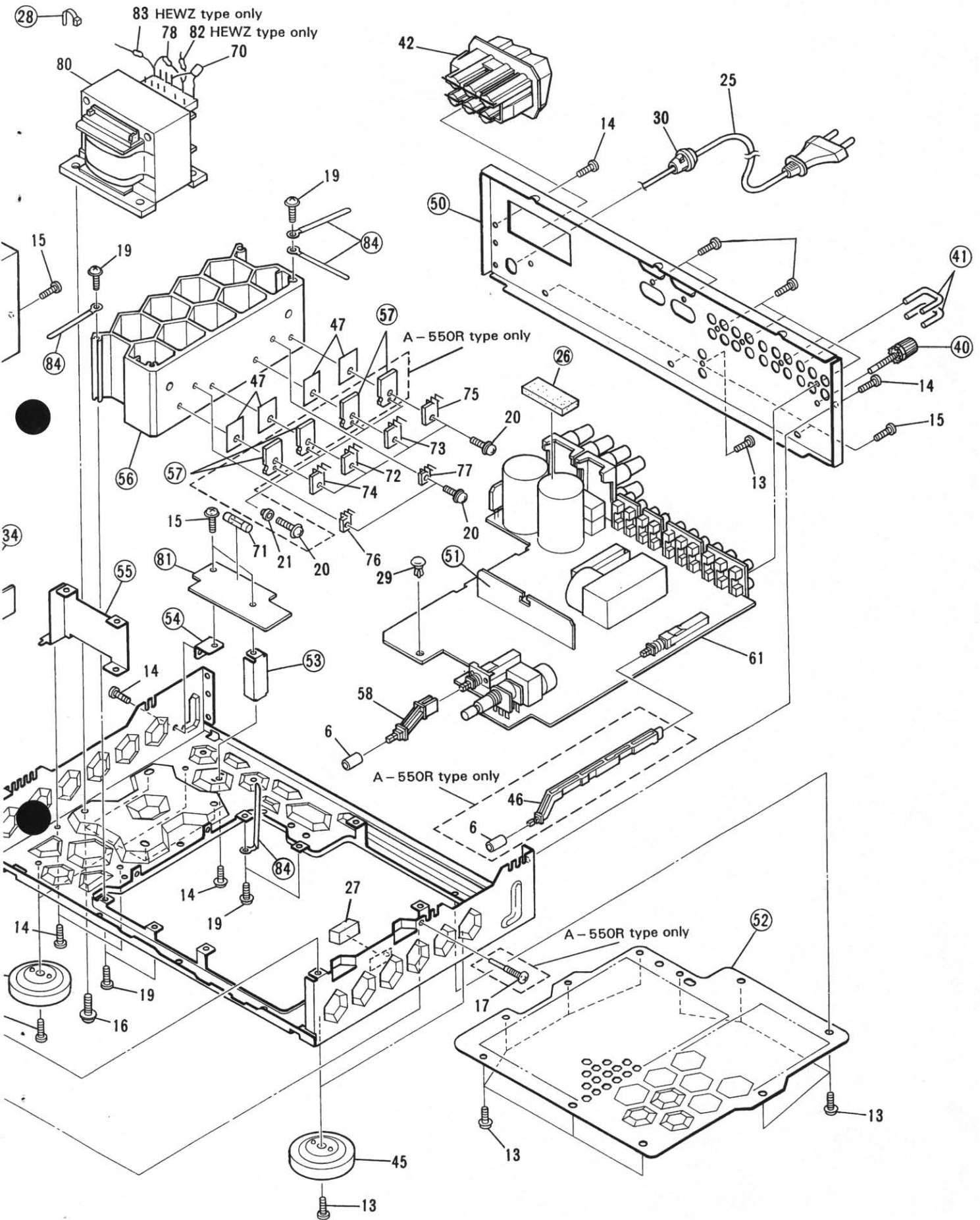
12

4

1.4 EXTERIOR



# A-550R, A-450R



A

B

C

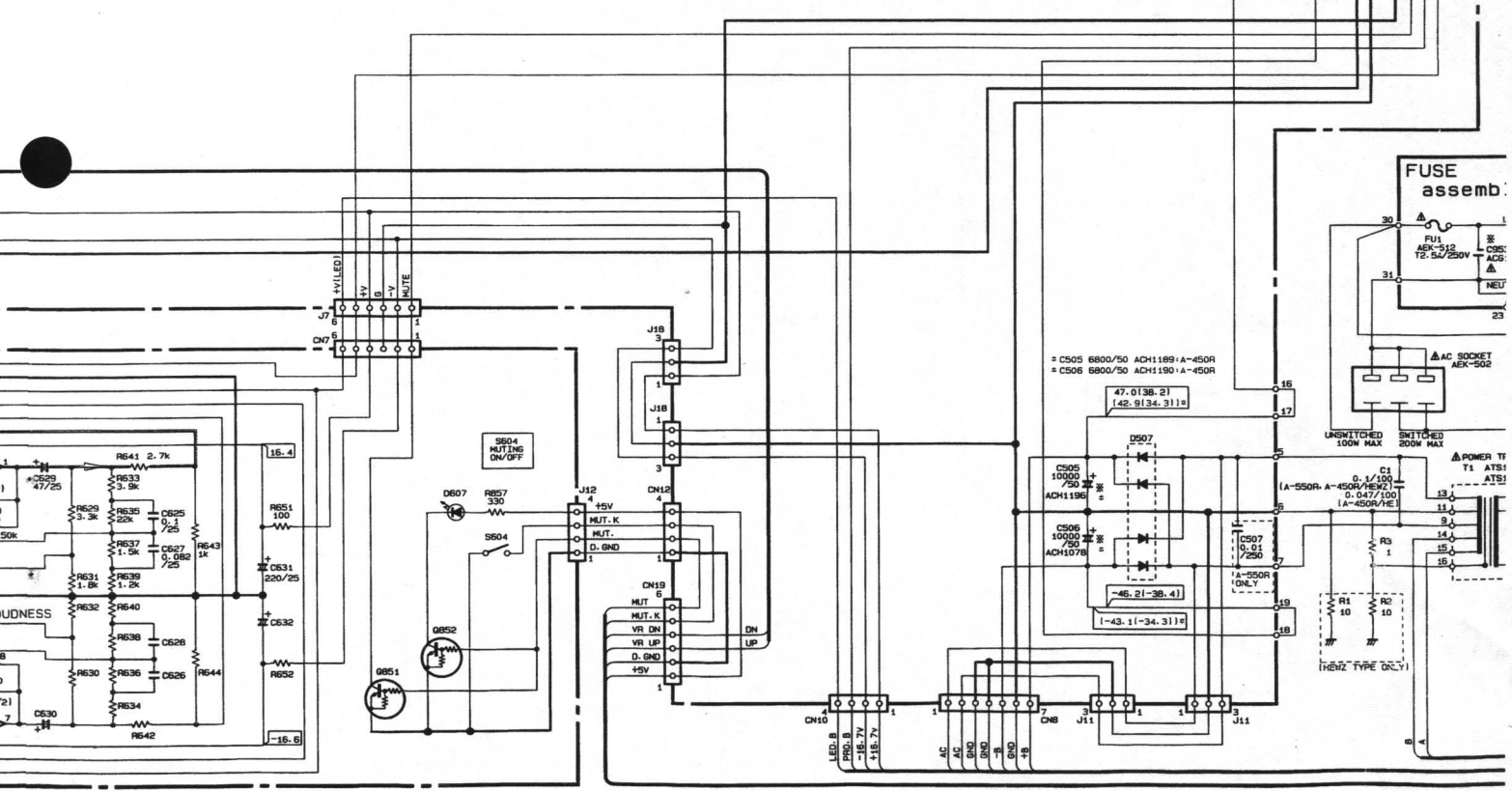
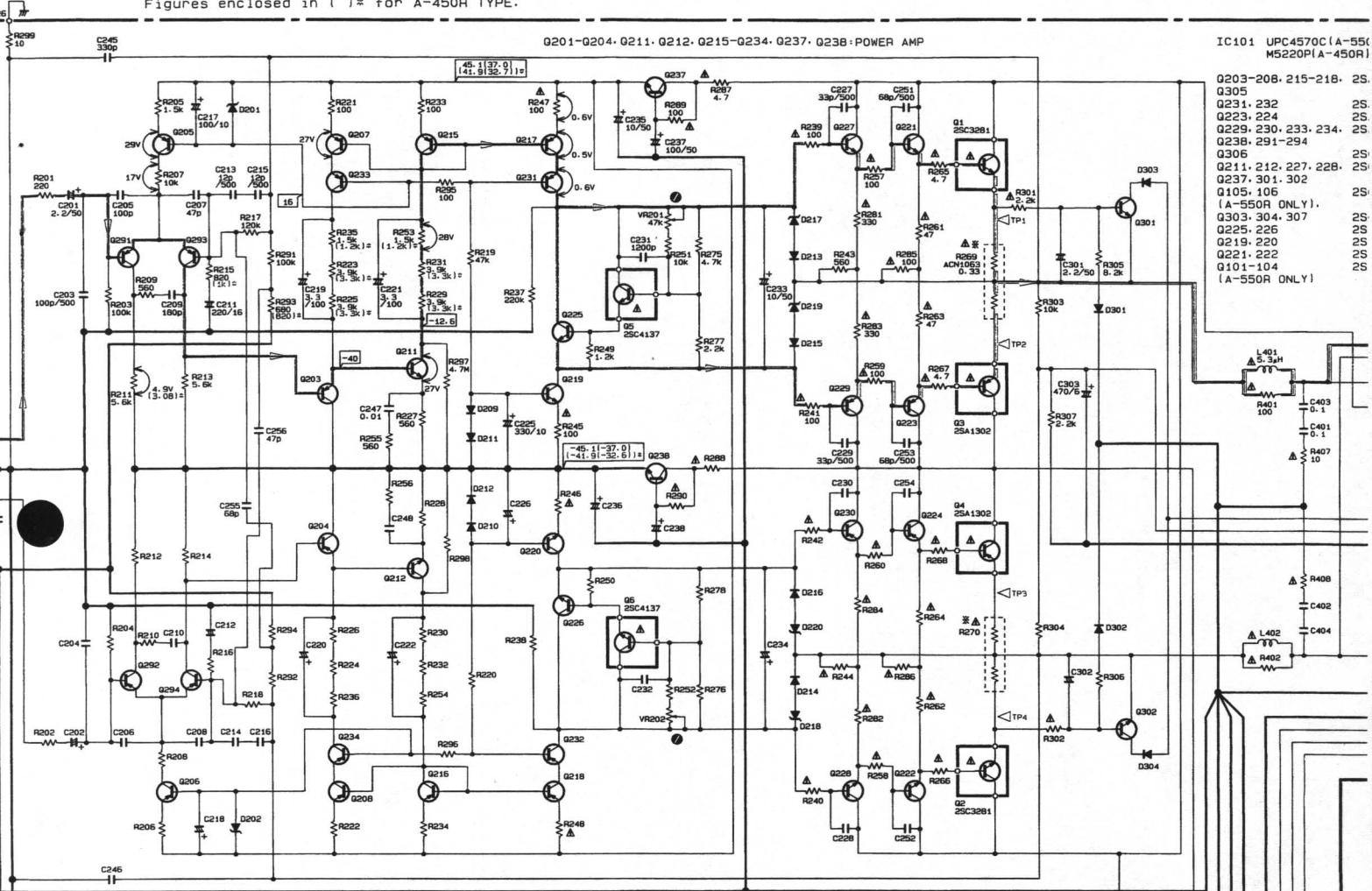
D

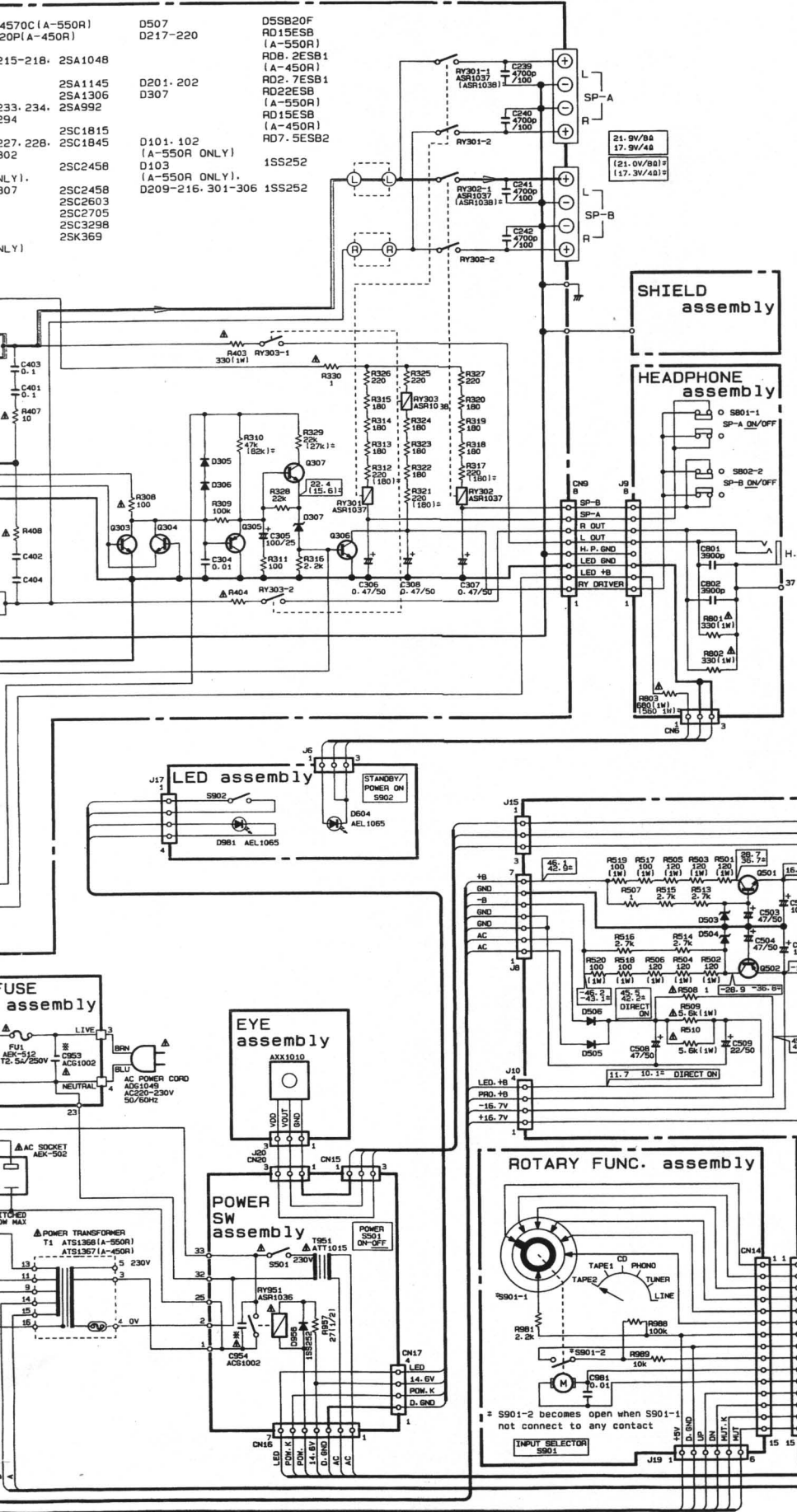
Figures enclosed in ( ) \* for A-450R TYPE.

Q201-Q204, Q211, Q212, Q215-Q234, Q237, Q238, POWER AMP

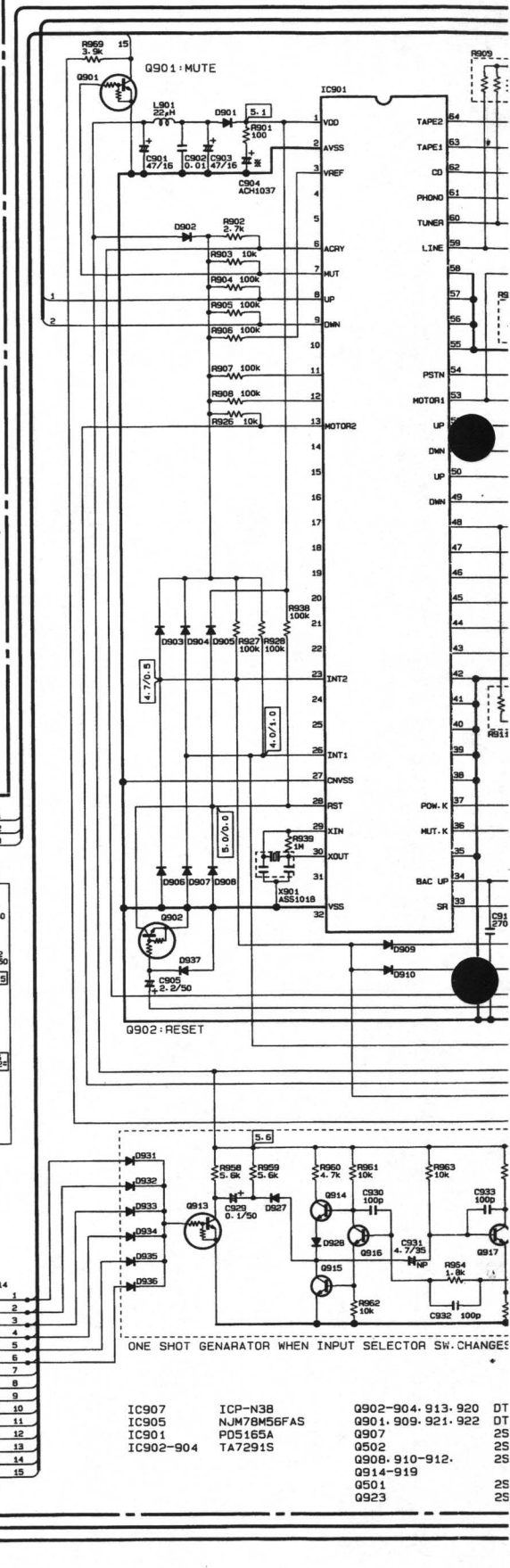
IC101 UPC4570C (A-550R)  
M5220P (A-450R)

- Q203-208, 215-218, 2S.
- Q305 2S.
- Q231, 232 2S.
- Q229, 224 2S.
- Q229, 230, 233, 234 2S.
- Q238, 291-294 2S.
- Q306 2S.
- Q211, 212, 227, 228 2S.
- Q237, 301, 302 2S.
- Q105, 106 2S.
- (A-550R ONLY)
- Q303, 304, 307 2S.
- Q225, 226 2S.
- Q219, 220 2S.
- Q221, 222 2S.
- Q101-104 (A-550R ONLY) 2S.

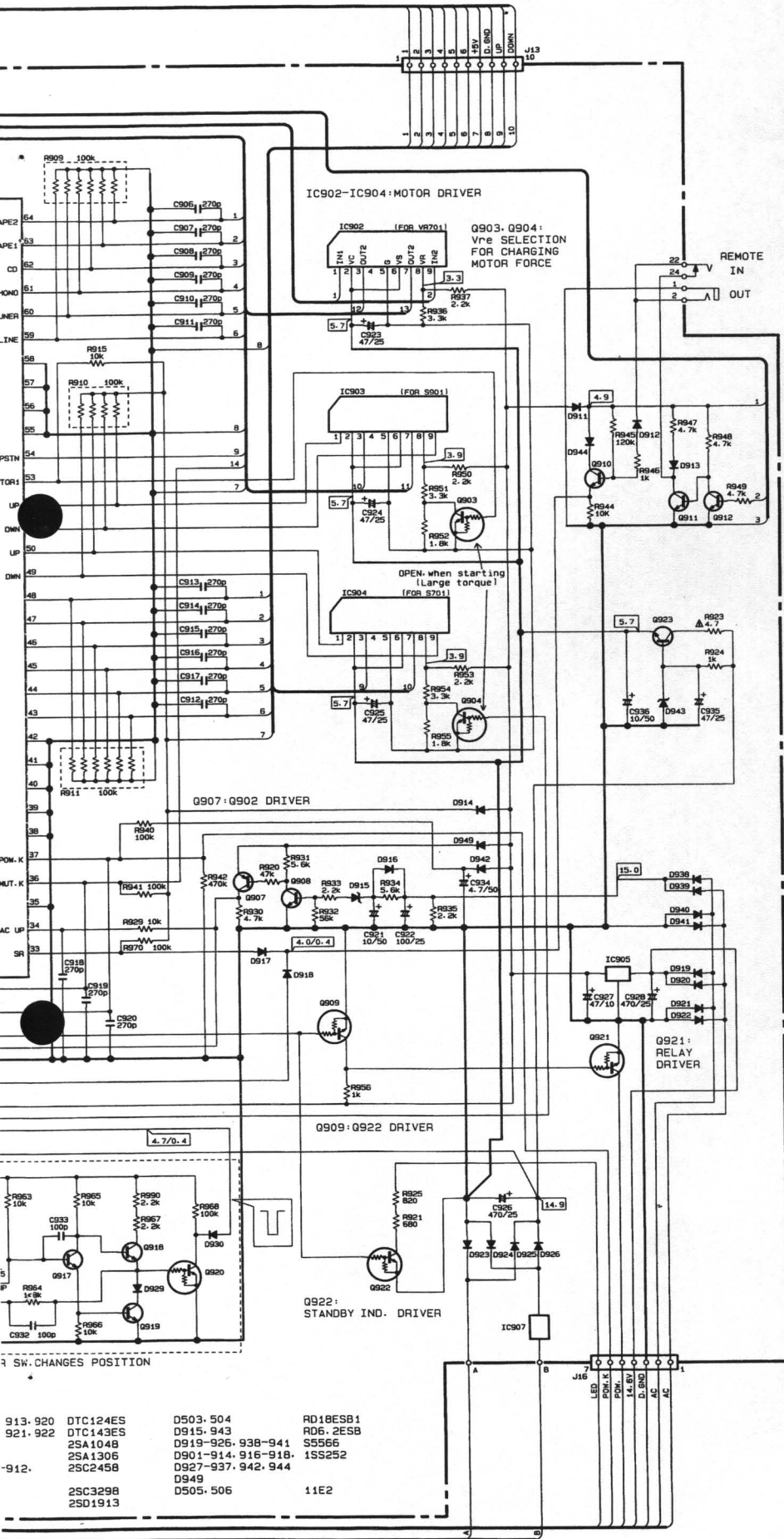




**CONTROL assembly (AWZ3496)**







- RESISTORS:**  
Indicated in  $\Omega$ ,  $\frac{1}{4}W$ ,  $\frac{1}{2}W$ ,  $\frac{3}{4}W$ ,  $\pm 5\%$  tolerance unless otherwise noted k : k $\Omega$ , M : M $\Omega$ , (F) :  $\pm 1\%$ , (G) :  $\pm 2\%$ , (K) :  $\pm 10\%$  (M) :  $\pm 20\%$  tolerance
- CAPACITORS:**  
Indicated in capacity ( $\mu F$ )/voltage (V) unless otherwise noted p : pF  
Indication without voltage is 50V except electrolytic capacitor.
- VOLTAGE, CURRENT:**  
  - Signal voltage at ( W + W 81)/output (1kHz)
  - DC voltage (V) at no input signal
  - Value in ( ) is DC voltage at rated power.
  - mA : DC current at no input signal
- OTHERS:**  
  - Signal route.
  - Adjusting point.
  - The  $\Delta$  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.
  - \* marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

**SWITCHES**

**POWER SW assembly**

S501 POWER

**ROTARY FUNC. assembly**

S901 ROTARY SW

**LED assembly**

S902 STANDBY

**AF COMPLEX assembly**

- S101 PHONO SEL MM/MC (A-550R ONLY)
- S701 FUNCTION REC SEL
- S702 FUNCTION
- S703 DIRECT SW ON/OFF

**STONE assembly**

- S601 SUB SONIC ON/OFF (A-550R ONLY)
- S602 LOUDNESS
- S604 MUT.K

**HEADPHONE assembly**

- S801-1 SP-A ON/OFF
- S801-2 SP-B ON/OFF

**LINE VOLTAGE SELECTION**

Line voltage can be changed with the following steps.

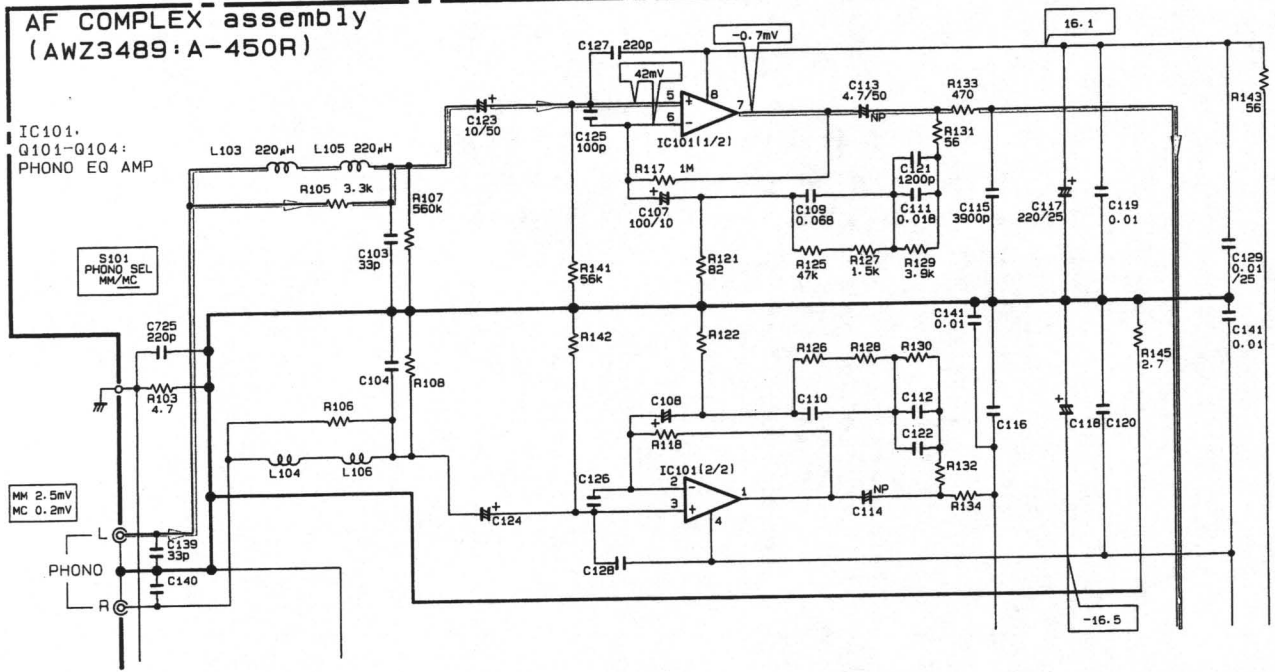
- Disconnect the AC Power cord.
- Remove the top cover.
- Change the connection of the power transformer primary pins.

| Voltage | Power transformer Pin No. |
|---------|---------------------------|
| 220V    | 3                         |
| 240V    | 5                         |

- Stick the line voltage label on the rear panel.

| Part No. | Description |
|----------|-------------|
| AAX-193  | 220V label  |
| AAX-192  | 240V label  |

|         |          |                    |          |
|---------|----------|--------------------|----------|
| 913-920 | DTC124ES | D503-504           | RD1BESB1 |
| 921-922 | DTC143ES | D915-943           | RD6.2ESB |
|         | 25A104B  | D919-926, 938-941  | S5566    |
|         | 25A1306  | D901-914, 916-918, | 1SS252   |
|         | 25C245B  | D927-937, 942, 944 |          |
|         |          | D949               |          |
|         | 25C329B  | D505, 506          | 11E2     |
|         | 25D1913  |                    |          |



- Parts with asterisk ( )\* differs according to models as follows ;

### AF COMPLEX ASSEMBLY

| Parts No.    | A - 550R and A - 550R - S | A - 450R    |
|--------------|---------------------------|-------------|
| IC101        | UPC4570C                  | M5220P      |
| Q101 - Q104  | 2SK369                    | VACANT      |
| Q105, Q106   | 2SC2458                   | VACANT      |
| D101, D102   | RD7.5ESB2                 | VACANT      |
| D103         | 1SS252                    | VACANT      |
| D217 - D220  | RD15ESB                   | RD8.2ESB1   |
| D307         | RD22ESB                   | RD15ESB     |
| S101         | ASG1012                   | VACANT      |
| RY301, RY302 | ASR1037                   | ASR1038     |
| L101, L102   | ATH1010                   | VACANT      |
| L103 - L106  | VACANT                    | LAU221K     |
| L107, L108   | LAU9R3K                   | VACANT      |
| C101, C102   | CFTXA103J50               | VACANT      |
| C103, C104   | CCCSL271J50               | CCCSL330J50 |
| C105, C106   | CKCYB472K50               | VACANT      |
| C107, C108   | CEXA101M25                | CEAS101M10  |
| C113, C114   | CEANP220M10               | CEAS4R7M50  |
| C117, C118   | CEXA221M25                | CEAS221M25  |
| C123, C124   | VACANT                    | CEAS100M50  |
| C125, C126   | VACANT                    | CCCSL101J50 |
| C127, C128   | CCCSL101J50               | CCDSL221J50 |
| C135, C136   | CEAS470M10                | VACANT      |
| C137, C138   | CCCSL151J50               | VACANT      |
| C139, C140   | CCCSL330J50               | CCDSL330J50 |
| C139, C140   | CCCSL330J50               | CCDSL330J50 |
| C244         | CKDYX104M25               | COMA224K50  |
| C506         | ACH1078                   | ACH1190     |
| C507         | COMA103K250               | VACANT      |
| C725         | CCDSL221J50               | CCCSL221J50 |
| C726         | CKCYF103Z50               | VACANT      |

| Parts No.    | A - 550R and A - 550R - S | A - 450R     |
|--------------|---------------------------|--------------|
| R101, R102   | RDR1/8PU101J              | VACANT       |
| R105, R106   | RD1/8PM472J               | RD1/8PM332J  |
| R107, R108   | RDR1/8PU563J              | RD1/8PM564J  |
| R109 - R112  | RD1/8PM222J               | VACANT       |
| R113, R114   | RD1/8PM331J               | VACANT       |
| R115, R116   | RD1/8PM153J               | VACANT       |
| R117, R118   | VACANT                    | RD1/8PM105J  |
| R119, R120   | RDR1/4PM6R8J              | VACANT       |
| R123, R124   | RD1/8PM820J               | VACANT       |
| R127, R128   | VACANT                    | RD1/8PM152J  |
| R131, R132   | RD1/8PM390J               | RD1/8PM560J  |
| R133, R134   | RDR1/8PU391J              | RDR1/8PU471J |
| R135, R136   | RD1/8PM331J               | VACANT       |
| R139, R140   | RD1/8PM821J               | VACANT       |
| R141, R142   | VACANT                    | RDR1/8PU563J |
| R151, R152   | RD1/8PM474J               | VACANT       |
| R153, R154   | RD1/8PM563J               | VACANT       |
| R155, R156   | RD1/8PM335J               | VACANT       |
| R215, R216   | RDR1/4PM821J              | RDR1/4PM102J |
| R223 - R226, |                           |              |
| R229 - R232  | RD1/4PM392J               | RD1/4PM332J  |
| R235, R236,  |                           |              |
| R253, R254   | RD1/8PM152J               | RD1/8PM122J  |
| R287, R288   | RD1/4PMF4R7J              | RFA1/4PS4R7J |
| R293, R294   | RD1/8PM681J               | RD1/8PM821J  |
| R310         | RD1/8PM473J               | RD1/8PM823J  |
| R312, R317,  |                           |              |
| R321         | RD1/4PM221J               | RD1/4PM181J  |
| R329         | RD1/8PM223J               | RD1/8PM273J  |
| R733         | RD1/8PM105J               | VACANT       |
| R734         | RD1/8PM475J               | VACANT       |

### PHONE ASSEMBLY

| Parts No.  | A - 550R and A - 550R - S | A - 450R    |
|------------|---------------------------|-------------|
| Q601, Q602 | 2SK246                    | VACANT      |
| D601       | AEL1065                   | VACANT      |
| D605, D606 | 1SS252                    | VACANT      |
| S601       | ASG1019                   | VACANT      |
| C603, C604 | CFTXA823J50               | VACANT      |
| C635, C636 | CCDSL150J50               | VACANT      |
| C643       | CKCYF103Z50               | VACANT      |
| C647, C648 | CCCSL820J50               | CCDSL390J50 |
| R601, R602 | RD1/8PM124J               | RD1/8PM224J |
| R603, R604 | RD1/8PM822J               | VACANT      |
| R647, R648 | RD1/8PM105J               | VACANT      |

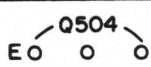
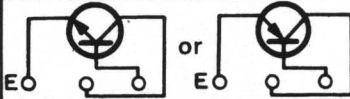
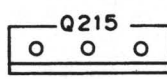
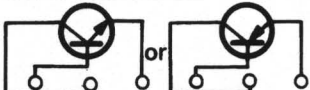
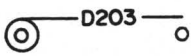



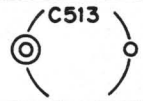



### HEADPHONE ASSEMBLY

| Parts No. | A - 550R and A - 550R - S | A - 450R   |
|-----------|---------------------------|------------|
| R803      | RS1LMF681J                | RS1LMF561J |

### 3. P.C.BOARDS CONNECTION DIAGRAM

**NOTE**

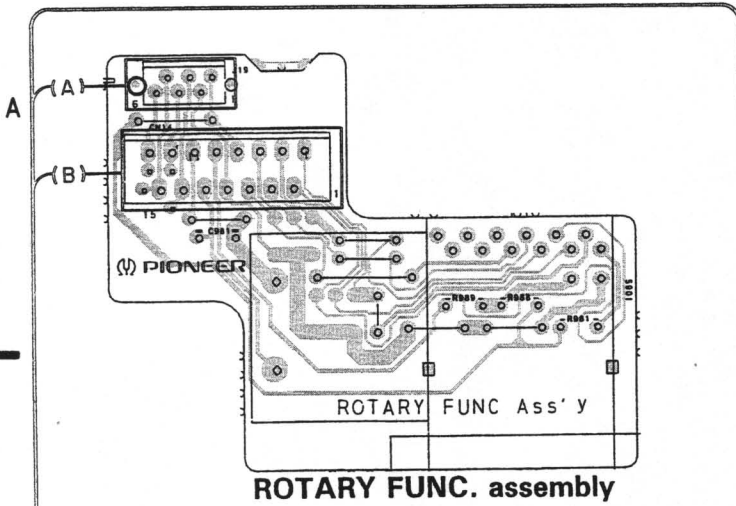
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

| P.C.B. pattern diagram indication   | Corresponding part symbol   | Part Name                |
|---|---|--------------------------|
|    |    | Transistor               |
|    |    | Radiator type transistor |
|    |    | Diode                    |
|    |    | Resistor                 |
|  |  | Capacitor (Polarity)     |
|  |  | Capacitor (Non-polarity) |

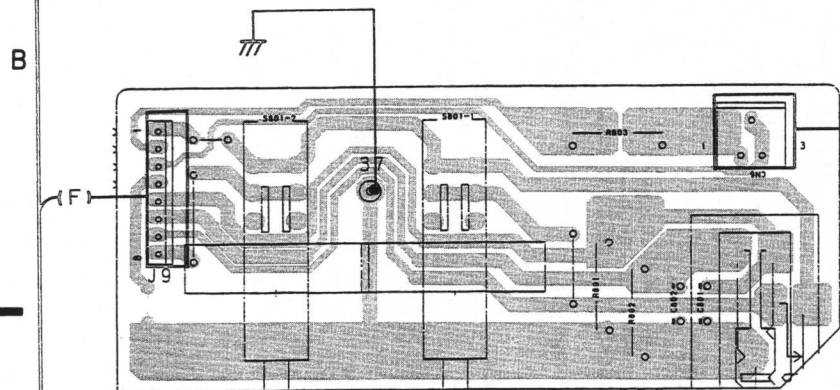
**Others**

| P.C.B. pattern diagram indication | Part Name                                |
|-----------------------------------|--|
| IC                                | IC                                       |
| S                                 | Switch                                   |
| RY                                | Relay                                    |
| L                                 | Coil                                     |
| F                                 | Filter                                   |
| VR                                | Variable resistor or Semi-fixed resistor |

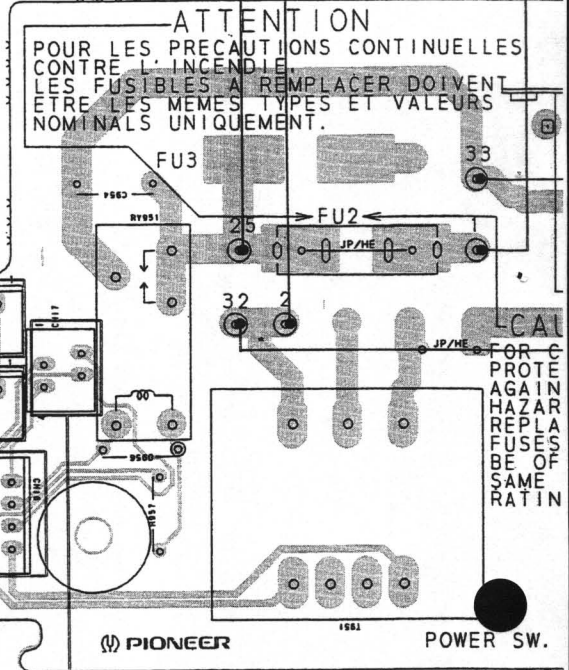
3. The capacitor terminal marked with ⊙ (double circles) shows negative terminal.
4. The diode terminal marked with ⊙ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.



ROTARY FUNC. assembly



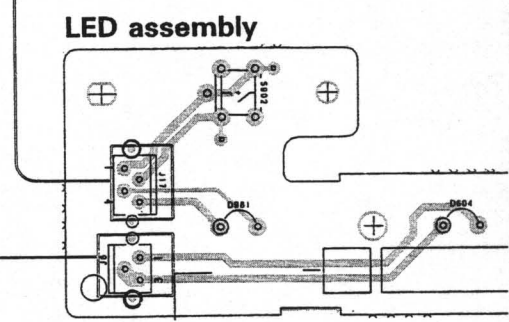
HEADPHONE assembly

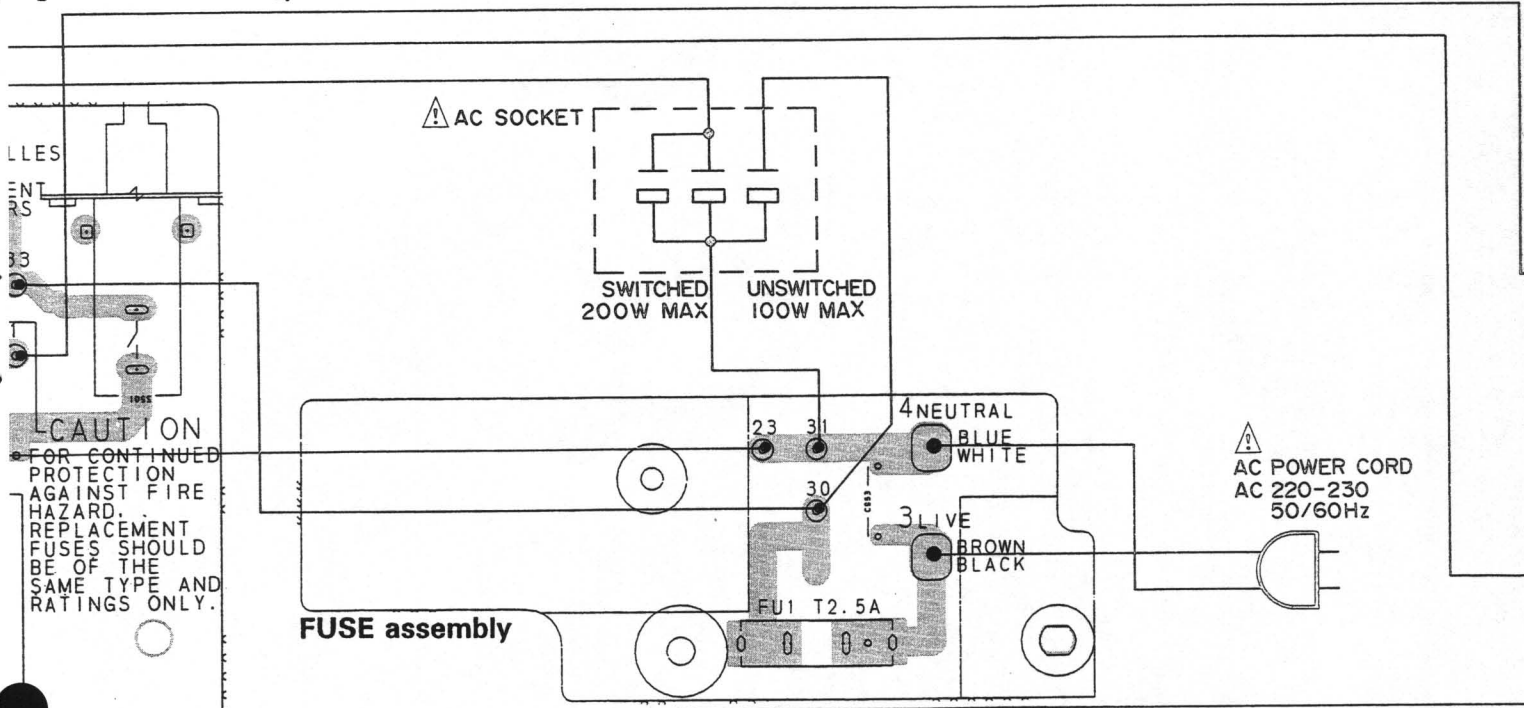


ATTENTION  
 POUR LES PRECAUTIONS CONTINUELLES  
 CONTRE L'INCENDIE,  
 LES FUSIBLES A REMPLACER DOIVENT  
 ETRE LES MEMES TYPES ET VALEURS  
 NOMINALS UNIQUEMENT.

FOR PROTECTION  
 AGAINST HAZARDOUS  
 REPLACEMENT OF  
 FUSES MUST BE OF  
 SAME RATING

POWER SW assembly



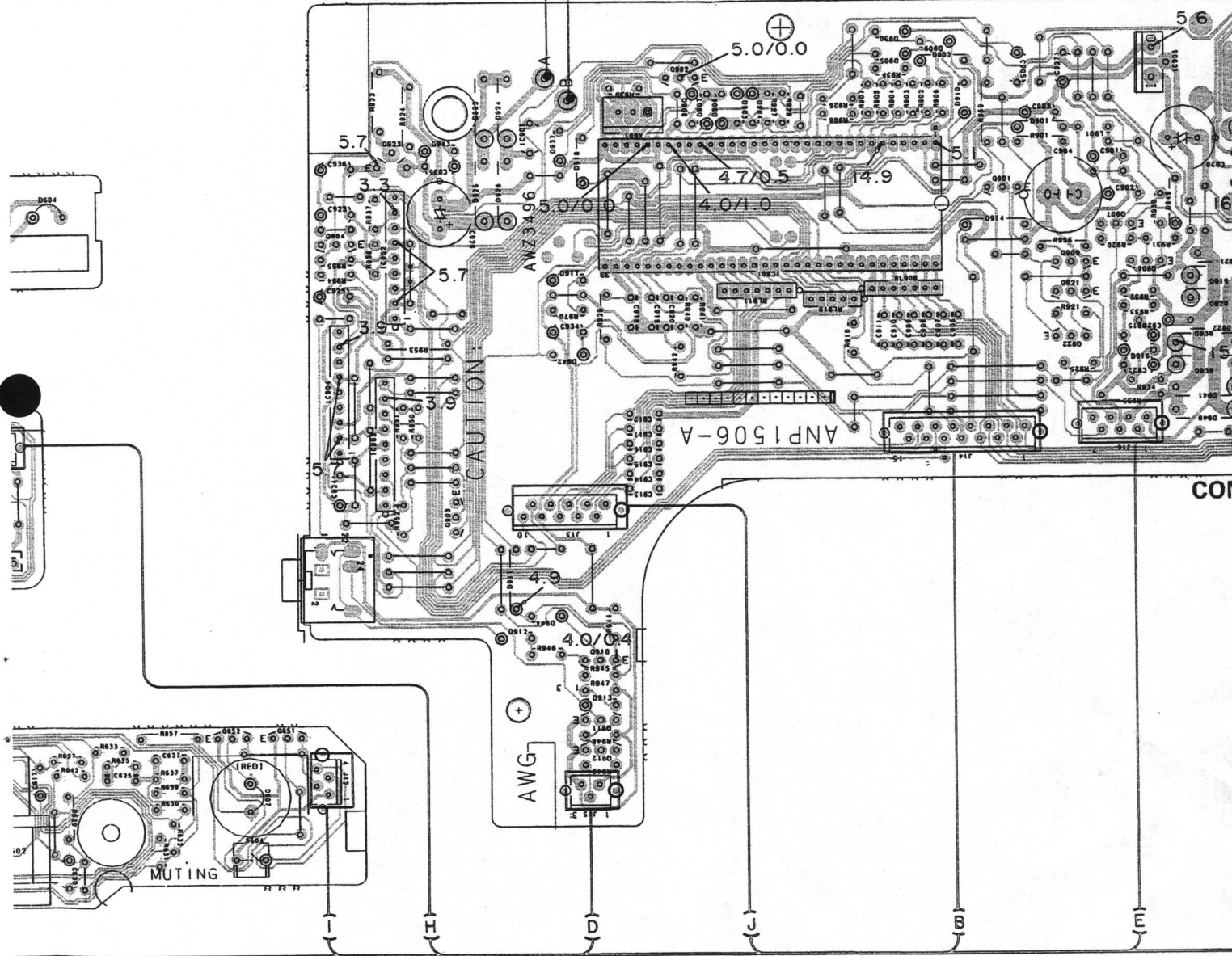


ER SW. ASS'Y

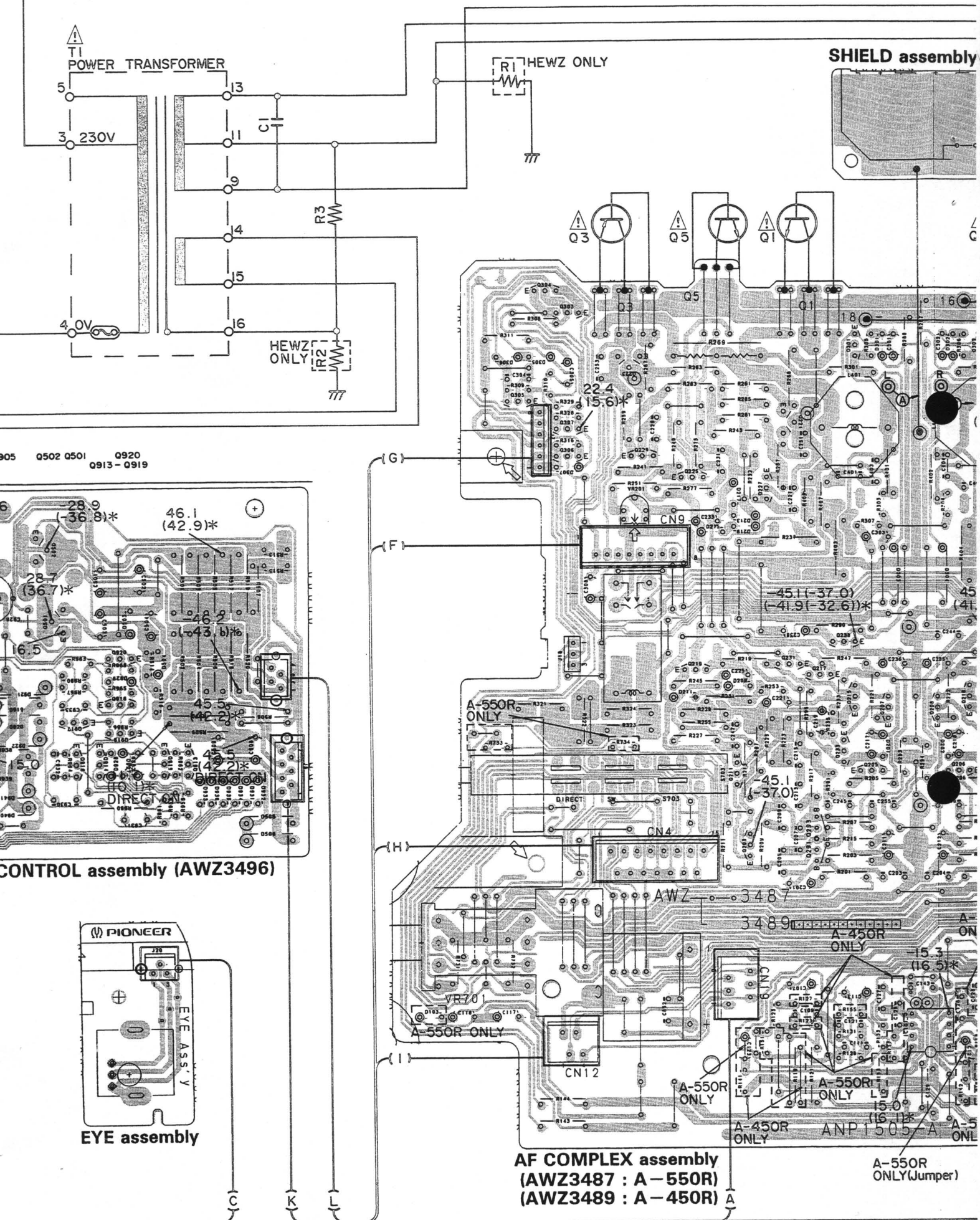
R SW assembly

Q904 IC902 Q923 IC904 IC903 Q903 IC907 Q902 IC901 Q901 Q909 Q907 Q908 IC905 Q921 Q922

Q910-Q912

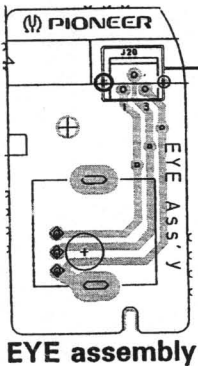


Figures enclosed in ( ) \* for A-450R TYPE.



0905 0502 0501 0920  
0913 - 0919

CONTROL assembly (AWZ3496)

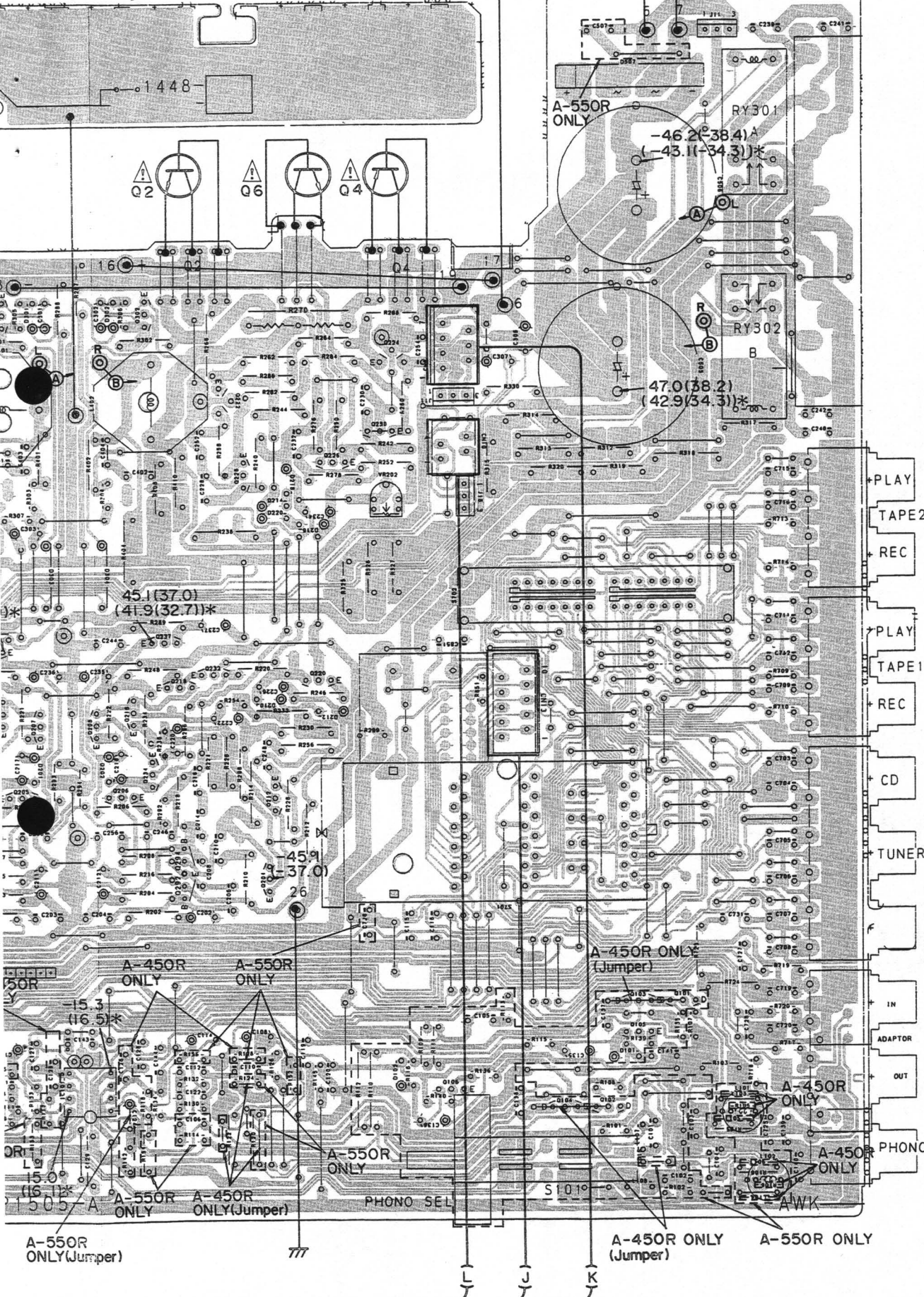


EYE assembly

AF COMPLEX assembly  
(AWZ3487 : A - 550R)  
(AWZ3489 : A - 450R)

A-550R ONLY (Jumper)

FIELD assembly



- Q5 Q6 Q4
- Q3 Q1 Q2
- Q304
- Q303
- Q301 Q302
- Q223 Q224
- Q305
- Q221 Q222 Q307
- Q229 Q230 Q306
- Q225 Q226
- Q227 Q228

- Q237 Q238
- Q231 Q232 Q220 Q215 Q218 Q208 Q207
- Q233 Q234 Q205 Q212
- Q211
- Q293 Q294 Q291 Q292
- Q203 Q204

- Q103 Q101 Q105
- Q106 Q104 Q102

A

B

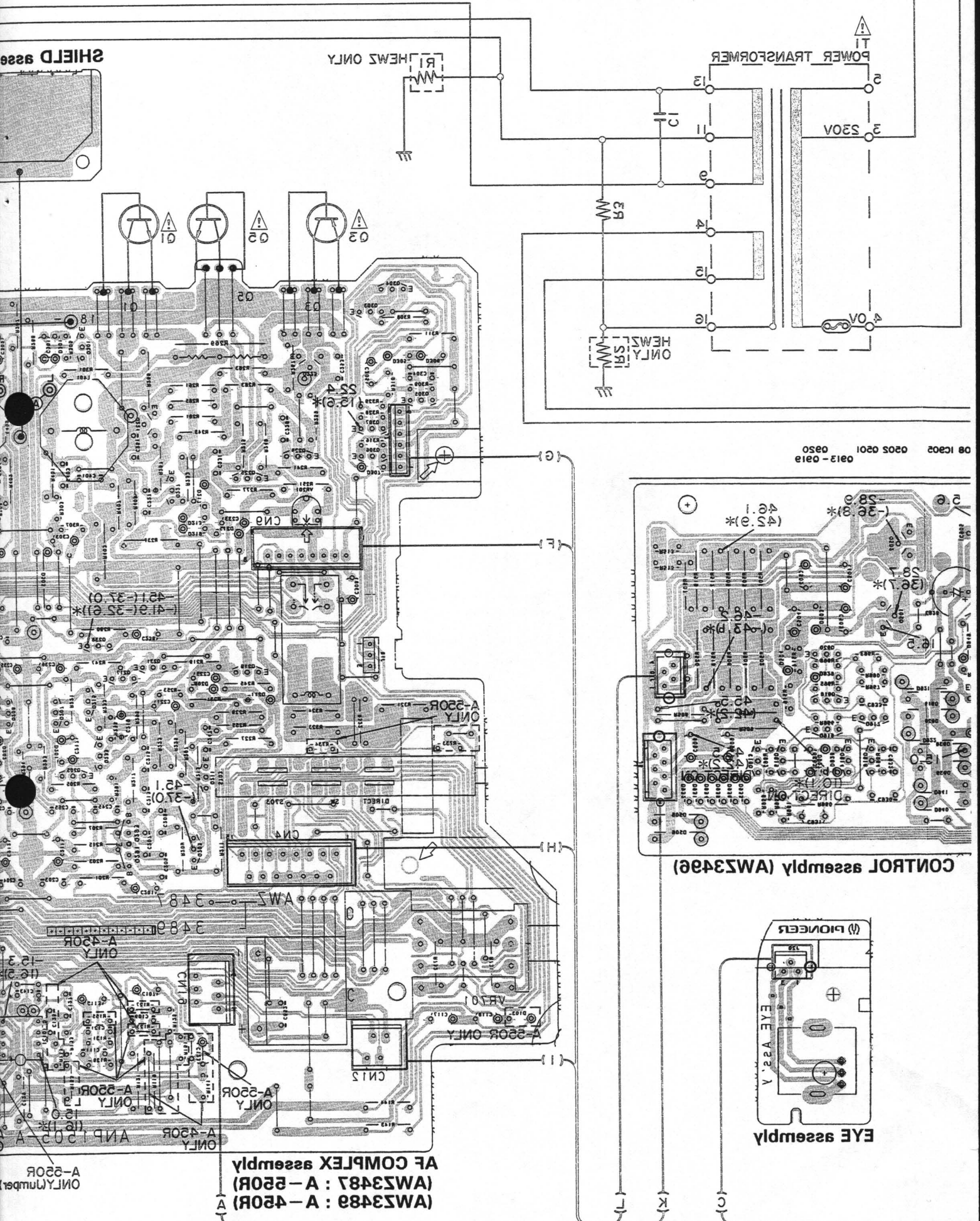
C

D



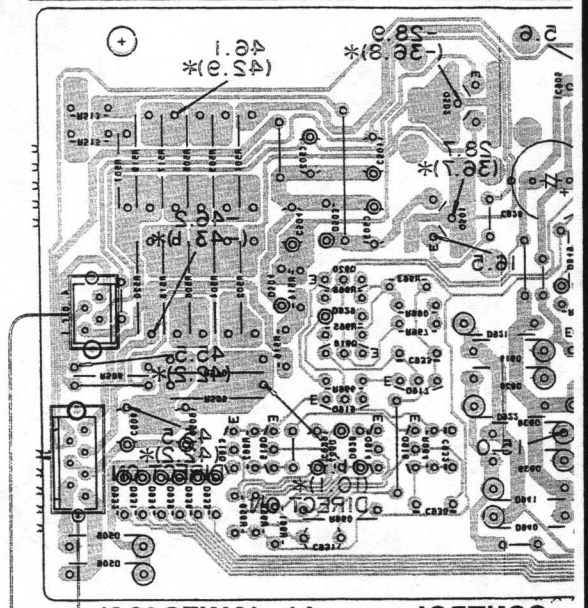


Figures enclosed in ( ) \* for A-450R TYPE.

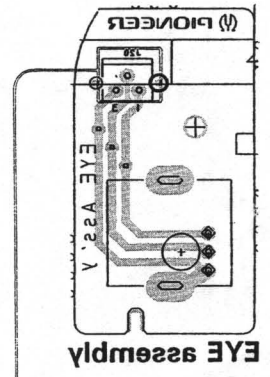


**AF COMPLEX assembly  
(AW23487 : A-550R)  
(AW23489 : A-450R)**

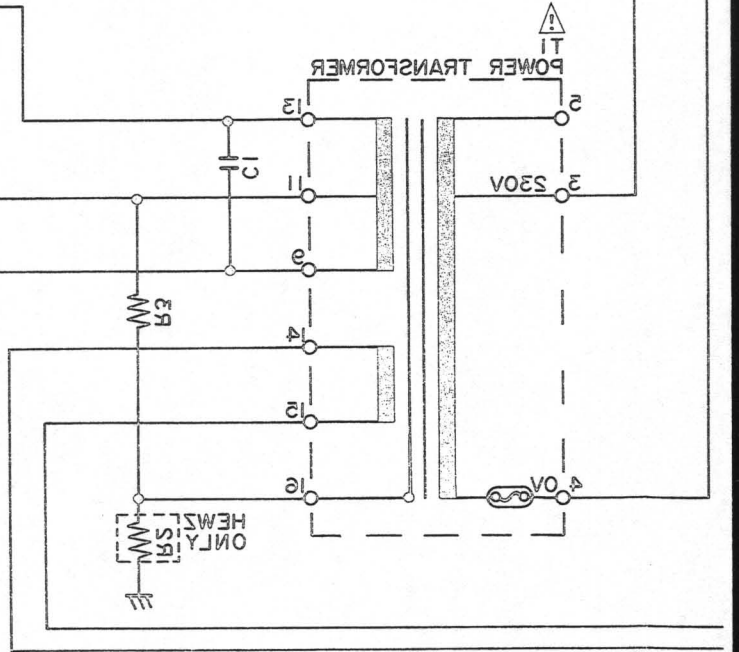
A-550R  
ONLY Number



**CONTROL assembly (AW23496)**



**EYE assembly**



08 1C92 0205 0201 0350  
0A13-0318

SHIELD assy

R1 HEWS ONLY

ONLY SR1 HEWS



AW23487

A-550R ONLY

A-550R ONLY

A-550R ONLY

A-450R ONLY

A-450R ONLY

A-450R ONLY

A-450R ONLY

A-450R ONLY

A-450R ONLY

A-450R ONLY

A-450R ONLY

A-450R ONLY

8

9

7

4

8

9

7

4





## 4. PCB's PARTS LIST

**NOTES:**

- Part without part number cannot be supplied.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The △ 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.
- 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 × 10 <sup>1</sup> | 561..... | RD1/8PM | Ⓜ | Ⓠ | Ⓜ | J |
| 47kΩ | 47 × 10 <sup>3</sup> | 473..... | RD1/4PS | Ⓠ | Ⓡ | Ⓠ | J |
| 0.5Ω | 0R5.....             |          | RN2H    | Ⓠ | Ⓠ | Ⓠ | K |
| 1Ω   | 010.....             |          | RS1P    | Ⓠ | Ⓠ | Ⓠ | K |

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

|        |                       |           |         |   |   |   |   |   |
|--------|-----------------------|-----------|---------|---|---|---|---|---|
| 5.62kΩ | 562 × 10 <sup>1</sup> | 5621..... | RN1/4SR | Ⓠ | Ⓠ | Ⓠ | Ⓠ | F |
|--------|-----------------------|-----------|---------|---|---|---|---|---|

| Mark No.                  | Description             | Parts No.   | Mark No.                            | Description             | Parts No.   |
|---------------------------|-------------------------|-------------|-------------------------------------|-------------------------|-------------|
| <b>POWER SW ASSEMBLY</b>  |                         |             | <b>⊙ CONTROL ASSEMBLY (AWZ3496)</b> |                         |             |
| <b>SEMICONDUCTOR</b>      |                         |             | <b>SEMICONDUCTOR</b>                |                         |             |
| D956                      | DIODE                   | 1SS252      | IC901                               | SYSTEM CONTROL<br>μ-COM | PD5165A     |
| <b>RELAY &amp; SWITCH</b> |                         |             | IC902-904                           | MECHANISM DRIVER<br>IC  | TA7291S     |
| △ RY951                   | RELAY                   | ASR1036     | IC905                               | REGULATOR IC            | NJM78M56FAS |
| △ S501                    | PUSH SWITCH             | ASG1035     | IC907                               | IC PROTECTOR            | ICP-N38     |
| <b>TORANSFORMER</b>       |                         |             | Q501                                | TRANSISTOR              | 2SC3298     |
| △ T951                    | POWER<br>TRANSFORMER    | ATT1015     | Q502                                | TRANSISTOR              | 2SA1306     |
| <b>CAPACITOR</b>          |                         |             | Q901                                | TRANSISTOR              | DTC143ES    |
| △ C954                    | CKA (0.01/AC400V)       | ACG1002     | Q902-904                            | TRANSISTOR              | DTC124ES    |
| <b>RESISTOR</b>           |                         |             | Q907                                | TRANSISTOR              | 2SA1048     |
| R957                      | CARBON FILM<br>RESISTOR | RD1/2PM270J | Q908                                | TRANSISTOR              | 2SC2458     |
| <b>OTHERS</b>             |                         |             | Q909                                | TRANSISTOR              | DTC143ES    |
| CN15                      | CONNECTOR (3P)          | KPE3        | Q910-912                            | TRANSISTOR              | 2SC2458     |
| CN16                      | CONNECTOR (7P)          | KPE7        | Q913                                | TRANSISTOR              | DTC124ES    |
| CN17                      | CONNECTOR (4P)          | KPE4        | Q914-919                            | TRANSISTOR              | 2SC2458     |
| CN20                      | CONNECTOR (3P)          | KPE3        | Q920                                | TRANSISTOR              | DTC124ES    |
| <b>LED ASSEMBLY</b>       |                         |             | Q921, 922                           | TRANSISTOR              | DTC143ES    |
| <b>SEMICONDUCTORS</b>     |                         |             | Q923                                | TRANSISTOR              | 2SD1913     |
| D604, 981                 | LED (RED)               | AEL1065     | D503, 504                           | ZENER DIODE             | RD18ESB1    |
| <b>SWITCH</b>             |                         |             | D505, 506                           | DIODE                   | 11E2        |
| S902                      | SWITCH                  | ASG1038     | D901-914                            | DIODE                   | 1SS252      |
|                           |                         |             | D915                                | ZENER DIODE             | RD6.2ESB    |
|                           |                         |             | D916-918                            | DIODE                   | 1SS252      |
|                           |                         |             | D919-926                            | DIODE                   | S5566       |
|                           |                         |             | D927-937                            | DIODE                   | 1SS252      |
|                           |                         |             | D938-941                            | DIODE                   | S5566       |
|                           |                         |             | D942                                | DIODE                   | 1SS252      |
|                           |                         |             | D943                                | ZENER DIODE             | RD6.2ESB    |
|                           |                         |             | D944, 949                           | DIODE                   | 1SS252      |
|                           |                         |             | <b>COIL</b>                         |                         |             |
|                           |                         |             | L901                                | AXIAL INDUCTOR          | LAU220K     |

# A-550R, A-450R

| Mark No.          | Description              | Parts No.    |
|-------------------|--------------------------|--------------|
| <b>CAPACITORS</b> |                          |              |
| C501, 502         | ELECTR.CAPACITOR         | CEAS100M50   |
| C503, 504         | ELECTR.CAPACITOR         | CEAS470M50   |
| C508              | ELECTR.CAPACITOR         | CEAS470M50   |
| C509              | ELECTR.CAPACITOR         | CEAS220M50   |
| C901              | ELECTR.CAPACITOR         | CEAS470M16   |
| C902              | CERAMIC CAPACITOR        | CKCYF103Z50  |
| C903              | ELECTR.CAPACITOR         | CEAS470M16   |
| C904              | CEA (47000/5.5V)         | ACH1037      |
| C905              | ELECTR.CAPACITOR         | CEAS2R2M50   |
| C906-920          | CERAMIC CAPACITOR        | CKMYB271K50  |
| C921              | ELECTR.CAPACITOR         | CEAS100M50   |
| C922              | ELECTR.CAPACITOR         | CEAS101M25   |
| C923-925          | ELECTR.CAPACITOR         | CEAS470M25   |
| C926              | ELECTROLYTIC<br>CAPACIT  | CEAS471M25   |
| C927              | ELECTR.CAPACITOR         | CEAS470M10   |
| C928              | ELECTROLYTIC<br>CAPACIT  | CEAS471M25   |
| C929              | ELECTR.CAPACITOR         | CEAS0R1M50   |
| C930              | CERAMIC CAPACITOR        | CCCSL101J50  |
| C931              | ELECTR.CAPACITOR         | CEANP4R7M35  |
| C932, 933         | CERAMIC CAPACITOR        | CCCSL101J50  |
| C934              | ELECTR.CAPACITOR         | CEAS4R7M50   |
| C935              | ELECTR.CAPACITOR         | CEAS470M25   |
| C936              | ELECTR.CAPACITOR         | CEAS100M50   |
| <b>RESISTORS</b>  |                          |              |
| R501, 502         | METAL OXIDE<br>RESISTOR  | RS1PMF121J   |
| R503, 504         | METAL OXIDE<br>RESISTOR  | RS1LMF121J   |
| R505, 506         | METAL OXIDE<br>RESISTOR  | RS1PMF121J   |
| △ R507, 508       | CARBON FILM<br>RESISTOR  | RD1/4PMF010J |
| △ R509, 510       | METAL OXIDE<br>RESISTOR  | RS1LMF562J   |
| R517-520          | METAL OXIDE<br>RESISTOR  | RS1PMF101J   |
| R909              | RESISTOR ARRAY<br>(100K) | RA6T104J     |
| R910              | RESISTOR ARRAY<br>(10K)  | RA4T104J     |
| R911              | RESISTOR ARRAY<br>(100K) | RA6T104J     |
| △ R923            | FUSIBLE RESISTOR         | RFA1/4PS4R7J |
| R924              | CARBON FILM<br>RESISTOR  | RD1/4PM102J  |
| R935              | CARBON FILM<br>RESISTOR  | RD1/4PM222J  |
| R960              | CARBON FILM<br>RESISTOR  | RD1/4PM472J  |
|                   | Other resistors          | RD1/4PM□□□J  |
| <b>OTHERS</b>     |                          |              |
|                   | JACK                     | AKN1006      |

| Mark No.   | Description             | Parts No.       |
|--|-------------------------|-----------------|
| <b>ROTARY FUNC. ASSEMBLY</b>   |                         |                 |
| <b>SWITCH</b>  |                         |                 |
| S901   | SWITCH                  | ASD1016         |
| <b>CAPACITOR</b>   |                         |                 |
| C981   | CERAMIC CAPACITOR       | CKDYF103Z50     |
| <b>RESISTORS</b>   |                         |                 |
|  | All resistors           | RD1/8PM□□□J     |
| <b>OTHERS</b>  |                         |                 |
| X901   | CERAMIC RESONATOR       | ASS1018         |
| CN14   | CONNECTOR (15P)         | KPE15           |
| <b>EYE ASSEMBLY</b>  |                         |                 |
| <b>OTHERS</b>  |                         |                 |
|  | REMOTE RECEIVER<br>UNIT | AXX1010         |
| <b>SHIELD ASSEMBLY</b>   |                         |                 |
| No parts ake supplied with the SHIELD assembly.                            |                         |                 |
| <b>HEAD PHONE ASSEMBLY</b>   |                         |                 |
| <b>SWICH</b>   |                         |                 |
| S801   | PUSH SWITCH             | SUL5L2B2S       |
| <b>CAPACITORS</b>  |                         |                 |
| C801, 802  | CERAMIC CAPACITOR       | CKCYB392K50     |
| <b>RESISTORS</b>   |                         |                 |
| △ R801, 802  | METAL OXIDE<br>RESISTOR | RS1PMF331J      |
| △ R803   | METAL OXIDE<br>RESISTOR | RS1LMF681J      |
| <b>OTHERS</b>  |                         |                 |
| CN6  | JACK<br>CONNECTOR (3P)  | AKN1002<br>KPE3 |
| <b>● AF COMPLEX ASSEMBLY (AWZ3487)<br/>(FOR A - 550R AND A - 550R - S)</b> |                         |                 |
| <b>SEMICONDUCTORS</b>  |                         |                 |
| IC101  | IC                      | UPC4570C        |
| Q101-104   | N-FET                   | 2SK369          |
| Q105, 106  | TRANSISTOR              | 2SC2458         |
| Q203-208   | TRANSISTOR              | 2SA1048         |

| Mark No.                      | Description          | Parts No.   |
|-------------------------------|----------------------|-------------|
| Q211, 212                     | TRANSISTOR           | 2SC1845     |
| Q215-218                      | TRANSISTOR           | 2SA1048     |
| Q219, 220                     | TRANSISTOR           | 2SC2705     |
| Q221, 222                     | TRANSISTOR           | 2SC3298     |
| Q223, 224                     | TRANSISTOR           | 2SA1306     |
| Q225, 226                     | TRANSISTOR           | 2SC2603     |
| Q227, 228                     | TRANSISTOR           | 2SC1845     |
| Q229, 230                     | TRANSISTOR           | 2SA992      |
| Q231, 232                     | TRANSISTOR           | 2SA1145     |
| Q233, 234                     | TRANSISTOR           | 2SA992      |
| Q237                          | TRANSISTOR           | 2SC1845     |
| Q238                          | TRANSISTOR           | 2SA992      |
| Q291-294                      | TRANSISTOR           | 2SA992      |
| Q301, 302                     | TRANSISTOR           | 2SC1845     |
| Q303, 304                     | TRANSISTOR           | 2SC2458     |
| Q305                          | TRANSISTOR           | 2SA1048     |
| Q306                          | TRANSISTOR           | 2SC1815     |
| Q307                          | TRANSISTOR           | 2SC2458     |
| D101, 102                     | ZENER DIODE          | RD7.5ESB2   |
| D103                          | DIODE                | 1SS252      |
| D201, 202                     | ZENER DIODE          | RD2.7ESB1   |
| D209-216                      | DIODE                | 1SS252      |
| D217-220                      | ZENER DIODE          | RD15ESB     |
| D301-306                      | DIODE                | 1SS252      |
| D307                          | ZENER DIODE          | RD22ESB     |
| D507                          | DIODE                | D5SB20F     |
| <b>RELAIES &amp; SWITCHES</b> |                      |             |
| RY301, 302                    | RELAY                | ASR1037     |
| RY303                         | RELAY                | ASR1038     |
| S101                          | PUSH SWITCH          | ASG1012     |
| S701                          | SWITCH               | ASD1017     |
| S702                          | SWITCH               | ASU1002     |
| S703                          | PUSH SWITCH          | SULL6S      |
| <b>COILS</b>                  |                      |             |
| L101, 102                     | COIL                 | ATH1010     |
| L107, 108                     | AXIAL INDUCTOR       | LAU3R3K     |
| L401, 402                     | COIL                 | ATH1009     |
| <b>CAPACITORS</b>             |                      |             |
| C101, 102                     | AUDIO FILM CAPACITOR | CFTXA103J50 |
| C103, 104                     | CERAMIC CAPACITOR    | CCCSL271J50 |
| C105, 106                     | CERAMIC CAPACITOR    | CKCYB472K50 |
| C107, 108                     | ELECTROLYTIC CAPACIT | CEXA101M25  |
| C109, 110                     | AUDIO FILM CAPACITOR | CFTXA683J50 |
| C111, 112                     | AUDIO FILM CAPACITOR | CFTXA183J50 |
| C113, 114                     | ELECTR.CAPACITOR     | CEANP220M10 |

| Mark No.  | Description          | Parts No.    |
|-----------|----------------------|--------------|
| C115, 116 | MYLOR FILM CAPACITOR | CQMA392K50   |
| C117, 118 | ELECTROLYTIC CAPACIT | CEXA221M25   |
| C119, 120 | CERAMIC CAPACITOR    | CKCYF103Z50  |
| C121, 122 | MYLOR FILM CAPACITOR | CQMA122J50   |
| C127, 128 | CERAMIC CAPACITOR    | CCCSL101J50  |
| C129      | CERAMIC CAPACITOR    | CKPYX103N25  |
| C135, 136 | ELECTR.CAPACITOR     | CEAS470M10   |
| C137, 138 | CERAMIC CAPACITOR    | CCCSL151J50  |
| C139, 140 | CERAMIC CAPACITOR    | CCCSL330J50  |
| C141      | CERAMIC CAPACITOR    | CKCYF103Z50  |
| C201, 202 | ELECTROLYTIC CAPACIT | CEEA2R2M50   |
| C203,204  | CERAMIC CAPACITOR    | CCCSL101K500 |
| C205, 206 | CERAMIC CAPACITOR    | CCCSL101J50  |
| C207, 208 | CERAMIC CAPACITOR    | CCCSL470J50  |
| C209, 210 | CERAMIC CAPACITOR    | CCCSL181J50  |
| C211, 212 | ELECTROLYTIC CAPACIT | CEEA221M16   |
| C213-216  | CERAMIC CAPACITOR    | CCCSL120K500 |
| C217, 218 | ELECTR.CAPACITOR     | CEAS101M10   |
| C219-222  | ELECTR.CAPACITOR     | CEAS3R3M100  |
| C225, 226 | ELECTR.CAPACITOR     | CEAS331M10   |
| C227-230  | CERAMIC CAPACITOR    | CCCSL330K500 |
| C231, 232 | CERAMIC CAPACITOR    | CKCYB122K50  |
| C233-236  | ELECTR.CAPACITOR     | CEAS100M50   |
| C237, 238 | ELECTR.CAPACITOR     | CEAS101M50   |
| C239-242  | POLYESTER CAPACITOR  | CQMXA472J100 |
| C244      | CERAMIC CAPACITOR    | CKDYX104M25  |
| C245, 246 | CERAMIC CAPACITOR    | CKCYB331K50  |
| C247, 248 | AUDIO FILM CAPACITOR | CFTXA103J50  |
| C251-254  | CERAMIC CAPACITOR    | CCCSL680K500 |
| C255      | CERAMIC CAPACITOR    | CCCSL680J50  |
| C256      | CERAMIC CAPACITOR    | CCDSL470J50  |
| C301,302  | ELECTR.CAPACITOR     | CEANP2R2M50  |
| C303      | ELECTROLYTIC CAPACIT | CEAS471M6    |
| C304      | CERAMIC CAPACITOR    | CKCYF103Z50  |
| C305      | ELECTR.CAPACITOR     | CEAS101M25   |
| C306-308  | ELECTR.CAPACITOR     | CEASR47M50   |
| C401-404  | AUDIO FILM CAPACITOR | CFTXA104J50  |
| C505      | ELECTROLYTIC CAPACIT | ACH1196      |
| C506      | ELECTROLYTIC CAPACIT | ACH1078      |
| C507      | MYLOR FILM CAPACITOR | CQMA103K250  |
| C703-708  | CERAMIC CAPACITOR    | CCCSL271J50  |
| C711, 712 | CERAMIC CAPACITOR    | CCCSL271J50  |
| C715, 716 | CERAMIC CAPACITOR    | CCCSL271J50  |
| C719, 720 | CERAMIC CAPACITOR    | CCCSL271J50  |

# A-550R, A-450R

| Mark No.         | Description          | Parts No.    | Mark No.         | Description          | Parts No.     |
|------------------|----------------------|--------------|------------------|----------------------|---------------|
| C725             | CERAMIC CAPACITOR    | CCDSL221J50  | R251, 252        | CARBON FILM RESISTOR | RD1/4PM103J   |
| C726             | CERAMIC CAPACITOR    | CKCYF103Z50  | R255, 256        | CARBON FILM RESISTOR | RD1/4PM561J   |
| C727, 728        | CERAMIC CAPACITOR    | CCCSL221J50  | △ R257-260       | FUSIBLE RESISTOR     | RFA1/4PS101J  |
| C731             | CERAMIC CAPACITOR    | CKCYF103Z50  | △ R261-264       | FUSIBLE RESISTOR     | RFA1/4PS470J  |
| C851, 852        | CERAMIC CAPACITOR    | CKDYF103Z50  | △ R265-268       | FUSIBLE RESISTOR     | RFA1/4PS4R7J  |
| <b>RESISTORS</b> |                      |              | △ R269, 270      | RESISTOR (0.33, 5W)  | ACN1063       |
| VR201, 202       | VR                   | ACP1045      | △ R275, 276      | CARBON FILM RESISTOR | RD1/4PM472J   |
| VR701            | VARIABLE RESISTOR    | ACX1060      | R277, 278        | CARBON FILM RESISTOR | RD1/4PM222J   |
| R101, 102        | CARBON FILM RESISTOR | RDR1/6PU101J | △ R281-284       | FUSIBLE RESISTOR     | RFA1/4PS331J  |
| R107, 108        | CARBON FILM RESISTOR | RDR1/6PU563J | △ R285, 286      | FUSIBLE RESISTOR     | RFA1/4PS101J  |
| R119, 120        | CARBON FILM RESISTOR | RDR1/4PM6R8J | △ R287, 288      | CARBON FILM RESISTOR | RD1/4PMF4R7J  |
| R121, 122        | CARBON FILM RESISTOR | RDR1/4PM820J | △ R289, 290      | FUSIBLE RESISTOR     | RFA1/4PS101J  |
| R133, 134        | CARBON FILM RESISTOR | RDR1/6PU391J | △ R301, 302      | CARBON FILM RESISTOR | RD1/4PMF222J  |
| R143, 144        | CARBON FILM RESISTOR | RD1/4PM560J  | △ R308           | CARBON FILM RESISTOR | RD1/4PMF101J  |
| R201, 202        | CARBON FILM RESISTOR | RDR1/4PM221J | R311             | CARBON FILM RESISTOR | RD1/4PM101J   |
| R203, 204        | CARBON FILM RESISTOR | RDR1/4PM104J | R312             | CARBON FILM RESISTOR | RD1/4PM221J   |
| R205, 206        | CARBON FILM RESISTOR | RD1/4PM152J  | R313-315         | CARBON FILM RESISTOR | RD1/4PM181J   |
| R207, 208        | CARBON FILM RESISTOR | RD1/4PM103J  | R317             | CARBON FILM RESISTOR | RD1/4PM221J   |
| R209, 210        | CARBON FILM RESISTOR | RD1/4PM561J  | R318-320         | CARBON FILM RESISTOR | RD1/4PM181J   |
| R211, 212        | CARBON FILM RESISTOR | RD1/4PM562J  | R321             | CARBON FILM RESISTOR | RD1/4PM221J   |
| R213, 214        | CARBON FILM RESISTOR | RD1/4PM562J  | R322-324         | CARBON FILM RESISTOR | RD1/4PM181J   |
| R215, 216        | CARBON FILM RESISTOR | RDR1/4PM821J | R325-327         | CARBON FILM RESISTOR | RD1/4PM221J   |
| R217, 218        | CARBON FILM RESISTOR | RDR1/4PM124J | △ R330           | CARBON FILM RESISTOR | RD1/4PMF010J  |
| R219, 220        | CARBON FILM RESISTOR | RD1/4PM473J  | △ R401, 402      | CARBON FILM RESISTOR | RD1/4PMFL101J |
| R221, 222        | CARBON FILM RESISTOR | RD1/4PM101J  | △ R403, 404      | METAL OXIDE RESISTOR | RS1LMF331J    |
| R223-226         | CARBON FILM RESISTOR | RD1/4PM392J  | △ R407, 408      | CARBON FILM RESISTOR | RD1/4PMFL100J |
| R227, 228        | CARBON FILM RESISTOR | RD1/4PM561J  | R731, 732        | CARBON FILM RESISTOR | RD1/4PM103J   |
| R229-232         | CARBON FILM RESISTOR | RD1/4PM392J  | Other resistors  |                      | RD1/8PM□□□J   |
| R233, 234        | CARBON FILM RESISTOR | RD1/4PM101J  | <b>OTHERS</b>    |                      |               |
| R237, 238        | CARBON FILM RESISTOR | RDR1/4PM224J | PIN JACK (4P)    |                      | AKB1007       |
| △ R239-242       | FUSIBLE RESISTOR     | RFA1/4PS101J | PIN JACK (6P)    |                      | AKB1008       |
| △ R243, 244      | CARBON FILM RESISTOR | RD1/4PMF561J | PIN JACK (6P)    |                      | AKB1024       |
| △ R245-248       | FUSIBLE RESISTOR     | RFA1/4PS101J | SPEAKER TERMINAL |                      | AKE1011       |
| R249, 250        | CARBON FILM RESISTOR | RD1/4PM122J  | 8-P              |                      |               |

| Mark No. | Description      | Parts No. |
|----------|------------------|-----------|
| CN10     | CONNECTOR (4P)   | KPE4      |
| CN12     | CONNECTOR (4P)   | KPE4      |
| CN13     | CONNECTOR (10P)  | KPE10     |
| CN19     | CONNECTOR (6P)   | KPE6      |
| CN4      | CONNECTOR (15P)  | KPE15     |
| CN8      | CONNECTOR (7P)   | KPE7      |
| CN9      | JUMPER CONNECTOR | KPC8      |

**● AF COMPLEX ASSEMBLY (AWZ3489)  
(FOR A - 450R)**

**SEMICONDUCTORS**

|           |             |           |
|-----------|-------------|-----------|
| IC101     | OP-AMP-IC   | M5220P    |
| Q203-208  | TRANSISTOR  | 2SA1048   |
| Q211, 212 | TRANSISTOR  | 2SC1845   |
| Q215-218  | TRANSISTOR  | 2SA1048   |
| Q219, 220 | TRANSISTOR  | 2SC2705   |
| Q221, 222 | TRANSISTOR  | 2SC3298   |
| Q223, 224 | TRANSISTOR  | 2SA1306   |
| Q225, 226 | TRANSISTOR  | 2SC2603   |
| Q227, 228 | TRANSISTOR  | 2SC1845   |
| Q229, 230 | TRANSISTOR  | 2SA992    |
| Q231, 232 | TRANSISTOR  | 2SA1145   |
| Q233, 234 | TRANSISTOR  | 2SA992    |
| Q237      | TRANSISTOR  | 2SC1845   |
| Q238      | TRANSISTOR  | 2SA992    |
| Q291-294  | TRANSISTOR  | 2SA992    |
| Q301, 302 | TRANSISTOR  | 2SC1845   |
| Q303, 304 | TRANSISTOR  | 2SC2458   |
| Q305      | TRANSISTOR  | 2SA1048   |
| Q306      | TRANSISTOR  | 2SC1815   |
| Q307      | TRANSISTOR  | 2SC2458   |
| D201, 202 | ZENER DIODE | RD2.7ESB1 |
| D209-216  | DIODE       | 1SS252    |
| D217-220  | ZENER DIODE | RD8.2ESB1 |
| D301-306  | DIODE       | 1SS252    |
| D307      | ZENER DIODE | RD15ESB   |
| D507      | DIODE       | D5SB20F   |

**SWITCHES & RELAIES**

|           |             |         |
|-----------|-------------|---------|
| RY301-303 | RELAY       | ASR1038 |
| S701      | SWITCH      | ASD1017 |
| S702      | SWITCH      | ASU1002 |
| S703      | PUSH SWITCH | SULL6S  |

**COILS**

|           |                |         |
|-----------|----------------|---------|
| L103-106  | AXIAL INDUCTOR | LAU221K |
| L401, 402 | COIL           | ATH1009 |

**CAPACITORS**

|           |                      |             |
|-----------|----------------------|-------------|
| C103, 104 | CERAMIC CAPACITOR    | CCCSL330J50 |
| C107, 108 | ELECTR.CAPACITOR     | CEAS101M10  |
| C109, 110 | AUDIO FILM CAPACITOR | CFTXA683J50 |
| C111, 112 | AUDIO FILM CAPACITOR | CFTXA183J50 |

| Mark No.  | Description          | Parts No.    |
|-----------|----------------------|--------------|
| C113, 114 | ELECTR.CAPACITOR     | CEAS4R7M50   |
| C115, 116 | MYLOR FILM CAPACITOR | CQMA392K50   |
| C117, 118 | ELECTR.CAPACITOR     | CEAS221M25   |
| C119, 120 | CERAMIC CAPACITOR    | CKCYF103Z50  |
| C121, 122 | MYLOR FILM CAPACITOR | CQMA122J50   |
| C123, 124 | ELECTR.CAPACITOR     | CEAS100M50   |
| C125, 126 | CERAMIC CAPACITOR    | CCCSL101J50  |
| C127, 128 | CERAMIC CAPACITOR    | CCDSL221J50  |
| C129      | CERAMIC CAPACITOR    | CKPYX103N25  |
| C139, 140 | CERAMIC CAPACITOR    | CCDSL330J50  |
| C141      | CERAMIC CAPACITOR    | CKCYF103Z50  |
| C201, 202 | ELECTROLYTIC CAPACIT | CBEA2R2M50   |
| C203, 204 | CERAMIC CAPACITOR    | CCCSL101K500 |
| C205, 206 | CERAMIC CAPACITOR    | CCCSL101J50  |
| C207, 208 | CERAMIC CAPACITOR    | CCCSL470J50  |
| C209, 210 | CERAMIC CAPACITOR    | CCCSL181J50  |
| C211, 212 | ELECTROLYTIC CAPACIT | CBEA221M16   |
| C213-216  | CERAMIC CAPACITOR    | CCCSL120K500 |
| C217, 218 | ELECTR.CAPACITOR     | CEAS101M10   |
| C219-222  | ELECTR.CAPACITOR     | CEAS3R3M100  |
| C225, 226 | ELECTR.CAPACITOR     | CEAS331M10   |
| C227-230  | CERAMIC CAPACITOR    | CCCSL330K500 |
| C231, 232 | CERAMIC CAPACITOR    | CKCYB122K50  |
| C233-236  | ELECTR.CAPACITOR     | CEAS100M50   |
| C237, 238 | ELECTR.CAPACITOR     | CEAS101M50   |
| C239-242  | POLYESTER CAPACITOR  | CQMXA472J100 |
| C244      | MYLOR FILM CAPACITOR | CQMA224K50   |
| C245, 246 | CERAMIC CAPACITOR    | CKCYB331K50  |
| C247, 248 | AUDIO FILM CAPACITOR | CFTXA103J50  |
| C251-254  | CERAMIC CAPACITOR    | CCCSL680K500 |
| C255      | CERAMIC CAPACITOR    | CCCSL680J50  |
| C256      | CERAMIC CAPACITOR    | CCDSL470J50  |
| C301, 302 | ELECTR.CAPACITOR     | CEANP2R2M50  |
| C303      | ELECTROLYTIC CAPACIT | CEAS471M6    |
| C304      | CERAMIC CAPACITOR    | CKCYF103Z50  |
| C305      | ELECTR.CAPACITOR     | CEAS101M25   |
| C306-308  | ELECTR.CAPACITOR     | CEASR47M50   |
| C401-404  | AUDIO FILM CAPACITOR | CFTXA104J50  |
| C505      | ELECTROLYTIC CAPACIT | ACH1189      |
| C506      | ELECTROLYTIC CAPACIT | ACH1190      |
| C703-708  | CERAMIC CAPACITOR    | CCCSL271J50  |
| C711, 712 | CERAMIC CAPACITOR    | CCCSL271J50  |
| C715, 716 | CERAMIC CAPACITOR    | CCCSL271J50  |
| C719, 720 | CERAMIC CAPACITOR    | CCCSL271J50  |
| C725      | CERAMIC CAPACITOR    | CCCSL221J50  |
| C727, 728 | CERAMIC CAPACITOR    | CCCSL221J50  |



# A-550R, A-450R

| Mark No.                | Description                                 | Parts No.                   |
|-------------------------|---|-----------------------------|
| C731                    | CERAMIC CAPACITOR                           | CKCYF103Z50                 |
| C851, 852               | CERAMIC CAPACITOR                           | CKDYF103Z50                 |
| <b>RESISTORS</b>        |   |                             |
| VR201, 202<br>VR701     | VR<br>VARIABLE RESISTOR                     | ACP1045<br>ACX1060          |
| R121, 122               | CARBON FILM<br>RESISTOR                     | RDR1/4PM820J                |
| R133, 134               | CARBON FILM<br>RESISTOR                     | RDR1/6PU471J                |
| R141, 142               | CARBON FILM<br>RESISTOR                     | RDR1/6PU563J                |
| R143, 144               | CARBON FILM<br>RESISTOR                     | RD1/4PM560J                 |
| R201, 202               | CARBON FILM<br>RESISTOR                     | RDR1/4PM221J                |
| R203, 204               | CARBON FILM<br>RESISTOR                     | RDR1/4PM104J                |
| R205, 206               | CARBON FILM<br>RESISTOR                     | RD1/4PM152J                 |
| R207, 208               | CARBON FILM<br>RESISTOR                     | RD1/4PM103J                 |
| R209, 210               | CARBON FILM<br>RESISTOR                     | RD1/4PM561J                 |
| R211-214                | CARBON FILM<br>RESISTOR                     | RD1/4PM562J                 |
| R215, 216               | CARBON FILM<br>RESISTOR                     | RDR1/4PM102J                |
| R217, 218               | CARBON FILM<br>RESISTOR                     | RDR1/4PM124J                |
| R219, 220               | CARBON FILM<br>RESISTOR                     | RD1/4PM473J                 |
| R221, 222               | CARBON FILM<br>RESISTOR                     | RD1/4PM101J                 |
| R223, 224               | CARBON FILM<br>RESISTOR                     | RD1/4PM332J                 |
| R225, 226               | CARBON FILM<br>RESISTOR                     | RD1/4PM332J                 |
| R227, 228               | CARBON FILM<br>RESISTOR                     | RD1/4PM561J                 |
| R229-232                | CARBON FILM<br>RESISTOR                     | RD1/4PM332J                 |
| R233, 234               | CARBON FILM<br>RESISTOR                     | RD1/4PM101J                 |
| R237, 238               | CARBON FILM<br>RESISTOR                     | RDR1/4PM224J                |
| △ R239-242              | FUSIBLE RESISTOR                            | RFA1/4PS101J                |
| △ R243, 244             | CARBON FILM<br>RESISTOR                     | RD1/4PMF561J                |
| △ R245-248<br>R249, 250 | FUSIBLE RESISTOR<br>CARBON FILM<br>RESISTOR | RFA1/4PS101J<br>RD1/4PM122J |
| R251, 252               | CARBON FILM<br>RESISTOR                     | RD1/4PM103J                 |
| R255, 256               | CARBON FILM<br>RESISTOR                     | RD1/4PM561J                 |
| △ R257-260              | FUSIBLE RESISTOR                            | RFA1/4PS101J                |
| △ R261-264              | FUSIBLE RESISTOR                            | RFA1/4PS470J                |

| Mark No.      | Description             | Parts No.     |
|---------------|-------------------------|---------------|
| △ R265-268    | FUSIBLE RESISTOR        | RFA1/4PS4R7J  |
| △ R269, 270   | RESISTOR (0.33, 5W)     | ACN1063       |
| R275, 276     | CARBON FILM<br>RESISTOR | RD1/4PM472J   |
| R277, 278     | CARBON FILM<br>RESISTOR | RD1/4PM222J   |
| △ R281-284    | FUSIBLE RESISTOR        | RFA1/4PS331J  |
| △ R285, 286   | FUSIBLE RESISTOR        | RFA1/4PS101J  |
| △ R287, 288   | FUSIBLE RESISTOR        | RFA1/4PS4R7J  |
| △ R289, 290   | FUSIBLE RESISTOR        | RFA1/4PS101J  |
| △ R301, 302   | CARBON FILM<br>RESISTOR | RD1/4PMF222J  |
| △ R308        | CARBON FILM<br>RESISTOR | RD1/4PMF101J  |
| R311          | CARBON FILM<br>RESISTOR | RD1/4PM101J   |
| R312-315      | CARBON FILM<br>RESISTOR | RD1/4PM181J   |
| R317-324      | CARBON FILM<br>RESISTOR | RD1/4PM181J   |
| R325-327      | CARBON FILM<br>RESISTOR | RD1/4PM221J   |
| △ R330        | CARBON FILM<br>RESISTOR | RD1/4PMF010J  |
| △ R401, 402   | CARBON FILM<br>RESISTOR | RD1/4PMFL101J |
| △ R403, 404   | METAL OXIDE<br>RESISTOR | RS1LMF331J    |
| △ R407, 408   | CARBON FILM<br>RESISTOR | RD1/4PMFL100J |
| R731, 732     | CARBON FILM<br>RESISTOR | RD1/4PM103J   |
|               | Other resistors         | RD1/8PM□□□J   |
| <b>OTHERS</b> |                         |               |
|               | PIN JACK (4P)           | AKB1007       |
|               | PIN JACK (6P)           | AKB1008       |
|               | PIN JACK (6P)           | AKB1024       |
|               | SPEAKER TERMINAL<br>8-P | AKE1011       |
| CN10, 12      | CONNECTOR (4P)          | KPE4          |
| CN13          | CONNECTOR (10P)         | KPE10         |
| CN19          | CONNECTOR (6P)          | KPE6          |
| CN4           | CONNECTOR (15P)         | KPE15         |
| CN8           | CONNECTOR (7P)          | KPE7          |
| CN9           | JUMPER CONNECTOR        | KPC8          |

## ● TONE ASSEMBLY (AWZ3491) (FOR A-550R AND A-550R-S)

### SEMICONDUCTORS

|            |            |           |
|------------|------------|-----------|
| IC601, 602 | OP-AMP IC  | RC4558DXP |
| Q601, 602  | N-FET      | 2SK246    |
| Q851, 852  | TRANSISTOR | DTC143ES  |

| Mark No.          | Description           | Parts No.   |
|-------------------|-----------------------|-------------|
| D601, 602         | LED (RED)             | AEL1065     |
| D603              | LED                   | AEL1084     |
| D605, 606         | DIODE                 | 1SS252      |
| D607              | LED (RED)             | AEL1065     |
| <b>SWITCHES</b>   |                       |             |
| S601, 602         | PUSH SWITCH           | ASG1019     |
| S604              | SWITCH                | ASG1029     |
| <b>CAPACITORS</b> |                       |             |
| C601, 602         | ELECTR.CAPACITOR      | CEAS010M50  |
| C603, 604         | AUDIO FILM CAPACITOR  | CFTXA823J50 |
| C605, 606         | ELECTR.CAPACITOR      | CEAS2R2M50  |
| C607, 608         | CERAMIC CAPACITOR     | CKDYX153M25 |
| C609, 610         | CERAMIC CAPACITOR     | CKDYX823M25 |
| C611, 612         | CERAMIC CAPACITOR     | CKCYB332K50 |
| C613, 614         | CERAMIC CAPACITOR     | CKDYX183M25 |
| C615, 616         | ELECTR.CAPACITOR      | CEAS2R2M50  |
| C617, 618         | ELECTR.CAPACITOR      | CEAS100M25  |
| C619, 620         | CERAMIC CAPACITOR     | CCDSL390J50 |
| C625, 626         | CERAMIC CAPACITOR     | CKDYX104M25 |
| C627, 628         | CERAMIC CAPACITOR     | CKDYX823M25 |
| C629, 630         | ELECTR.CAPACITOR      | CEAS470M25  |
| C631, 632         | ELECTR.CAPACITOR      | CEAS221M25  |
| C635, 636         | CERAMIC CAPACITOR     | CCDSL150J50 |
| C641, 642         | CERAMIC CAPACITOR     | CCCSL470J50 |
| C643              | CERAMIC CAPACITOR     | CKCYF103Z50 |
| C645, 646         | CERAMIC CAPACITOR     | CKCYB102K50 |
| C647, 648         | CERAMIC CAPACITOR     | CCCSL820J50 |
| <b>RESISTORS</b>  |                       |             |
| VR603, 604        | VARIABLE (100K-20AX2) | ACT1045     |
| R651, 652         | CARBON FILM RESISTOR  | RD1/4PM101J |
| R857              | CARBON FILM RESISTOR  | RD1/4PM331J |
|                   | Other resistors       | RD1/8PM□□□J |

● **TONE ASSEMBLY (AWZ3492)**  
**(FOR A-450R)**

**SEMICONDUCTORS**

|            |            |           |
|------------|------------|-----------|
| IC601, 602 | OP-AMP IC  | RC4558DXP |
| Q851, 852  | TRANSISTOR | DTC143ES  |
| D602       | LED (RED)  | AEL1065   |
| D603       | LED        | AEL1084   |
| D607       | LED (RED)  | AEL1065   |

**SWITCHES**

|      |             |         |
|------|-------------|---------|
| S602 | PUSH SWITCH | ASG1019 |
| S604 | SWITCH      | ASG1029 |

| Mark No.          | Description           | Parts No.   |
|-------------------|-----------------------|-------------|
| <b>CAPACITORS</b> |                       |             |
| C601, 602         | ELECTR.CAPACITOR      | CEAS010M50  |
| C605, 606         | ELECTR.CAPACITOR      | CEAS2R2M50  |
| C607, 608         | CERAMIC CAPACITOR     | CKDYX153M25 |
| C609, 610         | CERAMIC CAPACITOR     | CKDYX823M25 |
| C611, 612         | CERAMIC CAPACITOR     | CKCYB332K50 |
| C613, 614         | CERAMIC CAPACITOR     | CKDYX183M25 |
| C615, 616         | ELECTR.CAPACITOR      | CEAS2R2M50  |
| C617, 618         | ELECTR.CAPACITOR      | CEAS100M25  |
| C619, 620         | CERAMIC CAPACITOR     | CCDSL390J50 |
| C625, 626         | CERAMIC CAPACITOR     | CKDYX104M25 |
| C627, 628         | CERAMIC CAPACITOR     | CKDYX823M25 |
| C629, 630         | ELECTR.CAPACITOR      | CEAS470M25  |
| C631, 632         | ELECTR.CAPACITOR      | CEAS221M25  |
| C641, 642         | CERAMIC CAPACITOR     | CCCSL470J50 |
| C645, 646         | CERAMIC CAPACITOR     | CKCYB102K50 |
| C647, 648         | CERAMIC CAPACITOR     | CCDSL390J50 |
| <b>RESISTORS</b>  |                       |             |
| VR603, 604        | VARIABLE (100K-20AX2) | ACT1045     |
| R651, 652         | CARBON FILM RESISTOR  | RD1/4PM101J |
| R857              | CARBON FILM RESISTOR  | RD1/4PM331J |
|                   | Other resistors       | RD1/8PM□□□J |

**FUSE ASSEMBLY**

**CAPACITOR**

|      |                   |         |
|------|-------------------|---------|
| C953 | CKA (0.01/AC400V) | ACG1002 |
|------|-------------------|---------|

## 5. ADJUSTMENTS

### IDLE CURRENT ADJUSTMENT

1. Connect measuring instrument as Fig. 5-1.
2. Set the VOLUME CONTROL to minimum.
3. Set the POWER switch to ON.
4. Adjust VR201 (VR202) so that the voltage between TP1 (TP3) and TP2 (TP4) becomes  $20\text{mV} \pm 3\text{mV}$ .

*NOTE)*

*After turning on the power, wait at least 5 minutes before adjustment.*

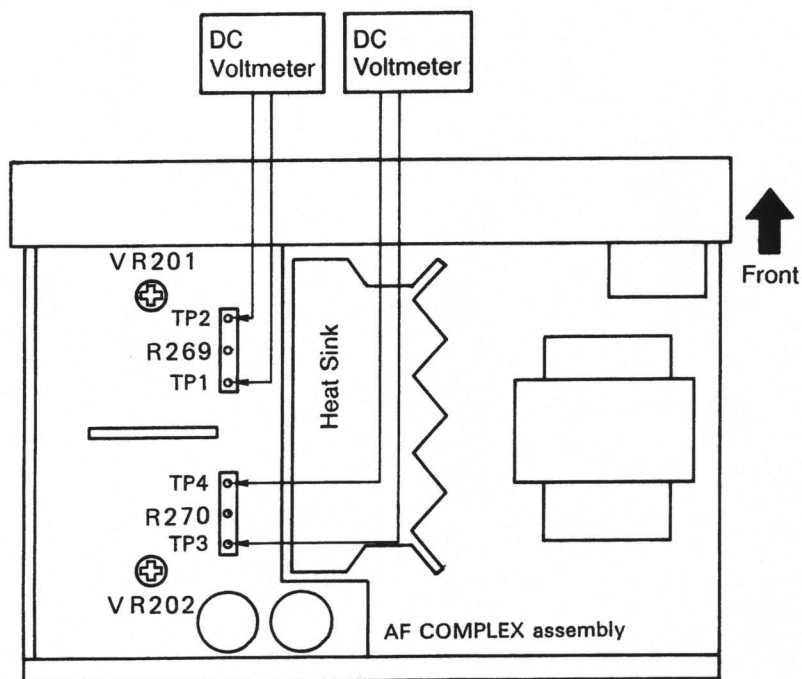


Fig. 5-1 Adjustment Method

## 5. RÉGLAGE

### RÉGLAGE DU COURANT DÉWATTÉ

1. Brancher les fils comme indiqué dans la fig. 5-1.
2. Après la mise sous tension, le moteur dure 5 minutes et n'introduire charge.
3. VR 201 sera réglé dans le canal gauche de manière que les deux tensions de bornes de R269 atteignent 20 mV ( $\pm 3$  mV).
4. VR 202 sera réglé dans le canal droit de manière que les deux tensions de bornes atteignent 20 mV ( $\pm 3$  mV).

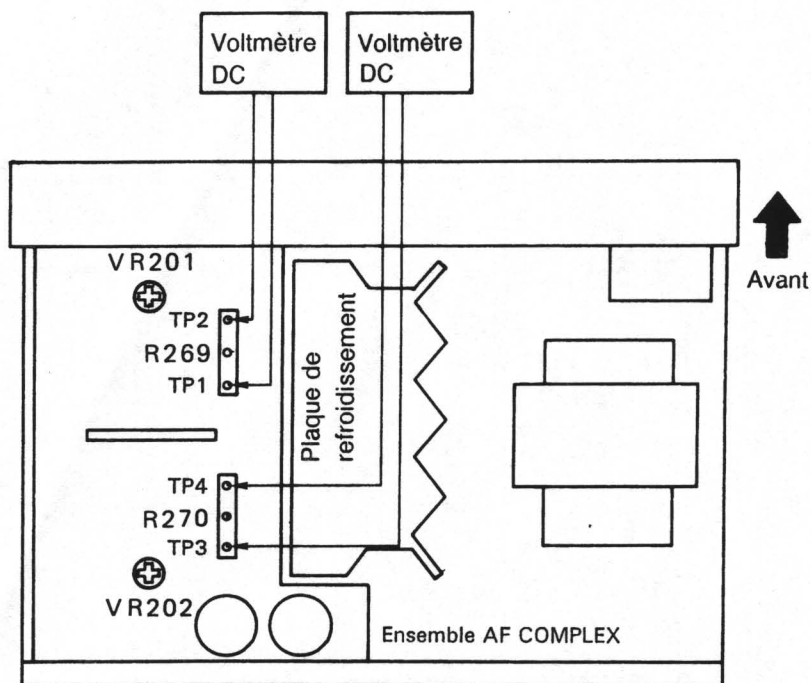


Fig. 5-1 Schéma du réglage

## 5. AJUSTE

### AJUSTE DE LA CORRIENTE DEVIADA

1. Conecte el cable como lo ilustra la Fig. 5-1.
2. El motor funciona por 5 minutos después de encender la unidad, sin introduzca.
3. El VR201 del canal izquierdo debe ajustarse de modo que la tensión entre ambos bornes de R269 llegue a 20 mV ( $\pm 3$  mV).
4. El VR202 del canal derecho debe ajustarse de modo que la tensión entre ambos bornes llegue a 20 mV ( $\pm 3$  mV).

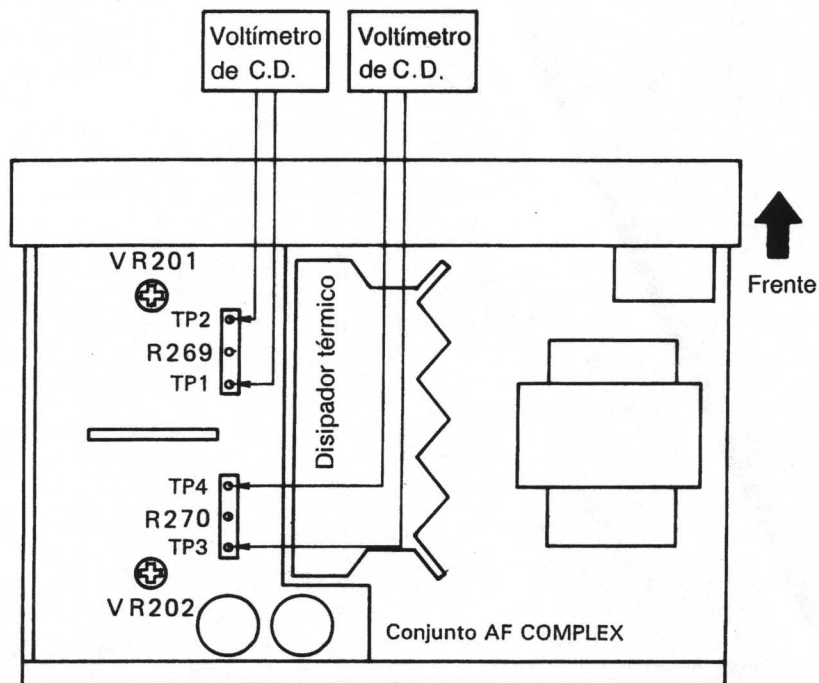
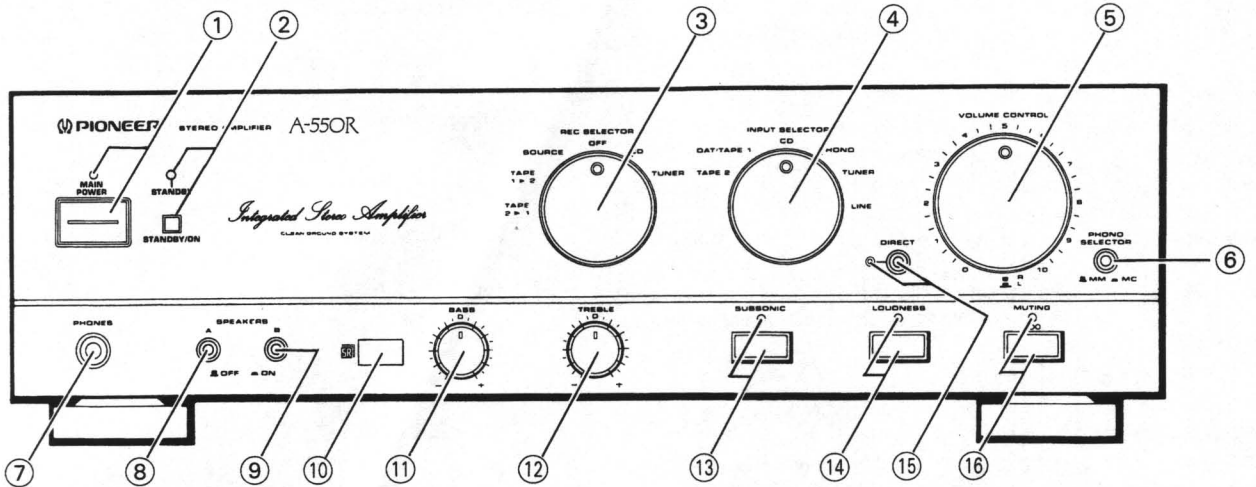


Fig. 5-1 Diagrama de ajuste

**6. PANEL FACILITIES**

**1**

The illustration shows model A-550R.  
Model A-450R is not equipped with ⑥ and ⑬.



**FRONT PANEL 1**

**① MAIN POWER switch/indicator**

Press to set the unit to the power STANDBY or ON condition. Press again to set to OFF.

**② STANDBY/ON button  
STANDBY indicator**

To use the amplifier, press the MAIN POWER switch ON, then press the STANDBY/ON button so that the STANDBY indicator goes off. When the STANDBY indicator lights, the unit is in 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.

**NOTE:**

When not using the unit for extended periods of time, set the MAIN POWER switch to OFF.

**③ REC SELECTOR switch**

When this switch is set to a position other than SOURCE or OFF, the equipment selected by REC SELECTOR switch can be recorded from, irrespective of the settings of INPUT SELECTOR switch and DIRECT button.

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

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

**OFF:** In this position, nothing from REC terminals of DAT/TAPE 1 and TAPE 2 is output. Set to this position when not recording; the cassette deck will be disconnected, improving sound quality.

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

**TAPE 1 ▶ 2:**

To record (copy) from the cassette deck of DAT/TAPE 1 terminals, to the cassette deck of TAPE 2 terminals.

**TAPE 2 ▶ 1:**

To record (copy) from the cassette deck of TAPE 2 terminals, to the cassette deck of DAT/TAPE 1 terminals.

**④ INPUT SELECTOR switch**

Use to select the playback source.

**LINE:** For playback with a component connected to LINE terminal.

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

**PHONO:** For record playback with a turntable.

**NOTE:**

- With the A-450R, you can use an MM cartridge or a high-output MC cartridge (over 1 mV).

- According to the type of cartridge used with the A-550R, you can select MM or MC with the PHONO SELECTOR button.

**CD:** For compact disc playback with a CD player.

**DAT/TAPE 1:**

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

**TAPE 2:**

For playback with a cassette deck connected to TAPE 2 terminals.

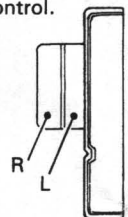
**⑤ VOLUME CONTROL**

Use to adjust the volume level.

This volume knob consists of two volume controls. Because you can adjust L (left) and R (right) channel volume levels independently, it also functions as a balance control.

**[Example]**

To raise R (right) channel volume level, prevent the L knob from turning with one hand, and turn the R knob with the other hand.



**NOTE:**

This unit is equipped with a circuit that attenuates LOUDNESS and TONE effect as volume is turned up.

## ⑥ PHONO SELECTOR button (A-550R only)

Set in accordance with the type of cartridge used with your turntable.

**MM (■):** Set to this position when using a moving magnet cartridge, or a moving coil cartridge with a high output of 1 mV or more.

**MC (■):** Set to this position when using a moving coil cartridge.

## ⑦ PHONES jack

When using headphones, insert the plug into this jack.

## ⑧ SPEAKERS A selector button

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

**ON (■):** Depressed position: Sound is heard from the speaker systems.

**OFF (■):** Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

## ⑨ SPEAKERS B selector button

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

**ON (■):** Depressed position: Sound is heard from the speaker systems.

**OFF (■):** Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

## ⑩ Remote control sensor window

## ⑪ BASS tone control

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

### NOTE:

- This control does not operate when DIRECT button is in the on position.
- At volume levels lower than "4," the set tone control effect is obtained.  
At volume levels higher than "4," the effect becomes increasingly weaker.

## ⑫ TREBLE tone control

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

### NOTE:

- This control does not operate when DIRECT button is in the on position.
- At volume levels lower than "4," the set tone control effect is obtained.  
At volume levels higher than "4," the effect becomes increasingly weaker.

## ⑬ SUBSONIC filter button/indicator (A-550R only)

Use this button when playing records with coarse grooves.

**on:** The indicator lights: In this position, frequencies of 17 Hz and below are cut, eliminating super-low-frequency noise caused by coarse record grooves, and thus helping prevent sound distortion.

**off:** The indicator goes off: Leave in this position for normal playback.

### NOTE:

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

## ⑭ LOUDNESS button/indicator

Use when listening at low volume levels.

**on:** The indicator lights: Boosts low and high frequencies to give added punch to playback even at low volume levels.

**off:** The indicator goes off: Should normally be left in this position.

### NOTE:

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

## ⑮ DIRECT button/indicator

Use this button/indicator when you do not wish to pass the output from input terminal equipment through the various frequency adjusting circuits (BASS, TREBLE, SUBSONIC, LOUDNESS) and adaptor terminals (ADAPTOR).

**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.

## ⑯ MUTING button/indicator

Use to temporarily cut sound volume.

**on:** The indicator lights.

The sound is cut off.

**off:** the indicator goes off.

The sound will return to its previous volume.

## 7. SPECIFICATIONS

### [A-550R]

#### Amplifier Section

Continuous power output (both channels driven at 20 Hz to 20 kHz)\*\*

|                    |              |
|--------------------|--------------|
| T.H.D. 0.009%, 8 Ω | 60 W + 60 W* |
| T.H.D. 0.02%, 4 Ω  | 80 W + 80 W* |

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

|                |                |
|----------------|----------------|
| T.H.D. 1%, 8 Ω | 70 W + 70 W*   |
| T.H.D. 1%, 4 Ω | 100 W + 100 W* |

Dynamic power output (on EIA dynamic test signal)

|             |                  |
|-------------|------------------|
| 8 Ω/4 Ω/2 Ω | 75 W/110 W/150 W |
|-------------|------------------|

Total harmonic distortion\*\*

|                            |         |
|----------------------------|---------|
| 20 Hz to 20 kHz, 60 W, 8 Ω | 0.009%* |
| 20 Hz to 20 kHz, 80 W, 4 Ω | 0.02%*  |

- The above values are applicable when AC 230 V power is supplied.

Input sensitivity/impedance

|                       |               |
|-----------------------|---------------|
| PHONO (MM)            | 2.5 mV/50 kΩ  |
| PHONO (MC)            | 0.2 mV/100 kΩ |
| CD, TUNER, LINE, TAPE | 150 mV/40 kΩ  |

PHONO overload level

|                              |              |
|------------------------------|--------------|
| 1 kHz, T.H.D. 0.008% (MM/MC) | 150 mV/12 mV |
|------------------------------|--------------|

Output level/impedance

|                          |               |
|--------------------------|---------------|
| TAPE REC, ADAPTOR OUTPUT | 150 mV/2.2 kΩ |
|--------------------------|---------------|

Frequency response

|                       |                          |
|-----------------------|--------------------------|
| PHONO (MM)            | 20 Hz to 20 kHz ± 0.3 dB |
| PHONO (MC)            | 20 Hz to 20 kHz ± 0.5 dB |
| CD, TUNER, LINE, TAPE | 5 Hz to 100 kHz ±3 dB*   |

Tone control (volume control set at -30 dB position)

|        |                |
|--------|----------------|
| 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) |
|--|-------------------------------|

Filter (SUBSONIC)

|  |                    |
|--|--------------------|
|  | 17 Hz (12 dB/oct.) |
|--|--------------------|

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

|   |              |
|---|--------------|
| PHONO (MM, 5 mV input/MC, 0.5 mV input) | 93 dB/74 dB* |
| CD, TUNER, LINE, TAPE                   | 108 dB*      |

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

|                       |              |
|-----------------------|--------------|
| PHONO (MM)            | 74 dB/63 dB* |
| CD, TUNER, LINE, TAPE | 88 dB/65 dB* |

MUTING

|  |    |
|--|----|
|  | -∞ |
|--|----|

#### Power Supply/Miscellaneous

Power requirements a.c. 220~230 Volts, 50/60 Hz

Power consumption 550 W

Dimensions 420 (W) × 352 (D) × 126 (H) mm

Weight (without package) 9.1 kg

#### Accessories

Remote control unit 1

Batteries (IEC R03, AAA) 2

Operating instructions 1

#### NOTE:

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

\* Measured with DIRECT button set to on.

\*\* Measured by Audio Spectrum Analyzer.

### [A-450R]

#### Amplifier Section

Continuous power output (both channels driven at 20 Hz to 20 kHz)\*\*

|                   |              |
|-------------------|--------------|
| T.H.D. 0.01%, 8 Ω | 40 W + 40 W* |
| T.H.D. 0.02%, 4 Ω | 50 W + 50 W* |

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

|                |              |
|----------------|--------------|
| T.H.D. 1%, 8 Ω | 55 W + 55 W* |
| T.H.D. 1%, 4 Ω | 75 W + 75 W* |

Dynamic power output (on EIA dynamic test signal)

|             |                 |
|-------------|-----------------|
| 8 Ω/4 Ω/2 Ω | 55 W/90 W/100 W |
|-------------|-----------------|

Total harmonic distortion\*\*

|                            |        |
|----------------------------|--------|
| 20 Hz to 20 kHz, 40 W, 8 Ω | 0.01%* |
| 20 Hz to 20 kHz, 50 W, 4 Ω | 0.02%* |

- The above values are applicable when AC 230 V power is supplied.

Input sensitivity/impedance

|                       |              |
|-----------------------|--------------|
| PHONO (MM)            | 2.5 mV/50 kΩ |
| CD, TUNER, LINE, TAPE | 150 mV/40 kΩ |

PHONO overload level

|                          |        |
|--------------------------|--------|
| 1 kHz, T.H.D. 0.02% (MM) | 150 mV |
|--------------------------|--------|

Output level/impedance

|                          |               |
|--------------------------|---------------|
| TAPE REC, ADAPTOR OUTPUT | 150 mV/2.2 kΩ |
|--------------------------|---------------|

Frequency response

|                       |                          |
|-----------------------|--------------------------|
| PHONO (MM)            | 20 Hz to 20 kHz ± 0.3 dB |
| CD, TUNER, LINE, TAPE | 5 Hz to 100 kHz ±3 dB*   |

Tone control (volume control set at -30 dB position)

|        |                |
|--------|----------------|
| 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)

|                        |         |
|------------------------|---------|
| PHONO (MM, 5 mV input) | 89 dB*  |
| CD, TUNER, LINE, TAPE  | 108 dB* |

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

|                       |              |
|-----------------------|--------------|
| PHONO (MM)            | 73 dB/63 dB* |
| CD, TUNER, LINE, TAPE | 87 dB/65 dB* |

#### Power Supply/Miscellaneous

Power requirements a.c. 220~230 Volts, 50/60 Hz

Power consumption 410 W

Dimensions 420 (W) × 352 (D) × 126 (H) mm

Weight (without package) 8.1 kg

#### Accessories

Remote control unit 1

Batteries (IEC R03, AAA) 2

Operating instructions 1

#### NOTE:

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

\* Measured with DIRECT button set to on.

\*\* Measured by Audio Spectrum Analyzer.