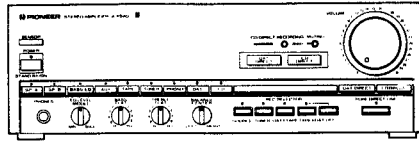


Service Manual



**ORDER NO.
ARP1577**

STEREO AMPLIFIER

A-X540

A-X440

A-X340

MODELS A-X540, A-X440 AND A-X340 HAVE FOUR VERSIONS:

| Type | Applicable model | | | Power requirement | Export destination |
|------|------------------|--------|--------|--|--|
| | A-X540 | A-X440 | A-X340 | | |
| HE | ○ | ○ | ○ | AC220V,240V (switchable) | European continent |
| HB | ○ | ○ | ○ | AC220V,240V (switchable) | United Kingdom |
| HEZ | ○ | ○ | ○ | AC220V,240V (switchable) | West Germany |
| SD | ○ | ○ | — | AC110V,120V-127V,220V, 240V (switchable) | Kingdom of Saudi Arabia and general market |

- This service manual is applicable to the HE and HB types.
- For the HB type, refer to page 48.
- For the other types, refer to additional service manual.

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PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada

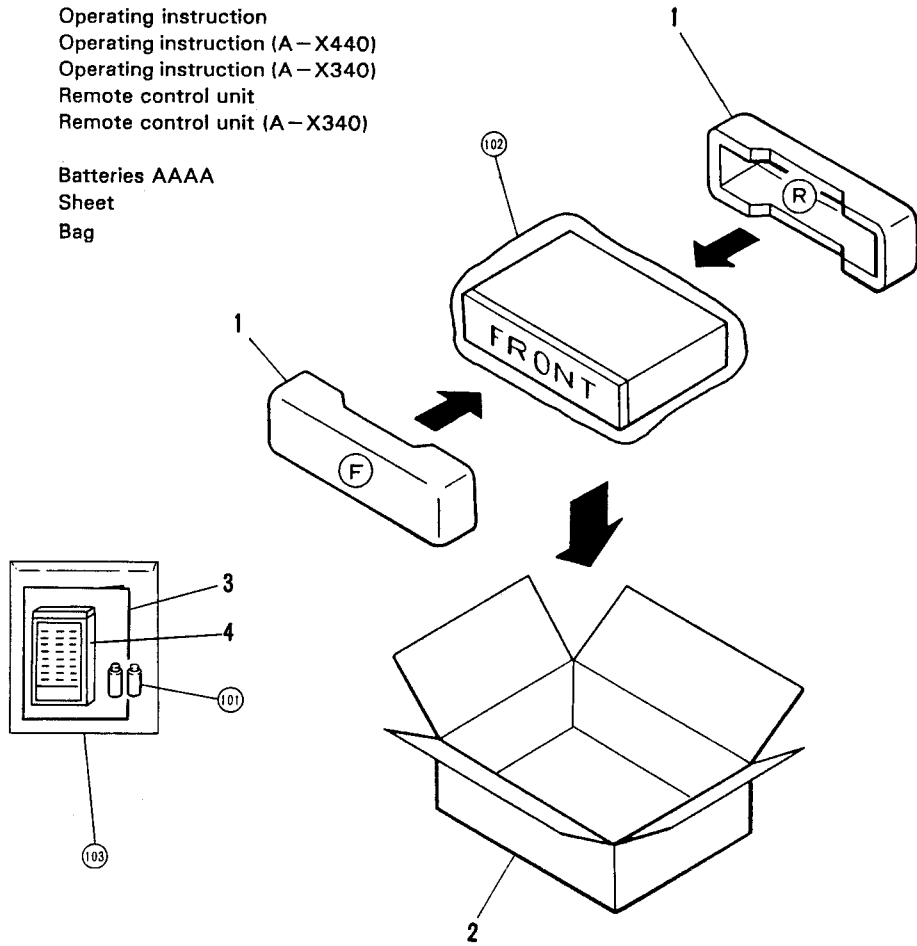
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium

PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

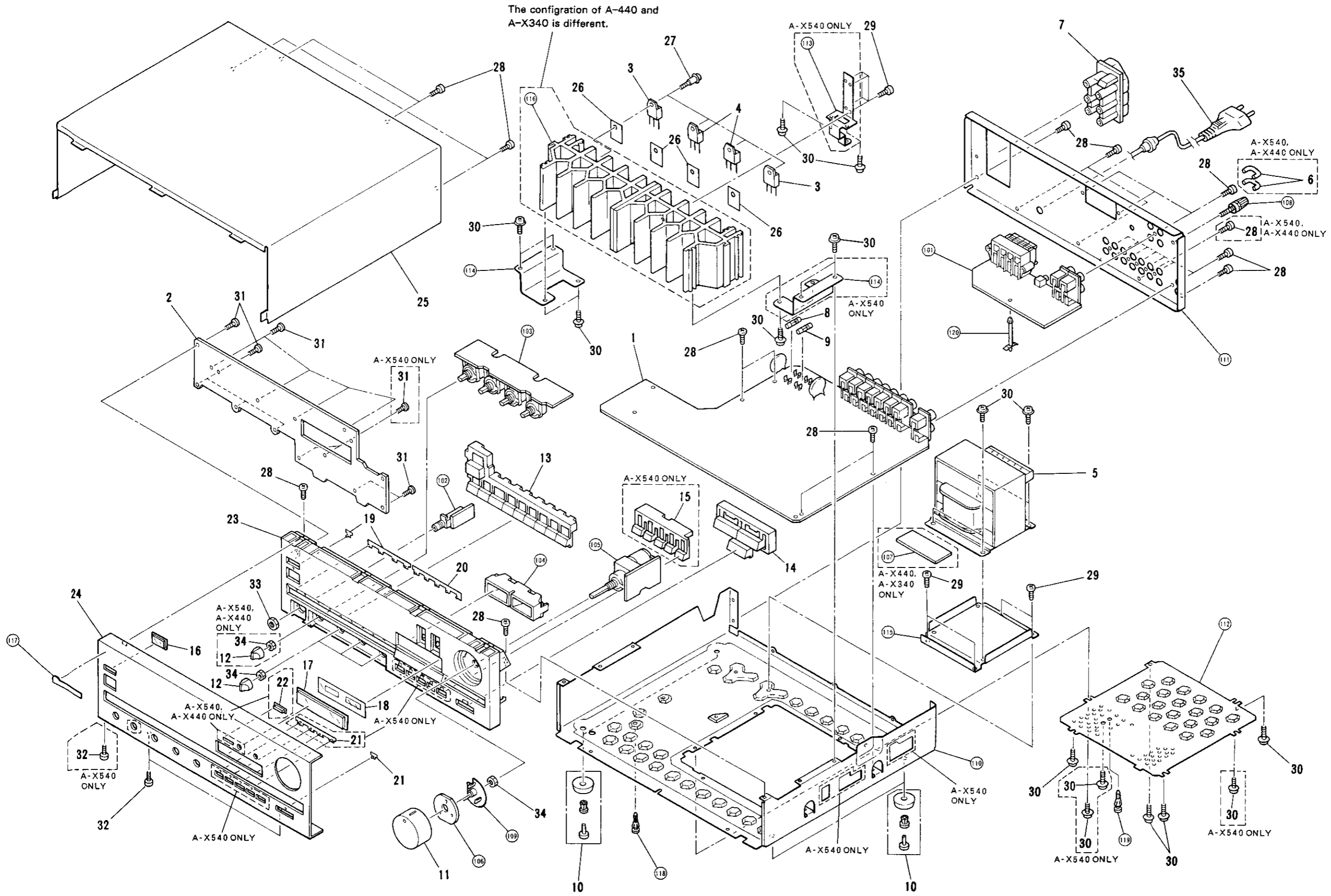
YA © MAY. 1988 Printed in Japan

1. PACKING

| Mark | No. | Parts No. | Description |
|------|-----|-----------|--------------------------------|
| | 1 | AHA1069 | Pad |
| | 2 | AHD1414 | Packing case |
| | | AHD1415 | Packing case (A-X440) |
| | | AHD1416 | Packing case (A-X340) |
| | 3 | ARE1080 | Operating instruction |
| | | ARE1081 | Operating instruction (A-X440) |
| | | ARE1082 | Operating instruction (A-X340) |
| | 4 | AXD1053 | Remote control unit |
| | | AXD1052 | Remote control unit (A-X340) |
| 101 | | | Batteries AAAA |
| 102 | | | Sheet |
| 103 | | | Bag |



2. EXPLODED VIEWS AND PARTS LIST



NOTES:

- Parts without part number
- The Δ mark found on a factor of the part. Therefor
- For your parts Stock Co and *
- ** GENERALLY MOI This classification shall number, temperature, h
- Parts marked by "⊙" are than usual or they may b

Parts List

| Mark | No. | Parts No. |
|-------------|-----|---------------------------------------|
| | 1 | AWZ1770 AWZ1777 AWZ1781 |
| | 2 | AWZ1772 AWZ1779 AWZ1782 |
| ** | 3 | 2SA1302 2SA1264N 2SA1263N |
| ** | 4 | 2SC3281 2SC3181N 2SC3180N |
| Δ * | 5 | ATS1141 ATS1142 ATS1143 |
| | 6 | AKM1019 AKM1004 |
| Δ * | 7 | AKP-502 |
| Δ ** | 8 | AEK-403 |
| Δ ** | 9 | AEK-403 AEK-017 AEK-018 |
| | 10 | AMR1285 |
| | 11 | AAB1044 AAB1081 AAB1082 |
| | 12 | AAB1070 |
| | 13 | AAD1382 AAD1383 |

NOTES:

- Parts without part number cannot be supplied.
- 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.
- For your parts Stock Control, the fast moving items are indicated with the marks $\star\star$ and \star .
 $\star\star$ GENERALLY MOVES FASTER THAN \star
 This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

| Mark | No. | Parts No. | Description | Mark | No. | Parts No. | Description |
|-----------------------|-----|-----------|--|------|--------------|--|-------------|
| | 1 | AWZ1770 | AF main assembly | 14 | AAD1384 | Direct knob (DAT DIRECT, CD DIRECT, PURE DIRECT LINE) | |
| | | AWZ1777 | AF main assembly (A-X440) | | AAD1385 | Direct knob (A-X340) | |
| | | AWZ1781 | AF main assembly (A-X340) | 15 | AAD1386 | REC SELECTOR knob (SOURCE, TUNER, DAT ▶ TAPE, TAPE ▶ DAT, OFF) | |
| | 2 | AWZ1772 | Control main assembly | 16 | AAK1333 | Sencer acrylic lens | |
| | | AWZ1779 | Control main assembly (A-X440) | 17 | AAK1473 | Lamp panel | |
| | | AWZ1782 | Control main assembly (A-X340) | | AAK1474 | Lamp panel (A-X340) | |
| $\star\star$ | 3 | 2SA1302 | Transistor (Q3,Q4) | 18 | AAK1475 | Display seat | |
| | | 2SA1264N | Transistor (Q3,Q4) (A-X440) | | AAK1476 | Display seat (A-X340) | |
| | | 2SA1263N | Transistor (Q3,Q4) (A-X340) | 19 | AAK1482 | Indicator lens L | |
| $\star\star$ | 4 | 2SC3281 | Transistor (Q1,Q2) | | AAK1483 | Indicator lens L (A-X340) | |
| | | 2SC3181N | Transistor (Q1,Q2) (A-X440) | 20 | AAK1484 | Indicator lens R | |
| | | 2SC3180N | Transistor (Q1,Q2) (A-X340) | 21 | AAK1485 | Indicator lens A | |
| Δ \star | 5 | ATS1141 | Power transformer (220V/240V,T1) | | AAK1486 | Indicator lens A (A-X440, A-X340) | |
| | | ATS1142 | Power transformer (220V/240V,T1) (A-X440) | 22 | AAK1487 | DILECT REC lens | |
| | | ATS1143 | Power transformer (220V/240V,T1) (A-X340) | 23 | AMB1397 | Panel base | |
| | 6 | AKM1019 | Jumper plug | | AMB1398 | Panel base (A-X440) | |
| | | AKM1004 | Jumper plug (A-X440, A-X340) | | AMB1399 | Panel base (A-X340) | |
| Δ | 7 | AKP-502 | AC socket (3P,AC OUTLET) | 24 | ANB1226 | Front panel | |
| Δ $\star\star$ | 8 | AEK-403 | Fuse (T2.5A/250V,FU1) | | ANB1227 | Front panel (A-X440) | |
| Δ $\star\star$ | 9 | AEK-403 | Fuse (T2.5A/250V,FU2) | | ANB1228 | Front panel (A-X340) | |
| | | AEK-017 | Fuse (T2A/250V, FU2) (A-X440) | 25 | AZN1802 | Bonnet cover | |
| | | AEK-018 | Fuse (T1.25A/250V, FU2) (A-X340) | | AZN1748 | Bonnet cover (A-X440, A-X340) | |
| | 10 | AMR1285 | Leg assembly | 26 | AEE1014 | Mica sheet | |
| | | | | | AEC-818 | Mica sheet (A-X440, A-X340) | |
| | 11 | AAB1044 | Rotary knob (VOLUME) | 27 | ABA-297 | Screw | |
| | | AAB1081 | Rotary knob (VOLUME) (A-X440) | 28 | ABA-298 | Screw | |
| | | AAB1082 | Rotary knob (VOLUME) (A-X340) | 29 | ABA1009 | Screw | |
| | 12 | AAB1070 | Rotary knob (BASS EQ LEVEL, BASS, TREBLE, BALANCE) | 30 | ABA1011 | Screw | |
| | 13 | AAD1382 | Function knob (STAND-BY/ON, SP-A, SP-B, BASS EQ, AUX, TAPE, TUNER, PHONO, DAT, CD) | 31 | BBZ26P080FMC | Screw | |
| | | AAD1383 | Function knob (A-X340) | 32 | BBZ30P080FZK | Screw | |
| | | | | 33 | ABN-065 | Nut | |
| | | | | 34 | NK90FUC | Nut | |
| | | | | 35 | ADG1021 | AC power cord | |

| Mark | No. | Parts No. | Description |
|------|-----|-----------|--------------------|
| | 101 | | SP assembly |
| | 102 | | HEADPHONE assembly |
| | 103 | | TONE assembly |
| | 104 | | LAMP assembly |
| | 105 | | VR assembly |
| | 106 | | LED assembly |
| | 107 | | CONNECTOR assembly |
| | 108 | | Terminal (GND) |
| | 109 | | VOL PCB holder |
| | 110 | | Chassis |
| | 111 | | Rear panel |
| | 112 | | Bottom plate |
| | 113 | | Heat sink holder A |
| | 114 | | Heat sink holder B |
| | 115 | | Trans holder |
| | 116 | | Heat sink |
| | 117 | | Name plate |
| | 118 | | Spacer |
| | 119 | | PCB spacer |
| | 120 | | PCB spacer |

Line voltage selection (HE, HB TYPES)

Line voltage can be changed with following steps.

1. Descomment the AC power cord.
2. Remove the top cover.
3. Change the connection wire (To Power transformer) of Terminal No. 3 (White) as follows.

| Voltage | Terminal No. 3 | Terminal No. 5 |
|---------|----------------|----------------|
| 220V | White | ..... |
| 240V | ..... | White |

4. Stick the voltage level on the rear panel.

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

3. SCHEMATIC DIAGRAM AND P.C.BOARDS CONNECTION DIAGRAM

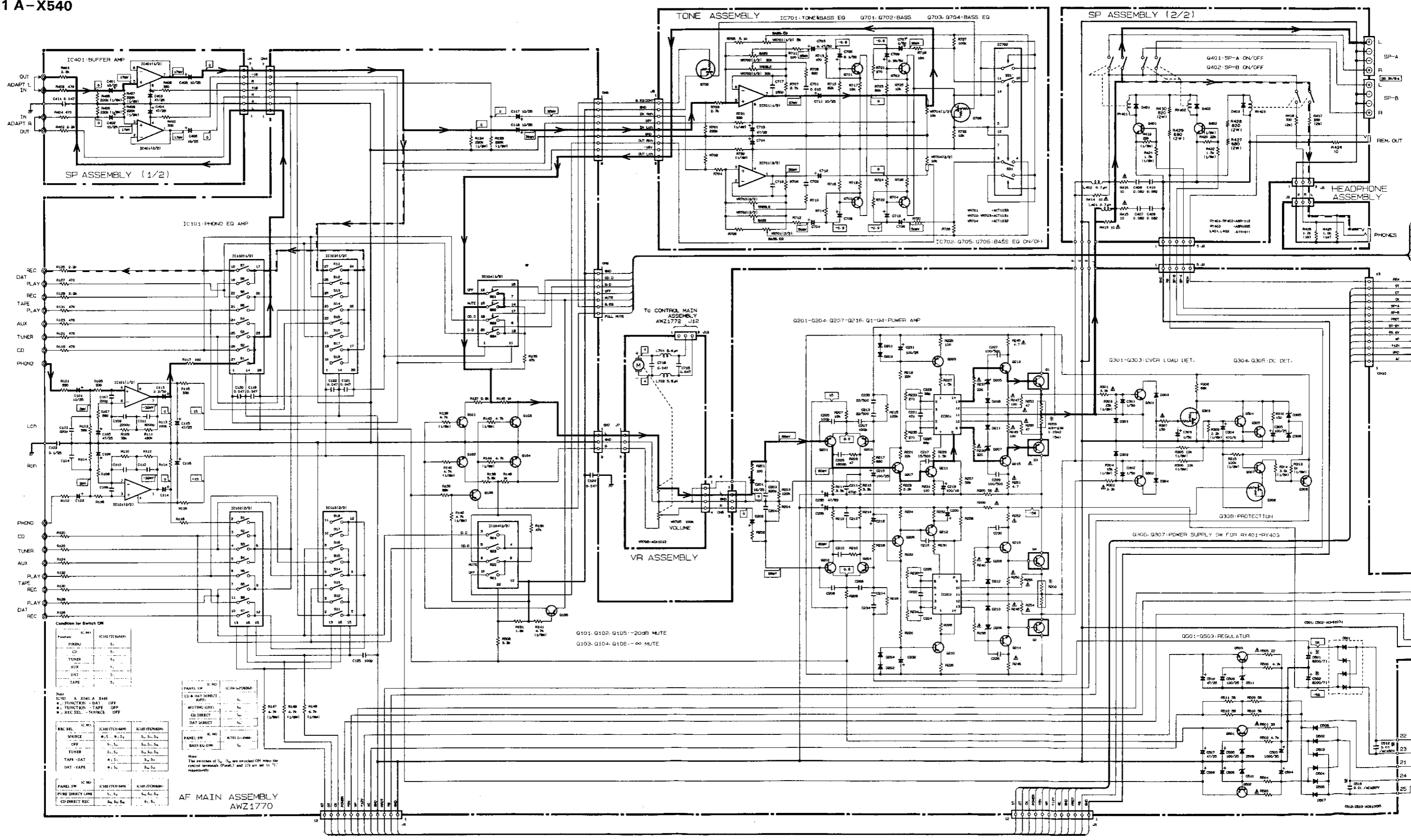
3.1 A-X540

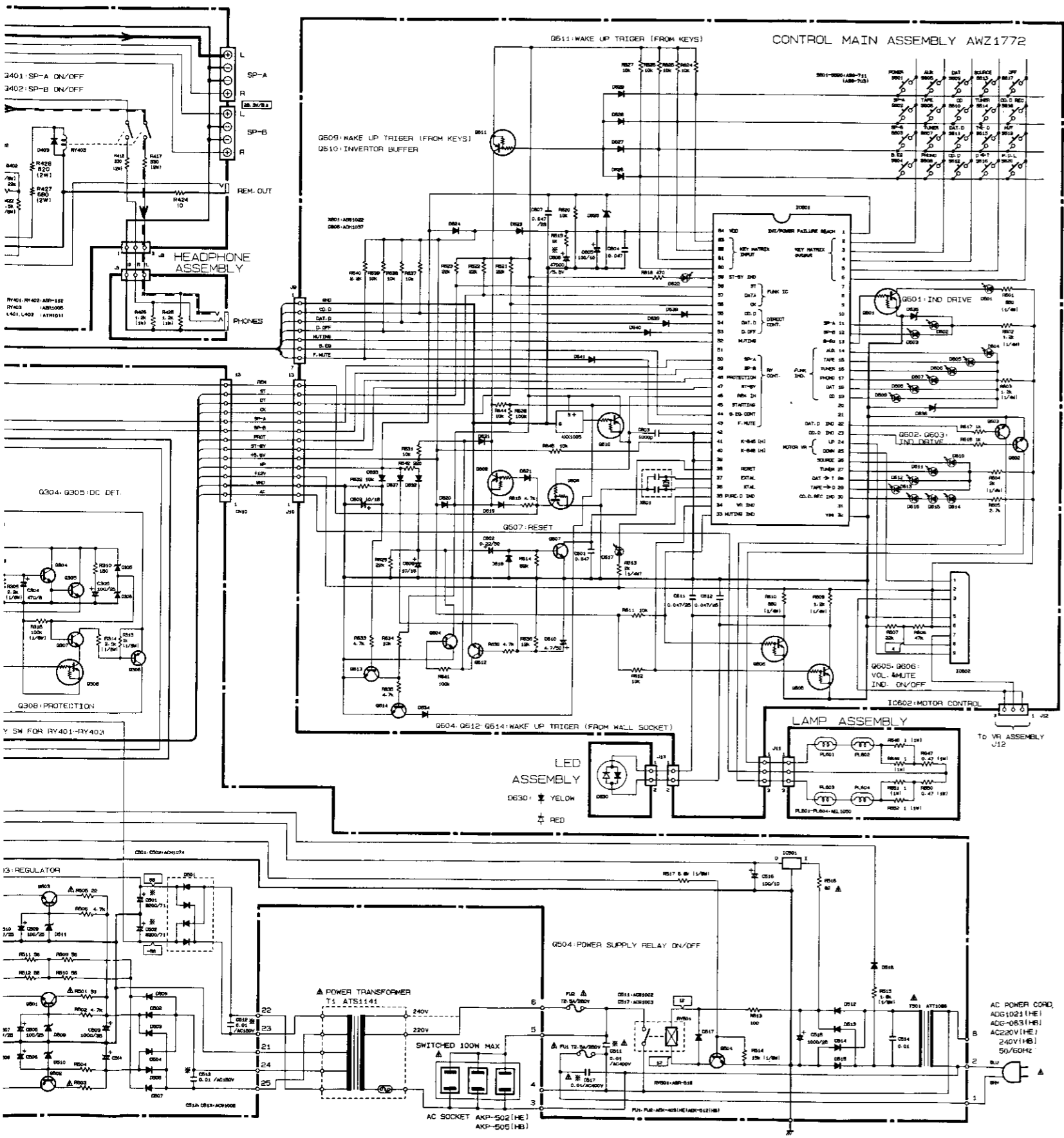
A

B

C

D





AF main assembly (AWZ1770)

| | |
|---|----------------------|
| Q3,Q4 Transistor | 2SA1302 |
| Q1,Q2 Transistor | 2SC281 |
| IC101 | M5218P |
| IC501 | M5278L56 |
| IC201,IC202 | PA0016 |
| IC103 | TC9163N |
| IC102 | TC9164N |
| IC104 | μPD6362C |
| Q308 | RN1201 (DTC143ES) |
| Q303 | RN2203 (DTA124ES) |
| Q105,Q106 | 2SA1048 |
| Q209,Q210 | 2SA1145 |
| Q215,Q216 | 2SA968 |
| Q201-Q204 | 2SA992 |
| Q306,Q502 | 2SB560 |
| Q207,Q208,Q301,Q302 | 2SC1845 |
| Q213,Q214 | 2SC2238 |
| Q307,Q504 | 2SC2240 |
| Q304,Q305 | 2SC2458 |
| Q211,Q212 | 2SC2705 |
| Q101-Q104 | 2SC2878 |
| Q501 | 2SD438 |
| Q503 | 2SD880 |
| D501 | D5SB20F |
| D207,D208 | HZS5BL |
| D205,D206 | HZS5CLL |
| D305 | RD13ESB |
| D511 | RD13ESB1 |
| D509,D510 | RD16ESB3 |
| D306 | RD5.6ESB |
| D502-D507,D512-D515 | S5566 (11E2) |
| D201-D204,D209-D212, D301-D304,D516,D517 | 1SS252 |

Control main assembly (AWZ1772)

| | |
|---|----------------------|
| IC601 | PDG022 |
| IC602 | TA7291S |
| Q601,Q605,Q606,Q608 | RN1201 (DTC143ES) |
| Q609-Q611 | RN2201 (DTA143ES) |
| Q602,Q603 | 2SC2235 |
| Q607,Q612-Q614,Q604 | 2SC2458 |
| D614-D616 | AEL1053 |
| D602-D613,D617,D622 | AEL1072 |
| D601 | AEL1073 |
| D635,D636 | RD3.0ESB |
| D625 | RD4.7ESB2 |
| D618-D621,D623,D624, D626-D629,D631-D634, D637-D641 | 1SS252 |

1. RESISTORS:
Indicated in Ω, ¼W, ½W, ±5% tolerance unless otherwise noted k:kΩ, M: MΩ, (F): ±1%, (G): ±2%, (K): ±10% (M): ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p: pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
 : Signal voltage of 100 W+100 W, 8Ω output (1 kHz)
 : DC voltage (V) at no input signal
 Value in () is DC voltage at rated power.
 : DC current at no input signal

4. OTHERS:
 : Signal route.
 : Adjusting point.
 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.
 * marked capacitors and resistors have parts numbers.

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

5. SWITCH

| | |
|------------|---------------|
| S601 POWER | S611 DAT.D |
| S602 SP-A | S612 CD.D |
| S603 SP-B | S613 SOURCE |
| S604 B.EQ | S614 TUNER |
| S605 AUX | S615 D → T |
| S606 TAPE | S616 T → D |
| S607 TUNER | S617 OFF |
| S608 PHONO | S618 CD.D REC |
| S609 DAT | S619 MUT |
| S610 CD | S620 P.D.L |

SP assembly

| | |
|-----------|---------|
| IC401 | M5218PF |
| Q401,Q402 | 2SC2235 |
| D401-D403 | 1SS252 |

TONE assembly

| | |
|-----------|----------------------|
| IC702 | LC4966 |
| IC701 | M5218PF |
| Q705 | RN1201 (DTC143ES) |
| Q706 | RN2201 (DTA143ES) |
| Q701-Q704 | 2SC1740SLN |

LED assembly

| | |
|----------|---------|
| D630 LED | AEL1071 |
|----------|---------|

1 | 2 | 3 | 4 | 5 | 6 | 7

Q610 Q608 Q614 Q613
Q611 Q609
Q601

IC601

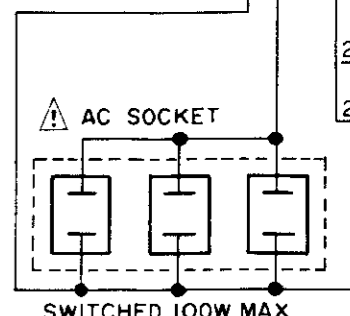
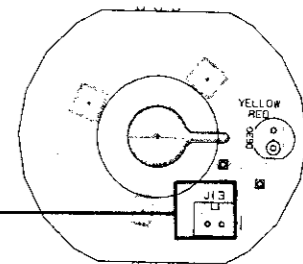
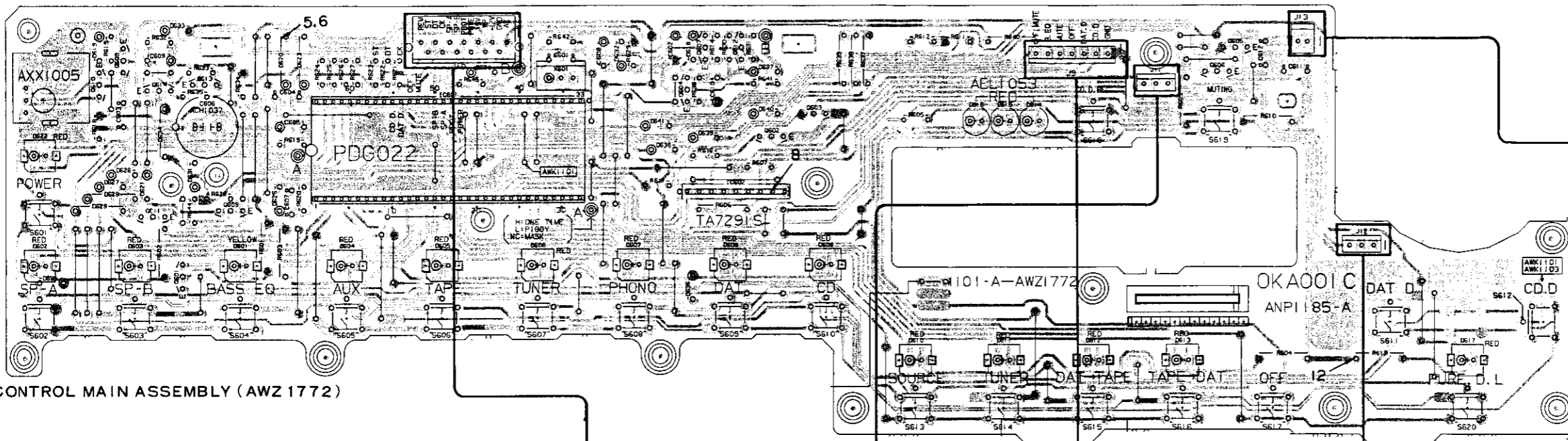
Q607 Q612
IC602 Q602 Q603

Q606 Q605

AC POWER
AC 220V
240V
50/60Hz

LED ASSEMBLY

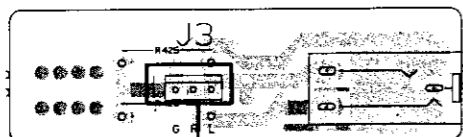
A



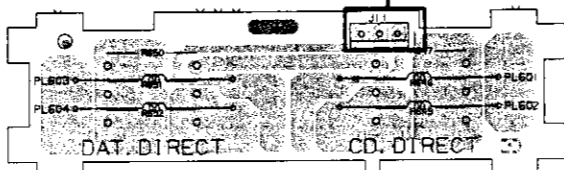
B

CONTROL MAIN ASSEMBLY (AWZ 1772)

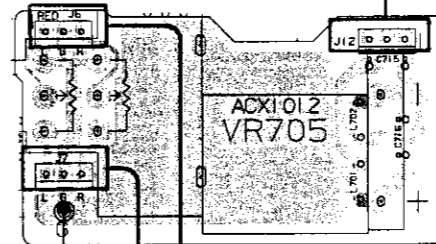
HEADPHONE ASSEMBLY



LAMP ASSEMBLY

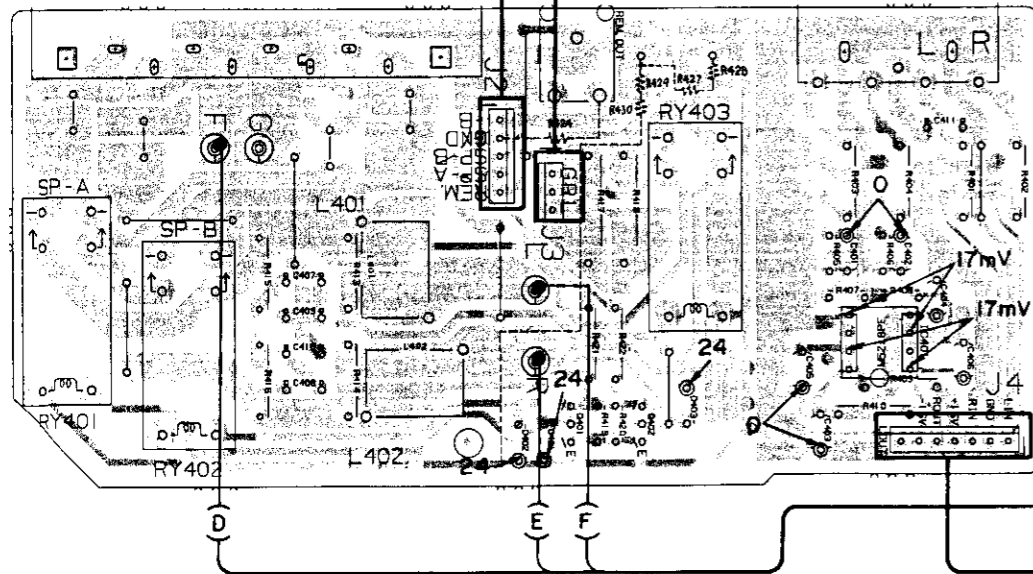


VR ASSEMBLY

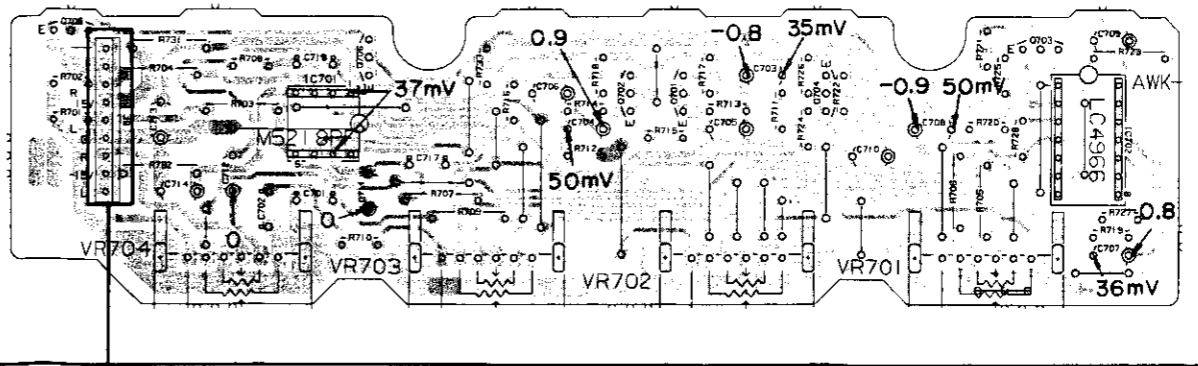


C

SP ASSEMBLY



TONE ASSEMBLY



D

1 | 2 | 3 | 4 | 5 | 6 | 7

AF

7

8

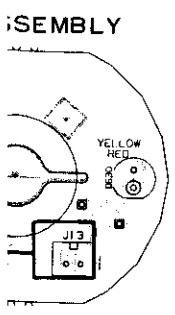
9

10

11

12

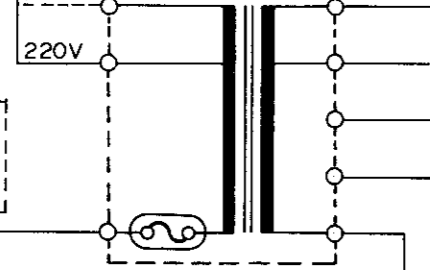
IC201 Q209 Q211 Q207 Q215 Q213 Q203 Q201 Q202 Q204 Q208 Q214 Q210 Q212 IC202 Q216 IC102 Q101-Q106 IC103 IC101 IC104



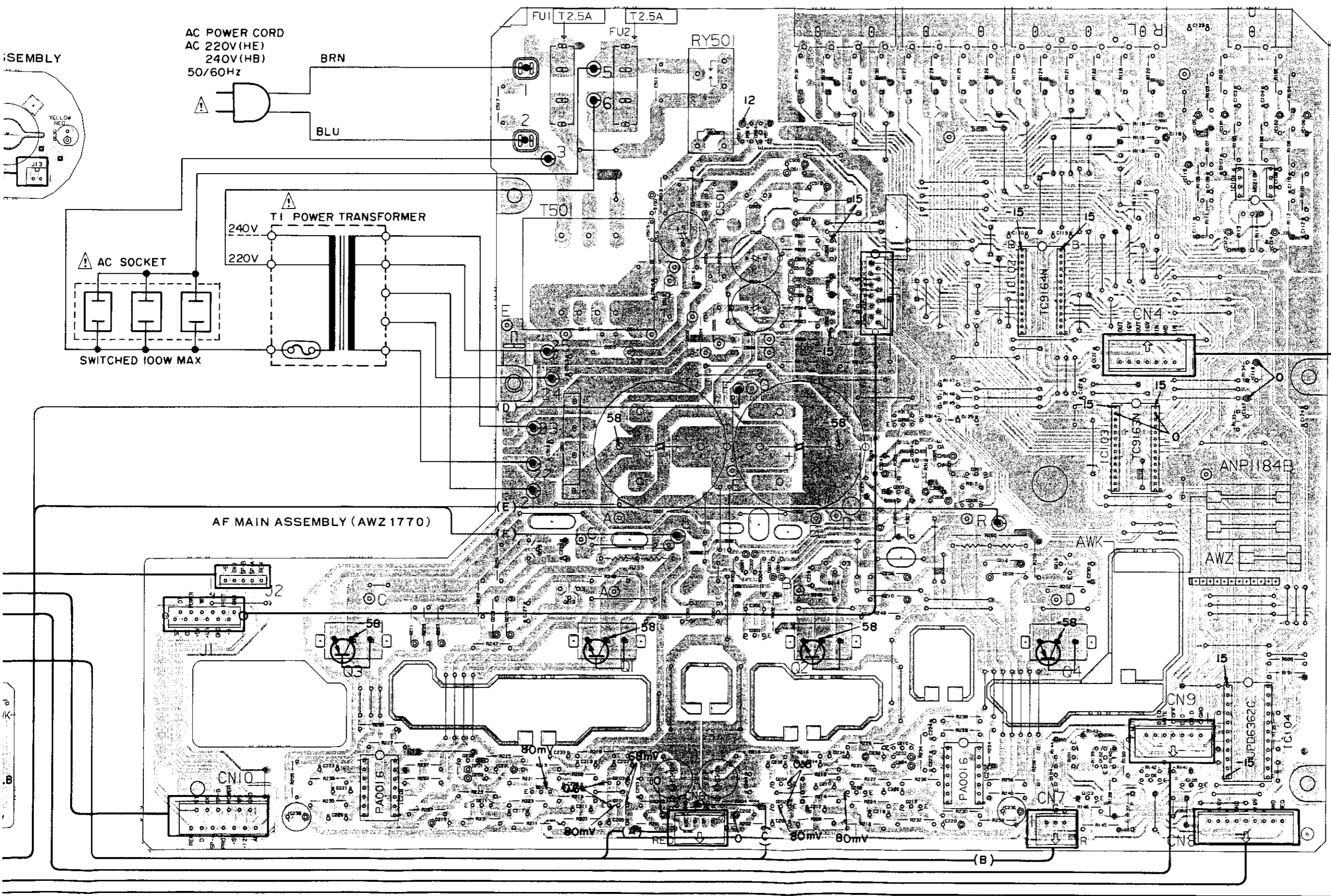
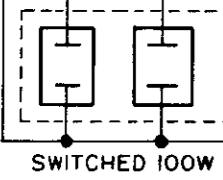
AC POWER CORD
AC 220V (HE)
240V (HB)
50/60Hz



T1 POWER TRANSFORMER



AC SOCKET



NOTE

- This P.C.B. connection diagram is viewed from the parts mounted side.
- 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 |
| | | Resistor 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 |

- The capacitor terminal marked with ⊖ (double circles) shows negative terminal.
- The diode terminal marked with ⊕ (double circles) shows cathode side.
- The transistor terminal to which E is affixed shows the emitter.

A

B

C

D

7

8

9

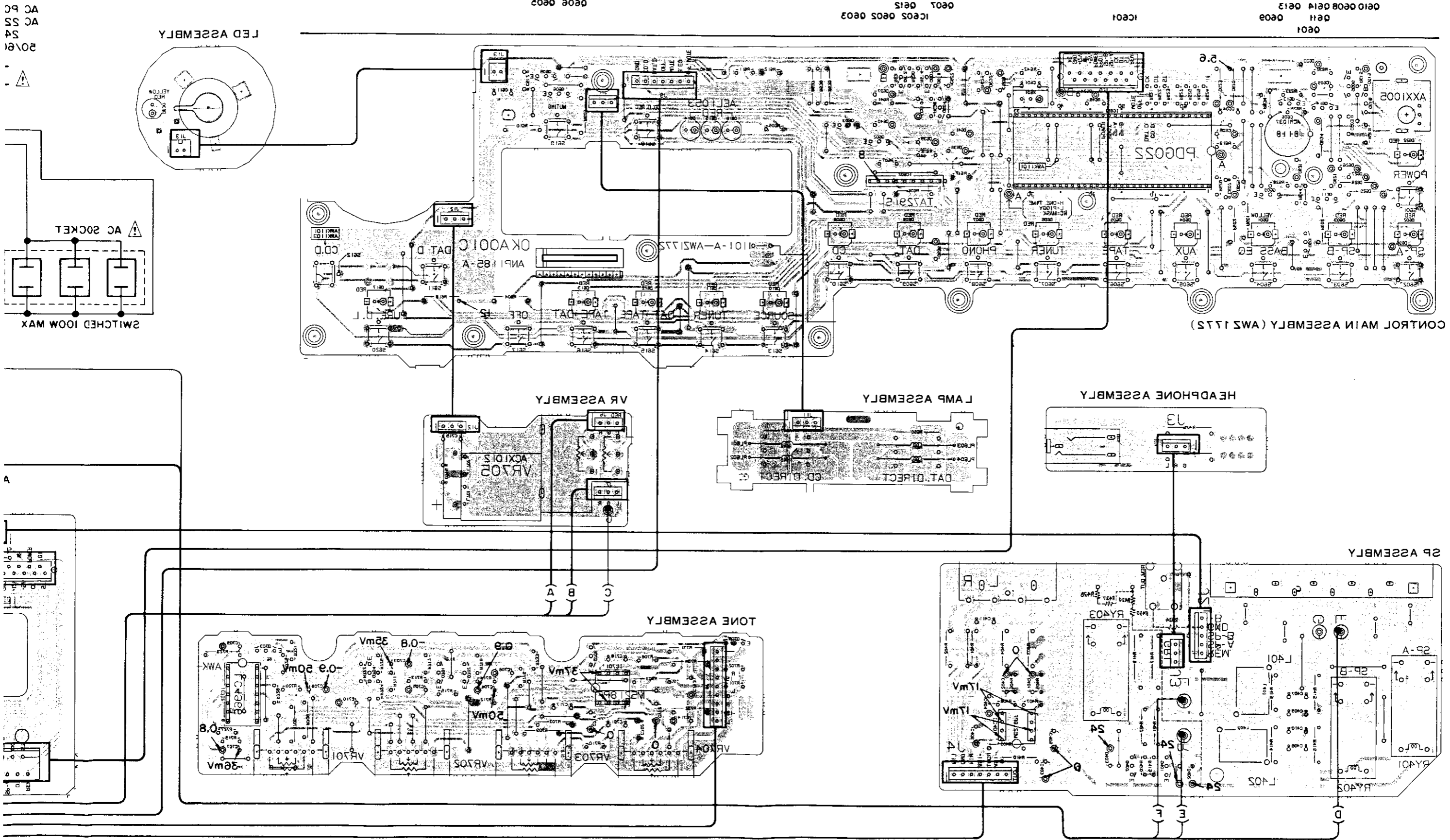
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11

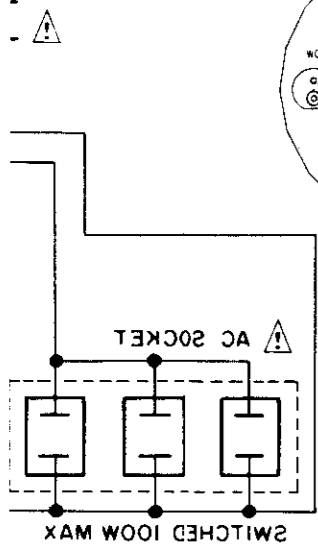
12

14

NOTE:
This picture shows the foil side of the
printed circuit.



20V 61
S4
AC SS
AC PC



A

D

6

5

4

3

2

1

6

5

4

3

2

1

A

B

C

D

0000 0002

0003 0005 0003 0001

0001 0003 0001 0008 0014 0013

CONTROL MAIN ASSEMBLY (AW3 173)

VR ASSEMBLY

LAMP ASSEMBLY

HEADPHONE ASSEMBLY

TONE ASSEMBLY

SP ASSEMBLY

AXX1005

POWER

P00055

VR705

CD DIRECT

3

VR705

SP-A

SP-B

SP-C

SP-D

SP-E

SP-F

SP-G

SP-H

SP-I

SP-J

SP-K

SP-L

SP-M

SP-N

SP-O

SP-P

SP-Q

SP-R

SP-S

SP-T

SP-U

SP-V

SP-W

SP-X

SP-Y

SP-Z

SP-AA

SP-AB

SP-AC

SP-AD

SP-AE

SP-AF

SP-AG

SP-AH

SP-AI

SP-AJ

SP-AK

SP-AL

SP-AM

SP-AN

SP-AO

SP-AP

SP-AQ

SP-AR

SP-AS

SP-AT

SP-AU

SP-AV

SP-AW

SP-AX

SP-AY

SP-AZ

SP-BA

SP-BB

SP-BC

SP-BD

SP-BE

SP-BF

SP-BG

SP-BH

SP-BI

SP-BJ

SP-BK

SP-BL

SP-BM

SP-BN

SP-BO

SP-BP

SP-BQ

SP-BR

SP-BS

SP-BT

SP-BU

SP-BV

SP-BW

SP-BX

SP-BY

SP-BZ

SP-CA

SP-CB

SP-CC

SP-CD

SP-CE

SP-CF

SP-CG

SP-CH

SP-CI

SP-CJ

SP-CK

SP-CL

SP-CM

SP-CN

SP-CO

SP-CP

SP-CQ

SP-CR

SP-CS

SP-CT

SP-CU

SP-CV

SP-CW

SP-CX

SP-CY

SP-CZ

SP-DA

SP-DB

SP-DC

SP-DD

SP-DE

SP-DF

SP-DG

SP-DH

SP-DI

SP-DJ

SP-DK

SP-DL

SP-DM

SP-DN

SP-DO

SP-DP

SP-DQ

SP-DR

SP-DS

SP-DT

SP-DU

SP-DV

SP-DW

SP-DX

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SP-EF

SP-EG

SP-EH

SP-EI

SP-EJ

SP-EK

SP-EL

SP-EM

SP-EN

SP-EO

SP-EP

SP-EQ

SP-ER

SP-ES

SP-ET

SP-EU

SP-EV

SP-EW

SP-EX

SP-EY

SP-EZ

SP-FA

SP-FB

SP-FC

SP-FD

SP-FE

SP-FF

SP-FG

SP-FH

SP-FI

SP-FJ

SP-FK

SP-FL

SP-FM

SP-FN

SP-FO

SP-FP

SP-FQ

SP-FR

SP-FS

SP-FT

SP-FU

SP-FV

SP-FW

SP-FX

SP-FY

SP-FZ

SP-GA

SP-GB

SP-GC

SP-GD

SP-GE

SP-GF

SP-GG

SP-GH

SP-GI

SP-GJ

SP-GK

SP-GL

SP-GM

SP-GN

SP-GO

SP-GP

SP-GQ

SP-GR

SP-GS

SP-GT

SP-GU

SP-GV

SP-GW

SP-GX

SP-GY

SP-GZ

SP-HA

SP-HB

SP-HC

SP-HD

SP-HE

SP-HF

SP-HG

SP-HH

SP-HI

SP-HJ

SP-HK

SP-HL

SP-HM

SP-HN

SP-HO

SP-HP

SP-HQ

SP-HR

SP-HS

SP-HT

SP-HU

SP-HV

SP-HW

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SP-IR

SP-IS

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SP-IU

SP-IV

SP-IW

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SP-IZ

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SP-JO

SP-JP

SP-JQ

SP-JR

SP-JS

SP-JT

SP-JU

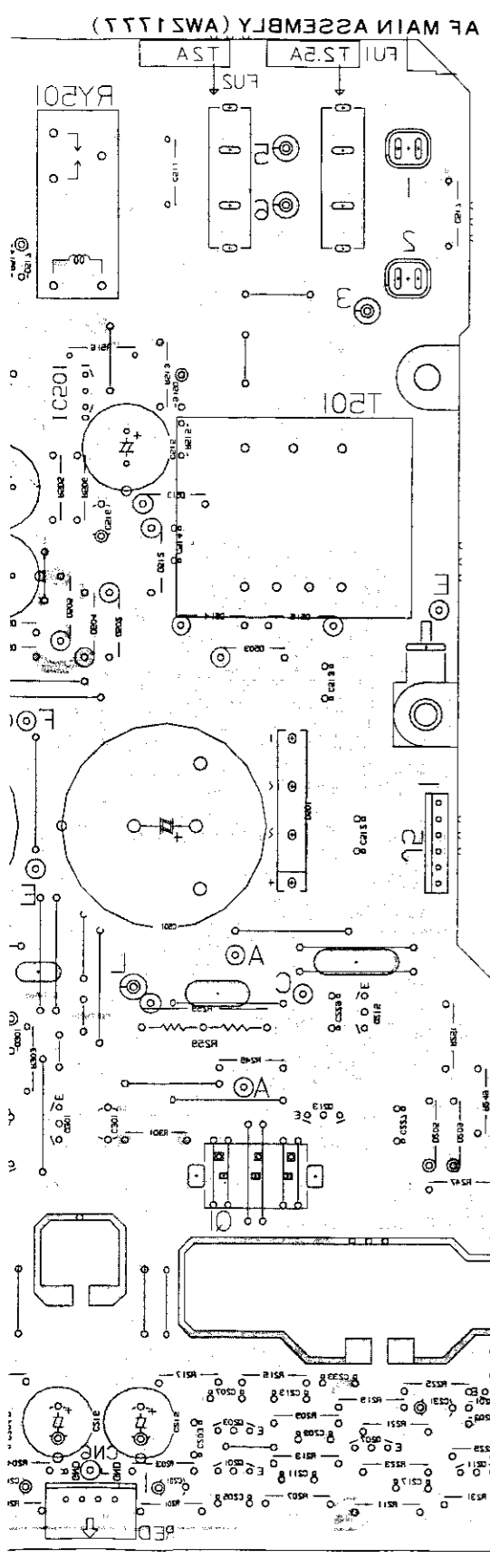
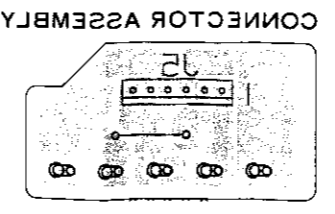
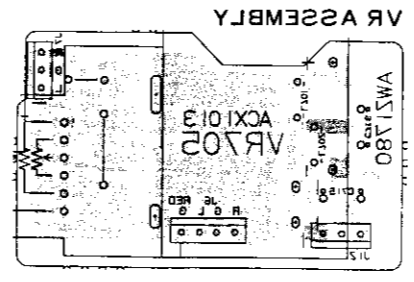
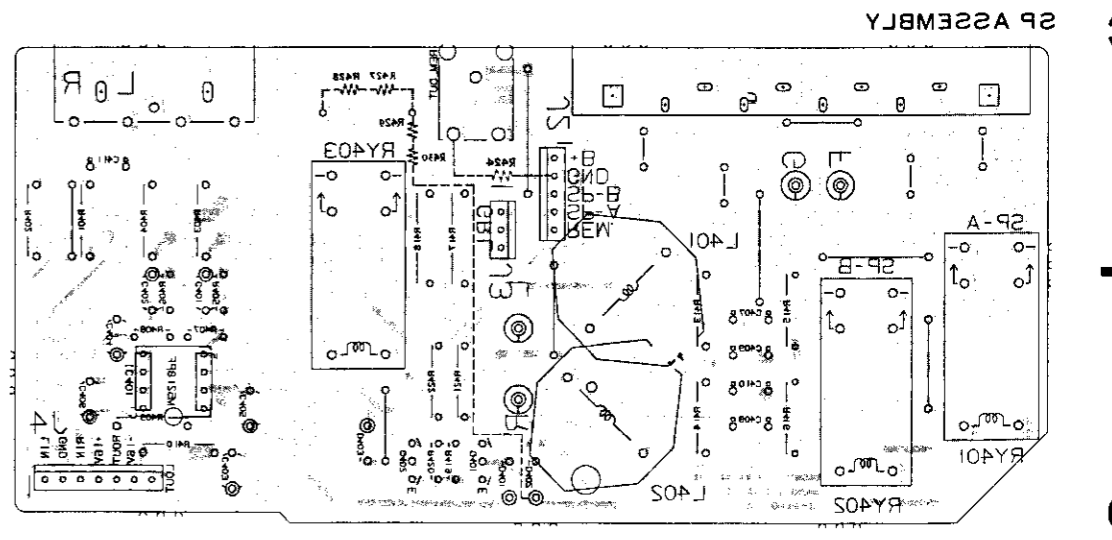
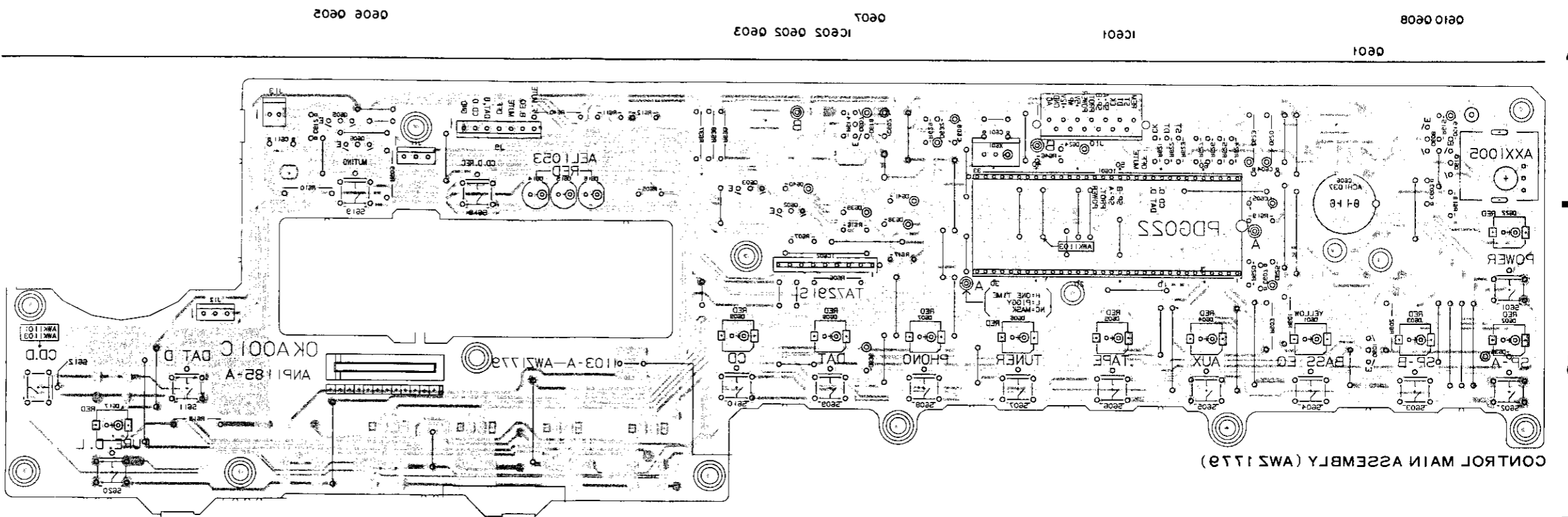
SP-JV

SP-JW

SP-JX

A
B
C
D

NOTE:
This picture shows the foil side of the
printed circuit.



IC201 0201-
0301 031
0501 0502 0511
0503 0504
0512 0513
0301 031

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A

B

C

D

Q610 Q608

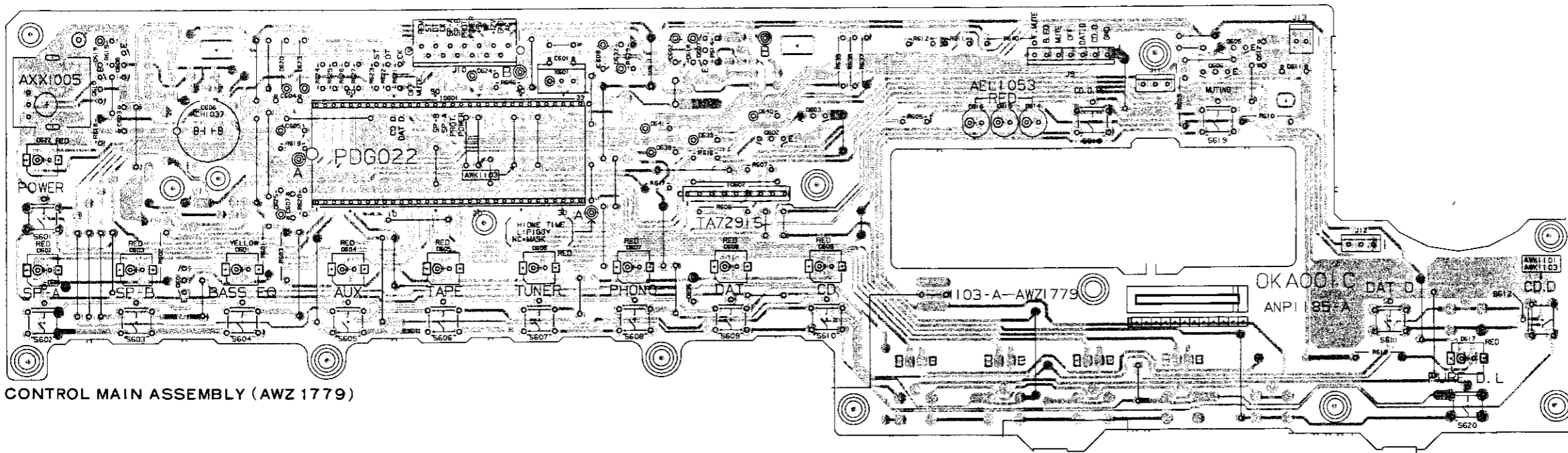
Q601

IC601

Q607

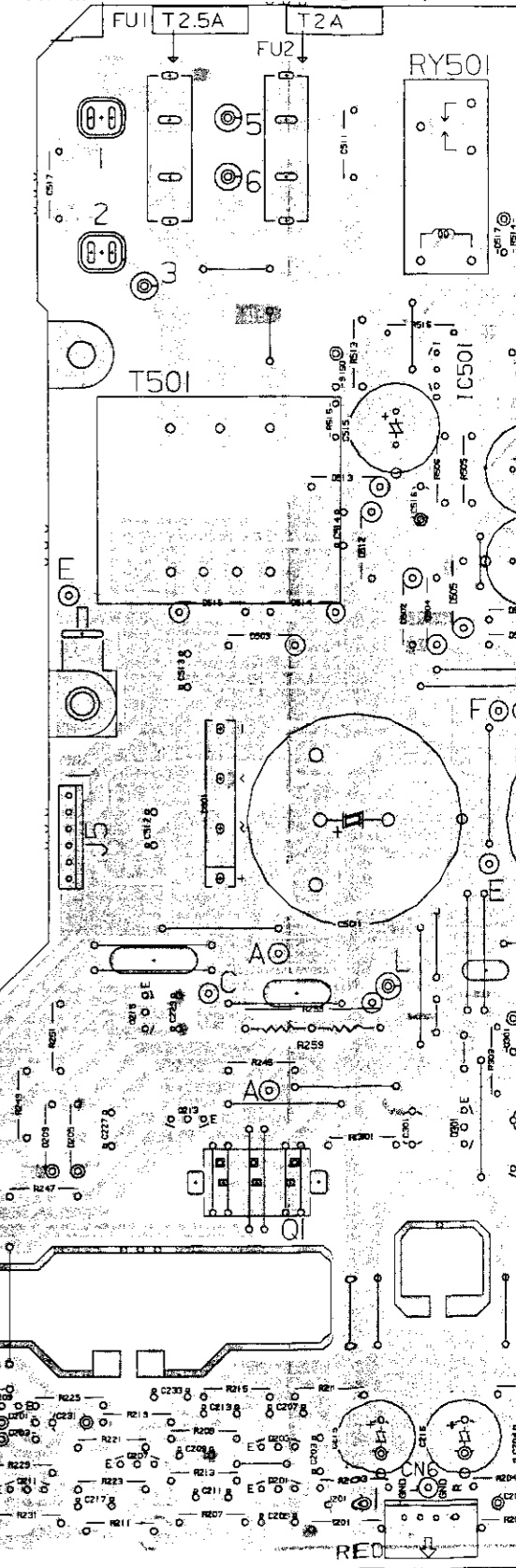
IC602 Q602 Q603

Q606 Q605

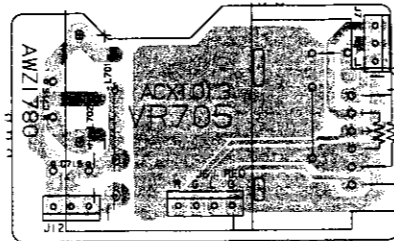


CONTROL MAIN ASSEMBLY (AWZ 1779)

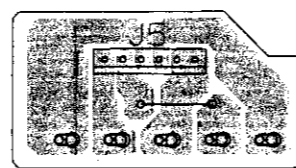
AF MAIN ASSEMBLY (AWZ 1777)



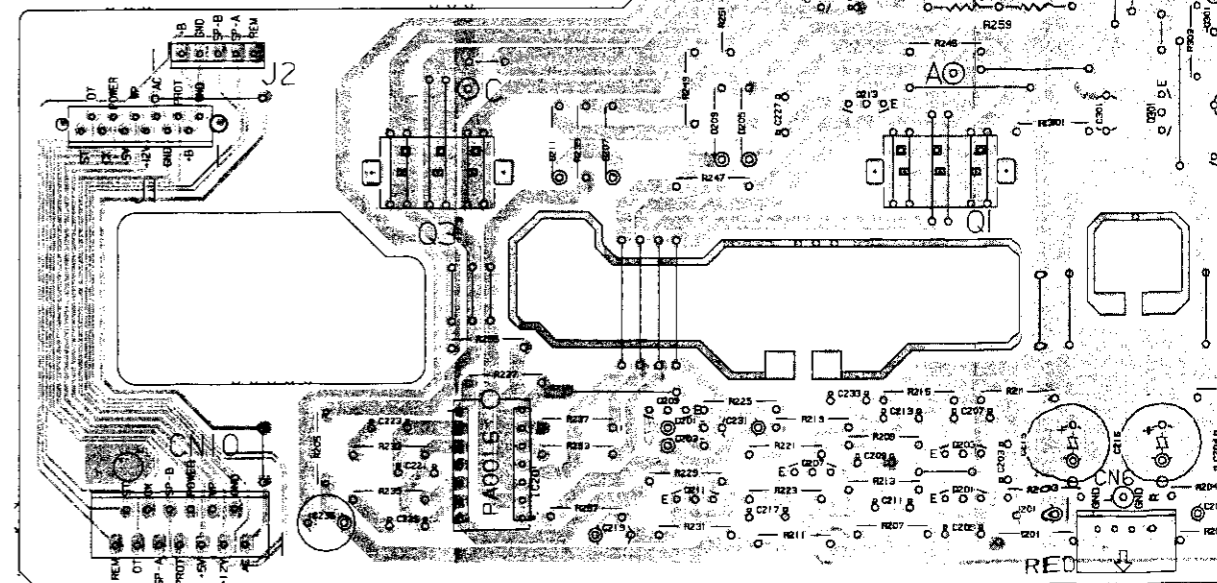
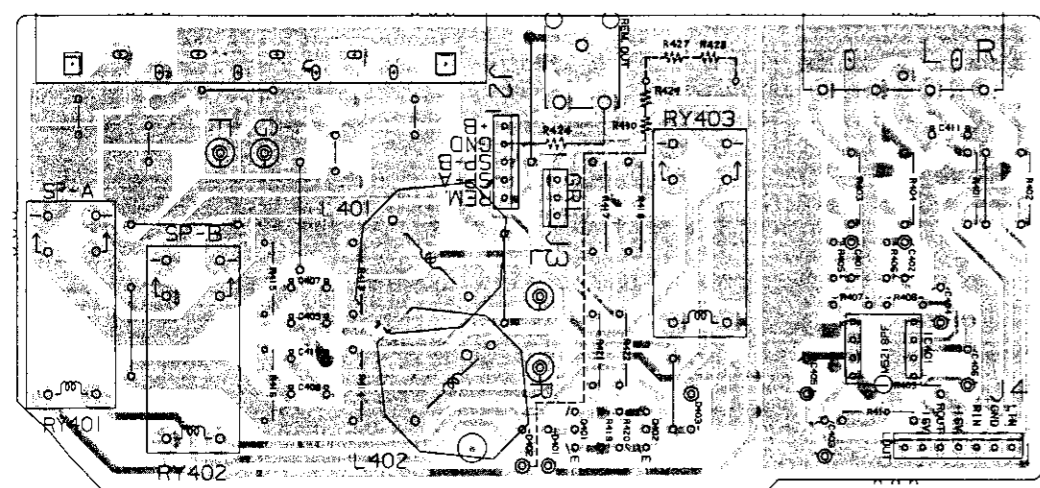
VR ASSEMBLY



CONNECTOR ASSEMBLY



SP ASSEMBLY



IC201 Q209 Q211

Q207

Q215 Q213

Q203 Q201

IC501 Q501-
Q301 Q30

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A

B

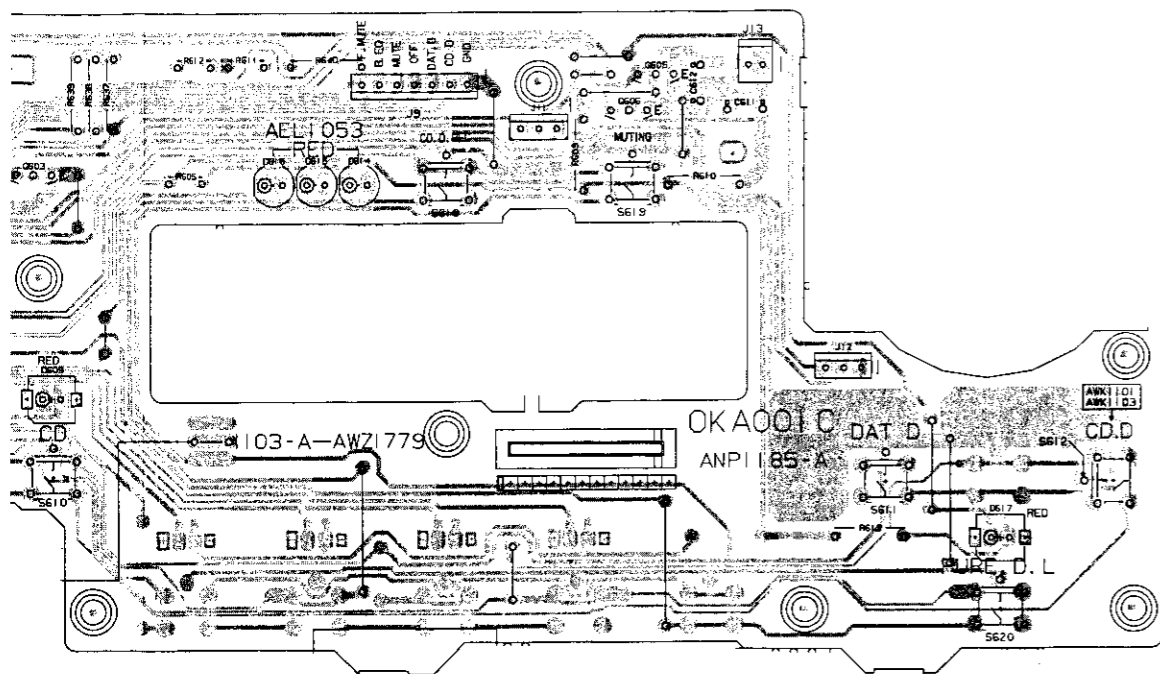
C

D

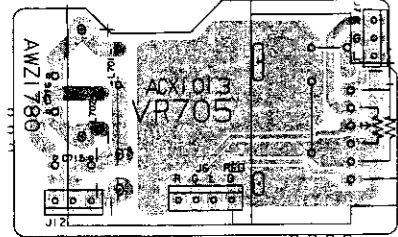
AF MAIN ASSEMBLY (AWZ 1777)

Q603

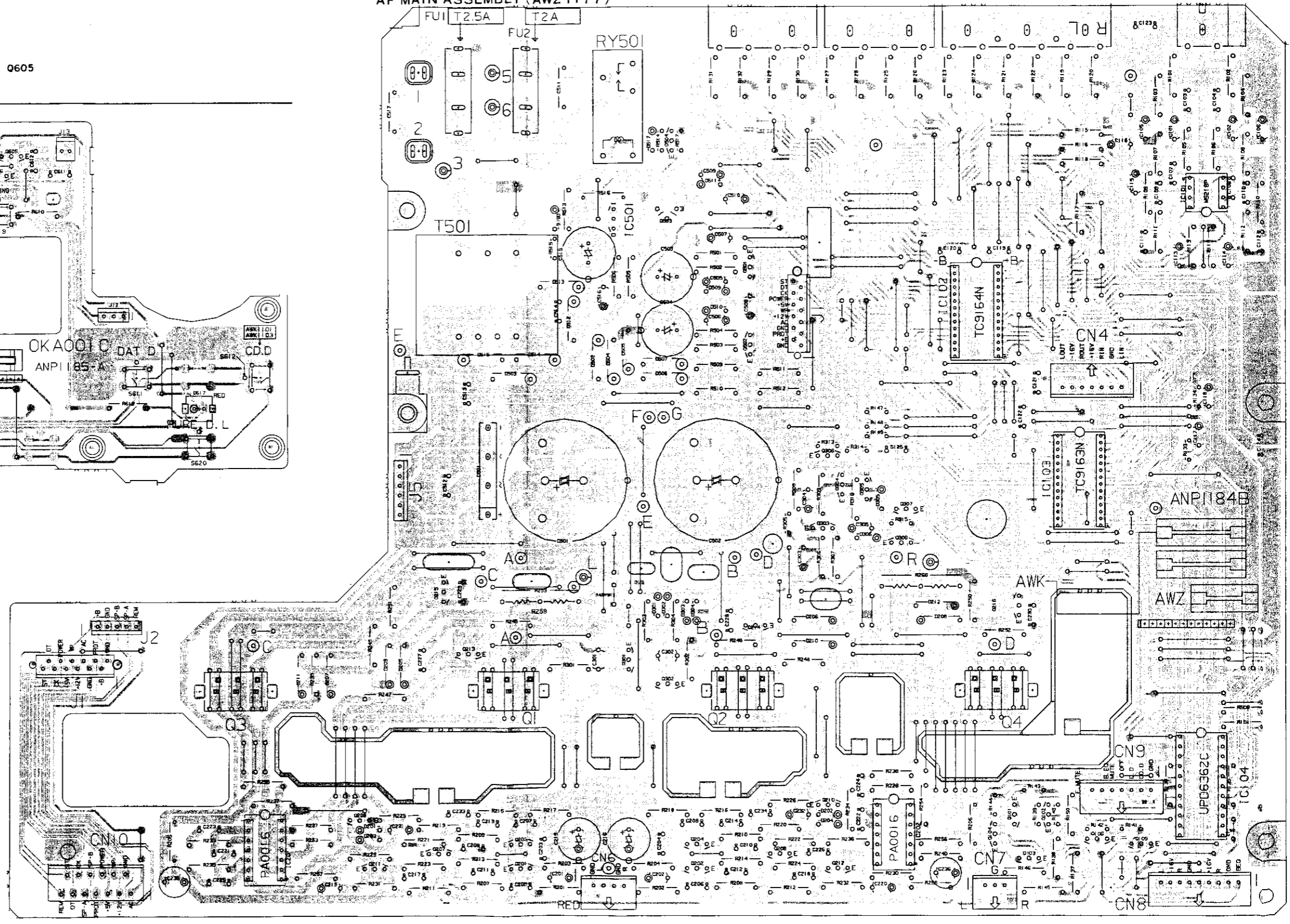
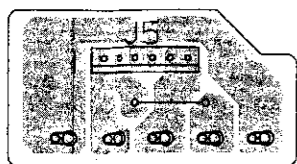
Q606 Q605



VR ASSEMBLY



CONNECTOR ASSEMBLY



4

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AF main assembly (AWZ1777)

| | |
|--|-------------------|
| Q3,Q4 Transistor | 2SA1264N |
| Q1,Q2 Transistor | 2SC3181N |
| IC101 | M5218P |
| IC501 | M5278L56 |
| IC201,IC202 | PA0016 |
| IC103 | TC9163N |
| IC102 | TC9164N |
| IC104 | μ PD6362C |
| Q308 | RN1201 (DTC143ES) |
| Q303 | RN2203 (DTA124ES) |
| Q105,Q108 | 2SA1048 |
| Q215,Q216 | 2SAE 5 |
| Q201-Q204,Q209, Q210 | 2SA992 |
| Q306,Q502 | 2SB560 |
| Q213,Q214 | 2SC2235 |
| Q207,Q208,Q211,Q212,Q301, Q302,Q307,Q504 | 2SC2240 |
| Q304,Q305 | 2SC2458 |
| Q101-Q104 | 2SC2878 |
| Q501 | 2SD438 |
| Q503 | 2SD880 |
| D207,D208 | HZS4BLL |
| D205,D206 | HZS5BLL |
| D501 | RBV402 |
| D305 | RD13ESB |
| D511 | RD13ESB1 |
| D509,D510 | RD16ESB3 |
| D306 | RD5.6ESB |
| D502-D507,D512-D515 | S5566 (11E2) |
| D201-D204,D209-D212, D301-D304,D516,D517 | 1SS252 |

1. RESISTORS:
Indicated in Ω , $\frac{1}{2}W$, $\frac{1}{4}W$, $\frac{1}{8}W$; $\pm 5\%$ tolerance unless otherwise noted k:k Ω , M: M Ω , (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$ (M): $\pm 20\%$ tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p: pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
 : Signal voltage at 62 W+ 62 W, B, output (1 kHz)
 : DC voltage (V) at no input signal
 Value in () is DC voltage at rated power.
 : DC current at no input signal

4. OTHERS:
 : Signal route.
 : Adjusting point.
 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.
 * marked capacitors and resistors have parts numbers.

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

5. SWITCH

| | |
|------------|---------------|
| S601 POWER | S609 DAT |
| S602 SP-A | S610 CD |
| S603 SP-B | S611 DAT.D |
| S604 B.EQ | S612 CD.D |
| S605 AUX | S618 CD.D REC |
| S606 TAPE | S619 MUT |
| S607 TUNER | S620 P.D.L |
| S608 PHONO | |

Control main assembly (AWZ1779)

| | |
|-------------------------------------|-------------------|
| IC601 | PDG022 |
| IC602 | TA7291S |
| Q601,Q605,Q606,Q608 | RN1201 (DTC143ES) |
| Q610 | RN2201 (DTA143ES) |
| Q602,Q603 | 2SC2235 |
| Q607 | 2SC2458 |
| D614-D616 | AEL1053 |
| D602-D609,D617,D622 | AEL1072 |
| D601 | AEL1073 |
| D635,D636 | RD3.0ESB |
| D625 | RD4.7ESB2 |
| D618-D620,D623,D624,D632, D638-D641 | 1SS252 |

SP assembly

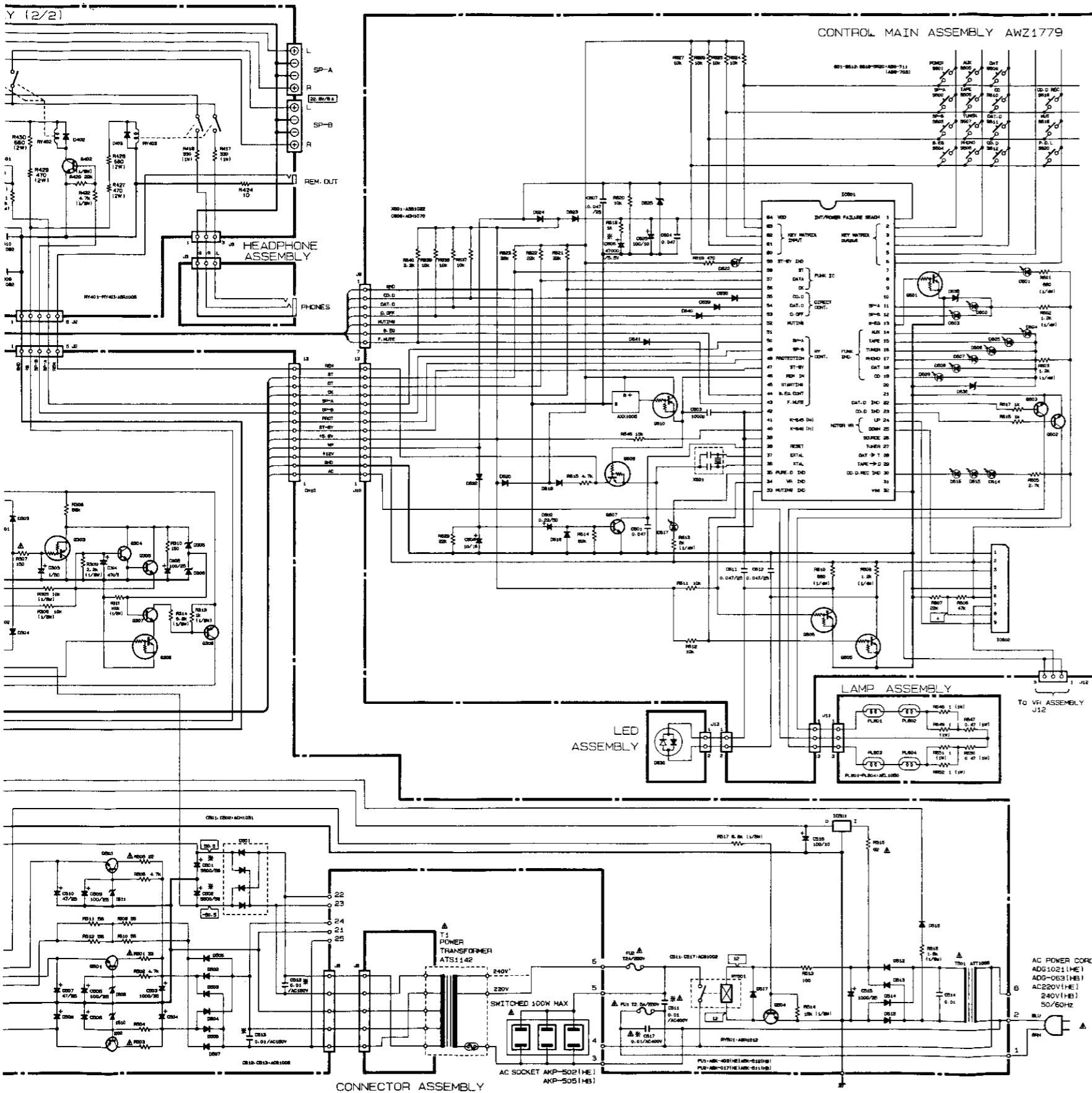
| | |
|-----------|---------|
| IC401 | M5218PF |
| Q401,Q402 | 2SC2240 |
| D401-D403 | 1SS252 |

TONE assembly

| | |
|-----------|-------------------|
| IC702 | LC4966 |
| IC701 | M5218PF |
| Q705 | RN1201 (DTC143ES) |
| Q706 | RN2201 (DTA143ES) |
| Q701-Q704 | 2SC1740SLN |

LED assembly

| | |
|----------|---------|
| D630 LED | AEL1071 |
|----------|---------|



A

B

C

D

A

B

C

D

1

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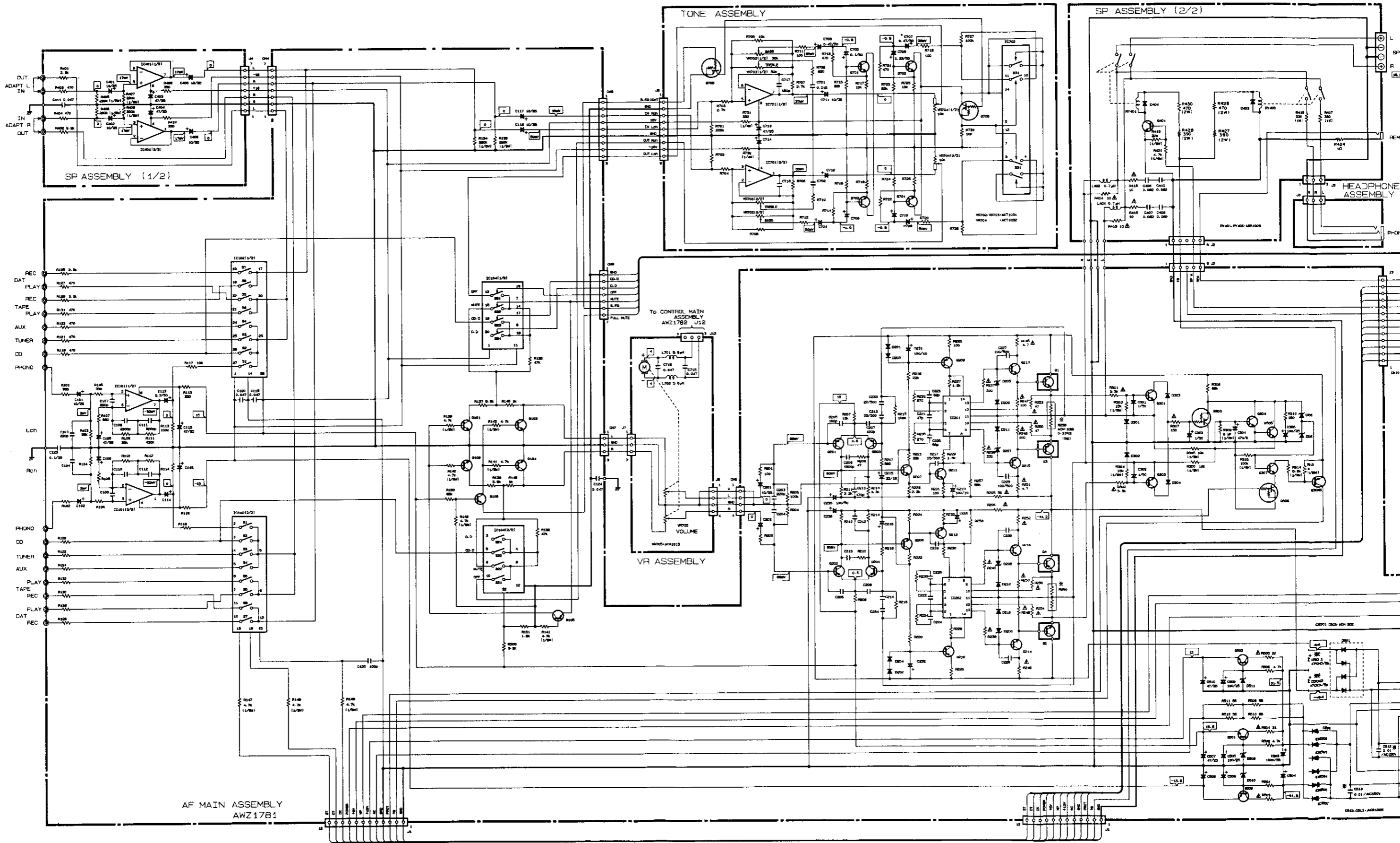
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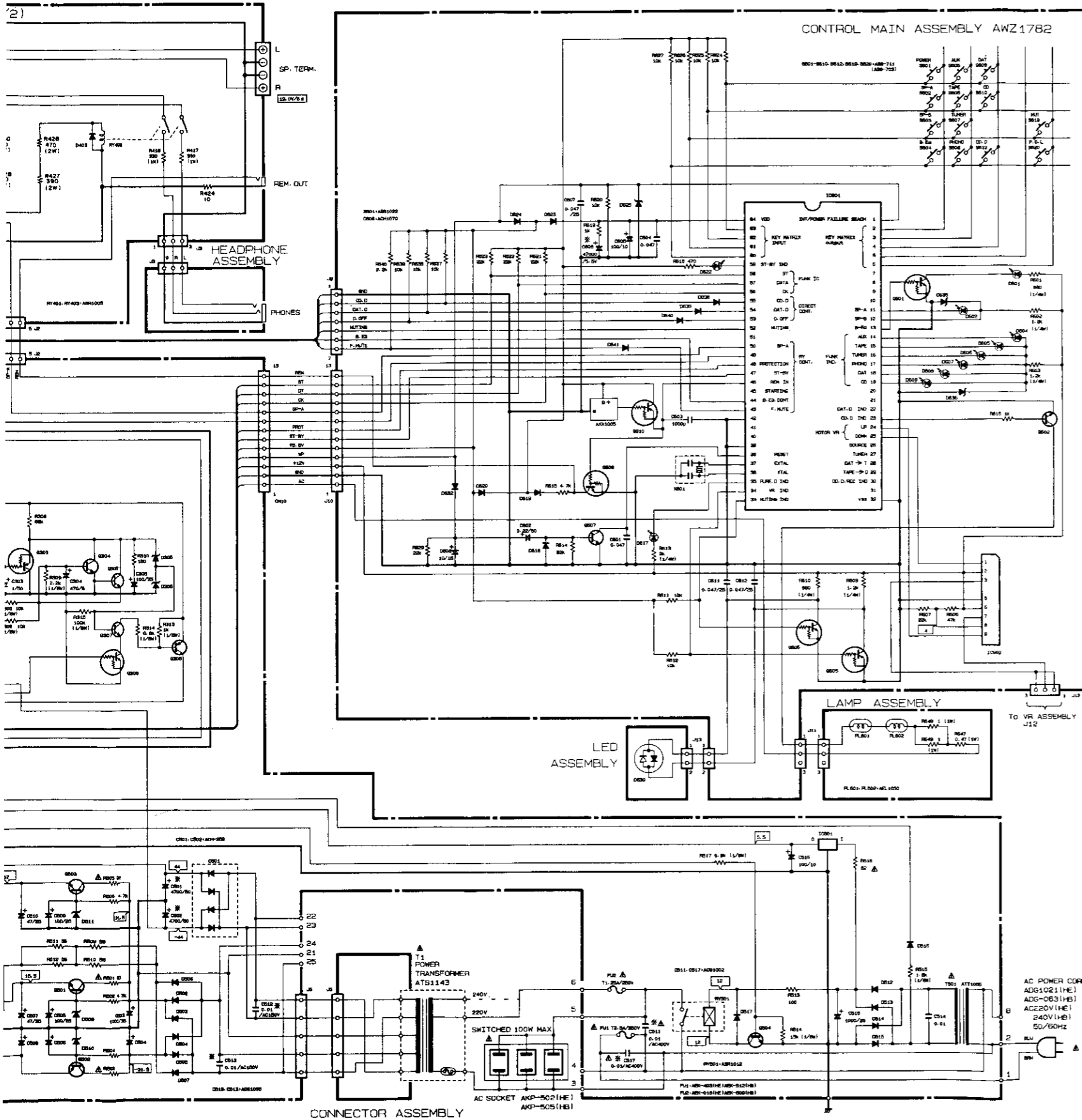
3

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AF main assembly (AWZ1781)

| | |
|---|-------------------|
| Q3,Q4 Transistor | 2SA1263N |
| Q1,Q2 Transistor | 2SC3180N |
| IC101 | M5218P |
| IC501 | M5278L56 |
| IC201,IC202 | PA0016 |
| IC102 | TC9164N |
| IC104 | μPD6362C |
| Q308 | RN1201 (DTC143ES) |
| Q303 | RN2203 (DTA124ES) |
| Q105,Q106 | 2SA1048 |
| Q215,Q216 | 2SA965 |
| Q201,Q202,Q203,Q204,Q209,Q210 | 2SA992 |
| Q306,Q502 | 2SB560 |
| Q213,Q214 | 2SC2235 |
| Q207,Q208,Q211,Q212,Q301,Q302,Q307,Q504 | 2SC2240 |
| Q304,Q305 | 2SC2458 |
| Q101 - Q104 | 2SC2878 |
| Q501 | 2SD438 |
| Q503 | 2SD880 |
| D207,D208 | HZS4BLL |
| D205,D206 | HZS5BLL |
| D501 | RBV402 |
| D305 | RD13ESB |
| D611 | RD13ESB1 |
| D509,D510 | RD16ESB3 |
| D306 | RD5.6ESB |
| D502 - D507,D512 - D515 | 5S566 (11E2) |
| D201 - D204,D209 - D212,D301 - D304,D516,D517 | 1SS252 |

Control main assembly (AWZ1782)

| | |
|--|-------------------|
| IC601 | PDG022 |
| IC602 | TA7291S |
| Q601,Q605,Q606,Q608 | RN1201 (DTC143ES) |
| Q610 | RN2201 (DTA143ES) |
| Q602 | 2SC2235 |
| Q607 | 2SC2458 |
| D602,D604,D605 - D609,D617,D622 | AEL1072 |
| D601 | AEL1073 |
| D635,D636 | RD3.0ESB |
| D625 | RD4.7ESB2 |
| D618 - D620,D623,D624,D632,D638 - D641 | 1SS252 |

- RESISTORS:**
Indicated in Ω, ¼W, ½W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M) : ±20% tolerance
- CAPACITORS:**
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF Indication without voltage is 50V except electrolytic capacitor.
- VOLTAGE, CURRENT:**
 - ⏏ : Signal voltage at 45 W+ 45 W, 8Ω 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 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.
* marked capacitors and resistors have parts numbers.

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

5. SWITCH

| | |
|------------|--------------|
| S601 POWER | S608 P110N0 |
| S602 SP-A | S609 DAT |
| S603 SP-B | S610 CD |
| S604 B, EQ | S612 CD, D |
| S605 AUX | S619 MUT |
| S606 TAPE | S620 P, D, L |
| S607 TUNER | |

SP assembly

| | |
|-----------|---------|
| IC401 | M5218PF |
| Q401 | 2SC2240 |
| D401,D403 | 1SS252 |

TONE assembly

| | |
|-------------|-------------------|
| IC702 | LC4966 |
| IC701 | M5218PF |
| Q705 | RN1201 (DTC143ES) |
| Q706 | RN2201 (DTA143ES) |
| Q701 - Q704 | 2SC1740SLN |

LED assembly

| | |
|----------|---------|
| D630 LED | AEL1071 |
|----------|---------|

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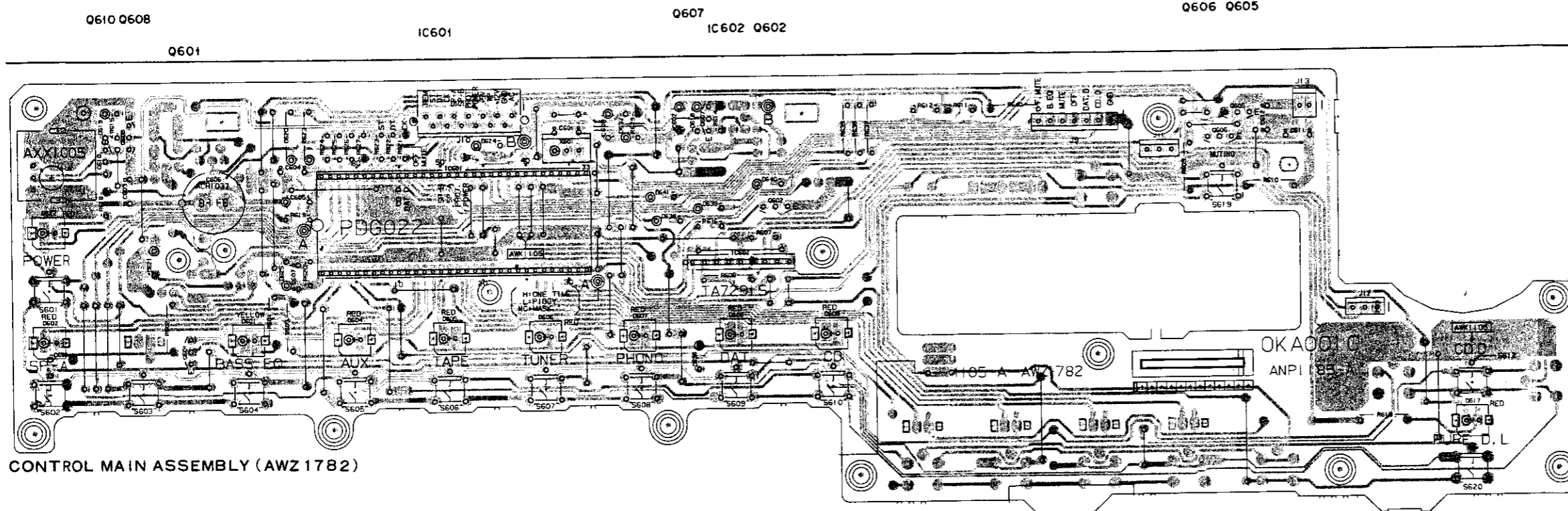
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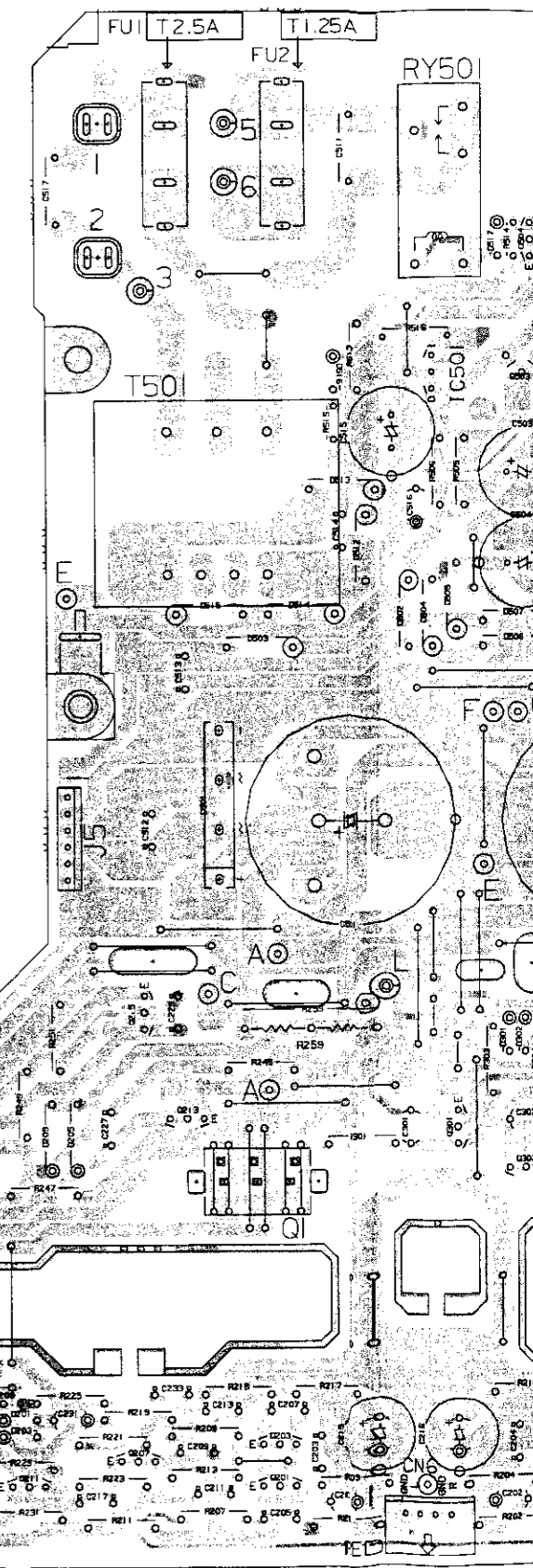
7

AF MAIN ASSEMBLY (AWZ 1781)

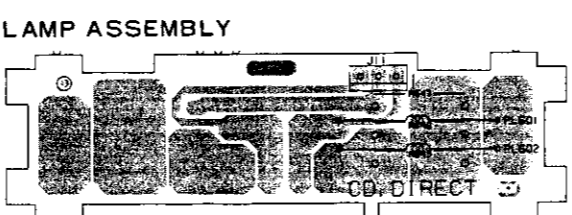
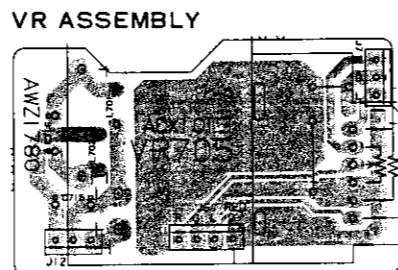
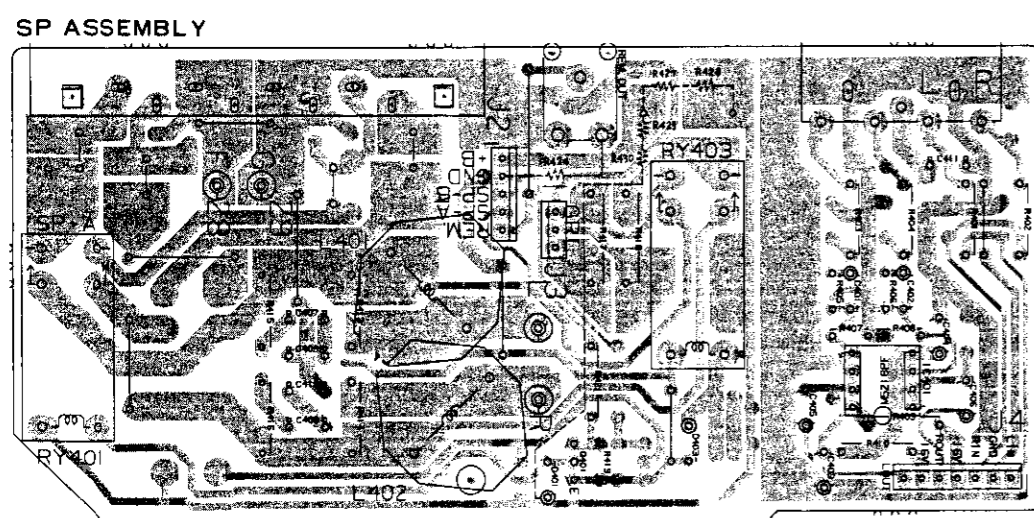
A



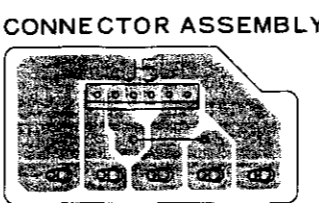
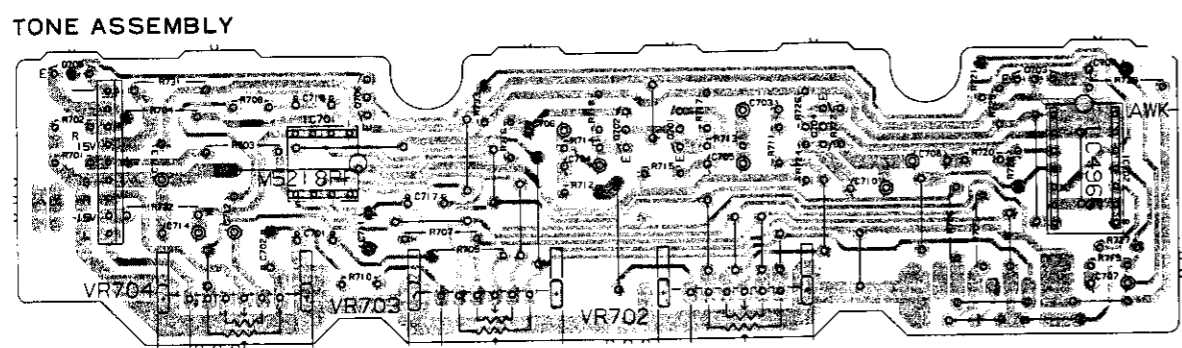
B



C



D



IC201 Q209 Q211 Q207 Q215 Q213 Q203 Q201 IC501 Q501-Q505 Q301 Q302

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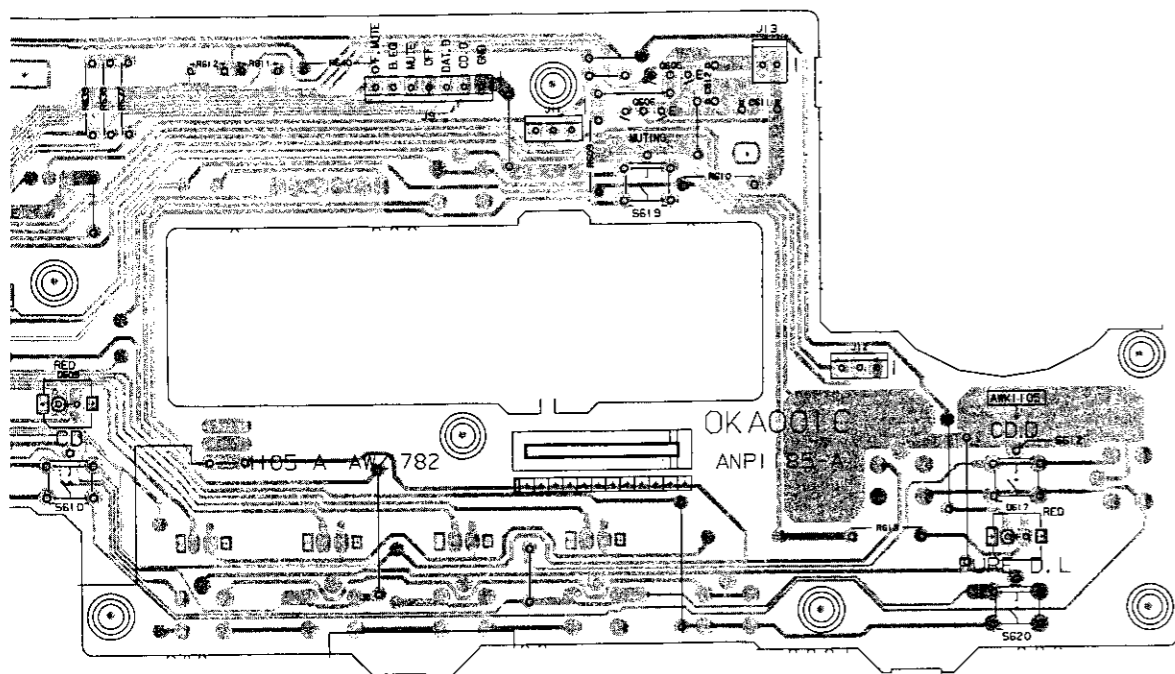
7

8

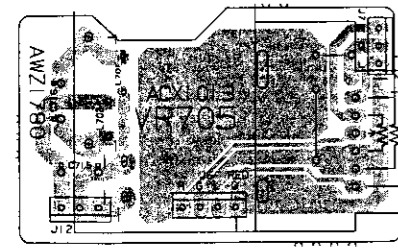
9

AF MAIN ASSEMBLY (AWZ 1781)

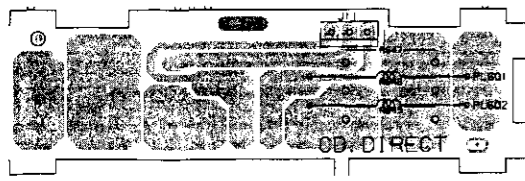
Q606 Q605



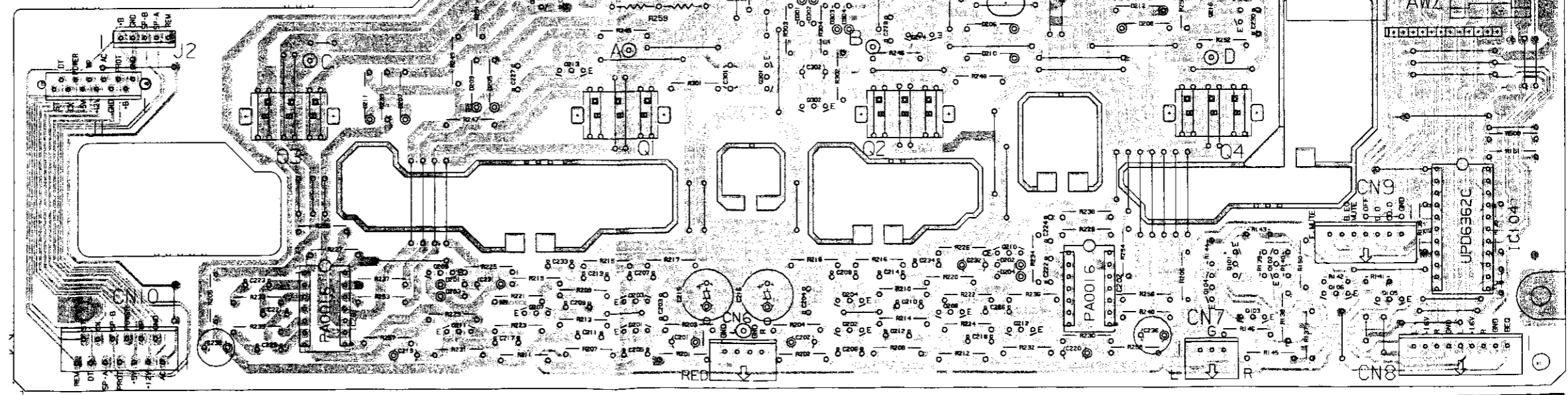
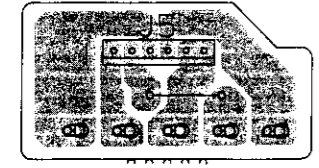
VR ASSEMBLY



MP ASSEMBLY



CONNECTOR ASSEMBLY



IC201 Q209 Q211 Q207 Q215 Q213 Q203 Q201 Q301 Q302 Q202 Q204 Q208 Q210 Q212 IC202 Q101 - Q106 IC101 IC102 Q216 IC104

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AF MAIN ASSEMBLY (AWS 1781)

NOTE:
This picture shows the foil side of the
printed circuit.

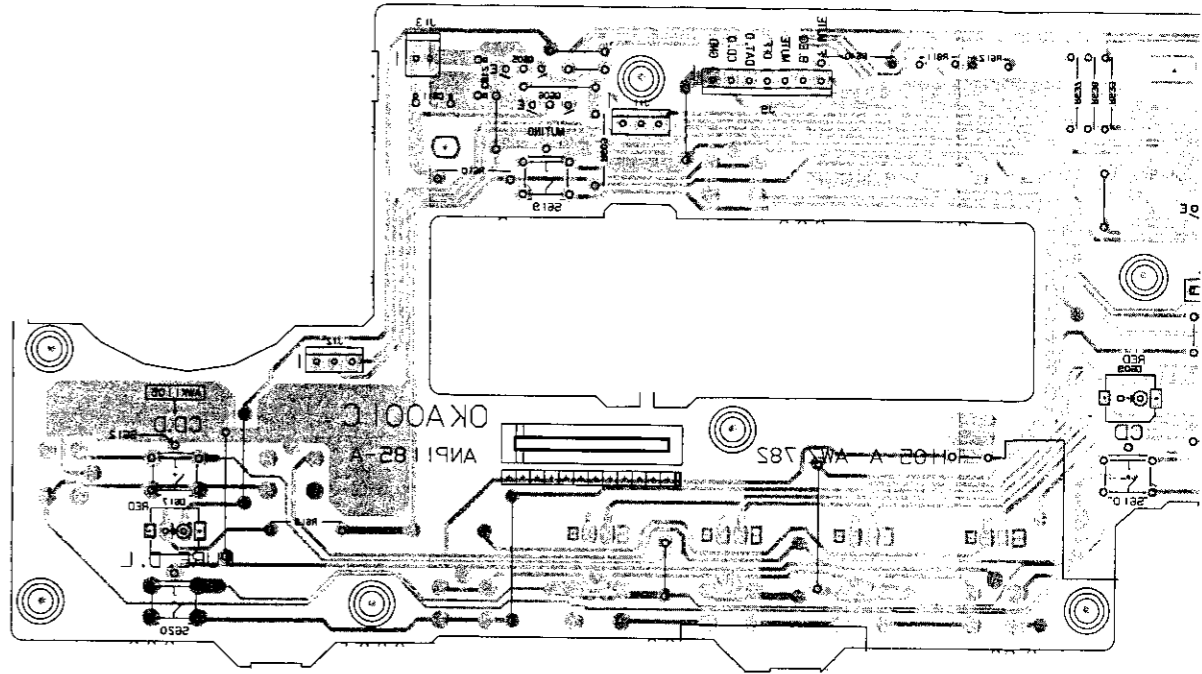
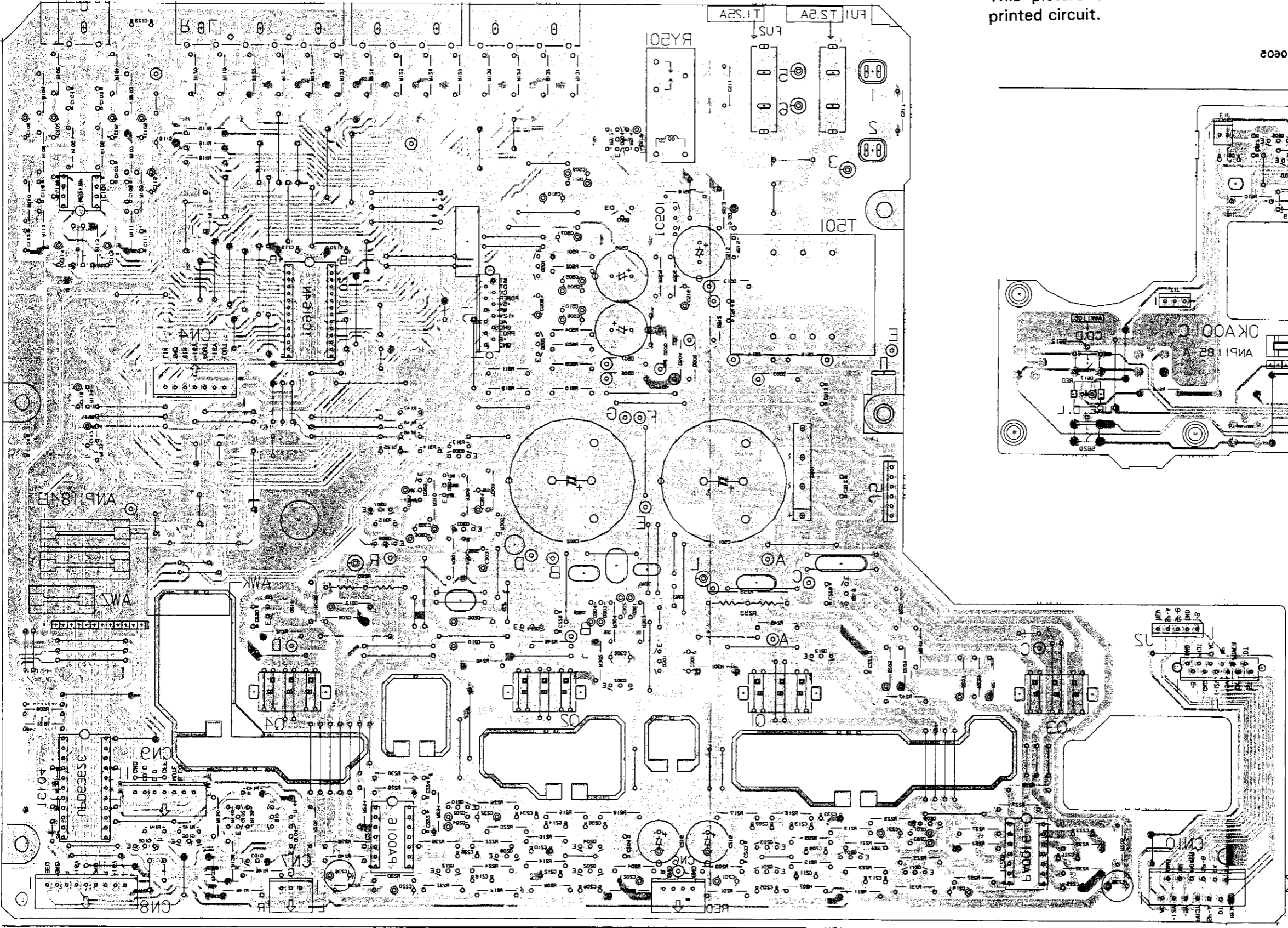
0000 0002

A

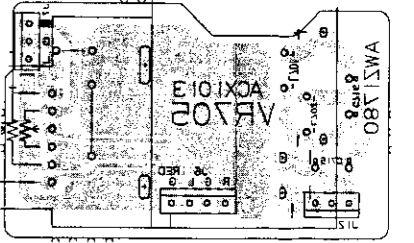
B

C

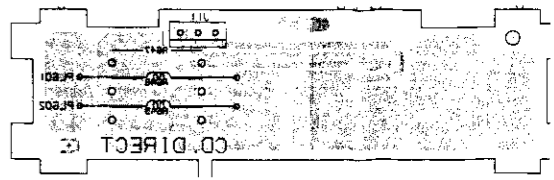
D



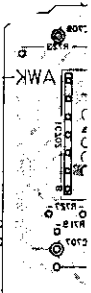
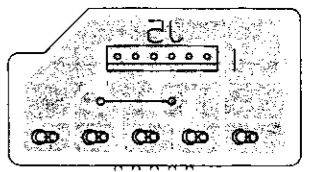
VR ASSEMBLY



AMP ASSEMBLY



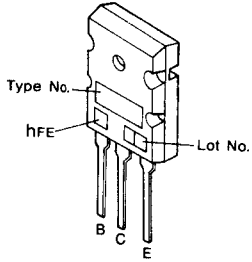
CONNECTOR ASSEMBLY



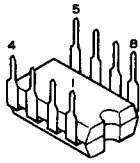
- IC501 0502 0511
- 0503 0501
- 0504
- 0512 0513
- 0505 0504 0508 0510 0515 0505
- 0514
- 0303-0308
- 0510-0106
- 0516
- IC104
- IC101

External Appearances of Transistor and ICs

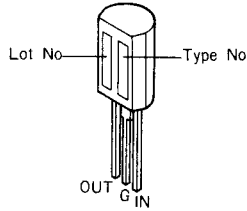
**2SA1302
2SC3281**



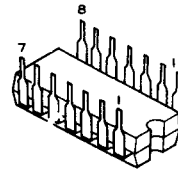
**M5218P
M5218PF**



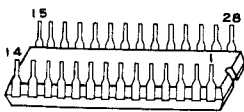
M5278L56



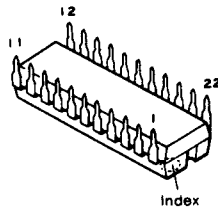
**PA0016
LC4966**



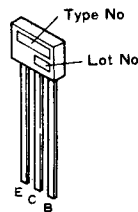
**TC9163N
TC9164N**



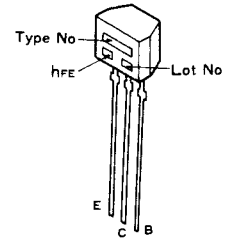
μ PD6362C



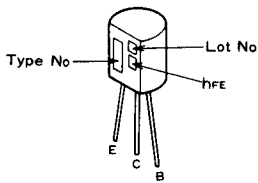
**RN1201
RN2203
RN2201**



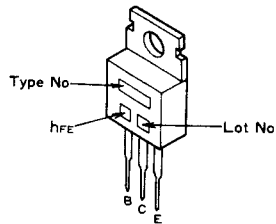
**2SA1048
2SC2458**



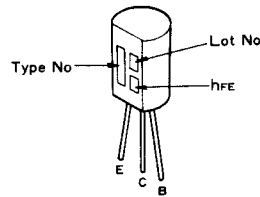
**2SA1145
2SC2240
2SC2878
2SC2705**



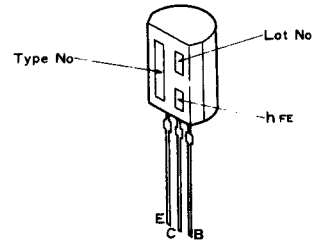
**2SA968
2SD880
2SC2238**



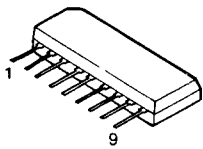
**2SA992
2SC1845**



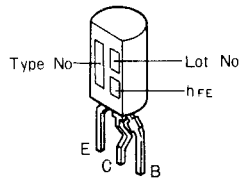
**2SB560
2SD438**



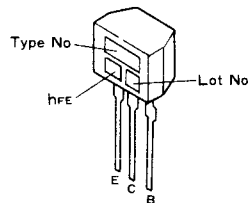
TA7291S



**2SC2235
2SA965**



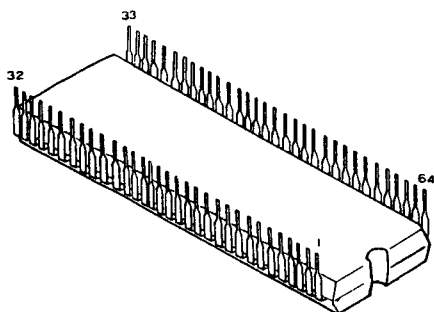
2SC1740SLN



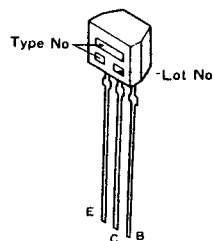
**2SA1263N
2SC3180N
2SA1264N
2SC3181N**



PDG022



**DTA143ES
DTC143ES
DTA124ES**



4. ELECTRICAL PARTS LIST

NOTES:

- Parts 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 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.
- For your parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.

★★ GENERALLY MOVES FASTER THAN ★

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

- 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%).

| | | | | | | | |
|--------------|------------------|----------|---------|-----------|-----------|-----------|---|
| 560 Ω | 56 $\times 10^1$ | 561..... | RD1/4PS | \square | \square | \square | J |
| 47k Ω | 47 $\times 10^3$ | 473..... | RD1/4PS | \square | \square | \square | J |
| 0.5 Ω | 0R5..... | | RN2H | \square | \square | \square | K |
| 1 Ω | 010..... | | RS1P | \square | \square | \square | K |

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

| | | | | | | | |
|----------------|-------------------|-----------|---------|-----------|-----------|-----------|---|
| 5.62k Ω | 562 $\times 10^1$ | 5621..... | RN1/4SR | \square | \square | \square | F |
|----------------|-------------------|-----------|---------|-----------|-----------|-----------|---|

4.1 A - X540

Miscellaneous Parts List

P.C. BOARD ASSEMBLIES

| Mark | Symbol & Description | Part No. | Mark | Symbol & Description | Part No. |
|------|-----------------------|----------|------|----------------------|---------------|
| | AF main assembly | AWZ1770 | ★★ | IC104 | μ PD6362C |
| | Control main assembly | AWZ1772 | ★★ | Q308 | RN1201 |
| | SP assembly | | | | (DTC143ES) |
| | HEADPHONE assembly | | ★★ | Q303 | RN2203 |
| | TONE assembly | | | | (DTA124ES) |
| | LAMP assembly | | ★★ | Q105,Q106 | 2SA1048 |
| | VR assembly | | ★★ | Q209,Q210 | 2SA1145 |
| | LED assembly | | ★★ | Q215,Q216 | 2SA968 |

OTHERS

| Mark | Symbol & Description | Part No. | Mark | Symbol & Description | Part No. |
|-------------|----------------------------------|----------|------|----------------------|----------|
| ★★ | Q3,Q4 Transistor | 2SA1302 | ★★ | Q201 - Q204 | 2SA992 |
| ★★ | Q1,Q2 Transistor | 2SC3281 | ★★ | Q306,Q502 | 2SB560 |
| Δ ★ | T1 Power transformer (220V/240V) | ATS1141 | ★★ | Q207,Q208,Q301,Q302 | 2SC1845 |
| | Jumper plug | AKM1019 | ★★ | Q213,Q214 | 2SC2238 |
| Δ | AC socket (3P OUTLET) | AKP-502 | ★★ | Q307,Q504 | 2SC2240 |
| Δ ★★ | FU1,FU2 Fuse (T2.5A/250V) | AEK-403 | ★★ | Q304,Q305 | 2SC2458 |
| Δ | AC power cord | ADG1021 | ★★ | Q211,Q212 | 2SC2705 |
| | Remote control unit | AXD1053 | ★★ | Q101 - Q104 | 2SC2878 |
| | | | ★★ | Q501 | 2SD438 |
| | | | ★★ | Q503 | 2SD880 |
| | | | ★ | D501 | D5SB20F |
| | | | ★ | D207,D208 | HZS5BLL |
| | | | ★ | D205,D206 | HZS5CLL |
| | | | ★ | D305 | RD13ESB |
| | | | ★ | D511 | RD13ESB1 |
| | | | ★ | D509,D510 | RD16ESB3 |

AF main assembly (AWZ1770)

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. | Mark | Symbol & Description | Part No. |
|------|----------------------|----------|------|---|----------|
| ★★ | IC101 | M5218P | ★ | D306 | RD5.6ESB |
| ★★ | IC501 | M5278L56 | ★ | D502 - D507,D512 - D515 | S5566 |
| ★★ | IC201,IC202 | PA0016 | | | (11E2) |
| ★★ | IC103 | TC9163N | ★ | D201 - D204,D209 - D212, D301 - D304,D516,D517 | 1SS252 |
| ★★ | IC102 | TC9164N | | | |

RELAY

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| △★★ | RY501 Relay | ASR-516 |

TRANSFORMER

| Mark | Symbol & Description | Part No. |
|------|------------------------|----------|
| △★ | T501 Power transformer | ATT1066 |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|---|--------------|
| △ | C511 Power capacitor (0.01/AC400V) | ACG1002 |
| | C512, C513 Power capacitors (0.01/AC150V) | ACG1005 |
| | C501, C502 (8200/71) | ACH1074 |
| | C227-C230 | CCCSL101K500 |
| △ | C517 Power capacitor (0.01/AC400V) | ACG1003 |
| | C217, C218 | CCCSL150K500 |
| | C213, C214, C233, C234 | CCCSL220K500 |
| | C103, C104, C107, C108, C203, C204 | CKMYB221K50 |
| | C221, C222 | CCCSL470J50 |
| | C223-C226 | CCCSL680J50 |
| | C125, C205-C208 | CCMSL101J50 |
| | C301, C302 | CEANP010M50 |
| | C303 | CEAS010M50 |
| | C101, C102, C117, C118 | CEAS100M25 |
| | C305, C509, C516 | CEAS101M25 |
| | C515 | CEAS102M25 |
| | C503, C504 | CEAS102M35 |
| | C113, C114 | CEAS2R2M50 |
| | C105, C106, C115, C116, C510 | CEAS470M25 |
| | C304 | CEAS471M6 |
| | C235, C236 | CEXA470M63 |
| | C201, C202 | CEYA100M25 |
| | C215, C216, C231, C232, C505, C506 | CEYA101M25 |
| | C507, C508 | CEYA470M25 |
| | C514 | CKCYB103K50 |
| | C209, C210 | CKCYB182K50 |
| | C211, C212 | CKCYB471K50 |
| | C119-C122, C124 | CKCYF473Z50 |
| | C123 | CKCYX104M25 |
| | C109, C110 | CQMA222J50 |
| | C111, C112 | CQMA822J50 |
| | C219, C220 | CEYA101M16 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|---|---------------|
| | R259, R260 (0.33 × 2/5W) | ACN-139 |
| | R201, R202, R215-R218 | RDR1/4PM□□□J |
| △ | R205, R206, R516 | RD1/4PMFL□□□J |
| △ | R247-R250, R307, R237-R240, R301, R302, R253-R256 | RD1/4PMF□□□J |

| Mark | Symbol & Description | Part No. |
|------|---|--------------|
| | R313, R303-R306, R315, R514, R515, R309, R133, R134, R314, R139-R144, R147-R149, R517 | RD1/8PM□□□J |
| △ | R505, R501, R503, R245, R246, R251, R252 | RFA1/4PS□□□J |

Other resistors

RD1/4PM□□□J

OTHERS

| Mark | Symbol & Description | Part No. |
|------|------------------------------|----------|
| | 4P Pin jack (TAPE) | AKB1007 |
| | 4P Pin jack (DAT) | AKB1051 |
| | 2P Pin jack (PHONO) | AKB1052 |
| | 6P Pin jack (CD, TUNER, AUX) | AKB1053 |
| | Transistor socket | AKH-017 |

Control main assembly (AWZ1772)

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|--|-------------------|
| ★★ | IC601 | PDG022 |
| ★★ | IC602 | TA7291S |
| ★★ | Q601, Q605, Q606, Q608 | RN1201 (DTC143ES) |
| ★★ | Q609-Q611 | RN2201 (DTA143ES) |
| ★★ | Q602, Q603 | 2SC2235 |
| ★★ | Q607, Q612-Q614, Q604 | 2SC2458 |
| ★ | D614-D616 | AEL1053 |
| ★ | D602-D613, D617, D622 | AEL1072 |
| ★ | D601 | AEL1073 |
| ★ | D635, D636 | RD3.0ESB |
| ★ | D625 | RD4.7ESB2 |
| ★ | D618-D621, D623, D624, D626-D629, D631-D634, D637-D641 | 1SS252 |

SWITCHES

| Mark | Symbol & Description | Part No. |
|------|---|-------------------|
| ★★ | S601-S620 Tact switch (POWER, SP-A, SP-B, BASS EQ, AUX, TAPE, TUNER, PHONO, DAT, CD, DAT D, CD D, SOURCE, TUNER, DAT ▶ TAPE, TAPE ▶ DAT, OFF, CD D REC, MUTING, PURE.D.L) | ASG-711 (ASG-703) |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|------------|
| | C606 (47000µF/5.5V) | ACH1037 |
| | C602 | CEJAR22M50 |
| | C609, C608 | CEJA100M16 |
| | C605 | CEJA101M10 |

| Mark | Symbol & Description | Part No. |
|------|----------------------|-------------|
| | C610 | CEJA4R7M50 |
| | C603 | CKDYB102K50 |
| | C601,C604 | CKDYF473Z50 |
| | C607,C611,C612 | CKDYX473M25 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------------|-------------|
| | R601 - R604,R609,R613,R610 | RD1/4PM□□□J |
| | Other resistors | RD1/8PM□□□J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|--|--------------------|
| ★ | X601 Ceramic resonator (4.19MHz) Remote control sensor unit | ASS1022 AXX1005 |

SP assembly

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★ | IC401 | M5218PF |
| ★★ | Q401,Q402 | 2SC2235 |
| ★ | D401 - D403 | 1SS252 |

RELAIES

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★ | RY401,RY402 Relay | ASR-112 |
| ★★ | RY403 Relay | ASR1005 |

COILS

| Mark | Symbol & Description | Part No. |
|------|---------------------------------|----------|
| | L401,L402 AF choke coil (0.7μF) | ATH1011 |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|-------------|
| | C401,C402,C405,C406 | CEAS100M25 |
| | C403,C404 | CEAS470M25 |
| | C407 - C410 | CFTXA823J50 |
| | C411 | CKCYF473Z50 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------------|---------------|
| ⚠ | R415,R416 | RD1/4PMFL100J |
| ⚠ | R413,R414 | RD1/4PMF100J |
| | R401 - R404,R409,R410,R424 | RD1/4PM□□□J |
| | R427,R429 | RS2PMF681J |
| | R428,R430 | RS2PMF821J |
| | R417,R418 | RS2LMF331J |
| | Other resistors | RD1/8PM□□□J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|--------------------------------|----------|
| | 4P Pin jack (ADAPTOR) | AKB1033 |
| | 8P Speaker terminal (SPEAKERS) | AKE-111 |
| | Mini jack (CONTROL) | AKN-207 |

HEADPHONE assembly

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|------------|
| | R425,R426 | RS1PMF122J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|-------------------------|----------|
| | Headphone jack (PHONES) | AKN1002 |

TONE assembly

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------------------|
| ★★ | IC702 | LC4966 |
| ★★ | IC701 | M5218PF |
| ★★ | Q705 | RN1201 (DTC143ES) |
| ★★ | Q706 | RN2201 (DTA143ES) |
| ★★ | Q701 - Q704 | 2SC1740SLN |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|-------------|
| | C709,C710 | CEASR33M50 |
| | C703,C704 | CEASR47M50 |
| | C705,C706 | CEAS0R1M50 |
| | C707,C708 | CEAS010M50 |
| | C711,C712 | CEAS100M25 |
| | C713,C714 | CEAS470M25 |
| | C717,C718 | CKMYB151K50 |
| | C701,C702 | CQMA153K50 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|--|-------------|
| ★ | VR702,VR703 Variable resistor (30k × 2) | ACT1031 |
| ★ | VR704 Variable resistor (10k × 2) | ACT1032 |
| ★ | VR701 Variable resistor (5k × 2) | ACT1033 |
| | R731,R732 | RD1/4PM331J |
| | Other resistors | RD1/8PM□□□J |

LAMP assembly

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------------------|--------------------------|
| | R647,R650 R648,R649,R651,R652 | RS1PMFR47J RS1PMF010J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|--------------------------------------|--------------------|
| ★★ | PL601 – PL604 Pilot lamp Lamp box | AEL1050 AMR1342 |

VR assembly

COILS

| Mark | Symbol & Description | Part No. |
|------|----------------------------------|----------|
| | L701,L702 Axial inductor (5.6μH) | LAU5R6K |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|-------------|
| | C715,C716 | CKCYF473Z50 |

RESISTOR

| Mark | Symbol & Description | Part No. |
|------|------------------------------------|----------|
| ★ | VR705 Variable resistor (100k × 2) | ACX1012 |

LED assembly

SEMICONDUCTOR

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★ | D630 LED | AEL1071 |

4.2 A – X440

Miscellaneous Parts List

P.C. BOARD ASSEMBLIES

| Mark | Symbol & Description | Part No. |
|------|-----------------------|----------|
| | AF main assembly | AWZ1777 |
| | Control main assembly | AWZ1779 |
| | SP assembly | |
| | HEADPHONE assembly | |
| | CONNECTOR assembly | |

TONE assembly
LAMP assembly
VR assembly
LED assembly

OTHERS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★ | Q3,Q4 Transistor | 2SA1264N |
| ★★ | Q1,Q2 Transistor | 2SC3181N |

| Mark | Symbol & Description | Part No. |
|------|--------------------------------------|--------------------|
| △ ★ | T1 Power transformer (220V/240V) | ATS1142 |
| △ | AC socket (3P OUTLET) | AKP – 502 |
| △★★ | FU2 Fuse (T2A/250V) | AEK – 017 |
| △★★ | FU1 Fuse (T2.5A/250V) | AEK – 403 |
| △ | AC power cord Remote control unit | ADG1021 AXD1053 |

AF main assembly (AWZ1777)

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|---|----------------------|
| ★★ | IC101 | M5218P |
| ★★ | IC501 | M5278L56 |
| ★★ | IC201,IC202 | PA0016 |
| ★★ | IC103 | TC9163N |
| ★★ | IC102 | TC9164N |
| ★★ | IC104 | μPD6362C |
| ★★ | Q308 | RN1201 (DTC143ES) |
| ★★ | Q303 | RN2203 (DTA124ES) |
| ★★ | Q105,Q106 | 2SA1048 |
| ★★ | Q215,Q216 | 2SA965 |
| ★★ | Q201 – Q204,Q209, Q210 | 2SA992 |
| ★★ | Q306,Q502 | 2SB560 |
| ★★ | Q213,Q214 | 2SC2235 |
| ★★ | Q207,Q208,Q211,Q212,Q301, Q302,Q307,Q504 | 2SC2240 |
| ★★ | Q304,Q305 | 2SC2458 |
| ★★ | Q101 – Q104 | 2SC2878 |
| ★★ | Q501 | 2SD438 |
| ★★ | Q503 | 2SD880 |
| ★ | D207,D208 | HZS4BLL |
| ★ | D205,D206 | HZS5BLL |
| ★ | D501 | RBV402 |
| ★ | D305 | RD13ESB |
| ★ | D511 | RD13ESB1 |
| ★ | D509,D510 | RD16ESB3 |
| ★ | D306 | RD5.6ESB |
| ★ | D502 – D507,D512 – D515 | S5566 (11E2) |
| ★ | D201 – D204,D209 – D212, D301 – D304,D516,D517 | 1SS252 |

RELAY

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| △★★ | RY501 Relay | ASR1012 |

TRANSFORMER

| Mark | Symbol & Description | Part No. |
|------|------------------------|----------|
| △ ★ | T501 Power transformer | ATT1066 |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|---|--------------|
| △ | C511,C517 Power capacitors (0.01/AC400V) | ACG1002 |
| | C512,C513 Power capacitors (0.01/AC150V) | ACG1005 |
| | C501,C502 (5600/56) | ACH1031 |
| | C227-C230 | CCCSL101K500 |
| | C217,C218 | CCCSL150K500 |
| | C213,C214,C233,C234 | CCCSL220K500 |
| | C103,C104,C107,C108,C203, C204 | CKMYB221K50 |
| | C221,C222 | CCCSL470J50 |
| | C223-C226 | CCCSL680J50 |
| | C125,C205-C208 | CCMSL101J50 |
| | C301,C302 | CEANP010M50 |
| | C303 | CEAS010M50 |
| | C101,C102,C117,C118 | CEAS100M25 |
| | C516,C219,C220,C231,C232 | CEAS101M10 |
| | C305,C505,C506,C509 | CEAS101M25 |
| | C515 | CEAS102M25 |
| | C503,C504 | CEAS102M35 |
| | C113,C114 | CEAS2R2M50 |
| | C105,C106,C115,C116,C507, C508,C510 | CEAS470M25 |
| | C304 | CEAS471M6 |
| | C235,C236 | CEXA470M63 |
| | C201,C202 | CEYA100M25 |
| | C215,C216 | CEYA330M16 |
| | C514 | CKCYB103K50 |
| | C209,C210 | CKCYB182K50 |
| | C109,C110 | CKCYB222K50 |
| | C211,C212 | CKCYB471K50 |
| | C111,C112 | CKCYB822K50 |
| | C119-C122,C124 | CKCYF473Z50 |
| | C123 | CKCYX104M25 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|--|--------------|
| | R259,R260 (0.33 × 2/5W) | ACN-139 |
| | R201,R202 | RDR1/4PM101J |
| △ | R205,R206,R516,R247-R250, R307,R237-R240,R301,R302, R253-R256 | RD1/4PMF□□□J |
| | R313,R303-R306,R315,R514, R515,R309,R133,R134,R139- R144,R147-R149,R314,R517 | RD1/8PM□□□J |
| △ | R505,R501,R503,R245,R246, R251,R252 | RFA1/4PS□□□J |
| | Other resistors | RD1/4PM□□□J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|------------------------------|----------|
| | 4P Pin jack (DAT, TAPE) | AKB1007 |
| | 6P Pin jack (CD, TUNER, AUX) | AKB1024 |
| | 2P Pin jack (PHONO) | AKB1039 |

Control main assembly (AWZ1779)

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|--|----------------------|
| ★★ | IC601 | PDG022 |
| ★★ | IC602 | TA7291S |
| ★★ | Q601,Q605,Q606,Q608 | RN1201 (DTC143ES) |
| ★★ | Q610 | RN2201 (DTA143ES) |
| ★★ | Q602,Q603 | 2SC2235 |
| ★★ | Q607 | 2SC2458 |
| ★ | D614-D616 | AEL1053 |
| ★ | D602-D609,D617,D622 | AEL1072 |
| ★ | D601 | AEL1073 |
| ★ | D635,D636 | RD3.0ESB |
| ★ | D625 | RD4.7ESB2 |
| ★ | D618-D620,D623,D624,D632, D638-D641 | 1SS252 |

SWITCHES

| Mark | Symbol & Description | Part No. |
|------|--|----------------------|
| ★★ | S601-S612,S618-S620 Tact switch (POWER, SP-A, SP-B, BASS EQ, AUX, TAPE, TUNER, PHONO, DAT, CD, DAT.D, CD.D, CD.D REC, MUTING, PURE.D.L) | ASG-711 (ASG-703) |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|-------------|
| | C606 (47000μF/5.5V) | ACH1070 |
| | C602 | CEJAR22M50 |
| | C608 | CEJA100M16 |
| | C605 | CEJA101M10 |
| | C603 | CKDYB102K50 |
| | C601,C604 | CKDYF473Z50 |
| | C607,C611,C612 | CKDYX473M25 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|---|----------------------------|
| | R601-R603,R609,R610,R613 Other resistors | RD1/4PM□□□J RD1/8PM□□□J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|-------------------------------------|----------|
| ★ | X601 Ceramic resonator (4.19MHz) | ASS1022 |
| | Remote control sencer unit | AXX1005 |

**SP assembly
SEMICONDUCTORS**

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★ | IC401 | M5218PF |
| ★★ | Q401,Q402 | 2SC2240 |
| ★ | D401-D403 | 1SS252 |

RELAIES

| Mark | Symbol & Description | Part No. |
|------|-------------------------|----------|
| ★★ | RY401,RY402,RY403 Relay | ASR1005 |

COILS

| Mark | Symbol & Description | Part No. |
|------|---------------------------------------|----------|
| | L401,L402 AF choke coil (0.7 μ H) | ATH1004 |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|---|--|
| | C401,C402,C405,C406 C403,C404 C411 C407-C410 | CEAS100M25 CEAS470M25 CKCYF473Z50 CFTXA823K50 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|--------------------------|---------------|
| △ | R415,R416 | RD1/4PMFL100J |
| △ | R413,R414 | RD1/4PMF100J |
| | R401-R404,R409,R410,R424 | RD1/4PM□□□J |
| | R417,R418 | RS1LMF□□□J |
| | R427,R429 | RS2PMF471J |
| | R428,R430 | RS2PMF681J |
| | Other resistors | RD1/8PM□□□J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|--------------------------------|----------|
| | 4P Pin jack (ADAPTOR) | AKB1033 |
| | 8P Speaker terminal (SPEAKERS) | AKE-111 |
| | Mini jack (CONTROL) | AKN-207 |

HEADPHONE assembly

OTHER

| Mark | Symbol & Description | Part No. |
|------|-------------------------|----------|
| | Headphone jack (PHONES) | AKN1002 |

CONNECTOR assembly

No parts are supplied with the CONNECTOR assembly.

TONE assembly

Refer to A-X540.

LAMP assembly

Refer to A-X540.

VR assembly

COILS

| Mark | Symbol & Description | Part No. |
|------|--|----------|
| | L701,L702 Axial inductor (5.6 μ H) | LAU5R6K |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|-------------|
| | C715,C716 | CKCYF473Z50 |

RESISTOR

| Mark | Symbol & Description | Part No. |
|------|---|----------|
| ★ | VR705 Variable resistor (100k \times 2) | ACX1013 |

LED assembly

Refer to A-X540.

4.3 A - X340

**Miscellaneous Parts List
P.C.BOARD ASSEMBLIES**

| Mark | Symbol & Description | Part No. |
|------|-----------------------|----------|
| | AF main assembly | AWZ1781 |
| | Control main assembly | AWZ1782 |
| | SP assembly | |
| | HEADPHONE assembly | |
| | CONNECTOR assembly | |
| | TONE assembly | |
| | LAMP assembly | |
| | VR assembly | |
| | LED assembly | |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|--------------------------------------|--------------------|
| ★★ | Q3,Q4 Transistor | 2SA1263N |
| ★★ | Q1,Q2 Transistor | 2SC3180N |
| △ ★ | T1 Power transformer (220V/240V) | ATS1143 |
| △ | AC socket (3P OUTLET) | AKP-502 |
| △★★ | FU2 Fuse (T1.25A/250V) | AEK-018 |
| △★★ | FU1 Fuse (T2.5A/250V) | AEK-403 |
| △ | AC Power cord Remote control unit | ADG-063 AXD1052 |

AF main assembly (AWZ1781)

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|---|----------------------|
| ★★ | IC101 | M5218P |
| ★★ | IC501 | M5278L56 |
| ★★ | IC201,IC202 | PA0016 |
| ★★ | IC102 | TC9164N |
| ★★ | IC104 | μPD6362C |
| ★★ | Q308 | RN1201 (DTC143ES) |
| ★★ | Q303 | RN2203 (DTA124ES) |
| ★★ | Q105,Q106 | 2SA1048 |
| ★★ | Q215,Q216 | 2SA965 |
| ★★ | Q201,Q202,Q203,Q204,Q209, Q210 | 2SA992 |
| ★★ | Q306,Q502 | 2SB560 |
| ★★ | Q213,Q214 | 2SC2235 |
| ★★ | Q207,Q208,Q211,Q212,Q301, Q302,Q307,Q504 | 2SC2240 |
| ★★ | Q304,Q305 | 2SC2458 |
| ★★ | Q101 - Q104 | 2SC2878 |
| ★★ | Q501 | 2SD438 |
| ★★ | Q503 | 2SD880 |
| ★ | D207,D208 | HZS4BLL |
| ★ | D205,D206 | HZS5BLL |
| ★ | D501 | RBV402 |
| ★ | D305 | RD13ESB |
| ★ | D511 | RD13ESB1 |
| ★ | D509,D510 | RD16ESB3 |
| ★ | D306 | RD5.6ESB |
| ★ | D502 - D507,D512 - D515 | S5566 (11E2) |
| ★ | D201 - D204,D209 - D212, D301 - D304,D516,D517 | 1SS252 |

RELAY

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| △★★ | RY501 Relay | ASR1012 |

TRANSFORMER

| Mark | Symbol & Description | Part No. |
|------|------------------------|----------|
| △★ | T501 Power transformer | ATT1066 |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|---|--------------|
| △ | C511,C517 Power capacitors (0.01/AC400V) | ACG1002 |
| | C512,C513 Power capacitors (0.01/AC150V) | ACG1005 |
| | C501,C502 (4700/50) | ACH-252 |
| | C227 - C230 | CCCSL101K500 |
| | C217,C218 | CCCSL150K500 |
| | C213,C214,C233,C234 | CCCSL220K500 |
| | C103,C104,C107,C108,C203, C204 | CKMYB221K50 |

| Mark | Symbol & Description | Part No. |
|------|--|-------------|
| | C221,C222 | CCCSL470J50 |
| | C223 - C226 | CCCSL680J50 |
| | C125,C205 - C208 | CCMSL101J50 |
| | C301,C302 | CEANP010M50 |
| | C303 | CEAS010M50 |
| | C101,C102,C117,C118 | CEAS100M25 |
| | C516,C219,C220,C231,C232 | CEAS101M10 |
| | C505,C506,C509,C305 | CEAS101M25 |
| | C235,C236 | CEAS101M50 |
| | C515 | CEAS102M25 |
| | C503,C504 | CEAS102M35 |
| | C113,C114 | CEAS2R2M50 |
| | C105,C106,C115,C116,C507, C508,C510 | CEAS470M25 |
| | C304 | CEAS471M6 |
| | C215,C216 | CEYA220M16 |
| | C201,C202 | CEYA100M25 |
| | C514 | CKCYB103K50 |
| | C209,C210 | CKCYB182K50 |
| | C109,C110 | CKCYB222K50 |
| | C211,C212 | CKCYB471K50 |
| | C111,C112 | CKCYB822K50 |
| | C119,C120,C124 | CKCYF473Z50 |
| | C123 | CKCYX104M25 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|--|---------------|
| | R259,R260 (0.33 × 2/5W) | ACN-139 |
| △ | R205,R206,R516 | RD1/4PMFL□□□J |
| △ | R307,R237 - R240,R301,R302, R253 - R256,R247 - R250 | RD1/4PMF□□□J |
| | R313,R303 - R306,R514,R515, R309,R133,R134,R139 - R144, R147 - R149,R314,R517,R315 | RD1/8PM□□□J |
| △ | R505,R501,R503,R245,R246, R251,R252 | RFA1/4PS□□□J |

Other resistors

RD1/4PM□□□J

OTHERS

| Mark | Symbol & Description | Part No. |
|------|------------------------------|----------|
| | 4P Pin jack (TAPE, DAT) | AKB1007 |
| | 6P Pin jack (CD, TUNER, AUX) | AKB1024 |
| | 2P Pin jack (PHONO) | AKB1039 |

Control main assembly (AWZ1782)

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★ | IC601 | PDG022 |
| ★★ | IC602 | TA7291S |

| Mark | Symbol & Description | Part No. |
|------|--|----------------------|
| ★★ | Q601, Q605, Q606, Q608 | RN1201 (DTC143ES) |
| ★★ | Q610 | RN2201 (DTA143ES) |
| ★★ | Q602 | 2SC2235 |
| ★★ | Q607 | 2SC2458 |
| ★ | D602, D604, D605 - D609, D617, D622 | AEL1072 |
| ★ | D601 | AEL1073 |
| ★ | D635, D636 | RD3.0ESB |
| ★ | D625 | RD4.7ESB2 |
| ★ | D618 - D620, D623, D624, D632, D638 - D641 | 1SS252 |

SWITCHES

| Mark | Symbol & Description | Part No. |
|------|--|----------------------|
| ★★ | S601 - S610, S612, S619, S620 Tact switch (POWER, SP-A, SP-B, BASS EQ, AUX, TAPE, TUNER, PHONO, DAT, CD, DAT.D, CD.D, CD.D REC, MUTING, PURE.D.L) | ASG-711 (ASG-703) |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|---------------------------|-------------|
| | C606 (47000 μ F/5.5V) | ACH1070 |
| | C602 | CEJAR22M50 |
| | C608 | CEJA100M16 |
| | C605 | CEJA101M10 |
| | C603 | CKDYB102K50 |
| | C601, C604 | CKDYF473Z50 |
| | C607, C611, C612 | CKDYX473M25 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|-------------------------------|-------------|
| | R601 - R603, R609, R610, R613 | RD1/4PM□□□J |
| | Other resistors | RD1/8PM□□□J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|----------------------------------|----------|
| ★ | X601 Ceramic resonator (4.19MHz) | ASS1022 |
| | Remote control sensor unit | AXX1005 |

SP assembly

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★ | IC401 | M5218PF |
| ★★ | Q401 | 2SC2240 |
| ★ | D401, D403 | 1SS252 |

RELAIIES

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------|
| ★★ | RY401, RY403 Relay | ASR1005 |

COILS

| Mark | Symbol & Description | Part No. |
|------|--|----------|
| | L401, L402 AF choke coil (0.7 μ F) | ATH1004 |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|------------------------|-------------|
| | C401, C402, C405, C406 | CEAS100M25 |
| | C403, C404 | CEAS470M25 |
| | C411 | CKCYF473Z50 |
| | C407 - C410 | CQMA823K50 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|-------------------------------|---------------|
| △ | R415, R416 | RD1/4PMFL100J |
| △ | R413, R414 | RD1/4PMF100J |
| | R401 - R404, R409, R410, R424 | RD1/4PM□□□J |
| | R417, R418 | RS1LMF□□□J |
| | R427, R429 | RS2PMF391J |
| | R428, R430 | RS2PMF471J |
| | Other resistors | RD1/8PM□□□J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|--------------------------------|----------|
| | 4P Pin jack (ADAPTOR) | AKB1033 |
| | 4P Speaker terminal (SPEAKERS) | AKE-109 |
| | Mini jack (CONTROL) | AKN-207 |

HEADPHONE assembly

Refer to A-X440.

CONNECTOR assembly

Refer to A-X440.

TONE assembly

SEMICONDUCTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|----------------------|
| ★★ | IC702 | LC4966 |
| ★★ | IC701 | M5218PF |
| ★★ | Q705 | RN1201 (DTC143ES) |
| ★★ | Q706 | RN2201 (DTA143ES) |
| ★★ | Q701 - Q704 | 2SC1740SLN |

CAPACITORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|------------|
| | C709, C710 | CEASR33M50 |

| Mark | Symbol & Description | Part No. |
|------|--|--|
| | C703,C704,C707,C708 C705,C706 C711,C712 C713,C714 | CEASR47M50 CEASOR1M50 CEAS100M25 CEAS470M25 |
| | C717,C718 C701,C702 | CKMYB151K50 CQMA153K50 |

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|---|---------------------------------------|
| ★ | VR702,VR703 Variable resistor (30k × 2) | ACT1031 |
| ★ | VR704 Variable resistor (10k × 2) R731,R732 Other resistors | ACT1032 RD1/4PM331J RD1/8PM□□□J |

LAMP assembly

RESISTORS

| Mark | Symbol & Description | Part No. |
|------|----------------------|------------|
| | All resistors | RS1PMF□□□J |

OTHERS

| Mark | Symbol & Description | Part No. |
|------|------------------------------------|--------------------|
| ★★ | PL601,PL602 Pilot lamp Lamp box | AEL1050 AMR1342 |

VR assembly

Refer to A-X440

LED assembly

Refer to A-X540

5. FOR A-X540/HB, A-X440/HB AND A-X340/HB TYPES

NOTES:

- Parts without part number cannot be supplied.
- 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.
- For your parts Stock Control, the fast moving items are indicated with the marks ★ ★ and ★.
- ★ ★ **GENERALLY MOVES FASTER THAN ★**
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

CONTRAST OF MISCELLANEOUS PARTS

5.1 A-X540

The A-X540/HB type is the same as the A-X540/HE type with the exception of the following sections.

| Mark | Symbol & Description | Part No. | | Remarks |
|-------------|---|----------------|----------------|---------|
| | | A-X540/HE type | A-X540/HB type | |
| Δ | AC power cord | ADG1021 | ADG-063 | |
| Δ ★★ | FU1,FU2 Fuse (T2.5A/250V) | AEK-403 | ..... |  |
| Δ ★★ | FU1,FU2 Fuse (T2.5A/250V) | ..... | AEK-512 | |
| Δ | 3P AC socket (OUTLET) | AKP-502 | AKP-505 | |
| | Operating instructions (English/French/German/Italian) | ARE1080 | ..... |  |
| | Operating instructions (English) | ..... | ARB1130 | |

5.2 A – X440

The A – X440/HB type is the same as the A – X440/HE type with the exception of the following sections.

| Mark | Symbol & Description | Part No. | | Remarks |
|------|--|------------------|------------------|---------|
| | | A – X440/HE type | A – X440/HB type | |
| ⚠ | AC power cord | ADG1021 | ADG-063 | |
| ⚠★★ | FU2 Fuse (T2A/250V) | AEK-017 | ..... |  |
| ⚠★★ | FU1 Fuse (T2.5A/250V) | AEK-403 | ..... |  |
| ⚠★★ | FU2 Fuse (T2A/250V) | ..... | AEK-511 | |
| ⚠★★ | FU1 Fuse (T2.5A/250V) | ..... | AEK-512 | |
| ⚠ | 3P AC socket (OUTLET) | AKP-502 | AKP-505 | |
| | Operating instruction (English/French/German/Italian) | ARE1081 | ..... |  |
| | Operating instruction (English) | ..... | ARB1129 | |

5.3 A – X340



The A – X340/HB type is the same as the A – X340/HE type with the exception of the following sections.





| Mark | Symbol & Description | Part No. | | Remarks |
|------|--|------------------|------------------|---------|
| | | A – X340/HE type | A – X340/HB type | |
| ⚠ | AC power cord | ADG1021 | ADG-063 | |
| ⚠★★ | FU2 Fuse (T1.25A/250V) | AEK-018 | ..... |  |
| ⚠★★ | FU1 Fuse (T2.5A/250V) | AEK-403 | ..... |  |
| ⚠★★ | FU2 Fuse (T1.25A/250V) | ..... | AEK-509 | |
| ⚠★★ | FU1 Fuse (T2.5A/250V) | ..... | AEK-512 | |
| ⚠ | 3P AC socket | AKP-502 | AKP-505 | |
| | Operating instruction (English/French/German/Italian) | ARE1082 | ..... |  |
| | Operating instruction (English) | ..... | ARB1128 | |




- NOTES:**
- For the Schematic diagrams and P.C.Boards connection diagrams, refer to the 3. SCHEMATIC DIAGRAM AND P.C.BOARDS CONNECTION DIAGRAM sections.
 - For the Line voltage selection, refer to page 6.

6. IC INFORMATION

MICRO COMPUTER (PDG022)

| Terminal No. | Terminal name | I/O | Condition | Terminal status | Remarks | | | | | | | | | | | | |
|--------------|---------------|-----|--|--|---|------|--------------|----|----|--------|--|---|---|----------|--|---|---|
| 1 | WP | I | Power supply "ON" |  | If the input frequency is not 50/60Hz the mode will be switched to backup mode. | | | | | | | | | | | | |
| 2 | PA0 | O | For A-X540, when control is performed. |  | Key matrix output | | | | | | | | | | | | |
| 3 | PA1 | | | | | | | | | | | | | | | | |
| 4 | PA2 | | | | | | | | | | | | | | | | |
| 5 | PA3 | | | | | | | | | | | | | | | | |
| 6 | PB0 | | | | | O | | | | | | | | | | | |
| 7 | PB1 | O | | | Non used | | | | | | | | | | | | |
| 8 | PB2 | O | | | | | | | | | | | | | | | |
| 9 | PB3 | O | | | | | | | | | | | | | | | |
| 10 | PE0 | O | | | | | | | | | | | | | | | |
| 11 | SP-A | O | SP selector...SP-A | L | SP-A IND illuminates | | | | | | | | | | | | |
| 12 | SP-B | O | SP selector...SP-B | L | SP-B IND illuminates | | | | | | | | | | | | |
| 13 | B-EQ | O | BASS EQ "ON" | H | BASS EQ IND illuminates | | | | | | | | | | | | |
| 14 | AUX | O | When FUNCTION SEL. set at each position. | L | AUX IND illuminates | | | | | | | | | | | | |
| 15 | TAPE | O | | L | TAPE IND illuminates | | | | | | | | | | | | |
| 16 | TUNER | O | | L | TUNER IND illuminates | | | | | | | | | | | | |
| 17 | PHONO | O | | L | PHONO IND illuminates | | | | | | | | | | | | |
| 18 | DAT | O | | L | DAT IND illuminates | | | | | | | | | | | | |
| 19 | CD | O | | L | CD IND illuminates | | | | | | | | | | | | |
| 20 | PC2 | O | | | Non used | | | | | | | | | | | | |
| 21 | PC3 | O | | | | | | | | | | | | | | | |
| 22 | DAT.D | O | DAT DIRECT "ON" | H | DAT DIRECT IND illuminates | | | | | | | | | | | | |
| 23 | CD.D | O | CD DIRECT "ON" | H | CD DIRECT IND illuminates | | | | | | | | | | | | |
| 24 | UP | O | VOLUME CONTROL | <table border="1"> <tr> <td>MODE</td> <td>Terminal No.</td> <td>24</td> <td>25</td> </tr> <tr> <td>VOL.UP</td> <td></td> <td>H</td> <td>L</td> </tr> <tr> <td>VOL.DOWN</td> <td></td> <td>L</td> <td>H</td> </tr> </table> | | MODE | Terminal No. | 24 | 25 | VOL.UP | | H | L | VOL.DOWN | | L | H |
| MODE | Terminal No. | 24 | 25 | | | | | | | | | | | | | | |
| VOL.UP | | H | L | | | | | | | | | | | | | | |
| VOL.DOWN | | L | H | | | | | | | | | | | | | | |
| 25 | DOWN | O | UP/DOWN | | | | | | | | | | | | | | |
| 26 | SOURCE | O | When REC SEL. set at each position. | L | SURCE IND illuminates | | | | | | | | | | | | |
| 27 | TUNER | O | | L | TUNER IND illuminates | | | | | | | | | | | | |
| 28 | DAT→T | O | | L | DAT→T IND illuminates | | | | | | | | | | | | |

| Terminal No. | Terminal name | I/O | Condition | Terminal status | Remarks | | |
|--------------|----------------------|-----|--|--|--|--------|---|
| 29 | TAPE→D | O | When REC SEL. set at each position. | L | TAPE→D IND. illuminates | | |
| 30 | CD.D.REC | O | CD DIRECT REC "ON" | L | CD DIRECT IND illuminates | | |
| 31 | NC | ... | ..... | ..... |  |  |  |
| 32 | V _{ss} | | GND | | | | |
| 33 | MUT IND | O | MUTING "ON" | H | Red IND illuminates | | |
| 34 | VR IND | O | Power supply "ON" | H | Yellow IND illuminates | | |
| 35 | PURE DIRECT | O | LINE DIRECT | L | | | |
| 36 | XTAL | O | Connect Crystal resonator (4.19MHz) |  | CLOCK oscillating terminal (For A-X540, oscillation is made if necessary.) | | |
| 37 | EXTAL | I | | | | | |
| 38 | RESET | I | When inputting RESET pulse |  | | | |
| 39 | PX ₀ /SC | I | ..... |  | GND. | | |
| 40 | PX ₁ /SOB | I | Model Terminal NO. | A-X540 | A-X440 | A-X340 | By arranging the terminal levels of Pins 40 and 41 as shown in the table, the program can be adjusted to the each models. |
| 41 | PX ₂ /SOA | I | 40 | H | L | L | |
| | | | 41 | L | H | L | |
| 42 | PX ₃ /SI | I | ..... | ..... | GND | | |
| 43 | F·MUTE | O | When switching over FUNCTION, CD or DAT DIRECT. |  | Prevents click noise | | |
| | | | During -∞ MUTING | H | | | |
| 44 | B.EQ CONT. | O | BASS EQ "ON" | H | Activates BASS EQ circuit | | |
| 45 | PY ₂ /WP | I | The IC601 (PDG022) is a "SUPERSILENT" micro computer which oscillates the CLOCK only when necessary (only A-X540). Therefore, this terminal will oscillate the CLOCK when the respective button on the front panel is pressed or when CLOCK oscillation is required. If, for example, a "H" signal is input when pressing the button, the terminal oscillates CLOCK and will determine the function. After the necessary actions, it stops CLOCK again and enters the STOP mode. | | | | |
| 46 | REM IN | I | |  | | | |
| 47 | ST-BY | O | Power supply "ON" | H | Relay (RY501) "ON" | | |
| 48 | PROTECTION | O | Power supply "ON" | H | Controls relay for SP (RY401 and RY402) and relay for HP (RY403). | | |
| | | | (7 seconds after power Supply ON.) | (L) | | | |
| 49 | SP-B | O | SP SELECTOR "SP-B" | H | Controls relay for SP-B (RY402). | | |
| 50 | SP-A | O | SP SELECTOR "SP-A" | H | Controls relay for SP-A (RY401). | | |
| 51 | PMO | O | ..... | ..... | Non used | | |
| 52 | MUTING | O | During MUTING (-20dB) | H | ON/OFF of -20dB MUTING. | | |
| 53 | D.OFF | O | LINE DIRECT "OFF" | L | | | |

| Terminal No. | Terminal name | I/O | Condition | Terminal status | Remarks |
|--------------|-----------------|-----|---|--|---------------------------|
| 54 | DAT.D | O | DAT DIRECT "ON" | L | |
| 55 | CD.D | O | CD DIRECT "ON" | L | |
| 56 | CK | O | When FUNCTION was changed. |  | For controlling FUNCTION. |
| 57 | DATA | | | | |
| 58 | ST | | | | |
| 59 | ST-BY IND | O | During STAND-BY. | L | STAND-BY IND illuminates |
| 60 | PJ ₀ | I | For A-X540, when the control action is performed. |  | Key matrix input |
| 61 | PJ ₁ | | | | |
| 62 | PJ ₂ | | | | |
| 63 | PJ ₃ | | | | |
| 64 | V _{DD} | ... | ..... |  | +5V Power supply terminal |

7. SPECIFICATIONS

A-X540

Amplifier Section

| | |
|--|--|
| DIN continuous power output (both channels driven) | |
| 1 kHz, 1%, 8Ω | 100W + 100W |
| DIN music power (both channels driven) | |
| 1 kHz, 1%, 8Ω | 160W + 160W |
| Continuous power output (both channel driven) | |
| 20 Hz to 20 kHz, T.H.D 0.3%, 8Ω | 85W + 85W |
| IEC Continuous power output (both channel driven) | |
| 63 Hz to 12.5 kHz, T.H.D 0.7%, 8Ω | 95W + 95W |
| Total harmonic distortion * | |
| 1 kHz, 50W, 8Ω | 0.005% * |
| Input (sensitivity/impedance) | |
| PHONO | 2.5 mV/50 kΩ |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, | |
| ADAPTOR | 150 mV/50 kΩ |
| Overload level | |
| PHONO 1 kHz, 0.1% | 150 mV |
| Output level | |
| TAPE REC, DAT REC, ADAPTOR OUT | 150 mV |
| Frequency Response | |
| PHONO | 20 Hz to 20 kHz ±0.5 dB |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, ADAPTOR | 10 Hz to 100 kHz $\begin{matrix} +1 \\ -3 \end{matrix}$ dB |
| CD (CD DIRECT ON) | 10 Hz to 100 kHz $\begin{matrix} +1 \\ -3 \end{matrix}$ dB |
| Tone Control | |
| BASS | ± 8 dB (100 Hz) |
| TREBLE | ± 8 dB (10 kHz) |
| BASS EQUALIZER | (MAX) +10 dB (60 Hz) |
| MUTING | -20 dB/-∞ |
| Signal-to-Noise ratio (IHF short circuited, A network) | |
| PHONO | 72 dB |
| CD (CD DIRECT ON) | 102 dB |
| Signal-to-Noise ratio (DIN, continuous power/50 mW) | |
| PHONO | 68 dB/60 dB |
| CD (CD DIRECT ON) | 82 dB/62 dB |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, | |
| ADAPTOR | 82 dB/62 dB |

Power Supply/Miscellaneous

| | |
|---|--------------------|
| Power requirements | |
| European model | AC220 V—, 50/60 Hz |
| U.K. model | AC240 V—, 50/60 Hz |
| Other destination models . . . —AC 110 V/120-127 V/ 220 V/240 V (switchable), 50/60 Hz | |
| Power consumption | |
| European model | 480W |
| U.K. model | 480W |
| AC outlets | |
| U.K. model | |
| switched (× 3) | 100W |
| Other destination models | |
| switched (× 2) | 100W |
| Unswitched (× 1) | 100W |
| Dimensions 360 (W) × 349 (D) × 115 (H) mm 14-1/8 (W) × 13-3/4 (D) × 4-1/2 (H) in | |
| Weight 8.5 kg (18 lb 13 oz) | |

Accessories

| | |
|------------------------|---|
| Remote control unit | 1 |
| Batteries AAA/R03 | 2 |
| Operating instructions | 1 |

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

* *Measured by Audio Spectrum Analyzer.*

A-X440

Amplifier Section

| | |
|--|--------------------------------------|
| DIN continuous power output (both channels driven) | |
| 1 kHz, 1%, 8 Ω | 65 W + 65 W |
| DIN music power (both channels driven) | |
| 1 kHz, 1%, 8 Ω | 120 W + 120 W |
| Continuous power output (both channels driven) | |
| 20 Hz to 20 kHz, T.H.D 0.3%, 8 Ω | 55 W + 55 W |
| IEC continuous power output (both channels driven) | |
| 63 Hz to 12.5 kHz, T.H.D 0.7%, 8 Ω | 60 W + 60 W |
| Total harmonic distortion | |
| 1 kHz, 35 W, 8 Ω | 0.005% * |
| Input (sensitivity/impedance) | |
| PHONO | 2.5 mV/50 kΩ |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, ADAPTOR | |
| | 150 mV/50 kΩ |
| Overload level | |
| PHONO 1 kHz, 0.1% | 150 mV |
| Output (level/impedance) | |
| TAPE REC, DAT REC, ADAPTOR OUT | 150 mV |
| Frequency Response | |
| PHONO | 20 Hz to 20 kHz ±0.5 dB |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, ADAPTOR | |
| | 10 Hz to 70 kHz $\pm\frac{1}{3}$ dB |
| CD (CD DIRECT ON) | 10 Hz to 100 kHz $\pm\frac{1}{3}$ dB |
| Tone Control | |
| BASS | ±8 dB 100 Hz |
| TREBLE | ±8 dB 10 kHz |
| BASS EQUALIZER | +10 dB (60 Hz) |
| MUTING | -20 dB/-∞ |
| Signal-to-Noise ratio (IHF short circuited, A network) | |
| PHONO | 72 dB |
| CD (CD DIRECT ON) | 100 dB |
| Signal-to-Noise ratio (DIN, continuous power/50 mW) | |
| PHONO | 68 dB/60 dB |
| TUNER, CD, AUX, TAPE PLAY, DAT PLAY, ADAPTOR | |
| | 82 dB/62 dB |
| CD (CD DIRECT ON) | 82 dB/62 dB |

Power Supply/Miscellaneous

| | |
|--------------------------|--|
| Power requirements | |
| U.K., Australian models | ~ AC 240 V, 50/60 Hz |
| Other destination models | ~ AC 110 V/120 - 127 V/ 220 V/240 V (switchable), 50/60 Hz |
| Power consumption | |
| Other destination models | 390 W |
| U.K., Australian models | 390 W |
| AC outlets | |
| U.K. model | |
| Switched (× 3) | 100 W |
| Other destination models | |
| Switched (× 2) | 100 W |
| Unswitched (× 1) | 100 W |
| Dimensions | 360 (W) × 346 (D) × 115 (H) mm 14-3/16 (W) × 13-5/8 (D) × 4-9/16 (H) in |
| Weight | 6.6 kg (14 lb 9 oz) |

Accessories

| | |
|------------------------|---|
| Operating instructions | 1 |
| Remote control unit | 1 |
| Batteries (AAA/R03) | 2 |

- Specifications and design subject to possible modification without notice due to improvements.
- *Measured by Audio Spectrum Analyzer.

A-X340

Amplifier Section

| | |
|--|--------------------------------------|
| DIN continuous power output (both channels driven) | |
| 1 kHz, 1%, 8 Ω | 45 W + 45 W |
| DIN music power (both channels driven) | |
| 1 kHz, 1%, 8 Ω | 85 W + 85 W |
| Continuous power output (both channels driven) | |
| 20 Hz to 20 kHz, T.H.D 0.5%, 8 Ω | 30 W + 30 W |
| IEC continuous power output (both channels driven) | |
| 63 Hz to 12.5 kHz T.H.D 0.7%, 8 Ω | 40 W + 40 W |
| Total harmonic distortion | |
| 1 kHz, 25 W, 8 Ω | 0.005% * |
| Input (sensitivity/impedance) | |
| PHONO | 2.5 mV/50 kΩ |
| TUNER, CD, AUX, TAPE PLAY, ADAPTOR | |
| | 150 mV/50 kΩ |
| Overload level | |
| PHONO 1 kHz, 0.1% | 150 mV |
| Output | |
| TAPE REC, ADAPTOR OUT | 150 mV |
| Frequency Response | |
| PHONO | 20 Hz to 20 kHz ±0.5 dB |
| TUNER, CD, AUX, TAPE PLAY, ADAPTOR | |
| | 10 Hz to 100 kHz $\pm\frac{1}{3}$ dB |
| CD (CD DIRECT ON) | 10 Hz to 100 kHz $\pm\frac{1}{3}$ dB |
| Tone Control | |
| BASS | ±8 dB (100 Hz) |
| TREBLE | ±8 dB (10 kHz) |
| BASS EQUALIZER | +8 dB (60 Hz) |
| MUTING | -20 dB/-∞ |
| Signal-to-Noise ratio (IHF short circuited, A network) | |
| PHONO | 72 dB |
| CD (CD DIRECT ON) | 100 dB |
| Signal-to-Noise ratio (DIN, continuous power/50 mW) | |
| PHONO | 68 dB/60 dB |
| TUNER, CD, AUX, TAPE PLAY, ADAPTOR | |
| | 82 dB/62 dB |
| CD (CD DIRECT ON) | 82 dB/62 dB |

Power Supply/Miscellaneous

| | |
|-------------------------|--------------------------------|
| Power requirements | |
| European model | ~ AC 220 V, 50/60 Hz |
| U.K., Australian models | ~ AC 240 V, 50/60 Hz |
| Power consumption | |
| European model | 250 W |
| U.K., Australian models | 250 W |
| AC outlets | |
| Switched (× 3) | 100 W |
| Dimensions | 360 (W) × 346 (D) × 115 (H) mm |
| Weight | 5.9 kg |

Accessories

| | |
|------------------------|---|
| Operating instructions | 1 |
| Remote control unit | 1 |
| Batteries (AAA/R03) | 2 |

- Specifications and design subject to possible modification without notice due to improvements.
- *Measured by Audio Spectrum Analyzer.