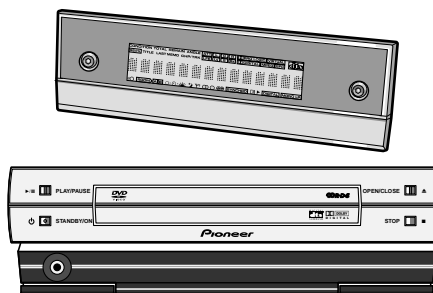


Service Manual

Pioneer



ORDER NO.
RRV2480

DVD/CD TUNER

XV-DV88 XV-DV77

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

| Type | Model | | Power Requirement | Region No. | Remarks |
|-------|---------|---------|---|------------|---------|
| | XV-DV88 | XV-DV77 | | | |
| ZVYXJ | ○ | ○ | DC power supplied from other system component | 2 | |
| ZUCXJ | — | ○ | DC power supplied from other system component | 1 | |

- This product is a system(s) component.
This product does not function properly independently ; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.
- Please connect it to the POWERED SUBWOOFER S-DV88SW or S-DV77SW, for adjustment and operation inspection.

| Component | Model | | Service manual | Remarks |
|----------------------|----------|----------|------------------|---------------|
| DVD/CD TUNER | XV-DV88 | XV-DV77 | RRV2480 | This manual. |
| SPEAKER SYSTEM | — | S-DV77 | RRV2473 | |
| SATELLITE SPEAKER | S-DV88ST | S-DV77ST | RRV2486, RRV2473 | |
| POWERED SUBWOOFER | S-DV88SW | S-DV77SW | RRV2474, RRV2473 | |
| MINIDISC RECORDER | MJ-L11 | | RRV2472 | System option |
| STEREO CASSETTE DECK | CT-L11 | | RRV2471 | System option |

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 © PIONEER CORPORATION 2001

T - ZZK JULY 2001 Printed in Japan

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.



WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65



NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

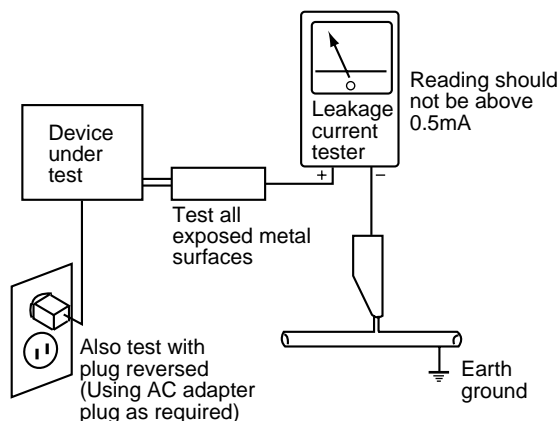
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a Δ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

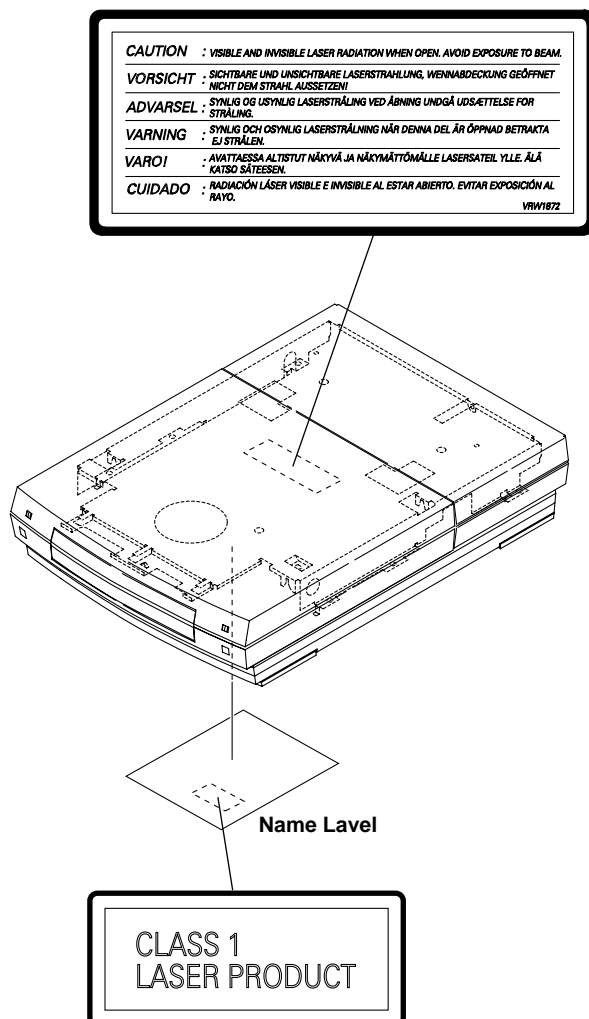
WARNING !

THE AEL (ACCESSIBLE EMISSION LEVEL) OF THE LASER POWER OUTPUT IS LESS THAN CLASS 1 BUT THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS 1.
A SPECIALLY INSTRUCTED PERSON SHOULD DO SERVICING OPERATION OF THE APPARATUS.

LASER DIODE CHARACTERISTICS

FOR DVD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 650 nm
FOR CD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 780 nm

LABEL CHECK (ZVYXJ TYPE ONLY)



Additional Laser Caution

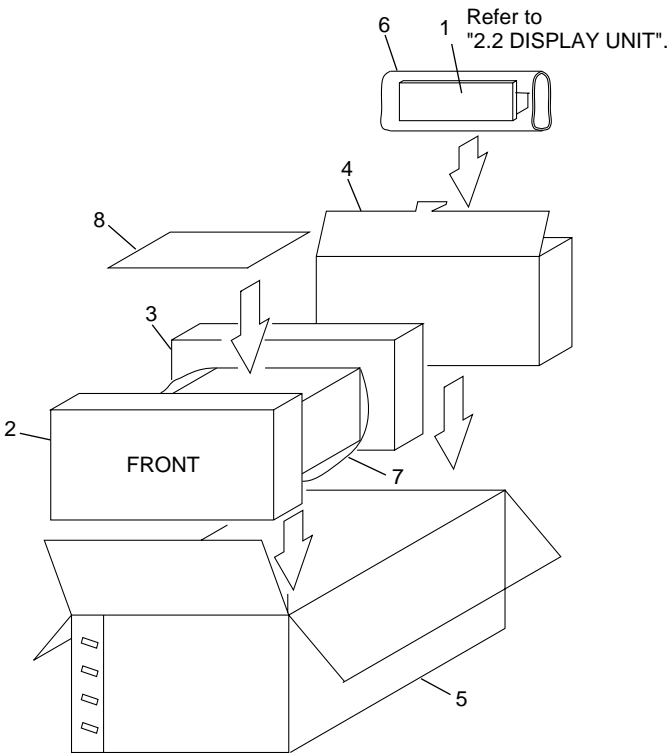
1. Loading-status detection switch (S101 on the LOAB assy) are detected by the microprocessor (IC601 in the DVDM assy).
 - To permit the laser diode to oscillate, it is required to set the loading-status detection switch for the clamp position (the center terminal of S101 is shorted to +3V).
When the voltage of IC101-pin 20 is +3V and IC601 (microprocessor) - pin 83 is +3V, 650nm laser diode for DVD oscillates in the DVDM Assy. When the voltage of IC101-pin 20 is +3V and IC601 (microprocessor) - pin 83 is 0V (GND), 780nm laser diode for CD oscillates in the DVDM Assy.
In the test mode *, the laser diode oscillates when microprocessor detects a PLAY signal, or when the PLAY key is pressed (KEYL assy), with the above requirements satisfied.
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

* : See page 73.

2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
● The Δ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
● Screws adjacent to ▼ mark on the product are used for disassembly.

2.1 PACKING



(1) PACKING PARTS LIST

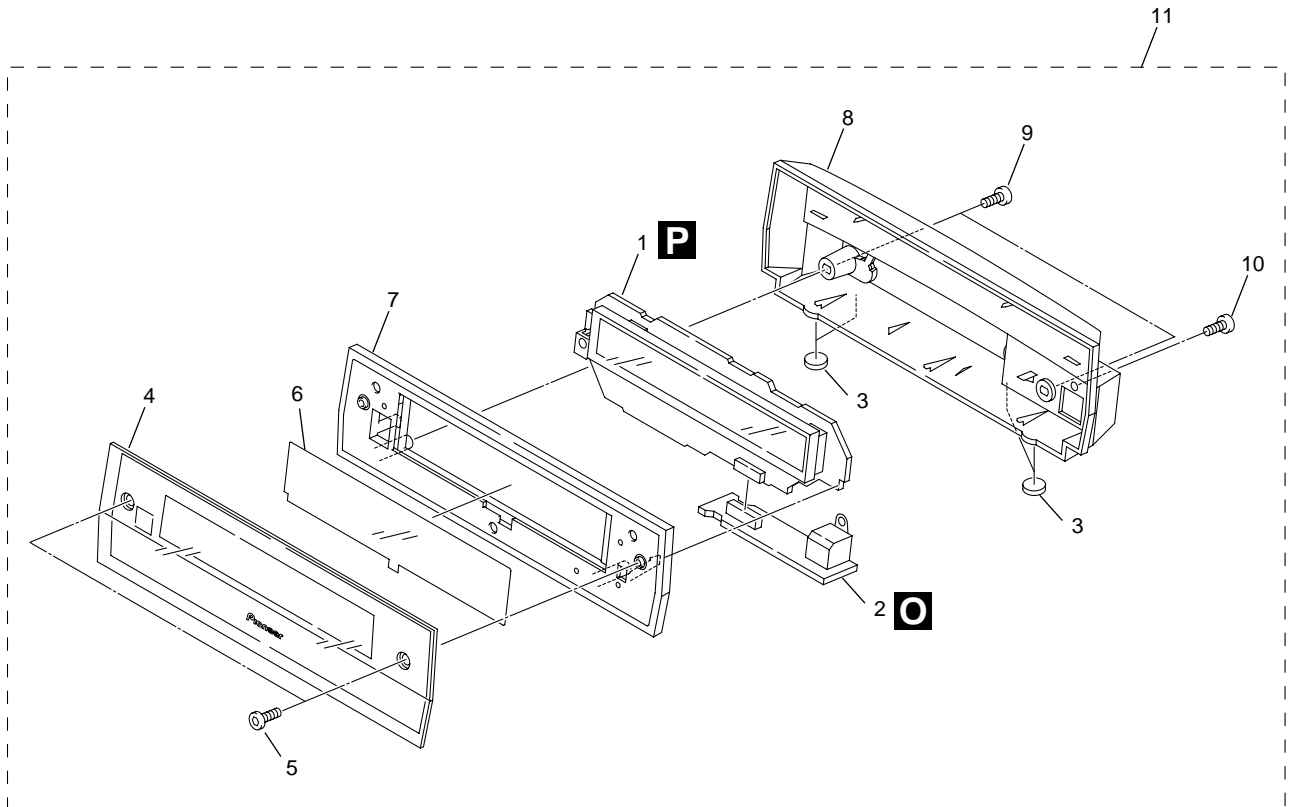
| Mark | No. | Description | Part No. |
|------|-----|---------------|------------------------|
| | 1 | DISPLAY UNIT | AXX7107 |
| | 2 | Front Pad | AHA7340 |
| | 3 | Rear Pad | AHA7341 |
| | 4 | Spacer NS2001 | AHB7056 |
| | 5 | Packing Case | See Contrast table (2) |
| | 6 | Packing Sheet | AHG7073 |
| | 7 | Seat | Z23-007 |
| NSP | 8 | Warranty Card | See Contrast table (2) |

(2) CONTRAST TABLE

XV-DV77/ZVYXJ, ZUCXJ and XV-DV88/ZVYXJ are constructed the same except for the following :

| Mark | No. | Symbol and Description | Part No. | | | Remarks |
|------|-----|------------------------|-------------------|-------------------|-------------------|---------|
| | | | XV-DV88 /ZVYXJ | XV-DV77 /ZVYXJ | XV-DV77 /ZUCXJ | |
| | 5 | Packing Case | AHD8022 | AHD7987 | AHD7994 | |
| NSP | 8 | Warranty Card | ARY7022 | ARY7022 | ARY7045 | |

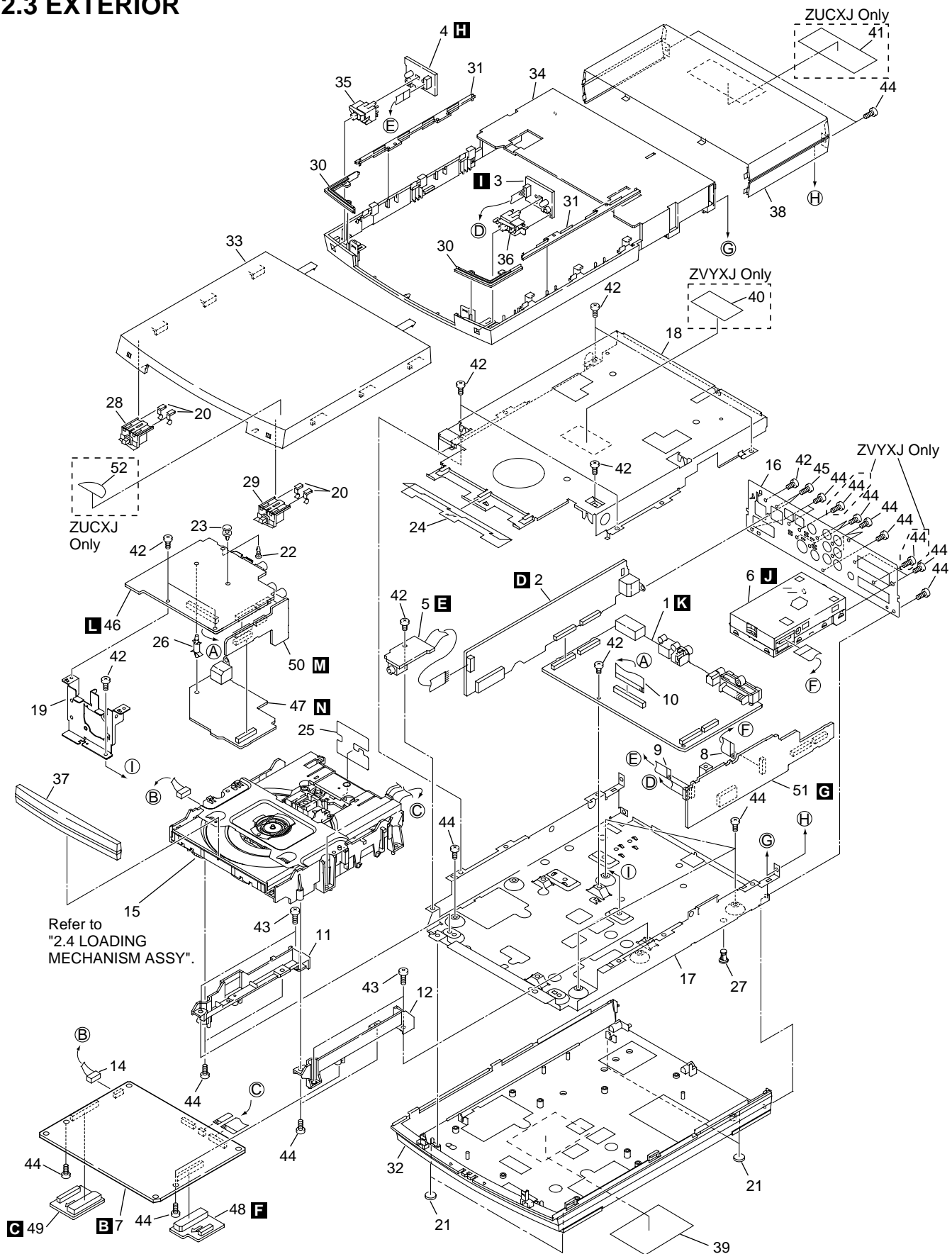
2.2 DISPLAY UNIT



• DISPLAY UNIT PARTS LIST

| Mark | No. | Description | Part No. |
|------|-----|---------------|--------------|
| | 1 | FLDP ASSY | AWU7854 |
| | 2 | CNB ASSY | AWU7855 |
| | 3 | Leg | AEB7090 |
| | 4 | Window | AAK7889 |
| | 5 | Deco Screw | ABA7072 |
| | 6 | FL Filter | AEC7195 |
| | 7 | Display Panel | AMB7750 |
| | 8 | Display Cover | AMC7048 |
| | 9 | Screw | BPZ30P080FZK |
| | 10 | Screw | PSC30P080FNI |
| | 11 | DISPLAY UNIT | AXX7107 |

2.3 EXTERIOR



(1) EXTERIOR PARTS LIST

| Mark | No. | Description | Part No. | Mark | No. | Description | Part No. |
|------|-----|----------------------|------------------------|------|-----|-------------------|------------------------|
| | 1 | MOTHER ASSY | See Contrast table (2) | | 31 | Side Line | AAP7088 |
| | 2 | SIDEL ASSY | AWU7813 | | 32 | Bottom Base | AMA7025 |
| | 3 | KEYR ASSY | AWU7816 | | 33 | Top Panel 1 | AMB7754 |
| | 4 | KEYL ASSY | AWU7815 | | 34 | Top Panel 2 | AMB7755 |
| | 5 | HP ASSY | AWU7814 | | 35 | Button L Assy | AXG7110 |
| | 6 | FM/AM TUNER MODULE | See Contrast table (2) | | 36 | Button R Assy | AXG7111 |
| | 7 | DVDM ASS'Y | VWS1496 | | 37 | Tray Cap Assy | See Contrast table (2) |
| | 8 | 13P F•F•C/60V | ADD7318 | | 38 | Bonnet | ANE7270 |
| | 9 | 9P F•F•C/60V | ADD7320 | NSP | 39 | Name Label | See Contrast table (2) |
| | 10 | 31P F•F•C/60V | ADD7322 | | 40 | Caution Label | See Contrast table (2) |
| | 11 | Adapter12 L | ANW7231 | | 41 | 65 Label | See Contrast table (2) |
| | 12 | Adapter12 R | ANW7232 | | 42 | Screw | BBZ30P060FMC |
| | 13 | ••••• | | | 43 | Screw | BBZ30P100FMC |
| NSP | 14 | Connector Ass'y | PG05KK-E10 | | 44 | Screw | BPZ30P080FZK |
| | 15 | Loading Mecha. Ass'y | VWT1188 | | 45 | Screw | PSC30P080FNI |
| | 16 | Rear Panel | See Contrast table (2) | | 46 | DSP ASSY | See Contrast table (2) |
| NSP | 17 | Bottom Plate | ANF7027 | | 47 | BALANCE ASSY | AWU7808 |
| NSP | 18 | Top Plate | ANF7028 | | 48 | TRADER ASSY | AWU7809 |
| | 19 | PCB Holder | ANG7359 | | 49 | TRADEL ASSY | AWU7810 |
| | 20 | Sensor Plate | ANG7360 | | 50 | JACK ASSY | AWU7811 |
| | 21 | Leg | AEB7090 | | 51 | SIDER ASSY | See Contrast table (2) |
| | 22 | Rebette | AEC7120 | NSP | 52 | Energy Star Label | See Contrast table (2) |
| NSP | 23 | PCB Spacer(3x6) | AEC7156 | | | | |
| | 24 | Lead Barrier | AEC7361 | | | | |
| | 25 | Mecha Barrier | AEC7362 | | | | |
| | 26 | PCB Holder | AEC7364 | | | | |
| NSP | 27 | PC Support | VEC1749 | | | | |
| | 28 | Sensor Button L | AAD7622 | | | | |
| | 29 | Sensor Button R | AAD7623 | | | | |
| | 30 | Illuminate Lens | AAK7896 | | | | |

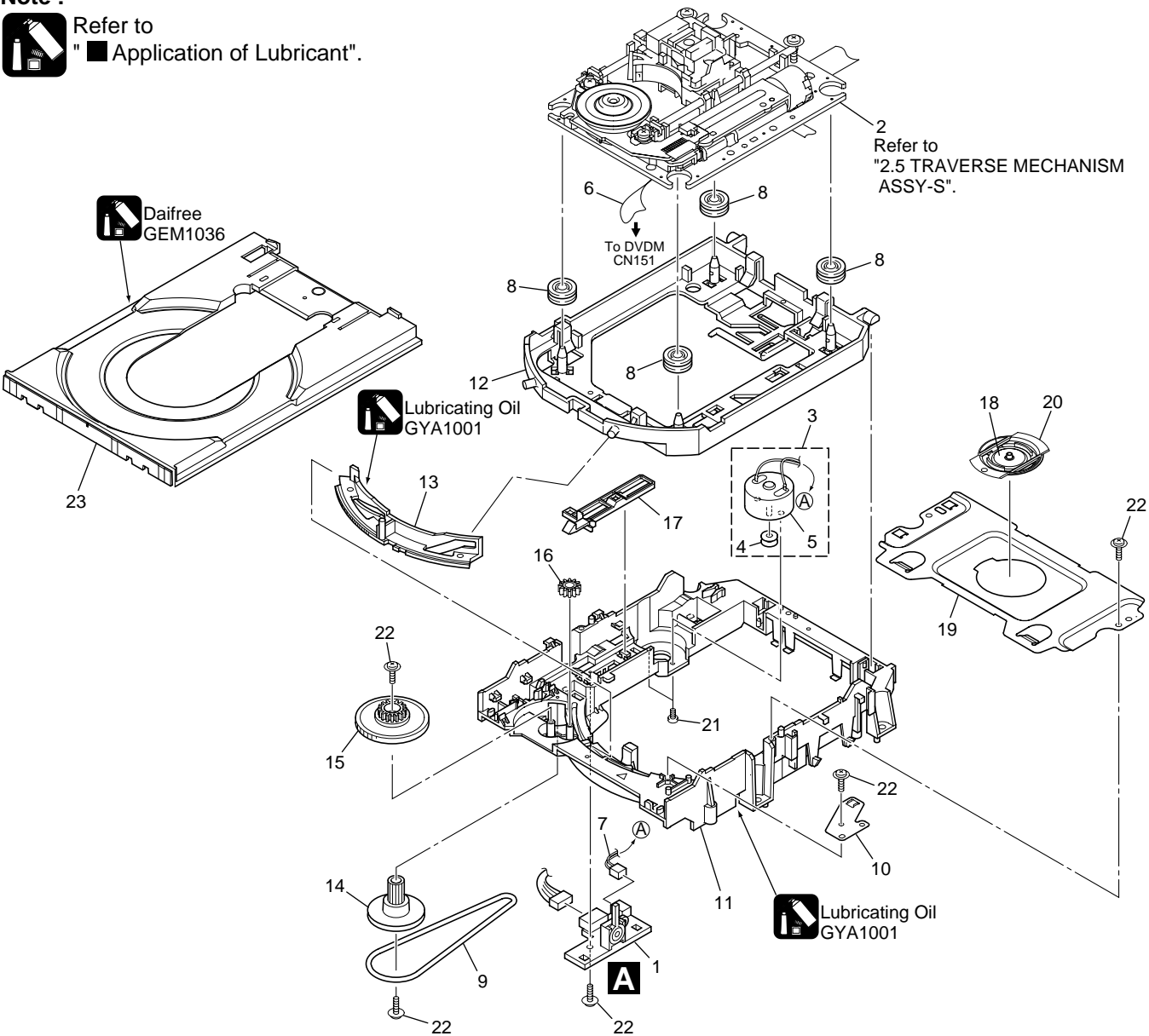
(2) CONTRAST TABLE

XV-DV77/ZVYXJ, ZUCXJ and XV-DV88/ZVYXJ are constructed the same except for the following :

| Mark | No. | Symbol and Description | Part No. | | | Remarks |
|------|-----|------------------------|-------------------|-------------------|-------------------|---------|
| | | | XV-DV88 /ZVYXJ | XV-DV77 /ZVYXJ | XV-DV77 /ZUCXJ | |
| | 1 | MOTHER ASSY | AWU7817 | AWU7806 | AWU7818 | |
| | 6 | FM/AM TUNER MODULE | AXQ7229 | AXQ7229 | AXQ7228 | |
| | 16 | Rear Panel | ANC7999 | ANC7999 | ANC8020 | |
| NSP | 37 | Tray Cap Assy | AXG7119 | AXG7119 | AXG7120 | |
| | 39 | Name Label | AAL7278 | AAL7277 | AAL7280 | |
| | 40 | Caution Label | VRW1872 | VRW1872 | Not used | |
| | 41 | 65 Label | Not used | Not used | ARW7050 | |
| | 46 | DSP ASSY | AWU7807 | AWU7807 | AWU7819 | |
| | 51 | SIDER ASSY | AWU7812 | AWU7812 | AWU7820 | |
| NSP | 52 | Energy Star Label | Not used | Not used | AAX7876 | |

2.4 LOADING MECHANISM ASSY

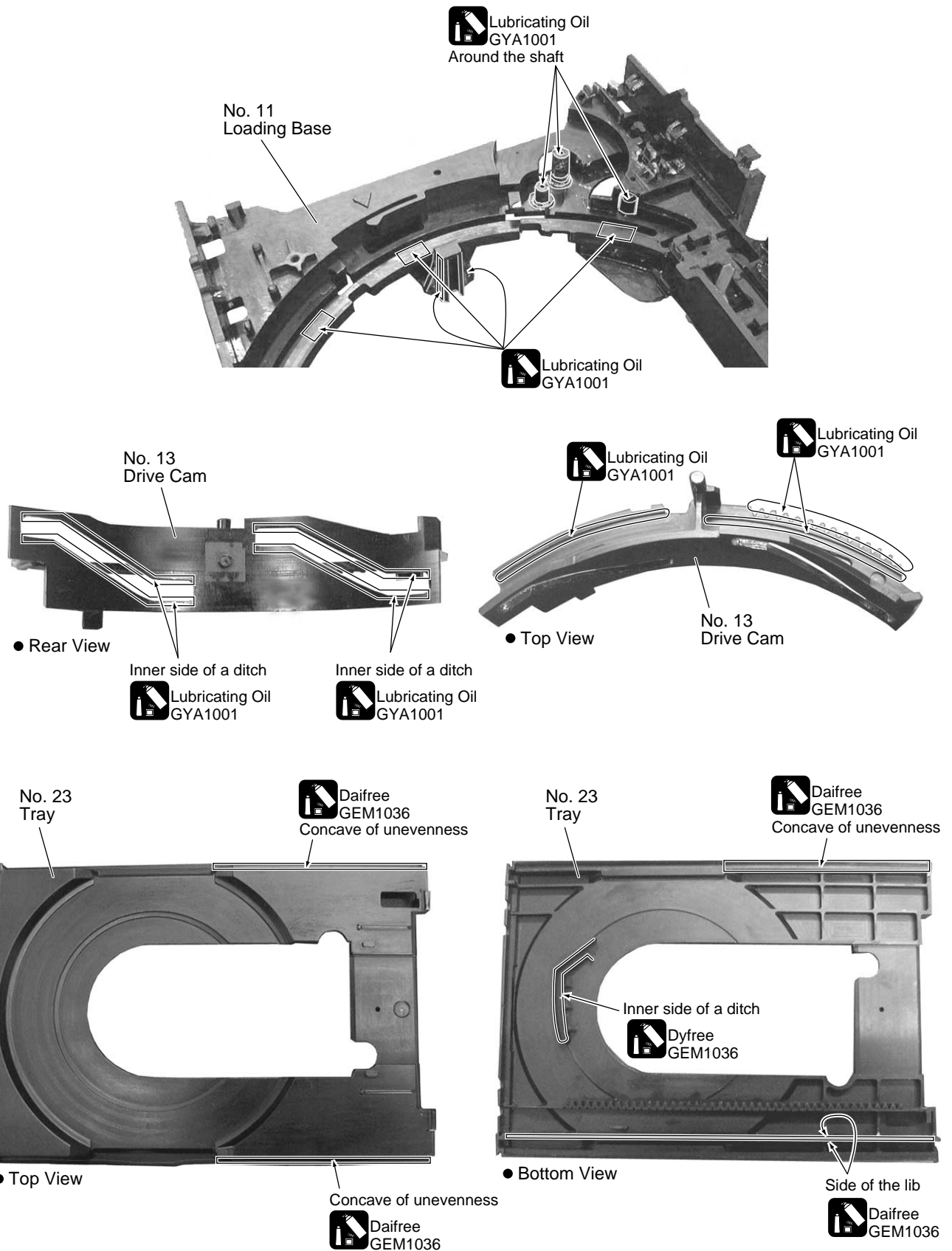
Note :
Refer to
" ■ Application of Lubricant".



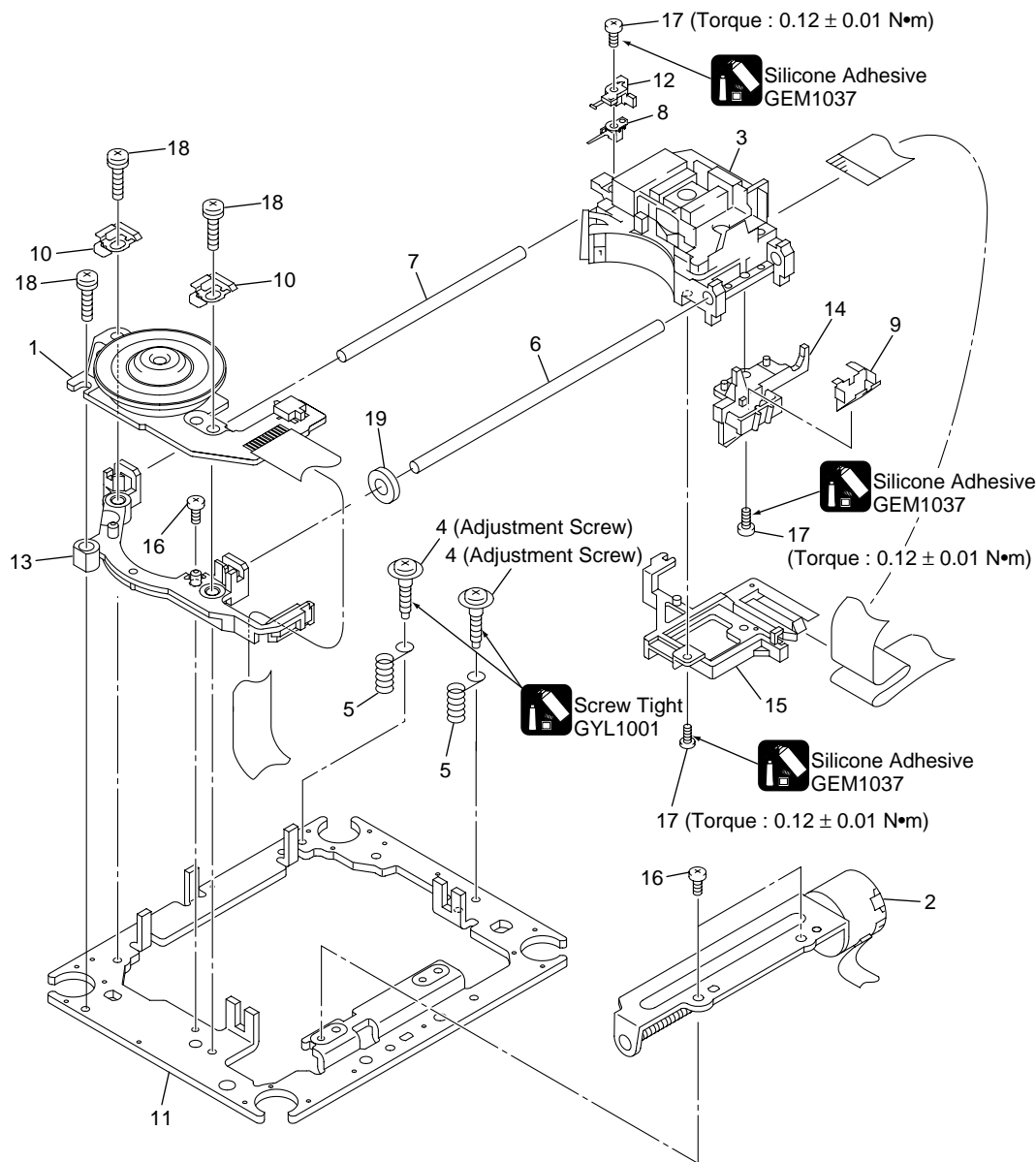
• LOADING MECHANISM ASSY PARTS LIST

| Mark | No. | Description | Part No. | Mark | No. | Description | Part No. |
|------|-----|---------------------------|----------|------|-------|----------------|----------|
| NSP | 1 | LOAB Assy | VWG2279 | | 11 | Loading Base | VNL1917 |
| | 2 | Traverse Mechanism Assy-S | VXX2782 | | 12 | Float Base DVD | VNL1918 |
| | 3 | Loading Motor Assy | VXX2505 | | 13 | Drive Cam | VNL1919 |
| | 4 | Motor Pulley | PNW1634 | | 14 | Gear Pulley | VNL1921 |
| | 5 | Carriage DC Motor / 0.3W | PXM1027 | | 15 | Loading Gear | VNL1922 |
| | 6 | Flexible Cable (26P) | VDA1864 | | 16 | Drive Gear | VNL1923 |
| | 7 | Connector Assy 2P | VKP2253 | | 17 | SW Lever | VNL1925 |
| | 8 | Float Rubber | VEB1327 | | 18 | Clamper Plate | VNE2251 |
| | 9 | Belt | VEB1330 | | 19 | Bridge | VNE2252 |
| | 10 | Stabilizer | VNE2253 | | 20 | Clamper | VNL1924 |
| | | | | 21 | Screw | JGZ17P028FMC | |
| | | | | 22 | Screw | Z39-019 | |
| | | | | 23 | Tray | VNL1920 | |

Application of Lubricant



2.5 TRAVERSE MECHANISM ASSY-S



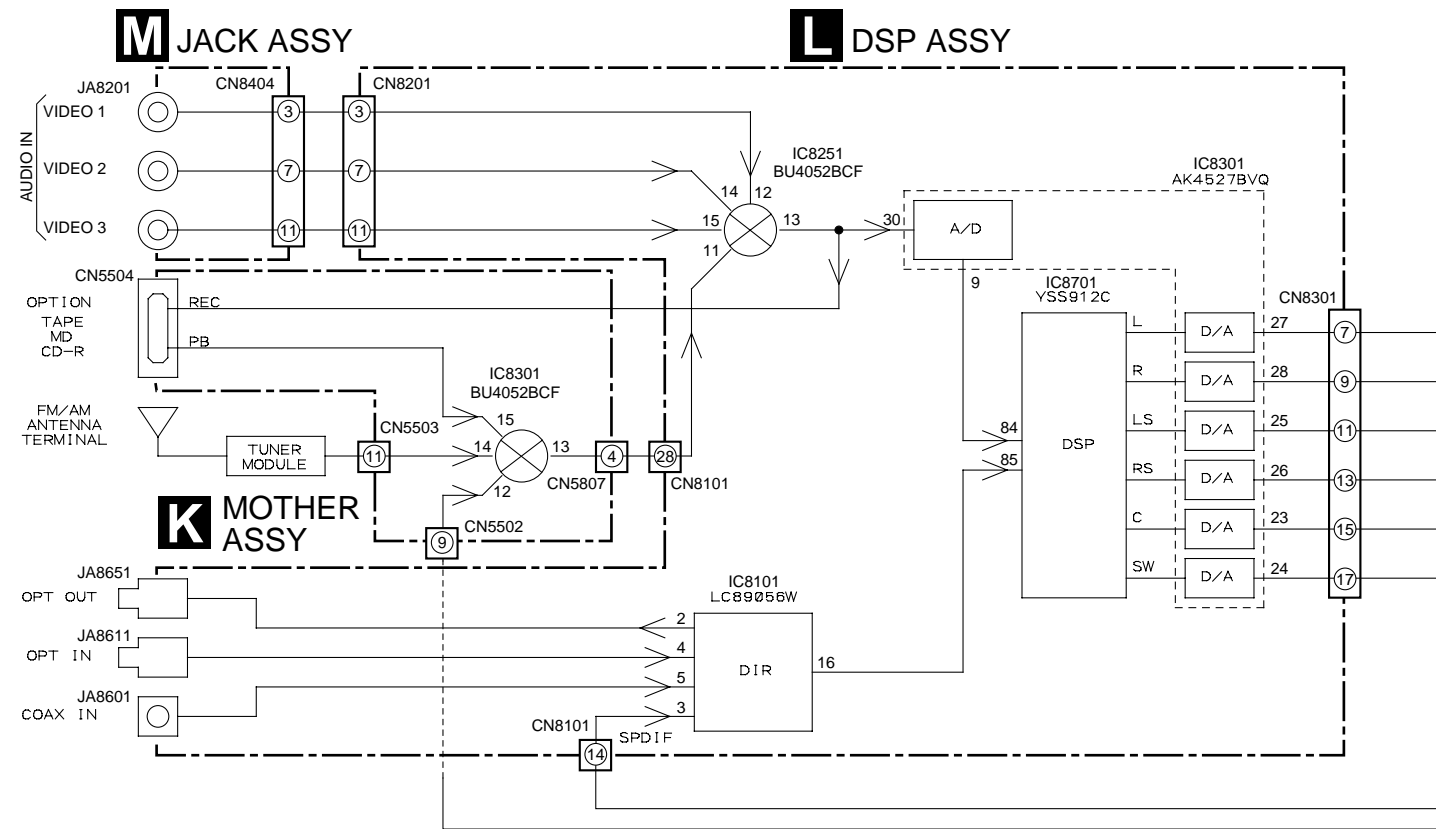
• TRAVERSE MECHANISM ASSY-S PARTS LIST

| Mark | No. | Description | Part No. | Mark | No. | Description | Part No. |
|------|-----|------------------------------|-------------------------|------|-----|-------------------|--------------|
| | 1 | Spindle Motor | VXM1088 (or VXM1089) | | 9 | Joint Spring | VNC1019 |
| | 2 | Stepping Motor (CARRIAGE) | VXM1090 (or VXM1091) | NSP | 10 | Support Spring | VNC1020 |
| | 3 | Pickup Assy-S | OXX8003 | | 11 | Mechanism Chassis | VNE2248 |
| | 4 | Skew Screw | VBA1080 | | 12 | Slider | VNL1811 |
| | 5 | Skew Spring | VBH1335 | | 13 | Spacer | VNL1913 |
| | 6 | Guide Bar | VLL1514 | | 14 | Joint | VNL1914 |
| | 7 | Sub Guide Bar | VLL1515 | | 15 | FFC Holder | VNL1915 |
| | 8 | Hold Spring | VNC1017 | | 16 | Screw | BBZ20P050FZK |
| | | | | | 17 | Screw | OBA8009 |
| | | | | | 18 | Screw | PMA26P100FMC |
| | | | | | 19 | Damper Sheet | VEB1335 |

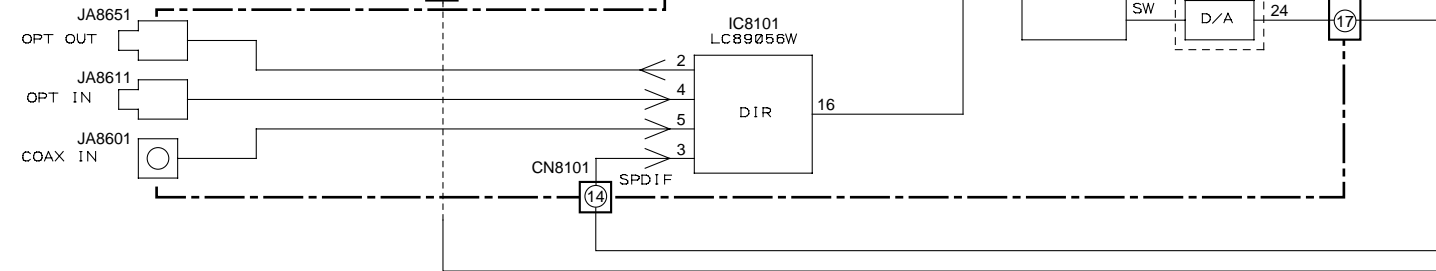
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

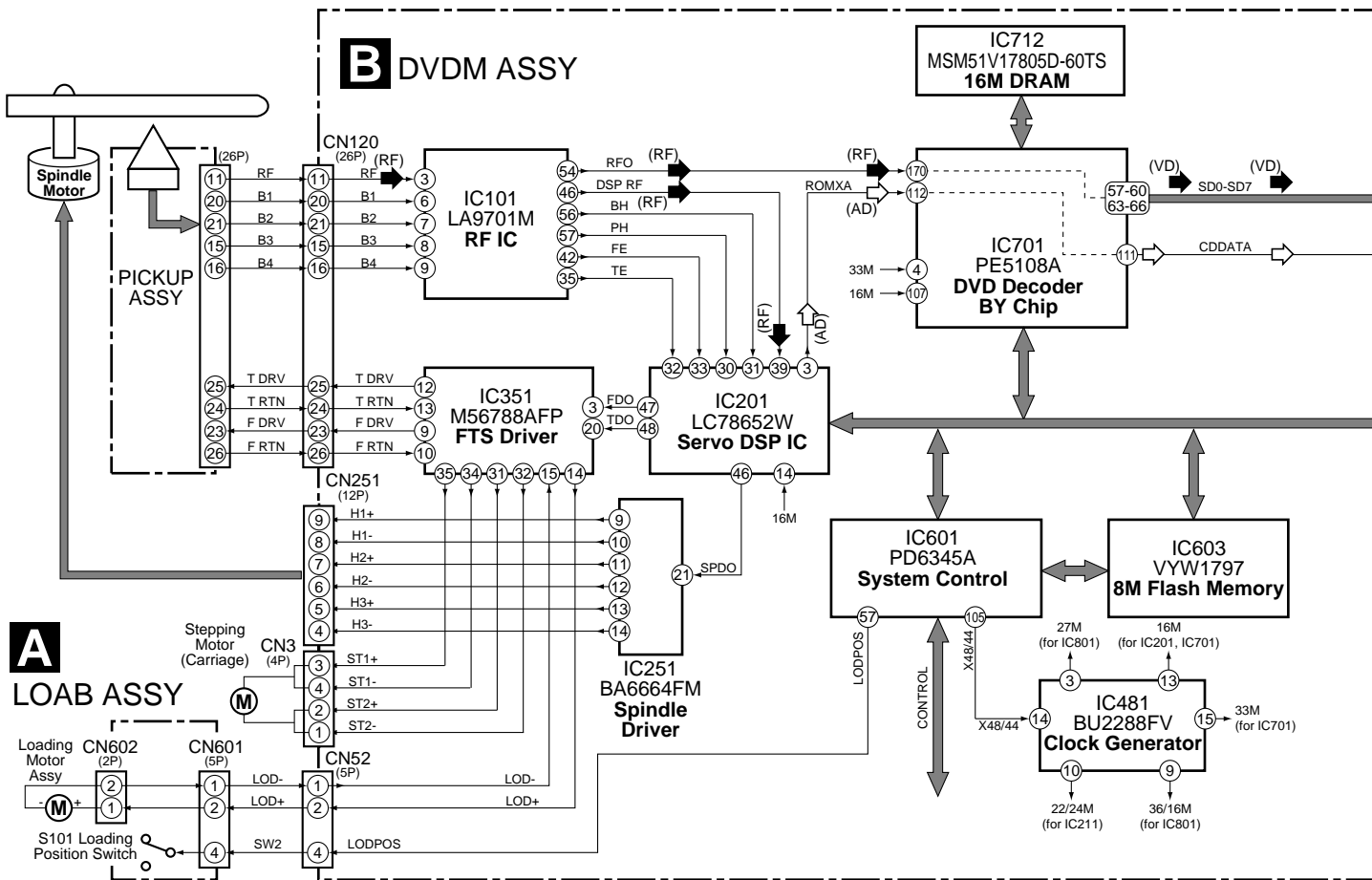
A



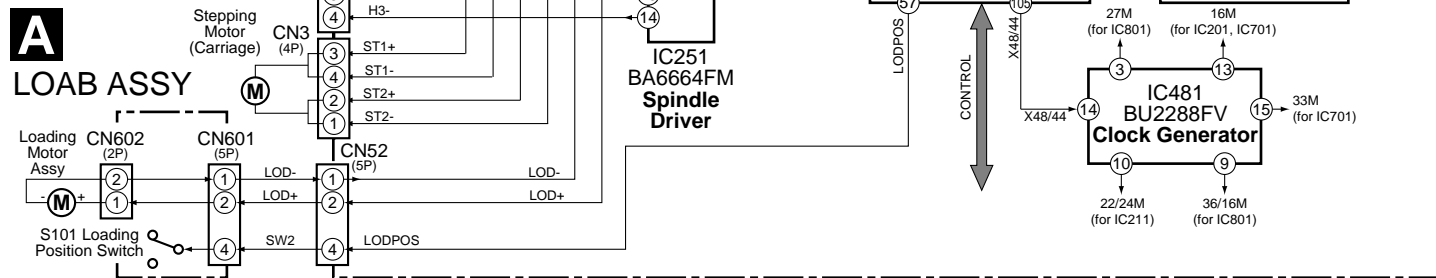
B



C

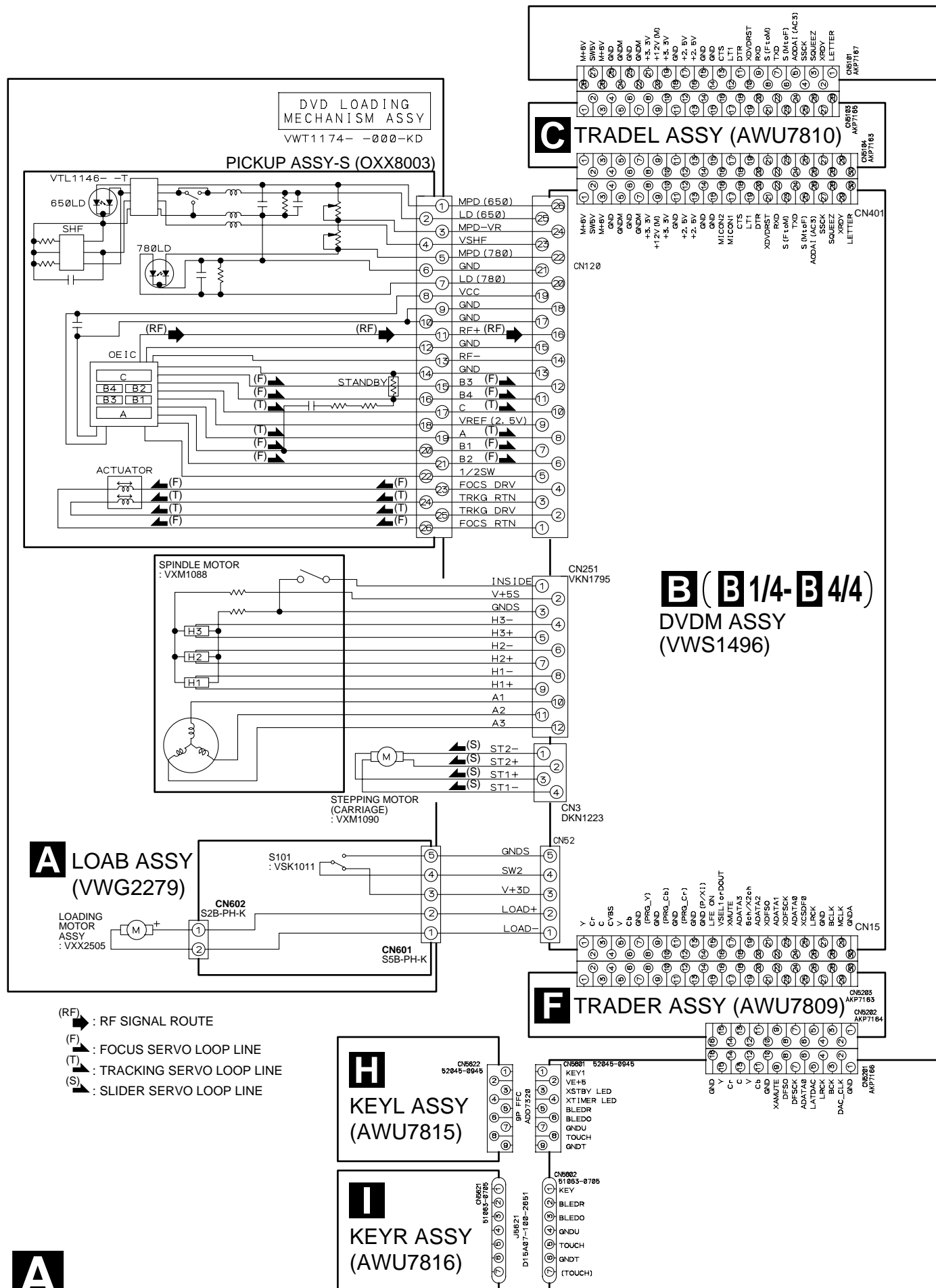


D



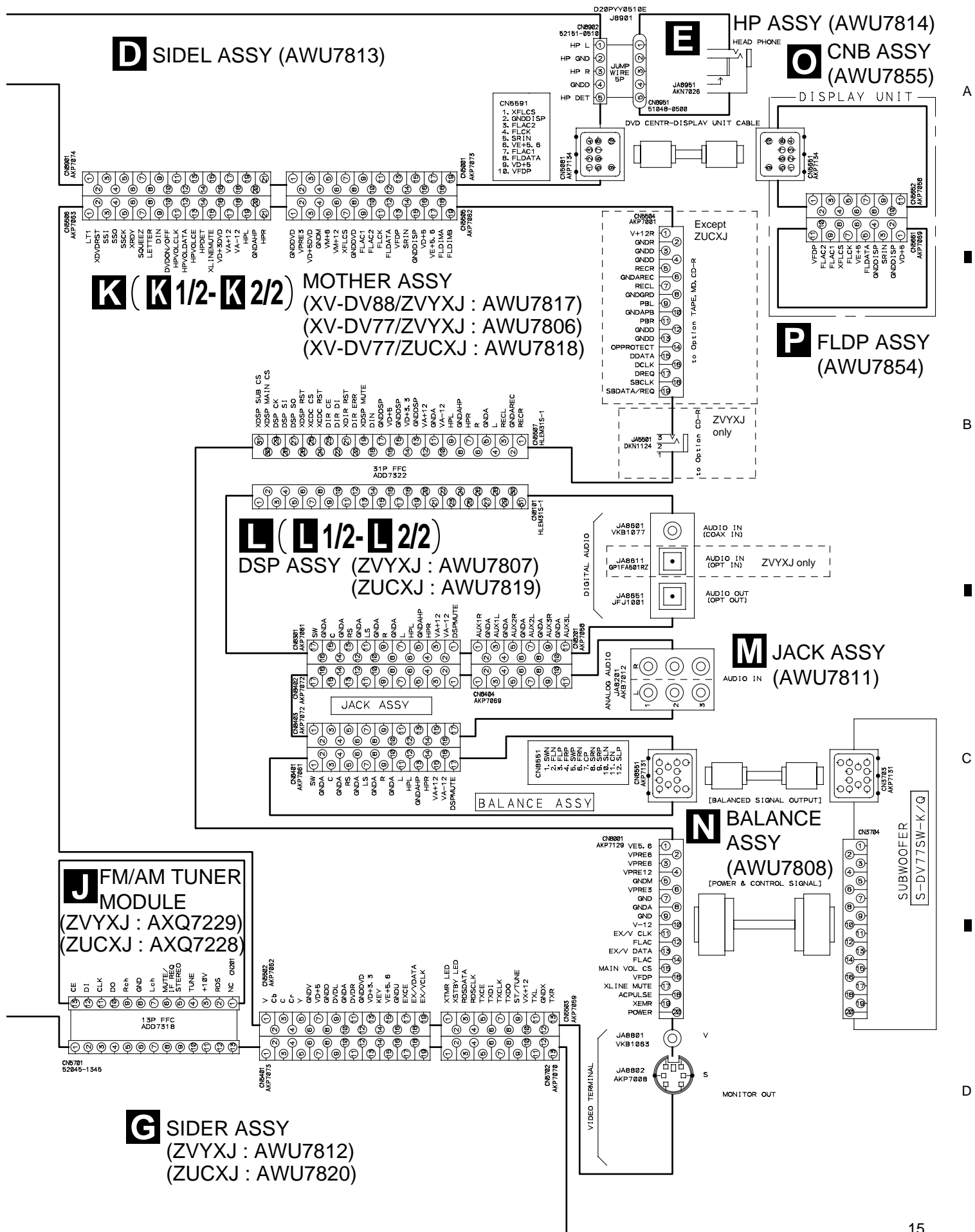


3.2 OVERALL WIRING CONNECTION DIAGRAM and LOAB ASSY

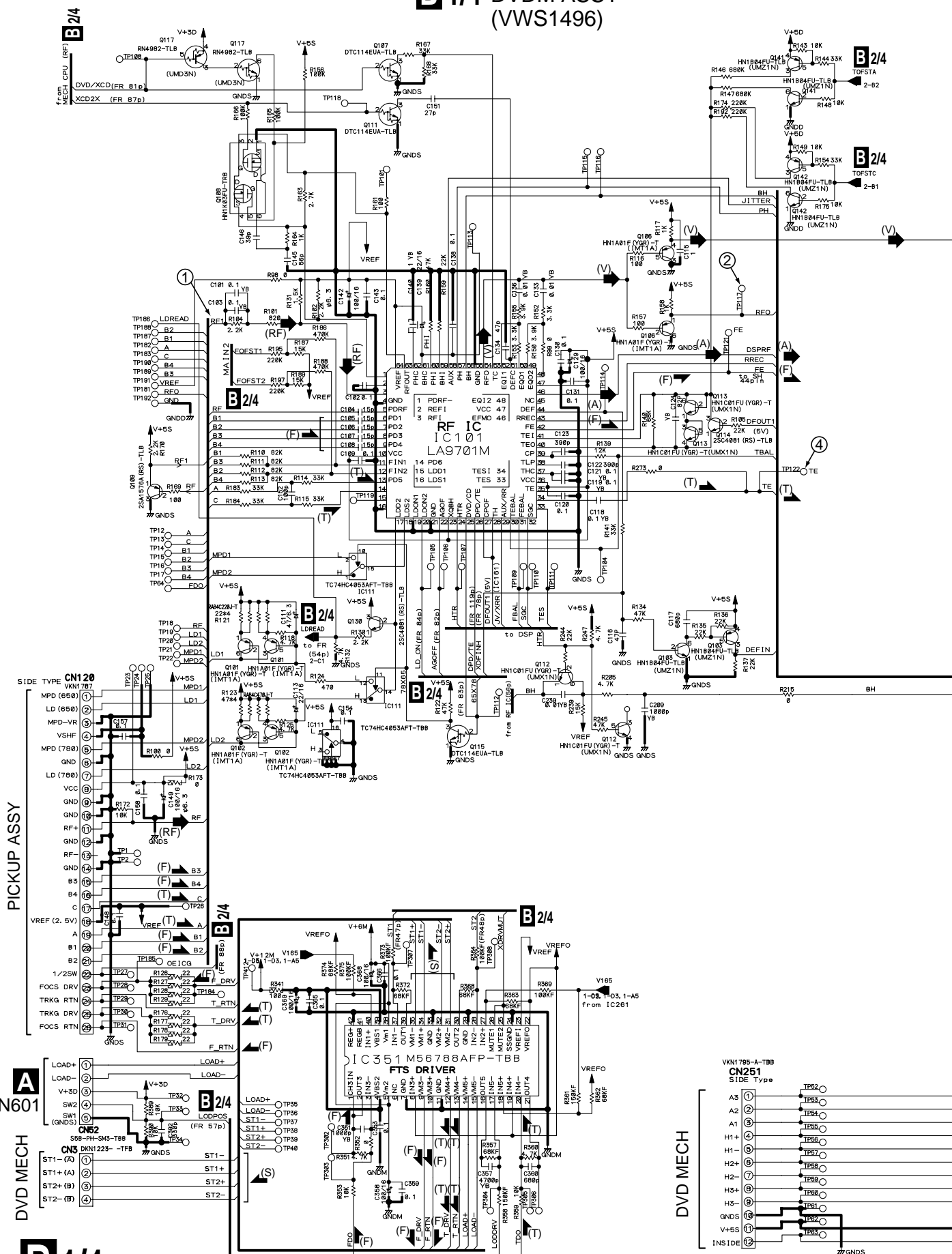


XV-DV88, XV-DV77

Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



B 1/4 DVDM ASSY
(VWS1496)

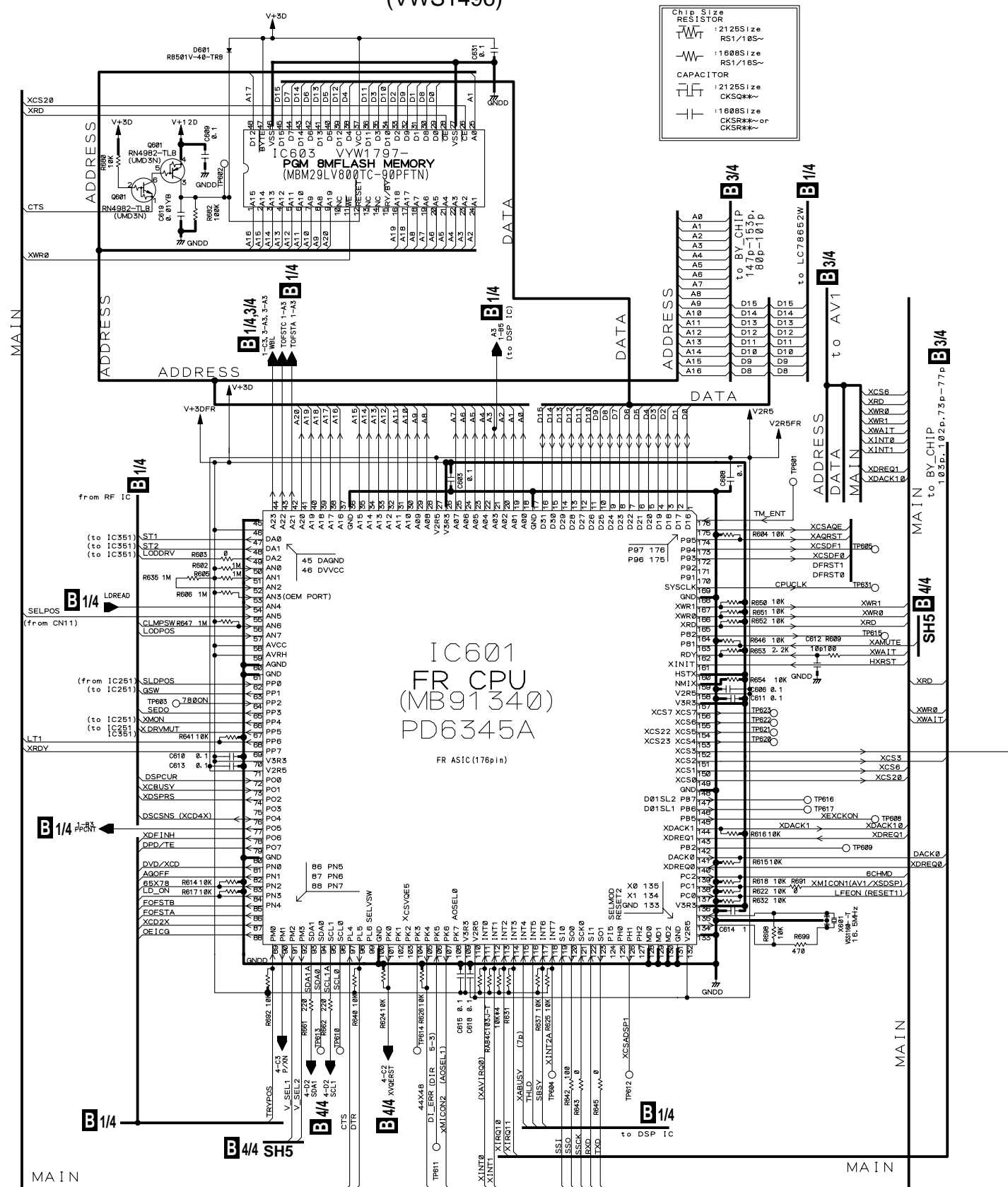


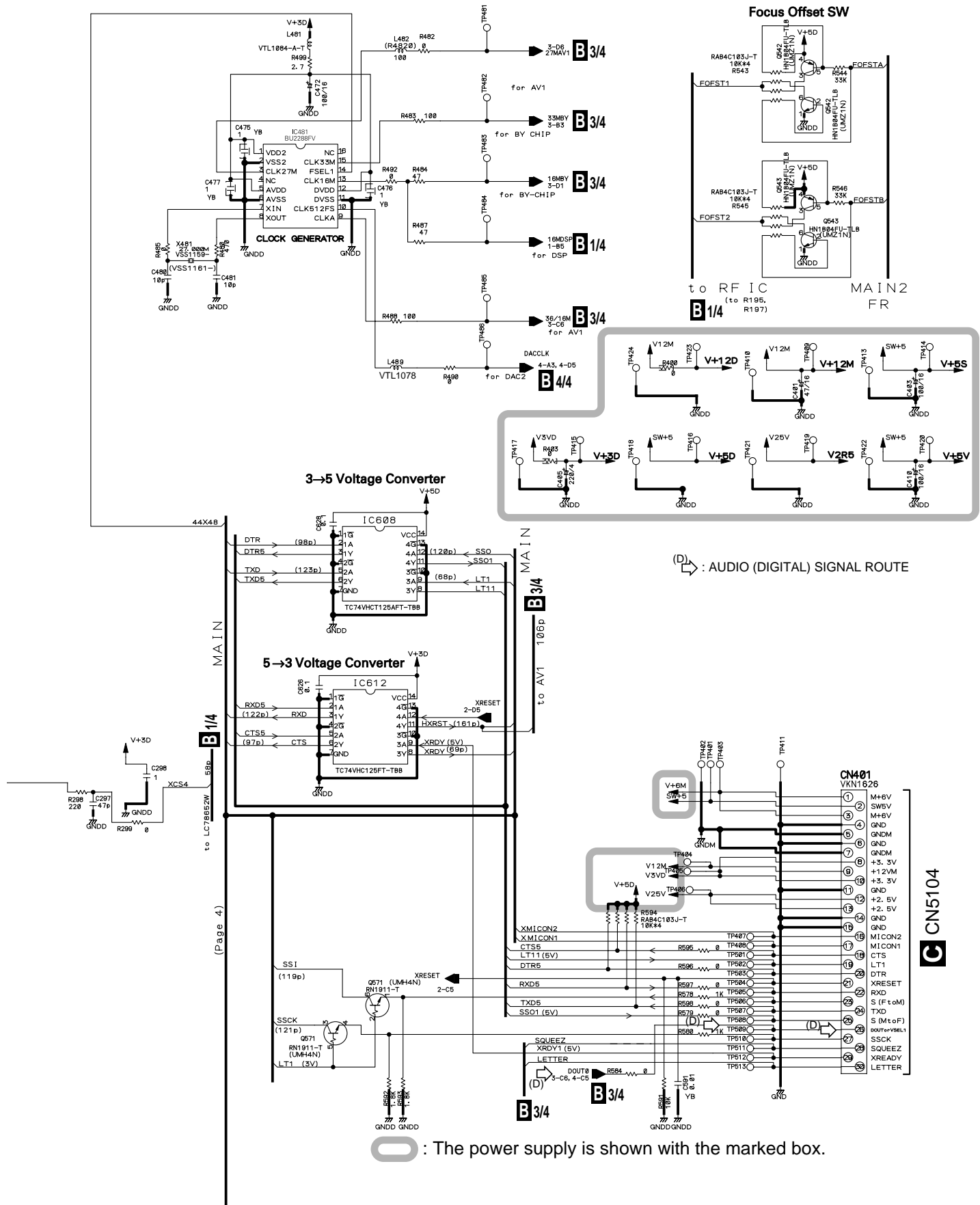


D

3.4 DVDM ASSY (2/4)

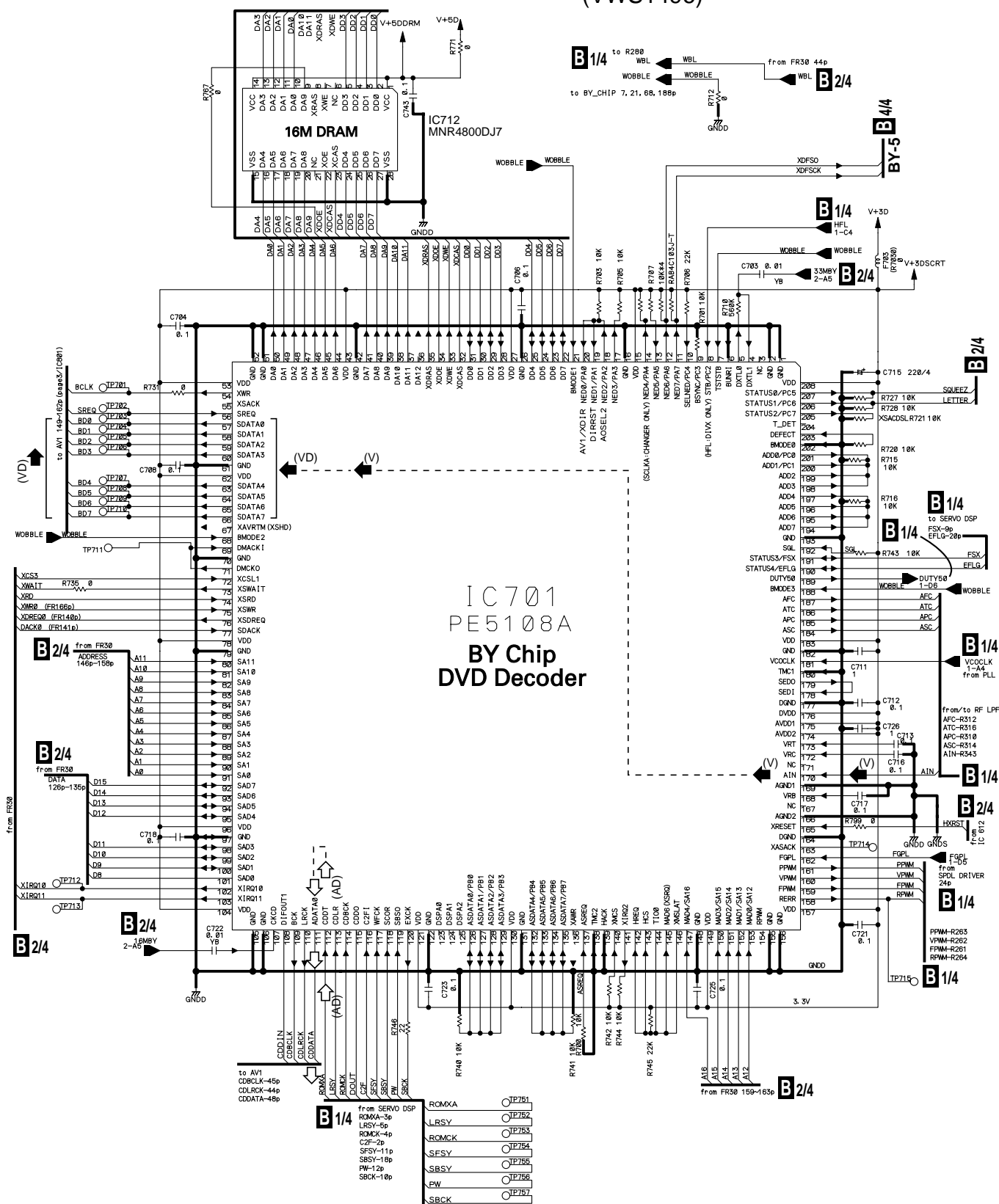
B 2/4 DVDM ASSY
(VWS1496)

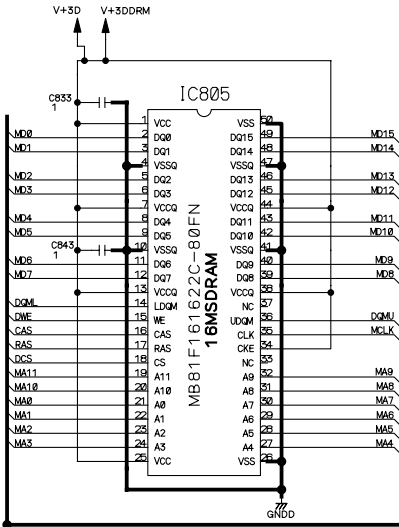




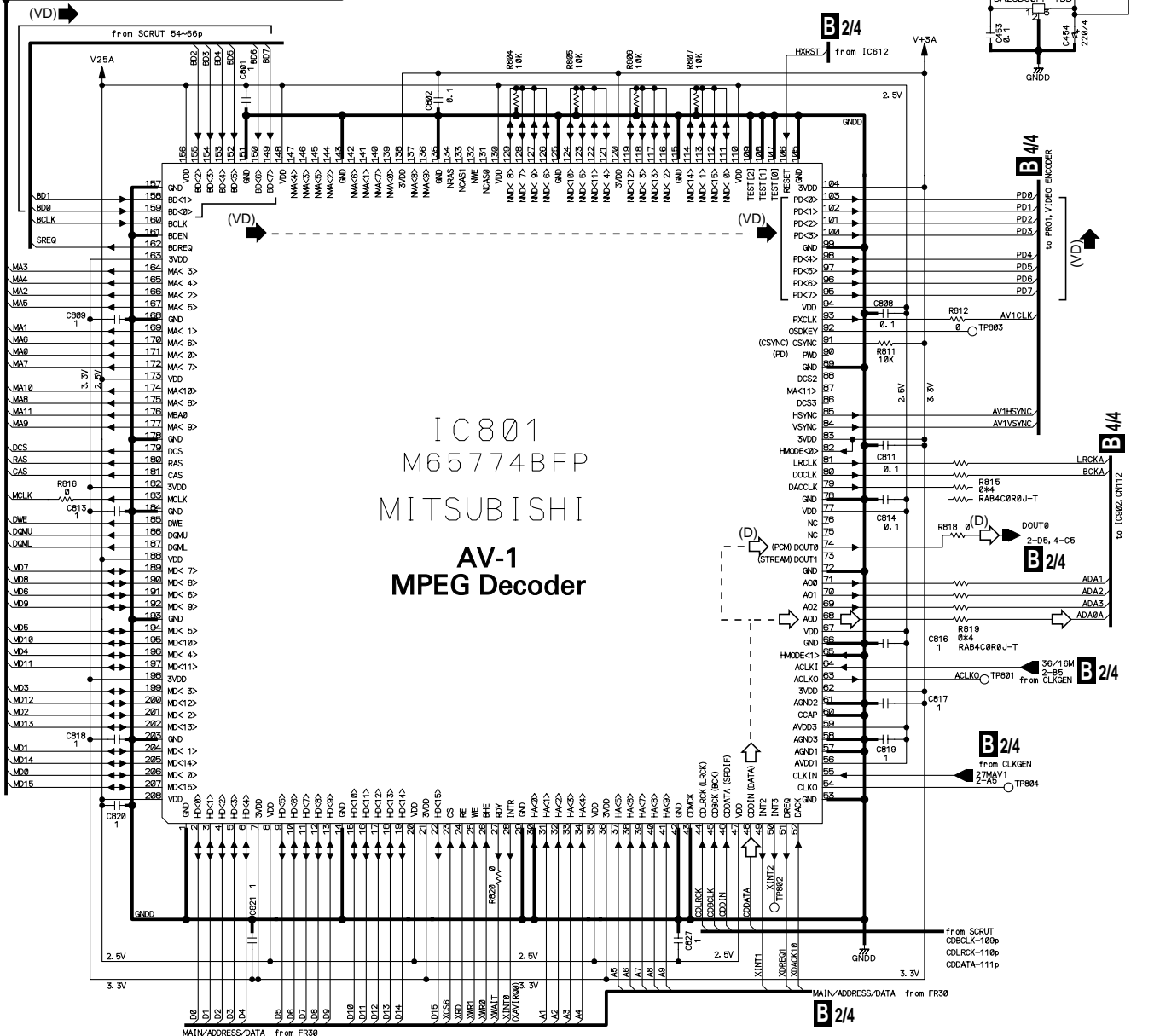
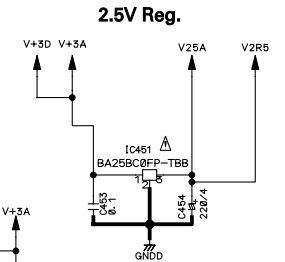
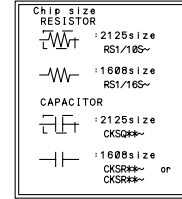
3.5 DVDM ASSY (3/4)

B 3/4 DVDM ASSY
(VWS1496)

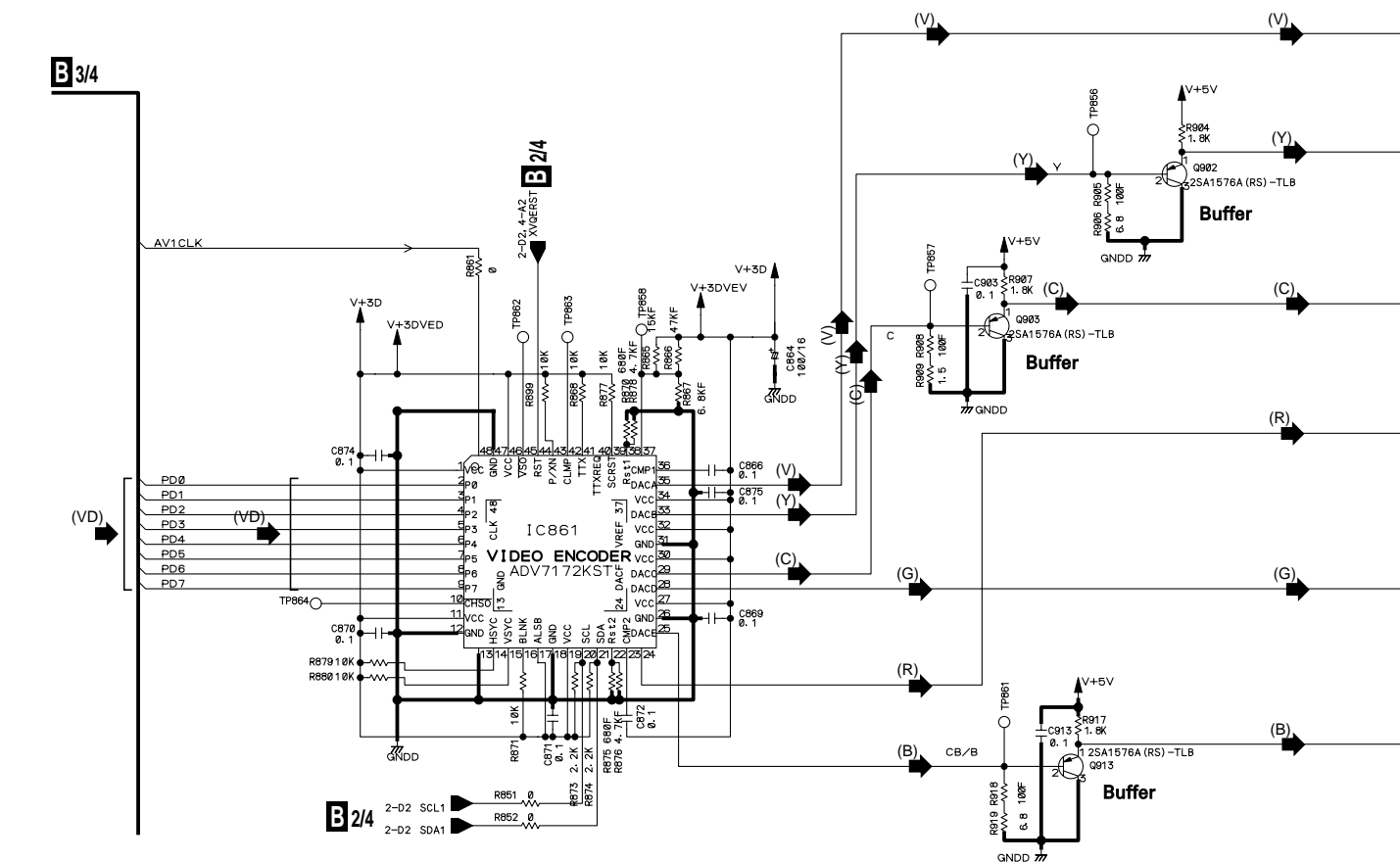




- (V) : RF (VIDEO) SIGNAL ROUTE
- (VD) : VIDEO DATA SIGNAL ROUTE
- (AD) : AUDIO DATASIGNAL ROUTE
- : AUDIO SIGNAL ROUTE
- (D) : AUDIO (DIGITAL) SIGNAL ROUTE



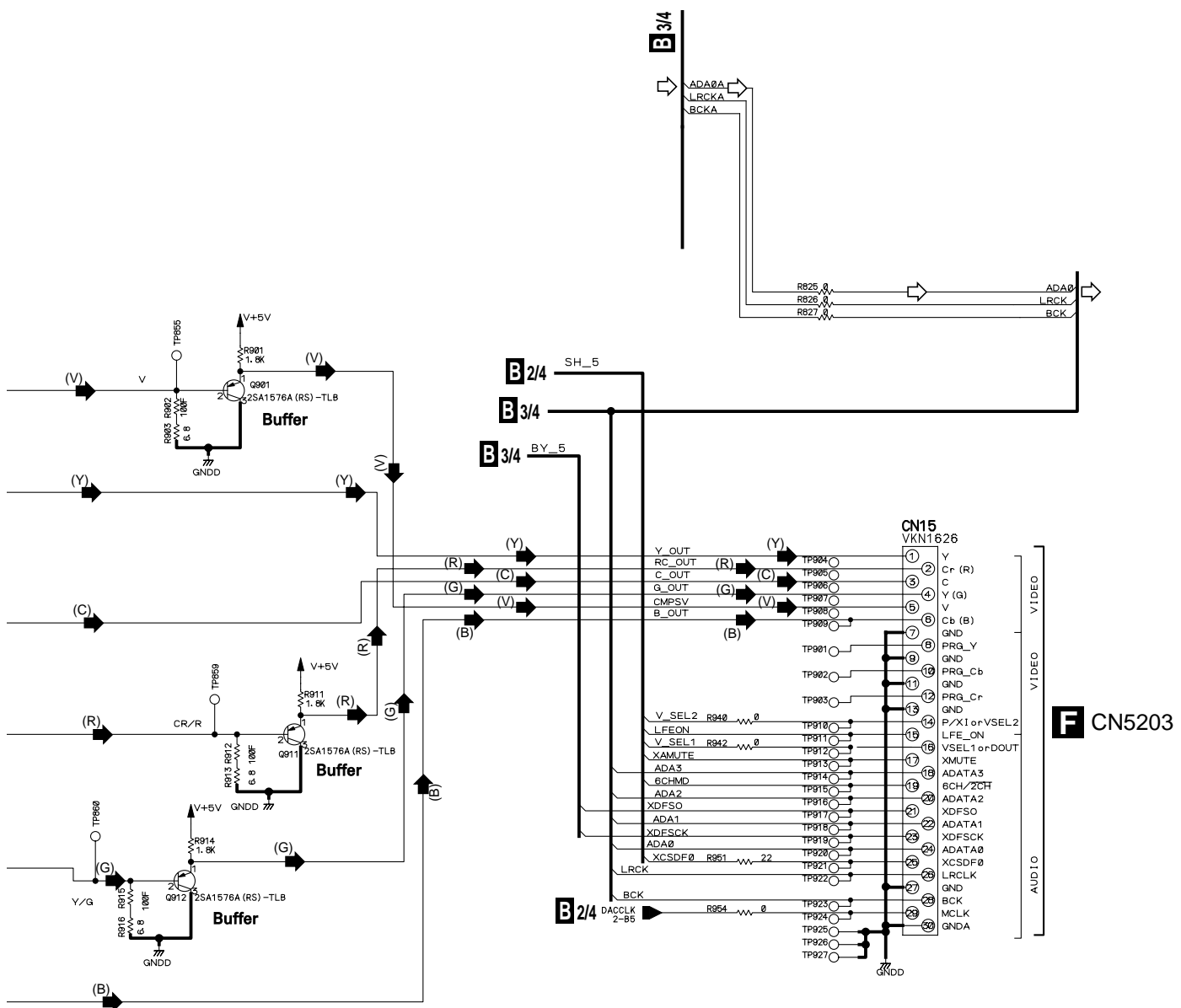
3.6 DVDM ASSY (4/4)

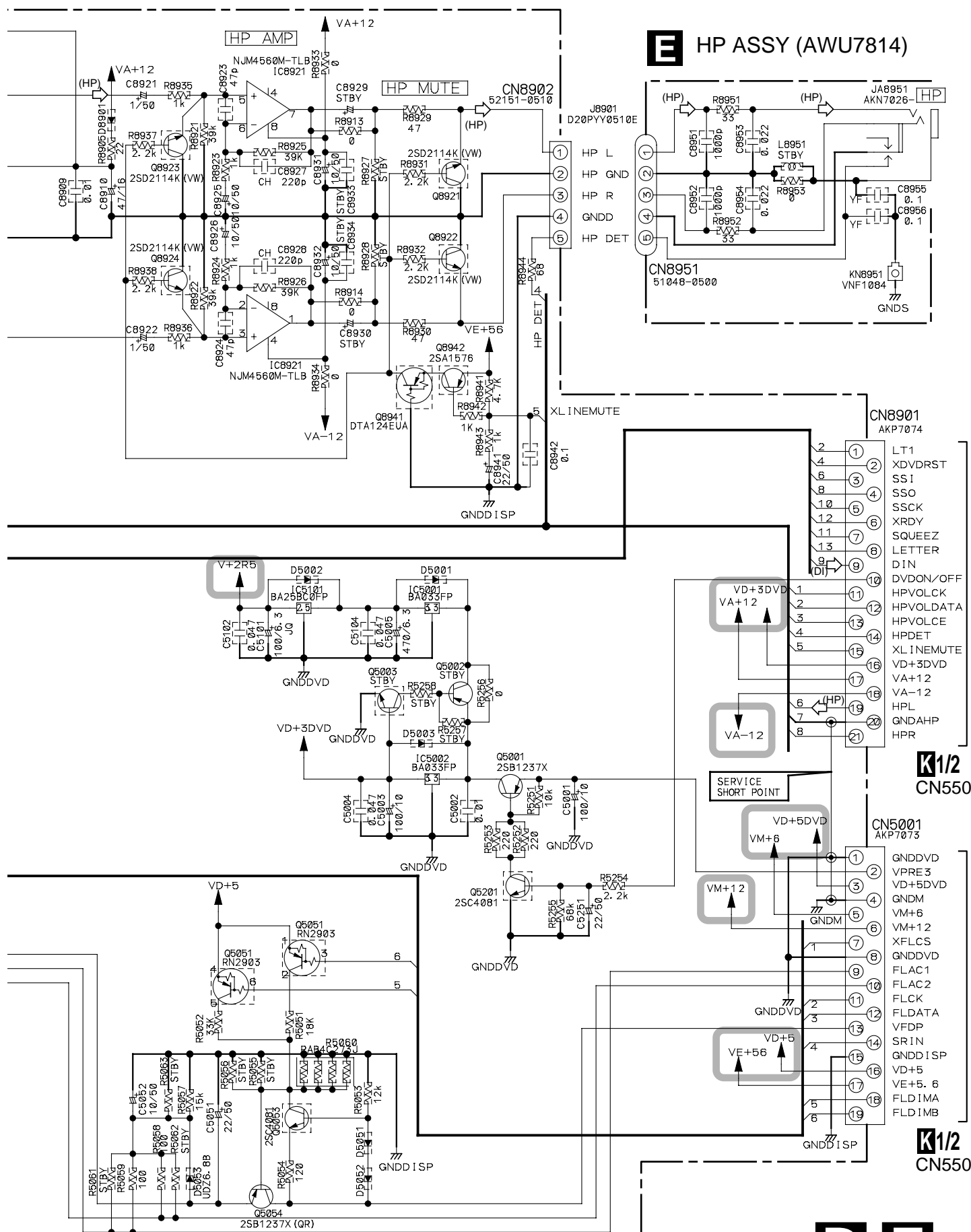


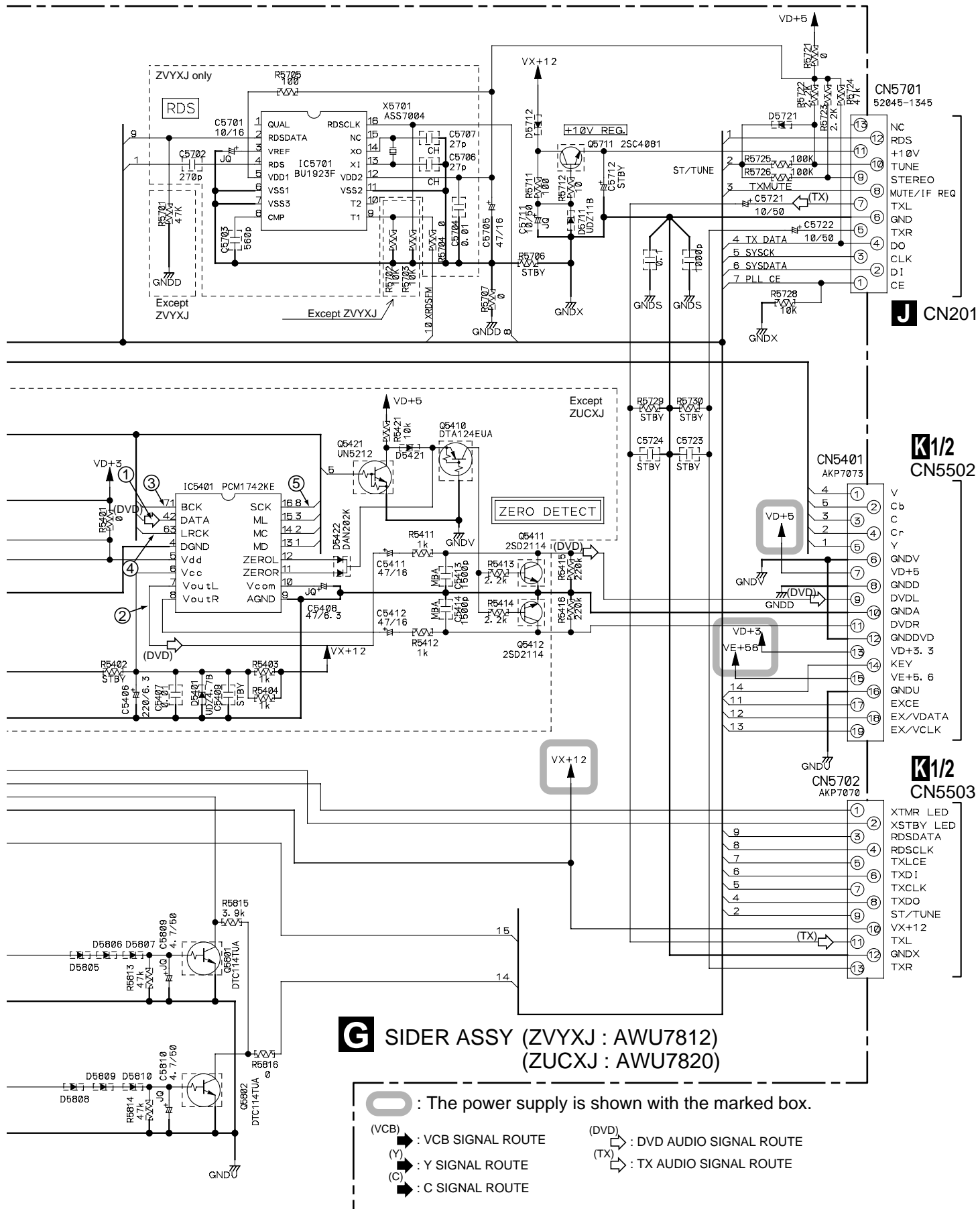
B 4/4 DVDM ASSY (VWS1496)

- (VD) : VIDEO DATASIGNAL ROUTE
 (V) : V SIGNAL ROUTE
 (Y) : Y SIGNAL ROUTE
 (C) : C SIGNAL ROUTE
 (R) : R SIGNAL ROUTE
 (G) : G SIGNAL ROUTE
 (B) : B SIGNAL ROUTE
 □ : AUDIO SIGNAL ROUTE

| CHIP SIZE | |
|-----------|--------------------|
| RESISTOR | : 2125size |
| | RS1/10S~ |
| | : 1608size |
| | RS1/16S~ |
| CAPACITOR | |
| | : 2125size |
| | CKSQ**~ |
| | : 1608size |
| | CCSR**~ or CKSR**~ |

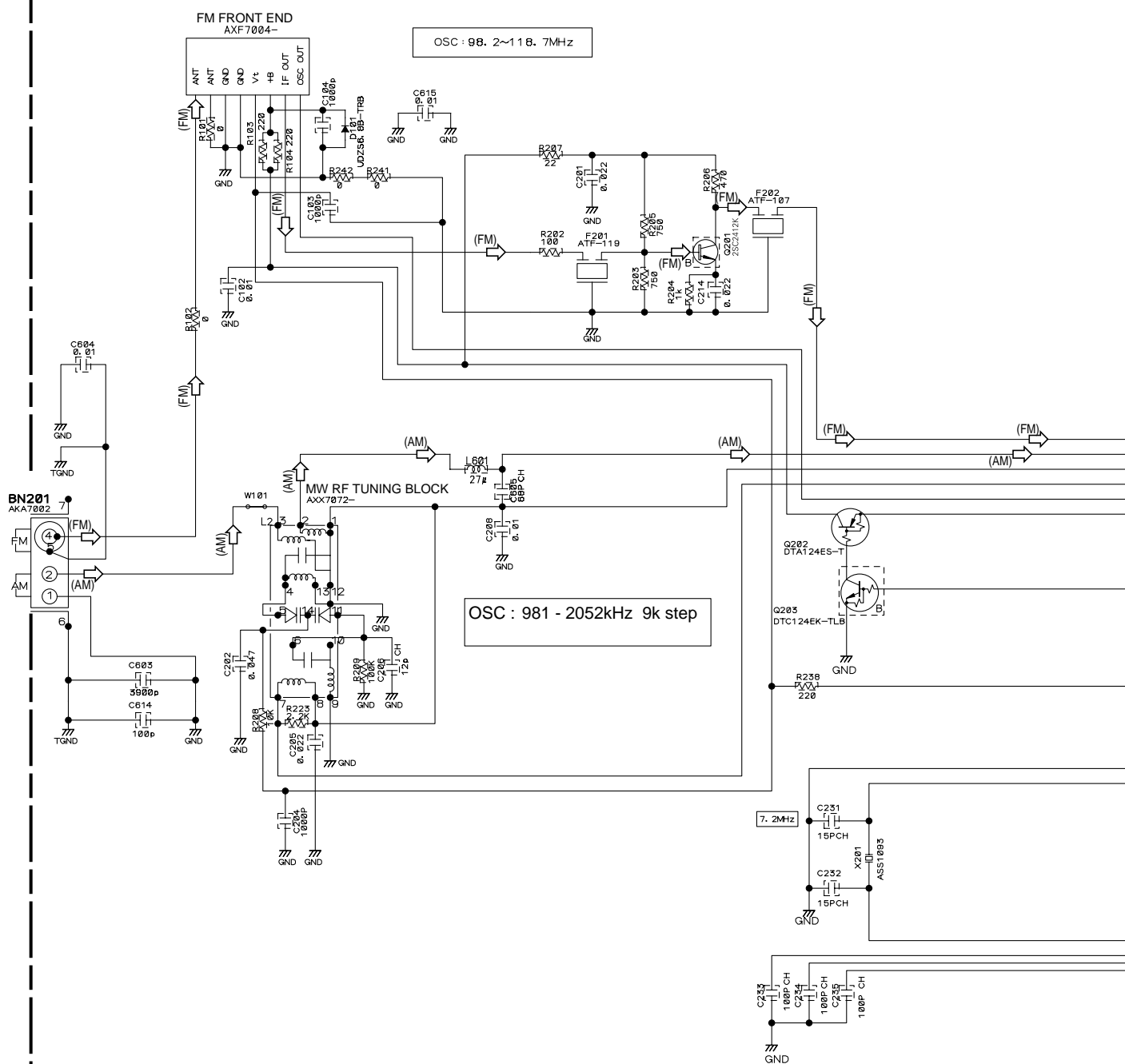






3.9 FM/AM TUNER MODULE (ZVYXJ TYPE)

J FM/AM TUNER MODULE (ZVYXJ : AXQ7229)



Notes

1. RESISTORS


Indicated in Ω , $1/16W \pm 5\%$ Tolerance unless otherwise noted K:K Ω , M:M Ω .

2. CAPACITORS

Indicated in Capacity (μF)/VOLTAGE (V) unless otherwise noted P:PF.

3. DIODES

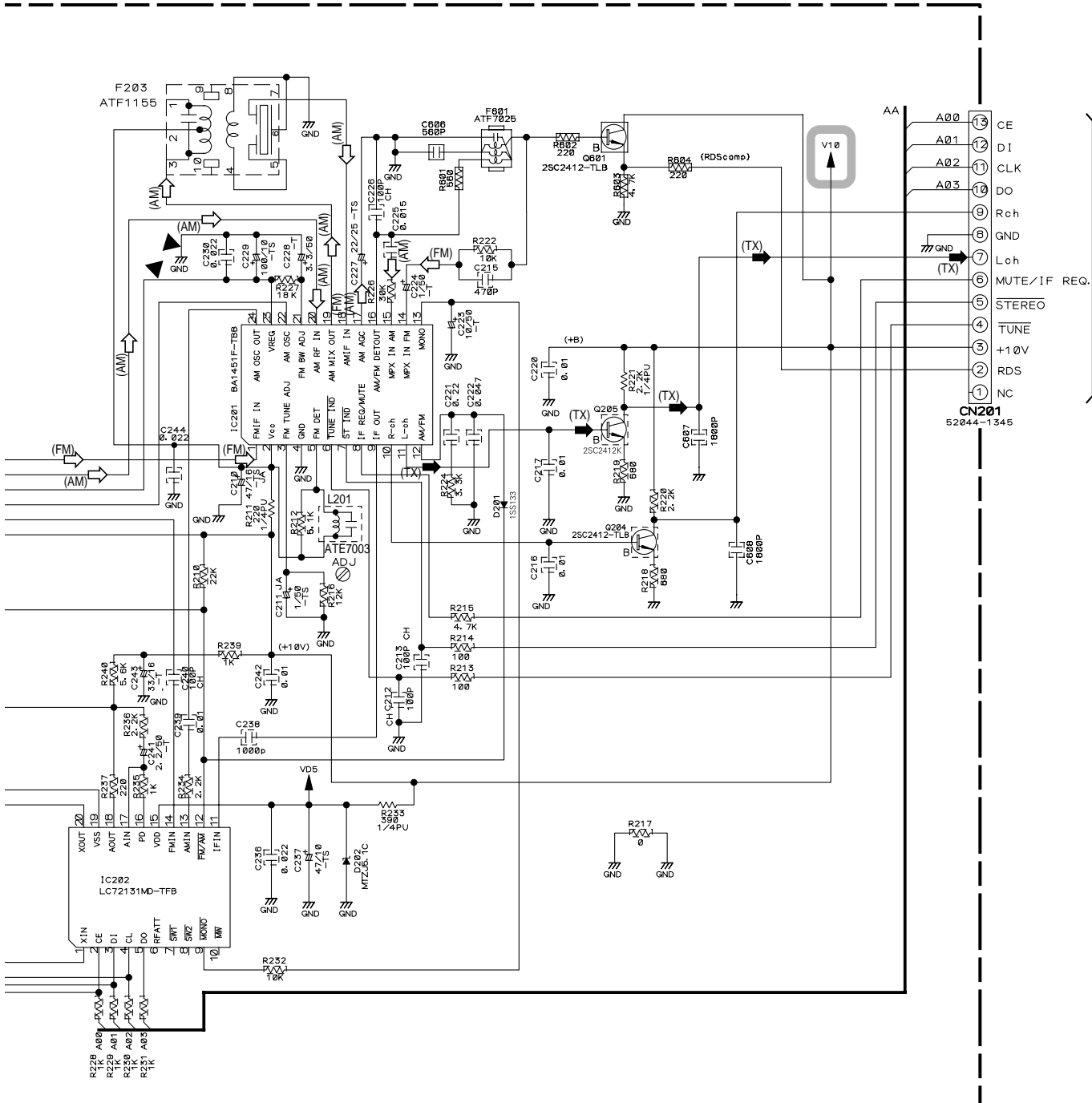
No mark diode is 1SS133.

 : The power supply is shown with the marked box.

(TX)  : AUDIO SIGNAL ROUTE (TUNER)

(AM)  : AM SIGNAL ROUTE

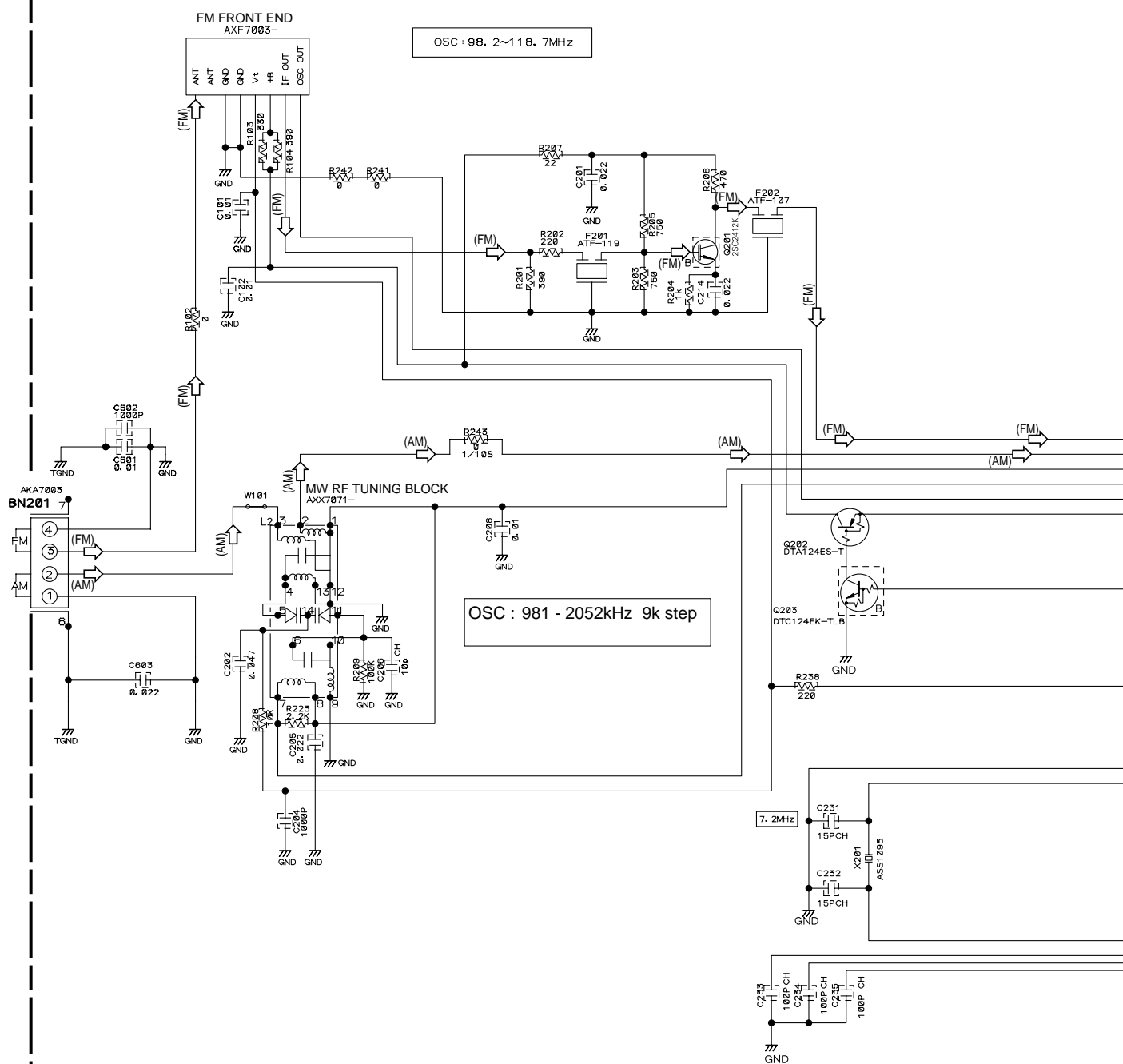
(FM)  : FM SIGNAL ROUTE



CN5701

3.10 FM/AM TUNER MODULE (ZUCXJ TYPE)

J FM/AM TUNER MODULE (ZUCXJ : AXQ7228)



Notes

1. RESISTORS


Indicated in Ω , $1/16W \pm 5\%$ Tolerance unless otherwise noted K:K Ω , M:M Ω .

2. CAPACITORS

Indicated in Capacity (μF)/VOLTAGE (V) unless otherwise noted P:PF.

3. DIODES

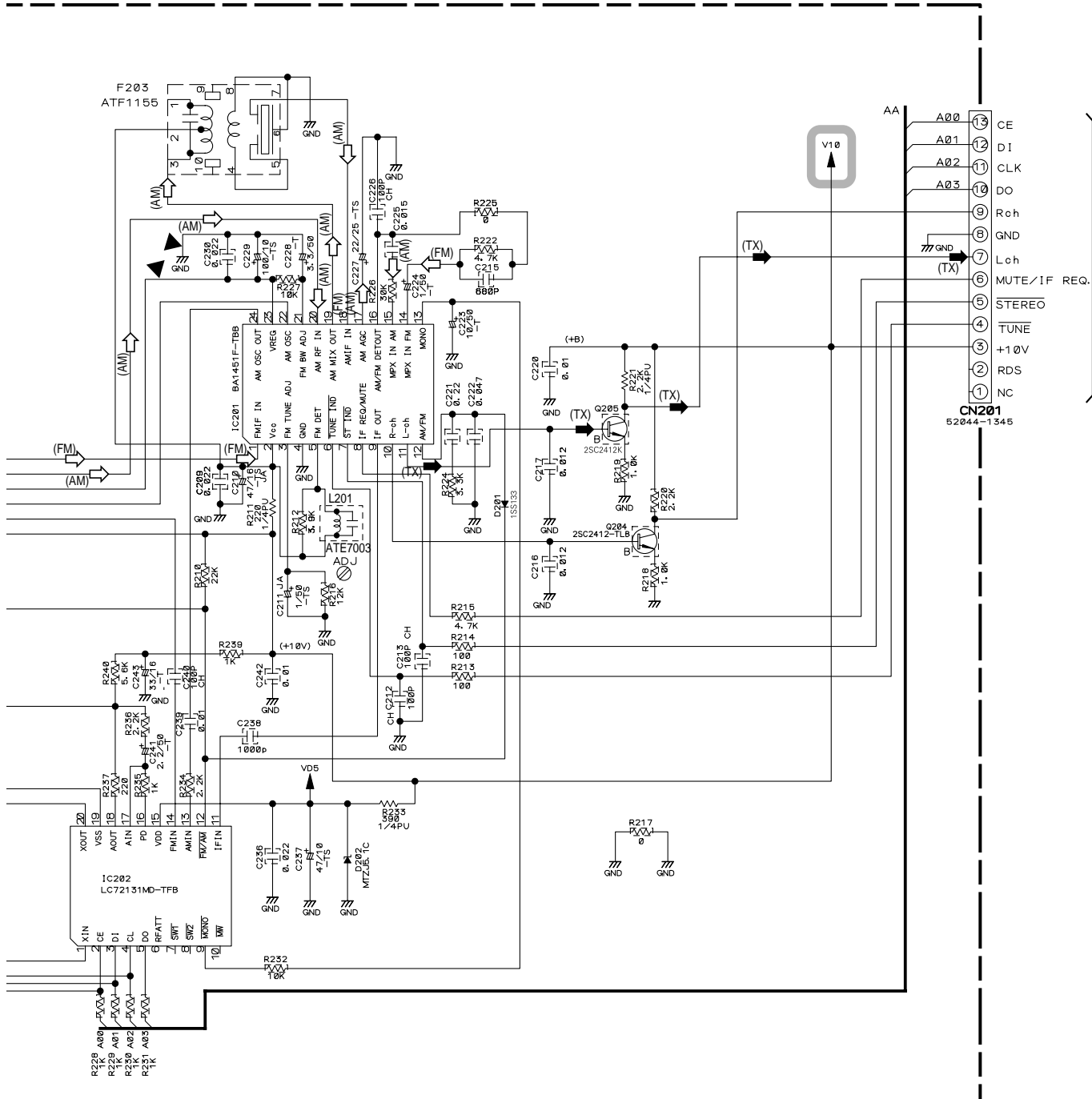
No mark diode is 1SS133.

 : The power supply is shown with the marked box.

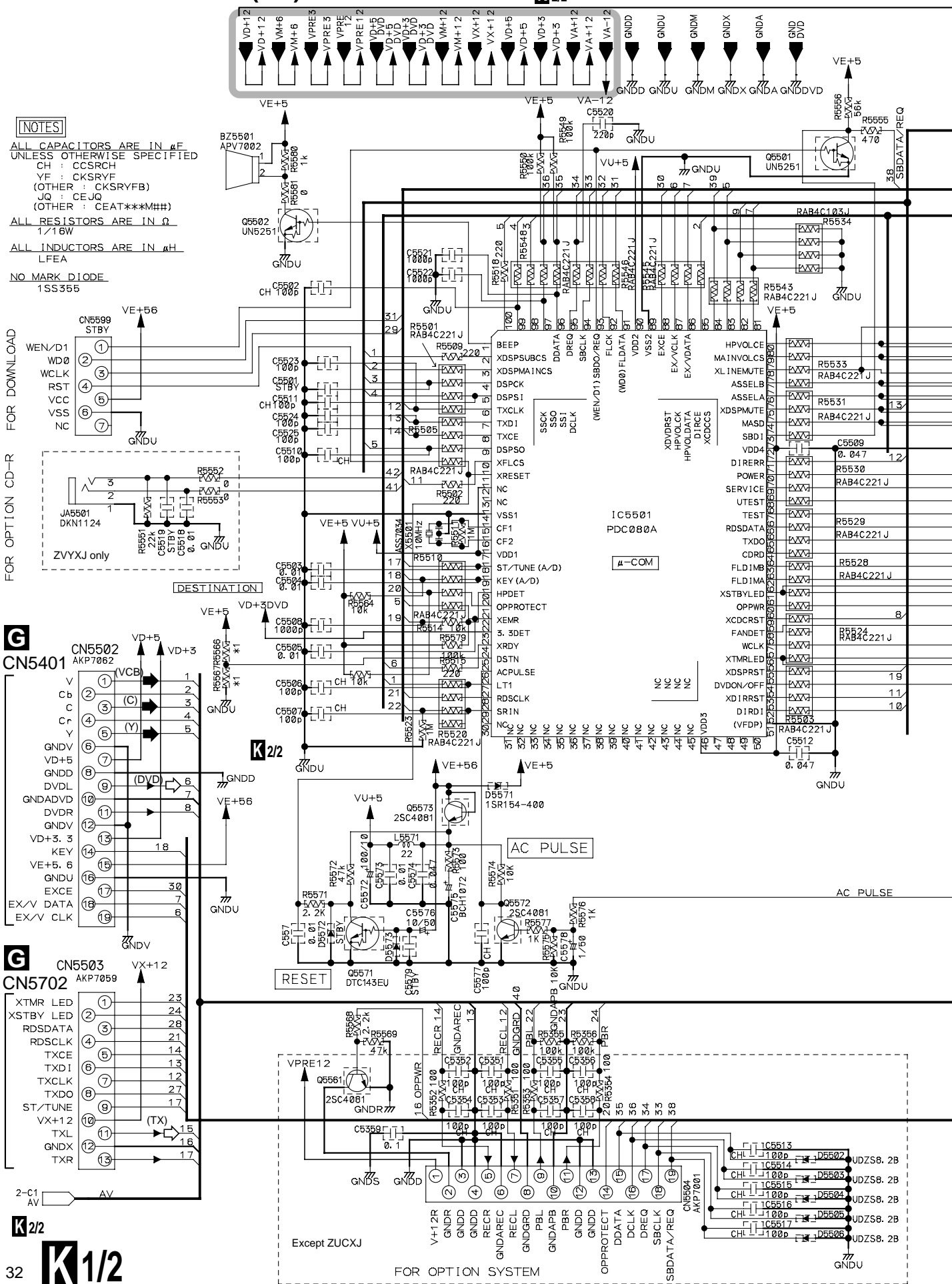
 : AUDIO SIGNAL ROUTE (TUNER)

 : AM SIGNAL ROUTE

 : FM SIGNAL ROUTE



3.11 MOTHER ASSY (1/2)

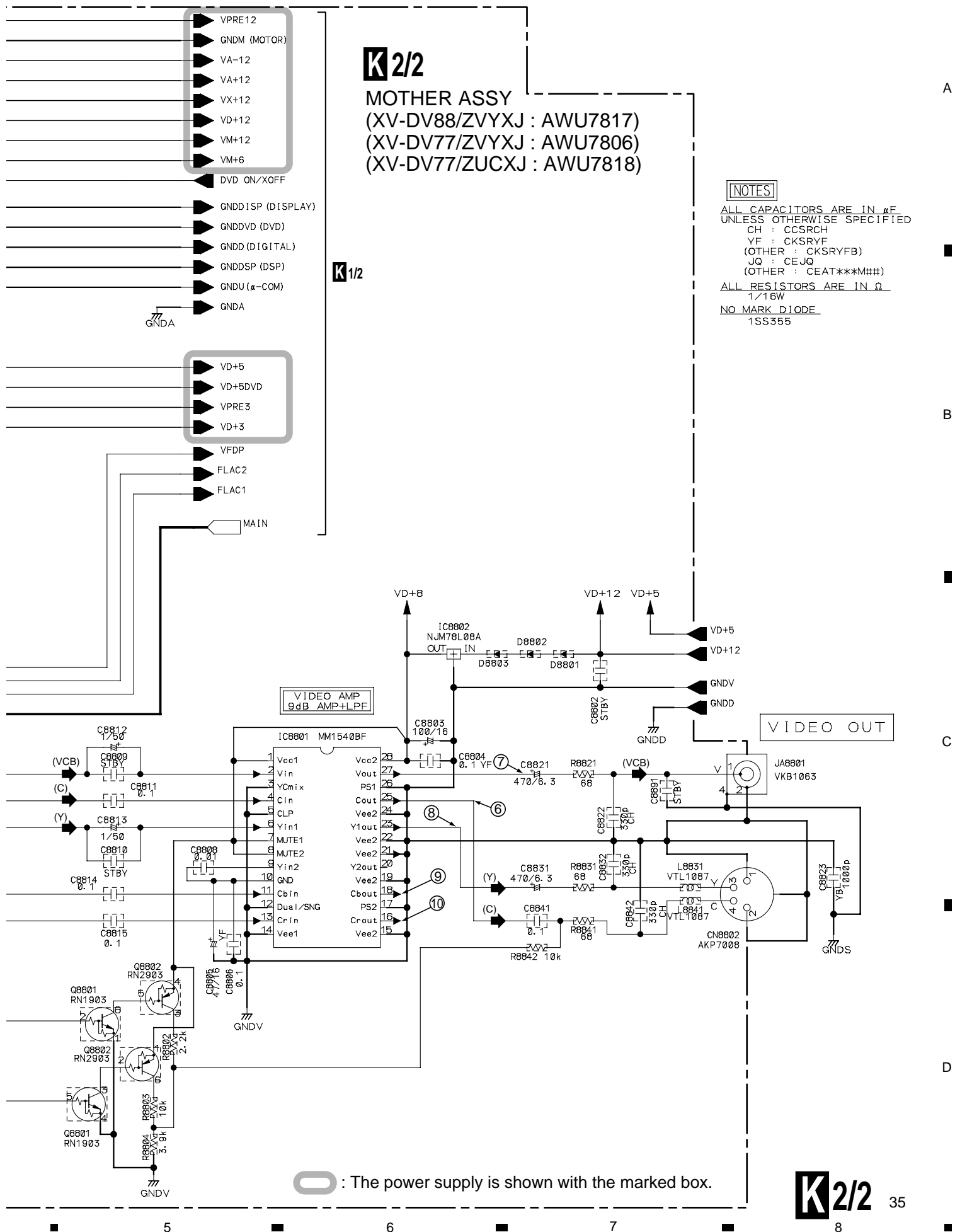




K^{1/2} 33

3.12 MOTHER ASSY (2/2)





3.13 DSP ASSY (1/2)

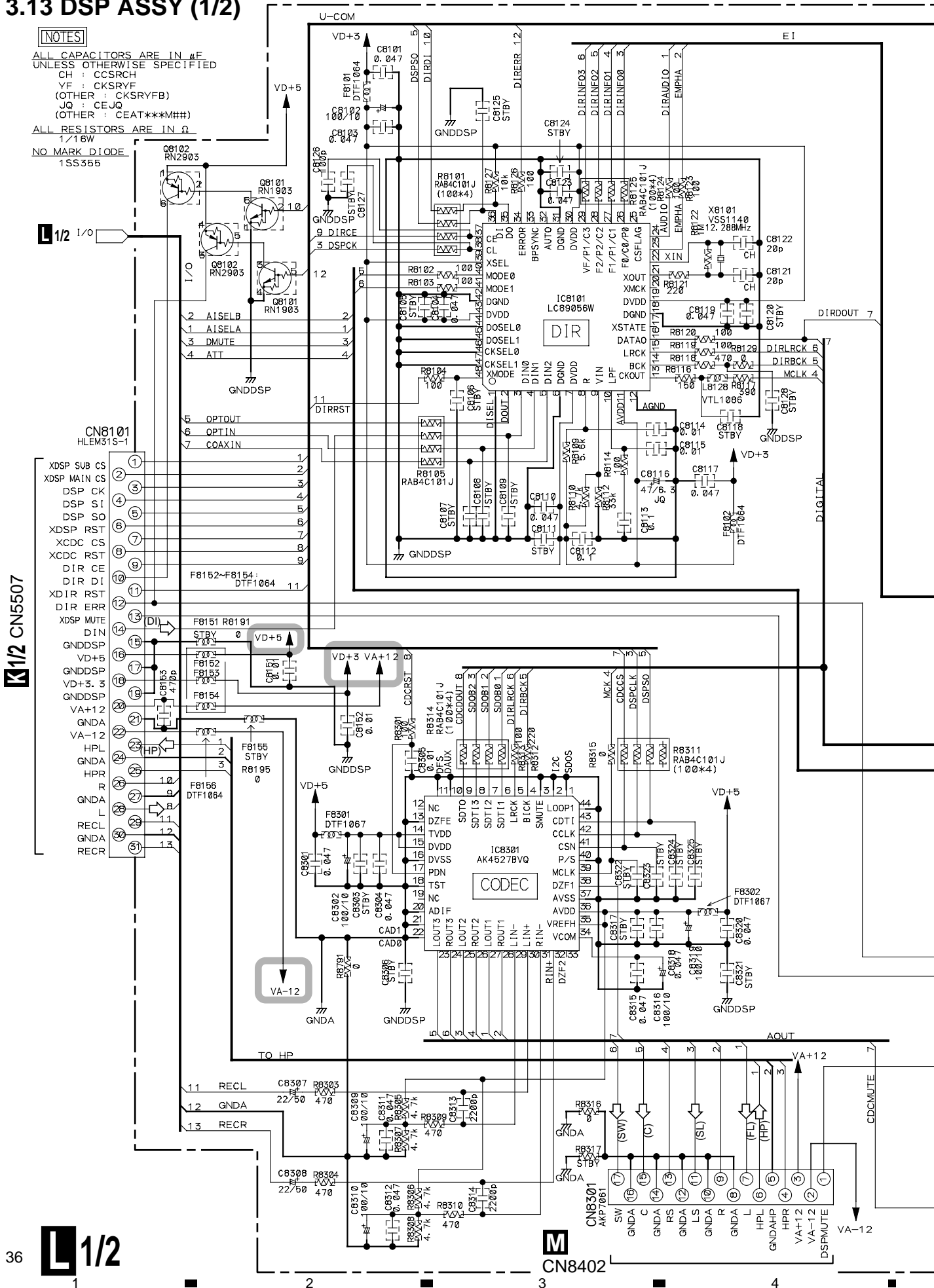
NOTES

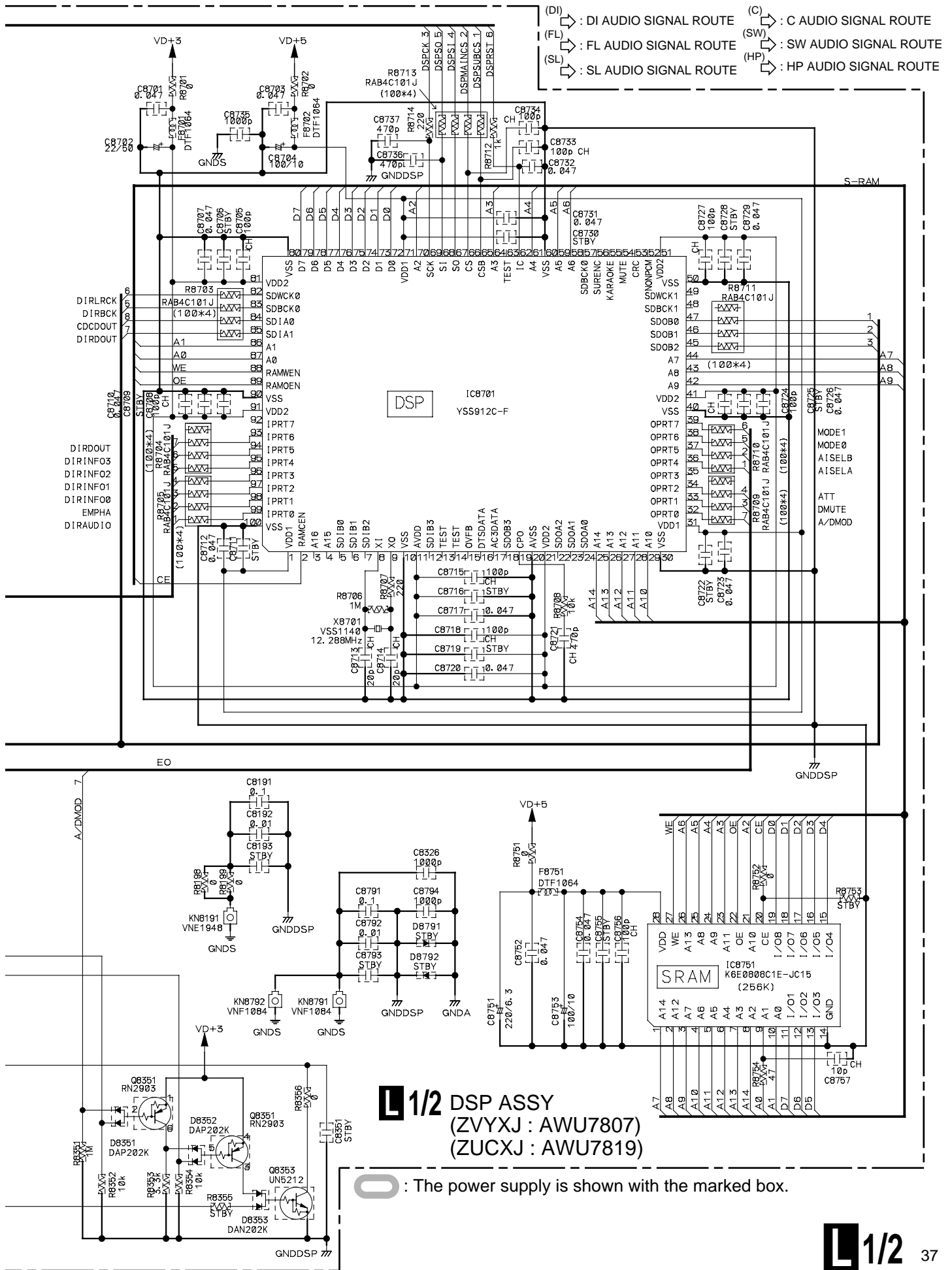
ALL CAPACITORS ARE IN μ F
UNLESS OTHERWISE SPECIFIED
CH : CCSRCH
YF : CKSRFY
(OTHER : CKSRYFB)
JQ : CEJQ
(OTHER : CEAT***M###)

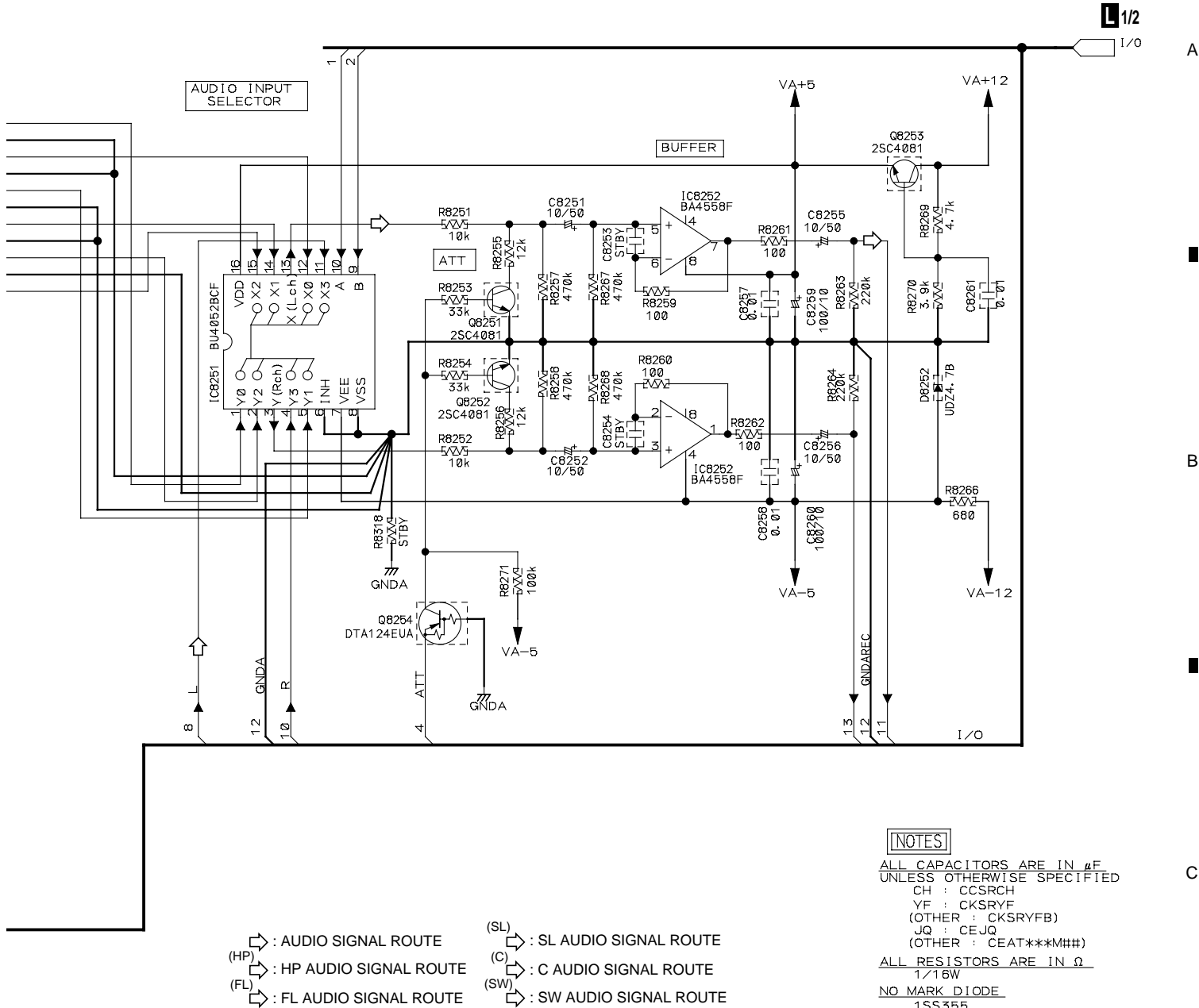
ALL RESISTORS ARE IN Ω
1/16W

NO MARK DIODE
1SS355

Q8102
RN2903







L 2/2 DSP ASSY
(ZVYXJ : AWU7807)
(ZUCXJ : AWU7819)

3.15 BALANCE ASSY

N BALANCE ASSY (AWU7808)

NOTES

ALL CAPACITORS ARE IN μ F
UNLESS OTHERWISE SPECIFIED

CH : CCSRCH

YF : CKSRYF

(OTHER : CKSRYB)

JQ : CEJQ

(OTHER : CEAT**M##)

ALL RESISTORS ARE IN Ω
1/16W

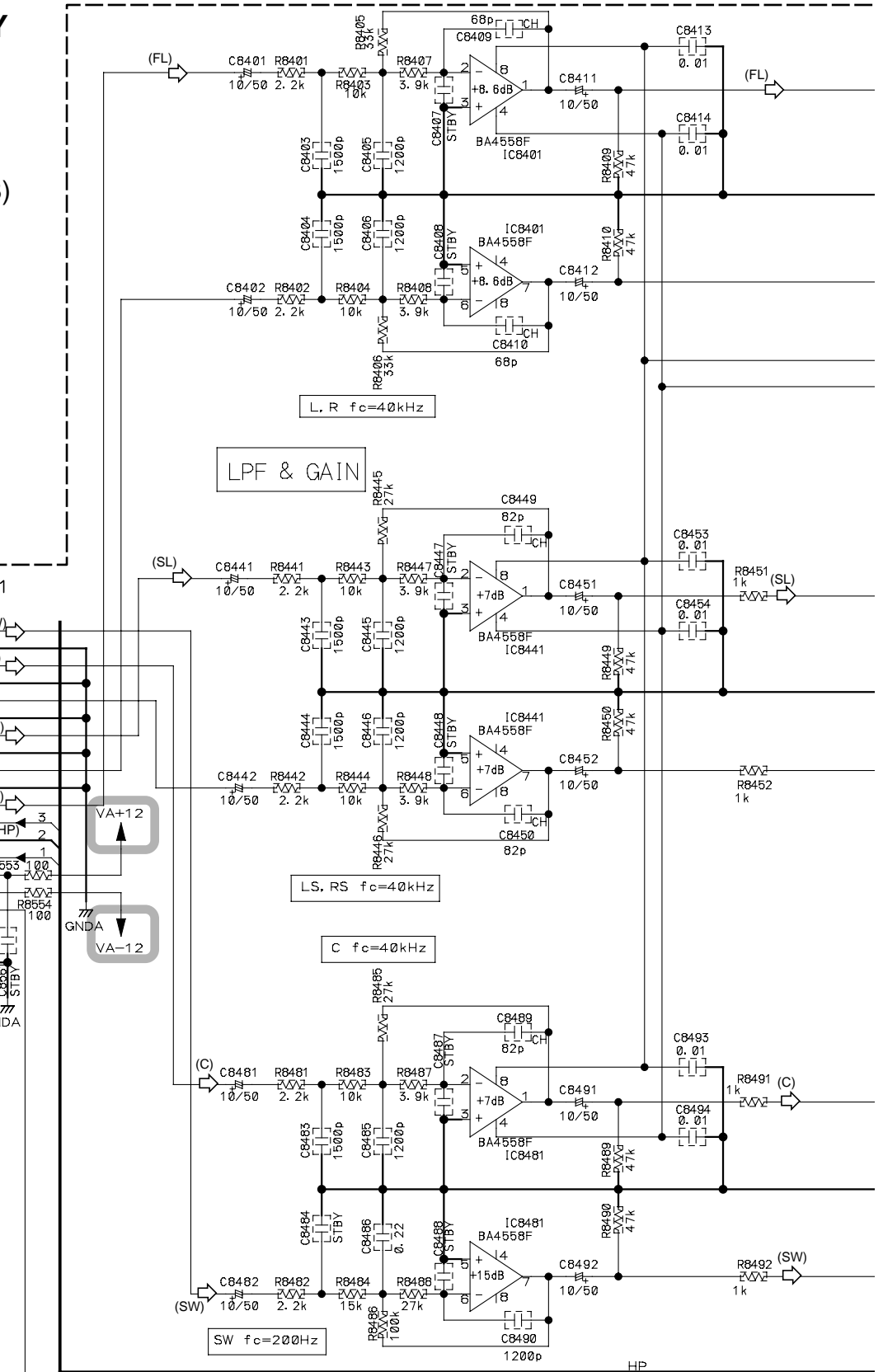
- (FL) \Rightarrow FL AUDIO SIGNAL ROUTE
(SL) \Rightarrow SL AUDIO SIGNAL ROUTE
(C) \Rightarrow C AUDIO SIGNAL ROUTE
(SW) \Rightarrow SW AUDIO SIGNAL ROUTE
(HP) \Rightarrow HP AUDIO SIGNAL ROUTE

M CN8403

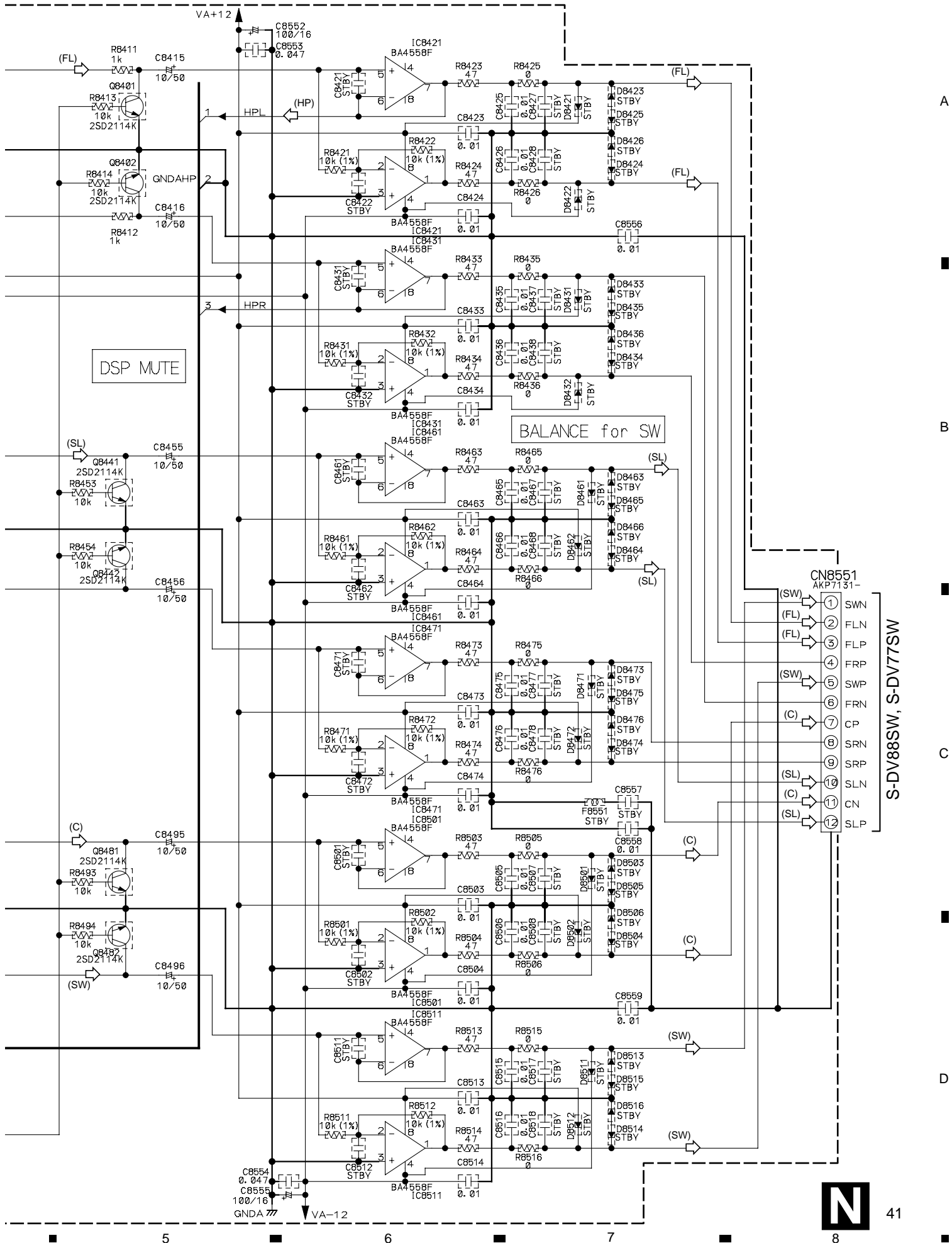
- SW (1)
GNDA (2)
C (3)
GNDA (4)
RS (5)
GNDA (6)
LS (7)
GNDA (8)
R (9)
GNDA (10)
L (11)
HPL (12)
GNDAHP (13)
HPR (14)
VA+12 (15)
VA-12 (16)
DSPMUTE (17)

CN8401
AKP7061

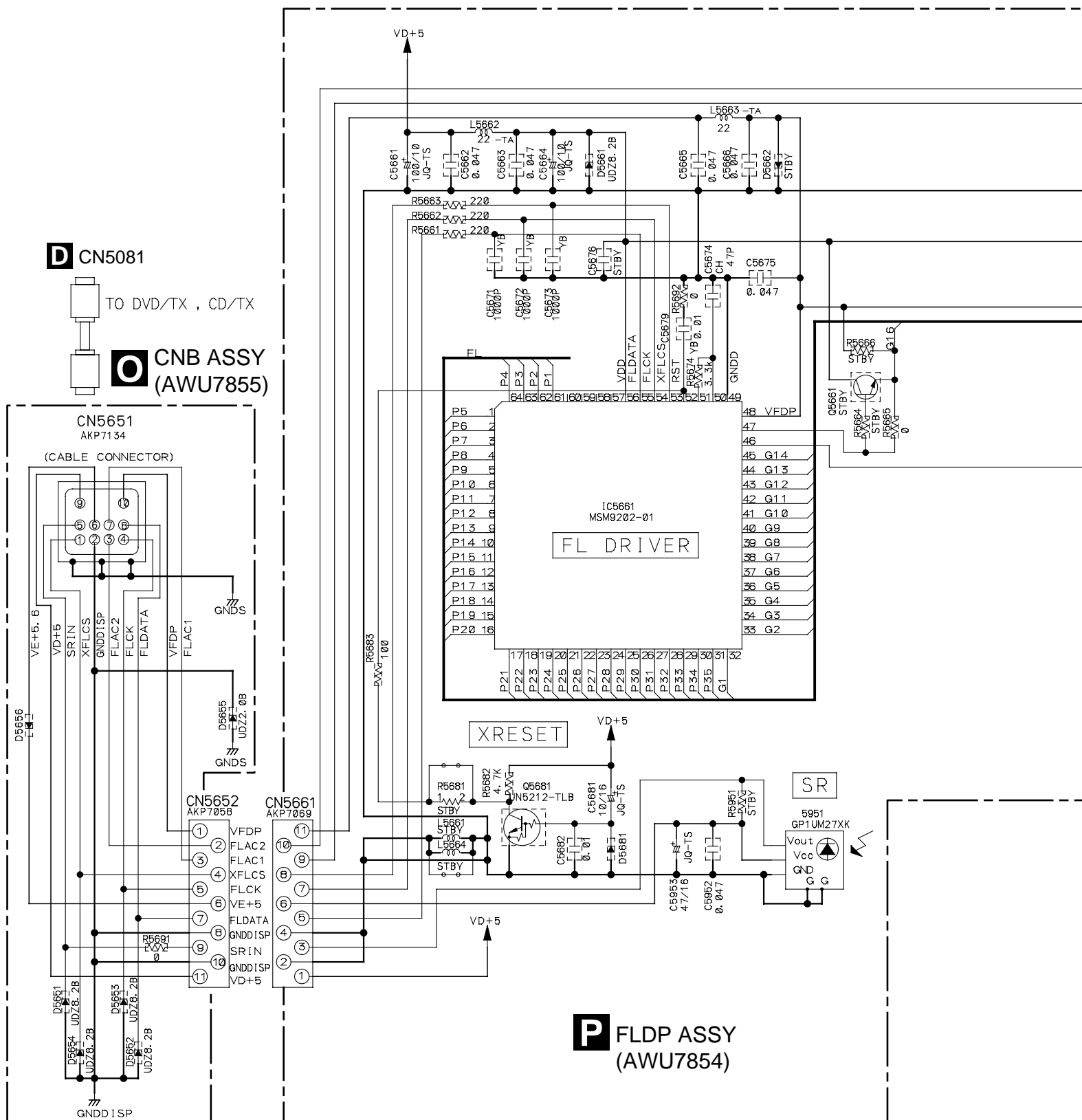
- VA+12
VA-12
GNDA
C8562
STBY
C8561
STBY
GNDA



: The power supply is shown with the marked box.



3.16 CNB and FLDP ASSYS



WAVEFORMS

Note : The encircled numbers denote measuring point in the schematic diagram.

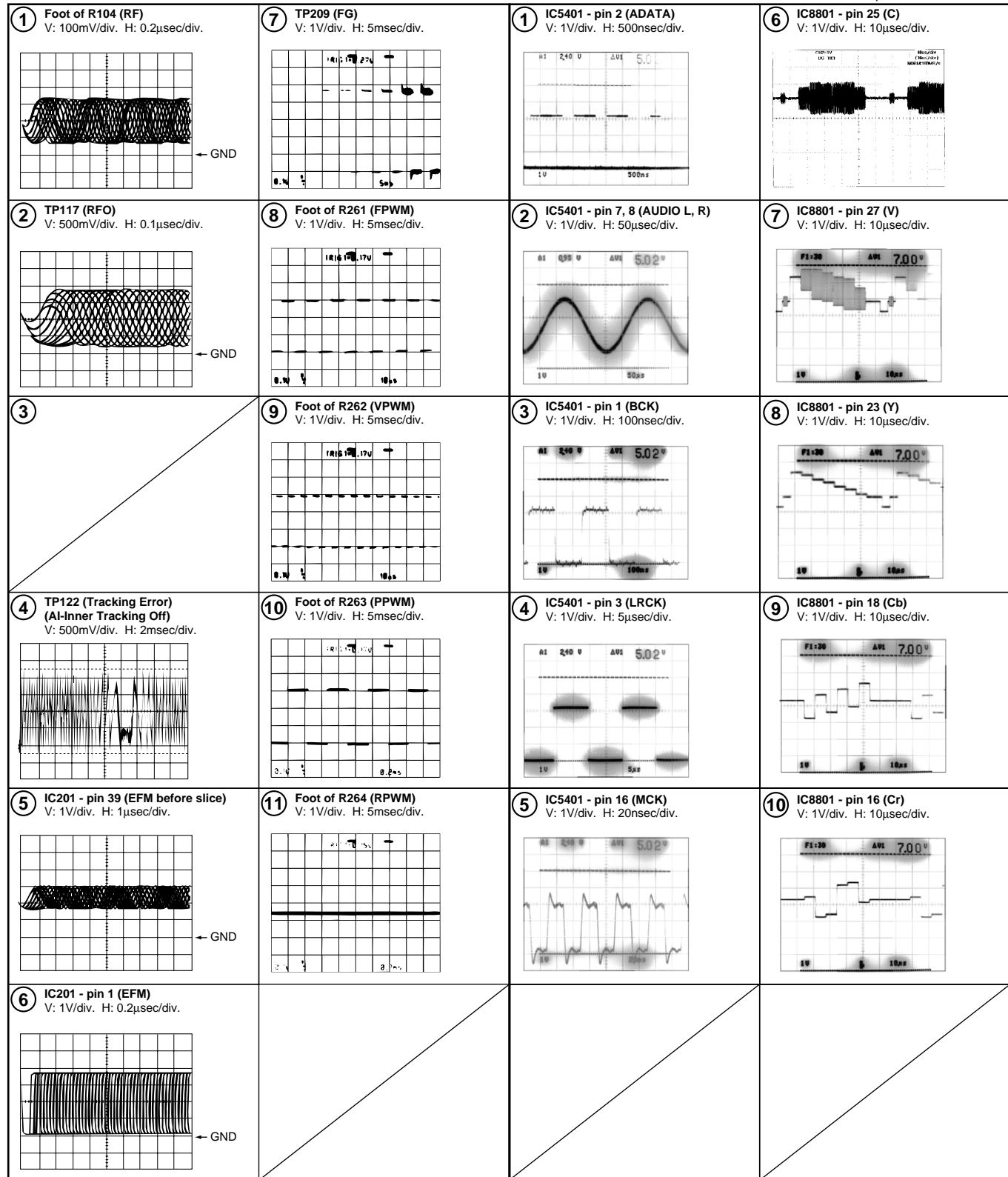
B DVDM ASSY

Measurement condition : No. 1 to 4 and 6 to 11 : MJK1, Title 1-chp 1
No. 5 : CD, ABEX-784 Track 1

G SIDER ASSY

Measurement condition : No. 1 to 5 : DVD-REF-A1, T2-Chap.1
No. 6 to 10 : DVD-REF-A1, T2-Chap.19

K MOTHER ASSY



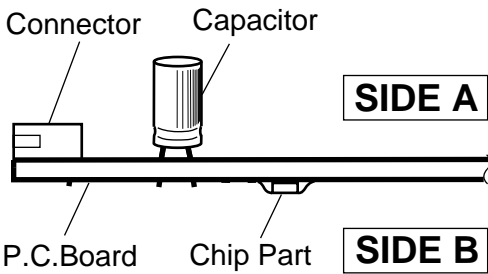
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

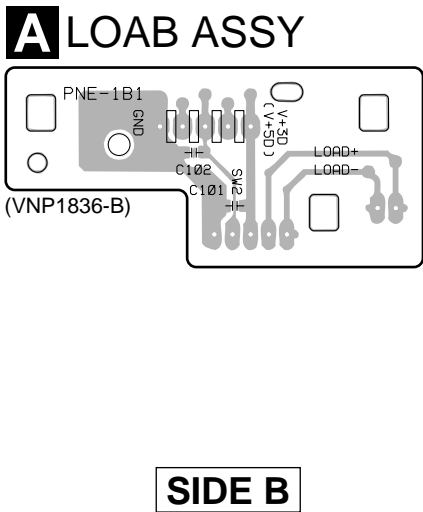
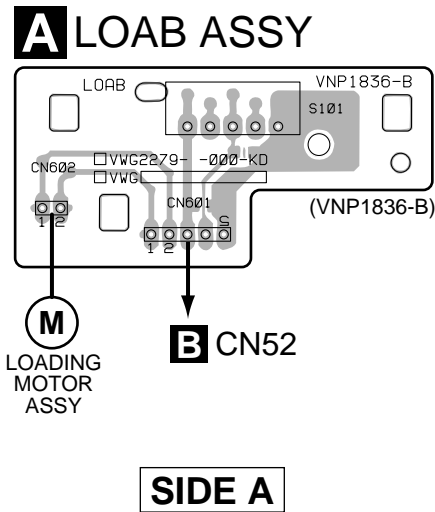
- 1. Part numbers in PCB diagrams match those in the schematic diagrams.
- 2. A comparison between the main parts of PCB and schematic diagrams is shown below.

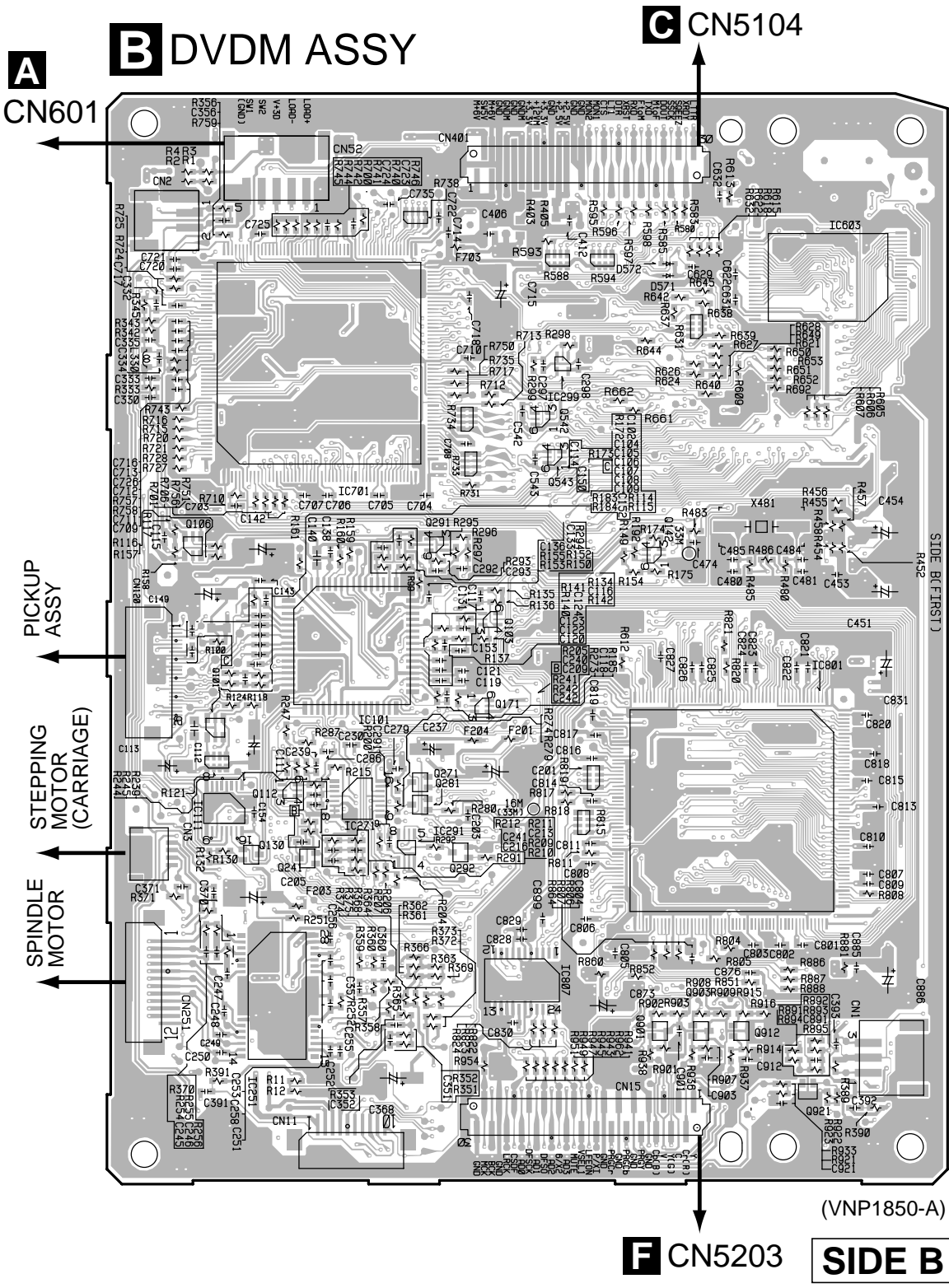
| Symbol In PCB Diagrams | Symbol In Schematic Diagrams | Part Name |
|------------------------|------------------------------|--------------------------|
| | | Transistor |
| | | Transistor with resistor |
| | | Field effect transistor |
| | | Resistor array |
| | | 3-terminal regulator |

- 3. The parts mounted on this PCB include all necessary parts for several destinations.
- For further information for respective destinations, be sure to check with the schematic diagram.
- 4. View point of PCB diagrams.



4.1 LOAB ASSY





- IC603
- IC701 IC299
- Q542
- Q543
- Q106 Q142
- Q103
- IC101
- Q171
- Q112 Q271
- IC111 IC271 Q281 IC801
- Q130 Q241 IC291 Q292
- IC807
- IC251
- Q901 Q903 Q912
- Q921

4.3 TRADEL, SIDEL and HP ASSYS

D SIDEL ASSY

O
CN5651

K
CN5505

K
CN5506

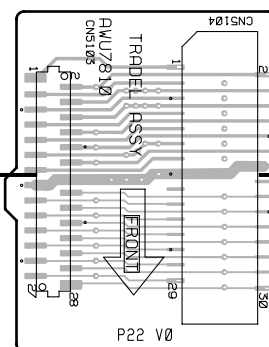
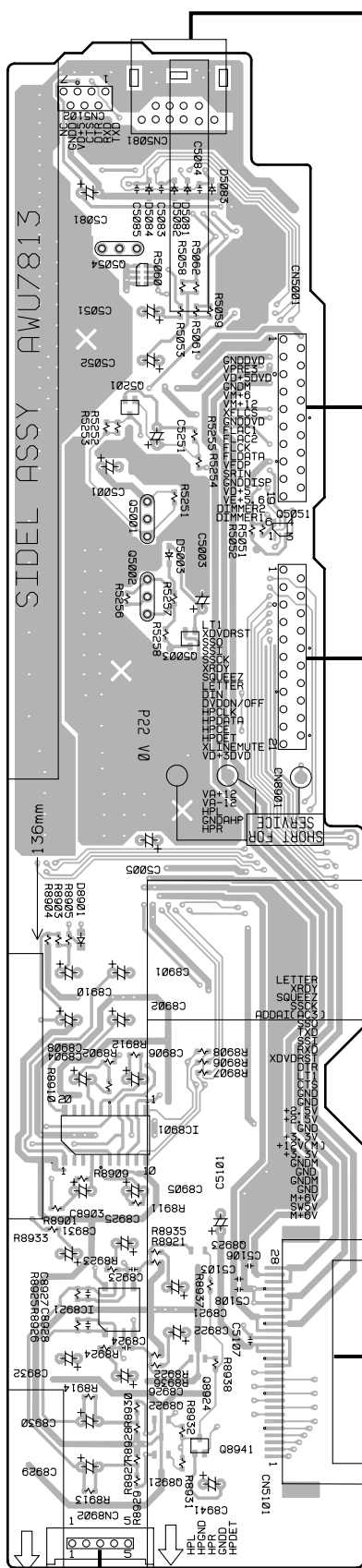
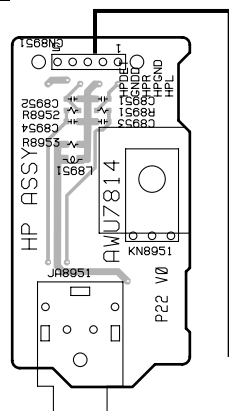
C TRADEL ASSY

B
CN401

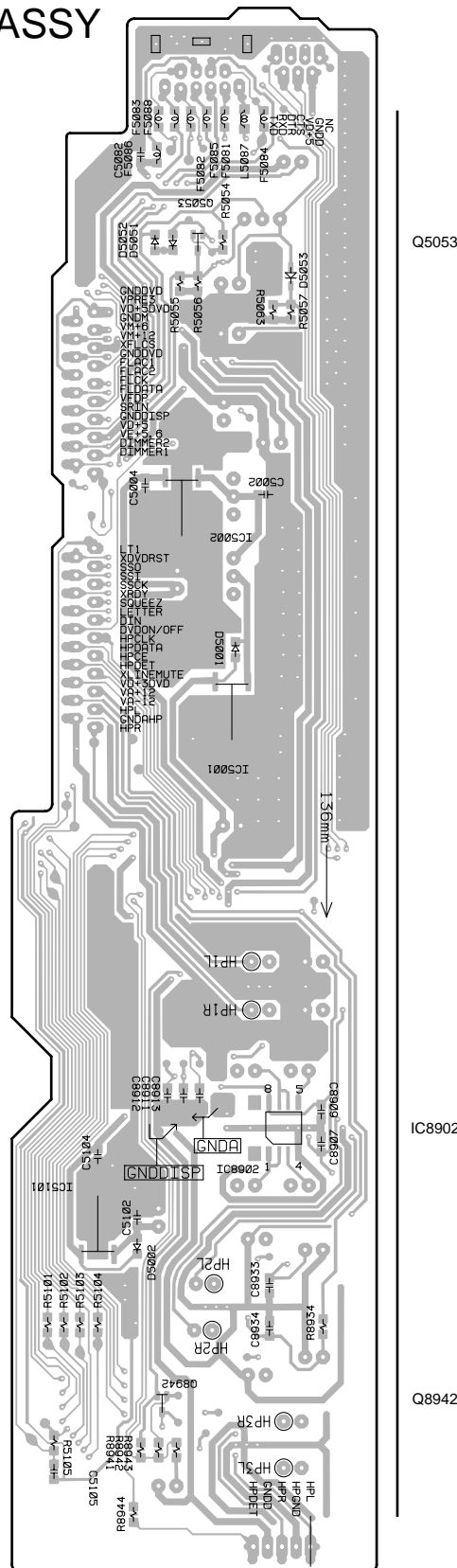
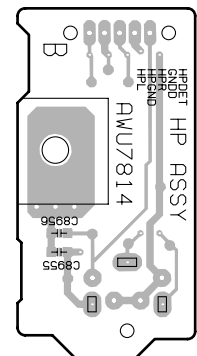
(ANP7407-B)

SIDE A

E HP ASSY



CTRADEL ASSY



4.4 TRADER, SIDER, KEYL and KEYR ASSYS

G SIDER ASSY

K
CN5503

K
CN5502

J
CN201

F TRADER ASSY

B
CN401

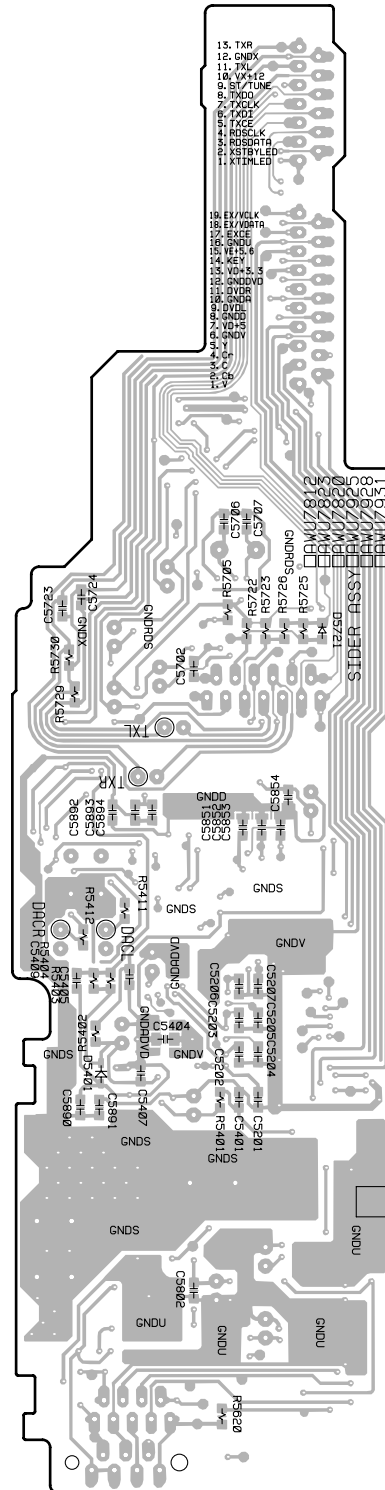
H KEYL ASSY

I KEYR ASSY

(ANP7407-B)

SIDE A

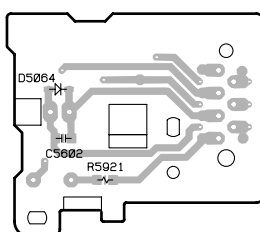
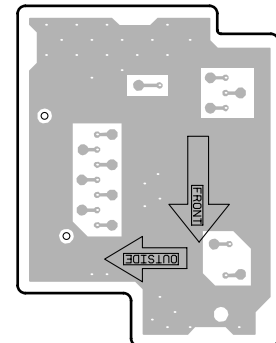
G SIDER ASSY



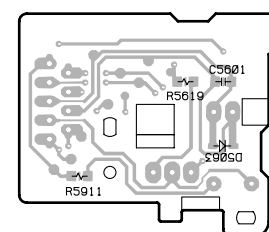
(ANP7407-B)

SIDE B

KEYR ASSY

**F**TRADER ASSY

H KEYL ASSY



4.5 MOTHER ASSY

K MOTHER ASSY

D CN8901

D CN5001

S-DV77SW,
S-DV88SW

L
CN8101

MOTHER ASSY

(ANP7407-B)

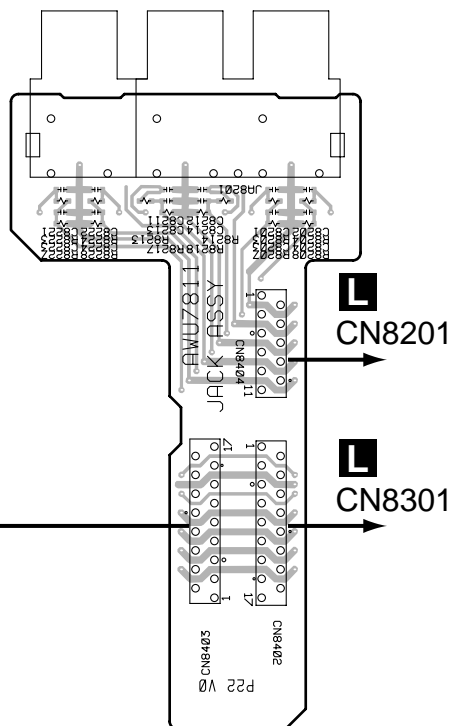
SIDE A

G CN5401

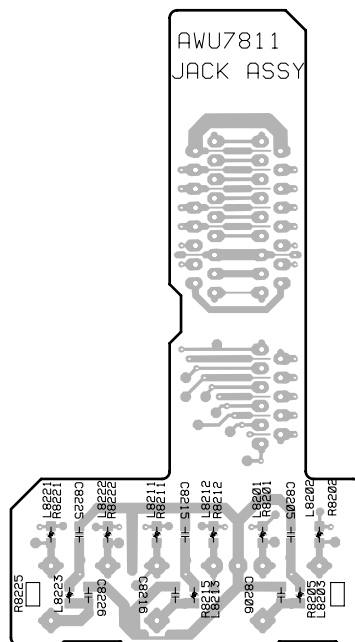
G CN5702

4.6 JACK and BALANCE ASSYS

M JACK ASSY

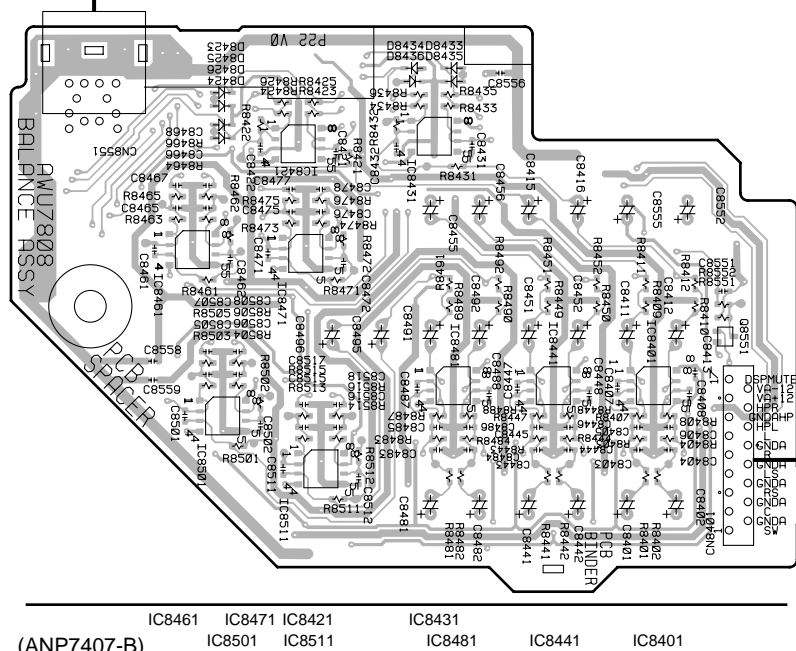


M JACK ASSY



S-DV77SW,
S-DV88SW

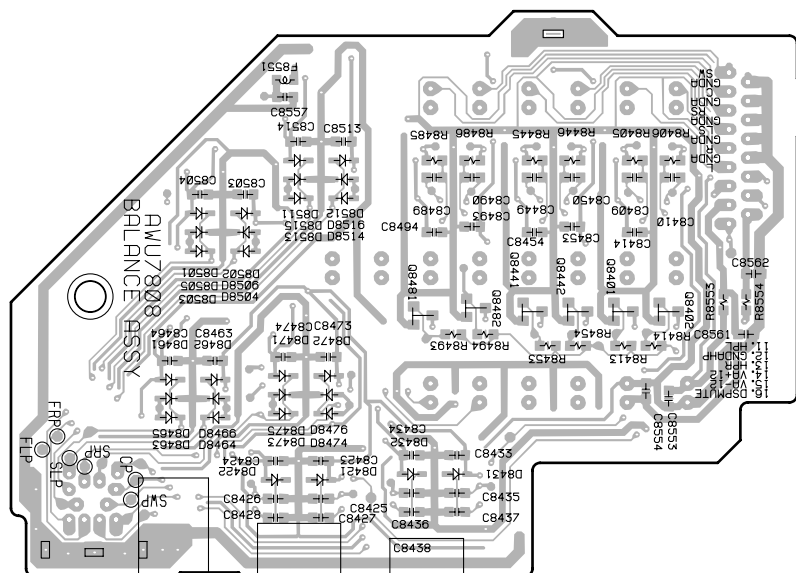
N BALANCE ASSY



IC8461 IC8471 IC8421 IC8431 IC8481 IC8441 IC8401
(ANP7407-B) IC8501 IC8511

SIDE A

N BALANCE ASSY

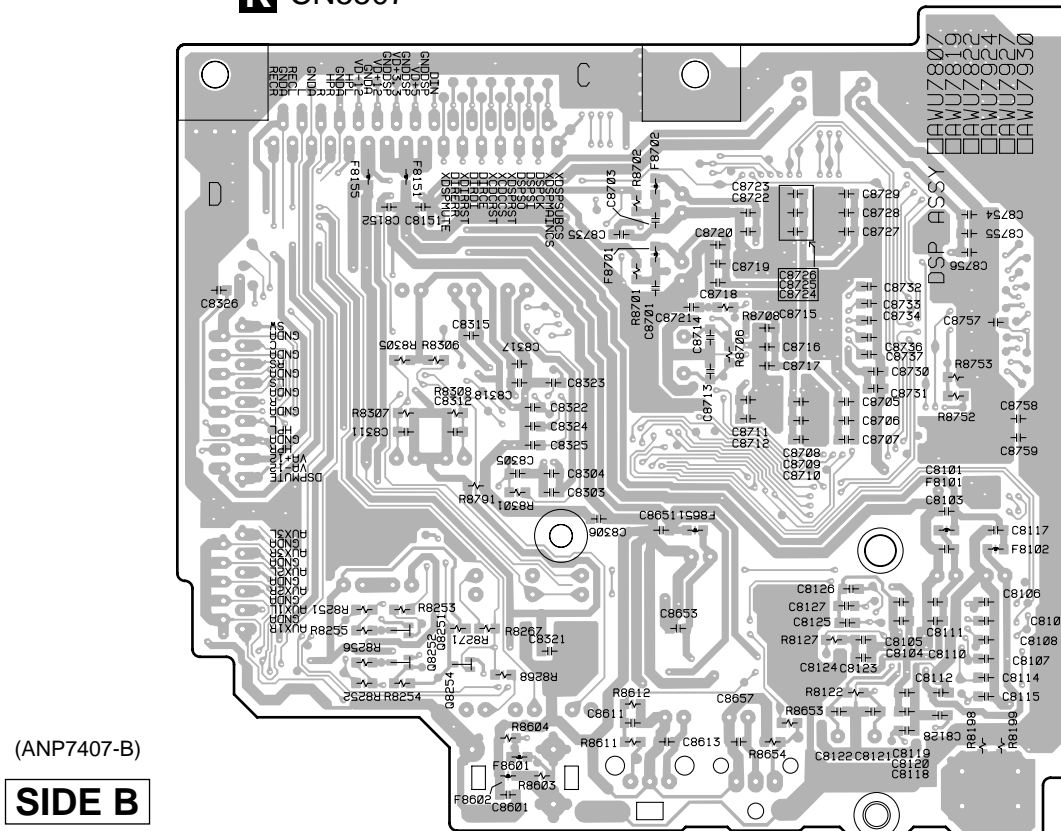
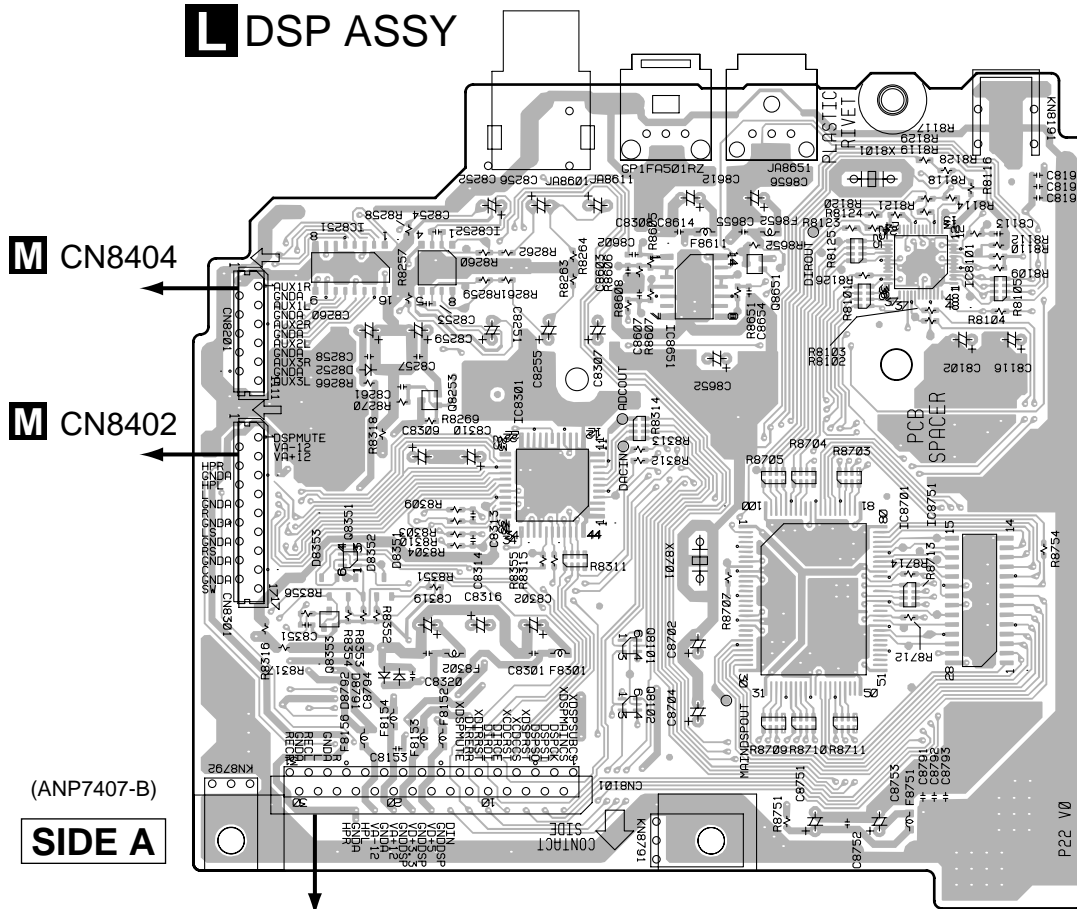


Q8481 Q8492 Q8441 Q8442 Q8401 Q8402

(ANP7407-B)

SIDE B

4.7 DSP ASSY



5. PCB PARTS LIST

NOTES: ● 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.

- 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 \rightarrow 56×10^1 \rightarrow 561 RD1/4PU 5 6 1 J

47k Ω \rightarrow 47×10^3 \rightarrow 473 RD1/4PU 4 7 3 J

0.5 Ω \rightarrow R50 RN2H R 5 0 K

1 Ω \rightarrow 1R0 RS1P 1 R 0 K

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

5.62k Ω \rightarrow 562×10^1 \rightarrow 5621 RN1/4PC 5 6 2 1 F

■ CONTRAST OF PCB ASSEMBLIES

| Mark | Symbol and Description | Part No. | | | Remarks |
|------|------------------------|------------------|------------------|------------------|---------|
| | | XV-DV88 ZVYXJ | XV-DV77 ZVYXJ | XV-DV77 ZUCXJ | |
| | FM/AM TUNER MODULE | AXQ7229 | AXQ7229 | AXQ7228 | |
| NSP | Loading Mechanism ASSY | VWT1188 | VWT1188 | VWT1188 | |
| NSP | └ LOAB ASSY | VWG2279 | VWG2279 | VWG2279 | |
| | DVDM ASSY | VWS1496 | VWS1496 | VWS1496 | |
| NSP | DVD COMP ASSY | AWM7622 | AWM7621 | AWM7623 | |
| NSP | └ MOTHER ASSY | AWU7817 | AWU7806 | AWU7818 | |
| | └ DSP ASSY | AWU7807 | AWU7807 | AWU7819 | |
| | └ BALANCE ASSY | AWU7808 | AWU7808 | AWU7808 | |
| | └ TRADER ASSY | AWU7809 | AWU7809 | AWU7809 | |
| | └ TRADEL ASSY | AWU7810 | AWU7810 | AWU7810 | |
| | └ JACK ASSY | AWU7811 | AWU7811 | AWU7811 | |
| | └ SIDER ASSY | AWU7812 | AWU7812 | AWU7820 | |
| | └ SIDEL ASSY | AWU7813 | AWU7813 | AWU7813 | |
| | └ HP ASSY | AWU7814 | AWU7814 | AWU7814 | |
| | └ KEYL ASSY | AWU7815 | AWU7815 | AWU7815 | |
| | └ KEYR ASSY | AWU7816 | AWU7816 | AWU7816 | |
| | DISPLAY ASSY | AWM7633 | AWM7633 | AWM7633 | |
| | └ FLDP ASSY | AWU7854 | AWU7854 | AWU7854 | |
| | └ CNB ASSY | AWU7855 | AWU7855 | AWU7855 | |

K MOTHER ASSY

AWU7817, AWU7806 and AWU7818 are constructed the same except for the following :

| Mark | Symbol and Description | Part No. | | | Remarks |
|------|-------------------------|--------------|--------------|-------------|---------|
| | | AWU7817 | AWU7806 | AWU7818 | |
| | Q5561 | 2SC4081 | 2SC4081 | Not used | |
| | D5502–D5506 | UDZS8.2B | UDZS8.2B | Not used | |
| | C5351–C5358 | CCSRCH101J50 | CCSRCH101J50 | Not used | |
| | C5518 | CKSRYB103K50 | CKSRYB103K50 | Not used | |
| | R5351–R5354 | RS1/16S101J | RS1/16S101J | Not used | |
| | R5551 | RS1/16S223J | RS1/16S223J | Not used | |
| | R5552, R5553 | RS1/16S0R0J | RS1/16S0R0J | Not used | |
| | R5566 | RS1/16S103J | RS1/16S473J | RS1/16S333J | |
| | R5567 | RS1/16S393J | Not used | RS1/16S223J | |
| | 5504 19P SOCKET | AKP7001 | AKP7001 | Not used | |
| | JA5501 STEREO MINI JACK | DKN1124 | DKN1124 | Not used | |

G SIDER ASSY

AWU7812 and AWU7820 are constructed the same except for the following :

| Mark | Symbol and Description | Part No. | | Remarks |
|------|--|--|---|---------|
| | | AWU7812 | AWU7820 | |
| | IC5401 IC5701 Q5410 Q5411, Q5412 Q5421 | PCM1742KE BU1923F DTA124EUA 2SD2114K UN5212 | Not used Not used Not used Not used Not used | |
| | D5401 D5421 D5422 C5402 C5404, C5407, C5704 | UDZ4.7B 1SS355 DAN202K CEJQ101M6R3 CKSRYB103K50 | Not used Not used Not used Not used Not used | |
| | C5406 C5408 C5411, C5412 C5413, C5414 C5701 | CEAT221M6R3 CEJQ470M6R3 CEAT470M16 CQMA222J50 CEJQ100M16 | Not used Not used Not used Not used Not used | |
| | C5702 C5703 C5706, C5707 R5201, R5204, R5705 R5202 | CKSRYB271K50 CKSRYB561K50 CCSRCH270J50 RS1/16S101J RS1/10S220J | Not used Not used Not used Not used Not used | |
| | R5203, R5401, R5704 R5205-R5207, R5411, R5412 R5413, R5414 R5421 R5701 | RS1/16S0R0J RS1/16S102J RS1/16S222J RS1/16S103J Not used | Not used Not used Not used Not used RS1/16S473J | |
| | R5702, R5703 X5701 CRYSTAL RESONATOR (4.332MHz) | Not used ASS7004 | RS1/16S103J Not used | |

L DSP ASSY

AWU7807 and AWU7819 are constructed the same except for the following :

| Mark | Symbol and Description | Part No. | | Remarks |
|------|--|--|--|---------|
| | | AWU807 | AWU7819 | |
| | F8611 C8612 C8613, C8614 R8611 JA8611 OPT. LINK IN 8MB/S | VTF1096 CEAT470M16 CKSRYB473K25 RS1/16S102J GP1FA501RZ | Not used Not used Not used Not used Not used | |

PCB PARTS LIST FOR XV-DV88/ZVYXJ UNLESS OTHERWISE NOTED

| Mark | No. | Description | Part No. | Mark | No. | Description | Part No. |
|---|-----|-------------|----------|--|-----|-------------|----------|
| A LOAB ASSY SWITCH S101 VSK1011 OTHERS CN602 KR CONNECTOR S2B-PH-K CN601 KR CONNECTOR S5B-PH-K PC BOARD LOAB VNP1836 | | | | B DVDM ASSY SEMICONDUCTORS IC861 ADV7172KST IC261, IC302 BA4510F IC251 BA6664FM IC481 BU2288FV IC101 LA9701M | | | |

XV-DV88, XV-DV77

| Mark | No. | Description | Part No. |
|------|------------------------------|-------------|-------------------|
| | IC201 | | LC78652W |
| | IC351 | | M56788AFP |
| | IC801 | | M65774BFP |
| | IC805 | | MB81F161622C-80FN |
| | IC712 | | MNR4800DJ7 |
| | IC601 | | PD6345A |
| | IC701 | | PE5108A |
| | IC111 | | TC74HC4053AFT |
| | IC612 | | TC74VHC125FT |
| | IC608 | | TC74VHCT125AFT |
| | IC304 | | TC7SHU04F |
| | IC603 | FLASH ROM | VYW1852 |
| | Q109, Q901–Q903, Q911–Q913 | | 2SA1576A |
| | Q114, Q130 | | 2SC4081 |
| | Q107, Q111, Q115, Q241 | | DTC114EUA |
| | Q101, Q102, Q106 | | HN1A01F |
| | Q103, Q141, Q142, Q542, Q543 | | HN1B04FU |
| | Q112, Q113 | | HN1C01FU |
| | Q108 | | HN1K03FU |
| | Q571 | | RN1911 |
| | Q117, Q171, Q601 | | RN4982 |
| | D302 | | KV1470 |
| | D601 | | RB501V-40 |

COILS AND FILTERS

| | | |
|------|------------|--------------|
| L304 | | LCYA1R5J2520 |
| L490 | CHIP BEADS | VTL1073 |
| L481 | CHIP BEADS | VTL1084 |

CAPACITORS

| | | |
|------------------------------|--|--------------|
| C480, C481, C612 | | CCSRCH100D50 |
| C152 | | CCSRCH101J50 |
| C104–C108 | | CCSRCH150J50 |
| C322 | | CCSRCH180J50 |
| C314 | | CCSRCH220J50 |
| C151 | | CCSRCH270J50 |
| C391, C392 | | CCSRCH331J50 |
| C146 | | CCSRCH390J50 |
| C122, C123 | | CCSRCH391J50 |
| C116, C134, C297 | | CCSRCH470J50 |
| C824, C826 | | CCSRCH471J50 |
| C145, C241 | | CCSRCH560J50 |
| C117, C360 | | CCSRCH681J50 |
| C124 | | CCSRCH820J50 |
| C129, C142, C149, C201, C205 | | CEV101M16 |
| C358, C368, C369, C403, C410 | | CEV101M16 |
| C472, C864 | | CEV101M16 |
| C113, C139 | | CEV220M16 |
| C405, C409, C715 | | CEV221M4 |
| C254, C401 | | CEV470M16 |
| C111 | | CEV470M6R3 |
| C140, C223, C224, C264, C312 | | CKSQYB105K10 |
| C475–C477 | | CKSQYB105K10 |
| C209, C211, C216, C313, C351 | | CKSRYB102K50 |
| C133, C136, C203, C220, C225 | | CKSRYB103K50 |
| C239, C261, C320, C321, C330 | | CKSRYB103K50 |
| C591, C619, C703, C722 | | CKSRYB103K50 |
| C101, C103, C118, C119, C121 | | CKSRYB104K16 |
| C212, C213, C227, C231 | | CKSRYB104K16 |
| C248–C251, C255, C263, C315 | | CKSRYB104K16 |

| Mark | No. | Description | Part No. |
|------|------------------------------|-------------|--------------|
| | C317 | | CKSRYB104K16 |
| | C208, C210 | | CKSRYB222K50 |
| | C266 | | CKSRYB224K10 |
| | C206, C214, C242, C357 | | CKSRYB472K50 |
| | C102, C109, C120, C130, C131 | | CKSRYF104Z25 |
| | C138, C143, C148, C154 | | CKSRYF104Z25 |
| | C157, C158, C204, C207, C215 | | CKSRYF104Z25 |
| | C221, C222, C226, C230, C236 | | CKSRYF104Z25 |
| | C253, C256, C258, C265, C299 | | CKSRYF104Z25 |
| | C319, C332, C353, C359 | | CKSRYF104Z25 |
| | C365, C366, C603, C606 | | CKSRYF104Z25 |
| | C608–C611, C613, C615, C618 | | CKSRYF104Z25 |
| | C626, C628, C631, C704, C706 | | CKSRYF104Z25 |
| | C708, C712, C713, C716–C718 | | CKSRYF104Z25 |
| | C721, C723, C725, C743, C802 | | CKSRYF104Z25 |
| | C808, C811, C814, C866 | | CKSRYF104Z25 |
| | C869–C872, C874, C875, C903 | | CKSRYF104Z25 |
| | C913 | | CKSRYF104Z25 |
| | C115, C217, C328, C614, C711 | | CKSRYF105Z10 |
| | C726, C801, C809, C813 | | CKSRYF105Z10 |
| | C816–C821, C827, C833, C843 | | CKSRYF105Z10 |

RESISTORS

| | | |
|------------------------------|--|--------------|
| R815, R819 | | RAB4C0R0J |
| R543, R545, R594, R631, R707 | | RAB4C103J |
| R121 | | RAB4C220J |
| R123 | | RAB4C470J |
| R400, R403 | | RS1/10S0R0J |
| R341 | | RS1/10S101J |
| R126–R129, R176–R179 | | RS1/10S220J |
| R902, R905, R908, R912, R915 | | RS1/16S1000F |
| R918 | | RS1/16S1000F |
| R364, R369, R373, R375 | | RS1/16S1003F |
| R865 | | RS1/16S1502F |
| R358, R361 | | RS1/16S1503F |
| R876, R878 | | RS1/16S4701F |
| R866 | | RS1/16S4702F |
| R870, R875 | | RS1/16S6800F |
| R867 | | RS1/16S6801F |
| R357, R362, R363, R368, R372 | | RS1/16S6802F |
| R374 | | RS1/16S6802F |
| R257 (1Ω) | | VCN1127 |
| R258, R259 (2.2Ω) | | VCN1128 |
| Other Resistors | | RS1/16S□□□J |

OTHERS

| | | |
|-------------|-------------------------------|------------|
| CN15, CN401 | B TO B PLUG 30P | AKP7168 |
| CN3 | 4P CONNECTOR | DKN1223 |
| CN52 | PH CONNECTOR | S5B-PH-SM3 |
| 9007 | FLEXIBLE CABLE (07P) | VDA1681 |
| CN120 | FFC CONNECTOR | VKN1787 |
| CN251 | 12P CONNECTOR | VKN1795 |
| X481 | CRYSTAL RESONATOR (27.000MHz) | VSS1159 |
| X601 | CERAMIC RESONATOR (16.5MHz) | VSS1160 |

TRADEL ASSY

OTHERS

| | | |
|--------|-------------------|---------|
| CN5104 | B TO B SOCKET 30P | AKP7163 |
| CN5103 | B TO B SOCKET 28P | AKP7165 |

| Mark | No. | Description | Part No. |
|----------|----------------------------------|-------------|--------------|
| D | SIDEL ASSY | | |
| | SEMICONDUCTORS | | |
| | IC5001, IC5002 | | BA033FP |
| | IC5101 | | BA25BC0FP |
| | IC8902 | | BA4558F-HT |
| | IC8901 | | LC75366M |
| | IC8921 | | NJM4560M |
| | Q8942 | | 2SA1576A |
| | Q5001, Q5054 | | 2SB1237X |
| | Q5053, Q5201 | | 2SC4081 |
| | Q8921-Q8924 | | 2SD2114K |
| | Q8941 | | DTA124EUA |
| | Q5051 | | RN2903 |
| | D5001-D5003, D5051, D5052, D8901 | | 1SS355 |
| | D5053 | | UDZS6.8B |
| | D5081-D5084 | | UDZS8.2B |
| | COILS AND FILTERS | | |
| | F5082 CHIP BEAD | | DTF1069 |
| | L5087 | | LCYA220J2520 |
| | CAPACITORS | | |
| | C5083-C5085, C5105 | | CCSRCH101J50 |
| | C8923, C8924 | | CCSRCH470J50 |
| | C5107, C5108 | | CCSRCH471J50 |
| | C5052, C8901-C8906, C8925, C8926 | | CEAT100M50 |
| | C8931, C8932 | | CEAT100M50 |
| | C5001, C5003, C5081 | | CEAT101M10 |
| | C8921, C8922 | | CEAT1R0M50 |
| | C5051, C5251, C8941 | | CEAT220M50 |
| | C8910 | | CEAT470M16 |
| | C5005, C8908 | | CEAT471M6R3 |
| | C5101 | | CEJQ101M6R3 |
| | C5002, C5004, C8907, C8909 | | CKSRYB103K50 |
| | C8927, C8928 | | CKSRYB221K50 |
| | C5102-C5104 | | CKSRYB473K50 |
| | C5082, C8942 | | CKSRYF104Z50 |
| | RESISTORS | | |
| | R5060 | | RAB4C273J |
| | Other Resistors | | RS1/16S□□□J |
| | OTHERS | | |
| | CN5001 19P SOCKET | | AKP7073 |
| | CN8901 21P SOCKET | | AKP7074 |
| | CN5081 10P CONNECTOR | | AKP7134 |
| | CN5101 B TO B PLUG 28P | | AKP7167 |
| | CN5102 7P CONNECTOR | | VKN1267 |
| E | HP ASSY | | |
| | CAPACITORS | | |
| | C8951, C8952 | | CKSRYB102K50 |
| | C8953, C8954 | | CKSRYB223K50 |
| | C8955, C8956 | | CKSRYF104Z50 |
| | RESISTORS | | |
| | All Resistors | | RS1/16S□□□J |

| Mark | No. | Description | Part No. |
|----------|----------------------------------|---------------------|--------------|
| | OTHERS | | |
| | 8952 | 5P CABLE HOLDER | 51048-0500 |
| | 8951 | MINI JACK | AKN7026 |
| | J 8901 | JUMPER WIRE | D20PYY0510E |
| | KN8951 | EARTH METAL FITTING | VNF1084 |
| F | TRADER ASSY | | |
| | OTHERS | | |
| | CN5203 B TO B SOCKET 30P | | AKP7163 |
| | CN5202 B TO B SOCKET 16P | | AKP7164 |
| G | SIDER ASSY | | |
| | SEMICONDUCTORS | | |
| | IC5701 | | BU1923F |
| | IC5851 | | BU4094BCF |
| | IC5801 | | NJM062M |
| | IC5401 | | PCM1742KE |
| | Q5611, Q5711 | | 2SC4081 |
| | Q5411, Q5412 | | 2SD2114K |
| | Q5410, Q5851 | | DTA124EUA |
| | Q5801, Q5802 | | DTC114TUA |
| | Q5852 | | RN2903 |
| | Q5421 | | UN5212 |
| | D5421, D5613, D5712, D5721 | | 1SS355 |
| | D5801-D5810 | | 1SS355 |
| | D5422 | | DAN202K |
| | D5711 | | UDZ11B |
| | D5401 | | UDZ4.7B |
| | COILS AND FILTERS | | |
| | L5801 | | LCYA220J2520 |
| | CAPACITORS | | |
| | C5807, C5808 | | CCSRCH102J50 |
| | C5201-C5203 | | CCSRCH221J50 |
| | C5706, C5707 | | CCSRCH270J50 |
| | C5851-C5853 | | CCSRCH470J50 |
| | C5406 | | CEAT221M6R3 |
| | C5411, C5412, C5705 | | CEAT470M16 |
| | C5701, C5711, C5721, C5722 | | CEJQ100M16 |
| | C5402 | | CEJQ101M6R3 |
| | C5801 | | CEJQ470M10 |
| | C5408, C5855 | | CEJQ470M6R3 |
| | C5809, C5810 | | CEJQ4R7M50 |
| | C5894 | | CKSRYB102K50 |
| | C5404, C5407, C5704, C5802-C5804 | | CKSRYB103K50 |
| | C5702 | | CKSRYB271K50 |
| | C5854 | | CKSRYB473K25 |
| | C5703 | | CKSRYB561K50 |
| | C5893 | | CKSRYF104Z25 |
| | C5413, C5414 | | CQMA222J50 |
| | RESISTORS | | |
| | R5202 | | RS1/10S220J |
| | R5723 | | RS1/10S222J |
| | Other Resistors | | RS1/16S□□□J |

XV-DV88, XV-DV77

| Mark | No. | Description | Part No. |
|---------------|--------|---------------------------------|------------|
| OTHERS | | | |
| | 5802 | CABLE HOLDER(7P) | 51063-0705 |
| | CN5801 | FFC CONNECTOR 9P | 52045-0945 |
| | CN5701 | 13P CONNECTOR | 52045-1345 |
| | CN5702 | 13P SOCKET | AKP7070 |
| | CN5401 | 19P SOCKET | AKP7073 |
| | CN5201 | B TO B PLUG 16P | AKP7166 |
| | 5801 | SCREW PLATE | VNE1948 |
| | X5701 | CRYSTAL RESONATOR (4.332MHz) | ASS7004 |

H KEYL ASSY

SEMICONDUCTORS

| | |
|-------|------------|
| Q5612 | HN1A01FU |
| D5601 | E1L55-3B0A |
| D5611 | VRPG5615S |

SWITCHES AND RELAYS

| | |
|-------|---------|
| S5911 | ASG7013 |
|-------|---------|

CAPACITORS

| | |
|-------|--------------|
| C5601 | CKSRYB473K25 |
|-------|--------------|

RESISTORS

| | |
|---------------|-------------|
| All Resistors | RS1/16S□□□□ |
|---------------|-------------|

OTHERS

| | | |
|--------|------------------|------------|
| CN5622 | FFC CONNECTOR 9P | 52045-0945 |
|--------|------------------|------------|

I KEYR ASSY

SEMICONDUCTORS

| | |
|-------|------------|
| D5602 | E1L55-3B0A |
|-------|------------|

SWITCHES AND RELAYS

| | |
|-------|---------|
| S5921 | ASG7013 |
|-------|---------|

CAPACITORS

| | |
|-------|--------------|
| C5602 | CKSRYB473K25 |
|-------|--------------|

RESISTORS

| | |
|---------------|-------------|
| All Resistors | RS1/16S□□□□ |
|---------------|-------------|

OTHERS

| | | |
|--------|------------------|-----------------|
| 5621 | CABLE HOLDER(7P) | 51063-0705 |
| J 5621 | JUMPER WIRE | D15A07-100-2651 |

J FM/AM TUNER MODULE (AXQ7229)

SEMICONDUCTORS

| | |
|------------------------|---------------|
| IC201 | BA1451F |
| IC202 | LC72131MD-TFB |
| Q201, Q204, Q205, Q601 | 2SC2412K |
| Q202 | DTA124ES |
| Q203 | DTC124EK |
| D201 | 1SS133 |
| D202 | MTZJ5.1C |
| D101 | UDZS6.8B |

| Mark | No. | Description | Part No. |
|--------------------------|------|-------------------|--------------|
| COILS AND FILTERS | | | |
| | L201 | FM DETECTOR COIL | ATE7003 |
| | F202 | FM CERAMIC FILTER | ATF-107 |
| | F201 | FM CERAMIC FILTER | ATF-119 |
| | F203 | AM CERAMIC FILTER | ATF1155 |
| | F601 | ANTIBIRDY FILTER | ATF7025 |
| | L601 | | LCTA270J2520 |

CAPACITORS

| | |
|-----------------------------|--------------|
| C605 | CCSQCH680J50 |
| C212, C213, C226, C233-C235 | CCSRCH101J50 |
| C240, C614 | CCSRCH101J50 |
| C206 | CCSRCH120J50 |
| C231, C232 | CCSRCH150J50 |

| | |
|------|------------|
| C223 | CEAT100M50 |
| C229 | CEAT101M10 |
| C224 | CEAT1R0M50 |
| C227 | CEAT220M25 |
| C241 | CEAT2R2M50 |

| | |
|------|------------|
| C243 | CEAT330M16 |
| C228 | CEAT3R3M50 |
| C237 | CEAT470M10 |
| C211 | CEJA1R0M50 |
| C210 | CEJA470M16 |

| | |
|------------------------------|--------------|
| C103, C104, C204, C238 | CKSRYB102K50 |
| C102, C208, C216, C217, C220 | CKSRYB103K50 |
| C239, C242, C604, C615 | CKSRYB103K50 |
| C225 | CKSRYB153K50 |
| C607, C608 | CKSRYB182K50 |

| | |
|------------------------------|--------------|
| C201, C205, C214, C230, C236 | CKSRYB223K50 |
| C244 | CKSRYB223K50 |
| C221 | CKSRYB224K10 |
| C603 | CKSRYB392K50 |
| C215 | CKSRYB471K50 |

| | |
|------------|--------------|
| C202, C222 | CKSRYB473K16 |
| C606 | CKSRYB561K50 |

RESISTORS

| | |
|-----------------|-------------|
| R211 | RD1/4PU221J |
| R221 | RD1/4PU222J |
| R233 | RD1/4PU391J |
| R103, R104 | RS1/10S221J |
| Other Resistors | RS1/16S□□□□ |

OTHERS

| | | |
|-------|---------------------------------------|------------|
| CN201 | 13P CONNECTOR | 52044-1345 |
| BN201 | 2P TERMINAL WITH PAL SHIELD CASE T | AKA7002 |
| | SHIELD CASE B | ANK7072 |
| X201 | CRYSTAL RESONATOR (7.2MHz) | ANK7073 |
| | | ASS1093 |

| | |
|--------------------|---------|
| FM FRONTEND | AXF7004 |
| AM RF TUNING BLOCK | AXX7072 |

J FM/AM TUNER MODULE (AXQ7228)

SEMICONDUCTORS

| | |
|------------------|---------------|
| IC201 | BA1451F |
| IC202 | LC72131MD-TFB |
| Q201, Q204, Q205 | 2SC2412K |
| Q202 | DTA124ES |
| Q203 | DTC124EK |

| Mark | No. | Description | Part No. |
|------|------|-------------|----------|
| | D201 | | 1SS133 |
| | D202 | | MTZJ5.1C |

COILS AND FILTERS

| | | |
|------|-------------------|---------|
| L201 | FM DETECTOR COIL | ATE7003 |
| F202 | FM CERAMIC FILTER | ATF-107 |
| F201 | FM CERAMIC FILTER | ATF-119 |
| F203 | AM CERAMIC FILTER | ATF1155 |

CAPACITORS

| | | |
|------------------------------|--|--------------|
| C206 | | CCSRCH100D50 |
| C212, C213, C226, C233–C235 | | CCSRCH101J50 |
| C240 | | CCSRCH101J50 |
| C231, C232 | | CCSRCH150J50 |
| C223 | | CEAT100M50 |
| C229 | | CEAT101M10 |
| C224 | | CEAT1R0M50 |
| C227 | | CEAT220M25 |
| C241 | | CEAT2R2M50 |
| C243 | | CEAT330M16 |
| C228 | | CEAT3R3M50 |
| C237 | | CEAT470M10 |
| C211 | | CEJA1R0M50 |
| C210 | | CEJA470M16 |
| C204, C238, C602 | | CKSRYB102K50 |
| C101, C102, C208, C220, C239 | | CKSRYB103K50 |
| C242, C601 | | CKSRYB103K50 |
| C216, C217 | | CKSRYB123K50 |
| C225 | | CKSRYB153K50 |
| C201, C205, C209, C214, C230 | | CKSRYB223K50 |
| C236, C603 | | CKSRYB223K50 |
| C221 | | CKSRYB224K10 |
| C202, C222 | | CKSRYB473K16 |
| C215 | | CKSRYB681K50 |

RESISTORS

| | | |
|-----------------|--|-------------|
| R211 | | RD1/4PU221J |
| R221 | | RD1/4PU222J |
| R233 | | RD1/4PU391J |
| R243 | | RS1/10S0R0J |
| R103 | | RS1/10S331J |
| R104 | | RS1/10S391J |
| Other Resistors | | RS1/16S□□□J |

OTHERS

| | | |
|-------|----------------------------|------------|
| CN201 | 13P CONNECTOR | 52044-1345 |
| BN201 | TERMINAL 4-P | AKA7003 |
| | SHIELD CASE T | ANK7072 |
| | SHIELD CASE B | ANK7073 |
| X201 | CRYSTAL RESONATOR (7.2MHz) | ASS1093 |
| | FM FRONT END | AXF7003 |
| | AM RF TUNING BLOCK | AXX7071 |

MOTHER ASSY

SEMICONDUCTORS

| | | | |
|---|--------|-------------------|-----------|
| △ | IC8003 | PROTECTOR (750mA) | AEK7062 |
| △ | IC8002 | PROTECTOR (1A) | AEK7064 |
| △ | IC8001 | PROTECTOR (1.5A) | AEK7065 |
| | IC5301 | | BU4052BCF |
| | IC8801 | | MM1540BF |

| Mark | No. | Description | Part No. |
|------|--------------|-------------|-----------|
| △ | IC8011 | | NJM7812FA |
| △ | IC8802 | | NJM78L08A |
| | IC5501 | | PDC080A |
| △ | IC8031 | | PQ20RV1E |
| | Q8011, Q8031 | | 2SB1237X |

| | | | |
|---|----------------------------|--|-----------|
| △ | Q8021, Q8041 | | 2SB1375 |
| | Q8022, Q8042 | | 2SC2412K |
| | Q5301, Q5561, Q5572, Q5573 | | 2SC4081 |
| | Q8051 | | 2SD2114K |
| | Q5503, Q5504 | | DTC124EUA |

| | | |
|--------------|--|------------|
| Q5571 | | DTC143EUA |
| Q8801 | | RN1903 |
| Q8802 | | RN2903 |
| Q5501, Q5502 | | UN5212 |
| D5571, D8032 | | 1SR154-400 |

| | | |
|----------------------------------|--|----------|
| D5573, D8011, D8031, D8801–D8803 | | 1SS355 |
| D8002 | | UDZ2.0B |
| D5302 | | UDZ4.7B |
| D5502–D5506, D8061–D8066 | | UDZS8.2B |

COILS AND FILTERS

| | | |
|--------------|------------|----------|
| L5571 | | LFEA220J |
| L8831, L8841 | CHIP BEADS | VTL1087 |

CAPACITORS

| | | |
|----------------------------------|--|--------------|
| C5575 | | BCH1072 |
| C5351–C5358, C5502, C5506, C5507 | | CCSRCH101J50 |
| C5510, C5511, C5513–C5517 | | CCSRCH101J50 |
| C5523–C5525, C5577, C8063–C8065 | | CCSRCH101J50 |
| C5520 | | CCSRCH221J50 |

| | | |
|-----------------------------------|--|--------------|
| C8822, C8832, C8842 | | CCSRCH331J50 |
| C5576, C8012, C8032, C8043 | | CEAT100M50 |
| C5303, C5304, C5572, C8023, C8033 | | CEAT101M10 |
| C8042 | | CEAT101M10 |
| C8803 | | CEAT101M16 |

| | | |
|----------------------------|--|--------------|
| C5578, C8812, C8813 | | CEAT1R0M50 |
| C8051 | | CEAT220M50 |
| C8013, C8022, C8805 | | CEAT470M16 |
| C8821, C8831 | | CEAT471M6R3 |
| C5508, C5521, C5522, C8823 | | CKSRYB102K50 |

| | | |
|-----------------------------------|--|--------------|
| C5301, C5302, C5305, C5503–C5505 | | CKSRYB103K50 |
| C5518, C5571, C5573, C8808 | | CKSRYB103K50 |
| C8804, C8806, C8811, C8814, C8815 | | CKSRYB104K25 |
| C8841 | | CKSRYB104K25 |
| C5509, C5512, C5574, C8011, C8021 | | CKSRYB473K25 |

| | | |
|--------------|--|--------------|
| C8031, C8041 | | CKSRYB473K25 |
| C5359 | | CKSRYF104Z50 |

RESISTORS

| | | |
|-----------------------------------|--|-----------|
| R5507, R5534 | | RAB4C103J |
| R5532 | | RAB4C104J |
| R5501, R5503, R5505, R5510, R5520 | | RAB4C221J |
| R5524, R5528–R5531, R5533, R5543 | | RAB4C221J |
| R5545, R5546, R5548 | | RAB4C221J |

| | | |
|-----------------|--|--------------|
| R5535 | | RAB4C473J |
| R8032 | | RS1/16S1501F |
| R8031 | | RS1/16S4700F |
| Other Resistors | | RS1/16S□□□J |

XV-DV88, XV-DV77

| Mark | No. | Description | Part No. |
|---------------|----------------|------------------------------|-----------|
| OTHERS | | | |
| | 5504 | 19P SOCKET | AKP7001 |
| | CN8802 | 4P MINI DIN SOCKET | AKP7008 |
| | CN5503 | 13P PLUG | AKP7059 |
| | CN5502, CN5505 | 19P PLUG | AKP7062 |
| | CN5506 | 21P PLUG | AKP7063 |
| | CN8001 | 20P SOCKET | AKP7129 |
| | 5501 | BUZZER | APV7002 |
| | JA5501 | STEREO MINI JACK | DKN1124 |
| | CN5507 | 31P FFC CONNECTOR | HLEM31S-1 |
| | JA8801 | 1P PIN JACK | VKB1063 |
| | KN8001 | EARTH METAL FITTING | VNF1084 |
| | X5501 | CERAMIC RESONATOR (10MHz) | ASS7034 |

L DSP ASSY SEMICONDUCTORS

| | |
|--------------|-----------------|
| IC8301 | AK4527BVQ |
| IC8252 | BA4558F-HT |
| IC8251 | BU4052BCF |
| IC8751 | K6E0808C1E-JC15 |
| IC8101 | LC89056W-E |
| IC8651 | TC74HCU04AF |
| IC8701 | YSS912C |
| Q8251-Q8253 | 2SC4081 |
| Q8254 | DTA124EUA |
| Q8651 | DTA143EUA |
| Q8101 | RN1903 |
| Q8102, Q8351 | RN2903 |
| Q8353 | UN5212 |
| D8353 | DAN202K |
| D8351, D8352 | DAP202K |
| D8252 | UDZ4.7B |

COILS AND FILTERS

| | |
|----------------------------------|---------|
| F8101, F8102, F8152-F8154, F8156 | DTF1064 |
| F8701, F8702, F8751 CHIP BEAD | DTF1064 |
| F8301, F8302 CHIP BEAD | DTF1067 |
| F8611, F8651, F8652 | VTF1096 |
| CHIP SOLID INDUCTOR | |
| L8128 CHIP BEADS | VTL1086 |

CAPACITORS

| | |
|-----------------------------------|--------------|
| C8607, C8654, C8757 | CCSRCH100D50 |
| C8126, C8705, C8708, C8715, C8718 | CCSRCH101J50 |
| C8724, C8727, C8733, C8734, C8756 | CCSRCH101J50 |
| C8121, C8122, C8713, C8714 | CCSRCH200J50 |
| C8153, C8721, C8736, C8737 | CCSRCH471J50 |
| C8251, C8252, C8255, C8256 | CEAT100M50 |
| C8102, C8259, C8260, C8302 | CEAT101M10 |
| C8309, C8310, C8316, C8319, C8652 | CEAT101M10 |
| C8704, C8753 | CEAT101M10 |
| C8307, C8308, C8702 | CEAT220M50 |
| C8751 | CEAT221M6R3 |
| C8612, C8656 | CEAT470M16 |
| C8116 | CEJQ470M6R3 |
| C8326, C8601, C8735, C8794 | CKSRYB102K50 |
| C8114, C8115, C8151, C8152, C8192 | CKSRYB103K50 |

| Mark | No. | Description | Part No. |
|------|-----------------------------------|-------------|--------------|
| | C8257, C8258, C8261, C8305, C8792 | | CKSRYB103K50 |
| | C8112, C8113, C8191, C8791 | | CKSRYB104K25 |
| | C8313, C8314 | | CKSRYB222K50 |
| | C8101, C8103, C8104, C8110, C8117 | | CKSRYB473K25 |
| | C8119, C8123, C8301, C8304 | | CKSRYB473K25 |
| | C8311, C8312, C8315, C8318, C8320 | | CKSRYB473K25 |
| | C8613, C8614, C8651, C8653, C8655 | | CKSRYB473K25 |
| | C8657, C8701, C8703, C8707, C8710 | | CKSRYB473K25 |
| | C8712, C8717, C8720, C8723, C8726 | | CKSRYB473K25 |
| | C8729, C8731, C8732, C8752, C8754 | | CKSRYB473K25 |
| | C8602 | | CKSRYF104Z25 |

RESISTORS

| | |
|-----------------------------------|-------------|
| R8101, R8105, R8125, R8311, R8314 | RAB4C101J |
| R8703-R8705, R8709-R8711, R8713 | RAB4C101J |
| Other Resistors | RS1/16S□□□□ |

OTHERS

| | |
|----------------------------|------------|
| CN8201 11P PLUG | AKP7058 |
| CN8301 17P PLUG | AKP7061 |
| JA8611 OPT. LINK IN 8MB/S | GP1FA501RZ |
| CN8101 31P FFC CONNECTOR | HLEM31S-1 |
| JA8651 OPT. LINK OUT 8MB/S | JFJ1001 |
| JA8601 1P PIN JACK | VKB1077 |
| 8191 SCREW PLATE | VNE1948 |
| KN8791, KN8792 | VNF1084 |
| EARTH METAL FITTING | |
| X8101, X8701 (12.288MHz) | VSS1140 |
| CRYSTAL RESONATOR | |

M JACK ASSY COILS AND FILTERS

| | |
|--------------------------|---------|
| L8201-L8203, L8211-L8213 | VTL1112 |
| L8221-L8223 CHIP BEADS | VTL1112 |

CAPACITORS

| | |
|--------------------------|--------------|
| C8201-C8204, C8211-C8214 | CCSRCH101J50 |
| C8221-C8224 | CCSRCH101J50 |
| C8205, C8215, C8225 | CKSRYB103K50 |

RESISTORS

| | |
|---------------|-------------|
| All Resistors | RS1/16S□□□□ |
|---------------|-------------|

OTHERS

| | |
|---------------------------|---------|
| 8201 PIN JACK(6P) | AKB7012 |
| CN8404 11P SOCKET | AKP7069 |
| CN8402, CN8403 17P SOCKET | AKP7072 |

N BALANCE ASSY SEMICONDUCTORS

| | |
|--------------------------------|------------|
| IC8401, IC8421, IC8431, IC8441 | BA4558F-HT |
| IC8461, IC8471, IC8481, IC8501 | BA4558F-HT |
| IC8511 | BA4558F-HT |
| Q8401, Q8402, Q8441, Q8442 | 2SD2114K |
| Q8481, Q8482 | 2SD2114K |
| Q8551 | DTA124EUA |

| Mark | No. | Description | Part No. |
|-------------------|-----------------------------------|-------------|--------------|
| CAPACITORS | | | |
| | C8409, C8410 | | CCSRCH680J50 |
| | C8449, C8450, C8489 | | CCSRCH820J50 |
| | C8401, C8402, C8411, C8412 | | CEAT100M50 |
| | C8415, C8416, C8441, C8442 | | CEAT100M50 |
| | C8451, C8452, C8455, C8456 | | CEAT100M50 |
| | C8481, C8482, C8491, C8492 | | CEAT100M50 |
| | C8495, C8496 | | CEAT100M50 |
| | C8552, C8555 | | CEAT101M16 |
| | C8413, C8414, C8423—C8426 | | CKSRYB103K50 |
| | C8433—C8436, C8453, C8454 | | CKSRYB103K50 |
| | C8463—C8466, C8473—C8476 | | CKSRYB103K50 |
| | C8493, C8494, C8503—C8506 | | CKSRYB103K50 |
| | C8513—C8516, C8556, C8558, C8559 | | CKSRYB103K50 |
| | C8405, C8406, C8445, C8446, C8485 | | CKSRYB122K50 |
| | C8490 | | CKSRYB122K50 |
| | C8403, C8404, C8443, C8444, C8483 | | CKSRYB152K50 |
| | C8486 | | CKSRYB224K10 |
| | C8553, C8554 | | CKSRYB473K25 |

RESISTORS

| | |
|----------------------------|--------------|
| R8421, R8422, R8431, R8432 | RS1/16S1002F |
| R8461, R8462, R8471, R8472 | RS1/16S1002F |
| R8501, R8502, R8511, R8512 | RS1/16S1002F |
| Other Resistors | RS1/16S□□□J |

OTHERS

| | |
|----------------------|---------|
| CN8401 17P PLUG | AKP7061 |
| CN8551 12P CONNECTOR | AKP7131 |
| 8401 PCB BINDER | VEF1040 |



CNB ASSY

SEMICONDUCTORS

| | |
|-------------|----------|
| D5656 | 1SS355 |
| D5655 | UDZ2.0B |
| D5651—D5654 | UDZS8.2B |

RESISTORS

| | |
|---------------|-------------|
| All Resistors | RS1/16S□□□J |
|---------------|-------------|

OTHERS

| | |
|----------------------|---------|
| CN5652 11P PLUG | AKP7058 |
| CN5651 10P CONNECTOR | AKP7134 |



FLDP ASSY

SEMICONDUCTORS

| | |
|--------|------------|
| IC5661 | MSM9202-01 |
| Q5681 | UN5212 |
| D5681 | 1SS355 |
| D5661 | UDZS8.2B |

COILS AND FILTERS

| | |
|-------|---------|
| L5663 | LAU100J |
| L5662 | LAU220J |

CAPACITORS

| | |
|--------------|--------------|
| C5674 | CCSRCH470J50 |
| C5681 | CEJQ100M16 |
| C5661, C5664 | CEJQ101M10 |
| C5669 | CEJQ330M35 |
| C5953 | CEJQ470M16 |

| Mark | No. | Description | Part No. |
|------|-----------------------------------|-------------|--------------|
| | C5671—C5673 | | CKSRYB102K50 |
| | C5679, C5682 | | CKSRYB103K50 |
| | C5662, C5663, C5665, C5666, C5668 | | CKSRYF473Z50 |
| | C5670, C5675, C5952 | | CKSRYF473Z50 |

RESISTORS

| | |
|---------------|-------------|
| All Resistors | RS1/16S□□□J |
|---------------|-------------|

OTHERS

| | |
|---------------------------|-----------|
| V5661 FL TUBE | AAV7082 |
| CN5661 11P SOCKET | AKP7069 |
| 5951 REMOTE RECEIVER UNIT | GP1UM27XK |

6. ADJUSTMENT

• Please connect it to the POWERED SUBWOOFER S-DV88SW or S-DV77SW and DISPLAY UNIT AXX7107, for adjustment and operation inspection.

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanism Part]

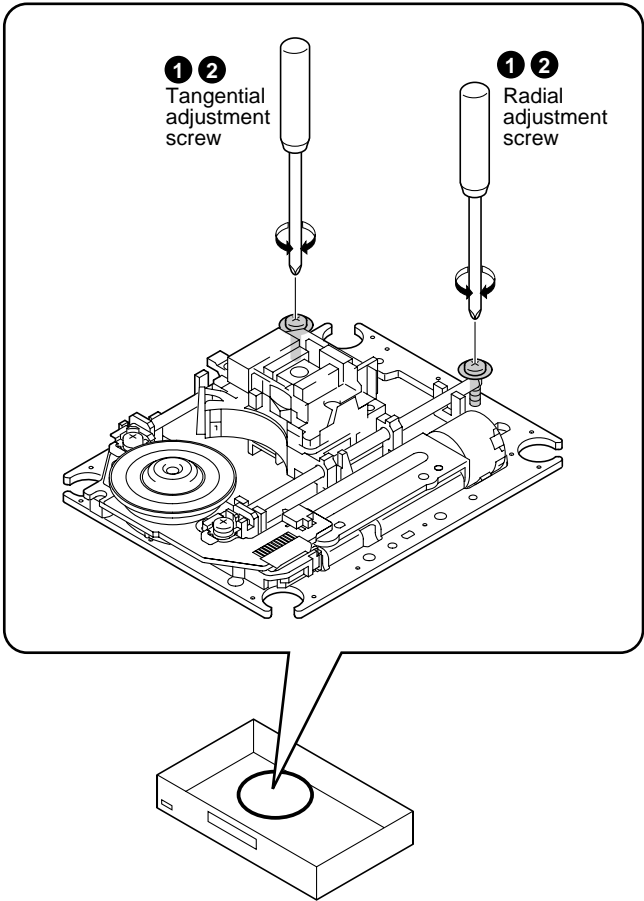
- ❶ Tangential and Radial Height Coarse Adjustment
- ❷ DVD Jitter Adjustment
- ❸ Initialize the Focus Sweep Setting

[Electrical Part]



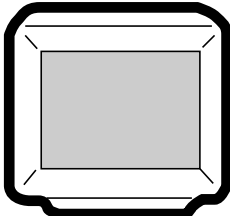
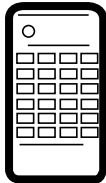


Electrical adjustments are not required.

■ Adjustment Points (Mechanism Part)

Cautions: After adjustment, adjustment screw locks with the Screw tight.



6.2 JIGS AND MEASURING INSTRUMENTS

| | |
|---|--|
|  ⊕ Screwdriver (large) |  ⊕ Screwdriver (medium) |
|  TV monitor |  Test mode remote control unit (GGF1067) |
|  ⊕ Precise screwdriver |  DVD test disc (GGV1025) |
| Screw tight (GYL1001) | |

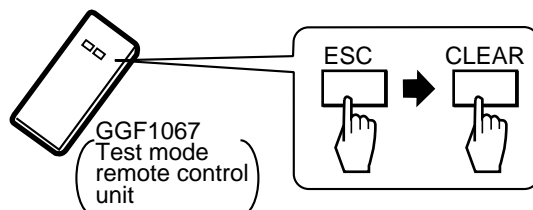
6.3 NECESSARY ADJUSTMENT POINTS

| When | Adjustment Points |
|---|--|
| ■ Exchange Parts of Mechanism Assy | |
| Exchange the Pickup | <div> <div>Mechanical point</div> <div>①, ②, ③</div> <div>* After adjustment, screw locks with the Screw tight.</div> </div> <div> <div>Electric point</div> <div>_____</div> </div> |
| Exchange the Traverse Mechanism | <div> <div>Mechanical point</div> <div>③</div> </div> <div> <div>Electric point</div> <div>_____</div> </div> |
| Exchange the Spindle Motor | <div> <div>Mechanical point</div> <div>②, ③</div> <div>* After adjustment, screw locks with the Screw tight.</div> </div> <div> <div>Electric point</div> <div>_____</div> </div> |
| ■ Exchange PCB Assy | |
| Exchange PC Board LOAB, DVDM ASSY | <div> <div>Mechanical point</div> <div>_____</div> </div> <div> <div>Electric point</div> <div>_____</div> </div> |

*

Purpose: To set the sweep which was correct with the individual Traverse mechanism.

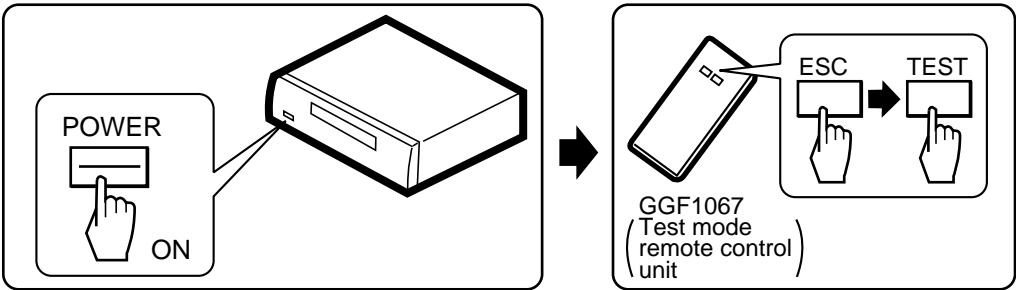
Be sure to perform the following step finally when replaced Pickup, Traverse Mechanism and Spindle Motor.



(It is necessary when performed adjustment procedure ②.)

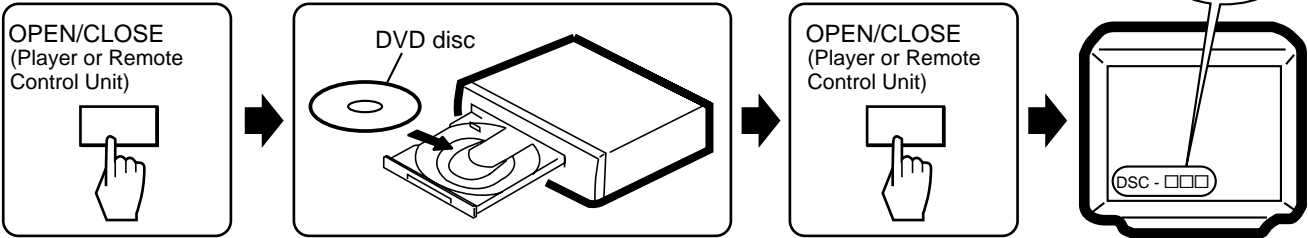
6.4 TEST MODE

TEST MODE: ON



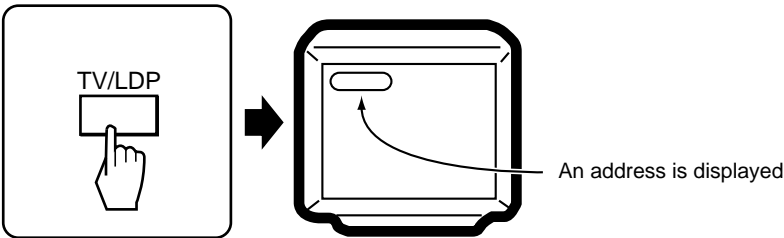
TEST MODE: DISC SET

<TRAY OPEN>



TEST MODE: PLAY

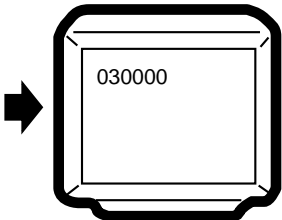
<PLAY>



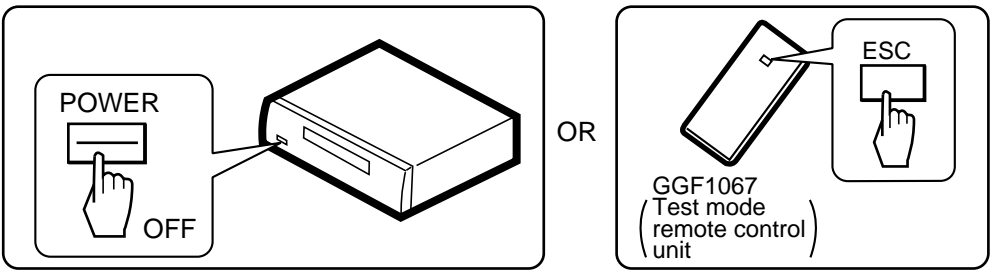
< When playback with the target address of disc (DVD)>

For example, when playback with # 30000

During PLAY +10 → 3 → 0 → 0 → 0 → 0 → CHP/TIM Press keys in order



TEST MODE: OFF

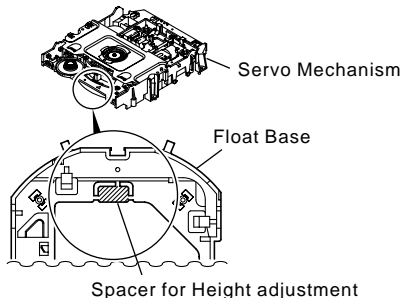


6.5 MECHANISM ADJUSTMENT

1 Tangential and Radial Height Coarse Adjustment

START

- Remove the servo mechanism.
- Remove a Spacer for height adjustment attached to the back side (shaded area) of the Servo Mechanism (Float Base) with nippers.



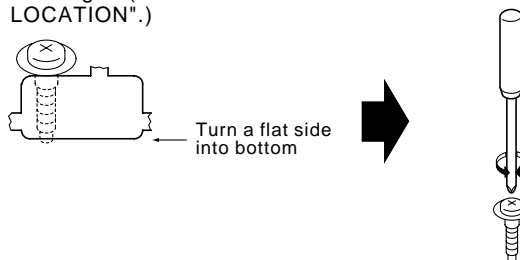
Note:
Turn the Short switch to Short side when removing the Pickup Flexible Cable.
(Refer to "7.1.6 DISASSEMBLY".)

Cautions:

Because there is not a Spacer for height adjustment in adjustment after the second time, will keep it at need.
(This parts is Traverse mechanism exclusive use of a model for 2001 years)



Put a spacer between a Tangential (or Radial) adjustment screw and Mechanism Base and turn each screw to adjust the height. (Refer to "6.1 ADJUSTMENT ITEMS AND LOCATION".)



2 DVD Jitter Adjustment

- Playback method of inner and outer address for the purpose is referred to "6.3 TEST MODE".
- Jitter indication of the monitor is referred to "7.1.3 TEST MODE SCREEN DISPLAY".

Use disc: GGV1025

START

- Test mode
- Play the DVD test disc at outer track (around #200000)



Mechanism Assy

Adjust the Tangential Adjustment Screw so that jitter becomes minimum.

J4 : Min



- Play the DVD test disc at inner track (around #30000)



Mechanism Assy

Adjust the Radial Adjustment Screw so that jitter becomes minimum.

J4 : Min



- Play the DVD test disc at outer track (around #200000)



Mechanism Assy

Readjust the Tangential Adjustment Screw so that jitter becomes minimum.

J4 : Min



Test mode end



Disc playback normally.

- The measurement of block error rate

ESC 5



CHECK

Confirm the error rate that is displayed "OK"

(Example ER (av): $2.5e - 5 \sim \text{OK}$)

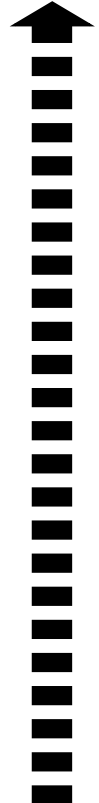
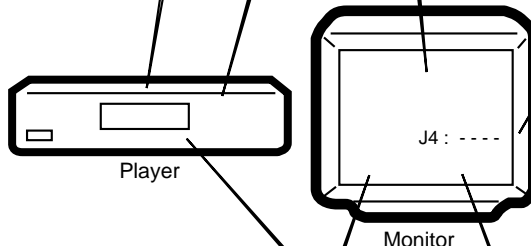


Turn the POWER OFF in case of NG once, and perform the adjustment once again.

If error rate is OK, locks a root of tangential and radial adjustment screws with the Screw tight, and go to step 3.

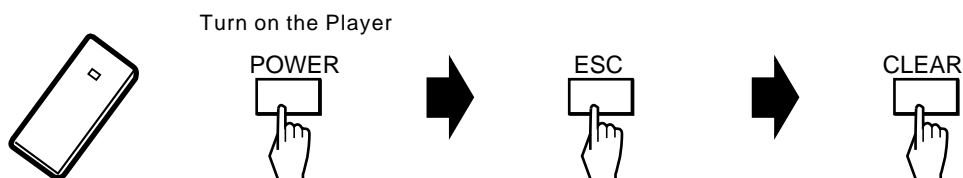


Screw tight : GYL1001



3 Initialize the Focus Sweep Setting

Purpose: To set the sweep which was correct with the individual Traverse mechanism.



Note: Be sure to perform this step when replaced the Pickup or Traverse mechanism.

6.6 TUNER SECTION

■ AM Tuner Section

- There is no adjustment in the AM tuner.

■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1.

| Step No. | Adjustment Title | ANT. Input level and signal condition | | | Adjustment | |
|----------|--------------------|---------------------------------------|------------|--------------------|--------------|---|
| | | Frequency (MHz) | Modulation | Input Level (dBμV) | Adjust point | Contents |
| 1 | T-METER Adjustment | 98 | OFF | 80 | L201 | Adjust L201 so that the DC voltage between Pin 21 and Pin 23 of IC201 (Test point V _{tm}) gets within 0 ± 50mV. |

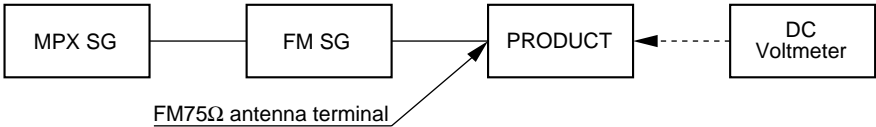


Fig.1 Adjustment Wiring Diagram

A FM/AM TUNER UNIT

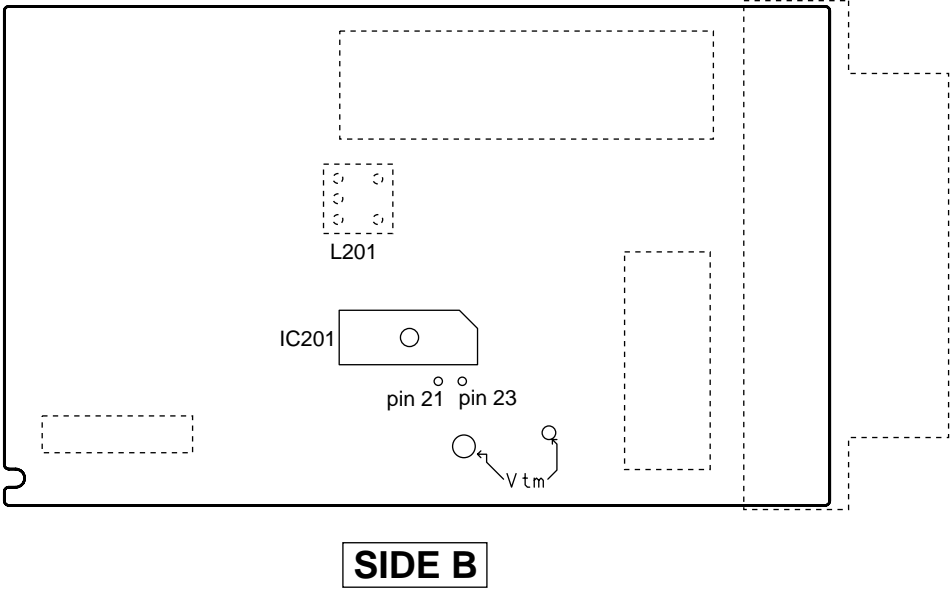


Fig.2 Adjustment Point

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 SELF-DIAGNOSTIC FUNCTION OF PICKUP DEFECTIVE

This unit can confirm the laser diode current value (DVD: 650nm, CD: 780nm) of pickup on the Test Mode screen.
(Press the **ESC** → **TEST** keys in order on the test mode remote control unit (GGF1067) to enter the test mode.)

It's effective in case of the following condition.

Symptom

- Indicates "No Disc" in FL display.
- Player does not playback, etc..

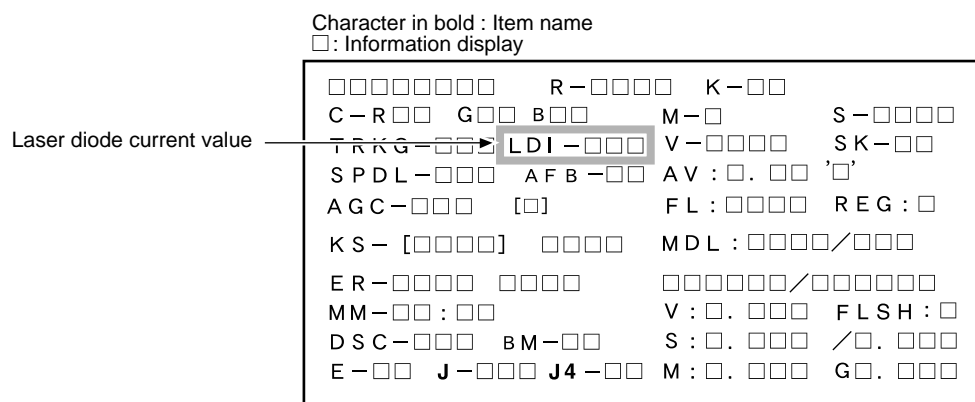
Procedure of Self-Diagnosis

- ① Enter the Test mode.
- ② When diagnosing the 650nm laser diode:
Press the **TEST** → **1** keys in order, and turn on the laser diode (It light-up for nine seconds.).
When diagnosing the 780nm laser diode:
Press the **TEST** → **4** keys in order, and turn on the laser diode (It light-up for nine seconds.).

When let it turn on once again after performed ② once,
After pressed **REP.B** key once
650nm: Press the **TEST** → **1** keys in order
780nm: Press the **TEST** → **4** keys in order

- ③ Confirm the indicated value of the laser diode current (LDI). (Refer to following figure.)
- ④ **When indicated value is more than 100, pickup is defective. → Replacement is necessary**
Replace the Traverse Mechanism Assy or Pickup.

Note : When a DVD disc or a CD disc is played in the test mode, this function is effective.



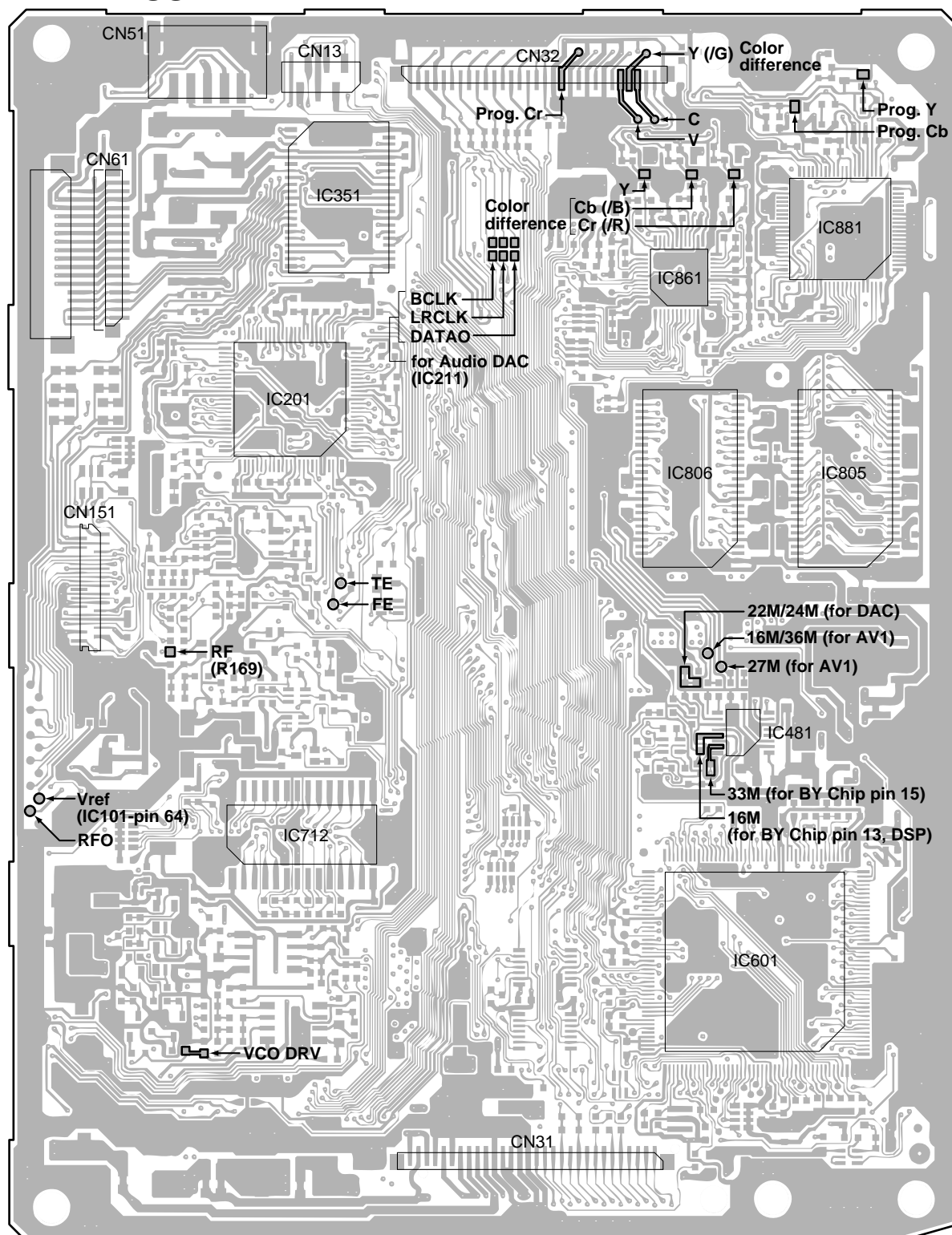
Test Mode Screen Display

7.1.2 TEST POINTS LOCATION

This model has not test terminal.

Please use following points on the DVDM Assy when checking RF, FE and TE, etc..

DVDM ASSY



SIDE A

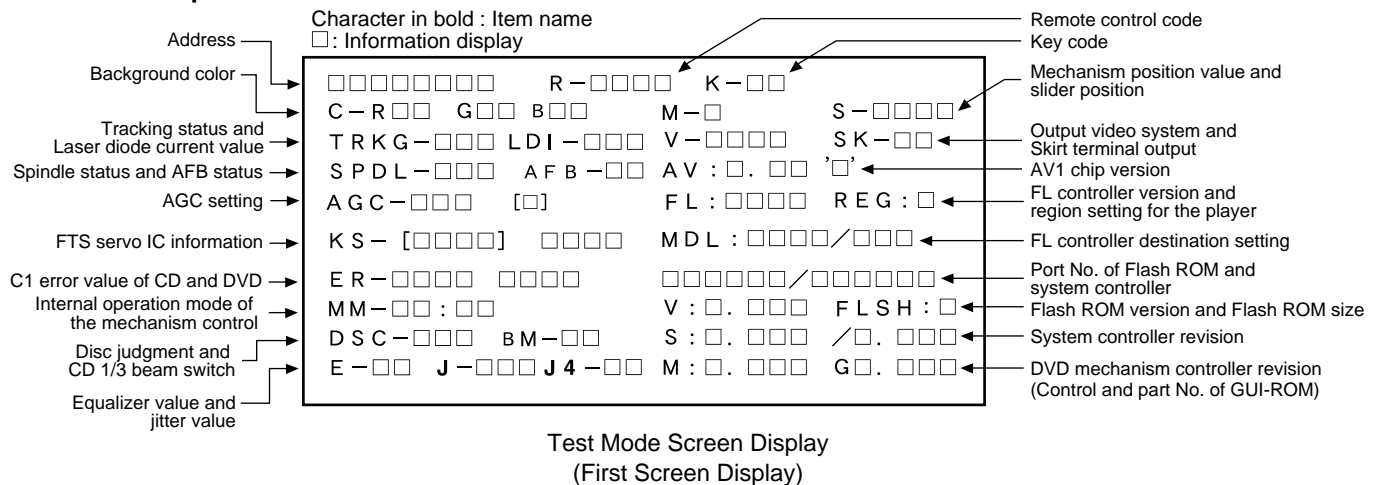
7.1.3 TEST MODE SCREEN DISPLAY

■ TEST MODE SCREEN DISPLAY

When the test mode is entered, press the **[ESC]** button and the **[TEST]** button in order of the test mode remote control unit (GGF1067).

Consecutive double-OSD display is supported during test mode. The screen is composed 10 lines with a maximum of 32 characters per line. It can't be used with the debugging display mode together.

• Screen Composition



Caution :

The first screen and second screen switch by pressing [DISPLAY] key of the remote control unit.

It is only a version display part on the lower right of the screen those contents of display change.

ATB : ON/OFF information display and AGC manual setting display deleted with the second generation.

The displays of Tilt error value, Tilt servo status and pickup DVD/CLD display deleted with the third generation becomes LD part is deleted.

• Description of Each Item on the Display

(1) Address indication

The address being traced is displayed in number.

DVD : ID indication (hexadecimal number, 8 digits)

[* * * * * * * *]

CD : A-TIME (min. sec.) [0 0 0 0 * * * *]

(Note : For DVDs, decimal-number indication is possible.)

(2) Code indication of the remote control unit [R - * * * *]

The code for the key pressed on the remote control unit, which is received by the FL controller, is displayed while the key is pressed. In the case of the double code, the second code will be displayed.

(3) Key code indication for the main unit [K - * * *]

The code for the key pressed on the main unit, which is received by the system controller, is displayed while the key is pressed.

(4) Background color indication [C - R * * G * * B * *]

(5) ① Tracking status [TRKG - * * *]

Tracking on [ON]

Tracking off [OFF]

② Laser diode current value [LDI - * * *]

(6) ① Spindle status [SPDL - * * *]

Spindle accelerator and brake, free-running [A/B]

FG servo [FG]

Rough, velocity phase servo [SRV]

Offset addition, rough, velocity phase servo [O_S]

② AFB status [AFB - * *]

ON [ON]

OFF [OFF]

(7) Mechanism position value [M - *]

Position code

[1] to [3]

(8) Slider position [S - * * * *]

CD TOC area

[IN]

CD active area

[CD]

(9) AGC setting [AGC - * *]

AGC on

[AGC-ON]

AGC off

[AGC-OFF]

(10) Output video system [V – * * * *]

| | |
|--------------|--------|
| NTSC system | [NTSC] |
| PAL system | [PAL] |
| Auto-setting | [AUTO] |

Skirt terminal output [SK – * *]

| | |
|---------|------|
| VIDEO | [00] |
| S-VIDEO | [01] |
| RGB | [02] |

Note : Display only the model which can do the output setting of skirt terminal.

(11) FTS servo IC information

DSP coefficient indication [KS – [* * * *] * * * *]
Displays the address (four digits) of the specified coefficient and the setting value (four digits) with [TEST] and [9] keys.

(12) Error rate indication

- ① C1 error value of CD [ER – C1 * * * *]
- ② C1 error value of DVD [ER – * * * * * * * *]

(13) Internal operation mode of mechanism controller

[MM – * * : * *]

Internal mechanism mode (2 digits) and internal mechanism step (2 digits) of the mechanism controller

(14) ① Disk sensing [DSC – * * *]

The type of discs loaded is displayed.

[DVD], [CD], [VCD], []

② CD 1/3 beam switch [BM – * *]

(15) ① Equalizer value [E – * *]

② Jitter value [J – * *]

Make the jitter four times, and renew it in every 0.5 second. [J4 – * *]

CD is effective only in the jitter value.

(16) Version of the AV-1 chip [AV : * . * * ' * ']

(17) ① Version of the FL controller [FL : * * * *]

② Region setting of the player [REG : *]

Setting value [1] to [6]

(18) Destination setting of the FL controller

[MDL : * * * * / * * * *]

Four characters in the front represent the type of model :
three characters in the back represent the destination code.

J : /J, K : /KU, /KC, /KU/KC, R : /RAM, /RL, /RD, /LB,

WY : /WY

(19) The part number of the flash ROM and system controller [* * * * * * / * * * * * *]

- ① Part number of the flash ROM <Front>
(Example) VYW1536-A = W1536A
(Example) PD6256A9 = 6256A9
- ② Part number of the system controller <Back>
(Example) PD3381T1 = 3381T1

(20) ① Version of the flash ROM [V : * . * * *]

② Flash ROM size [FLSH = *]

(21) Revision of the system controller [S : * . * * * / * . * *]

- ① Revision number of the external ROM part (flash ROM) of the system controller <Front>
- ② Revision of the internal ROM part of the system controller <Back>

(22) Revision of the DVD mechanism controller

[M : * . * * *]

Revision number of the external ROM part (flash ROM) of the DVD mechanism controller

(23) Control and part numbers of the GUI-ROM

[GUI : * * * *]

No GUI model displays as " — / — ".

OEM model displays the part number of GUI-ROM

[GUI : * * * *]

■ DEBUGGING SCREEN SPECIFICATION FOR THE MECHANISM CONTROLLER

• This specifications is subject to change without notice.

① Indication Method of The Mechanism Controller Debugging Screen

A debugging screen of the mechanism controller is indicated when pressing the test mode remote control unit [GGF1067] in order of the **[ESC]** and **[CHP/TM]** buttons.

Release from debugging screen display of the mechanism controller with the **[ESC]** button.

② Screen Layout

| | | | | | | | | | | | | | | | | | |
|----|----|----|------|----|-----|-----|----|----|----|----|----|----|----|---|----|---|----|
| ER | 1 | > | 2 | | | | | 3 | 4 | | | | | | | | |
| M | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | | |
| S | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | | | | |
| | 7 | 8 | cm | 22 | rpm | SGC | : | 10 | - | 11 | - | 12 | | | | | |
| | 13 | 14 | | 15 | | J | - | 16 | 0 | - | 17 | 1 | | | | | |
| | | | | | | | | | | | | | | | | | |
| M | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | | | | | |
| S | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | | | | | |
| S | : | 21 | OEIC | : | 9 | 23 | BM | - | 24 | | | | | | | | |
| F | 25 | - | 26 | I | 27 | T | 28 | - | 29 | S | 30 | - | 31 | R | 32 | C | 33 |

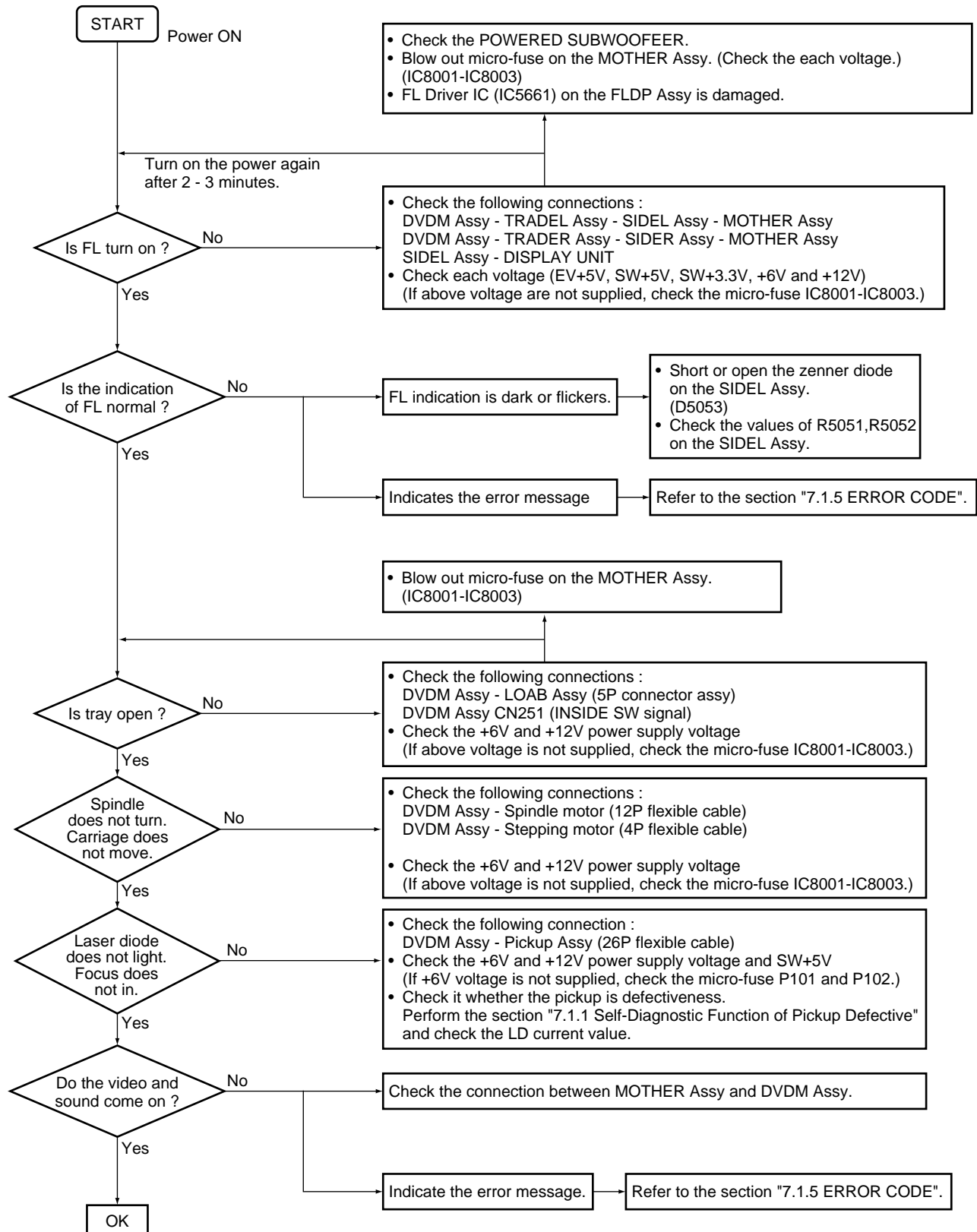
③ Indication Contents

- The error that became the trigger that an error of 2 occurred.
There are many cases same as 2.
- The error number that transferred to the system controller
Refer to the error list about contents of error number.
- Code read in state (it does not support in this unit)
When X is indicated, ID or subcode are not able to read in.
When X is not indicated, they are able to read in.
- ID or subcode (it does not support in this unit)
Subcode indicates the A time.
- Inside mode of the mechanism controller when an error of 1 occurred
It can indicate to a maximum 10 mode. Indicate it in order of an old mode from the left, and go right, and become a new mode. Indicate only a nest share of the mode.
- Processing step of inside mode of 5
It can grasp the mode reaching an error and transition of step by watching 5 and 6 and it can specify the occurrence place of most errors.
- Disk information in the mechanism controller
? : Indistinctness
NO : There is no disc
DVD 1 : DVD single layer
DVD 2 : DVD dual layer
CD : CD
CDR : CD-R or CD-RW
CDR P : PRD of CD-R or CD-RW
- As a result of 8cm /12cm distinction
? : Indistinctness (undistinction)
8 : 8 cm
12 : 12 cm
- OEIC gain (it does not support in this unit)
H : OEIC HIGH gain
L : OEIC LOW gain
- SGC gain for LD of 780nm
It indicates a step using in the mechanism controller inside with a hexadecimal number.
Set the gain so that S curve becomes 1.8V (p-p) in disc distinction.
- SGC gain for LD of 650nm For L0.
It indicates a step using in the mechanism controller inside with a hexadecimal number. Set a gain so that S curve becomes 1.8V (p-p) in disc distinction.
- SGC gain for LD of 650nm For L1.
It indicates a step using in the mechanism controller inside with a hexadecimal number. Set a gain so that a S curve becomes 1.8V (p-p) in disc distinction.
- RF count value for disc distinction
RF count value to use the disc distinction. It compares threshold value of 14 and 15 and distinguishes the disc.
- Disc distinction threshold value (DVD and CD)
Threshold value of the disc distinction. Distinguish it from DVD if bigger than this value, and distinguish it from CD if small.

15. Disc distinction threshold value (CD and unrecorded disc)
Threshold value of the disc distinction. Distinguish it from CD if bigger than this value, and distinguish it from an unrecorded disc if small.
16. Current jitter value
Indicate the value that was read in from the MY-CHIP in DVD, and indicate the value that was read in from the servo DSP in CD.
17. Focus balance setting value of L0
18. Focus balance setting value of L1
19. Current mechanism controller inside mode
(it does not support in this unit)
It can indicate to a maximum 10 modes. Indicate only a nest share of the mode.
20. Processing step of 11 inside modes
(it does not support in this unit)
It can grasp the current mode, the mode reaching it and transition of step by watching 19 and 20.
21. Spindle control state of MY-CHIP
(it does not support in this unit)
OFF : Motor off condition
A/B : Accelerator and brakes
FG : FG servo
RVP : Rough speed phase servo
ORVP : Rough speed phase servo of offset addition
22. Rotation number of spindle motor
Do not FG read in ? indication (during spindle stop).
23. Tracking error generation system
(it does not support in this unit)
1: 1 beam (DPD)
3: 3 beams
24. TZC count value (it does not support in this unit)
The value that counted the number of TZC for one rotation in the tracking open state.
When this value is more than 512 with CD, set it in 1 beam because the eccentric is large.
DVD does not measure it because it is 1 beam fixed (indication is 0000).
25. It indicates the frequency that entered the focus backup
Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Due to a 1 byte counter, next of FF becomes 00.
26. It indicates focus backup limit frequency with the hexadecimal number
Initial value is 14H, it does decrement whenever enter the focus backup and it gives up backup if it became 0. Then the error is generated. After reverted from the backup, When not enter the backup and pass fixed time (1500ms), return to initial value again.
27. It indicates the frequency that entered the internal circumference plunging into backup of the sled
Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Due to a 1 byte counter, next of FF becomes 00.
28. It indicates the frequency that entered the tracking overrun backup
Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Due to a 1 byte counter, next of FF becomes 00.
29. It indicates the limit frequency of tracking overrun backup with a hexadecimal number
Initial value is 03H, it does decrement whenever enter the tracking overrun backup and it gives up backup if it became 0.
30. It indicates the frequency that entered sled overrun backup
Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Due to a 1 byte counter, next of FF becomes 00.
31. It indicates the limit frequency of sled overrun backup with a hexadecimal number
Initial value is 03H, it does decrement whenever enter the sled overrun backup and it gives up backup if it became 0.
32. It indicates the frequency that entered the tracking close NG backup
Hexadecimal number indication. Counter does not reset till turns the power off after turning it on. Next of FF is be a 1 byte counter in 00.
The hexadecimal number indication which indicates the frequency that reads
33. ID/subQ, and entered NG backup
Hexadecimal number indication. A counter does not reset it till cuts it off after turning it on. Due to a 1 byte counter, next of FF becomes 00.
34. An address to indicate in 35
Set it by using RS232.I
(an address) Set it with DA.
35. Contents of an address indicated in 34.

7.1.4 TROUBLE SHOOTING

- No Power ON
- FL is not turned ON
- FL indication is unusual



7.1.5 ERROR CODE

Error codes that are displayed on the FL display without using the remote control unit

| FL Display | Possible causes | Operation of the unit |
|------------|---|---|
| AV1 VER | AV-1 chip is not a match with the program of system controller | The sound may not out with the specific audio. |
| CPU AERR | CPU address error (Hardware is unusual.) | No operation |
| DMA AERR | DMA address error (Hardware is unusual.) | No operation |
| FLASH ID | Difference in versions of the internal ROM of the system controller and of the flash ROM, or bus line failure or reverse installation | No operation |
| FLASH WRP | Write protect error of the flash ROM | No operation |
| FLASH SIG | Difference in part number of the flash ROM (When the ROM which could't be used was used.) | No operation |
| FLASH SUM | Check sum error of the flash ROM (It exceeds the regular size.) or reverse installation (Hardware is unusual.) | No operation |
| FLASH SIZE | Size error of the flash ROM (Use 4 or 8 M-bit.) | No operation |
| ILLGAL | The system controller fetched a code other than an operation code (Hardware is unusual.) | No operation |
| RESERVE | Undefined interrupt (Hardware is unusual.) | No operation |
| SLOT | Inappropriate slot command issued (Hardware is unusual.) | No operation |
| SDSP PWER | Access error to the servo DSP or clock does not oscillation (Hardware is unusual.) | Accept only OFF operation of the POWER key of the main unit. Remote control unit is impossible. |

Error codes that are displayed on the FL display by using the remote control unit (Mechanism controller error)

To display: ESC + DISPLAY + DISPLAY; Location of the display: At the two digits of center of the FL display

To display the error history: ESC + DISPLAY + One shot; Location of the display: TV screen

| FL | Description of Error | Causes if with a DVD | Causes if with a CD | Operation of the Unit |
|----|---------------------------------------|--|--|--|
| 11 | Search timeout | Search could not be complete within 7 seconds. | Search could not be complete within 7 seconds, and it could not enter the target area within 7 seconds by VCD scan. | CD : Stops, DVD : Continues operation |
| 12 | Search retry error | A search could not be completed after 3 retries, search backup was executed 4 times, or in a case of timeout (6 seconds) while the unit was tracing 11 tracks or more beyond the target while the search operation was converging. | Backup against slider skip was executed 4 times during a search, or slider skip twice resulted in starting from the read-in point. | CD : Stops, DVD : Continues operation |
| 19 | Tracing timeout while converging | Timeout (10.5 seconds) while tracing at the stage of convergence of a search. | | Stop |
| 1B | Index 0 search error | | During Track (Index) Search, the search for the beginning of a program could not be completed within 3 seconds (20 seconds in the case of Index Search) after positioning based on the TOC data was completed. | Stop |
| 1C | Wobble distinction error | Distinguished RW disc without wobble. | | Read the RW control data. |
| 22 | Timeout of slider inner circumference | Inside switch could not ON within 3 seconds. | | Stop |
| 23 | Timeout of slider outer circumference | Inside switch could not OFF within 2 seconds. | | Stop |

| FL | Description of Error | Causes if with a DVD | Causes if with a CD | Operation of the Unit |
|----|---|--|---------------------|--|
| 33 | No FOK pulse during playback CLVA | When the focus was deviated continuously 20 times. | | Adjusts focus at the innermost circumference and tries to return to its position where the error was generated (for 3 times), then opens. If the same error persists after one retry, the tray opens. (No FOK pulse) |
| 38 | Disc-type-sensing error | If normal starting was impossible in the following three cases, disc-type sensing will be retried if other errors occur excepting C5 error. However, when the focus error "33" was occurred continuously 3 times, it is finished as "38 error" at the moment: (1) startup with the first disc-type-sensing result, (2) forced startup with another disc by designating the disc type, (3) forced startup with the original disc by designating the disc type. | | Open |
| 39 | SGC converge timeout | SGC could not converge during detects the peak | | Open |
| 41 | Spindle timeout | The unit did not enter Stop mode within 10 seconds of issuance of a Stop command. | | Stop |
| 48 | Spindle FG transition timeout | The spindle could not converge into within $\pm 12\%$ of the target FG rotation speed within 10 seconds after spindle kick. The first time after startup (the first time after disc distinction), it doesn't become the number of the target rotation within five seconds. The first time after startup, detects the abnormal rotation number of high-speed continuously 3 loops. DVD: 5 to 9 mS, CD: 40 to 60 mS | | Stops. (FG timeout) |
| 49 | Spindle PLL transition timeout | After the second times after startup, it doesn't become the number of the target rotation within five seconds. Detects the abnormal high-speed or low-speed rotations. DVD: 5 to 9 mS, CD: 40 to 60 mS | | Stops. ("73" is displayed during starting process.) |
| 4A | Spindle lock timeout | Spindle could not lock more than 1.5 seconds before start the AFB. | | Stops. ("73" is displayed during starting process.) |
| 51 | Auto sequence timeout of peak detection | ABUSY did not return within 1 second after the DDTCT (peak detection) command was sent. | | Stop |
| 52 | Auto sequence timeout of focus jump down | ABUSY did not return within 30 mS after the FJMPD (Focus jump 1 to 0) command was sent. | | Stop |
| 53 | Auto sequence timeout of focus jump up | ABUSY did not return within 30 mS after the FJMPU (Focus jump 0 to 1) command was sent. | | Stop |
| 54 | Auto sequence timeout of play AGC | ABUSY did not return within 50 mS after the GSUMON (play-AGC-measuring) command was sent. | | Stop |
| 55 | Auto sequence timeout of disc-type-sensing | ABUSY did not return within 2 seconds after the DJSRT (disc-sensing) command was sent. | | Stop |
| 56 | Auto sequence timeout of ATB2 | ABUSY did not return within 1 second after the TBLOFS (Internal ATB after the completion of external ATB) command was sent. | | Stop |
| 57 | Auto sequence timeout of tracking servo ON | ABUSY did not return within 500 mS after the TSON (tracking servo ON) command was sent. | | Stop |
| 58 | Auto sequence timeout of ATB1 | ABUSY did not return within 200 mS after the TBL (external ATB) command was sent. | | Stop |
| 59 | Auto sequence timeout of focus gain adjustment | ABUSY did not return within 2 seconds after the FGN (focus gain adjustment) command was sent. | | Stop |
| 5A | Auto sequence timeout of tracking gain adjustment | ABUSY did not return within 2 seconds after TGN (tracking gain adjustment) command was sent. | | Stop |
| 5B | Auto sequence timeout of offset adjustment | ABUSY did not return within 1 second after the CMDAVE (offset adjustment) command was sent. | | Stop |

| FL | Description of Error | Causes if with a DVD | Causes if with a CD | Operation of the Unit |
|------|--|--|---|--|
| 5C | Auto sequence timeout of modulation factor measurement | ABUSY did not return within 200 mS after the ADJMIR (modulation factor measurement) command was sent. | | Stop |
| 5D | Auto sequence timeout of auto focus bias | ABUSY did not return within 2 seconds after the AFB (auto focus bias) command was sent. | | Stop |
| 5F | Auto sequence already busy | A command could not be sent because ABUSY was low. ABUSY did not return within 200 mS after TLV command was sent. | | Stop |
| 62 | Pause retry error | Pause mode could not be restored within three retries after it had been released. | | Continues operation |
| 71 | ID can not read during tracing | An ID could not be read for 1 second or more. | | Stop |
| 72 | Subcode check failure during playback | | No frame could be read for 3 seconds or more. | Stop |
| 73 | ID can not read at the startup | An ID could not be read within 1 second after the AFB adjustment had been finished. | | Opens (ID readout failure) |
| 74 | Subcode check failure during startup | | No subcode could be read within 3 seconds after AFB adjustment had been finished. | Opens (Subcode readout failure). |
| 81 | Timeout for reading TOC of the mechanism controller | | TOC readout took 30 seconds or more. | Stop |
| 82 | Timeout for reading TOC of the system controller | | Reading TOC of the system controller took 30 seconds or more. | Stop |
| A1 | Communication timeout of DSP command | A command could not be issued to DSP because Command Busy (XCBUSY) was in force (XCBUSY = L) for a specified time (about 200 mS). | | Open |
| A2 | Communication timeout for reading DSP coefficient | Command Busy (XCBUSY) was in force for a specified time (about 200 mS) before and after a coefficient read command was issued to DSP, or the address echo-back after command issuance did not match the setup address. | | Open |
| A3 | Communication timeout for writing DSP coefficient | Command Busy (XCBUSY) was in force for a specified time (about 1024 mS) before and after the coefficient write command was issued to DSP. | | Open |
| A4 | Communication timeout for continuously writing DSP coefficient | Command Busy (XCBUSY) was in force for 200 μ S during continuous coefficient writing, or before and after a continuous write command was issued to DSP. | | Open |
| B1 | Timeout error for backup | In the tracing state during the backup sequence, codes could not be read for 1 second or more. In the backup sequence, tracking ON sequence of the servo DSP could not be completed even if more than 500 mS after the tracking ON command was issued. | | Stops |
| B2 | Retry error for backup | Tracing impossible after retring the tracking ON for 3 times in the backup sequence. | | Stops |
| B3 | Retry error for trace | During tracing, runaway was detected after three iterations of backup operations for detecting runaway. | | Stops |
| C3 | Detection of tracking overcurrent | During playback, the overcurrent detection port was at L for 300 ms or more continuously. | | Stops (the mechanical controller operates independently). |
| (C5) | Short-circuit test corresponding error | While the power was on, the overcurrent detection port was at L for 40 ms or more continuously. | | Turns off the power instantly (No indication on the FL display and no writing to flash memory) |
| E3 | Violation against digital copy guard | | | Stops |

| FL | Description of Error | Causes if with a DVD | Causes if with a CD | Operation of the Unit |
|----|----------------------|---|---------------------|--|
| F5 | Tray being pushed | The tray switch that had been Open mode was forcibly changed to a mode other than Open by an external force. | | Closes |
| F8 | Loading timeout | Loading, unloading or clamping could not be completed within a specified time (about 5 seconds). | | Reverses the loading direction. If timeout is repeated upon retry, the unit stops. |
| FC | Focus | The following error occurred eight times. (1) Focus ON sequence could not be completed even if more than two seconds after the focus ON command (to the servo DSP) was sent. (2) Focus IN sequence was finished, actually focus IN was not completed. | | Stops wherever possible then opens (stops in the case of side B). |

Error codes that are displayed on the FL display by using the remote control unit (Device error)

To display : ESC + DISPLAY + DISPLAY ; Location of the display : At the two digits of left of the FL display

| FL | Description of Error | Causes if with a DVD | Causes if with a CD | Operation of the Unit |
|----------------|-----------------------------------|----------------------|---------------------|---|
| bit3=1 08 etc. | AV1 access error (read, write NG) | | | No operation or it becomes debugging indication if the power is able to ON. |
| bit2=1 04 etc. | MY CHIP access error | | | |
| bit1=1 01 etc. | SRAM access error | | | |

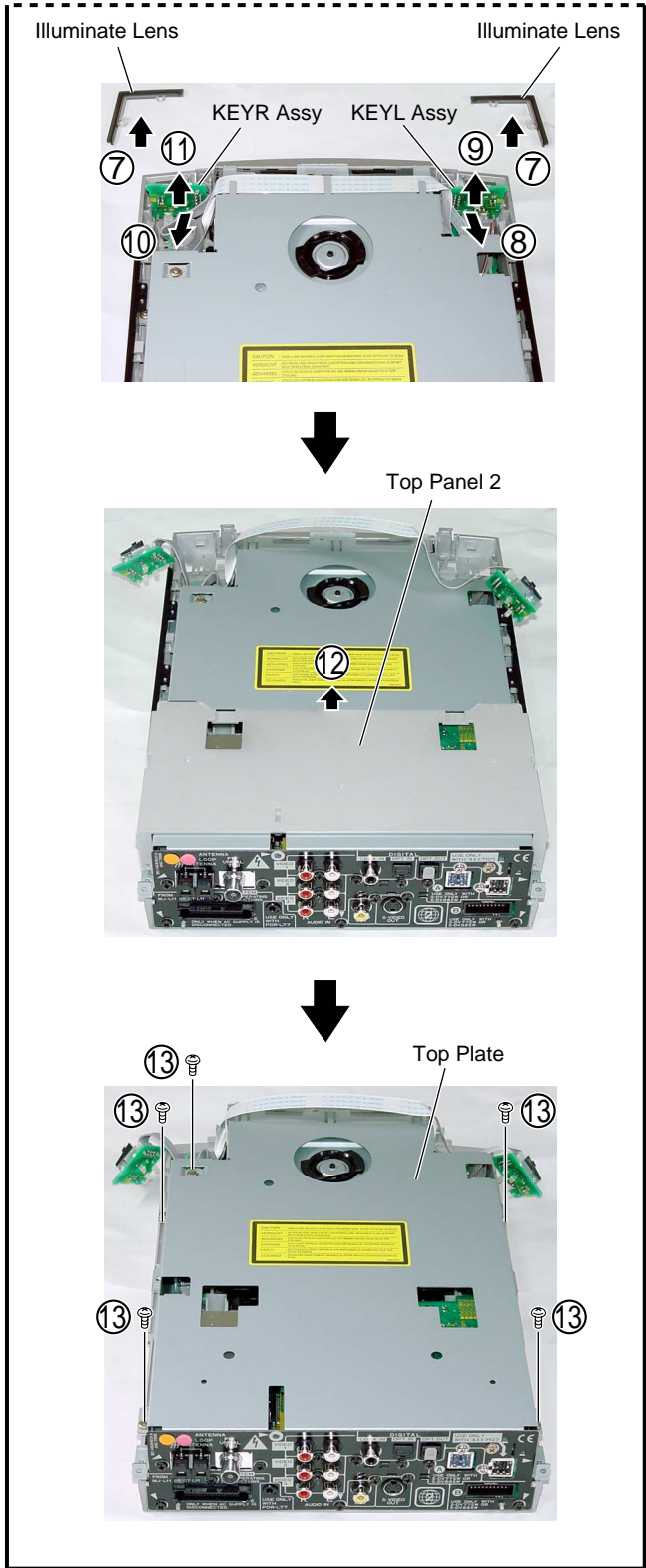
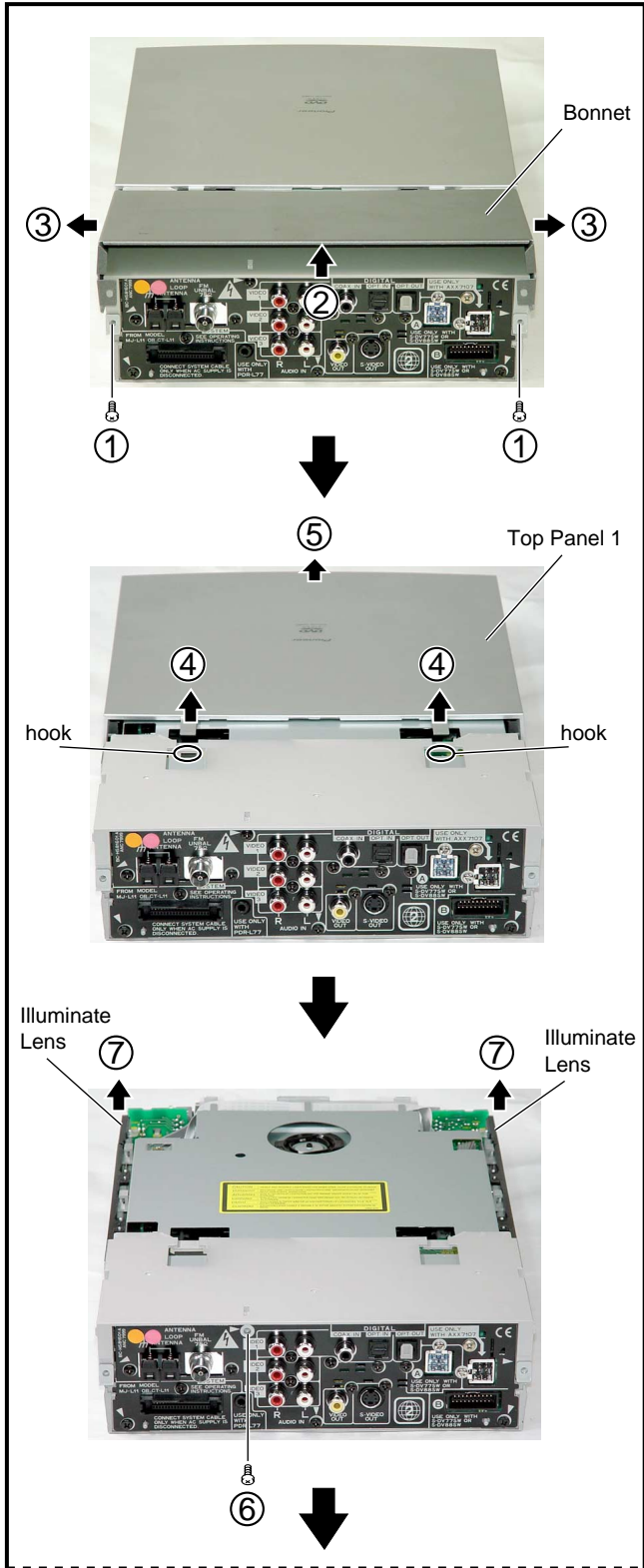
7.1.6 DISASSEMBLY

■ DIAGNOSIS OF PCBs

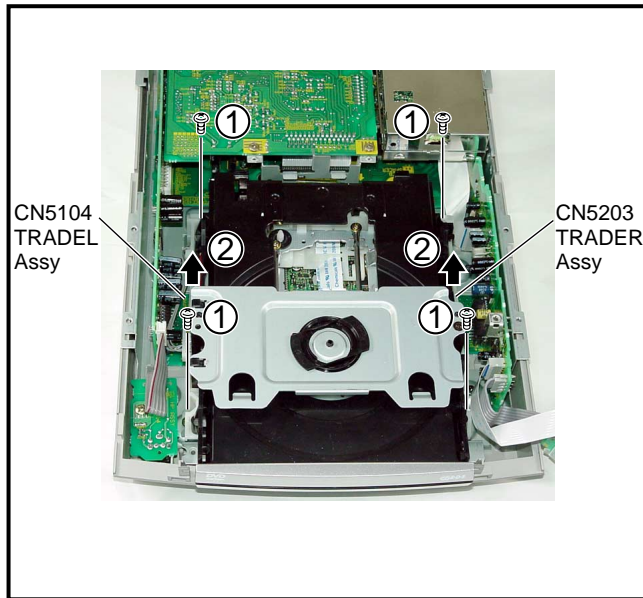
Note

When diagnosing the unit, be sure to use two connection cables for service. (Part No. : GGD1228)

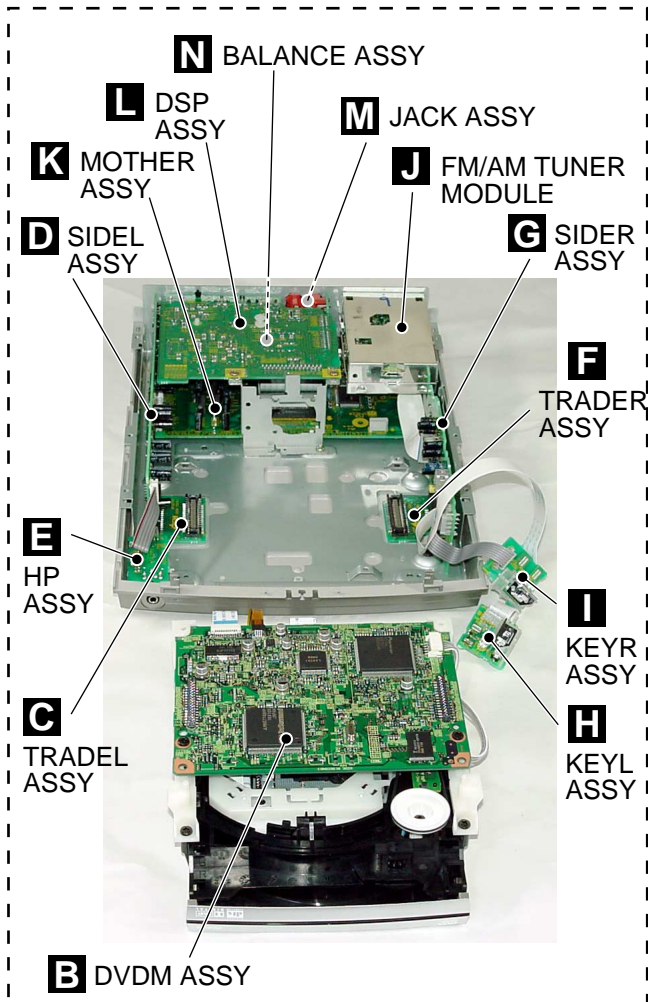
1 Bonnet, Top Panel 1, Top Panel 2 and Top Plate



2 Loading Mechanism Assy

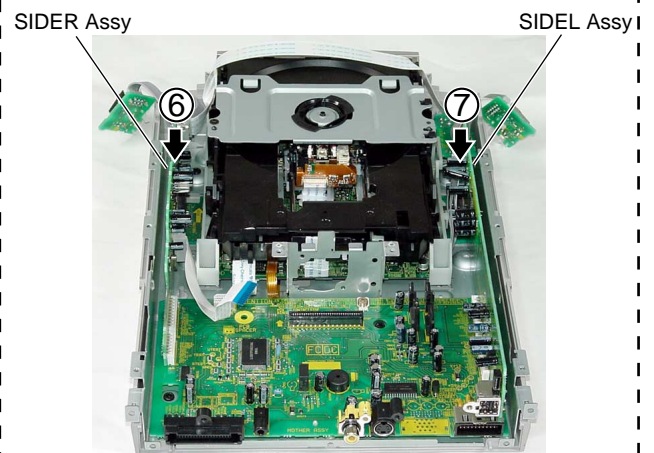
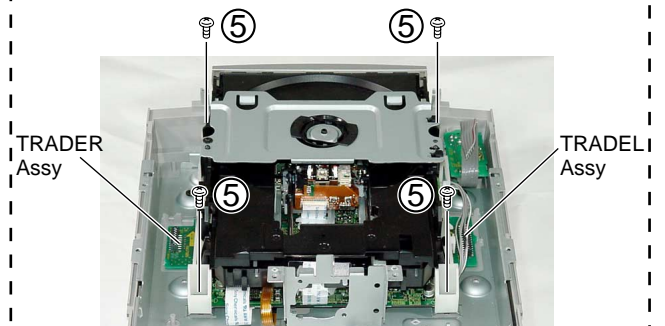
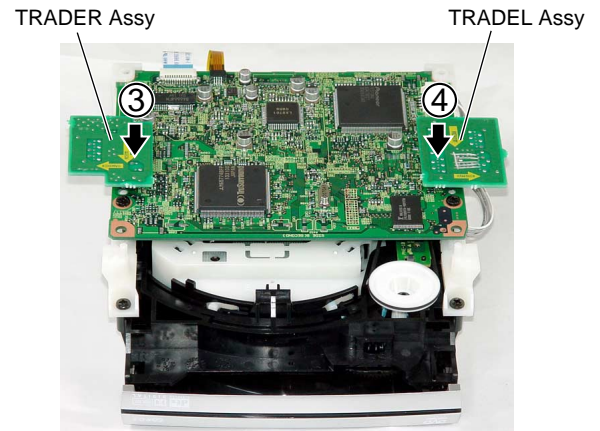


● PCB Location

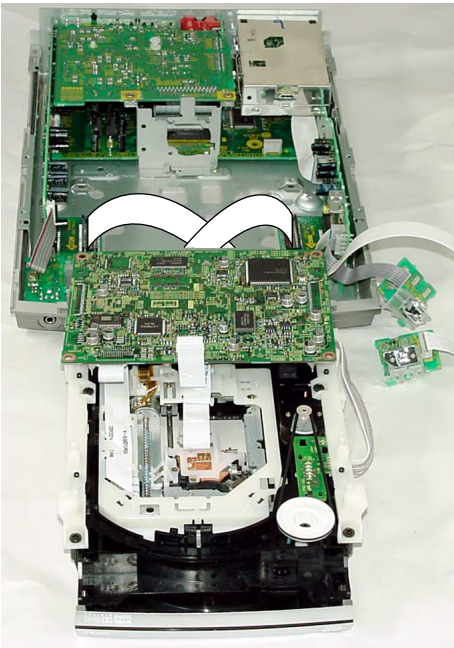
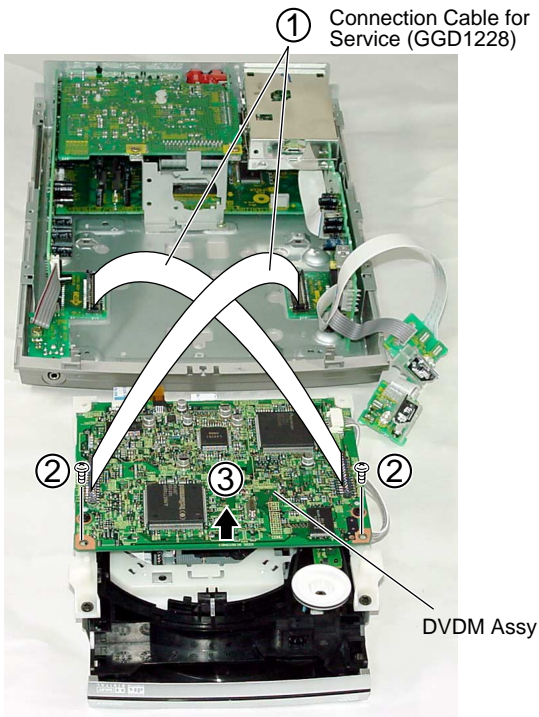


● Assembly

- ① Remove SIDER ASSY and SIDER ASSY.
- ② Remove TRADEL ASSY and TRADER ASSY.

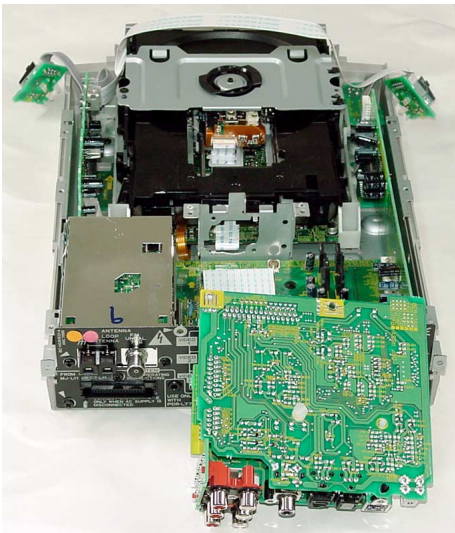
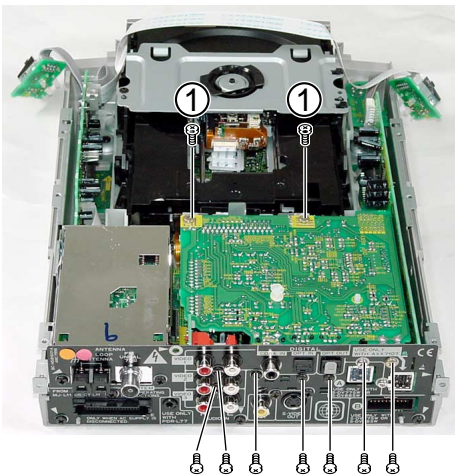


3 Diagnosis of DVDM Assy



Diagnosis

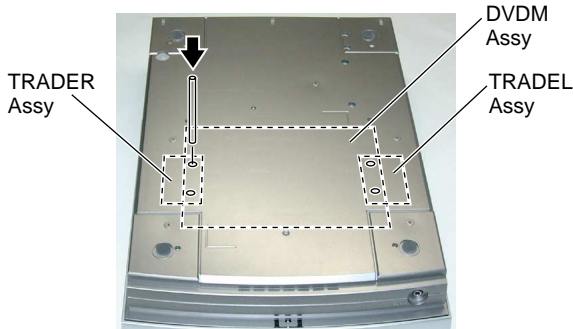
4 Diagnosis of DSP, JACK and BALANCE Assys



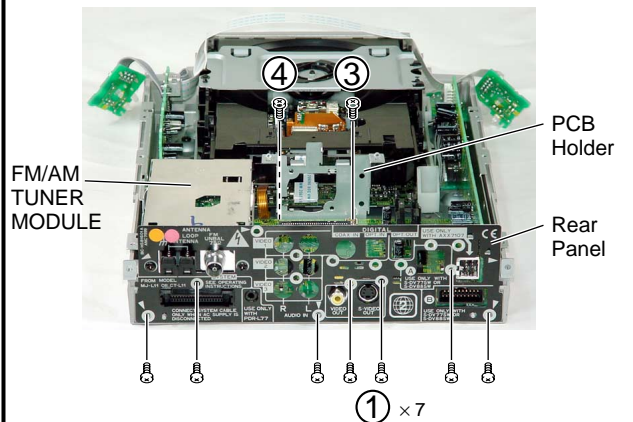
Diagnosis

● Attention when Loading Mechanism Assy is assembled

- Letting uses four hole of bottom face and insert connectors surely.
- TRADEL Assy (CN5104) - DVDM Assy (CN401)
- TRADER Assy (CN5203) - DVDM Assy (CN15)

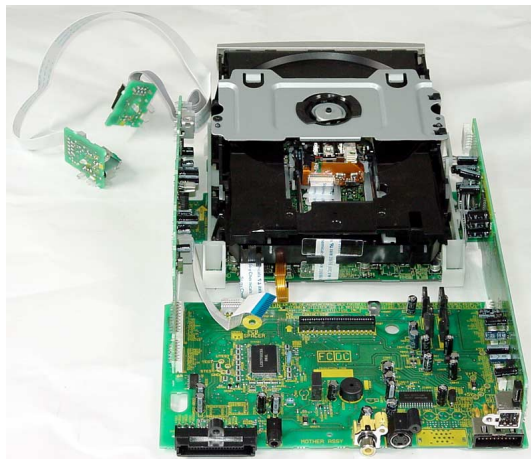
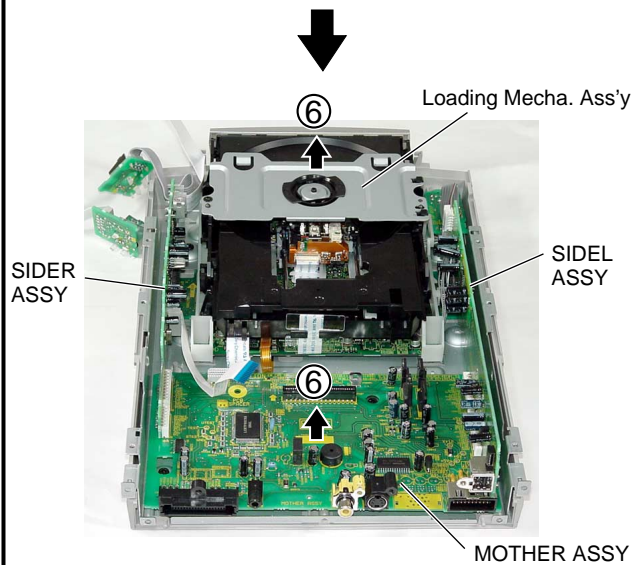


5 MOTHER Assy

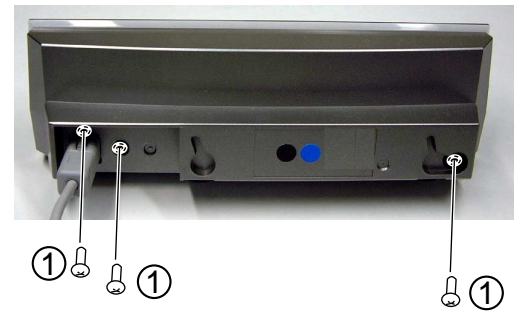


② Remove Rear Panel and FM/AM TUNER MODULE.

⑤ Remove PCB Holder.



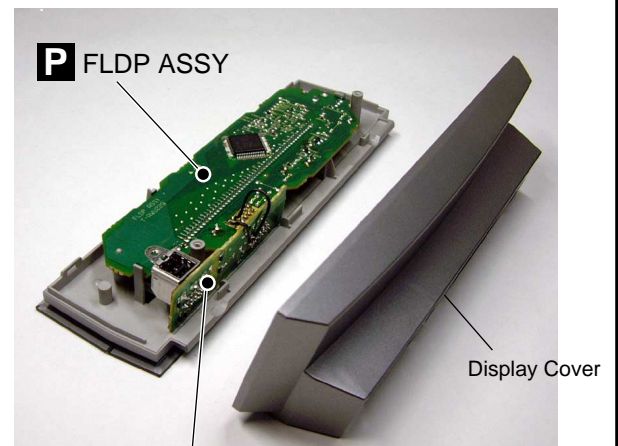
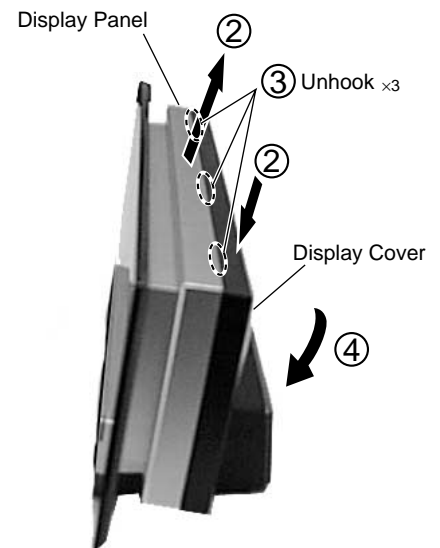
Display Unit



② Display Panel and Display Cover are vertically moved.

③ The hook three places of the upper part are removed.

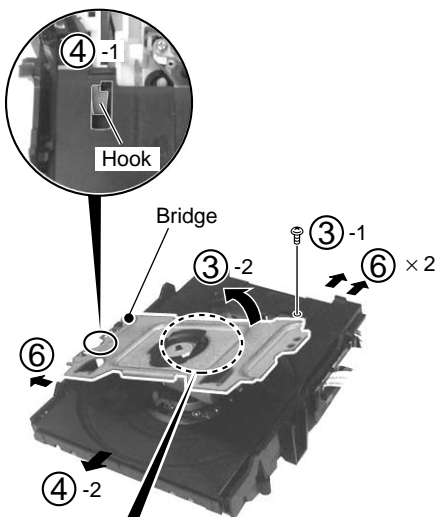
④ Removes while rotating Display Cover in the direction of the arrow.



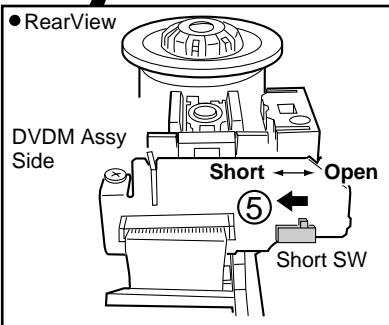
① CNB ASSY

Disassembly of the Traverse Mechanism Assy and the Pickup Assy

- ① Remove the Bonnet, Top Panel1, Top Panel2 and Top Plate.
- ② Remove the Loading Mechanism Assy.
- ③ Remove the Bridge (Screw $\times 1$).
- ④ Pull out the Tray and remove it while unhooking a Hook.
- ⑤ Turn the Short SW to Short side.
- ⑥ Remove three connectors.

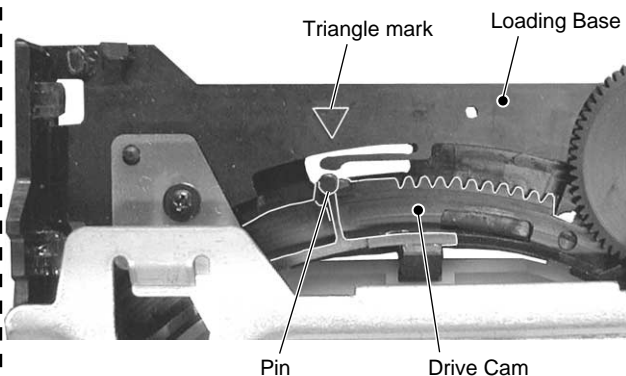


• Rear View



Caution in the tray insertion

In the Tray insertion, insert it after matching a triangle mark of the Loading Base and a position of pin of the Drive Cam.

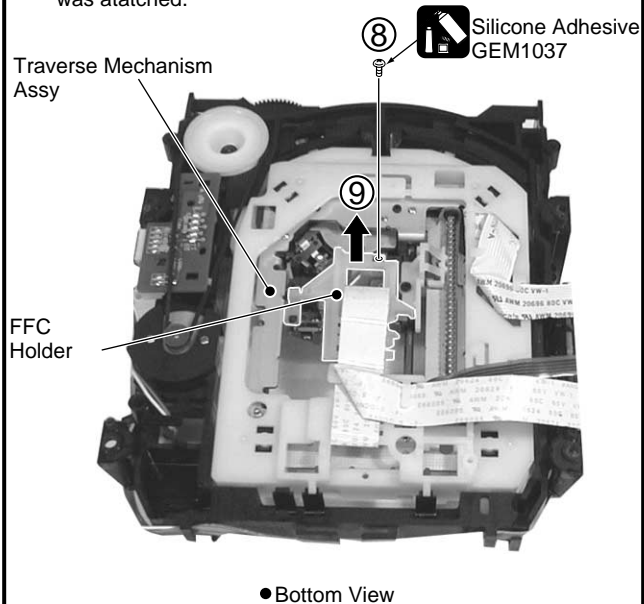


- ⑦ Remove the DVDM Assy (Screws $\times 2$).
Remove the Adapter12 L and Adapter12 R (Screws $\times 4$).
- ⑧ Remove a screw.

Cautions:

Screw is locked with Silicone Bond.
Please lock it with Silicone Bond when installs it.

- ⑨ Remove the FFC Holder with the state which Flexible Cable was attached.

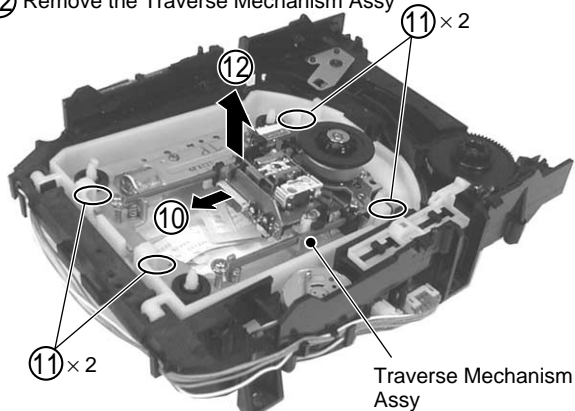


• Bottom View

Pickup Assy

• When Removing The Traverse Mechanism Assy

- ⑩ Remove the Pickup Flexible Cable
- ⑪ Unhook ($\times 4$)
- ⑫ Remove the Traverse Mechanism Assy

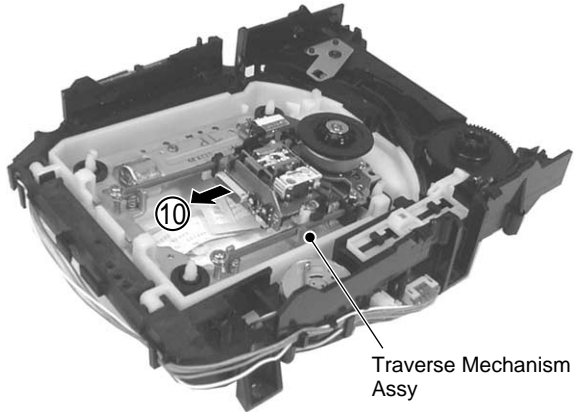


Exchange



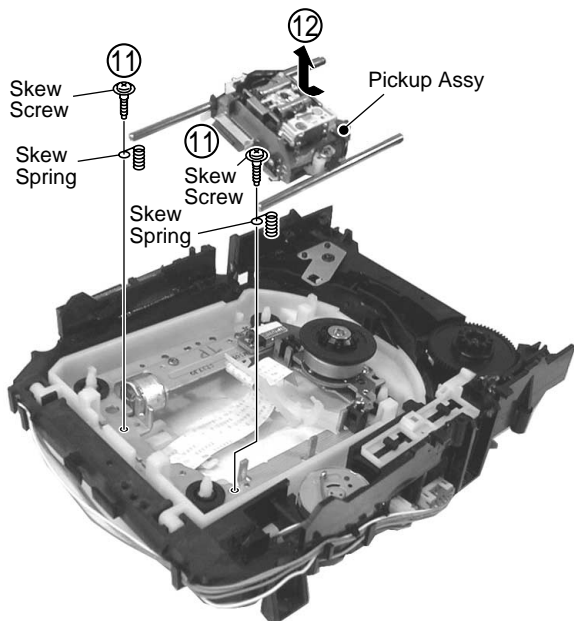
● When Removing The Pickup Assy

- ⑩ Remove the Pickup Flexible Cable.



- ⑪ Remove two Skew Screws and two Skew Springs.

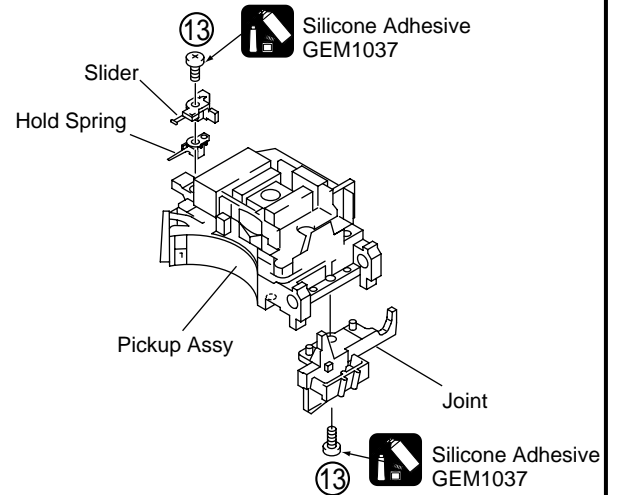
- ⑫ Remove the Pickup Assy.



- ⑬ Remove two screws.

Cautions:

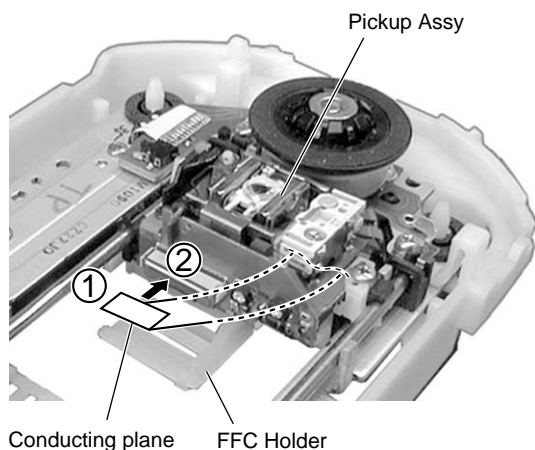
Screw is locked with Silicone Bond.
Please lock it with Silicone Bond when installs it.



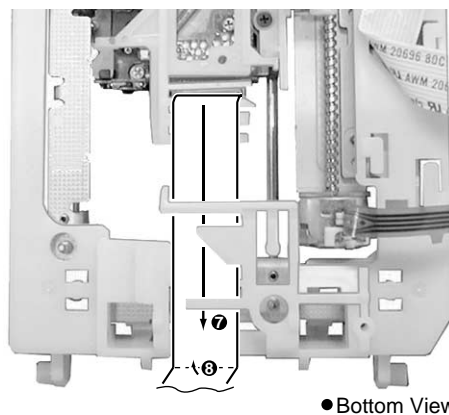
Exchange

Styling the Pickup Flexible Cable

- ① Fold a edge of lining part of the Pickup Flexible Cable.
- ② Insert the Pickup Flexible Cable in connector, and lock it surely.

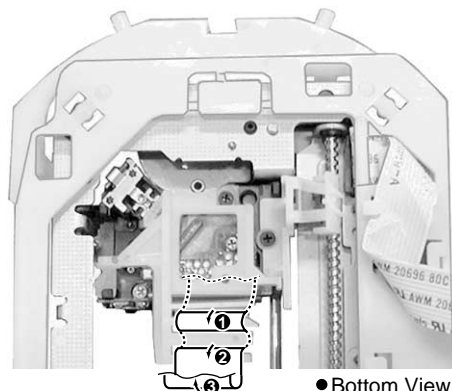


Caution:
Move the Pickup to the innermost of the disc.

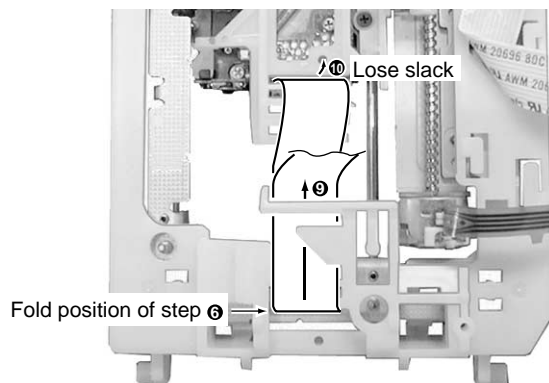


● Bottom View

- ③ Perform the styling as shown in figure below.

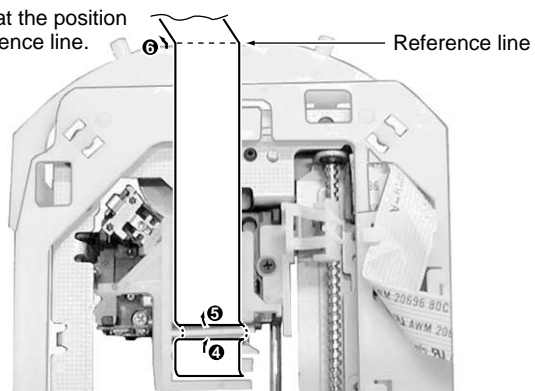


● Bottom View

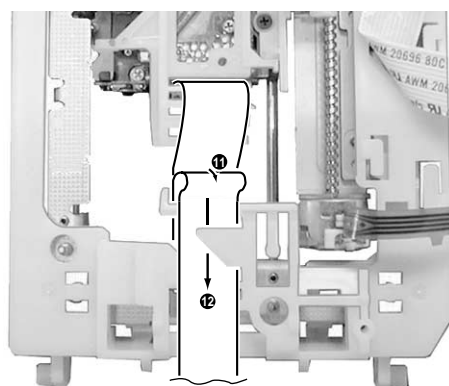


● Bottom View

Fold it at the position of reference line.



● Bottom View



● Bottom View

7.1.7 SINGLE OPERATION METHOD

- FL display does not turn on, but please connect DISPLAY UNIT AXX7107 in order to use Remote Control Unit.

TEST MODE : ON Service TEST mode. (STEST)

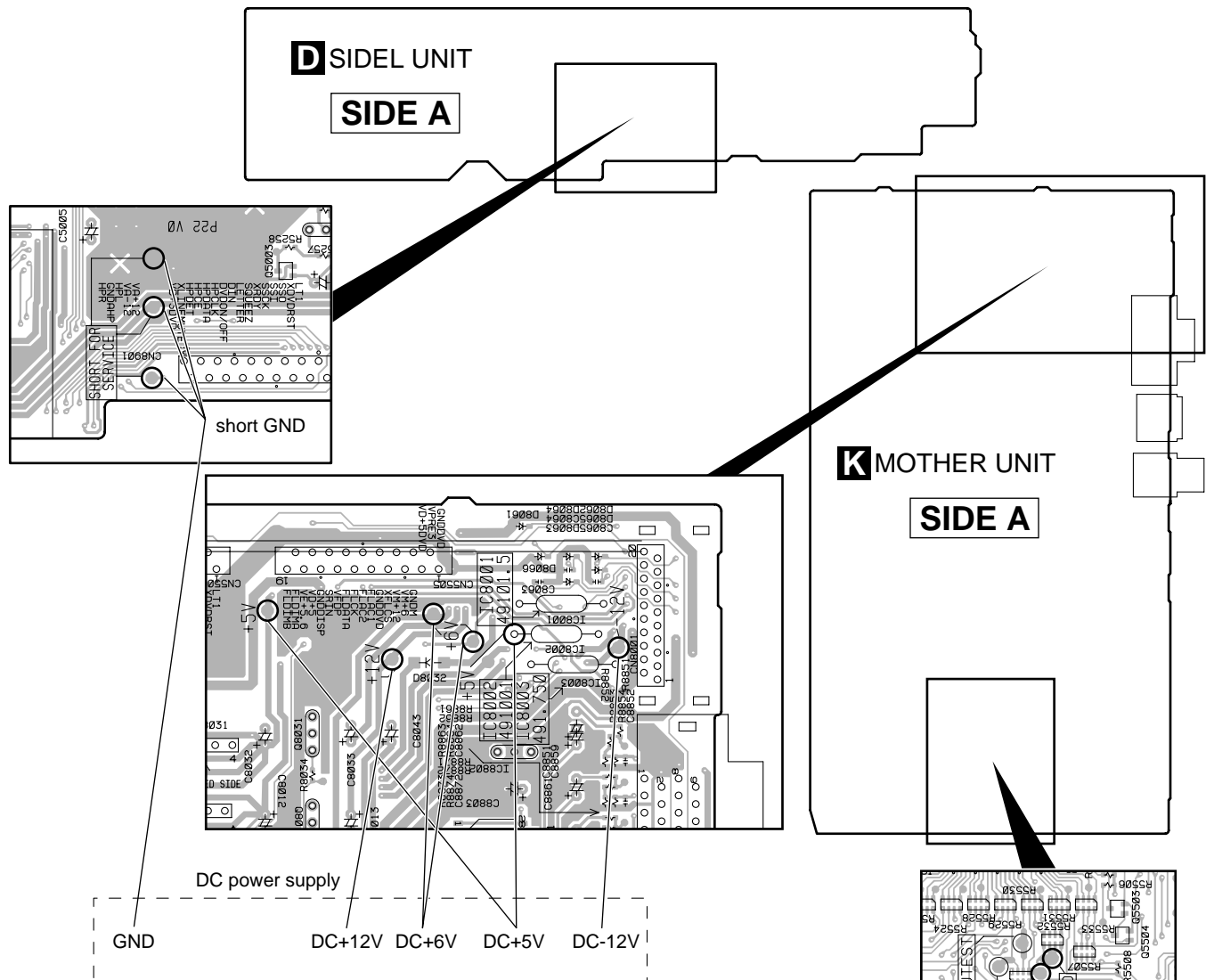
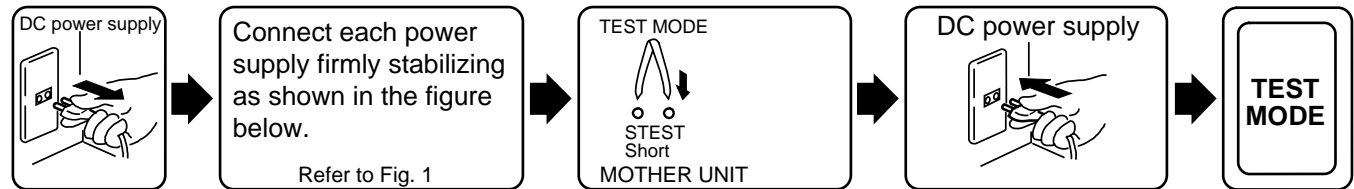
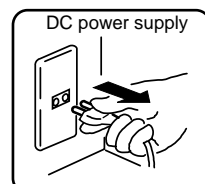


Fig. 1 DC power supply Point Location

TEST MODE : STOP



To come off the test mode, AC OFF.
The test mode is not completely cleared in POWER OFF key and AC OFF, please.

7.2 PARTS

7.2.1 IC

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

■ PDC080A (MOTHER UNIT : IC5501)

- System Control IC
- Pin Function

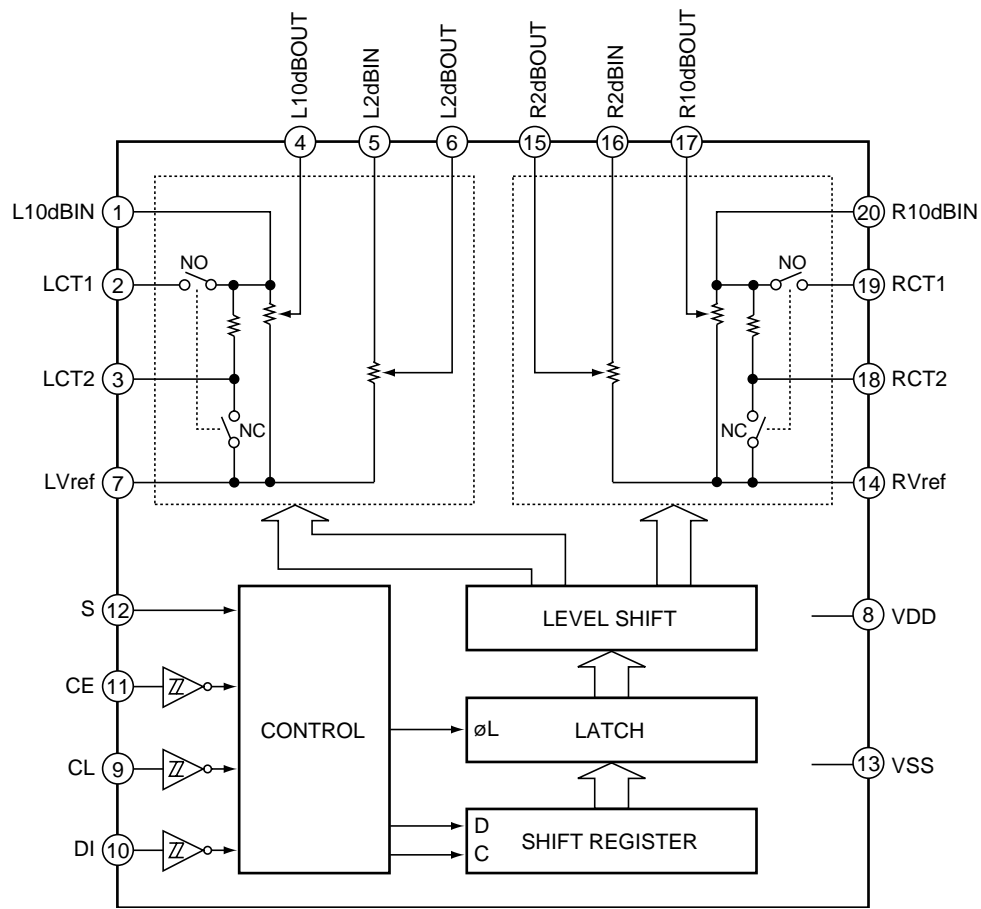
| No. | Pin Name | I/O | MOS | Function | Pin Function |
|-----|--------------|-----|-----|----------------|---|
| 1 | BEEP | O | C | Port | BEEP Output |
| 2 | XDSP SUB CS | O | C | Port | YSS912 SUB DSP Control CE |
| 3 | XDSP MAIN CS | O | C | Port | YSS912 MAIN DSP Control CE |
| 4 | DSP CK | O | C | Port | YSS912 Communication Clock Signal |
| 5 | DSP SI | I | C | Port | YSS912 Communication Data input Signal |
| 6 | TXCLK | O | C | Port | FM/AM Tuner module Control Clock |
| 7 | TXDI | O | C | Port | FM/AM Tuner module Control Data |
| 8 | TXCE | O | C | Port | FM/AM Tuner module Control CE |
| 9 | DSP SO | O | C | Port | YSS912 Communication Data output Signal |
| 10 | XFL CS | O | C | Port | FL Driver CE |
| 11 | XRESET | I | - | RESET | RESET |
| 12 | (NC) | - | - | | Connect VDD1 for Not used |
| 13 | (NC) | - | - | | Open for Not used |
| 14 | GND | - | - | GND | GND |
| 15 | CF1 | - | - | SERALOCK | Seramic resonator Connected terminal |
| 16 | CF2 | - | - | SERALOCK | Seramic resonator Connected terminal |
| 17 | VDD | - | - | VDD | VDD |
| 18 | ST/TUNE | I | N | Analog Input | STEREO/TUNED Detection Input |
| 19 | KEY | I | N | Analog Input | KEY Input |
| 20 | HP DET | I | N | Port | Head Phone Detection |
| 21 | OP PROTECT | I | N | Port | Option (MD, DECK) Protect Detection Input |
| 22 | XEMR | I | N | Port | Signal of emergency generation from amplifier |
| 23 | 3.3DET | I | N | Port | DVD 3.3Volt Detection Input |
| 24 | XRDY | O | N | Port | DVD Microcomputer Communication Ready output |
| 25 | DSTN | I | N | Analog Input | Destination Switch |
| 26 | ACPULSE | I | N | INT0 Port | AC Pulse Input |
| 27 | LT1 | I | C | INT1 Port | DVD Microcomputer Communication Latch input |
| 28 | RDSCLK | I | C | INT2 Port | Clock Input from RDS Decoder (Without RDS : Low Output) |
| 29 | RMC | I | C | INT3 Port | Remote Control Signal Input |
| 30 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 31 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 32 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 33 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 34 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 35 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 36 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 37 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 38 | (NC) | O | P | VFD Controller | Prohibition of use only for VFD |
| 39 | (NC) | O | P | Port | Not used |
| 40 | (NC) | O | P | Port | Not used |
| 41 | (NC) | O | P | Port | Not used |
| 42 | (NC) | O | P | Port | Not used |
| 43 | (NC) | O | P | Port | Not used |
| 44 | (NC) | O | P | Port | Not used |
| 45 | (NC) | O | P | Port | Not used |
| 46 | VDD | - | - | VDD | VDD |
| 47 | (NC) | O | P | Port | Not used |
| 48 | (NC) | O | P | Port | Not used |
| 49 | (NC) | O | P | Port | Not used |
| 50 | (NC) | O | P | Port | Not used |

| No. | Pin Name | I/O | MOS | Function | Pin Function |
|-----|-------------|-----|-----|-------------|---|
| 51 | GND | - | - | | |
| 52 | DIR DI | I | P | Port | Data Input from DIR |
| 53 | XDIR RST | O | P | Port | DIR Reset |
| 54 | DVD ON/OFF | O | P | Port | DVD Power Contorol |
| 55 | XDSP RST | O | P | Port | YSS912 Reset |
| 56 | XTMRLED | O | P | Port | Timer Standby Display LED Control |
| 57 | WCLK | I | P | Port | For Flash Rewrite |
| 58 | FAN DET | I | P | Port | FUN Detection L : OK H : NG (Power off) |
| 59 | XCDC RST | O | P | Port | CODEC Reset |
| 60 | OP PWR | O | P | Port | Option (MD, DECK) Power ON/OFF |
| 61 | XSTBYLED | O | P | Port | Standby Display LED Control |
| 62 | FLDIMA | O | P | Port | FL Dimmer Control A |
| 63 | FLDIMB | O | P | Port | FL Dimmer Control B |
| 64 | CDRD | I | P | Port | Communication for CDR : Send information from CDR to DVD |
| 65 | TXDO | I | P | Port | Data Input from FM/AM Tuner module |
| 66 | RDSDATA | I | P | Port | Data Input from RDS Decoder |
| 67 | TEST | I | P | Port | Test Mode Detection Jumper |
| 68 | UTEST | I | P | Port | Unit Test Mode Detection Jumper |
| 69 | SERVICE | I | P | Port | Service Mode Detection Jumper |
| 70 | POWER | O | P | Port | System Power Supply Control |
| 71 | DIR ERR | I | P | Port | ERR Input from DIR |
| 72 | VDD | - | - | VDD | VDD |
| 73 | SBDI | O | P | Port | System Bus Received Data |
| 74 | MASD | O | P | Port | Communication for CDR : Send information from DVD to CDR |
| 75 | XDSP MUTE | O | P | Port | DSP Mute (ASSY Mute) |
| 76 | ASSELA | O | P | Port | Audio source select A |
| 77 | ASSELB | O | P | Port | Audio source select B |
| 78 | XLINE MUTE | O | P | Port | System Audio Mute |
| 79 | MAIN VOL CS | O | P | Port | Main Volume Chip Select |
| 80 | HP VOL CE | O | P | Port | Head Phone Volume CE |
| 81 | XCDC CS | O | P | Port | Codec Chip Select |
| 82 | DIR CE | O | P | Port | DIR CE |
| 83 | HP VOL DATA | O | P | Port | Head Phone Volume Data |
| 84 | HP VOL CK | O | P | Port | Head Phone Volume Clock |
| 85 | XDVD RST | O | C | Port | DVD Reset |
| 86 | EX/V DATA | O | C | Port | Expandor/Volume Data |
| 87 | EX/V CLK | O | C | Port | Expandor/Volume Clock |
| 88 | EXCE | O | C | Port | Expandor CE |
| 89 | GND | - | - | GND | GND |
| 90 | VDD | - | - | VDD | VDD |
| 91 | FL DATA | O | C | Port | FL Driver Control Data, Using combinedly with WD0 for Flash Rewrite |
| 92 | FL CK | O | C | Port | FL Driver Control Clock |
| 93 | SBDO/REQ | O | C | Port | System Bus Sending Data/Request, Using combinedly with WEN/D1 for Flash Rewrite |
| 94 | SBCLK | O | C | Port | System Bus Clock |
| 95 | DREQ | O | C | Port | Display Data Communication Request |
| 96 | DDATA | I | C | Hard Serial | Display Data Communication Received Data |
| 97 | DCLK | I | C | Hard Serial | Display Data Communication Clock |
| 98 | SSI | O | C | Hard Serial | DVD Microcomputer Communication Data output (AMP side output) |
| 99 | SSO | I | C | Hard Serial | DVD Microcomputer Communication Data input (AMP side input) |
| 100 | SSCK | O | C | Hard Serial | DVD Microcomputer Communication Clock output |

■ LC75366M (SIDEL ASSY : IC8901)

• Electronic volume for 2 channel

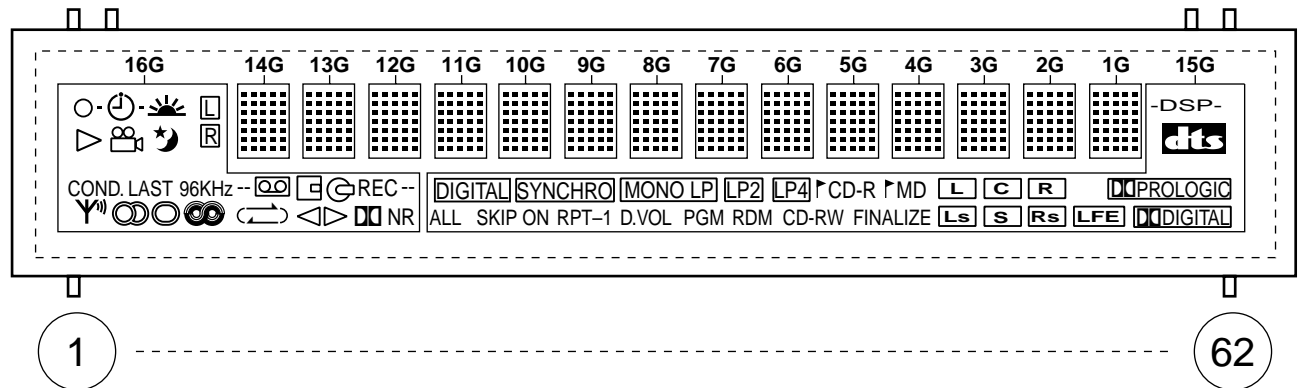
• Block Diagram



7.2.2 DISPLAY

■ AAV7082 (FLDP ASSY : V5661)

• FL DISPLAY



● Anode Connection

| | 16G | 15G | 14G - 1G |
|-----|-----------|----------|----------|
| P1 | L R | -DSP- | 1-1 |
| P2 | ☀ | PROLOGIC | 2-1 |
| P3 | ⊖ | DIGITAL | 3-1 |
| P4 | ○ | LFE | 4-1 |
| P5 | ☾ | Rs | 5-1 |
| P6 | ☾ | S | 1-2 |
| P7 | Y | S | 2-2 |
| P8 | COND. | Ls | 3-2 |
| P9 | ∞ | R | 4-2 |
| P10 | ○ | C | 5-2 |
| P11 | LAST | L | 1-3 |
| P12 | ⊖ | FINALIZE | 2-3 |
| P13 | ⊖ | MD | 3-3 |
| P14 | ⊖ | CD-R | 4-3 |
| P15 | ⊖ | W | 5-3 |
| P16 | 96KHz | -R | 1-4 |
| P17 | ⊖ | CD | 2-4 |
| P18 | ⊖ | RDM | 3-4 |
| P19 | NR | PGM | 4-4 |
| P20 | -- REC -- | LP4 | 5-4 |
| P21 | ⊖ | LP2 | 1-5 |
| P22 | ⊖ | D.VOL | 2-5 |
| P23 | ⊖ | MONO LP | 3-5 |
| P24 | ⊖ | -1 | 4-5 |
| P25 | - | RPT | 5-5 |
| P26 | - | SYNCHRO | 1-6 |
| P27 | - | ON | 2-6 |
| P28 | - | SKIP | 3-6 |
| P29 | - | DIGITAL | 4-6 |
| P30 | - | ALL | 5-6 |
| P31 | - | - | 1-7 |
| P32 | - | - | 2-7 |
| P33 | - | - | 3-7 |
| P34 | - | - | 4-7 |
| P35 | - | - | 5-7 |

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

(14G - 1G)

● Pin Connection

| Pin No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|-----|-----|-----|-----|
| Connection | F1 | F1 | NP | NP | NX | NX | NX | P4 | P3 | P2 | P1 | 16G | 15G | 14G | 13G | 12G | 11G | 10G | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G | P35 | P34 | P33 | P32 |
| Pin No. | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 |
| Connection | P31 | P30 | P29 | P28 | P27 | P26 | P25 | P24 | P23 | P22 | P21 | P20 | P19 | P18 | P17 | 916 | P15 | P14 | 913 | P12 | P11 | P10 | P9 | P8 | P7 | P6 | P5 | NP | NP | F2 | F2 |

F1, F2 : Filament

1G~16G : Grid

NP : No Pin

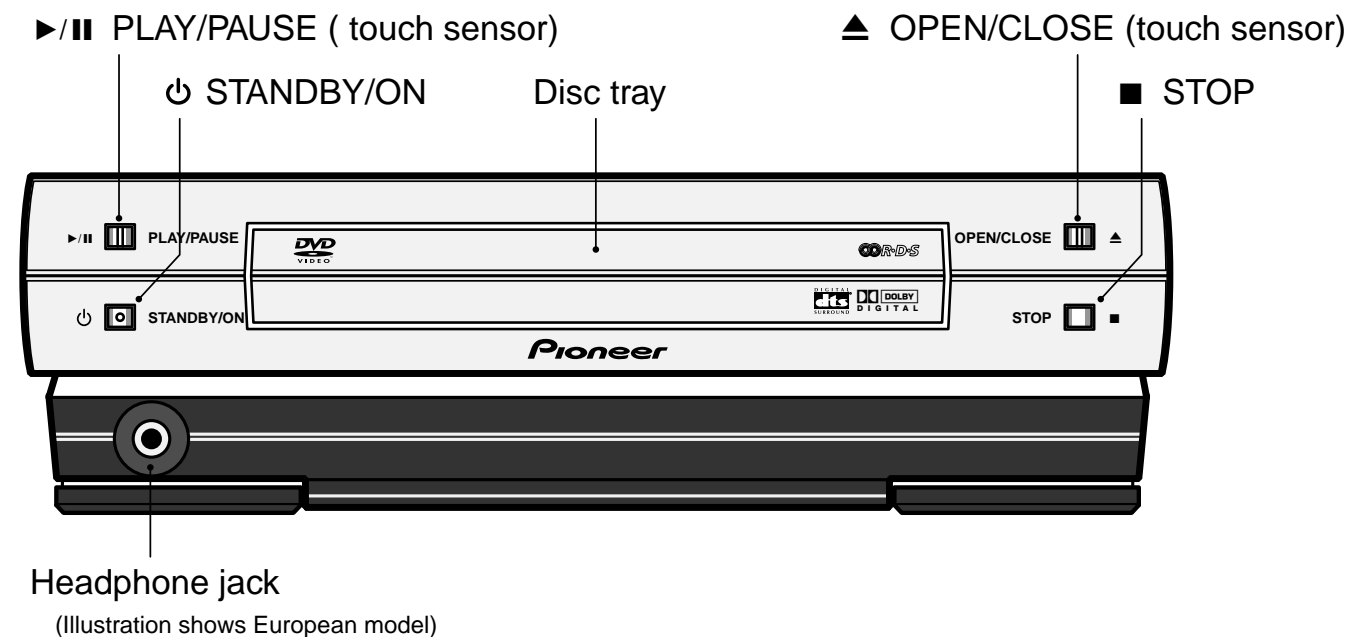
NX : No extend pin

DL : Datum Line

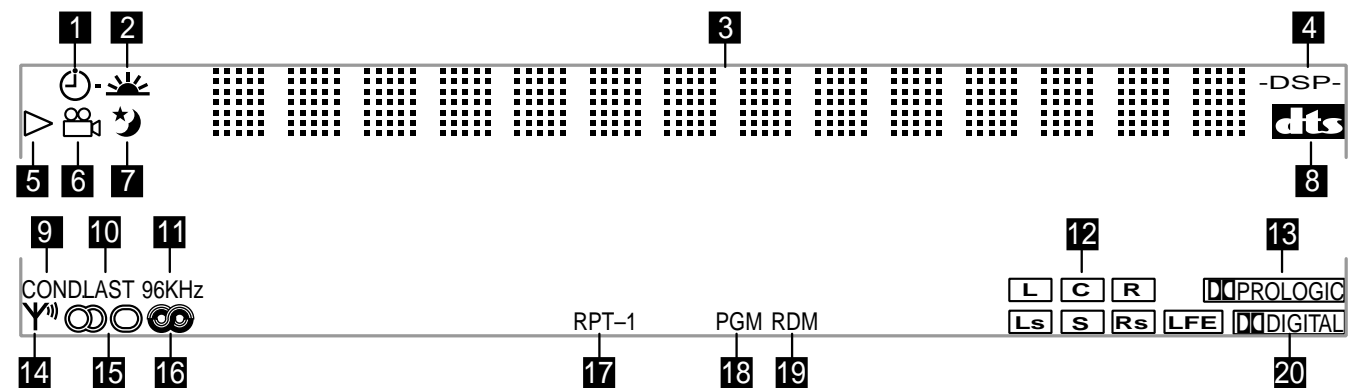
8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

■ Front panel

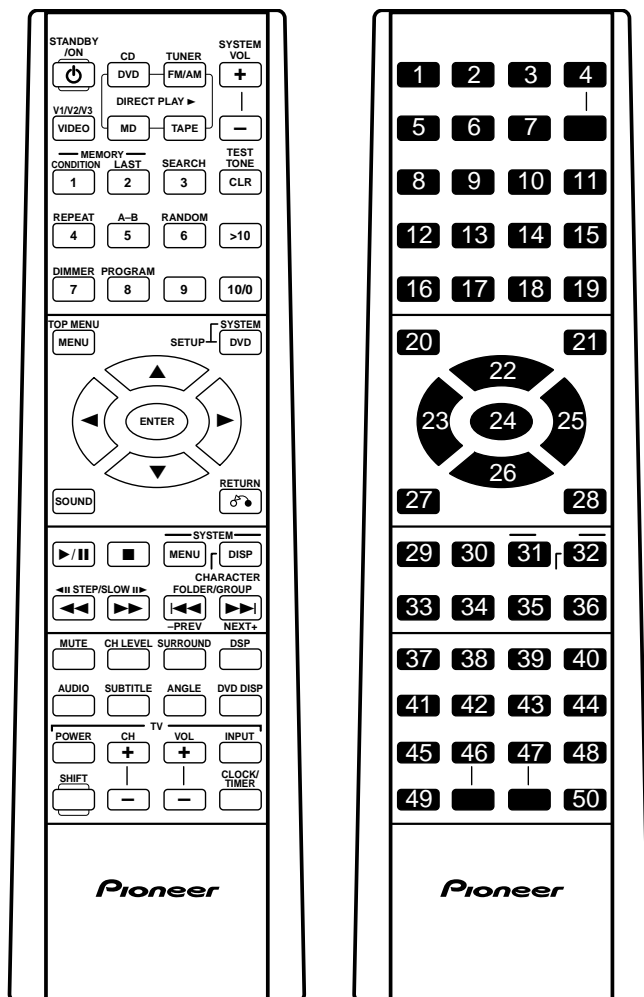


■ Display



- | | |
|--|---|
| 1 ⏰ Timer | 12 Active channel indicators |
| 2 ☀ Wake up timer | 13 PRO LOGIC Lights when playing a Dolby Pro Logic source |
| 3 Character display | 14 Y Indicates strength of broadcast signal |
| 4 - DSP - | 15 Auto stereo/mono mode |
| 5 ▷ Lights when a disc is playing | 16 RDS (European model only) |
| 6 Multi-angle scene | 17 RPT, RPT-1 Repeat play mode |
| 7 Sleep timer | 18 PGM Program play |
| 8 Lights when playing a DVD with DTS sound | 19 RDM Random play |
| 9 COND. Condition memory | 20 DOLBY DIGITAL Lights when playing a Dolby Digital source |
| 10 LAST Last memory | |
| 11 96kHz Lights when playing a disc with 96kHz audio | |

Remote control



- 1 STANDBY/ON
- 2 DVD/CD (DIRECT PLAY)
- 3 TUNER FM/AM (DIRECT PLAY)
- 4 SYSTEM VOL +/-
- 5 VIDEO V1/V2/V3
- 6 MD (DIRECT PLAY)
- 7 TAPE (DIRECT PLAY)
- 8 1 | CONDITION
- 9 2 | LAST
- 10 3 | SEARCH
- 11 CLR | TEST TONE
- 12 4 | REPEAT

- 13 5 | A-B
- 14 6 | RANDOM
- 15 >10 Use to select numbers over 10
- 16 7 | DIMMER
- 17 8 | PROGRAM
- 18 9
- 19 10/0 Use as 10 or 0
- 20 MENU | TOP MENU
- 21 DVD SETUP | SYSTEM SETUP
- 22 Cursor up
- 23 Cursor left
- 24 ENTER
- 25 Cursor right
- 26 Cursor down
- 27 SOUND
- 28 RETURN
- 29
- 30
- 31 SYSTEM MENU
- 32 SYSTEM DISP | CHARACTER
- 33 | STEP/SLOW
- 34 | STEP/SLOW
- 35 | -PREV | FOLDER/GROUP
- 36 | +PREV | FOLDER/GROUP
- 37 MUTE Press to mute/restore the sound
- 38 CH LEVEL
- 39 SURROUND
- 40 DSP
- 41 AUDIO
- 42 SUBTITLE
- 43 ANGLE
- 44 DVD DISP
- 45 POWER
- 46 CH+/-
- 47 VOL+/-
- 48 INPUT
- 49 SHIFT Press to access alternative button functions
- 50 CLOCK/TIMER

8.2 SPECIFICATIONS

DVD Player (Audio) Section

| | |
|-----------------------|---|
| S/N ratio | 100 dB (EIAJ) |
| Dynamic range | 97 dB (EIAJ) |
| Distortion | 0.004% |
| Frequency response | |
| 48 kHz sampling | 4 Hz to 22 kHz |
| 96 kHz sampling | 4 Hz to 44 kHz |
| Wow & flutter | Below measurable levels (±0.001% W.PEAK) |

DVD Player (Video) Section

| | |
|----------------------------|------------------|
| Output level | 1 Vp-p (75 Ω) |
| Video Y output level | 1 Vp-p (75 Ω) |
| Video C output level | 286 mVp-p (75 Ω) |

DVD (Other jacks) Section

| | |
|---|-------------------|
| Digital optical output (PCM/□□/DTS) | Optical connector |
| Digital optical input (PCM/□□/DTS) | Optical connector |
| Digital coaxial input (PCM/□□/DTS) | Coaxial connector |

Tuner Section

| | |
|----------------------------------|------------------------------------|
| FM tuner | |
| Frequency range | 87.5 MHz to 108.0 MHz |
| Antenna | 75 Ω unbalanced |
| AM tuner | |
| Frequency range | |
| European model | |
| | 522 kHz to 1,602 kHz (9 kHz step) |
| Not applicable to European model | |
| | 530 kHz to 1,700 kHz (10 kHz step) |
| | 522 kHz to 1,602 kHz (9 kHz step) |
| Antenna | loop antenna (supplied) |

Miscellaneous

| | |
|------------------|--|
| DVD/CD Tuner | |
| Dimensions | 220 (W) x 317 (D) x 65 (H) mm (8-11/16 (W) x 12-1/2 (D) x 2-9/16 (H) in.) |
| Weight | 2.5 kg (5 lbs 8 oz) |
| Display unit | |
| Diemnsions | 206 (W) x 50 (D) x 65 (H) mm (8-1/8 (W) x 1-15/16 (D) x 2-9/16 (H) in.) |
| Weight | 0.2 kg (7 oz.) |

| | |
|-----------------------|----------------------------------|
| Operating conditions: | |
| Temperature | +5°C to +35°C (+41°F to 95°F) |
| Humidity | 5% to 85% (without condensation) |

Supplied Items

| | |
|---|----|
| Display unit | 1 |
| Remote control unit | 1 |
| AA/R6P dry cell batteries | 2 |
| AM loop antenna | 1 |
| FM antenna | 1 |
| Video cord | 1 |
| Power cord | 1 |
| Speaker cords (5m) | 3 |
| Speaker cords (10m) | 2 |
| Non-skid pads (Satellite) | 19 |
| Non-skid pads (subwoofer) | 4 |
| Control cable A | 1 |
| Control cable B | 1 |
| Display cable | 1 |
| Operating instructions (Setting up) | 1 |
| Operating instructions (Basic) | 1 |
| Warranty card | 1 |


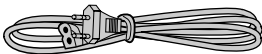
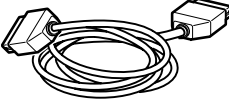

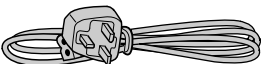
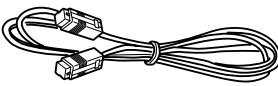


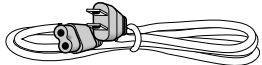
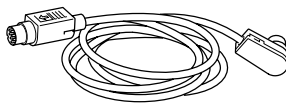
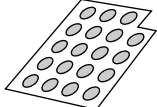
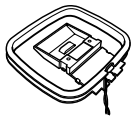


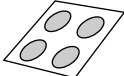
Note:
• Specifications and design subject to possible modification without notice, due improvements.

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- This product's instructions are contained within the instruction manual of the related system component(s).
The manual is packed with those component(s).
This product's accessories etc. are packed with its related component(s).

• ACCESSORIES

| | | | |
|---|--|--|--|
| <ul style="list-style-type: none"> • Remote control unit (AXD7305)  | <ul style="list-style-type: none"> • Power cord (ADG1154) (For MYXJI type)  | <ul style="list-style-type: none"> • Control cable A (MYXJI, NVXJI : ADE7079) (KUCXJI : ADE7078)  | <ul style="list-style-type: none"> • Speaker cords (5m) (SDS1115, SDS1116, SDS1117)  |
| | <ul style="list-style-type: none"> • Power cord (ADG1156) (For NVXJI type)  | <ul style="list-style-type: none"> • Control cable B (MYXJI, NVXJI : ADE7064) (KUCXJI : ADE7063)  | <ul style="list-style-type: none"> • Speaker cords (10m) (SDS1118, SDS1119)  |
| <ul style="list-style-type: none"> • AA/R6P dry cell batteries (VEM1011)  | <ul style="list-style-type: none"> • Power cord (ADG7022) (For KUCXJI type)  | <ul style="list-style-type: none"> • Display cable (ADE7077)  | <ul style="list-style-type: none"> • Non-skid pads (Satellite) (SEC1541)  |
| <ul style="list-style-type: none"> • AM loop antenna (ATB7009)  | <ul style="list-style-type: none"> • FM antenna (MYXJI, NVXJI : ADH7005) (KUCXJI : ADH7004)  | <ul style="list-style-type: none"> • Video cord (VDE1053) (L=1.5m)  <p>Yellow</p> | <ul style="list-style-type: none"> • Non-skid pads (subwoofer) (SEC1563)  |