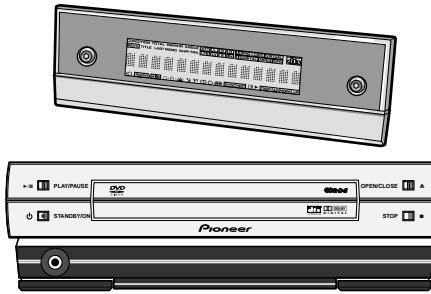


**Pioneer**

# Service Manual



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

## CONTENTS

1. SAFETY INFORMATION .....	2	7.1.2 TEST POINTS LOCATION .....	74
2. EXPLODED VIEWS AND PARTS LIST .....	4	7.1.3 TEST MODE SCREEN DISPLAY .....	75
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM ..	12	7.1.4 TROUBLE SHOOTING .....	79
4. PCB CONNECTION DIAGRAM .....	45	7.1.5 ERROR CODE .....	80
5. PCB PARTS LIST .....	58	7.1.6 DISASSEMBLY .....	84
6. ADJUSTMENT .....	66	7.1.7 SINGLE OPERATION METHOD .....	91
7. GENERAL INFORMATION .....	73	7.2 PARTS .....	92
7.1 DIAGNOSIS .....	73	7.2.1 IC .....	92
7.1.1 SELF-DIAGNOSTIC FUNCTION OF PICKUP DEFECTIVE .....	73	7.2.2 DISPLAY .....	95
8. PANEL FACILITIES AND SPECIFICATIONS ..	96		

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## 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.

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.

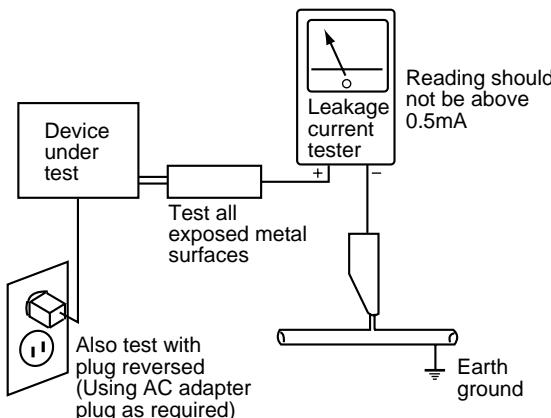
### 2. PRODUCT SAFETY NOTICE

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  $\Delta$  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.

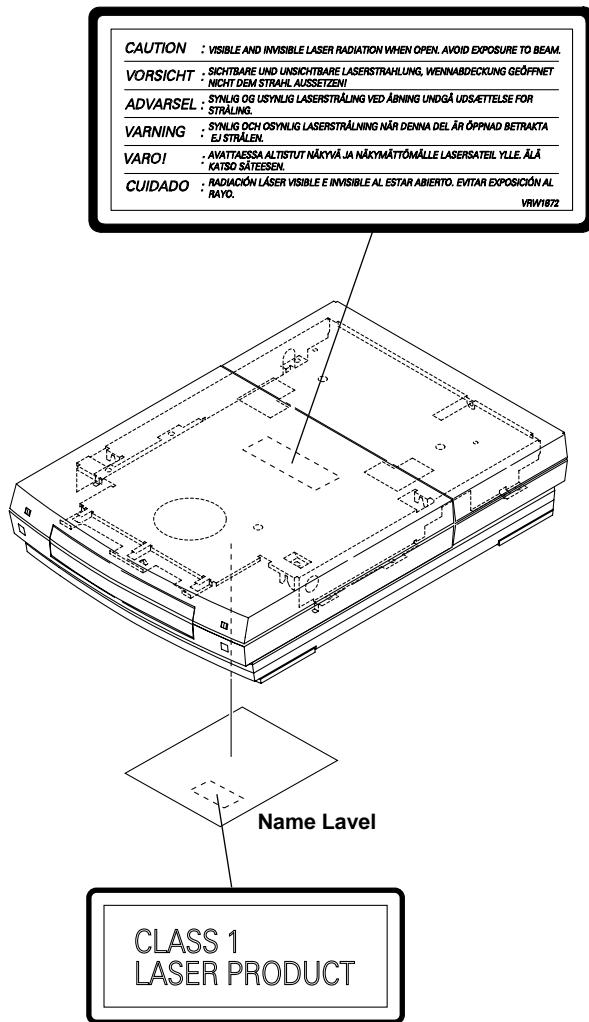


## WARNING !

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

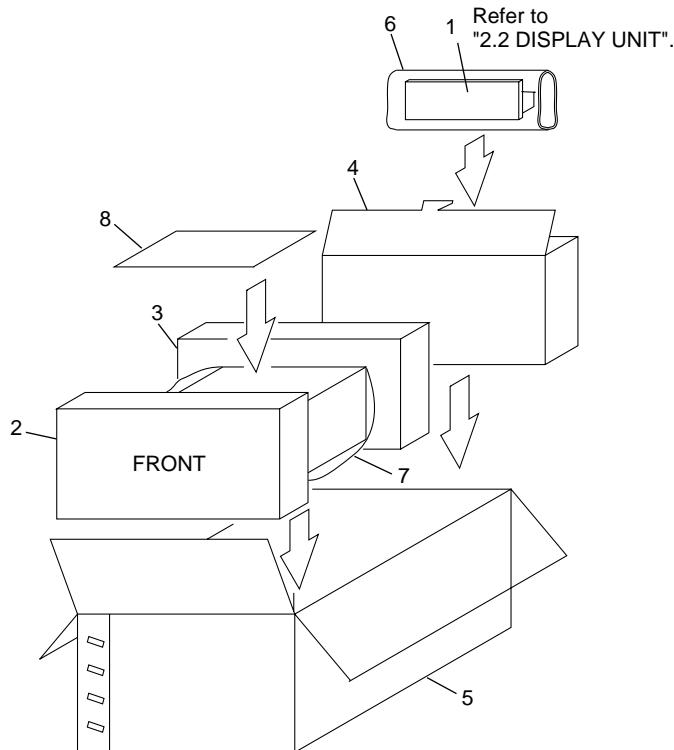
1. Loading-status detection switch (S101 on the LOAB assy) are detected by the microprocessor (IC601 in the DVDM assy).  
• To permit the laser diode to oscillate, it is required to set the loading-status detection switch for the clamp position (the center terminal of S101 is shorted to +3V). When the 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  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part.  
 Therefore, when replacing, be sure to use parts of identical designation.  
 • Screws adjacent to  $\blacktriangledown$  mark on the product are used for disassembly.

### 2.1 PACKING



#### (1) PACKING PARTS LIST

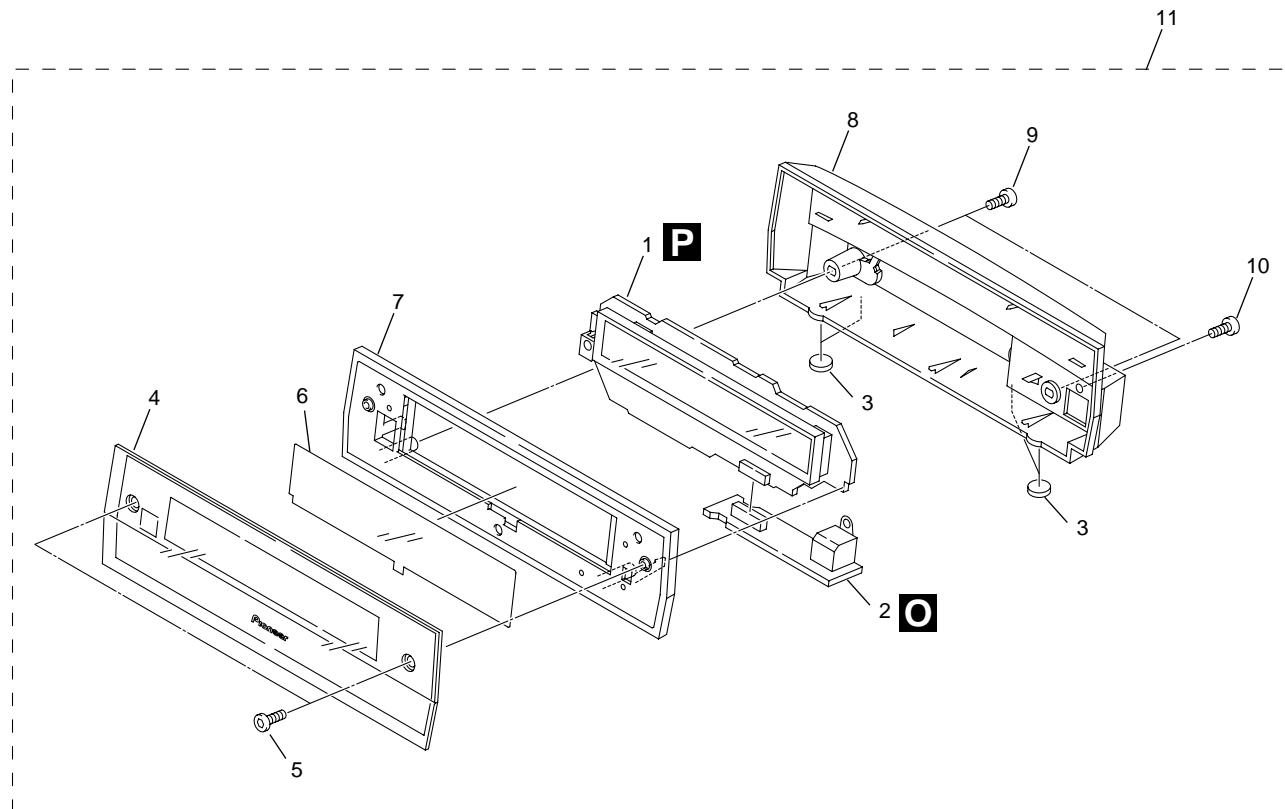
Mark	No.	Description	Part No.
	1	DISPLAY UNIT	AXX7107
	2	Front Pad	AHA7340
	3	Rear Pad	AHA7341
	4	Spacer NS2001	AHB7056
	5	Packing Case	See Contrast table (2)
	6	Packing Sheet	AHG7073
	7	Seat	Z23-007
NSP	8	Warranty Card	See Contrast table (2)

#### (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	
NSP	5	Packing Case	AHD8022	AHD7987	AHD7994	
	8	Warranty Card	ARY7022	ARY7022	ARY7045	

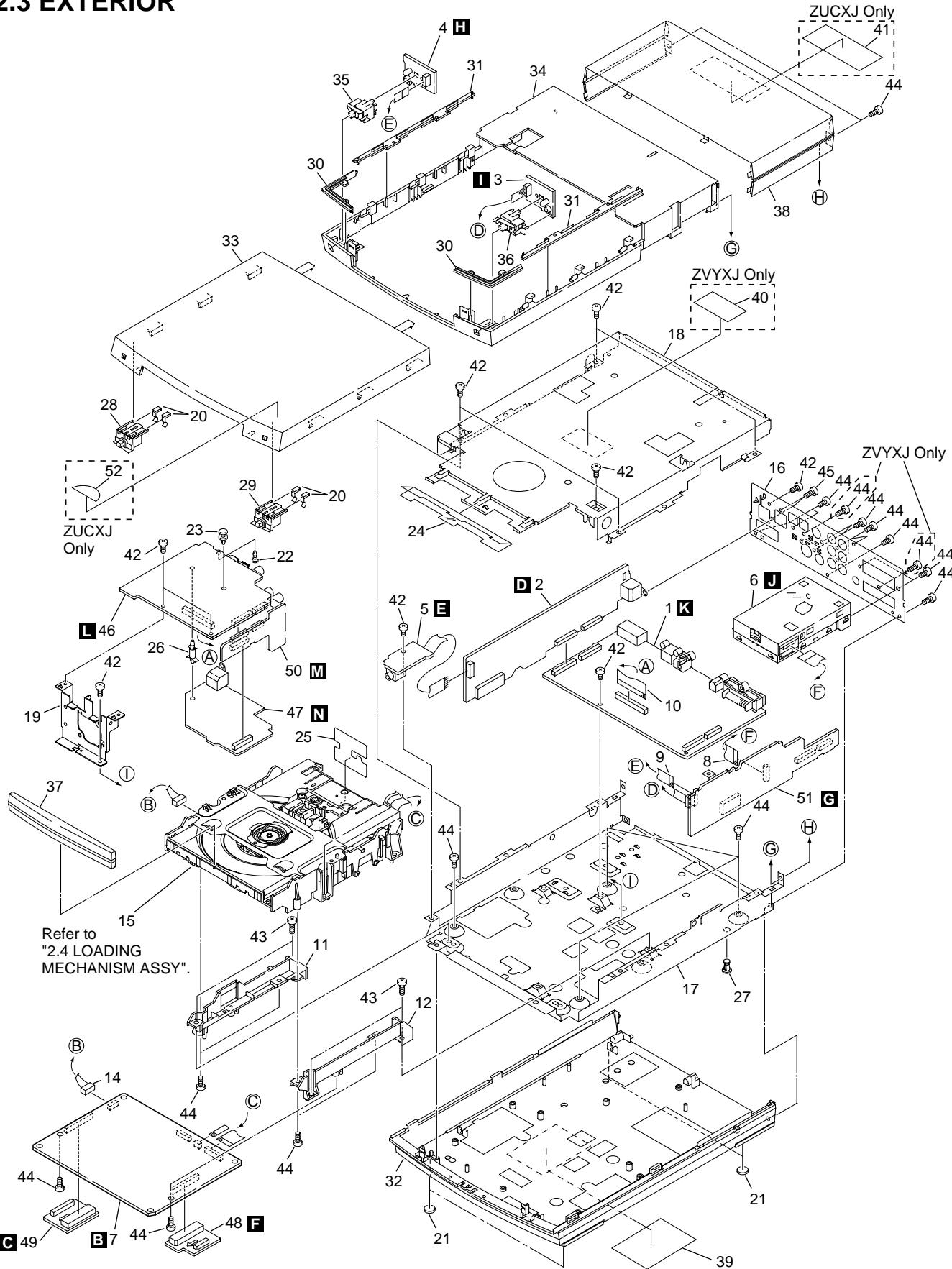
## 2.2 DISPLAY UNIT



### • 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
NSP	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
NSP	21	Leg	AEB7090	NSP	51	SIDER ASSY	See Contrast table (2)
	22	Rebette	AEC7120		52	Energy Star Label	See Contrast table (2)
NSP	23	PCB Spacer(3x6)	AEC7156				
	24	Lead Barrier	AEC7361				
	25	Mecha Barrier	AEC7362				
NSP	26	PCB Holder	AEC7364				
	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 :

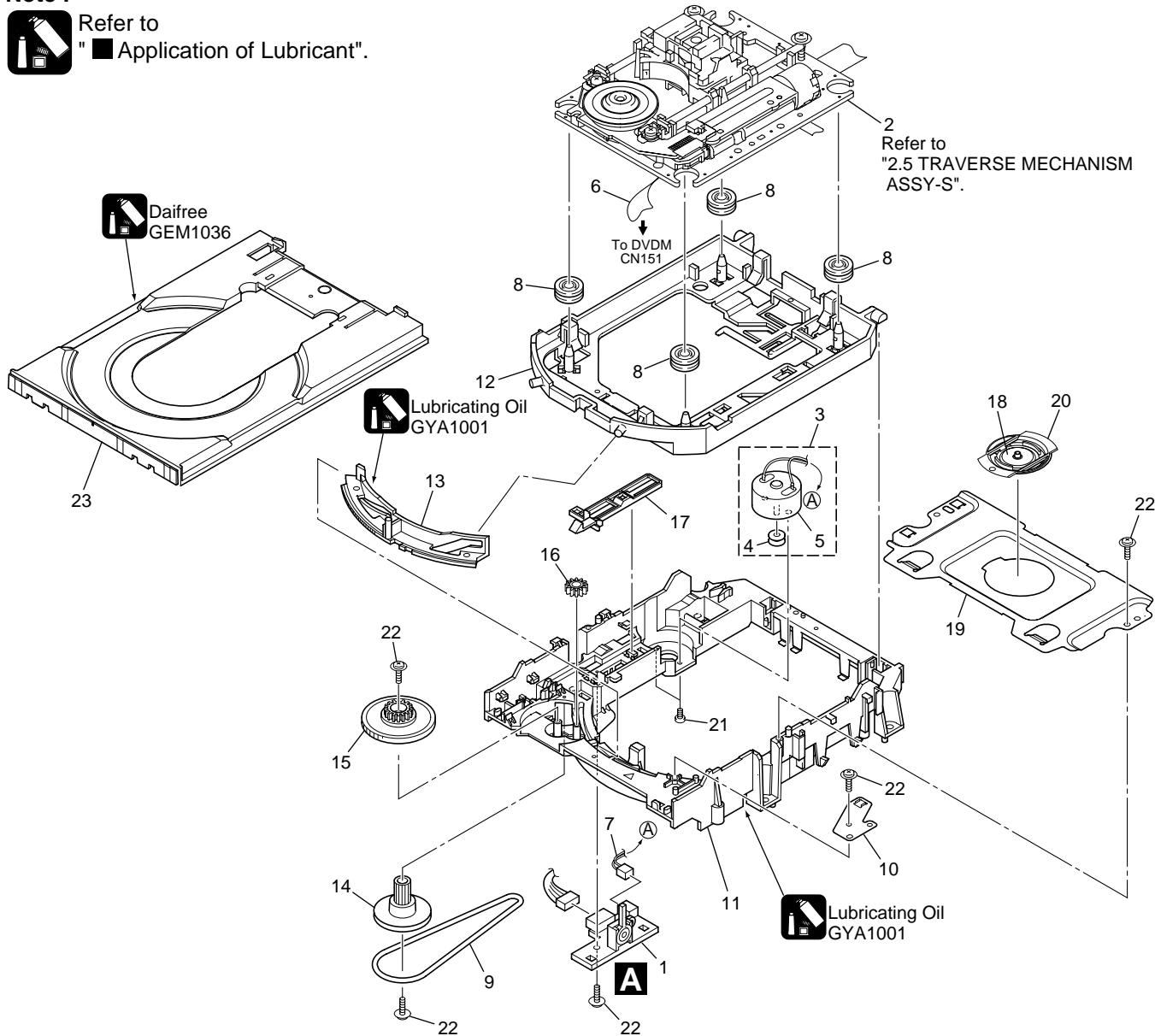
Mark	No.	Symbol and Description	Part No.			Remarks
			XV-DV88 /ZVYXJ	XV-DV77 /ZVYXJ	XV-DV77 /ZUCXJ	
NSP	1	MOTHER ASSY	AVU7817	AWU7806	AWU7818	
	6	FM/AM TUNER MODULE	AXQ7229	AXQ7229	AXQ7228	
	16	Rear Panel	ANC7999	ANC7999	ANC8020	
	37	Tray Cap Assy	AXG7119	AXG7119	AXG7120	
	39	Name Label	AAL7278	AAL7277	AAL7280	
	40	Caution Label	VRW1872	VRW1872	Not used	
	41	65 Label	Not used	Not used	ARW7050	
NSP	46	DSP ASSY	AWU7807	AWU7807	AWU7819	
	51	SIDER ASSY	AWU7812	AWU7812	AWU7820	
	52	Energy Star Label	Not used	Not used	AAX7876	

## 2.4 LOADING MECHANISM ASSY

Note :



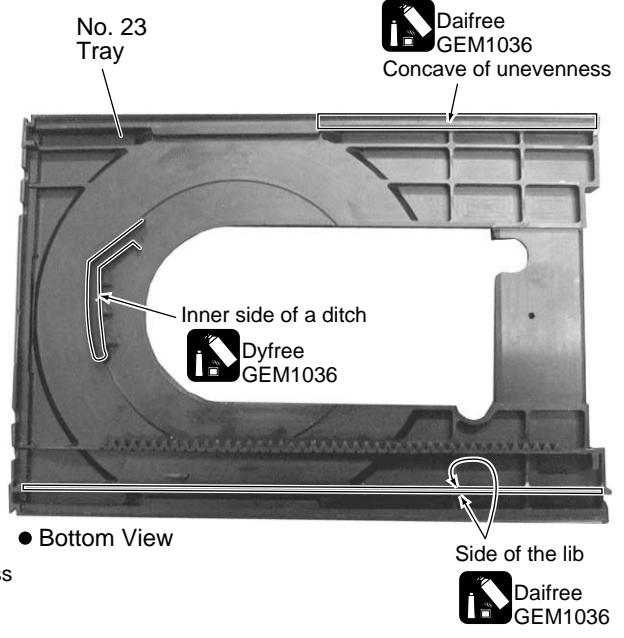
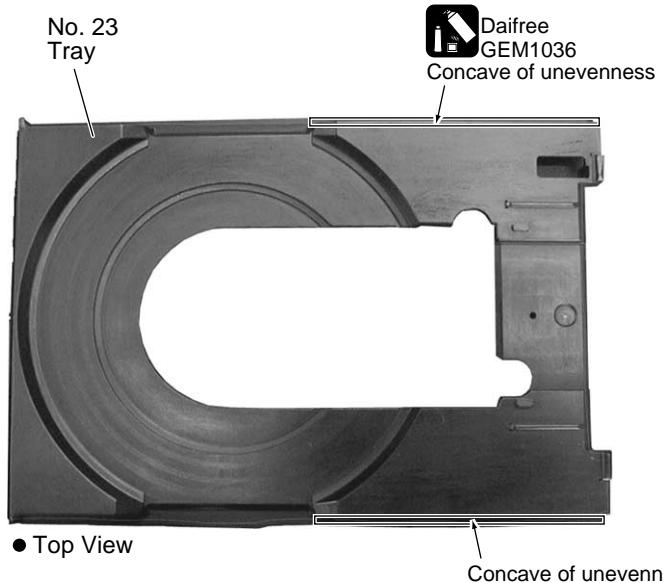
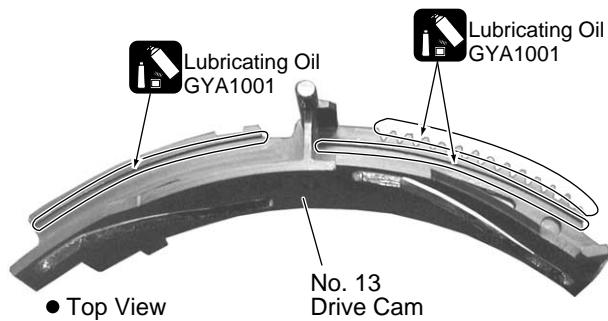
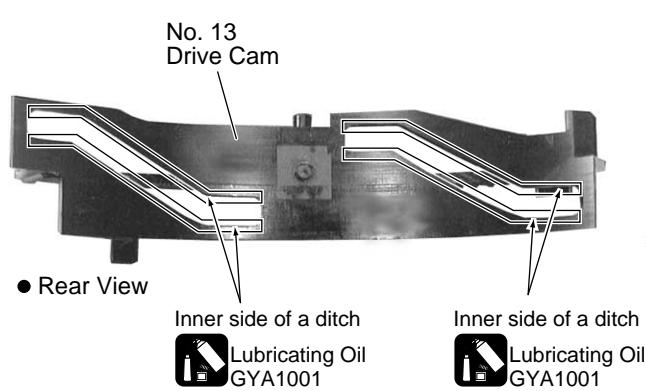
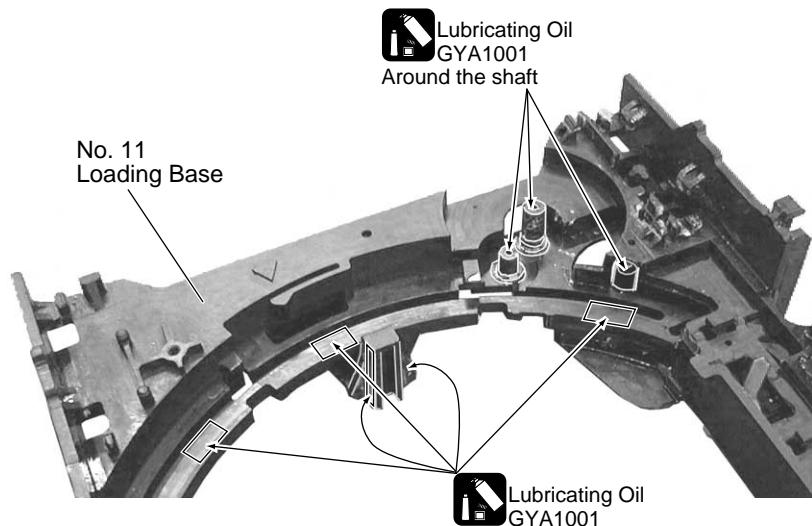
Refer to  
"Application of Lubricant".



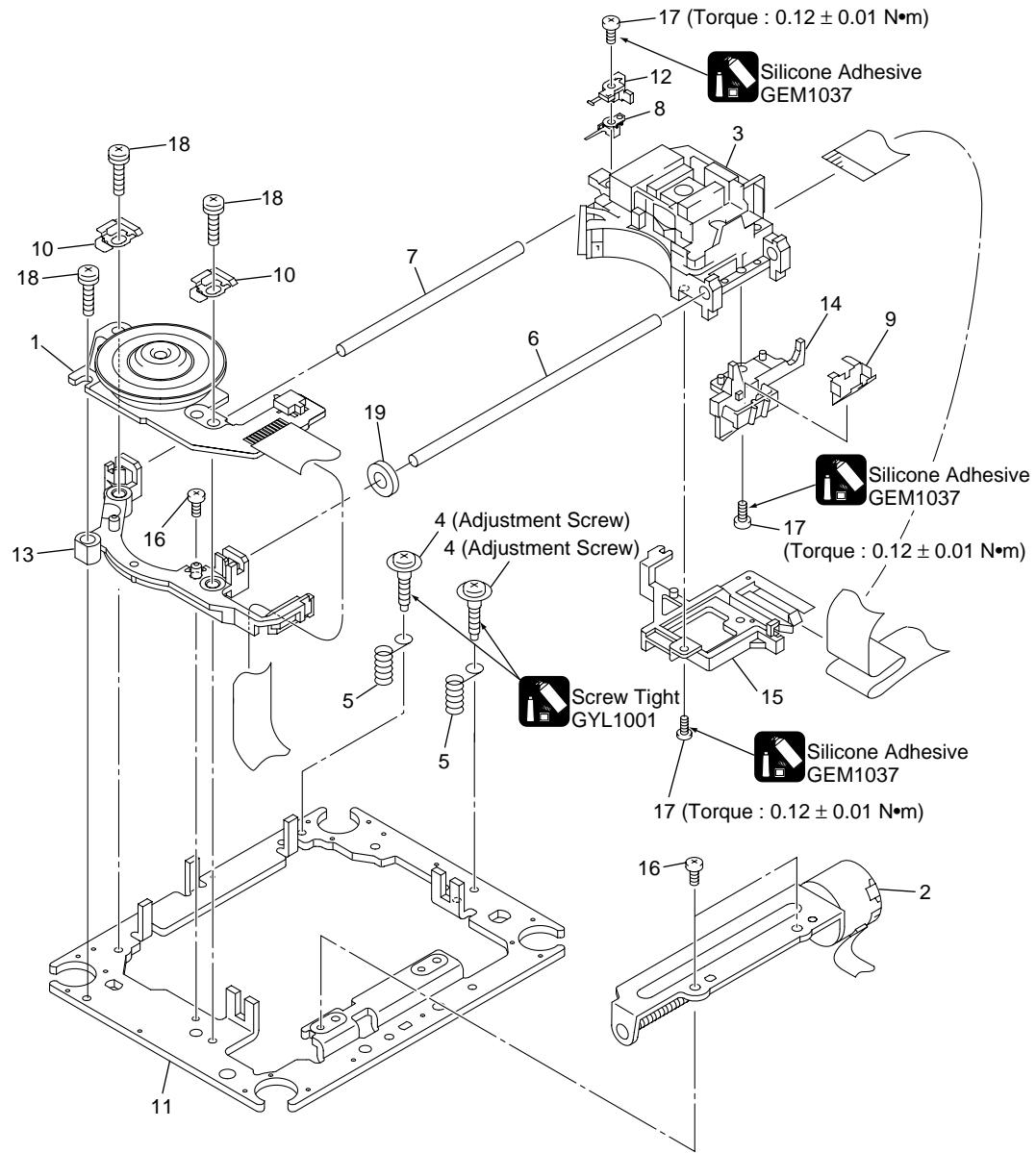
### • LOADING MECHANISM ASSY PARTS LIST

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

## ■ Application of Lubricant



## 2.5 TRAVERSE MECHANISM ASSY-S



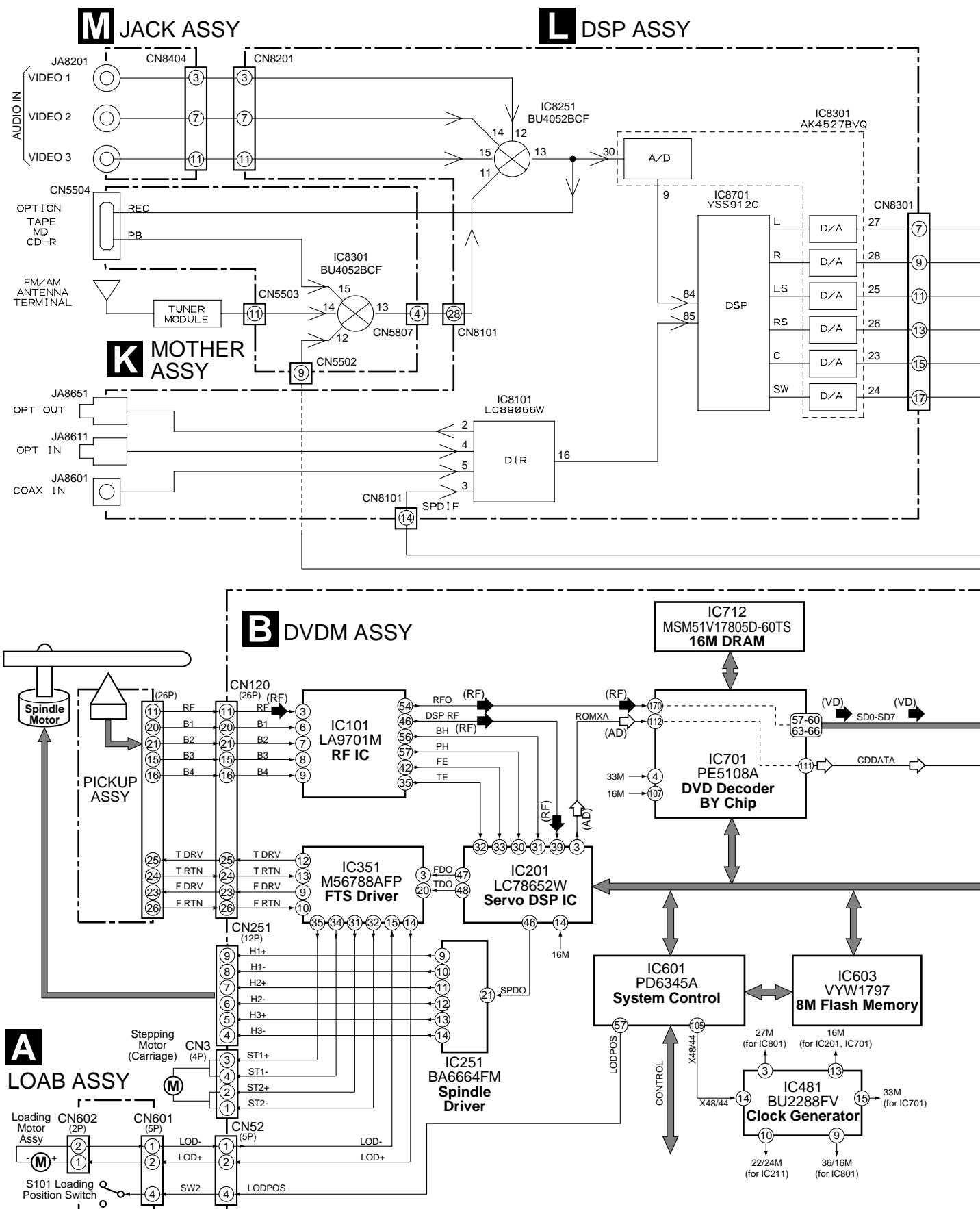
### • TRAVERSE MECHANISM ASSY-S PARTS LIST

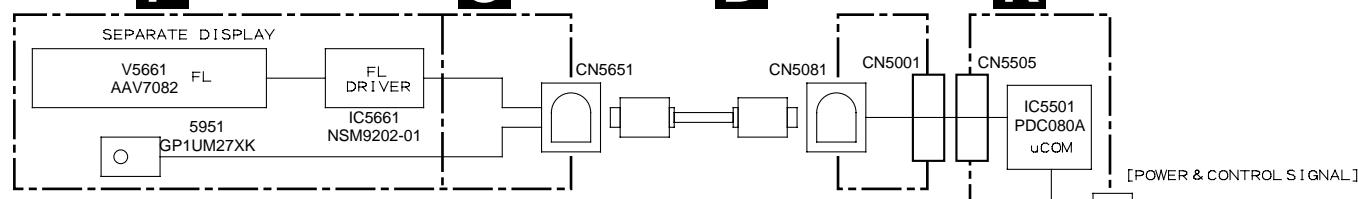
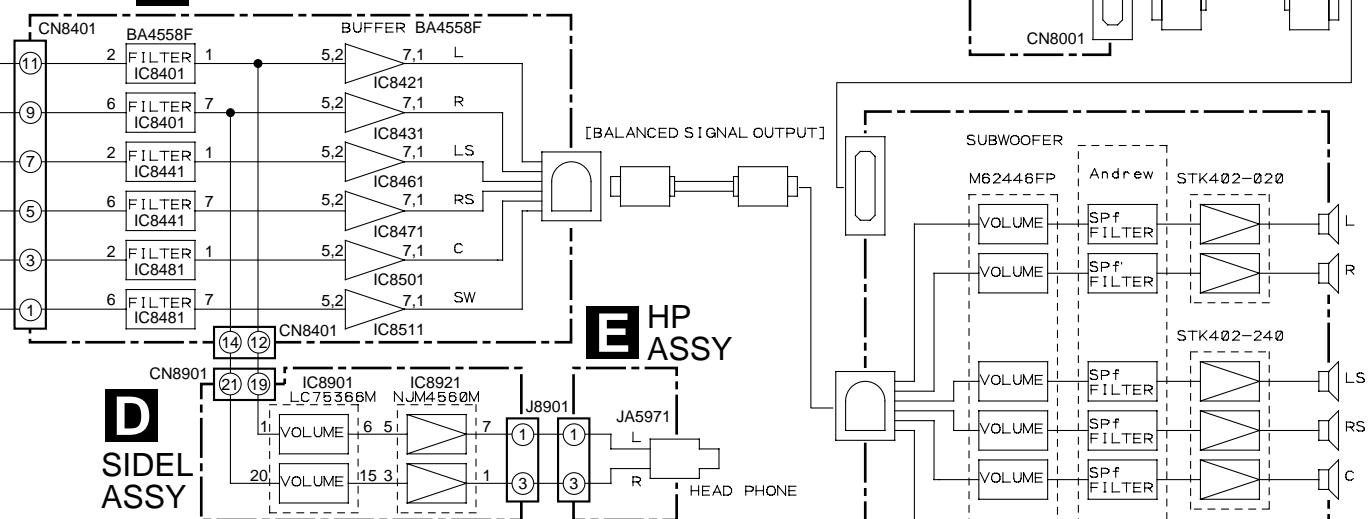
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
1	Spindle Motor		VXM1088 (or VXM1089)		9	Joint Spring	VNC1019
2	Stepping Motor (CARRIAGE)		VXM1090 (or VXM1091)	NSP	10	Support Spring	VNC1020
3	Pickup Assy-S		OXX8003		11	Mechanism Chassis	VNE2248
4	Skew Screw		VBA1080		12	Slider	VNL1811
5	Skew 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



**P** FLDP ASSY**O** CNB ASSY**D** SIDEL ASSY**K** MOTHER ASSY**N** BALANCE ASSY**D** SIDEL ASSY**E** HP ASSY**IC805**  
MB81F161622C-80FN  
16M SDRAM149,150,  
152-155,  
158,159

64-55

36/16M 27M

27M

95-98,  
100-103

PDD-PDT

27M

48

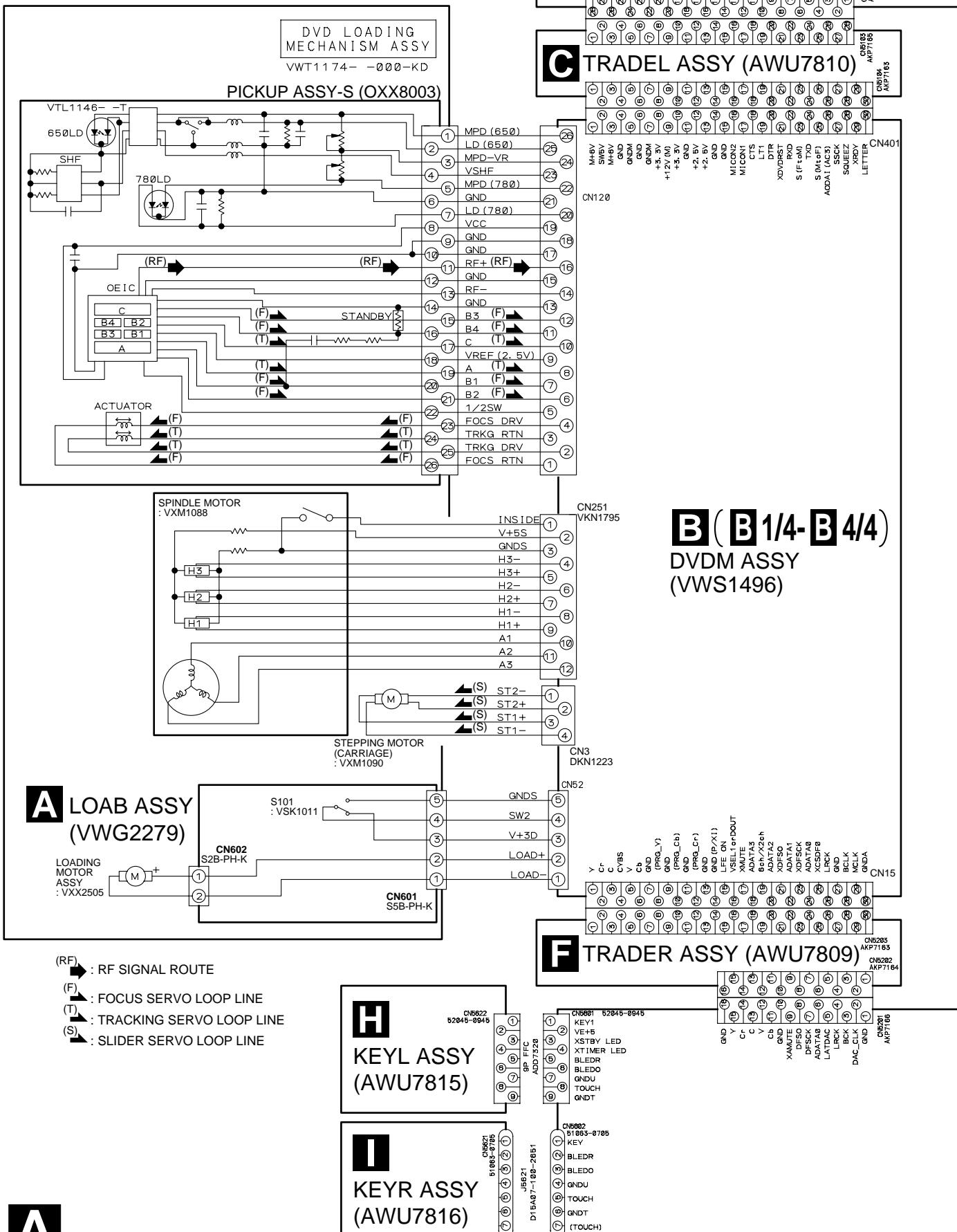
2-9

V

27M

## XV-DV88, XV-DV77

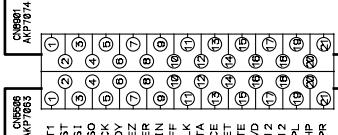
### 3.2 OVERALL WIRING CONNECTION DIAGRAM and LOAB ASSY



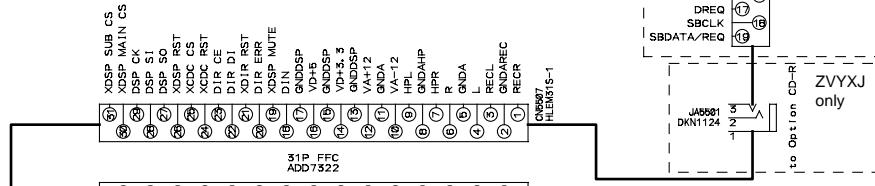
# XV-DV88, XV-DV77

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

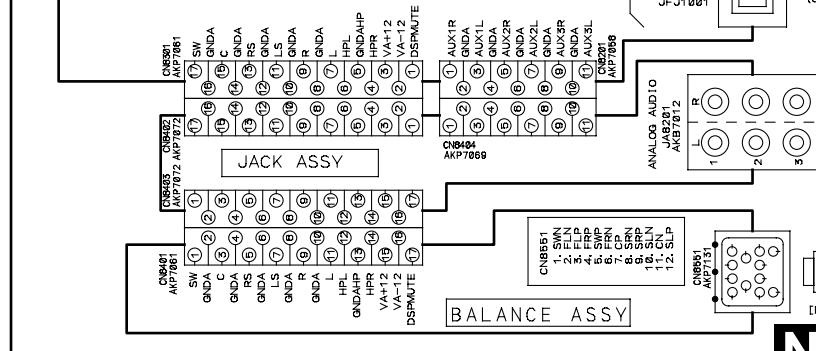
## D SIDEL ASSY (AWU7813)



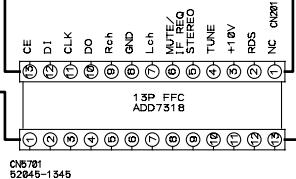
## K (K 1/2-K 2/2) MOTHER ASSY (XV-DV88/ZVYXJ : AWU7817) (XV-DV77/ZVYXJ : AWU7806) (XV-DV77/ZUCXJ : AWU7818)



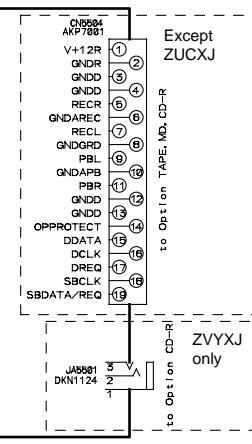
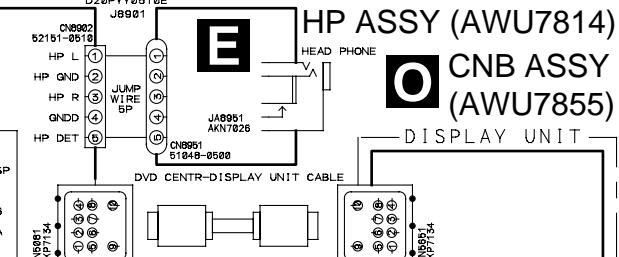
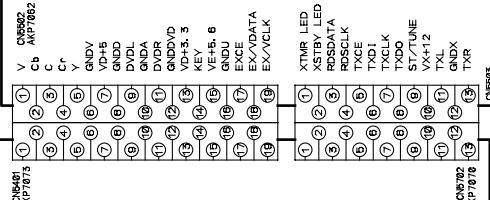
## L (L 1/2-L 2/2) DSP ASSY (ZVYXJ : AWU7807) (ZUCXJ : AWU7819)



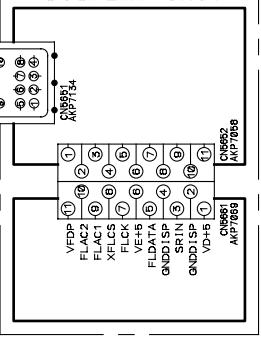
## J FM/AM TUNER MODULE (ZVYXJ : AXQ7229) (ZUCXJ : AXQ7228)



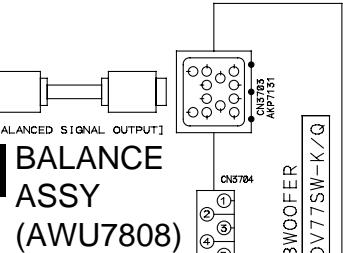
## G SIDER ASSY (ZVYXJ : AWU7812) (ZUCXJ : AWU7820)



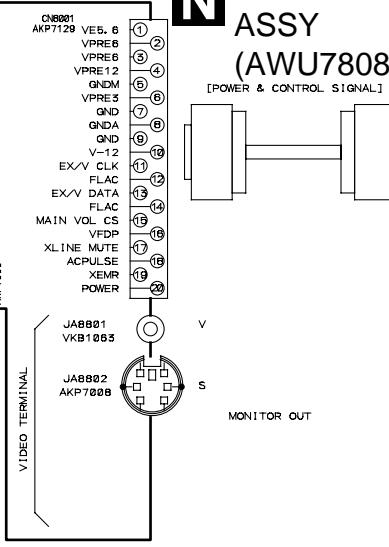
## P FLDP ASSY (AWU7854)



## M JACK ASSY (AWU7811)



## N BALANCE ASSY (AWU7808)

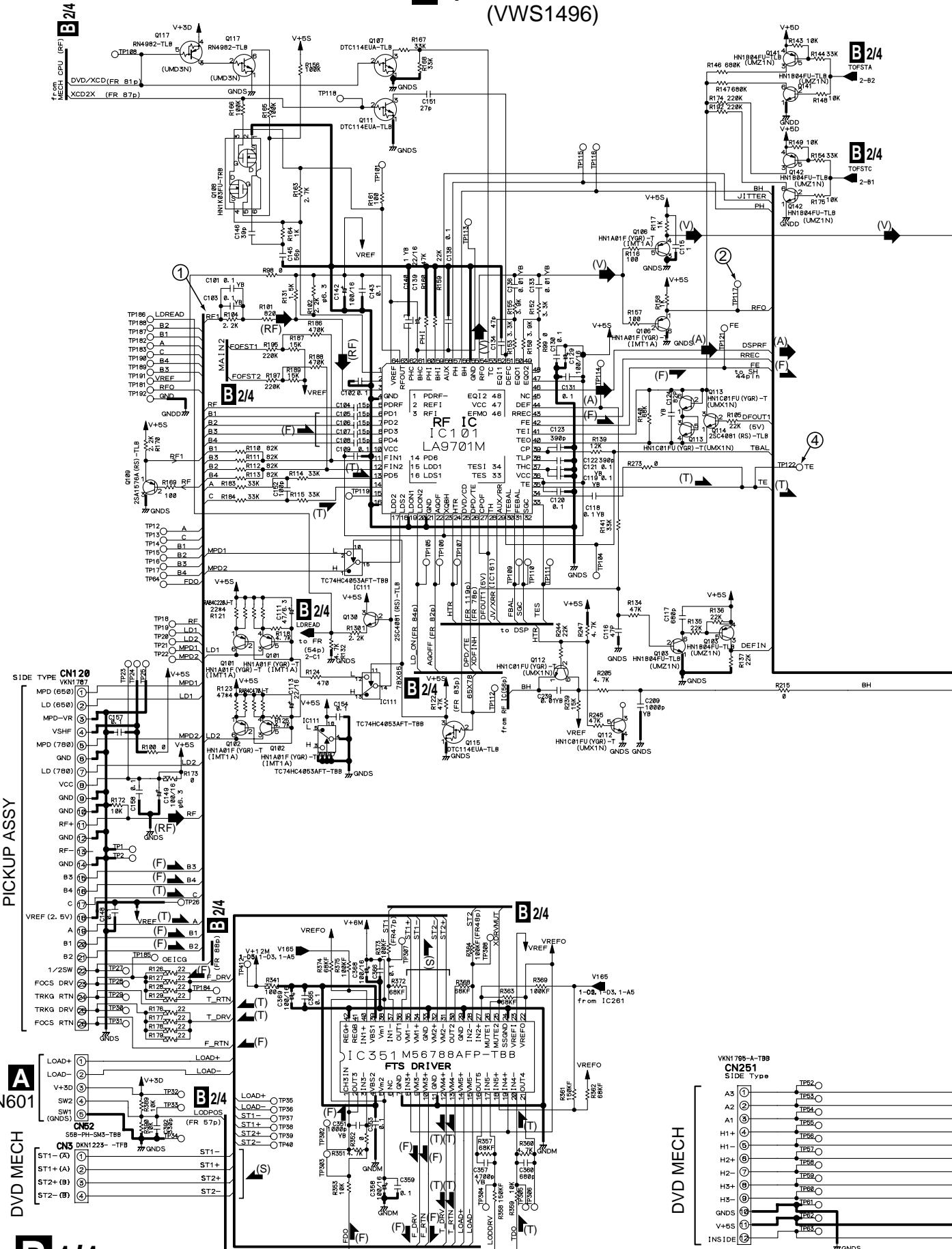


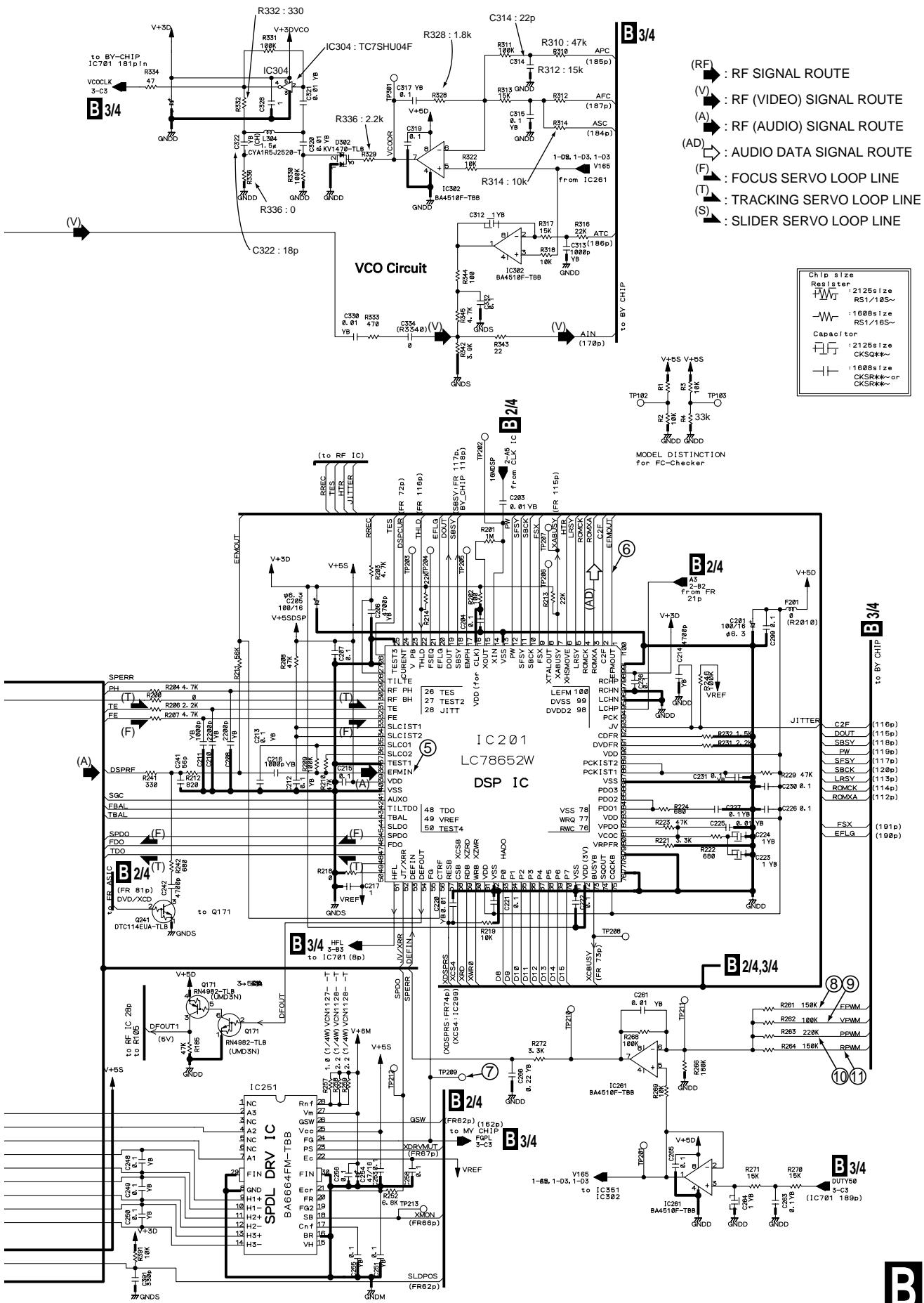
## S-DV77SW-K/Q

# XV-DV88, XV-DV77

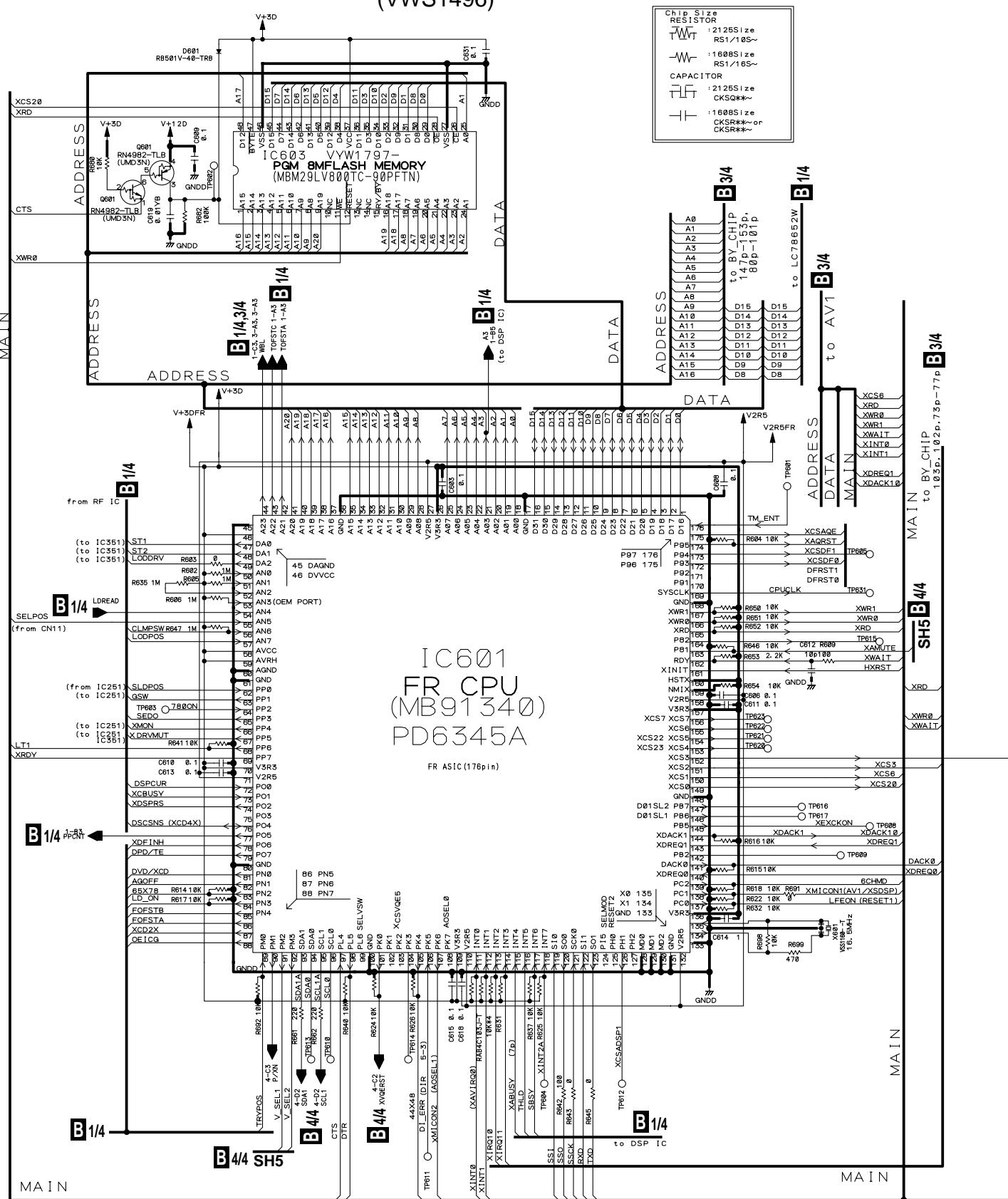
## 3.3 DVDM ASSY (1/4)

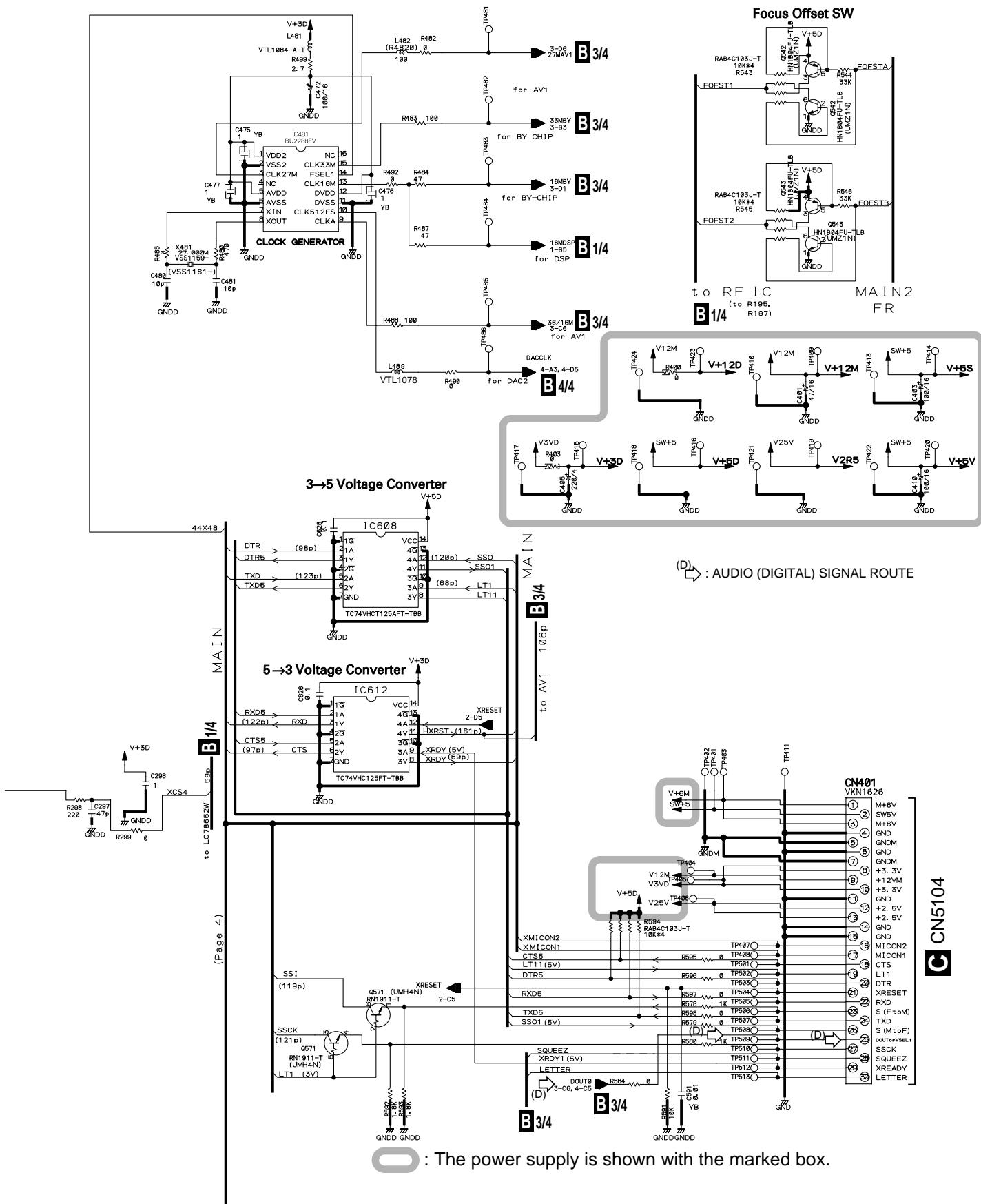
### B 1/4 DVDM ASSY (VWS1496)





## 3.4 DVDM ASSY (2/4)

B 2/4 DVDM ASSY  
(VWS1496)

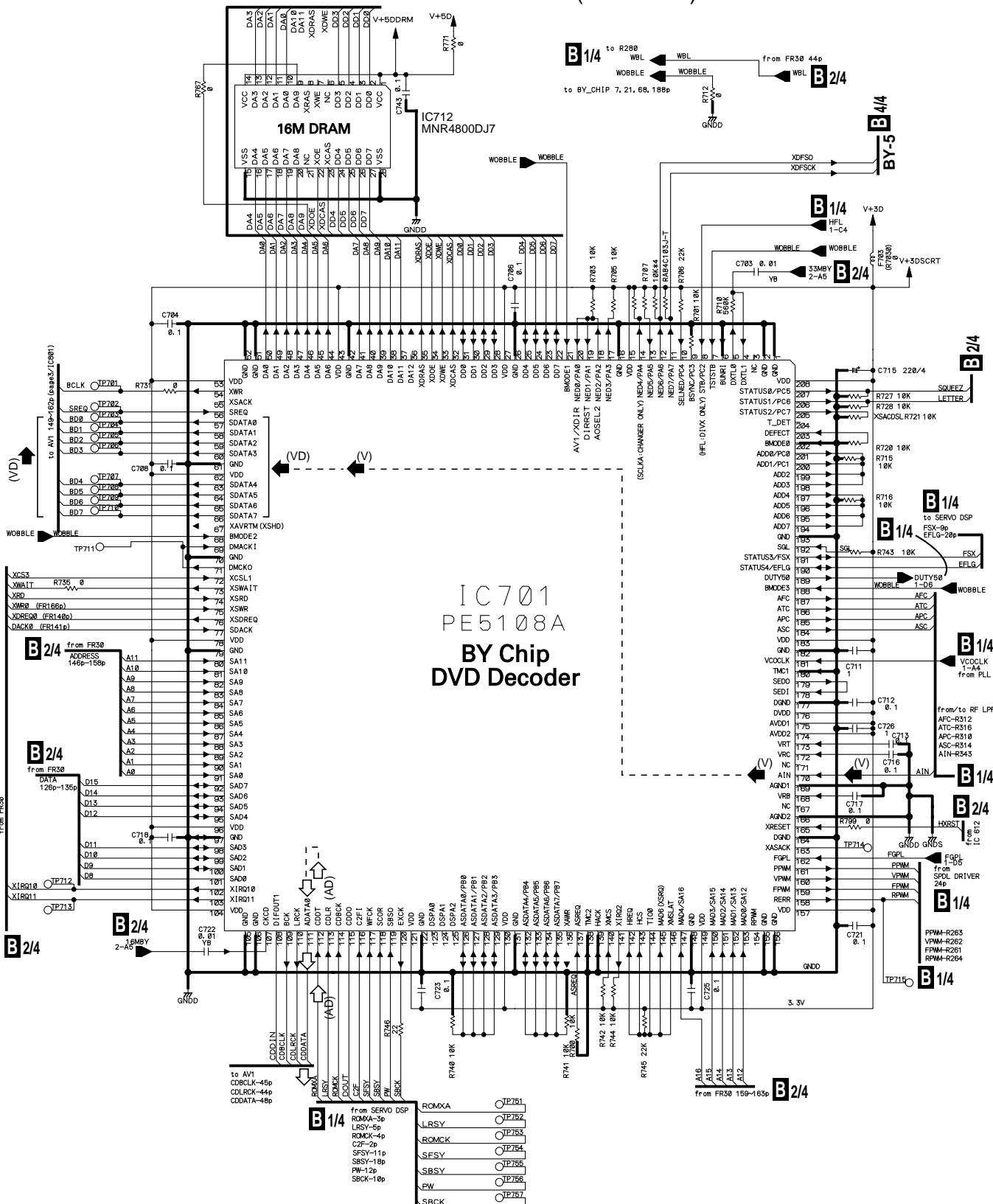


### 3.5 DVDM ASSY (3/4)

A

**B 3/4** DVDM ASSY  
(VWS1496)

B

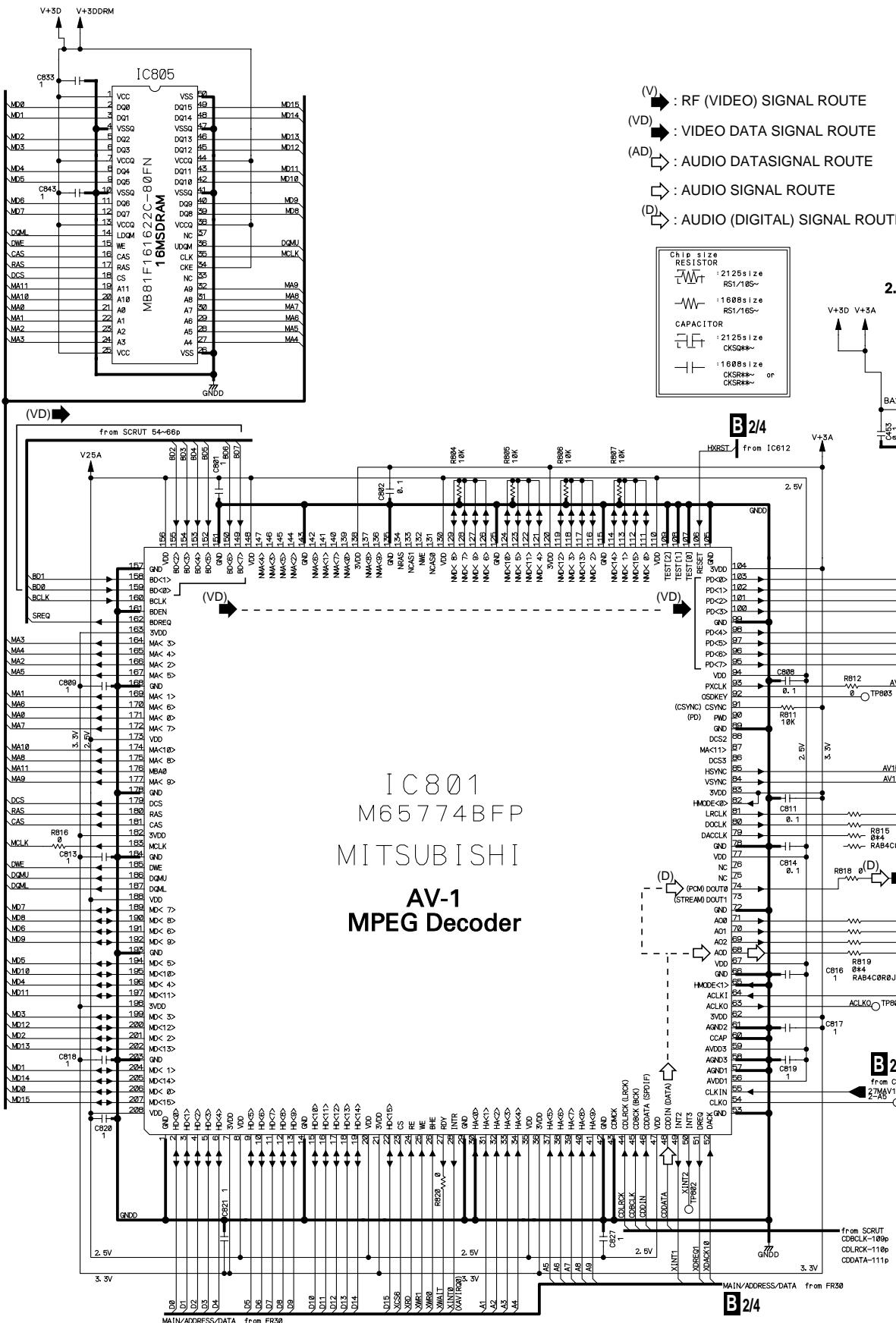


C

D

20

**B 3/4**



B3/4

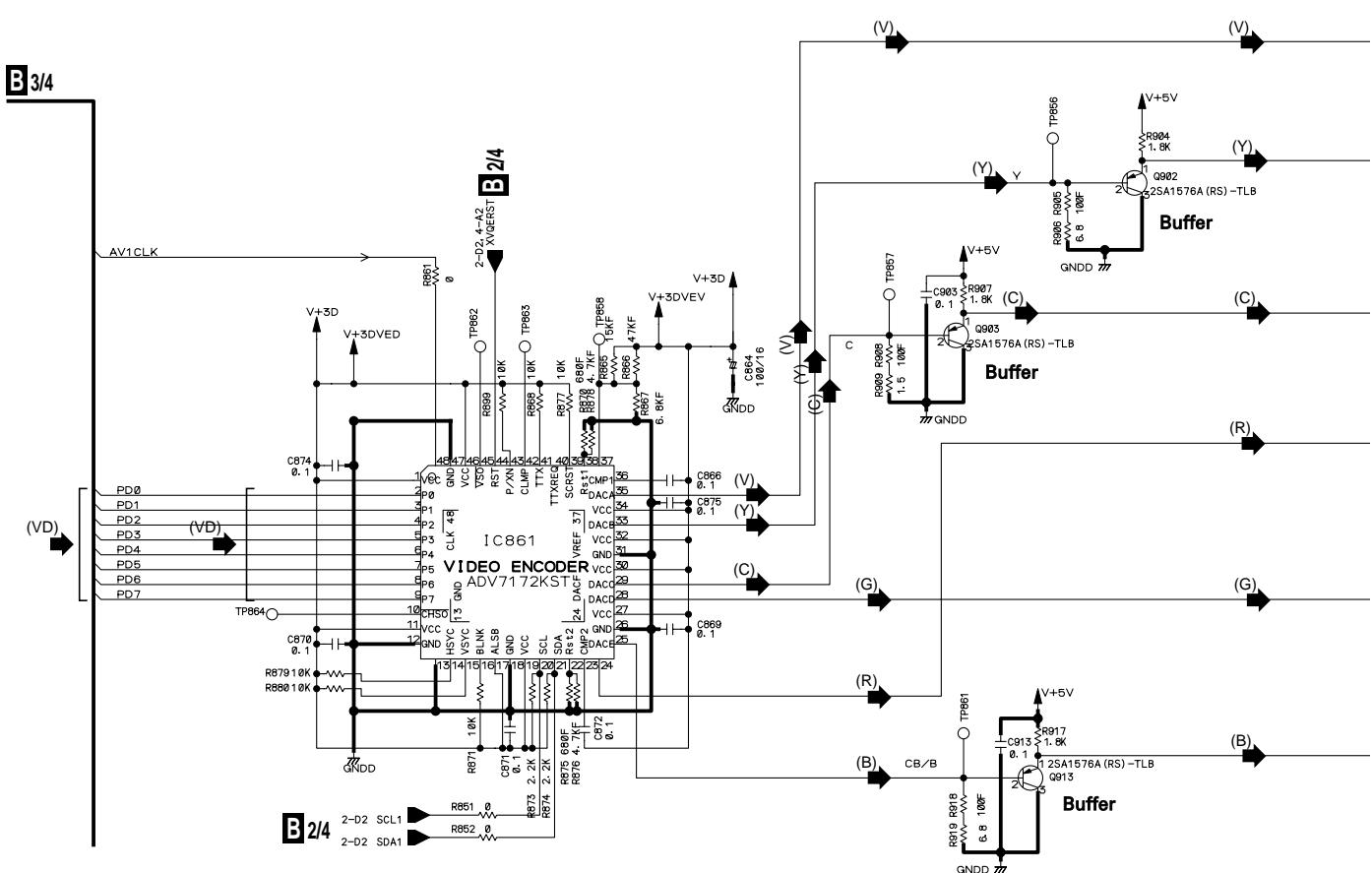
## XV-DV88, XV-DV77

A

B

C

D



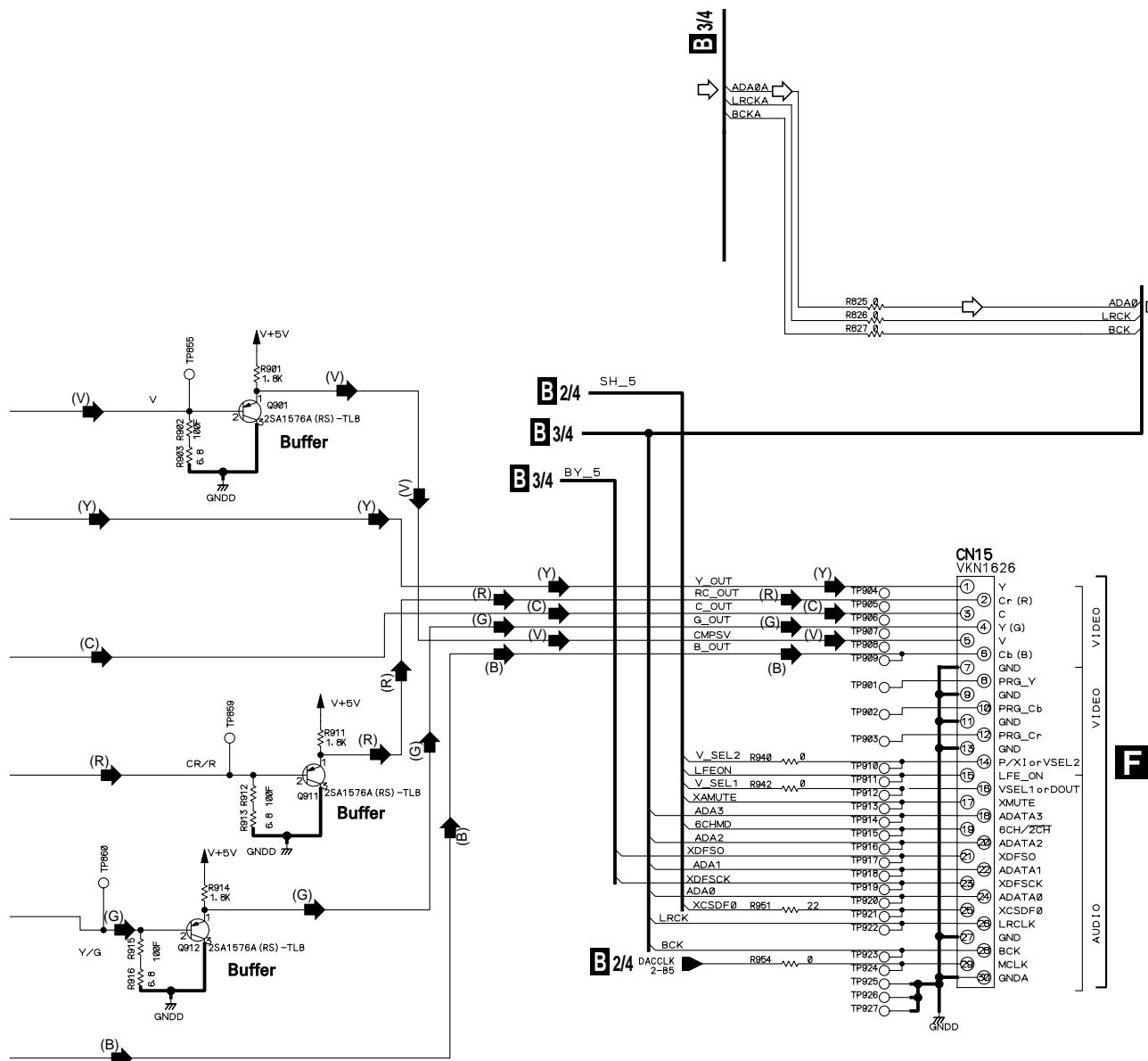
22

B 4/4

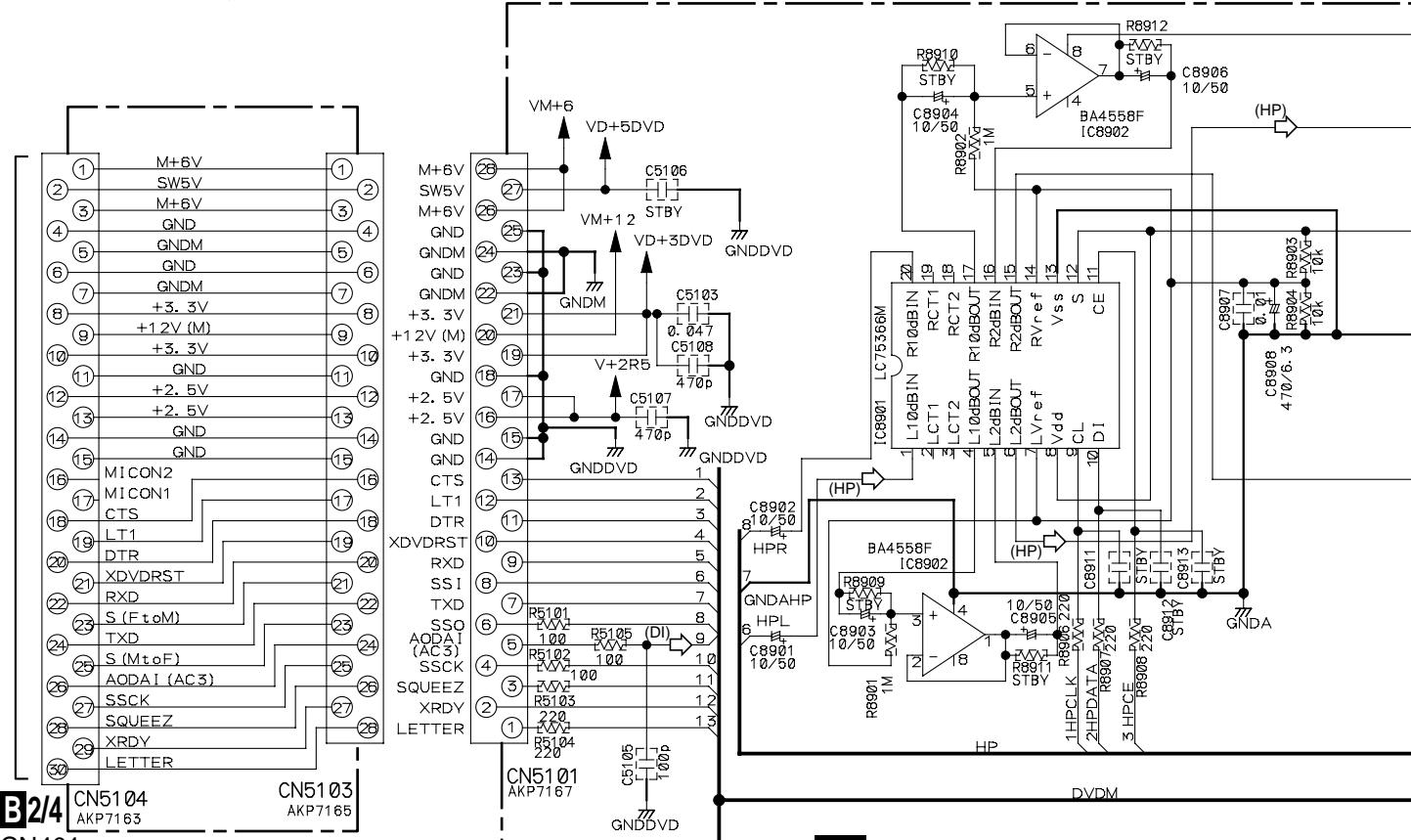
## B 4/4 DVDM ASSY (VWS1496)

(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

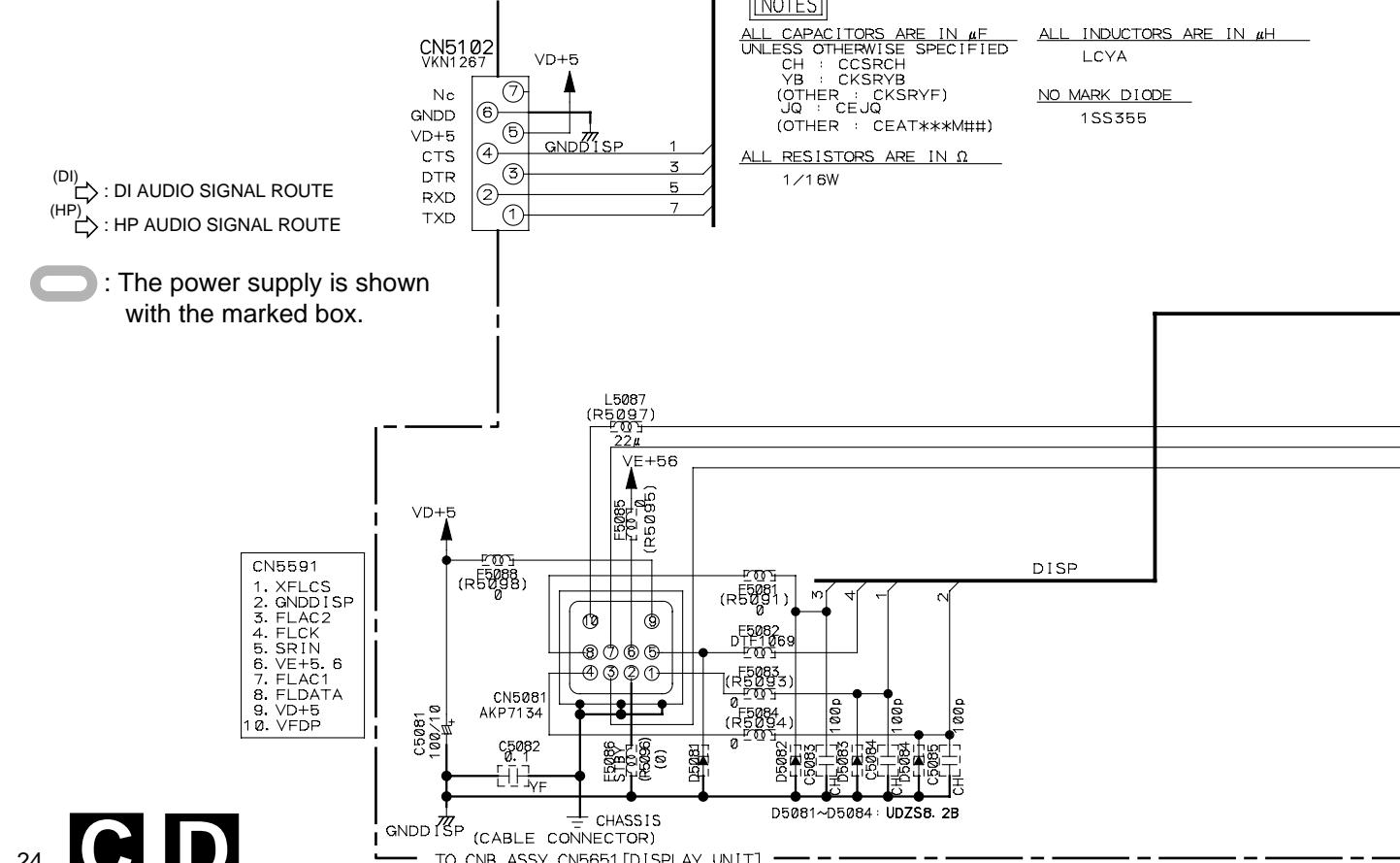
CHIP SIZE	RESISTOR
12125 size	RS1/10S~
1608 size	RS1/16S~
CAPACITOR	
12125 size	CKSQ***
1608 size	CCSR*** or CKSR***



### 3.7 TRADEL, Sidel and HP ASSYS



**C TRADEL ASSY  
(AWU7810)**



## D SIDEL ASSY (AWU7813)

NOTES

ALL CAPACITORS ARE IN  $\mu$ F ALL INDUCTORS ARE IN  $\mu$ H  
UNLESS OTHERWISE SPECIFIED LCYA

CH : CCSRCH  
YB : CKSRYB  
(OTHER : CKSRYF) NO MARK DIODE  
JQ : CEJQ  
(OTHER : CEAT\*\*\*M##) 1SS355

ALL RESISTORS ARE IN  $\Omega$

1/16W

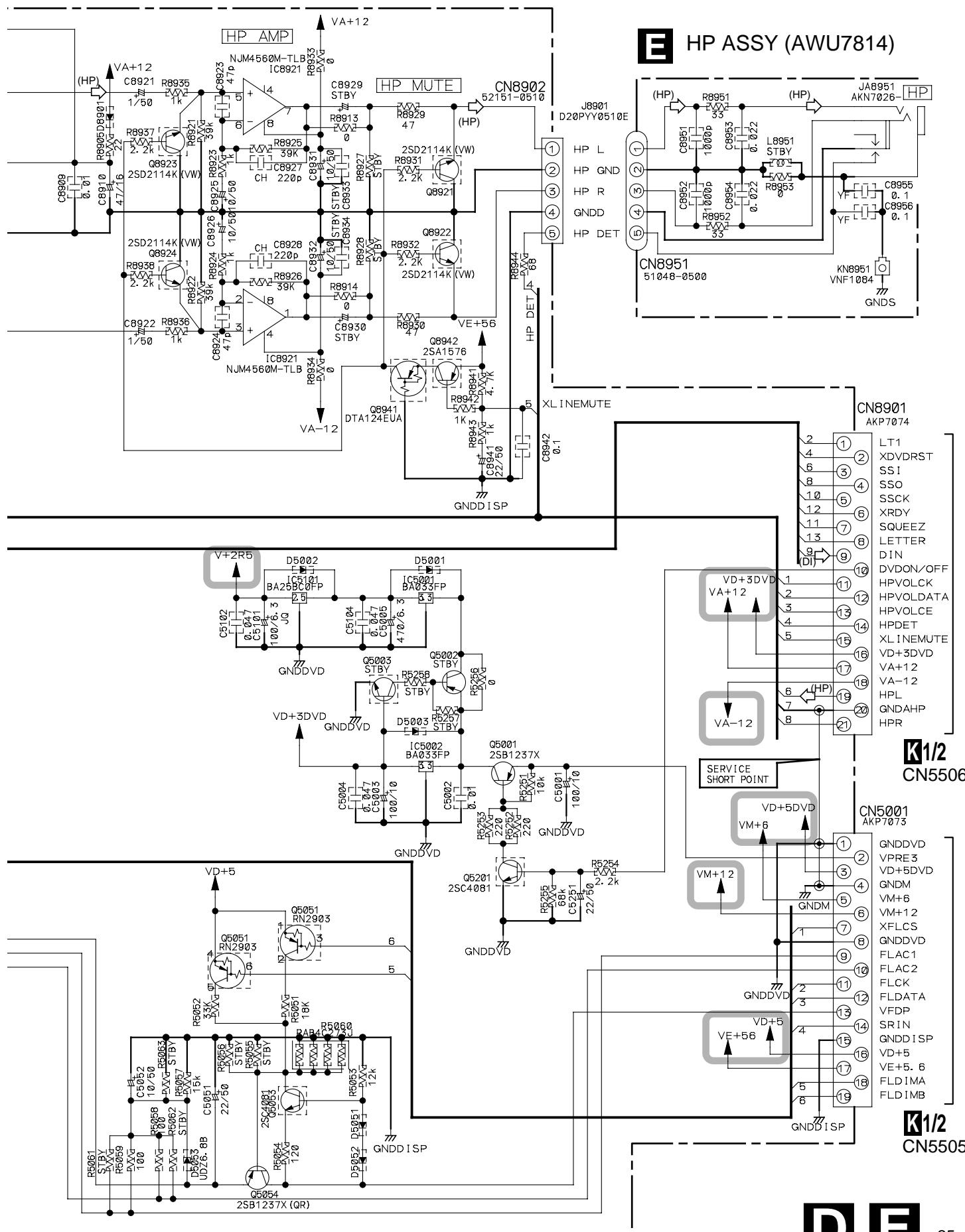
<sup>(DI)</sup>  : DI AUDIO SIGNAL ROUTE  
<sup>(HP)</sup>  : HP AUDIO SIGNAL ROUTE

: The power supply is shown with the marked box.

CN5591  
 1. XFLCS  
 2. GNDDISP  
 3. FLAC2  
 4. FLCK  
 5. SRIN  
 6. VE+5. 6  
 7. FLAC1  
 8. FLDATA  
 9. VD+5  
 10. VFDP

24

**C D**



## 3.8 TRADER, SIDER, KEYL and KEYR ASSYS

A

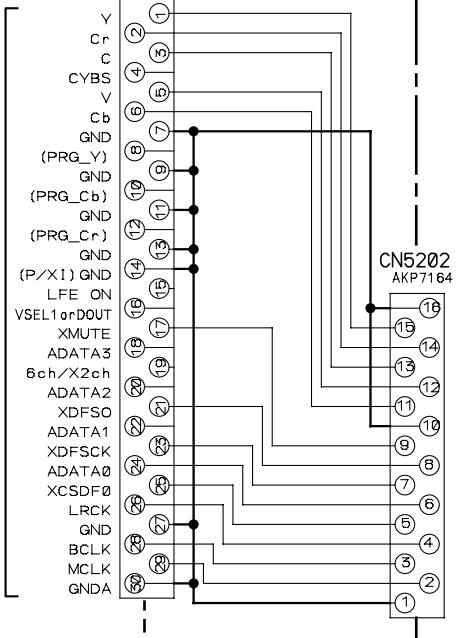
## NOTES

ALL CAPACITORS ARE IN  $\mu$ F  
UNLESS OTHERWISE SPECIFIED  
CH : CCSRCH  
YF : CKSRYF  
(OTHER : CKSRYB)  
JQ : CEQJ  
(OTHER : CEAT\*\*\*M\*\*\*)  
ALL RESISTORS ARE IN  $\Omega$   
1/16W  
ALL INDUCTORS ARE IN  $\mu$ H  
LCYA  
NO MARK DIODE  
1SS355

## F TRADER ASSY (AWU7809)

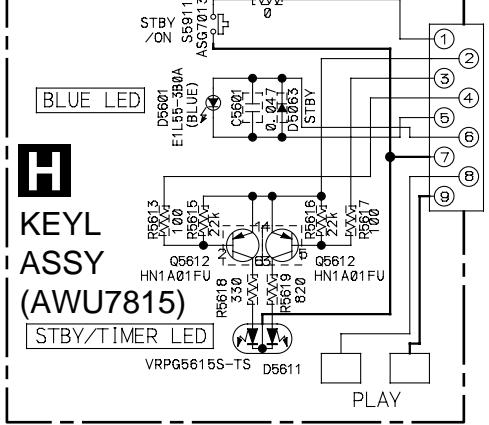
B4/4

CN15



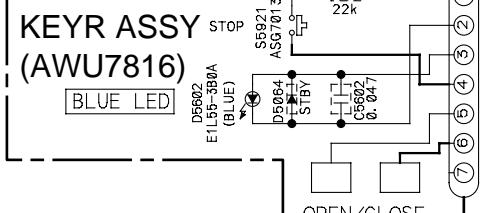
C

CN5622



D

CN5621

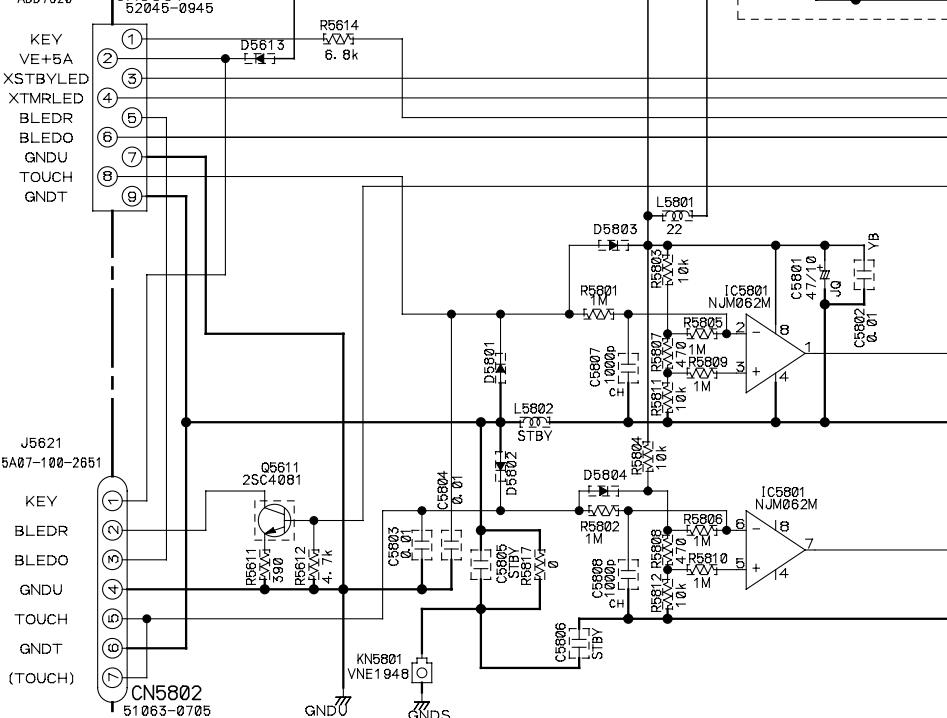
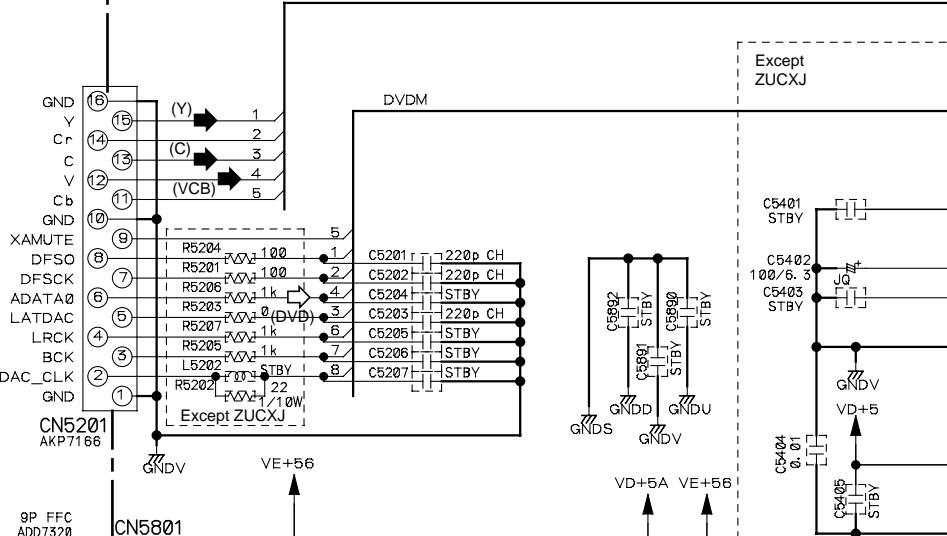
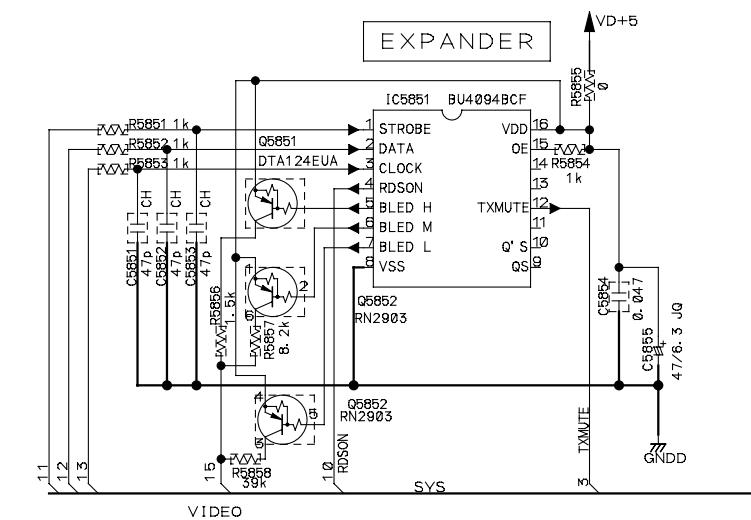


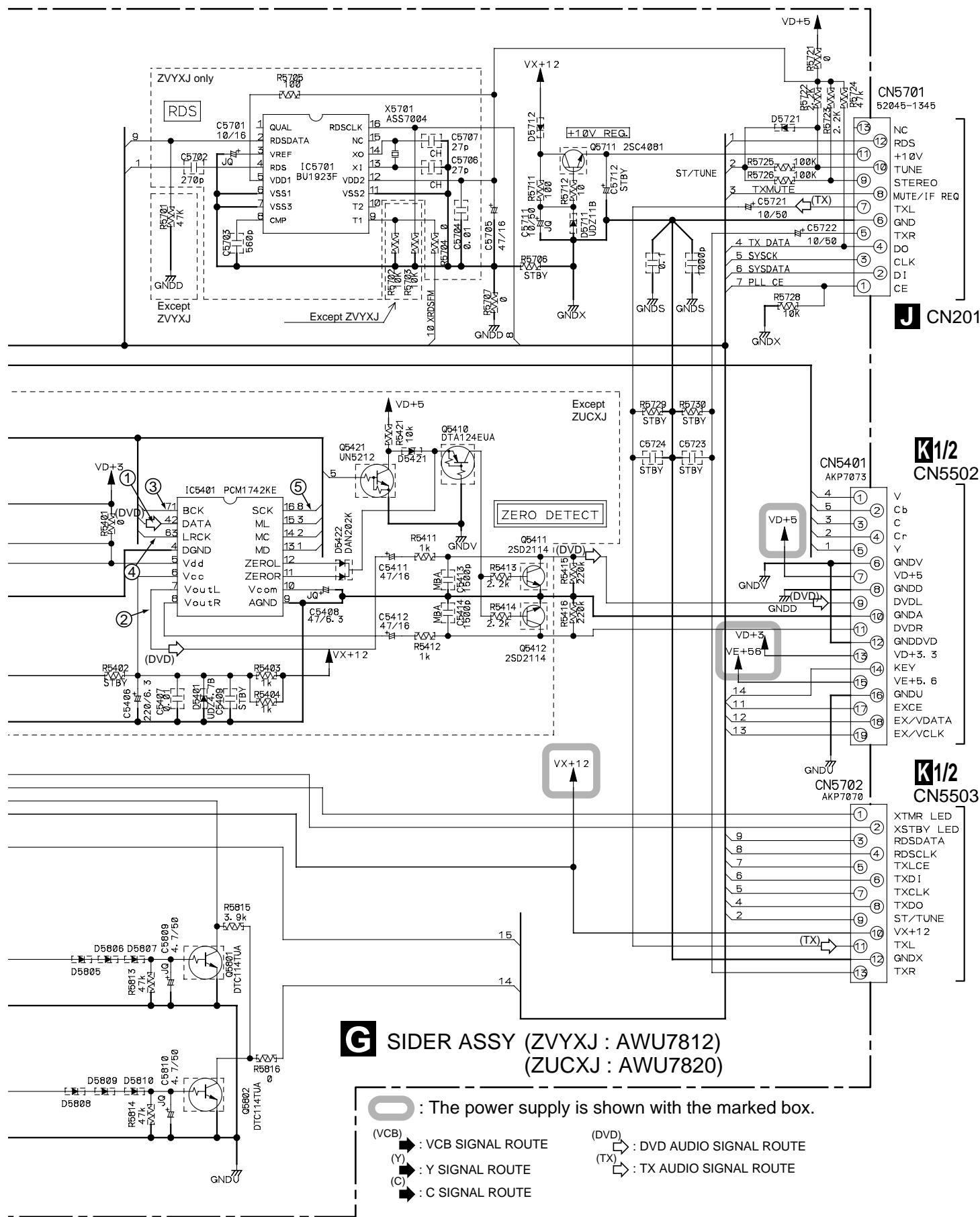
F

G

H

I



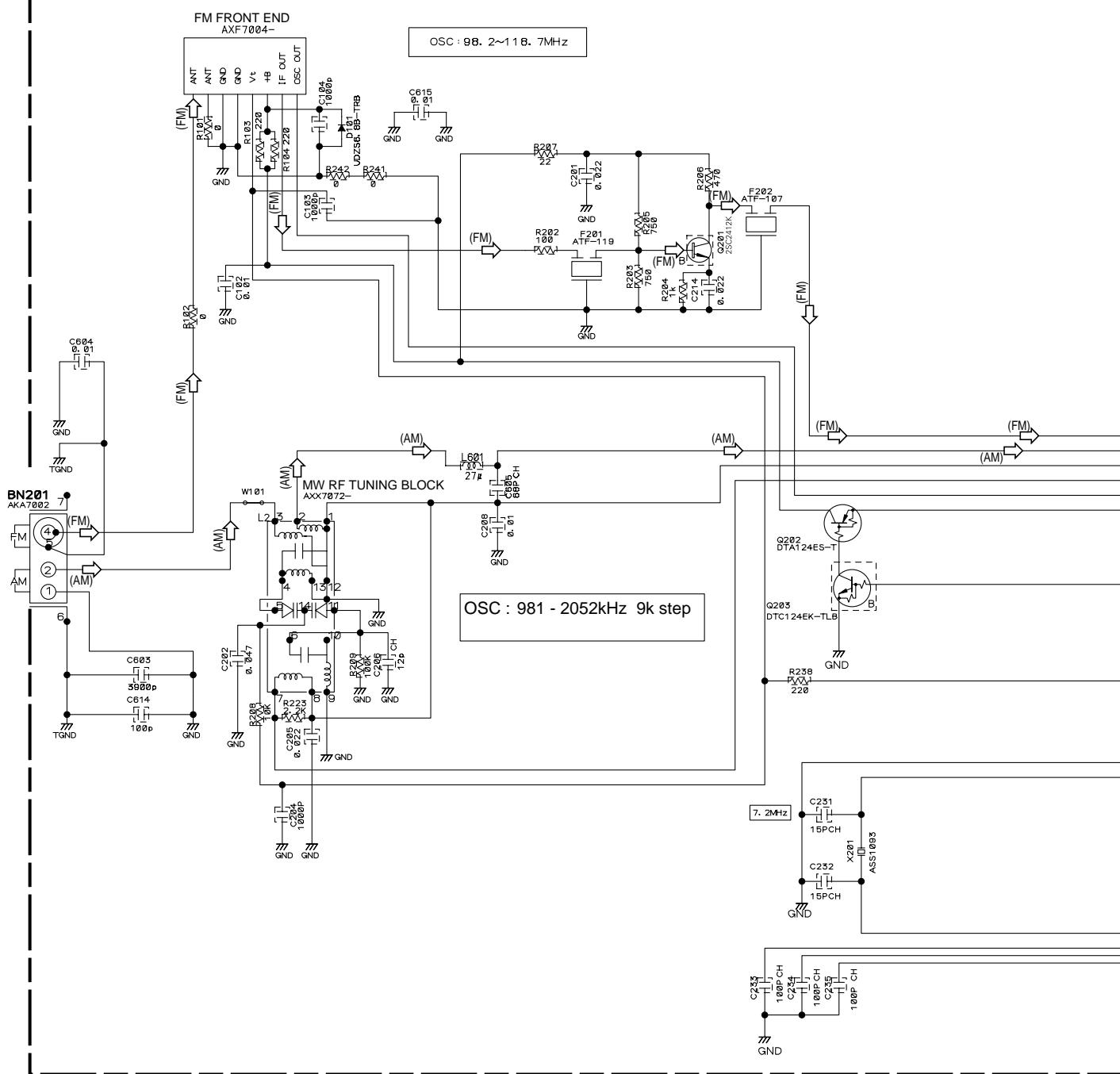


## XV-DV88, XV-DV77

### **3.9 FM/AM TUNER MODULE (ZVYXJ TYPE)**

A

**J** FM/AM TUNER MODULE (ZVYXJ : AXQ7229)



28

J

1

2

4

4

## Notes

## 1. RESISTORS

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

### 3. CAPACITORS

Indicated in Capacity ( $\mu$ F) / VOLTAGE (V) unless otherwise noted P:PF

### 3 DIODES

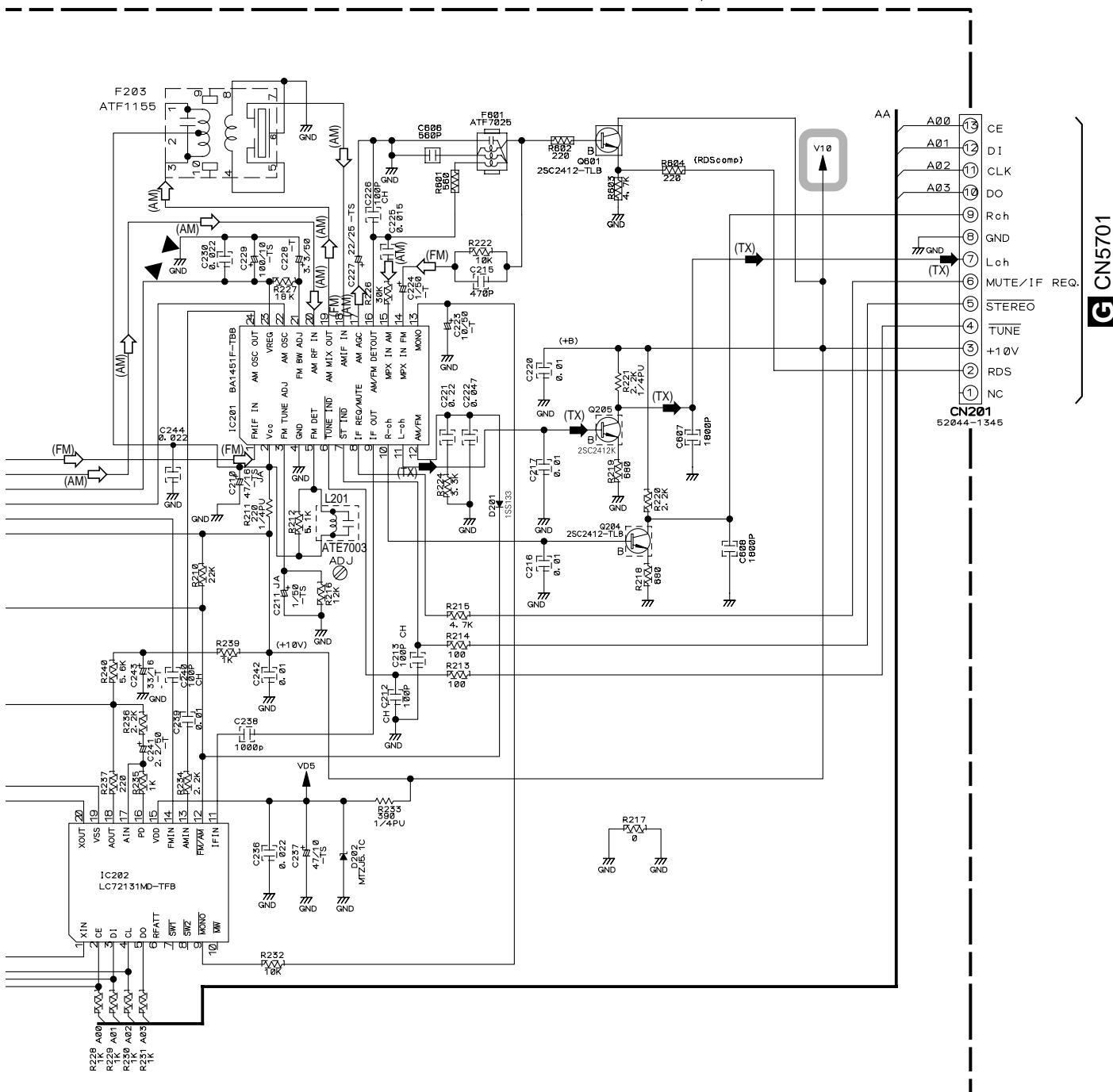
No mark diode is 1SS133.

 : The power supply is shown with the marked box.

→ : AUDIO SIGNAL ROUTE (TUNER)

## ► . AUDIO SIGNAL ROUTING (AM).

→ : AM SIGNAL ROUTE  
(FM)

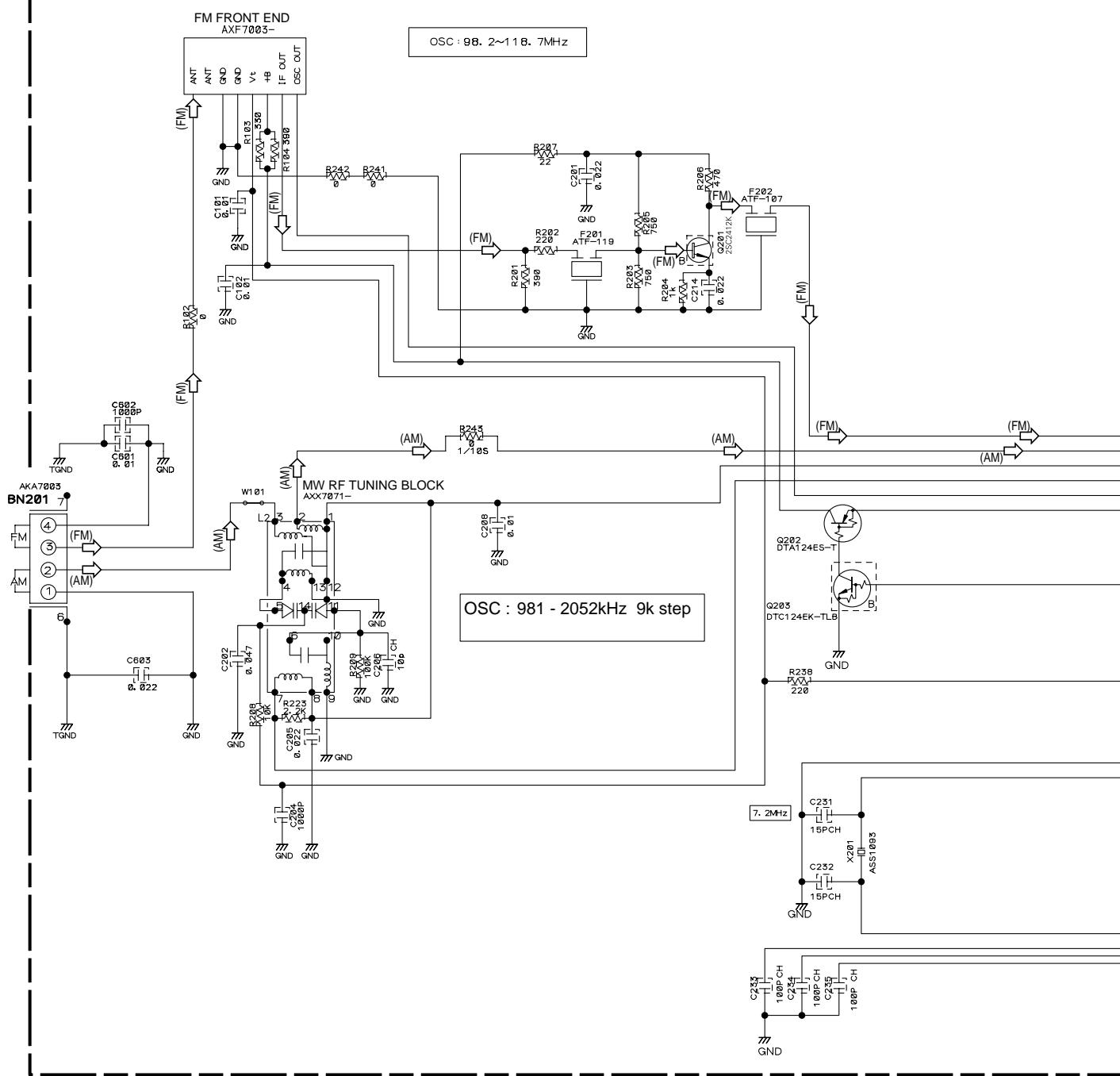


## XV-DV88, XV-DV77

### 3.10 FM/AM TUNER MODULE (ZUCXJ TYPE)

A

J FM/AM TUNER MODULE (ZUCXJ : AXQ7228)



30

1

3

6

4

## Notes

## 1. RESISTORS

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

### 3. CAPACITORS

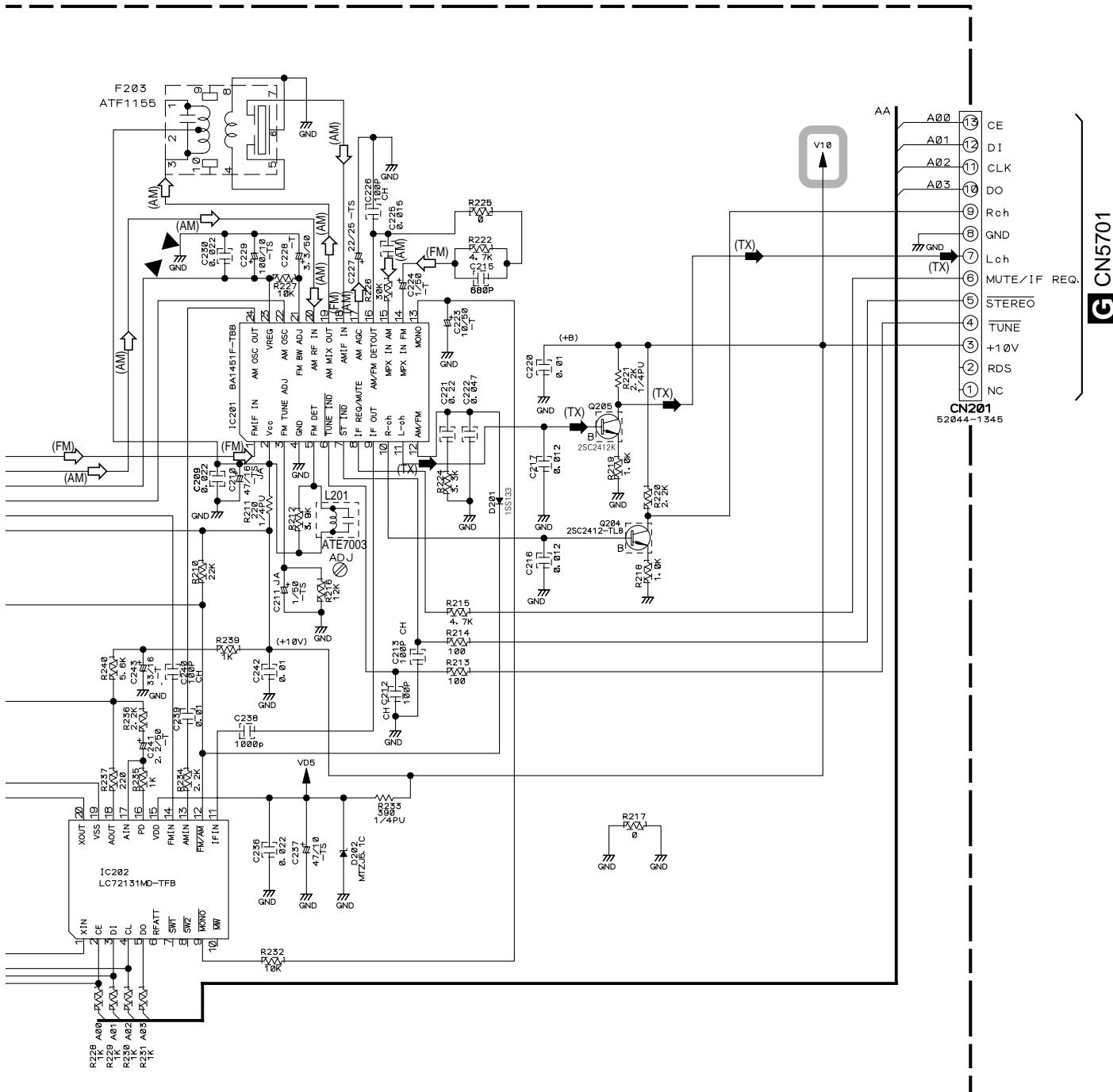
Indicated in Capacity ( $\mu$ F) / VOLTAGE (V) unless otherwise noted P:PE.

### 3 DIODES

No mark diode is 1SS133.

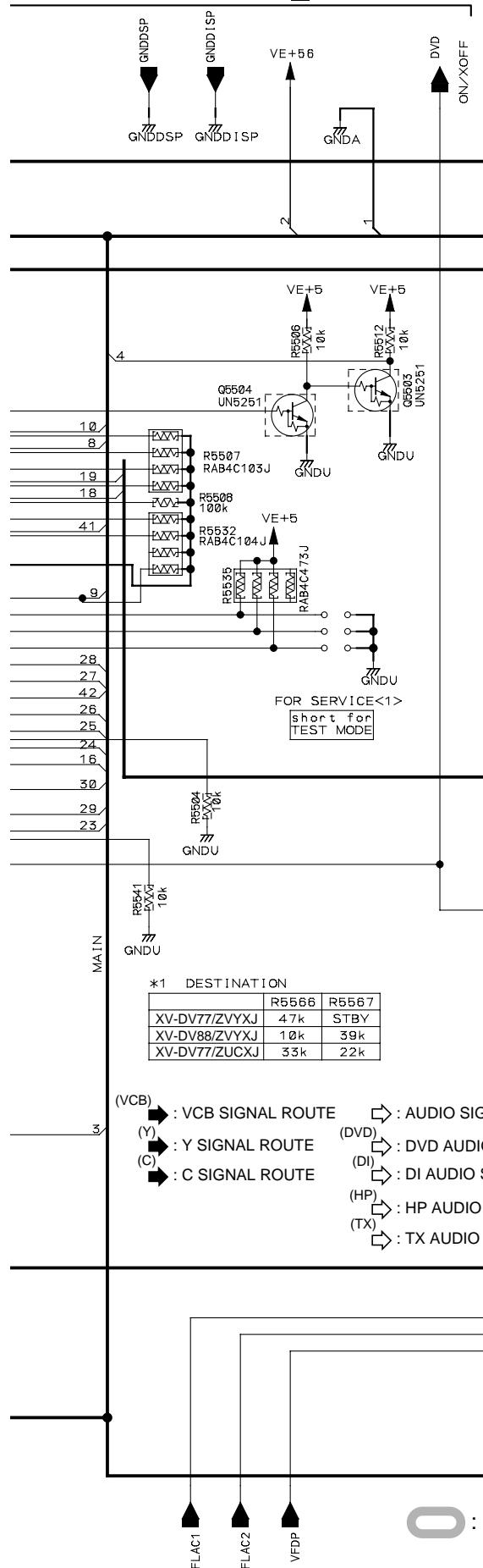
 : The power supply is shown with the marked box.

- (TX) ➡ : AUDIO SIGNAL ROUTE (TUNER)
- (AM) ➡ : AM SIGNAL ROUTE
- (FM) ➡ : FM SIGNAL ROUTE

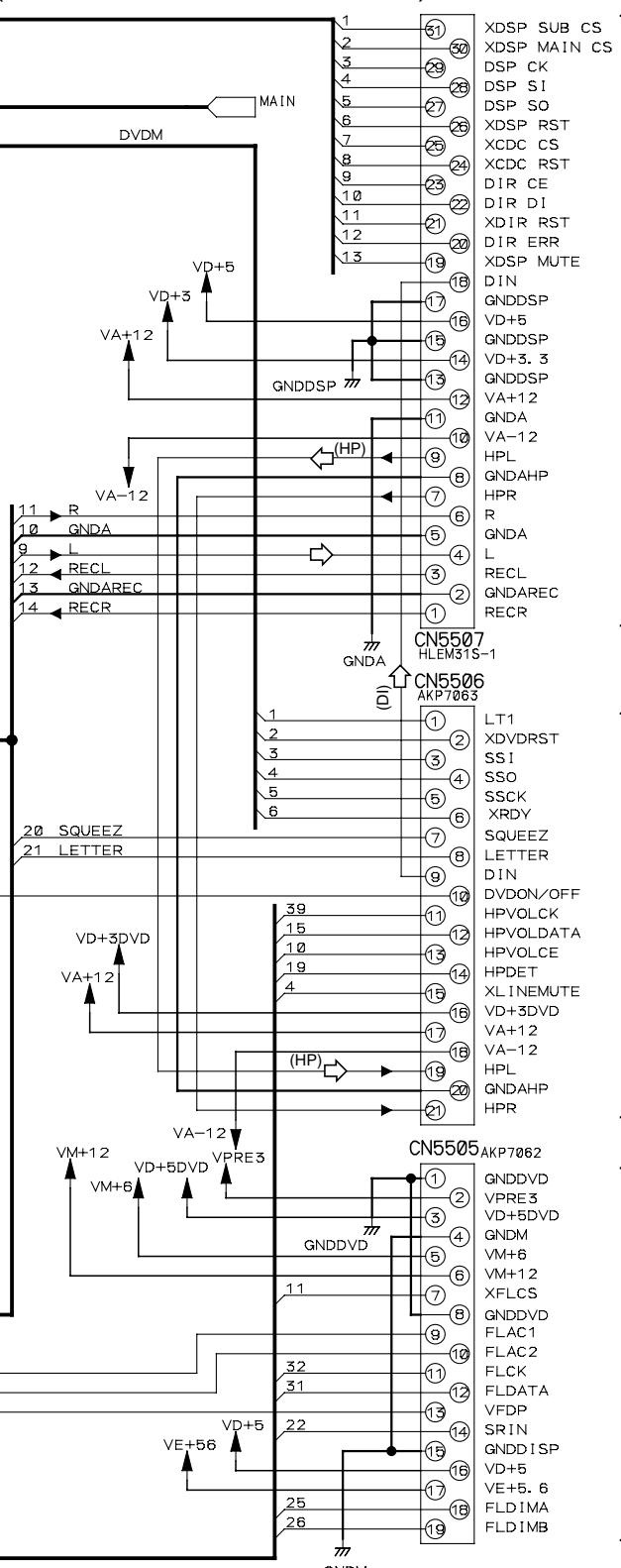




K 2/2



**K 1/2** MOTHER ASSY  
(XV-DV88/ZVYXJ : AWU7817)  
(XV-DV77/ZVYXJ : AWU7806)  
(XV-DV77/ZUCXJ : AWU7818)



 : The power supply is shown with the marked box.

11/2 CN8101

**D** CN8901

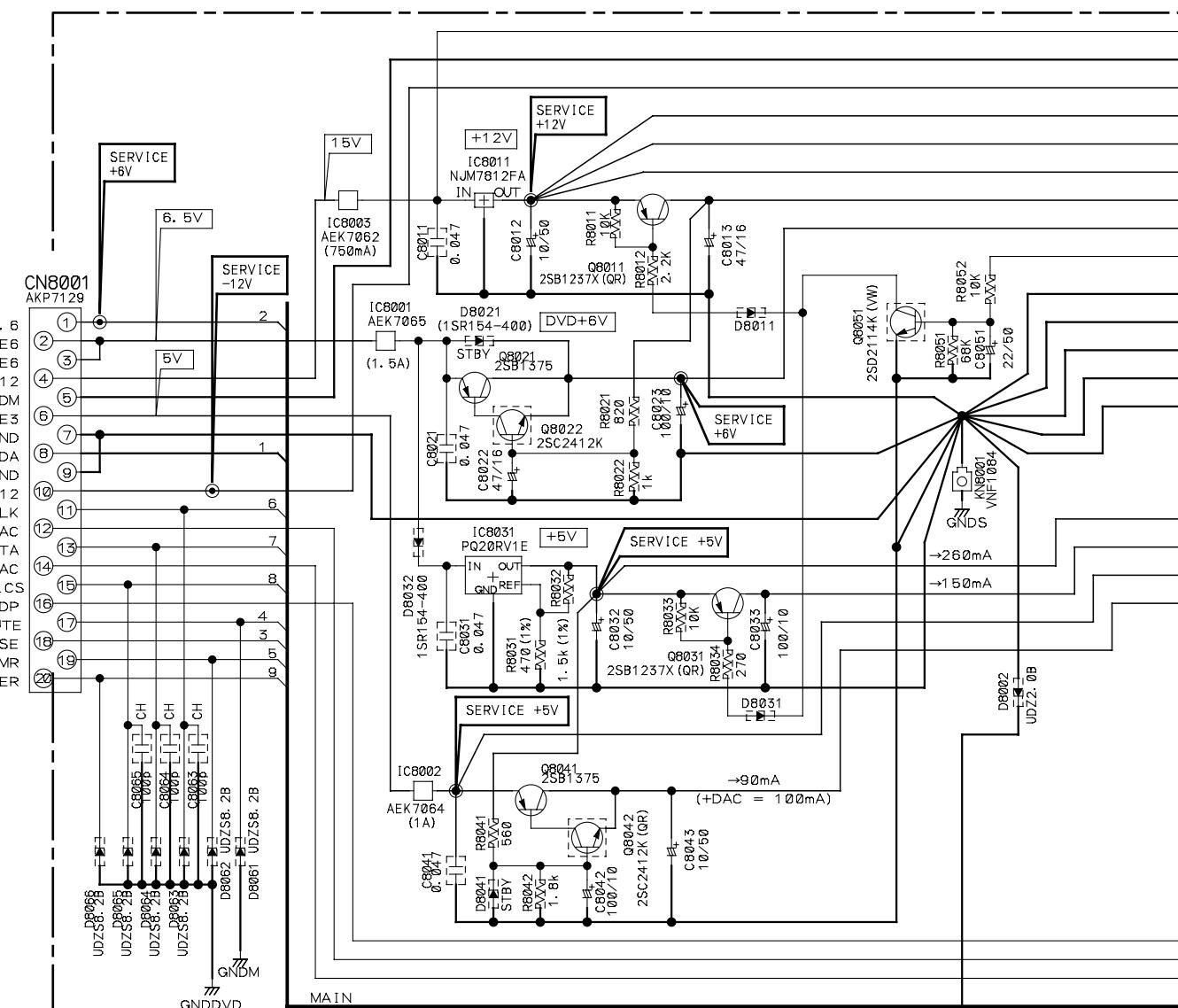
D CN5001

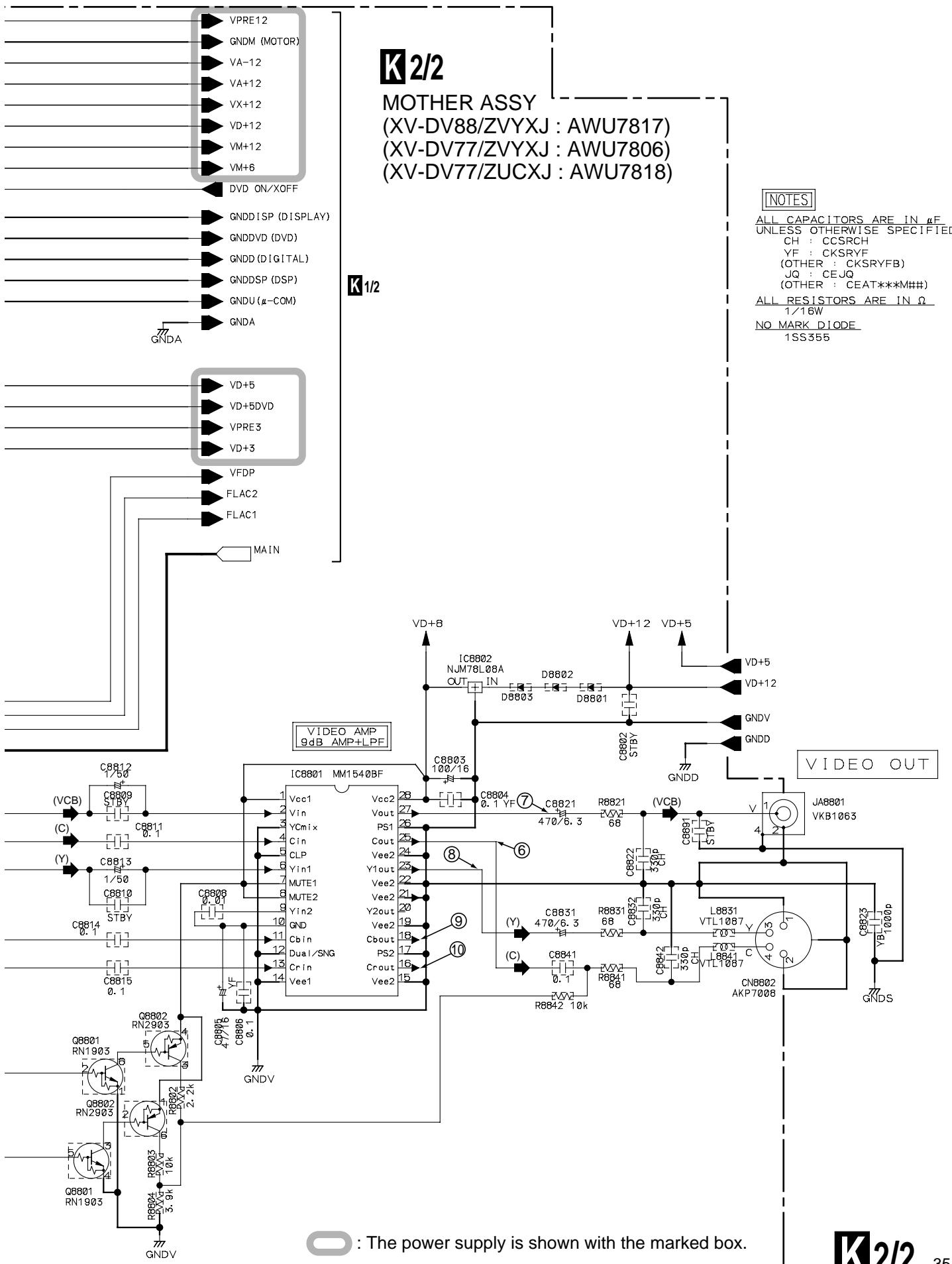
2 33

## XV-DV88, XV-DV77

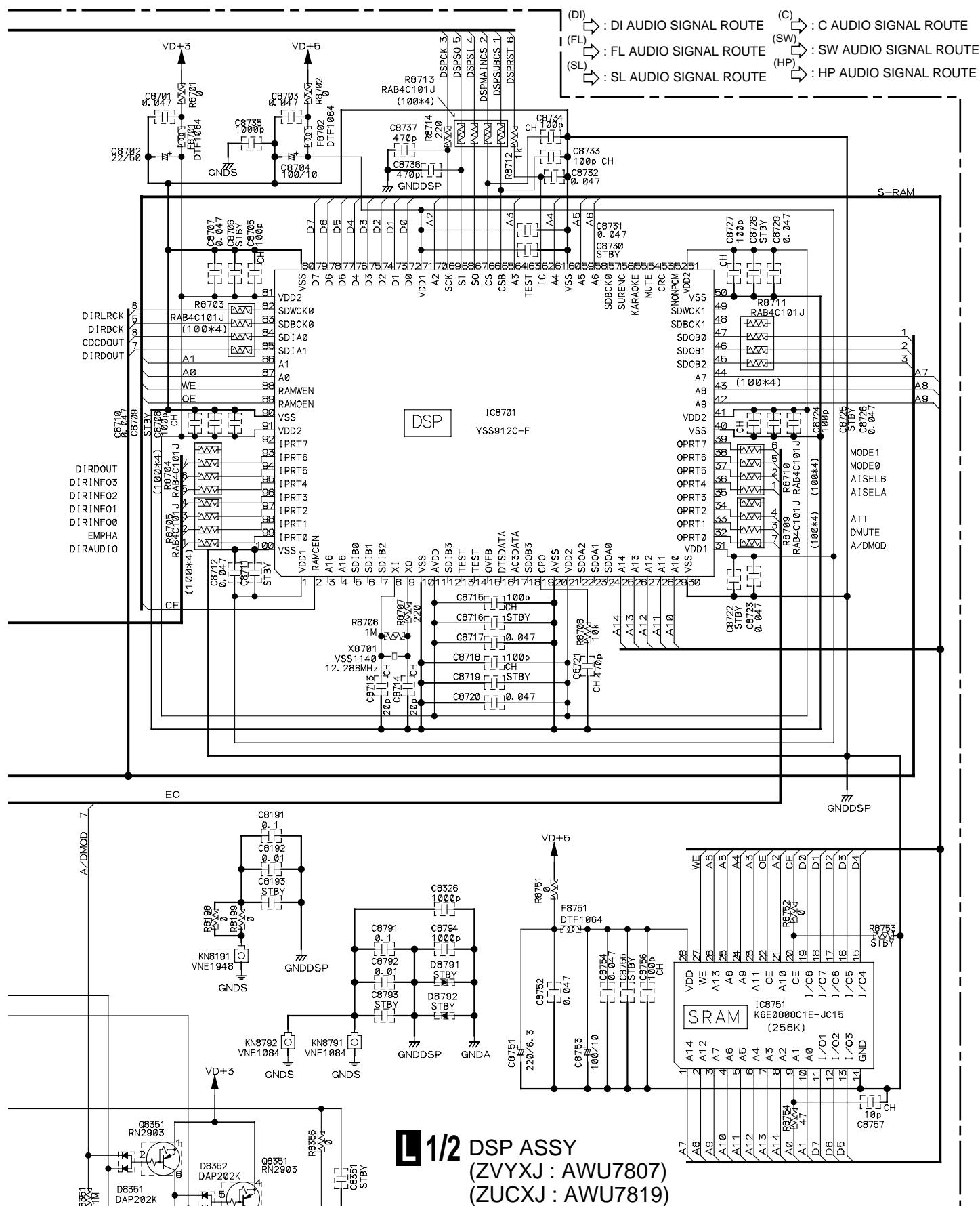
## 3.12 MOTHER ASSY (2/2)

S-DV88SW, S-DV77SW





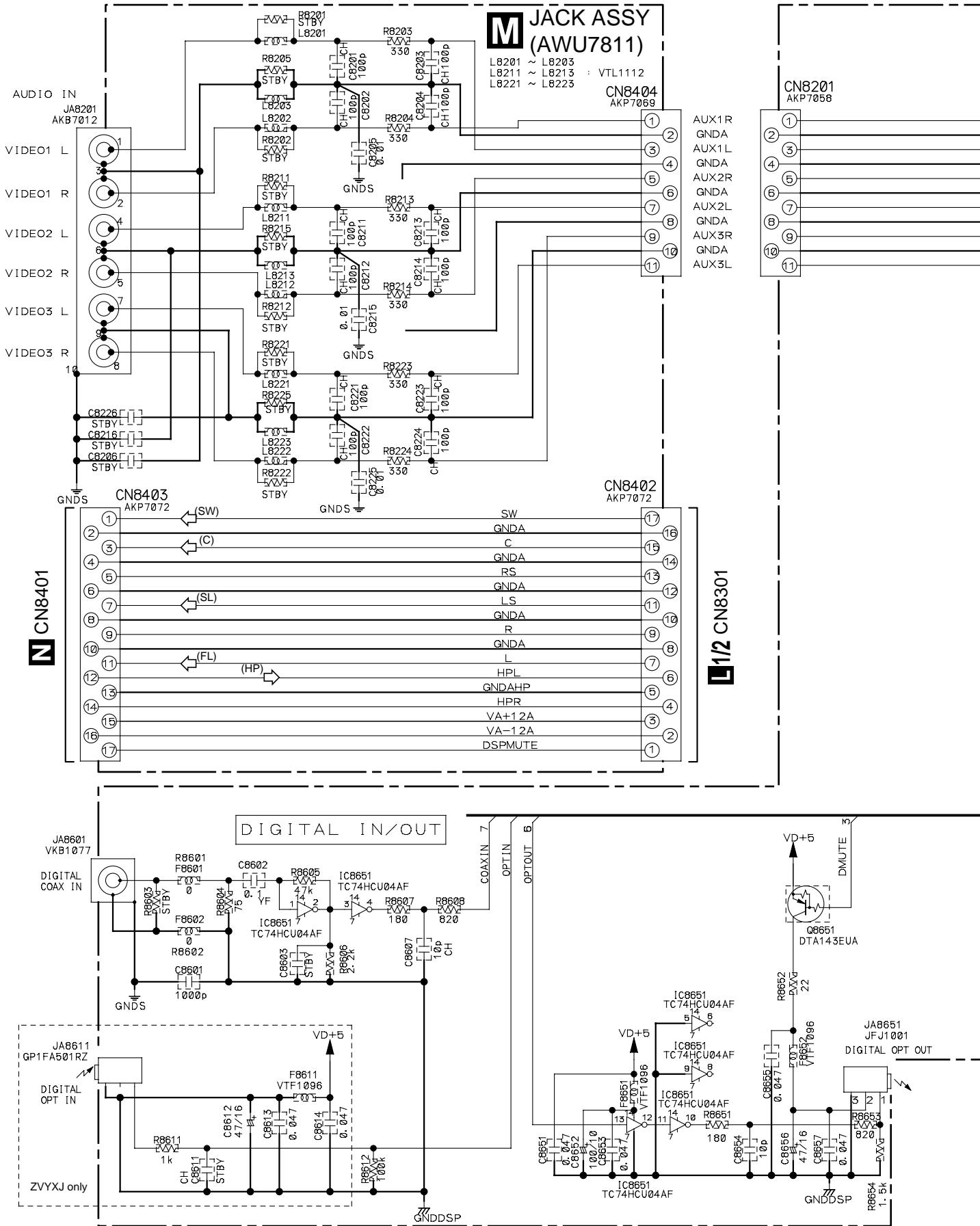


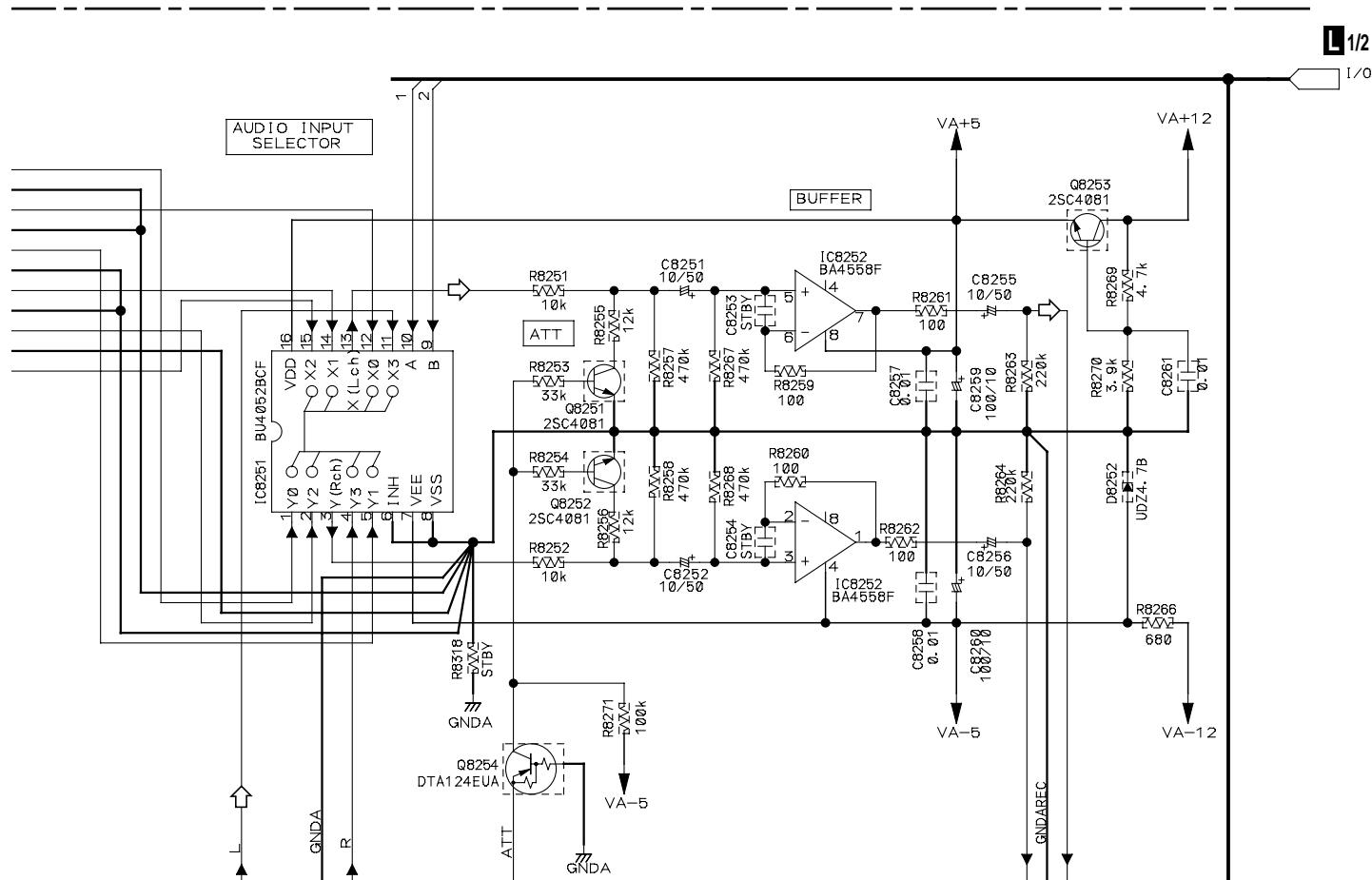


**L 1/2 DSP ASSY**  
(ZVYXJ : AWU7807)  
(ZUCXJ : AWU7819)

## XV-DV88, XV-DV77

### 3.14 DSP (2/2) and JACK ASSYS





**NOTES**

UNLESS OTHERWISE SPECIFIED  
CH : CCSRCH  
YF : CKSRYF  
(OTHER : CKSRYFB)  
JQ : CEJQ  
(OTHER : CEAT\*\*\*M##)

ALL RESISTORS ARE IN  $\Omega$   
1/16W  
NO MARK DIODE

→ : AUDIO SIGNAL ROUTE  
 (HP) → : HP AUDIO SIGNAL ROUTE  
 (FL) → : FL AUDIO SIGNAL ROUTE  
 (SL) → : SL AUDIO SIGNAL ROUTE  
 (C) → : C AUDIO SIGNAL ROUTE  
 (SW) → : SW AUDIO SIGNAL ROUTE

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

5

L 2/2 39

## 3.15 BALANCE ASSY

**N** BALANCE ASSY  
(AWU7808)

## [NOTES]

ALL CAPACITORS ARE IN  $\mu$ F UNLESS OTHERWISE SPECIFIED

CH : CCSRCH

YF : CKSRVF

(OTHER : CKSRYB)

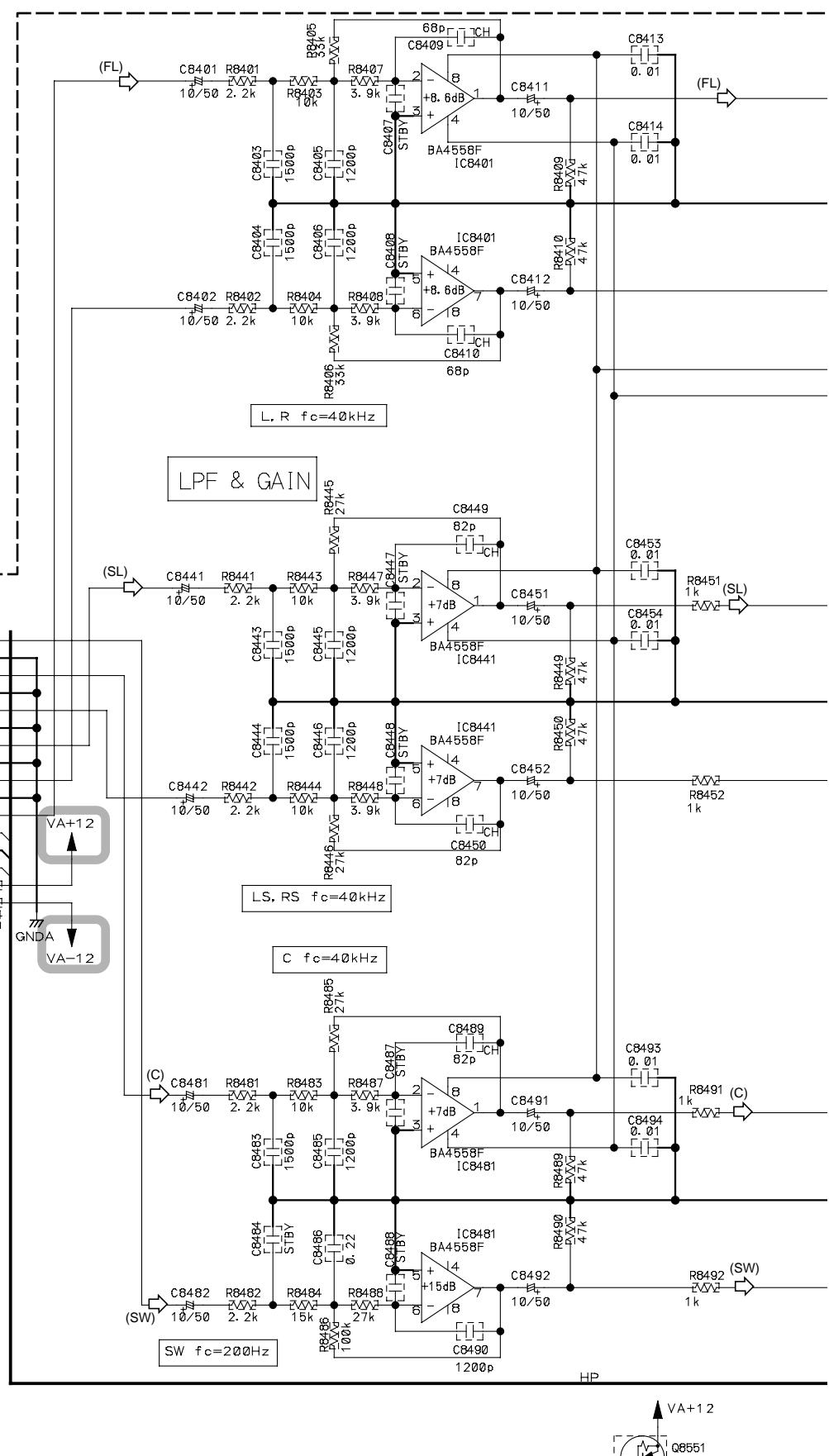
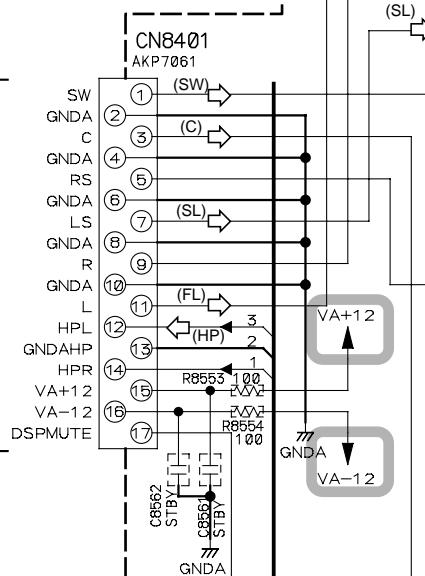
JQ : CEJQ

(OTHER : CEAT\*\*\*M##)

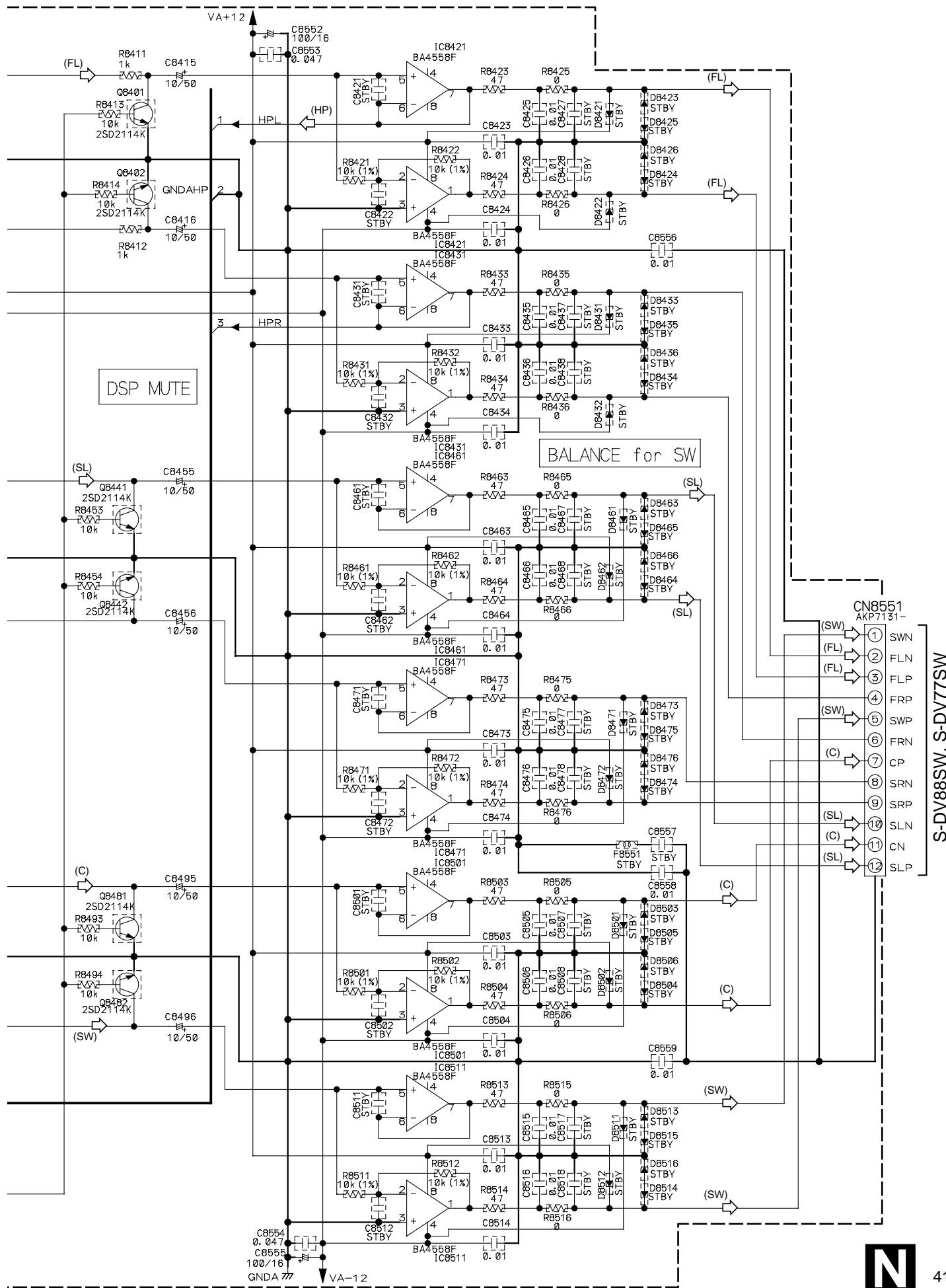
ALL RESISTORS ARE IN  $\Omega$ 

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

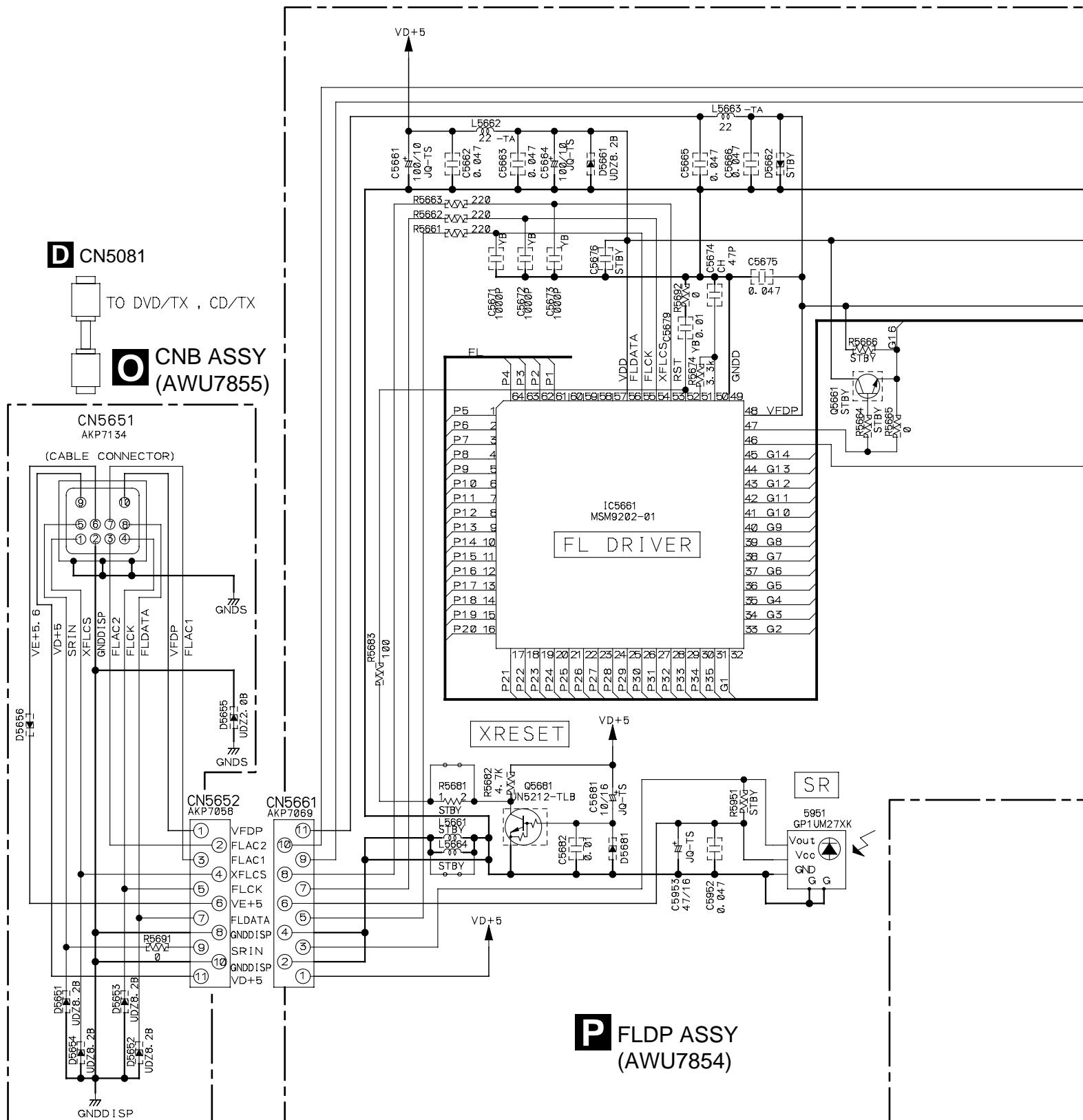
**M**  
CN8403


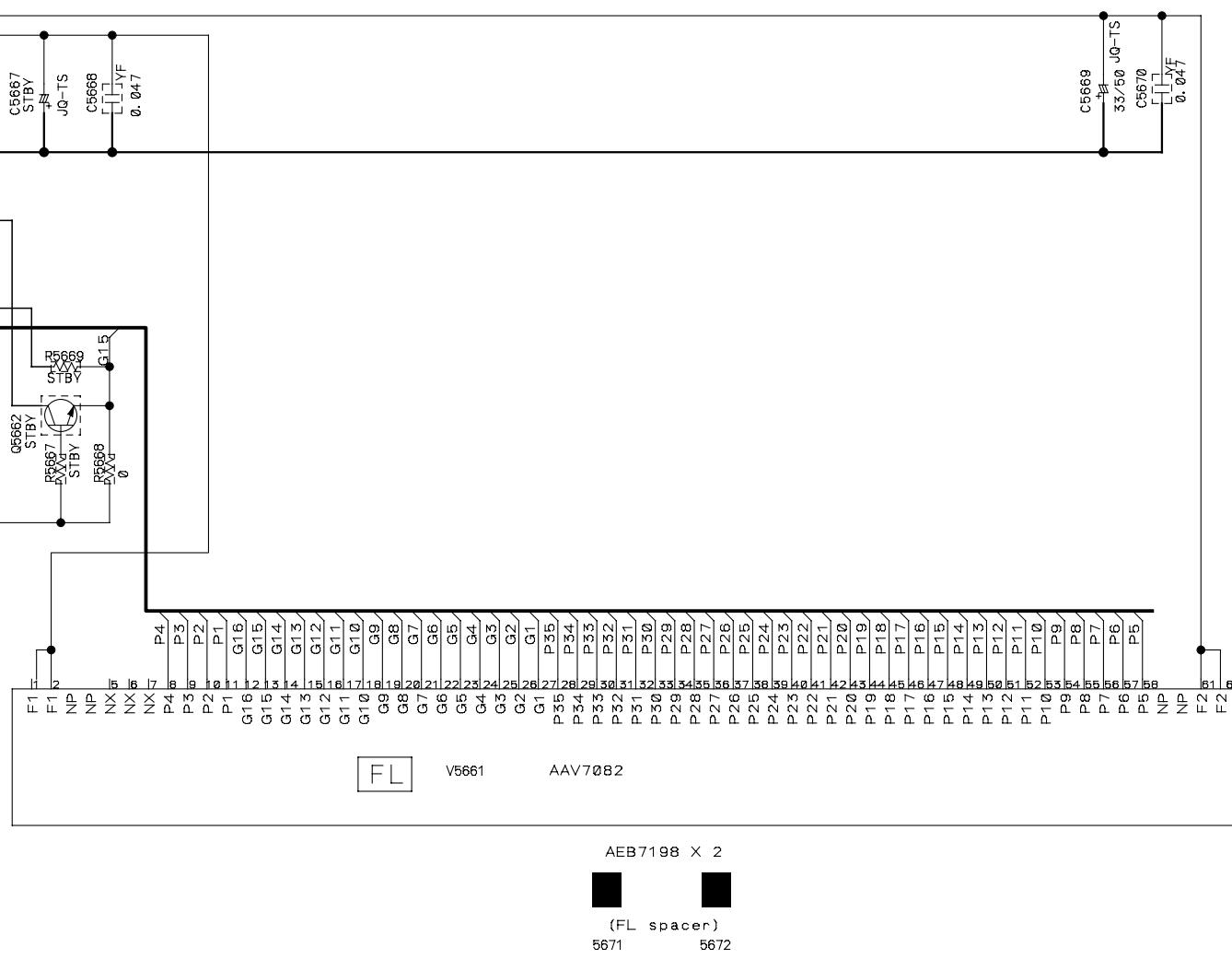
: The power supply is shown with the marked box.



S-DV88SW, S-DV77SW

## 3.16 CNB and FLDP ASSYS





**NOTES**

ALL CAPACITORS ARE IN  $\mu$ F  
UNLESS OTHERWISE SPECIFIED

CH : CCSRCH  
YF : CKSRYF  
(OTHER : CKSRYB)  
- : CEJQ -TS  
JQ-TS

ALL RESISTORS ARE IN  $\Omega$

1/16W  
1/4WPU

ALL INDUCTORS ARE IN  $\mu$ H

LAU -TA  
-TA

NO MARK DIODE

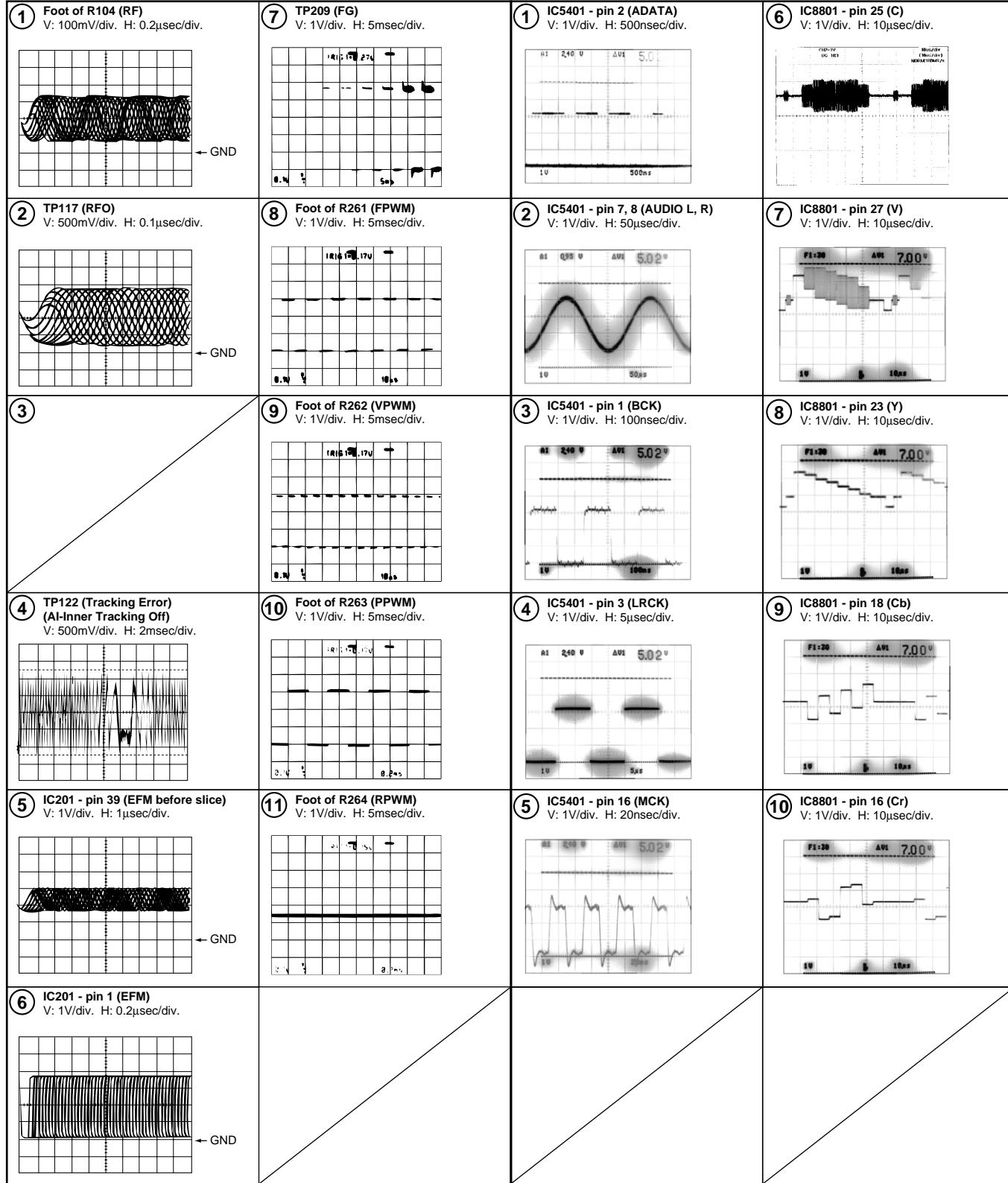
ISS355

## ■ 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

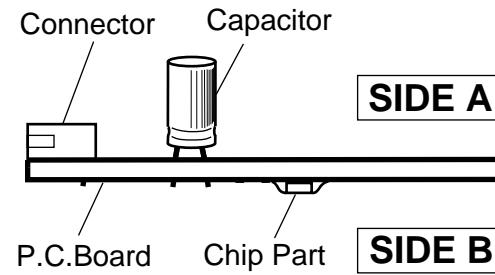
## 4. PCB CONNECTION DIAGRAM

### 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.

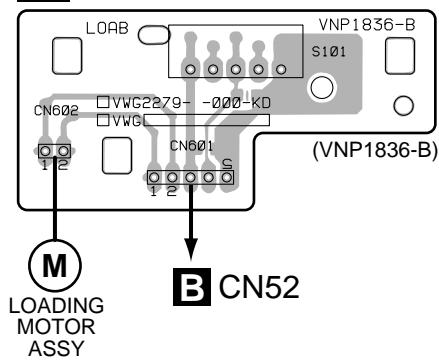
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

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.



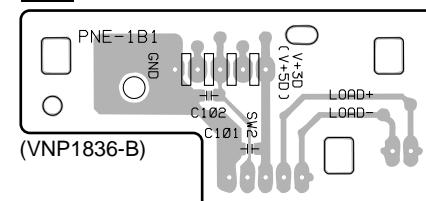
### 4.1 LOAB ASSY

#### A LOAB ASSY



**SIDE A**

#### A LOAB ASSY



**SIDE B**

**A**

45

## XV-DV88, XV-DV77

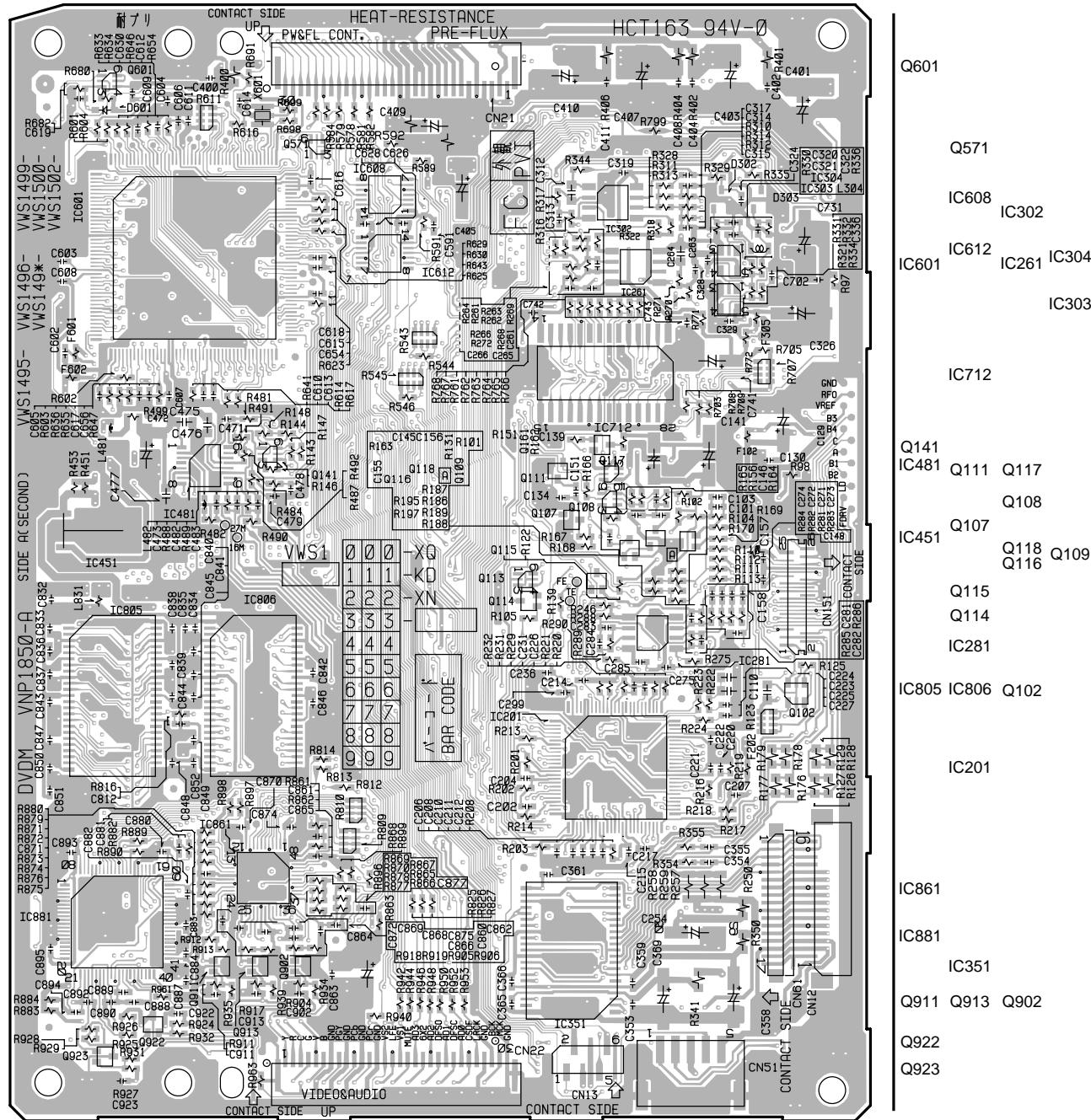
A

## 4.2 DVDM ASSY

B

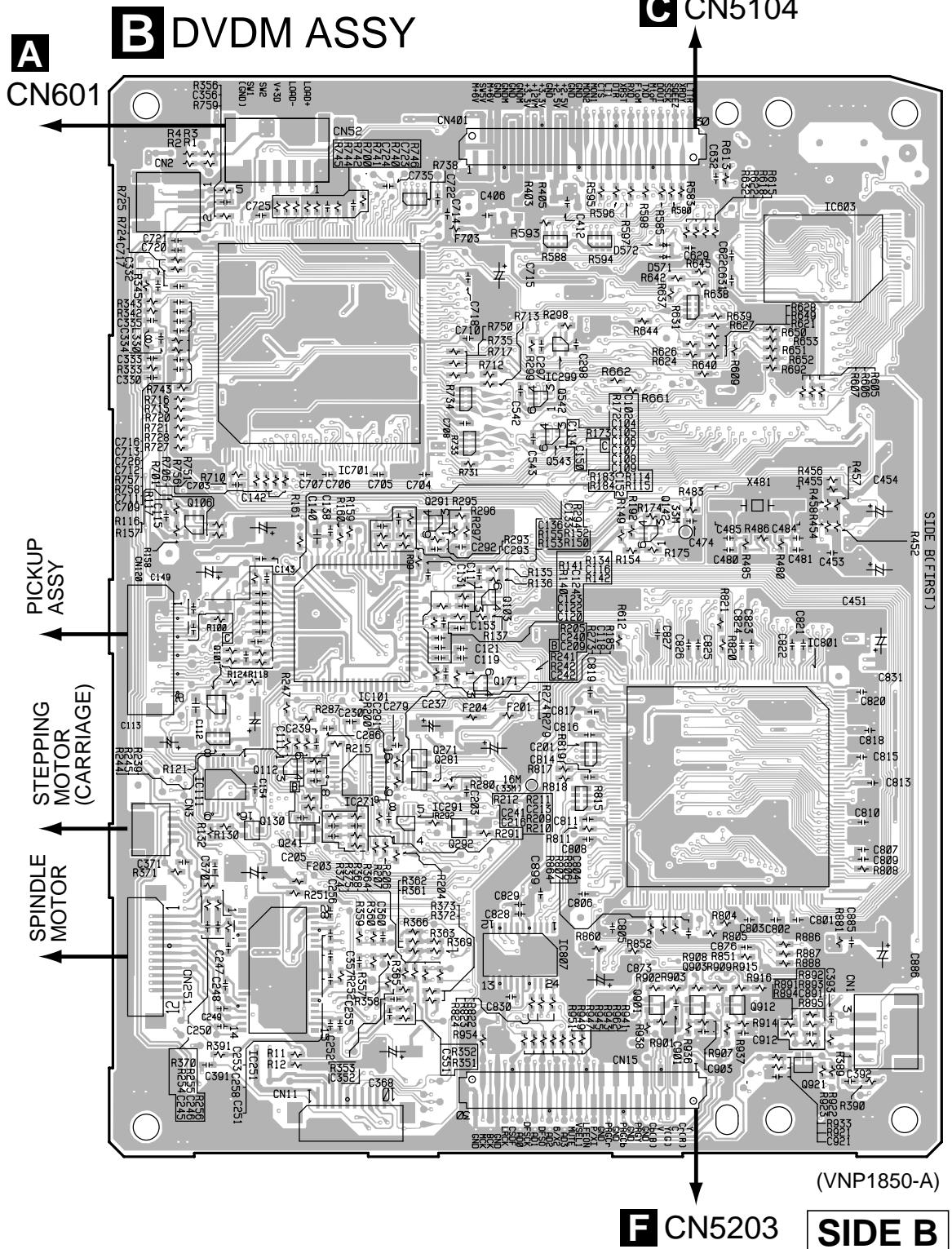
**B DVDM ASSY**

C



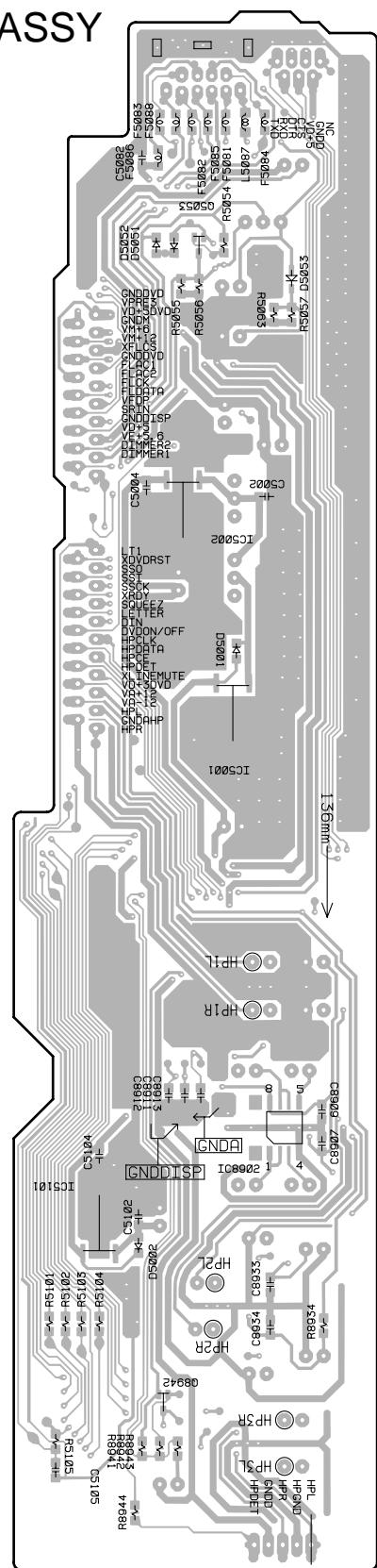
(VNP1850-A)

## SIDE A

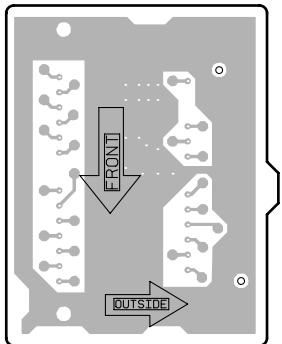




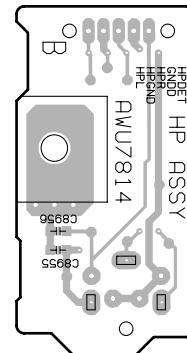
**D SİDEL ASSY**



**C TRADEL ASSY**

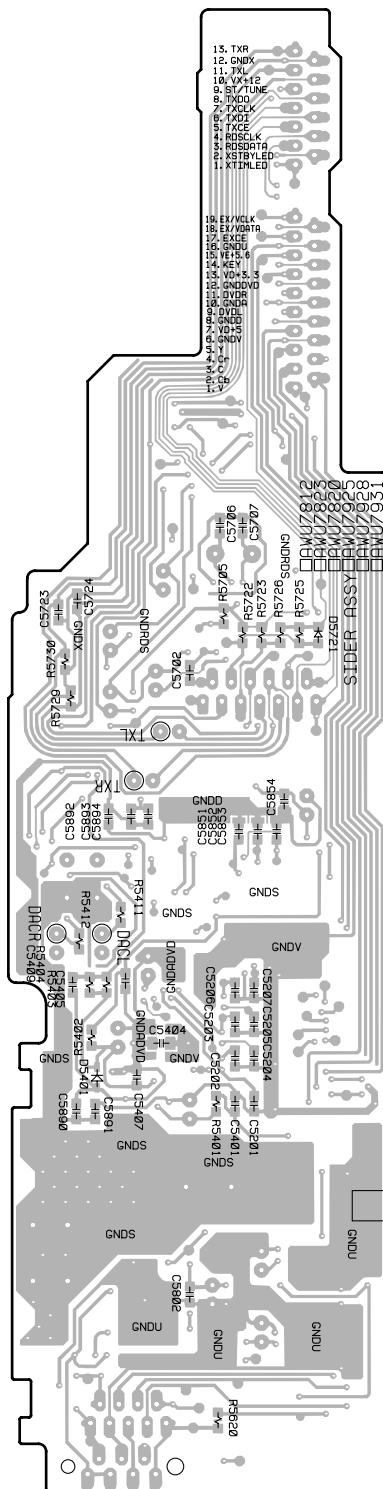


**E** HP ASSY





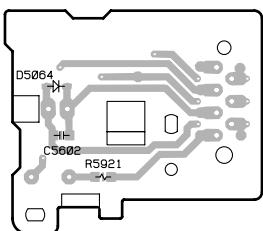
# G SIDER ASSY



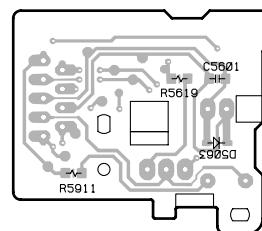
(ANP7407-B)

## SIDE B

## I KEYR ASSY



# H KEYL ASSY



1

2

4

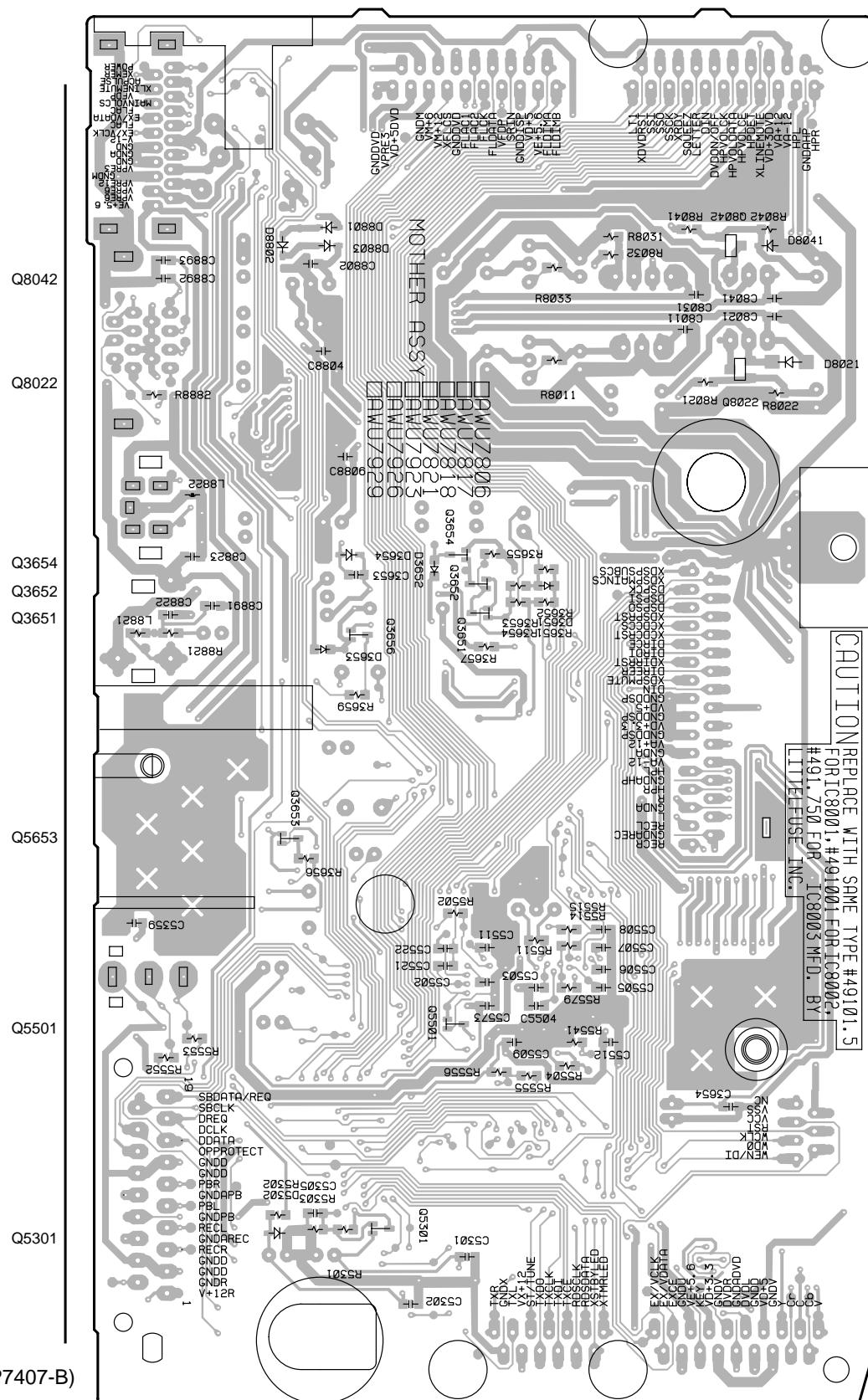
1

5

**F G H I**

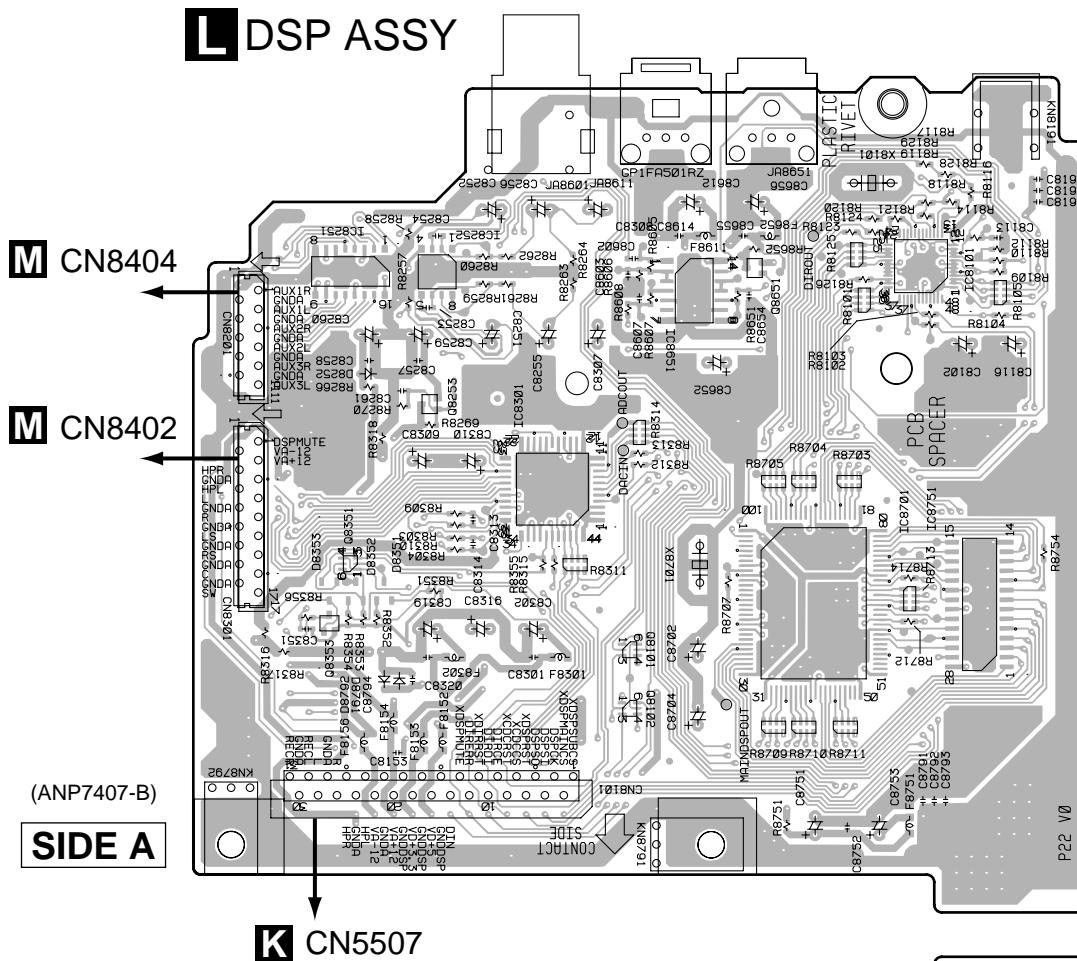


# K MOTHER ASSY





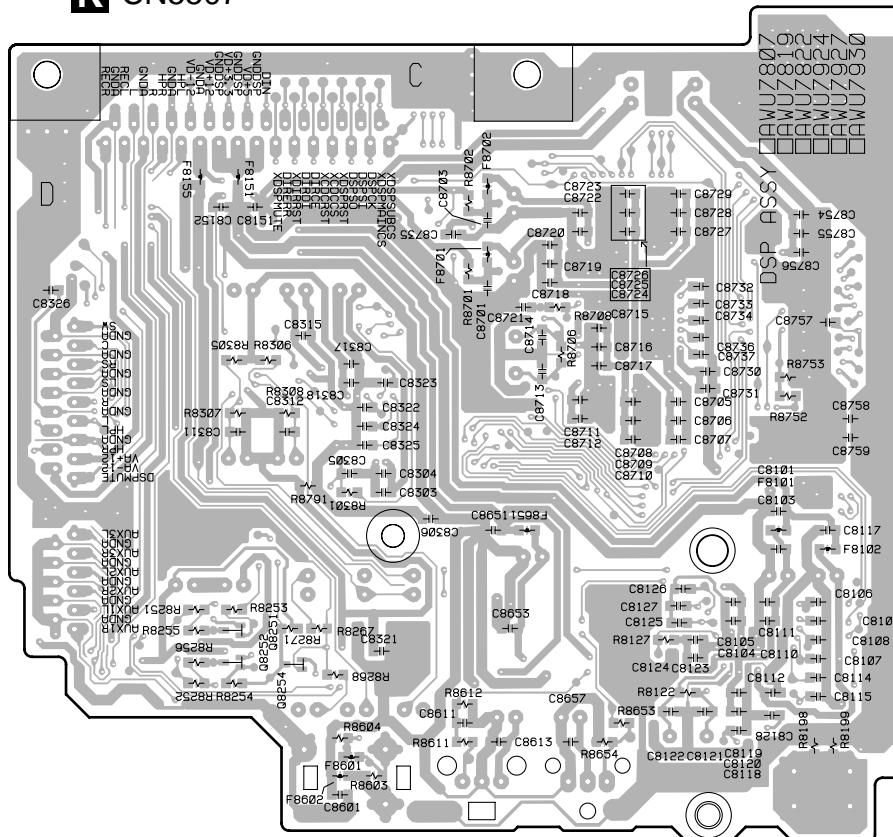
## 4.7 DSP ASSY



(ANP7407-B)

**SIDE A**

**K CN5507**



(ANP7407-B)

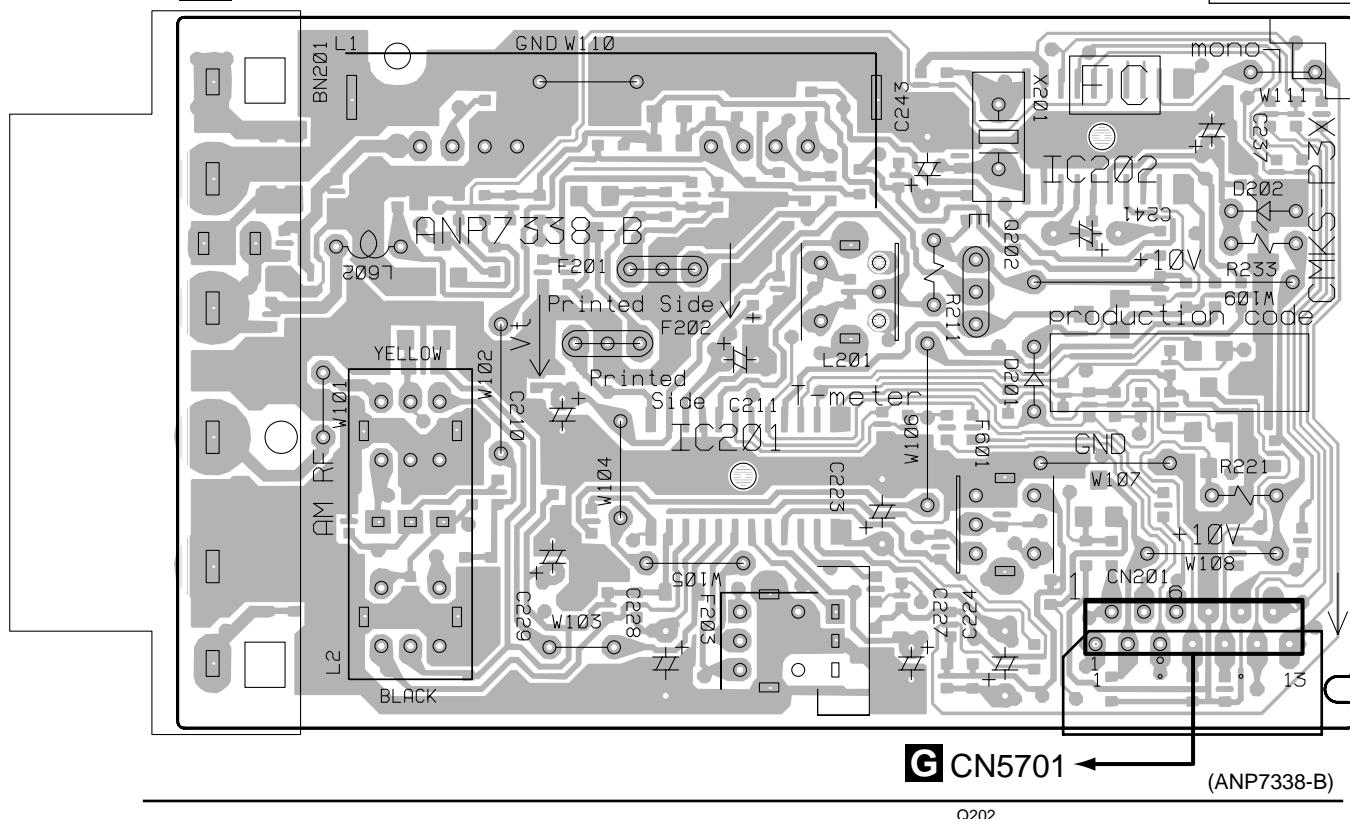
## SIDE B

Q8251  
Q8252  
Q8254

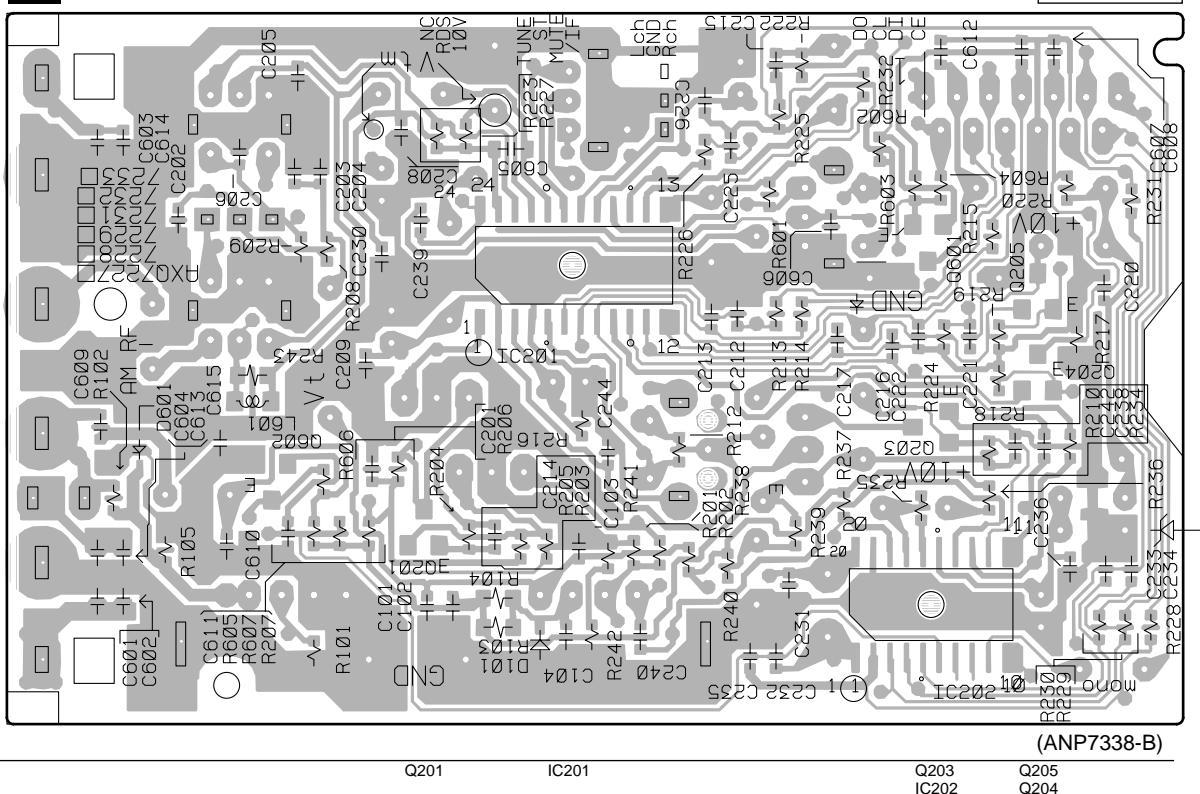
## 4.8 FM/AM TUNER MODULE

**J** FM/AM TUNER MODULE

SIDE A

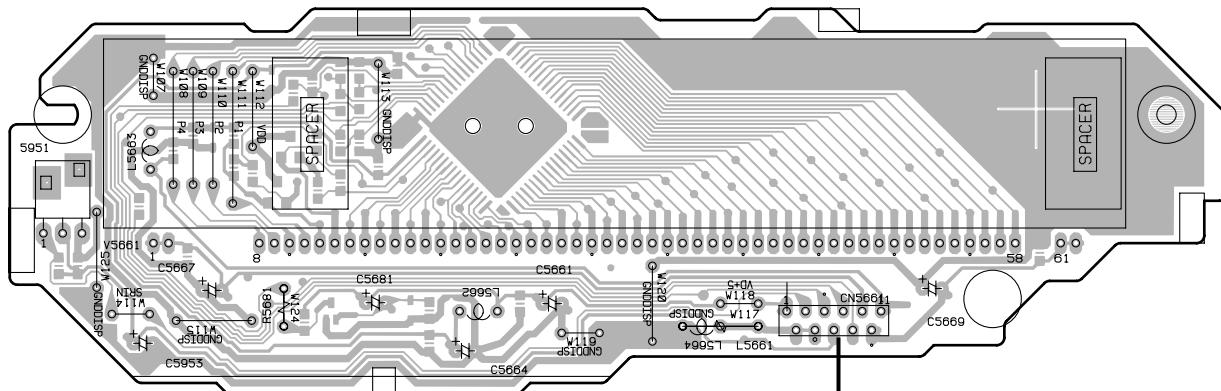
**J** FM/AM TUNER MODULE

SIDE B

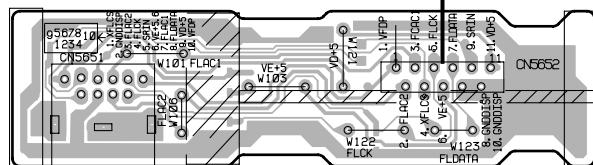


## 4.9 CNB and FLDP ASSYS

**P FLDP ASSY**



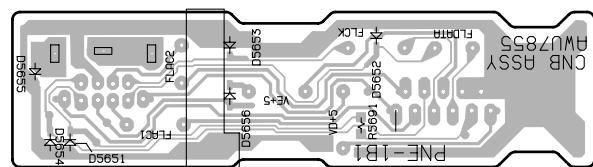
O CNB ASSY



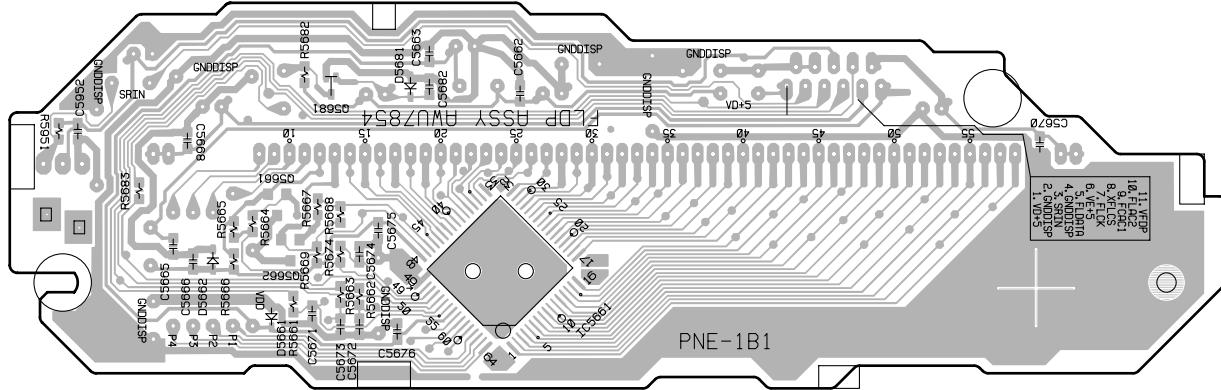
(ANP7412-B)

**SIDE A**

O CNB ASSY



**P FLDP ASSY**



(ANP7412-B)

## SIDE B

OP

## 5. PCB PARTS LIST

NOTES:

- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- 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 $\Omega$	→	$56 \times 10^3$	→	561	.....	RDI/4PU	5	6	1	J
47k $\Omega$	→	$47 \times 10^3$	→	473	.....	RDI/4PU	4	7	3	J
0.5 $\Omega$	→	R50	.....			RN2H	R	5	0	K
1 $\Omega$	→	1R0	.....			RS1P	1	R	0	K

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

5.62k $\Omega$	→	$562 \times 10^3$	→	5621	.....	RNI/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	
NSP	└ DSP ASSY	AWU7807	AWU7807	AWU7819	
NSP	└ BALANCE ASSY	AWU7808	AWU7808	AWU7808	
NSP	└ TRADER ASSY	AWU7809	AWU7809	AWU7809	
NSP	└ TRADEL ASSY	AWU7810	AWU7810	AWU7810	
NSP	└ JACK ASSY	AWU7811	AWU7811	AWU7811	
NSP	└ SIDER ASSY	AWU7812	AWU7812	AWU7820	
NSP	└ SIDEL ASSY	AWU7813	AWU7813	AWU7813	
NSP	└ HP ASSY	AWU7814	AWU7814	AWU7814	
NSP	└ KEYL ASSY	AWU7815	AWU7815	AWU7815	
NSP	└ KEYR ASSY	AWU7816	AWU7816	AWU7816	
NSP	DISPLAY ASSY	AWM7633	AWM7633	AWM7633	
NSP	└ FLDP ASSY	AWU7854	AWU7854	AWU7854	
NSP	└ 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	RS1/16SOR0J	RS1/16SOR0J	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	PCM1742KE	Not used	
	IC5701	BU1923F	Not used	
	Q5410	DTA124EUA	Not used	
	Q5411, Q5412	2SD2114K	Not used	
	Q5421	UN5212	Not used	
	D5401	UDZ4.7B	Not used	
	D5421	1SS355	Not used	
	D5422	DAN202K	Not used	
	C5402	CEJQ101M6R3	Not used	
	C5404, C5407, C5704	CKSRYB103K50	Not used	
	C5406	CEAT221M6R3	Not used	
	C5408	CEJQ470M6R3	Not used	
	C5411, C5412	CEAT470M16	Not used	
	C5413, C5414	CQMA222J50	Not used	
	C5701	CEJQ100M16	Not used	
	C5702	CKSRYB271K50	Not used	
	C5703	CKSRYB561K50	Not used	
	C5706, C5707	CCSRCH270J50	Not used	
	R5201, R5204, R5705	RS1/16S101J	Not used	
	R5202	RS1/10S220J	Not used	
	R5203, R5401, R5704	RS1/16S0R0J	Not used	
	R5205-R5207, R5411, R5412	RS1/16S102J	Not used	
	R5413, R5414	RS1/16S222J	Not used	
	R5421	RS1/16S103J	Not used	
	R5701	Not used	RS1/16S473J	
	R5702, R5703	Not used	RS1/16S103J	
X5701	CRYSTAL RESONATOR (4.332MHz)	ASS7004	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	VTF1096	Not used	
	C8612	CEAT470M16	Not used	
	C8613, C8614	CKSRYB473K25	Not used	
	R8611	RS1/16S102J	Not used	
JA8611	OPT. LINK IN 8MB/S	GP1FA501RZ	Not used	

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

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

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	IC201		LC78652W		C317		CKSRYB104K16
	IC351		M56788Afp		C208, C210		CKSRYB222K50
	IC801		M65774Bfp		C266		CKSRYB224K10
	IC805		MB81F161622C-80FN		C206, C214, C242, C357		CKSRYB472K50
	IC712		MNR4800DJ7		C102, C109, C120, C130, C131		CKSRYF104Z25
	IC601		PD6345A		C138, C143, C148, C154		CKSRYF104Z25
	IC701		PE5108A		C157, C158, C204, C207, C215		CKSRYF104Z25
	IC111		TC74HC4053AFT		C221, C222, C226, C230, C236		CKSRYF104Z25
	IC612		TC74VHC125FT		C253, C256, C258, C265, C299		CKSRYF104Z25
	IC608		TC74VHCT125AFT		C319, C332, C353, C359		CKSRYF104Z25
	IC304		TC7SHU04F		C365, C366, C603, C606		CKSRYF104Z25
	IC603	FLASH ROM	VYW1852		C608-C611, C613, C615, C618		CKSRYF104Z25
	Q109, Q901-Q903, Q911-Q913		2SA1576A		C626, C628, C631, C704, C706		CKSRYF104Z25
	Q114, Q130		2SC4081		C708, C712, C713, C716-C718		CKSRYF104Z25
	Q107, Q111, Q115, Q241		DTC114EUA		C721, C723, C725, C743, C802		CKSRYF104Z25
	Q101, Q102, Q106		HN1A01F		C808, C811, C814, C866		CKSRYF104Z25
	Q103, Q141, Q142, Q542, Q543		HN1B04FU		C869-C872, C874, C875, C903		CKSRYF104Z25
	Q112, Q113		HN1C01FU		C913		CKSRYF104Z25
	Q108		HN1K03FU		C115, C217, C328, C614, C711		CKSRYF105Z10
	Q571		RN1911		C726, C801, C809, C813		CKSRYF105Z10
	Q117, Q171, Q601		RN4982		C816-C821, C827, C833, C843		CKSRYF105Z10
	D302		KV1470				
	D601		RB501V-40				
<b>COILS AND FILTERS</b>							
	L304		LCYA1R5J2520		R815, R819		RAB4C0R0J
	L490	CHIP BEADS	VTL1073		R543, R545, R594, R631, R707		RAB4C103J
	L481	CHIP BEADS	VTL1084		R121		RAB4C220J
<b>CAPACITORS</b>							
	C480, C481, C612		CCSRCH100D50		R123		RAB4C470J
	C152		CCSRCH101J50		R400, R403		RS1/10S0R0J
	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				
<b>RESISTORS</b>							
					R819		RS1/10S101J
					R543, R545, R594, R631, R707		RS1/10S220J
					R121		RS1/16S1000F
					R123		RS1/16S1000F
					R400, R403		RS1/16S1003F
					R341		RS1/16S1502F
					R126-R129, R176-R179		RS1/16S1503F
					R902, R905, R908, R912, R915		RS1/16S4701F
					R918		RS1/16S4702F
					R364, R369, R373, R375		RS1/16S6800F
					R865		RS1/16S6801F
					R358, R361		RS1/16S6802F
					R876, R878		RS1/16S6802F
					R866		VCN1127
					R870, R875		VCN1128
					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
<b>OTHERS</b>							
					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

**C TRADEL ASSY**
**OTHERS**

 CN5104 B TO B SOCKET 30P  
 CN5103 B TO B SOCKET 28P

 AKP7163  
 AKP7165

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
<b>D</b>		<b>SIDEL ASSY</b>				<b>OTHERS</b>	
		<b>SEMICONDUCTORS</b>			8952	5P CABLE HOLDER	51048-0500
		IC5001, IC5002	BA033FP		8951	MINI JACK	AKN7026
		IC5101	BA25BC0FP		J 8901	JUMPER WIRE	D20PY0510E
		IC8902	BA4558F-HT		KN8951	EARTH METAL FITTING	VNF1084
		IC8901	LC75366M				
		IC8921	NJM4560M				
		Q8942	2SA1576A	<b>F</b>		<b>TRADER ASSY</b>	
		Q5001, Q5054	2SB1237X			<b>OTHERS</b>	
		Q5053, Q5201	2SC4081		CN5203	B TO B SOCKET 30P	AKP7163
		Q8921-Q8924	2SD2114K		CN5202	B TO B SOCKET 16P	AKP7164
		Q8941	DTA124EUA				
		Q5051	RN2903	<b>G</b>		<b>SIDER ASSY</b>	
		D5001-D5003, D5051, D5052, D8901	1SS355			<b>SEMICONDUCTORS</b>	
		D5053	UDZS6.8B		IC5701		BU1923F
		D5081-D5084	UDZS8.2B		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
					<b>COILS AND FILTERS</b>		
					L5801		LCYA220J2520
					<b>CAPACITORS</b>		
					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
					<b>RESISTORS</b>		
					R5202		RS1/10S220J
					R5723		RS1/10S222J
					Other Resistors		RS1/16S□□□J

# XV-DV88, XV-DV77

Mark	No.	Description	Part No.
<b>OTHERS</b>			
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
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### CAPACITORS

C5601	CKSRYB473K25
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### RESISTORS

All Resistors	RS1/16S□□□J
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### OTHERS

CN5622	FFC CONNECTOR 9P	52045-0945
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## I KEYR ASSY

### SEMICONDUCTORS

D5602	E1L55-3B0A
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### SWITCHES AND RELAYS

S5921	ASG7013
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### CAPACITORS

C5602	CKSRYB473K25
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### RESISTORS

All Resistors	RS1/16S□□□J
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### 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.
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### 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□□□J

### OTHERS

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

FM FRONTEND	AXF7004
AM RF TUNING BLOCK	AXX7072

## J FM/AM TUNER MODULE (AXQ7228)

### SEMICONDUCTORS

IC201	BA1451F
IC202	LC72131MD-TFB
Q201, Q204, Q205, Q601	2SC2412K
Q202	DTA124ES
Q203	DTC124EK

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	D201		1SS133	△	IC8011		NJM7812FA
	D202		MTZJ5.1C	△	IC8802		NJM78L08A
<b>COILS AND FILTERS</b>							
	L201	FM DETECTOR COIL	ATE7003	△	IC5501		PDC080A
	F202	FM CERAMIC FILTER	ATF-107	△	IC8031		PQ20RV1E
	F201	FM CERAMIC FILTER	ATF-119	△	Q8011, Q8031		2SB1237X
	F203	AM CERAMIC FILTER	ATF1155	△	Q8021, Q8041		2SB1375
<b>CAPACITORS</b>							
	C206		CCSRCH100D50		Q8022, Q8042		2SC2412K
	C212, C213, C226, C233–C235		CCSRCH101J50		Q5301, Q5561, Q5572, Q5573		2SC4081
	C240		CCSRCH101J50		Q8051		2SD2114K
	C231, C232		CCSRCH150J50		Q5503, Q5504		DTC124EUA
	C223		CEAT100M50		Q5571		DTC143EUA
	C229		CEAT101M10		Q8801		RN1903
	C224		CEAT1R0M50		Q8802		RN2903
	C227		CEAT220M25		Q5501, Q5502		UN5212
	C241		CEAT2R2M50		D5571, D8032		1SR154-400
	C243		CEAT330M16		D5573, D8011, D8031, D8801–D8803	1SS355	
	C228		CEAT3R3M50		D8002	UDZ2.0B	
	C237		CEAT470M10		D5302	UDZ4.7B	
	C211		CEJA1R0M50		D5502–D5506, D8061–D8066	UDZS8.2B	
	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				
<b>RESISTORS</b>							
	R211		RD1/4PU221J		C5575	BCH1072	
	R221		RD1/4PU222J		C5351–C5358, C5502, C5506, C5507	CCSRCH101J50	
	R233		RD1/4PU391J		C5510, C5511, C5513–C5517	CCSRCH101J50	
	R243		RS1/10S0R0J		C5523–C5525, C5577, C8063–C8065	CCSRCH101J50	
	R103		RS1/10S331J		C5520	CCSRCH221J50	
	R104		RS1/10S391J		C8822, C8832, C8842	CCSRCH331J50	
	Other Resistors		RS1/16S□□□J		C5576, C8012, C8032, C8043	CEAT100M50	
<b>OTHERS</b>							
	CN201	13P CONNECTOR	52044-1345		C5303, C5304, C5572, C8023, C8033	CEAT101M10	
	BN201	TERMINAL 4-P	AKA7003		C8042	CEAT101M10	
		SHIELD CASE T	ANK7072		C8803	CEAT101M16	
		SHIELD CASE B	ANK7073				
	X201	CRYSTAL RESONATOR (7.2MHz)	ASS1093				
		FM FRONT END	AXF7003				
		AM RF TUNING BLOCK	AXX7071				
<b>MOTHER ASSY</b>							
<b>SEMICONDUCTORS</b>							
△	IC8003	PROTECTOR (750mA)	AEK7062		R5535	RAB4C473J	
△	IC8002	PROTECTOR (1A)	AEK7064		R8032	RS1/16S1501F	
△	IC8001	PROTECTOR (1.5A)	AEK7065		R8031	RS1/16S4700F	
	IC5301		BU4052BCF		Other Resistors	RS1/16S□□□J	
	IC8801		MM1540BF				
<b>RESISTORS</b>							
					R5532	RAB4C104J	
					R5501, R5503, R5505, R5510, R5520	RAB4C221J	
					R5524, R5528–R5531, R5533, R5543	RAB4C221J	
					R5545, R5546, R5548	RAB4C221J	



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.
<b>OTHERS</b>			
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
F8301, F8302	CHIP BEAD
F8611, F8651, F8652	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	C8257, C8258, C8261, C8305, C8792	CKSRYB103K50	
C8112, C8113, C8191, C8791	C8112, C8113, C8191, C8791	CKSRYB104K25	
C8313, C8314	C8313, C8314	CKSRYB222K50	
C8101, C8103, C8104, C8110, C8117	C8101, C8103, C8104, C8110, C8117	CKSRYB473K25	
C8119, C8123, C8301, C8304	C8119, C8123, C8301, C8304	CKSRYB473K25	
C8311, C8312, C8315, C8318, C8320	C8311, C8312, C8315, C8318, C8320	CKSRYB473K25	
C8613, C8614, C8651, C8653, C8655	C8613, C8614, C8651, C8653, C8655	CKSRYB473K25	
C8657, C8701, C8703, C8707, C8710	C8657, C8701, C8703, C8707, C8710	CKSRYB473K25	
C8712, C8717, C8720, C8723, C8726	C8712, C8717, C8720, C8723, C8726	CKSRYB473K25	
C8729, C8731, C8732, C8752, C8754	C8729, C8731, C8732, C8752, C8754	CKSRYB473K25	
C8602	C8602	CKSRYF104Z25	

### **RESISTORS**

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

### **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	EARTH METAL FITTING	VNF1084
X8101, X8701	(12.288MHz)	VSS1140
	CRYSTAL RESONATOR	

## **M JACK ASSY**

### **COILS AND FILTERS**

L8201–L8203, L8211–L8213	VTL1112
L8221–L8223	CHIP BEADS

### **CAPACITORS**

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

### **RESISTORS**

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

### **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.	Mark	No.	Description	Part No.				
<b>CAPACITORS</b>											
	C8409, C8410		CCSRCH680J50		C5671–C5673		CKSRYB102K50				
	C8449, C8450, C8489		CCSRCH820J50		C5679, C5682		CKSRYB103K50				
	C8401, C8402, C8411, C8412		CEAT100M50		C5662, C5663, C5665, C5666, C5668		CKSRYF473Z50				
	C8415, C8416, C8441, C8442		CEAT100M50		C5670, C5675, C5952		CKSRYF473Z50				
	C8451, C8452, C8455, C8456		CEAT100M50	<b>RESISTORS</b>							
	C8481, C8482, C8491, C8492		CEAT100M50	All Resistors							
	C8495, C8496		CEAT100M50	RS1/16S□□□J							
	C8552, C8555		CEAT101M16	<b>OTHERS</b>							
	C8413, C8414, C8423–C8426		CKSRYB103K50	V5661	FL TUBE	AAV7082					
	C8433–C8436, C8453, C8454		CKSRYB103K50	CN5661	11P SOCKET	AKP7069					
	C8463–C8466, C8473–C8476		CKSRYB103K50	5951	REMOTE RECEIVER UNIT	GP1UM27XK					
	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	VER1040

**O 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

**P 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

## 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

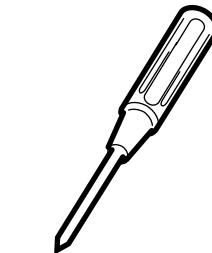
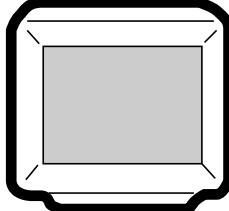
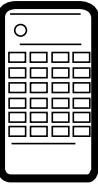
[Mechanism Part]

- ① Tangential and Radial Height Coarse Adjustment
- ② DVD Jitter Adjustment
- ③ Initialize the Focus Sweep Setting

[Electrical Part]

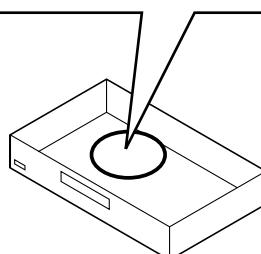
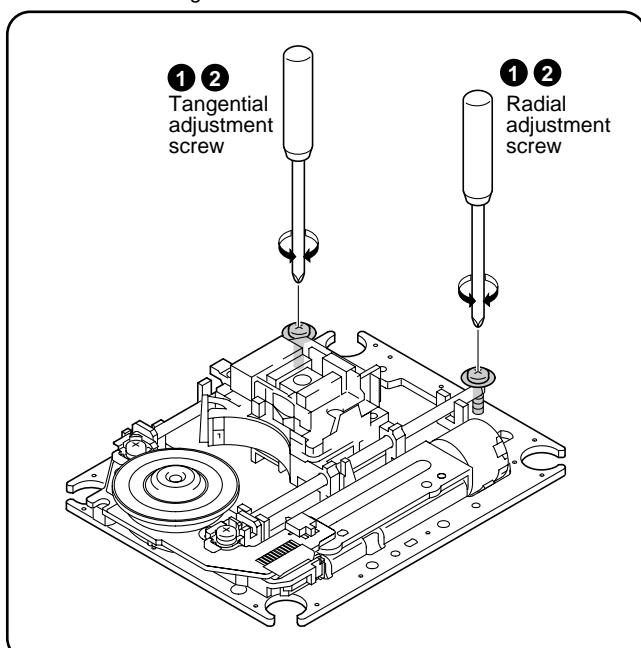
Electrical adjustments are not required.

### 6.2 JIGS AND MEASURING INSTRUMENTS

	
	
	
Screw tight (GYL1001)	

#### ■ Adjustment Points (Mechanism Part)

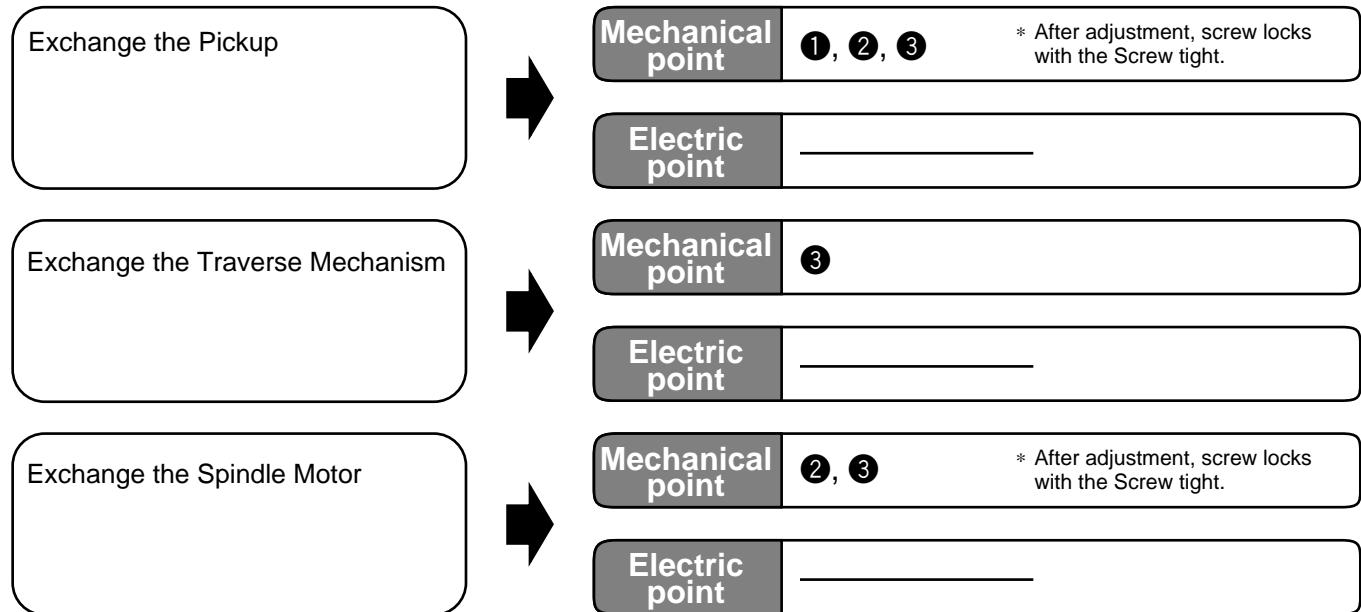
**Cautions:** After adjustment, adjustment screw locks with the Screw tight.



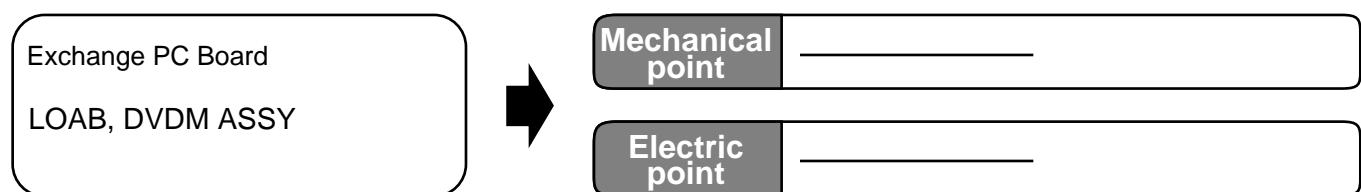
### 6.3 NECESSARY ADJUSTMENT POINTS

#### When

##### ■ Exchange Parts of Mechanism Assy



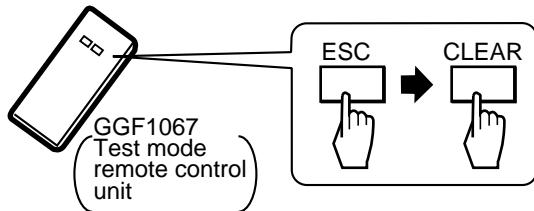
##### ■ Exchange PCB Assy



\*

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

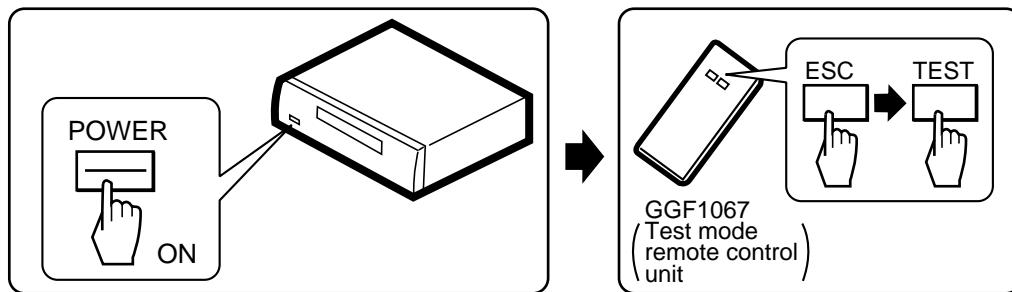
Be sure to perform the following step finally when replaced Pickup, Traverse Mechanism and Spindle Motor.



(It is necessary when performed adjustment procedure ②.)

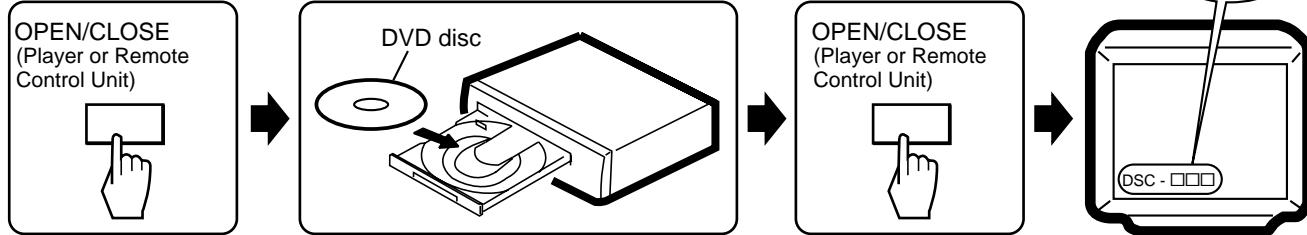
## 6.4 TEST MODE

### TEST MODE: ON



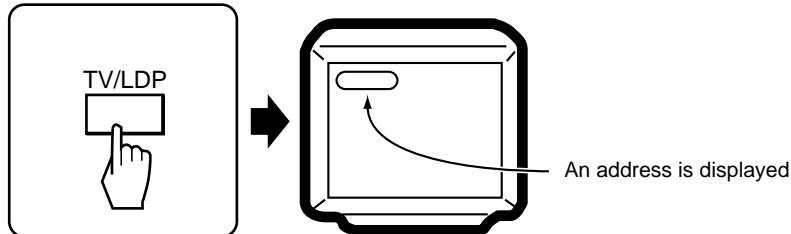
### TEST MODE: DISC SET

#### <TRAY OPEN>



### TEST MODE: PLAY

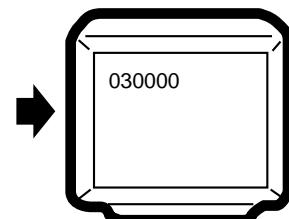
#### <PLAY>



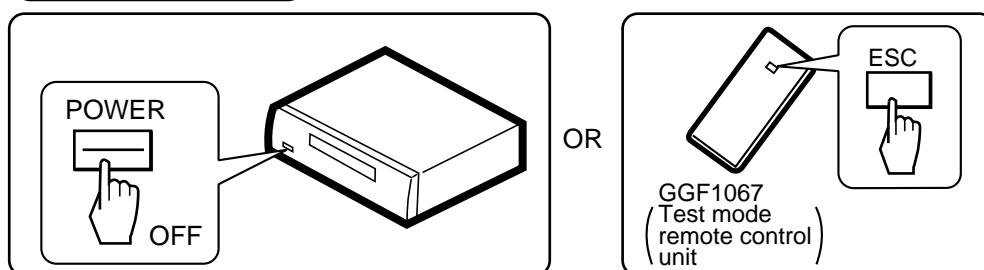
#### < When playback with the target address of disc (DVD) >

For example, when playback with # 30000

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



### TEST MODE: OFF

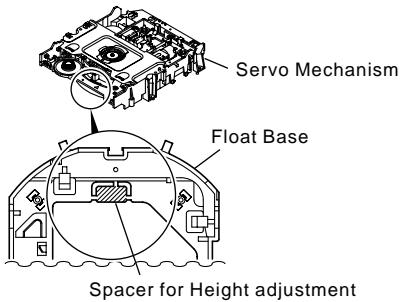


## 6.5 MECHANISM ADJUSTMENT

### 1 Tangential and Radial Height Coarse Adjustment

#### START

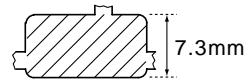
- Remove the servo mechanism.
- Remove a Spacer for height adjustment attached to the back side (shaded area) of the Servo Mechanism (Float Base) with nippers.



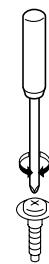
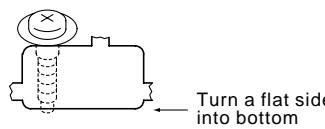
**Note:**  
Turn the Short switch to Short side when removing the Pickup Flexible Cable.  
(Refer to "7.1.6 DISASSEMBLY".)

#### 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".)



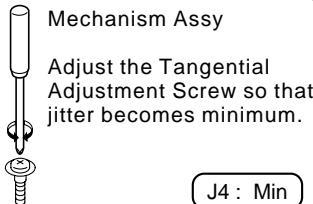
## 2 DVD Jitter Adjustment

- 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".

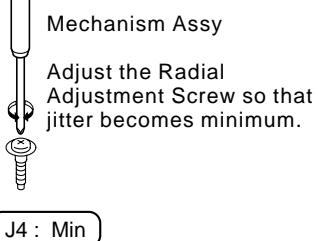
Use disc: GGV1025

### START

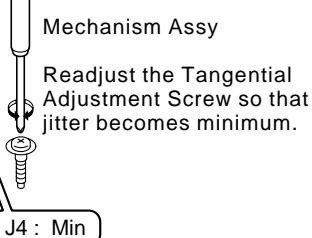
- Test mode
- Play the DVD test disc at outer track (around #200000)



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



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



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

### CHECK

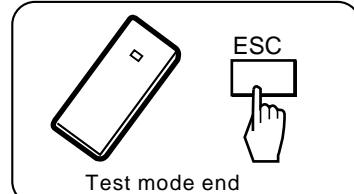
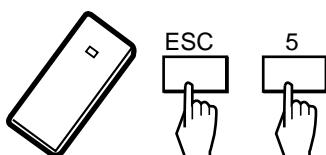
Confirm the error rate that is displayed "OK"  
(Example ER (av): 2.5e - 5-\*OK )

NG

OK

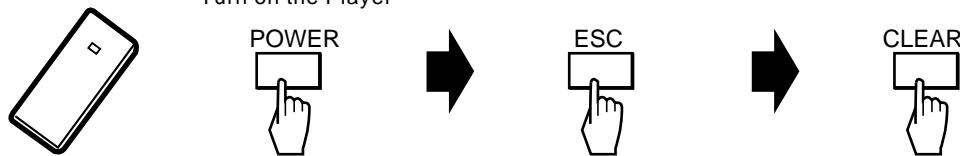
If error rate is OK, locks a root of tangential and radial adjustment screws with the Screw tight, and go to step ③.  
 Screw tight : GYL1001

Disc playback normally.  
• The measurement of block error rate



### 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 (dB $\mu$ V)	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 Vtm) gets within $0 \pm 50\text{mV}$ .

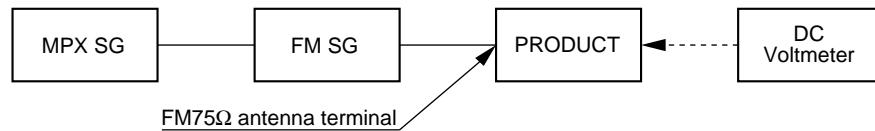


Fig.1 Adjustment Wiring Diagram

### A FM/AM TUNER UNIT

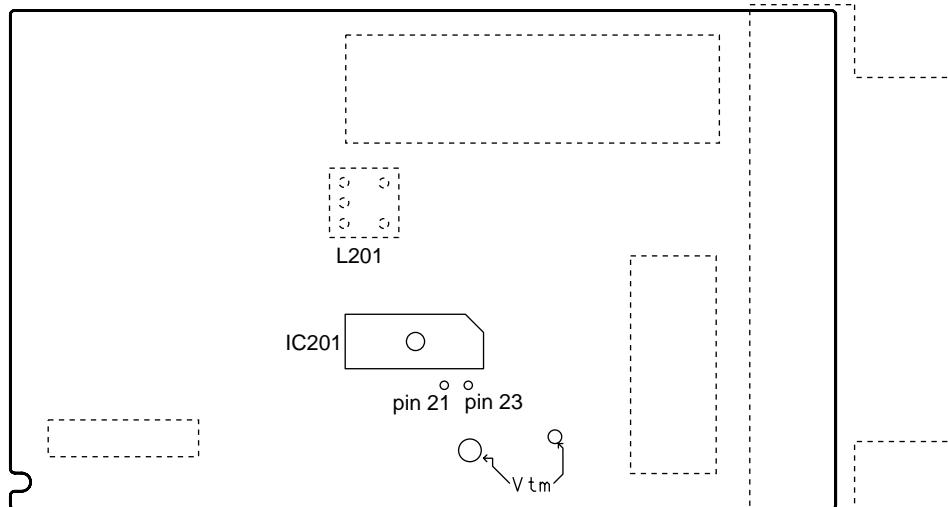


Fig.2 Adjustment Point

## 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.

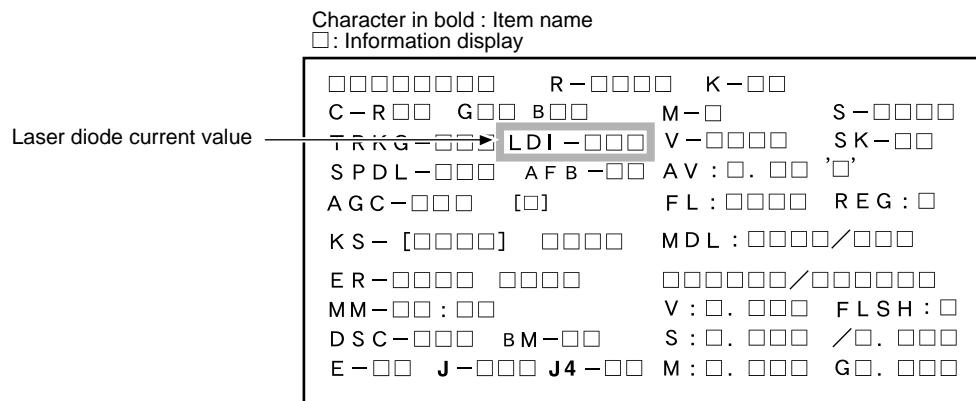
##### Symptom

- 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.).
- 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.



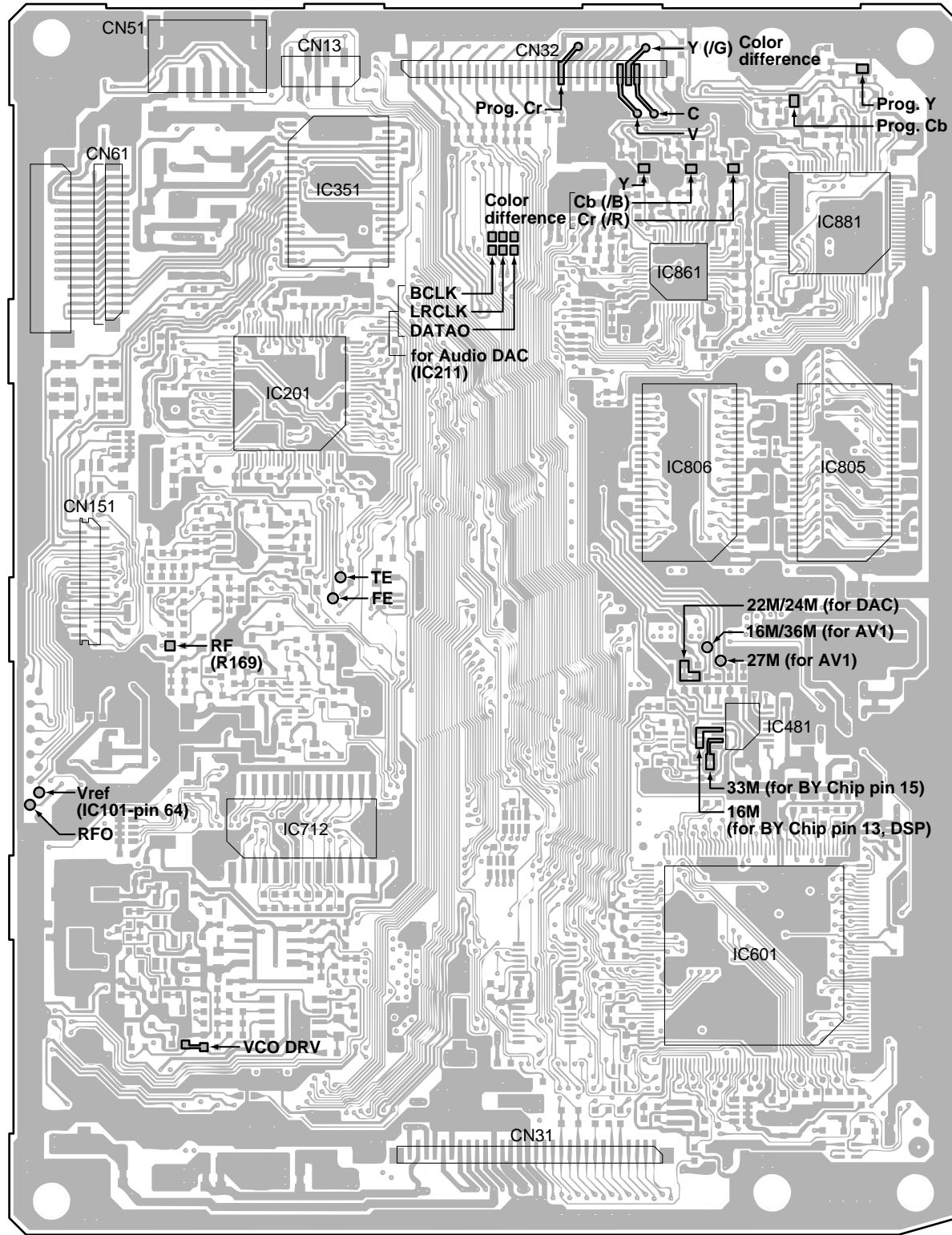
Test Mode Screen Display

### 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**

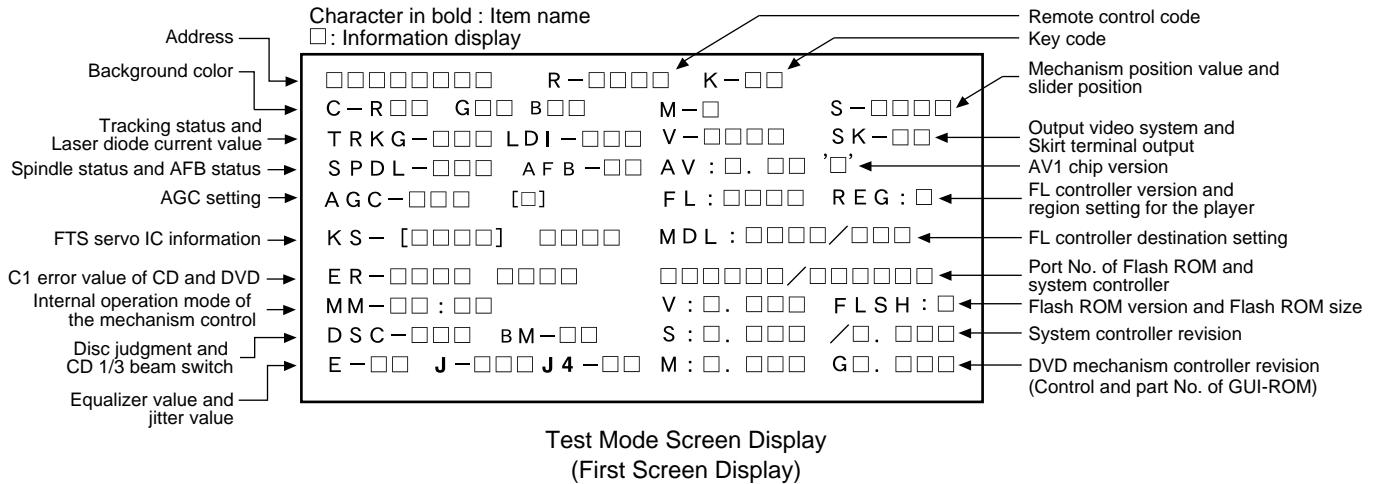
## 7.1.3 TEST MODE SCREEN DISPLAY

### ■ 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 (Example) VYW1536-A = W1536A	<Front>
(Example) PD6256A9 = 6256A9	

② Part number of the system controller (Example) PD3381T1 = 3381T1	<Back>
---	--------

## (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

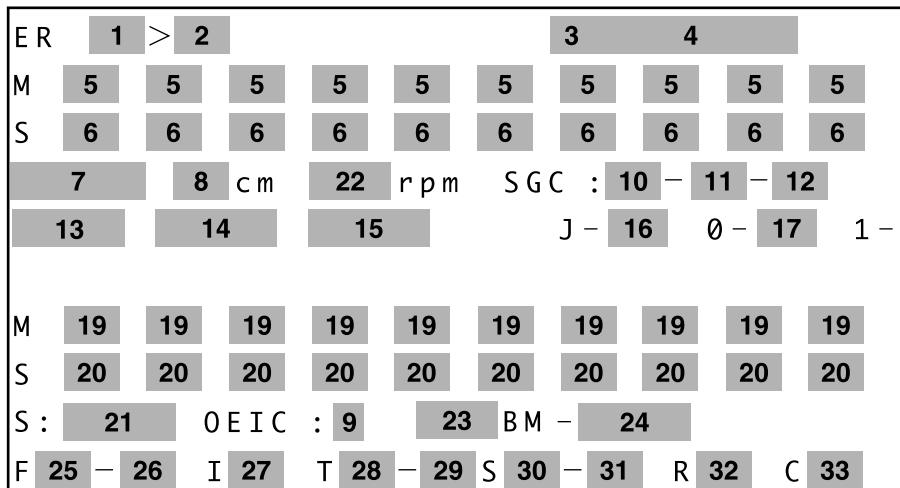
- This specifications is subject to change without notice.

### 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



### ③ Indication Contents

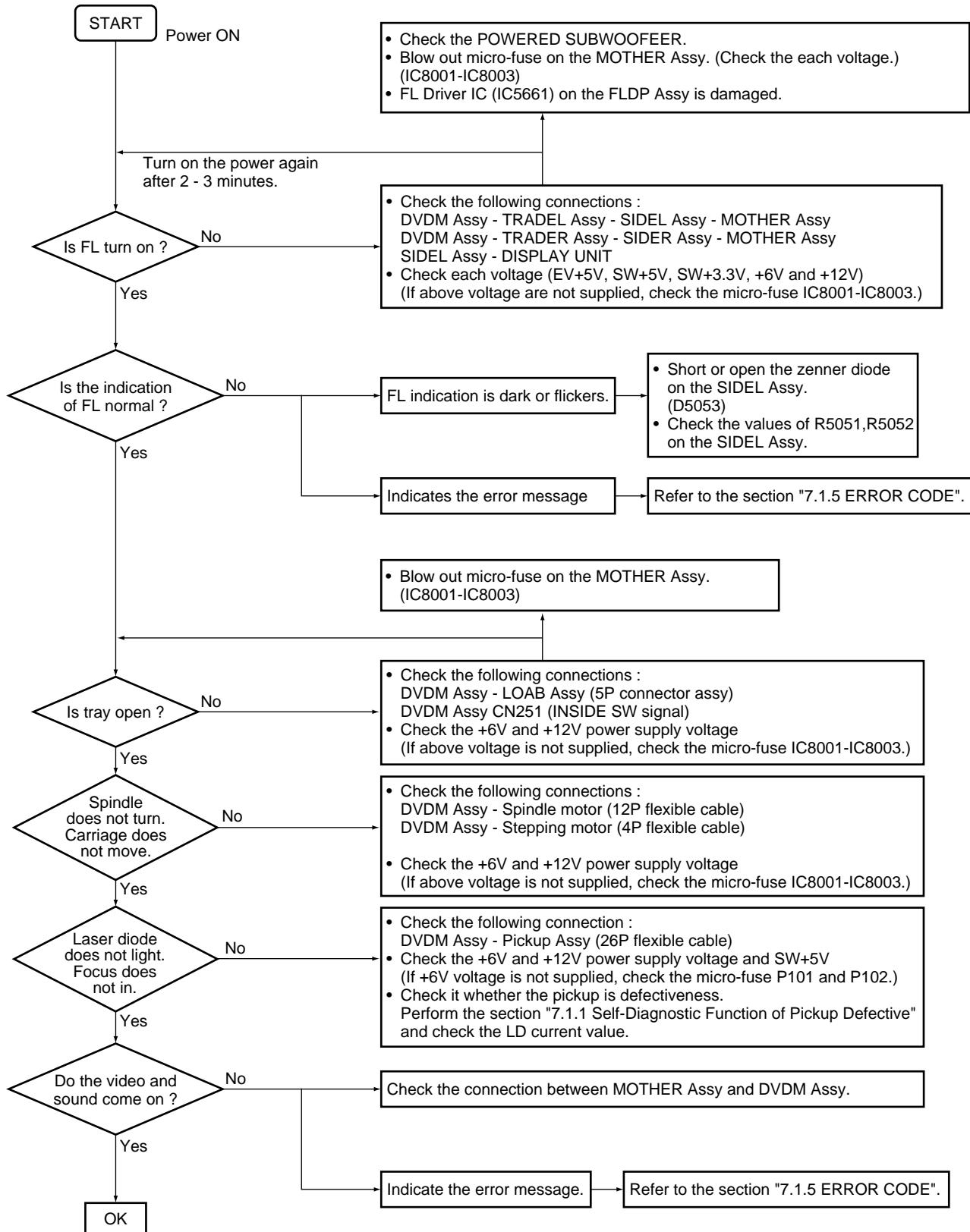
- The error that became the trigger that an error of 2 occurred.  
There are many cases same as 2.
- The error number that transferred to the system controller  
Refer to the error list about contents of error number.
- Code read in state (it does not support in this unit)  
When X is indicated, ID or 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 CMDAIVE (offset adjustment) command was sent.		Stop

# XV-DV88, XV-DV77

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 $\mu$ 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 retrig 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			

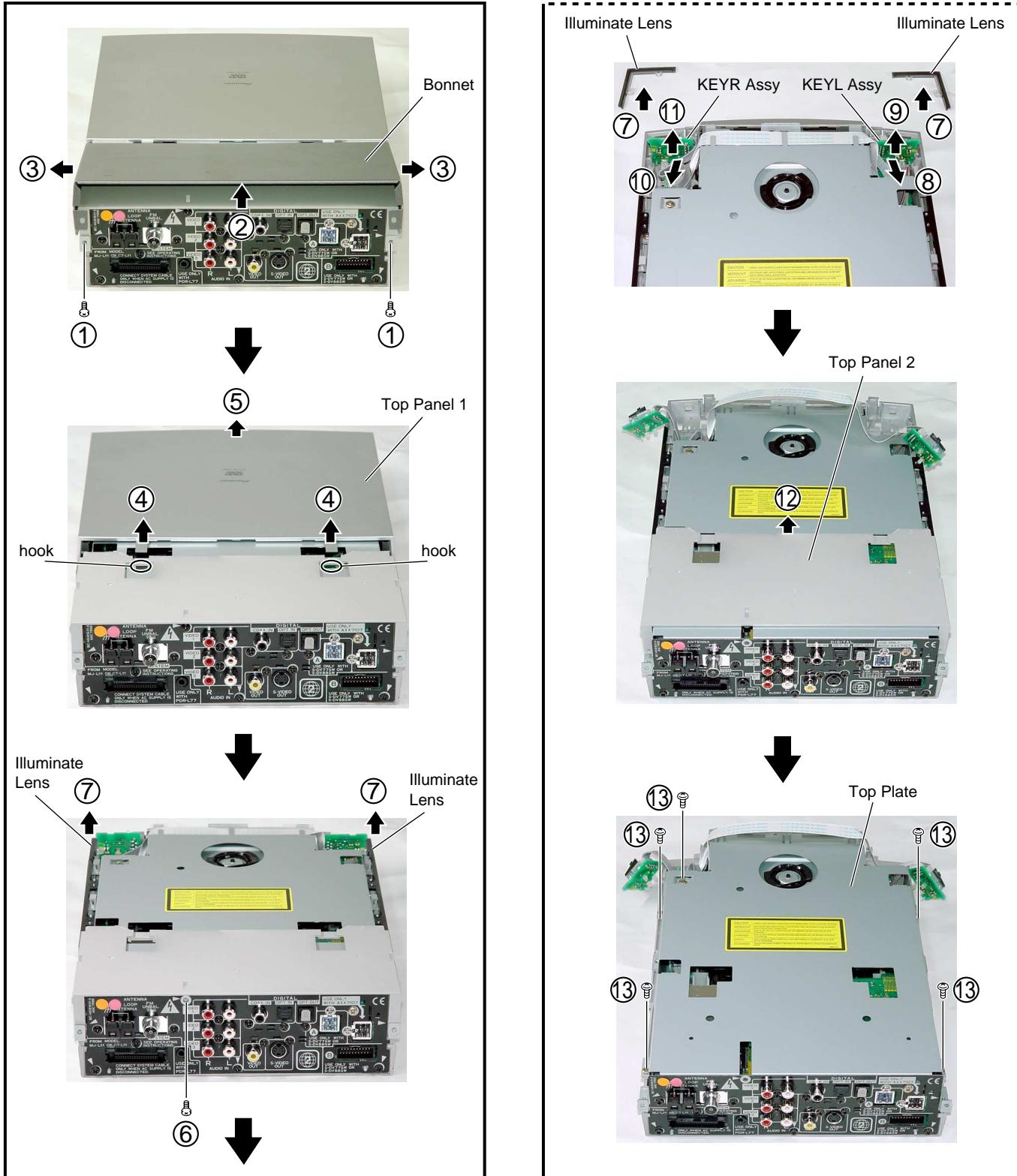
## 7.1.6 DISASSEMBLY

### ■ DIAGNOSIS OF PCBs

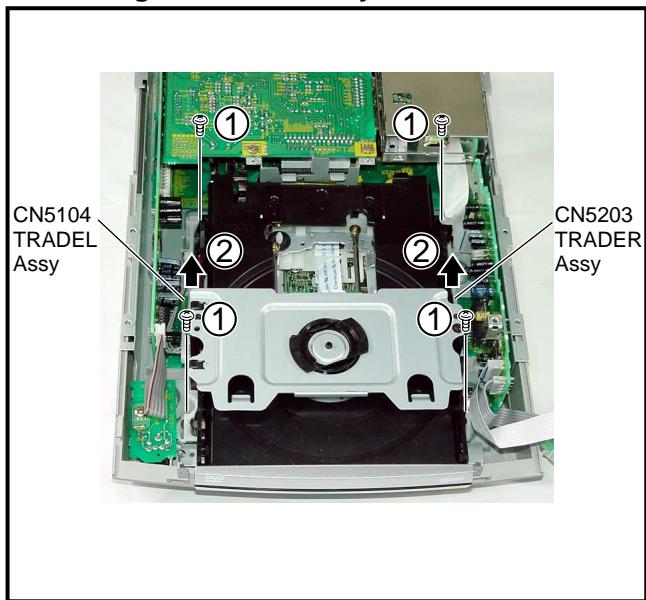
#### Note

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

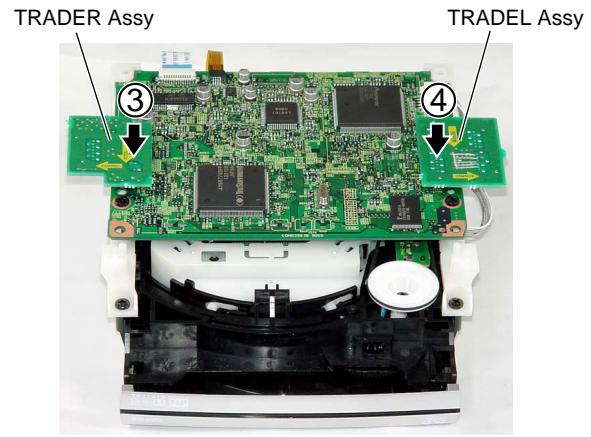


## 2 Loading Mechanism Assy

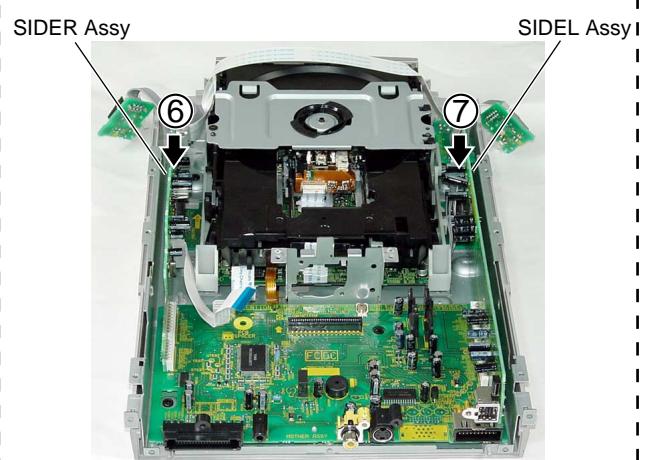
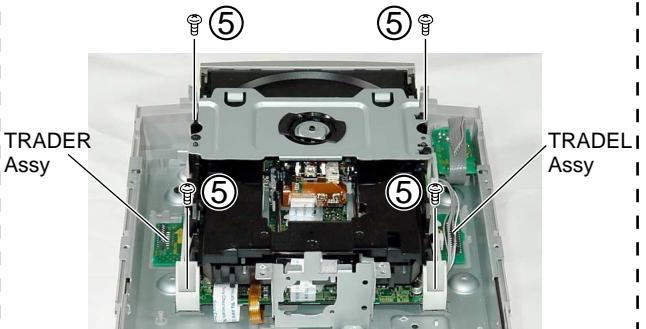
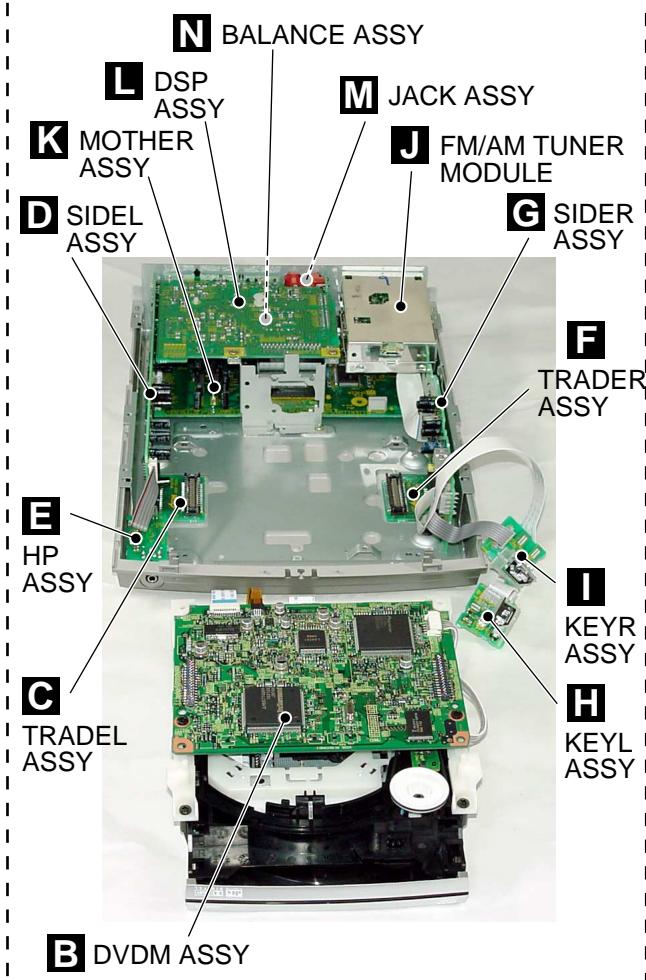


## ● Assembly

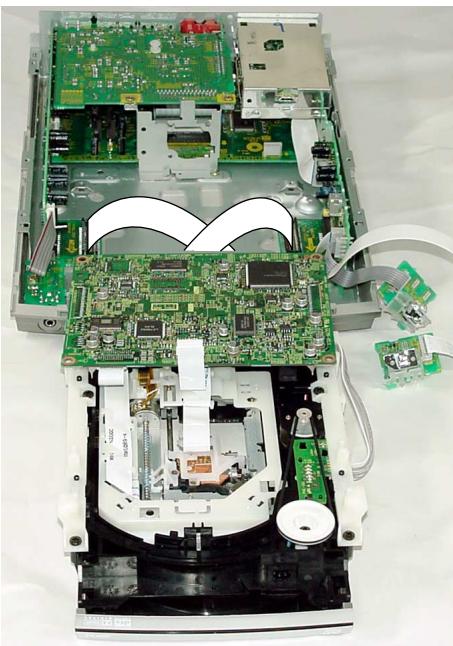
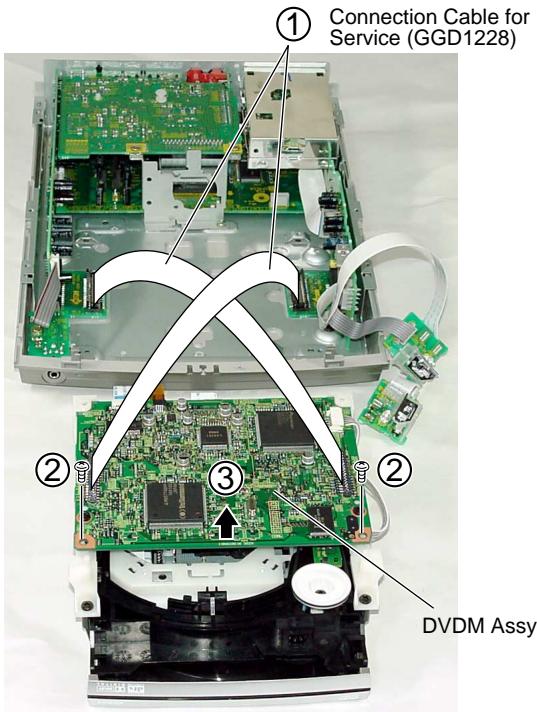
- ① Remove SIDEL ASSY and SIDER ASSY.
- ② Remove TRADEL ASSY and TRADER ASSY.



## ● PCB Location

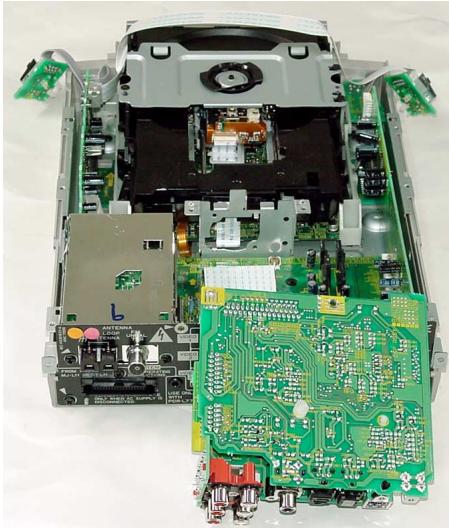
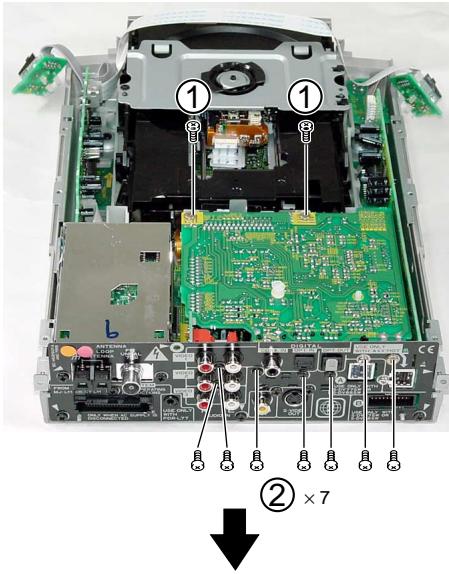


## 3 Diagnosis of DVDM Assy



Diagnosis

## 4 Diagnosis of DSP, JACK and BALANCE Assys



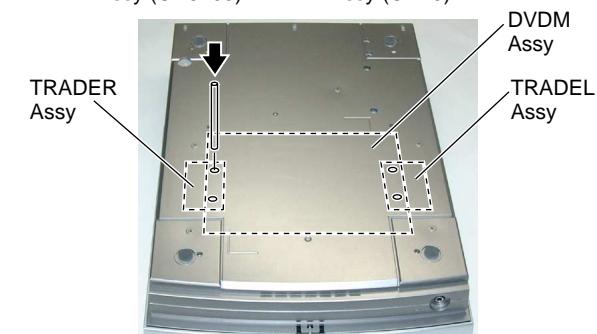
Diagnosis

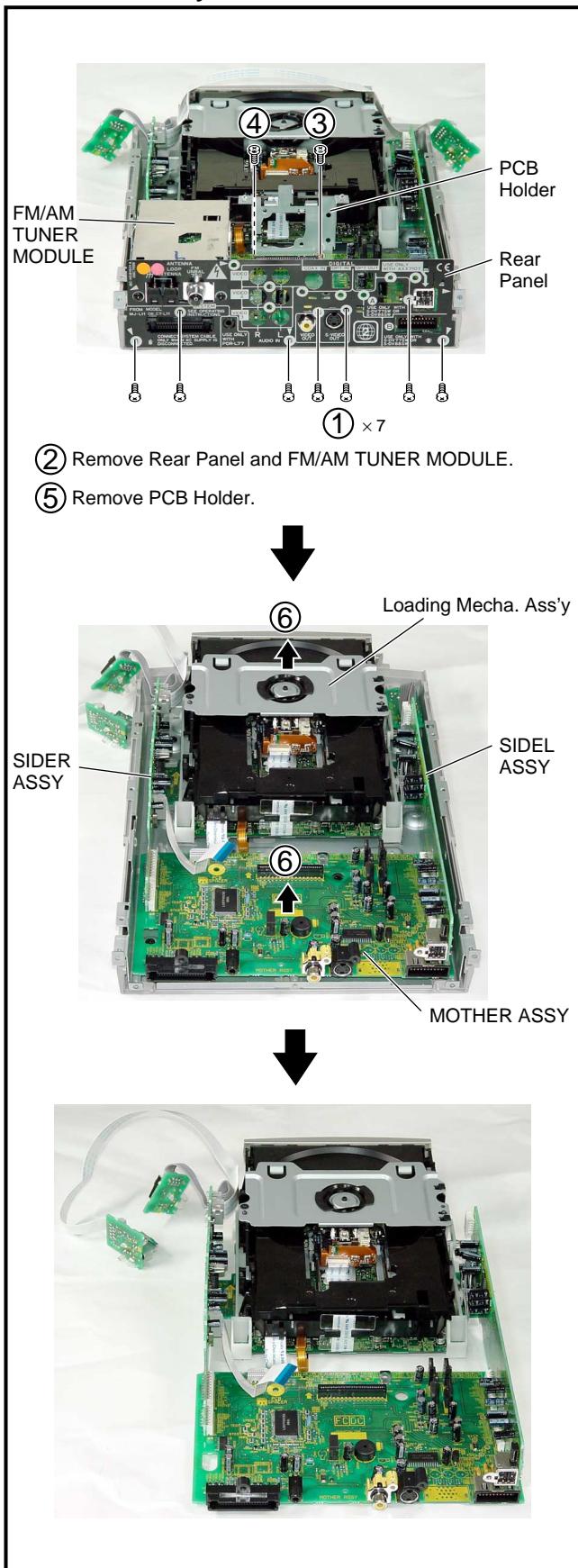
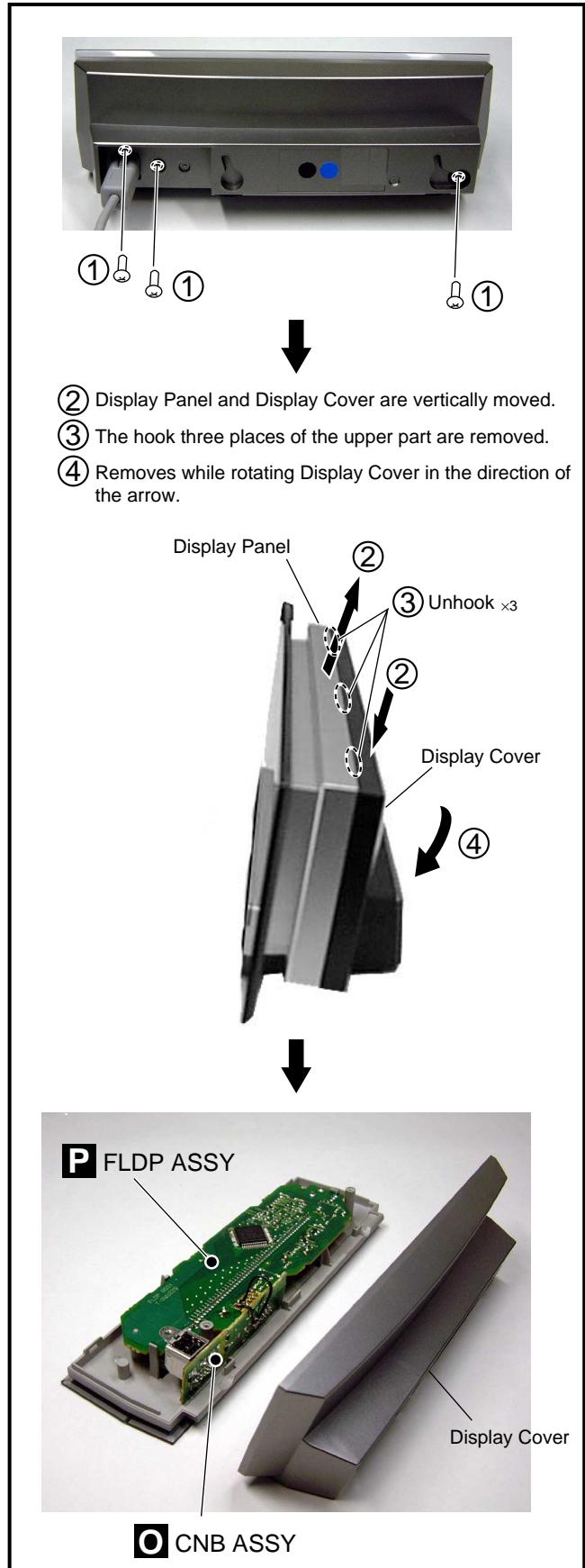
### ● Attention when Loading Mechanism Assy is assembled

Letting uses four hole of bottom face and insert connectors surely.

TRADEL Assy (CN5104) - DVDM Assy (CN401)

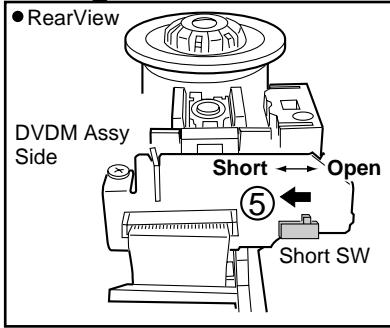
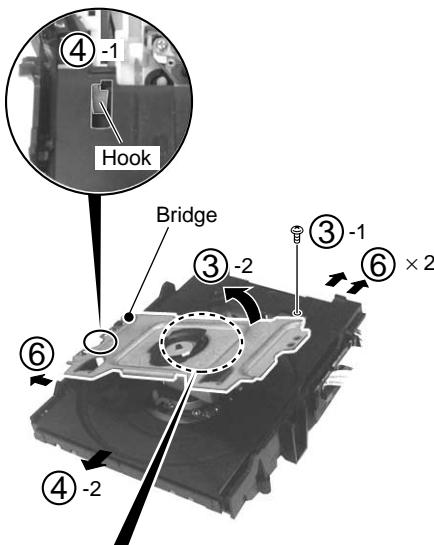
TRADER Assy (CN5203) - DVDM Assy (CN15)



**5 MOTHER Assy****■ Display Unit**

## ■ 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.

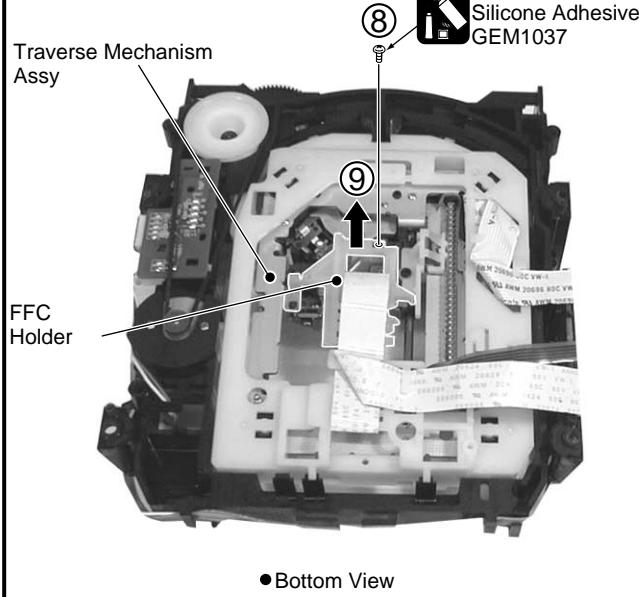


- ⑦ Remove the DVDM Assy (Screws  $\times 2$ ).
- ⑧ Remove a screw.

**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

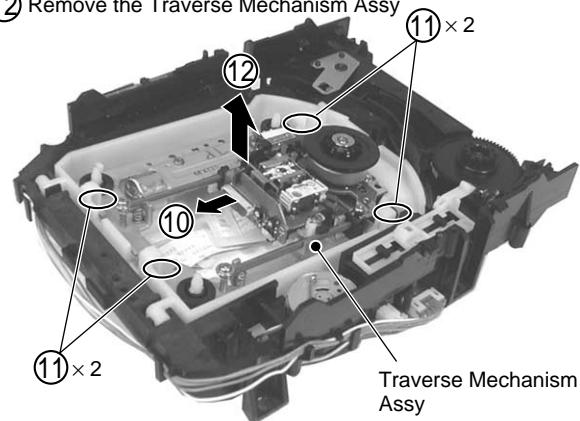
Traverse Mechanism Assy

● When Removing The Traverse Mechanism Assy

- ⑩ Remove the Pickup Flexible Cable

- ⑪ Unhook ( $\times 4$ )

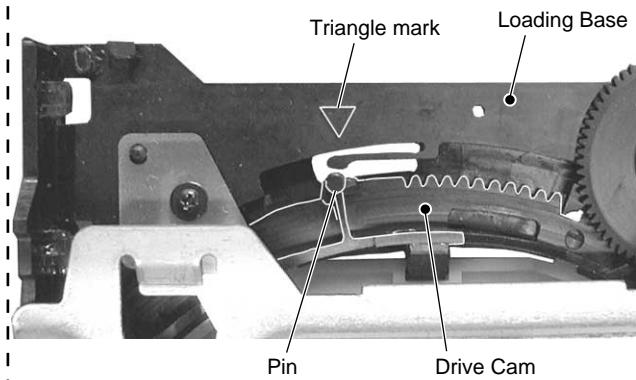
- ⑫ Remove the Traverse Mechanism Assy



Exchange

**Caution in the tray insertion**

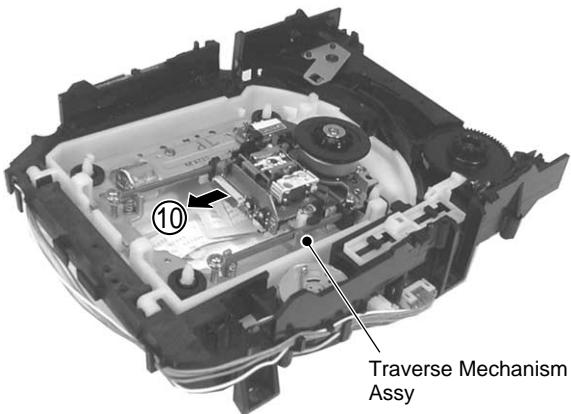
In the Tray insertion, insert it after matching a triangle mark of the Loading Base and a position of pin of the Drive Cam.





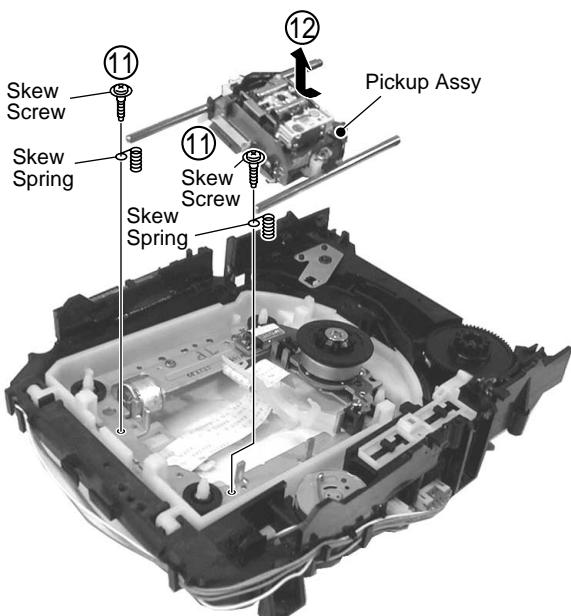
● When Removing The Pickup Assy

⑩ Remove the Pickup Flexible Cable.



⑪ Remove two Skew Screws and two Skew Springs.

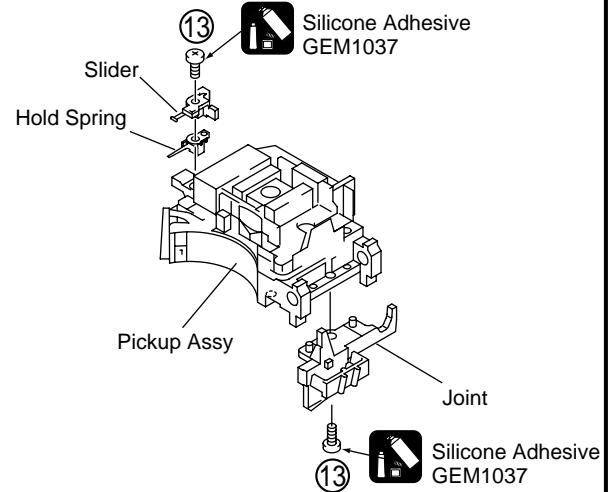
⑫ Remove the Pickup Assy.



⑬ Remove two screws.

**Cautions:**

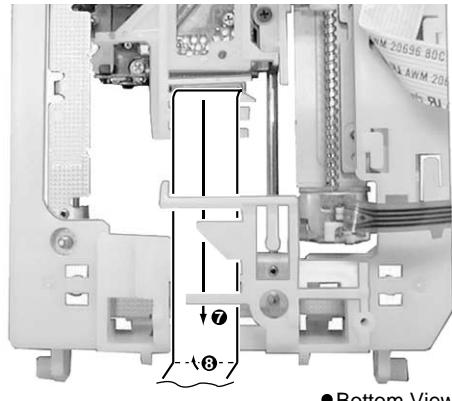
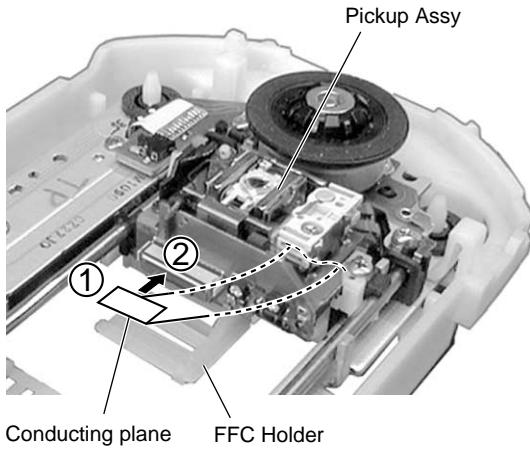
Screw is locked with Silicone Bond.  
Please lock it with Silicone Bond when installs it.



Exchange

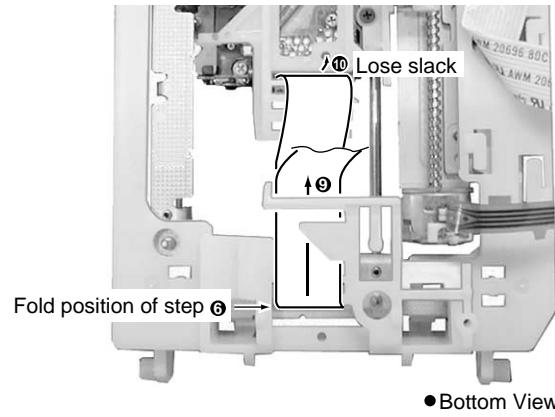
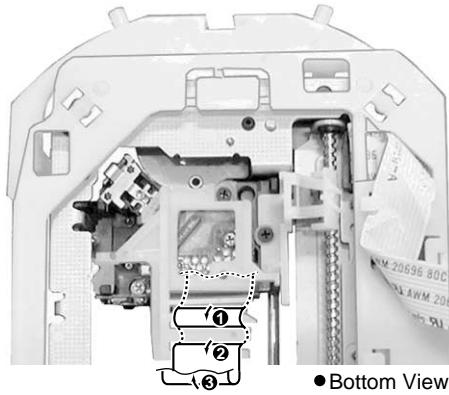
## Styling the Pickup Flexible Cable

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

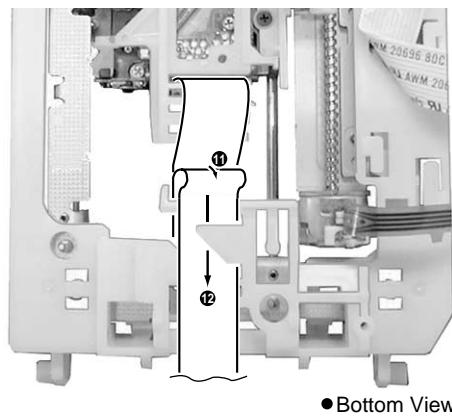
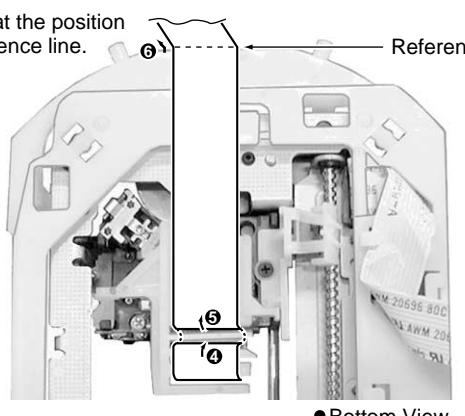


**Caution:**  
Move the Pickup to the innermost of the disc.

- ③ Perform the styling as shown in figure below.



Fold it at the position of reference line.  
Reference line



### 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)

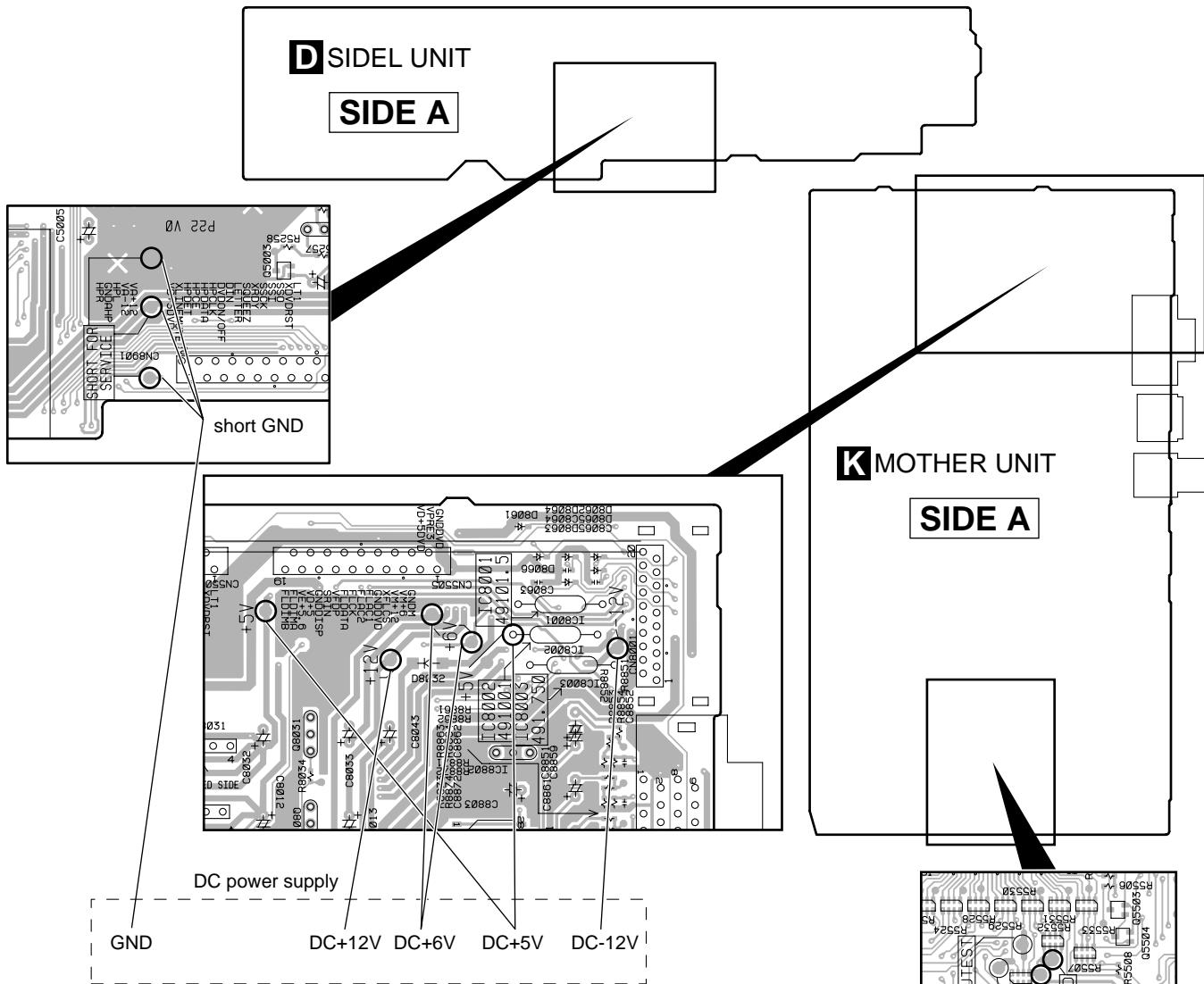
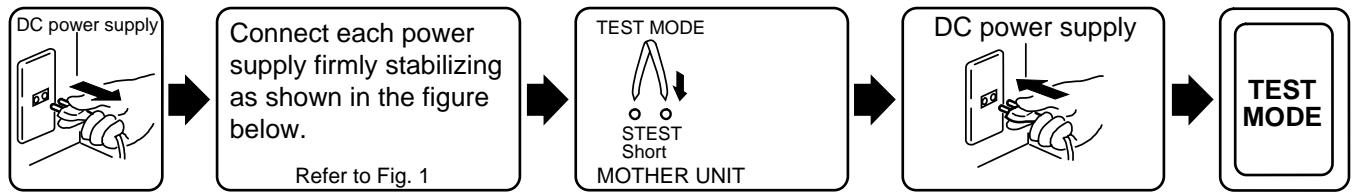
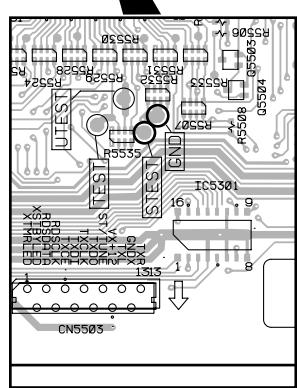


Fig. 1 DC power supply Point Location

#### 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.



TEST mode Short Point

## 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

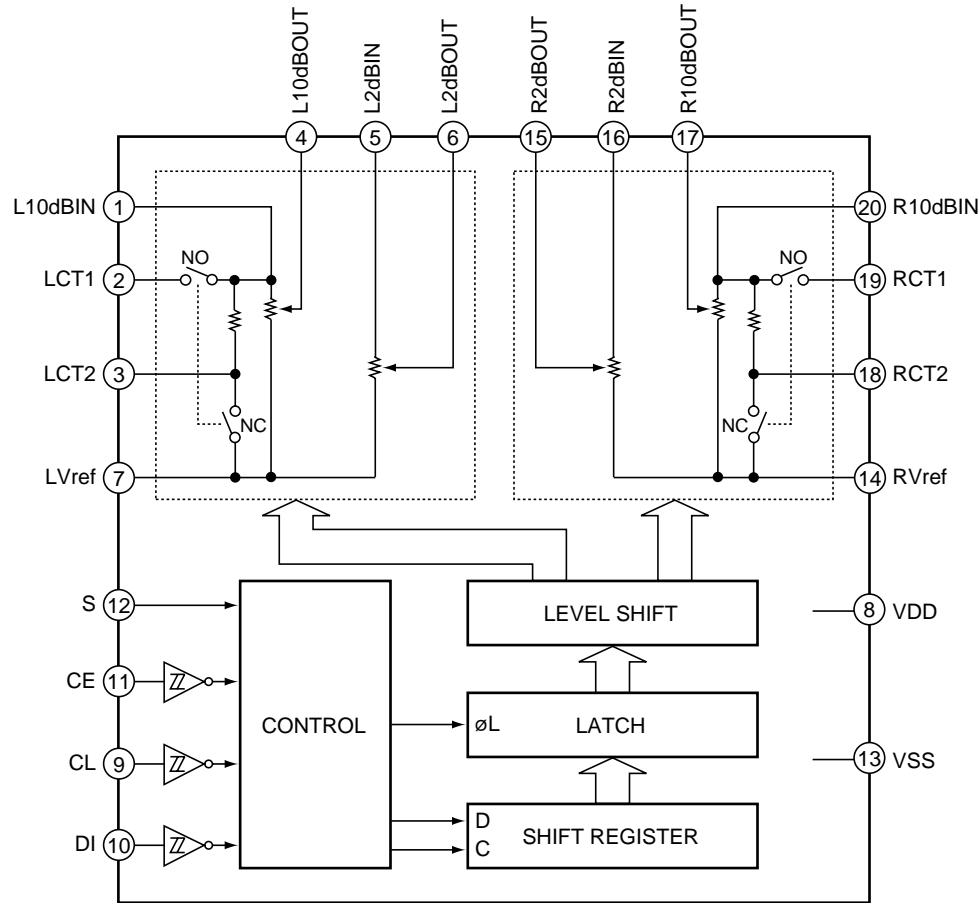
No.	Pin Name	I/O	MOS	Function	Pin Function
1	BEEP	O	C	Port	BEEP Output
2	XDSP SUB CS	O	C	Port	YSS912 SUB DSP Control CE
3	XDSP MAIN CS	O	C	Port	YSS912 MAIN DSP Control CE
4	DSP CK	O	C	Port	YSS912 Communication Clock Signal
5	DSP SI	I	C	Port	YSS912 Communication Data input Signal
6	TXCLK	O	C	Port	FM/AM 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 Control
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	FAN 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	RDS DATA	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	Expander/Volume Data
87	EX/V CLK	O	C	Port	Expander/Volume Clock
88	EXCE	O	C	Port	Expander 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

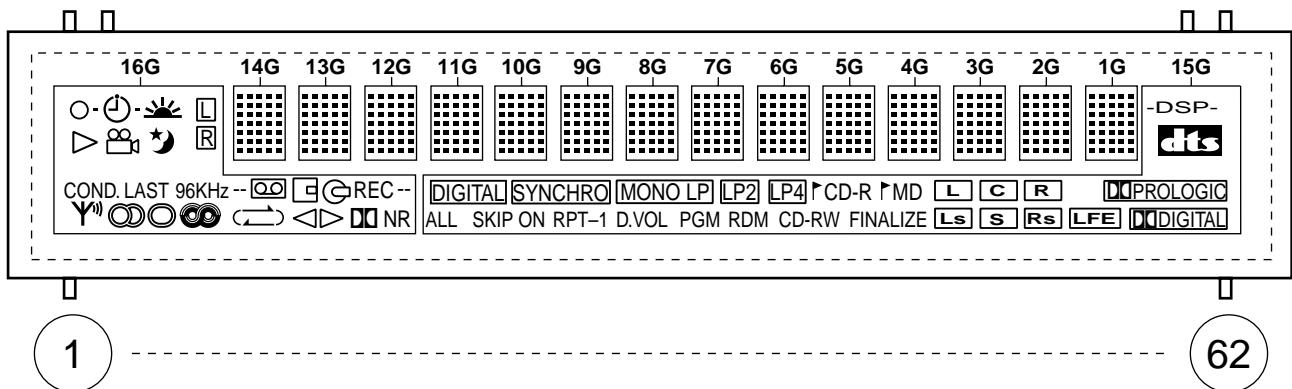
- Block Diagram



## 7.2.2 DISPLAY

### ■ AAV7082 (FLDP ASSY : V5661)

#### • FL DISPLAY



1

62

#### ● Anode Connection

	16G	15G	14G - 1G
P1	□ R	-DSP-	1-1
P2	■	dts	2-1
P3	-○-	DOLPROLOGIC	3-1
P4	○	DODIGITAL	4-1
P5	■	LFE	5-1
P6	■	Rs	1-2
P7	■	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	C	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	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	NP	NP	F2	F2

F1, F2 : Filament

1G~16G : Grid

NP : No Pin

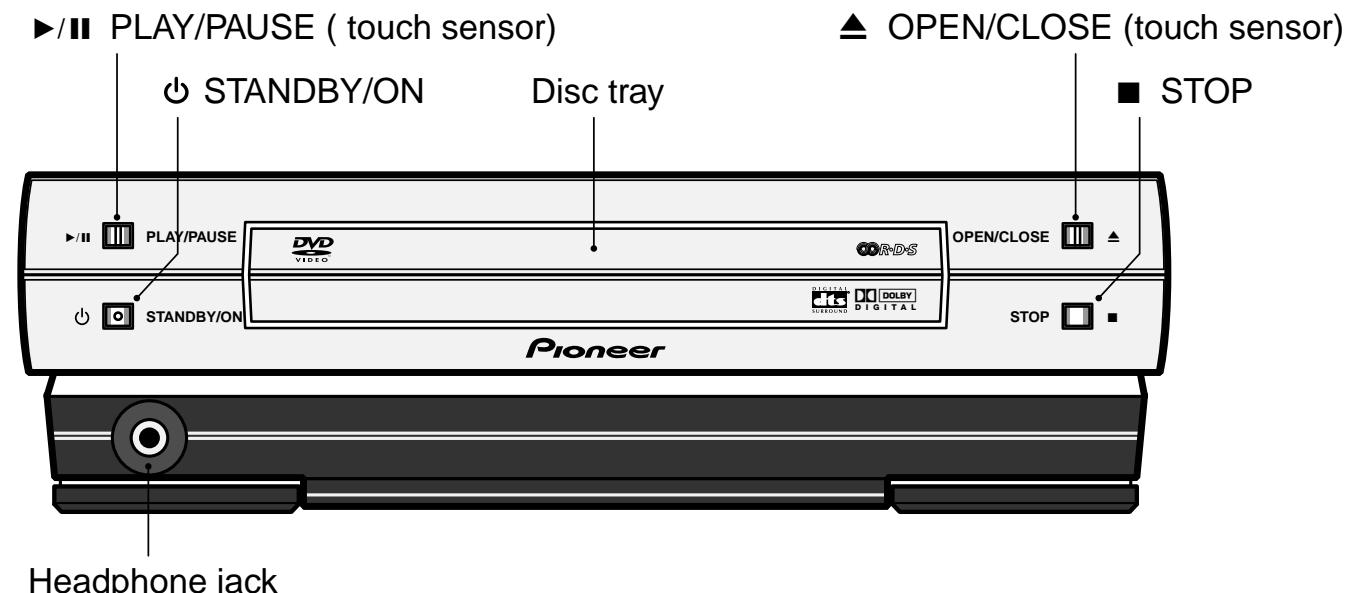
NX : No extend pin

DL : Datum Line

## 8. PANEL FACILITIES AND SPECIFICATIONS

### 8.1 PANEL FACILITIES

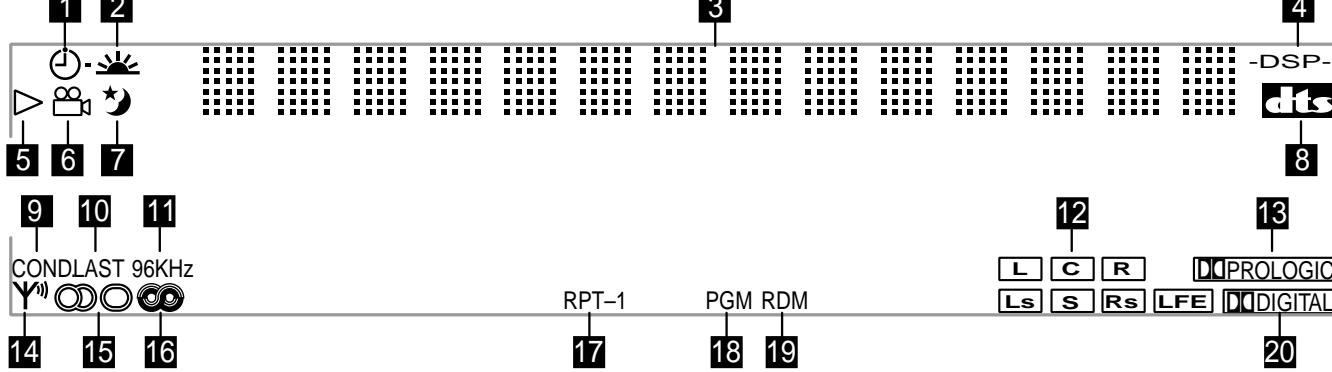
#### ■ Front panel



Headphone jack

(Illustration shows European model)

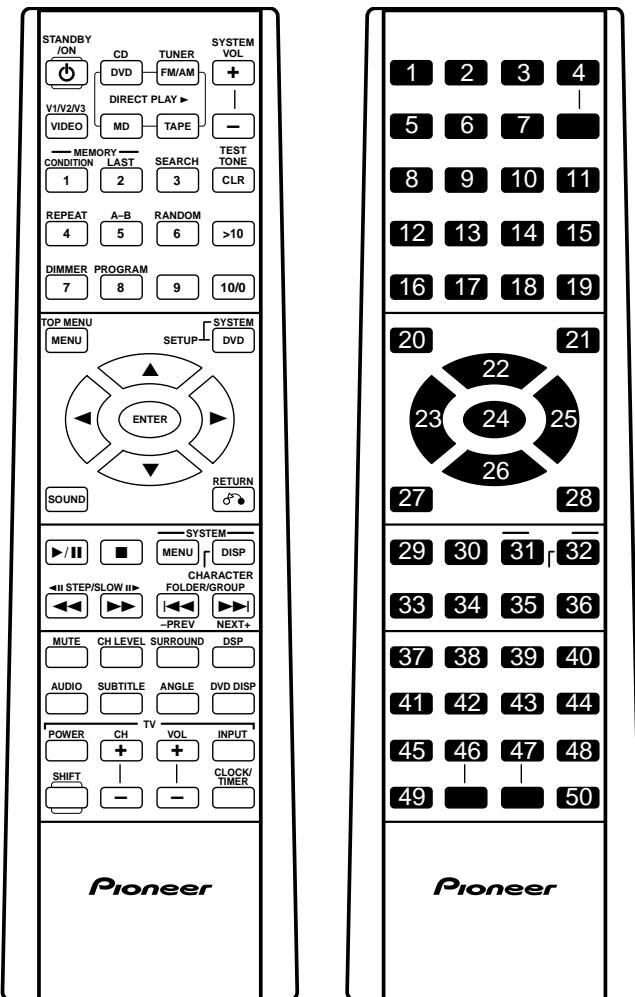
#### ■ Display



- 1 ⏹ Timer
- 2 ☀ Wake up timer
- 3 Character display
- 4 - DSP -
- 5 ▶ Lights when a disc is playing
- 6 🎥 Multi-angle scene
- 7 ⏸ Sleep timer
- 8 🎬 Lights when playing a DVD with DTS sound
- 9 COND. Condition memory
- 10 LAST Last memory
- 11 96kHz Lights when playing a disc with 96kHz audio

- 12 Active channel indicators
- 13 PRO LOGIC Lights when playing a Dolby Pro Logic source
- 14 📻 Indicates strength of broadcast signal
- 15 🎣 Auto stereo/mono mode
- 16 RDS (European model only)
- 17 RPT, RPT-1 Repeat play mode
- 18 PGM Program play
- 19 RDM Random play
- 20 DOLBY DIGITAL Lights when playing a Dolby Digital source

## ■ 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 ▶/II
- 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/DIGITAL/DTS) .....	Optical connector
Digital optical input (PCM/DIGITAL/DTS) .....	Optical connector
Digital coaxial input (PCM/DIGITAL/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	
Dimensions .....	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:

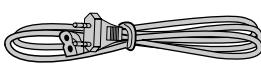
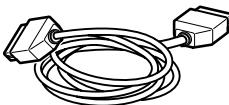
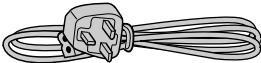
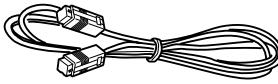
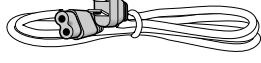
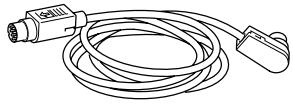
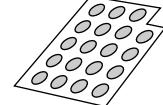
- Specifications and design subject to possible modification without notice, due improvements.

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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

• Remote control unit (AXD7305)	• Power cord (ADG1154) (For MYXJI type)	• Control cable A (MYXJI, NVXJI : ADE7079) (KUCXJI : ADE7078)	• Speaker cords (5m) (SDS1115, SDS1116, SDS1117)
			
• AA/R6P dry cell batteries (VEM1011)	• Power cord (ADG1156) (For NVXJI type)	• Control cable B (MYXJI, NVXJI : ADE7064) (KUCXJI : ADE7063)	• Speaker cords (10m) (SDS1118, SDS1119)
			
• AM loop antenna (ATB7009)	• Power cord (ADG7022) (For KUCXJI type)	• Display cable (ADE7077)	• Non-skid pads (Satellite) (SEC1541)
			
• FM antenna (MYXJI, NVXJI : ADH7005) (KUCXJI : ADH7004)	• Video cord (VDE1053) (L=1.5m)	Yellow	• Non-skid pads (subwoofer) (SEC1563)
			