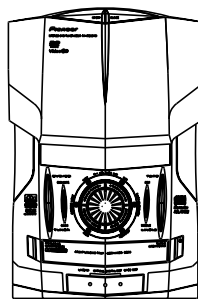


# Service Manual

Pioneer



ORDER NO.  
RRV2475

STEREO DVD TUNER DECK

# XV-IS22DVD

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

Type	Model	Power Requirement	Remarks
	XC-IS22CD		
ZBDXJ	O	DC power supply from other system (M-IS22V)	
ZLXJ/NC	O	DC power supply from other system (M-IS22V)	

● **This product is a system(s) component.**

**This product does not function properly when it is independent ; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.**

Component	System	Service Manual	Remarks
COMPACT MINI COMPONENT	IS22-DVD	—————	
STEREO DVD TUNER DECK	XV-IS22DVD	RRV2475	This service manual
STEREO POWER AMPLIFIER	M-IS22V	RRV2482	
SPEAKER SYSTEM	S-IS22V	RRV2461	

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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.

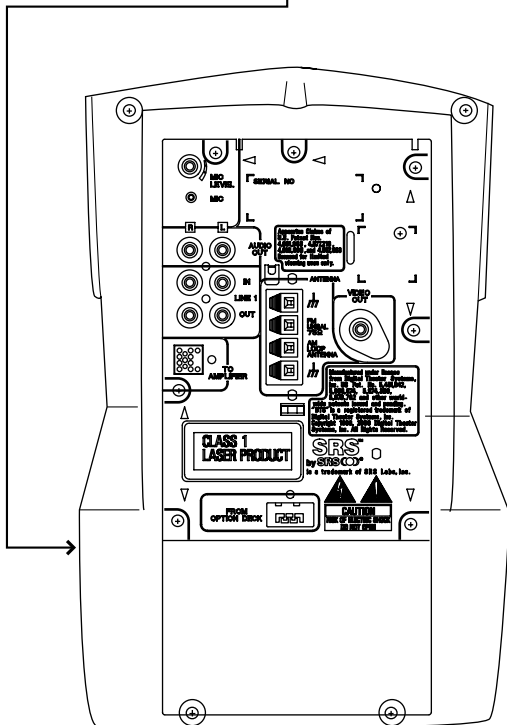
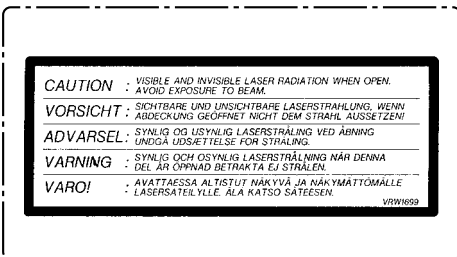
**IMPORTANT**

THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.  
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

**LASER DIODE CHARACTERISTICS**

FOR DVD : MAXIMUM OUTPUT POWER : 5 mW  
                  WAVELENGTH : 655 nm  
FOR CD : MAXIMUM OUTPUT POWER : 5mW  
                  WAVELENGTH : 785 nm

## LABEL CHECK



(Rear view)

**Additional Laser Caution**

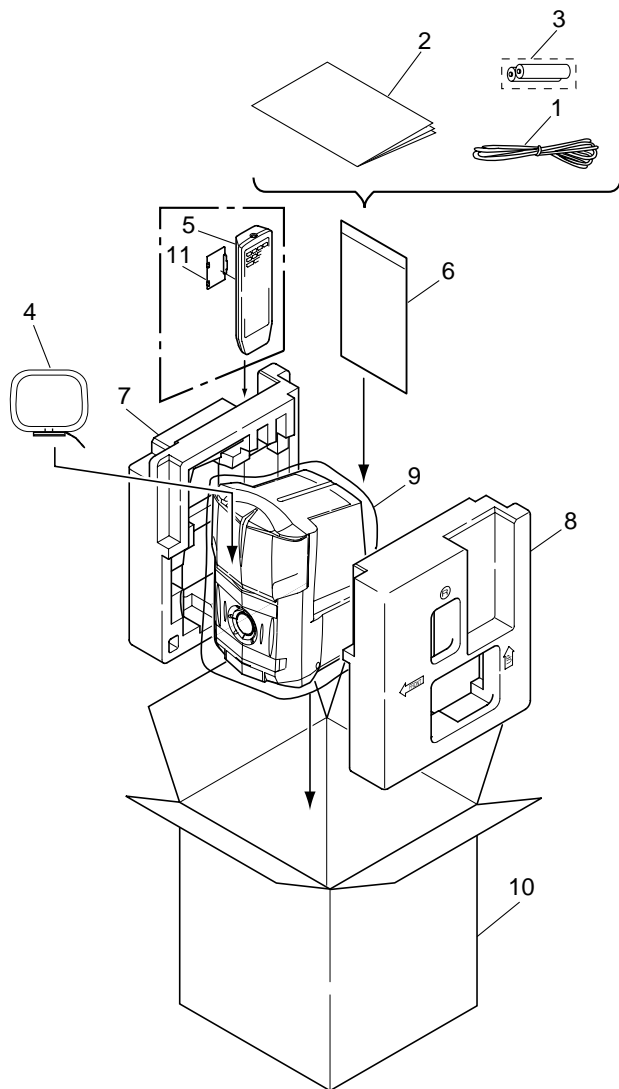
- Inside detection switch (S201 on the SMEB assy) are detected by the microprocessor (IC11 in the DVDM assy).
  - To permit the laser diode to oscillate, it is required to set the inside detection switch for the inside position (S201 : ON) . The 655 nm laser diode for DVD oscillation will continue if pin 19 of IC1 is shorted to +5V (fault condition) in the DVDM assy. The 785 nm laser diode for CD oscillates if pin 20 of IC1 is shorted to +5V 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 (S5916 ON in the FRONT PANEL assy), with the above requirements satisfied.
- When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

\* : See page 65.

## 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 ▼ mark on the product are used for disassembly.

### 2.1 PACKING



#### (1) PACKING PARTS LIST

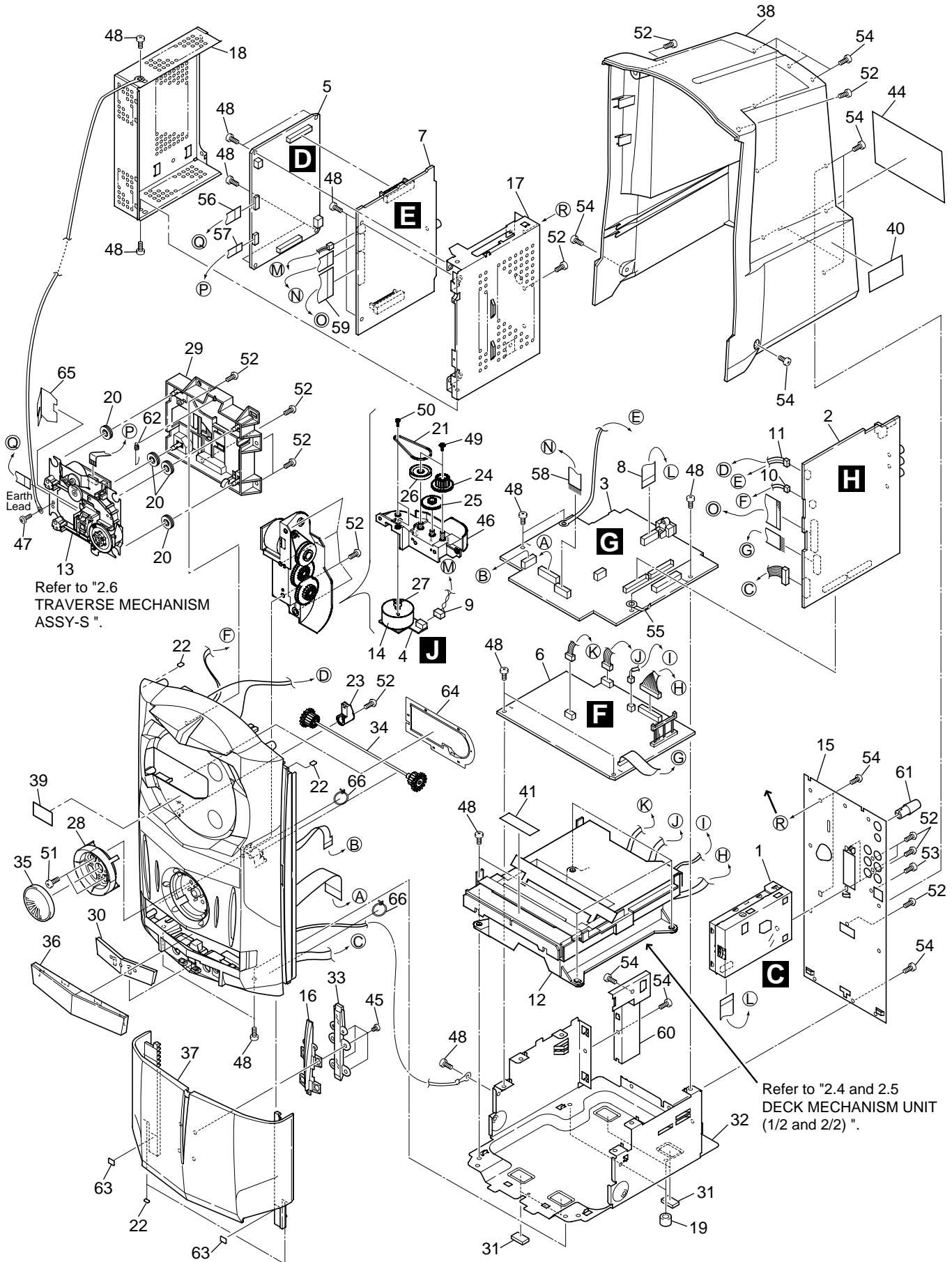
Mark	No.	Description	Part No.
	1	FM Antenna	ADH7004
	2	Operating Instructions (English/Chinese)	XRE3045
	3	Dry Cell Batteries (AA/R6P)	VEM-013
	4	AM Loop Antenna	ATB7009
	5	Remote Control Unit	XXD3036
NSP	6	Polyethylene Bag (0.03 x 230 x 340)	Z21-038
	7	Protector L	XHA3120
	8	Protector R	XHA3121
	9	Packing Sheet	AHG7053
	10	Packing Case	See Contrast table(2)
	11	Battery Cover	XZN3117

#### (2) CONTRAST TABLE

XV-IS22DVD/ZBDXJ and ZLXJ/NC are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.		Remarks
			ZBDXJ type	ZLXJ/NC type	
	10	Packing Case	XHD3179	XHD3181	

2. 2 EXTERIOR



**(1) EXTERIOR PARTS LIST**

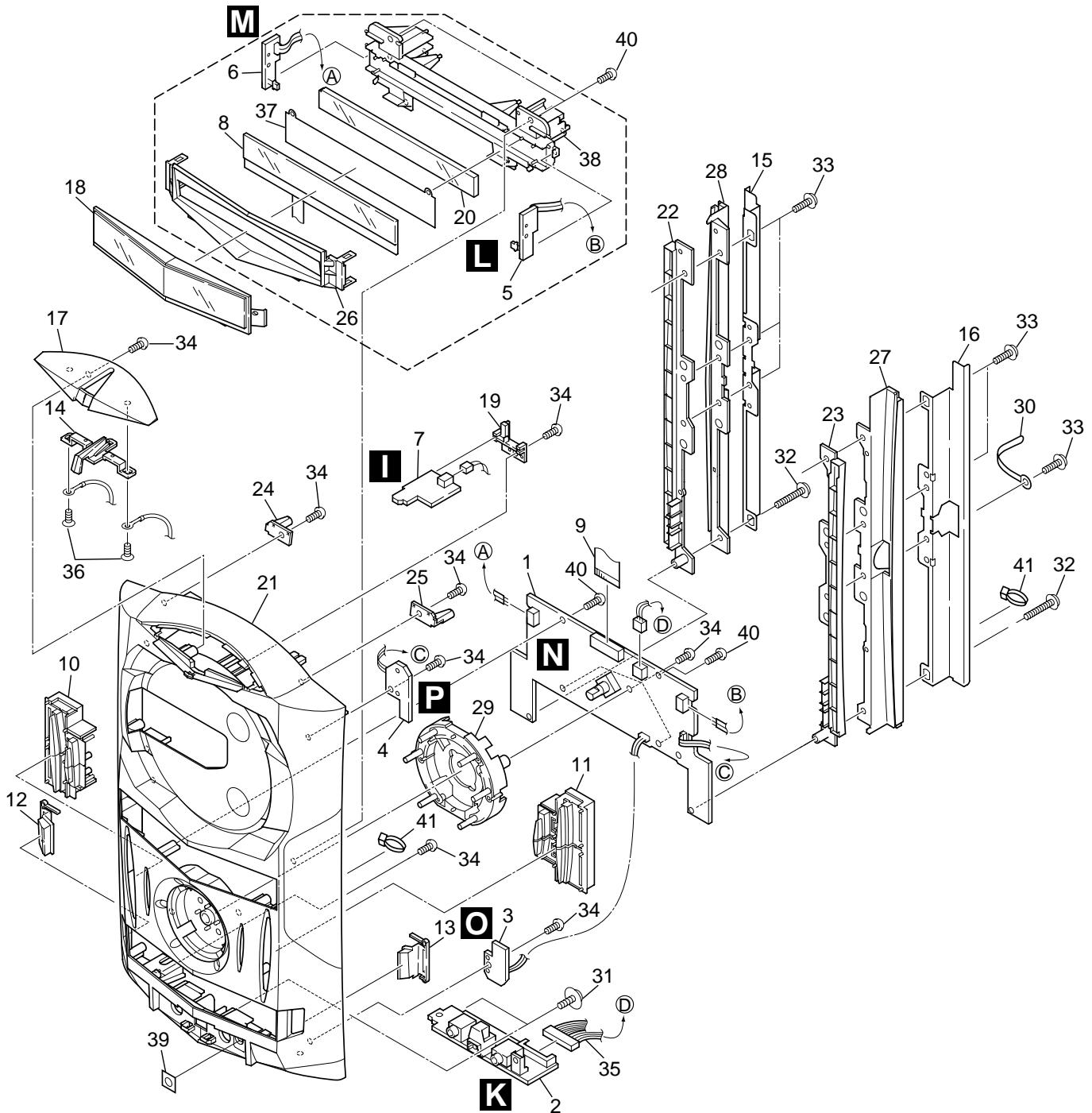
Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	FM/AM TUNER MODULE	AXQ7228		36	Tray Cap (Pls)	XAK3191
NSP	2	AF ASSY	XWZ3468		37	CD Door(Pls)	XAN3040
NSP	3	IF ASSY	XWZ3469		38	Rear Cover (Pls)	XMC3001
NSP	4	CD MOTOR ASSY	XWZ3473		39	Pu Caution Label	ARW7059
	5	DVDM ASSY	XWX3036		40	Caution Label	VRW1699
NSP	6	DECK ASSY	XWX3038	NSP	41	Tray Seal	RRW1162
NSP	7	DVD CONNECT ASSY	XWX3039		42	•••••	
	8	13p F.F.C/30V 27p	XDD3081		43	•••••	
	9	Connector Assy	PG02KK2F25	NSP	44	Name Label	See Contrast table (2)
	10	Connector Assy	PG02KK-F15		45	Screw M3 (Steel)	XBA3005
	11	Connector Assy 3p	XDX3016		46	Gear Holder (Pls)	AMR7240
	12	Deck Mechanism Unit	AXA7075		47	Screw	BBZ26P040FMC
NSP	13	Traverse Mecha. Assy	XWT3001		48	Screw	BBZ30P080FMC
	14	Slider Motor	VXM1033		49	Screw	Z39-019
	15	Rear Panel(Mtl)	XNC3115		50	Screw	PMZ26P040FMC
	16	CD Door Lens	XAK3188		51	Screw	PPZ30P080FMC
	17	DVD Base (Mtl)	XNG3051		52	Screw	VPZ30P080FZK
	18	DVD Shield (Mtl)	XNK3007		53	Screw	BCZ30P080FZK
NSP	19	Spacer	AEB7092		54	Screw	BBZ30P080FMC
	20	Floating Rubber	VEB1327		55	Cord Clamper (Steel)	RNH-184
	21	Belt	AEB7171		56	Flexible Cable (24p)	XDD3077
	22	Cussion Rubber	AEB7154		57	Flexible Cable (8P)	XDD3078
	23	Shaft Holder (Pls)	AMR7237		58	11p F.F.C/30V	XDD3080
	24	Gear B	AMR7260		59	26p F.F.C/30V	XDD3083
	25	Gear A	ANW7063		60	DVD Bracket	XNG3052
	26	Gear Pulley A	ANW7066		61	Mic Knob (Pls)	XAB3007
	27	Motor Pulley	PNW1634		62	Float Spring	XBH3012
	28	Play Button (Pls)	XAD3097		63	Spacer	XEB3023
	29	Float Base (Pls)	XMR3021		64	DVD Cover	XAK3297
	30	Jack Door(Pls)	XAN3030		65	Pick Up Barrier	XNK3009
	31	Rubber Sheet	AEB1111		66	Binder	ZCA-SKB90BK
NSP	32	Chassis M(Mtl)	XNA3007				
	33	LT Conductor M (Pls)	XAK3217				
	34	Shaft Assy	XXG3076				
	35	Jog Knob(Pls)	XAA3018				

**(2) CONTRAST TABLE**

XV-IS22DVD/ZBDXJ and ZLXJ/NC are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.		Remarks
			ZBDXJ type	ZLXJ/NC type	
NSP	44	Name Label	XAL3084	XAL3086	

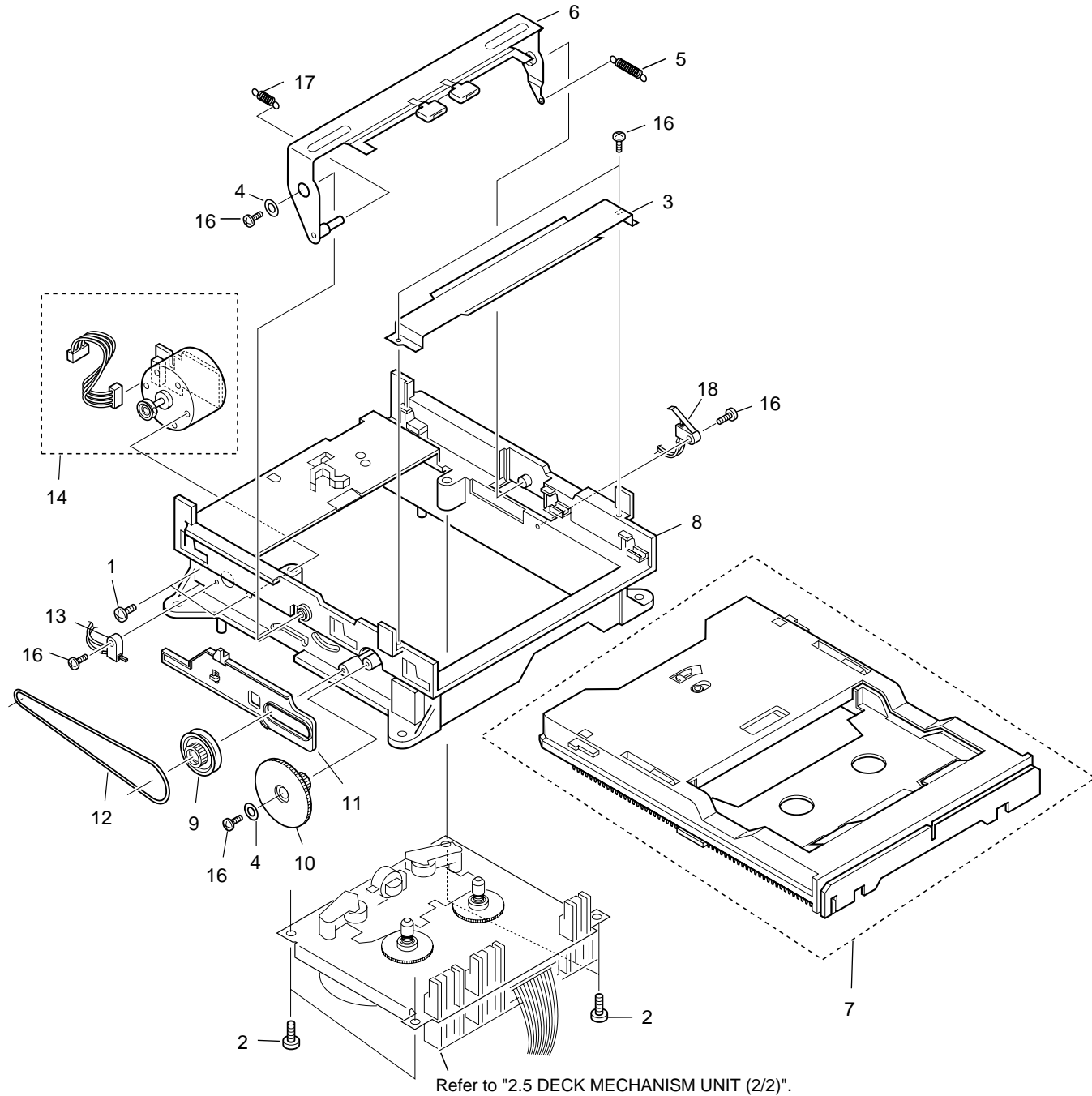
### 2.3 FRONT PANEL ASSY



## ● FRONT PANEL ASSY PARTS LIST

Mark	No.	Description	Parts No.
NSP	1	FRONT PANEL ASSY	XWZ3408
NSP	2	F-TERMINAL ASSY	XWZ3472
NSP	3	CD OPEN SW ASSY	XWZ3411
NSP	4	CD CLOSE SW ASSY	XWZ3412
NSP	5	LIGHT- L ASSY	XWZ3413
NSP	6	LIGHT- R ASSY	XWZ3414
NSP	7	MEDIA BLUE LED ASSY	XWZ3415
	8	LCD ASSY	XAV3012
	9	17p F.F.C/30V	XDD3082
	10	Func. Button L (Pls)	XAD3080
	11	Func. Button R (Pls)	XAD3081
	12	Side Button L (Pls)	XAD3082
	13	Side Button R (Pls)	XAD3083
	14	O/C Key(Pls)	XAD3084
	15	Frame DV (Mtl)	XNG3050
	16	Frame R (Mtl)	XNG3049
	17	O/C Key Base (Pls)	XAK3189
	18	Display Window (Pls)	XAK3190
	19	PCB Holder(Pls)	XMR3030
	20	Lens M(Pls)	XAK3192
	21	Front Panel DVD (Pls)	XMB3055
	22	Blind DV(Pls)	XMR3027
	23	Blind R(Pls)	XMR3025
	24	R.C. Holder L (Pls)	XMR3039
	25	R.C. Holder R (Pls)	XMR3040
	26	LCD Cover (Pls)	XAK3233
	27	Rail R(Pls)	XMR3024
	28	Rail DV(Pls)	XMR3026
	29	Ring Button (Pls)	XAD3098
	30	Cord Clamper (Steel)	RNH-184
	31	Screw With Washer	ABA1005
	32	Screw (P3 x 20)	XBA3006
	33	Screw	IPZ30P100FMC
	34	Screw	VPZ30P080FZK
	35	Connector Assy 12p	ADX3014
	36	Screw	BPZ30P060FZK
	37	Diffusion Sheet	XAK3234
	38	Lens Holder	XMR3028
	39	Sensor Cover	XAK3270
	40	Screw	VPZ30P100FMC
	41	Binder	ZCA-SKB90BK

## 2.4 DECK MECHANISM UNIT (1/2)

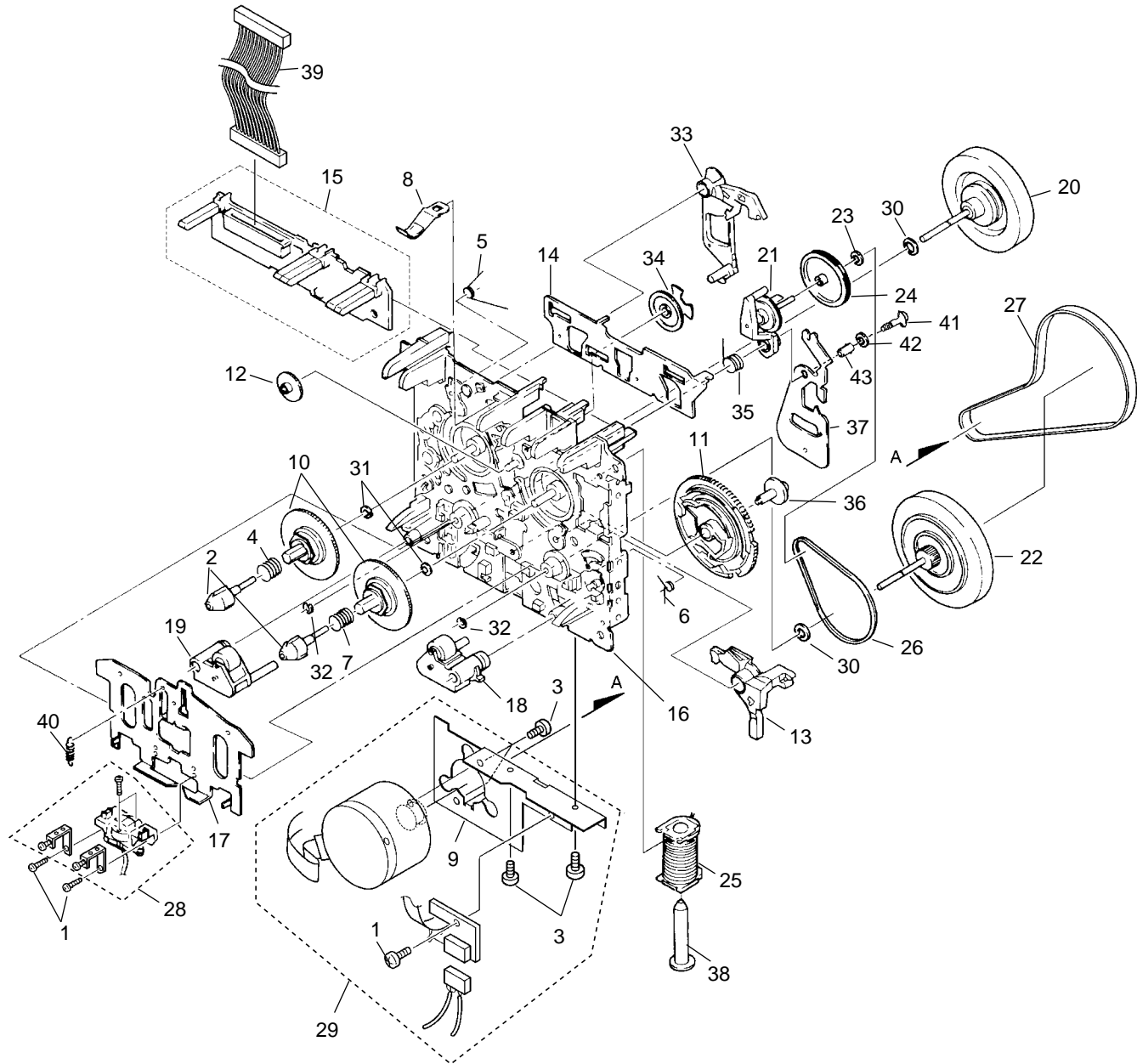




## ● DECK MECHANISM UNIT (1/2) PARTS LIST

Mark	No.	Description	Parts No.
	1	Screw	FG114-14
	2	Screw	UG12H-15
	3	Front BKT	FC64K-11
	4	Washer	MJ112-22
	5	SP Return	FK34N-11
	6	Plate Hold BLK	F573-258
	7	Holder CST BLK	F527-078
	8	LDG Base	FD56R-12
	9	Pulley	FD56T-11
	10	LDG Gear	FD56U-11
	11	Slider	FD57E-11
	12	LDG Belt	FF19L-12
	13	Switch	UE15S-14
	14	MTR Reel BLK	F564-313
	15	.....	
	16	Screw	UG12H-28
	17	SP Clamper	FK34M-11
	18	Switch	UE18P-21

2.5 DECK MECHANISM UNIT (2/2)

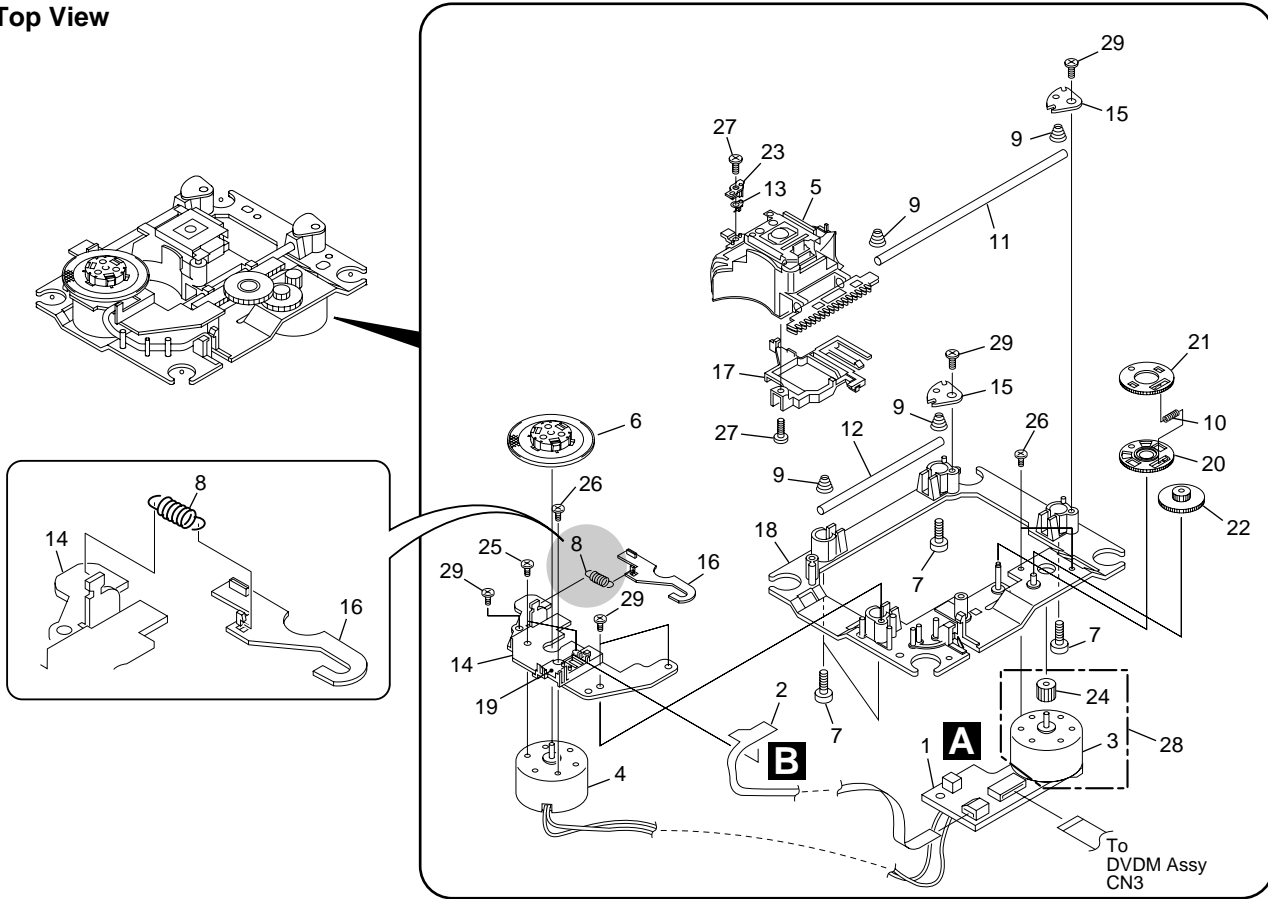


## ● DECK MECHANISM UNIT (2/2) PARTS LIST

Mark	No.	Description	Parts No.
	1	Screw	KG194-36
	2	Reel Feather	FD57D-13
	3	Screw	UG11S-14
	4	SP Reel(L)	FK32U-12
	5	SP Brake	FK33B-13
	6	SP Arm Play	FK33P-11
	7	SP Reel(R)	FK32V-12
	8	Spring Cassette	FC65M-11
	9	BKT MTR	FC64M-12
	10	Reel Base	FD52W-12
	11	Cam Gear	FD52Y-23
	12	Play Gear (A)	FD53K-12
	13	Arm Play	FD53D-19
	14	Plate Slide	FC61L-19
	15	PCB Control BLK	F567-617
	16	Chassis base BLK	F612-231
	17	Head Base	FC61K-32
	18	Roller Pinch BLK R	F514-129
	19	Roller Pinch BLK L	F514-130
	20	Assy F/W	FR24S-21
	21	Clutch Assy BLK	F522-037
	22	Clutch Assy BLK	F522-048
	23	Washer	FJ111-13
	24	F/R Pulley	FD53F-15
	25	Solenoid BLK	F765-279
	26	F/R Belt	FF18W-12
	27	Belt Main	FF19H-11
	28	Plate HD BLK	F513-824
	29	MTR MAIN BLK	F525-321
	30	Washer	FJ111-30
	31	Washer	FJ111-35
	32	Washer	UJ16F-11
	33	Lever Brake	FD53P-17
	34	FF Gear(A)	FD53L-12
	35	Cam SP	FK32S-14
	36	Screw	UJ14A-12
	37	Lever F/R	FC62G-14
	38	Plunger	FL41S-21
	39	Mecha-Cable	WH65N-11
	40	Spring HB	FK32T- 31
	41	Screw	UG15V-13
	42	Washer	MJ112- 22
	43	Spacer	UJ15V- 13

## 2.6 TRAVERSE MECHANISM ASSY-S

• Top View



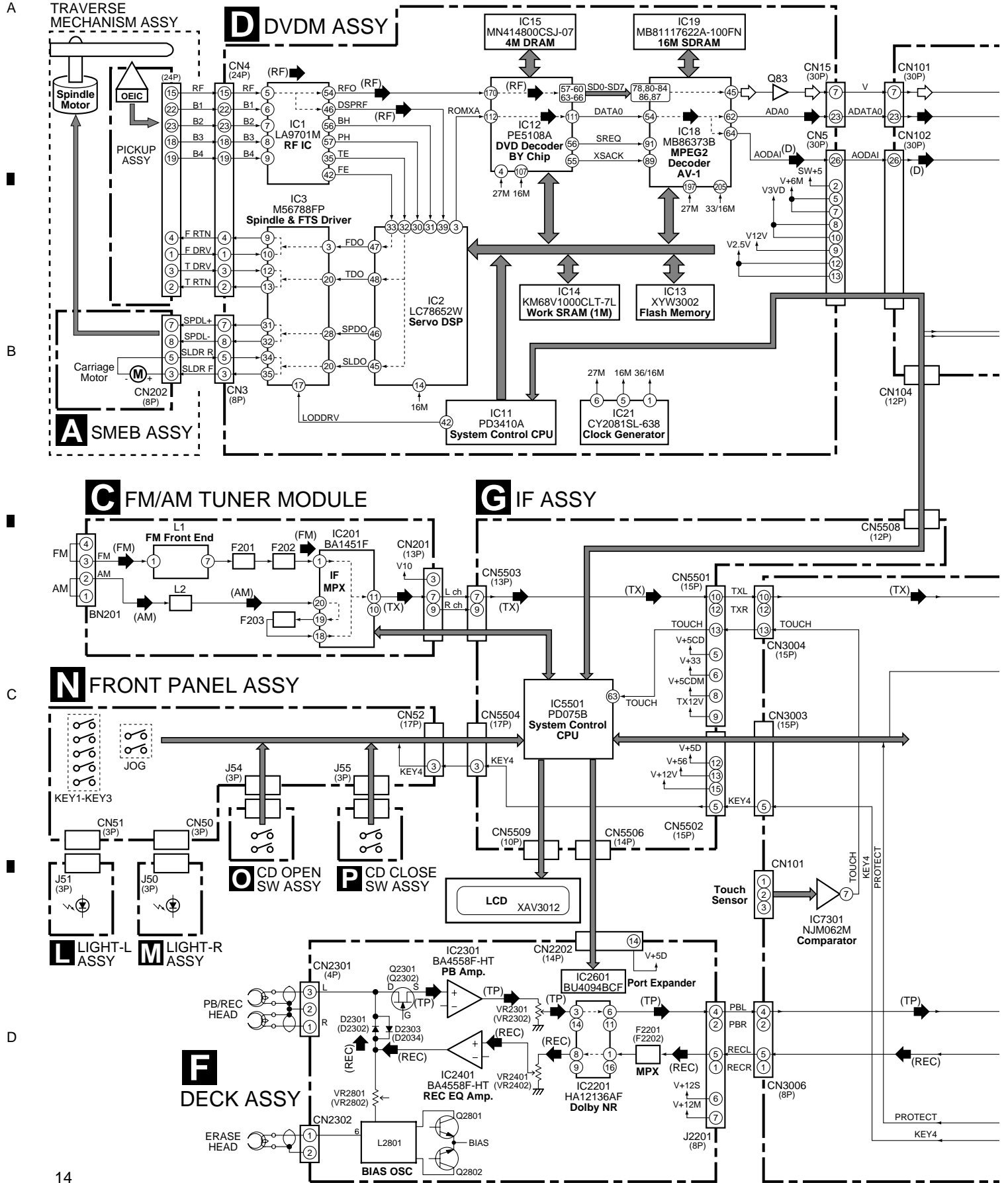
### • TRAVERSE MECHANISM ASSY-S PARTS LIST

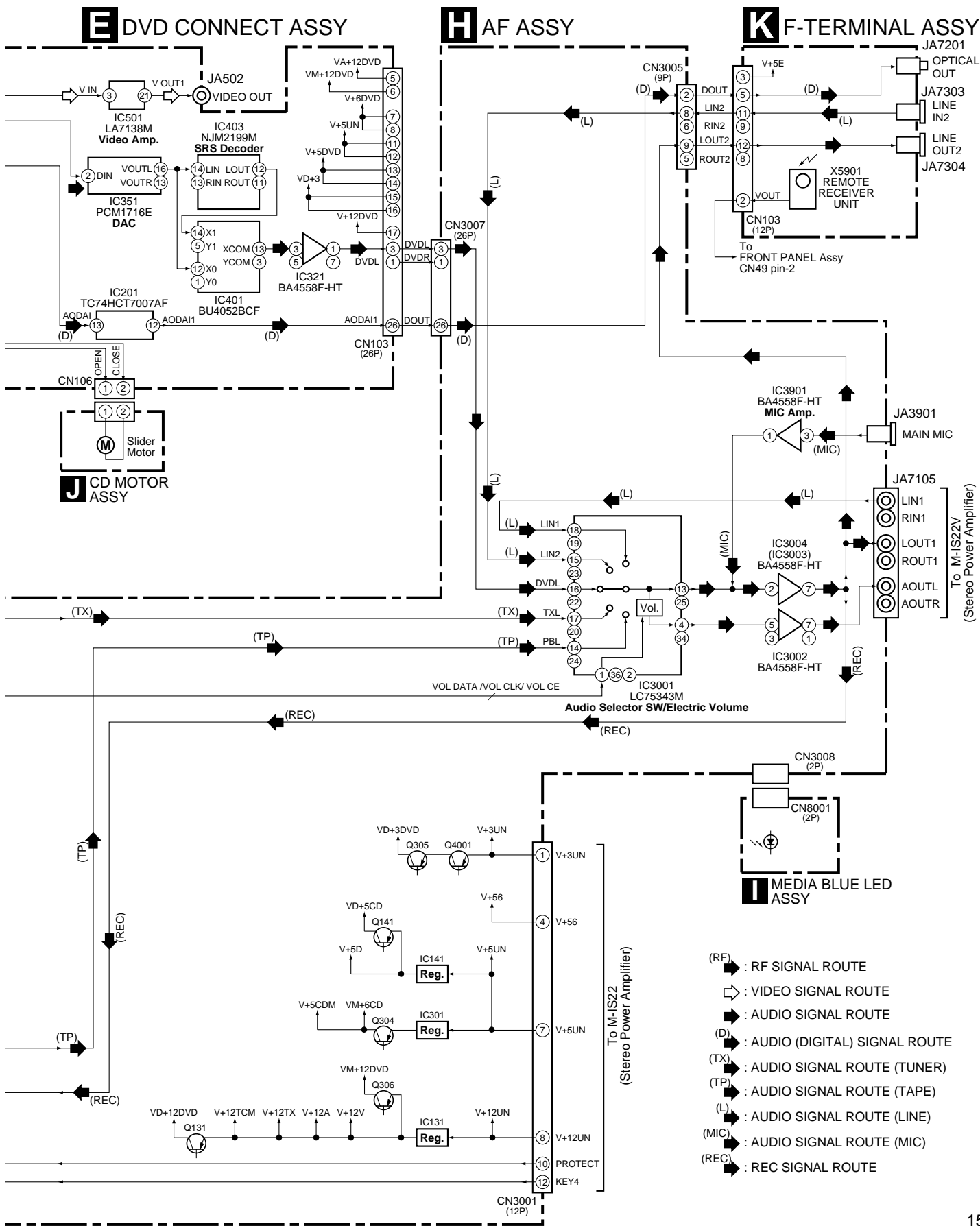
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	SMEB Assy	VWG2048		16	Hook	VNL1770
NSP	2	FGSB Assy	VWG2009		17	FFC Holder	XNL3002
NSP	3	Motor (CARRIAGE)	VXM1079		18	Mechanism Base	VNL1806
NSP	4	Motor (SPINDLE)	VXM1084		19	FG Holder	VNL1807
△ NSP	5	Pickup Assy	VWY1055		20	Gear A	VNL1808
	6	Disc Table Assy	XXA3026		21	Gear B	VNL1809
	7	Screw	VBA1058		22	Gear C	VNL1810
	8	Hook Spring	XBH3013		23	Slider	VNL1811
	9	Skew Spring	VBH1303		24	Gear D	VNL1814
	10	Gear Spring	VBH1308		25	Screw	JFZ17P025FZK
	11	Guide Bar	VLL1504		26	Screw	JGZ17P028FMC
	12	Sub-guide Bar	VLL1505		27	Screw	VBA1051
	13	Hold Spring	VNC1017		28	Carriage Motor Assy	VXX2650
NSP	14	Motor Base	VNE2154	NSP	29	Screw	PBA1069
NSP	15	Cover	VNE2155				



# 3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

## 3.1 BLOCK DIAGRAM





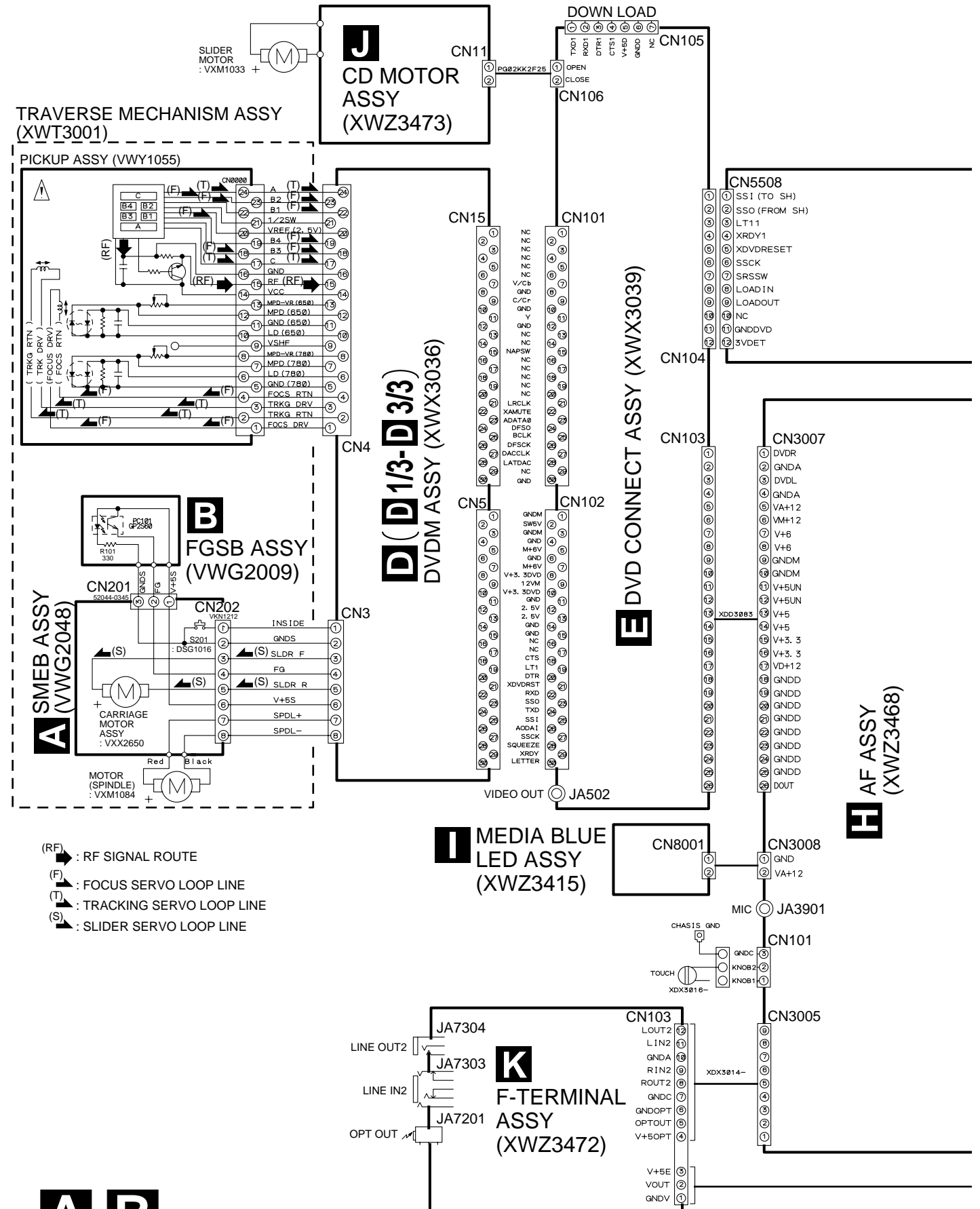
A

B

C

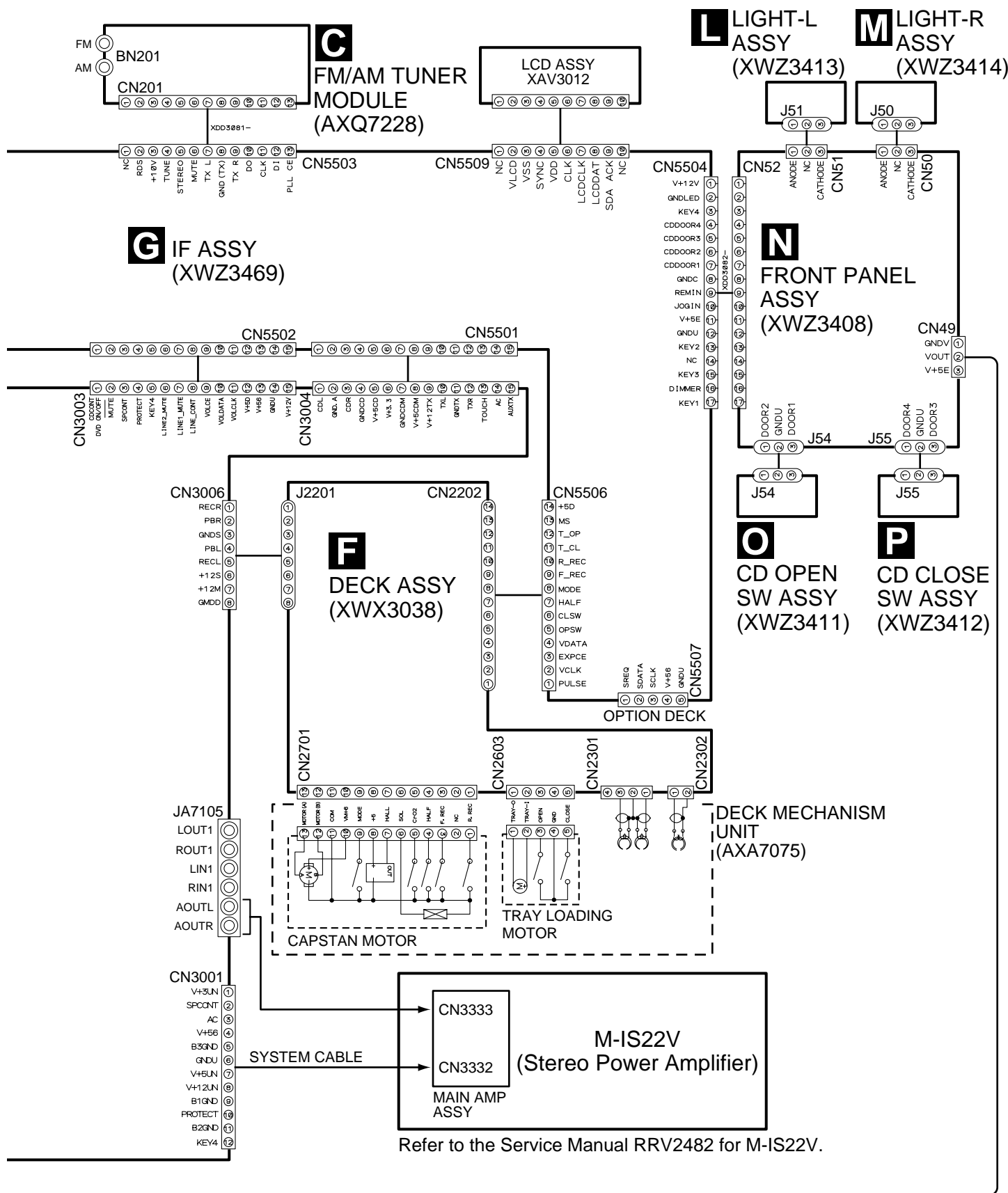
D

3.2 SMEB, FGSB ASSYS and OVERALL WIRING DIAGRAM



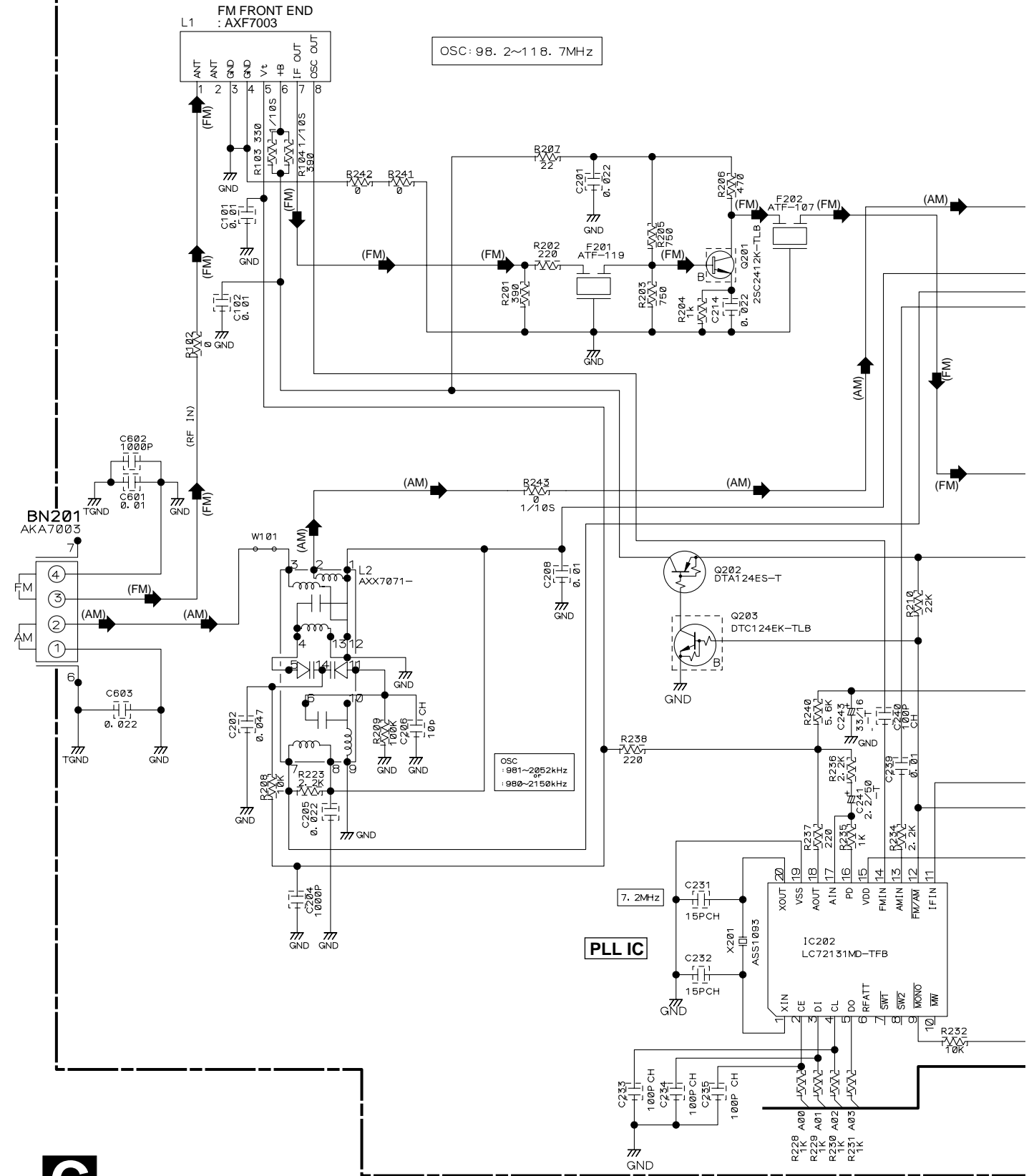


Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



### 3.3 FM/AM TUNER MODULE

#### FM/AM TUNER MODULE (AXQ7228)



5

6

7

8

XV-IS22DVD

Notes

1. RESISTORS

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

2. CAPACITORS

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

3. DIODES

No mark diode is 1SS133.

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

O : The power supply is shown with the marked box.

5

6

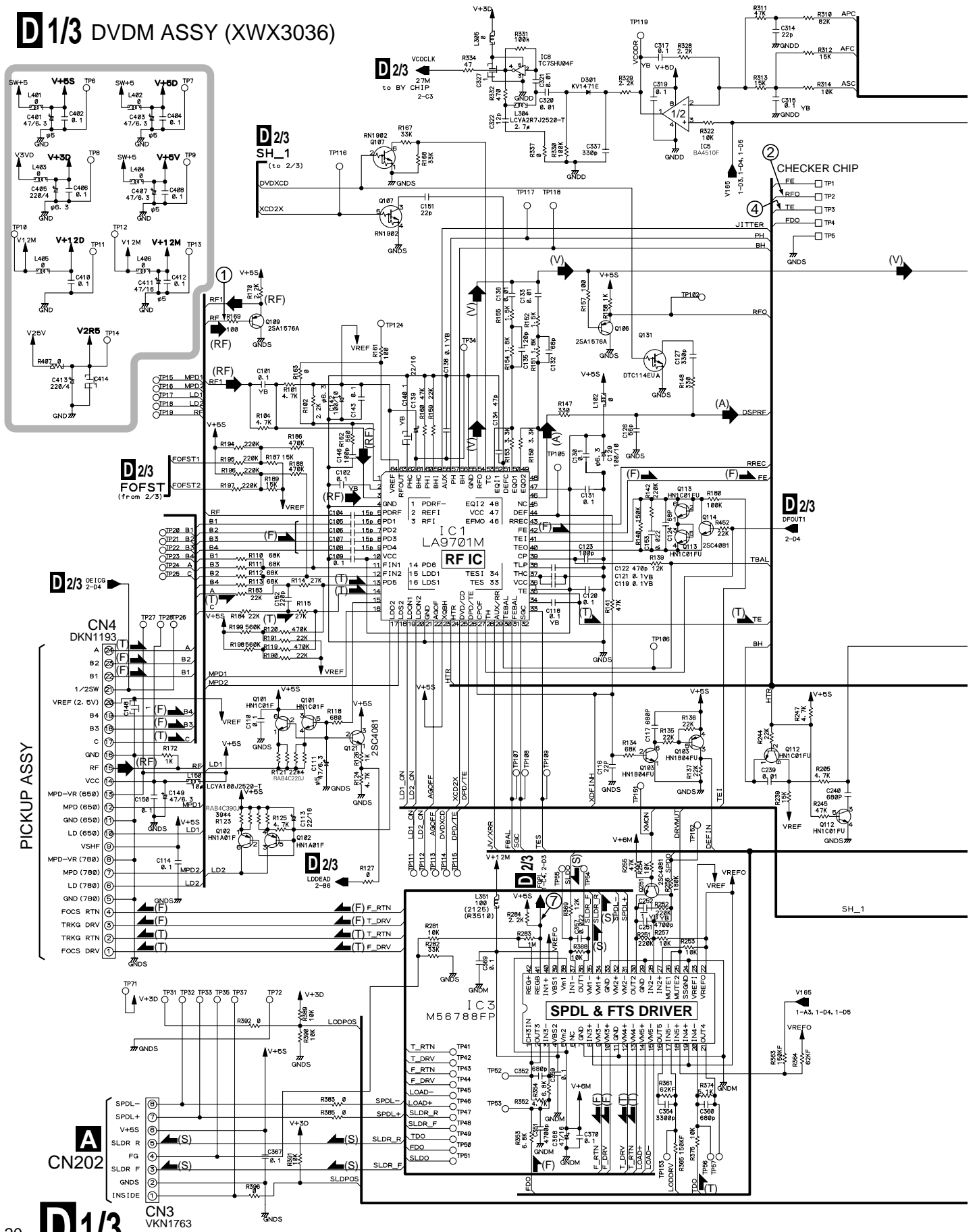
7


8

19

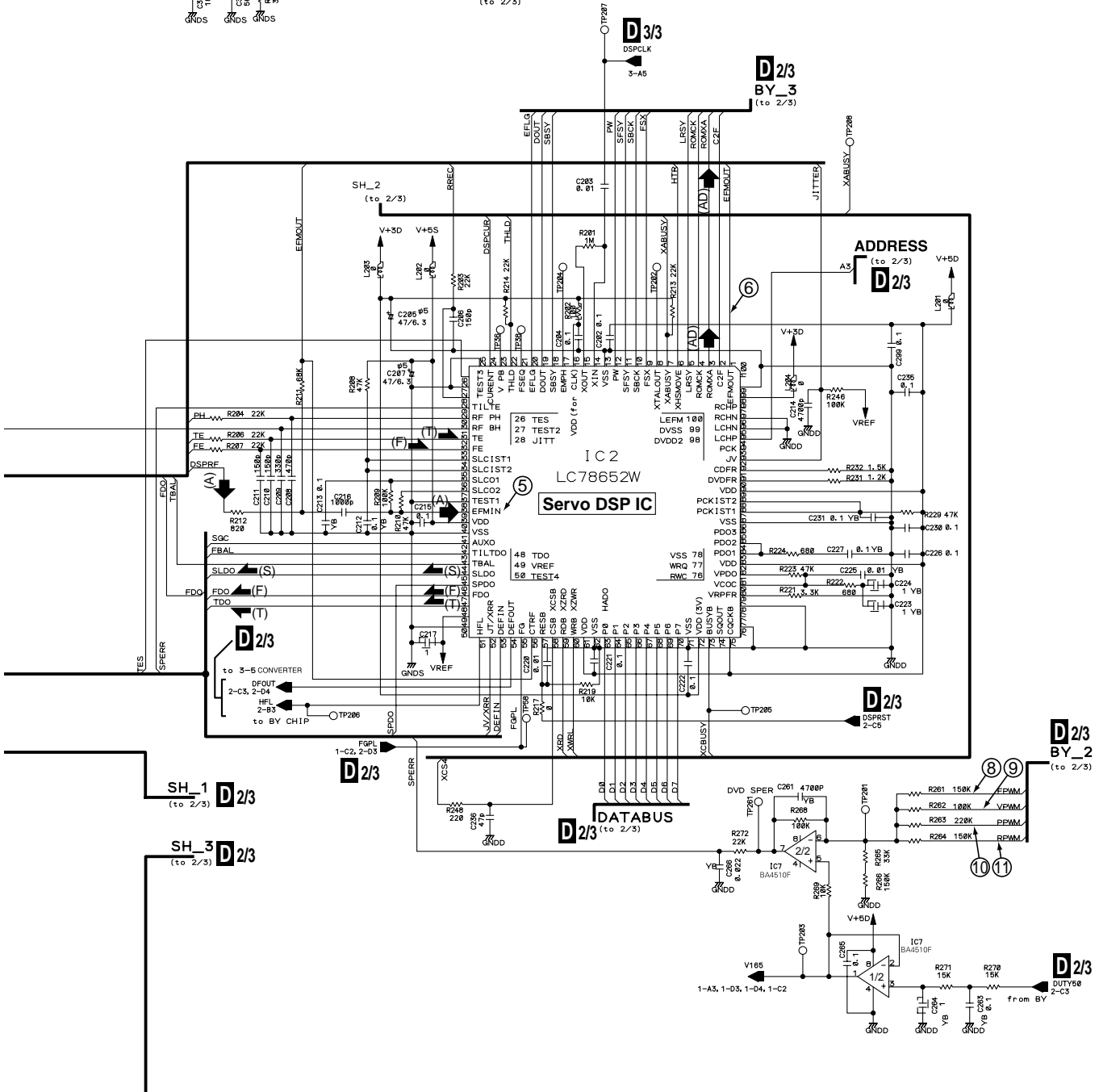
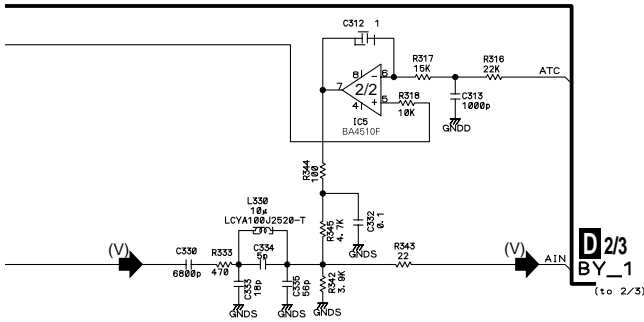
3.4 DVDM ASSY (1/3)

D 1/3 DVDM ASSY (XWX3036)



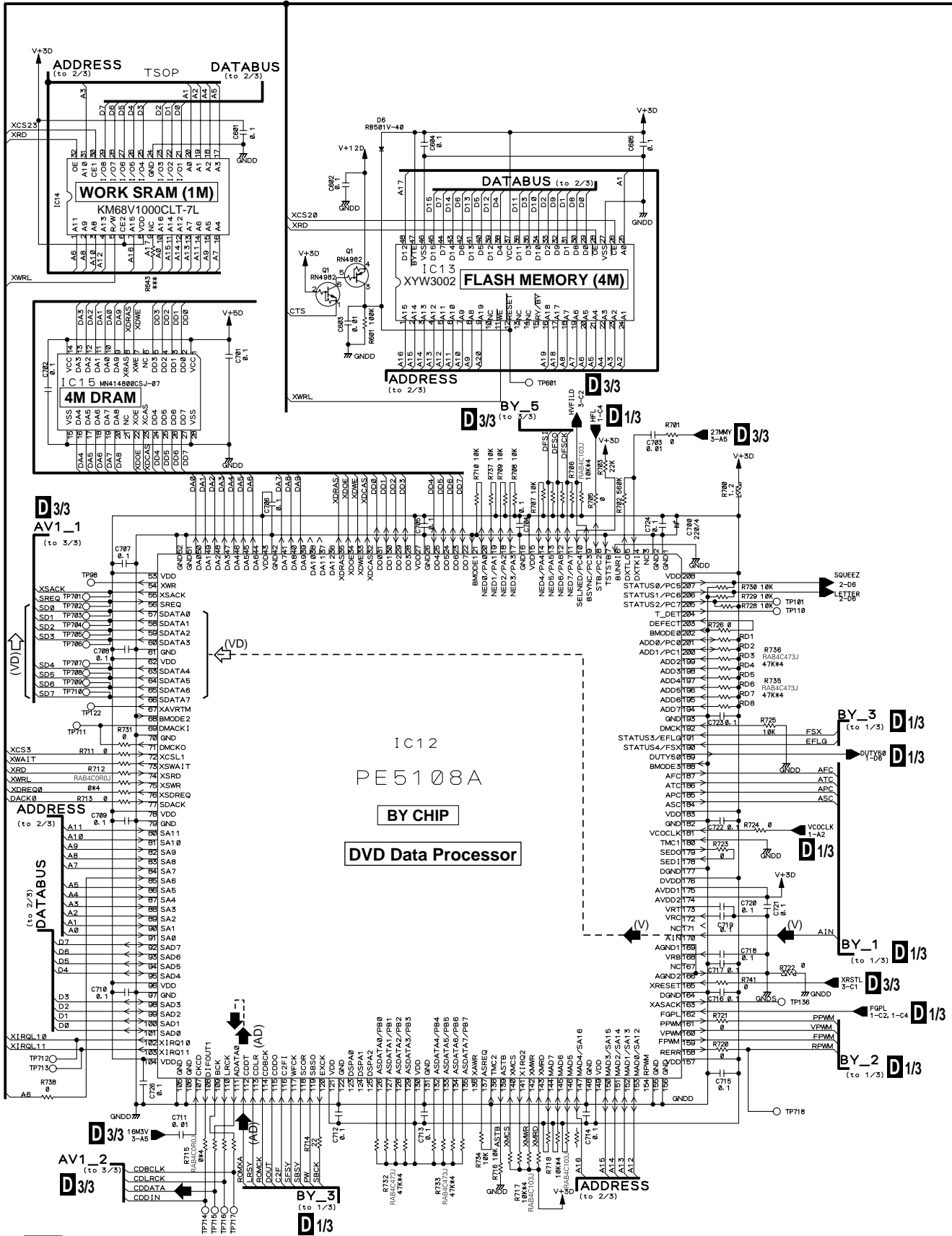
 : The power supply is shown with the marked box.

- (RF) : RF SIGNAL ROUTE
- (V) : RF (VIDEO) SIGNAL ROUTE
- (A) : RF (AUDIO) SIGNAL ROUTE
- (AD) : AUDIO DATA SIGNAL ROUTE
- (F) : FOCUS SERVO LOOP LINE
- (T) : TRACKING SERVO LOOP LINE
- (S) : SLIDER SERVO LOOP LINE



3.5 DVDM ASSY (2/3)

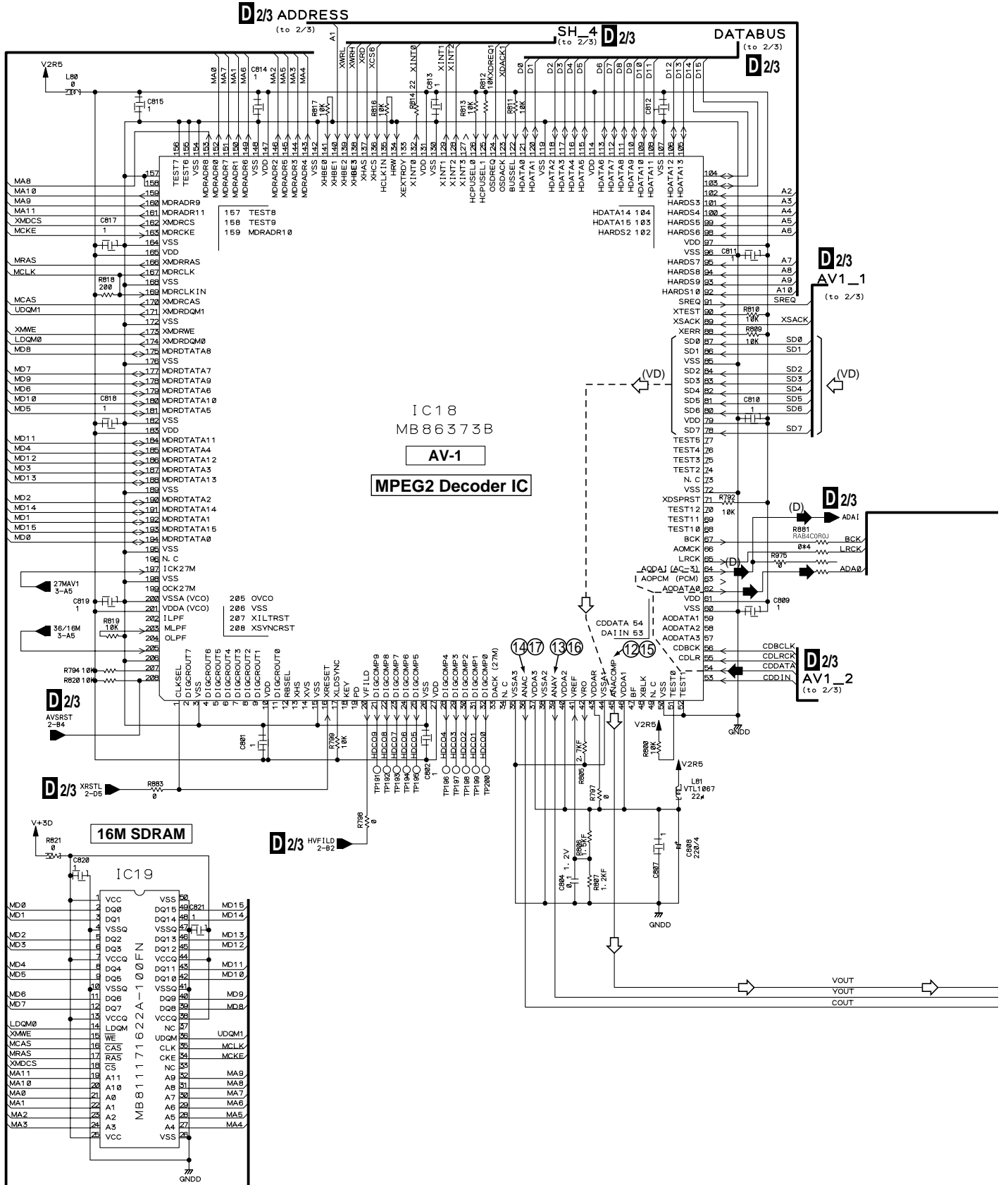
D 2/3 DVDM ASSY (XWX3036)



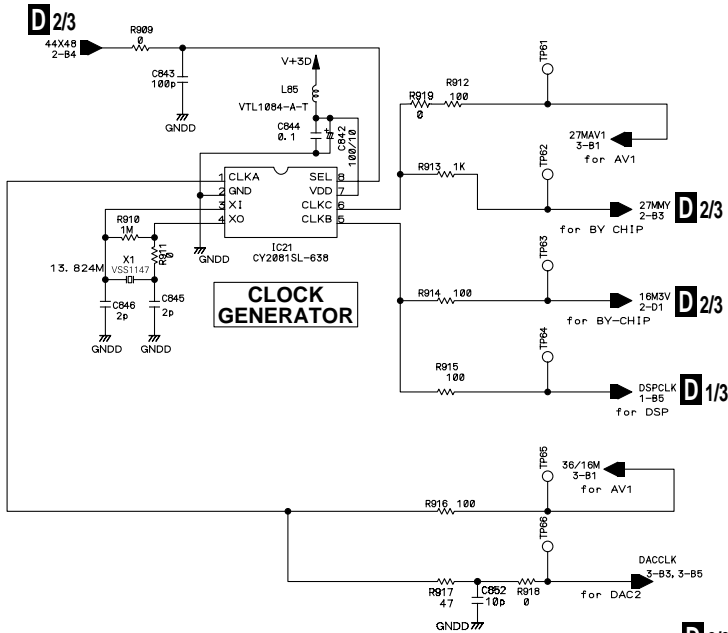


3.6 DVDM ASSY (3/3)

D3/3 DVDM ASSY (XWX3036)



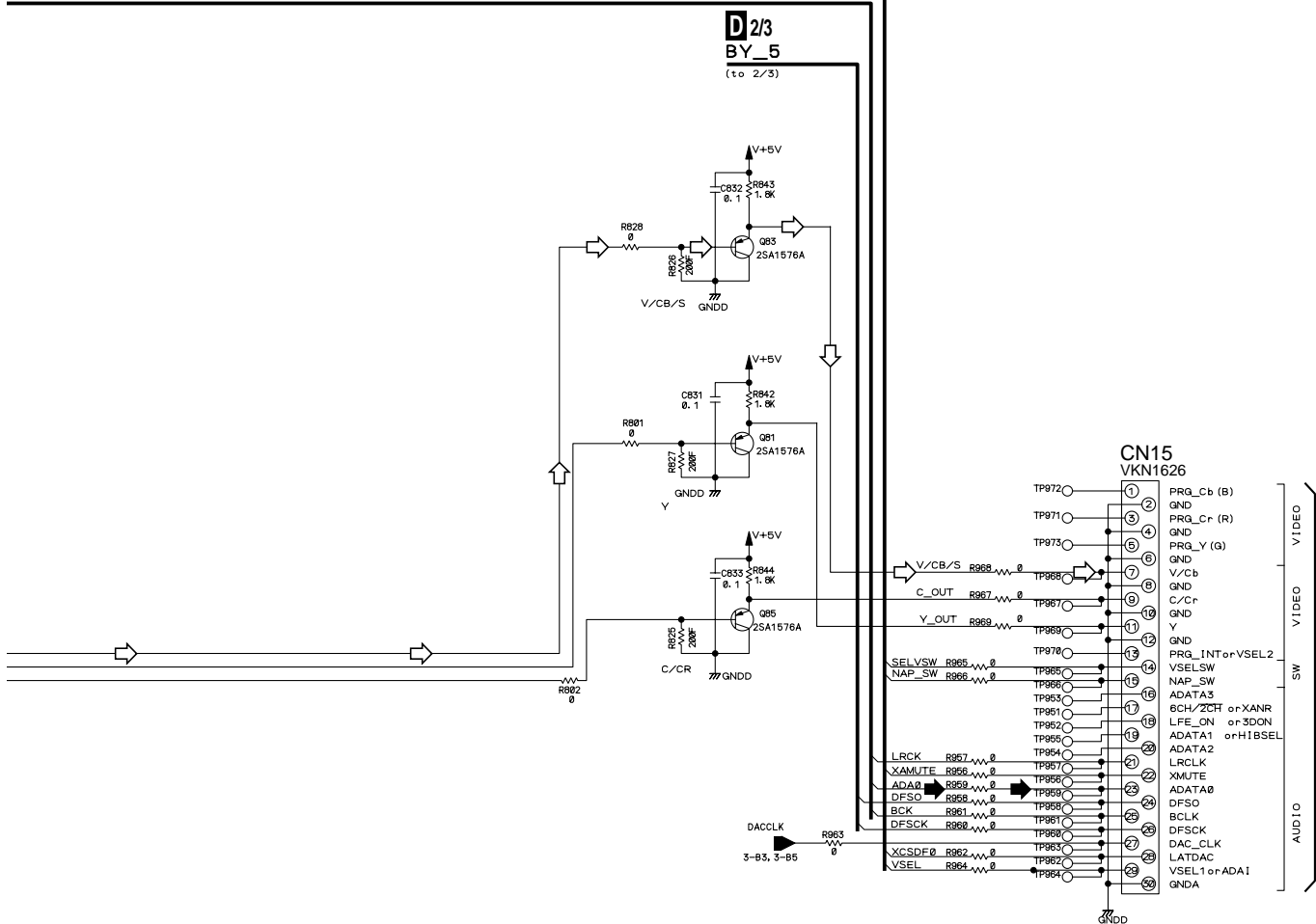




- (VD) □ : VIDEO DATA SIGNAL ROUTE
- : VIDEO SIGNAL ROUTE
- ▣ : AUDIO SIGNAL ROUTE
- (D) ▣ : AUDIO (DIGITAL) SIGNAL ROUTE

**D 2/3**  
SH\_5  
(to 2/3)

**D 2/3**  
BY\_5  
(to 2/3)



**E** CN101

3.7 DVD CONNECT ASSY

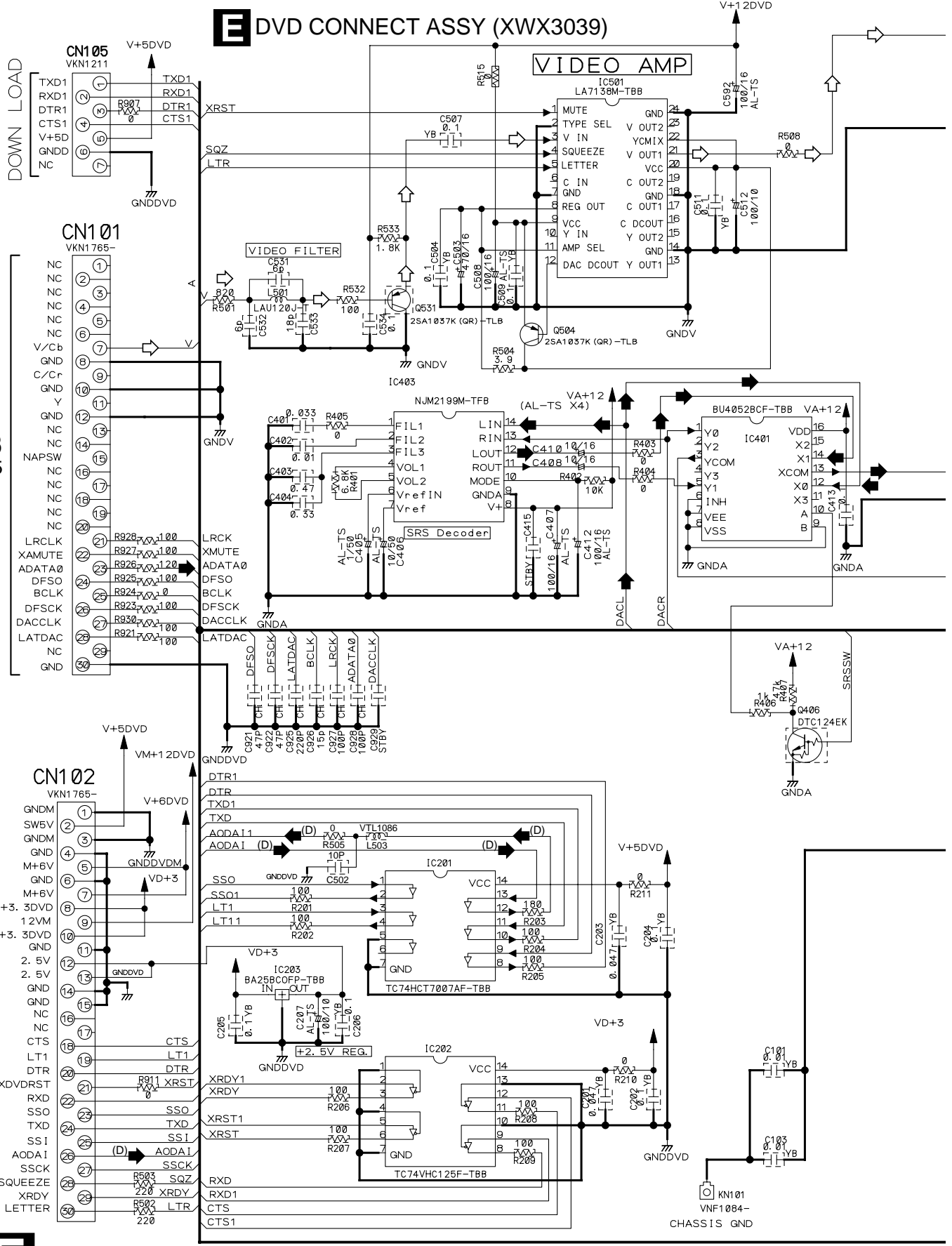
DVD CONNECT ASSY (XWX3039)


A

B

C

D

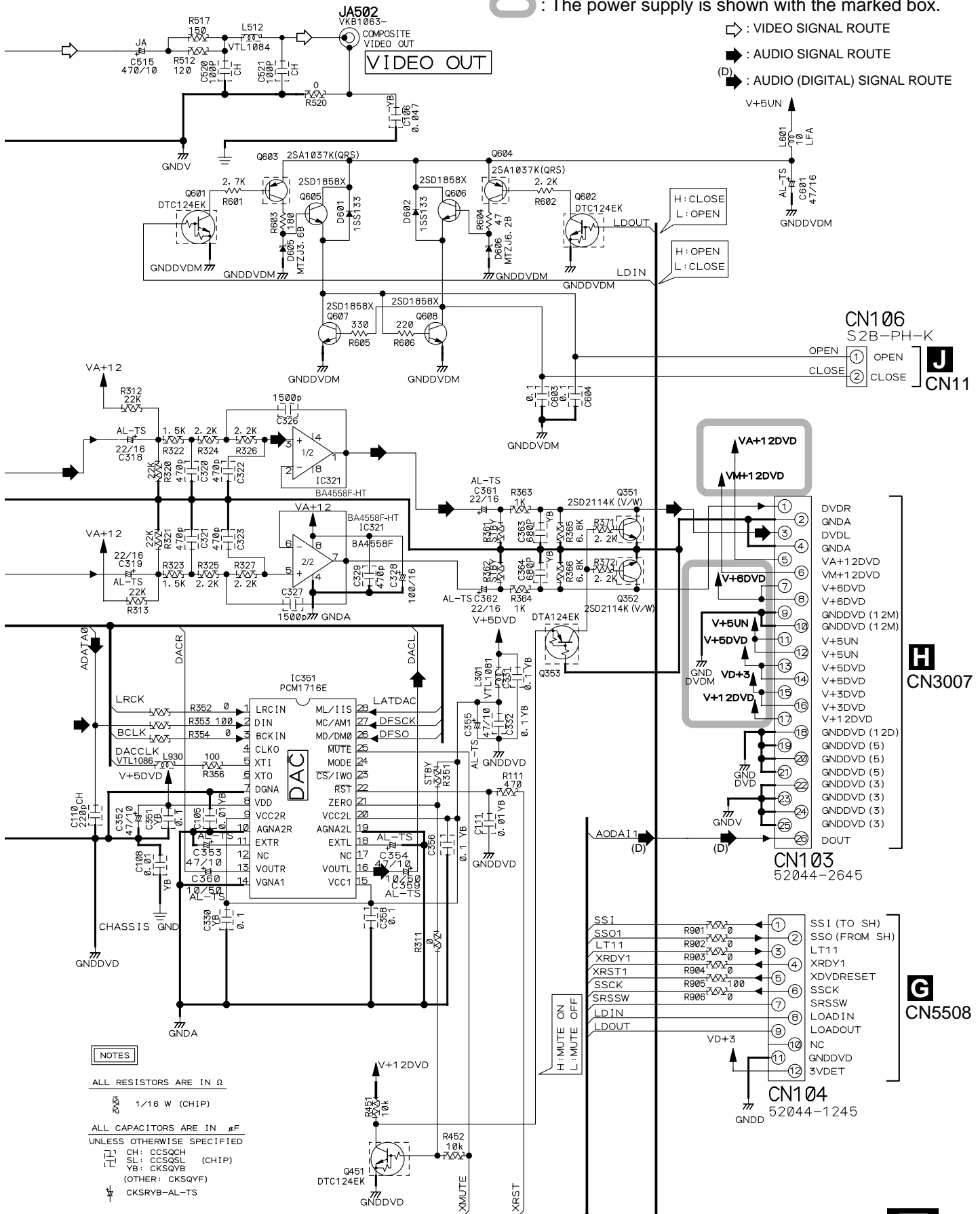


 : The power supply is shown with the marked box.

 : VIDEO SIGNAL ROUTE


 : AUDIO SIGNAL ROUTE

(D)  : AUDIO (DIGITAL) SIGNAL ROUTE







**NOTES**

ALL RESISTORS ARE IN  $\Omega$

 1/16 W (CHIP)

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

 CH: CCSQCH  
 SL: CCSQSL (CHIP)  
 YB: CKSQYB  
(OTHER: CKSQYF)  
 CKSRYB-AL-TS

A  
B  
C  
D



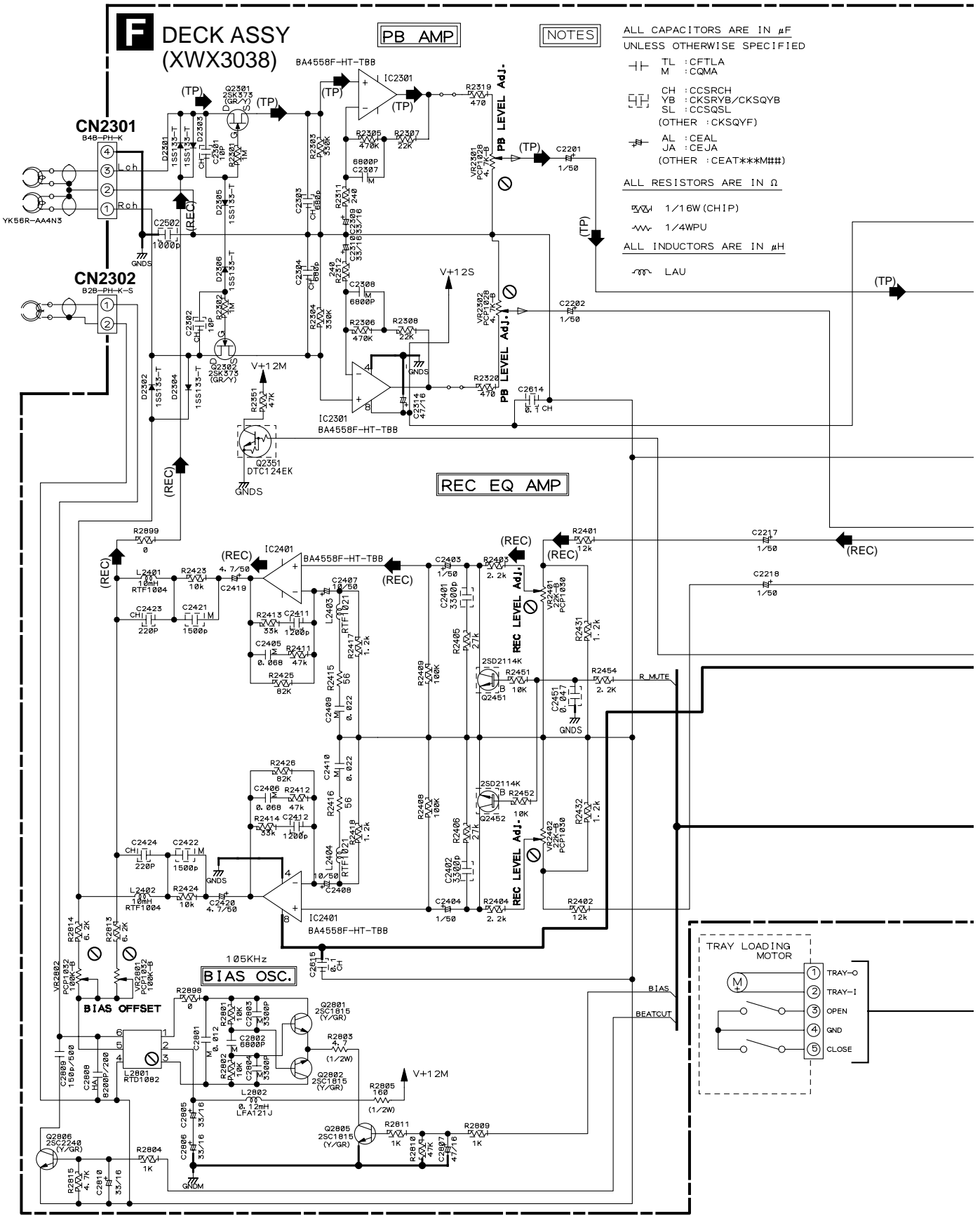
3.8 DECK ASSY

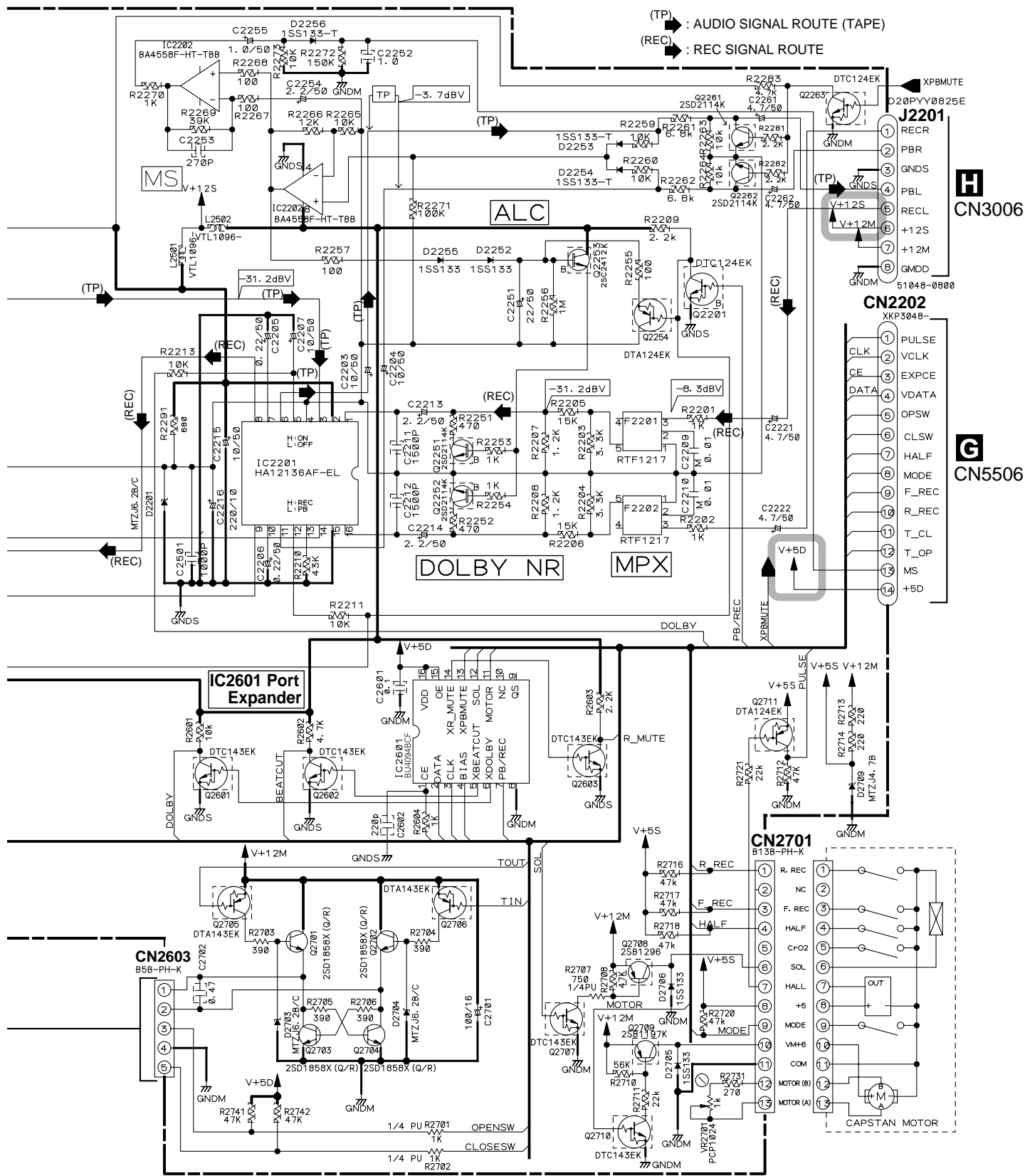
A

B

C

D





○ : The power supply is shown with the marked box.

### 3.9 IF ASSY

**G** IF ASSY  
(XWZ3469)

**C** CN201

**CN5503**  
52045-1345

**CN5501**  
KM200TA15

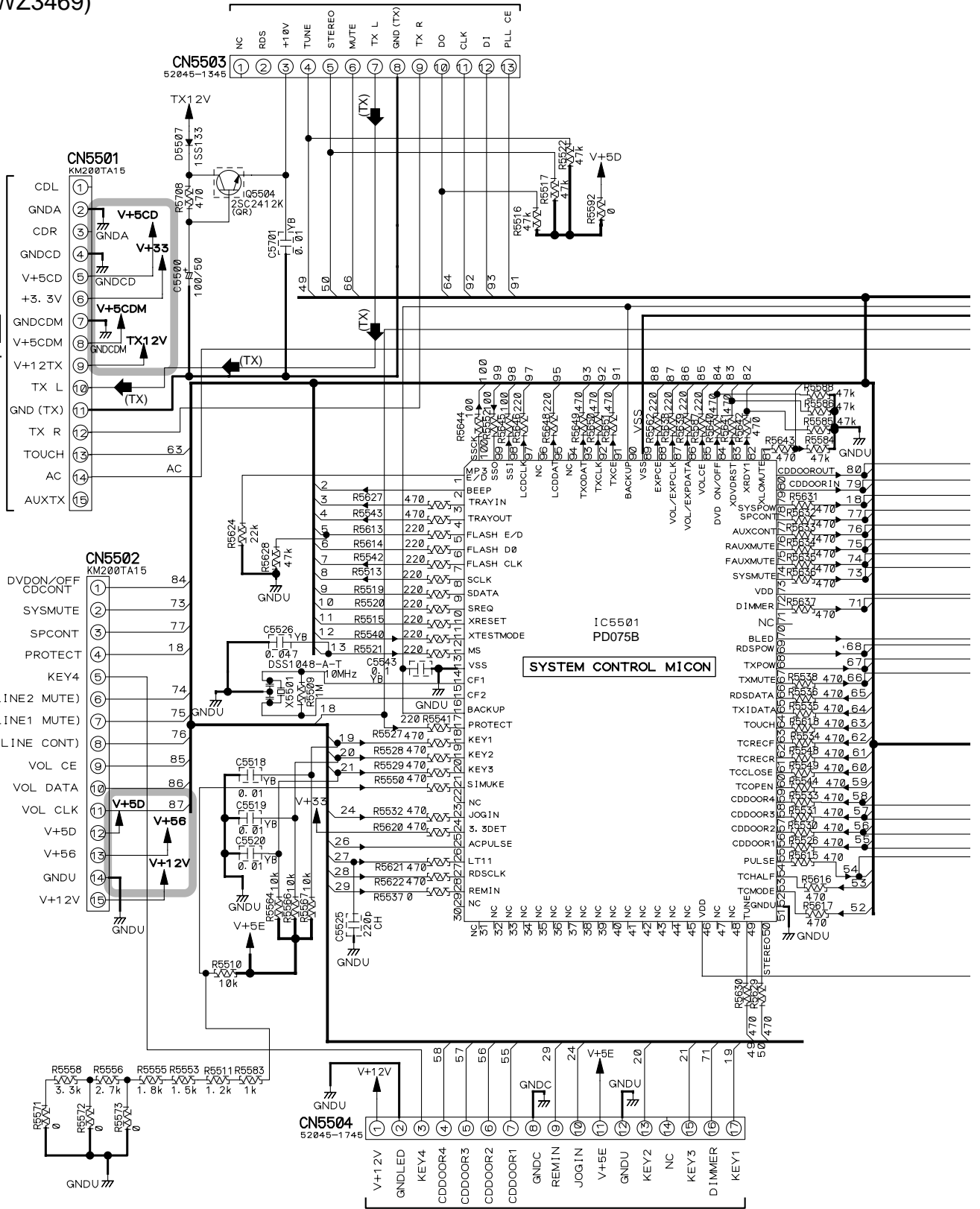
**H** CN3004

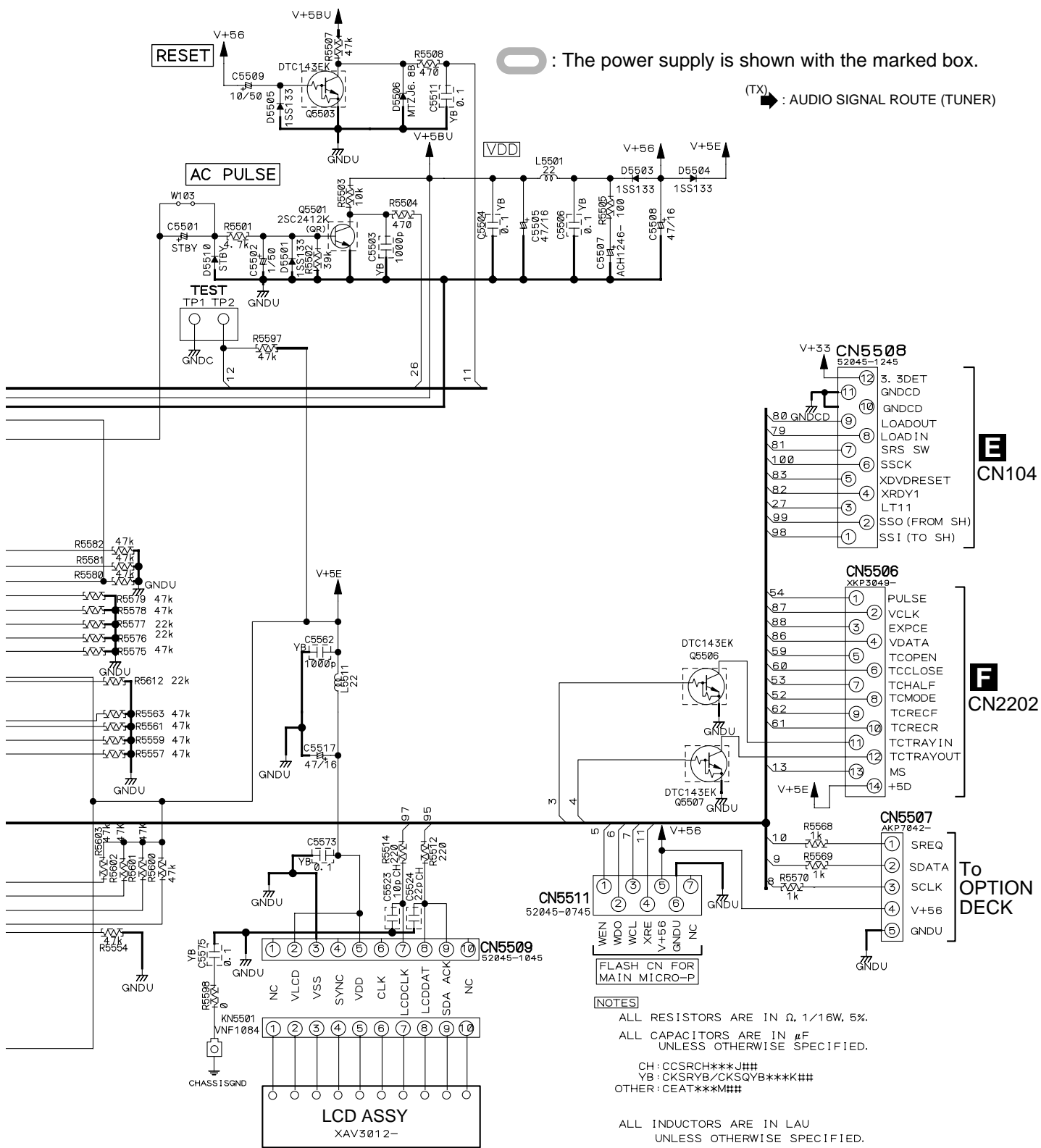
**CN5502**  
KM200TA15

**H** CN3003

**CN5504**  
52045-1745

**N** CN52





  : The power supply is shown with the marked box.

(TX) : AUDIO SIGNAL ROUTE (TUNER)

**E** CN104

**F** CN2202

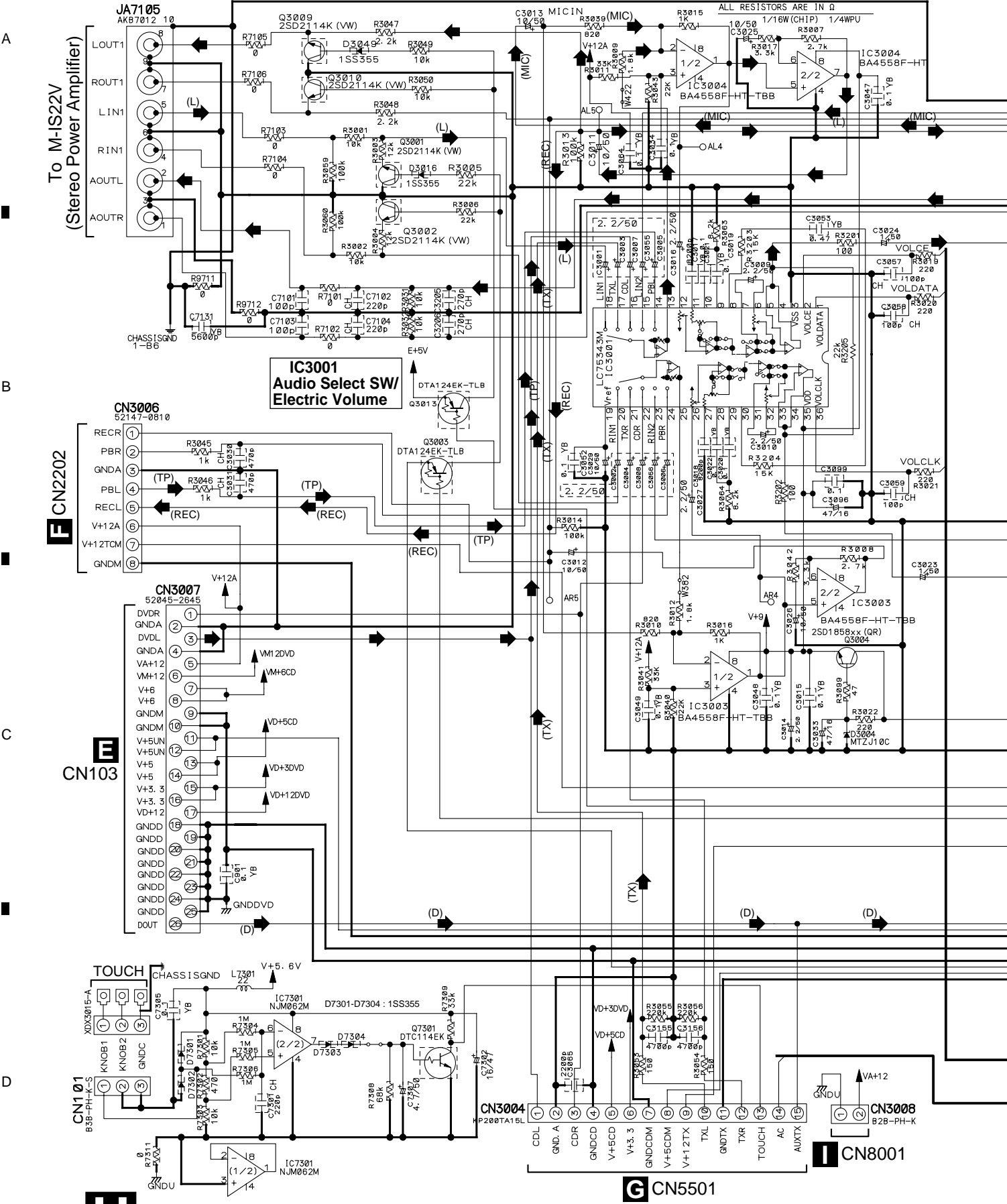
To OPTION DECK

- NOTES**
- ALL RESISTORS ARE IN Ω, 1/16W, 5%.
  - ALL CAPACITORS ARE IN μF UNLESS OTHERWISE SPECIFIED.
  - CH: CCSRCH\*\*\*J##
  - YB: CKSRYB/CKSQYB\*\*\*K##
  - OTHER: CEAT\*\*\*M##
  - ALL INDUCTORS ARE IN LAU UNLESS OTHERWISE SPECIFIED.
  - ALL DIODES ARE 1S133 UNLESS OTHERWISE SPECIFIED.



3.10 AF ASSY

AF ASSY (XWZ3468)





NOTES

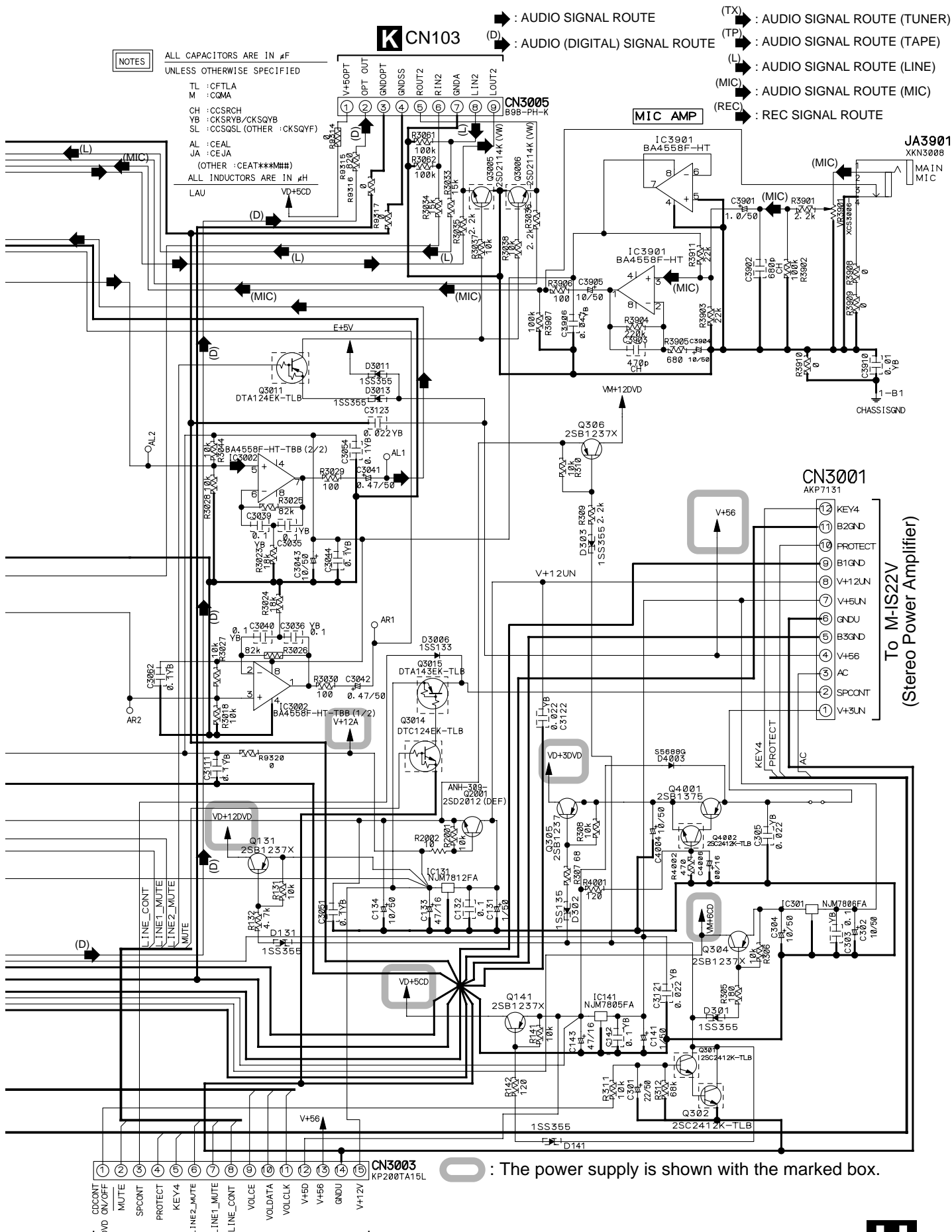
ALL CAPACITORS ARE IN  $\mu$ F  
UNLESS OTHERWISE SPECIFIED

TL : CFTLA  
M : COMA  
CH : CCSRCH  
YB : CKSRVB/CKSQVB  
SL : CCSQSL (OTHER : CKSQVF)

AL : CEAL  
JA : CEJA  
(OTHER : CEAT\*\*\*###)

ALL INDUCTORS ARE IN  $\mu$ H  
LAU

▶ : AUDIO SIGNAL ROUTE  
(D) : AUDIO (DIGITAL) SIGNAL ROUTE  
(TX) : AUDIO SIGNAL ROUTE (TUNER)  
(TP) : AUDIO SIGNAL ROUTE (TAPE)  
(L) : AUDIO SIGNAL ROUTE (LINE)  
(MIC) : AUDIO SIGNAL ROUTE (MIC)  
(REC) : REC SIGNAL ROUTE



K CN103

CN3005

MIC AMP

JA3901  
XKN3008  
MAIN MIC

CN3001  
AKP7131

To M-IS22V  
(Stereo Power Amplifier)

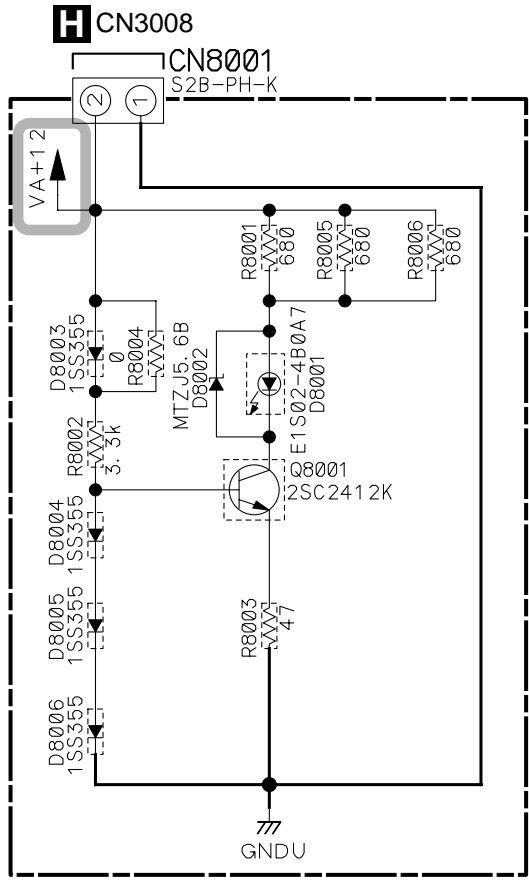
CN3003  
KP200TA15L

○ : The power supply is shown with the marked box.



### 3.11 MEDIA BLUE LED, CD MOTOR and F-TERMINAL ASSYS

A

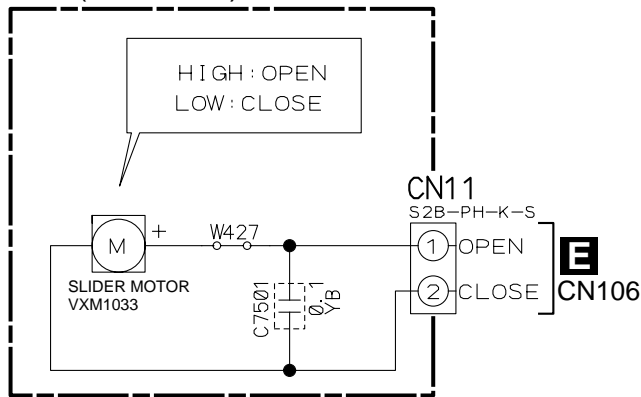


B

**I** MEDIA BLUE LED ASSY (XWZ3415)

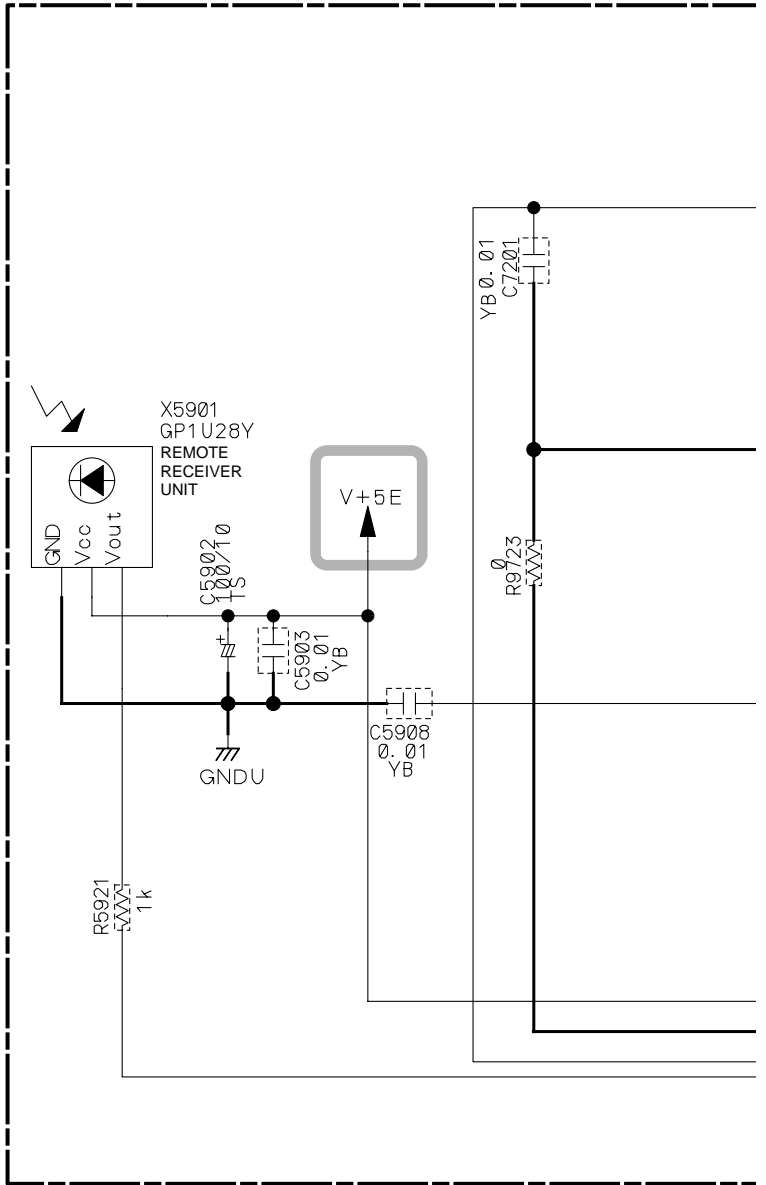
C

**J** CD MOTOR ASSY (XWZ3473)



D


**K** F-TERMINAL ASSY (XWZ3472)





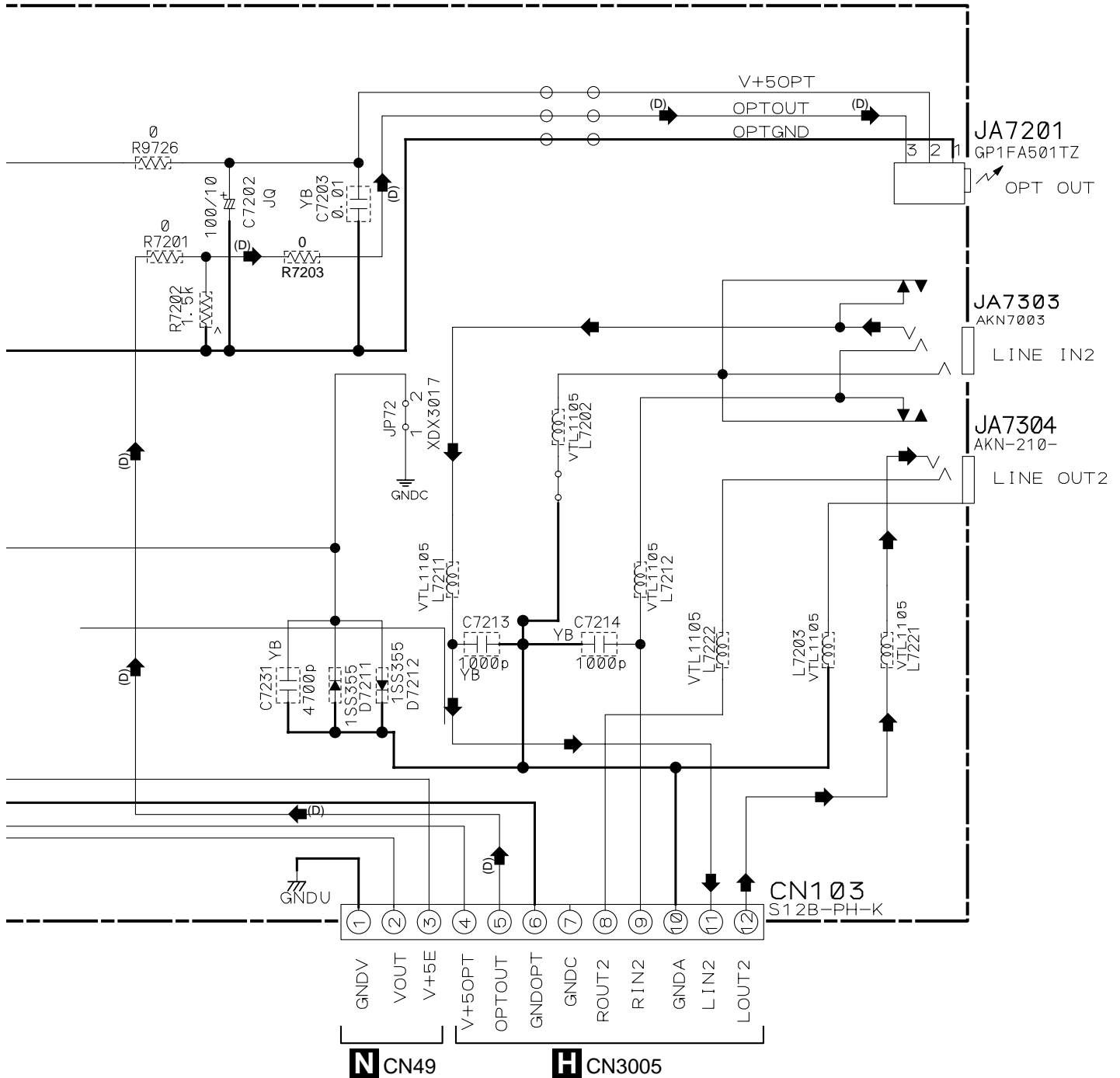
NOTES

ALL RESISTORS ARE IN Ω  
 1/16W (CHIP)  
 1/4WPU  
 ALL INDUCTORS ARE IN μH  
 LAU

ALL CAPACITORS ARE IN μF  
 UNLESS OTHERWISE SPECIFIED  
 TL : CFTLA  
 M : CQMA  
 CH : CCSRCH  
 YB : CKSRYB/CKSQYB  
 SL : CCSQSL  
 (OTHER : CKSQYF)  
 AL : CEAL  
 JA : CEJA  
 (OTHER : CEAT\*\*\*M##)  
 ALL DIODES ARE 1S355  
 UNLESS OTHERWISE SPECIFIED

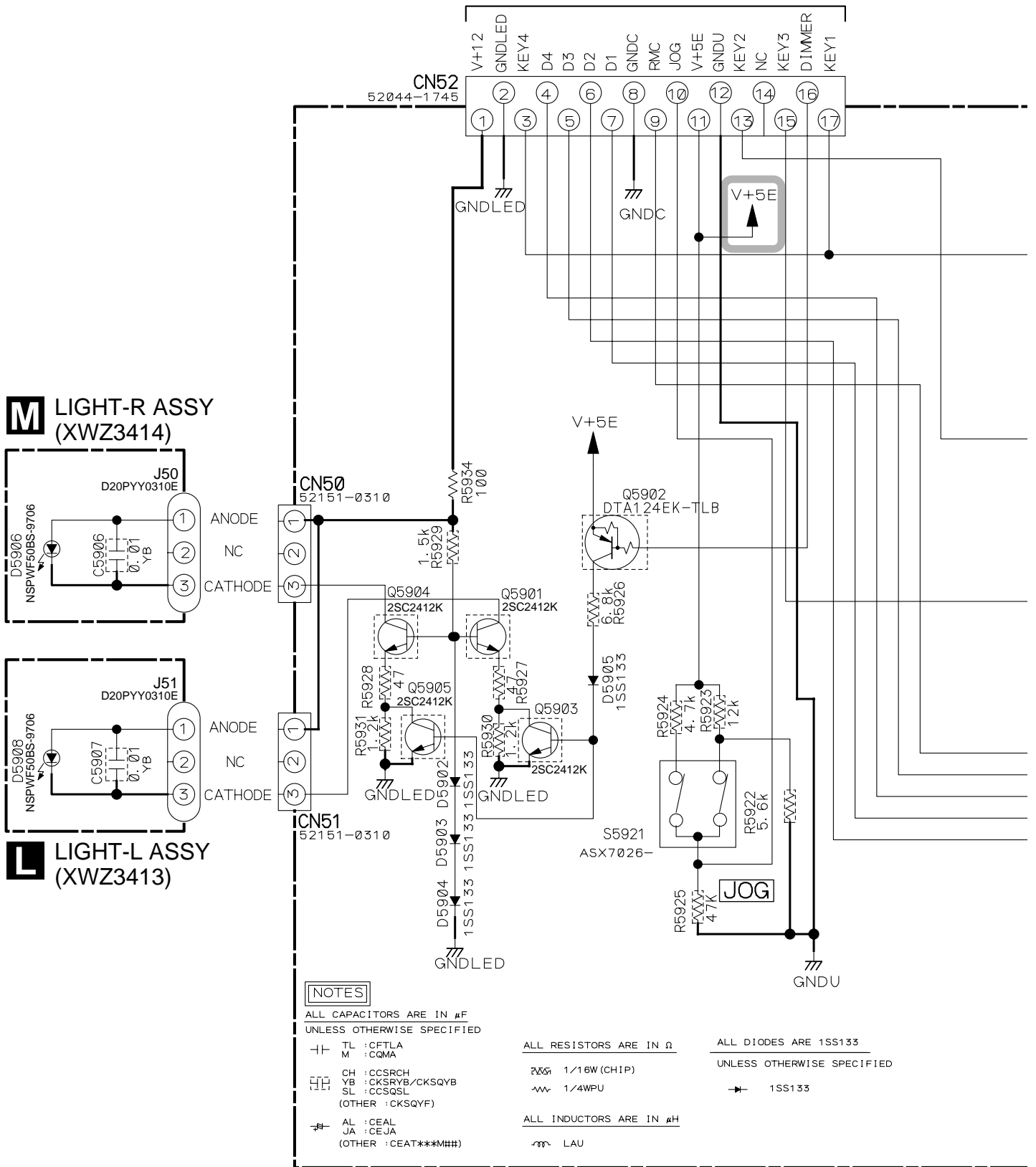
 : The power supply is shown with the marked box.

 : AUDIO SIGNAL ROUTE  
 : AUDIO (DIGITAL) SIGNAL ROUTE



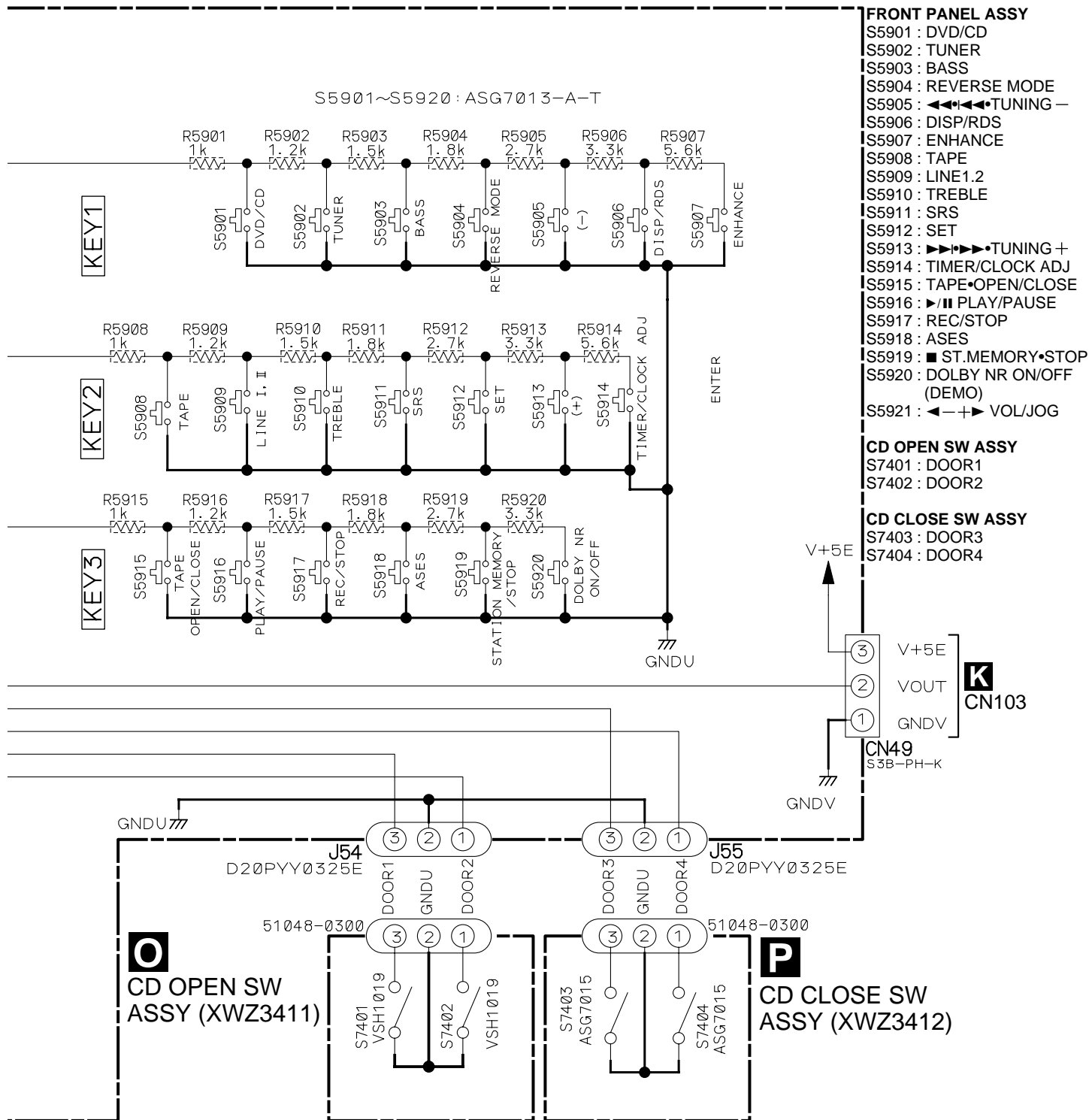
3.12 LIGHT-L, LIGHT-R, FRONT PANEL, CD OPEN SW and CD CLOSE SW ASSYS

**G** CN5504



**O** : The power supply is shown with the marked box.

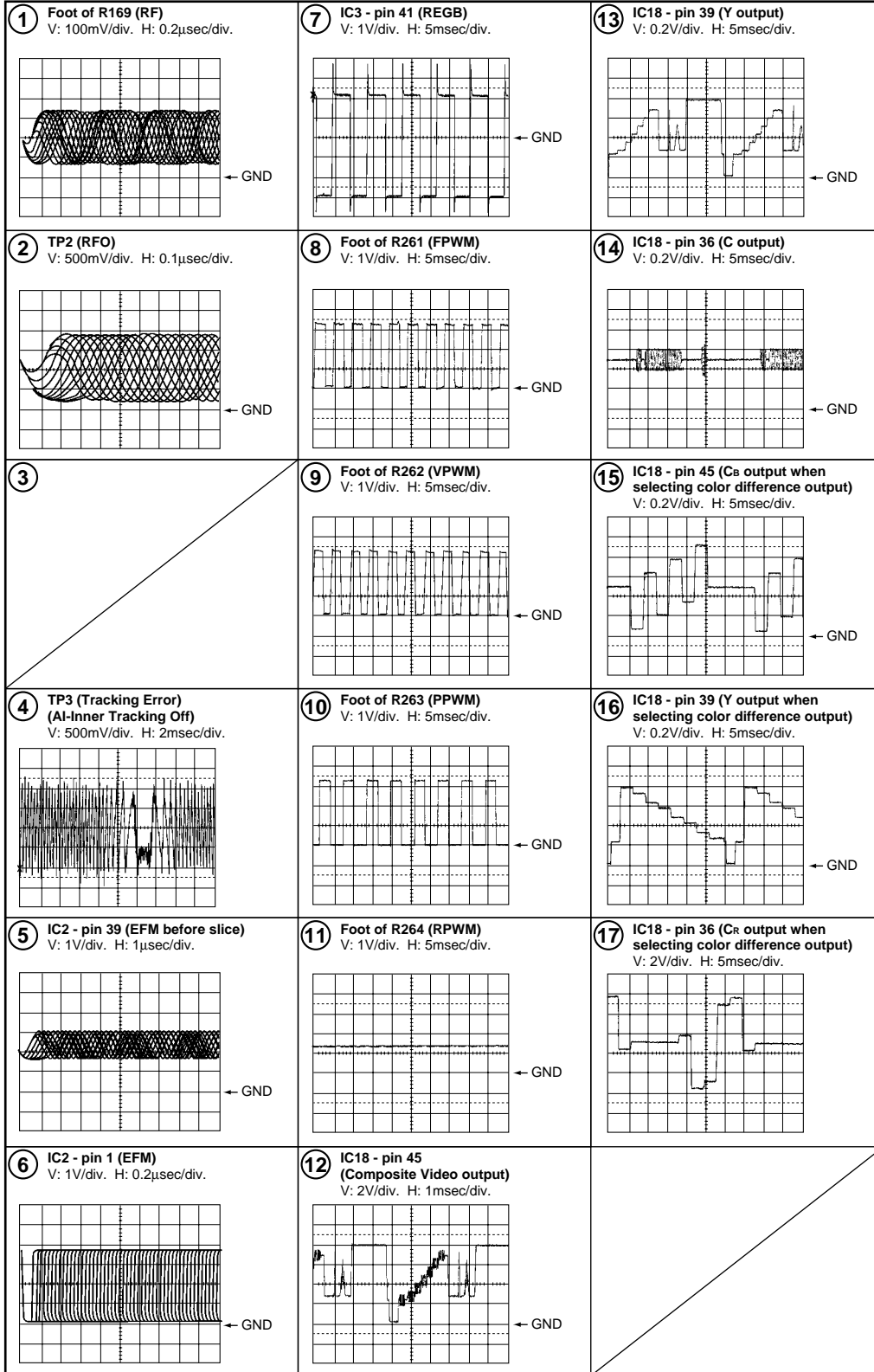
### N FRONT PANEL ASSY (XWZ3408)



## WAVEFORMS (DVDM ASSY)

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

Measurement condition : No. 1 to 4 and 6 to 11 : MJK1, Title 1-chp 1  
 No. 5 : CD, ABEX-784 Track 1  
 No. 12 to 14 : MJK1, Title 1-chp 4  
 No. 15 to 17 : MJK1, Title 1-chp 5





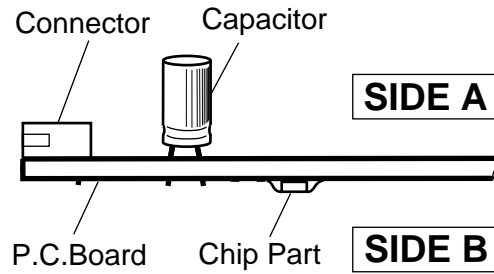
# 4. PCB CONNECTION DIAGRAM

## NOTE FOR PCB DIAGRAMS :

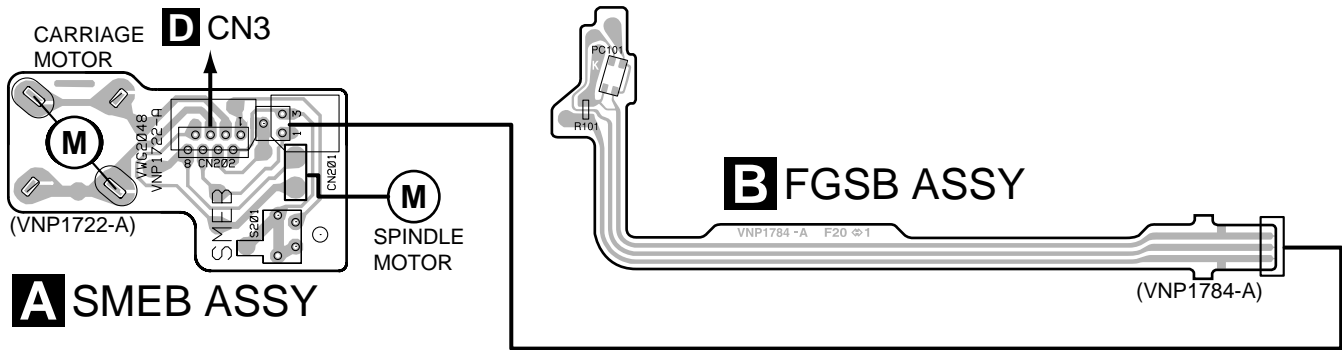
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

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 SMEB and FGSB ASSYS



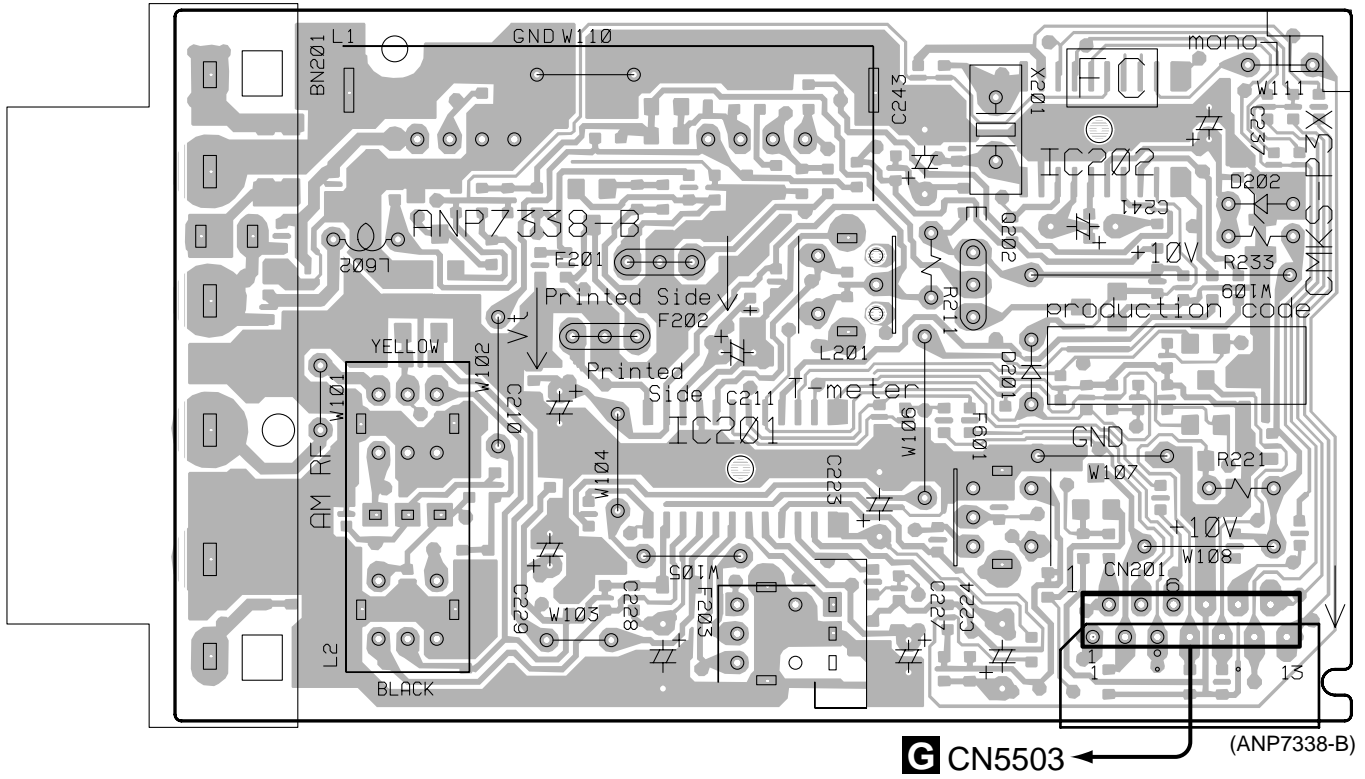
**SIDE A**



### 4.2 FM/AM TUNER MODULE

## C FM/AM TUNER MODULE

**SIDE A**

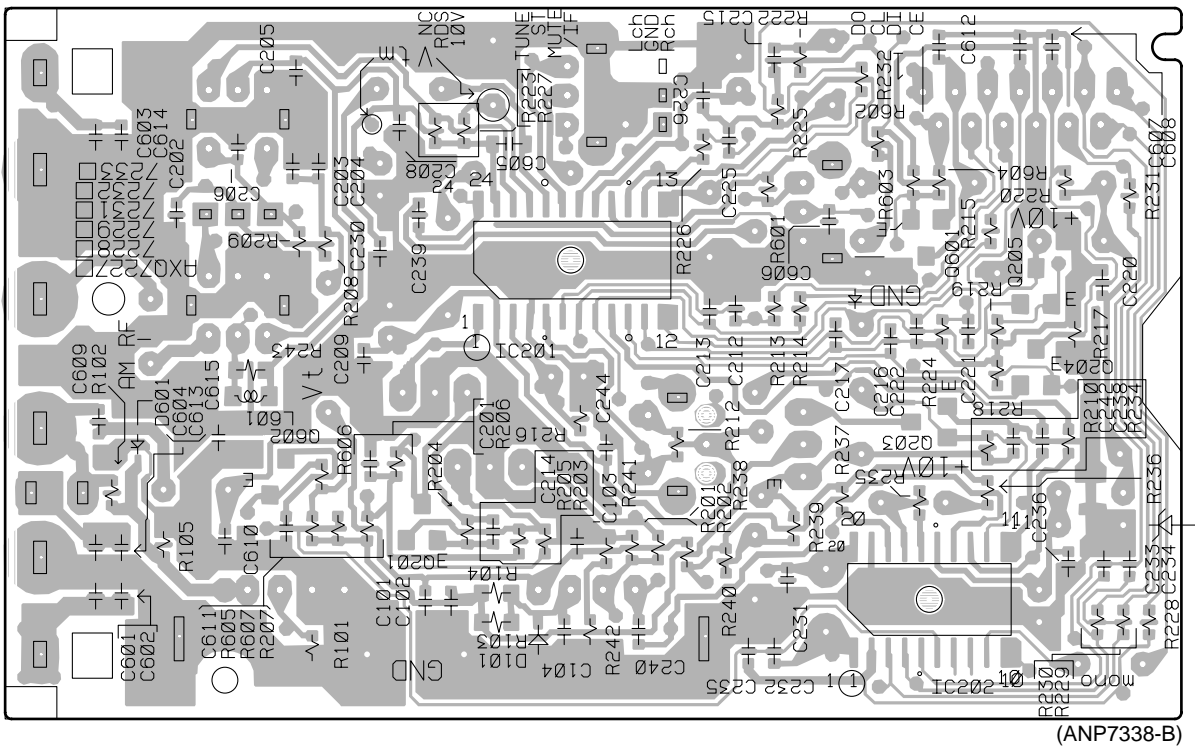


**G** CN5503 (ANP7338-B)

Q202

## C FM/AM TUNER MODULE

**SIDE B**



**B** CN5503 (ANP7338-B)

Q201

IC201

Q203  
IC202

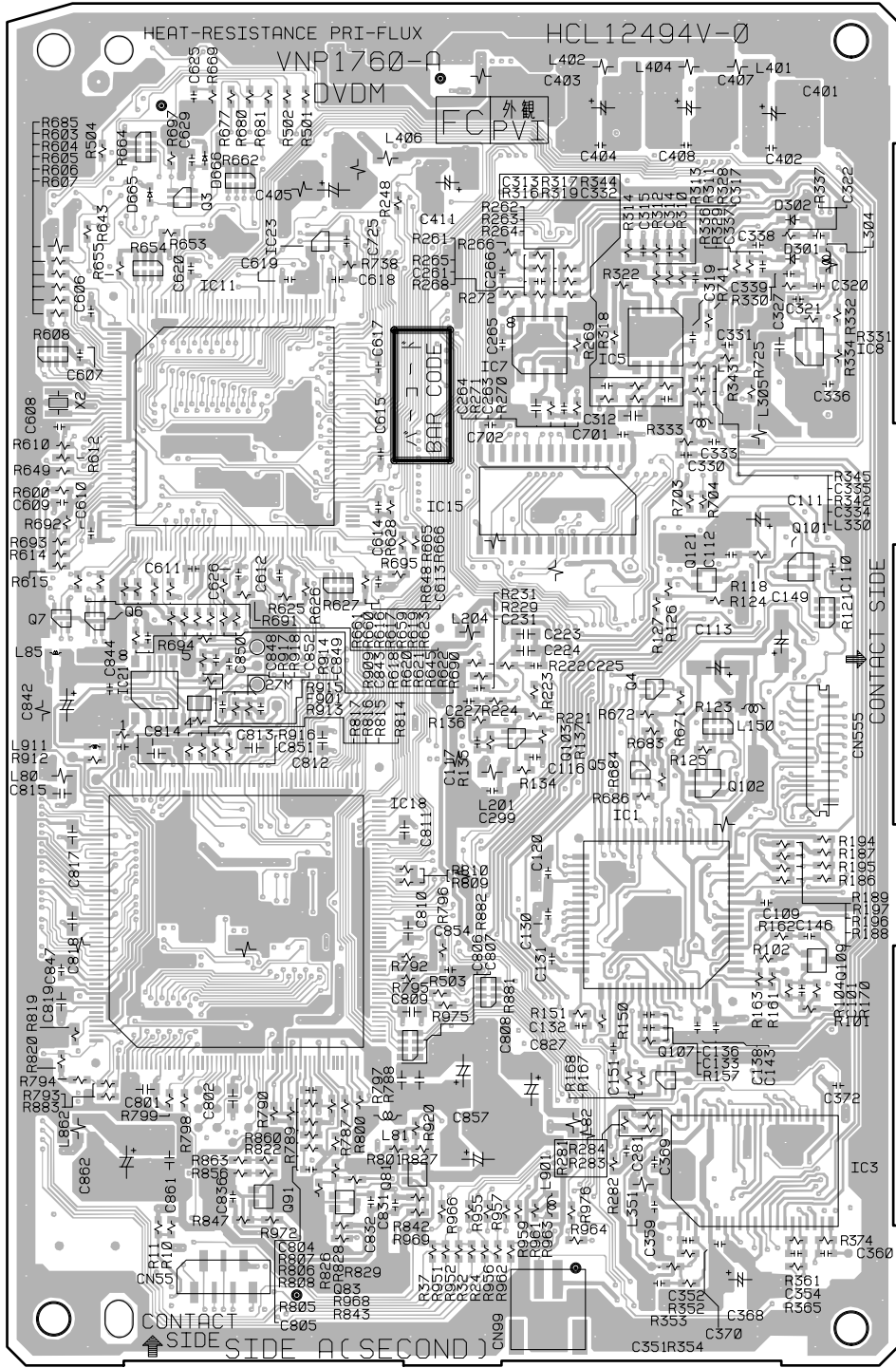
Q205  
Q204

**B**

4.3 DVDM ASSY

**D** DVDM ASSY

• This PCB is a four-layered board.



- Q3
- IC7 IC5 IC8
- IC11
- IC15
- Q121 Q101
- Q7 Q6
- IC21 Q4
- Q103 Q5 Q102
- IC18 IC1
- Q109
- Q107
- Q81 IC3
- Q91 Q83

**SIDE A**

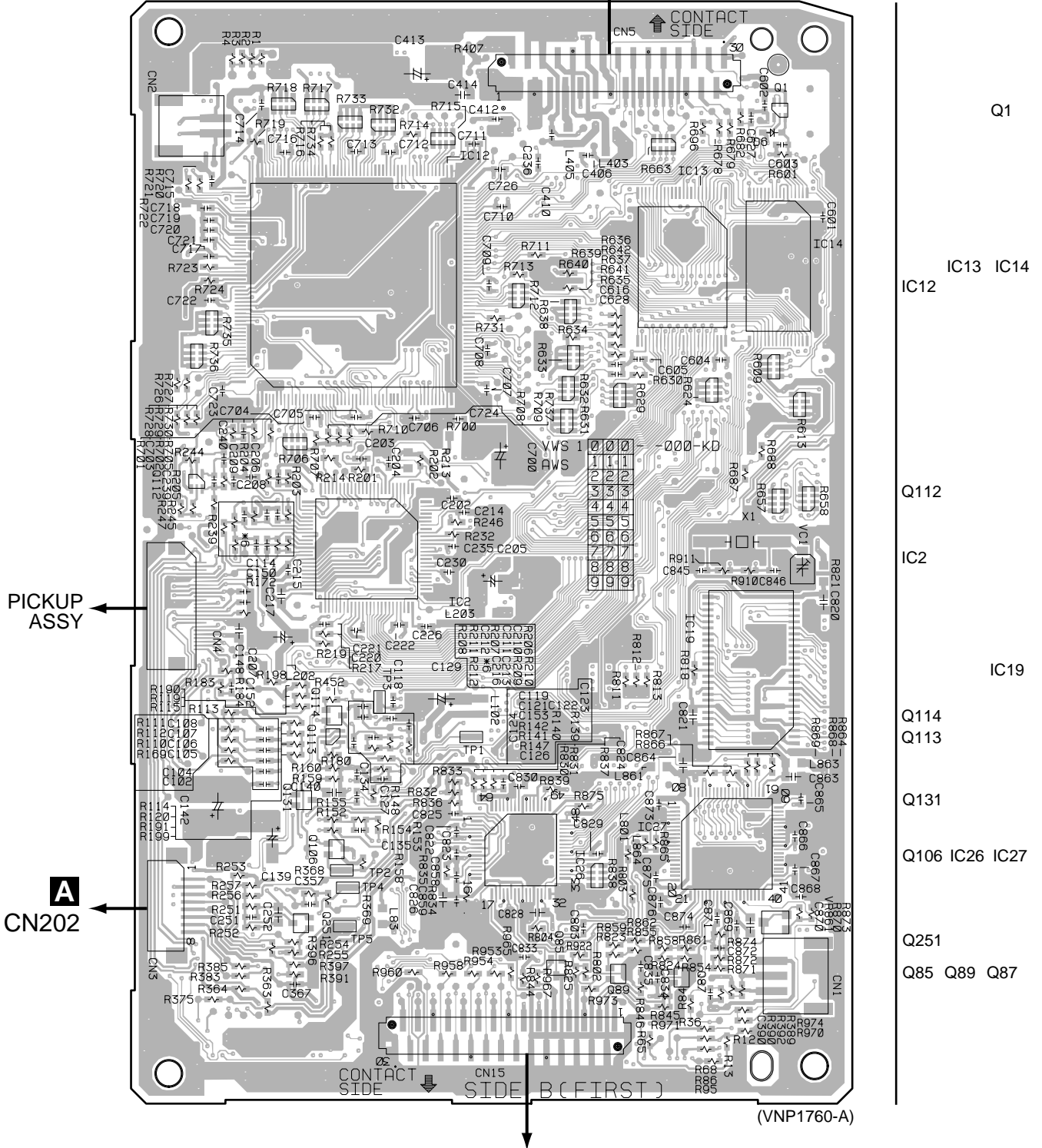
(VNP1760-A)



**D** DVDM ASSY

**E** CN102

• This PCB is a four-layered board.



PICKUP ASSY

**A** CN202

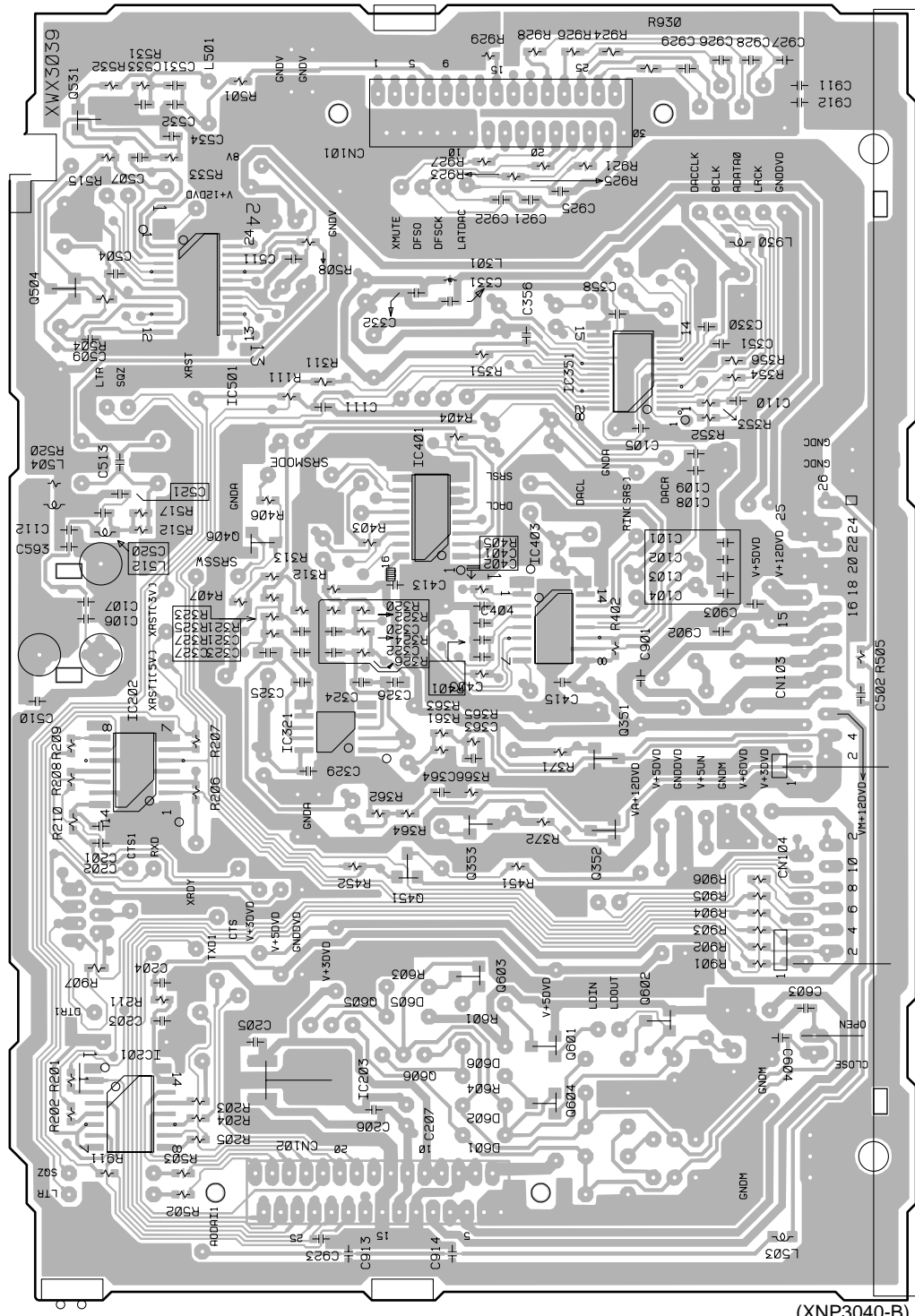
**E** CN101

**SIDE B**

**D**



# DVD CONNECT ASSY



(XNP3040-B)

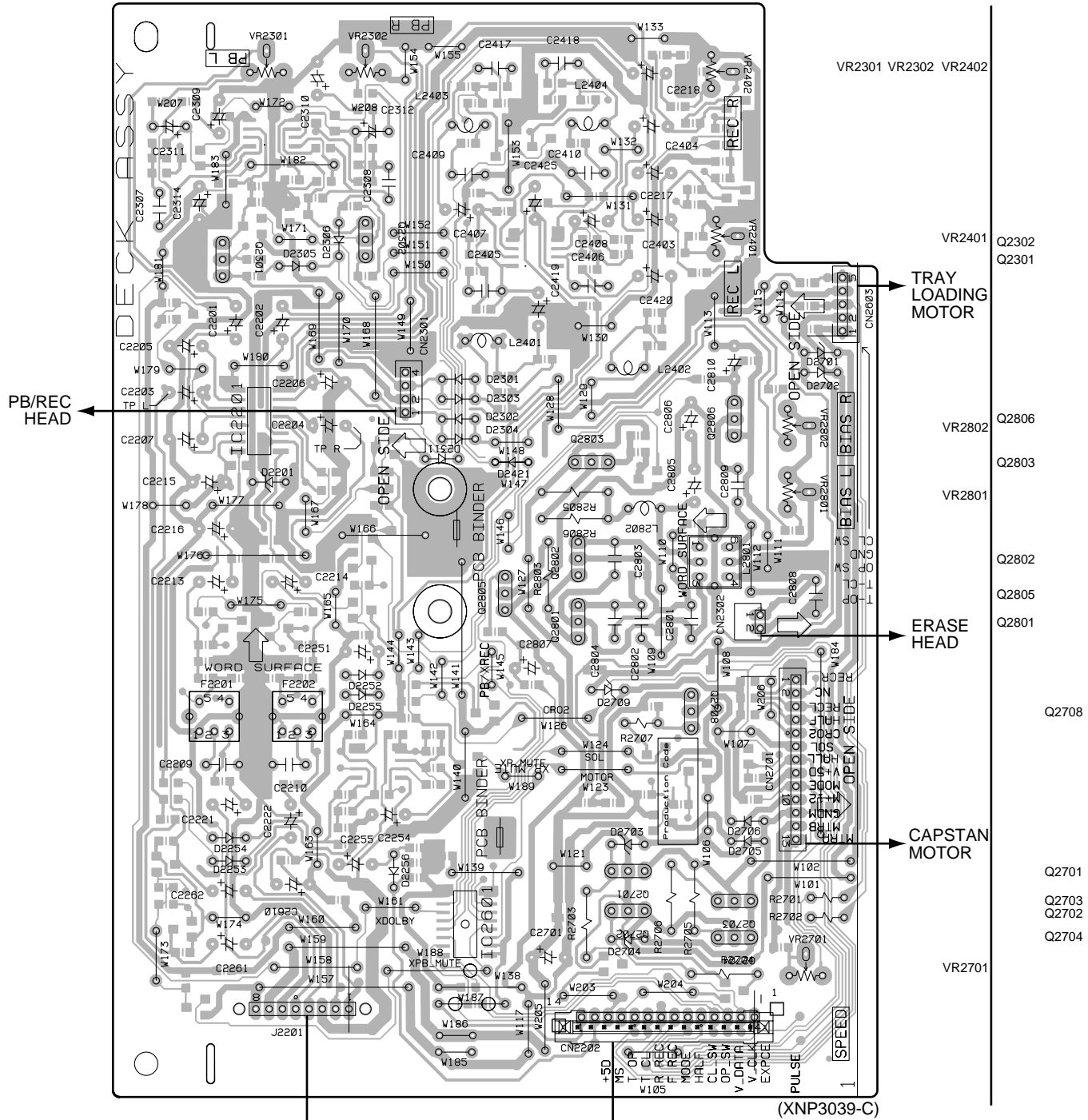
**SIDE B**

- Q351
- Q504 IC501
- IC351
- IC401
- Q406
- IC403
- IC321
- Q351
- Q352
- Q451
- Q603
- Q602
- Q601
- IC203
- Q604
- IC201



# 4.5 DECK ASSY

## F DECK ASSY



H CN3006

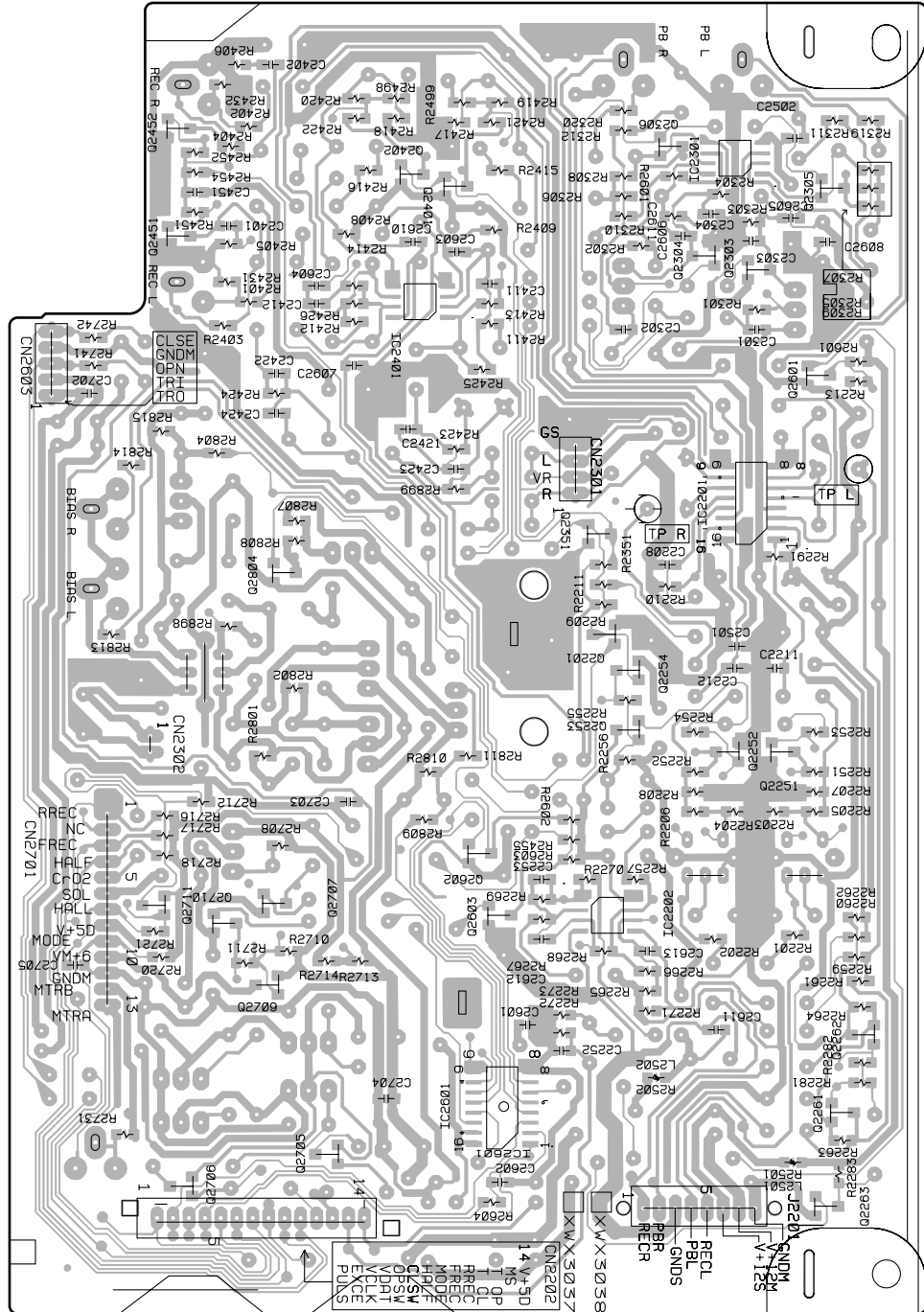
G CN5506

SIDE A



A

# F DECK ASSY



(XNP3039-C)

Q2452	Q2306
Q2402	IC2301
Q2401	Q2305
Q2451	Q2304
IC2401	Q2303
Q2601	
IC2201	
Q2351	
Q2804	
Q2201	
Q2254	
Q2253	Q2252
	Q2251
Q2602	
Q2711	Q2707
	Q2603
	Q2710
	IC2202
Q2709	
Q2262	
IC2601	Q2261
Q2705	
Q2706	Q2263

B

C

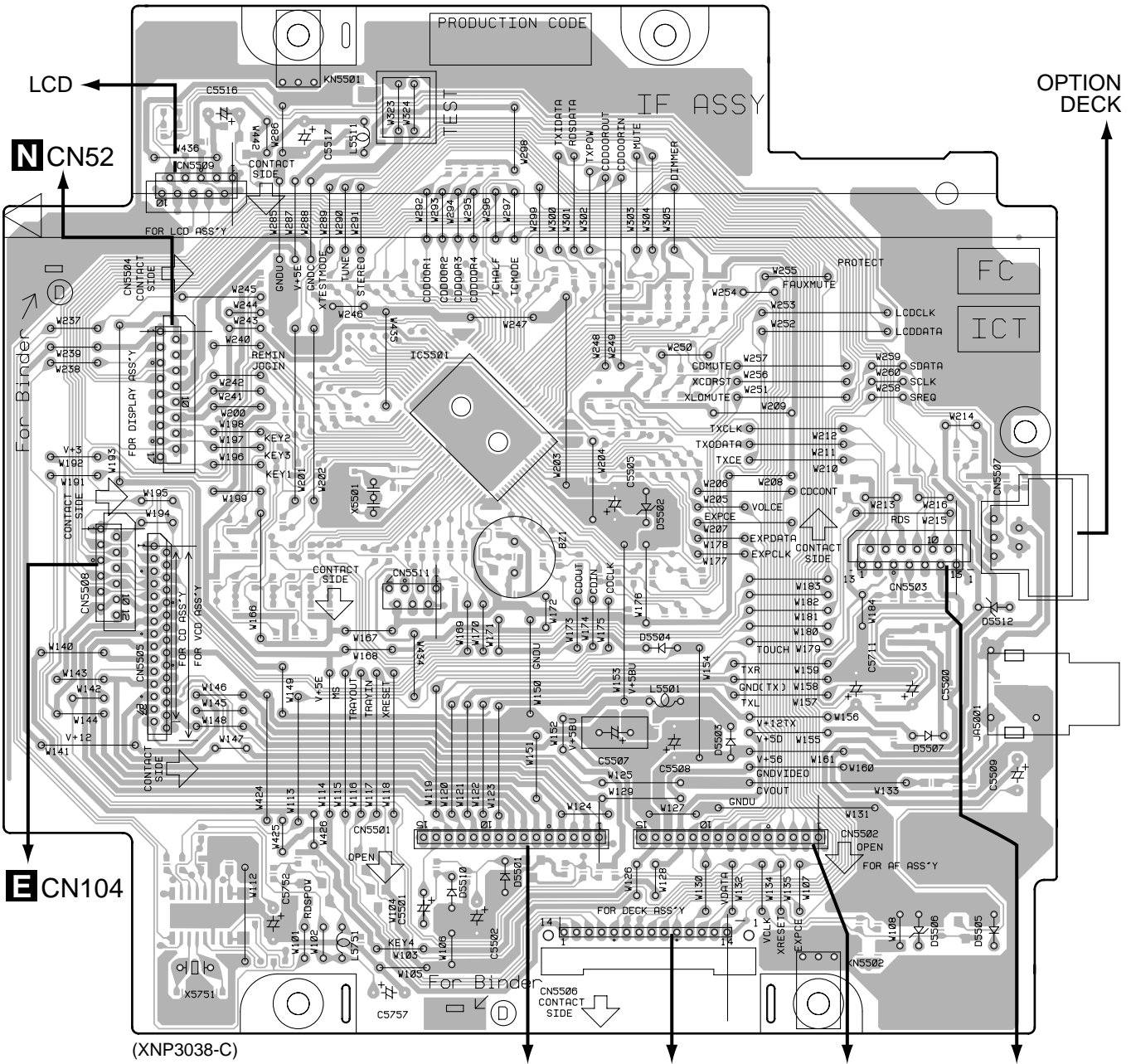
D

SIDE B



### 4.6 IF ASSY

## G IF ASSY



H CN3004 F CN2202 H CN3003 C CN201

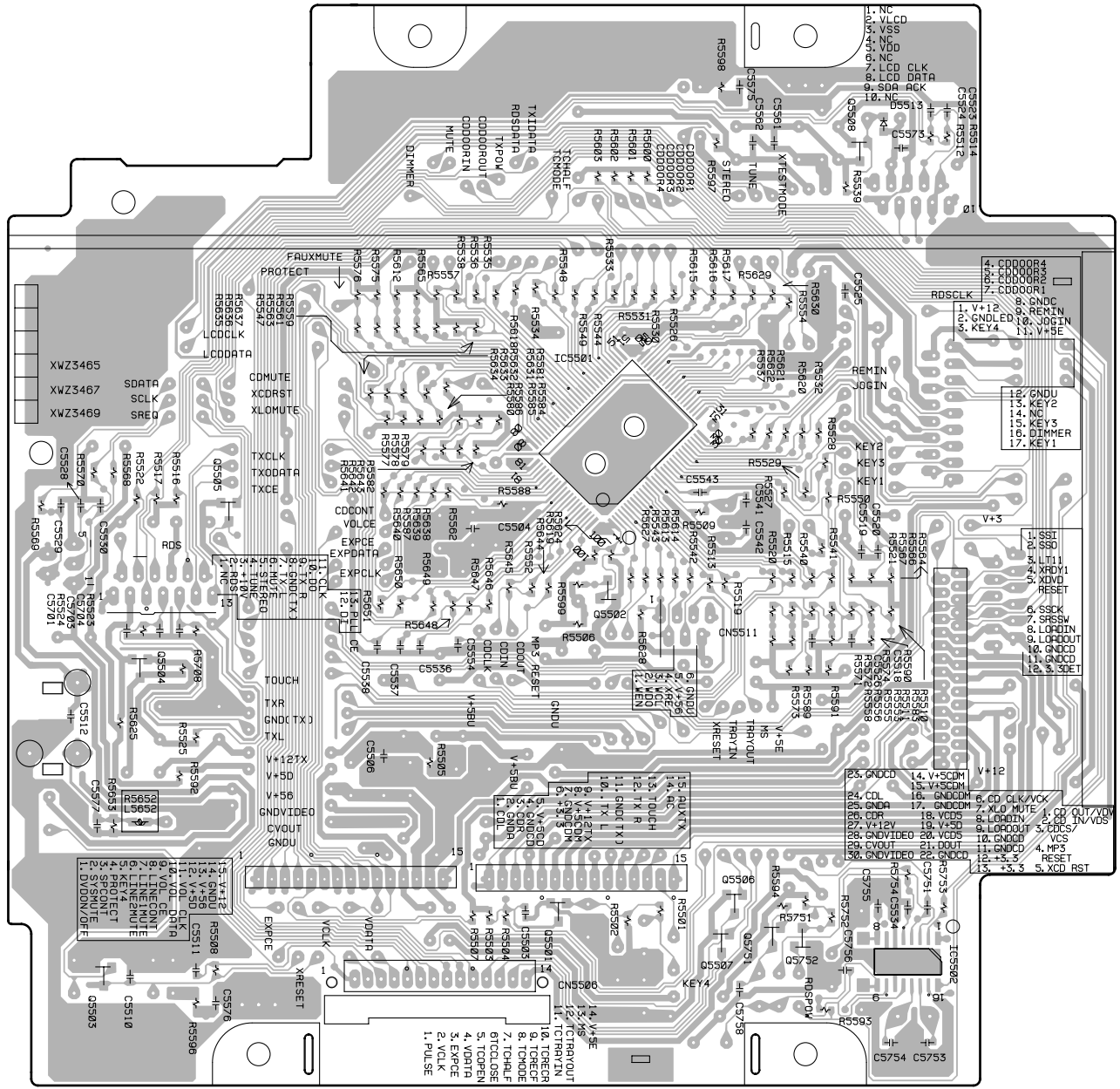
IC5501

SIDE A





G IF ASSY



(XNP3038-C)

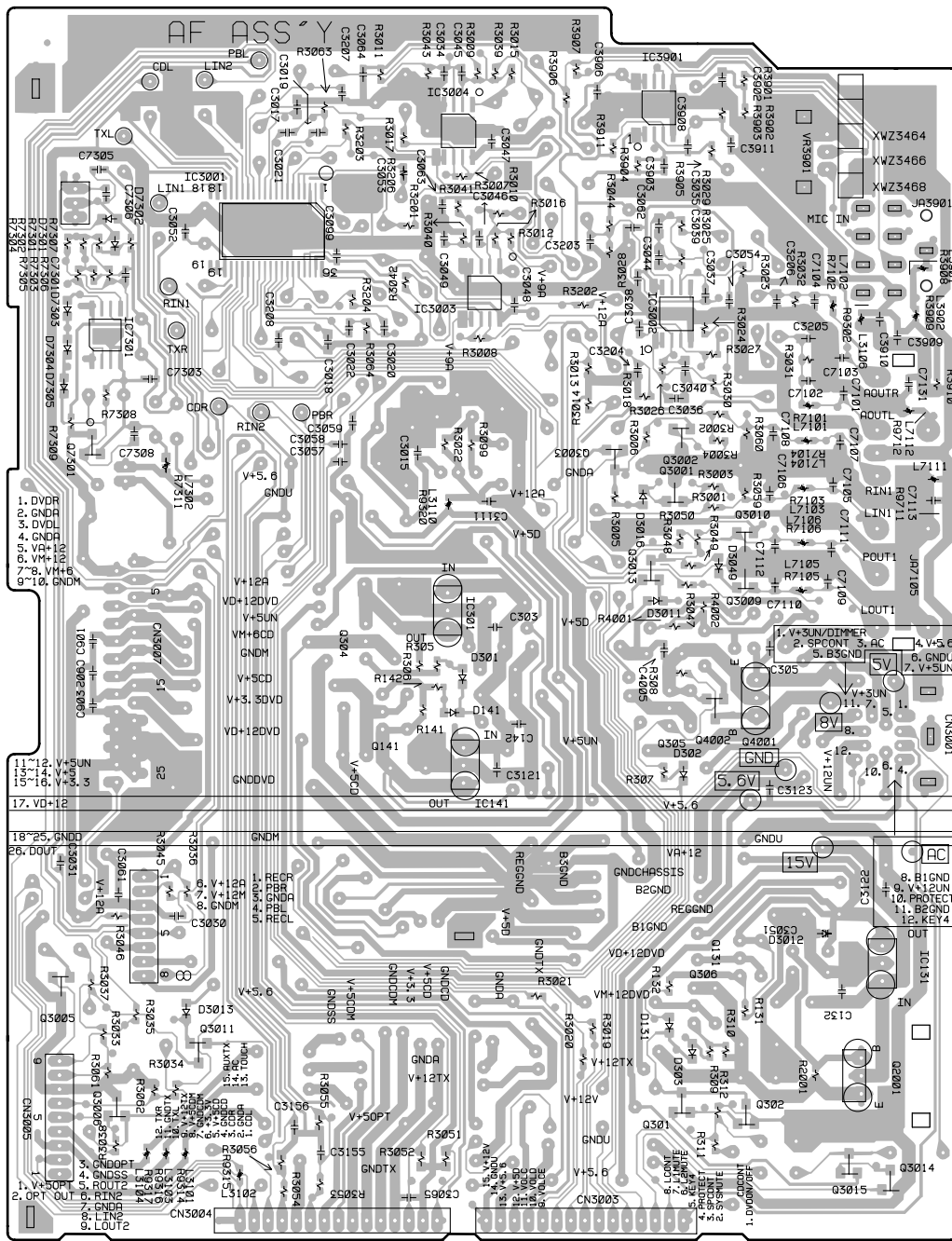
Q5504 Q5505 Q5501 Q5502 Q5506 Q5508 IC5502  
 Q5503 Q5507 Q5509 Q5510 Q5511 Q5512 Q5513 Q5514 Q5515 Q5516 Q5517 Q5518 Q5519 Q5520 Q5521 Q5522 Q5523 Q5524 Q5525 Q5526 Q5527 Q5528 Q5529 Q5530 Q5531 Q5532 Q5533 Q5534 Q5535 Q5536 Q5537 Q5538 Q5539 Q5540 Q5541 Q5542 Q5543 Q5544 Q5545 Q5546 Q5547 Q5548 Q5549 Q5550 Q5551 Q5552 Q5553 Q5554 Q5555 Q5556 Q5557 Q5558 Q5559 Q5560 Q5561 Q5562 Q5563 Q5564 Q5565 Q5566 Q5567 Q5568 Q5569 Q5570 Q5571 Q5572 Q5573 Q5574 Q5575 Q5576 Q5577 Q5578 Q5579 Q5580 Q5581 Q5582 Q5583 Q5584 Q5585 Q5586 Q5587 Q5588 Q5589 Q5590 Q5591 Q5592 Q5593 Q5594 Q5595 Q5596 Q5597 Q5598 Q5599 Q5600 Q5601 Q5602 Q5603 Q5604 Q5605 Q5606 Q5607 Q5608 Q5609 Q5610 Q5611 Q5612 Q5613 Q5614 Q5615 Q5616 Q5617 Q5618 Q5619 Q5620 Q5621 Q5622 Q5623 Q5624 Q5625 Q5626 Q5627 Q5628 Q5629 Q5630 Q5631 Q5632 Q5633 Q5634 Q5635 Q5636 Q5637 Q5638 Q5639 Q5640 Q5641 Q5642 Q5643 Q5644 Q5645 Q5646 Q5647 Q5648 Q5649 Q5650 Q5651 Q5652 Q5653 Q5654 Q5655 Q5656 Q5657 Q5658 Q5659 Q5660 Q5661 Q5662 Q5663 Q5664 Q5665 Q5666 Q5667 Q5668 Q5669 Q5670 Q5671 Q5672 Q5673 Q5674 Q5675 Q5676 Q5677 Q5678 Q5679 Q5680 Q5681 Q5682 Q5683 Q5684 Q5685 Q5686 Q5687 Q5688 Q5689 Q5690 Q5691 Q5692 Q5693 Q5694 Q5695 Q5696 Q5697 Q5698 Q5699 Q5700 Q5701 Q5702 Q5703 Q5704 Q5705 Q5706 Q5707 Q5708 Q5709 Q5710 Q5711 Q5712 Q5713 Q5714 Q5715 Q5716 Q5717 Q5718 Q5719 Q5720 Q5721 Q5722 Q5723 Q5724 Q5725 Q5726 Q5727 Q5728 Q5729 Q5730 Q5731 Q5732 Q5733 Q5734 Q5735 Q5736 Q5737 Q5738 Q5739 Q5740 Q5741 Q5742 Q5743 Q5744 Q5745 Q5746 Q5747 Q5748 Q5749 Q5750 Q5751 Q5752 Q5753 Q5754 Q5755 Q5756 Q5757 Q5758 Q5759 Q5760 Q5761 Q5762 Q5763 Q5764 Q5765 Q5766 Q5767 Q5768 Q5769 Q5770 Q5771 Q5772 Q5773 Q5774 Q5775 Q5776 Q5777 Q5778 Q5779 Q5780 Q5781 Q5782 Q5783 Q5784 Q5785 Q5786 Q5787 Q5788 Q5789 Q5790 Q5791 Q5792 Q5793 Q5794 Q5795 Q5796 Q5797 Q5798 Q5799 Q5800 Q5801 Q5802 Q5803 Q5804 Q5805 Q5806 Q5807 Q5808 Q5809 Q5810 Q5811 Q5812 Q5813 Q5814 Q5815 Q5816 Q5817 Q5818 Q5819 Q5820 Q5821 Q5822 Q5823 Q5824 Q5825 Q5826 Q5827 Q5828 Q5829 Q5830 Q5831 Q5832 Q5833 Q5834 Q5835 Q5836 Q5837 Q5838 Q5839 Q5840 Q5841 Q5842 Q5843 Q5844 Q5845 Q5846 Q5847 Q5848 Q5849 Q5850 Q5851 Q5852 Q5853 Q5854 Q5855 Q5856 Q5857 Q5858 Q5859 Q5860 Q5861 Q5862 Q5863 Q5864 Q5865 Q5866 Q5867 Q5868 Q5869 Q5870 Q5871 Q5872 Q5873 Q5874 Q5875 Q5876 Q5877 Q5878 Q5879 Q5880 Q5881 Q5882 Q5883 Q5884 Q5885 Q5886 Q5887 Q5888 Q5889 Q5890 Q5891 Q5892 Q5893 Q5894 Q5895 Q5896 Q5897 Q5898 Q5899 Q5900 Q5901 Q5902 Q5903 Q5904 Q5905 Q5906 Q5907 Q5908 Q5909 Q5910 Q5911 Q5912 Q5913 Q5914 Q5915 Q5916 Q5917 Q5918 Q5919 Q5920 Q5921 Q5922 Q5923 Q5924 Q5925 Q5926 Q5927 Q5928 Q5929 Q5930 Q5931 Q5932 Q5933 Q5934 Q5935 Q5936 Q5937 Q5938 Q5939 Q5940 Q5941 Q5942 Q5943 Q5944 Q5945 Q5946 Q5947 Q5948 Q5949 Q5950 Q5951 Q5952 Q5953 Q5954 Q5955 Q5956 Q5957 Q5958 Q5959 Q5960 Q5961 Q5962 Q5963 Q5964 Q5965 Q5966 Q5967 Q5968 Q5969 Q5970 Q5971 Q5972 Q5973 Q5974 Q5975 Q5976 Q5977 Q5978 Q5979 Q5980 Q5981 Q5982 Q5983 Q5984 Q5985 Q5986 Q5987 Q5988 Q5989 Q5990 Q5991 Q5992 Q5993 Q5994 Q5995 Q5996 Q5997 Q5998 Q5999 Q6000

SIDE B





# H AF ASSY



(XNP3038-C)

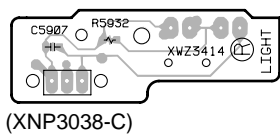
IC7301	IC3001	Q3010	
Q3701	Q3011	Q3003	Q3002
Q3005	Q3006	Q3001	Q3009
		Q3013	Q4002
		Q301	Q302
		Q3014	

**SIDE B**

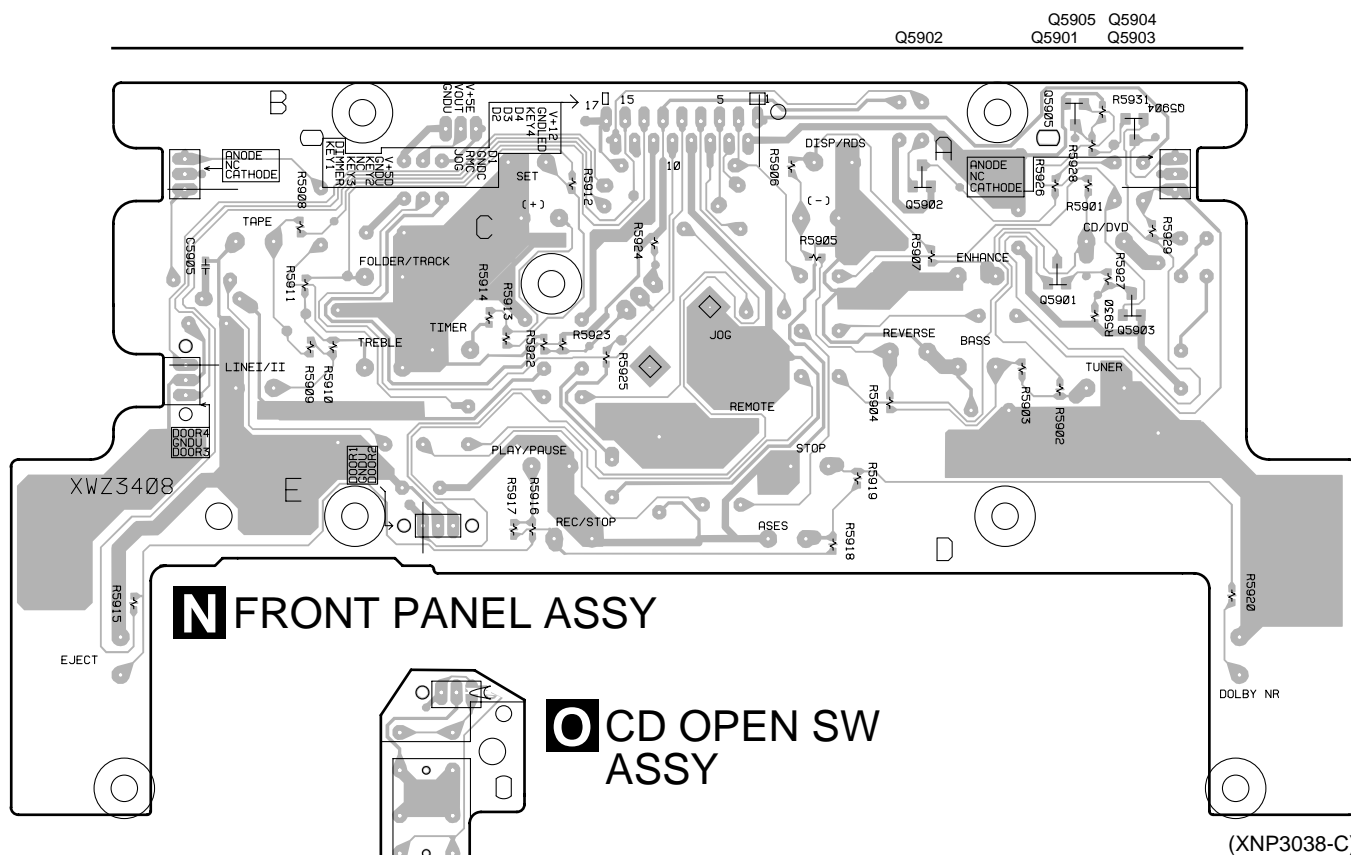
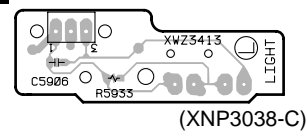




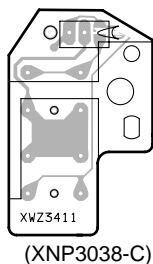
# L LIGHT-L ASSY



# M LIGHT-R ASSY

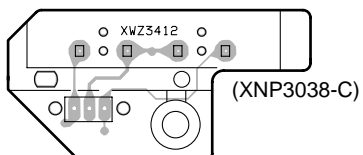


# N FRONT PANEL ASSY



# O CD OPEN SW ASSY

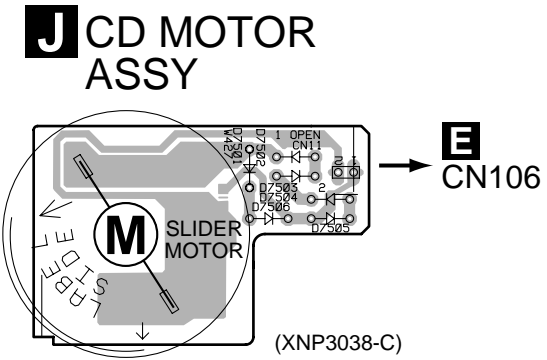
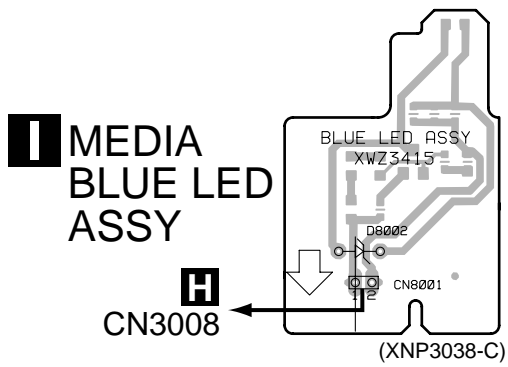
# P CD CLOSE SW ASSY



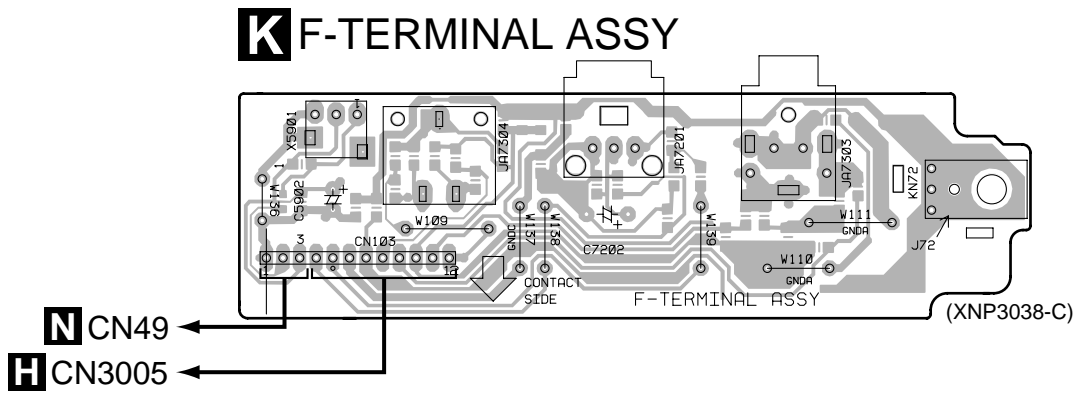
SIDE B

4.9 MEDIA BLUE LED, CD MOTOR and F-TERMINAL ASSYS

A

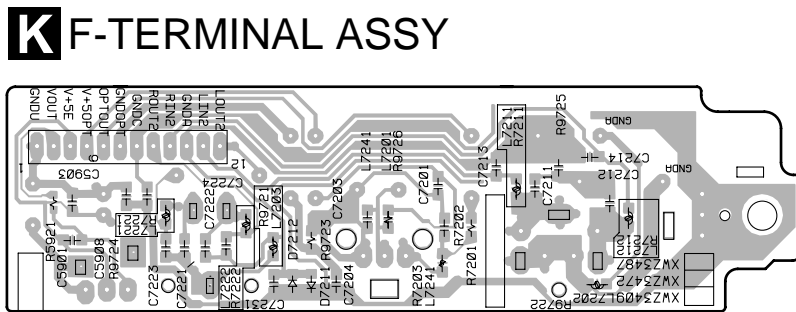


B

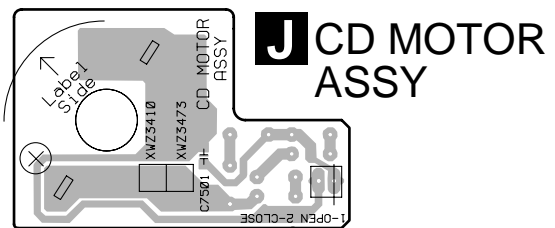
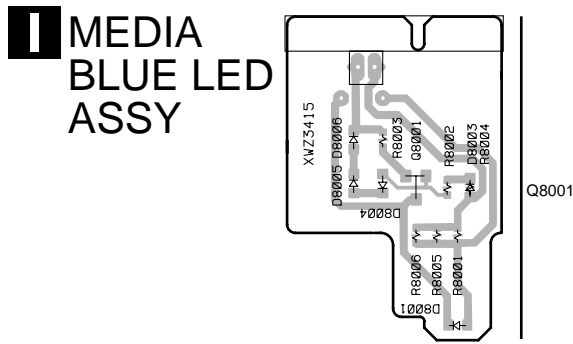


SIDE A

C



D



SIDE B

# 5. PCB PARTS LIST

- NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.  
 ●The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.  
 ●When ordering resistors, first convert resistance values into code form as shown in the following examples.  
 Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10<sup>1</sup> → 561 ..... RD1/4PU 5 6 1 J  
 47k Ω → 47 × 10<sup>3</sup> → 473 ..... RD1/4PU 4 7 3 J  
 0.5 Ω → R50 ..... RN2H R 5 0 K  
 1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).  
 5.62k Ω → 562 × 10<sup>1</sup> → 5621 ..... RN1/4PC 5 6 2 1 F

Mark	No.	Description	Part No.
<b>LIST OF ASSEMBLIES</b>			
NSP		TRAVERSE MECHANISM ASSY	XWT3001
NSP		└ SMEB ASSY	VWG2048
NSP		└ FGSB ASSY	VWG2009
		FM/AM TUNER MODULE	AXQ7228
		DVDM ASSY	XWX3036
NSP		DVD CONNECT ASSY	XWX3039
NSP		DECK ASSY	XWX3038
NSP		MEDIA ASSY	XWM3184
NSP		└ IF ASSY	XWZ3469
NSP		└ AF ASSY	XWZ3468
NSP		└ MEDIA BLUE LED ASSY	XWZ3415
NSP		└ CD MOTOR ASSY	XWZ3473
NSP		└ F-TERMINAL ASSY	XWZ3472
NSP		└ LIGHT-L ASSY	XWZ3413
NSP		└ LIGHT-R ASSY	XWZ3414
NSP		└ FRONT PANEL ASSY	XWZ3408
NSP		└ CD OPEN SW ASSY	XWZ3411
NSP		└ CD CLOSE SW ASSY	XWZ3412

## A SMEB ASSY

### SWITCH

S201 DSG1016

### OTHERS

CN201 3P FFC CONNECTOR 52044-0345  
 CN202 8P FFC CONNECTOR VKN1212  
 PC BOARD SMEB VNP1722

## B FGSB ASSY

### SEMICONDUCTOR

PC101 GP2S60

### RESISTORS

R101 RS1/10S331J

Mark	No.	Description	Part No.
------	-----	-------------	----------

## C FM/AM TUNER MODULE

### SEMICONDUCTORS

IC201 BA1451F  
 IC202 LC72131MD-TFB  
 Q201,Q204,Q205 2SC2412K  
 Q202 DTA124ES  
 Q203 DTC124EK  
 D201 1SS133  
 D202 MTZJ5.1C

### COIL AND FILTERS

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

### CAPACITORS

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

# XV-IS22DVD

Mark	No.	Description	Part No.
<b>RESISTORS</b>			
	R211		RD1/4PU221J
	R221		RD1/4PU222J
	R233		RD1/4PU391J
	R243		RS1/10S0R0J
	R103		RS1/10S331J
	R104		RS1/10S391J
	Other Resistors		RS1/16S□□□□

## OTHERS

CN201	13P FFC CONNECTOR	52044-1345
BN201	4P ANTENNA TERMINAL SHIELD CASE T	AKA7003
	SHIELD CASE B	ANK7072
X201	CRYSTAL RESONATOR (7.2MHz)	ANK7073
	CRYSTAL RESONATOR (7.2MHz)	ASS1093
L1	FM FRONT END	AXF7003

## **D** DVDM ASSY SEMICONDUCTORS

IC5,IC7		BA4510F
IC21		CY2081SL-638
IC14		KM68V1000CLT-7L
IC1		LA9701M
IC2		LC78652W
IC3		M56788FP-TFB
IC19		MB811171622A-100FN
IC18		MB86373B
IC15		MN414800CSJ-07
IC11		PD3410A
IC12		PE5108A
IC8		TC7SHU04F
IC13		XYW3002
Q106,Q109,Q81,Q83,Q85		2SA1576A
Q114,Q121,Q251		2SC4081
Q131		DTC114EUA
Q102		HN1A01F
Q103,Q6,Q7		HN1B04FU
Q101		HN1C01F
Q112,Q113		HN1C01FU
Q107,Q4,Q5		RN1902
Q3		RN1911
Q1		RN4982
D301		KV1471E
D6		RB501V-40
D665,D666		RB521S-30

## COILS

L150,L330		LCYA100J2520
L304		LCYA2R7J2520
L81	CHIP COIL	VTL1067
L85	CHIP BEAD	VTL1084

## CAPACITORS

C852		CCSRCH100D50
C123,C146,C613,C843		CCSRCH101J50
C322		CCSRCH120J50
C135		CCSRCH121J50
C104-C108		CCSRCH150J50

Mark	No.	Description	Part No.
	C206,C210,C211		CCSRCH151J50
	C333		CCSRCH180J50
	C116,C151,C314		CCSRCH220J50
	C152		CCSRCH221J50
	C127,C209,C337		CCSRCH331J50
	C134,C236		CCSRCH470J50
	C122,C208		CCSRCH471J50
	C126,C335		CCSRCH560J50
	C334		CCSRCH5R0C50
	C124,C132		CCSRCH680J50
	C117,C240,C352,C360		CCSRCH681J25
	C845,C846		CCSRCK2R0C50
	C129,C142,C842		CEV101M10
	C113,C139		CEV220M16
	C405,C413,C700,C808		CEV221M4
	C111,C149,C205,C207,C401		CEV470M6R3
	C403,C407		CEV470M6R3
	C140,C223,C224,C252,C264		CKSQYB105K10
	C312		CKSQYB105K10
	C148,C217,C327,C414		CKSQYF105Z16
	C801,C802,C807,C809-C815		CKSQYF105Z16
	C817-C821		CKSQYF105Z16
	C216,C313		CKSRYB102K50
	C133,C136,C203,C220,C225		CKSRYB103K50
	C239,C320,C321,C603,C625		CKSRYB103K50
	C703,C711		CKSRYB103K50
	C101,C102,C114,C118,C119		CKSRYB104K16
	C121,C138,C204,C212,C213		CKSRYB104K16
	C227,C231,C263,C315,C317		CKSRYB104K16
	C332,C804		CKSRYB104K16
	C153,C266		CKSRYB223K25
	C357		CKSRYB223K50
	C354		CKSRYB332K50
	C214,C251,C261,C351		CKSRYB472K50
	C330		CKSRYB682K50
	C109,C110,C120,C130,C131		CKSRYF104Z16
	C143,C150,C202,C215		CKSRYF104Z16
	C221,C222,C226,C230,C235		CKSRYF104Z16
	C265,C299,C319,C359,C367		CKSRYF104Z16
	C369,C370,C402,C404,C406		CKSRYF104Z16
	C408,C410,C412,C601,C602		CKSRYF104Z16
	C604-C612,C614,C615		CKSRYF104Z16
	C617-C620,C626,C701,C702		CKSRYF104Z16
	C704-C710,C712-C724,C726		CKSRYF104Z16
	C831-C833,C844		CKSRYF104Z16
	C368,C411 (47μF/16V)		VCH1166

## RESISTORS

R712,R715,R881		RAB4C0R0J
R632		RAB4C101J
R608,R609,R613,R624,R627		RAB4C103J
R629,R631,R633,R638,R654		RAB4C103J
R657,R658,R664,R706		RAB4C103J
R717,R718		RAB4C103J
R121,R663		RAB4C220J
R123		RAB4C390J
R732,R733,R735,R736		RAB4C473J
R1020,R2010,R2020,R2030,R2040		RS1/10S0R0J
R3050,R4010,R4020,R4030,R4040		RS1/10S0R0J
R4050,R4060,R407,R685,R722		RS1/10S0R0J
R8000,R821		RS1/10S0R0J
R202,R3510		RS1/10S101J
R700		RS1/10S1R2J



Mark	No.	Description	Part No.
	R807		RS1/16S1201F
	R806		RS1/16S1501F
	R363,R365		RS1/16S1503F
	R825-R827		RS1/16S2000F
	R805		RS1/16S2701F
	R361,R364		RS1/16S6202F
	Other Resistors		RS1/16S□□□□J

**OTHERS**

CN4	FFC CONNECTOR	DKN1193
X2	CHIP CERAMIC LOCK (20MHz)	DSS1110
	FLEXIBLE CABLE 07P	VDA1681
CN15,CN5	B TO B CONNECTOR 30P	VKN1626
CN3	8P FFC CONNECTOR	VKN1763
X1	CRYSTAL RESONATOR (13.824MHz)	VSS1147

**E DVD CONNECT ASSY**  
**SEMICONDUCTORS**

IC203	BA25BC0FP
IC321	BA4558F-HT
IC401	BU4052BCF
IC501	LA7138M
IC403	NJM2199M-TFB
IC351	PCM1716E
IC201	TC74HCT7007AF
IC202	TC74VHC125F
Q504,Q531,Q603,Q604	2SA1037K
Q605-Q608	2SD1858X
Q351,Q352	2SD2114K
Q353	DTA124EK
Q406,Q451,Q601,Q602	DTC124EK
D601,D602	1SS133
D605	MTZJ3.6B
D606	MTZJ6.2B

**COILS**

L501	LAU120J
L601	LFA100J
L301	VTL1081
L512	VTL1084
L503,L930	VTL1086

**CAPACITORS**

C502,C929	CCSRCH100D50
C520,C521,C927,C928	CCSRCH101J50
C926	CCSRCH150J50
C533	CCSRCH180J50
C110,C925	CCSRCH221J50
C921,C922	CCSRCH470J50
C320-C323,C329	CCSRCH471J50
C363,C364	CCSRCH681J50
C531,C532	CCSRCH6R0D50
C359,C360,C408,C410	CEAL100M16
C406	CEAL100M50
C207,C512	CEAL101M10
C328,C407,C412,C592	CEAL101M16
C405	CEAL1R0M50
C318,C319,C361,C362	CEAL220M16

Mark	No.	Description	Part No.
	C352-C355		CEAL470M10
	C601		CEAL470M16
	C508		CEAT101M16
	C515		CEAT471M10
	C503		CEAT471M16

C101,C103,C105,C108,C111	CKSRYP103K50
C402	CKSRYP103K50
C202,C204-C206,C330-C332	CKSRYP104K25
C351,C356,C358,C413,C504	CKSRYP104K25
C507,C509,C511,C534	CKSRYP104K25

C603,C604	CKSRYP104K25
C326,C327	CKSRYP152K50
C401	CKSRYP333K16
C404	CKSRYP333K16
C106,C201,C203	CKSRYP473K50

C403	CKSRYP474K10
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**RESISTORS**

R603	RD1/4PU181J
R606	RD1/4PU221J
R602	RD1/4PU222J
R601	RD1/4PU272J
R605	RD1/4PU331J
R604	RD1/4PU470J
Other Resistors	RS1/16S□□□□J

**OTHERS**

CN104	12P FFC CONNECTOR	52044-1245
CN103	26P FFC CONNECTOR	52044-2645
CN106	KR CONNECTOR	S2B-PH-K
JA502	1P PIN JACK	VKB1063
CN105	7P FFC CONNECTOR	VKN1211
CN101,CN102	B TO B CONNECTOR 30P	VKN1765
KN101	EARTH METAL FITTING	VNF1084

**F DECK ASSY**  
**SEMICONDUCTORS**

IC2202,IC2301,IC2401	BA4558F-HT
IC2601	BU4094BCF
IC2201	HA12136AF
Q2709	2SB1197K
Q2708	2SB1296
Q2801,Q2802,Q2805	2SC1815
Q2806	2SC2240
Q2253	2SC2412K
Q2701-Q2704	2SD1858X
Q2251,Q2252,Q2261,Q2262	2SD2114K
Q2451,Q2452	2SD2114K
Q2301,Q2302	2SK373
Q2254,Q2711	DTA124EK
Q2705,Q2706	DTA143EK
Q2201,Q2263,Q2351	DTC124EK
Q2601-Q2603,Q2707,Q2710	DTC143EK
D2252-D2256,D2301-D2306	1SS133
D2705,D2706	1SS133
D2709	MTZJ4.7B/C
D2201,D2703,D2704	MTZJ6.2B/C

# XV-IS22DVD

Mark No.	Description	Part No.
<b>COILS AND FILTERS</b>		
L2802		LFA121J
L2801	COIL	RTD1082
L2401,L2402	COIL (10mH)	RTF1004
L2403,L2404	COIL (4.7mH)	RTF1021
F2201,F2202	MPX FILTER	RTF1217
L2501,L2502	CHIP BEAD	VTL1096

## CAPACITORS

C2809		CCCSL151K2H
C2301,C2302		CCSRCH100D50
C2423,C2424,C2602		CCSRCH221J50
C2253		CCSRCH271J50
C2303,C2304		CCSRCH681J50
C2203,C2204,C2207,C2215		CEAT100M50
C2407,C2408		CEAT100M50
C2701		CEAT101M16
C2201,C2202,C2217,C2218,C2255		CEAT1R0M50
C2403,C2404		CEAT1R0M50
C2251		CEAT220M50
C2216		CEAT221M10
C2213,C2214,C2254		CEAT2R2M50
C2309,C2310,C2805,C2806,C2810		CEAT330M16
C2314,C2807		CEAT470M16
C2221,C2222,C2261,C2262		CEAT4R7M50
C2419,C2420		CEAT4R7M50
C2205,C2206		CEATR22M50
C2252		CKSQYB105K10
C2702		CKSQYB474K16
C2501,C2502		CKSRYB102K50
C2601		CKSRYB104K25
C2411,C2412		CKSRYB122K50
C2211,C2212,C2421,C2422		CKSRYB152K50
C2401,C2402		CKSRYB332K50
C2451		CKSRYB473K50
C2808		CQHA822J2A
C2209,C2210		CQMA103J50
C2801		CQMA123J50
C2409,C2410		CQMA223J50
C2803,C2804		CQMA332J50
C2307,C2308,C2802		CQMA682J50
C2405,C2406		CQMA683J50

## RESISTORS

R2805		RD1/2PM161J
R2703-R2706		RD1/2PM391J
R2803		RD1/2PM4R7J
R2701,R2702		RD1/4PU102J
R2707		RD1/4PU751J
VR2701 (1kΩ)		PCP1024
VR2301,VR2302 (4.7kΩ)		PCP1028
VR2401,VR2402 (22kΩ)		PCP1030
VR2801,VR2802 (100kΩ)		PCP1032
Other Resistors		RS1/16S□□□□

## OTHERS

	8P CABLE HOLDER	51048-0800
CN2701	KR CONNECTOR	B13B-PH-K
CN2302	KR CONECTOR	B2B-PH-K
CN2301	KR CONNECTOR	B4B-PH-K
CN2603	KR CONNECTOR	B5B-PH-K

Mark No.	Description	Part No.
J2201	JUMPER WIRE 8P	D20PYY0825E
	PCB BINDER	VEF1040
CN2202	14P PLUG	XKP3048

## G IF ASSY

### SEMICONDUCTORS

IC5501		PDC075B
Q5501,Q5504		2SC2412K
Q5503,Q5506,Q5507		DTC143EK
D5501,D5503-D5505,D5507		1SS133
D5506		MTZJ6.8B

### COILS

L5501,L5511		LAU220J
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### CAPACITORS

C5507 (0.047F/5.5V)		ACH1246
C5523		CCSRCH100D50
C5524		CCSRCH220J50
C5525		CCSRCH221J50
C5509		CEAT100M50
C5500		CEAT101M50
C5502		CEAT1R0M50
C5505,C5508,C5517		CEAT470M16
C5503,C5562		CKSRYB102K50
C5518-C5520,C5701		CKSRYB103K50
C5504,C5506,C5511,C5543,C5573		CKSRYB104K25
C5575		CKSRYB104K25
C5526		CKSRYB473K50

### RESISTORS

All Resistors		RS1/16S□□□□
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### OTHERS

CN5511	7P FFC CONNECTOR	52045-0745
CN5509	10P FFC CONNECTOR	52045-1045
CN5508	12P FFC CONNECTOR	52045-1245
CN5503	13P FFC CONNECTOR	52045-1345
CN5504	17P FFC CONNECTOR	52045-1745
CN5507	5P SOCKET	AKP7042
X5501	CERAMIC RESONATOR (10MHz)	DSS1048
CN5501,CN5502	15P PLUG PCB BINDER	KM200TA15
		VEF1040
KN5501	EARTH METAL FITTING	VNF1084
CN5506	14P PLUG	XKP3049

## H AF ASSY

### SEMICONDUCTORS

IC3002-IC3004,IC3901		BA4558F-HT
IC3001		LC75343M
IC7301		NJM062M
IC141		NJM7805FA
IC301		NJM7806FA

Mark	No.	Description	Part No.
	IC131		NJM7812FA
	Q131,Q141,Q304-Q306		2SB1237X
	Q4001		2SB1375
	Q301,Q302,Q4002		2SC2412K
	Q3004		2SD1858X
	Q2001		2SD2012
	Q3001,Q3002,Q3005,Q3006		2SD2114K
	Q3009,Q3010		2SD2114K
	Q3003,Q3011,Q3013		DTA124EK
	Q3015		DTA143EK
	Q7301		DTC114EK
	Q3014		DTC124EK
	D3006		1SS133
	D131,D141,D301,D3011,D3013		1SS355
	D3016,D302,D303,D3049		1SS355
	D7301-D7304		1SS355
	D3004		MTZJ10C
	D4003		S5688G

**COIL**

L7301	LAU220J
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**CAPACITORS**

C3057-C3059	CCSRCH101J50
C7102,C7104,C7301	CCSRCH221J50
C3205,C3206	CCSRCH271J50
C3903	CCSRCH471J50
C3902	CCSRCH681J50

C134,C3011-C3013,C302	CEAT100M50
C3025,C3026,C3029,C304,C3043	CEAT100M50
C3904,C3905,C4004	CEAT100M50
C4006	CEAT101M16
C131,C141,C3023,C3024,C3901	CEAT1R0M50

C301	CEAT220M50
C3001-C3010,C3014,C3016,C3027	CEAT2R2M50
C3055,C3056	CEAT2R2M50
C133,C143,C3033,C3096,C7302	CEAT470M16
C7307	CEAT4R7M50

C3041,C3042	CEATR47M50
C3910,C7131	CKSRYB103K50
C132,C142,C3015,C3019-C3022	CKSRYB104K25
C303,C3034-C3036,C3039,C3040	CKSRYB104K25
C3044,C3047-C3049,C3051,C3052	CKSRYB104K25

C3099,C3111,C7305,C7306,C901	CKSRYB104K25
C3065	CKSRYB222K50
C305,C3121-C3123	CKSRYB223K50
C3906	CKSRYB473K50
C3053	CKSRYB474K10

C3017,C3018	CKSRYB822K50
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**RESISTORS**

R2002	RD1/4PU100J
R3205	RD1/4PU223J
VR3901 (10kΩ)	XCS3006
Other Resistors	RS1/16S□□□J

**OTHERS**

CN3007	26P FFC CONNECTOR	52045-2645
CN3006	8P JUMPER CONNECTOR	52147-0810
JA7105	6P PIN JACK	AKB7012
CN3001	12P CONNECTOR	AKP7131
CN3008	KR CONNECTOR	B2B-PH-K

Mark	No.	Description	Part No.
	CN101	KR CONNECTOR 3P	B3B-PH-K
	CN3005	KR CONNECTOR	B9B-PH-K
	CN3003,CN3004	15P SOCKET	KP200TA15L
		PCB BINDER	VEF1040
	JA3901	MINI JACK	XKN3008

**I MEDIA BLUE LED ASSY**  
**SEMICONDUCTORS**

Q8001	2SC2412K
D8003-D8006	1SS355
D8001	E1S02-4B0A7
D8002	MTZJ5.6B

**RESISTORS**

All Resistors	RS1/16S□□□J
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**OTHERS**

CN8001	KR CONNECTOR	S2B-PH-K
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**J CD MOTOR ASSY**

**CAPACITOR**

C7501	CKSRYB104K25
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**OTHERS**

CN11	KR CONNECTOR	S2B-PH-K
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**K F-TERMINAL ASSY**

**SEMICONDUCTORS**

D7211,D7212	1SS355
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**COILS**

L7202,L7203,L7211,L7212	VTL1105
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CHIP BEAD	
L7221,L7222	VTL1105
CHIP BEAD	

**CAPACITORS**

C5902	CEAT101M10
C7202	CEJQ101M10
C7213,C7214	CKSRYB102K50
C5903,C5908,C7201,C7203	CKSRYB103K50
C7231	CKSRYB472K50

**RESISTORS**

All Resistors	RS1/16S□□□J
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**OTHERS**

JA7304	MINI JACK	AKN-210
JA7303	MINI JACK	AKN7003
JA7201	OPTICAL LINK OUT	GP1FA501TZ
X5901	REMOTE RECEIVER UNIT	GP1U28Y

# XV-IS22DVD

Mark	No.	Description	Part No.
<b>L</b>		<b>LIGHT-L ASSY</b>	
		<b>SEMICONDUCTOR</b>	
	D5908		NSPWF50BS-9706
		<b>CAPACITOR</b>	
	C5907		CKSRYB103K50
		<b>OTHERS</b>	
	J51	3P CABLE HOLDER JUMPER WIRE 3P	51048-0300 D20PYY0310E

Mark	No.	Description	Part No.
<b>M</b>		<b>LIGHT-R ASSY</b>	
		<b>SEMICONDUCTOR</b>	
	D5906		NSPWF50BS-9706
		<b>CAPACITOR</b>	
	C5906		CKSRYB103K50
		<b>OTHERS</b>	
	J50	3P CABLE HOLDER JUMPER WIRE 3P	51048-0300 D20PYY0310E

Mark	No.	Description	Part No.
<b>N</b>		<b>FRONT PANEL ASSY</b>	
		<b>SEMICONDUCTORS</b>	
	Q5901, Q5903-Q5905		2SC2412K
	Q5902		DTA124EK
	D5902-D5905		1SS133
		<b>SWITCHES</b>	
	S5901-S5920		ASG7013
	S5921		ASX7026
		<b>RESISTORS</b>	
	R5934		RD1/4PU101J
	Other Resistors		RS1/16S□□□J
		<b>OTHERS</b>	
		3P CABLE HOLDER	51048-0300
	CN52	17P FFC CONNECTOR	52044-1745
	CN50, CN51	3P JUMPER CONNECTOR	52151-0310
	J54, J55	JUMPER WIRE 3P	D20PYY0325E
	CN49	KR CONNECTOR	S3B-PH-K

Mark	No.	Description	Part No.
<b>O</b>		<b>CD OPEN SW ASSY</b>	
		<b>SWITCHES</b>	
	S7401, S7402		VSH1019
		<b>OTHERS</b>	
		3P CABLE HOLDER	51048-0300

Mark	No.	Description	Part No.
<b>P</b>		<b>CD CLOSE SW ASSY</b>	
		<b>SWITCHES</b>	
	S7403, S7404		ASG7015
		<b>OTHERS</b>	
		3P CABLE HOLDER	51048-0300

## 6. ADJUSTMENT

For adjustment, use the stereo power amplifier (M-IS22V).

### 6.1 DECK SECTION

#### 6.1.1 Adjustment Condition

- (1) The ground at the time of adjustment shall be W166. (Refer to Fig. 6-3).
- (2) Clean the heads and demagnetize them using a head eraser.
- (3) Set the measurement level to 0 dBV = 1 Vrms.
- (4) Use the specified tape for adjustment. Use the labeled (A) side of the test tape.

NCT-111 : For Tape Speed adjustment  
 STD-331E : For Playback adjustment  
 STD-632 : Normal blank tape

\* As the reference recording level is 250 nwb/m for STD-331E, the recording level will be higher than 4 dB for STD-331B (160nwb/m). When adjusting, pay carefully attention to the type of tape used.

- (5) Provide yourself with the following measuring devices:
  - AC millivoltmeter
  - Low-frequency oscillator
  - Attenuator
  - Oscilloscope
- (6) Adjust both right and left channels unless other wise specified.
- (7) Turn the DOLBY NR switch off unless otherwise specified.
- (8) Warm up the unit for several minutes before adjustment. In particular, be sure to warm up the unit in the REC/PLAY mode for 3 to 5 minutes before starting recording/playback frequency characteristics adjustment.
- (9) Always follow the indicated adjustment order. Otherwise, a complete adjustment may not be achieved.

#### ■ List of Adjustments

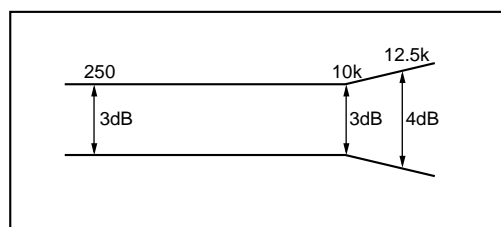
##### ● Playback Section

- (1) Tape Speed Confirmation
- (2) Head Azimuth Adjustment
- (3) Playback Level Adjustment

##### ● Recording Section

- (1) Recording Bias Adjustment
- (2) Recording Level Adjustment

#### PLAY BACK



#### RECORDING

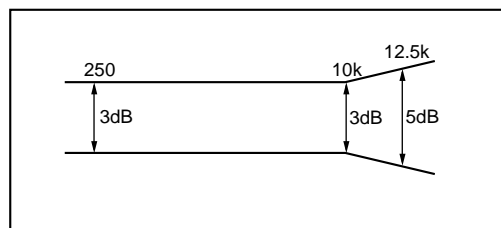


Fig. 6-1 Frequency Characteristics

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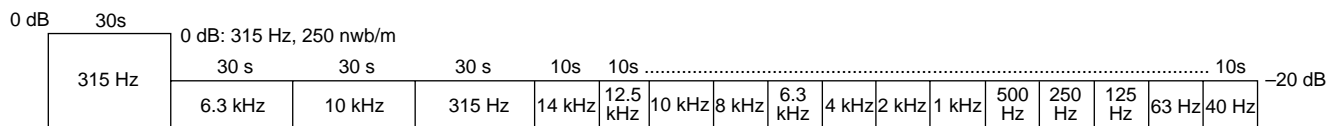


Fig. 6-2 Test Tape STD-331E

## 6.1.2 Playback Section

### (1) Tape Speed Confirmation

No.	Mode	Input Signal/Test Tape	Adjustment Points	Measurement Points	Adjustment Value	Remarks
1	PLAY	NCT-111 (3 kHz)	VR2701 (DECK ASSY) (Refer to Fig. 6-3)	TP R (C2204) (DECK ASSY)	3000 Hz $\begin{matrix} +10 \\ -10 \end{matrix}$ Hz	FWD adjustment REV Confirmation ( 3000 Hz $\begin{matrix} +60 \\ -60 \end{matrix}$ Hz )

### (2) Head Azimuth Adjustment

- This unit is equipped with auto tape selector.
- Do not switch between forward and reverse operation with the screwdriver inserted.

No.	Mode	Input Signal/Test Tape	Adjustment Points	Measurement Points	Adjustment Value	Remarks
1	PLAY	STD-331E test tape (Playback: 10 kHz, -20 dB)	Head azimuth adjustment Screw (Refer to Fig. 6-3)	TP L (C2203) TP R (C2204) (DECK ASSY)	Max. Playback signal level	After adjustment, apply silicon bond to the head azimuth adjustment screw.

### (3) Playback Level Adjustment

- Since this adjustment determines playback DolbyNR level, Perform it carefully.

No.	Mode	Input Signal/Test Tape	Adjustment Points		Measurement Points	Adjustment Value	Remarks
1	PLAY	STD-331E test tape (Playback: 315 Hz, 0 dB)	L ch	VR2301	TP L (C2203) TP R (C2204) (DECK ASSY)	-3.7 dBV	
			R ch	VR2302			

## 6.1.3 Recording Section

### (1) Recording Bias Adjustment

- After the adjustment, caution should be exercised so as not to become under bias by checking the distortion rate.

No.	Mode	Input Signal/Test Tape	Adjustment Points		Measurement Points	Adjustment Value	Remarks
1	REC/ PAUSE	Input a 315Hz signal to the LINE - IN terminal. *	Input signal level		TP L (C2203) TP R (C2204) (DECK ASSY)	-23.7 dBV	Repeat adjustment until playback level of the 10kHz signal is within 0.5dBV $\pm$ 0.5dB from that of the 315Hz signal.
2	REC $\rightarrow$ PLAY	Load the STD-632 test tape and record/playback the 315Hz and 10kHz signals. (see the Note below)	L ch	VR2801			
			R ch	VR2802			

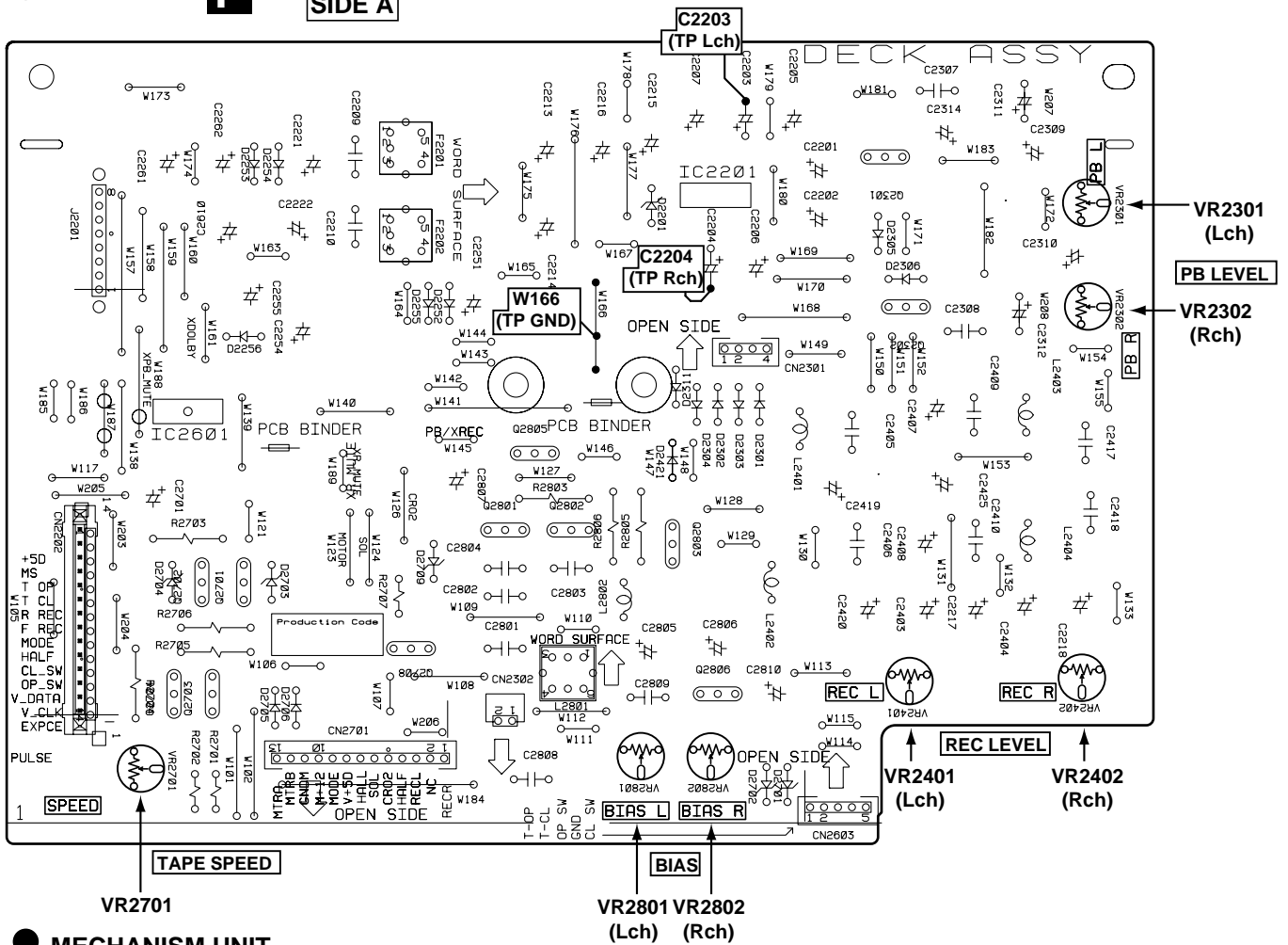
Note: Set the 10kHz input signal level to the same value as the 315Hz input signal level of step 1.

### (2) Recording Level Adjustment

No.	Mode	Input Signal/Test Tape	Adjustment Points		Measurement Points	Adjustment Value	Remarks
1	REC/ PAUSE	Input a 315Hz signal to the LINE- IN terminal.*	Input signal level		TP L (C2203) TP R (C2204) (DECK ASSY)	-7.7 dBV	Repeat recording, playback and adjustment until playback level of the 315Hz signal becomes -7.7dBV $\pm$ 0.5dB.
2	REC $\rightarrow$ PLAY	STD-632 test tape and record/ playback the 315Hz signal.	L ch	VR2401			
			R ch	VR2402			

● DECK ASSY **F**

**SIDE A**



● MECHANISM UNIT

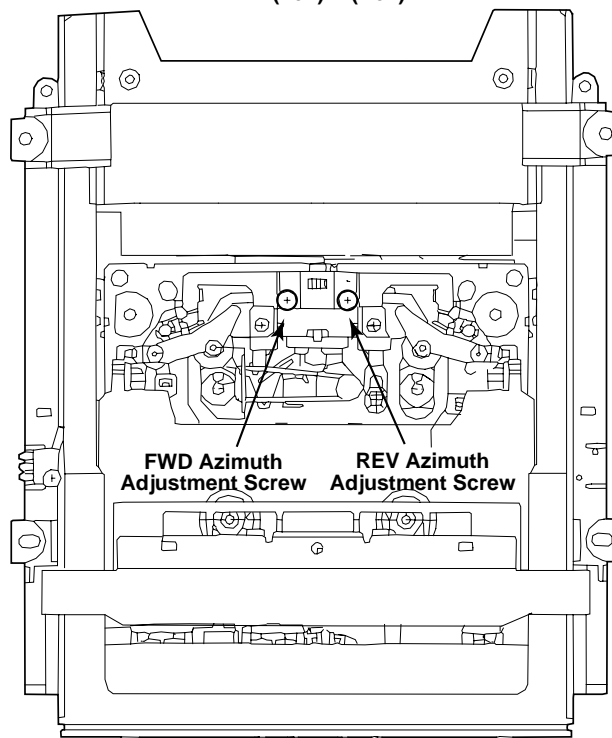


Fig. 6-3 Adjustment and Measurement Points

## 6.2 TUNER SECTION

### 6.2.1 AM TUNER SECTION

- There is no adjustment in the AM tuner.

### 6.2.2 FM TUNER SECTION

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 6-5.

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 V <sub>tm</sub> ) gets within 0 $\pm$ 50mV.

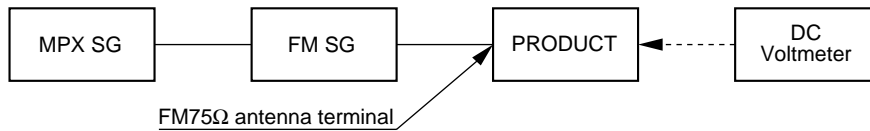


Fig.6.4 Adjustment Wiring Diagram

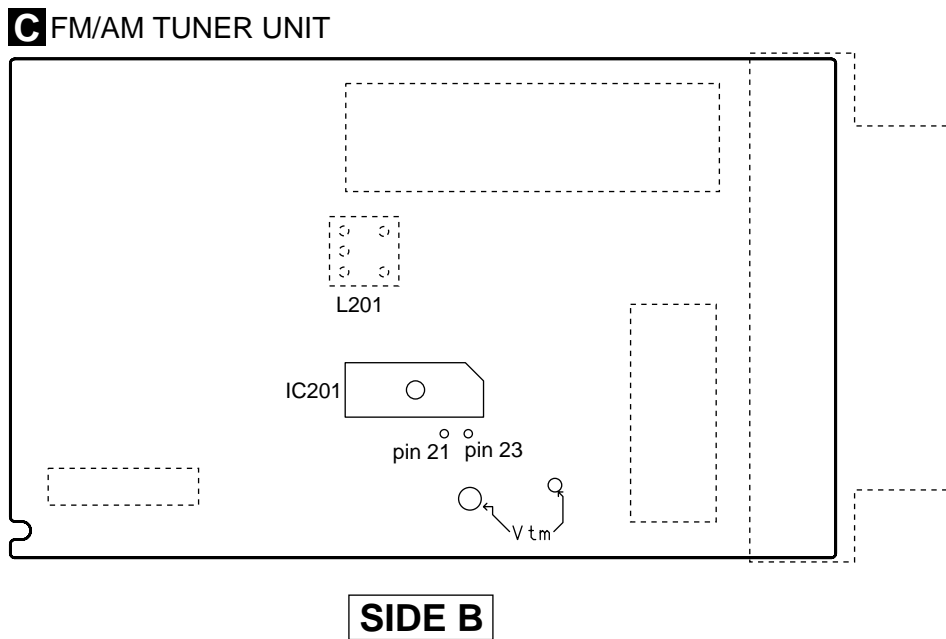


Fig.6.5 Adjustment Point

## 6.3 DVD SECTION

- There is no adjustment in the DVDM ASSY.



## 7. GENERAL INFORMATION

### 7.1 DIAGNOSIS

#### 7.1.1 TEST MODE

##### 7.1.1.1 SELF-DIAGNOSTIC FUNCTION OF PICKUP DEFECTIVE

This model can be confirmed the laser diode current of the pickup at the Test Mode screen.

(For entering to the Test Mode, press the **ESC** → **TEST** buttons in order of the test mode remote control unit GGF1067.)

It is valid to the following symptoms.

#### Symptom

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

#### Procedure of Self-Diagnosis

- ① Press the **TEST** → **1** buttons (of the test mode remote control unit : GGF1067) in the test mode screen, and turn on the laser diode (It light-up for nine seconds.).
- ② Confirm the indicated value of the laser diode current (LDI).
- ③ **When indicated value is more than 110, pickup is defective.** → **Exchange is necessary.**  
Exchange the whole Traverse Mechanism Assy.

**Note :** This function is effective even when a DVD disc is played in the test mode.  
This function is effective only for DVD pickup (650nm).

Character in bold : Item name  
□: Information display

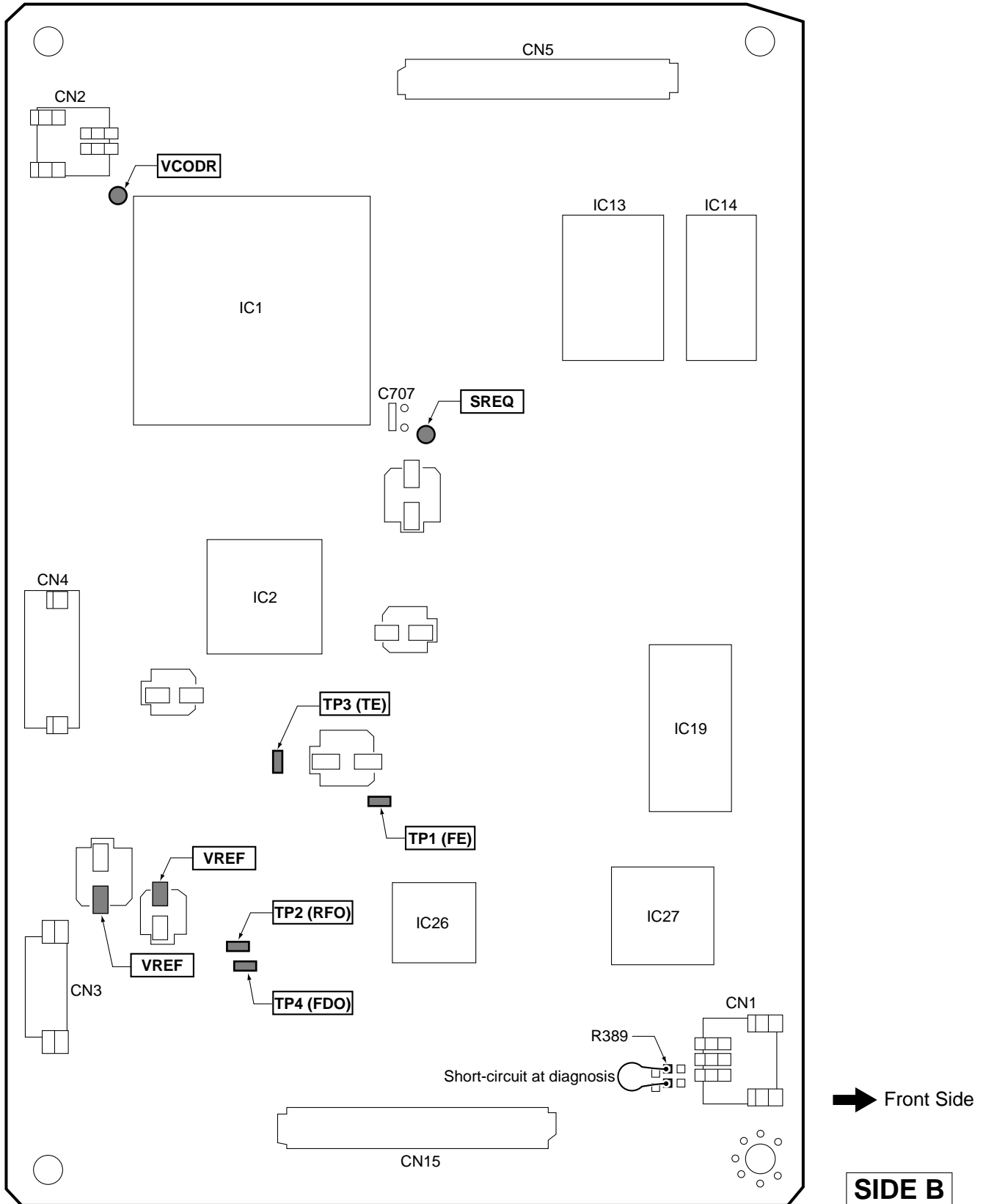
□□□□□□□□	R-□□□□	K-□□	
C-R□□	G□□	B□□	M-□ S-□□□□
TRKG-□□□	<b>LDI-□□□</b>	V-□□□□	
SPDL-□□□	AFB-□□	AV:□.□□'□'	
AGC-□□□	[□]	FL:□□□□	REG:□
KS-[□□□□]	□□□□	MDL:□□□□/□□□□	
ER-□□□□	□□□□	□□□□□□/□□□□□□	
MM-□□:□□		V:□.□□□	FLSH:□
DSC-□□□	BM-□□	S:□.□□□	/□.□□□
J-□□□		M:□.□□□	G□.□□□

Laser diode current value →

Test Mode Screen Display

7.1.1.2 TEST POINTS LOCATION

DVDM ASSY



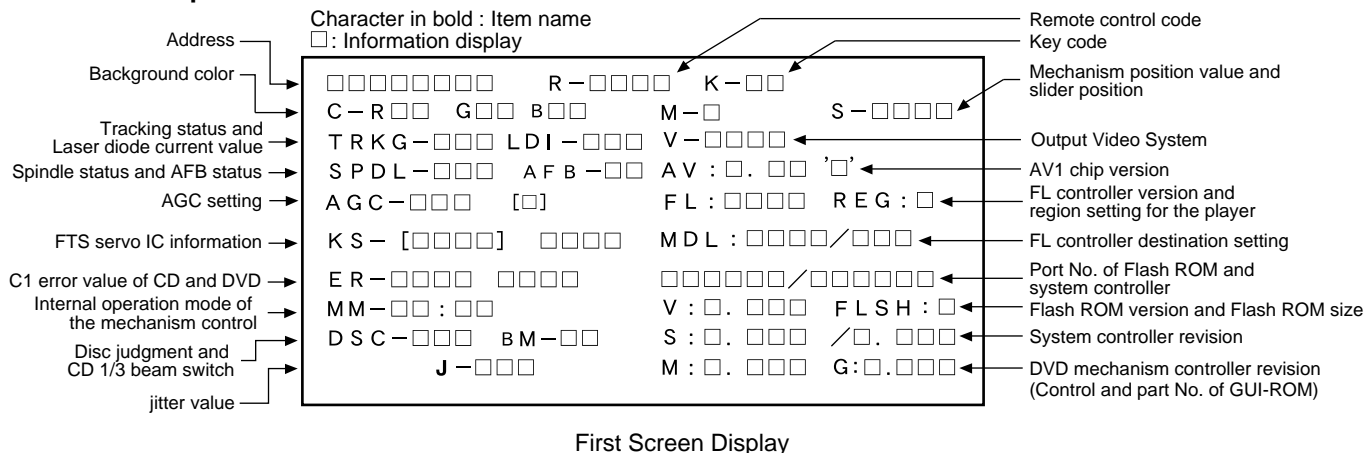
### 7.1.1.3 TEST MODE SCREEN DISPLAY

#### ■ TEST MODE SCREEN DISPLAY

For entering to the Test Mode, press the [ESC] → [TEST] buttons 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]

## (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 Disc sensing [DSC – \* \* \*]

The type of discs loaded is displayed.  
 [DVD], [CD ], [VCD], [ ]

## ② CD 1/3 beam switch [BM – \* \*]

## (15) Jitter value [J – \* \*]

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 : \* \* \* \* / \* \* \* \*]

For characters in front represent the type of model :  
 There characters that follow represent the destination code.  
 J : /J, K : /KU, /KC, /KU/KC, R : /RAM, /RL, /RD, /LB,  
 WY : /WY

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

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

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

② Flash ROM size [FLSH = \*]

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

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

## (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 : \* \* \* \* \*]

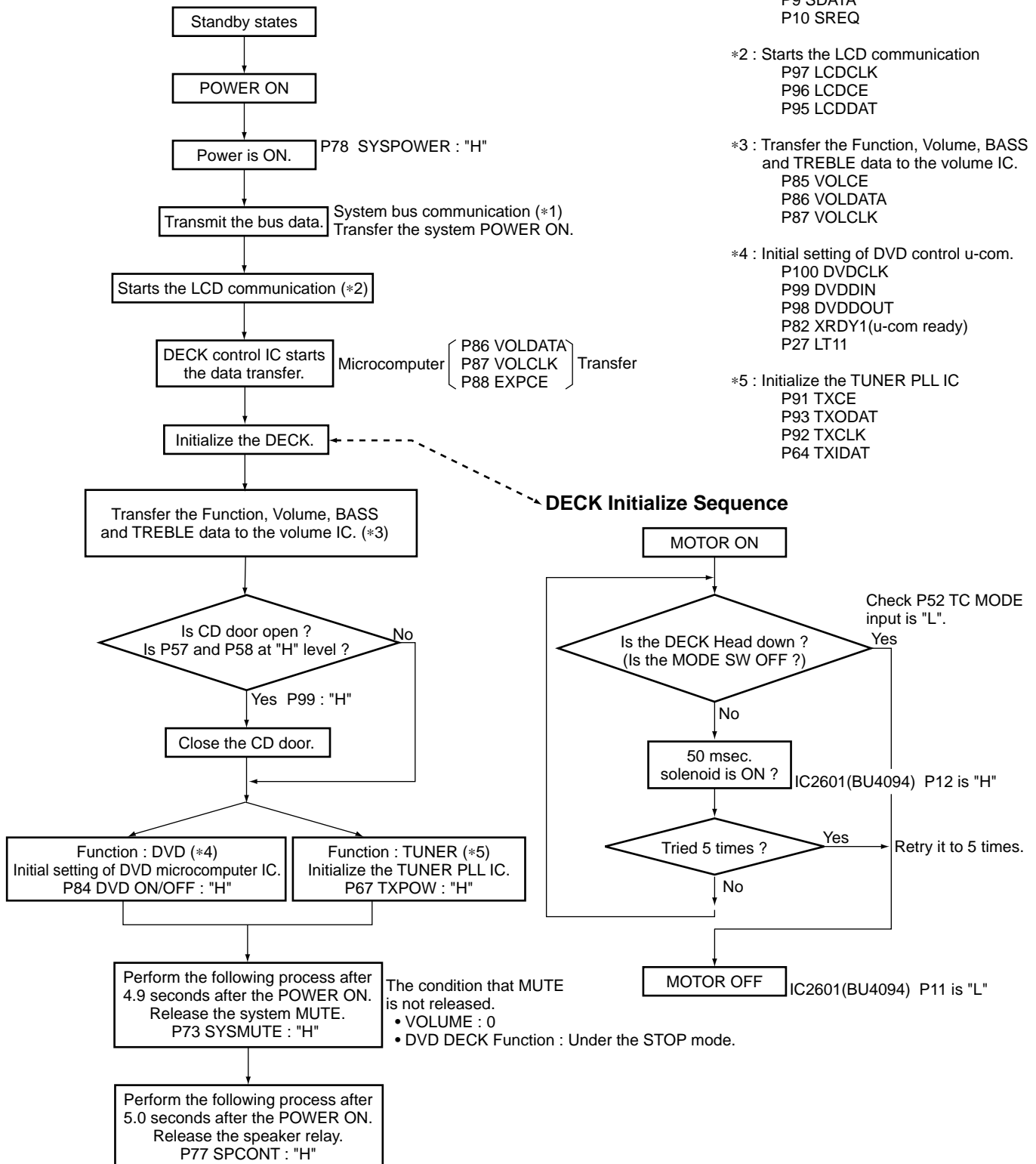
No GUI model displays as "— / —".

### 7.1.2 POWER ON SEQUENCE

Note 1 : IC No. or P\*\* without name indicate the pin No. of microcomputer (IC5501 : IF ASSY).

Note :

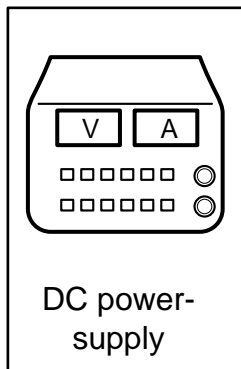
- \*1 : System bus communication  
P8 SCLK  
P9 SDATA  
P10 SREQ
- \*2 : Starts the LCD communication  
P97 LCDCLK  
P96 LCDCE  
P95 LCDDAT
- \*3 : Transfer the Function, Volume, BASS and TREBLE data to the volume IC.  
P85 VOLCE  
P86 VOLDATA  
P87 VOLCLK
- \*4 : Initial setting of DVD control u-com.  
P100 DVDCCLK  
P99 DVDDIN  
P98 DVDDOUT  
P82 XRDY1(u-com ready)  
P27 LT11
- \*5 : Initialize the TUNER PLL IC  
P91 TXCE  
P93 TXODAT  
P92 TXCLK  
P64 TXIDAT



## 7.1.3 SINGLE OPERATION METHOD

Single purpose operation test mode specification for IS22DVD service.  
It is the mode to operate by the MEDIA ASSY.

### ■ Jigs and Measuring instruments



### ■ Single purpose operation method.

① Connect point (A) of the AF ASSY [+8V, +15V, +5V, GND] and DC power-supply.  
(Refer to Fig. 7-1.)

Connect point (A)	DC power-supply	
	Voltage (V)	Remarks
AF ASSY: (+8V)	+8V	
AF ASSY: (+15V)	+15V	
AF ASSY: (+5V)	+5V	
AF ASSY: (GND)	GND	

② Keeps pushing main body "BASS key" and the "TREBLE" key together.  
(Refer to Fig. 7-2.)

③ Connect the AF ASSY [Connect point (B): +5.6V] under the condition (With doing a key 2-fold push.) of ②.  
(Refer to Fig. 7-2.)

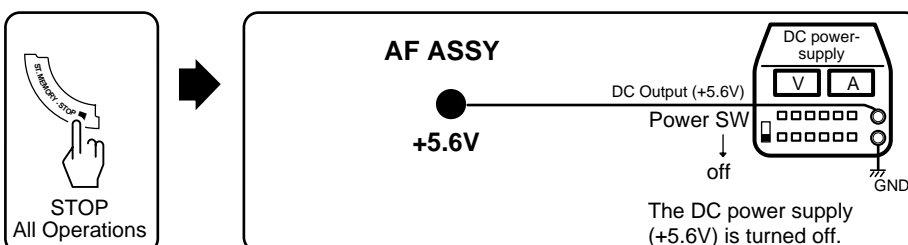
Connect point (B)	DC power-supply	
	Voltage (V)	Remarks
AF ASSY: (+5.6V)	+5.6V	
AF ASSY: (GND)	GND	

④ The main system starts working.  
Stop pushing "BASS" and "TREBLE" keys.

Note:

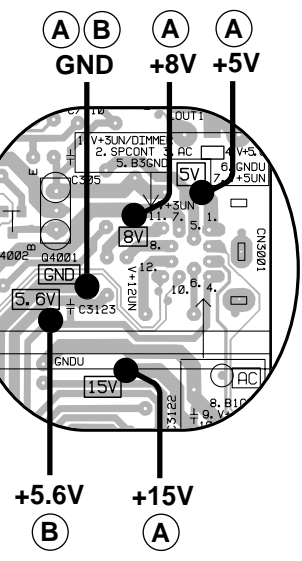
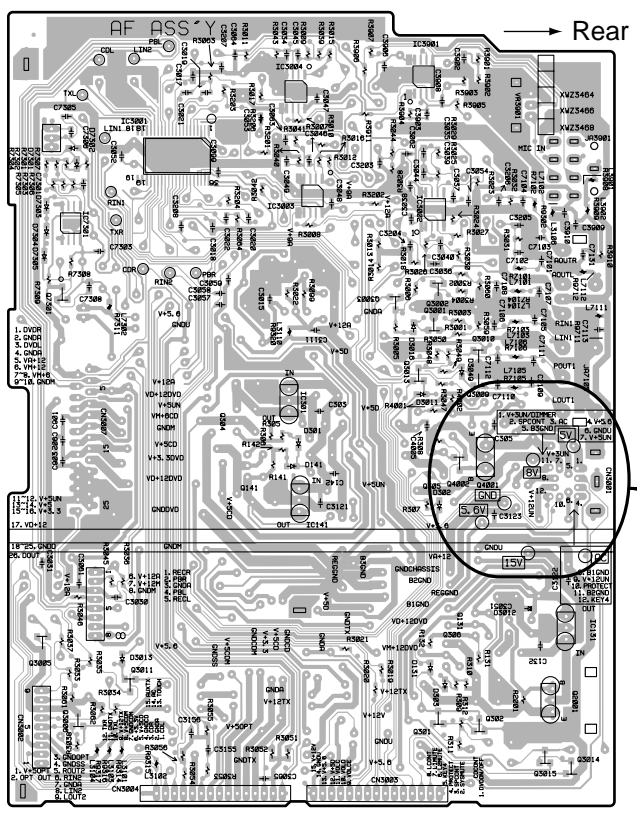
- The test mode is finished when a STANDBY/ON key is pushed during POWER ON state or the power supply is cut off.  
Do the above operation when you make it work again.
- It doesn't work only by connecting power supplies. Do the above operation.
- The microcomputer does not perform AC CHECK at this time.

### TEST MODE : STOP → CANCEL



**CONNECTED POINT**

**H AF ASSY**



**SIDE B**

**STEP 1**

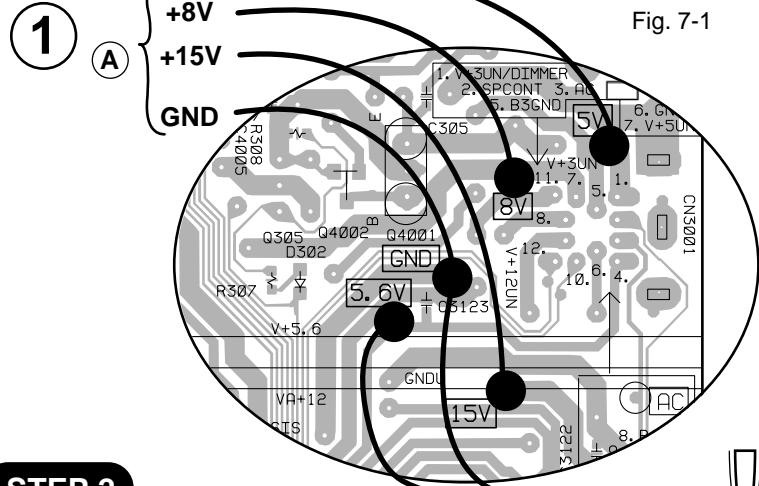


Fig. 7-1

**STEP 2**

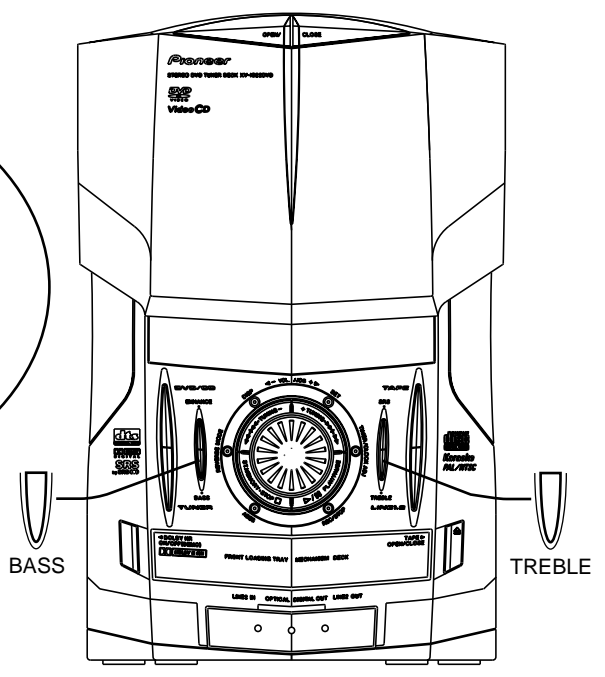
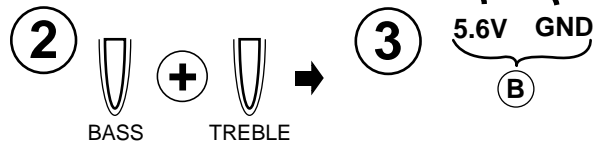


Fig. 7-2

## 7.1.4 TROUBLE SHOOTING

### XV-IS22DVD microcomputer troubleshooting

Symptom of problem	Thought cause	Check method
<ul style="list-style-type: none"> <li>The power supply does not enter .</li> <li>The standby LED lights even if the POWER key is pushed.</li> </ul>	<ul style="list-style-type: none"> <li>The microcomputer is not reset.</li> </ul>	<ul style="list-style-type: none"> <li>Whether terminal RESET (11Pin) is "H" is confirmed. The operation of the RESET circuit is confirmed if not becoming "H".</li> </ul>
	<ul style="list-style-type: none"> <li>The AC pulse is not input.</li> </ul>	<ul style="list-style-type: none"> <li>Whether the AC pulse is input to AC input terminal (26Pin) is confirmed. If the AC pulse is not input, the AC pulse generation circuit is confirmed.</li> </ul>
	<ul style="list-style-type: none"> <li>The oscillation circuit of the microcomputer does not oscillate.</li> </ul>	<ul style="list-style-type: none"> <li>The microcomputer or the oscillation circuit is broken. The microcomputer or the oscillation circuit is exchanged.</li> </ul>
<ul style="list-style-type: none"> <li>It enters the state of POWER OFF soon even in case of the POWER ON.</li> </ul>	<ul style="list-style-type: none"> <li>If the function is DVD, the 3.3DETECT input is 2.9V or less.</li> </ul>	<ul style="list-style-type: none"> <li>If the voltage of the 3.3DETECT (25Pin) terminal of the microcomputer is 2.9V or less, the voltage is adjusted to 2.9V or more.</li> </ul>
	<ul style="list-style-type: none"> <li>The input of the PROTECT terminal (18Pin) is Lo.</li> </ul>	<ul style="list-style-type: none"> <li>Whether the Power Supply Circuit operation is confirmed.</li> </ul>
<ul style="list-style-type: none"> <li>DVD does not operate at all.</li> <li>Time is not displayed in FL DISPLAY at the DVD function.</li> </ul>	<ul style="list-style-type: none"> <li>It does not communicate with the DVD microcomputer.</li> </ul>	<ul style="list-style-type: none"> <li>Whether terminal (27Pin, 82Pin, 98-100Pin) for the communication with the DVD microcomputer does the communication operation is confirmed. If the communication operation is not done, whether the B to B connector etc. are disconnected is confirmed.</li> <li>Whether "H" is output to terminal DVDRESET (83Pin) is confirmed.</li> </ul>
<ul style="list-style-type: none"> <li>The operation key is not accepted at all.</li> </ul>	<ul style="list-style-type: none"> <li>It is recognized that other KEY has already been pushed.</li> </ul>	<ul style="list-style-type: none"> <li>When KEY is not pushed, whether KEY input terminal (19-21Pin) is 5V is confirmed. If the KEY input terminal is not 5V, whether KEY SW on the line breaks is confirmed.</li> </ul>



## 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 couldn'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

### 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
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
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

# XV-IS22DVD

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
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	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	ABUSY did not return within 30 mS after the FJMPU (Focus jump 0 to 1) command was sent.		Stop
54	Auto sequence timeout of play AGC	ABUSY did not return within 50 mS after the GSUMON (play-AGC-measuring) command was sent.		Stop
55	Auto sequence timeout of disc-type-sensing	ABUSY did not return within 2 seconds after the DJSRT (disc-sensing) command was sent.		Stop
56	Auto sequence timeout of ATB2	ABUSY did not return within 1 second after the TBLOFS (Internal ATB after the completion of external ATB) command was sent.		Stop
57	Auto sequence timeout of tracking servo ON	ABUSY did not return within 500 mS after the TSON (tracking servo ON) command was sent.		Stop
58	Auto sequence timeout of ATB1	ABUSY did not return within 200 mS after the TBL (external ATB) command was sent.		Stop
59	Auto sequence timeout of focus gain adjustment	ABUSY did not return within 2 seconds after the FGN (focus gain adjustment) command was sent.		Stop
5A	Auto sequence timeout of tracking gain adjustment	ABUSY did not return within 2 seconds after TGN (tracking gain adjustment) command was sent.		Stop
5B	Auto sequence timeout of offset adjustment	ABUSY did not return within 1 second after the CMDAVE (offset adjustment) command was sent.		Stop
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)

FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
74	Subcode check failure during startup			Opens (Subcode readout failure).
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
A4	Communication timeout for continuously writing DSP coefficient	Command Busy (XCBUSY) was in force for 200 mS during continuous coefficient writing, or before and after a continuous write command was issued to DSP.		Open
B1	Timeout error for backup	In the tracing state during the backup sequence, codes could not be read for 1 second or more. In the backup sequence, tracking ON sequence of the servo DSP could not be completed even if more than 500 mS after the tracking ON command was issued.		Stops
B2	Retry error for backup	Tracing impossible after retring the tracking ON for 3 times in the backup sequence.		Stops
B3	Retry error for trace	During tracing, runaway was detected after three iterations of backup operations for detecting runaway.		Stops
C3	Detection of tracking overcurrent	During playback, the overcurrent detection port was at L for 300 ms or more continuously.		Stops (the mechanical controller operates independently).
(C5)	Short-circuit test corresponding error	While the power was on, the overcurrent detection port was at L for 40 ms or more continuously.		Turns off the power instantly (No indication on the FL display and no writing to flash memory)
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. It 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**

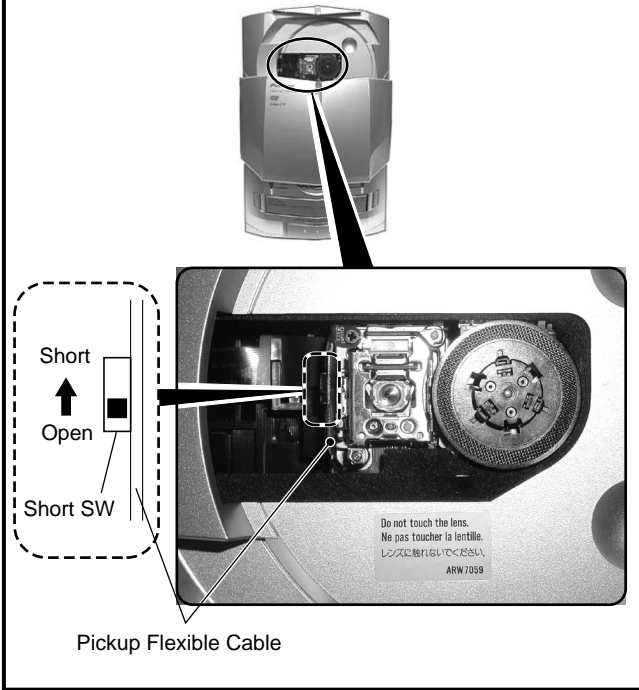
FL	Description of Error	Causes if with a DVD	Causes if with a CD	Operation of the Unit
bit3=1 08 etc.	AV1 access error (read, write NG)			No operation or it becomes debugging indication if the power is able to ON.
bit2=1 04 etc.	MY CHIP access error			
bit1=1 01 etc.	SRAM access error			

### 7.1.6 DISASSEMBLY

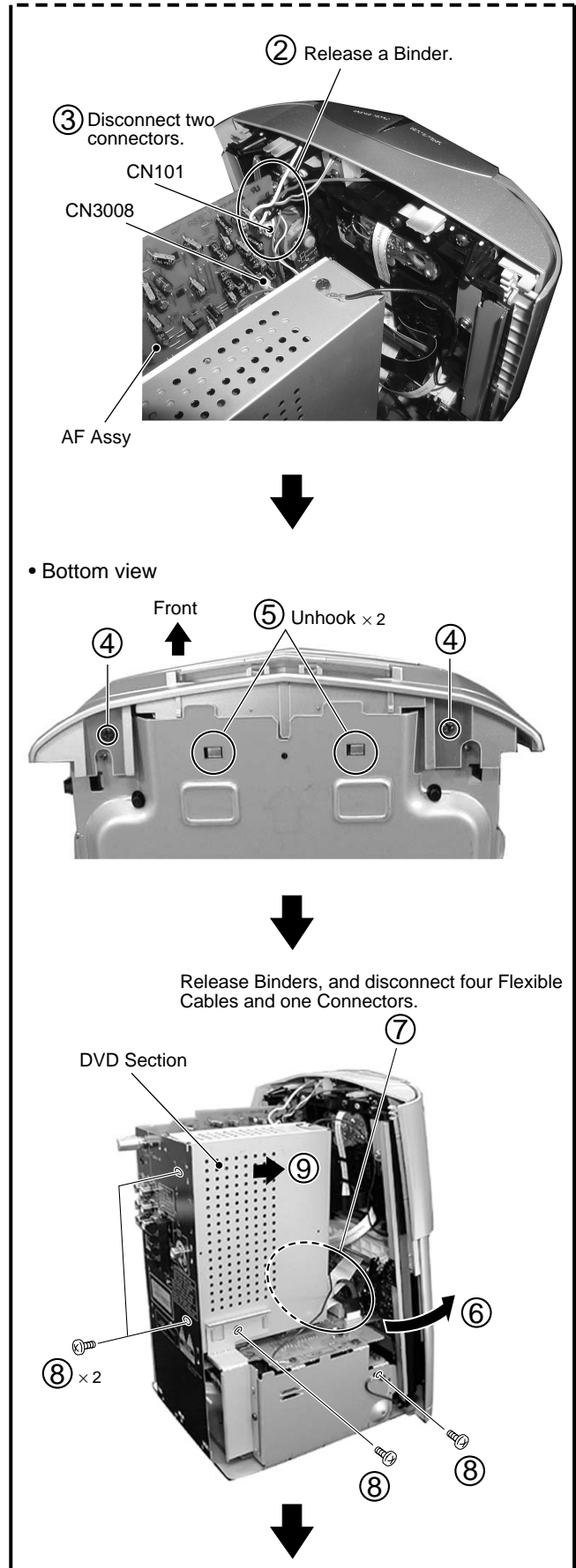
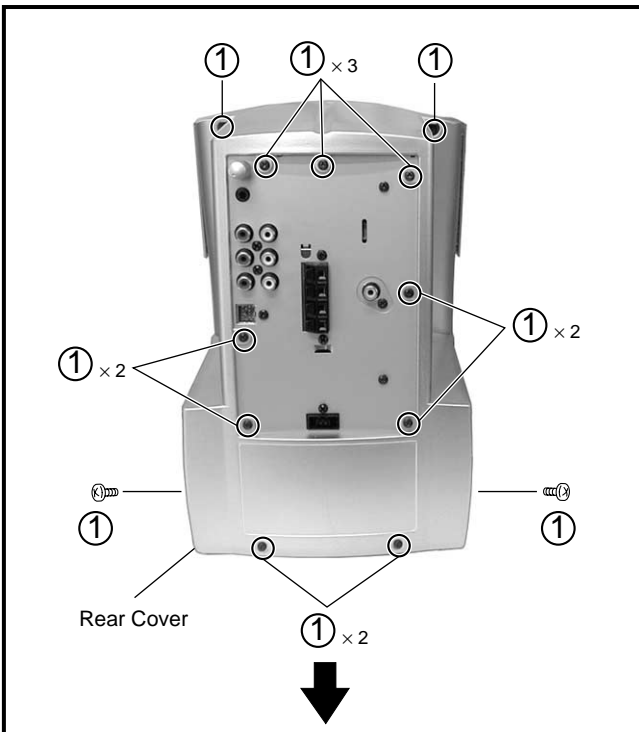
**Note:**  
Flexible Cables are not removed in the case of the adjustment, but remove the Flexible Cables to apply in the case of the exchange or repair.

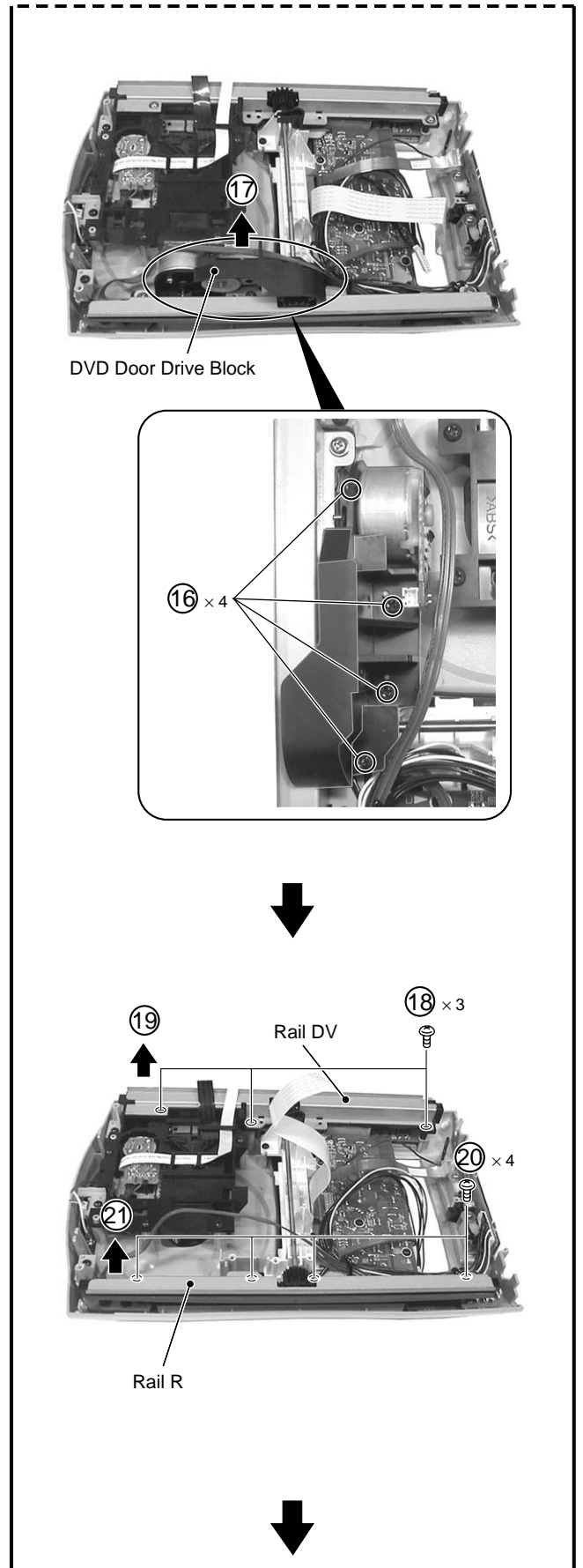
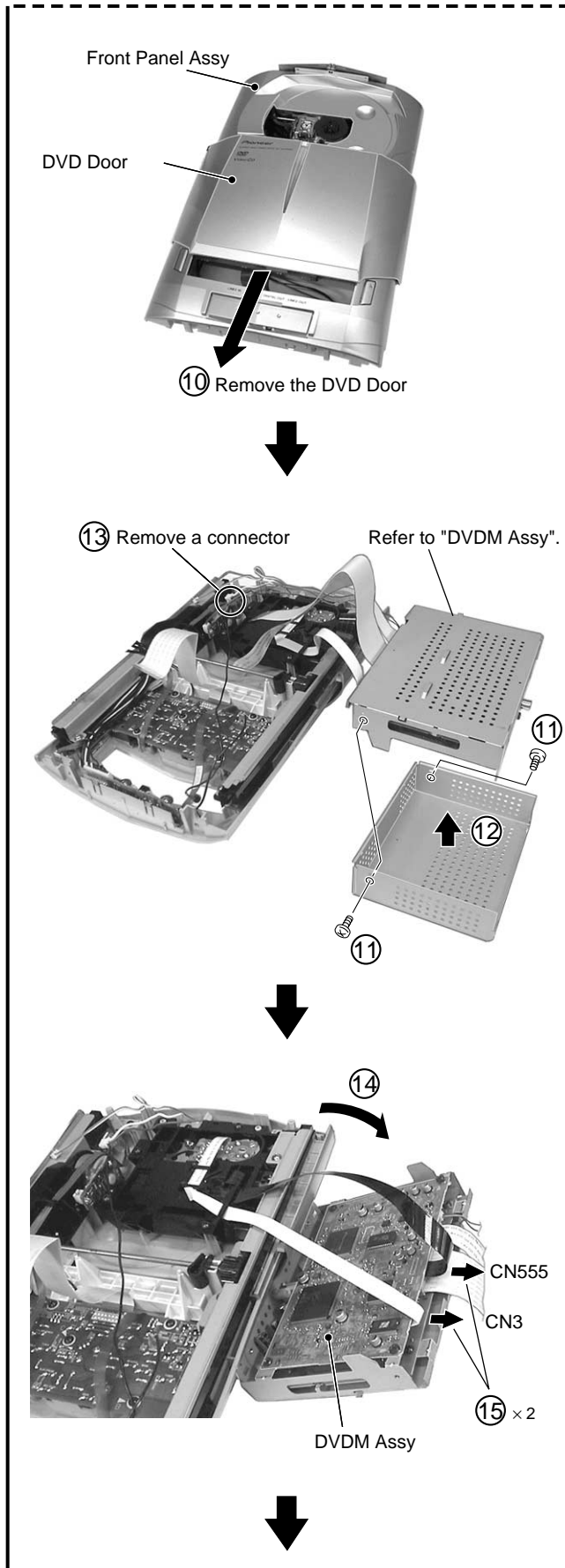
#### ■ Pickup Short SW Set To Short Side

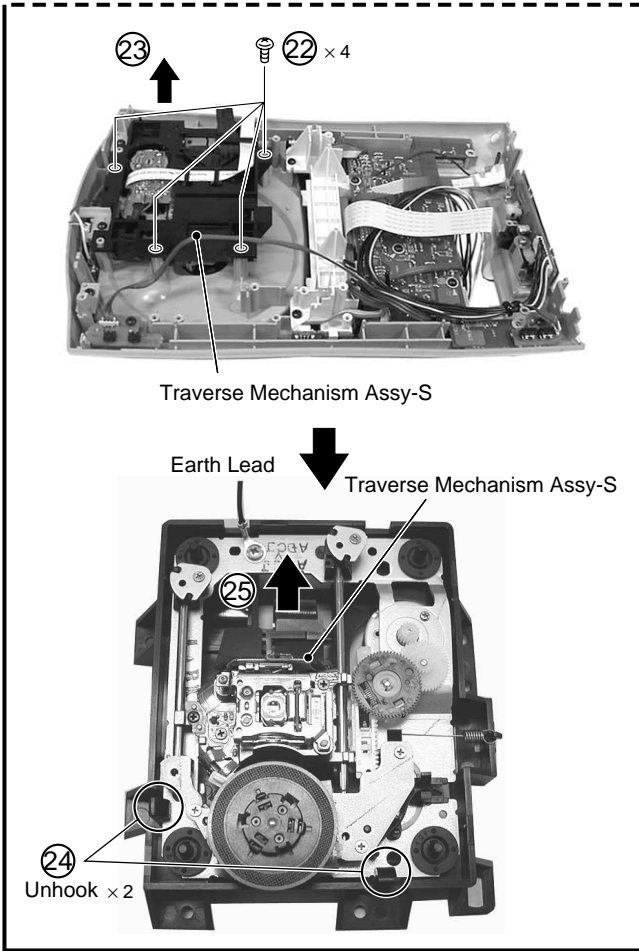
When remove the Pickup Flexible Cable, turn the Short SW to Short side firstly.



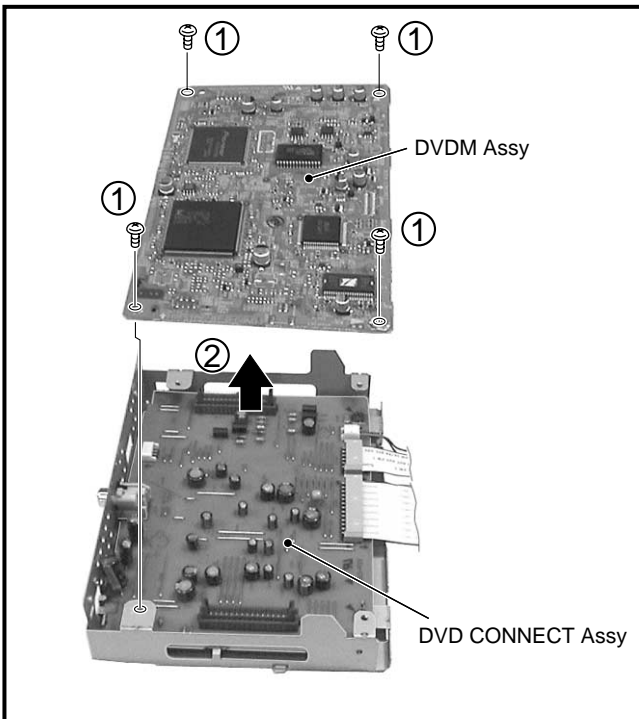
#### ■ Front Panel Assy and Traverse Mechanism Assy-S



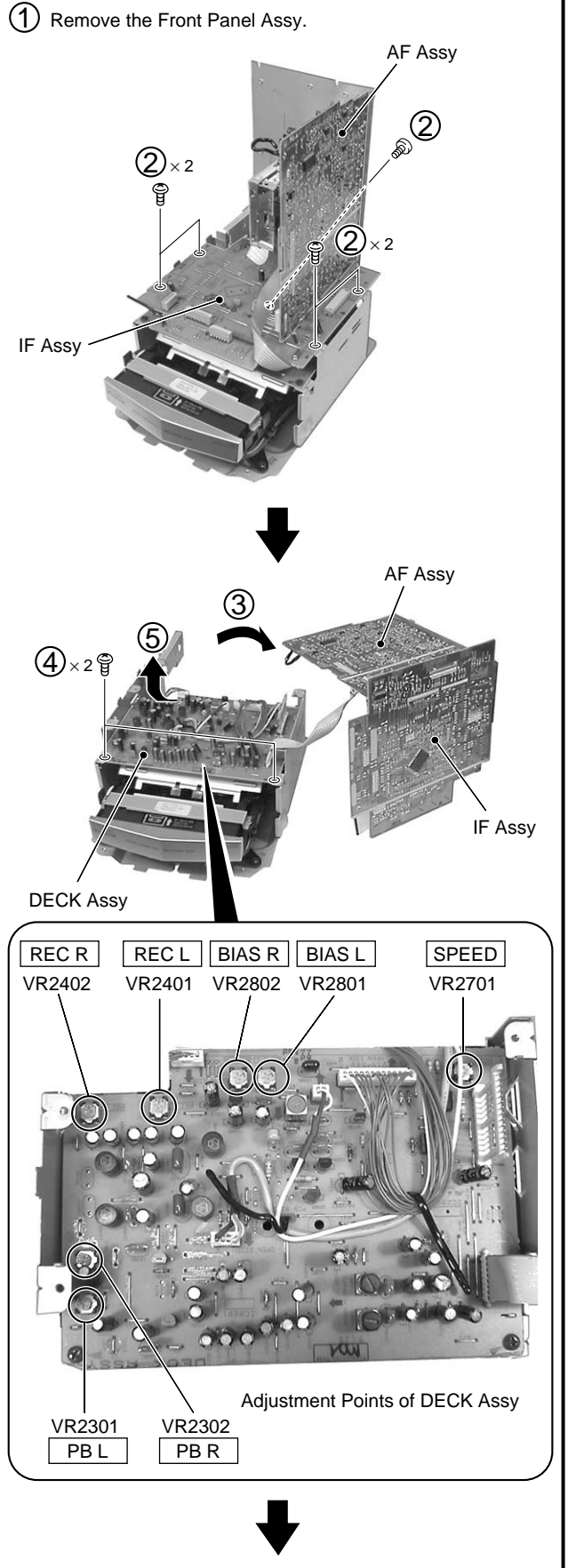


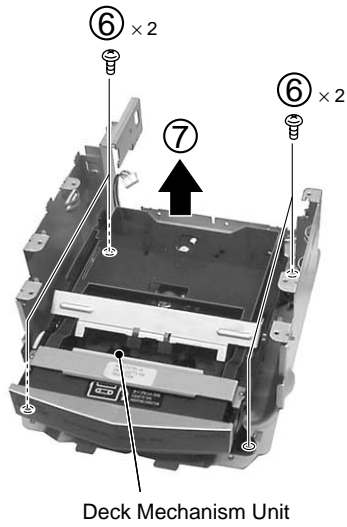


**DVDM Assy**



**Deck Mechanism Unit**





Deck Mechanism Unit

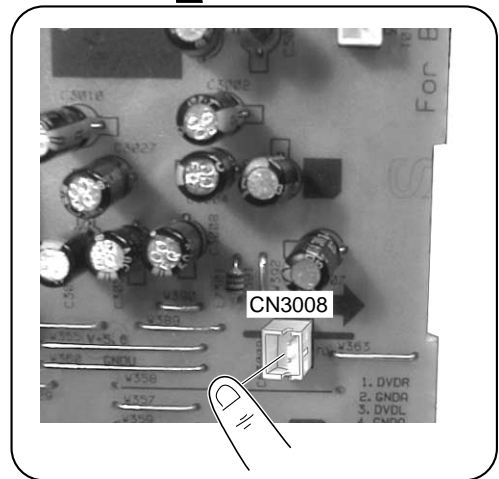
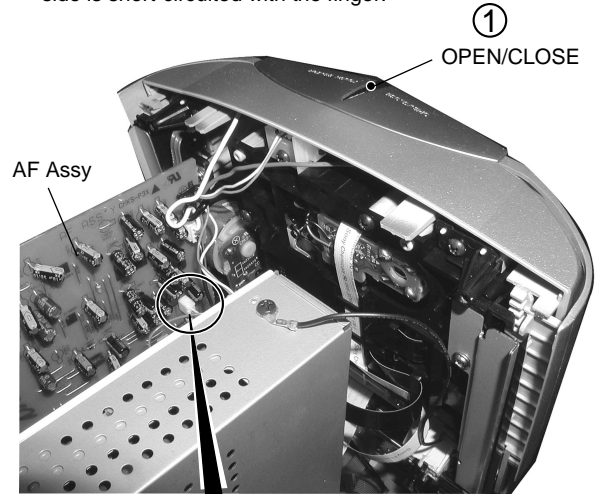


Exchange or Repair

**Note**

① DVD Door OPEN/CLOSE

When a connector CN3008 of AF Assy is removed from the touch sensor system, sensor does not work and DVD Door can't open and close. DVD Door can open when the land of CN3008 at the foil side is short-circuited with the finger.



## 7.2 IC

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

### •List of IC

PDC075B, NJM2199M, LC75343M, PD3410A, LC78652W, MB86373B

### ■ PDC075B (IF ASSY : IC5501)

• System Control IC

### •Pin Function (1/3)

No.	Mark	Pin Name	Type	Function
1	P16/T1PWML	NC	O	-
2	P17/T1PWH/BUZ	BEEP	O	Buzzer Control
3	P30	TC TRAY IN	O	TAPE tray Load in
4	P31	TC TRAY OUT	O	TAPE tray Load out
5	P32	FLASH E/D	I/O	For FLASH Writing
6	P33	FLASH D0	I/O	For FLASH Writing
7	P34	FLASH CLK	O	For FLASH Writing
8	P35	SCLK	O	System bus Clock
9	P36	SDATA	I/O	System bus Data
10	P37	SREQ	I/O	System bus Request
11	RES	XRESET	-	Microcomputer Reset terminal
12	XT1/AN10	XTESTMODE	I	Test Mode Input
13	XT2/AN11	MS	I	MS Signal Input
14	VSS1	VSS	-	GND
15	CF1	CF1	-	OSC Input
16	CF2	CF2	-	OSC Output
17	VDD1	VDD	-	Power supply
18	P80/AN0	PROTECT	I	Protection detection Input
19	P81/AN1	KEY1	I	Key Input
20	P82/AN2	KEY2	I	Key Input
21	P83/AN3	KEY3	I	Key Input
22	P84/AN4	SIMUKE	I	Model type select Input
23	P85/AN5	NC	O	-
24	P86/AN6	JOGIN	I	Multi-Jog Input
25	P87/AN7	3.3 DETECT	O	DVD3.3V detection Input
26	P70/INT0/T0 LCP/AN8	ACPULS	I	AC Pulse Input
27	P71/INT1/T0 HCP/AN9	LT11	I	DVD Microcomputer Communication Latch Input
28	P72/INT2/T0 IN	RDSCLK	I	RDS Clock Input
29	P73/INT3/T0 IN	REMIN	I	Remote Control Input
30	S0/T0	NC	-	-
31	S1/T1	NC	-	-
32	S2/T2	NC	-	-
33	S3/T3	NC	-	-
34	S4/T4	NC	-	-
35	S5/T5	NC	-	-
36	S6/T6	NC	-	-
37	S7/T7	NC	-	-
38	S8/T8	NC	-	-
39	S9/T9	NC	-	-
40	S10/T10	NC	-	-



## ●Pin Function (2/3)

No.	Mark	Pin Name	Type	Function
41	S11/T11	NC	-	-
42	S12/T12	NC	-	-
43	S13/T13	NC	-	-
44	S14/T14	NC	-	-
45	S15/T15	NC	-	-
46	VDD3	VDD	-	Power supply
47	S16/PC0	NC	-	-
48	S17/PC1	NC	-	-
49	S18/PC2	TUNE	I	TX TUNED Input
50	S19/PC3	STEREO	I	TX STEREO Input
51	VP	GND	-	GND
52	S20/PC4	TCMODE	I	Mechanism MODE SW
53	S21/PC5	TCHALF	I	Mechanism HALF SW
54	S22/PC6	PULSE	I	TC Reel pulse
55	S23/PC7	CD DOOR1	I	CD door detection Input 1 (OPEN completion SW)
56	S24/PD0	CD DOOR2	I	CD door detection Input 2 (OPEN slowdown SW)
57	S25/PD1	CD DOOR3	I	CD door detection Input 3 (CLOSE slowdown SW)
58	S26/PD2	CD DOOR4	I	CD door detection Input 4 (CLOSE completion SW)
59	S27/PD3	TC OPEN	I	Tray OPEN SW
60	S28/PD4	TC CLOSE	I	Tray CLOSE SW
61	S29/PD5	TC RECR	I	Mechanism RECR SW
62	S30/PD6	TC RECF	I	Mechanism RECF SW
63	S31/PD7	TOUCH	I	Touch sensor Input
64	S32/PE0	TXIDAT	I	TX LSI data Input
65	S33/PE1	RDSDATA	I	RDS data Input
66	S34/PE2	TXMUTE	O	TX mute control
67	S35/PE3	TXPOW	O	TX power supply control
68	S36/PE4	RDSPow	O	RDS power supply control
69	S37/PE5	NC	-	-
70	S38/PE6	NC	-	-
71	S39/PE7	DIMMER	O	DIMMER control
72	VDD4	VDD	-	Power supply
73	S40/PF0	SYSMUTE	O	System mute control
74	S41/PF1	FAUXMUTE	O	Front mute control
75	S42/PF2	RAUXMUTE	O	Rear mute control
76	S43/PF3	AUXCONT	O	Input ATT change for Digital appliance
77	S44/PF4	SPCONT	O	Speaker relay control
78	S45/PF5	SYSPow	O	System power supply control
79	S46/PF6	CD DOOR OUT	O	CD Door OPEN drive output
80	S47/PF7	CD DOOR IN	O	CD Door CLOSE drive output

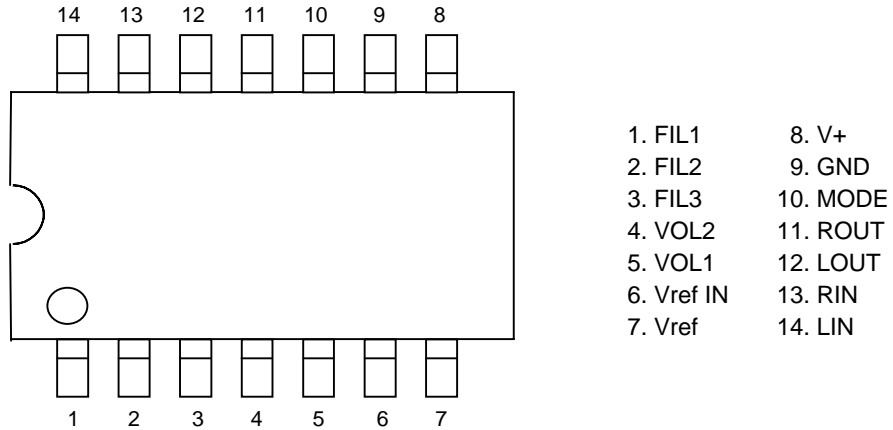
## ●Pin Function (3/3)

No.	Mark	Pin Name	Type	Function
81	S48/PG0	SRS CONT	O	SRS control
82	S49/PG1	XRDY1	O	DVD microcomputer READY output
83	S50/PG2	XDVDRST	O	DVD Reset
84	S51/PG3	DVD ON/OFF	O	DVD power control
85	P00	VOLCE	O	Electronic volume IC chip enable
86	P01	VOLDATA	O	Electronic volume IC data
87	P02	VOLCLK	O	Electronic volume IC clock
88	P03	EXPCE	O	Extended IC chip enable
89	VSS2	VSS	-	GND
90	VDD2	VDD	-	Power supply
91	P04	TXCE	O	TX LSI chip enable
92	P05	TXCLK	O	TX LSI clock
93	P06	TXODAT	O	TX LSI data output
94	P07	NC	O	-
95	P10/SO0	LCDDAT	O	LCD driver DATA
96	P11/SI0/SB0	LCDCE	O	LCD driver CE (general-purpose port )
97	P12/SCK0	LCDCLK	O	LCD driver CLOCK
98	P13/SO1	SSI(SSO)	O	DVD microcomputer communication DATA output (AMP side is output)
99	P14/S11/SB1	SSO(SSI)	I	DVD microcomputer communication DATA output (AMP side is input)
100	P15/SCK1	SSCK	O	DVD microcomputer communication CLOCK output

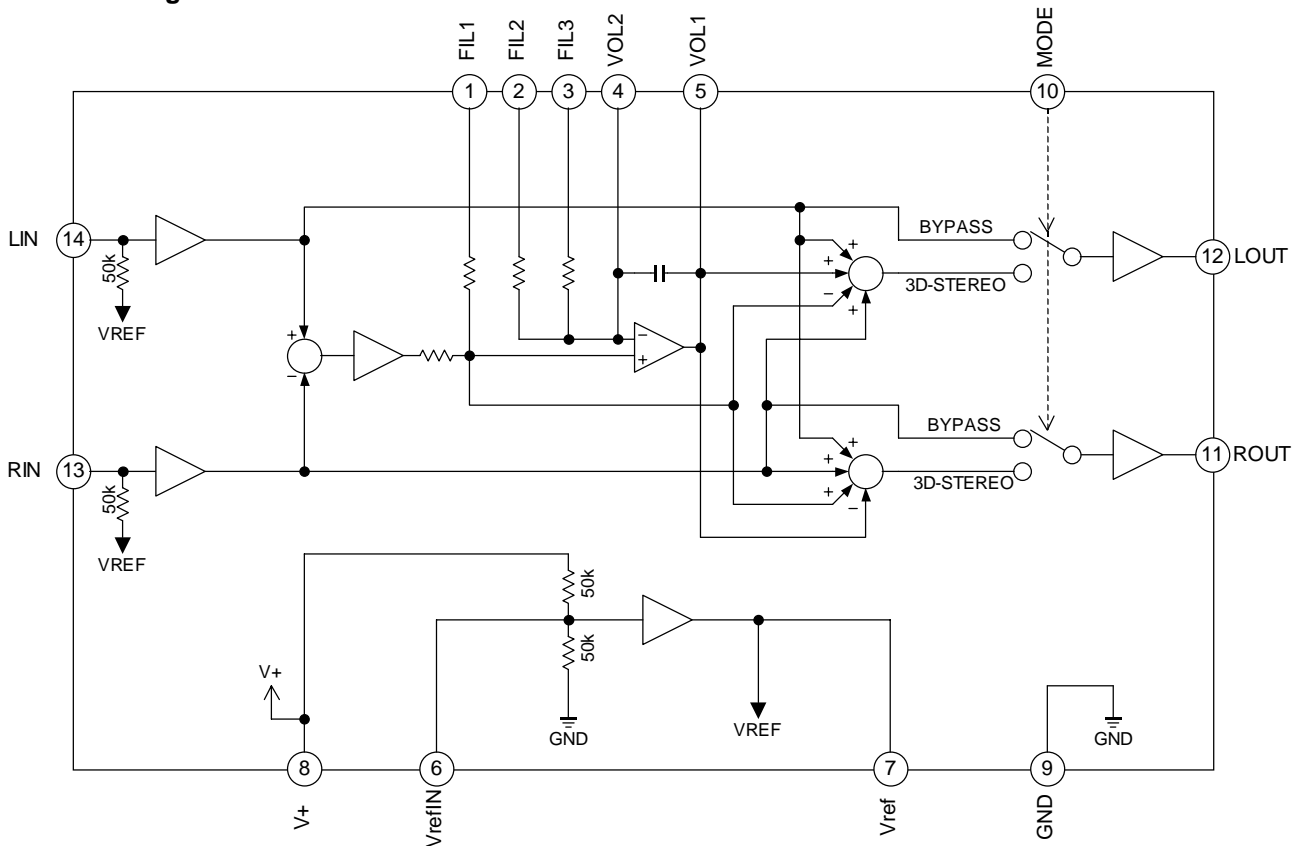
■ NJM2199M (DVD CONNECT ASSY : IC403)

• SRS 3D IC

● Pin Layout

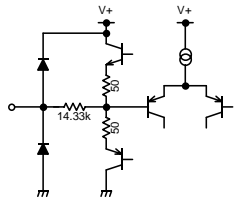
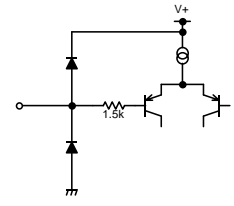
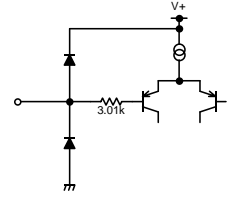
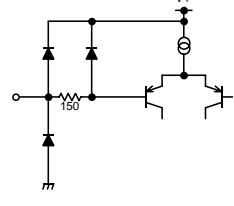
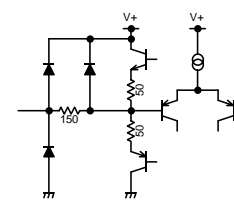
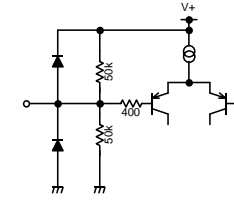
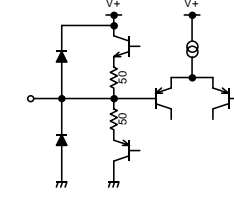


● Block Diagram


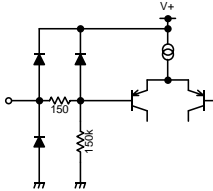
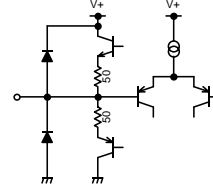
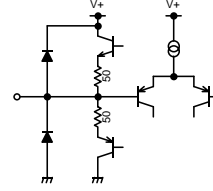
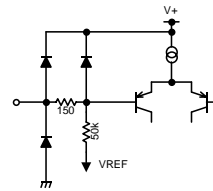
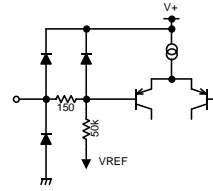


# XV-IS22DVD

## •Pin Function (1/2)

No.	Pin Name	Function	Equivalent Circuit	Pin Voltage
1	FIL1	Filter Input Terminal		V+/2
2	FIL2	Filter Input Terminal		V+/2
3	FIL3	Filter Input Terminal		V+/2
4	VOL2	WIDTH VR Input Terminal		V+/2
5	VOL1	WIDTH VR Input Terminal		V+/2
6	VREF IN	Filter Input Terminal for Reference Voltage		V+/2
7	VREF	Reference Voltage Terminal		V+/2
8	V+	Power Supply Terminal	—	V+

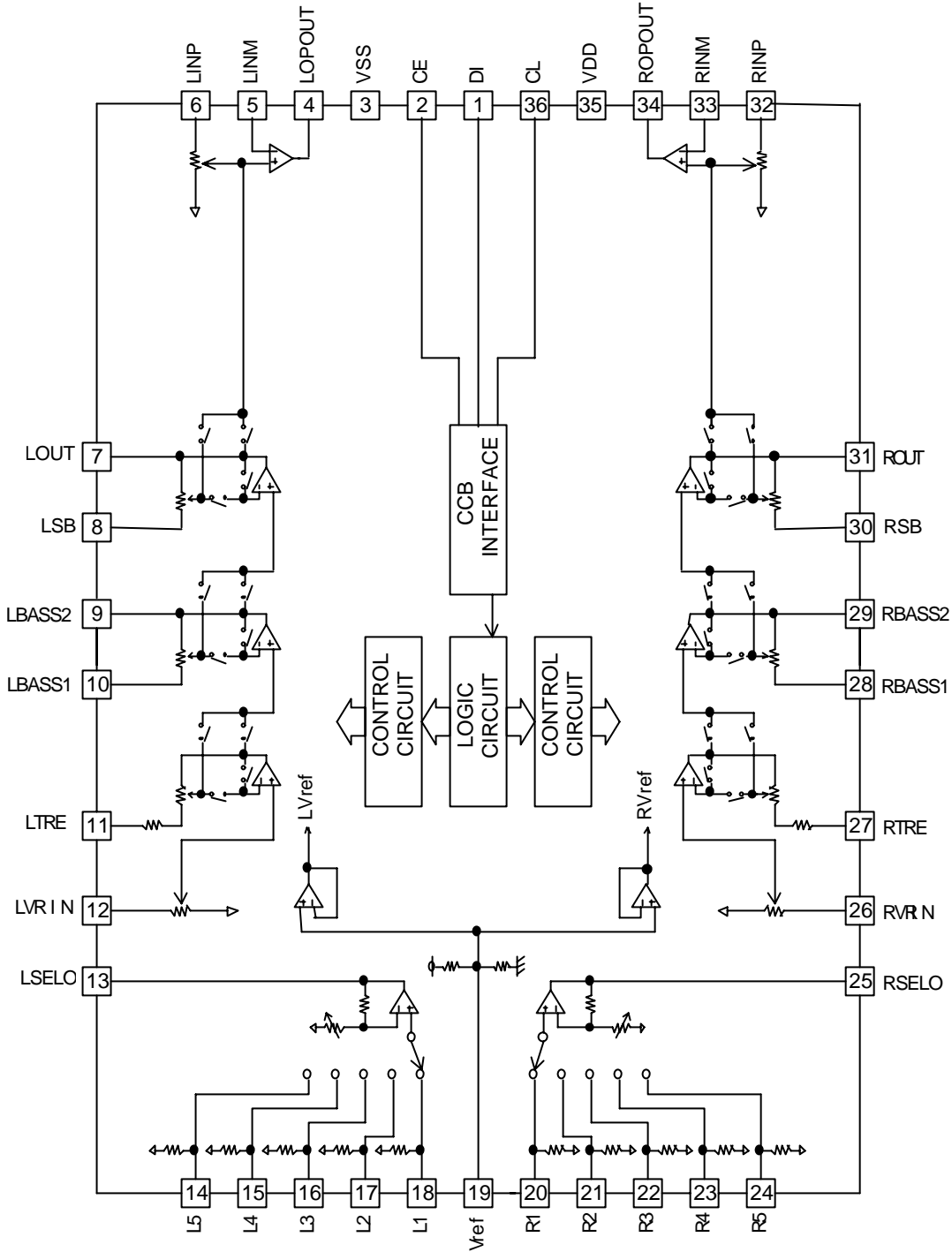
●Pin Function (2/2)

No.	Pin Name	Function	Equivalent Circuit	Pin Voltage
9	GND	GND Terminal		0V
10	MODE1	MODE Control Terminal		0V
11	ROUT	Rch Output Terminal		V+/2
12	LOUT	Lch Output Terminal		V+/2
13	RIN	Rch Input Terminal		V+/2
14	LIN	Lch Input Terminal		V+/2

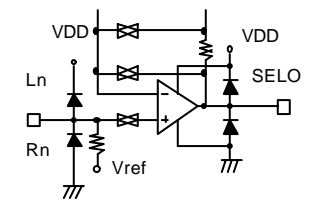
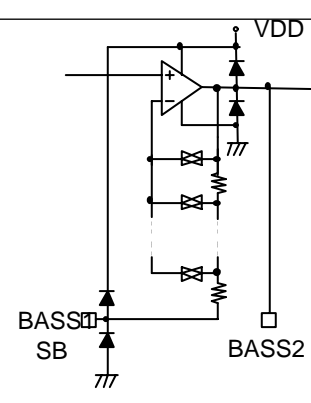
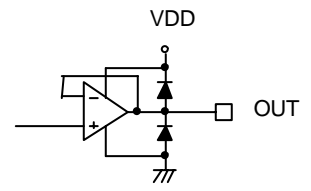
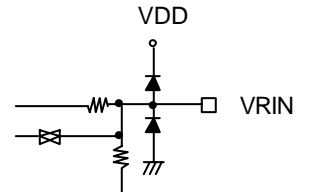
■ LC75343M (AF ASSY : IC3001)

- Select SW/Electric Volume

●Block Diagram



●Pin Function (1/2)

Pin Name	Pin No.	Function	Remarks
L1 L2 L3 L4 L5 R1 R2 R3 R4 R5	18 17 16 15 14 20 21 22 23 24	• Input signal terminal	
LSELO RSELO	13 25	• Input selector output terminal	
LBASS1 LBASS2 RBASS1 RBASS2 LSB RSB	10 9 28 29 8 30	• For BASS and SUPER BASS band use or MID and BASS use Connection terminal of capacitor and resistor which compose a filter.	
LOUT ROUT	7 31	• ATT+ Equalizer output terminal / capacitor connection terminal which compose a SUPER BASS filter	
LVRIN RVRIN	12 26	• Volume input terminal	

# XV-IS22DVD

## ●Pin Function (2/2)

Pin Name	Pin No.	Function	Remarks
LTRE RTRE	11 27	<ul style="list-style-type: none"> <li>Capacitor connection terminal which compose a filter for TREBLE band.</li> </ul>	
Vref	19	<ul style="list-style-type: none"> <li>0.5 x VDD voltage generation section for analog ground</li> </ul>	
VSS	3	<ul style="list-style-type: none"> <li>Ground terminal</li> </ul>	
VDD	35	<ul style="list-style-type: none"> <li>Power supply terminal</li> </ul>	
CE	2	<ul style="list-style-type: none"> <li>Chip enable terminal</li> <li>Data are written in the internal latch by a timing that it becomes "L" from "H", and each analog switch works.</li> <li>Data transfer enables by "H" level.</li> </ul>	
DI CL	1 36	<ul style="list-style-type: none"> <li>Data transfer enables with serial data and clock level for control.</li> </ul>	
LINP RINP	6 32	<ol style="list-style-type: none"> <li>General purpose op-amp specification Non-inverting input terminal of general purpose op-amp.</li> <li>ATT control specification Non-inverting input terminal of op-amp for ATT.</li> <li>3 bands specification Non-inverting input terminal of op-amp for ATT.</li> </ol>	
LINM RINM	5 33	<ol style="list-style-type: none"> <li>General purpose op-amp specification Non-inverting input terminal of general purpose op-amp. Connect to L (R) OPOUT terminal when this terminal is not used. (connect between pin 4 and pin 5) , (connect between pin 34 and pin 33)</li> <li>ATT control specification Inverting input terminal of op-amp for ATT. Connect to L (R) OPOUT terminal is not used. (connect between pin 4 and pin 5) , (connect between pin 34 and pin 33)</li> <li>3 bands specification Inverting input terminal of op-amp for ATT. Connect to L (R) OPOUT terminal is not used. (connect between pin 4 and pin 5) , (connect between pin 34 and pin 33)</li> </ol>	
LOPOUT ROPOUT	4 34	<ol style="list-style-type: none"> <li>General purpose op-amp specification inverting output terminal of general purpose op-amp. Connect to L (R) INM terminal when this terminal is not used. (connect between pin 4 and pin 5) , (connect between pin 34 and pin 33)</li> <li>ATT control specification Inverting output terminal of op-amp for ATT. Connect to L (R) INM terminal is not used. (connect between pin 4 and pin 5) , (connect between pin 34 and pin 33)</li> <li>3 bands specification Inverting output terminal of op-amp for ATT. Connect to L (R) INM terminal is not used. (connect between pin 4 and pin 5) , (connect between pin 34 and pin 33)</li> </ol>	



## ■ PD3410A (DVDM ASSY : IC11)

### • System Control IC

#### ● Pin Function(1/4)

No.	Mark	Pin Name	I/O	Function
1	XCS3/XCASL	XCS3	O	PD4995A (MY CHIP) chip select signal output
2	GND	GND	–	GND
3	CK	HCPUCK	O	N.C.
4	VCC	V+3D	–	V+3D
5	PICLK	–	I/O	N.C.
6	PIDATA	–	I/O	N.C.
7	GND	GND	–	GND
8	PORTH0	–	O	N.C.
9	PORTH1	–	O	N.C.
10	PORTH2	36MVH	O	BU2158F (Clock generator) [WY model]
11	PORTH3	V_SEL2	O	Composite/S switching signal output of the skirt terminal
12	VCC	V+3D	–	V+3D
13	PORTH4	–	O	N.C.
14	PORTH5	–	O	N.C.
15	PORTH6	–	O	N.C.
16	PORTH7	–	O	N.C.
17	GND	GND	–	GND
18	EXTAL	EXTAL	I	Connect a ceramic resonator
19	XTAL	XTAL	O	
20	VCC	V+3D	–	V+3D
21	PORTG0	XCSDFO	O	DAC chip select signal output (←XLAT3)
22	PORTG1	–	O	N.C.
23	PORTG2	–	O	N.C.
24	PORTG3	–	O	N.C.
25	PORTG4	–	O	N.C.
26	GND	GND	–	GND
27	PORTG5	–	O	N.C.
28	PORTG6	–	O	N.C.
29	PORTG7	XAMUTE	O	Last stage mute signal output of the audio
30	PORTF0	44X48	O	DAC 44/48 FS switching signal output
31	PORTF1	–	I	N.C.
32	PORTF2	3DON	O	3D audio ON/bypass switching signal output
33	VCC	V+3D	–	V+3D
34	PORTF3	–	O	N.C.
35	PORTF4	XAVSRST	O	Sync. reset port
36	PORTF5	–	O	N.C.

## ●Pin Function(2/4)

No.	Mark	Pin Name	I/O	Function
37	PORTF6	–	O	N.C.
38	PORTF7	XCSVE	O	Serial communication enable signal output of the video encoder [WY model]
39	GND	GND	–	GND
40	AVSS	GND	–	GND
41	AVCC	V+3D	–	V+3D
42	OUTA_P	LODRV	O	Loading drive output
43	VREF	V+3D	–	V+3D
44	OUTB_P	TEI	O	Tracking offset signal output
45	AVSS	GND	–	GND
46	AVSS	GND	–	GND
47	PORTE0	V_SEL	O	Component/composite switching signal output
48	PORTE1	–	I	N.C.
49	PORTE2	–	I	N.C.
50	PORTE3	FOFST1	I/O	Focus offset adjustment output 1
51	PORTE4	FOFST2	I/O	Focus offset adjustment output 2
52	PORTE5	XDFINH	I/O	Defect shunt signal output
53	PORTE6	DVD/XCD	O	DVD/CD switching signal output
54	PORTE7	LD1_ON	O	650 nm laser diode ON signal output
55	PORTD0	LD2_ON	O	780 nm laser diode ON signal output
56	VCC	V+3D	–	V+3D
57	PORTD1	DPD/TE	O	1 beam/3 beams switching signal output
58	PORTD2	AGOFF	O	AGC ON/OFF switching signal output of RF IC
59	PORTD3	XCD2X	O	Signal output for switching the double speed playback (VCD)
60	PORTD4	OEICG	O	OEIC gain switching signal output
61	GND	GND	–	GND
62	PORTD5	XMON	O	ON/OFF switching signal output of the spindle motor control output
63	PORTD6	–	O	N.C.
64	PORTD7	–	I	N.C.
65	PORTJ0	XDRVMUT	O	Driver mute output
66	PORTJ1	–	O	N.C.
67	PORTJ2	XDSPRST	O	Servo DSP reset
68	PORTJ3	–	I	N.C.
69	VCC	V+3D	–	V+3D
70	PORTJ4	TM_ENT	I	Test mode entry
71	PORTJ5	–	O	N.C.
72	PORTJ6	VSEL_SW	I	Component/composite SW input
73	PORTJ7	–	I	N.C.
74	PB0/TIOCA2	XCBUSY	I	Command busy input
75	PB1/TIOCB2	XABUSY	I	Auto-sequence busy input
76	PB2/TIOCA3	XINT2	I	Interrupt input 2 (AV-1)
77	VCC	V+3D	–	V+3D
78	PB3/TIOCB3	LT1	O	Communication response signal output to the FL controller
79	PB4/TIOCA4	SBSY	I	Subcode block sync. input
80	XMTEST	–	I	Test terminal (V+3D)
81	XCPUMD	–	I	Test terminal (V+3D)
82	XRES	XRESET	I	Reset input

## ●Pin Function(3/4)

No.	Mark	Pin Name	I/O	Function
83	GND	GND	–	GND
84	AN0	LODPOS	I	Loading position input
85	AN1	SLDPOS	I	Slider position input
86	AN2	–	I	N.C.
87	AN3	NAP_SW	I	NTSC/AUTO/PAL SW input
88	AN4	XOEM	I	Input terminal of OEM model protection
89	AN5	LDDEAD	I	Input for LD current value display
90	AN6	–	I	N.C.
91	AN7	–	I	N.C.
92	Avref	V+3D	–	V+3D
93	AVCC	V+3D	–	V+3D
94	AVSS	GND	–	GND
95	PB5/TIOCB4	–	I	N.C.
96	PB6/TIOXA4/TCLKC	C2F	I	C2 error input
97	PB7/TIOXB4/TCLKD	XRDY	I	Communication request input from the FL controller
98	PB8/RxD0	SSI	I	Serial data input (FL controller)
99	PB9/TxD0	SSO	O	Serial data output (FL controller)
100	VCC	V+3D	–	V+3D
101	PB10/RxD1	RXD	I	Data input of the RS-232C
102	PB11/TxD1	TXD	O	Data output of the RS-232C
103	PB12/XIRQ4/SCK0	SSCK	I/O	Serial clock output (FL controller)
104	PB13/XIRQ5/SCK1	XIRQL10	I	Interrupt input #0 (MY CHIP)
105	GND	GND	–	GND
106	PB14/XIRQ6	XIRQL11	I	Interrupt input #1 (MY CHIP)
107	PB15/XIRQ7	XINT0	I	Interrupt input #0 (AV-1)
108	PA0/XCS4/TIOCA0	XCS4	O	Servo DSP chip select signal output
109	PA1/XCS5/XRAS	–	O	N.C.
110	PA2/XCS6/TIOCB0	XCS6	O	AV-1 chip select signal output
111	XWAIT	XWAIT	I	Wait signal input
112	XWRL	XWRL	O	Write pulse output L
113	GND	GND	–	GND
114	XWRH	XWRH	O	Write pulse output H
115	XRD	XRD	O	Read pulse output
116	PA7/XBACK	XCURDET	I	Over-current detection signal input
117	PA8/XBREQ	CTS	I	RS-232C transfer permit input
118	PA9/XAH/XIRQOUT/ XADTRG	DTR	O	RS-232C transfer permit output
119	PA10/DPL/TIOCA1	XINT1	I	Interrupt input 1 (AV-1)
120	PA11/DPH/TIOCB1	THLD	I	Tracking hold signal input
121	VCC	V+3D	–	V+3D
122	PA12/XIRQ0/DACK0/ TCLKA	DACK0	O	DMA response output (MY CHIP)
123	PA13/XIRQ1/ XDREQ0/TCLKB	XDREQ0	I	DMA request input (MY CHIP)
124	PA14/XIRQ2/XDACK1	XDACK1	O	DMA response output (AV-1)
125	PA15/XIRQ3/XDREQ1	XDREQ1	I	DMA request input (AV-1)
126	AD0	D0	I/O	Data bus 0

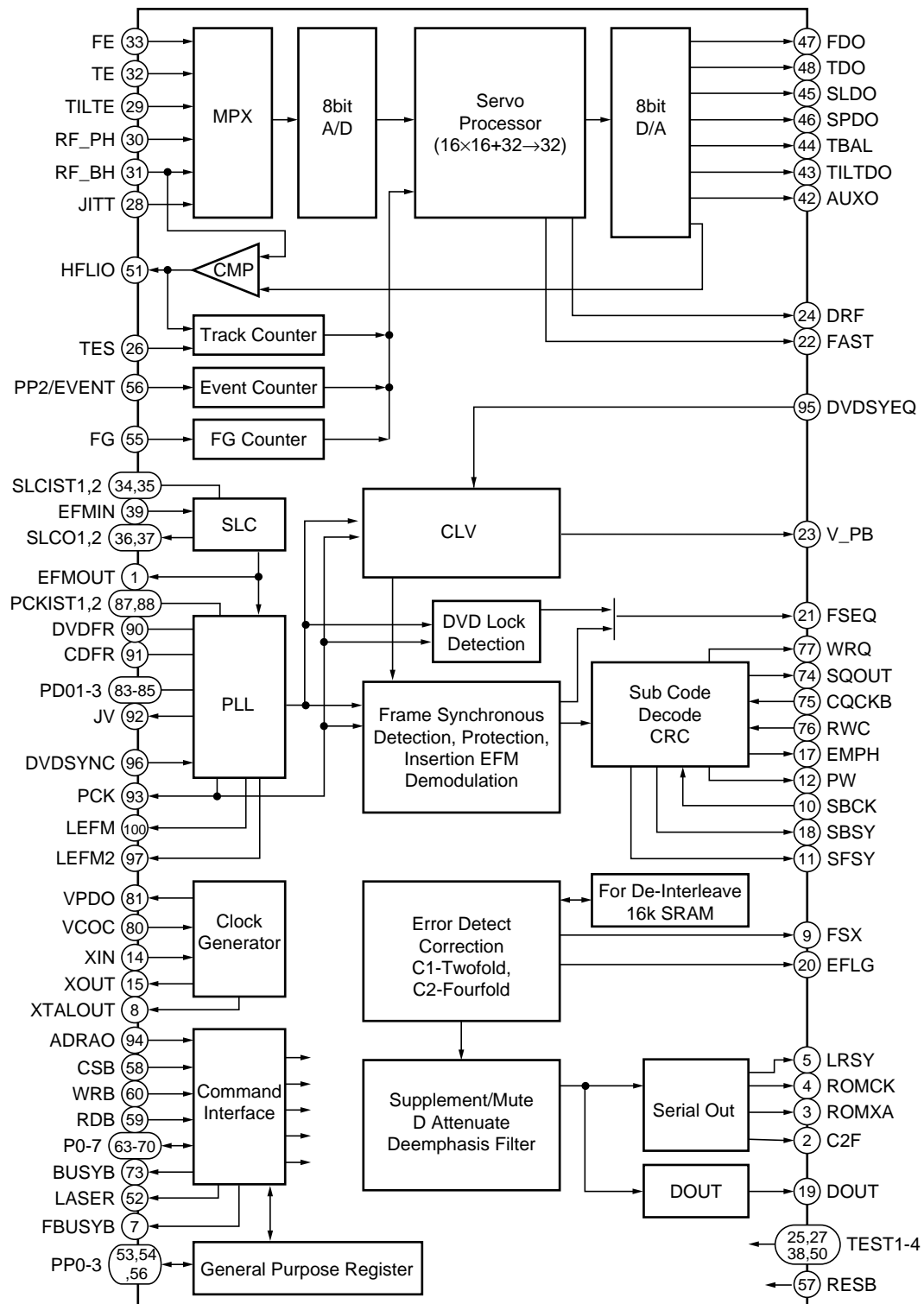
## ●Pin Function(4/4)

No.	Mark	Pin Name	I/O	Function
127	GND	GND	–	GND
128	AD1	D1	I/O	Data bus 1
129	AD2	D2	I/O	Data bus 2
130	AD3	D3	I/O	Data bus 3
131	AD4	D4	I/O	Data bus 4
132	AD5	D5	I/O	Data bus 5
133	AD6	D6	I/O	Data bus 6
134	VCC	V+3D	–	V+3D
135	AD7	D7	I/O	Data bus 7
136	AD8	D8	I/O	Data bus 8
137	AD9	D9	I/O	Data bus 9
138	AD10	D10	I/O	Data bus 10
139	GND	GND	–	GND
140	AD11	D11	I/O	Data bus 11
141	AD12	D12	I/O	Data bus 12
142	AD13	D13	I/O	Data bus 13
143	AD14	D14	I/O	Data bus 14
144	VCC	V+3D	–	V+3D
145	AD15	D15	I/O	Data bus 15
146	A0 (XHBS)	A0	O	Address bus 0
147	A1	A1	O	Address bus 1
148	A2	A2	O	Address bus 2
149	GND	GND	–	GND
150	A3	A3	O	Address bus 3
151	A4	A4	O	Address bus 4
152	A5	A5	O	Address bus 5
153	A6	A6	O	Address bus 6
154	A7	A7	O	Address bus 7
155	A8	A8	O	Address bus 8
156	A9	A9	O	Address bus 9
157	A10	A10	O	Address bus 10
158	A11	A11	O	Address bus 11
159	A12	A12	O	Address bus 12
160	A13	A13	O	Address bus 13
161	A14	A14	O	Address bus 14
162	A15	A15	O	Address bus 15
163	A16	A16	O	Address bus 16
164	A17	A17	O	Address bus 17
165	VCC	V+3D	–	V+3D
166	A18	A18	O	Address bus 18
167	A19	A19	O	Address bus 19
168	A20	A20	O	Address bus 20 [RAM model]
169	A21	A21	O	N.C.
170	XNMI	XNMI	I	V+3D
171	GND	GND	–	GND
172	XCS10	–	O	N.C.
173	XCS20	XCS20	O	Chip select signal output of the flash ROM
174	XCS22	–	O	Chip select signal output of the GUI ROM [OEM model]
175	XCS23	XCS23	O	Chip select signal output of the SRAM
176	XCS2	–	O	N.C.

■ LC78652W (DVDM ASSY : IC2)

• DSP IC

●Block Diagram



# XV-IS22DVD

## ●Pin Function(1/2)

No.	Pin Name	I/O	Function
1	EFMOUT	O	Output the state that was binary-stated value EFM
2	C2F	O	C2 flag output
3	ROMXA	O	CD-ROM data output
4	ROMCK	O	Shift clock output for CD-ROM data output
5	LRSY	O	L/R clock output for CD-ROM data output
6	PP3	I/O	General-purpose port input/output / DVD sync. signal input      N ch-OD output
7	FBUSYB	O	Busy signal output of DSP process operation      N ch-OD output
8	XTALOUT	O	External system clock output
9	FSX	O	CD 1 frame sync. signal output
10	SBCK	I	Subcode reading out clock input
11	SFSY	O	Frame sync. signal output of subcode
12	PW	O	Subcode P, Q, R, S, T, U, V and W output
13	VSS	-	GND pin
14	XIN	I	Connect a crystal resonator (16.9344MHz)
15	XOUT	O	Connect a crystal resonator
16	DVDD1	-	3.3V power supply of the oscillation circuit
17	EMPH	O	Monitor pin of the deemphasis
18	SBSY	O	Sync. signal output of the subcode block
19	DOUT	O	Audio EIAJ data output
20	EFLG	O	Error correction state monitor of the error correction C1 and C2
21	FSEQ	O	Detection monitor of the CD/DVD frame sync. signal
22	FAST	O	Playback speed monitor      N ch-OD output
23	V_PB	O	Monitor output of the rough servo/CLV control
24	DRF	O	In focus monitor
25	TEST3	I	Test input 3
26	TES	I	Tracking error signal input
27	TEST2	I	Test input 2
28	JITT	I	Jitter quantity detecting signal input of EFM PLL
29	TILTE	I	Tilt error signal input
30	RF_PH	I	RF peak hold signal input
31	RF_BH	I	RF bottom hold signal input
32	TE	I	Tracking error signal input
33	FE	I	Focus error signal input
34	SLCIST1	-	Current setting pin 1 of the constant current charge pump for SLC
35	SLCIST2	-	Current setting pin 2 of the constant current charge pump for SLC
36	SLCO1	O	Control output 1 for SLC
37	SLCO2	O	Control output 2 for SLC
38	TEST1	I	Test input 1
39	EFMIN	I	EFM/EFM + input
40	AVDD	-	5V power supply of A/D and D/A for servo
41	AVSS	-	GND of A/D and D/A for servo
42	AUXO	O	DA auxiliary output
43	TILTDO	O	Tilt control signal output
44	TBAL	O	Tracking balance control signal output
45	SLDO	O	Sled control signal output
46	SPDO	O	Spindle control signal output
47	FDO	O	Focus control signal output
48	TDO	O	Tracking control signal output
49	VREF	-	Reference level of D/A for servo
50	TEST4	I	Test input 4

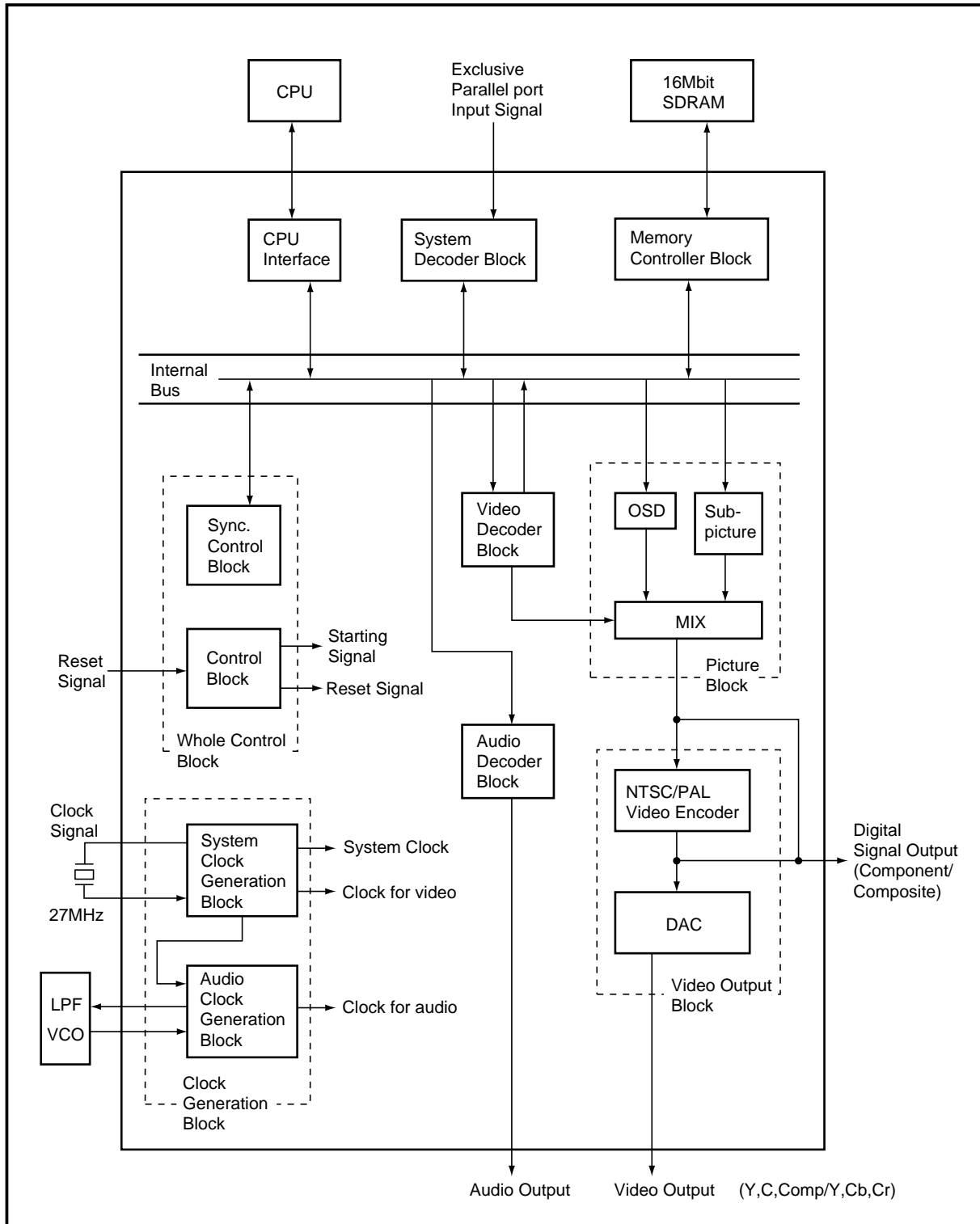
## ●Pin Function(2/2)

No.	Pin Name	I/O	Pin Function
51	HFLIO	I/O	Mirror detection signal input/output
52	LASER	O	Output pin for laser ON/OFF control
53	PP0/DVD_CDB	I/O	General-purpose port input/output / Disc discrimination signal output
54	PP1/CRCERRB	I/O	General-purpose port input/output / Subcode CRC result signal output
55	FG	I	FG counter input
56	PP2/EVENT	I/O	General-purpose port input/output / Event counter input
57	RESB	I	Reset input
58	CSB	I	Chip select input
59	RDB	I	Internal state reading signal input
60	WRB	I	Command / data writing signal input
61	DVDD2	-	5V power supply
62	VSS	-	GND
63	P0	I/O	Command / data input/output
64	P1		
65	P2		
66	P3		
67	P4		
68	P5		
69	P6		
70	P7		
71	VSS	-	GND
72	DVDD1	-	3.3V power supply for internal
73	BUSYB	O	Busy signal output of command process
74	SQOUT	O	Serial output of subcode Q
75	CQCKB	I	Shift clock input for subcode Q data output
76	RWC	I	Update permission input of subcode Q
77	WRQ	O	Read out ready monitor of subcode Q
78	AVSS	-	PLL GND for internal system clock
79	VRPFR	-	VCO oscillation range setting of PLL for system clock
80	VCOC	I	Connect a PLL filter for system clock
81	VPDO	O	
82	AVDD	-	PLL 5V power supply for system clock
83	PDO1	I/O	PLL filter connection pin 1 for EFM playback
84	PDO2	I/O	PLL filter connection pin 2 for EFM playback
85	PDO3	I/O	PLL filter connection pin 3 for EFM playback
86	AVSS	-	PLL GND for EFM playback
87	PCKIST1	-	Current setting 1 of PLL constant current charge pump for EFM playback
88	PCKIST2	-	Current setting 2 of PLL constant current charge pump for EFM playback
89	AVDD	-	PLL 5V power supply for EFM playback
90	DVDFR	-	VCO oscillation range setting of PLL for EFM playback 1
91	CDFR	-	VCO oscillation range setting of PLL for EFM playback 2
92	JV	O	Jitter output of PLL clock for EFM playback
93	PCK	O	Bit clock output for EFM playback
94	ADRAO	I	Address input
95	DVDSYEQ	I	DVD synchronize pulse input
96	DVDSYNC	I	DVD synchronous signal input
97	LEFM2	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 2
98	DVDD1	-	3.3V power supply for I/O
99	VSS	-	GND
100	LEFM	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 1

■ MB86373B (DVDM ASSY : IC18)

• MPEG2 Decoder IC

●Block Diagram





## ●Pin Function(1/3)

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	CLKSEL	I	ON/OFF signal of PLL ("H" : ON, "L" : OFF)	27	VDD	–	2.5V power supply
2	DIGCPN7	O	Digital component signal output (MSB) Digital Y signal output (9-bit) (MSB)	28	DIGCOMP4	O	Digital composite signal output Digital C signal output
3	VSS	–	GND	29	DIGCOMP3		
4	DIGCPN6	O	Digital component signal output Digital Y signal output (9-bit)	30	DIGCOMP2		
5	DIGCPN5			31	DIGCOMP1		
6	DIGCPN4			32	DIGCOMP0		Digital composite signal output (LSB) Digital C signal output (LSB)
7	DIGCPN3			33	DACK		O
8	DIGCPN2			34	N.C.	–	Non connection
9	DIGCPN1	35	VSSA3	–	GND (D/A converter)		
10	VDD	–	2.5V power supply	36	ANAC	O	Analog color (C) output signal
11	DIGCPN0	O	Digital component signal output (LSB) Digital Y signal output (9-bit) (LSB)	37	VDDA3	–	2.5V power supply (for built-in D/A converter only)
12	RBSEL	O	Cb and Cr discrimination signal at the digital component signal output. LSB at the digital Y signal output.	38	VSSA2	–	GND (D/A converter)
13	XHS	O	Horizontal sync. output signal	39	ANAY	O	Analog luminance (Y) output signal
14	XVS	O	Vertical sync. output signal	40	VDDA2	–	2.5V power supply (for built-in D/A converter only)
15	VSS	–	GND	41	VREF	I	Reference voltage for D/A converter
16	XRESET	I	LSI reset signal	42	VRO	O	Internal current setting pin of D/A converter
17	XLDCSYNC	I	External sync. signal input (LD mode)	43	VDDA4	–	2.5V power supply (for built-in D/A converter only)
18	KEY	O	KEY signal for LD and OSD overlay (LD mode)	44	VSSA1	–	GND (D/A converter)
19	PD	O	Phase comparison result output signal of horizontal sync. (LD mode)	45	ANACOMP	O	Analog composite output signal
20	VFLD	O	Field discrimination signal at the digital signal output H : even field L : odd field	46	VDDA1	–	2.5V power supply (for built-in D/A converter only)
21	DIGCOMP9	O	Digital composite signal output (MSB) Digital C signal output (MSB)	47	BF	O	Burst flag signal
22	DIGCOMP8			48	XBLK	O	H/V composite blanking signal
23	DIGCOMP7			49	TEST4	O	Normally, set to "open".
24	DIGCOMP6			50	VSS	–	GND
25	DIGCOMP5			51	TEST0	I	Normally, set to "open".
26	VSS	–	GND	52	TEST1	I	"L" status normally

## ●Pin Function(2/3)

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function		
53	DAIIN	I	Digital data input of external input (SPDIF)	92	HADRS10	I	CPU address bus signal (MSB)		
54	CDDATA	I	Audio data input of external input (correspond to CD)	93	HADRS9	I	CPU address bus signal		
55	CDLR	I	Data channel clock input of external input (correspond to CD)	94	HADRS8				
56	CDBCK	I	Data clock input of external input (correspond to CD)	95	HADRS7				
57	AODATA3	O	Audio decode data	96	VSS	-	GND		
58	AODATA2			97	VDD	-	2.5V power supply		
59	AODATA1			98	HADRS6	I	CPU address bus signal		
60	VSS	-	GND	99	HADRS5				
61	VDD	-	2.5V power supply	100	HADRS4				
62	AODATA0	O	Audio decode data	101	HADRS3				
63	AOPCM	O	Digital audio interface output (compression data)	102	HADRS2		CPU address bus signal (LSB)		
64	AODAI	O	Digital audio interface output (decode data)	103	HDATA15	I/O	CPU data bus signal (MSB)		
65	LRCK	O	Data channel clock for D/A and digital filter	104	HDATA14		CPU data bus signal		
66	AOMCK	O	Master clock for D/A and digital filter	105	HDATA13				
67	BCK	O	Bit clock for D/A and digital filter	106	HDATA12				
68	TEST2	I	Normally, set to "open".	107	VSS	-	GND		
69	TEST3			108	HDATA11	I/O	CPU data bus signal		
70	NC	-	Non connection	109	HDATA10				
71	XDSPRST	I	Normally, set to "open".	110	HDATA9				
72	VSS	-	GND	111	HDATA8				
73	TEST5	O	Normally, set to "open".	112	HDATA7				
74	NC	-	Normally, set to "open".	113	HDATA6	I/O	CPU data bus signal		
75	NC			114	VDD			-	2.5V power supply
76	NC			115	HDATA5			I/O	CPU data bus signal
77	NC			116	HDATA4				
78	SD7	I	Parallel data input	117	HDATA3	I/O	CPU data bus signal		
79	VDD	-	2.5V power supply	118	HDATA2				
80	SD6	I	Parallel data input	119	VSS	-	GND		
81	SD5			120	HDATA1	I/O	CPU data bus signal		
82	SD4			121	HDATA0		CPU data bus signal (LSB)		
83	SD3			122	BUSSEL	I	Bus width selection signal (0 : 8-bit bus, 1 : 16-bit bus)		
84	SD2			123	XOSDACK	I	OSD data acknowledge signal		
85	VSS	-	GND	124	XOSDREQ	O	OSD data request signal		
86	SD1	I	Parallel data input	125	HCPUSEL1	I	CPU selection signal (00 :SPARC, 01 :86 system, 10 :68 system, 11 :Reserve)		
87	SD0			126	HCPUSEL0				
88	XERR	I	Error input signal	127	XINT3	O	Interrupt request signal to the CPU		
89	XSACK	I	Acknowledge signal	128	XINT2				
90	XTEST	I	Set to "H" at normal use	129	XINT1				
91	SREQ	O	Data request signal	130	VSS	-	GND		

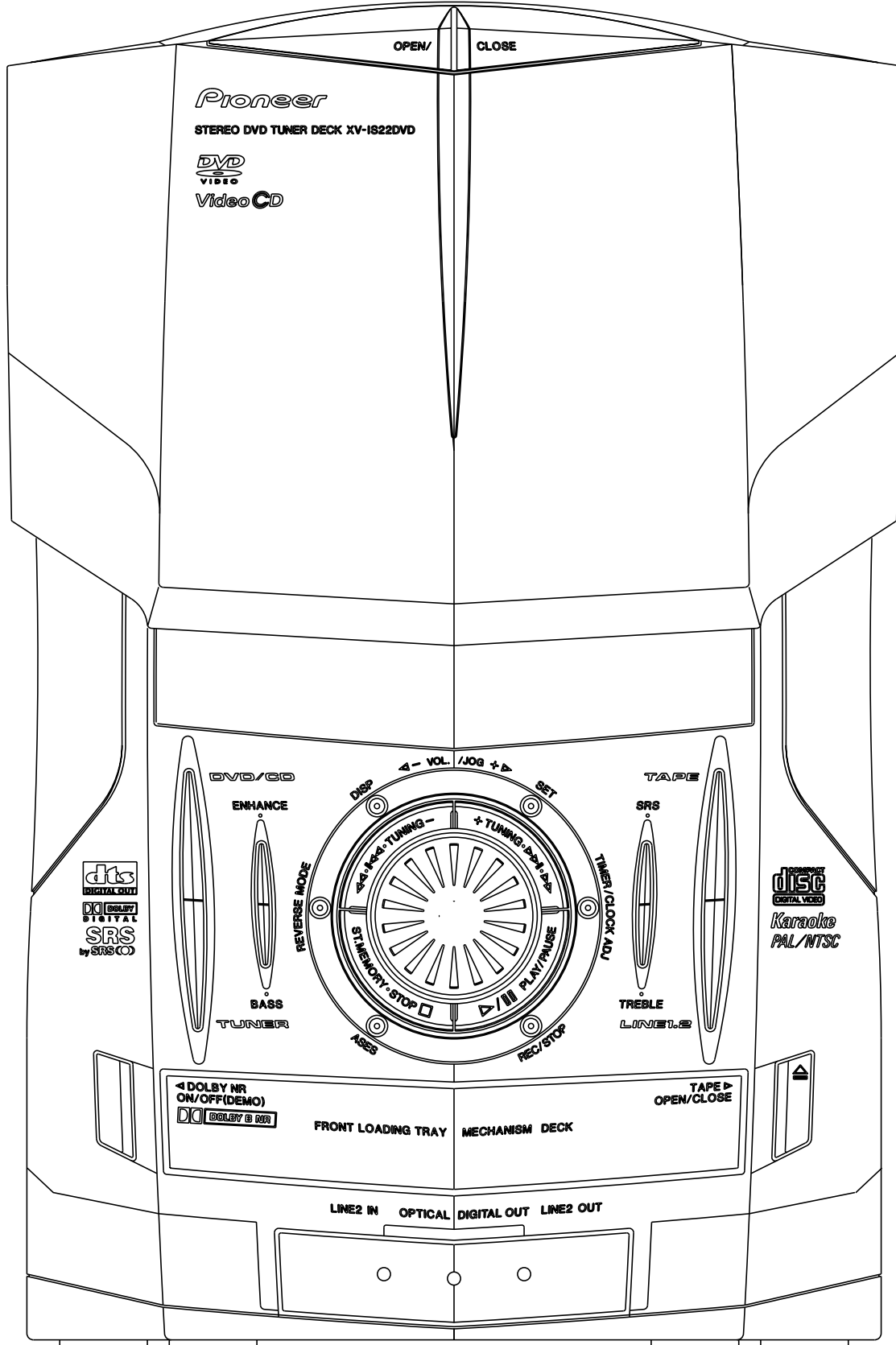
## ●Pin Function(3/3)

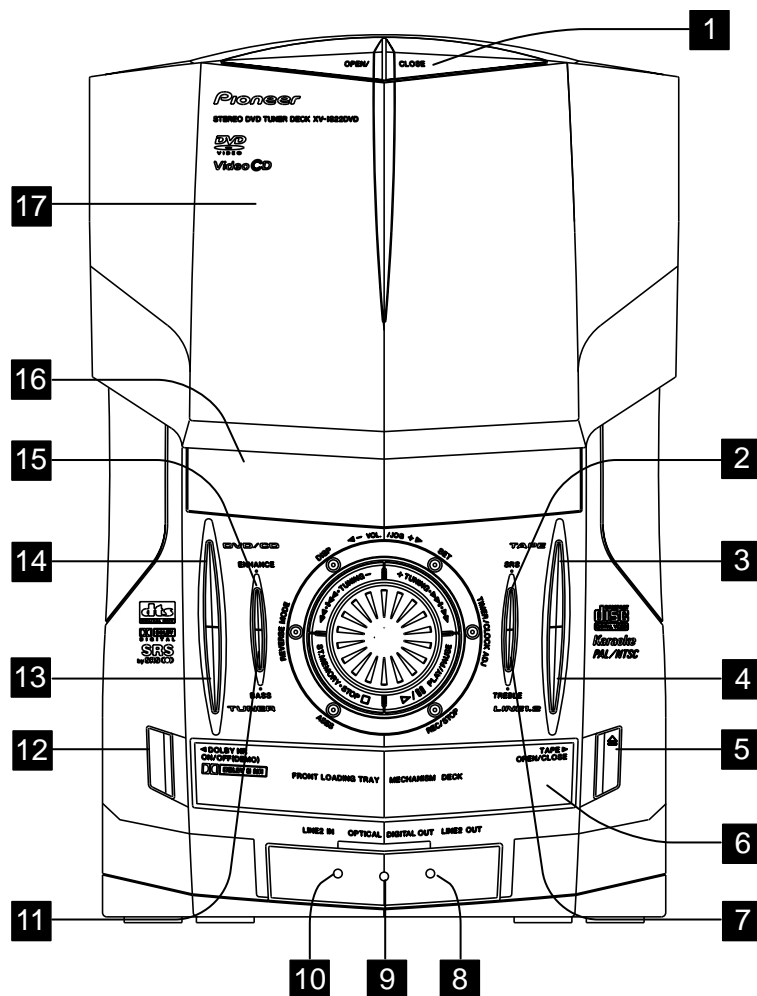
No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function		
131	VDD	–	2.5V power supply	170	XMDRCAS	O	CAS signal for SDRAM		
132	XINT0	O	Interrupt request signal to CPU	171	XMDRDQM1	O	Input mask / output enable signal for SDRAM		
133	XEXTRDY	O	SPARC, 68 system : Ready signal to CPU 86 system : Acknowledge (ACK) signal to CPU	172	VSS	–	GND		
134	HRW	I	CPU read / write signal	173	XMDRWE	O	Write enable signal for SDRAM		
135	HCLKIN	I	Host clock input	174	XMDRDQM0	O	Input mask / output enable signal for SDRAM		
136	XHCS	I	LSI chip select signal	175	MDRDAT8	I/O	Data bus signal for SDRAM		
137	XHAS	I	SPARC, 68 system : CPU address strobe 86 system : CPU address status	176	VSS	–	GND		
138	XHBE3	I	CPU byte enable signal	177	MDRDAT7	I/O	Data bus signal for SDRAM		
139	XHBE2			178	MDRDAT9				
140	XHBE1			179	MDRDAT6				
141	XHBE0			180	MDRDAT10				
142	VSS	–	GND	181	MDRDAT5				
143	MDRADR4	O	Address signal for SDRAM	182	VSS	–	GND		
144	MDRADR3			183	VDD	–	2.5V power supply		
145	MDRADR5			184	MDRDAT11	I/O	Data bus signal for SDRAM		
146	MDRADR2			185	MDRDAT4				
147	VDD	–	2.5V power supply	186	MDRDAT12				
148	VSS	–	GND	187	MDRDAT3				
149	MDRADR6	O	Address signal for SDRAM	188	MDRDAT13	I/O	Data bus signal for SDRAM		
150	MDRADR1			189	VSS			–	GND
151	MDRADR7			190	MDRDAT2			I/O	Data bus signal for SDRAM
152	MDRADR0			191	MDRDAT14				
153	MDRADR8		Address signal for SDRAM (LSB)	192	MDRDAT1		Data bus signal for SDRAM (MSB)		
154	VSS	–	GND	193	MDRDAT15				
155	TEST6	I	"L" status normally	194	MDRDAT0	I/O	Data bus signal for SDRAM (LSB)		
156	TEST7			195	VSS	–	GND		
157	TEST8			196	N.C.	–	Non connection		
158	TEST9			197	ICK27M	I	System clock input		
159	MDRADR10	O	Address signal for SDRAM	198	VSS	–	GND		
160	MDRADR9			199	OCK27M	O	System clock output		
161	MDRADR11			200	VSSA(VCO)	–	GND (for VCO only)		
162	XMDRCS	O	Chip select signal for SDRAM	201	VDDA(VCO)	–	2.5V power supply (for VCO only)		
163	MDRCKE	O	Clock enable signal for SDRAM	202	ILPF	O	PLL block inverter output for audio		
164	VSS	–	GND	203	MLPF	I	PLL block inverter input for audio		
165	VDD	–	2.5V power supply	204	OLPF	O	Phase detector output for audio		
166	XMDRRAS	O	RAS signal for SDRAM	205	OVCO	I	VCO input for audio clock		
167	MDRCLK	O	Clock output signal for SDRAM	206	VSS	–	GND		
168	VSS	–	GND	207	XPLLST	I	PLL section reset signal		
169	MDRCLKIN	I	Clock input signal for SDRAM	208	XSYNCRST	I	SYNC reset signal		

# 8. PANEL FACILITIES AND SPECIFICATIONS

## 8.1 PANEL FACILITIES

### ■ Front Panel

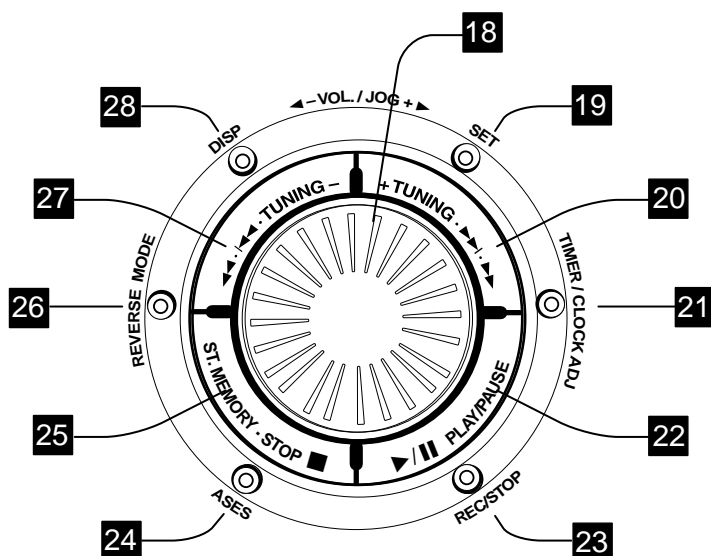




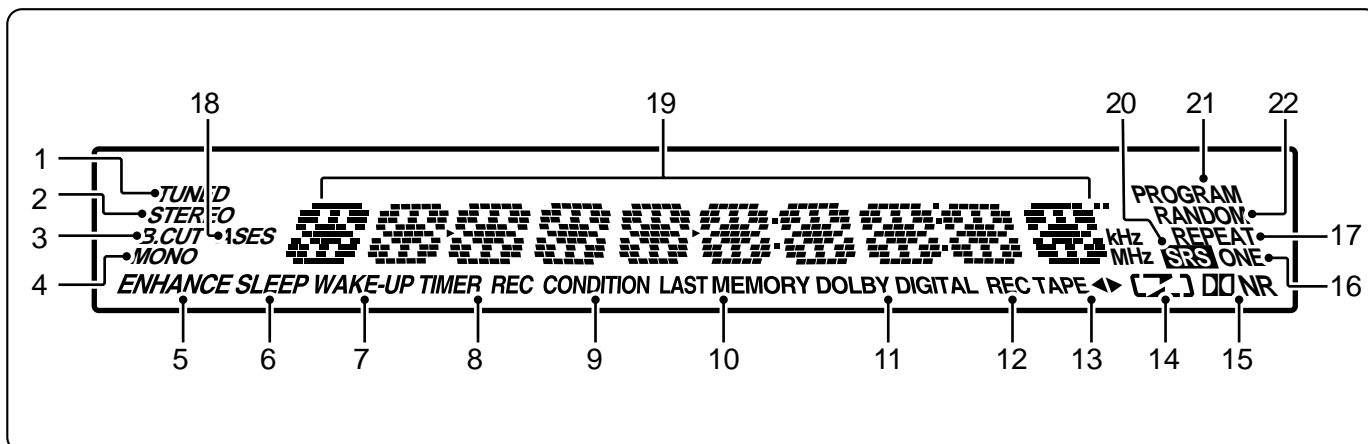
1. OPEN/CLOSE touch sensor
2. SRS
3. TAPE
4. LINE 1.2
5. TAPE OPEN/CLOSE ▲
6. Cassette tray
7. TREBLE
8. LINE 2 OUT jack
9. OPTICAL DIGITAL OUT jack
10. LINE 2 IN jack
11. BASS
12. DOLBY NR ON/OFF (DEMO)
13. TUNER
14. DVD/CD
15. ENHANCE
16. Display
17. Disc cover

\* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

\* "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.



## ■ Display



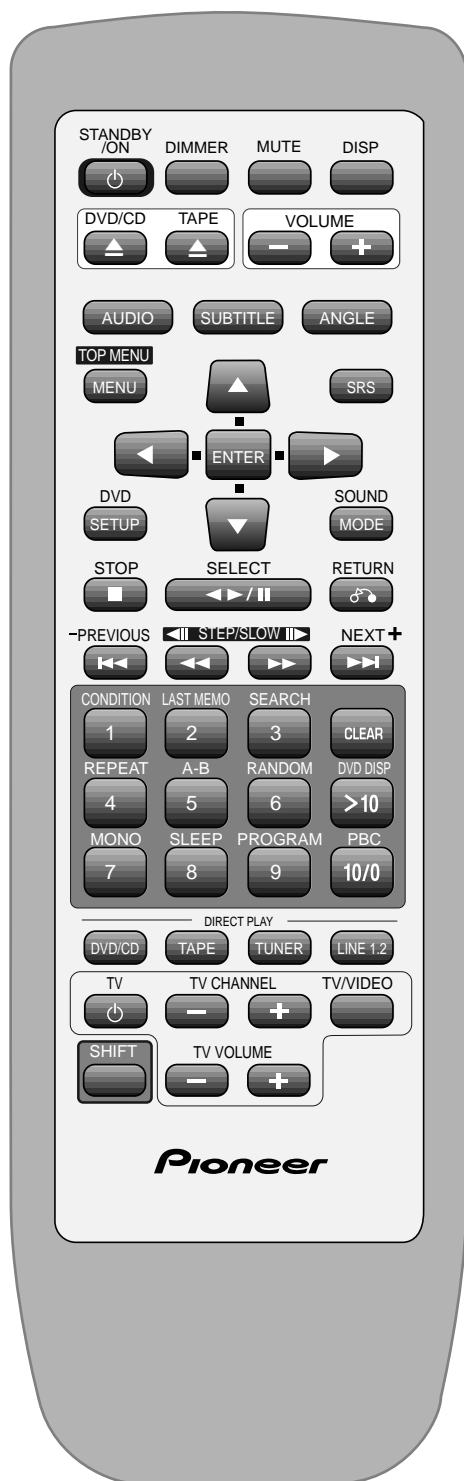
### Display window

1. TUNED Lights when tuned to a radio broadcast
2. STEREO Lights when listening to FM stereo radio
3. B.CUT Lights when beat cut 2 is active
4. MONO Lights when FM mono mode is on
5. ENHANCE Lights when one of the Enhance modes is on
6. SLEEP Lights when the sleep timer is active
7. WAKE UP Lights when the wake up timer is active
8. TIMER REC Lights when the record timer is active
9. CONDITION Lights when a disc with memorized setting is in the player
10. LAST MEMORY Lights when a bookmarked disc is loaded in the player
11. DOLBY DIGITAL Lights when Dolby Digital is switched on
12. REC Lights during tape recording
13. TAPE ◀▶ Indicates the direction of tape travel (◀ (reverse) or ▶ (forward))
14. ⇄ Indicates the reverse mode (⇄, ⇄ or ⇄)
15. NR Lights when Dolby B Noise Reduction is on
16. ONE Lights in repeat one-track play
17. REPEAT Lights in repeat play
18. ASES Lights during ASES (Auto Synchro Editing System) recording
19. Character display
20. SRS Lights when SRS has been switched on.
21. PROGRAM Lights in program play
22. RANDOM Lights in random play

*"SRS" is a trademark of SRS Labs, Inc. in the United States and selected foreign countries.*

## ■ Remote Control Unit

To learn about the function of a particular button, look up the name of the button in the following alphabetical list (buttons marked with symbols appear first).



Press to switch the system on or into standby.



Use to navigate the on-screen menus.



Press to stop a disc or tape currently playing.



Press to start playback of a disc or tape. When playing a disc, press to pause playback (press again to restart). When playing a tape, press to start playing the other side.



Use to scan backward on a disc, or fast-rewind a tape. When listening to the radio, use for tuning to stations.



Use to scan forward on a disc, or fast-forward a tape. When listening to the radio, use for tuning to stations.

**◀|| (SHIFT + ◀◀)**

Use with the **SHIFT** button for reverse frame-advance and slow motion reverse playback of a DVD or Video CD.

**||▶ (SHIFT + ▶▶)**

Use with the **SHIFT** button for frame advance and slow motion forward playback of a DVD or Video CD.



Use to skip back tracks/chapters on a disc or tape. When listening to the radio, use to change the station preset.



Use to skip forward tracks/chapters on a disc or tape. When listening to the radio, use to change the station preset.

**>10**

Use to select numbers over 10 (press this button, then input the number using the other number buttons).

**10/0**

Use as zero or 10 when entering numbers (for track numbers, station presets, etc.).

**1-9**

Number buttons (for track numbers, station presets, etc.).

### A **A-B (SHIFT + 5)**

Press to mark the start and end points of a loop to repeat when playing discs.

### **ANGLE**

Press to switch camera angle on DVD discs recorded with multiple camera angles.

### **AUDIO**

Press to switch the audio language of DVD discs and the audio type of CD/VCDs.

### C **CLEAR**

Press to clear or cancel various operations.

## **CONDITION (SHIFT + 1)**

Press to memorize the current DVD disc preferences.

## **D DIMMER**

Press to change the display brightness.

## **DISP**

Press to change the display information.

## **DVD/CD**

Press to change the system function to DVD/CD/Video CD.

## **DVD/CD ▲**

Press to open/close the disc cover.

## **DVD DIS (SHIFT + >10)**

Press to display disc information on-screen.

## **DVD SETUP**

Press to display the DVD Setup menu for access to various sound, picture and language options.

## **E ENTER**

Use to select items from on-screen menus.

## **L LAST MEMO (SHIFT + 2)**

Press to memorize the current position on a DVD disc.

## **LINE 1.2**

Press to change the system function to line 1 or line 2 inputs.

## **M MENU**

Press to display the disc menu of a DVD disc.

## **MONO (SHIFT + 7)**

Press to listen to a stereo FM broadcast in mono (sound quality is usually improved).

## **MUTE**

Press to mute all sound from the speakers. Press again to restore the sound.

## **N NEXT + (SHIFT + ►►)**

Press to display the next menu screen on a PBC Video CD.

## **P PBC (SHIFT + 10/0)**

Press to switch Video CD playback control on or off.

## **PREVIOUS – (SHIFT + ◀◀)**

Press to display the previous menu screen on a PBC Video CD.

## **PROGRAM (SHIFT + 9)**

Press to start programming a playlist.

## **R RANDOM (SHIFT + 6)**

Press to start random playback of tracks/discs loaded.

## **REPEAT (SHIFT + 4)**

Use to select a repeat mode for discs.

## **RETURN ↵**

Press to leave a menu screen without making changes. During PBC playback at a Video CD, press to display the PBC menu.

## **S SEARCH (SHIFT + 3)**

Use to select the disc search mode (track, chapter, title or time).

## **SELECT (SHIFT + ◀▶/||)**

Press to start playing the selected track from a Video CD PBC menu.

## **SHIFT**

Use to access secondary functions printed in white on blue on the remote control.

## **SLEEP (SHIFT + 8)**

Press to set up the sleep timer.

## **SOUND MODE**

Press to change the sound mode (adjust using the jog dial or ◀◀ and ►► (remote)).

## **SRS**

Press to switch on Dolby Virtual surround sound.

## **STEP/SLOW (SHIFT + ◀◀, SHIFT + ►► )**

See ◀|| and ||► above.

## **SUBTITLE**

Press to switch the subtitle language of DVD discs during playback.

## **T TAPE**

Press to switch to the tape function.

## **TAPE ▲**

Press to open/close the tape deck.

## **TOP MENU (SHIFT + MENU)**

Press to display the top menu of a DVD disc.

## **TUNER**

Press to switch to the tuner, and use to switch between FM and AM bands.

## **TV ⏻**

Press to switch your TV on or into standby.

## **TV CH +**

Press to change the TV channel.

## **TV CH –**

Press to change the TV channel.

## **TV VOL +**

Press to turn up the TV volume.

## **TV VOL –**

Press to turn down the TV volume.

## **TV/VIDEO**

Press to switch the TV's input between the built in TV tuner and an external video source.

## **V VOLUME +/-**

Use to adjust the overall volume level.



## 8.2 SPECIFICATIONS

### Amplifier Section(Reference)

Continuous Power (RMS)..... 100 W + 100 W  
(1 kHz, THD 10%, 6 Ω)

### Disc Section

Digital audio characteristics .... DVD fs: 96KHz, 24-bit  
Type DVD system, Video CD system and Compact Disc  
digital audio system

Frequency response ..... 4 Hz to 44KHz  
S/N ratio ..... 95dB  
Dynamic range ..... 95dB  
Total harmonic distortion ..... 0.005%  
Wow and Flutter ..... Limit of measurement  
(±0.001% W.PEAK) or less (EIAJ)

### Cassette deck Section

Systems..... 4-track, 2-channel stereo  
Heads ..... Recording/playback head x 1  
Erasing head x 1  
Motor ..... DC Servo motor x 1  
Tape types ..... TYPE I (Normal)

### FM Tuner Section

Frequency Range ..... 87.5 - 108MHz  
Antenna ..... 75 Ω, unbalanced

### AM Tuner Section

Frequency Range  
With 9 KHz step ..... 531 kHz to 1,602 kHz  
With 10 KHz step ..... 530 kHz to 1,700 kHz  
Antenna ..... Loop antenna

### Miscellaneous

#### Power Requirements

Multi voltage model ... AC110-127 V, 220-230/240V  
(switchable), 50/60Hz

#### Power Consumption

Round 2-pin AC plug model ..... 180W

Flat blade 2-pin AC plug model ..... 540W

Power Consumption in standby mode ..... 1 W

#### Dimensions:

DVD Tuner Deck .. 204 (W) x 300 (H) x 237 (D) mm

Power Amplifier .... 160 (W) x 300 (H) x 237 (D) mm

#### Weight:

DVD Tuner Deck ..... 3.2 kg

Power Amplifier ..... 4.9 kg

### Accessories (DVD Tuner Deck)

Operating Instructions ..... 1

Remote control unit ..... 1

FM antenna ..... 1

AM loop antenna ..... 1

Dry cell batteries (AA/R6P) ..... 2

#### Note

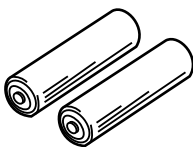
*Specifications and design subject to possible modification without notice, due to improvements.*

## ■ Accessories

Remote control unit x1  
(XXD3036)



dry cell batteries (AA/R6P) x2  
(VEM-013)



FM antenna x1  
(ADH7004)



AM Loop antenna x1  
(ATB7009)

