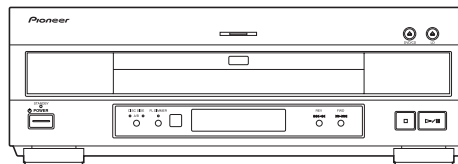


Service Manual

Pioneer



ORDER NO.
RRV2045

DVD LD PLAYER

DVL-919

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

Type	Model	Power Requirement	Region No.	The voltage can be converted by the following method.
	DVL-919			
RL	○	AC110-127/220-240V	3	Automatic select
RAM	○	AC110-127/220-240V	6	Automatic select
RB	○	AC110-127/220-240V	3	Automatic select
RD/RB	○	AC110-127/220-240V	2	Automatic select

CONTENTS

1. SAFETY INFORMATION	2	7. GENERAL INFORMATION	78
2. EXPLODED VIEWS AND PARTS LIST	3	7.1 PARTS	78
3. SCHEMATIC DIAGRAM	16	7.1.1 IC	78
4. PCB CONNECTION DIAGRAM	40	7.2 DISASSEMBLY/ASSEMBLY	80
5. PCB PARTS LIST	54	7.3 BLOCK DIAGRAM	82
6. ADJUSTMENT	62	8. PANEL FACILITIES AND SPECIFICATIONS	84

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
 © PIONEER ELECTRONIC CORPORATION 1998

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 PIONNER 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 : 7 mw
WAVELENGTH : 650 nm
- FOR CD/LD
MAXIMUM OUTPUT POWER : 5 mw
WAVELENGTH : 780-785 nm

Additional Laser Caution

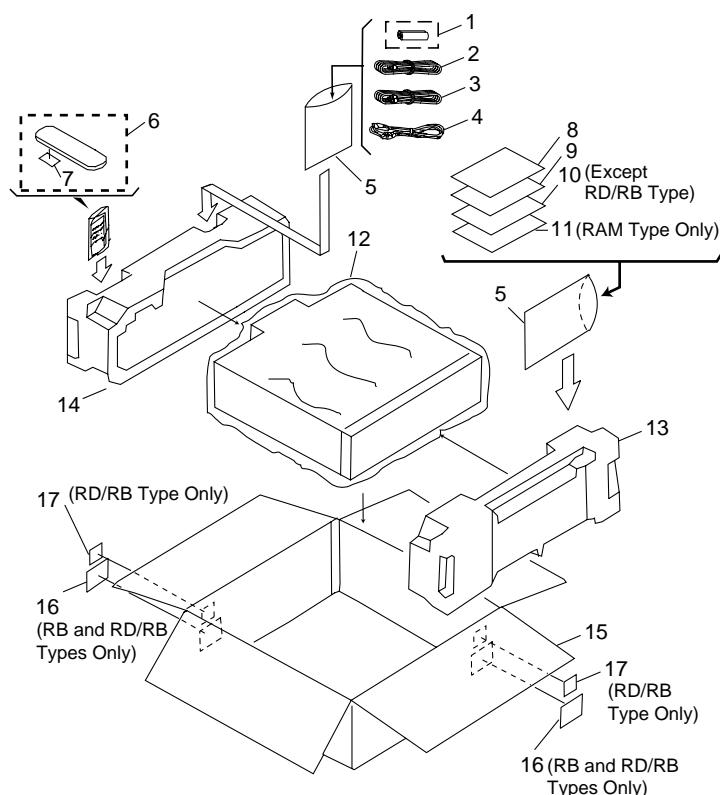
1. The ON/OFF statuses of the side-A/B detection switch (Lever switch connecting to the TNMB assy), slider-position detection switches (INNER and OUTER on the PKSB assy), loading-status detection switches (SW1, 2 and 3 on the LMSB assy), side B inside detection switch (S901 on the BISB assy) and CLD pickup active detection switch (S903 on the LCSB assy) are detected by the microprocessor (IC101 in the CLD MAIN assy). Also the DVD pickup active detection switch (S902 on the DCSB assy) is detected by the microprocessor (IC501 in the DVD MAIN assy).
 - To permit the laser diode of CLD pickup to oscillate, it is required to set the CLD pickup active detection switch (S903 : OFF) and the slider-position detection switches for the LD ACTIVE status (INNER : OFF, OUTER: OFF), and to set the loading-status detection switches for tilt neutral state (SW1 : ON, SW2 : OFF, SW3 : ON). As long as these requirements are not satisfied, the laser diode will not oscillate. When the requirements are met in any way, the laser diode can oscillate. The laser diode oscillation will continue if pin 13 of IC801 is shorted to GND or the emitter and collector of Q834 are shorted each other (fault condition) in the CLD MAIN assy.
 - To permit the laser diode of DVD pickup to oscillate, it is required to set the DVD pickup active detection switch (S902 :OFF) and each switch and a state of laser diode are contents same as state of CLD pickup mentioned above. The laser diode oscillation will continue if pin 13 of IC101 is shorted to +5V (fault condition) in the DVD MAIN assy.
In the test mode *, the laser diode oscillates when the microprocessor detects a PLAY signal, or when the PLAY key is pressed (S104 ON in the FLKY assy), with the above requirements satisfied.
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* : Refer to 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 ⚠ 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 product are used for disassembly.

2.1 PACKING



(1) PARTS LIST

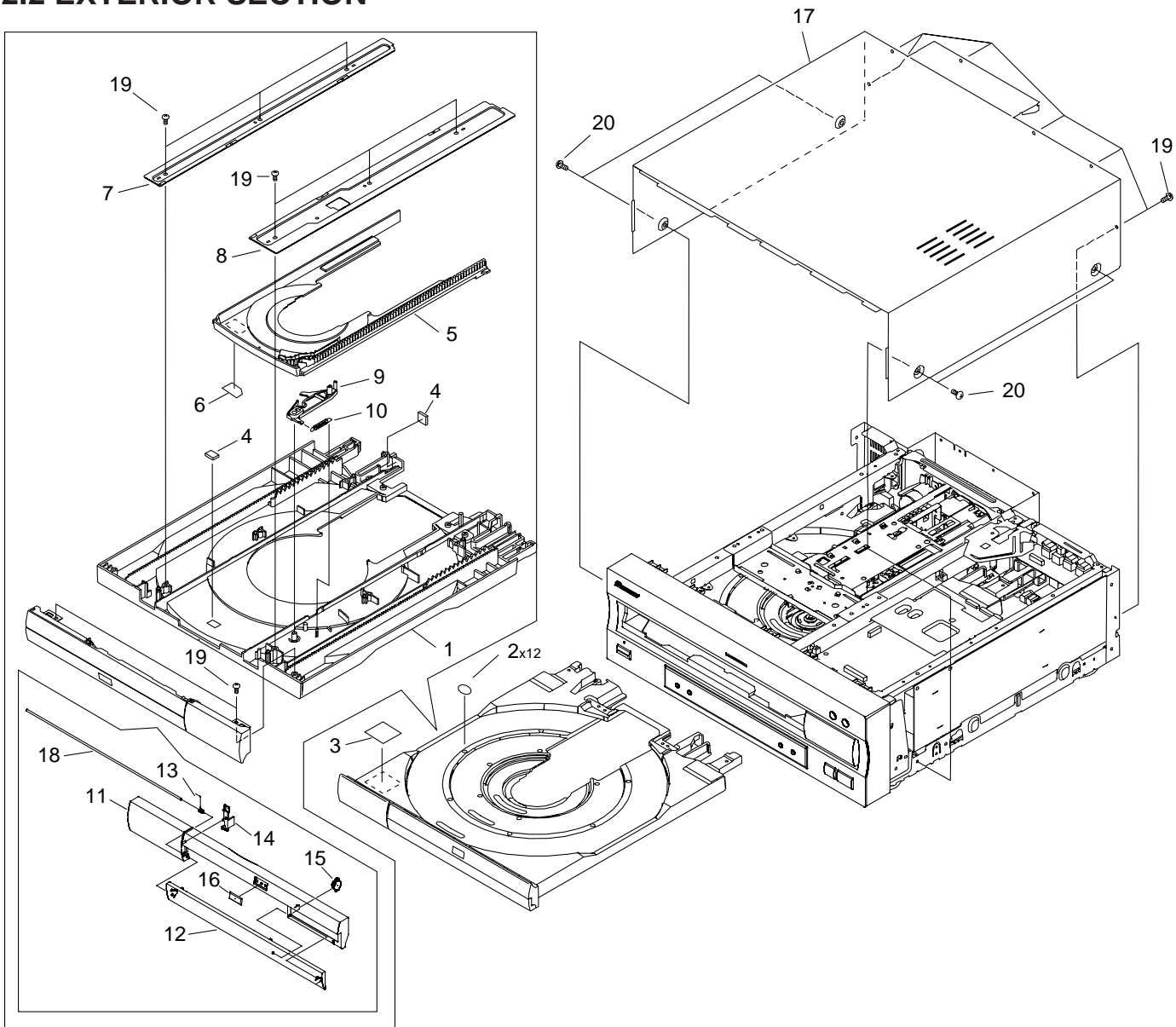
Mark	No.	Description	Part No.
NSP	1	DRY CELL BATTERY (R6P,AA)	VEM-013
	2	VIDEO CORD (L=1.5m)	VDE1036
	3	AUDIO CORD (L=1.5m)	VDE1033
⚠	4	AC POWER CORD	See Contrast table (2)
	5	POLYETHYLENE BAG	Z21-038
	6	REMOTE CONTROL UNIT (CU-DV027)	VXX2603
	7	BATTERY COVER	VNK4334
NSP	8	CAUTION	See Contrast table (2)
	9	OPERATING INSTRUCTIONS (English)	VRB1209
	10	OPERATING INSTRUCTIONS	See Contrast table (2)
NSP	11	WARRANTY CARD	See Contrast table (2)
	12	MIRROR MAT SHEET	VHL1018
	13	PAD F	VHA1226
	14	PAD R	VHA1227
	15	PACKING CASE	See Contrast table (2)
	16	LABEL	See Contrast table (2)
	17	LABEL (REGION)	See Contrast table (2)

(2) CONTRAST TABLE

DVL-919/RL, RAM, RB, and RD/RB are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			RL type	RAM type	RB type	RD/RB type	
⚠	4	AC POWER CORD	ADG1127	ADG7017	ADG7003	ADG7003	
	8	CAUTION	VRM1071	VRM1063	VRM1063	VRM1063	
NSP	10	OPERATING INSTRUCTIONS (Trad-Chinese)	VRC1084	Not used	VRC1084	Not used	
	10	OPERATING INSTRUCTIONS (Simp-Chinese)	Not used	VRC1083	Not used	Not used	
NSP	11	WARRANTY CARD	Not used	ARY7028	Not used	Not used	
	15	PACKING CASE	VHG1770	VHG1771	VHG1770	VHG1770	
	16	LABEL	Not used	Not used	VRW1764	VRW1765	
	17	LABEL (REGION)	Not used	Not used	Not used	VRW1701	

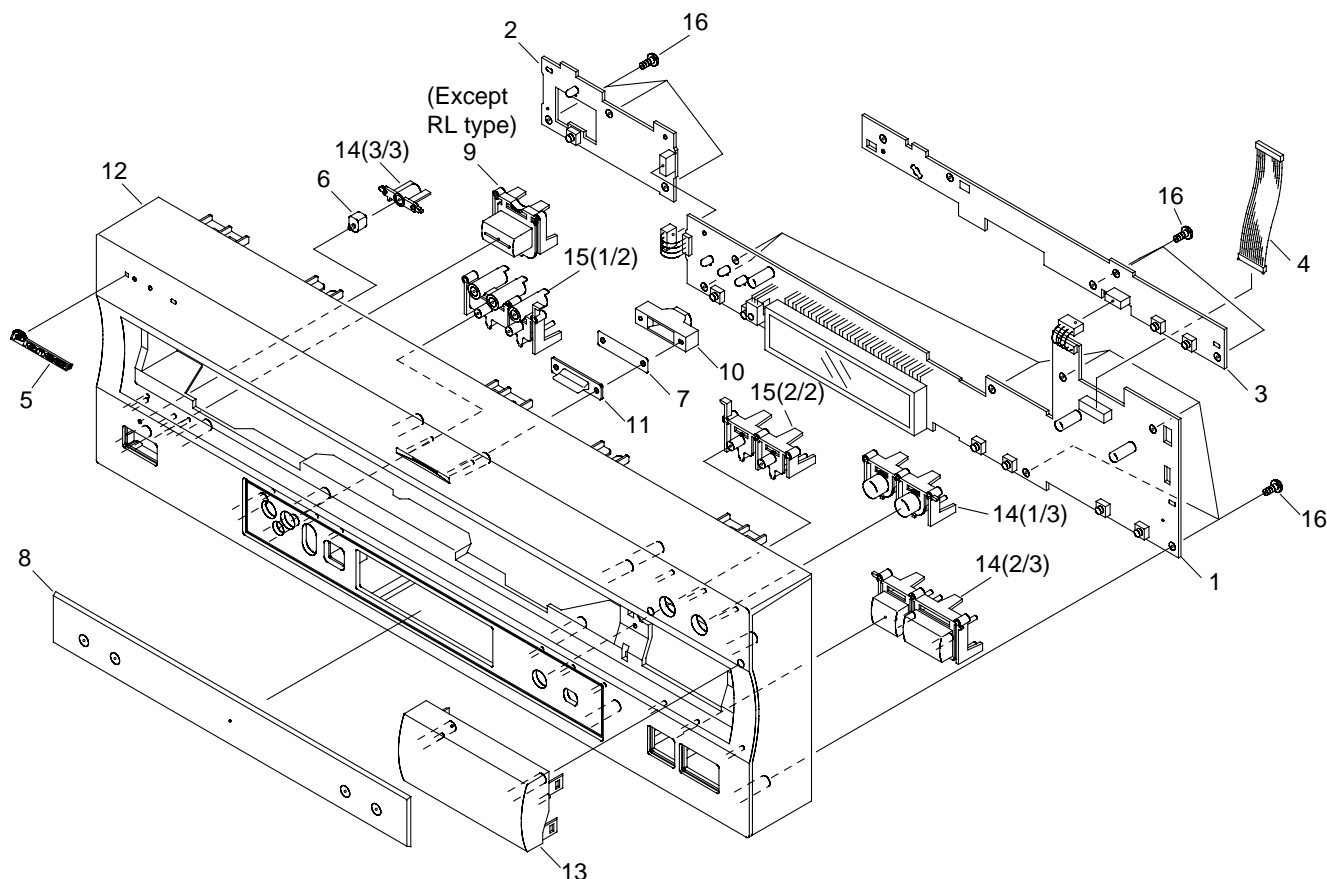
2.2 EXTERIOR SECTION



● PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	LD TRAY ASSY	VXA2302	11	TRAY PANEL	VNK4350	
	2	CUSHION	VEC1881	12	DVD DOOR	VNK4351	
NSP	3	LABEL	VRW1289	13	DOOR SPRING	VBH1248	
	4	DAMP CUSHION	VEC1683	14	DOOR HOLDER	VNL1817	
	5	CD TRAY	VNK3664	15	DAMPER	VXA1999	
	6	LABEL	VRW1628	16	DVD PLATE	VAM1075	
	7	GUIDE PLATE (R)	VNE1939	17	BONNET CASE S	VXX2560	
	8	GUIDE PLATE (L)	VNE1938	18	DOOR SHAFT	VLL1506	
	9	LOCK PLATE	VNL1703	19	SCREW	BBZ30P080FMC	
	10	LOCK PLATE SPRING	VBH1188	20	SCREW	BCZ40P060FZK	

2.3 FRONT PANEL SECTION



(1) PARTS LIST

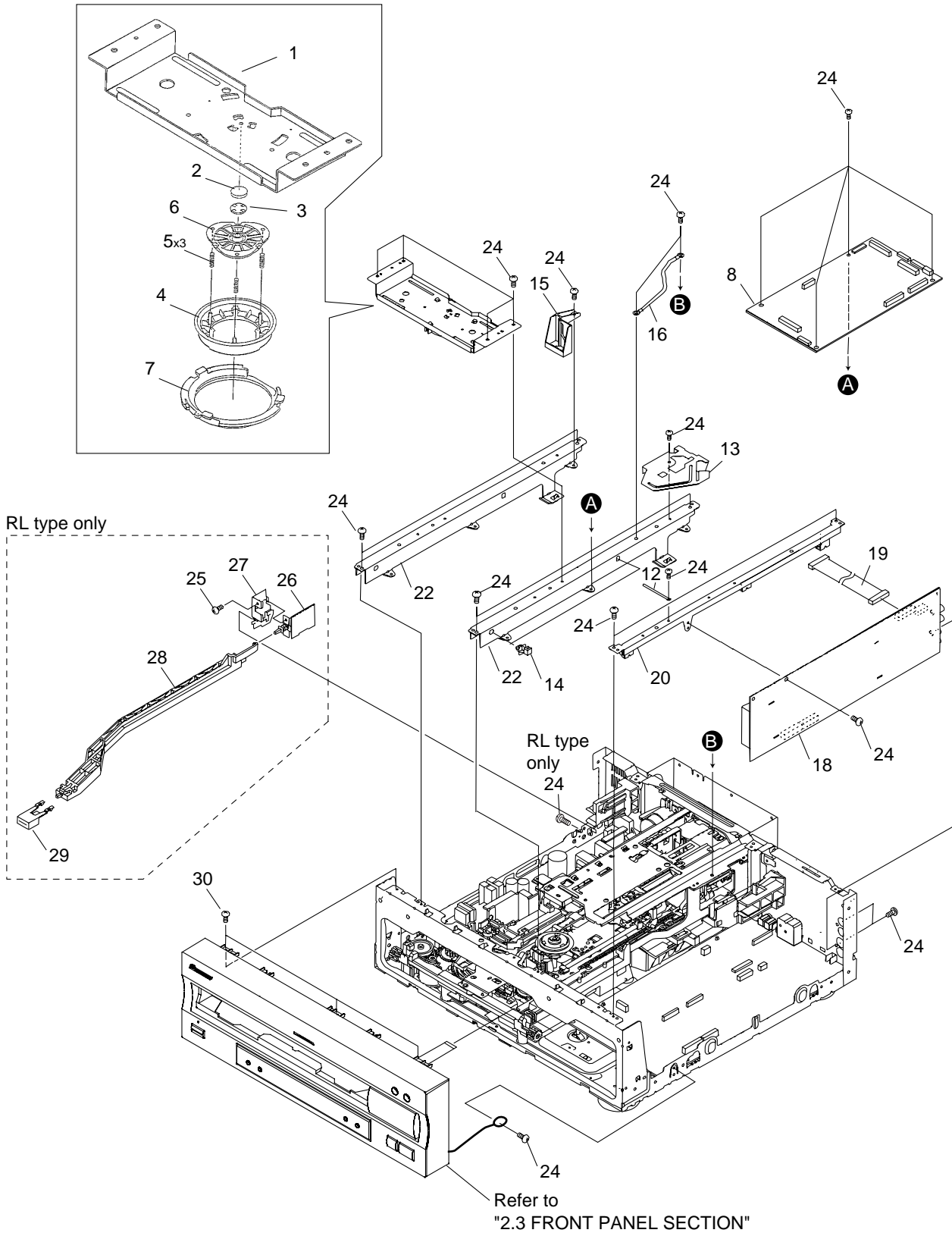
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	FLKY ASSY	See Contrast table (2)		11	ILLUMINATION LENS	VNK4168
NSP	2	PWSB ASSY	See Contrast table (2)		12	FRONT PANEL	See Contrast table (2)
NSP	3	DILB ASSY	VWG1995		13	SUB PANEL	VNK4414
	4	FLEXIBLE CABLE (14P)	VDA1638		14	PLAY BUTTON	VNK4348
	5	NAME PLATE G	PAM1779		15	OPERATION BUTTON	VNK4349
	6	LED LENS	PNW2019		16	SCREW	BBZ30P080FMC
	7	ILLUMINATION FILTER	VEC1950				
	8	FL LENS	VEC2014				
	9	PW BUTTON	See Contrast table (2)				
	10	ILLUMI HOLDER	VNK4098				

(2) CONTRAST TABLE

DVL-919/RL, RAM, RB and RD/RB are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			RL type	RAM type	RB type	RD/RB type	
NSP	1	FLKY ASSY	VWG2006	VWG2030	VWG2030	VWG2030	
	2	PWSB ASSY	VWG2007	VWG1994	VWG1994	VWG1994	
	9	PW BUTTON	Not used	VNK4059	VNK4059	VNK4059	
	12	FRONT PANEL	VNK4385	VNK4377	VNK4377	VNK4377	

2.4 TOP VIEW SECTION



(1) TOP VIEW SECTION PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	CENTER PLATE	VNE2127	NSP	16	CORD WITH PLUG	DE007VF0
	2	RUBBER MAT	VEB1114		17	•••••	
	3	THRUST HOLDER	VNL1663		18	GYCB ASSY	VWV1634
	4	CLAMPER	VNL1648		19	HOUSING ASSY(13P)	VKP2196
	5	CLAMPER SPRING	VBH1192	NSP	20	PCB-HOLDER	VNE2164
	6	CLAMPER HEAD	VNL1649		21	•••••	
	7	CLAMPER HOLDER	VNL1788	NSP	22	CENTER ANGLE	VNE2126
	8	DVDM ASSY	VWS1355		23	•••••	
	9	•••••			24	SCREW	BBZ30P080FMC
	10	•••••			25	SCREW	See Contrast table (2)
	11	•••••			26	MSWB ASSY	See Contrast table (2)
	12	CORD CLAMPER	RNH-184	NSP	27	POWER HOLDER	See Contrast table (2)
	13	CABLE HOLDER	VEC1958		28	POWER JOINT	See Contrast table (2)
NSP	14	CORNER POST	DEC1212		29	POWER BUTTON	See Contrast table (2)
	15	SHIPPING CAM	VNL1729		30	SCREW	IBZ30P080FMC

(2) CONTRAST TABLE

DVL-919/RL, RAM, RB and RD/RB are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			RL type	RAM type	RB type	RD/RB type	
NSP	25	SCREW	PMB30P080FZK	Not used	Not used	Not used	
	26	MSWB ASSY	VWG1895	Not used	Not used	Not used	
	27	POWER HOLDER	VNE2123	Not used	Not used	Not used	
	28	POWER JOINT	VNK4148	Not used	Not used	Not used	
	29	POWER BUTTON	VNK4159	Not used	Not used	Not used	

(1) BOTTOM VIEW SECTION PARTS LIST

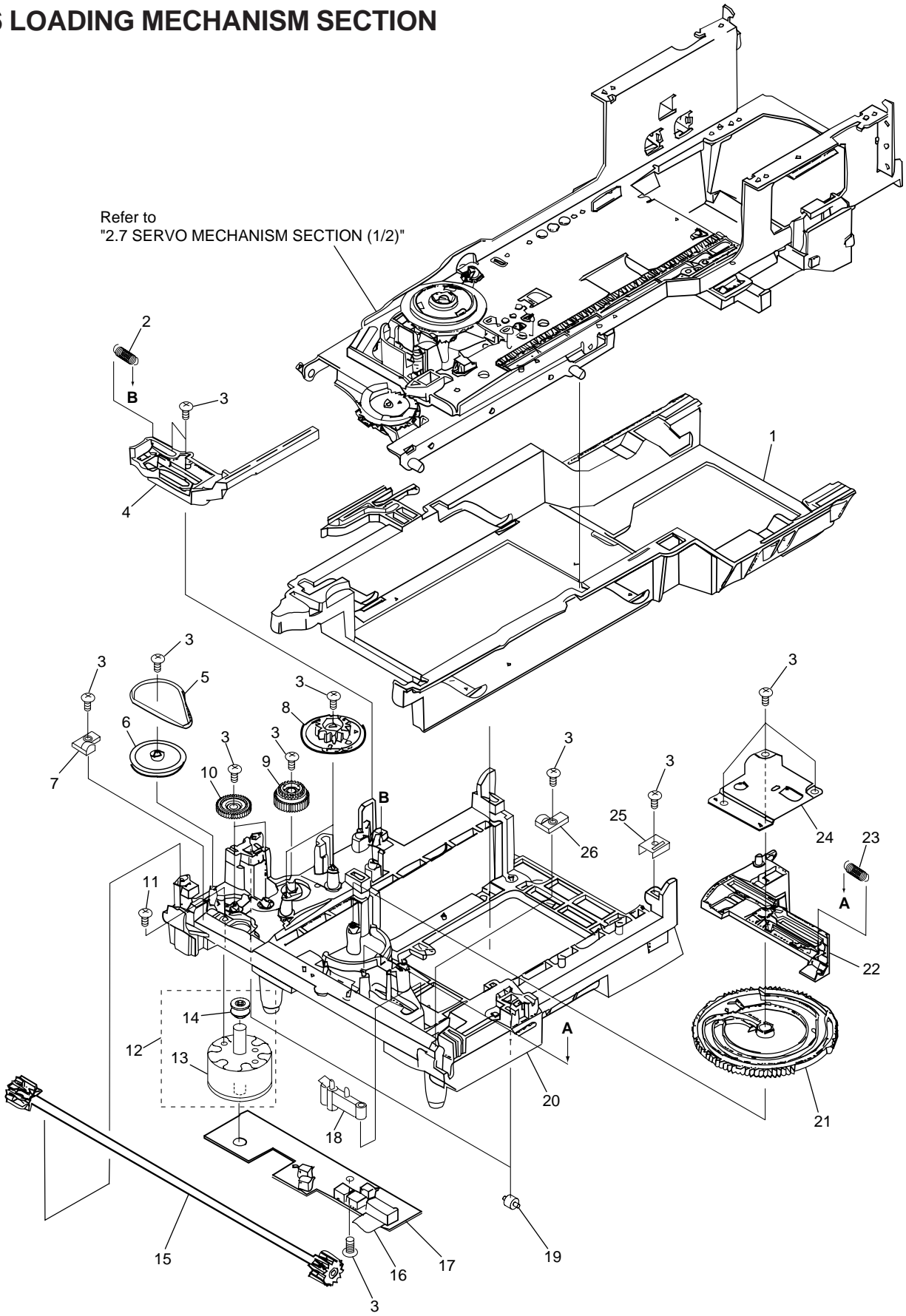
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	CHASSIS	VNA1887	NSP	22	CAM HOLDER R	VNE2090
	2	INSULATOR ASSY	VXA2356		23	FLEXIBLE CABLE(22P)	VDA1652
	3	PCB HINGE	VEC1174		24	•••••	
NSP	4	PCB SPACER	AEC1188		25	HOUSING ASSY (4P)	VKP2195
NSP	5	CIRCUIT BOARD SPACER	VEC1957		26	REAR PANEL R	VNA1892
△	6	POWER SUPPLY ASSY	VWR1287		27	REAR PANEL L	VNA2031
	7	SHEET P	VEC1874		28	TRAY STOPPER	VNL1707
	8	CORD CLAMPER	RNH-184		29	REAR COVER	See Contrast table (2)
NSP	9	STOPPER	VNE2088		30	•••••	
	10	SPACER	VEC1939		31	•••••	
	11	SHELL CLIP	DEC1184		32	SCREW	BBZ30P080FMC
	12	•••••			33	SCREW	BBZ30P100FMC
	13	CLDM ASSY	See Contrast table (2)		34	RIVET	RBM-003
	14	•••••		NSP	35	SPACER	VEC1989
	15	HOUSING ASSY (14P)	VKP2151	NSP	36	HOUSING ASSY	See Contrast table (2)
	16	FLEXIBLE CABLE(15P)	VDA1644				
NSP	17	PANEL HOLDER	VNA1686				
NSP	18	MECHANISM ASSY	VWT1155				
NSP	19	CAM HOLDER L	VNE2089				
	20	SHIPPING LEVER	VNL1728				
	21	SHIPPING SPRING	VBH1275				

(2) CONTRAST TABLE

DVL-919/RL, RAM, RB and RD/RB are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				Remarks
			RL type	RAM type	RB type	RD/RB type	
NSP	13	CLDM ASSY	VWS1352	VWS1353	VWS1353	VWS1353	
	29	REAR COVER	VNA2032	VNA2034	VNA2033	VNA2051	
	36	HOUSING ASSY	Not used	VKP2189	VKP2189	VKP2189	

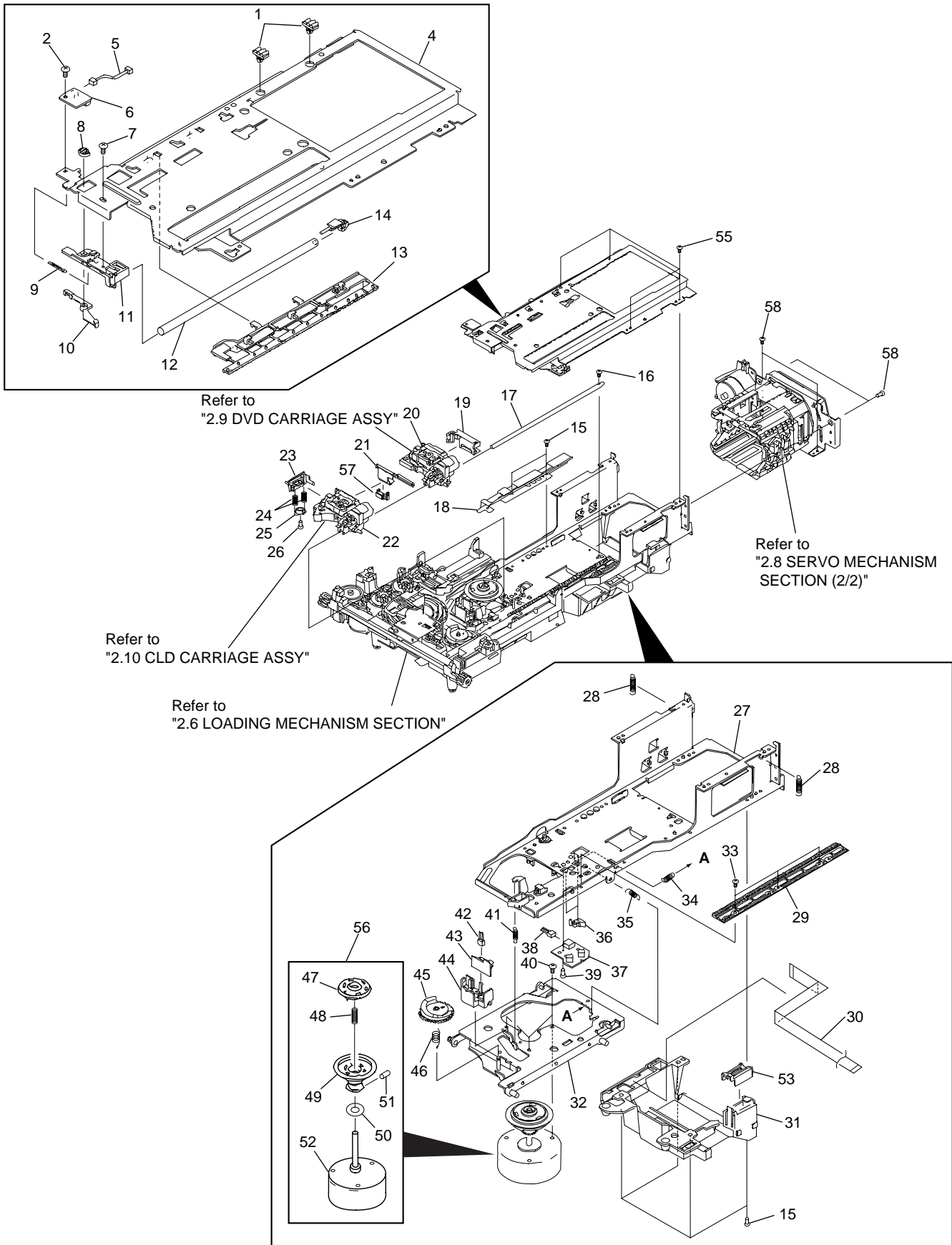
2.6 LOADING MECHANISM SECTION



● **LOADING MECHANISM SECTION PARTS LIST**

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Clamp Cam B	VNL1765		16	Flexible Cable (10P)	VDA1645
	2	CDP Spring	VBH1191	NSP	17	LMSB Assy	VWG1554
	3	Screw	Z39-019		18	MB Switch Lever	VNL1664
	4	CD Plate	VNL1685		19	Roller	VNL1042
	5	Rubber Belt	VEB1184		20	Mechanism Base	VNK3239
	6	Gear Pulley	VNL1662		21	Cam Gear	VNL1625
	7	Slider (L)	VNL1665		22	Cam Plate	VNL1631
	8	Twin Gear	VNL1626		23	CAS Spring	VBH1190
	9	Center Gear	VNL1660		24	Shaft Holder	VNE1942
	10	Double Gear	VNL1661		25	CAM Holder	VNE2032
	11	Screw	BMZ26P040FMC		26	Slider (R)	VNL1666
	12	Loading Motor Assy	VXX2045				
	13	Carriage Motor	VXM1033				
NSP	14	Motor Pulley	VNL1630				
	15	Synchro Gear Assy	VXA2105				

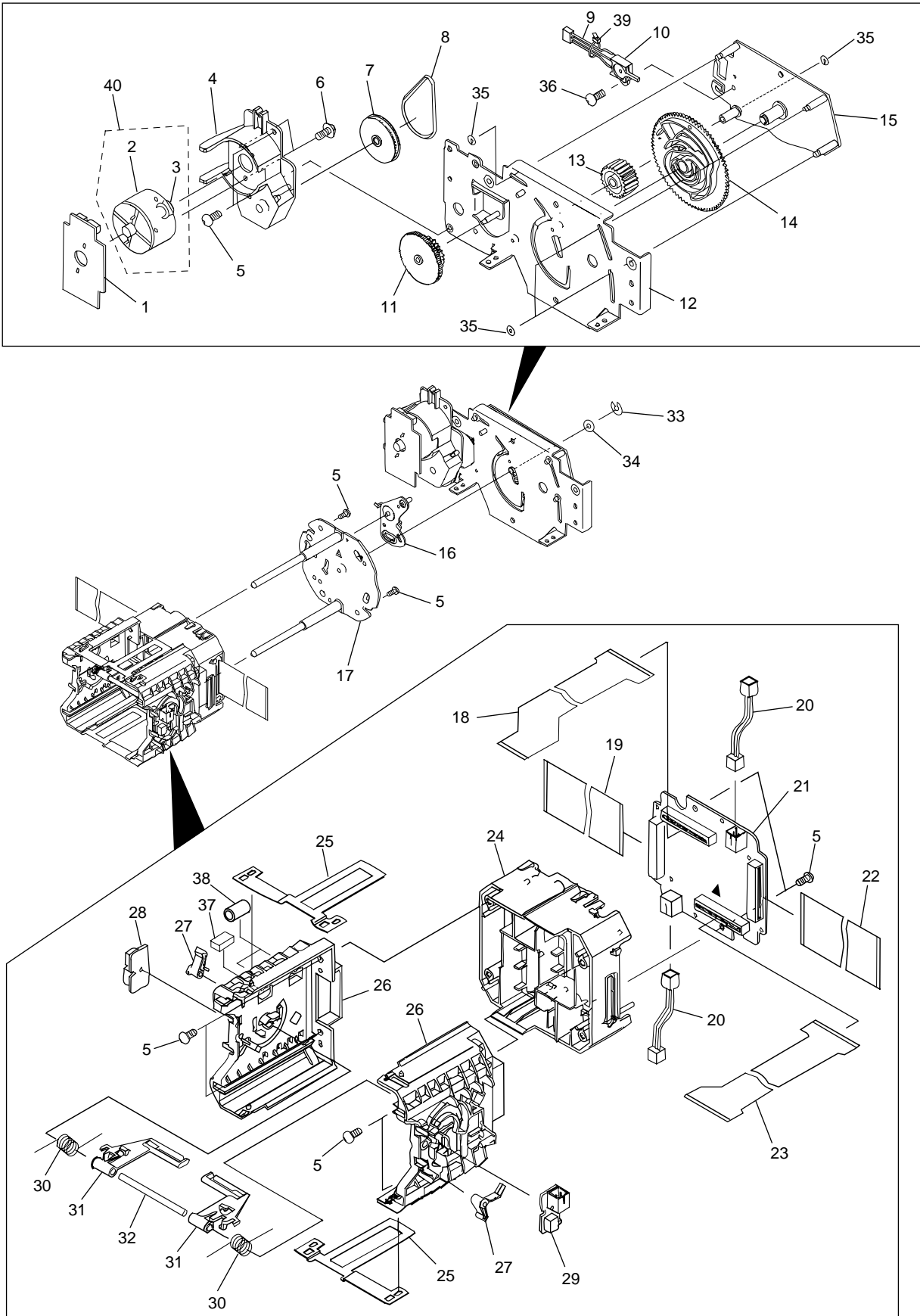
2.7 SERVO MECHANISM SECTION (1/2)



● SERVO MECHANISM SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Mini Clamp	VEC2030		26	Screw	PMZ20P060FZK
	2	Screw	BBZ26P060FMC		27	Tilt Base (Under)	VNL1711
	3	•••••			28	Tilt Rear Spring	VBH1274
	4	Tilt Base (Upper)	VNE2062		29	CA Rack (Lower)	VNL1712
	5	Housing Assy (2P)	VKP2136		30	Flexible Cable (6P)	VDA1642
NSP	6	BISB Assy	VWG1796		31	Flexible Cable Cover	VNL1727
	7	Screw	BPZ20P040FZK		32	Motor Base	VNE1941
	8	B Cam	VNL1725		33	Screw	IBZ26P060FMC
	9	Support Spring	VBH1273		34	Tilt Spring	VBH1263
	10	SW Lever B	VNL1723		35	Thrust Spring	VBH1245
	11	Shaft Holder	VNL1724		36	CA Switch Lever	VNL1644
	12	CA Shaft (Upper)	VLL1486	NSP	37	PKSB Assy	VWG1555
	13	CA Rack (Upper)	VNL1722		38	Housing Assy (3P)	VKP2045
	14	Shaft Stay	VNL1726		39	Screw	IBZ26P120FMC
	15	Screw	BBZ30P080FMC		40	Screw	PMA30P050FMC
	16	Screw	PPZ20P060FMC		41	Tilt Spring B	VBH1287
	17	CA Shaft (Lower)	VLL1496		42	Housing Assy (3P)	VKP2046
	18	TAN Guide	VNE2061	NSP	43	FG Assy	VWG1556
	19	FPC Holder A	VNL1751		44	FG Base	VNL1781
⚠	20	DVD Carriage Assy	VWT1146		45	Tilt Cam	VNL1643
	21	FPC Holder B	VNL1801		46	Tilt Cam Spring	VBH1243
⚠	22	CLD Carriage Assy	VWT1141		47	PRC Hub	VNL1684
	23	CA Guide	VNL1668		48	Centering Spring	VBH1269
	24	TAN Spring (B)	VBH1264		49	R Turn Table Assy	VXA2354
	25	TAN Lever (B)	VNL1669	NSP	50	Oil Stopper	VPF1002
					51	Screw	ZMD30H030FBT
				NSP	52	Spindle Motor	VXM1057
					53	Cover S	VNL1780
					54	•••••	
					55	Screw	BBZ30P050FZK
					56	Spindle Motor Assy	VXX2579
					57	FPC Holder	VNL1789
					58	Screw	BCZ30P080FMC

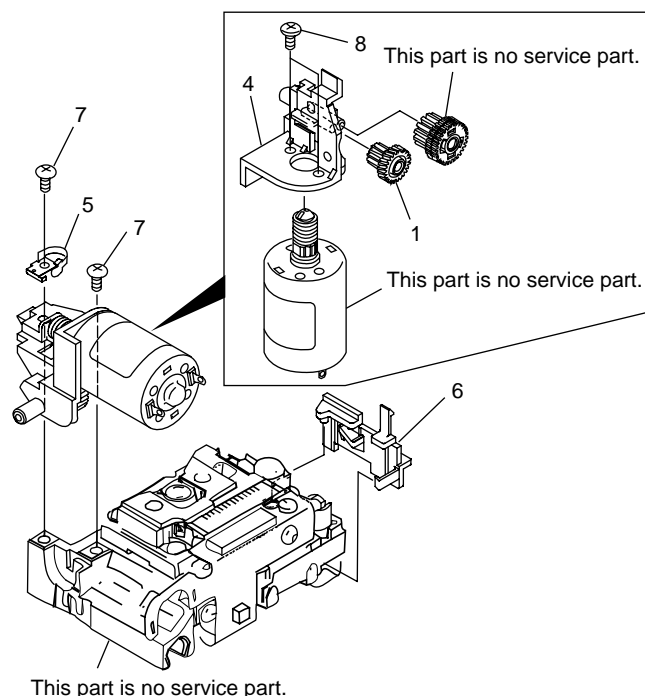
2.8 SERVO MECHANISM SECTION (2/2)



● SERVO MECHANISM SECTION (2/2) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	TNMB Assy	VWG1793	NSP	21	CNNB Assy	VWG1792
	2	Carriage Motor	VXM1033		22	Flexible Cable (27P)	VDA1643
NSP	3	Motor Pulley	VNL1630		23	PU FPC-A	VNP1582
	4	Motor Holder	VNL1717		24	PCB Holder	VNL1716
	5	Screw	BBZ30P080FMC		25	FC Guide	VNE2059
	6	Screw	BMZ26P040FMC		26	PU Holder	VNL1715
	7	Gear Pulley	VNL1662		27	SW Lever C	VNL1714
	8	Rubber Belt	VEB1184	NSP	28	LCSB Assy	VWG1795
	9	Housing Assy (3P)	VKP2137	NSP	29	DCSB Assy	VWG1794
	10	Lever Switch	DSK1003		30	FC Arm Spring	VBH1272
	11	Middle Gear	VNL1720		31	FC Arm	VNL1713
	12	Turn Panel Assy	VXA2337		32	Tilt Shaft	VLL1175
	13	Gear S	VNL1719		33	E Ring	YE30FUC
	14	Turn Cam Gear	VNL1718		34	Washer	WA42D080D050
	15	Swing Plate Assy	VXA2289		35	Washer	WT26D070D050
	16	Turn Lever Assy	VXA2292		36	Screw	PMA26P060FMC
	17	Turn Plate Assy	VXA2290		37	Cushion	VEC1917
	18	PU FPC-B	VNP1583		38	Tube	VEB1273
	19	Flexible Cable (26P)	VDA1653		39	Binder	Z09-056
	20	Connector Assy	PG02KK-E10		40	Loading Motor Assy	VXX2045

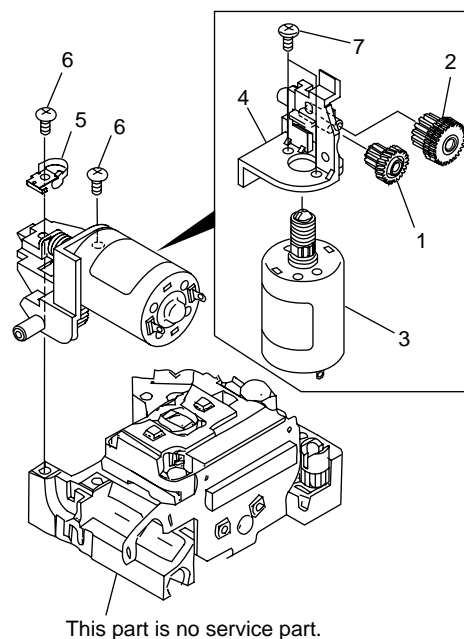
2.9 DVD CARRIAGE ASSY



● DVD CARRIAGE ASSY PARTS LIST

Mark	No.	Description	Part No.
	1	CA Gear (A)	VNL1782
	2	•••••	
	3	•••••	
	4	Motor Holder	VNL1779
	5	Thrust Holder	VBK1058
	6	CA Guide B	VNL1721
	7	Screw	BBZ20P050FZK
	8	Screw	PMA20P033FUC

2.10 CLD CARRIAGE ASSY



● CLD CARRIAGE ASSY PARTS LIST

Mark	No.	Description	Part No.
	1	CA Gear (A)	VNL1782
	2	CA Gear (B)	VNL1639
	3	Slider Motor Assy	VXX2472
	4	Motor Holder	VNL1779
	5	Thrust Holder	VBK1058
	6	Screw	PBZ20P050FMC
	7	Screw	PMA20P033FUC

3. SCHEMATIC DIAGRAM

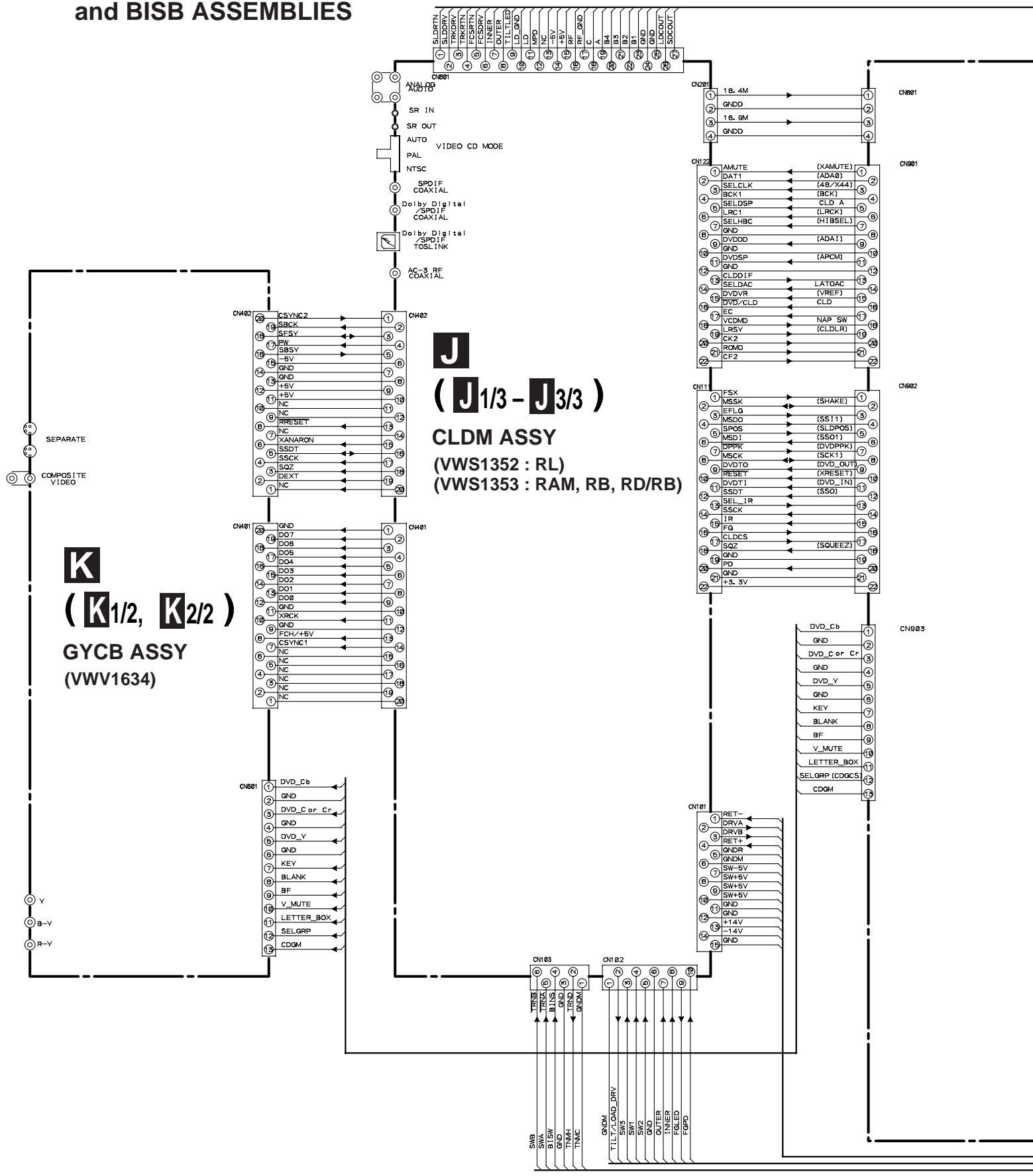
3.1 OVERALL WIRING DIAGRAM, LMSB, PKSB, FG, CNNB, TNMB, DCSB, LCSB and BISB ASSEMBLIES

A

B

C

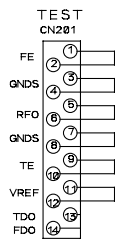
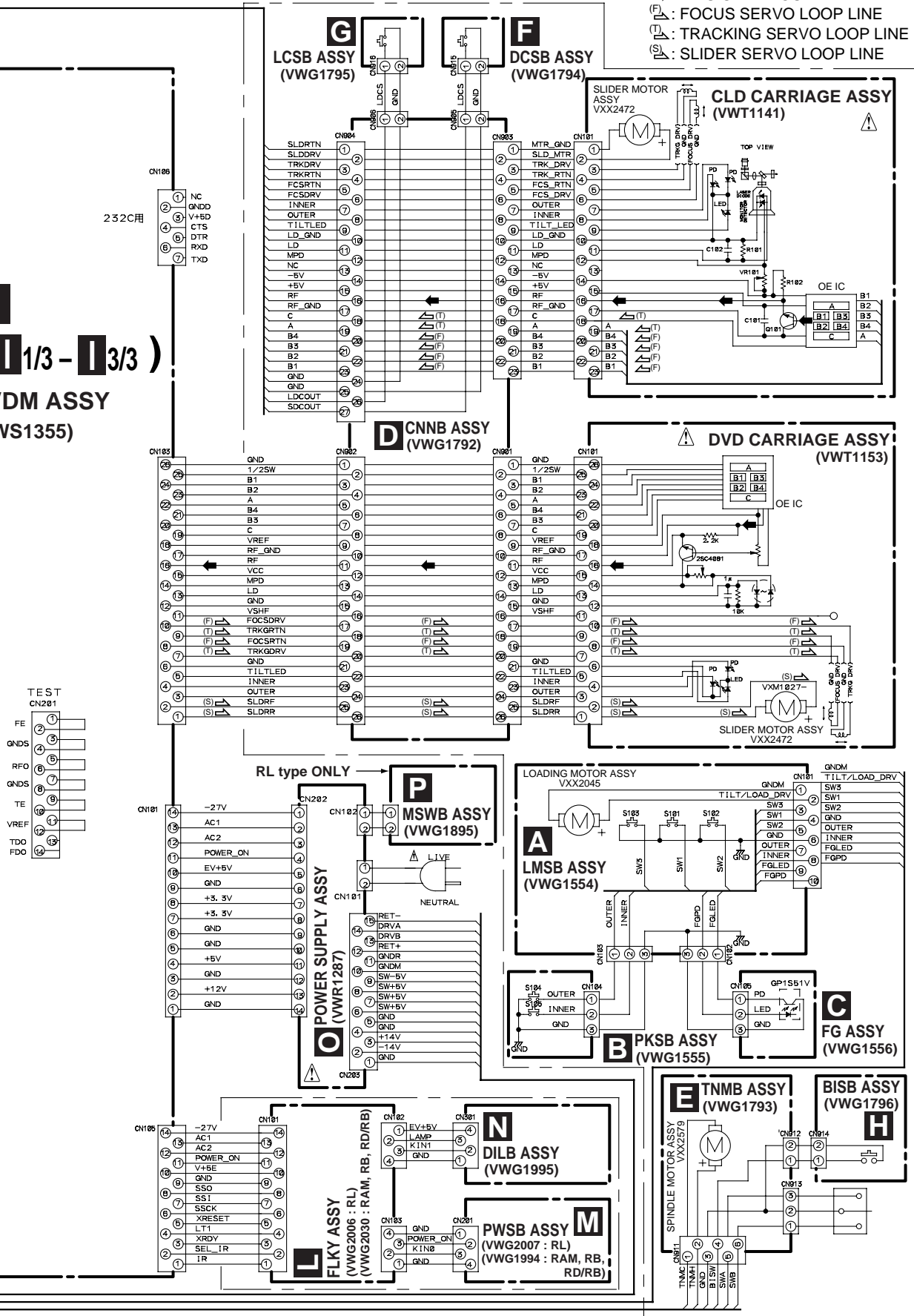
D



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

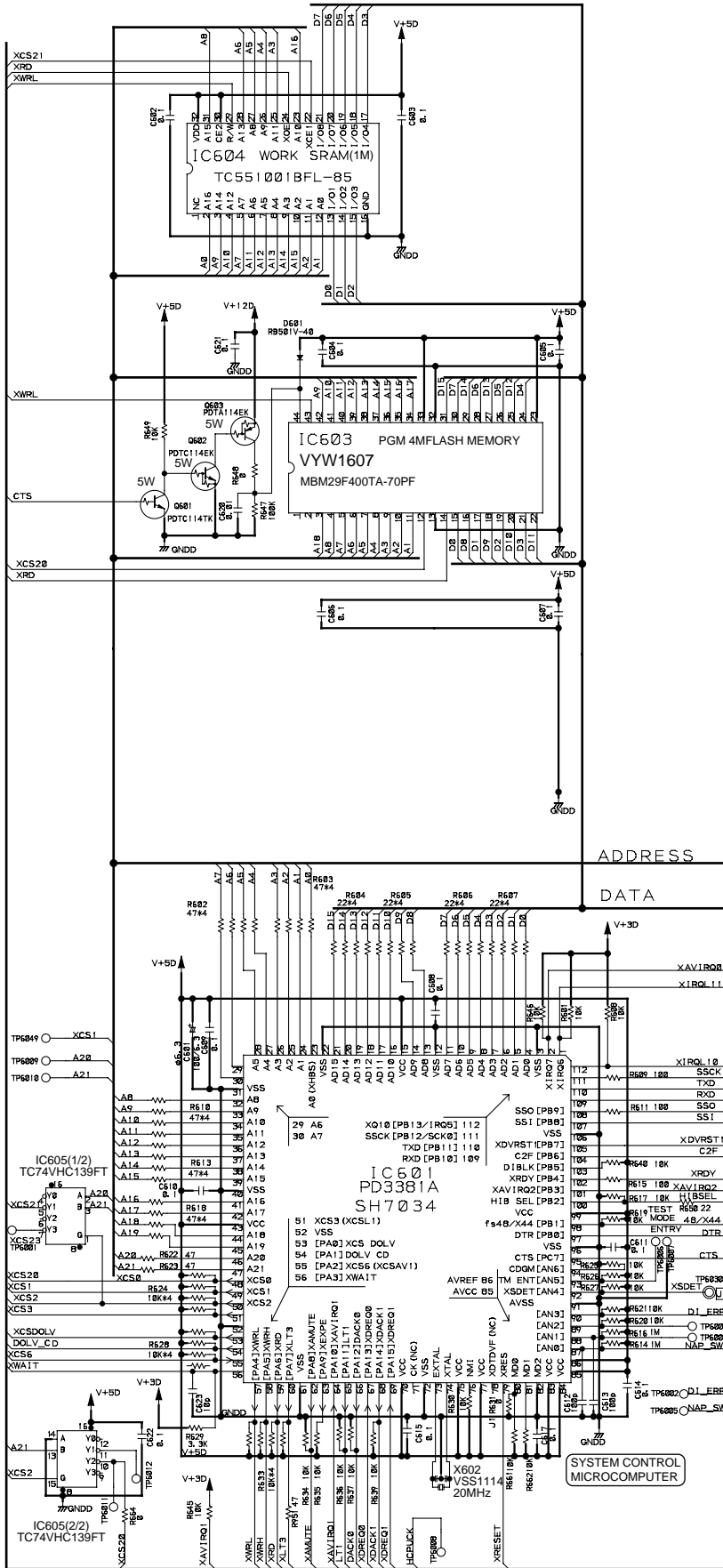
1
(1/3 - 3/3)
DVDM ASSY
(VWS1355)

- : RF SIGNAL ROUTE
- (F) : FOCUS SERVO LOOP LINE
- (T) : TRACKING SERVO LOOP LINE
- (S) : SLIDER SERVO LOOP LINE



A B C D E F G H

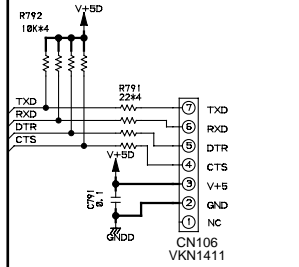
3.3 DVDM ASSY (2/3)



2/3 DVDM ASSY (VWS1355)

1/3 C2F,XRESET

3/3 XCSDOLV,DOLV-CD,XWRL,XWRH, XRD,XLT3,XAMUTE,XDREQ1,CDGM, HCPUCK,IR,SEL-IR,XDVRST1, XAVIRQ0,48/X44,HIBSEL,XCS6, XDACK1,NAP SW,C2F



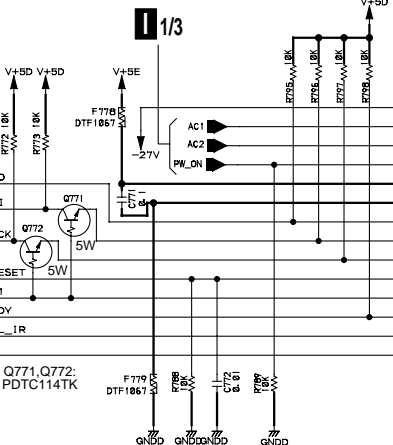
MAIN

3/3 ADDRESS A2-A10

ADDRESS

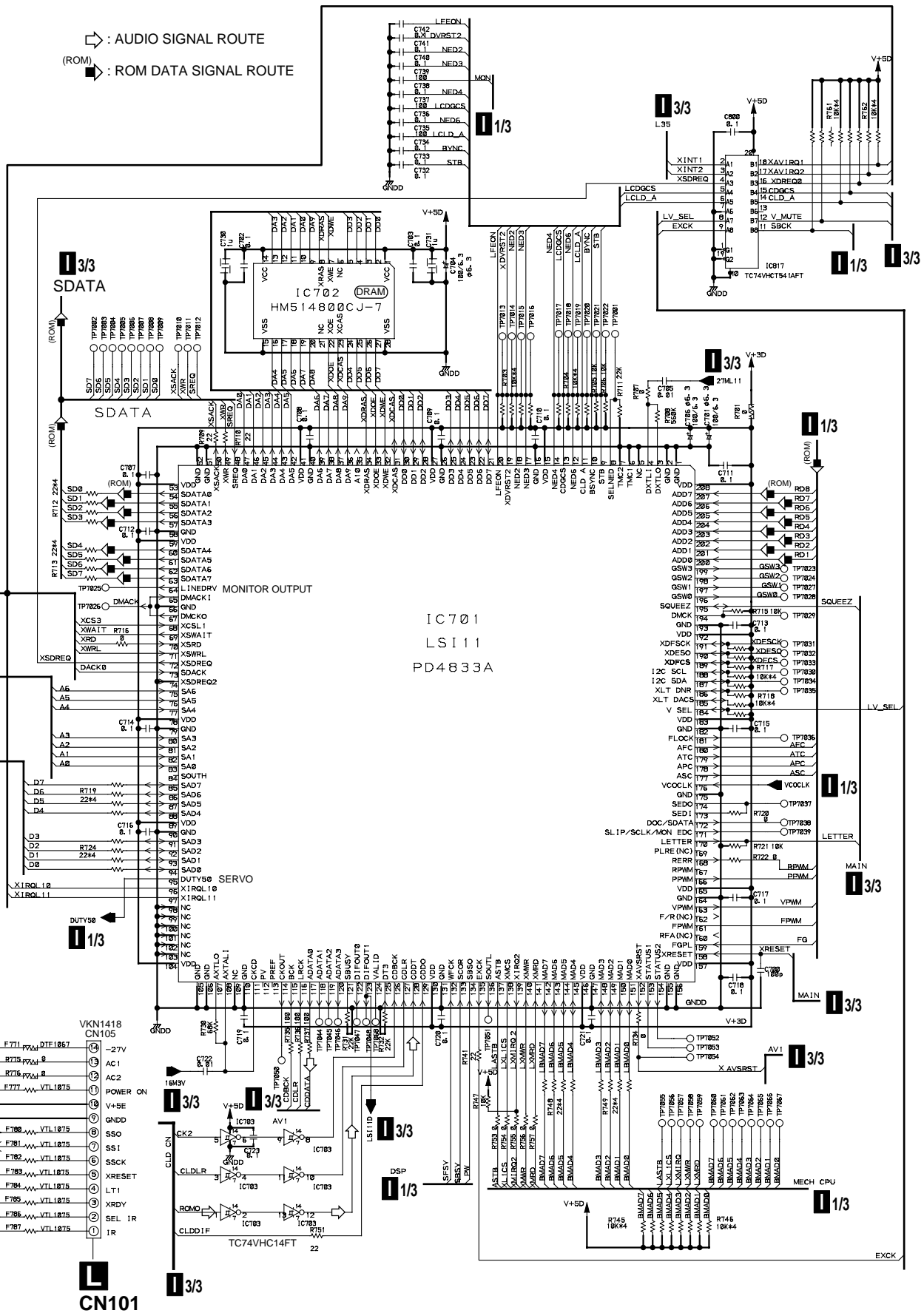
3/3 DATA

DATA



Q771,Q772: PDMC114TK

□ : AUDIO SIGNAL ROUTE
◼ : ROM DATA SIGNAL ROUTE



CN101

3.4 DVDM ASSY (3/3)

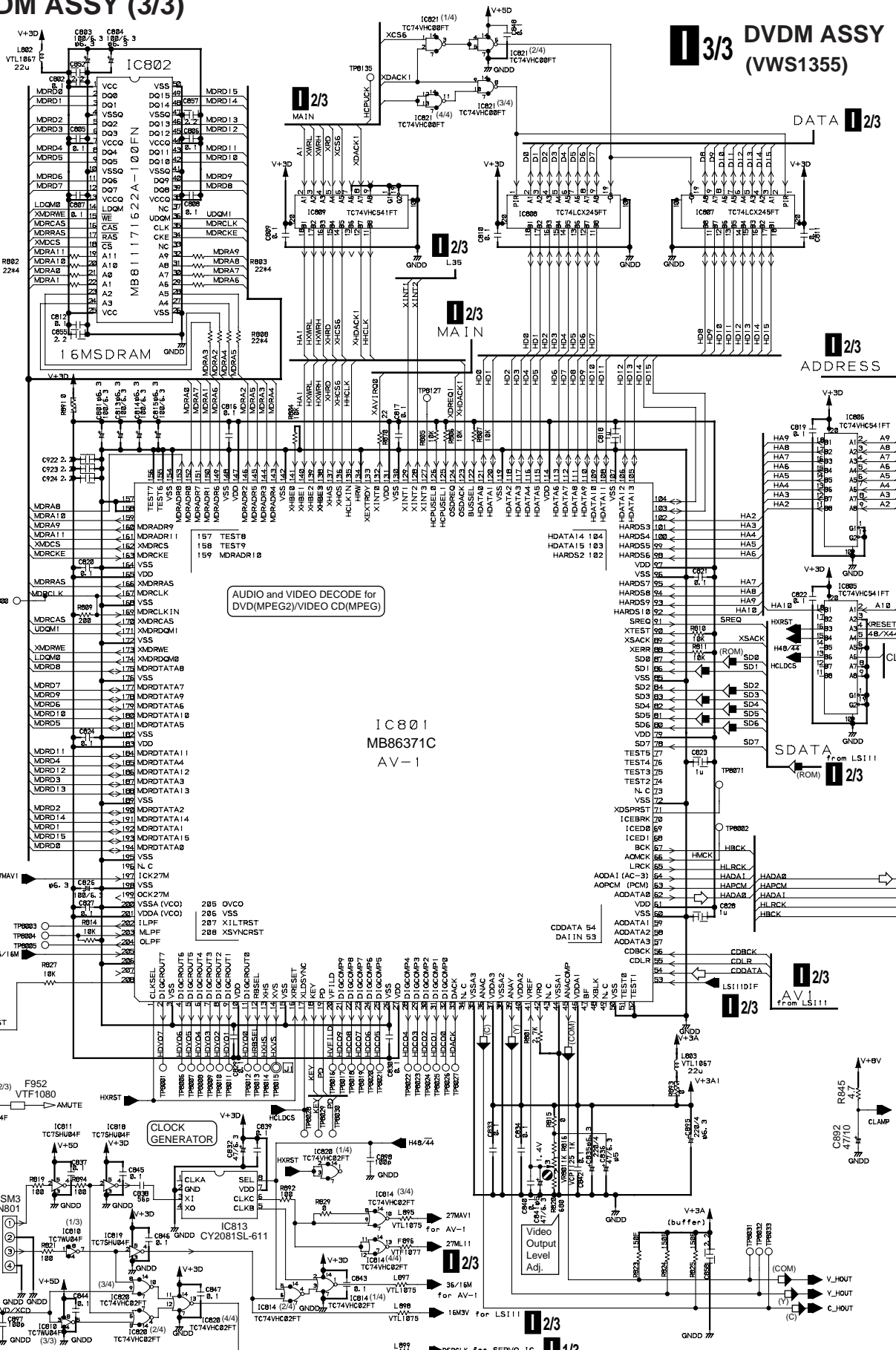
3/3 DVDM ASSY (VWS1355)

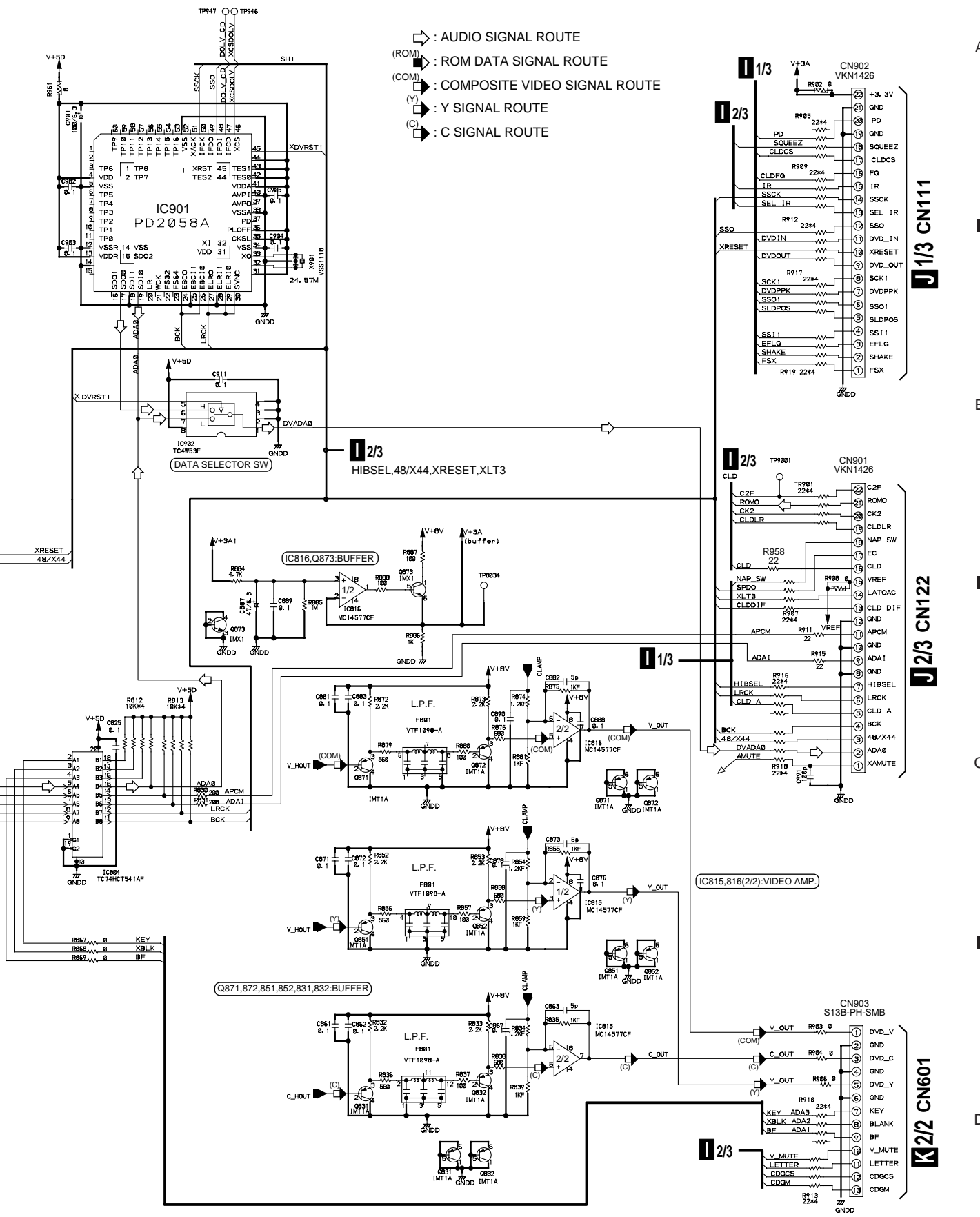
A

B

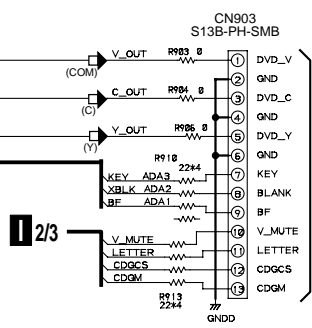
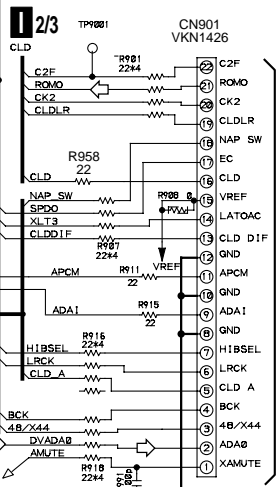
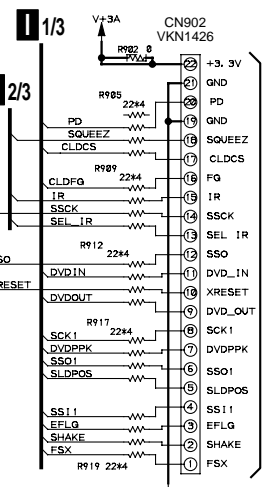
C

D





- ◁ : AUDIO SIGNAL ROUTE
- (ROM) : ROM DATA SIGNAL ROUTE
- (COM) : COMPOSITE VIDEO SIGNAL ROUTE
- (Y) : Y SIGNAL ROUTE
- (C) : C SIGNAL ROUTE



3.5 CLDM ASSY (1/3)

J 1/3 CLDM ASSY (VWS1352 : RL) (VWS1353 : RAM, RB, RD/RB)

A

B

C

D

J 3/3 CN902

CN203

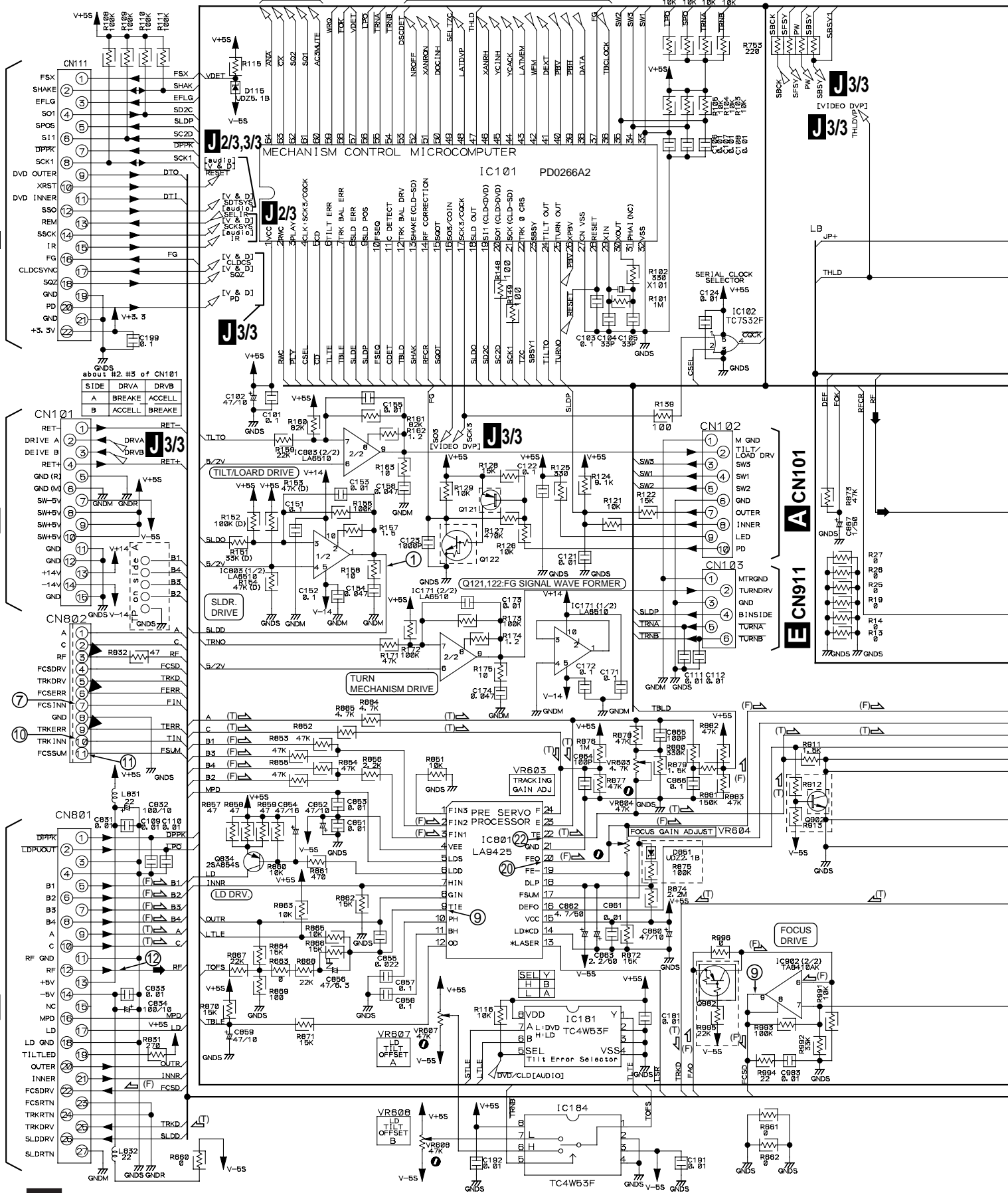
CN904

AUDIO CIRCUIT

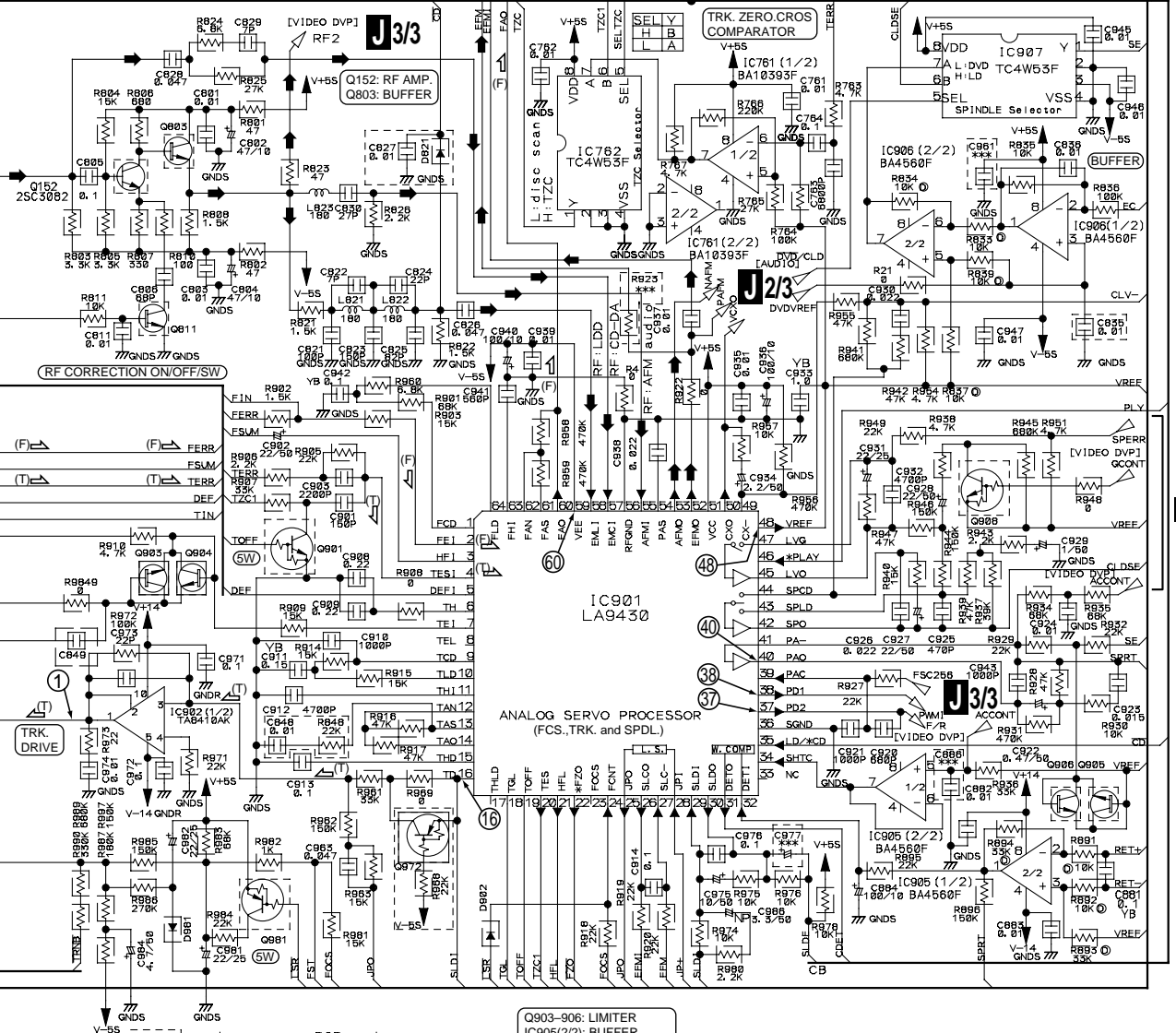
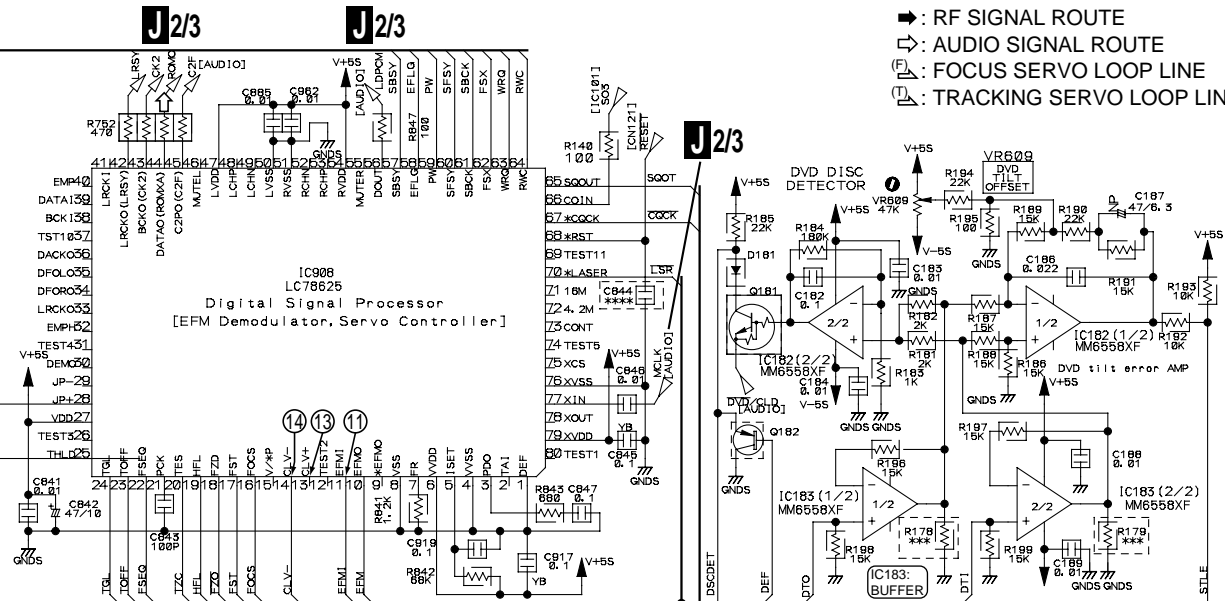
VIDEO CIRCUIT

J 2/3

J 3/3



- : RF SIGNAL ROUTE
- ⇄ : AUDIO SIGNAL ROUTE
- ⌚ : FOCUS SERVO LOOP LINE
- ⌚ : TRACKING SERVO LOOP LINE



ready part on PCBoard
(part is not mounted)

mounted parts only
mechanical power SW model

Q903-906: LIMITER
IC905(2/2): BUFFER
IC905(1/2): SPDL. ERR.
Q908: SPDL. GAIN CONT.

3.6 CLDM ASSY (2/3)

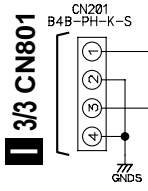
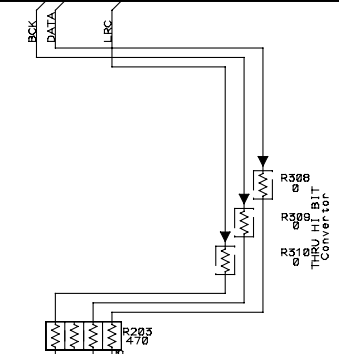
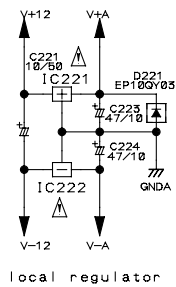
AB

A

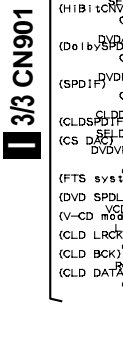
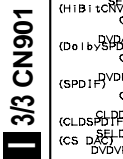
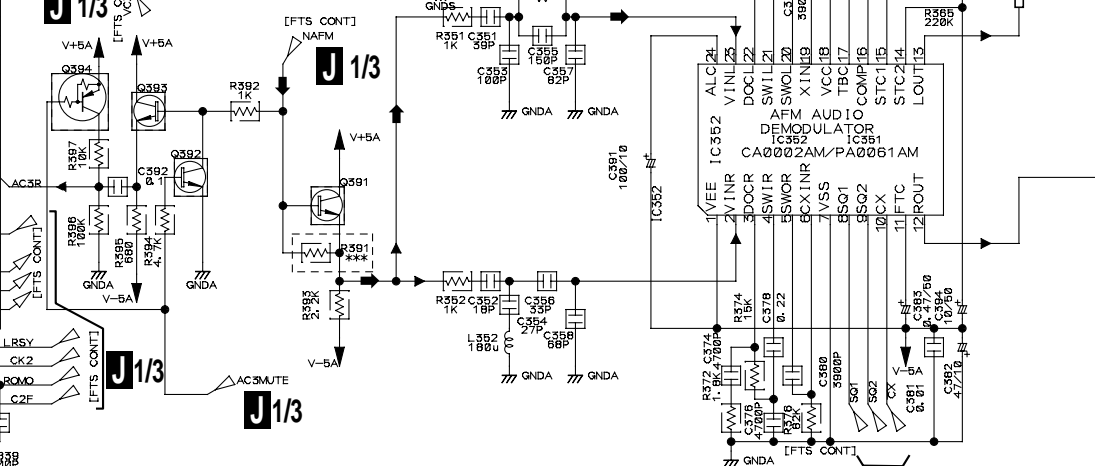
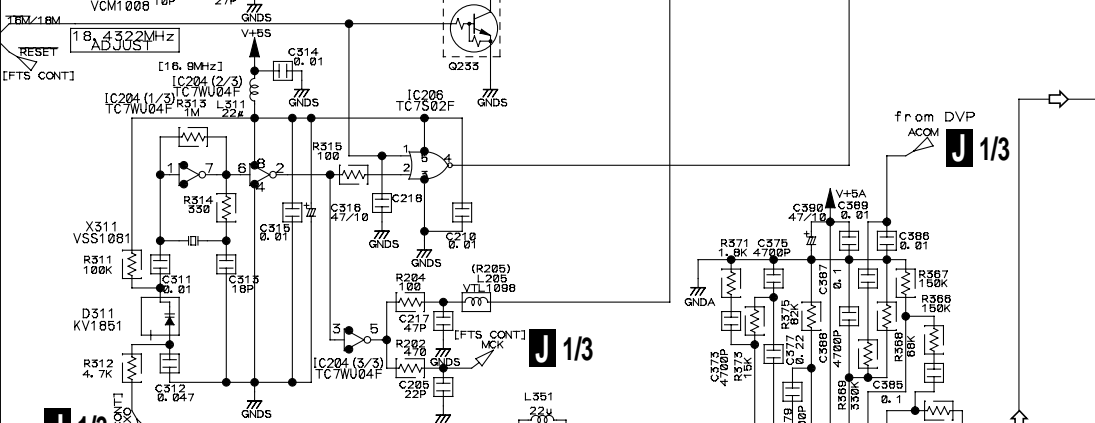
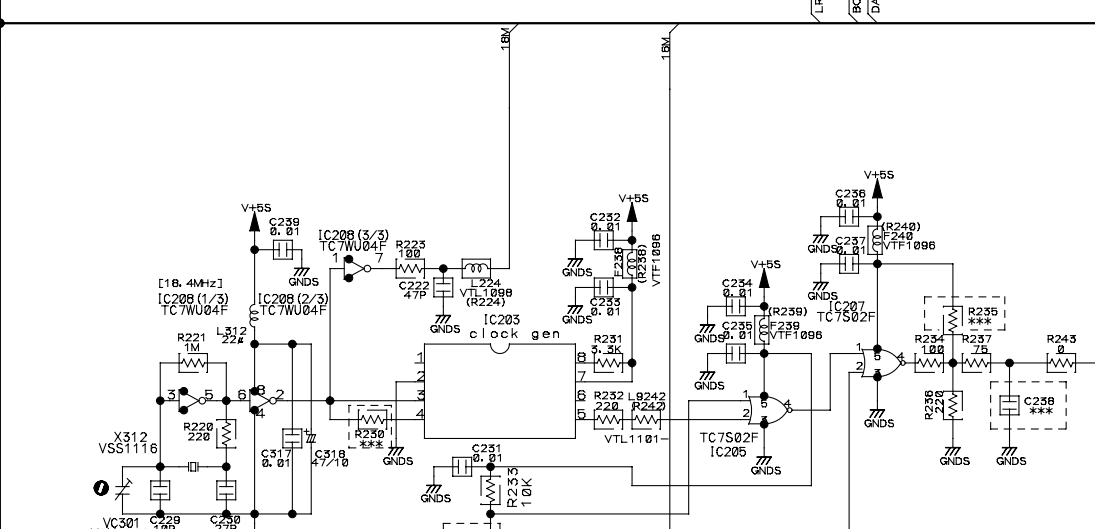
B

C

D

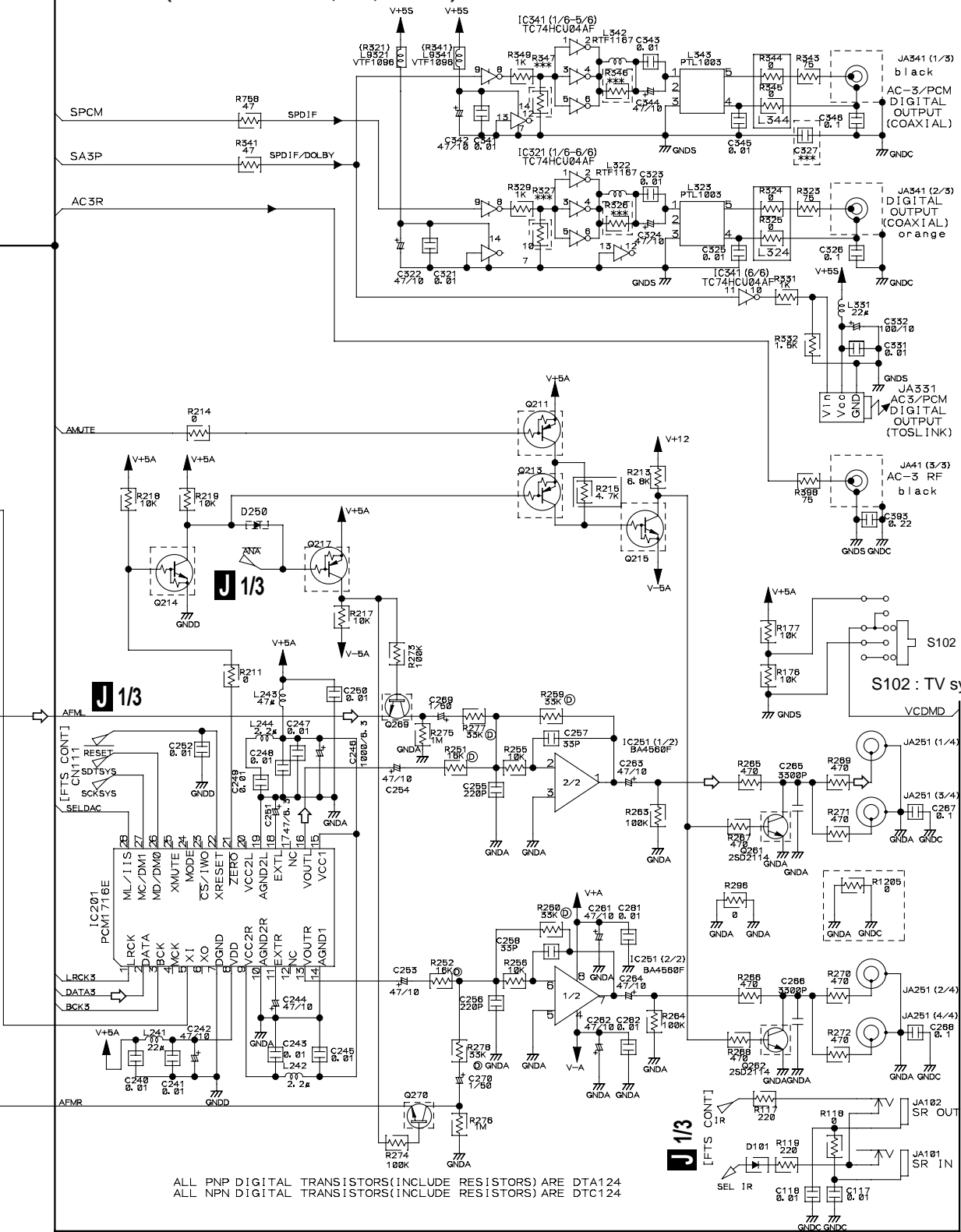


ready part not mounted



J 2/3 CLDM ASSY
 (VWS1352 : RL)
 (VWS1353 : RAM, RB, RD/RB)

➔ RF SIGNAL ROUTE
 ⇨ AUDIO SIGNAL ROUTE

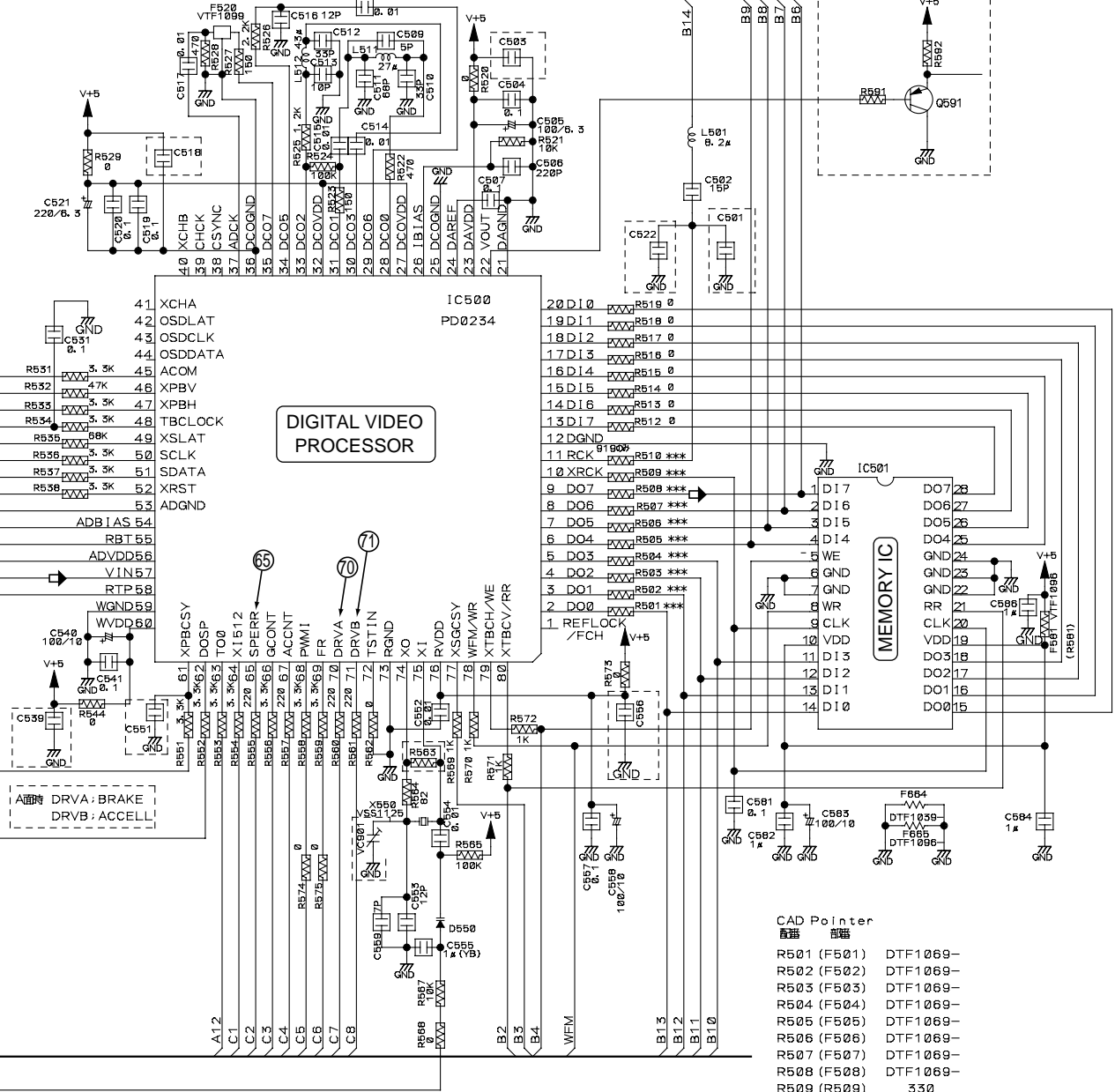
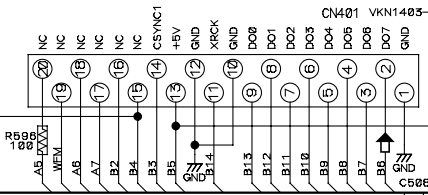


ALL PNP DIGITAL TRANSISTORS(INCLUDE RESISTORS) ARE DTA124
 ALL NPN DIGITAL TRANSISTORS(INCLUDE RESISTORS) ARE DTC124

K 1/2 CN401

J 3/3 CLDM ASSY (VWS1352 : RL) (VWS1353 : RAM, RB, RD/RB)

➡ : RF SIGNAL ROUTE ➡ : VIDEO SIGNAL ROUTE



VTF1055	F573
VTF1068	F571
LA7134M	IC400
TC4W53F	IC410
PD6159A	IC500
TC75U04F	IC550
TC74HC4053AF	IC620
TC7W00F	IC650
BA4560F	IC680
VSS1079	X505
VSS1073	X510
1SS355	D480 650 655
KV1851	D505 510

CAD Pointer

R501 (F501)	DTF1069-
R502 (F502)	DTF1069-
R503 (F503)	DTF1069-
R504 (F504)	DTF1069-
R505 (F505)	DTF1069-
R506 (F506)	DTF1069-
R507 (F507)	DTF1069-
R508 (F508)	DTF1069-
R509 (R509)	330
R510 (R510)	680
R511 (R511)	

3.8 GYCB ASSY (1/2)

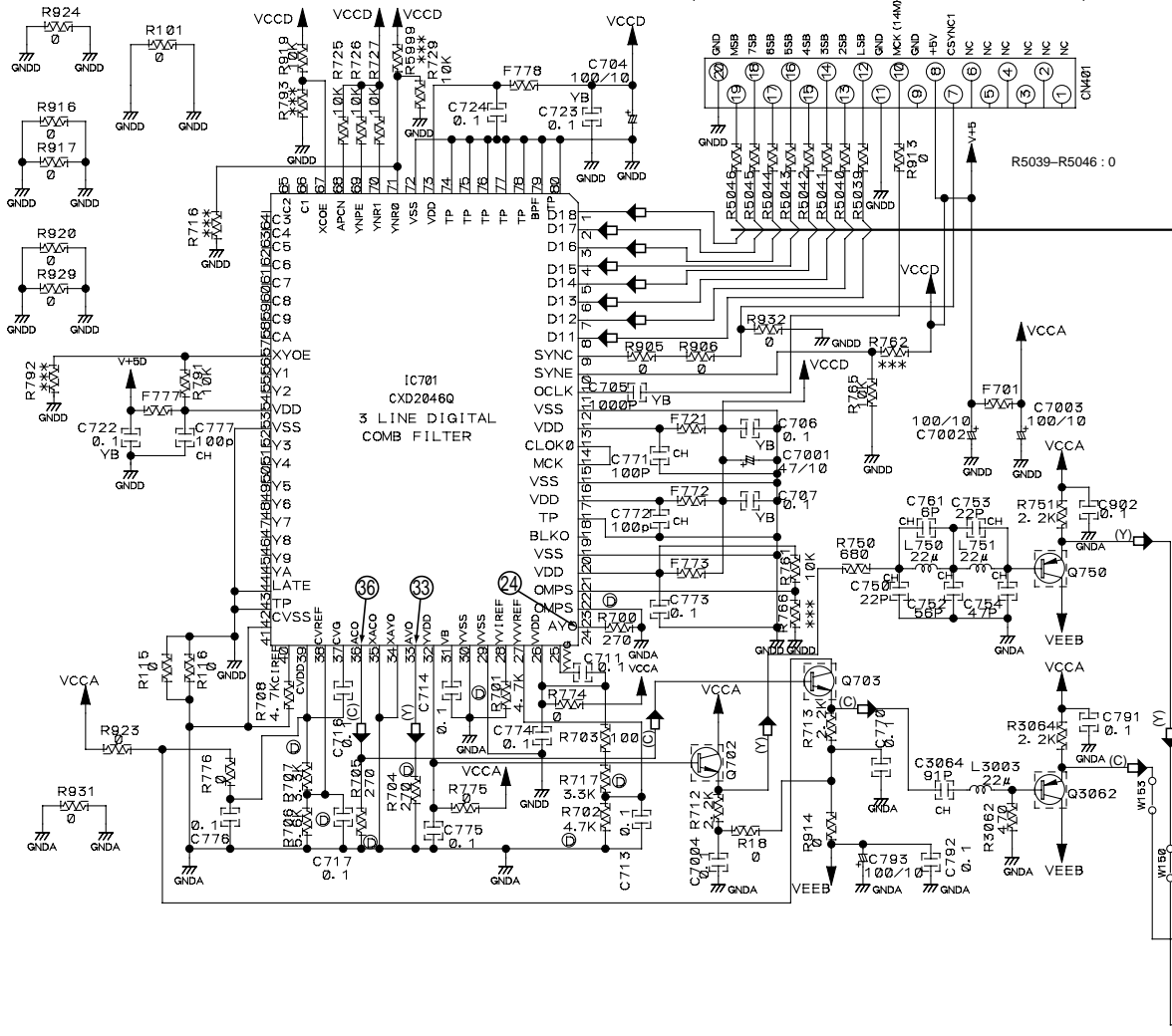
J 3/3 CN401

A

B

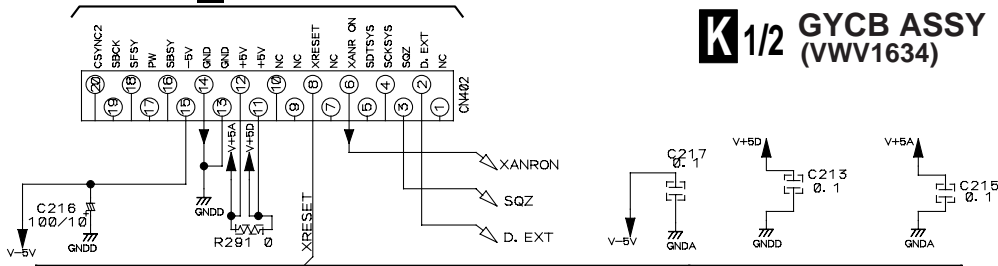
C

D

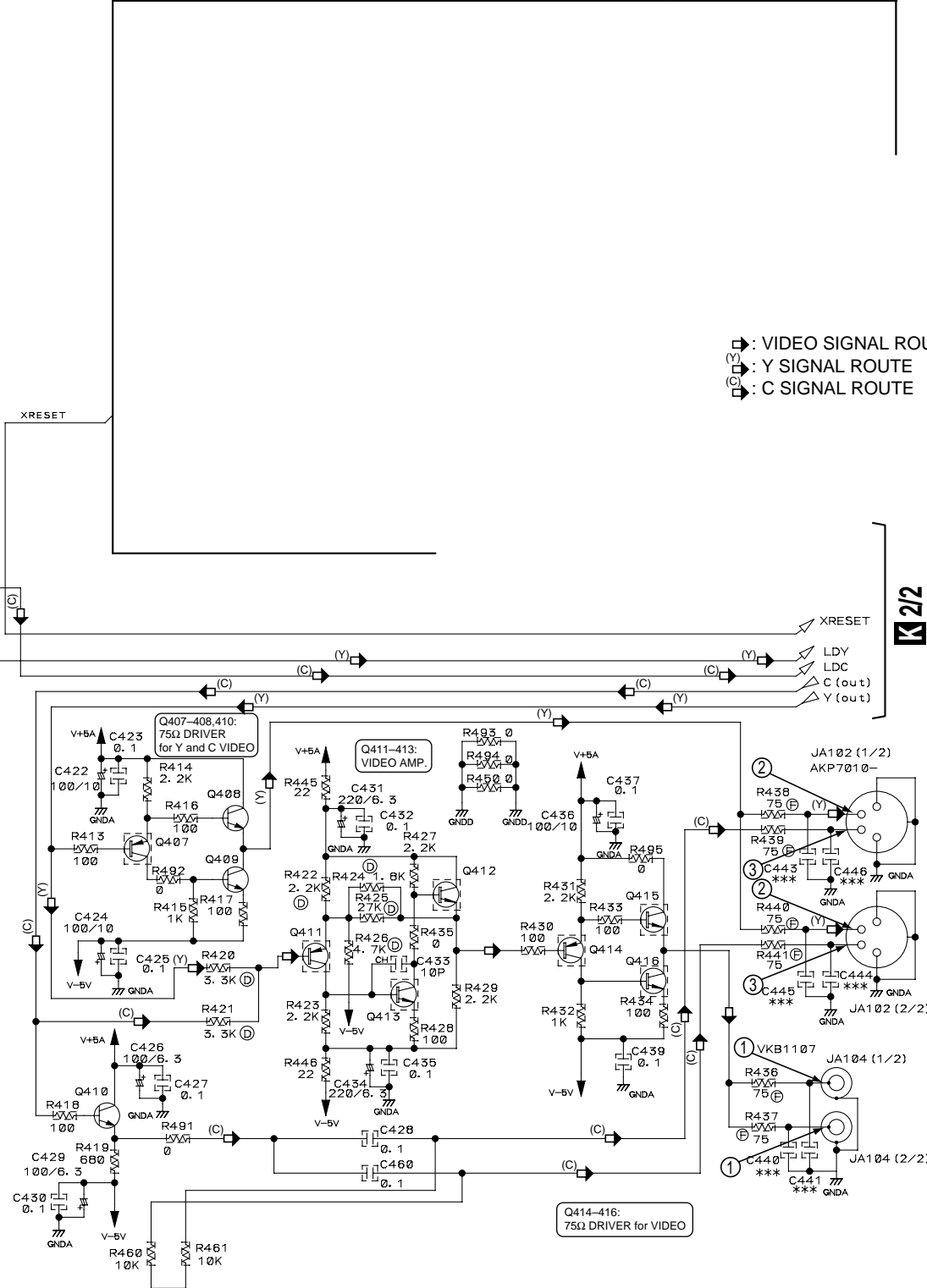


3/3 CN402

1/2 GYCB ASSY (VWV1634)



□ : VIDEO SIGNAL ROUTE
 □ : Y SIGNAL ROUTE
 □ : C SIGNAL ROUTE

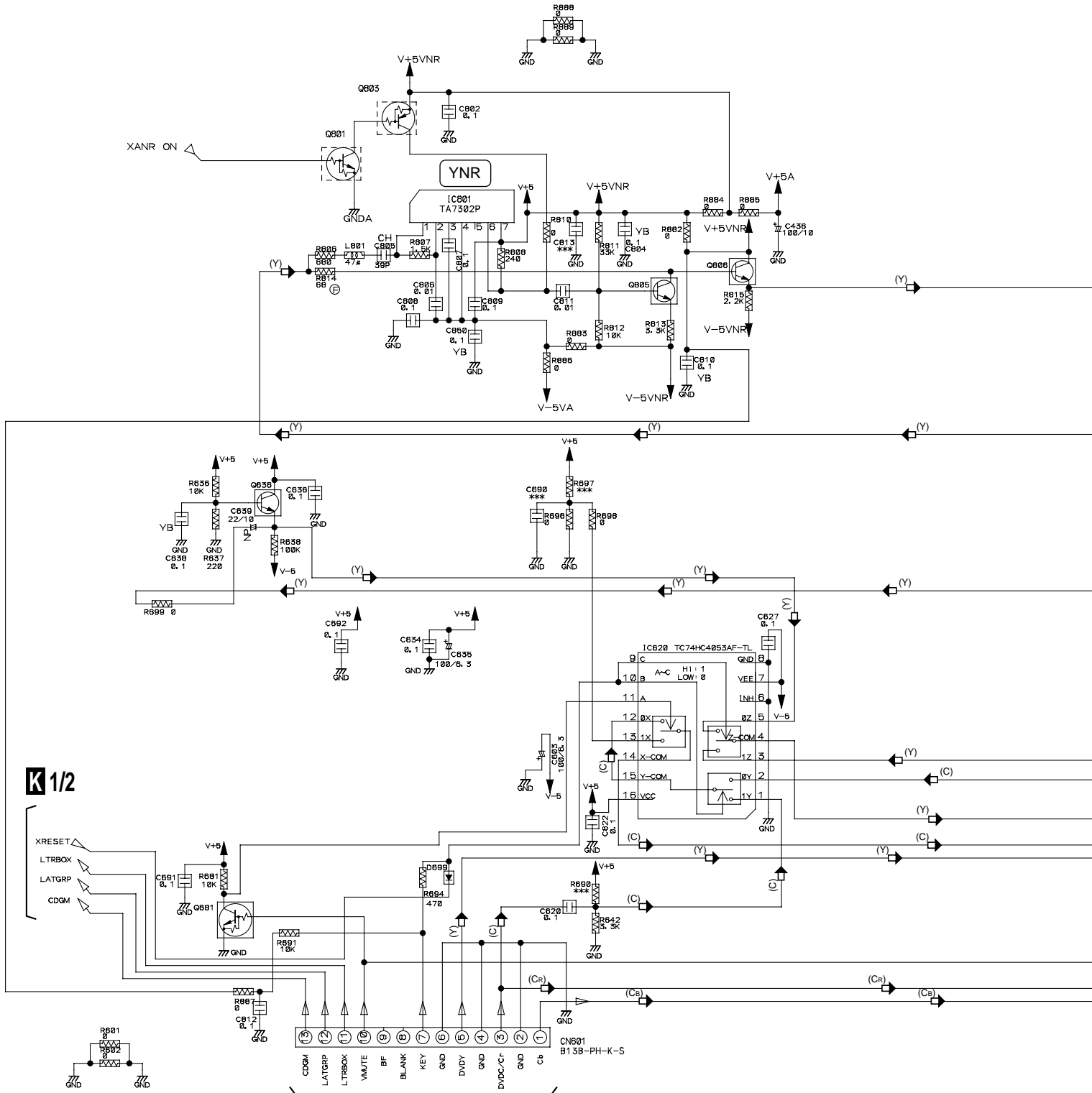


2/2

1/2

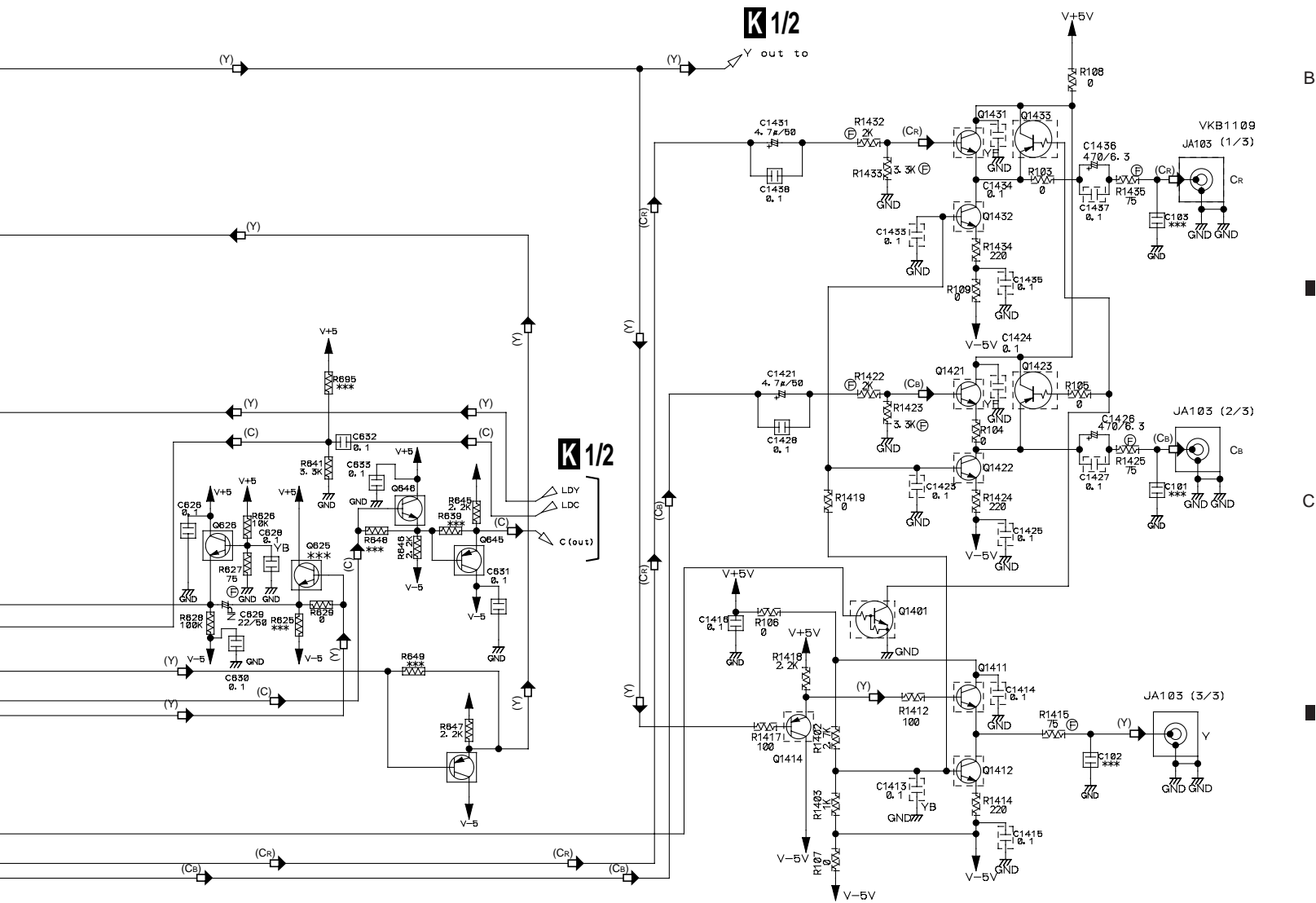
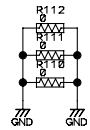
3.9 GYCB ASSY (2/2)

K2/2 GYCB ASSY (VWV1634)



3/3 CN903

(Cb) : COMPONENT VIDEO SIGNAL ROUTE (Cb)
 (Cr) : COMPONENT VIDEO SIGNAL ROUTE (Cr)
 (Y) : Y SIGNAL ROUTE
 (C) : C SIGNAL ROUTE



Q1411, Q1412, Q1421, Q1422, Q1431, Q1432
 : 75Ω DRIVER for COMPONENT VIDEO OUT (Y, Cb, Cr)

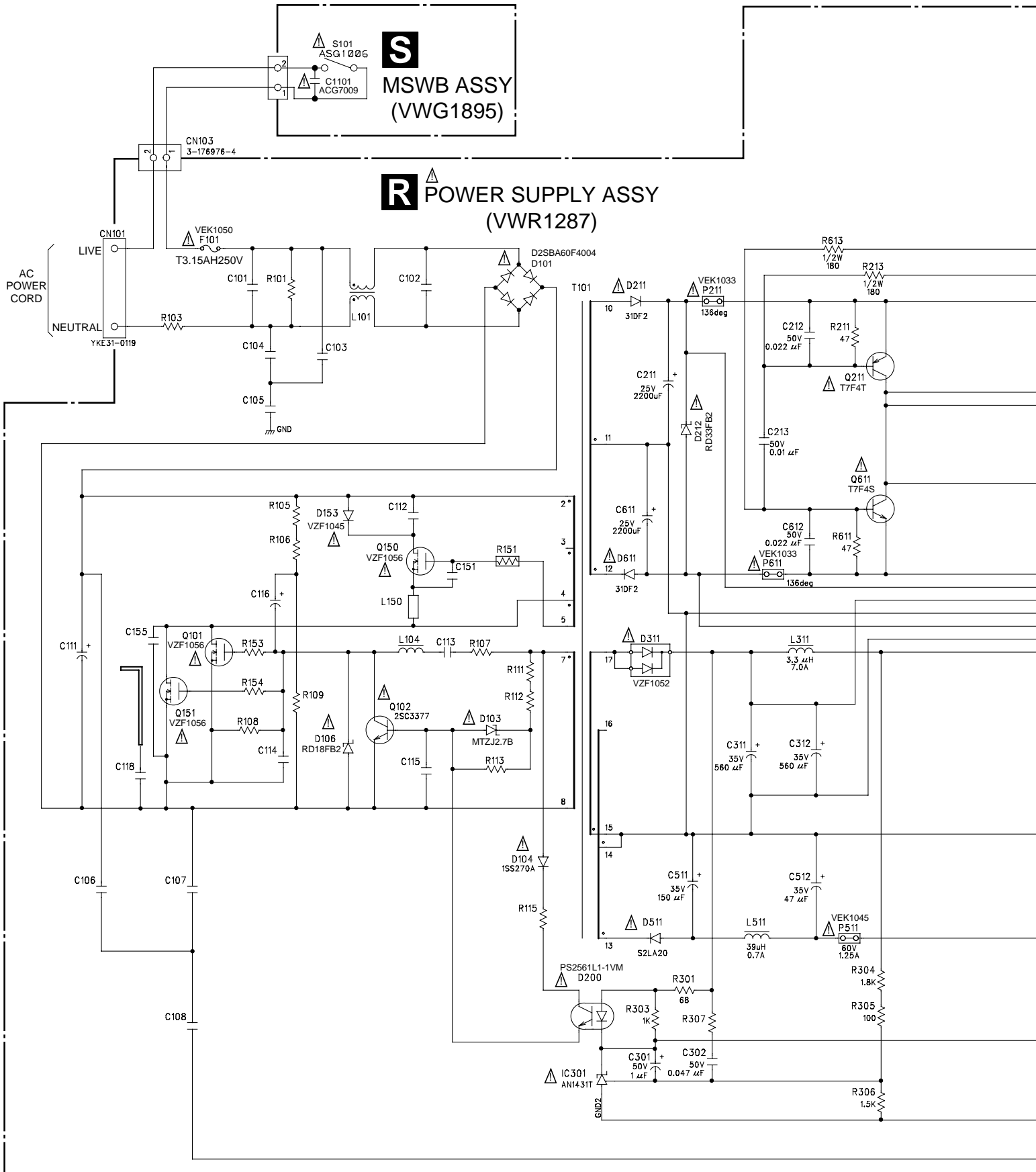
3.11 POWER SUPPLY and MSWB ASSEMBLIES

A

B

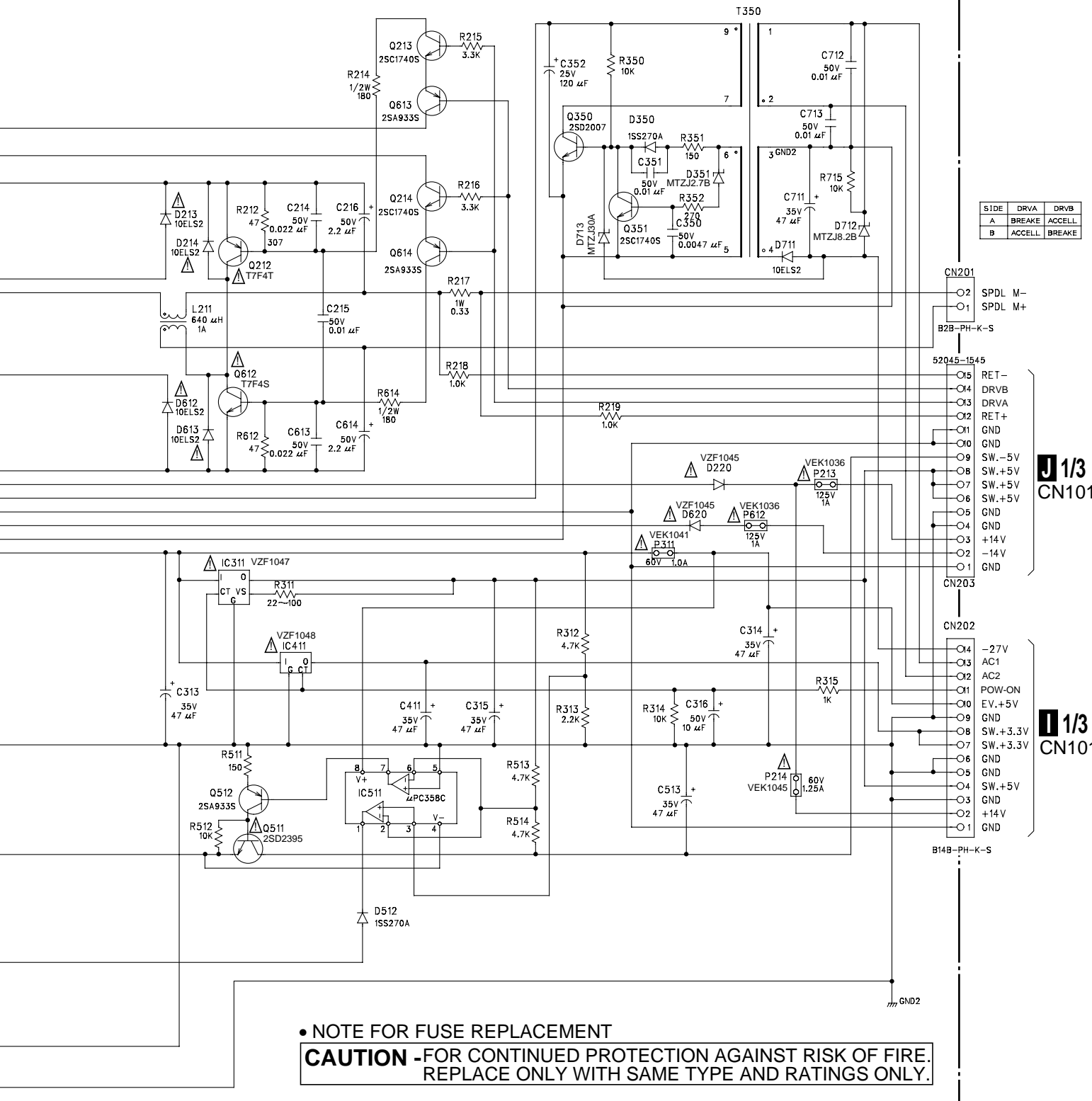
C

D



« NOTE ON SPARE PARTS IN POWER SUPPLY ASSY »

- In case of repairing, use the described parts only to prevent an accident.
- Write the red ✓ mark on the board when the primary section of POWER SUPPLY Assy is repaired.
- Take care to keep the space, not touching other parts when replacing the parts.



• NOTE FOR FUSE REPLACEMENT
CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
 REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

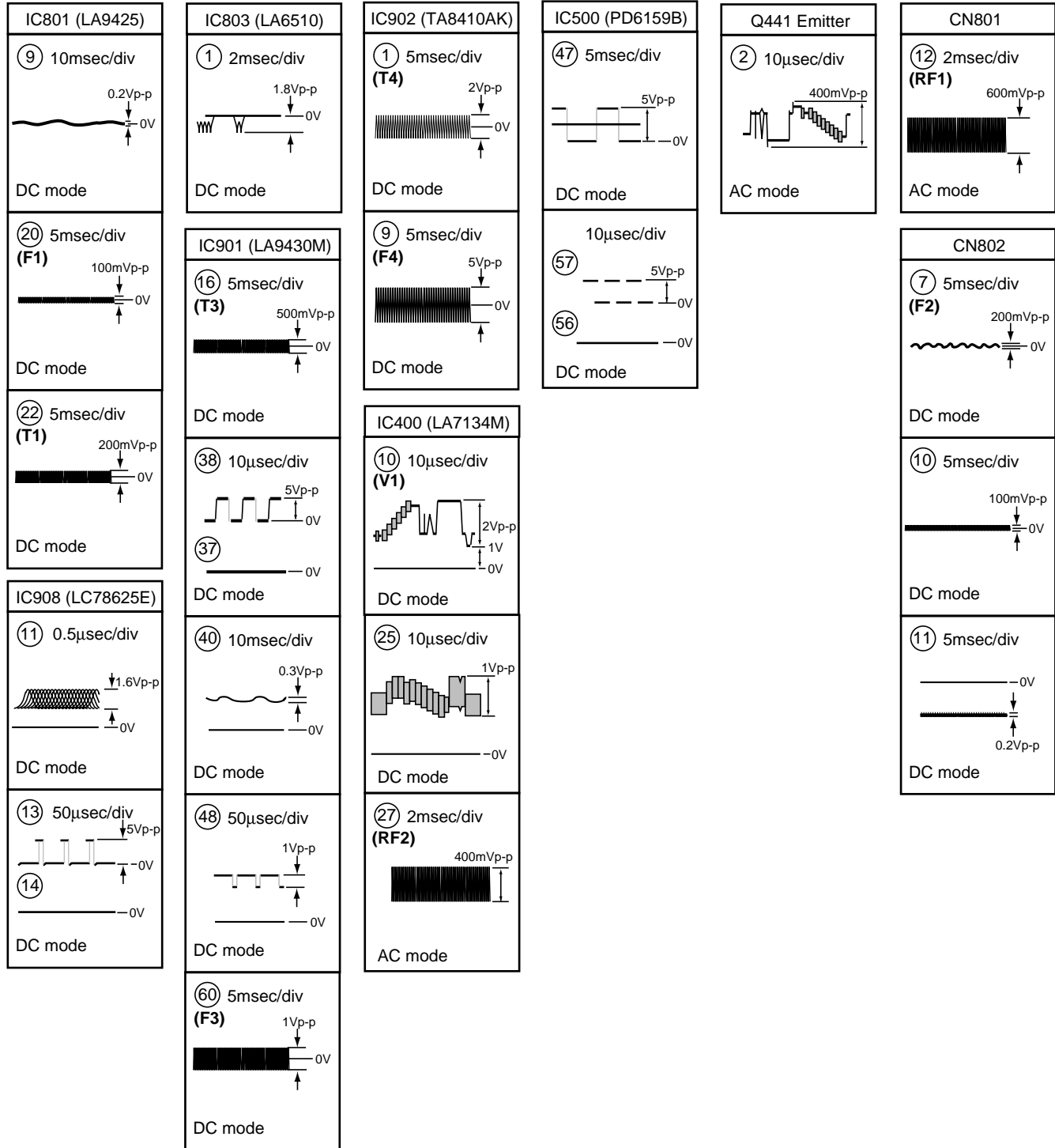


● WAVEFORMS AND VOLTAGES

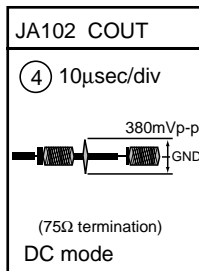
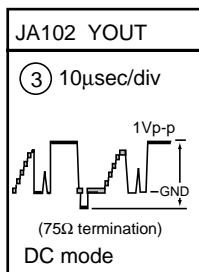
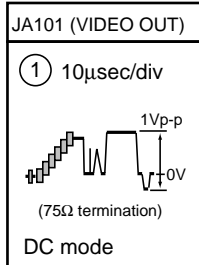
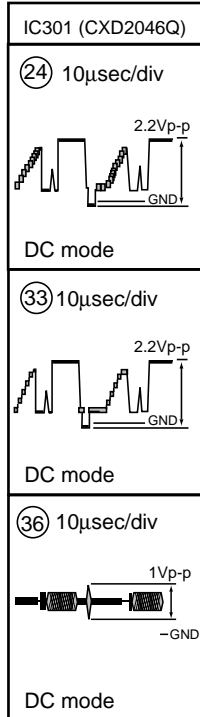
Note : (No.) in the table correspond to the pin number.

Measurement condition : In case when (D.audio) is written, at time when disc that has digital audio recording is played.

CLDM ASSY




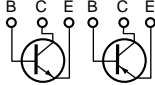

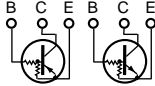

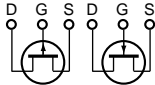
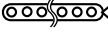
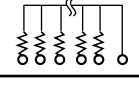


GYCB ASSY



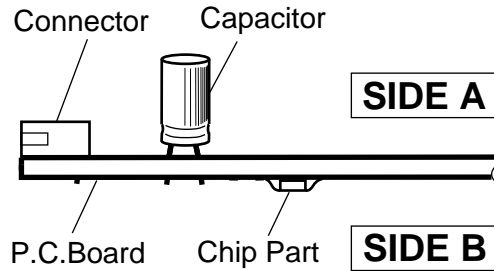
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

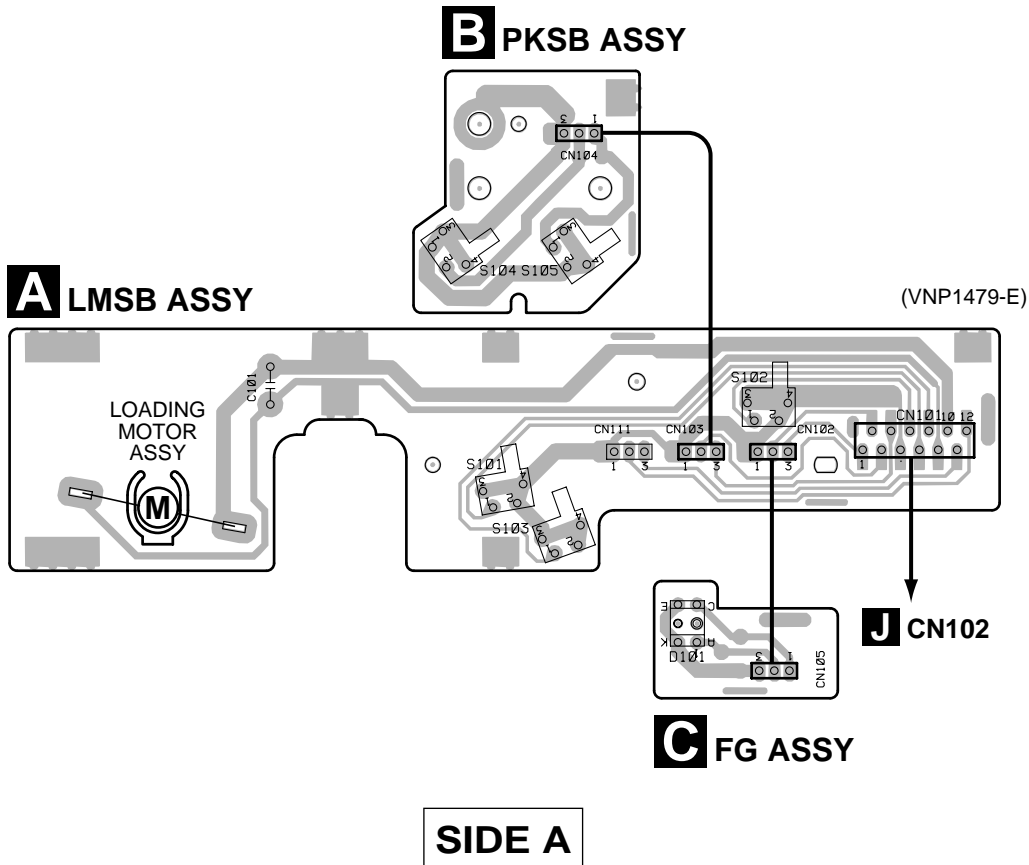
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

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

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



4.1 LMSB, PKSB and FG ASSEMBLIES



4.3 DVDM ASSY

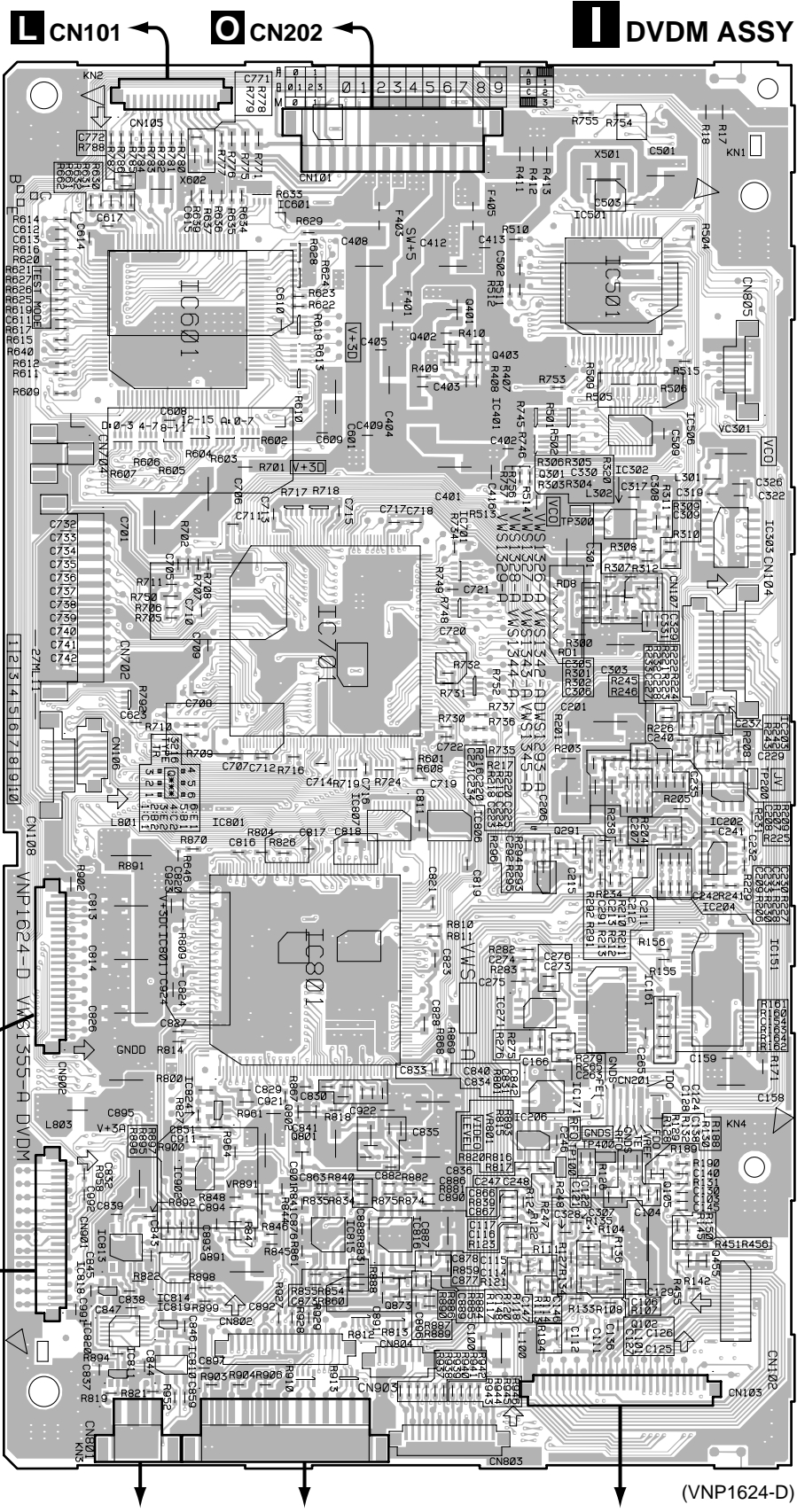
• This PCB is a four-layered board. Middle layer is mainly connected to Vcc and GND.

A

B

C

D



SIDE A

J CN122

J CN201

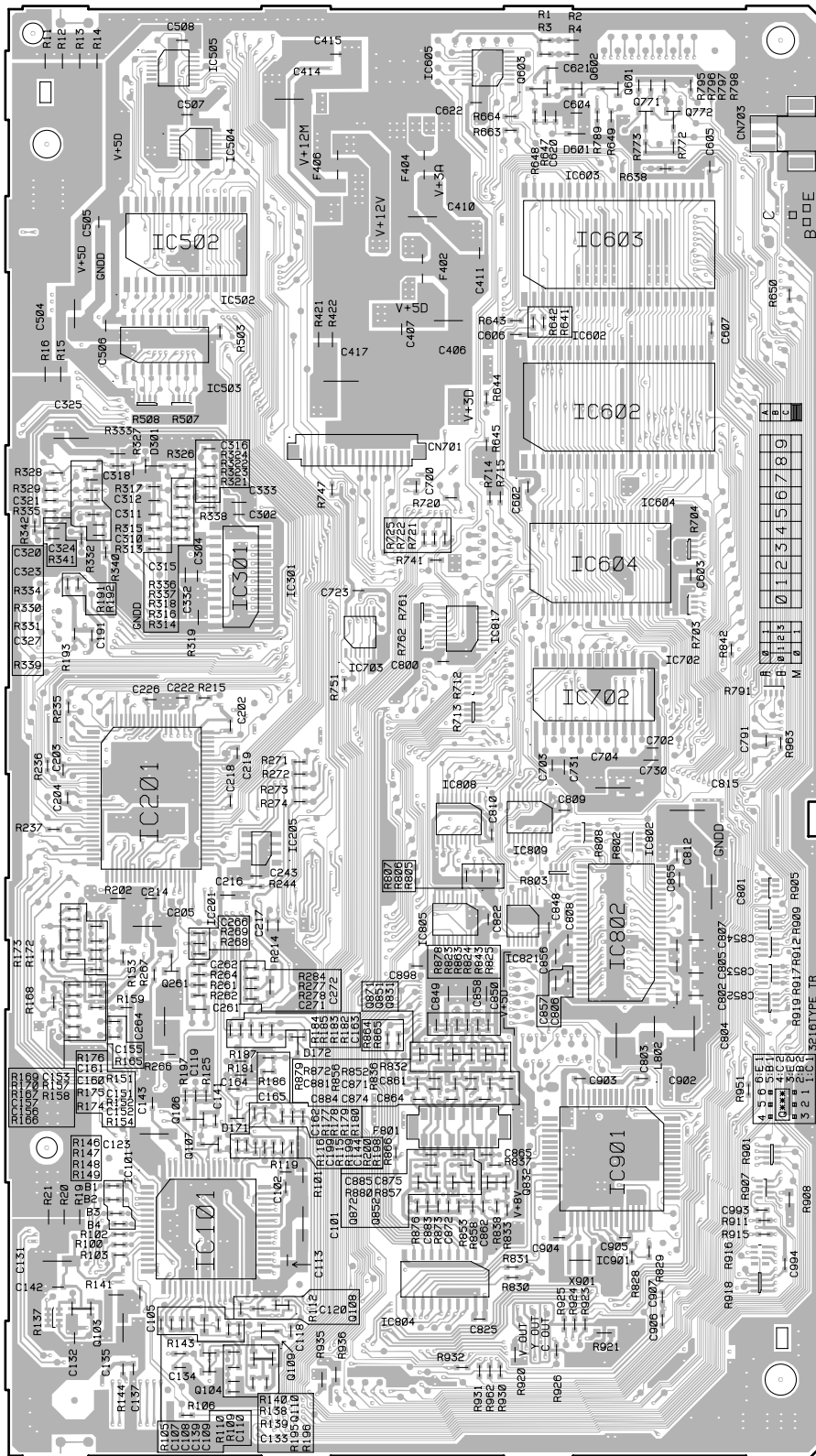
K CN601

D CN902

(VNP1624-D)

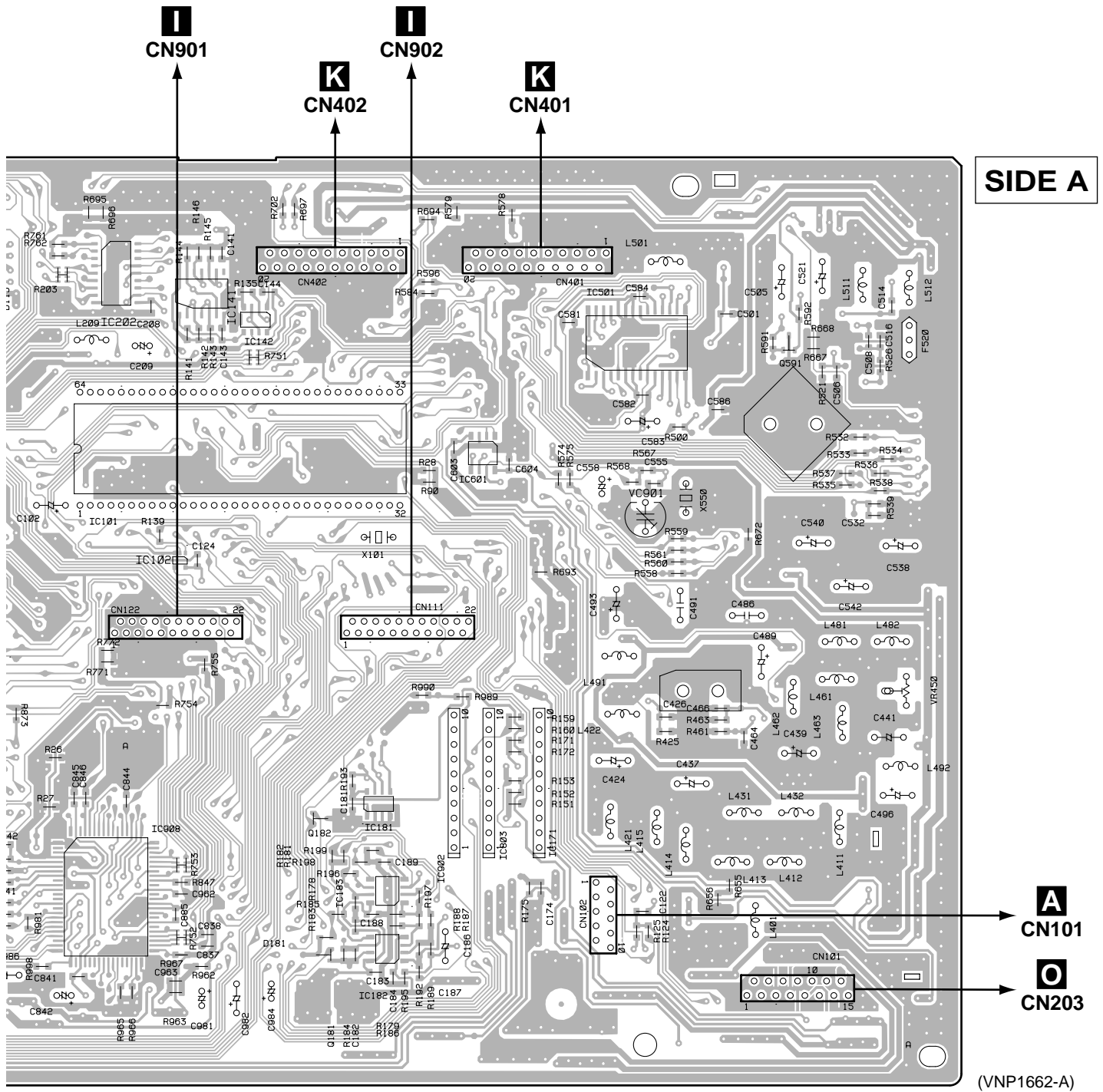
DVDM ASSY

SIDE B



- IC505 Q601
- IC605 Q603
- Q771
- IC504 Q772
- IC502 IC603
- IC503
- IC602
- IC301 IC604
- IC703 IC817
- IC702
- IC201 IC808
- IC809
- IC205
- IC805
- IC821
- IC802
- Q261
- Q871
- Q851
- Q831
- Q106
- Q107 IC901
- Q872
- Q852
- Q832
- IC101
- Q103 IC804
- Q108
- Q110
- Q104

(VNP1624-D)



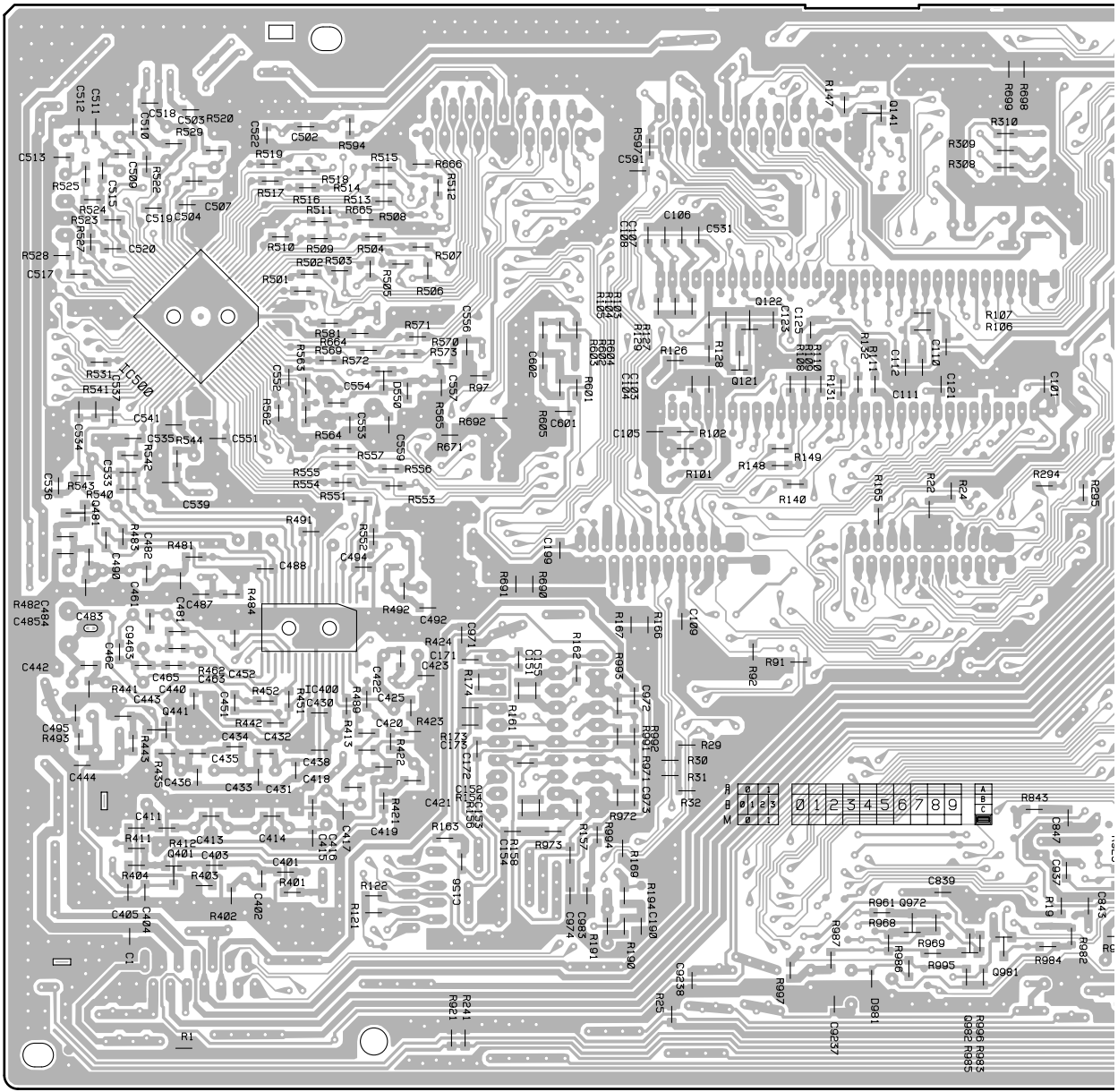
SIDE A

(VNP1662-A)

								VC901		VR450
IC202	IC141	IC142	Q182	IC181	IC902	IC601	IC171	IC501	Q591	
IC908	IC102	IC101	Q181	IC183		IC803				
			IC182							

J CLDM ASSY

SIDE B



Q481 Q441 IC500 IC400 Q122 Q141 Q995 Q981
 Q401 Q972

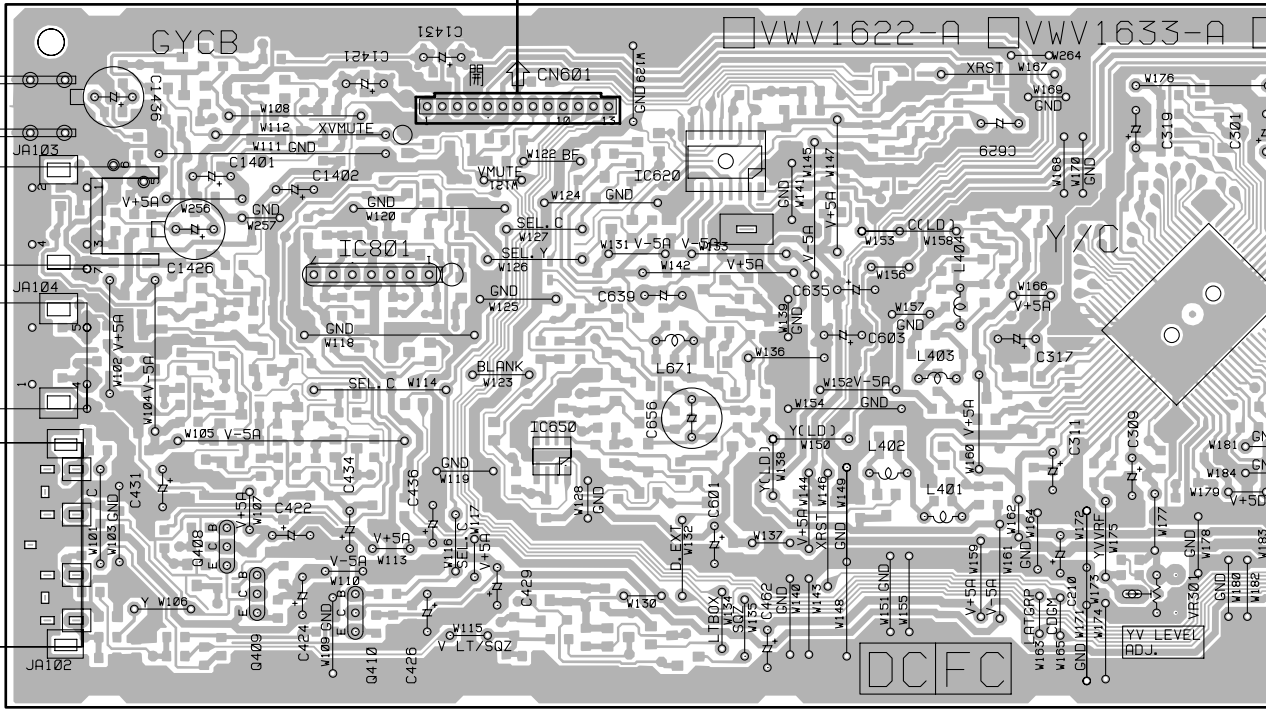


4.5 GYCB ASSY

K GYCB ASSY

CN903

SIDE A



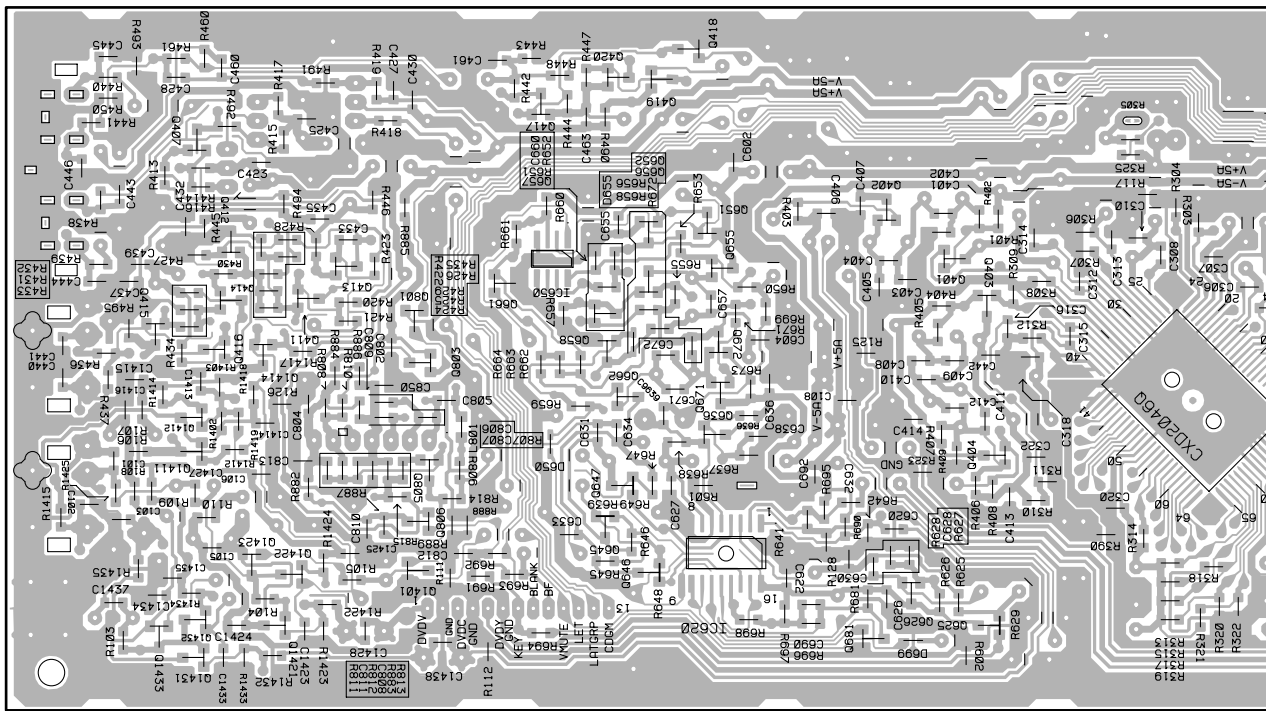
Q408
Q409

IC801
Q410

VR301

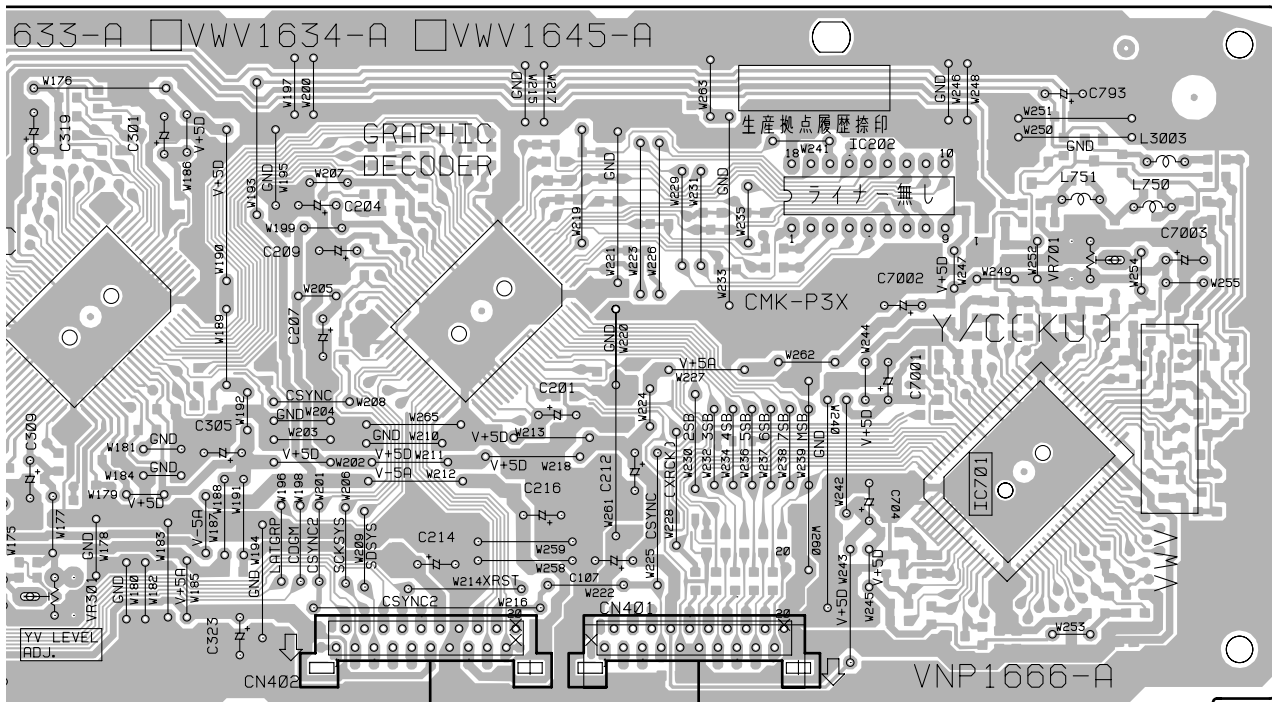
SIDE B

K GYCB ASSY



Q415	Q407	Q412	Q413	Q801	Q661	Q417	Q420	Q651	Q402	Q401	IC301
Q1433	Q1412	Q414		Q803		IC650	Q419	Q655	Q626	Q403	
	Q1411	Q416		Q805			Q652	Q672	Q681	Q404	
	Q1432	Q1417		Q806			Q656-Q658	Q671		Q625	
	Q1431	Q1421-Q1423		Q1401			Q662	Q636			
							Q645-Q647	IC620			

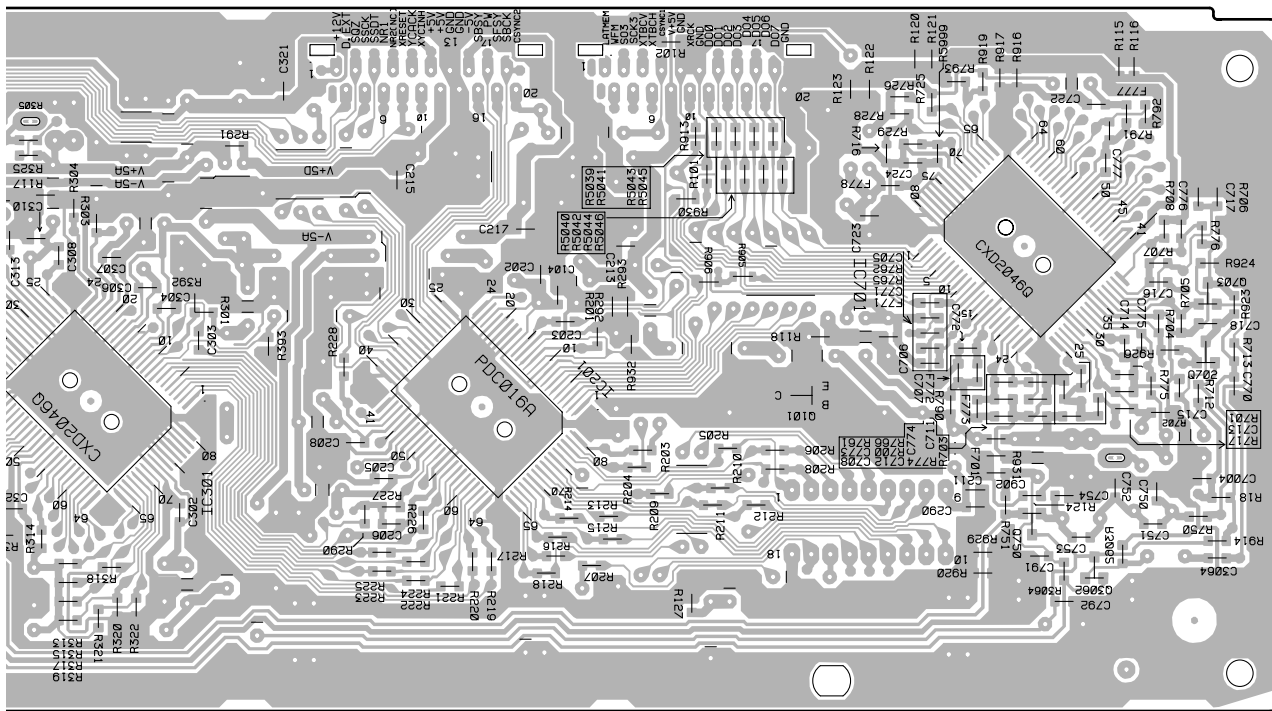




SIDE A

A

B



SIDE B

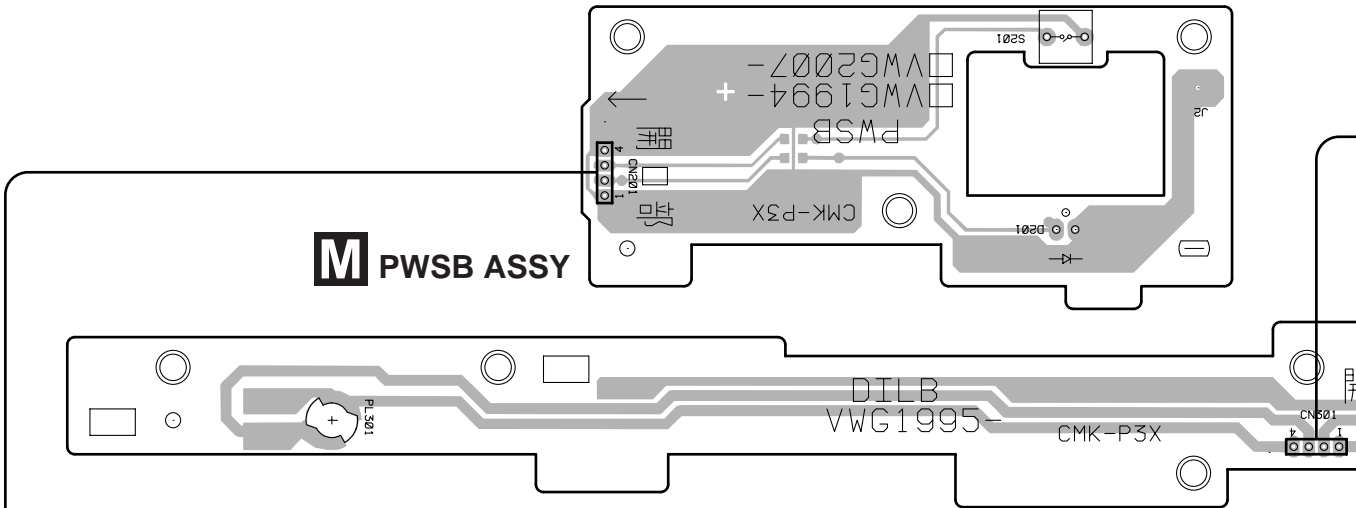
C

D



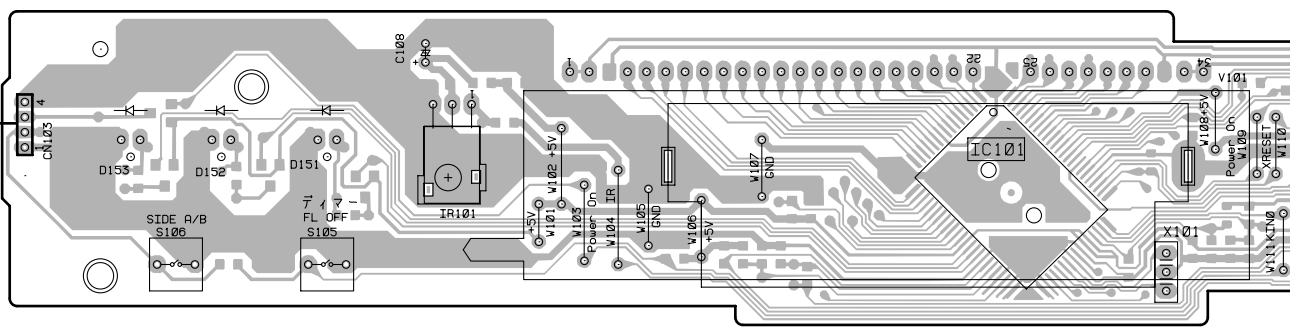
4.6 FLKB, PWSB and DILB ASSEMBLIES

A

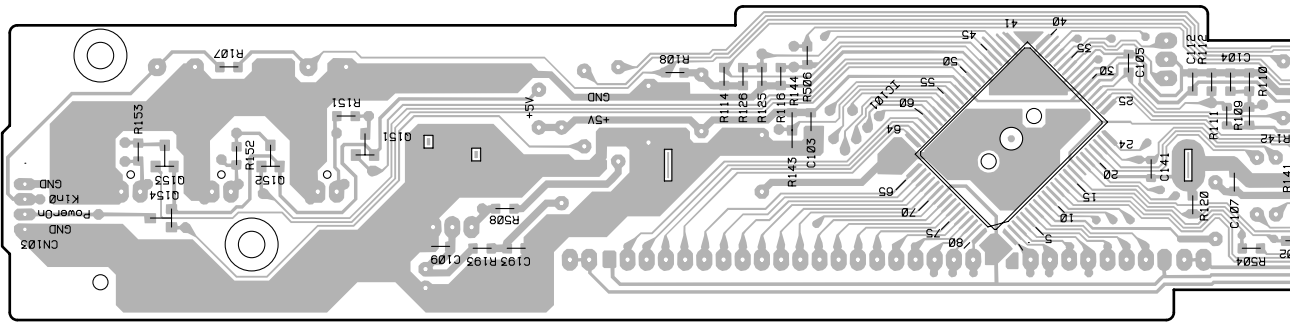


B

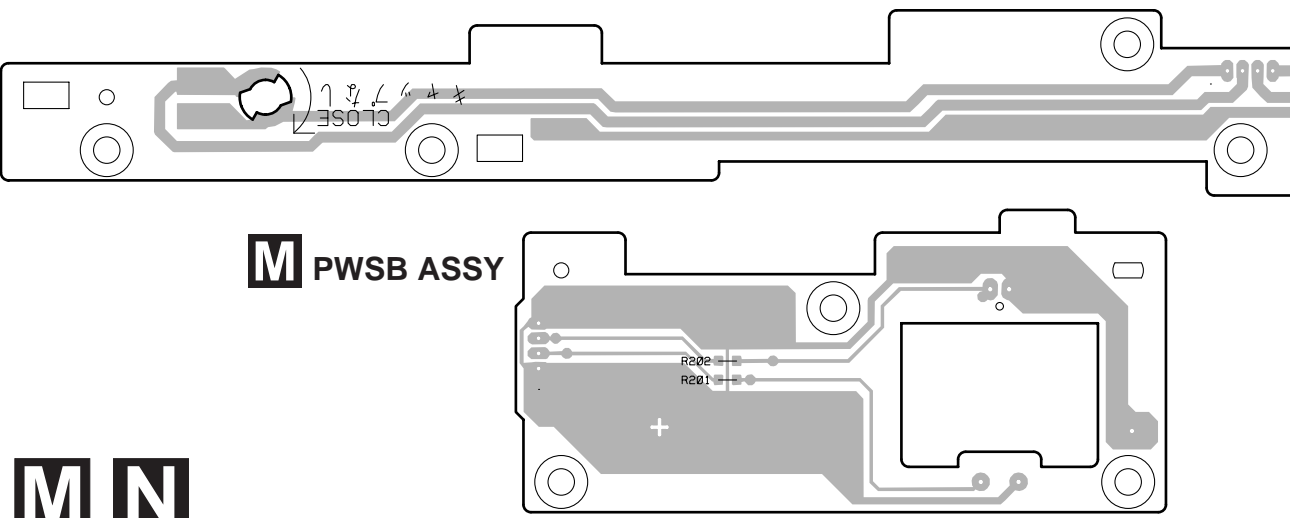
SIDE A



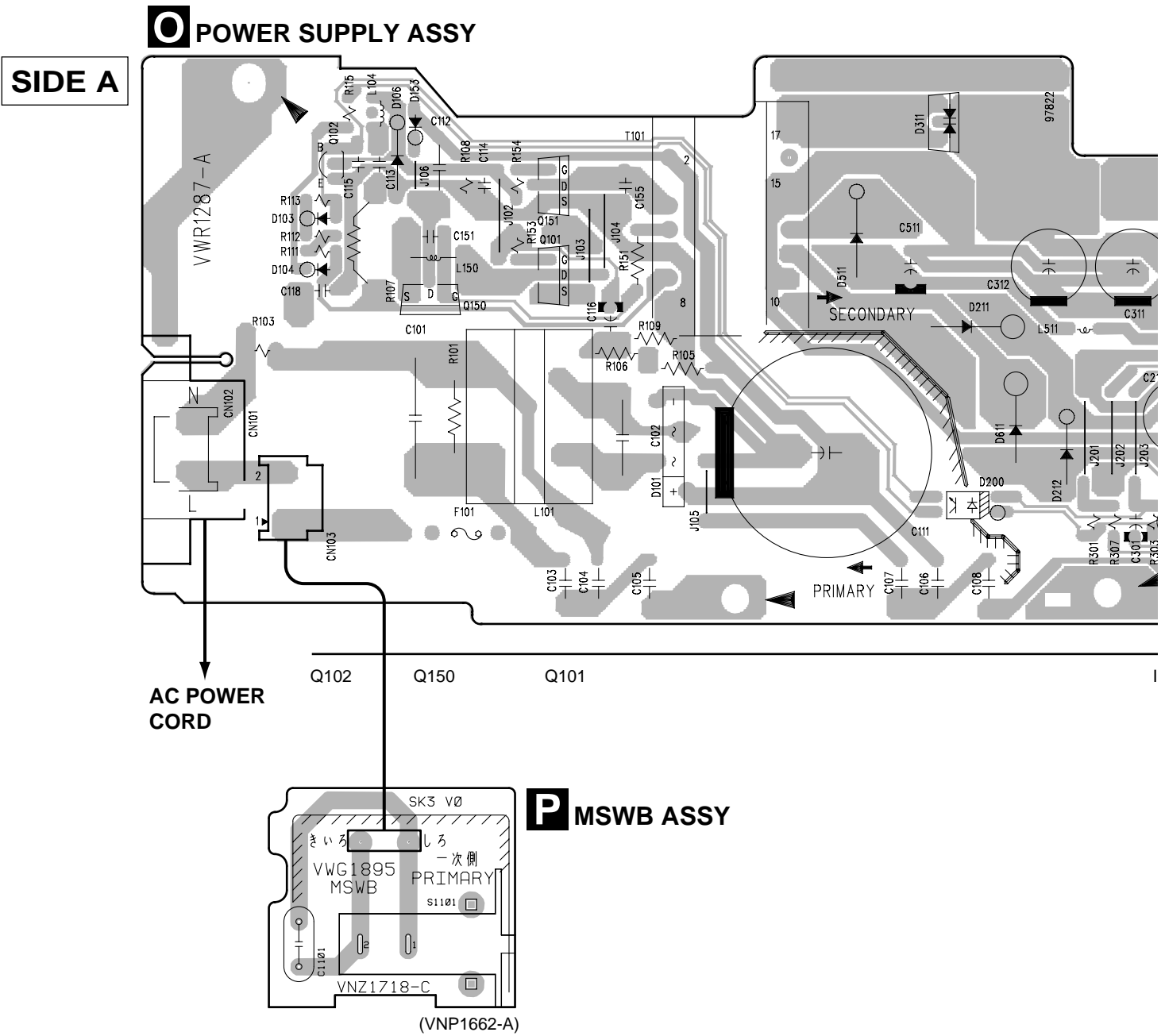
SIDE B



D



4.7 POWER SUPPLY and MSWB ASSEMBLIES

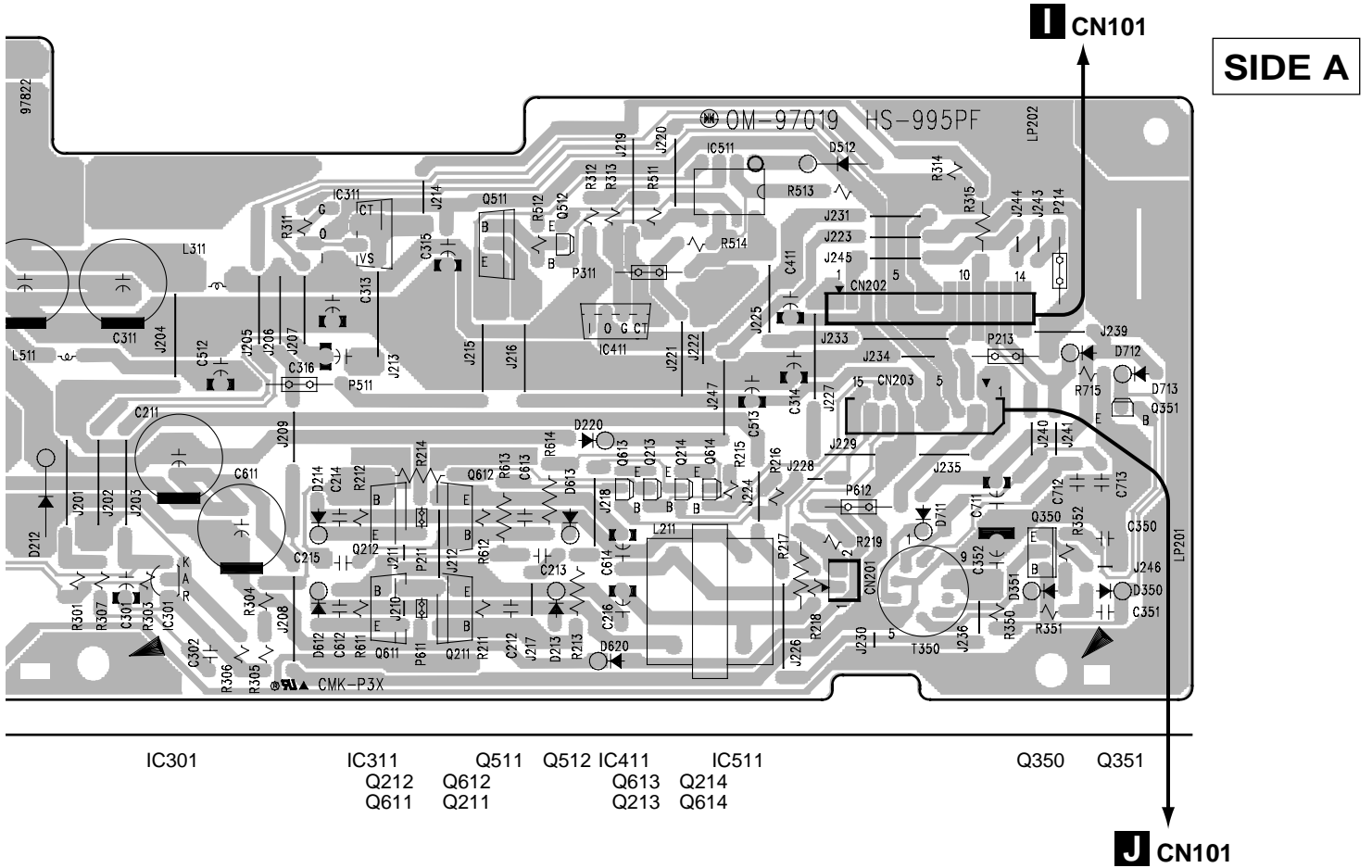


A

B

C

D



- IC301
- IC311
- Q511
- Q512
- IC411
- IC511
- Q350
- Q351



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 \rightarrow 56×10^1 \rightarrow 561 RD1/4PU $\boxed{5} \boxed{6} \boxed{1} J$

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

0.5 Ω \rightarrow R50 RN2H $\boxed{R} \boxed{5} \boxed{0} K$

1 Ω \rightarrow 1R0 RS1P $\boxed{1} \boxed{R} \boxed{0} K$

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

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

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.				Remarks
		RL type	RAM type	RB type	RD/RB type	
NSP	MACB ASSY	VWM1507	VWM1507	VWM1507	VWM1507	
NSP	└LMSB ASSY	VWG1554	VWG1554	VWG1554	VWG1554	
NSP	└PKSB ASSY	VWG1555	VWG1555	VWG1555	VWG1555	
NSP	└FG ASSY	VWG1556	VWG1556	VWG1556	VWG1556	
NSP	MECHB ASSY	VWM1721	VWM1721	VWM1721	VWM1721	
NSP	└CNNB ASSY	VWG1792	VWG1792	VWG1792	VWG1792	
NSP	└TNMB ASSY	VWG1793	VWG1793	VWG1793	VWG1793	
NSP	└DCSB ASSY	VWG1794	VWG1794	VWG1794	VWG1794	
NSP	└LCSB ASSY	VWG1795	VWG1795	VWG1795	VWG1795	
NSP	└BISB ASSY	VWG1796	VWG1796	VWG1796	VWG1796	
NSP	FLKB ASSY	VWM1880	VWM1894	VWM1894	VWM1894	
NSP	└FLKY ASSY	VWG2006	VWG2030	VWG2030	VWG2030	
NSP	└PWSB ASSY	VWG2007	VWG1994	VWG1994	VWG1994	
NSP	└DILB ASSY	VWG1995	VWG1995	VWG1995	VWG1995	
NSP	CLD MAIN ASSY	VWM1866	Not used	Not used	Not used	
	└MSWB ASSY	VWG1895	Not used	Not used	Not used	
	└CLDM ASSY	VWS1352	VWS1353	VWS1353	VWS1353	*1
	DVDM ASSY	VWS1355	VWS1355	VWS1355	VWS1355	
Δ	GYCB ASSY	VWV1634	VWV1634	VWV1634	VWV1634	
	POWER SUPPLY ASSY	VWR1287	VWR1287	VWR1287	VWR1287	

Note *1: Although VWS1352 and VWS1353 are different in part number, they have same service parts.

■ CONTRAST OF PCB ASSEMBLIES

FLKY ASSY

VWG2006 and VWG2030 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		VWG2006	VWG2030	
R125		Not used	RS1/10S0R0J	
R126		RS1/10S0R0J	Not used	

PWSB ASSY

VWG2007 and VWG1994 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		VWG2007	VWG1994	
	S201	Not used	RSG1030	

■ PCB PARTS LIST FOR DVL-919/RL

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
A		LMSB ASSY		F		DCSB ASSY	
		SWITCHES AND RELAYS				SWITCHES AND RELAYS	
		S101-S103	VSG1006			S902	DSG1017
		OTHERS				OTHERS	
		CN101 10P CONNECTOR	52044-1045			CN915 KR CONNECTOR	S2B-PH-K-S
B		PKSB ASSY		G		LCSB ASSY	
		SWITCHES AND RELAYS				SWITCHES AND RELAYS	
		S104, S105	VSG1006			S903	DSG1017
		OTHERS				OTHERS	
						CN916 KR CONNECTOR	S2B-PH-K-S
C		FG ASSY		H		BISB ASSY	
		SEMICONDUCTORS				SWITCHES AND RELAYS	
		D101	GP1S24			S901	DSG1017
D		CNNB ASSY				OTHERS	
		OTHERS				CN914 KR CONNECTOR	S2B-PH-K-S
		CN903 CONNECTOR	52030-2310				
		CN901 CONNECTOR	52030-2610				
		CN905, CN906 KR CONNECTOR	S2B-PH-K-S				
		CN902 CONNECTOR	SLW26R-1C7				
		CN904 CONNECTOR	SLW27R-1C7				
E		TNMB ASSY		P		MSWB ASSY	
		OTHERS				CAPACITORS	
		CN911 6P CONNECTOR	52044-0645			⚠ C1101 (4700pF/AC250V)	ACG7009
		CN912 CONNECTOR POST	B2B-PH-K-S			OTHERS	
		CN913 CONNECTOR POST	B3B-PH-K-S			⚠ S1101	ASG1006

DVL-919

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

N DILB ASSY

SWITCHES AND RELAYS

S301, S302	RSG1030
------------	---------

RESISTORS

All Resistors	RS1/10S□□□J
---------------	-------------

OTHERS

CN301	CONNECTOR 4P	04R-FJ
PL301	LAMP	VEL1022

L FLKY ASSY

SEMICONDUCTORS

IC101	PE5018B
IC102	S-806D
Q102	DTD113ES
Q151-Q154	PDTA124EK
D102	1SS355
D106	EP05Q04
D101	RB411D
D152, D153	SLP3118C51H
D151	SLP4118C51H

SWITCHES AND RELAYS

S101-S106	RSG1030
-----------	---------

CAPACITORS

C106, C108, C110	CEAT470M10
C101, C102, C104, C105, C111	CKSQYB102K50
C141	CKSQYB102K50
C103, C107, C109, C112, C192	CKSQYF104Z25
C195	CKSQYF104Z25

RESISTORS

All Resistors	RS1/10S□□□J
---------------	-------------

OTHERS

CN102, CN103	CONNECTOR 4P	04P-FJ
	REMOTE RECEIVER UNIT	GP1U28X
V101	FL TUBE	VAW1046
	SPACER	VEC1599
CN101	14P CONNECTOR	VKN1274
	HOLDER	VNF1087
X101	CERAMIC RESONATOR(5MHz)	VSS1104

M PWSB ASSY

SEMICONDUCTORS

D201	SLP9118C51H
------	-------------

RESISTORS

All Resistors	RS1/10S□□□J
---------------	-------------

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

OTHERS

CN201	CONNECTOR 4P	04R-FJ
-------	--------------	--------

O POWER SUPPLY ASSY

SEMICONDUCTORS

△ IC301	AN1431T
△ IC311	VZF1047
△ IC411	VZF1048
IC511	UPC358C
△ Q101, Q150, Q151	VZF1056
△ Q102	2SC3377
△ Q211, Q212	T7F4T
Q213, Q214, Q351	2SC1740S
Q350	2SD2007
△ Q511	2SD2395
Q512, Q613, Q614	2SA933S
△ Q611, Q612	T7F4S
△ D101	D2SB60F4004
△ D103	MTZJ2.7B
△ D104	1SS270A
△ D106	RD18FB2
△ D153, D220, D620	VZF1045
△ D200	PS2561L1-1VM
△ D211, D611	31DF2
△ D212	RD33FB2
△ D213, D214, D612, D613	10ELS2
△ D311	VZF1052
D350, D512	1SS270A
D351	MTZJ2.7B
△ D511	S2LA20
D711	10ELS2
D713	MTZJ30A
D712	MTZJ8.2B

RESISTORS

△ R151	FUSIBLE R(RF25S8.2J)	VZC1058
--------	----------------------	---------

OTHERS

△ F101	FUSE(3.15A/250V)	VEK1050
△ FU211, FU611	FUSE(136°C)	VEK1033
△ FU213, FU612	FUSE(1A/125V)	VEK1036
△ P214, P511	FUSE(1.25A/60V)	VEK1045
△ P311	FUSE(1A/60V)	VEK1041

J CLDM ASSY

SEMICONDUCTORS

IC761	BA10393F
IC251, IC601, IC905, IC906	BA4560F
IC352	CA0002AM
IC203	CY2081SL-611
IC171, IC803	LA6510

Mark	No.	Description	Part No.
	C902		CEJA220M50
	C863, C934		CEJA2R2M50
	C242, C244		CEJA470M6R3
	C862		CEJA4R7M50
	C486		CFTLA154J50
	C491		CFTLA683J50
	C426, C910		CKSQYB102K50
	C845, C881, C917, C942		CKSQYB104K25
	C555, C933		CKSQYB105K10
	C923		CKSQYB153K25
	C911		CKSQYB154K16
	C903		CKSQYB222K50
	C379, C380		CKSQYB392K50
	C373–C376, C388, C912, C932		CKSQYB472K50
	C963		CKSQYB473K25
	C763		CKSQYB682K50
	C106–C112, C117, C118, C121		CKSQYF103Z50
	C124, C153, C155, C173, C181		CKSQYF103Z50
	C183, C184, C188, C189		CKSQYF103Z50
	C191, C192, C210, C231–C237		CKSQYF103Z50
	C239–C241, C243, C245		CKSQYF103Z50
	C247–C250, C252, C281, C282		CKSQYF103Z50
	C311, C314, C315, C317, C321		CKSQYF103Z50
	C323, C325, C331, C341, C343		CKSQYF103Z50
	C345, C381, C386, C389, C422		CKSQYF103Z50
	C442, C508, C514, C515, C517		CKSQYF103Z50
	C533, C534, C536, C552, C554		CKSQYF103Z50
	C761, C762, C801, C803, C811		CKSQYF103Z50
	C831, C833, C836, C841, C846		CKSQYF103Z50
	C851, C853, C861, C882, C883		CKSQYF103Z50
	C885, C924, C935, C937, C939		CKSQYF103Z50
	C945–C947, C962, C974, C983		CKSQYF103Z50
	C101, C103, C122, C151, C152		CKSQYF104Z25
	C171, C172, C182, C199, C218		CKSQYF104Z25
	C267, C268, C326, C346, C385		CKSQYF104Z25
	C387, C392, C404, C405, C420		CKSQYF104Z25
	C423, C425, C430, C438, C440		CKSQYF104Z25
	C443, C452, C488, C492, C494		CKSQYF104Z25
	C504, C507, C519, C520, C531		CKSQYF104Z25
	C537, C541, C557, C601		CKSQYF104Z25
	C603, C604, C764, C805, C847		CKSQYF104Z25
	C857, C858, C866, C913, C914		CKSQYF104Z25
	C919, C971, C972, C976		CKSQYF104Z25
	C582, C584, C586		CKSQYF105Z16
	C186, C602, C855, C926, C930		CKSQYF223Z50
	C938		CKSQYF223Z50
	C377, C378, C393, C908, C909		CKSQYF224Z25
	C154, C156, C174, C312, C463		CKSQYF473Z50
	C826, C828		CKSQYF473Z50
	C265, C266		CQMBA332J50
	VC301 (20pF)		VCM-008

Mark	No.	Description	Part No.
RESISTORS			
	R751		RA4C0R0J
	R753		RA4C221J
	R203, R752		RA4C471J
	R425, R833, R834, R837, R839		RN1/10SE1002D
	R891, R892		RN1/10SE1002D
	R152, R156		RN1/10SE1003D
	R251, R252		RN1/10SE1602D
	R541		RN1/10SE1800D
	R540		RN1/10SE3300D
	R151, R259, R260, R277, R278		RN1/10SE3302D
	R893, R894		RN1/10SE3302D
	R153, R154		RN1/10SE4702D
	VR450 (2.2kΩ)		PCP1025
	VR603 (4.7kΩ)		PCP1028
	VR604, VR607–VR609 (47kΩ)		PCP1031
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN103	CONNECTOR 6P	52045-0645
	CN102	CONNECTOR	52045-1045
	CN101	CONNECTOR	52045-1545
	CN802	CONNECTOR	B11P-SHF-1AA
	CN201	CONNECTOR	B4B-PH-K-S
		SCREW	BBZ30P060FCC
	JA101, JA102	JACK	RKN1004
	JA331	OPTICAL OUTPUT JACK	TOTX178
		PCB BINDER	VEF1040
	JA251	JACK	VKB1065
	JA341	JACK	VKB1110
	CN111, CN122	22P CONNECTOR	VKN1253
	CN801	27P CONNECTOR	VKN1258
	CN401, CN402	B TO B CONNECTOR 20P	VKN1403
		SCREW PLATE	VNE1948
	S102	SLIDE SWITCH	VSH1020
	X101	CERAMIC RESONATOR(9MHz)	VSS1040
	X311	CRYSTAL RESONATOR(16MHz)	VSS1081
	X312	CRYSTAL RESONATOR(18.432MHz)	VSS1116
	X550	CRYSTAL RESONATOR(28MHz)	VSS1131
DVDM ASSY			
SEMICONDUCTORS			
	IC301		ADC1175CIJMX
	IC171		BA10393F
	IC401		BA178M08FP
	IC151		BA6797FP
	IC813		CY2081SL-611
	IC702		HM514800CJ-7
	IC101		LA9700M
	IC201		LC78650NE
	IC802		MB811171622A-100FN
	IC801		MB86371C

Mark	No.	Description	Part No.
	IC815, IC816		MC14577CF
	IC271, IC302		NJM2100M
	IC203		NJM2107F
	IC901		PD2058A
	IC601		PD3381A
	IC701		PD4833A
	IC501		PD4889A
	IC502		SRM2B256SLMX70
	IC202, IC204, IC206, IC902		TC4W53F
	IC604		TC551001BFL-85
	IC503		TC74HC573AF
	IC804		TC74HCT541AF
	IC303		TC74HCU04AF
	IC807, IC808		TC74LCX245FT
	IC821		TC74VHC00FT
	IC814, IC820		TC74VHC02FT
	IC505, IC605		TC74VHC139FT
	IC703		TC74VHC14FT
	IC504		TC74VHC20FT
	IC805, IC806, IC809		TC74VHC541FT
	IC506		TC74VHCT245AFT
	IC817		TC74VHCT541AFT
	IC811, IC818, IC819		TC7SHU04F
	IC810		TC7WU04F
	IC603		VYW1607
⚠	Q401		2SB1260
	Q108		HN1K03FU
	Q455, Q831, Q832, Q851, Q852		IMT1A
	Q871, Q872		IMT1A
	Q103, Q402, Q403, Q873		IMX1
	Q102, Q104, Q291, Q301		IMZ1A
	Q106, Q603		PDTA114EK
	Q107, Q109, Q602		PDTC114EK
	Q601, Q771, Q772		PDTC114TK
	D301		KV1410
	D171, D172		MA152WK
	D601		RB501V-40

COILS AND FILTERS

F771, F778, F779	CHIP BEAD	DTF1067
F896	FERRITE CORE	VTF1077
F952	FERRITE CORE	VTF1080
F801	VIDEO FILTER	VTF1098
F401-F406	CHIP EMI FILTER	VTH1037
L301	CHIP COIL(1.5μH)	VTL1059
L101, L302	CHIP COIL(10μH)	VTL1061
L802, L803	CHIP COIL(22μH)	VTL1067
L335, L340, L342	CHIP BEADS	VTL1074
L777, L780-L787, L895	CHIP BEADS	VTL1075
L897-L899	CHIP BEADS	VTL1075
L100	CHIP COIL(47μH)	VTL1119

Mark	No.	Description	Part No.
CAPACITORS			
	C623		CCSRCH100D50
	C152, C208, C291, C612, C613		CCSRCH101J50
	C700, C735, C737, C739		CCSRCH101J50
	C897, C898, C991		CCSRCH101J50
	C111, C139, C215, C231, C232		CCSRCH151J50
	C248		CCSRCH151J50
	C125, C148, C329		CCSRCH180J50
	C112, C118		CCSRCH220J50
	C121, C130, C199, C319, C324		CCSRCH330J50
	C120		CCSRCH331J50
	C310, C323, C327		CCSRCH470J50
	C230		CCSRCH471J50
	C126, C331, C838		CCSRCH560J50
	C127, C330, C863, C873, C882		CCSRCH5R0C50
	C160		CCSRCH680J50
	C401, C417, C892		CEHV470M10
	C101, C104, C201, C325, C601		CEV101M6R3
	C701, C704, C706, C801		CEV101M6R3
	C803, C804, C813-C815, C826		CEV101M6R3
	C901		CEV101M6R3
	C123, C158, C412, C414		CEV220M16
	C835, C895		CEV221M4
	C131, C135, C205, C206, C301		CEV470M6R3
	C303, C404, C406, C408, C410		CEV470M6R3
	C501, C504, C832, C836, C841		CEV470M6R3
	C887		CEV470M6R3
	C211		CKSQYB104K25
	C100, C109, C124, C216, C220		CKSQYB105K10
	C229, C234, C275, C308, C326		CKSQYB105K10
	C332, C333, C730, C731		CKSQYB105K10
	C416, C818, C823, C828		CKSQYF105Z16
	C213, C292, C309, C321		CKSRYB102K50
	C105, C106, C108, C146, C147		CKSRYB103K50
	C151, C154-C157, C161, C207		CKSRYB103K50
	C217, C221, C247, C276, C318		CKSRYB103K50
	C320, C620, C705, C722, C772		CKSRYB103K50
	C859		CKSRYB103K50
	C143, C162-C165, C223, C224		CKSRYB104K16
	C242, C273, C274, C311, C312		CKSRYB104K16
	C315		CKSRYB104K16
	C141, C271		CKSRYB222K50
	C328		CKSRYB223K25
	C122		CKSRYB473K16
	C102, C103, C113, C129		CKSRYF104Z16
	C132-C134, C136, C137, C159		CKSRYF104Z16
	C166, C191, C202-C204, C209		CKSRYF104Z16
	C214, C218, C219, C222		CKSRYF104Z16
	C226-C228, C235, C237, C241		CKSRYF104Z16
	C246, C302, C304, C305, C317		CKSRYF104Z16
	C322, C402, C403, C405, C407		CKSRYF104Z16

Mark	No.	Description	Part No.
	C409, C411, C413, C415		CKSRYF104Z16
	C502, C503, C505–C509		CKSRYF104Z16
	C602–C611, C614, C615, C617		CKSRYF104Z16
	C621, C622, C702, C703		CKSRYF104Z16
	C707–C721, C723, C732–C734		CKSRYF104Z16
	C736, C738, C740–C742, C771		CKSRYF104Z16
	C791, C800, C802, C805–C812		CKSRYF104Z16
	C816, C817, C819–C822		CKSRYF104Z16
	C824, C825, C827, C829, C830		CKSRYF104Z16
	C833, C834, C837, C839, C840		CKSRYF104Z16
	C842–C848, C861, C862, C867		CKSRYF104Z16
	C871, C872, C876, C878, C881		CKSRYF104Z16
	C883, C888–C890, C902–C905		CKSRYF104Z16
	C911		CKSRYF104Z16
	C852, C855, C857, C858 (2.2μF)		VCG1031
	C922–C924 (2.2μF)		VCG1031
	VC301 (40pF)		VCM1010

RESISTORS

R602, R603, R610, R613, R618	DCN1090
R507, R508, R624, R628, R633	DCN1094
R703, R704, R717, R718	DCN1094
R745, R746, R761, R762, R792	DCN1094
R812, R813	DCN1094
R137, R501, R502, R505, R506	DCN1104
R604–R607, R712, R713, R719	DCN1104
R724, R748, R749, R791	DCN1104
R802, R803, R808, R901, R905	DCN1104
R907, R909, R910, R912, R913	DCN1104
R916–R919	DCN1104
R101, R11–R14, R141	RS1/10S0R0J
R15–R17, R171, R18	RS1/10S0R0J
R201–R203, R300, R319, R333	RS1/10S0R0J
R411–R413, R701, R775, R776	RS1/10S0R0J
R891, R893, R902, R908, R961	RS1/10S0R0J
R205	RS1/10S101J
R835, R839, R855, R859, R875	RS1/16S1001F
R881	RS1/16S1001F
R834, R854, R874	RS1/16S1201F
R823–R825	RS1/16S1500F
R117, R118	RS1/16S1501F
R126	RS1/16S1502F
R241, R247	RS1/16S2202F
R110, R153, R155, R168, R169	RS1/16S2702F
R173, R174, R213, R228, R229	RS1/16S2702F
R248	RS1/16S2702F
R152, R156, R158–R164, R167	RS1/16S4702F
R170, R172, R175, R194, R227	RS1/16S4702F
R836, R856, R879	RS1/16S5600F
VR801 (1kΩ)	VCP1125
Other Resistors	RS1/16S□□□J

Mark	No.	Description	Part No.
OTHERS			
	CN903	CONNECTOR	S13B-PH-SM3
	CN101	CONNECTOR	S14B-PH-SM3
	CN801	CONNECTOR	S4B-PH-SM3
		FLEXIBLE CABLE	VDA1681
	TP100, TP200, TP300, TP400	CHECKER-CHIP	VKF1001
	CN201	CONNECTOR	VKN1324
	CN106	7P CONNECTOR	VKN1411
	CN105	14P CONNECTOR	VKN1418
	CN901, CN902	22P CONNECTOR	VKN1426
	CN103	26P CONNECTOR	VKN1430
	KN1–KN3	EARTH METAL FITTING LABEL	VNF1109 VRW1750
	X602	CERAMIC RESONATOR(20MHz)	VSS1114
	X501	CERAMIC RESONATOR(10MHz)	VSS1115
	X901	CERAMIC RESONATOR(24MHz)	VSS1118

K GYCB ASSY SEMICONDUCTORS

IC701	CXD2046Q
IC801	TA7302P
IC620	TC74HC4053AF
Q1414, Q3062, Q407, Q411, Q414	2PB709A
Q645, Q647, Q750	2PB709A
Q1411, Q1412, Q1421, Q1422	2PD601A
Q1431, Q1432, Q412, Q413	2PD601A
Q415, Q416, Q626, Q636, Q646	2PD601A
Q702, Q703, Q805, Q806	2PD601A
Q408–Q410	2SC1740S
Q1423, Q1433, Q417, Q420, Q803	PDTA124EK
Q1401, Q418, Q419, Q681, Q801	PDTC124EK
D699	MA111

COILS AND FILTERS

F701, F771–F773	CHIP BEAD	DTF1069
F777, F778	CHIP BEAD	DTF1069
L3003, L750, L751		LAU220J-TA
L801		LCTA470J2520

CAPACITORS

C433	CCSQCH100D50
C771, C772, C777	CCSQCH101J50
C750, C753	CCSQCH220J50
C805	CCSQCH390J50
C754	CCSQCH470J50
C752	CCSQCH560J50
C751	CCSQCH6R0D50
C3064	CCSQCH910J50
C424	CEAL101M6R3
C1421, C1431	CEAL4R7M16
C629	CEANP220M10
C1401, C1402, C210, C216, C422	CEAT101M10
C7001–C7003, C704	CEAT101M10
C431, C434	CEAT221M6R3
C1426, C1436	CEAT471M6R3

Mark	No.	Description	Part No.
	C426, C429, C436, C462, C603		CEJA101M6R3
	C635, C793		CEJA101M6R3
	C639		CEJANP220M10
	C705		CKSQYB102K50
	C1413, C620, C628, C632, C638		CKSQYB104K25
	C706, C707, C722, C723, C804		CKSQYB104K25
	C810, C850		CKSQYB104K25
	C806, C807, C811		CKSQYF103Z50
	C1414–C1416, C1423–C1425		CKSQYF104Z25
	C1427, C1428, C1433–C1435		CKSQYF104Z25
	C1437, C1438, C213, C215, C217		CKSQYF104Z25
	C423, C425, C427, C428, C430		CKSQYF104Z25
	C432, C435, C437, C439, C460		CKSQYF104Z25
	C463, C622, C626, C627		CKSQYF104Z25
	C630, C631, C633, C634, C636		CKSQYF104Z25
	C692, C7004, C711, C713, C714		CKSQYF104Z25
	C716, C717, C724, C770		CKSQYF104Z25
	C773–C776, C791, C792, C802		CKSQYF104Z25
	C808, C809, C812, C902		CKSQYF104Z25

RESISTORS

R424		RN1/10SE1801D
R422		RN1/10SE2201D
R700, R704, R705		RN1/10SE2700D
R425		RN1/10SE2702D
R420, R421, R707, R717		RN1/10SE3301D
R426, R701, R702, R708		RN1/10SE4701D
R706		RN1/10SE5601D
R1422, R1432		RS1/10S2001F
R1423, R1433		RS1/10S3301F
R814		RS1/10S68R0F
R1415, R1425, R1435, R436–R441		RS1/10S75R0F
R627		RS1/10S75R0F
Other Resistors		RS1/10S□□□J

OTHERS

JA102	SOCKET	AKP7010
CN601	CONNECTOR	B13B-PH-K-S
	PCB BINDER	VEF1040
JA104	JACK	VKB1107
JA103	JACK	VKB1109
CN401, CN402	B TO B CONNECTOR 20P	VKN1390
	SCREW PLATE	VNE1948

6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanical Part]

CLD

- ① Tilt Offset Adjustment
- ② Tangential Direction Angle Adjustment for Side A
- ③ Spindle Motor Centering Adjustment for Side A
- ④ Crosstalk Check and Fine Tilt Offset Adjustment for Side A
- ⑤ Focus Servo Loop Gain Adjustment
- ⑥ Tracking Servo Loop Gain Adjustment
- ⑦ Tangential Direction Angle Adjustment for Side B
- ⑧ Spindle Motor Centering Adjustment for Side B
- ⑨ Crosstalk Check and Fine Tilt Offset Adjustment for Side B

DVD

- ⑩ RF MAX Adjustment
- ⑪ DVD Jitter Adjustment

[Electrical Part]

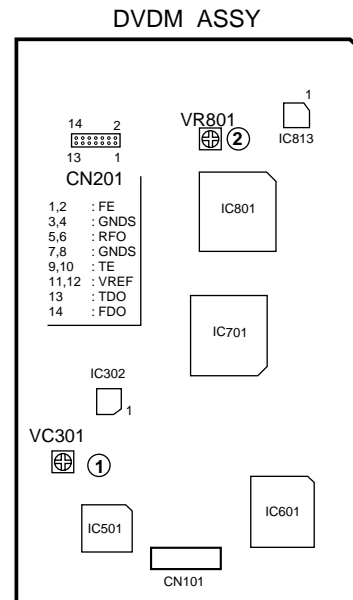
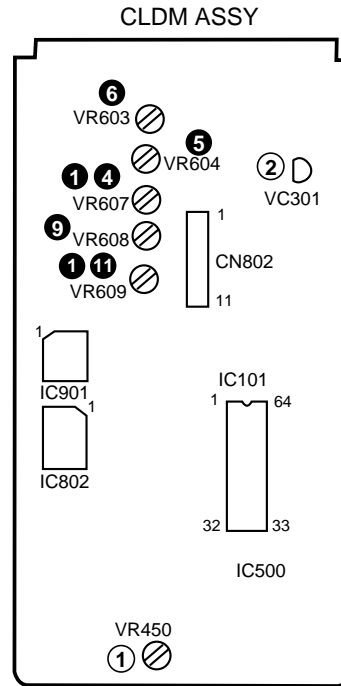
CLDM ASSY

- ① Video Level Adjustment
- ② 18MHz Master Clock Adjustment

DVDM ASSY

- ① VCO Offset Adjustment
- ② Video Output Level Adjustment

■ Adjustment Points (PCB Part)

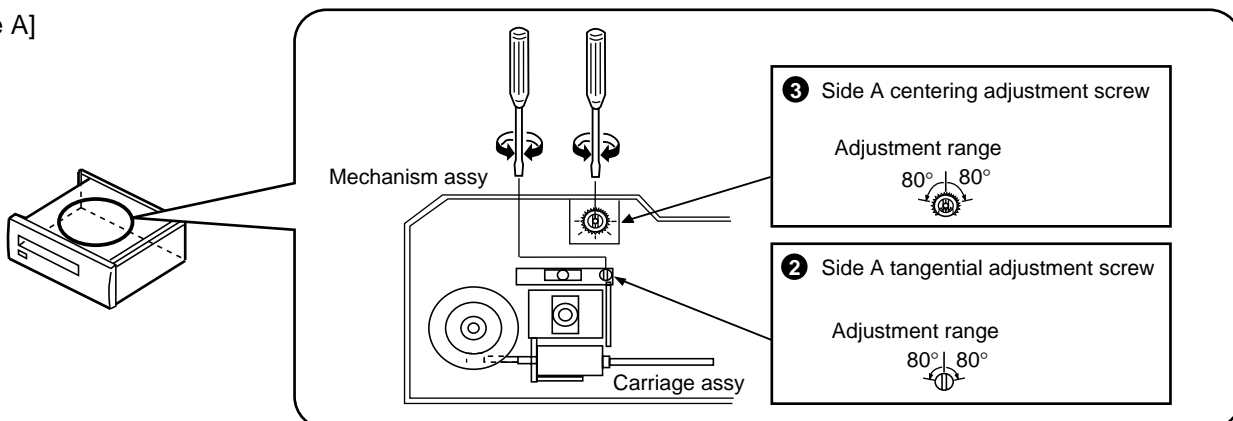


SIDE A

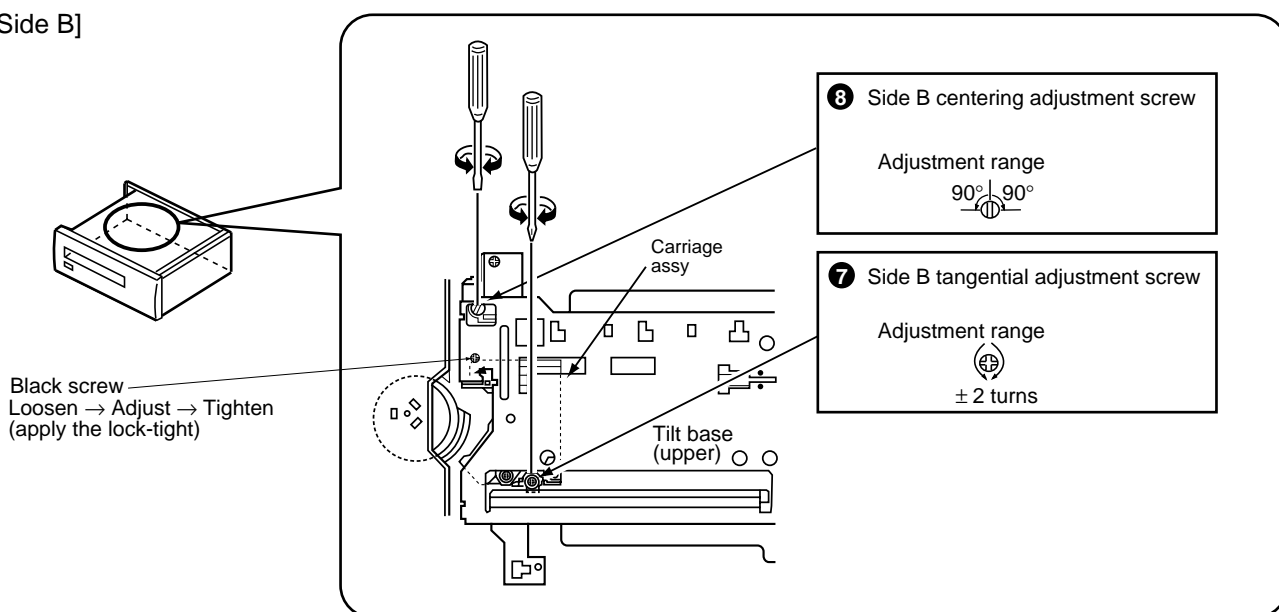
■ Adjustment Points (Mechanism Part)

CLD

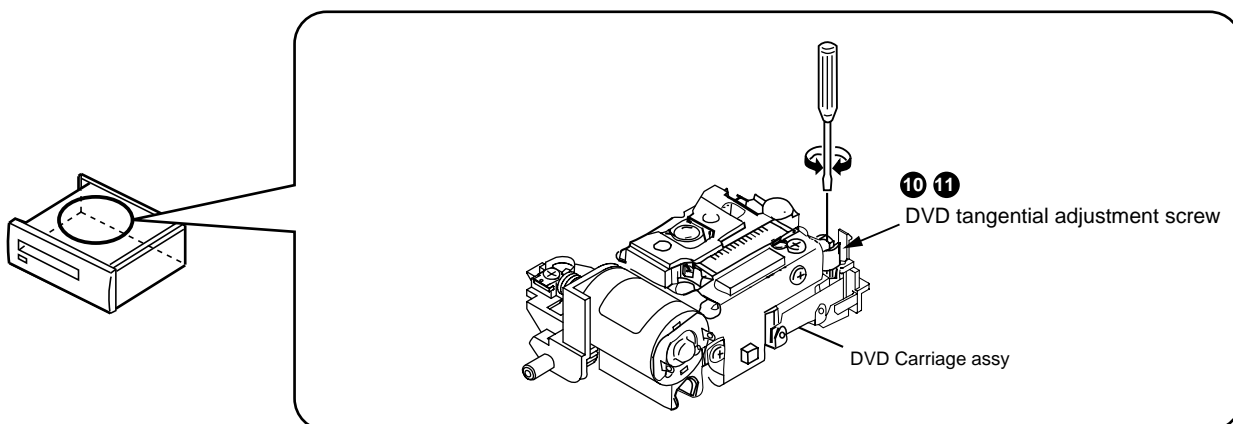
[Side A]



[Side B]


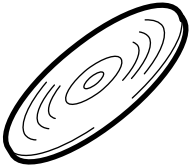



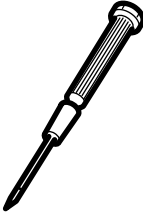
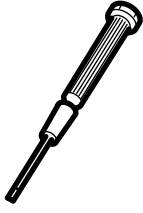


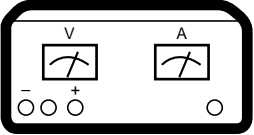
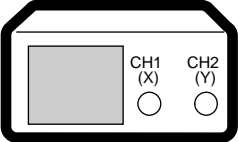

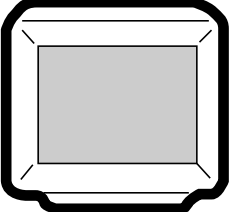
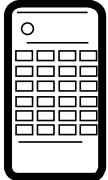
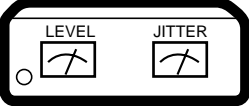

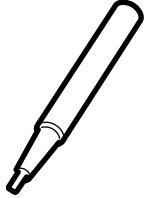


DVD



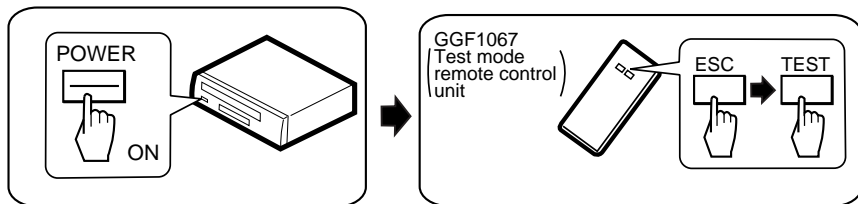
Note : Apply the lock-tight.

6.2 JIGS AND MEASURING INSTRUMENTS

 <p>CD test disc (YEDS-7)</p>	 <p>LD test disc (NTSC :GGV1012) (PAL :GGV1007)</p>	 <p>DVD test disc (DVD-MJK1)</p>	 <p>⊖ Screwdriver (medium)</p>
 <p>⊖ Screwdriver (small)</p>	 <p>⊕ Precise screwdriver</p>	 <p>⊖ Precise screwdriver</p>	 <p>⊕ Screwdriver (large)</p>
 <p>⊕ Screwdriver (medium)</p>	 <p>DC power supply</p>	 <p>Dual-trace oscilloscope (with delay) Frequency band \geq 40MHz</p>	 <p>Frequency counter Display digit \geq 8-digit</p>
 <p>TV monitor</p>	 <p>Test mode remote control unit (GGF1067)</p>	 <p>Jitter meter</p>	 <p>Equalizer unit</p>
 <p>Plastic or Ceramic ⊖ Screwdriver (small)</p>			

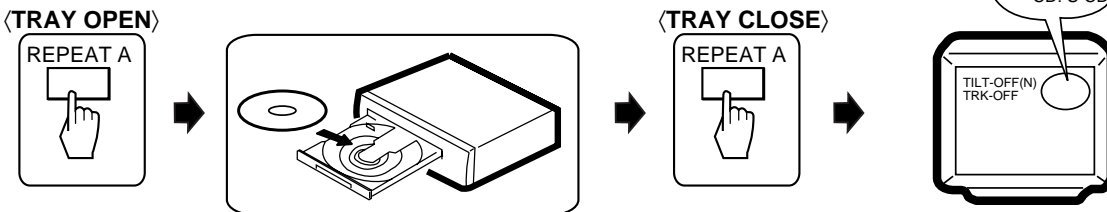
6.3 TEST MODE

TEST MODE: ON

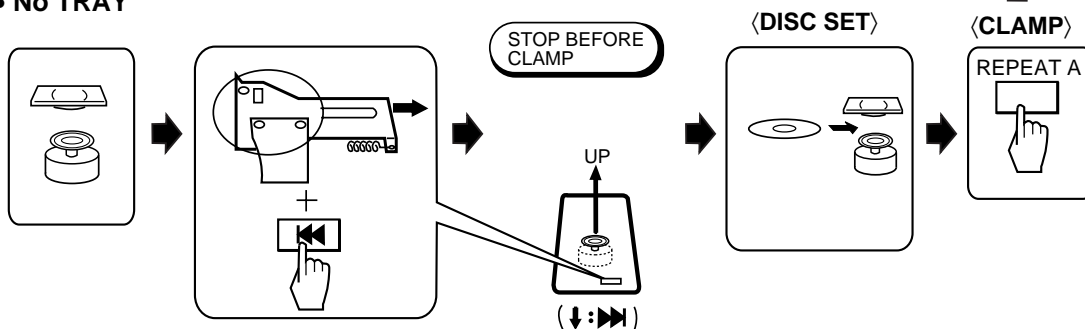


TEST MODE: DISC SET

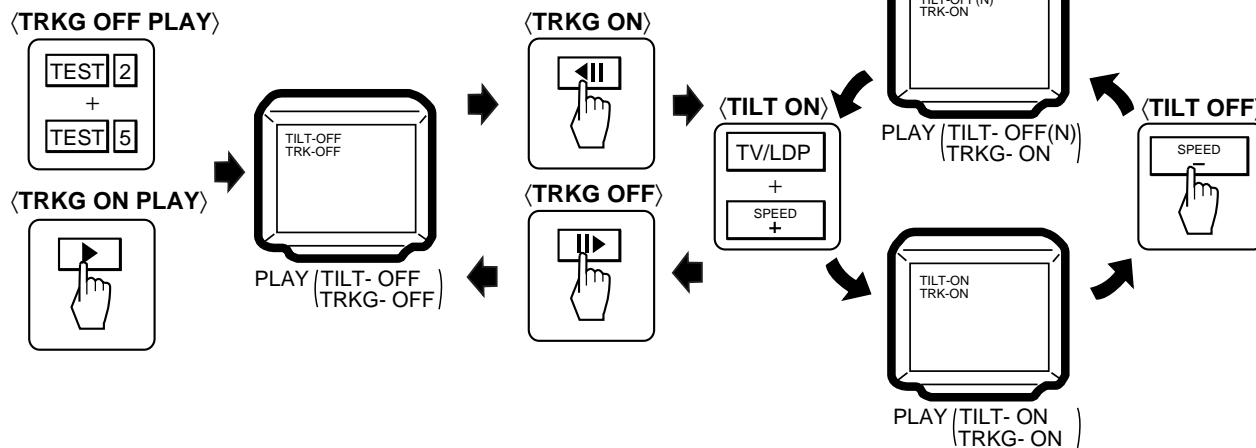
• With TRAY



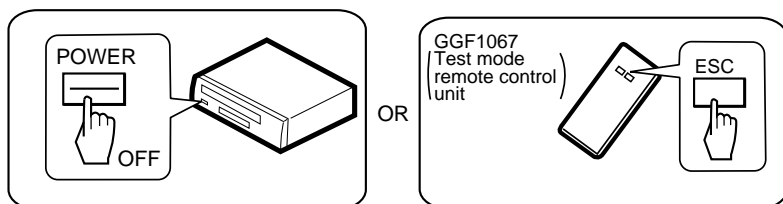
• No TRAY



TEST MODE: PLAY



TEST MODE: OFF

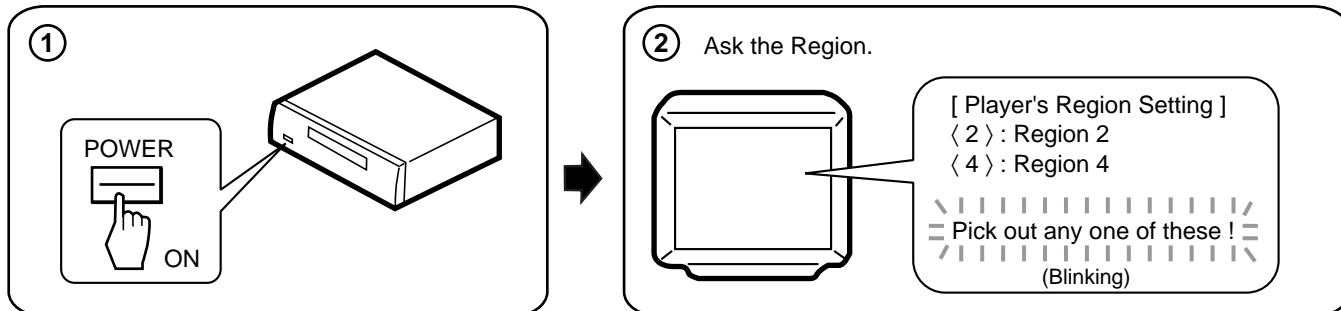


6.4 NECESSARY ADJUSTMENT POINTS

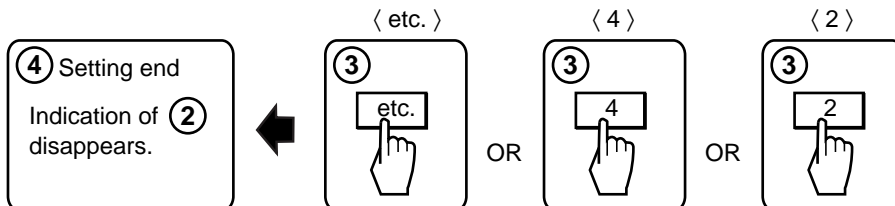
When	Adjustment Points				
■ EXCHANGE MECHANISM ASSY PARTS					
Exchange pickup (CLD)	<table border="1"> <tr> <td style="background-color: #cccccc;">Mechanical point</td> <td>①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨</td> </tr> <tr> <td style="background-color: #cccccc;">Electric point</td> <td>_____</td> </tr> </table>	Mechanical point	①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨	Electric point	_____
Mechanical point	①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨				
Electric point	_____				
Exchange pickup (DVD)	<table border="1"> <tr> <td style="background-color: #cccccc;">Mechanical point</td> <td>⑩, ⑪</td> </tr> <tr> <td style="background-color: #cccccc;">Electric point</td> <td>_____</td> </tr> </table>	Mechanical point	⑩, ⑪	Electric point	_____
Mechanical point	⑩, ⑪				
Electric point	_____				
Exchange spindle motor	<table border="1"> <tr> <td style="background-color: #cccccc;">Mechanical point</td> <td>③, ⑧</td> </tr> <tr> <td style="background-color: #cccccc;">Electric point</td> <td>_____</td> </tr> </table>	Mechanical point	③, ⑧	Electric point	_____
Mechanical point	③, ⑧				
Electric point	_____				
■ EXCHANGE PCB ASSY					
Exchange board CLDM ASSY	<table border="1"> <tr> <td style="background-color: #cccccc;">Mechanical point</td> <td>①, ④, ⑤, ⑥, ⑨</td> </tr> <tr> <td style="background-color: #cccccc;">Electric point</td> <td>_____</td> </tr> </table> <p style="text-align: center;">Note : ① and ② are adjusted already.</p>	Mechanical point	①, ④, ⑤, ⑥, ⑨	Electric point	_____
Mechanical point	①, ④, ⑤, ⑥, ⑨				
Electric point	_____				
Exchange board DVDM ASSY	<table border="1"> <tr> <td style="background-color: #cccccc;">Mechanical point</td> <td>⑩, ⑪</td> </tr> <tr> <td style="background-color: #cccccc;">Electric point</td> <td>_____</td> </tr> </table> <p style="text-align: center;">Note : ① and ② are adjusted already.</p>	Mechanical point	⑩, ⑪	Electric point	_____
Mechanical point	⑩, ⑪				
Electric point	_____				
⋮					
<ul style="list-style-type: none"> • When replacing the FLASH MEMORY (IC603) on the DVDM Assy, follow the "6.5 REGION SETTING". 					
Exchange board GYCB ASSY	<table border="1"> <tr> <td style="background-color: #cccccc;">Mechanical point</td> <td>_____</td> </tr> <tr> <td style="background-color: #cccccc;">Electric point</td> <td>_____</td> </tr> </table>	Mechanical point	_____	Electric point	_____
Mechanical point	_____				
Electric point	_____				

6.5 REGION SETTING

Perform this operation after confirming the region number of each destination on the cover.
 Region number decided once can be changed never again.



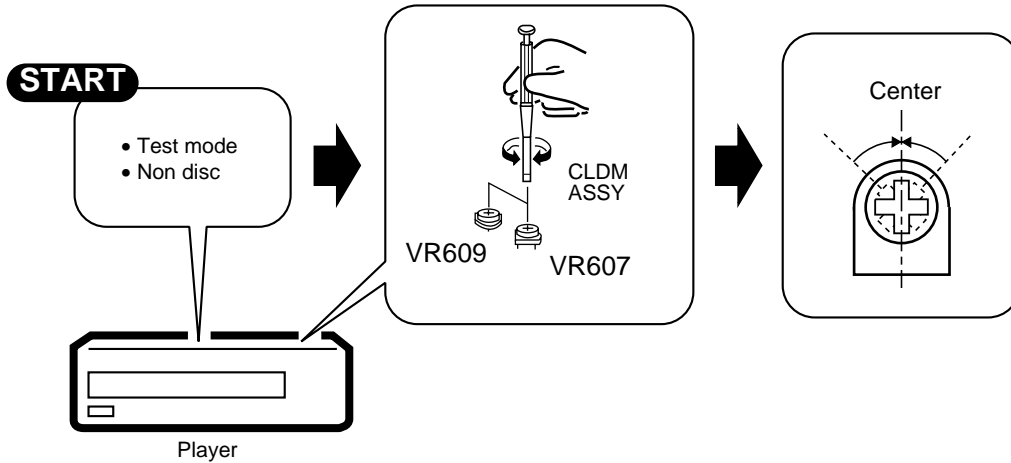
Note : Region is decided by destination of the player automatically, and there is a case when it doesn't ask on this screen. There is not need of this setting at that occasion.



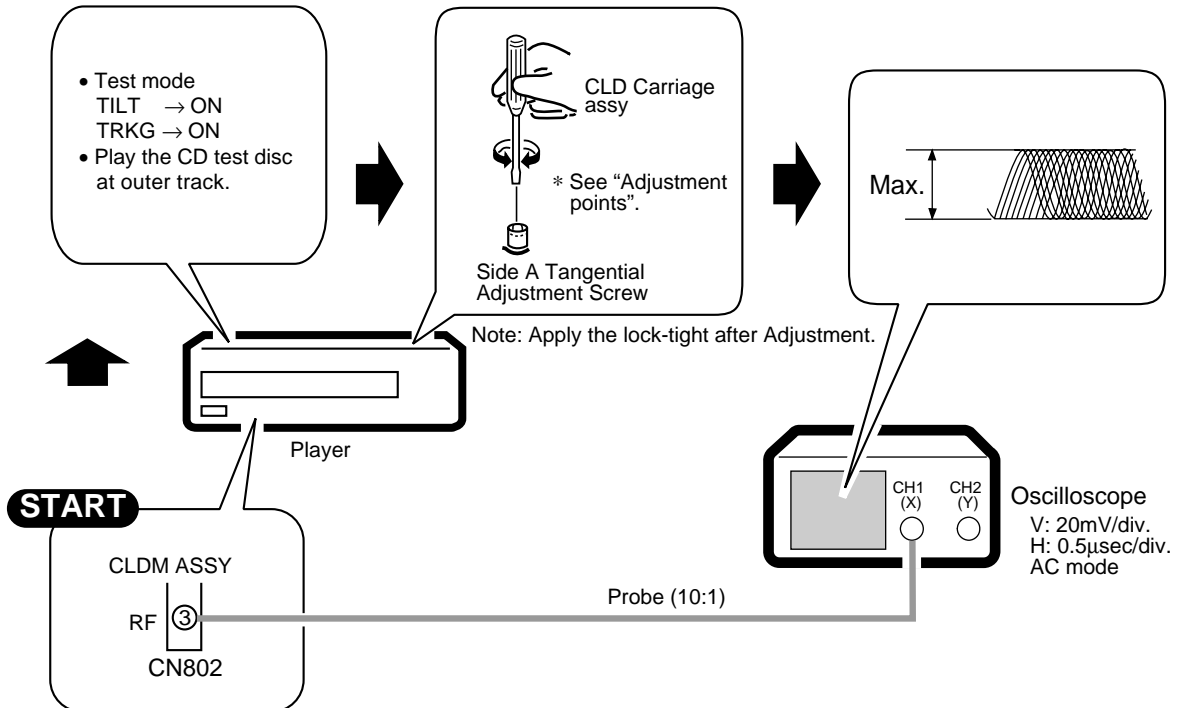
Key input the number with the test mode remote control unit (GGF1067).

6.6 MECHANICAL ADJUSTMENT

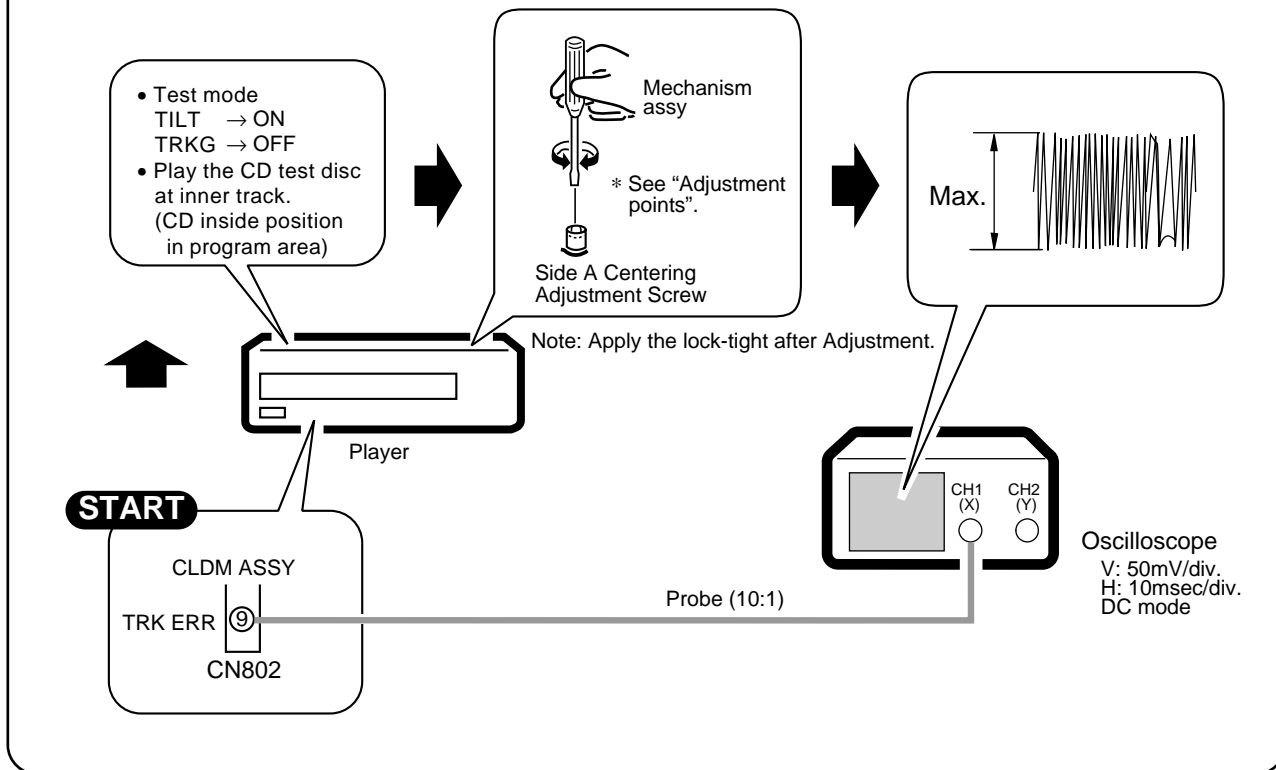
1 Tilt Offset Adjustment



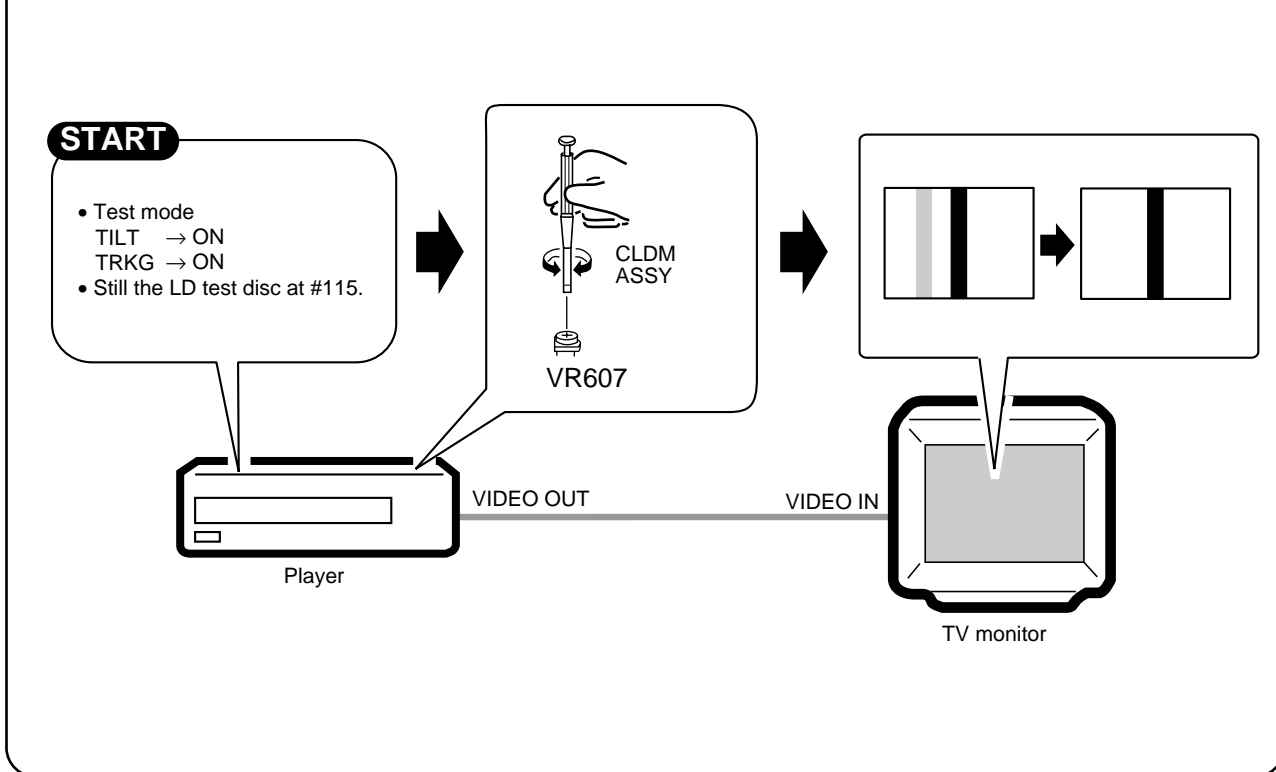
2 Tangential Direction Angle Adjustment for Side A



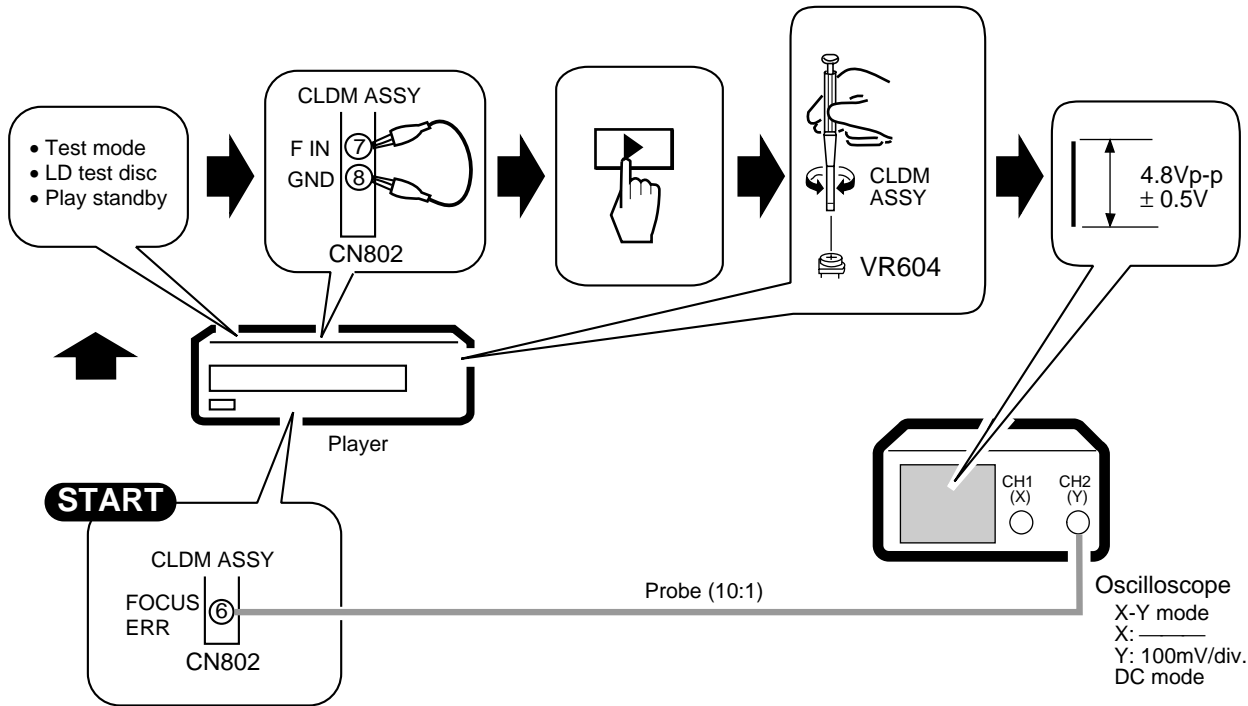
3 Spindle Motor Centering Adjustment for Side A



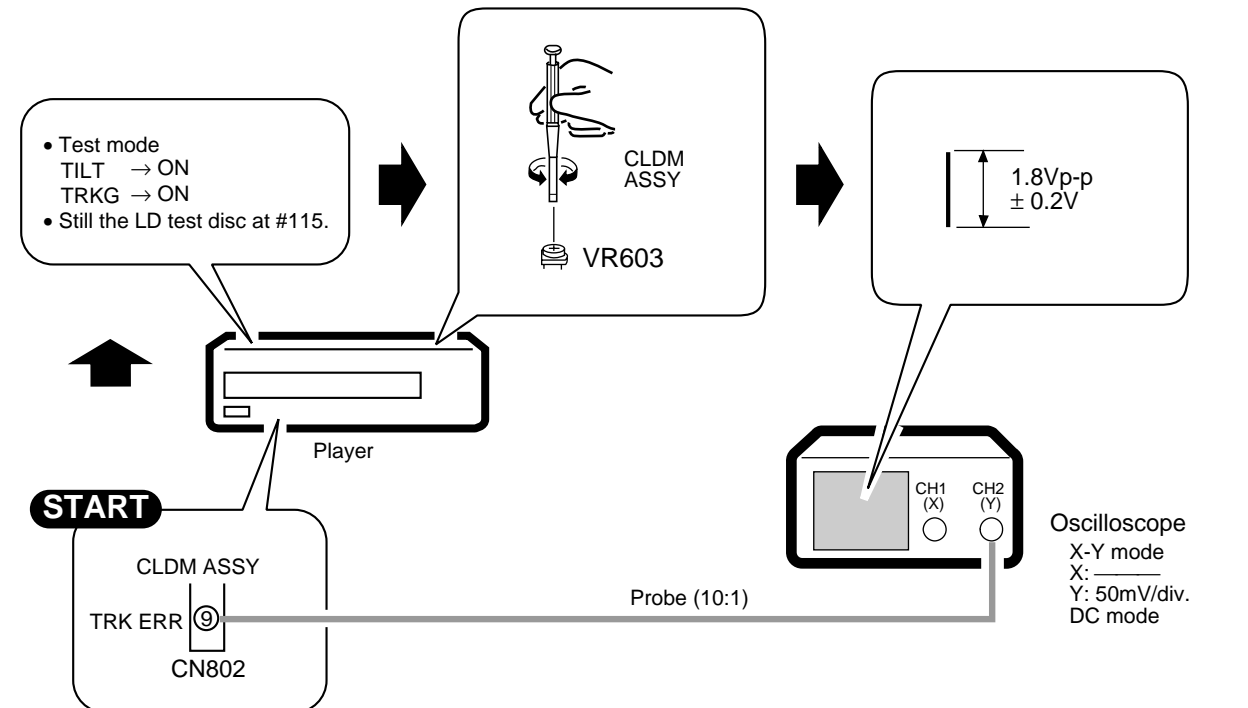
4 Crosstalk Check and Fine Tilt Offset Adjustment for Side A



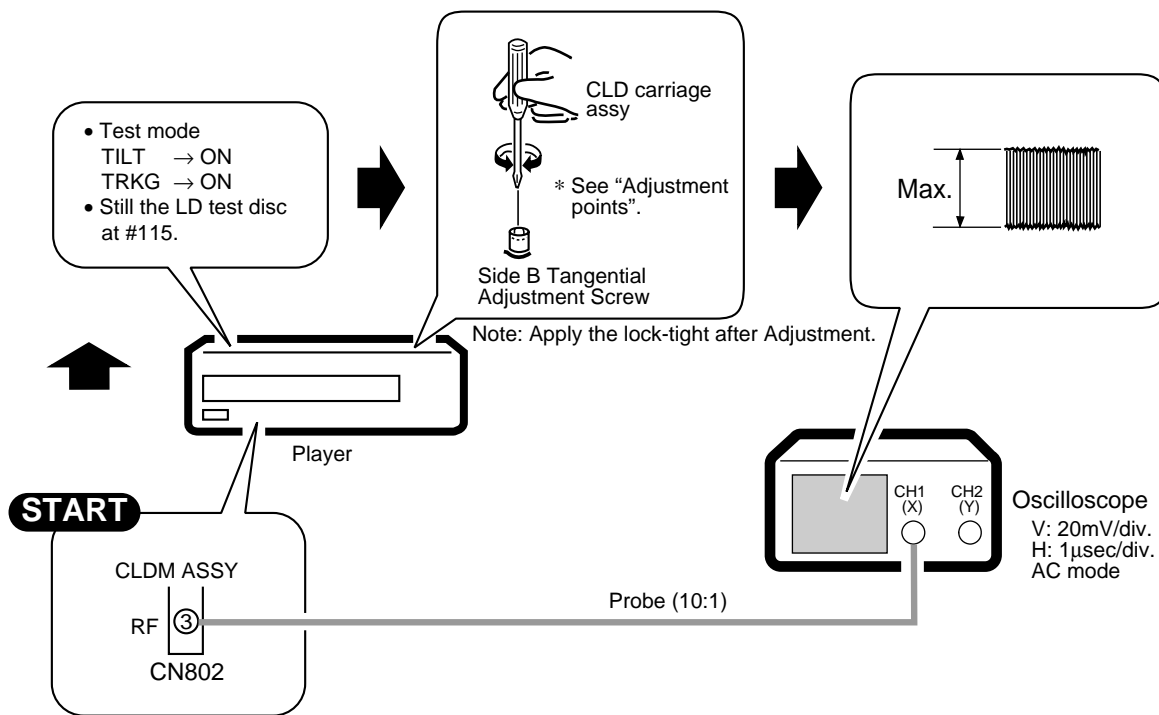
5 Focus Servo Loop Gain Adjustment



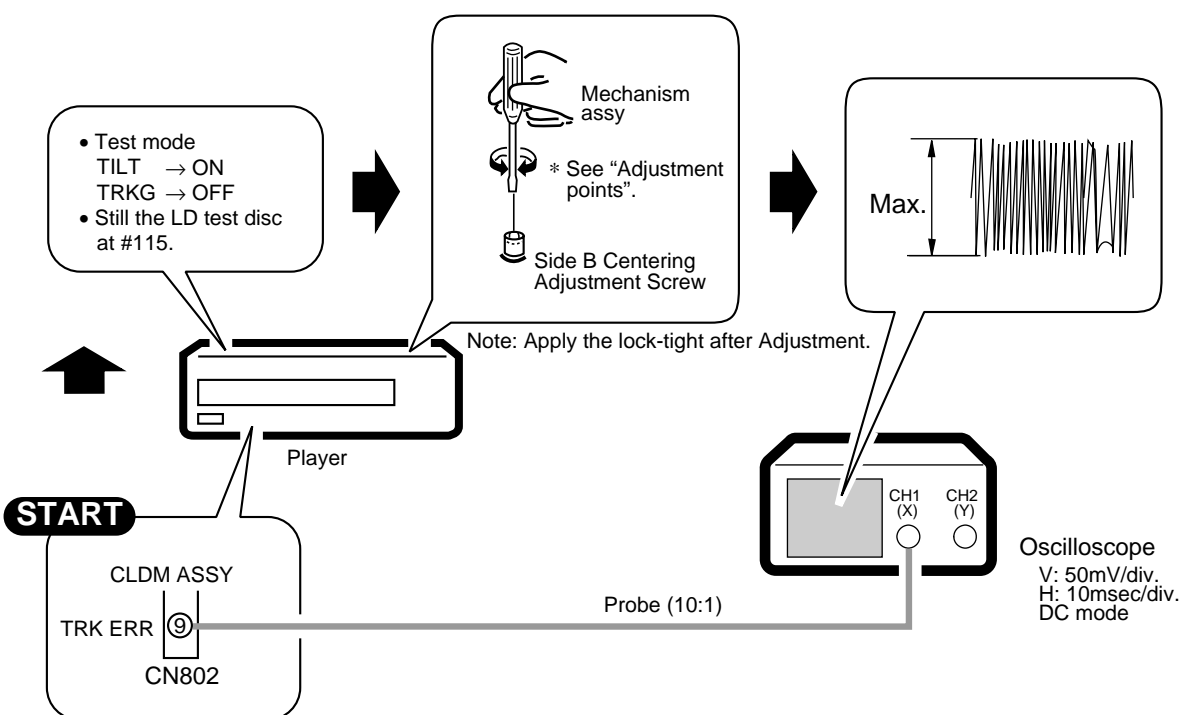
6 Tracking Servo Loop Gain Adjustment



7 Tangential Direction Angle Adjustment for Side B



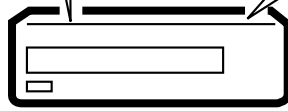
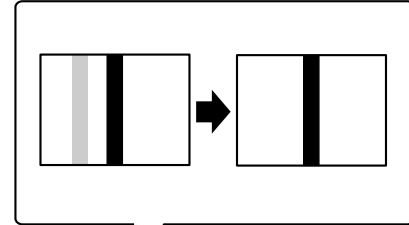
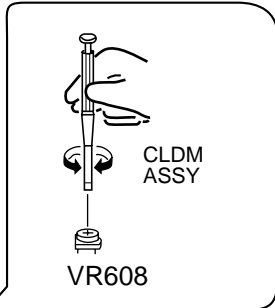
8 Spindle Motor Centering Adjustment for Side B



9 Crosstalk Check and Fine Tilt Offset Adjustment for Side B

START

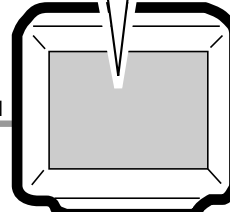
- Test mode
TILT → ON
TRKG → ON
- Still the LD test disc at #115.



Player

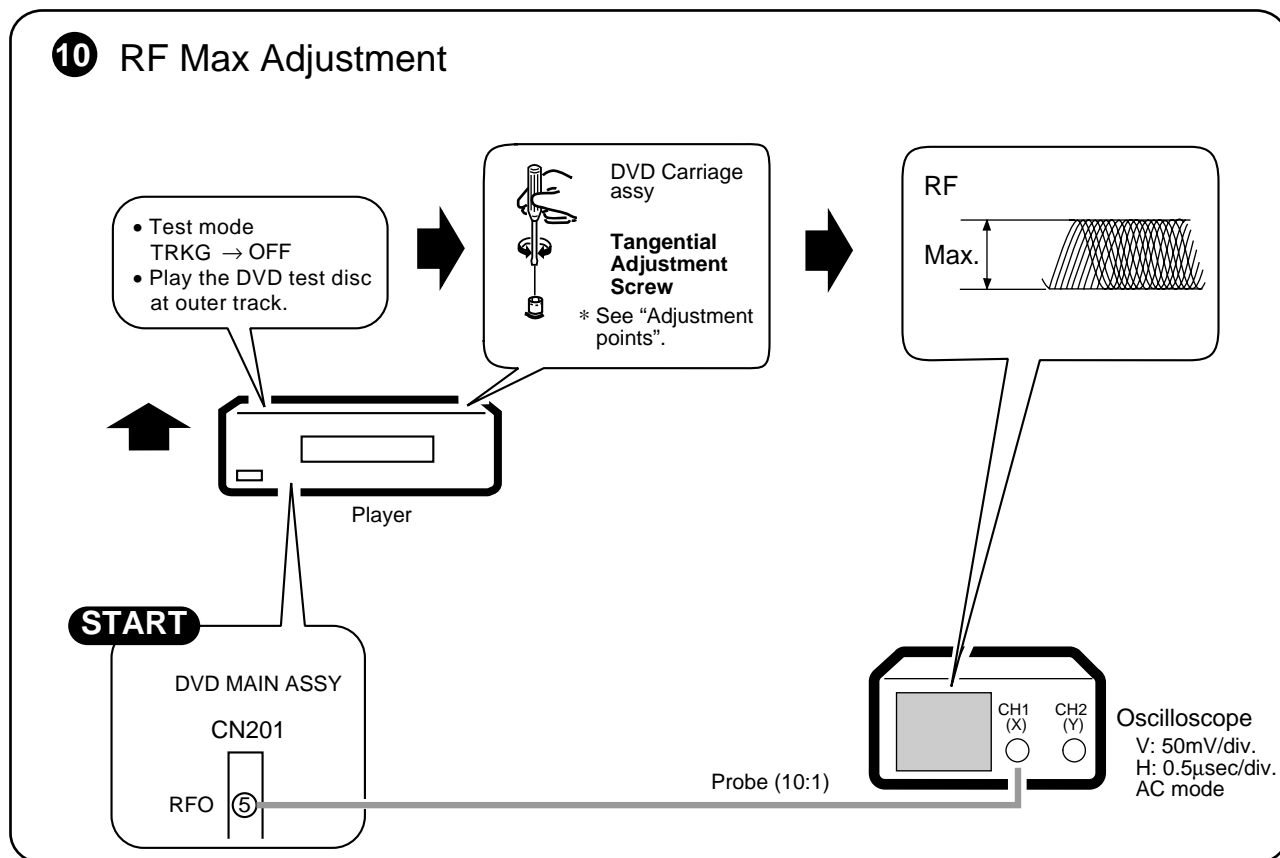
VIDEO OUT

VIDEO IN

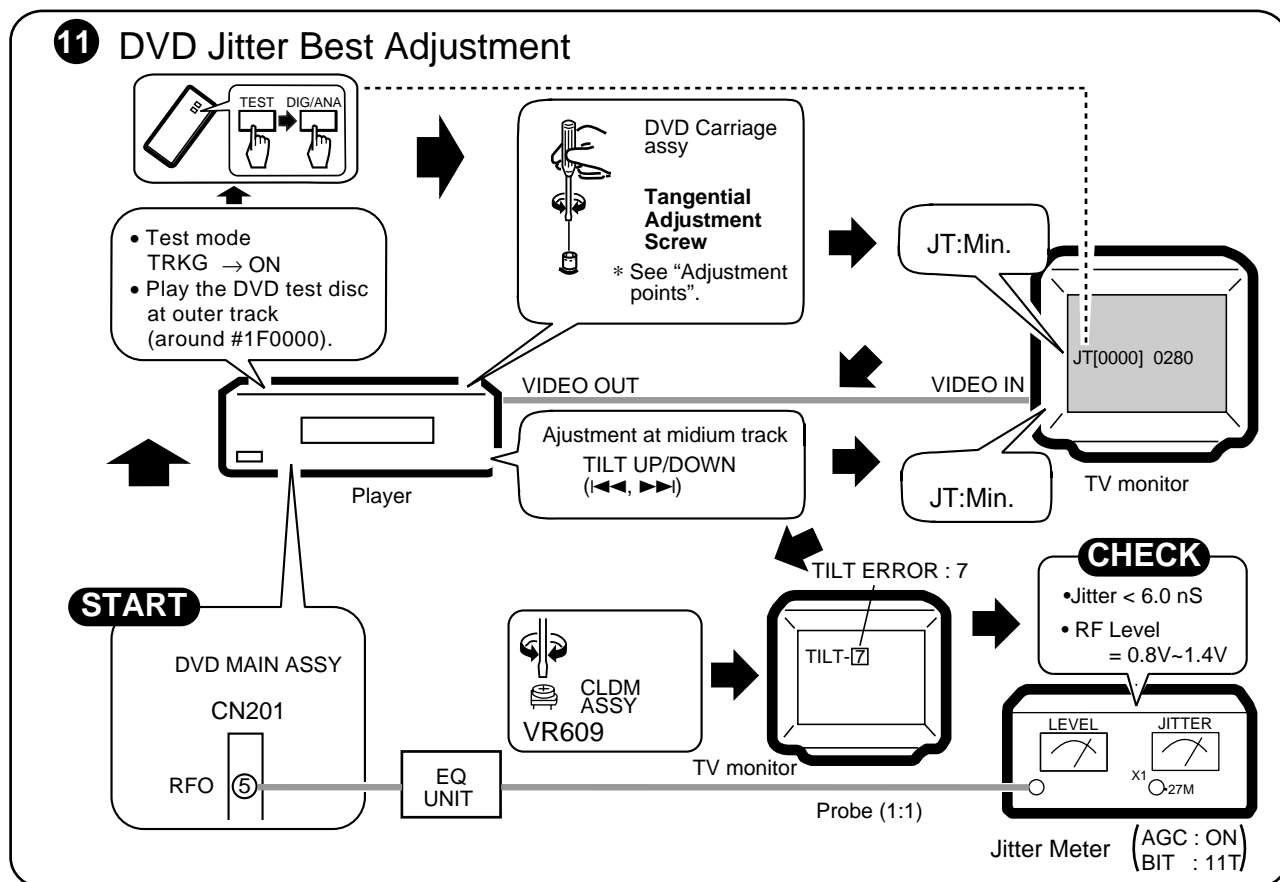


TV monitor

10 RF Max Adjustment

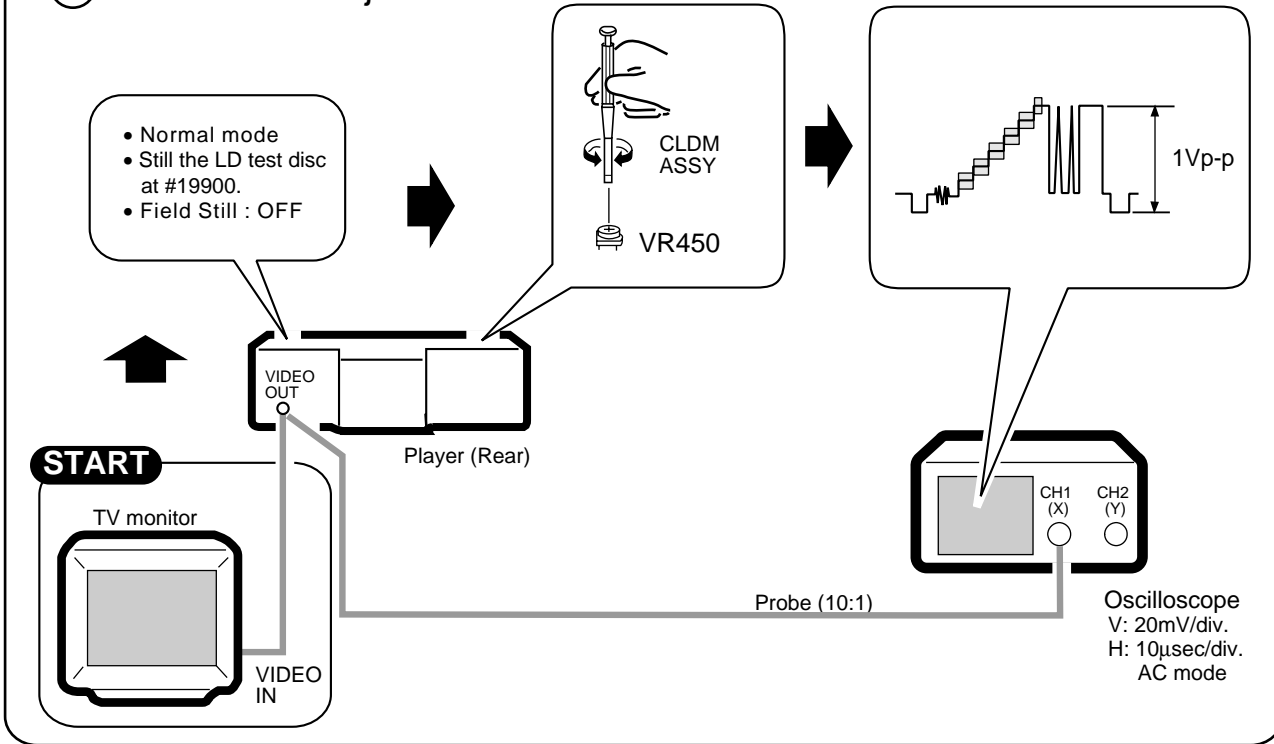


11 DVD Jitter Best Adjustment

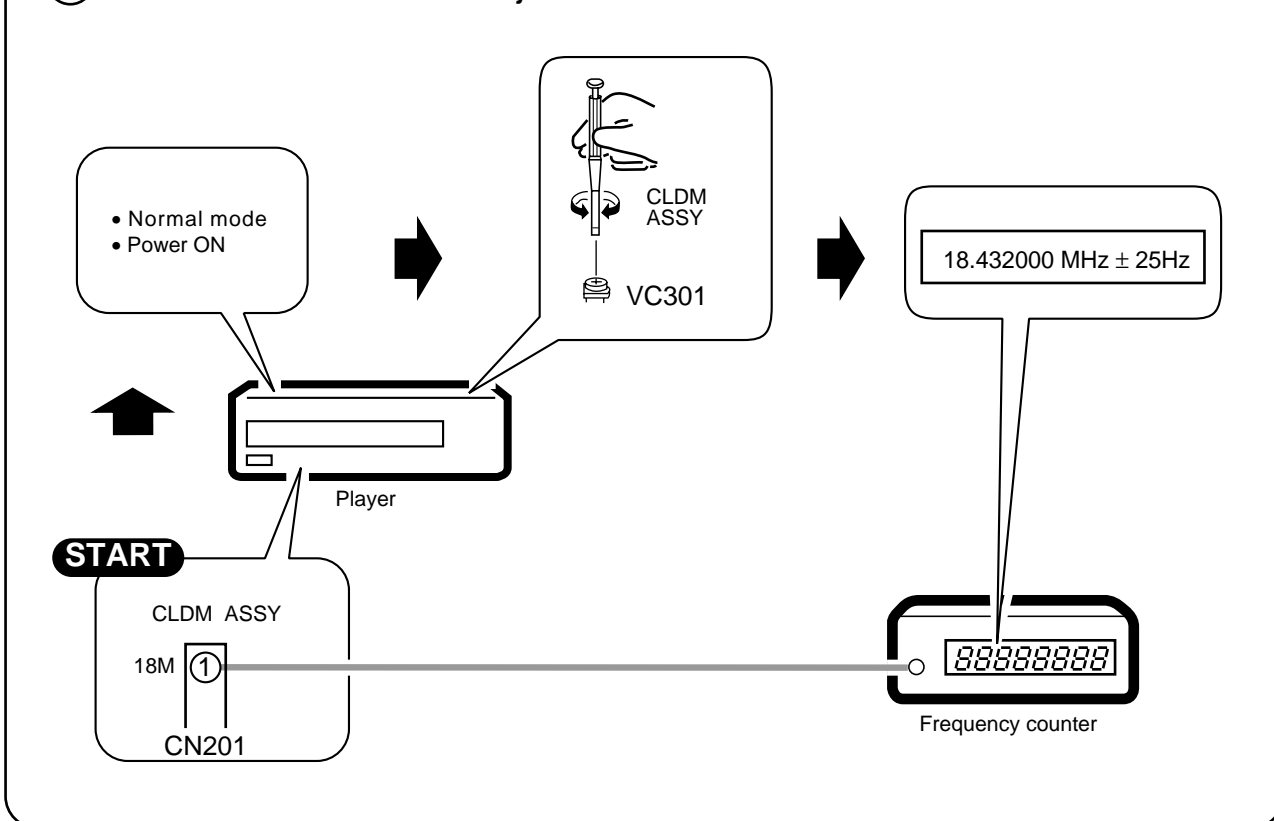


6.7 ELECTRICAL ADJUSTMENT FOR CLDM ASSY

① Video Level Adjustment

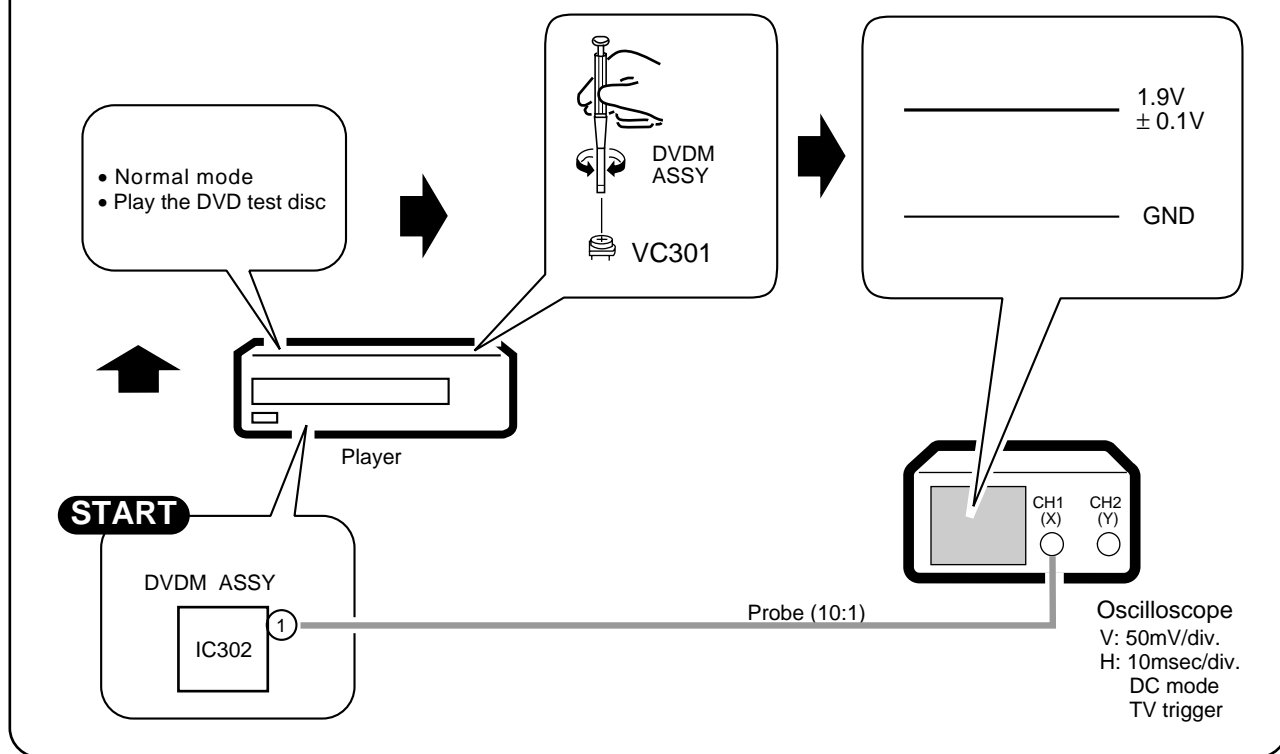


② 18MHz Master Clock Adjustment

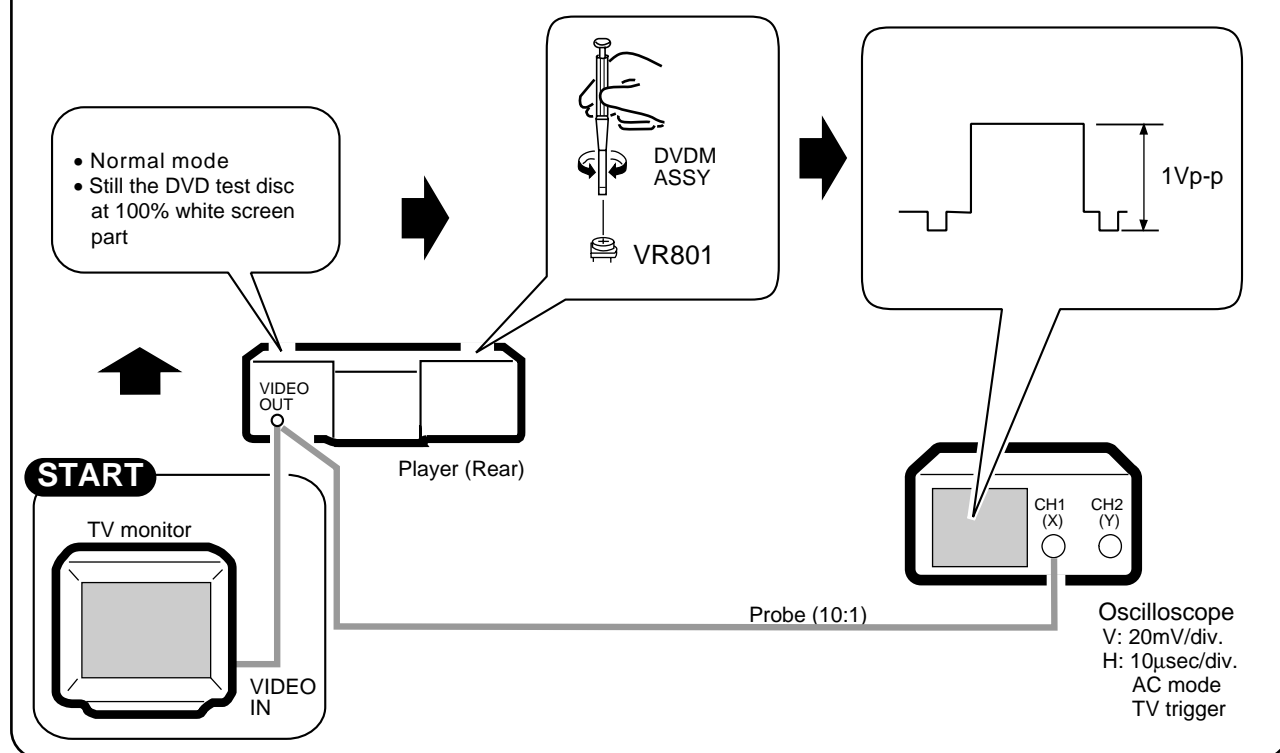


6.8 ELECTRICAL ADJUSTMENT FOR DVDM ASSY

① VCO Offset Adjustment

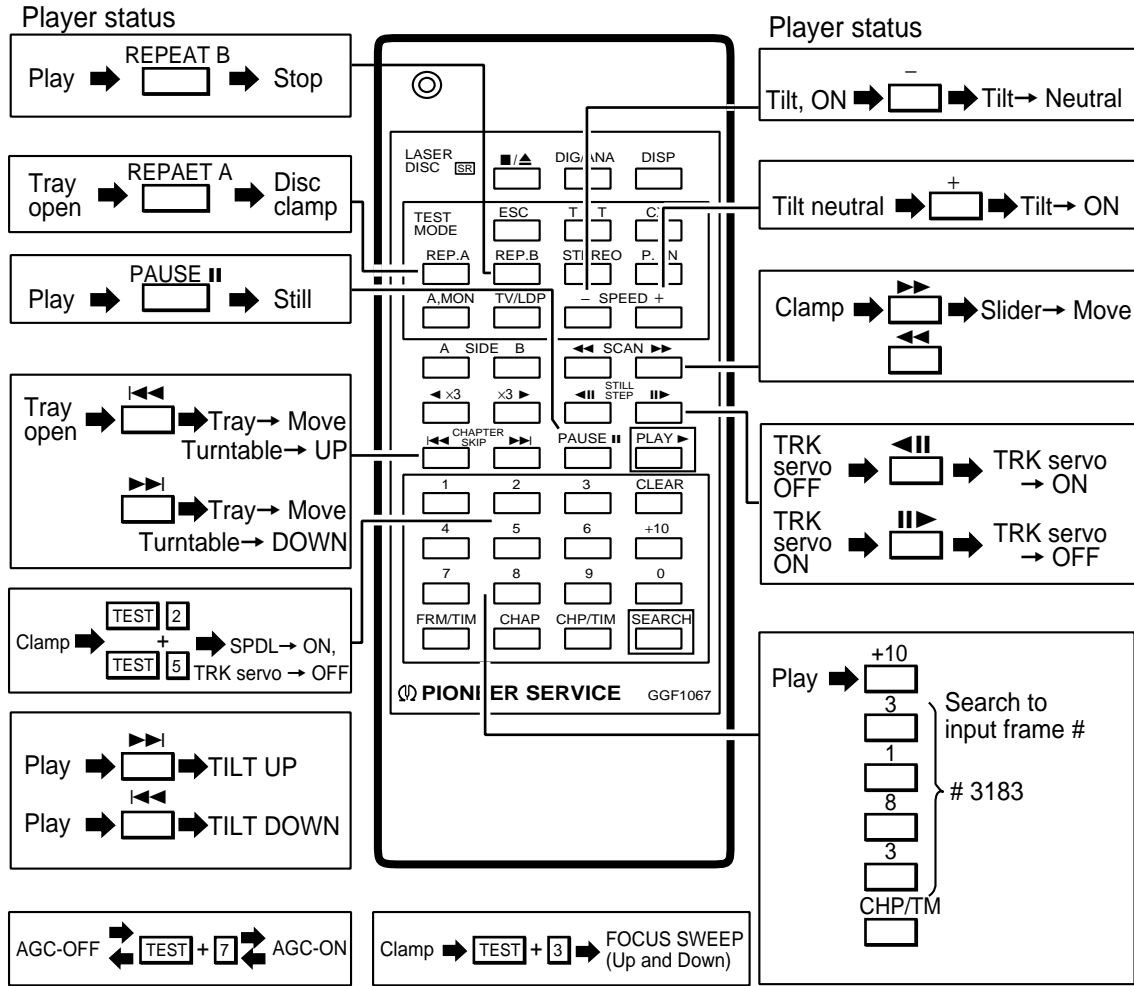


② Video Output Level Adjustment

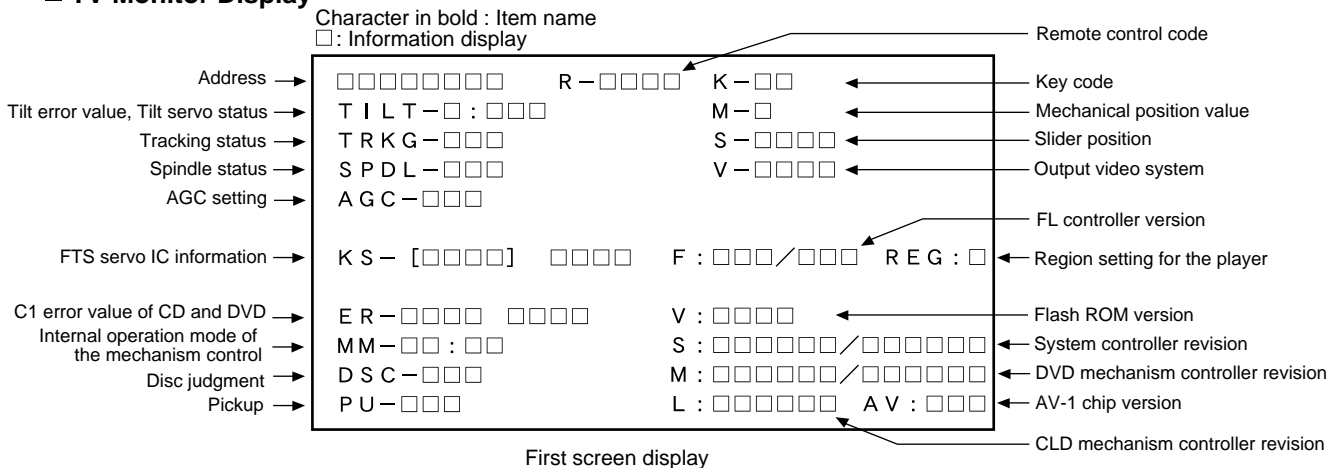


6.9 OPERATIONS IN THE TEST MODE

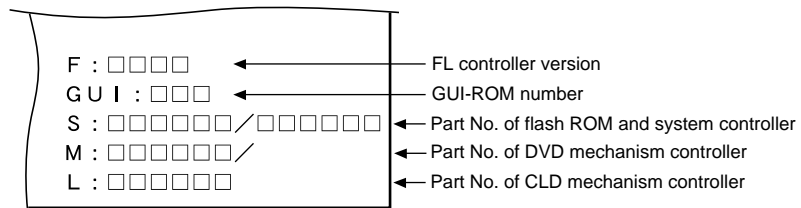
■ Test Mode Remote Control Unit (GGF1067)



■ TV Monitor Display



Note : Switch the first and second screen by pressing the [DISPLAY] key on the remote control unit.



Second screen display (at lower right portion of the screen)

7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

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

■ PD0266A2 (CLDM ASSY : IC101)

- Mechanism Control IC

• Pin Function

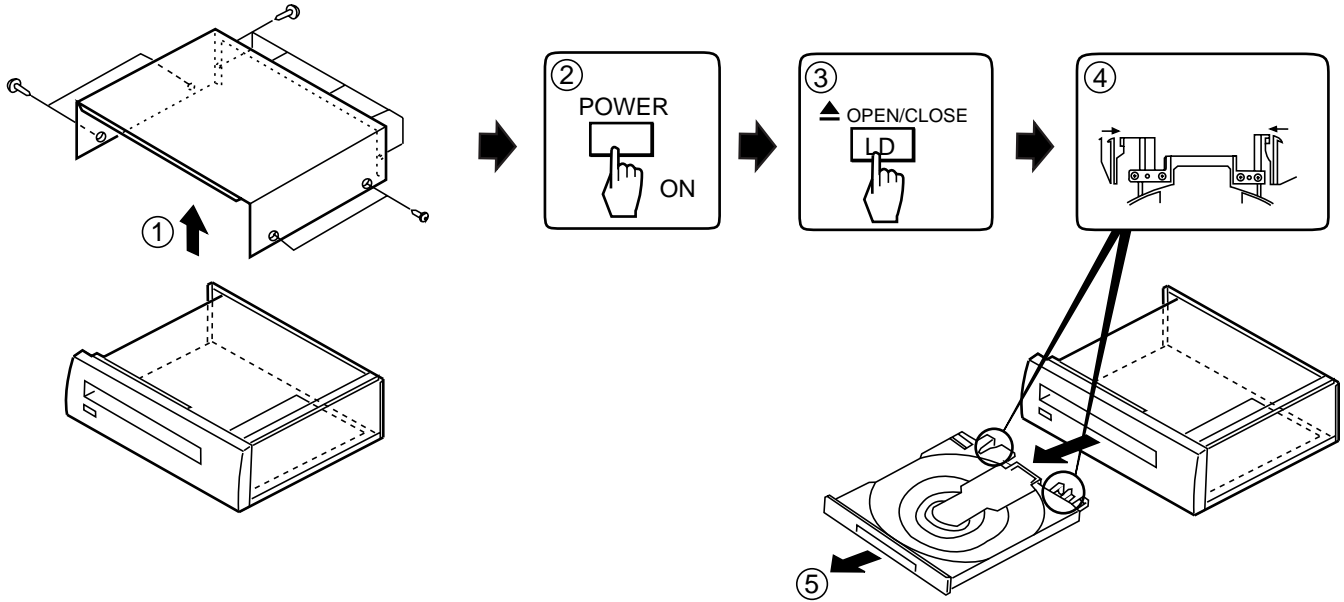
No.	Pin Name	I/O	Function
1	VCC	I	Power supply pin Apply 5V ± 10%
2	RWC	O	DSP read/write command signal output "L"= Read "H"= Write
3	XPLAY	O	Signal output during spindle servo "L"= SC PLAY "H"= Others
4	XCQCK	O	DVP/DSP clock switch "L"= DSP "H"= Others
5	XCD	O	LD/CD switch signal output "L"= CD "H"= LD
6	TILT ERR	I	A/D • This signal is A/D converted as the tilt servo control input. Control the tilt motor so that this signal becomes 2.5V.
7	TRK BAL ERR	I	A/D • Tracking balance error signal input This signal is A/D converted as the tracking offset control input.
8	SLD ERR	I	A/D • This signal is A/D converted as the slider servo control input. Control the slider motor so that this signal becomes 2.5V.
9	SLD POS	I	A/D • Pickup position detection switch input Detect the position by reading A/D input value which each switches are resistance divided.
10	FSEQ	I	Subcode sync. confirmity detection signal input "L"= Not confirmity "H"= Confirmity
11	XC DETECT	I	Spindle over-current detection signal input "L" = Over current "H"= Normal
12	TRK BAL DRV	O	PWM • Output the tracking offset signal to PWM output, then use for auto tracking offset. 910 μsec period, tri-state control H, L, Z
13	SHAKE	I/O	Handshake signal for data communication with the DVD mechanism control IC This pin is the bilateral data line and each microprocessor control the Input/Output.
14	RF CORRECTION	O	RF correction switch signal output "H"= Gain UP CD, CDV-A:Low, CAV inner circuit gain up, others are High.
15	SQOUT	I	Command data input from DSP Read out SUBQ
16	COIN	O	Serial 3 data output
17	SCK3/CQCK	O	Serial 3 clock output
18	SLD DRV	O	PWM • Slider control signal output 5V= FWD, 0V= REV, 2.5V= STOP 910 μsec period, tri-state control
19	SI1	I	Serial data input from the DVD mechanism control IC
20	SO1	O	Serial data output to the DVD mechanism control IC
21	SCK1	I/O	Clock for serial communication with the DVD mechanism control IC Becomes input mode without communicate with the DVD mechanism control IC
22	TRK 0 CRS	I	INT • Tracking error zero cross signal input Monitor this signal when searching track count in the miss clamp detection
23	SBSY	I	Subcode block sync. input
24	TILT OUT	I/O	LOAD/TILT control output PWM output 0V : Tray IN / Tilt DOWN, 5V : Tray OUT / Tilt UP, 2.5V : STOP
25	TURN OUT	O	Turn drive signal output
26	XPBV	I	Playback vertical sync. signal input of LD/CDV "L"= During vertical sync.
27	CNVSS	I	Ground for A/D conversion
28	XRESET	I	Reset signal input "L"= Reset "H"= Release reset
29	XIN	I	9MHz clock oscillation input
30	XOUT	O	9MHz clock oscillation output

No.	Pin Name	I/O	Function
31	N.C.	O	Not used
32	GND	I	Ground
33	MSW1	I	Switch input for Loading/Tilt position detection
34	MSW3		
35	MSW2		
36	TBCLOCK	I	Spindle lock signal input "L"= Unlock "H"= Lock
37	FG	I	Spindle motor FG signal input
38	DATA	I	Input for Phillips code decoder with built-in mechanism controller
39	XPBH	I	Playback H-SYNC input for Phillips code decoder
40	XPBV	I	Playback V-SYNC input for Phillips code decoder
41	DEXT	O	Control signal output of video dynamic range extension "H"= ON "L"= OFF
42	WFM	I	WFM : with memory
43	LATMEM	O	Serial control latch output of memory control IC PD3212A Latches at falling edge.
44	YACK	O	3 line digital comb IC PD6148 ACK input
45	XYCINH	O	3 line digital comb IC PD6148 Communication data switch output
46	XANRH	O	Analog NR level "L"= low "H"= high
47	THOLD	I	Track jump accelerating / decelerating signal input "L"= Others "H"= During accelerating / decelerating
48	LATDVP	O	PD0234 serial latch signal output Latches at falling edge.
49	SELTZC	O	TZC switch signal output "H"= at normal "L"= at CD/DVD disc discrimination
50	DOCINH	O	Control the clamp pulse and clamp killer circuit by tri-state value
51	XANRON	O	Control signal output of analog NR "L"= ON "H"= OFF
52	NROFF	O	Noise reduction control output by VDEM "L"= Normal "H"= Not NR
53	DSCEXST	I	Disc present/absent detecting signal input by the tilt sum in the DVD P.U. mode "H"= Absent "L"= Present DEFECT input at LD P.U.
54	XTURNB	I	Turn switch input "H"= Side A / turn "L"= Side B
55	XTURNA	I	Turn switch input "H"= Side B / turn "L"= Side A
56	XLPO	I	LD P.U. out position detecting switch input "H"= LD P.U. active "L"= LD P.U. out position
57	VDET	I	Use for power abnormal signal input port "L"= Normal "H"= Abnormal
58	XFOK	I	Focus servo lock signal input "L"= Lock "H"= Unlock Use for lock detection of focus servo
59	WRQ	I	Subcode Q reading OK signal input "L"= NG "H"= OK This pin will be H when subcode Q data passed by CRC check.
60	AC3MUTE	O	Mute control signal output for AC3 Release MUTE during playback. "L"= Release MUTE "H"= MUTE
61	SQ1	O	Analog audio switching signal output 1/L "L"= Squelch OFF "H"= Squelch ON
62	SQ2	O	Analog audio switching signal output 2/R "L"= Squelch OFF "H"= Squelch ON
63	XCX	O	Analog audio CX noise reduction switching signal output "L"= CX ON "H"= CX OFF
64	XANA	O	Digital / Analog audio switching signal output "L"= Analog "H"= Digital

7.2 DISASSEMBLY/ASSEMBLY

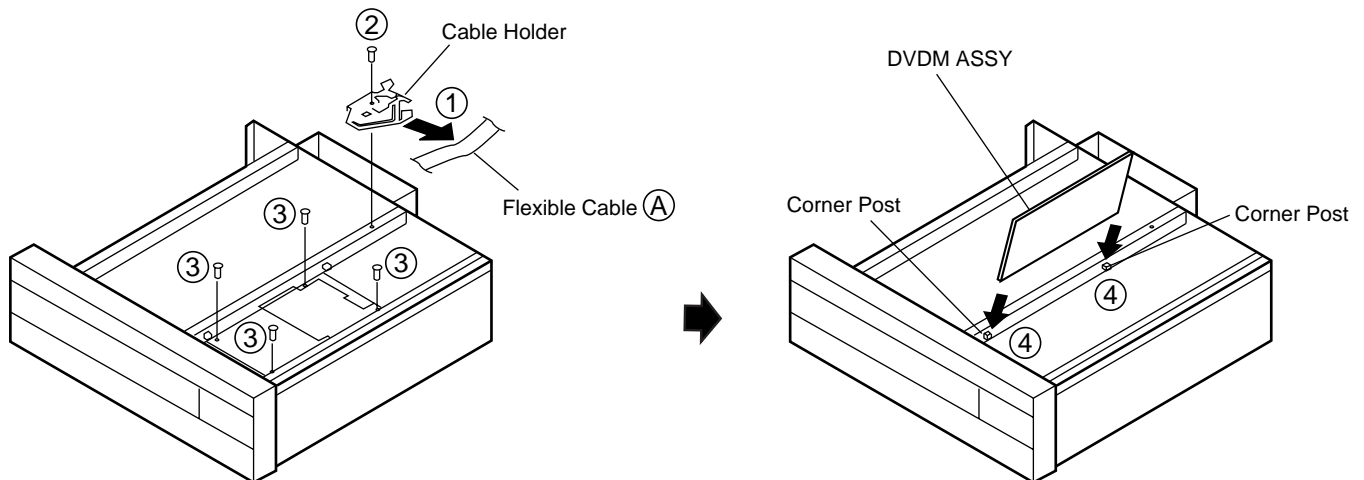
(1) DISC TRAY

- Disassembly : ① → ② → ③ → ④ → ⑤
- Assembly : ⑤ → ①



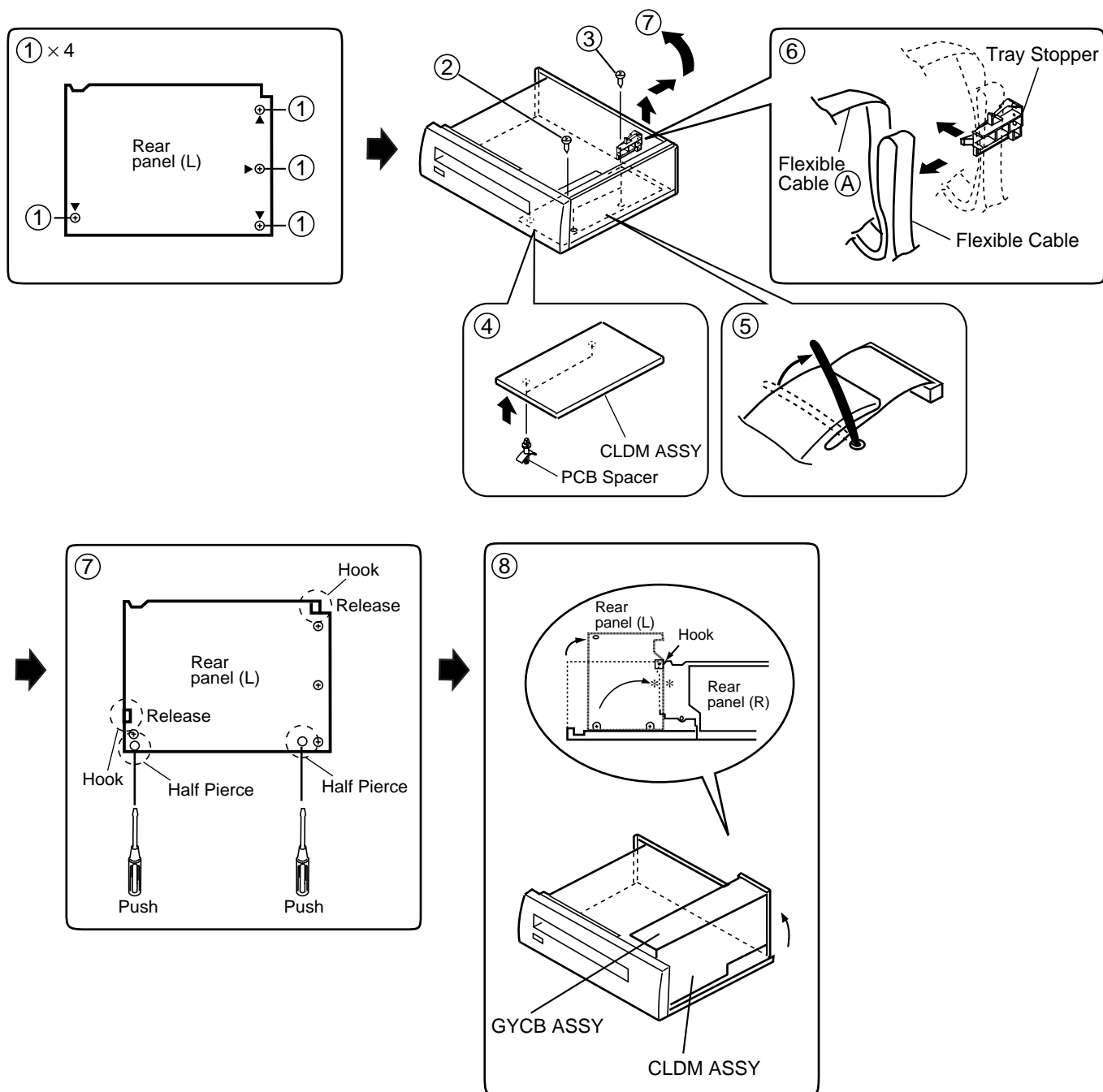
(2) DVDM ASSY

- Disassembly : ① → ② → ③ → ④
- Assembly : ④ → ③ → ② → ①

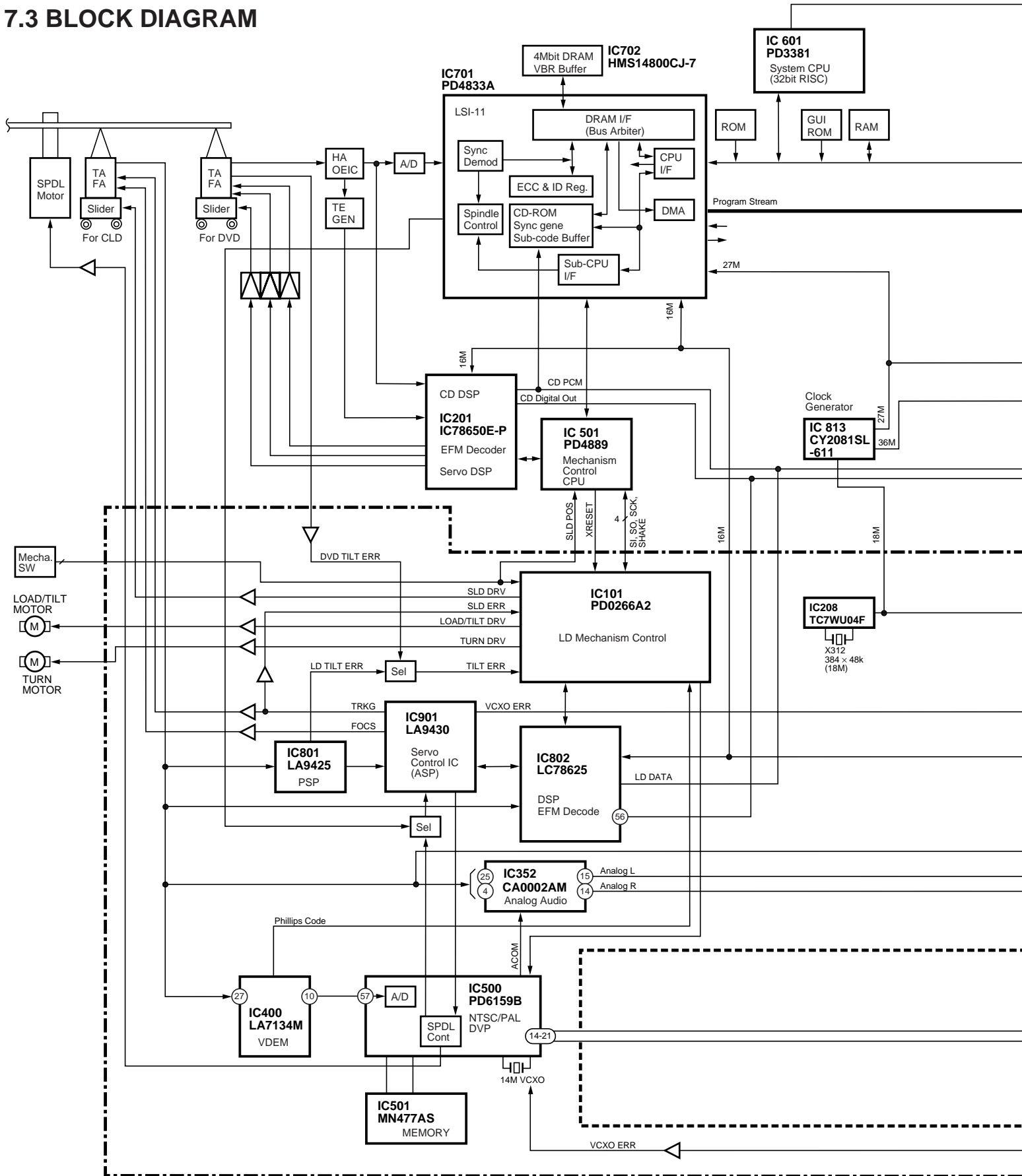


(3) CLDM ASSY

- Disassembly : ① → ② → ③ → ④ → ⑤ → ⑥ → ⑦ → ⑧
- Assembly : ⑧ → ⑦ → ⑥ → ⑤ → ④ → ③ → ② → ①



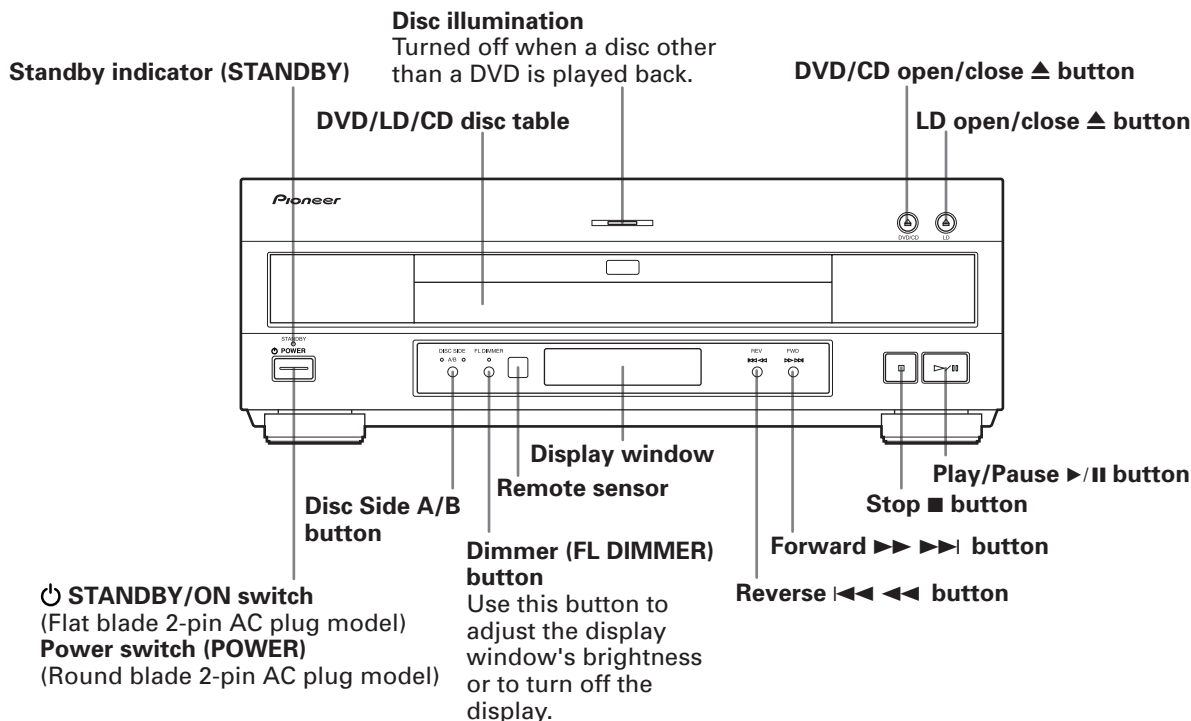
7.3 BLOCK DIAGRAM



8. PANEL FACILITIES AND SPECIFICATIONS

FRONT PANEL

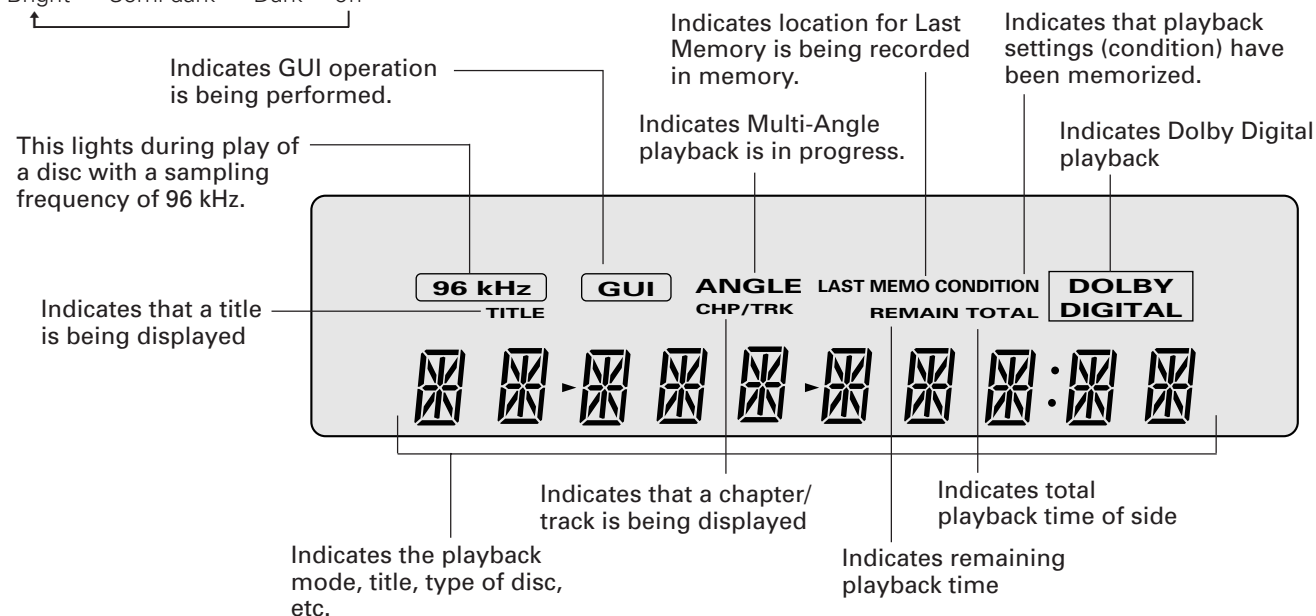
The following illustration shows the Flat blade 2-pin AC plug model.



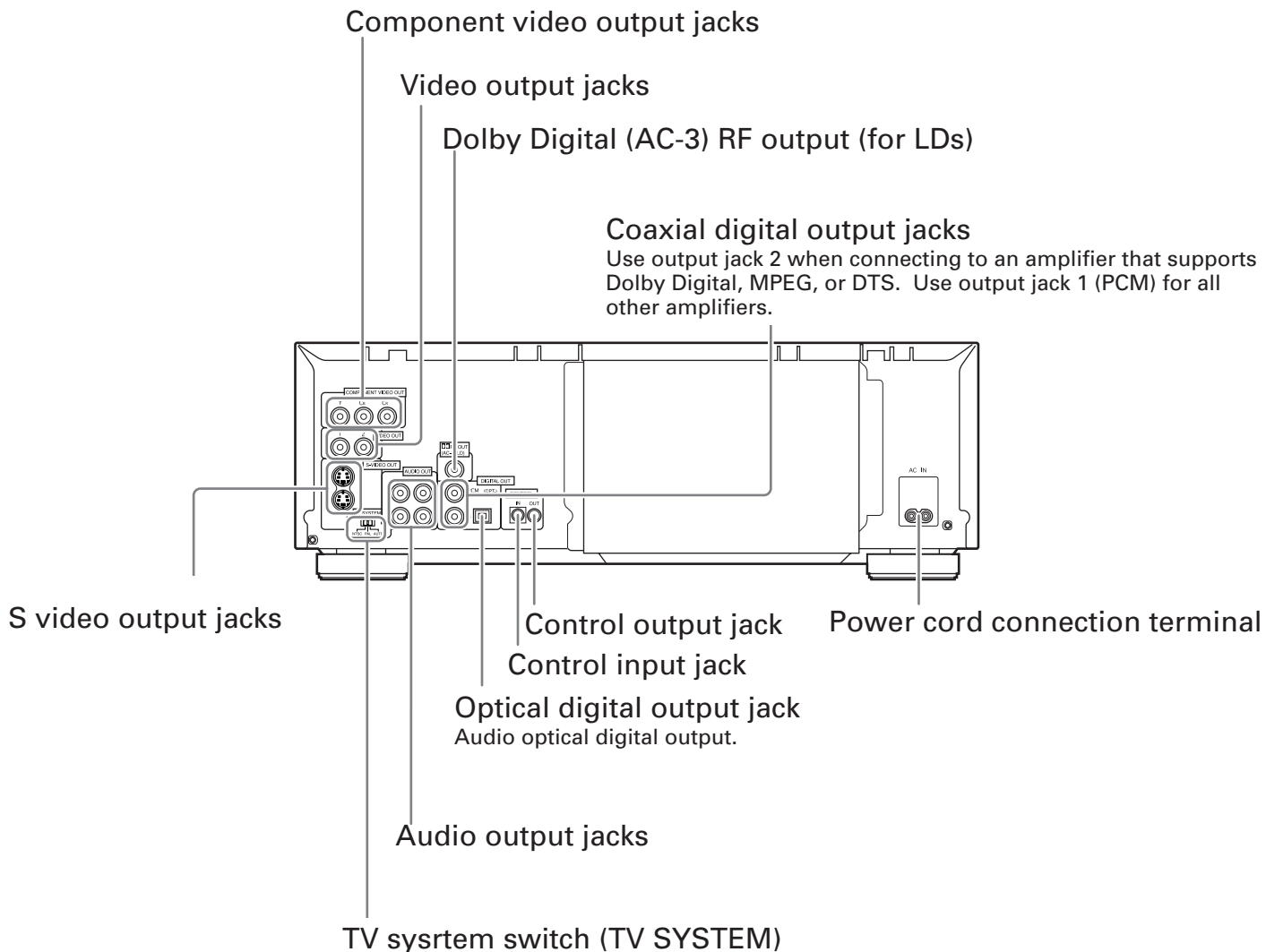
DISPLAY WINDOW

When you press the FL DIMMER button, the brightness of the display window changes among the following settings.

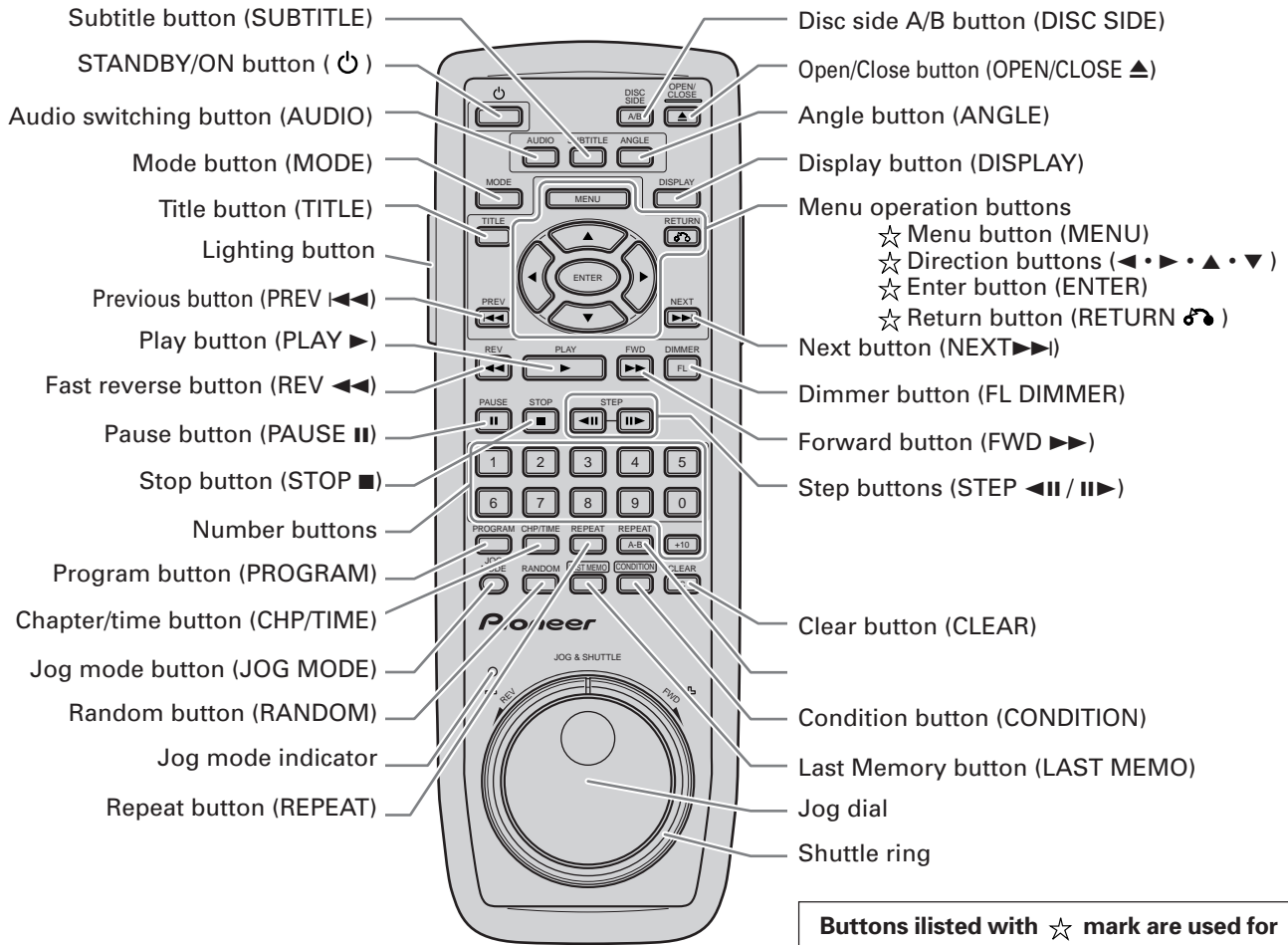
Bright → Semi-dark → Dark → off



■ REAR PANEL

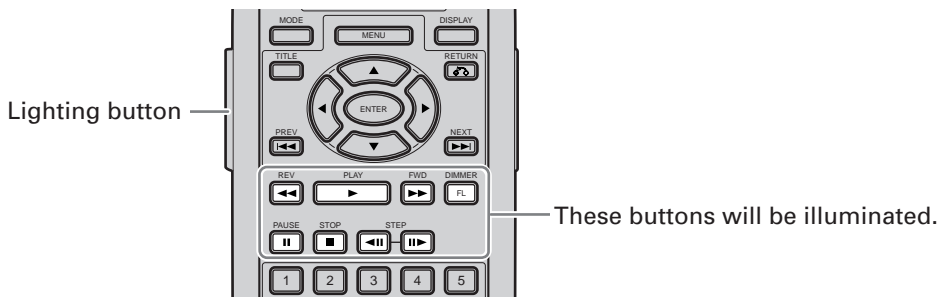


■ REMOTE CONTROL



Using the lighting button

- When you press the lighting button on the left side of the remote control, buttons on the remote control illustrated below will be illuminated for about 3 seconds.



■ SPECIFICATIONS

General

System	DVD system, LaserVision Disc system and Compact Disc digital audio system
Power requirements	AC 110-127/220-240V, 50/60Hz
Power consumption	48 W
Power consumption in standby mode	6.9 W
Weight	
Flat blade 2-pin AC plug model	8.5kg
Round blade 2-pin AC plug model	8.6kg
Dimensions	
Flat blade 2-pin AC plug model	420(W) x 462(D) x 146(H) mm
Round blade 2-pin AC plug model	420(W) x 464(D) x 146(H) mm
(Not including protruding cables, etc.)	
Operating temperature	+5°C to +35°C
Operating humidity	5% to 85%

S-Video Output (2 pairs)

Y (luminance) - Output level	1 Vp-p (75 Ω)
C (color) - Output level	286 mVp-p (75 Ω)
Jacks	S-VIDEO jack

Video Output (2 pairs)

Output level	1 Vp-p (75 Ω)
Jacks	RCA jacks

Component Video Output

(Y, C _B , C _R)	
Output level	Y: 1.0 Vp-p (75 Ω)
.....	C _B , C _R : 0.7 Vp-p (75 Ω)
Jacks	RCA jacks

Audio Output (2 pairs)

Output level	
During audio output	200 mVrms (1 kHz, -20 dB)
Number of channels	2
Jacks	RCA jacks

Digital audio characteristics (DVD fs=96kHz/24 bit)

Frequency response	4 Hz to 44 kHz (DVD fs: 96 kHz) 4 Hz to 20 kHz (LD, CD)
S/N ratio	115 dB
Dynamic range	103 dB
Total harmonic distortion	0.002 %
Wow and flutter	Limit of measurement (±0.001% W. PEAK) or lower

Other Terminals

Optical digital output (AC-3/PCM)	Optical digital jack
Coaxial digital output (AC-3/PCM)	RCA jack
Coaxial digital output (PCM)	RCA jack
AC-3 RF output (for LD)	RCA jack
CONTROL IN	Minijack (3.5ø)
CONTROL OUT	Minijack (3.5ø)

Accessories

Remote control unit	1
AA (R6P) dry cell batteries	2
Audio cord	1
Video cord	1
Power cord	1
Operating Instructions	1

NOTE:

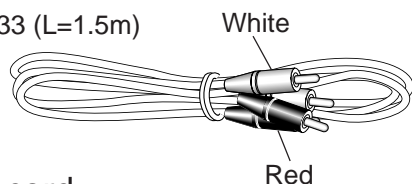
The specifications and design of this product are subject to change without notice, due to improvement.

Manufactured under license from Dolby Laboratories. "Dolby", "AC-3" and the double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works, © 1992-1997 Dolby Laboratories, Inc. All rights reserved.

■ ACCESSORIES

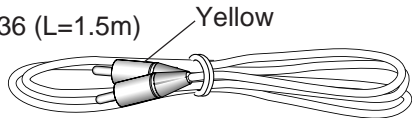
Audio cord

VDE1033 (L=1.5m)



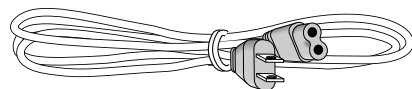
Video cord

VDE1036 (L=1.5m)

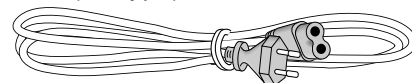


Power cord

<Flat blade 2-pin AC plug model>
ADG7003 (RB and RD/RB types)
ADG7017 (RAM type)



<Roundblade 2-pin AC plug model>
ADG1127 (RL type)



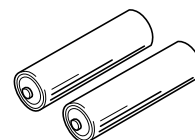
(Either of the two power cords above is supplied.)

Remote control unit

VXX2603 (CU-DV027)



Batteries(AA/R6P) ... 2



Other included items:

- Operating Instructions