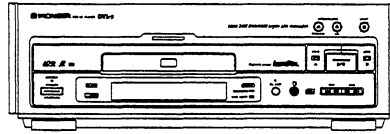


Service Manual

PIONEER
The Art of Entertainment



ORDER NO.
RRV1783

DVD LD PLAYER DVL-9

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

Type	Model	Power requirement	Remarks
	DVL-9		
RL	○	AC110 - 120V / 220 - 240V	

• For the DVD section, refer to the service guide RRV1710 for DV-500.



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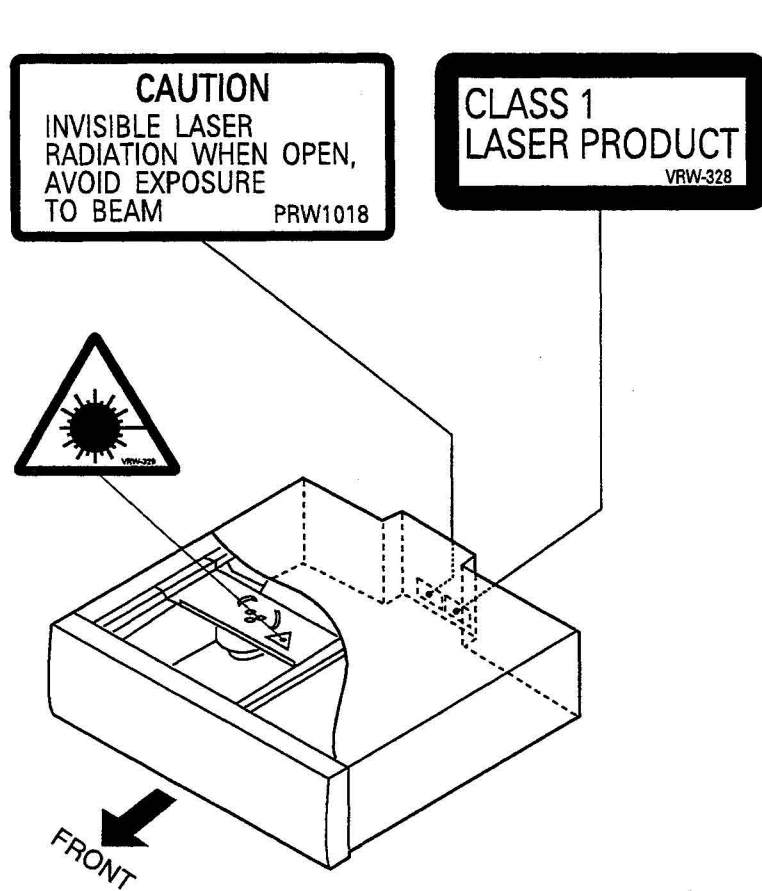
PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923
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T - IZM APR. 1997 Printed in Belgium

1. SAFETY INFORMATION

<p>VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEIYLLE. ÄLÄ KATSO SÄTEESEEN.</p>		<p>WARNING! DEVICE INCLUDES LASER DIODE WHICH EMITS INVISIBLE INFRARED RADIATION WHICH IS DANGEROUS TO EYES. THERE IS A WARNING SIGN ACCORDING TO PICTURE 1 INSIDE THE DEVICE CLOSE TO THE LASER DIODE.</p>	
<p>ADVARSEL : USYNTLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHED SAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.</p>	<p>LASER kuva 1 Lasersäteilyn varoitusmerkki</p>	<p>IMPORTANT THIS PIONNER APPARATUS CONTAINS LASER OF CLASS 1. SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.</p>	<p>LASER Picture 1 Warning sign for laser radiation</p>
<p>VARNING! OSYNTLIG LASERSTRÅLNING NÅR DENNA DEL ÅR ÖPPNAD OCH SPÄRREN ÅR URKOPPLAD. BETRAKTA EJ STRÅLEN.</p>		<p>LASER DIODE CHARACTERISTICS MAXIMUM OUTPUT POWER : 5 mw WAVELENGTH : 780-785 nm</p>	

LABEL CHECK



Additional Laser Caution

- 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 (IC201 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 5 of IC995 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 (S204 ON in the KEYB 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 a Class 1 laser beam.

* : Refer to page 79.

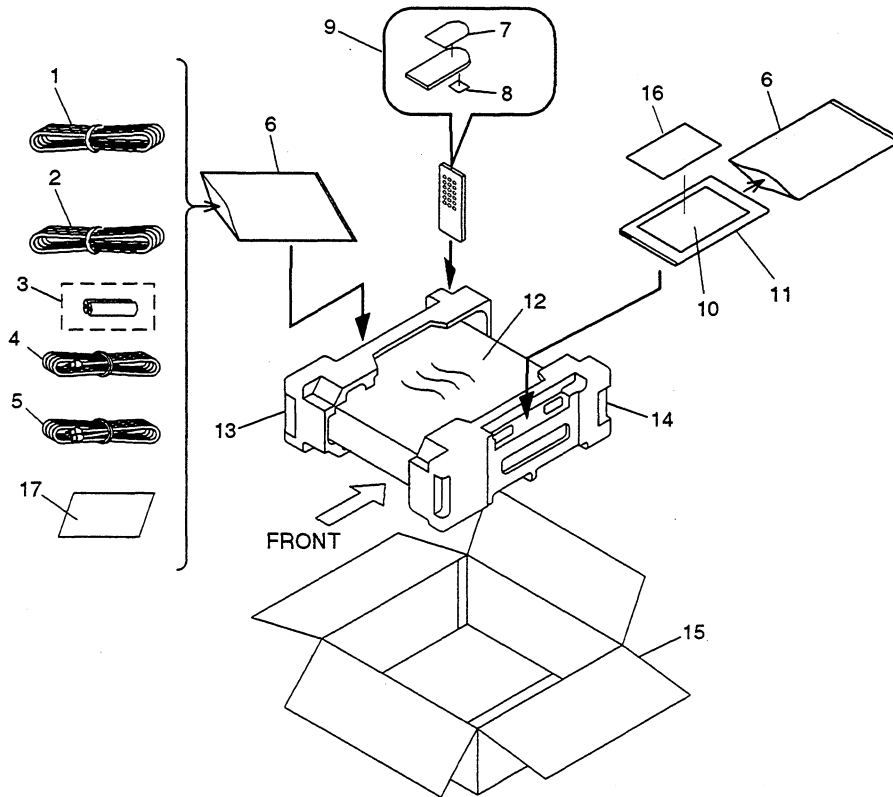
2. EXPLODED VIEWS AND PARTS LIST

NOTES : • Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

• The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

• Screws adjacent to \blacktriangledown mark on the product are used for disassembly.

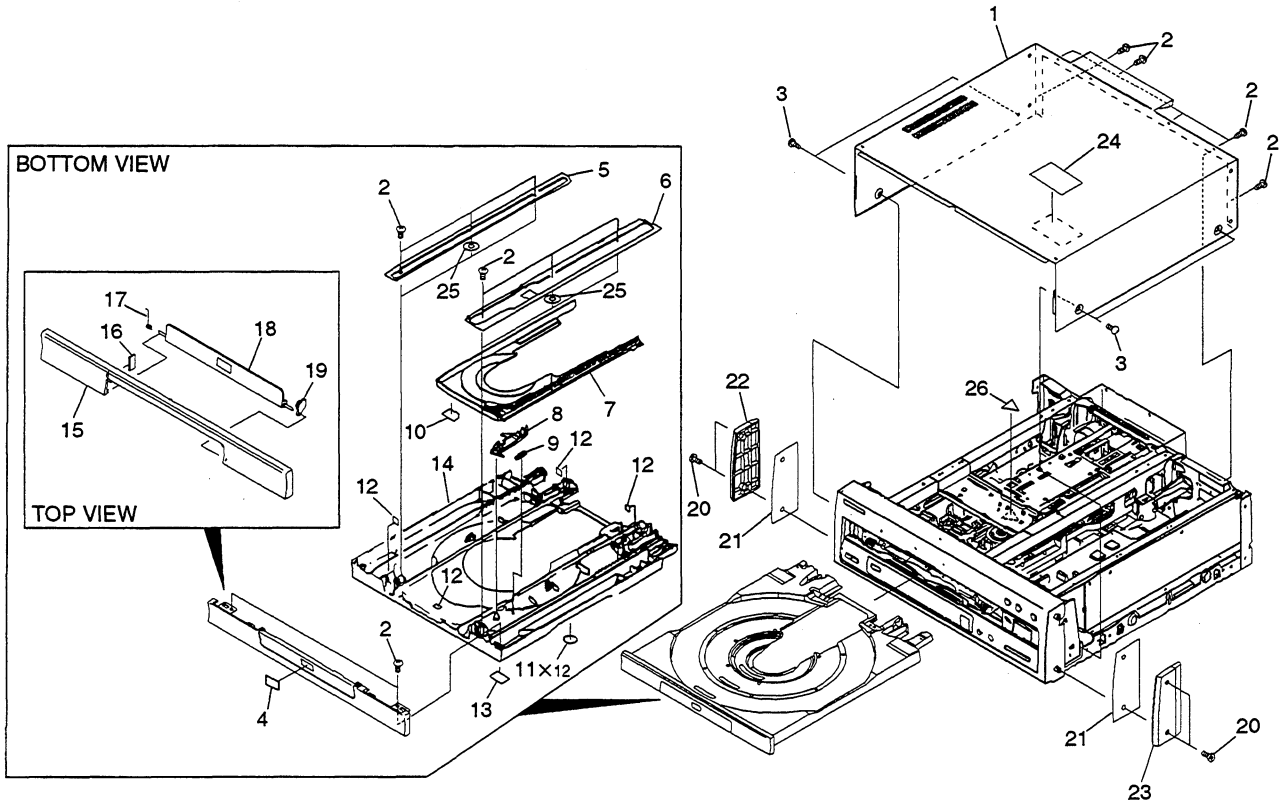
2.1 PACKING



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
Δ	1	Power Cord (Round Blade 2-Pin AC Plug)	ADG1154		9	Remote Control Unit (CU-DV002)	VXX2428
Δ	2	Power Cord (Flat Blade 2-Pin AC Plug)	ADG1158	NSP	10	Warranty Card	ARW1020
NSP	3	Dry Cell Battery (R03,AAA)	VEM-022		11	Operating Instructions (English/Chinese)	VRD1065
	4	Video Cord	VDE1036		12	Mirror Mat	VHL1018
	5	Audio Cord	VDE1033		13	Pad L	VHA1195
	6	Polyethylene Bag	Z21-038		14	Pad R	VHA1196
	7	Upper Cover	VNK3941		15	Packing Case	VHG1640
	8	Battery Cover	VNK3920	NSP	16	Caution	VRM1067
				NSP	17	Caution	VRM1068

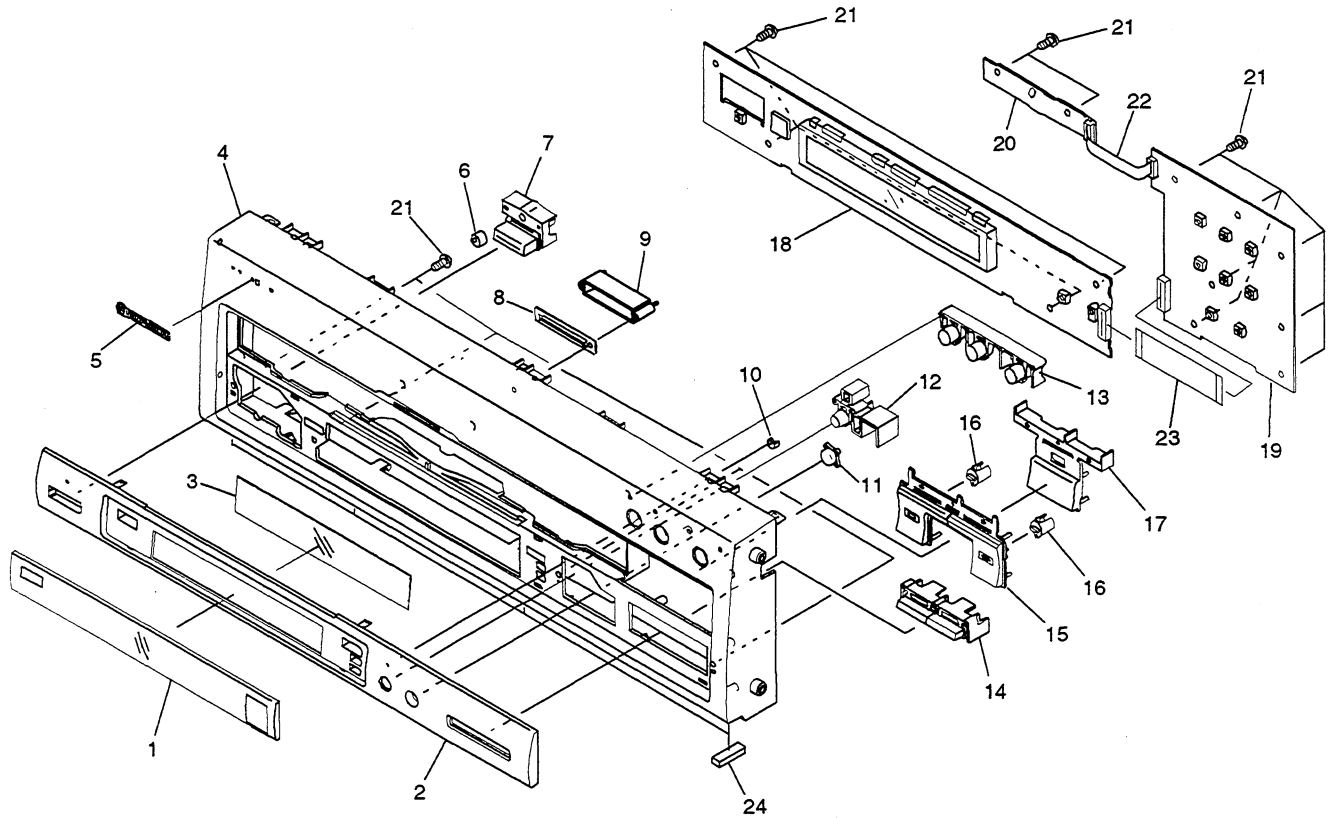
2.2 EXTERIOR SECTION



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Bonnet Case S	VXX2483		14	LD Tray Assy	VXA2302
	2	Screw	BBZ30P080FMC		15	Tray Panel	VNK3606
	3	Screw	BCZ40P060FZK		16	Door Holder	VEC1904
	4	DVD Plate	VAM1066		17	Door Spring	VBH1248
	5	Guide Plate (R)	VNE1939		18	DVD Door Assy	VXA2273
	6	Guide Plate (L)	VNE1938		19	Damper Assy	VXA1999
	7	CD Tray	VNK3664		20	Screw	VBA1028
	8	Lock Plate	VNL1703		21	Side Spacer	VNK3860
	9	Lock Plate Spring	VBH1188		22	Side Panel L	VNK3679
	10	Tray Label	VRW1628		23	Side Panel R	VNK3680
	11	Cushion	VEC1881		24	Label (REGIONAL)	VRW1654
	12	Damp Cushion	VEC1683		25	Washer	VEC1254
NSP	13	Carry Label	VRW1289		26	Caution Label (G)	VRW-329

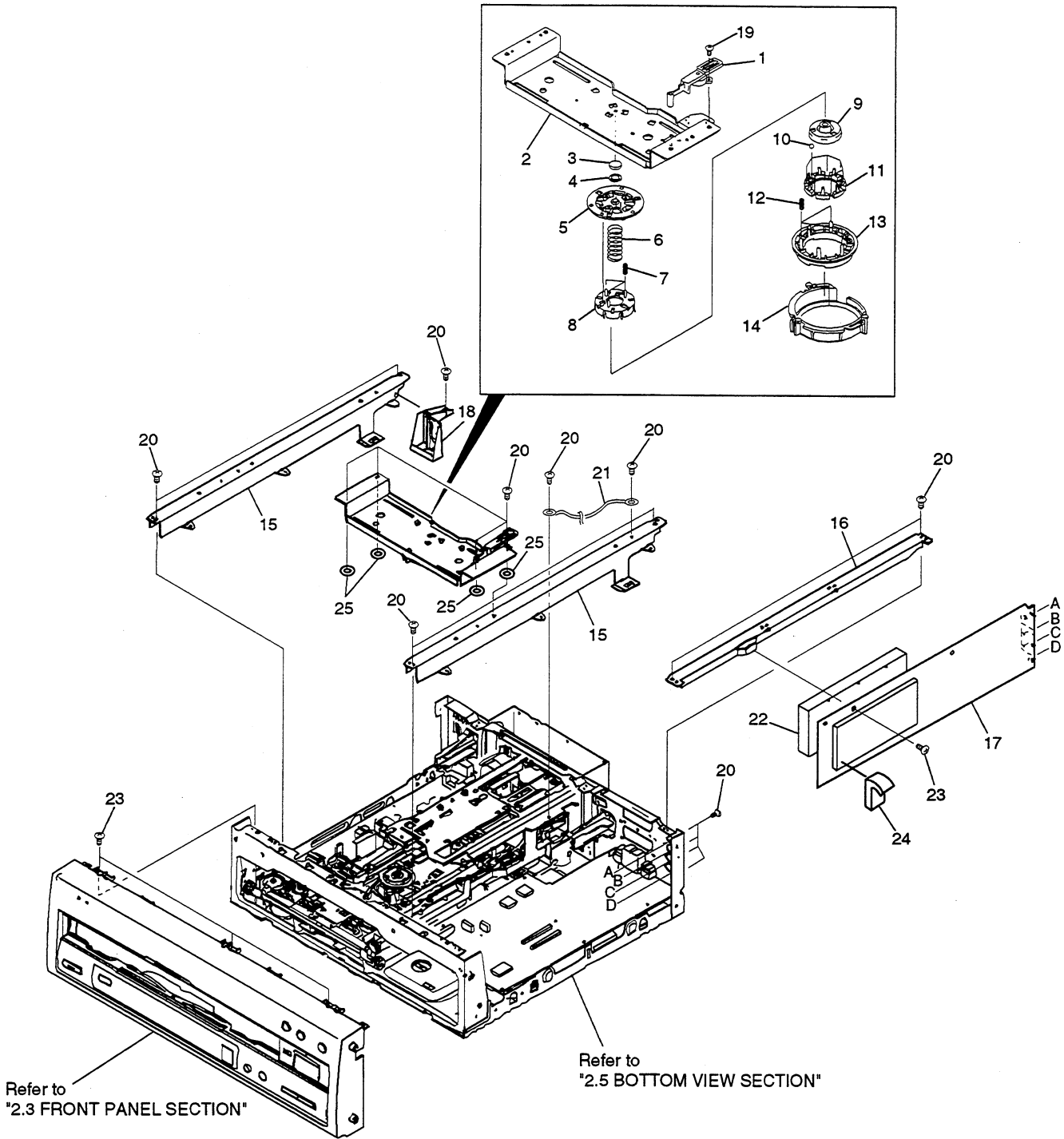
2.3 FRONT PANEL SECTION



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	FL Lens	VNK3599		13	Open Button	VNK3598
	2	Sub Panel	VNK3663		14	Skip Button	VNK3603
	3	FL Filter	VEC1891		15	Side Button	VNK3660
	4	Front Panel	VNK4027		16	Side Lens	VNK3602
	5	Name Plate	VAM1051		17	Play Button	VNK3600
	6	LED Lens	PNW2019		18	FLPB Assy	VWG1841
	7	Power Button	VNK3607		19	KEYB Assy	VWG1842
	8	Illumination Lens	VNK3652		20	LEDB Assy	VWG1832
	9	LED Holder	VNK4001		21	Screw	BBZ30P080FMC
	10	LED Lens 1	RNK2066		22	Flexible Cable (5P)	VDA1590
	11	IR Window	VNK2246		23	Flexible Cable (19P)	VDA1603
	12	Display Button	VNK3667	NSP	24	Spacer A	VEC1933

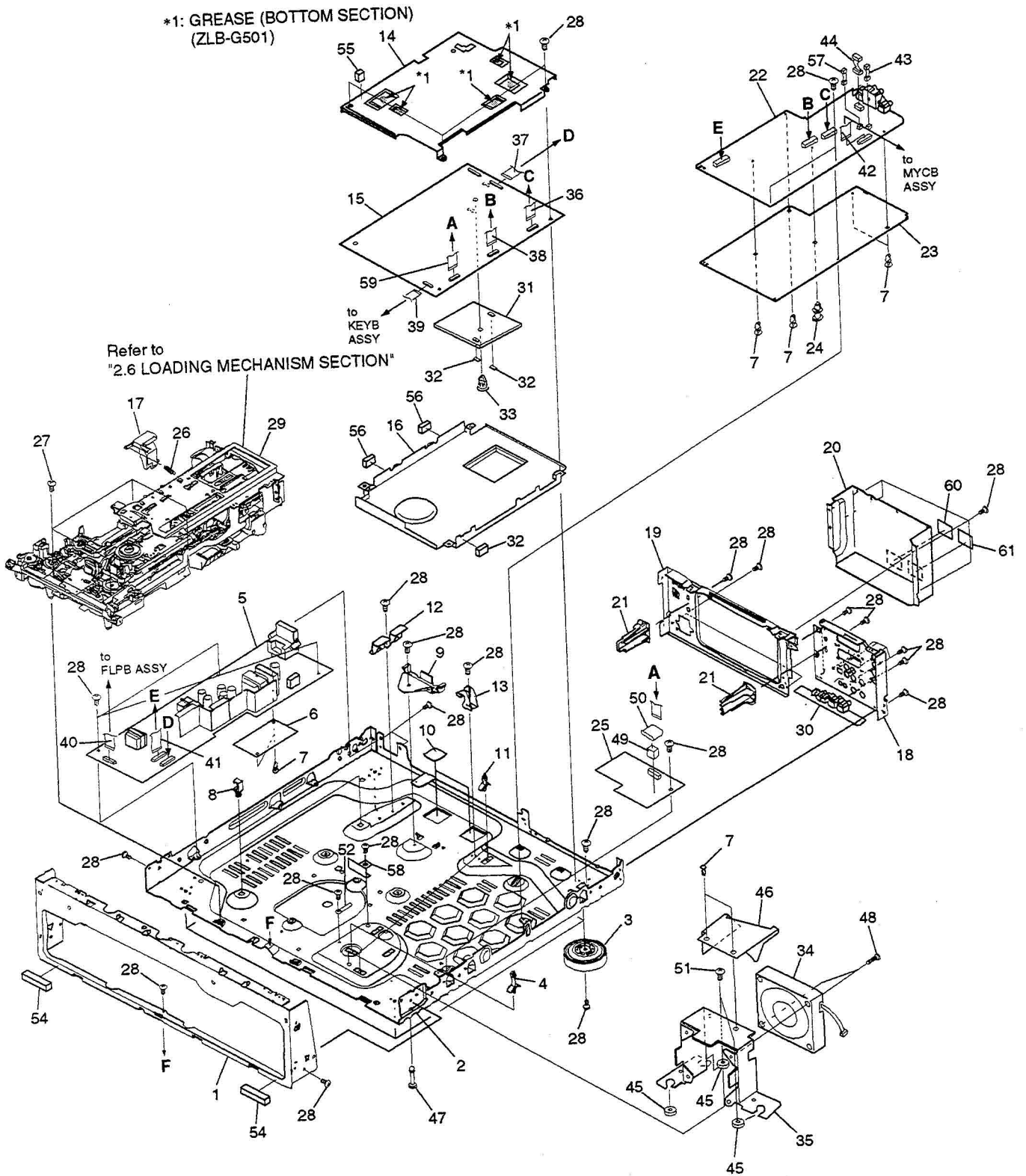
2.4 TOP VIEW SECTION



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	D Lever Assy	VXA2205		13	Clamper	VNL1604
	2	Center Plate	VNE2051		14	Clamper Holder	VNL1708
	3	Rubber Sheet	VEB1114	NSP	15	Center Angle	VNE2048
	4	Thrust Holder	VNL1663	NSP	16	PCB Holder	VNE2049
	5	Clamper Head	VNL1603		17	MGYCB Assy	VWV1468
	6	LD Spring	VBH1240		18	Shipping Cam	VNL1729
	7	Cover Spring	VBH1234		19	Screw	PBZ20P060FMC
	8	Ball Cover	VNL1602		20	Screw	BBZ30P080FMC
	9	LD Hab	VNT1047	NSP	21	Wire	DE007VF0
	10	Steel Ball	VNX1013		22	Shield Case B	VNF1099
	11	Ball Guide	VNL1616		23	Screw	IBZ30P080FMC
	12	Clamp Spring	VBH1239		24	Cushion	VEC1925
					25	Washer	VEC1952

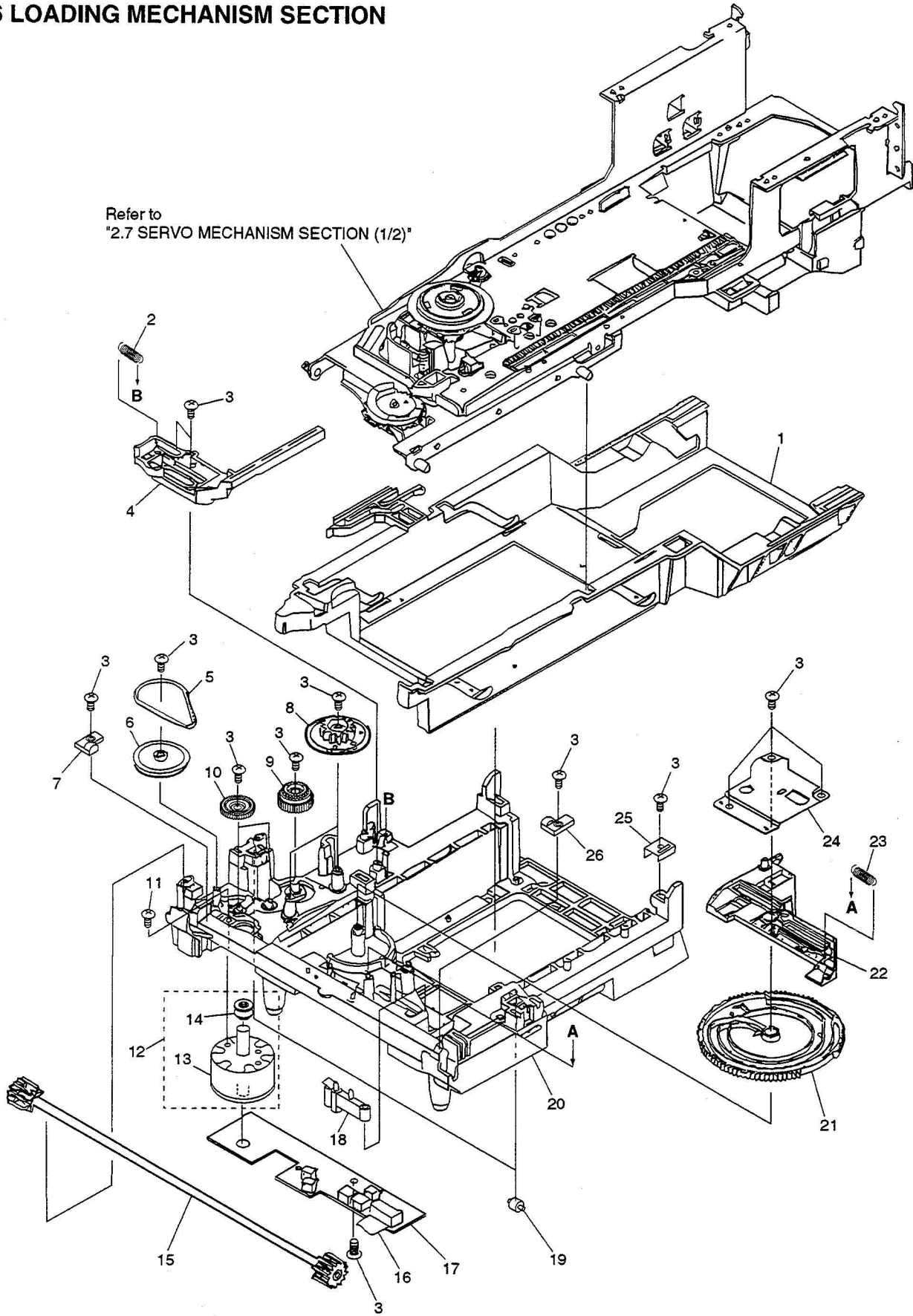
2.5 BOTTOM VIEW SECTION



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	Panel Holder	VNA1686		31	FTSB Assy	VWS1291
NSP	2	Chassis	VNA1851	NSP	32	Spacer A	VEC1933
	3	Insulator	PNW1912		33	PCB Holder	AEC1534
NSP	4	Spacer 40	PNW2488		34	DC Fan Motor	VXM1070
△	5	POWER SUPPLY Assy	VWR1274		35	Fan Holder	VNE2108
	6	Sheet P	VEC1874		36	Flexible Cable (26P)	VDA1587
	7	Rivet	RBM-003		37	Flexible Cable (24P)	VDA1588
	8	PCB Hinge	VEC1174		38	Flexible Cable (30P)	VDA1586
NSP	9	Stopper	VNE2088		39	Flexible Cable (13P)	VDA1589
	10	Rubber Spacer	VEC1939		40	Flexible Cable (5P)	VDA1572
NSP	11	PCB Spacer	AEC1188		41	Flexible Cable (15P)	VDA1582
NSP	12	Cam Holder L	VNE2089		42	Flexible Cable (10P)	VDA1583
NSP	13	Cam Holder R	VNE2090		43	Housing Assy (2P)	VKP2138
	14	Shield Case (Upper)	VNF1093		44	Housing Assy (8P)	VKP2139
	15	DVD MAIN Assy	VWS1312		45	Rubber Bush	VEB1164
	16	Shield Case (Lower)	VNF1110	NSP	46	Fan Cover	VEC1921
	17	Shipping Lever	VNL1728	NSP	47	Locking Card Spacer	VEC1596
	18	Rear Panel L	VNA1807		48	Screw	IBZ30P150FMC
	19	Rear Panel R	VNA1684	NSP	49	Spacer B	VEC1934
	20	Rear Cover	VNA1812	△	50	Ferrite Core	VTH1038
	21	Tray Stopper	VNL1707		51	Screw	VBA1029
	22	CLD MAIN Assy	VWS1284	NSP	52	Cord Holder	ZCB-069Z
	23	Sheet C	VEC1875		53	•••••	
NSP	24	PCB Spacer	AEC1372	NSP	54	Cushion	VEC1923
	25	MCRB Assy	VWV1544	NSP	55	Spacer C	VEC1935
	26	Shipping Spring	VBH1275		56	Cushion	VEC1924
	27	Screw	BBZ30P100FMC		57	Housing Assy (2P)	VKP2142
	28	Screw	BBZ30P080FMC	NSP	58	PCB Angle	VNE2110
NSP	29	Mechanism Assy	VWT1132		59	Flexible Cable (26P)	VDA1621
	30	JCKB Assy	VWV1532		60	Caution Label	PRW1018
				NSP	61	Caution Label (F)	VRW-328

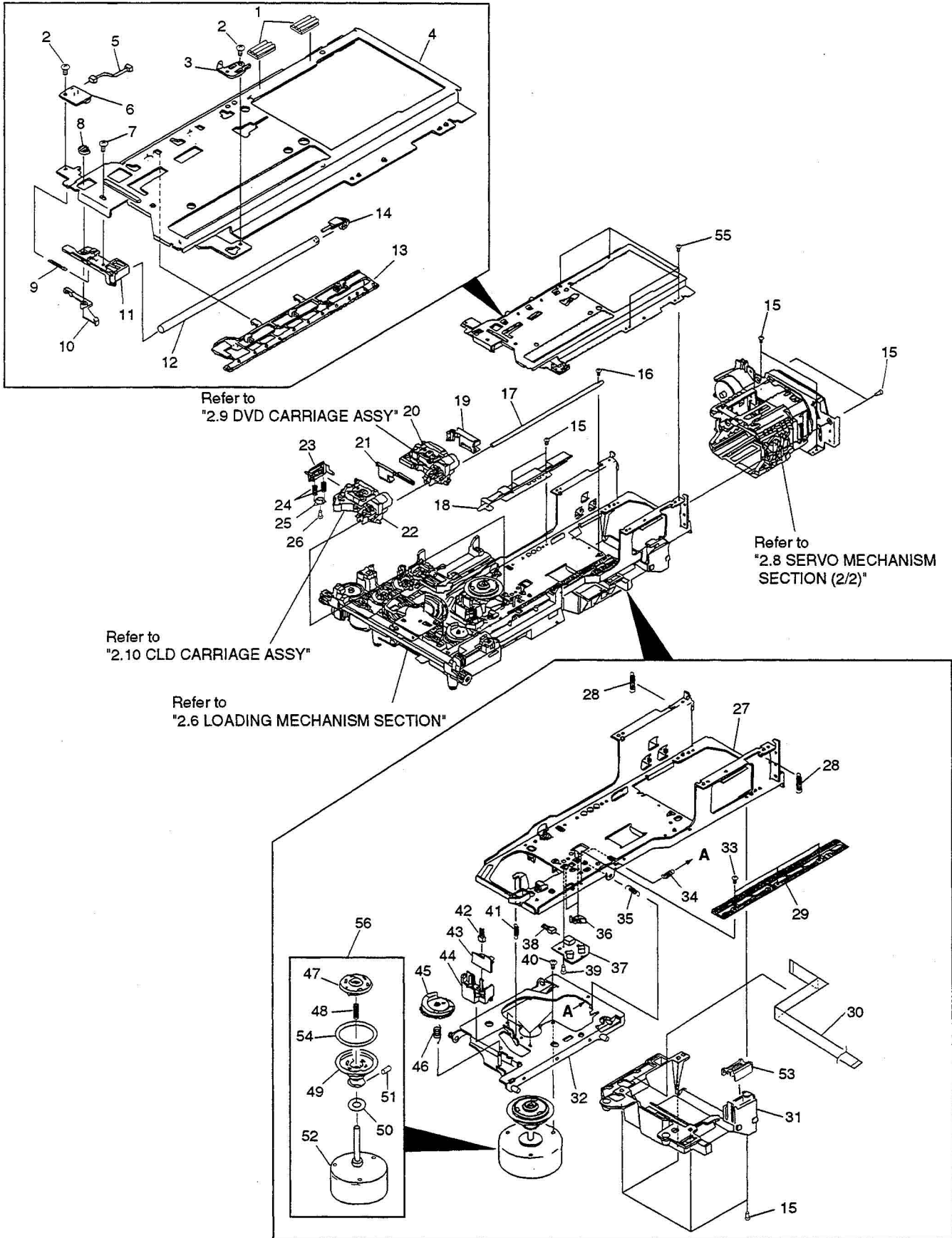
2.6 LOADING MECHANISM SECTION



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Clamp Cam B	VNL1765		16	Flexible Cable (10P)	VDA1579
	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				

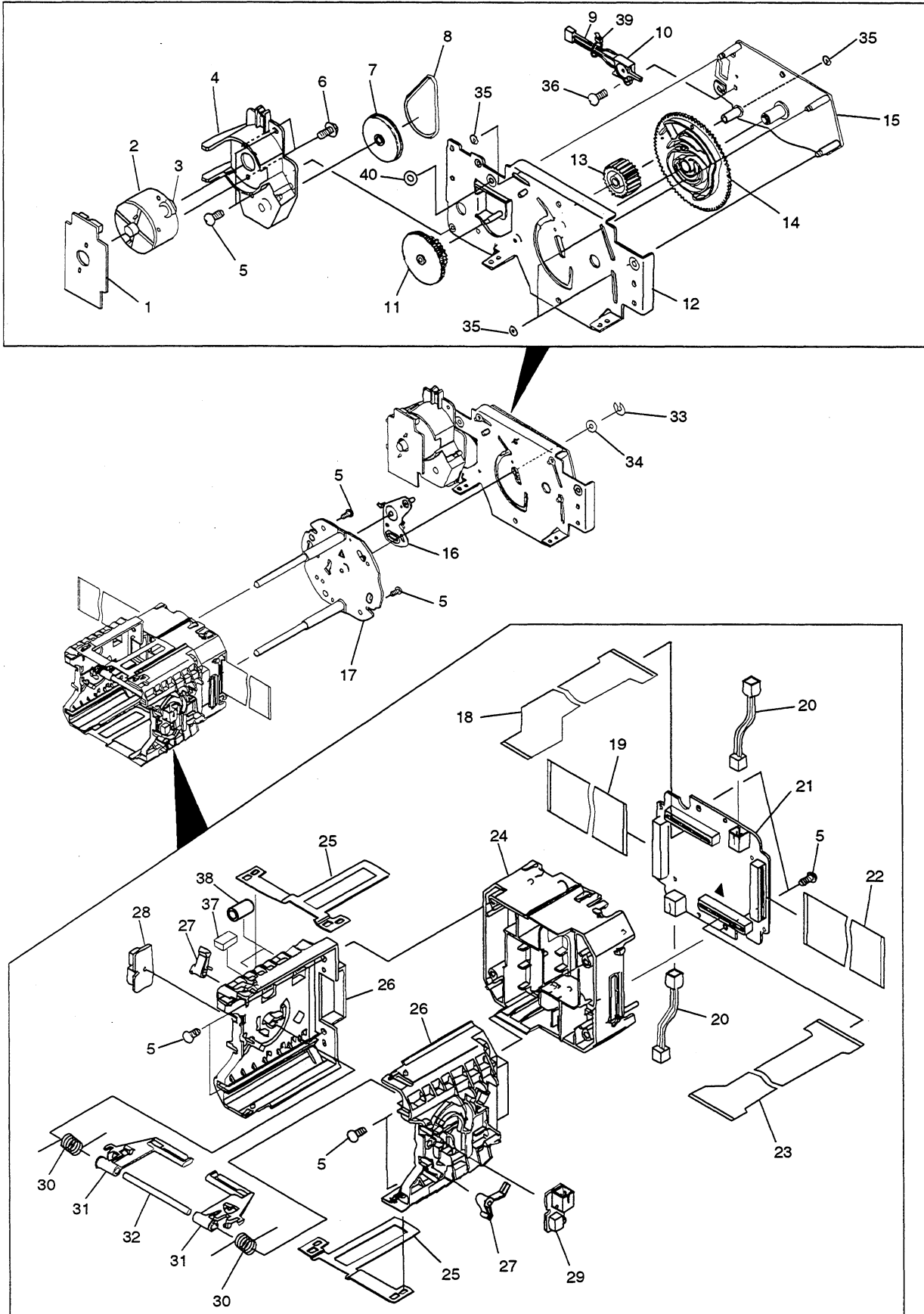
2.7 SERVO MECHANISM SECTION (1/2)



Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Mini Clamp	VEC1905		26	Screw	PMZ20P060FZK
	2	Screw	BBZ26P060FMC		27	Tilt Base (Under)	VNL1711
	3	A Horn	VNL1689		28	Tilt Rear Spring	VBH1274
	4	Tilt Base (Upper)	VNE2062		29	CA Rack (Lower)	VNL1712
	5	Housing Assy (2P)	VKP2136		30	Flexible Cable (6P)	VDA1578
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)	VLL1485		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	VWT1139		45	Tilt Cam	VNL1643
	21	FPC Holder B	VNL1752		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	NSP	49	Turn Table Assy	VXA2285
	25	TAN Lever (B)	VNL1669	NSP	50	Oil Stopper	VBF1002
					51	Screw	ZMD30H030FBT
				NSP	52	Spindle Motor	VXM1057
					53	Cover S	VNL1780
				NSP	54	Rubber Sheet	VEB1272
					55	Screw	BBZ30P050FZK
					56	Spindle Motor Assy	VXX2521

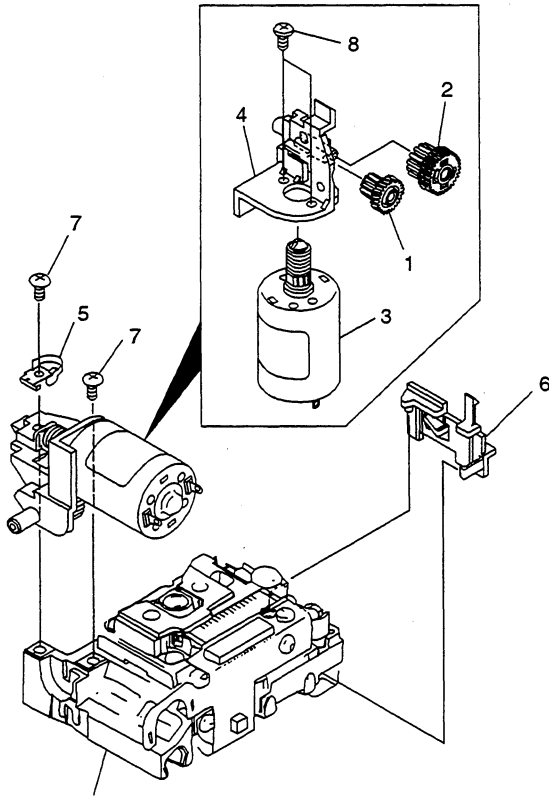
2.8 SERVO MECHANISM SECTION (2/2)



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)	VDA1581
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)	VDA1580		39	Binder	Z09-056
	20	Connector Assy	PG02KK-E10		40	Washer	VEC1951

2.9 DVD CARRIAGE ASSY

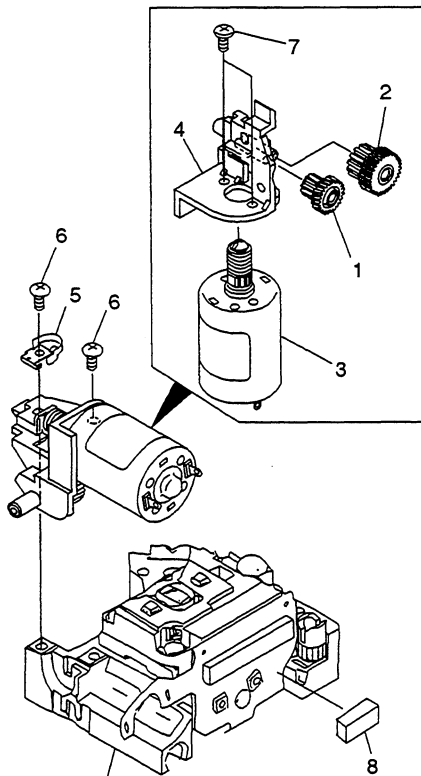


This part is no service part.

Parts List

Mark	No.	Description	Part No.
	1	CA Gear (A)	VNL1782
	2	CA Gear B Assy	VXX2471
	3	Slider Motor Assy	VXX2472
	4	Motor Holder	VNL1779
	5	Thrust Holder	VBK1058
	6	CA Guide B	VNL1721
	7	Screw	BBZ20P050FZK
	8	Screw	PMZ20P030FMC

2.10 CLD CARRIAGE ASSY



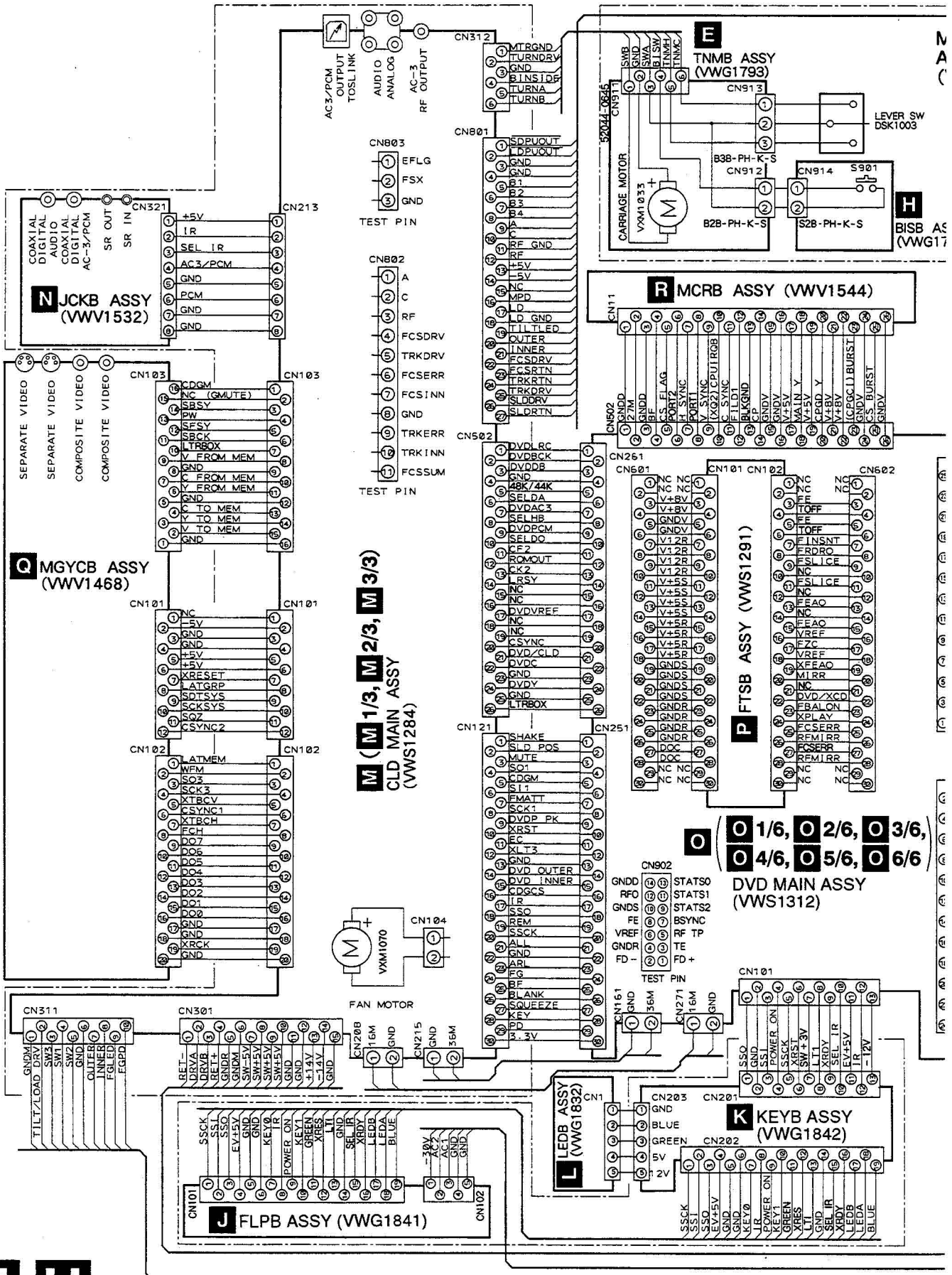
This part is no service part.

Parts List

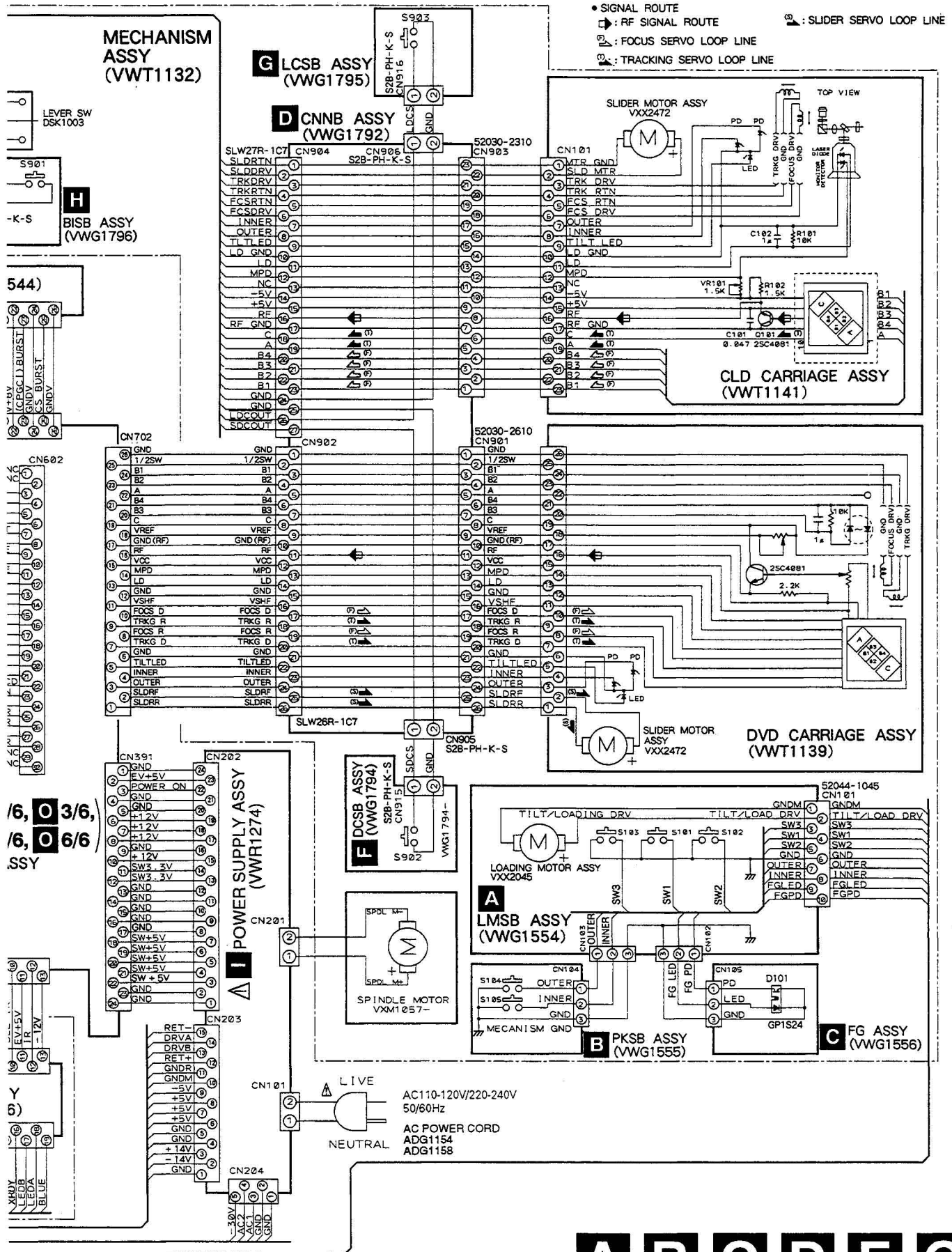
Mark	No.	Description	Part No.
	1	CA Gear (A)	VNL1782
	2	CA Gear (B)	VNL1639
	3	Slider Motor Assy	VXX2472
	4	Motor Holder	VNL1779
	5	Thrust Holder	VBK1058
	6	Screw	PBZ20P050FMC
	7	Screw	PMZ20P030FMC
	8	Cushion B	VEC1945

3. SCHEMATIC DIAGRAM

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



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



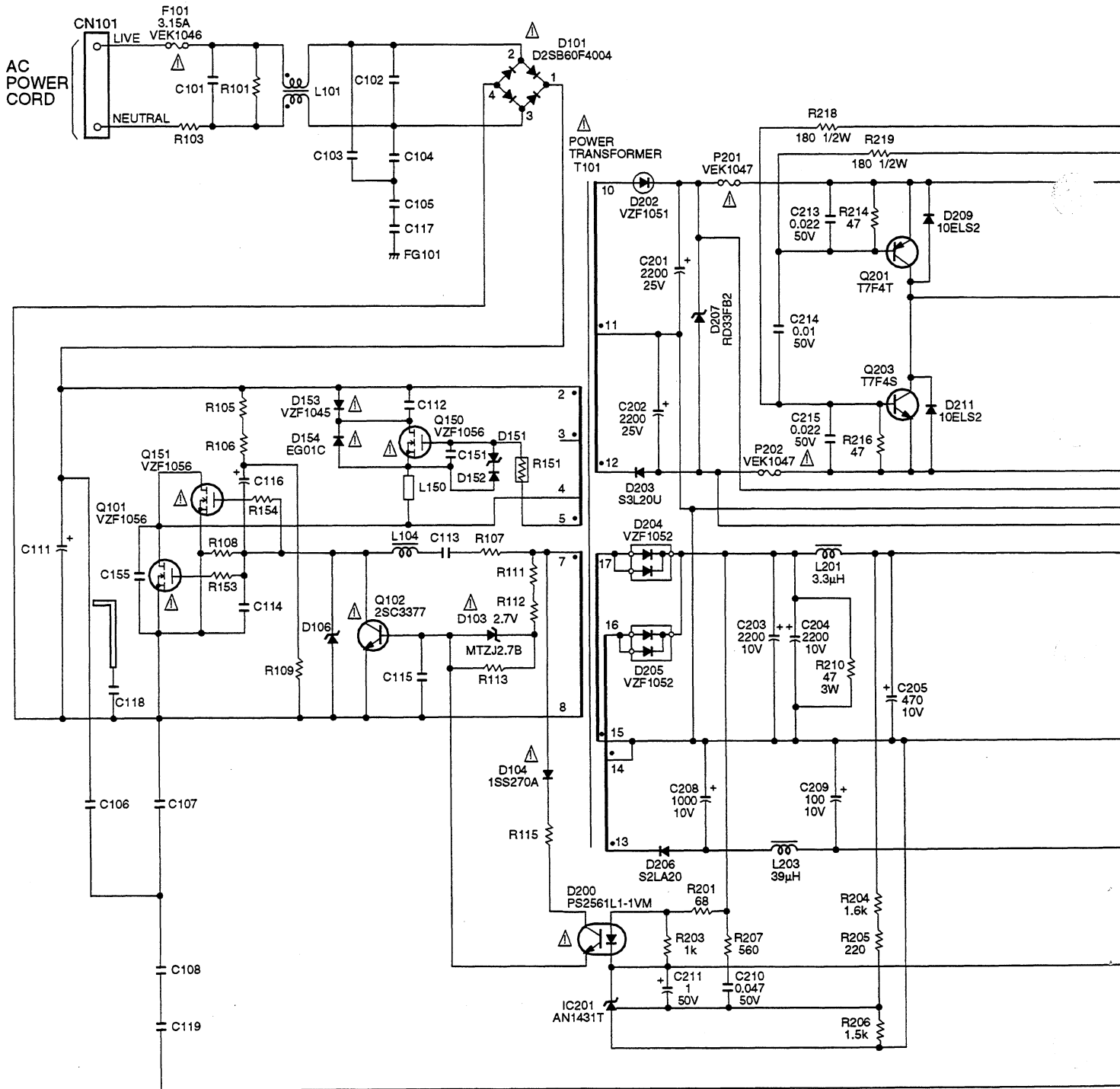
A B C D F G

3.2 POWER SUPPLY ASSY

• NOTE FOR FUSE REPLACEMENT

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

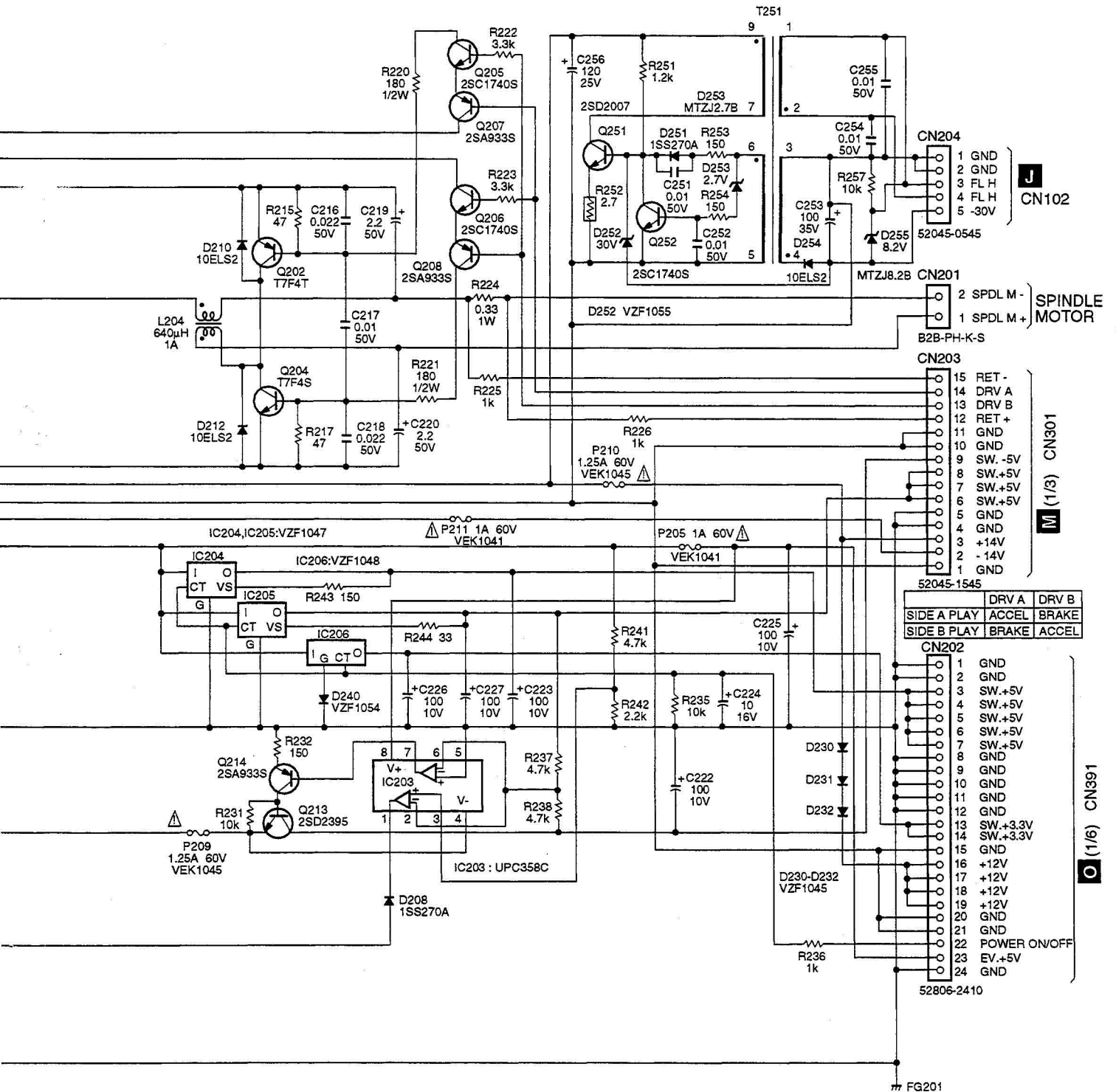
 POWER SUPPLY ASSY (VWR1274)



《 NOTE OF SPARE PARTS IN POWER SUPPLY (SYPS) ASSY 》

- In case of repairing, use the described parts only to prevent an accident.
- Please write the red √ mark on the board when the primary section of POWER SUPPLY (SYPS) Assy is repaired.
- Please take care to keep the space, not touching other parts when replacing the parts.

CAUTION -FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
 REPLACE ONLY WITH SAME TYPE NO. 491001 MFD.
 BY LITTELFUSE INC. FOR P205 AND P211, 4911.25 MFD.
 BY LITTELFUSE INC. FOR P209 AND P210.



J CN102
 1 GND
 2 GND
 3 FL H
 4 FL H
 5 -30V

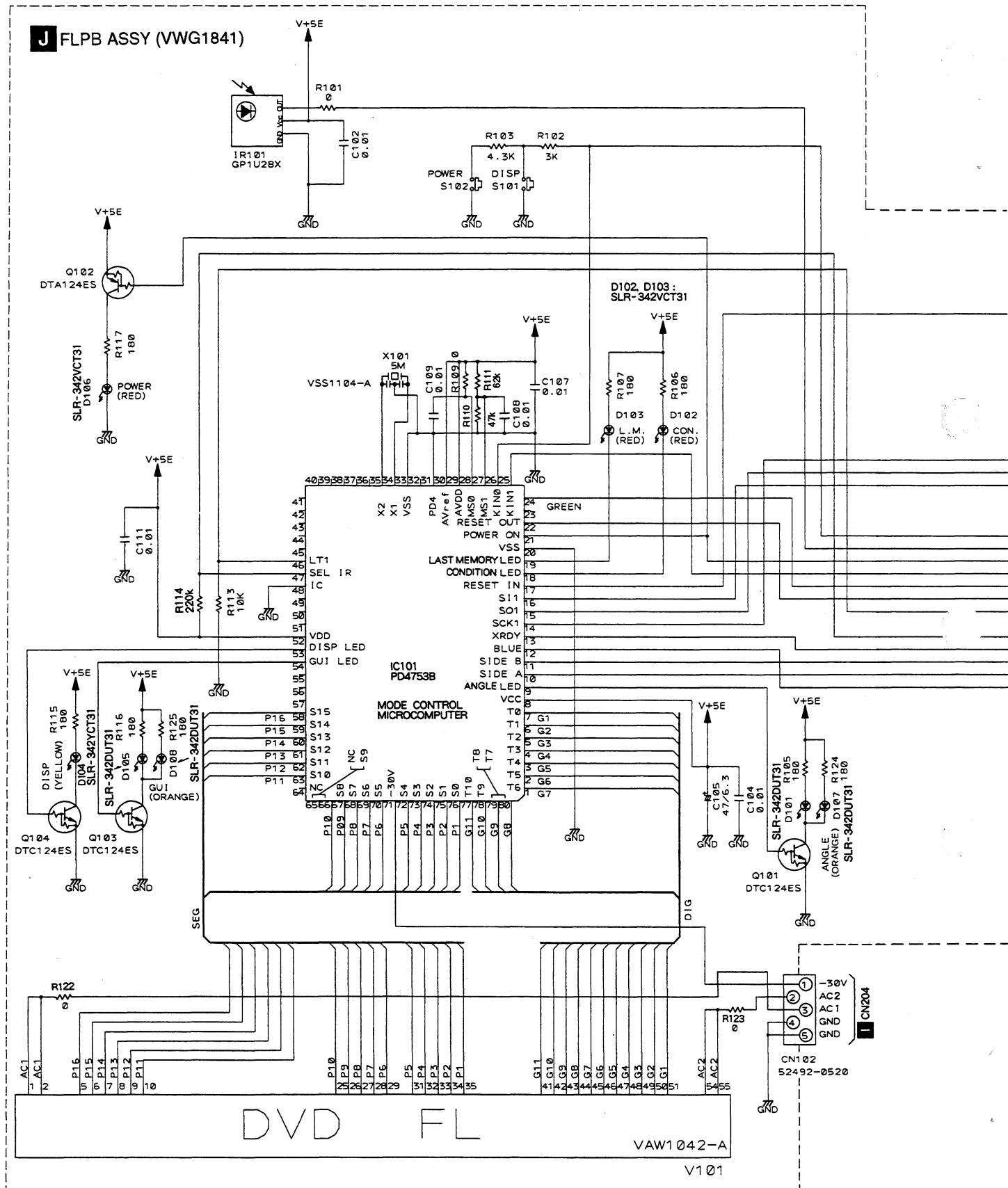
K SPINDLE MOTOR
 2 SPDL M -
 1 SPDL M +
 B2B-PH-K-S

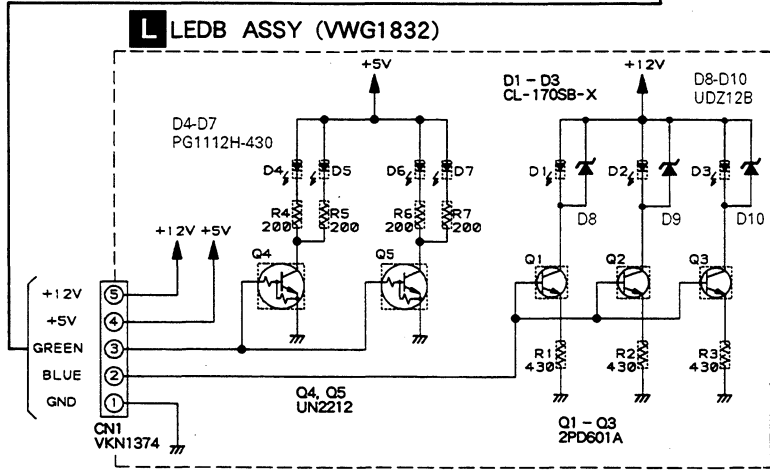
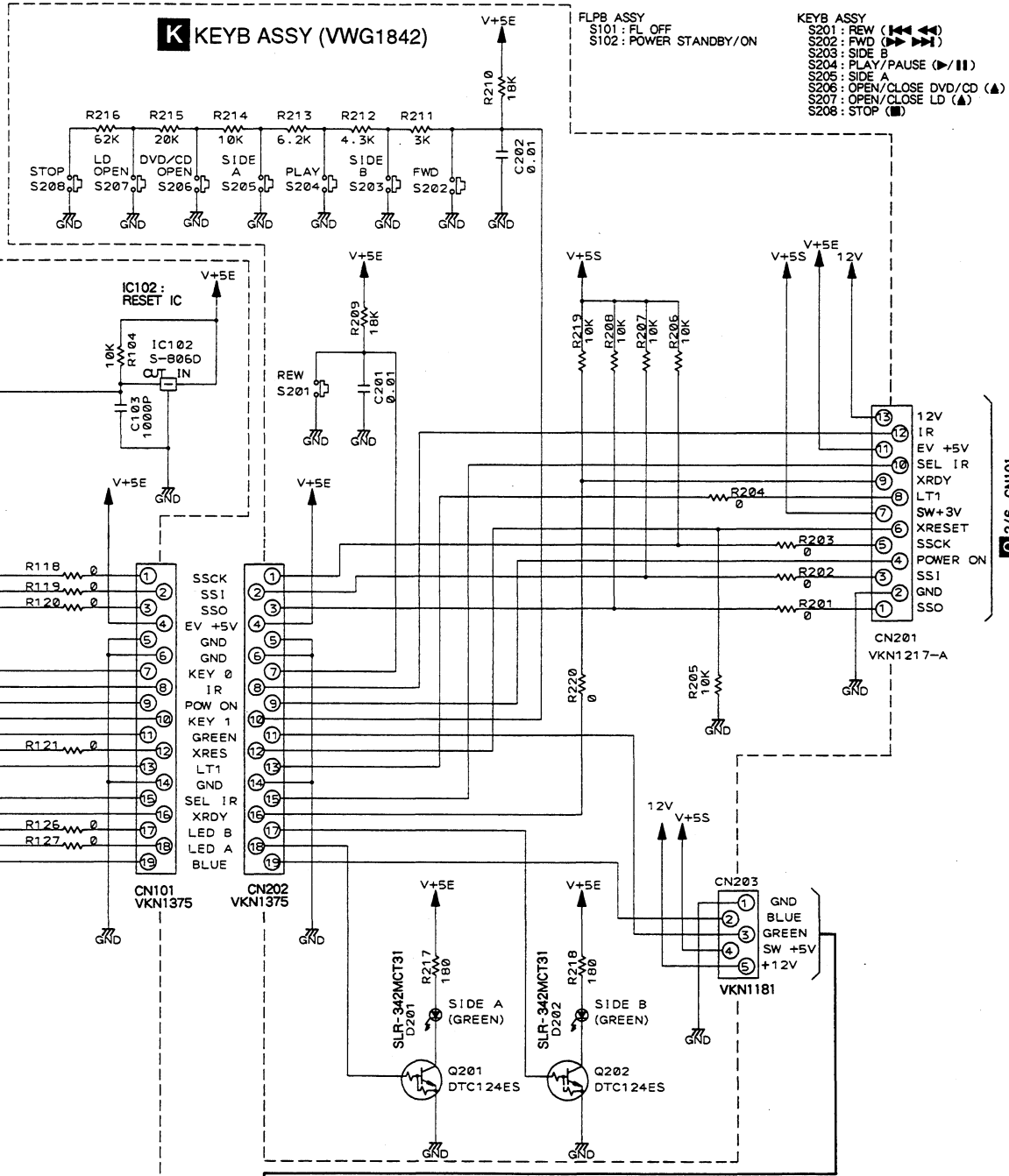
M (1/3) CN301
 15 RET -
 14 DRV A
 13 DRV B
 12 RET +
 11 GND
 10 GND
 9 SW. -5V
 8 SW.+5V
 7 SW.+5V
 6 SW.+5V
 5 GND
 4 GND
 3 +14V
 2 -14V
 1 GND

	DRV A	DRV B
SIDE A PLAY	ACCEL	BRAKE
SIDE B PLAY	BRAKE	ACCEL

O (1/6) CN391
 1 GND
 2 GND
 3 SW.+5V
 4 SW.+5V
 5 SW.+5V
 6 SW.+5V
 7 SW.+5V
 8 GND
 9 GND
 10 GND
 11 GND
 12 GND
 13 SW.+3.3V
 14 SW.+3.3V
 15 GND
 16 +12V
 17 +12V
 18 +12V
 19 +12V
 20 GND
 21 GND
 22 POWER ON/OFF
 23 EV.+5V
 24 GND

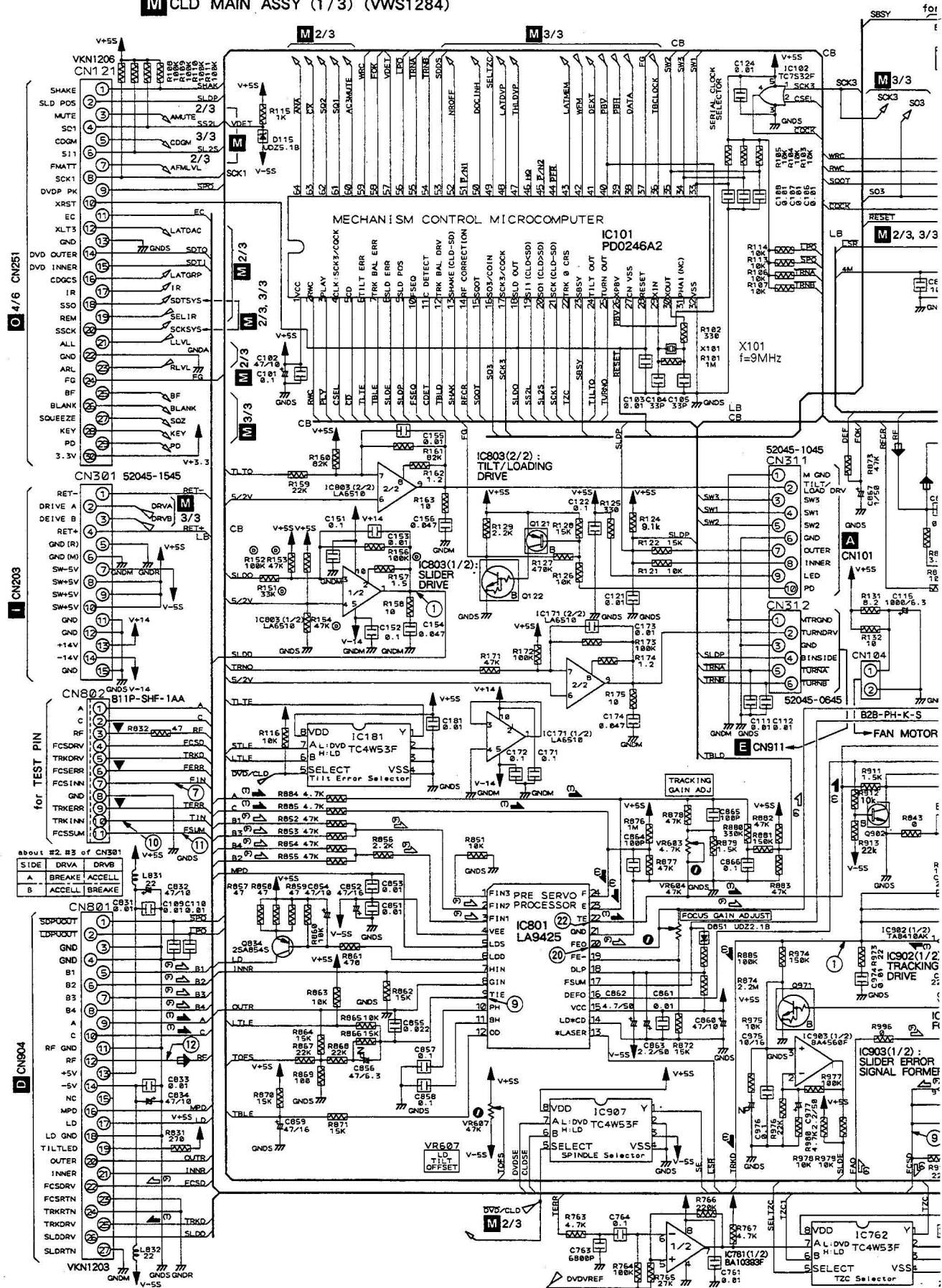
3.3 FLPB, KEYB AND LEDB ASSEMBLIES

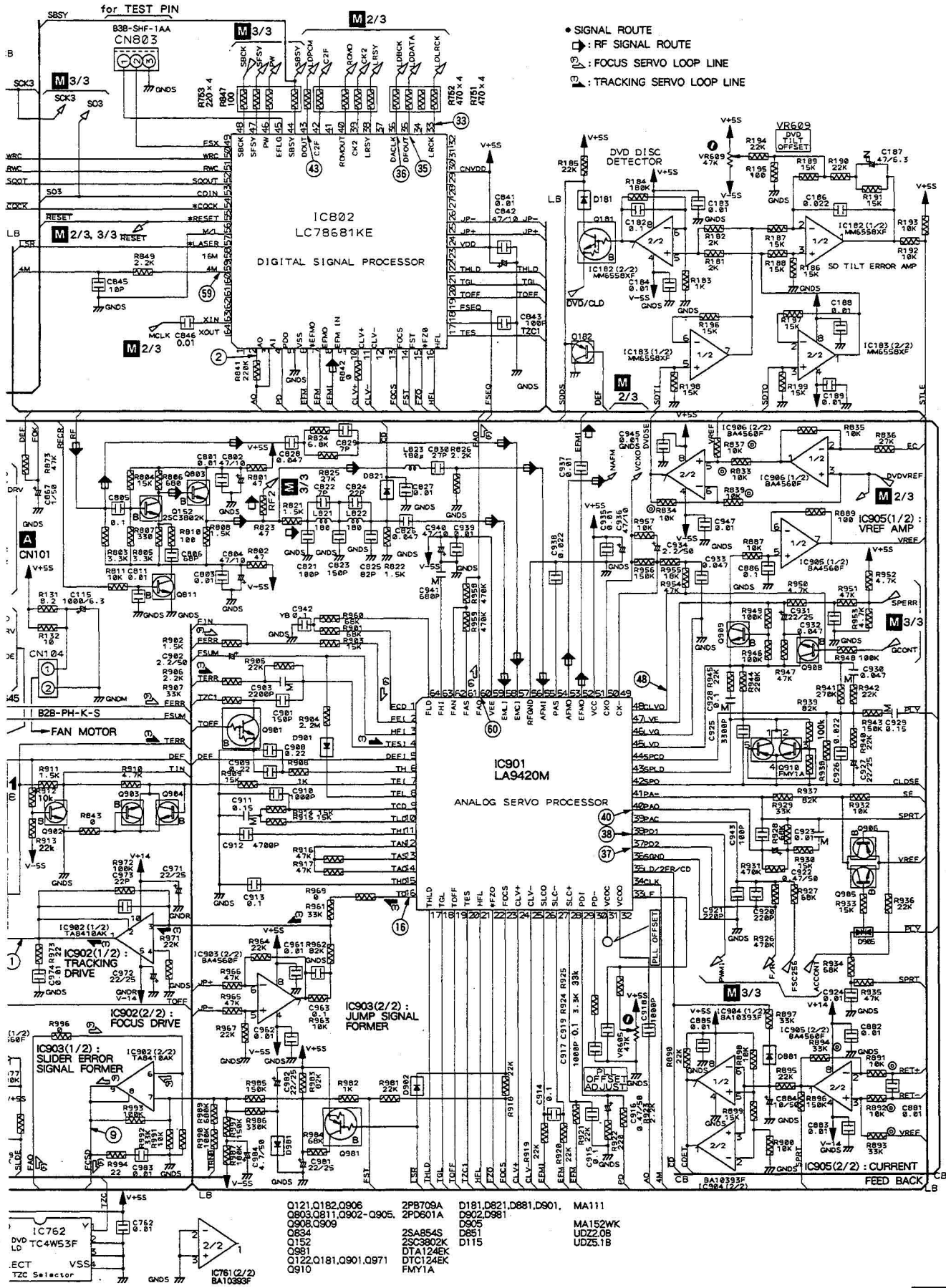




3.4 CLD MAIN ASSY (1/3)

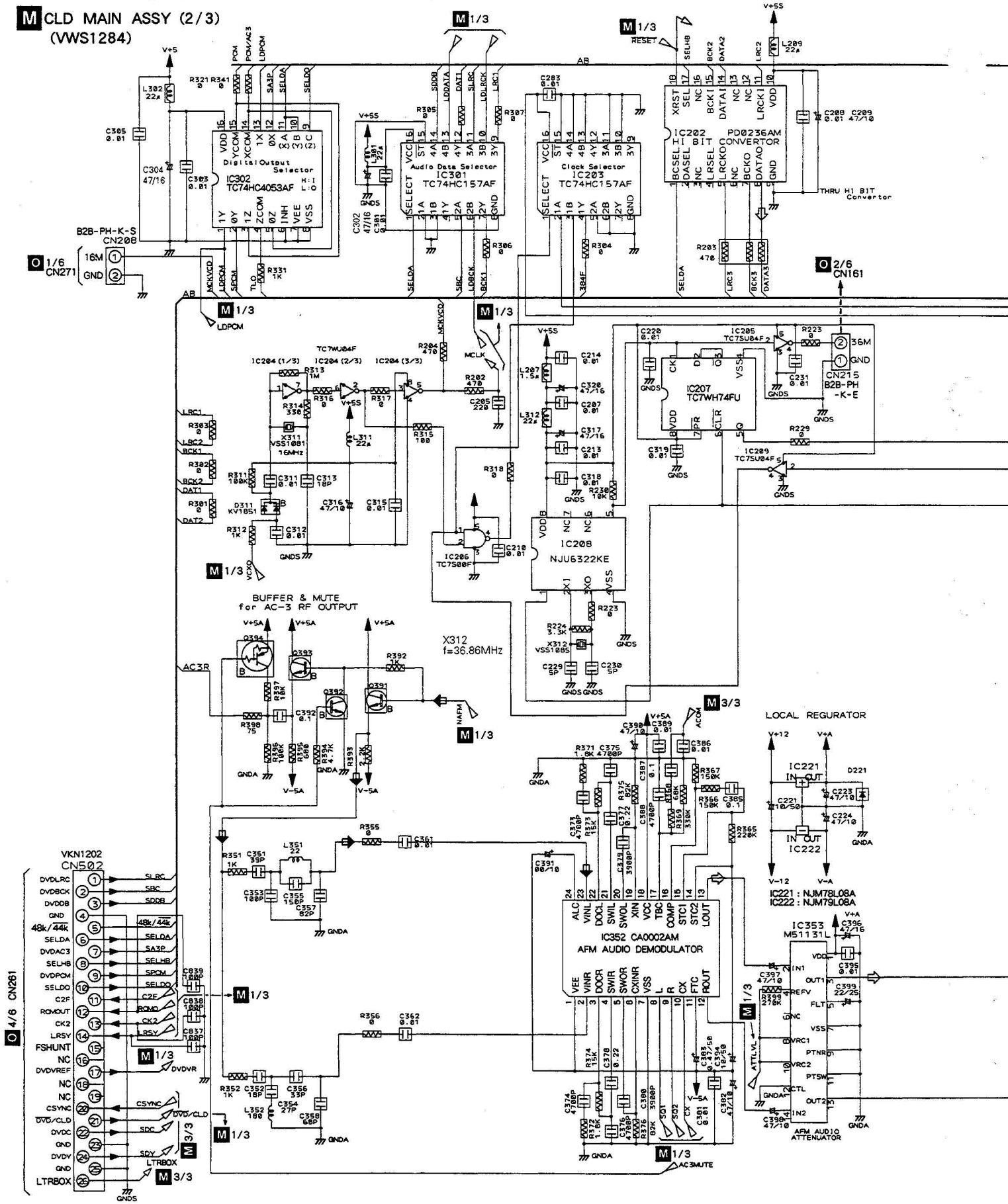
M CLD MAIN ASSY (1/3) (VWS1284)



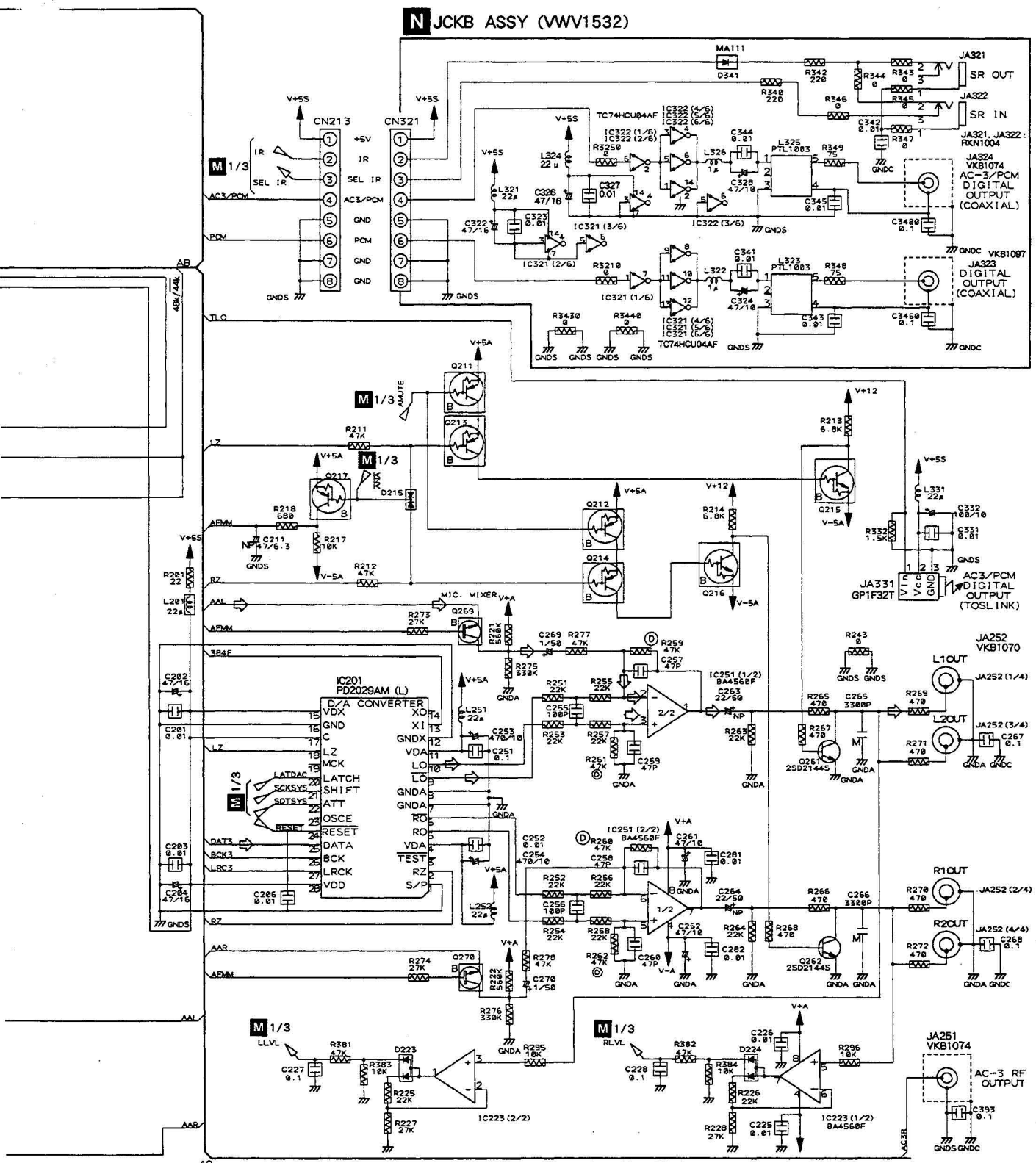


3.5 CLD MAIN (2/3) AND JCKB ASSEMBLIES

M CLD MAIN ASSY (2/3)
(VWS1284)

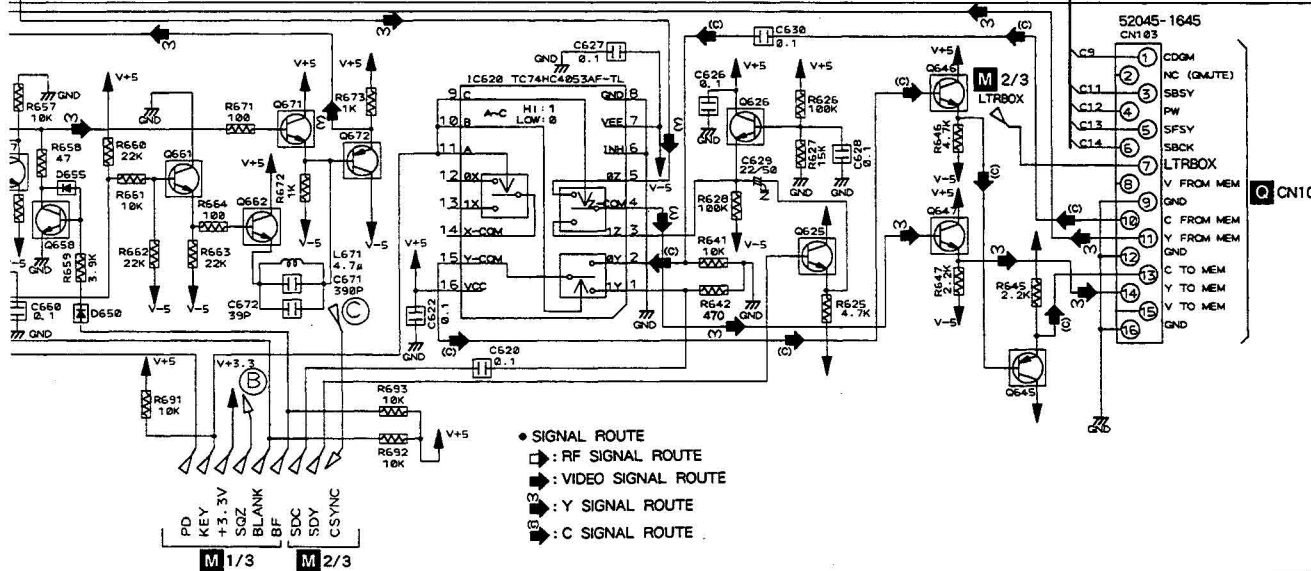
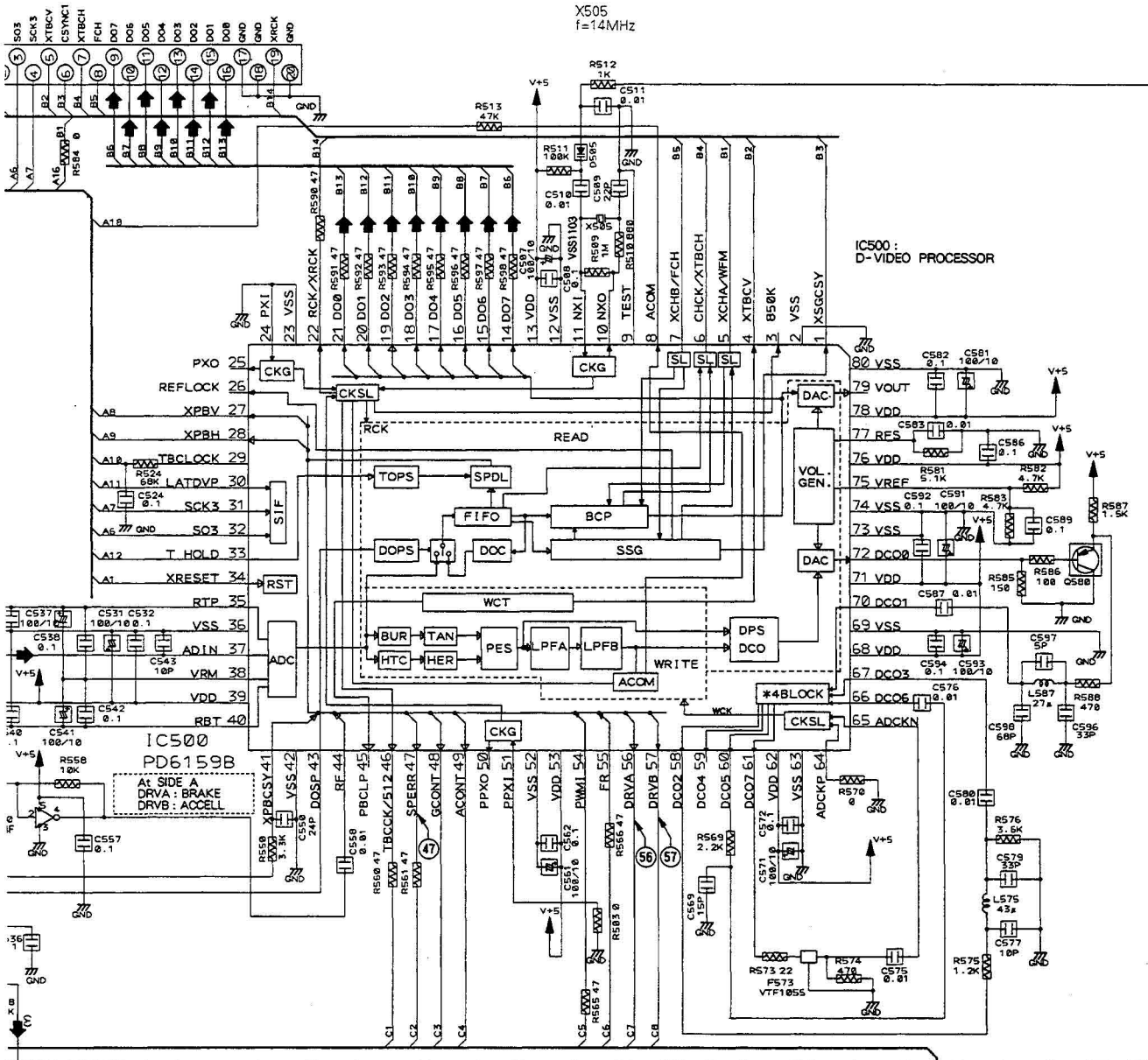


N JCKB ASSY (VW1532)



- Q269,Q270,Q391-Q393 2PD601A
 - Q261,Q262 2SD2144S
 - Q211-Q214,Q217,Q394 DTA1245K
 - Q215,Q216 DTC1245K
 - D221 EC100S04
 - D311 KV18S1
 - D223,D224 MA152WA
 - D215 MA152WK
- SIGNAL ROUTE
- ◻: RF SIGNAL ROUTE
 - ◻: AUDIO SIGNAL ROUTE

Q CN102

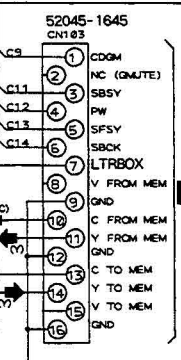


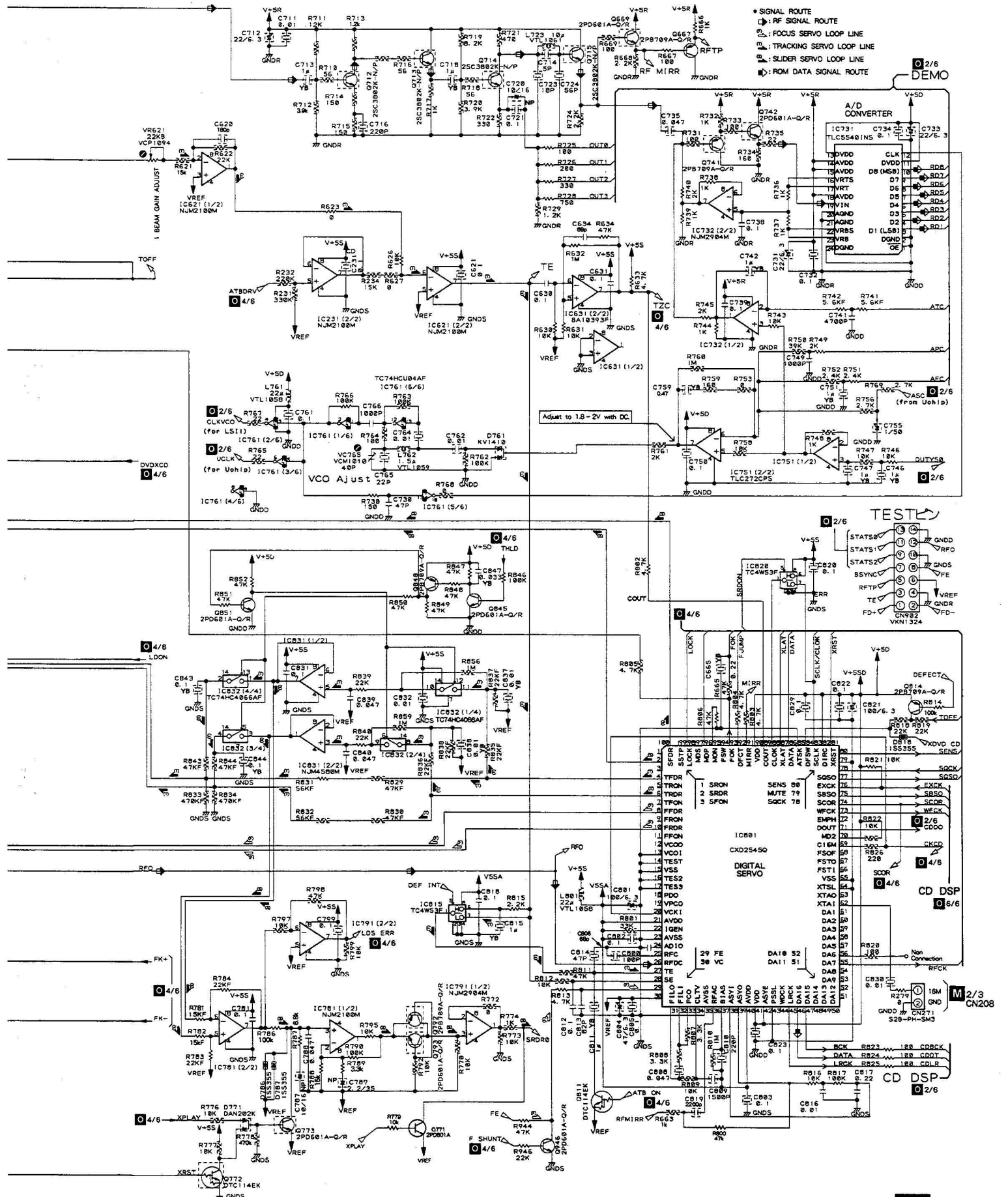
- SIGNAL ROUTE
- : RF SIGNAL ROUTE
- ▬ : VIDEO SIGNAL ROUTE
- : Y SIGNAL ROUTE
- ▬ : C SIGNAL ROUTE

M 1/3

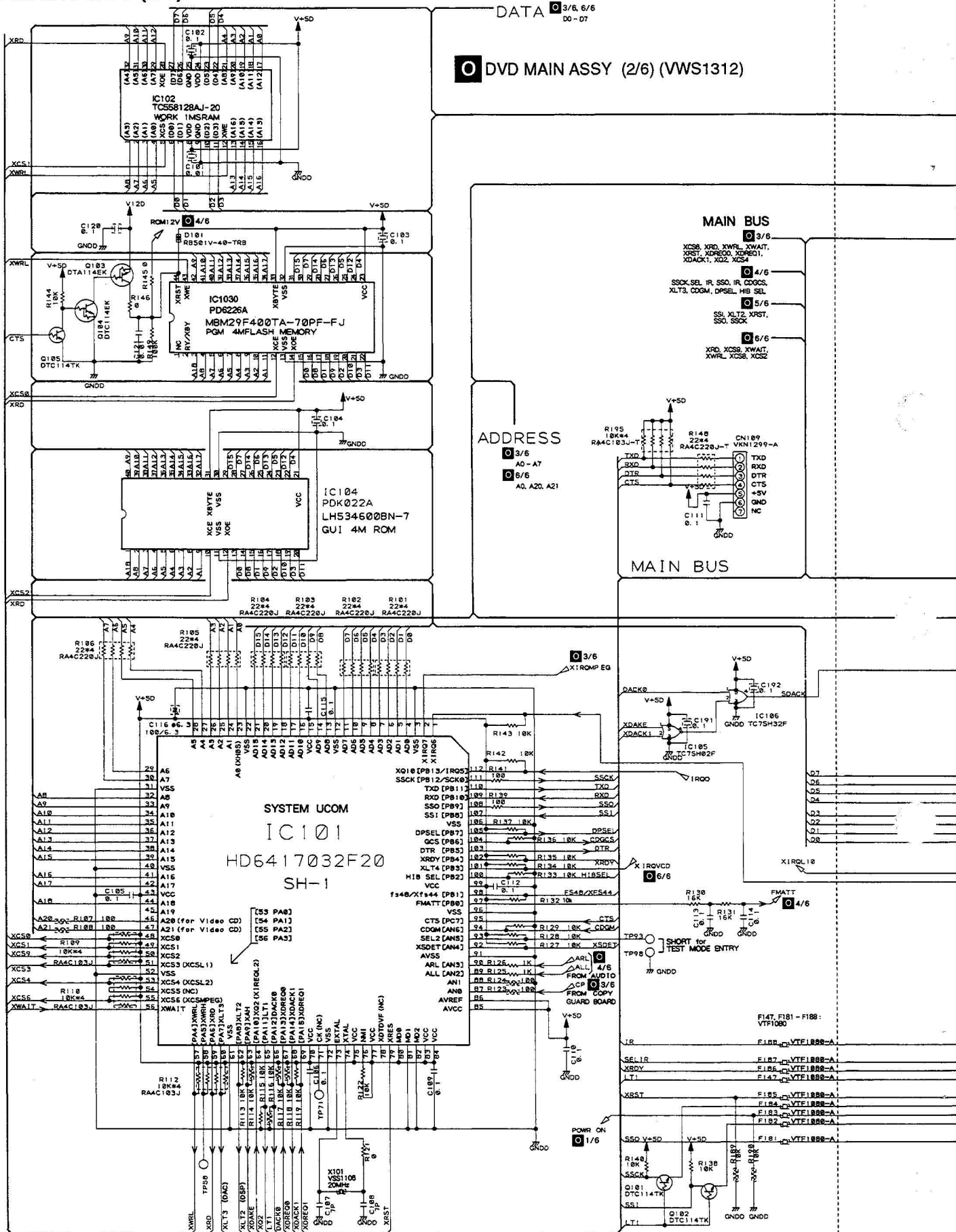
M 2/3

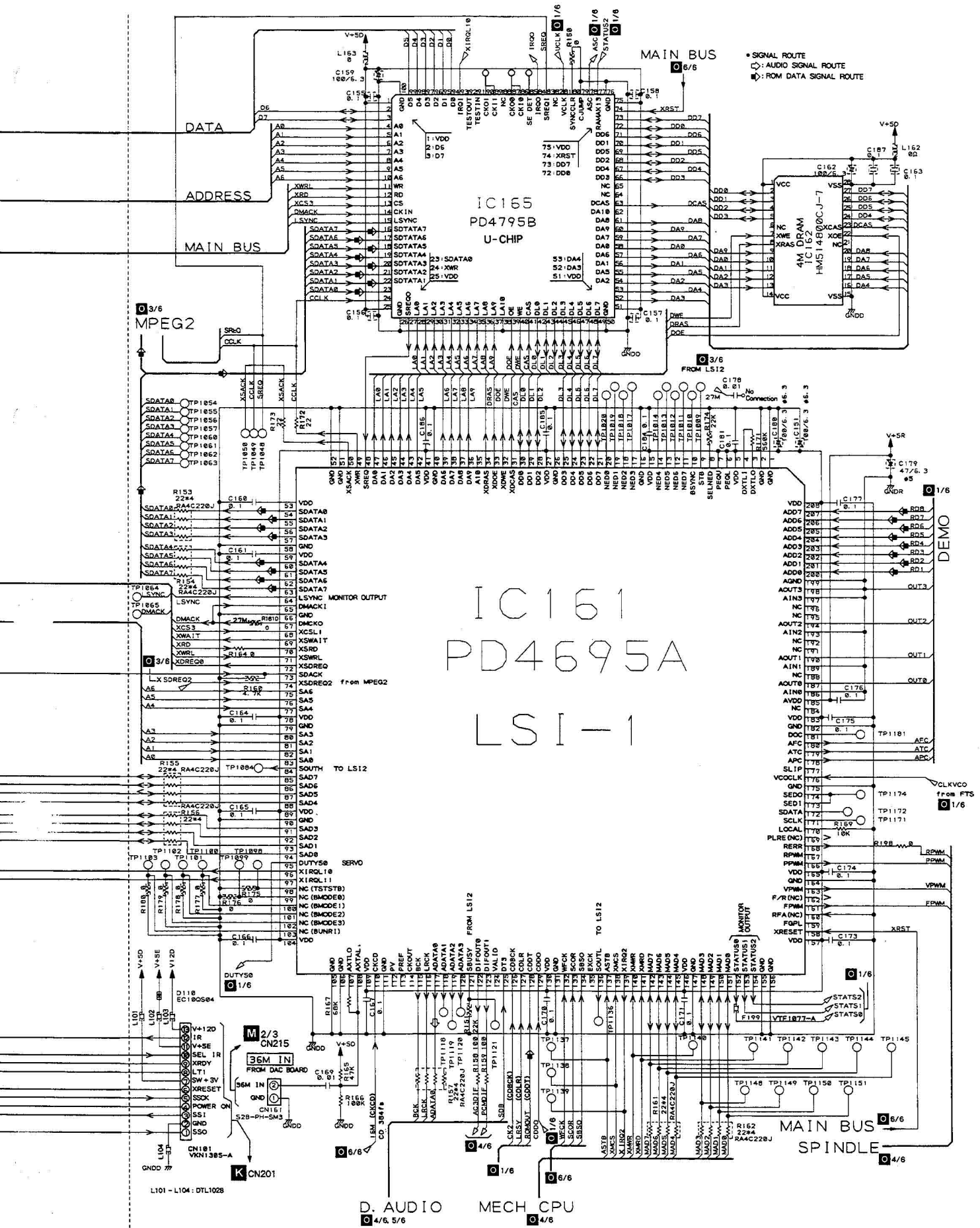
Q CN103





3.8 DVD MAIN ASSY (2/6)



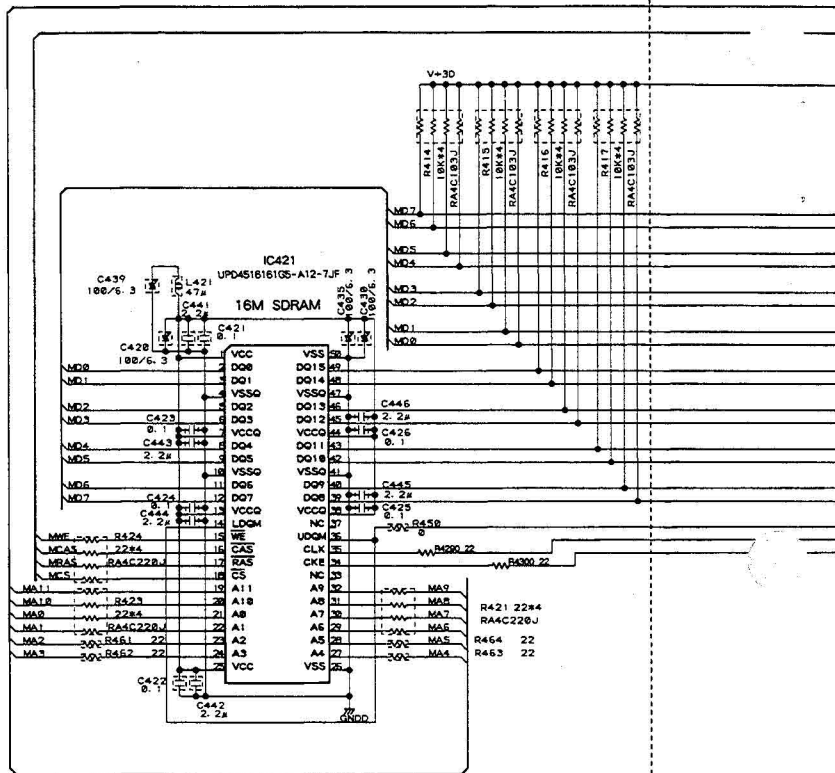


IC161
PD4695A
LSI-1

3.9 DVD MAIN ASSY (3/6)

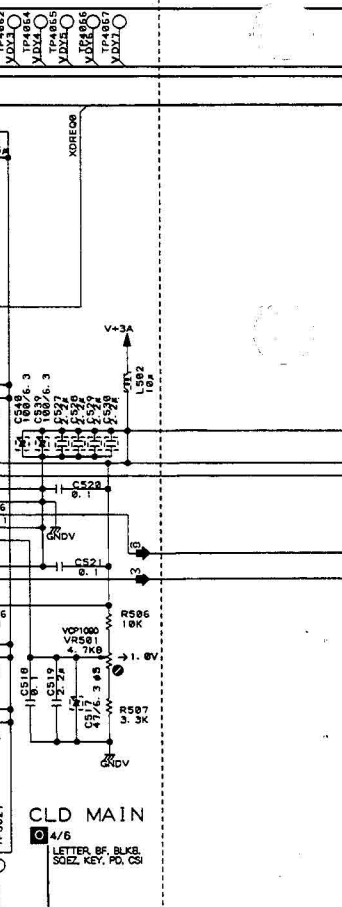
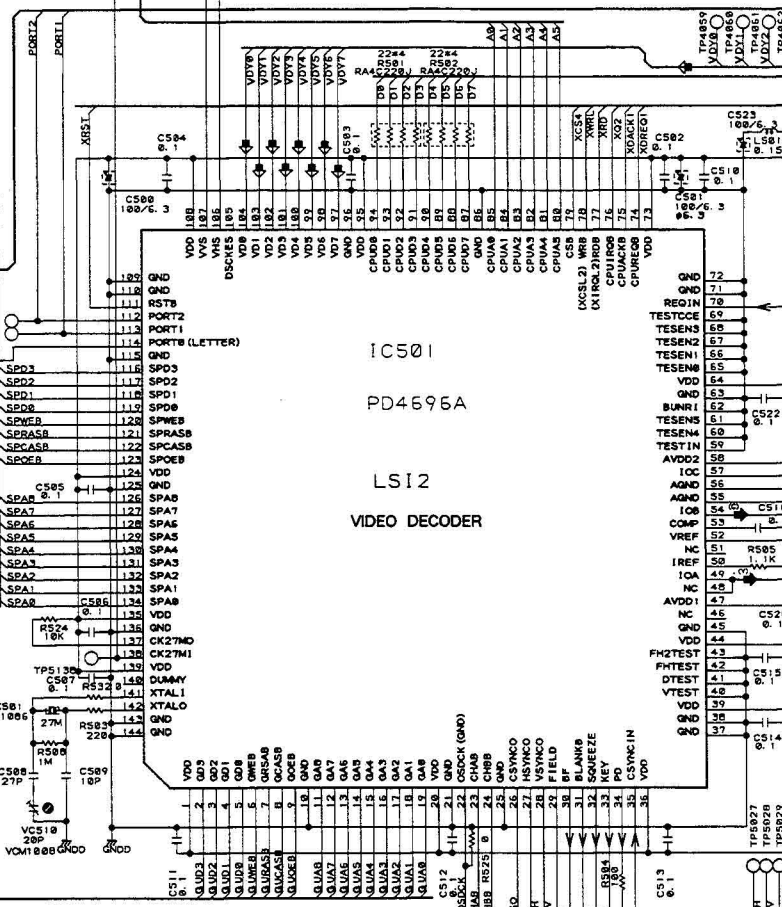
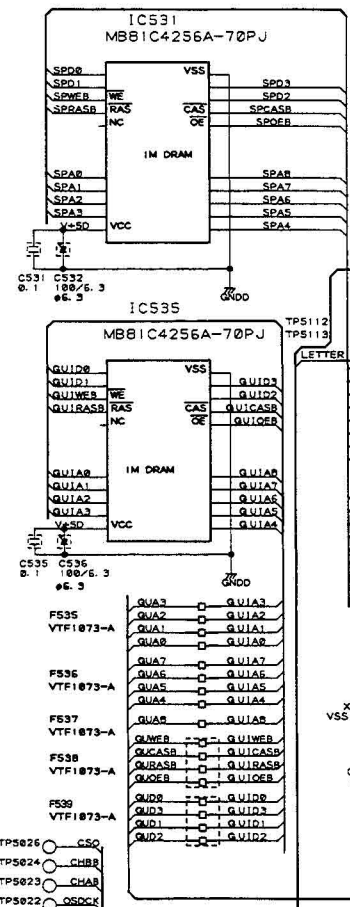
Q DVD MAIN ASSY (3/6) (VWS1312)

ADDRESS
Q 2/6

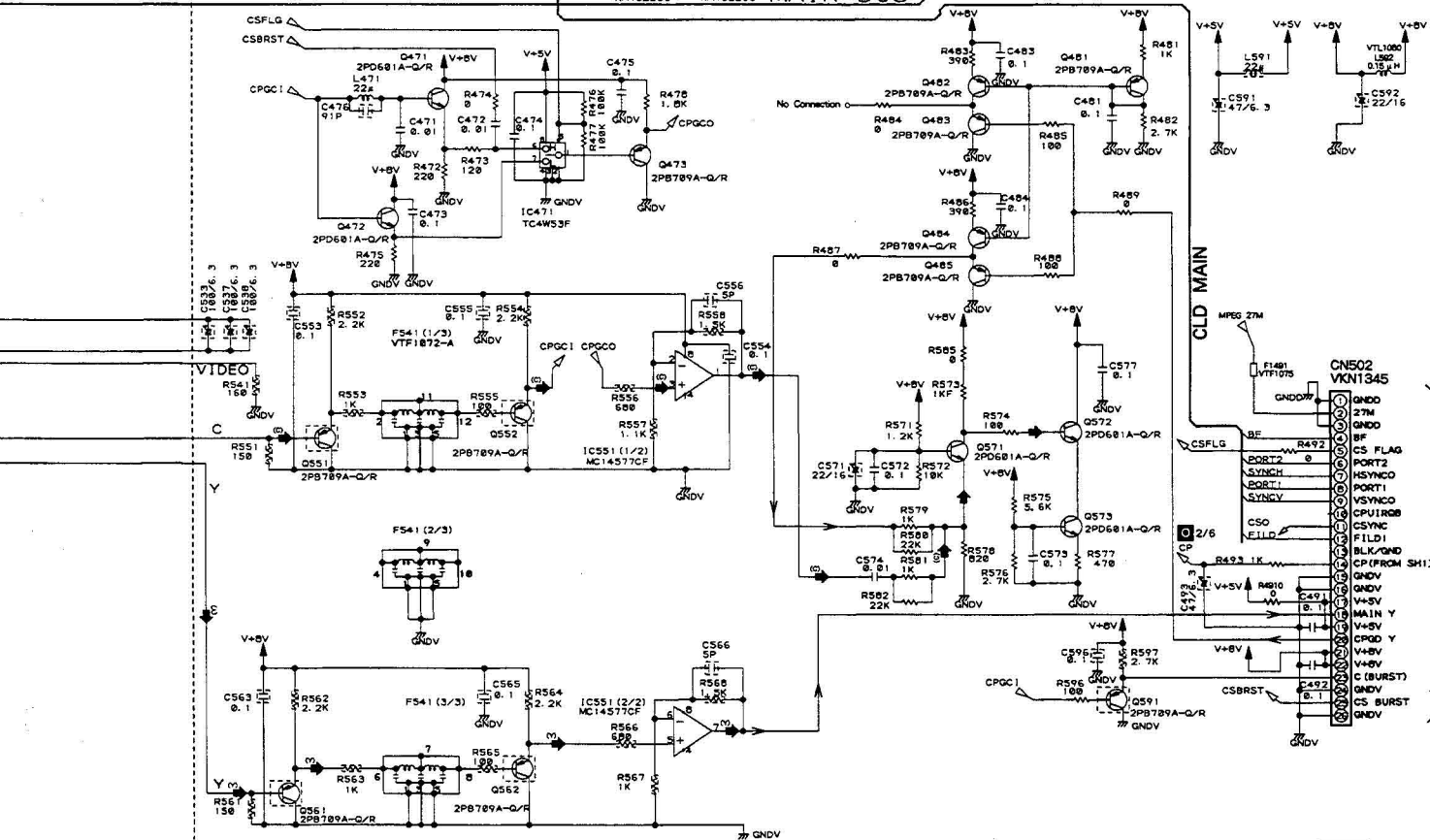
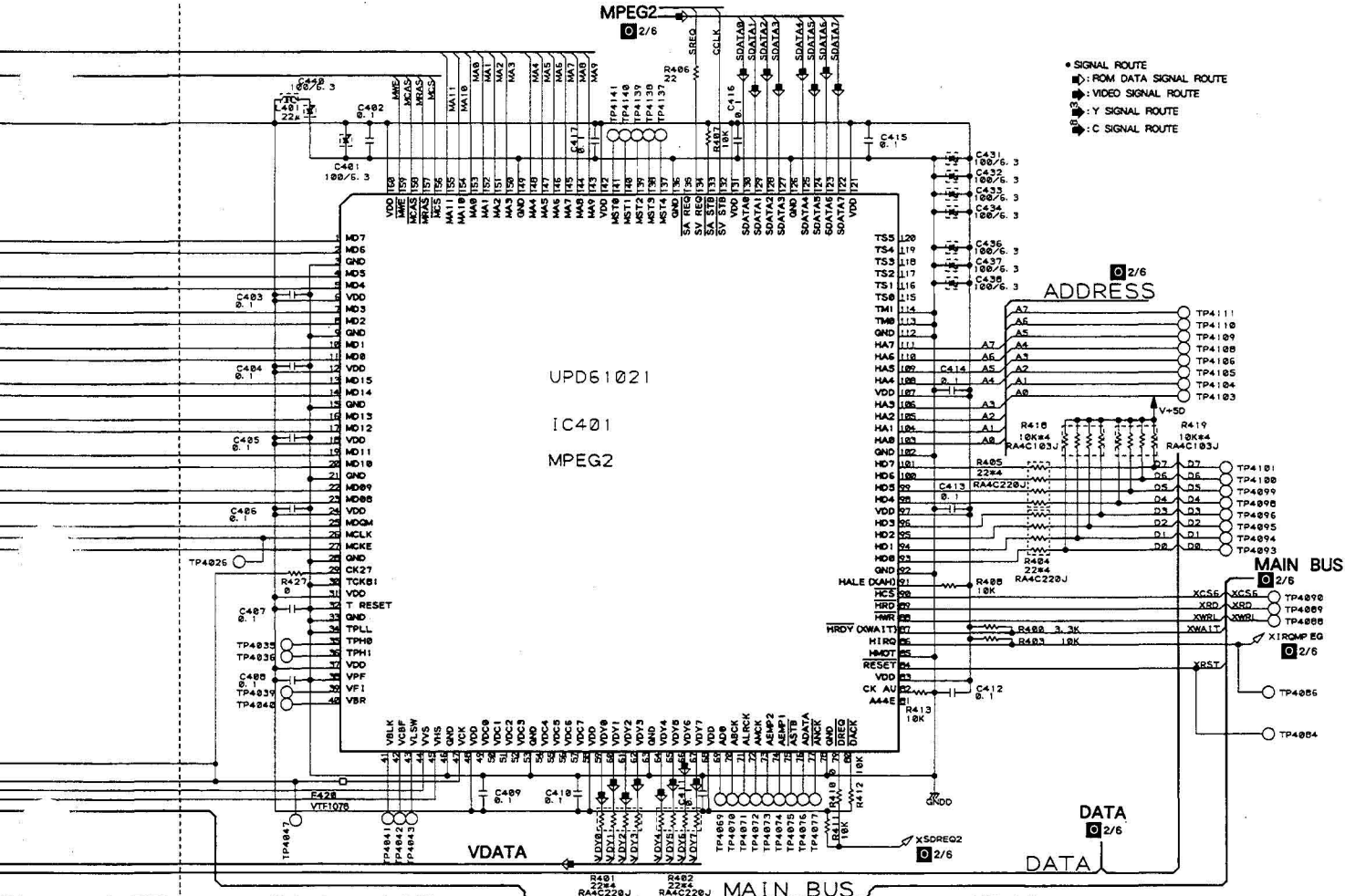


Q 2/6
27M

TO LS11

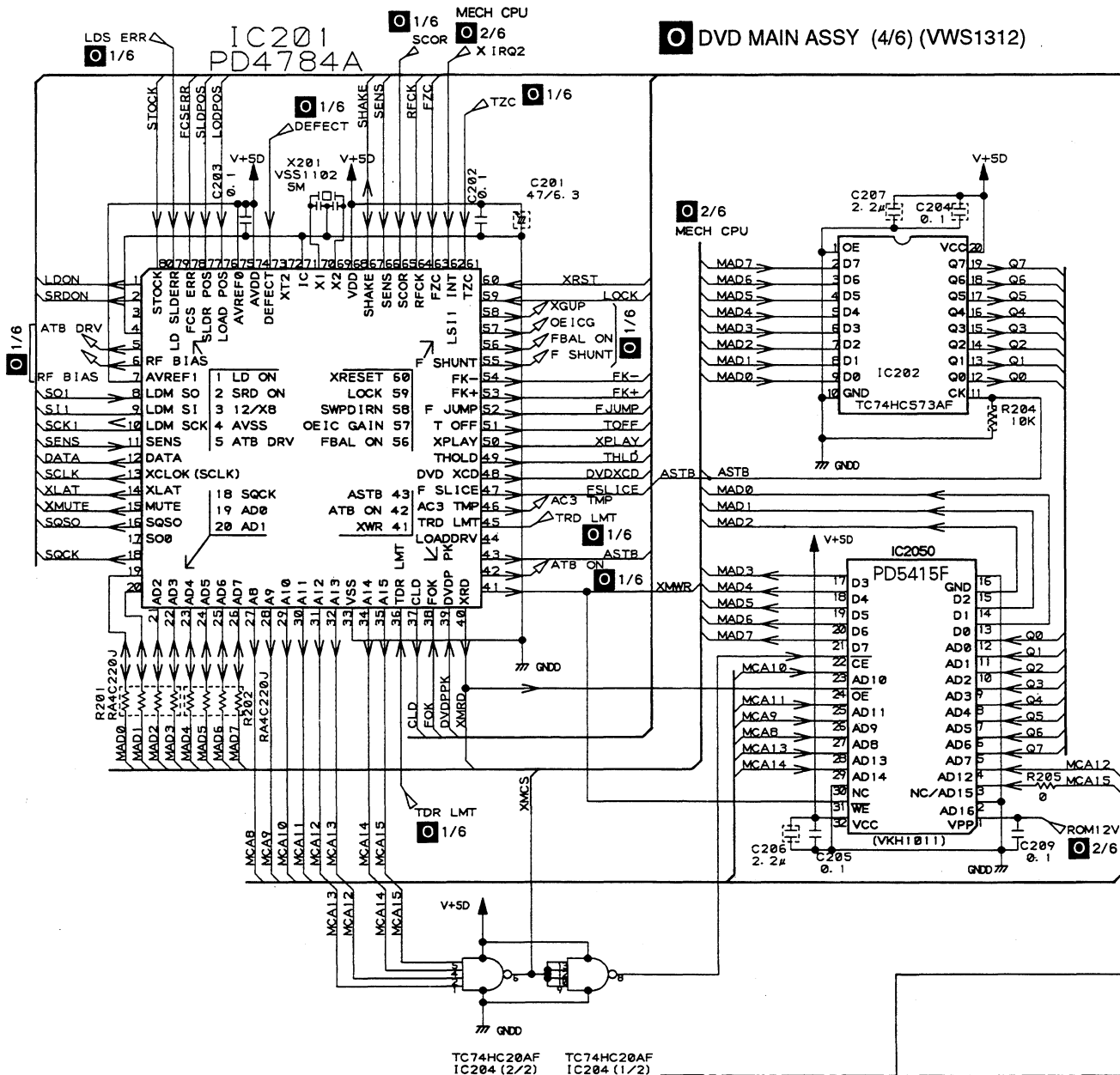


CLD MAIN
Q 4/6
LETTER, BF, BK, S02, KEY, PD, Q



3.10 DVD MAIN ASSY (4/6)

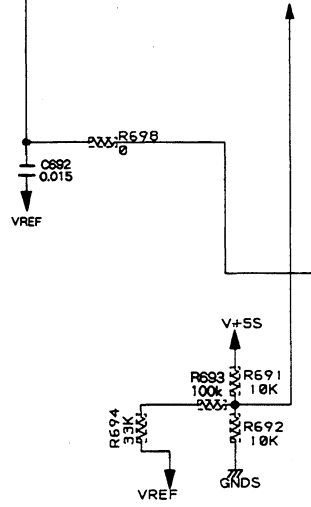
DVD MAIN ASSY (4/6) (VWS1312)



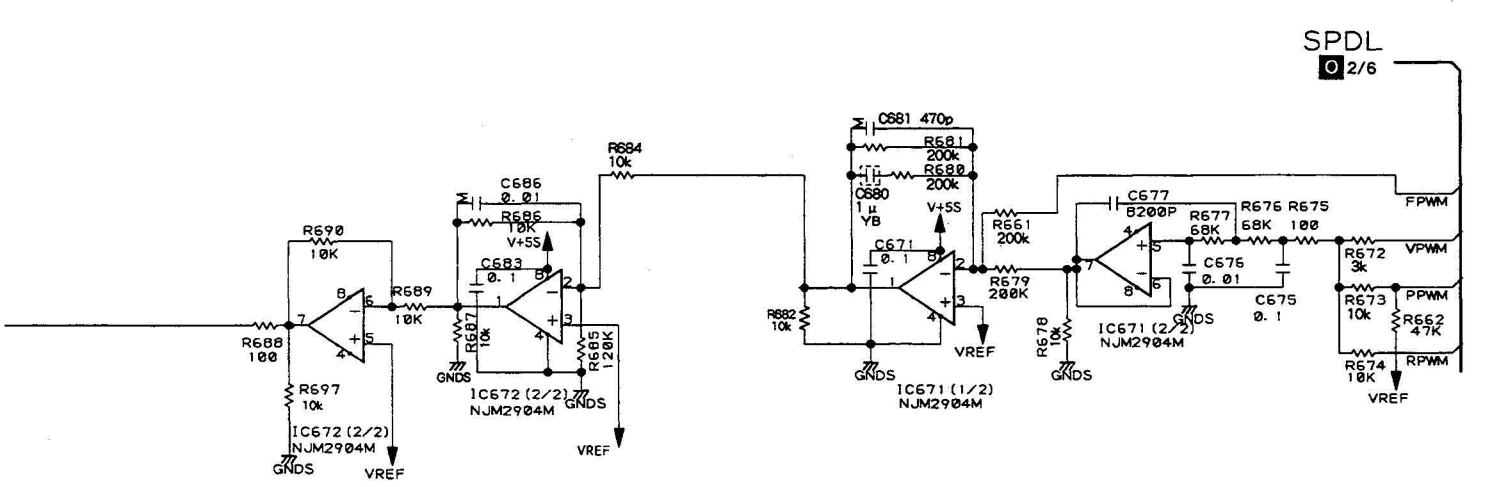
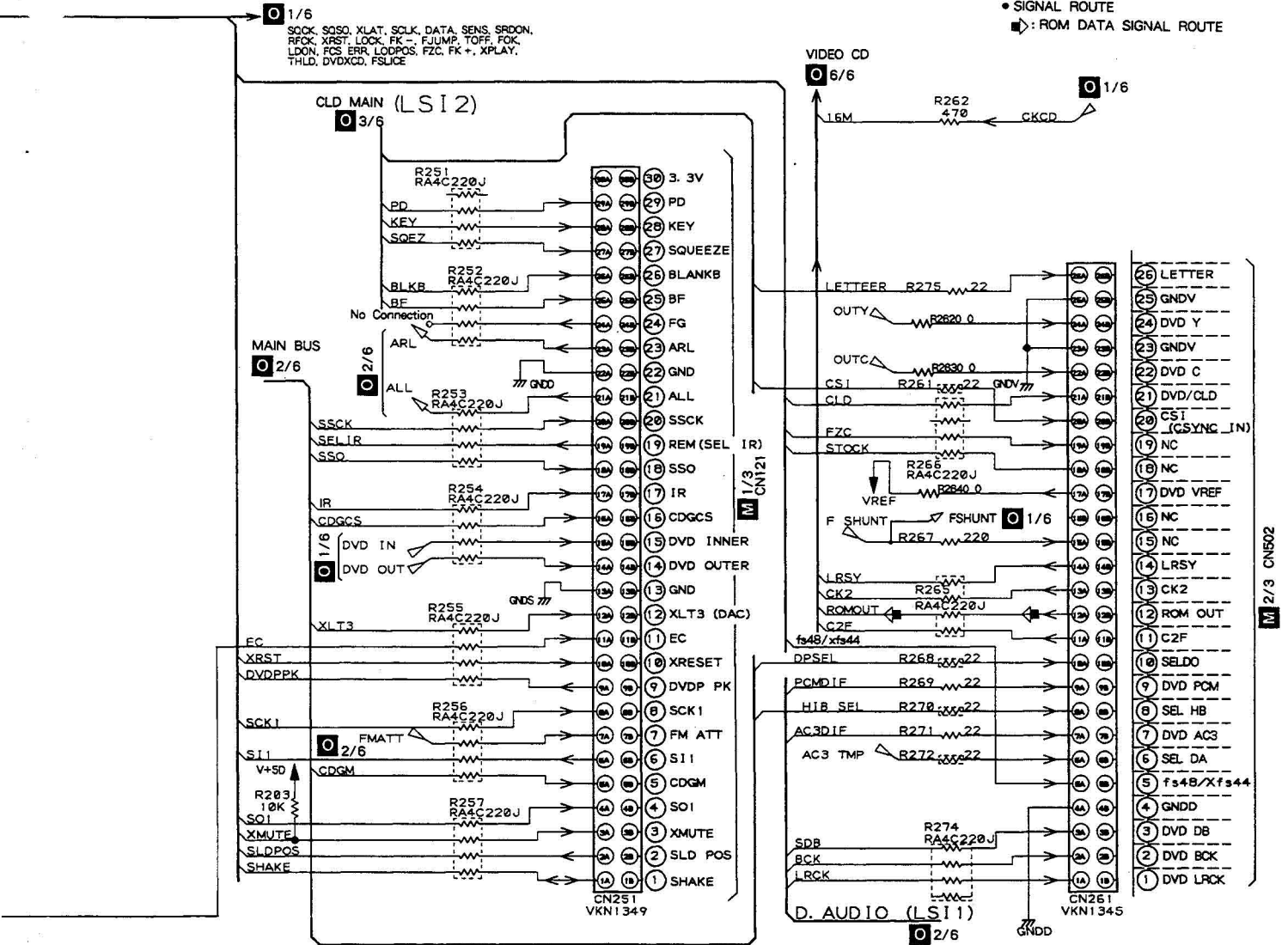
MECHANISM SECTION

SPDL SECTION

MCP



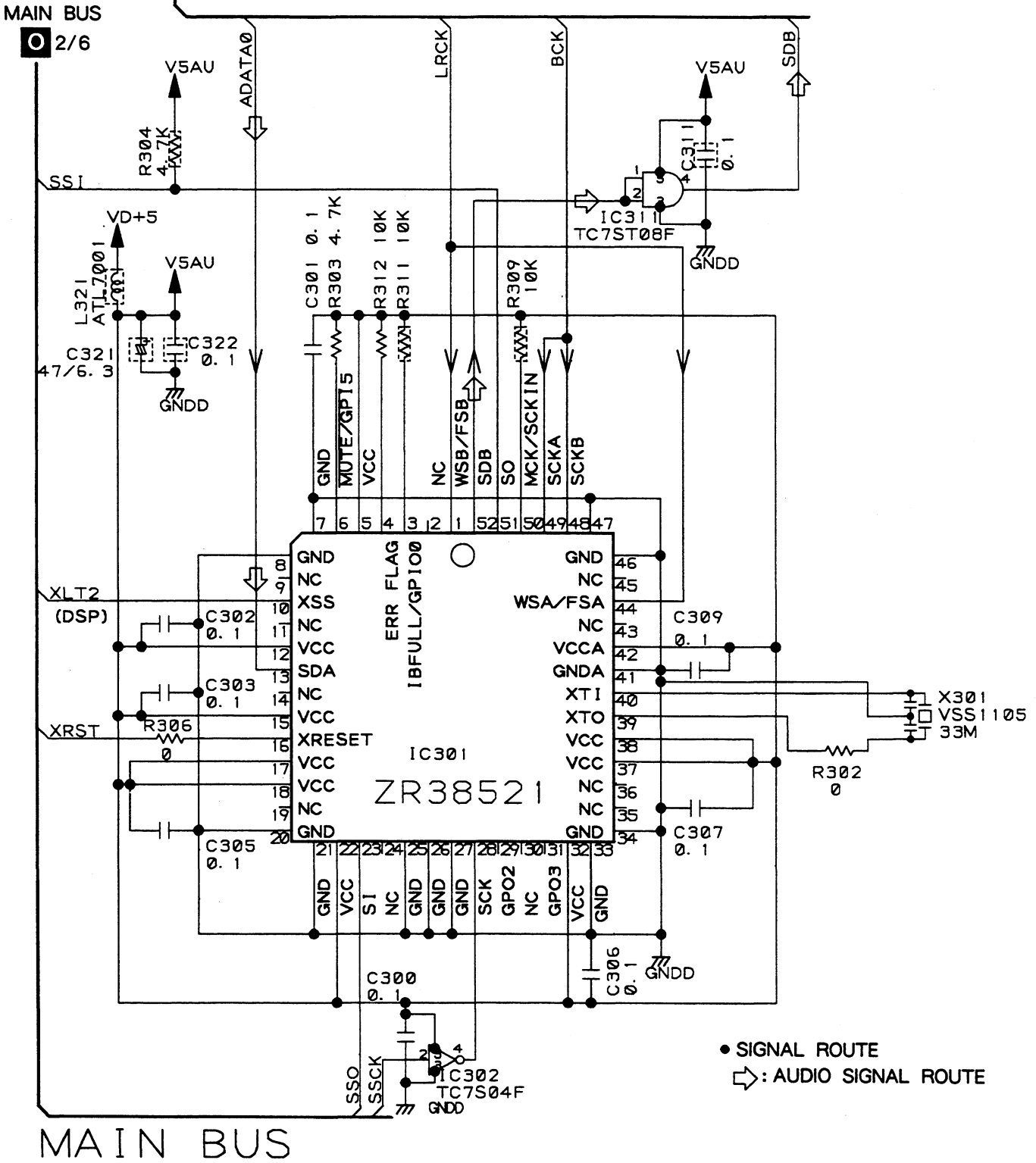
• SIGNAL ROUTE
 ■: ROM DATA SIGNAL ROUTE



3.11 DVD MAIN ASSY (5/6)

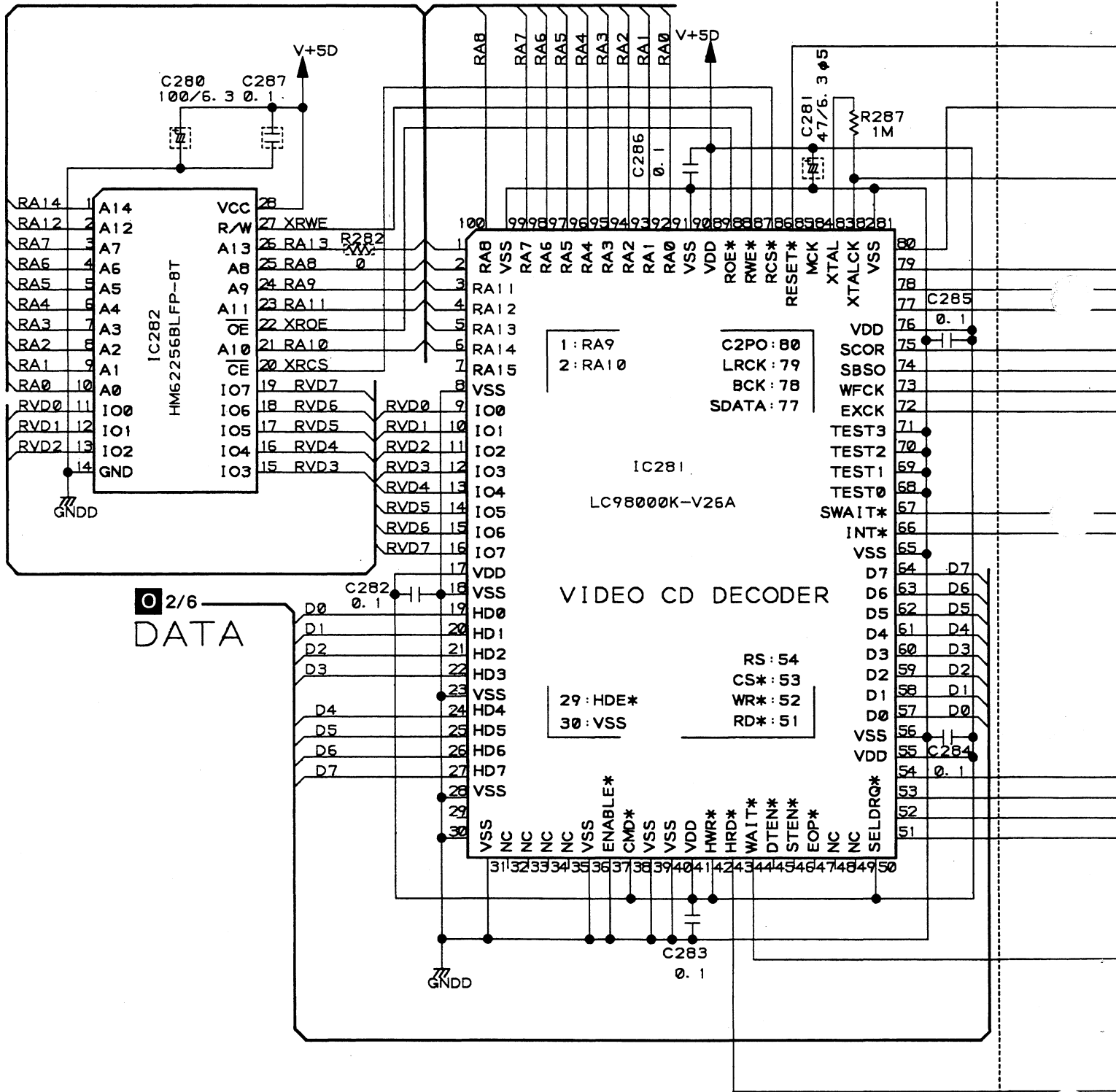
D. AUDIO

DVD MAIN ASSY (5/6) (VWS1312)

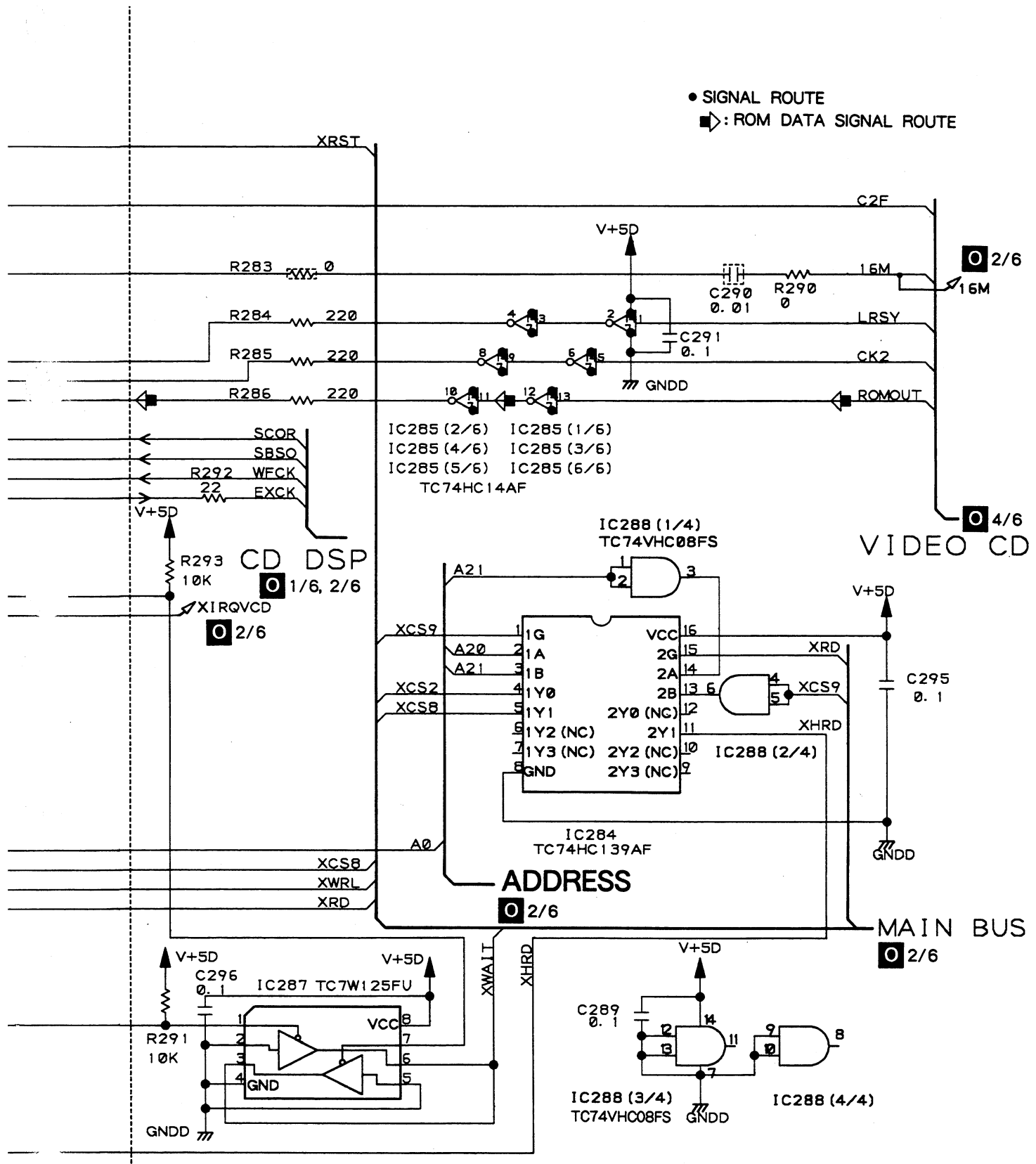


3.12 DVD MAIN ASSY (6/6)

O DVD MAIN ASSY (6/6) (VWS1312)

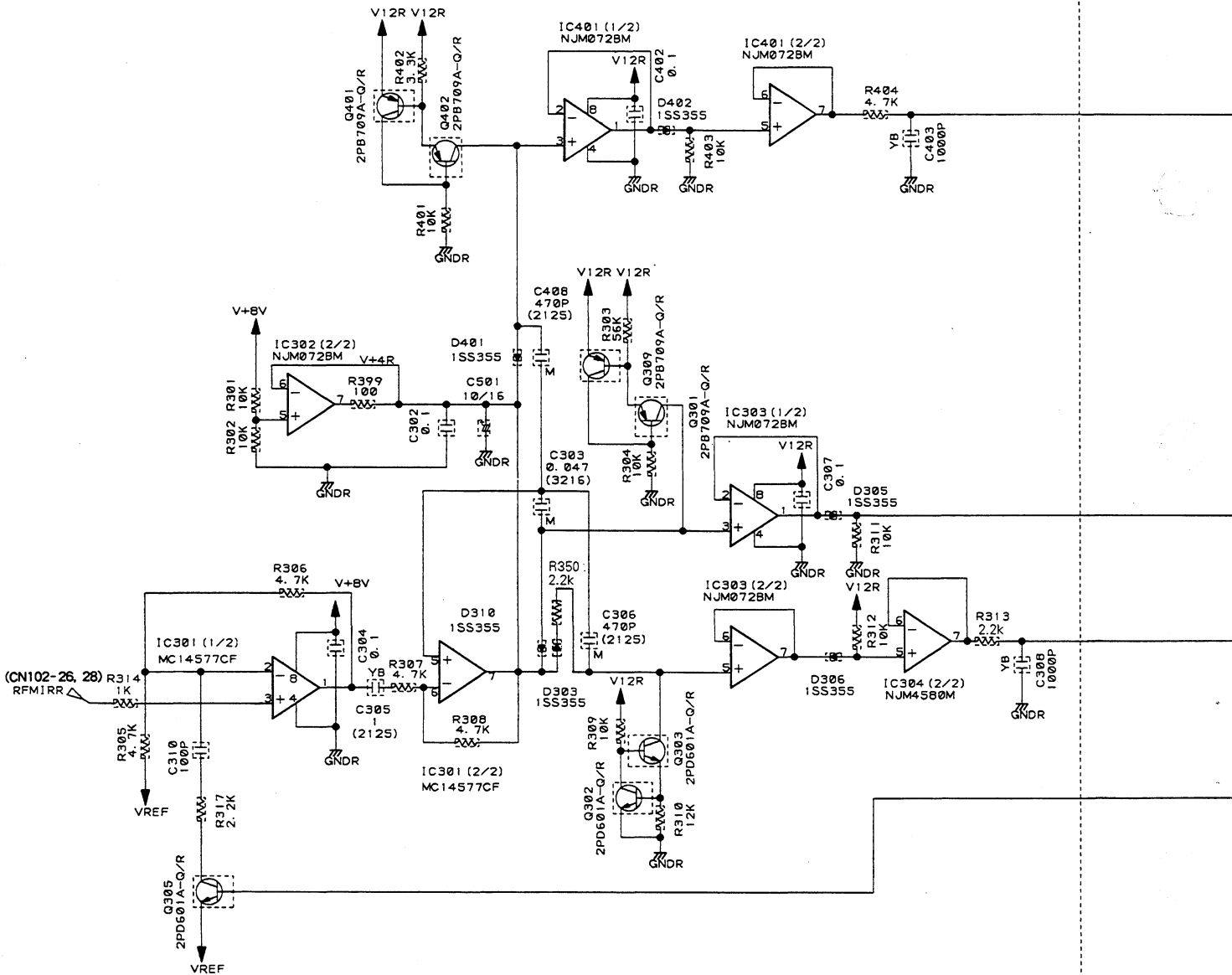
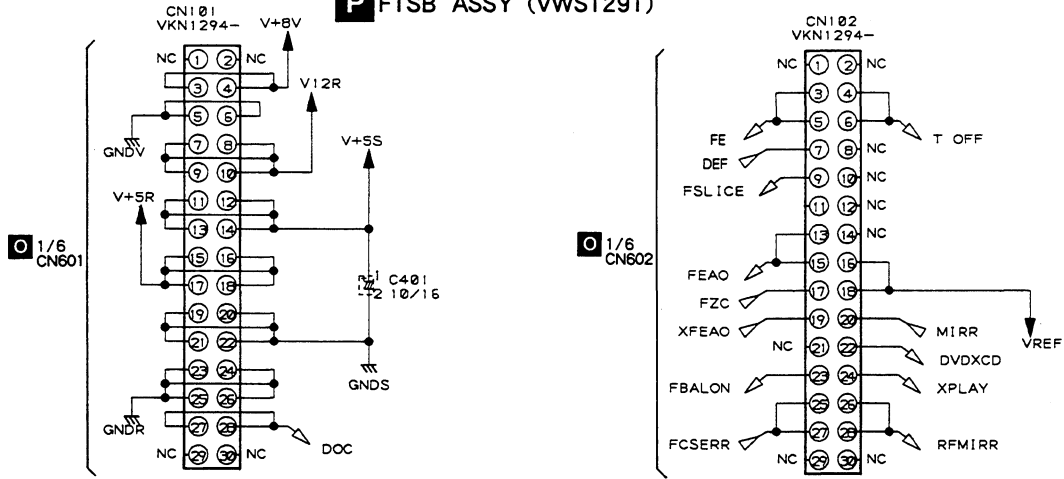


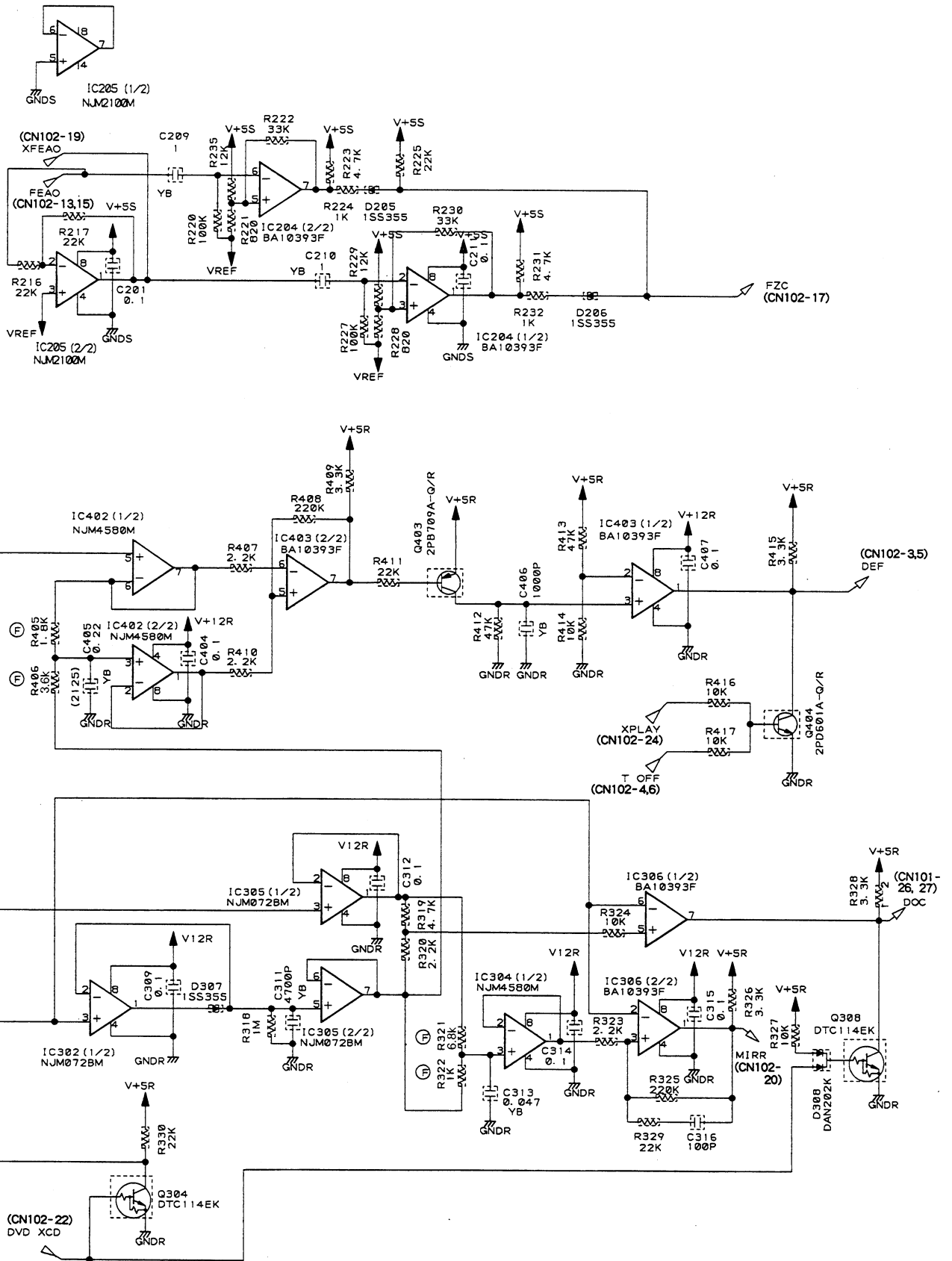
● SIGNAL ROUTE
 ■▷: ROM DATA SIGNAL ROUTE



3.13 FTSB ASSY

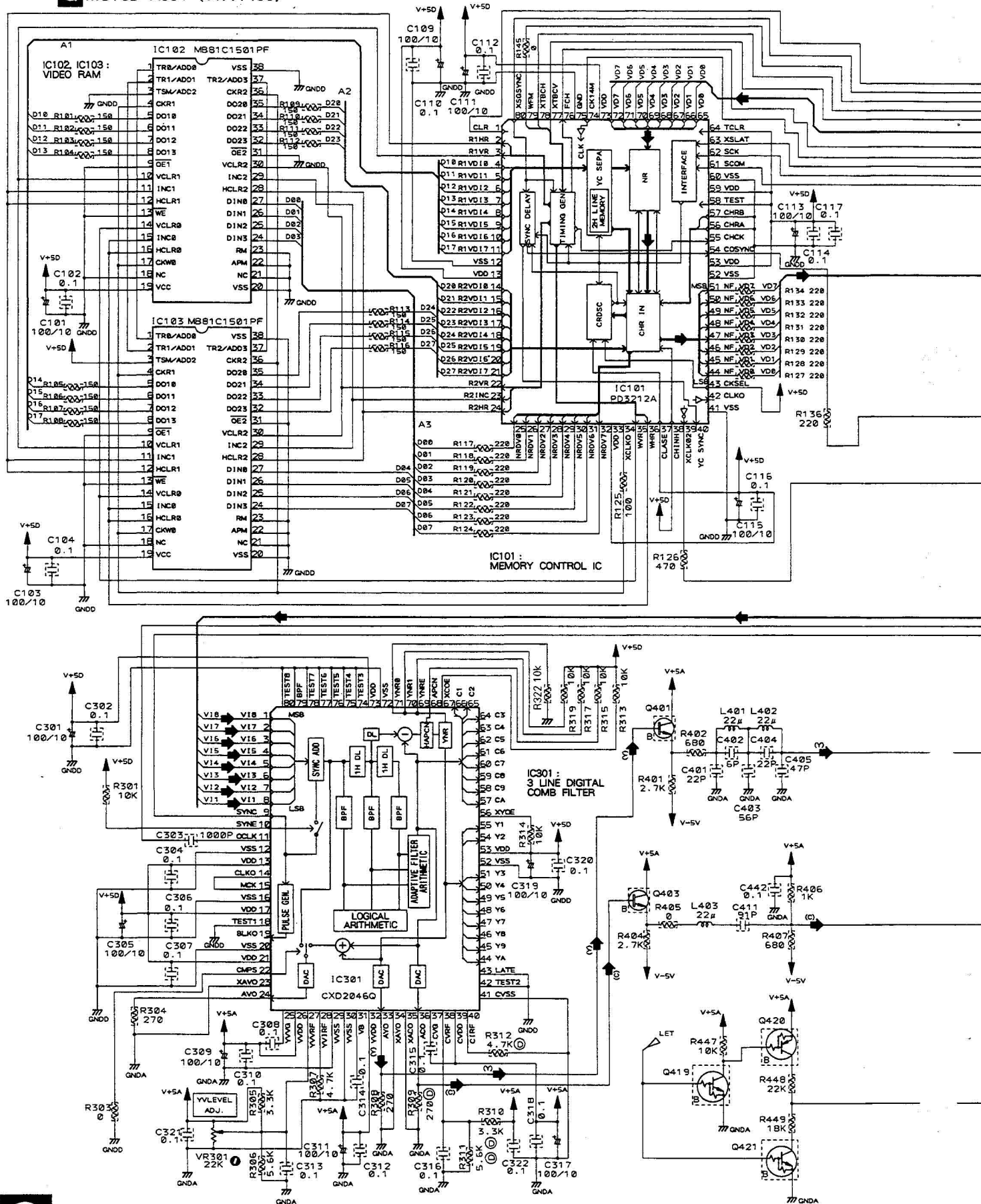
P FTSB ASSY (VWS1291)

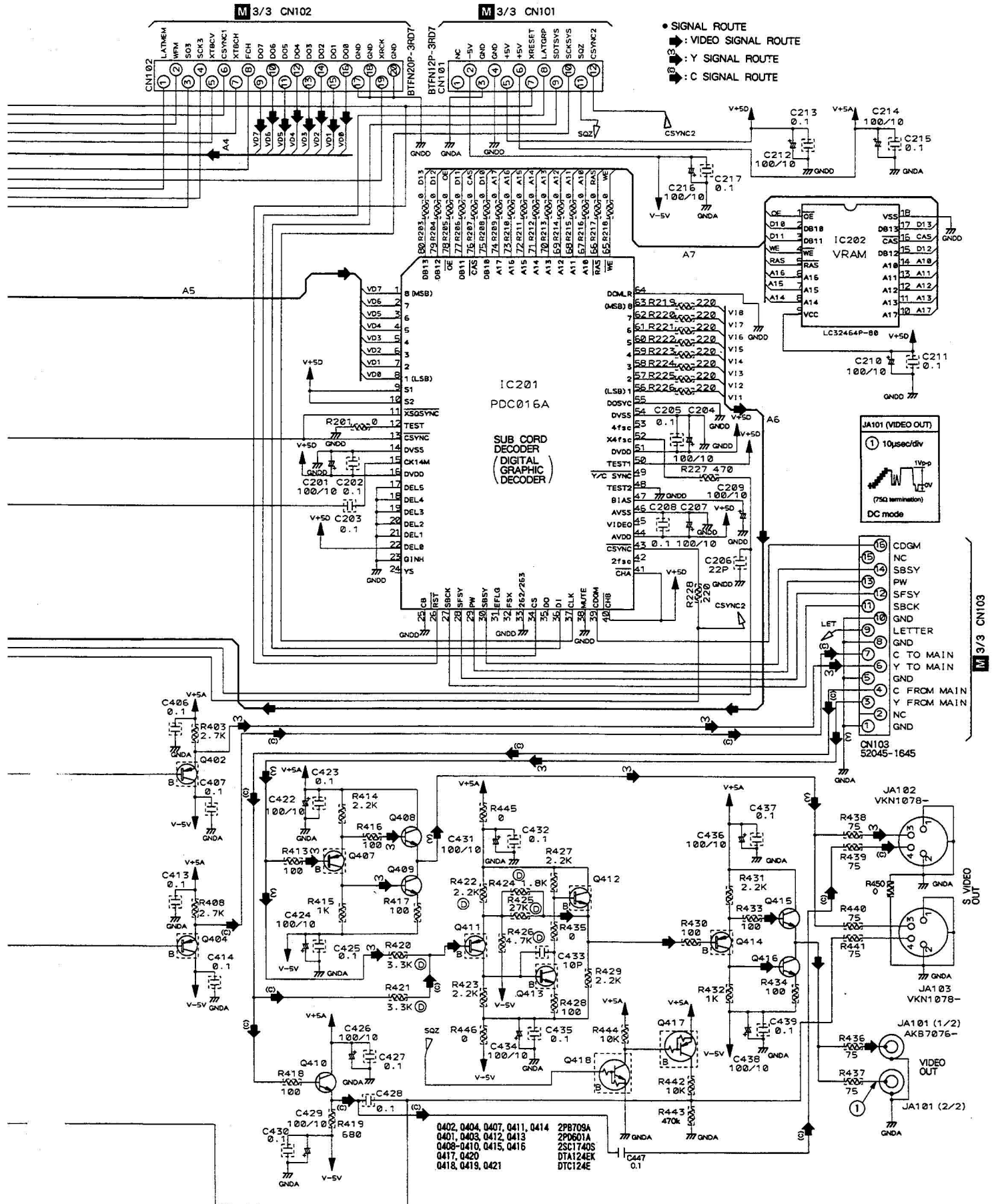




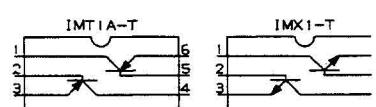
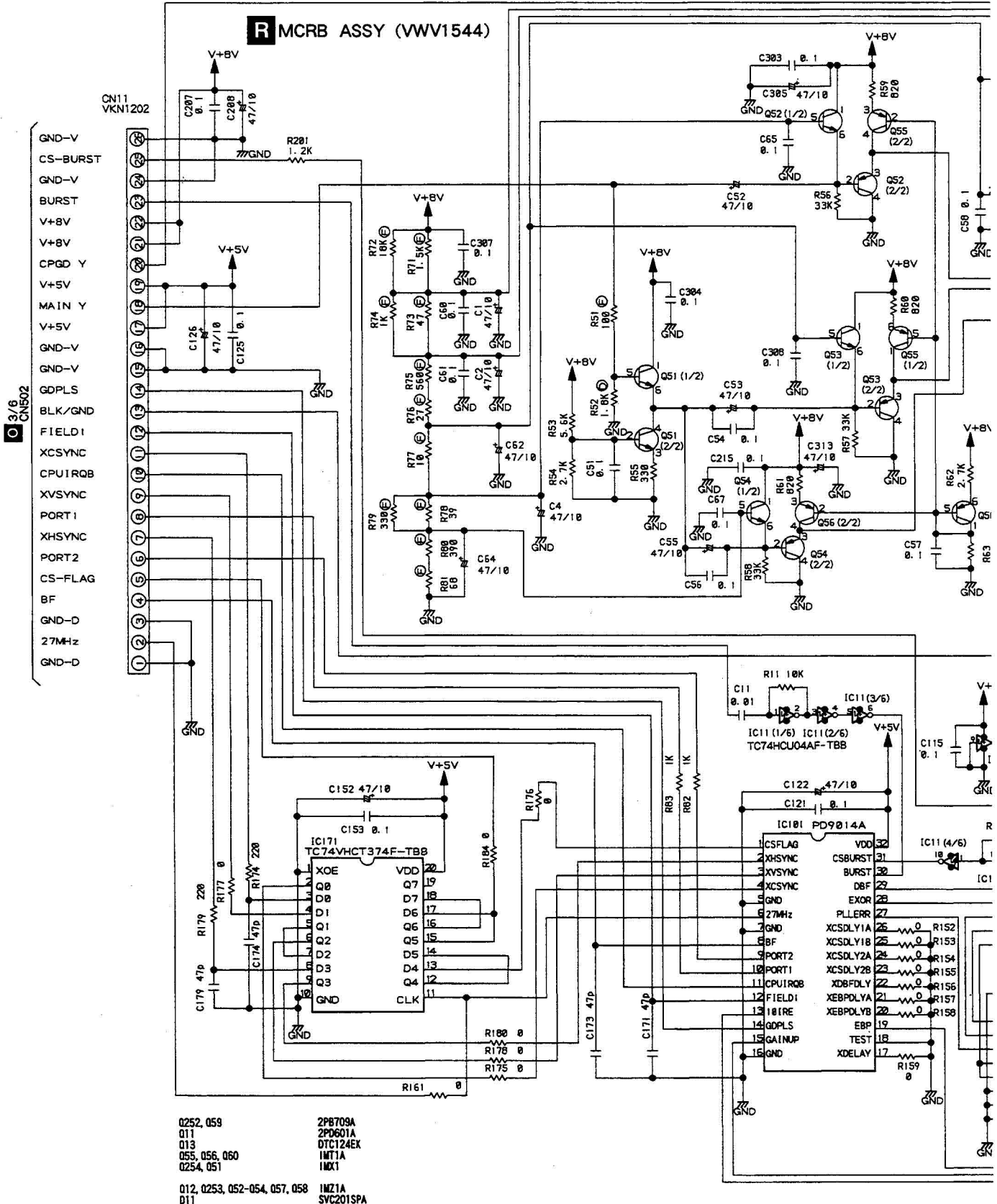
3.14 MGYCB ASSY

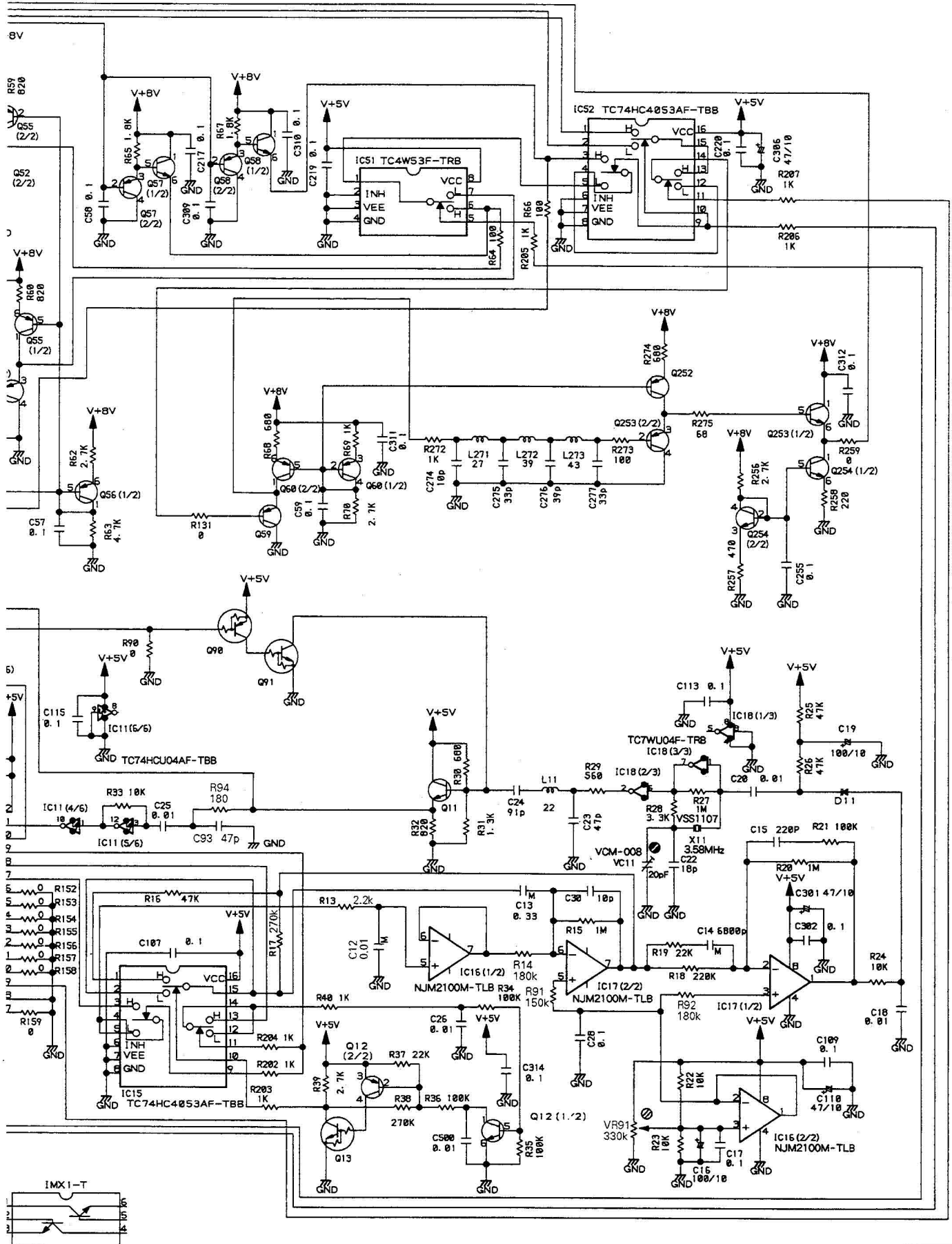
MGYCB ASSY (VWV1468)





3.15 MCRB ASSY





• WAVEFORMS AND VOLTAGE

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.

M CLD MAIN ASSY

<p>IC801 (LA9425)</p> <p>⑨ 10msec/div</p> <p>0.2Vp-p 0V</p> <p>DC mode</p>	<p>IC802 (LC78681KE)</p> <p>② 0.1μsec/div</p> <p>4.3Vp-p 0V</p> <p>AC mode (D.audio)</p>	<p>IC901 (LA9420M)</p> <p>⑩ 5msec/div</p> <p>500mVp-p 0V</p> <p>DC mode</p>	<p>IC400 (LA7134M)</p> <p>⑩ 10μsec/div</p> <p>1.6Vp-p 0V</p> <p>DC mode</p>	<p>CN801</p> <p>⑫ 2msec/div</p> <p>600mVp-p 0V</p> <p>AC mode</p>	<p>CN802</p> <p>⑦ 5msec/div</p> <p>200mVp-p 0V</p> <p>DC mode</p>
<p>⑳ 5msec/div</p> <p>100mVp-p 0V</p> <p>DC mode</p>	<p>③③ 10μsec/div</p> <p>4.2Vp-p 0V</p> <p>AC mode (D.audio)</p>	<p>③⑧ 10μsec/div</p> <p>5Vp-p 0V</p> <p>DC mode</p>	<p>⑳ 2msec/div</p> <p>400mVp-p 0V</p> <p>AC mode</p>		<p>⑩ 5msec/div</p> <p>100mVp-p 0V</p> <p>DC mode</p>
<p>②② 5msec/div</p> <p>200mVp-p 0V</p> <p>DC mode</p>	<p>③⑤ 0.2μsec/div</p> <p>4.4Vp-p 0V</p> <p>AC mode (D.audio)</p>	<p>④⑩ 10msec/div</p> <p>0.3Vp-p 0V</p> <p>DC mode</p>	<p>②⑤ 10μsec/div</p> <p>1Vp-p 0V</p> <p>DC mode</p>		<p>⑪ 5msec/div</p> <p>0.2Vp-p 0V</p> <p>DC mode</p>
	<p>③⑥ 0.2μsec/div</p> <p>4.5Vp-p 0V</p> <p>AC mode (D.audio)</p>	<p>④⑧ 50μsec/div</p> <p>1Vp-p 0V</p> <p>DC mode</p>	<p>IC500 (PD6159A)</p> <p>④⑦ 5msec/div</p> <p>5Vp-p 0V</p> <p>DC mode</p>		
	<p>④③ 0.1μsec/div</p> <p>4.5Vp-p 0V</p> <p>AC mode (D.audio)</p>	<p>⑥⑩ 5msec/div</p> <p>1Vp-p 0V</p> <p>DC mode</p>	<p>10μsec/div</p> <p>⑤⑦ 5Vp-p</p> <p>5Vp-p 0V</p> <p>DC mode</p>		
	<p>⑤⑨ 0.1μsec/div</p> <p>2Vp-p 0V</p> <p>AC mode (D.audio)</p>	<p>IC902 (TA8410AK)</p> <p>① 5msec/div</p> <p>2Vp-p 0V</p> <p>DC mode</p>	<p>⑤⑥ 5Vp-p</p> <p>5Vp-p 0V</p> <p>DC mode</p>		
	<p>IC803 (LA6510)</p> <p>① 2msec/div</p> <p>1.8Vp-p 0V</p> <p>DC mode</p>	<p>⑨ 5msec/div</p> <p>5Vp-p 0V</p> <p>DC mode</p>	<p>Q441 Emitter</p> <p>② 10μsec/div</p> <p>400mVp-p 0V</p> <p>AC mode</p>		

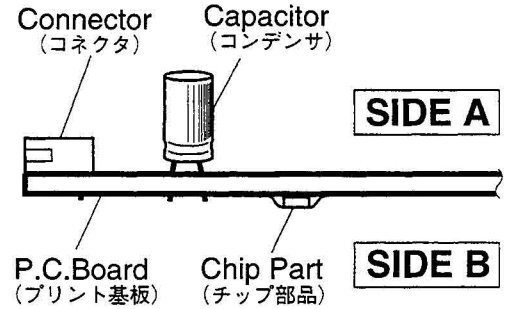
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

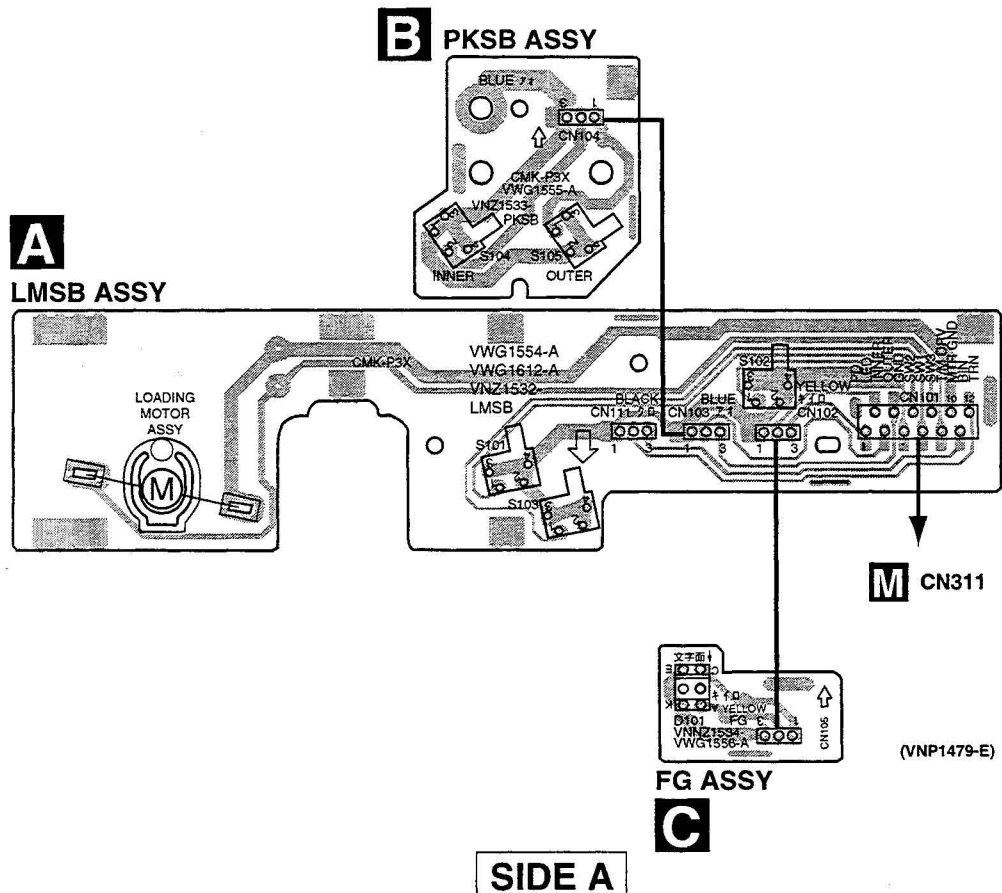
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

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

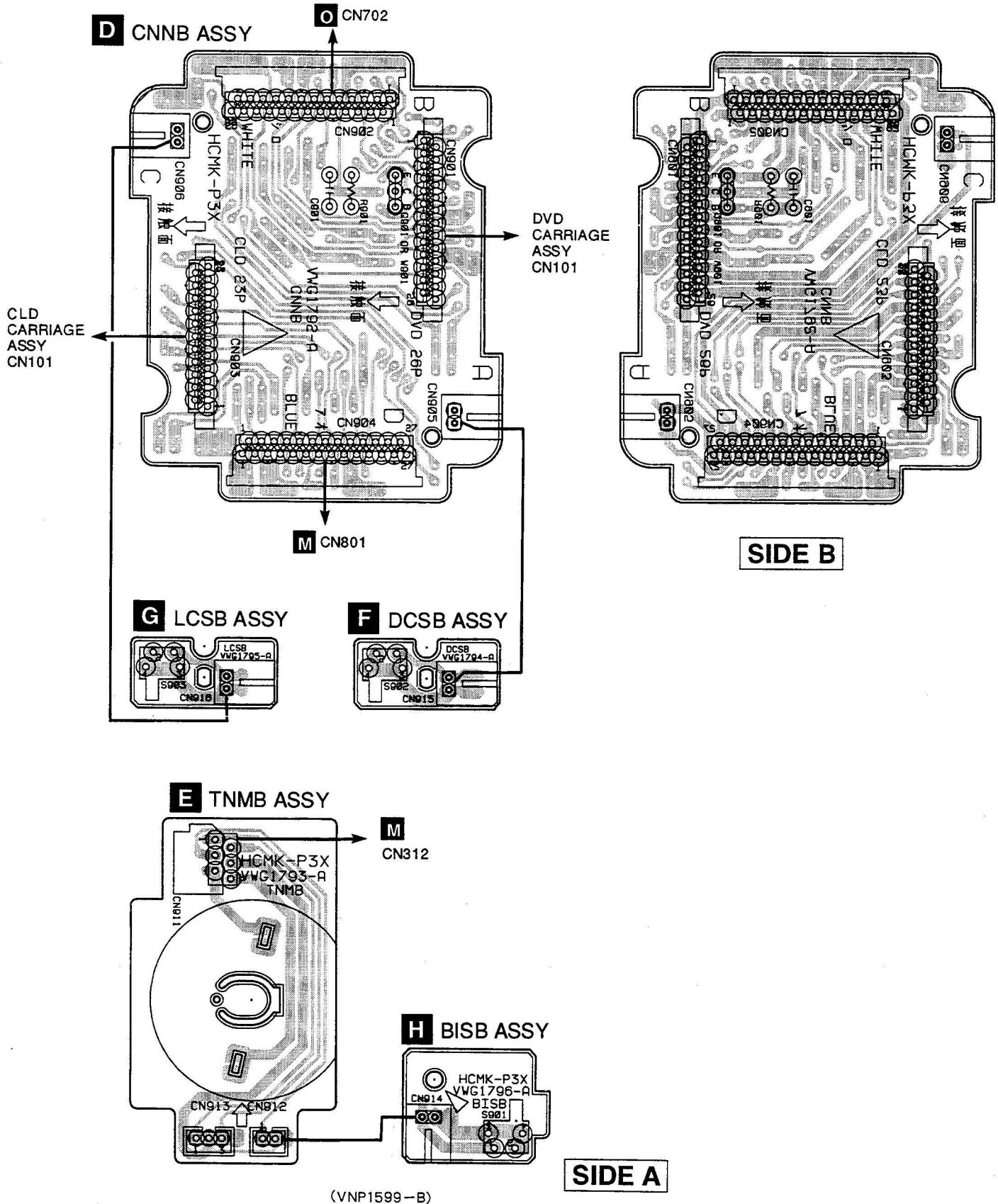
3. The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



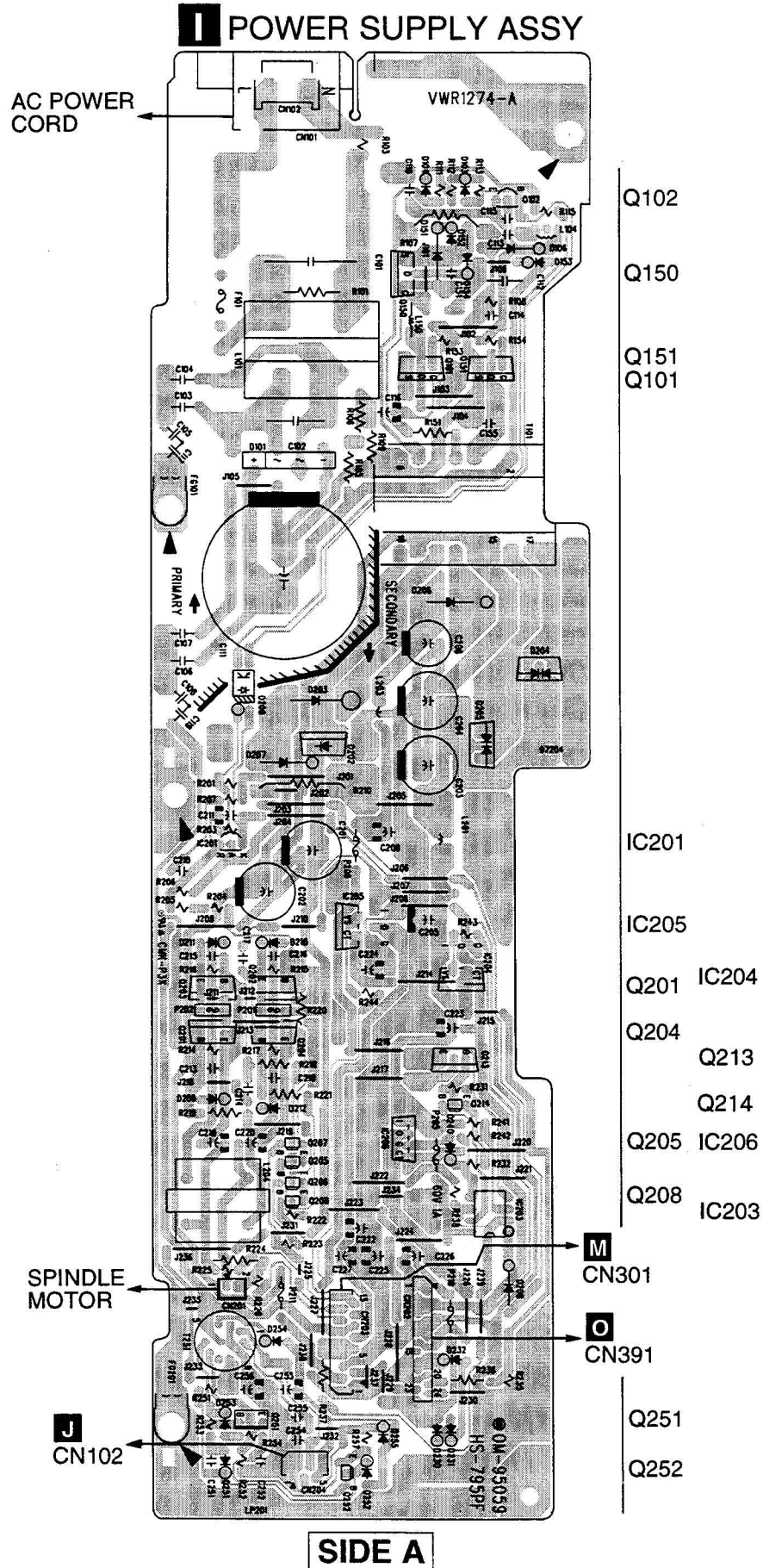
4.1 LMSB, PKSB AND FG ASSEMBLIES



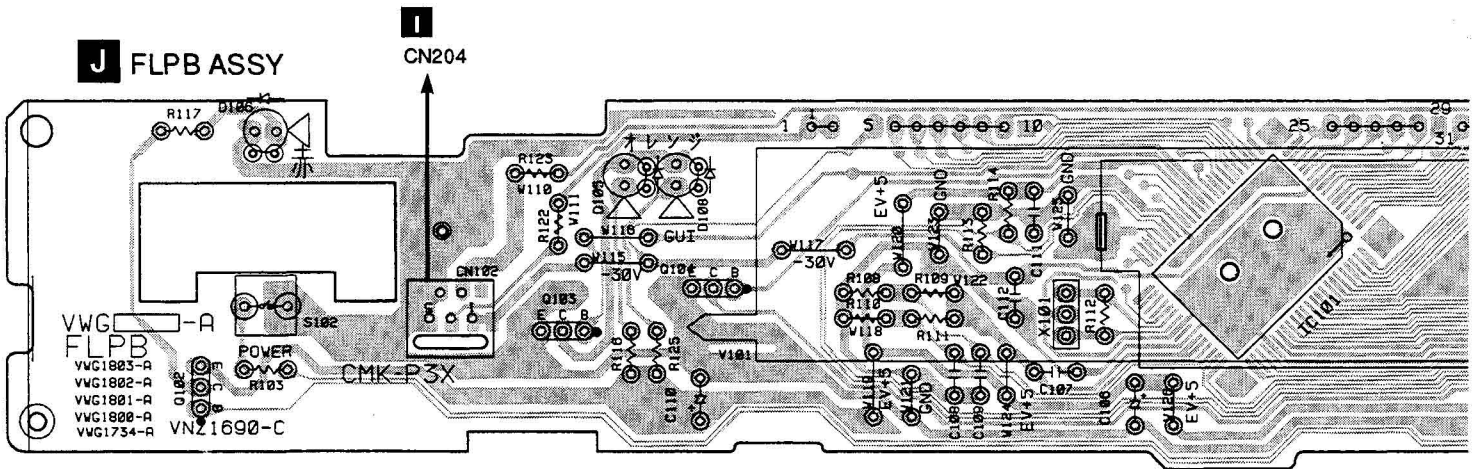
4.2 CNNB, TNMB, DCSB, LCSB AND BISB ASSEMBLIES



4.3 POWER SUPPLY ASSY



4.4 FLPB, KEYB AND LEDB ASSEMBLIES



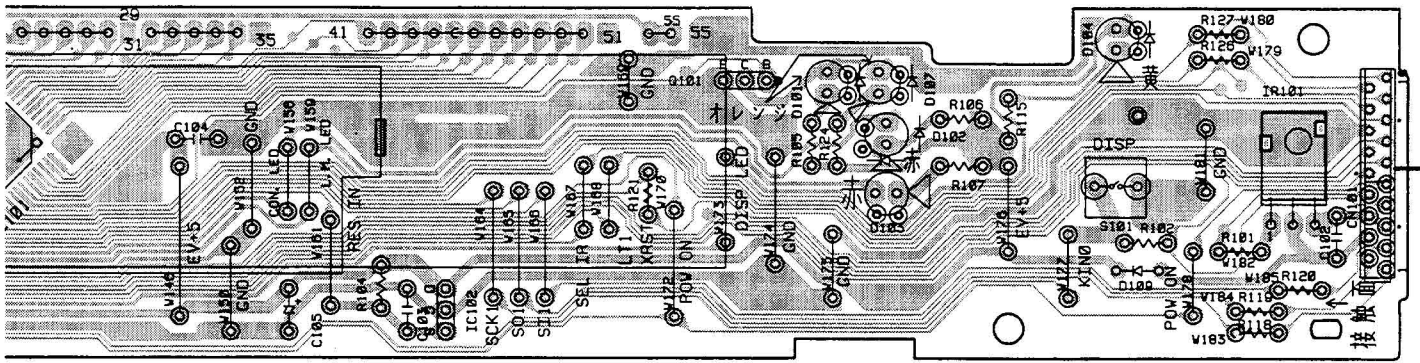
Q102

Q103

Q104

IC101

SIDE A

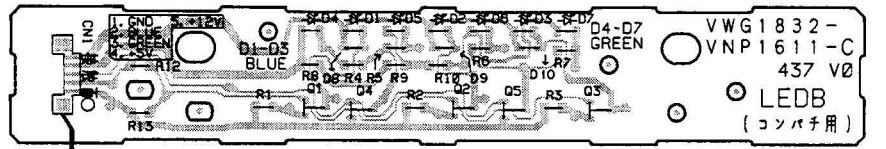


IC102

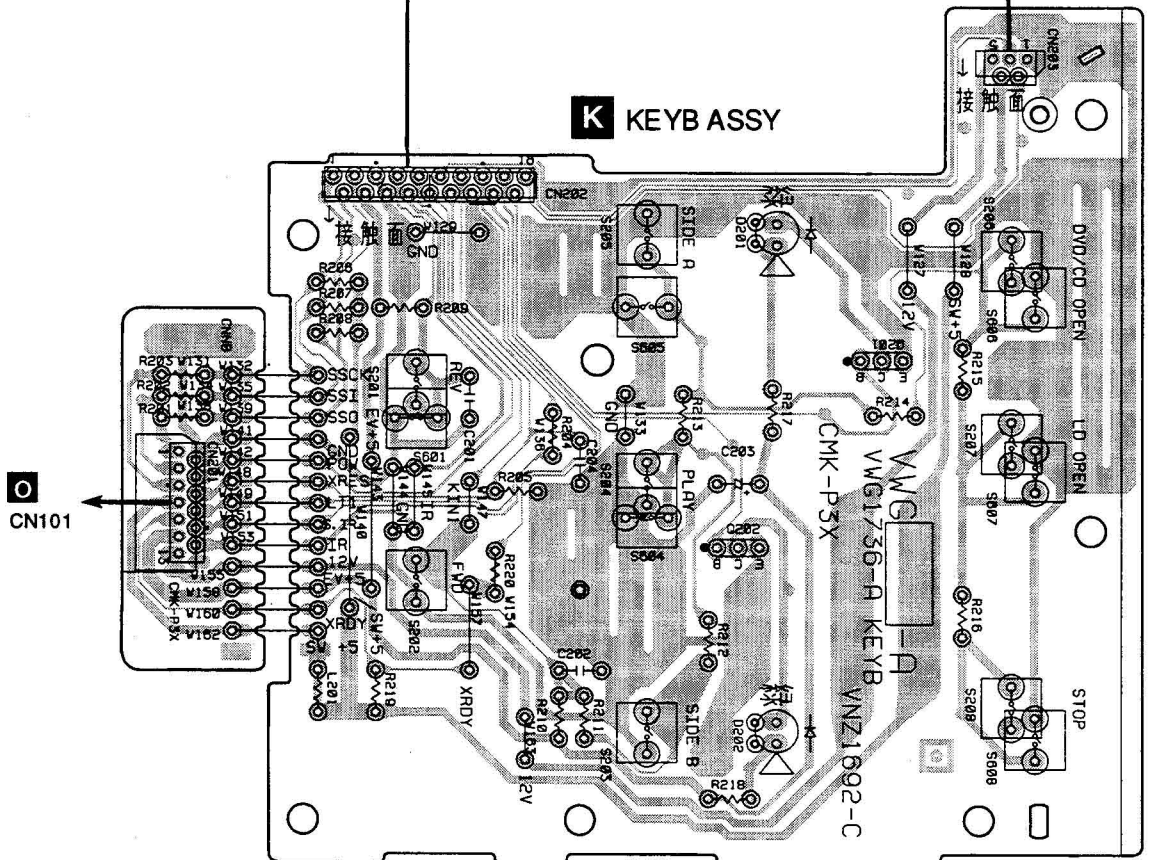
Q101

(VNP1547-C)

L LEDB ASSY



K KEYB ASSY



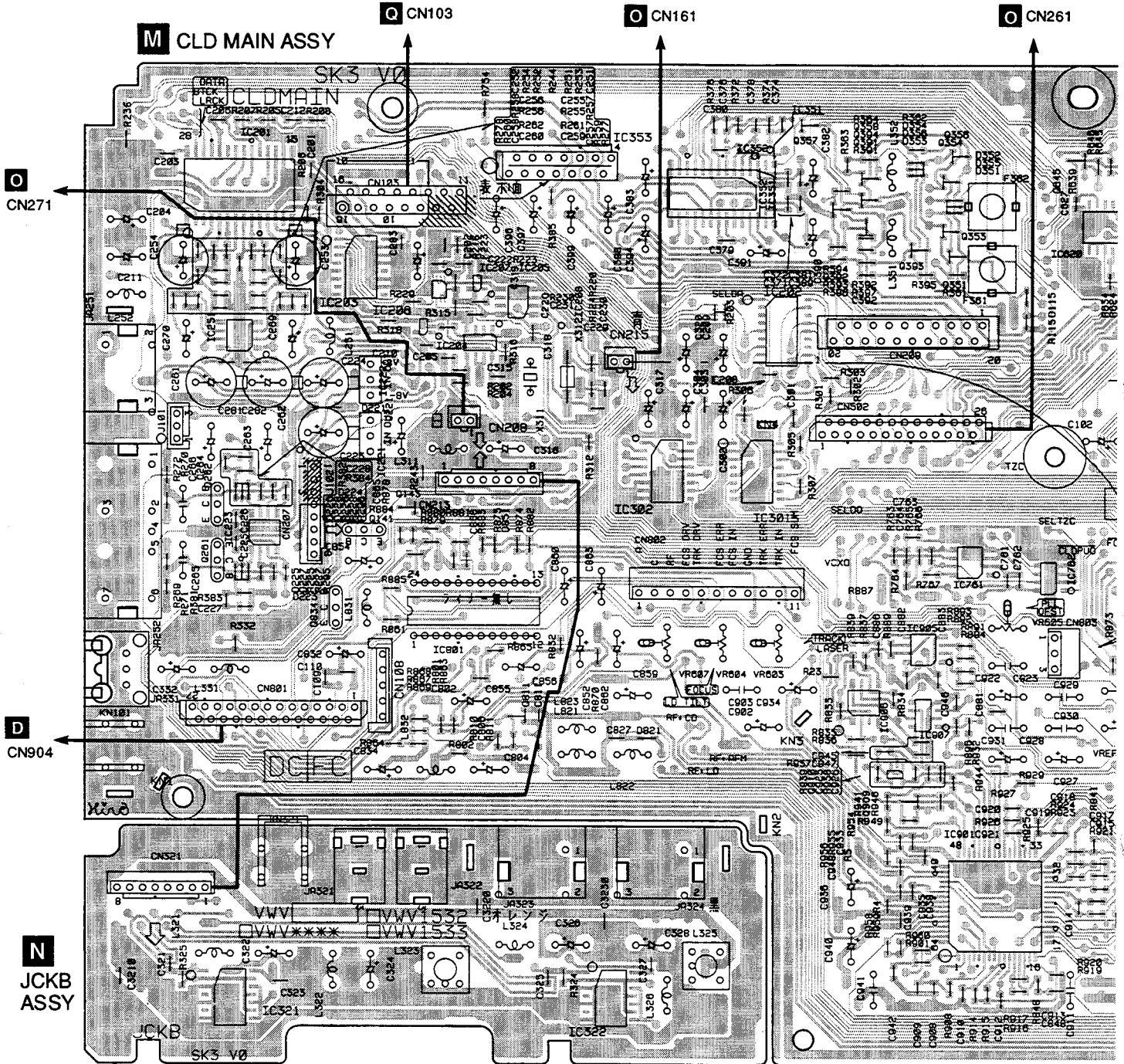
○ CN101

(VNP1547-C)

SIDE A

J K L

4.5 CLD MAIN AND JCKB ASSEMBLIES



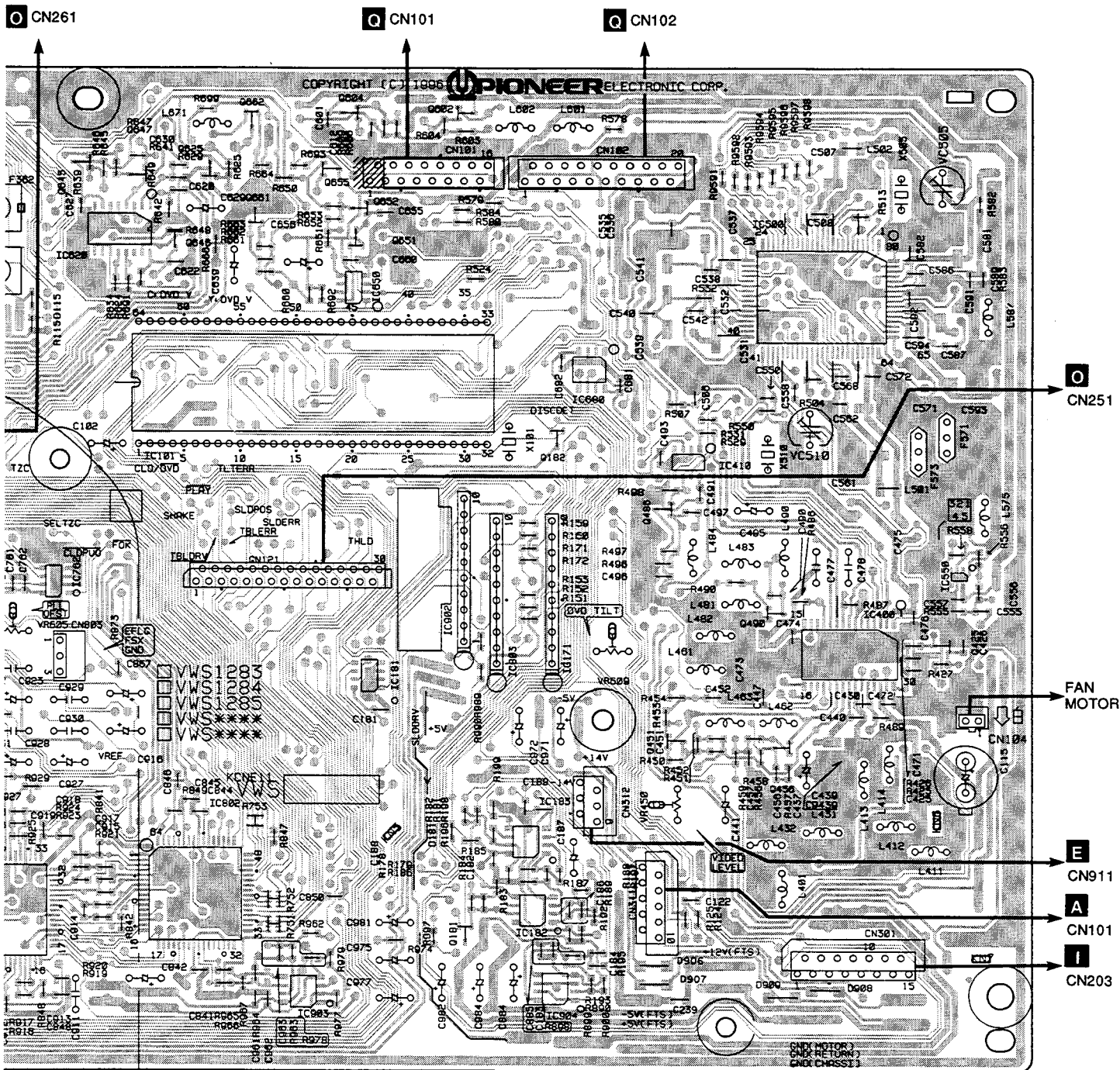
(VNP1605-D)

VR607 VR604 VR603

VR605

Q261	IC201	IC203	IC207	IC205	IC208	IC302	IC351	IC202	Q358	Q354	Q356	Q645	IC62
Q262	IC251	IC206	IC204	IC353	IC322	IC352	IC301	Q394	Q393	Q351			Q
IC321	IC223	Q834	IC221	IC801	IC811			Q391	IC905	IC761	IC762		
		Q141	IC222					Q392	IC906	IC907	IC901		
			Q143					Q910	Q909				

SIDE A

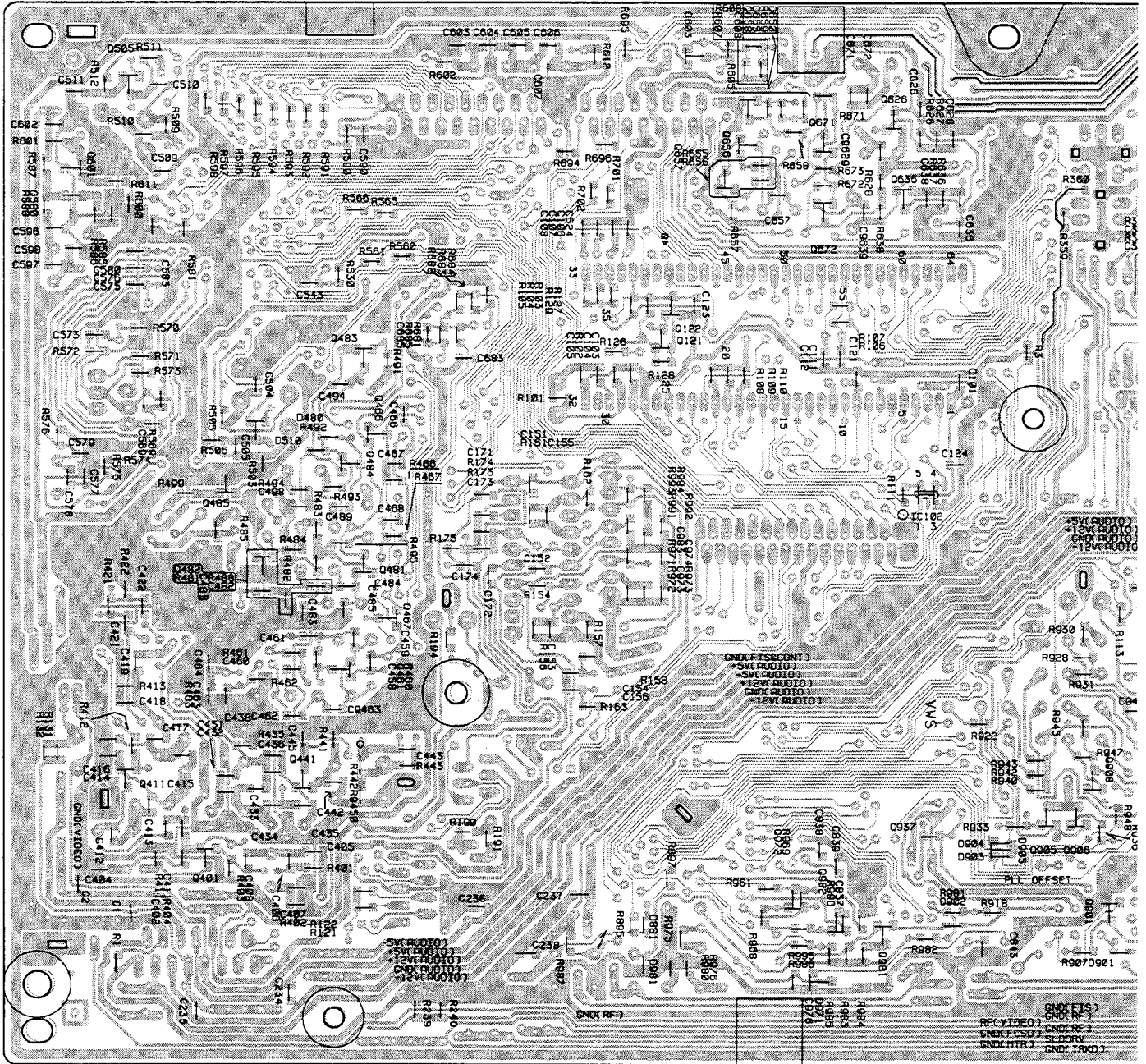


'R605									VR609	VR450	VC510	VC505
Q645	IC620	Q625	Q662	Q604	Q651	Q602	IC183				IC500	IC550
	Q647	Q646	Q661	Q655	Q652		IC182	IC680	IC410		IC400	
IC762		IC101		IC650		IC902	IC803	IC171	Q486			
01		IC802		IC903	IC181	Q181		Q182	Q451	Q490	Q456	Q425
								IC904				

SIDE A



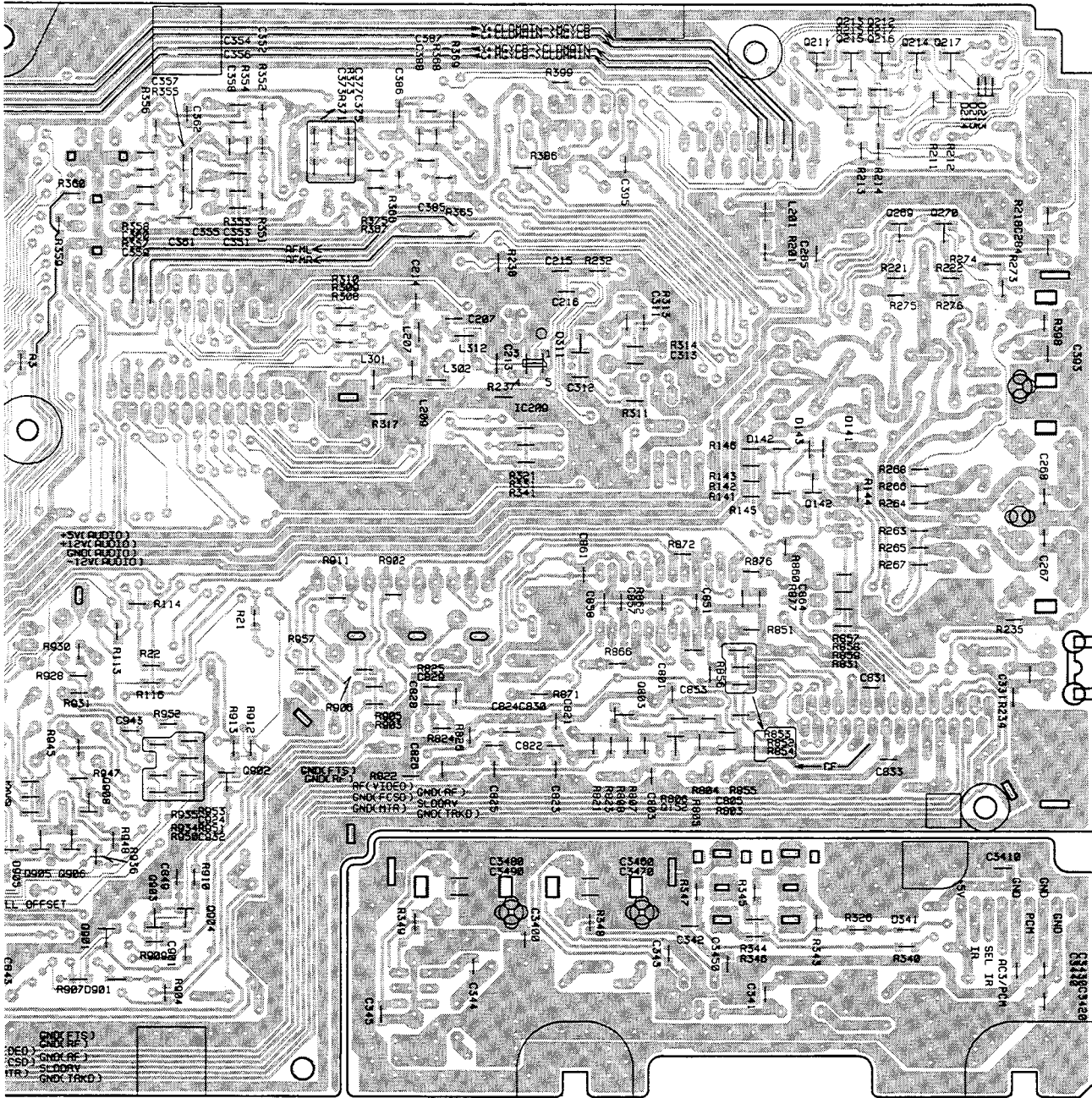
M CLD MAIN ASSY



- | | | | | | | | |
|------|------|------|------|------|------|-------|------|
| Q580 | Q461 | Q603 | Q656 | Q671 | Q626 | IC102 | |
| Q601 | Q482 | Q485 | Q441 | Q483 | Q466 | Q467 | Q908 |
| | Q411 | Q401 | | Q484 | Q481 | | Q905 |
| | | | | | | | Q906 |
| | | | | | | | Q909 |

SIDE B





N
JCKB
ASSY

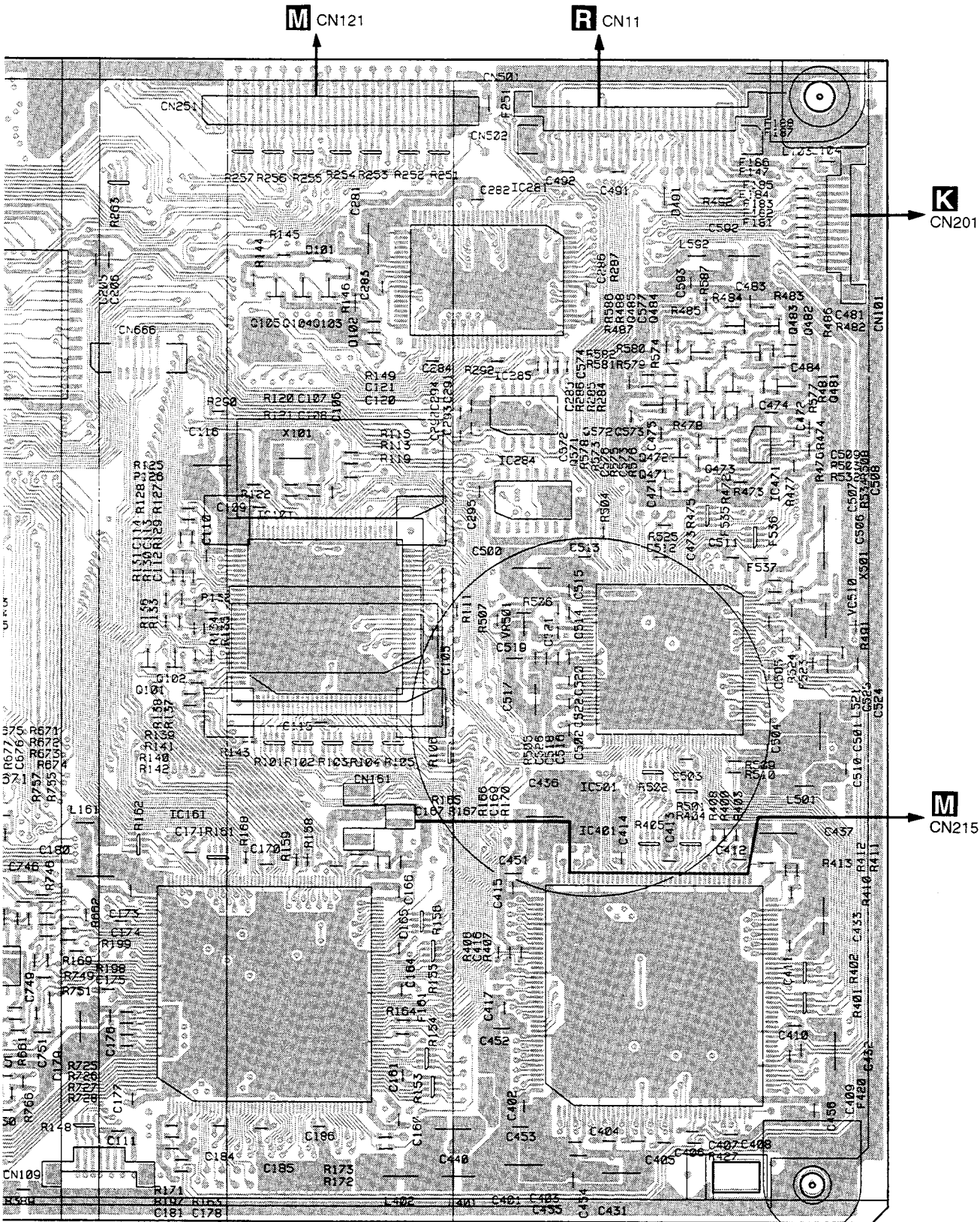
(VNP1605-D)

Q908
1905 Q906 Q901 Q903 Q904 Q902

IC209 Q803
Q152

Q211 Q213 Q212
Q142 Q215 Q216 Q214 Q217
Q269 Q270

SIDE B



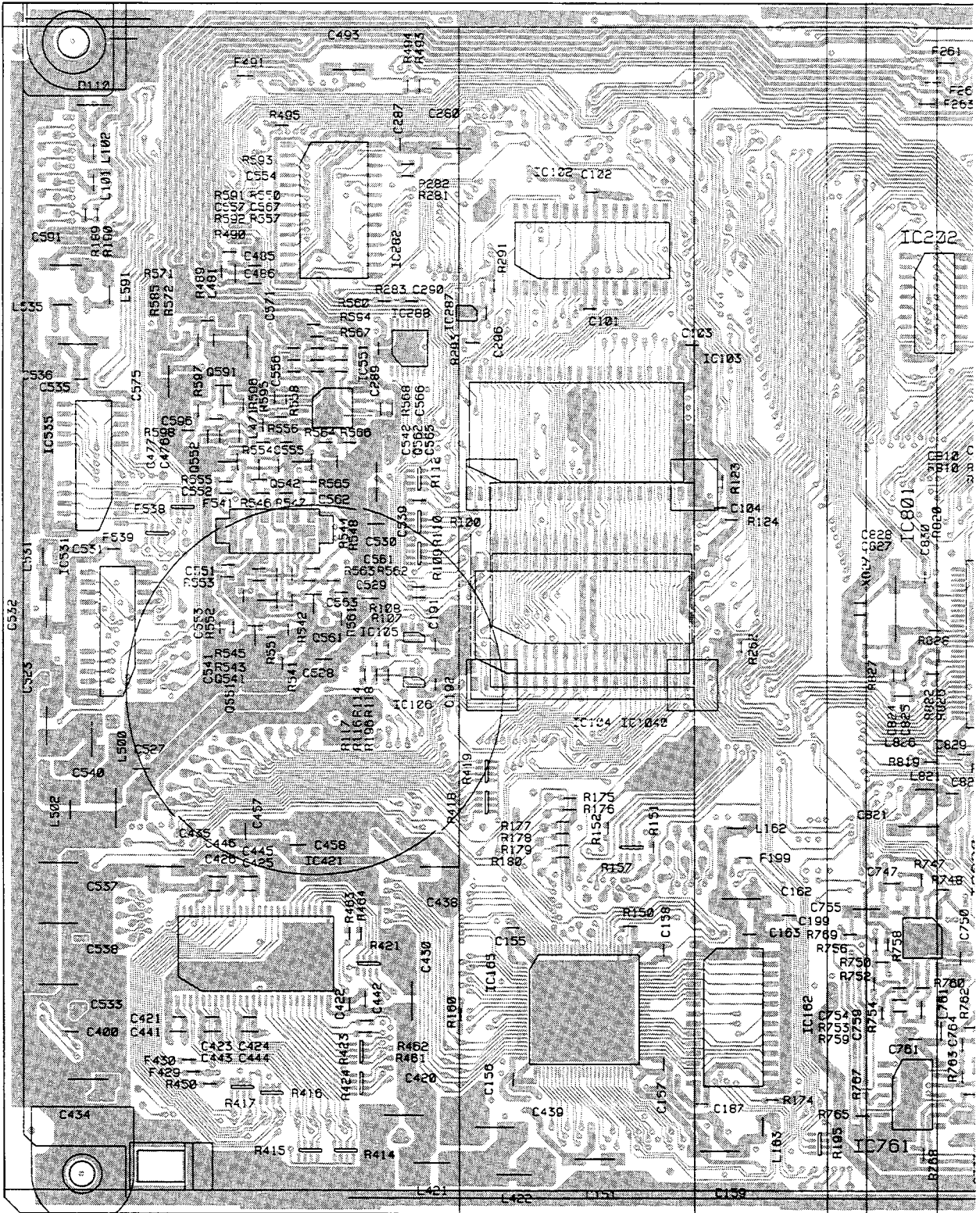
65			VR501	VC510
205		Q103-Q105	IC281	Q485 Q484 Q481-Q483
371	Q101 Q102	IC101	IC285 IC284	Q571-Q573 IC471
314		IC161		Q471-Q473 IC401 IC501

SIDE A



DVD MAIN ASSY

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

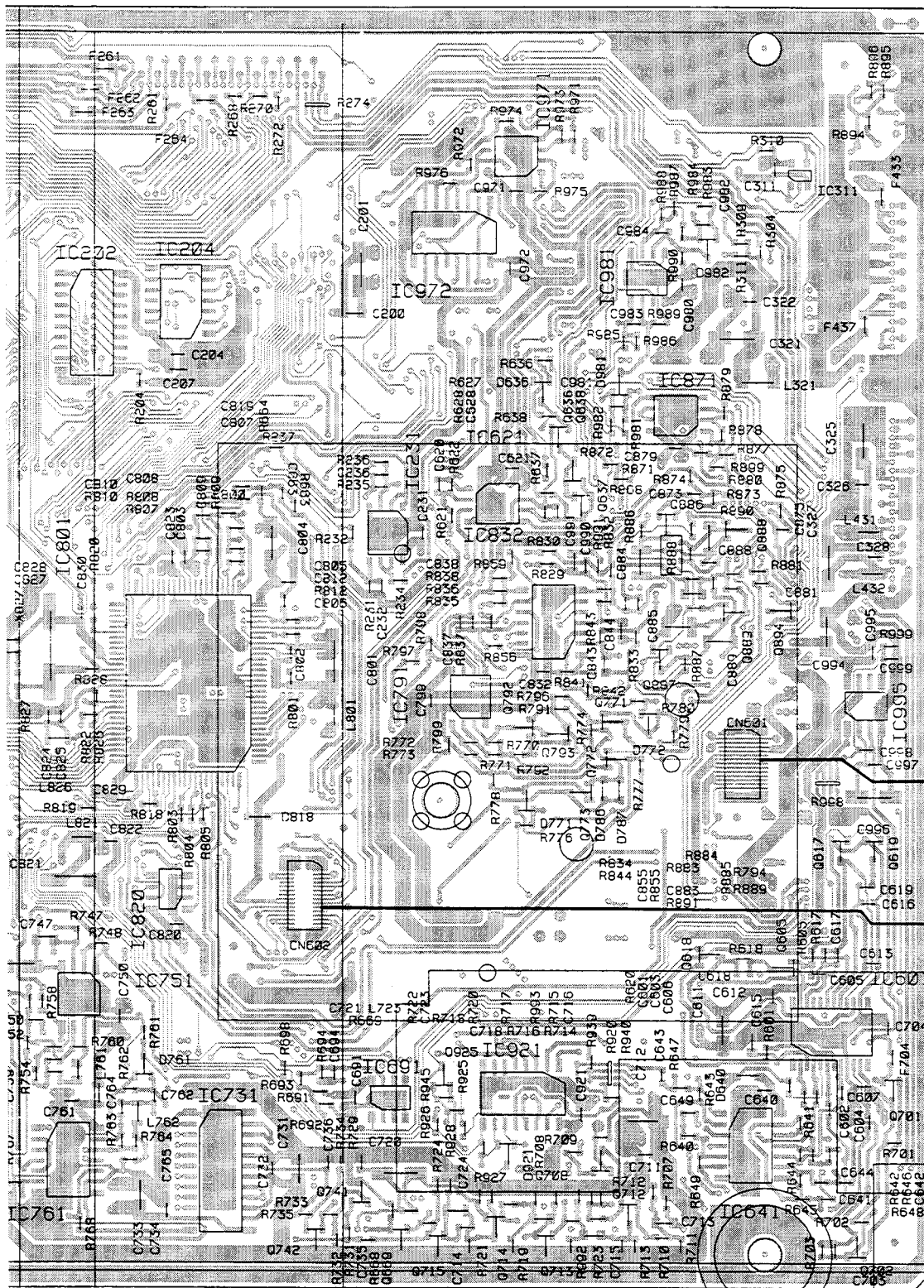


(VNP1550-C)

IC535	Q591	Q542	Q562	IC282	IC288	IC102 - IC104	IC202
IC531	Q552	Q541	Q561	IC551	IC287		IC751
	Q551	IC421	IC105	IC106	IC165	IC162	IC761

SIDE B





P
CN101

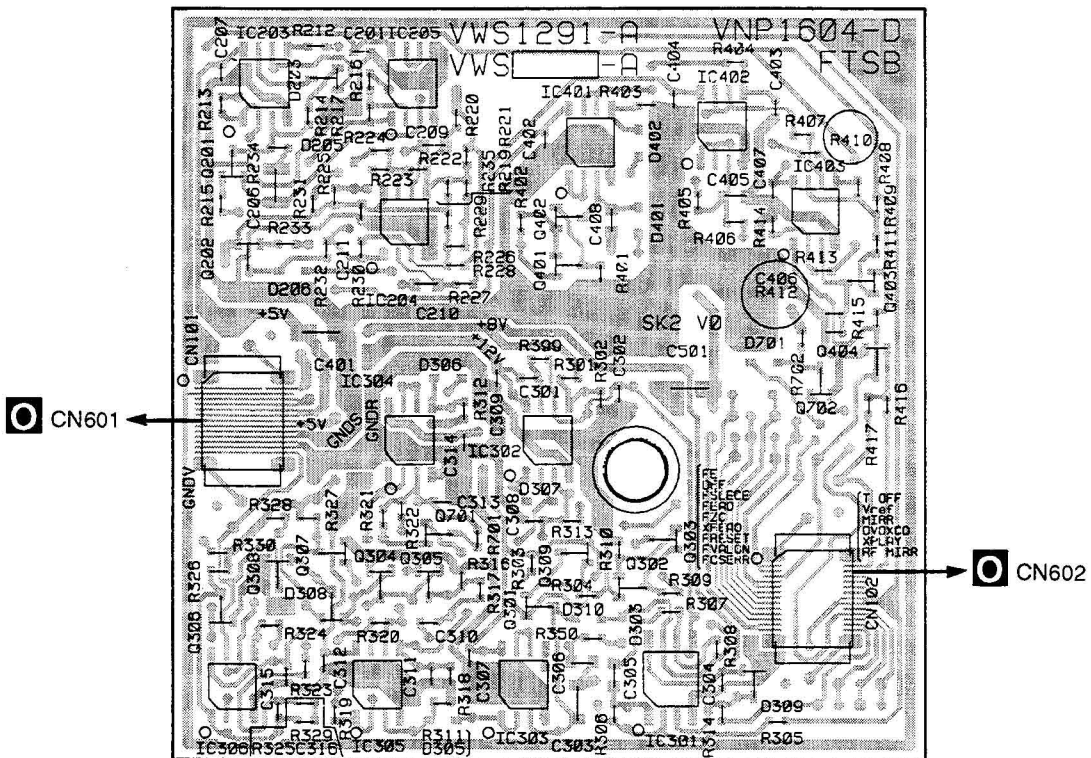
P
CN102

IC202 IC204 IC231 IC972 IC621 IC971 IC981 IC871 IC311 IC995
 IC751 IC801 IC791 IC832 Q636-Q638 Q886-Q889 Q617 Q619
 IC761 IC820 IC731 Q741 IC691 Q925 Q792 Q793 Q771-Q773 Q894 Q701
 Q742 IC921 Q708 Q618 Q605 IC601
 Q669 Q715 Q714 Q713 Q712 IC641 Q702

SIDE B

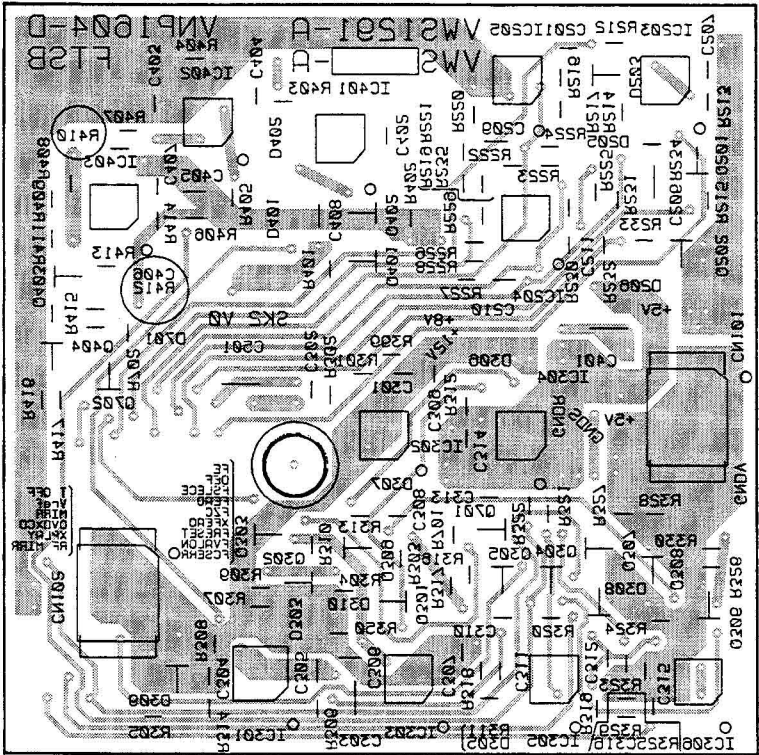


P FTSB ASSY



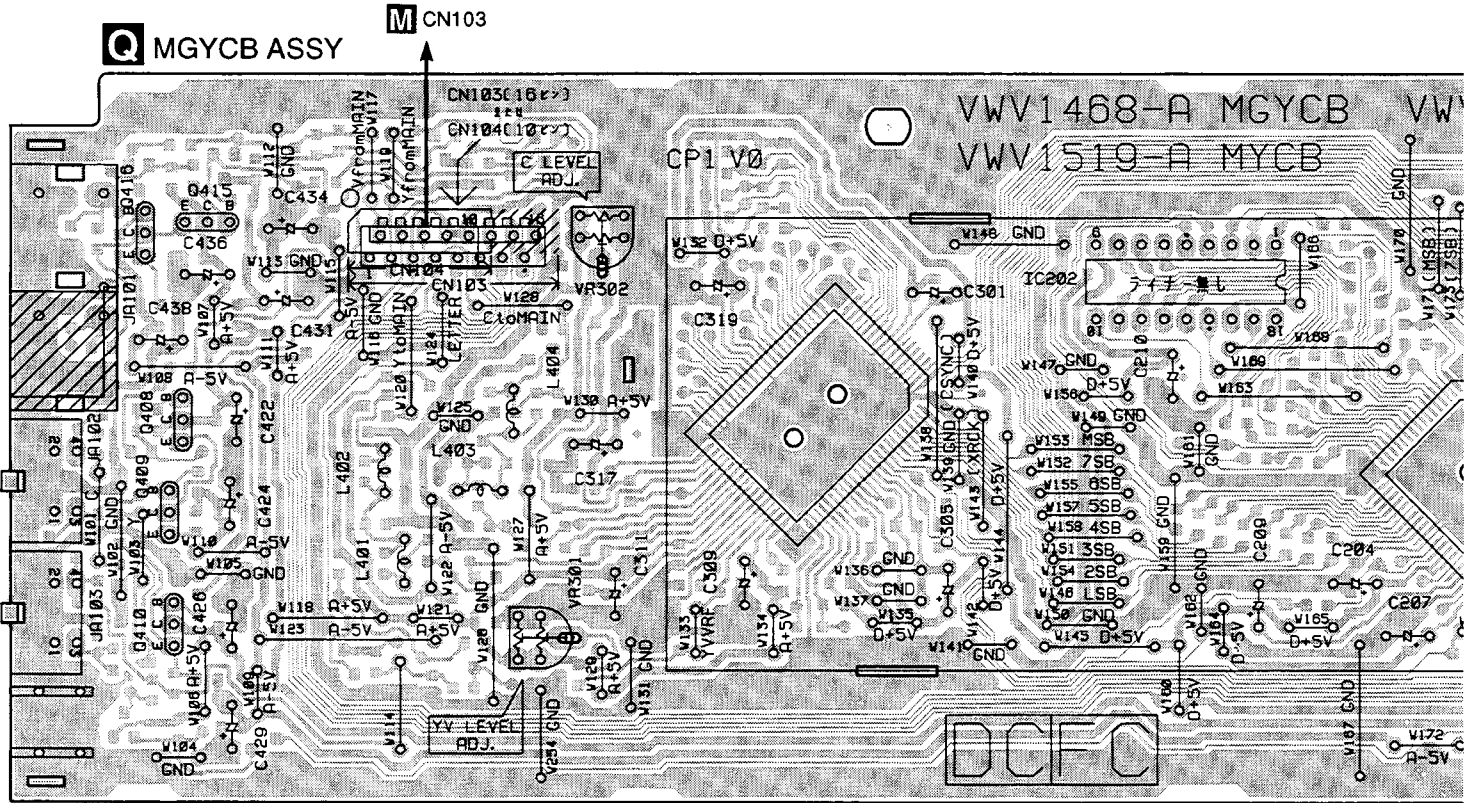
- IC203 IC205 Q401 Q402 IC401 IC402 IC403
- Q201 IC305 IC204 Q305 Q309 Q302 Q303 Q404 Q403
- Q202 Q308 Q307 IC304 Q301 IC302
- IC306 Q304 Q305 IC303 IC301

SIDE A



SIDE B

4.8 MGYCB ASSY



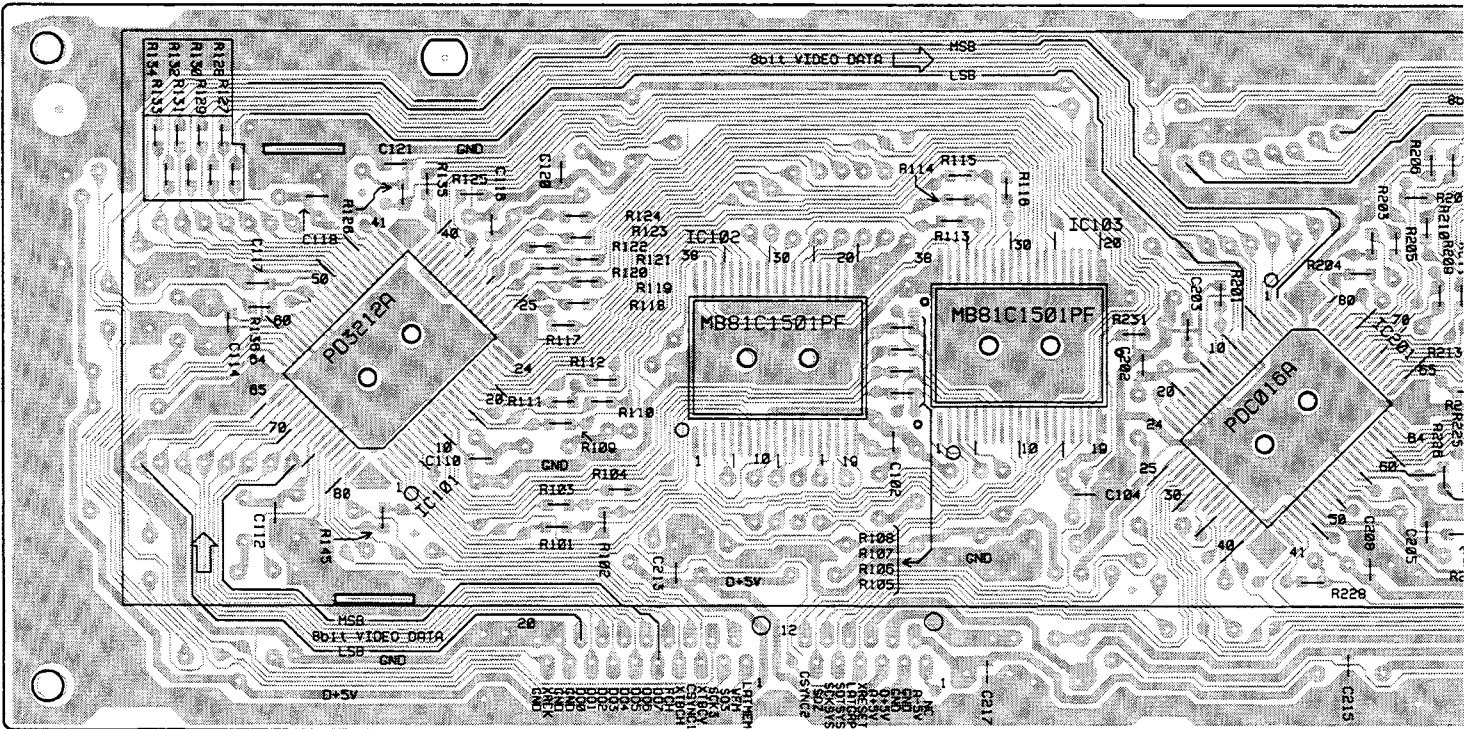
VR301 VR302

Q416 Q415
Q408-Q410

SIDE A

IC202

Q MGYCB ASSY



IC101

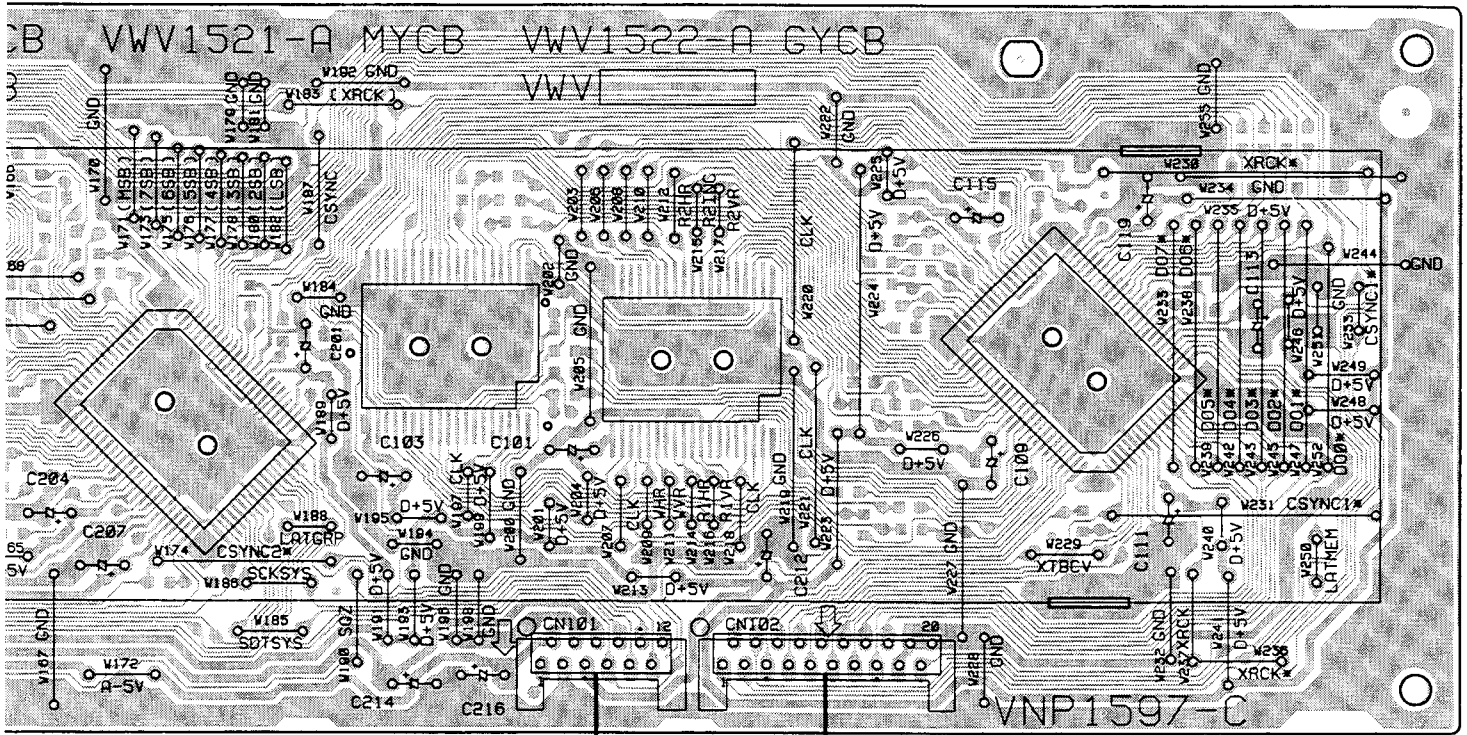
IC102

IC103

IC201

SIDE B

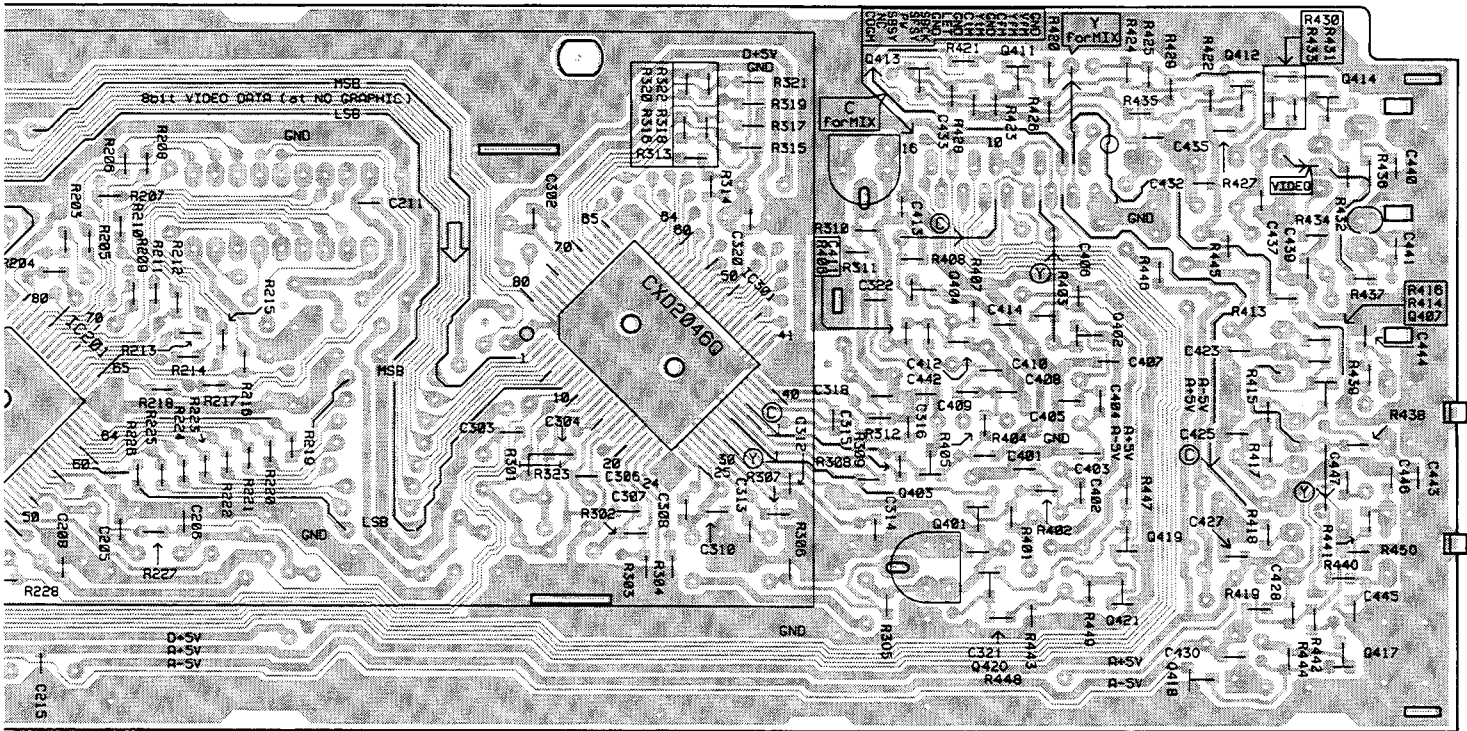




M CN101

M CN102

SIDE A



IC301

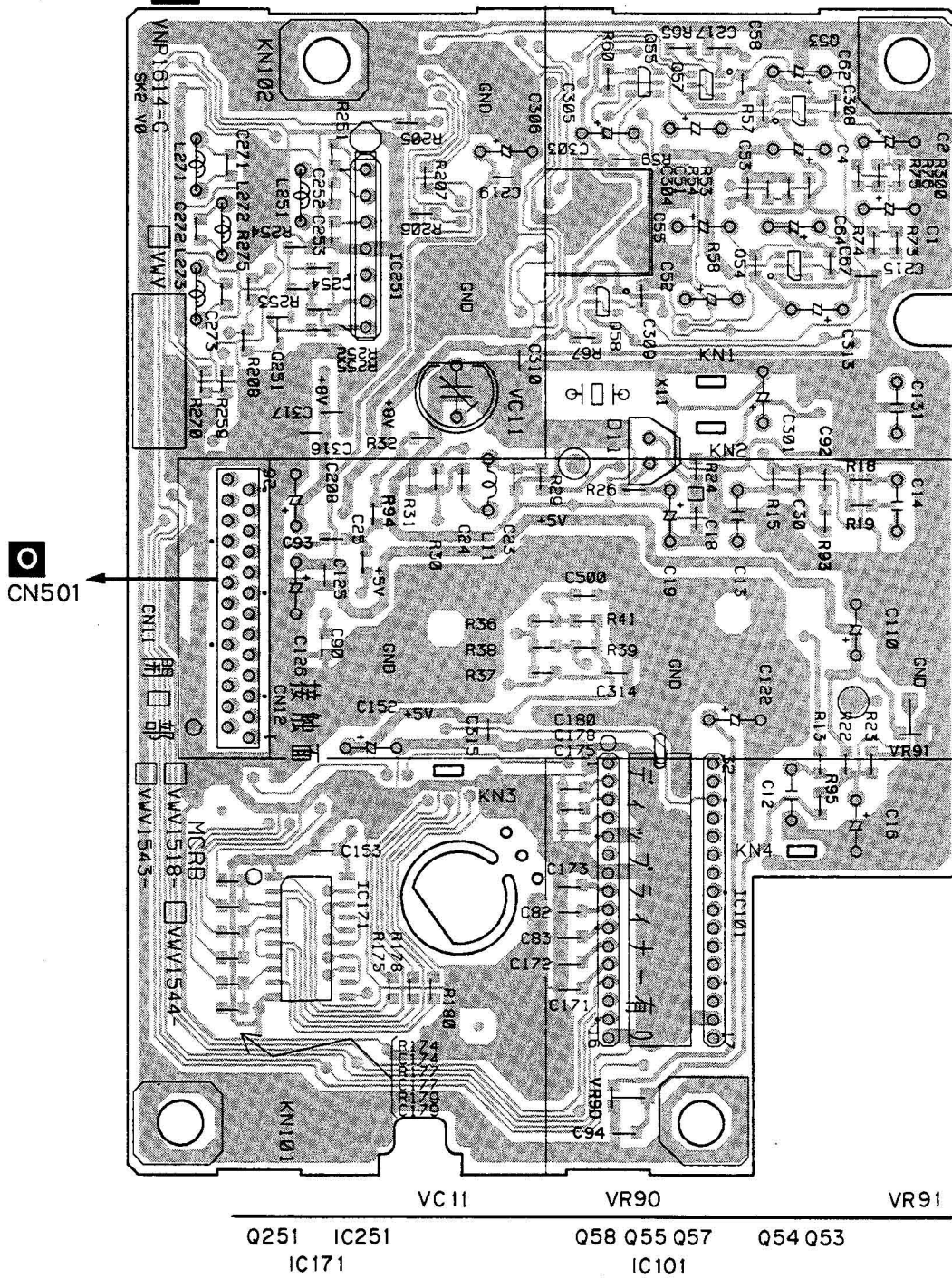
Q413 Q404 Q411 Q402 Q412 Q414 Q407
Q403 Q401 Q420 Q421 Q419 Q418 Q417

SIDE B



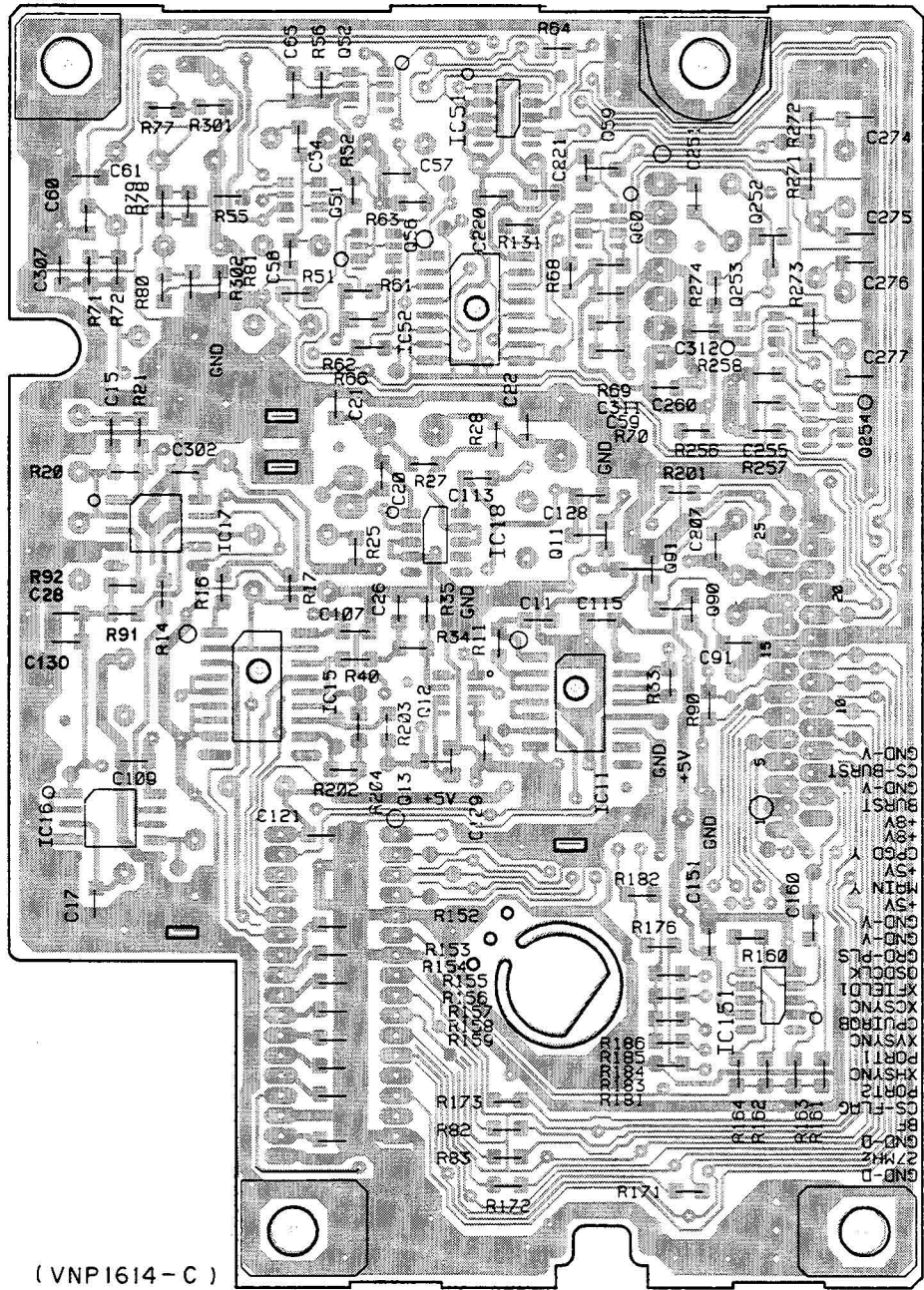
4.9 MCRB ASSY

R MCRB ASSY



SIDE A

R MCRB ASSY



(VNPI614-C)

IC16	IC17	IC15	Q51	Q52	Q56	IC51	Q59	Q60	Q252	Q254
			Q13	Q12		IC18	IC52	Q11	Q91	Q90
								IC11		IC151

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 \rightarrow 56 $\times 10^1$ \rightarrow 561 RD1/4PU 5 6 1 J
 47k Ω \rightarrow 47 $\times 10^3$ \rightarrow 473 RD1/4PU 4 7 3 J
 0.5 Ω \rightarrow R50 RN2H R 5 0 K
 1 Ω \rightarrow 1R0 RS1P 1 R 0 K
- Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
- 5.62k Ω \rightarrow 562 $\times 10^1$ \rightarrow 5621 RN1/4PC 5 6 2 1 F

Mark No.	Description	Part No.
LIST OF ASSEMBLIES		
NSP	MACB ASSY	VWM1507
NSP	└ LMSB ASSY	VWG1554
NSP	└ PKSB ASSY	VWG1555
NSP	└ FG ASSY	VWG1556
NSP	MECHB ASSY	VWM1721
NSP	└ CNNB ASSY	VWG1792
NSP	└ TNMB ASSY	VWG1793
NSP	└ DCSB ASSY	VWG1794
NSP	└ LCSB ASSY	VWG1795
NSP	└ B1SB ASSY	VWG1796
Δ	POWER SUPPLY ASSY	VWR1274
NSP	FLKB ASSY	VWM1760
	└ FLPB ASSY	VWG1841
	└ KEYB ASSY	VWG1842
	LEDB ASSY	VWG1832
NSP	CLD MAIN ASSY	VWM1744
	└ CLD MAIN ASSY	VWS1284
	└ JCKB ASSY	VWV1532
	DVD MAIN ASSY	VWS1312
	FTSB ASSY	VWS1291
	MGYCB ASSY	VWV1468
	MCRB ASSY	VWV1544

MACB ASSY

OTHERS

PC BOARD MACB VNP1479

A LMSB ASSY

SWITCHES

S101-S103 DSG1017

OTHERS

CN101 10P FFC CONNECTOR 52044-1045

Mark No.	Description	Part No.
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B PKSB ASSY

SWITCHES

S104, S105 DSG1017

C FG ASSY

SEMICONDUCTOR

D101 GP1S24

MECHB ASSY

OTHERS

PC BOARD MECHB VNP1599

D CNNB ASSY

OTHERS

CN903 23P FFC CONNECTOR 52030-2310
 CN901 26P FFC CONNECTOR 52030-2610
 CN905, CN906 KR CONNECTOR 2P S2B-PH-K-S
 CN902 26P FFC CONNECTOR SLW26R-1C7
 CN904 27P FFC CONNECTOR SLW27R-1C7

E TNMB ASSY

OTHERS

CN911 6P FFC CONNECTOR 52044-0645
 CN912 KR CONNECTOR 2P B2B-PH-K-S
 CN913 KR CONNECTOR 3P B3B-PH-K-S

F DCSB ASSY

SWITCH

S902 DSG1017

OTHERS

CN915 KR CONNECTOR 2P S2B-PH-K-S

Mark No. Description Part No.

G LCSB ASSY

SWITCH

S903 DSG1017

OTHERS

CN916 KR CONNECTOR 2P S2B-PH-K-S

H BISB ASSY

SWITCH

S901 DSG1017

OTHERS

CN914 KR CONNECTOR 2P S2B-PH-K-S

I POWER SUPPLY ASSY

SEMICONDUCTORS

IC201 AN1431T
 IC203 UPC358C
 IC204, IC205 VZF1047
 IC206 VZF1048
 Q101, Q150, Q151 VZF1056

△ Q102 2SC3377
 Q201, Q202 T7F4T
 Q203, Q204 T7F4S
 Q205, Q206, Q252 2SC1740S
 Q207, Q208, Q214 2SA933S

△ Q213 2SD2395
 Q251 2SD2007
 D101 D2SB60F4004
 D202 VZF1051
 D204, D205 VZF1052

△ D152, D240 VZF1054
 D252 VZF1055
 D106, D151 VZF1057
 D209-D212, D254 10ELS2
 D104 1SS270A

△ D208, D251 1SS270A
 D153 VZF1045
 D230-D232 VZF1045
 D154 EG01C
 D103 MTZJ2. 7B

△ D253 MTZJ2. 7B
 D255 MTZJ8. 2B
 D200 PS2561L1-1VM
 D207 RD33FB2
 D206 S2LA20
 D203 S3L20U

OTHERS

△ F101 FUSE (3. 15A) VEK1046
 △ P201, P202 FUSE VEK1047
 △ P205, P211 FUSE (1A) VEK1041
 △ P209, P210 FUSE (1. 25A) VEK1045

Mark No. Description Part No.

J FLPB ASSY

SEMICONDUCTORS

IC101 PD4753B
 IC102 S-806D
 Q102 DTA124ES
 Q101, Q103, Q104 DTC124ES
 D101, D105, D107, D108 SLR-342DUT31

D102, D103, D106 SLR-342VCT31
 D104 SLR-342YCT31

SWITCHES

S101, S102 RSG1030

CAPACITORS

C105 CEJA470M6R3
 C103 CKPUYB102K50
 C102, C104, C107-C109, C111 CKPUYF103Z25

RESISTORS

All Resistors RD1/4PU□□□J

OTHERS

CN102 FFC BOTTOM CONNECTOR 5P 52492-0520
 REMOTE RECEIVER UNIT GP1U28X
 V101 FL TUBE VAW1042
 SPACER VEC1599
 CN101 1.25 FJ CONNECTOR VKN1375

FL HOLDER VNF1087
 X101 CERAMIC RESONATOR VSS1104
 (5. 00MHz)

K KEYB ASSY

SEMICONDUCTORS

Q201, Q202 DTC124ES
 D201, D202 SLR-342MCT31

SWITCHES

S201-S208 RSG1030

CAPACITORS

C202 CKPUYB102K50
 C201 CKPUYF103Z25

RESISTORS

All Resistors RD1/4PU□□□J

OTHERS

CN203 5P FFC CONNECTOR VKN1181
 CN201 13P FFC CONNECTOR VKN1217
 CN202 1.25 FJ CONNECTOR VKN1375

L LEDB ASSY

SEMICONDUCTORS

Q1-Q3 2PD601A
 Q4, Q5 UN2212
 D1-D3 CL-170SB-X
 D4-D7 PG1112H-430
 D8-D10 UDZ12B

RESISTORS

All Resistors RS1/10S□□□J

OTHERS

CN1 5P FFC CONNECTOR VKN1374

Mark No.	Description	Part No.
M CLD MAIN ASSY		
SEMICONDUCTORS		
	IC761, IC904	BA10393F
	IC223, IC251, IC680, IC903	BA4560F
	IC905, IC906	BA4560F
	IC352	CA0002AM
	IC171, IC803	LA6510
	IC400	LA7134M
	IC901	LA9420M
	IC801	LA9425
	IC802	LC78681KE
	IC353	M51131L
	IC182, IC183	MM6558XF
△	IC221	NJM78L08A
△	IC222	NJM79L08A
	IC208	NJU6322KE
	IC202	PD0236AM
	IC101	PD0246A2
	IC201	PD2029AM(L)
	IC500	PD6159B
	IC902	TA8410AK
	IC181, IC762, IC907	TC4W53F
	IC203, IC301	TC74HC157AF
	IC302, IC620	TC74HC4053AF
	IC206	TC7S00F
	IC102	TC7S32F
	IC205, IC209, IC550	TC7SU04F
	IC650	TC7W00F
	IC207	TC7WH74FU
	IC204	TC7WU04F
	Q121, Q182, Q482, Q580, Q645	2PB709A
	Q672, Q906	2PB709A
	Q269, Q270, Q391-0393, Q401	2PD601A
	Q441, Q481, Q625, Q626, Q636	2PD601A
	Q646, Q647, Q655-0658	2PD601A
	Q661, Q662, Q671, Q803, Q811	2PD601A
	Q902-0905, Q908, Q909	2PD601A
	Q834	2SA854S
	Q152	2SC3802K
	Q261, Q262	2SD2144S
	Q211-Q214, Q217, Q394, Q651	DTA124EK
	Q981	DTA124EK
	Q122, Q181, Q215, Q216, Q652	DTC124EK
	Q901, Q971	DTC124EK
	Q910	FMY1A
	D221	ECT10QS04
	D311, D505	KV1851
	D181, D650, D655, D821, D881	MA111
	D901, D902, D981	MA111
	D223, D224	MA152WA
	D215, D905	MA152WK
	D851	UD22.0B
	D115	UD25.1B
COILS AND FILTERS		
	L413	LAU100J
	L401	LAU101J
	L352, L821-L823	LAU181J
	L251, L252, L311, L331, L351	LAU220J
	L412, L461, L482, L831, L832	LAU220J

Mark No.	Description	Part No.
	L411, L587	LAU270J
	L431, L432, L575	LAU430J
	L671	LAU4R7J
	L462	LAU560J
	L414	LAU8R2J
	L463	LFA561J
	F223 FERRITE BEAD	VTF1094
	F573 14.3MHZ FILTER	VTF1095
	L201, L209, L301, L302, L312	VTL1058
	CHIP COIL (22μH)	
	L207 CHIP COIL (1.5μH)	VTL1059
CAPACITORS		
	C417, C418, C421, C434, C543	CCSQCH100D50
	C577, C845	CCSQCH100D50
	C255, C256, C353, C655, C821	CCSQCH101J50
	C837-C839, C843, C864, C865	CCSQCH101J50
	C943	CCSQCH101J50
	C432, C436, C483	CCSQCH120J50
	C412	CCSQCH121J50
	C408, C414, C484, C569	CCSQCH150J50
	C355, C823, C901	CCSQCH151J50
	C313, C352	CCSQCH180J50
	C205, C509, C824, C973	CCSQCH220J50
	C413, C555, C920, C921	CCSQCH221J50
	C550	CCSQCH240J50
	C354, C411, C416, C431, C830	CCSQCH270J50
	C104, C105, C356, C433, C451	CCSQCH330J50
	C579, C596	CCSQCH330J50
	C351, C407, C485, C672	CCSQCH390J50
	C671	CCSQCH391J50
	C222, C257-C260, C405, C461	CCSQCH470J50
	C229, C597	CCSQCH5R0C50
	C358, C598, C806	CCSQCH680J50
	C435, C822, C829	CCSQCH7R0D50
	C357, C825	CCSQCH820J50
	C459, C462	CCSQCH910J50
	C230	CCSQCJ3R0C50
	C656	CEAL100M16
	C437	CEAL101M6R3
	C927, C931	CEAL220M6R3
	C936, C940	CEAL470M16
	C316	CEAL470M6R3
	C975	CEANP100M16
	C263, C264, C629, C639	CEANP220M10
	C187, C211, C441, C856	CEANP470M6R3
	C221, C394, C397, C398, C884	CEAS100M50
	C332, C391	CEAS101M10
	C115	CEAS102M6R3
	C269, C270, C867	CEAS1R0M50
	C399, C971, C972, C981, C982	CEAS220M25
	C863, C902, C934, C977	CEAS2R2M50
	C102, C202, C204, C209	CEAS470M16
	C223, C224, C261, C262, C302	CEAS470M16
	C304, C317, C320, C382, C390	CEAS470M16
	C396, C802, C804, C832, C834	CEAS470M16
	C842, C852, C854, C859, C860	CEAS470M16
	C253, C254	CEAS471M10
	C862, C984	CEAS4R7M50
	C383, C916, C922	CEASR47M50
	C439	CEV100M16
	C471, C473, C475, C507, C531	CEV101M6R3
	C535, C537, C539, C541, C561	CEV101M6R3

Mark	No.	Description	Part No.
	C571, C581, C591, C593		CEV101M6R3
	C928		CFTXA104J50
	C477, C911, C929		CFTXA154J50
	C930		CFTXA473J50
	C478		CFTXA683J50
	C425, C910, C917, C918		CKSQYB102K50
	C942		CKSQYB104K25
	C925		CKSQYB332K50
	C379, C380		CKSQYB392K50
	C371-C376, C388, C912		CKSQYB472K50
	C763		CKSQYB682K50
	C106-C112, C121, C124, C153		CKSQYF103Z50
	C155, C173, C181, C183, C184		CKSQYF103Z50
	C188, C189, C201, C203		CKSQYF103Z50
	C206-C208, C210, C213, C214		CKSQYF103Z50
	C231, C251, C252, C281-C283		CKSQYF103Z50
	C301, C303, C311, C312, C315		CKSQYF103Z50
	C318, C319, C331, C361, C362		CKSQYF103Z50
	C381, C386, C389, C395, C422		CKSQYF103Z50
	C442, C510, C511, C558		CKSQYF103Z50
	C575, C576, C580, C583, C587		CKSQYF103Z50
	C761, C762, C801, C803, C811		CKSQYF103Z50
	C827, C831, C833, C841, C846		CKSQYF103Z50
	C851, C853, C861, C881-C883		CKSQYF103Z50
	C885, C924, C935, C937, C939		CKSQYF103Z50
	C945, C946, C961, C962, C974		CKSQYF103Z50
	C983		CKSQYF103Z50
	C101, C103, C122, C151, C152		CKSQYF104Z25
	C171, C172, C182, C227, C228		CKSQYF104Z25
	C267, C268, C385, C387, C392		CKSQYF104Z25
	C402, C404, C419, C430, C438		CKSQYF104Z25
	C440, C445, C447, C472, C474		CKSQYF104Z25
	C476, C508, C524, C532, C536		CKSQYF104Z25
	C538, C540, C542, C556, C557		CKSQYF104Z25
	C562, C572, C582, C586, C589		CKSQYF104Z25
	C592, C594, C620, C622		CKSQYF104Z25
	C626-C628, C630, C636, C638		CKSQYF104Z25
	C660, C681-C683, C764, C805		CKSQYF104Z25
	C857, C858, C866, C886		CKSQYF104Z25
	C913-C915, C919, C963, C976		CKSQYF104Z25
	C186, C685, C855, C926, C938		CKSQYF223Z50
	C377, C378, C393, C908, C909		CKSQYF224Z25
	C154, C156, C174, C460, C826		CKSQYF473Z50
	C828, C932, C933		CKSQYF473Z50
	C923		CQMA103J50
	C903		CQMA222J50
	C265, C266		CQMA332J50
	C941		CQMA681J50

RESISTORS

R753	RA4C221J
R203, R751, R752	RA4C471J
R425, R833, R834, R837, R839	RN1/10SE1002D
R891, R892	RN1/10SE1002D
R152, R156	RN1/10SE1003D
R532	RN1/10SE1100D
R531	RN1/10SE1800D
R151, R893, R894	RN1/10SE3302D
R153, R154, R259-R262	RN1/10SE4702D
VR450 (2.2kΩ)	PCP1025
VR603 (4.7kΩ)	PCP1028
VR604, VR605, VR607, VR609 (47kΩ)	PCP1031
Other Resistors	RS1/10S□□□J

Mark	No.	Description	Part No.
OTHERS			
	CN312	6P FFC CONNECTOR	52045-0645
	CN311	10P FFC CONNECTOR	52045-1045
	CN301	15P FFC CONNECTOR	52045-1545
	CN103	16P FFC CONNECTOR	52045-1645
	CN802	11P TOP POST	B11P-SHF-1AA
	CN215	KR CONNECTOR 2P	B2B-PH-K-E
	CN104, CN208	KR CONNECTOR 2P	B2B-PH-K-S
	CN803	3P TOP POST SCREW	B3P-SHF-1AA
	CN101	B TO B CONNECTOR 12P	BBZ30P060FCC
			BTFN12S-3SB7
	CN102	B TO B CONNECTOR 20P	BTFN20S-3SB7
	JA331	OPTICAL MODULE	GP1F32T
		PCB BINDER	VEF1040
	JA252	4P PIN JACK	VKB1070
	JA251	1P PIN JACK	VKB1074
		64P IC SOCKET	VKH1004
	CN502	26P FFC CONNECTOR	VKN1202
	CN801	27P FFC CONNECTOR	VKN1203
	CN121	30P FFC CONNECTOR SCREW TERMINAL	VKN1206
			VNE1948
	X101	CERAMIC RESONATOR (9MHz)	VSS1040
	X311	CRYSTAL RESONATOR (16MHz)	VSS1081
	X312	CHIP CRYSTAL (36.86MHz)	VSS1085
	X505	CRYSTAL RESONATOR (14MHz)	VSS1103

N JCKB ASSY SEMICONDUCTORS

IC321, IC322	TC74HCU04AF
D341	MA111

COILS

L322, L326	LAU1R0J
L321, L324	LAU220J
L323, L325	PTL1003

CAPACITORS

C322, C324, C326, C328	CEAL470M16
C323, C327, C341-C345	CKSQYF103Z50
C3460, C3480	CKSQYF104Z25

RESISTORS

All Resistors	RS1/10S□□□J
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OTHERS

JA321, JA322	REMOTE CONTROL JACK	RKN1004
JA324	1P PIN JACK	VKB1074
JA323	1P PIN JACK	VKB1097
	SCREW TERMINAL	VNE1948

Mark	No.	Description	Part No.
DVD MAIN ASSY			
SEMICONDUCTORS			
	IC631, IC981		BA10393F
	IC851		BA6797FP
	IC901		CXA2521AQ
	IC801		CXD2545Q
	IC101		HD6417032F20
	IC162		HM514800CJ-7
	IC282		HM62256BLFP-8T
	IC995		IR3C07N
	IC281		LC98000K-V26A
	IC531, IC535		MB81C4256A-70PJ
	IC551		MC14577CF
	IC231, IC621, IC781, IC931		NJM2100M
	IC671, IC672, IC732, IC791, IC971		NJM2904M
	IC831, IC911		NJM4580M
	IC601		PA0065AM
	IC2050		PD5415F
	IC161		PD4695A
	IC501		PD4696A
	IC201		PD4784A
	IC165		PD4795B
	IC1030		PD6226A
	IC104		PK022A
	IC381		TA78M08F
	IC471, IC815, IC820		TC4W53F
	IC102		TC558128AJ-20
	IC284		TC74HC139AF
	IC285		TC74HC14AF
	IC204		TC74HC20AF
	IC972		TC74HC4052AF
	IC921		TC74HC4053AF
	IC832		TC74HC4066AF
	IC202		TC74HC573AF
	IC641, IC761		TC74HCU04AF
	IC288		TC74VHC08FS
	IC302		TC7S04F
	IC105		TC7SH02F
	IC106		TC7SH32F
	IC311		TC7ST08F
	IC287		TC7W125FU
	IC751		TLC272CPS
	IC731		TLC5540INS
	IC421		UPD4516161G5-A12-7JF
	IC401		UPD61021
	IC205		VKH1011
	IC301		ZR38521
	Q473, Q481-Q485, Q551, Q552		2PB709A
	Q561, Q562, Q591, Q667, Q702		2PB709A
	Q705, Q708, Q741, Q792, Q814		2PB709A
	Q848, Q857, Q893		2PB709A
	Q382, Q383, Q471, Q472		2PD601A
	Q571-Q573, Q605, Q669, Q701		2PD601A
	Q742, Q771, Q773, Q793, Q845		2PD601A
	Q851, Q914, Q916, Q925, Q936		2PD601A
	Q946		2PD601A
	Q381		2SB1260
	Q712-Q715		2SC3802K
	Q103		DTA114EK
	Q104, Q617, Q618, Q772, Q811		DTC114EK

Mark	No.	Description	Part No.
	Q101, Q102, Q105		DTC114TK
	Q886, Q887, Q894		DTC124EK
	D786, D787, D818		1SS355
	D771, D921, D981, D982		DAN202K
	D110		EC100S04
	D761		KV1410
	D101		RB501V-40
	D640		UD22.0B
COILS AND FILTERS			
	L321	CHIP SOLID INDUCTOR	ATL7001
	L101-L104	CHIP INPEDER	DTL1028
	F541	DVD VIDEO FILTER	VTF1072
	F535, F536, F538, F539	FERRITE BEAD	VTF1073
	F537	FERRITE BEAD	VTF1074
	F1491	FERRITE BEAD	VTF1075
	F420, F523	FERRITE BEAD	VTF1076
	F199	FERRITE BEAD	VTF1077
	F704	CHIP SOLID INDUCTOR	VTF1078
	F390-F399	FERRITE BEAD	VTF1079
	F147, F181-F188	FERRITE BEAD	VTF1080
	L431, L432, L471, L591, L701	CHIP COIL (22μH)	VTL1058
	L761, L801	CHIP COIL (22μH)	VTL1058
	L762	CHIP COIL (1.5μH)	VTL1059
	L501, L592	CHIP COIL (0.15μH)	VTL1060
	L502, L723	CHIP COIL (10μH)	VTL1061
	L421	CHIP COIL (47μH)	VTL1063
CAPACITORS			
	C509		CCSRCH100D50
	C800		CCSRCH101J50
	C601-C604, C606, C904		CCSRCH121J50
	C902, C903		CCSRCH151J50
	C723		CCSRCH180J50
	C620		CCSRCH181J50
	C765		CCSRCH220J50
	C716, C810, C917		CCSRCH221J50
	C508, C618		CCSRCH270J50
	C914		CCSRCH390J50
	C862-C864		CCSRCH391J50
	C730, C814		CCSRCH470J50
	C616, C681		CCSRCH471J50
	C724		CCSRCH560J50
	C556, C566, C714		CCSRCH5R0C50
	C634, C806, C854, C855		CCSRCH680J50
	C107, C108		CCSRCH7R0D50
	C813		CCSRCH820J50
	C476		CCSRCH910J50
	C116, C151, C159, C162, C180		CEV101M6R3
	C280, C401, C420, C430-C440		CEV101M6R3
	C500, C501, C523, C532, C533		CEV101M6R3
	C536-C540, C801, C821		CEV101M6R3
	C755		CEV1R0M50
	C325, C384, C571, C592, C857		CEV220M16
	C859		CEV220M16
	C611, C712, C731, C733, C900		CEV220M6R3
	C912, C919, C994		CEV220M6R3
	C179, C201, C281, C321, C327		CEV470M6R3
	C396, C493, C517, C591, C701		CEV470M6R3
	C804, C996		CEV470M6R3
	C720, C787		CEVNP100M16
	C789		CEVNP2R2M35
	C908		CFHS333J16
	C788, C839, C840		CFHS473J16

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	C884, C885, C907 C686, C909 C882, C883 C677 C843, C844, C894		CFHSP104J16 CFHSQ103J16 CFHSQ272J50 CFHSQ822J16 CKSQYB104K25		R401, R402, R404, R405, R421 R423, R424, R501, R502 R998 R2510, R2620, R2630, R2640, R4910 R723		RA4C220J RA4C220J RA4C390J RS1/10S0R0J RS1/10S0R0J
	C615, C680, C713, C718, C742 C746, C747, C751, C811 C815, C817 C759, C893 C206, C207, C441-C446, C519		CKSQYB105K10 CKSQYB105K10 CKSQYB224K16 CKSQYB474K16 CKSQYF225Z16		R892 R573 R862, R863, R866, R867 R149, R166, R477, R693 R762, R763, R766, R786, R790		RS1/10S1R2J RS1/16S1001F RS1/16S1002F RS1/16S1003F RS1/16S1003F
	C527-C530 C749, C766 C101, C121, C169, C178, C290 C471, C472, C574, C605, C617 C676, C700, C711, C762, C764		CKSQYF225Z16 CKSRYB102K50 CKSRYB103K50 CKSRYB103K50 CKSRYB103K50		R814, R817, R846, R873, R876 R999 R383, R864, R865 R781, R782, R788, R900-R903 R580, R582, R783, R784		RS1/16S1003F RS1/16S1003F RS1/16S1202F RS1/16S1502F RS1/16S2202F
	C816, C830, C832, C837, C838 C853, C861, C881, C906 C997-C999 C983, C984 C809		CKSRYB103K50 CKSRYB103K50 CKSRYB103K50 CKSRYB104K16 CKSRYB152K50		R835-R840, R871, R872, R893 R914, R916, R936, R946 R232, R236, R793, R794 R884, R885, R989, R990 R712, R720, R857		RS1/16S2202F RS1/16S2202F RS1/16S2203F RS1/16S2203F RS1/16S3901F
	C692 C641-C644, C649, C819 C931, C932 C847 C741		CKSRYB153K50 CKSRYB222K50 CKSRYB222K50 CKSRYB333K16 CKSRYB472K50		R798, R800, R829, R830 R843, R844, R854, R855, R925 R927, R928, R945 R778, R833, R834 R575, R741, R742		RS1/16S4702F RS1/16S4702F RS1/16S4702F RS1/16S4703F RS1/16S5601F
	C735, C808 C102-C106, C109-C115, C120 C155-C158, C160, C161 C163-C167, C170, C171 C173-C177, C181, C184-C187		CKSRYB473K16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16		R831, R832 R874, R877 R882, R883 R4010 VR501 (4.7kΩ)		RS1/16S5602F RS1/16S6802F RS1/16S8202F VCN1058 VCP1090
	C191, C192, C202-C205, C209 C231, C282-C287, C289, C291 C295, C296, C300-C303 C305-C307, C309, C311, C322 C326, C328, C382, C383		CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16		VR904, VR921 (10kΩ) VR621, VR938 (22kΩ) VR922 (10kΩ)		VCP1092 VCP1094 VCP1131 RS1/16S□□□J
	C391-C393, C395, C397, C399 C402-C417, C421-C426 C473-C475, C481, C483, C484 C491, C492, C502-C507 C510-C516, C518, C520-C522		CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16	OTHERS			
	C526, C531, C535, C553-C555 C563, C565, C572, C573, C577 C596, C607, C612, C613, C621 C630, C631, C640, C671, C675 C683, C702-C704, C721, C732		CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16		CN161, CN271 PH CONNECTOR 2P CN601, CN602 B TO B CONNECTOR 60P CN109 7P FFC CONNECTOR CN101 13P FFC CONNECTOR CN391 24P FFC CONNECTOR		S2B-PH-SM3 VKN1293 VKN1299 VKN1305 VKN1316
	C734, C738, C739, C750, C761 C781, C799, C802, C803, C805 C812, C818, C820, C822, C823 C829, C831, C858, C901, C911 C918, C921, C930, C971, C972		CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16 CKSRYF104Z16		CN902 B TO B CONNECTOR 14P CN261, CN502, CN702 26P FFC CONNECTOR CN251 30P FFC CONNECTOR X501 CHIP CRYSTAL (27.00MHz)		VKN1324 VKN1345 VKN1349 VSS1086
	C980-C982, C995 VC510 (20pF) VC765 (40pF)		CKSRYF104Z16 VCM1008 VCM1010		X201 CHIP CERAMIC (5.00MHz) X301 CHIP CERAMIC (33MHz) X101 CHIP CERAMIC (20MHz)		VSS1102 VSS1105 VSS1106

RESISTORS

R109, R110, R112, R195 R414-R419, R920 R101-R106, R148, R153-R157 R161, R162, R201, R202 R251-R257, R265, R266, R274	RA4C103J RA4C103J RA4C220J RA4C220J RA4C220J
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Mark No.	Description	Part No.
P	FTSB ASSY	
SEMICONDUCTORS		
IC204, IC306, IC403		BA10393F
IC301		MC14577CF
IC302, IC303, IC305, IC401		NJM072BM
IC205		NJM2100M
IC304, IC402		NJM4580M
Q301, Q309, Q401-Q403		2PB709A
Q302, Q303, Q305, Q404		2PD601A
Q304, Q308		DTC114EK
D205, D206, D303, D305-D307		1SS355
D310, D401, D402		1SS355
D308		DAN202K
CAPACITORS		
C316		CCSRCH101J50
C401, C501		CEV100M16
C303		CFHS473J16
C306, C408		CFHSQ471J50
C209, C210, C305		CKSQYB105K10
C308, C403, C406		CKSRYB102K50
C311		CKSRYB472K50
C313		CKSRYB473K16
C201, C211, C302, C304, C307		CKSRYF104Z16
C309, C312, C314, C315, C402		CKSRYF104Z16
C404, C407		CKSRYF104Z16
C310		CCSRCH101J50
C405		CKSQYB224K16
RESISTORS		
R322		RS1/16S1001F
R405		RS1/16S1801F
R406		RS1/16S3601F
R321		RS1/16S6801F
Other Resistors		RS1/16S□□□J
OTHERS		
CN101, CN102 B TO B CONNECTOR 30P		VKN1294
Q	MGYCB ASSY	
SEMICONDUCTORS		
IC301		CXD2046Q
IC202		LC32464P-80
IC102, IC103		MB81C1501PF
IC101		PD3212A
IC201		PDC016A
Q402, Q404, Q407, Q411, Q414		2PB709A
Q401, Q403, Q412, Q413		2PD601A
Q408-Q410, Q415, Q416		2SC1740S
Q417, Q420		DTA124EK
Q418, Q419, Q421		DTC124EK
COILS		
L401-L403		LAU220J
CAPACITORS		
C433		CCSQCH100D50
C206, C401, C404		CCSQCH220J50
C405		CCSQCH470J50
C403		CCSQCH560J50
C402		CCSQCH6R0D50
C411		CCSQCH910J50
C101, C103, C109, C111, C113		CEAS101M10
C115, C201, C204, C207		CEAS101M10
C209, C210, C212, C214, C216		CEAS101M10

Mark No.	Description	Part No.
C301, C305, C309, C311, C317		CEAS101M10
C319, C422, C424, C426, C429		CEAS101M10
C431, C434, C436, C438		CEAS101M10
C303		CKSQYB102K50
C102, C104, C110, C112, C114		CKSQYF104Z25
C116-C118, C202, C203, C205		CKSQYF104Z25
C208, C211, C213, C215, C217		CKSQYF104Z25
C302, C304, C306-C308, C310		CKSQYF104Z25
C312-C316, C318, C320-C322		CKSQYF104Z25
C406, C407, C413, C414, C423		CKSQYF104Z25
C425, C427, C428, C430, C432		CKSQYF104Z25
C435, C437, C439, C442, C447		CKSQYF104Z25
RESISTORS		
R424		RN1/10SE1801D
R422		RN1/10SE2201D
R309		RN1/10SE2700D
R425		RN1/10SE2702D
R310, R420, R421		RN1/10SE3301D
R312, R426		RN1/10SE4701D
R311		RN1/10SE5601D
VR301 (22KΩ)		PCP1030
Other Resistors		RS1/10S□□□J
OTHERS		
CN103 16P FFC CONNECTOR		52045-1645
2P PIN JACK		AKB7076
CN101 B TO B CONNECTOR 12P		BTFN12P-3RD7
CN102 B TO B CONNECTOR 20P		BTFN20P-3RD7
4P MINI DIN SOCKET		VKN1078
SCREW TERMINAL		VNE1948
SHIELD CASE A		VNF1098
SHIELD CASE C		VNF1100
R	MCRB ASSY	
SEMICONDUCTORS		
IC16, IC17		NJM2100M
IC101		PD9014A
IC51		TC4W53F
IC15, IC52		TC74HC4053AF
IC11		TC74HCU04AF
IC171		TC74VHCT374F
IC18		TC7WU04F
Q252, Q59		2PB709A
Q11		2PD601A
Q13		DTC124EK
Q55, Q56, Q60		1MT1A
Q254, Q51		1MX1
Q12, Q253, Q52-Q54		1MZ1A
Q57, Q58		1MZ1A
D11		SVC201SPA
COILS		
L271		LAU270J
L272		LAU390J
L273		LAU430J
L11		LFA220J
CAPACITORS		
C274, C30		CCSQCH100D50
C22		CCSQCH180J50
C15		CCSQCH221J50
C275, C277		CCSQCH330J50
C276		CCSQCH390J50

Mark	No.	Description	Part No.
	C171, C173, C174, C179		CCSQCH470J50
	C23, C92, C93		CCSQCH470J50
	C24		CCSQCH910J50
	C16, C19		CEJA101M10
	C1, C110, C122, C126, C152		CEJA470M10
	C2, C208, C301, C305, C306		CEJA470M10
	C313, C4, C52, C53, C55		CEJA470M10
	C62, C64		CEJA470M10
	C12		CFTXA103J50
	C13		CFTXA334J50
	C11, C18, C20, C25, C26		CKSQYF103Z50
	C500		CKSQYF103Z50
	C107, C109, C113, C115, C121		CKSQYF104Z25
	C125, C153, C17, C207, C215		CKSQYF104Z25
	C217, C219, C220, C255, C28		CKSQYF104Z25
	C302-C304, C307-C312, C314		CKSQYF104Z25
	C51, C54, C56-C61, C65		CKSQYF104Z25
	C67		CKSQYF104Z25
	C14		COMZA682J50
	VC11 (20pF)		VCM-008
RESISTORS			
	R52		RN1/10SE1801D
	R51		RS1/10S1000F
	R74		RS1/10S1001F
	R77		RS1/10S10R0F
	R71		RS1/10S1501F
	R72		RS1/10S1802F
	R76		RS1/10S27R0F
	R79		RS1/10S3300F
	R80		RS1/10S3900F
	R78		RS1/10S39R0F
	R73		RS1/10S47R0F
	R75		RS1/10S5600F
	R81		RS1/10S68R0F
	VR91 (330k Ω)		VCP1143
	Other Resistors		RS1/10S□□□□J
OTHERS			
	X11	CRYSTAL (3.579545MHz)	VSS1107
		PCB BINDER	VEF1040
	CN12	26P FFC CONNECTOR	VKN1202
	KN102	EARTH METAL FITTING	VNF1084

6. ADJUSTMENT (調整方法)

6.1 ADJUSTMENT ITEMS AND LOCATION (調整項目と調整位置)

■ Adjustment Items

[Mechanical Part]

CLD

- ① Tilt Offset Adjustment
(チルトオフセット調整)
- ② Tangential Direction Angle Adjustment for Side A
(A面タンジェンシャル傾き調整)
- ③ Spindle Motor Centering Adjustment for Side A
(A面スピンドル芯出し調整)
- ④ Crosstalk Check and Fine Tilt Offset Adjustment for Side A
(A面クロストーク確認及び、チルトオフセット微調整)
- ⑤ Focus Servo Loop Gain Adjustment
(フォーカスサーボループゲイン調整)
- ⑥ Tracking Servo Loop Gain Adjustment
(トラッキングサーボループゲイン調整)
- ⑦ Tangential Direction Angle Adjustment for Side B
(B面タンジェンシャル傾き調整)
- ⑧ Spindle Motor Centering Adjustment for Side B
(B面スピンドル芯出し調整)
- ⑨ Crosstalk Check and Fine Tilt Offset Adjustment for Side B
(B面クロストーク確認及び、チルトオフセット微調整)

DVD

- ⑩ DVD Focus S-curve Level Coarse Adjustment
(DVDフォーカスS字レベル粗調整)
- ⑪ RF MAX Adjustment
(RF MAX調整)
- ⑫ Jitter Adjustment
(ジッター調整)
- ⑬ Tracking Error Level Adjustment
(トラッキングエラーレベル調整)
- ⑭ DVD Focus S-curve Level Fine Adjustment
(DVDフォーカスS字レベル微調整)

[Electrical Part]

CLD

- ① Video Level Adjustment
(ビデオレベル調整)
- ② PLL Offset Adjustment
(PLLオフセット調整)
- ③ Y Output Level Adjustment
(Y出力レベル調整)

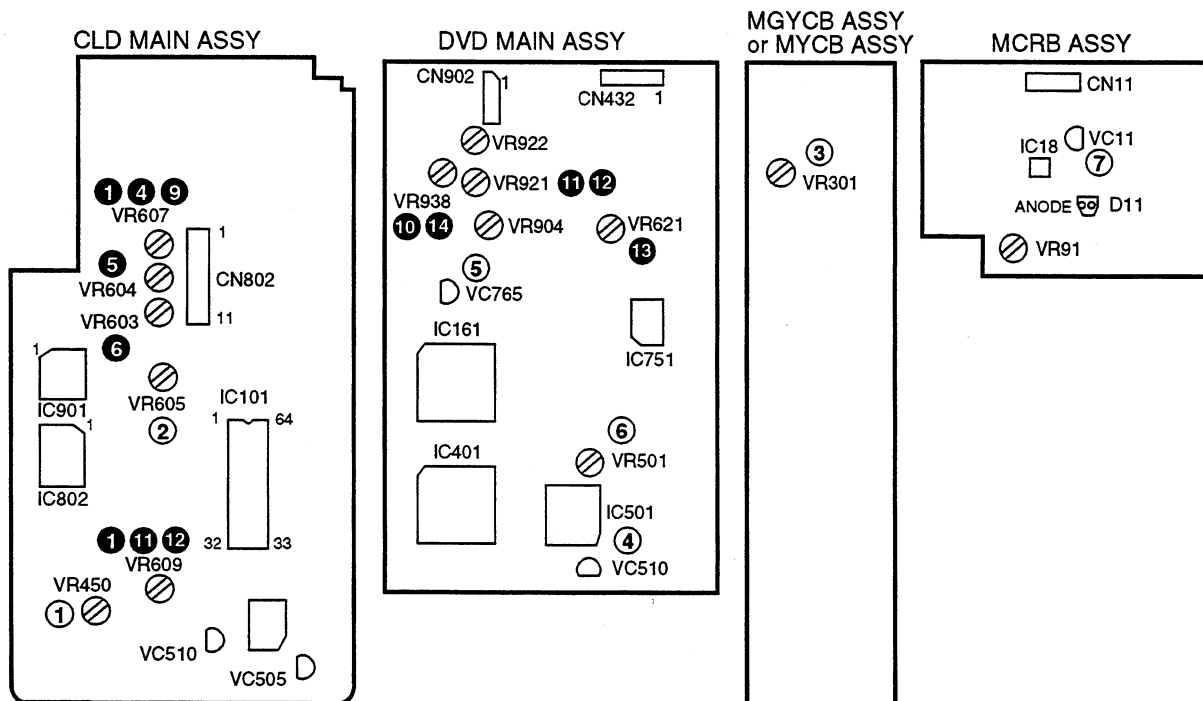
DVD

- ④ Master Clock Adjustment
(マスタークロック調整)
- ⑤ VCO Offset Adjustment
(VCOオフセット調整)
- ⑥ Video Output Adjustment
(ビデオ出力調整)

MCRB

- ⑦ MCRB Master CLK Adjustment
(MCRBマスターCLK調整)
- ⑧ MCRB Inverter Burst Adjustment
(MCRB反転バースト調整)

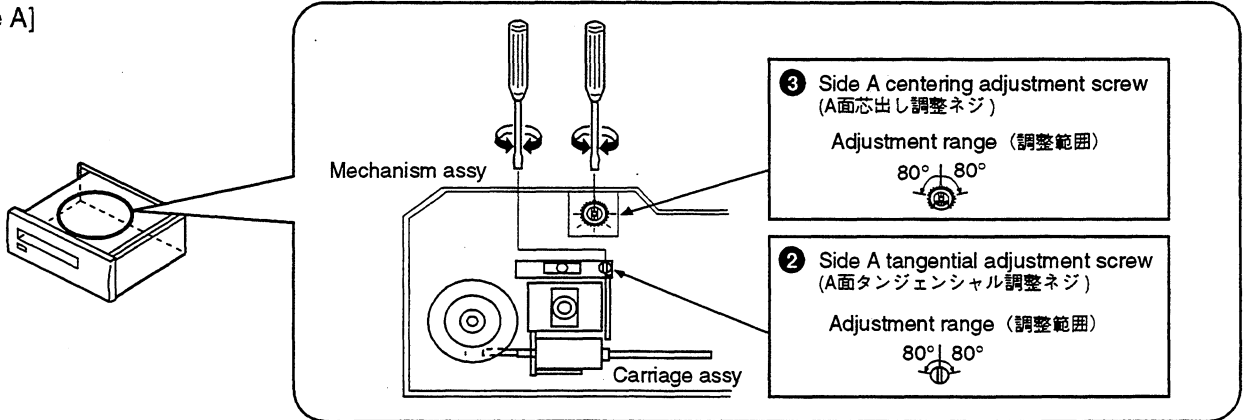
■ Adjustment Points (PCB Part)



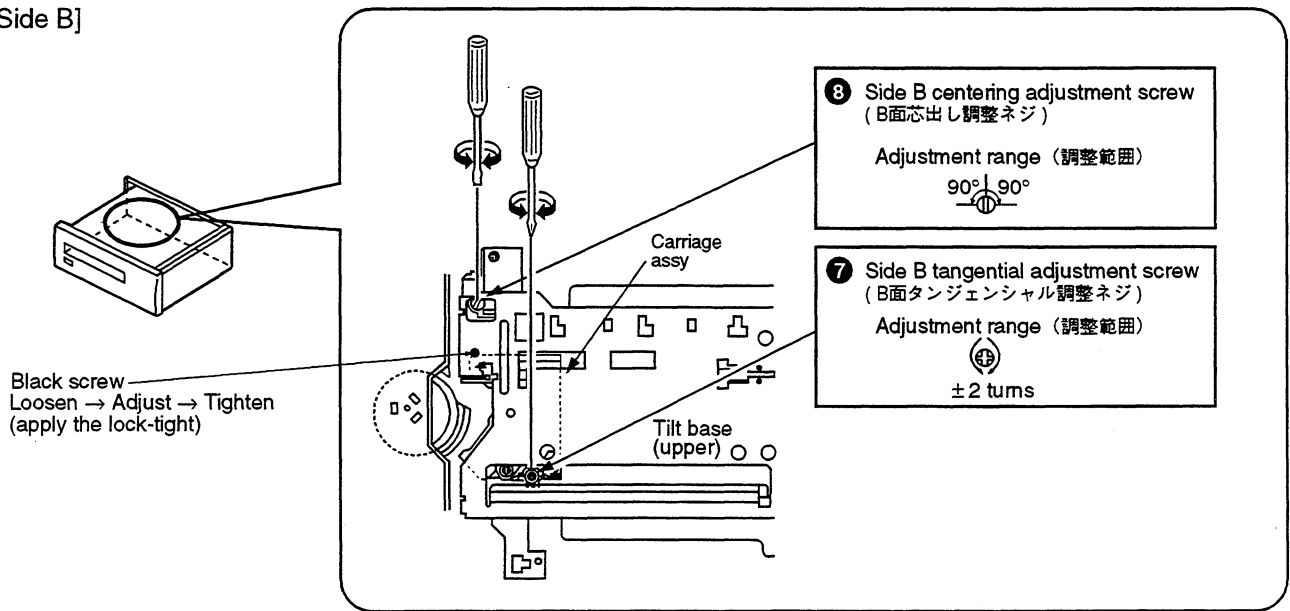
■ Adjustment Points (Mechanism Part)

CLD

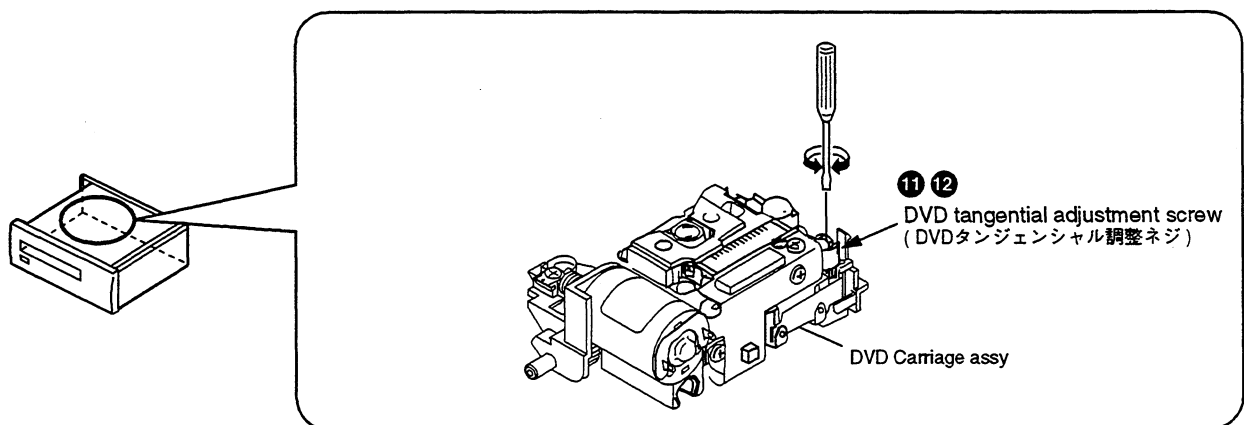
[Side A]



[Side B]










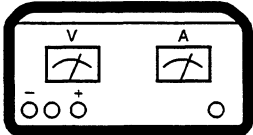
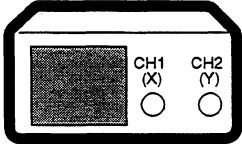
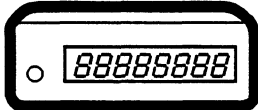
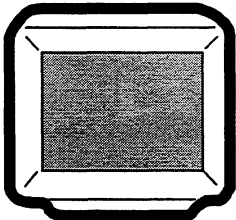
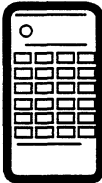
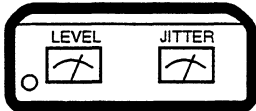
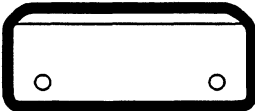
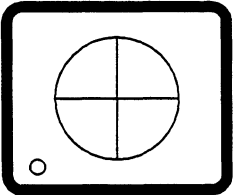


DVD



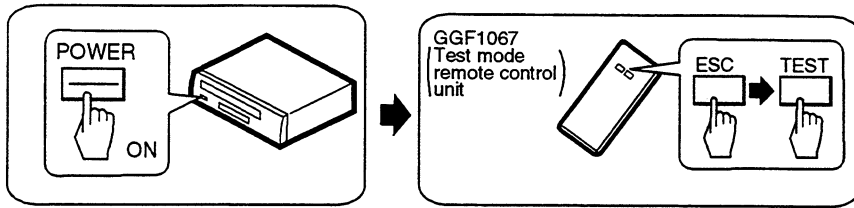
Note : Apply the lock-tight.
(調整ネジは、調整後ボンドロックする.)

6.2 JIGS AND MEASURING INSTRUMENTS (調整に必要な治工具類)

 <p>CD test disc (YEDS-7)</p>	 <p>LD test disc (GGV1012)</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 $\geq 40\text{MHz}$</p>	 <p>Frequency counter Display digit $\geq 8\text{-digit}$</p>
 <p>TV monitor</p>	 <p>Test mode remote control unit (GGF1067)</p>	 <p>Jitter meter</p>	 <p>Equalizer unit</p>
 <p>Vector scope</p>			

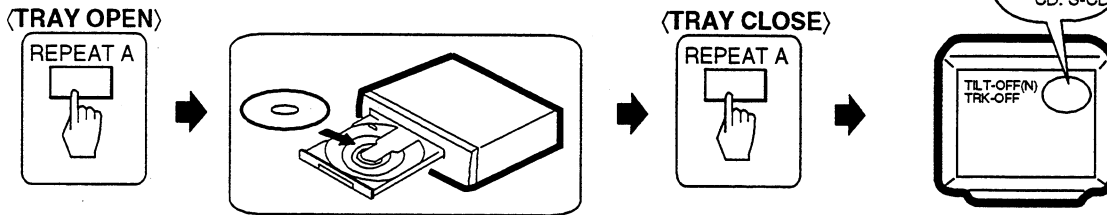
6.3 TEST MODE (テストモード)

TEST MODE: ON

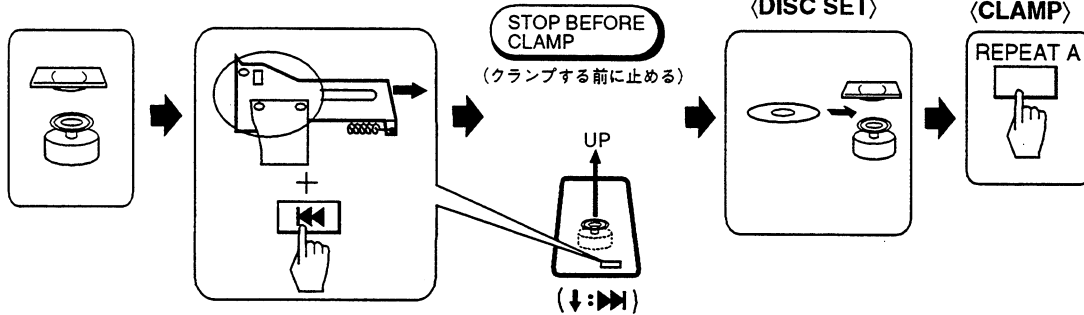


TEST MODE: DISC SET

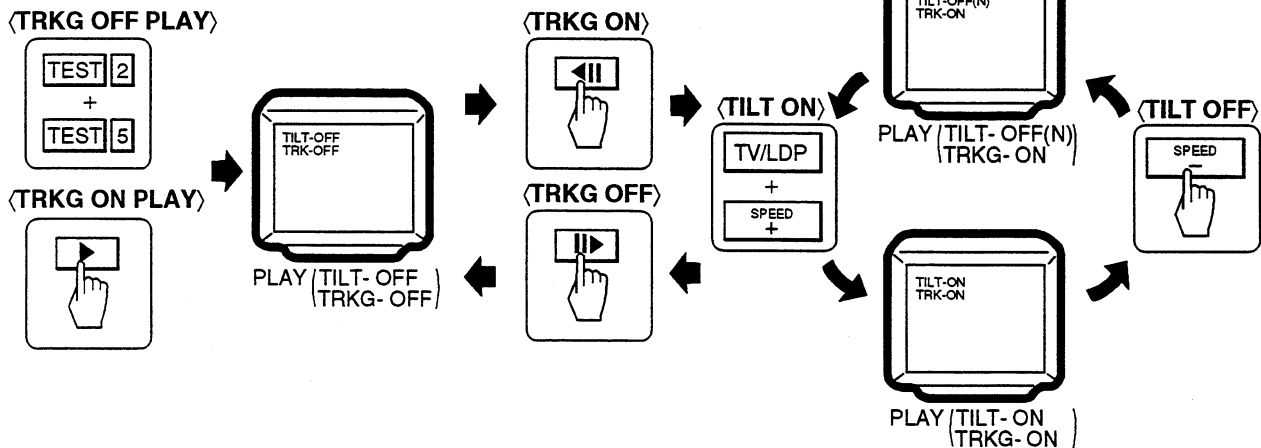
- With TRAY (トレイ有りの場合)



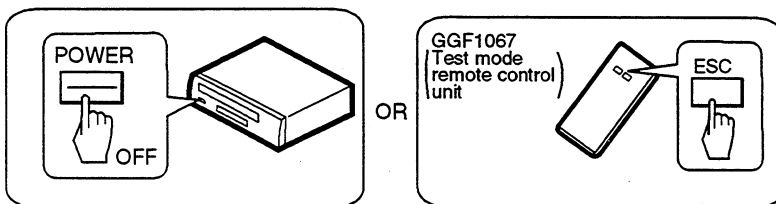
- No TRAY (トレイ無しの場合)



TEST MODE: PLAY



TEST MODE: OFF



6.4 NECESSARY ADJUSTMENT POINTS (必要な調整項目)

When (このような時)

Adjustment Points

■ EXCHANGE MECHANISM ASSY PARTS
(メカASSY部品を交換したとき)

Exchange pickup (CLD)
(CLDのピックアップを交換したとき)

Mechanical point ①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨

Electric point _____

Exchange pickup (DVD)
(DVDのピックアップを交換したとき)

Mechanical point ⑩, ⑪, ⑫, ⑬, ⑭

Electric point _____

Exchange spindle motor
(スピンドルモータを交換したとき)

Mechanical point ③, ⑧

Electric point _____

■ EXCHANGE PCB ASSY
(PCB ASSYを交換したとき)

Exchange board
CLD MAIN ASSY
(マザーボードを交換したとき)

Mechanical point ①, ④, ⑤, ⑥, ⑨

Electric point _____

Note : ①, ② and ③ are adjusted already. (①,②,③は調整済)

Exchange board
DVD MAIN ASSY
(マザーボードを交換したとき)

Mechanical point ⑩, ⑪, ⑫, ⑬, ⑭

Electric point _____

Note : ④, ⑤ and ⑥ are adjusted already. (④,⑤,⑥は調整済)

Exchange board
MCRB ASSY
(MCRB ASSYを交換したとき)

Mechanical point _____

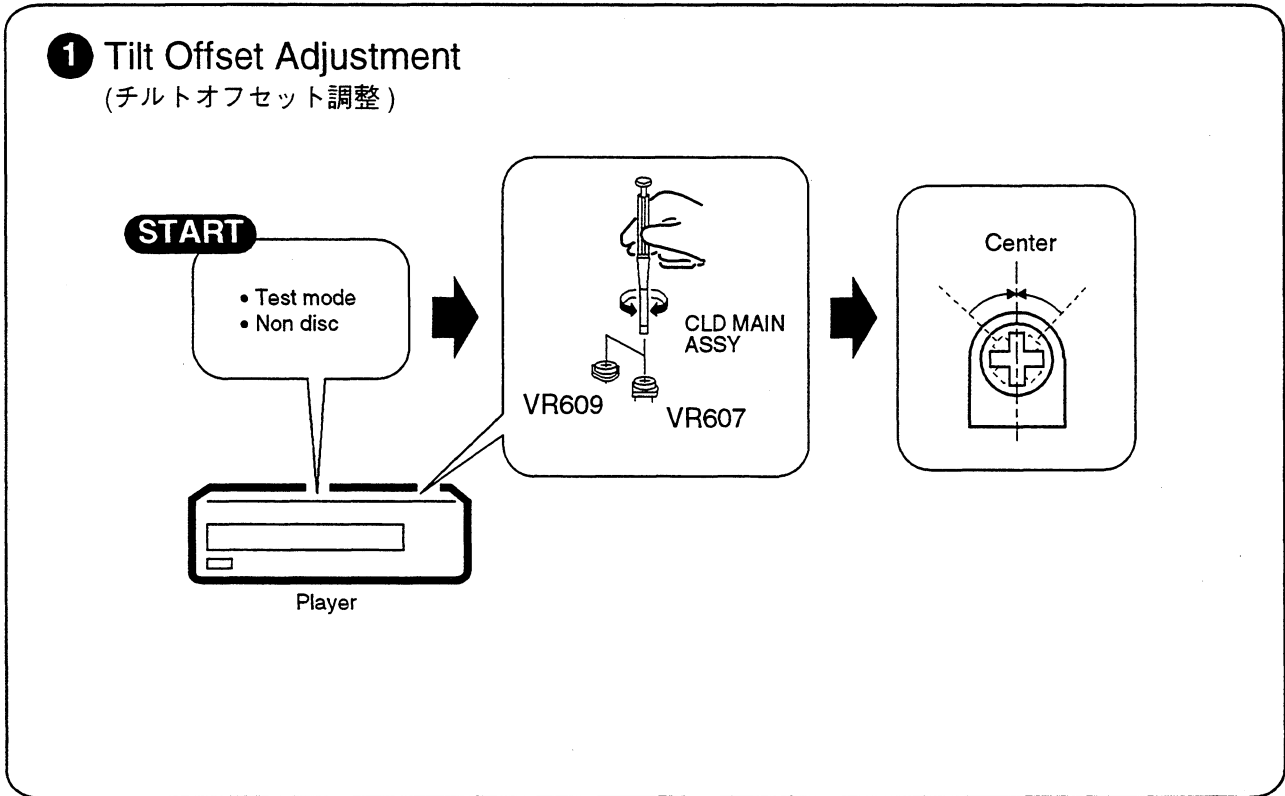
Electric point _____

Note : ⑦ and ⑧ is adjusted already. (⑦, ⑧は調整済)

6.5. MECHANICAL ADJUSTMENT (機構系の調整)

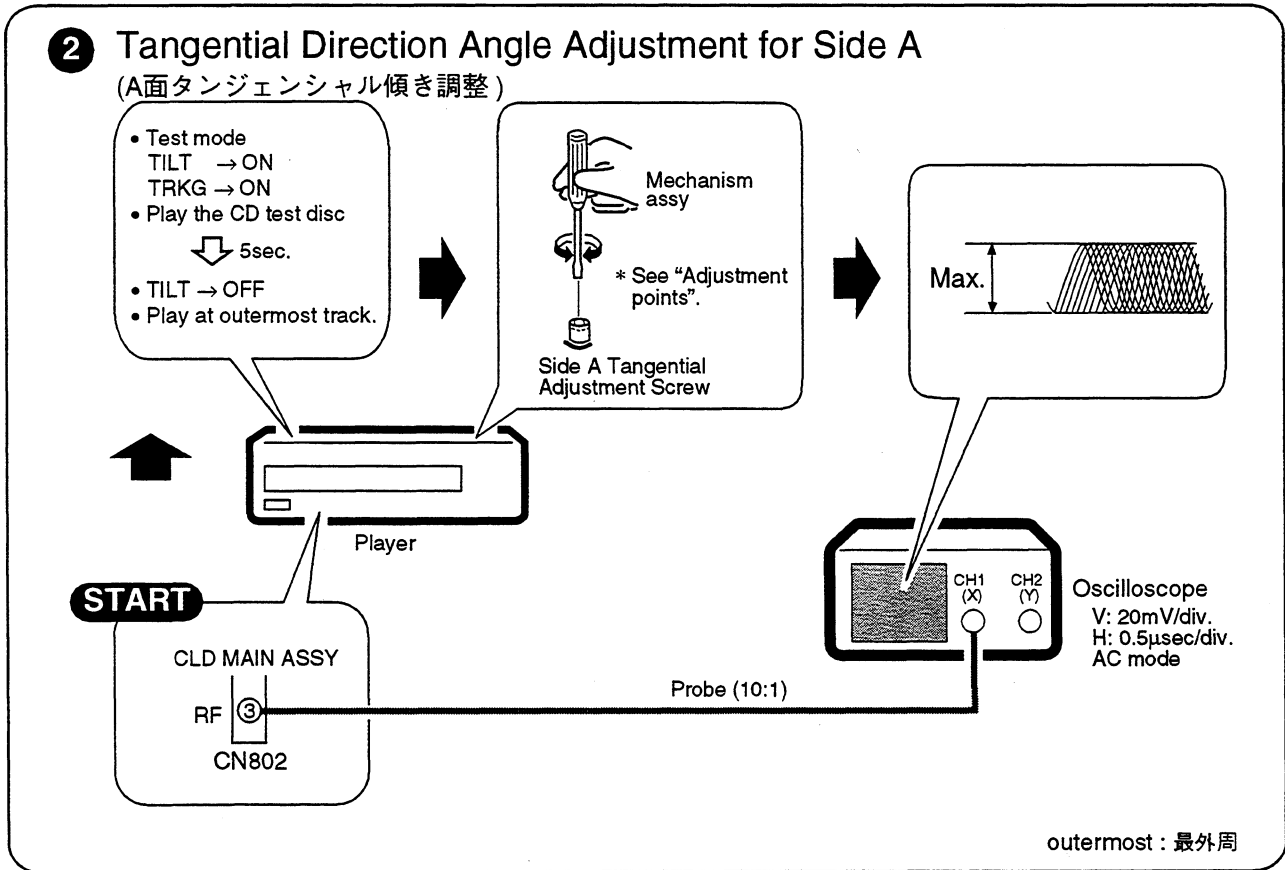
1 Tilt Offset Adjustment

(チルトオフセット調整)

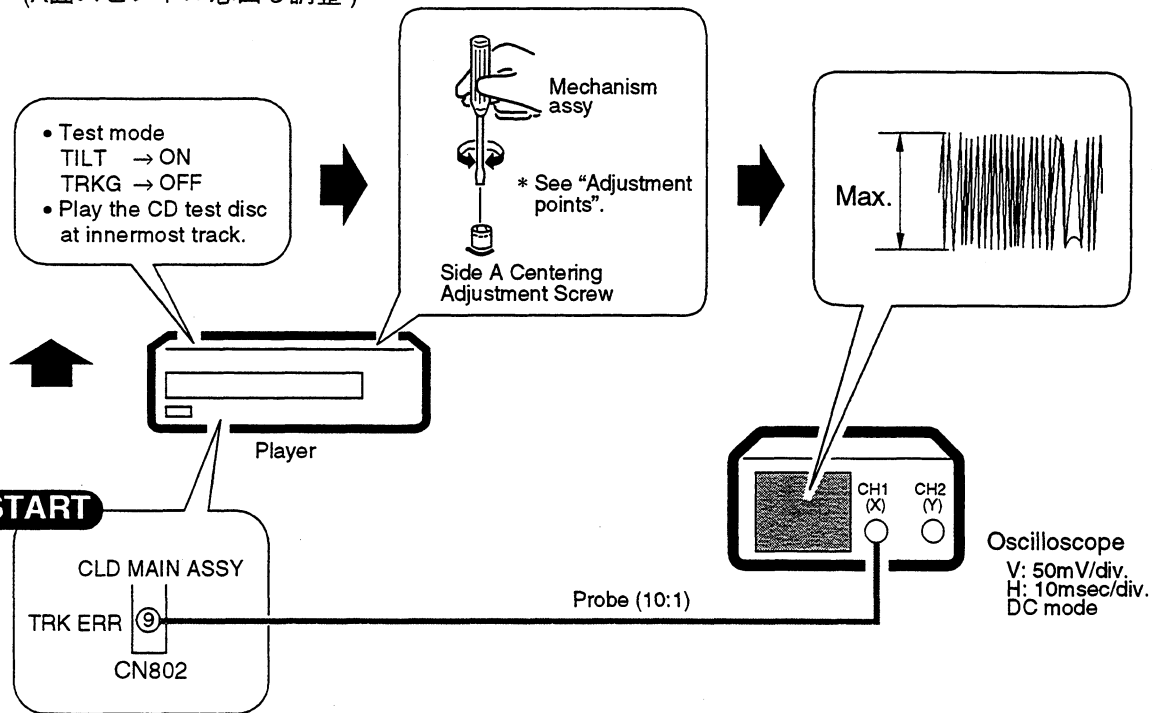


2 Tangential Direction Angle Adjustment for Side A

(A面タンジェンシャル傾き調整)

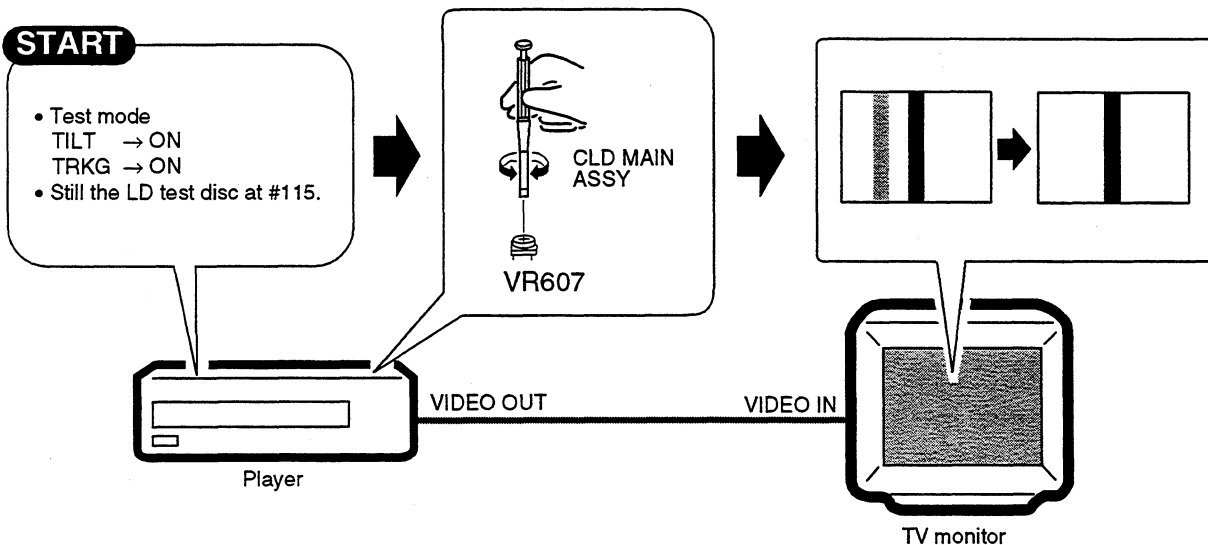


3 Spindle Motor Centering Adjustment for Side A (A面スピンドル芯出し調整)

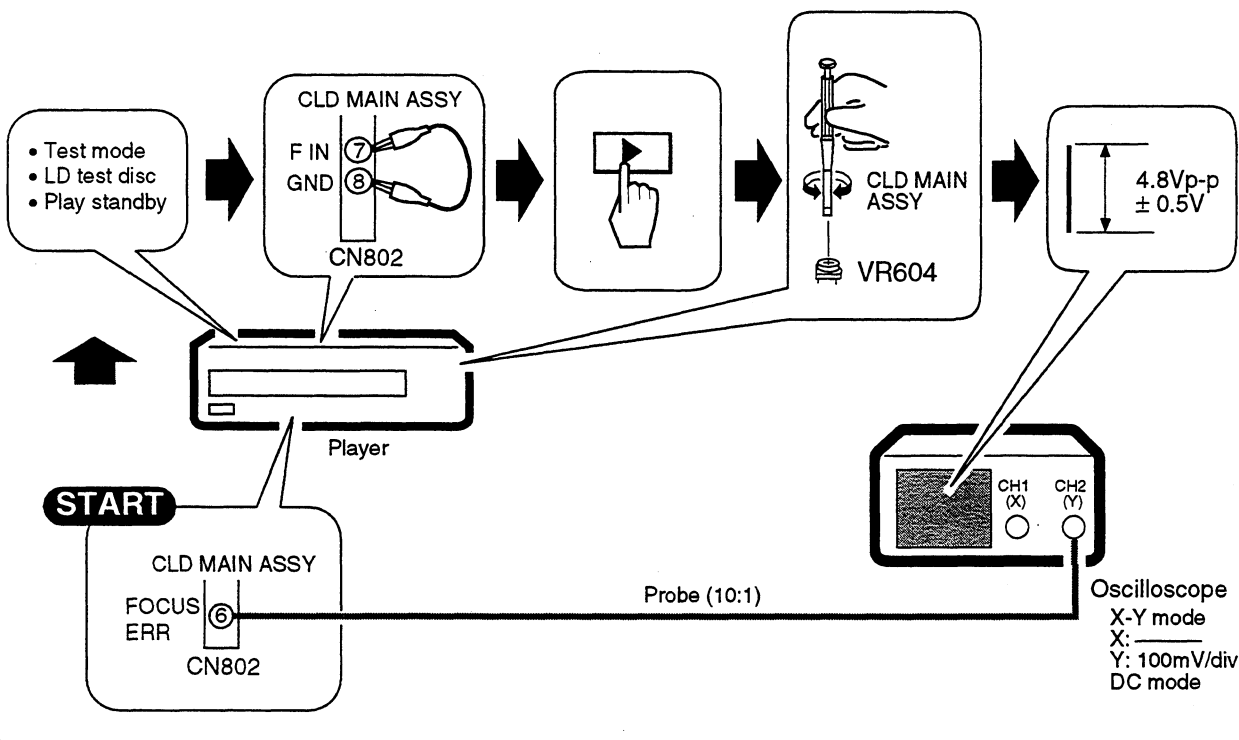


innermost : 最内周

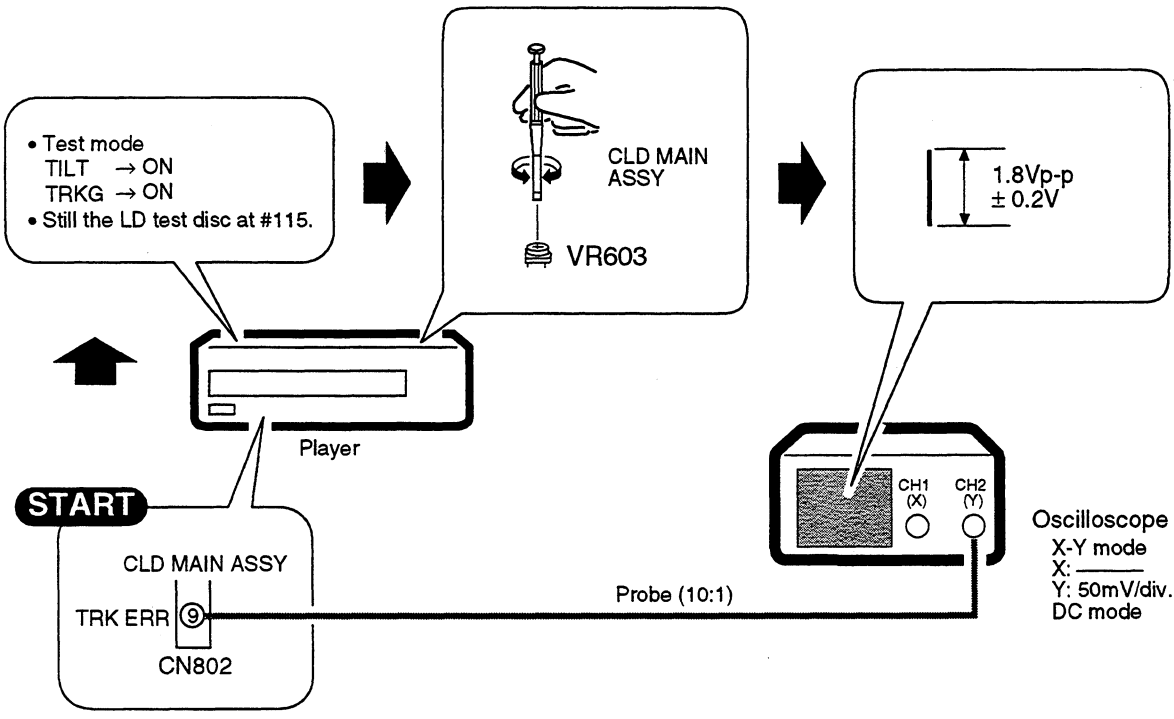
4 Crosstalk Check and Fine Tilt Offset Adjustment for Side A (A面クロストーク確認及び、チルトオフセット微調整)



5 Focus Servo Loop Gain Adjustment (フォーカスサーボループゲイン調整)



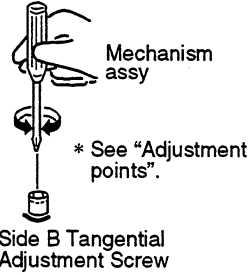
6 Tracking Servo Loop Gain Adjustment (トラッキングサーボループゲイン調整)



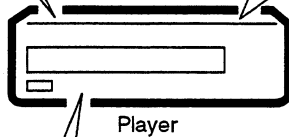
7 Tangential Direction Angle Adjustment for Side B

(B面タンジェンシャル傾き調整)

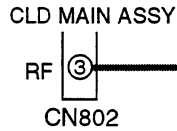
- Test mode
TILT → ON
TRKG → ON
- Still the LD test disc at #115.



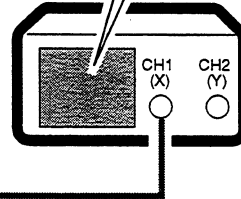
Max.



START



Probe (10:1)

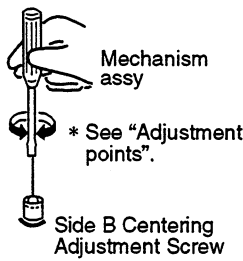


Oscilloscope
V: 20mV/div.
H: 1μsec/div.
AC mode

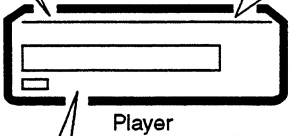
8 Spindle Motor Centering Adjustment for Side B

(B面スピンドル芯出し調整)

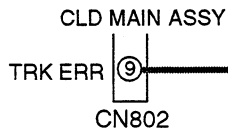
- Test mode
TILT → ON
TRKG → OFF
- Still the LD test disc at #115.



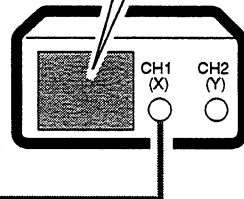
Max.



START



Probe (10:1)

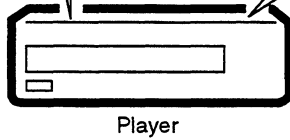
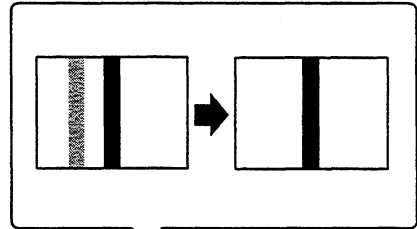
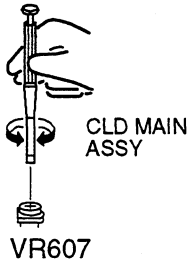


Oscilloscope
V: 50mV/div.
H: 10msec/div.
DC mode

9 Crosstalk Check and Fine Tilt Offset Adjustment for Side B
 (B面クロストーク確認及び、チルトオフセット微調整)

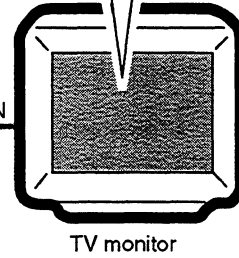
START

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



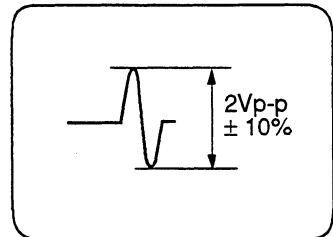
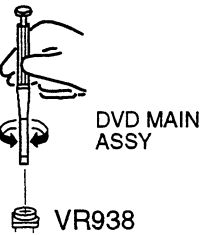
VIDEO OUT

VIDEO IN

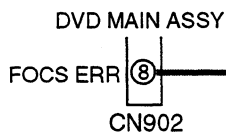


10 DVD Focus S-curve Level Coarse Adjustment
 (DVDフォーカスS字レベル粗調整)

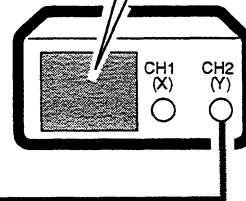
- Test mode
- DVD test disc
- Focus Up and Down



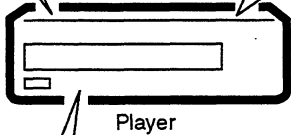
START



Probe (10:1)



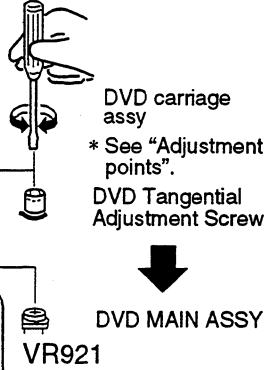
Oscilloscope
 V: 50mV/div.
 H: 10msec/div.
 DC mode



11 RF MAX Adjustment

(RF MAX調整)

- Test mode TRKG → OFF
- Play the DVD test disc at outermost track.



RF Level MAX.

LEVEL

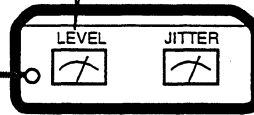
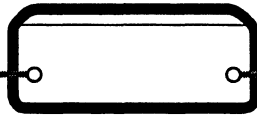
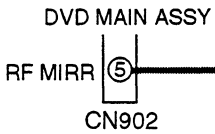


CHECK

- RF Level 0.6V~1.2V
- (AGC : OFF)
- (BIT : 11T)
- 1:1 Probe

Jitter meter

START

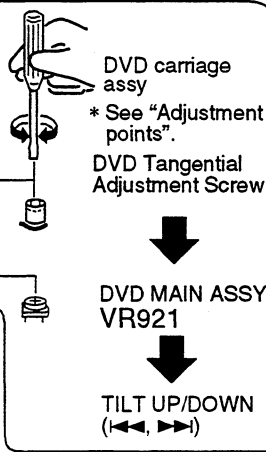


outermost : 最外周

12 Jitter Best Adjustment

(ジッターベスト調整)

- Test mode TRKG → ON
- Play the DVD test disc at outermost track.



Jitter MIN.

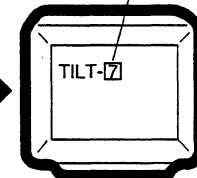
JITTER



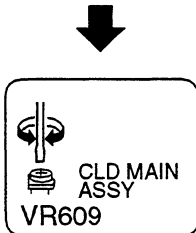
CHECK

- RF Level 0.8V~1.4V
- (AGC : ON)
- (BIT : 11T)
- 1:1 Probe

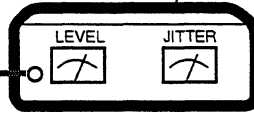
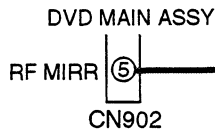
TILT ERROR : 7



TV monitor



START

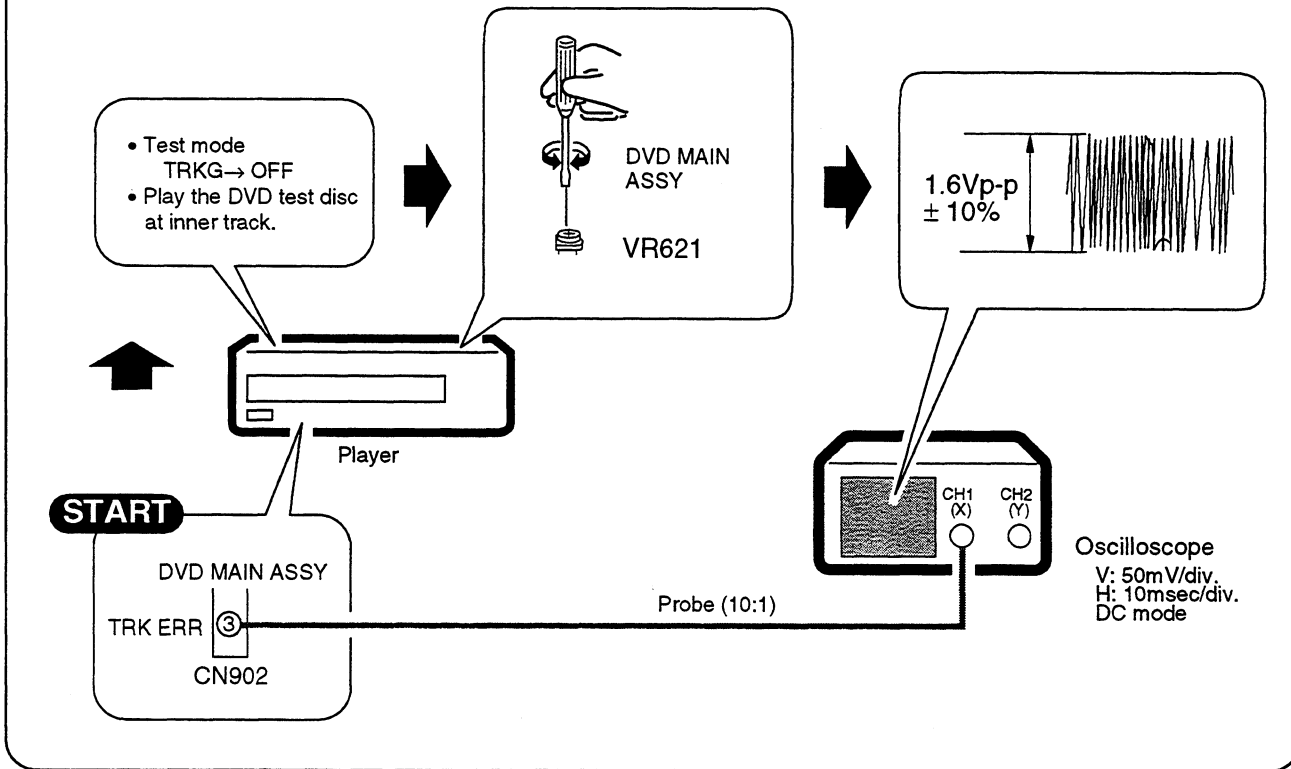


Jitter meter

outermost : 最外周

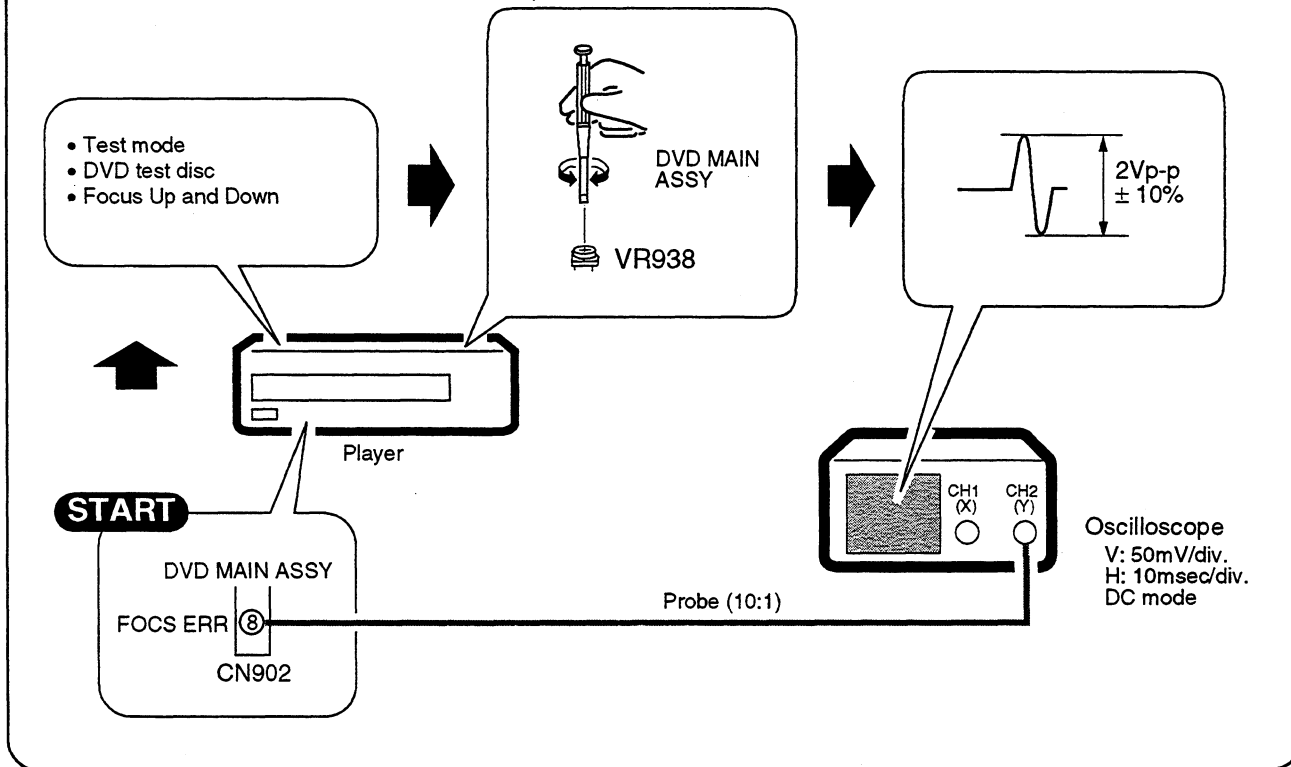
13 Tracking Error Level Adjustment

(トラッキングエラーレベル調整)

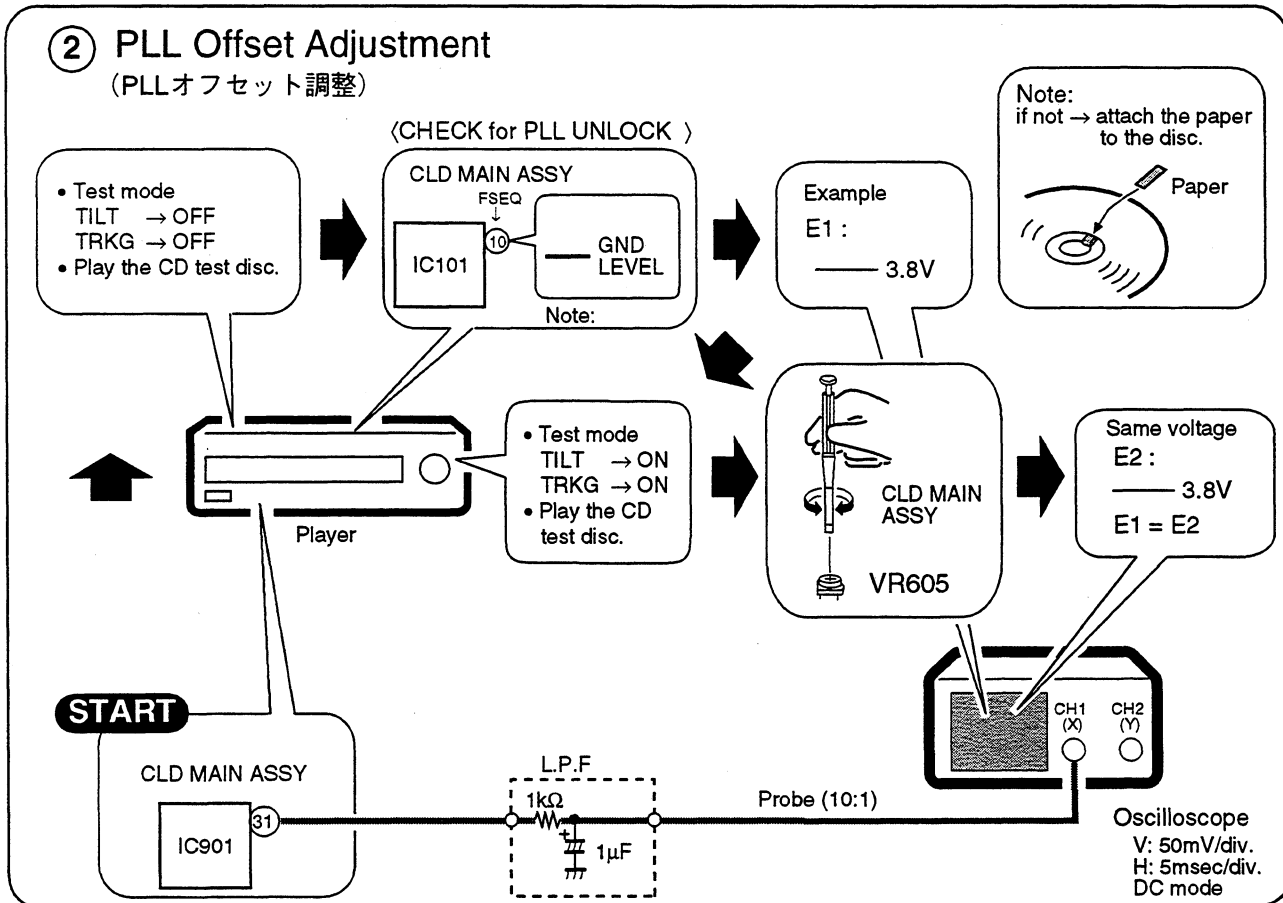
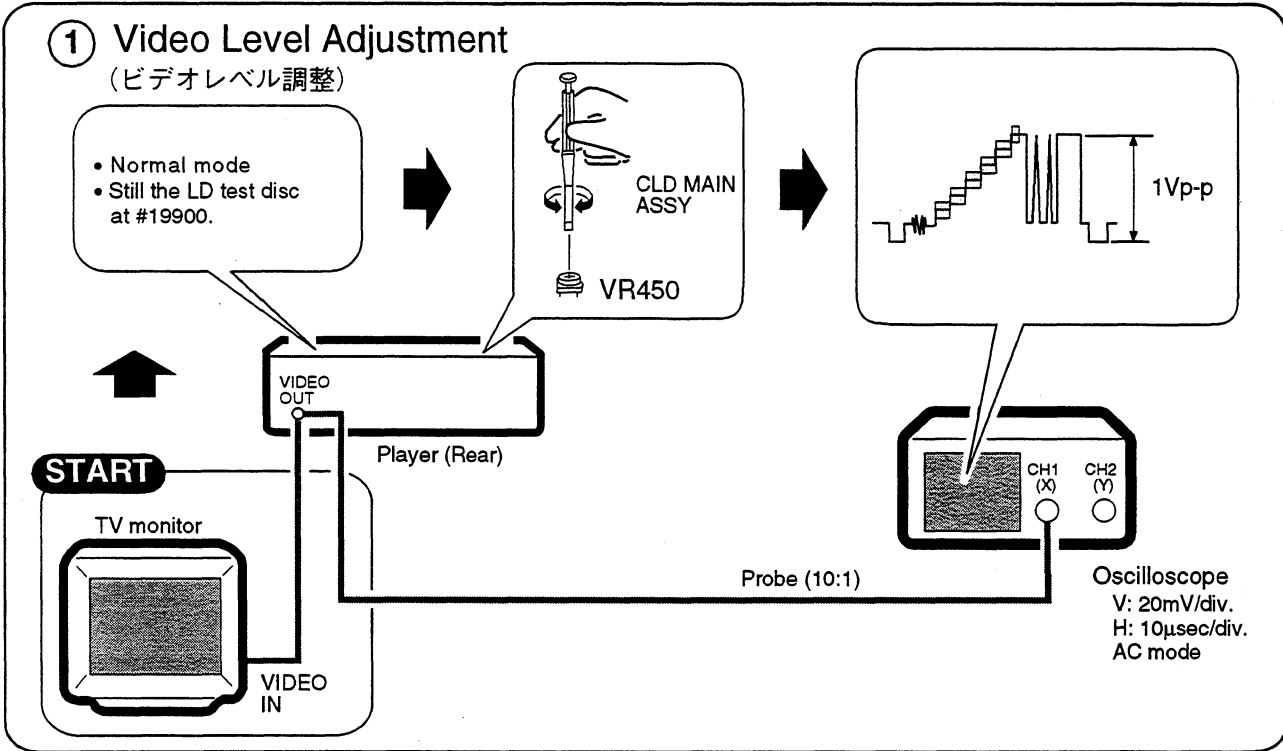


14 DVD Focus S-curve Level Fine Adjustment

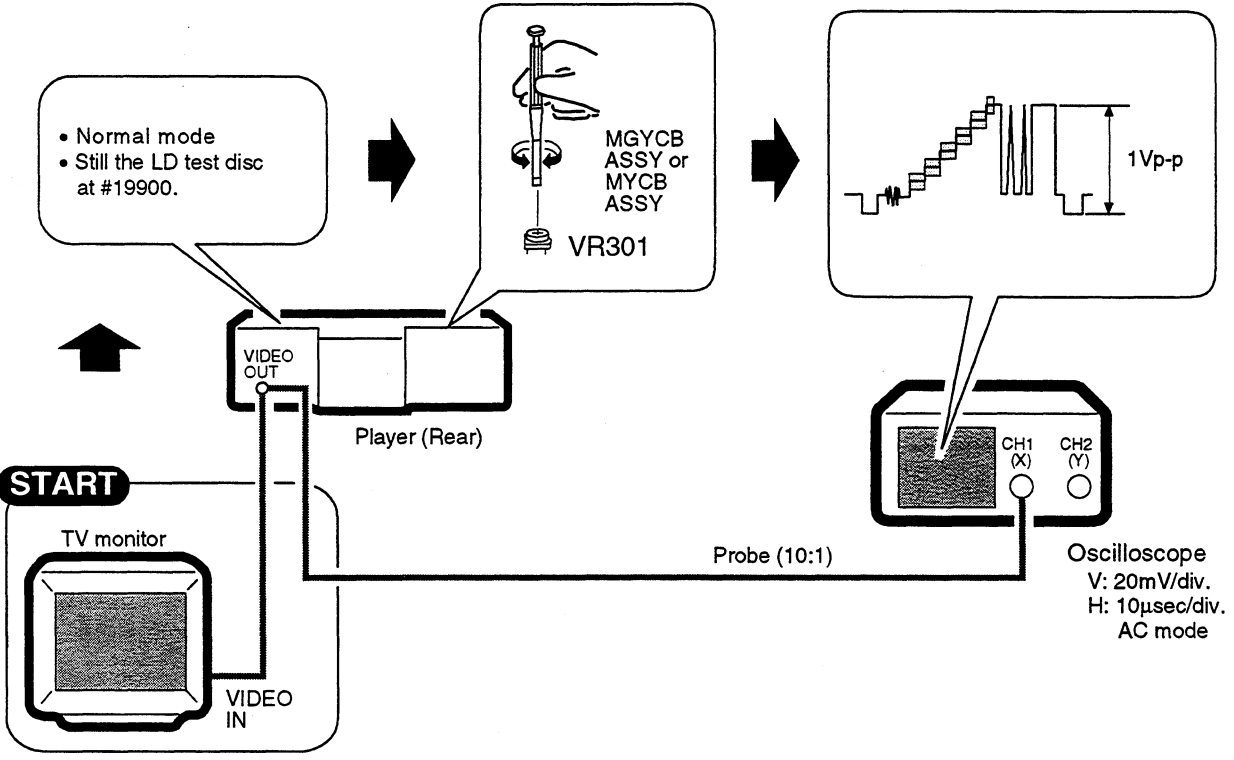
(DVDフォーカスS字レベル微調整)



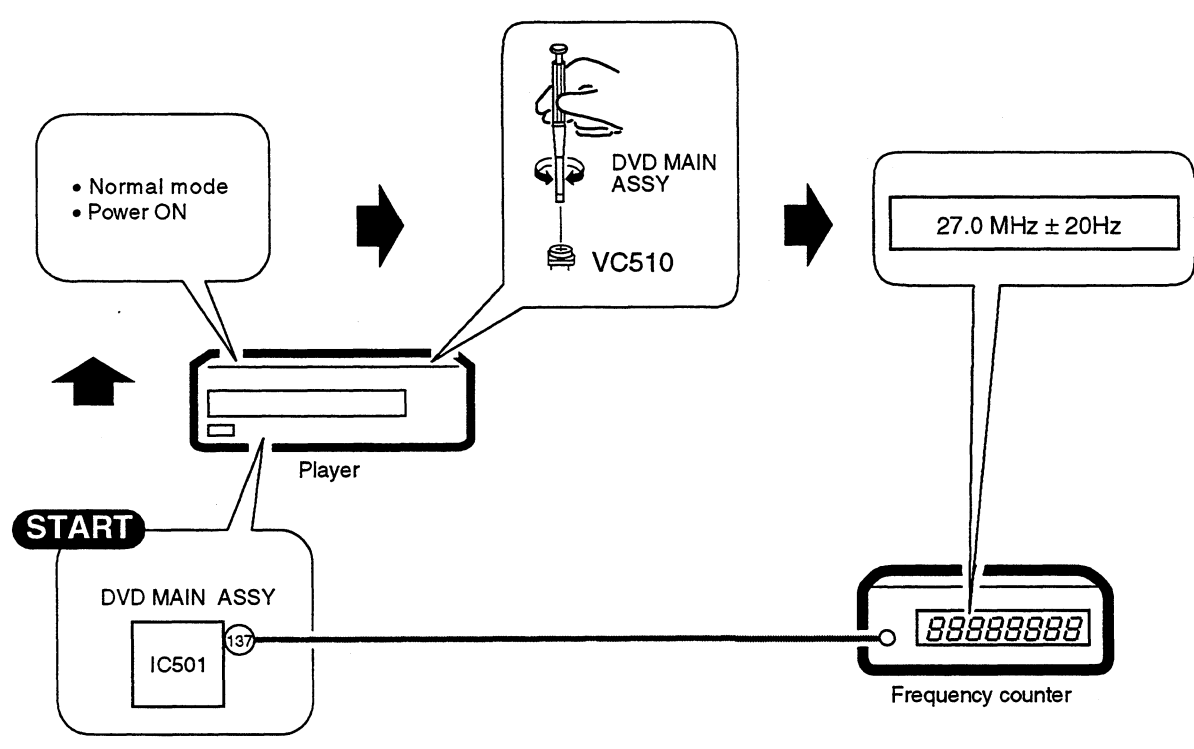
6.6 ELECTRICAL ADJUSTMENT (電気系の調整)



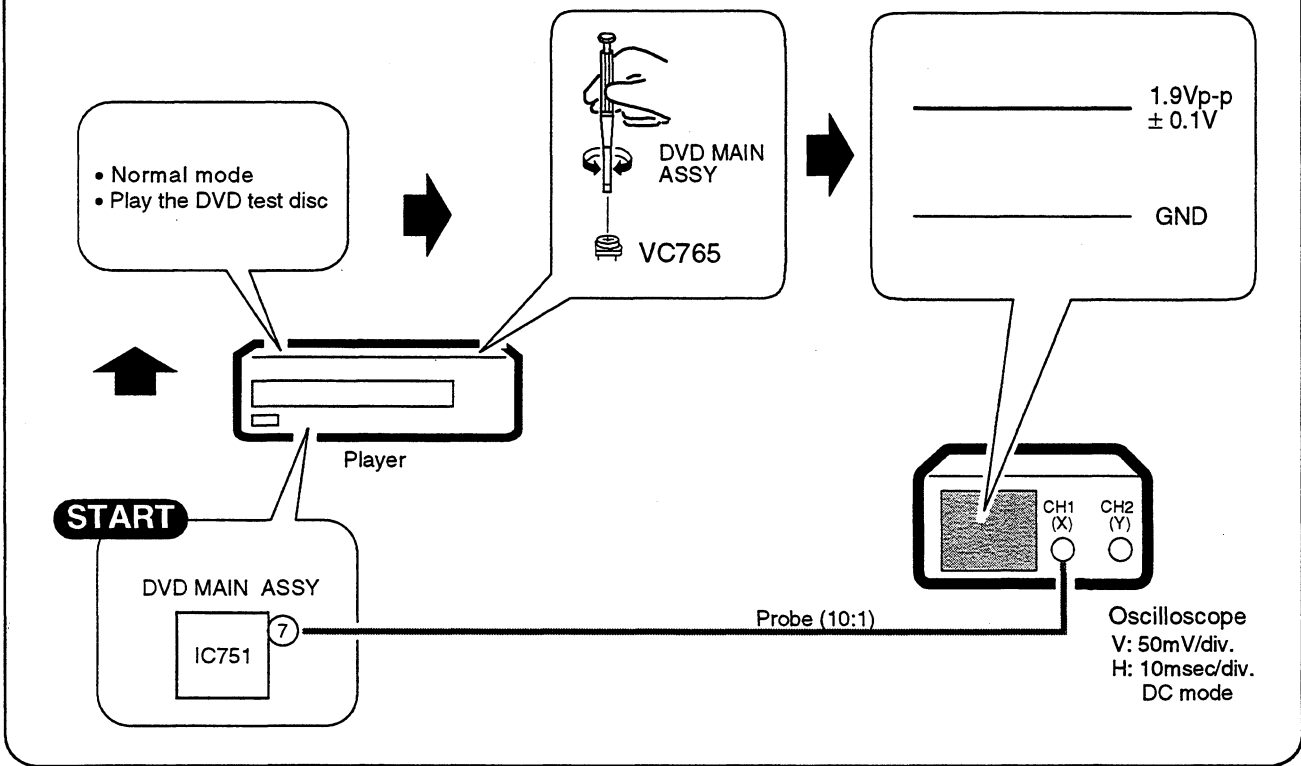
③ Y Output Level Adjustment (Y出力レベル調整)



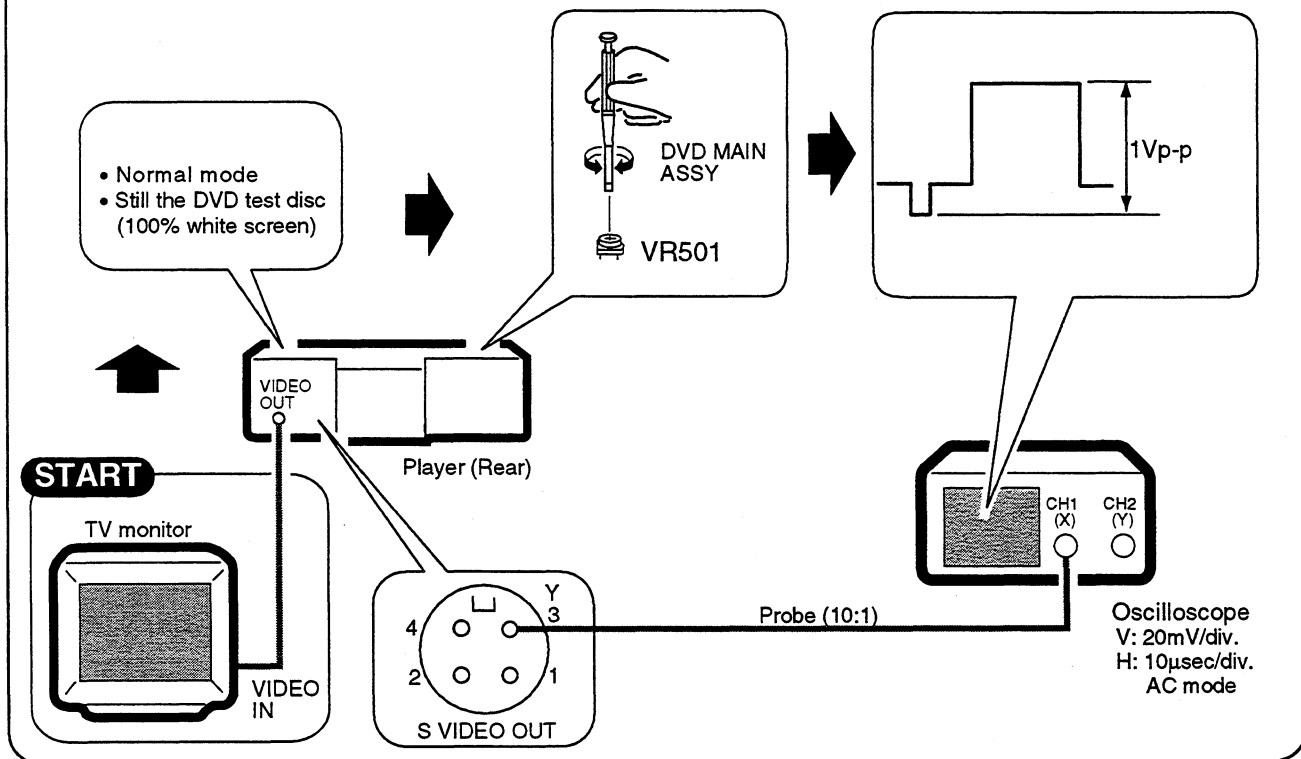
④ Master Clock Adjustment (マスタークロック調整)



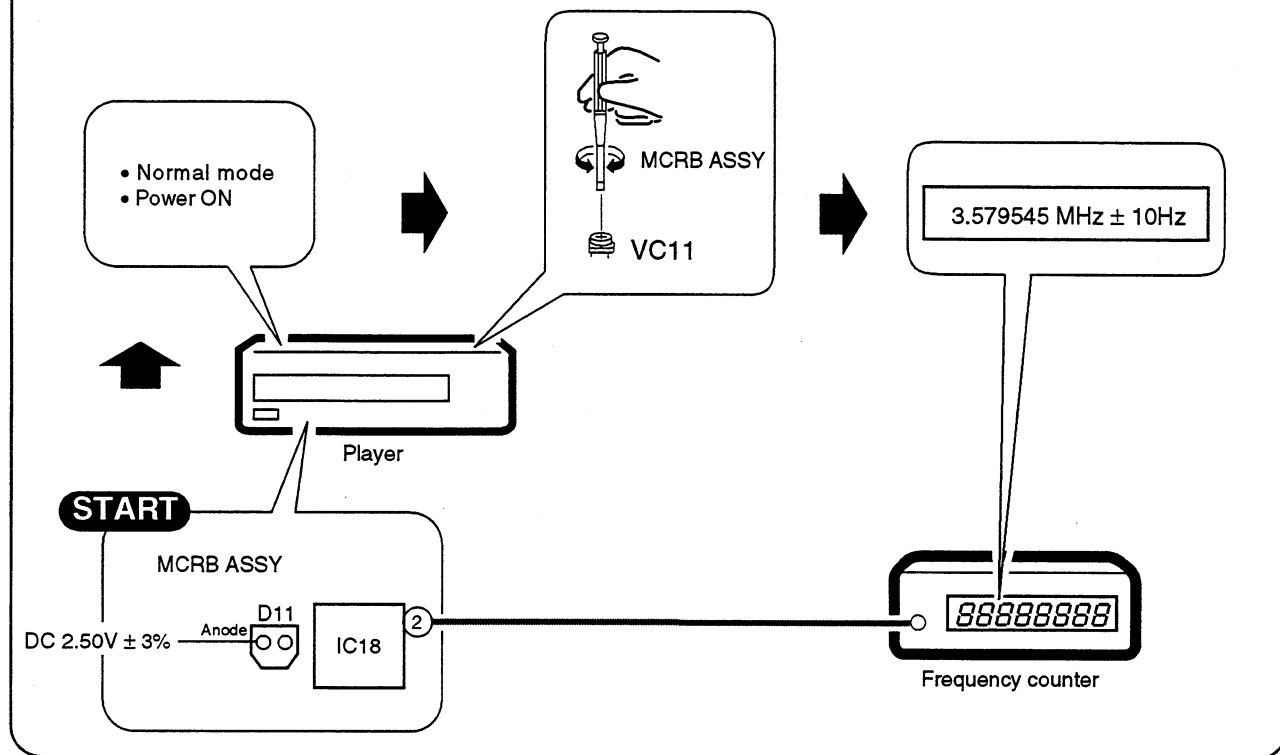
5 VCO Offset Adjustment
(VCOオフセット調整)



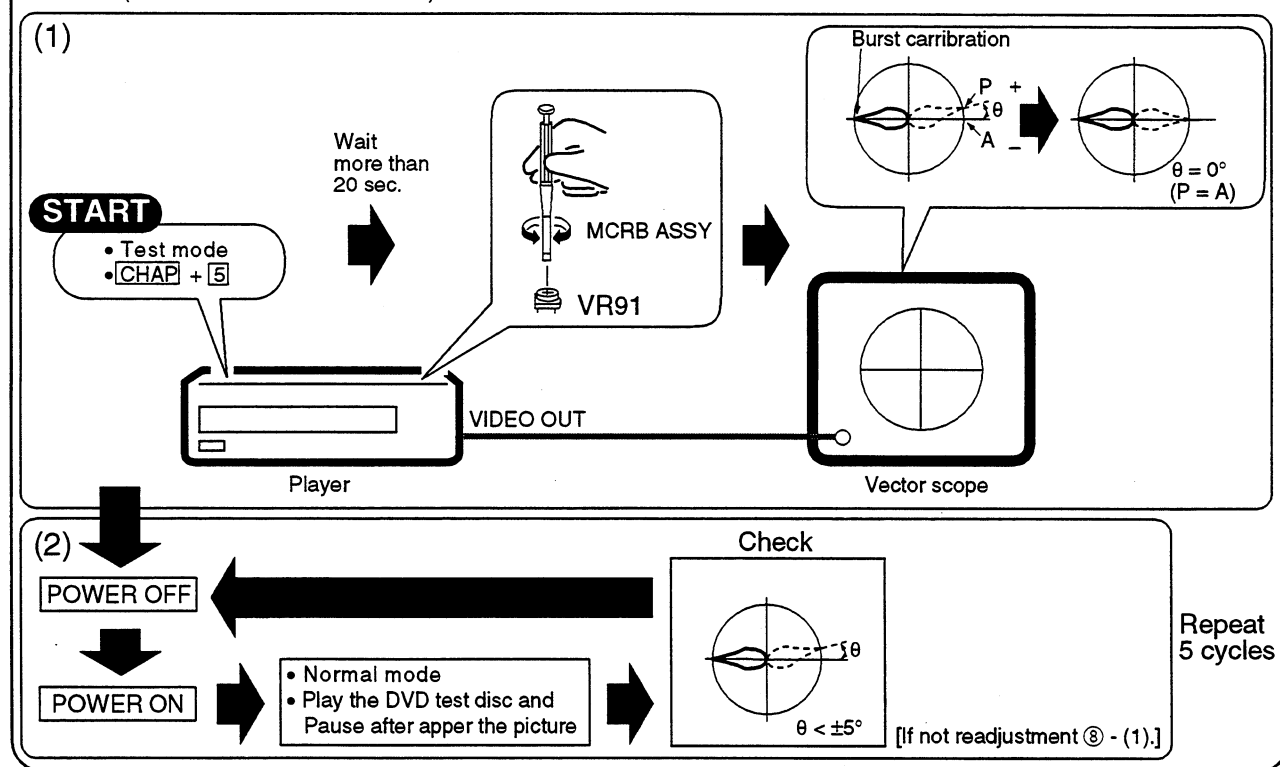
6 Video Output Adjustment
(ビデオ出力調整)



⑦ MCRB Master CLK Adjustment
(MCRBマスターCLK調整)

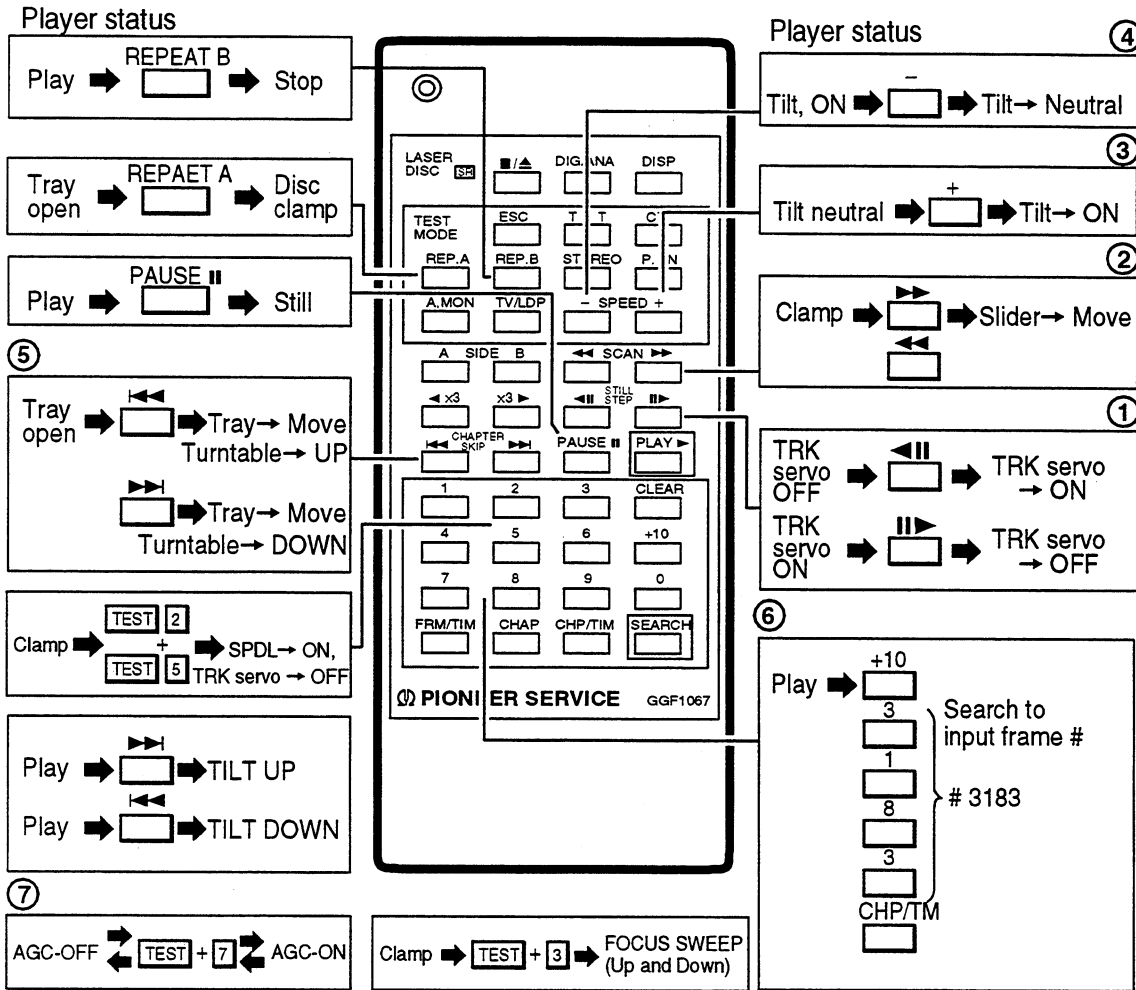


⑧ MCRB Inverter Burst Adjustment
(MCRB反転バースト調整)

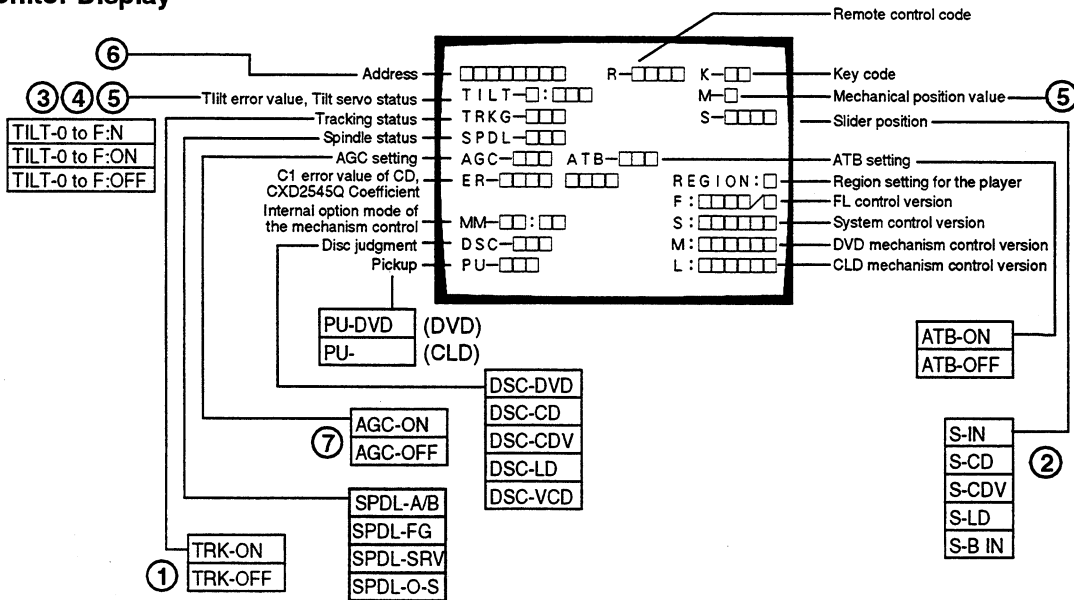


6.7 OPERATIONS IN THE TEST MODE (テストモード時のサービス用リモコン操作方法)

■ Test Mode Remote Control Unit (GGF1067)



■ TV Monitor Display

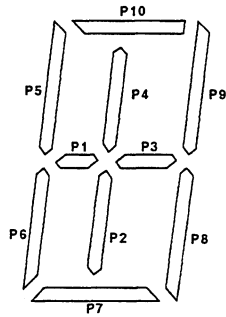
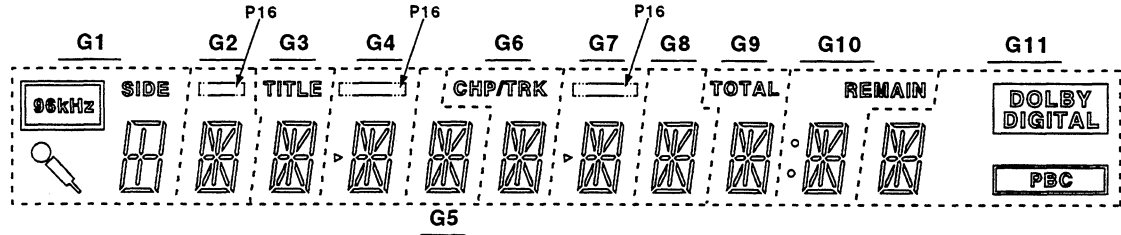


7. GENERAL INFORMATION

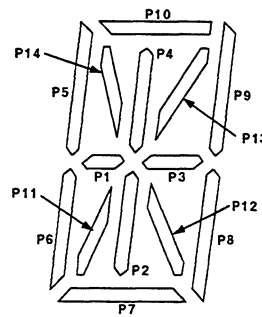
7.1 DISPLAY

■ VAW1042 (FLPB ASSY : V101)

• FL DISPLAY



G1



G1-G11

• ANODE AND GRID ASSIGNMENT

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11
P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1
P2	P2	P2	P2	P2	P2	P2	P2	P2	P2	P2	P2
P3	P3	P3	P3	P3	P3	P3	P3	P3	P3	P3	P3
P4	P4	P4	P4	P4	P4	P4	P4	P4	P4	P4	P4
P5	P5	P5	P5	P5	P5	P5	P5	P5	P5	P5	P5
P6	P6	P6	P6	P6	P6	P6	P6	P6	P6	P6	P6
P7	P7	P7	P7	P7	P7	P7	P7	P7	P7	P7	P7
P8	P8	P8	P8	P8	P8	P8	P8	P8	P8	P8	P8
P9	P9	P9	P9	P9	P9	P9	P9	P9	P9	P9	P9
P10	P10	P10	P10	P10	P10	P10	P10	P10	P10	P10	P10
P11		P11	P11	P11	P11	P11	P11	P11	P11	P11	P11
P12		P12	P12	P12	P12	P12	P12	P12	P12	P12	P12
P13	96kHz	P13	P13	P13	P13	P13	P13	P13	P13	P13	P13
P14		P14	P14	P14	P14	P14	P14	P14	P14	P14	P14
P15											
P16	SIDE	P16	TITLE	P16		CHP/TRK	P16		TOTAL	REMAIN	DOLBY DIGITAL

• PIN ASSIGNMENT

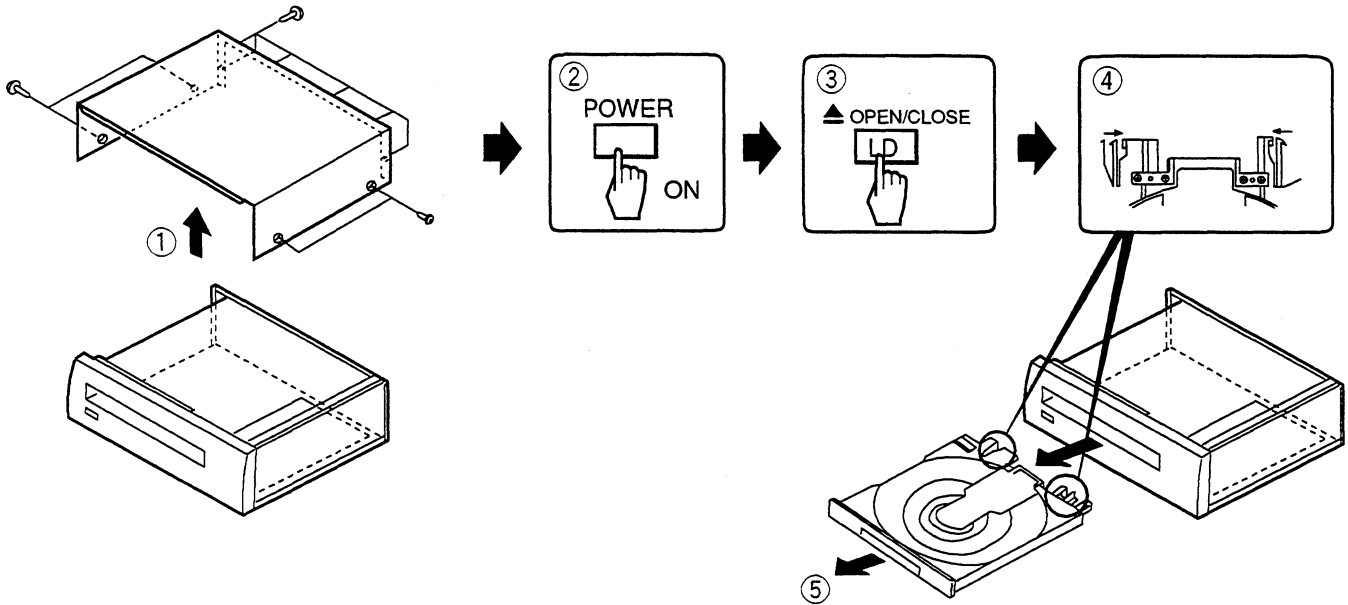
Pin No.	1	2	3	4	5	6	7	8	9	10	11-24	25	26	27	28	29	30	31	32
Assignment	F1	F1	NP	NL	P16	P15	P14	P13	P12	P11	NL	P10	P9	P8	P7	P6	NL	P5	P4
Pin No.	33	34	35	36-40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Assignment	P3	P2	P1	NL	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1	NL	NP	F2	F2

F1, F2 : Filament G1-G11 : Grid P1-P16 : Anode NP : No Pin NL : No Lead

7.2 DISASSEMBLY/ASSEMBLY (分解/組立の手順)

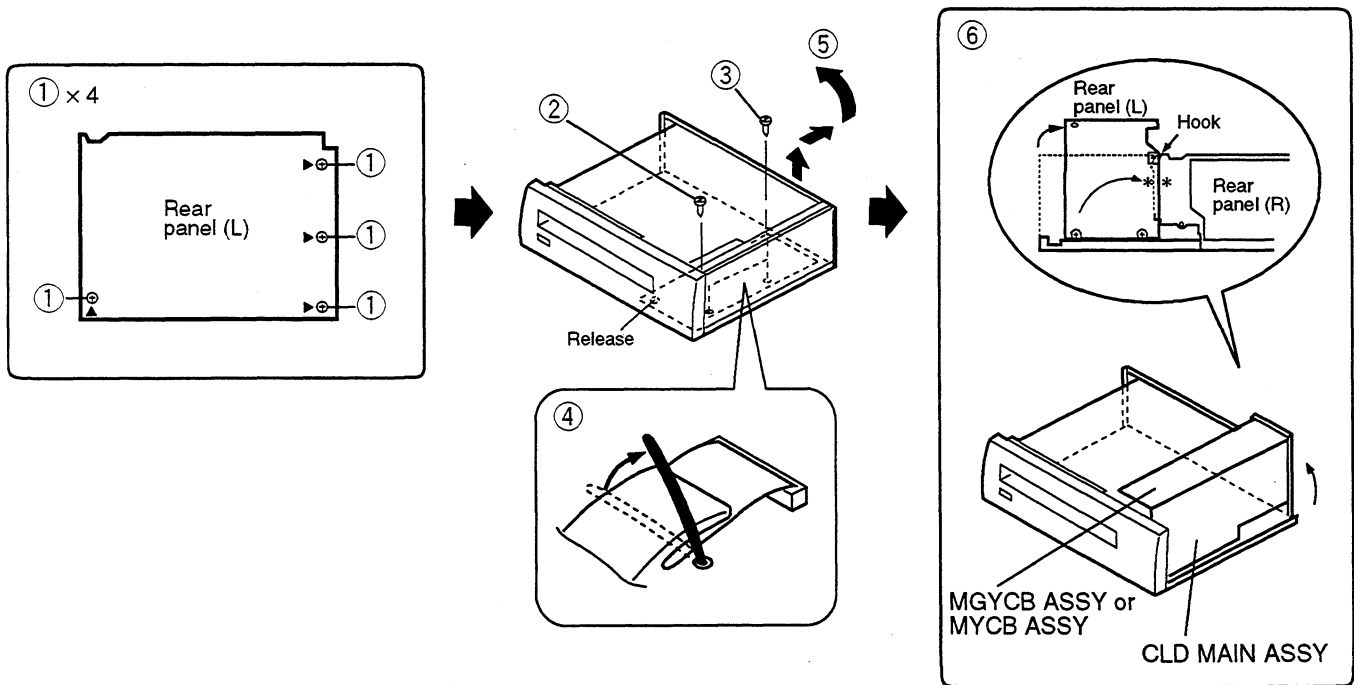
(1) DISC TRAY

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



(2) CLD MAIN ASSY

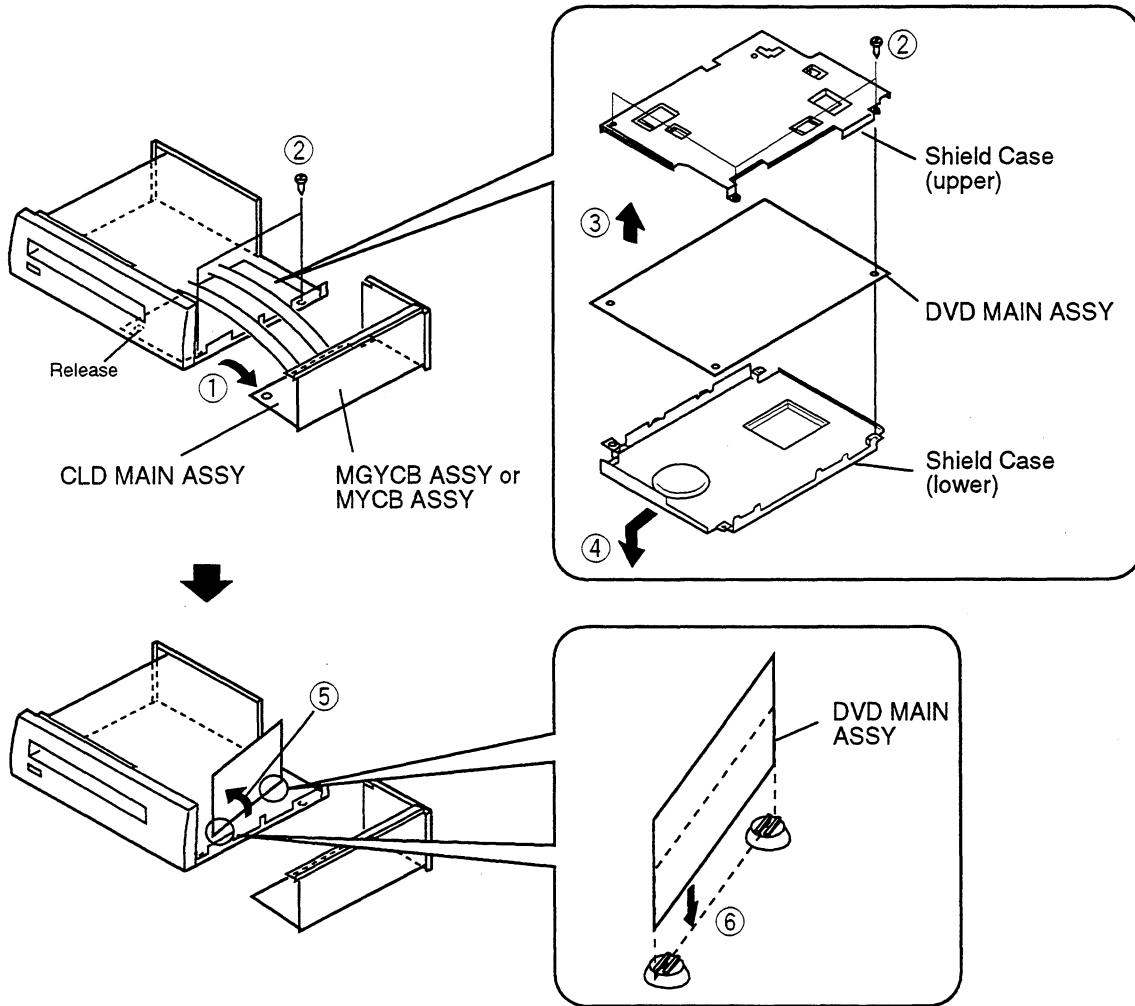
- Disassembly : ① → ② → ③ → ④ → ⑤ → ⑥
- Assembly : ⑥ → ⑤ → ④ → ③ → ② → ①



(3) DVD MAIN ASSY

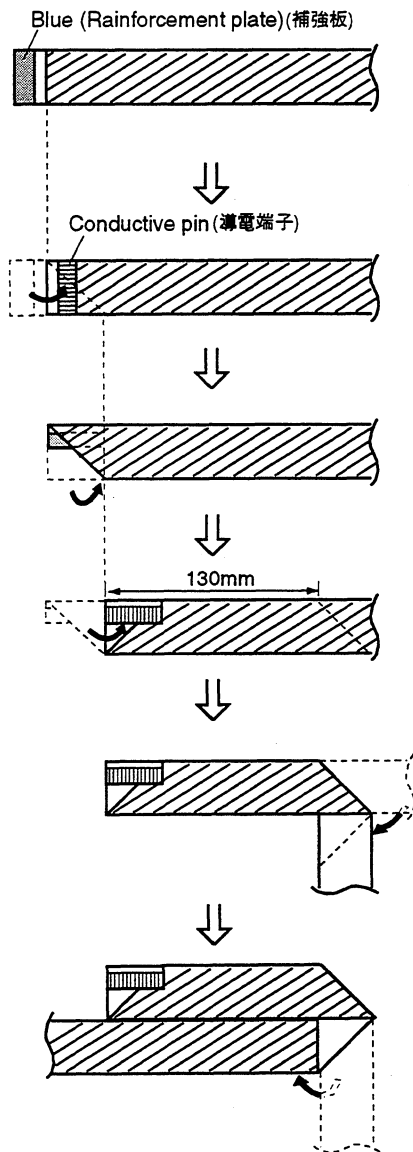
• Disassembly : ① → ② → ③ → ④ → ⑤ → ⑥

• Assembly : ⑥ → ④ → ③ → ② → ①

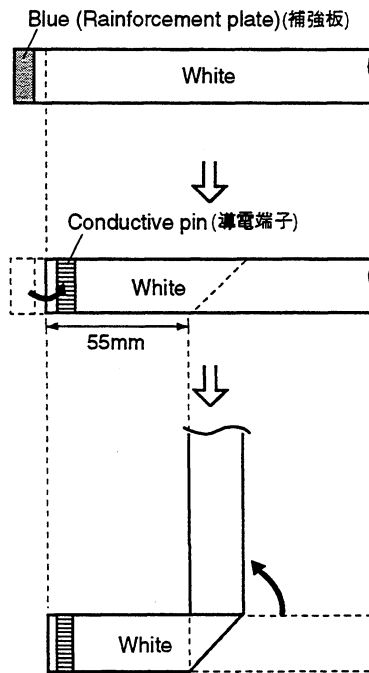



7.3 HOW TO BEND THE FLEXIBLE CABLE (フレキシブルケーブルの折り方)

(1) THE FLEXIBLE CABLE FOR CLD CARRIAGE ASSY

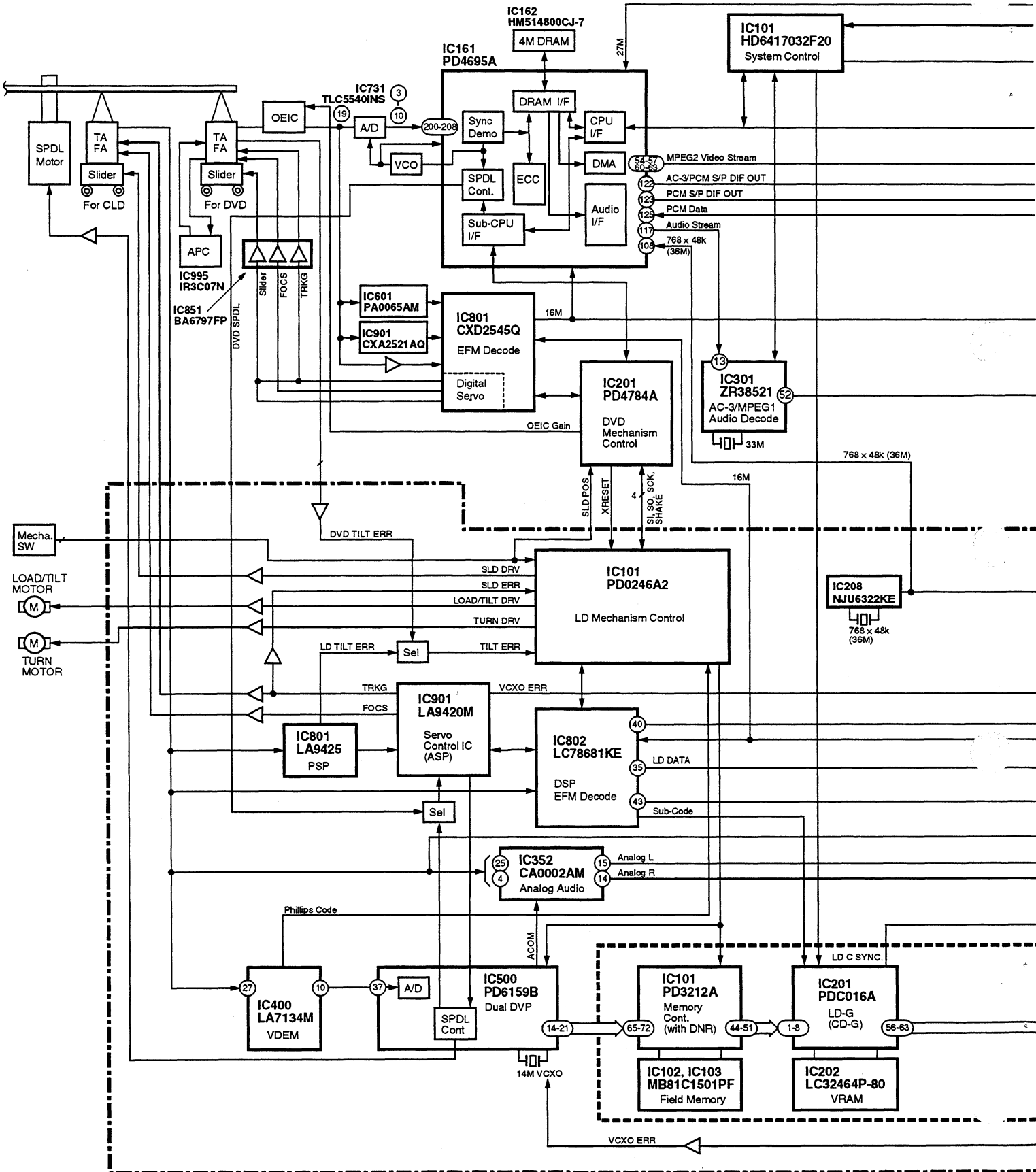


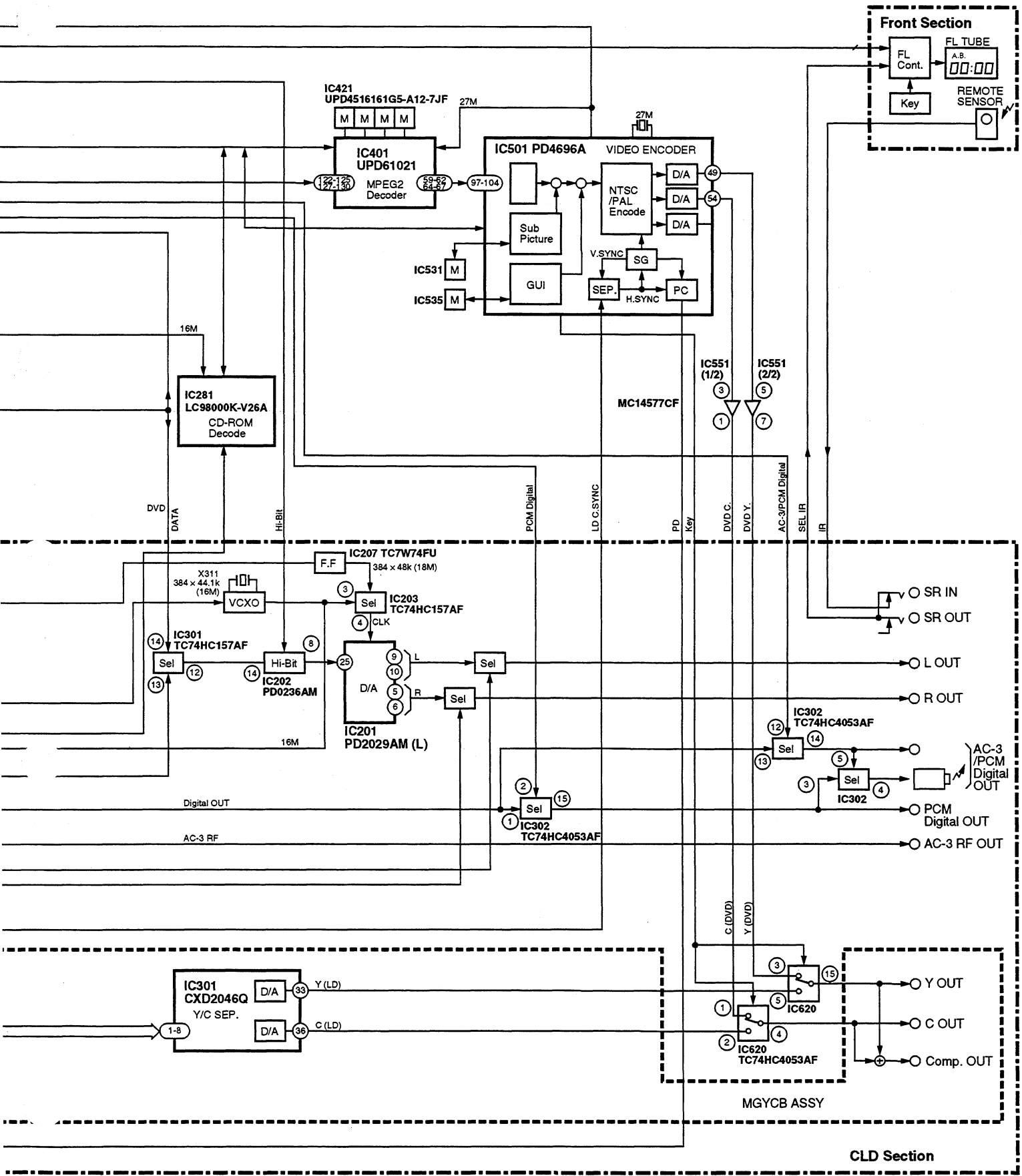
(2) THE FLEXIBLE CABLE FOR DVD CARRIAGE ASSY



 Part rating indication side (部品定格表示側)

7.4 BLOCK DIAGRAM

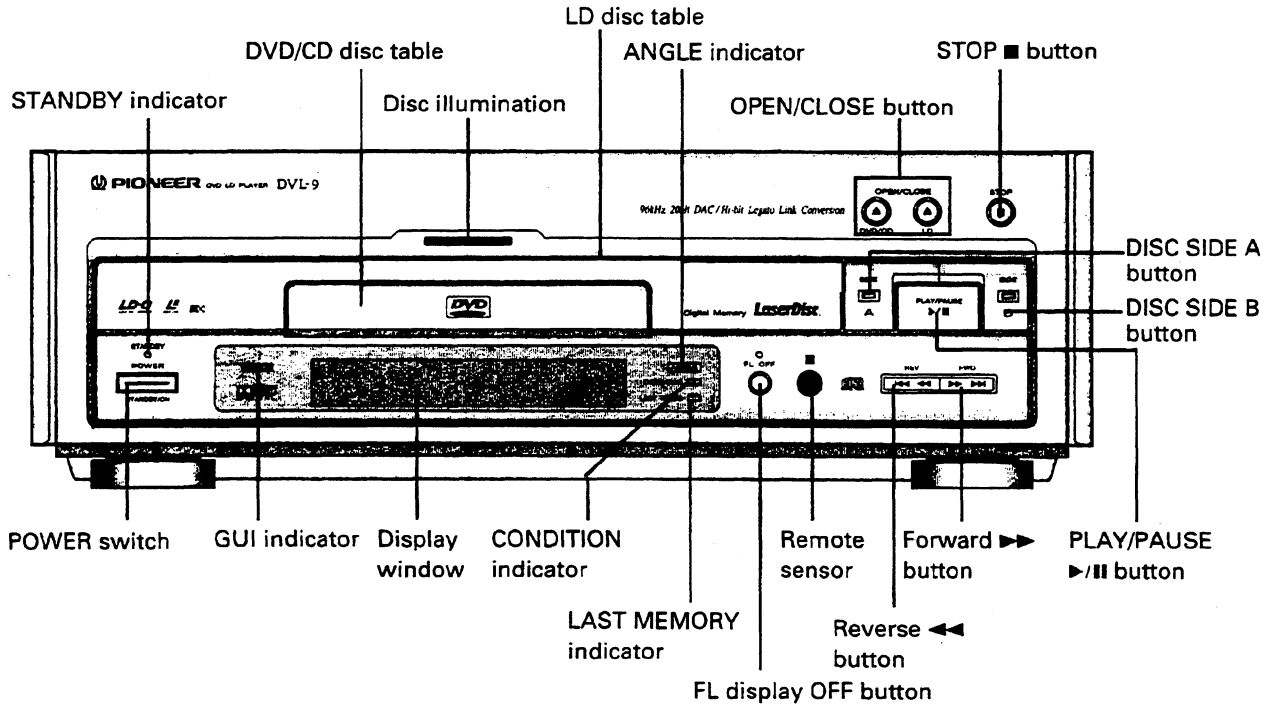




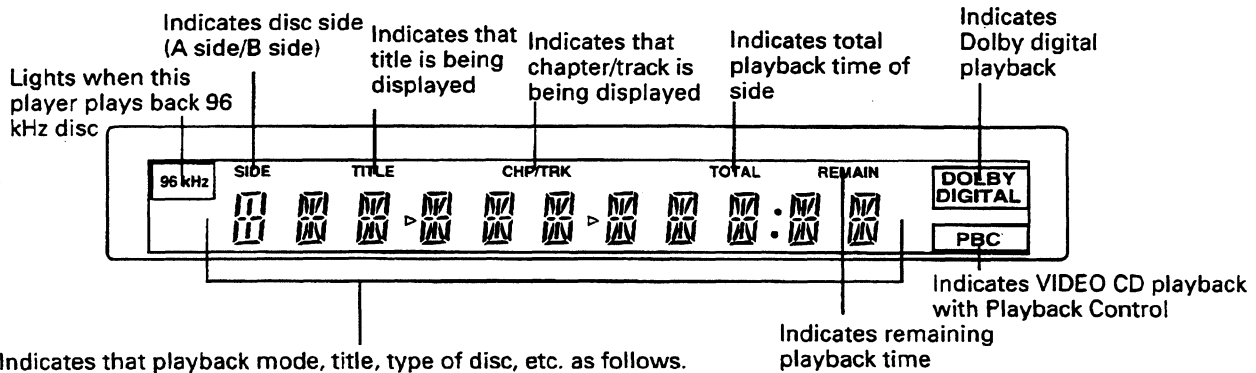
8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

■ Front panel



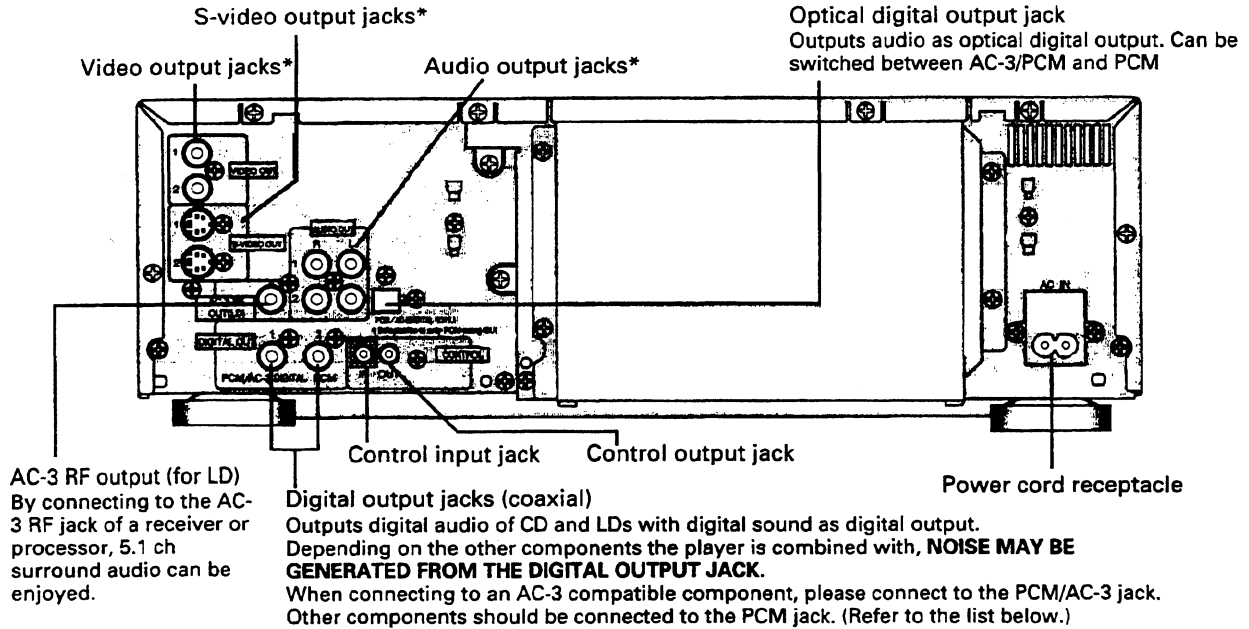
Display window



Indicates that playback mode, title, type of disc, etc. as follows.

LD	Laser Disc	CLOSE	Disc table is closing
CD	Compact disc	PLAY	Playback
CDV	CD video	STOP	Stop
DVD	DVD	PAUSE	Pause
VCD	VIDEO CD	NO DISC	No disc
OPEN	Disc table is opening or is open	- OFF -	Power is turned off
		SIDE A(B)	SIDE A(B): Disc side

■ Rear panel

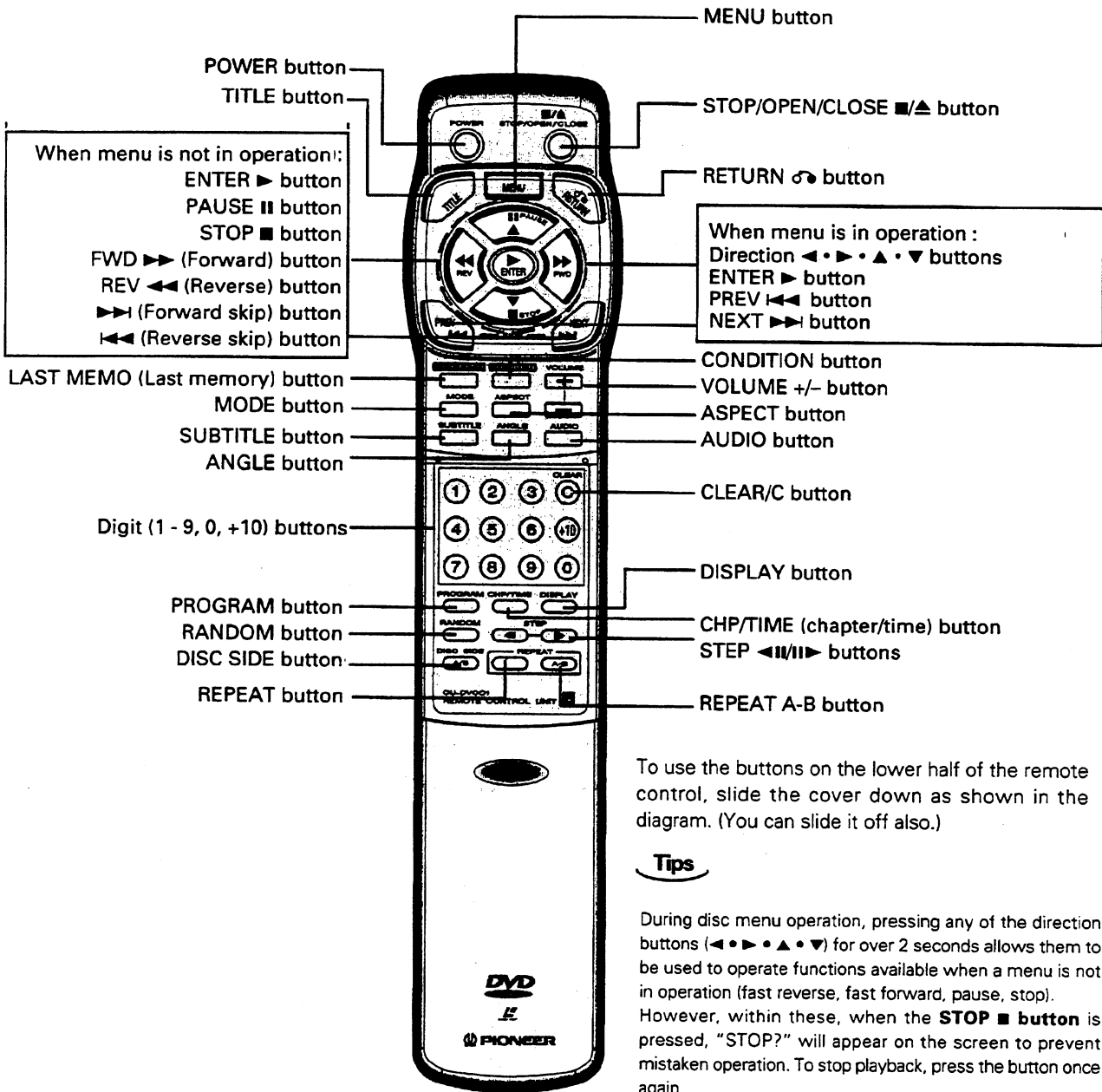


* There are two jacks, allowing 2 systems to be connected at the same time. For example, one can be connected to the TV and the other can be connected to an AV amplifier.

Your home amplifier	Regular AV amplifier	Coaxial	Connect to PCM jack
		Optical	Connect to PCM/AC-3 DIGITAL (OPT) output jack and select PCM using the menu
	AC-3 compatible amplifier	Coaxial	Connect to PCM/AC-3 DIGITAL jack
		Optical	Connect to PCM/AC-3 DIGITAL (OPT) output jack and select AC-3/PCM using the menu

RDM	Random playback	STEREO	Stereo
PROGRAM	Program mode	MENU	Menu mode
R_TRK	Track/chapter repeat playback	TITLE	Title menu
R_A	Start point of 2 point repeat playback	CHAPTER	Chapter menu
R_AB	2-point repeat playback	SUB-TITLE	Sub-title menu
R_TTL	Title repeat playback	SETUP	Set-up menu
R_SID	LD both-side repeat playback	ANGLE	Angle menu
COND MEMORY	Condition memory	AUDIO	Audio menu
LAST MEMORY	Last memory playback	DOLBY DIGITAL 5.1CH	Dolby digital surround 5.1 ch
CINEMA1	Cinema 1 mode	PCM 96K	96K PCM audio
CINEMA2	Cinema 2 mode	PCM 48K	48K PCM audio
ANIMATION	Animation mode	MPEG AUDIO	MPEG1 or MPEG2 audio
STANDARD	Standard mode		

Remote control



8.2 SPECIFICATIONS

General

System	DVD system, LaserVision Disc system, VIDEO CD system and Compact Disc digital audio system
Power requirements:	AC 110-120/220-240 V, 50/60 Hz
Power consumption	65 W
Weight	9.1 kg
Dimensions	440 (W) x 463 (D) x 140 (H) mm (Not including protruding cables, etc.)
Operating temperature	+5°C to +35°C (+36°F to +96°F)
Operating humidity	5% to 85% (no condensation)

S-Video Outputs (2 pairs)

1 is the S-VIDEO output and *2* is the S2-VIDEO output.

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

Video Outputs (2 pairs)

Output level	1 Vp-p (75Ω loaded, negative sync)
Jacks	RCA jacks

Audio Outputs (2 pairs)

Output level	200 mVrms (1 kHz, 40%)
Analog audio output	200 mVrms (1 kHz, -20 dB)
Digital audio output	200 mVrms (1 kHz, -20 dB)
Number of channels	2
Jacks	RCA jacks

Digital audio characteristics (DVD fs = 48 kHz)

Frequency response	4 Hz to 22 kHz (DVD fs: 48 kHz) 4 Hz to 20 kHz (LD, CD)
S/N ratio	115 dB (EIAJ)
Dynamic range	97 dB (EIAJ)
Total harmonic distortion	0.0028 %
Wow and flutter	Limit of measurement (±0.001% W. PEAK) or lower (EIAJ)

Other Terminals

Optical digital output (PCM/AC-3)	Optical digital jack
Coaxial digital output(PCM/AC-3)	RCA type pin jack
Coaxial digital output (PCM)	RCA type pin jack
AC-3RF output (for LD)	RCA type pin jack
CONTROL IN	Minijack (3.5mm dia.)
CONTROL OUT	Minijack (3.5mm dia.)

Accessories

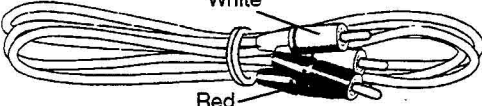
Remote control unit	1
AAA/R03 dry cell batteries	2
Audio cord	1
Video cord	1
Power cord	2
Operating Instructions	1
Warranty card	1

NOTE:

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

• Accessories

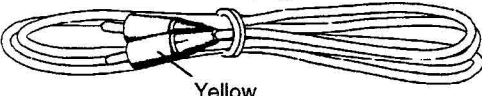
Audio cord (L = 1.5m)



White

Red

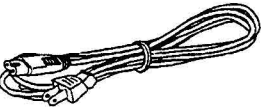
Video cord (L = 1.5m)




Yellow

Power cord


<Flat blade 2-pin AC plug model>



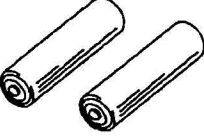
<Round blade 2-pin AC plug model>



Remote control unit



Batteries.....2



● Warranty card

● Operating Instructions

Use a power cord that matches your wall power socket.
When the unit is used in Singapore, Malaysia or Indonesia, be sure to use a power cord with a 2-pin round-blade plug and do not use that with a 2-pin flat-blade plug.