

# Service Manual

ORDER NO.  
RRV1919

DVD LD PLAYER

# DVL-91

● Refer to the service manual RRV1871 for DVL-909/KU.

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

Type	Model	Power Requirement	Remarks
	DVL-91		
KU/CA	○	AC120V	

# 1. CONTRAST OF MISCELLANEOUS PARTS

- NOTES:**
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
  - The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
  - 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 → 56 x 10<sup>1</sup> → 561 ..... RD1/4PU 561 J  
 47k → 47 x 10<sup>3</sup> → 473 ..... RD1/4PU 473 J  
 0.5 → R50 ..... RN2H R50 K  
 1 → 1R0 ..... RS1P 1R0 K

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

● Reference Nos. indicate the pages and Nos. in the service manual for the base model.

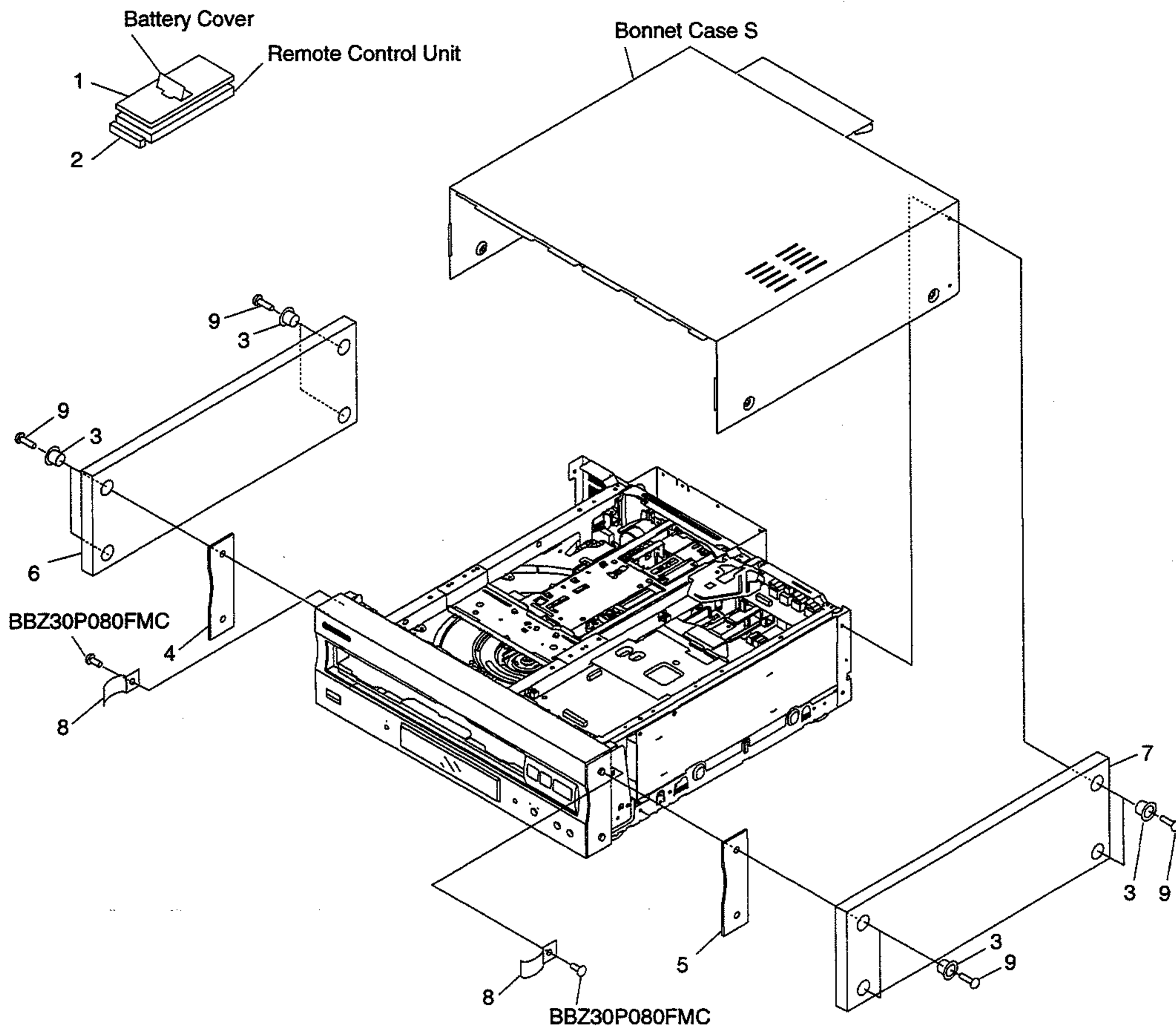
## ■ CONTRAST TABLE

DVL-91/KU/CA and DVL-909/KU are constructed the same except for the following :

Ref. No.	Mark	Symbol and Description	Part No.		Remarks
			DVL-909/KU	DVL-91/KU/CA	
P5-13	NSP	FLKY Assy └ FLKB Assy	VWM1799 VWG1887	VWM1803 VWG1891	
P3- 1	NSP	Dry Cell Battery (R6P,AA)	VEM-013	Not used	
P3- 1	NSP	Dry Cell Battery (R03,AAA)	Not used	VEM-022	
P3- 2		Video Cord (L=1.5m)	VDE1048	VDE1024	
		S Video Cord (L=2m)	Not used	VDE1013	
P3- 3		Audio Cord (L=1.5m)	VDE1033	VDE1023	
P3- 6		Remote Control Unit (CU-DV018)	VXX2549	Not used	
P3- 6		Remote Control Unit (CU-DV017)	Not used	VXX2562	
P3- 7		Battery Cover	VNK3703	DNK2286	
		Case (Below)	Not used	VNK2062	No.1
	NSP	Filter	Not used	VNK2063	No.2
P3- 9		Operating Instructions (English)	VRB1186	VRB1190	
P3-11	NSP	Warranty Card	ARY1044	ARY1026	
P3-13		Pad F	VHA1206	VHA1214	
P3-14		Pad R	VHA1207	VHA1215	
P3-15		Packing Case	VHG1722	VHG1738	
P4- 1		LD Tray Assy	VXA2173	VXA2318	
P4- 5		CD Tray	VNK3922	VNK3923	
P4-17		Bonnet Case S	VXX2561	VXX2570	
		Wood Coller	Not used	PNW1238	No.3
		Gold Mole L	Not used	VAH1277	No.4
		Gold Mole R	Not used	VAH1278	No.5
		Side Wood L	Not used	VAP1030	No.6
		Side Wood R	Not used	VAP1031	No.7
		Earth Plate	Not used	VNE1518	No.8
		Screw	Not used	IBZ40P200FZK	No.9
P5- 1		Front Aluminum	VAH1276	VAH1281	
P5- 3		Panel Base	VNK4070	VNK4216	
P9- 1	NSP	Shassis	VNA1887	VNA1955	
P9-26		Rear Panel R	VNA1892	VNA1956	
P9-27		Rear Panel L	VNA1907	VNA1927	
P9-29		Rear Cover	VNA1918	VNA1928	

Note : The numbers in the remarks column correspond to the numbers on the exploded diagram, Refer to "EXPLODED VIEWS".

■ EXPLODED VIEWS



■ CONTRAST OF PCB ASSEMBLIES

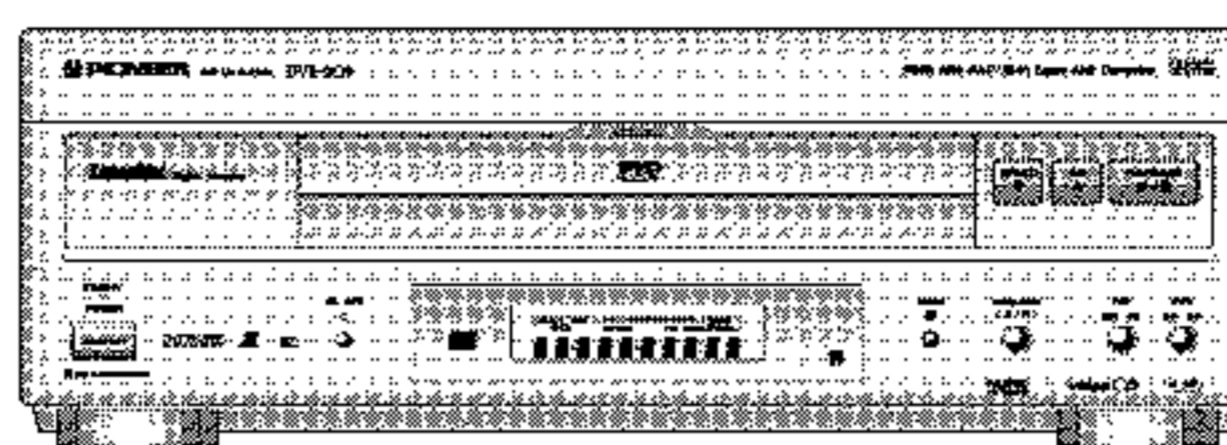
■ FLKB ASSY

VWG1891 and VWG1887 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		VWG1887	VWG1891	
R109 R110		RS1/10S363J RS1/10S622J	RS1/10S472J RS1/10S123J	

# Service Manual

**PIONEER**  
The Art of Entertainment



ORDER NO.  
**RRV1888**

DVD LD PLAYER

# DVL-909

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

Type	Model	Power Requirement	The voltage can be converted by the following method.	Regional restriction codes (region number)
	DVL-909			
WY	○	AC 220 – 240V	_____	2
WY/RD	○	AC 220 – 240V	_____	4
RD/RA	○	AC 110 – 127/220 – 240V	Automatic select	1
RD/RC	○	AC 110 – 127/220 – 240V	Automatic select	3
RAM	○	AC 110 – 127/220 – 240V	Automatic select	6
RL	○	AC 110 – 127/220 – 240V	Automatic select	3

●Refer to the service guide RRV1896 for DV-505.  
IC information is described in the service guide.

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# 1. SAFETY INFORMATION

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

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

LASER DIODE CHARACTERISTICS

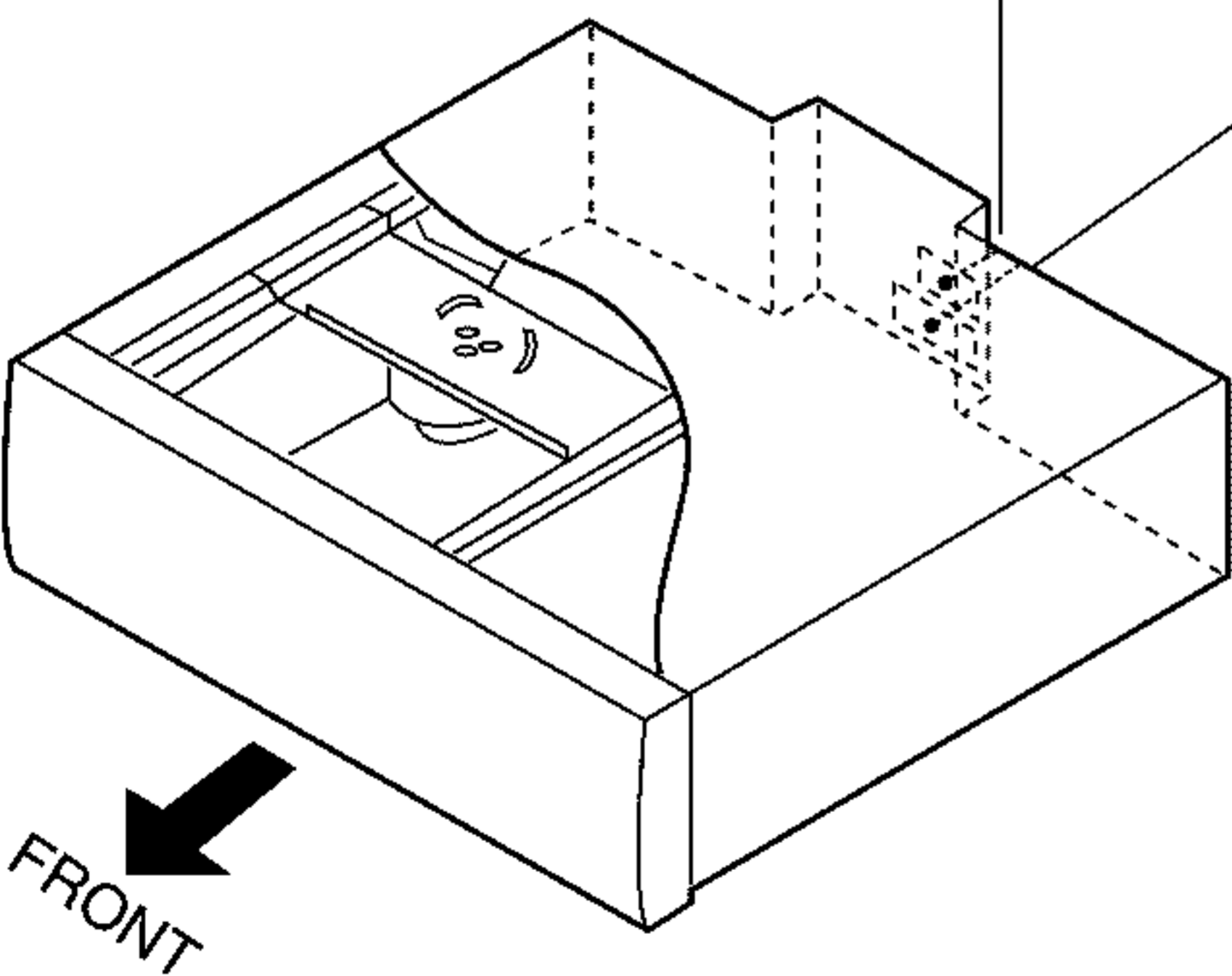
- FOR DVD  
MAXIMUM OUTPUT POWER : 7 mw  
WAVELENGTH : 650 nm
- FOR CD/LD  
MAXIMUM OUTPUT POWER : 5 mw  
WAVELENGTH : 780-785 nm

## LABEL CHECK

<b>CAUTION</b>	: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. : AVOID EXPOSURE TO BEAM.
<b>VORSICHT</b>	: SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN : ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN!
<b>ADVARSEL</b>	: SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING : UNDGÅ UDSÆTTELSE FOR STRÅLING.
<b>VARNING</b>	: SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA : DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN.
<b>VARO!</b>	: AVATTAESSA ALTISTUT NÄKYVÄ JA NÄKYMÄTTÖMÄLLE : LASERSATEILYLLE. ÄLÄ KATSO SÄTEESÄN.

VRW1699

**CLASS 1  
LASER PRODUCT**  
(Printed on the Rear Cover)



**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 (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 (S107 ON in the FLKB 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.

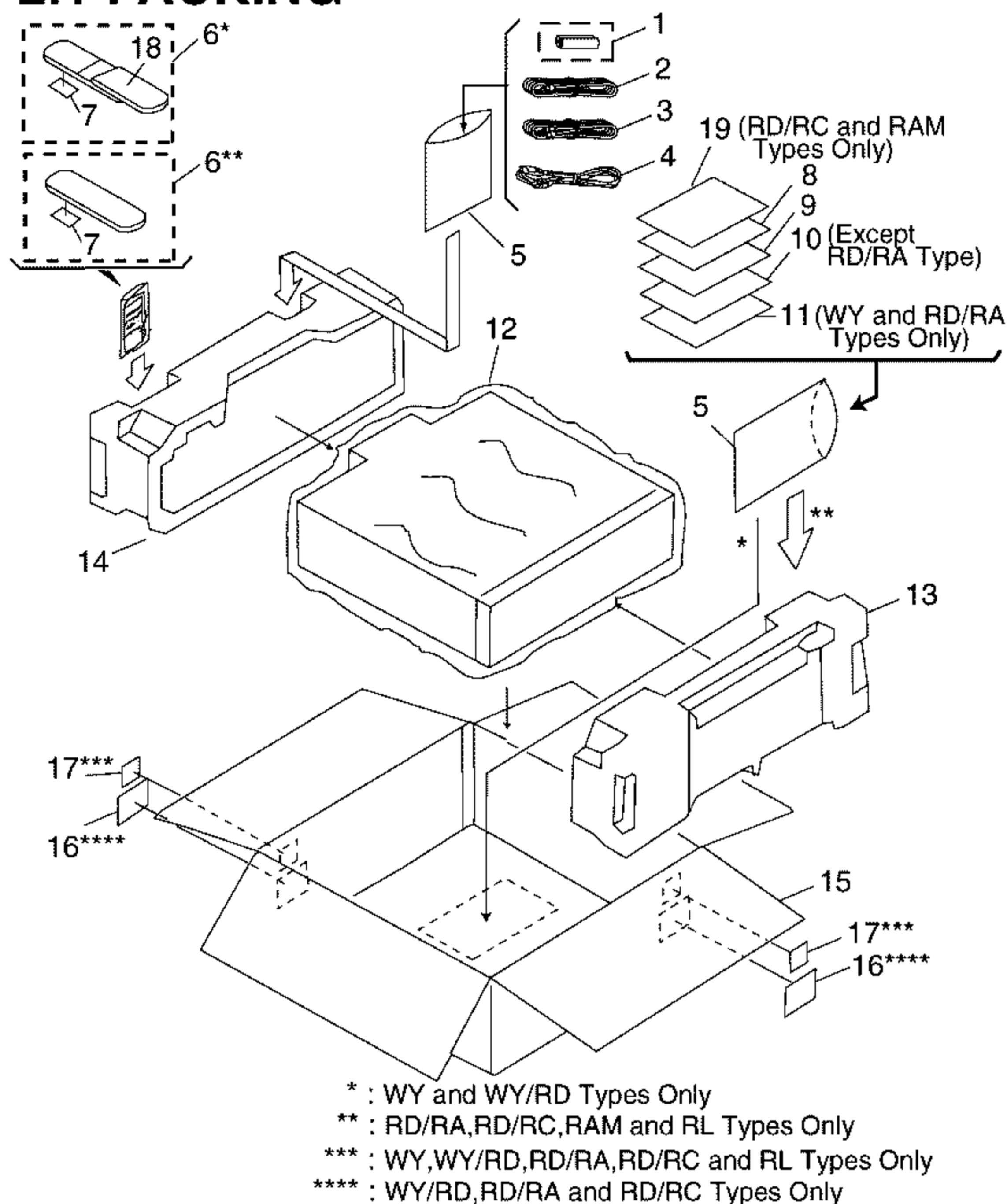
## 2. EXPLODED VIEWS AND PARTS LIST

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

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

● Screws adjacent to  $\blacktriangledown$  mark on product are used for disassembly.

### 2.1 PACKING



\* : WY and WY/RD Types Only  
 \*\* : RD/RA, RD/RC, RAM and RL Types Only  
 \*\*\* : WY, WY/RD, RD/RA, RD/RC and RL Types Only  
 \*\*\*\* : WY/RD, RD/RA and RD/RC Types Only

### (1) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	DRY CELL BATTERY	See Contrast table (2)
	2	VIDEO CORD(L=1.5m)	VDE1048
	3	AUDIO CORD(L=1.5m)	VDE1033
$\Delta$	4	AC POWER CORD	See Contrast table (2)
	5	POLYETHYLENE BAG	Z21-038
	6	REMOTE CONTROL UNIT	See Contrast table (2)
	7	BATTERY COVER	See Contrast table (2)
NSP	8	CAUTION	VRM1071
	9	OPERATING INSTRUCTIONS	See Contrast table (2)
	10	OPERATING INSTRUCTIONS	See Contrast table (2)
NSP	11	WARRANTY CARD	See Contrast table (2)
	12	MIRROR MAT SHEET	VHL1018
	13	PAD F	VHA1206
	14	PAD R	VHA1207
	15	PACKING CASE	See Contrast table (2)
	16	LABEL	See Contrast table (2)
	17	LABEL(REGION)	See Contrast table (2)
	18	UPPER COVER	See Contrast table (2)
NSP	19	CARD	See Contrast table (2)

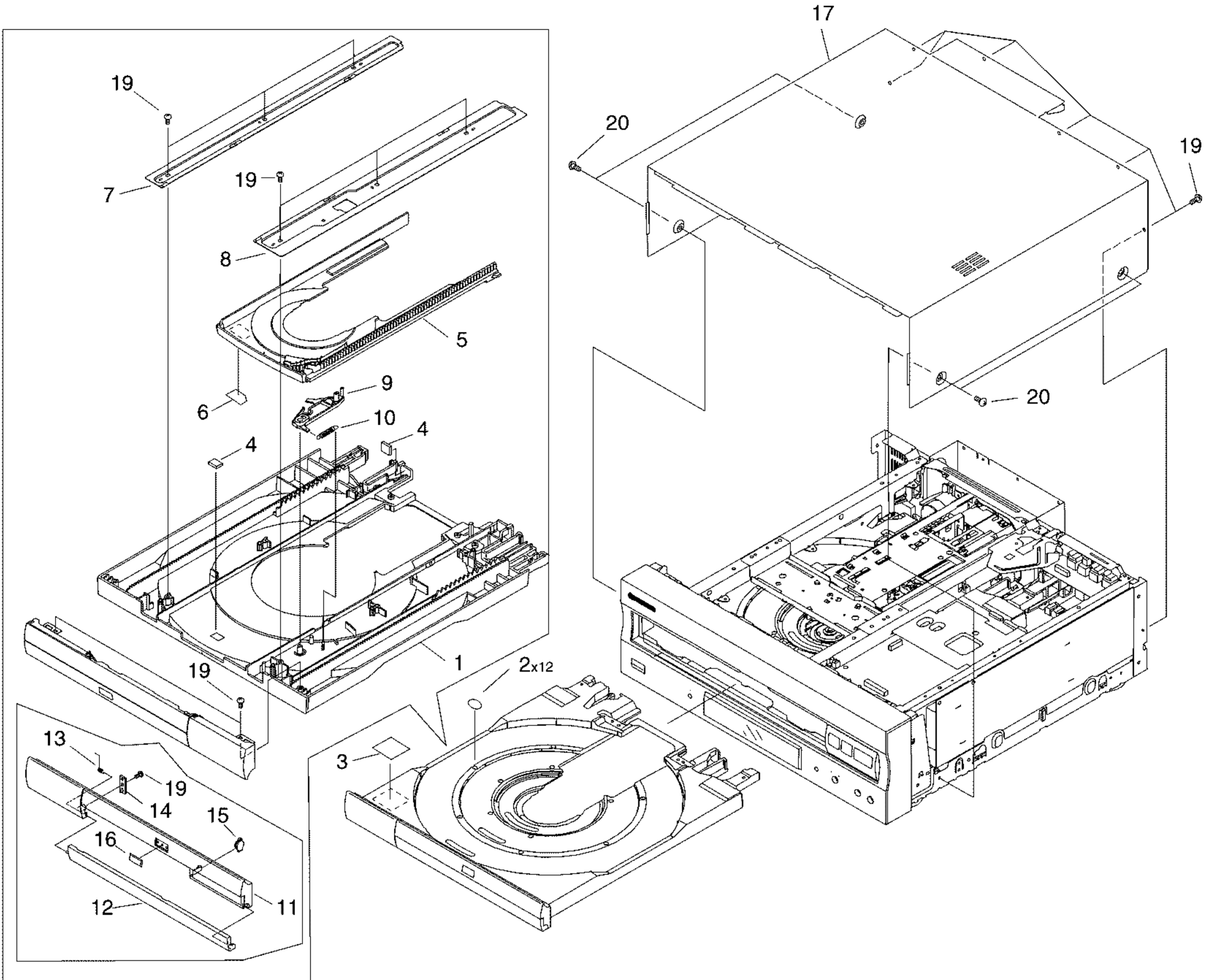
### (2) CONTRAST TABLE

DVL-909/WY, WY/RD, RD/RA, RD/RC, RAM and RL are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.						Remarks
			WY	WY/RD	RD/RA	RD/RC	RAM	RL	
NSP	1	DRY CELL BATTERY (R03,AAA)	VEM-022	VEM-022	Not used	Not used	Not used	Not used	
NSP	1	DRY CELL BATTERY (R6P,AA)	Not used	Not used	VEM-013	VEM-013	VEM-013	VEM-013	
$\Delta$	4	AC POWER CORD	ADG1127	ADG1127	ADG7003	ADG7003	ADG7017	ADG1154	
	6	REMOTE CONTROL UNIT	VXX2534	VXX2534	Not used	Not used	Not used	Not used	(CU-DV013)
	6	REMOTE CONTROL UNIT	Not used	Not used	VXX2549	VXX2549	VXX2549	VXX2549	(CU-DV018)
	7	BATTERY COVER	VNK4203	VNK4203	VNK3703	VNK3703	VNK3703	VNK3703	
	9	OPERATING INSTRUCTIONS (English/French/German/Italian)	VRE1069	VRE1069	Not used	Not used	Not used	Not used	
	9	OPERATING INSTRUCTIONS	Not used	Not used	VRB1193	VRB1193	VRB1193	VRB1193	(English)
	10	OPERATING INSTRUCTIONS (Spanish/Portuguese/Dutch/Swedish)	VRF1043	VRF1043	Not used	Not used	Not used	Not used	
	10	OPERATING INSTRUCTIONS	Not used	Not used	Not used	VRC1064	Not used	VRC1064	(Trad-Chinese)
	10	OPERATING INSTRUCTIONS	Not used	Not used	Not used	Not used	VRC1062	Not used	(Simp-Chinese)
NSP	11	WARRANTY CARD	ARY7008	Not used	ARW1020	Not used	Not used	Not used	
	15	PACKING CASE	VHG1724	VHG1724	VHG1734	VHG1734	VHG1744	VHG1734	
	16	LABEL	Not used	VRW1713	VRW1711	VRW1710	Not used	Not used	
	17	LABEL(REGION)	VRW1701	VRW1705	VRW1708	VRW1702	Not used	VRW1702	
	18	UPPER COVER	VNK4204	VNK4204	Not used	Not used	Not used	Not used	
NSP	19	CARD	Not used	Not used	Not used	VRY1110	VRY1109	Not used	



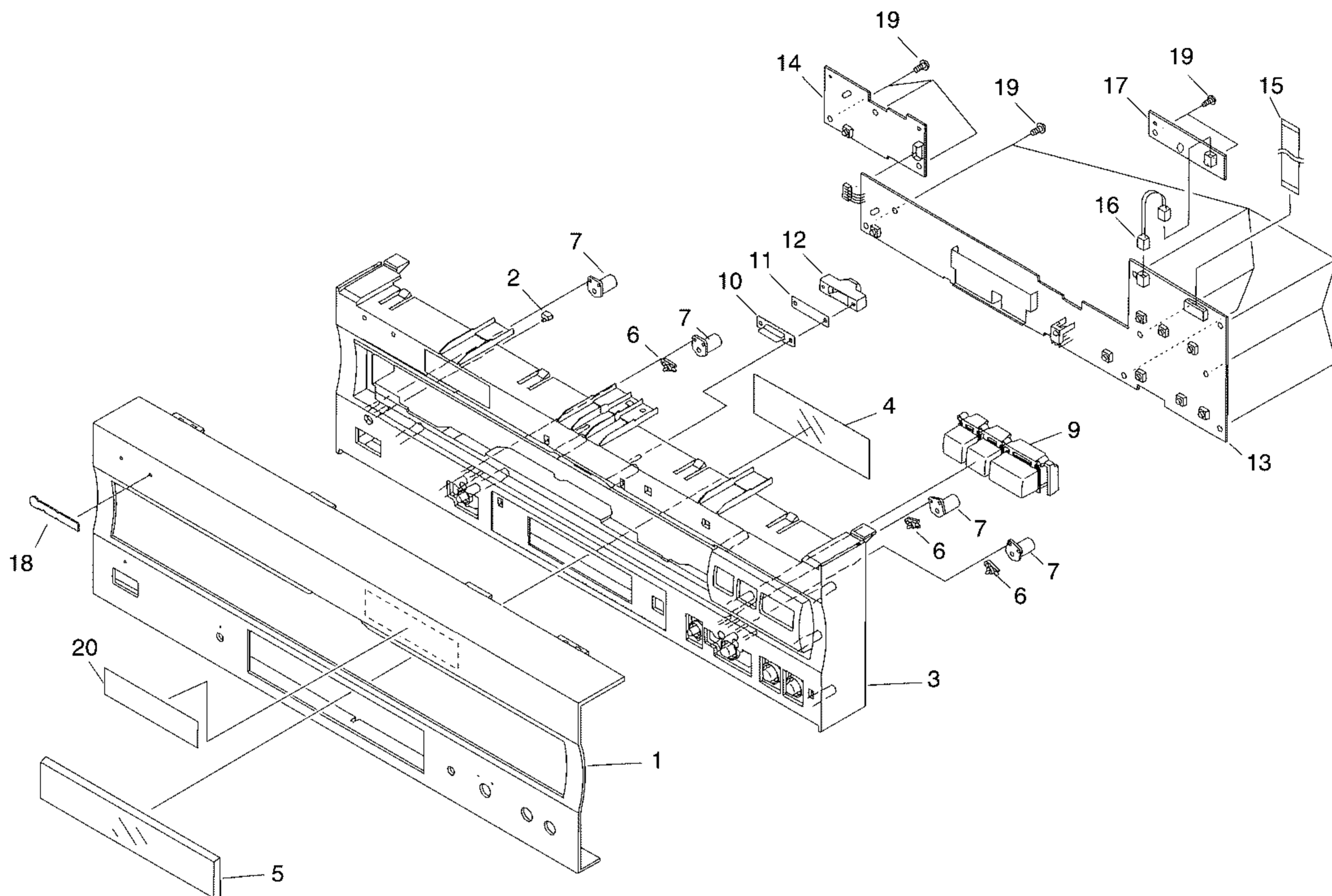
2.2 EXTERIOR SECTION



●PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	LD TRAY ASSY	VXA2302		11	TRAY PANEL	VNK4065
	2	CUSHION	VEC1881		12	DVD DOOR ASSY	VXA2338
NSP	3	LABEL	VRW1289		13	DOOR SPRING	VBH1248
	4	DAMP CUSHION	VEC1683		14	DOOR HOLDER	VNL1697
	5	CD TRAY	VNK3664		15	DAMPER	VXA1999
	6	LABEL	VRW1628		16	DVD PLATE	VAM1077
	7	GUIDE PLATE (R)	VNE1939		17	BONNET CASE S	VXX2560
	8	GUIDE PLATE (L)	VNE1938		18	•••••	
	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	FRONTALMI	See Contrast table (2)		11	ILLUMINATION FILTER	VEC1950
	2	LED LENS 1	RNK2066		12	ILLUMI HOLDER	VNK4289
	3	PANEL BASE	VNK4064		13	FLKB ASSY	See Contrast table (2)
	4	FL FILTER	VEC1643	NSP	14	PWSB ASSY	See Contrast table (2)
	5	FL LENS	VEC1943		15	FLEXIBLE CABLE(14P)	VDA1638
	6	INDICATOR LENS	VNK1538		16	CONNECTOR ASSY	PG02KK-E12
	7	LENS HOLDER	VNK4151	NSP	17	DILB ASSY	VWG1894
	8	•••••			18	NAME PLATE	VAM1051
	9	PLAY BUTTON	VNK4067		19	SCREW	BBZ30P080FMC
	10	ILLUMINATION LENS	VNK4168	NSP	20	GETTER	See Contrast table (2)

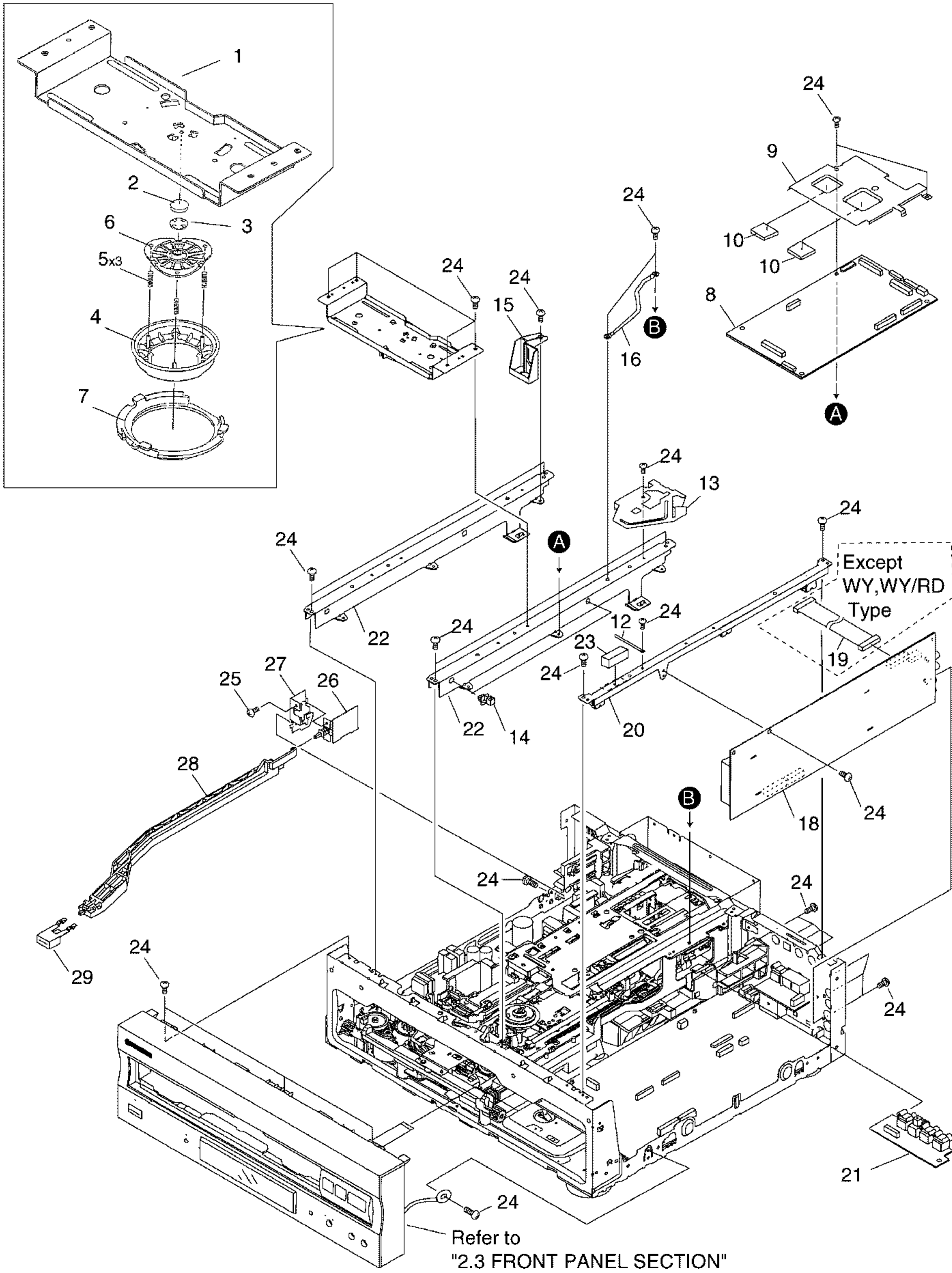
#### (2) CONTRAST TABLE

DVL-909/WY, WY/RD, RD/RA, RD/RC, RAM and RL are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.						Remarks
			WY	WY/RD	RD/RA	RD/RC	RAM	RL	
NSP	1	FRONTALMI	VAH1280	VAH1280	VAH1279	VAH1279	VAH1279	VAH1279	
NSP	20	GETTER	Not used	Not used	VRW1694	VRW1694	VRW1694	VRW1694	
NSP	13	FLKB ASSY	VWG1890	VWG1890	VWG1936	VWG1936	VWG1935	VWG1889	
NSP	14	PWSB ASSY	VWG1938	VWG1938	VWG1893	VWG1893	VWG1893	VWG1893	



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	DMYC or MYCB ASSY	See Contrast table (2)
	4	CLAMPER	VNL1648		19	HOUSING ASSY(13P)	See Contrast table (2)
	5	CLAMPER SPRING	VBH1192	NSP	20	PCB-HOLDER	VNE2121
	6	CLAMPER HEAD	VNL1649		21	JCKB ASSY	See Contrast table (2)
	7	CLAMPER HOLDER	VNL1788	NSP	22	CENTER ANGLE	VNE2126
	8	DVDM ASSY	VWS1328		23	CUSHION	VEC1982
	9	HEAT SINK	VNE2134		24	SCREW	BBZ30P080FMC
	10	RADIATION SEAT	VEB1282		25	SCREW	PMB30P080FZK
	11	•••••			26	MSWB ASSY	VWG1895
	12	CORD CLAMPER	RNH-184	NSP	27	POWER HOLDER	VNE2123
	13	CABLE HOLDER	VEC1958		28	POWER JOINT	VNK4148
NSP	14	CORNER POST	DEC1212		29	POWER BUTTON	VNK4159
	15	SHIPPING CAM	VNL1729				

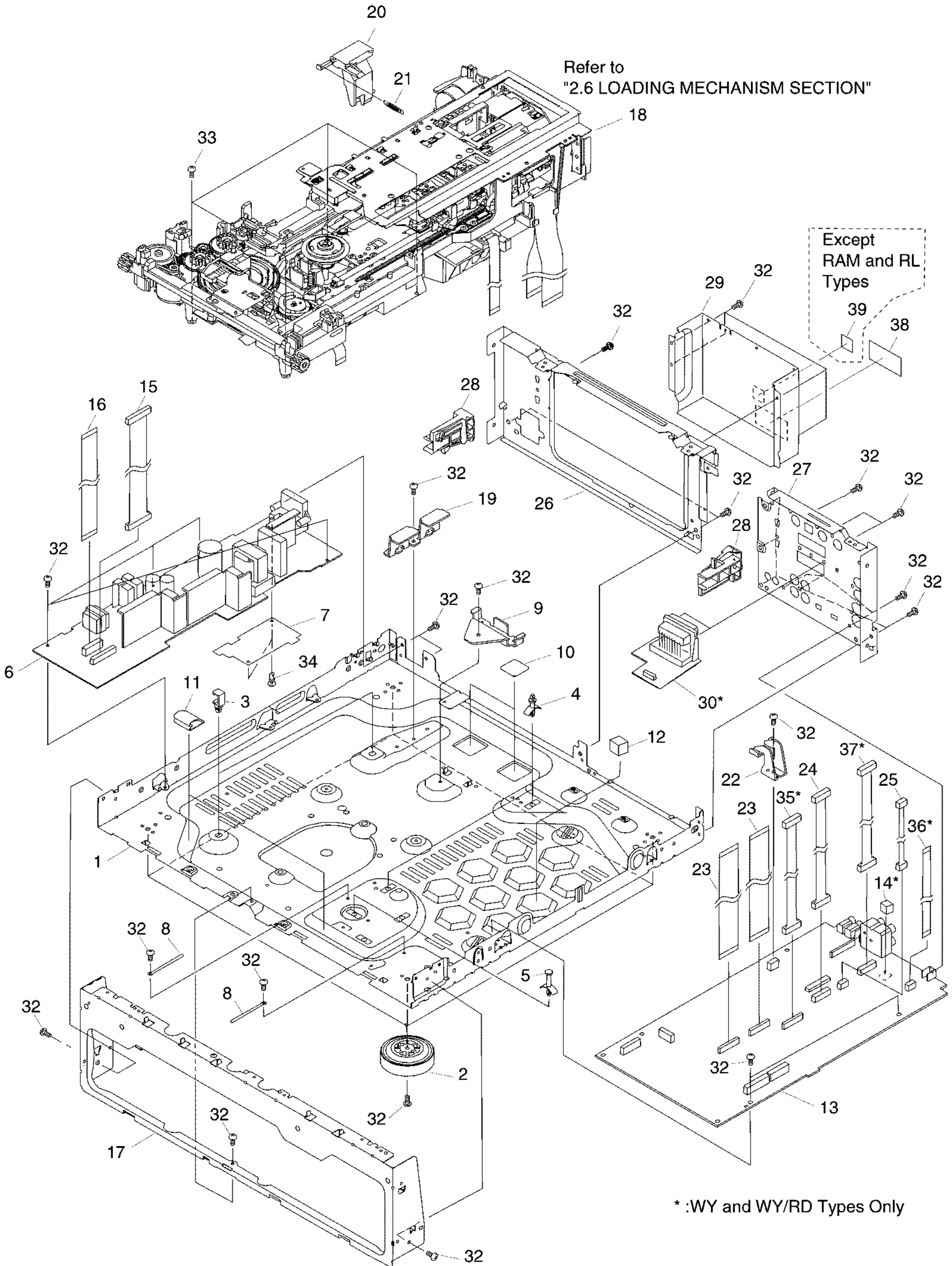
**(2) CONTRAST TABLE**

DVL-909/WY, WY/RD, RD/RA, RD/RC, RAM and RL are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.						Remarks
			WY	WY/RD	RD/RA	RD/RC	RAM	RL	
	18	DMYC ASSY	VWV1584	VWV1584	Not used	Not used	Not used	Not used	
	18	MYCB ASSY	Not used	Not used	VWV1596	VWV1596	VWV1596	VWV1596	
	19	HOUSING ASSY(13P)	Not used	Not used	VKP2154	VKP2154	VKP2154	VKP2154	
	21	JCKB ASSY	VWV1578	VWV1578	VWV1579	VWV1579	VWV1579	VWV1579	

# DVL-909

## 2.5 BOTTOM VIEW SECTION





**(1) BOTTOM VIEW SECTION PARTS LIST**

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
NSP	1	CHASSIS	VNA1887		21	SHIPPING SPRING	VBH1275
	2	INSULATOR ASSY	VXA2356	NSP	22	CAM HOLDER R	VNE2090
	3	PCB HINGE	VEC1174		23	FLEXIBLE CABLE(22P)	VDA1652
NSP	4	PCB SPACER	AEC1188		24	HOUSING ASSY (7P)	VKP2155
NSP	5	CIRCUIT BOARD SPACER	VEC1957		25	HOUSING ASSY (4P)	VKP2153
⚠	6	POWER SUPPLY ASSY	VWR1287		26	REAR PANEL R	VNA1892
	7	SHEET P	VEC1874		27	REAR PANEL L	See Contrast table (2)
	8	CORD CLAMPER	RNH-184		28	TRAY STOPPER	VNL1707
NSP	9	STOPPER	VNE2088		29	REAR COVER	See Contrast table (2)
	10	SPACER	VEC1939		30	SCRB ASSY	See Contrast table (2)
	11	SHELL CLIP	DEC1184		31	•••••	
NSP	12	SPACER A	VEC1989		32	SCREW	BBZ30P080FMC
	13	CLDM ASSY	See Contrast table (2)		33	SCREW	BBZ30P100FMC
NSP	14	SPACER B	See Contrast table (2)		34	RIVET	RBM-003
	15	HOUSING ASSY (14P)	VKP2151		35	HOUSING ASSY(13P)	See Contrast table (2)
	16	FLEXIBLE CABLE(15P)	VDA1644		36	FLEXIBLE CABLE(6P)	See Contrast table (2)
NSP	17	PANEL HOLDER	VNA1686		37	CONNECTOR ASSY	See Contrast table (2)
NSP	18	MECHANISM ASSY	VWT1149		38	LABEL(CAUTION)	VRW1699
NSP	19	CAM HOLDER L	VNE2089		39	LABEL(REAGION)	See Contrast table (2)
	20	SHIPPING LEVER	VNL1728				

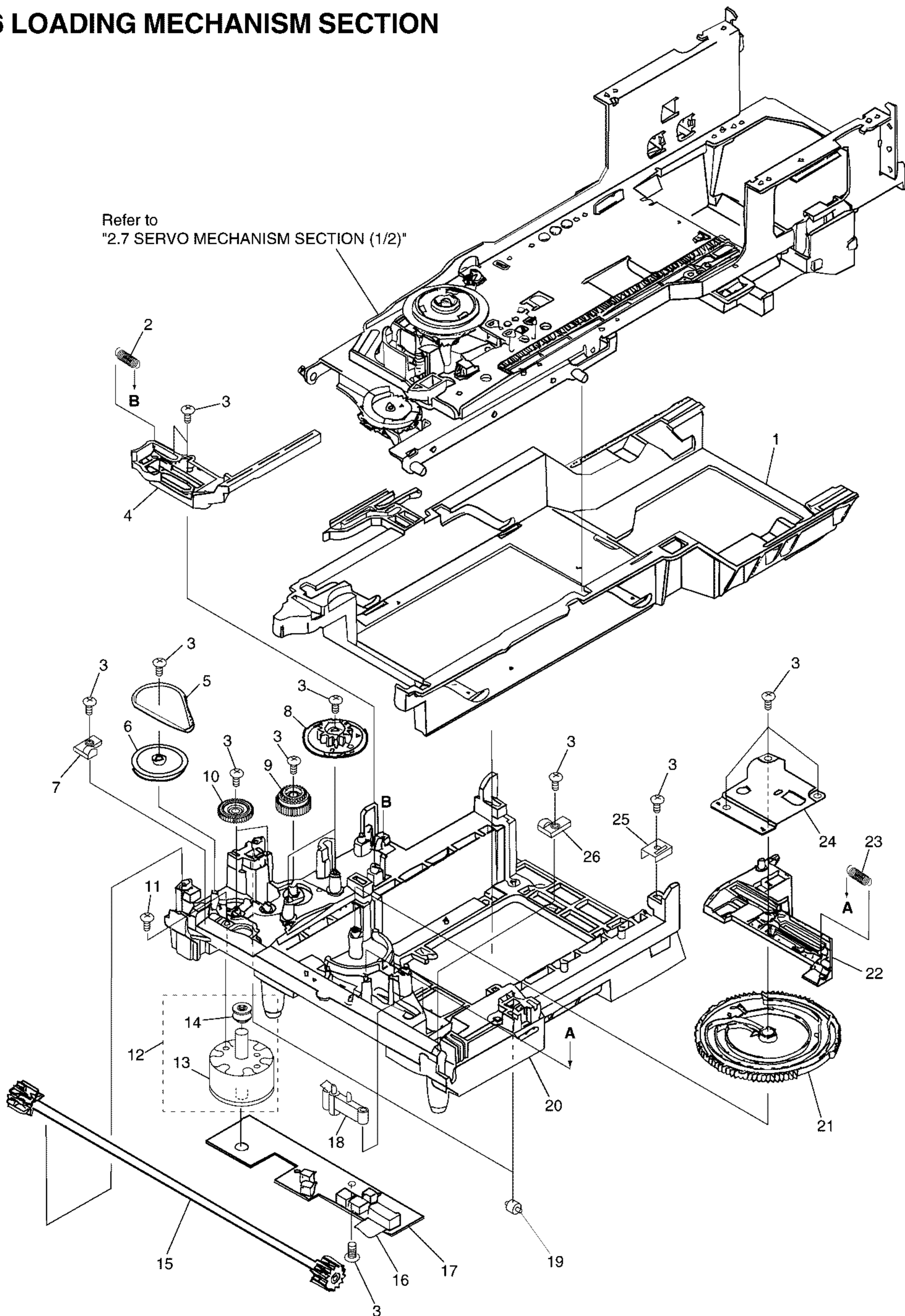
**(2) CONTRAST TABLE**

DVL-909/WY, WY/RD, RD/RA, RD/RC, RAM and RL are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.						Remarks
			WY	WY/RD	RD/RA	RD/RC	RAM	RL	
NSP	13	CLDM ASSY	VWS1332	VWS1332	VWS1331	VWS1331	VWS1331	VWS1331	
	14	SPACER B	VEC1979	VEC1979	Not used	Not used	Not used	Not used	
	27	REAR PANEL L	VNA1920	VNA1920	VNA1908	VNA1908	VNA1908	VNA1908	
	29	REAR COVER	VNA1925	VNA1925	VNA1895	VNA1895	VNA1893	VNA1894	
	30	SCRB ASSY	VWV1470	VWV1470	Not used	Not used	Not used	Not used	
	35	HOUSING ASSY(13P)	VKP2162	VKP2162	Not used	Not used	Not used	Not used	
	36	FLEXIBLE CABLE(6P)	VDA1635	VDA1635	Not used	Not used	Not used	Not used	
	37	CONNECTOR ASSY	PG08KK-F10	PG08KK-F10	Not used	Not used	Not used	Not used	
	39	LABEL(REAGION)	VRW1700	VRW1704	VRW1709	VRW1703	Not used	Not used	



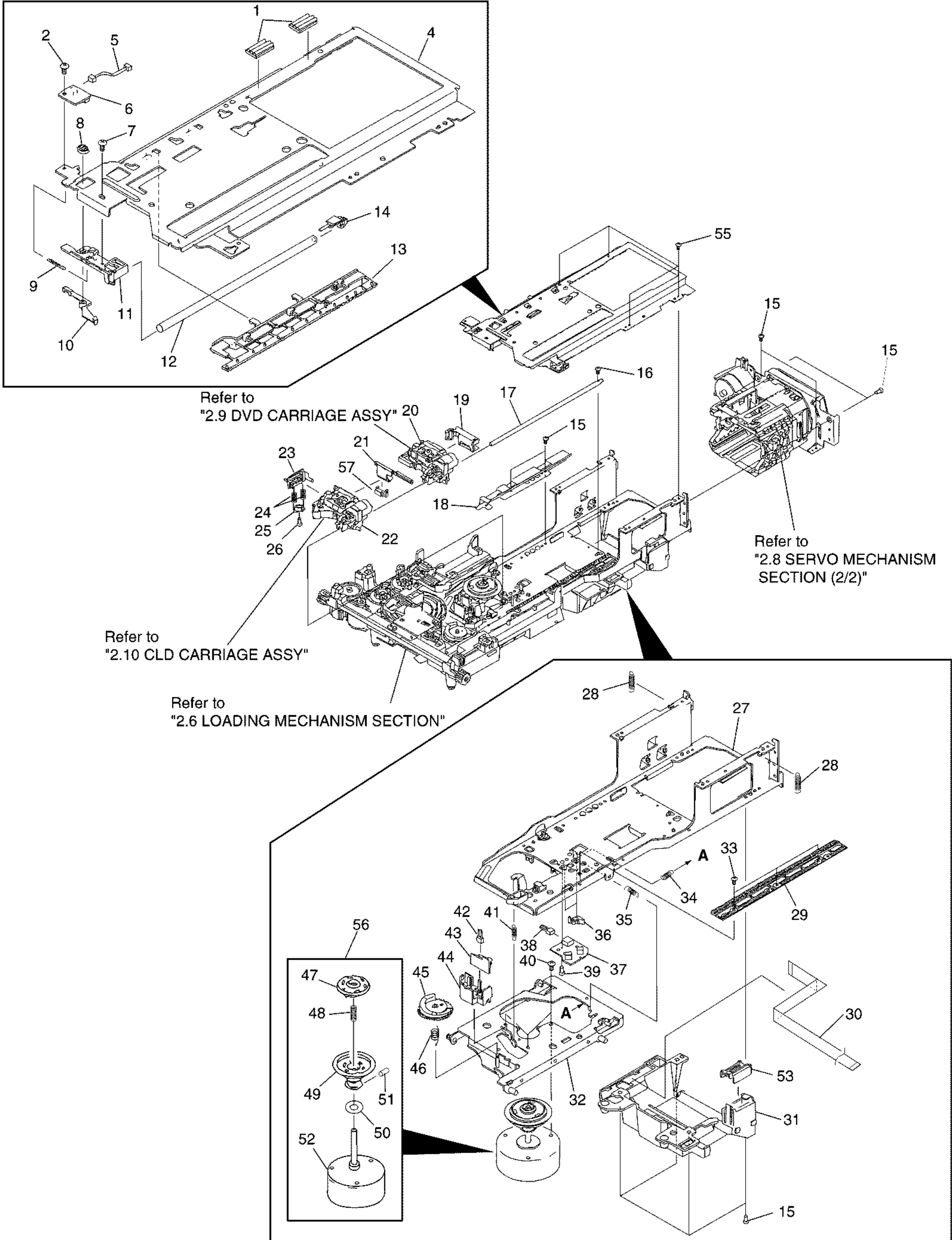
## 2.6 LOADING MECHANISM SECTION



● **LOADING MECHANISM SECTION PARTS LIST**

<b>Mark</b>	<b>No.</b>	<b>Description</b>	<b>Part No.</b>	<b>Mark</b>	<b>No.</b>	<b>Description</b>	<b>Part No.</b>
	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)



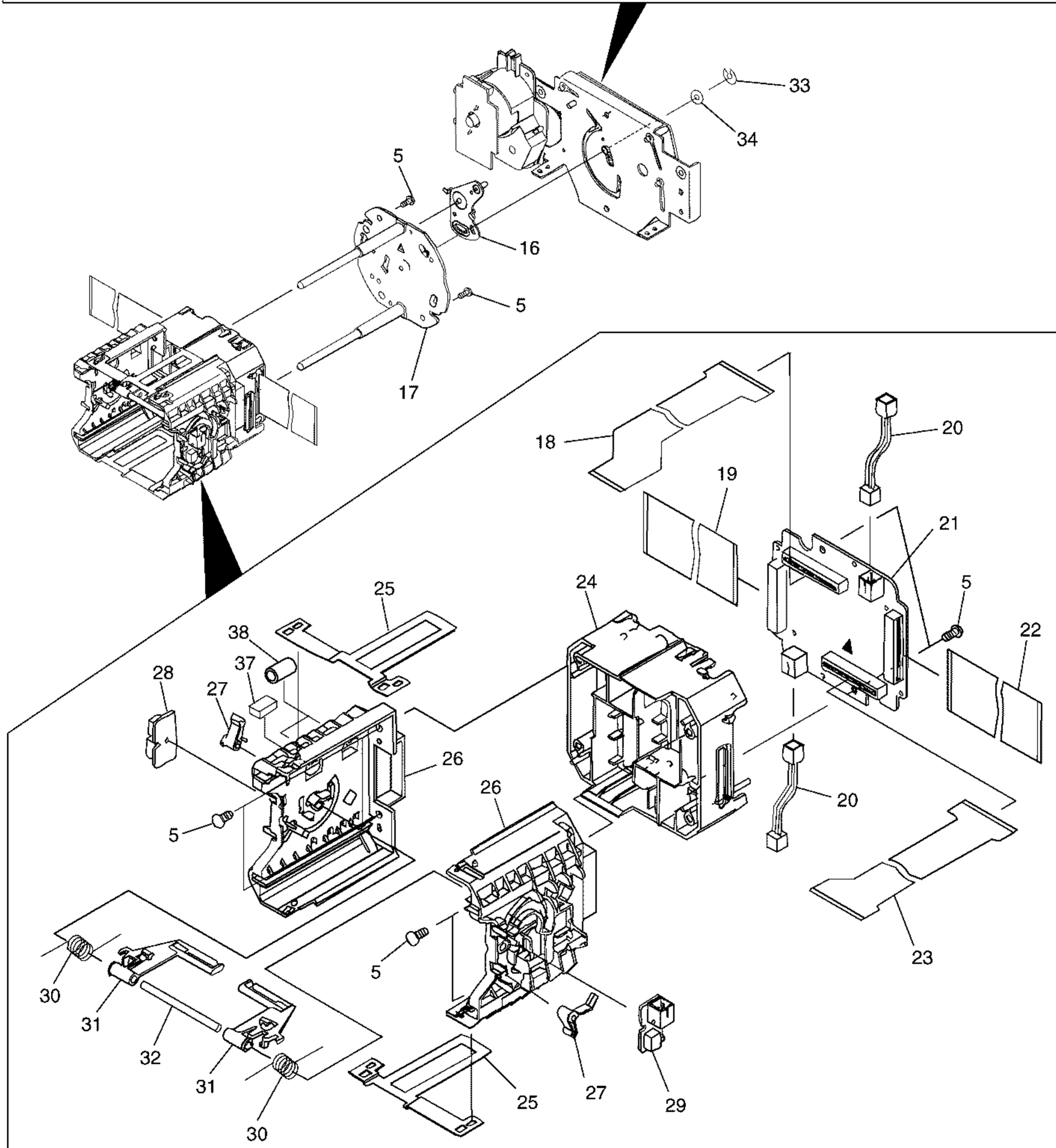
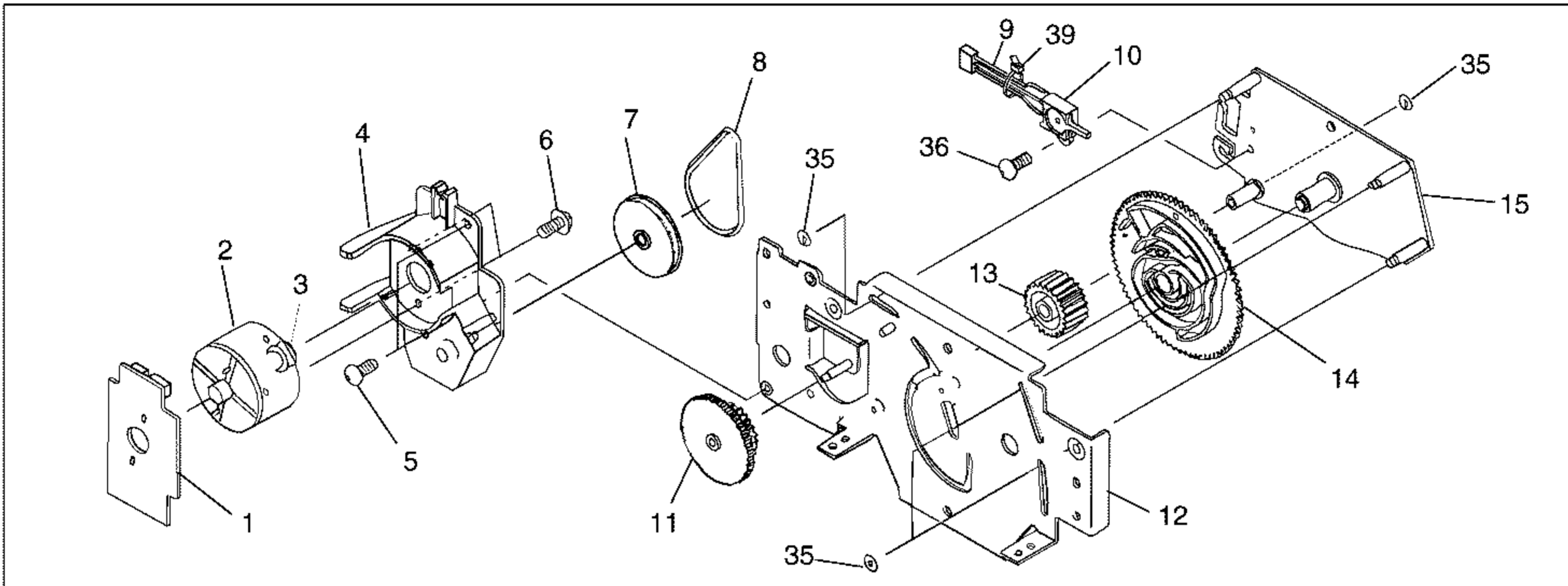


### ● SERVO MECHANISM SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Mini Clamp	VEC1905		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



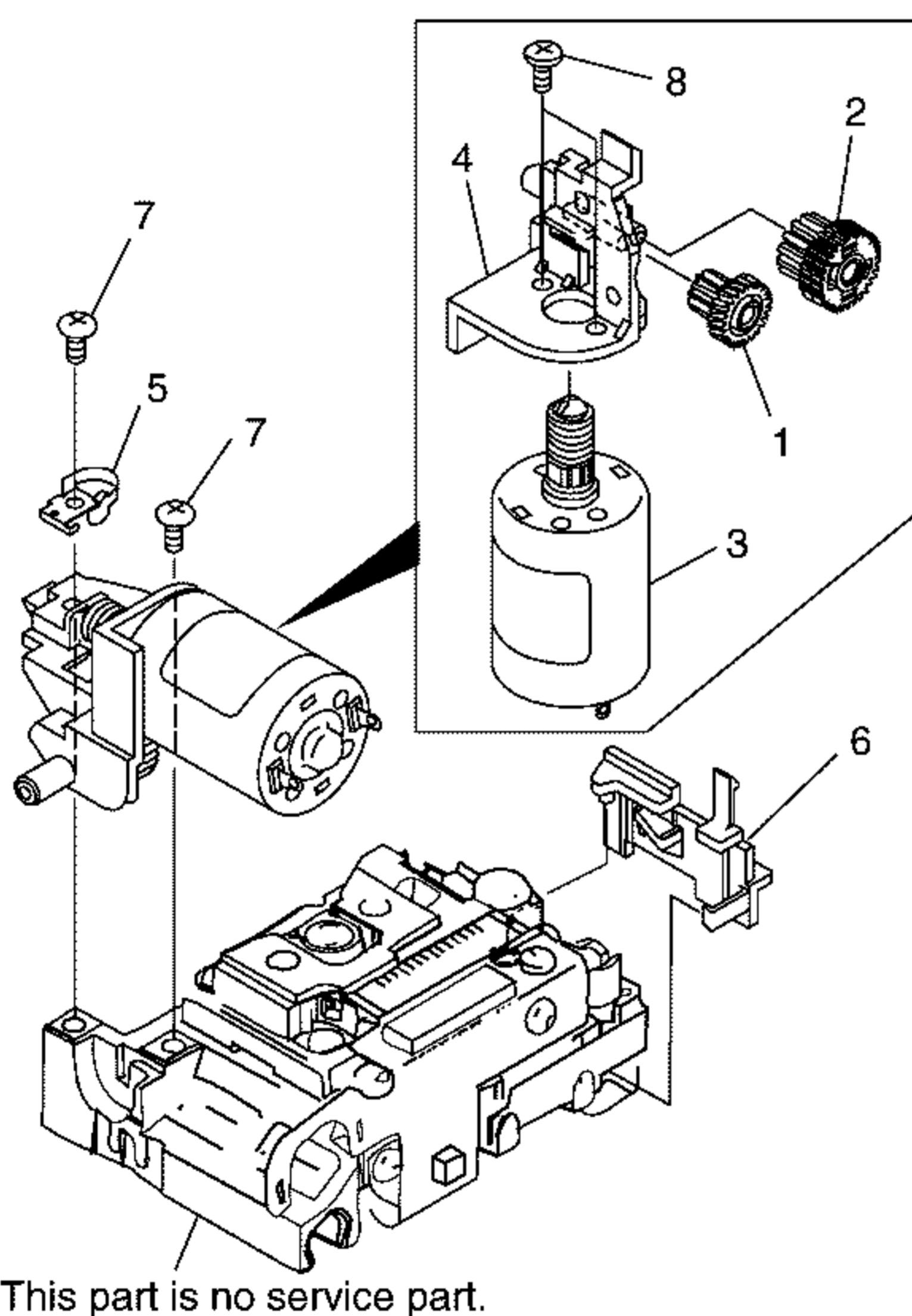
2.8 SERVO MECHANISM SECTION (2/2)



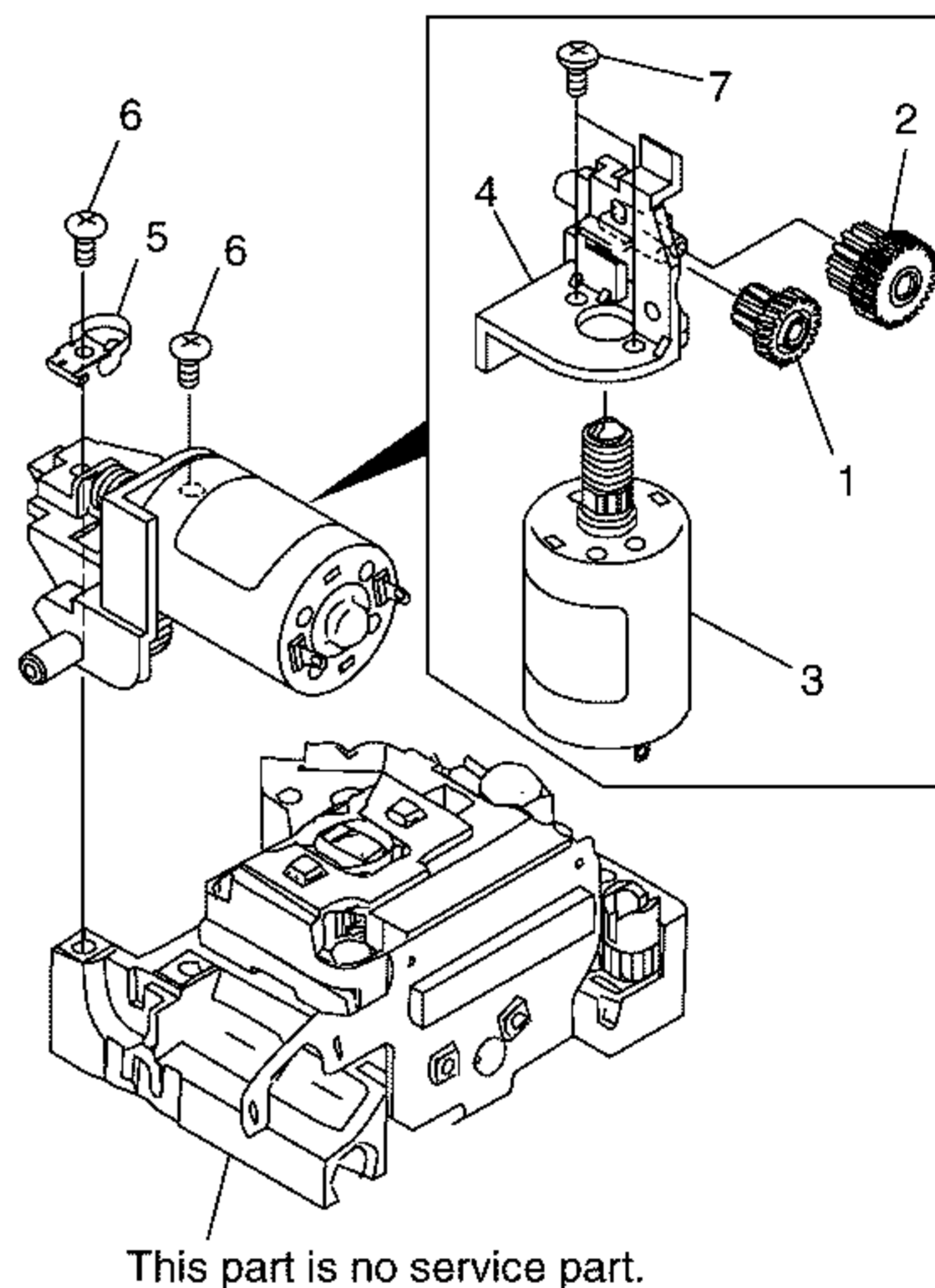
● SERVO MECHANISM SECTION (2/2) PARTS LIST

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				

2.9 DVD CARRIAGE ASSY



2.10 CLD CARRIAGE ASSY



● DVD CARRIAGE ASSY 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	PMA20P033FUC

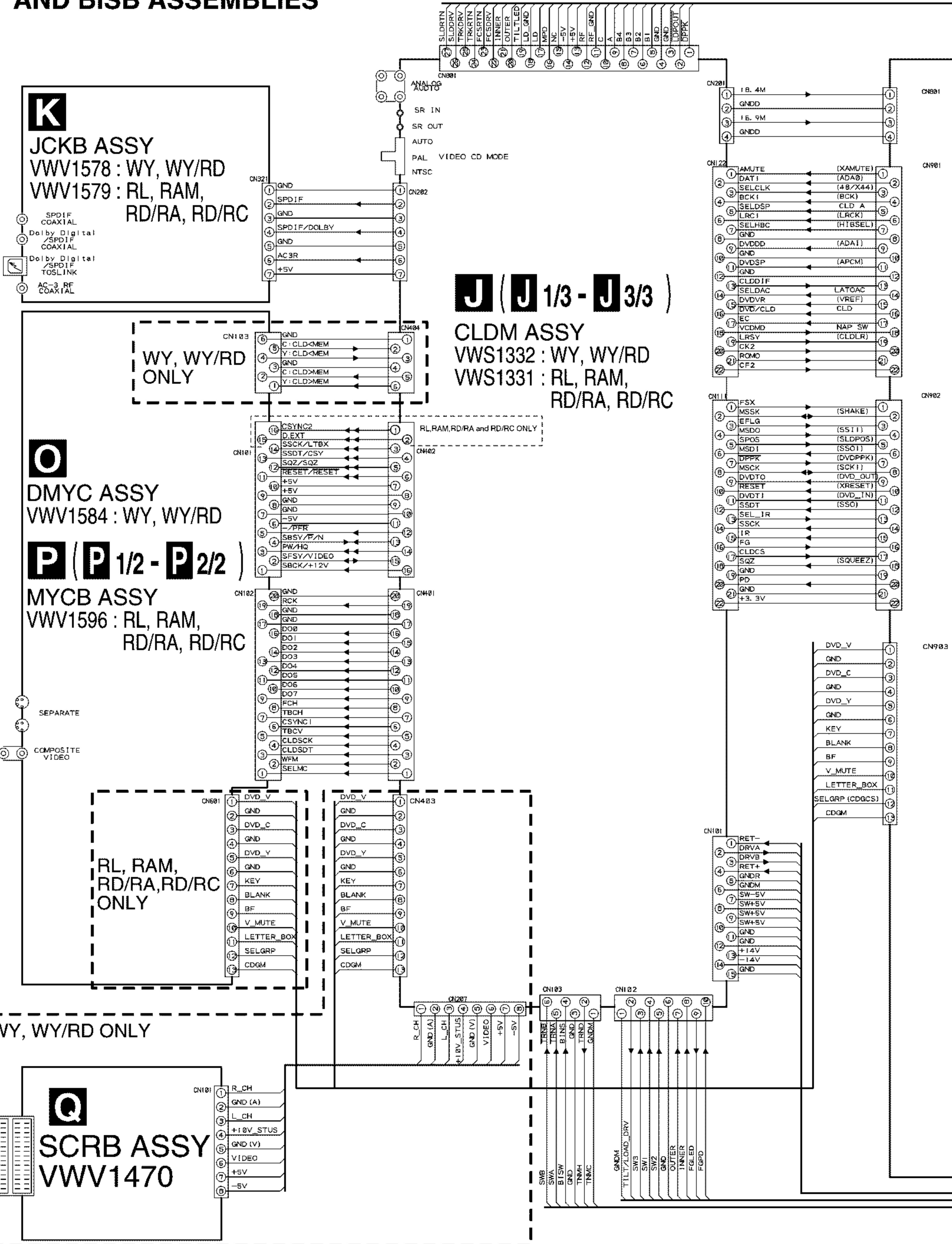
● CLD CARRIAGE ASSY PARTS LIST

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

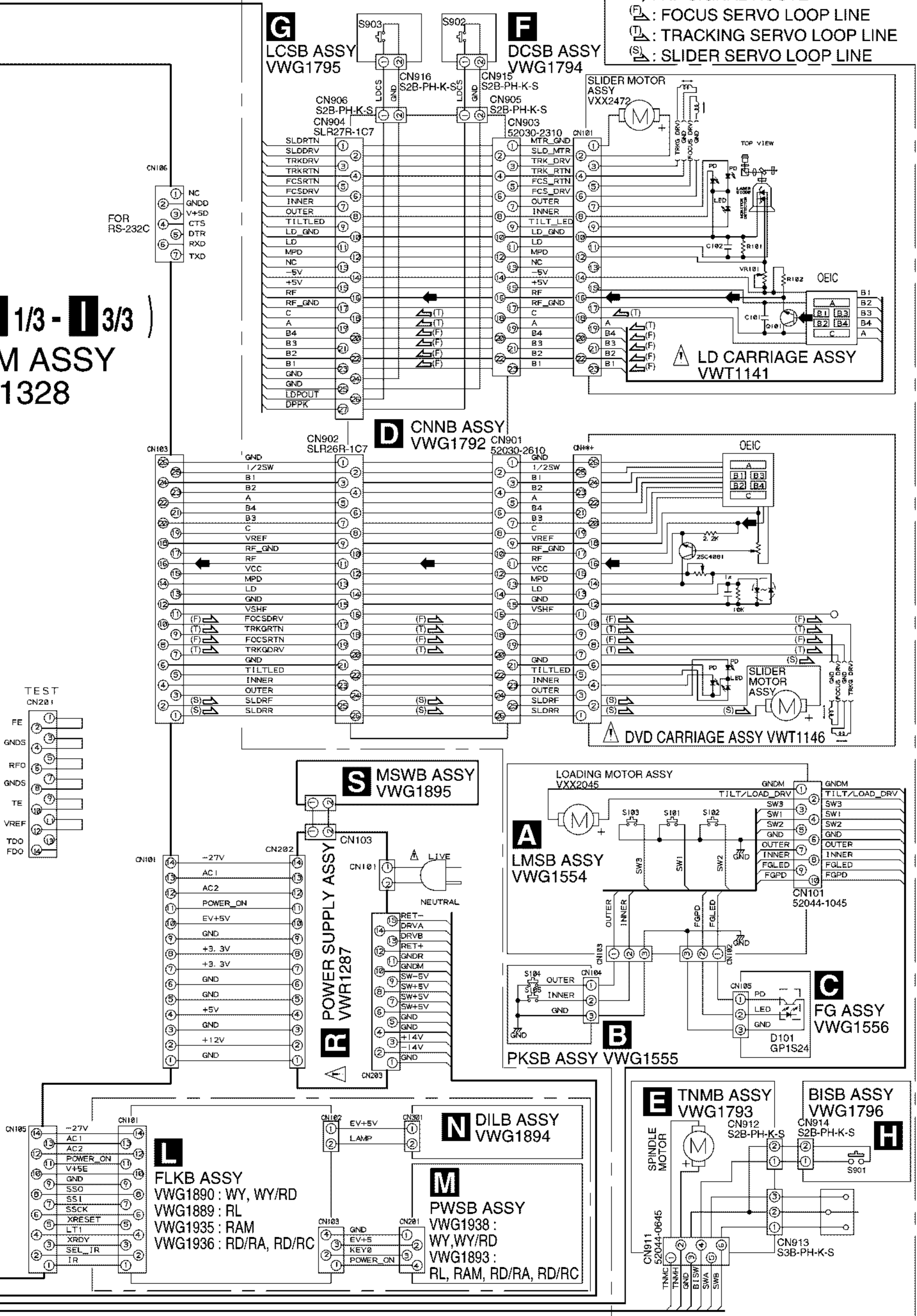
#### 3.1 OVERALL WIRING DIAGRAM, LMSB, PKSB, FG, CNNB, TNMB, DCSB, LCSB AND BISB ASSEMBLIES



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

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

**1 ( 1/3 - 3/3 )**  
**DVDM ASSY**  
**VWS1328**



**A B C D E F G H**



3.2 DVDM ASSY (1/3)

A

B

C

D

1/3

DVDM ASSY  
VWS1328

2/3

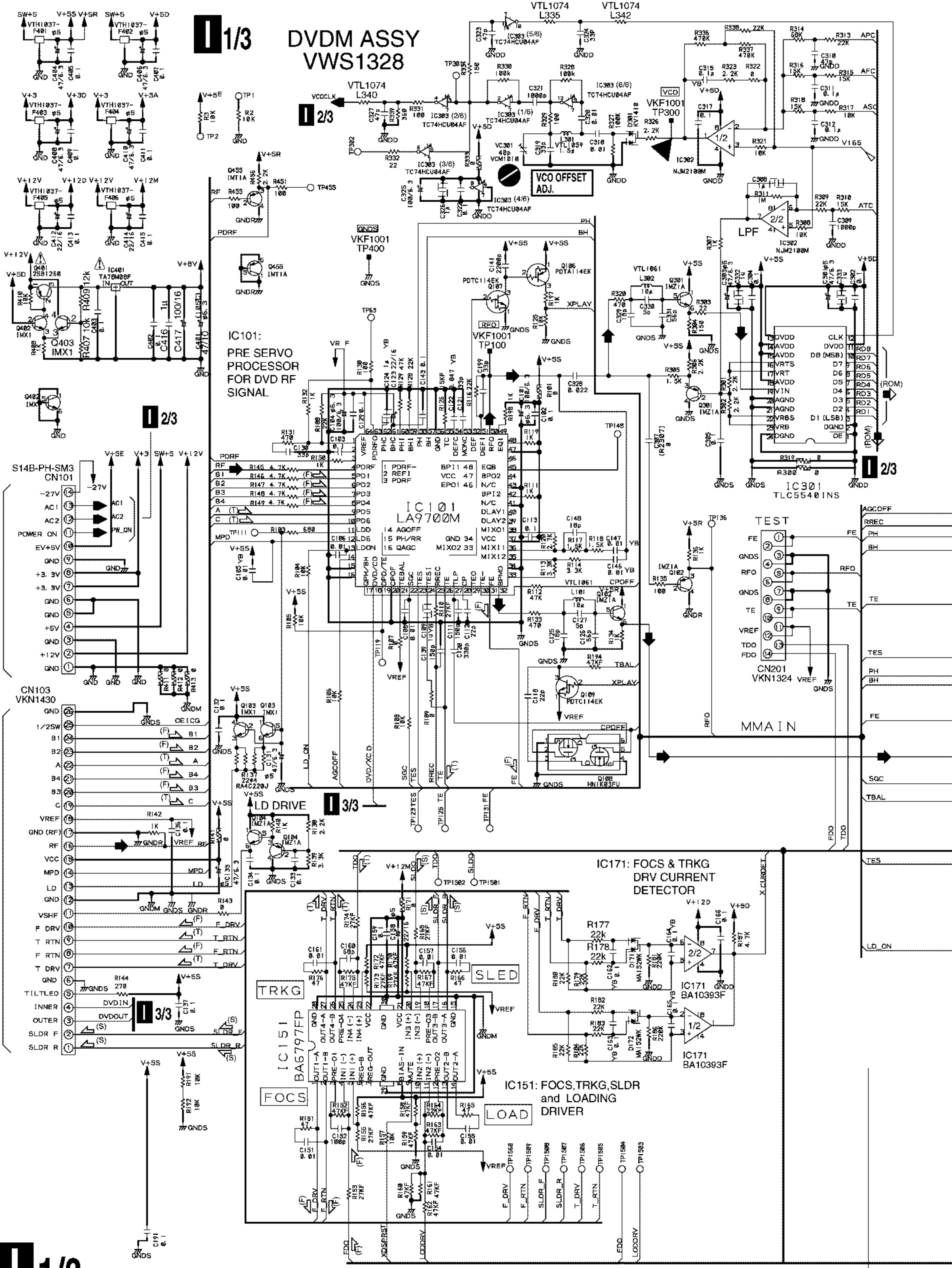
2/3

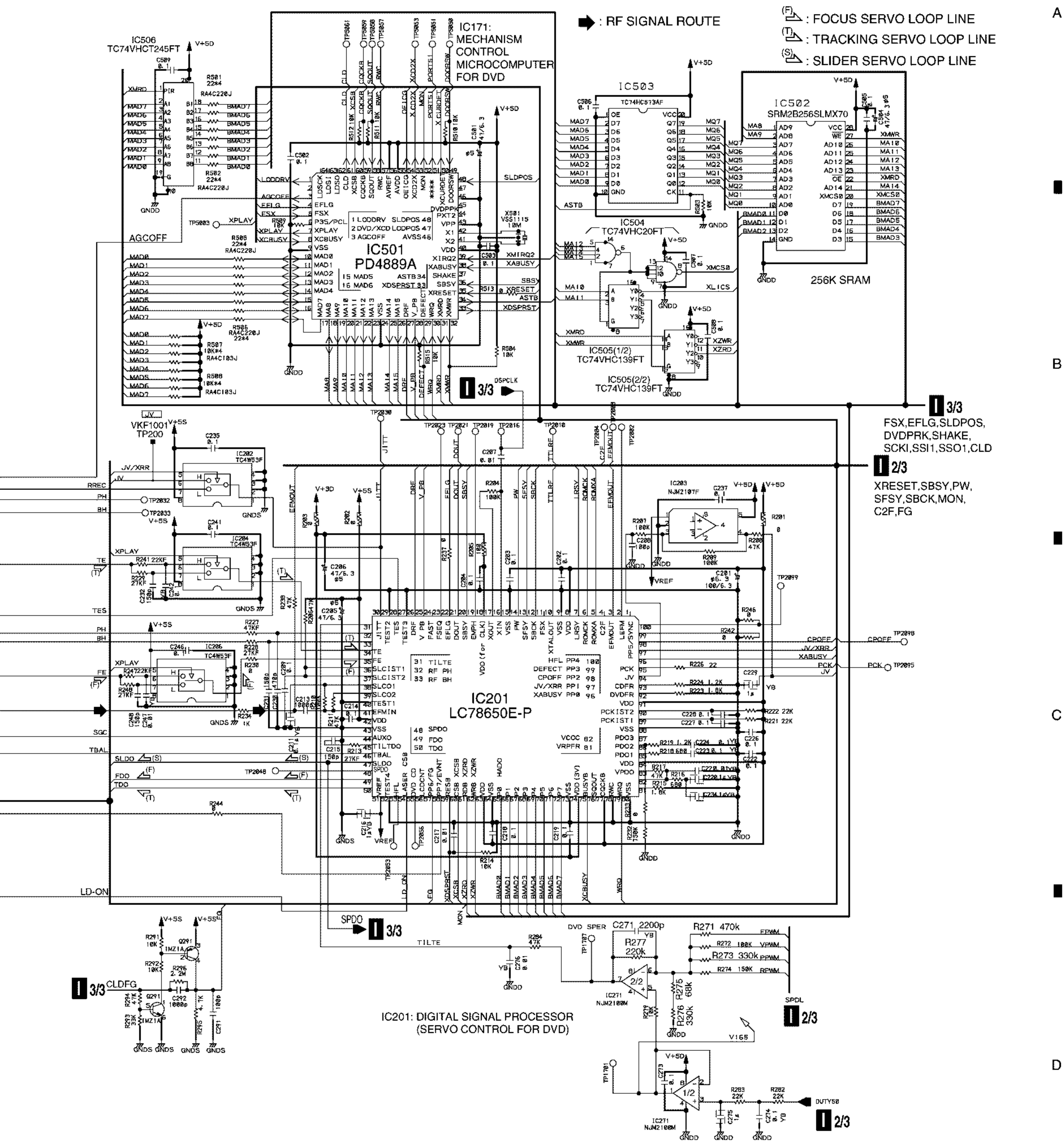
3/3

1/3

Q CN202

DVD CARRIAGE ASSY





(F) : FOCUS SERVO LOOP LINE  
 (T) : TRACKING SERVO LOOP LINE  
 (S) : SLIDER SERVO LOOP LINE

➔ : RF SIGNAL ROUTE

3/3  
 FSX,EFLG,SLDPOS,  
 DVDPRK,SHAKE,  
 SCKI,SSI1,SSO1,CLD

2/3  
 XRESET,SBSY,PW,  
 SFSY,SBCK,MON,  
 C2F,FG

IC201: DIGITAL SIGNAL PROCESSOR  
 (SERVO CONTROL FOR DVD)

1/3 19



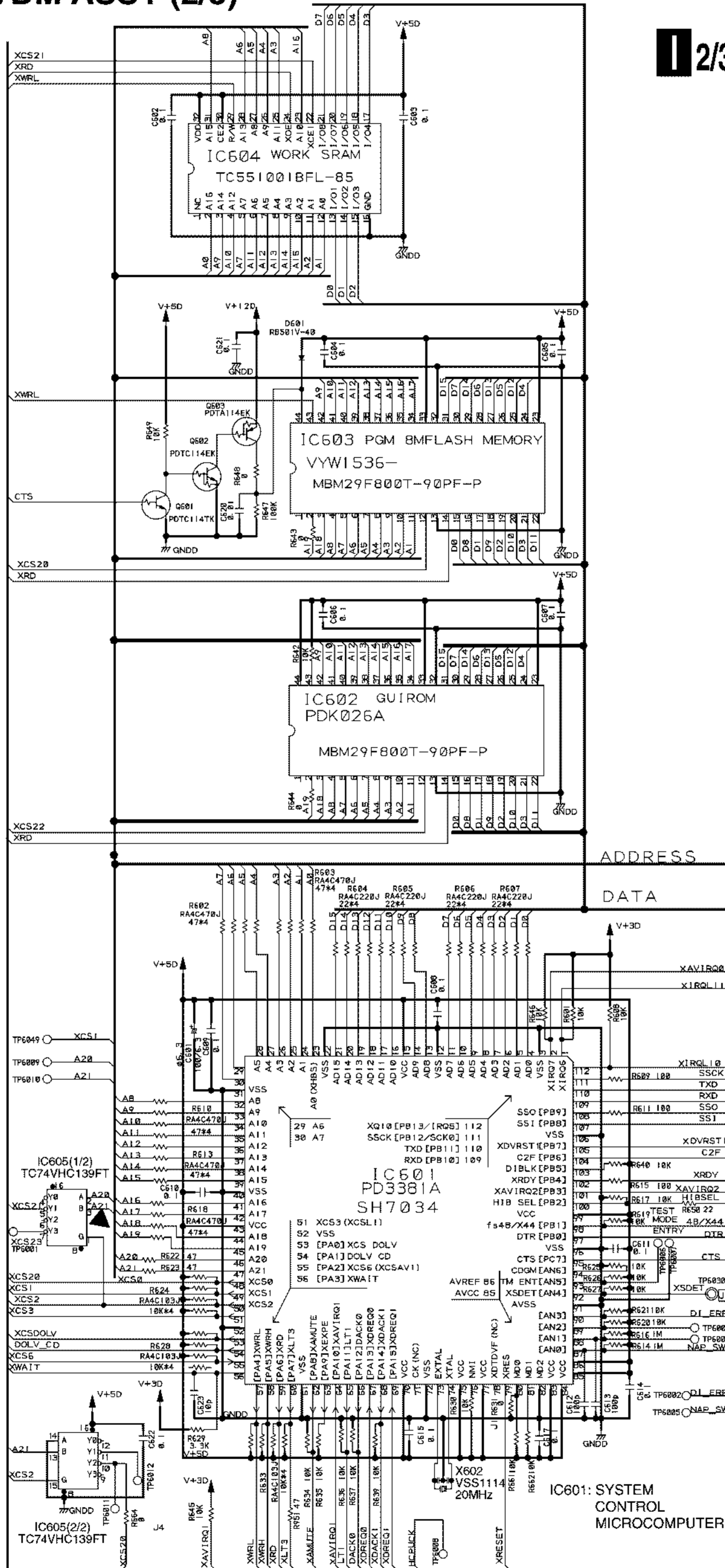
3.3 DVDM ASSY (2/3)

A

B

C

D

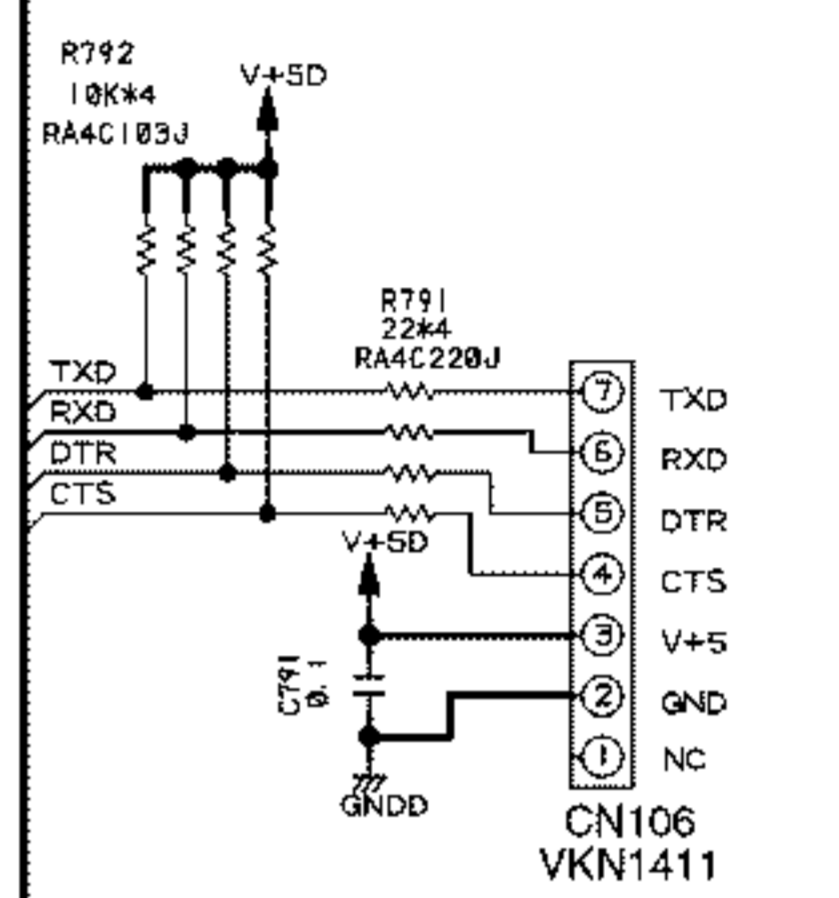


1/3

DVDM ASSY  
VWS1328

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

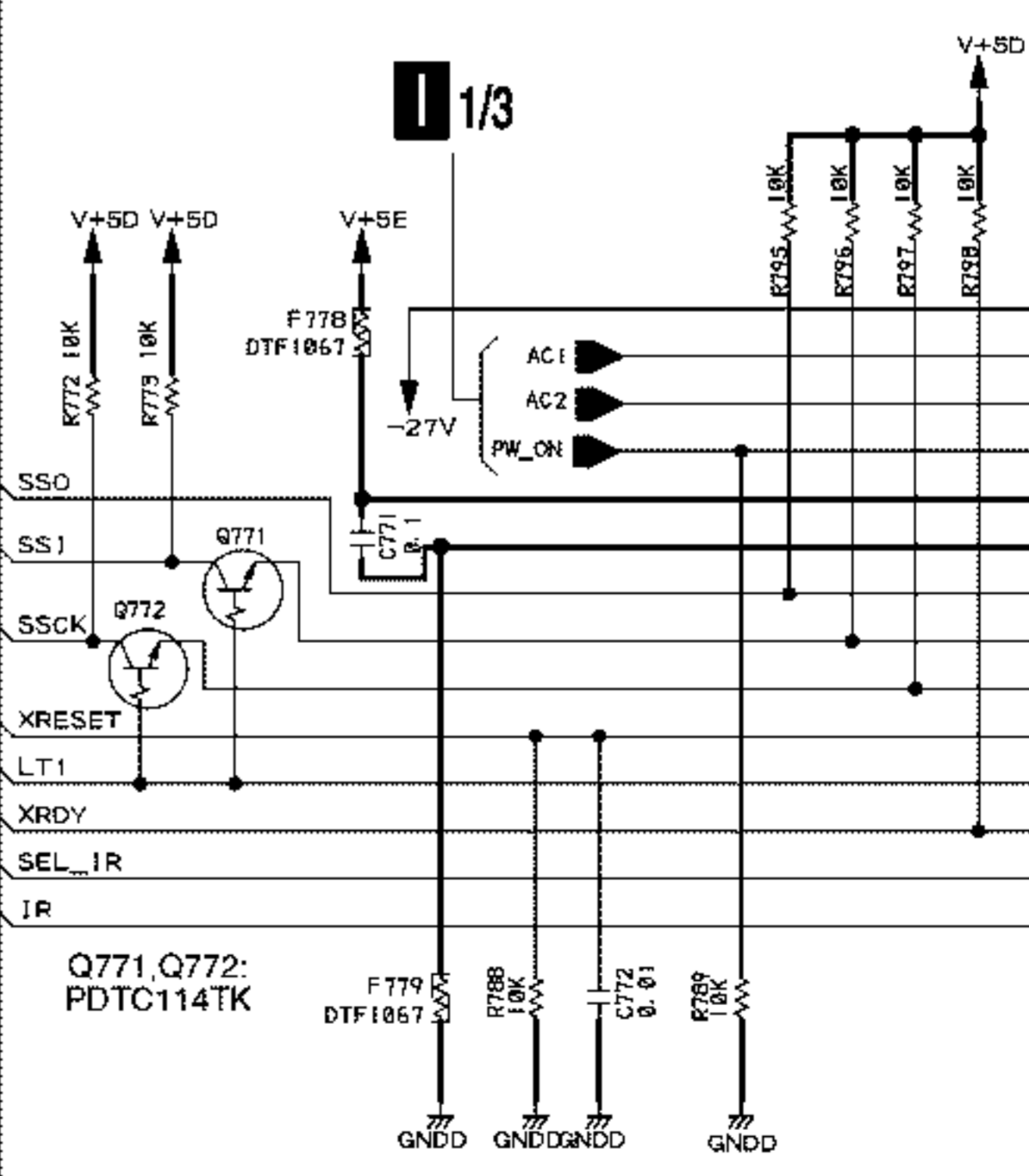
3/3  
ADDRESS  
A2-A10

ADDRESS

3/3  
DATA

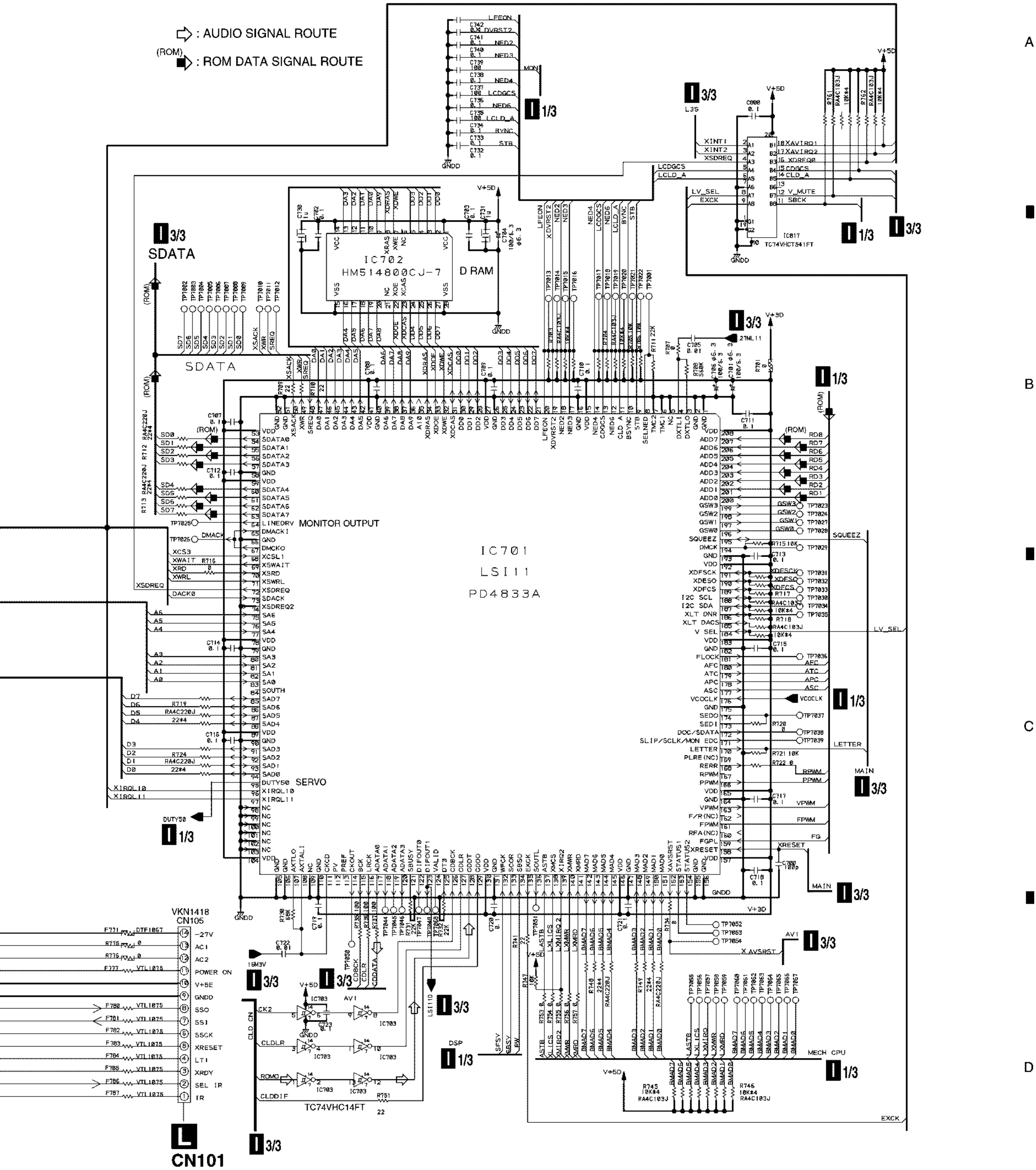
DATA

1/3





: AUDIO SIGNAL ROUTE  
 (ROM) : ROM DATA SIGNAL ROUTE



A

B

C

D

3.4 DVDM ASSY (3/3)

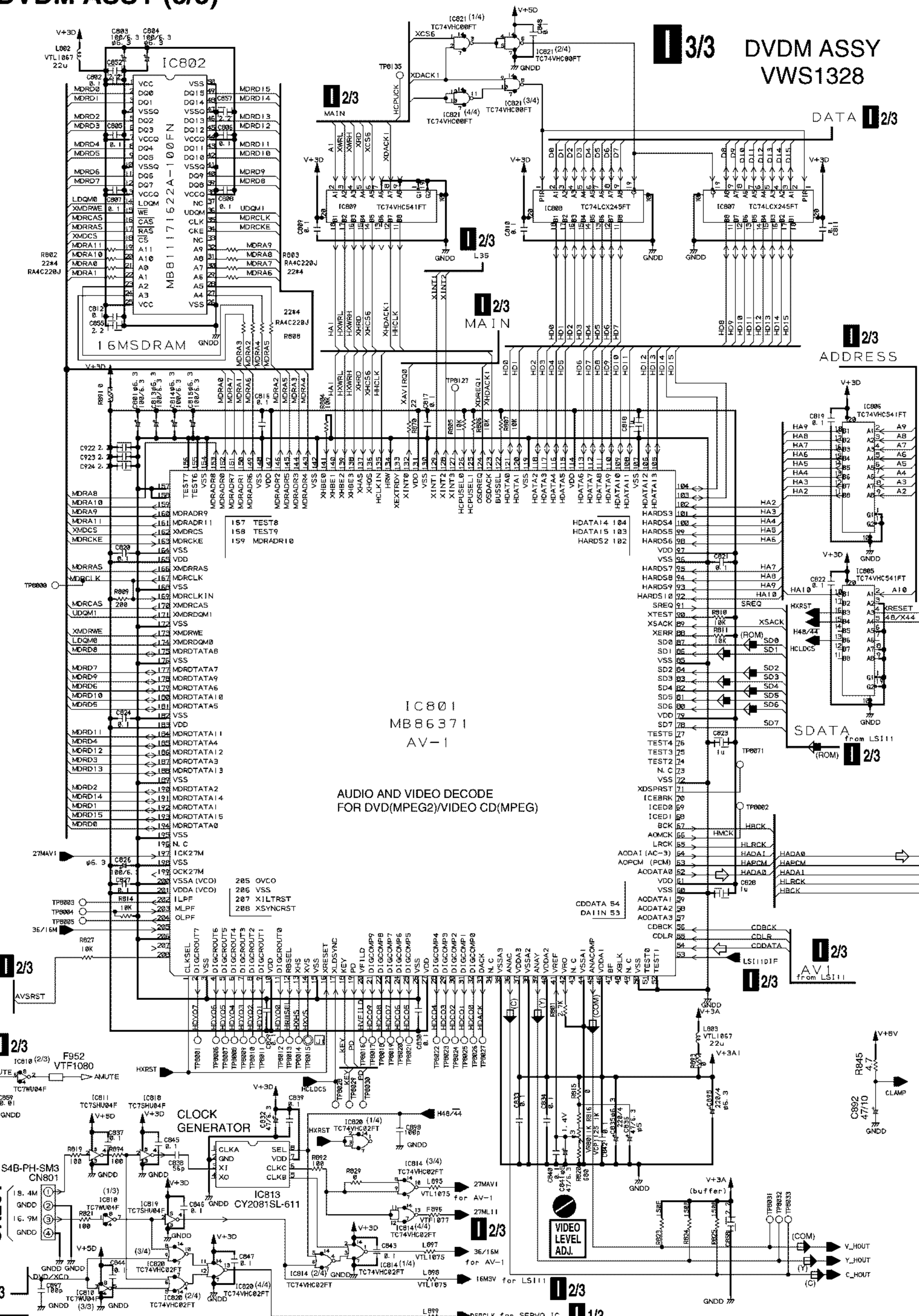
3/3 DVDM ASSY  
VWS1328

A

B

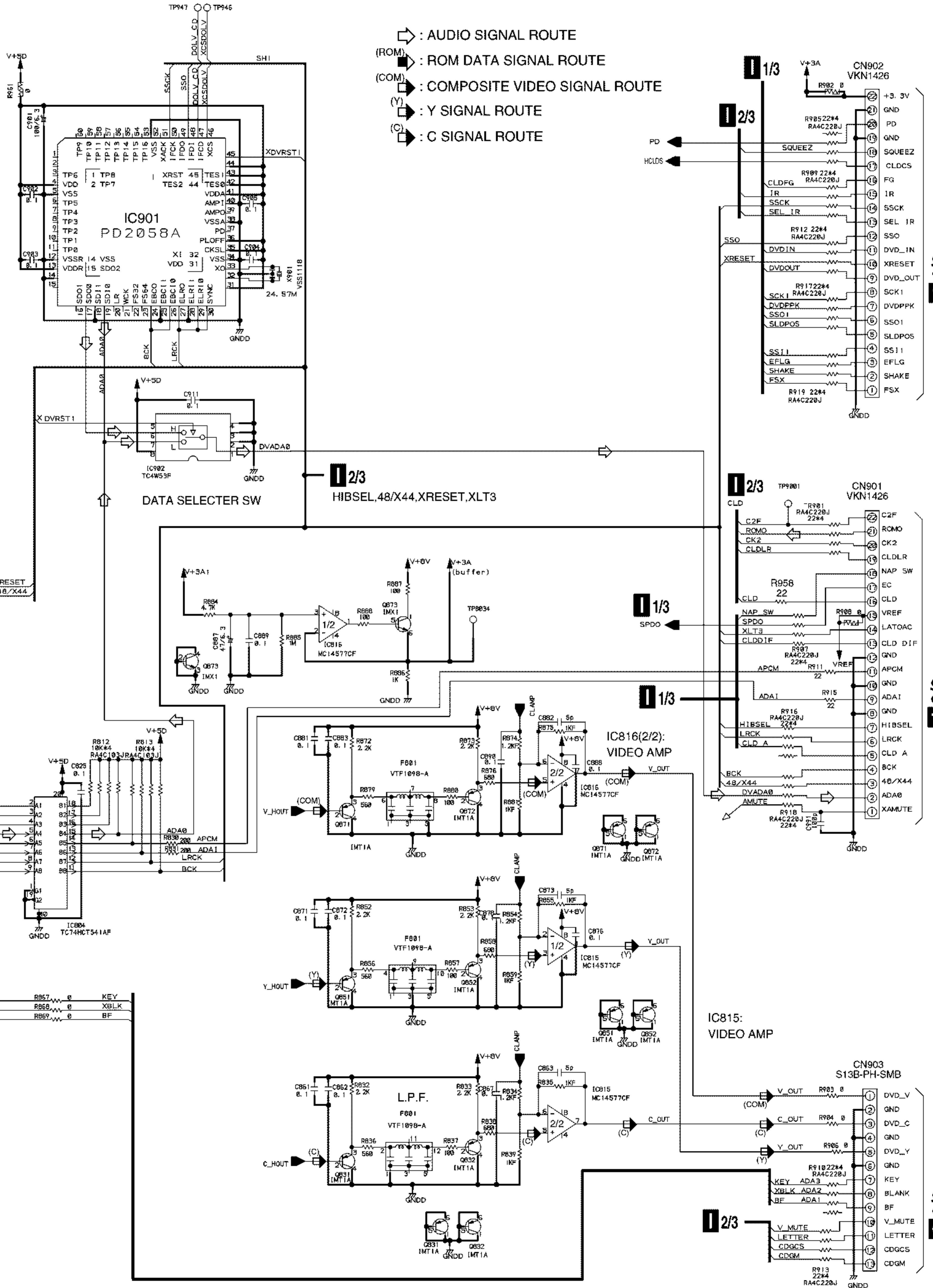
C

D





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



J 1/3 CN111

J 2/3 CN122

O 2/2 CN601



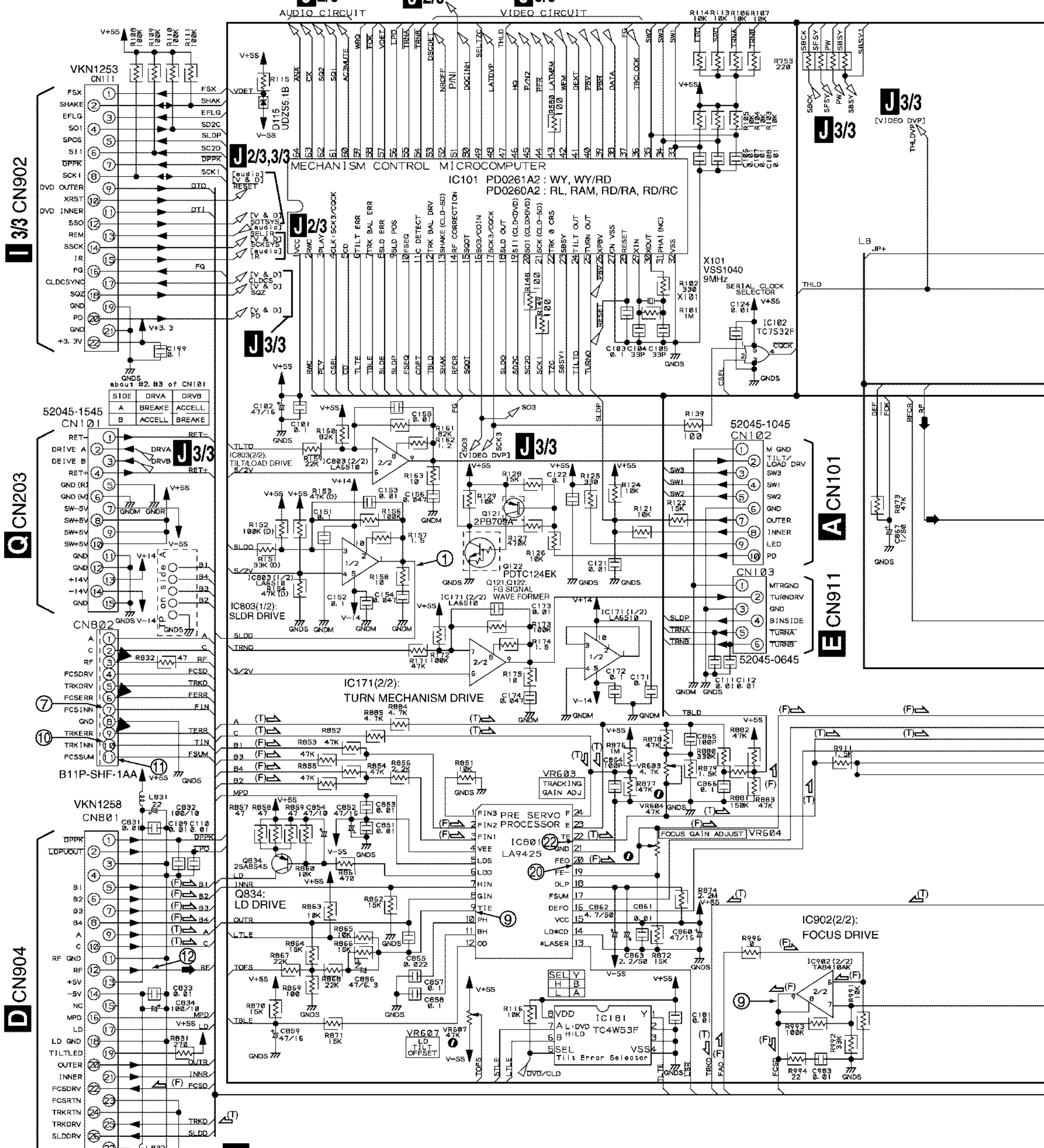
3.5 CLDM ASSY (1/3)

A

B

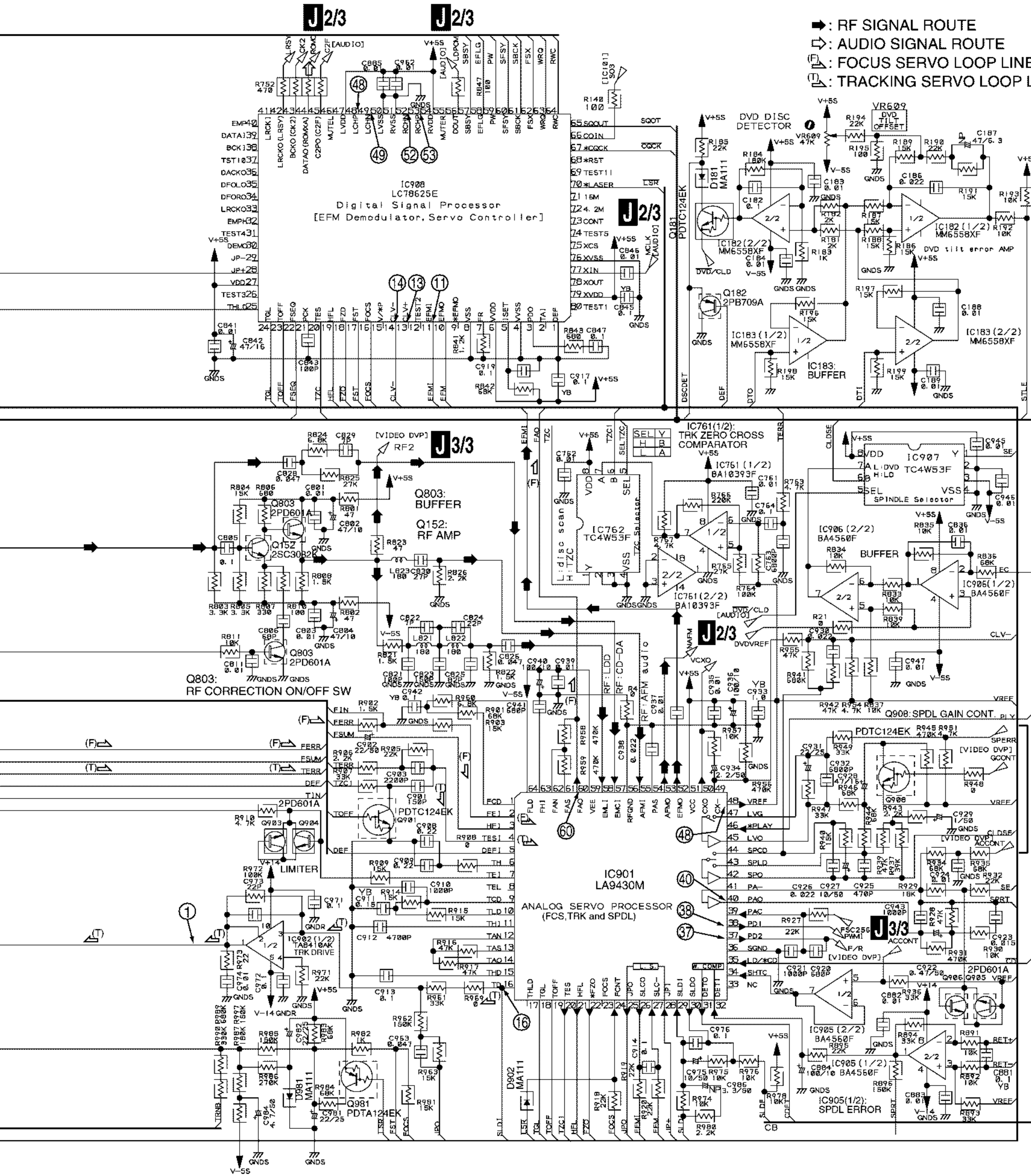
C

D



**J 1/3** CLDM ASSY  
(VWS1332 : WY and WY/RD types)  
(VWS1331 : RL, RAM, RD/RA and RD/RC types)

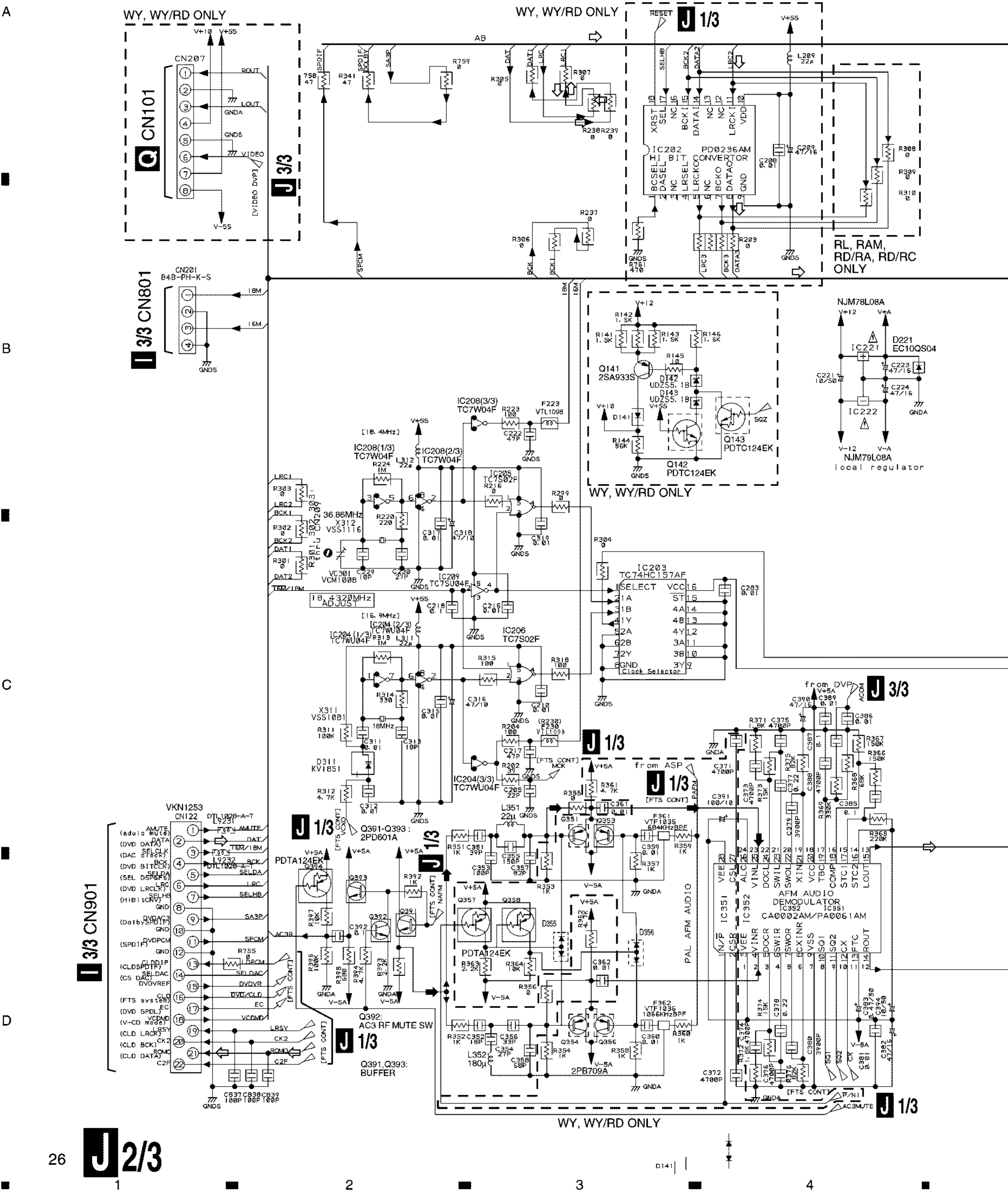




➔: RF SIGNAL ROUTE  
 ⇨: AUDIO SIGNAL ROUTE  
 (F): FOCUS SERVO LOOP LINE  
 (T): TRACKING SERVO LOOP LINE

A  
B  
C  
D

3.6 CLDM ASSY (2/3) AND JCKB ASSY





# CLDM ASSY

(VWS1332 : WY, WY/RD)

(VWS1331 : RL, RAM, RD/RA, RD/RC)

**J** 2/3

➡ : RF SIGNAL ROUTE

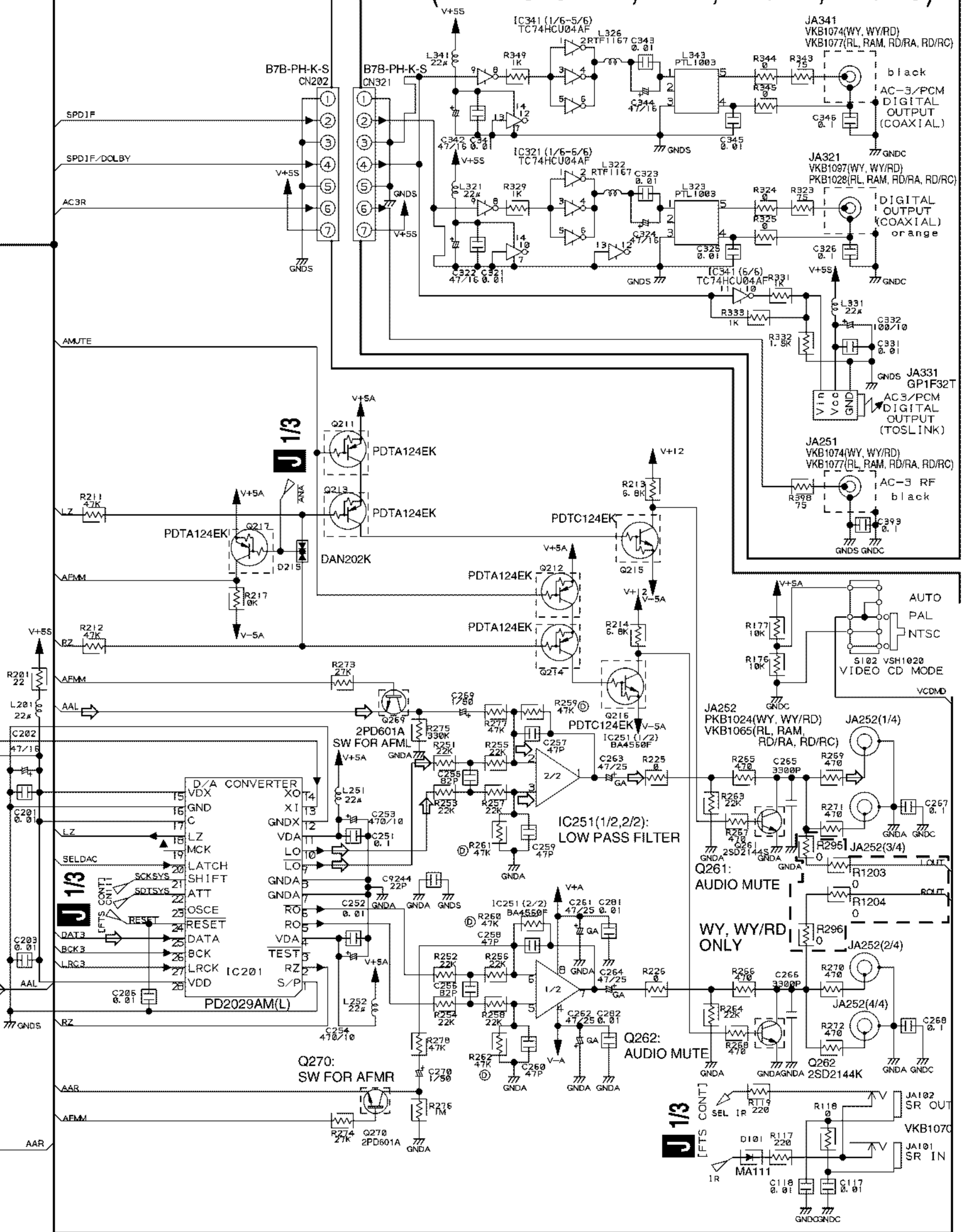
⇨ : AUDIO SIGNAL ROUTE

**K**

# JCKB ASSY

(VWV1578 : WY, WY/RD)

(VWV1579 : RL, RAM, RD/RA, RD/RC)



**J** 2/3

**K**

3.7 CLDM ASSY (3/3)(FOR WY AND WY/RD TYPES)

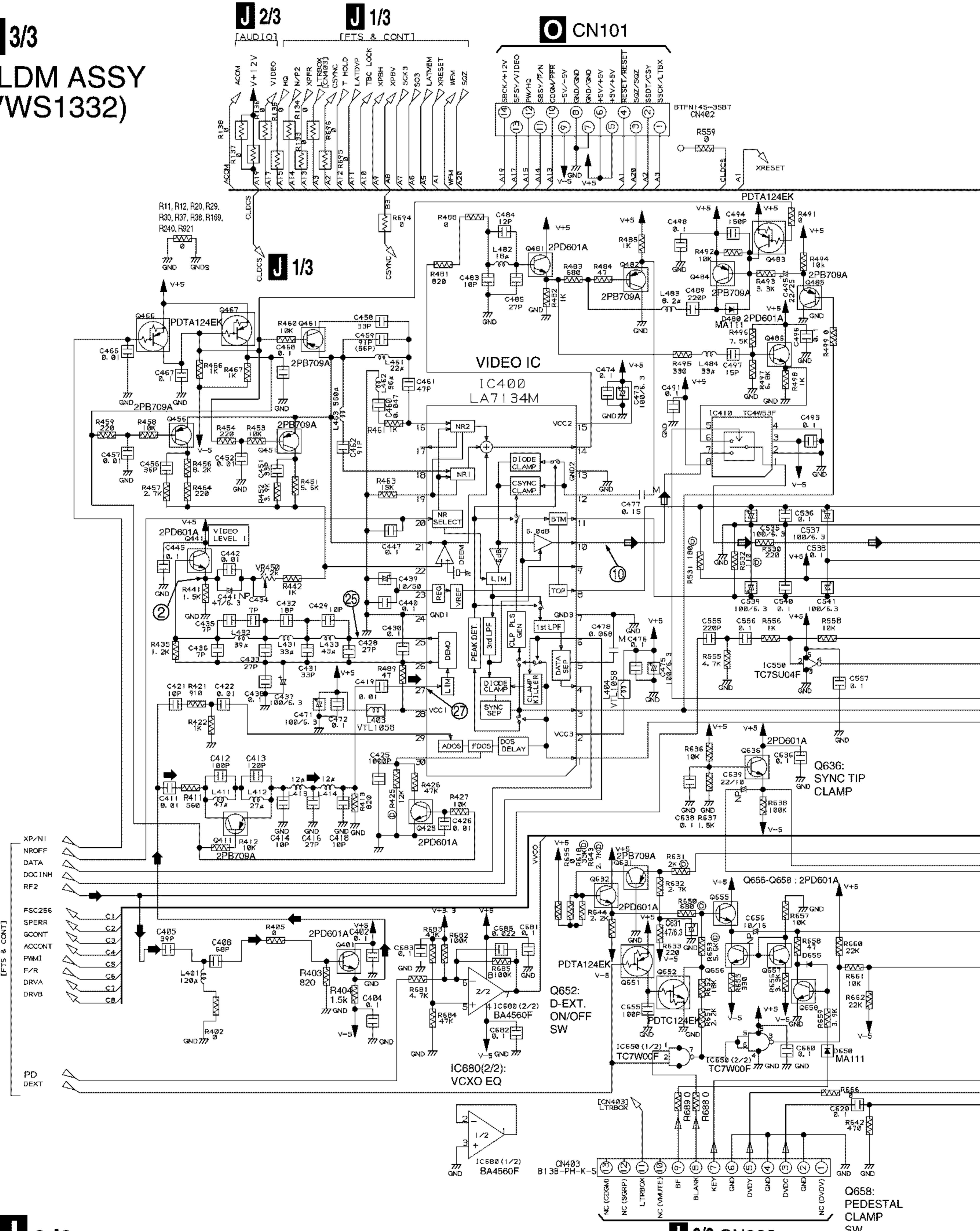
A

**J 3/3**  
CLDM ASSY  
(VWS1332)

B

C

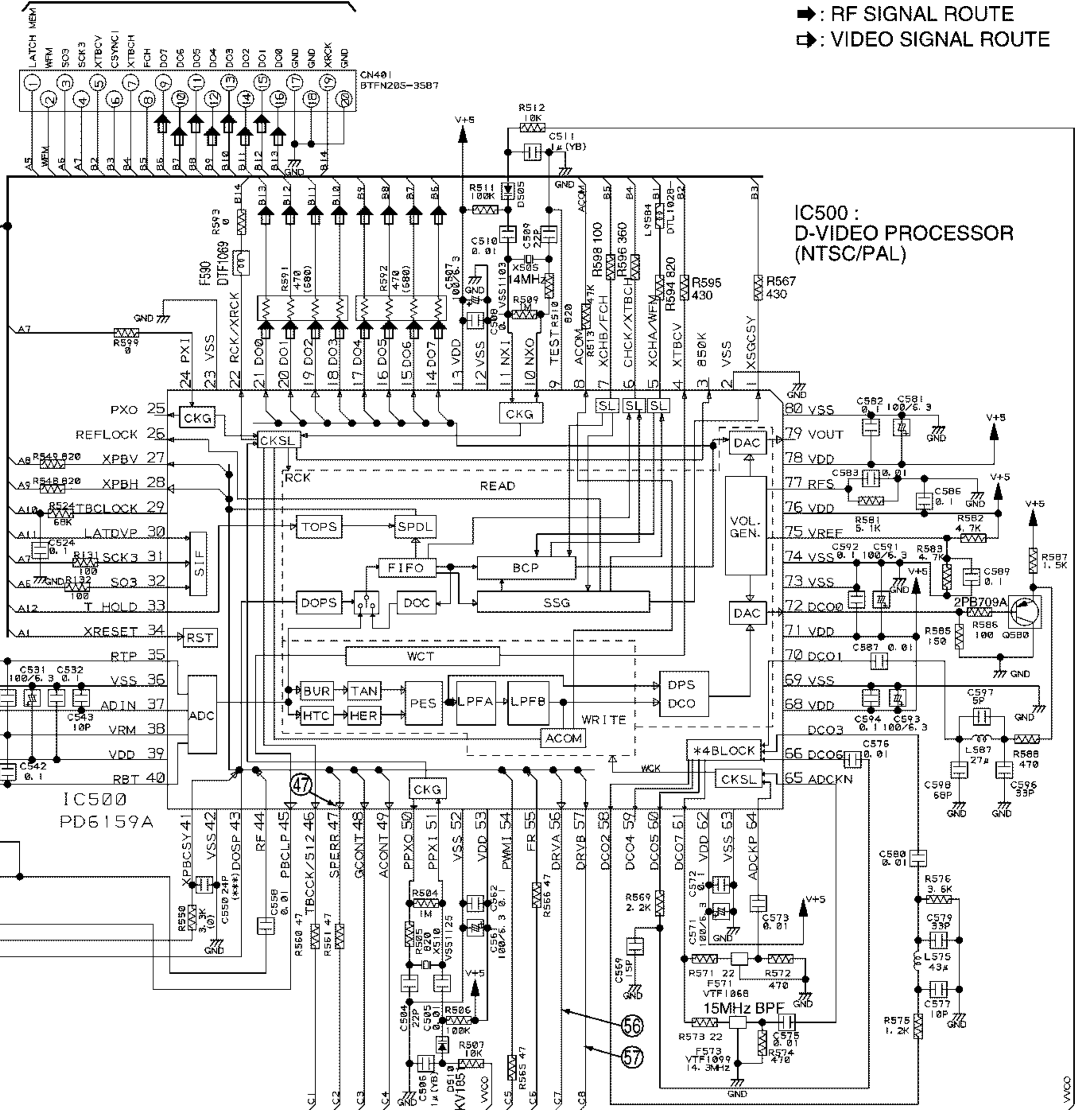
D





○ CN102

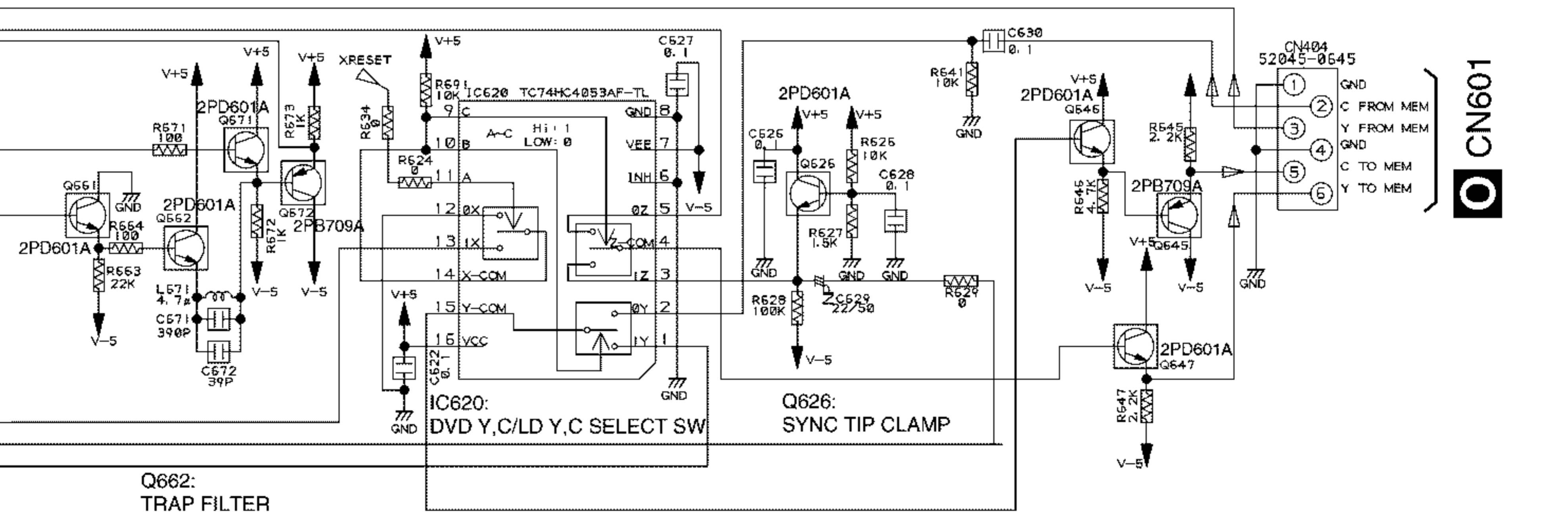
➡: RF SIGNAL ROUTE  
⇨: VIDEO SIGNAL ROUTE



IC500 :  
D-VIDEO PROCESSOR  
(NTSC/PAL)

IC500  
PD6159A

15MHz BPF

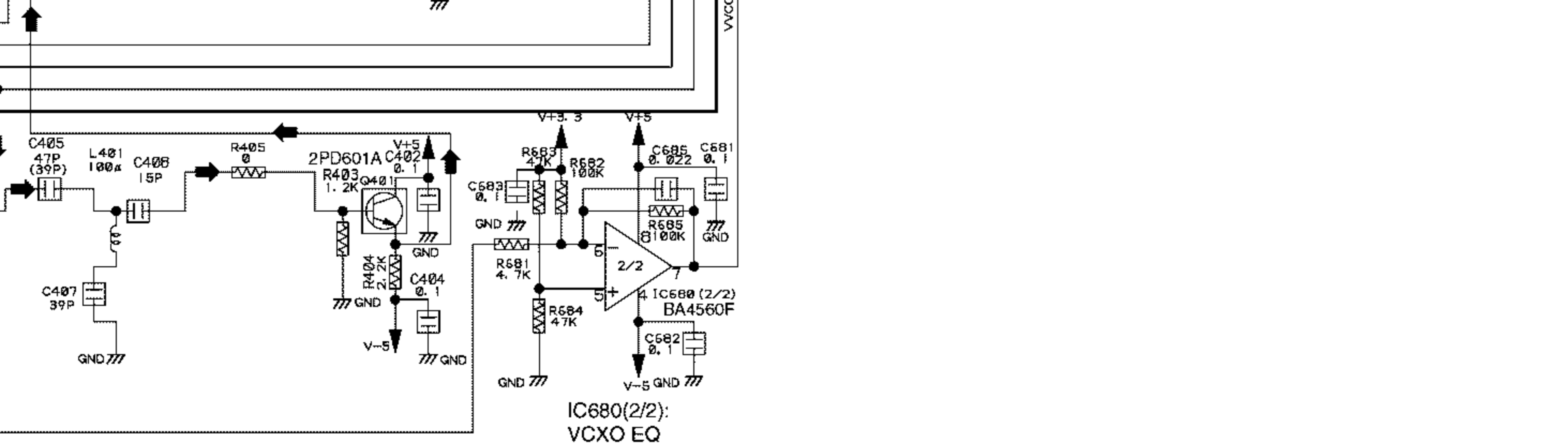
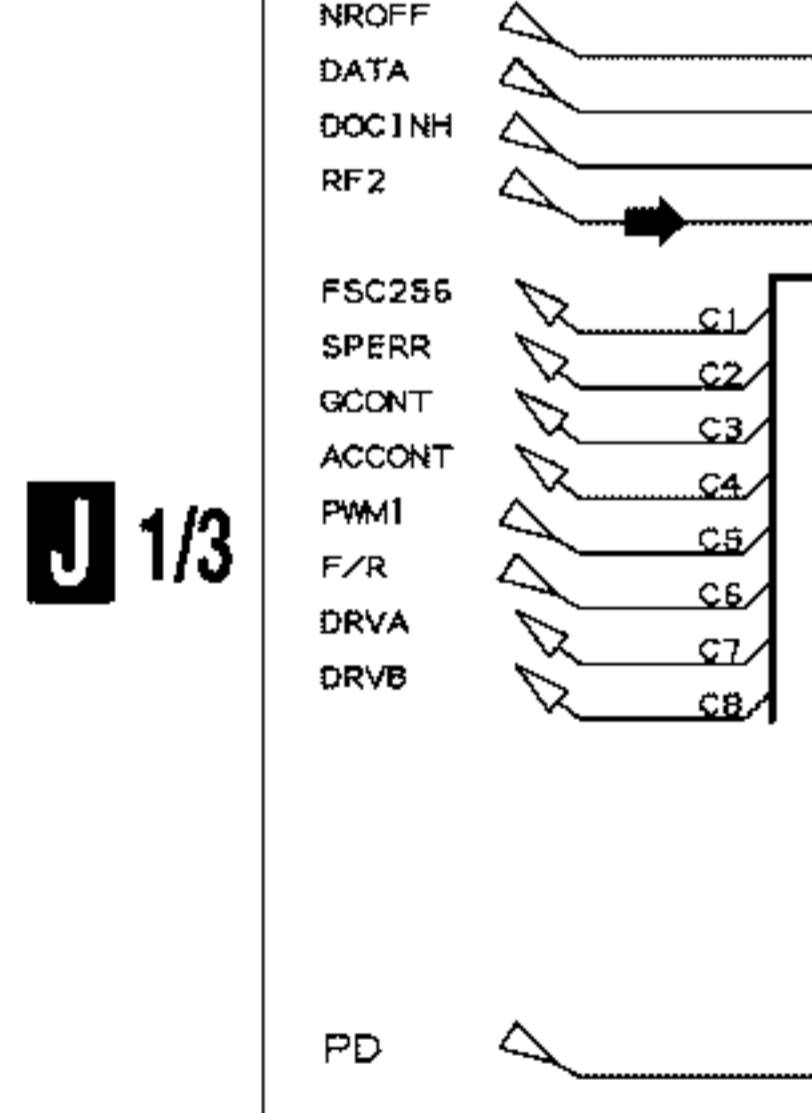
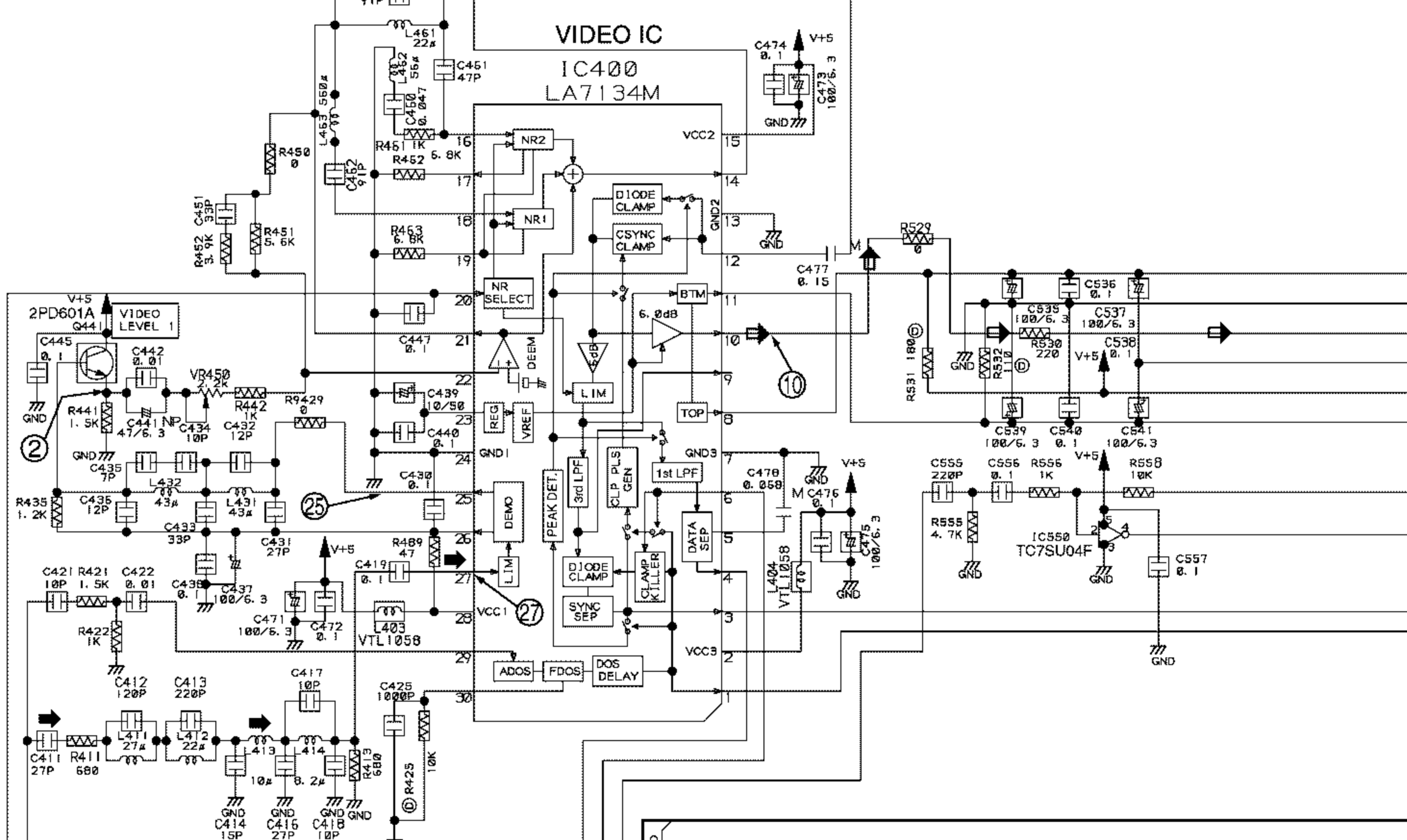
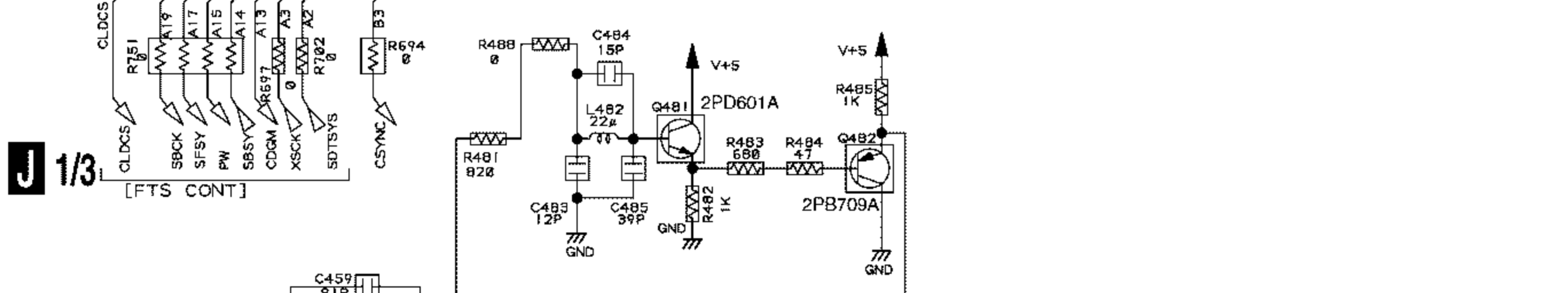
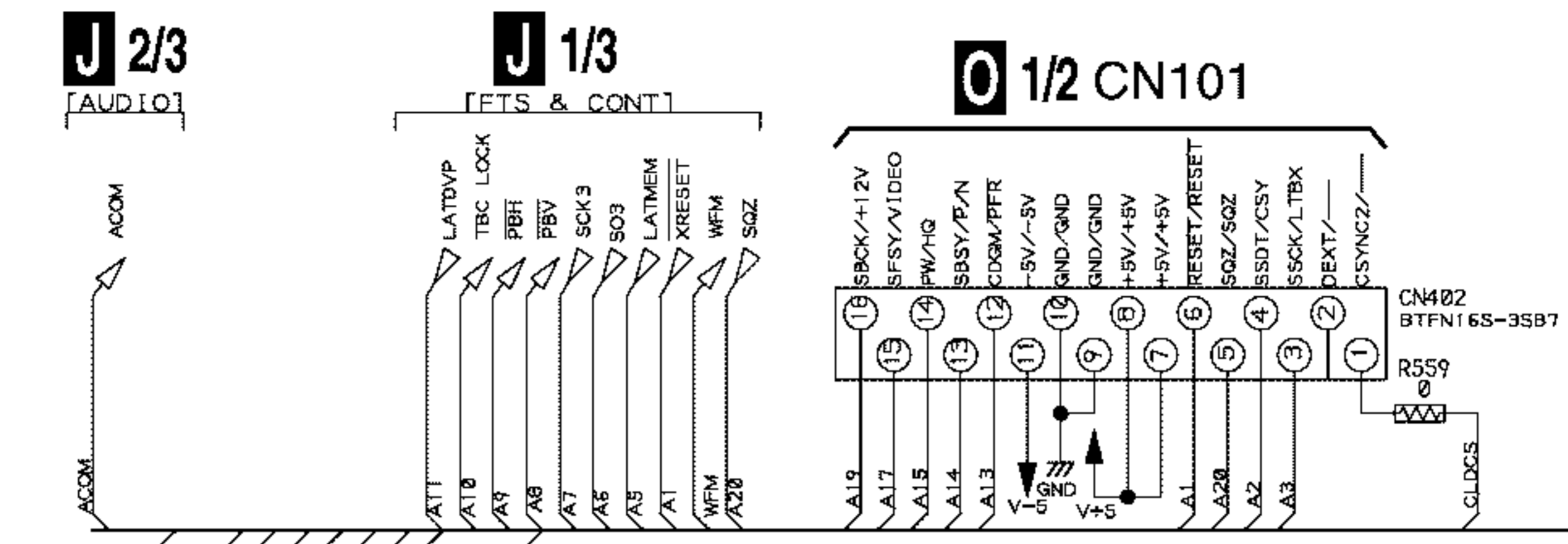


Q662:  
TRAP FILTER  
ON/OFF SW



3.8 CLDM ASSY (3/3)(FOR RL, RAM, RD/RA AND RD/RC TYPES)

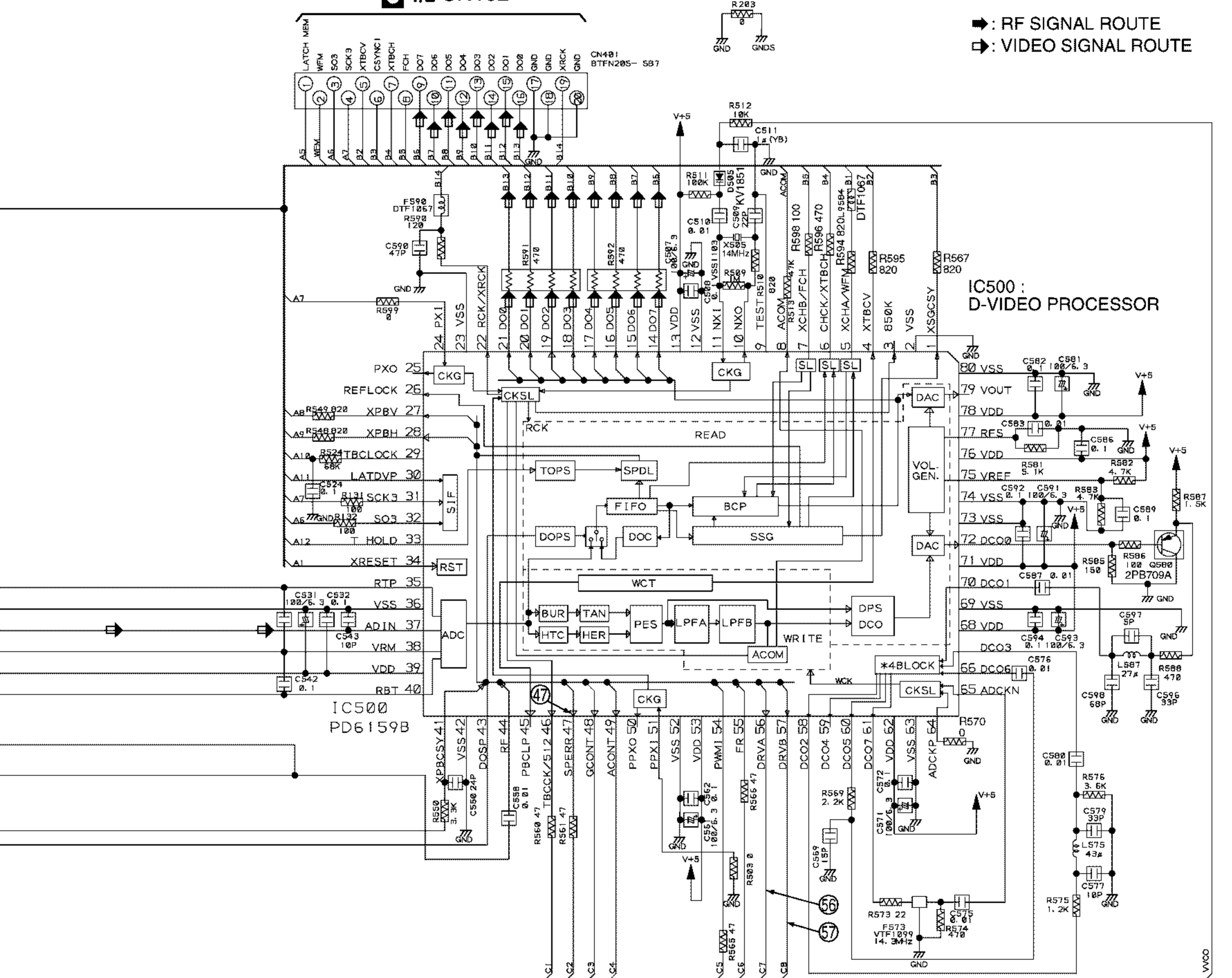
**J 3/3**  
CLDM ASSY  
(VWS1331)



30 **J 3/3** (RL, RAM, RD/RA AND RD/RC TYPES)

1/2 CN102

➔ : RF SIGNAL ROUTE  
➠ : VIDEO SIGNAL ROUTE



A

B

C

D

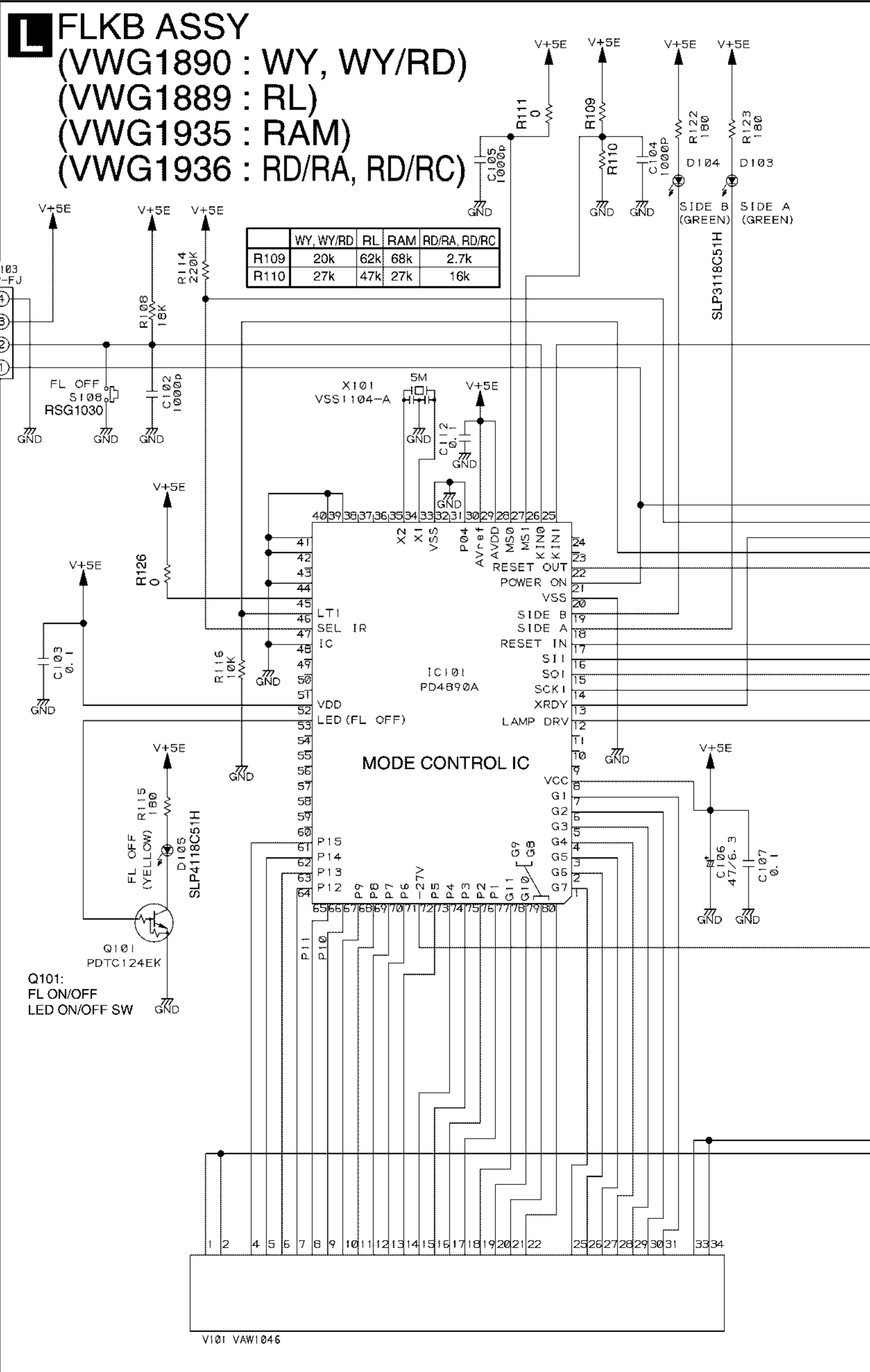
(RL, RAM, RD/RA AND RD/RC TYPES)

J 3/3

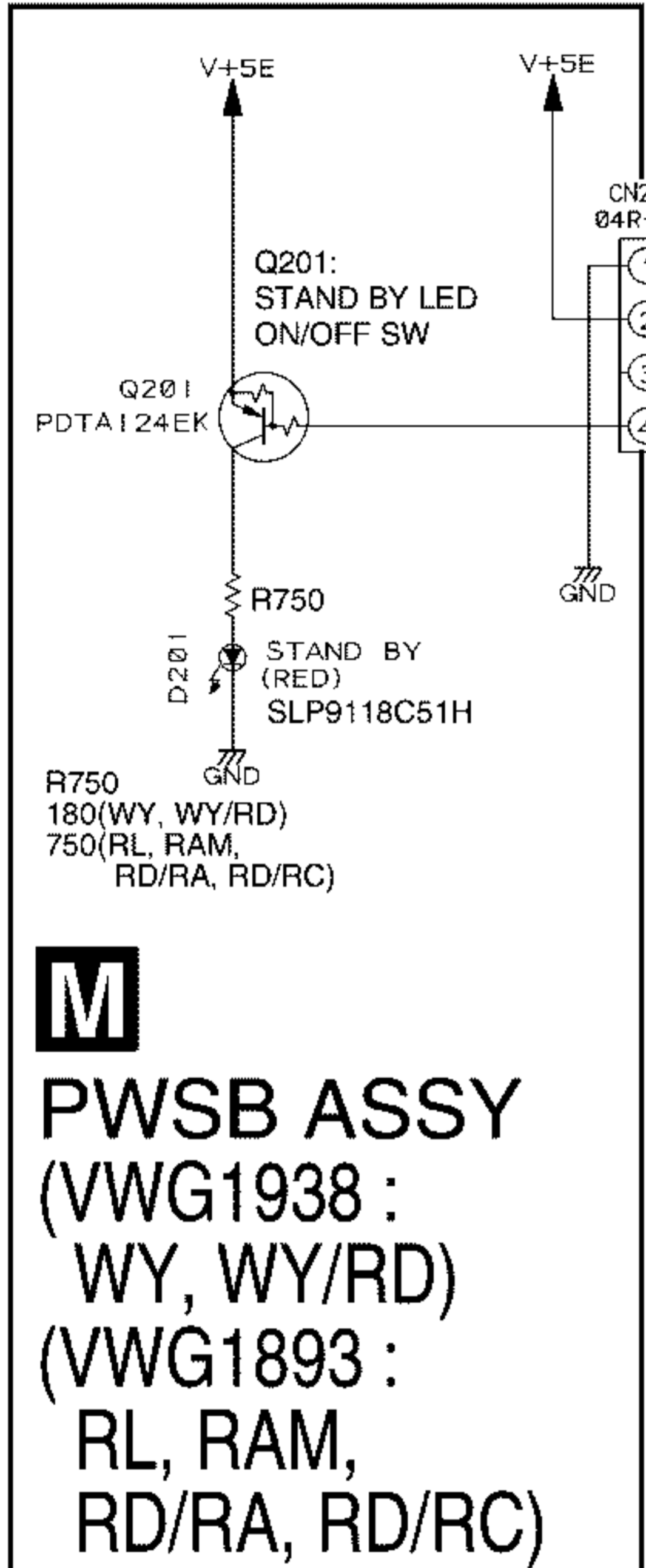


### 3.9 FLKB, PWSB AND DILB ASSEMBLIES

A



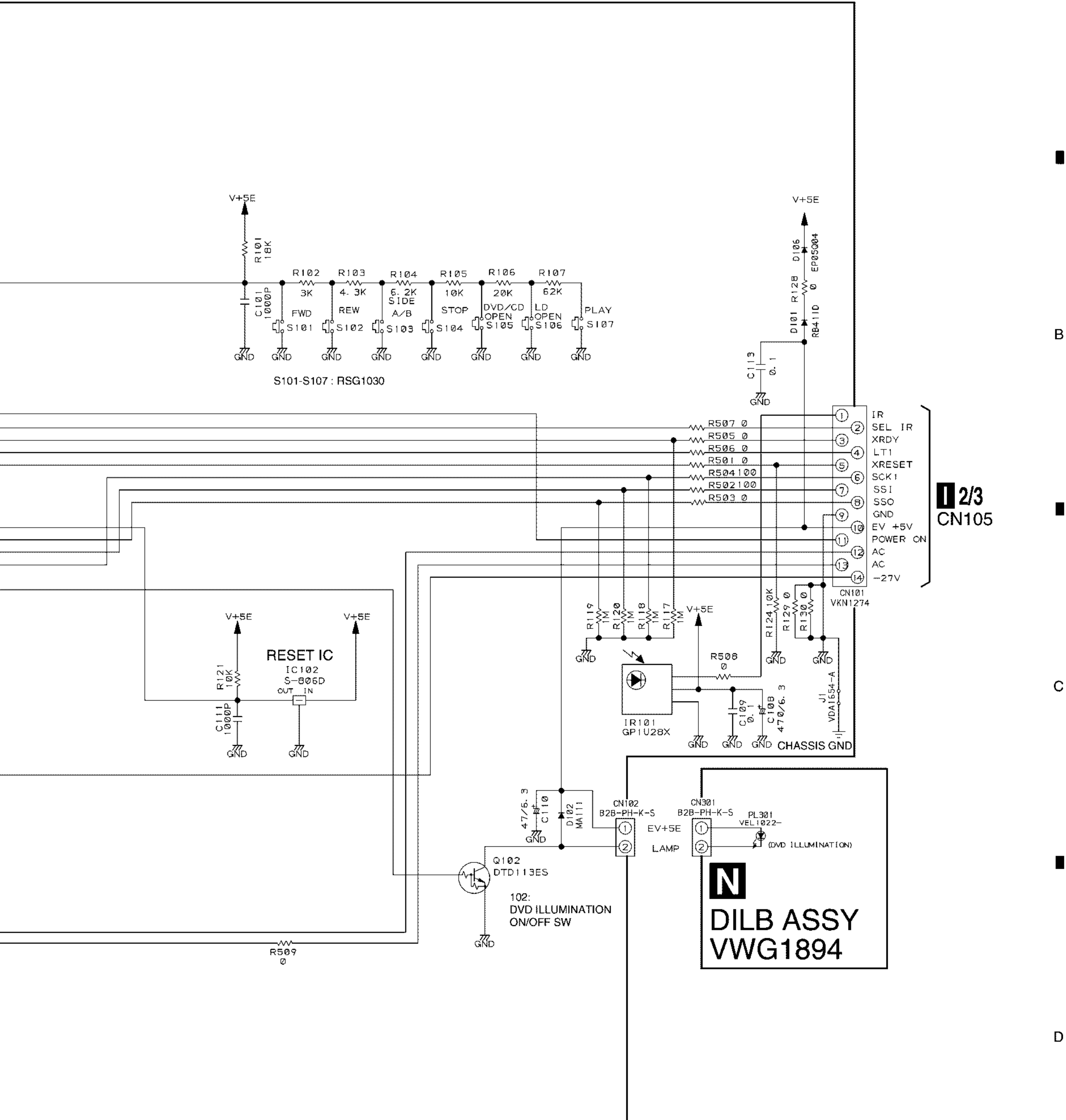
B



C

- FLKB ASSY
- S101:FWD(▶▶▶▶▶)
  - S102:REV(◀◀◀◀◀)
  - S103:DISC SIDE A/B
  - S104:STOP(■)
  - S105:DVD/CD OPEN/CLOSE(▲)
  - S106:LD OPEN/CLOSE(▲)
  - S107:PLAY/PAUSE(▶||)
  - S108:FL OFF

D





3.10 DMYC ASSY (WY AND WY/RD TYPES ONLY)

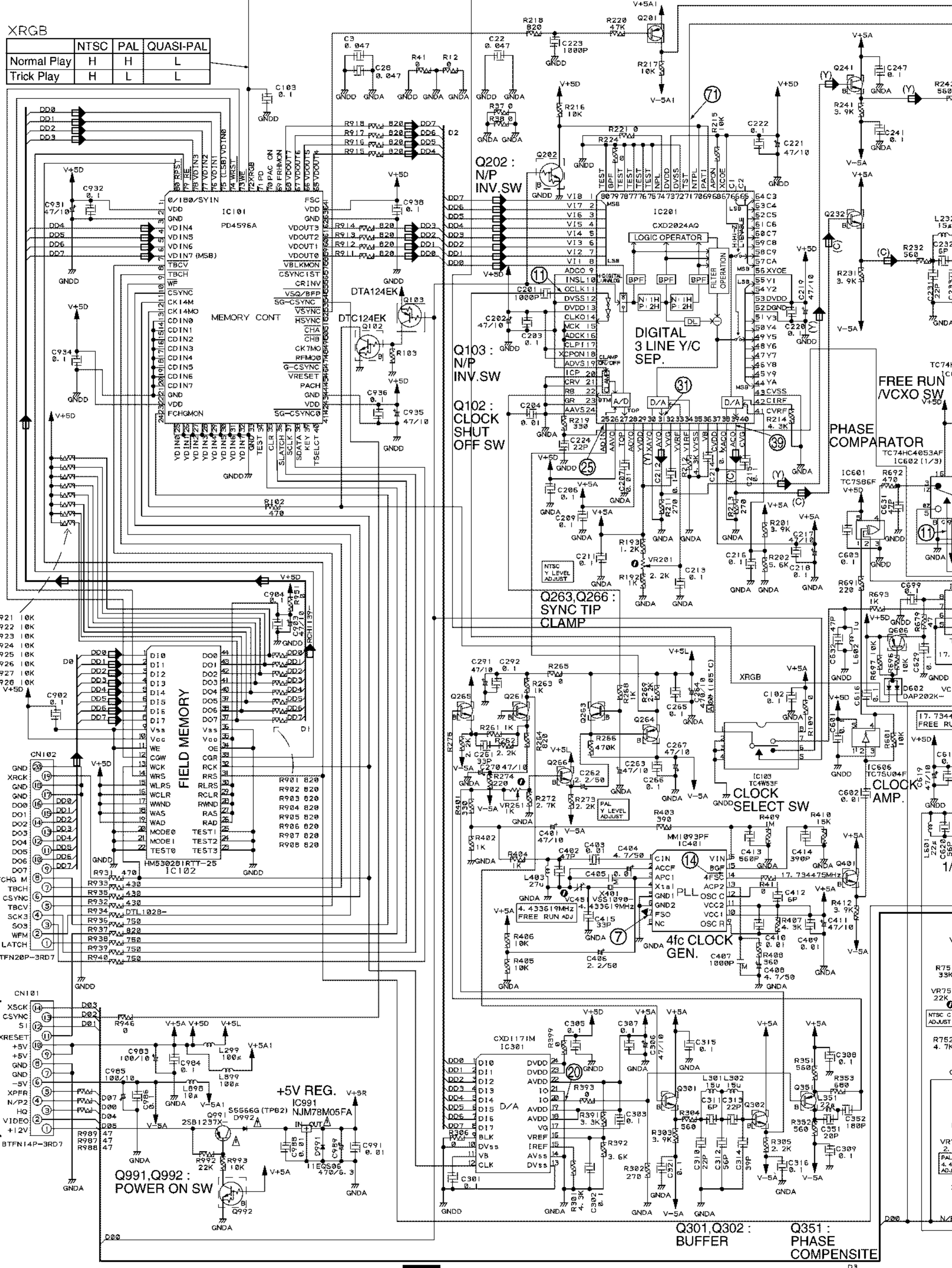
	NTSC	PAL	QUASI-PAL
Normal Play	H	H	L
Trick Play	H	L	L

A

B

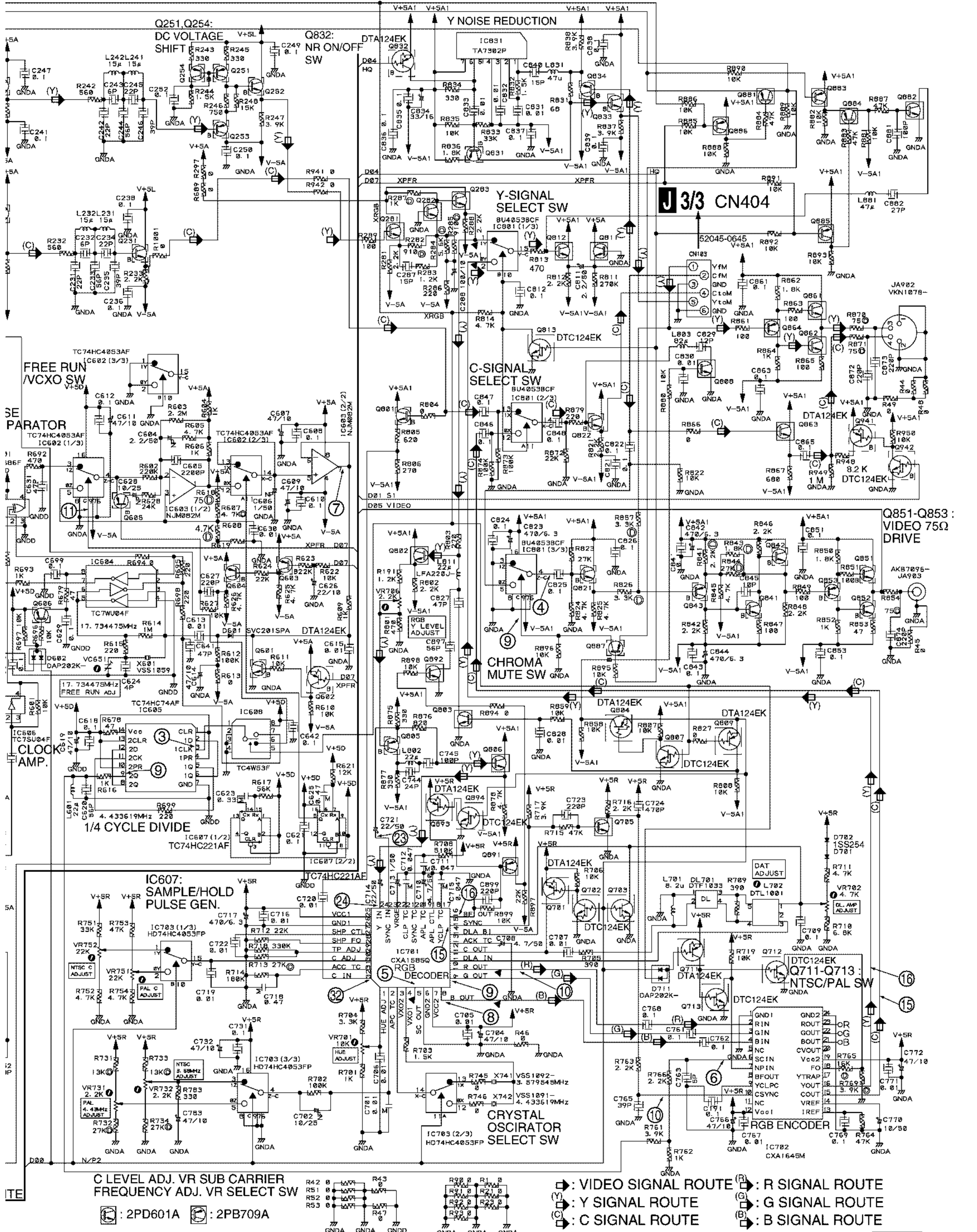
C

D



DMYC ASSY (VWV1584)





A

B

C

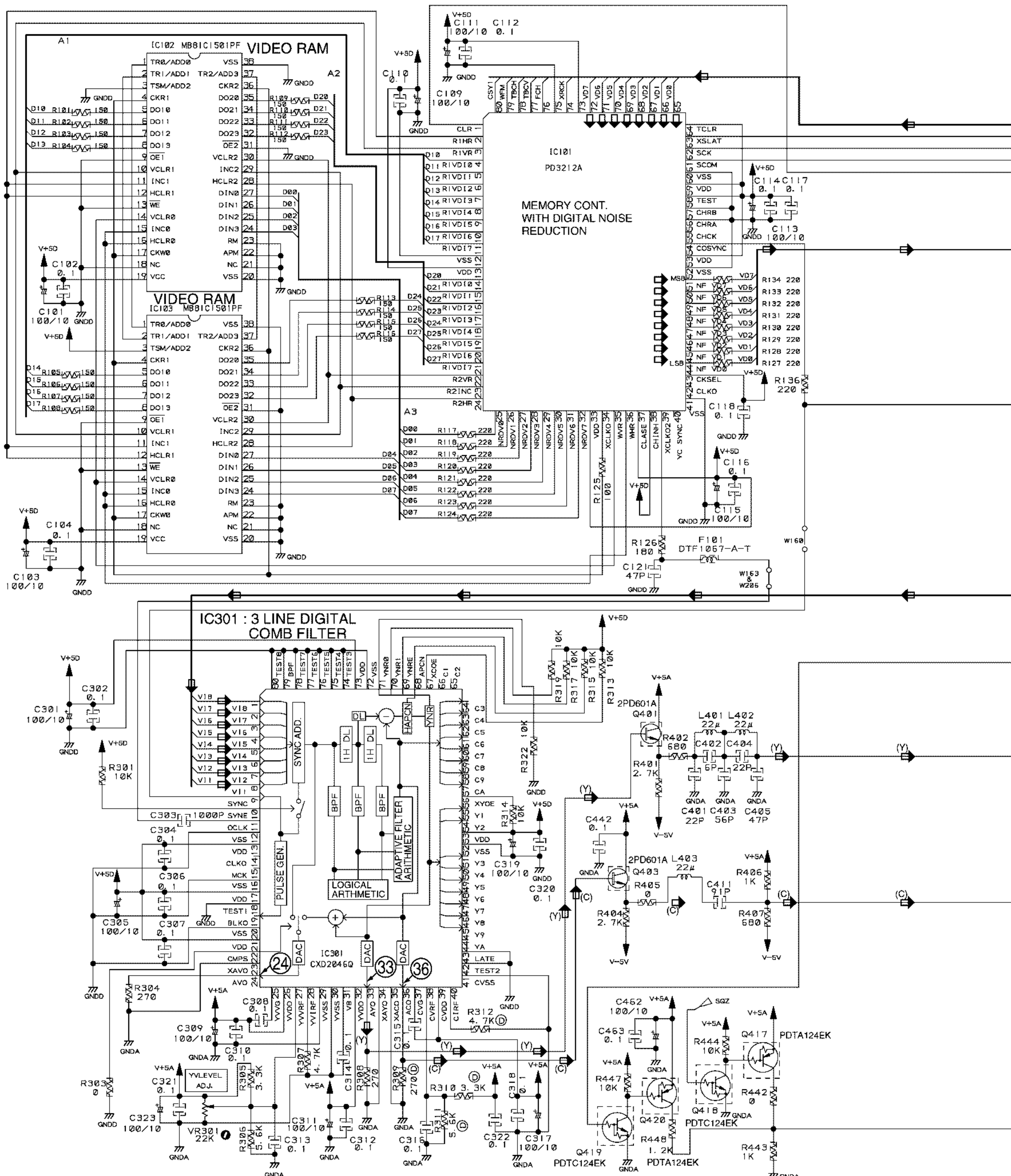
D

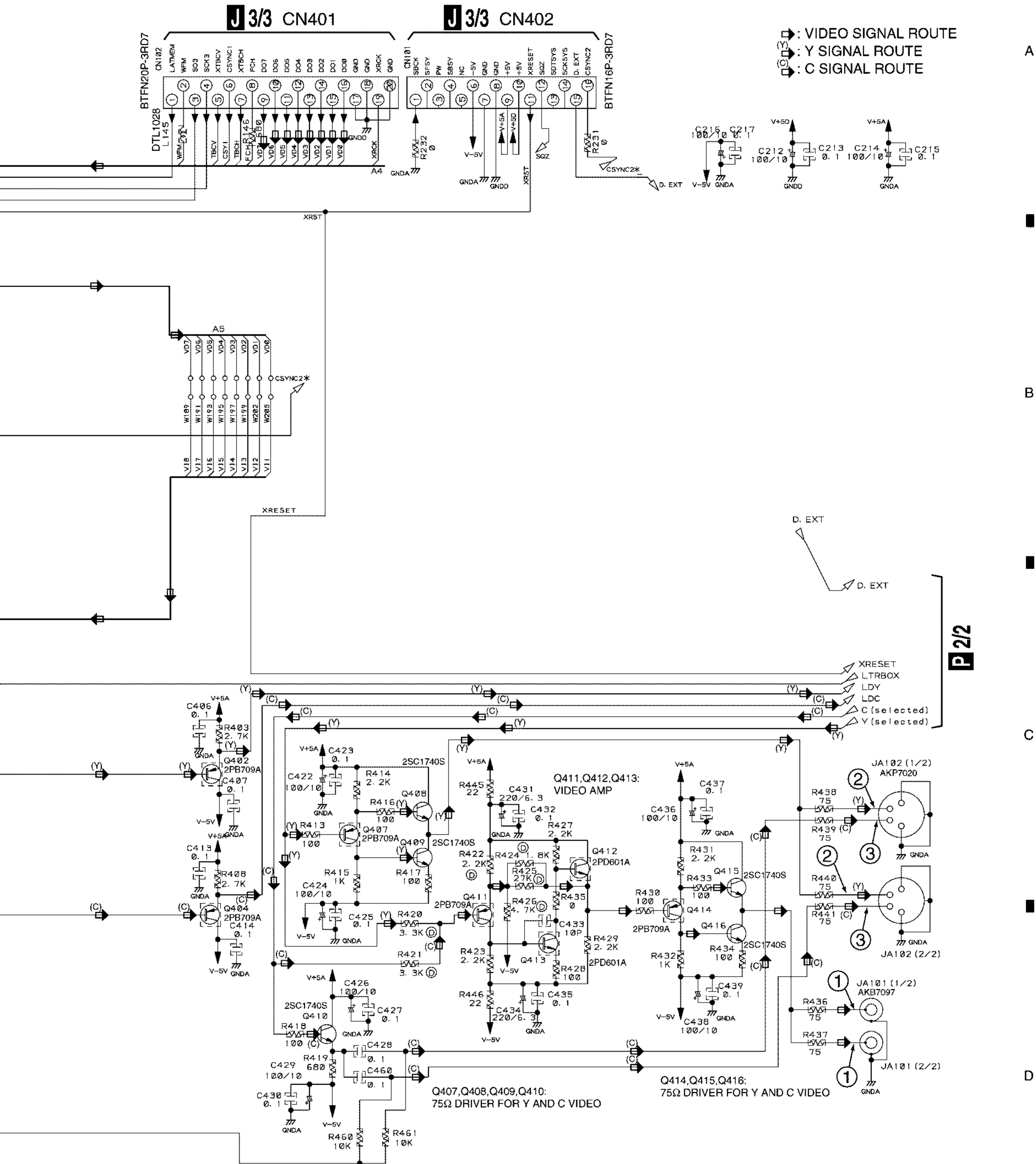
(WY AND WY/RD TYPES ONLY)



3.11 MYCB ASSY (1/2)(RL, RAM, RD/RA AND RD/RC TYPES ONLY)

P 1/2 MYCB ASSY (VWV1596)





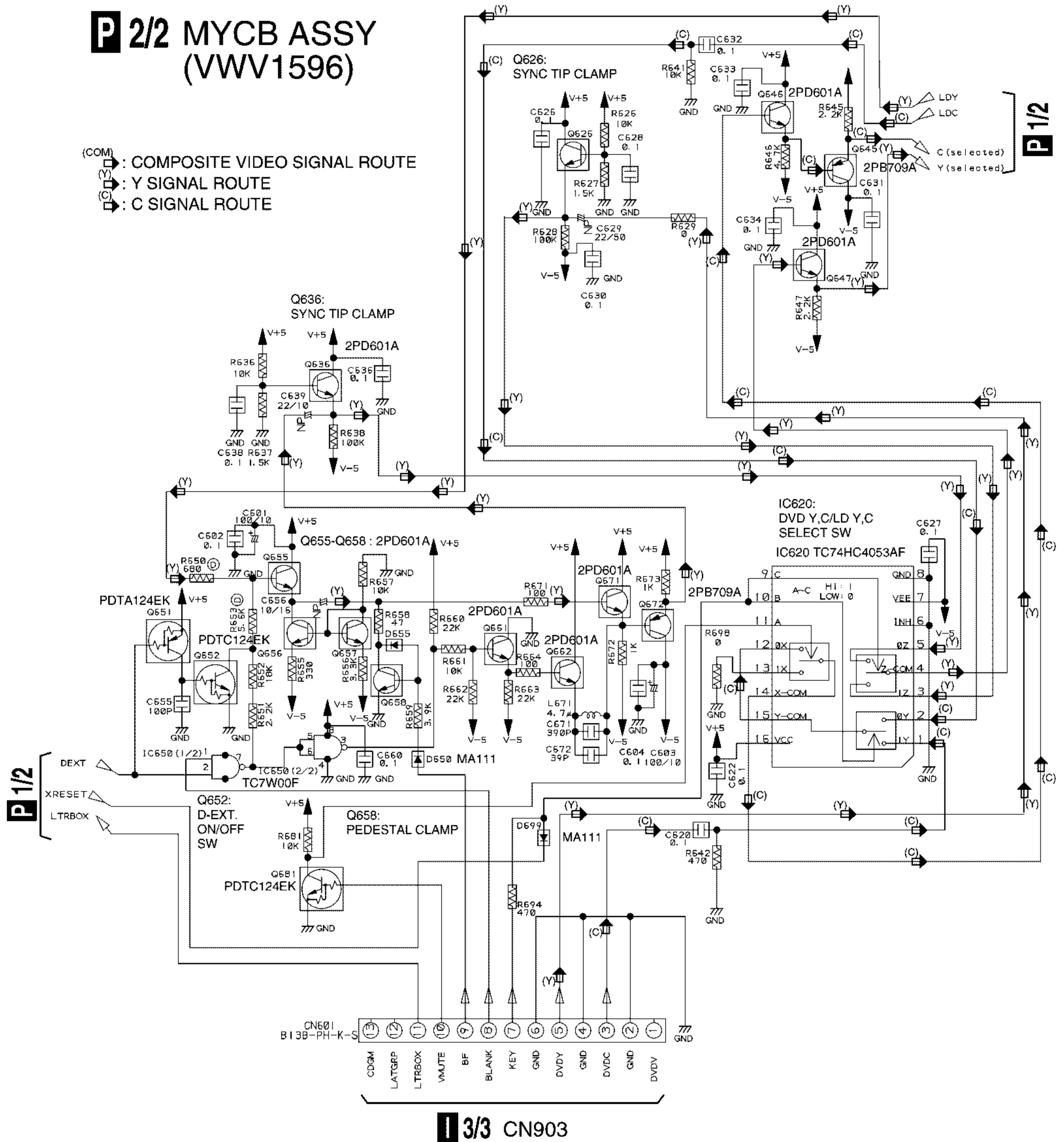
(RL, RAM, RD/RA AND RD/RC TYPES ONLY) P 1/2



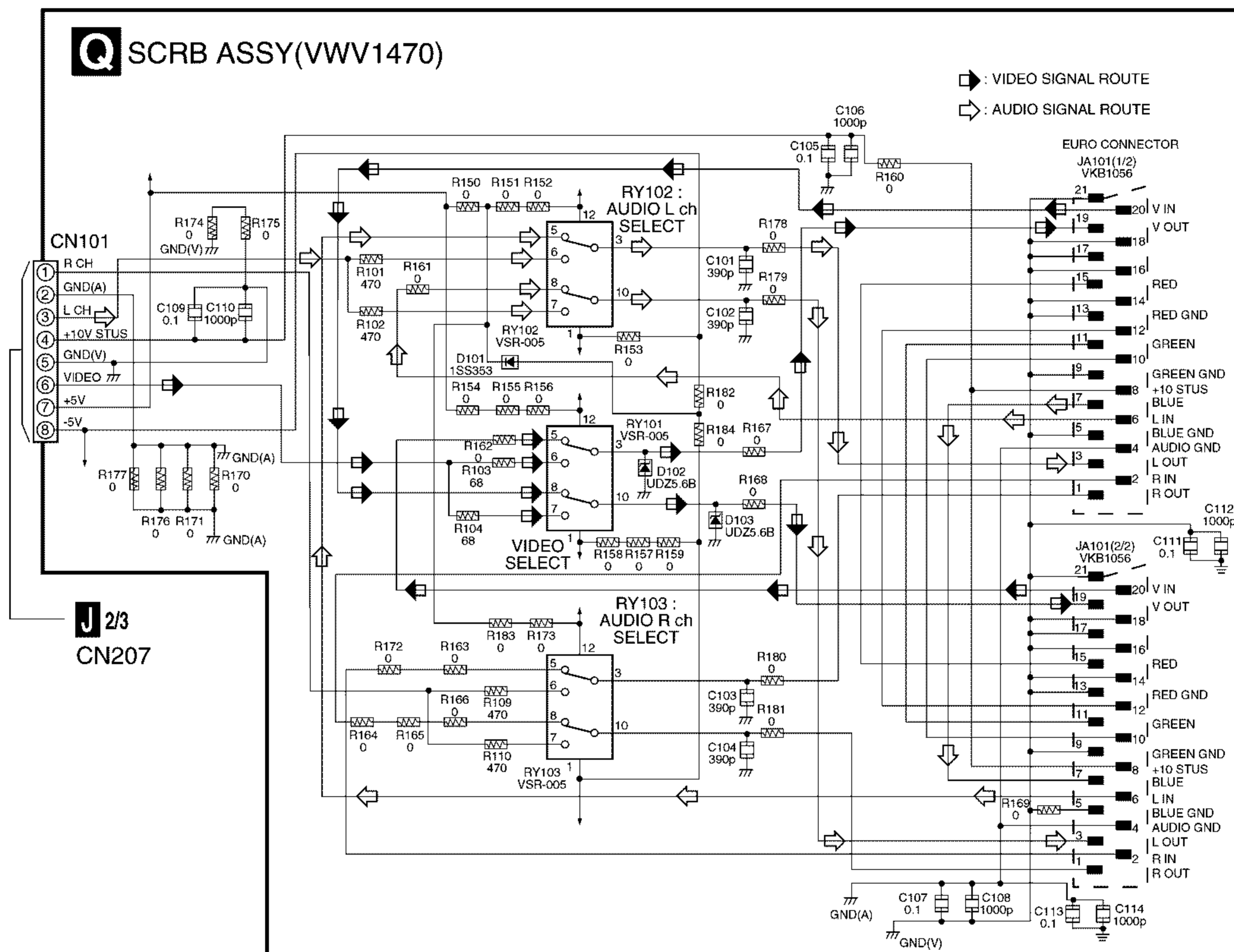
3.12 MYCB ASSY (2/2)(RL, RAM, RD/RA AND RD/RC TYPES ONLY)

**P** 2/2 MYCB ASSY (VWV1596)

(COM) : COMPOSITE VIDEO SIGNAL ROUTE  
 (Y) : Y SIGNAL ROUTE  
 (C) : C SIGNAL ROUTE

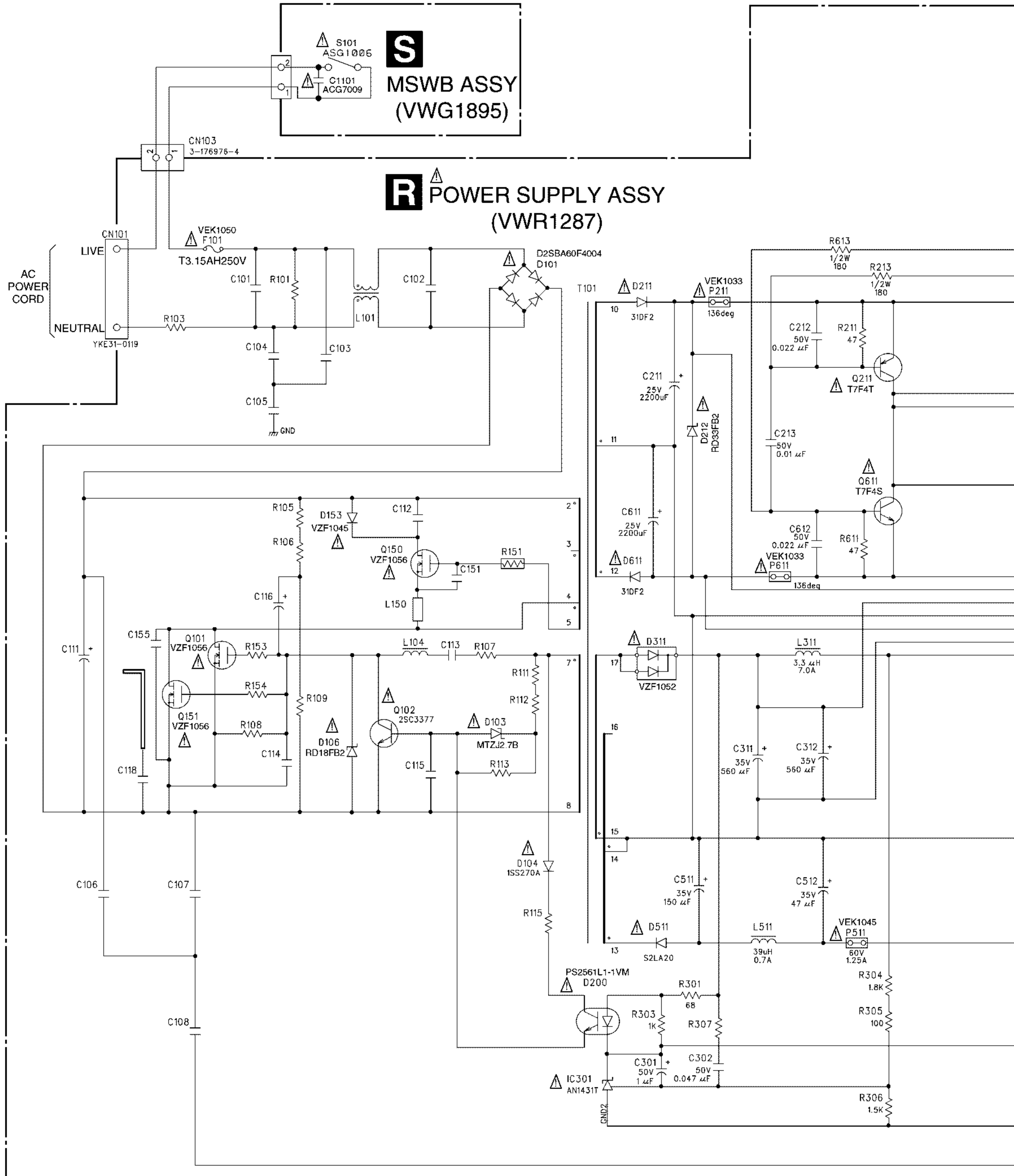


3.13 SCRB ASSY (WY AND WY/RD TYPES ONLY)



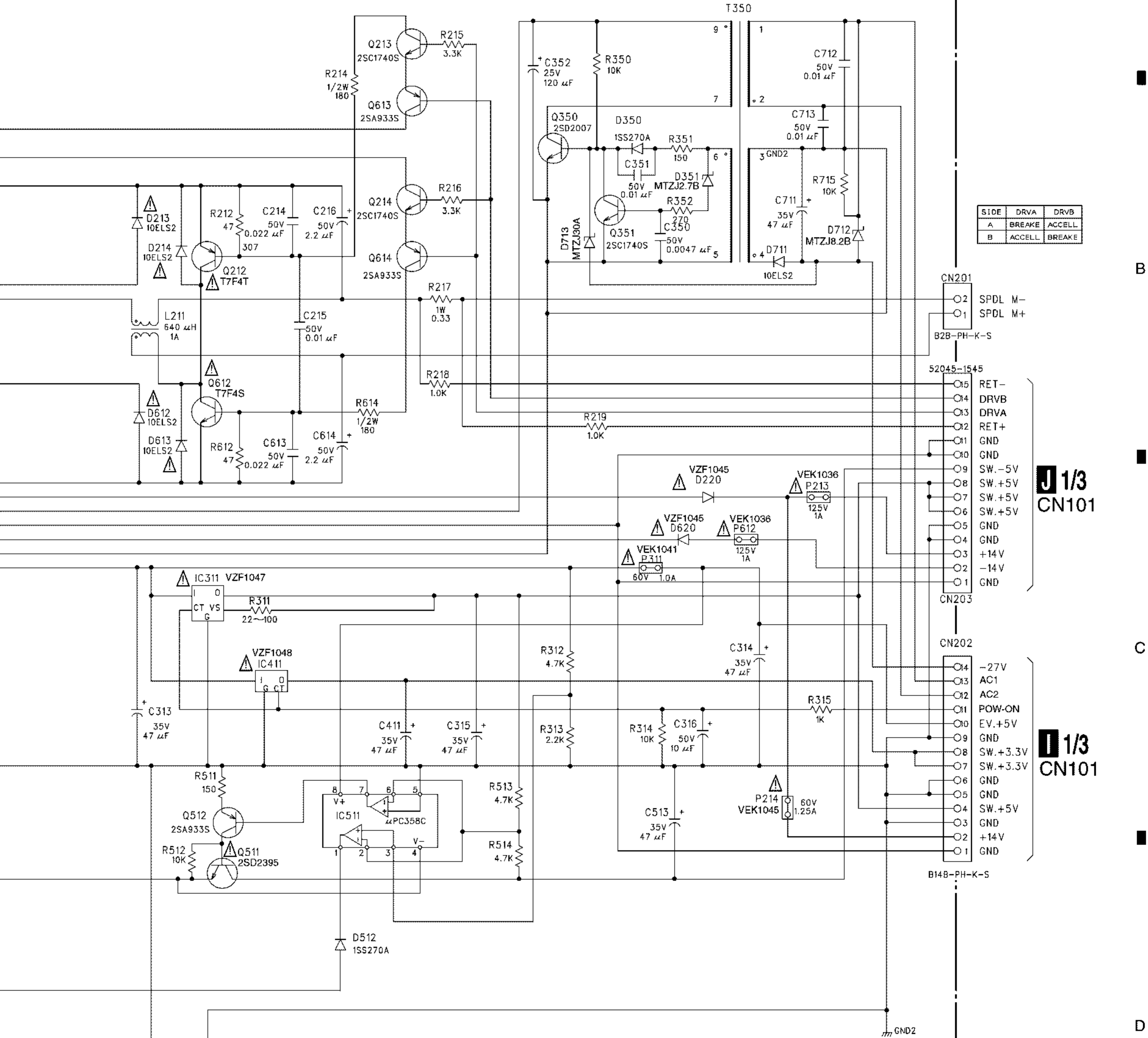


### 3.14 POWER SUPPLY AND MSWB ASSEMBLIES



《 NOTE OF SPARE PARTS IN POWER SUPPLY 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 Assy is repaired.
- Please 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.

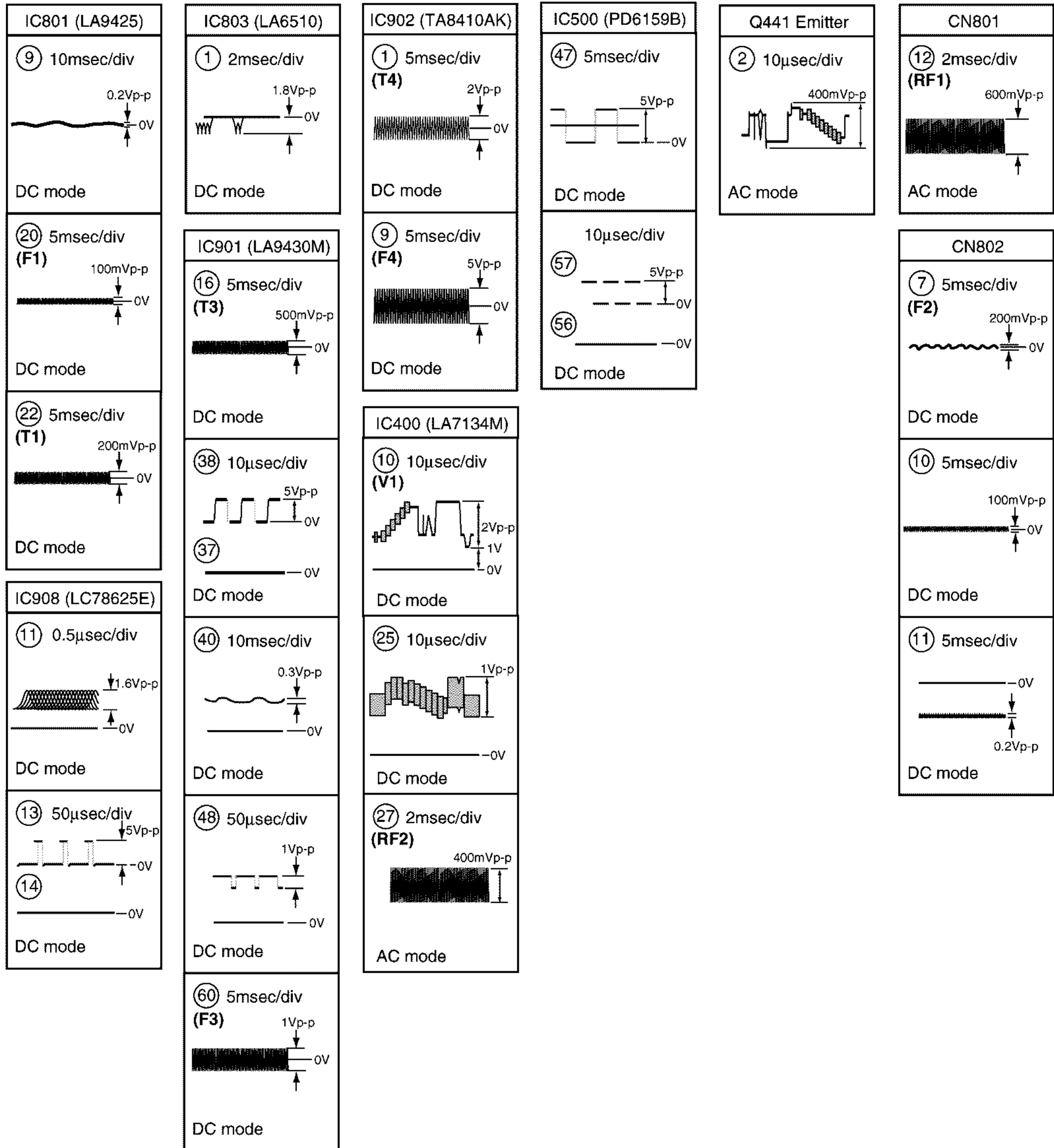


● WAVEFORMS AND VOLTAGES

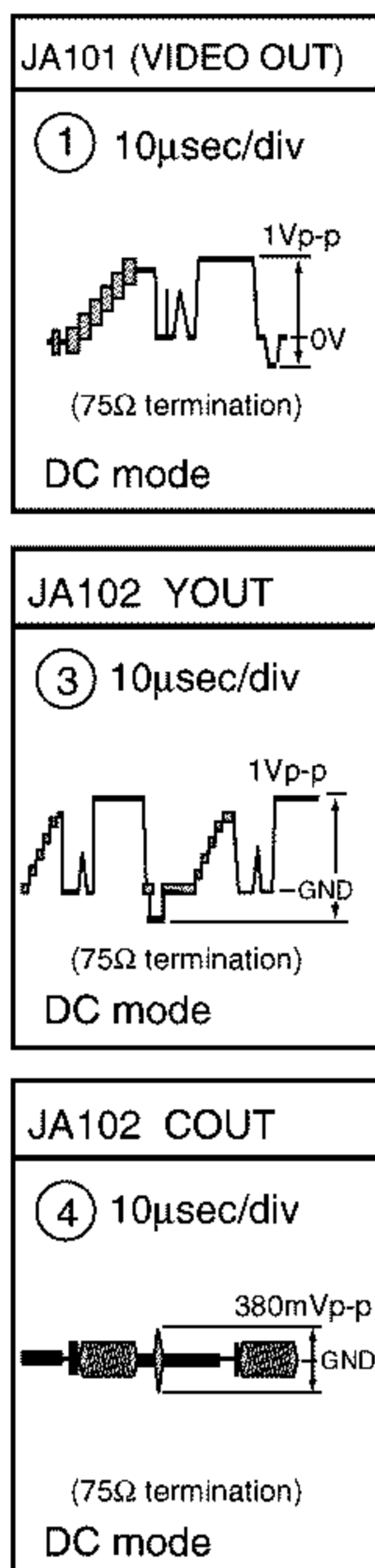
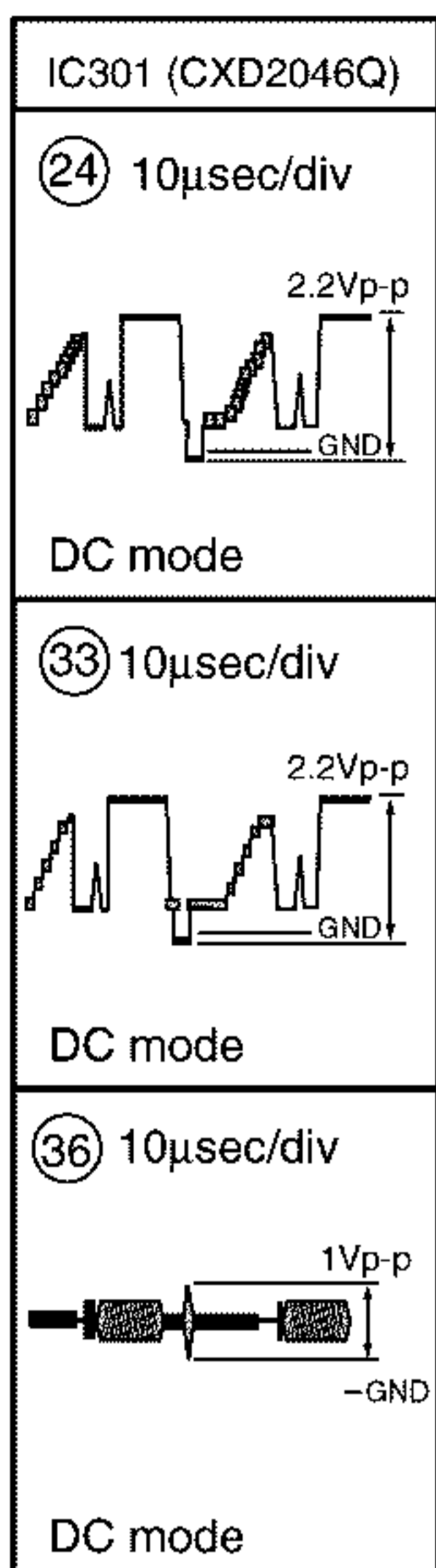
Note : (No) in the table correspond to the pin number.

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

CLDM ASSY

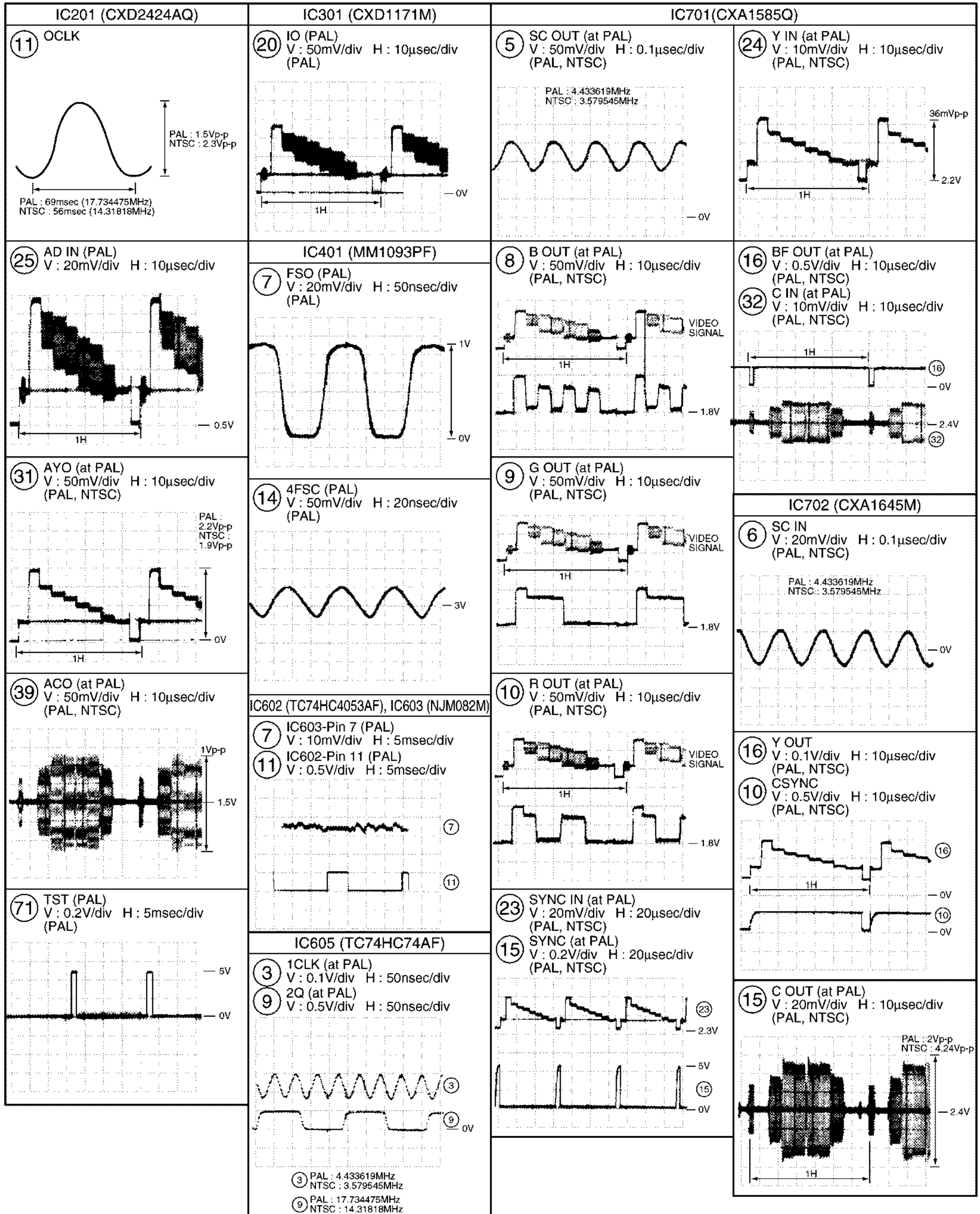


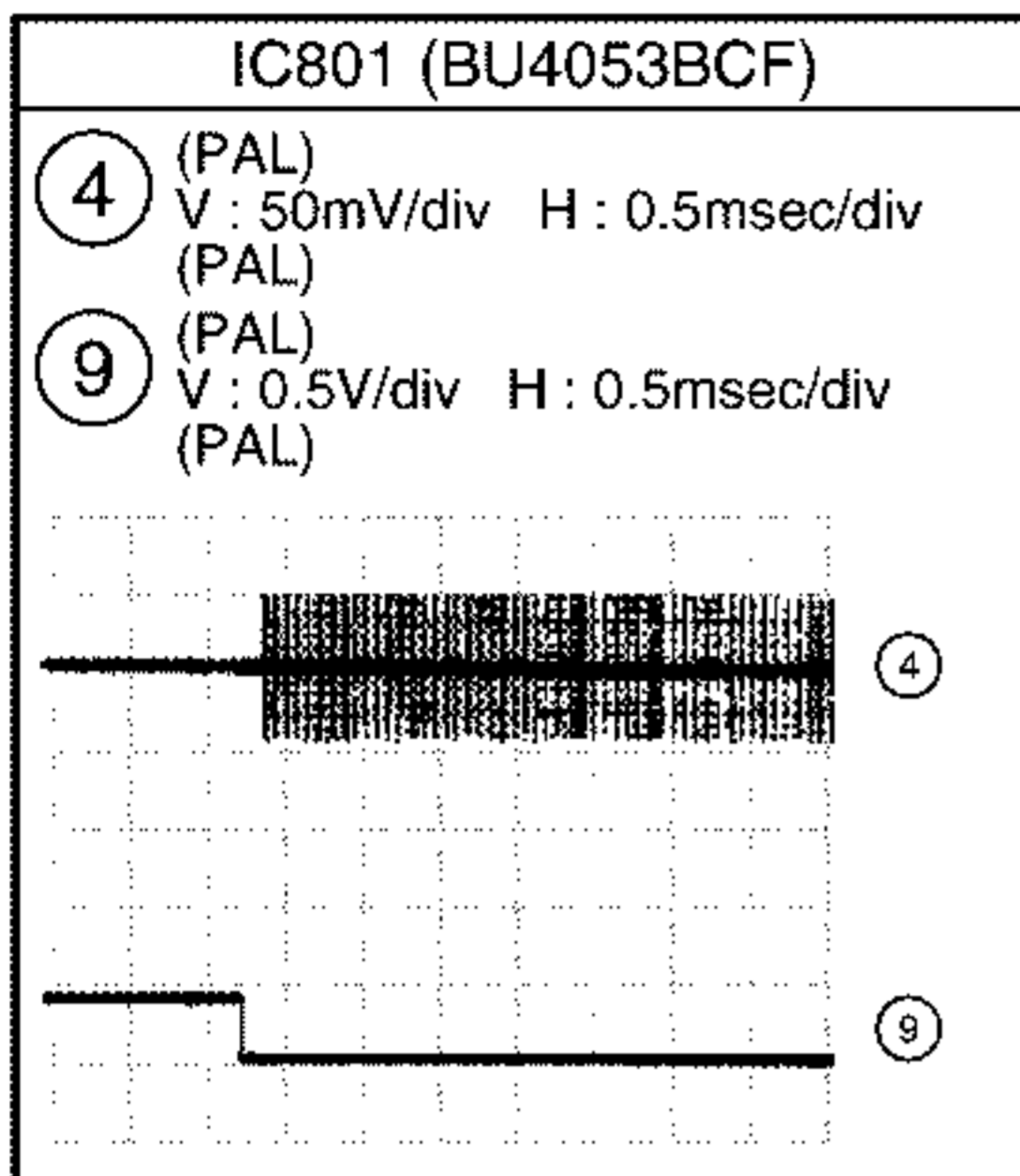
MYCB ASSY





DMYC ASSY





IC201 (CXD2024AQ)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	21	0	41	2.6	61	0
2	0	22	0.5	42	2.6	62	0
3	0	23	0	43	0	63	0
4	0	24	0	44	0	64	0
5	0	25	-	45	0	65	0
6	0	26	5	46	0	66	0
7	0	27	2.6	47	0	67	5
8	0	28	5	48	0	68	5
9	0	29	5	49	0	69	-
10	0	30	0	50	0	70	-
11	2.3	31	-	51	0	71	-
12	0	32	3.4	52	0	72	0
13	5	33	2.6	53	5	73	5
14	2.4	34	2.6	54	0	74	0
15	2.4	35	0	55	0	75	0
16	2.5	36	1.1	56	5	76	0
17	5	37	5	57	0	77	0
18	5	38	0	58	0	78	0
19	0	39	1.3	59	0	79	0
20	0	40	3.4	60	0	80	0

IC301 (CXD1171M)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	-	13	0
2	-	14	0
3	-	15	2.1
4	-	16	2.1
5	-	17	2.5
6	-	18	4
7	-	19	4
8	-	20	-
9	0	21	0
10	0	22	4
11	0.5	23	5
12	2.4	24	5

IC401 (MM1093PF)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	3.3	9	3.4
2	0.7	10	5
3	2.4	11	5
4	3.2	12	3.2
5	0	13	2
6	0	14	2.9
7	-	15	-
8	0	16	-

IC701 (CXA1585Q)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	2	17	3.1
2	3.4	18	3
3	3.1	19	2.5
4	3.2	20	3.1
5	1.6	21	3.1
6	0	22	4.2
7	5	23	2.5
8	2	24	2.5
9	2	25	0
10	2	26	0
11	0(NTSC) 2.3(PAL)	27	2.5
12	3.15	28	2.1
13	3.1	29	1.23
14	0(NTSC) 2.3(PAL)	30	2.5
15	H:4 over L:0.5 under	31	2.2
16	H:4 over L:0.5 under	32	2.3

IC702 (CXA1645M)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0*	13	2
2	2 (Black level at CLAMP)	14	4
3		15	2.2
4	-	16	1.3 (Black level)
5		17	1.6 (Black level)
6	-	18	2
7	1.7	19	5*
8	H:3.6 L:3.2	20	1.2 (Black level)
9	2.5	21	1.7 (Black level)
10	2.2	22	
11	-	23	
12	5*	24	0*

\* : External apply voltage.



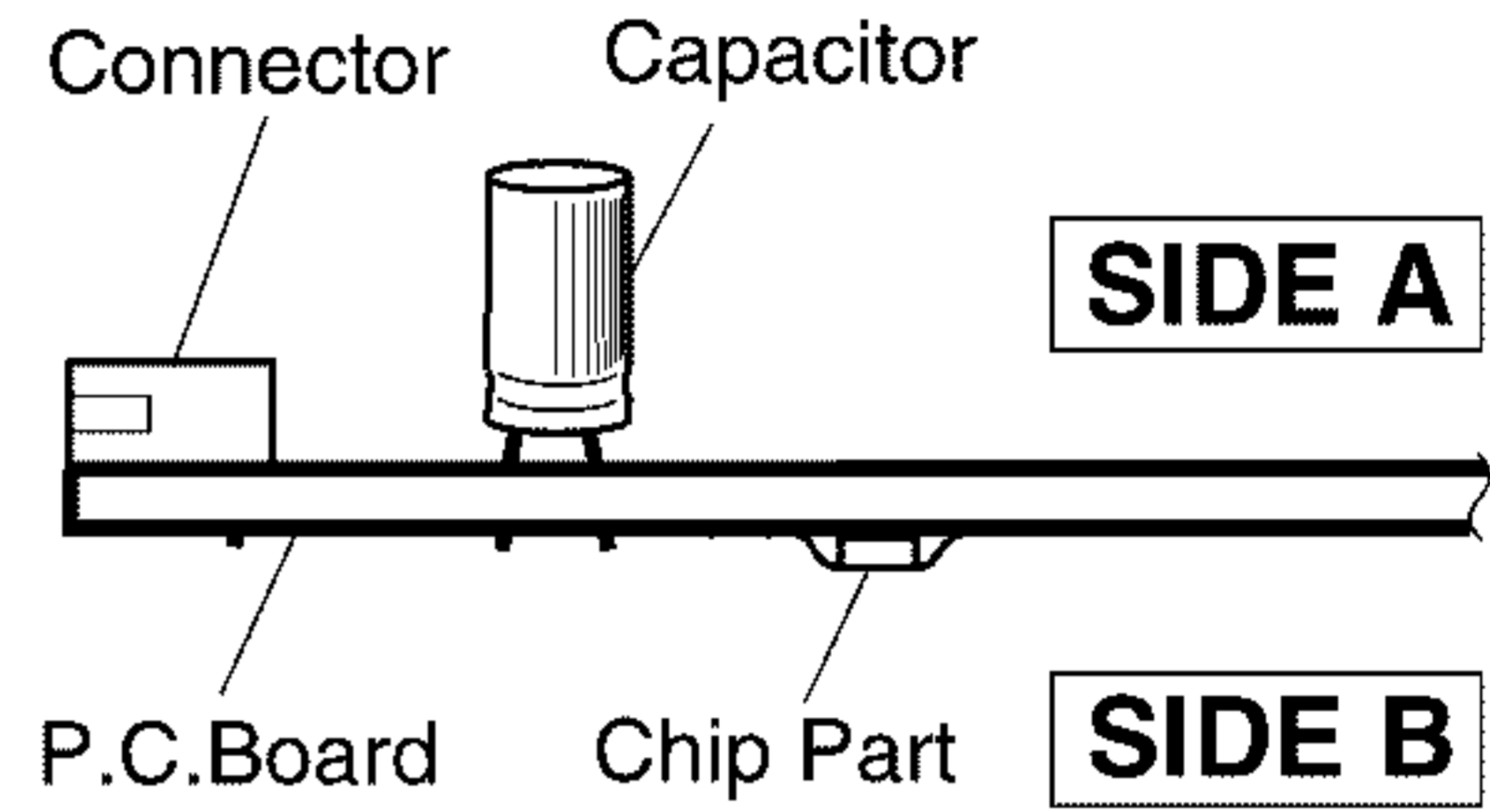
# 4. PCB CONNECTION DIAGRAM

## NOTE FOR PCB DIAGRAMS :

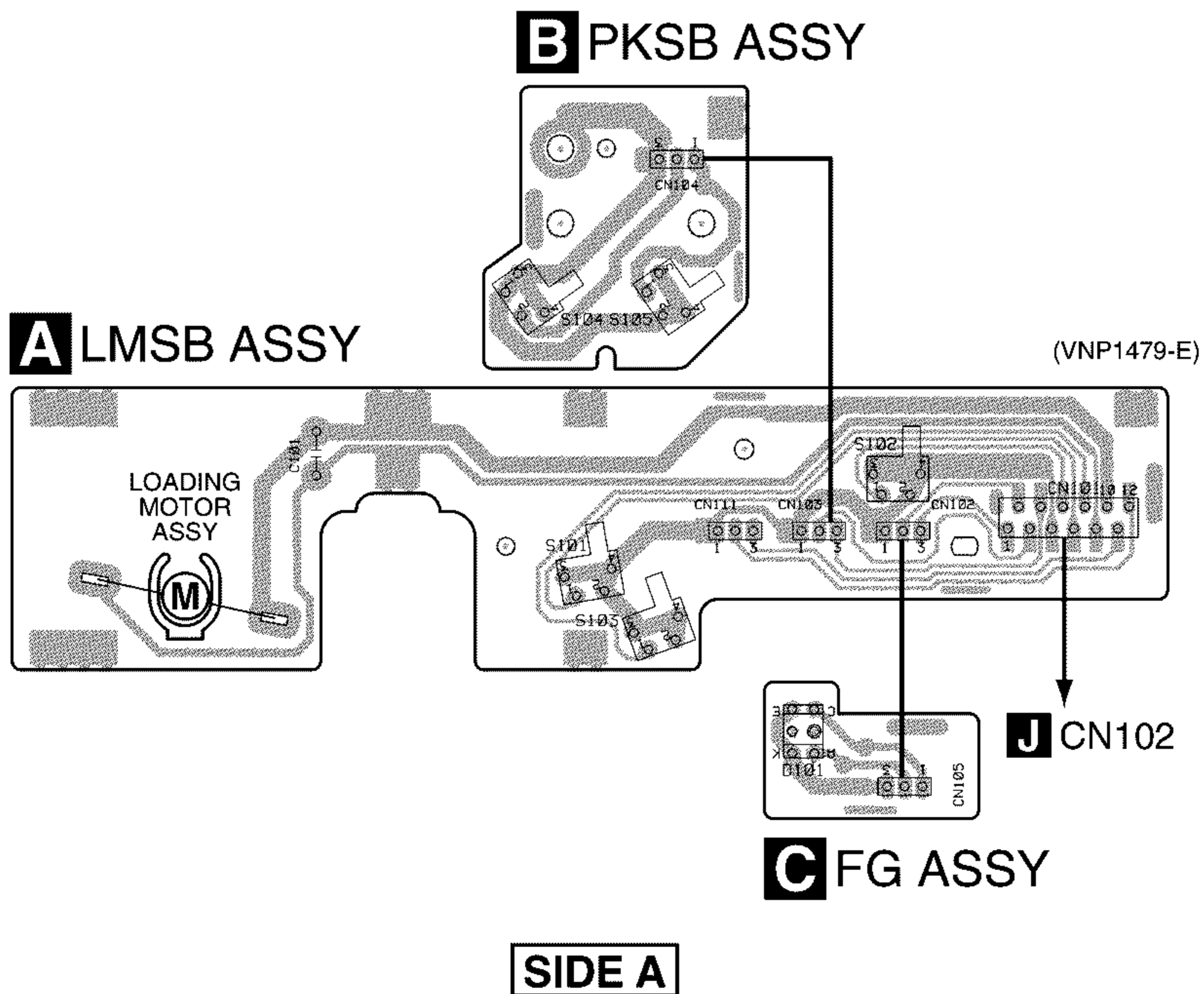
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

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

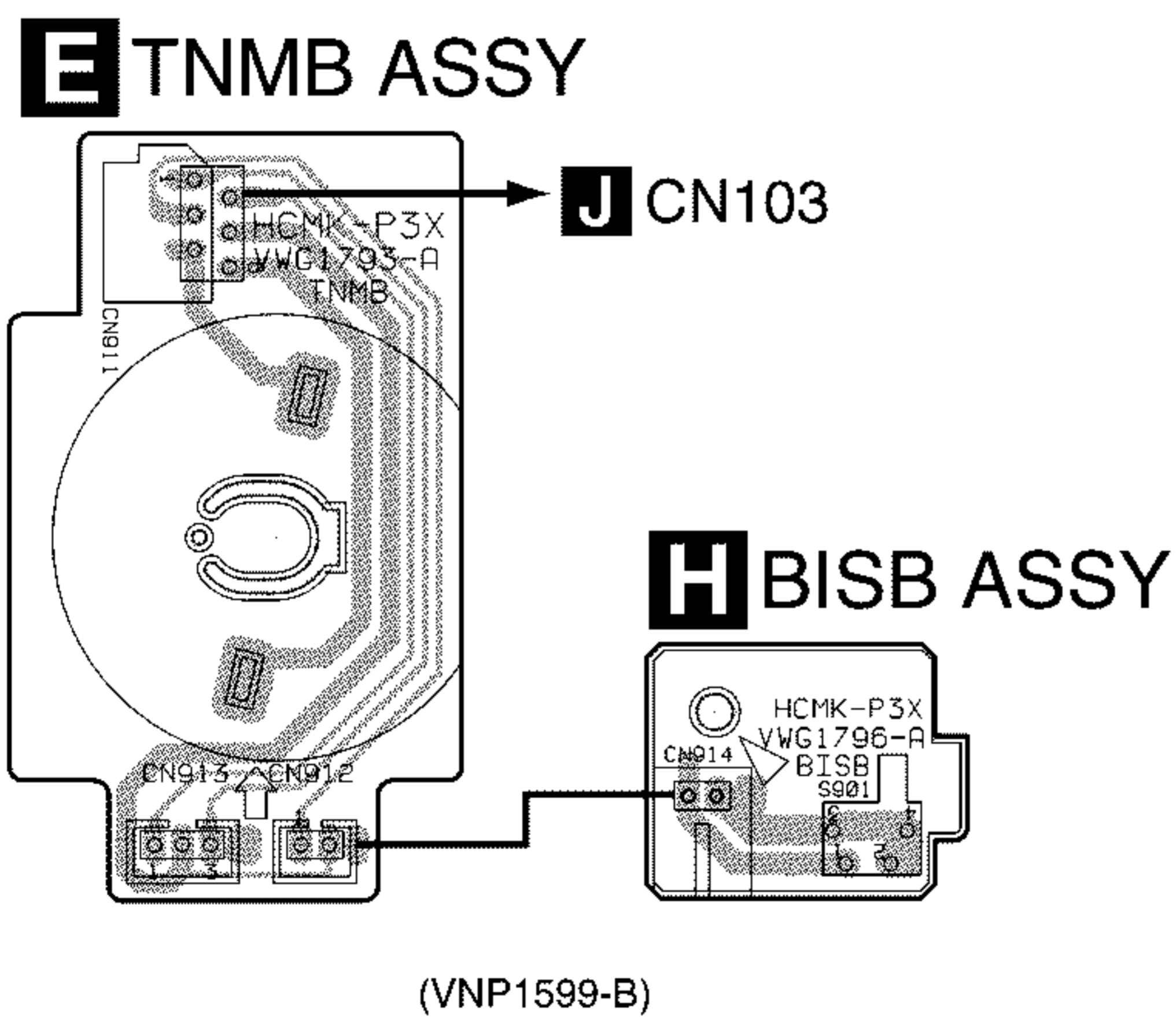
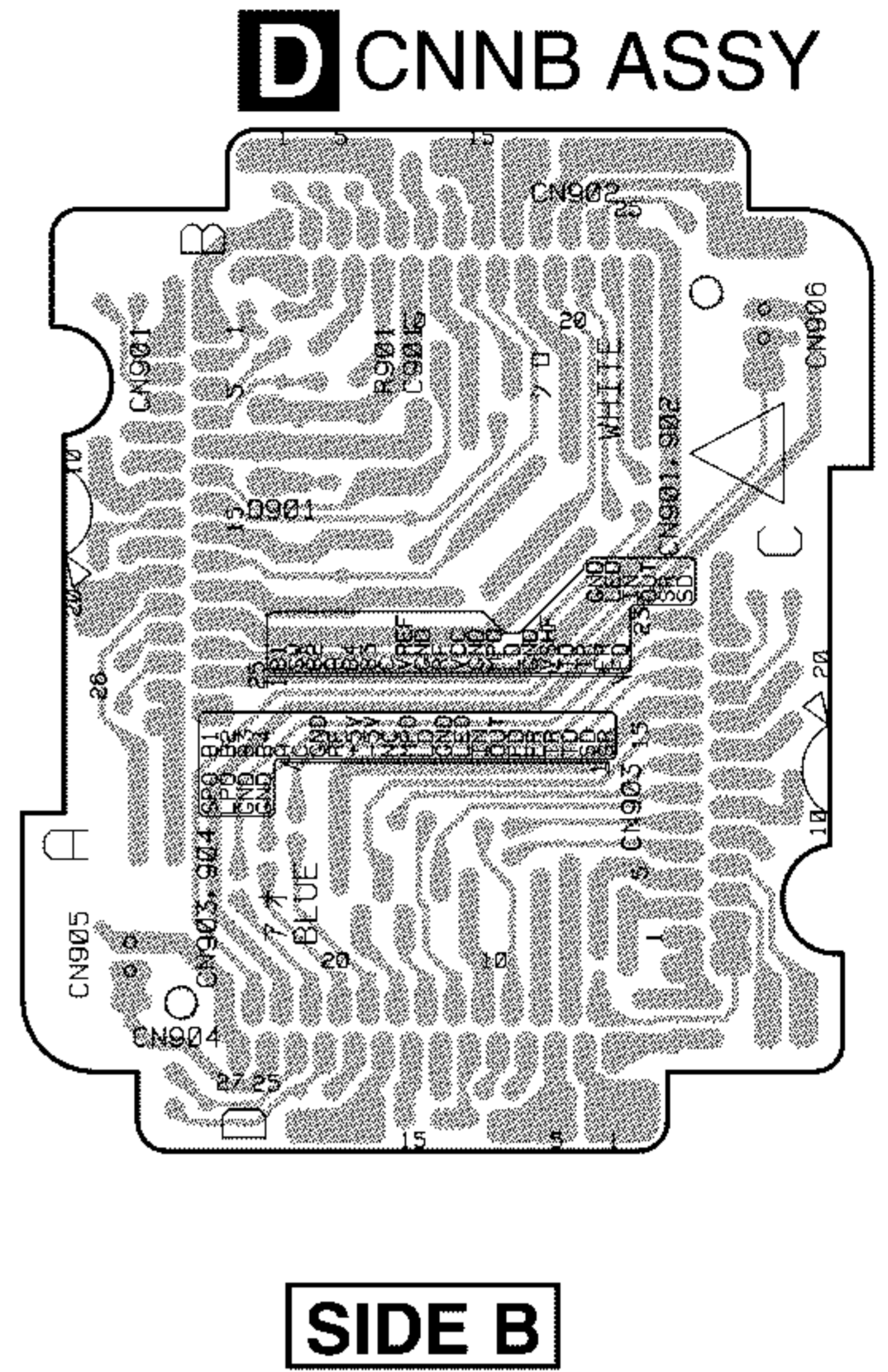
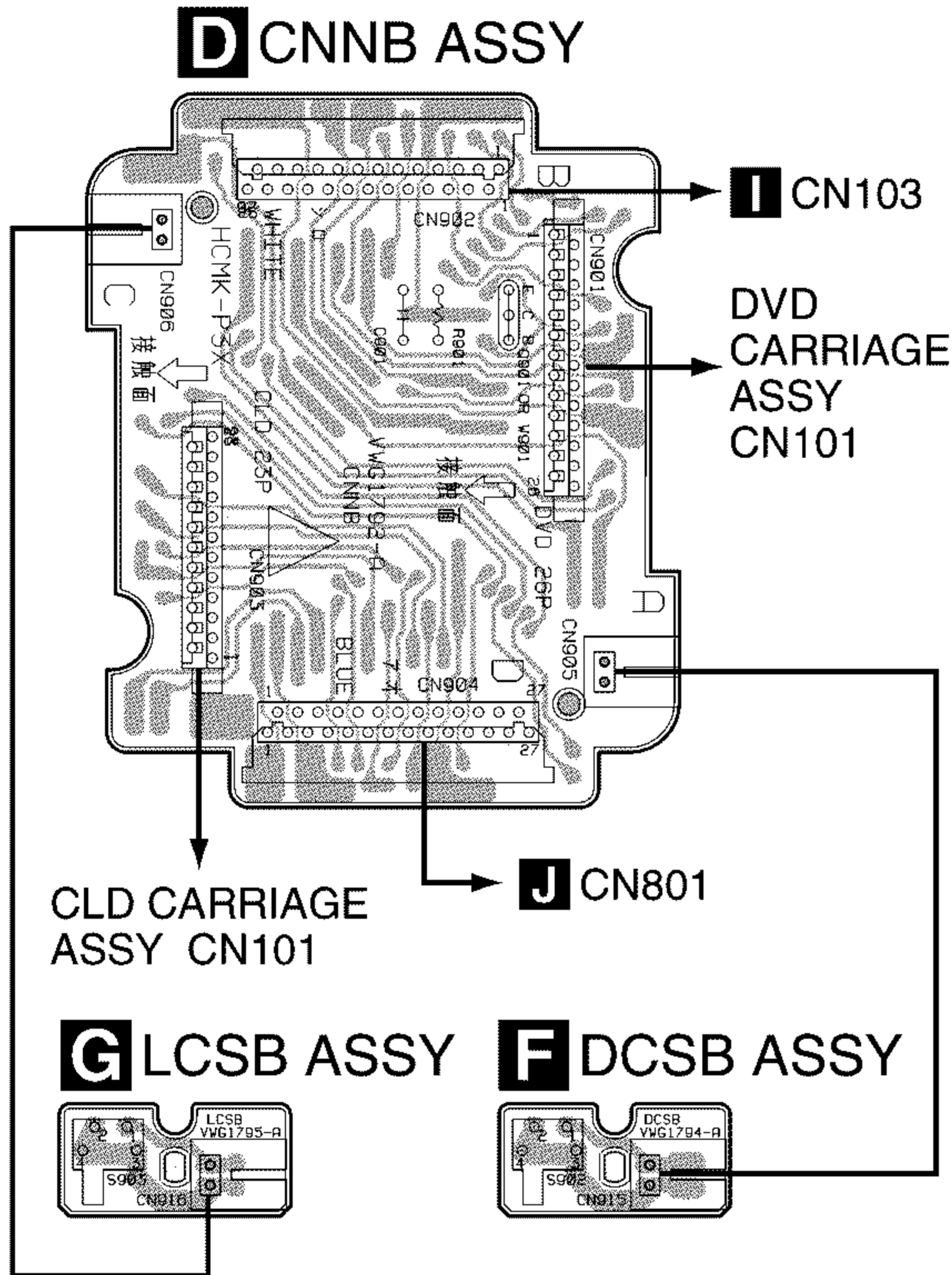
3. The parts mounted on this PCB include all necessary parts for several destinations.
- For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



## 4.1 LMSB, PKSB AND FG ASSEMBLIES



4.2 CNNB, TNMB, DCSB, LCSB AND BISB ASSEMBLIES



**SIDE A**



### 4.3 DVDM ASSY

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

**L** CN101   **R** CN202   **I** DVDM ASSY

A

B

C

D

IC601  
IC501  
Q401  
Q403

IC506  
IC401  
VC301

IC302  
IC303

Q301

IC701

IC203

IC202

IC807 IC806  
Q291  
IC204

IC801 IC151  
IC161  
IC271

IC171  
IC824  
Q802 IC206  
Q801 Q105  
IC902

IC815 IC816  
Q891 Q455  
IC813 Q102  
IC814 Q873

IC820  
IC810  
IC811

**J** CN111

**J** CN122

**J** CN201

**J** CN403 (WY, WY/RD)

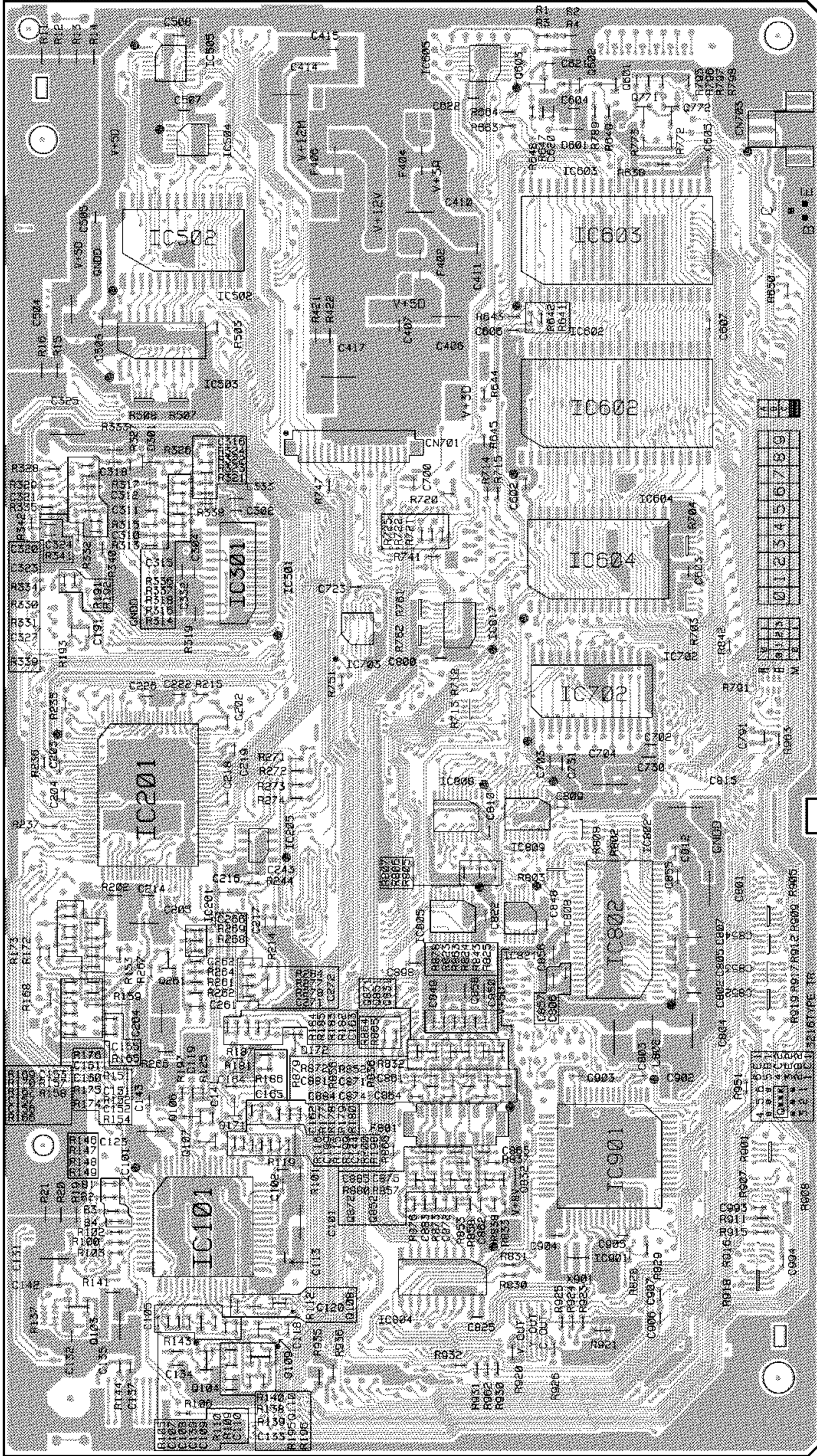
**D** CN902

**P** CN601  
(RL, RAM, RD/RA, RD/RC)

**SIDE A**



# DVDM ASSY



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

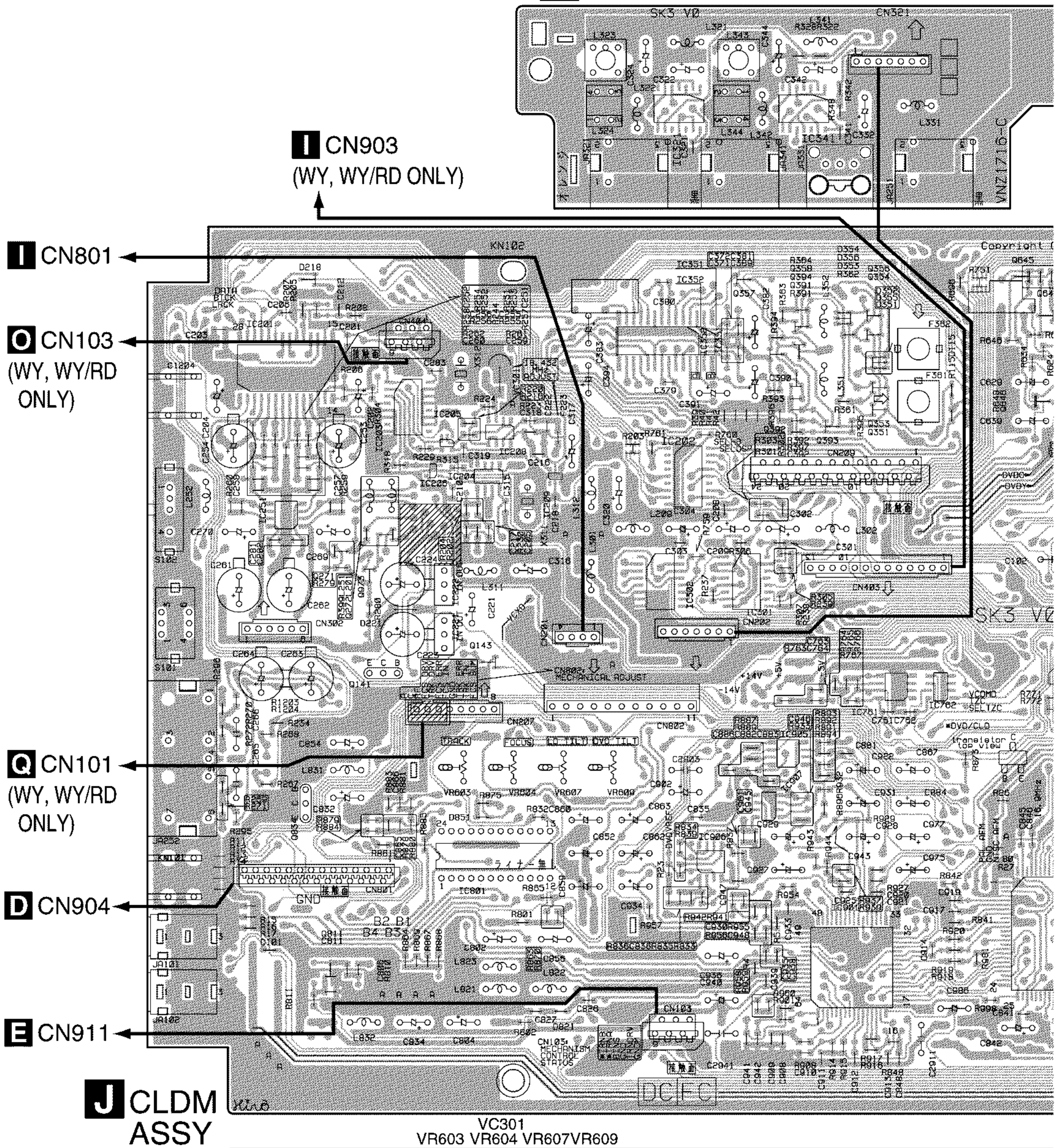
(VNP1624-C)

**SIDE B**



4.4 CLDM AND JCKB ASSEMBLIES

**K** JCKB ASSY



IC201	IC251	IC203—IC206	IC208	IC209	IC352	IC351	Q357	Q358	Q356	Q353	Q645—
Q834	Q271	Q973	Q272		IC202				Q354	Q351	
	Q811	Q141	IC222	Q143	IC302	IC301	Q391—	Q394	IC761	IC762	IC9
		IC221	IC801			IC905—IC907		IC901			

**SIDE A**



**O** CN101

(WY, WY/RD)

**P** CN101

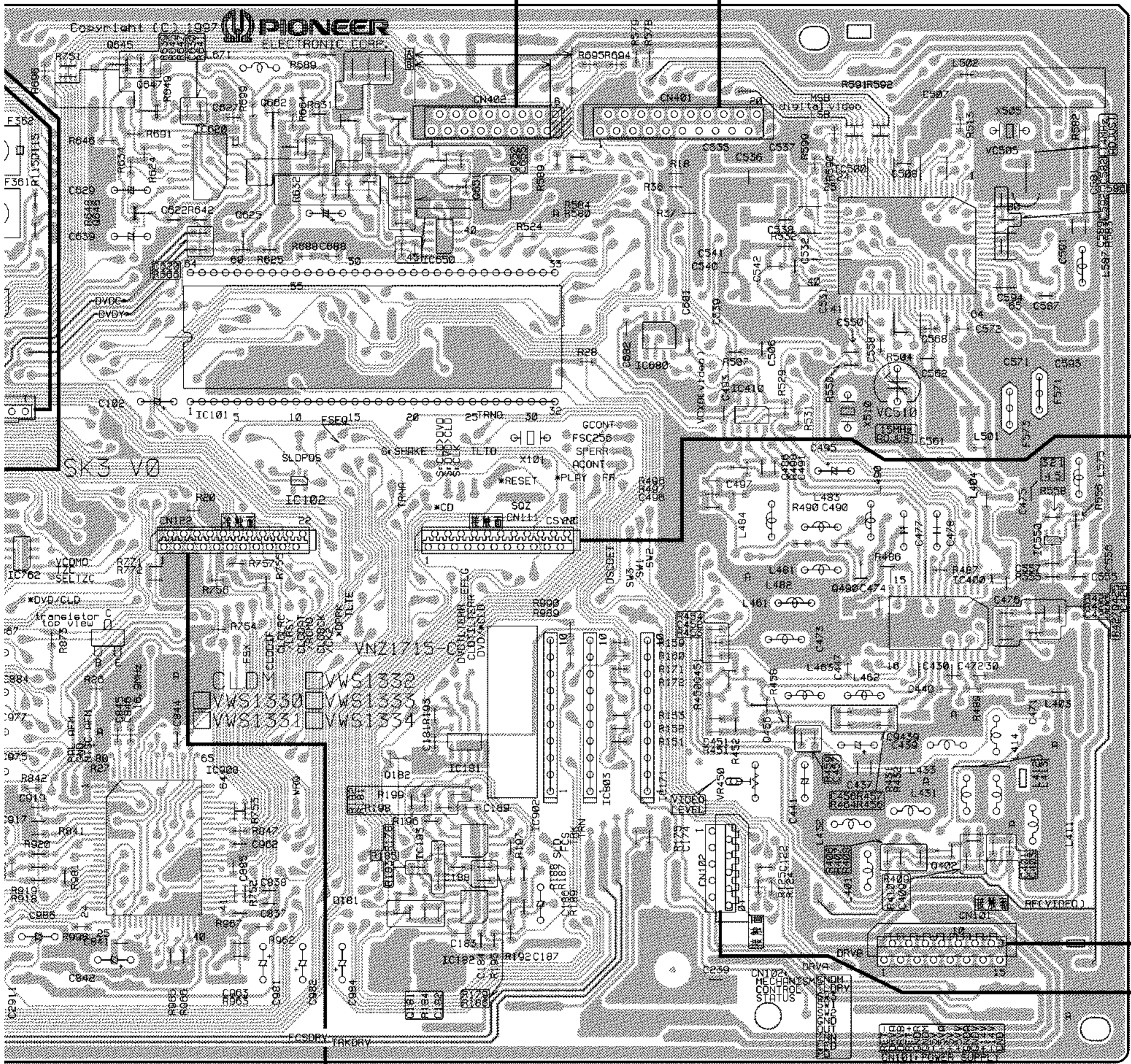
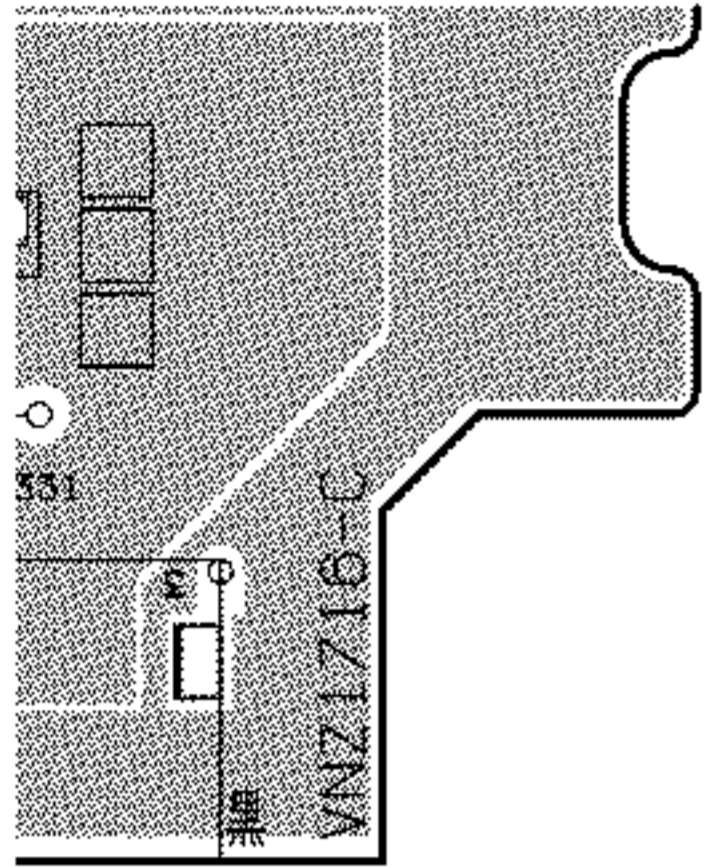
(RL, RAM, RD/RA, RD/RC)

**O** CN102

(WY, WY/RD)

**P** CN102

(RL, RAM, RD/RA, RD/RC)



**I** CN902

**R** CN203

**A** CN101

**I** CN901

- Q645—Q647 Q662 Q652 Q651 IC680 IC410 VC510 VC505
- IC762 IC620 Q625 IC101 IC102 Q182 IC181—IC183 Q451 Q456 IC500 IC400 IC550
- IC908 IC187 Q181 IC188 IC189 IC192 IC193 IC194 IC195 IC196 IC197 IC198 IC199 IC200 IC201 IC202 IC203 IC204 IC205 IC206 IC207 IC208 IC209 IC210 IC211 IC212 IC213 IC214 IC215 IC216 IC217 IC218 IC219 IC220 IC221 IC222 IC223 IC224 IC225 IC226 IC227 IC228 IC229 IC230 IC231 IC232 IC233 IC234 IC235 IC236 IC237 IC238 IC239 IC240 IC241 IC242 IC243 IC244 IC245 IC246 IC247 IC248 IC249 IC250 IC251 IC252 IC253 IC254 IC255 IC256 IC257 IC258 IC259 IC260 IC261 IC262 IC263 IC264 IC265 IC266 IC267 IC268 IC269 IC270 IC271 IC272 IC273 IC274 IC275 IC276 IC277 IC278 IC279 IC280 IC281 IC282 IC283 IC284 IC285 IC286 IC287 IC288 IC289 IC290 IC291 IC292 IC293 IC294 IC295 IC296 IC297 IC298 IC299 IC300 IC301 IC302 IC303 IC304 IC305 IC306 IC307 IC308 IC309 IC310 IC311 IC312 IC313 IC314 IC315 IC316 IC317 IC318 IC319 IC320 IC321 IC322 IC323 IC324 IC325 IC326 IC327 IC328 IC329 IC330 IC331 IC332 IC333 IC334 IC335 IC336 IC337 IC338 IC339 IC340 IC341 IC342 IC343 IC344 IC345 IC346 IC347 IC348 IC349 IC350 IC351 IC352 IC353 IC354 IC355 IC356 IC357 IC358 IC359 IC360 IC361 IC362 IC363 IC364 IC365 IC366 IC367 IC368 IC369 IC370 IC371 IC372 IC373 IC374 IC375 IC376 IC377 IC378 IC379 IC380 IC381 IC382 IC383 IC384 IC385 IC386 IC387 IC388 IC389 IC390 IC391 IC392 IC393 IC394 IC395 IC396 IC397 IC398 IC399 IC400 IC401 IC402 IC403 IC404 IC405 IC406 IC407 IC408 IC409 IC410 IC411 IC412 IC413 IC414 IC415 IC416 IC417 IC418 IC419 IC420 IC421 IC422 IC423 IC424 IC425 IC426 IC427 IC428 IC429 IC430 IC431 IC432 IC433 IC434 IC435 IC436 IC437 IC438 IC439 IC440 IC441 IC442 IC443 IC444 IC445 IC446 IC447 IC448 IC449 IC450 IC451 IC452 IC453 IC454 IC455 IC456 IC457 IC458 IC459 IC460 IC461 IC462 IC463 IC464 IC465 IC466 IC467 IC468 IC469 IC470 IC471 IC472 IC473 IC474 IC475 IC476 IC477 IC478 IC479 IC480 IC481 IC482 IC483 IC484 IC485 IC486 IC487 IC488 IC489 IC490 IC491 IC492 IC493 IC494 IC495 IC496 IC497 IC498 IC499 IC500 IC501 IC502 IC503 IC504 IC505 IC506 IC507 IC508 IC509 IC510 IC511 IC512 IC513 IC514 IC515 IC516 IC517 IC518 IC519 IC520 IC521 IC522 IC523 IC524 IC525 IC526 IC527 IC528 IC529 IC530 IC531 IC532 IC533 IC534 IC535 IC536 IC537 IC538 IC539 IC540 IC541 IC542 IC543 IC544 IC545 IC546 IC547 IC548 IC549 IC550 IC551 IC552 IC553 IC554 IC555 IC556 IC557 IC558 IC559 IC560 IC561 IC562 IC563 IC564 IC565 IC566 IC567 IC568 IC569 IC570 IC571 IC572 IC573 IC574 IC575 IC576 IC577 IC578 IC579 IC580 IC581 IC582 IC583 IC584 IC585 IC586 IC587 IC588 IC589 IC590 IC591 IC592 IC593 IC594 IC595 IC596 IC597 IC598 IC599 IC600 IC601 IC602 IC603 IC604 IC605 IC606 IC607 IC608 IC609 IC610 IC611 IC612 IC613 IC614 IC615 IC616 IC617 IC618 IC619 IC620 IC621 IC622 IC623 IC624 IC625 IC626 IC627 IC628 IC629 IC630 IC631 IC632 IC633 IC634 IC635 IC636 IC637 IC638 IC639 IC640 IC641 IC642 IC643 IC644 IC645 IC646 IC647 IC648 IC649 IC650 IC651 IC652 IC653 IC654 IC655 IC656 IC657 IC658 IC659 IC660 IC661 IC662 IC663 IC664 IC665 IC666 IC667 IC668 IC669 IC670 IC671 IC672 IC673 IC674 IC675 IC676 IC677 IC678 IC679 IC680 IC681 IC682 IC683 IC684 IC685 IC686 IC687 IC688 IC689 IC690 IC691 IC692 IC693 IC694 IC695 IC696 IC697 IC698 IC699 IC700 IC701 IC702 IC703 IC704 IC705 IC706 IC707 IC708 IC709 IC710 IC711 IC712 IC713 IC714 IC715 IC716 IC717 IC718 IC719 IC720 IC721 IC722 IC723 IC724 IC725 IC726 IC727 IC728 IC729 IC730 IC731 IC732 IC733 IC734 IC735 IC736 IC737 IC738 IC739 IC740 IC741 IC742 IC743 IC744 IC745 IC746 IC747 IC748 IC749 IC750 IC751 IC752 IC753 IC754 IC755 IC756 IC757 IC758 IC759 IC760 IC761 IC762 IC763 IC764 IC765 IC766 IC767 IC768 IC769 IC770 IC771 IC772 IC773 IC774 IC775 IC776 IC777 IC778 IC779 IC780 IC781 IC782 IC783 IC784 IC785 IC786 IC787 IC788 IC789 IC790 IC791 IC792 IC793 IC794 IC795 IC796 IC797 IC798 IC799 IC800 IC801 IC802 IC803 IC804 IC805 IC806 IC807 IC808 IC809 IC810 IC811 IC812 IC813 IC814 IC815 IC816 IC817 IC818 IC819 IC820 IC821 IC822 IC823 IC824 IC825 IC826 IC827 IC828 IC829 IC830 IC831 IC832 IC833 IC834 IC835 IC836 IC837 IC838 IC839 IC840 IC841 IC842 IC843 IC844 IC845 IC846 IC847 IC848 IC849 IC850 IC851 IC852 IC853 IC854 IC855 IC856 IC857 IC858 IC859 IC860 IC861 IC862 IC863 IC864 IC865 IC866 IC867 IC868 IC869 IC870 IC871 IC872 IC873 IC874 IC875 IC876 IC877 IC878 IC879 IC880 IC881 IC882 IC883 IC884 IC885 IC886 IC887 IC888 IC889 IC890 IC891 IC892 IC893 IC894 IC895 IC896 IC897 IC898 IC899 IC900 IC901 IC902 IC903 IC904 IC905 IC906 IC907 IC908 IC909 IC910 IC911 IC912 IC913 IC914 IC915 IC916 IC917 IC918 IC919 IC920 IC921 IC922 IC923 IC924 IC925 IC926 IC927 IC928 IC929 IC930 IC931 IC932 IC933 IC934 IC935 IC936 IC937 IC938 IC939 IC940 IC941 IC942 IC943 IC944 IC945 IC946 IC947 IC948 IC949 IC950 IC951 IC952 IC953 IC954 IC955 IC956 IC957 IC958 IC959 IC960 IC961 IC962 IC963 IC964 IC965 IC966 IC967 IC968 IC969 IC970 IC971 IC972 IC973 IC974 IC975 IC976 IC977 IC978 IC979 IC980 IC981 IC982 IC983 IC984 IC985 IC986 IC987 IC988 IC989 IC990 IC991 IC992 IC993 IC994 IC995 IC996 IC997 IC998 IC999 IC1000

(VNP1630-C)

**SIDE A**

**J K**



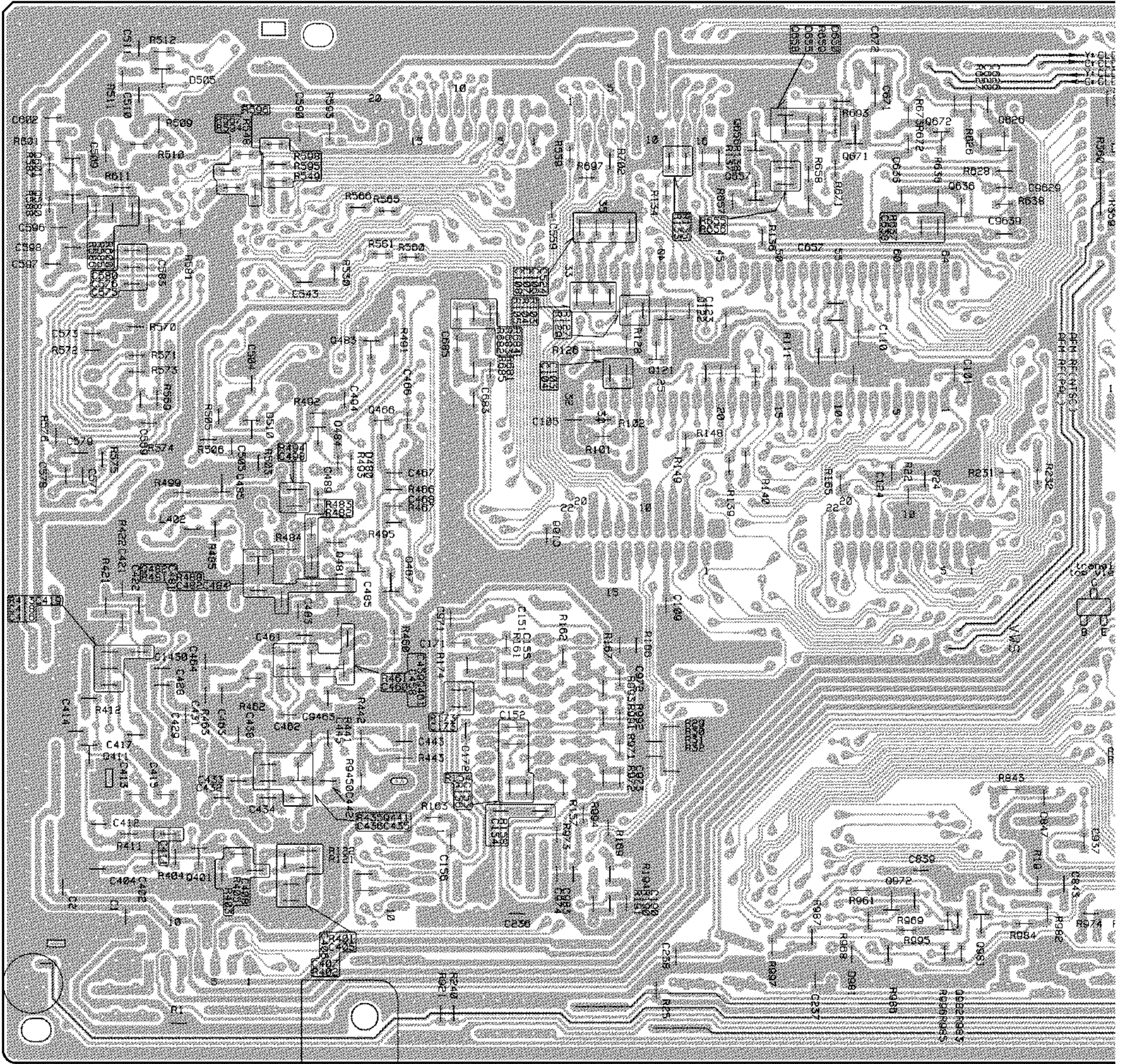
A

B

C

D

# J CLDM ASSY



- Q601 Q485 Q484 Q483 Q122 Q656-Q658 Q671 Q672 Q626
- Q580 Q482 Q481 Q466 Q121 Q636
- Q411 Q401 Q461 Q467 Q972 Q982 Q981
- Q441

**SIDE B**

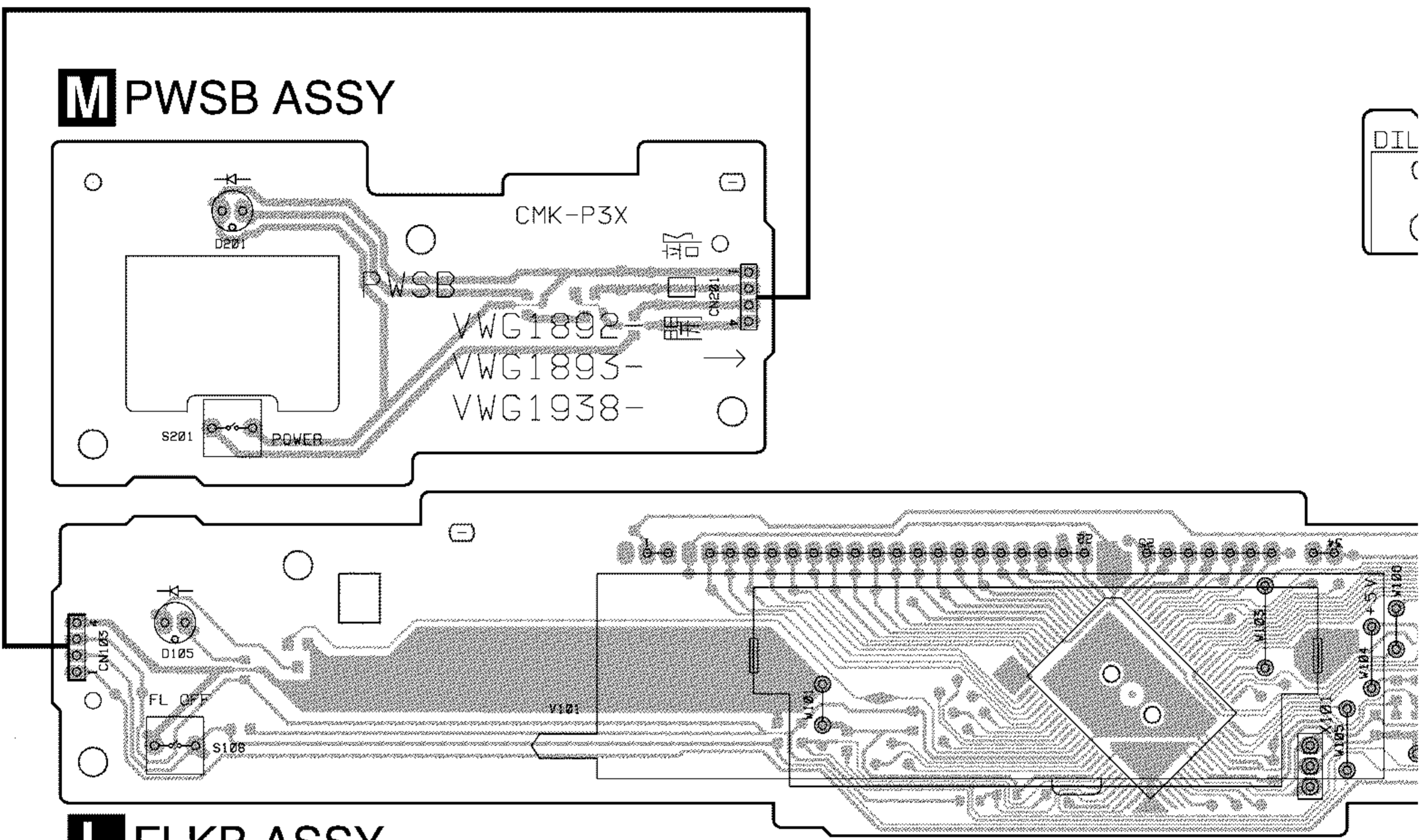






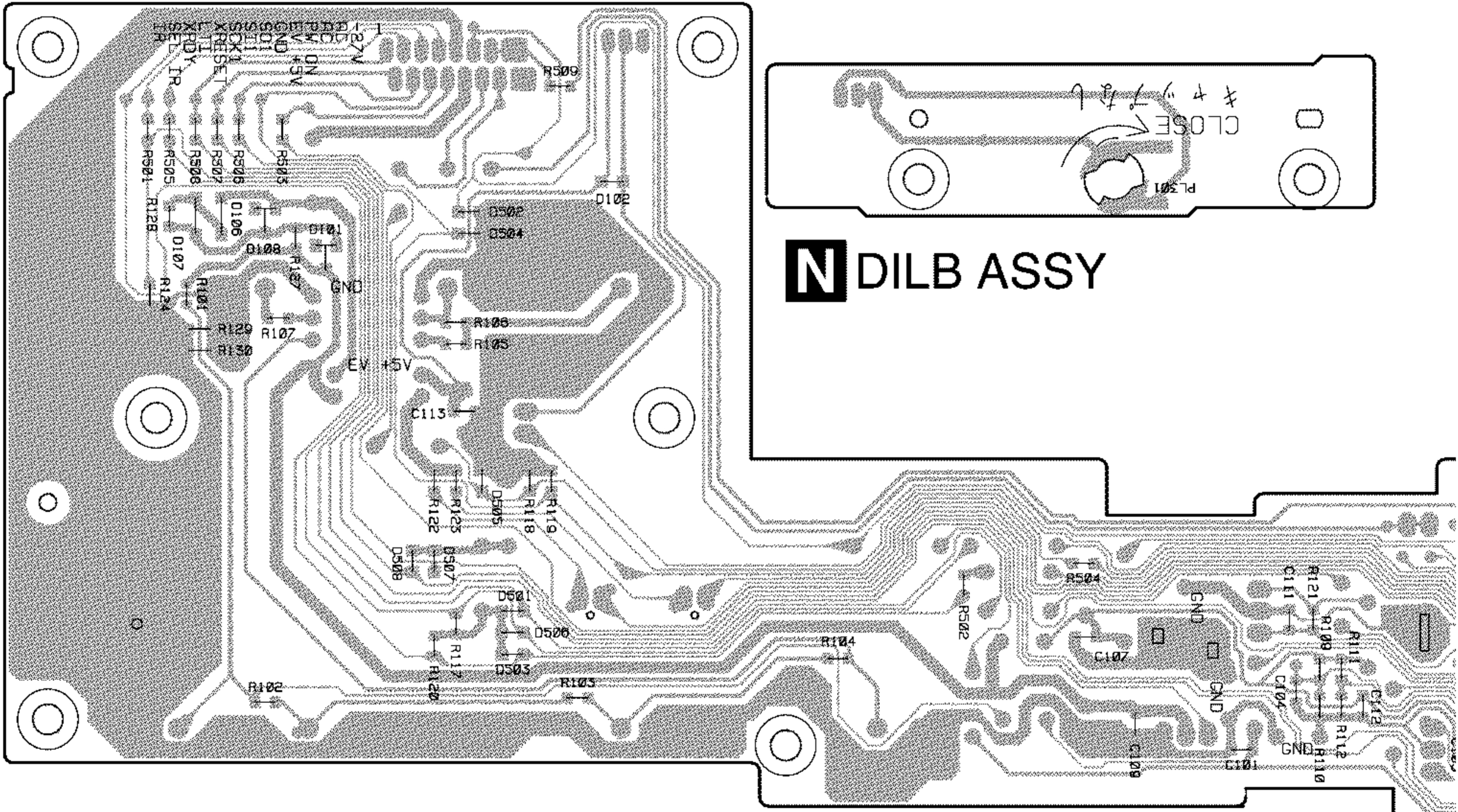
4.5 FLKB, PWSB AND DILB ASSEMBLIES

A

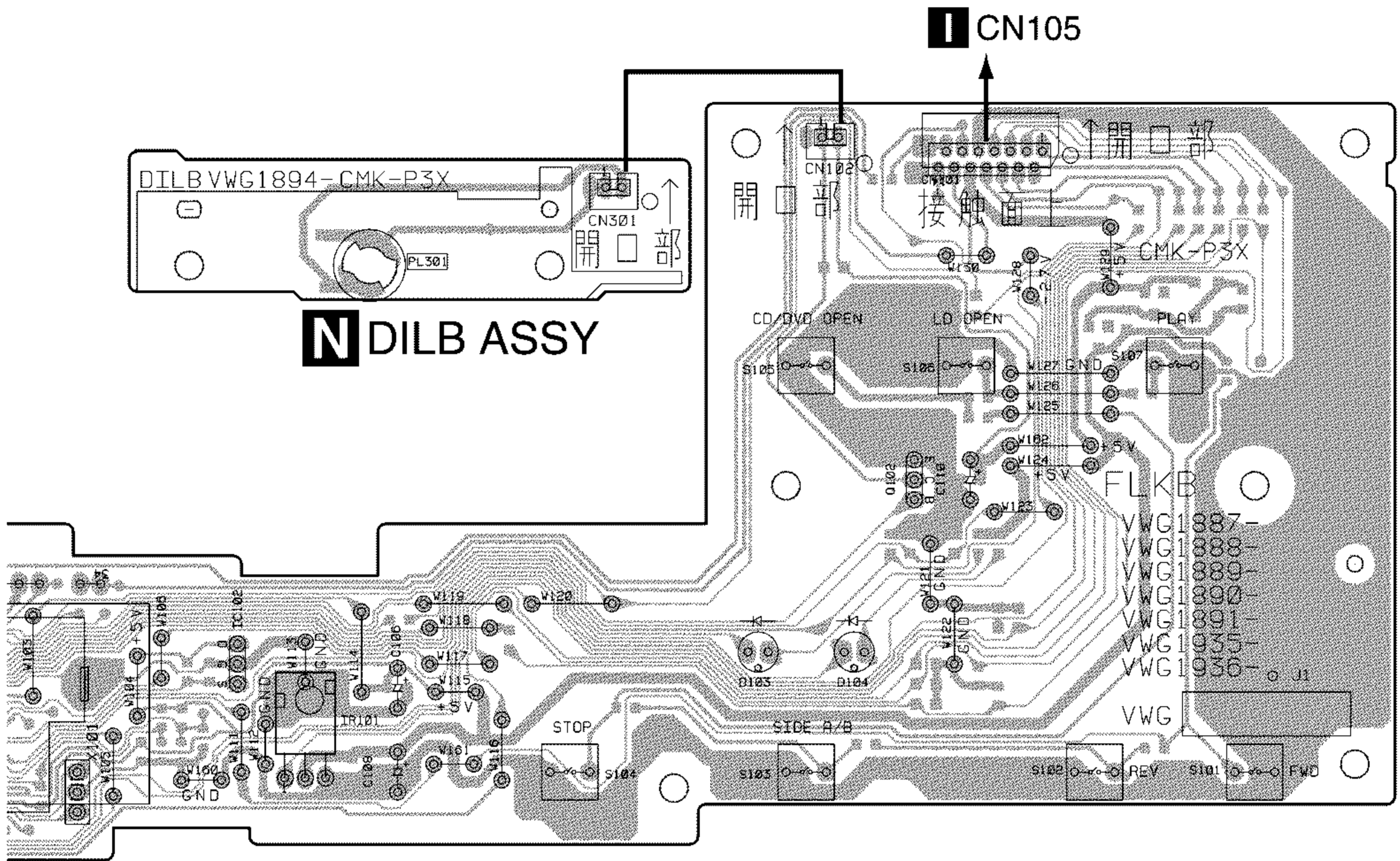


**SIDE A**

C



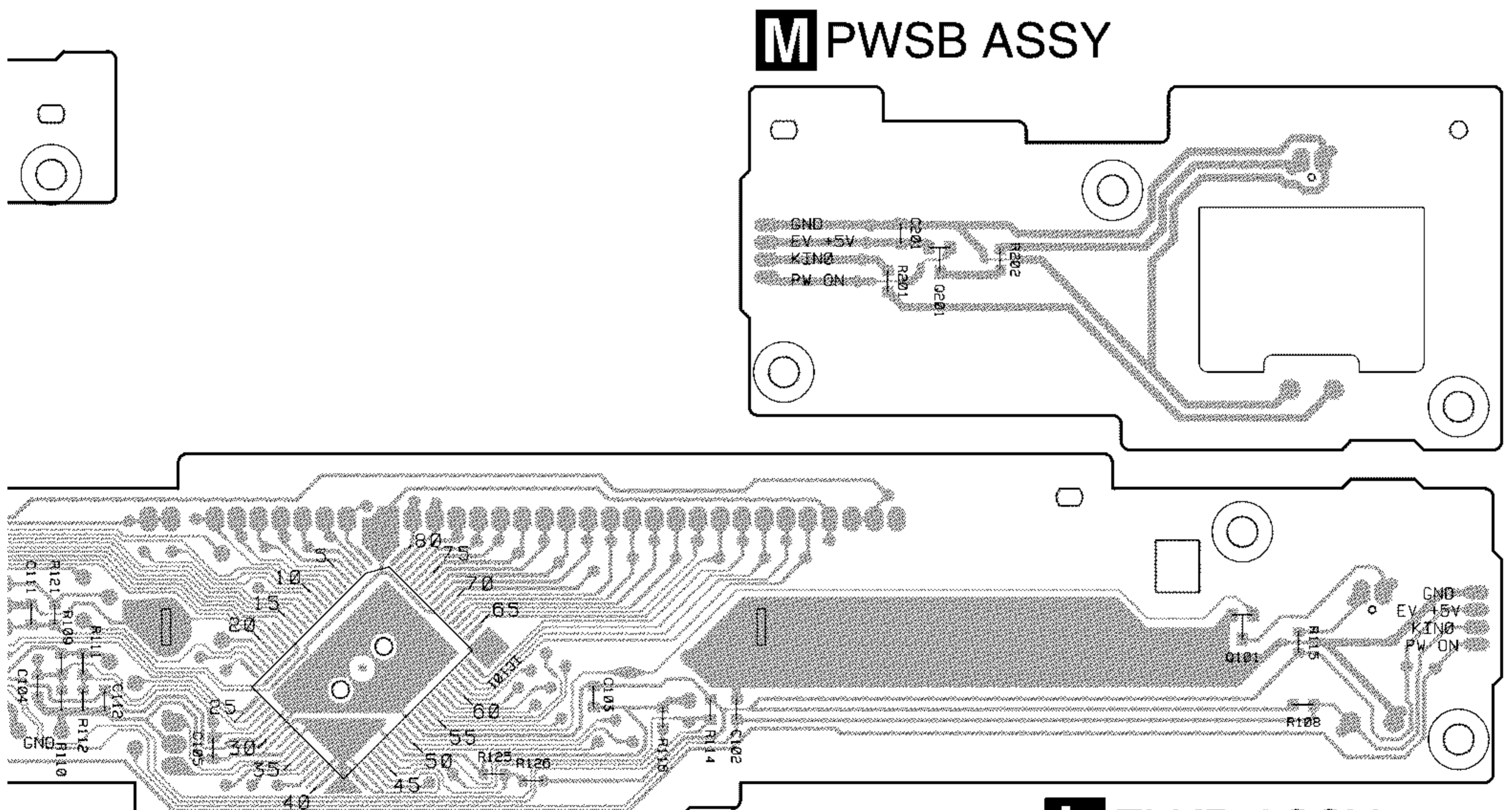




**N** DILB ASSY

**SIDE A**

(VNP1631-B)



**M** PWSB ASSY

**SIDE B**

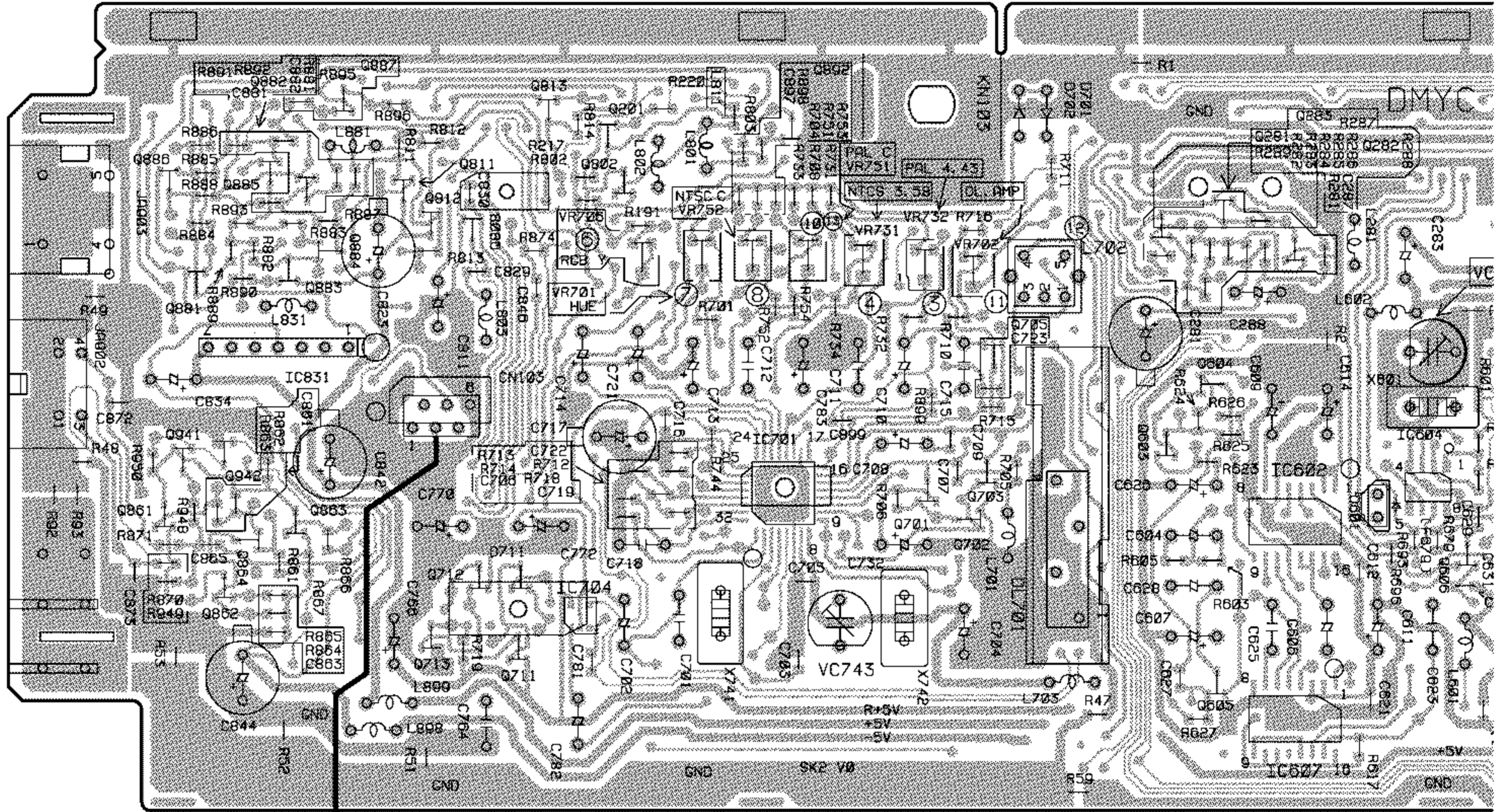
**L** FLKB ASSY



4.6 DMYC ASSY (WY AND WY/RD TYPES ONLY)

- |   |
|---|
| Q886 Q885 Q882 Q887 Q811 Q813 Q201 Q892 Q281 - Q283             |
| Q881 Q883 Q884 Q812 Q808 Q802 Q603 Q604 IC604                   |
| Q941 Q942 IC831 Q705 IC602                                      |
| Q861 - Q864 Q711 - Q713 IC704 IC701 Q701 - Q703 Q605 IC607 Q606 |
| VR701 VR752 VR751 VR732 VR706 VC743 VR731 VR702 VC651           |

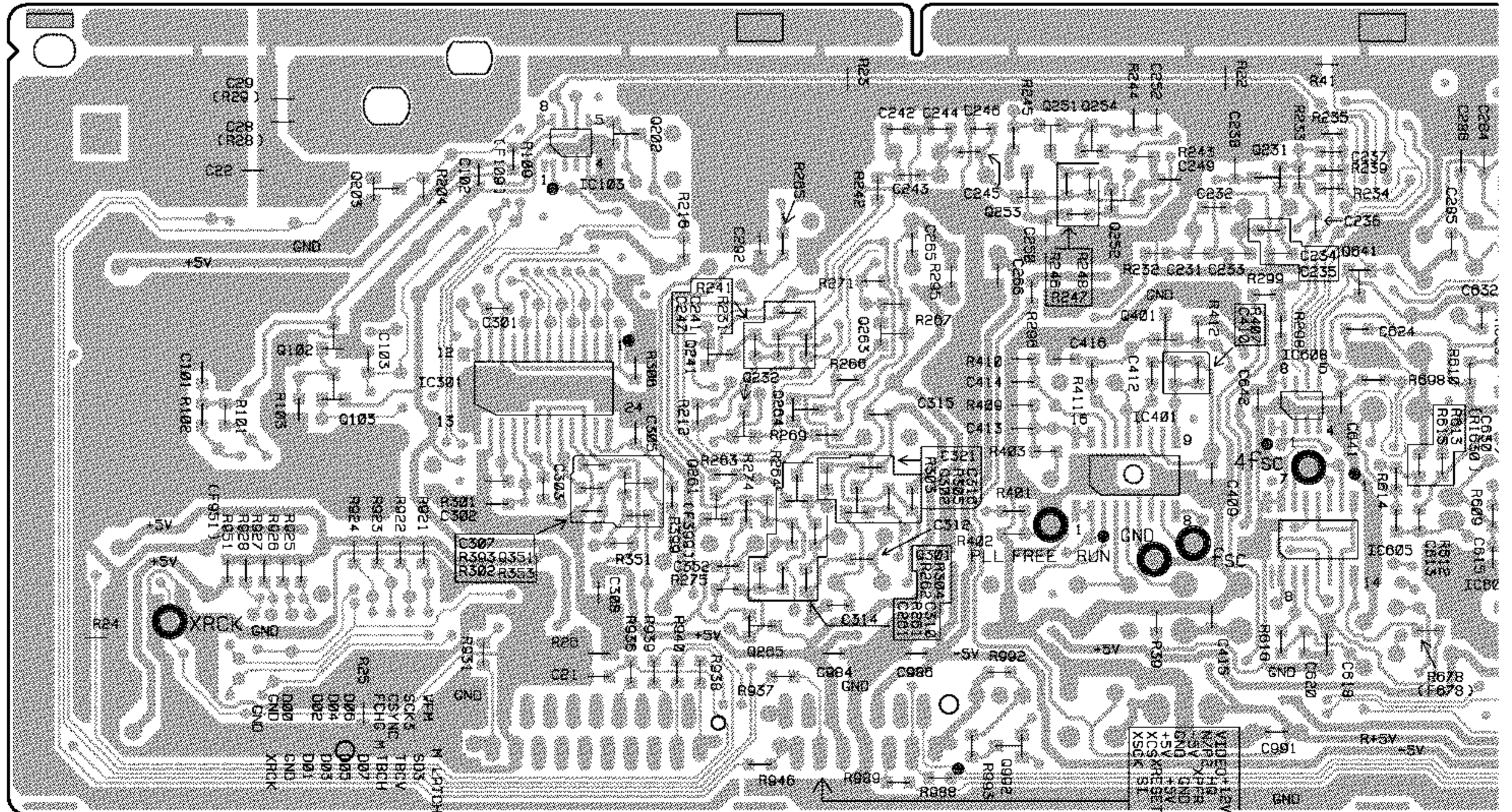
**DMYC ASSY**



**SIDE A**

- |                |  |                        |                       |
|----------------|--|------------------------|-----------------------|
| Q203 Q102 Q103 | IC103 Q202 IC301                             | Q251 - Q254 IC401 Q401 | Q231 Q641 IC608 IC605 |
|                | Q241 Q232 Q264 Q263 Q351 Q261 Q301 Q302 Q265 | Q992                   |                       |

**DMYC ASSY**



**SIDE B**

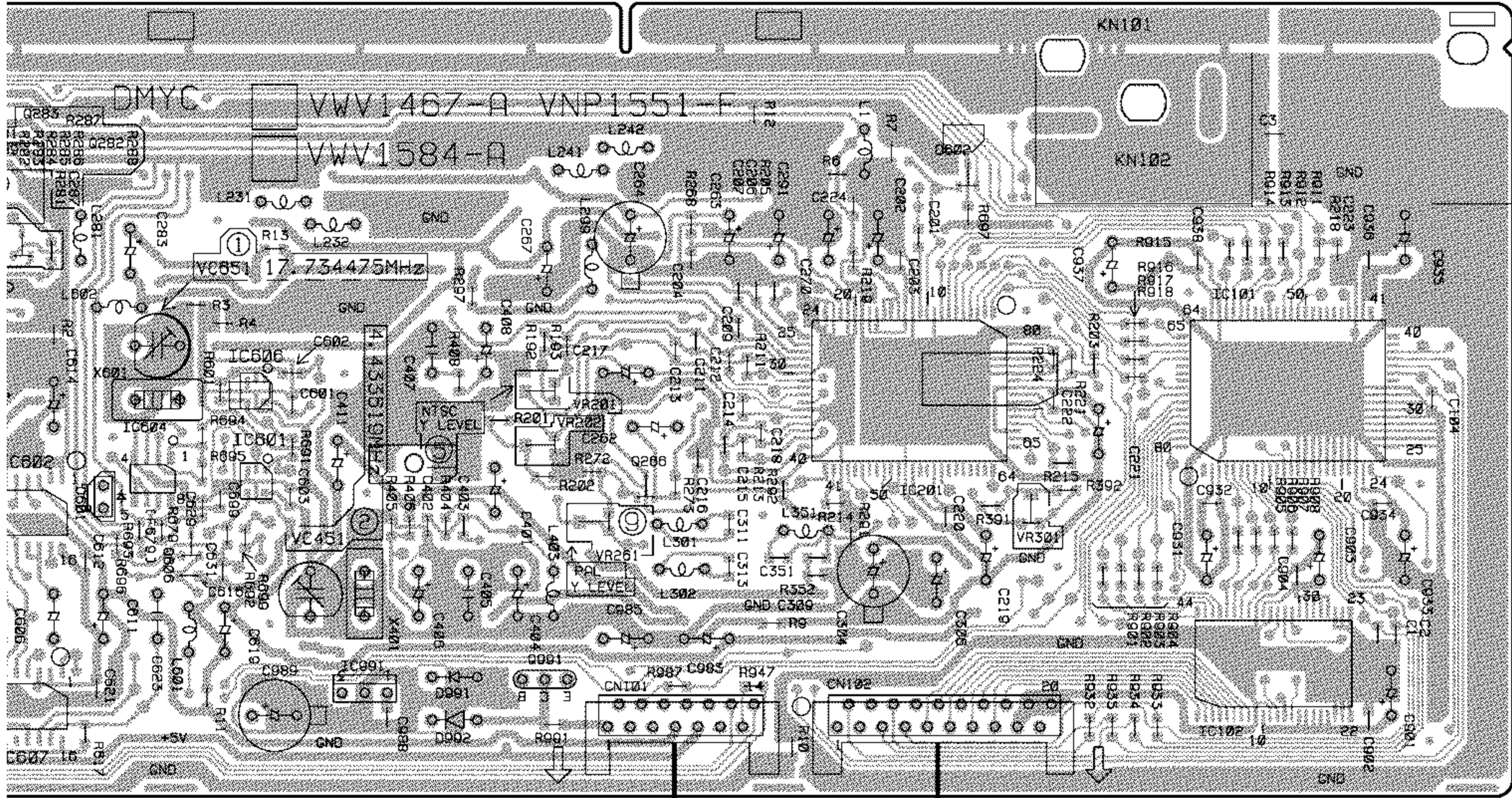
56 **DMYC ASSY (WY AND WY/RD TYPES ONLY)**



83

IC604	IC606					
Q602	IC601		Q266	IC201	IC101	
Q607	Q606	IC991	Q991		IC102	

VC651		VR201		VR301
VC451		VR202 VR261		



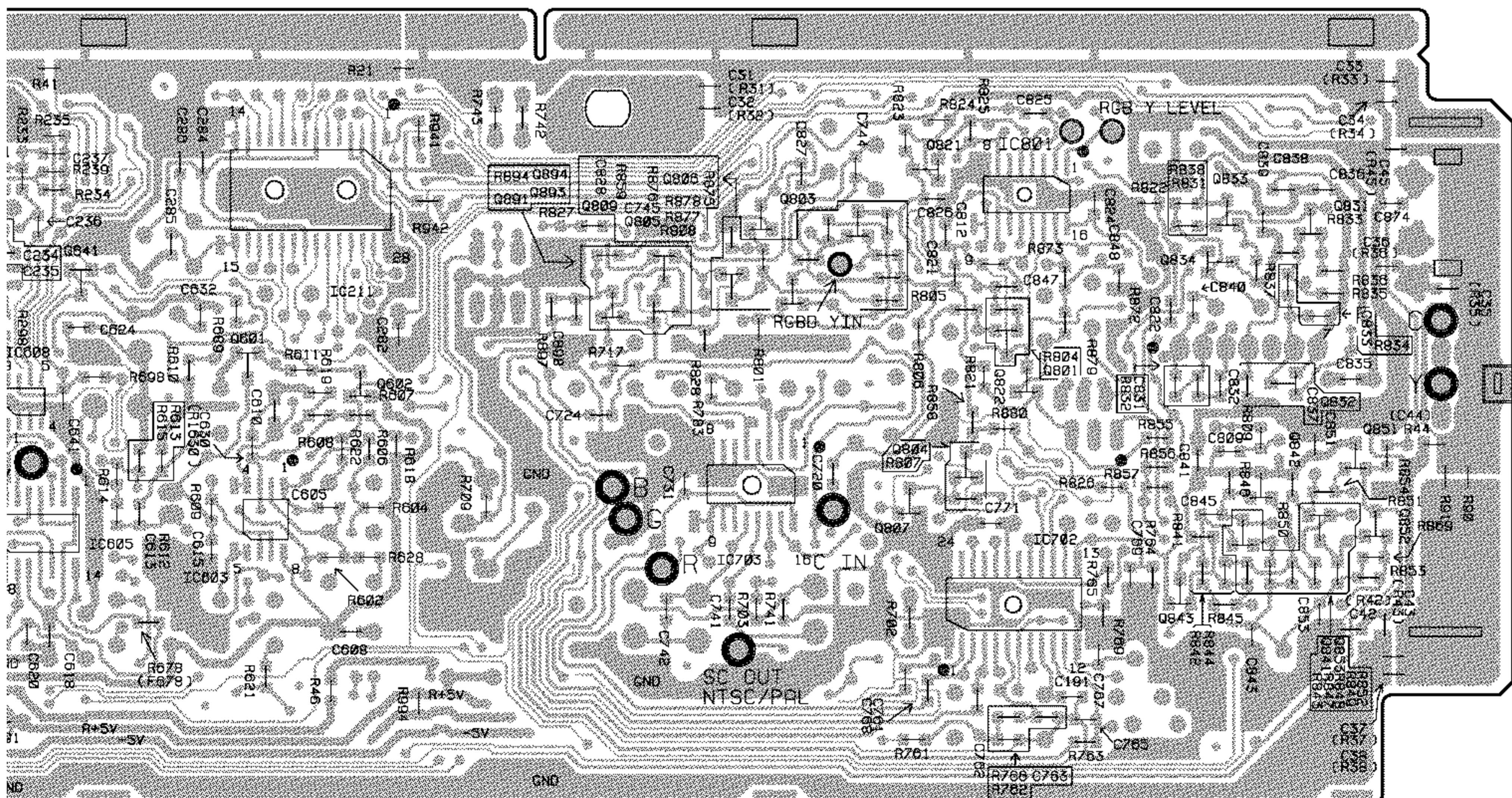
J CN402

J CN401

SIDE A

(VNP1551-F)

Q641	IC211	Q894	Q803	Q806	Q821	IC801	Q834	Q833	Q831	
C608	Q601	Q602	Q891	Q893	Q805	Q804	Q801	Q822	Q832	Q851
IC605	IC603		IC703		Q807	IC702	Q841	Q842	Q853	Q852
							Q843			



SIDE B

(WY AND WY/RD TYPES ONLY)

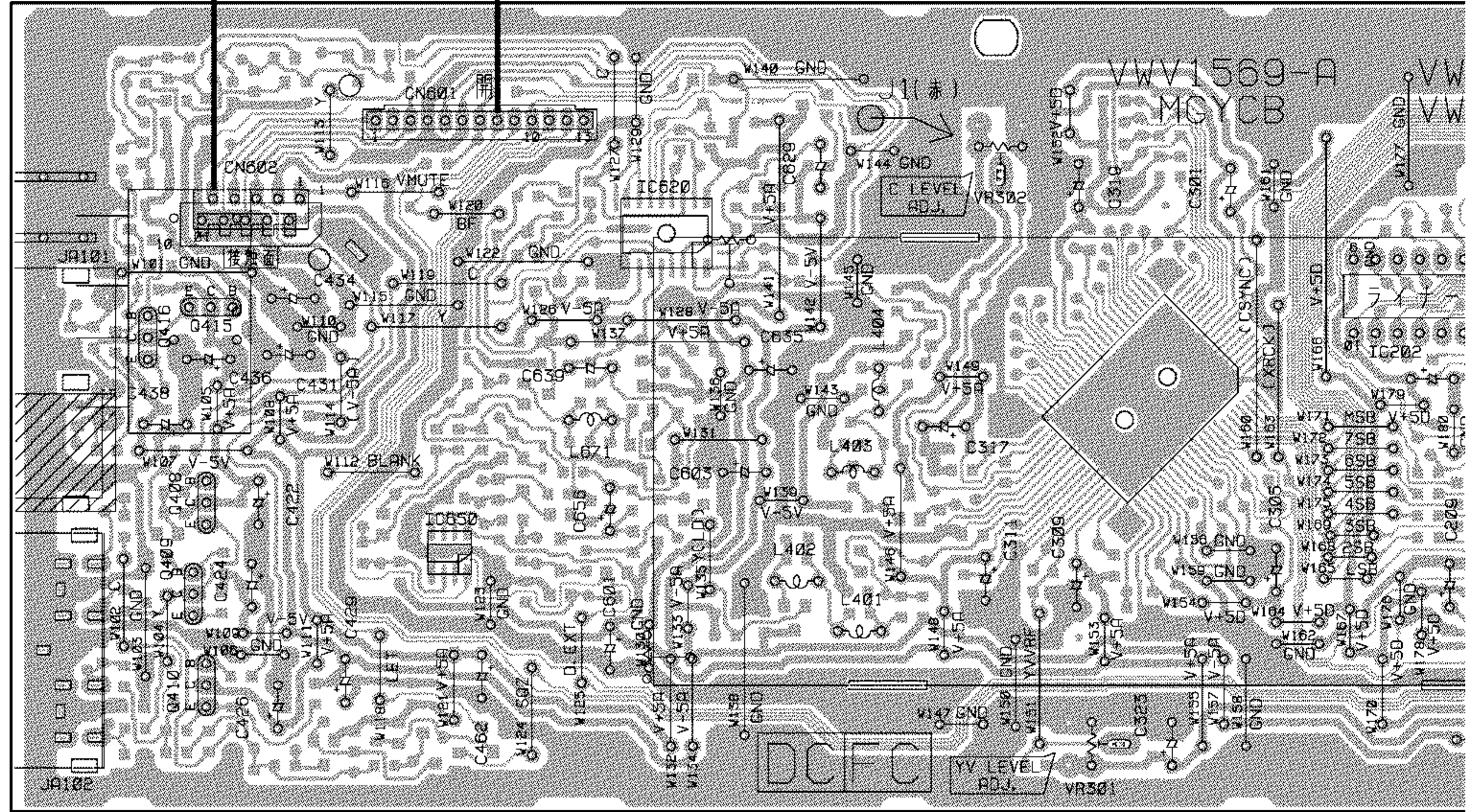




4.7 MYCB ASSY (RL, RAM, RD/RA AND RD/RC TYPES ONLY)

**P** CN405      **I** CN903      **O** MYCB ASSY

A



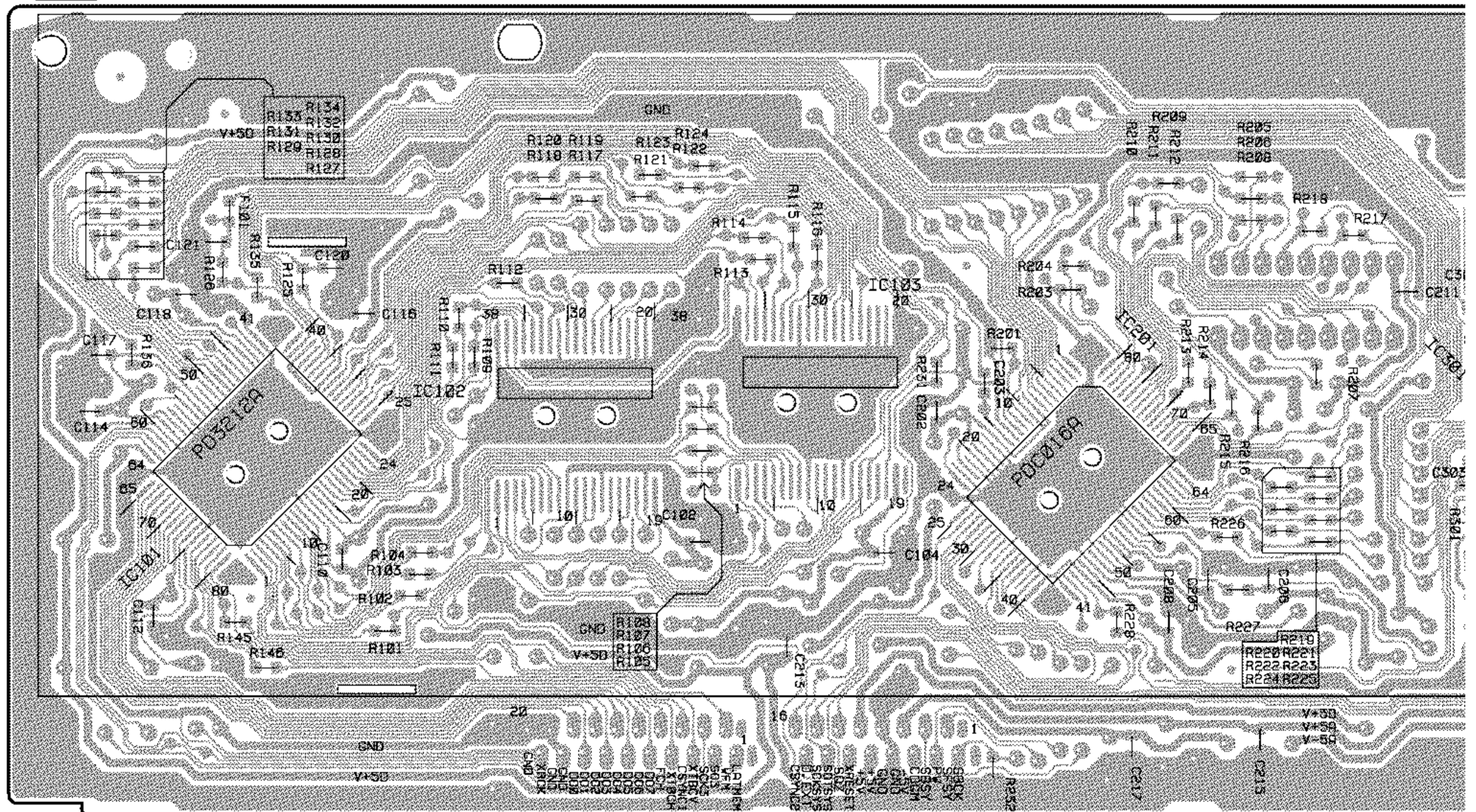
B

Q416 Q415  
Q408 - Q410

**SIDE A**

**O** MYCB ASSY

C



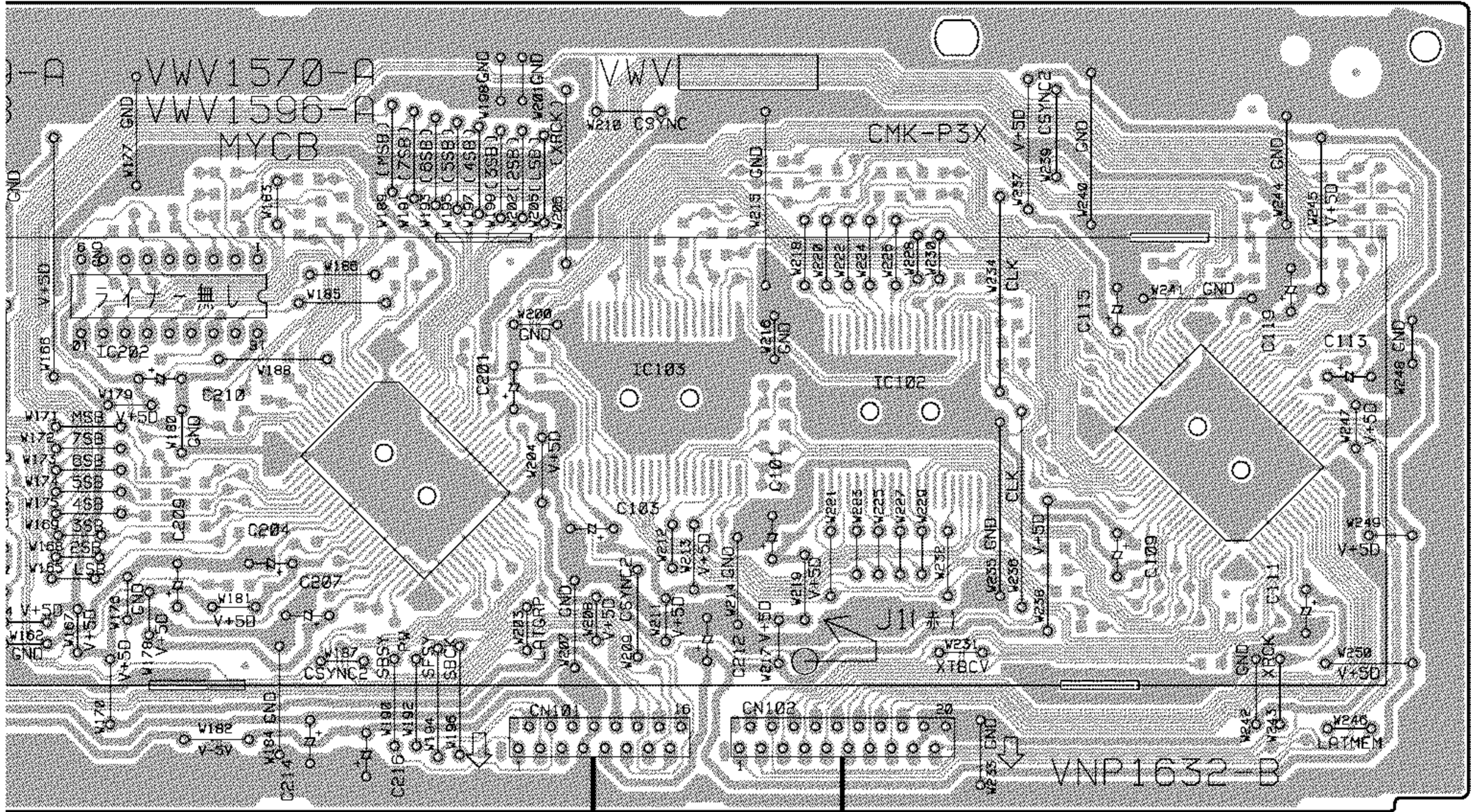
D

IC101      IC102      IC103      IC201

**SIDE B**

58 **P** (RL, RAM, RD/RA AND RD/RC TYPES ONLY)





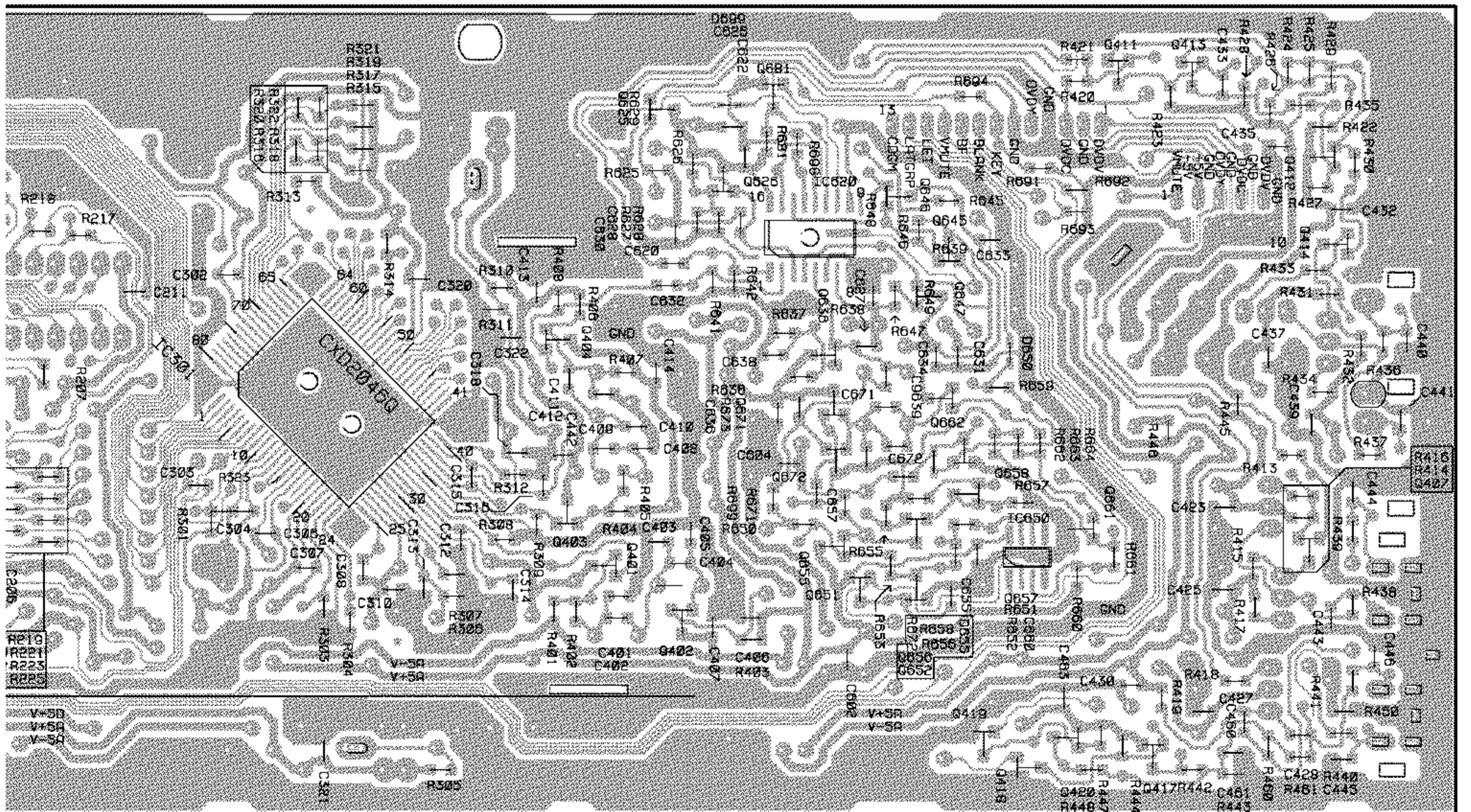
IC202

**J** CN402

**J** CN401

**SIDE A**

(VNP1632-B)



IC301

Q625 Q681 IC620 Q645-Q647 Q411 Q413 Q412  
 Q626 Q636 Q662 IC650 Q661 Q414  
 Q401-Q404 Q671 Q656 Q658 Q407  
 Q672 Q652 Q657  
 Q655 Q651 Q417-Q420

**SIDE B**

**(RL, RAM, RD/RA AND RD/RC TYPES ONLY)**

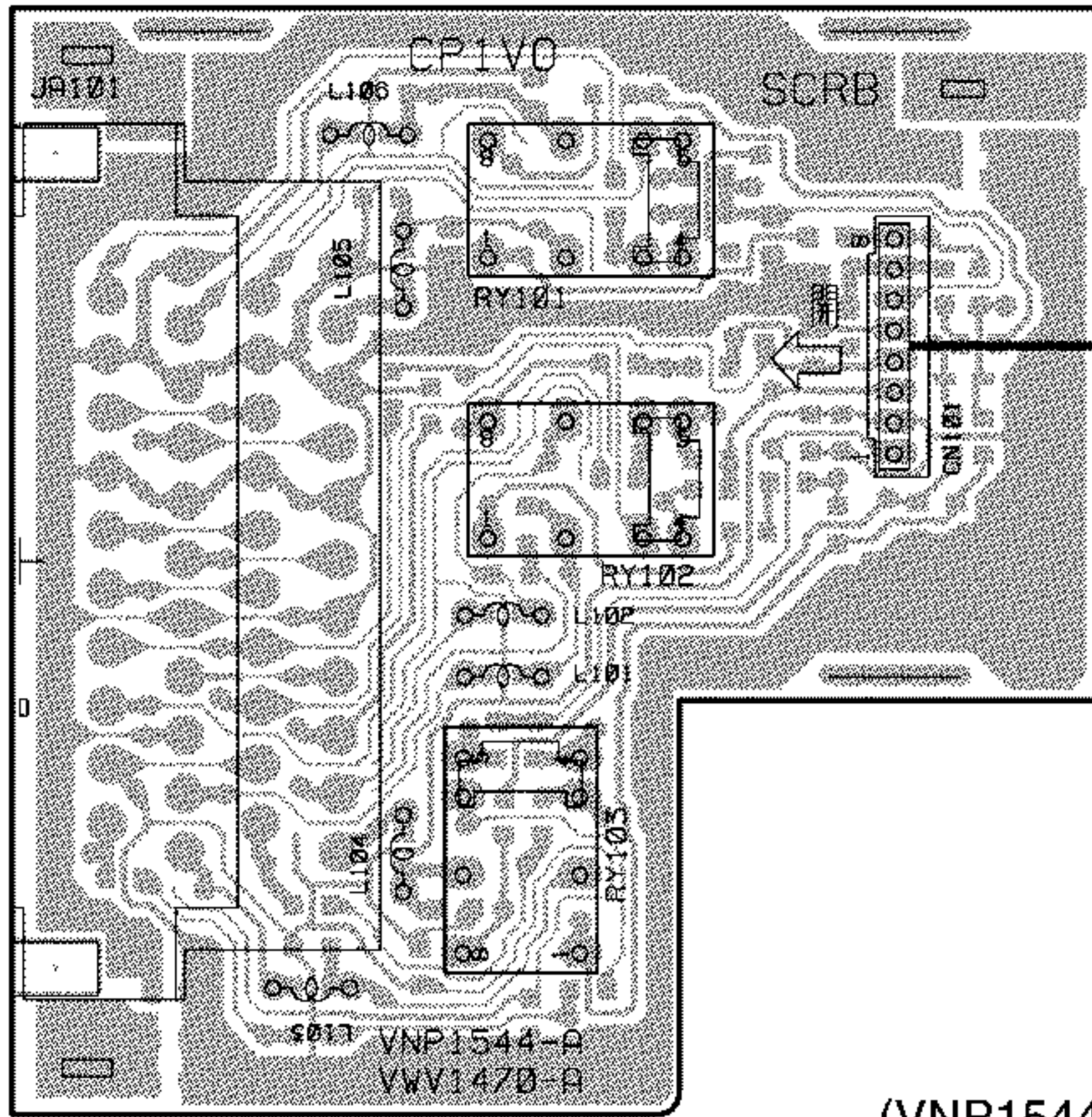




### 4.8 SCRIB ASSY (WY AND WY/RD TYPES ONLY)

A

#### Q SCRIB ASSY

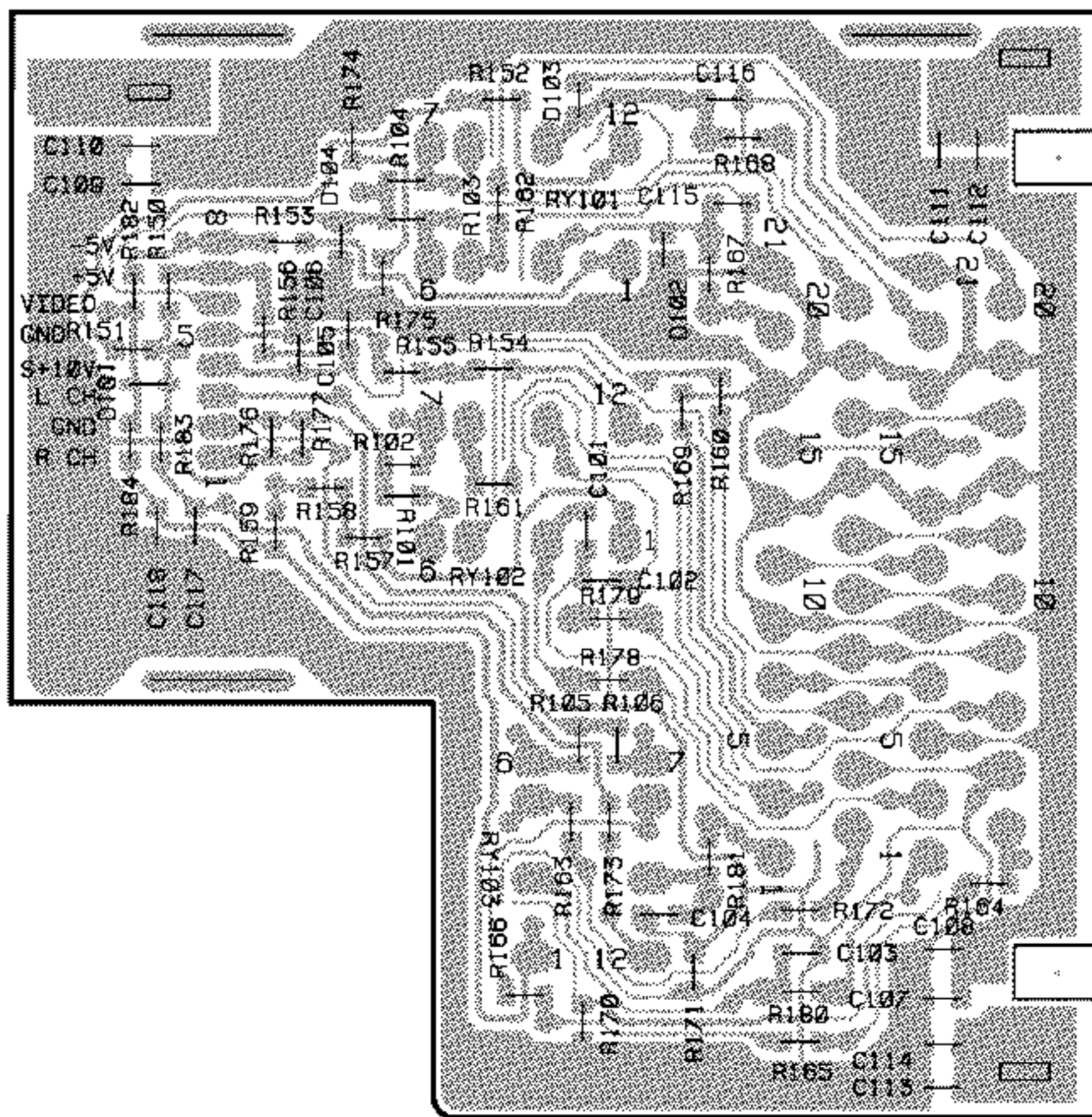


(VNP1544-A)

**SIDE A**

B

#### Q SCRIB ASSY



**SIDE B**

C

D

60 **Q (WY AND WY/RD TYPES ONLY)**

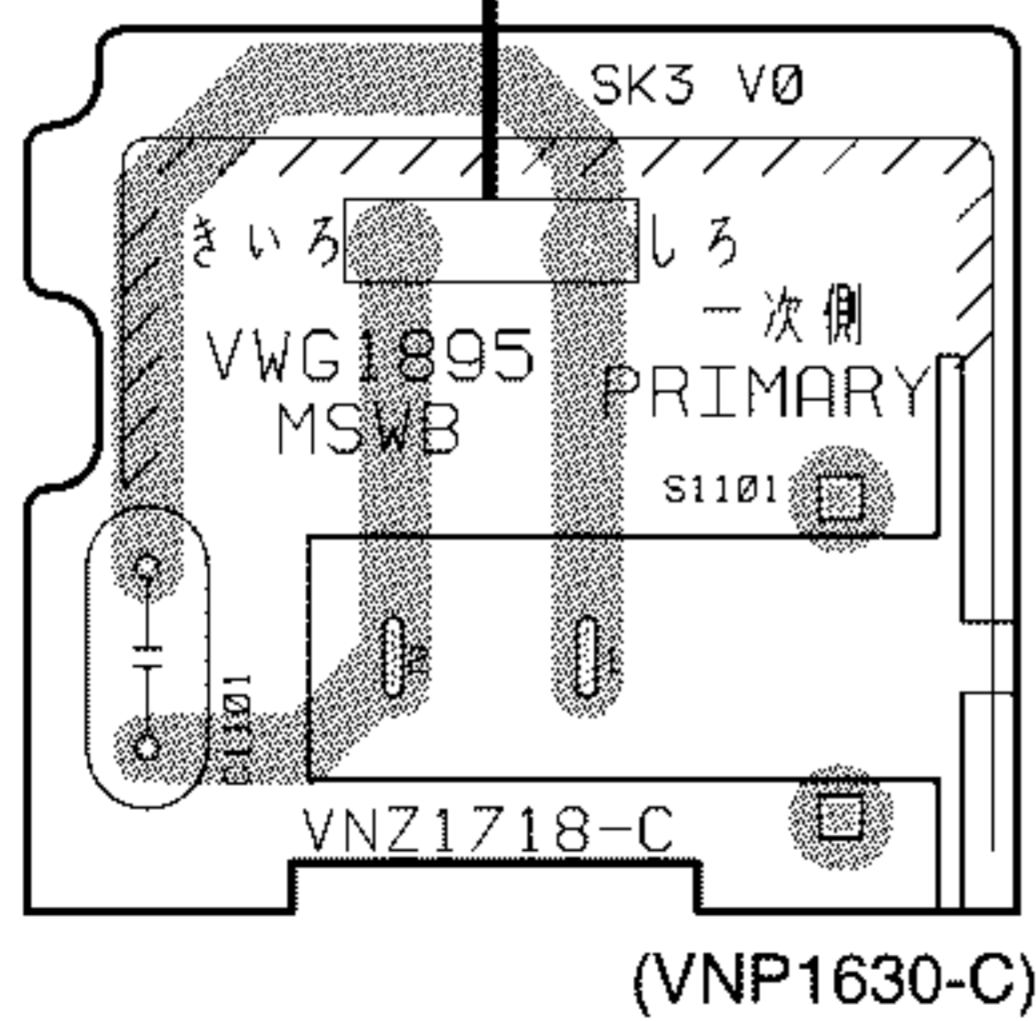
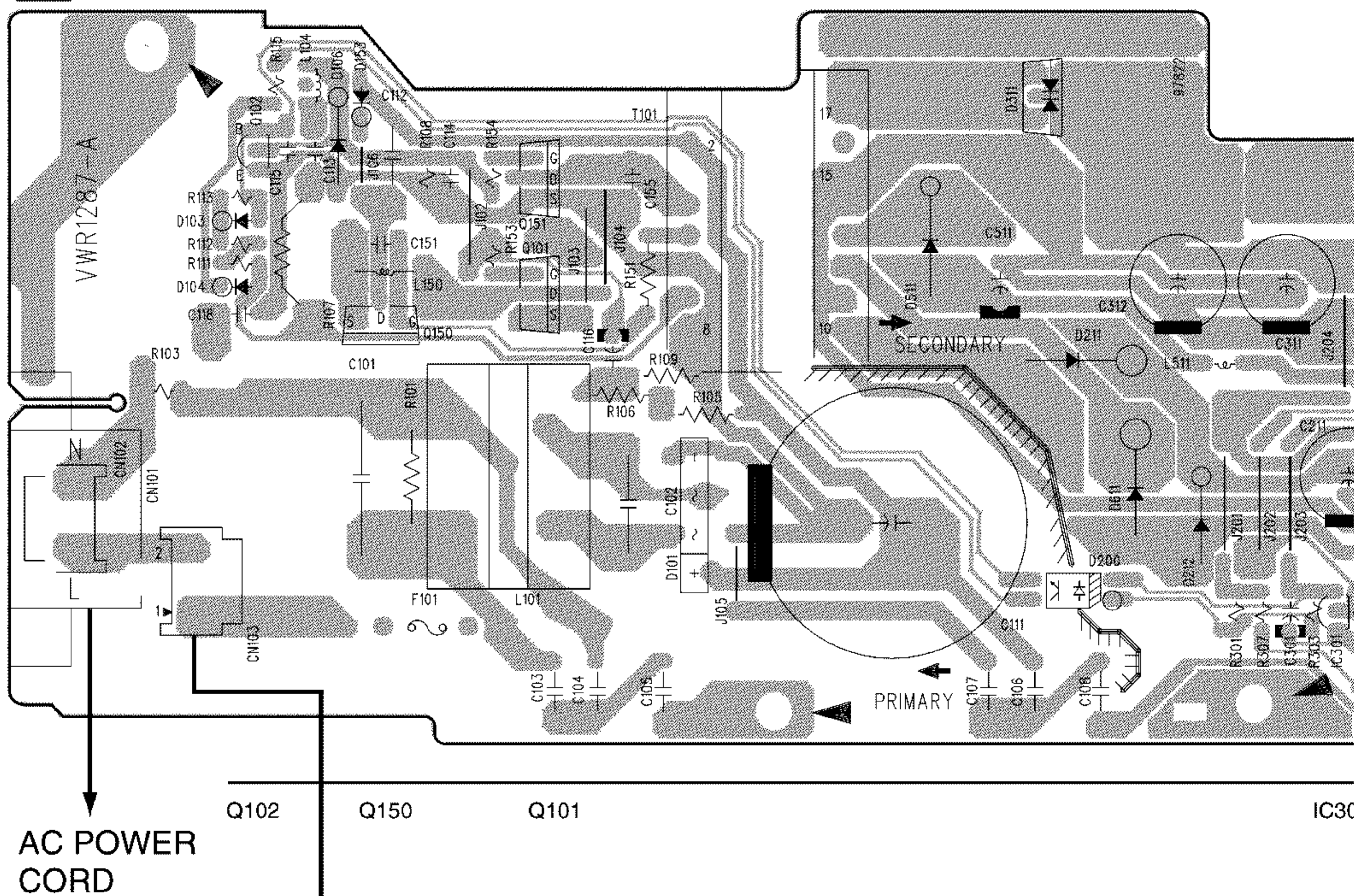






### 4.9 POWER SUPPLY AND MSWB ASSEMBLIES

#### **R** POWER SUPPLY ASSY



#### **S** MSWB ASSY

**SIDE A**







## 5. PCB PARTS LIST

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

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

● 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 → 56 × 10<sup>1</sup> → 561 ..... RD1/4PU561J  
 47k → 47 × 10<sup>3</sup> → 473 ..... RD1/4PU473J  
 0.5 → R50 ..... RN2H R50 K  
 1 → 1R0 ..... RS1P 1R0 K

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

5.62k → 562 × 10<sup>1</sup> → 5621 ..... RN1/4PC5621F

### ■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.						Remarks
		WY	WY/RD	RD/RA	RD/RC	RAM	RL	
NSP	MACB ASSY	VWM1507	VWM1507	VWM1507	VWM1507	VWM1507	VWM1507	
NSP	└ LMSB ASSY	VWG1554	VWG1554	VWG1554	VWG1554	VWG1554	VWG1554	
NSP	└ PKSB ASSY	VWG1555	VWG1555	VWG1555	VWG1555	VWG1555	VWG1555	
NSP	└ FG ASSY	VWG1556	VWG1556	VWG1556	VWG1556	VWG1556	VWG1556	
NSP	MECHB ASSY	VWM1721	VWM1721	VWM1721	VWM1721	VWM1721	VWM1721	
NSP	└ CNNB ASSY	VWG1792	VWG1792	VWG1792	VWG1792	VWG1792	VWG1792	
NSP	└ TNMB ASSY	VWG1793	VWG1793	VWG1793	VWG1793	VWG1793	VWG1793	
NSP	└ DCSB ASSY	VWG1794	VWG1794	VWG1794	VWG1794	VWG1794	VWG1794	
NSP	└ LCSB ASSY	VWG1795	VWG1795	VWG1795	VWG1795	VWG1795	VWG1795	
NSP	└ BISB ASSY	VWG1796	VWG1796	VWG1796	VWG1796	VWG1796	VWG1796	
NSP	FLKY ASSY	VWM1802	VWM1802	VWM1823	VWM1823	VWM1822	VWM1801	
NSP	└ FLKB ASSY	VWG1890	VWG1890	VWG1936	VWG1936	VWG1935	VWG1889	*1
NSP	└ PWSB ASSY	VWG1938	VWG1938	VWG1893	VWG1893	VWG1893	VWG1893	*2
NSP	└ DILB ASSY	VWG1894	VWG1894	VWG1894	VWG1894	VWG1894	VWG1894	
NSP	CLDGM ASSY	VWM1806	VWM1806	VWM1805	VWM1805	VWM1805	VWM1805	
	└ CLDM ASSY	VWS1332	VWS1332	VWS1331	VWS1331	VWS1331	VWS1331	
	└ JCKB ASSY	VWV1578	VWV1578	VWV1579	VWV1579	VWV1579	VWV1579	
	└ MSWB ASSY	VWG1895	VWG1895	VWG1895	VWG1895	VWG1895	VWG1895	
	DVDM ASSY	VWS1328	VWS1328	VWS1328	VWS1328	VWS1328	VWS1328	
	DMYC ASSY	VWV1584	VWV1584	Not used	Not used	Not used	Not used	
	MYCB ASSY	Not used	Not used	VWV1596	VWV1596	VWV1596	VWV1596	
	SCRB ASSY	VWV1470	VWV1470	Not used	Not used	Not used	Not used	
$\Delta$	POWER SUPPLY ASSY	VWR1287	VWR1287	VWR1287	VWR1287	VWR1287	VWR1287	

\*1:Although VWG1890,VWG1936,VWG1935 and VWG1889 are different in part number,they have the same service parts list.

\*2:Although VWG1938 and VWG1893 are different in part number,they have the same service parts list.

### ■ PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
		<b>MACB ASSY</b>				<b>LMSB ASSY</b>	
		<b>OTHERS</b>				<b>SWITCHES</b>	
		PC BOARD ( MACB)	VNP1479			S101-S103	DSG1017



Mark No.	Description	Part No.
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**OTHERS**

CN101	10P CONNECTOR	52044-1045
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**B PKSB ASSY****SWITCHES**

S104,S105		DSG1017
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**C FG ASSY****SEMICONDUCTOR**

D101		GP1S24
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**MECHB ASSY****OTHERS**

PC BOARD (MECHB)		VNP1599
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**D CNNB ASSY****OTHERS**

CN903	23P FFC CONNECTOR	52030-2310
CN901	26P FFC CONNECTOR	52030-2610
CN905,CN906	KR CONNECTOR	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	B2B-PH-K-S
CN913	KR CONNECTOR	B3B-PH-K-S

**F DCSB ASSY****SWITCH**

S902		DSG1017
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**OTHERS**

CN915	KR CONNECTOR	S2B-PH-K-S
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**G LCSB ASSY****SWITCH**

S903		DSG1017
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Mark No.	Description	Part No.
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**OTHERS**

CN916	KR CONNECTOR	S2B-PH-K-S
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**H BISB ASSY****SWITCH**

S901		DSG1017
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**OTHERS**

CN914	KR CONNECTOR	S2B-PH-K-S
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**FLKY ASSY****OTHERS**

PC BOARD (FLKY)		VNP1631
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**L FLKB ASSY****SEMICONDUCTORS**

IC101	PD4890A
IC102	S-806D
Q102	DTD113ES
Q101	PDTC124EK
D106	EP05Q04
D102	MA111
D101	RB411D
D103,D104	SLP3118C51H
D105	SLP4118C51H

**SWITCHES**

S101-S108		RSG1030
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**CAPACITORS**

C110	CEAL470M6R3
C108	CEHAQ471M6R3
C106	CEJA470M6R3
C101,C102,C104,C105,C111	CKSQYB102K50
C103,C107,C109,C112,C113	CKSQYF104Z25

**RESISTORS**

All Resistors		RS1/10S□□□J
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**OTHERS**

CN103	FJ CONNECTOR 4P	04P-FJ
CN102	KR CONNECTOR	B2B-PH-K-S
	REMOTE RECEIVER UNIT	GP1U28X
V101	FL TUBE	VAW1046
J1	EARTH CABLE	VDA1654
	SPACER	VEC1599
CN101	14P CONNECTOR	VKN1274
	HOLDER	VNF1087
X101	CERAMIC RESONATOR(5MHz)	VSS1104



# DVL-909

Mark	No.	Description	Part No.
<b>M PWSB ASSY</b>			
<b>SEMICONDUCTORS</b>			
	Q201		PDTA124EK
	D201		SLP9118C51H
<b>SWITCH</b>			
	S201		RSG1030
<b>RESISTORS</b>			
	All Resistors		RS1/10S□□□J
<b>OTHERS</b>			
	CN201	FJ CONNECTOR 4P	04R-FJ

## N DILB ASSY

<b>OTHERS</b>			
	CN301	KR CONNECTOR	B2B-PH-K-S
	PL301	LAMP	VEL1022

## CLDGM ASSY

<b>OTHERS</b>			
		PC BOARD ( CLDGM)	VNP1630

## R POWER SUPPLY ASSY

<b>SEMICONDUCTORS</b>			
	IC301		AN1431T
	IC311	(SI-3050CA)	VZF1047
	IC411	(PQ3RD13)	VZF1048
	IC511		UPC358C
	Q101,Q150,Q151	FET(2SK2333)	VZF1056
	Q102		2SC3377
	Q211,Q212		T7F4T
	Q213,Q214,Q351		2SC1740S
	Q512,Q613,Q614		2SA933S
	Q611,Q612		T7F4S
	Q350		2SD2007
	Q511		2SD2395
	D101		D2SB60F4004
	D103		MTZJ2.7B
	D351		MTZJ2.7B
	D104		1SS270A
	D350,D512		1SS270A
	D106		RD18FB2
	D153,D220,D620	DIODE(D1N60)	VZF1045
	D200		PS2561L1-1VM
	D211,D611		31DF2 D712

Mark	No.	Description	Part No.
	D212		RD33FB2
	D213,D214,D612,D613		10ELS2MTZJ8.2B
	D711		10ELS2MTZJ8.2B
	D311	DIODE(F10P04Q)	VZF1052
	D511		S2LA20
	D713		MTZJ30A
<b>OTHERS</b>			
	F101	FUSE(3.15A/250V)	VEK1050
	P211,P611	FUSE(136°C)	VEK1033
	P213,P612	FUSE(1A/125V)	VEK1036
	P214,P511	FUSE(1.25A/60V)	VEK1045
	P311	FUSE(1A/60V)	VEK1041

## I DVDM ASSY

<b>SEMICONDUCTORS</b>			
	IC171		BA10393F
	IC151		BA6797FP
	IC813		CY2081SL-611
	IC702		HM514800CJ-7
	IC101		LA9700M
	IC201		LC78650E-P
	IC802		MB811171622A-100FN
	IC801		MB86371
	IC815,IC816		MC14577CF
	IC271,IC302		NJM2100M
	IC203		NJM2107F
	IC901		PD2058A
	IC601		PD3381A
	IC701		PD4833A
	IC501		PD4889A
	IC602		PDK026A
	IC502		SRM2B256SLMX70
	IC401		TA78M08F
	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



Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	IC811,IC818,IC819		TC7SHU04F		C131,C135,C205,C206,C301		CEV470M6R3
	IC810		TC7WU04F		C303,C404,C406,C408,C410		CEV470M6R3
	IC301		TLC5540INS		C501,C504,C832,C836,C841		CEV470M6R3
	IC603		VKH1012		C887		CEV470M6R3
	IC6003		VYW1536		C211		CKSQYB104K25
	Q401		2SB1260		C109,C124,C216,C220,C229		CKSQYB105K10
	Q108		HN1K03FU		C234,C275,C308,C326		CKSQYB105K10
	Q455,Q831,Q832,Q851,Q852		IMT1A		C332,C333,C730,C731		CKSQYB105K10
	Q871,Q872		IMT1A		C416,C818,C823,C828		CKSQYF105Z16
	Q103,Q402,Q403,Q873		IMX1		C213,C292,C309,C321		CKSRYB102K50
	Q102,Q104,Q291,Q301		IMZ1A		C105,C106,C108,C146,C147		CKSRYB103K50
	Q106,Q603		PDTA114EK		C151,C154-C157,C161,C207		CKSRYB103K50
	Q107,Q109,Q602		PDTC114EK		C217,C221,C247,C276,C318		CKSRYB103K50
	Q601,Q771,Q772		PDTC114TK		C320,C620,C705,C722,C772		CKSRYB103K50
	D301		KV1410		C859		CKSRYB103K50
	D171,D172		MA152WK		C143,C162-C165,C223,C224		CKSRYB104K16
	D601		RB501V-40		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
					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)		VCG1030
					C922-C924 (2.2μF)		VCG1030
					VC301 (40pF)		VCM1010
<b>COILS AND FILTERS</b>				<b>RESISTORS</b>			
	F771,F778,F779	CHIP BEADS	DTF1067		R507,R508,R624,R628,R633		RA4C103J
	F896	FERRITE CORE	VTF1077		R703,R704,R717,R718		RA4C103J
	F952	FERRITE CORE	VTF1080		R745,R746,R761,R762,R792		RA4C103J
	F801	VIDEO FILTER	VTF1098		R812,R813		RA4C103J
	F401-F406	CHIP EMI FILTER	VTH1037		R137,R501,R502,R505,R506		RA4C220J
	L301	(1.5μH)	VTL1059		R604-R607,R712,R713,R719		RA4C220J
	L101,L302	(10μH)	VTL1061		R724,R748,R749,R791		RA4C220J
	L802,L803	(22μH)	VTL1067				
	L335,L340,L342	CHIP BEADS	VTL1074				
	L777,L780-L787,L895	CHIP BEADS	VTL1075				
	L897-L899	CHIP BEADS	VTL1075				
<b>CAPACITORS</b>							
	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				



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Mark	No.	Description	Part No.
	R802,R803,R808,R901,R905 R907,R909,R910,R912,R913 R916-R919		RA4C220J RA4C220J RA4C220J
	R602,R603,R610,R613,R618 R101,R11-R14,R141 R15-R17,R171,R18 R201-R203,R300,R319,R333 R411-R413,R701,R775,R776		RA4C470J RS1/10S0R0J RS1/10S0R0J RS1/10S0R0J RS1/10S0R0J
	R891,R893,R902,R908,R961 R205 R835,R839,R855,R859,R875 R881 R834,R854,R874		RS1/10S0R0J RS1/10S101J RS1/16S1001F RS1/16S1001F RS1/16S1201F
	R823-R825 R117,R118 R126 R241,R247 R110,R153,R155,R168,R169		RS1/16S1500F RS1/16S1501F RS1/16S1502F RS1/16S2202F RS1/16S2702F
	R173,R174,R213,R228,R229 R248 R152,R156,R158-R164,R167 R170,R172,R175,R194,R227 VR801 (1kΩ)		RS1/16S2702F RS1/16S2702F RS1/16S4702F RS1/16S4702F VCP1125
	Other Resistors		RS1/16S□□□J

## OTHERS

CN903	PH CONNECTOR	S13B-PH-SM3
CN101	PH CONNECTOR	S14B-PH-SM3
CN801	PH CONNECTOR	S4B-PH-SM3
TP100,TP200,TP300,TP400	CHECKER-CHIP	VKF1001
CN201	14P CONNECTOR	VKN1324
CN106	7P FFC CONNECTOR	VKN1411
CN105	14P FFC CONNECTOR	VKN1418
CN901,CN902	22P FFC CONNECTOR	VKN1426
CN103	26P FFC CONNECTOR	VKN1430
KN1-KN3	EARTH METAL FITTING LABEL	VNF1109 VRW1634
X602	CERAMIC RESONATOR(20MHz)	VSS1114
X501	CERAMIC RESONATOR(10MHz)	VSS1115
X901	CERAMIC RESONATOR(24MHz)	VSS1118

## J CLDM ASSY (VWS1332)

### SEMICONDUCTORS

IC761	BA10393F
IC251,IC680,IC905,IC906	BA4560F
IC171,IC803	LA6510
IC400	LA7134M
IC801	LA9425
IC901	LA9430M
IC908	LC78625E
IC182,IC183	MM6558XF
IC221	NJM78L08A
IC222	NJM79L08A

Mark	No.	Description	Part No.
	IC351		PA0061AM
	IC202		PD0236AM
	IC101		PD0261A2
	IC201		PD2029AM(L)
	IC500		PD6159B
	IC902		TA8410AK
	IC181,IC410,IC762,IC907		TC4W53F
	IC203		TC74HC157AF
	IC620		TC74HC4053AF
	IC205,IC206		TC7S02F
	IC102		TC7S32F
	IC209,IC550		TC7SU04F
	IC650		TC7W00F
	IC204,IC208		TC7WU04F
	Q121,Q182,Q351,Q353,Q354		2PB709A
	Q356,Q411,Q451,Q456,Q461		2PB709A
	Q482,Q484,Q485,Q580,Q645		2PB709A
	Q672		2PB709A
	Q269,Q270,Q391-Q393,Q401		2PD601A
	Q425,Q441,Q481,Q486,Q626		2PD601A
	Q631,Q632,Q636,Q646,Q647		2PD601A
	Q655-Q658,Q661,Q662,Q671		2PD601A
	Q803,Q811,Q903-Q906		2PD601A
	Q834		2SA854S
	Q141		2SA933S
	Q152		2SC3082K
	Q261,Q262		2SD2114K
	Q211-Q214,Q217,Q357,Q358		PDTA124EK
	Q394,Q466,Q467,Q483,Q651		PDTA124EK
	Q981		PDTA124EK
	Q122,Q142,Q143,Q181		PDTC124EK
	Q215,Q216,Q652,Q901,Q908		PDTC124EK
	D215		DAN202K
	D221		EC10QS04
	D311,D505,D510		KV1851
	D101,D141,D181,D480,D650		MA111
	D655,D902,D981		MA111
	D355,D356		MA152WA
	D115,D142,D143		UDZS5.1B

### COILS AND FILTERS

F590	DTF1069
L9231,L9232,L9584	DTL1028
L413,L414	LAU120J
L401	LAU121J
L482	LAU180J
L352,L821-L823	LAU181J
L201,L209,L251,L252	LAU220J
L311,L312,L351,L461	LAU220J
L831,L832	LAU220J
L412,L587	LAU270J
L431,L484	LAU330J
L432	LAU390J
L433,L575	LAU430J
L411	LAU470J
L671	LAU4R7J







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Mark	No.	Description	Part No.
	C377,C378,C908,C909		CKSQYF224Z25

C154,C156,C174,C312,C460	CKSQYF473Z50
C826,C828	CKSQYF473Z50
C265,C266	CQMBA332J50
VC301 (20pF)	VCM1008

## RESISTORS

R753	RA4C221J
R203,R752	RA4C471J
R591,R592	RA4C681J
R833,R834,R837,R839	RN1/10SE1002D
R891,R892	RN1/10SE1002D

R152,R156	RN1/10SE1003D
R532	RN1/10SE1100D
R425	RN1/10SE1202D
R531	RN1/10SE1800D
R631	RN1/10SE2001D

R635	RN1/10SE2701D
R151,R618,R893,R894	RN1/10SE3302D
R153,R154,R259-R262	RN1/10SE4702D
R653	RN1/10SE5601D
R650	RN1/10SE6800D

VR450 (2.2kΩ)	PCP1025
VR603 (4.7kΩ)	PCP1028
VR604,VR607,VR609 (47kΩ)	PCP1031
Other Resistors	RS1/10S□□□J

## OTHERS

CN103,CN404	6P FFC CONNECTOR	52045-0645
CN102	10P FFC CONNECTOR	52045-1045
CN101	15P FFC CONNECTOR	52045-1545
CN802	11P CONNECTOR	B11P-SHF-1AA
CN403	KR CONNECTOR	B13B-PH-K-S

CN201	KR CONNECTOR	B4B-PH-K-S
CN202	KR CONNECTOR	B7B-PH-K-S
	SCREW	BBZ30P060FCC
CN402	14P CONNECTOR	BTFN14S-3SB7
CN401	20P CONNECTOR	BTFN20S-3SB7

JA252	2P PIN JACK	PKB1024
JA101,JA102	JACK	RKN1004
	PCB BINDER	VEF1040
	64P IC SOCKET	VKH1004
CN111,CN122	22P FFC CONNECTOR	VKN1253

CN801	27P FFC CONNECTOR	VKN1258
	SCREW PLATE	VNE1948
S102	SLIDE SWITCH	VSH1020
X101	CERAMIC RESONATOR(9MHz)	VSS1040
X311	CRYSTAL RESONATOR(16MHz)	VSS1081

X505	CRYSTAL RESONATOR(14MHz)	VSS1103
X312	CRYSTAL RESONATOR (18.432MHz)	VSS1116
X510	CRYSTAL RESONATOR(15MHz)	VSS1125

Mark	No.	Description	Part No.
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## J CLDM ASSY (VWS1331)

### SEMICONDUCTORS

IC761	BA10393F
IC251,IC680,IC905,IC906	BA4560F
IC352	CA0002AM
IC171,IC803	LA6510
IC400	LA7134M

IC801	LA9425
IC901	LA9430M
IC908	LC78625E
IC182,IC183	MM6558XF
IC221	NJM78L08A

IC222	NJM79L08A
IC101	PD0260A2
IC201	PD2029AM(L)
IC500	PD6159B
IC902	TA8410AK

IC181,IC762,IC907	TC4W53F
IC203	TC74HC157AF
IC205,IC206	TC7S02F
IC102	TC7S32F
IC209,IC550	TC7SU04F

IC204,IC208	TC7WU04F
Q121,Q182,Q482,Q580	2PB709A
Q269,Q270,Q391-Q393,Q401	2PD601A
Q441,Q481,Q803,Q811	2PD601A
Q903-Q906	2PD601A

Q834	2SA854S
Q152	2SC3082K
Q261,Q262	2SD2114K
Q211-Q214,Q217,Q394,Q981	PDTA124EK
Q122,Q181,Q215,Q216,Q901	PDTC124EK

Q908	PDTC124EK
D215	DAN202K
D221	EC10QS04
D311,D505	KV1851

D101,D181,D902,D981	MA111
D115	UDZS5.1B

### SWITCH

S102	VSH1020
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### COILS AND FILTERS

F590	CHIP BEADS	DTF1067
L9231,L9232,L9584	CHIP INPEDER	DTL1028
L413		LAU100J
L401		LAU101J
L352,L821-L823		LAU181J

L201,L251,L252	LAU220J
L311,L312,L351,L412,L461	LAU220J
L482,L831,L832	LAU220J
L411,L587	LAU270J







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Mark No.	Description	Part No.
<b>RESISTORS</b>		
R751,R203		RA4C0R0J
R753		RA4C221J
R591,R592,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,VR607,VR609 (47kΩ)		PCP1031
Other Resistors		RS1/10S□□□J

## OTHERS

CN103	6P FFC CONNECTOR	52045-0645
CN102	10P FFC CONNECTOR	52045-1045
CN101	15P FFC CONNECTOR	52045-1545
CN802	11P CONNECTOR	B11P-SHF-1AA
CN201	KR CONNECTOR	B4B-PH-K-S
CN202	KR CONNECTOR SCREW	B7B-PH-K-S BBZ30P060FCC
CN402	16P CONNECTOR	BTFN16S-3SB7
CN401	20P CONNECTOR	BTFN20S-3SB7
JA101,JA102	JACK	RKN1004
	PCB BINDER	VEF1040
JA252	4P JACK	VKB1065
	64P SHRINK IC SOCKET	VKH1004
CN111,CN122	22P FFC CONNECTOR	VKN1253
CN801	27P FFC CONNECTOR	VKN1258
	SCREW PLATE	VNE1948
X101	CERAMIC RESONATOR(9MHz)	VSS1040
X311	CRYSTAL RESONATOR(16MHz)	VSS1081
X505	CRYSTAL RESONATOR(14MHz)	VSS1103
X312	CRYSTAL RESONATOR (18.432MHz)	VSS1116

## **P** MYCB ASSY

### SEMICONDUCTORS

IC301		CXD2046Q
IC102,IC103		MB81C1501PF
IC101		PD3212A
IC620		TC74HC4053AF
IC650		TC7W00F
Q402,Q404,Q407,Q411,Q414		2PB709A
Q645,Q672		2PB709A
Q401,Q403,Q412,Q413,Q626		2PD601A
Q636,Q646,Q647,Q655-Q658		2PD601A
Q661,Q662,Q671		2PD601A
Q408-Q410,Q415,Q416		2SC1740S
Q417,Q420,Q651		PDTA124EK
Q418,Q419,Q652,Q681		PDTC124EK

Mark No.	Description	Part No.
D650,D655,D699		MA111

### COILS AND FILTERS

F101	CHIP BEADS	DTF1067
L145	CHIP INPEDER	DTL1028
L401-L403		LAU220J
L671		LAU4R7J

### CAPACITORS

C433		CCSQCH100D50
C655		CCSQCH101J50
C401,C404		CCSQCH220J50
C672		CCSQCH390J50
C671		CCSQCH391J50
C121,C405		CCSQCH470J50
C403		CCSQCH560J50
C402		CCSQCH6R0D50
C411		CCSQCH910J50
C656		CEANP100M16
C629,C639		CEANP220M10
C101,C103,C109,C111,C113		CEAT101M10
C115,C212,C214,C216,C301		CEAT101M10
C305,C309,C311,C317,C319		CEAT101M10
C323,C422,C424,C426,C429		CEAT101M10
C462,C601,C603,C635		CEAT101M10
C431,C434		CEAT221M6R3
C436,C438		CEJA101M6R3
C303		CKSQYB102K50
C620,C632		CKSQYB104K25
C102,C104,C110,C112,C114		CKSQYF104Z25
C116-C118,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,C460		CKSQYF104Z25
C463,C602,C604,C622		CKSQYF104Z25
C626-C628,C630,C631		CKSQYF104Z25
C633,C634,C636,C638,C660		CKSQYF104Z25

### RESISTORS

R424		RN1/10SE1801D
R422		RN1/10SE2201D
R309		RN1/10SE2700D
R425		RN1/10SE2702D
R310,R420,R421		RN1/10SE3301D
R312,R426		RN1/10SE4701D
R311,R653		RN1/10SE5601D
R650		RN1/10SE6800D
VR301 (22kΩ)		PCP1030
Other Resistors		RS1/10S□□□J

### OTHERS

CN602	10P FFC CONNECTOR	52045-1045
CN	4P MIN.DIN SOCKET	AKP7023
CN601	KR CONNECTOR	B13B-PH-K-S



Mark	No.	Description	Part No.
	CN101	CONNECTOR 16P	BTFN16P-3RD7
	CN102	CONNECTOR 20P	BTFN20P-3RD7
	J1	JUMPER WIRE	DB218NS0
	JA101	2P JACK	VKB1094

## **K** JCKB ASSY

### SEMICONDUCTORS

IC321,IC341	TC74HCU04AF
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### COILS

L321,L331,L341	LAU220J
L323,L343 PULSE TRANSFORMER	PTL1003
L322,L342 FERRITE BEADS	RTF1167

### CAPACITORS

C332	CEAT101M10
C322,C324,C342,C344	CEAT470M16
C321,C323,C325,C331,C341	CKSQYF103Z50
C343,C345	CKSQYF103Z50
C326,C346	CKSQYF104Z25
C393	CKSQYF224Z25

### RESISTORS

All Resistors	RS1/10S□□□J
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### OTHERS

CN321	KR CONNECTOR	B7B-PH-K-S
JA331	OPTICAL LINK OUT	GP1F32T
	PCB BINDER	VEF1040
JA251,JA341	1P PIN JACK	
	(FOR VWV1578)	VKB1074
	(FOR VWV1579)	VKB1077
JA321	1P PIN JACK	
	(FOR VWV1578)	VKB1097
	(FOR VWV1579)	PKB1028

## **Q** SCR B ASSY

### SEMICONDUCTORS

D101	1SS353
D102,D103	UDZ5.6B

### SWITCHES AND RELAYS

RY101-RY103	VSR-005
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### CAPACITORS

C101-C104	CCSQCH391J50
C106,C108,C110,C112,C114	CKSQYB102K50
C105,C107,C109,C111,C113	CKSQYF104Z25

Mark	No.	Description	Part No.
<b>RESISTORS</b>			
		All Resistors	RS1/10S□□□J

### OTHERS

JA101	PCB BINDER	VEF1040
	EARTH PLATE	VKB1056
		VNF1097

## **O** DMYC ASSY

### SEMICONDUCTORS

IC801	BU4053BCF
IC701	CXA1585Q
IC702	CXA1645M
IC301	CXD1171M
IC201	CXD2024AQ

IC703	HD74HC4053FP
IC102	HM530281RTT-25
IC401	MM1093PF
IC603	NJM082M
IC991	NJM78M05FA

IC101	PD4596A
IC831	TA7302P
IC103,IC608	TC4W53F
IC607	TC74HC221AF
IC602	TC74HC4053AF

IC605	TC74HC74AF
IC601	TC7S86F
IC606	TC7SU04F
IC604	TC7WU04F
Q201,Q251,Q253,Q254,Q264	2PB709A

Q351,Q603-Q606,Q805,Q831	2PB709A
Q834,Q843,Q853,Q864,Q881	2PB709A
Q883-Q887,Q891	2PB709A
Q231,Q232,Q241,Q252,Q261	2PD601A
Q263,Q265,Q266,Q281-Q283	2PD601A

Q301,Q302,Q401,Q601,Q705	2PD601A
Q801-Q803,Q806,Q808	2PD601A
Q811,Q812,Q821,Q822,Q833	2PD601A
Q841,Q842,Q851,Q852	2PD601A
Q861-Q863,Q882,Q892	2PD601A

Q991	2SB1237X
Q103,Q602,Q701,Q711,Q804	DTA124EK
Q809,Q832,Q893,Q941	DTA124EK
Q102,Q202,Q702,Q703	DTC124EK
Q712,Q713,Q807,Q813,Q894	DTC124EK

Q942,Q992	DTC124EK
D991	11EQS06
D701,D702	1SS254
D602,D711	DAP202K
D992	S5566G(TPB2)

D601	SVC201SPA
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# DVL-909

Mark No.	Description	Part No.
<b>COILS AND FILTERS</b>		
L702	1H DELAY ADJUST COIL	DTL1001
L898		LAU100J
L299		LAU101J
L231,L232,L241,L242		LAU150J
L301,L302		LAU150J
L602		LAU1R0J
L351,L601,L802,L899		LAU220J
L403		LAU270J
L831,L881		LAU470J
L803		LAU820J
L701		LAU8R2J
L811		LFA220J
<b>CAPACITORS</b>		
C845		CCSQCH100D50
C745,C881		CCSQCH101J50
C829		CCSQCH120J50
C287,C840		CCSQCH150J50
C352		CCSQCH181J50
C351		CCSQCH200J50
C224,C231,C234,C242,C245		CCSQCH220J50
C310,C313		CCSQCH220J50
C627,C723,C872-C874,C899		CCSQCH221J50
C744		CCSQCH240J50
C882		CCSQCH270J50
C261,C415		CCSQCH330J50
C235,C246,C314,C765		CCSQCH390J50
C414		CCSQCH391J50
C402,C631,C632,C641,C827		CCSQCH470J50
C724		CCSQCH471J50
C624		CCSQCH4R0C50
C233,C244,C312,C620,C897		CCSQCH560J50
C413		CCSQCH561J50
C763		CCSQCH5R0C50
C232,C243,C311,C412		CCSQCH6R0D50
C628,C702		CEANP100M25
C606		CEANP1R0M50
C604		CEANP2R2M50
C770		CEAT100M50
C288,C983,C985		CEAT101M10
C713		CEAT1R0M50
C626,C714,C721		CEAT220M50
C262,C406		CEAT2R2M50
C834		CEAT330M16
C202,C217,C219,C221,C263		CEAT470M10
C267,C270,C291,C306,C401		CEAT470M10
C411,C607,C609,C611,C614		CEAT470M10
C619,C704,C732,C772,C783		CEAT470M10
C931,C935		CEAT470M10
C264,C281,C304,C717,C823		CEAT471M6R3
C842,C844,C989		CEAT471M6R3
C404,C408,C708,C710		CEAT4R7M50
C811		CEJA2R2M50

Mark No.	Description	Part No.
C766		CEJA470M10
C623		CFTLA334J50
C625,C718		CFTLA474J50
C201,C223		CKSQYB102K50
C191		CKSQYB104K25
C605		CKSQYB222K50
C204,C207,C403,C409,C410		CKSQYF103Z50
C602,C613,C615,C705-C707		CKSQYF103Z50
C716,C719,C720,C722,C767		CKSQYF103Z50
C771,C828,C830-C833,C988		CKSQYF103Z50
C991		CKSQYF103Z50
C102,C103,C203,C206,C209		CKSQYF104Z25
C211-C216,C218,C220,C222		CKSQYF104Z25
C236,C238,C241,C247		CKSQYF104Z25
C249,C250,C252,C265,C266		CKSQYF104Z25
C282,C292,C301-C303,C305		CKSQYF104Z25
C307-C309,C315,C316,C321		CKSQYF104Z25
C601,C603,C608,C610,C612		CKSQYF104Z25
C616,C618,C621,C629,C642		CKSQYF104Z25
C709,C731,C761,C762		CKSQYF104Z25
C768,C769,C812,C821,C822		CKSQYF104Z25
C824-C826,C835-C839,C841		CKSQYF104Z25
C843,C846-C848,C851,C853		CKSQYF104Z25
C861,C863,C865,C902,C904		CKSQYF104Z25
C932,C934,C936,C938,C984		CKSQYF104Z25
C986		CKSQYF104Z25
C699		CKSQYF104Z50
C22,C28,C3		CKSQYF473Z25
C407		CQMA102J50
C405,C701		CQMA103J50
C711,C712,C715		CQMA473J50
C903	(47μF/10V)	RCH1139
VC651	(20pF)	VCM-008
VC451	(45pF)	VCM1002
<b>RESISTORS</b>		
R854,R870,R871,R618		RN1/10SC75R0D
R287		RN1/10SE1001D
R731,R733		RN1/10SE1302D
R765		RN1/10SE1602D
R843		RN1/10SE1801D
R841		RN1/10SE2201D
R713,R732,R734,R844		RN1/10SE2702D
R826,R857		RN1/10SE3301D
R769		RN1/10SE3901D
R607,R845,R608		RN1/10SE4701D
R284		RN1/10SE5601D
R282,R285		RN1/10SE9100D
VR261	(1kΩ)	VCP1105
VR201,VR706,VR731,VR732	(2.2kΩ)	VCP1107
VR702	(4.7kΩ)	VCP1109
VR701	(10kΩ)	VCP1111
VR751,VR752	(22kΩ)	VCP1113
Other Resistors		RS1/10S□□□J



Mark No.	Description	Part No.
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**OTHERS**

CN103	6P FFC CONNECTOR	52045-0645
JA903	1P PIN JACK	AKB7096
CN101	14P CONNECTOR	BTFN14P-3RD7
CN102	20P CONNECTOR	BTFN20P-3RD7
DL701	DELAY LINE	DTF1033
902	4P DIN SOCKET	VKN1078
	SCREW PLATE	VNE1948
X601	(17.734475MHz)	VSS1059
X401	(4.433619MHz)	VSS1090
X742	(4.433619MHz)	VSS1091
X741	(3.579545MHz)	VSS1092

**S MSWB ASSY****CAPACITORS**

⚠ C1101	(4700pF/AC250V)	ACG7009
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**OTHERS**

⚠ S1101	PUSH SWITCH	ASG1006
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# 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

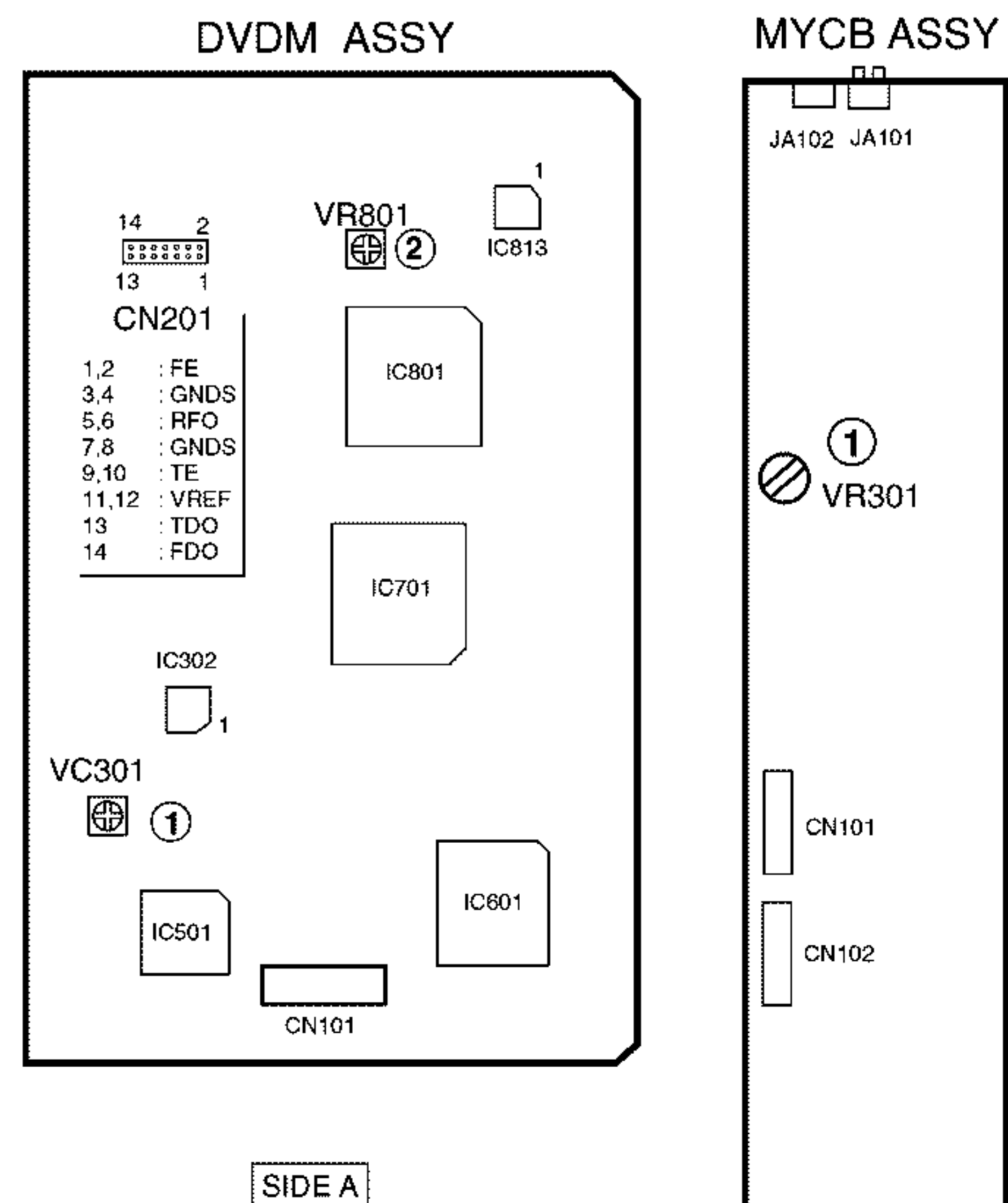
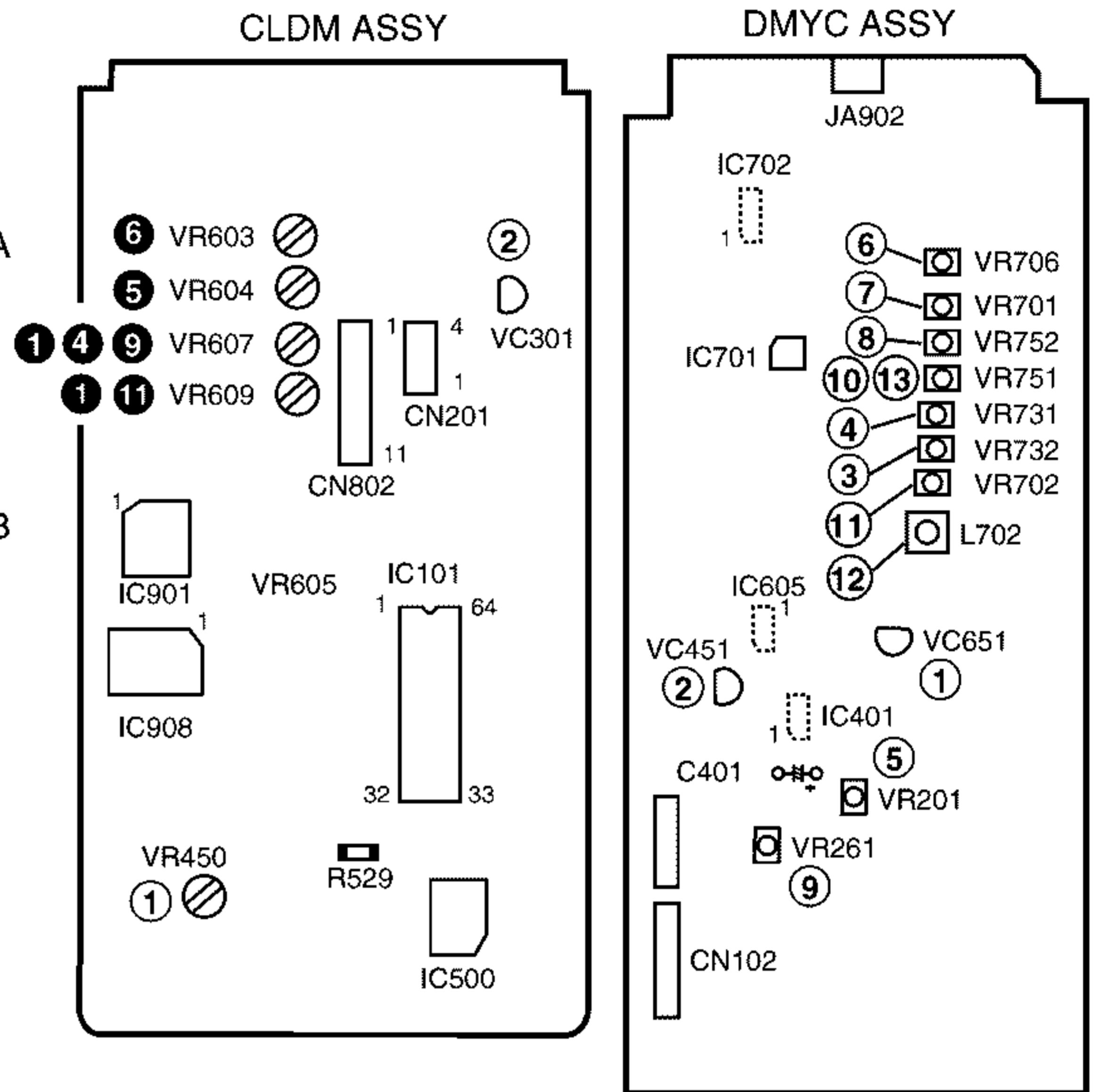
#### DMYC ASSY

- ① 17MHz Free-run Frequency Adjustment
- ② 4.43MHz Free-run Frequency Adjustment for Y/C Separation
- ③ PAL 4.43MHz Free-run Frequency Adjustment for RGB Decoder
- ④ NTSC 3.58MHz Free-run Frequency Adjustment for RGB Decoder
- ⑤ NTSC Y Level Adjustment
- ⑥ RGB Decoder Y Level Adjustment
- ⑦ RGB Decoder HUE Adjustment
- ⑧ RGB Decoder NTSC Chroma Level Adjustment
- ⑨ PAL Y Level Adjustment
- ⑩ Coarse RGB Decoder PAL Chroma Level Adjustment
- ⑪ RGB Decoder PAL Delay Line Amp Gain Adjustment
- ⑫ RGB Decoder PAL DAT Adjustment
- ⑬ Fine RGB Decoder PAL Chroma Level Adjustment

#### MYCB ASSY

- ① Y Output Level Adjustment

### ■ Adjustment Points (PCB Part)

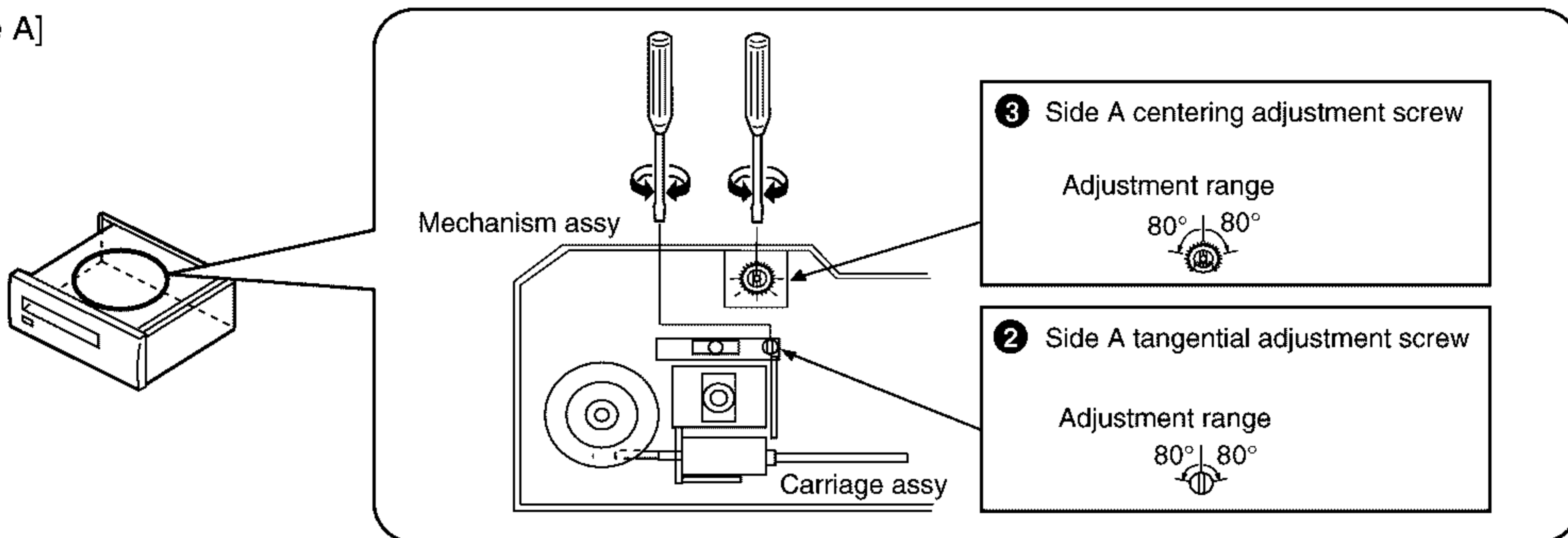




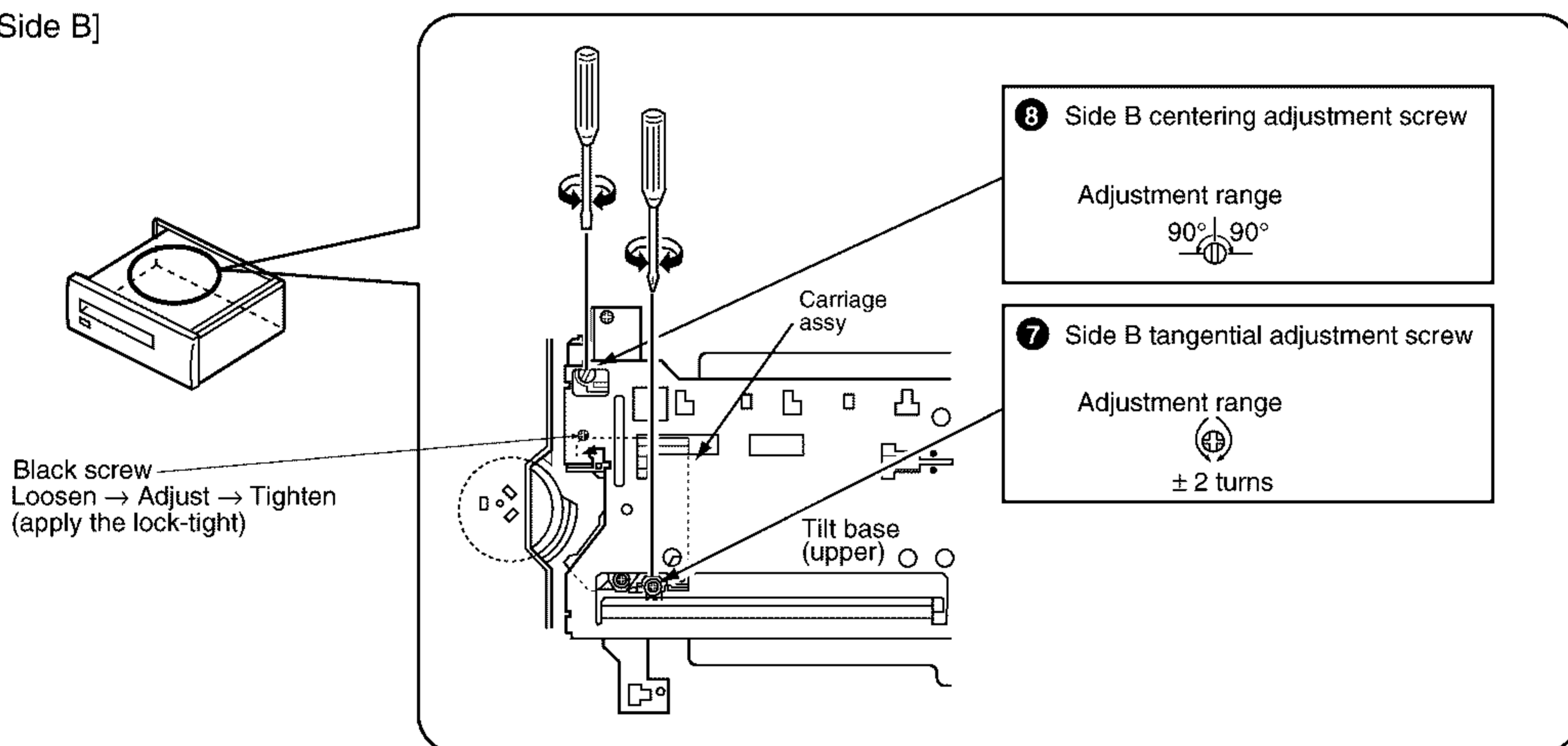
■ Adjustment Points (Mechanism Part)

CLD

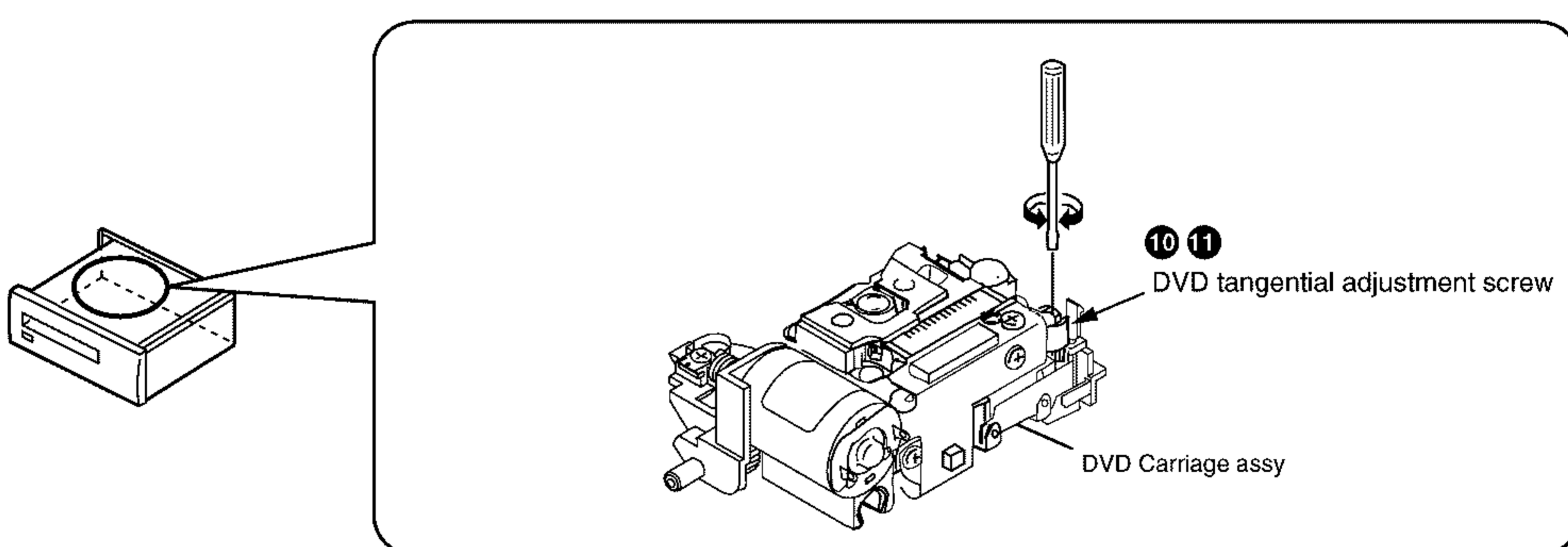
[Side A]



[Side B]




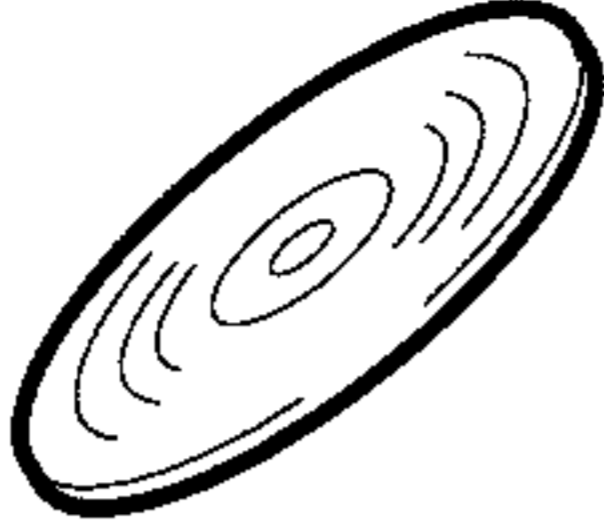



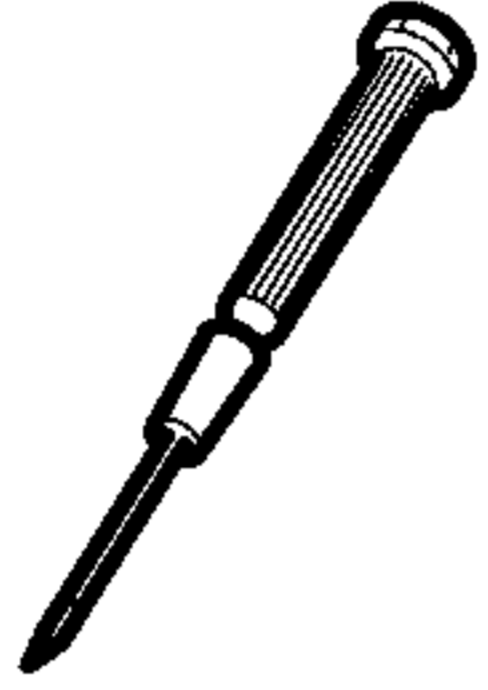
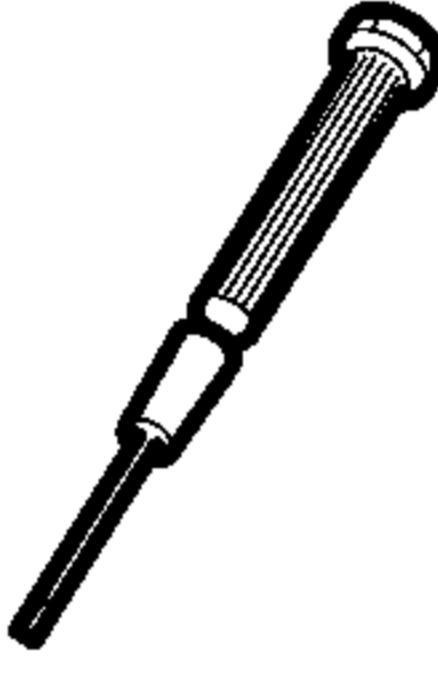

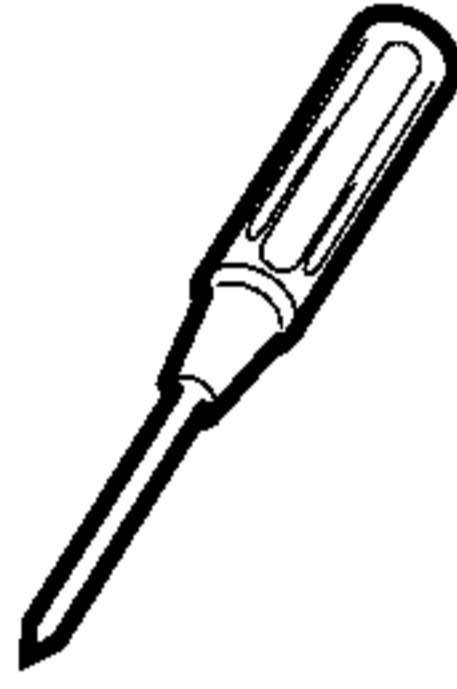
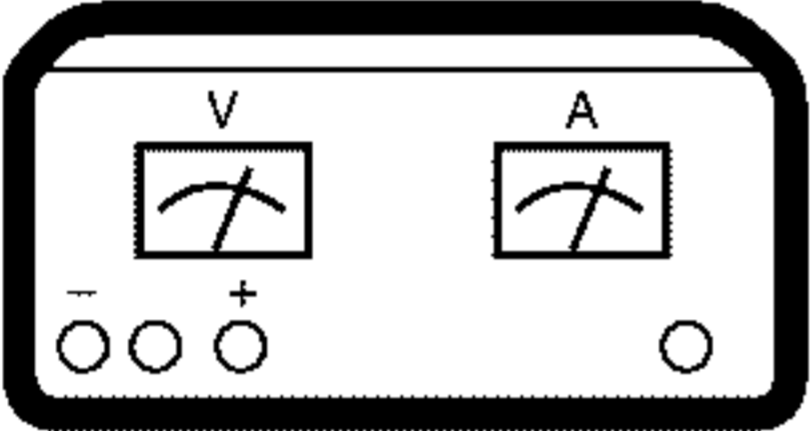
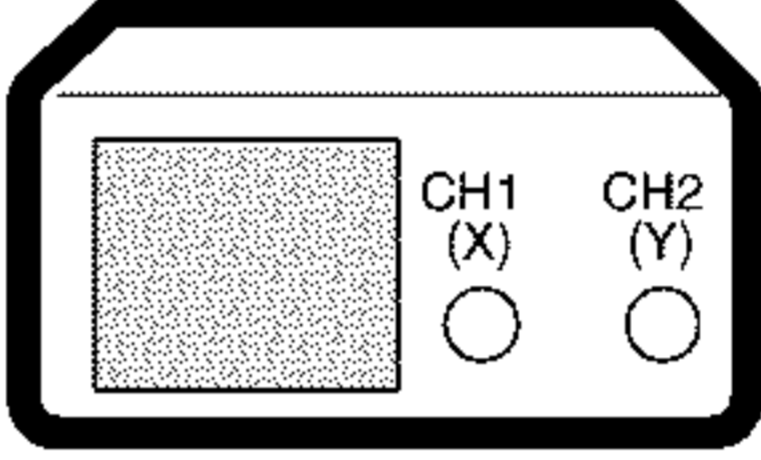

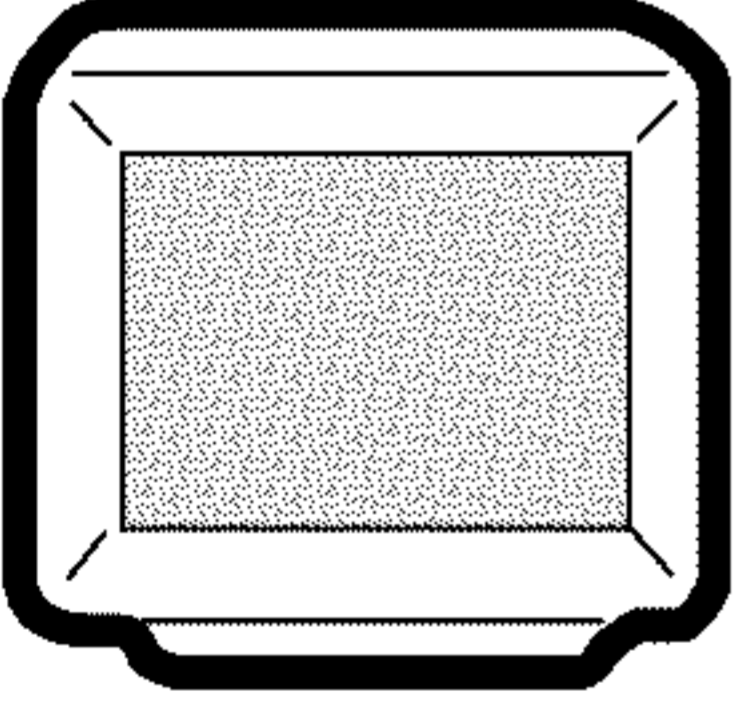
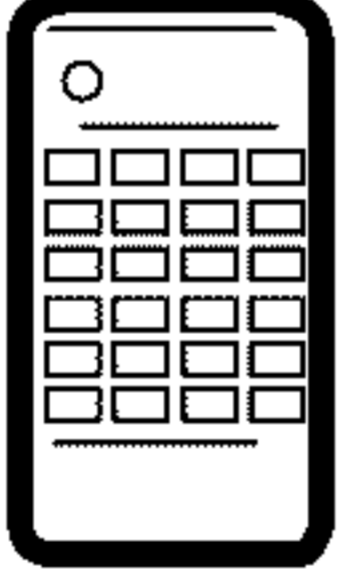
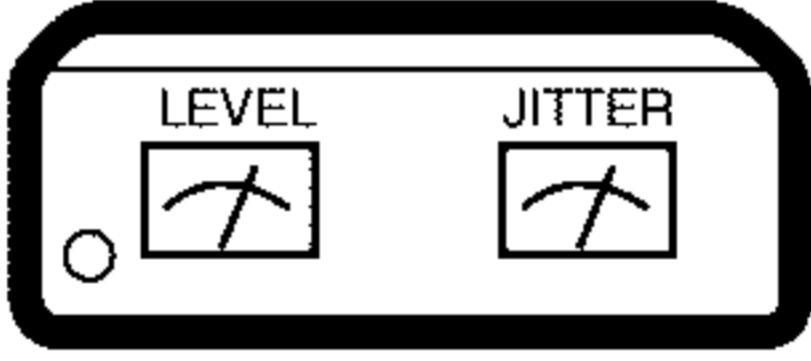

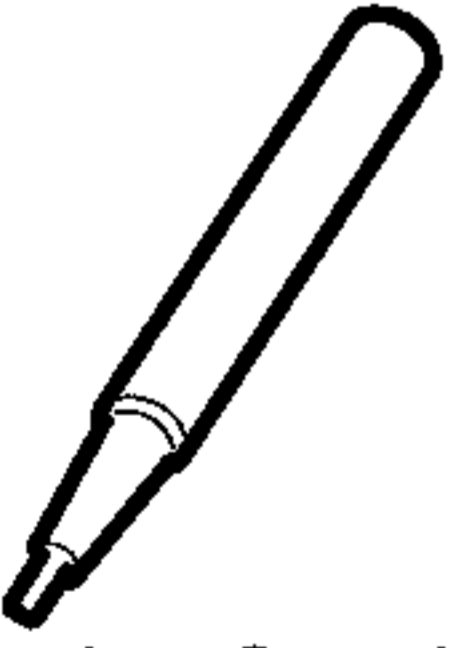
DVD



Note : Apply the lock-tight.



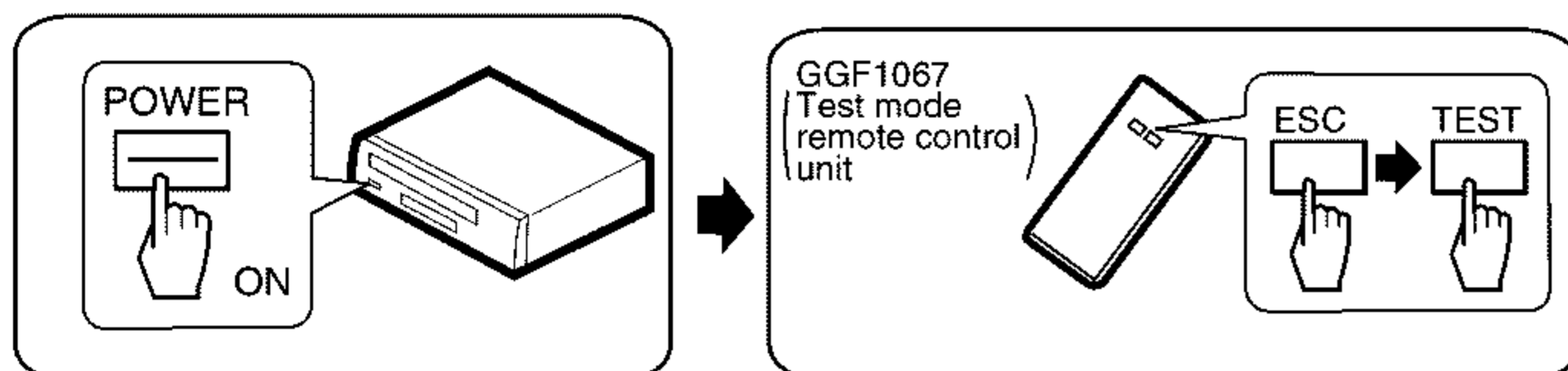
6.2 JIGS AND MEASURING INSTRUMENTS

 <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 <math>\geq 40\text{MHz}</math></p>	 <p>Frequency counter Display digit <math>\geq 8\text{-digit}</math></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

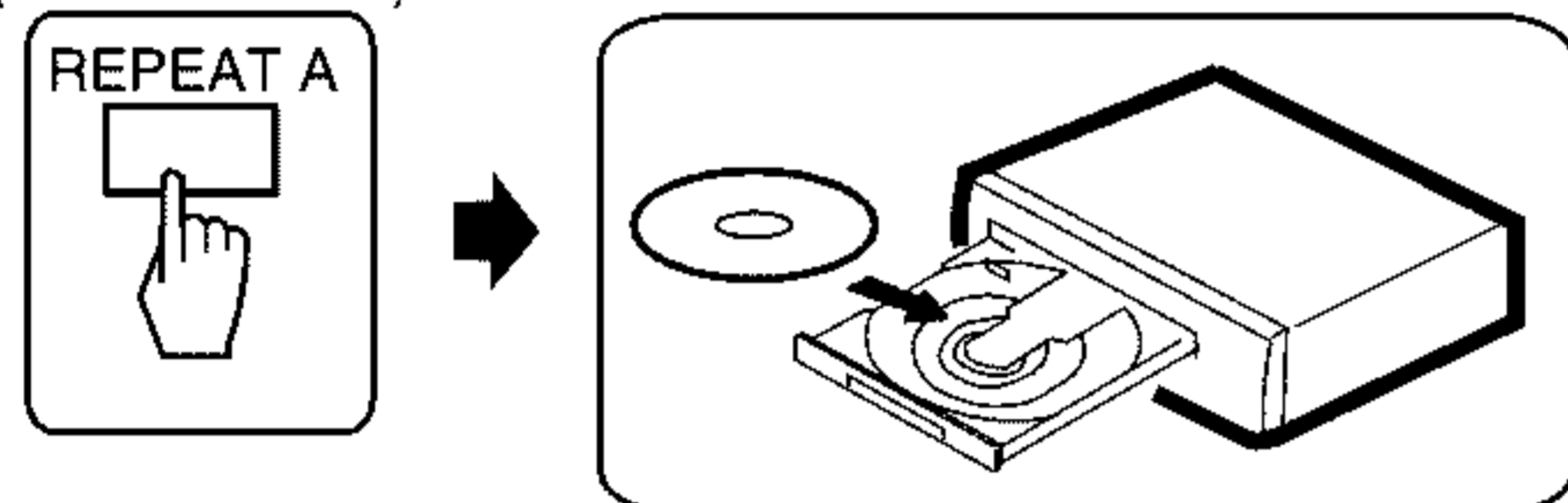
#### TEST MODE: ON



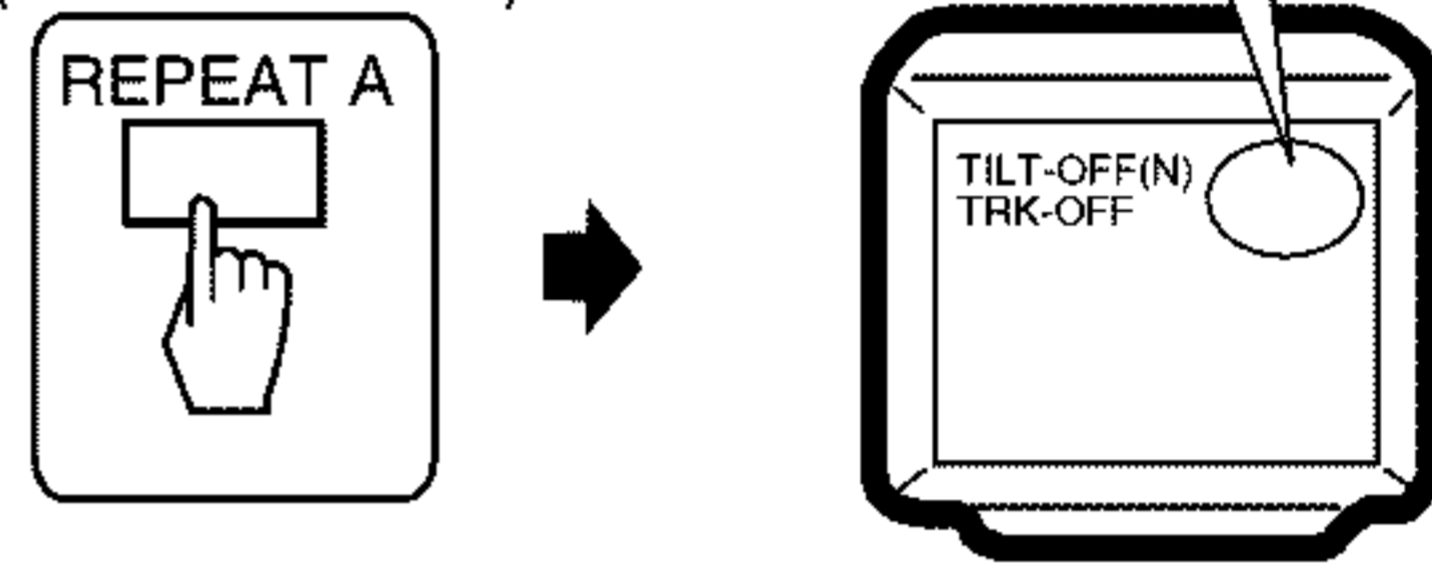
#### TEST MODE: DISC SET

• With TRAY

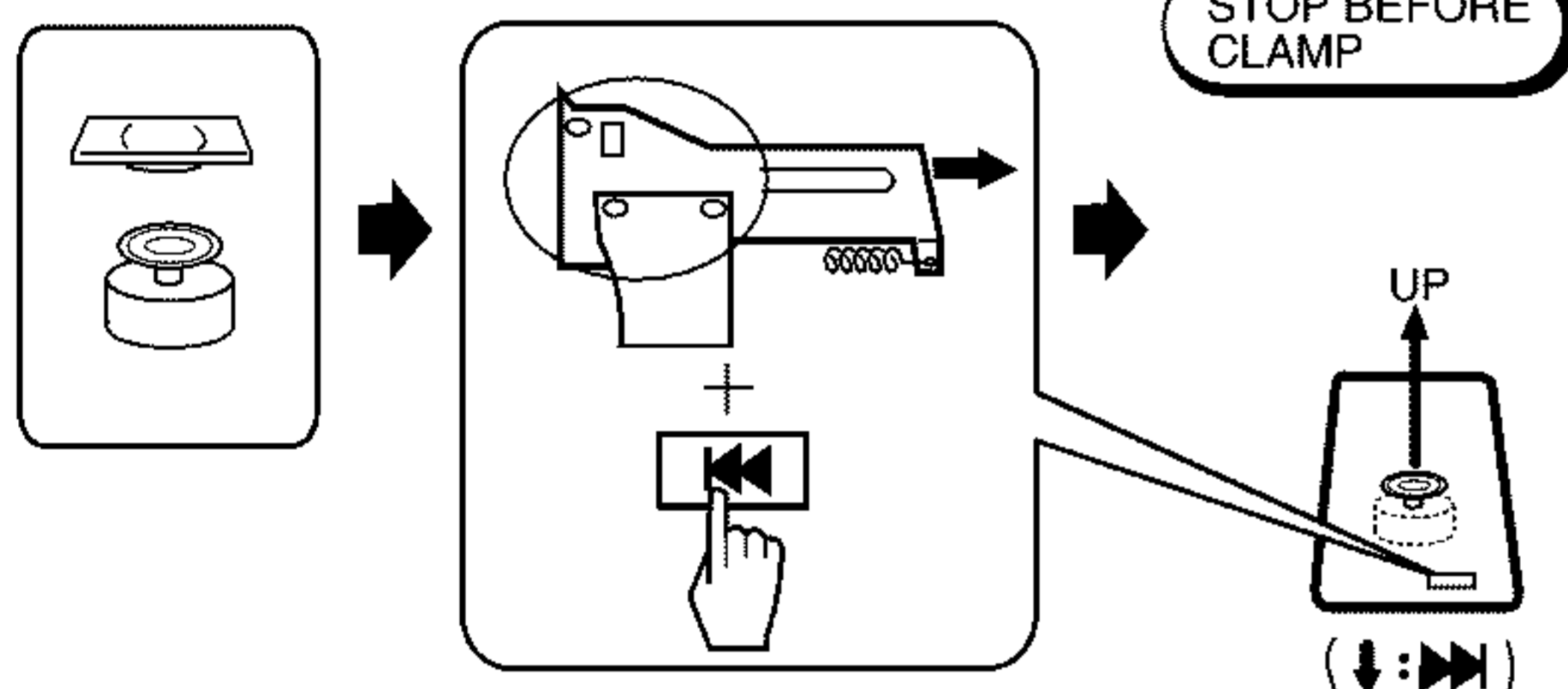
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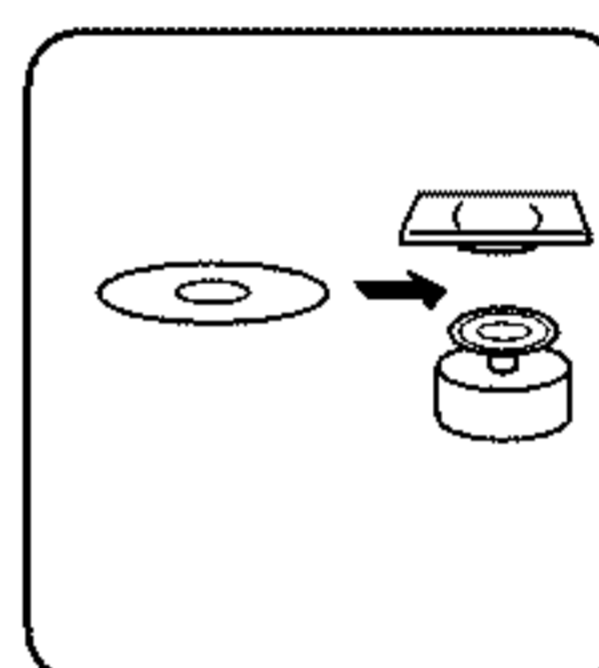
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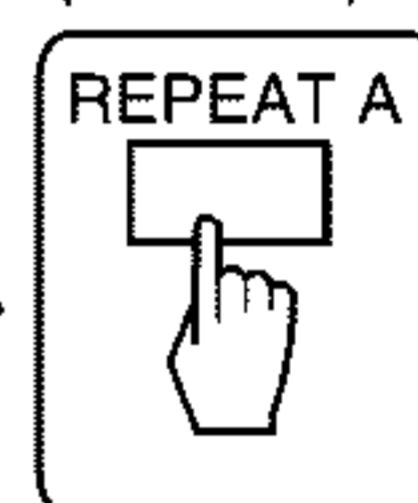
• No TRAY



<DISC SET>

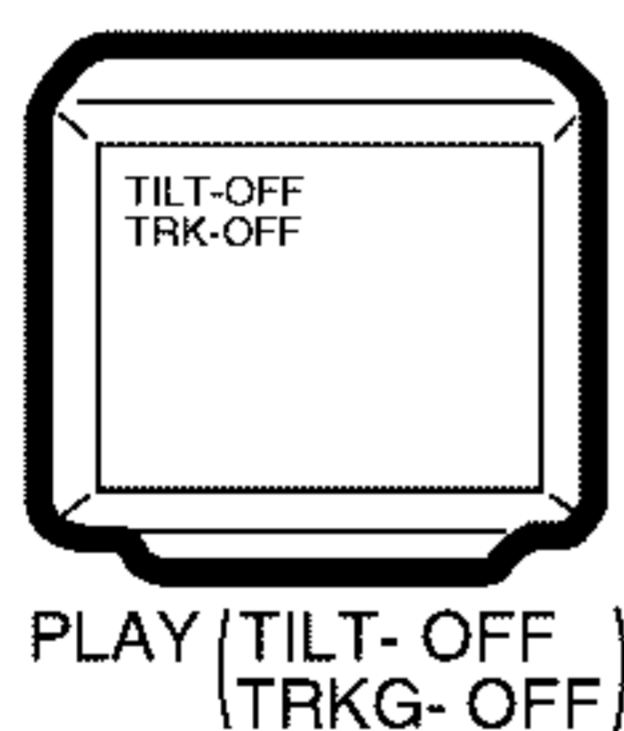
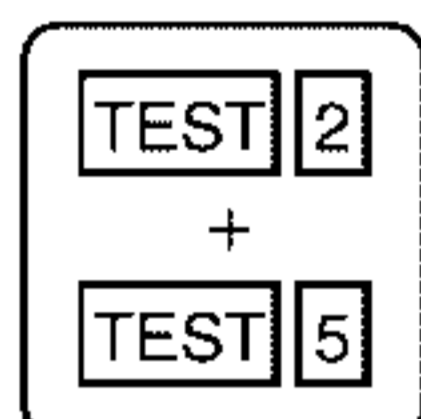


<CLAMP>

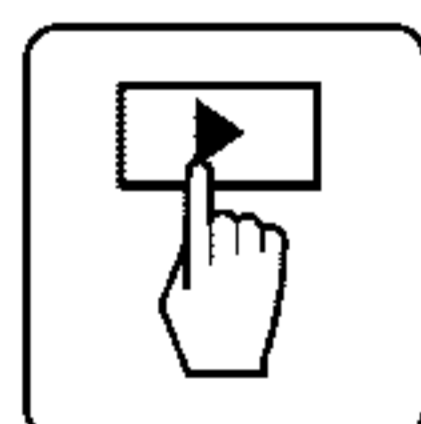


#### TEST MODE: PLAY

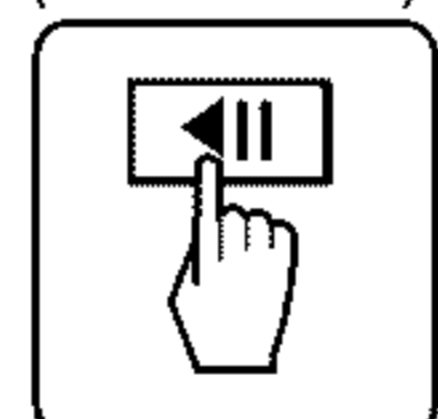
<TRKG OFF PLAY>



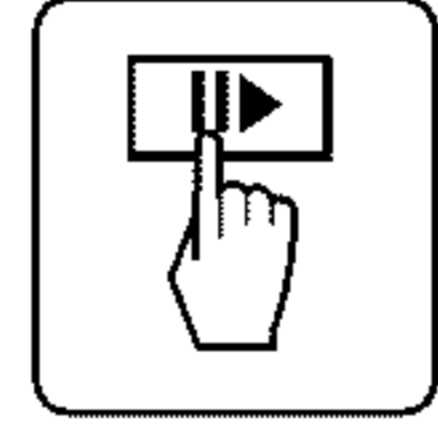
<TRKG ON PLAY>



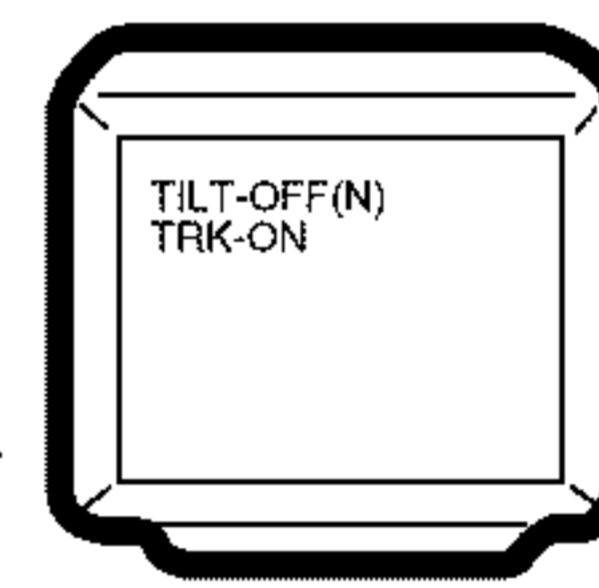
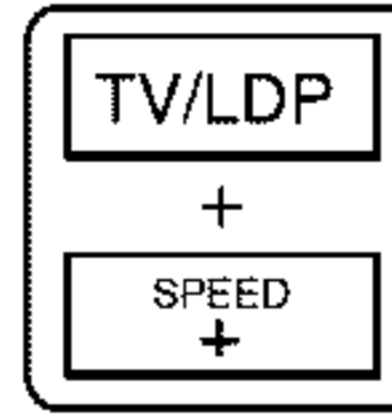
<TRKG ON>



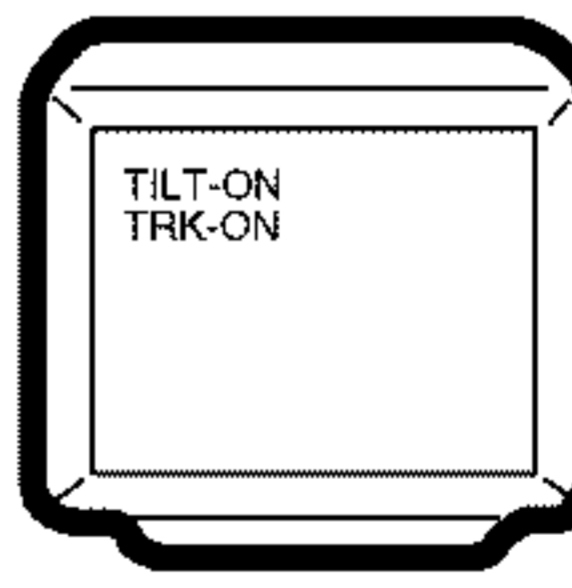
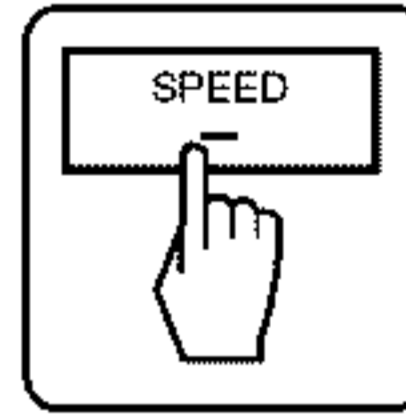
<TRKG OFF>



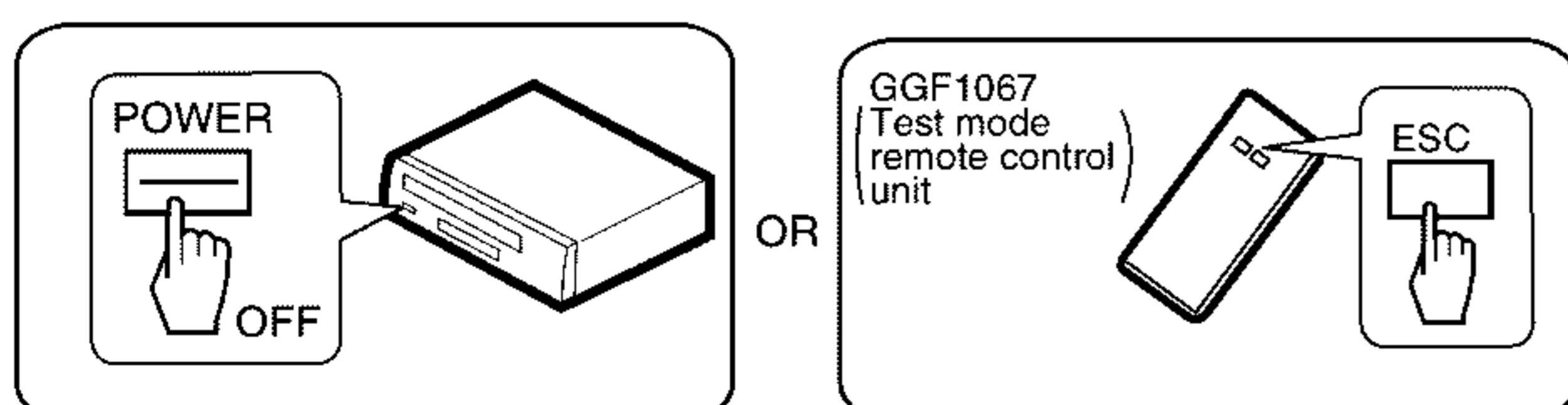
<TILT ON>



<TILT OFF>



#### TEST MODE: OFF





# DVL-909

## 6.4 NECESSARY ADJUSTMENT POINTS

When

Adjustment Points

### ■ EXCHANGE MECHANISM ASSY PARTS

Exchange pickup (CLD)	➔	Mechanical point	①, ②, ③, ④, ⑤, ⑥, ⑦, ⑧, ⑨
		Electric point	_____
Exchange pickup (DVD)	➔	Mechanical point	⑩, ⑪
		Electric point	_____
Exchange spindle motor	➔	Mechanical point	③, ⑧
		Electric point	_____

### ■ EXCHANGE PCB ASSY

Exchange board CLDM ASSY	➔	Mechanical point	①, ④, ⑤, ⑥, ⑨
		Electric point	_____
Exchange board DVDM ASSY	➔	Mechanical point	⑩, ⑪
		Electric point	_____

Note : ① and ② are adjusted already.

Note : ① and ② are adjusted already.

● When replacing the FLASH MEMORY (IC603) on the DVDM Assy, follow the "6.5 REGION SETTING".

Exchange board DMYC ASSY	➔	Mechanical point	_____
		Electric point	_____
Exchange board MYCB ASSY	➔	Mechanical point	_____
		Electric point	_____

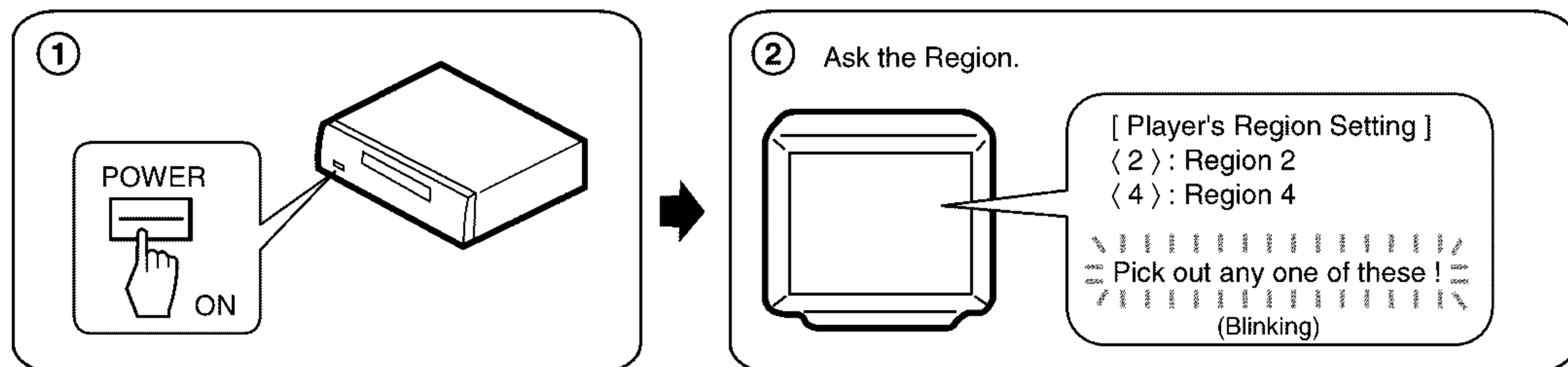
Note : ① - ⑬ are adjusted already.

Note : ① is adjusted already.

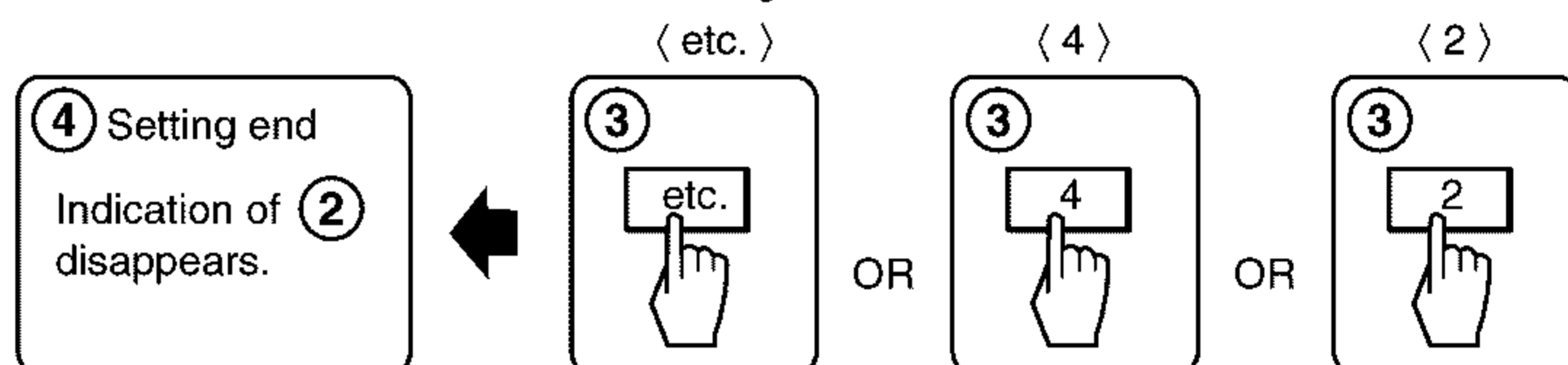


## 6.5 REGION SETTING

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.

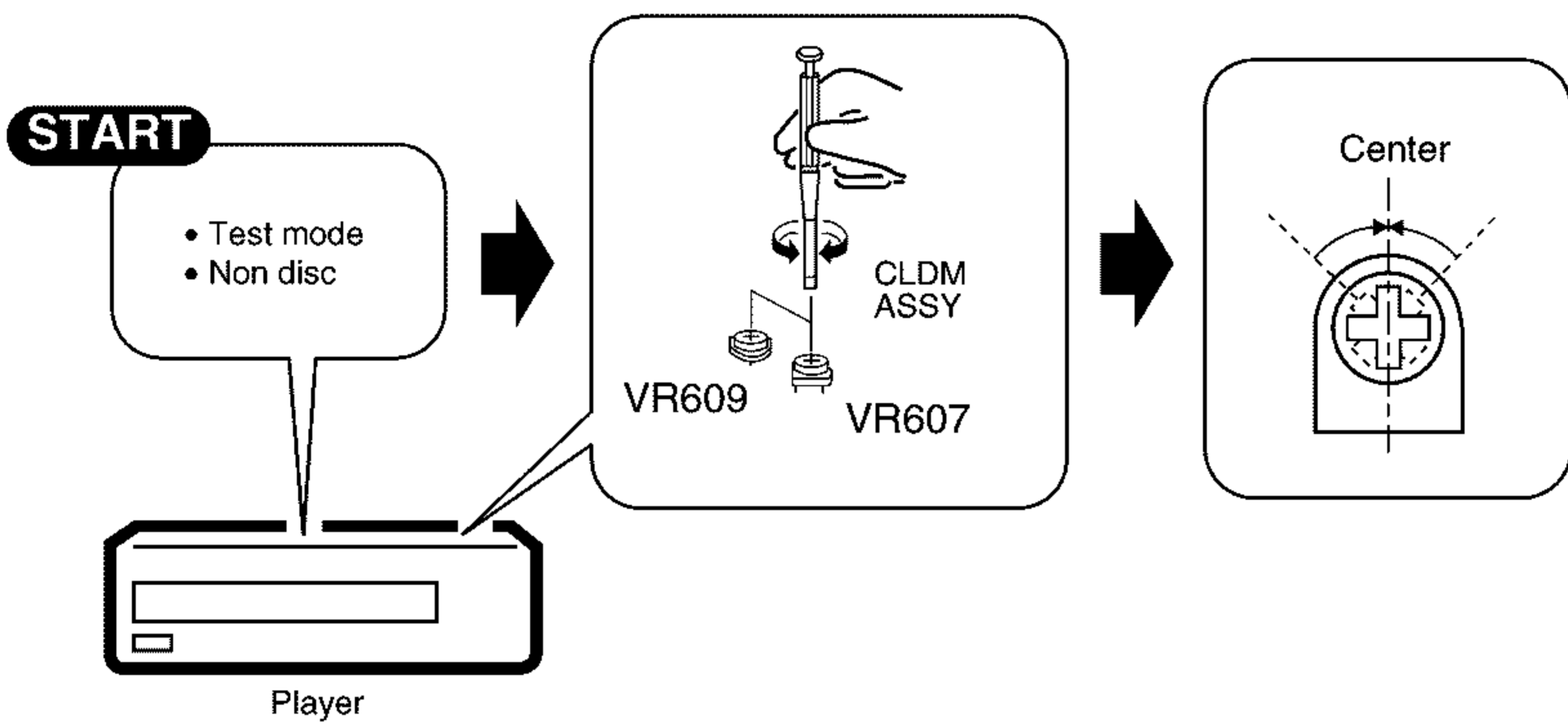


Key input the number with the test mode remote control unit (GGF1067).

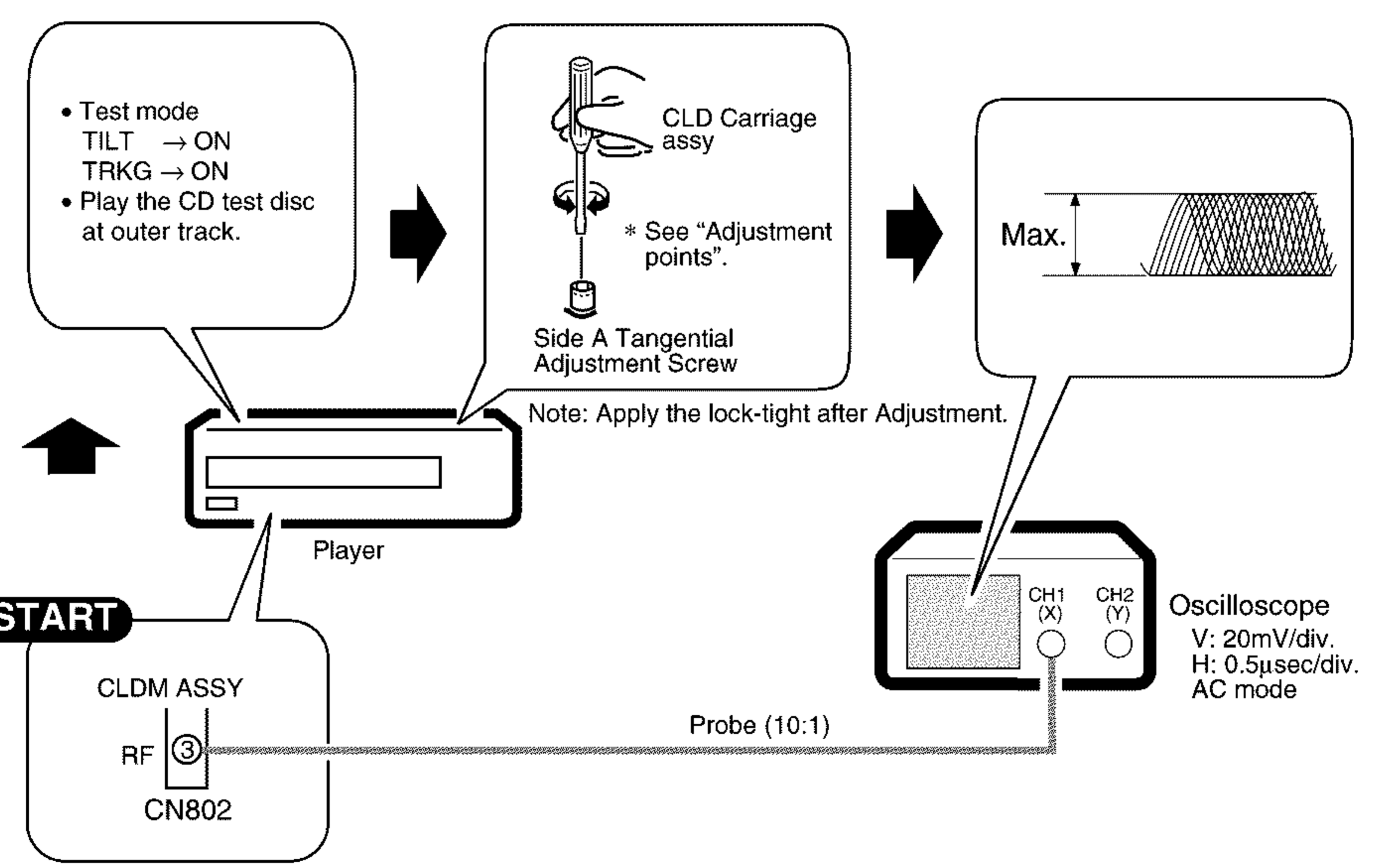


6.6 MECHANICAL ADJUSTMENT

1 Tilt Offset Adjustment

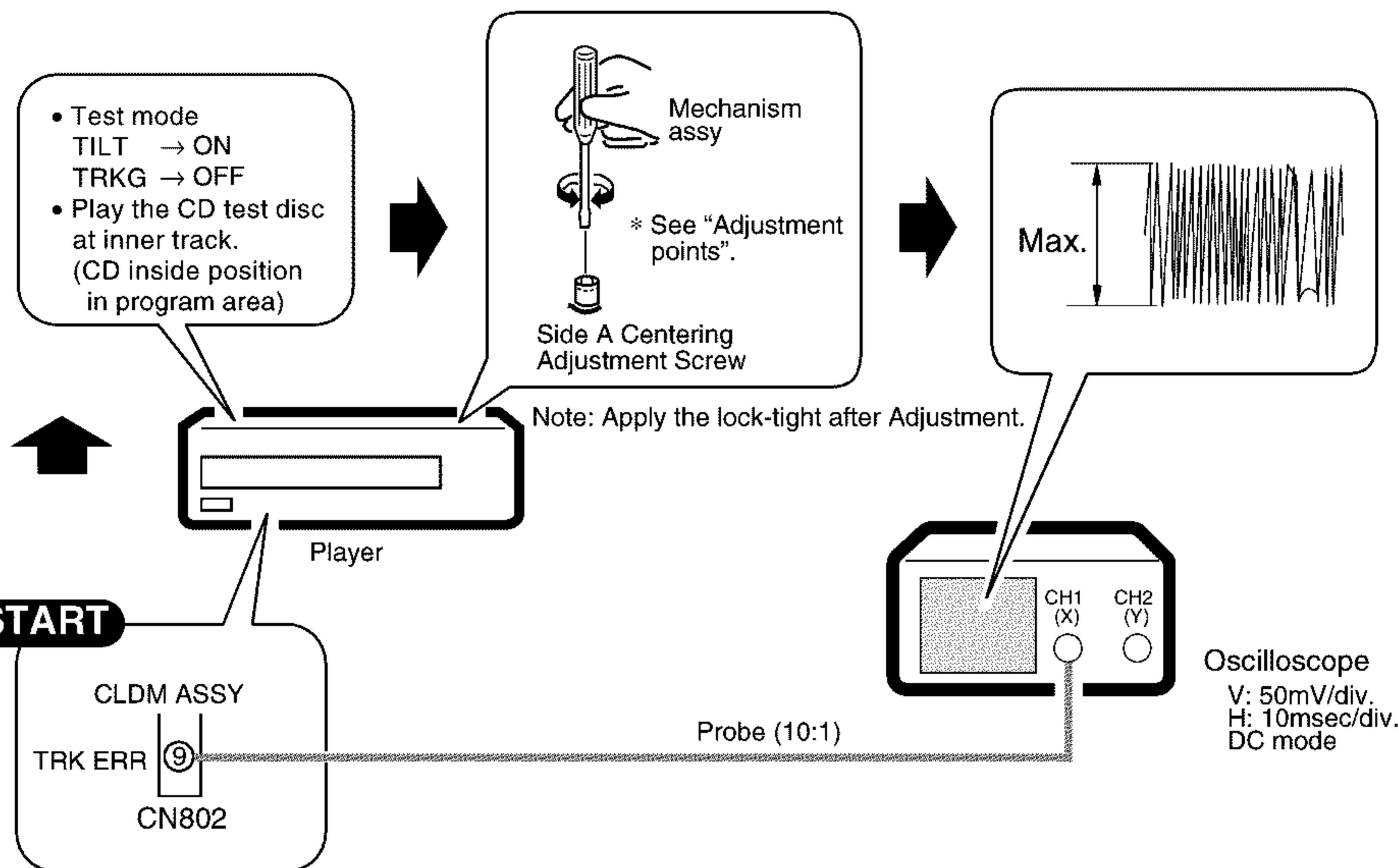


2 Tangential Direction Angle Adjustment for Side A

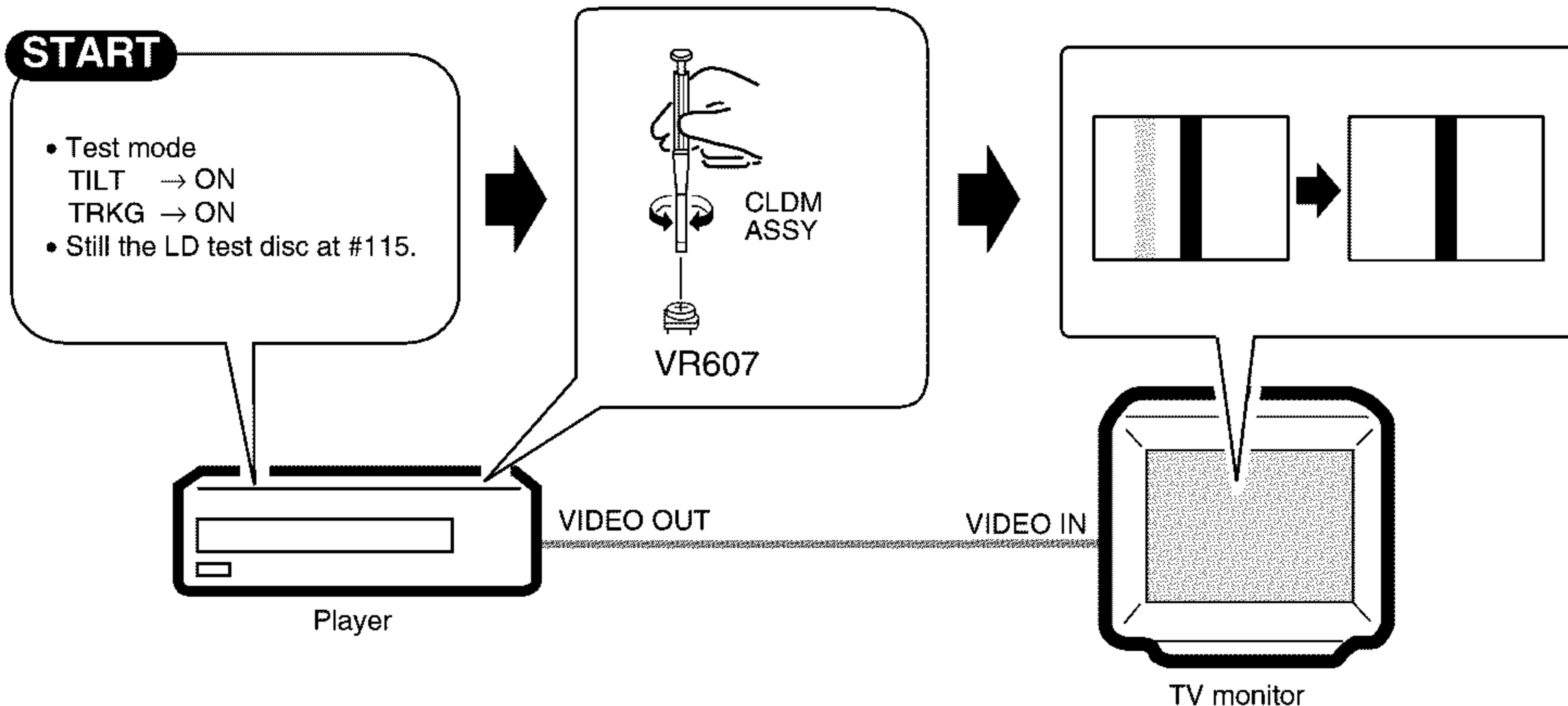




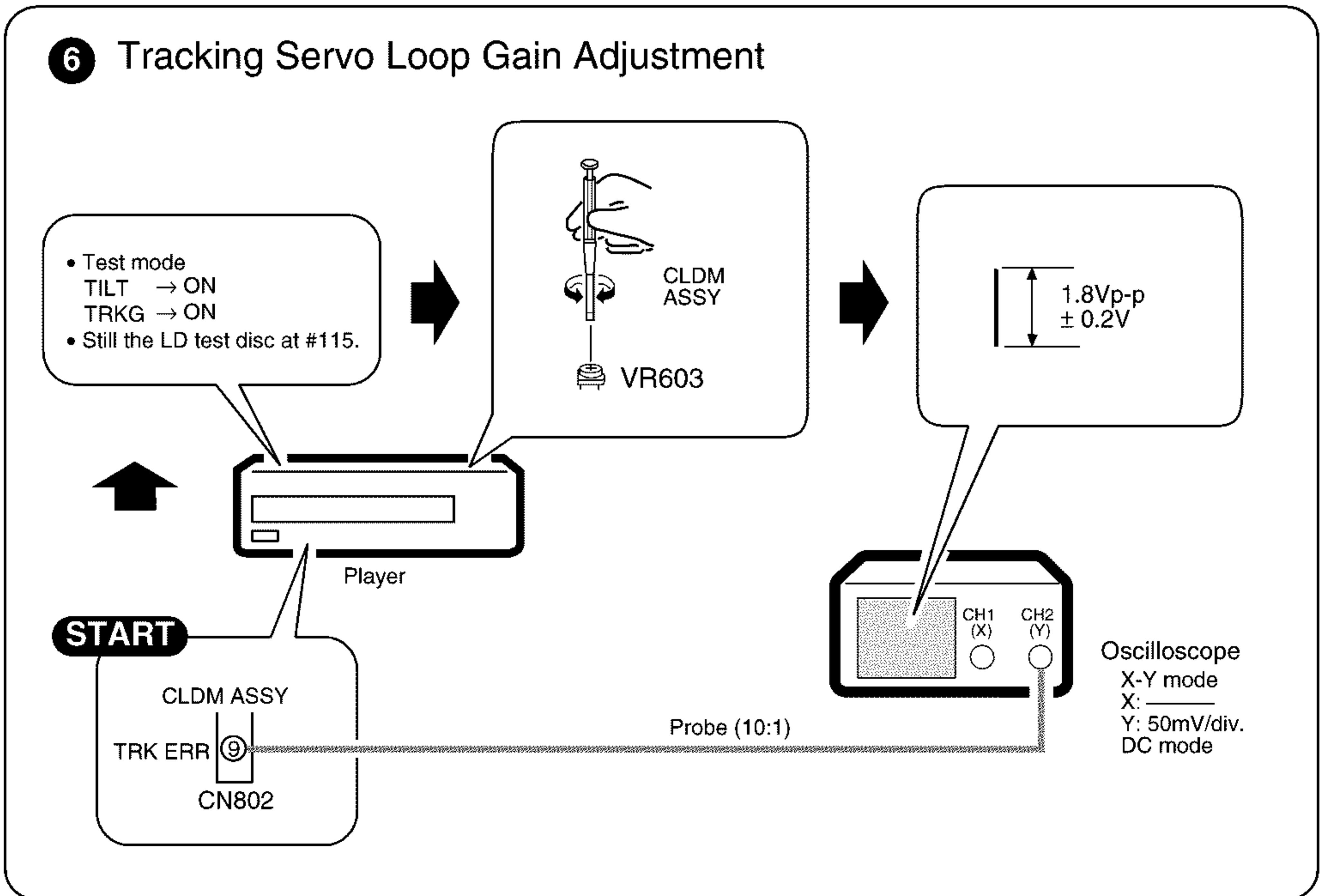
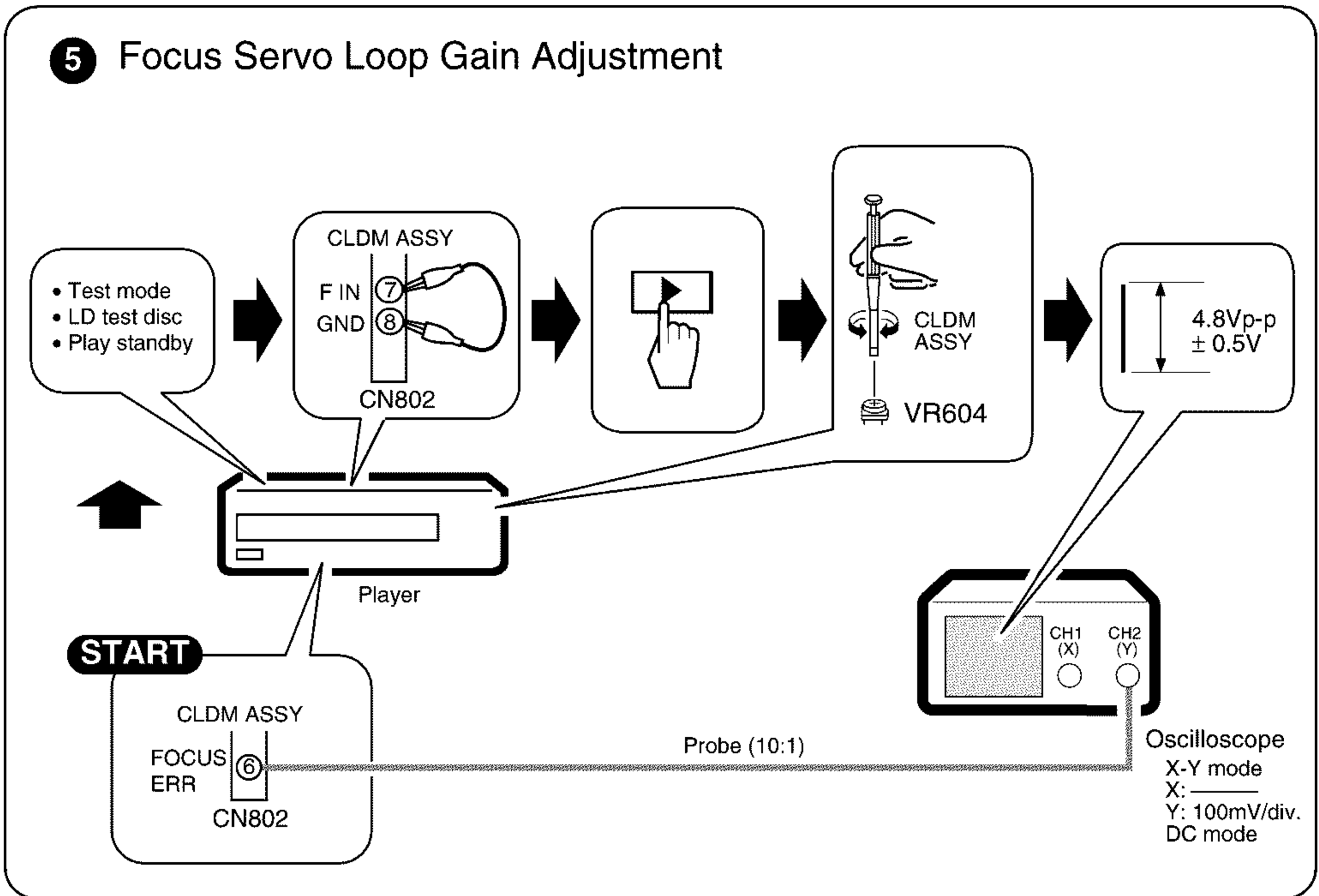
### 3 Spindle Motor Centering Adjustment for Side A



### 4 Crosstalk Check and Fine Tilt Offset Adjustment for Side A

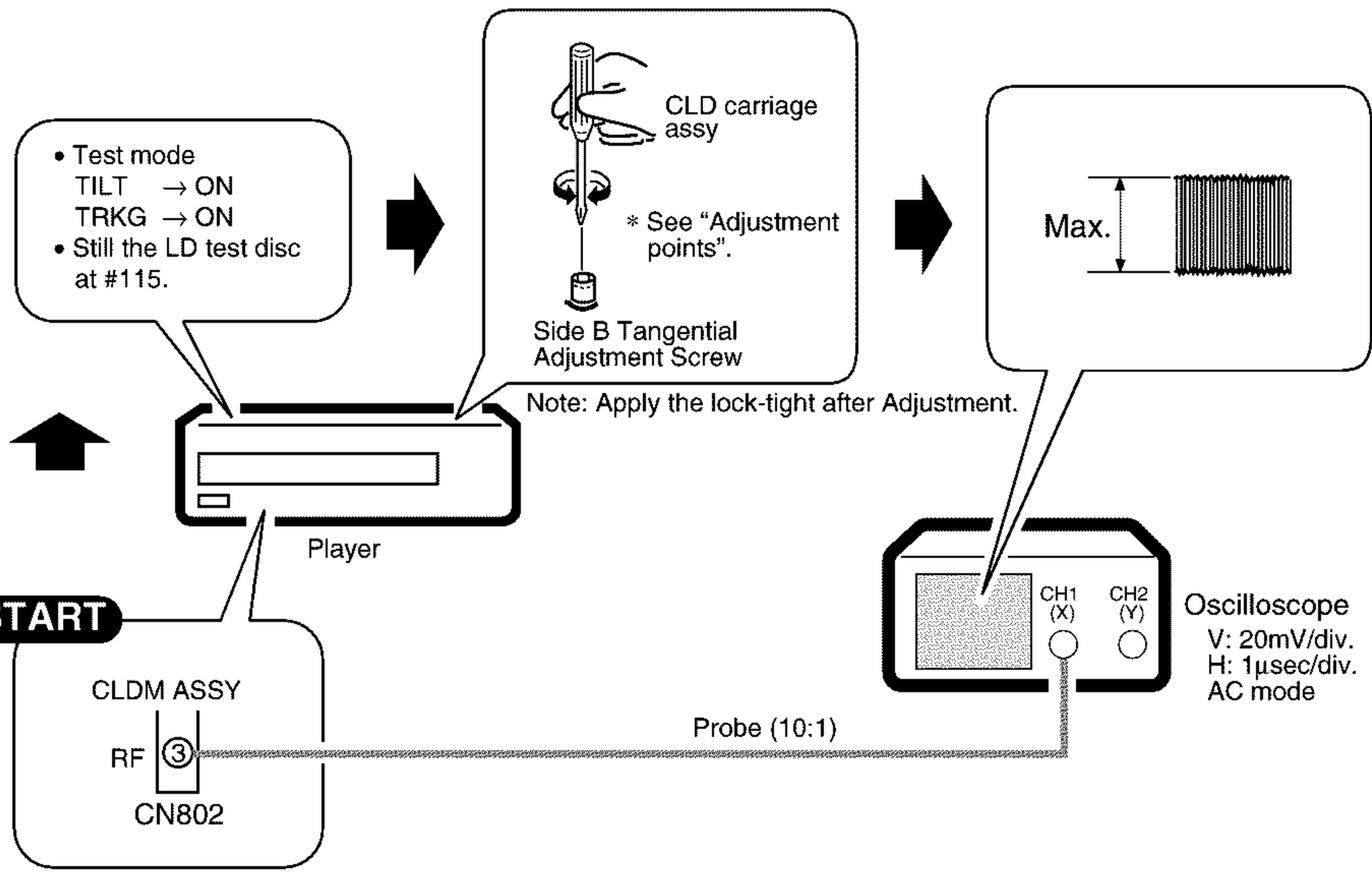




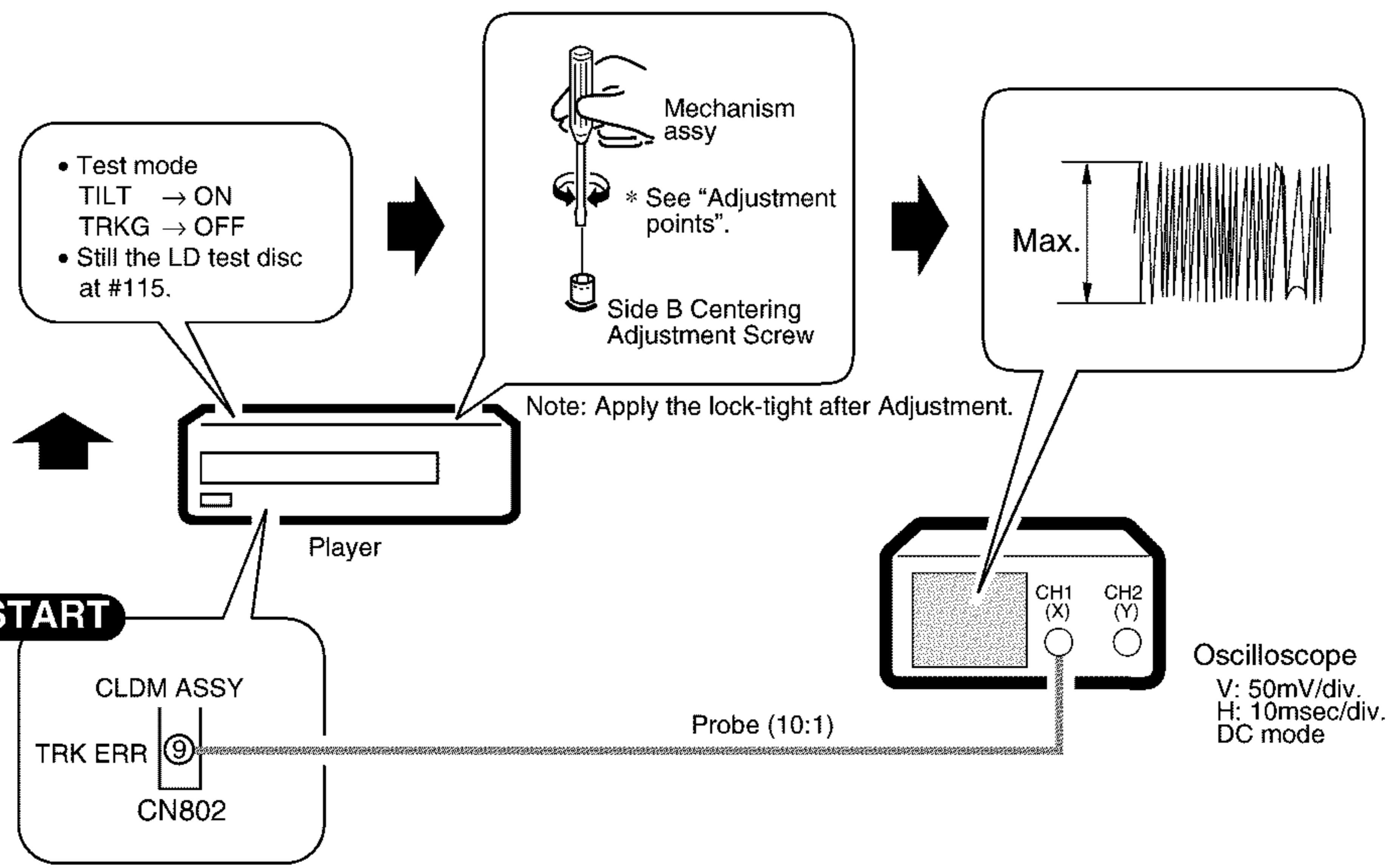




### 7 Tangential Direction Angle Adjustment for Side B



### 8 Spindle Motor Centering Adjustment for Side B

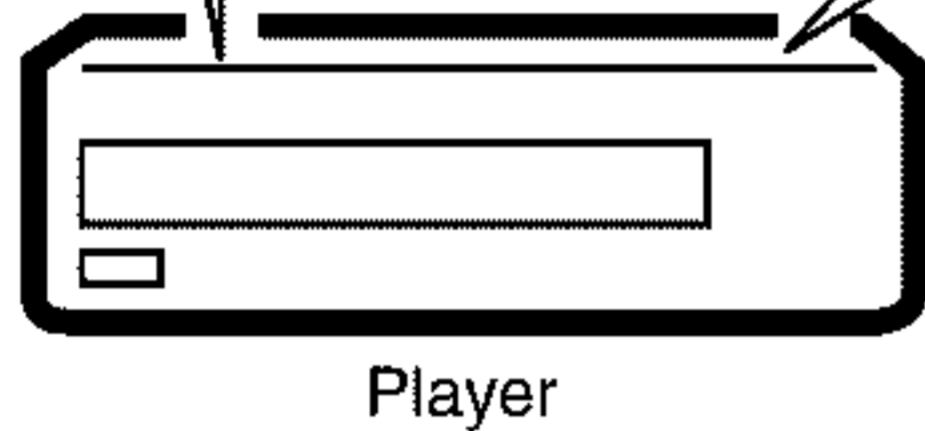
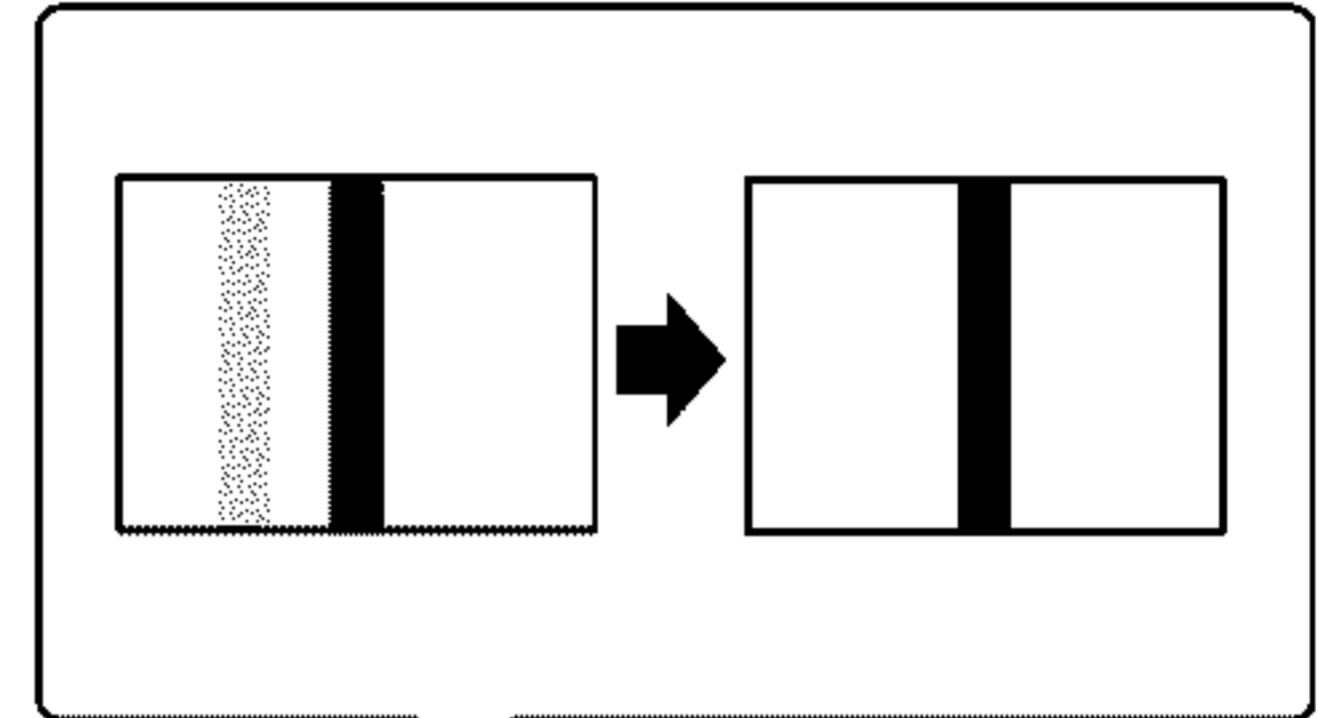
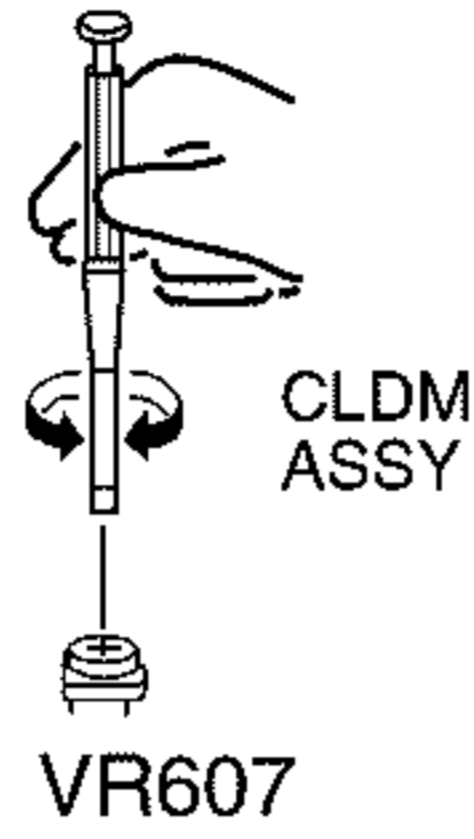




**9** Crosstalk Check and Fine Tilt Offset Adjustment for Side B

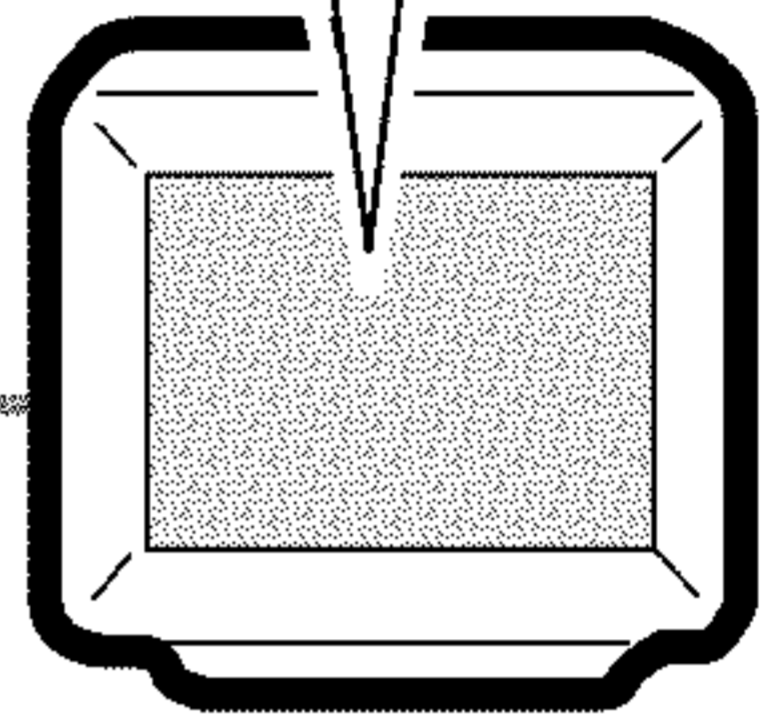
**START**

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



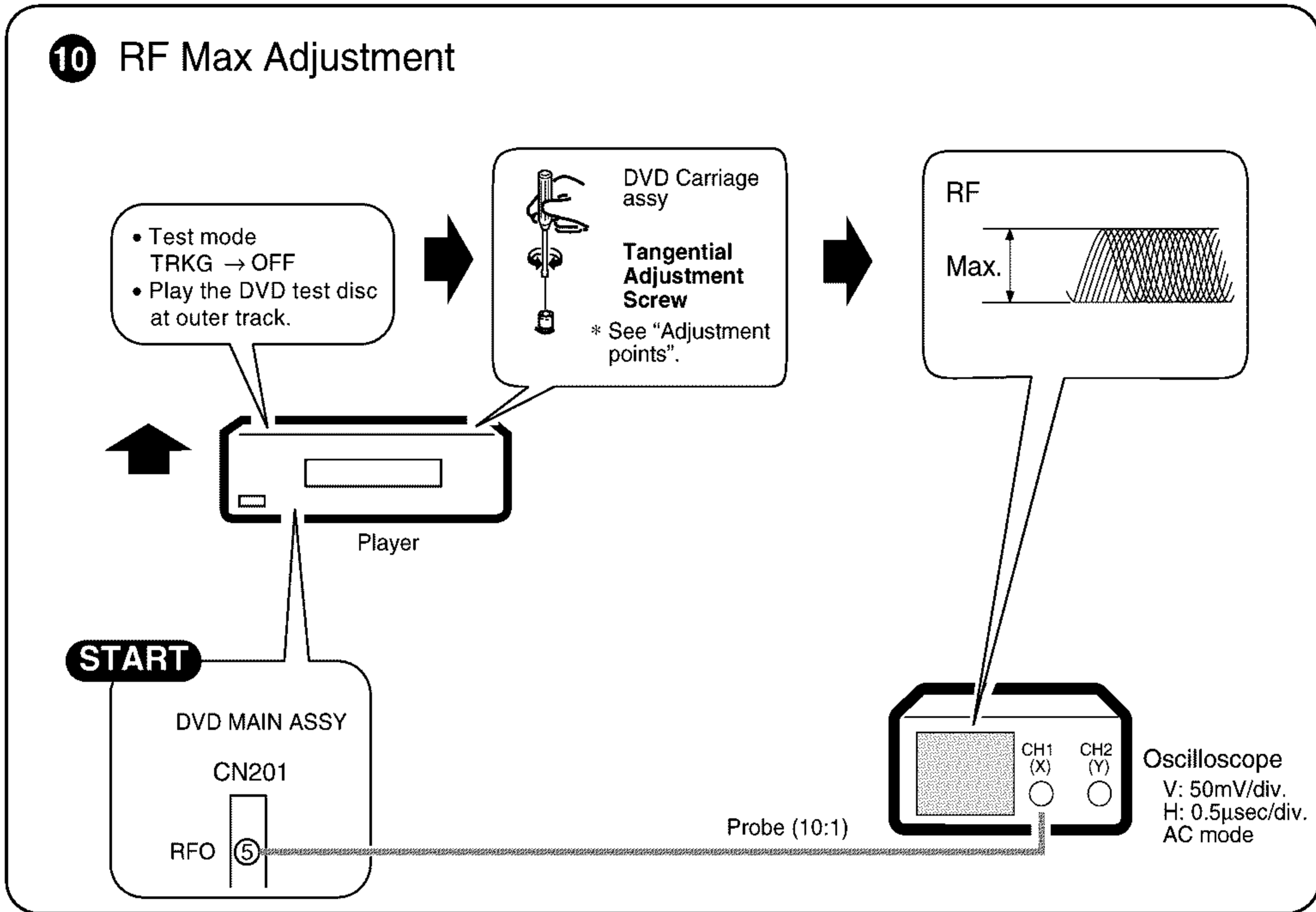
VIDEO OUT

VIDEO IN

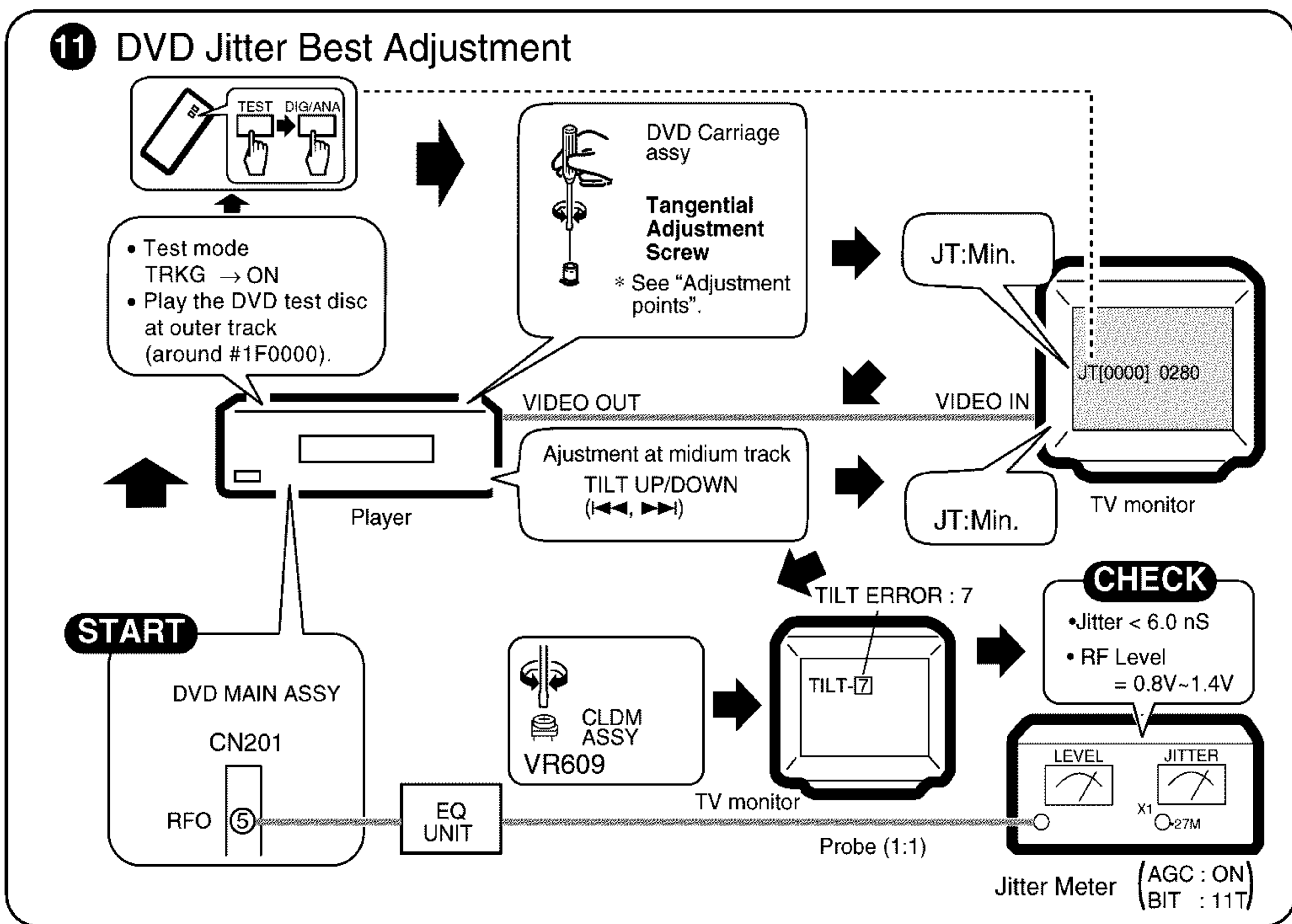




### 10 RF Max Adjustment

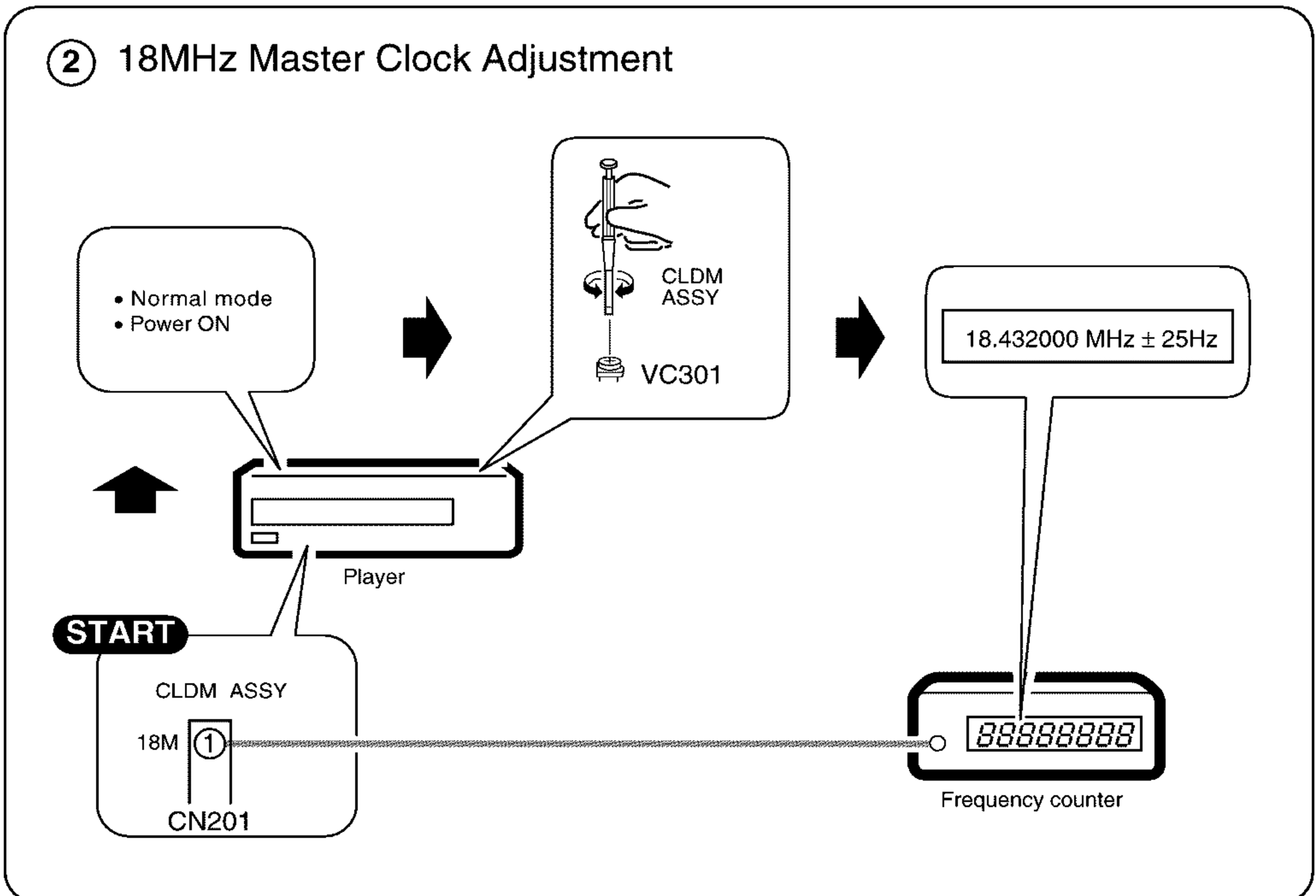
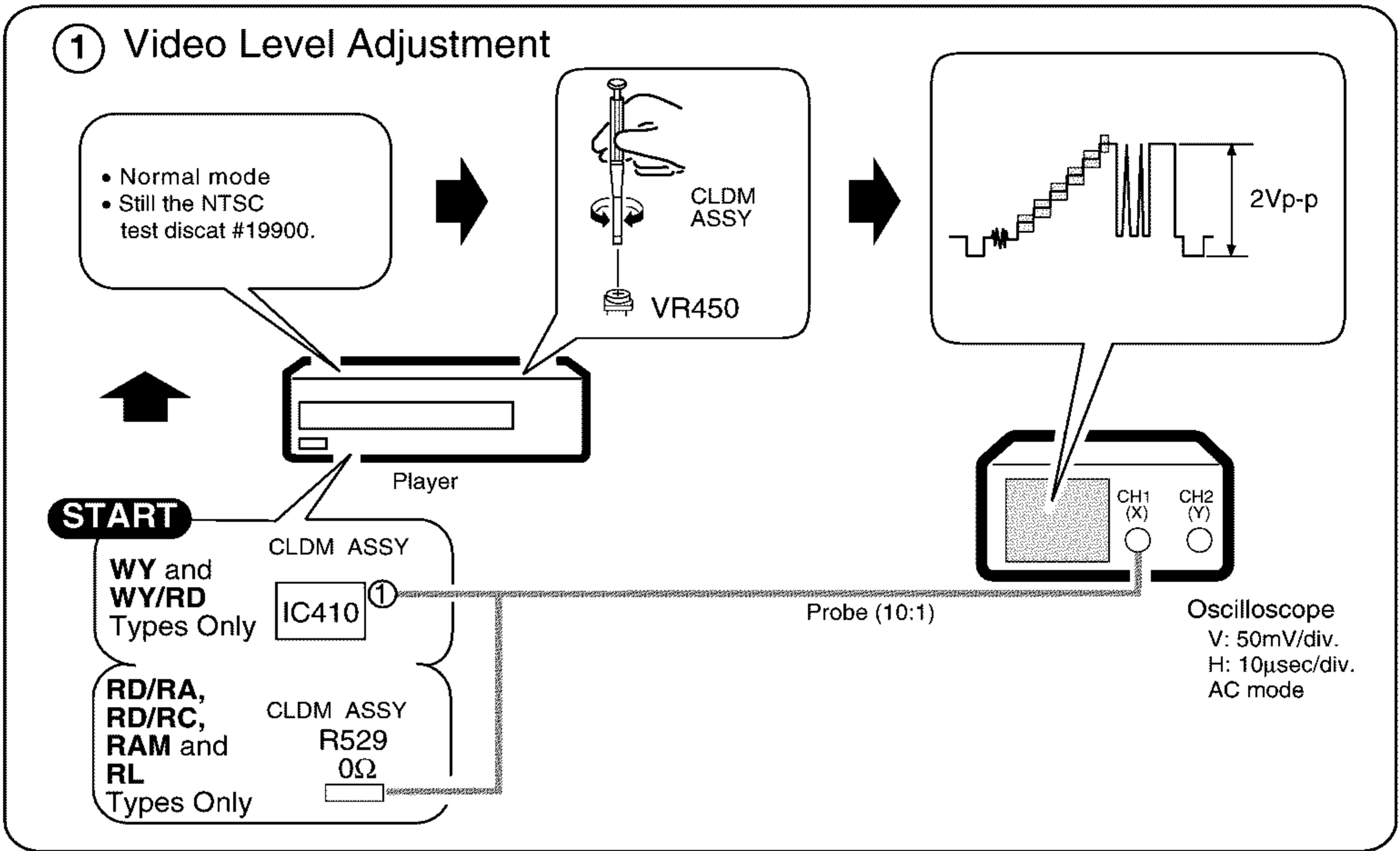


### 11 DVD Jitter Best Adjustment





6.7 ELECTRICAL ADJUSTMENT FOR CLDM ASSY

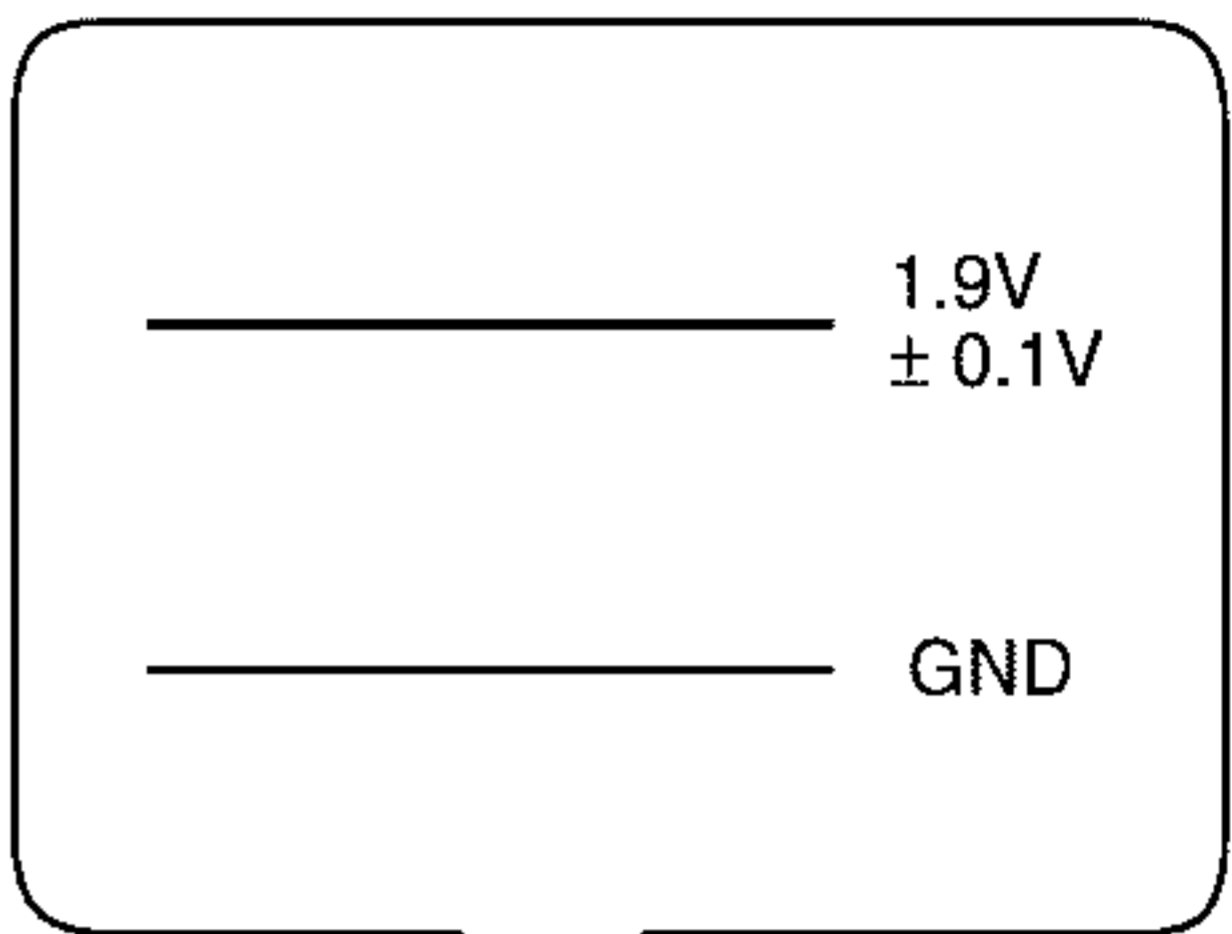
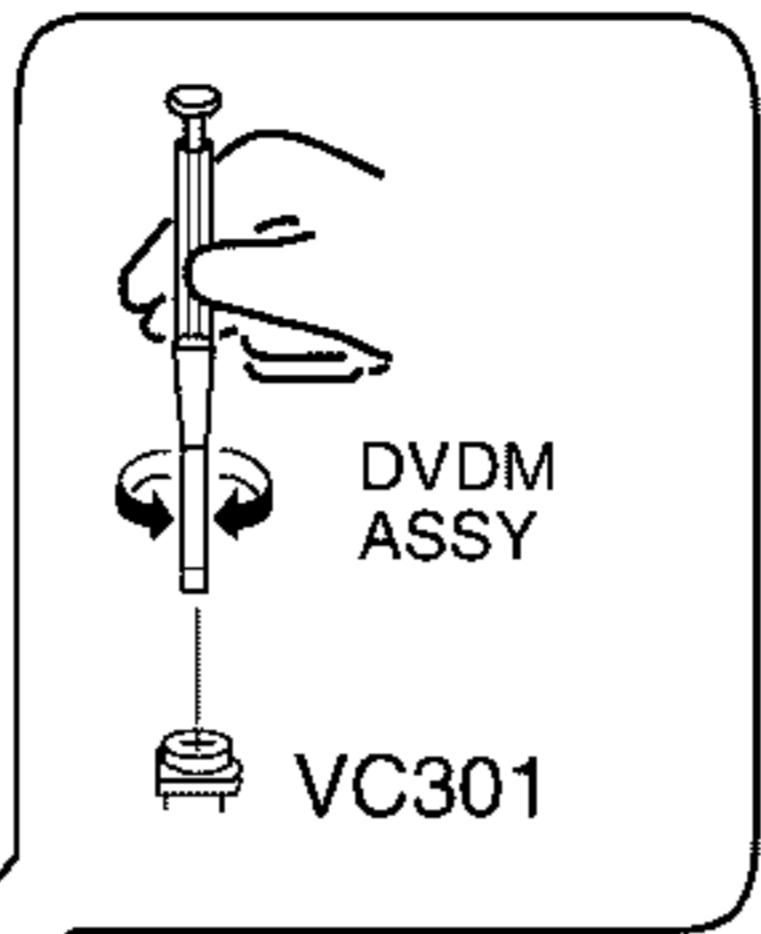




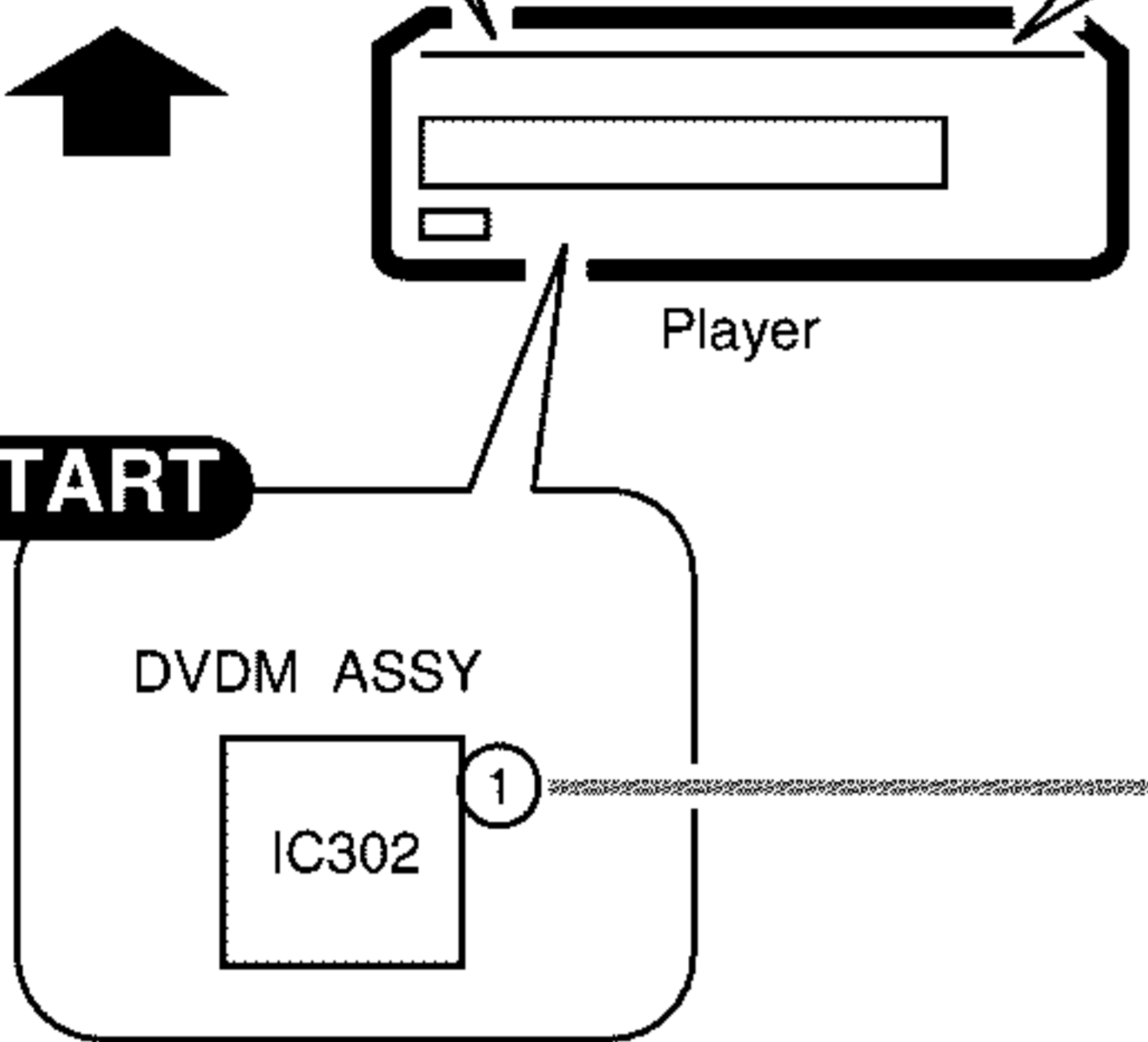
### 6.8 ELECTRICAL ADJUSTMENT FOR DVDM ASSY

#### ① VCO Offset Adjustment

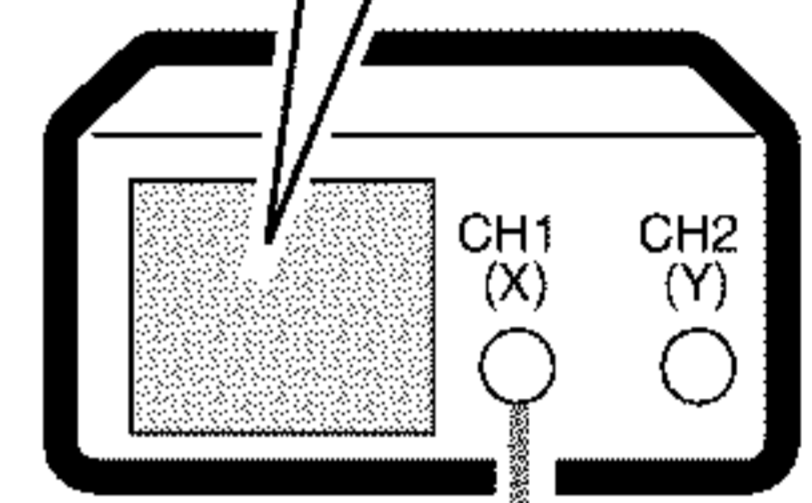
- Normal mode
- Play the DVD test disc



**START**



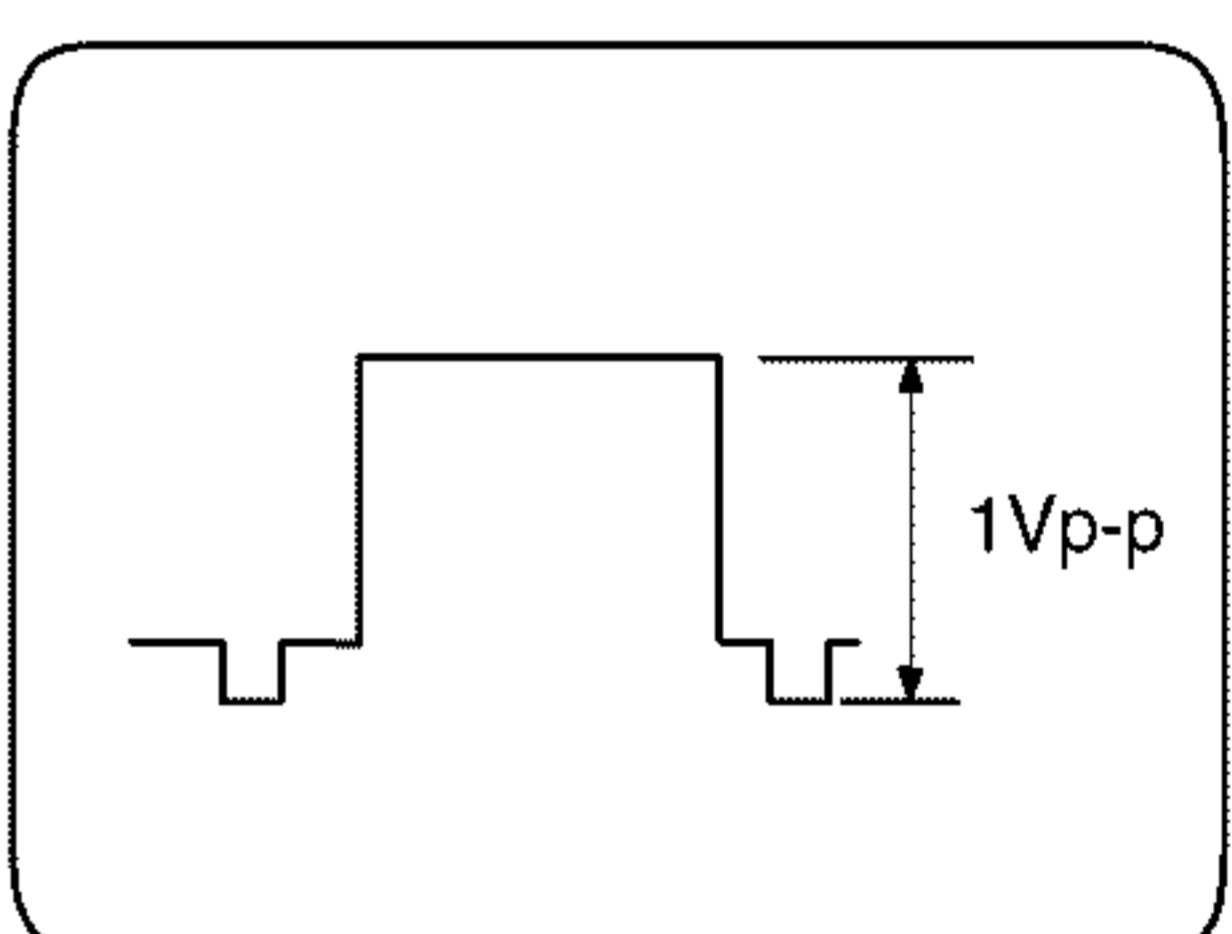
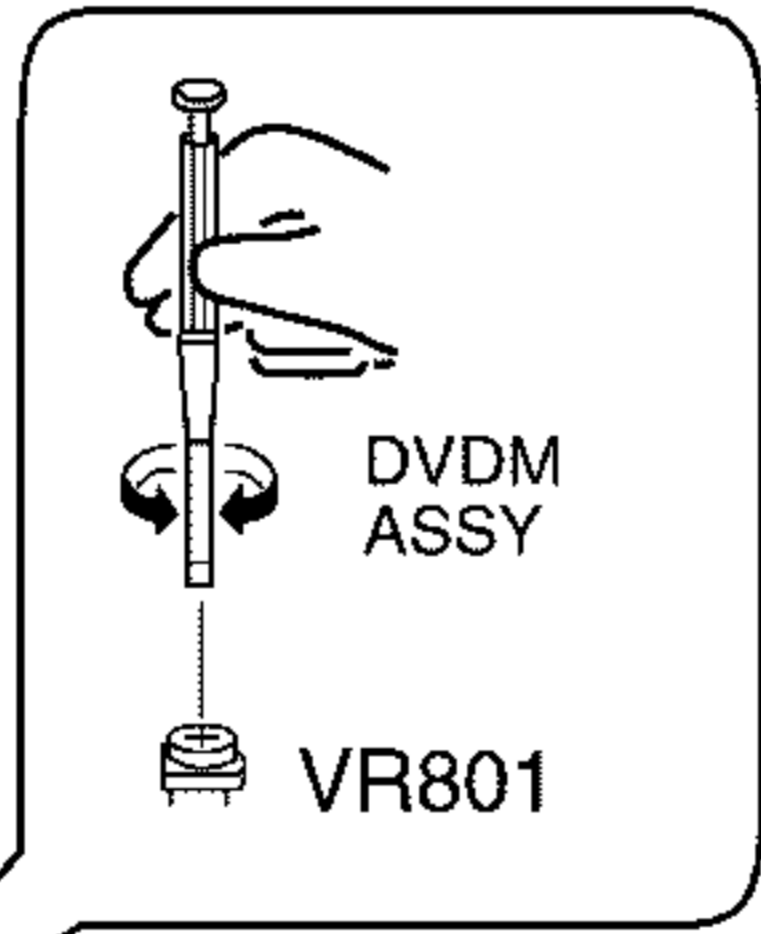
Probe (10:1)



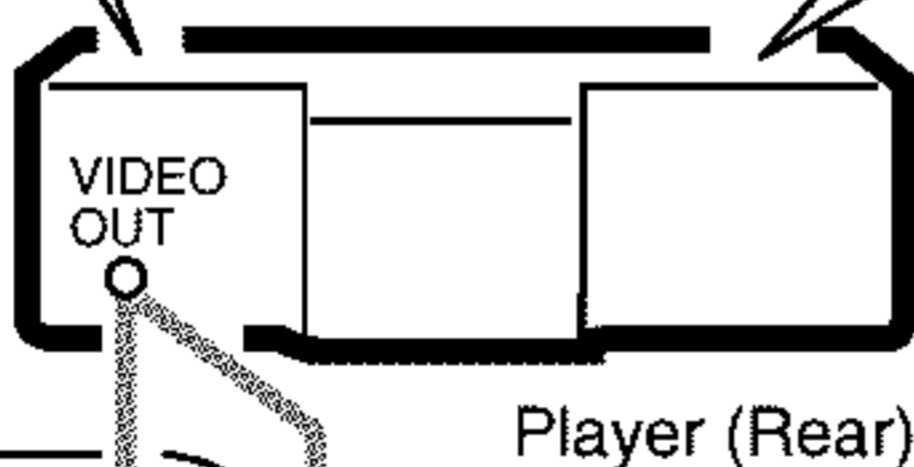
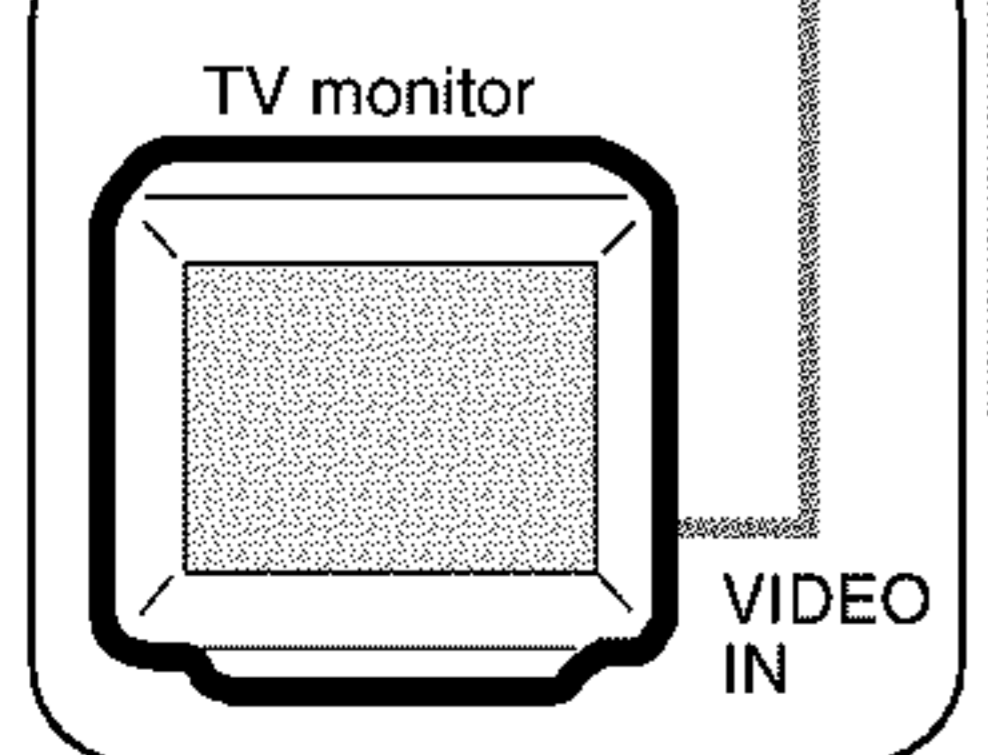
Oscilloscope  
V: 50mV/div.  
H: 10msec/div.  
DC mode  
TV trigger

#### ② Video Output Level Adjustment

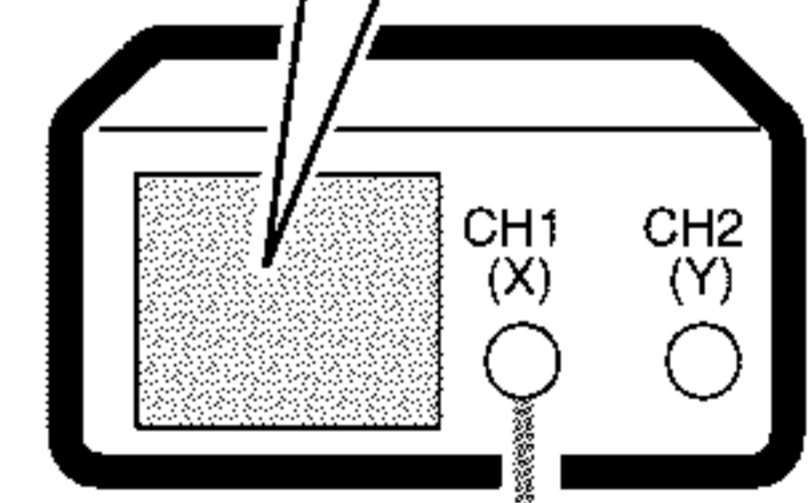
- Normal mode
- Still the DVD test disc at 100% white screen part



**START**



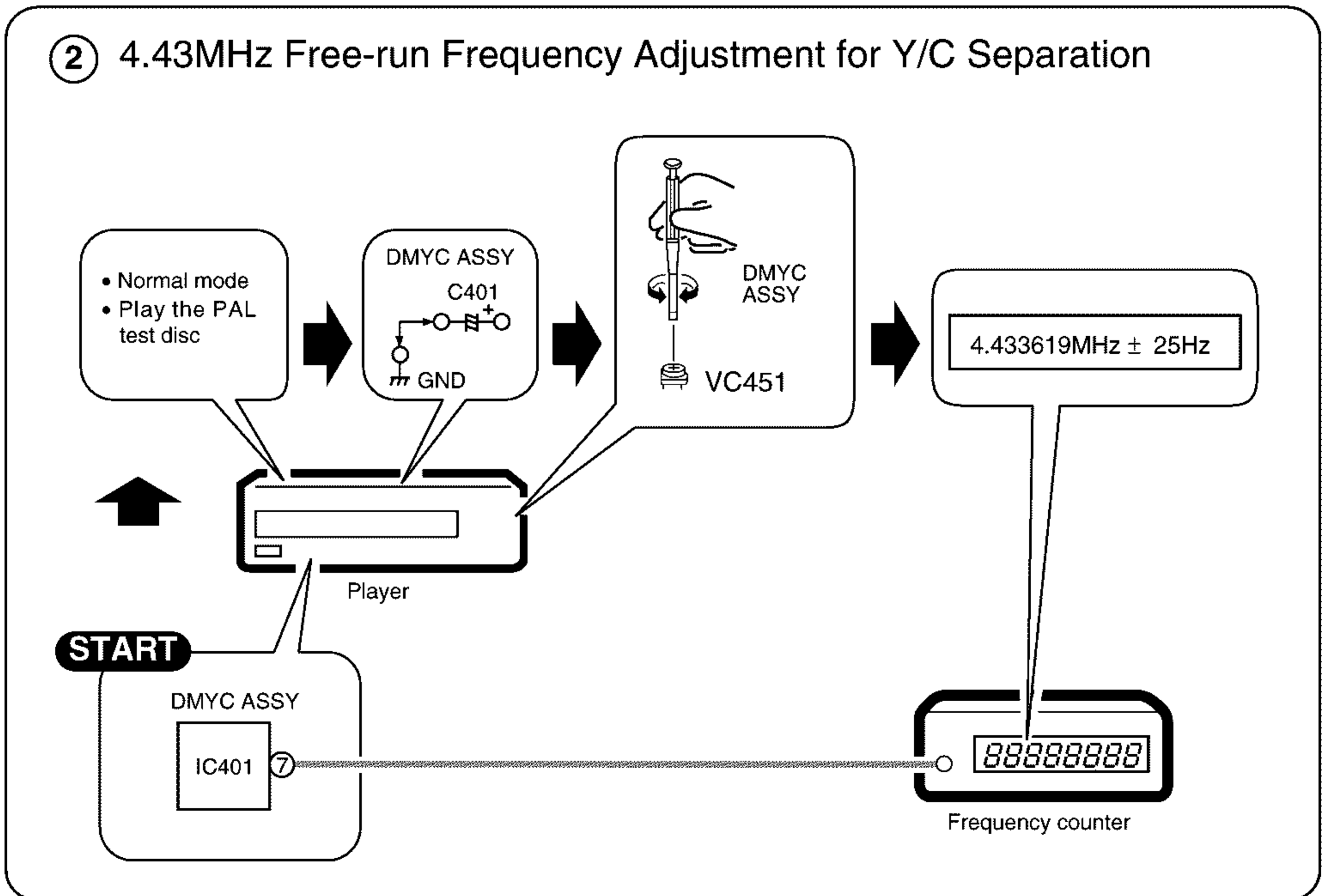
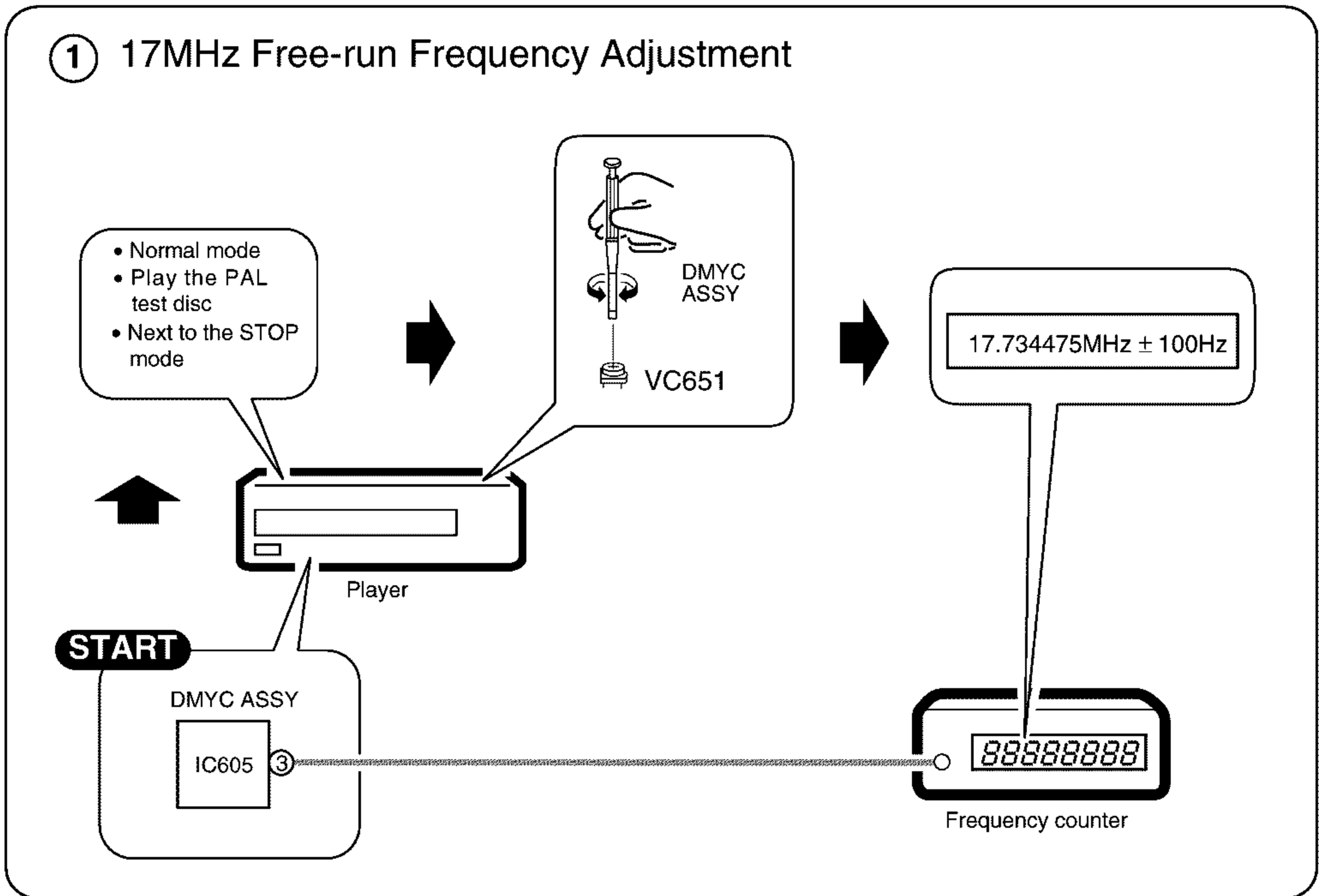
Probe (10:1)



Oscilloscope  
V: 20mV/div.  
H: 10μsec/div.  
AC mode  
TV trigger

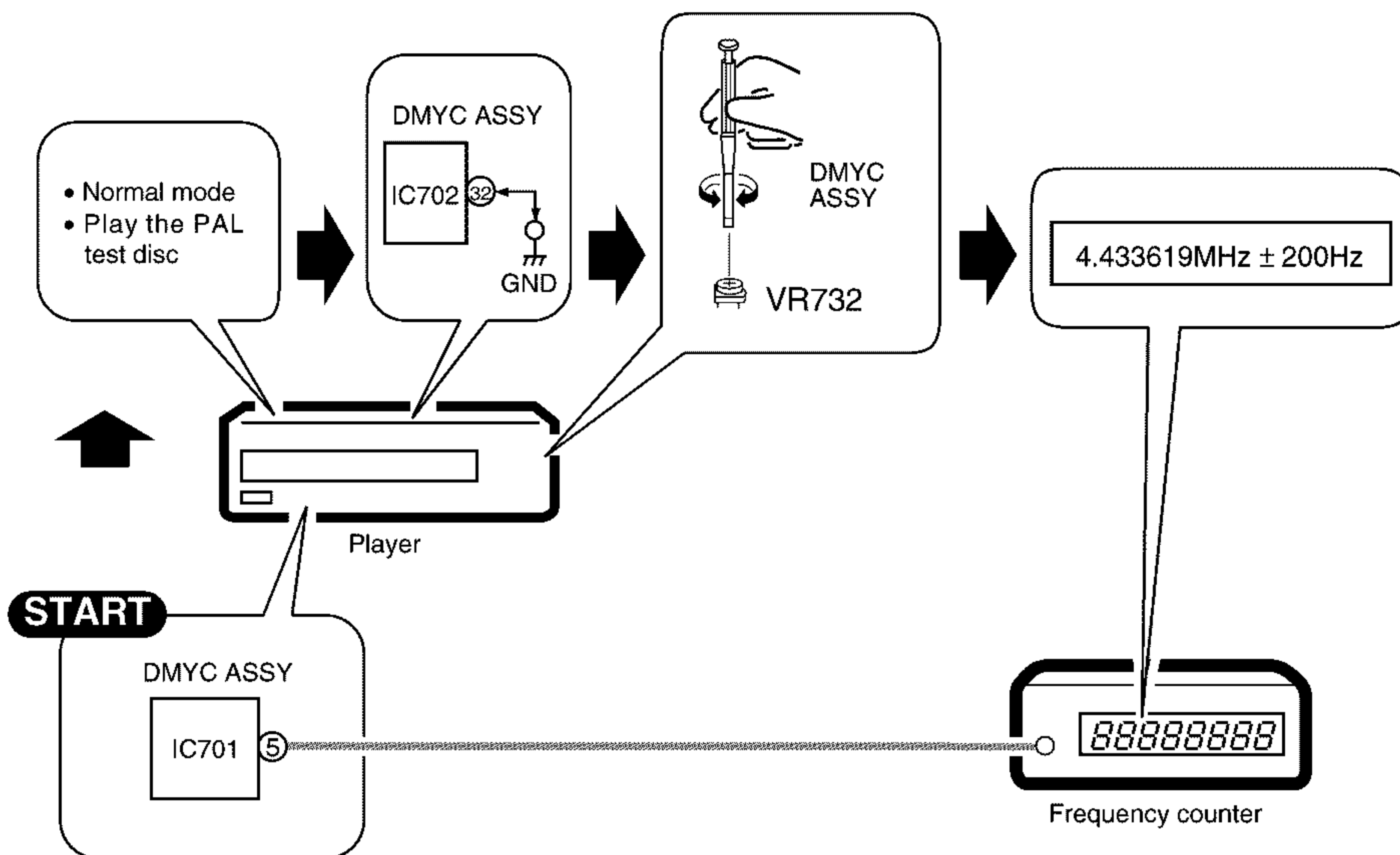


6.9 ELECTRICAL ADJUSTMENT for DMYC ASSY

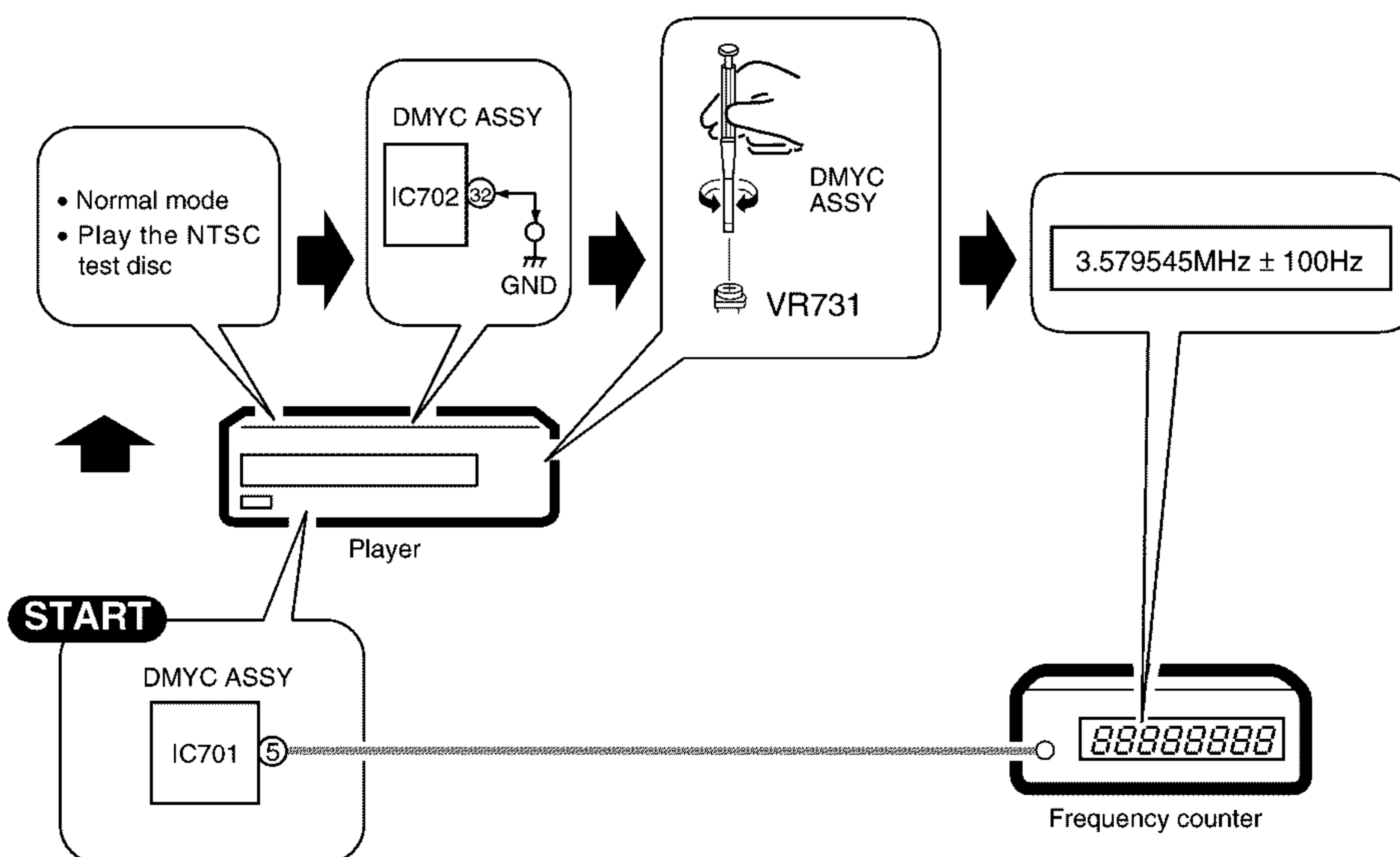




③ PAL 4.43MHz Free-run Frequency Adjustment for RGB Decoder

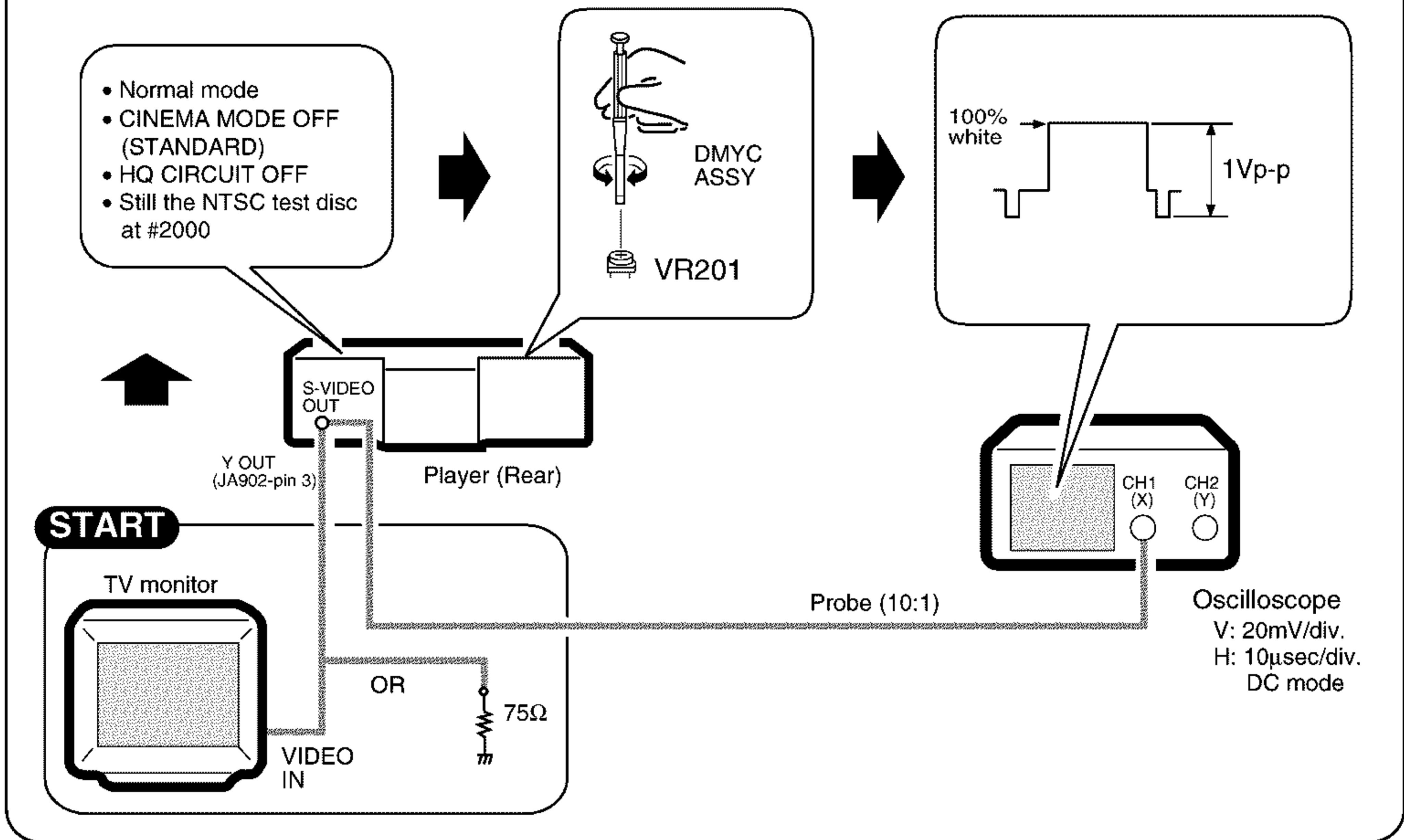


④ NTSC 3.58MHz Free-run Frequency Adjustment for RGB Decoder

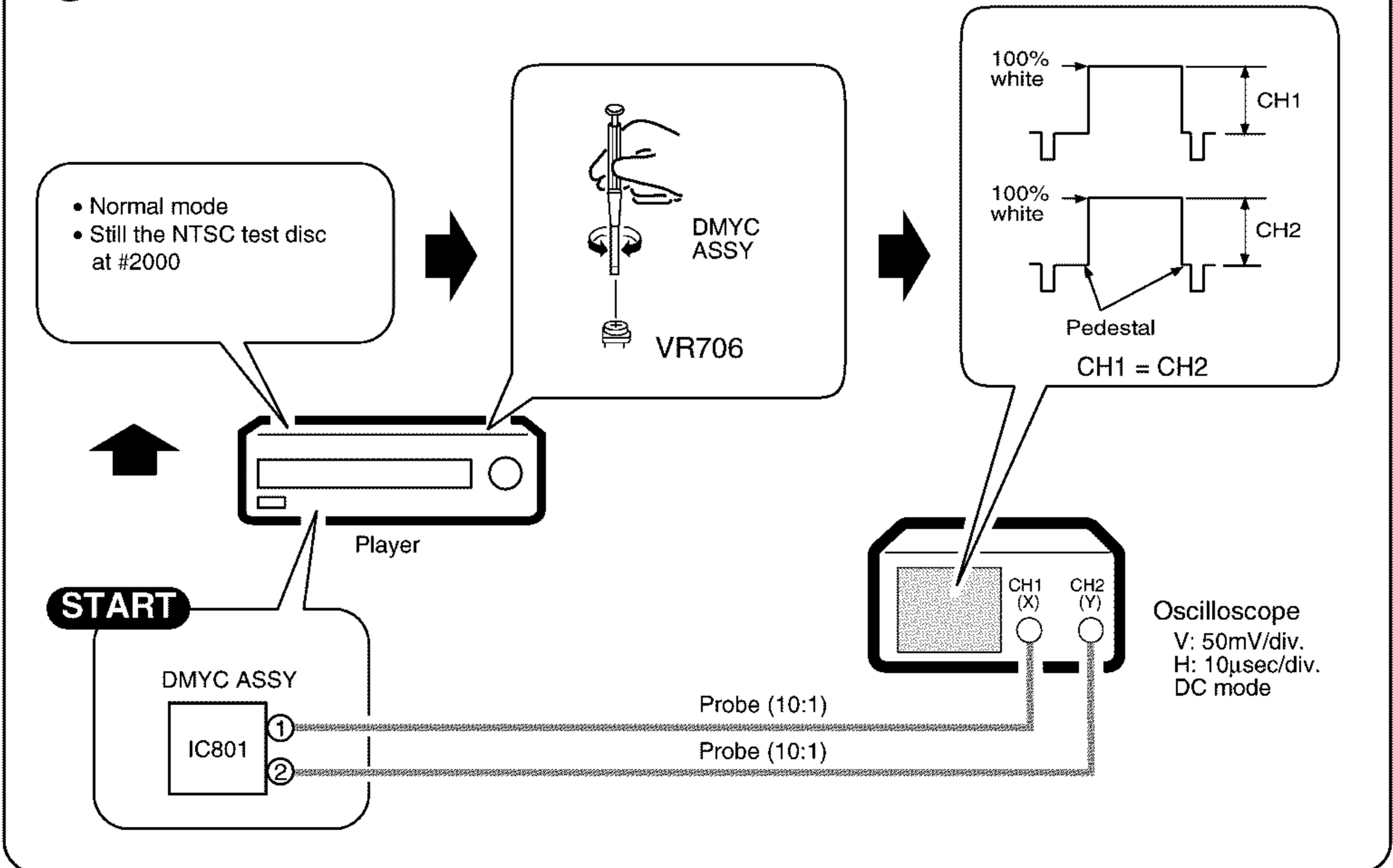




### 5) NTSC Y Level Adjustment

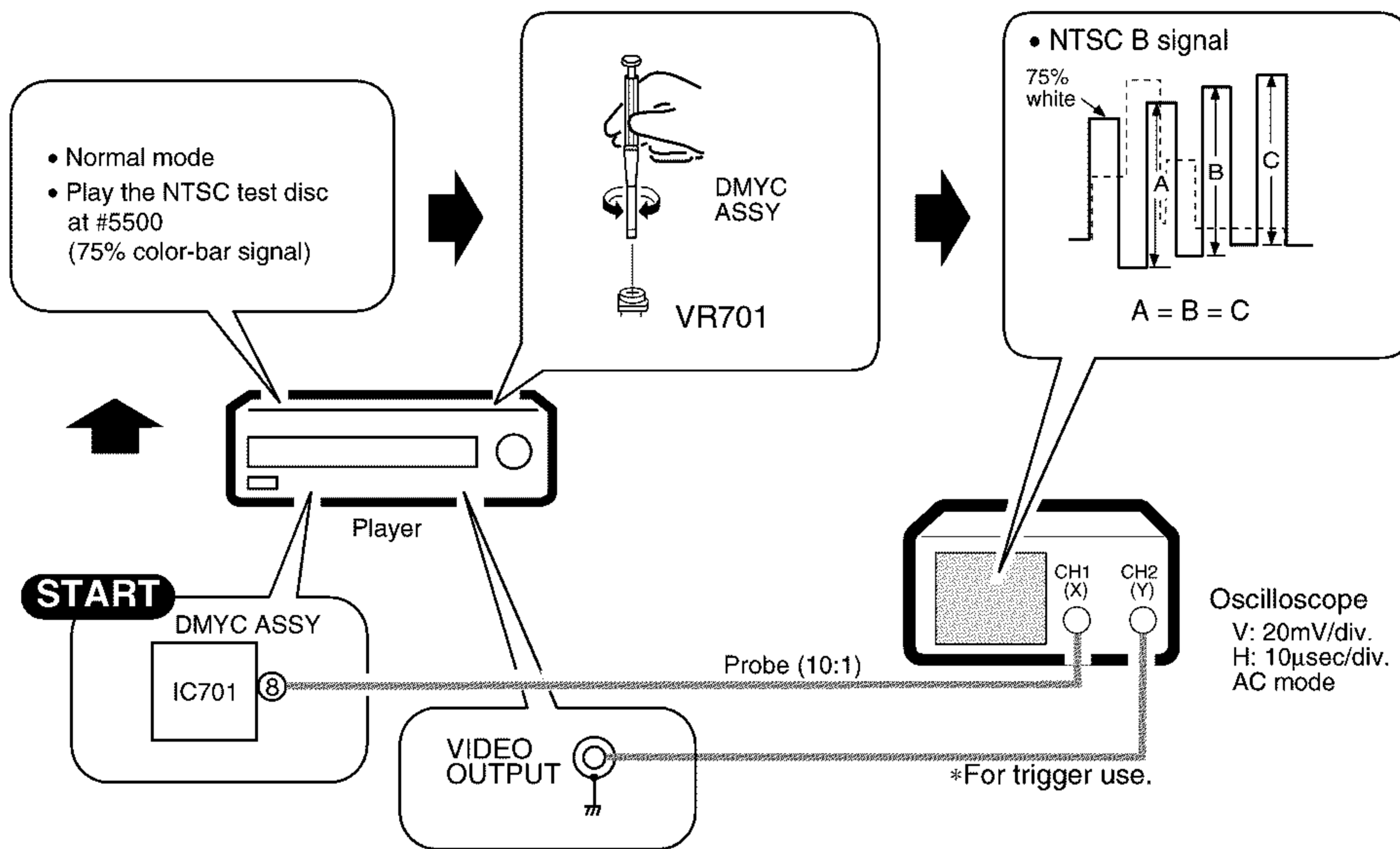


### 6) RGB Decoder Y Level Adjustment

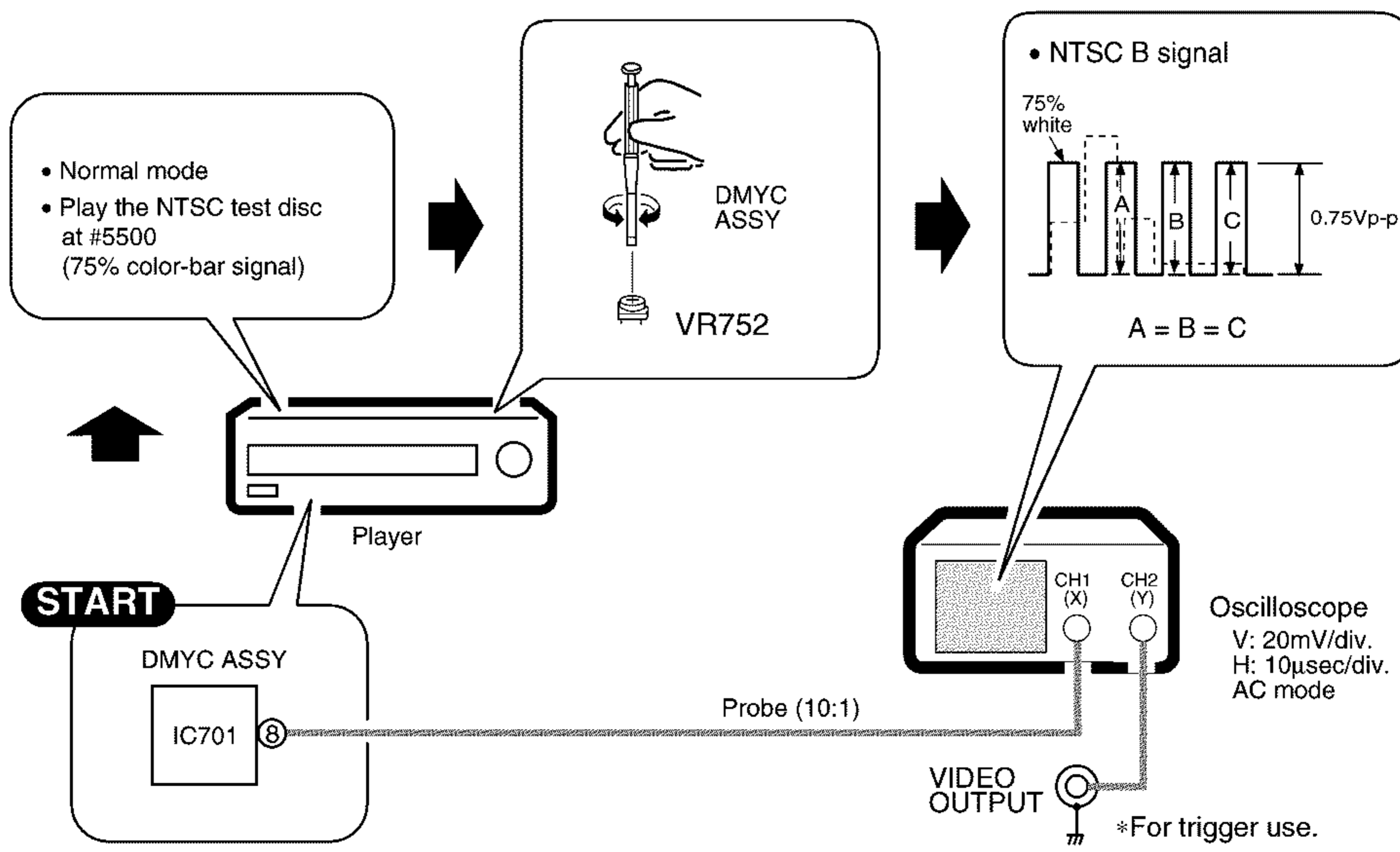




### ⑦ RGB Decoder HUE Adjustment

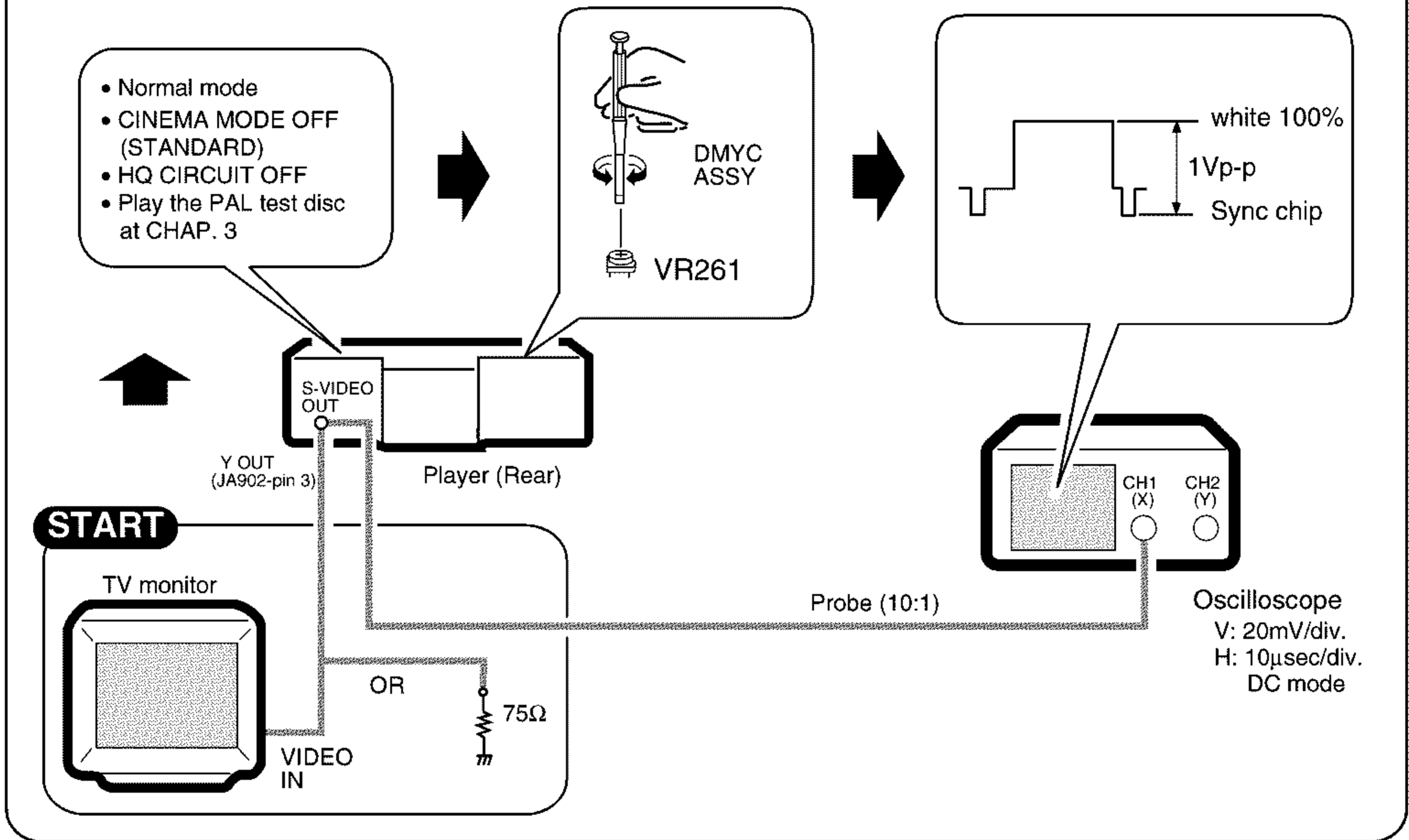


### ⑧ RGB Decoder NTSC Chroma Level Adjustment

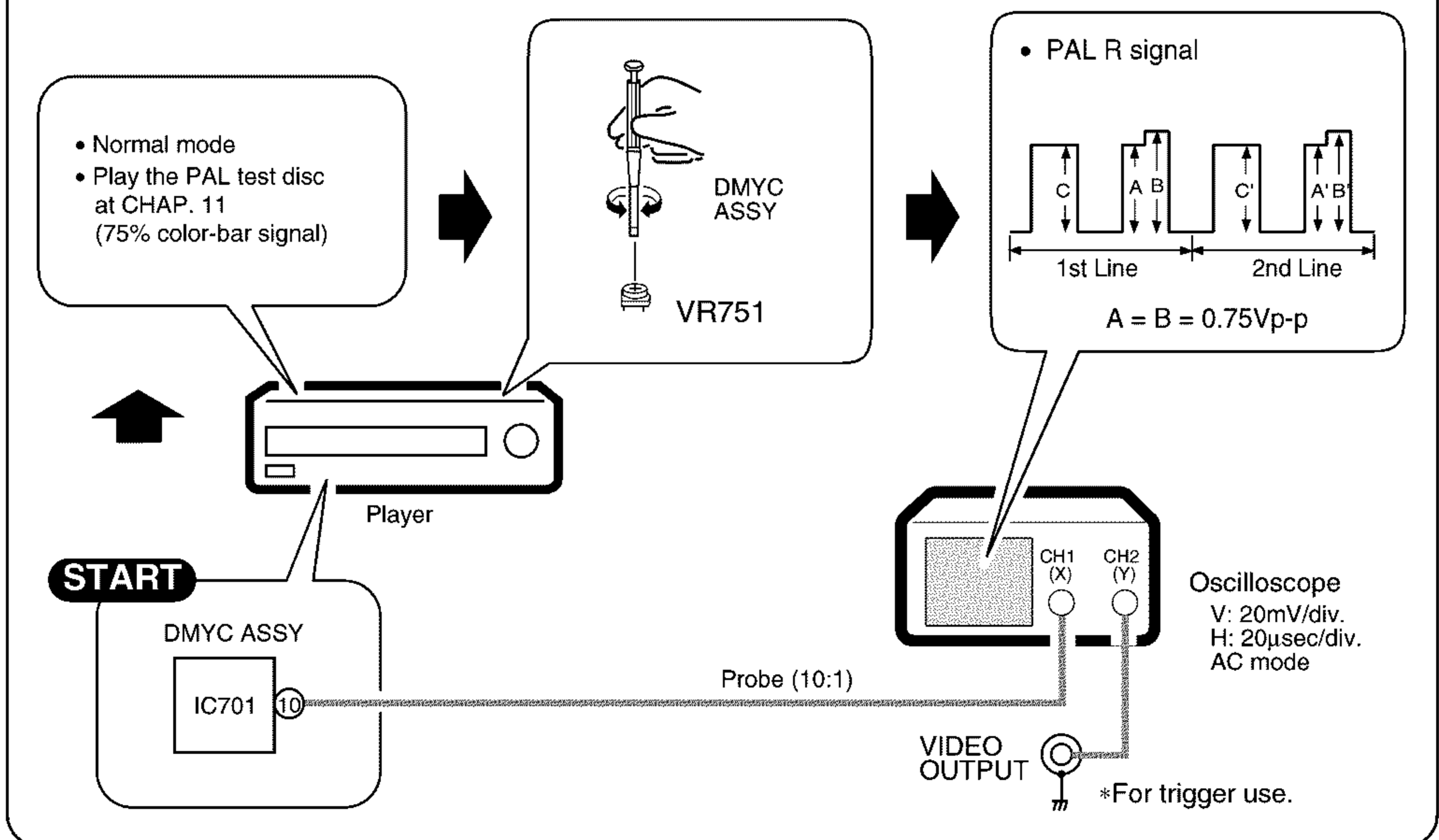




### 9 PAL Y Level Adjustment

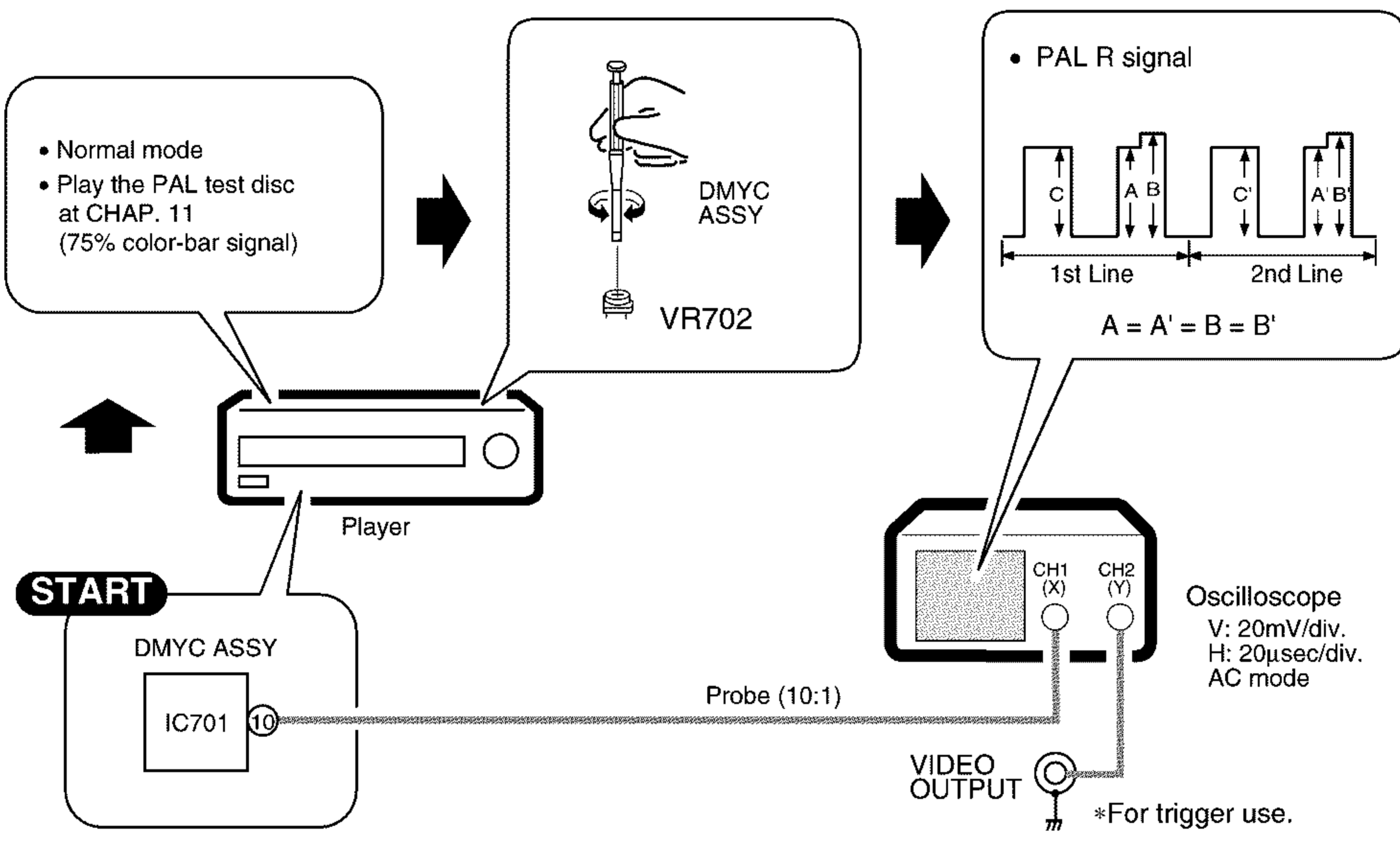


### 10 Coarse RGB Decoder PAL Chroma Level Adjustment

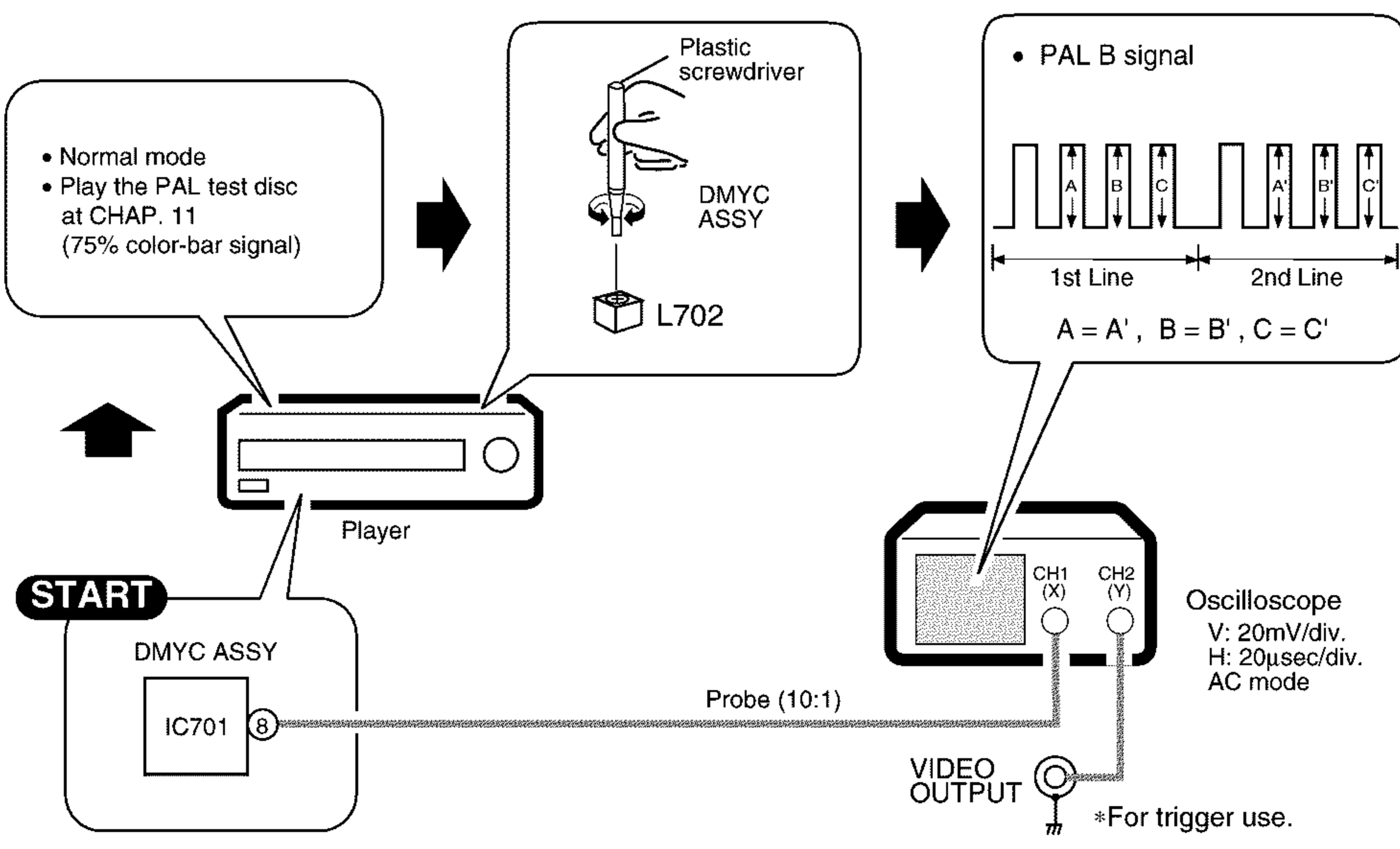




### 11 RGB Decoder PAL Delay Line Amp. Gain Adjustment

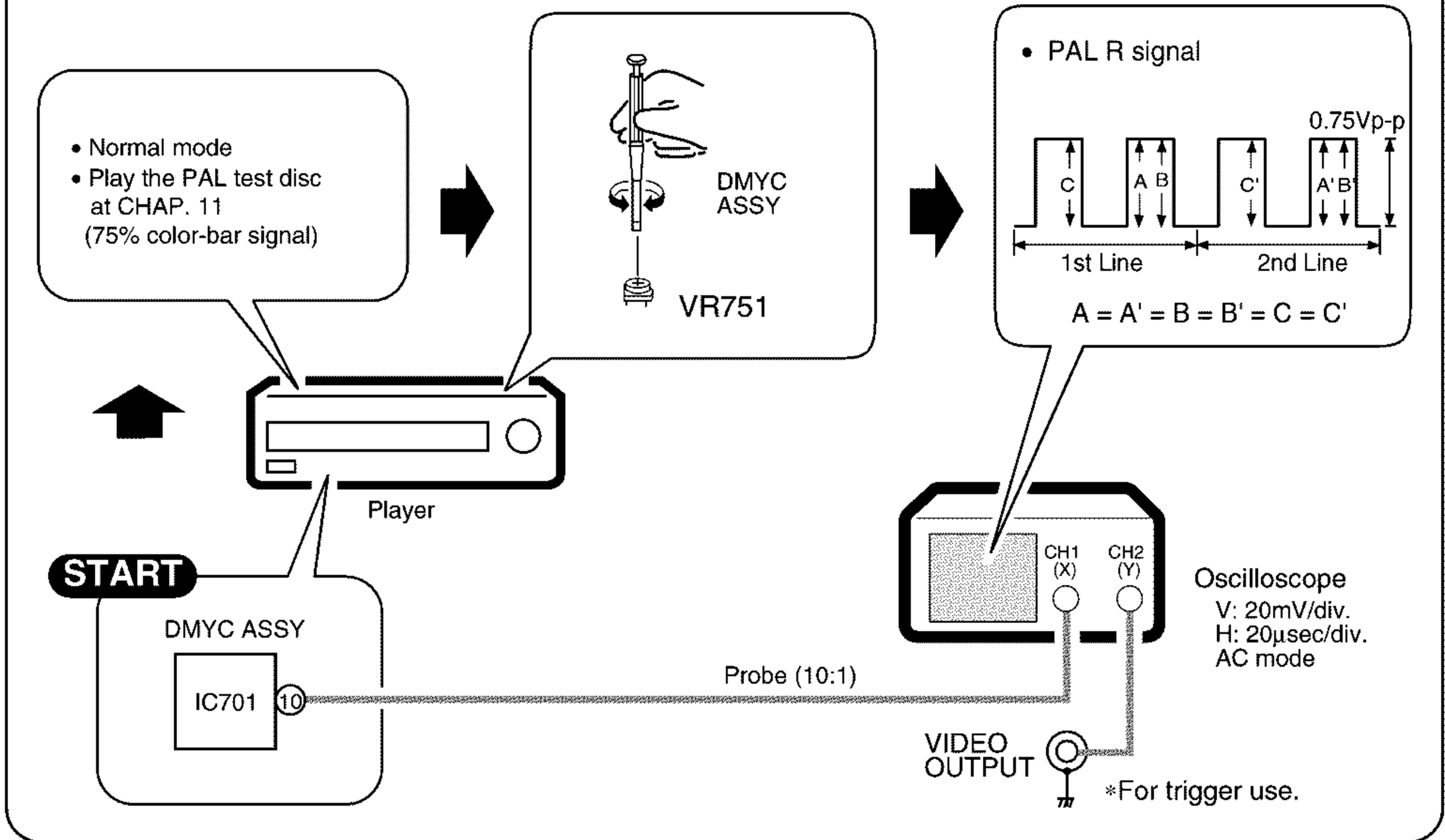


### 12 RGB Decoder PAL DAT Adjustment

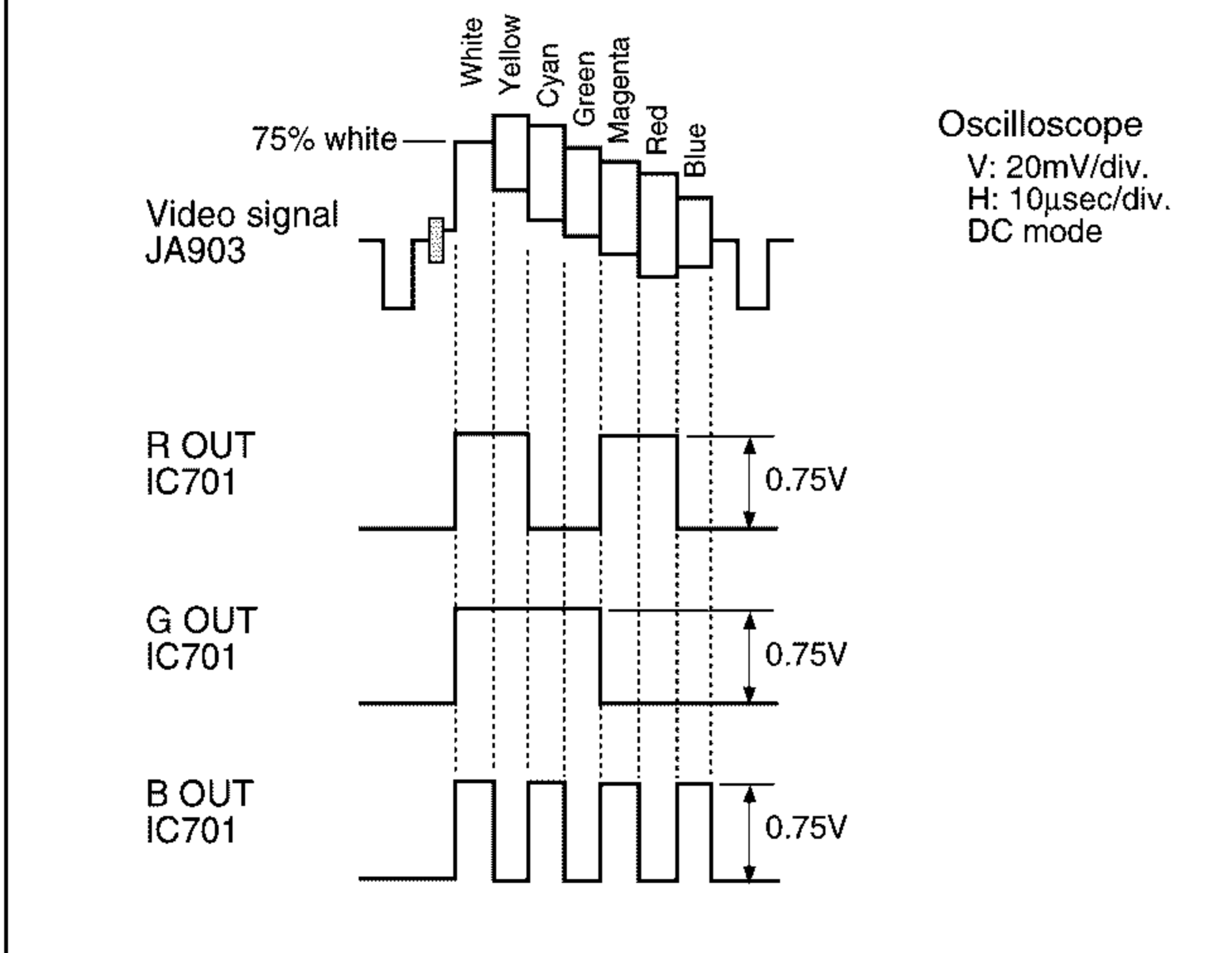




13 Fine RGB Decoder PAL Chroma Level Adjustment



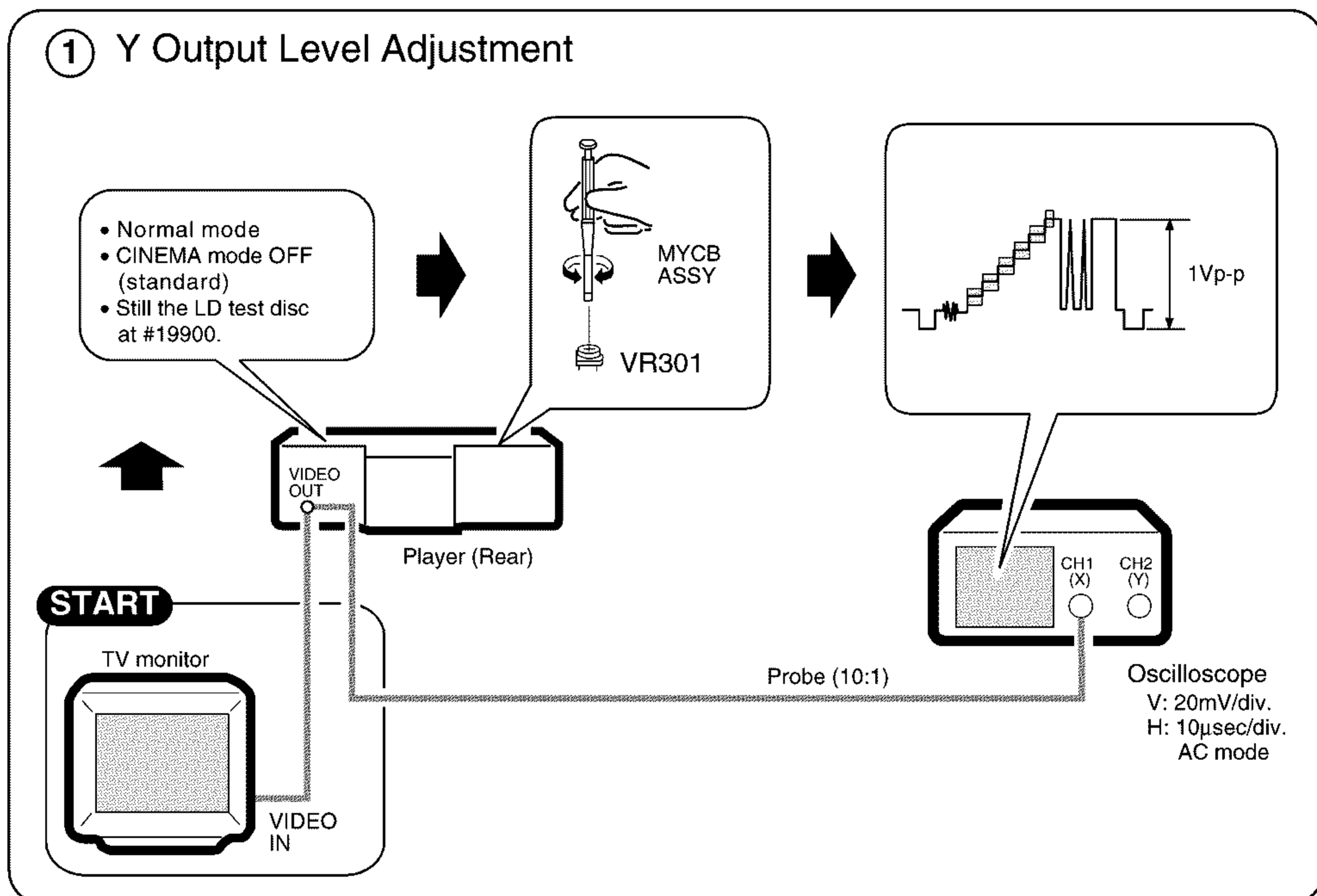
- The signal relations between the 75% color-bar signal and each R,G,B signal





### 6.10 ELECTRICAL ADJUSTMENT FOR MYCB ASSY

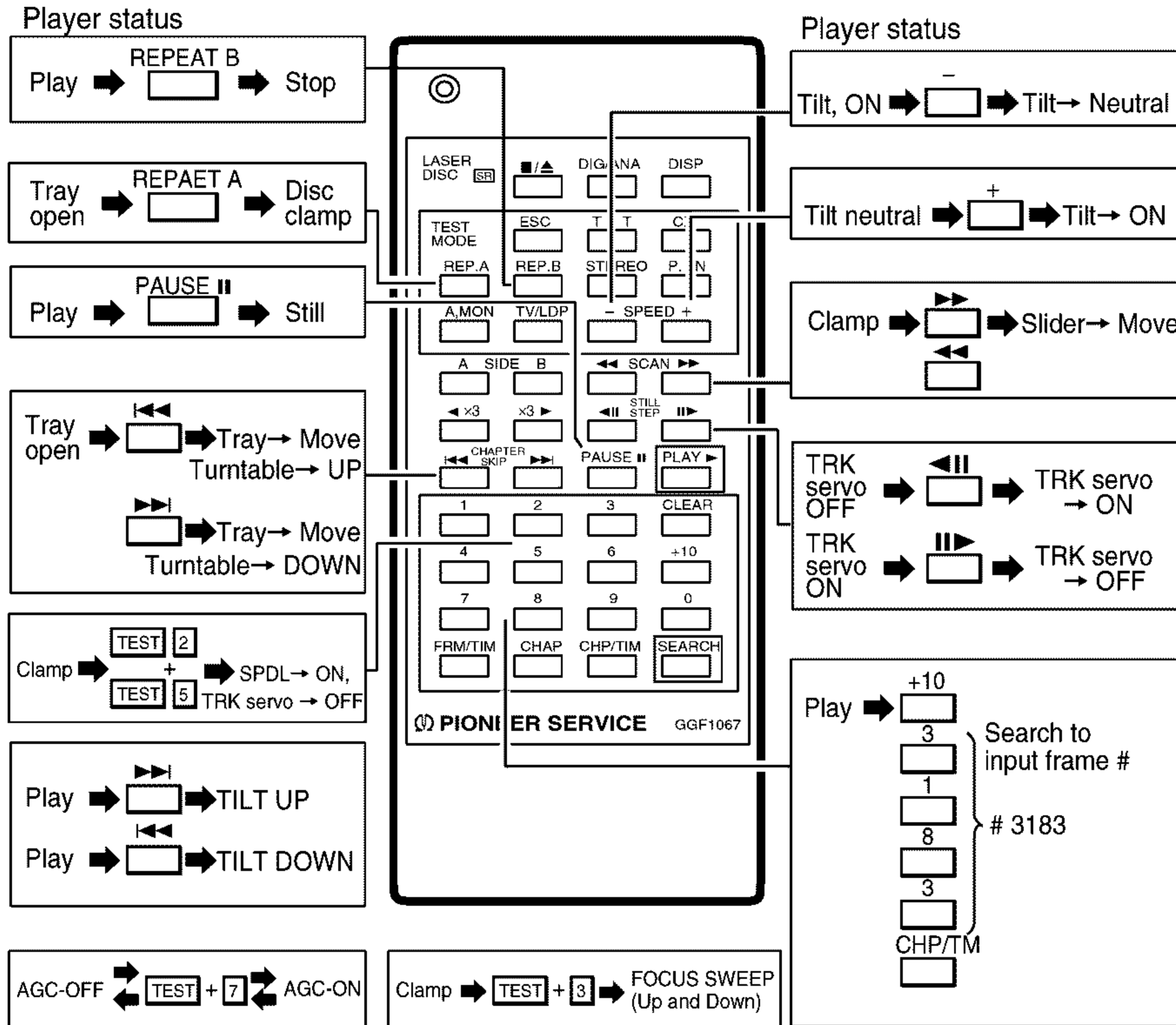
#### ① Y Output Level Adjustment



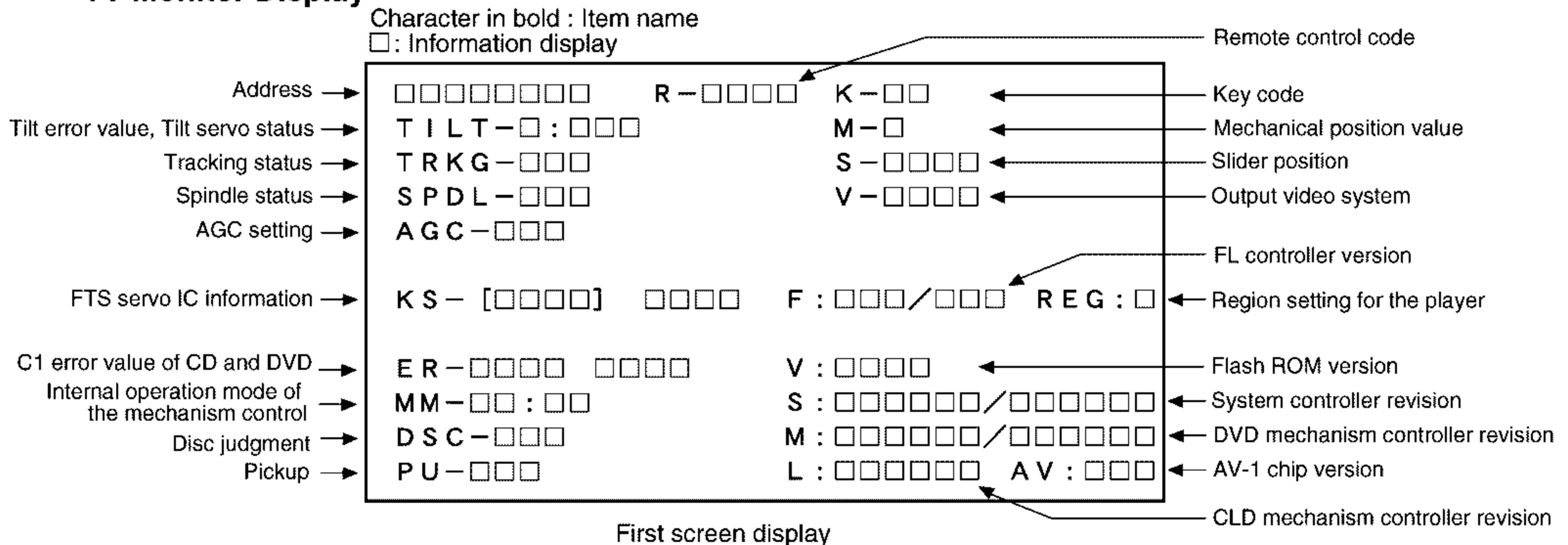


### 6.11 OPERATIONS IN THE TEST MODE

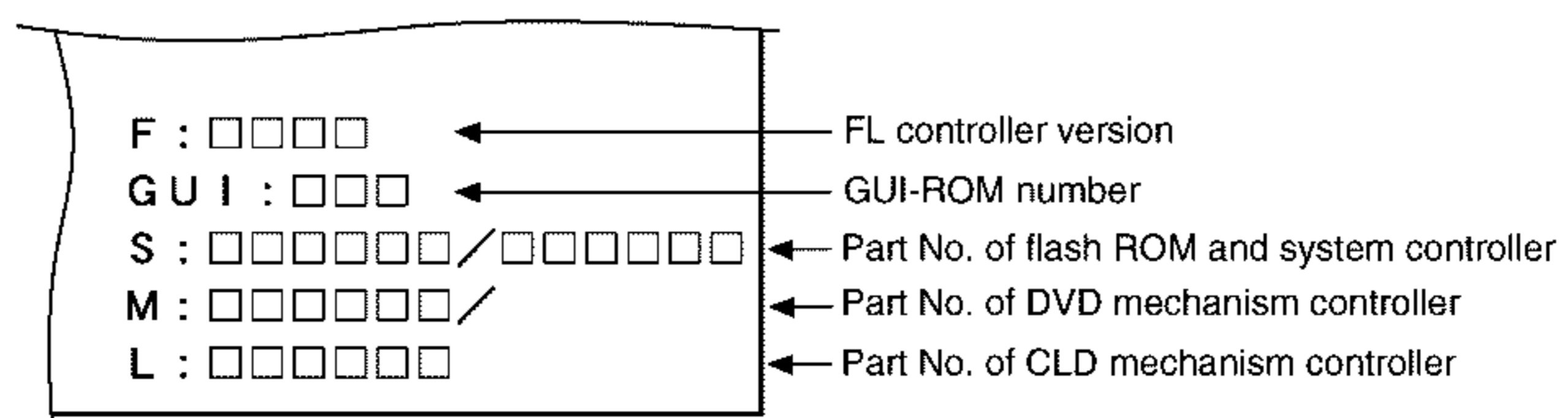
#### ■ Test Mode Remote Control Unit (GGF1067)



#### ■ TV Monitor Display



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







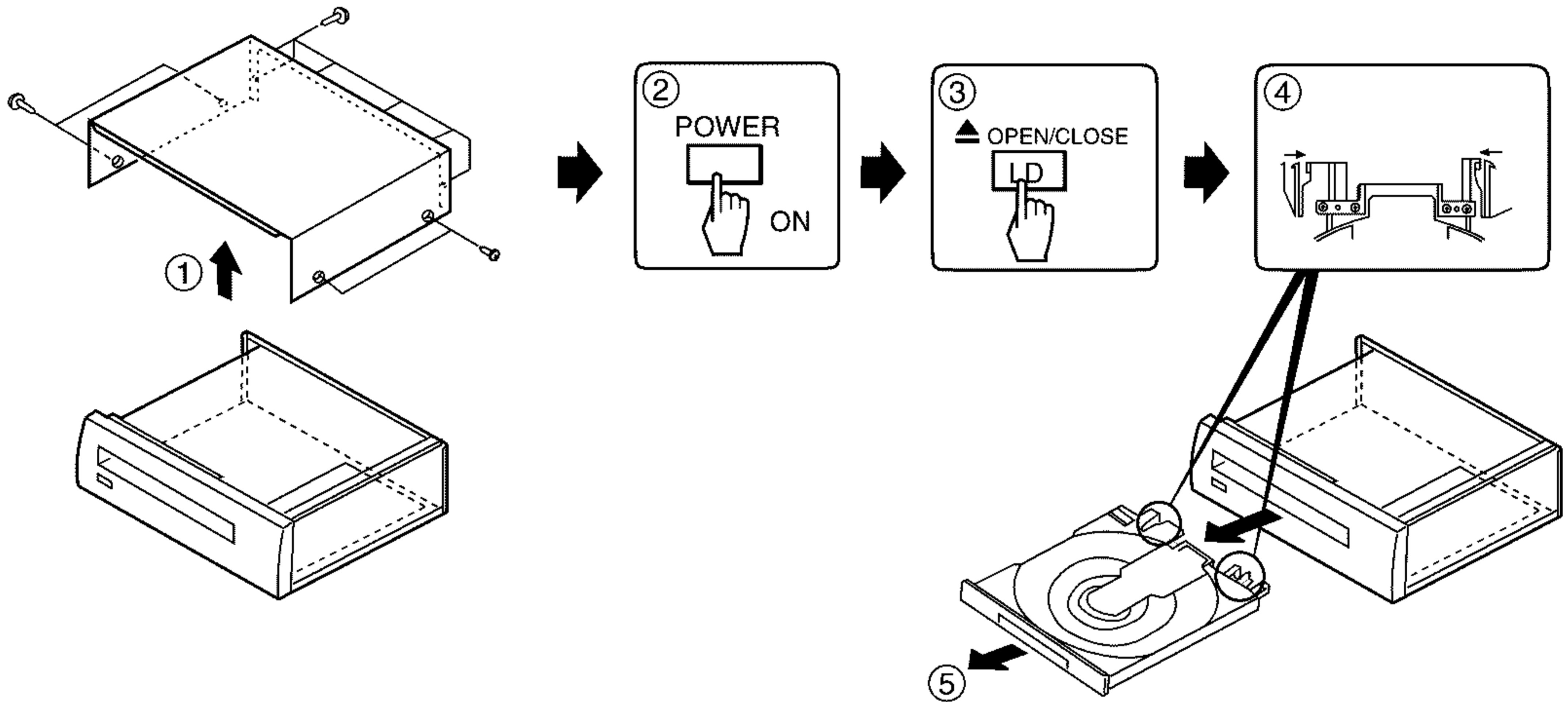


## 7. GENERAL INFORMATION

### 7.1 DISASSEMBLY/ASSEMBLY

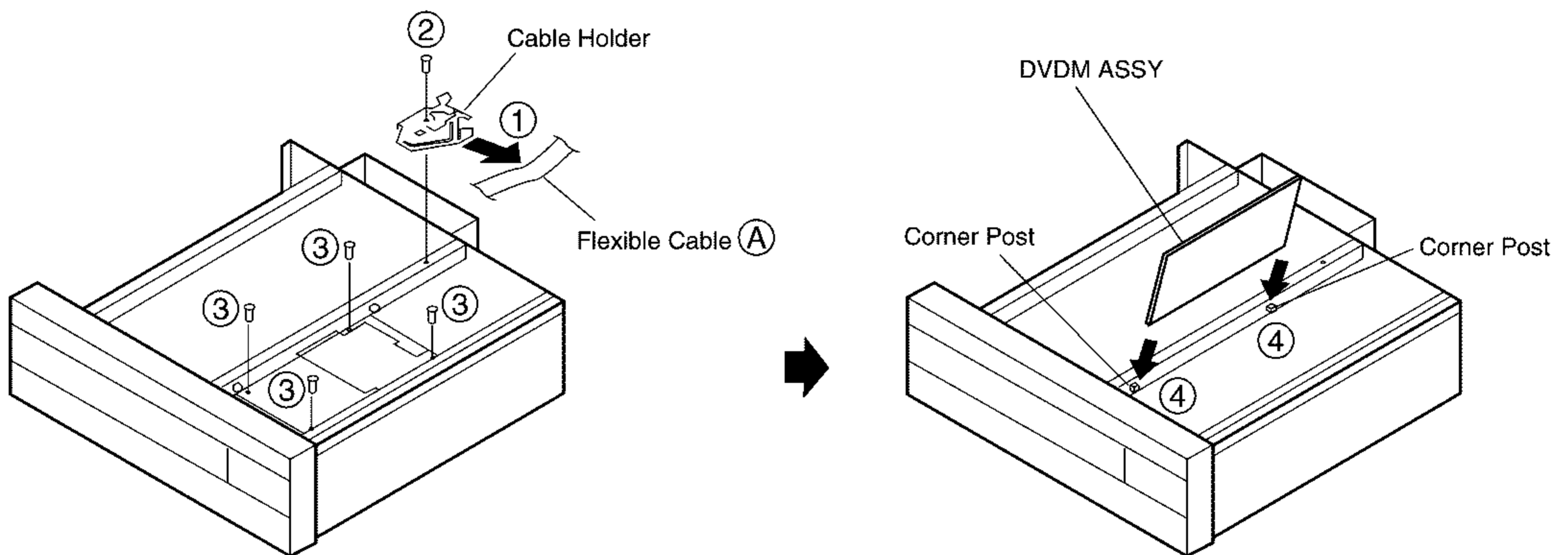
#### (1) DISC TRAY

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



#### (2) DVDM ASSY

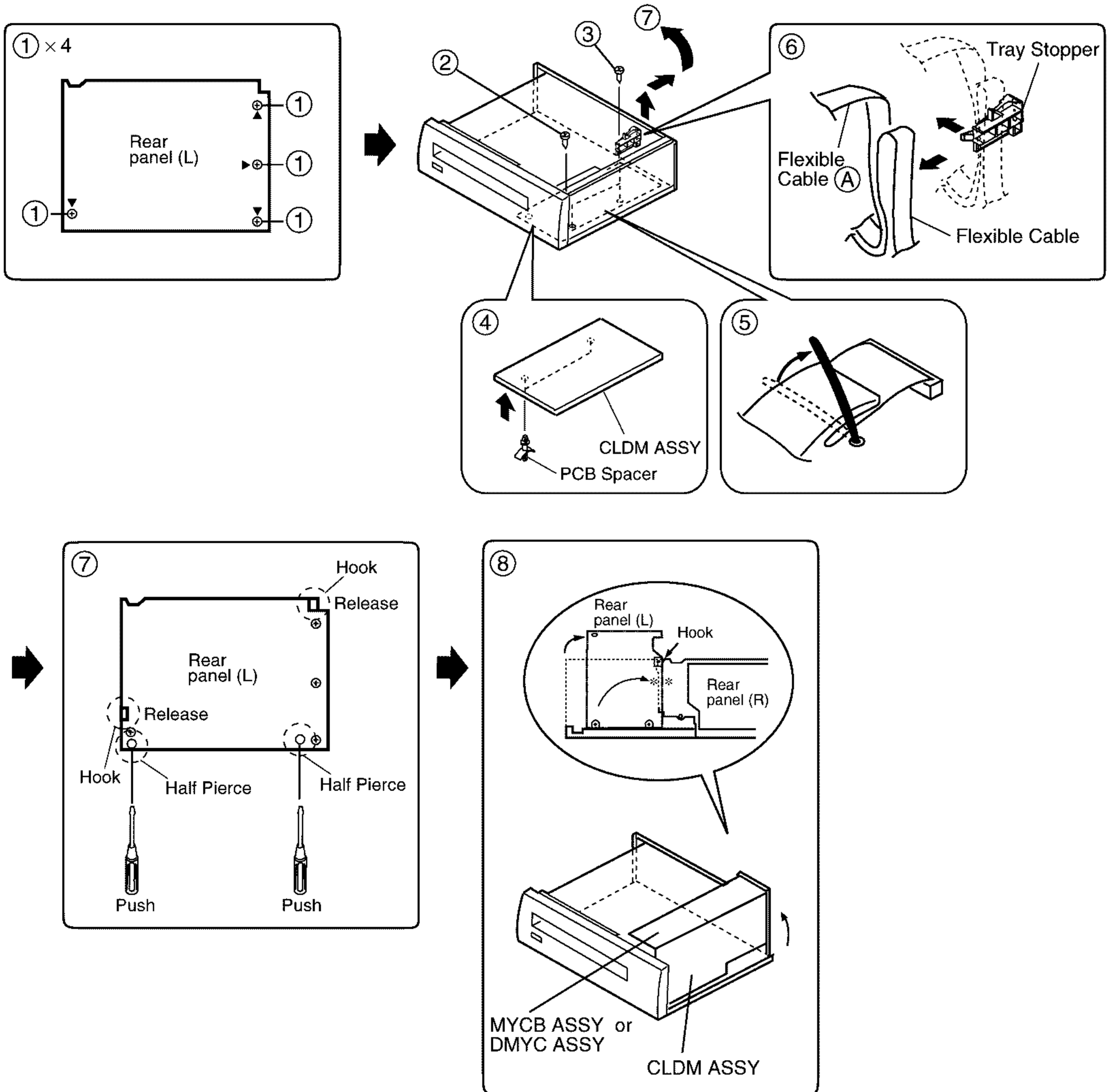
- Disassembly : ① → ② → ③ → ④
- Assembly : ④ → ③ → ② → ①





**(3) CLDM ASSY**

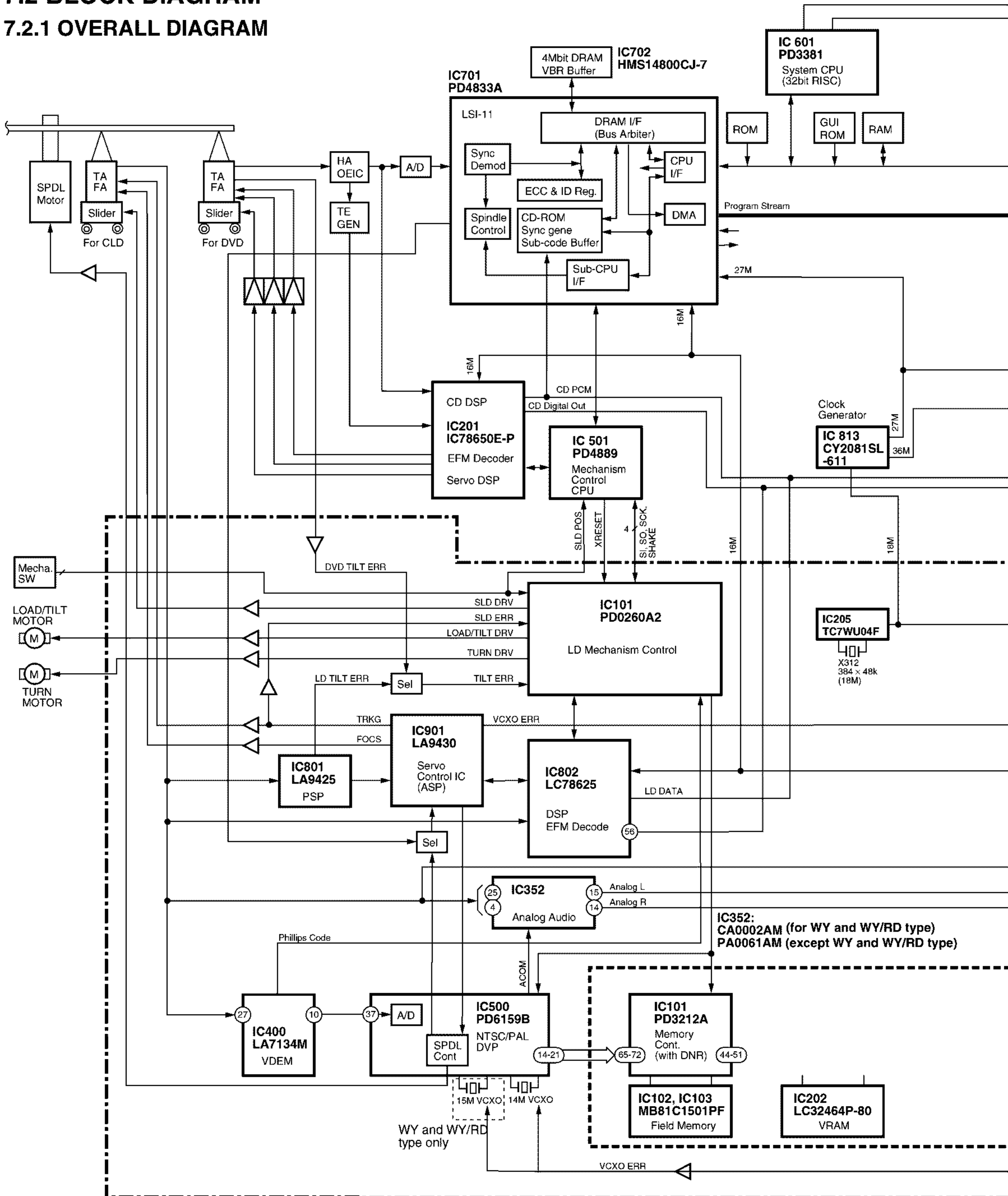
- Disassembly : ① → ② → ③ → ④ → ⑤ → ⑥ → ⑦ → ⑧
- Assembly : ⑧ → ⑦ → ⑥ → ⑤ → ④ → ③ → ② → ①



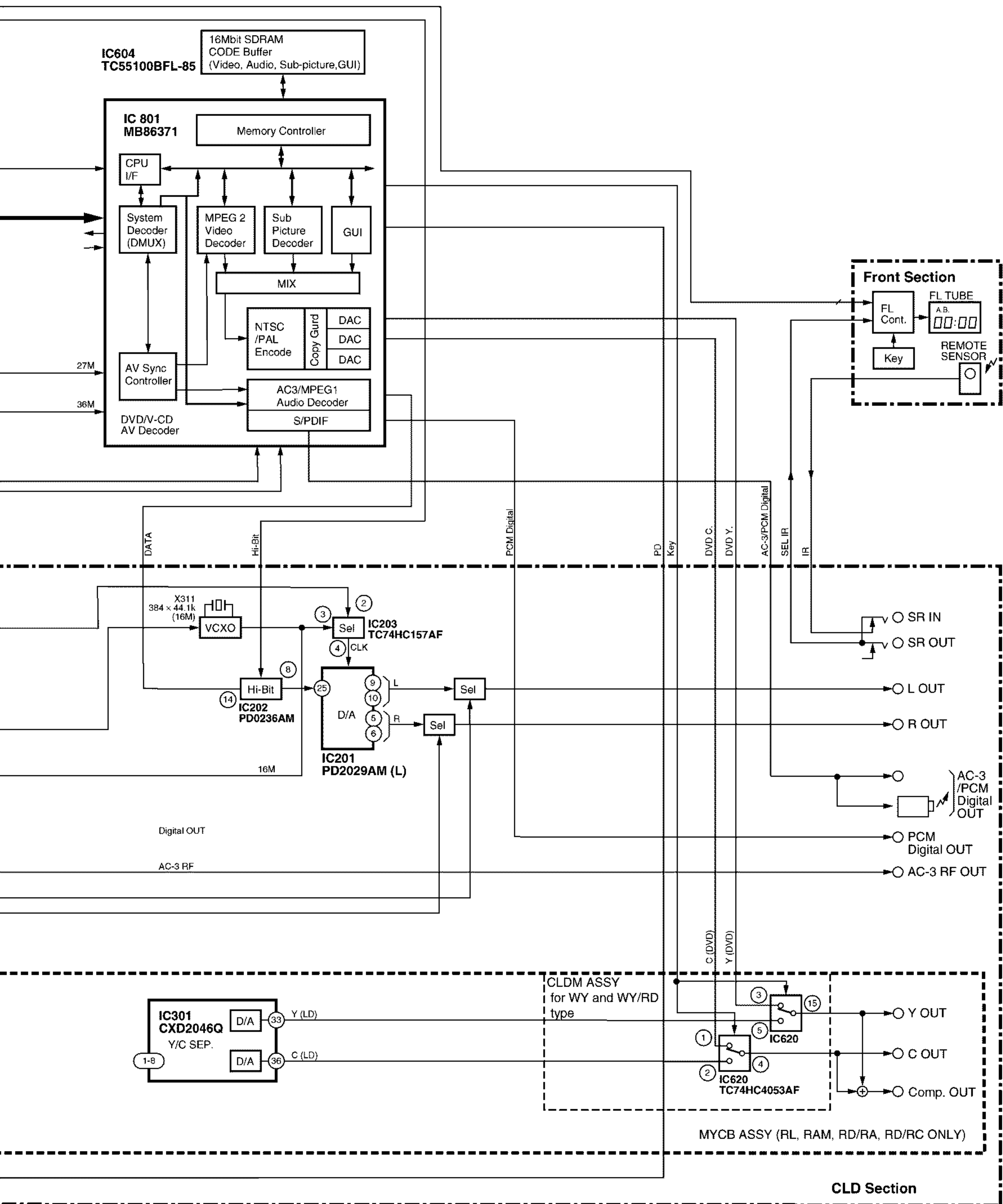


## 7.2 BLOCK DIAGRAM

### 7.2.1 OVERALL DIAGRAM

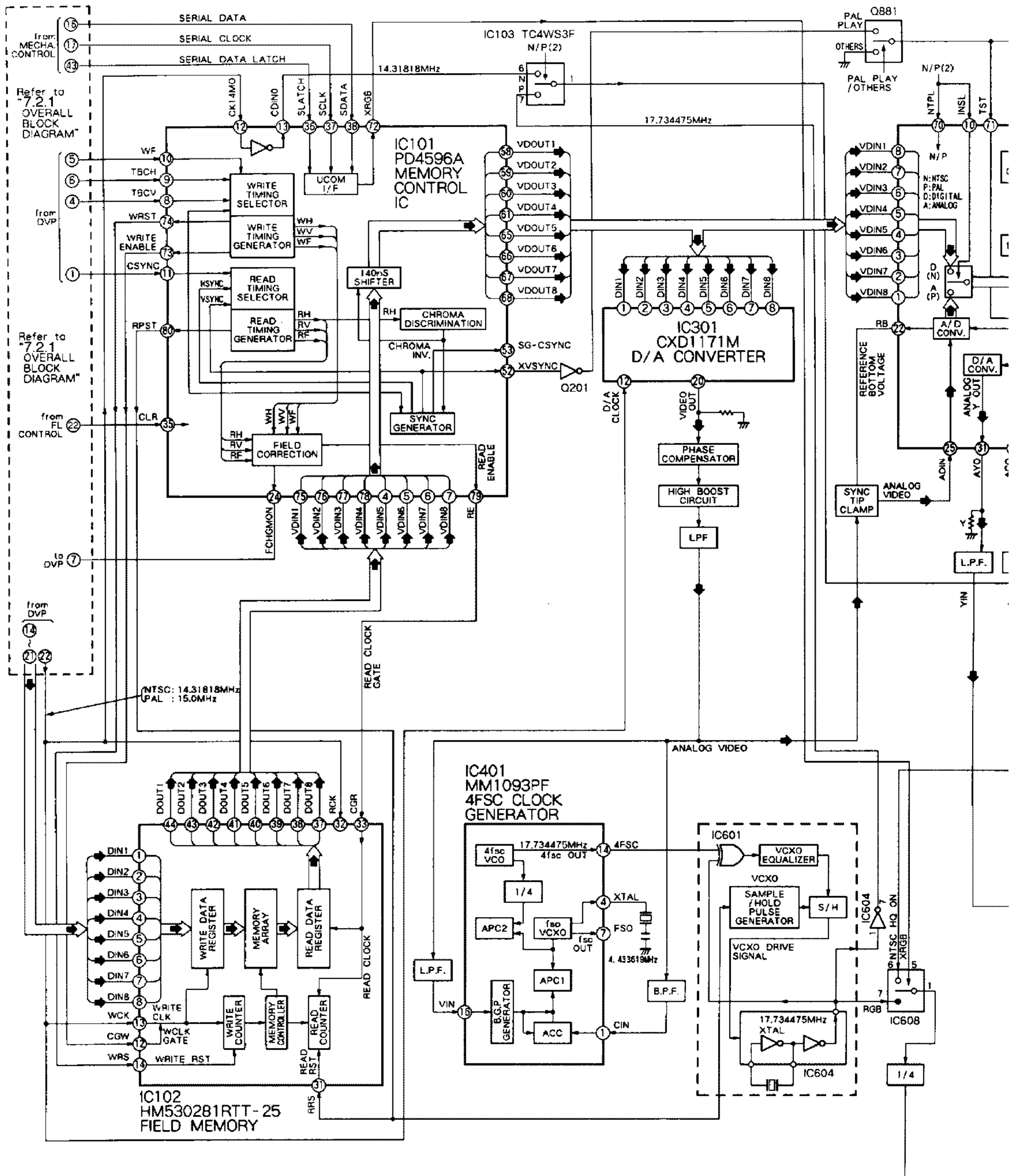




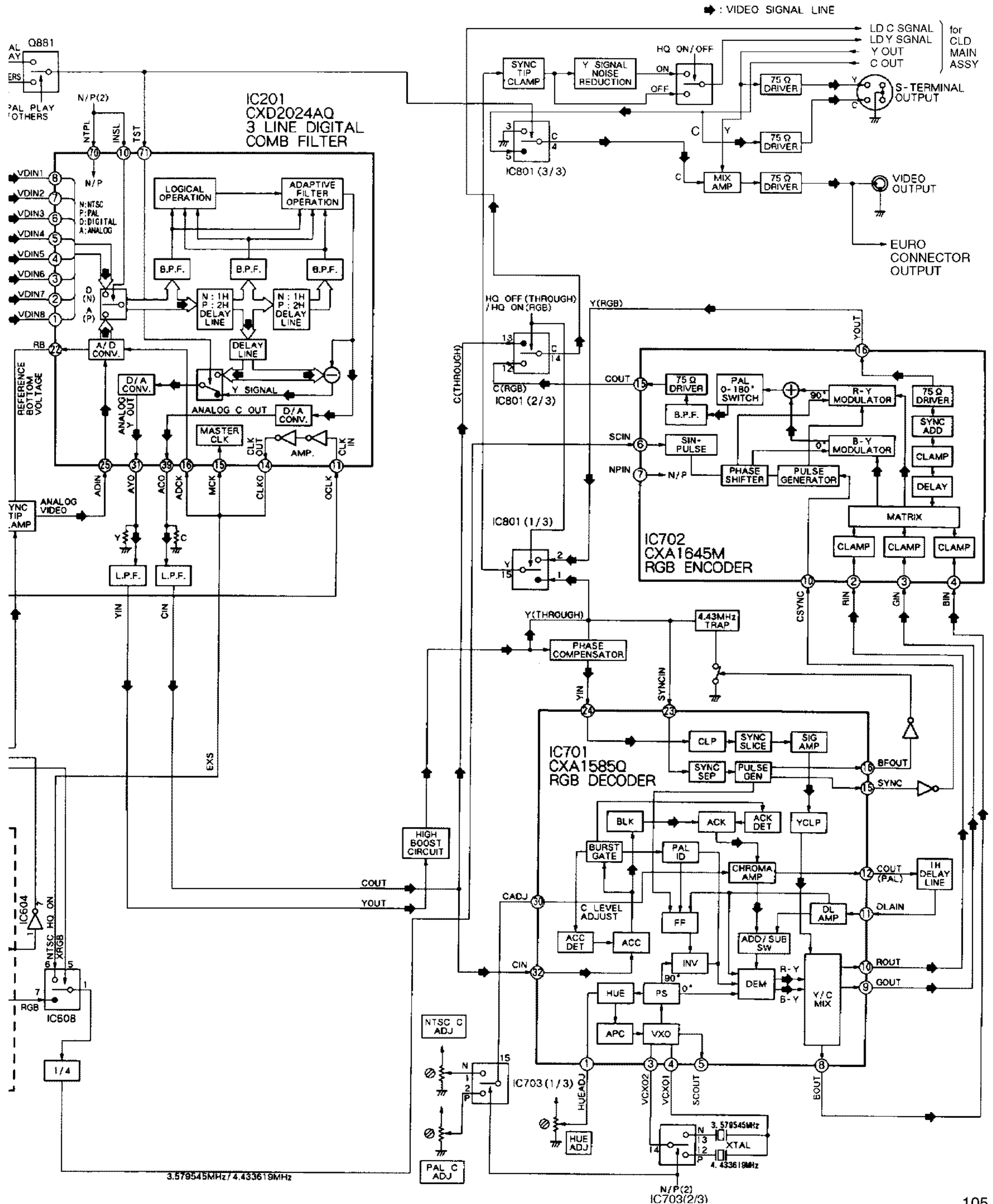




7.2.2 DMYC BLOCK (WY and WY/RD TYPES ONLY)



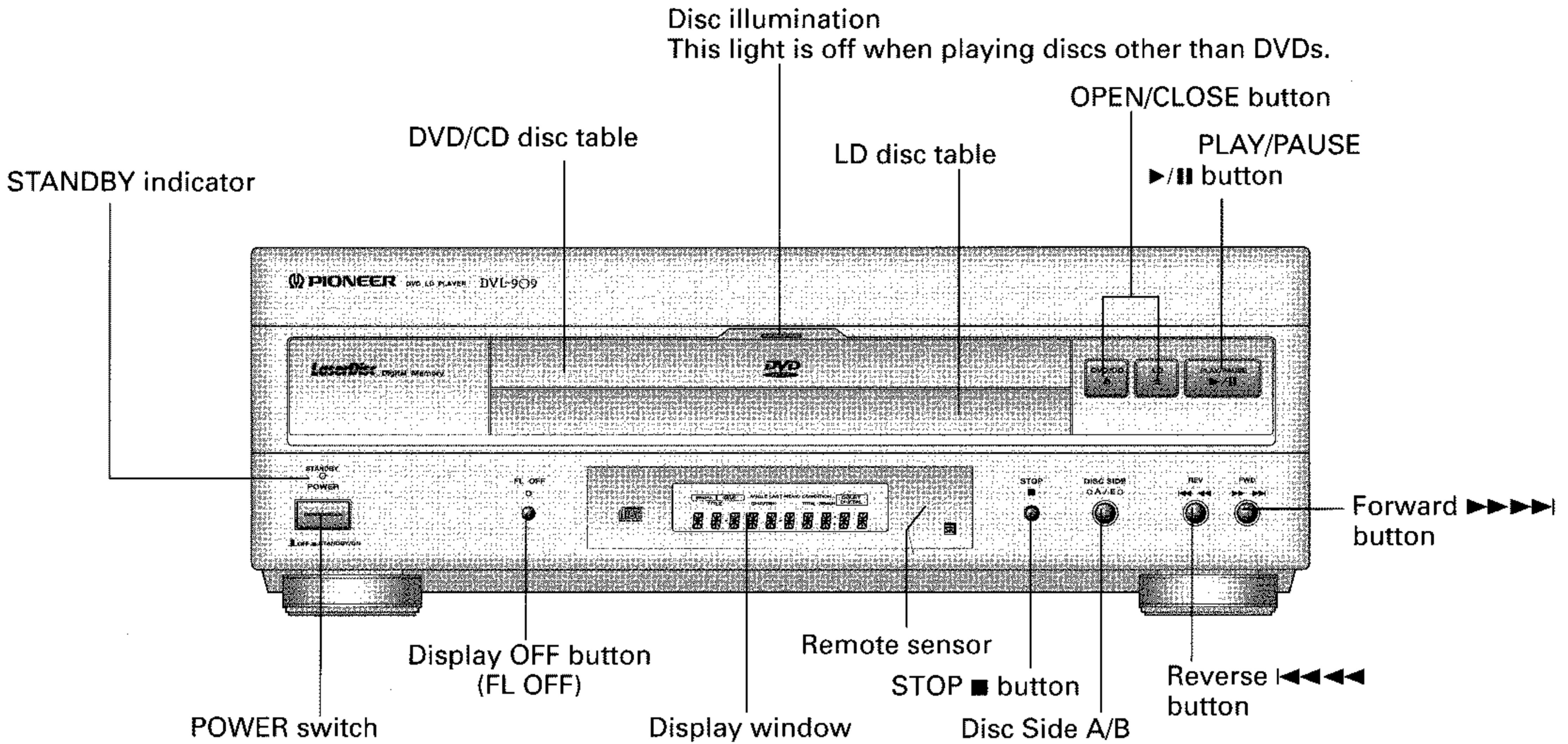




# 8. PANEL FACILITIES AND SPECIFICATIONS

• For DVL-909/RD/RA,RD/RC, RAM and RL types

## FRONT PANEL



## REAR PANEL

### Digital Output Jack (Coaxial)

This is used for output of the digital audio signal recorded on CDs, Video CDs and digital audio LDs. Depending on the components connect, noise may be generated.

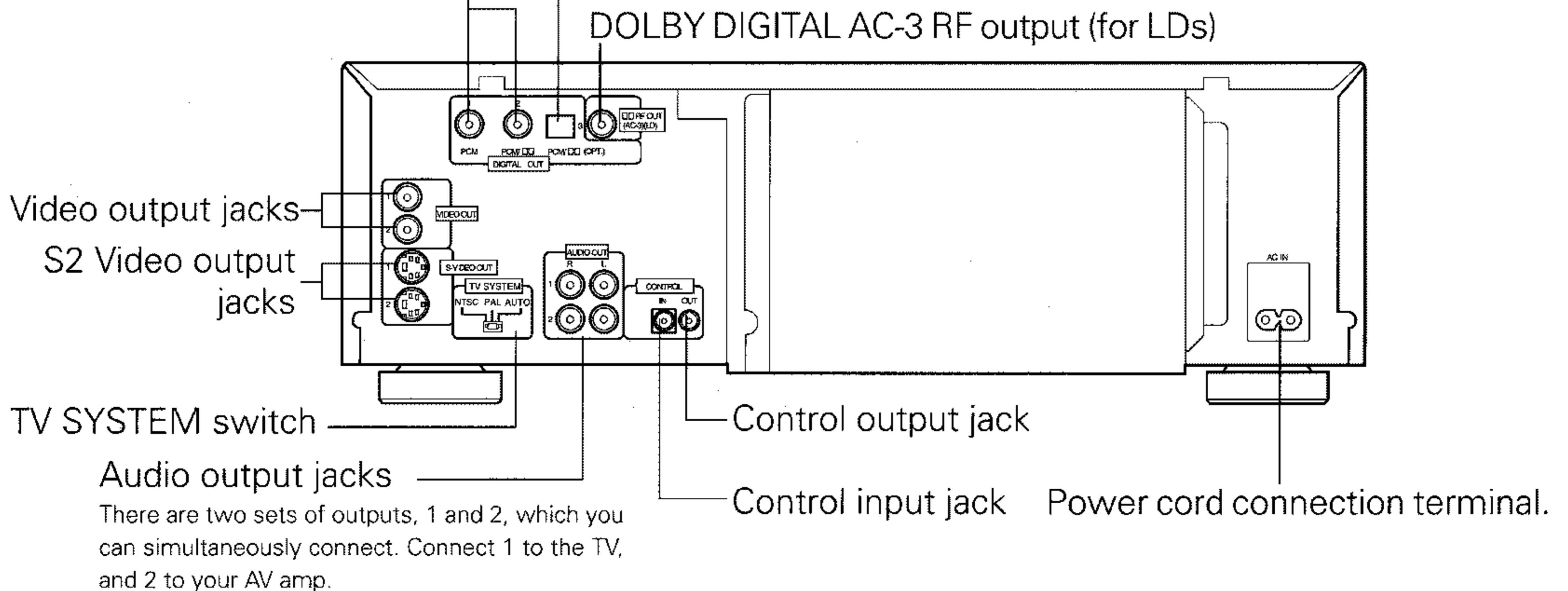
Your amp	Regular digital amplifier	Coaxial	Connect to the PCM jack, and select PCM from a menu.
		Optical	Connect to the optical jack, and select PCM from the menu.
	AC-3 compatible amplifier	Coaxial	Connect to the PCM/DOLBY DIGITAL jack, and select PCM/DOLBY DIGITAL from the menu.
		Optical	Connect to the optical jack, and select PCM/DOLBY DIGITAL from the menu.

### Digital Output

When connecting to an AC-3 compatible component, use the PCM/DOLBY DIGITAL jack. Use the PCM jack for all other components. (Refer to the chart on the right.)

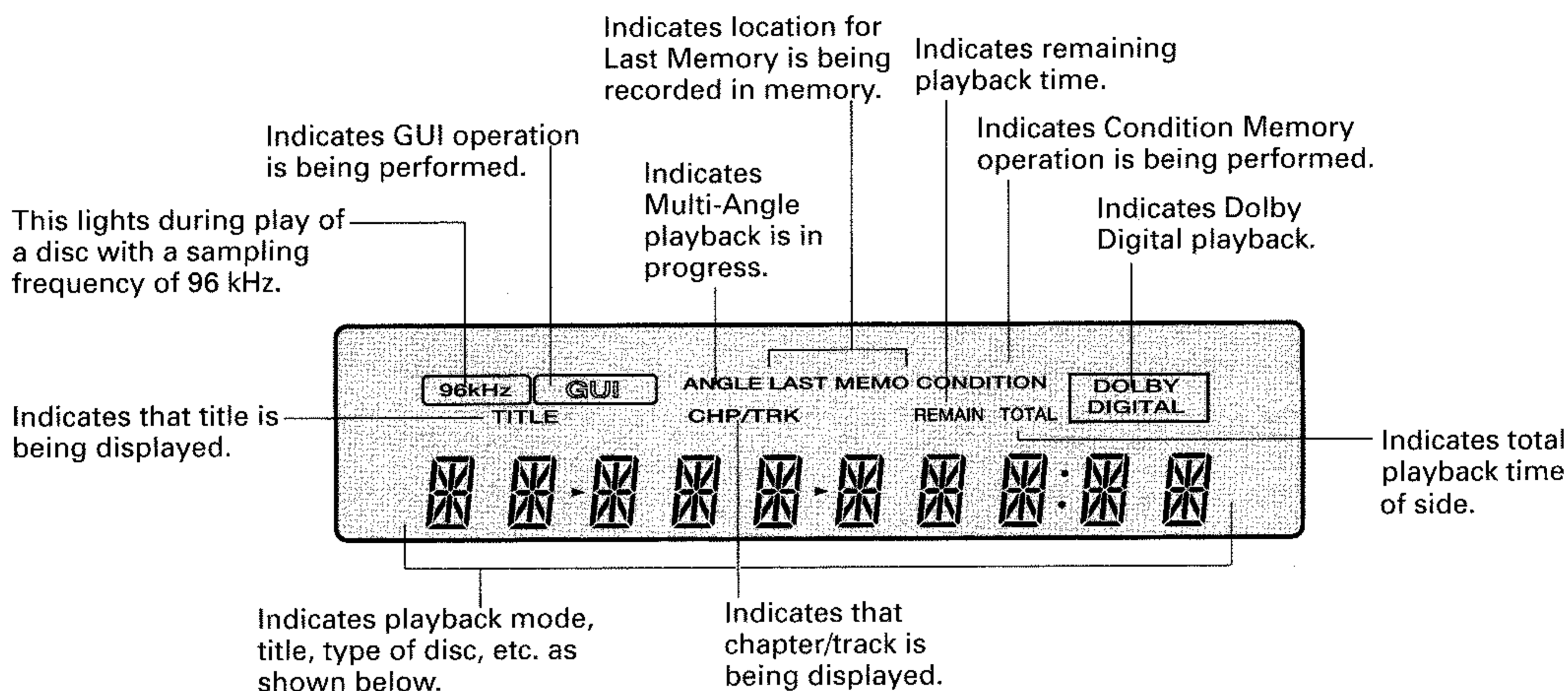
### Optical Digital Output

Audio optical digital output. Switchable between PCM/DOLBY DIGITAL and PCM output.



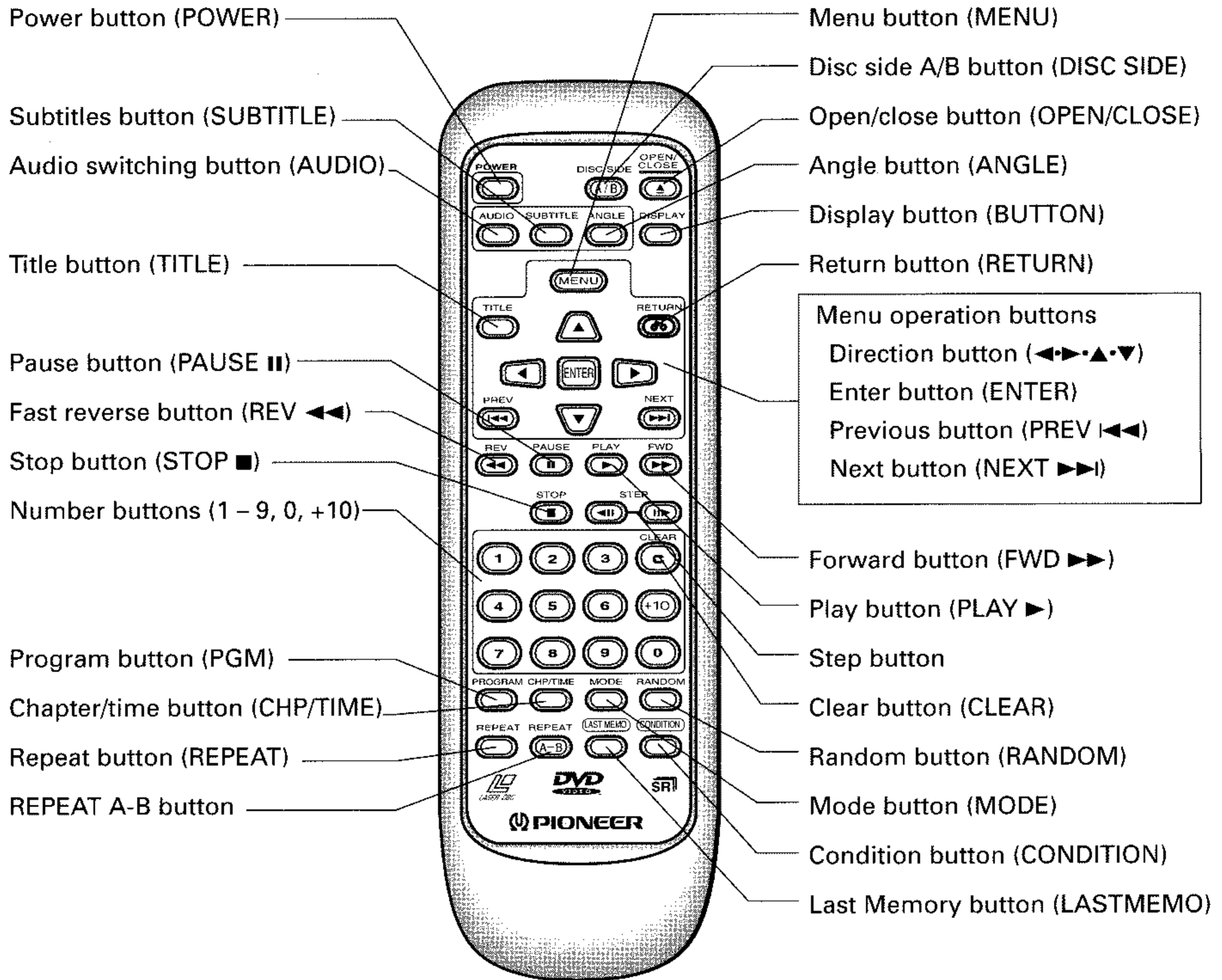


## ■ DISPLAY WINDOW



LD	:Laser Disc	STOP	:Stop
CD	:Compact disc	PAUSE	:Pause
CDV	:CD video	NO DISC	:No disc
DVD	:DVD	-- OFF --	:Power is turned off
VED	:Video CD	MENU	:Menu mode
PBC PLAY	:During Video CD PBC play	TITLE	:Title menu
OPEN	:Disc table is opening or is open	CHAPTER	:Chapter menu
CLOSE	:Disc table is closing	SUB-TITLE	:Subtitle menu
RDM	:Random playback	SETUP	:Set-up menu
PROGRAM	:Program mode	AUDIO	:Audio menu
PGM	:Program playback	COND-MEM	:Condition Memory
R-TRK	:Repeat mode	LAST-MEM	:Last Memory
R-A	:Start point of 2 point repeat playback		
R-AB	:2 point repeat playback		
R-TTL	:Repeat playback of the title		
R-CHP	:Repeat playback of the chapter		
R-SID	:Both sides of LD repeat playback		
STEREO	:Stereo		
PLAY	:Playback		

■ REMOTE CONTROL





## ■ SPECIFICATIONS

### ● For DVL-909/RD/RA,RD/RC, RAM and RL types

#### General

System ..... DVD system, LaserVision Disc system and Compact Disc digital audio system  
 Laser ..... Semiconductor laser: wavelength 650 nm, 780 nm  
 Power requirements: ..... AC 110 – 127/220 – 240 V, 50/60 Hz  
 Power consumption ..... 57 W  
 Weight ..... 8.9 kg  
 Dimensions ..... 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% (no condensation)

#### Video Output (2 pairs)

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

#### S-Video Output level (2 pairs)

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

#### Audio Output (2 pairs)

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

#### Digital audio characteristics

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	0.003 %
Wow and flutter	Limit of measurement (±0.001% W. PEAK) or lower (EIAJ)

#### Other Terminals

Optical digital output (PCM/□□) ..... Optical digital jack  
 Coaxial digital output (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  
 Warranty card ..... 1  
 (With region number "1" models only)

#### NOTE:

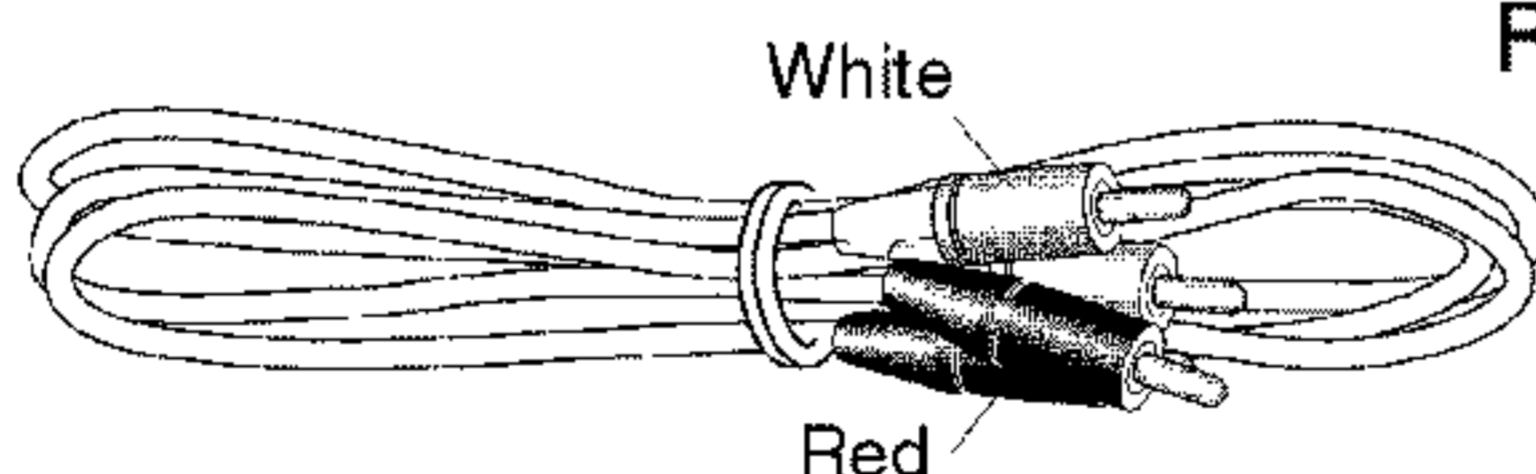
The specifications and design of this product are subject to change without notice, due to improvement.

"Dolby, Digital (AC-3)" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

## ■ ACCESSORIES

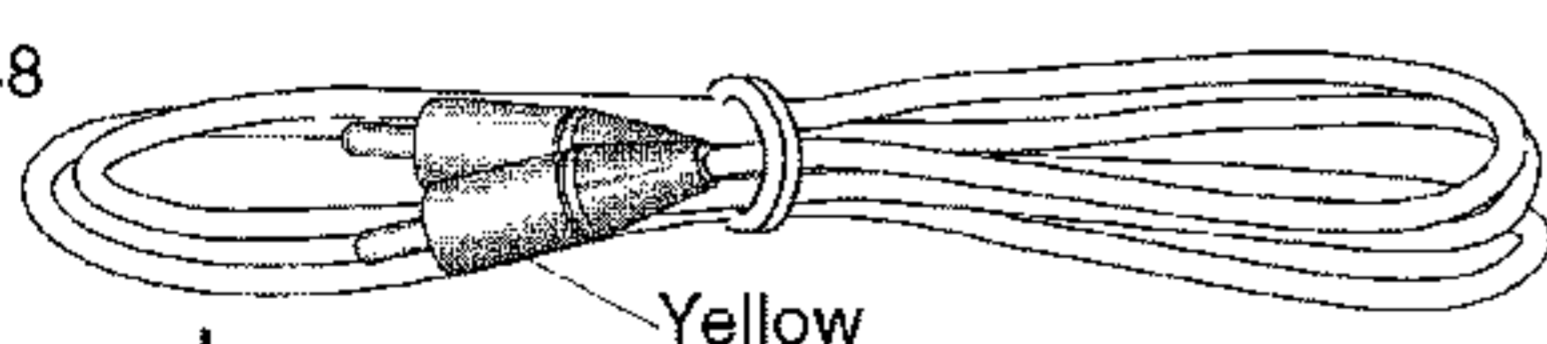
#### Audio cord

VDE1033  
 L=1.5m



#### Video cord

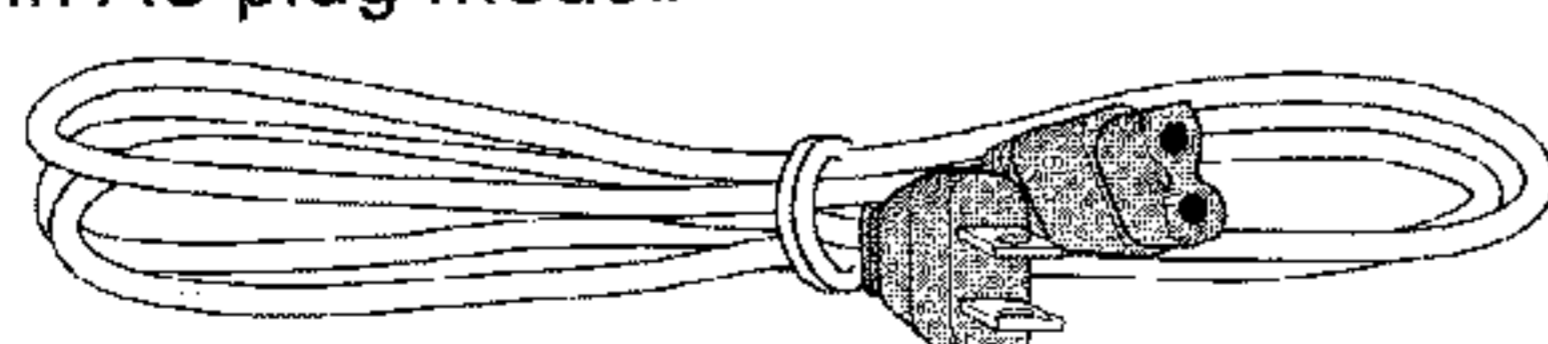
VDE1048  
 L=1.5m



#### Power cord

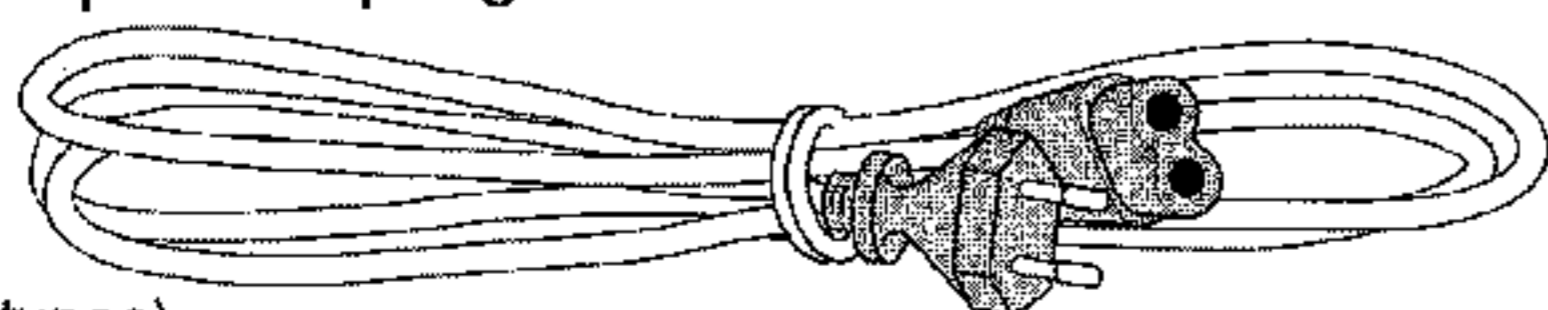
<Flat blade 2-pin AC plug model>

ADG7003  
 (RD/RA and RD/RC types)  
 ADG7017  
 (RAM type)

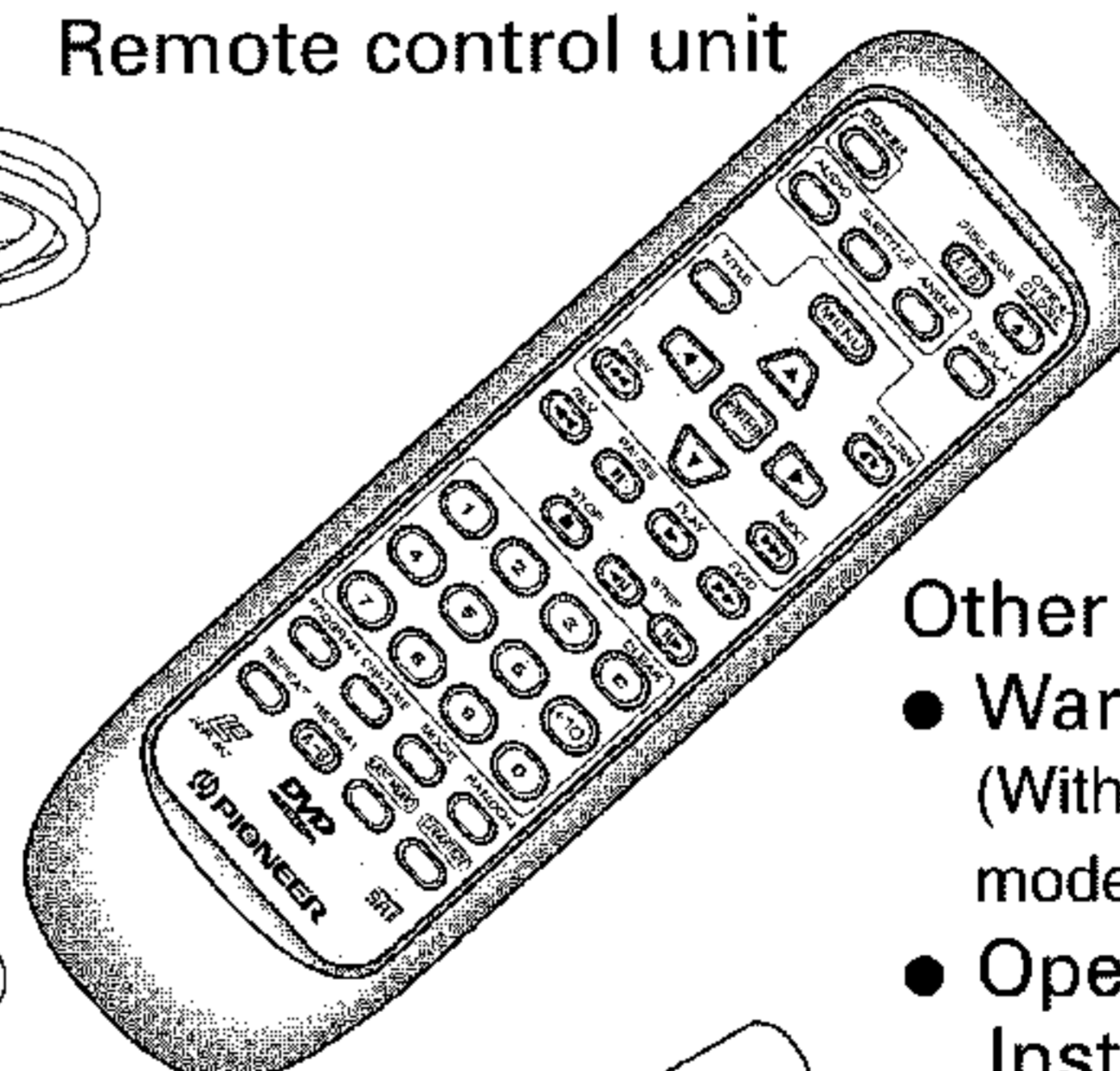


<Round blade 2-pin AC plug model>

ADG1154  
 (RL type)  
 ADG1127  
 (WY and WY/RD types)



#### Remote control unit



VXX2534(CU-DV013)  
 ( WY and WY/RD types)

VXX2549(CU-DV018)  
 ( RD/RA,RD/RC, RAM and RL types)

#### Other included items

- Warranty card (With region number "1" models only.)
- Operating Instructions

#### Batteries....2

