

# Service Manual



ORDER NO.  
ARP2589

CD CDV LD PLAYER

# CLD-150K

## CLD-V202

## CLD-1810K

CLD-150K, CLD-V202 AND CLD-1810K HAVE THE FOLLOWING :

Type	Model			Power Requirement	Remarks
	CLD-150K	CLD-V202	CLD-1810K		
HEZ	○	○	—	AC220-230V, 240V (Switchable)*	
SD	—	—	○	AC110V, 120-127V, 220V, 240V (Switchable)	

\* Change the connection of the power transformer's primary wiring.

- This manual is applicable to the CLD-150K, CLD-V202 and CLD-1810K.
- For CLD-V202 and CLD-1810K, refer to page 103.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

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## 1. SAFETY INFORMATION

(FOR EUROPEAN MODEL ONLY)

**VARO!**  
AVATTAESSA JA SUOJALUKITUS  
OHITETTAESSA OLET ALTTHINA  
NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.  
ÄLÄ KATSO SÄTEESEEN.



LASER  
Kuva 1  
Lasersäteilyn  
varoitusmerkki

**WARNING!**  
DEVICE INCLUDES LASER DIODE WHICH  
EMITS INVISIBLE INFRARED RADIATION  
WHICH IS DANGEROUS TO EYES. THERE IS  
A WARNING SIGN ACCORDING TO PICTURE  
1 INSIDE THE DEVICE CLOSE TO THE LASER  
DIODE.



LASER  
Picture 1  
Warning sign for  
laser radiation

**ADVERSEL.**  
USYNLIG LASERSTRÅLING VED ÅBNING  
NÅR SIKKERHEDSÅFBRYDERE ER UDE AF  
FUNKTION. UNDGÅ UDSÆTTELSE FOR  
STRÅLING.

**VARNING!**  
OSYNLIG LASERSTRÅLING NÅR DENNA  
DEL ÄR ÖPPNAD OCH SPÄRREN  
ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.

**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**  
MAXIMUM OUTPUT POWER: 5 mw  
WAVELENGTH: 780-785 nm

## 2. LABEL CHECK

HEZ model



HEZ model

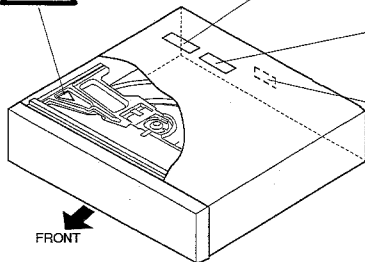
**VARO!**  
Avattamessa ja suojalukitus ohitetta-  
essa olet alttina näkymättömälle  
lasersäteilylle. Älä katso säteeseen.  
**VARNING!**  
Osynlig laserstrålning när denna del  
är öppnad och spärren är urkopplad.  
Betrakta ej strålen. VBR1257

HEZ model

**ADVERSEL**  
OSYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSÅ-  
FBRYDERE ER UDE AF FUNKTION.  
UNDGÅ UDSÆTTELSE FOR STRÅLING.  
**VOORSICHT!**  
UNSICHTBARE LASERSTRÅLUNG TRÜFT AUSE, WENN DIESES  
GERÄT KLAPPEL GEÖFFNET IST NICHT DEM STRAHLE. ABSCHIESS-  
VERBODEN.

HEZ model

**CLASS 1  
LASER PRODUCT**  
VBR-328



FRONT

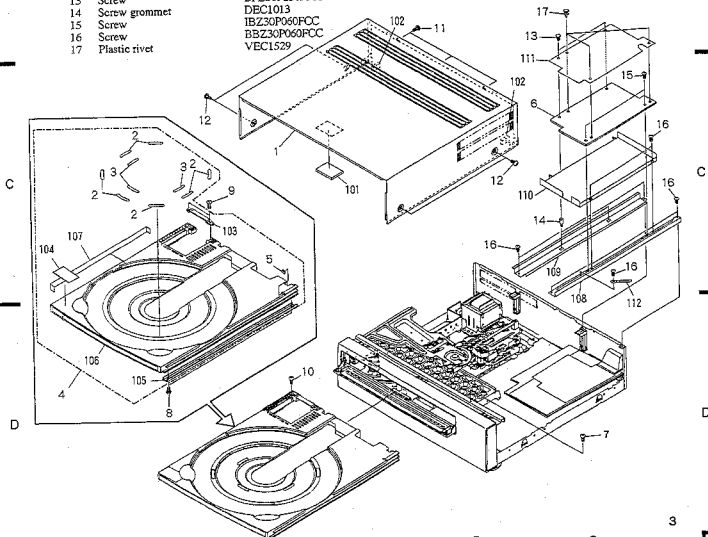
### 3. EXPLODED VIEWS, PACKING AND PARTS LIST

#### 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.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

#### 3.1 EXTERIOR SECTION Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Bonnet assembly S	VXX1458	NSP	101	Bonnet cushion	VEC1358
	2	Disc pad (L)	VEC1191	NSP	102	Cushion	VEC1004
	3	Disc pad (S)	VEC1192	NSP	103	Tray angle	VNE1533
	4	Tray assembly S	VXX1460	NSP	104	Carry label	VRW1289
	5	Tray rubber	VEB1089	NSP	105	Tray reinforced plate	VNE1528
⊙	6	KFCB assembly	VWV1286	NSP	106	Tray	VNK1587
	7	Screw	PCZ30P080FMC	NSP	107	Side plate	VNE1362
	8	Screw	BPZ30P080FCU	NSP	108	Angle R	VNE1832
	9	Screw	CPZ30P100FMC	NSP	109	Center holder	VNE1831
	10	Screw	BPZ30P140FMC	NSP	110	Shield plate	VNE1833
	11	Screw	BBZ30P080FCC	NSP	111	Karaoke sheet	VEC1588
	12	Screw	BCZ40P060FZK	NSP	112	Cord holder	VNF-005
	13	Screw	BPZ30P250FMC				
	14	Screw grommet	DEC1013				
	15	Screw	IBZ30P060FCC				
	16	Screw	BBZ30P060FCC				
	17	Plastic rivet	VEC1529				



## 3.2 FRONT PANEL SECTION

## Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Front panel assembly-S	VXX1796	NSP 101	IRKB assembly	VWG1371
2	Front door assembly-S	VXX1797	NSP 102	KAKB assembly	VWG1374
3	FL panel	VNK1980	NSP 103	HEPB assembly	VWV1284
4	FL filter	VNK2133	NSP 104	MIJB assembly	VWV1285
5	Door plate	VNE1482	NSP 105	Insulator sheet	VEC1465
6	Door damp rubber	VEB1141	NSP 106	CNCB assembly	VWG1369
7	Sub panel (S)	VNK1871	NSP 107	FLKB assembly	VWG1370
8	Key control button	VNK1859	NSP 108	DIKB assembly	VWG1373
9	Door spring	VBH1096	NSP 109	KCKB assembly	VWG1372
10	System key	VNK2129	NSP 110	Front door assembly	VXA1890
11	Select button assembly	VXA1773	NSP 111	Damp rubber	VEB1193
12	PW button	VNK1856	NSP 112	Insulator sheet B	VEC1499
13	Plastic rivet	VEC-143	NSP 113	Shield sheet	VEF1039
14	Back panel (L)	VNK1864	114	*****	
15	Back panel (R)	VNK1865	115	*****	
16	HP knob	VNK1920	NSP 116	Front panel assembly	VXA1888
17	Ten key (A)	VNK1860			
18	Ten key (B)	VNK1861			
19	Damper assembly	VXA1053			
20	Change knob	VNK1862			
21	Vocal button assembly	VXA1694			
22	Screw	BPZ20P040FZK			
23	*****				
24	Screw	BPZ26P060FCU			
25	Screw	IPZ26P060FMC			
26	Screw	BPZ26P080FMC			
27	*****				
28	VOL knob (S)	VNK1857			
29	VOL knob (L)	VNK1858			
30	LED spacer	VEB1173			

A

B

C

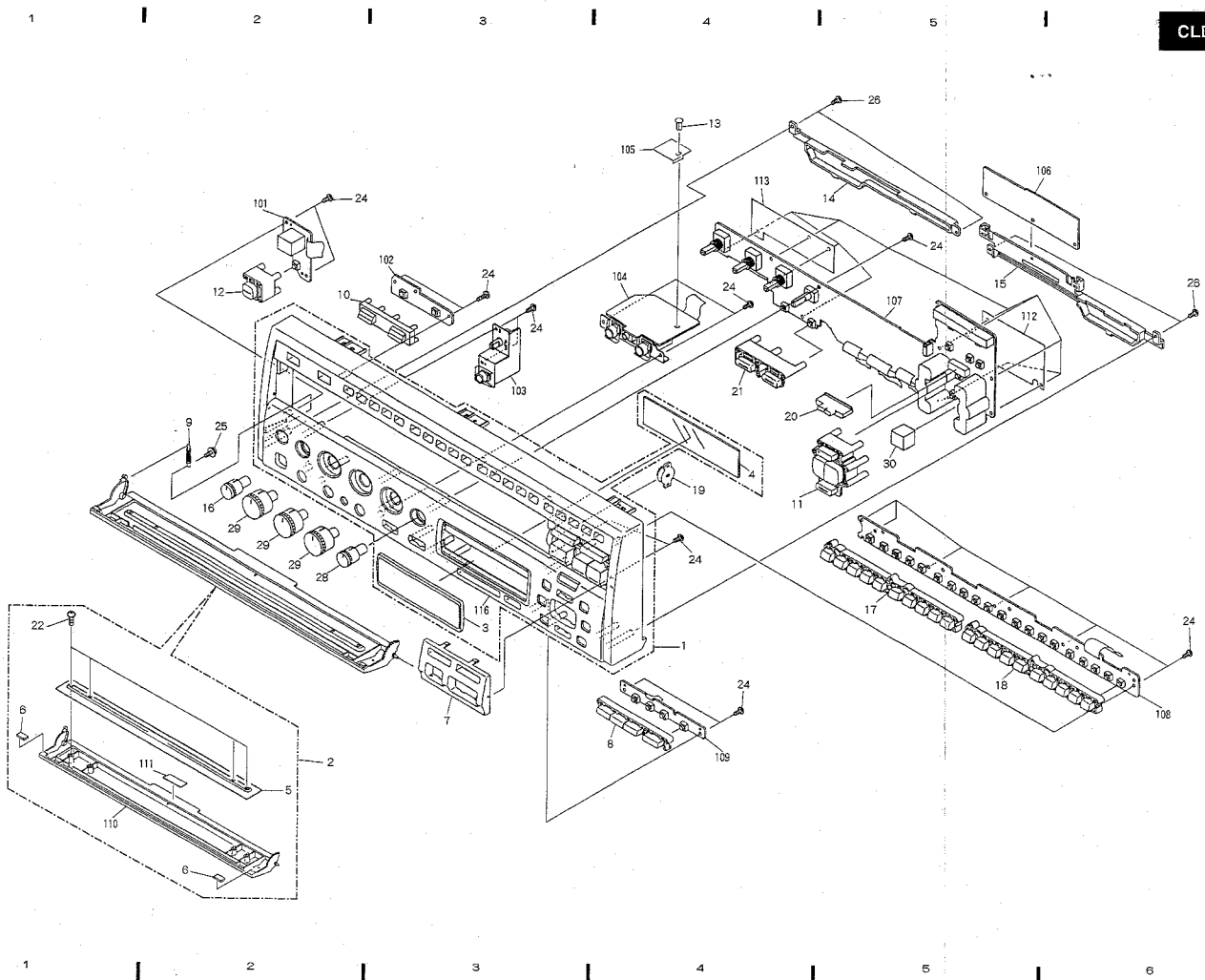
D

A

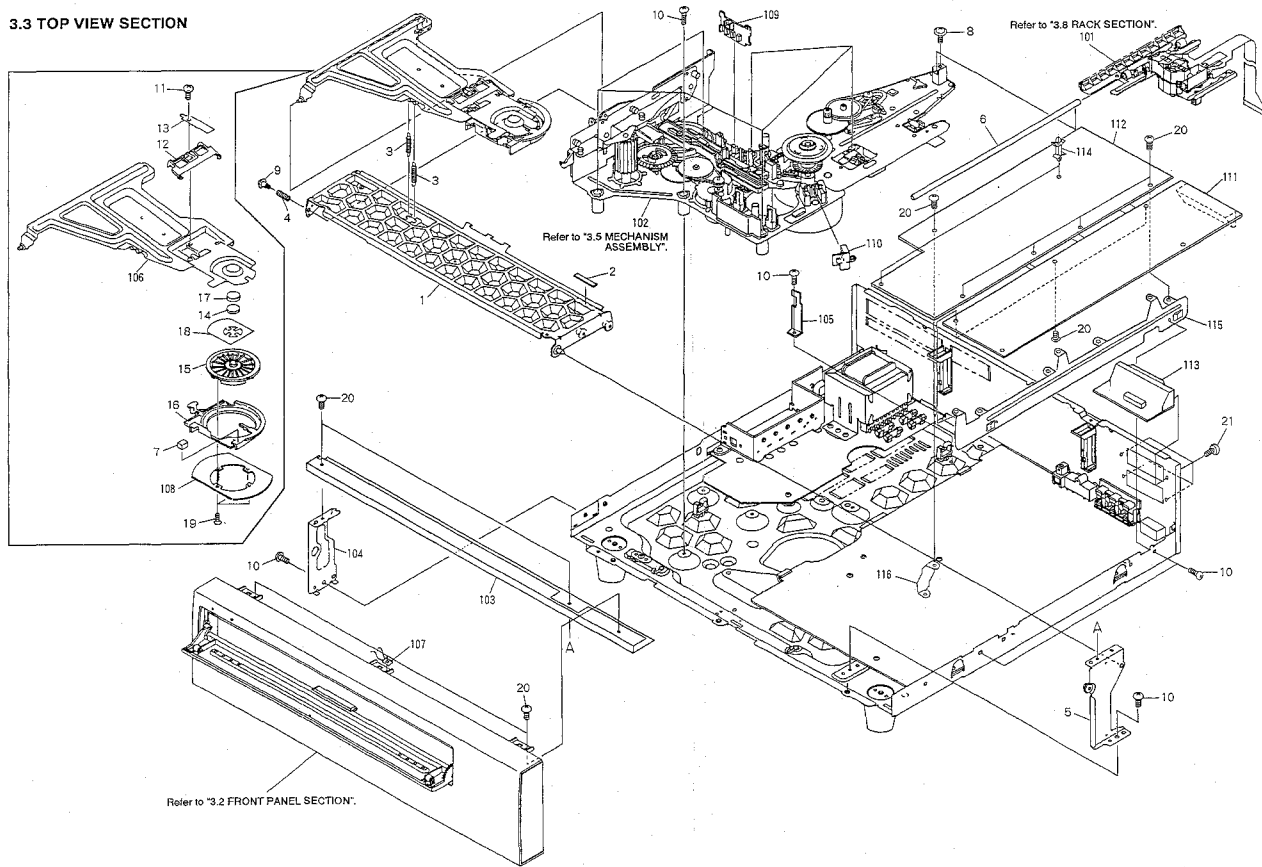
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D



3.3 TOP VIEW SECTION



## Parts List

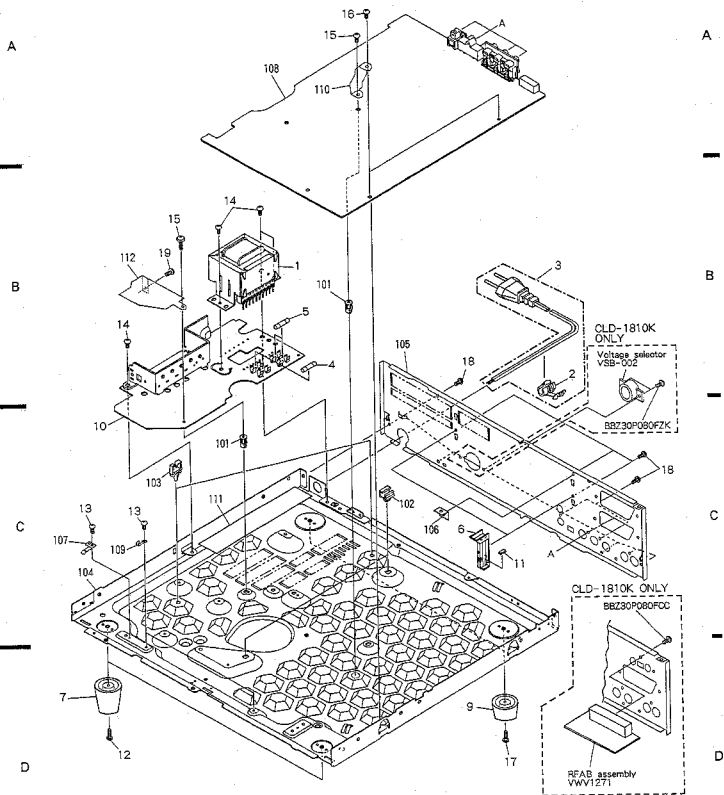
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
1		Clamper arm (A) assembly	VXA1319	NSP	101	Rack assembly	VWT1061
2		Rubber (A)	VEB1084	NSP	102	Mechanism assembly	VWT1073
3		Clamper spring	VBH1094	NSP	103	Front angle	VNE1653
4		Arm spring	VBH1093	NSP	104	Side stay (L)	VNE1306
5		Side stay (R) assembly	VXA1529	NSP	105	SM head holder	VNE1592
6		Carriage shaft	VLL1177	NSP	106	Clamper arm (B)	VNE1306
7		Clamper cushion	VEC1271	NSP	107	Earth plate	VNE1518
8		Screw (B)	VBA1018	NSP	108	Stabilizer	VNE1353
9		Screw (B)	VBA1008	NSP	109	SW1 board assembly	VWG1375
10		Screw	BBZ30P060FCC	NSP	110	PG board assembly	VWG1376
11		Screw	BBZ30P060FMC	NSP	111	PALB board assembly	VWV1245
12		Parallel link	VNL1254	NSP	112	VDTB board assembly	VWS1105
13		Plate spring	VBK1014	NSP	113	SCRT board assembly	VWV1220
14		Ball holder	VNL1289	NSP	114	PC suport	VEC1508
15		Clamper S	VNL1248	NSP	115	PCB holder	VNE1652
16		Clamper holder	VNL1205	NSP	116	PCB holder (C)	VNE1329
17		Rubber sheet	VEB1114				
18		Thrust holder	VBK1018				
19		Screw	CPZ20P050FMC				
20		Screw	IBZ30P060FCC				
21		Screw	BBZ30P080FCC				

## 3.4 BASE SECTION

## Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
△	1	Power transformer	VTT1062	NSP	101	PCB spacer	PNY-404
△	2	Strain relief	CM-22B	NSP	102	P plate holder	PNY-405
△	3	AC power cord	VDG1028	NSP	103	Wire crimp (B)	VEC1012
△	4	Fuse (FU203, FU204) (T1.25A)	REK-101	NSP	104	Base chassis	VNA1216
				NSP	105	Rear panel	VNA1280
△	5	Fuse (FU201, FU202) (T3.15A)	REK-105	NSP	106	Rear angle	VNE1850
	6	Tray stopper	VNL1202	NSP	107	Earth plate	VNE1642
	7	Insulator assembly	VXA1638	NSP	108	ASCB board assembly	VWX1149
	8	.....		NSP	109	Cord holder	VNF-069
				NSP	110	PCB holder (C)	VNE1329
	9	Insulator assembly	VXA1639	NSP	111	Insulator sheet	VEC1251
⊙	10	SYPS assembly	VWR1157	NSP	112	Barrier	VNE1861
	11	Door damp rubber	VEB1033				
	12	Screw	BBZ30P160FMC				
	13	Screw	BBZ30P060FCC				
	14	Screw	BCZ40P080FUC				
	15	Screw	IPZ30P160FMC				
	16	Screw	IBZ30P060FCC				
	17	Screw	BBZ30P100FCC				
	18	Screw	BBZ30P080FCC				
	19	Plastic rivet	PBM1001				

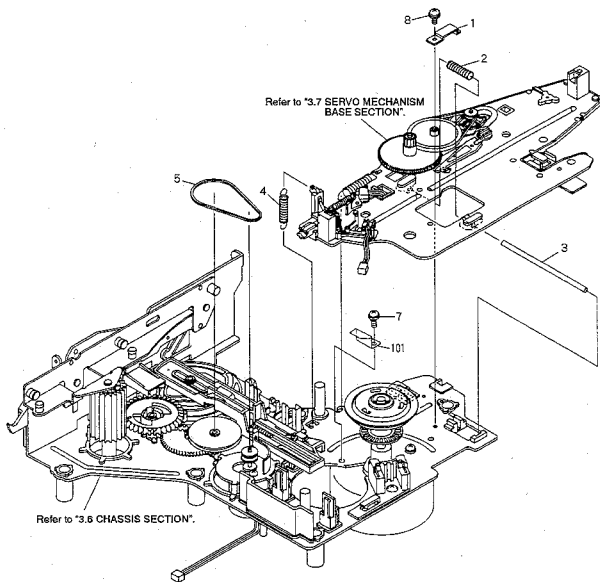




## 3.5 MECHANISM ASSEMBLY

## Parts List

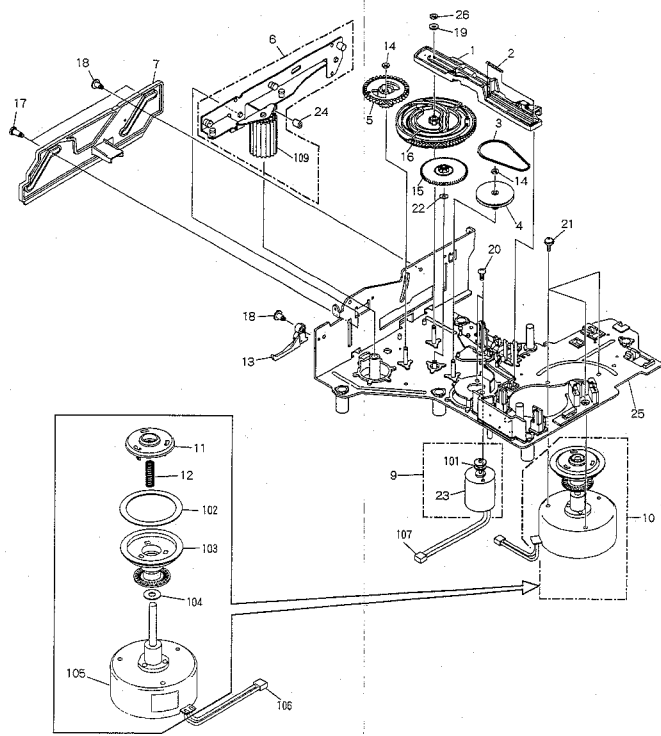
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Plate spring	VBK1013	6	.....	
2	Thrust spring	VBH1073	7	Screw	PMA30P050FMC
3	Tilt shaft	VLL1175	8	Screw	ABZ26P050FMC
4	Tilt pulling spring	VBH1074			
5	Belt	PEB1013	NSP 101	Cam head stopper	VNE1331



3.6 CHASSIS SECTION

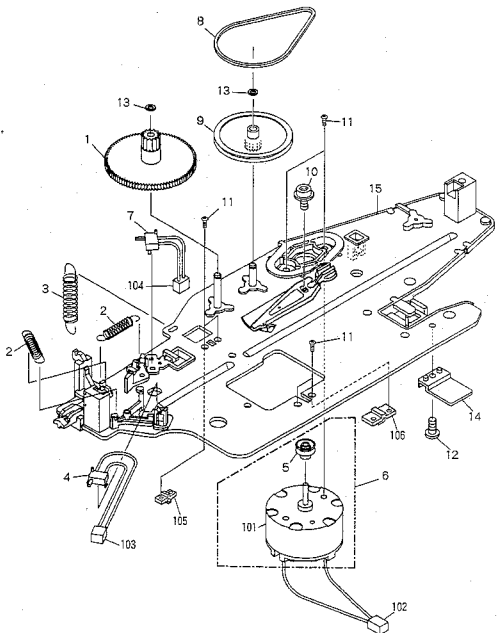
Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Spring slanting cam	VNL1191	NSP 101	Motor pulley	VLL1176
2	Cam spring	VBH1082	NSP 102	Rubber sheet	VEB1103
3	Bell	PEB1013	NSP 103	Turn table assembly	VXA1283
4	Gear pulley	VNL1249	NSP 104	Oil stopped washer	VBFI002
5	Follow gear	VNL1194	NSP 105	Spindle motor	VXM1032
6	Roller plate assembly	VXA1531	NSP 106	Housing assembly	VKPI566
7	Slide cam	VNL1188	NSP 107	Housing assembly	VKPI862
8	*****		108	*****	
9	Loading motor assembly	VXX1262	NSP 109	Slider gear	VNL1189
10	Spindle motor assembly	VXA1474			
11	Centering hub	VNL1174			
12	Centering spring	VBH1083			
13	Door lever (S)	VNL1404			
14	Washer	WT26D047D025			
15	Two stair gear	VNL1193			
16	Cam gear	VNL1190			
17	Screw (C)	VBA1015			
18	Screw (B)	VBA1008			
19	Nylon washer	WA32N060W020			
20	Screw	PMZ30P040FMC			
21	Screw	PMA30P050FMC			
22	Washer	WA32D060D025			
23	Loading motor	VXM1034			
24	Stop ring	VEB1091			
25	Chassis assembly	VXA1575			
26	E ring	YE23FUC			



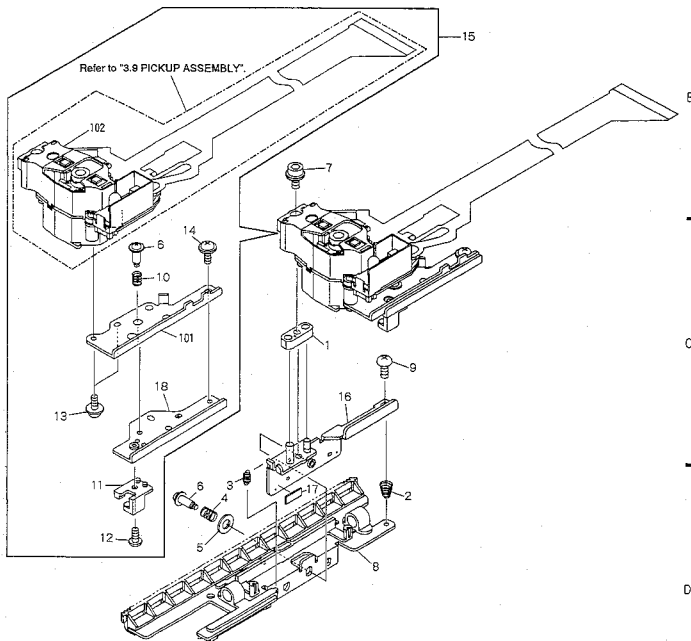
**3.7 SERVO MECHANISM BASE SECTION**  
Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	CA gear (3)	VNL1196	13	Washer	WT26D047D025
2	Switch pulling spring	VBH1079	14	FLE base	VNL1341
3	TC pulling spring	VBH1181	15	Servo mechanism base assembly - S	VXX1583
4	Push switch (S5:OUTER)	DSG1014	NSP 101	Carriage motor	VXM1033
5	CA pulley (1)	VNL1197	NSP 102	Housing assembly	VKP1553
6	Carriage motor assembly	VXX1261	NSP 103	Housing assembly	VKP1861
7	Push switch (S4:INNER)	DSG1014	NSP 104	Housing assembly	VKP1554
8	CA belt	VEB1077	NSP 105	Holder A	VNV1022
9	CA pulley (2)	VNL1198	NSP 106	Holder B	VNV1023
10	Screw	SMF30H080FBT			
11	Screw	PMZ26P040FMC			
12	Screw	BPZ26P050FMC			

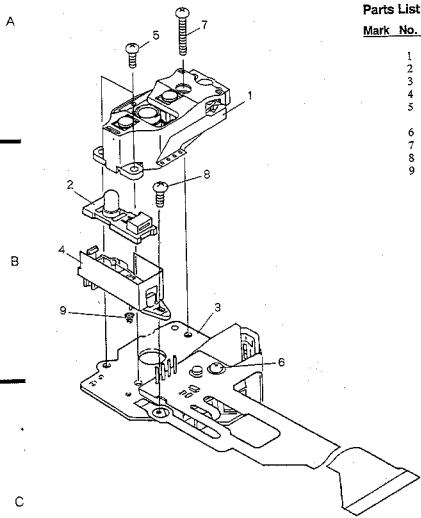


**3.8 RACK SECTION**  
Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	PU base	VNL1209	11	TAN base	VNL1199
2	LP center spring	VBH1075	12	Screw	PMZ20P040FMC
3	PU pulling spring	VBH1089	13	Screw	PMZ20P040FMC
4	L-2 spring	VBH1090	14	Screw	AMZ30P050FMC
5	Washer	WA32F070M080	15	Slider assembly	VWT1060
6	Screw	VBA1007	16	PU mount base assembly	VXA1762
7	Screw (2.6 x 10)	VLL1192	17	Spacer (S)	VEC1264
8	Rack	VNL1186	18	TAN plate (1)	VNE1606
9	Screw	BMZ26P080FMC			
10	TAN spring	VBH1081	NSP 101	TAN plate (2)	VNE1303
			NSP 102	Pickup assembly	VWY1021



3.9 PICKUP ASSEMBLY

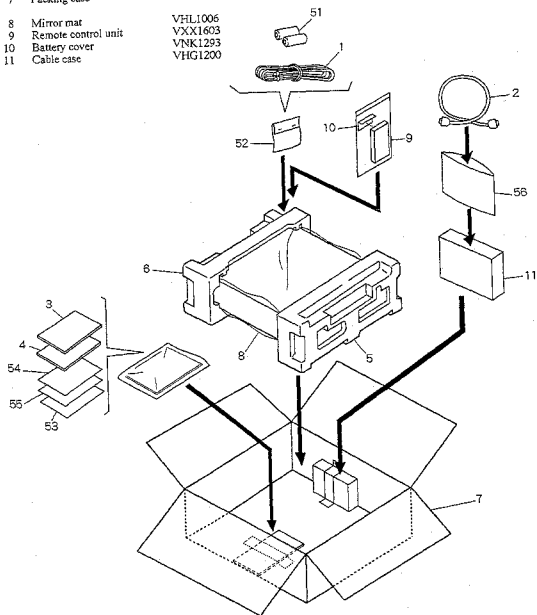


Parts List

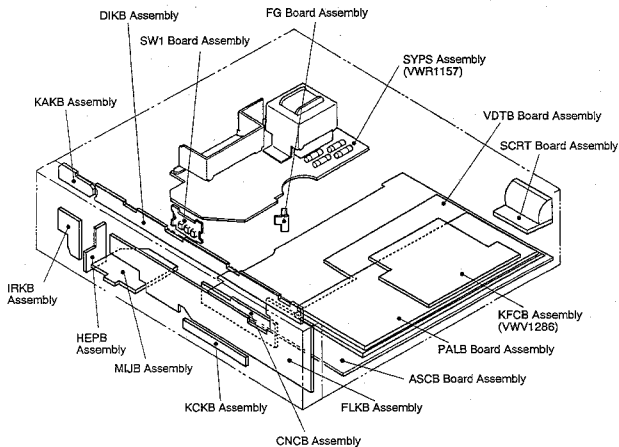
Mark	No.	Description	Part No.
1		Actuator assembly	VXX15S1
2		Sensor assembly	VEX1018
3		Pre-pickup assembly	VXX1413
4		Sensor stay	VNH1037
5		Screw	PMA20P060FMC
6		Screw	PMA20P080FMC
7		Screw	PMA20P160FMC
8		Screw	BMZ20P060FMC
9		Sensor spring	VBH1087

3.10 PACKING  
Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
1		Connection cord	VDE-055	NSP	51	Dry cell battery (R03, AAA)	VEM-022
2		SCART cable	VDE1027	NSP	52	Polyethylene bag	VHL-014
3		Operating instructions (English)	VRB1077	NSP	53	Caution card	VRR1009
				NSP	54	Caution card (EW)	VRM1027
				NSP	55	Caution card (UC)	VRM1039
				NSP	56	Polyethylene bag	ZZ1-029
4		Operating instructions (German/French/Spanish/Italian)	VRD1007				
5		Pad (R)	VHA1086				
6		Pad (L)	VHA1094				
7		Packing case	VHG1240				
8		Mirror mat	VHL1006				
9		Remote control unit	VXX1603				
10		Battery cover	VNK1293				
11		Cable case	VHG1200				



## 4. PCB LOCATION



ASCB	: AUDIO SERVO CONTROL BOARD
FG	: FG COUNTER BOARD
SW1	: SW1 BOARD
VDTB	: VIDEO AND TBC BOARD
PALB	: PAL BOARD
SCRT	: EUROPEAN SCRT BOARD
SYPS	: SYSTEM POWER SUPPLY
CNCB	: CONNECTOR BOARD
FLKB	: FL KEY BOARD
IRKB	: IR KEY BOARD
KCKB	: KEY CONTROL KEY BOARD
DIKB	: DIRECT KEY BOARD
KAKB	: KARAOKE BOARD
HEPB	: HEADPHONE BOARD
MIJB	: MIC JACK BOARD
KFCB	: KARAOKE FUNCTION BOARD

## 5. SCHEMATIC AND PCB CONNECTION DIAGRAMS

### Note:

(Type 4)

1. When ordering service parts, be sure to refer to "PARTS LIST OF EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

### 3. RESISTORS:

Unit: k $\Omega$ , M $\Omega$ , or  $\Omega$  unless otherwise noted.  
 Rated power: 1/4W, 1/8W, 1/8W, 1/10W unless otherwise noted.  
 Tolerance: (F):  $\pm 1\%$ , (G):  $\pm 2\%$ , (K):  $\pm 10\%$ , (M):  $\pm 20\%$  or  $\pm 5\%$  unless otherwise noted.

### 4. CAPACITORS:

Unit: pF or  $\mu$ F unless otherwise noted.  
 Ratings: capacitor ( $\mu$ F) / voltage (V) unless otherwise noted.  
 Rated voltage: 50V except for electrolytic capacitors.

### 5. COILS:

Unit: m:mH or  $\mu$ H unless otherwise noted.

### 6. VOLTAGE AND CURRENT:

$\square$ : DC voltage (V) in PLAY mode unless otherwise noted.  
 $\square$ : mA or  $\leftarrow$  mA: DC current in PLAY mode unless otherwise noted.  
 Value in ( ) is DC current in STOP mode.

### 7. OTHERS

- $\rightarrow$ : Signal route.
- $\odot$ : Adjustment point.
- $\nabla$  (Red): Measurement point.
- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

### 8. SWITCHES (Underline indicates switch position):

OUTSIDE OF PCB ASSEMBLIES

S4 : INNER  
 S5 : OUTER

SW1 ASSEMBLY

S1-S3 : LOADING/TILT

FLKB ASSEMBLY

S101 : CHORUS  
 S102 : VOCAL  
 S103 : ONE TOUCH KARAOKE  
 S104 : ONECE MORE  
 S105 : SURROUND  
 S106 : VOCAL PARTNER  
 S107 : OPEN/CLOSE  
 S110 : PLAY/PAUSE  
 S111 : STOP  
 S112 : DOOR OPEN  
 S113 : KARAOKE/NORMAL/AUX INPUT

ASCB BOARD ASSEMBLY

S201 : ATT (ON-OFF)

KAKB ASSEMBLY

S202 : 16:9  
 S203 : SYSTEM ] SELECTOR

DIKB ASSEMBLY

S301 : 1  
 S302 : 2  
 S303 : 3  
 S304 : 4  
 S305 : 5  
 S306 : 6  
 S307 : 7  
 S308 : 8  
 S309 : 9  
 S301 : 10  
 S311 : 11  
 S312 : 12  
 S313 : 13  
 S314 : 14  
 S315 : 15  
 S316 : 16  
 S317 : 17  
 S318 : 18  
 S319 : 19  
 S320 : 20

IRKB ASSEMBLY

S401 : POWER

KCKB ASSEMBLY

S701 : b  
 S702 : 4  
 S703 : #  
 S704 : AUDIO MODE



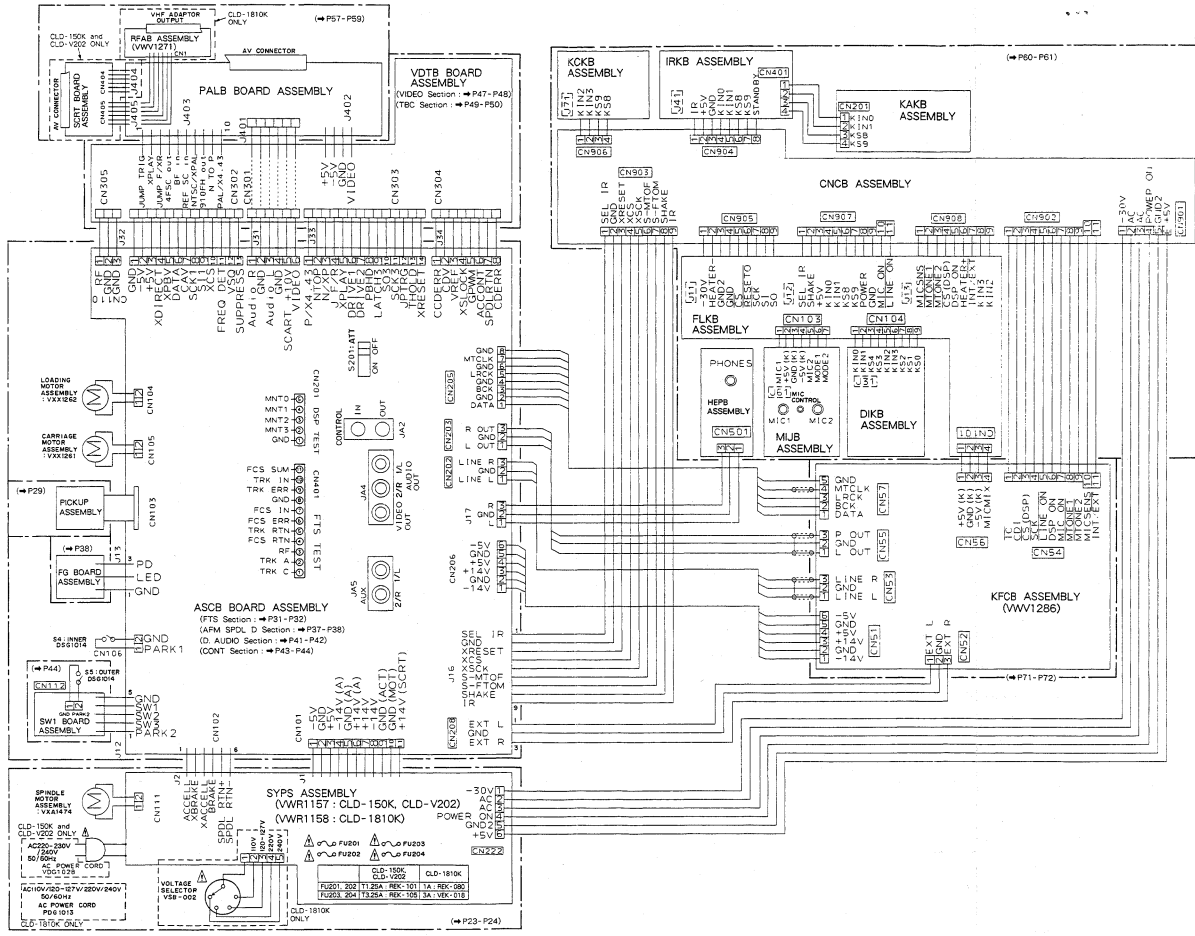
5.1 OVERALL WIRING DIAGRAM

A

B

C

D



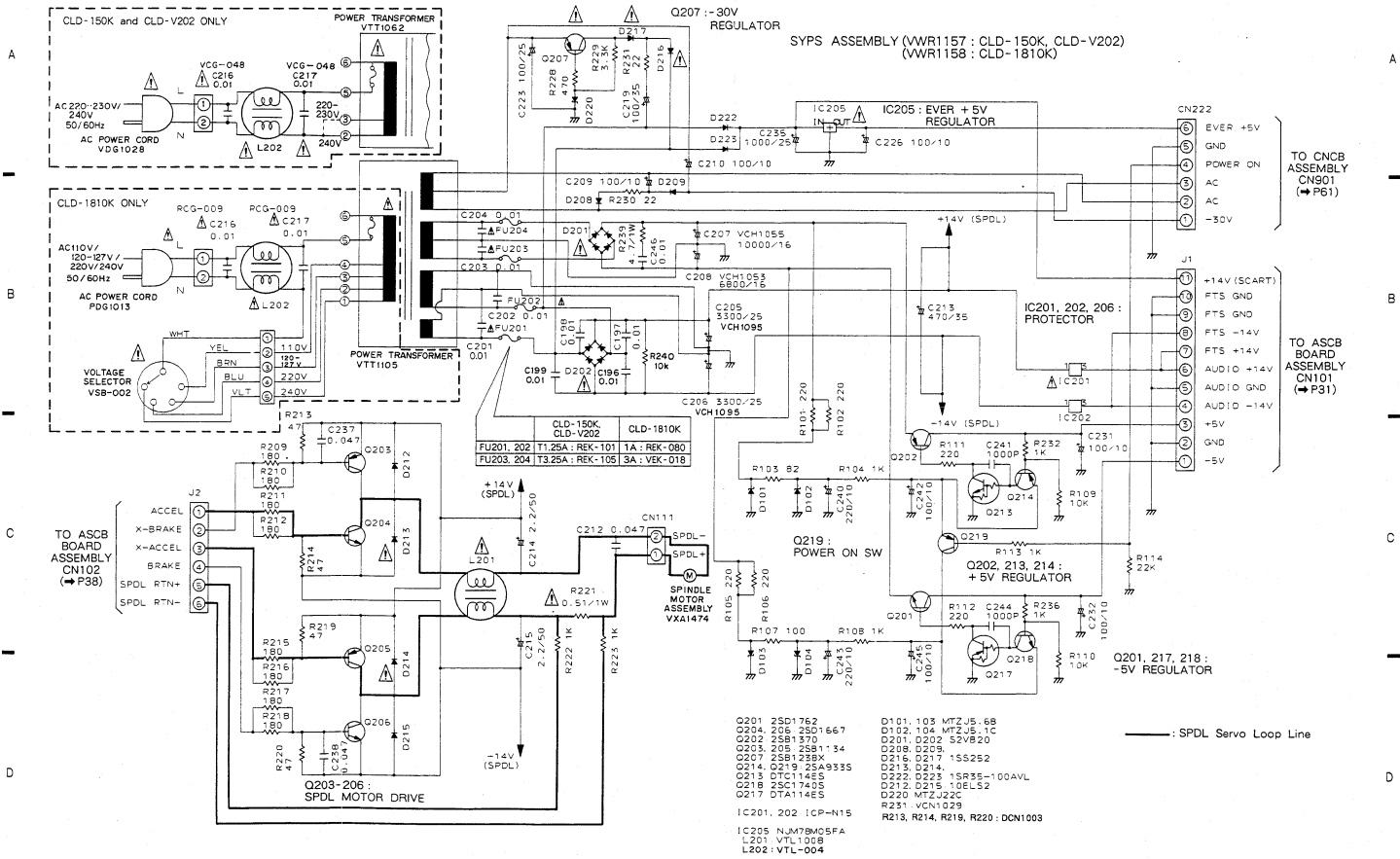
A

B

C

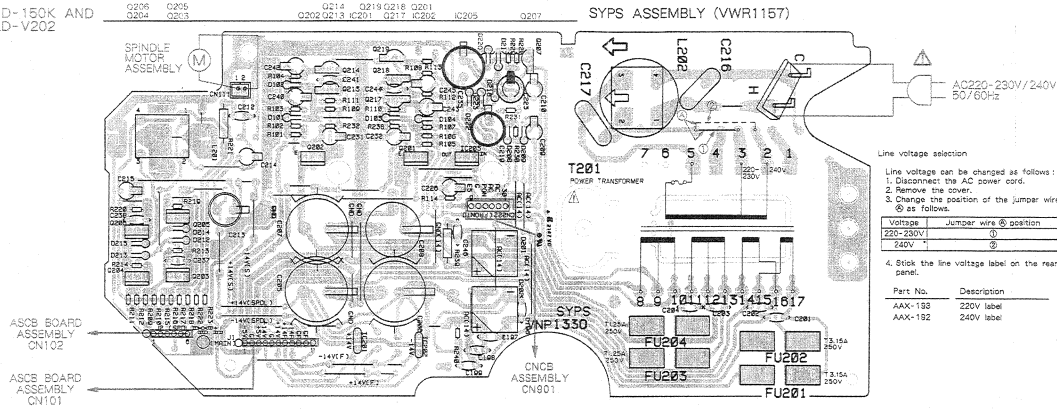
D

5.2 SYPS ASSEMBLY



CLD-150K AND CLD-V202

SYPS ASSEMBLY (VWR1157)



Line voltage selection  
 Line voltage can be changed as follows:  
 1. Disconnect the AC power cord.  
 2. Remove the cover.  
 3. Change the position of the jumper wire as follows.

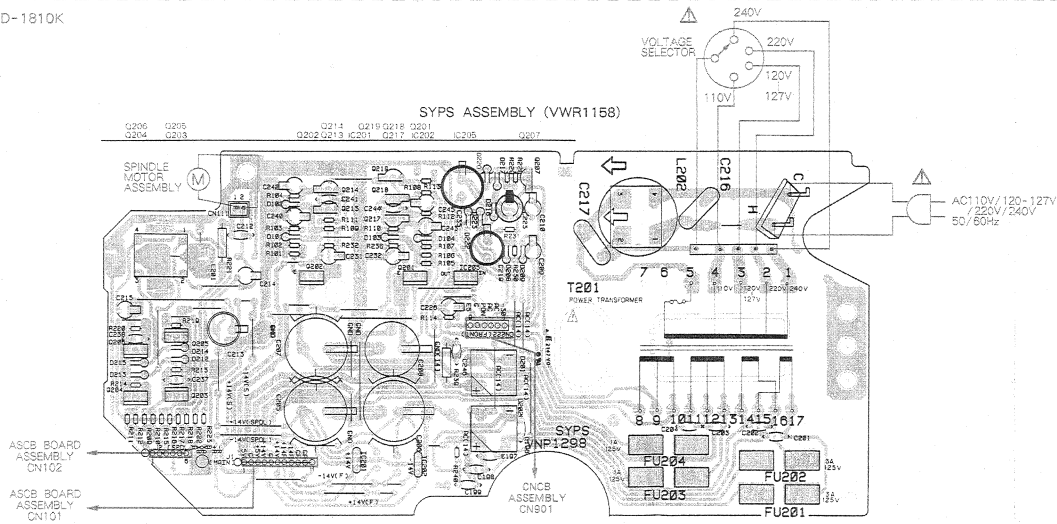
Voltage	Jumper wire @ position
220-230V	①
240V	②

4. Stick the line voltage label on the rear panel.

Part No.	Description
AAK-193	220V label
AAK-192	240V label

CLD-1810K

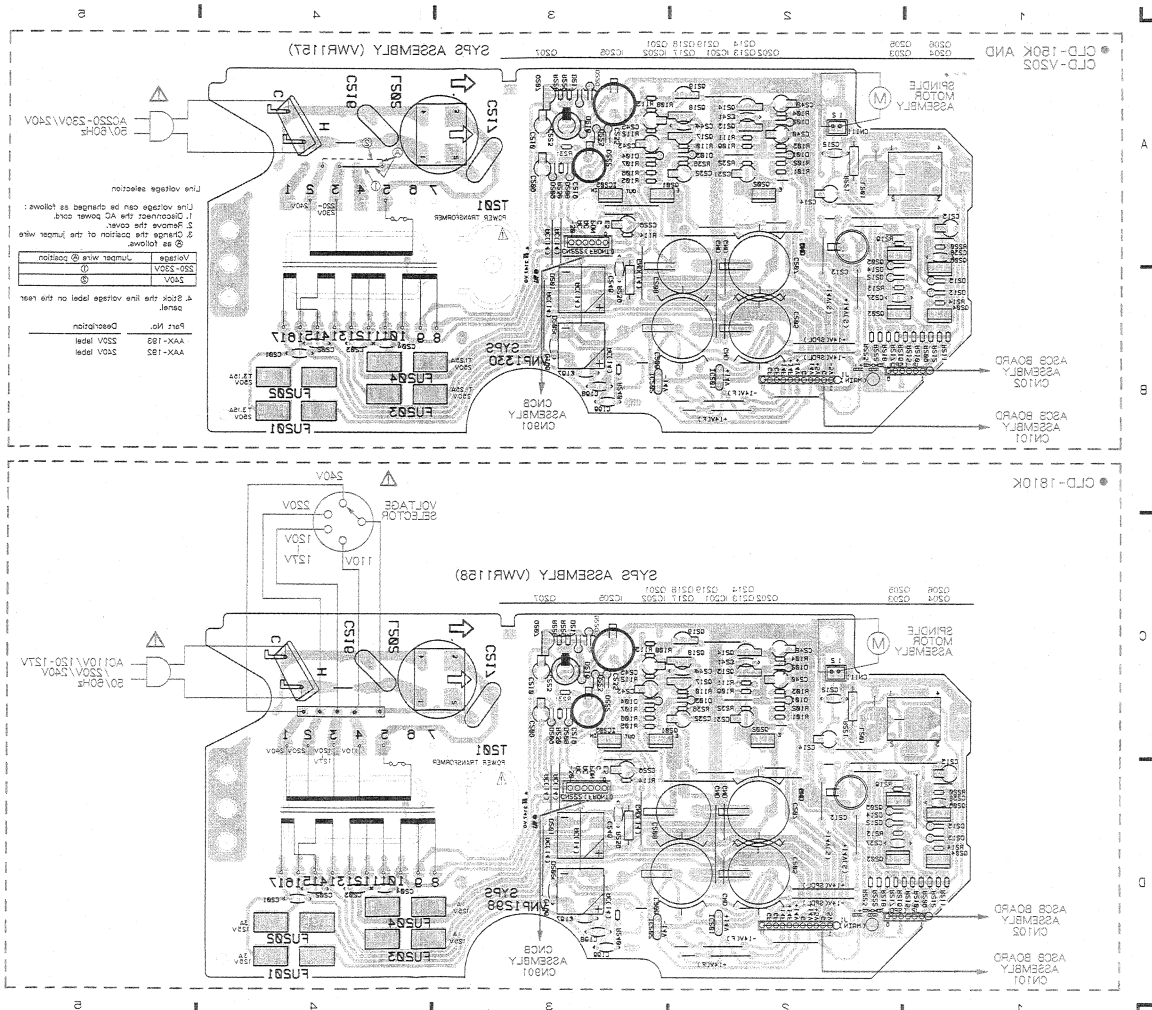
SYPS ASSEMBLY (VWR1158)



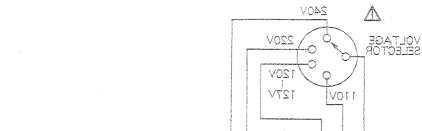
P.C.B. pattern capacitor	Corresponding part symbol	Part name
		Resistor
		FET
		Diode
		Zener diode
		LED
		Variable
		Tact switch
		Inductor
		Cap
		Transformer
		Fiber
		Ceramic capacitor
		Mylar capacitor
		Electrolytic capacitor (Non-adjustable)
		Electrolytic capacitor (Adjustable)
		Electrolytic capacitor (Flatcase)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resistor
		Thermistor

1. The P.C.B. connection diagram is viewed from the parts mounted side.  
 2. The part which has been mounted on the board can be isolated with those shown with the corresponding setting symbols listed in the above Table.  
 3. The capacitor terminal marked with shows negative terminal.  
 4. The diode marked with shows cathode side.  
 5. The transformer terminal marked with shows center.

This P.C.B. connection diagram is viewed from the foil side.



These voltage selection  
 1. Connect the AC power cord.  
 2. Remove the cover.  
 3. Change the position of the selector switch as follows:  
 (a) as follows  
 (b) 250V  
 (c) 200-250V  
 (d) 150V  
 (e) 110V  
 4. Check the voltage label on the rear panel.  
 Part No. Description  
 AAX-183 250V label  
 AAX-185 150V label



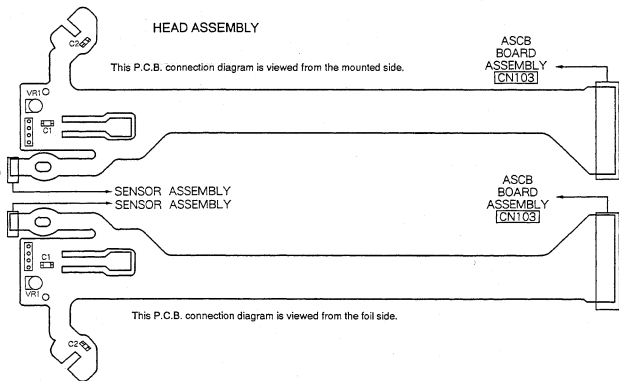
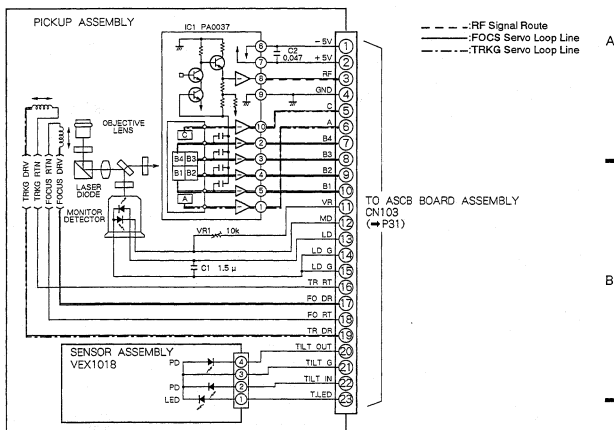
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



































D

5.3 PICKUP ASSEMBLY



FTS SECTION

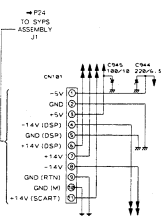
Note: (No.) in the table correspond to the pin No.

IC801 (CXA1081S)		CN401		IC803 (PM3003)		Other points						
①		⑳		③		①		⑳		①	Q810 Collector	
②		㉑		④		⑧		④⑩		②	CN103 Pin 16	
⑦		㉒		⑤		⑩		④⑨		③	Q828 Collector	
⑫		㉓		⑥		⑮		④⑦		④	CN103 Pin 17	
⑮		㉔		⑦		⑰		⑤⑤		⑤	CN103 Pin 18	
				⑧		⑱		⑤⑥		⑥	IC804 Pin 9	
				⑩								
				⑪								

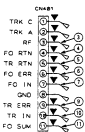
5.4 ASCB BOARD ASSEMBLY (1/4:FTS SECTION)

ASCB BOARD ASSEMBLY (1/4)  
● FTS SECTION

A



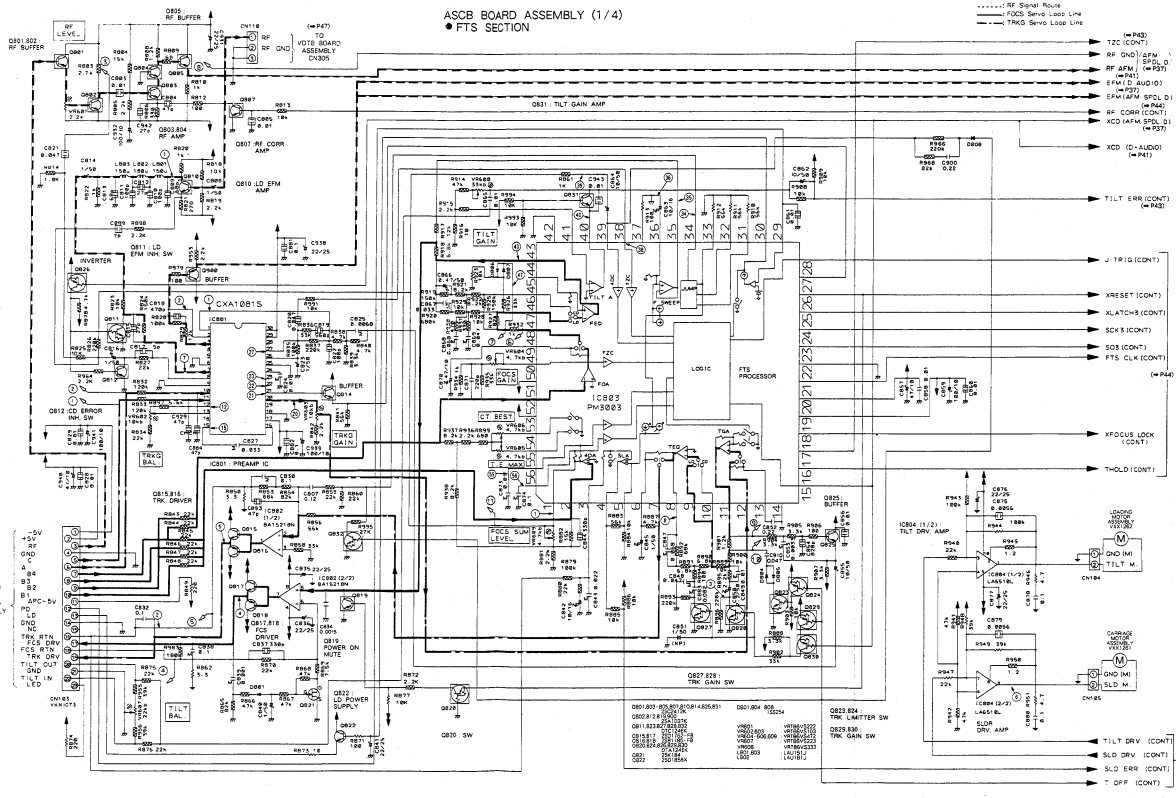
B



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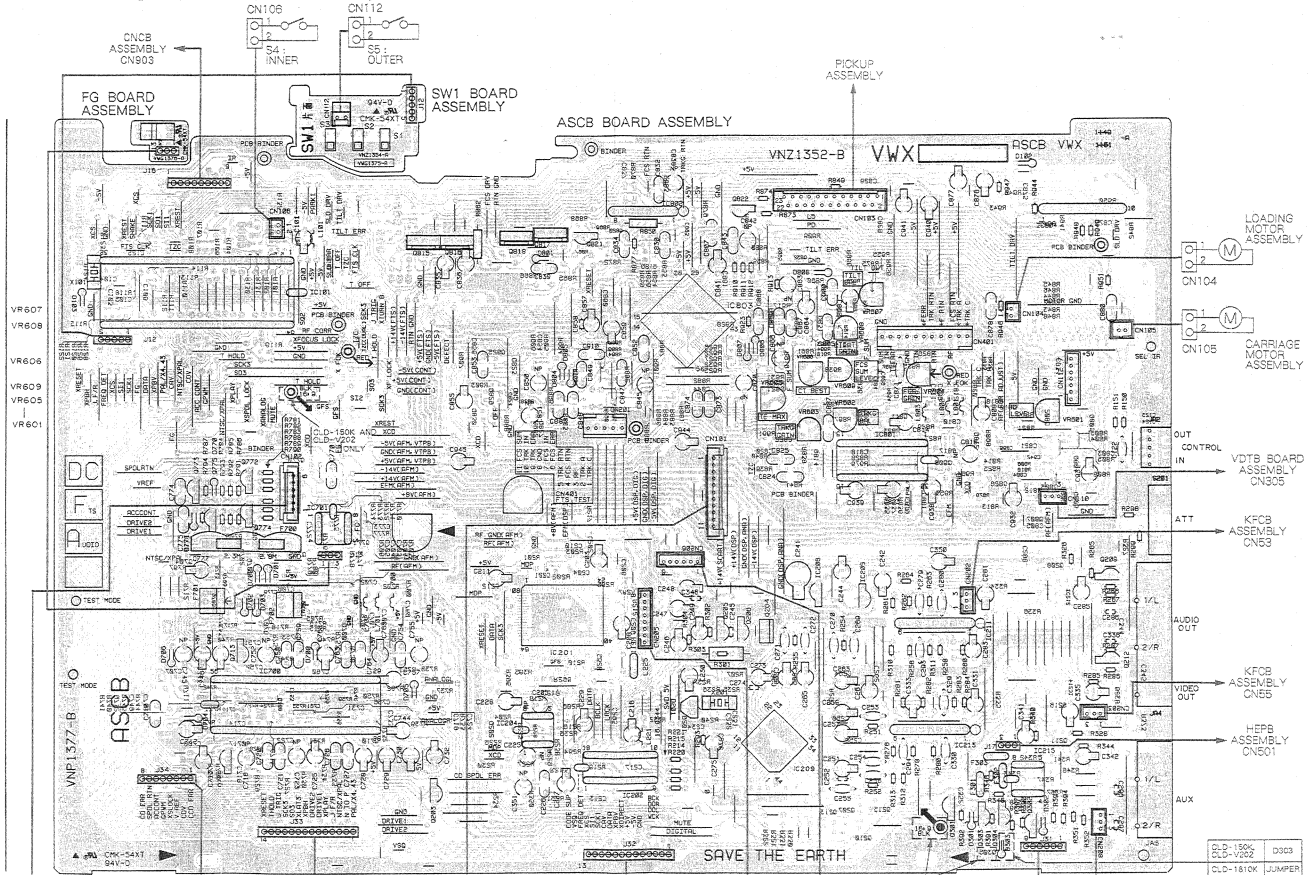


D



CLD-66

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IC 802  
IC 804  
IC 815  
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IC 819  
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IC 803  
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CLD-150K AND CLD-1502 ONLY  
CLD-1810K JUMPER



1

2

3

4

5

6

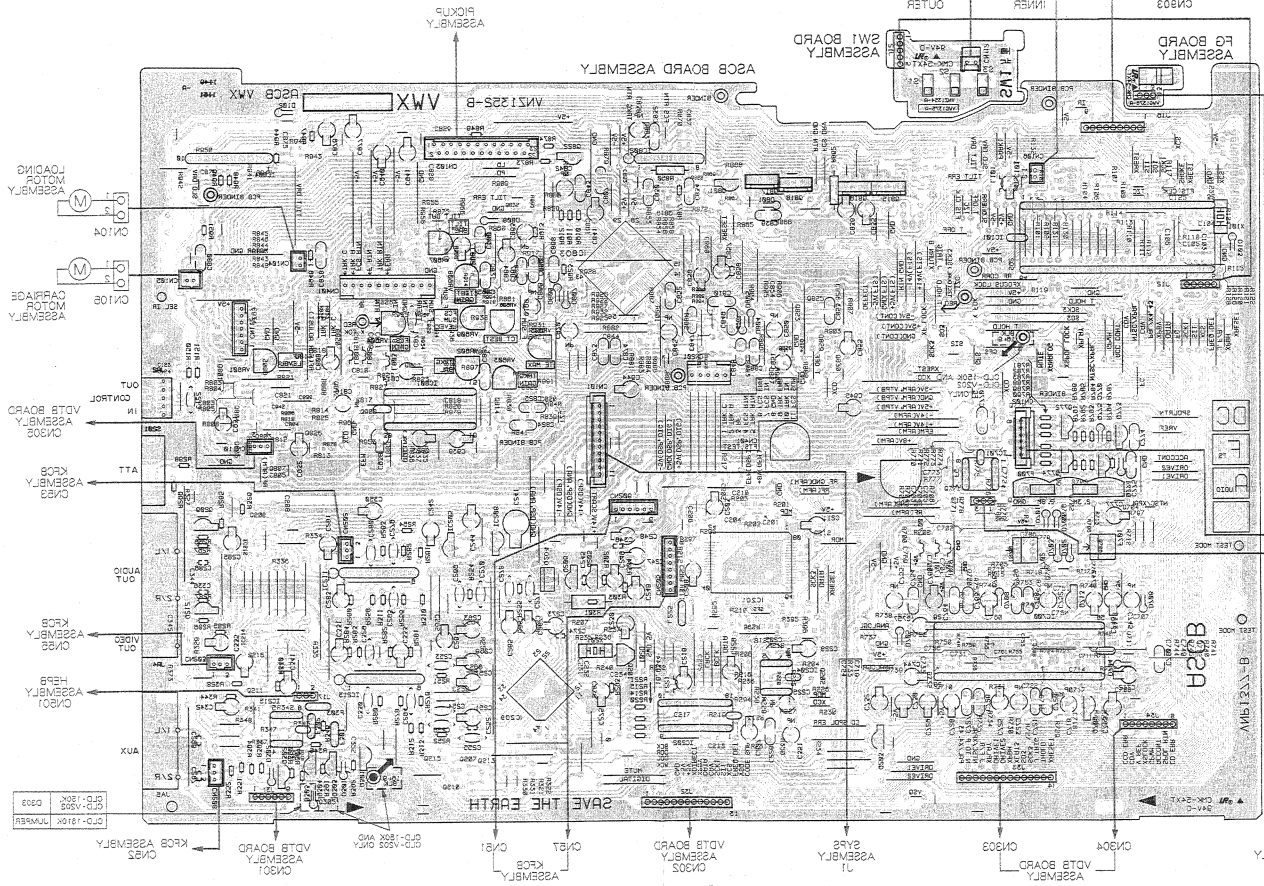
This P.C.B. connection diagram is viewed from the foil side.

A

B

C

D



ASMB108 ASSEMBLY	0.001
ASMB107 ASSEMBLY	0.001
ASMB106 ASSEMBLY	0.001
ASMB105 ASSEMBLY	0.001
ASMB104 ASSEMBLY	0.001
ASMB103 ASSEMBLY	0.001
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ASMB80 ASSEMBLY	0.001
ASMB79 ASSEMBLY	0.001
ASMB78 ASSEMBLY	0.001
ASMB77 ASSEMBLY	0.001
ASMB76 ASSEMBLY	0.001
ASMB75 ASSEMBLY	0.001
ASMB74 ASSEMBLY	0.001
ASMB73 ASSEMBLY	0.001
ASMB72 ASSEMBLY	0.001
ASMB71 ASSEMBLY	0.001
ASMB70 ASSEMBLY	0.001
ASMB69 ASSEMBLY	0.001
ASMB68 ASSEMBLY	0.001
ASMB67 ASSEMBLY	0.001
ASMB66 ASSEMBLY	0.001
ASMB65 ASSEMBLY	0.001
ASMB64 ASSEMBLY	0.001
ASMB63 ASSEMBLY	0.001
ASMB62 ASSEMBLY	0.001
ASMB61 ASSEMBLY	0.001
ASMB60 ASSEMBLY	0.001
ASMB59 ASSEMBLY	0.001
ASMB58 ASSEMBLY	0.001
ASMB57 ASSEMBLY	0.001
ASMB56 ASSEMBLY	0.001
ASMB55 ASSEMBLY	0.001
ASMB54 ASSEMBLY	0.001
ASMB53 ASSEMBLY	0.001
ASMB52 ASSEMBLY	0.001
ASMB51 ASSEMBLY	0.001
ASMB50 ASSEMBLY	0.001
ASMB49 ASSEMBLY	0.001
ASMB48 ASSEMBLY	0.001
ASMB47 ASSEMBLY	0.001
ASMB46 ASSEMBLY	0.001
ASMB45 ASSEMBLY	0.001
ASMB44 ASSEMBLY	0.001
ASMB43 ASSEMBLY	0.001
ASMB42 ASSEMBLY	0.001
ASMB41 ASSEMBLY	0.001
ASMB40 ASSEMBLY	0.001
ASMB39 ASSEMBLY	0.001
ASMB38 ASSEMBLY	0.001
ASMB37 ASSEMBLY	0.001
ASMB36 ASSEMBLY	0.001
ASMB35 ASSEMBLY	0.001
ASMB34 ASSEMBLY	0.001
ASMB33 ASSEMBLY	0.001
ASMB32 ASSEMBLY	0.001
ASMB31 ASSEMBLY	0.001
ASMB30 ASSEMBLY	0.001
ASMB29 ASSEMBLY	0.001
ASMB28 ASSEMBLY	0.001
ASMB27 ASSEMBLY	0.001
ASMB26 ASSEMBLY	0.001
ASMB25 ASSEMBLY	0.001
ASMB24 ASSEMBLY	0.001
ASMB23 ASSEMBLY	0.001
ASMB22 ASSEMBLY	0.001
ASMB21 ASSEMBLY	0.001
ASMB20 ASSEMBLY	0.001
ASMB19 ASSEMBLY	0.001
ASMB18 ASSEMBLY	0.001
ASMB17 ASSEMBLY	0.001
ASMB16 ASSEMBLY	0.001
ASMB15 ASSEMBLY	0.001
ASMB14 ASSEMBLY	0.001
ASMB13 ASSEMBLY	0.001
ASMB12 ASSEMBLY	0.001
ASMB11 ASSEMBLY	0.001
ASMB10 ASSEMBLY	0.001
ASMB9 ASSEMBLY	0.001
ASMB8 ASSEMBLY	0.001
ASMB7 ASSEMBLY	0.001
ASMB6 ASSEMBLY	0.001
ASMB5 ASSEMBLY	0.001
ASMB4 ASSEMBLY	0.001
ASMB3 ASSEMBLY	0.001
ASMB2 ASSEMBLY	0.001
ASMB1 ASSEMBLY	0.001

1

2

3

4

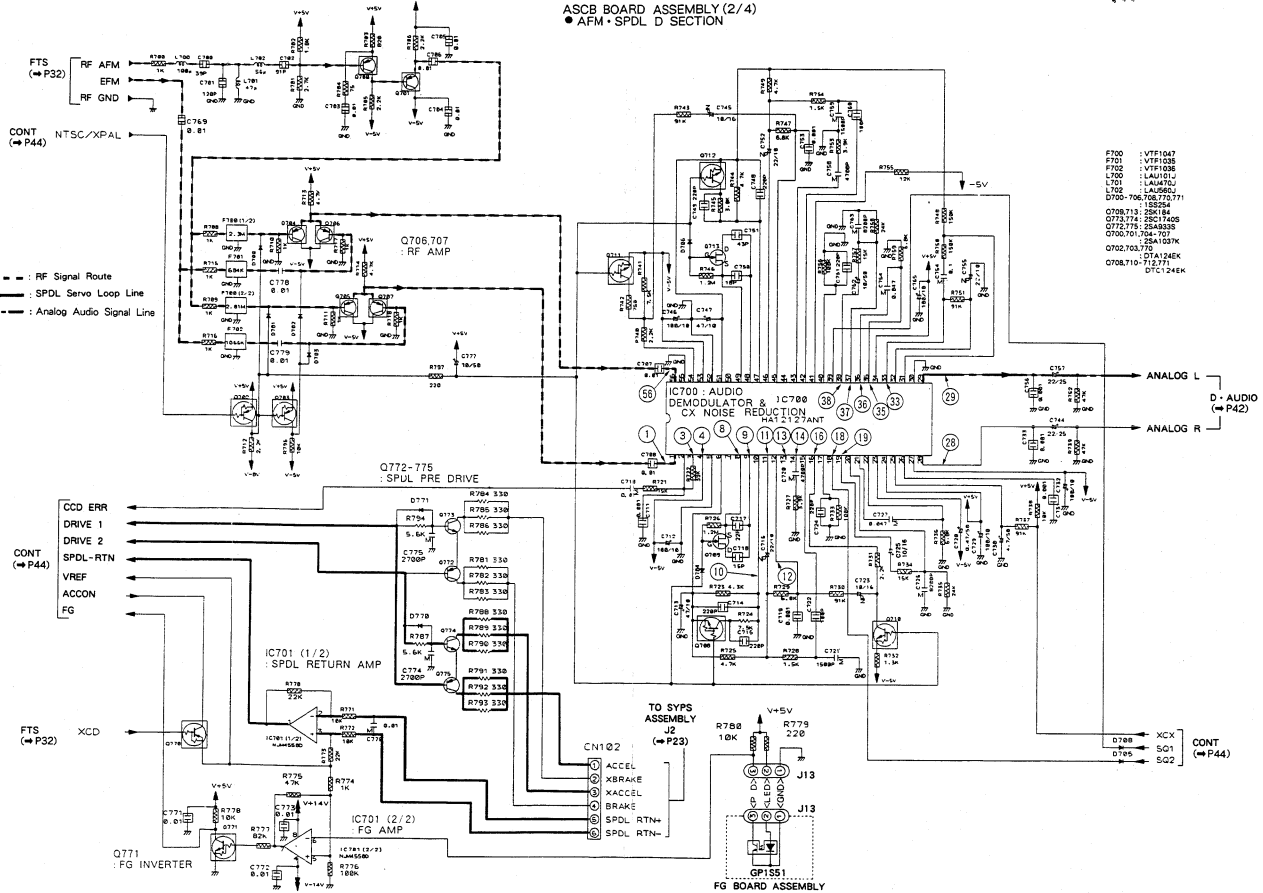
5

6

7 | 8 | 9 | 10 | 11 | 12

5.5 ASCB (2/4:AFM, SPDL D SECTION) AND FG BOARD ASSEMBLIES

ASCB BOARD ASSEMBLY (2/4)  
 ● AFM • SPDL D SECTION



A






















B

C

D

## AFM. SPDL D SECTION

• IC700 (HA12127ANT) Note: (No) in the table correspond to the pin No.

① 	⑩ 	⑮ 	③③ 	⑤⑤ 
③ 	⑪ 	⑱ 	⑤⑤ 	
④ 	⑫ 	⑲ 	⑤⑤ 	
⑧ 	⑬ 	⑳ 	⑤⑦ 	
⑨ 	⑭ 	㉓ 	⑤⑧ 	

D. AUDIO SECTION

Note: Waveforms and voltages are at the PLAY.

IC201 (CXD2500AQ)

Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	0	15	0	29	0	43	*	57	*	71	*
2	0	16	4.8	30	0	44	0	58	*	72	5
3	0	17	0	31	*	45	4.8	59	5	73	5
4	*	18	*	32	*	46	*	60	*	74	*
5	0	19	2.4	33	4.8	47	*	61	5	75	0
6	4.8	20	*	34	*	48	*	62	*	76	0
7	0	21	0	35	*	49	*	63	*	77	*
8	4.8	22	2.3	36	*	50	*	64	*	78	*
9	0	23	4.8	37	*	51	*	65	0	79	*
10	0	24	*	38	*	52	0	66	*	80	0
11	0	25	0	39	0	53	*	67	*		
12	0	26	0	40	4.8	54	*	68	0		
13	0	27	*	41	*	55	0	69	*		
14	0	28	0	42	*	56	*	70	5		

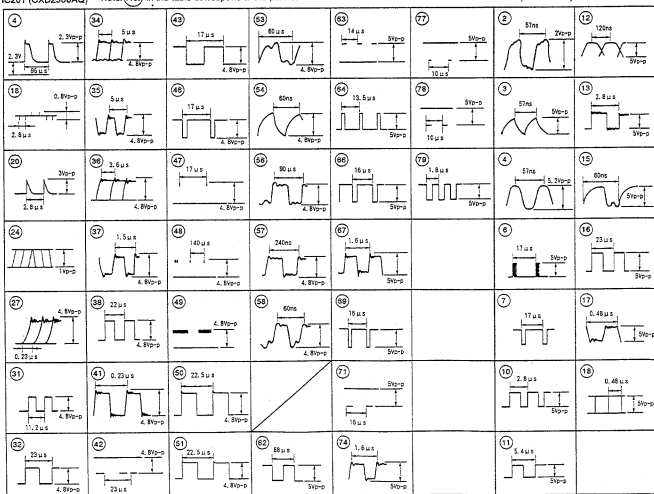
\*. Refer to waveforms

IC202 (SM5840AF)

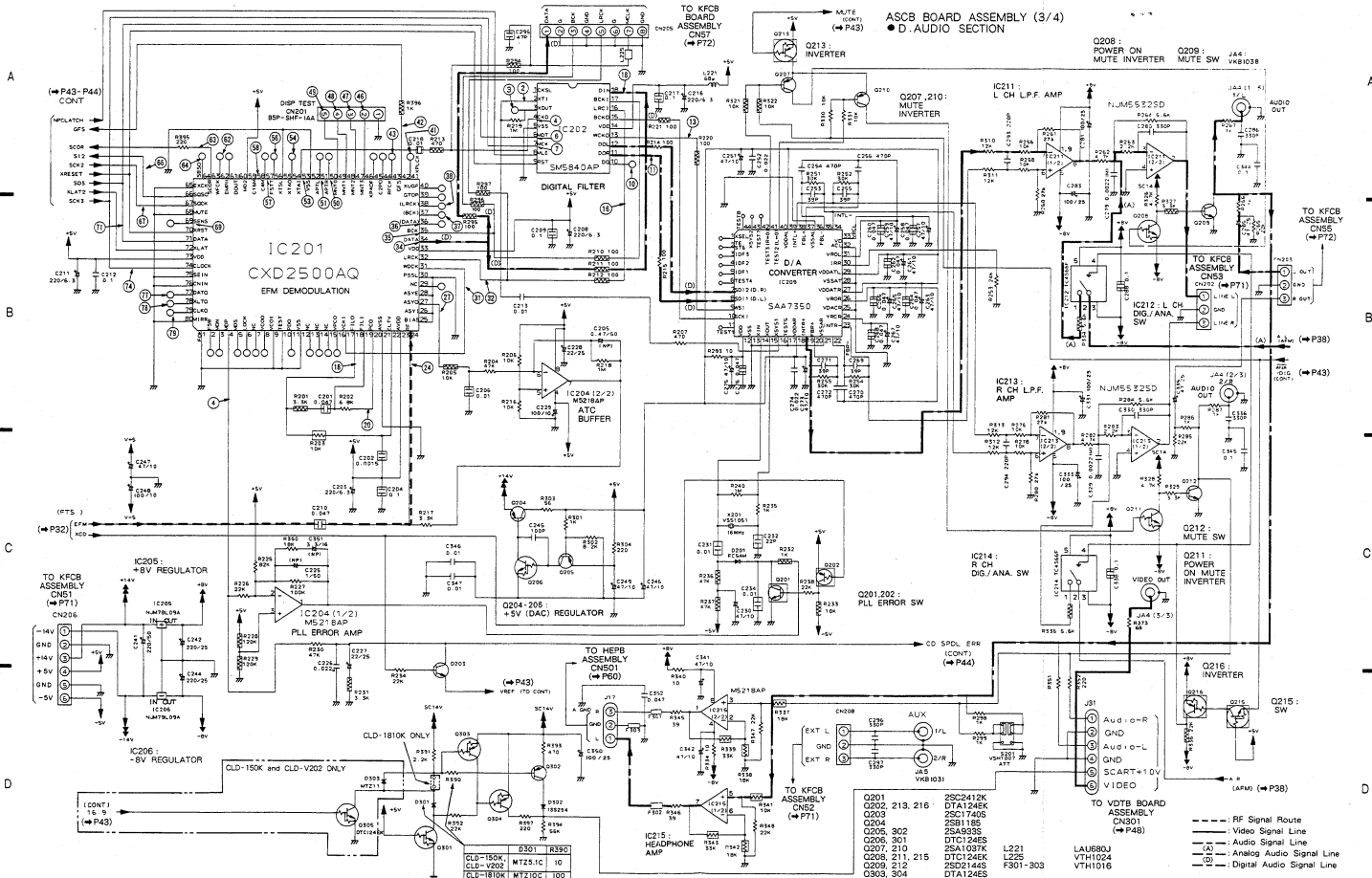
Pin No.	Voltage	Pin No.	Voltage
1	5	10	*
2	*	11	*
3	*	12	*
4	*	13	*
5	0	14	5
6	*	15	*
7	*	16	*
8	5	17	*
9	5	18	*

IC201 (CXD2500AQ) Note: (No.) in the table correspond to the pin No.

IC202 (SM5840AF)
































5.6 ASCB BOARD ASSEMBLY (3/4:D. AUDIO SECTION)





VIDEO SECTION

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

IC401 (PA5013A)				IC404 (PA0017)
① 	⑭ 	⑲ 	④⑥ 	⑨ 
③ 	⑮ 	⑳ 	IC402 (PM0001)	
④ 	⑯ 	㉑ 		
⑤ 	⑰ 	㉒ 	⑤ 	
⑥ 	⑱ 	㉓ 	⑧ 	
⑦ 	㉔ 	㉕ 	IC403 (CXL1008P)	
⑩ 	⑳ 	㉖ 		
⑪ 	㉗ 	④④ 	④ 	





5.8 VDTB BOARD ASSEMBLY (1/2:VIDEO SECTION)

A

A

B

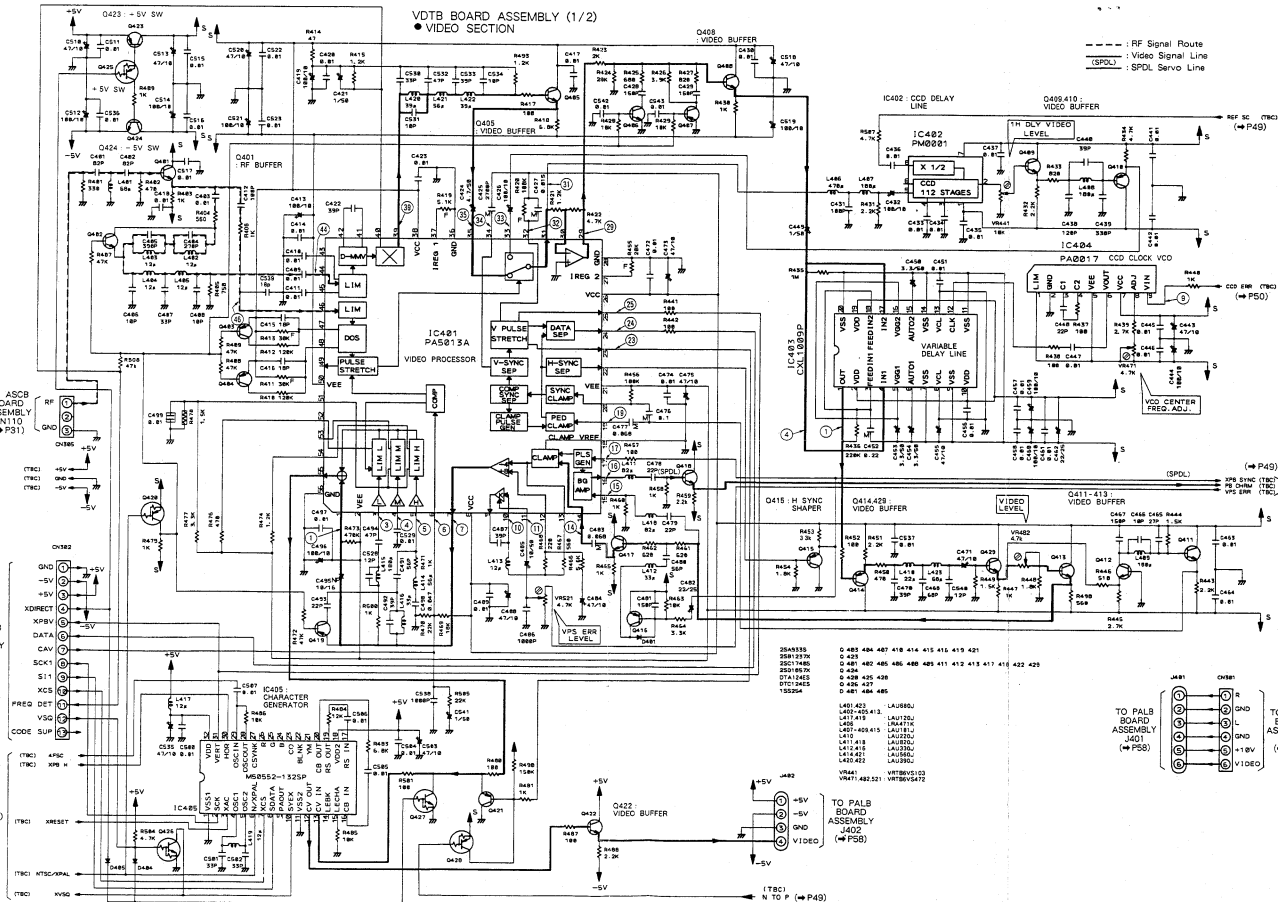
B

C

C

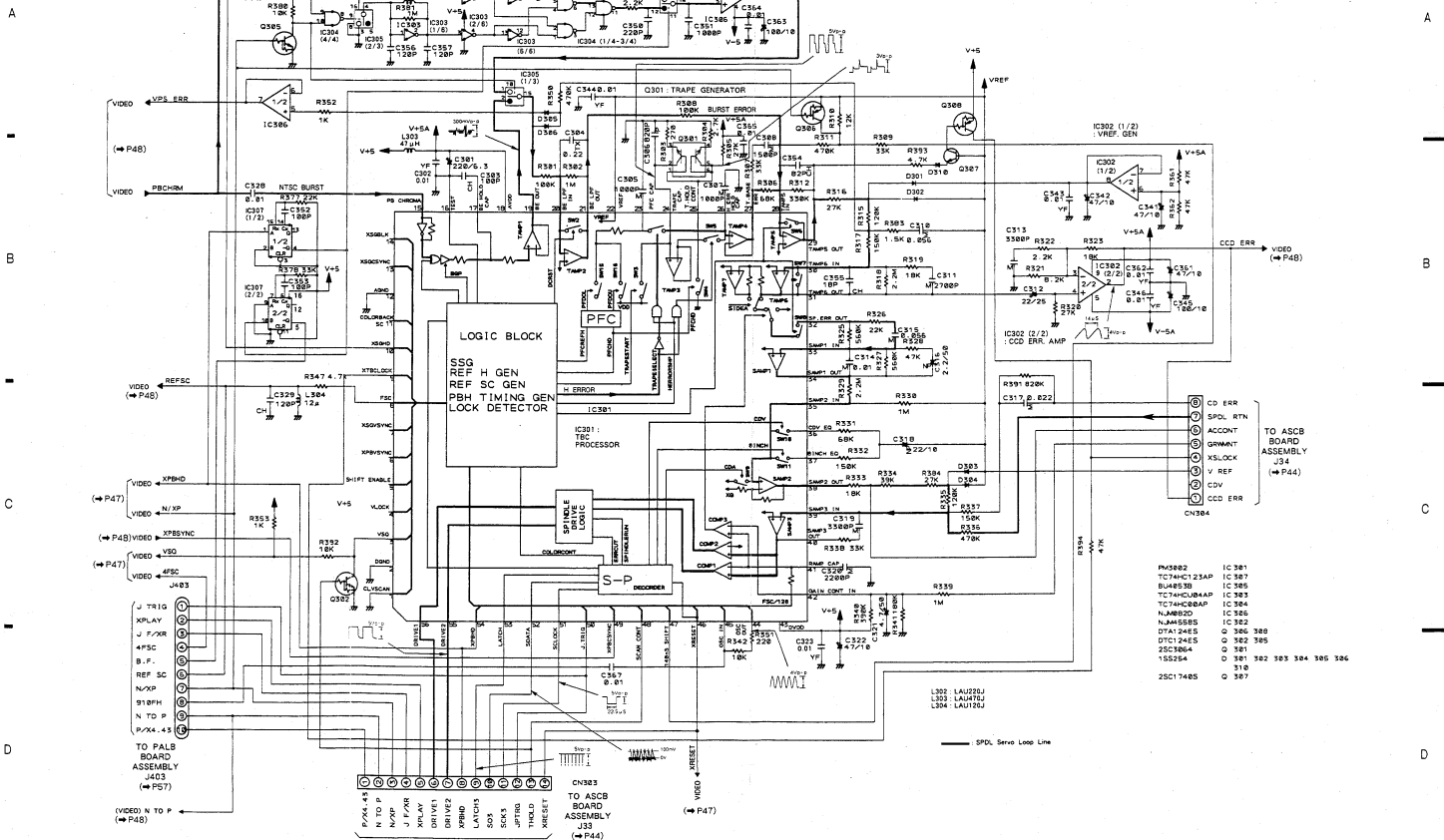
D

D



5.9 VDTB BOARD ASSEMBLY (2/2:TBC SECTION)

VDTB BOARD ASSEMBLY (2/2)  
● TBC SECTION



PALB BOARD ASSEMBLY

IC202 IC204 IC303 IC205 IC208 IC201 Q103 Q108 IC103  
 Q202 Q201 IC102 IC207 IC101 Q208 Q206 Q209 Q210 Q207 Q214 Q213 Q107 Q108 Q109 Q110 Q111 Q112-Q116 Q104  
 VC203 VC201 VC202 VR201 VR202 VR102 VR101

A

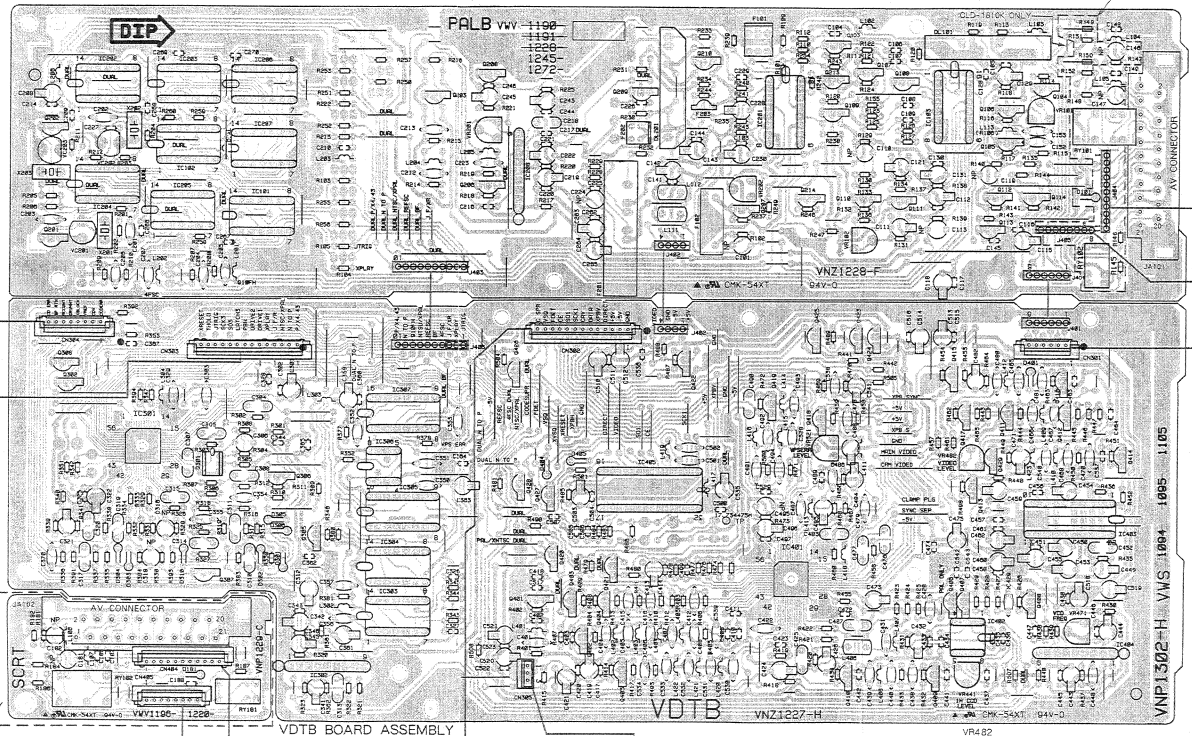
B

C

D

ASCB BOARD ASSEMBLY J34  
 ASCB BOARD ASSEMBLY J33

SCR1  
 AV-CONNECTOR  
 VNP1302-H-VMS-1994-1995-1105



Q308 Q302 IC301 Q301 Q307 Q306 Q305 IC302 IC303-IC307 Q426 Q428 Q427 Q421 Q401 Q420 Q402-Q405 IC405 G422 Q419 IC401 Q425 Q423 Q424 Q418 Q410 Q415 Q417 Q411 Q416 Q409 Q413 Q429 Q408 Q412 Q406 Q407 IC402 IC451 IC403 IC404

ASCB BOARD ASSEMBLY J32  
 ASCB BOARD ASSEMBLY CN110

1

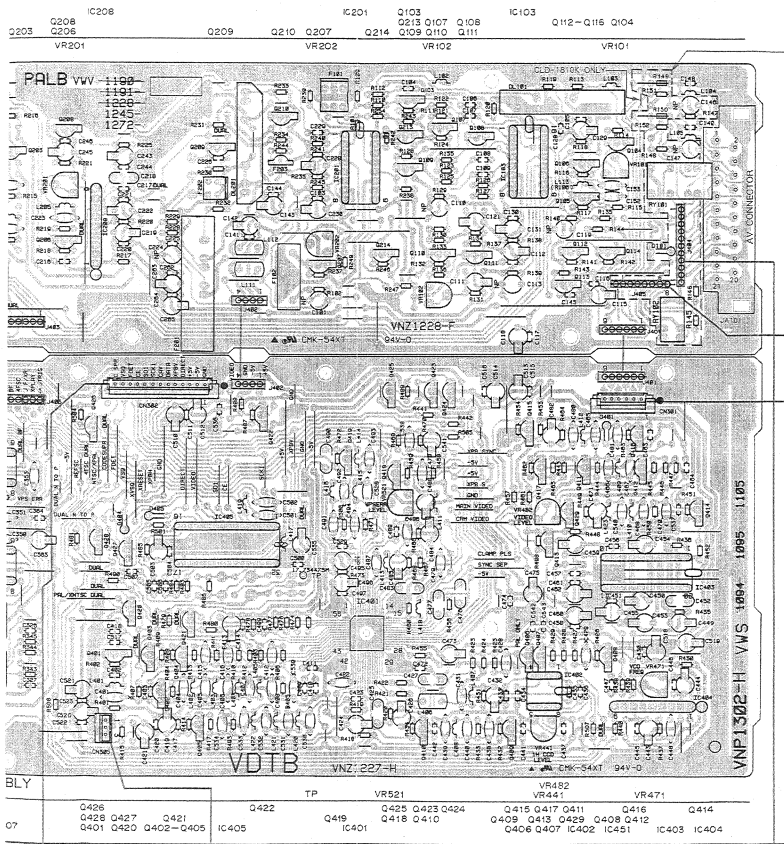
2

3

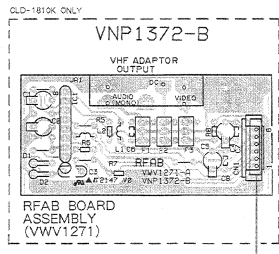
4

5

6



CLD-150K	R148, R150	R146, R147, R148, R149, R150, R151, R152	USED	OPEN	3 PIN
CLD-150K	JUMPER		USED	USED	6 PIN
CLD-150K			OPEN	USED	

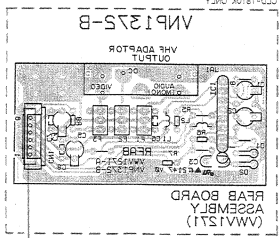
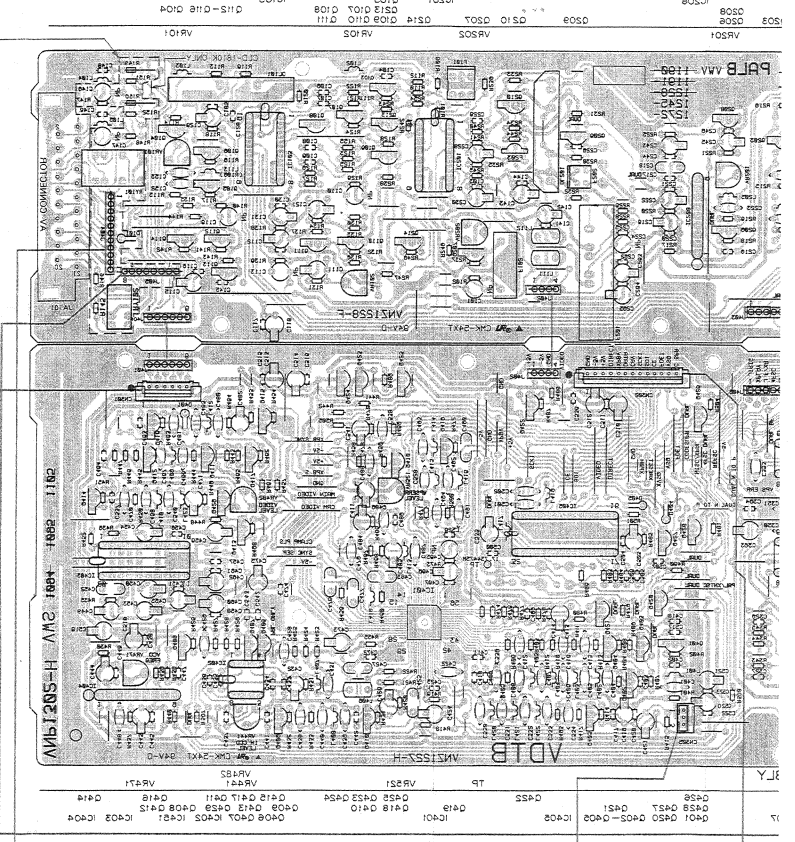


ASCB BOARD ASSEMBLY J31

ASCB BOARD ASSEMBLY J32

ASCB BOARD ASSEMBLY CN110

CFD-150K	CFD-150K	CFD-150K	CFD-150K
CFD-150K	CFD-150K	CFD-150K	CFD-150K
CFD-150K	CFD-150K	CFD-150K	CFD-150K
CFD-150K	CFD-150K	CFD-150K	CFD-150K

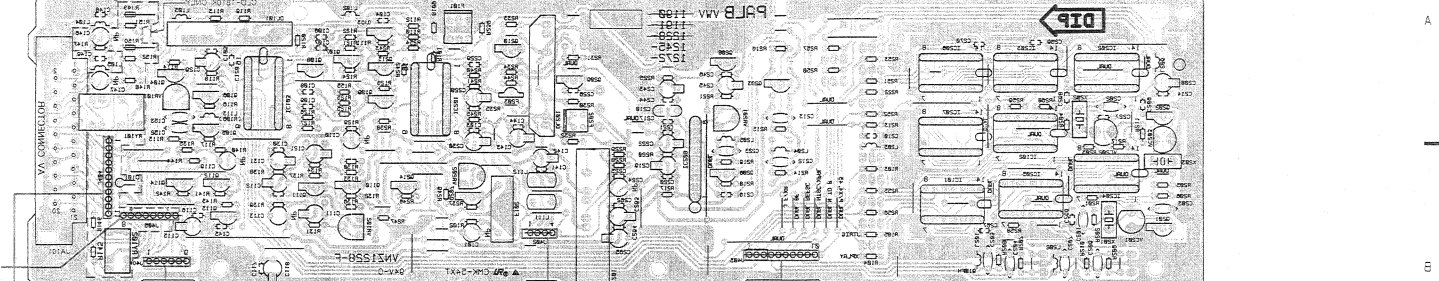
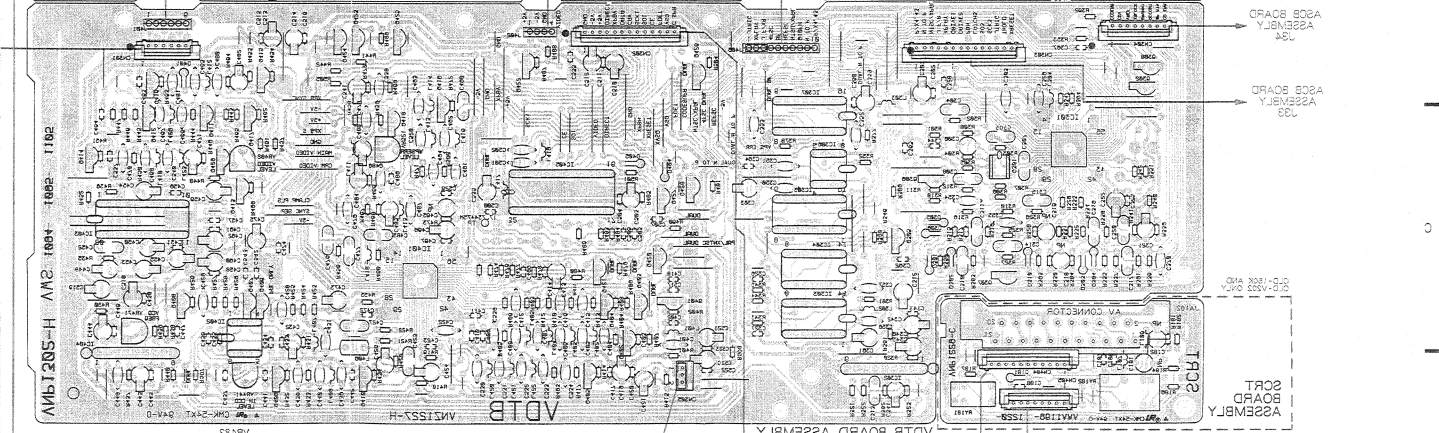


ASSEMBLY ASSEMBLY  
731

CFD-150K ONLY

This P.C.B. connection diagram is viewed from the foil side.

ASSEMBLY BOARD SORT ASSEMBLY  
 TQ32  
 MA1139-1559  
 AM-1205-H VMC-1004-T1002  
 AM1155L-H  
 MA1155-L  
 P/B B BOARD ASSEMBLY  
 P/B B BOARD ASSEMBLY  
 P/B B BOARD ASSEMBLY  
 P/B B BOARD ASSEMBLY



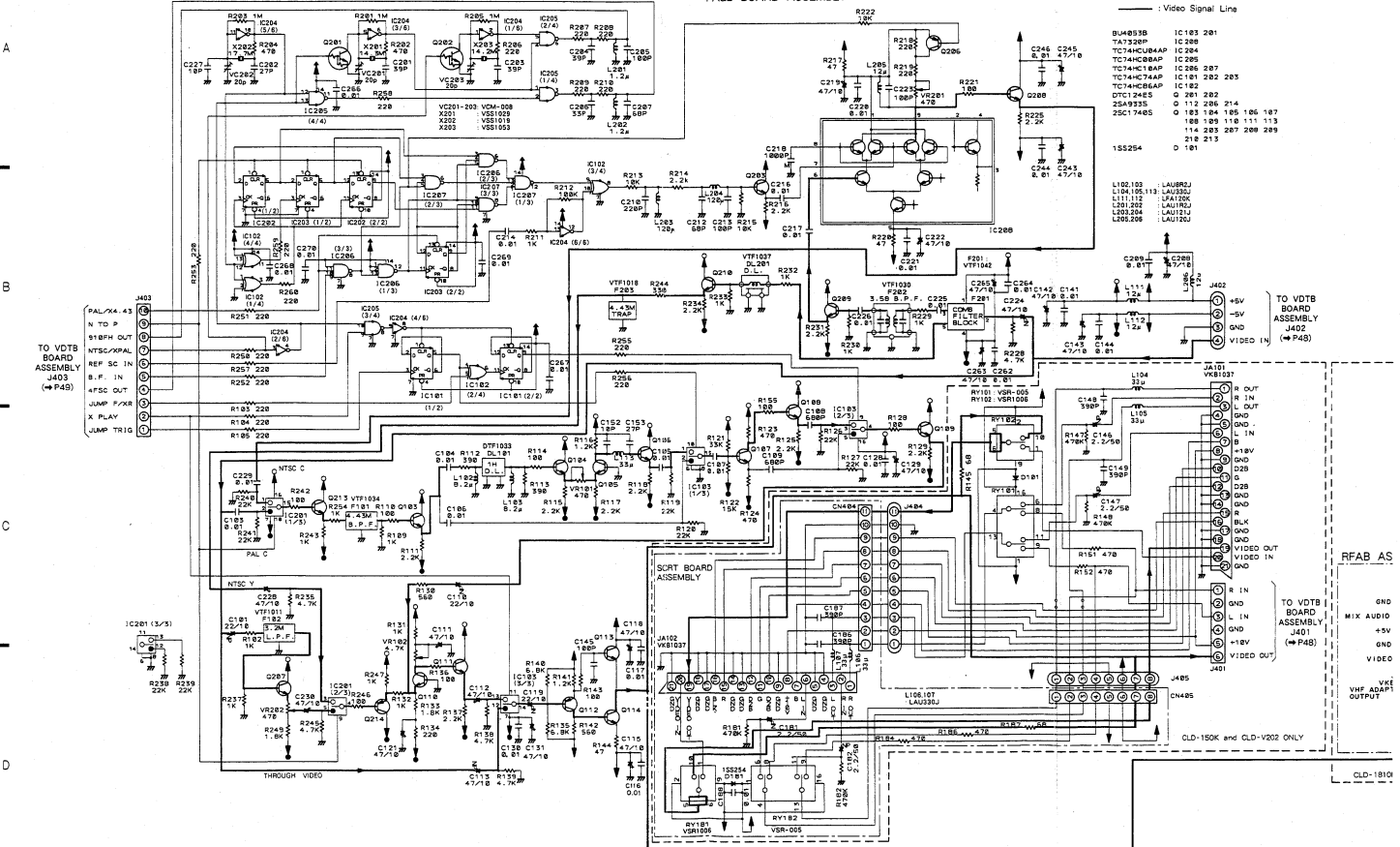
IC305 IC304 IC303 IC302 IC301  
 IC305 IC304 IC303 IC302 IC301  
 IC305 IC304 IC303 IC302 IC301  
 IC305 IC304 IC303 IC302 IC301  
 IC305 IC304 IC303 IC302 IC301  
 IC305 IC304 IC303 IC302 IC301  
 IC305 IC304 IC303 IC302 IC301  
 IC305 IC304 IC303 IC302 IC301

ASSEMBLY BOARD SORT ASSEMBLY  
 TQ32  
 MA1139-1559  
 AM-1205-H VMC-1004-T1002  
 AM1155L-H  
 MA1155-L  
 P/B B BOARD ASSEMBLY  
 P/B B BOARD ASSEMBLY  
 P/B B BOARD ASSEMBLY  
 P/B B BOARD ASSEMBLY

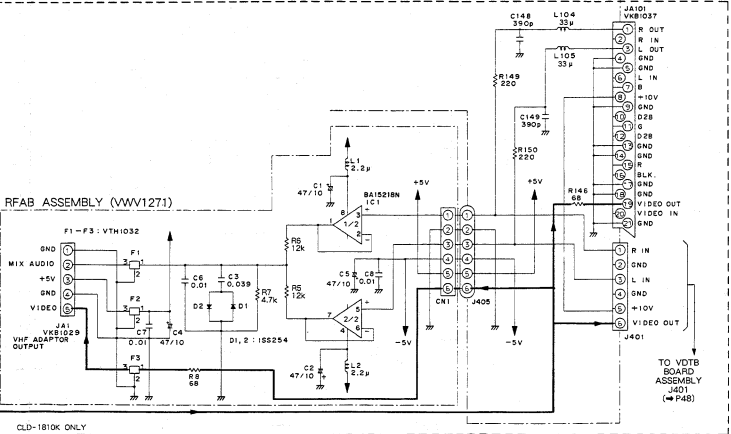
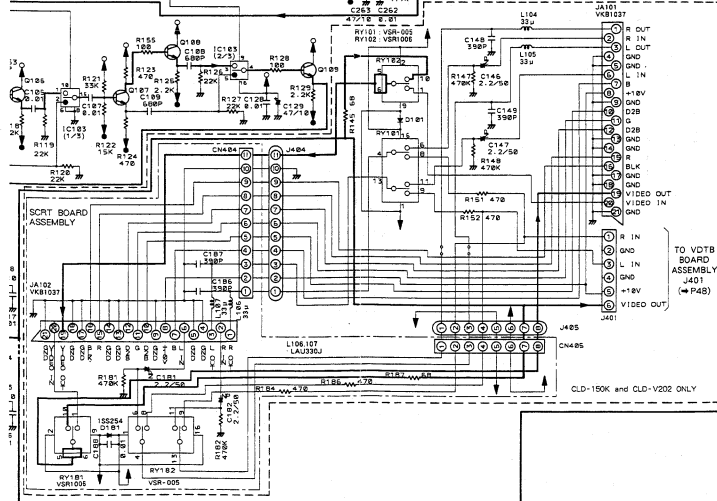
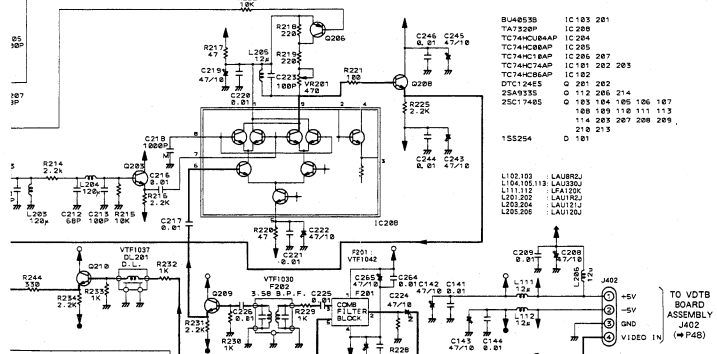
# 5.10 PALB, SCRT BOARD AND RFAB ASSEMBLIES

## PALB BOARD ASSEMBLY

--- Video Signal Line



PALB BOARD ASSEMBLY



A

B

C

D



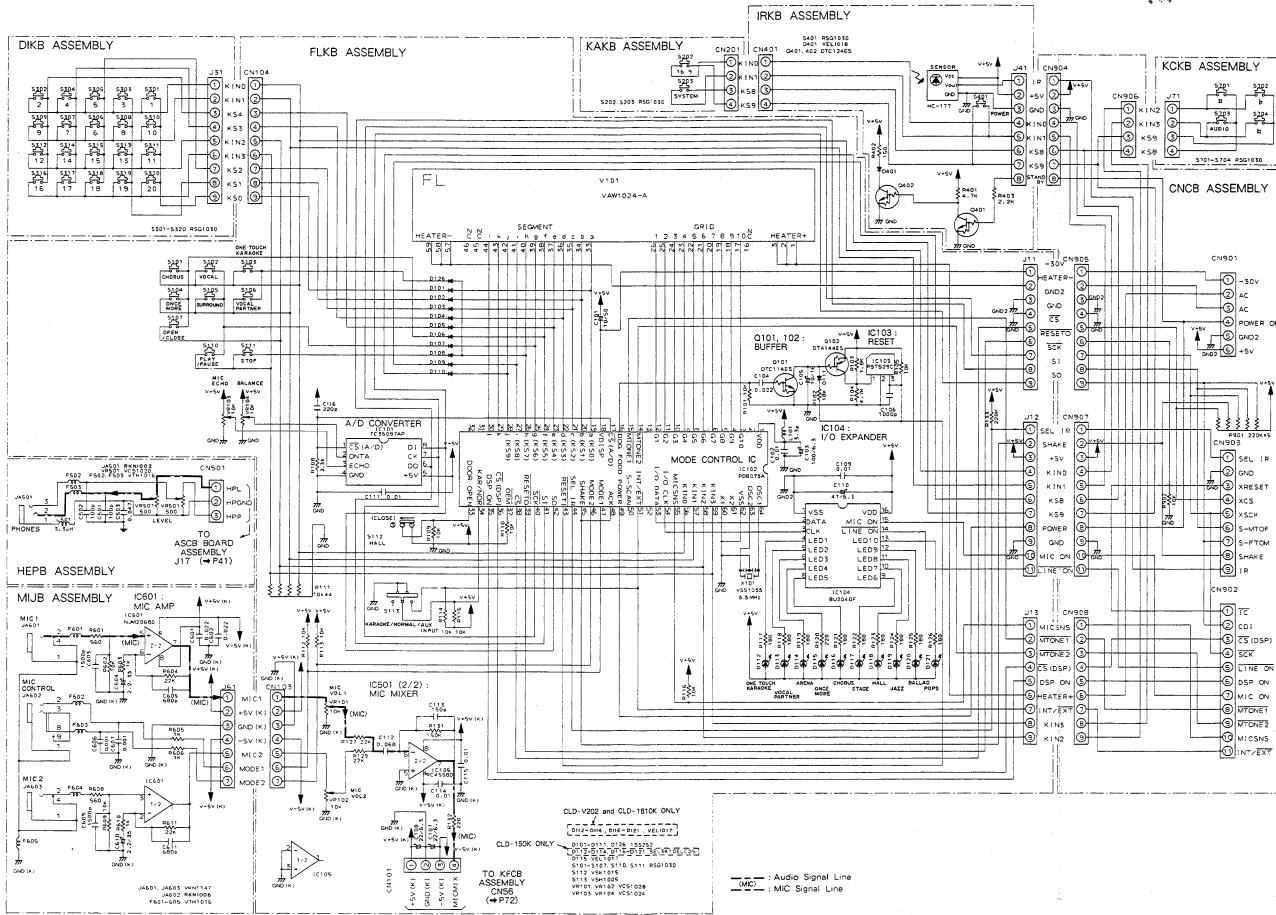
5.11 DIKB, FLKB, KAKB, IRKB, HEPB, MIJB, KCKB AND CNCB ASSEMBLIES

A

B

C

D



TO SYPS ASSEMBLY CN222 (P24)

TO ASCB BOARD ASSEMBLY J16 (P43)

TO KFCB ASSEMBLY CNS4 (P72)

CLD-V202 and CLD-1810K ONLY

IC101: 74LS01, 74LS02, 74LS04, 74LS10, 74LS11, 74LS12, 74LS13, 74LS14, 74LS15, 74LS16, 74LS17, 74LS18, 74LS19, 74LS20, 74LS21, 74LS22, 74LS23, 74LS24, 74LS25, 74LS26, 74LS27, 74LS28, 74LS29, 74LS30, 74LS31, 74LS32, 74LS33, 74LS34, 74LS35, 74LS36, 74LS37, 74LS38, 74LS39, 74LS40, 74LS41, 74LS42, 74LS43, 74LS44, 74LS45, 74LS46, 74LS47, 74LS48, 74LS49, 74LS50, 74LS51, 74LS52, 74LS53, 74LS54, 74LS55, 74LS56, 74LS57, 74LS58, 74LS59, 74LS60, 74LS61, 74LS62, 74LS63, 74LS64, 74LS65, 74LS66, 74LS67, 74LS68, 74LS69, 74LS70, 74LS71, 74LS72, 74LS73, 74LS74, 74LS75, 74LS76, 74LS77, 74LS78, 74LS79, 74LS80, 74LS81, 74LS82, 74LS83, 74LS84, 74LS85, 74LS86, 74LS87, 74LS88, 74LS89, 74LS90, 74LS91, 74LS92, 74LS93, 74LS94, 74LS95, 74LS96, 74LS97, 74LS98, 74LS99, 74LS100

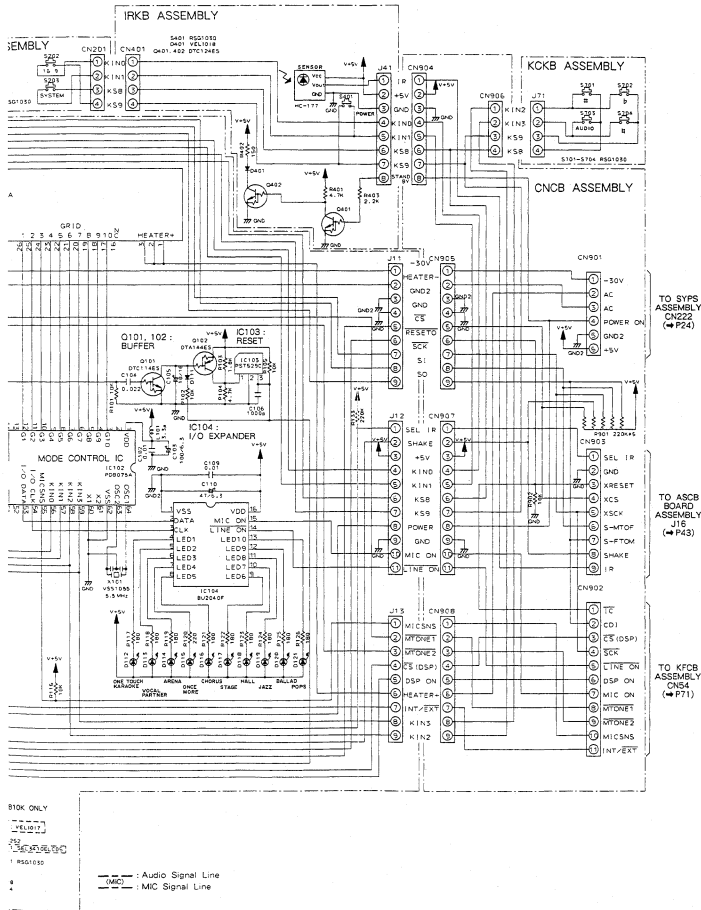
CLD-150K ONLY

TO KFCB ASSEMBLY CNS8 (P72)

IC105: 74LS10, 74LS11, 74LS12, 74LS13, 74LS14, 74LS15, 74LS16, 74LS17, 74LS18, 74LS19, 74LS20, 74LS21, 74LS22, 74LS23, 74LS24, 74LS25, 74LS26, 74LS27, 74LS28, 74LS29, 74LS30, 74LS31, 74LS32, 74LS33, 74LS34, 74LS35, 74LS36, 74LS37, 74LS38, 74LS39, 74LS40, 74LS41, 74LS42, 74LS43, 74LS44, 74LS45, 74LS46, 74LS47, 74LS48, 74LS49, 74LS50, 74LS51, 74LS52, 74LS53, 74LS54, 74LS55, 74LS56, 74LS57, 74LS58, 74LS59, 74LS60, 74LS61, 74LS62, 74LS63, 74LS64, 74LS65, 74LS66, 74LS67, 74LS68, 74LS69, 74LS70, 74LS71, 74LS72, 74LS73, 74LS74, 74LS75, 74LS76, 74LS77, 74LS78, 74LS79, 74LS80, 74LS81, 74LS82, 74LS83, 74LS84, 74LS85, 74LS86, 74LS87, 74LS88, 74LS89, 74LS90, 74LS91, 74LS92, 74LS93, 74LS94, 74LS95, 74LS96, 74LS97, 74LS98, 74LS99, 74LS100

— : Audio Signal Line

— (M) : MIC Signal Line



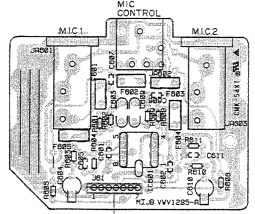
A

B

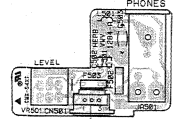
C

D

MIB ASSEMBLY

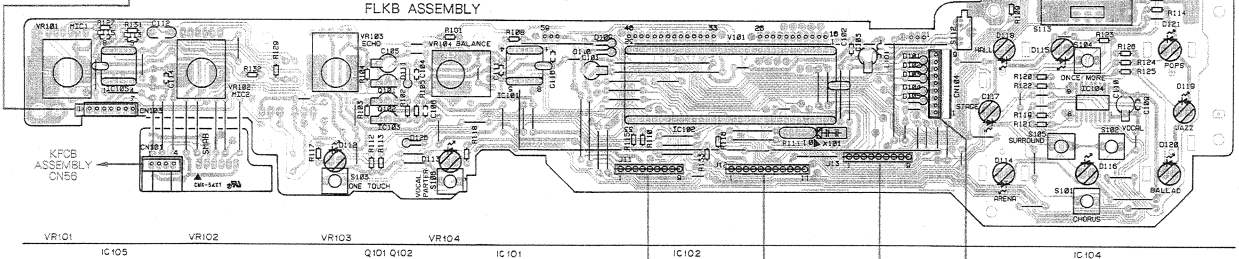


HEPB ASSEMBLY

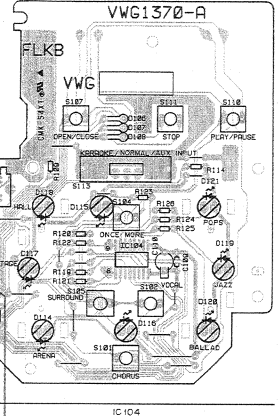


ASCB BOARD ASSEMBLY J17

FLKB ASSEMBLY



VWG1370-A



VR101

VR102

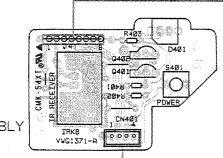
VR103

VR104

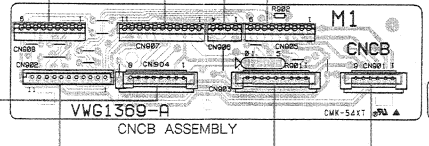
IC101

IC102

IC104



IRKB ASSEMBLY

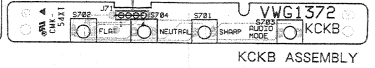


VWG1369-A

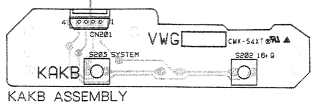
KFCB ASSEMBLY CN54

ASCB BOARD ASSEMBLY J18

SVPS ASSEMBLY CN222

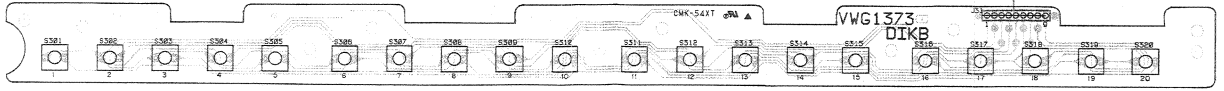


VNP1378-B



KAKB ASSEMBLY

DIKB ASSEMBLY



1

2

3

4

5

6

This P.C.B. connection diagram is viewed from the foil side.

A

B

C

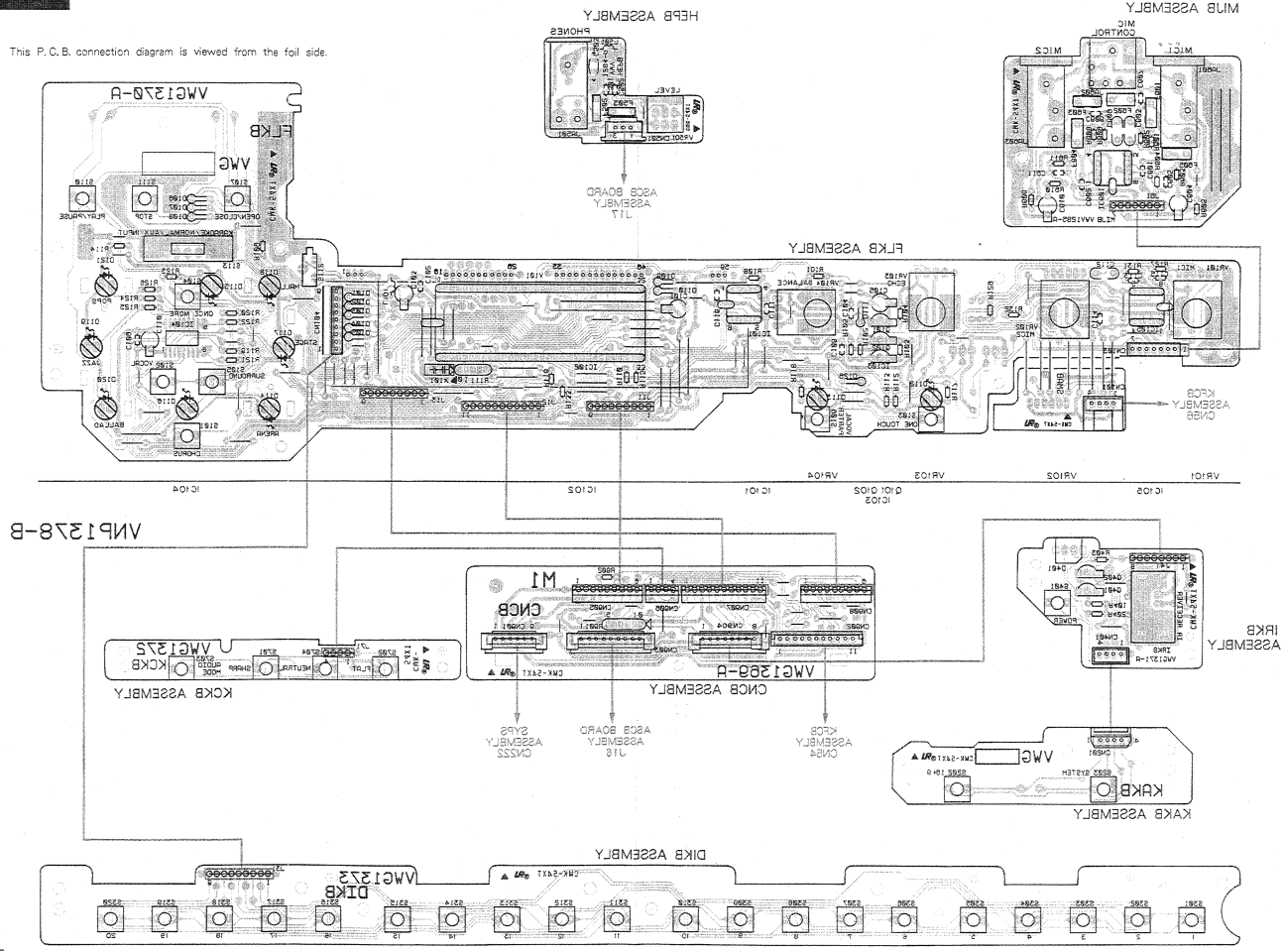
D

A

B

C

D



WAG1378-B

KCKB ASSEMBLY

WAG1375-B

KCKB

CNS33 ASSEMBLY

J18

CNCB ASSEMBLY

WAG1380-R

CNCB

M1

CN24 ASSEMBLY

K20B

WAG1379-B

KAKB ASSEMBLY

WAG1378-B

WAG1375-B

KCKB

IRKB ASSEMBLY

KAKB ASSEMBLY

WAG1378-B

WAG1375-B

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

ASSEMBLY BOARD

J17

ASSEMBLY

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

MIB ASSEMBLY

WAG1370-R

FLKB ASSEMBLY

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

WAG1370-R

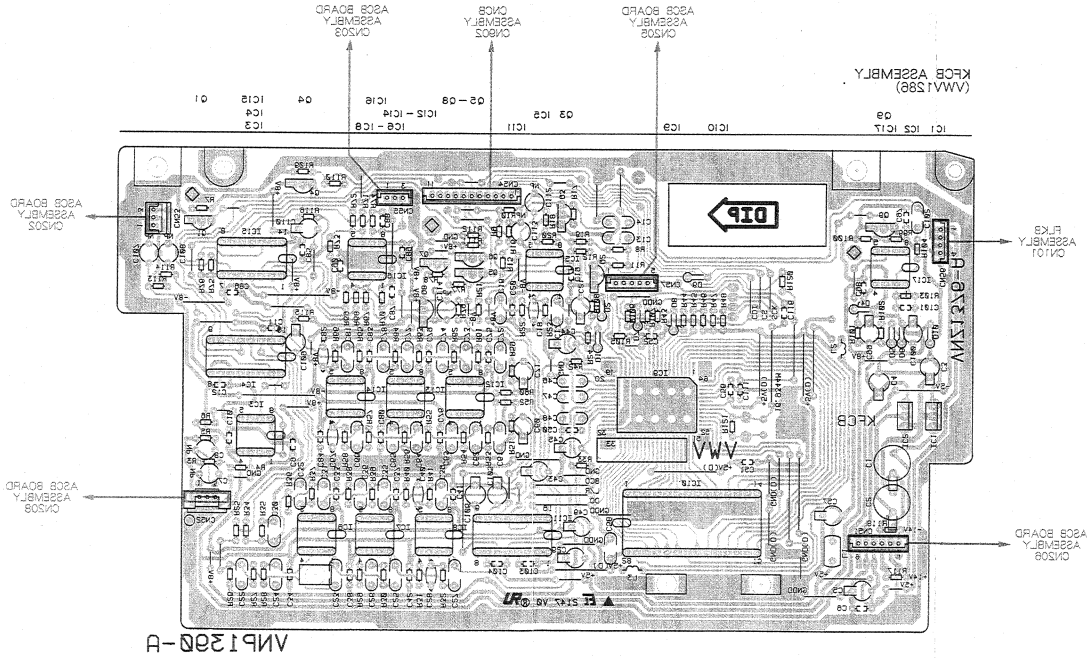
WAG1370-R

HEPB ASSEMBLY

WAG1370-R

5.12 KFCB ASSEMBLY

This P.C.B. connection diagram is viewed from the foil side.



A

B

C

D

A

B

C

D

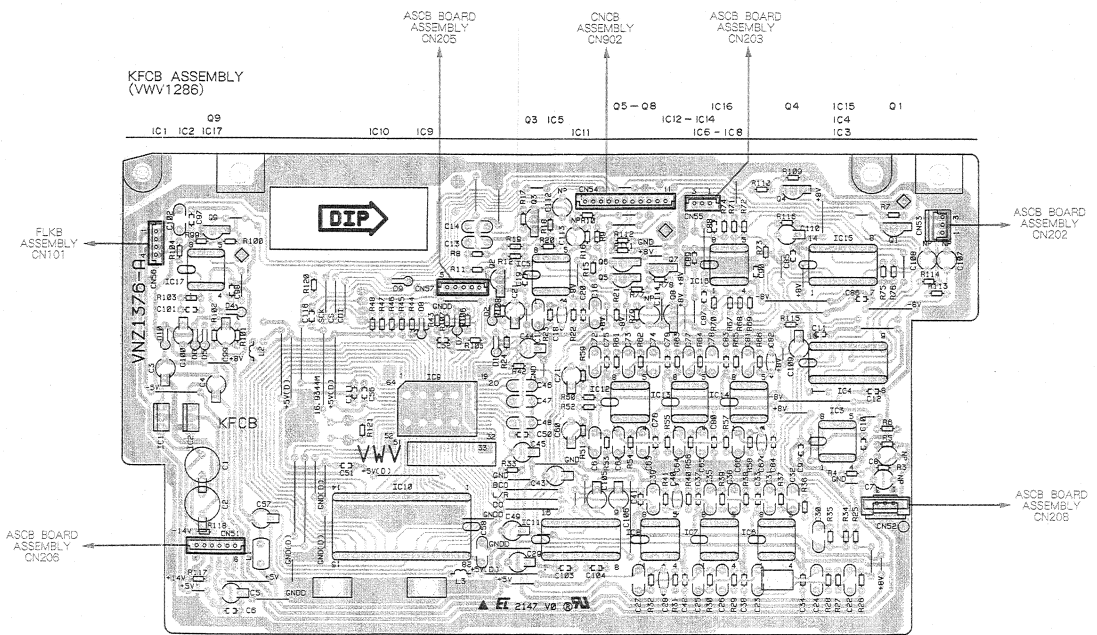
2 3 4 5 6

A

A

KFCB ASSEMBLY  
(VWV1286)

09 IC1 IC2 IC17 IC10 IC9 03 IC5 IC11 05-08 IC12-IC14 IC6-IC8 04 IC15 01 IC4 IC3



VNP1390-A

B

B

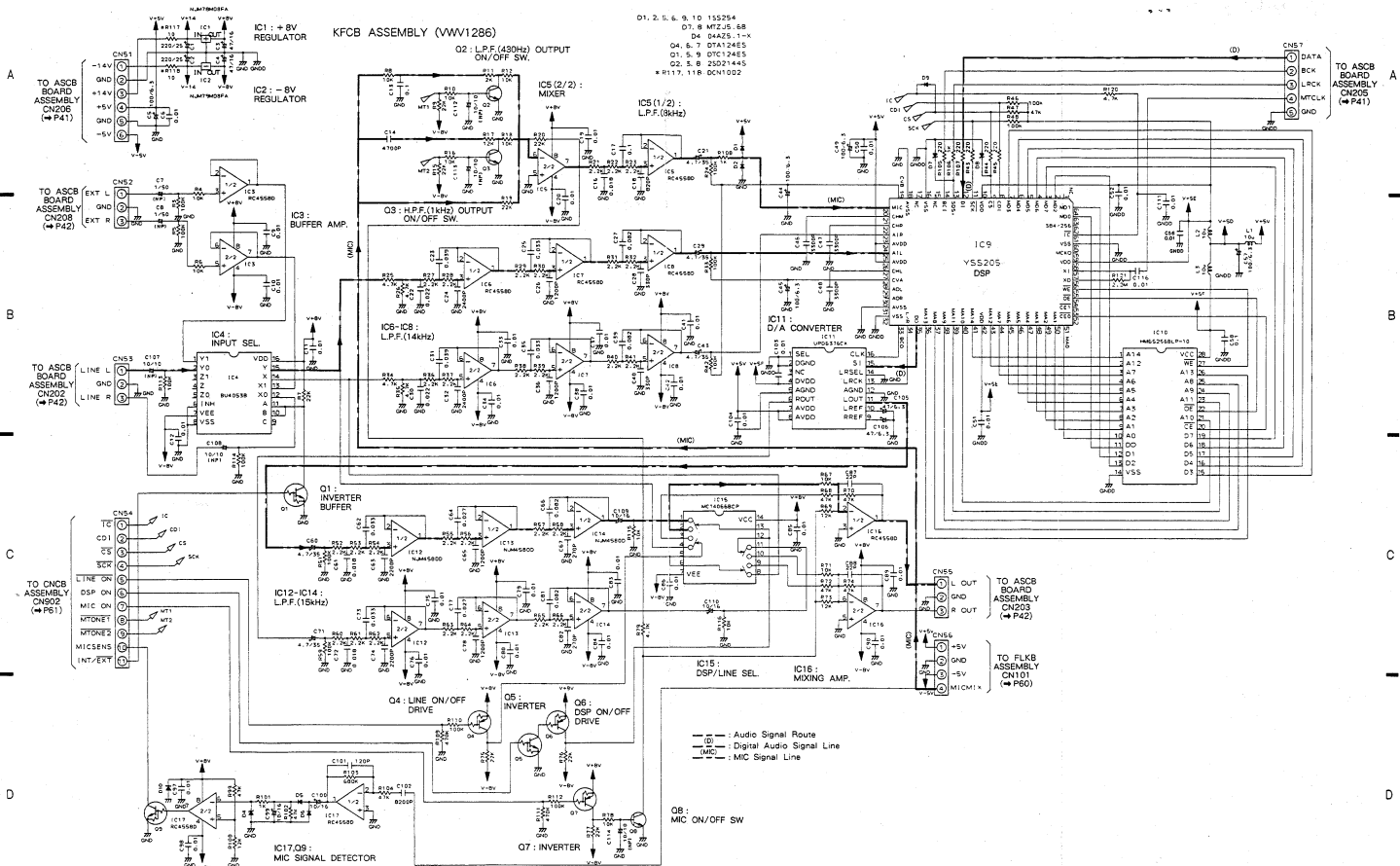
C

C

D

D

1 2 3 4 5 6



## 6. 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 of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "©" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.  
Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).  
560  $\Omega$   $\rightarrow$  56  $\times 10^1$   $\rightarrow$  561 ..... RD18P4[5][6][1]J  
47k  $\Omega$   $\rightarrow$  47  $\times 10^4$   $\rightarrow$  473 ..... RD14P5[4][7][3]J  
0.5  $\Omega$   $\rightarrow$  0R5 ..... RN2H[0][R][5]K  
1  $\Omega$   $\rightarrow$  010 ..... RN1P[0][1][0]K  
Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).  
5.62k  $\Omega$   $\rightarrow$  562  $\times 10^3$   $\rightarrow$  5621 ..... RN14P[C][5][6][2][1]F

Mark No.	Description	Part No.	Mark No.	Description	Part No.
<b>LIST OF ASSEMBLIES</b>					
<b>MAIN BOARD ASSEMBLY</b>					
NSP	SW1 BOARD ASSEMBLY	VW1308			
NSP	PG BOARD ASSEMBLY	VW1375			
NSP	ASCB BOARD ASSEMBLY	VW1376			
NSP	ASCB BOARD ASSEMBLY	VW1149			
<b>VTPB BOARD ASSEMBLY</b>					
NSP	VDTB BOARD ASSEMBLY	VW1261			
NSP	SCRT BOARD ASSEMBLY	VW1105			
NSP	PALB BOARD ASSEMBLY	VW1220			
NSP	PALB BOARD ASSEMBLY	VW1245			
<b>FRPB ASSEMBLY</b>					
NSP	CNCD ASSEMBLY	VW1310			
NSP	FLKB ASSEMBLY	VW1369			
NSP	FLKB ASSEMBLY	VW1370			
NSP	TRKB ASSEMBLY	VW1371			
NSP	KCKB ASSEMBLY	VW1372			
NSP	DIKB ASSEMBLY	VW1373			
NSP	KAKB ASSEMBLY	VW1374			
NSP	HEPB ASSEMBLY	VW1284			
NSP	MIJB ASSEMBLY	VW1285			
<b>SYPS ASSEMBLY</b>					
NSP	RECB ASSEMBLY	VW1157			
NSP	HEAD ASSEMBLY	VW1286			
NSP	HEAD ASSEMBLY	VW1119			
<b>SW1 BOARD ASSEMBLY</b>					
<b>SWITCHES</b>					
	S1-S3	D5G1015			
<b>FG BOARD ASSEMBLY</b>					
<b>SEMICONDUCTOR</b>					
	D	GP15S1			

## ASCB BOARD ASSEMBLY

## SEMICONDUCTORS

IC302	BA15218N
IC801	CA1A0815
IC201	CDX0500AQ
IC204	HA12127ANT
IC204	LA8510L
IC204, IC215	MS218AP
IC701	NJ46559D
IC700, IC213	NJMS35SD
IC205	NJM78L09A
IC206	NJM79L09A
IC101	P00136A
IC803	PM3003
IC209	SAAT350
IC202	SM5840AP
Q201, Q210, Q700, Q701, Q704-Q707, Q802, Q812, Q815, Q800	2SA1037K
Q205, Q302, Q772, Q775	2SA4933S
Q204	2SB1185
Q815, Q818	2SB1185
Q203, Q773, Q774	2SC1740S
Q201, Q801, Q803-Q805, Q807, Q810, Q814, Q825, Q831	2SC2412K
Q815, Q817	2SD176Z
Q822	2SD1858X
Q209, Q212	2SD2144S
Q709, Q713, Q821	2SK184
Q303, Q304	DTA124ES
Q206, Q301	DTC124ES
D102, D103, D302, D700-D706, D708, D770, D771, D801, D804-D808	1SS254
D201	PCS4M
D301, D303	MT25-1C
<b>SWITCH</b>	
S301	V5H1007

Mark No.	Description	Part No.	Mark No.	Description	Part No.
<b>COILS AND FILTERS</b>					
L700	LAU101J		C730	CEAS4R7M50	
LA801, LA803	LAU151J		C728	CEAS4R7M50	
L802	LAU181J		C725	CEJA100M15	
L701	LAU470J		C723	CEJNF100M16	
L101, L702	LAU502J		C710, C770, C824, C849, C865, C873	CFTA1A03J50	
L221	LAUR80J		C754, C832, C836, C874, C878, C880	CFTA1A14J50	
F701	VYF1035		C807	CFTA1A24J50	
F702	VYF1036		C721, C759	CFTA1A52J50	
F700	VYF1047		C830	CFTA1A54J50	
F301-F303	VYH1015		C226, C843	CFTA2A23J50	
L225	VYH1024		C852, C900	CFTA2A24J50	
<b>CAPACITORS</b>					
C285, C284	CCCH221J50		C827, C867	CFTA3A33J50	
C255, C255, C269, C271	CCCH390J50		C720, C758	CFTA4A72J50	
C871	CCCSL221J50		C721, C764, C848, C869, C910	CFTA4A73J50	
C280, C330	CCCSL331J50		C847, C868	CFTA4A83J50	
C254, C256, C270, C272	CCCSL471J50		C726, C763		
C817, C899	CSCSQH70D50		C883		
C123, C124, C722, C760, C804, C810, C811, C822	CSCSQH101J50		C122		
C701	CSCSQH121J50		C245		
C718	CSCSQH150J50		C286, C296, C297, C336		
C750	CSCSQH180J50		C352, C374		
C232, C717	CSCSQH20J50		C346, C358		
C714, C715, C724, C748, C749, C761	CSCSQH21J50		C711, C719, C731, C733, C753, C756		
C812, C815, C942	CSCSQH270J50		C202		
C104, C105	CSCSQH300J50		C875, C879		
C125	CSCSQH330J50		C854		
C700	CSCSQH390J50		C103, C106, C206, C213, C218, C231, C234, C703-C708, C769, C771-C773, C778, C779, C803, C805, C828, C829, C856, C866, C861, C943		
C751	CSCSQH430J50		C204, C209, C212, C217, C288, C338, C344, C345, C381, C382		
C859, C884, C893, C929	CSCSQH470J50		C102, C201, C210, C285, C290, C292, C294, C266, C268, C276, C352, C320, C821, C839		
C809, C813	CSCSQH580J50		C204, C209, C212, C217, C288, C338, C344, C345, C381, C382		
C702	CSCSQH910J50		C102, C201, C210, C285, C290, C292, C294, C266, C268, C276, C352, C320, C821, C839		
C837, C844	CSCSL331J50				
C818	CSCSL471J50				
C919	CSCSL561J50				
C225, C816, C845, C851	CEANP01M50				
C745, C842, C863	CEANP100M16				
C716, C732, C755	CEANP200M10				
C850	CEANP20M50				
C351	CEANP38M16				
C870	CEANP470M10				
C205, C866	CEANPR47M50				
C808, C814, C823, C840	CEASD10M50				
C762, C777, C855, C862, C864	CEASJ00M50				
C101, C229, C248, C712, C729, C732, C746, C765, C859, C932, C939, C941, C945	CEASJ01M10				
C281, C283, C331, C333, C350	CEASJ01M25				
C227, C228, C744, C757, C835, C836, C841, C876, C877, C931, C938	CEASJ220M25				
C245, C244	CEASJ221M25				
C241	CEASJ221M50				
C203, C208, C211, C215, C944	CEASJ221M6R3				
C230, C246, C247, C249, C251, C257, C259, C261, C263, C265, C267, C273, C275, C341, C342, C713, C747, C857, C930	CEAS470M10				
C285, C335	CEAS470M25				

## RESISTORS

VR602, VR603 (10k $\Omega$ )	VRTB6V5103
VR601 (2.2k $\Omega$ )	VRTB6V5222
VR607 (22k $\Omega$ )	VRTB6V5323
VR608 (33k $\Omega$ )	VRTB6V5333
VR604-VR606, VR609 (4.7k $\Omega$ )	VRTB6V5472
R397	RD1/2L212J
R283, R340, R344, R390, R873	RD1/6PM10J
R214, R215, R220, R221, R913	RD1/6PM101J
R266, R267, R286, R287, R298, R299, R301	RD1/6PM102J
R256, R258, R276, R278, R877, R923	RD1/6PM103J
R944	RD1/6PM104J
R310-R313	RD1/6PM123J
R150, R151, R304, R351, R352, R849, R874	RD1/6PM221J
R263, R283, R391	RD1/6PM222J
R265, R285, R392, R947	RD1/6PM223J



Mark No.	Description	Part No.
R260, R261, R280, R281		RD1/6PM273J
R251, R252, R254, R255		RD1/6PM303J
R781-R786, R788-R793		RD1/6PM331J
R345, R346		RD1/6PM390J
R948, R949		RD1/6PM393J
R393		RD1/6PM471J
R262, R282, R326, R328		RD1/6PM472J
R946, R951		RD1/6PM477J
R264, R284, R787, R794		RD1/6PM562J
R394, R910-R912		RD1/6PM563J
R302		RD1/6PM822J
R856, R862		RS1LMF3R3J
R303		RS2LMF560J
OTHER RESISTORS		RS1/10S□□□□

## OTHERS

CN201	5P TOP POST	BSP-SHF
JA5	2P PIN JACK (AUX)	YKB1031
JA4	3P PIN JACK (VIDEO OUT, AUDIO OUT)	YKB1038
JA2	2P MINI JACK (CONTROL)	YKN-183
CN103	23P TOP CONNECTOR	YKN1073
X101	CERAMIC RESONATOR (9.0MHz)	YSS1040
X201	CRYSTAL RESONATOR (16MHz)	YSS1051

## VDTB BOARD ASSEMBLY

## SEMICONDUCTORS

IC305		BU4052B
IC403		CXL1009P
IC405		M50552-132SP
IC306		NJM082D
IC302		NJM4558S
IC404		PA0017
IC401		PA5013A
IC402		PM0001
IC301		PM3002
IC304		TC74HC00AP
IC307		TC74HC123AP
IC303		TC74HC04AP
Q403, Q404, Q407, Q410, Q414-Q415, Q419, Q421, Q423		2SA933S
Q807, Q401, Q402, Q405, Q406, Q408, Q409, Q411-Q413, Q417, Q418, Q422, Q429		2SC1740S
Q301		2SC3064
Q424		2SD1855X
Q306, Q308, Q420, Q425, Q428		DTA124PS
Q302, Q305, Q426, Q427		DTC124ES
D301-D306, D310, D401, D404, D405		ISS254

Mark No.	Description	Part No.
<b>COILS</b>		
L304, L402-L405, L413, L417, L419		LAU120J
L407-L409, L415		LAU181J
L362, L410		LAU220J
L412, L415		LAU330J
L420, L422		LAU390J
L303		LAU470J
L414, L421		LAU560J
L401, L423		LAU680J
L411, L418		LAU820J
L406		LR471K

## CAPACITORS

C303, C352, C353, C412, C431		CCCCH101J50
C528, C540		CCCCH120J50
C329, C366, C357, C438		CCCCH121J50
C428, C429, C467, C481		CCCCH151J50
C448, C539		CCCCH180J50
C478, C479, C493		CCCCH220J50
C465		CCCCH270J50
C407, C501, C502, C530		CCCCH330J50
C422, C440, C470, C487, C492, C533		CCCCH390J50
C494, C532		CCCCH470J50
C480, C491		CCCCH560J50
C468		CCCCH680J50
C354, C401, C402		CCCCH820J50
C350		CCCCL221J50
C404		CCCCL271J50
C439		CCCCL331J50
C405		CCCCL391J50
C406, C408, C466, C531, C534		CCPUCH100J50
C355, C415, C416		CCPUCH180J50
C495		CBANP100M16
C318		CBANP220M10
C316		CBANP2R2M50
C421, C449, C541		CBAS010M50
C485		CBAS100M50
C345, C363, C413, C419, C426, C432, C444, C459, C460, C496, C512, C514, C519, C521		CBAS101M10
C312, C462, C482		CBAS220M25
C301		CBAS221M6R3
C450, C453, C454		CBAS3R3M50
C322, C341, C342, C359, C361, C443, C455, C471, C473, C475, C484, C488, C503, C510, C513, C518, C520, C535		CBAS470M10
C321, C424		CBAS4R7M50
C304, C452		CFTXA224J50
C314		CFTXA103J50
C476		CFTXA104J50
C427		CFTXA153J50
C317		CFTXA223J50
C490		CFTXA473J50
C310, C315		CFTXA563J50
C477, C483		CFTXA683J50
C351, C486, C538		CNCYB102K50

Mark No.	Description	Part No.	Mark No.	Description	Part No.
C302, C323, C326-C328, C343, C344, C346, C380, C382, C364, C365, C367, C403, C409-C411, C414, C417, C418, C420, C423, C430, C433-C437, C441, C442, C445-C447, C451, C456-C458, C461, C463, C464, C472, C474, C489, C497, C499, C500, C504-C507, C511, C515-C517, C522, C523, C529, C536, C537, C542, C543		OKPYY103N16	Q201, Q202 D101		DTC124ES 1S254
C305, C307 C308 C320 C311, C425 C313, C319 C306		QMA102J50 QMA152J50 QMA222J50 QMA272J50 QMA332J50 QPA821J100	<b>RELAYS</b> RY101 RY102		VSR-005 VSR1006
<b>RESISTORS</b> R420 R455 R411 R413 R419  VR441 (10k $\Omega$ ) VR471, VR482, VR521 (4.7k $\Omega$ ) OTHER RESISTORS		RN1/6PQ1003F RN1/6PQ2002F RN1/6PQ3002F RN1/6PQ3002F RN1/6PQ5101F  VRTB6VS103 VRTB6VS472 RD1/6PMM□□□□	<b>COILS AND FILTERS</b> L205, L206 L203, L204 L201, L202 L104, L105, L113 L102, L103  L111, L112 F102 F203 F202 F101 F201		LAU120J LAU121J LAU1R2J LAU330J LAU8R2J  LFA120K VTF1011 VTF1016 VTF1030 VTF1034 VTF1042
<b>SCRT BOARD ASSEMBLY</b> <b>SEMICONDUCTOR</b> D181		ISS254	<b>CAPACITORS</b> VC201-VC203 (20P) C205, C213, C223 C153, C202 C206 C201, C203, C204  C207, C212 C210 C152, C227 C101, C110, C119 C146, C147  C113, C224 C111, C112, C115, C118, C121, C129, C131, C142, C143, C208, C219, C222, C226, C230, C243, C245, C263, C265 C145  C146, C149 C108, C109 C103-C107, C116, C117, C128, C130, C141, C144, C209, C214, C216, C217, C220, C221, C225, C226, C229, C244, C246, C262, C264, C266-C270 C218		YOM-008 CCCH101J50 CCCH270J50 CCCH350J50 CCCH390J50  CCCH880J50 CCCSL221J50 CCPUC100J50 CEANP220M10 CEANP2R2M50  CEANP470M10 CEAS470M10  CKPYYB101K50  CKPYYB391K50 CKPYYB681K50 CKPYY103N16
<b>RELAYS</b> RY182 RY181		VSR-005 VSR1006	<b>OTHERS</b> JA101 RGB CONNECTOR (AV CONNECTOR)		VSR-005 VSR1006
<b>COILS</b> L106, L107		LAU330J	<b>OTHERS</b> JA102 RGB CONNECTOR (AV CONNECTOR)		VSR-005 VSR1006
<b>CAPACITORS</b> C181, C182 C186, C187 C188		CEANP2R2M50 CKPYYB391K50 CKPYY103N16	<b>OTHERS</b> JA101 RGB CONNECTOR (AV CONNECTOR)		VSR-005 VSR1006
<b>RESISTORS</b> ALL RESISTORS		RD1/6PMM□□□□	<b>OTHERS</b> JA101 RGB CONNECTOR (AV CONNECTOR)		VSR-005 VSR1006
<b>OTHERS</b> JA102 RGB CONNECTOR (AV CONNECTOR)		VXB1037	<b>OTHERS</b> JA101 RGB CONNECTOR (AV CONNECTOR)		VSR-005 VSR1006
<b>PALB BOARD ASSEMBLY</b> <b>SEMICONDUCTORS</b> IC103, IC201 IC208 IC205 IC206, IC207 IC101, IC202, IC203  IC102 IC204 Q112, Q206, Q214 Q103-Q111, Q113, Q114, Q203, Q207-Q210, Q213		BU4053B TA7320P TC74HC00AP TC74HC10AP TC74HC74AP  TC74HC86AP TC74HC004AP 2SA933S 2SC1740S	<b>RESISTORS</b> RY101, VR201, VR202 (470 $\Omega$ ) RY102 (4.7k $\Omega$ ) OTHER RESISTORS		VRTB6VS471 VRTB6VS472 RD1/6PMM□□□□
<b>OTHERS</b> JA101 RGB CONNECTOR (AV CONNECTOR)		VXB1037	<b>OTHERS</b> DL101 64 $\mu$ SEC DELAY LINE X202 CRYSTAL RESONATOR (17.734MHz)  X201 CRYSTAL RESONATOR (14.318MHz) X203 CRYSTAL RESONATOR (14.22MHz) DL201 750nSEC DELAY LINE		VXB1037 DTF1033 VSS1019  VSS1029 VSS1053 VTF1037

Mark No.	Description	Part No.
<b>CNCB ASSEMBLY</b>		
<b>RESISTORS</b>		
R901		RAST224J
R902		RD1/6PWC□□□J

**FLKB ASSEMBLY****SEMICONDUCTORS**

IC104	BU2040F
IC102	PD8075A
IC103	PST559C
IC105	RC4558D
IC101	TC35097AP
Q102	DTA144ES
Q101	DTC114ES
D101-D111, D126	1SS252
D12-D114, D116-D121	SEL3410BLC05
D115	VEL1017

**SWITCHES**

S101-S107, S110, S111	RSG1030
S113	VSH1005
S112	VSK1015

**COIL**

L101	LAU3R3J
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**CAPACITORS**

C105	CEJA100M16
C101	CEJA100M50
C103	CEJA101M6R3
C107, C108	CEJA220M6R3
C110	CEJA470M6R3
C112	CFTNA683J50
C106	CKPUYB102K50
C113	CKPUYB151K50
C116	CKPUYB221K50
C104	CKPUYF223Z25
C102, C109, C111, C114, C115	CKPUY103N16

**RESISTORS**

VR103, VR104 (10kΩ)	VCS1024
VR101, VR102 (10kΩ)	VCS1028
R111	RA4T103J
OTHER RESISTORS	RD1/6PWC□□□J

**OTHERS**

CN103	CONNECTOR	BTMK07S
CN104	CONNECTOR	BTMK09S
V101	FL TUBE	VAV1024
	FL SPACER	VEB1159
X101	CERAMIC RESONATOR (5.50MHz)	YSS1055

**IRKB ASSEMBLY****SEMICONDUCTORS**

Q401, Q402	DTC124ES
D401	VEL1018

**SWITCH**

S401	RSG1030
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Mark No.	Description	Part No.
<b>RESISTORS</b>		
	ALL RESISTORS	RD1/6PWC□□□J

**OTHERS**

IR SENSOR UNIT	RC-177
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**KCKB ASSEMBLY****SWITCHES**

S701-S704	RSG1030
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**DIKB ASSEMBLY****SWITCHES**

S301-S320	RSG1030
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**KAKB ASSEMBLY****SWITCHES**

S202, S203	RSG1030
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**HEPB ASSEMBLY****COIL AND FILTERS**

L501	LAU3R3J
F502, F503	VTH1016

**CAPACITORS**

C503	CGCY1473K25
C501, C502	CKPUYB101K50

**RESISTORS**

VR501 (500Ω)	VCS1020
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**OTHERS**

JA501	HEADPHONE JACK (PHONES)	RKN1002
	SNAP PLATE	VNE1102

**MIJB ASSEMBLY****SEMICONDUCTOR**

IC601	NUM2068D
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**FILTERS**

F601-F605	VTH1016
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**CAPACITORS**

C604, C610	CEAL2R2M35
C606, C607	CKPUYB102K50
C605, C611	CKPUYB681K50
C601, C602	CKPUYF223Z25
C603, C609	QMA162150

**RESISTORS**

ALL RESISTORS	RD1/6PWC□□□J
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**OTHERS**

JA602	HEADPHONE JACK (MIC CONTROL)	RKN1006
JA601, JA602	MIC JACK	VKN1147
	SNAP PLATE	VNE1102

Mark No. Description Part No.

**SYPS ASSEMBLY**

**SEMICONDUCTORS**

△ IC201 ICP-N15  
 IC202 ICP-N15  
 △ IC205 NJM78M05FA  
 Q214, Q219 2SA933S  
 Q203, Q205 2SB1134  
  
 △ Q207 2SB1238X  
 Q202 2SB1370  
 Q218 2SC1740S  
 Q204, Q206 2SD1667  
 Q201 2SD1762  
  
 Q217 DTA114BS  
 Q213 DTC114ES  
 D212, D215 10ELS2  
 △ D213, D214 1SR35-100AVL  
 D222, D223 1SR35-100AVL  
  
 D208, D209 1SS252  
 △ D216, D217 1SS252  
 D220 MTZJ22C  
 D102, D104 MTZJ5. 1C  
 D101, D103 MTZJ5. 6B  
 △ D201, D202 SZVB20

**COILS**

△ L202 VTL-004  
 △ L201 VTL1008

**CAPACITORS**

C209, C210, C226, C231, C232, C242, C245 CEAS101M10  
 C223 CEAS101M25  
 C219 CEAS101M35  
 C235 CEAS102M25  
 C240, C243 CEAS221M10  
  
 C214, C215 CEAS2R2M50  
 C213 CEAS471M35  
 C212, C237, C238 CGTY473M25  
 C196-C199, C246 CKTF108Z50  
 C241, C244 CKPUB102K50  
  
 △ C201-C204 CKPUP108Z25  
 C216, C217 (0.01) VCG-048  
 C208 (8800/16) VCH1053  
 C207 (10000/16) VCH1055  
 C205, C206 (3300/25) VCH1095

**RESISTORS**

R239 RS1LMF4R7J  
 △ R221 RS1LMFR51J  
 R231 (22Ω) VCH1029  
 R213, R214, R219, R220 (47Ω) DCH1003  
 OTHER RESISTORS RD1/6PMM□□□J

**HEAD ASSEMBLY**

**CAPACITORS**

C1 CXSQYF478Z50  
 C5 CXSYP105Z16

**RESISTOR**

VR1 (10kΩ) VCP1040

Mark No. Description Part No.

**KFCB ASSEMBLY**

**SEMICONDUCTORS**

IC4 BQ4053B  
 IC10 FM6525GBLP-10  
 IC15 MC14066BCP  
 IC12-IC14 NJM4580D  
 IC1 NJM78M08FA  
  
 IC2 NJM79M08FA  
 IC3, IC5-IC8, IC16, IC17 RC4558D  
 IC11 UPD6378CX  
 IC9 YSS205  
 Q2, Q3, Q8 2SD2144S  
  
 Q4, Q6, Q7 DTA124ES  
 Q1, Q5, Q9 DTC124ES  
 D4 04Z5, 1-X  
 D1, D2, D5, D6, D9, D10 1SS254  
 D7, D8 MTZJ5. 6B

**COILS**

L2, L3 LAU100J  
 L1 LFA190K

**CAPACITORS**

C37, C38 CCPUSL220J50  
 C1, C2 CEAS221M25  
 C39, C100, C109, C110 CEJA100M16  
 C5, C44, C45, C49, C57 CEJA101M6R3  
 C3, C4 CEJA477M63  
  
 C105, C106 CEJA470M6R3  
 C21, C28, C43, C60, C71 CEJA4R7M35  
 C7, C8 CEJANP010M50  
 C107, C108, C112-C114 CEJANP100M10  
 C13, C17, C58 CPTXA104J50  
  
 C27, C39, C66, C81 CPTXA823J50  
 C18 CKCYB821K50  
 C101 CKPUB121K50  
 C67, C82 CKPUB271K50  
 C28, C40 CKPUB331K50  
  
 C6, C9, C12, C19, C20, C33, C34, C37, C38, CKPUY103N16  
 C41, C42, C50-C52, C58, C75, C78, C79, C80,  
 C83-C86, C89, C90, C97, C98, C103, C104,  
 C111, C116  
 C26, C36, C65, C78 QMA122J50  
  
 C16, C61, C72 QMA183J50  
 C63, C74 QMA222J50  
 C22, C30 QMA223J50  
 C24, C32 QMA273J50  
 C64, C77 QMA273J50  
  
 C45-C48 QMA332J50  
 C25, C35, C62, C73 QMA333J50  
 C23, C31 QMA393J50  
 C14 QMA472J50  
 C102 QMA822J50

**RESISTORS**

R117, R118 (20Ω) DCH1002  
 OTHER RESISTORS RD1/6PMM□□□J

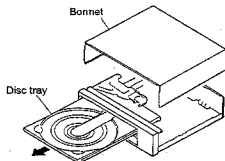
## 7. ADJUSTMENTS

### 7.1 TEST MODE

#### TEST MODE

The player has a test mode function which allows the servicer to check the player's status on the TV screen by executing the respective key operation.

Also, since the TRK servo opens and closes easily, the test mode is especially useful for mechanical adjustments.



#### TEST MODE CANCELLATION

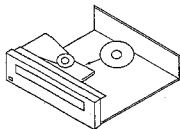
Turn off the power switch.

#### PLAYER OPERATION IN THE TEST MODE

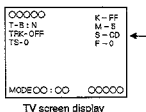
Operate the player by selecting a test mode function with the keys on the player or on the remote control unit.

##### ● CD PLAYBACK

① Place the CD disc on the turn table.  
(Clamper is already lifted up.)



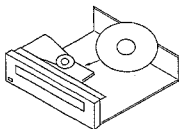
② Press the **◀◀** or **▶▶** key to appear "S-CD" on the TV screen display.



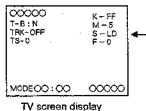
③ Clamp the disc by pressing the PLAY (**▶**) key once. Then, press the PLAY (**▶**) key twice, disc will be normal playbacked.

##### ● LD PLAYBACK

① Place the LD disc on the turn table.  
(Clamper is already lifted up.)



② Press the **◀◀** or **▶▶** key to appear "S-LD" on the TV screen display.

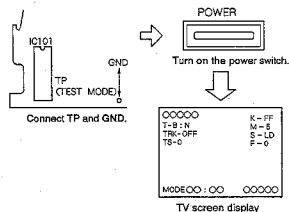


③ Clamp the disc by pressing the PLAY (**▶**) key once. Then, press the PLAY (**▶**) key twice, disc will be normal playbacked.

#### TEST MODE INITIATION

[Procedure]

1. Remove the bonnet and disc tray.
2. Connect the TP (TEST MODE) in the ASCB board assembly to GND.
3. Turn on the power switch.
4. Disconnect the TP from GND.

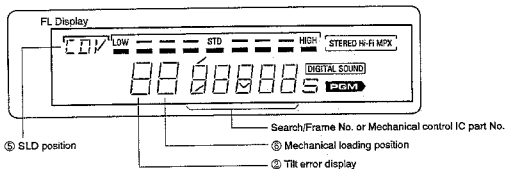
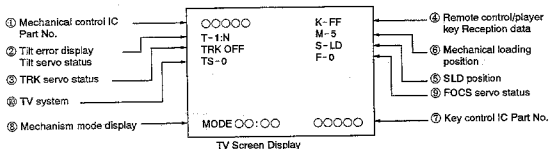


**Table. Operation in the test mode.**

Function	Player Status	Key Operation	Remarks
Open Tray	STOP mode	▲	
Close Tray	Tray open	▲	
Stop	PLAY mode	■	
Play	Disc placement and tray closed.	▶	<ul style="list-style-type: none"> <li>Start play with the TRK servo open.</li> <li>Start play with tilt neutral.</li> <li>The disc type (LD/CD/CDV) is determined when playback starts at the SLDR position during start play.</li> </ul>
TRK Servo Open/Close	PLAY mode	▶	Each time the PLAY button (▶) is pressed, the TRK servo will open or close alternately.
Still	PLAY mode TRK servo closed.	(Remote control unit key)	Each time the PAUSE button (  ) is pressed, the player will switch between the PLAY and STILL modes alternately.
SLDR REV SCAN	PLAY mode	◀◀	<ul style="list-style-type: none"> <li>Counterclockwise</li> <li>With the TRK servo open, the pickup can be damaged if the SLD moves further inward than the lead-in area on the disc. Do not allow the SLD to move further inward than the lead-in area.</li> </ul>
SLDR FWD SCAN	PLAY mode	▶▶	<ul style="list-style-type: none"> <li>Clockwise</li> <li>With the TRK servo open, the pickup can be damaged if the SLD moves further outward than the lead-in area on the disc. Do not allow the SLD to move further outward than the lead-in area.</li> </ul>
TILT Neutral	POWER switch ON	* SPEED -	
TILT Servo ON	PLAY mode	* SPEED +	
TILT Minus TILT Servo OFF	PLAY mode	◀◀	Press and hold down the keys.
TILT Plus TILT Servo OFF	PLAY mode	▶▶	Press and hold down the keys.
Screen Display ON/OFF	POWER switch ON	PGM key	
Frame search	PLAY mode	+10 key ↓ 0-9 key ↓ ▶	<ul style="list-style-type: none"> <li>In the PLAY mode, press the +10 key. (The player will standby for the frame No. entry.)</li> <li>Use the numeric keys(0 - 9) to enter the frame No.. Then press the player's PLAY key to search.</li> <li>After the search is completed, the player will return to the previous mode before the search was performed.</li> </ul>
Loading Motor Rotation Clockwise Counterclockwise	Tray open	▶▶   ◀◀	<ul style="list-style-type: none"> <li>FWD:Unloading</li> <li>REV:Loading</li> </ul>
FOCS OFFSET (CT BEST) VR606 Check	PLAY mode (TRK servo OPEN)	ONCE MORE	<ul style="list-style-type: none"> <li>For checking VR604 F-0 : Normal mode                             <ul style="list-style-type: none"> <li>When closing the TRK servo, VR606 (CT BEST) is effected.</li> <li>When opening the TRK servo, VR605 (TE MAX) is effected.</li> </ul> </li> <li>F-1 : When opening the TRK servo, VR606 (CT BEST) is also effected.</li> </ul>

\* As remote controller for CLD-150K does not have this key, use a remote controller with the SPEED key such as that for services (GGF1067), etc. when operating.

TV SCREEN AND LED DISPLAYS IN THE TEST MODE



① The Mechanical Control IC (ASCB board assembly) Part No. will be Displayed.  
PD01136A → 0136A

② Tilt Servo Status / Tilt Error Display

T-0:00

Tilt servo status : N...Tilt neutral  
ON...Tilt servo ON  
OFF...Tilt servo OFF

Tilt error display: 0 Tilt -  
↑ Tilt neutral  
F Tilt +

③ TRK Servo Status

TV screen display

TRK-○○○

- └ ON...TRK servo close
- └ OFF...TRK servo open

④ Remote Control / Player Key Reception Data

TV screen display

K-○○

└ See table below

Code	Function	Code	Function	Code	Function	Code	Function
00	0	20	F JOG0	40	(CHAP/TRK)	60	10
01	1	21	F JOG1	41	(FRAM/TIM)	61	11
02	2	22	F JOG2	42	(SEARCH)	62	12
03	3	23	F JOG3	43	DISPLAY	63	13
04	4	24	R JOG0	44	REPEAT B	64	14
05	5	25	R JOG1	45	CLEAR	65	15
06	6	26	R JOG2	46	SPEED -	66	16
07	7	27	R JOG3	47	SPEED +	67	17
08	8	28		48	REPEAT A	68	18
09	9	29		49	(2/R)	69	19
0A	VOLUME +	2A		4A	(STEREO)	6A	20
0B	VOLUME -	2B		4B	(1/L)	6B	
0C	DGT / ANL	2C		4C	PROGRAM	6C	
0D		2D		4D		6D	PLAY / PAUSE
0E	CX ON/OFF	2E		4E		6E	STOP
0F	(TV / LDP)	2F		4F		6F	OPEN / CLOSE
10	(F-SCAN)	30		50	R-STEP	70	
11	(R-SCAN)	31		51		71	DIRECT CD
12	16:9	32		52	F-SKIP	72	PEAK
13	CHAP / FRME	33		53	R-SKIP	73	SINGLE
14		34		54	F-STEP	74	
15		35		55	R-MULT	75	
16	STOP / OPEN	36		56		76	
17	PLAY/SEARCH	37	DGT LEVEL	57		77	
18	PAUSE	38	KEY CONTROL #	58	F-MULT	78	
19		39	KEY CONTROL #	59		79	
1A	(POW ON)	3A	KEY CONTROL #	5A	HILIT / INTR	7A	AUDIO MODE
1B	(POW OFF)	3B	ONECE MORE	5B		7B	VOCAL
1C	POW ON/OFF	3C	ONE TOUCH	5C		7C	CHORUS
1D	EDIT	3D	WARIKOMI	5D		7D	TV SYSTEM
1E	AUDIO	3E	SURROUND	5E	RNOM (TEST)	7E	
1F	+10	3F		5F	(ESC)	7F	

⑤ SLD Position

TV screen display

S-○○○

- └ IN ... CD inside SW ON
- └ CD ... CD active area
- └ CDV ... CDV active area
- └ LD ... LD active area

⑥ Mechanical Loading Position

TV screen display

M-○

- └ 0 ... Tray open
- └ 1 ... Loading
- └ 2 ... Standby
- └ 3 ... Clamped
- └ 5 ... Tilt minus
- └ 6 ... Tilt neutral (one side)
- └ 7 ... Tilt plus
- └ 8 ... Tilt limit

⑦ Focus Offset VR Status

TV screen display

F-○

- └ 0 ... Normal mode
  - When closing the TRK servo, VR606 (CT BEST) is effected.
  - When opening the TRK servo, VR605 (TE MAX) is effected.
- └ 1 ... When opening the TRK servo, VR606 (CT BEST) is also effected.



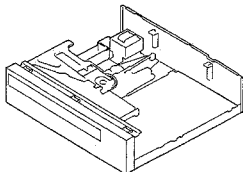
## 7.2 REQUIRED INSTRUMENTS

- Small screwdriver (7 cm shaft)
- Small Phillips screwdriver (15 cm shaft)
- Low - pass filter (47k ohms+1  $\mu$ F / BP)
- Dual - trace oscilloscope (with delay)
- AF oscillator
- Frequency counter
- LD test disc  
NTSC ...GGV1003  
PAL ...GGV - 145
- Short clip
- TV monitor
- Resistor (1k ohms, 47k ohms)
- Capacitor (0.01  $\mu$ F, 0.0027  $\mu$ F)
- Remote control unit
- 2mm hexagonal wrench

## 7.3 ADJUSTMENT PREPARATION AND NOTES

### 1. Player Preparation

Before perform the adjustment, remove the bonnet and the disc tray. Then place the player horizontally on a flat surface.



### 2. Disc Insertion

Insert the disc from the rear of the player. Place it securely on the turntable. When the PLAY key is pressed, the clamper will go down and secure the disc. Playback will then begin.

### 3. Use All the Oscilloscope's Probes at 10:1.

### 4. Required adjustment after Replacement of major parts.

Adjustments	Replacement assemblies				
	Pickup	Actuator	Pre-pickup	Spindle motor	Sensor
1. Tilt Servo Gain Adjustment	⊗				⊗
2. Coarse Adjustment of Grating and TRK Balance Adjustment	⊗	⊗	⊗		
3. Slider Shaft Horizontal Adjustment	⊗	⊗	⊗	○	⊗
4. Pickup Inclination Adjustment	⊗	⊗	⊗	○	○
5. TRKG Error Best / Crosstalk Best Adjustment	⊗	⊗	⊗	○	○
6. FOCS SUM Level Adjustment	⊗	⊗	⊗	○	○
7. Tilt Sensor Inclination / Tilt Balance Adjustment	⊗	⊗	⊗	○	⊗
8. Verification and Adjustment of Spindle Motor Centering	⊗	⊗	⊗	⊗	
9. Fine Adjustment of Grating and TRK Balance Adjustment	⊗	⊗	⊗		
10. FCS Servo Loop Gain Adjustment	⊗	⊗	⊗		
11. TRKG Servo Loop Gain Adjustment	⊗	⊗	⊗		
12. RF Gain Adjustment	⊗	⊗	⊗		

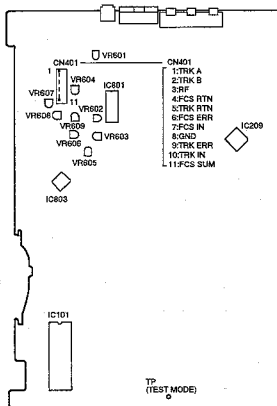
Note: Adjustments indicated by a ○ are made only when there is crosstalk.

## 7.4 ASCB BOARD ASSEMBLY ADJUSTMENT

Note: Use the GGV1003 NTSC test disc for all the adjustments of the ASCB board assembly.

ADJUSTMENT	Adjusting Point	Measurement equipment Connecting Point	Player Condition	Adjusting Specification
1 Tilt Servo Gain Adjustment	VR608	None	Power off	<ul style="list-style-type: none"> <li>Making of Tilt GAIN VR position Red : Turn to Right Clear : Center Blue : Turn to Left</li> </ul>
2 Coarse Adjustment of Grating and TRK Balance Adjustment	Grating/VR602	CN401-8 (TRK ERR)	<ul style="list-style-type: none"> <li>Test mode #15,000 still TRK servo loop open</li> </ul>	<ul style="list-style-type: none"> <li>Null point → TRK error MAX</li> <li>Adjust VR602 so that the TRK error waveform amplitude's positive and negative level become equal.</li> </ul>
3 Slider Shaft Horizontal Adjustment	Player SKIP key	CN401-4 (FCS RTN)	<ul style="list-style-type: none"> <li>Test mode TR servo loop off TRK servo loop open #3,200 still</li> </ul>	<ul style="list-style-type: none"> <li>Use the SKIP key to adjust to 0V ± 20mV.</li> </ul>
4 Pickup Inclination Adjustment	Pickup Assembly TAN /TRK inclination adjustment screw	CN401-3(RF)	<ul style="list-style-type: none"> <li>Test mode #2,251 still TRK servo loop close TRK servo loop open</li> </ul>	<ul style="list-style-type: none"> <li>RF waveform's amplitude MAX (Pickup TAN / TRK adjustment screw)</li> <li>Minimize crosstalk.</li> </ul>
5 TRKG Error Best / Crosstalk Best Adjustment	VR605 (TE BEST) VR606 (CT BEST)	CN401-9 (TRK ERR) CN401-3(RF)	<ul style="list-style-type: none"> <li>Test mode TRK servo close / open Tilt servo loop off</li> </ul>	<ul style="list-style-type: none"> <li>RF MAX (VR606) TRK error MAX (VR605)</li> </ul>
6 FOCUS SUM Level Adjustment	VR609	CN401-11 (FCS SUM)	<ul style="list-style-type: none"> <li>Play mode</li> </ul>	<ul style="list-style-type: none"> <li>Adjust VR 609 so that the voltage becomes 1.5VDC.</li> </ul>
7 Tilt Sensor Inclination / Tilt Balance Adjustment	Tilt sensor inclination adjustment screw VR607 (TILT BAL)	TV monitor Test mode screen	<ul style="list-style-type: none"> <li>Test mode #18,200 / #115 still TRK servo loop close Tilt servo loop off</li> </ul>	<ul style="list-style-type: none"> <li>Set VR 607 to the center.</li> <li>Adjust the adjustment screw so that the tilt error display code is 6.7, or 8.</li> <li>Adjust VR607 so that the tilt error display becomes 7.</li> </ul>
8 Verification and Adjustment of Spindle Motor Centering	Spindle motor centering adjustment screw.	CH1:CN401-8 (TRK ERR) CH2:CN401-1, 2 (TRK SUM) (X-Y mode)	<ul style="list-style-type: none"> <li>Test mode #23,800 / #3,000 still TRK servo loop open Tilt servo loop on</li> </ul>	<ul style="list-style-type: none"> <li>Adjust the centering adjustment screw so that the lissajous figures of #3,000 and #23,800 are the same.</li> </ul>
9 Fine Adjustment of Grating and TRK Balance Adjustment	Grating / VR602	CH1:CN401-8 (TRK ERR) CH2:CN401-1, 2 (TRK SUM) (X-Y mode)	<ul style="list-style-type: none"> <li>Test mode TRK servo loop open Tilt servo loop on</li> </ul>	<ul style="list-style-type: none"> <li>Minimize the Y direction of the lissajous figure.</li> <li>Level of the X direction of the lissajous figures are equal.</li> </ul>
10 FCS Servo Loop Gain Adjustment	VR604	CH1:CN401-7 (FCS IN) CH2:CN401-6 (FCS ERR) (X-Y mode)	<ul style="list-style-type: none"> <li>Test mode #15,000 still TRK servo loop close Tilt servo loop on</li> </ul>	<ul style="list-style-type: none"> <li>Adjust VR604 so that the lissajous figure is symmetric with respect to the X and Y axes.</li> </ul>
11 TRK Servo Loop Gain Adjustment	VR603	CH1:CN401-10 (TRK IN) CH2:CN401-9 (TRK ERR) (X-Y mode)	<ul style="list-style-type: none"> <li>Test mode #15,000 still TRK servo loop close Tilt servo loop on</li> </ul>	<ul style="list-style-type: none"> <li>Adjust VR603 so that the lissajous figure is symmetric with respect to the X and Y axes.</li> </ul>
12 RF Gain Adjustment	VR601	CN401-3(RF)	<ul style="list-style-type: none"> <li>#15,000 still</li> </ul>	<ul style="list-style-type: none"> <li>Adjust VR601 so that the RF level becomes 300mV ± 50mV.</li> </ul>



Note: Adjustment of the ASCB board assembly is the same as that of the CLD-1600/HEZ. For details, refer to the service manual ARP2308 for the CLD-1600/HEZ



ASCB BOARD ASSEMBLY

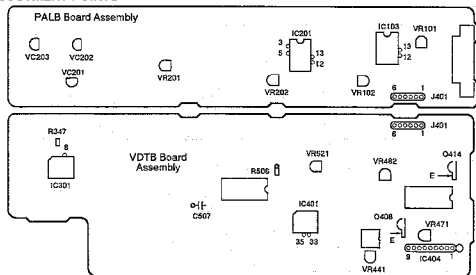
## 7.5 ELECTRICAL ADJUSTMENTS

Note: This unit automatically switches between the NTSC and PAL systems by reading the Phillips code on the test disc. Use the GGV-145 PAL disc for the items marked for PAL mode in the Remarks column and the GGV1003 NTSC disc for the items marked for NTSC mode.

Adjustment	Adjusting Point	Adjusting Specifications	Inspection Standard	Remarks	
PALB Board Assembly (1/2)					
1	Sync-generator Clock Adjustment	VC202	Adjust VC401 for 17.734475MHz at the J403 side of R508 lead wire in the video section.	17.734475MHz $\pm$ 100Hz	PAL mode
2	NTSC REF Clock adjustment	VC201	Adjust VC201 for 14.31818MHz at the J403 side of C507 lead wire in the video section.	14.31818MHz $\pm$ 100Hz	NTSC mode
3	REF Clock Adjustment	VC203	Adjust for 3.5546875MHz at pin 8 (R347) of IC301.	3.5546875MHz $\pm$ 25Hz	PAL mode
VDTB Board Assembly					
4	VCO Center Frequency Adjustment	VR471	 Adjust VR471 so that the time lag between CCD input video (Q408 emitter) and the CCD output video (Q414 emitter) becomes 75 $\mu$ sec (1H + 11 $\mu$ sec). For this adjustment, connect pin 9 of IC404 to GND.	75 $\mu$ sec $\pm$ 1.4 $\mu$ sec	PAL mode
5	Video Level Adjustment	VR482	 Adjust the 100% white video level to 2 Vp-p at VIDEO OUT (J401, pin 6).	2Vp-p $\pm$ 5%	PAL mode
6	1H Delay Video Level Adjustment	VR441	Adjust VR441 so that the level of the 1H-delay video at pin 33 of IC401 becomes the same as that of the main-line video pin 35.	Main-line video $\pm$ 3%	PAL mode
7	VPS ERR Level Adjustment	VR521	While observing the magenta screen on a vector scope, minimize the jitter at VIDEO OUT (J401, pin 6).		PAL mode

	Adjustment	Adjusting Point	Adjusting Specifications	Inspection Standard	Remarks
PALB Board Assembly (2/2)					
8	MOD Video Level Adjustment	VR102	Adjust VR102 so that the luminance level of the MOD video at pin 13 of IC103 becomes the same as that of the through video at pin 12.	$\pm 3\%$	PAL mode
9	1H Delay S.C. Level Adjustment	VR101	While observing color bars in still mode on a vector scope, minimize the gain variation at VIDEO OUT (J401, pin 6).		PAL mode
10	MOD Y Level adjustment	VR202	Adjust VR202 so that the luminance level between IC201 pin 3 (passed through the comb filter) and IC201 pin 5 (passed through the 3.2M L. P. F.) becomes same level.	$\pm 3\%$	NTSC converter mode
11	MOD SC Level adjustment	VR201	Adjust VR201 so that the converter chroma level at IC201 pin 13 becomes the same as the main chroma level at IC201 pin 12.		NTSC converter mode

• ADJUSTMENT POINTS

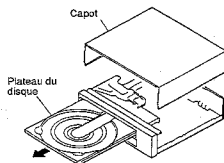


## 7. REGLAGES

### 7.1 MODE D'ESSAI

#### MODE D'ESSAI

Le lecteur possède une fonction Mode d'essai, permettant au réparateur de vérifier l'état de l'appareil sur l'écran TV par exécution d'opérations sur les touches respectives. De plus, comme l'asservissement TRK s'ouvre et se ferme facilement, le mode d'essai est particulièrement pratique pour les ajustements mécanismes.



#### ANNULATION DU MODE D'ESSAI

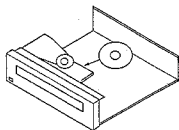
Couper l'interrupteur d'alimentation.

#### FONCTIONNEMENT DU LECTEUR EN MODE D'ESSAI

Faire fonctionner le lecteur en choisissant une fonction du mode d'essai par les touches du lecteur ou de la télécommande.

##### ● Lecture d'un CD

- ① Placer un disque CD sur le plateau.  
(La bride est déjà relevée.)



- ② Appuyer sur **◀▶** ou **▶▶** pour obtenir "S-CD" sur l'écran du téléviseur.

```

OOOOO      K - FF
T-B : N     M - S
TRK - OFF   S - LD
TS - 0      F - 0

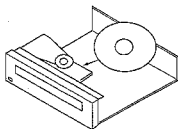
MODEOO : OO OOOOO
  
```

Ecran du téléviseur

- ③ Immobiliser le disque en appuyant une fois sur la touche PLAY (**▶**). Appuyer ensuite deux fois sur la touche PLAY (**▶**) et le disque sera reproduit normalement.

##### ● Lecture d'un LD

- ① Placer un disque LD sur le plateau.  
(La bride est déjà relevée.)



- ② Appuyer sur **◀▶** ou **▶▶** pour obtenir "S-LD" sur l'écran du téléviseur.

```

OOOOO      K - FF
T-B : N     M - S
TRK - OFF   S - LD
TS - 0      F - 0

MODEOO : OO OOOOO
  
```

Ecran du téléviseur

- ③ Immobiliser le disque en appuyant une fois sur la touche PLAY (**▶**). Appuyer ensuite deux fois sur la touche PLAY (**▶**) et le disque sera reproduit normalement.

#### PASSAGE EN MODE D'ESSAI

[Démarche]

1. Déposer le capot et le plateau du disque.
2. Raccorder TP (TEST MODE) de l'ensemble ASCB à GND (masse).
3. Allumer l'interrupteur d'alimentation.
4. Débrancher TP et GND (masse).

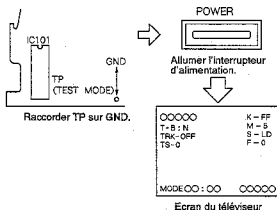
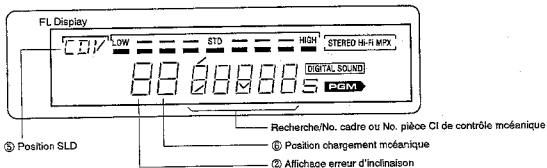
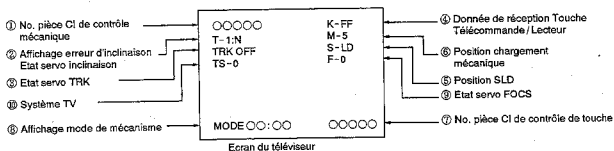


Tableau : Démarches en mode d'essai

Fonction	Etat du lecteur	Touche utilisée	Remarques
Ouverture plateau	Mode STOP	▲	
Fermeture plateau	Plateau ouvert	▲	
Arrêt	Mode PLAY	■	
Lecture	Placement de disque et plateau fermé.	▶	<ul style="list-style-type: none"> <li>Lancer la lecture avec servo TRK ouvert.</li> <li>Lancer la lecture avec inclinaison au neutre.</li> <li>Le type de disque (LD/CD/CDV) est déterminé quand la lecture commence à la position SLDR.</li> </ul>
Servo TRK Ouverture/Fermeture	Mode PLAY	▶	<ul style="list-style-type: none"> <li>A chaque poussée sur la touche PLAY (▶), le servo TRK s'ouvre ou se ferme alternativement.</li> </ul>
Fixe	Mode PLAY Servo TRK fermé.		<ul style="list-style-type: none"> <li>A chaque poussée sur la touche PAUSE (  ), le lecteur passe alternativement entre les modes PLAY et STILL.</li> </ul>
SLDR REV SCAN	Mode PLAY	◀◀	<ul style="list-style-type: none"> <li>Sens anti-horaire</li> <li>Avec le servo TRK ouvert, le capteur peut être endommagé sur le SLD se déplace plus à l'intérieur que la zone d'amorce du disque. Ne pas laisser le SLD dépasser la zone d'amorce vers l'intérieur du disque.</li> </ul>
SLDR FWD SCAN	Mode PLAY	▶▶	<ul style="list-style-type: none"> <li>Sens horaire</li> <li>Avec le servo TRK ouvert, le capteur peut être endommagé sur le SLD se déplace plus à l'extérieur que la zone d'amorce du disque. Ne pas laisser le SLD dépasser la zone d'amorce vers l'extérieur du disque.</li> </ul>
TILT Neutre	Interrupteur POWER allumé	*SPEED -	
TILT Servo ON	Mode PLAY	*SPEED +	
TILT Moins TILT Servo OFF	Mode PLAY	◀◀	<ul style="list-style-type: none"> <li>Maintenir les touches enfoncées.</li> </ul>
TILT Plus TILT Servo OFF	Mode PLAY	▶▶	<ul style="list-style-type: none"> <li>Maintenir les touches enfoncées.</li> </ul>
Ecran d'affichage ON/OFF	Interrupteur POWER allumé	Touche PGM	
Recherche de cadre	Mode PLAY	Touche +10 ↓ Touche 0-9 ↓ ▶	<ul style="list-style-type: none"> <li>En mode PLAY, appuyer sur la touche +10 (Le lecteur se met en attente de l'entrée du No. de cadre.)</li> <li>Se servir des touches numériques (0 - 9) pour entrer le numéro de cadre, puis appuyer sur la touche PLAY du lecteur pour la recherche.</li> <li>A la fin de la recherche, le lecteur repasse au mode d'avant la recherche.</li> </ul>
Moteur de chargement Rotation en sens horaire ou anti-horaire	Plateau ouvert	▶▶   ◀◀	<ul style="list-style-type: none"> <li>FWD: Déchargement</li> <li>REV: Chargement</li> </ul>
FOCS OFFSET (CT BEST) Vérification VR606	Mode PLAY (Servo TRK ouvert)	ONCE MORE	<ul style="list-style-type: none"> <li>Pour vérification VR604</li> <li>F-0: Mode norma;</li> <li>A la fermeture du TRK servo, VR606 (CT BEST) est actualisé.</li> <li>A l'ouverture de TRK servo, VR605 (TE MAX) est actualisé.</li> <li>F-1: A l'ouverture de TRK servo, VR606 (CT BEST) est aussi actualisé.</li> </ul>

\* Comme cette touche n'est pas prévue pour la télécommande pour le CLD-150K, utiliser une télécommande qui est équipée de la touche SPEED, telle que celle pour l'entretien (GGF1067), pour l'opération.

ECRAN DU TÉLÉVISEUR ET AFFICHAGES EN MODE D'ESSAI



① Le No. de pièce (ensemble ASCB) CI de contrôle mécanique sera affiché.  
PD0136A → 0136A

② Etat servo inclinaison/Affichage erreur d'inclinaison  
T-0:00

Etat servo d'inclinaison : N... Neutre  
ON... Servo ON  
OFF... Servo OFF

Affichage erreur inclin : 0 Inclinaison -  
↓ Neutre.  
F Inclinaison +

③ Etat servo TRK

Ecran du téléviseur

TRK-○○○

- ON...Servo TRK fermé
- OFF...Servo TRK ouvert

④ Donnée de réception Touche Télécommande / Lecteur

Ecran du téléviseur

K-○○○

↳ Voir tableau ci-après.

Code	Fonction	Code	Fonction	Code	Fonction	Code	Fonction
00	0	20	F JOG0	40	(CHAP/TRK)	60	10
01	1	21	F JOG1	41	(FRAM/TM)	61	11
02	2	22	F JOG2	42	(SEARCH)	62	12
03	3	23	F JOG3	43	DISPLAY	63	13
04	4	24	R JOG0	44	REPEAT B	64	14
05	5	25	R JOG1	45	CLEAR	65	15
06	6	26	R JOG2	46	SPEED -	66	16
07	7	27	R JOG3	47	SPEED +	67	17
08	8	28		48	REPEAT A	68	18
09	9	29		49	(2/R)	69	19
0A	VOLUME +	2A		4A	(STEREO)	6A	20
0B	VOLUME -	2B		4B	(1/L)	6B	
0C	DGT/ANL	2C		4C	PROGRAM	6C	
0D		2D		4D		6D	PLAY / PAUSE
0E	CX ON/OFF	2E		4E		6E	STOP
0F	(TV / LDP)	2F		4F		6F	OPEN / CLOSE
10	(F-SCAN)	30		50	R-STEP	70	
11	(R-SCAN)	31		51		71	DIRECT CD
12	16:9	32		52	F-SKIP	72	PEAK
13	CHAP / FRME	33		53	R-SKIP	73	SINGLE
14		34		54	F-STEP	74	
15		35		55	R-MULT	75	
16	STOP / OPEN	36		56		76	
17	PLAY/SEARCH	37	DGT LEVEL	57		77	
18	PAUSE	38	KEY CONTROL	58	F-MULT	78	
19		39	KEY CONTROL	59		79	
1A	(POW ON)	3A	KEY CONTROL	5A	HILIT / INTR	7A	AUDIO MODE
1B	(POW OFF)	3B	ONCE MORE	5B		7B	VOCAL
1C	POW ON/OFF	3C	ONE TOUCH	5C		7C	CHORUS
1D	EDIT	3D	WARIKOMI	5D		7D	TV SYSTEM
1E	AUDIO	3E	SURROUND	5E	RNDM (TEST)	7E	
1F	+10	3F		5F	(ESC)	7F	

⑤ Position SLD

Ecran du téléviseur

S-○○○

- IN ... CD intérieur SW ON
- CD ... Zone active de CD
- CDV ... Zone active de CDV
- LD ... Zone active de LD

⑥ Position de chargement mécanique

Ecran du téléviseur

M-○○○

- 0 ... Plateau ouvert
- 1 ... Chargement
- 2 ... Attente
- 3 ... Verrouillé
- 5 ... Inclinaison min
- 6 ... Inclinaison neutre (un côté)
- 7 ... Inclinaison plus
- 8 ... Limite d'inclinaison

⑦ Etat VR décalage de mise au point

Ecran du téléviseur

F-○○○

- 0 ... Mode normal
  - \*A la fermeture de servo TRK, VR606 (CT BEST) est actualisé.
  - \*A l'ouverture de servo TRK, VR605 (TE MAX) est actualisé.
- 1 ... A l'ouverture de servo TRK, VR606 (CT BEST) est aussi actualisé.



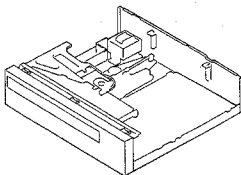
## 7.2 INSTRUMENTS DE RÉGLAGE

- Petit tournevis (tige de 7 cm)
- Petit tournevis cruciforme (tige 15 cm)
- Filtre passe-bas (47 kohms + 1  $\mu$ F/BP)
- Oscilloscope double faisceau (avec retard)
- Oscillateur audiofréquence (AF)
- Compteur de fréquence
- Disque d'essai LD  
NTSC ...GGV1003  
PAL ...GGV-145
- Disque CDV
- Pince coupe-circuit
- Moniteur TV
- Résistance (1 kohms, 47 kohms)
- Condensateur (0,01  $\mu$ F, 0,0027  $\mu$ F)
- Télécommande
- Clé hexagonale 2 mm

## 7.3 PRÉPARATIFS ET REMARQUES SUR LES RÉGLAGES

### 1. Préparation du Lecteur

Avant d'effectuer un réglage, déposer le capot et le plateau du disque; placer ensuite le lecteur à l'horizontale sur une surface plate.



### 2. Insertion du disque

Insérer le disque par l'arrière du lecteur et le poser correctement sur le plateau. Par une poussée sur la touche PLAY, la bride s'abaisse pour immobiliser le disque et la lecture commence.

### 3. Utiliser toutes les sondes d'oscilloscope à 10:1.

## 4. Réglage requis après remplacement des pièces principales

Réglages	Ensembles de remplacement				
	Capteur	Actuateur	Pré-capteur	Moteur d'axe	Capteur
1. Réglage de gain d'inclinaison	⊗				⊗
2. Réglage approximatif de réfraction et de balance d'alignement (TRK)	⊗	⊗	⊗		
3. Réglage horizontal d'axe coulissant	⊗	⊗	⊗	○	⊗
4. Réglage d'inclinaison de capteur	⊗	⊗	⊗	○	○
5. Réglage Erreur TRKG/Diaphonie optimal	⊗	⊗	⊗	○	○
6. Réglage de niveau FOCUS SUM	⊗	⊗	⊗	○	○
7. Réglage Inclinaison de capteur/balance d'inclinaison	⊗	⊗	⊗	○	⊗
8. Vérification et réglage du centrage de moteur de broche	⊗	⊗	⊗	⊗	
9. Réglage fin de réfraction et de balance d'alignement (TRK)	⊗	⊗	⊗		
10. Réglage de gain de boucle FCS	⊗	⊗	⊗		
11. Réglage de gain de boucle TRKG	⊗	⊗	⊗		
12. Réglage de gain RF	⊗	⊗	⊗		

Remarque : Les réglages marqués d'un (○) sont effectués uniquement en cas de diaphonie.

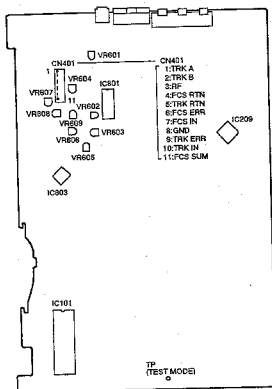
## 7.4 REGLAGES SUR L'ENSEMBLE ASCB

Remarque: Utiliser le disque d'essai NTSC GGV1003 pour tous les réglages de l'ensemble ASCB board.

Réglage	Point de Réglage	Equipement de Mesure Point de Connexion	Etat du Lecteur	Spécifications de Réglage
1 Réglage de gain d'inclinaison	VR808	Aucun	Hors tension	<ul style="list-style-type: none"> <li>Position de GAIN VR d'inclinaison Rouge: Tourner vers le droite Clair Centre Bleu: Tourner vers la gauche</li> </ul>
2 Réglage approximatif de réfraction et de balance d'alignement (TRK)	Réfraction/VR802	CN401-9 (TRK ERR)	<ul style="list-style-type: none"> <li>Mode d'essai #15,000 fixe</li> <li>Servo boucle TRK ouverte</li> </ul>	<ul style="list-style-type: none"> <li>Point nul - Erreur TRK MAX</li> <li>Ajuster VR802 pour que le niveau positif et négatif de l'amplitude de forme d'onde à l'erreur TRK soit égal.</li> </ul>
3 Réglage horizontal d'axe coulisant	Touche SKIP du lecteur	CN401-4 (FCS RTN)	<ul style="list-style-type: none"> <li>Mode d'essai</li> <li>Servo boucle d'inclinaison coupée</li> <li>Servo boucle TRK ouverte</li> <li>#5,200 fixe</li> </ul>	<ul style="list-style-type: none"> <li>Utiliser la touche SKIP pour ajuster 0V <math>\pm</math> 20mV.</li> </ul>
4 Réglage d'inclinaison de capteur	Vis de réglage TAN ensemble capteur/ inclinaison TRK	CN401-3(RF)	<ul style="list-style-type: none"> <li>Mode d'essai #2,251 fixe</li> <li>Servo boucle TRK fermée/ouverte</li> <li>Servo boucle d'inclinaison ouverte</li> </ul>	<ul style="list-style-type: none"> <li>Amplitude de forme d'onde RF MAX (Vis de réglage TAN capteur/TRK)</li> <li>Diaphonie minimisée</li> </ul>
5 Réglage optimal d'erreur d'alignement/diaphonie	VR805 (TE BEST) VR808 (CT BEST)	CN401-9(TRK ERR) CN401-3(RF)	<ul style="list-style-type: none"> <li>Mode d'essai</li> <li>Servo boucle TRK fermée/ouverte</li> <li>Servo boucle d'inclinaison coupée</li> </ul>	<ul style="list-style-type: none"> <li>RF MAX (VR808)</li> <li>Erreur TRK MAX (VR805)</li> </ul>
6 Réglage de niveau FOCS SUM	VR809	CN401-11 (FCS SUM)	<ul style="list-style-type: none"> <li>Mode Lecture</li> </ul>	<ul style="list-style-type: none"> <li>Ajuster VR809 pour que la tension soit 1.5 VDC.</li> </ul>
7 Réglage inclinaison de capteur/balance d'inclinaison	Vis de réglage d'inclinaison de capteur VR807 (TILT BAL)	Moniteur TV Ecran en mode d'essai	<ul style="list-style-type: none"> <li>Mode d'essai #16,200 / #115 fixe</li> <li>Servo boucle TRK fermée</li> <li>Servo boucle d'inclinaison coupée</li> </ul>	<ul style="list-style-type: none"> <li>Régler VR807 au centre.</li> <li>Agir sur vis de réglage de sorte que la code d'affichage d'erreur soit 6,7 ou 8.</li> <li>Ajuster VR807 de sorte que l'affichage d'erreur d'inclinaison soit 7.</li> </ul>
8 Vérification et réglage du centrage de moteur de broche	Vis de réglage de centrage de moteur d'axe	CH1:CN401-8 (TRK ERR) CH2:CN401-1, 2 (TRK SUM) (mode X-Y)	<ul style="list-style-type: none"> <li>Mode d'essai #23,800 / #3,000 fixe</li> <li>Servo boucle TRK ouverte</li> <li>Servo boucle d'inclinaison ON</li> </ul>	<ul style="list-style-type: none"> <li>Agir sur la vis de réglage de centrage pour que les figures de Lisajous de #3,000 et #23,800 soient les mêmes.</li> </ul>
9 Réglage fin de réfraction et de balance TRK	Réfraction / VR802	CH1:CN401-8 (TRK ERR) CH2:CN401-1, 2 (TRK SUM) (mode X-Y)	<ul style="list-style-type: none"> <li>Mode d'essai</li> <li>Servo boucle TRK ouverte</li> <li>Servo boucle d'inclinaison ON</li> </ul>	<ul style="list-style-type: none"> <li>Minimiser la direction Y de la figure de Lisajous.</li> <li>Les niveaux de la direction X des figures de Lisajous sont égaux.</li> </ul>
10 Réglage de gain de boucle asservie FCS	VR804	CH1:CN401-7 (FCS IN) CH2:CN401-8 (FCS ERR) (mode X-Y)	<ul style="list-style-type: none"> <li>Mode d'essai #15,000 fixe</li> <li>Servo boucle TRK fermée</li> <li>Servo boucle d'inclinaison ON</li> </ul>	<ul style="list-style-type: none"> <li>Ajuster VR804 de sorte que la figure de Lisajous soit symétrique sur les axes X et Y.</li> </ul>
11 Réglage de gain de boucle asservie TRK	VR803	CH1:CN401-10 (TRK IN) CH2:CN401-9 (TRK ERR) (mode X-Y)	<ul style="list-style-type: none"> <li>Mode d'essai #15,000 fixe</li> <li>Servo boucle TRK fermée</li> <li>Servo boucle d'inclinaison ON</li> </ul>	<ul style="list-style-type: none"> <li>Ajuster VR803 de sorte que la figure de Lisajous soit symétrique sur les axes X et Y.</li> </ul>
12 Réglage de gain de fréquence radio (RF)	VR801	CN401-3(RF)	<ul style="list-style-type: none"> <li>#15,000 fixe</li> </ul>	<ul style="list-style-type: none"> <li>Ajuster VR801 de sorte que le niveau RF devienne 300mV <math>\pm</math> 50mV.</li> </ul>



Remarque: Réglage de l'ensemble de plaquette ASCB est le même que pour le CLD-1600/HEZ. Pour les détails, se reporter à 'ARP2308' du manuel d'entretien du CLD - 1600/HEZ.

## ENSEMBLE ASCB



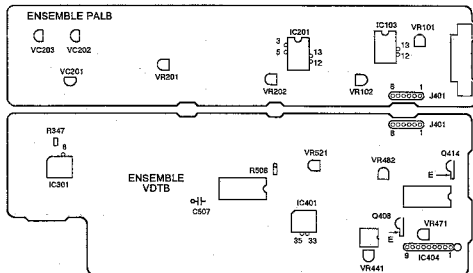
## 7.5 REGLAGES ELECTRIQUES

Remarque: Cet appareil automatiquement change ses systèmes entre NTSC et PAL en lisant le code Philips enregistré sur le disque d'essai. Utiliser le disque PAL GGV-145 pour les articles marqués pour le mode PAL dans la colonne "Remarques" et le disque NTSC GGV1003 pour les articles marqués pour le mode NTSC.

Réglage	Point de Réglage	Spécifications de Réglage	Norme d'Inspection	Remarques
Ensemble PALB (1/2)				
1 Réglage de rythmeur de synchro-générateur	VC202	Ajuster VC401, situé sur le côté J403 du fil R506 dans la section vidéo, sur 17,734475MHz.	17,734475MHz $\pm$ 100Hz	Mode PAL
2 Réglage de rythmeur NTSC REF	VC201	Ajuster VC201, situé sur le côté J403 du fil C507 dans la section vidéo, sur 14,31818MHz.	14,31818MHz $\pm$ 100Hz	Mode NTSC
3 Réglage de rythmeur REF	VC203	Ajuster sur 3,5546875MHz à la broche 8 (R347) de IC301.	3,5546875MHz $\pm$ 25Hz	Mode PAL
Ensemble VDTB				
4 Réglage de fréquence centrale VCO	VR471	 <p>Ajuster VR471 de sorte que le retard horaire entre le signal vidéo d'entrée CCD (émetteur Q408) et le signal vidéo de sortie CCD (émetteur Q414) soit 75 <math>\mu</math>sec (1H+11 <math>\mu</math>sec). Pour ce réglage, raccorder la broche 9 de IC404 sur GND.</p>	75 $\mu$ sec $\pm$ 1,4 $\mu$ sec	Mode PAL
5 Réglage de niveau vidéo	VR482	 <p>Ajuster le niveau vidéo blanc 100% sur 2Vc-c au VIDEO OUT (J401, broche 6).</p>	2Vc-c $\pm$ 5%	Mode PAL
6 Réglage de niveau vidéo de retard 1H	VR441	Ajuster VR441 de sorte que le niveau du signal vidéo de retard 1H à la broche 33 de IC401 soit le même que celui du signal vidéo de ligne à la broche 35.	Signal vidéo de ligne $\pm$ 3%	Mode PAL
7 Réglage de niveau VPS ERR	VR521	Tout en observant l'écran magenta sur le vectroscope, minimiser l'instabilité au VIDEO OUT (J401, broche 6).		Mode PAL

Réglage	Point de Réglage	Spécifications de Réglage	Norme d'Inspection	Remarques	
Ensemble PALB (2/2)					
8	Réglage de niveau vidéo MOD	VR102	Ajuster VR102 de sorte que le niveau de luminance du signal vidéo MOD à la broche 13 de IC103 soit le même que celui du signal vidéo à la broche 12.	$\pm 3\%$	Mode PAL
9	Réglage de niveau SC de retard 1H	VR101	Tout en observant les barres couleur en mode d'image fixe sur un vectroscope, minimiser la variation de gain à VIDEO OUT (J401, broche 6).		Mode PAL
10	Réglage de niveau MOD Y	VR202	Ajuster VR202 de façon que le niveau de la luminance du IC201 broche 3 (passée par le filtre peigne) et celui du IC201 broche 5 (passée par le 3.2M L. P. F.) soient les mêmes.	$\pm 3\%$	Mode d'convertir de la NTSC
11	Réglage de niveau MOD SC	VR201	Ajuster VR201 de façon que le niveau de chroma du convertisseur du IC201 broche 13 et le niveau de chroma principal du IC201 broche 12 soient les mêmes.		Mode d'convertir de la NTSC

• POINT DU REGLAGE



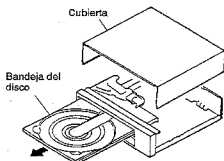
## 7. AJUSTES

### 7.1 MODO DE PRUEBA

#### MODO DE PRUEBA

El reproductor tiene la función del modo de prueba para permitir el hombre de servicios a comprobar el estado del reproductor sobre la pantalla de TV por las teclas respectivas.

Además, el servo de seguimiento se abre y se cierre fácilmente, el modo de prueba es muy útil para los ajustes mecánicos.



#### CANCELACIÓN DEL MODO DE PRUEBA

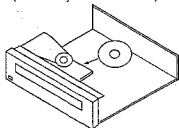
Desconecte la alimentación.

#### FUNCIÓN DEL REPRODUCTOR EN EL MODO DE PRUEBA

Maneje el reproductor por seleccionando la función del modo de prueba con las teclas sobre el reproductor o sobre el control remote.

##### • Reproducción de CD

- ① Ponga el CD (disco compacto) sobre el plato giratorio.  
(El tomillo ya se ha levantado.)



- ② Presione la tecla o para que la visualización "S-CD" se muestre en la pantalla de TV.

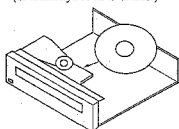
OOOOO	K-FF
T-B:N	M-5
TRK-OFF	S-LD
TS-0	F-0
MODEOO:OO OOOOO	

Visualización en la pantalla de TV

- ③ Sujete el disco presionando la tecla PLAY () una vez. Después, presione la tecla PLAY () dos veces. El disco se reproducirá normalmente.

##### • Reproducción de LD

- ① Ponga el disco LD sobre el plato giratorio.  
(El tomillo ya se ha levantado.)



- ② Presione la tecla o para que la visualización "S-LD" se muestre en la pantalla de TV.

OOOOO	K-FF
T-B:N	M-5
TRK-OFF	S-LD
TS-0	F-0
MODEOO:OO OOOOO	

Visualización en la pantalla de TV

- ③ Sujete el disco presionando la tecla PLAY () una vez. Después, presione la tecla PLAY () dos veces. El disco se reproducirá normalmente.

#### INICIACION DEL MODO DE PRUEBA

[Procedimiento]

1. Remueva la cubierta y la bandeja del disco.
2. Conecte TP (MODO DE PRUEBA) situado en el conjunto de tabla ASCB a GND.
3. Conecte la alimentación.
4. Desconecte TP y GND.

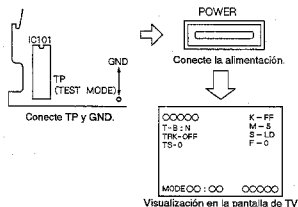
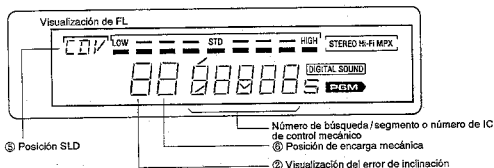
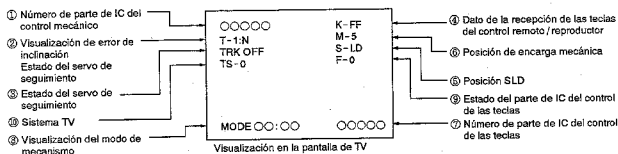


Tabla. Función en el modo de prueba

Función	Estado del Reproductor	Función de tecla	Notas
Bandeja abierta	Modo STOP	▲	
Bandeja cerrada	Bandeja abierta	▲	
Parada	Modo PLAY	■	
Reproducción	Colocación del disco y la bandeja cerrada	▶	<ul style="list-style-type: none"> <li>• Empieza la reproducción con el servo de seguimiento abierto.</li> <li>• Empieza la reproducción con la inclinación neutral.</li> <li>• El tipo del disco (LD/CD/CDV) se determina cuando la reproducción se empieza en la posición SLDR.</li> </ul>
Abierto/cerrado del servo de seguimiento	Modo PLAY	▶	• Cada vez que la tecla PLAY (▶) se presiona, el servo de seguimiento será abierto o cerrado alternadamente.
Fijo	Modo PLAY Cerrado del servo de seguimiento		• Cada vez que la tecla STILL (  ) se presiona, el reproductor se cambia entre los modos PLAY y STILL alternadamente.
SLDR REV SCAN	Modo PLAY	◀◀	<ul style="list-style-type: none"> <li>• A la izquierda</li> <li>• Con el servo de seguimiento abierto, el captor puede ser dañado si el SLD mueva más al interior que la área de conducción sobre el disco. No haga el SLD mover más al interior que la área de conducción.</li> </ul>
SLDR FWD SCAN	Modo PLAY	▶▶	<ul style="list-style-type: none"> <li>• A la derecha</li> <li>• Con el servo de seguimiento abierto, el captor puede ser dañado si el SLD mueva más al exterior que la área de conducción sobre el disco. No haga el SLD mover más al exterior que la área de conducción.</li> </ul>
Inclinación neutral	Interruptor POWER ON	*SPEED -	
ON del servo de inclinación	Modo PLAY	*SPEED +	
Menos de la inclinación OFF del servo de inclinación	Modo PLAY	◀◀	• Presione y retenga las teclas.
Más de la inclinación OFF del servo de inclinación	Modo PLAY	▶▶	• Presione y retenga las teclas.
ON/OFF de la visualización en la pantalla	Interruptor POWER ON	Tecla PGM	
Búsqueda de segmento	Modo PLAY	Tecla +10 ↓ Teclas 0-9 ↓ ▶	<ul style="list-style-type: none"> <li>• En el modo de PLAY, presione la tecla +10. (El reproductor será preparado para la entrada del número de segmento.)</li> <li>• Use las teclas numéricas (0-9) para entrar el número de segmento. Después, presione la tecla PLAY del reproductor para la búsqueda.</li> <li>• Después de completar la búsqueda, el reproductor se volverá al modo anterior.</li> </ul>
Rotación del motor de carga hacia la derecha y hacia la izquierda	Bandeja abierta	▶▶ ◀◀	<ul style="list-style-type: none"> <li>• FWD:Descargar</li> <li>• REV:Encargar</li> </ul>
FOCS OFFSET (CT BEST) Comprobación de VR606	Modo PLAY (el servo de seguimiento OPEN)	ONCE MORE	<ul style="list-style-type: none"> <li>• Para comprobar VR604</li> <li>F=0: Modo normal</li> <li>-Cuando cierre el servo de seguimiento, VR606 (CT BEST) es efectivo.</li> <li>-Cuando abra el servo de seguimiento, VR605 (TE MAX) es efectivo.</li> <li>F=1: Cuando abra el servo de seguimiento, VR606 (CT BEST) es también efectivo.</li> </ul>

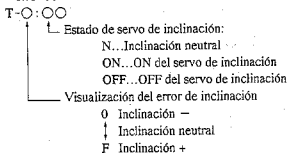
\* Como el controlador remoto para el CLD-150K no posee esta tecla, utilice para la operación otro con tecla SPEED como el usado para servicio (GGF1067), etc.

**VISUALIZACIONES EN LA PANTALLA DE TV Y DE LED EN EL MODO DE PRUEBA**



① Se mostrará el número de parte de IC (conjunto de tabla ASCB) del control mecánico.  
 PD0136A → 0136A

② Estado del servo de inclinación / Visualización del error de inclinación



③ Estado del servo de seguimiento

Visualización en la pantalla de TV

TRK-○○○

- └ ON... Cerrado del servo de seguimiento
- └ OFF... Abierto del servo de seguimiento

④ Dato de la recepción de las teclas del control remoto /reproductor

Visualización en la pantalla de TV

K-○○○

└ Vea la tabla abajo.

Código	Función	Código	Función	Código	Función	Código	Función
00	0	20	F JOG0	40	(CHAP / TRK)	60	10
01	1	21	F JOG1	41	(FRAM / TIM)	61	11
02	2	22	F JOG2	42	(SEARCH)	62	12
03	3	23	F JOG3	43	DISPLAY	63	13
04	4	24	R JOG0	44	REPEAT B	64	14
05	5	25	R JOG1	45	CLEAR	65	15
06	6	26	R JOG2	46	SPEED -	66	16
07	7	27	R JOG3	47	SPEED +	67	17
08	8	28		48	REPEAT A	68	18
09	9	29		49	(2 / R)	69	19
0A	VOLUME +	2A		4A	(STEREO)	6A	20
0B	VOLUME -	2B		4B	(1 / L)	6B	
0C	DGT / ANL	2C		4C	PROGRAM	6C	
0D		2D		4D		6D	PLAY / PAUSE
0E	CX ON/OFF	2E		4E		6E	STOP
0F	(TV / LDP)	2F		4F		6F	OPEN / CLOSE
10	(F-SCAN)	30		50	R-STEP	70	
11	(R-SCAN)	31		51		71	DIRECT CD
12	16.9	32		52	F-SKIP	72	PEAK
13	CHAP / FRME	33		53	R-SKIP	73	SINGLE
14		34		54	F-STEP	74	
15		35		55	R-MULT	75	
16	STOP / OPEN	36		56		76	
17	PLAY/SEARCH	37	DGT LEVEL	57		77	
18	PAUSE	38	KEY CONTROL	58	F-MULT	78	
19		39	KEY CONTROL	59		79	
1A	(POW ON)	3A	KEY CONTROL	5A	HILIT / INTR	7A	AUDIO MODE
1B	(POW OFF)	3B	ONCE MORE	5B		7B	VOCAL
1C	POW ON/OFF	3C	ONE TOUCH	5C		7C	CHORUS
1D	EDIT	3D	WARIKOMI	5D		7D	TV SYSTEM
1E	AUDIO	3E	SURROUND	5E	RNDM (TEST)	7E	
1F	+10	3F		5F	(ESC)	7F	

⑤ Posición de SLD

Visualización en la pantalla de TV

S-○○○

- └ IN ... ON del interruptor interior del CD
- └ CD ... Área activo del CD
- └ CDV ... Área activo del CDV
- └ LD ... Área activo del LD

⑥ Posición de encarga mecánica

Visualización en la pantalla de TV

M-○

- └ 0 ... Abierto de la bandeja
- └ 1 ... Encarga
- └ 2 ... Preparado
- └ 3 ... Sujetado
- └ 5 ... Menos de inclinación
- └ 6 ... Inclinación neutral (un lado)
- └ 7 ... Más de inclinación
- └ 8 ... Limite de inclinación

⑦ Estado compensador de VR de foco

Visualización en la pantalla de TV

F-○

- └ 0 ... Modo normal
- Cuando cierre el servo de seguimiento, VR606 (CT BEST) es efectivo.
- Cuando abre el servo de seguimiento, VR605 (TE MAX) es efectivo.
- 1 ... Cuando abre el servo de seguimiento, VR606 (CT BEST) es también efectivo.



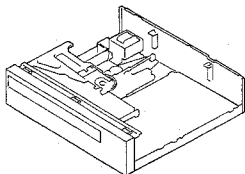
## 7.2 INSTRUMENTOS REQUERIDOS

- Destornillador pequeño (con un mango de aprox. 7cm)
- Destornillador pequeño de Phillips (con un mango de aprox. 15cm)
- Filtro de paso bajo (47 kilohmios + 1  $\mu$ F/BP)
- Osciloscopio de doble traza (con retardo)
- Oscilador de AF
- Frecuencímetro
- Disco de prueba LD  
NTSC ...GGV1003  
PAL ...GGV-145
- Disco LDD de 8 pulgadas
- Disco CDV
- Presilla cortocircuitadora
- Monitor de TV
- Resistor (1 kilohmios, 47kilohmios)
- Capacitor (0,01  $\mu$ F, 0,027  $\mu$ F)
- Control remoto
- Llave inglesa hexagonal de 2mm

## 7.3 PREPARATIVOS Y PRECAUCIONES PARA LOS AJUSTES

### 1. Preparativo Para el Reproductor

Antes de realizar el ajuste, quite la cubierta y la bandeja. Luego, coloque el reproductor horizontalmente sobre la superficie plana.



### 2. Inserción del Disco

Inserte el disco desde atrás del reproductor. Colóquelo seguramente sobre el plato giratorio. Cuando se presiona la tecla PLAY, el sujetador se descenderá para sujetar el disco. Luego se comenzará la reproducción.

### 3. Use Todas las Sondas de Osciloscopio de 10:1.

## 4. Sólo el Conjunto Principal se Necesita Ajustarse.

Ajustes	Reemplazo de conjunto				
	Captor	Actuador	Precaptor	Eje de motor	Sensor
1. Ajuste del Servo de la Ganancia de Inclinación	⊗				⊗
2. Ajuste Aproximado de la Retícula y Ajuste del Equilibrio de Error de Seguimiento	⊗	⊗	⊗		
3. Ajuste del Nivel del Eje de la Corredera	⊗	⊗	⊗	○	⊗
4. Ajuste de la Inclinación del Captor	⊗	⊗	⊗	○	○
5. Ajuste del Error de Seguimiento/Ajuste de la Diafonía	⊗	⊗	⊗	○	○
6. Ajuste del Nivel de la Suma del Foco	⊗	⊗	⊗	○	○
7. Ajuste del Sensor de inclinación/Ajuste del Equilibrio de la Inclinación	⊗	⊗	⊗	○	⊗
8. Comprobación y Ajuste del Centrado del Motor del Eje Central	⊗	⊗	⊗	⊗	
9. Ajuste fino de la Retícula y Ajuste del Equilibrio de Seguimiento	⊗	⊗	⊗		
10. Ajuste de la Ganancia del Bucle de Servos del Foco	⊗	⊗	⊗		
11. Ajuste de la Ganancia del Bucle de Servos de Seguimiento	⊗	⊗	⊗		
12. Ajuste de la Ganancia de RF	⊗	⊗	⊗		

Nota: Ajustes marcados con ○ se realizan solamente cuando se aparece la diafonía.

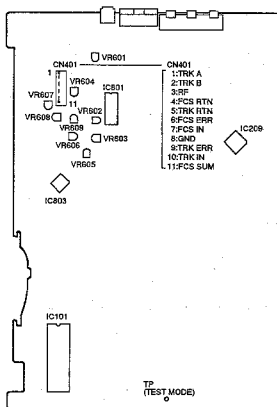
## 7.4 AJUSTES DEL CONJUNTO DEL ASCB

Nota: Use el disco de prueba GGV1003 para todos los ajustes del montaje ASCB board.

Ajuste	Punto de Ajuste	Equipo de Medición y Puntos de Conexión	Condiciones el reproductor	Especificación de ajuste
1 Ajuste del servo de la ganancia de inclinación	VR608	No hay	Desconecte la alimentación	<ul style="list-style-type: none"> <li>• Posición de GAIN VR de inclinación Rojo: Gire hacia la derecha. Hacia: Centro. Azul: Gire hacia la izquierda.</li> </ul>
2 Ajuste aproximado de la retícula y ajuste del equilibrio de error de seguimiento	Retícula/VR602	CN401-9 (TRK ERR)	<ul style="list-style-type: none"> <li>• Modo de prueba n.° 15,000 fijo</li> <li>Abierto del bucle de servos de seguimiento</li> </ul>	<ul style="list-style-type: none"> <li>• Punto nulo → Error de TRK a MAX</li> <li>• Ajuste VR602 hasta que los niveles positivo y negativo de la amplitud de la forma de onda del error TRK sean iguales.</li> </ul>
3 Ajuste del nivel del eje de la corredera	Tecla SKIP del reproductor	CN401-4 (FCS RTN)	<ul style="list-style-type: none"> <li>• Modo de prueba OFF del bucle de servos de inclinación</li> <li>Abierto del bucle de servos de seguimiento n.° 5,200 fijo</li> </ul>	<ul style="list-style-type: none"> <li>• Use la tecla SKIP para ajustar a <math>0V \pm 20</math> mV.</li> </ul>
4 Ajuste de la inclinación del captor	Tornillo para ajuste del conjunto del captor TAN/ inclinación TRK	CN401-3(RF)	<ul style="list-style-type: none"> <li>• Modo de prueba n.° 2,251 fijo</li> <li>Cerrado/abierto del bucle de servos de seguimiento</li> <li>Abierto del bucle de servos de inclinación</li> </ul>	<ul style="list-style-type: none"> <li>• La amplitud de la forma de onda de RF a MAX. (Tornillo para el ajuste de TAN/ TRK del captor)</li> <li>• Distorsión mínima</li> </ul>
5 Ajuste del error de seguimiento/ajuste de la diafonía	VR605 (TE BEST) VR606 (OT BEST)	CN401-9 (TRK ERR) CN401-3(RF)	<ul style="list-style-type: none"> <li>• Modo de prueba Cerrado/abierto del bucle de servos de seguimiento</li> <li>OFF del bucle de servos de inclinación</li> </ul>	<ul style="list-style-type: none"> <li>• RF a MAX (VR606)</li> <li>• Error de TRK a MAX (VR605)</li> </ul>
6 Ajuste del nivel de la suma del foco	VR609	CN401-11 (FCS SUM)	<ul style="list-style-type: none"> <li>• Modo de reproducción</li> </ul>	<ul style="list-style-type: none"> <li>• Ajuste VR609 hasta que la tensión sea de 1,5 VCC.</li> </ul>
7 Ajuste del sensor de inclinación/ajuste del equilibrio de la inclinación	Tornillo para el ajuste del sensor de inclinación VR607(TILT BAL)	Monitor de TV Pantalla de modo de prueba	<ul style="list-style-type: none"> <li>• Modo de prueba Fijo de n.° 16,200 /n.° 115</li> <li>Cerrado del bucle de servos de seguimiento</li> <li>OFF del bucle de servos de inclinación</li> </ul>	<ul style="list-style-type: none"> <li>• Coloque VR607 en el centro.</li> <li>• Ajuste el tornillo para el ajuste hasta que el código de la visualización del error de inclinación sea 6,7 ó 8.</li> <li>• Ajuste VR607 hasta que la visualización del error de inclinación sea 7.</li> </ul>
8 Comprobación y ajuste del centrado del motor del eje central	Tornillo para el ajuste del centrado del motor del eje central	CH1:CN401-9 (TRK ERR) CH2:CN401-1, 2 (TRK SUM) (Modo de X-Y)	<ul style="list-style-type: none"> <li>• Modo de prueba Fijo de n.° 23,800 /n.° 3,000 fijo</li> <li>Abierto del bucle de servos de seguimiento</li> <li>ON del bucle de servos de inclinación</li> </ul>	<ul style="list-style-type: none"> <li>• Ajuste el tornillo para el ajuste del centrado hasta que las figuras de Lisajous n.° 3,000 y n.° 23,800 sean agudas.</li> </ul>
9 Ajuste fino de la retícula y ajuste del equilibrio de seguimiento	Retícula/VR602	CH1:CN401-9 (TRK ERR) CH2:CN401-1, 2 (TRK SUM) (Modo de X-Y)	<ul style="list-style-type: none"> <li>• Modo de prueba Abierto del bucle de servos de seguimiento</li> <li>ON del bucle de servos de inclinación</li> </ul>	<ul style="list-style-type: none"> <li>• Reduzca la anchura del sentido del eje Y de la figura de Lisajous.</li> <li>• Los niveles de la visualización del eje de las figuras de Lisajous son iguales.</li> </ul>
10 Ajuste de la ganancia del bucle de servos del foco	VR604	CH1:CN401-7 (FCS IN) CH2:CN401-8 (FCS ERR) (Modo de X-Y)	<ul style="list-style-type: none"> <li>• Modo de prueba Fijo de n.° 15,000</li> <li>Cerrado del bucle de servos de seguimiento</li> <li>ON del bucle de servos de inclinación</li> </ul>	<ul style="list-style-type: none"> <li>• Ajuste VR604 hasta que la figura de Lisajous sea simétrica con respecto a los ejes X e Y.</li> </ul>
11 Ajuste de la ganancia del bucle de servos de seguimiento	VR603	CH1:CN401-10 (TRK IN) CH2:CN401-9 (TRK ERR) (Modo de X-Y)	<ul style="list-style-type: none"> <li>• Modo de prueba Fijo de n.° 15,000</li> <li>Cerrado del bucle de servos de seguimiento</li> <li>ON del bucle de servos de inclinación</li> </ul>	<ul style="list-style-type: none"> <li>• Ajuste VR603 hasta que la figura de Lisajous sea simétrica con respecto a los ejes X e Y.</li> </ul>
12 Ajuste de la ganancia de RF	VR601	CN401-3(RF)	<ul style="list-style-type: none"> <li>• Fijo de n.° 15,000</li> </ul>	<ul style="list-style-type: none"> <li>• Ajuste VR601 hasta que el nivel de RF sea de 300 mV <math>\pm</math> 50 mV.</li> </ul>



Nota: Manera de ajustar el conjunto de la tabla ASCB es misma que CLD-1600/HEZ. Para los detalles, refírase al manual de servicios ARP2308 para CLD-1600/HEZ.

## CONJUNTO DEL ASCB



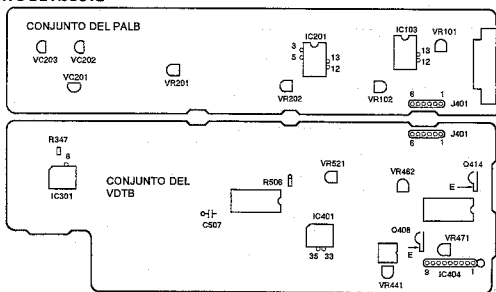
## 7.5 AJUSTES ELECTRICOS

Nota: Esta unidad automáticamente conmuta entre los sistemas NTSC y PAL por leyendo el código en el disco de prueba. Use el disco GGV-145 PAL para los artículos del modo PAL en la columna de notas y use el disco GGV1003 NTSC para los artículos del modo NTSC.

Ajuste	Punto de Ajuste	Especificaciones de Ajuste	Inspección Estándar	Notas	
Conjunto del PALB (1/2)					
1	Ajuste del reloj del generador sincrónico	VC202	Ajuste VC401 a 17,734475MHz al lado J403 del alambre de conducción R506 en la sección de video.	17.734475MHz ± 100Hz	Mode PAL
2	Ajuste de reloj NTSC REF	VC201	Ajuste VC201 a 14,31818MHz al lado J403 del alambre de conducción C507 en la sección de video.	14,31818MHz ± 100Hz	Mode NTSC
3	Ajuste de reloj REF	VC203	Ajuste a 3.5546875MHz al alfiler 8 (R347) de IC301.	3,5546875MHz ± 25Hz	Mode PAL
Conjunto del VDTB					
4	Ajuste de frecuencia central de VCO	VR471	 Ajuste VR471 para que el retardo de tiempo entre entrada de video CCD (Q408 emisor) y la salida de video CCD (Q414 emisor) sea 75 μsec (1H + 11 μsec). Para este ajuste, conecte el alfiler de IC404 a GND.	75 μsec ± 1,4 μsec	Mode PAL
5	Ajuste del nivel de video	VR482	 Ajuste del nivel de video blanco de 100% ± 2Vp-p en VIDEO OUT (J401, alfiler 6).	2Vp-p ± 5%	Mode PAL
8	Ajuste del nivel de video de retardo 1H	VR441	Ajuste VR441 para que el nivel de video de retardo de 1H en el alfiler 33 de IC401 sea mismo que el nivel de video en el alfiler 35. Video de línea principal es de ± 3%.	Video de línea principal ± 3%	Mode PAL
7	Ajuste del nivel de VPS ERR	VR521	Mientras observando la pantalla majenta en la esfera de vector, reduzca la fluctuación en VIDEO OUT (J401, alfiler 6).		Mode PAL

	Ajuste	Punto de Ajuste	Especificaciones de Ajuste	Inspección Estándar	Notas
Conjunto del PALB (2/2)					
8	Ajuste del nivel de video MOD	VR102	Ajuste VR102 para que el nivel de luz de vídeo MOD al afilier 13 de IC103 sea mismo que el nivel a través de video en el afilier 12.	± 3%	Mode PAL
9	Ajuste del nivel SC de retardo de 1H	VR101	Mientras observando las barras de color en el modo fijo en la esfera de vector, reduzca la variación de ganancia en VIDEO OUT (J401, afilier 8).		Mode PAL
10	Ajuste del nivel de MOD Y	VR202	Ajuste VR202 hasta que el nivel de luminancia del afilier 3 de IC201 (que pasa por el filtro de peine) y el nivel de luminancia del afilier 5 de IC201 (que pasa por 3.2M L. P. F.) sean iguales.	± 3%	Mode de convertir del NTSC
11	Ajuste del nivel de MOD SC	VR201	Ajuste VR201 hasta que el nivel de croma de convertidor en el afilier 13 de IC201 sea igual con el nivel del afilier 12 de IC201.		Mode de convertir del NTSC

• PUNTO DE AJUSTE



## 8. FOR CLD- V202 / HEZ AND CLD- 1810K / SD

### 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.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

### CONTRAST OF MISCELLANEOUS PARTS

CLD - V202 / HEZ, CLD - 1810K / SD and CLD - 150K / HEZ have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		CLD-150K/HEZ	CLD-V202/HEZ	CLD-1810K/SD	
⊙	MAIN board assembly	VWM1308	VWM1308	VWM1325	
NSP	ASCB board assembly	VWX1149	VWX1149	VWX1151	
⊙	VTPB board assembly	VWM1261	VWM1261	VWM1263	
NSP	SCRT board assembly	VWV1220	VWV1220	*****	
NSP	PALB board assembly	VWV1245	VWV1245	VWV1272	
⊙	FRPB assembly	VWM1310	VWM1324	VWM1324	
NSP	FLKB assembly	VWG1370	VWG1377	VWG1377	
⊙	SYPS assembly	VWR1157	VWR1157	VWR1158	
⊙	RFAB assembly	*****	*****	VWV1271	
$\Delta$	Power transformer ( AC220- 230V, 240V )	VTT1062	VTT1062	*****	
$\Delta$	Power transformer ( AC110, 120- 127, 220, 240V )	*****	*****	VTT1105	
$\Delta$	Voltage selector ( AC110, 120- 127, 220, 240V )	*****	*****	VSB-002	
$\Delta$	AC power cord	VDG1028	VDG1028	FDG1013	
$\Delta$	Strain relief	CM-22B	CM-22B	CM-22	
$\Delta$	Fuse ( FU203, 204, 1.25A )	REK-101	REK-101	*****	
$\Delta$	Fuse ( FU201, 202, 3.15A )	REK-105	REK-105	*****	
$\Delta$	Fuse ( FU203, 204, 1A )	*****	*****	REK-080	
$\Delta$	Fuse ( FU201, 202, 3A )	*****	*****	VEK-018	
	PW button	VNK1856	DAC1561	VNK1856	
	Key control button	VNK1859	DAC1562	VNK1859	
	Ten key ( A )	VNK1860	DAC1563	VNK1860	
	Ten key ( B )	VNK1861	DAC1564	VNK1861	
	System key	VNK2129	VNK2129	VNK2128	
	Bonnet assembly- S	VXX1458	DXX1760	VXX1458	
NSP	Bonnet	VNA1135	DNE1155	VNA1135	
	VOL kob ( S )	VNK1857	DNK2248	VNK1857	
	VOL kob ( L )	VNK1858	DNK2249	VNK1858	
	Change knob	VNK1862	DNK2250	VNK1862	
	Sub panel ( S )	VNK1871	DNK2251	VNK1871	
	HP knob	VNK1920	DNK2252	VNK1920	
	Front panel assembly- S	VXX1796	VXX1800	VXX1798	
NSP	Front panel assembly	VXA1888	VXA1912	VXA1887	
	FL panel	VNK1980	DNK2261	VNK1980	
	FL filter	VNK2133	VNK1855	VNK1855	
	Front door assembly- S	VXX1797	VXX1801	VXX1799	
NSP	Front door assembly	VXA1890	VXA1913	VXA1889	
	Select button assembly	VXA1773	DXA1414	VXA1773	
NSP	Rear panel	VNA1280	VNA1306	VNA1287	

Mark	Symbol & Description	Part No.			Remarks
		CLD-150K / HEZ	CLD-V202 / HEZ	CLD-1810K / SD	
NSP	Wire clamp	*****	*****	VECI237	
NSP	Power supply insulation sheet	*****	*****	VECI265	
	Packing case	VHG1240	VHG1243	VHG1239	
	SCART cable	VDE1027	VDE1027	*****	
	Video cable	*****	*****	VDE-056	
	Operating instructions (English)	VRB1077	VRB1078	VRB1077	
	Operating instructions (German / French / Spanish / Italian)	VRD1007	VRD1008	*****	
	Operating instructions (Chinese)	*****	*****	VRC1015	
	Cable case	VHG1200	VHG1200	*****	
NSP	Caution card (EW)	VRM1027	*****	*****	
NSP	Caution card (UC)	VRM1039	*****	VRM1039	
NSP	Caution card	VRR1009	*****	VRR1009	
NSP	Caution card (UC)	*****	*****	VRM1026	

### ASCB board assembly

VWX1151 and VWX1149 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		VWX1149	VWX1151	
	Q305	DTC124EK	*****	
	D301	MTZ5.1C	MTZ10C	
	D303	MTZ5.1C	*****	
	R390	RD1/6PM100J	RD1/6PM101J	

### PALB board assembly

VWV1272 and VWV1245 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		VWV1245	VWV1272	
	D101	1SS254	*****	
	RY101	VSR-005	*****	
	RY102	VSR1006	*****	
	C146, C147	CEANP2R2M50	*****	
	R145	RD1/6PM680J	*****	
	R146	*****	RD1/6PM680J	
	R147, R148	RD1/6PM474J	*****	
	R149, R150	*****	RD1/6PM221J	
	R151, R152	RD1/6PM471J	*****	

### FLKB assembly

VWG1377 and VWG1370 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		VWG1370	VWG1377	
	D112-D114, D116-121	SEL3410ELC05	VEL1017	

**SYPS assembly**

VWR1158 and VWR1157 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		VWR1157	VWR1158	
NSP	C216, C217 CN	VCG-048 *****	RCG-009 VKNI041	

**RFAB assembly**

Mark	No.	Description	Part No.
<b>SEMICONDUCTOR</b>			
		IC1	BA15218N
		D1, D2	1SS254
<b>COILS AND FILTERS</b>			
		L1, L2	LAU2R2M
		F1-F3	VTH1032
<b>CAPACITORS</b>			
		C1, C2, C4, C5	CBAS470M10
		C3	CFTKA393J50
		C6-C8	CKPUYY108N16
<b>RESISTORS</b>			
		R5, R6	RD1/GPM123J
		R7	RD1/GPM472J
		R8	RD1/GPM680J
<b>OTHERS</b>			
	JA1	RF PIN JACK (VHF ADAPTOR OUTPUT) SCREW TERMINAL	YKB1029  VNE1841

## 9. SPECIFICATIONS

### 1. General

System	LaserVision Disc system and Compact Disc digital audio system
Laser	Semiconductor laser wavelength 780 nm
Power requirements	CLD-150K ..... AC 220 - 230 V, 50/60 Hz CLD-1810K ..... AC 110/120 - 127/220/240 V (Switchable), 50/60 Hz
Power consumption	CLD-150K ..... 49 W CLD-1810K ..... 49 W
Weight	CLD-150K ..... 8.6 kg CLD-1810K ..... 8.7 kg
Dimensions	CLD-150K ..... 420 (W) x 427 (D) x 139 (H) mm CLD-1810K ..... 420 (W) x 427.5 (D) x 139 (H) mm
Operating temperature	..... +5°C ~ +35°C
Operating humidity	..... 5% ~ 90% (There should be no condensation of moisture.)

### 2. Disc

#### LaserVision Discs

##### PAL disc

*Maximum playing times	
30 cm active play disc	..... 72 min/both sides
30 cm long play disc	..... 2 hours/both sides
20 cm active play disc	..... 28 min/both sides
	14 min/one side
20 cm long play disc	..... 40 min/both sides
	20 min/one side

##### Spindle motor speed

Active play disc	..... 1,500 rpm
Long play disc	..... 1,500 rpm (inner circumference) to 570 rpm (outer circumference) (For a 30 cm disc)

##### NTSC disc

*Maximum playing times	
30 cm standard play disc	..... 1 hour/both sides
30 cm extended play disc	..... 2 hours/both sides
20 cm standard play disc	..... 28 min/both sides
	14 min/one side
20 cm extended play disc	..... 40 min/both sides
	20 min/one side
Standard play disc	..... 1,800 rpm
Extended play disc	..... 1,800 rpm (inner circumference) to 600 rpm (outer circumference) (For a 30 cm disc)

#### Compact Discs

DISC	..... Diameter: 12 cm, 8 cm, Thickness: 1.2 mm
Rotation direction (pickup side)	..... Counterclockwise
Linear speed	..... 1.2 ~ 1.4m/sec
*Maximum playing time	..... 74 min. 12 cm discs 20 min. 8 cm discs (For stereo playback)

#### Compact Discs with Video

Disc	..... Diameter: 12 cm, Thickness: 1.2 mm
Rotation direction (pickup side)	..... Counterclockwise
Linear speed	..... Audio portion: 1.2 ~ 1.4m/sec Video portion: 11 ~ 12m/sec
*Maximum playing time	..... Video portion: 5 min. (CLV) Audio portion: 20 min. (Digital)

\* Actual playback time differs for each disc.

### 3. Video characteristics

Format	..... PAL/NTSC specifications
Video output	Level ..... 1 Vp-p nominal, sync. negative, terminated impedance ..... 75Ω unbalanced Jack ..... RCA jack

### 4. Audio characteristics

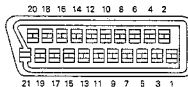
Output level	
During analog audio output	..... 200 mVrms (1 kHz, 40%)
During digital audio output	..... 200 mVrms (1 kHz, -20 dB)
Jacks	..... Both RCA jacks
Number of channels	..... 2

### 5. Other Terminals

Microphone input	..... 2
MIC control input	..... miniature jack
Head phones output	..... 1
Control input/output	..... Both miniature jacks
AUX	..... RCA jacks
VHF adaptor output (Video/Audio)	..... Both RCA jacks with DC jack
AV connector input/output	..... 21-pin connector (CLD-150K only)
AV connector output	..... 21-pin connector (CLD-1810K only)

This connector provides the video and audio signals for connection to a colour video TV monitor (or TV set) which has a "AV CONNECTOR" terminal.

### PIN assignment



PIN no.	1 Audio 2/R out	17 GND
	3 Audio 1/L out	18 Video out
	4 GND	21 GND
	8 Status	

### 6. Accessories

Remote control unit (CU-CLD046)	..... 1
Size "AAA" (IEC R03) dry cell batteries	..... 2
Euroconnector cable (CLD-150K only)	..... 1
Video cord (CLD-1810K only)	..... 1
Audio cord	..... 1
Operating instructions	..... 1
Warranty card	..... 1




## 7. Functions

Remote control unit operations (CU-CLD046)

	Function	Standard play Disc (CAV)	Extended play Disc (CLV)	Compact Disc with Video	Compact Disc
Basic Functions	Single-side play	YES	YES	YES	YES
	Pause	YES	YES	YES	YES
	Stop	YES	YES	YES	YES
	Eject	YES	YES	YES	YES
Search	Fast forward (forward and reverse)	YES	YES	YES	YES
	Chapter/Track skip	YES	YES	YES	YES
	Direct chapter/Track number search	YES	YES	YES	YES
	Frame number search	YES	NO	NO	NO
	Time number search	NO	YES	YES	YES
	Absolute time search	NO	NO	NO	YES
Program	Chapter/Track program play	YES	YES	YES	YES
	Program correction	YES	YES	YES	YES
Repeat	Chapter/Track repeat	YES	YES	YES	YES
	One-side repeat	YES	YES	YES	YES
	Program repeat	YES	YES	YES	YES
Trick play	Still/Step	YES	NO	NO	NO
Time display	Elapsed time display	NO	YES	YES	YES
	Absolute time display	YES*1	NO	NO	YES
	Remaining track time display	NO	NO	YES	YES
	Remaining total time display	YES*1	YES*1	YES	YES
	Total number of selections, total time display	YES*1	YES*1	YES	YES
Others	CX system ON/OFF	YES*2	YES*2	NO	NO
	AUTO DIGITAL/ANALOG switch	YES*3	YES*3	NO	NO
	Audio channel selection (Stereo, 1/L, 2/R)**4	YES	YES	YES	YES

\*1 Only discs with TOC

\*2 Valid for analog audio playing a disc with the  mark.

\*3 Can only be used with NTSC discs with digital audio tracks.

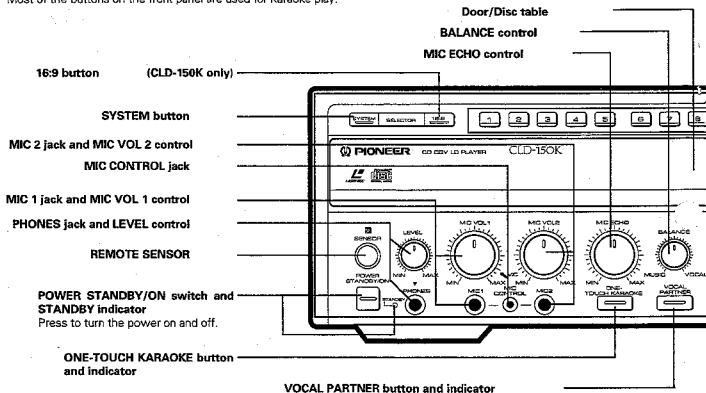
\*4 Only NORMAL mode

**NOTE:**

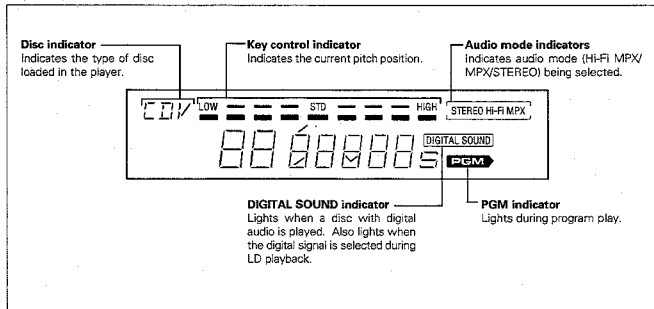
The specifications and design of this product are subject to change without notice, due to improvements.

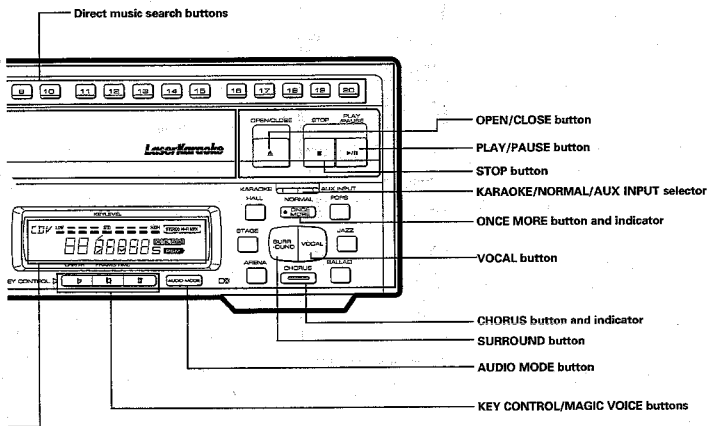
## 10. PANEL FACILITIES

- Most of the buttons on the front panel are used for Karaoke play.



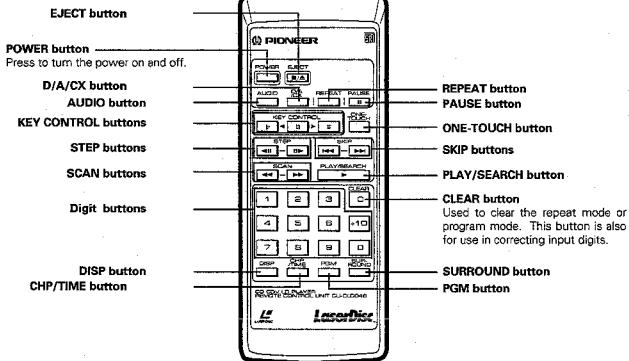
### Display window



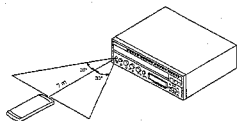


The illustration shows CLD-150K.

- Remote control buttons with the same names or marks as buttons on the front panel of the player control the same operations as the corresponding front panel buttons.
- Most of the buttons on the remote control unit are used for Disc playback explained from page 26 onwards.



When operating the remote control unit, point the unit's infrared signal transmitter at the remote control receiver (SENSOR) on the front panel of the player. The remote control unit can be used within a range of about 7 meters (23 feet) from the remote sensor, and within angles of up to about 30 degrees.



**NOTE FOR USING THE REMOTE CONTROL UNIT**

• If a plug is connected to the CONTROL IN terminal at the rear of the player, remote control operations cannot be done with the remote control unit aimed at the player's remote control sensor. Aim the remote control unit at the AV amplifier or the component display's sensor instead.

- If there is any obstacle between the remote control unit and the player, or if the unit is held at too large an angle relative to the front panel of the player, the signal from the remote control unit will fail to reach the remote sensor.
- If the player is operating in the vicinity of other appliances generating infrared rays, or if other remote control devices using infrared rays are used near the player, the player may operate improperly. Conversely, if the player's remote control unit is operated in the vicinity of other appliances which use an infrared remote control device, the other appliance may operate improperly. If this should happen, change the place of installation so that improper operation does not occur.
- If the range of operation of the remote control unit becomes too short, replace the batteries.
- When the unit is not to be used for a long period of time (more than one month), remove the batteries to prevent them from leaking inside the compartment. If leakage occurs, wipe up the liquid inside the compartment before inserting new batteries.
- Do not place books or other objects on the remote control unit, since they might depress the buttons and run down the batteries.
- If the remote control sensor window is in a position where it receives strong light such as sunlight or fluorescent light, control may not be possible.