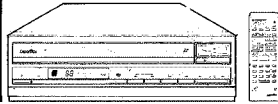


# Service Manual



ORDER NO.  
ARP 1373

## COMPACT DISC/LASERVISION PLAYER CLD-1010

NTSC



COMPACT  
disc  
DIGITAL AUDIO

MODEL CLD-1010 COMES IN TWO VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Power requirement	Export destination
KUC	AC 120 V only	U.S.A., Canada
S/G	AC 110 V, 120 V, 220 V, 240 V (switchable)	U.S. Military

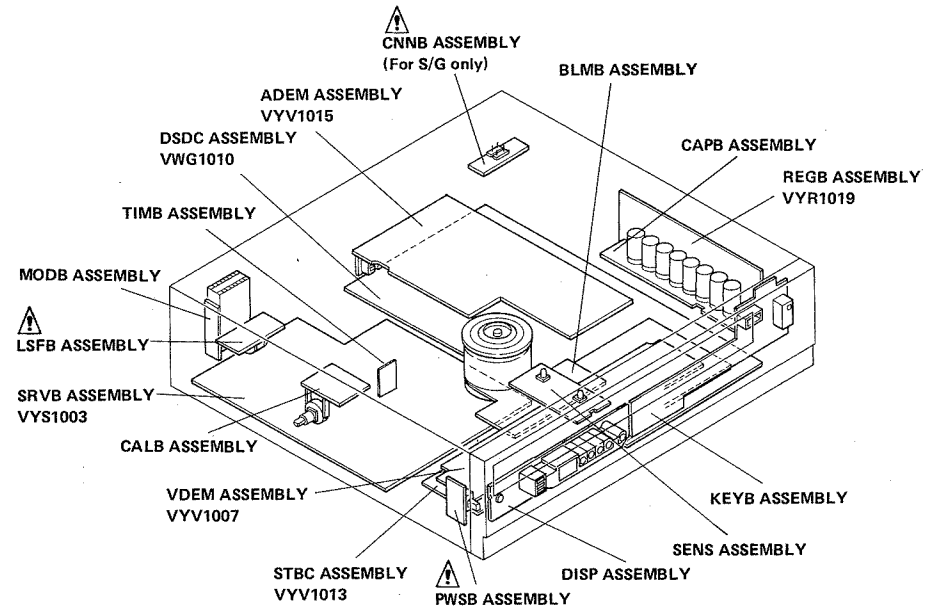
- This service manual is applicable to the KUC and S/G types
- As to the S/G type, please refer to page 109.

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CLD-1010

### 7. P.C. BOARDS LOCATION



VWG1010	DSDC	(Digital Sound Demodulator Board)
VYS1003	SRVB	(Servo Board)
VYV1013	STBC	(Spindle & Time Base Corrector)
VYV1007	VDEM	(Video Demodulator)
VYV1015	ADEM	(Audio Demodulator)
	CAPB	(Capacitor Board)
	SENS	(Sensor Board)
VYR1019	REGB	(Regulator Board)
	LSFB	(Line Surge Filter Board)
	PWSB	(Power Switch Board)
	DISP	(Display Board)
	MODB	(Modulator Board)
	CALB	(Carry Loading Board)
	BLMB	(Brushless Motor Board)
	KEYB	(Key Board)
	TIMB	(Tilt Motor Board)
	CNNB	(Connection Board)

**7. Functions**

Function that can be operated with remote control unit (CU-CLD004)

Functions	Laser/Video Disc		Compact Disc
	Standard Play Disc	Expanded Play Disc	
PLAY	YES	YES	YES
PAUSE	YES	YES	YES
STOP	YES	YES	YES
REPEAT	YES	YES	YES
FUNCTION SELECTION	YES	YES	YES
AUTOMATIC PAUSE	YES	YES	YES
AUDIO CHANNEL SELECTION	YES	YES	YES
(Stereo, T.L./Z/R)	YES(1)	YES(1)	—
AUTO DIGITAL/ANALOG	YES(2)	YES(2)	—
STILL/STEP	YES	NO	—
CX SYSTEM ON/OFF	YES	NO	—
CHAPTER SKIP (Forward, Reverse)	YES(3)	YES(3)	—
MULTI-STEP (Forward, Reverse)	YES	NO	—
MULTI-STEP (Variable in 8 steps)	—	—	—
MULTI SPEED DISPLAY	YES	NO	—
TIME NUMBER DISPLAY	YES	YES	—
CHAPTER NUMBER DISPLAY	YES(3)	YES(3)	—
TIME NUMBER SEARCH	YES	YES	—
CHAPTER NUMBER SEARCH	YES(3)	YES(3)	—
CHAPTER REPEAT	YES(3)	YES(3)	YES
CHAPTER REPEAT MEMORY	YES	YES	YES
SIDE REPEAT	YES	YES	YES
PROGRAM REPEAT	YES(3)	YES(3)	YES
PROGRAM DISPLAY	YES(3)	YES(3)	YES
PROGRAM EDIT	YES(3)	YES(3)	YES
[SKIP SELECTION]	—	—	—
TIME SEARCH	—	—	—
TRACK NUMBER SEARCH	—	—	—
(DIRECT SELECTION)	—	—	—
TRACKTIME DISPLAY	—	—	—
TOTAL TRACKS/TOTAL TIME DISPLAY	—	—	—

NOTE:

- (1) Can only be used with discs with digital sound tracks.  
 (2) Valid for analog sound when playing a disc with the CX mark.  
 (3) Available for playback of disc on which chapter numbers are recorded.

**Other Functions**

- Automatic start (Possible for both CD and LV.)
- Automatic picture stop (LV.) Possible only for discs on which picture stop codes are recorded.)

NOTE:

Specifications and design subject to possible modifications without notice, due to improvement.

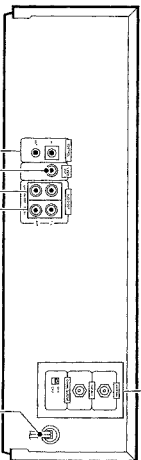
**3. PANEL FACILITIES**

[REAR PANEL]

**ANTENNA terminal (75 Ω F-type jack)**  
 Connect the coaxial cable (75 Ω) from the VHF TV antenna to this terminal.

**VHF OUT terminal (75 Ω F-type jack)**

Connect this terminal to your TV set's VHF antenna terminal.



**Power cord**  
 Connect this to a power outlet.

**ABOUT THE AUDIO OUTPUT TERMINALS**

This player is equipped with two sets of audio output terminals. As shown in the table below, the CD/LV terminals are able to output all the audio signals that can be played back by the player.

Type of Disc	Playback Sound	Output Terminals
Compact Disc	Digital	CD/LV
Laser/Video Disc (Discs with the  mark)	Digital	CD/LV* Can be selected with the AUTO DIGITAL/ANALOG key on the remote control unit.
Laser/Video Disc (Discs with the  mark)	Analog	CD/LV* (LV/Analog)
Compact Disc	Analog	CD/LV (LV/ANALOG)

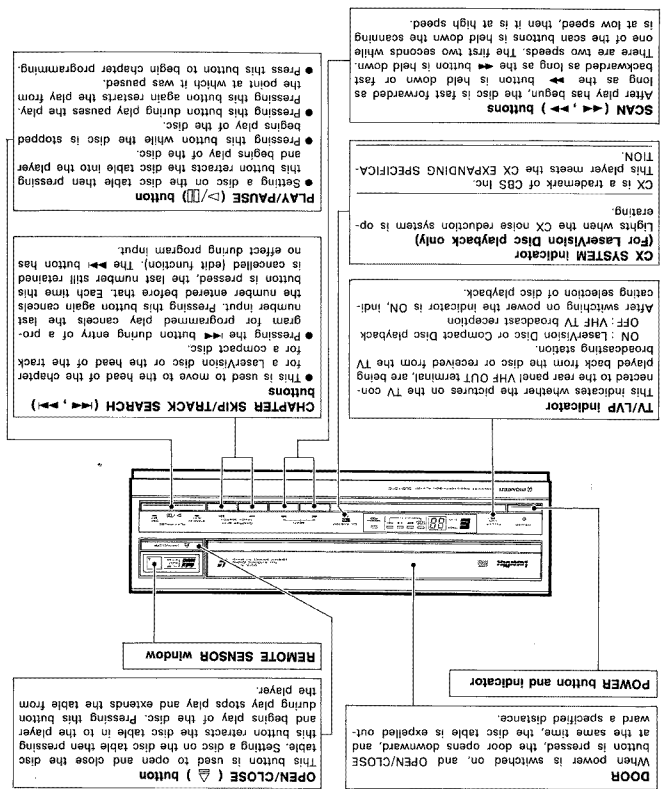
**For ordinary operation, connect the CD/LV terminals to your amplifier.**

The LV (ANALOG) terminals are provided for developmental use. They do not need to be used for ordinary operation.

NOTE:

The sound output from the VHF output terminal is analog sound. When a TV set is connected to the VHF output terminal, the sound will be converted to digital sound or to the digitally recorded sound on Laser/Video with Digital Sound Discs.

PLAYER FRONT PANEL

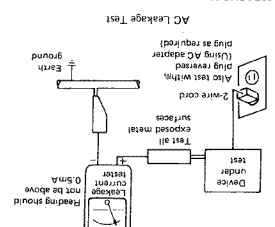


1. SAFETY INFORMATION

**1. SAFETY PRECAUTIONS**  
The following check should be performed for the customer and service technician.

**LEAKAGE CURRENT CHECK**  
Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 2292 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screws, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance into a 120V AC GND outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.

**1. SAFETY PRECAUTIONS**  
ANY MEASUREMENTS NOT WITHIN THE LIMITS OF THE LINE ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

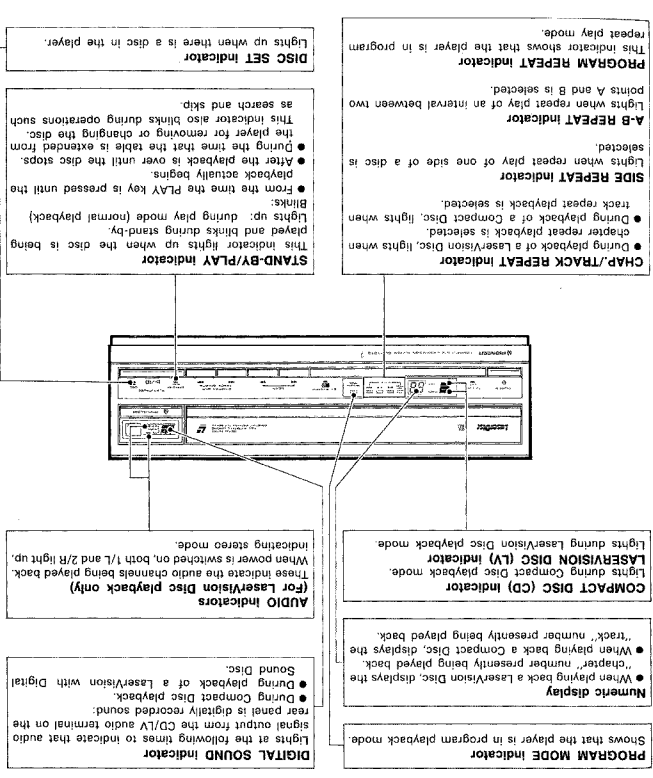


2. PRODUCT SAFETY NOTICE

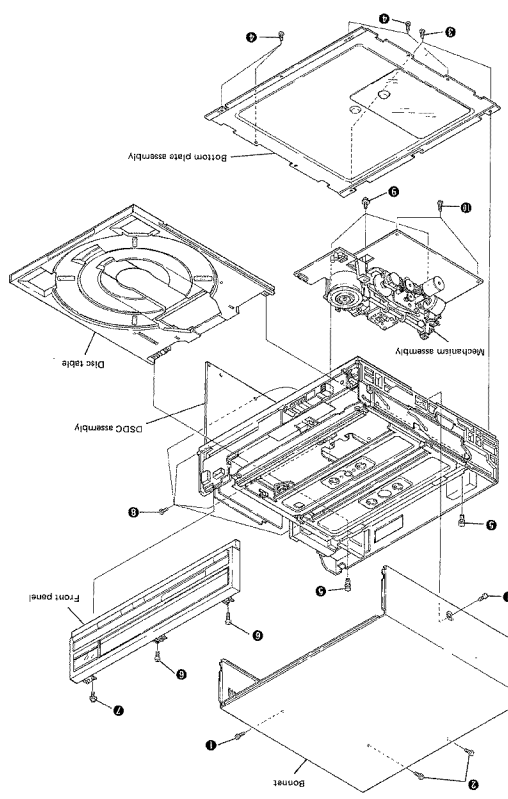
Many electrical and mechanical parts in the appliance have special safety related characteristics. There are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Re-termination points which have these special safety characteristics are identified in this Service Manual.  
Electrical components having such features are identified by marking with a Δ on the schematics and on the parts list in this Service Manual.  
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the PIONEER Service Manual may be obtained at a nominal charge from PIONEER.  
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. SPECIFICATIONS

- 1. General**
- System: LaserVision Disc system and Compact Disc digital audio system
  - Laser: Semiconductor laser wavelength 780 nm
  - Power requirements: U.S. and Canadian models: AC 120 V, 50/60 Hz, AC 110V/220/240 V (switchable), 50/60 Hz U.S. and Canadian models: 49 W
  - Power consumption: U.S. and Canadian models: 49 W
  - Dimensions: 115 kg (25 lb 6 oz) 420W x 411(D) x 120(H) mm 16.9(16)W x 16.3(16)D x 4.7(4.7)H in
  - Operating temperature: 5°C — 45°C (41°F — 95°F)
  - Operating humidity: 5% — 90% (There should be no condensation of moisture.)
  - LaserVision Discs
    - Maximum playing times: 1 hour/both sides, 12 inch extended play disc, 1 hour/both sides
    - Rotation direction (pickup side): Counterclockwise
    - Linear speed: 1.2 - 1.4 m/sec
    - Maximum playing time: 80 min or more (For stereo playback)
  - Video characteristics
    - NTSC specifications
    - Video output: Level: 1 Vp-nominal, sync. negative, terminated Impedance: 75 Ω unbalanced RCA jack Terminal: Channel 3 or 4 (switchable) Impedance: 75 Ω unbalanced Terminal: F-type jack
  - U.S. Military model Remote control unit (CU-CLD004) Size: "AAA" (IEC R03) dry cell battery RF antenna cable Video connecting cord Antenna adaptor (75 Ω/300 Ω → 75 Ω F-type plug) (F 75 Ω/300 Ω → 75 Ω F-type plug) Operating instructions Warranty card
- 2. Accessories**
- U.S. and Canadian models Remote control unit (CU-CLD004) Size: "AAA" (IEC R03) dry cell battery RF antenna cable Video connecting cord Antenna adaptor (75 Ω/300 Ω → 75 Ω F-type plug) (F 75 Ω/300 Ω → 75 Ω F-type plug) Operating instructions Warranty card
- 3. Video characteristics**
- Actual playback time differs for each disc.
  - Maximum playing time: 80 min or more (For stereo playback)
  - Linear speed: 1.2 - 1.4 m/sec
  - Rotation direction (pickup side): Counterclockwise
  - Disc Diameter: 120 mm, Thickness: 1.2 mm
  - Compact Discs
    - Standard play disc: 1,800 rpm (inner circumference) to 600 rpm (outer circumference)
    - Expanded play disc: 1,800 rpm
    - Spindle motor speed: 8-inch standard play disc: 28 min/both sides, 8-inch extended play disc: 40 min/both sides
- 4. Audio characteristics**
- Output level: 200 mVrms (RMS), 40% (1kHz, 40%) During digital audio output: 200 mVrms (1kHz, 40%) During analog audio output: 200 mVrms (1kHz, 40%) (For LV analog audio output, both RCA jacks)
  - Terminal: 1/4, 2/8 and stereo selections are possible) Both RCA jacks
  - Number of channels: 2
  - Digital Audio Characteristics
    - Frequency response: 1 Hz - 20 kHz (± 0.5 dB) (IEA)
    - S/N ratio: 88 dB (IEA)
    - Channel separation: 32 dB (IEA)
    - Total harmonic distortion: 0.0005% (IEA)
    - Limit of measurement: ± 0.001% WPEAK (IEA)
    - View and filter direction: 0.0005% (IEA)
  - LV is based on EIAJ.
- 5. Other Terminals**
- Control input/output: Both miniature jacks
- 6. Accessories**
- U.S. and Canadian models Remote control unit (CU-CLD004) Size: "AAA" (IEC R03) dry cell battery RF antenna cable Video connecting cord Antenna adaptor (75 Ω/300 Ω → 75 Ω F-type plug) (F 75 Ω/300 Ω → 75 Ω F-type plug) Operating instructions Warranty card



### 4. DISASSEMBLY



- [Bonnet]**
1. Remove the two screws ① on the front.
  2. Remove the three screws ② on the rear.
- [Bottom Plate]**
1. Remove the two screws ③.
  2. Remove the four screws ④.
- [Disc Table]**
1. Remove the bonnet.
  2. Switch on the power, press the OPEN/CLOSE key ( ⑦ ), then with the disc table up, switch off the power.
  3. Remove the two rivets ⑤.
  4. Switch the power back on. When the disc table is fully extended, pull it away gently.
- [Front Panel]**
1. Remove the two screws ⑥ and a screw ⑦.
  2. Remove the two screws ⑧ and a screw ⑨.
- [Mechanical Assembly]**
1. Remove the four screws ⑩ then raise the DSDC assembly.
  2. Remove the three screws ⑪ and remove the two screws ⑫.
- Note: The details on how to replace the Pick-up assembly will be found on Page 68.

### • Disassembly Procedure

### [REMOTE CONTROL UNIT]

The accessory remote control unit can be used during playback of both LaserVision discs and Compact Discs.

- The functions shown in black are used for LaserVision Discs only.
- Compact Discs only.
- The functions shown in green are used for LaserVision Discs only.

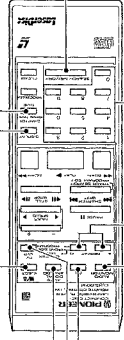
Keys appearing in other colors have the same functions for both kinds of disc.

**CX Key**  
This is the on/off key for the CX noise reduction system.

**AUDIO MONITOR KEY**  
Switches the audio channel. When the player is first turned on, the audio is stereo and the 1/1 and 2/1r AUDIO indicators are both lit up. Each time this key is pressed, the audio channel moves one step through the sequence: 1/1 → 2/1r → Stereo → 1/1.

**REPEAT (A, B) KEYS**  
These are used for repeat playback.

**DIGIT (0 - 9) KEYS**  
This is used for programs for programmed play. (Memory key function) This key is also used to input programs for programmed play.



**TV/LVP KEY**  
When the VHF antenna is connected to the TV set via the player, this key switches between disc playback and VHF TV broadcast reception.

**AUTO DIGITAL/ANALOG KEY**  
Pressing this key selects the audio output terminals on the back of the player during playback of a LaserVision disc with digital audio. This key has no effect for playback of compact discs or LaserVision discs without digital audio.

**EJECT (▲/▼) KEY**  
This key is used to stop playback and remove the disc. The first time this key is pressed stops the rotation of the disc. The second time this key is pressed extends the disc table from the player. If there is no disc on the disc table, the disc table is extended out from the player the first time this key is pressed.

**DISPLAY KEY**  
• For a LaserVision disc, the display of the chapter or frame playing or resuming the screen for a LaserVision disc, the screen will change to show the REMAIN time, the TOTAL time, and back to the REMAIN time respectively.

**CHAPTER/FRAME-TIME, TIME KEY**  
This key is used to call up the part of the disc that you wish to see or listen to (search).

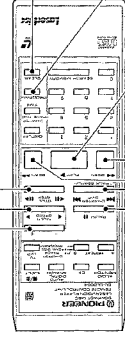
**PAUSE (||) KEY**  
When this is pressed, the play-back is temporarily interrupted. To release the pause mode, press the PAUSE key again.

**SEARCH SKIP/TRACK (◀▶) KEY**  
CHAPTER SKIP/TRACK SEARCH button on the front of the player. This key has the same functions as the CHAPTER SKIP/TRACK PROGRAM EDIT (◀▶) key.

**SCAN (◀▶, ▶▶) KEY**  
This is used for fast forward and fast backward playback.

**PLAY (▶) KEY**  
• Setting a disc on the disc table then pressing this key starts playback.  
• Pressing this key when the disc is stopped starts playback.  
• Pressing this key when the player and begins play of the that chapter program.

**PROGRAM KEY**  
This key is used for programmed playback, which is playback in the order of chapters for a LaserVision disc or the order of tracks for a compact disc is changed.



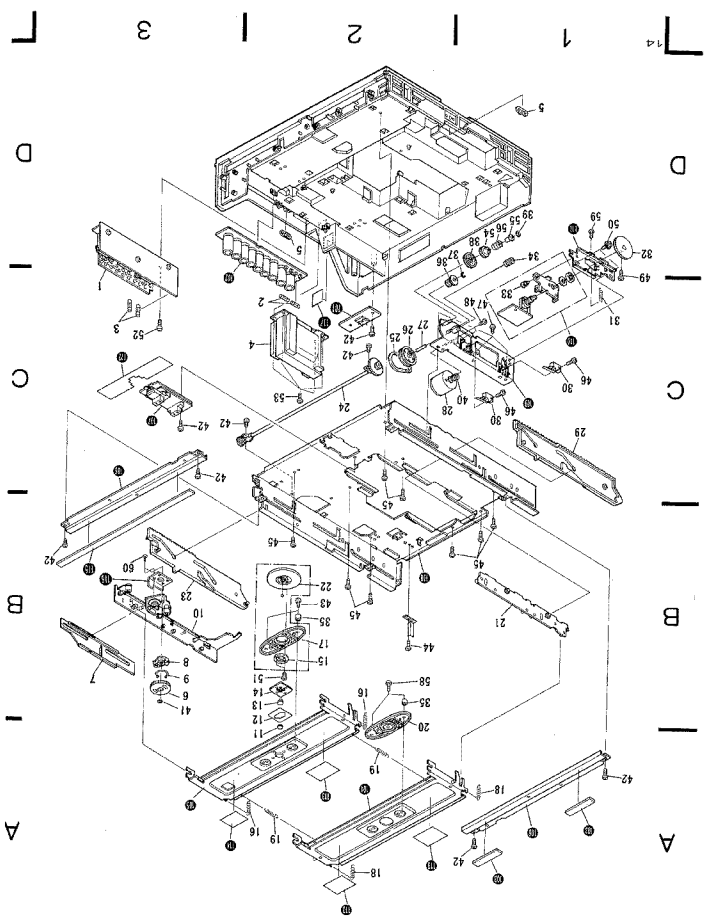
**STOP KEY**  
This key is used for setting the speed for multi-speed playback.

**MULTI-SPEED (▶, ▶▶) KEY (LaserVision disc)**  
Pressing the ▶ side of this key during playback of a standard disc plays back the disc in the reverse direction at the present speed. Pressing the ▶▶ side of this key during playback of a LaserVision disc plays back the disc in the reverse direction at the present speed. Pressing the ▶▶ side of this key has no effect for extended play discs and "CLV" discs.

**STILL/STEP (◀, ▶▶) KEY (LaserVision disc)**  
Pressing either end of this key causes still frame playback. Then, pressing the ▶▶ side of this key advances the playback one frame. This key reverses the playback one frame.

**CLEAR KEY**  
The CLEAR key is used in the following cases:  
• To stop repeat playback, to interrupt a search, or to correct input mode with the DIGIT keys. (Pressing the CLEAR key and holding it down ends numeric input mode itself.)  
• To erase the last step of the program. (Pressing the CLEAR key and holding it down ends numeric input mode itself.)  
• To end program playback.

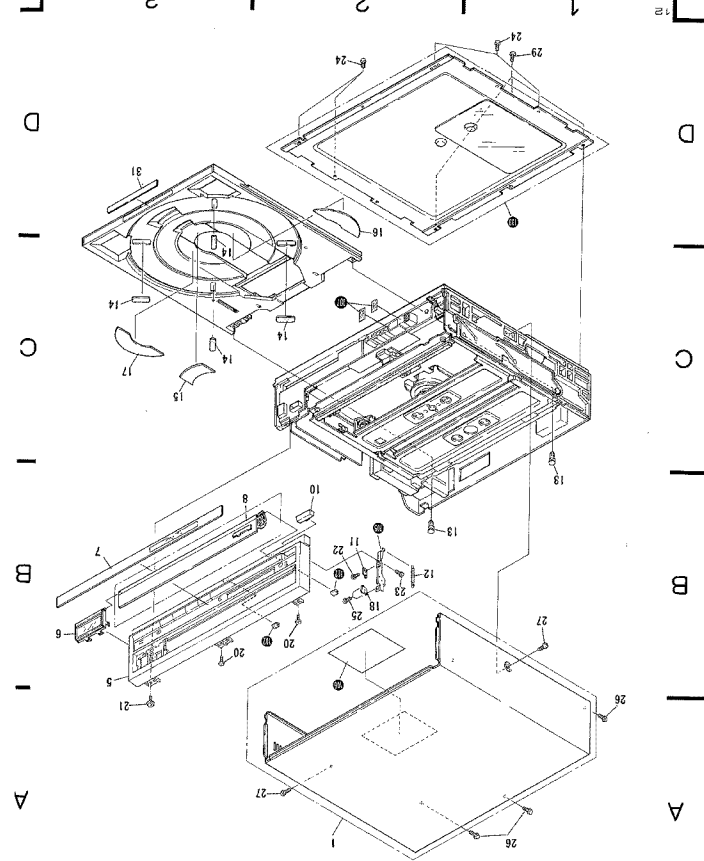
**SEARCH/MEMORY KEY**  
This is used for:  
• Execution of search operation.  
• For memory repeat operation. (Memory key function) This key is also used to input programs for programmed play.



● Parts List of Top View

Mark	No.	Part No.	Description
	1	V7A1019	REG assembly
	2	V8K1025	Frame (RM) (RU23, RU104)
	3	V8K1025	Frame (RM) (RU23, RU104)
	4	VTT-078	Power transformer (T1)
	5	V8A-006	Welding nut
	6	V8L1029	Gear (E)
	7	V8L1024	Flack
	8	V8L1030	Pinion (E)
	9	V8H1007	Gear spring
	10	V8A1063	Roller plate (R) assembly
	11	V8B-129	Rubber sheet
	12	V8C-262	Holder securing tape
	13	V8L1018	Ball holder
	14	V8L-689	Holder
	15	V8L-500	Clamp head
	16	V8H-162	L.D. damper spring
	17	V8L-612	Compass bar
	18	V8H-179	CD damper spring
	19	V8H-177	Holder spring
	20	V8A1067	CD clip damper assembly
	21	V8A1062	Roller plate (L) assembly
	22	V8L-583	Disc clamp
	23	V8L-583	Flack gear (R)
	24	V8A1028	Synchronized gear assembly
	25	V8B-125	Synchronized belt (L)
	26	V8A-477	Pulley (L) assembly
	27	V8L1020	Gear (A) shaft
	28	V8L-582	Leading motor (MB)
	29	V8L-582	Slide switch (SB, S7)
	30	V8K-010	Slide switch (SB, S7)
	31	V8H-181	RE spring
	32	V8L1036	Roller gear
	33	V8C-143	Plastic rivet
	34	V8L1020	Gear (A)
	35	V8L-345	Speaker
	36	V8L1047	Gear (C)
	37	V8C003	E ring
	38	V8L1045	W Gear (A)
	39	V8Z003	E ring
	40	V8L1051	Motor pulley
	41	W736C000025	Washer
	42	PM820P080CU	Screw
	43	PM820P080FMC	Screw
	44	BMZ20P080FMC	Screw
	45	BPZ20P080CU	Screw
	46	BMZ20P080FMC	Screw
	47	BPZ20P080CU	Screw
	48	PM820P080FMC	Screw
	49	BPZ20P080FMC	Screw
	50	PM820P080CU	Screw
	51	BPZ20P080FMC	Screw
	52	BPZ20P080CU	Screw
	53	BPZ20P100CU	Screw
	54	V8L1046	W Gear (B)
	55	V8L1039	W Gear (A) shaft
	56	V8H1017	W Gear spring
	57	PM820P080FMC	Screw
	58	PM820P080FMC	Screw
	59	PM820P080FMC	Screw
	60	BPZ20P080FMC	Screw
	101	CNNB assembly	
	102	CAPB assembly	
	103	Rubber cushion	
	104	Chimney holder assembly	
	105	Clamp holder	
	106	Bridge	
	107	SENB assembly	
	108	Sub chassis	
	109	M holder assembly	
	110	CALB assembly	
	111	RE holder	
	112	Black sheet	
	113	Dump cushion (K)	
	114	Dump cushion (L)	
	115	Speaker	
	116	Flack holder	
	117	Fuse caution label	

5. EXPLODED VIEWS AND PARTS LIST

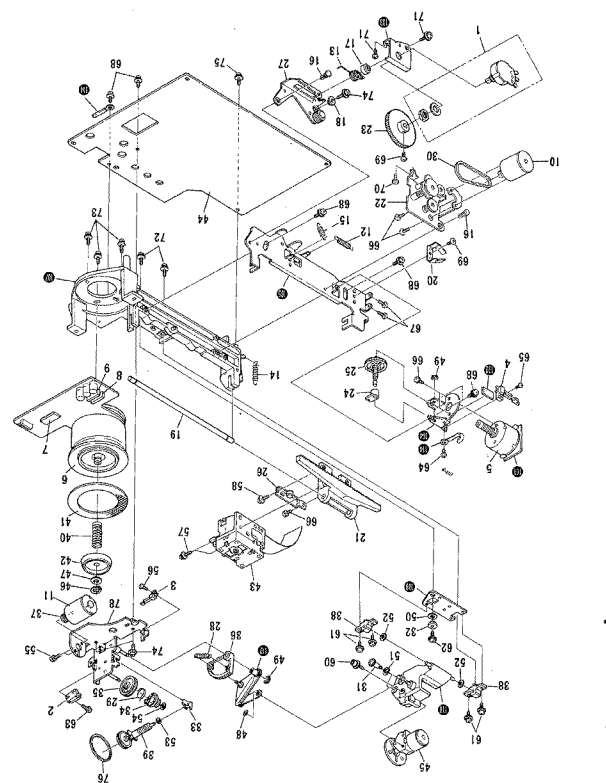


● Parts List of Exterior and Front View

Mark	No.	Part No.	Description
	1	V8A1054	Bottom assembly
	2	V8K1041	Front panel assembly-S
	3	V8K1041	Front panel assembly-S
	4	V8K1041	Front panel assembly-S
	5	V8K1041	Front panel assembly-S
	6	V8K1028	Indicator panel assembly
	7	V8K1028	Display Panel
	8	V8K1049	Front door assembly
	9	V8K1071	Power button
	10	V8K-012	Door switch
	11	V8H1010	Door spring
	12	V8C-261	Plastic rivet
	13	V8C-273	Disc Pad
	14	V8E1021	Sheet (F)
	15	V8E1022	Sheet (R)
	16	V8E1023	Sheet (R)
	17	V8A1053	Dumper assembly
	18	ABZ20P080FUC	Screw
	19	ABZ20P080FUC	Screw
	20	ABZ20P080FUC	Screw
	21	AMZ20P080FUC	Screw
	22	AMZ20P080FUC	Screw
	23	AMZ20P080FUC	Screw
	24	AMZ20P080FUC	Screw
	25	AMZ20P080FMC	Screw
	26	BPZ20P080FMC	Screw
	27	BPZ20P080FMC	Screw
	28	BPZ20P080FMC	Screw
	29	BPZ20P080FMC	Screw
	30	BPZ20P080FMC	Screw
	31	V8W1015	Caddy label
	101	Cushion	
	102	Cushion	
	103	Bottom board assembly	
	104	Black sheet	
	105	SW holder	
	106	Black sheet	
	107	Cushion	

NOTES:  
 ● Parts without part number cannot be supplied.  
 ● The Ⓢ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical design.  
 ● For your parts Stock Control, the fast moving items are indicated with the marks \*.  
 ● \* GENERALTY MOVES FASTER THAN \*  
 This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.  
 ● Parts marked by Ⓢ are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

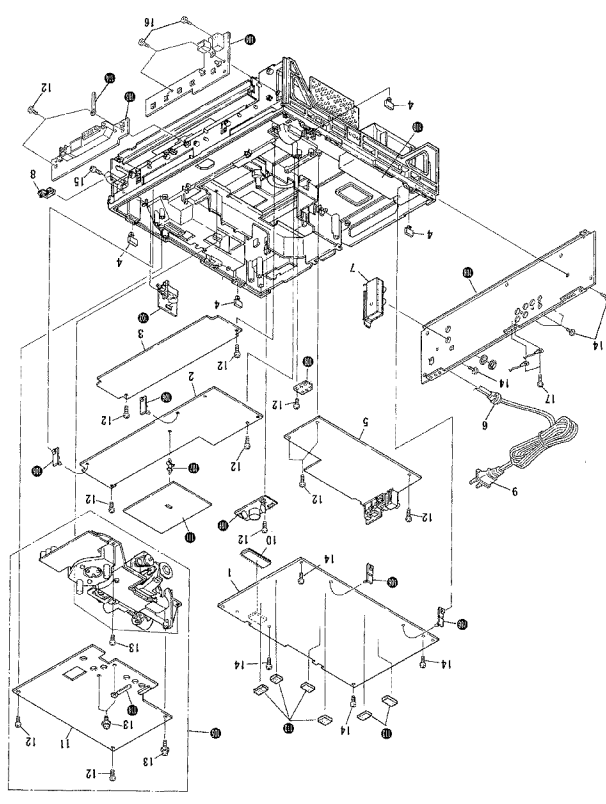
5.4 MECHANISM ASSEMBLY VIEW



● Parts List of Mechanism View

Mark No.	Part No.	Description
** 1	VCS-017	Position motor (V71)
** 2	VCS-010	(CD MOTOR RELEASE) (S5)
** 3	VSK-014	Leaf switch
** 4	IPSK-003	Leaf spring (L1M17) (S3)
** 5	VXM-003	Tilt motor (LM)
** 6	VXM-063	Spindle motor (L.D, M1)
** 7	PA3-016	Control IC (IC1)
** 8	STAC20A	Transformer array (C10)
** 9	STAA30A	(L.D SPINDLE MOTOR) (L11)
** 10	VXM-004	LOAD motor (for SLDR) (M2)
** 11	VXM1070	Smag motor (MS)
** 12	VBM-138	Slider motor spring
13	VBM-140	Torsion spring
14	VBM-142	Tilt spring
15	VBM1011	Positioning motor spring
16	VBC-143	Plastic hinge
17	VLL-310	Pin nut
18	VLL-311	Nut
19	VLL1032	Carriage shaft
20	VNE-701	Switch adjustment board
21	VNL-588	Slider
22	VXA1071	Gear box assembly
23	VNL1036	Positioning gear
24	VNV-036	Tilt nut
25	VXA-387	Tilt shaft assembly
27	VXA-418	Pin holder assembly
28	VBM-166	Gear spring
29	VEM-167	Pinion spring
30	VEM1024	Pinion
31	VLL-163	Screw
32	VLL-371	Color
33	VNL-291	Shaft holder
34	VNL-616	Pinion (A)
35	VNL-616	Pinion (B)
36	VNL-617	Arm gear
37	VNL-635	Motor pulley
38	VNV-038	Holder
39	VXA-471	Worm gear assembly
40	VBM-141	Centering spring
41	VNV-037	Centering hub
42	VNV-037	Centering knob
43	VW1010	Peak-up assembly
44	VXK1047	Spindle motor assembly (CD, M2)
45	VCS1003	SRFB assembly
46	VCS081	Washer
47	WAB2N120M020	Washer
48	WT210050080	Washer
49	VRC-FUC	E ring
50	VRC-023	Spring (4φ)
51	VRC-023	Spring (4φ)
52	WAS1D0540680	Washer
53	WAS1D040025	Washer
54	WT341000080	Washer
55	AM2000020FMC	Screw
56	PM200040FMC	Screw
57	PM2828060FMC	Screw
58	AM2269707FMC	Screw
59	VLL-378	Screw
60	AM300050FCU	Screw
61	AM230080FMC	Screw
62	AM230080FMC	Screw
63	AM220080FCU	Screw
64	AM220080FCU	Screw
65	PM200050FMC	Screw
66	PM200040FMC	Screw
67	PM2828060FMC	Screw
68	PM230080FMC	Screw
69	PM230080FMC	Screw
70	PM200080FMC	Screw
71	PM200100FMC	Screw
72	VLL-378	Screw
73	VLL-377	Screw
74	PM200080FCU	Screw
75	PM200080FCU	Screw
76	VER-126	Synchronized belt S
77	VXA-415	Base assembly
101		TMB assembly
102		Tripart bushing
103		FB support
104		Tilt holder
106		Tilt base
107		Mechanism chassis
108		Slide plate
110		Motor base
111		Arm assembly
112		Arm assembly
114		Cord clasper

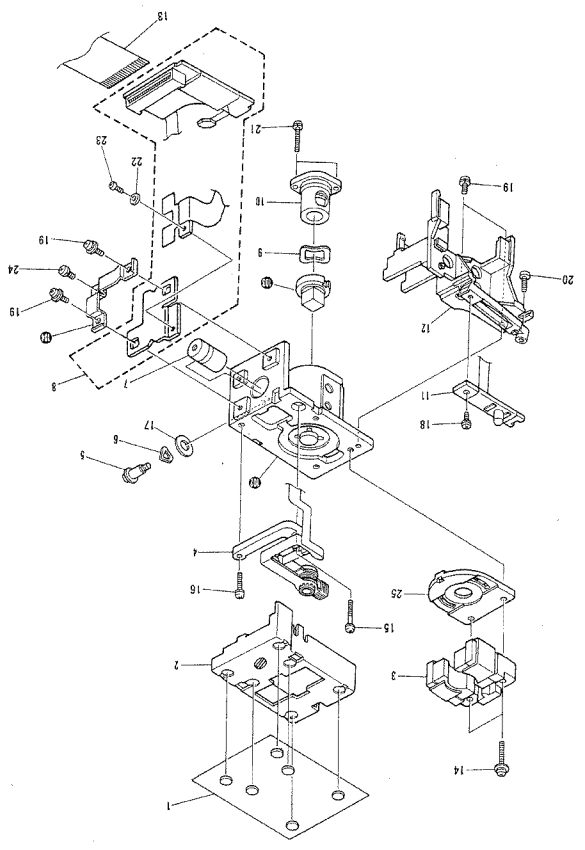
5.3 BOTTOM VIEW



● Parts List of Bottom View

Mark No.	Part No.	Description
1	VWG1010	DSCD assembly
2	VV1013	STFC assembly
3	VV1007	VDEM assembly
4	VER1001	Rubber foot
5	VV1016	ADCM assembly
6	CM-22C	Cord stopper
7	VV1016	MDB assembly
8	VNK1068	SW joint
9	VDC-038	AC Power cord
10	VVM1029	EP ROM (IC111)
11	VV1003	SRFB assembly
12	PM230080FCU	Screw
13	PM230080FZK	Screw
14	PM230080FZK	Screw
15	PM230080FCU	Screw
16	PM230080FCU	Screw
17	PM230080FCU	Screw
101		LSPB assembly
102		PWSB assembly
103		DISB assembly
104		KCEB assembly
105		Medium assembly
106		P.C.B hinge
107		PC support
108		Ear plate
110		Base
111		Shield sheet
113		P.C.B cushion
114		Cord clasper

5.6 PICK-UP ASSEMBLY VIEW



● Parts List of Pick-up Assembly

Mark	No.	Part No.	Description
	1	VLD-034	PD
	2	VNH-057	Actuator cover
	3	VGX-071	Magnetic trans assembly
	4	VXK-009	Screw B
	5	VLL-282	Wave washer (4)
	6	PBE-020	Wave washer (8)
	7	VXK-084	Multi lens assembly
	8	VXK-1002	PC board assembly
	9	PBE-022	Wave washer (8)
	10	VXK1001-A	Sensor assembly
	11	VXK1001-A	LD assembly
	12	VNH-056	FD spring N
	13	VDA-108	Optical body
	14	PBM20P120FMC	FD spring N
	15	PMA20P140FMC	Screw
	16	PMA20P080FMC	Screw
	17	WA40100R050	Weather
	18	PZ20P050FMC	Screw
	19	PZ20P050FMC	Screw
	20	PZ20P050FMC	Screw
	21	PMA20P80FMC	Screw
	22	WA20P050FMC	Weather
	23	PMA20P040FMC	Screw
	24	PMA20P60FMC	Screw
	25	VGX1005	Wave length plate assembly
	102		Optical body
	103		FD spring N
	104		FD spring N

**INSTALLING THE HEAD ASSEMBLY**

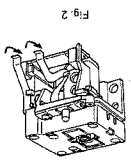
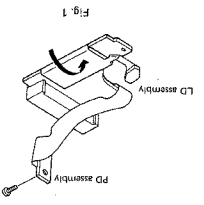
In order to make sure that flexible parts are supported in such a way that they lie flat, use the following procedure to install the PD-head assembly.

1. Use glue and double-sided tape folded in the manner indicated by the arrow in Figure 1 to install the PD-head assembly.

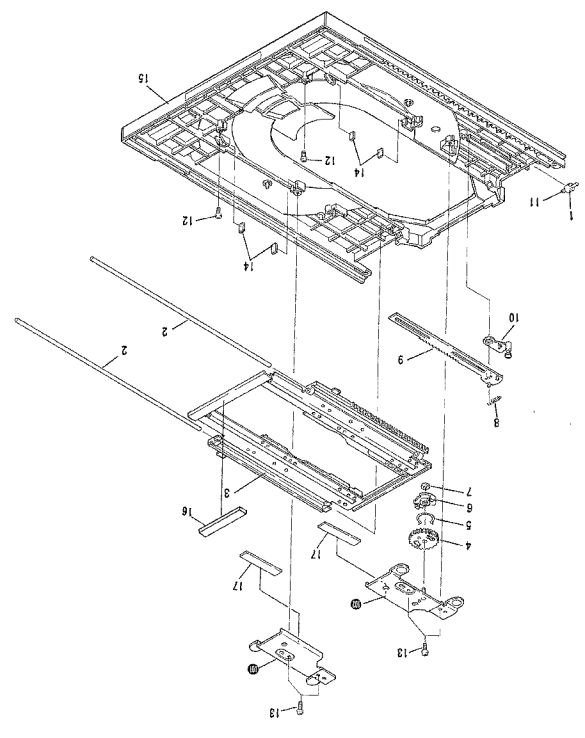
2. With the flexible part bent as shown in Figure 1, install it on the Pick-up.

3. Solder the flexible circuit board that connects the TRKG and FOCs coils and the disc tilt detection board on the Head assembly as shown in Fig. 2.

Note:  
The copper foil on the flexible circuit board can not withstand heat very well, so solder as quickly as possible. Touch the soldering iron to the Head assembly, not to the flexible circuit board.



5.5 CARRY ASSEMBLY VIEW



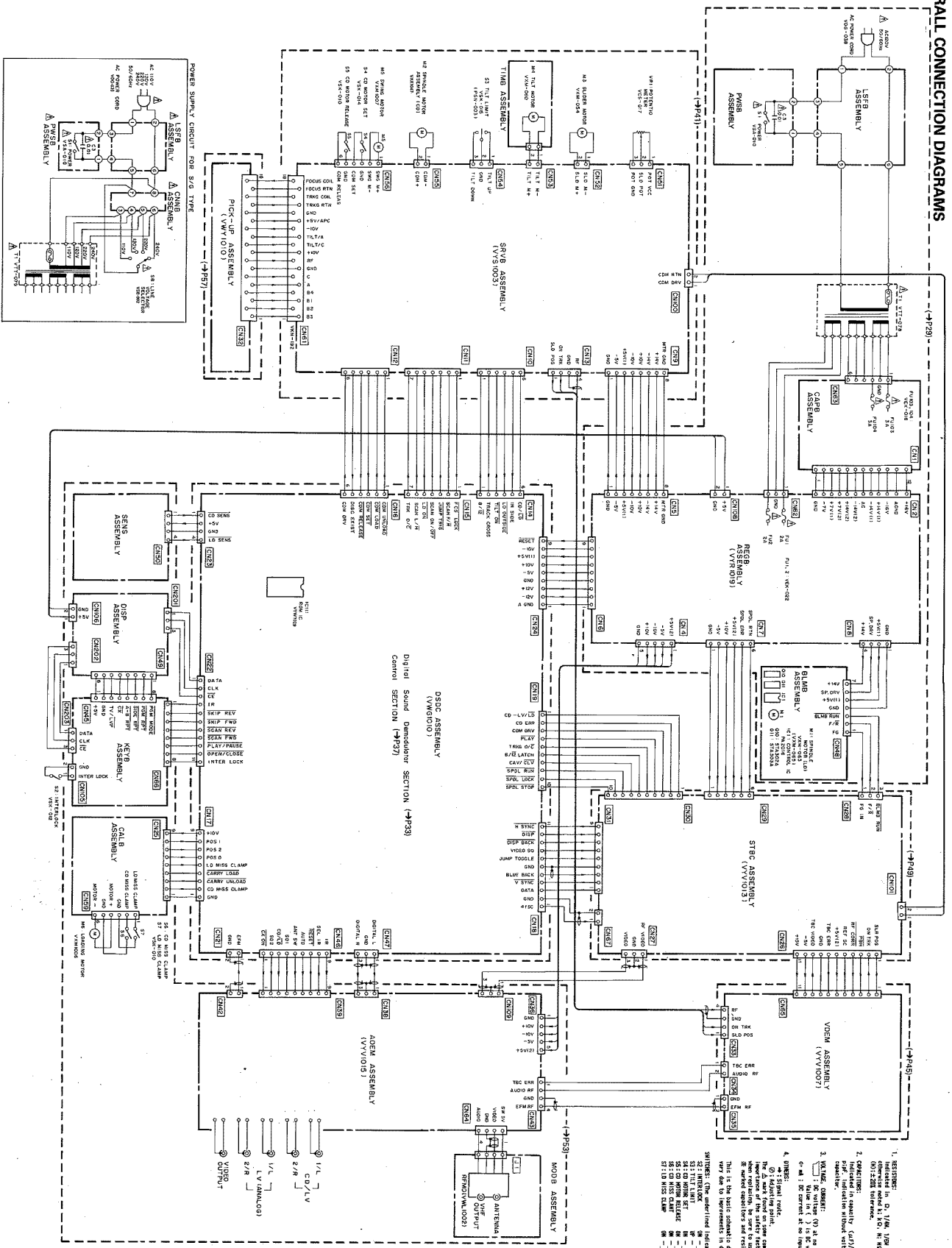
● Parts List of Carry Assembly

Mark	No.	Part No.	Description
	1	VNL-597	Roller
	2	VLL-356	Shaft
	3	VXA-493	Sub-carry assembly
	4	VNL-594	Gear (C)
	5	VBH1015	Gear spring
	6	VNL-595	Gear (D)
	7	WT31D064D026	Polyurethane washer
	8	VBH1008	Lock plate spring
	9	VNL1025	Slide plate
	10	VXA1061	Lock plate assembly
	11	VLL1028	Pin
	12	ABZ0P080FCU	Screw
	13	BEZ0P080FCU	Screw
	14	VFC-272	Carry cushion
	15	VXX1027	Carry assembly-S
	16	VFC-272	Carry cushion
	17	VFC-298	Claspion F
	18	VFC1054	Black sheet (C)
	101		Gear base (B) assembly
	102		Gear base (A) assembly

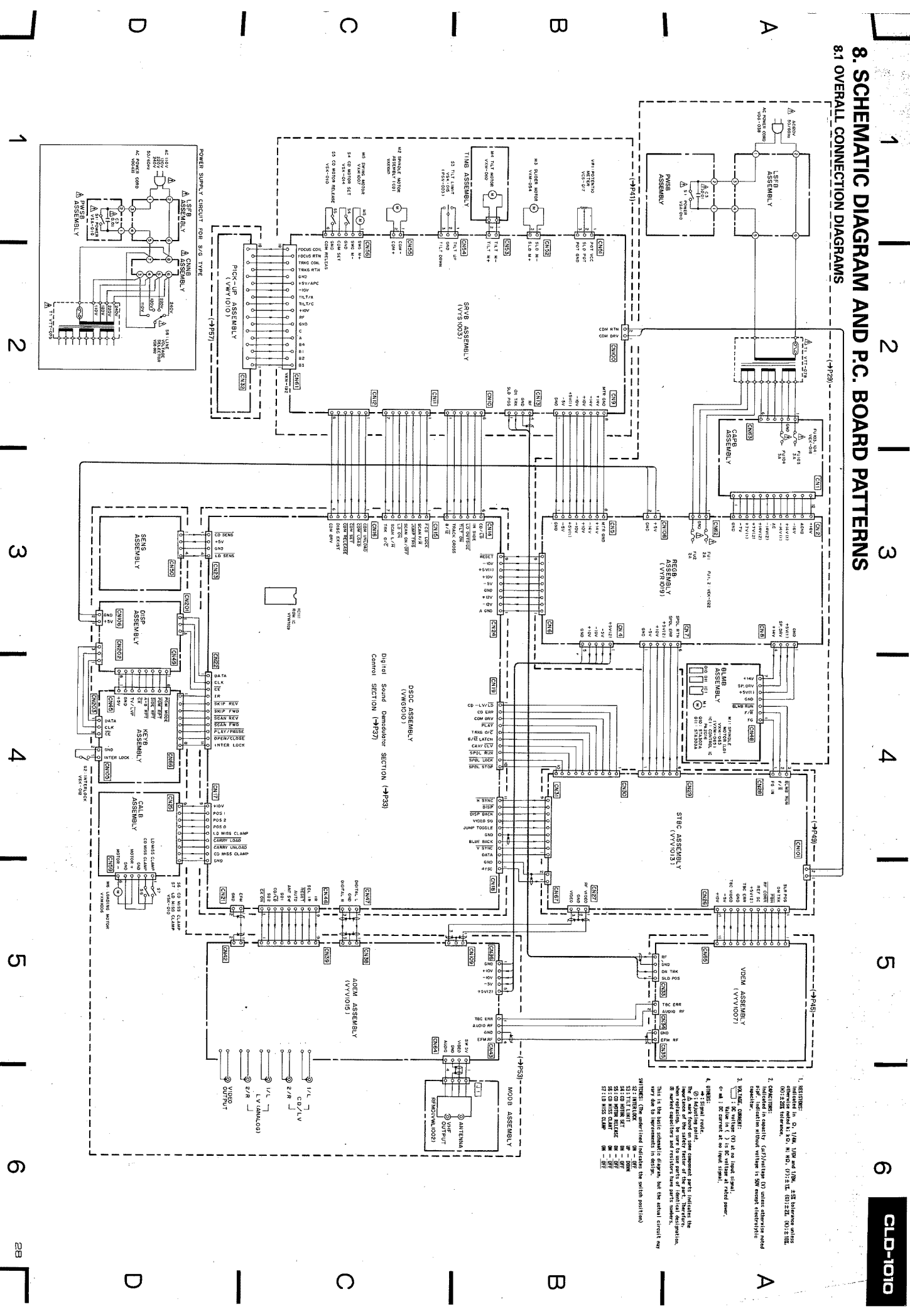
Note: Always install this sheet when replacing the Subcarrier assembly. In order to prevent erroneous disc detection.

# 8. SCHEMATIC DIAGRAM AND P.C. BOARD PATTERNS

## 8.1 OVERALL CONNECTION DIAGRAM

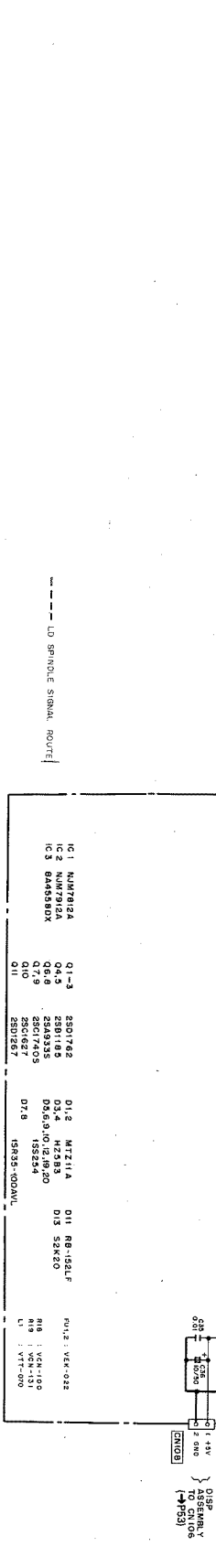
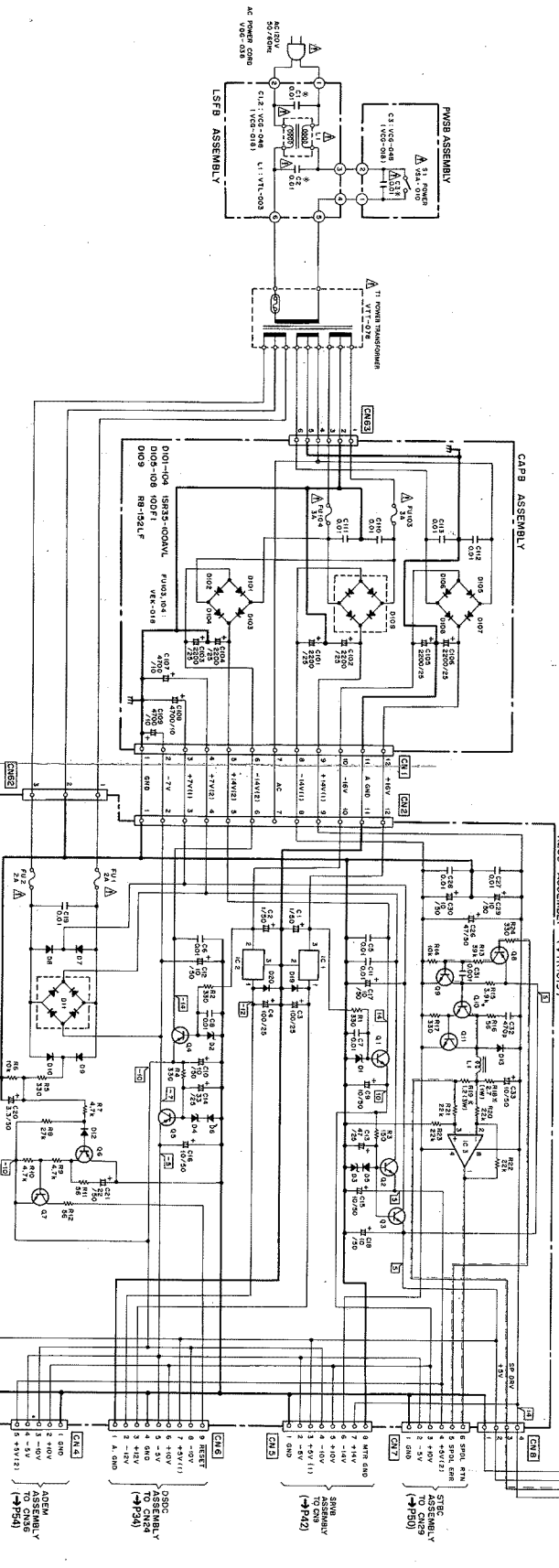
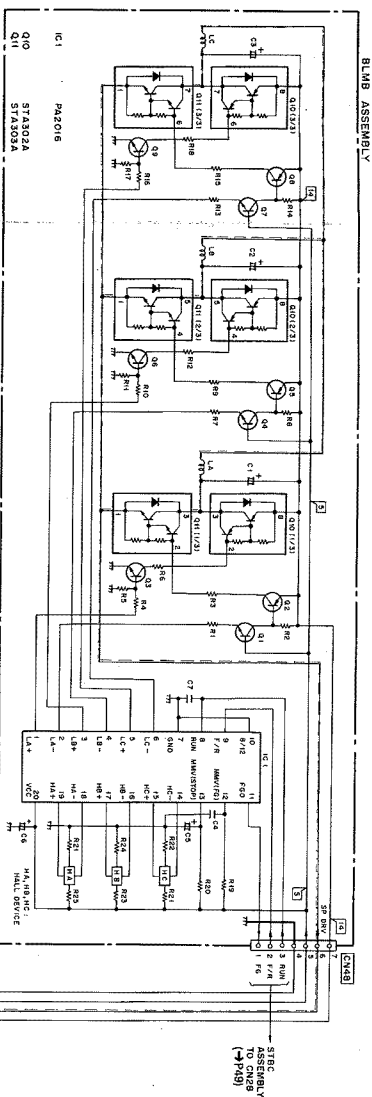


1. INDICATED IN CO. 110M, 100M and 100K. 25% tolerance unless otherwise noted. K: 1.0, M: 10, Q: 0.1, Z: 0.01, R: 0.1, S: 0.01, B: 0.1, C: 0.01, D: 0.001, E: 0.0001, F: 0.00001, G: 0.000001, H: 0.0000001, J: 0.00000001, K: 0.000000001, L: 0.0000000001, M: 0.00000000001, N: 0.000000000001, O: 0.0000000000001, P: 0.00000000000001, Q: 0.000000000000001, R: 0.0000000000000001, S: 0.00000000000000001, T: 0.000000000000000001, U: 0.0000000000000000001, V: 0.00000000000000000001, W: 0.000000000000000000001, X: 0.0000000000000000000001, Y: 0.00000000000000000000001, Z: 0.000000000000000000000001.
2. INDICATED IN CAPACITY (uF) VALUES (U) unless otherwise noted.
3. INDICATED IN RESISTANCE (ohms) VALUES (R) unless otherwise noted.
4. DIMENSIONS: (a) AS SHOWN IN DRAWING. (b) AS SHOWN IN DRAWING. (c) AS SHOWN IN DRAWING. (d) AS SHOWN IN DRAWING. (e) AS SHOWN IN DRAWING. (f) AS SHOWN IN DRAWING. (g) AS SHOWN IN DRAWING. (h) AS SHOWN IN DRAWING. (i) AS SHOWN IN DRAWING. (j) AS SHOWN IN DRAWING. (k) AS SHOWN IN DRAWING. (l) AS SHOWN IN DRAWING. (m) AS SHOWN IN DRAWING. (n) AS SHOWN IN DRAWING. (o) AS SHOWN IN DRAWING. (p) AS SHOWN IN DRAWING. (q) AS SHOWN IN DRAWING. (r) AS SHOWN IN DRAWING. (s) AS SHOWN IN DRAWING. (t) AS SHOWN IN DRAWING. (u) AS SHOWN IN DRAWING. (v) AS SHOWN IN DRAWING. (w) AS SHOWN IN DRAWING. (x) AS SHOWN IN DRAWING. (y) AS SHOWN IN DRAWING. (z) AS SHOWN IN DRAWING.



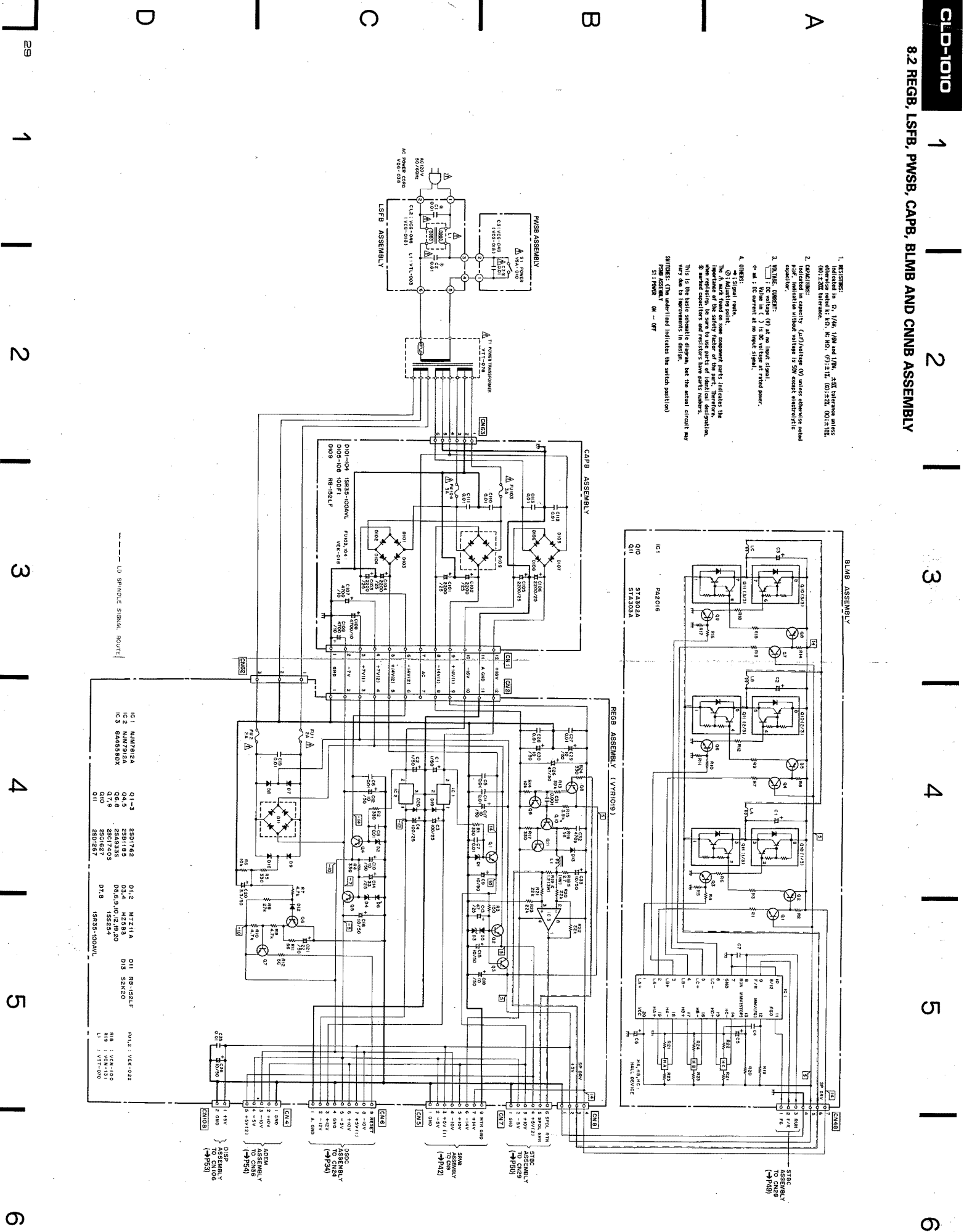


1. RESISTORS: Indicated in  $\Omega$ ,  $\frac{1}{4}\Omega$ ,  $\frac{1}{10}\Omega$  and  $\frac{1}{2}\Omega$ ,  $\pm 5\%$  tolerance unless otherwise noted by K $\Omega$ , M  $\Omega$ , K $\Omega$ , (R) $\pm 1\%$ , (D) $\pm 2\%$ , (O) $\pm 1\%$ , (B) $\pm 2\%$  tolerance.
  2. CAPACITORS: Indicated by (C/P) notation (O) unless otherwise noted. "p" indicates picofarads, "m" indicates millifarads, "u" indicates microfarads.
  3. DIODES: Indicated by (D) notation (O) unless otherwise noted. "m" indicates milliamperes, "A" indicates amperes.
  4. TRANSISTORS: Indicated by (T) notation (O) unless otherwise noted. "NPN" or "PNP" indicates the transistor type. "Q" indicates the transistor part number.
  5. IC'S: Indicated by (IC) notation (O) unless otherwise noted. "IC" indicates the IC part number.
  6. RESISTOR VALUE: Indicated by (R) notation (O) unless otherwise noted. "R" indicates the resistor value.
  7. CAPACITOR VALUE: Indicated by (C) notation (O) unless otherwise noted. "C" indicates the capacitor value.
  8. DIODE VALUE: Indicated by (D) notation (O) unless otherwise noted. "D" indicates the diode value.
  9. TRANSISTOR VALUE: Indicated by (T) notation (O) unless otherwise noted. "T" indicates the transistor value.
  10. IC VALUE: Indicated by (IC) notation (O) unless otherwise noted. "IC" indicates the IC value.
- NOTE: The actual circuit may vary due to improvements in design.
- SHIELDS: (The underlined indicates the shield position)
- REG ASSEMBLY OR - 071

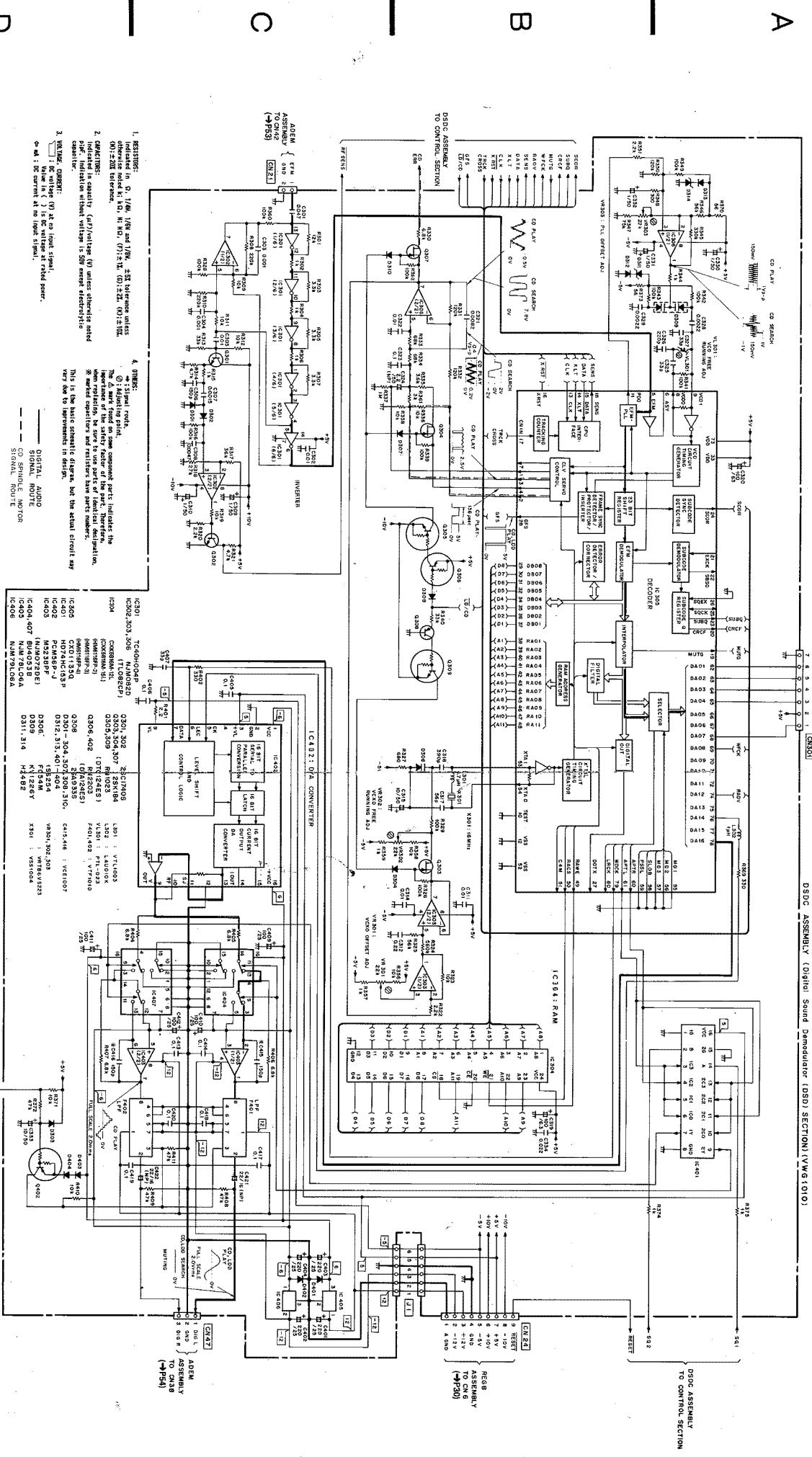


LD SPINOLE SIGNAL ROUTE

IC 1	741C	741C	741C	741C
IC 2	741C	741C	741C	741C
IC 3	741C	741C	741C	741C
IC 4	741C	741C	741C	741C
D 01	1N4001	1N4001	1N4001	1N4001
D 02	1N4001	1N4001	1N4001	1N4001
D 03	1N4001	1N4001	1N4001	1N4001
D 04	1N4001	1N4001	1N4001	1N4001
R 01	1K	1K	1K	1K
R 02	1K	1K	1K	1K
R 03	1K	1K	1K	1K
R 04	1K	1K	1K	1K
R 05	1K	1K	1K	1K
R 06	1K	1K	1K	1K
R 07	1K	1K	1K	1K
R 08	1K	1K	1K	1K
R 09	1K	1K	1K	1K
R 10	1K	1K	1K	1K
C 01	0.1	0.1	0.1	0.1
C 02	0.1	0.1	0.1	0.1
C 03	0.1	0.1	0.1	0.1
C 04	0.1	0.1	0.1	0.1
C 05	0.1	0.1	0.1	0.1
C 06	0.1	0.1	0.1	0.1
C 07	0.1	0.1	0.1	0.1
C 08	0.1	0.1	0.1	0.1
C 09	0.1	0.1	0.1	0.1
C 10	0.1	0.1	0.1	0.1



1 2 3 4 5 6



**1. RESISTORS:**  
Indicated in Q, 1/4W, 1/8W and 1/8W. 5% tolerance unless otherwise noted. R, 100, R, 100, (7) 2.1, (D) 2.1, (O) 2.1, (U) 2.1, (V) 2.1, (W) 2.1, (X) 2.1, (Y) 2.1, (Z) 2.1.

**2. CAPACITORS:** capacitor (47) functions (U) unless otherwise noted. Indication without values is 50V ceramic electrolytic capacitor.

**3. VALUES COMMENT:**  
①: IC package (U) as per input signal.  
②: IC package (U) as per input signal.  
③: IC current at the input signal.

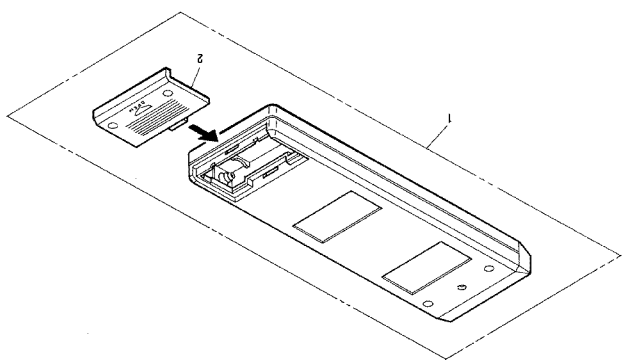
**4. SIGNALS:**  
①: Indicating point.  
②: Name of point on component part indicates the item to be replaced. Be sure to use part of identical designation. \*\* wired connectors and resistors have parts numbers. This is the basic schematic diagram. See the actual circuit way very low to improve in design.

--- DIGITAL AUDIO  
--- SIGNAL ROUTE

RESISTOR VALUES:  
IC201 TC5010A 01  
IC202, 203, 205 T1C082P  
IC204 T1C082P  
IC205, 206, 207 FM 023  
IC208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

● Parts List of Remote control unit

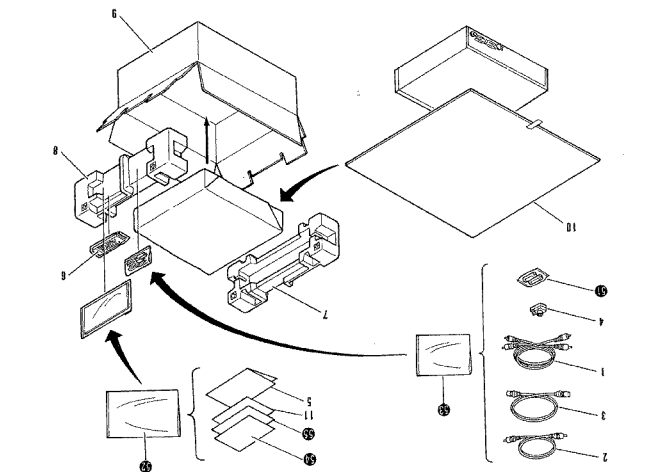
Mark No.	Part No.	Description
1.	VX X1040	Remote control unit
2.	VNX-548	Cover



5.7 REMOTE CONTROL UNIT

● Parts List of Packing

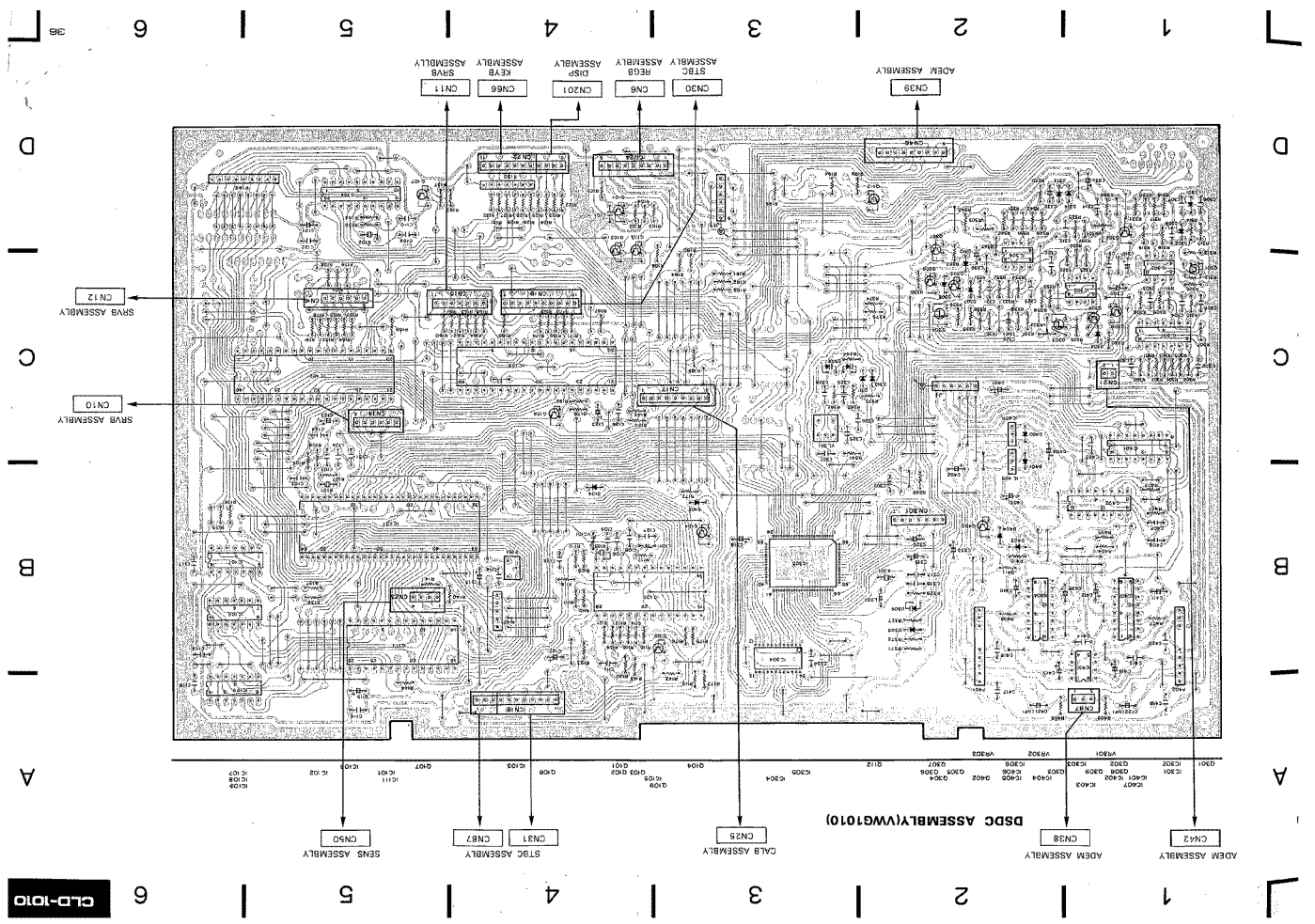
Mark No.	Part No.	Description
1.	VDE1002 (VDE-055)	Audio cable
2.	VDE-056 (VDE-1005)	Video cable
3.	VDE1001 (VDE-054)	RF antenna cable
4.	VCR1003	Antenna adaptor
5.	VFR1003	Operating instructions
6.	VXX1040	Remote control unit
7.	VHA1004	Pad (L)
8.	VHA1007	Pad (R)
9.	VHG1011	Packing case
10.	VHL007	Sheet
11.	VHG1001	Sub operating instructions



6. PACKING

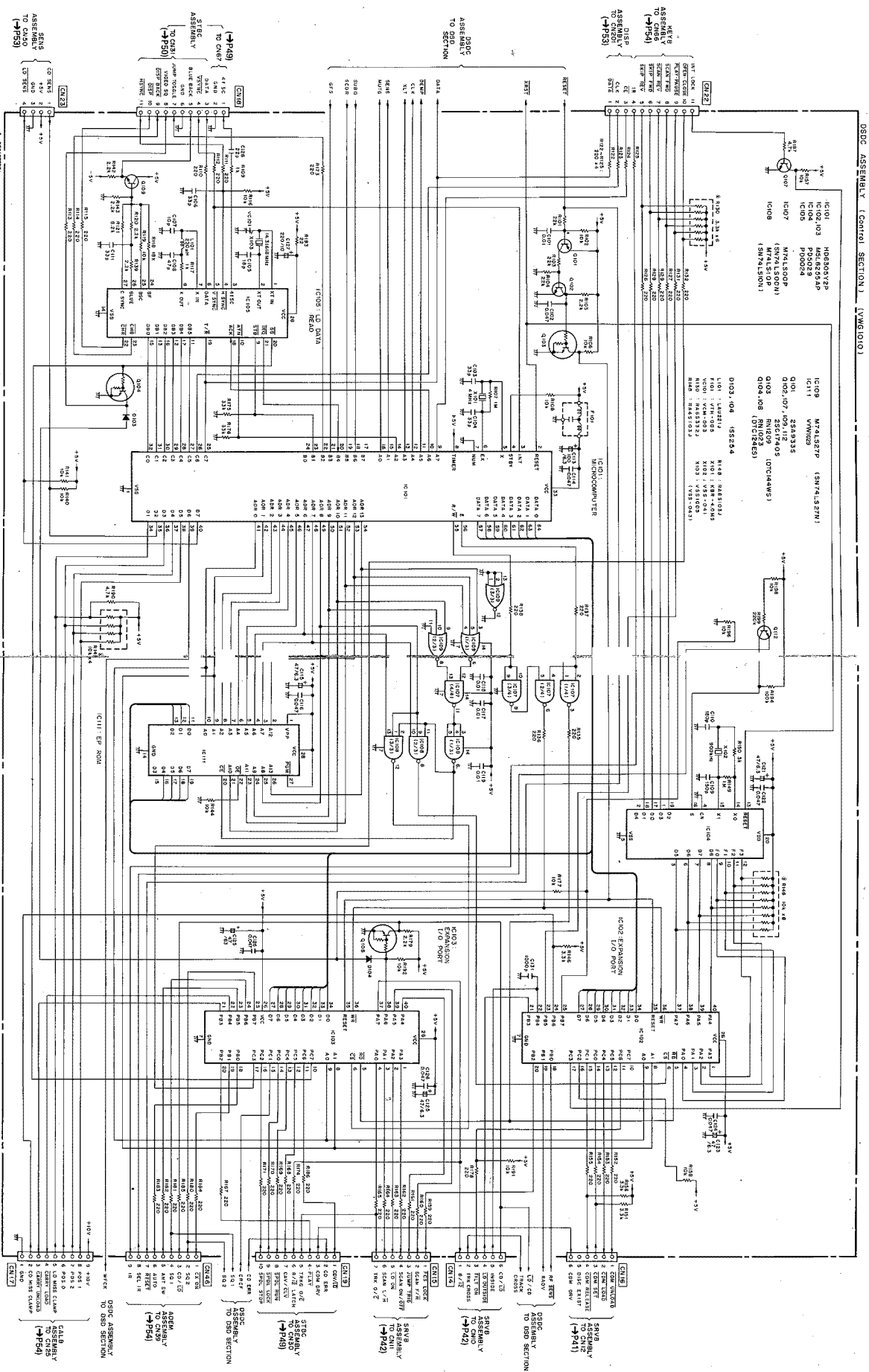
CLD-1010

CLD-1010

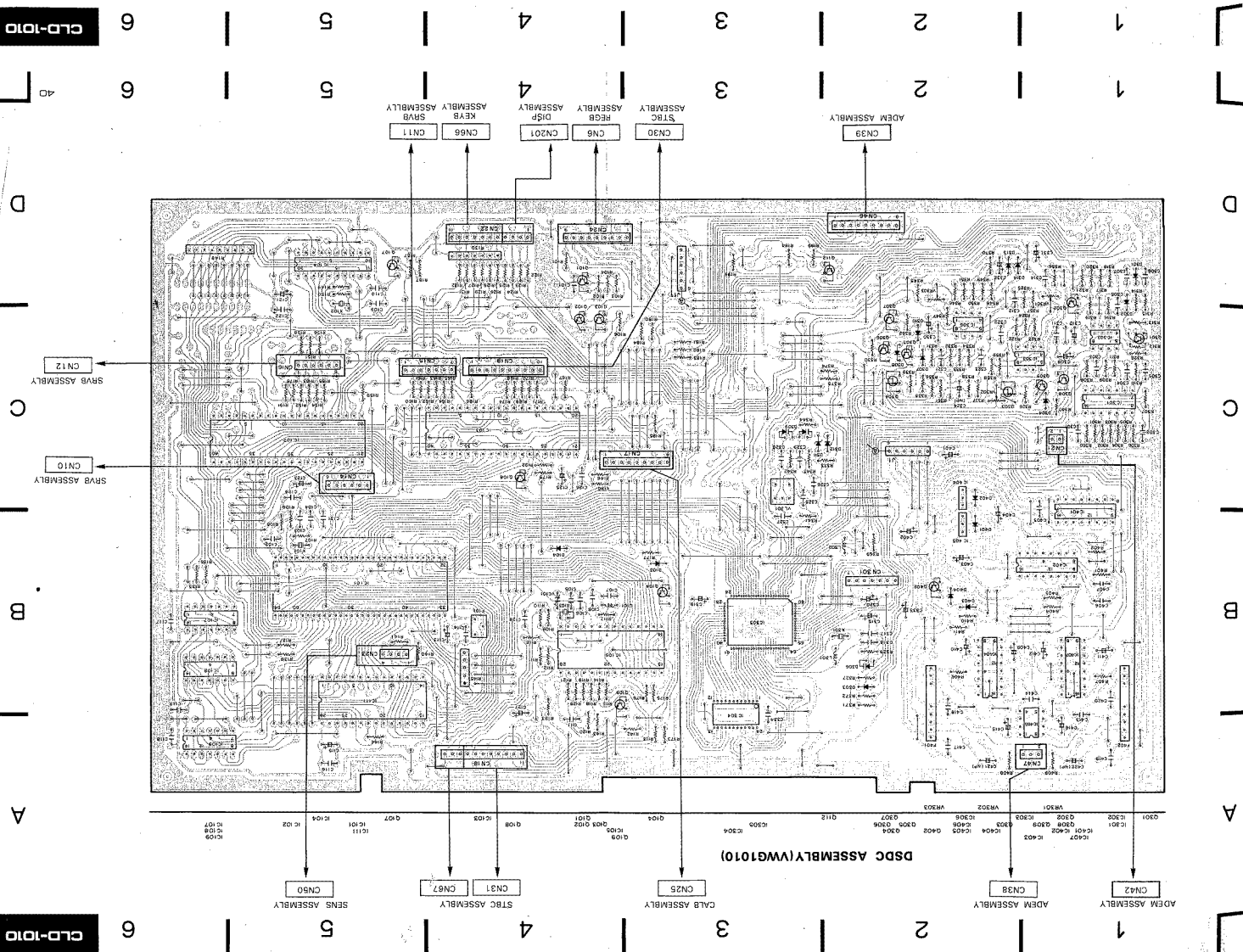
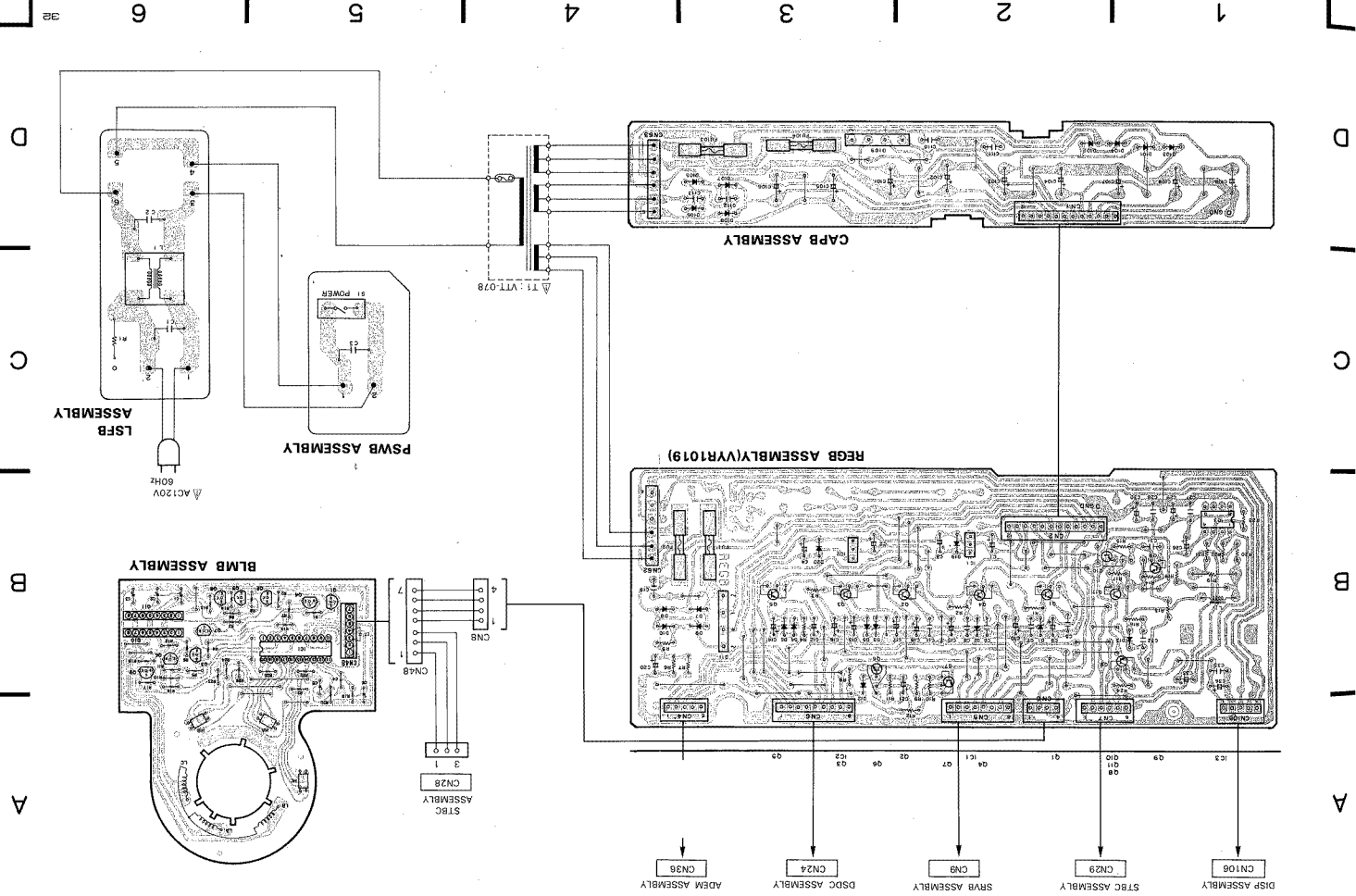


CLD-1010

CLD-1010

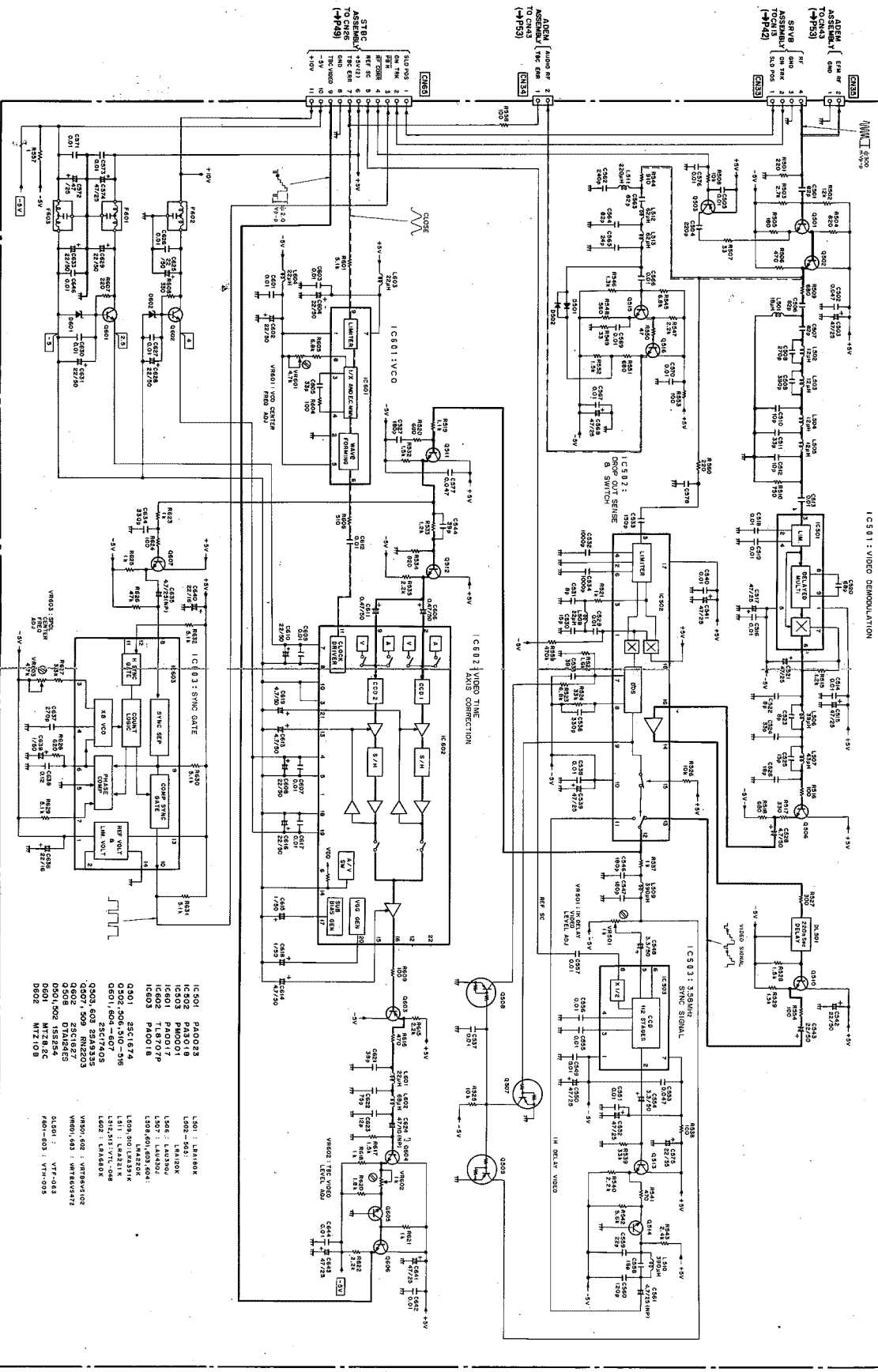


- RESISTORS:  
Indicated in Ω, 1/4W, 1/8W and 1/8W. 25% tolerance unless otherwise specified.  
Indicated in Ω, 1/4W, 1/8W and 1/8W. 25% tolerance unless otherwise specified.
- Capacitors:  
Indicated in pF, nF and μF. 5% tolerance unless otherwise specified.
- Diodes:  
Indicated in pF, nF and μF. 5% tolerance unless otherwise specified.
- Notes:  
1. Values in ( ) are minimum and maximum values.  
2. Values in ( ) are nominal values.  
3. Values in ( ) are maximum values.  
4. Values in ( ) are minimum values.





VDEM ASSEMBLY (VVV007)



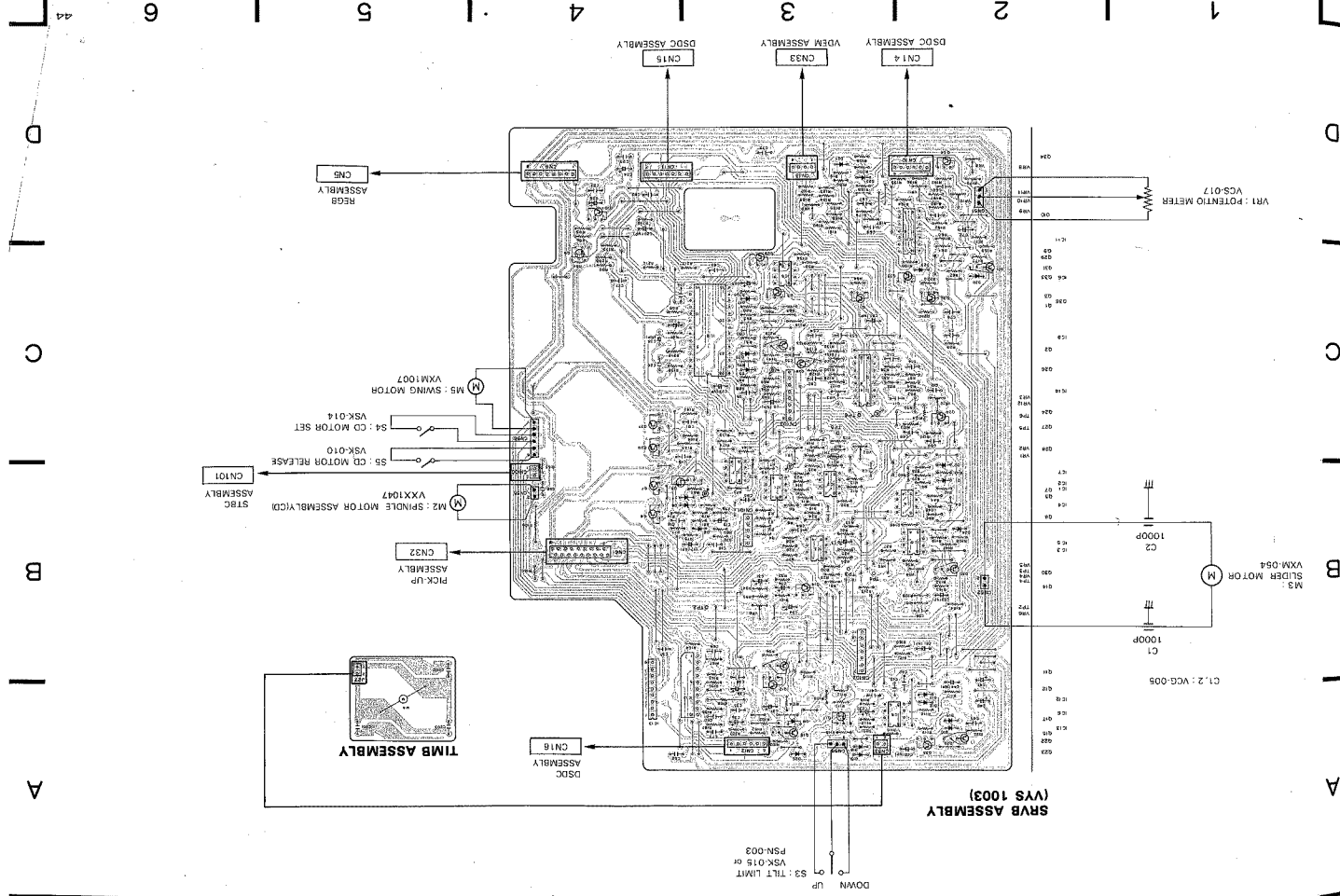
1. RESISTORS: In Ω, 1/4W, 1/8W and 1/16W. 2.5% tolerance unless otherwise noted. In kΩ, MΩ, kMΩ, (1) 1%, (2) 2%, (3) 5%, (4) 10%, (5) 20% tolerance.
2. CAPACITORS: Inductance in microhenry (μH) unless otherwise noted. Capacitance in picofarad (pF) unless otherwise noted. Electrolytic capacitors are shown with polarity.
3. WAVEFORMS: Indicated by (V) at the input signal, (V) at the output signal, and (V) at the input signal.

4. OTHERS:
  - ⊗: Adjusting point.
  - ⊕: Mark found on some component parts indicates the same replacement. Be sure to use parts of identical designation.
  - \* Marked capacitors and resistors have parts numbers. This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

--- VIDEO SIGNAL ROUTE  
 --- CCD SERVO SIGNAL ROUTE  
 --- DIGITAL AUDIO SIGNAL ROUTE  
 --- ANALOG AUDIO SIGNAL ROUTE

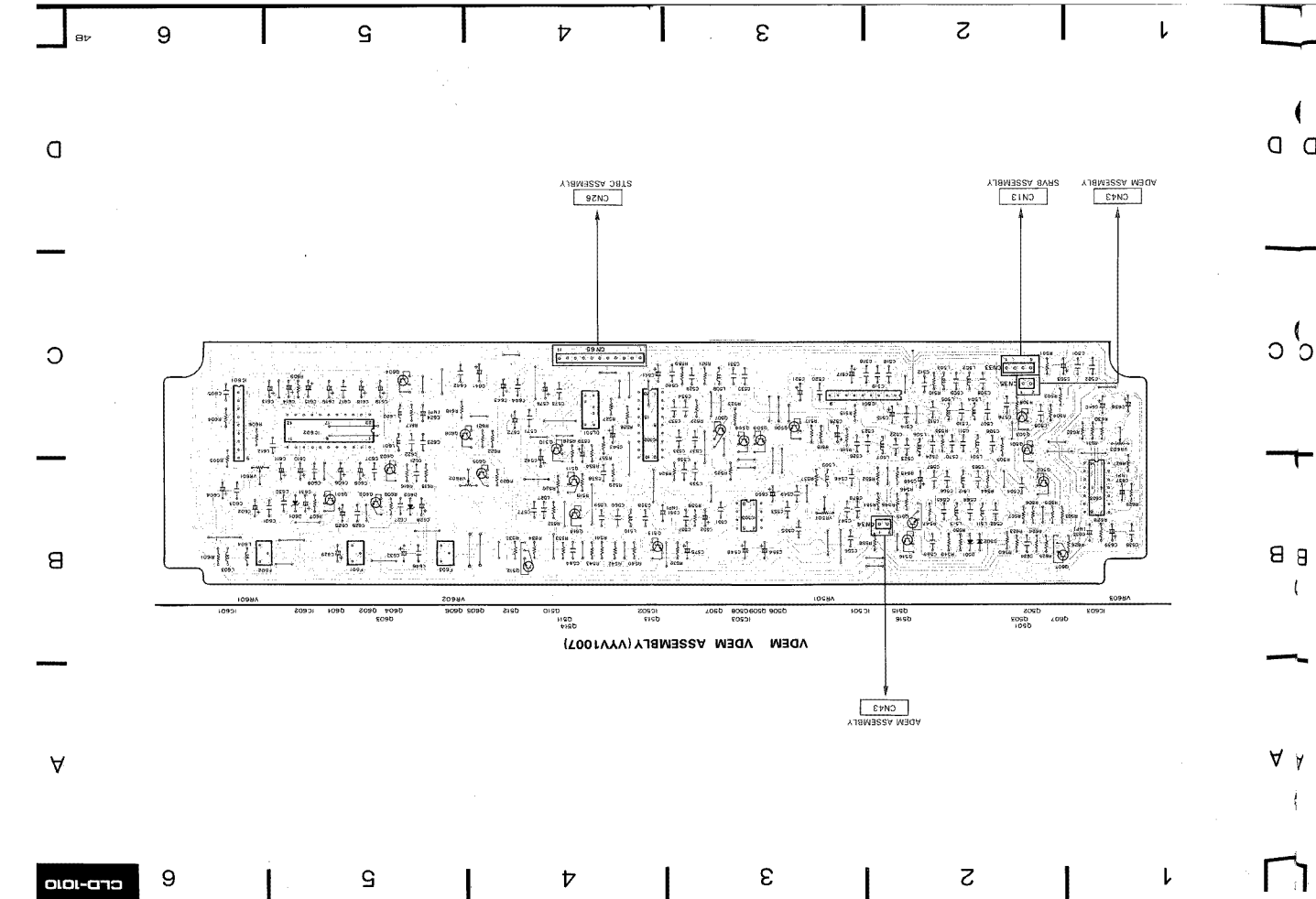
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IC805	TA8707P
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IC808	506-510-916
IC809	25C17405
IC810	25C17405
IC811	25C17405
IC812	25C17405
IC813	25C17405
IC814	25C17405
IC815	25C17405
IC816	25C17405
IC817	25C17405
IC818	25C17405
IC819	25C17405
IC820	25C17405
IC821	25C17405
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IC823	25C17405
IC824	25C17405
IC825	25C17405
IC826	25C17405
IC827	25C17405
IC828	25C17405
IC829	25C17405
IC830	25C17405
IC831	25C17405
IC832	25C17405
IC833	25C17405
IC834	25C17405
IC835	25C17405
IC836	25C17405
IC837	25C17405
IC838	25C17405
IC839	25C17405
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IC844	25C17405
IC845	25C17405
IC846	25C17405
IC847	25C17405
IC848	25C17405
IC849	25C17405
IC850	25C17405
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IC893	25C17405
IC894	25C17405
IC895	25C17405
IC896	25C17405
IC897	25C17405
IC898	25C17405
IC899	25C17405
IC900	25C17405

L801	10K10K
L802	10K10K
L803	10K10K
L804	10K10K
L805	10K10K
L806	10K10K
L807	10K10K
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L892	10K10K
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L894	10K10K
L895	10K10K
L896	10K10K
L897	10K10K
L898	10K10K
L899	10K10K
L900	10K10K



6 5 4 3 2 1

CLD-1010



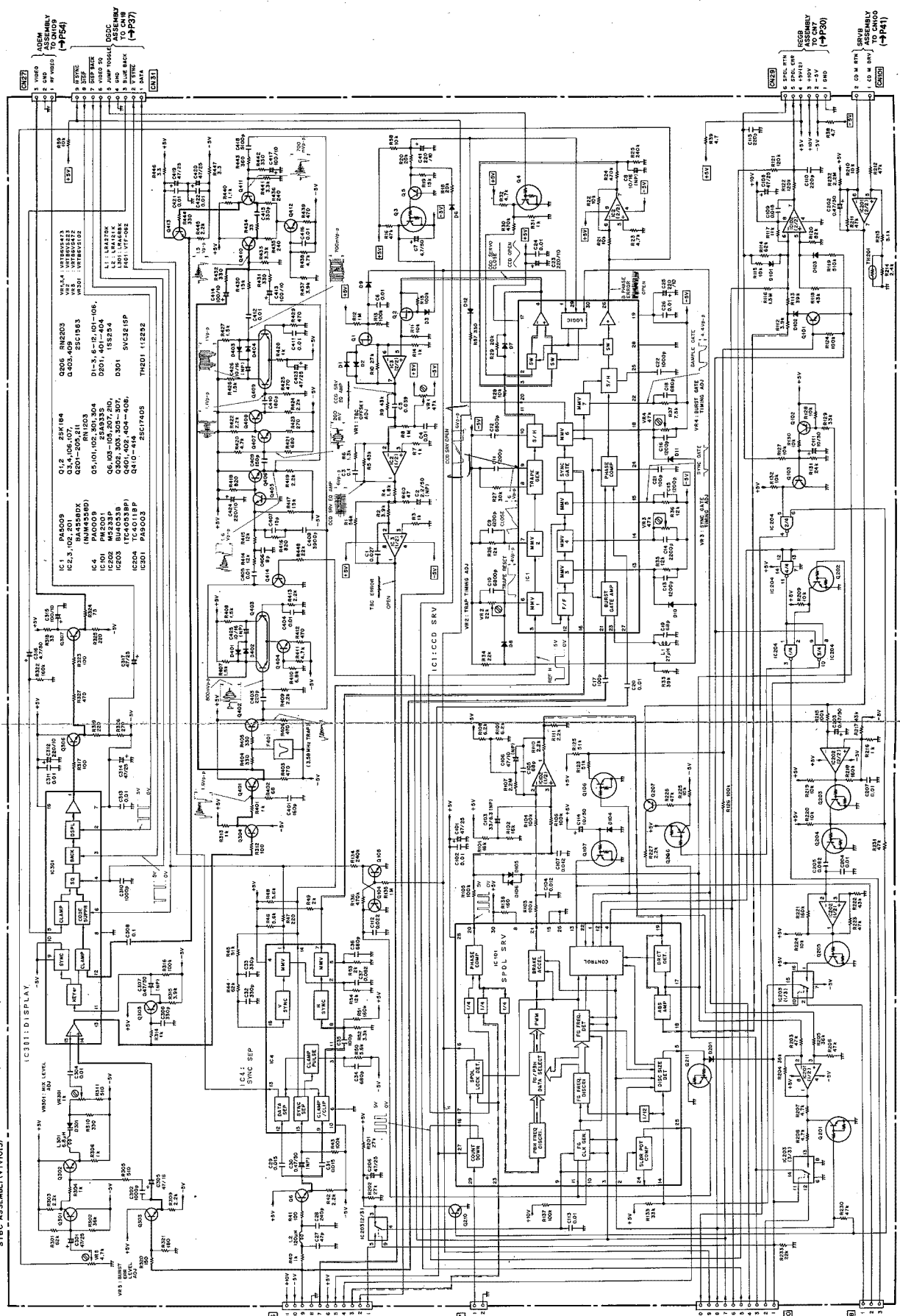
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CLD-1010



8.7 STBC ASSEMBLY

STBC ASSEMBLY (V11013)

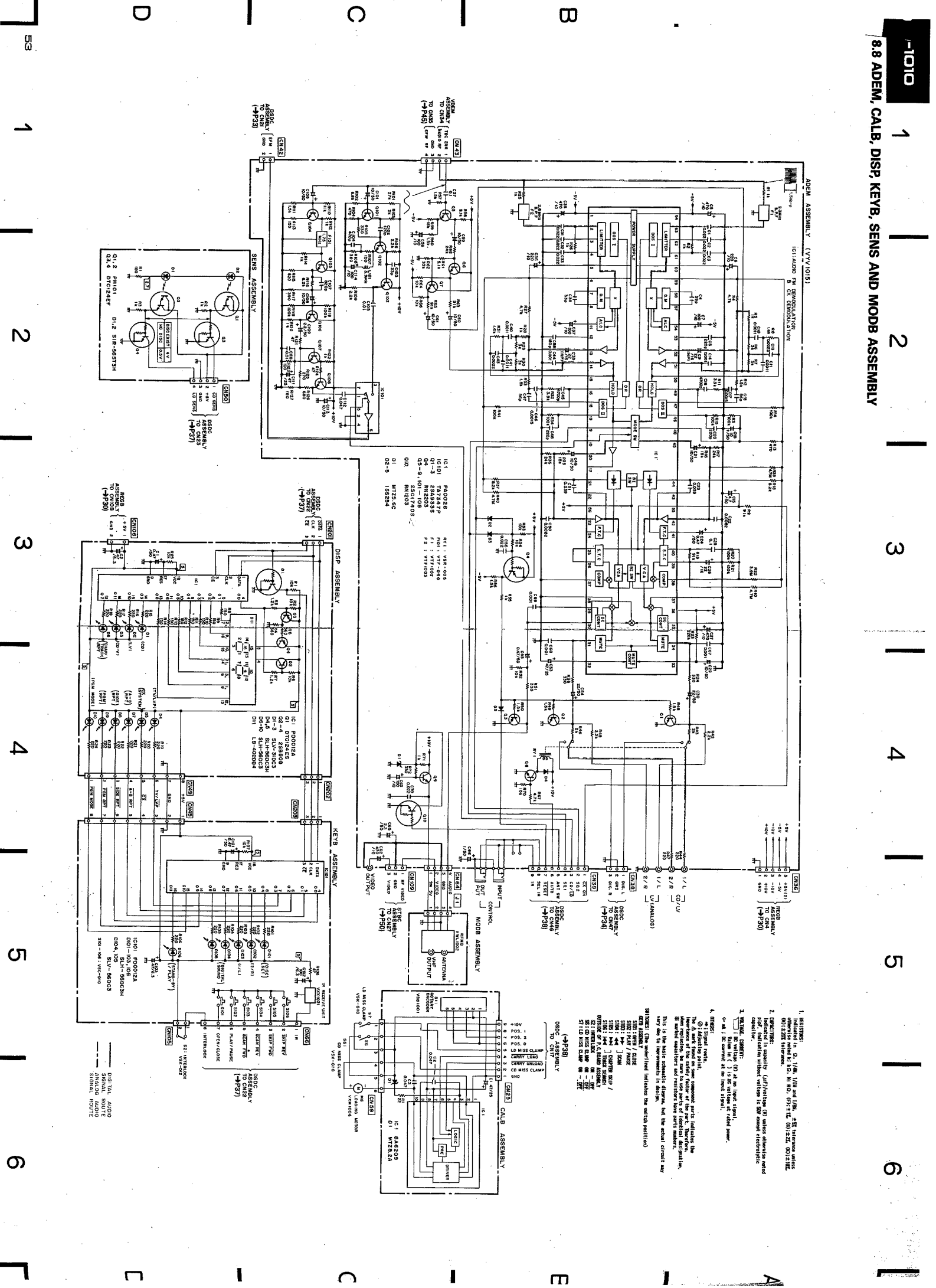


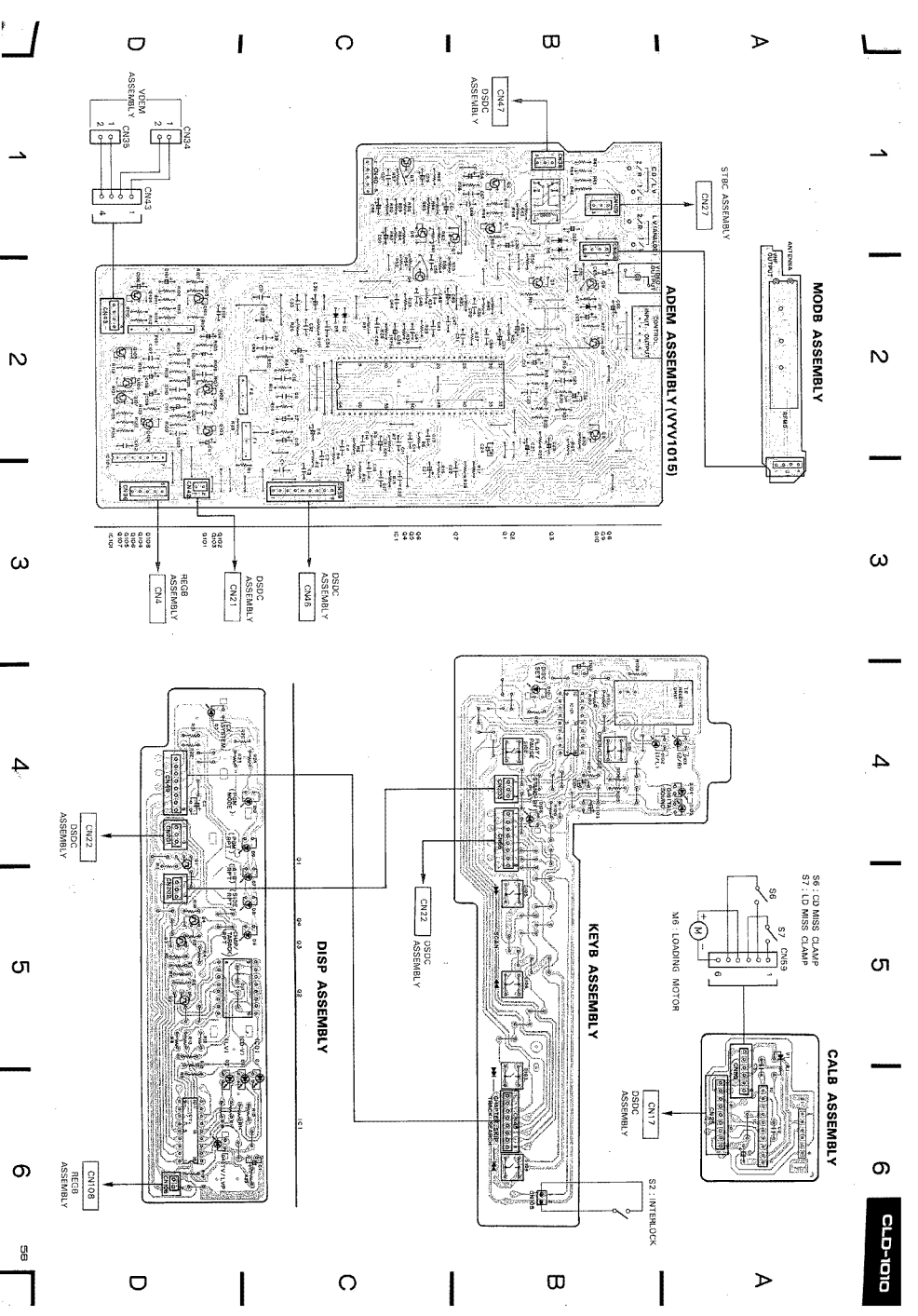
1. RESISTORS: R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100.

2. CAPACITORS: C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100.

3. VOLTAGE CONVERT: V1, V2, V3, V4, V5, V6, V7, V8, V9, V10, V11, V12, V13, V14, V15, V16, V17, V18, V19, V20, V21, V22, V23, V24, V25, V26, V27, V28, V29, V30, V31, V32, V33, V34, V35, V36, V37, V38, V39, V40, V41, V42, V43, V44, V45, V46, V47, V48, V49, V50, V51, V52, V53, V54, V55, V56, V57, V58, V59, V60, V61, V62, V63, V64, V65, V66, V67, V68, V69, V70, V71, V72, V73, V74, V75, V76, V77, V78, V79, V80, V81, V82, V83, V84, V85, V86, V87, V88, V89, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, V100.

4. OTHERS: U1, U2, U3, U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U29, U30, U31, U32, U33, U34, U35, U36, U37, U38, U39, U40, U41, U42, U43, U44, U45, U46, U47, U48, U49, U50, U51, U52, U53, U54, U55, U56, U57, U58, U59, U60, U61, U62, U63, U64, U65, U66, U67, U68, U69, U70, U71, U72, U73, U74, U75, U76, U77, U78, U79, U80, U81, U82, U83, U84, U85, U86, U87, U88, U89, U90, U91, U92, U93, U94, U95, U96, U97, U98, U99, U100.





MODB ASSEMBLY

STBC ASSEMBLY

ADEM ASSEMBLY (VVV1015)

CALB ASSEMBLY

S6: CD MISS CLAMP  
S7: LD MISS CLAMP

M38 LOADING MOTOR

KEYB ASSEMBLY

DSDC ASSEMBLY

S2: INTERLOCK

DISP ASSEMBLY

DSDC ASSEMBLY

CN21

HEGB ASSEMBLY

CN1

D

CN24

CN23

VOEAM ASSEMBLY

CN23

CN24

1

2

3

4

5

6

D

CN22

DSDC ASSEMBLY

CN108

HEGB ASSEMBLY

1

2

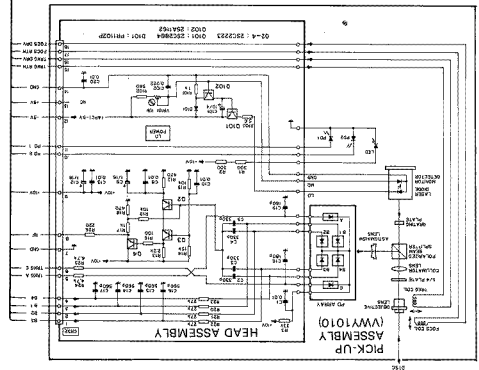
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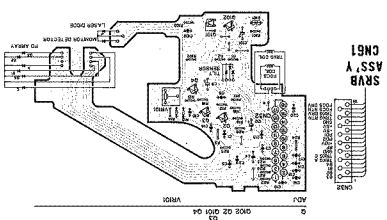
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58



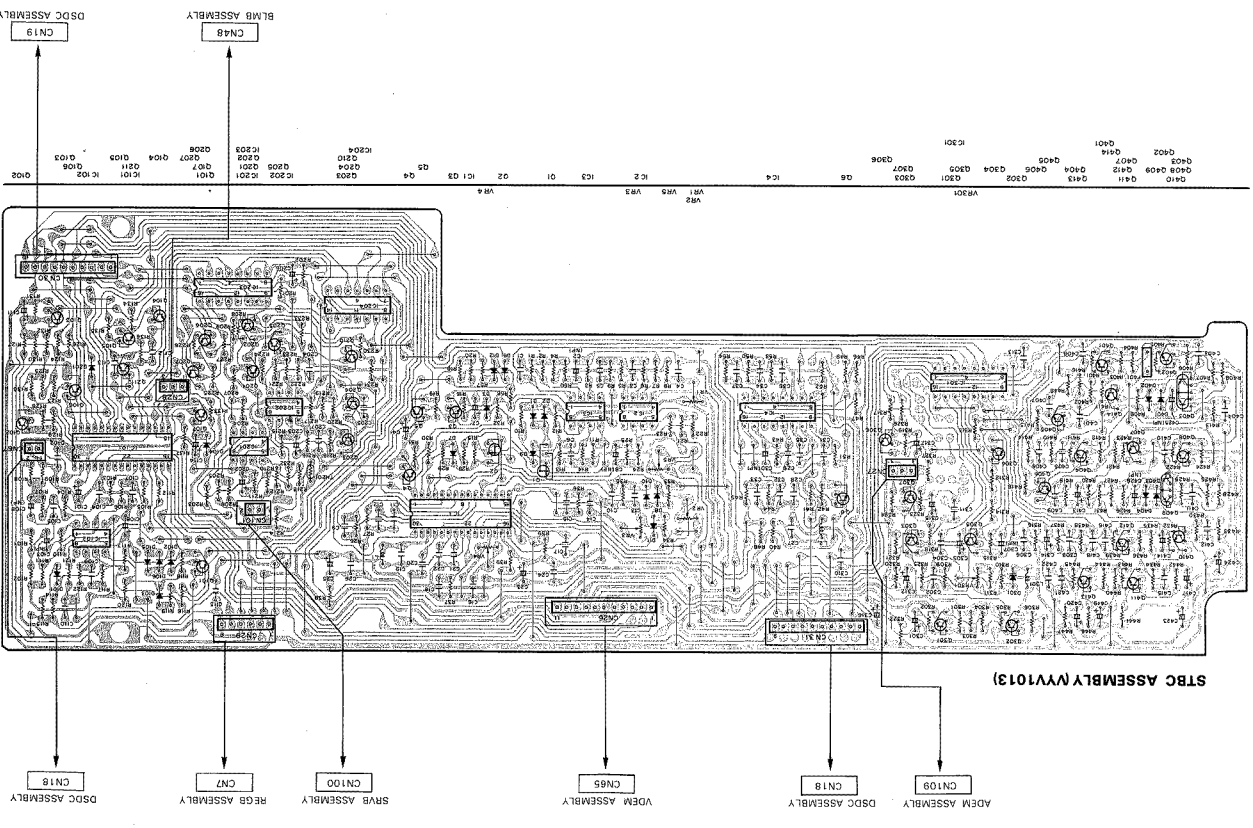
PICK-UP ASSEMBLY (WVY1010)

TO CNB1  
SHRB ASSEMBLY



HEAD ASSEMBLY

1. RESISTORS: Indicated by R, 1/4W, 1/8W and 1/16W. .5% tolerance unless otherwise noted. Values are in Ω, K, M, W. (C) = CIL, (D) = DL, (E) = EL.
  2. CAPACITORS: Indicated by C. (A) = air-core inductor; (B) = iron-core inductor; (C) = electrolytic capacitor.
  3. VOLTAGE GRADIENT: Indicated by V.
  4. DIODES: Indicated by D. (A) = no input signal; (B) = no output signal; (C) = DC current at no input signal; (D) = DC current at rated power; (E) = AC current at rated power.
- The A mark found on some component parts indicates the location of the assembly factor of part. Therefore, when capacitors and resistors have part numbers, when existing, are used to identify electrical designation.
- This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.



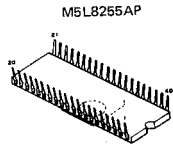
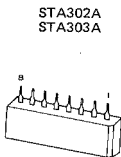
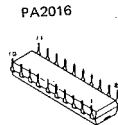
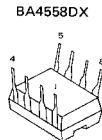
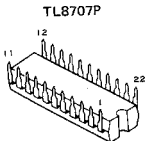
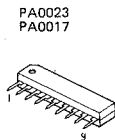
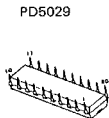
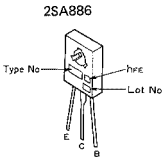
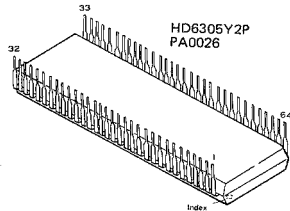
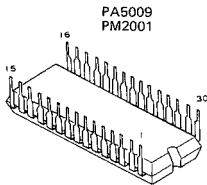
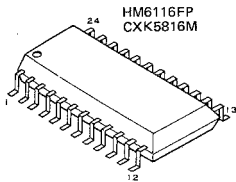
STBC ASSEMBLY (WVY1013)

OSDC ASSEMBLY  
CN19

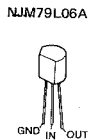
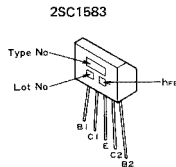
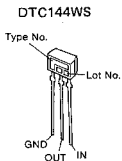
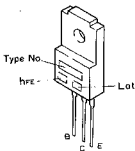
BLMB ASSEMBLY  
CN18

Q410 Q411 Q412 Q413 Q414  
Q408 Q409 Q407  
Q405 Q406 Q404 Q403  
Q301 Q302 Q303 Q304 Q305  
Q201 Q202 Q203 Q204  
Q101 Q102 Q103 Q104 Q105 Q106 Q107 Q108 Q109

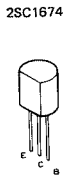
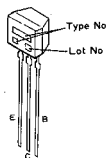
External Appearance of Transistors and ICs



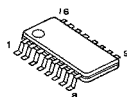
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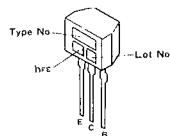
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DTC124ES  
DTC124EF



BU4053BD  
BU4053B  
NJU4053BD  
NJU4053B



2SA933S  
2SC1740S





Mark	Symbol & Description	Part No.
	<b>COILS</b>	
C67	Coil	VTT-070
	<b>CAPACITORS</b>	
Mark	Symbol & Description	Part No.
	<b>CAPACITORS</b>	
C22	C22, C23, C231	CCCH480D50
C10	C10, C12	CCCH470M50
C59	C59, C63, C63A	CEA510M50
C58	C58, C62, C72, C78, C79, C80, C90	CEA510M50S
	<b>SEMICONDUCTORS</b>	
Mark	Symbol & Description	Part No.
	<b>SEMICONDUCTORS</b>	
C11	C11	CEA2322M25
C101	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>CAPACITORS</b>	
Mark	Symbol & Description	Part No.
	<b>CAPACITORS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>OTHERS</b>	
Mark	Symbol & Description	Part No.
	<b>OTHERS</b>	
C21	C21	CEA2322M25
C101	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>RESISTORS</b>	
Mark	Symbol & Description	Part No.
	<b>RESISTORS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>OTHERS</b>	
Mark	Symbol & Description	Part No.
	<b>OTHERS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250

Mark	Symbol & Description	Part No.
	<b>COILS</b>	
	<b>CAPACITORS</b>	
Mark	Symbol & Description	Part No.
	<b>CAPACITORS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>OTHERS</b>	
Mark	Symbol & Description	Part No.
	<b>OTHERS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>RESISTORS</b>	
Mark	Symbol & Description	Part No.
	<b>RESISTORS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>OTHERS</b>	
Mark	Symbol & Description	Part No.
	<b>OTHERS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>SEMICONDUCTORS</b>	
Mark	Symbol & Description	Part No.
	<b>SEMICONDUCTORS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250
	<b>CAPACITORS</b>	
Mark	Symbol & Description	Part No.
	<b>CAPACITORS</b>	
C101	C101	CEA2322M25
C101 - C108	C101 - C108	CEA4642M10
C10	C10 - C113	CKCYF103250

Mark	Symbol & Description	Part No.
	<b>COIL</b>	
	<b>SEMICONDUCTORS</b>	
Mark	Symbol & Description	Part No.
	<b>SEMICONDUCTORS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>RESISTOR</b>	
Mark	Symbol & Description	Part No.
	<b>RESISTOR</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>OTHERS</b>	
Mark	Symbol & Description	Part No.
	<b>OTHERS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>CAPACITORS</b>	
Mark	Symbol & Description	Part No.
	<b>CAPACITORS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>RESISTORS</b>	
Mark	Symbol & Description	Part No.
	<b>RESISTORS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>CAPACITORS</b>	
Mark	Symbol & Description	Part No.
	<b>CAPACITORS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>OTHERS</b>	
Mark	Symbol & Description	Part No.
	<b>OTHERS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>CAPACITORS</b>	
Mark	Symbol & Description	Part No.
	<b>CAPACITORS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>RESISTORS</b>	
Mark	Symbol & Description	Part No.
	<b>RESISTORS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25
	<b>CAPACITORS</b>	
Mark	Symbol & Description	Part No.
	<b>CAPACITORS</b>	
C1	C1	CEA470M25
C2, C3	C2, C3	CGD4Y473M25
C4	C4	CG04Y473M25



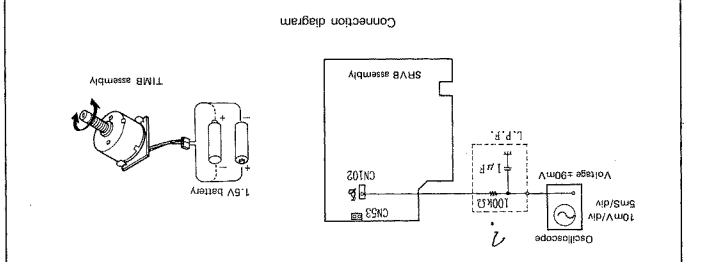


1.1.2 PICK-UP ASSEMBLY TILT ADJUSTMENT (1)

● Objective: To adjust the position of the slider shaft so that the Pick-up assembly moves parallel to the disc

● Symptoms if the adjustment is inadequate: Cross talk

- Measuring equipment
  - Oscilloscope
  - 1.5 V battery
  - Leads
  - L.P.F.
- Measuring point and tools
  - SRVB assembly CN102-5
  - Still frame at frame #17,000 (middle) and still at frame #100 (inner edge)
- Adjustment point
  - SRVB assembly tilt motor



Adjustment Procedure

1. Connect the oscilloscope to SRVB assembly CN102-5 (focus coil) through the L.P.F. (100 KHz, 1 μF). Set the range of the oscilloscope to 10 mV/division and 5 m/division.
2. Play the LD test disc.
3. Find Frame #17,000. Use the horizontal adjustment.
4. Find Frame #100. Make sure that the voltage at SRVB assembly CN102-5 is between -90mV and +90mV.
5. If the voltage measured in (4) is not between -90mV and +90mV, disconnect the connector for the tilt motor from CN35 of the SRVB assembly, then connect the leads for the 1.5 V battery to the tilt motor. Turn the motor until the voltage measured with the oscilloscope is between -90mV and +90mV. To turn the motor the other way, reverse the leads from the 1.5 V battery.

10. HOW TO REPLACE THE PICK-UP ASSEMBLY?

- Removing the Mechanical Assembly
  1. Remove the bottom plate (by removing the ten screws). (Figure 10-1)
  2. Remove the four screws securing the DSTC assembly. (Figure 10-2)
  3. Remove the two screws securing the ST3BC assembly, then open the board. (Figure 10-2)
  4. Remove the six connectors from the SRVB assembly and the BLMB assembly. (Figure 10-3)
  5. Remove the three (A) screws shown in Figure 10-3 from the Mechanical assembly and remove the two (B) screws shown in Figure 10-3 from the SRVB assembly. (Figure 10-3)
  6. Remove the Mechanical assembly together with the SRVB assembly.

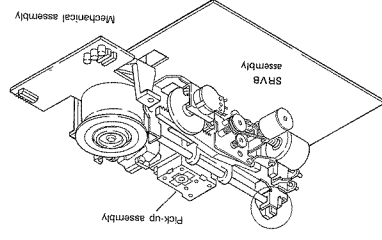
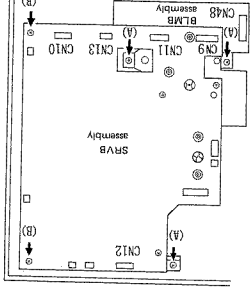
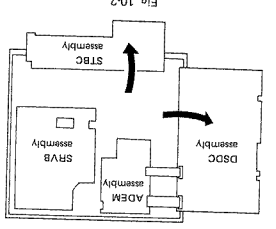
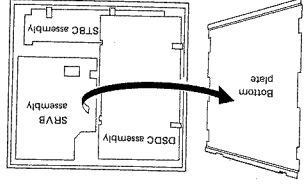


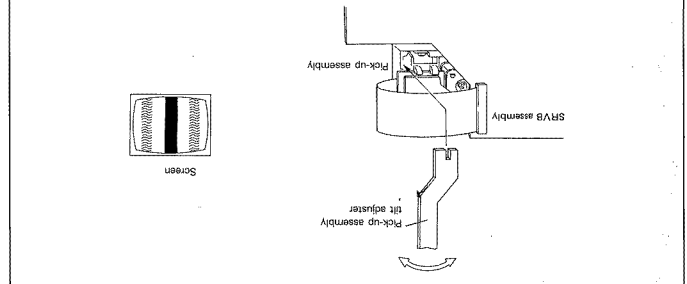
Fig. 10-4

1.1.3 PICK-UP ASSEMBLY TILT ADJUSTMENT (2)

● Objective: To have the Pick-up assembly installed parallel to the disc

● Symptoms if the adjustment is inadequate: Cross talk

- Measuring equipment
  - TV monitor
  - Pick-up assembly tilt adjuster (CGF-064)
- Measurement point and tools
  - LD test disc F series ... #42,314, #104 still, #115 still, #115 still, #115 still
- Adjustment point
  - Pick-up assembly angle



Adjustment Procedure

1. Find Frame #42,314 (#46,135)
2. Use the Pick-up assembly adjuster (CGF-064) as shown in the diagram to adjust the Pick-up assembly angle to the position that minimizes the cross talk on the screen.
3. Find Frame #104 (#115) and check that the cross talk is not noticeable. If there is cross talk, repeat Steps 1 through 3.
4. Remove the mechanical assembly from the disc player, then reinstall the mechanical assembly in the disc player.

● Replacing the Pick-up assembly

6. Move the Pick-up assembly by hand all the way to the edge.
7. Remove the flexible cable from connector CN61 on the SRVB assembly, then remove the two screws securing the Pick-up assembly.
8. Remove the Pick-up assembly from the Mechanical assembly. (Fig. 10-5)
9. Adjust the Tilt sensor tilt adjustment screw on the new Pick-up assembly so that the Tilt sensor and the sensor stay are parallel. (Fig. 10-6)
10. Install the new Pick-up assembly on the Mechanical assembly. Turn it all the way clockwise, then tighten the Pick-up assembly screw slightly. Skipping this step can make it quite difficult to adjust the tilt of the Pick-up assembly later.
11. Turn the worm gear of the tilt motor so that the tilt base is at the same height as the top of the chassis of the Mechanical assembly. (Fig. 10-7, 10-8)

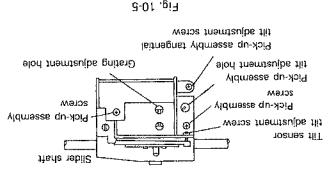


Fig. 10-5

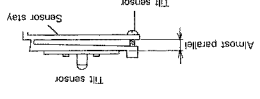


Fig. 10-6

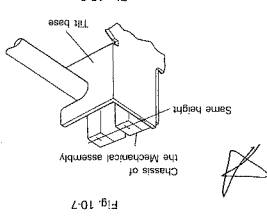


Fig. 10-7

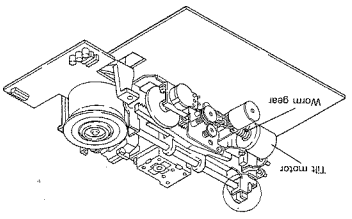
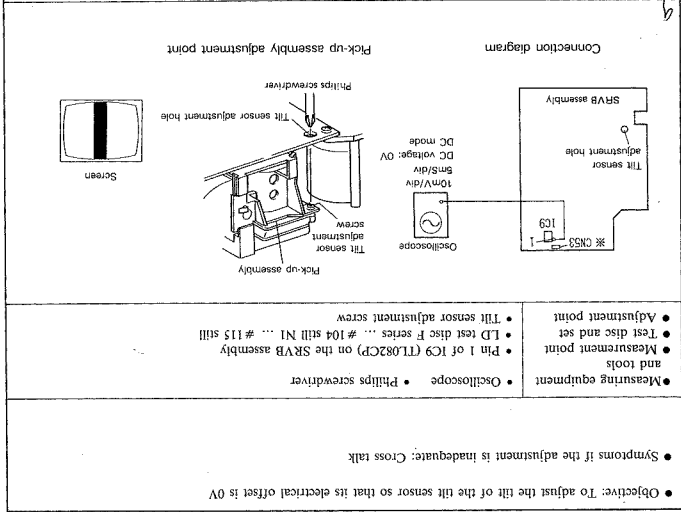


Fig. 10-8

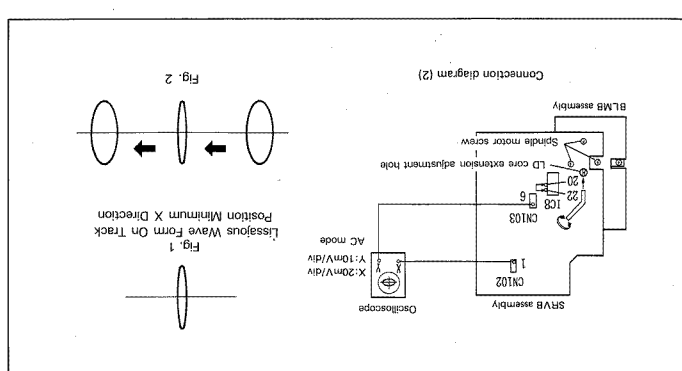
12. Install the Mechanical assembly in the disc player, tighten the three (A) screws and two (B) screws shown in Figure 10-3, connect the ground, then connect the connectors.
13. Leave connector CN53 on the SRVB assembly unconnected.
14. Carry out the following adjustments:
  - Pick-up assembly tilt adjustment (1)
  - Pick-up assembly tilt adjustment (2)
  - Tilt sensor tilt adjustment
  - LD spindle motor axis centering
  - Grating fine adjustment
  - CD spindle motor tilt adjustment
  - CD spindle motor axis centering
  - LD/CD disc clamp switching position adjustment
  - Rotary encoder adjustment
  - Synchronization belt adjustment
  - Roller plate (right) assembly adjustment
  - Subcarrier assembly, slide plate and gear (C) alignment
  - Carrier insertion

**Adjustment Procedure**

1. Leave the CNS3 connector disconnected (to disconnect the tilt servo).
2. Play back the LD test disc and check that the cross talk is minimal at Frame # 18,914 (# 22,525). If there is excessively cross talk, repeat the Pick-up assembly tilt adjustments (1) and (2).
3. Connect the oscilloscope to Pin 1 of IC9 (TL082CP) on the SRVB assembly. Adjust the tilt sensor adjustment so that the DC voltage is 0 V.
4. Connect CNS3 of the SRVB assembly.
5. Double check that there is no cross talk at Frames # 104 (# 115), # 18,914 (# 22,525), and # 42,314 (# 46,135). If there is cross talk, repeat the Pick-up assembly tilt adjustments (1) and (2).



**11.4 TILT SENSOR TILT ADJUSTMENT**  
 Mechanical Adjustments



**11.5 LD SPINDLE MOTOR AXIS CENTERING**  
 Mechanical Adjustments

● Objective: To align the position of the motor so that the Pick-up assembly moves on the horizontal line of the center of the LD spindle motor.

● Symptom if the adjustment is inadequate: Track skipping, excessively long search times

● Measuring equipment

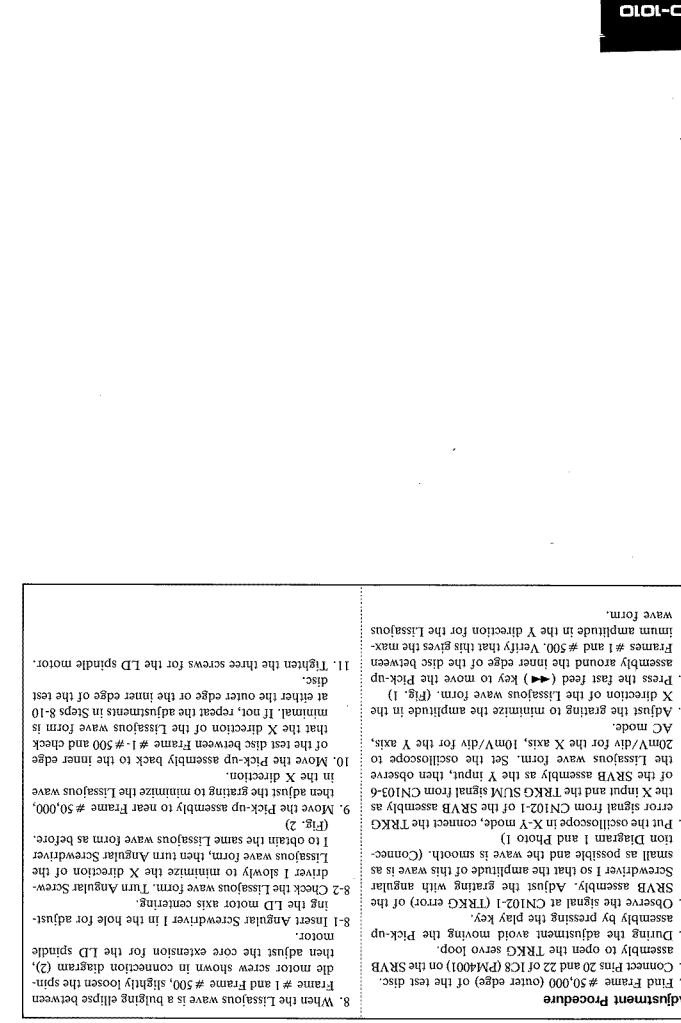
- Oscilloscope
- Angular Screwdriver 1 (GGV-129)

● and tools

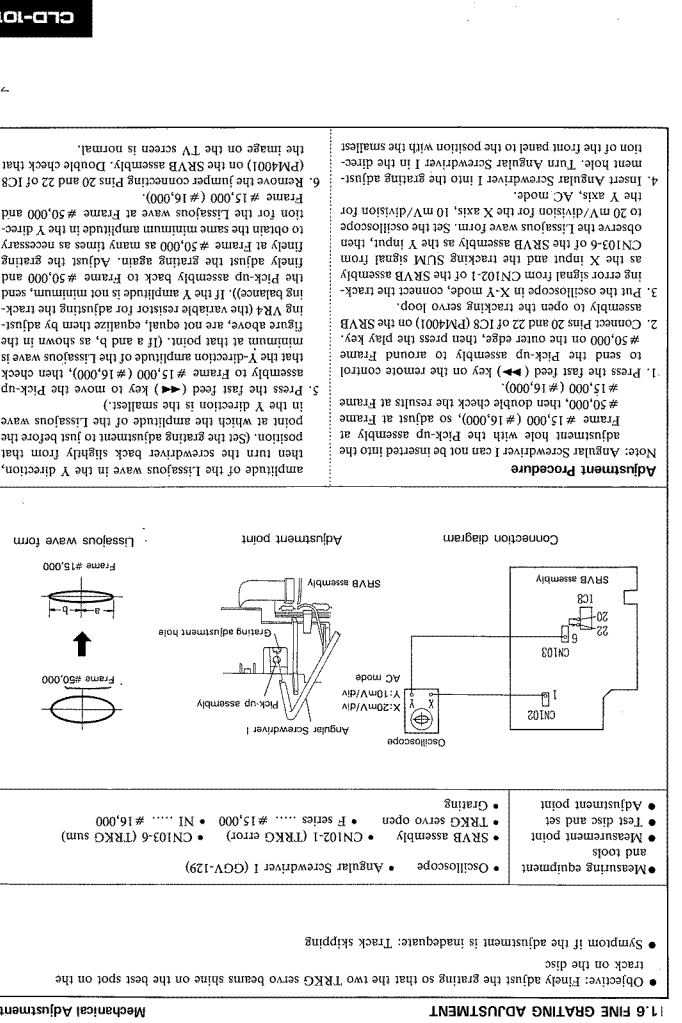
- Measurement point
- SRVB assembly
- CNS102-1 (tracking error)
- CNS103-6 (tracking sum)
- Test disc and set
- Adjustment point
- Grating
- LD spindle motor

**11.4 TILT SENSOR TILT ADJUSTMENT**  
 Mechanical Adjustments

**11.5 LD SPINDLE MOTOR AXIS CENTERING**  
 Mechanical Adjustments



**11.6 FINE GRATING ADJUSTMENT**  
 Mechanical Adjustments



**11.7 LD SPINDLE MOTOR AXIS CENTERING**  
 Mechanical Adjustments

CLD-1010

CLD-1010

CLD-1010

CLD-1010

### 11.7 CD SPINDLE MOTOR TILT ADJUSTMENT

Objective: To adjust the tilt of the CD spindle motor to optimize the CD optic characteristics (e.g. the error rate)

Symptom if the adjustment is inadequate: High error rate, track skipping

Measuring equipment

- YEDS-7 CD test disc
- Angular Screwdriver II (GGV-063) and tools
- Measurement point
- SRVB assembly CN13-4 (RF signal)
- Play CD disc track # 23 (soundless portion)
- CD spindle motor

Adjustment point

- CD spindle motor

Adjustment procedure

1. With the disc player laying flat, mount a CD disc and raise the CD spindle motor.
2. Press the eject key on the front panel and remove the CD disc.
3. Push in the disc table.
4. Loosen the fastening screw for the CD spindle motor slightly from the top of the player.
5. With the player laying flat, load the CD test disc (YEDS-7), then press the eject key on the Remote controller to stop the rotation of the spindle motor.
6. Observe the RF signal at CN-13-4 of the SRVB assembly. Insert Angular screwdriver II (GGV-063) into the hole for adjusting the CD motor tilt and adjust the tilt of the CD motor to maximize the amplitude of the RF signal.

Connection diagram

CD motor tilt 10mV/div  
Oscilloscope 0.5s/div  
CD spindle motor  
Fastening screw  
CD spindle motor  
CD motor Mechanical assembly front diagram  
Angular screwdriver I

11.7 CD SPINDLE MOTOR TILT ADJUSTMENT

### 11.8 CD SPINDLE MOTOR AXIS CENTERING ADJUSTMENT

Objective: To adjust the position of the CD spindle motor.

Symptom if the adjustment is inadequate: Track skipping

Measuring equipment

- Oscilloscope
- YEDS-7 CD test disc
- Angular Screwdriver I (GGV-129) and tools
- Measurement point
- SRVB assembly
- CN102-1 (TRKG error)
- CN103-6 (tracking sum)
- TRKG servo open
- Play the CD test disc
- CD spindle motor

Adjustment point

- Adjustment point

Adjustment procedure

1. Put the oscilloscope in X-Y mode, connect the TRKG error signal from CN102-1 of the SRVB assembly as the X input and the TRKG sum signal from CN103-6 of the SRVB assembly as the Y input, then observe the Lissajous wave form. Set the oscilloscope to 10mV/div for the X axis, 10mV/div for the Y axis.
2. Slightly loosen the two screws fastening the CD spindle motor pedestal.
3. Play the CD test disc, moving the Pick-up assembly between Tracks #1-#5 at the inner edge. Connects Pins 20 and 22 of IC8 (PM4001) on the SRVB assembly to open the tracking servo loop.
4. Insert Angular Screwdriver I in the hole for adjusting the centering of the CD motor axis as shown in Figure above (left). Turn Angular Screwdriver I to the point that gives the maximum amplitude of the Lissajous wave in the Y direction.
5. Note: If the Lissajous wave is not clear, connect L.P.F.'s between the X and Y terminals of the oscilloscope and the measuring points as shown in the figure above.
6. Close the tracking servo loop, find Track #23, then open the tracking servo loop again. Double check that there is no significant change in the Lissajous wave.
7. Close the tracking servo loop.
8. Press the Eject key on the remote control once and lay the player flat. Press the Eject key again and remove the disc.
9. Tighten the screws securing the CD spindle motor.

Connection diagram

Angular screwdriver I  
SRVB assembly  
L.P.F. 0.01  
100kΩ  
100kΩ  
0.01  
100kΩ  
L.P.F.  
Oscilloscope  
X: 20mV/div  
Y: 10mV/div  
Minimum amplitude of the Lissajous wave in the Y direction

11.8 CD SPINDLE MOTOR AXIS CENTERING ADJUSTMENT

### 11.9 LD/CD DISC CLAMP SWITCHING POSITION ADJUSTMENT

Objective: To adjust the position for the LD/CD clamp switch

Symptom if the adjustment is inadequate: Disc not set

Measuring equipment

- Screwdriver

Adjustment point

- LD (CD) disc clamp switch position adjustment slit
- LD (CD) disc clamp switch
- Start the LD (CD) disc.
- Start a pile of two LD discs.
- Adjustment point
- LD (CD) disc clamp switch
- LD (CD) disc clamp switch

Adjustment procedure

Note: If the disc table is ejected without the disc clamp being passed even if there is a disc clamped, then carry out the following procedure to adjust the position for LD/CD disc clamp switching.

Flow chart

```

    graph TD
      A[Disc loading] -- Ejected --> B[Insert the screwdriver in the slit and turn clockwise.]
      A -- OK --> C[Loading 3 discs]
      B -- Ejected --> D[Insert the screwdriver in the slit and turn clockwise.]
      B -- OK --> C
      C -- Ejected --> E[Loading 4 discs]
      C -- OK --> F[Loading two discs]
      D -- Ejected --> E
      D -- OK --> F
      E -- Ejected --> G[Insert the screwdriver in the slit and turn counter-clockwise.]
      E -- OK --> H[Adjustment complete]
      F -- Ejected --> G
      F -- OK --> H
      G -- Ejected --> I[Disc is played properly.]
      G -- OK --> H
      I -- Ejected --> J[Adjustment complete]
      I -- OK --> H
  
```

11.9 LD/CD DISC CLAMP SWITCHING POSITION ADJUSTMENT

### 11.10 ROTARY ENCODER ADJUSTMENT

Objective: To adjust the position of the rotary encoder

Symptom if the adjustment is inadequate: Player can not distinguish LD/CD switching.

Measuring equipment

- Screwdriver
- Oscilloscope
- DSDC assembly CN17-8 and tools
- Measurement point
- DSDC assembly CN17-8
- Rotary encoder
- Adjustment point
- Power switch on
- Test disc and set

Adjustment procedure

1. Switch on the disc player without mounting a disc.
2. Move the left and right rack gears slowly towards the other. Tighten the stopper screws, making sure that the rack gear and the potentiometer gear do not stop meshing.
3. Loosen the stopper screw shown in the figure so that the potentiometer gear can move up and down. Then lightly lift up the rack gear with your hand and adjust the meshing of the gears to line up the spot on the rack gear marked with \* with the hole in the potentiometer gear.
4. Loosen the two screws (C) and insert the screwdriver in the adjustment hole (D).
5. Finely adjust the position of the rotary encoder with the screwdriver so that the level at CN17-8 on the DSDC assembly goes from low (OV) to high (5V).
6. Tighten the two screws (C).
7. Mount a CD (LD) disc and cut the power off while the swing mechanism is switching the spindle motor.
8. Double check that the hole (A) on the Rack gear and the hole (B) on the subchassis are lined up with each other. If they are not, repeat Steps 2 through 8.
9. Tighten the stopper screws, making sure that the rack gear and the potentiometer gear do not stop meshing and that there is a little play in the gear teeth, then apply screw locking solution.

Connection diagram

Oscilloscope 8 Hz  
LOW (OV)  
HIGH (5V)  
DSDC assembly  
Rack gear  
Potentiometer gear  
Rack gear  
Potentiometer gear  
Stopper screw  
Rack gear  
Potentiometer gear

11.10 ROTARY ENCODER ADJUSTMENT

**1.11 SYNCHRONIZATION BELT ADJUSTMENT**

**Adjustment Procedure**

- Apply approximately 50g of tension at the center of the pulley and move the motor so that the slack in the belt is about 2mm. Then tighten the screw temporarily.
- Tighten the screw. Stop the pulley by hand when the motor is turning and be sure that the gears do not slip.

**Mechanical Adjustments**

- Measuring equipment
- Test disc and set
- Adjustment point

● Symptom if the adjustment is inadequate: Slipping in the synchronization gears.

● Objective: To adjust the slack in the synchronization belt.

**1.12 RIGHT ROLLER PLATE ASSEMBLY ADJUSTMENT**

**Adjustment Procedure**

- Meshing the Roller plate (R) assembly, Gear (E), Pinion (E), and Intermediate rack
- Line up the hole in the Gear (L) with Hole B and the hole in the Gear (E) with Hole A and install them on the Roller plate (R) assembly as shown in Fig. 2.
- With the parts in the positions relative to each other shown in Figures 1 and 2, install the Intermediate rack on the Roller plate (R) assembly.
- Move the Intermediate rack all the way from the position it has been fitted into and make sure that the hole in the Gear (E) is in the position shown in Fig. 3. When carrying out Operations 1-4 above, grease the locations shown in Fig. 1.
- After installing the Intermediate rack, tighten the screws so that the Rack holder attaches the Roller plate (R) assembly (Fig. 1).

**Fig. 1 Gear Assembly Gear Teeth Meshing**

**Fig. 2**

**Fig. 3 Verifying the Gear Meshing**

**Mechanical Adjustments**

- Measuring equipment and tools
- Measurement point
- Test disc and set
- Adjustment point

● Symptom if the adjustment is inadequate: Abnormality in the loading operation

● Objective: To have the gear (E), pinion (E) and the Intermediate rack mesh

**1.13 MESHING THE SUBCARRIER ASSEMBLY, SLIDE PLATE, GEAR (C)**

**Assembly**

- Pull the Subcarrier assembly all the way towards you.
- Push the Slide plate back to the point at which the Lock plate switches (turns in the carrier).
- Install the Gear (C) so that Hole C on the Slide plate is on the line connecting Side Hole A on the slide plate and Side Hole B on the Gear base (R) assembly, as shown in the figure.

**Verification**

- Turn the Lock plate to the outside, then move the Lock carriage assembly to the rear.
- Move the Subcarrier all the way forward and make sure that the Lock plate for the Slide plate switches smoothly.
- While performing these operations, make sure that the Carriage and Subcarrier assemblies are on the same center.

**Mechanical Adjustments**

- Measuring equipment and tools
- Measurement point
- Test disc and set
- Adjustment point

● Symptom if the adjustment is inadequate: Abnormal loading operations

● Objective: The way the Subcarrier assembly, Slide plate, and Gear (C) mesh

**1.14 CARRIAGE INSERTION METHOD**

**Insertion Method**

- Pull the Clamper holder forward until it locks. (The Loading mechanism comes farther forward than the out position.)
- Set the Carrier horizontal and insert it keeping the left and right guide grooves lined up with the Rollers on the sides of the Loading mechanism.
- Install the two Plastic rivets.
- Install the Front panel.

**Verification**

- Switch on the power, have the Carrier unload, mount a CD or LD disc, then check that the player can play this disc properly.
- Next, mount the other type of Disc (LD or CD), switch off the power while the CD motor is swinging, then check that the clearance between the right rear section of the Carrier and the Stopper is at least 2 mm, as shown in the figure above.

**Mechanical Adjustments**

- Measuring equipment and tools
- Measurement point
- Test disc and set
- Adjustment point

● Symptom if the adjustment is inadequate: Abnormal loading operations

### 3. RF Level Adjustment

● Objective: To optimize the amplitude of the RF signals


● Symptom if the adjustment is inadequate: Too many drop outs

● Measuring equipment and tools

- Oscilloscope
- SRVB assembly CN13-4 (RF signal)
- LD test disc F series ... #15,000 still N1 ... #16,000 still
- SRVB assembly VR6
- Adjustment point
- Test disc and set

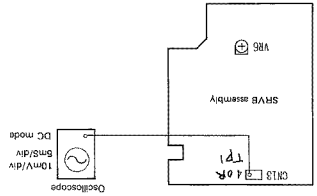
**Adjustment Procedure**

1. Find Frame #15,000 (#16,000), oscilloscope and observe the RF signals.
2. Connect CN13-4 on the SRVB assembly and the
3. Adjust VR6 so that the amplitude of the RF signals at CN13-4 is 300mVp-p.



RF signal  
300mVp-p

**Connection Diagram**



## 12. ELECTRICAL ADJUSTMENT

### 12.1 SRVB ASSEMBLY ADJUSTMENT

● Objective: To set the electric offset for the FOCs servo to 0

● Symptom if the adjustment is inadequate: The FOCs is difficult to lock, causing the playability of the disc to deteriorate.

● Measuring equipment and tools

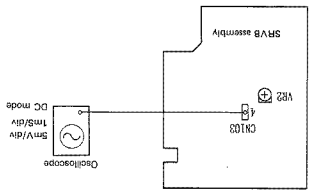
- Oscilloscope
- SRVB assembly CN103-4 (FOCS error)
- SRVB assembly VR2
- Test disc and set
- Adjustment point

**Adjustment Procedure**

1. Switch on the power without mounting the disc.
2. Observe the DC voltage at CN103-4 (FOCS error) on the SRVB assembly and adjust VR2 so that this voltage is within 5mV of 0V.

▶ 000V

**Connection Diagram**



### 4. TRKG Servo Loop Gain Adjustment

● Objective: To set the optimum loop gain for the TRKG servo

● Symptom if the adjustment is inadequate: Deterioration of the playability

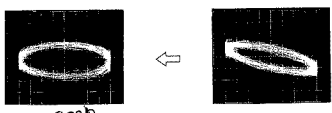
● Measuring equipment and tools

- Oscilloscope
- 68 kΩ resistor
- SRVB assembly CN102-1 ... X CN102-2 ... X
- LD test disc F series ... #15,000 still N1 ... #16,000 still
- SRVB assembly VR5
- Adjustment point

**Adjustment Procedure**

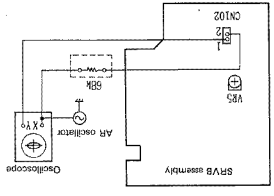
1. Set the output and the frequency for the AF oscillator to the values shown in the table above.
2. Find Frame #15,000 (#16,000).
3. Connect the resistor, AF oscillator, and oscilloscope as shown in the diagram above.
4. Put the oscilloscope in X-Y mode, then observe the Lissajous wave.
5. Adjust VR5 so that the Lissajous wave is symmetrical about both the X and Y axes.

Making the Lissajous Wave Form Horizontal



good

**Connection diagram**



Test disc	F1	F2	F3	FA	FB
Frequency (kHz)	3.0	3.7	3.3	3.3	3.3
Output (Vp-p)	4.0	4.0	4.0	4.0	4.0

N1, ... 2.7kHz(ΔVp-p)

### 2. TRKG Balance Adjustment

● Objective: To set the electric offset for the Tracking servo to 0

● Symptom if the adjustment is inadequate: Searches take longer (and jump operations become more difficult).

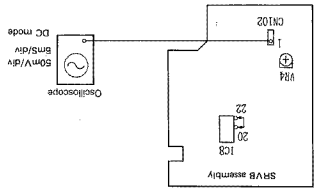
● Measuring equipment and tools

- Oscilloscope
- SRVB assembly CN102-1 (TRKG error)
- LD test disc F series, N1 ... #20,000 still
- SRVB assembly VR4
- Adjustment point

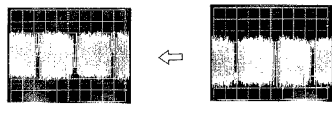
**Adjustment Procedure**

1. Mount the LD test disc. The player automatically begins to play this disc.
2. Find Frame #20,000 with the remote controller.
3. Connect Pins 20 and 22 of IC8 (PM4001) on the SRVB assembly to open the TRKG servo loop.
4. Observe the TRKG error signal at CN102-1 of the SRVB assembly.
5. Adjust VR4 so that positive amplitude and the negative amplitude of the TRKG error signal are the same.

**Connection Diagram**



TRKG Error Wave Form



**6. FOCUS Loop Gain Adjustment**

● Objective: To set the optimum loop gain for the FOCUS servo

● Symptom if the adjustment is inadequate: Deterioration of the playability

● Measuring equipment and tools

- Oscilloscope
- SRVB assembly CN103-4 ... Y CN103-5 ... X
- Test disc F series ... # 15,000 still NI ... # 16,000 still
- SRVB assembly VR3

● Adjustment point

- Test disc and set
- Measurement point
- SRVB assembly CN103-4 ... Y CN103-5 ... X
- Switch off the FOCUS motor protection circuit.
- LD test disc F series ... # 15,000 still NI ... # 16,000 still

● Connection diagram

Test disc	F1	F2	F3	F4	F5
Frequency (kHz)	2.1	1.7	1.7	2.0	1.7
Output (Vp-p)	1.2	1.2	1.2	1.2	1.2

● Adjustment Procedure

1. Connect the drain and the source of Q5 (2SK184) on the SRVB assembly to disable the FOCUS motor protection circuit.
2. Set the output and the frequency for the AF oscillator to the values shown in the table above.
3. Find Frame # 15,000 (# 16,000).
4. Connect the AF oscillator to CN103-5 and the oscilloscope to CN103-4, as shown in the diagram above.

● Making the Lissajous Wave Form Horizontal

**6. FOCUS Error Balance Adjustment**

● Objective: To operate the FOCUS servo at the optimum position

● Symptom if the adjustment is inadequate: Crossstalk

● Measuring equipment and tools

- TV monitor
- Video output terminals on the player
- SRVB assembly VR1

● Adjustment point

- Test disc and set
- Measurement point
- Video output terminals on the player
- SRVB assembly VR1

● Connection diagram

● Adjustment Procedure

1. Find Frame # 104 (# 115).
2. Adjust VR1 to minimize the crossstalk generated on the left and right sides of the TV screen.

● Screen with crossstalk

● Screen

**7. CD FOCUS Balance Adjustment**

● Objective: To operate the FOCUS servo at the optimum position

● Symptom if the adjustment is inadequate: Higher error rate, breaks in the sound

● Measuring equipment and tools

- Oscilloscope
- CD test disc (YEDS-7)
- SRVB assembly CN13-4
- CD play
- SRVB assembly VR12

● Adjustment point

- Test disc and set
- Measurement point
- SRVB assembly CN13-4
- CD play
- SRVB assembly VR12

● Connection diagram

● Adjustment Procedure

1. Mount the CD test disc (YEDS-7) and play it.
2. Observe the RF signal at CN13-4 of the SRVB assembly.
3. Adjust VR12 to maximize the amplitude of the RF signal.

**8. Inside/Outside Position Detection Adjustment**

● Objective: To determine the position for starting LD/CD play and the Pick-up position for when the Tilt servo is off

● Symptom if the adjustment is inadequate: The disc is not played and the CD motor can not swing.

● Measuring equipment and tools

- TV monitor
- CD test disc (YEDS-7)
- SRVB assembly VR8, VR9, VR10, VR11

● Adjustment point

- Test disc and set
- Measurement point
- CD test disc (YEDS-7) Track # 1
- SRVB assembly VR8, VR9, VR10, VR11

● How to Enter Test Mode

1. Mount the test disc.
2. Press the Eject (M/A) key on the Remote control once to stop the rotation of the Spindle motor.
3. Switch off the power for the player.
4. With the front door of the player open, switch on its power.
5. Press the play key. After the image appears, press the display switch key on the remote control and make sure that either "P" or "L" is displayed on the top right of the screen.

● Adjustment Procedure

1. LD inside position adjustment
1. Find Frame # 1,500 (# 1,500), then adjust VR8 so that the L/P display changes from L to P.
2. 12-inch LD outside position adjustment
2. Find Frame # 46,600 (# 49,600), then adjust VR9 so that the L/P display changes from P to L.
3. 8-inch LD outside position adjustment
3. Connect the center and the collector of Q34 (DTC124ES) of the SRVB assembly.
4. Find Frame # 17,000 (# 18,300), then adjust VR10 so that the L/P display changes from P to L.
5. Remove the connection between the emitter and the collector of Q34.

● Front door

● STBC assembly

### 12.2 STBC ASSEMBLY ADJUSTMENT

#### 1. TBC Offset Adjustment

● Objective: To set the offset voltage at Pin 1 of IC3 (BA4558DX) of the STBC assembly to 0V

● Symptom if the adjustment is inadequate: After a search, the color lock is slow.

<ul style="list-style-type: none"> <li>● Measuring equipment and tools</li> <li>● Oscilloscope</li> <li>● L.P.F.</li> </ul>	<ul style="list-style-type: none"> <li>● Measurement point</li> <li>● Stand by</li> <li>● STBC assembly</li> <li>● IC3 (BA4558DX) Pin 1</li> </ul>	<ul style="list-style-type: none"> <li>● Adjustment point</li> <li>● Test disc and set</li> <li>● STBC assembly VR1</li> </ul>
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**Adjustment Procedure**

1. Press the **Effect** key on the Remote control once to stop the rotation of the Spindle motor.
2. With the player on stand by, connect the oscilloscope to Pin 1 of IC3 (BA4558DX) and measure the offset voltage.
3. Adjust VR1 so that the offset voltage at Pin 1 of IC3 (BA4558DX) is 0 V.

Note: If the DC voltage can not be checked because of noise, connect the Low-pass filter (L.P.F.) as shown in the diagram above.

### 2. Time Axis Error Detection Adjustment

● Objective: To balance the positive amplitude and negative amplitude of the Time axis error signal

● Symptom if the adjustment is inadequate: The screen is warped and the color lock does not work.

<ul style="list-style-type: none"> <li>● Measuring equipment and tools</li> <li>● Oscilloscope</li> <li>● STBC assembly</li> <li>● IC1 (PA5009) Pin 11</li> <li>● LD disc play</li> <li>● STBC assembly VR2</li> </ul>	<ul style="list-style-type: none"> <li>● Measurement point</li> <li>● STBC assembly</li> <li>● IC1 (PA5009) Pin 11</li> </ul>	<ul style="list-style-type: none"> <li>● Adjustment point</li> <li>● Test disc and set</li> <li>● STBC assembly VR2</li> </ul>
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**Adjustment Procedure**

1. Press the **Play** key.
2. Connect Pin 9 of IC601 (PA0017) of the VDEM assembly to ground to give the Time axis error component to ground to give the Time axis error component.
3. Connect the oscilloscope to Pin 11 of IC1 (PA5009) on the STBC assembly and observe the Time axis error signal.
4. Adjust VR2 so that the positive amplitude and the negative amplitude of the Time axis error signal (the wave) are the same.

### 3. Sync Gate Timing Adjustment

● Objective: To optimize the timing for the sync gate

● Symptom if the adjustment is inadequate: The colors are uneven, the color lock does not work, and the system starts from the middle without reading data.

<ul style="list-style-type: none"> <li>● Measuring equipment and tools</li> <li>● Oscilloscope</li> <li>● STBC assembly</li> <li>● IC1 (PA5009) Pin 15</li> <li>● LD disc play</li> <li>● STBC assembly VR3</li> </ul>	<ul style="list-style-type: none"> <li>● Measurement point</li> <li>● STBC assembly</li> <li>● IC1 (PA5009) Pin 15</li> </ul>	<ul style="list-style-type: none"> <li>● Adjustment point</li> <li>● Test disc and set</li> <li>● STBC assembly VR3</li> </ul>
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**Adjustment Procedure**

1. Connect the emitter of Q307 on the STBC assembly to CH1 of the oscilloscope and observe the Video signal and the Monostable multi-vibrator (MMV) output of the sync gate.
2. Adjust VR3 of the STBC assembly so that the falling edge of the MMV output is 5µsec. ahead of the H sync of the Video signal.

### 4. Burst Gate Timing Adjustment

● Objective: To optimize the timing for the burst gate

● Symptom if the adjustment is inadequate: The system starts from the middle. There is no color. The color is uneven. Fine stripes stand out.

<ul style="list-style-type: none"> <li>● Measuring equipment and tools</li> <li>● Oscilloscope</li> <li>● STBC assembly</li> <li>● Q307 (emitter)</li> <li>● IC1 (PA5009) Pin 22</li> <li>● LD disc play</li> <li>● STBC assembly VR4</li> </ul>	<ul style="list-style-type: none"> <li>● Measurement point</li> <li>● STBC assembly</li> <li>● IC1 (PA5009) Pin 22</li> </ul>	<ul style="list-style-type: none"> <li>● Adjustment point</li> <li>● Test disc and set</li> <li>● STBC assembly VR4</li> </ul>
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**Adjustment Procedure**

1. Connect the emitter of Q307 on the STBC assembly to CH1 of the oscilloscope and Pin 22 of IC1 (PA5009) to CH2 of the oscilloscope and observe the Video signal and the Monostable multi-vibrator (MMV) output of the sync gate.
2. Adjust VR4 of the STBC assembly so that the falling edge of the MMV output is 1 µsec. later than the Burst signal of the Video signal.

<p>Optimum point VR301 turned to the left VR301 turned to the right</p> <p>Wave forms</p>	<p>4. Adjust VR301 so that the waves in the chroma signal are smooth.</p> <p>3. Connect the emitter of Q307 of the STBC assembly to the oscilloscope and observe the Video signal.</p> <p>2. Turn VR5 on the STBC assembly all the way counter-clockwise.</p> <p>1. Find Chapter #20 (#15) on the LD test disc.</p>
<p><b>Adjustment Procedure</b></p> <p>1. Find Chapter #20 (#15) on the LD test disc.</p> <p>2. Turn VR5 on the STBC assembly all the way counter-clockwise.</p> <p>3. Connect the emitter of Q307 of the STBC assembly to the oscilloscope and observe the Video signal.</p> <p>4. Adjust VR301 so that the waves in the chroma signal are smooth.</p>	
<p><b>Connection diagram</b></p>	
<p>● Objective: To optimize the chroma level in the color phase compensation section</p> <p>● Symptom if the adjustment is inadequate: There is much unevenness in the colors on the screen.</p> <p>● Measuring equipment and tools</p> <ul style="list-style-type: none"> <li>● Oscilloscope</li> <li>● LD test disc</li> <li>● STBC assembly</li> <li>● Q307 (emitter)</li> <li>● LD test disc F series ... #26,101 (Chap #20) N1 ... #7,201 (Chap #15) still</li> </ul> <p>● Adjustment point</p> <ul style="list-style-type: none"> <li>● STBC assembly VR301</li> </ul>	

5. MIX Chroma Level Adjustment

<p>1. Find Chapter #20 (#15). (It shows a magenta screen.)</p> <p>2. Adjust VR5 to the point at which the magenta image is most even.</p>	<p><b>Adjustment Procedure</b></p> <p>1. Find Chapter #20 (#15). (It shows a magenta screen.)</p> <p>2. Adjust VR5 to the point at which the magenta image is most even.</p>
<p><b>Connection diagram</b></p>	
<p>● Objective: To optimize the level of the Error signal in the Color phase compensation section</p> <p>● Symptom if the adjustment is inadequate: There is much unevenness in the colors on the screen.</p> <p>● Measuring equipment and tools</p> <ul style="list-style-type: none"> <li>● TV monitor</li> <li>● LD test disc</li> <li>● STBC assembly VR5</li> </ul> <p>● Adjustment point</p> <ul style="list-style-type: none"> <li>● Test disc and set</li> <li>● LD test disc F series ... #26,101 (Chap #20) N1 ... #7,201 (Chap #15) still</li> </ul>	

6. Color Phase Error Signal Level Adjustment

<p>Main video signal IH delay video signal</p> <p>Wave forms</p>	<p>1. Connect Pin 13 of IC502 (PA3018) of the VDEM assembly to CH1 of the dual trace oscilloscope and Pin 11 to CH2.</p> <p>2. Find Chapter #15 (#29).</p> <p>3. Adjust VR501 so that the IH delay video level (CH2) is the same as the main line video level (CH1).</p> <p>Note: The Video level is the level from the sync tip to the white peak.</p>
<p><b>Adjustment Procedure</b></p> <p>1. Connect Pin 13 of IC502 (PA3018) of the VDEM assembly to CH1 of the dual trace oscilloscope and Pin 11 to CH2.</p> <p>2. Find Chapter #15 (#29).</p> <p>3. Adjust VR501 so that the IH delay video level (CH2) is the same as the main line video level (CH1).</p> <p>Note: The Video level is the level from the sync tip to the white peak.</p>	
<p><b>Connection diagram</b></p>	
<p>● Objective: To equalize the video levels for the IH delay signal and the Main line video signal</p> <p>● Symptom if the adjustment is inadequate: The IH level is: Too high ... White drop out is noticeable and the horizontal adjustment is out of alignment (causing horizontal lines on the screen) Too low ... Black drop out is noticeable.</p> <p>● Measuring equipment and tools</p> <ul style="list-style-type: none"> <li>● Dual trace oscilloscope</li> <li>● VDEM assembly</li> <li>● IC502 (PA3018) Pin 11</li> <li>● IC502 (PA3018) Pin 13</li> <li>● LD test disc F series ... #19,801 (Chap #15) N1 ... #19,801 (Chap #29) still</li> <li>● VDEM assembly VR501</li> </ul> <p>● Adjustment point</p> <ul style="list-style-type: none"> <li>● VDEM assembly VR501</li> </ul>	

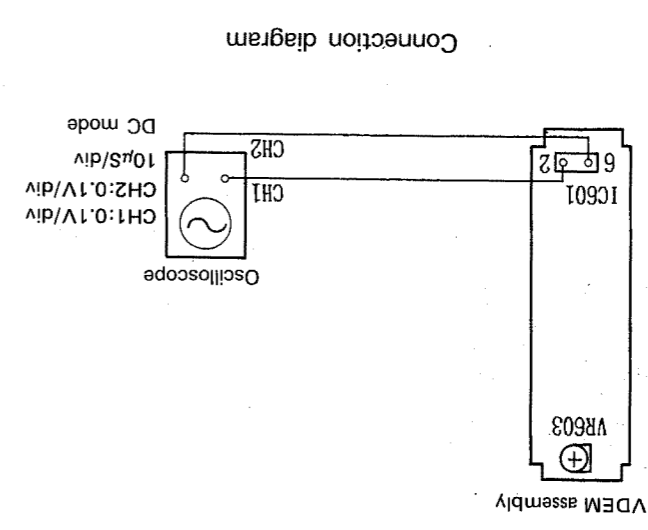
1.1 H Delay Video Level Adjustment

<p>Video level IH delay video signal</p> <p>Wave forms</p>	<p>1. Connect the emitter of Q307 of the STBC assembly to the Oscilloscope and measure the Video signal.</p> <p>2. Find Chapter #15 (#29).</p> <p>3. Adjust VR602 so that the Video level at the emitter of Q307 of the STBC assembly is 2Vp-p.</p> <p>Note: The Video level is the voltage from the sync tip to the white peak.</p>
<p><b>Adjustment Procedure</b></p> <p>1. Connect the emitter of Q307 of the STBC assembly to the Oscilloscope and measure the Video signal.</p> <p>2. Find Chapter #15 (#29).</p> <p>3. Adjust VR602 so that the Video level at the emitter of Q307 of the STBC assembly is 2Vp-p.</p> <p>Note: The Video level is the voltage from the sync tip to the white peak.</p>	
<p><b>Connection diagram</b></p>	
<p>● Objective: To set the level of the Video signal to 2Vp-p</p> <p>● Symptom if the adjustment is inadequate: The system starts up from the middle and cannot read the data. The screen is too bright or too dark.</p> <p>● Measuring equipment and tools</p> <ul style="list-style-type: none"> <li>● Oscilloscope</li> <li>● STBC assembly</li> <li>● Emitter of Q307</li> <li>● LD test disc F series ... #19,801 (Chap #15) N1 ... #19,801 (Chap #29) still</li> <li>● VDEM assembly VR602</li> </ul> <p>● Adjustment point</p> <ul style="list-style-type: none"> <li>● Test disc and set</li> <li>● LD test disc F series ... #19,801 (Chap #15) N1 ... #19,801 (Chap #29) still</li> </ul>	

2. Output Video Level Adjustment



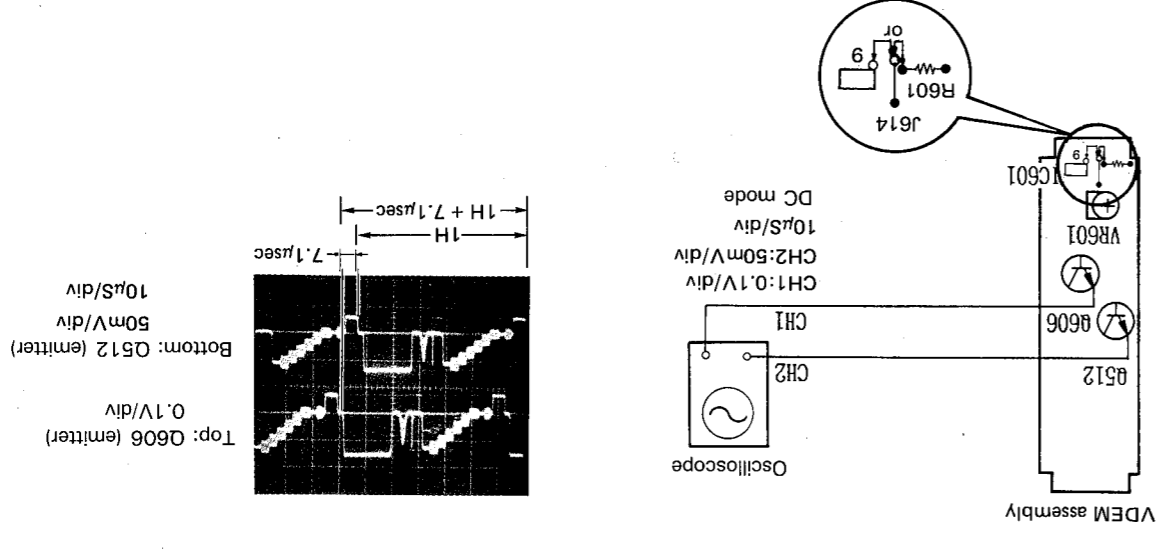
- Adjustment Procedure**
1. Connect Pin 2 of IC601 (PA0018) of the VDEM assembly to CH1 of the dual trace oscilloscope and Pin 6 to CH2.
  2. Connect Pin 2 of IC601 to both CH1 and CH2 of the oscilloscope and bring the DC level to the middle of the oscilloscope.
  3. Play the test disc.
  4. Leave CH1 connected to Pin 2 and connected CH2 to Pin 6. Adjust VR603 so that the levels of CH1 and CH2 are the same.
- Note: The Video level is the voltage from the sync tip to the white peak.



- Measuring equipment and tools
  - Measurement point
  - Test disc and set
  - LD disc play
  - VDEM assembly
  - IC601 (PA0018) Pin 2 and Pin 6
  - VDEM assembly VR603
  - Dual trace oscilloscope
- Objective: To adjust the VCO free run frequency used in separating the Synchronization signals from the Video signals
- Symptom if the adjustment is inadequate: The spindle can not be locked.

**3. Synchronization Separation VCO Free Run Frequency Adjustment**

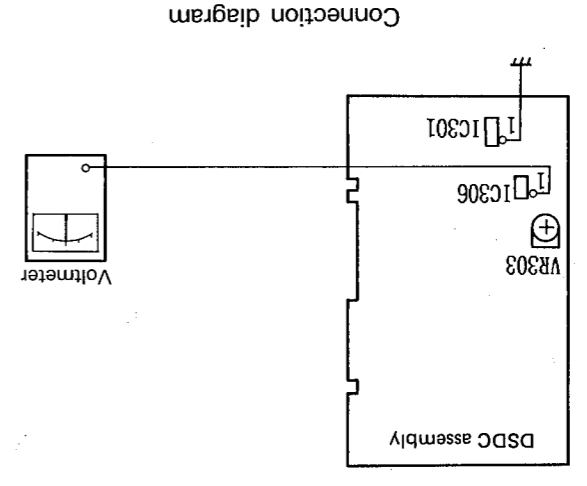
- Adjustment Procedure**
1. Connect Pin 9 of IC601 (PA0017) of the VDEM assembly to ground. (Connect one side of R601 (J614) to J614.)
  2. Connect CH1 of the dual trace oscilloscope to the emitter of Q512.
  3. Play the LD test disc. Find Chapter #15 (#29).
  4. Adjust VR601 so that the Video signal on CH1 is 70.1  $\mu$ sec. (1H + 7.1  $\mu$ sec.) slower than the Video signal on CH2.
- Note: When there is no Time axis error in the Play back video signal, the Video signal is delayed 70.1  $\mu$ sec. by the time axis error compensation CCD.



- Measuring equipment and tools
  - Measurement point
  - Test disc and set
  - LD test disc
  - VDEM assembly VR601
  - VDEM assembly Q606 emitter Q512
  - VDEM assembly VR601
  - Dual trace oscilloscope
  - LD test disc
- Objective: To optimize the setting of the delay time for the CCD for Time axis error compensation
- Symptom if the adjustment is inadequate: It is hard to lock the colors and after a search the colors lock slowly.

**4. VCO Central Frequency Adjustment**

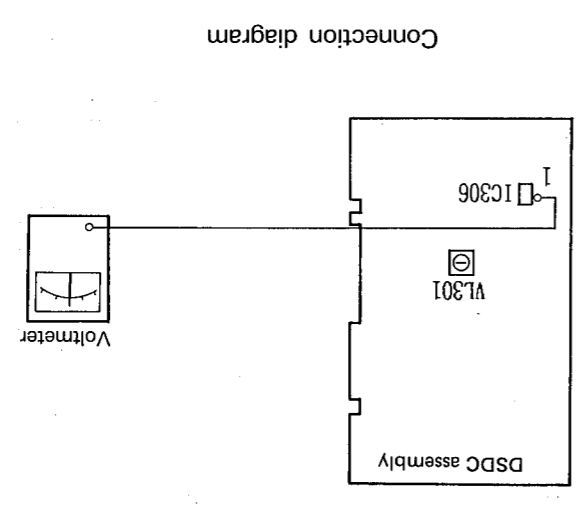
- Adjustment Procedure**
1. Press the Eject key on the Remote control once to stop the rotation of the Spindle motor.
  2. Connect the voltmeter to Pin 1 of IC306 (TL082CP) of the DSDC assembly and measure the PLL offset voltage.
  3. Ground Pin 1 of IC301 (TC40H004P) of the DSDC assembly.
  4. Adjust VR303 of the DSDC assembly so that the voltage at Pin 1 of IC306 is  $50 \pm 50mV$ .
  5. Remove the line grounding Pin 1 of IC301.



- Measuring equipment and tools
  - Measurement point
  - Test disc and set
  - Adjustment point
  - DSDC assembly VR303
  - DSDC assembly
  - IC306 (TL082CP) (NJM082D) Pin 1
  - Stand by
  - Ground Pin 1 of IC301 (TC40H004P) of the DSDC assembly
  - Voltmeter
- Objective: To optimize the offset for the PLL circuit used to extract the reference clock for the EFM decoder
- Symptom if the adjustment is inadequate: There is no digital sound or the sound is broken.

**1.2.4 DSDC ASSEMBLY ADJUSTMENT**

- Adjustment Procedure**
1. Mount the LDD test disc. Play it.
  2. Connect the voltmeter to Pin 1 of IC306 (TL082CP) of the DSDC assembly and measure the voltage of the VCO control signal.
  3. Adjust VL301 of the DSDC assembly so that the voltage of the VCO control signal at Pin 1 of IC306 is  $150 \pm 100mV$ .



- Measuring equipment and tools
  - Measurement point
  - Test disc and set
  - Adjustment point
  - DSDC assembly VL301
  - DSDC assembly
  - IC306 (TL082CP) (NJM082D) Pin 1
  - LDD test disc
  - DSDC assembly VL301
  - Voltmeter
- Objective: To optimize the free run frequency for the reference clock for the EFM decoder
- Symptom if the adjustment is inadequate: There is n sound or the sound is broken.

**2. VCO Free Run Frequency Adjustment**

**3. VCXO Offset Adjustment**

● Objective: To minimize the offset for the Spindle phase error comparator circuit (there is synchronized noise).

- Measuring equipment and tools
- Measurement point
- Test disc and set
- Adjustment point

- DSDC assembly
- LDD disc
- Oscilloscope
- IC305 (CXD1135Q) Pin 3 (leads of R336, R338, and R361)
- DSDC assembly VR301

Wave form

VR301 turned to the left of the adjustment point

Adjustment point

VR301 turned to the right of the adjustment point

**Adjustment Procedure**

1. Connect the oscilloscope to Pin 3 of IC305 (CXD1135Q) and measure the Spindle phase error output voltage. (If it is difficult to measure at Pin 3 of IC305, measure at the leads of one of the resistors connected to Pin 3, R336, R338, or R361.)
2. Mount the LDD test disc. Play it.
3. Adjust VR301 to the point at which the positive and the negative pulses are the smallest.

**Connection diagram**

**5. REF and Subcarrier Frequencies Adjustment**

● Objective: To set the reference and subcarrier frequencies to 3,579545 MHz  $\pm$  5 Hz

- Measuring equipment and tools
- Measurement point
- Test disc and set
- Adjustment point

- Frequency counter
- STBC assembly
- Power on
- DSDC assembly VC101

Wave form

VC101

3,579545MHz

3,579545MHz

3,579545MHz

**Adjustment Procedure**

1. Switch on the power.
2. Connect the frequency counter to Pin 27 of IC101 (PM2001) on the STBC assembly.
3. Adjust VC101 so that the frequency is 3,579545MHz  $\pm$  5Hz.

**Connection diagram**

**4. VCXO Free Run Frequency Adjustment**

● Objective: To set the correct frequency for the crystal used for the EFM decoder

- Measuring equipment and tools
- Measurement point
- Test disc and set
- Adjustment point

- Frequency counter
- DSDC assembly
- IC402 (PCM56P-J) Pin 5
- CD test disc play
- DSDC assembly VR302

Wave form

VR302

4,2336MHz

4,2336MHz

4,2336MHz

**Adjustment Procedure**

1. Mount the CD test disc.
2. After the disc starts turning, press the Eject key on the Remote control once to stop the rotation of the Spindle motor.
3. Connect the frequency counter to Pin 5 of IC402 (PCM56P-J).
4. Adjust VR302 of the DSDC assembly so that the frequency is 4,2336MHz  $\pm$  200Hz.

**Connection diagram**

**13. FOR S/G TYPE**

**CONTRAST OF MISCELLANEOUS PARTS CLD-1010/S/G**

The CLD-1010/S/G type is the same as the CLD-1010/KUC type with the exception of the following sections.

Circuit Diagrams

LSF8

PWSB

Mark	Symbol & Description	Part No.	Remarks
▽	CNNB assembly	CLD-1010/KUC	
▽	Power transformer (T1) (AC110V, 120V, 220V, 240V)	VT-079	Non supply
*	Power transformer (T1) (AC120V)	VT-078	
▽	F Type plug	VKX-017	
▽	SW holder	VNE-675	
**	Line voltage selector (AC110V, 120V, 220V, 240V)	VS8-002	
▽	Front panel assembly-S	VXX1041	
▽	Packing case	VHG1011	
▽	Cap	VEB-108	
▽	Rubber foot	VEB1001	
▽	A/C Power cord	VDG-038	
		CLD-1010/S/G	