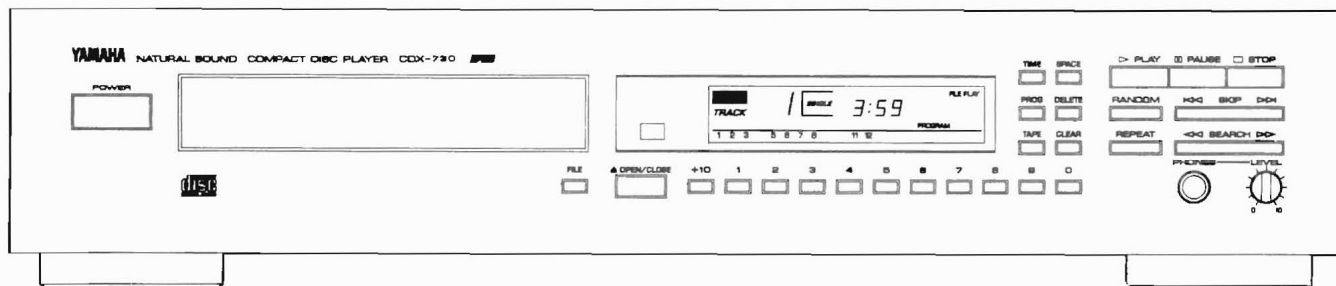


COMPACT DISC PLAYER CDX-730/730E

SERVICE MANUAL



IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that all service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

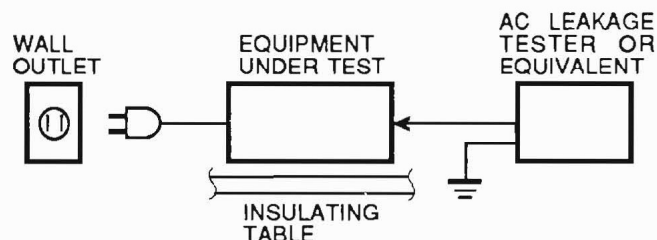
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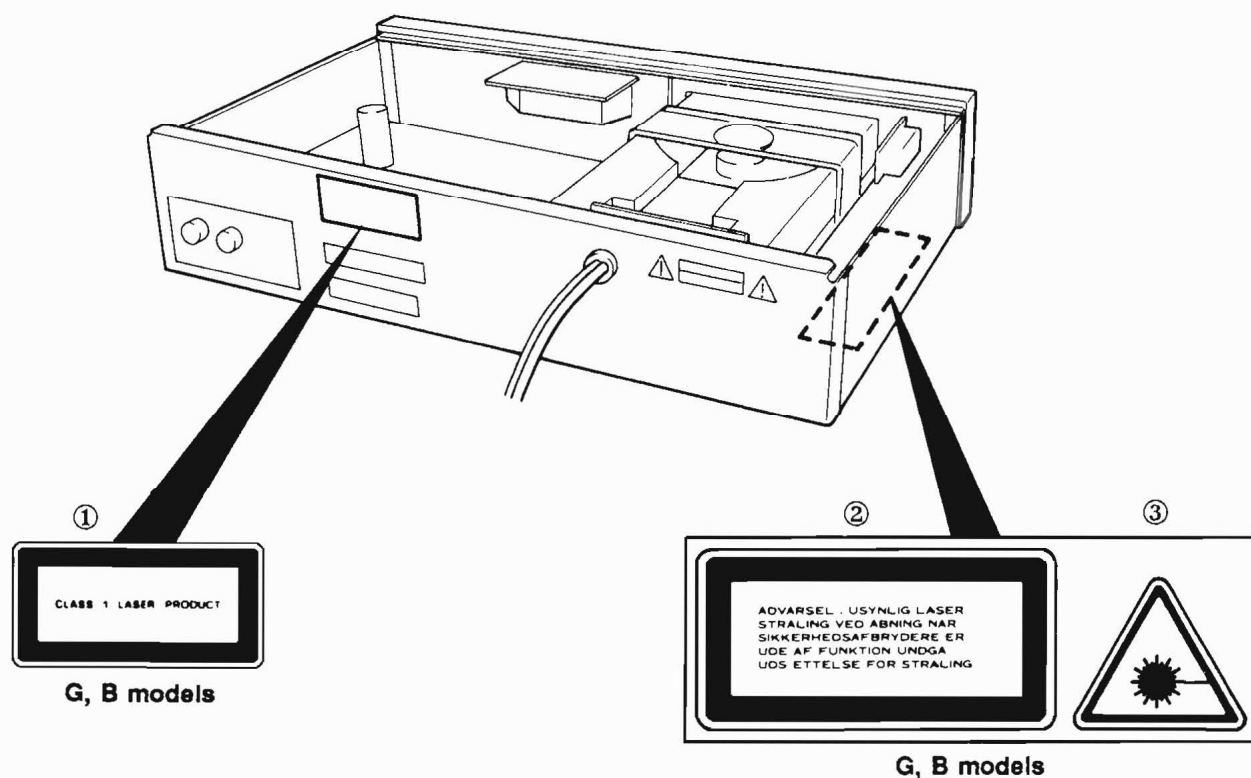
■ TO SERVICE PERSONNEL

1. Critical Components Information.
Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.
2. Leakage Current Measurement (For 120V Model Only).
When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.
 - Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F.
 - Leakage current must not exceed 0.5mA.
 - Be sure to test for leakage with the AC plug in both polarities.
 - **POLARIZATION (U, C models)**
This CD player product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature.



CAUTION-USE OF CONTROLS, ADJUSTMENTS, OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN, MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THE COMPACT DISC PLAYER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED SERVICE PERSONNEL.



English

- ① THIS LABEL (SEE POSITION SHOWN IN THE ILLUSTRATION) INFORMS THE USER THAT THE APPARATUS CONTAINS A LASER COMPONENT.
 - ② THIS LABEL (SEE POSITION SHOWN IN THE ILLUSTRATION) WARNS THAT ANY FURTHER PROCEDURE WILL BRING THE USER INTO EXPOSURE WITH THE LASER BEAM.
 - ③ THE RADIATION WARNING LABEL IS PLACED INSIDE THE UNIT AS SHOWN IN THE ILLUSTRATION, TO WARN AGAINST FURTHER MEASURES ON THE UNIT. THE EQUIPMENT CONTAINS A LASER COMPONENT RADIATING LASER RAYS EXCEEDING THE LIMIT OF CLASS 1 LASER PRODUCTS.
- CAUTION-USE OF CONTROLS, ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN, MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Swedish

- ① PÅSKRIFTEN SITTE PÅ APPARATEM SOM VISAS SOM EN UPPMANING OM ATT APPARATEN OMFATTAR EN INBYGGD LASERKOMPONENT.
 - ② TEXTSKYLTEN FÖR LASERN ÄR PLACERAD PÅ APPARATEN SOM EN UPPMANING OM ATT APPARATEN INNEHÅLLER EN LASERKOMPONENT.
 - ③ VARNINGSSKYLTEN FÖR STRÅLNING HAR PLACERATS I APPARATEN, SOM BILDEN VISAR, SOM EN VARNING OM YTTERLIGARE INGREPP I APPARATEN. MATERIELEN INNEHÅLLER EN LASERKOMPONENT SOM AVGER LASERSTRÅLNING ÖVERSTIGANDE GRÄNSEN FÖR LASERKLASS 1.
- VARNING-INGREPP I APPARATEN BÖR ENDAST FÖRETAS AV FACKMAN MED KUNSKAP OM ATT RISK FÖRELIGGER FÖR RADIOAKTIV STRÅLNING.

Danish

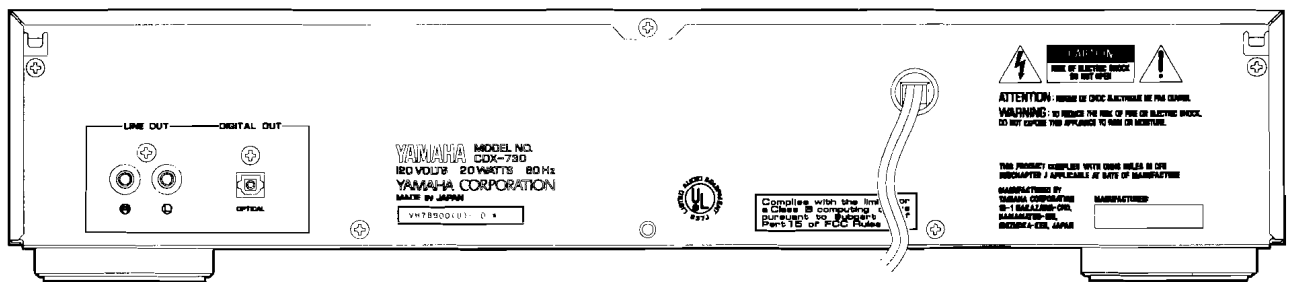
- ① DETTE MÆRKAT ER ANBRAGT SOM VIST I ILLUSTRATIONEN FOR AT ADVARE BRUGEREN OM AT APPARATET INDEHOLDER EN LASERKOMPONENT.
 - ② DETTE MÆRKAT OM LASEREN ER ANBRAGT PÅ APPARATET SOM EN OPLYSNING OM AT APPARATET INDEHOLDER ET LASERKOMPONENT.
 - ③ ADVARSELSKILTET OM STRÅLING ER PLACERET INDEN I APPARATET, SOM VIST I ILLUSTRATIONEN, SOM EN ADVARSEL OM YDERLIGERE INDGREB I APPARATET. APPARATET INDEHOLDER ET LASERKOMPONENT SOM AVGIVER LASESTRÅLING DER OVERSTIGER GÆNSEVERDIEN FOR LASERKLASSE 1.
- ADVARSEL! INDGREB BØR KUN FORETAGES AF EN FAGMAND DA DER ER RISIKO FOR RADIOAKTIV STRÅLING.

Finnish

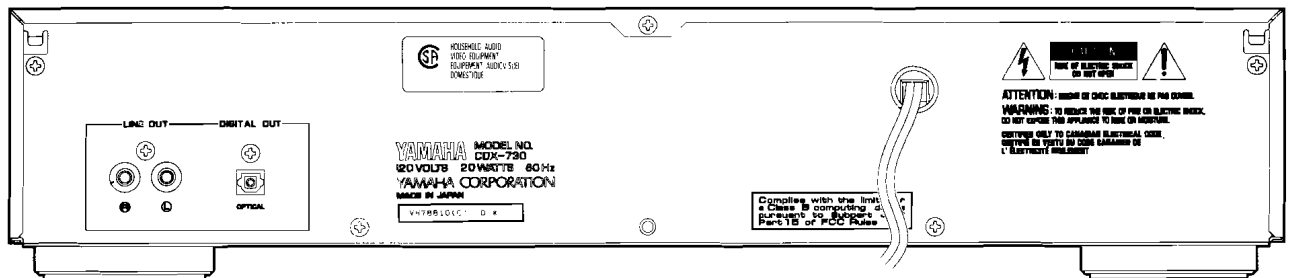
- ③ "VAROITUS! LAITE SISÄLTÄÄ LASERDIODIN, JOKA LÄHETTÄÄ (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ."

REAR PANELS

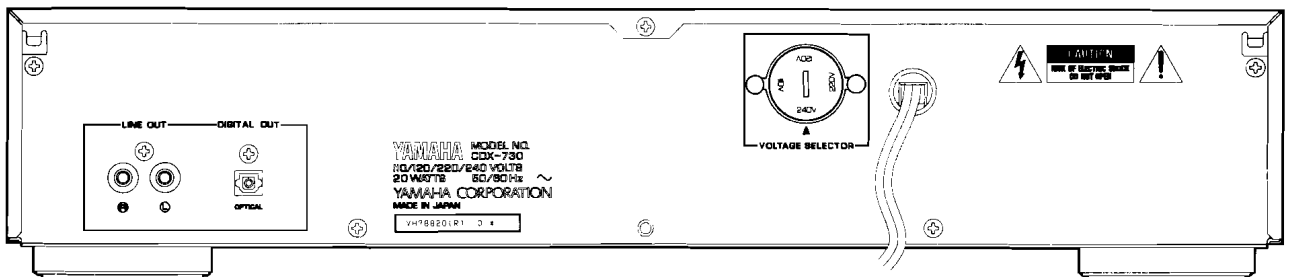
▼ U model



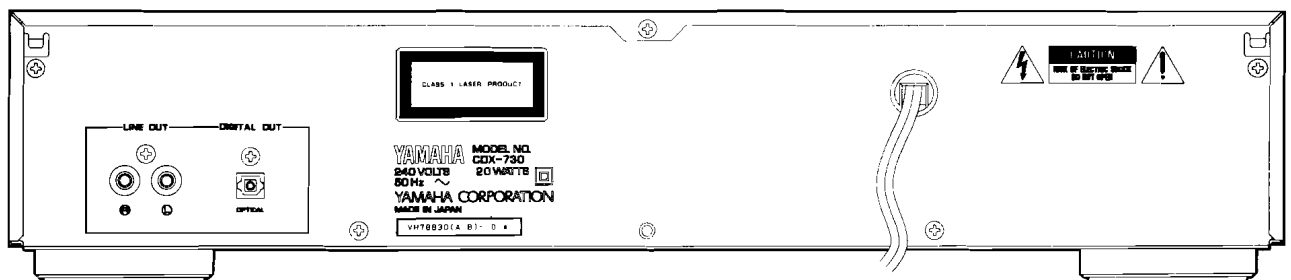
▼ C model



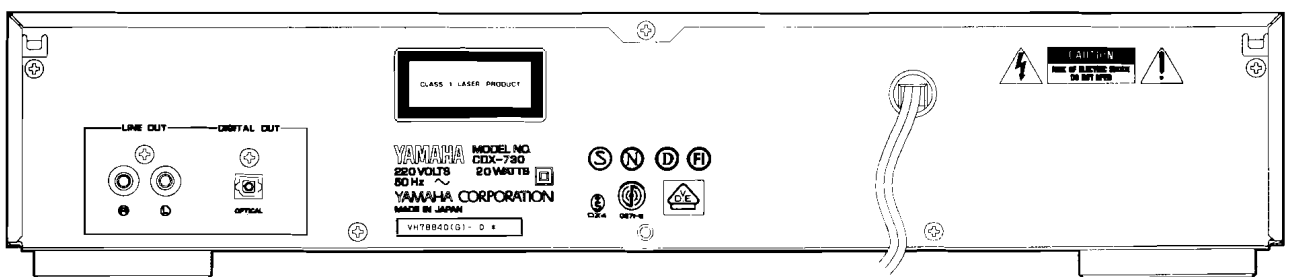
▼ R model



▼ A, B models



▼ G model



■ INTERLOCK OPERATION

The Digital Compact Disc Player reads the disc signals by laser beam detection. The human body must directly exposed to the laser beam. Human eyes are especially not be damaged by the laser beam. This unit is therefore equipped with an interlock to prevent unnecessary laser output.

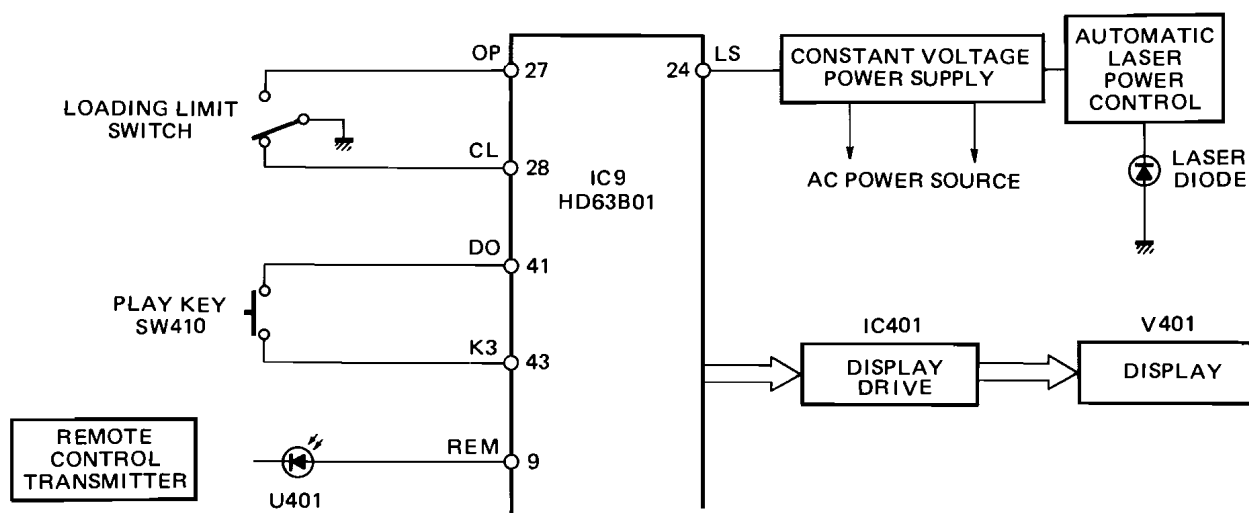
Laser output is controlled by the injection or cutoff of the constant voltage source to the laser diode at Pin 24 (LS) of IC9 (HD63B01), and also by Automatic Laser Power Control Circuit. When Pin 24 is in "H" (High) level, the laser emits the beam. When Pin 24 is in "L" (Low) level, the laser does not emit the beam.

Pin 24 is set in "H" level when the unit is loaded with a disc and reads the index signals or when the unit is set in the play mode. When the unit reads the index signals and the following two conditions are met, the laser emits the beam.

- 1) When the Loading Limit Switch is set in "CL" side. (The disc tray is closed.)
- 2) When the pickup is located at the area of minimum internal circumference.

After the above conditions are met and the index signals have been read, the laser emits the beam when the following two conditions are met.

- 1) When the PLAY key (SW410) or that of Remote Control Transmitter is pressed.
- 2) When TIMER PLAY is ON.



SPECIFICATIONS

AUDIO SECTION

Frequency Response	2Hz~20kHz +0.5dB, -1.0dB
De-Emphasis Equalization	±0.5dB (EIAJ)
Harmonic Distortion+Noise	Less than 0.005%, 1kHz (EIAJ)
S/N Ratio	106dB (EIAJ)
Dynamic Range	More than 94dB (EIAJ)
Wow & Flutter	Unmeasurable
Channel Separation	More than 90dB, 1kHz (EIAJ)
Output Voltage	2V (EIAJ)
Output Impedance	2.2kΩ
Headphone Output (-20dB)	620mV/150Ω

INTERNAL SYSTEM

Optical Pick-up	3-beam laser
Error Correction System	CIRC
D/A Conversion	18-bit linear
Filter	Hi-Bit 8-Fold Oversampling Digital filter 3rd Order New Active Filter

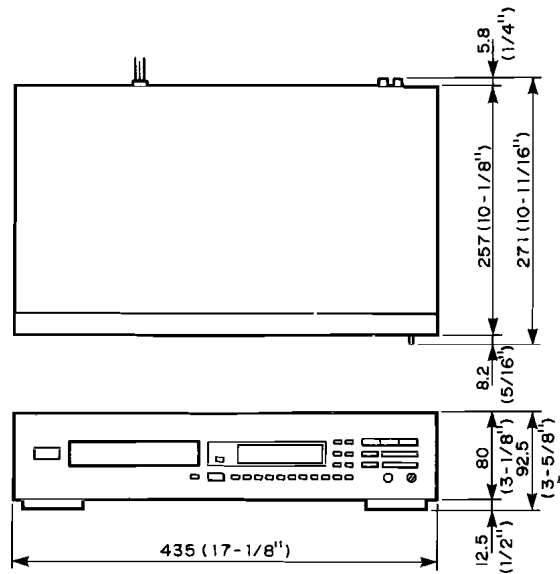
GENERAL

Power Requirements	
U, C models	120V AC 60Hz
G, B models	220-240V AC 50Hz
A model	240V AC 50Hz
R, P models	110-120/220-240V AC 50/60Hz
Power Consumption	20W
Dimensions (WxHxD)	435 x 92.5 x 271mm (17-1/8"x3-5/8"x10-11/16")
Weight	3.9kg (8 lbs 9 oz)
Accessories	Pin plug code Remote control transmitter Dry-cell: x2 (Sise "AAA", R03)

*Specifications are subject to change without notice.

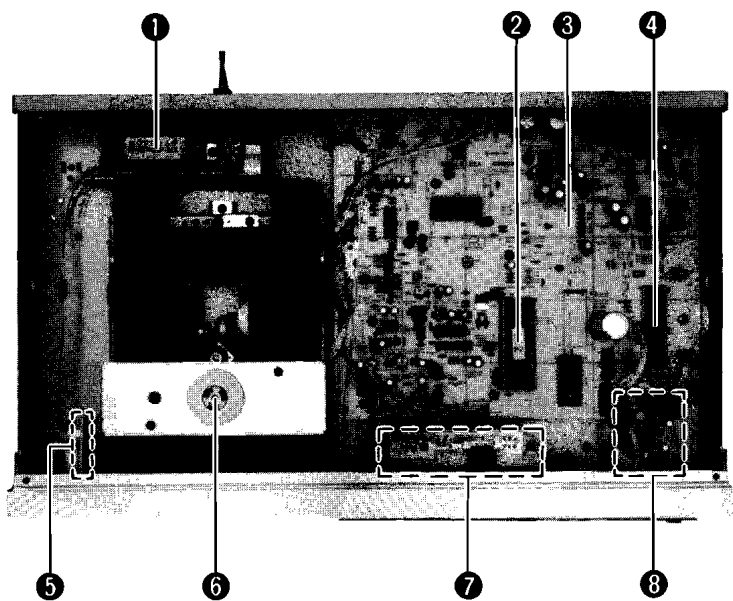
- U U. S. A. model
- C Canadian model
- B British model
- A Australian model
- G European model
- R General model
- P PX model

DIMENSION



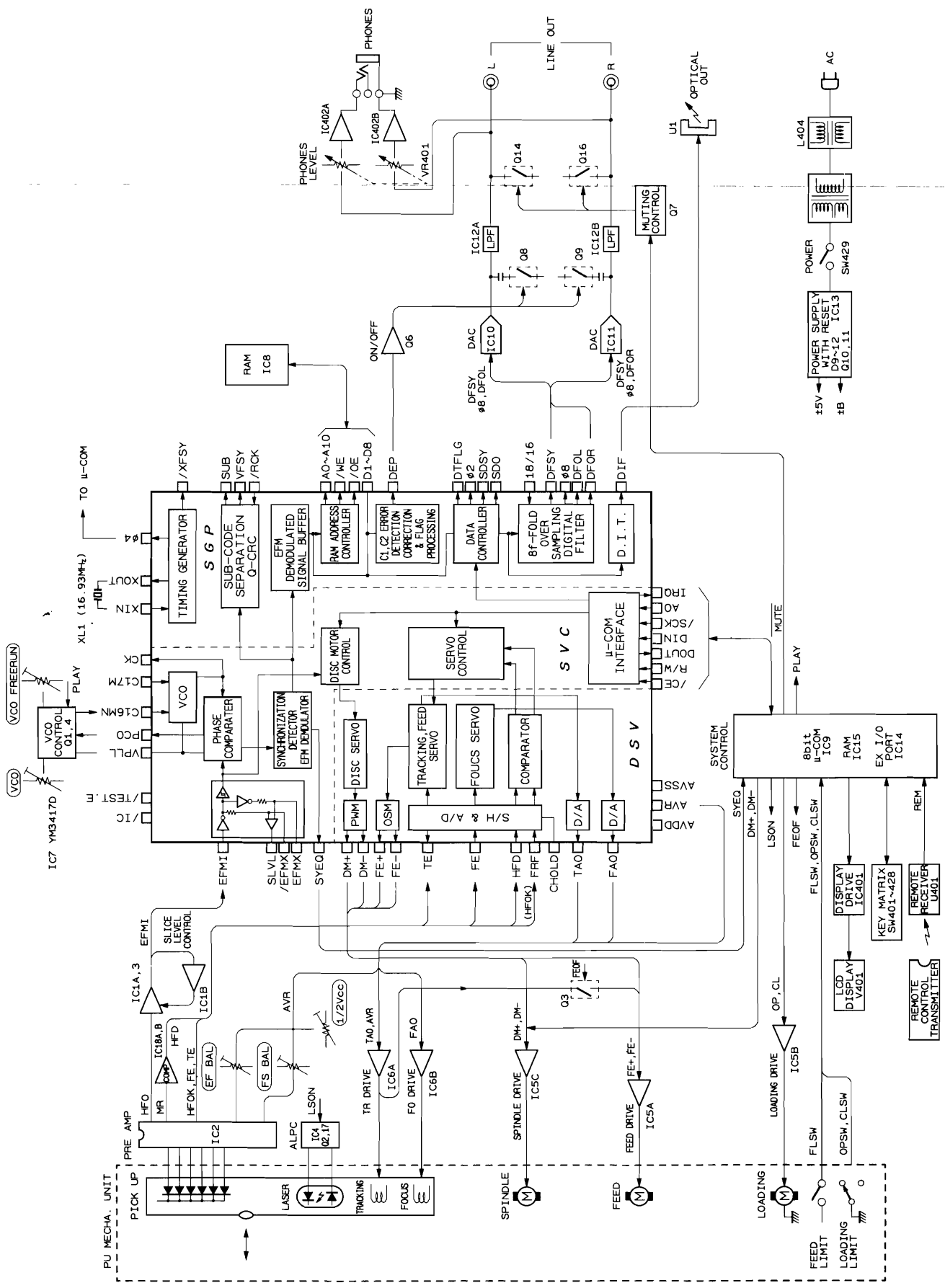
Unit : mm (inch)

INTERNAL VIEW



- 1 OPERATION CIRCUIT BOARD (5)
- 2 IC9 : HD63B01YORL30P
- 3 MAIN CIRCUIT BOARD (1)
- 4 IC14 : M5M82C55AP-2 or MSM82C55A-2RS
- 5 OPERATION CIRCUIT BOARD (3)
- 6 PU MECHANISM UNIT (KSL-150AFM)
- 7 OPERATION CIRCUIT BOARD (4)
- 8 OPERATION CIRCUIT BOARD (2)

■ BLOCK DIAGRAM



■ DISASSEMBLY PROCEDURES

(Remove parts in disassembly order as numbered.)

1. Removal of Top Cover

- Remove 5 screws (①) in Fig. 1.
- Lift the Top Cover to the back side and move it rearward slantingly.

2. Removal of Front Panel

- Remove 6 screws (②) in Fig. 1.
- Press the Levers in Fig. 1, and pull the Front Panel forward.

3. Removal of PU Mechanism Unit

- Remove 3 screws (③) in Fig. 1.

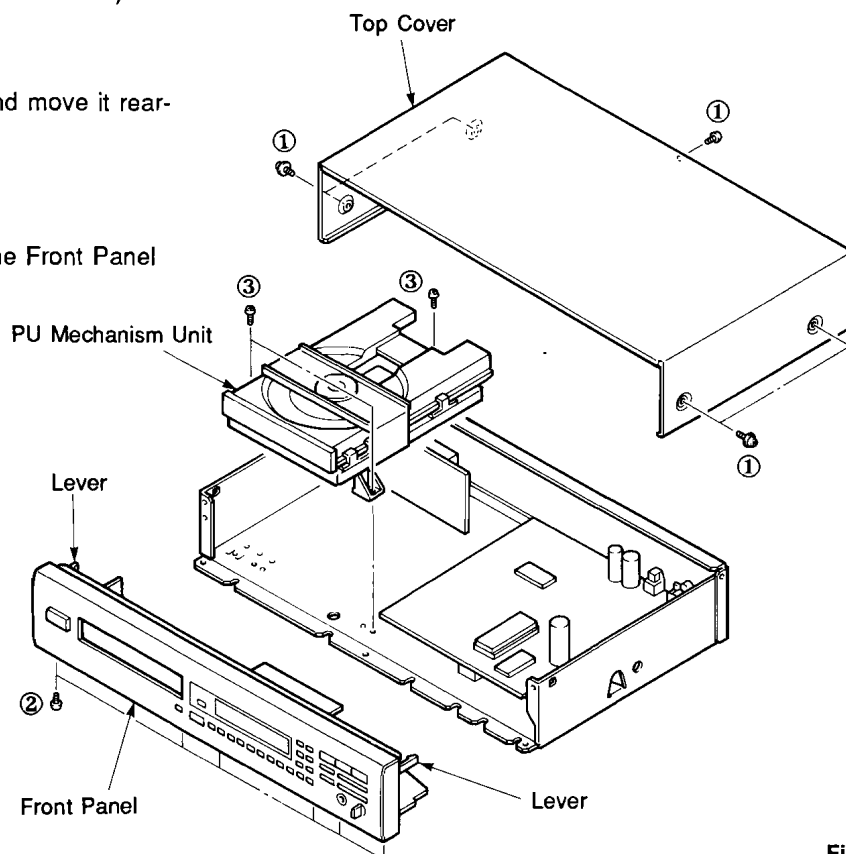
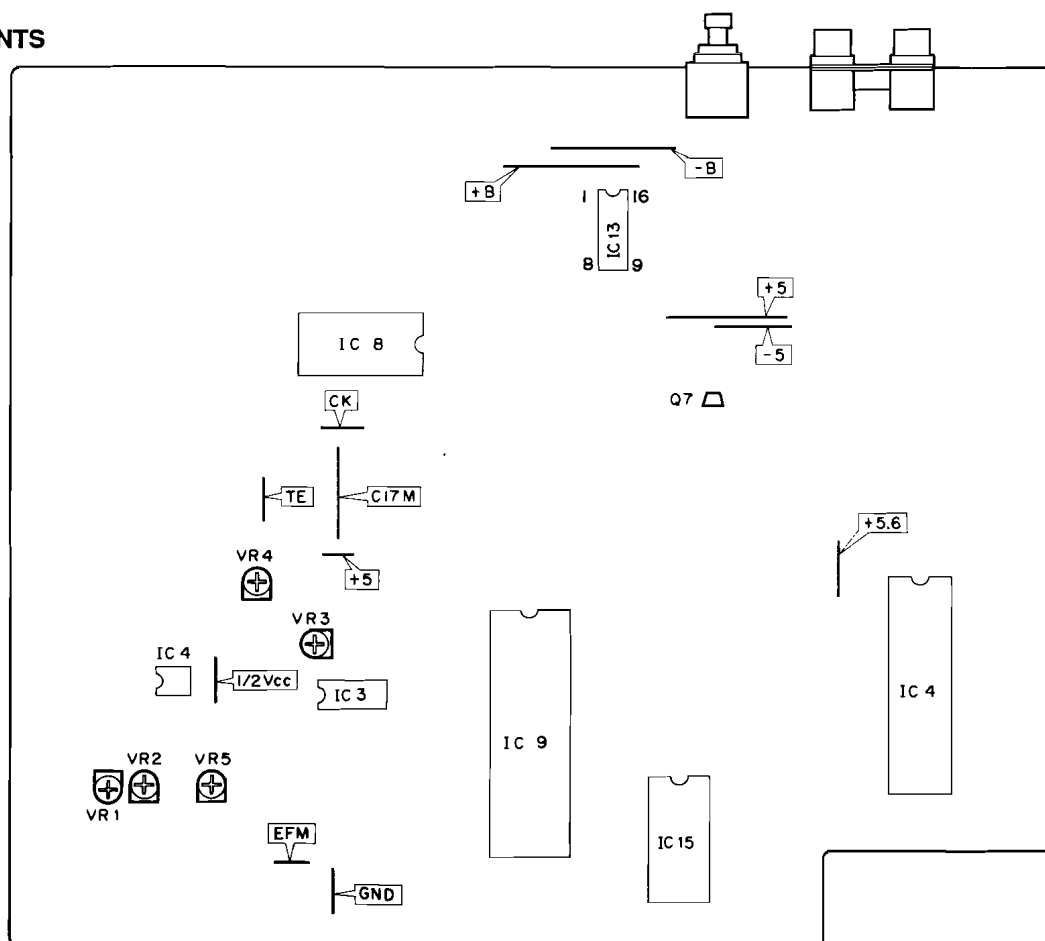


Fig. 1

■ ADJUSTMENTS

● TEST POINTS



● Necessary items

Measuring instruments

Osilloscope	: x 1
(Band width of 50MHz or more)	
AC voltmeter	: x 1
DC voltmeter	: x 1
Frequency counter	: x 1

Jigs

Test disc	: x 1
[YEDS-18 (P/No. TX911730) or]	
[YEDS-7 (P/No. TX911320)]	

Tools

Screwdriver	: x 1
(For Pre-set Potentiometer adjustment)	

Confirmation of Power Voltage

ITEM	TEST POINT	RATING
+B	+B~GND	About 11.2V (at STOP)
-B	-B~GND	About -11.8V (at STOP)
+5	+5~GND	5V±0.25V
-5	-5~GND	-5V±0.25V
Mute power supply	Q7 emitter~GND	4.94V~5.2V
+5.6	+5.6~GND	5.36V~5.67V

Confirmation of Reset Operation

A Low to High change should occur about 500msec. after the power is turned ON and a High to Low change should occur when the power is turned OFF and the voltage at +5 drops to 4.2V.

Confirmation of Muting Operation

The voltage of the Q7 collector should be about 5V immediately after the power is turned ON and -5V upon entering the PLAY mode. Also it should be 5V in PAUSE, STOP and SKIP modes and finally immediately after the power is turned OFF from the PLAY mode.

● Before Adjustment

Storing TEST Mode

Holding both "4" and "7" on the ten-key pad down, turn ON the power switch. Take the fingers off "4" and "7" keys, and all the segments in the display light for about 2 seconds and the TEST mode starts.

● Contents of TEST mode

OPEN/CLOSE	: OPEN, CLOSE
PAUSE	: FOCUS START
STOP	: STOP, FOCUS OFF
PLAY	: PLAY
PROG	: TRACKING SERVO OFF
DELETE	: TRACKING SERVO ON

*When the PAUSE key is pressed to execute FOCUS start, it sometimes takes a few seconds before FOCUS is locked. Therefore, avoid pressing the PLAY key too quickly.

1. 1/2 Vcc Adjustment

- ① Do not load the disc.
- ② Measure the voltage at the **+5** terminal and suppose that value as V_o .
- ③ Measure the voltage at the **1/2 Vcc** terminal and adjust VR5 so that the following rating will be satisfied.

$$\text{Rating : } 1/2 \text{ Vcc} = V_o/2 \pm 5\text{mV}$$

$$\text{Reference value : } V_o = 5.0\text{V}$$

$$1/2 \text{ Vcc} = 2.5\text{V}$$

2. VCO Adjustment

- ① Do not load the disc.
- ② Measure the voltage at the **C17M** terminal and adjust VR3 so that the following rating will be satisfied.
Rating : C17M = 2.5V±0.05V

3. VCO Free Run Adjustment

- ① Do not load the disc.
- ② Connect a frequency counter to the **CK** terminal.
*Make sure to use a probe (10 : 1 probe for oscilloscope) to input data to the frequency counter.
- ③ Adjust VR4 so that the following rating will be satisfied.
Rating : $F_{vco} = 4.3218\text{MHz} \pm 0.01\text{MHz}$

4. Confirmation of Focus Search

- ① Do not load the disc.
- ② Set to the TEST mode.
- ③ Press the PAUSE key.
- ④ Check to make sure that the laser diode of the optical pick-up head emits light and the objective lens moves smoothly from the lowest point to the highest point.
- ⑤ Press the STOP key.

5. Confirmation of Loading Operation

- ① Set to the TEST mode.
- ② Press OPEN side of the OPEN/CLOSE key.
- ③ Check to make sure that the tray opens smoothly.
- ④ Press CLOSE side of the OPEN/CLOSE key.
- ⑤ Check to make sure that the tray closes smoothly.

6. Confirmation of Focus & Tracking Operation

- ① Set to the TEST mode.
- ② Load the test disc by using the OPEN/CLOSE key.
- ③ Press the PAUSE key.
- ④ Check to make sure that the focus servo is applied by moving the test disc a little by hand.
- ⑤ Press the PLAY key.
- ⑥ Check that the disc starts turning and the time read from the disc is displayed on the LCD display.

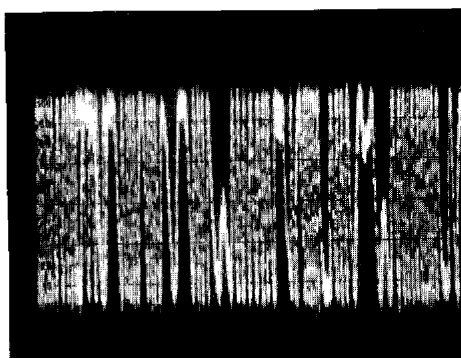
7. EF Balance Adjustment

- ① Set to the TEST mode.
- ② Load the test disc by using the OPEN/CLOSE key.
- ③ Press the PAUSE key.
- ④ Press the PLAY key.
- ⑤ Press the PROG key.
- ⑥ Adjust VR2 so that the **TE** waveform becomes symmetrical on both upper and lower sides of 1/2 Vcc standard DC level.

Connection of Oscilloscope

1/2 Vcc terminal to GND side.

TE terminal to HOT side.

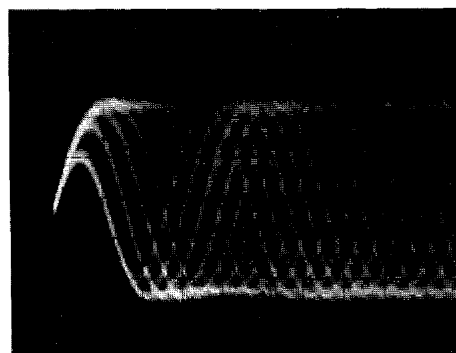


8. Confirmation of HF Level

- ① Set to the TEST mode.
- ② Load the test disc by using the OPEN/CLOSE key.
- ③ Press the PAUSE key.
- ④ Press the PLAY key.
- ⑤ Press the DELETE key.
- ⑥ Check at the **EFM** terminal that the EFM signal (eye pattern) amplitude is $1.0 \pm 0.2V_{p-p}$.

Oscilloscope setting conditions

- AC coupling.
- 0.2V/DI range. (Vertical)
(20mV/div when 10 : 1 probe is used)
- 0.5μsec/div time. (Horizontal)



9. Adjustment of Focusing

- ① Set to the TEST mode.
- ② Load the test disc by using the OPEN/CLOSE key.
- ③ Press the PAUSE key.
- ④ Press the PLAY key.
- ⑤ Press the DELETE key.
- ⑥ Adjust VR1 so that clear EFM signal (eye pattern) is obtained at the **EFM** terminal.

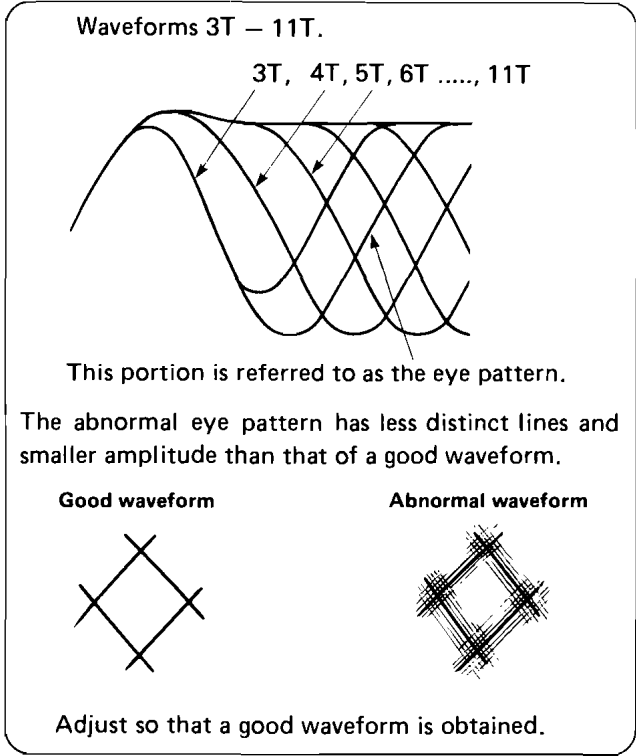
Oscilloscope setting conditions

- AC coupling
- 0.2V/div range (Vertical)
(20mV/div when 10 : 1 probe is used)
- 0.5μsec/div time (Horizontal)

10. Confirmation of Kick Operation

- ① Set to the TEST mode.
- ② Load the test disc by using the OPEN/CLOSE key.
- ③ Press the PAUSE key.
- ④ Press the PLAY key.
- ⑤ Press either **<<** key or **>>** key and check to make sure that the time on display advances accurately and smoothly.
- ⑥ Press the PLAY key and check that the way displayed time advances is back to that in the PLAY mode.

● EYE PATTERN



■ TEST MODE

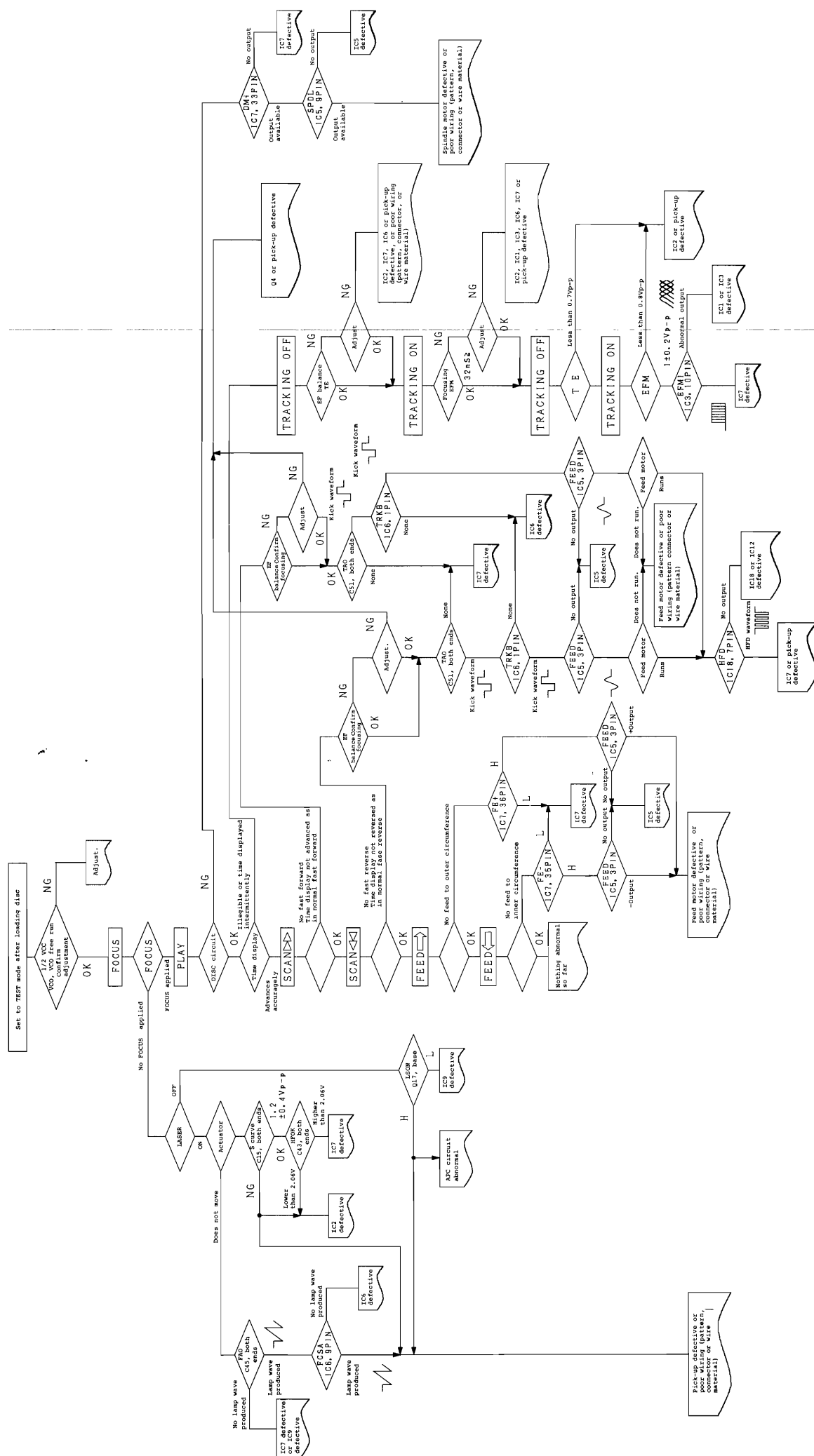
● Starting TEST mode

Holding both “4” and “7” on the ten key pad down, turn ON the power switch. Take the fingers off “4” and “7” keys, and all the segments in the display light for about 2 seconds and the TEST mode starts.

Note : Note that the feed gear will be chipped if the innermost or outermost circumference is reached by using or key in the TEST mode.

● Contents of TEST mode key

KEY	CONTENT	KEY	CONTENT
FILE	RAM check RAM OK if MUTE → “L”	□	STOP Laser OFF, causes every item including spindle to stop
合	OPEN/CLOSE	PROG	TRACKING OFF
+10	Spindle motor brake	DELETE	TRACKING ON
1	Shift from TEST mode to PRODUCT mode	RANDOM	PLAY MUTE Play but no sound produced
2	Tracking OFF at inner circumference	⏮	Forced feed to inner circumference
3	PLAY at inner circumference	⏭	Forced feed to outer circumference
4	Tracking OFF	TAPE	Inner circumference 10 track kick provided continuously at 33msec. intervals.
5	Tray forced to open	CLEAR	Outer circumference 10 track kick provided continuously at 33msec. intervals.
6	Tray forced to close	REPEAT	Spindle acceleration
7	PLAY ⏮ VCO gain “H”	⏮	Inner circumference 10 track kick provided continuously at 100msec. intervals.
8	PLAY ⏭ VCO gain “L”	⏭	Outer circumference 10 track kick provided continuously at 100msec. intervals.
9	MUTE ⏮ Sound produced		
0	MUTE ⏭ No sound produced		
TIME	LASER OFF Laser goes off		
SPACE	LASER ON Laser turns on.		
▷	PLAY Play		
⏮	FOCUS Laser ON, focus search		



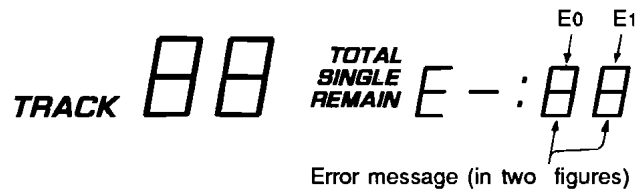
■ ERROR MESSAGE

1. How to get error code displayed

To get a code for any malfunction displayed, press the STOP key of the remote controller while pressing the STOP key on the main unit in the STOP or OPEN mode.

2. How to read error message

When occurrence of an error is detected during operation, a code indicating what has occurred is displayed in the time display segment as shown below.

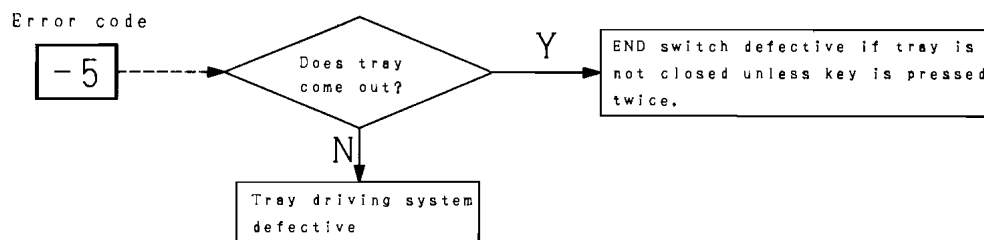


E0 (STATE)	E1 (Phenomenon)	Meaning	Remarks
X	0	No data reading was executed after search.	
X	1	Data reading failed in the mid of each state.	For 5 seconds
7	3	No data reading was executed though the disc was turned with focus applied at start.	PLL lock failure
—	5	Tray open NG.	
9	5	Tray close NG.	
9	7	Feed inner circumference switch NG.	
X	8	Focus dropped in the mid of each state and could not be restored even when retried.	Retry 5 times

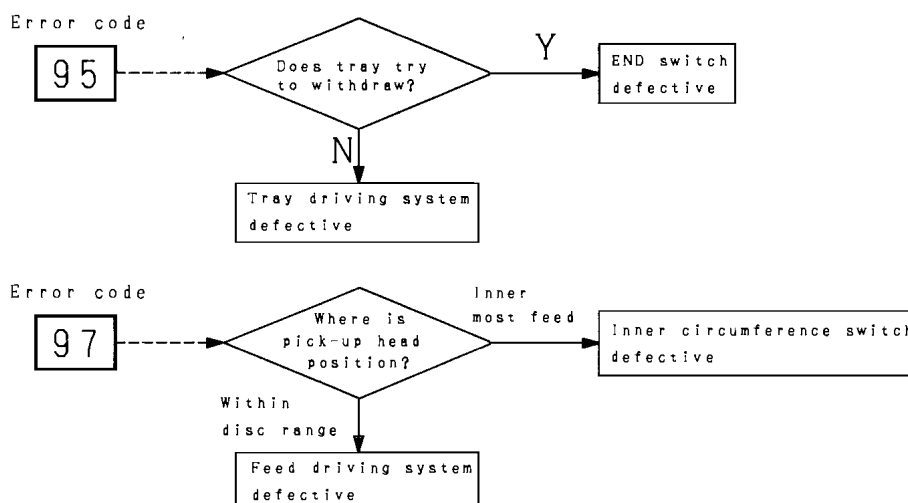
* Note : X represents each state : PLAY when X=0, MANUAL SEARCH when X=3 and PAUSE when X=4.

3. How to locate cause of the error from the error message

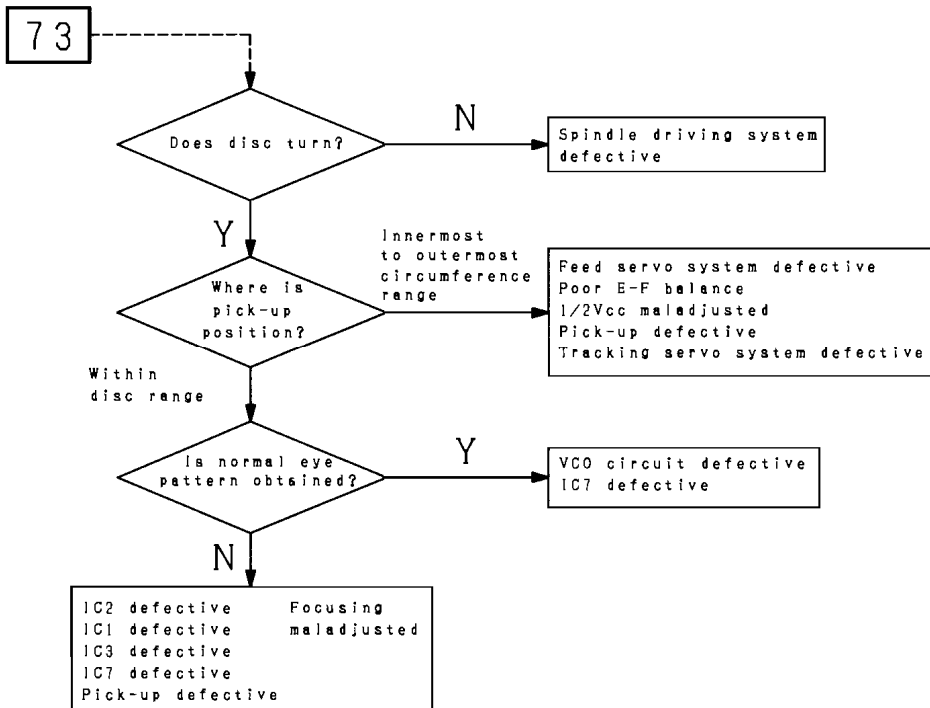
- Tray does not come out even when the power is turned ON and the OPEN/CLOSE key is pressed.



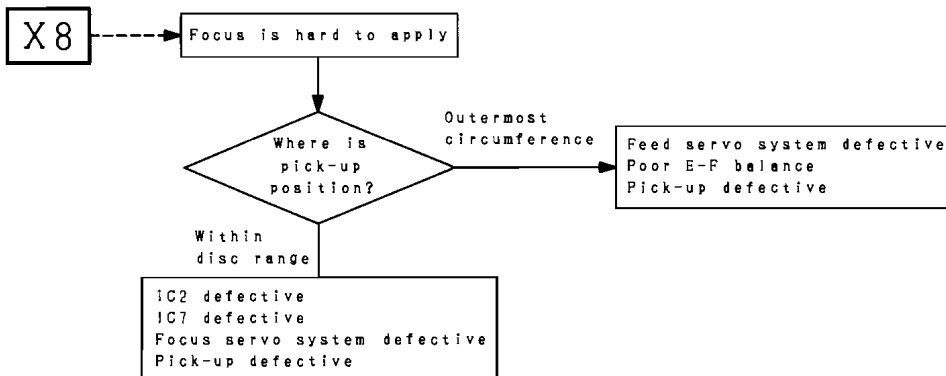
- Tray does not close or even when closed, it opens again after some time.



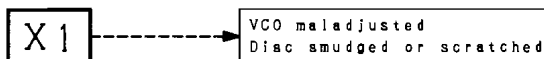
Error code



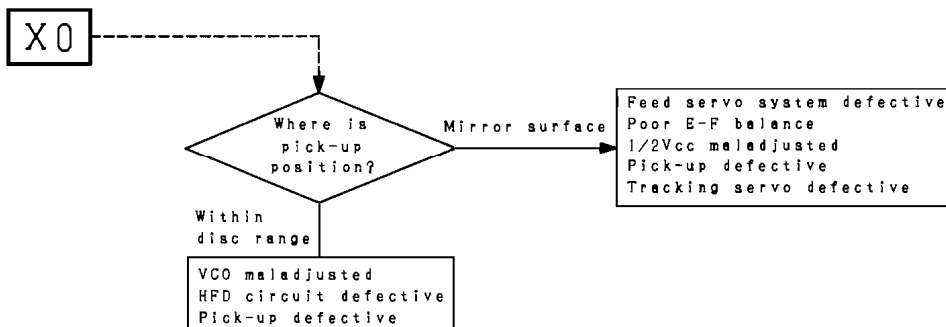
Error code



Error code

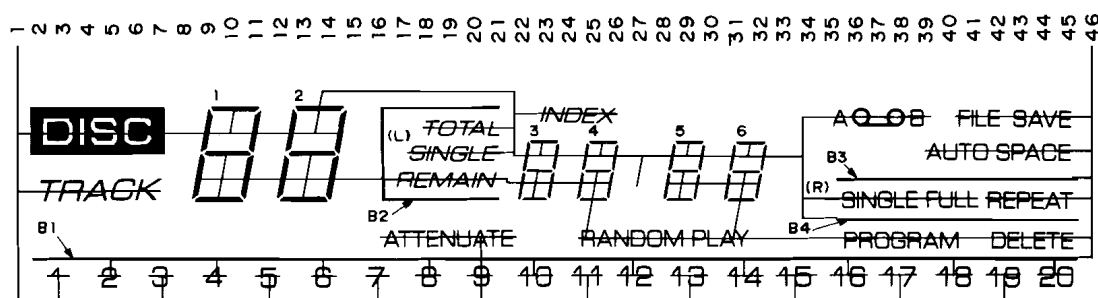
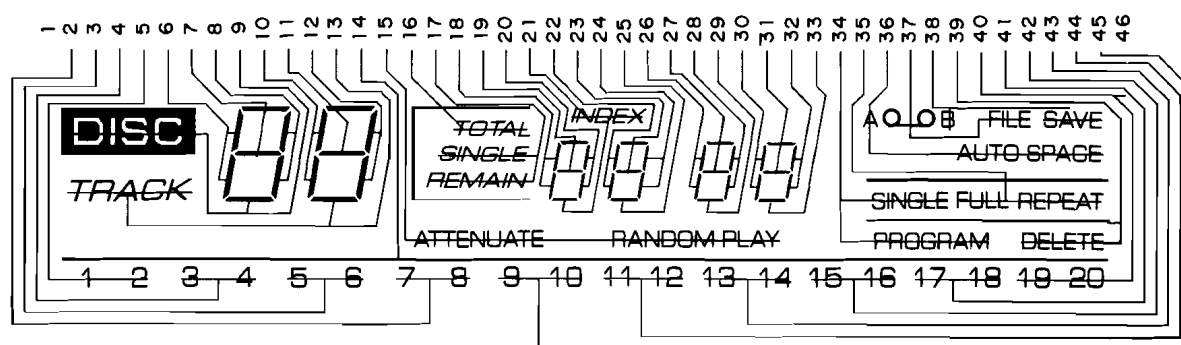


Error code



■ DISPLAY DATA

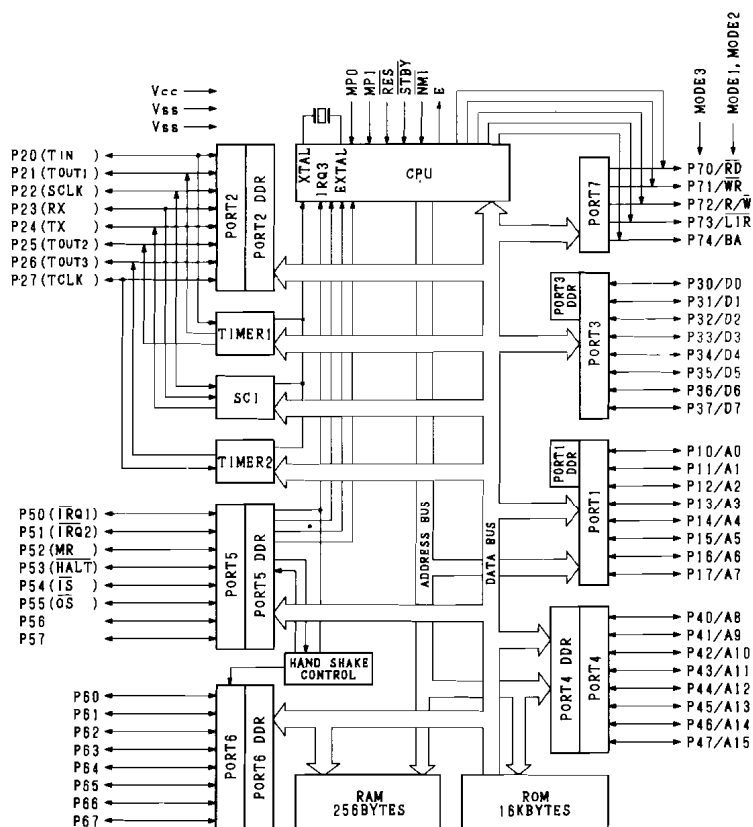
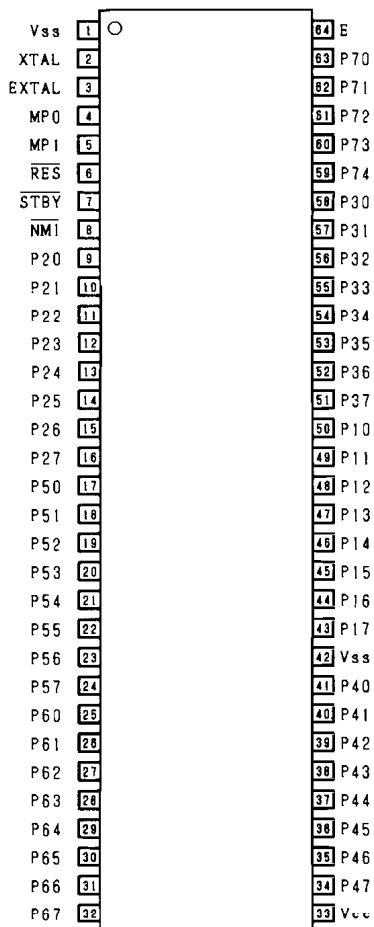
● V401 : LCD8094BIJP



No.	COM1	COM2	No.	COM1	COM2	No.	COM1	COM2	No.	COM1	COM2
1	COM	—	13	TRACK	2d	25	COL	4d	37	OL	FILE
2	7	8	14	—	B1	26	5F	5e	38	B	SAVE
3	5	6	15	ATTENAU	RANDOM	27	5A	5g	39	B4	DELETE
4	3	4	16	TOTAL	PLAY	28	5B	5c	40	19	20
5	1	2	17	SINGLE(L)	B2	29	—	5d	41	17	18
6	1f	1e	18	3f	REMAIN	30	6F	6e	42	15	16
7	1a	1g	19	3a	3e	31	6A	6g	43	13	14
8	1b	1c	20	3b	3g	32	6B	6c	44	11	12
9	DISC	1d	21	INDEX	3c	33	—	6d	45	9	10
10	2f	2e	22	4f	3d	34	SINGLE(R)	PROGRAM	46	—	COM
11	2a	2g	23	4a	4e	35	FULL	B3 REPEAT			
12	2b	2c	24	4b	4g	36	A	AUTO SPACE			

■ IC DATA

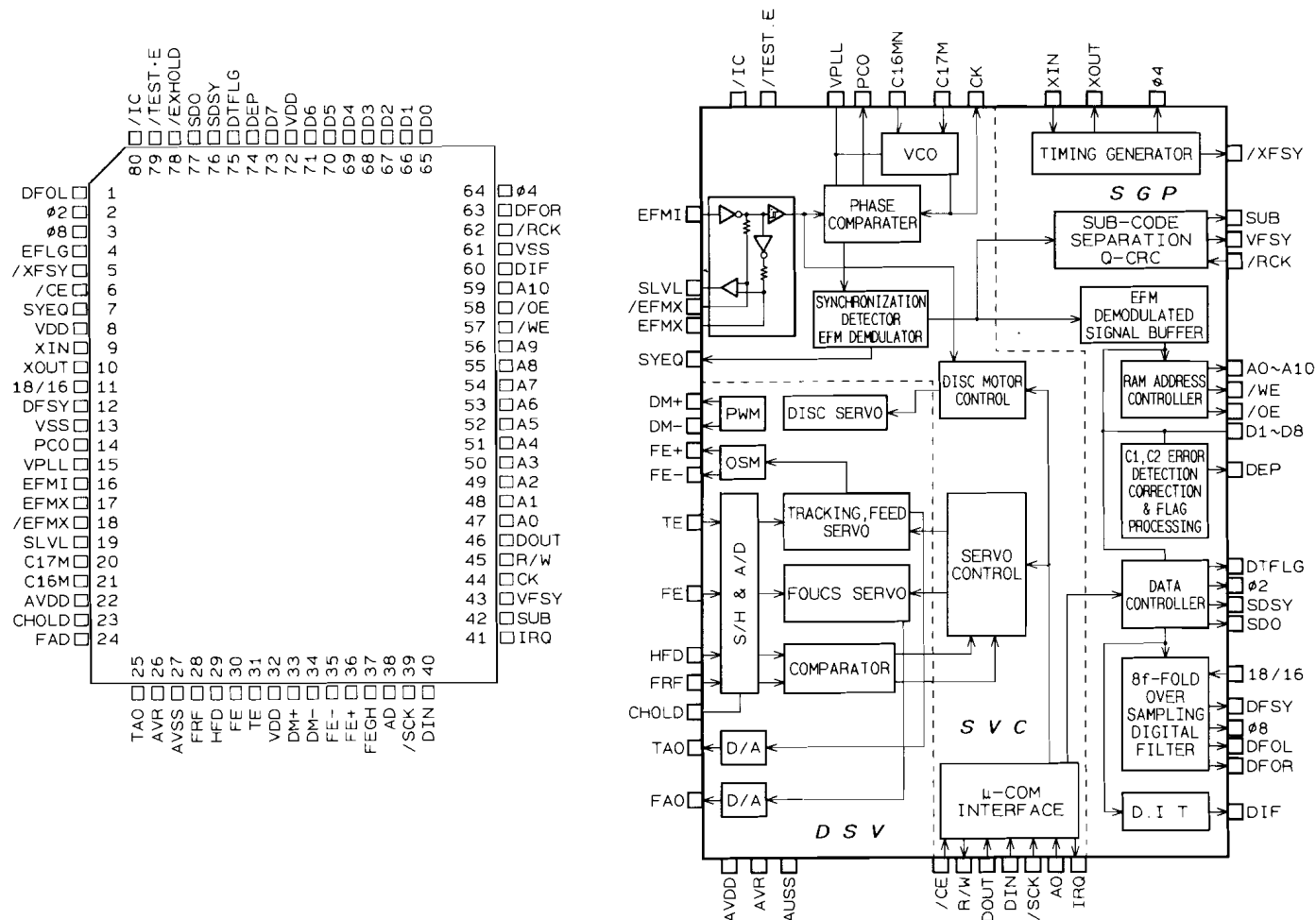
IC9 : HD63B01YORL30P
8bit μ -COM



Pin No.	Pin Name	Function
1	Vss	GND
3	EXTAL	External clock input
4	MP0	MPO "H", MP1 "L" Sets mode for external ROM
5	MP1	
6	RES	Starts moving at $\nearrow$ and stops at $\searrow$
9	REM	Input from beam receiving remote control unit.
10	FEOF	Feed servo OFF at "H"
11	SCK	Serial clock output to YM3417D & LC7582
12	S1	Serial data input from YM3417D
13	S0	Serial data output to YM3417D & LC7582
14	IRQ	Request signal from YM3417D
15	CE	Chip enable of YM3417D at "L"
16	AO	Selects DSV section in YM3417D at "H" Selects SVC section in YM3417D at "L"
17	INH	LCD off at "L"
18	CE	Chip enable of LC7582 at "H"
20	R/W	From μ COM to YM3417D at "H" From YM3417D to μ COM at "L"
21	SYEQ	Input of synchronous coincidence signal from YM3417D EFM pattern and YM3417D internal counter synchronized at "H"
22	PLAY	VCO gain L at "H" (during play) VCO gain H at "L" (other than during play)
23	MUTE	Sound output at "H" (during play, fast forward or fast reverse) Sound output mute at "H" (during other than above)
24	LSON	Laser diode turns ON at "H"
25	OP	Tray open function at OP "H", CL "L"
26	CL	Tray close function at OP "L", CL "H" Brake at OP "L", CL "L"
27	OPSW	Tray open state detecting switch input
28	CLSW	Tray closed state detecting switch input
29	FLSW	Feed original point switch input
30	FEGH	Feed gain H output
31	DM+	Disc motor acceleration command
32	DM-	Disc motor deceleration command
33	Vcc	+5V
34	A15	Address output to 82C55 and LC3517BL-15
35	A14	
36	A13	
37	A12	
38	A11	
39	A10	
40	A9	
41	A8	
42	Vss	
43	A7	
44	A6	
45	A5	
46	A4	
47	A3	
48	A2	
49	A1	
50	A0	Data output to 82C55 and LC3517BL-15
51	D7	
52	D6	
53	D5	
54	D4	
55	D3	
56	D2	
57	D1	
58	D0	
62	WR	Write control signal to 82C55 and LC3517BL-15
63	RD	Read input to 82C55 and LC3517BL-15

IC7 : YM3417D

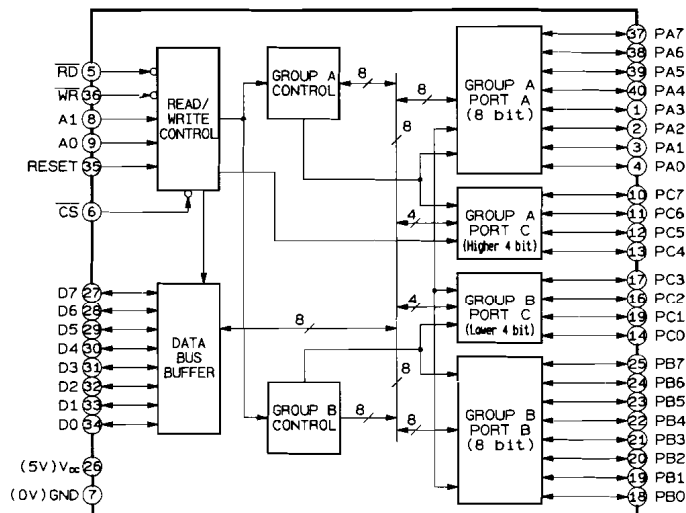
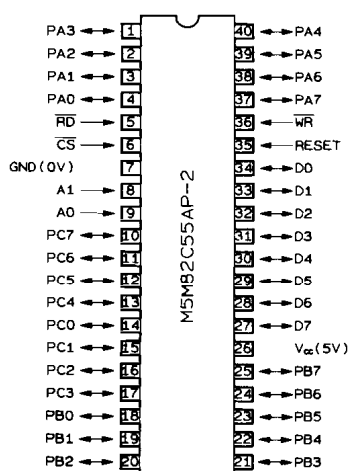
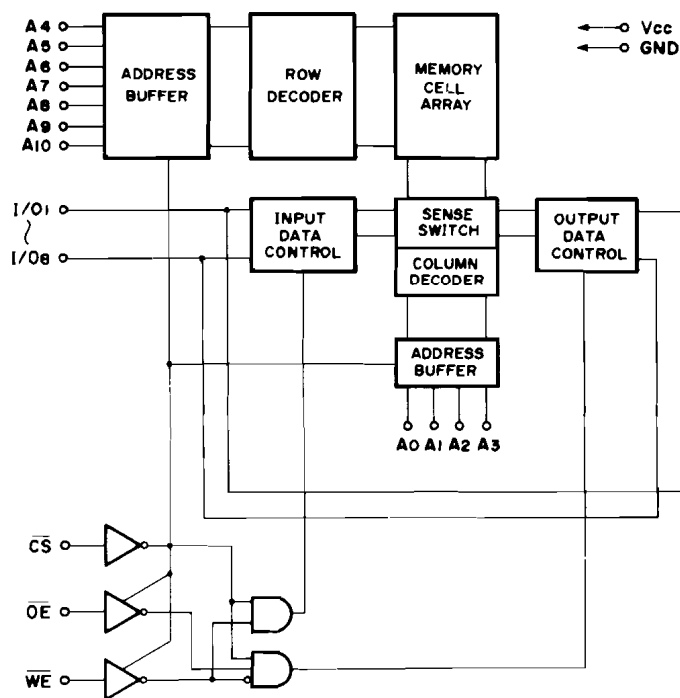
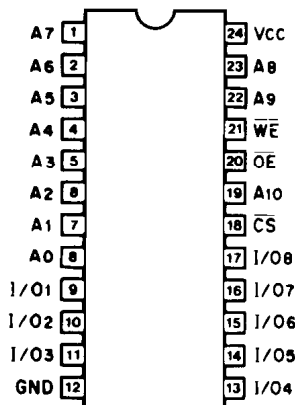
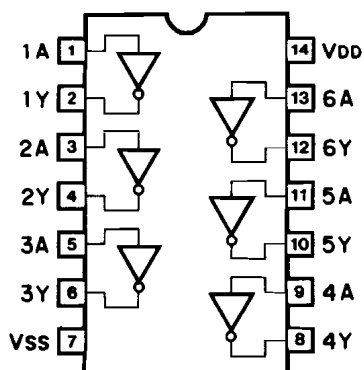
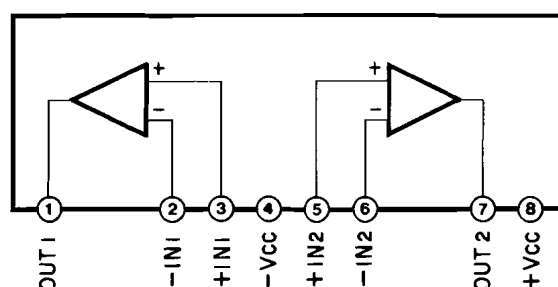
Signal Processor & Controller for Compact Disc Player



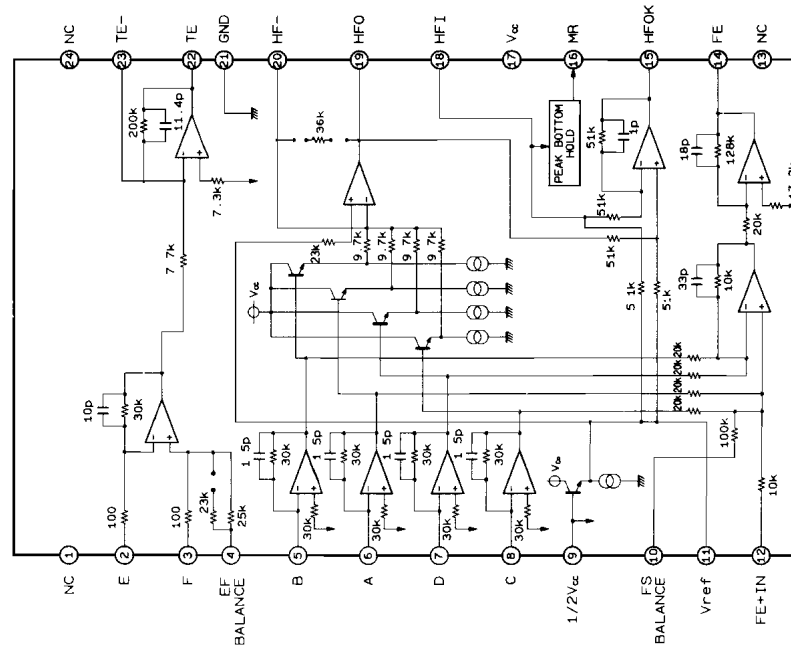
Pin No.	Pin Name	I / O	Function
1	DFOL	O	DF output signal (audio serial signal for DAC) L ch
2	Ø2	O	Quartz synchronous 2,1168MHz output (SDO bit clock)
3	Ø8	O	Quartz synchronous 8,4672MHz output (DFO bit clock)
4	EFLG	O	Error flag monitor terminal
5	/XFSY	I/O	Quartz synchronous 7.35MHz output (frame synchronous signal)
6	/CE	I	Chip enable
7	SYEQ	O	Synchronous coincidence monitor (EFM pattern and internal counter synchronized at "H")
8	VDD	—	
9	X IN	I	For XTAL connection 16.934MHz (clock input terminal)
10	X OUT	O	For XTAL connection
11	18/16	O ↑	18bit/16bit output selectable (L : 16bit, H : 18bit)
12	DFS Y	O	DFO output synchronous signal output
13	Vss	—	GND for PCO, XTAL system
14	PCO	O	EFM pattern to CK phase comparison output
15	VPLL	—	Power terminal for VCO
16	EFMI	O	EFM signal input
17	EFMX	O	With EFM resistor, forward rotation output
18	/EFMX	O	With EFM resistor, reverse rotation output
19	SLVL	Oa	Slice level output (Potential difference between EFMX and /EFMX is output.)
20	C17M	-a	For adjusted voltage of VCO
21	C16M	la	For VCO control
22	AVDD	—	Power supply for A/D, DAC system

Pin No.	Pin Name	I / O	Function
23	CHOLD	-a	Capacity external terminal for S/H of A/D converter
24	FAO	Oa	DAC output of focus servo
25	TAO	Oa	DAC output of tracking servo
26	AVR	—	Central voltage of servo system
27	AVss	—	GND of A/D, DAC system
28	FRF	Ia	FRF signal input
29	HFD	Ia	HFD signal input
30	FE	Ia	Focus error signal input
31	TE	Ia	Tracking error signal input
32	VDD	—	Power supply for logic system
33	DM+	O	Disc servo signal, forward rotation control signal
34	DM-	O	Disc servo signal, reverse rotation control signal
35	FE-	O	Feed servo signal toward inner circumference
36	FE+	O	Feed servo signal toward outer circumference
37	FEGH	O	"H" output at M4 search
38	AD	I	Select address for DSV side or SVC side (L : SVC, H : DSV)
39	/SCK	I	μCOM interface serial clock input
40	D IN	I	μCOM interface serial data input
41	IRQ	O Δ	μCOM interface (request signal from CDP to μCOM)
42	SUB	O Δ	For subcode output
43	VFSY	O Δ	Subcode frame signal (98 frame synchronous signal)
44	CK	O	Clock obtained through clock playback circuit
45	R/W	I ↑	μCOM interface (0 : CDP μCOM 1 : μCOM CDP)
46	D OUT	O	μCOM interface data output
47	A0	O	External SRAM address terminal A0
48	A1	O	External SRAM address terminal A1
49	A2	O	External SRAM address terminal A2
50	A3	O	External SRAM address terminal A3
51	A4	O	External SRAM address terminal A4
52	A5	O	External SRAM address terminal A5
53	A6	O	External SRAM address terminal A6
54	A7	O	External SRAM address terminal A7
55	A8	O	External SRAM address terminal A8
56	A9	O	External SRAM address terminal A9
57	/WE	O	SRAM input / output control terminal
58	/OE	O	SRAM input / output control terminal
59	A10	O	External SRAM address terminal A10
60	DIF	O	Digital audio interface output
61	Vss	—	
62	/RCK	I ↓	Bit timing signal of subcode output
63	DFOR	O	DF output signal (audio serial signal for DAC) R ch
64	Ø4	O	Quartz synchronous 4.2336MHz output
65	D0	I/O	External SRAM data signal D0
66	D1	I/O	External SRAM data signal D1
67	D2	I/O	External SRAM data signal D2
68	D3	I/O	External SRAM data signal D3
69	D4	I/O	External SRAM data signal D4
70	D5	I/O	External SRAM data signal D5
71	D6	I/O	External SRAM data signal D6
72	VDD	—	
73	D7	I/O	External SRAM data signal D7
74	DEP	O	Deemphasis signal
75	DTFLG	O	For data flag output (Error flag is output)
76	SDSY	O	Synchronous signal of SDO (H : L ch, L : R ch)
77	SDO	O	Serial audio signal output
78	/EXHOLD	I ↑	For servo characteristics selection
79	/TEST E	I ↑	For CDP test
80	/IC	I ↑	For resetting

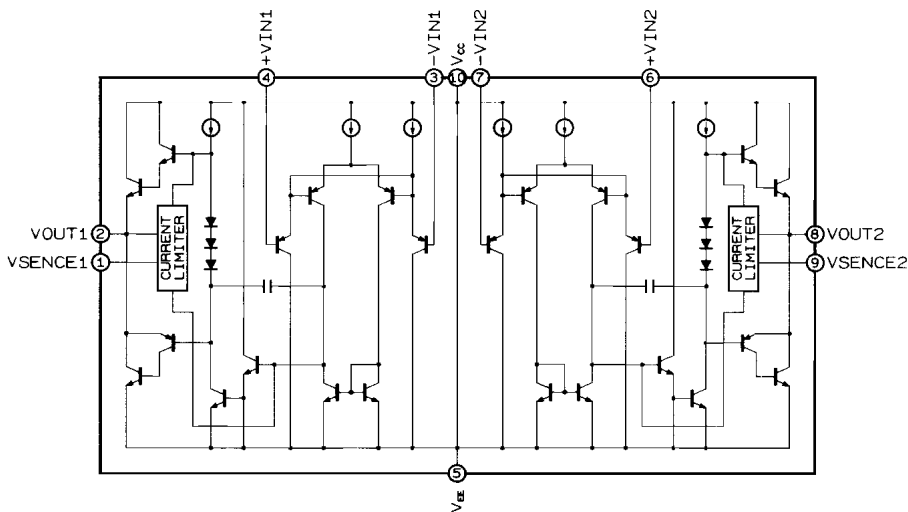
↑ : Pull-up terminal, ↓ : Pull-down terminal, Δ : Open drain terminal, a : Analog signal

IC14 : M5M82C55AP-2 or MSM82C55A-2RS
Programmable Peripheral Interface

IC8 : LC3517B-15, LC3517BL-15 or CXK5816PS
IC15 : LC3517BL-15
2048-Word x 8bit Static RAM

IC3, 16 : μ PD74HCU04C or BU74HCU04
Hex Inverters

IC12, 402 : M5218L or BA15218N
Dual Ope-amp


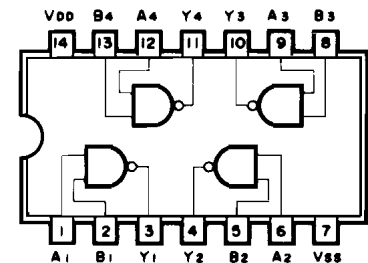
IC2 : M51569FP or YXD446BO
RF Amp



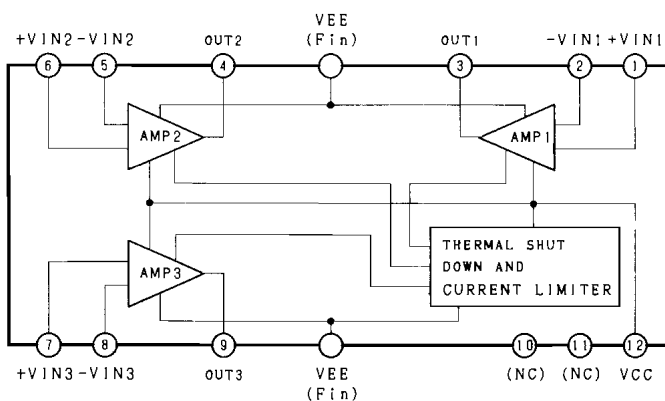
IC6 : LA6510
Dual Power Operational Amp



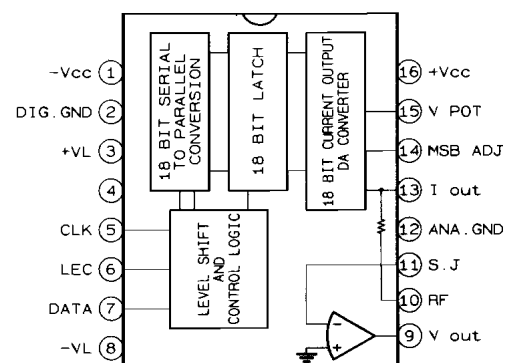
IC17 : μ PD74HC00C or BU74HC00
Quad 2-Input NAND Gate

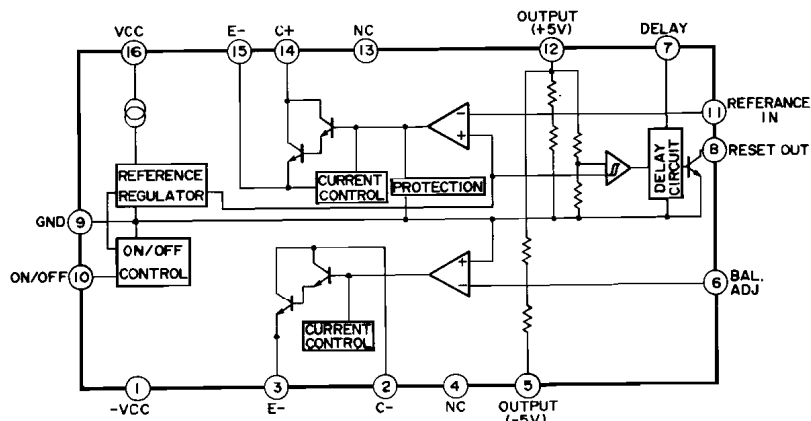
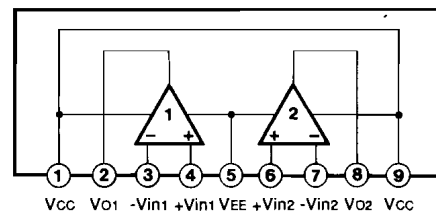
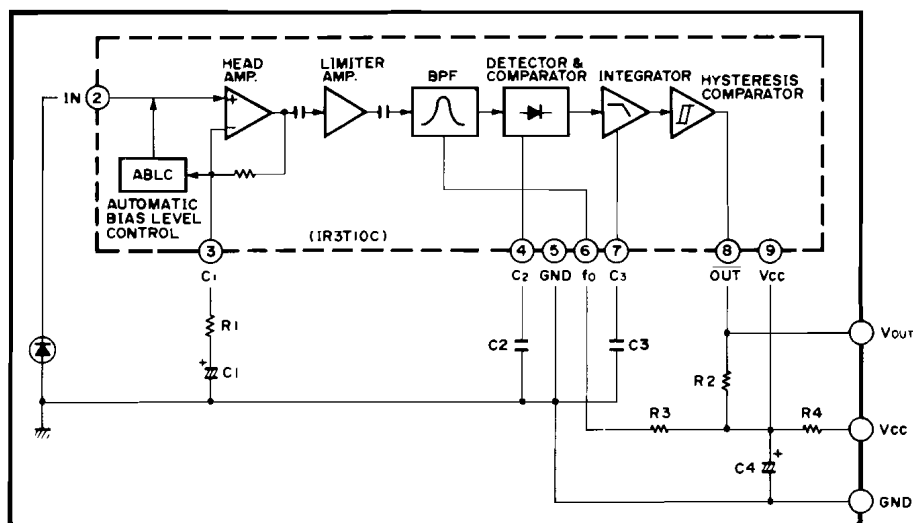
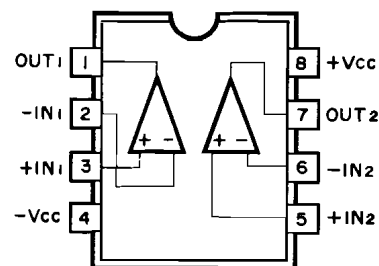
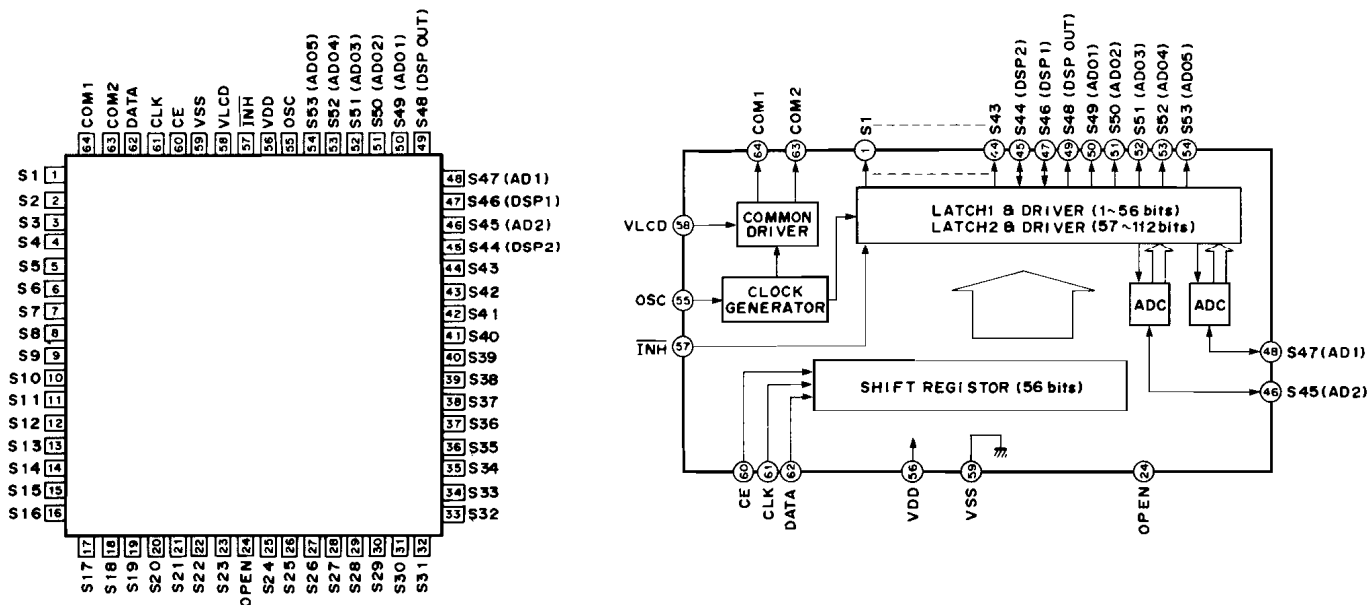


IC5 : LA6520
3-Channel Power Operational Amp

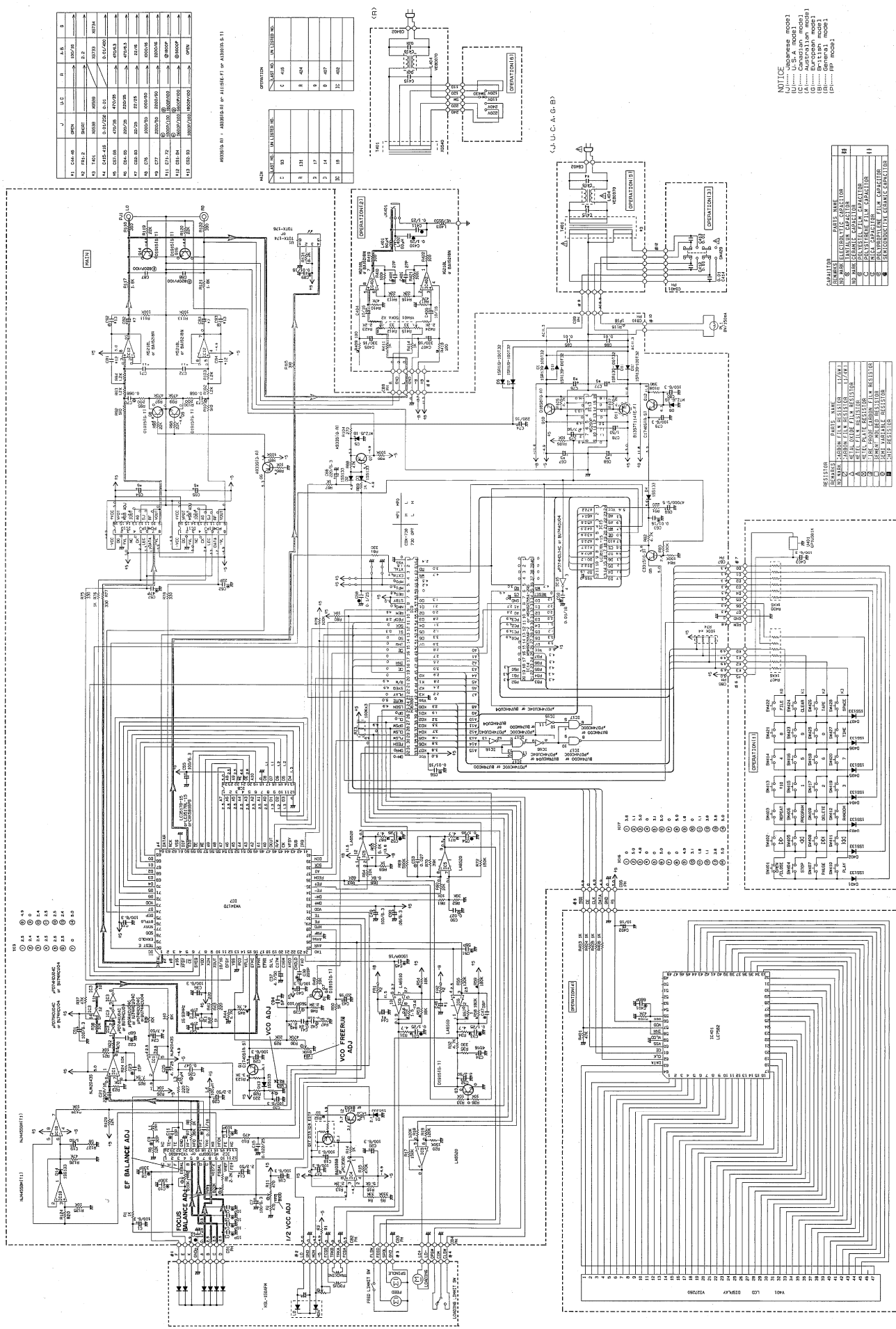


IC10, 11 : PCM61PJ
D/A Converter



IC13 : M5290P**Constant-Voltage Tracking Supply with Reset****IC1 : NJM2043S**
Dual Ope-amp**U401 : GPIU501X****Remote Control Receiver Unit****IC4 : μ PC358C or BA10358****IC18 : NJM4558M (TI)****Dual Ope-amp****IC401 : LC7582****LCD Driver**

■ SCHEMATIC DIAGRAM



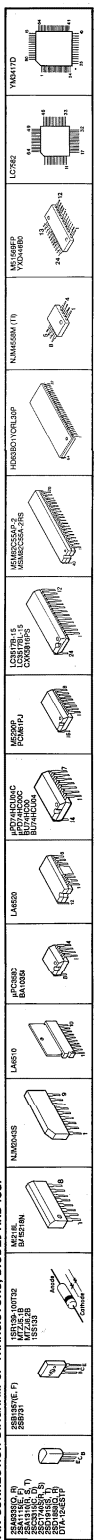
CAPACITOR		UNIT
①	SEMICONDUCTOR PARTS NAME	
②	NO MARK ELECTROLYTIC CAPACITOR	
③	NO MARK TANTALUM CAPACITOR	
④	NO MARK CERAMIC CAPACITOR	
⑤	POLYESTER FILM CAPACITOR	
⑥	POLYSTYRENE FILM CAPACITOR	
⑦	NICA CAPACITOR	
⑧	POLYPROPYLENE FILM CAPACITOR	
⑨	PERMITSERAMIC CERAMIC CAPACITOR	

RESISTOR		PARTS	NAME
NO MARK	☐	CARBON FILM RESISTOR	116W1
1	☐	CARBON FILM RESISTOR	117W1
2	☐	40TAL OXIDE FILM RESISTOR	117W1
3	☐	40TAL FILM RESISTOR	
4	☐	40TAL PLATE RESISTOR	
5	☐	100% PROOF CARBON FILM RESISTOR	
6	☐	CEMENT MOLDED RESISTOR	
7	☐	SEMI VARIABLE RESISTOR	
8	☐	WTR RESISTOR	

NOTICE

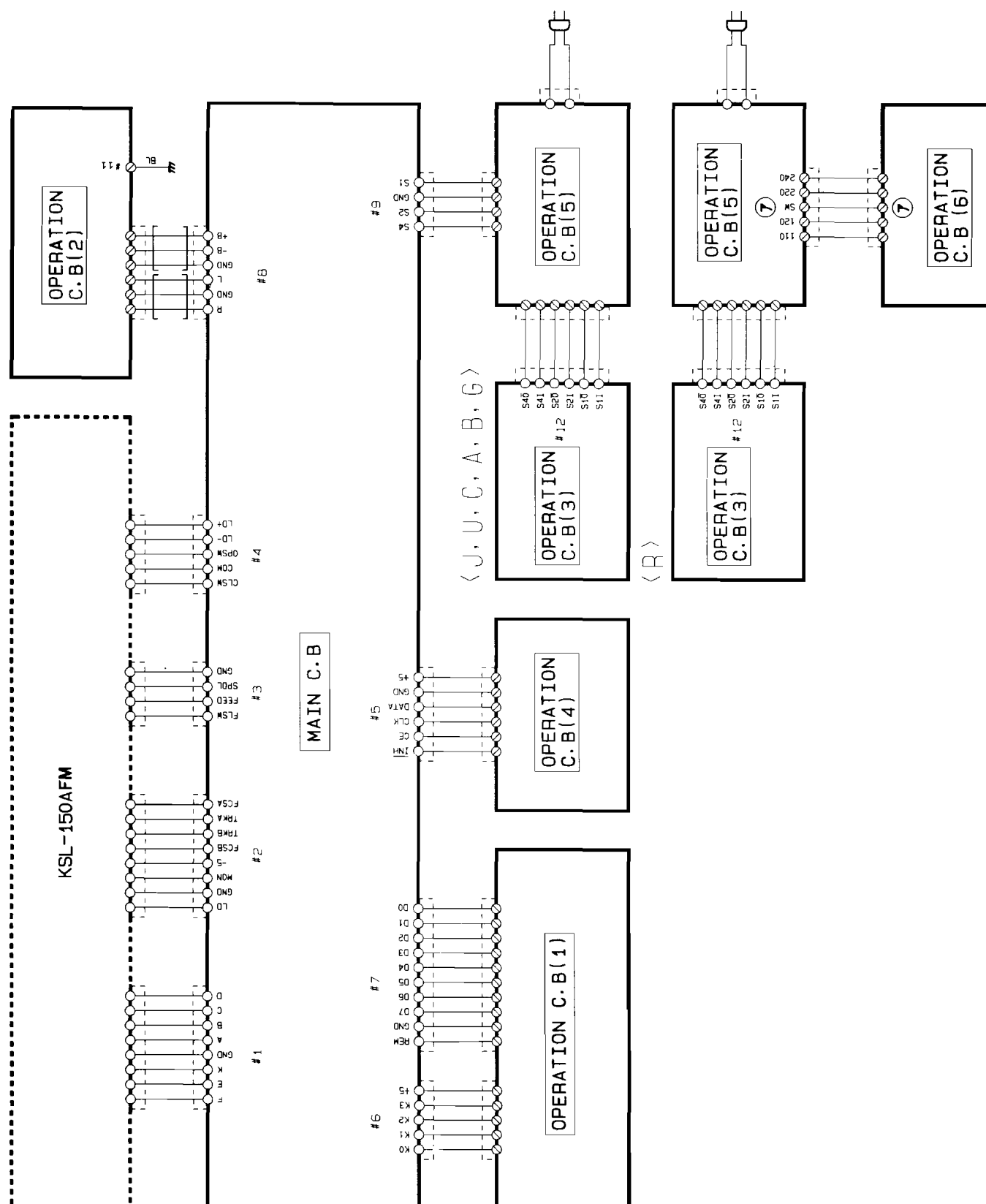
(J)..... Japanese model
(U)..... U.S.A model
(C)..... Canadian model
(A)..... Australian model
(G)..... European model
(B)..... British model
(R)..... General model
(P)..... RP model

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.



- * All voltage are measured with a 10M Ω /DC electric volt meter.
- * Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
- * Schematic diagram is subject to change without notice.

■ INTERCONNECT WIRING DIAGRAM



PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

Components having special characteristics are marked $\triangle$ and must be replaced with parts having specifications equal to those originally installed.

●Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS List. For the parts No. of the carbon resistors, refer to P. 42.

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
※	VI257700	MAIN CIRCUIT BOARD	メインシート		J	
※	VI283700	MAIN CIRCUIT BOARD	メインシート		U,C,R	
※	VI283800	MAIN CIRCUIT BOARD	メインシート		A,B,G	
※	VI713000	POLYPROPYLENE FILM CAP	PPコン	C87,88	J	
	UA252820	MYLAR FILM CAP	マイラーコン	C87,88	UCRABG	
※	VI713400	POLYPROPYLENE FILM CAP	PPコン	C92,93	J	
※	UA253180	MYLAR FILM CAP	マイラーコン	C71,72	UCRABG	
※	VI713400	POLYPROPYLENE FILM CAP	PPコン	C71,72	J	
※	VI714000	POLYPROPYLENE FILM CAP	PPコン	C81,84	J	
	UA253560	MYLAR FILM CAP	マイラーコン	C81,84	UCRABG	
	UA254180	MYLAR FILM CAP	マイラーコン	C42		
	UA254270	MYLAR FILM CAP	マイラーコン	C50,53		
	UA254680	MYLAR FILM CAP	マイラーコン	C70,73		
	UA655240	MYLAR FILM CAP	マイラーコン	C41		
	UT452560	POLYPROPYLENE FILM CAP	PPコン	C39		
※	FG244100	CERAMIC CAP	セラコン	C85,86		
	FG244470	CERAMIC CAP	セラコン	C26		
※	VF466600	CERAMIC CAP	円筒セラコン	C3-6,11		
	VG276200	CERAMIC CAP	円筒セラコン	C23		
	VG276600	CERAMIC CAP	円筒セラコン	C57,62		
※	VG276900	CERAMIC CAP	円筒セラコン	C9		
※	VG277500	CERAMIC CAP	円筒セラコン	C47,51		
	VG277700	CERAMIC CAP	円筒セラコン	C22		
	VF466800	CERAMIC CAP	円筒セラコン	C13		
	VG278400	CERAMIC CAP	円筒セラコン	C39		
※	VG278600	CERAMIC CAP	円筒セラコン	C8,10		
※	VG279200	CERAMIC CAP	円筒セラコン	C45		
	VG279400	CERAMIC CAP	円筒セラコン	C21		
	VF467300	CERAMIC CAP	円筒セラコン	C12,56,59,63,89		
	VG280100	CERAMIC CAP	円筒セラコン	C15		
	VA761100	CERAMIC CAP	セラコン	C27,35		
	UH118100	ELECTROLYTIC CAP	ケミコン	C1,7,16-18,20,29,30,36,40,48,49,55,90,91		
	VG286200	ELECTROLYTIC CAP	ケミコン	C79,80	J	
	UH118100	ELECTROLYTIC CAP	ケミコン	C79,80	UCRABG	
※	VG286300	ELECTROLYTIC CAP	ケミコン	C66	J	
	UH018220	ELECTROLYTIC CAP	ケミコン	C66	UCRABG	
※	VI709600	ELECTROLYTIC CAP	ケミコン	C64,65	J	
	UJ118470	ELECTROLYTIC CAP	ケミコン	C64,65	UCRABG	
※	VG289700	ELECTROLYTIC CAP	ケミコン	C67,68	J	
	UJ118470	ELECTROLYTIC CAP	ケミコン	C67,68	UCRABG	
	VE394300	ELECTROLYTIC CAP	ケミコン	C82,83	J	
	UH137220	ELECTROLYTIC CAP	ケミコン	C82,83	UCRABG	
	UH137220	ELECTROLYTIC CAP	ケミコン	C43	UCRABG	
	UH137330	ELECTROLYTIC CAP	ケミコン	C34		
	VG287700	ELECTROLYTIC CAP	ケミコン	C74	J	
	UH238220	ELECTROLYTIC CAP	ケミコン	C74	UCRABG	
	UH138100	ELECTROLYTIC CAP	ケミコン	C44,46	A,B,G	
	UH166100	ELECTROLYTIC CAP	ケミコン	C19		
	VG290500	ELECTROLYTIC CAP	ケミコン	C78	J	

※New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	UH166100	ELECTROLYTIC CAP	1 μ F 50V	ケミコン	C78	UCRABG
	UH166220	ELECTROLYTIC CAP	2.2 μ F 50V	ケミコン	C14,28,32	
	UH166470	ELECTROLYTIC CAP	4.7 μ F 50V	ケミコン	C24,37	
	VG290800	ELECTROLYTIC CAP	4.7 μ F 50V	ケミコン	C75	J
	UH166470	ELECTROLYTIC CAP	4.7 μ F 50V	ケミコン	C75	UCRABG
※	VI709700	ELECTROLYTIC CAP	1000 μ F 50V	ケミコン	C76	J
	UJ139100	ELECTROLYTIC CAP	1000 μ F 16V	ケミコン	C78	UCRABG
※	VI709900	ELECTROLYTIC CAP	2200 μ F 50V	ケミコン	C77	J
	UJ139220	ELECTROLYTIC CAP	2200 μ F 16V	ケミコン	C77	UCRABG
	UK346470	ELECTROLYTIC CAP	4.7 μ F 25V	B P ケミコン	C25	
※	VI271200	ELECTROLYTIC CAP	47000 μ F 5.5V	バックアップケミコン	C69	
※	VD930900	SEMI-CONDUCT CAP	0.1 μ F 25V	半導体セラコン	C2,31,33,52,54,58	
※	VB100200	COIL	EL0606RA 10uH	固定コイル	L2	
※	VE008800	COIL	EL0606RA 100uH	コイル	L4	
※	VG669900	COIL	LHL06TB 470uH	コイル	L3	
※	VG670600	COIL	LHL06TB 1mH	コイル	L1	
	HV453100	FLAME PROOF RESISTOR	1 Ω 1/4W	不燃化カーボン抵抗	R57	
	HV753150	FLAME PROOF RESISTOR	1.5 Ω 1/4W	不燃化カーボン抵抗	R52	
	HV453470	FLAME PROOF RESISTOR	4.7 Ω 1/4W	不燃化カーボン抵抗	R31,34,67,71	
	HV454220	FLAME PROOF RESISTOR	22 Ω 1/4W	不燃化カーボン抵抗	R12	
※	VI339500	METAL FILM RESISTOR	18K Ω 1/6W	金属皮膜抵抗	R53,54	
	VH254500	METAL FILM RESISTOR	4.7K Ω 1/6W	金属皮膜抵抗	R44,45	
	VE595000	METAL FILM RESISTOR	180K Ω 1/6W	金属皮膜抵抗	R58,59	
※	VI661400	METAL OXIDE RESISTOR	18 Ω 1W	酸化金属被膜抵抗	R116	
	VH293400	FUSE RESISTOR	2.2 Ω 1/6W	ヒューズ抵抗	FR1,2	A,B,G
※	VD270200	RESISTOR ARRAY	RMLS3 J 100K Ω x3	抵抗アレイ	R73	
※	VB933600	RESISTOR ARRAY	RMLS4 J 100K Ω x4	抵抗アレイ	R74	
	XD446B00	IC	YXD446B0	I C	IC2	
※	XG828A00	IC	UPC358C	I C	IC4	
※	XG381A00	IC	LA6520	I C	IC5	
※	XF947A00	IC	LA6510	I C	IC6	
	XD201001	IC	M5290P 5V	I C	IC13	
	iG142220	IC	UPD74HC004C	I C	IC3,16	
※	XG384A00	IC	M5M82C55A9-2	I C	IC14	
	iG058210	IC	M5218L	I C	IC12	
	iG080200	IC	NJM2043S	I C	IC1	
	iG103520	IC	NJM4558MT-1	I C	IC18	
※	XG829A00	IC	HD63B01Y0RL30P	I C	IC9	
	XE195A00	IC	LC3517B-15	I C	IC8	
	XE859A00	IC	LC3517BL-15	I C	IC15	
※	XG804A00	IC	PCM61PJ	I C	IC10,11	
※	iR000020	IC	UPD74HC00C	I C	IC17	
※	XG756B00	IC	YM3417D	I C	IC7	
※	VI272900	PIN JACK	2P	ピンジャック	PJ1	J
	VE484600	PIN JACK	2P	ピンジャック	PJ1	UCRABG
	VG067200	OPTICAL MODULE	6P	光送信モジュール	U1	
	VD004500	BASE PIN	PH 2P TE	ベースピン	CB10	
	VD004700	BASE PIN	PH 4P TE	ベースピン	CB3,9	
	VD004800	BASE PIN	PH 5P TE	ベースピン	CB4,6	
	VD004900	BASE PIN	PH 6P TE	ベースピン	CB5,8	

※ New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	VD005100	BASE PIN	PH 8P TE	ベースピン	CB1,2	
	VD005300	BASE PIN	PH 10P TE	ベースピン	CB7	
	VC398800	QUARTZ CRYSTAL RESONATOR	16.9344M HC-49/TS	水晶振動子	XL1	
	VB862500	PRE-SET POTENTIOMETER	B220Ω	半固定VR	VR5	
	VB861100	PRE-SET POTENTIOMETER	B1KΩ	半固定VR	VR3	
	VB861500	PRE-SET POTENTIOMETER	B10KΩ	半固定VR	VR2,4	
	VB861600	PRE-SET POTENTIOMETER	B22KΩ	半固定VR	VR1	
	IA093370	TRANSISTOR	2SA933S Q,R	トランジスタ	Q6,7	
	VH555500	TRANSISTOR	2SB1357 E,F	トランジスタ	Q11	
	VI287900	TRANSISTOR	2SB731	トランジスタ	Q2	
	VC529400	TRANSISTOR	2SC3315 C,D	トランジスタ	Q5	
	IC174070	TRANSISTOR	2SC1740S R,S	トランジスタ	Q1,12	
	VC502100	TRANSISTOR	2SD1915 S,T	トランジスタ	Q3,4,8,9,14,16	
	VE813400	TRANSISTOR	2SD1858 Q,R	トランジスタ	Q10	
	VH257100	DIGITAL TRANSISTOR	DTA124ES	デジトラ	Q17	
	VH770800	DIODE	1SR139-100	ダイオード	D6,7,9-12	
	VG437400	ZENER DIODE	MTZJ5.1B 5.1V	ツェナーダイオード	D5	
	VG438000	ZENER DIODE	MTZJ6.2B 6.2V	ツェナーダイオード	D8	
	IF004600	DIODE	1SS133 T-77	ダイオード	D1-4,13,14	
	VB966900	PIN	INSA-6024	スタイルピン		
	VA119100	HEAT SINK		ヒートシンク		
	NX604980	OPERATION CIRCUIT BOARD		オペレーションシート	T	UCRABG
	NX604960	OPERATION CIRCUIT BOARD		オペレーションシート	T	J
	NX604970	OPERATION CIRCUIT BOARD		オペレーションシート	BL	UCRABG
	FG244100	CERAMIC CAP	0.01μF 50V	セラコン	C412-414	
	VG276800	CERAMIC CAP	27PF 50V	円筒セラコン	C408,409	
	VG278900	CERAMIC CAP	680PF 50V	円筒セラコン	C401	
	VD930900	SEMI-CONDUCT CAP	0.1μF 25V	半導体セラコン	C410,411	
	UH137100	ELECTROLYTIC CAP	10μF 16V	ケミコン	C402,404,406	
	UJ138330	ELECTROLYTIC CAP	330μF 16V	ケミコン	C405,407	
	UM388100	ELECTROLYTIC CAP	100μF 6.3V	ケミコン	C403	
	VD473700	COIL	SBT-0460T 60uH	コイル	L401,402	
	VI491100	FERRITE CORE	BP53RB19012080M	フェライトコア	L405,406	
	VE795500	FERRITE BEAD	B-01-RTF	フェライトビーズ	L403	
	HV455100	FLAME PROOF RESISTOR	100Ω 1/4W	不燃化カーボン抵抗	R409,418	
	VI272400	RESISTOR ARRAY	1KΩ×6	抵抗アレイ	R407,408	
	IG058210	IC	M5218L	IC	IC402	
	XB417001	IC	LC7582	IC	IC401	
	VI272600	LCD DISPLAY	LCD8094B1JP	LCD表示器	V401	
	VF926500	RECEIVE UNIT	GP1U501X	リモコン受光ユニット	U401	
	VI272700	PUSH SWITCH	PSE01-A4KPX	プッシュSW	SW429	
	VG392900	TACT SWITCH	SKHVAA	タクトSW	SW401-428	
	LB301720	PHONES JACK	M1669-A	ホーンジャック	JK401	J
	LB302430	PHONES JACK		ホーンジャック	JK401	UCRABG
	LB302420	PHONES JACK	M1669-A	ホーンジャック	JK401	UCRABG
	VD004900	BASE PIN	PH 6P TE	ベースピン	CB401	
	VH789900	POTENTIOMETER	A50KΩ EVJ-CHOF	ロータリーVR	VR401	

*New Parts (新規部品)

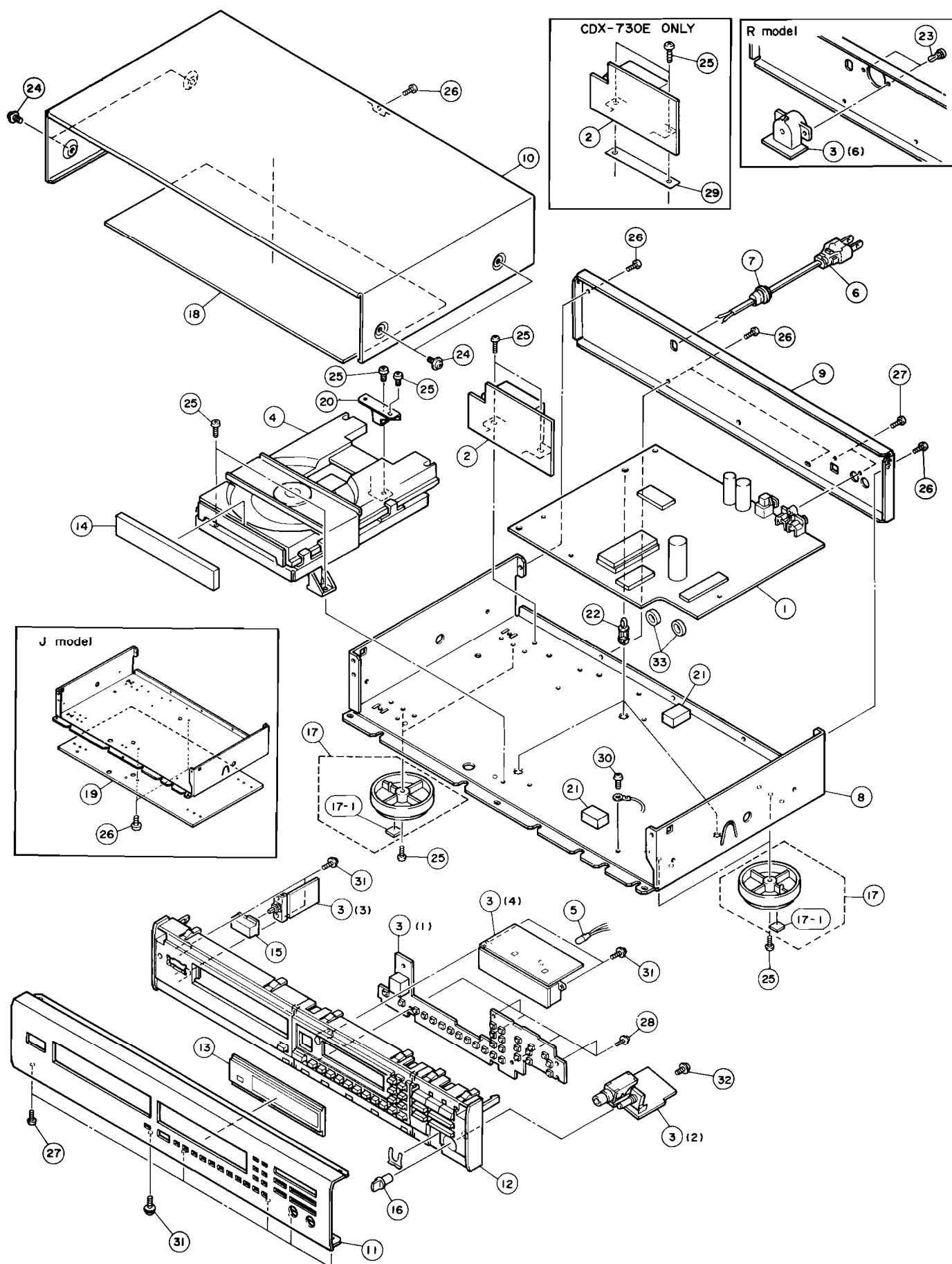
ランク : Japan only

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
	IF004600	DIODE	1SS133 T-77	ダイオード	D401-407	
	VG335800	REFLECTOR		リフレクター		
	VH041200	SHEET		シート		
	CB605620	PLASTIC RIVET	NO.1057	ブラリベット		
	VF444500	LAMP CAP	AG-4015	ランプキャップ		
※	NX604910	TRANSFORMER CIRCUIT BOARD		トランスシート		J
※	NX604920	TRANSFORMER CIRCUIT BOARD		トランスシート		U,C
※	NX604940	TRANSFORMER CIRCUIT BOARD		トランスシート		B
※	NX604930	TRANSFORMER CIRCUIT BOARD		トランスシート		R
※	NX604950	TRANSFORMER CIRCUIT BOARD		トランスシート		G
※	NX606740	TRANSFORMER CIRCUIT BOARD	CDX-730E	トランスシート		B
※	NX606750	TRANSFORMER CIRCUIT BOARD	CDX-730E	トランスシート		G
	FI324100	CERAMIC CAP	0.01 μ F 250V	スパークキラーコン	C415,416	J
	FI384100	CERAMIC CAP	0.01 μ F 400V	規格認定コン	C415,416	U,C
	VE179200	CERAMIC CAP	0.01 μ F 400V	規格認定コン	C415,416	R,A,B,G
※	XG538A00	POWER TRANSFORMER		電源トランス	T401	J
※	XG539A00	POWER TRANSFORMER		電源トランス	T401	U,C
※	XG540A00	POWER TRANSFORMER		電源トランス	T401	R
※	XG733A00	POWER TRANSFORMER		電源トランス	T401	A,B
※	XG734A00	POWER TRANSFORMER		電源トランス	T401	G
※	XG844A00	POWER TRANSFORMER	CDX-730E	電源トランス		B
※	XG845A00	POWER TRANSFORMER	CDX-730E	電源トランス		G
	VE800700	LINE FILTER	1.8mH ELF18D290V	ラインフィルタ	L404	
	VG388100	VOLTAGE SELECTOR	HXV0244	電圧切替器	SW430	R
	VE225700	BASE PIN	2P	ベースポスト	CB402	
	LA003790	WRAPPING TERMINAL	CDX-730E	ラッピングタンシ	TE401	B,G

※New Parts (新規部品)

ランク : Japan only

EXPLODED VIEW



MECHANICAL PARTS

Note) ϕ : Diameter

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
1	VI257700	MAIN CIRCUIT BOARD	メインシート		J	
1	VI283700	MAIN CIRCUIT BOARD	メインシート		U,C,R	
1	VI283800	MAIN CIRCUIT BOARD	メインシート		A,B,G	
2	NX604910	TRANSFORMER CIRCUIT BOARD	トランスシート		J	
2	NX604920	TRANSFORMER CIRCUIT BOARD	トランスシート		U,C	
2	NX604930	TRANSFORMER CIRCUIT BOARD	トランスシート		R	
2	NX604940	TRANSFORMER CIRCUIT BOARD	トランスシート		A,B	
2	NX604950	TRANSFORMER CIRCUIT BOARD	トランスシート		G	
2	NX606740	TRANSFORMER CIRCUIT BOARD	トランスシート	CDX-730E	B	
2	NX606750	TRANSFORMER CIRCUIT BOARD	トランスシート	CDX-730E	G	
3	NX604980	OPERATION CIRCUIT BOARD	オペレーションシート	T	UCRABG	
3	NX604960	OPERATION CIRCUIT BOARD	オペレーションシート		J	
3	NX604970	OPERATION CIRCUIT BOARD	オペレーションシート	BL	UCRABG	
4	VI287800	PU MECHA UNIT	P Uメカユニット			
5	VG933600	LAMP	ランプ	KSL-150ACM3 1.2W 8V150mA		
6	VE042100	POWER CORD ASSY	パワーコード ASSY		J	
6	VE640000	POWER CORD ASSY	パワーコード ASSY		U,C	
6	VE222900	POWER CORD ASSY	パワーコード ASSY		R	
6	VE042900	POWER CORD ASSY	パワーコード ASSY		A	
6	VE043100	POWER CORD ASSY	パワーコード ASSY		B	
6	VE043400	POWER CORD ASSY	パワーコード ASSY		G	
6	VI375600	POWER CORD ASSY	パワーコード ASSY	CDX-730E	B	
6	VI375700	POWER CORD ASSY	パワーコード ASSY	CDX-730E	G	
7	CB616810	CORD STOPPER	コードストッパー	CM-22A	J,U,C	
7	CB620190	CORD STOPPER	コードストッパー	CM-22B	R,A,B,G	
8	VH787200	BOTTOM	ボトム			
9	VH787900	REAR PANEL	リヤパネル		J	
9	VH788000	REAR PANEL	リヤパネル		U	
9	VH788100	REAR PANEL	リヤパネル		C	
9	VH788200	REAR PANEL	リヤパネル		R	
9	VH788300	REAR PANEL	リヤパネル		A,B	
9	VH788400	REAR PANEL	リヤパネル		G	
9	VI247100	REAR PANEL	リヤパネル	CDX-730E	B	
9	VI247200	REAR PANEL	リヤパネル	CDX-730E	G	
10	AA831020	TOP COVER	トップカバー	BL		
10	VH210800	TOP COVER	トップカバー	T		
11	VH798700	FRONT PANEL	フロントパネル	BL	J	
11	VI072700	FRONT PANEL	フロントパネル	BL	UCRABG	
11	VI072800	FRONT PANEL	フロントパネル	T	UCRABG	
11	VH798800	FRONT PANEL	フロントパネル	T	J	
11	VI621800	FRONT PANEL	フロントパネル	BL	B,G	
11	VI621900	FRONT PANEL	フロントパネル	T	B,G	
12	VH690800	FRONT PANEL,SUB	フロントパネル サブ	BL		
12	VH996500	FRONT PANEL,SUB	フロントパネル サブ	T		
13	VH691000	WINDOW	ウインドウ	BL		
13	VH996600	WINDOW	ウインドウ	T		
14	VH690900	LID	リッド	BL		
14	VH996900	LID	リッド	T		
15	VH841900	BUTTON	ボタン	BL		
15	VH842000	BUTTON	ボタン	T		

※New Parts (新規部品)

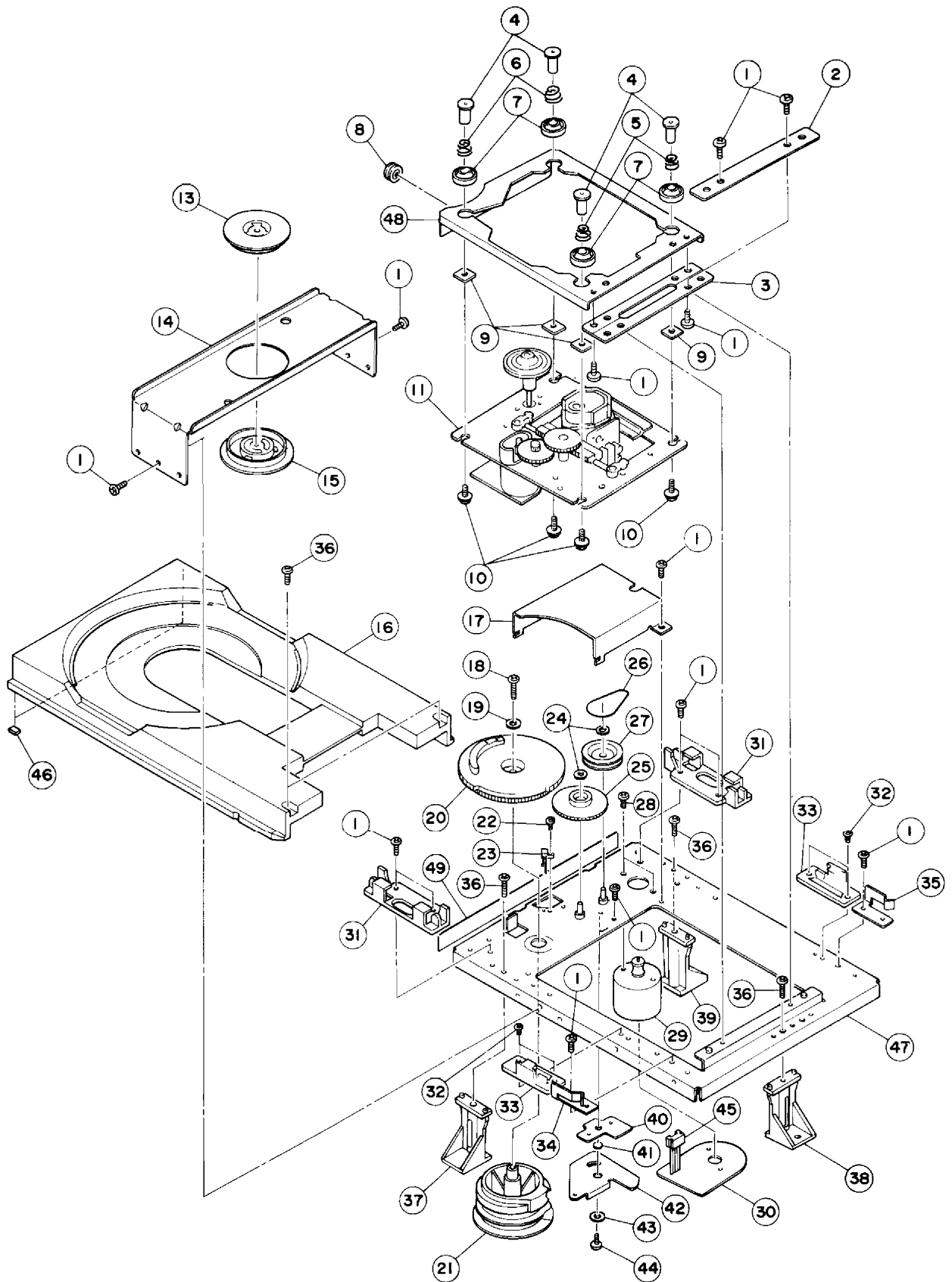
ランク : Japan only

Ref. NO.	PART NO.	Description		部 品 名	Remarks	Markets	ランク
* 16	VH790300	KNOB		ノブ	BL		
* 16	VH790400	KNOB		ノブ	T		
* 17	VI667000	LEG ASS'Y		レッグASSY	BL	J	
* 17	VE228000	LEG ASS'Y		レッグASSY	BL	UCRABG	
* 17	VH997000	LEG ASS'Y		レッグASSY	T	UCRABG	
17-1	VE215700	LEG,CUSHION		レッグクッション			
* 18	VI246300	SHEET		シート		J	
* 19	VI246400	BOTTOM COVER		ボトムカバー			
* 20	VI246500	GROUND PLATE		アースプレート			
21	VI299500	SHEET		シート			
22	CB097610	HOLDER,P,C,BOARD		シートホルダー			
23	CB068880	PLASTIC RIVET	#1027	ブラリベット			
* 24	EX601260	CUP SCREW S TIGHT	4x8 FCM3-3G	カップネジ	T		
24	EX601080	CUP SCREW S TIGHT	4x8 FCM3-BL	カップネジ	BL		
* 25	EX601270	BW HEAD SCREW	3x8 (φ8) ZMC2-Y	BWヘッドネジ			
26	EN301010	BIND HEAD BONDING TAP SCREW	3x8	バインドボンディングネジ			
27	EN335030	BONDING TAP SCREW	3x10 FCRM3-BL	ボンディングネジ			
28	EX600840	BW HEAD TAPPING SCREW	2x6 FCRM3-BL	BWヘッドタッピングネジ			
* 29	VI353400	SHEET	CDX-730E	シート		B,G	
30	EI030046	BINDING HEAD TAPPING SCREW	3x4 ZMC2-Y	バインドタッピングネジ			
31	EX930010	BW HEAD TAPPING SCREW	3x8 ZMC2-BL	BWヘッドタッピングネジ			
32	EX600240	BW HEAD TAPPING SCREW	3x8 FCM3-BL	BWヘッドタッピングネジ			
* 33	VI491100	FERRITE CORE	CDX-730E	フェライトコア		B,G	
		ACCESSORIES		付属品			
	VG718700	PIN PLUG CORD	1M	ピンピンコード			
	VH932900	REMOTE CONTROL TRANSMITTER		トランスミッター			
* 1	VI293500	REMOTE CONTROL TRANSMITTER	CDX-730E	トランスミッター		B,G	
		DRY CELL	AAA,R03	マンガン電池			
		DRY CELL	CDX-730E 1A,R06	マンガン電池		B,G	

*New Parts (新規部品)

ランク : Japan only

■ EXPLODED VIEW (PU MECHA. UNIT)



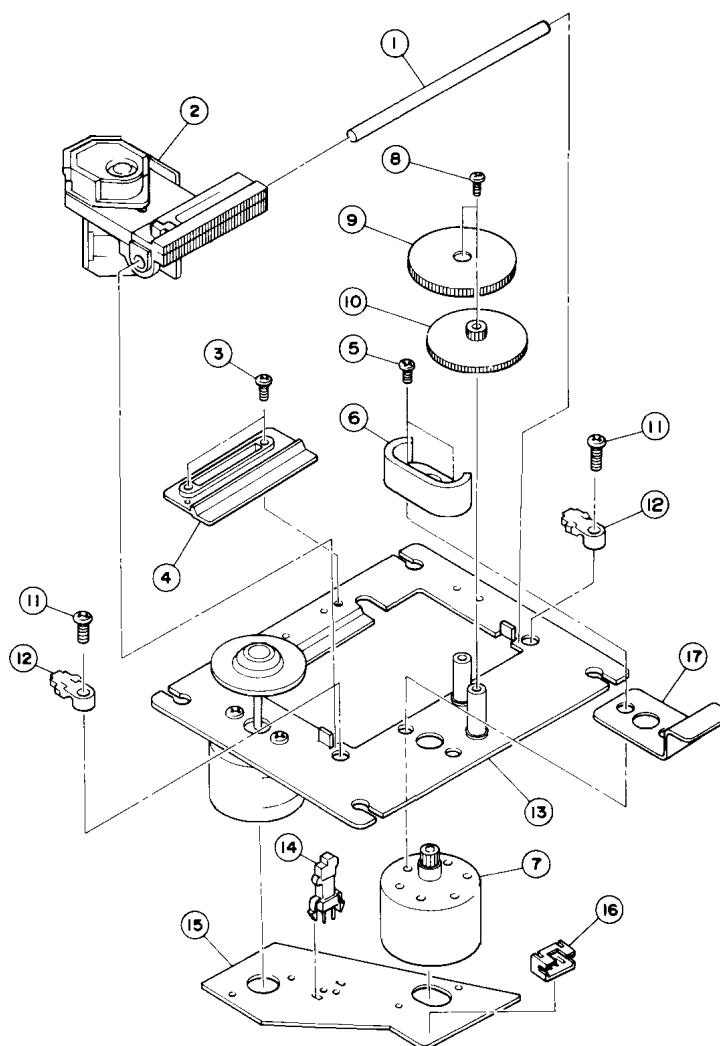
■ MECHANICAL PARTS (PU MECHA. UNIT) Note) ϕ : Diameter

Ref. NO.	PART NO.	Description		部 品 名	Remarks	Markets	ランク
* 01	ED028066	BINDING HEAD SCREW	2.6x6 ZMC2-Y	バインド小ネジ	7-685-862-01		
* 02	AX607330	HINGE HOLD		ヒンジ押え	2-642-170-01		
* 03	AX607340	HINGE		ヒンジ	2-642-103-01		
* 04	BX601560	SHAFT		シャフト	2-642-160-01		
* 05	AX607350	SPRING B		エンスイケイコイルバネ B	2-642-137-01		
* 06	AX607380	SPRING A		エンスイケイコイルバネ A	2-642-139-01		
* 07	CX610770	INSULATOR		インシュレータ	2-642-158-01		
* 08	AX607370	ROLLER		ローラー	2-642-169-01		
* 09	BX601570	PLATE SP		プレート SP	2-642-159-01		
* 10	AX607380	BW HEAD SCREW	2x8 ϕ 8	座付ネジ	2-642-142-01		
* 11	NX605870	MECHANISM SUB ASS'Y		メカサブASSY	8-848-156-02		
* 13	NX605720	MAGNET ASS'Y		マグネットASSY	X-2642-108-1		
* 14	AX607390	CHUCK CHASSIS		チャックシャーシ	2-642-165-01		
* 15	CX610780	CHUCKING PULLEY		チャッキングプーリー	2-642-181-01		
* 16	CX610790	TRAY		トレイ	2-642-156-01		
* 17	AX607400	GEAR COVER		ギアカバー	2-642-149-02		
* 18	EJ026106	PAN HEAD TAPPING SCREW	2.6x10 ZMC2-Y	ナベタッピングネジ	7-685-535-19		
* 19	AX607410	WASHER		ザガネ	4-812-554-00		
* 20	CX610800	DRIVE GEAR		ドライブギア	2-642-154-02		
* 21	CX610810	CONTROL CAM		コントロールカム	2-642-153-01		
* 22	ED020046	BIND HEAD SCREW	2x4	バインド小ネジ	7-685-851-01		
* 23	KX602360	LEAF SWITCH		リーフスイッチ	1-572-052-11		
* 24	CX610820	WASHER		止めワッシャー	3-558-708-21		
* 25	CX610830	GEAR		中間ギア	2-642-148-01		
* 26	CX610840	BELT,LOADING MOTOR		LMベルト	3-653-387-00		
* 27	CX610850	LOADING PULLEY		ローディングプーリー	4-913-731-01		
* 28	ED326036	BIND HEAD SCREW	2.6x3	バインド小ネジ	7-621-775-00		
* 29	JX600540	MOTOR ASS'Y		モーターASSY	X-2641-336-1		
* 30	LX603460	MOTOR CIRCUIT BOARD		モーター基板	1-624-793-21		
* 31	CX610860	TRAY HOLDER (F)		トレイホルダー	2-642-161-01		
* 32	EI020046	BIND HEAD TAPPING SCREW	2x4	バインドタッピングネジ	7-685-781-01		
* 33	CX610870	TRAY HOLDER (R)		トレイホルダー	2-642-162-01		
* 34	CX610880	TRAY GUIDE R		トレイガイド	2-642-146-01		
* 35	CX610890	TRAY GUIDE L		トレイガイド	2-642-147-01		
* 36	EI330106	BIND HEAD TAPPING SCREW	3x10	バインドタッピングネジ	7-685-547-19		
* 37	AX607420	BOSS		ボス	2-642-510-01		
* 38	AX607430	BOSS		ボス	2-642-512-01		
* 39	AX607440	BOSS		ボス	2-642-511-01		
* 40	AX607450	LINK PLATE		リンクプレート	2-642-173-01		
* 41	CX610900	BOSS		ボス	2-642-133-02		
* 42	NX605730	STOPPER LINK ASS'Y		ストッパーリンクASSY	X-2642-109-1		
* 43	CX610910	SPACER		スペーサ	2-642-172-01		
* 44	EK035060	BW HEAD TAPPING SCREW	2.6x8 ZMC2-Y	BWヘッドタッピングネジ	7-682-902-32		
* 45	LX601830	CONNECTER PIN	5P	コネクタピン	1-564-721-11		
* 46	CX610920	DAMPER		ダンパー	2-642-125-01		
* 47	NX605750	MAIN CHASSIS ASS'Y		メインシャーシASSY	X-2642-106-1		
* 48	NX605740	SUB CHASSIS ASS'Y		サブシャーシASSY	X-2642-105-1		
* 49	CX610930	FRONT TAPE		フロントテープ	2-642-157-03		

※New Parts (新規部品)

ランク : Japan only

EXPLODED VIEW (KSM-150AFM)



Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
* 01	BX601580	SLIDE SHAFT	スライド軸	4-910-431-01		
* 02	PX600430	LASER PICK UP	レーザーピックアップ	8-848-046-51		
* 03	AX607540	SPECIAL SCREW	特殊タッピングネジ	2-641-386-01		
* 04	CX610940	SLIDE HOLDER	スライドホルダー	2-641-443-02		
* 05	EA020056	PAN HEAD SCREW	ナベ小ネジ	7-621-255-35		
* 06	CX610950	GEAR COVER	ギアカバー	2-641-434-01		
* 07	JX600550	SLED MOTOR ASS'Y	スレッドモータASSY	X-2641-358-1		
* 08	AX607550	SPECIAL SCREW	特殊頭ネジ	3-303-809-31		
* 09	CX610960	GEAR A	歯車A	2-641-404-02		
* 10	CX610970	GEAR B	歯車B	2-641-403-05		
* 11	AX607560	SPECIAL SCREW	特殊ネジ	2-641-447-01		
* 12	CX610980	SHAFT CLAMP	シャフトクランプ	2-641-448-02		
* 13	JX600560	SPINDLE MOTOR ASS'Y	スピンドルモータASSY	X-2641-356-1		
* 14	KX602370	LEAF SWITCH	リーフスイッチ	1-572-053-11		
* 15	LX603470	MOTOR CIRCUIT BOARD	モータ基板	1-628-263-11		
* 16	LX603480	CONNECTOR PIN	コネクタピン	1-564-720-11		
* 17	AX607460	STOPPER	ストッパー	2-641-371-01		

*New Parts (新規部品)

ランク : Japan only

CDX-730/730E

A

B

C

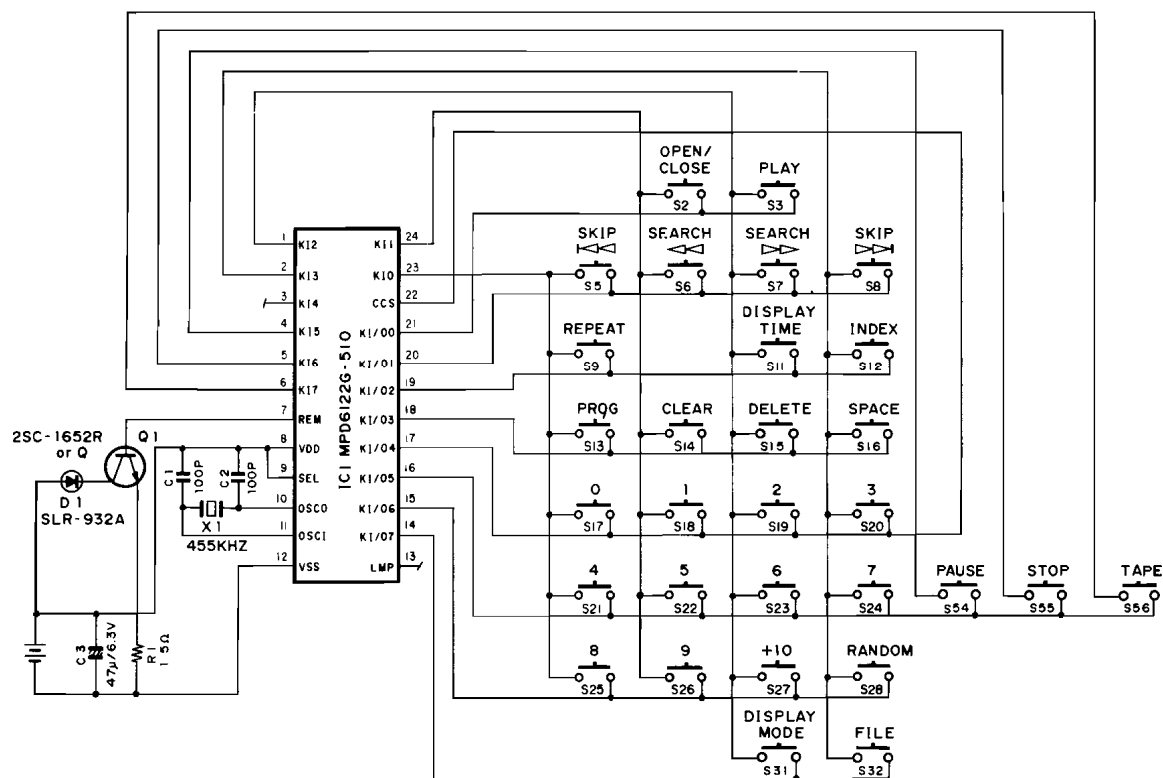
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E

CDX-730/730E

CDX-730 REMOTE CONTROL TRANSMITTER

SCHEMATIC DIAGRAM



CUSTOM CODE

C0

C1

C2

C3

C4

C5

C6

C7

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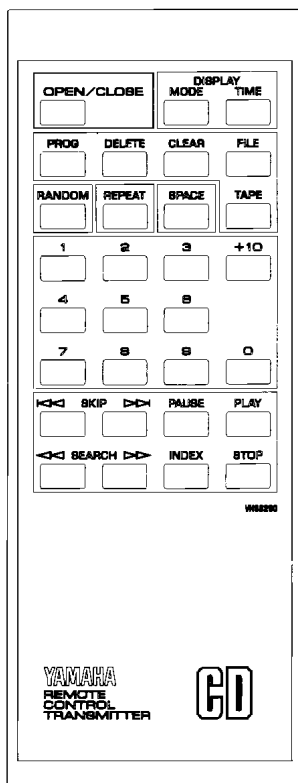
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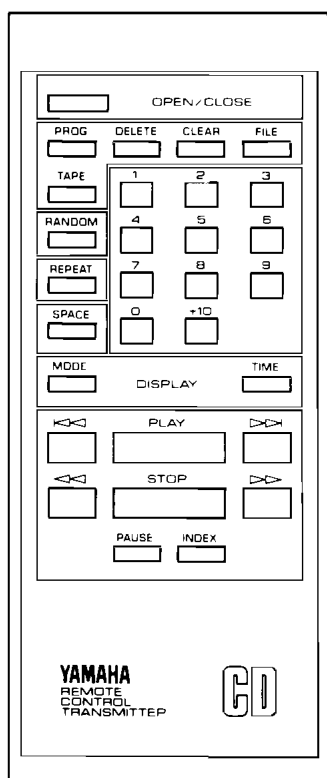
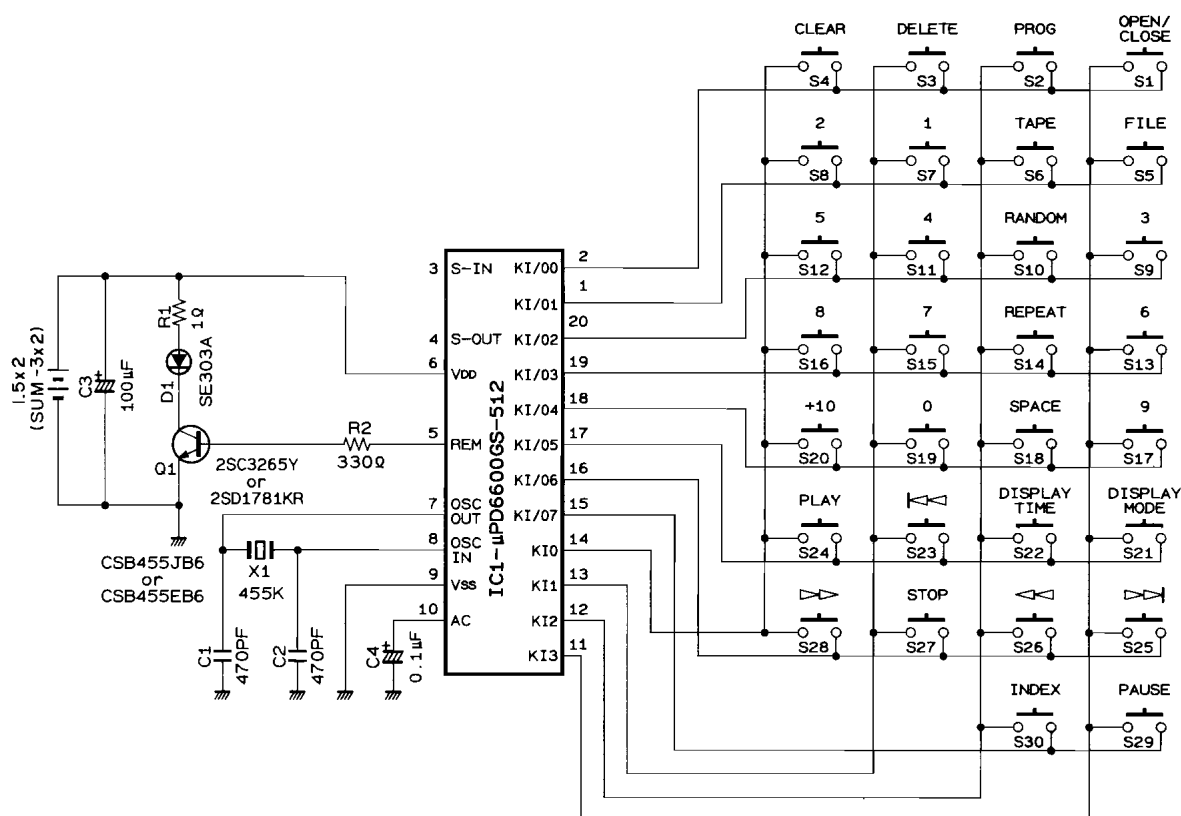


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5	0	0	1	0	0	0	0	0	SKIP ⏮
6	1	0	1	0	0	0	0	0	SEARCH ⏮
7	0	1	1	0	0	0	0	0	SEARCH ⏭
8	1	1	1	0	0	0	0	0	SKIP ⏭
9	0	0	0	1	0	0	0	0	REPEAT
11	0	1	0	1	0	0	0	0	DISPLAY TIME
12	1	1	0	1	0	0	0	0	INDEX
13	0	0	1	1	0	0	0	0	PROG
14	1	0	1	1	0	0	0	0	CLEAR
15	0	1	1	1	0	0	0	0	DELETE
16	1	1	1	1	0	0	0	0	SPACE
17	0	0	0	0	1	0	0	0	0
18	1	0	0	0	1	0	0	0	1
19	0	1	0	0	1	0	0	0	2
20	1	1	0	0	1	0	0	0	3
21	0	0	1	0	1	0	0	0	4
22	1	0	1	0	1	0	0	0	5
23	0	1	1	0	1	0	0	0	6
24	1	1	1	0	1	0	0	0	7
25	0	0	0	1	1	0	0	0	8
26	1	0	0	1	1	0	0	0	9
27	0	1	0	1	1	0	0	0	+10
28	1	1	0	1	1	0	0	0	RANDOM
31	0	1	1	1	1	0	0	0	DISPLAY MODE
32	1	1	1	1	1	0	0	0	FILE
54	1	0	1	0	1	0	1	0	PAUSE
55	0	1	1	0	1	0	1	0	STOP
56	1	1	1	0	1	0	1	0	TAPE

Ref. NO.	PART NO.	Description	部 品 名	Remarks	Markets	ランク
*	VH932900	REMOTE CONTROL TRANSMITTER	リモコンランスミッター			
	CX607200	LID	電池蓋			

CDX-730E REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM



CUSTOM CODE 79H

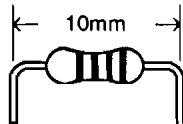
KEY No.	FUNCTION	HEX CODE	KEY No.	FUNCTION	HEX CODE
1	OPEN / CLOSE	01	16	8	18
2	PROG	0C	17	9	19
3	DELETE	0E	18	SPACE	0F
4	CLEAR	0D	19	0	10
5	FILE	1F	20	+10	1A
6	TAPE	57	21	DISPLAY MODE	1E
7	1	11	22	DISPLAY TIME	0A
8	2	12	23	⏮	04
9	3	13	24	PLAY	02
10	RANDOM	1B	25	⏭	07
11	4	14	26	⏪	05
12	5	15	27	STOP	56
13	6	16	28	⏩	06
14	REPEAT	08	29	PAUSE	55
15	7	17	30	INDEX	0B

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF853100	12 K Ω	HJ35 7120	HF85 7120
1.8 Ω	HJ35 3180	*	15 K Ω	HJ35 7150	HF85 7150
2.2 Ω	HJ35 3220	HF853220	18 K Ω	HJ35 7180	HF85 7180
3.3 Ω	HJ35 3330	HF853330	22 K Ω	HJ35 7220	HF85 7220
4.7 Ω	HJ35 3470	HF853470	27 K Ω	HJ35 7270	HF85 7270
5.6 Ω	HJ35 3560	HF853560	33 K Ω	HJ35 7330	HF85 7330
10 Ω	HJ35 4100	HF854100	39 K Ω	HJ35 7390	HF85 7390
15 Ω	HJ35 4150	HF854150	47 K Ω	HJ35 7470	HF85 7470
22 Ω	HJ35 4220	HF854220	56 K Ω	HJ35 7560	HF85 7560
27 Ω	HJ35 4270	HF854270	68 K Ω	HJ35 7680	HF85 7680
33 Ω	HJ35 4330	HF854330	82 K Ω	HJ35 7820	HF85 7820
39 Ω	HJ35 4390	HF854390	91 K Ω	HJ35 7910	HF85 7910
47 Ω	HJ35 4470	HF854470	100 K Ω	HJ35 8100	HF85 8100
56 Ω	HJ35 4560	HF854560	120 K Ω	HJ35 8120	HF85 8120
68 Ω	HJ35 4680	HF854680	150 K Ω	HJ35 8150	HF85 8150
82 Ω	HJ35 4820	HF854820	180 K Ω	HJ35 8180	HF85 8180
100 Ω	HJ35 5100	HF855100	220 K Ω	HJ35 8220	HF85 8220
110 Ω	HJ35 5110	HF855110	270 K Ω	HJ35 8270	HF85 8270
120 Ω	HJ35 5120	HF855120	330 K Ω	HJ35 8330	HF85 8330
150 Ω	HJ35 5150	HF855150	390 K Ω	HJ35 8390	HF85 8390
160 Ω	HJ35 5160	*	470 K Ω	HJ35 8470	HF85 8470
180 Ω	HJ35 5180	HF855180	560 K Ω	HJ35 8560	HF85 8560
220 Ω	HJ35 5220	HF855220	680 K Ω	HJ35 8680	HF85 8680
270 Ω	HJ35 5270	HF855270	820 K Ω	HJ35 8820	HF85 8820
330 Ω	HJ35 5330	HF855330	1.0 M Ω	HJ35 9100	HF85 9100
390 Ω	HJ35 5390	HF855390	1.2 M Ω	HJ35 9120	*
470 Ω	HJ35 5470	HF855470	1.5 M Ω	HJ35 9150	HF85 9150
510 Ω	*	HF855510	1.8 M Ω	HJ35 9180	HF85 9180
560 Ω	HJ35 5560	HF855560	2.2 M Ω	HJ35 9220	HF85 9220
680 Ω	HJ35 5680	HF855680	3.3 M Ω	HJ35 9330	HF85 9330
820 Ω	HJ35 5820	HF855820	3.9 M Ω	HJ35 9390	*
910 Ω	HJ35 5910	HF855910	4.7 M Ω	HJ35 9470	HF85 9470
1.0 K Ω	HJ35 6100	HF856100			
1.2 K Ω	HJ35 6120	HF856120			
1.5 K Ω	HJ35 6150	HF856150			
1.8 K Ω	HJ35 6180	HF856180			
2.0 K Ω	HJ35 6200	HF856200			
2.2 K Ω	HJ35 6220	HF856220			
2.4 K Ω	HJ35 6240	HF856240			
2.7 K Ω	HJ35 6270	HF856270			
3.0 K Ω	HJ35 6300	HF856300			
3.3 K Ω	HJ35 6330	HF856330			
3.6 K Ω	HJ35 6360	HF856360			
3.9 K Ω	HJ35 6390	HF856390			
4.7 K Ω	HJ35 6470	HF856470			
5.1 K Ω	HJ35 6510	HF856510			
5.6 K Ω	HJ35 6560	HF856560			
6.8 K Ω	HJ35 6680	HF856680			
8.2 K Ω	HJ35 6820	HF856820			
9.1 K Ω	HJ35 6910	HF856910			
10 K Ω	HJ35 7100	HF857100			

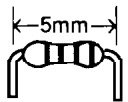
1/4W Type

HJ35 ○○○○



1/6W Type

HF85 ○○○○



YAMAHA TECHNICAL BULLETIN

ELECTRONICS CORPORATION, USA

6722 ORANGETHORPE AVENUE, BUENA PARK, CALIFORNIA 90620 • MAIL ADDRESS: P.O. BOX 6660, BUENA PARK, CALIFORNIA 90622 • PHONE: (714) 522-9105

No.: 147H

Effective Date: September 28, 1990

MODEL: CDX-730 COMPACT DISC PLAYER
SERIAL NUMBERS EFFECTED: All
SUBJECT: REPLACEMENT LASER HEAD
(and modification of Kick Gain Circuit)

TYPE OF CHANGE		
MANDATORY	OPTIONAL	FOR INFO ONLY
☒	☐	☐

(When replacing a KSS-150A laser head with a KSS-210A, it is necessary to modify the Kick Gain circuit.)

The KSS-150A laser head has been replaced by a KSS-210A. Only the newer (type KSS-210A) laser head is available as a replacement part, therefore the original part number (PX600430) will be retained.

The new part can be used in early production units with no effect on operation or performance -- however the new part requires modification of the Kick Gain circuit.

To replace a KSS-150A with a KSS-210A, install the new laser head and change the following resistors:

<u>RESISTOR</u>	<u>OLD VALUE</u>	<u>NEW VALUE</u>	<u>YAMAHA P/N</u>
R-56	130k Ohms	470k Ohms	HF858470
R-63	82k Ohms	110k Ohms	HF858110
NOTE: If a 110k Ohm resistor is not immediately available, use two 220k Ohm resistors (YAMAHA P/N HF858220) in parallel.			
R-64	10k Ohms	15k Ohms	HF857150
R-65	5.6k Ohms	8.2k Ohms	HF856820

Finally, do a COMPLETE ADJUSTMENT (including confirmation of normal "Kick Gain" operation) as shown in the CDX-730 Service Manual.