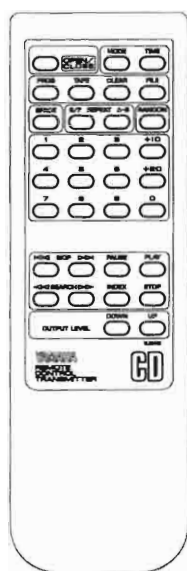
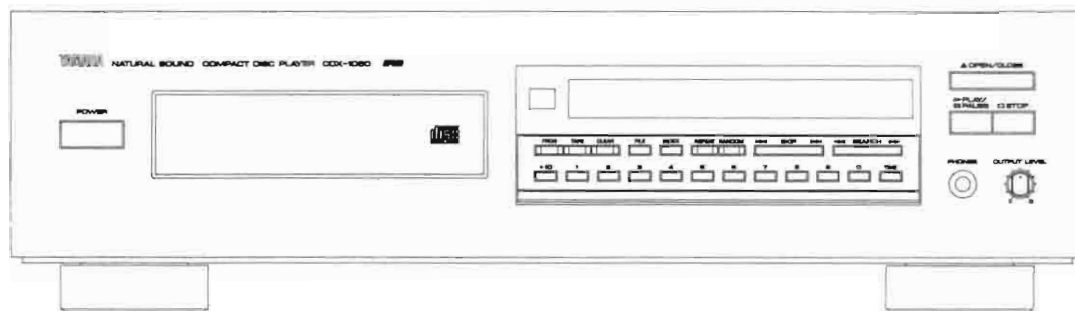


COMPACT DISC PLAYER

CDX-1060

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.

CDX-1060

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IC BLOCK	29
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■ TO SERVICE PERSONNEL

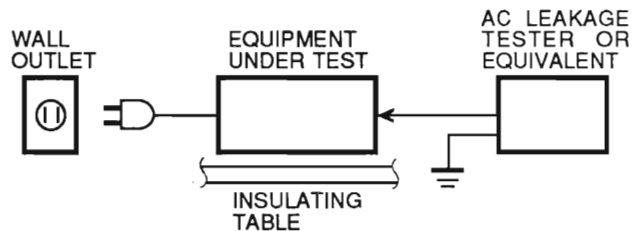
1. Critical Components Information.

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 Models Only).

When service has been completed, it is imperative to 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 OR 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.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to carefully follow the instructions below when servicing.

1. Laser Diode Properties

- Material : GaAlAs
- Wavelength : 780 nm
- Emission Duration : Continuous
- Laser Output : max. 44.6 μ W*

* This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. When checking the laser diode emission, keep your eyes more than 30 cm away from the objective lens.

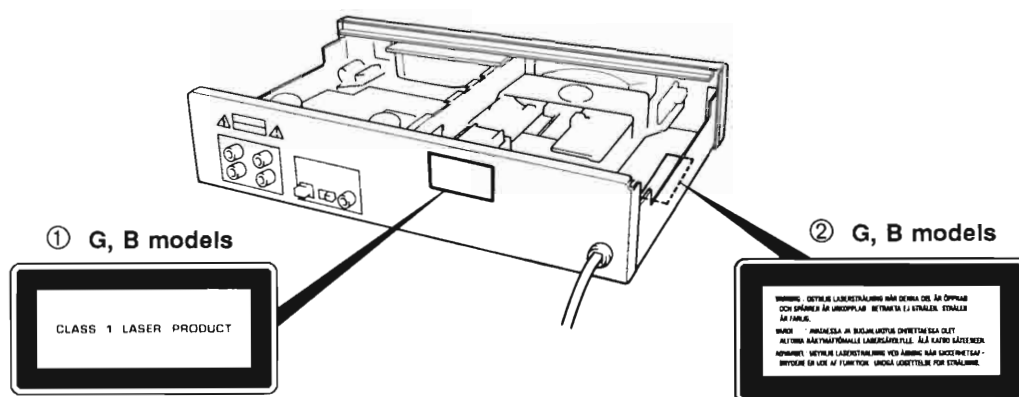
WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.



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.

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

Swedish

- ① DENNA MÄRKNING (SE FIGUR) UPPLYSER OM ATT DET I APPARATEN INGÅR EN LASERKOMPONENT AV TYP KLAS 1.
- ② VARNINGSMÄRKNING (SE FIGUR) FÖR STRÅLNING. INGREPP I APPARATEN BÖR ENDAST FÖRETAGAS AV FACKMAN MED KÄNNEDOM OM LASER. APPARATEN INNEHÅLLER EN LASERKOMPONENT SOM AVGER STRÅLNING ÖVERSTIGANDE GRÄNSEN FÖR LASERKLASS 1.

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.

ADVARSEL : INDGREB BOR KUN FORETAGES AF EN FAGMAND DA DER ER RISIKO FOR RADIOAKTIV STRÅLING.

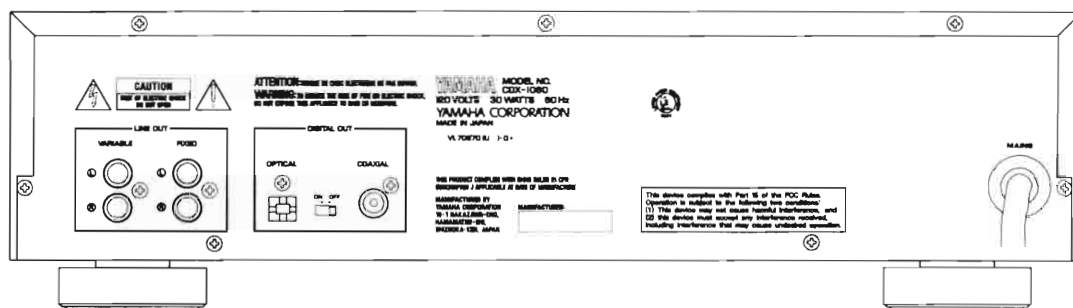
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING.
UNDGÅ UDSÆTTELSE FOR STRÅLING.

Finnish

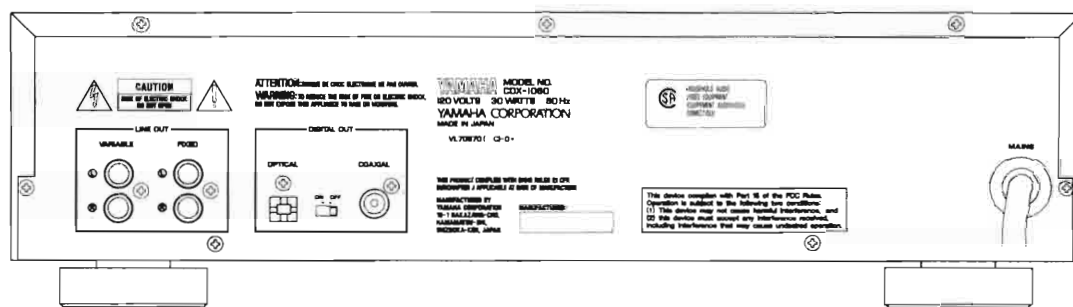
VAROI :
AVATTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

REAR PANELS

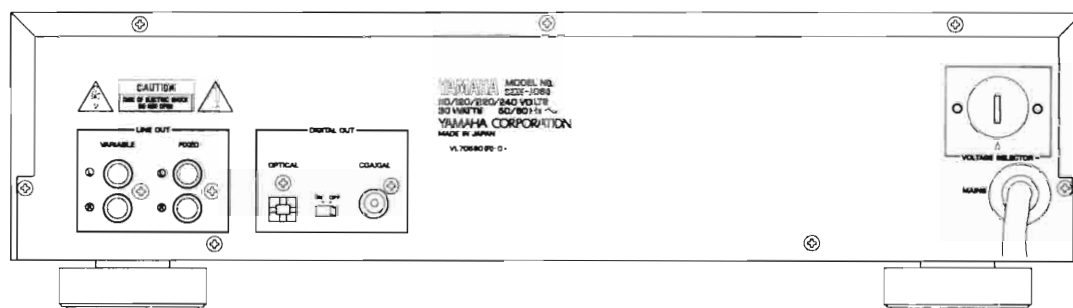
▼ U model



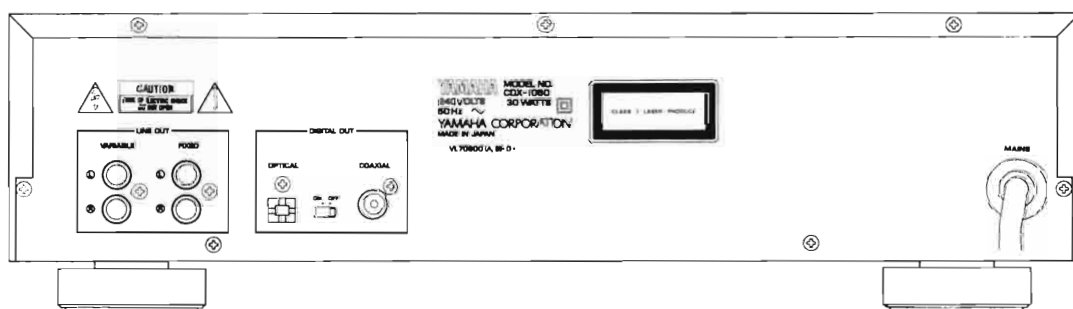
▼ C model



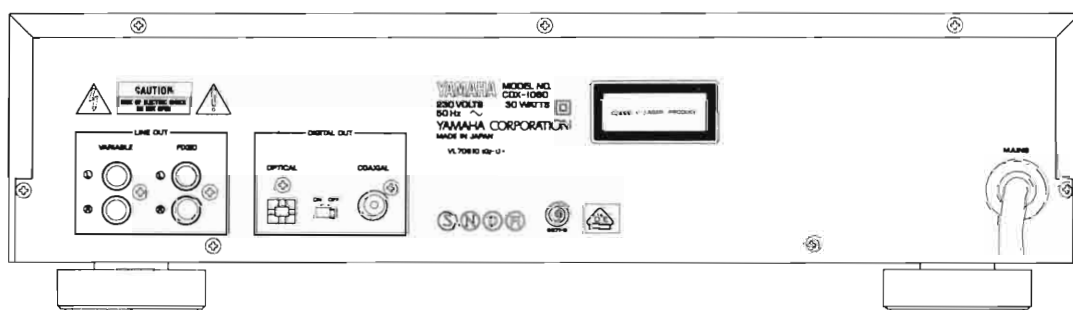
▼ R model



▼ A, B models



▼ G model



SPECIFICATIONS

AUDIO SECTION

Frequency Response	2Hz~20kHz ± 0.3 dB
De-Emphasis Equalization	± 0.5 dB (EIAJ)
Harmonic Distortion+Noise	Less than 0.0016%, 1kHz (EIAJ)
S/N Ratio	120dB (EIAJ)
Dynamic Range	More than 100dB (EIAJ)
Wow & Flutter	Unmeasurable
Channel Separation	More than 100dB, 1kHz (EIAJ)
Output Voltage	2V (EIAJ)
Output Impedance	630 Ω
Headphone Output (-20dB)	640mV/150 Ω (VR MAX)

INTERNAL SYSTEM

Optical Pick-up	3-beam laser
D/A Conversion	1-bit system

GENERAL

Power Requirements	
U, C models	120V AC 60Hz
A, B models	240V AC 50Hz
G model	230V AC 50Hz
R model	110/120/220/240V AC 50/60Hz

Power Consumption 30W

Dimensions (W x H x D) 435 x 121.7 x 345.5mm
(17-1/8" x 4-13/16" x 13-5/8")

Weight 10.0kg (22 lbs 1 oz)

Accessories Pin plug code

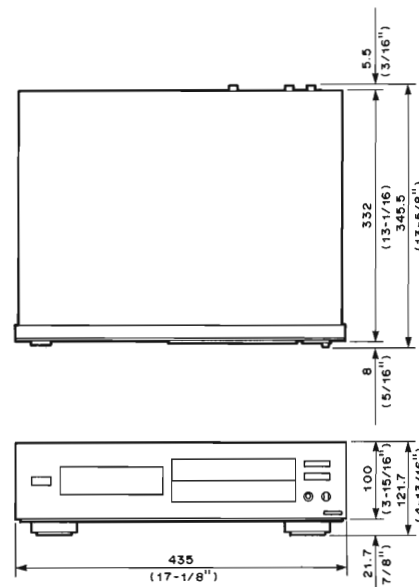
Remote control transmitter

Dry-cell: x2 (Size "AA", R06)

*Specifications are subject to change without notice.

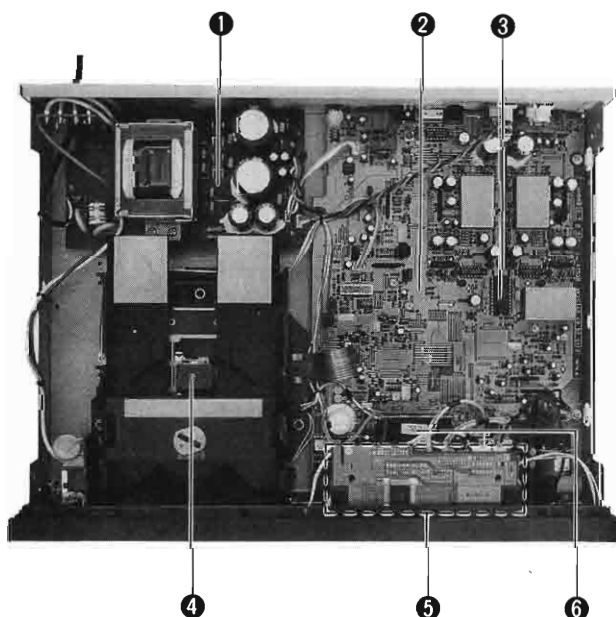
U U. S. A. model
C Canadian model
B British model
A Australian model
G European model
R General model
P PX model

DIMENSIONS



Unit : mm (inch)

INTERNAL VIEW



- ❶ POWER SUPPLY CIRCUIT BOARD (1)
- ❷ MAIN P.C.B. ASS'Y
- ❸ IC14 : YAC506 (DAC)
- ❹ DISC MECHANISM UNIT
- ❺ POWER SUPPLY P.C.B. ASS'Y
- ❻ IC10 : 8 bit μ -COM

DISASSEMBLY PROCEDURES

(Remove parts in disassembly order as numbered.)

1. Removal of Top Cover

- Remove 4 screws (①) and 3 screws (②) in Fig. 1.
- Lift the Top Cover to the back side and move it rearward slantingly.

2. Removal of Inner Top

- Remove 4 screws (③) and a screw (④) in Fig. 1.

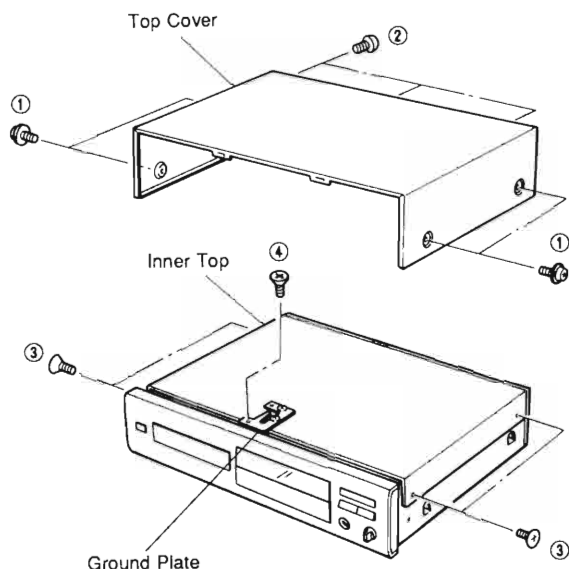


Fig. 1

5. Removal of Pick-up Head

- Pull out the tray.
- Remove a screw (⑩) and then remove the spring tray/BE in Fig. 3.
- Remove a plastic rivet (⑪) and then remove the flexible P. C. B from the mechanical base in Fig. 4.
- Disconnect the connector (#3) of the disc motor from the mechanical base in Fig. 4.
- Remove 2 screws (⑫) and then remove the spindle mechanism assembly (with a hanger) in Fig. 3.

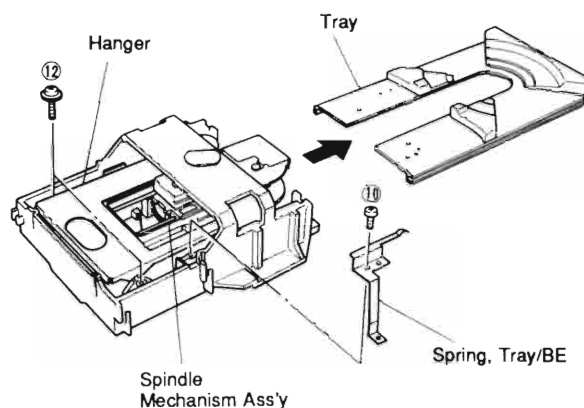


Fig. 3

3. Removal of Front panel

- Turn ON the power and open the tray.
- Turn OFF the power, remove 2 screws (⑤) and remove the lid/tray in Fig. 2.
- Close the tray by pushing it lightly.
- Remove 7 screws (⑥) and a screw (⑦)* in Fig. 2.
- * Disconnect the connector whose wire is connected.
- Release 2 levers (one on each side) and pull out the Front Panel in Fig. 2.

4. Removal of Disc Mechanism Unit

- Remove 3 screws (⑧) and a screw (⑨) in Fig. 2.
- * Disconnect the connector whose wire is connected.

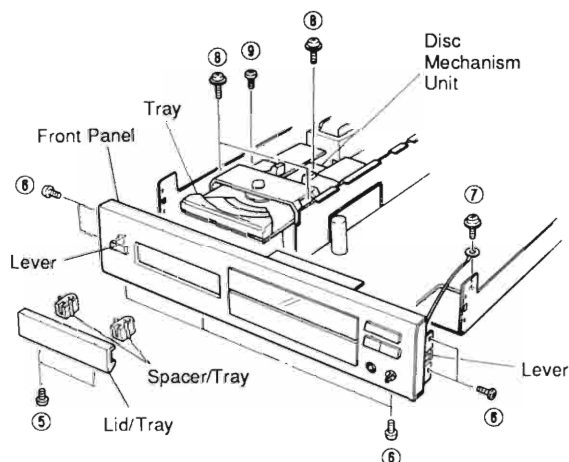


Fig. 2

● Rear View of Disc Mechanism Unit

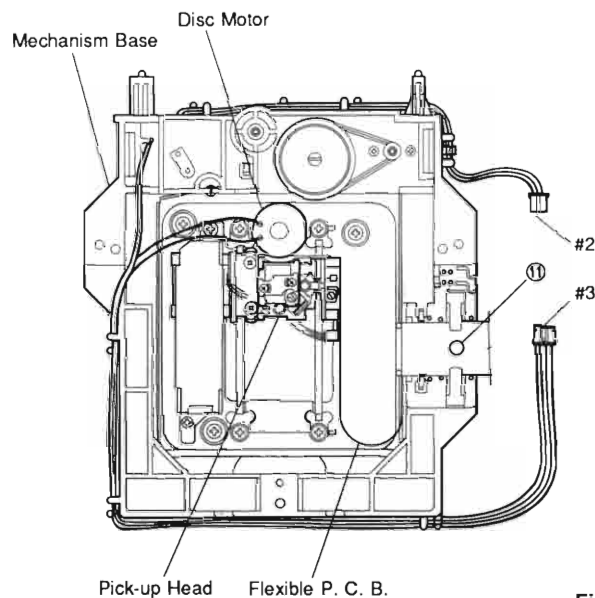


Fig. 4

- f. Remove 3 special screws (13) and then remove the hanger in Fig. 5.
- g. Disconnect the connector of the rear actuator.
- h. Remove 2 screws (14) and then remove the holder/lear in Fig. 5.
- i. Remove 2 screws (15) and then remove the linear motor in Fig. 5.
- j. Remove 4 screws (16) and then remove the holder/shaft and support/shaft in Fig. 5.
- k. Remove the pick-up head (with a shaft) in Fig. 5.
(Refer to the exploded view of the disc mechanism unit.)

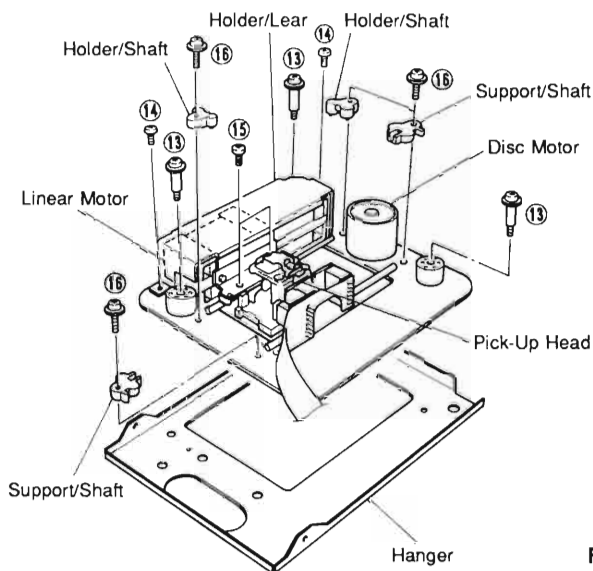
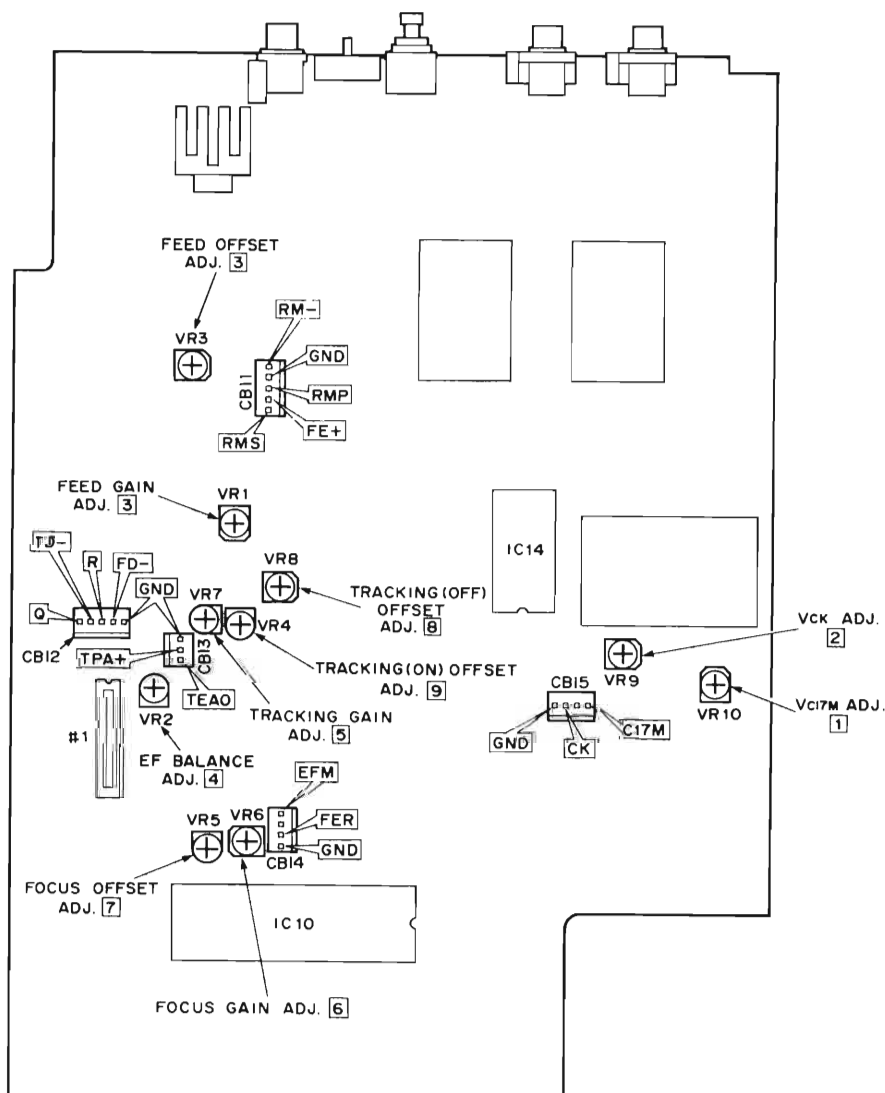


Fig. 5

■ ADJUSTMENTS

● TEST POINTS



● Necessary Items

Measuring Instruments

Oscilloscope (Band width of 50MHz or more)	: x 1
AC voltmeter	: x 1
DC voltmeter	: x 1
Frequency counter	: x 1
Low frequency oscillator or function generator (which generates square wave)	: x 1

Jigs

Test disc YEDS-18 (P/No. TX911730) or TCD-782 (A-BEX)	: x 1
Scratch disc TCD-721R (P/No. TX911960)	: x 1
4P Connector kit (P/No. MX600340)	: x 1
5P Connector kit (P/No. MX600350)	: x 1

Tools

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

● Carry out following adjustments in order as numbered

1. VCO adjustment (VC17M ADJ.)
2. VCO free-run adjustment (FCK ADJ.)
3. Linear motor adjustment
(Feed offset ADJ. & Feed gain ADJ.)
4. EF Balance adjustment
5. Tracking gain adjustment
6. Focus gain adjustment
7. Focus offset adjustment
8. Tracking OFF offset adjustment
9. Tracking ON offset adjustment
10. Jitter confirmation

● Before Adjustment

Starting TEST Mode

While pressing both "4" and "7" keys, turn ON the power switch. Take fingers off both keys, and all the display segments light for about 2 seconds and the operation mode is set to the TEST mode.

(See page 15 for TEST mode explanation)

● Command keys for adjustment in TEST mode

"1" : For return to NORMAL mode

"2" : VCO/Linear motor gain offset / tracking focus offset adjustment key.

The tray opens and LB turns ON.

Note) No operation is available without a tray.

"3" : For adjusting EF balance

The tray is closed, focus locked and the disc rotation is started. (Tracking Servo OFF)

"4" : For adjusting tracking focus gain.

Disc is played.

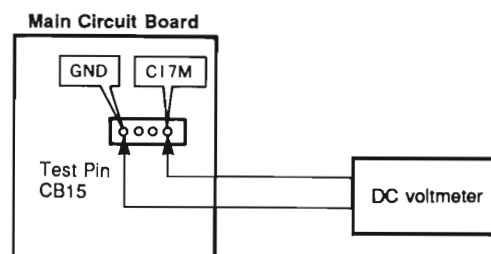
"5" : For adjusting tracking focus offset

The tray opens and LB turns ON.
But Tracking Servo should be OFF.
[Pin 6 (TROF) of IC9 "H"]

"6" : For adjusting tracking offset

The tray opens and LB turns ON.
But Tracking Servo should be ON.
[Pin 6 (TROF) of IC9 "L"]

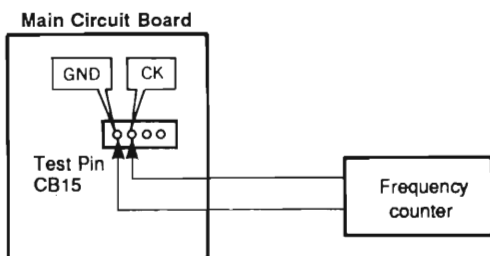
1 VCO adjustment



- ① Do not load the disc.
- ② Set to the TEST mode.
- ③ Press the "2" key.
- ④ Measure the voltage at C17M terminal and adjust VR10 so that the specified voltage is obtained.
* This adjustment should be done at least 1 minute after turning ON the power.

$$VC17M = 2.5V \pm 50mV \text{ (DC)}$$

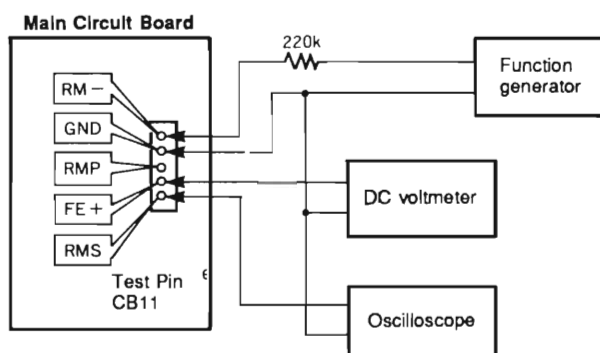
2 VCO free-run adjustment



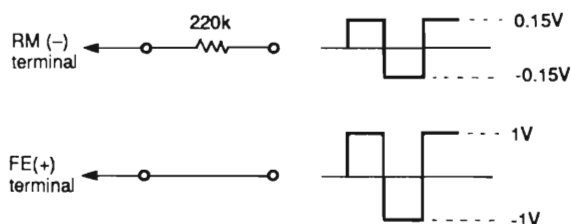
- ① Do not load the disc.
- ② Set to the TEST mode.
- ③ Press the "2" key.
- ④ Connect a frequency counter to the CK terminal.
* Be sure to use a probe (10:1 type for oscilloscope) for frequency counter input.
- ⑤ Adjust VR9 so that the specified frequency is obtained.

$$FCK = 4.3218\text{MHz} \pm 0.02\text{MHz}$$

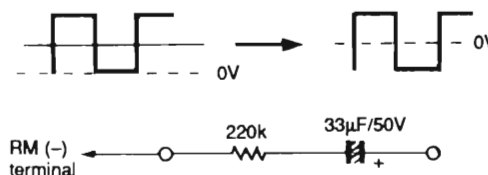
3 Linear motor adjustment (Feed gain adj.)



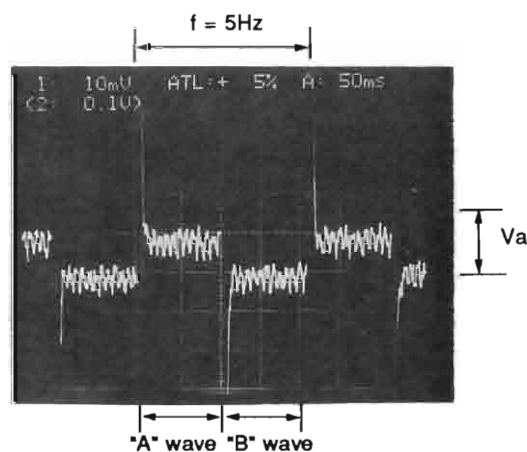
- ① Turn OFF the power.
- ② Disconnect the connector #1.
(Flexible P. C. B. of pick-up head)
- ③ Do not load the disc.
- ④ Set to the TEST mode.
- ⑤ Press the "2" key.
- ⑥ Short-circuit the RMP terminal and GND.
- ⑦ Measure the voltage at the FE (+) terminal and adjust VR3 so that the specified voltage is obtained. (Feed offset adjustment)
 $VFE = 0V \pm 100\text{mV}$ (DC)
- ⑧ Apply a 5Hz, $\pm 0.15V$ square wave to the RM (-) terminal through a 220k Ω resistance so that $\pm 1V$ voltage is obtained at the FE (+) terminal.



* If the square wave appears only on the positive (+) side on the low frequency oscillator, apply square wave through a 33 $\mu\text{F}/50V$ capacitor (UJ167330).

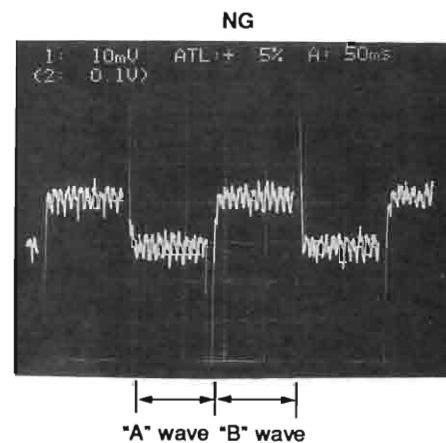


- ⑨ Turn OFF the power and install the connector #1.
(Flexible P. C. B. of pick-up head)
- ⑩ Turn ON the power and set to the TEST mode.
- ⑪ Press the "2" key.
- ⑫ Adjust VR1 so that derivative waveforms as shown below are obtained at the RMS terminal. (Feed gain adjustment)



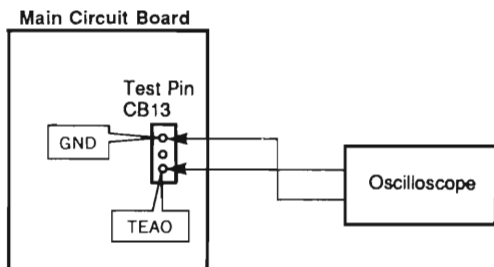
$$V_a = 20\text{mV} \pm 2.5\text{mV} \text{ (DC)}$$

Note: The "B" wave voltage should not exceed the "A" wave voltage as shown below Fig. NG.



- ⑬ Disconnect the RM (-) terminal from square wave input.
- ⑭ Disconnect the short cord between the RMP terminal and GND.
- ⑮ Measure the voltage at the FE (+) terminal and adjust VR3 so that the specified voltage is obtained. (Feed offset adjustment)
 $VFE = 0V \pm 50\text{mV}$ (DC)

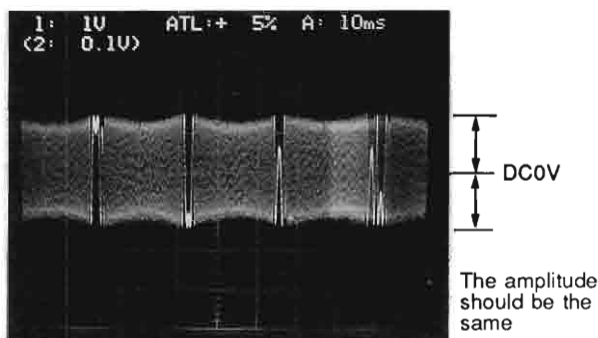
4 EF balance adjustment



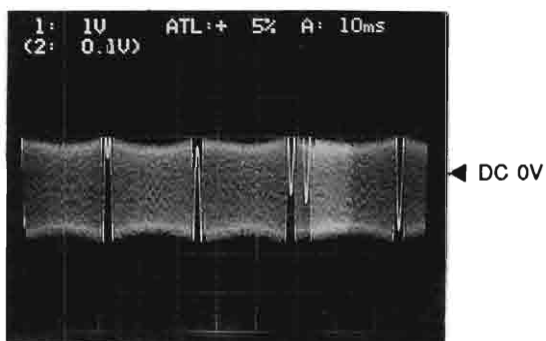
- ① Load a test disc.
- ② Set to the TEST mode.
- ③ Press the "3" key .
- ④ Adjust VR2 so that the amplitude becomes equal on both sides (upper and lower) of DC 0V in the wave-form at the TEAO terminal.

Rating : DC offset → 0V±50mV

OK

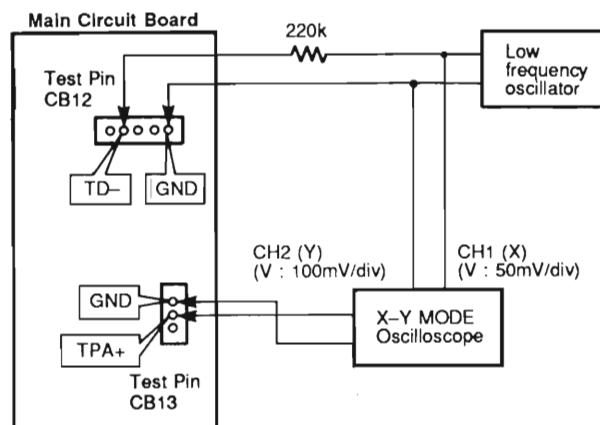


NG



5 Tracking gain adjustment

- ① Connect an oscilloscope and a low frequency oscillator to the TD(-) terminal and TPA(+) terminal as shown below.



- ② Load the test disc.
- ③ Set to the TEST mode.
- ④ Press the "4" key .
- ⑤ Apply a 100mVrms sine wave from the low frequency oscillator to the TD(-) terminal through a 220kΩ resistance as follows : *

* Maked

Test disc	Frequency
YEDS-18	740Hz, 100mVrms
TCD-782	870Hz, 100mVrms
(LotNo.T7098DAor T90808)	
TCD782 (Lot No. 00101A)	810Hz, 100mVrms
Philips 5	760Hz, 100mVrms

- ⑥ Adjust VR7 so that the phase difference between the TD(-) terminal and TPA(+) terminal is 90°.

OK



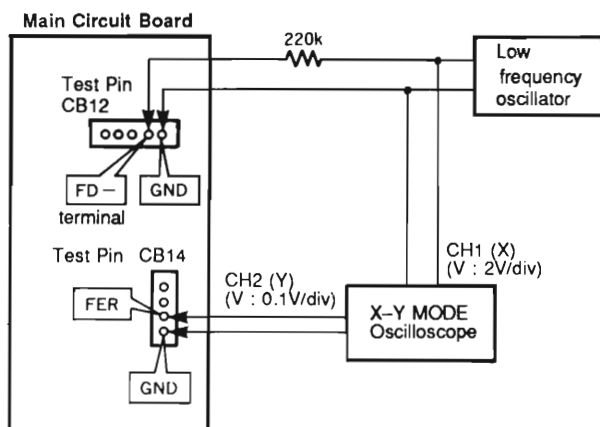
90°

NG



6 Focus gain adjustment

- Connect an oscilloscope and a low frequency oscillator to the FD(-) terminal and FER terminal as shown below.



- Load the test disc.
- Set to the TEST mode.
- Press the "4" key .
- Apply a 2.3Vrms sine wave from the low frequency oscillator to the FD(-) terminal through a 220kΩ resistance as follows : *

* Maked

Test disc	Frequency
YEDS-18	635Hz, 2.3Vrms
TCD-782 (A-BEX)	610Hz, 2.3Vrms
Philips 5	560Hz, 2.3Vrms

- Adjust VR6 so that the phase difference between the FD(-) terminal and FER terminal is 90°.

OK

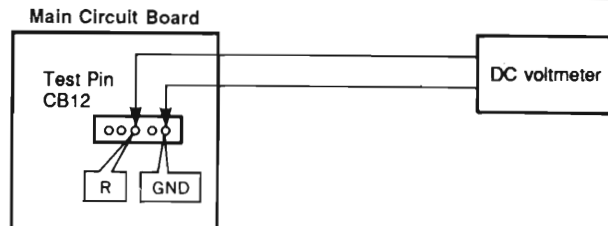


90°

NG

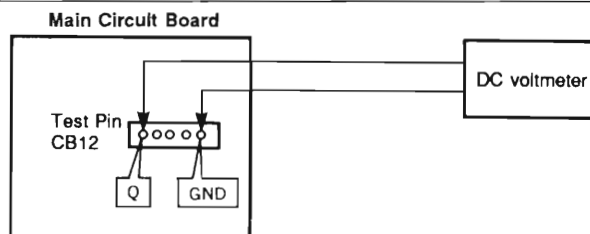


7 Focus offset adjustment



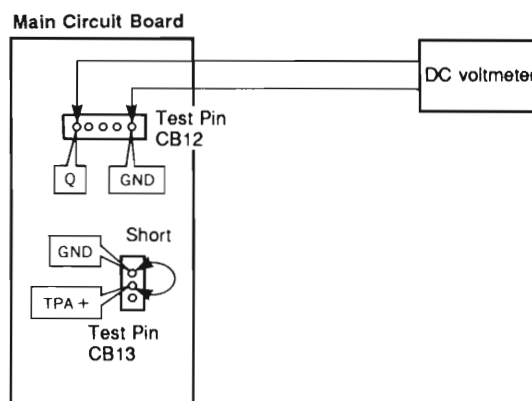
- Do not load the disc.
- Set to the TEST mode.
- Press the "5" key .
- Measure the voltage at the R terminal and adjust VR5 so that the specified voltage is obtained.
 $VR = 0V \pm 100mV$ (DC)

8 Tracking OFF offset adjustment



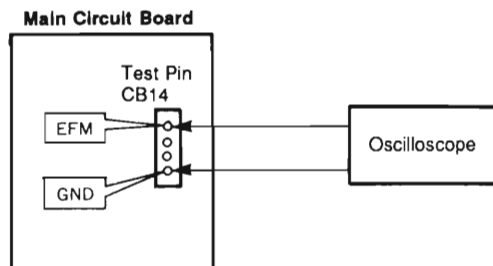
- Do not load the disc.
- Set to the TEST mode.
- Press the "5" key .
- Measure the voltage at the Q terminal and adjust VR8 so that the specified voltage is obtained.
 $VQ \text{ OFF} = 0V \pm 20mV$ (DC)

9 Tracking ON offset adjustment



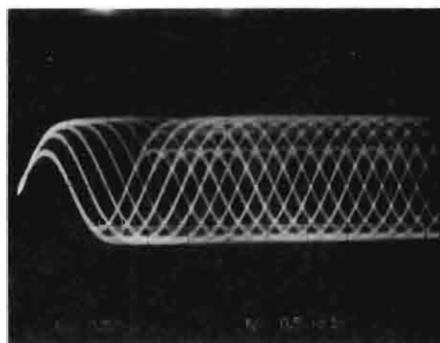
- Do not load the disc.
- Set to the TEST mode.
- Short-circuit the TPA (+) terminal and GND.
- Press the "6" key .
- Measure the voltage at the Q terminal and adjust VR4 so that the specified voltage is obtained.
 $VQ \text{ ON} = 0V \pm 20mV$ (DC)
- Disconnect the short cord between the TPA (+) terminal and GND.

10 Jitter confirmation



- ① Load the test disc.
- ② Play the track 1 (0:00~0:30). (PLAY mode)
- ③ Check to make sure that a clear EFM signal (eye pattern) is output at the EFM terminal.

Eye pattern

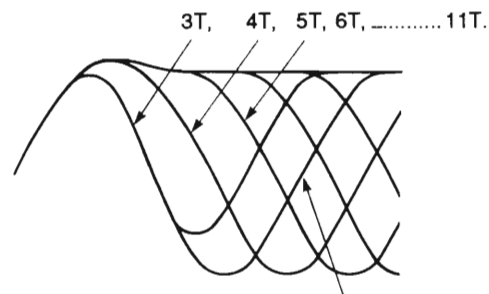


Oscilloscope setting conditions

- AC coupling
- 0.5V/div range. (Vertical)
(50mV/div when 10 : 1 probe is used)
- 0.5μsec/div time. (Horizontal)

● EYE PATTERN

Waveforms 3T—11T.



This portion is referred to as the eye pattern.

An abnormal eye pattern has less distinct lines and smaller amplitude than that of a good waveform.

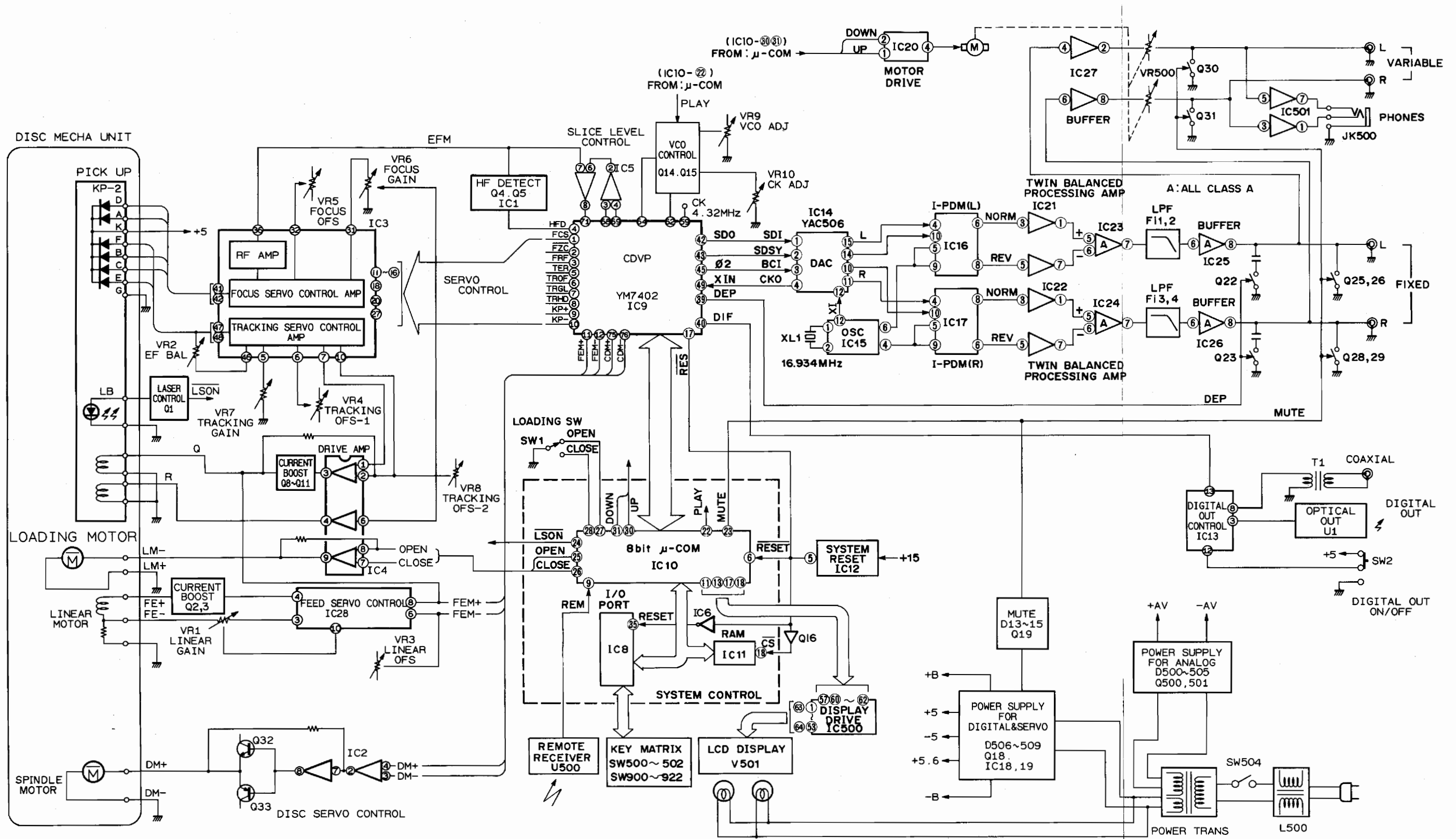
Good waveform



Abnormal waveform

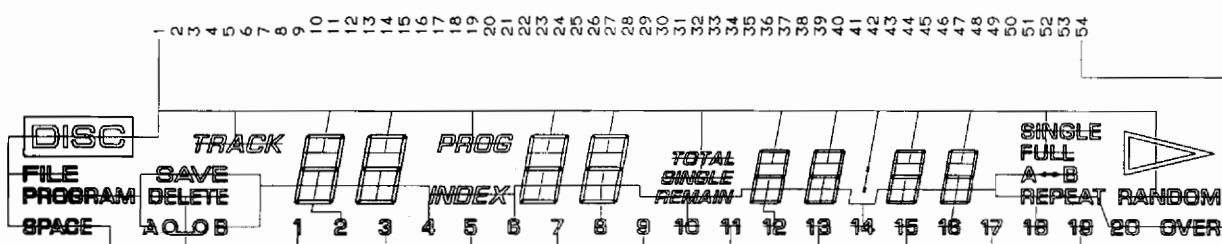
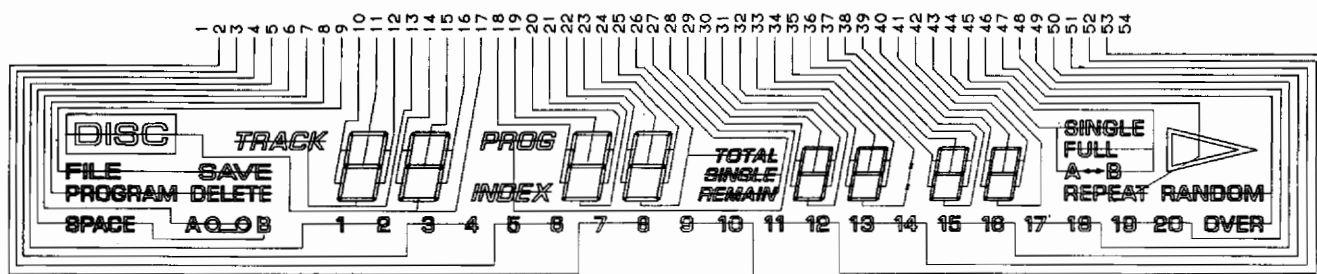


■ BLOCK DIAGRAM



■ DISPLAY DATA

V501 : LCD8149B1JP



No.	COM1	COM2	No.	COM1	COM2	No.	COM1	COM2	No.	COM1	COM2
1	COM	—	15	2a	2g	29	5a	5g	43	—	8d
2	7	8	16	2a	2c	30	5b	5c	44	SINGLE 2)	A—
3	5	6	17	DISC	2d	31	—	5d	45	FULL	B
4	3	4	18	3f	3e	32	6f	6e	46	▷	REPEAT
5	1	2	19	3a	3g	33	6a	6g	47	RANDOM	OVER
6	SPACE	B	20	3b	3c	34	6b	6c	48	19	20
7	Q.O	A	21	—	3d	35	COL	6d	49	17	18
8	DELETE	PROG	22	4f	4e	36	7f	7e	50	15	16
9	FILE	SAVE	23	4a	4g	37	7a	7g	51	13	14
10	1f	1e	24	4b	4c	38	7b	7c	52	11	12
11	1a	1g	25	TOTAL	4d	39	—	7d	53	9	10
12	1b	1c	26	SIGNAL 1)	REMAIN	40	8f	8e	54	—	COM
13	TRACK	1d	27	PROG	INDEX	41	8a	8g			
14	2f	2e	28	5f	5e	42	8b	8c			

■ TEST MODE

● Starting TEST mode

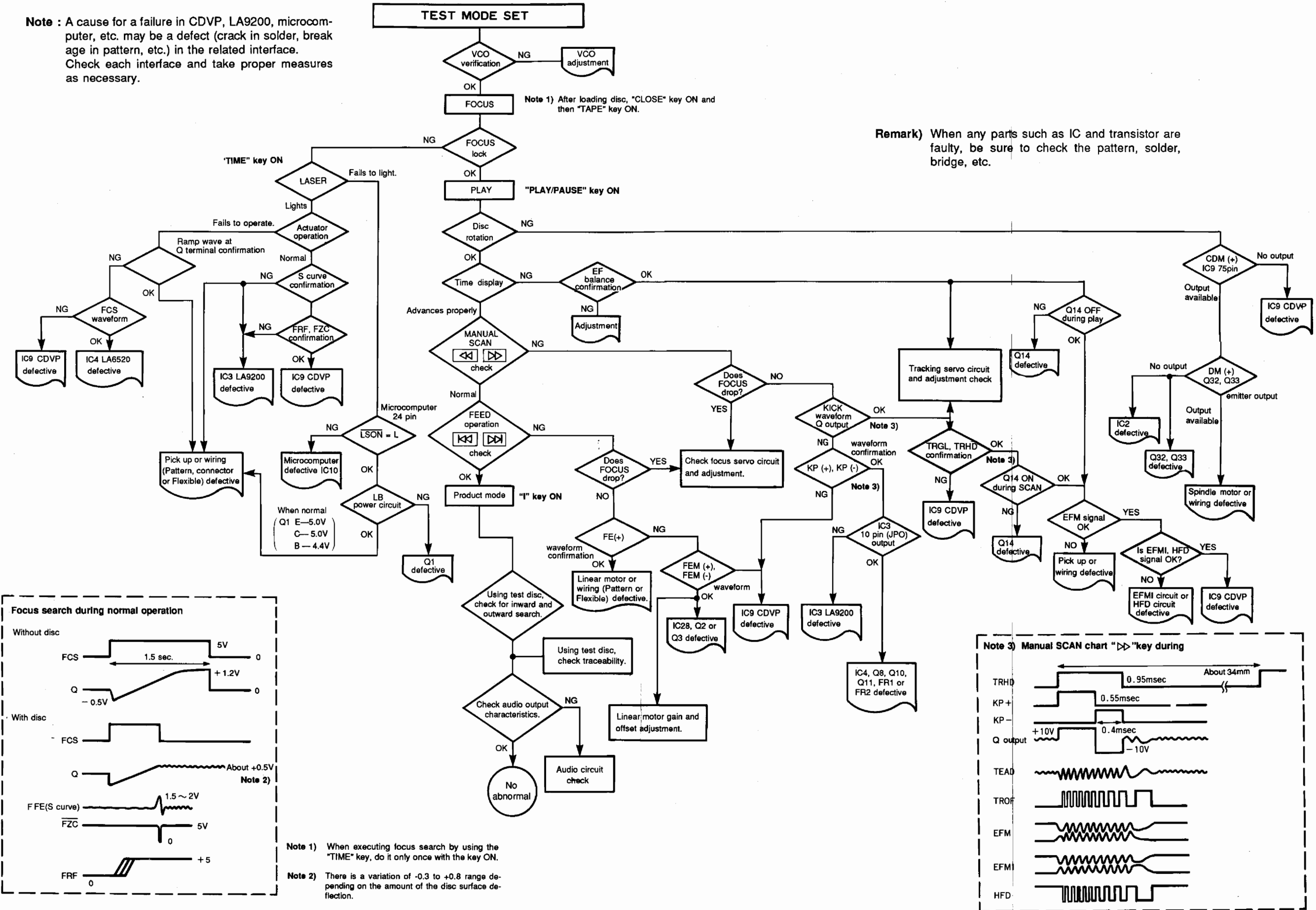
While pressing both "4" and "7" keys, turn ON the POWER switch.

Take fingers off both keys, and all the display segments light for about 2 seconds and the operation mode is set to the TEST mode.

● Contents of TEST mode key

KEY	CONTENTS
FILE	VCO circuit gain control (Microcomputer 22pin "PLAY" terminal) H
PLOG	VCO circuit gain control (Microcomputer 22pin "PLAY" terminal) L
INDEX	Audio output MUTE control (Microcomputer 23pin "MUTE" terminal) H
CLEAR	Audio output MUTE control (Microcomputer 23pin "MUTE" terminal) L Note: Inoperable when digital output is ON.
OPEN/CLOSE	Open/Close.
+10	Disc brake.
1	Return to normal mode.
2	For adjusting VCO, linear motor gain offset and tracking focus offset. The tray opens and LB turns ON. Note: Inoperable without a tray.
3	For adjusting EF balance. The tray is closed and locked from focus search, and then the disc rotation is started. TR—OFF
4	For adjusting tracking focus gain. Playing is started.
5	For adjusting tracking focus offset. The tray opens and LB turns ON. But TR should be OFF. (TR—OFF H)
6	For adjusting tracking offset. The tray opens and LB turns ON. But TR should be ON. (TR—OFF L)
7	Linear motor offset confirmation key TR—OFF(H) FEOF(L)
8	Linear motor offset confirmation key TR—OFF(L) FEOF(L)
9	For checking spindle motor. Reverse revolution
0	For checking spindle motor. Normal revolution
DOWN	Motor volume DOWN
UP	Motor volume UP
REPEAT	TR—OFF "TR—OFF H"
RANDOM	TR—ON "TR—OFF L"
◀◀	Manual search ◀◀
▶▶	Manual search ▶▶
TIME	LB—ON (H)
◀◀	Forced feed Inward
▶▶	Forced feed Outward
PLAY/PAUSE	For setting to PLAY mode.
TAPE	Focus search.
STOP	For setting to STOP mode.

Note : A cause for a failure in CDVP, LA9200, microcomputer, etc. may be a defect (crack in solder, break age in pattern, etc.) in the related interface. Check each interface and take proper measures as necessary.



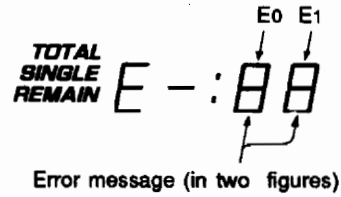
■ ERROR MESSAGE

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.

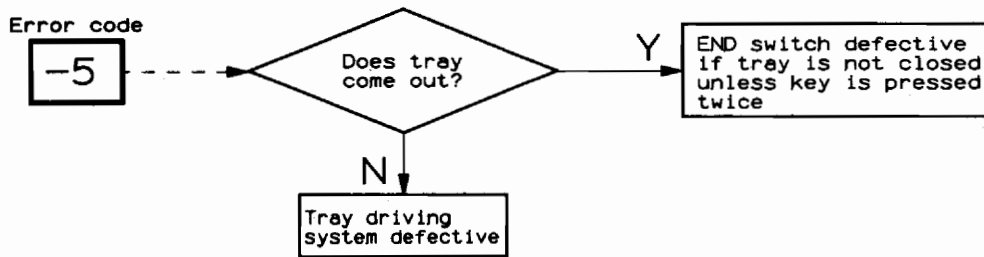


E0 (STATE)	E1 (Phenomenon)	Meaning	Remarks
X	0	No data reading was executed after search.	
X	1	Data reading failed in the mid of each state.	For 5 seconds
7	3	No data reading was executed though the disc was turned with focus applied at start.	PLL lock failure
—	5	Tray open NG.	
9	5	Tray close NG.	
X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

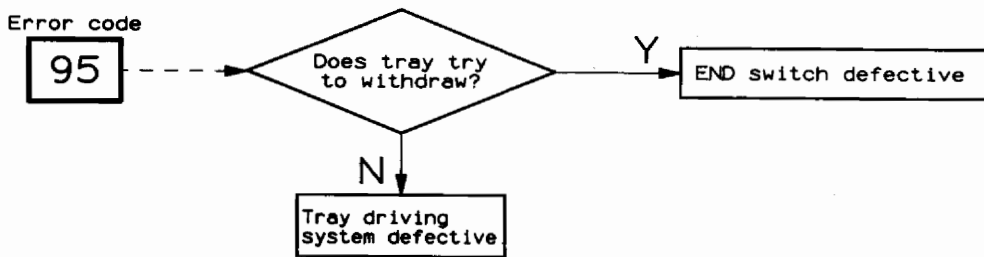
* **Note** : X represents each state : PLAY when X=0, MANUAL SEARCH when X=3 and PAUSE when X=4.

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.

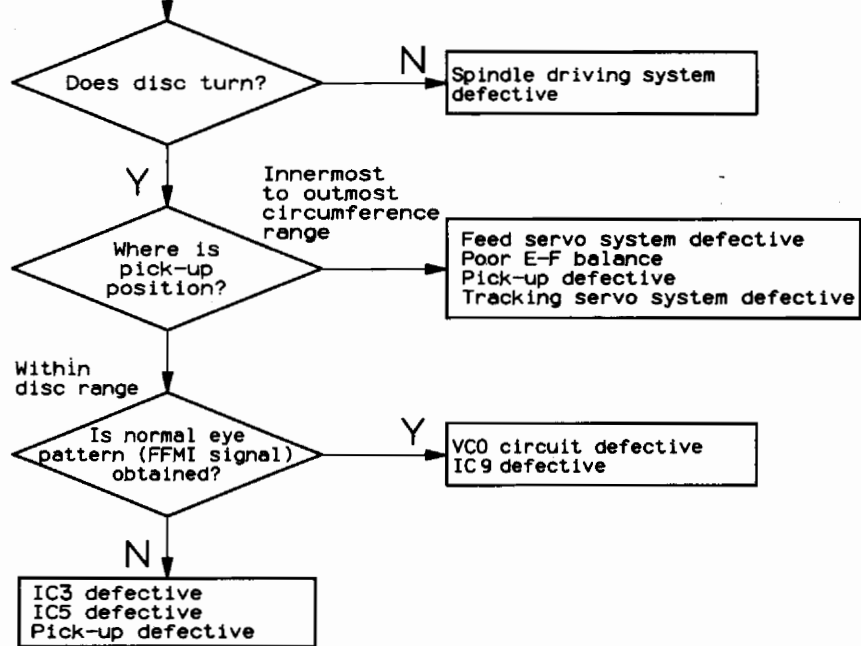


- Tray does not close or even when closed, it opens again after some time.



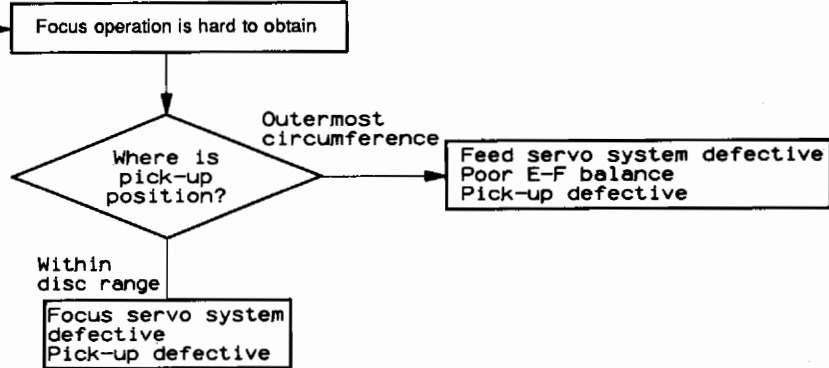
Error code

73



Error code

X8



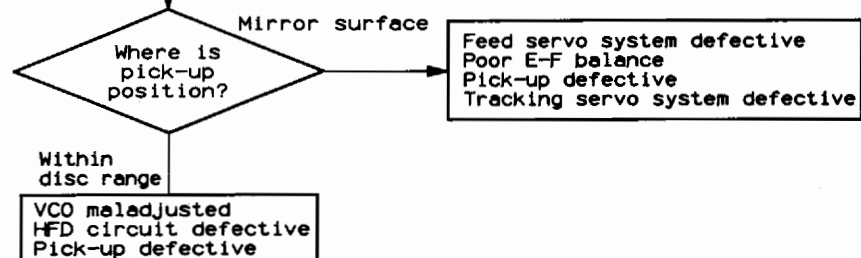
Error code

X1

VCO maladjusted
Disc smudged or scratched

Error code

X0

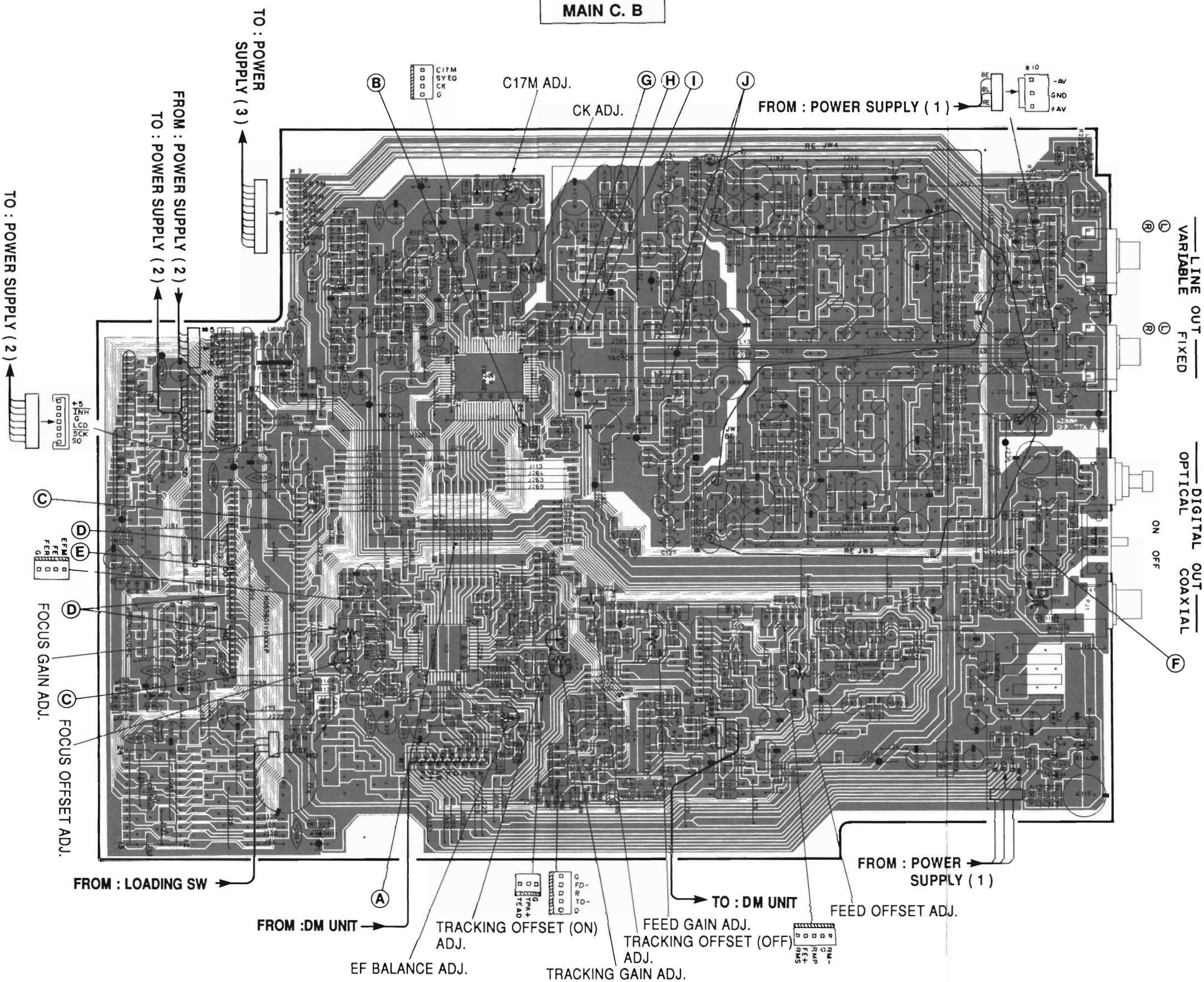


PRINTED CIRCUIT BOARD (Foil side)

(A) to (J) : WAVEFORM OF TEST POINT (See page 30)

Semiconductor Location

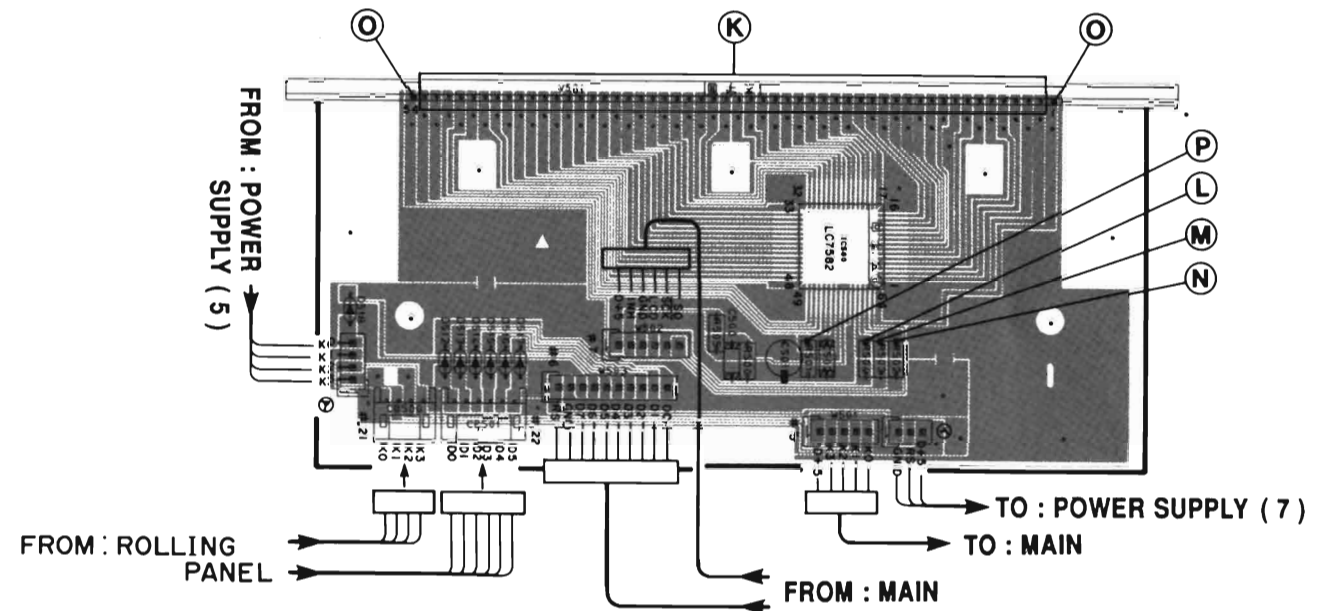
Ref. No.	Location
D 3	C2
D 6	D2
D 7	C3
D 8	G4
D 9	D2
D 10	C4
D 11	C5
D 12	G4
D 13	G5
D 14	G5
D 15	G4
IC 1	D2
IC 2	F4
IC 3	D4
IC 4	E4
IC 5	D2
IC 6	C4
IC 7	C4
IC 8	C3
IC 9	D3
IC 10	C4
IC 11	C5
IC 12	C4
IC 13	G3
IC 14	E3
IC 15	E2
IC 16	E3
IC 17	E2
IC 18	G4
IC 19	G5
IC 20	C3
IC 21	E3
IC 22	E2
IC 23	F3
IC 24	F2
IC 25	F3
IC 26	F2
IC 27	G2
IC 28	E4
Q 1	F4
Q 2	F4
Q 3	E4
Q 4	D2
Q 5	D3
Q 6	G4
Q 7	D4
Q 8	E5
Q 9	E5
Q 10	E5
Q 11	E5
Q 12	E5
Q 13	E4
Q 14	D2
Q 15	D2
Q 16	C4
Q 17	E3
Q 18	G4
Q 19	G5
Q 20	E3
Q 21	G3
Q 22	G3
Q 23	G2
Q 24	G3
Q 25	G3
Q 26	G3
Q 27	G2
Q 28	G2
Q 29	G2
Q 30	G2
Q 31	G2
Q 32	F4
Q 33	F4



1
2
3
4
5
6

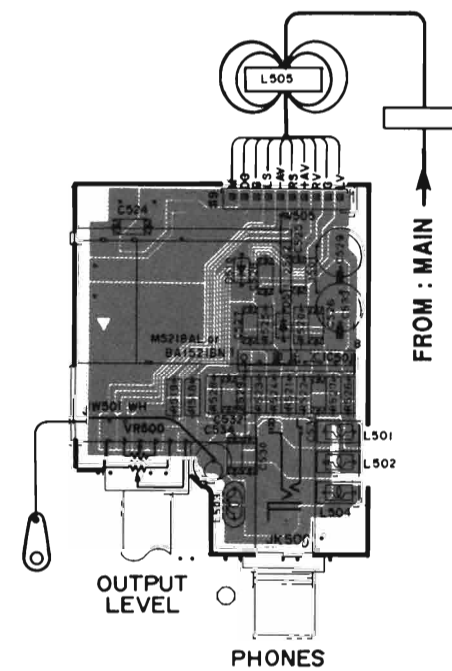
Ⓚ to Ⓟ : WAVEFORM OF TEST POINT (See page 30)

POWER SUPPLY C. B (2)



POWER SUPPLY C. B (3)

POWER SUPPLY C. B (1)

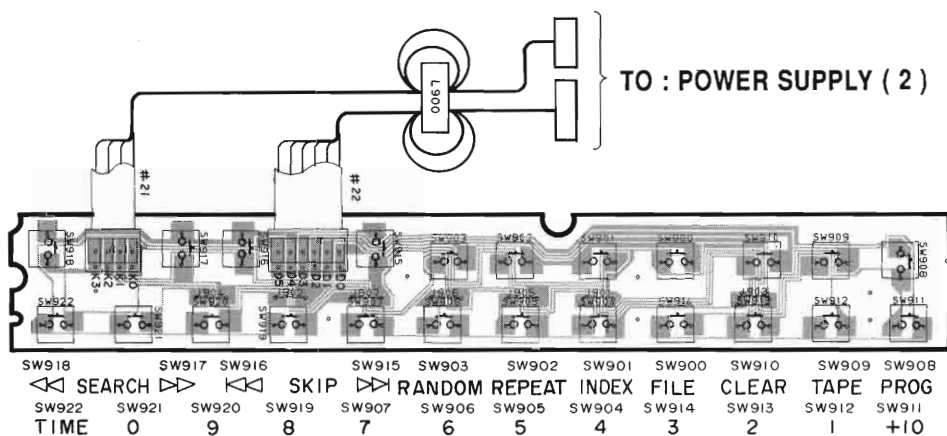


OUTPUT
LEVEL

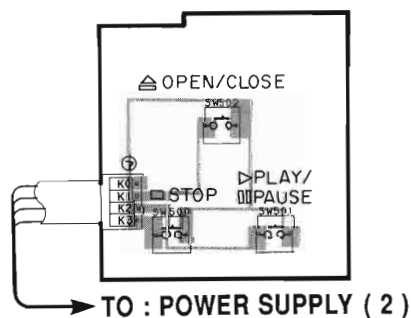
PHONES

PRINTED CIRCUIT BOARD (Foil side)

ROLLING PANEL C. B



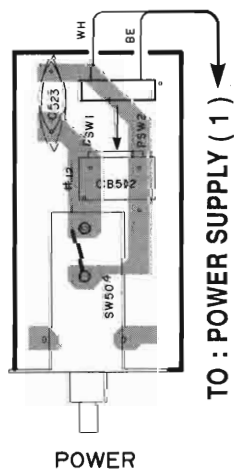
POWER SUPPLY C. B (5)



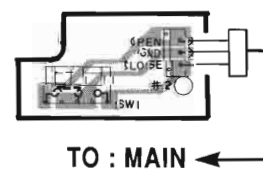
POWER SUPPLY C. B (7)



POWER SUPPLY C. B (6)

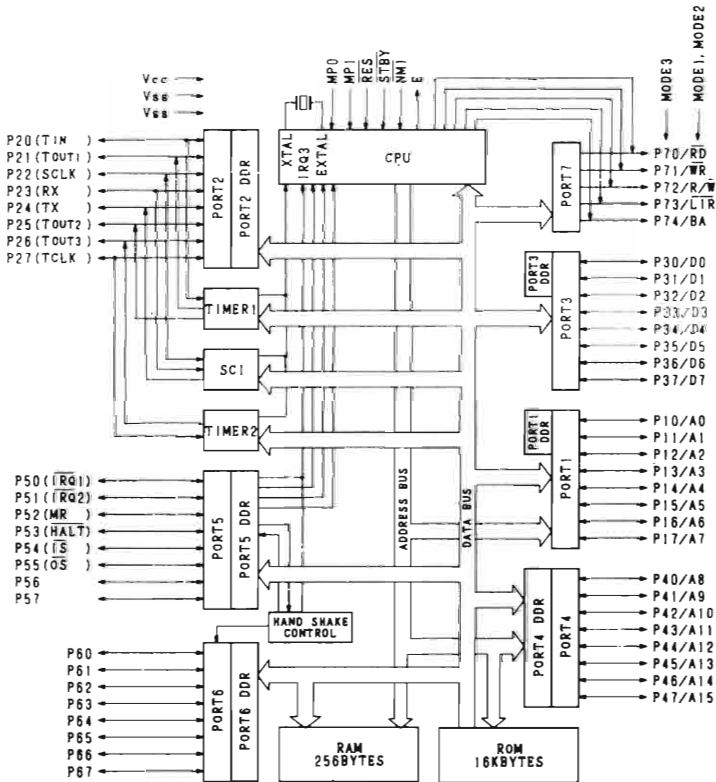
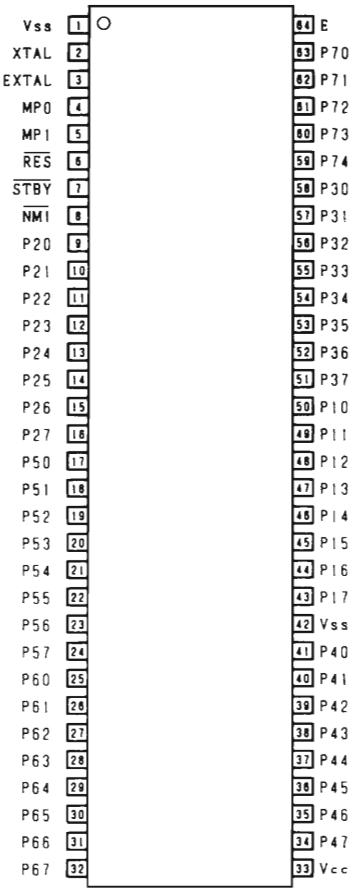


LOADING SW C. B



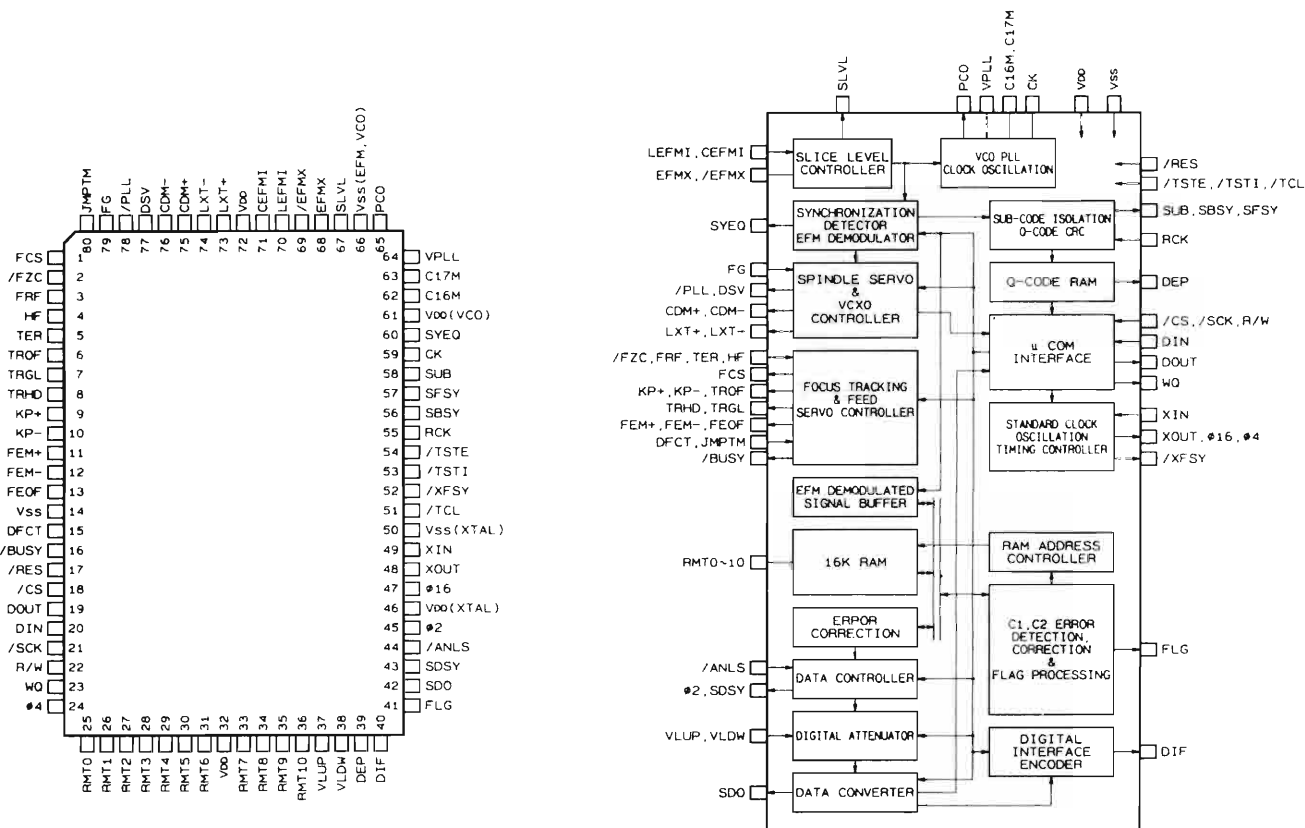
IC DATA

IC10 : HD63BO1YOXXXP
8bit μ -COM



Pin No.	Pin Name	Function
1	Vss	GND
3	XTAL	External clock input
4	MP0	MP0 "L", MP1 "H" For setting built-in ROM used mode
5	MP1	
6	RESET	Operation starts at  and stops at  .
9	REM	Input from remote control beam reception unit
10	R/W	From μ -COM to YM7402 at "H" From YM7402 to μ -COM at "L"
11	SCK	Serial clock output to YM7402 & LC7582
12	SI	Serial data input from YM7402
13	SO	Serial data output to YM7402 & LC7582
14	WQ	Request signal from YM7402
15	CDVP	YM7402 chip enable at "L"
16	TER	Tracking error input
17	INH	LCD goes off at "L".
18	LCD	LC7582 chip enable at "H"
21	BUSY	Signal input to indicate that instruction from YM7402 is being executed.
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, fast reverse) Sound output mute at "L" (other than above)
24	LSON	Laser diode lights at "L"
25	OPEN	Tray open operation at OP "H", CL "L"
26	CLOSE	Tray close operation at OP "L", CL "H" Braking at OP "L", CL "L"
27	OPSW	Switch input to detect open tray
28	CLSW	Switch input to detect closed tray
29	VLDW	Pulse output for digital volume (for lower volume)
30	MVLUP	Motor Volume UP
31	MVLDW	Motor Volume DOWN
32	VLUP	Pulse output for digital volume (for higher volume)
33	VDD	+5V
34	A15	 Address output to M5M82C55AP-2 and LC3517BL-15
35	A14	
36	A13	
37	A12	
38	A11	
39	A10	
40	A9	
41	A8	
42	Vss	GND
43	A7	 Data output to M5M82C55AP-2 and LC3517BL-15
44	A6	
45	A5	
46	A4	
47	A3	
48	A2	
49	A1	
50	A0	
51	D7	 Data output to M5M82C55AP-2 and LC3517BL-15
52	D6	
53	D5	
54	D4	
55	D3	
56	D2	
57	D1	
58	D0	
62	WR	Write control signal to M5M82C55AP-2 and LC3517BL-15
63	RD	Read input to M5M82C55AP-2 and LC3517BL-15

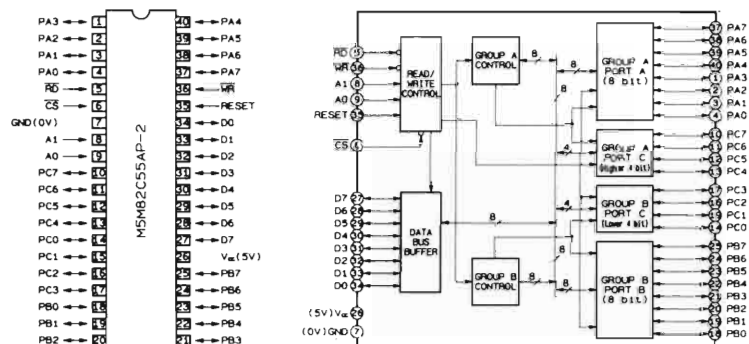
Signal Processor & Controller for Compact Disc Player



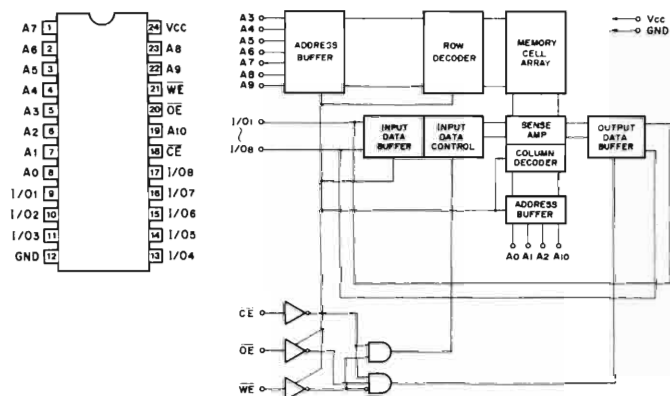
Pin No.	Pin Name	I / O	Function
1	FCS	O	Focus search signal output
2	FZC	I	Focus zero cross signal input
3	FRF	I	Focus reflection signal input
4	HF	I	HF signal input
5	TER	I	Tracking error signal input
6	TROF	O	Tracking servo OFF signal output
7	TRGL	O	TRGL signal output
8	TRHD	O	Tracking hold signal output
9	KP+	O	Outward kick pulse output
10	KP-	O	Inward kick pulse output
11	FEM+	O	Outward feed pulse output
12	FEM-	O	Inward feed pulse output
13	FEOF	O	Feed servo OFF signal output
14	Vss		GND
15	DFCT	I	For setting track count synchronous mode
16	BUSY	O	Sequence control output (H : End of track count)
17	RES	I	System reset input
18	CS	I	Chip select input from μ -COM
19	D OUT	O	Serial data output to μ -COM
20	D IN	I	Serial data input from μ -COM
21	SCK	I	Clock input for input/output of serial data with μ -COM
22	R/W	I	Control signal input for data input/output with μ -COM
23	WQ	O	Request signal output for data output to μ -COM
24	ϕ 4	O	System clock output (4.2336MHz)

Pin No.	Pin Name	I / O	Function
25	RMT0		For testing internal RAM
26	RMT1		
27	RMT2		
28	RMT3		
29	RMT4		
30	RMT5		
31	RMT6		
32	VDD		+5V
33	RMT7		For testing internal RAM
34	RMT8		
35	RMT9		
36	RMT10		
37	VL UP	I	Volume up input
38	VL DW	I	Volume down input
39	DEP	O	Deemphasis control signal output
40	DIF	O	Data output for digital interface
41	FLG	O	Flag output to correct error in SDO output data
42	SDO	O	Serial data output
43	SDSY	O	Synchronous signal output (44.1kHz) of SDO output data
44	ANLS	I	Analog sound serial data input
45	Ø2	O	System lock output (2.1168MHz)
46	VDD		XTAL system +5V
47	Ø16	O	System clock output
48	X OUT	O	For connecting quartz oscillator (16.9344MHz)
49	X IN	I	
50	Vss		XTAL system GND
51	TCL	I	Test signal input
52	XFSY	O	Frame synchronous signal output (7.35kHz)
53	TSTI		Test mode input
54	TSTE		Test mode control signal input
55	RCK	I	Clock input for reading sub-code
56	SBSY	O	Sub-code block synchronization output
57	SFSY	O	Sub-code frame signal output
58	SUB	O	Sub-code serial output (P~W)
59	CK	O	VCO system clock output (4.3218MHz)
60	SYEQ	O	Synchronous coincidence monitor (H : EFM pattern and internal counter are synchronized.)
61	VDD		VCO system +5V
62	C16M	I/O	For VCO control
63	C17M	I/O	For VCO adjusted voltage
64	VPLL		For VCO power supply
65	PCO	O	Clock reproduction system phase error output
66	Vss		EFM, VCO system GND
67	SLVL	O	Slice level output
68	EFMX	O	Signal output after limiting amplitude of EFM signal input (normal phase)
69	EFMX	O	Signal output after limiting amplitude of EFM signal output. (reverse phase)
70	LEFMI	I	LD mode EFM signal input
71	CEFMI	I	CD mode EFM signal input
72	VDD		+5V
73	LXT+	O	VCXO frequency up signal output (only in LD mode)
74	LXT-	O	VCXO frequency down signal output (only in LD mode)
75	CDM+	O	Disc motor acceleration signal output (only in CD mode)
76	CDM-	O	Disc motor deceleration signal output (only in CD mode)
77	DSV	O	For system expansion
78	PLL	O	PLL operation monitor (L : Spindle control is PLL operated.)
79	FG	I	FG signal input
80	JMPTM	I	Trigger input to start sequence control

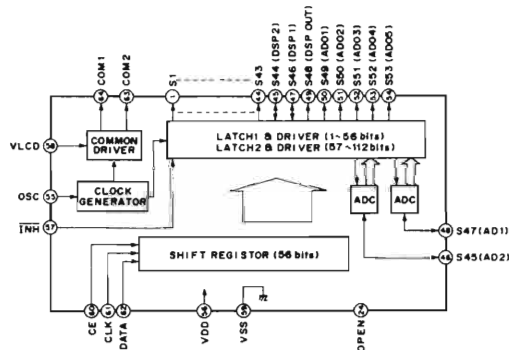
IC8 : M5M82C55AP-2
Programmable Peripheral Interface



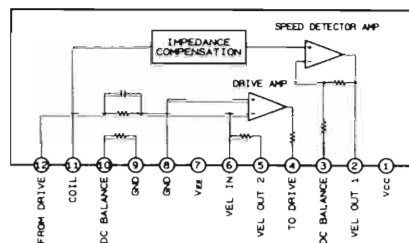
IC11 : LC3517BL-15
2048-Word x 8bit Static RAM



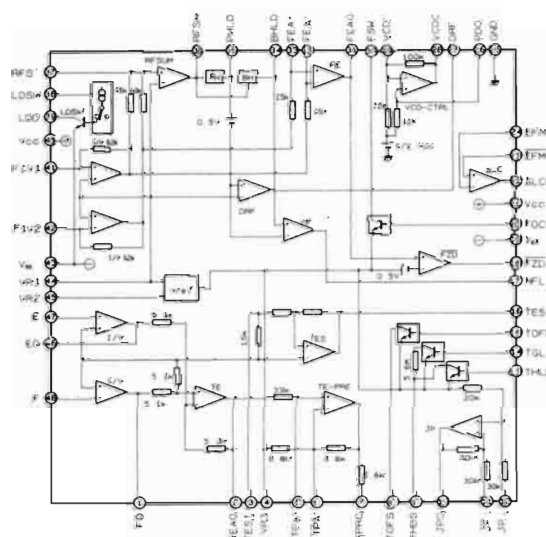
IC500 : LC7582
LCD Driver



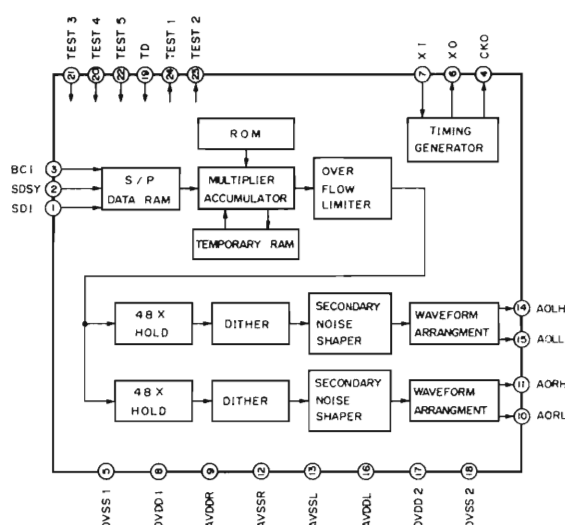
IC28 : S2FR04
Hybrid IC



IC3 : LA9200NM
RF Amp & Servo Controller

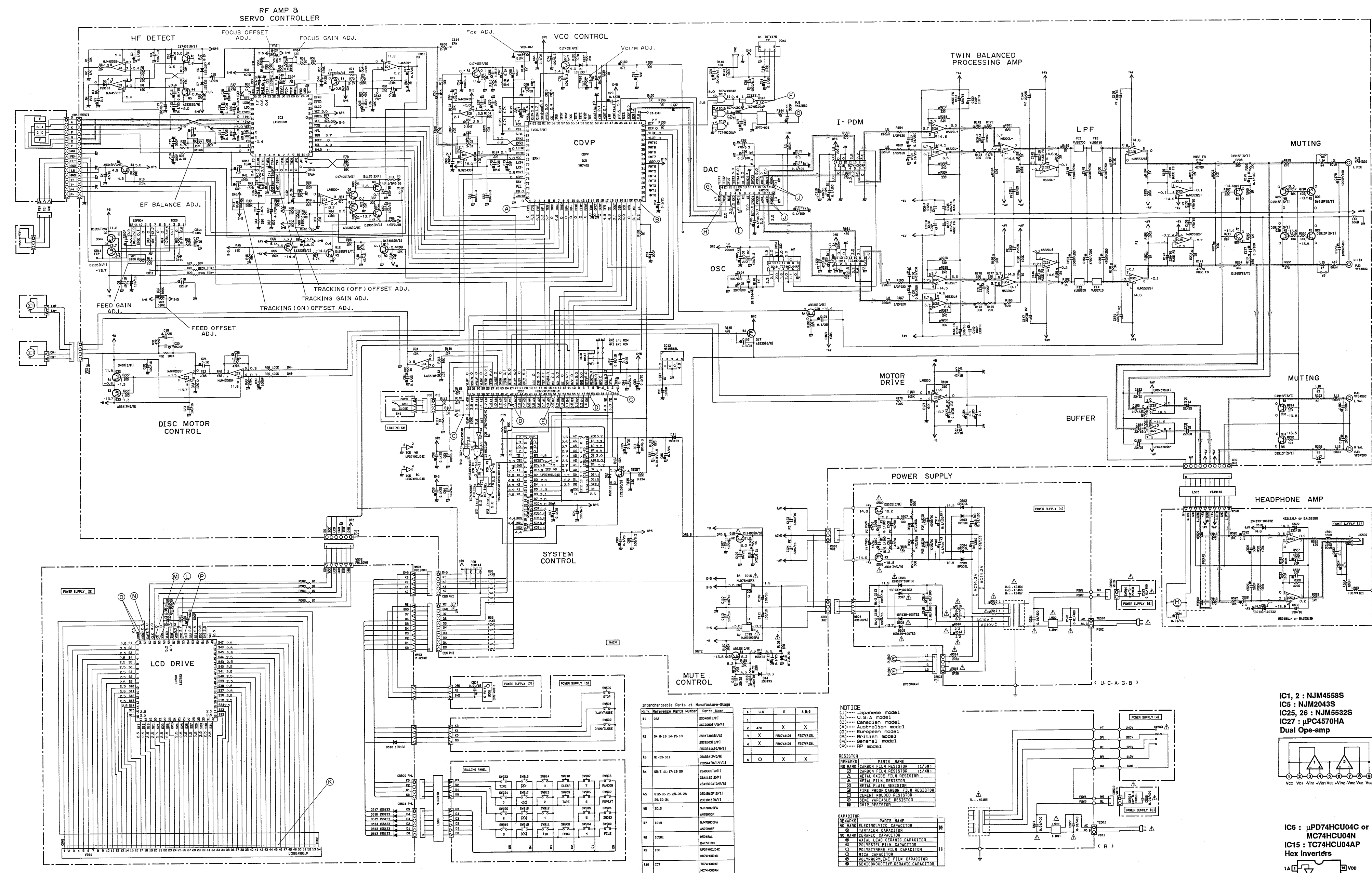


IC14 : YAC506
1bit D/A Converter

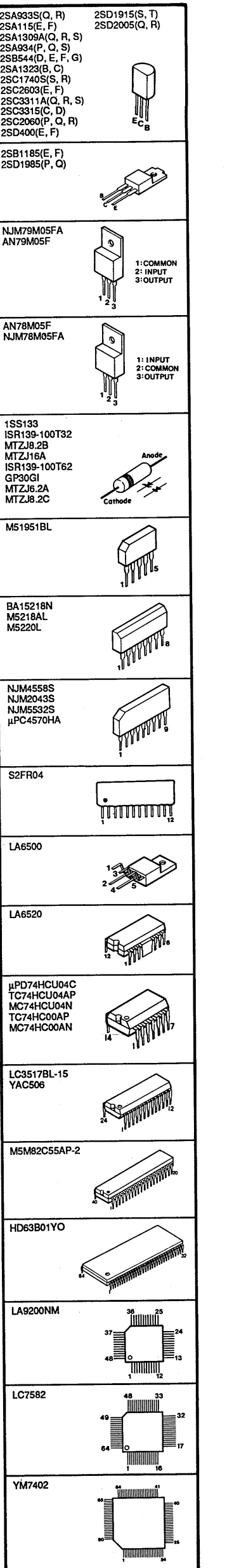
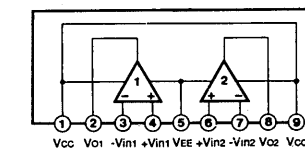
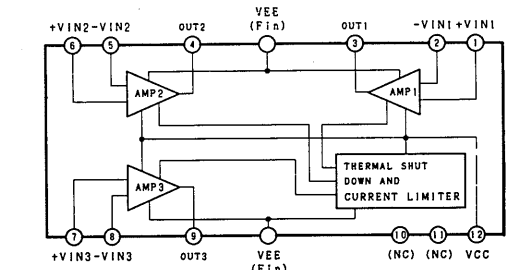
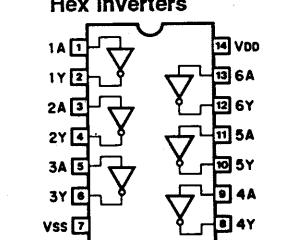
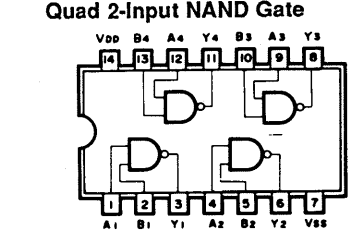
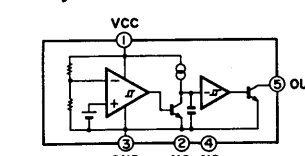
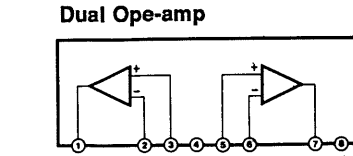
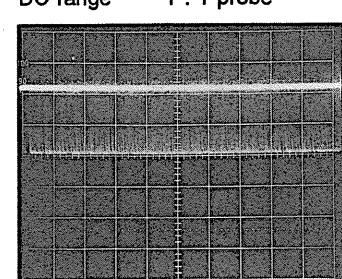
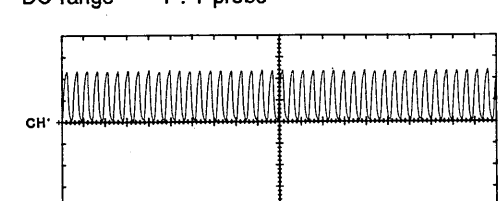
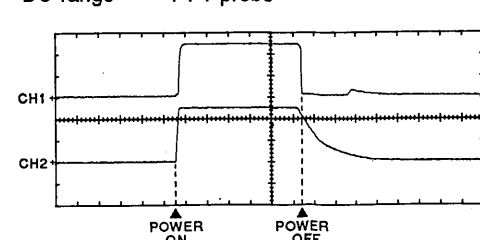
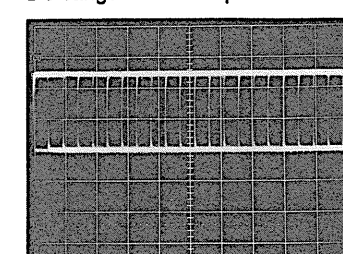
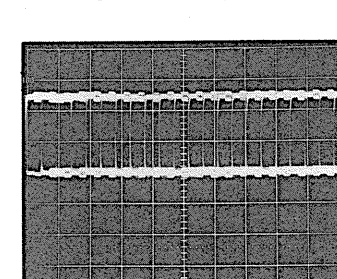
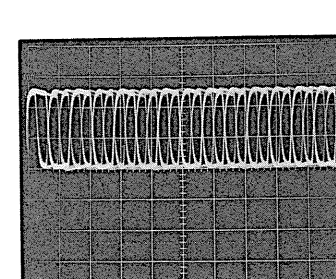
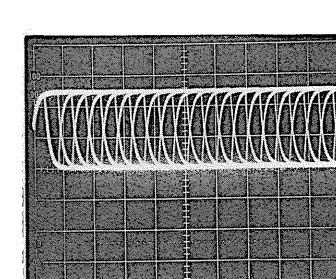
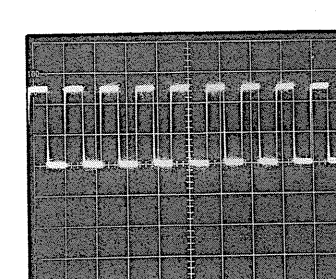
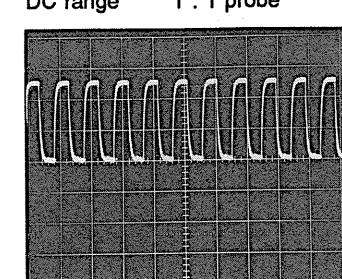
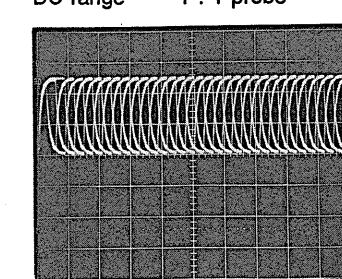
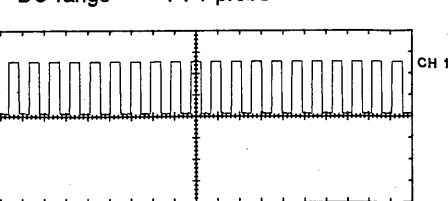
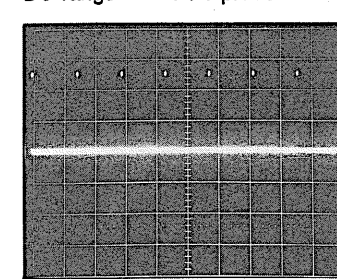
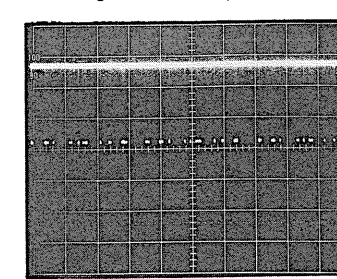
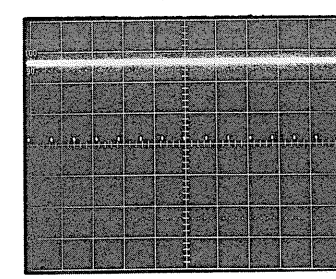
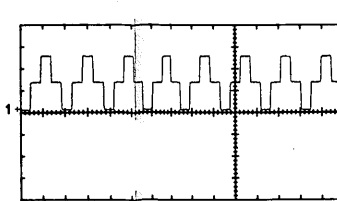
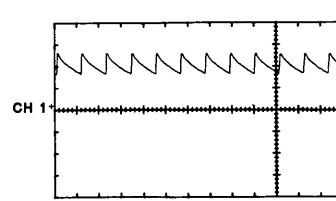


SCHEMATIC DIAGRAM

* Each voltage used here is the voltage obtained in the normal PLAY mode.



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

IC1, 2 : NJM4558
IC3 : NJM2043S
IC25, 26 : NJM5532S
IC27 : μPC4570HA
Dual Op-ampIC4 : LA6520
3-Channel Power Operational AmpIC8 : μPD74HC04C or
M74HC04N
IC15 : TC74HC04AP
Hex InvertersIC7 : TC74HC00AP or M74HC00AN
Quad 2-Input NAND GateIC12 : MS151BL
System ResetIC21-24 : MS220L
IC501 : BA15218N or MS218AL
Dual Op-ampPoint (A) (TER)
(Pin 5 of IC9)
V : 2V/div H : 0.1msec/div
DC range 1 : 1 probePoint (B) (G4)
(Pin 24 of IC9)
V : 2V/div H : 500nsec/div
DC range 1 : 1 probePoint (C) (RESET, VDD)
(CH1 : Pin 6 of IC10, CH2 : Pin 33 of IC10)
V : 2V/div H : 200nsec/div
DC range 1 : 1 probePoint (D) (A0 to A15, D0 to D6)
(Pin 34 to 41, Pin 43 to 50 and
Pin 52 to 58 of IC10)
V : 2V/div H : 2μsec/div
DC range 1 : 1 probePoint (E) (D7)
(Pin 51 of IC10)
V : 2V/div H : 2μsec/div
DC range 1 : 1 probePoint (F) (DIGITAL OUT)
(Pin 8 of IC13)
V : 2V/div H : 0.5μsec/div
DC range 1 : 1 probePoint (G) (SDI)
(Pin 1 of IC14)
V : 2V/div H : 1μsec/div
DC range 1 : 1 probePoint (H) (SDSY)
(Pin 2 of IC14)
V : 2V/div H : 20μsec/div
DC range 1 : 1 probePoint (I) (BCI)
(Pin 3 of IC14)
V : 2V/div H : 0.5μsec/div
DC range 1 : 1 probePoint (J) (CLK)
(Pin 10, 11, 14 and 15 of IC14)
V : 2V/div H : 0.2μsec/div
DC range 1 : 1 probePoint (K) (S1 to S52)
(Pin 1 to 23, Pin 25 to 53 of IC500)
V : 2V/div H : 10nsec/div
DC range 1 : 1 probePoint (L) (CE)
(Pin 60 of IC500)
V : 2V/div H : 10nsec/div
DC range 1 : 1 probePoint (M) (CLK)
(Pin 61 of IC500)
V : 2V/div H : 10nsec/div
DC range 1 : 1 probePoint (N) (DATA)
(Pin 62 of IC500)
V : 2V/div H : 20nsec/div
DC range 1 : 1 probePoint (O) (COM1, COM2)
(Pin 63 and 64 of IC500)
V : 2V/div H : 5μsec/div
DC range 1 : 1 probePoint (P) (OSC)
(Pin 55 of IC500)
V : 2V/div H : 20μsec/div
DC range 1 : 1 probe

* All voltage are measured with a 10MΩ/V 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.

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. 50.

Schm Ref.	PART NO.	Description	Remarks	Markets
	VM486000	P.C.B. ASS'y, POWER		U,C
	VM486100	P.C.B. ASS'y, POWER		R
	VM486200	P.C.B. ASS'y, POWER		A,B,G
C500	VF467000	CERAMIC TUBULAR CAP	1000pF 50V	
C501	UJ818100	ELECTROLYTIC CAP	100uF 6.3V	
C502	VG278900	CERAMIC TUBULAR CAP	680pF 50V	
C504	VF467300	CERAMIC TUBULAR CAP	0.01uF 16V	
C505	VH622400	ELECTROLYTIC CAP	47uF 50V	
C506	VH622400	ELECTROLYTIC CAP	47uF 50V	
C507	VK512900	ELECTROLYTIC CAP	4700uF 50V	
C508	VH622400	ELECTROLYTIC CAP	47uF 50V	
C509	Vi862200	POLYETHYLENE FILM CAP	0.1uF 100V	
C510	Vi862200	POLYETHYLENE FILM CAP	0.1uF 100V	
C511	VH622400	ELECTROLYTIC CAP	47uF 50V	
C512	VK512900	ELECTROLYTIC CAP	4700uF 50V	
C513	Vi578400	ELECTROLYTIC CAP	6800uF 16V	
C514	Vi503200	METALIZED POLYESTER FILM CAP	0.01uF 100V	
C515	Vi503200	METALIZED POLYESTER FILM CAP	0.01uF 100V	
C516	Vi578400	ELECTROLYTIC CAP	6800uF 16V	
C517	Vi862200	POLYETHYLENE FILM CAP	0.1uF 100V	
C518	Vi503200	METALIZED POLYESTER FILM CAP	0.01uF 100V	
C519	Vi503200	METALIZED POLYESTER FILM CAP	0.01uF 100V	
C520	Vi862200	POLYETHYLENE FILM CAP	0.1uF 100V	
C521	Fi384100	RECOGNIZED CERAMIC CAP	0.01uF 400V	U,C $\triangle$
C521	VE179200	RECOGNIZED CERAMIC CAP	0.01uF 400V	R,A,B,G $\triangle$
C522	Fi384100	RECOGNIZED CERAMIC CAP	0.01uF 400V	U,C $\triangle$
C522	VE179200	RECOGNIZED CERAMIC CAP	0.01uF 400V	R,A,B,G $\triangle$
C523	Fi384100	RECOGNIZED CERAMIC CAP	0.01uF 400V	U,C $\triangle$
C523	VE179200	RECOGNIZED CERAMIC CAP	0.01uF 400V	R,A,B,G $\triangle$
C524	VF467300	CERAMIC TUBULAR CAP	0.01uF 16V	
C525	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
C526	VG278800	CERAMIC TUBULAR CAP	560pF 50V	
C527	VG278800	CERAMIC TUBULAR CAP	560pF 50V	
C528	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
C529	UJ838330	ELECTROLYTIC CAP	330uF 16V	
C530	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
C531	VF466600	CERAMIC TUBULAR CAP	10pF 50V	
C532	VF466600	CERAMIC TUBULAR CAP	10pF 50V	
C533	UJ838330	ELECTROLYTIC CAP	330uF 16V	
C534	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
CB500	VB858300	BASE POST	PH 4P SE	
CB501	VB858500	CONNECTOR	PH i-TYPE 6P SE	
CB502	VG879900	CONNECTOR	VH 2P TE	
CB503	VD004700	CONNECTOR	PH i-TYPE 4P TE	
D500	VG441000	ZENER DIODE	MTZJ16A	
D501	VG441000	ZENER DIODE	MTZJ16A	
D502	VJ967200	DIODE	GP30GL	
D503	VJ967200	DIODE	GP30GL	
D504	VJ967200	DIODE	GP30GL	
D505	VJ967200	DIODE	GP30GL	

※New Parts (新規部品)

POWER P. C. B.

Sch Ref.	PART NO.	Description	Remarks	Markets
D506	VH801600	DIODE	1SR139-100	△
D507	VH801600	DIODE	1SR139-100	△
D508	VH801600	DIODE	1SR139-100	△
D509	VH801600	DIODE	1SR139-100	△
D510	VH770800	DIODE	1SR139-100 T-32	
D511	VH770800	DIODE	1SR139-100 T-32	
D512	iF004600	DIODE	1SS133	
D513	iF004600	DIODE	1SS133	
D514	iF004600	DIODE	1SS133	
D515	iF004600	DIODE	1SS133	
D516	iF004600	DIODE	1SS133	
D517	iF004600	DIODE	1SS133	
D518	iF004600	DIODE	1SS133	
IC500	XB417A00	IC	LC7582	
IC501	XH471A00	IC	M5218AL	
JK500	VH521300	PHONES JACK		
L500	VE800700	LINE FILTER	1.8mH ELF18D290V	△
L501	VF968800	COIL	60uH	
L502	VF968800	COIL	60uH	
L503	VH749700	FERRITE BEAD	FB07VA121TB	
L504	VF968800	COIL	60uH	
L505	Vi491100	FERRITE CORE	BP53RB19012080M	
Q500	VK475100	TRANSISTOR	2SD2005 Q,R	△
Q501	iA093410	TRANSISTOR	2SA934 P,Q,R	△
R510	HV453220	FLAME PROOF CARBON RESISTOR	2.2Ω 1/4W	△
R511	HV453220	FLAME PROOF CARBON RESISTOR	2.2Ω 1/4W	△
R512	HV453220	FLAME PROOF CARBON RESISTOR	2.2Ω 1/4W	△
R513	HV453220	FLAME PROOF CARBON RESISTOR	2.2Ω 1/4W	△
R514	HL324390	METAL OXIDE RESISTOR	39Ω 2W	△
R515	HL324390	METAL OXIDE RESISTOR	39Ω 2W	△
R516	HV453100	FLAME PROOF CARBON RESISTOR	1Ω 1/4W	△
R517	HV453100	FLAME PROOF CARBON RESISTOR	1Ω 1/4W	△
SW500	VJ827400	PUSH SWITCH	EVQ-214 04M STOP	
SW501	VJ827400	PUSH SWITCH	EVQ-214 04M PLAY/PAUSE	
SW502	VJ827400	PUSH SWITCH	EVQ-214 04M OPEN/CLOSE	
SW503	VL908000	VOLTAGE SELECTOR	ESE-370 R	△
SW504	Vi319200	PUSH SWITCH	SDDL1 POWER	△
TE501	LA002140	WRAPPING TERMINAL	2P i-TYPE P=10	
U500	VJ791000	LIGHT DETECTING MODULE	SPS-420-1	
V501	VJ745800	LCD	LCD-8149BJP	
VR500	VJ542400	POTENTIOMETER WITH MOTOR	A10KΩ×2	
	VB966900	CONNECTOR	IHSA-6024	
	VH828700	REFLECTOR	LCD	
	VH879200	SHEET		
	CB605620	PLASTIC RIVET	No.1057	
	VF444500	LAMP CAP	AG-4015	

※New Parts (新規部品)

MAIN P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
	VM562700	P.C.B. ASS'y, MAIN		U,C
	VM562800	P.C.B. ASS'y, MAIN		R
	VM562900	P.C.B. ASS'y, MAIN		A,B,G
C1	UA655100	MYLAR FILM CAP	0.1uF 50V	
C2	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF 25V	
C3	UJ818100	ELECTROLYTIC CAP	100uF 6.3V	
C4	UJ837470	ELECTROLYTIC CAP	47uF 16V	
C5	UA653220	MYLAR FILM CAP	2200pF 50V	
C6	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C7	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C10	UJ747100	ELECTROLYTIC CAP	10uF 25V	
C11	VF467300	CERAMIC TUBULAR CAP	0.01uF 16V	
C12	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF 25V	
C13	UJ818100	ELECTROLYTIC CAP	100uF 6.3V	
C14	VF466600	CERAMIC TUBULAR CAP	10pF 50V	
C15	VG278600	CERAMIC TUBULAR CAP	330pF 50V	
C16	VG278600	CERAMIC TUBULAR CAP	330pF 50V	
C17	UK147100	ELECTROLYTIC CAP	10uF 25V	
C18	UA653220	MYLAR FILM CAP	2200pF 50V	
C19	UK146470	ELECTROLYTIC CAP	4.7uF 25V	
C20	UA653560	MYLAR FILM CAP	5600pF 50V	
C21	UA655120	MYLAR FILM CAP	0.12uF 50V	
C22	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C23	UJ738100	ELECTROLYTIC CAP	100uF 16V	
C24	VF466800	CERAMIC TUBULAR CAP	100pF 50V	
C25	UK147100	ELECTROLYTIC CAP	10uF 25V	
C26	UA653100	MYLAR FILM CAP	1000pF 50V	
C27	UK166330	ELECTROLYTIC CAP	3.3uF 50V	
C28	UT452100	POLYPROPYLENE FILM CAP	100pF 100V	
C29	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF 25V	
C30	UJ818100	ELECTROLYTIC CAP	100uF 6.3V	
C31	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF 25V	
C32	UJ818100	ELECTROLYTIC CAP	100uF 6.3V	
C33	VF466600	CERAMIC TUBULAR CAP	10pF 50V	
C34	UA654100	MYLAR FILM CAP	0.01uF 50V	
C35	VG277700	CERAMIC TUBULAR CAP	68pF 50V	
C36	UA652470	MYLAR FILM CAP	470pF 50V	
C37	UA654750	MYLAR FILM CAP	0.075uF 50V	
C38	UA653100	MYLAR FILM CAP	1000pF 50V	
C39	UA653100	MYLAR FILM CAP	1000pF 50V	
C40	VF466800	CERAMIC TUBULAR CAP	100pF 50V	
C41	VG278900	CERAMIC TUBULAR CAP	680pF 50V	
C42	UA655390	MYLAR FILM CAP	0.39uF 50V	
C43	UK166470	ELECTROLYTIC CAP	4.7uF 50V	
C44	UJ747100	ELECTROLYTIC CAP	10uF 25V	
C45	UA654430	MYLAR FILM CAP	0.043uF 50V	
C46	UJ837470	ELECTROLYTIC CAP	47uF 16V	
C47	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF 25V	
C48	UA655220	MYLAR FILM CAP	0.22uF 50V	
C49	UJ738100	ELECTROLYTIC CAP	100uF 16V	

*New Parts (新規部品)

MAIN P. C. B.

Sch Ref.	PART NO.	Description	Remarks	Markets
C50	UJ738100	ELECTROLYTIC CAP	100uF	16V
C51	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C52	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C53	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C54	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C55	UA654150	MYLAR FILM CAP	0.015uF	50V
C56	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C57	UA654470	MYLAR FILM CAP	0.047uF	50V
C58	UA654470	MYLAR FILM CAP	0.047uF	50V
C59	VF466700	CERAMIC TUBULAR CAP	47pF	50V
C60	UA653470	MYLAR FILM CAP	4700pF	50V
C61	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C62	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C63	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C64	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C65	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C66	UA654180	MYLAR FILM CAP	0.018uF	50V
C67	UA655240	MYLAR FILM CAP	0.24uF	50V
C68	VG278800	CERAMIC TUBULAR CAP	560pF	50V
C69	UJ866470	ELECTROLYTIC CAP	4.7uF	50V
C70	VG276600	CERAMIC TUBULAR CAP	22pF	50V
C71	VG277000	CERAMIC TUBULAR CAP	33pF	50V (SL)
C72	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C73	VG276600	CERAMIC TUBULAR CAP	22pF	50V
C74	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C75	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C76	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C77	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C78	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C79	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C80	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C81	VG278400	CERAMIC TUBULAR CAP	220pF	50V
C82	VF467300	CERAMIC TUBULAR CAP	0.01uF	16V
C83	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C84	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C85	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C86	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C87	Vi271200	ELECTROLYTIC CAP	47000uF	5.5V
C88	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C89	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C90	VG279400	CERAMIC TUBULAR CAP	2200pF	16V
C91	VG277500	CERAMIC TUBULAR CAP	56pF	50V
C92	UJ867100	ELECTROLYTIC CAP	10uF	50V
C93	UJ818100	ELECTROLYTIC CAP	100uF	6.3V
C94	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C95	UJ719100	ELECTROLYTIC CAP	1000uF	6.3V
C96	UJ737330	ELECTROLYTIC CAP	33uF	16V
C97	VG278600	CERAMIC TUBULAR CAP	330pF	50V
C98	VH619300	ELECTROLYTIC CAP	470uF	6.3V
C99	Vi862200	POLYETHYLENE FILM CAP	0.1uF	100V

*New Parts (新規部品)

MAIN P. C. B.

Sch Ref.	PART NO.	Description	Remarks	Markets
C100	Vi862200	POLYETHYLENE FILM CAP	0.1uF	100V
C102	Vi862200	POLYETHYLENE FILM CAP	0.1uF	100V
C103	VH619300	ELECTROLYTIC CAP	470uF	6.3V
C104	FU451390	MICA CAP	39pF	500V
C105	FU451390	MICA CAP	39pF	500V
C106	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C107	UJ747100	ELECTROLYTIC CAP	10uF	25V
C108	UJ747100	ELECTROLYTIC CAP	10uF	25V
C109	UJ738100	ELECTROLYTIC CAP	100uF	16V
C110	UJ828100	ELECTROLYTIC CAP	100uF	10V
C111	UJ738100	ELECTROLYTIC CAP	100uF	16V
C112	UJ828100	ELECTROLYTIC CAP	100uF	10V
C113	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C114	UJ747220	ELECTROLYTIC CAP	22uF	25V
C115	UJ729220	ELECTROLYTIC CAP	2200uF	10V
C116	VG278600	CERAMIC TUBULAR CAP	330pF	50V
C117	Vi862200	POLYETHYLENE FILM CAP	0.1uF	100V
C118	Vi988100	ELECTROLYTIC CAP	470uF	16V
C119	Vi862200	POLYETHYLENE FILM CAP	0.1uF	100V
C120	Vi988100	ELECTROLYTIC CAP	470uF	16V
C121	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C123	VG288200	ELECTROLYTIC CAP	3300uF	16V
C124	VG288200	ELECTROLYTIC CAP	3300uF	16V
C125	Vi862200	POLYETHYLENE FILM CAP	0.1uF	100V
C126	Vi862200	POLYETHYLENE FILM CAP	0.1uF	100V
C127	VJ966900	POLYPROPYLENE FILM CAP	0.01uF	250V
C128	VJ966900	POLYPROPYLENE FILM CAP	0.01uF	250V
C129	VK512500	MYLAR FILM CAP	100pF	50V
C130	VJ966900	POLYPROPYLENE FILM CAP	0.01uF	250V
C131	VJ966900	POLYPROPYLENE FILM CAP	0.01uF	250V
C132	VK512500	MYLAR FILM CAP	100pF	50V
C133	VK512700	ELECTROLYTIC CAP	330uF	16V
C134	VK512600	MYLAR FILM CAP	2200pF	50V
C135	VK512700	ELECTROLYTIC CAP	330uF	16V
C136	VK512500	MYLAR FILM CAP	100pF	50V
C137	VK512700	ELECTROLYTIC CAP	330uF	16V
C138	VK512600	MYLAR FILM CAP	2200pF	50V
C139	VK512700	ELECTROLYTIC CAP	330uF	16V
C140	VK512500	MYLAR FILM CAP	100pF	50V
C141	UJ837470	ELECTROLYTIC CAP	47uF	16V
C142	VD930900	SEMI-CONDUCTIVE CERAMIC CAP	0.1uF	25V
C143	UJ837470	ELECTROLYTIC CAP	47uF	16V
C144	VH620600	ELECTROLYTIC CAP	22uF	25V
C145	VE393100	ELECTROLYTIC CAP	220uF	10V
C146	VE393100	ELECTROLYTIC CAP	220uF	10V
C147	VH620600	ELECTROLYTIC CAP	22uF	25V
C148	VJ966600	POLYPROPYLENE FILM CAP	1500pF	250V
C149	VJ966800	POLYPROPYLENE FILM CAP	4700pF	250V
C150	VJ966800	POLYPROPYLENE FILM CAP	4700pF	250V
C151	VH620600	ELECTROLYTIC CAP	22uF	25V

*New Parts (新規部品)

MAIN P. C. B.

Sch Ref.	PART NO.	Description	Remarks	Markets
C152	VH620600	ELECTROLYTIC CAP	22uF 25V	
C153	VJ966800	POLYPROPYLENE FILM CAP	1500pF 250V	
C154	VJ966800	POLYPROPYLENE FILM CAP	4700pF 250V	
C155	VJ966800	POLYPROPYLENE FILM CAP	4700pF 250V	
C156	Vi988100	ELECTROLYTIC CAP	470uF 16V	
C158	Vi988100	ELECTROLYTIC CAP	470uF 16V	
C159	Vi988100	ELECTROLYTIC CAP	470uF 16V	
C161	Vi988100	ELECTROLYTIC CAP	470uF 16V	
C162	UJ747220	ELECTROLYTIC CAP	22uF 25V	
C163	UK137220	ELECTROLYTIC CAP	22uF 16V	
C164	UK137220	ELECTROLYTIC CAP	22uF 16V	
C165	UJ747220	ELECTROLYTIC CAP	22uF 25V	
C167	Vi536600	ELECTROLYTIC CAP	47uF 50V	
C169	VE393100	ELECTROLYTIC CAP	220uF 10V	
C170	VE393100	ELECTROLYTIC CAP	220uF 10V	
C171	Vi536600	ELECTROLYTIC CAP	47uF 50V	
C174	VH620600	ELECTROLYTIC CAP	22uF 25V	
C175	VH620600	ELECTROLYTIC CAP	22uF 25V	
C176	VJ966400	POLYESTER FILM CAP	0.1uF 100V	
C177	VJ966400	POLYESTER FILM CAP	0.1uF 100V	
C178	VJ966500	POLYPROPYLENE FILM CAP	1000pF 400V	
C179	VJ966500	POLYPROPYLENE FILM CAP	1000pF 400V	
C180	UA653100	MYLAR FILM CAP	1000pF 50V	
C181	UA653100	MYLAR FILM CAP	1000pF 50V	
C182	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
C183	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
C184	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
C185	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
C186	VF611200	MULTILAYER CERAMIC CAP	0.1uF 50V	
C187	VJ599100	CERAMIC TUBULAR CAP	0.1uF 50V	
CB1	Vi009100	CONNECTOR	FPC i-TYPE 17P TE	
CB2	VD004600	CONNECTOR	PH i-TYPE 3P TE	
CB3	VD004700	CONNECTOR	PH i-TYPE 4P TE	
CB5	VD004800	CONNECTOR	PH i-TYPE 5P TE	
CB6	VD005300	CONNECTOR	PH i-TYPE 10P TE	
CB7	VD004900	CONNECTOR	PH i-TYPE 6P TE	
CB8	VL844700	CONNECTOR	XH 3P TE	
CB9	VK184300	CONNECTOR	DR 10P TE	
CB10	LB932030	CONNECTOR	VH 3P TE	
CB11	LB500250	CONNECTOR	NH 5P TE	
CB12	LB500250	CONNECTOR	NH 5P TE	
CB13	LB300730	CONNECTOR	NH 3P TE	
CB14	LB400570	CONNECTOR	NH 4P TE	
CB15	LB400570	CONNECTOR	NH 4P TE	
D3	iF004600	DIODE	1SS133	
D6	iF004600	DIODE	1SS133	
D7	iF004600	DIODE	1SS133	
D8	VG439000	ZENER DIODE	MTZJ8.2C	
D9	iF004600	DIODE	1SS133	
D10	iF004600	DIODE	1SS133	

*New Parts (新規部品)

MAIN P. C. B.

Sch Ref.	PART NO.	Description	Remarks	Markets
D11	IF004600	DIODE	1SS133	
D12	VG437900	ZENER DIODE	MTZJ6.2A	
D13	IF004600	DIODE	1SS133	
D14	IF004600	DIODE	1SS133	
D15	VG438900	ZENER DIODE	MTZJ8.2B	
Fi1	VJ967000	LC FILTER	PFB-2 4502-090A	
Fi2	VJ967100	LC FILTER	PFB-2 4502-090B	
Fi3	VJ967000	LC FILTER	PFB-2 4502-090A	
Fi4	VJ967100	LC FILTER	PFB-2 4502-090B	
FR1	Vi868300	FUSABLE RESISTOR	0.68Ω 1/6W	
FR2	Vi868300	FUSABLE RESISTOR	0.68Ω 1/6W	
IC1	IG076800	IC	NJM4558S	
IC2	IG076800	IC	NJM4558S	
IC3	XG839A00	IC	LA9200HM	
IC4	XG381A00	IC	LA6520	
IC5	IG080200	IC	NJM2043S	
IC6	IG142220	IC	uPD74HC04C	
IC7	IR000001	IC	TC74HC00AP	
IC8	XG384A00	IC	M5M82C55AP-2	
IC9	XG491A00	IC	YM7402	
IC10	XK225A00	IC	HDG3801Y0RBF2P	
IC11	XE859A00	IC	LC3517BL-15	
IC12	XB253001	IC	M51951BL	
IC13	IR000001	IC	TC74HC00AP	
IC14	XJ638A00	IC	YAC506-D	
IC15	IG142200	IC	TC74HC04AP	
IC16	IR000001	IC	TC74HC00AP	
IC17	IR000001	IC	TC74HC00AP	
IC18	XJ604A00	IC	NJM78M05FA	
IC19	XE436A00	IC	NJM79M05FA	
IC20	XH907A00	IC	LA6500	
IC21	IG092000	IC	M5220L	
IC22	IG092000	IC	M5220L	
IC23	IG092000	IC	M5220L	
IC24	IG092000	IC	M5220L	
IC25	XA426001	IC	NJM5532S	
IC26	XA426001	IC	NJM5532S	
IC27	XB247301	IC	uPC4570HA	
IC28	VH721700	IC	S2FR04	
L1	VF968800	COIL	60uH	
L2	VB056900	COIL	220uH	
L3	VB056900	COIL	220uH	
L4	VB056900	COIL	220uH	
L5	VB056900	COIL	220uH	
L6	VB056900	COIL	220uH	
L7	VB056900	COIL	220uH	
L8	VB056900	COIL	220uH	
L9	VF968800	COIL	60uH	
L10	VF968800	COIL	60uH	
L11	VF968800	COIL	60uH	

*New Parts (新規部品)

MAIN P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
L12	VF968800	COIL	60uH	
L13	VF968800	COIL	60uH	
L14	VM749700	FERRITE BEAD	FB07VA121TB	R, A, B, G
L15	VM749700	FERRITE BEAD	FB07VA121TB	R, A, B, G
L16	VM749700	FERRITE BEAD	FB07VA121TB	R, A, B, G
L17	VM749700	FERRITE BEAD	FB07VA121TB	R, A, B, G
PJ1	VK525600	PIN JACK	1P	
PJ2	VF645900	PIN JACK	2P (WH, RE)	
PJ3	VF645900	PIN JACK	2P (WH, RE)	
Q1	IA093410	TRANSISTOR	2SA934 P, Q, R	
Q2	VE029200	TRANSISTOR	2SD1985 P, Q	
Q3	Vi530900	TRANSISTOR	2SB1185 E, F	
Q4	iC174020	TRANSISTOR	2SC1740S R, S	
Q5	IA093320	TRANSISTOR	2SA933S Q, R	
Q6	VCG19100	TRANSISTOR	2SA1323 B, C	
Q7	IA093320	TRANSISTOR	2SA933S Q, R	
Q8	iC174020	TRANSISTOR	2SC1740S R, S	
Q9	Vi530900	TRANSISTOR	2SB1185 E, F	
Q10	VE029200	TRANSISTOR	2SD1985 P, Q	
Q11	IA093320	TRANSISTOR	2SA933S Q, R	
Q12	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q13	iC174020	TRANSISTOR	2SC1740S R, S	
Q14	iC174020	TRANSISTOR	2SC1740S R, S	
Q15	iC174020	TRANSISTOR	2SC1740S R, S	
Q16	VC529400	TRANSISTOR	2SC3315 C, D	
Q17	IA093320	TRANSISTOR	2SA933S Q, R	
Q18	iC174020	TRANSISTOR	2SC1740S R, S	
Q19	IA093320	TRANSISTOR	2SA933S Q, R	
Q20	IA093320	TRANSISTOR	2SA933S Q, R	
Q22	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q23	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q25	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q26	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q28	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q29	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q30	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q31	VK432900	TRANSISTOR	2SD1915 (F) S, T	
Q32	ID040040	TRANSISTOR	2SD400	
Q33	IA093410	TRANSISTOR	2SA934 P, Q, R	
R88	HV454100	FLAME PROOF CARBON RESISTOR	10Ω 1/4W	
R95	HV454100	FLAME PROOF CARBON RESISTOR	10Ω 1/4W	
R96	VII721500	RESISTOR ARRAY	100KΩ x4	
R98	Vi272400	RESISTOR ARRAY	1KΩ x6	
R99	Vi272400	RESISTOR ARRAY	1KΩ x6	
R128	VH721400	RESISTOR ARRAY	10KΩ x3	
R149	HV456100	FLAME PROOF CARBON RESISTOR	1KΩ 1/4W	
R158	HV455180	FLAME PROOF CARBON RESISTOR	180Ω 1/4W	
R180	HV453220	FLAME PROOF CARBON RESISTOR	2.2Ω 1/4W	
SW2	KA401430	SLIDE SWITCH	SSY-322 2-2	DIGITAL OUT
T1	Vi530800	PULSE TRANSFORMER	3PTD-001	

※New Parts (新規部品)

MAIN P. C. B. & ROLLING SW P. C. B.

Schm Ref.	PART NO.	Description	Remarks	Markets
U1	Vi623600	LIGHT EMITTING MODULE	TOTX17G	
VR1	VJ692400	PRE-SET POTENTIOMETER	B100Ω	FEED GAIN
VR2	VB861900	PRE-SET POTENTIOMETER	B100KΩ	EF BALANCE
VR3	VJ693600	PRE-SET POTENTIOMETER	B10KΩ	FEED OFFSET
VR4	VB861800	PRE-SET POTENTIOMETER	B47KΩ	TR.ON OFFSET
VR5	VB861800	PRE-SET POTENTIOMETER	B47KΩ	TR.GAIN
VR6	VJ693600	PRE-SET POTENTIOMETER	B10KΩ	FOCUS GAIN ADJ.
VR7	VB861900	PRE-SET POTENTIOMETER	B100KΩ	FOCUS OFFSET AD
VR8	VJ693700	PRE-SET POTENTIOMETER	B15KΩ	TR.OFF OFFSET
VR9	VJ693600	PRE-SET POTENTIOMETER	B10KΩ	Vck ADJ.
VR10	VJ693100	PRE-SET POTENTIOMETER	B1.5KΩ	Vc17M ADJ.
XL1	VJ719800	CRYSTAL RESONATOR	16.9344MHz	
	CB069250	BINDING TIE	BK-1	
	VJ564300	RADIATOR	OSH-2025-SP	
	Vi835500	HEAT SINK	PH-0124S-B	
	BB070420	BUS BAR	L=100	
	Vi448100	SHIELD CASE	LPF	
	VK567000	DAMPER	LPF	
	Vi745400	HEAT SINK		
	ED330066	BIND HEAD SCREW	3x6 FCRW3-BL	
	VN164900	WASHER	16x9x0.35	
	VN165000	WASHER	10x6x0.35	

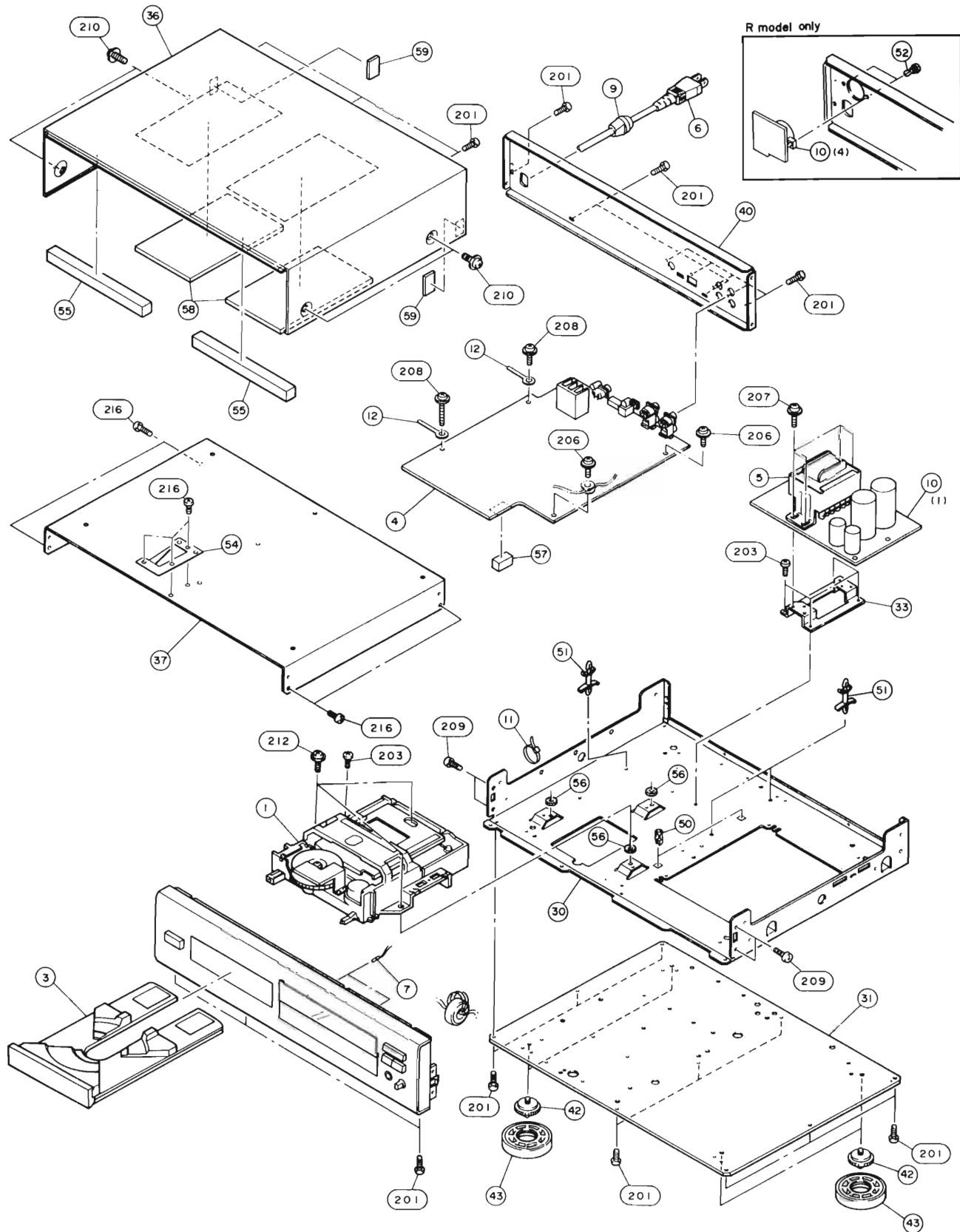
※New Parts (新規部品)

Schm Ref.	PART NO.	Description	Remarks	Markets
	VM486300	P.C.B. ASS'y, ROLLING SW		
SW900	VJ827400	PUSH SWITCH	EVQ-214 04H	FILE
SW901	VJ827400	PUSH SWITCH	EVQ-214 04H	INDEX
SW902	VJ827400	PUSH SWITCH	EVQ-214 04H	REPEAT
SW903	VJ827400	PUSH SWITCH	EVQ-214 04H	RANDOM
SW904	VJ827400	PUSH SWITCH	EVQ-214 04H	4
SW905	VJ827400	PUSH SWITCH	EVQ-214 04H	5
SW906	VJ827400	PUSH SWITCH	EVQ-214 04H	6
SW907	VJ827400	PUSH SWITCH	EVQ-214 04H	7
SW908	VJ827400	PUSH SWITCH	EVQ-214 04H	PRUG
SW909	VJ827400	PUSH SWITCH	EVQ-214 04H	TAPE
SW910	VJ827400	PUSH SWITCH	EVQ-214 04H	CLEAR
SW911	VJ827400	PUSH SWITCH	EVQ-214 04H	+10
SW912	VJ827400	PUSH SWITCH	EVQ-214 04H	1
SW913	VJ827400	PUSH SWITCH	EVQ-214 04H	2
SW914	VJ827400	PUSH SWITCH	EVQ-214 04H	3
SW915	VJ827400	PUSH SWITCH	EVQ-214 04H	SKIP→
SW916	VJ827400	PUSH SWITCH	EVQ-214 04H	←SKIP
SW917	VJ827400	PUSH SWITCH	EVQ-214 04H	SEARCH→
SW918	VJ827400	PUSH SWITCH	EVQ-214 04H	←SEARCH
SW919	VJ827400	PUSH SWITCH	EVQ-214 04H	8
SW920	VJ827400	PUSH SWITCH	EVQ-214 04H	9
SW921	VJ827400	PUSH SWITCH	EVQ-214 04H	0
SW922	VJ827400	PUSH SWITCH	EVQ-214 04H	TIME
	Vi491100	FERRITE CORE	BP53RB19012080H	

※New Parts (新規部品)

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■ EXPLODED VIEW



MECHANICAL PARTS

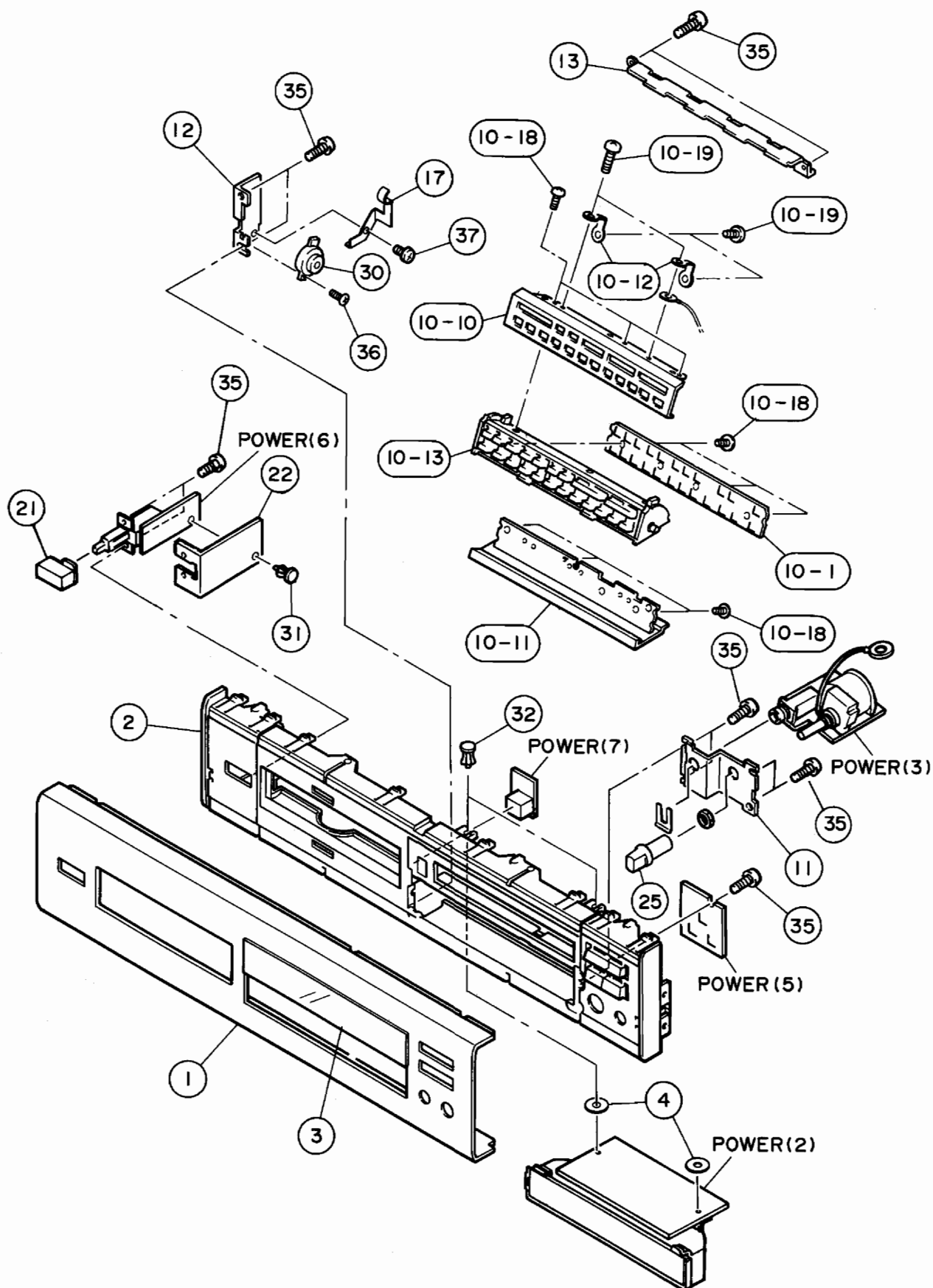
Ref. NO.	PART NO.	Description	Remarks	Markets
* 1	VK225700	DISC MECHANISM UNIT	DM-90E	
* 3	VM524800	TRAY ASS'y	BL	
* 3	VM524900	TRAY ASS'y	TI	
* 4	VM562700	P.C.B. ASS'y, MAIN		U,C
* 4	VM562800	P.C.B. ASS'y, MAIN		R
* 4	VM562900	P.C.B. ASS'y, MAIN		A,B,G
5	XG464A00	POWER TRANSFORMER		U,C
5	XG465A00	POWER TRANSFORMER		R
5	XG466A00	POWER TRANSFORMER		A,B
5	XG467A00	POWER TRANSFORMER		G
6	MG001630	POWER CORD	7.0A 250V 2.0m	R
6	MG002220	POWER CORD	10A 125V 2.0m	U,C
6	MG002310	POWER CORD	7.5A 250V 2.0m	A
6	MG002320	POWER CORD	2.5A 250V 2.0m	G
6	MG002330	POWER CORD	6.0A 300V 2.0m	B
7	VI284600	LAMP	150mA 8V	
9	CB620190	CORD STOPPER	CM-22B	R,A,B,G
9	CB620200	CORD STOPPER	CM-22C	U,C
* 10	VM486000	P.C.B. ASS'y, POWER		U,C
* 10	VM486100	P.C.B. ASS'y, POWER		R
* 10	VM486200	P.C.B. ASS'y, POWER		A,B,G
11	CB069250	BINDING TIE	BK-1	
12	VC380200	BINDING TIE	S-15	
30	VK085500	CHASSIS		
* 31	VL706200	BOTTOM COVER		
33	VJ795400	FRAME	TRANSFORMER	
36	VL705400	TOP COVER	BL	
36	VL705500	TOP COVER	TI	
37	VH881800	INNER TOP		
* 40	VL705700	REAR PANEL		U,C
* 40	VL705900	REAR PANEL		R
* 40	VL706000	REAR PANEL		A,B
* 40	VL706100	REAR PANEL		G
42	VG143400	LEG		
43	VG264300	LEG BASE ASS'y		
50	VI048500	PC SUPPORT		
51	VK087200	PC SUPPORT	No.2451	
52	CB601420	PLASTIC RIVET	No.6204	R
54	VJ685300	GROUND PLATE		
* 55	VM525000	CUSHION		
* 56	VL909700	SPACER		
57	VI299500	SHEET		
58	VF222600	DAMPER		
59	VH625500	DAMPER		
201	EN301010	BIND HEAD BONDING TAP. SCREW 3x8	FCRM3-BL	
203	E1130056	BIND HEAD B-TITE SCREW 3x5	FNM3-3G	
206	EX600250	CUP B-TITE SCREW 3x10	FCRM3-BL	
* 207	EX602550	BW HEAD B-TITE SCREW 4x10-8	FCM3	
* 208	EX602560	BW HEAD P-TITE SCREW 3x20-8	FCRM3-BL	
209	EP600730	BIND HEAD P-TITE SCREW 3x8	FCRM3-BL	

*New Parts (新規部品)

Ref. NO.	PART NO.	Description	Remarks	Markets
210	EK385090	BW HEAD SCREW	4x8 ZMC2-BL	BL
210	EX601150	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	TI
± 212	EX602580	BIND HEAD B-TITE SCREW	3x10 PW ZMC2-BL	
± 216	EO330086	FLAT HEAD B-TITE SCREW	3x8 FCN3	PACK
ACCESSORIES				
± 70	VL964400	REMOTE CONTROL TRANSMITTER		
± 70-1	CX672770	LID		
	VC167600	PIN-PLUG CORD	2P 0.8m	
		DRY CELL	SUM-3,AA,R6P	

*New Parts (新規部品)

CDX-1060

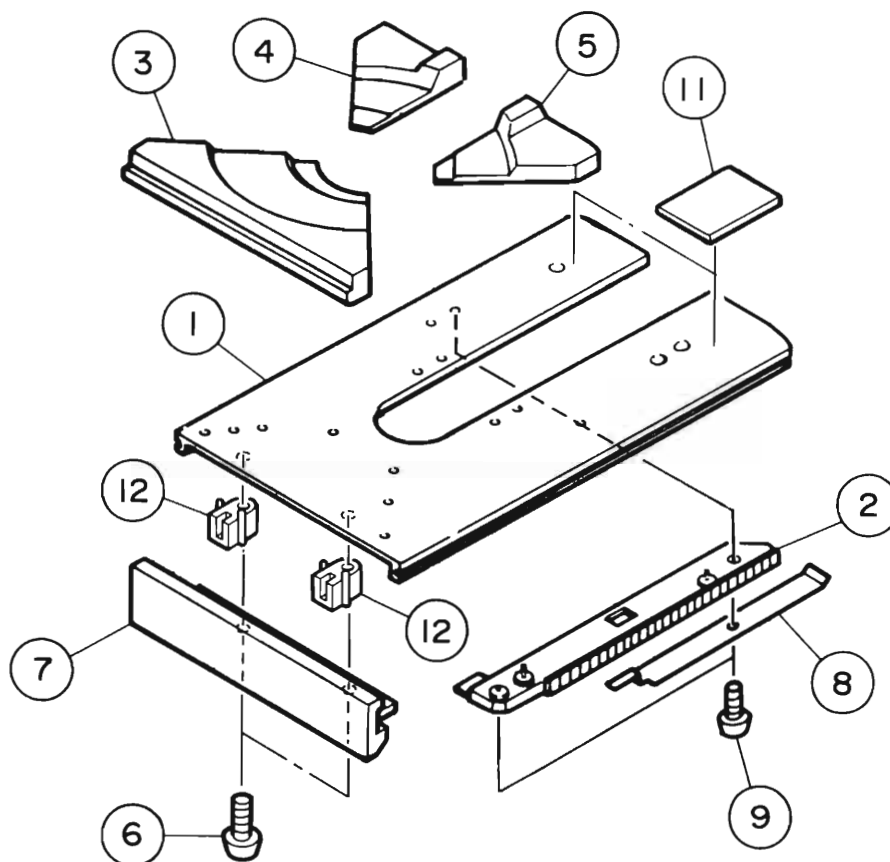
EXPLODED VIEW (Panel Unit)

■ MECHANICAL PARTS (Panel Unit)

Ref. NO.	PART NO.	Description	Remarks	Markets
* 1	VL706600	FRONT PANEL	BL	
* 1	VL706700	FRONT PANEL	TI	
* 2	VL708200	SUB PANEL	BL	
* 2	VL708300	SUB PANEL	TI	
* 3	VL709000	WINDOW PANEL		
4	CA070810	WASHER		
* 10- 1	VM486300	P.C.B. ASS'y, ROLLING SW		
* 10-10	VL707600	PANEL, ROLLING	T	BL
* 10-10	VL707700	PANEL, ROLLING	T	TI
* 10-11	VL707900	PANEL, ROLLING	L	BL
* 10-11	VL708100	PANEL, ROLLING	L	TI
* 10-12	VL706400	GROUND PLATE		
* 10-13	VL708600	BUTTON, ROLLING		BL
* 10-13	VL708700	BUTTON, ROLLING		TI
10-18	E1320066	BIND HEAD P-TITE SCREW	2x6	ZMC2-BL PACK
* 10-19	VC298900	BIND HEAD B-TITE SCREW	2.6x6	FCRM3-BL
* 11	VL810500	HOLDER, HP		
* 12	VL810600	HOLDER, DAMPER		
* 13	VL920600	PLATE		
* 17	VL810800	SPRING	P	
21	VH841900	BUTTON	POWER	BL
21	VH842000	BUTTON	POWER	TI
22	VK084800	SHIELD PLATE		
* 25	VL709200	KNOB	VR	BL
* 25	VL709300	KNOB	VR	TI
30	VGG64000	DAMPER ASS'y		
31	CB602970	PLASTIC RIVET	No.920	
32	CB603240	PLASTIC RIVET	No.590	
35	EP600730	BIND HEAD P-TITE SCREW	3x8	FCRM3-BL
36	EA320046	PAN HEAD SCREW	2x4	FCRM3-BL PACK
37	E1030046	BIND HEAD TAPPING SCREW	3x4	ZMC2-Y PACK

*New Parts (新規部品)

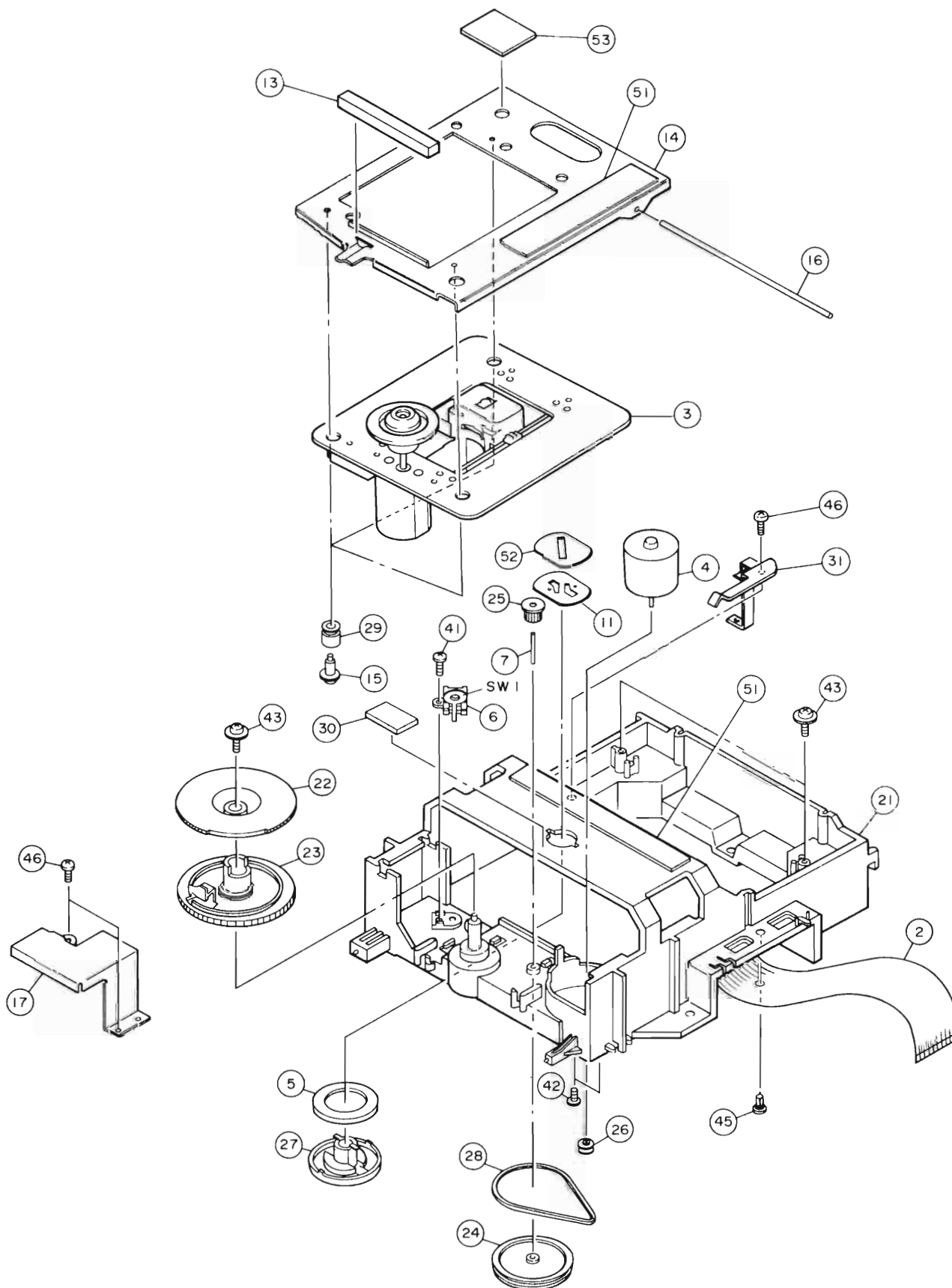
1 ■ EXPLODED VIEW (Tray Ass'y)



Ref. NO.	PART NO.	Description	Remarks	Markets
※	VM524800	TRAY ASS'y	BL	
※	VM524900	TRAY ASS'y	TI	
※ 1	VL709500	TRAY BASE	BL	
※ 1	VL709600	TRAY BASE	TI	
2	VH651300	RACK, TRAY		
3	Vi807600	DISC MAT ASS'y	FT	BL
3	Vi809200	DISC MAT ASS'y	FT	TI
4	Vi807700	DISC MAT ASS'y	RR	BL
4	Vi809300	DISC MAT ASS'y	RR	TI
5	Vi807800	DISC MAT ASS'y	RL	BL
5	Vi809400	DISC MAT ASS'y	RL	TI
6	Ei330166	BIND HEAD TAPPING SCREW	3x16	FCRM3-BL PACK
※ 7	VL709700	LID, TRAY		BL
※ 7	VL709800	LID, TRAY		TI
8	VJ920100	GROUND PLATE		
※ 9	EO226086	FLAT HEAD B-TITE SCREW	2.6x8	FNM3-3G PACK
11	VK565600	DAMPER	TRAY	
※ 12	VL710000	SPACER, LID		

※ New Parts (新規部品)

■ EXPLODED VIEW (DM-90E Unit)



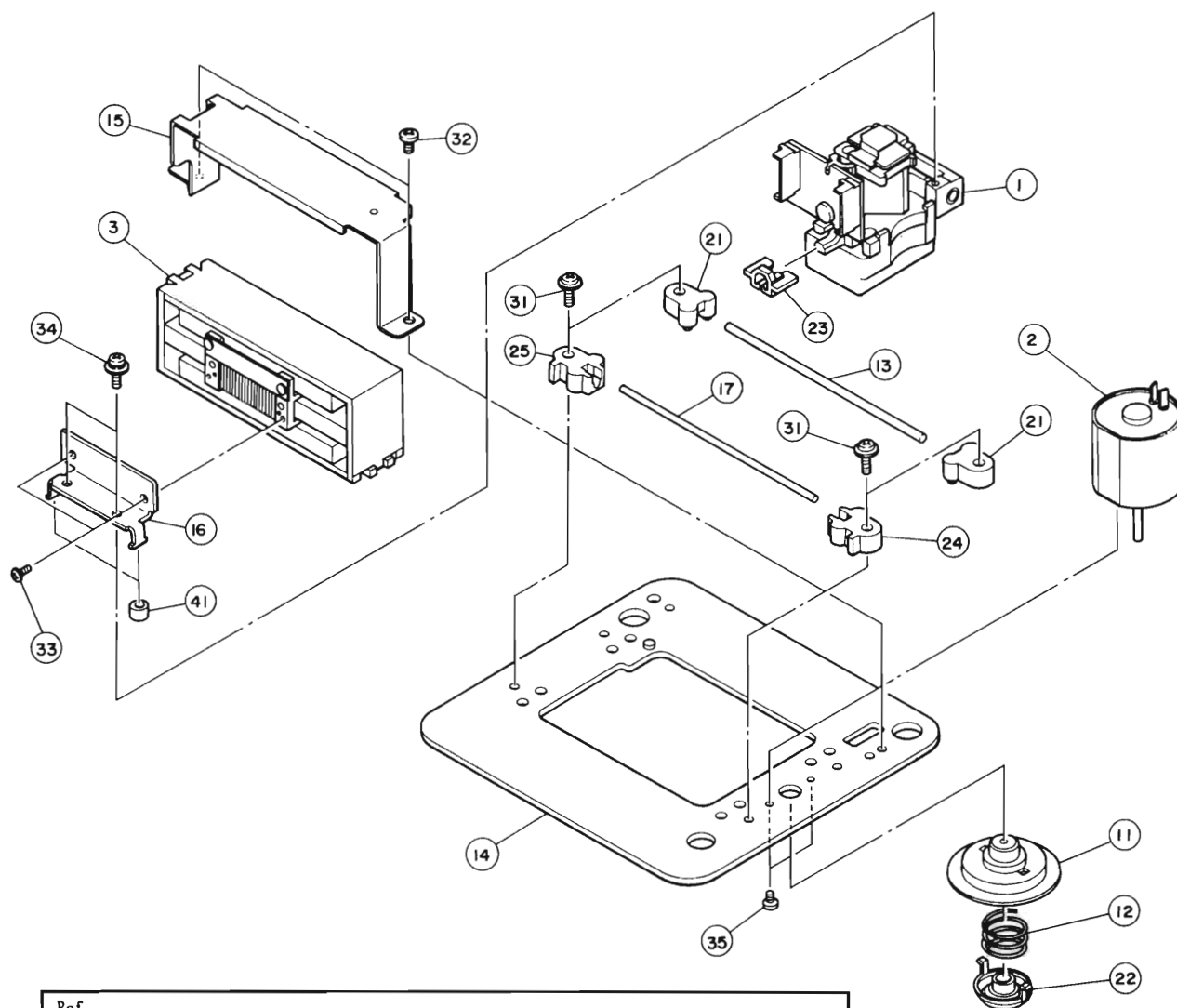
MECHANICAL PARTS (DM-90E Unit)

Ref. NO.	PART NO.	Description	Remarks	Markets
※	VK225700	DISC MECHANISM UNIT	DM-90E	
2	XG926A00	FLEXIBLE P.C.B.		
3	Vi489900	SPINDLE MECHANISM ASS'y		
4	VE415100	MOTOR, F.L.S		
5	Vi493400	MAGNET		
6	Vi797900	P.C.B. ASS'y, LOADING SW		
6-SW1	Vi294000	LEVER SWITCH	SSCF21	
11	VH924700	FLANGE, CLAMPER		
12	AA619330	SHAFT S	φ 2x23L	
13	VJ649700	CUSHION	HANGER	
14	VH649700	HANGER		
15	VH649500	SPECIAL SCREW		
16	VH924800	SHAFT, HINGE		
17	Vi776700	GEAR, COVER		
21	VK225600	MECHANISM BASE 2		
22	VH650600	GEAR, LOADING		
23	VH650700	CAM, LIFTING		
24	VH651000	PULLEY	DRIVE	
25	VH650800	GEAR, SMALL		
26	CB658510	PULLEY	P	
27	VH651200	CLAMPER		
※	VN244900	BELT, LOADING		
29	VH650400	DAMPER		
30	VJC21200	SPACER		
31	VJ920000	SPRING, TRAY/BE		
41	EP620160	BIND HEAD P-TITE SCREW	2.6x6 ZMC2-BL	
42	ED320046	BIND HEAD SCREW	2x4 ZMC2-BL PACK	
※	EX602280	BW HEAD P-TITE SCREW	3x12-10 FCRM3-BL	
45	CB068880	PLASTIC RIVET	No.1027	
46	EX000400	BIND HEAD P-TITE SCREW	3x6 ZMC2-BL	
51	VK565400	DAMPER	MECHA. BASE	
52	VK565500	DAMPER	FRANGE	
53	VK678600	SHEET	SLIDE	

※New Parts (新規部品)

CDX-1060

EXPLODED VIEW (Spindle Mecha. Ass'y)



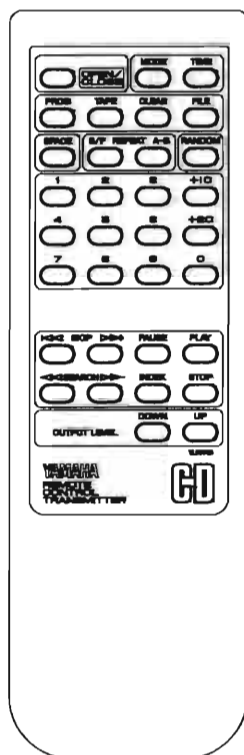
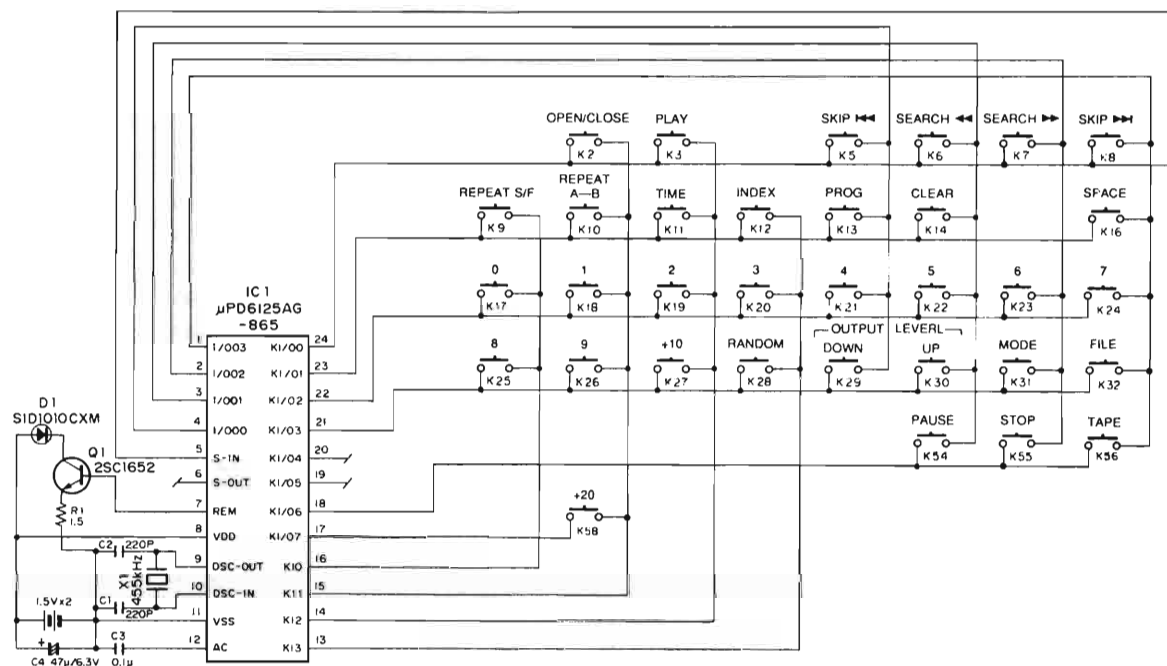
Ref. NO.	PART NO.	Description	Remarks	Markets
1	Vi517200	OPTICAL PICK UP HEAD	TAOHS-KP2	
2	Vi070800	MOTOR		
3	VL473100	LINEAR MOTOR	DC12V SLA2001B	
11	Vi070600	DISC TABLE		
12	Vi030800	SPRING		
13	VH649400	SHAFT, FEED		
14	VL250900	CHASSIS		
15	VL250700	HOLDER, LEAR		
16	VL250800	PLATE, CONNECTING		
17	VH892900	SHAFT	FEED	
21	VH650200	HOLDER	SHAFT	
22	Vi030700	SENSOR CAP, '89		
23	VH604800	SLIDER, SHAFT		
24	VH604900	SUPPORT, SHFAT	F	
25	VH605000	SUPPORT, SHAFT	B	
31	EX602240	BW HEAD B-TITE SCREW	3x10 FCRM3-BL	
32	Ei026056	BIND HEAD B-TITE SCREW	2.6x5 ZMC2-Y PACK	
33	VD016500	BIND HEAD P-TITE SCREW	2x4 ZMC2-Y	
34	EX602570	BIND HEAD SCREW	2.6x8 SP FCRM3-BL	
35	ED320046	BIND HEAD SCREW	2x4 FCRM3-BL PACK	
41	VL472900	CUSHION	PU	

※New Parts (新規部品)

REMOTE CONTROL TRANSMITTER

CDX-1060

■ SCHEMATIC DIAGRAM

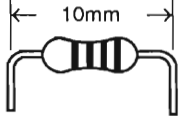


CUSTOM CODE C0 C1 C2 C3 C4 C5 C6 C7
1 0 0 1 1 1 1 0

KEY No.	HEX	D0	D1	D2	D3	D4	D5	D6	D7	FUNCTION
2	01	1	0	0	0	0	0	0	0	OPEN/CLOSE
3	02	0	1	0	0	0	0	0	0	PLAY
5	04	0	0	1	0	0	0	0	0	SKIP
6	05	1	0	1	0	0	0	0	0	SEARCH
7	06	0	1	1	0	0	0	0	0	SEARCH
8	07	1	1	1	0	0	0	0	0	SKIP
9	08	0	0	0	1	0	0	0	0	REPEAT S/F
10	09	1	0	0	1	0	0	0	0	REPEAT A-B
11	0A	0	1	0	1	0	0	0	0	TIME
12	0B	1	1	0	1	0	0	0	0	INDEX
13	0C	0	0	1	1	0	0	0	0	PROG
14	0D	1	0	1	1	0	0	0	0	CLEAR
16	0F	1	1	1	1	0	0	0	0	SPACE
17	10	0	0	0	0	1	0	0	0	0
18	11	1	0	0	0	1	0	0	0	1
19	12	0	1	0	0	1	0	0	0	2
20	13	1	1	0	0	1	0	0	0	3
21	14	0	0	1	0	1	0	0	0	4
22	15	1	0	1	0	1	0	0	0	5
23	16	0	1	1	0	1	0	0	0	6
24	17	1	1	1	0	1	0	0	0	7
25	18	0	0	0	1	1	0	0	0	8
26	19	1	0	0	1	1	0	0	0	9
27	1A	0	1	0	1	1	0	0	0	+10
28	1B	1	1	0	1	1	0	0	0	RANDOM
29	1C	0	0	1	1	1	0	0	0	OUTPUT LEVERL DOWN
30	1D	1	0	1	1	1	0	0	0	OUTPUT LEVERL UP
31	1E	0	1	1	1	1	0	0	0	MODE
32	1F	1	1	1	1	1	0	0	0	FILE
54	55	1	0	1	0	1	0	1	0	PAUSE
55	56	0	1	1	0	1	0	1	0	STOP
56	57	1	1	1	0	1	0	1	0	TAPE
58	59	1	0	0	1	1	0	1	0	+20

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	HF85 3100	12 K Ω	HJ35 7120	HF85 7120
1.8 Ω	HJ35 3180	*	15 K Ω	HJ35 7150	HF85 7150
2.2 Ω	HJ35 3220	HF85 3220	18 K Ω	HJ35 7180	HF85 7180
3.3 Ω	HJ35 3330	HF85 3330	22 K Ω	HJ35 7220	HF85 7220
4.7 Ω	HJ35 3470	HF85 3470	27 K Ω	HJ35 7270	HF85 7270
5.6 Ω	HJ35 3560	HF85 3560	33 K Ω	HJ35 7330	HF85 7330
10 Ω	HJ35 4100	HF85 4100	39 K Ω	HJ35 7390	HF85 7390
15 Ω	HJ35 4150	HF85 4150	47 K Ω	HJ35 7470	HF85 7470
22 Ω	HJ35 4220	HF85 4220	56 K Ω	HJ35 7560	HF85 7560
27 Ω	HJ35 4270	HF85 4270	68 K Ω	HJ35 7680	HF85 7680
33 Ω	HJ35 4330	HF85 4330	82 K Ω	HJ35 7820	HF85 7820
39 Ω	HJ35 4390	HF85 4390	91 K Ω	HJ35 7910	HF85 7910
47 Ω	HJ35 4470	HF85 4470	100 K Ω	HJ35 8100	HF85 8100
56 Ω	HJ35 4560	HF85 4560	120 K Ω	HJ35 8120	HF85 8120
68 Ω	HJ35 4680	HF85 4680	150 K Ω	HJ35 8150	HF85 8150
82 Ω	HJ35 4820	HF85 4820	180 K Ω	HJ35 8180	HF85 8180
100 Ω	HJ35 5100	HF85 5100	220 K Ω	HJ35 8220	HF85 8220
110 Ω	HJ35 5110	HF85 5110	270 K Ω	HJ35 8270	HF85 8270
120 Ω	HJ35 5120	HF85 5120	330 K Ω	HJ35 8330	HF85 8330
150 Ω	HJ35 5150	HF85 5150	390 K Ω	HJ35 8390	HF85 8390
160 Ω	HJ35 5160	*	470 K Ω	HJ35 8470	HF85 8470
180 Ω	HJ35 5180	HF85 5180	560 K Ω	HJ35 8560	HF85 8560
220 Ω	HJ35 5220	HF85 5220	680 K Ω	HJ35 8680	HF85 8680
270 Ω	HJ35 5270	HF85 5270	820 K Ω	HJ35 8820	HF85 8820
330 Ω	HJ35 5330	HF85 5330	1.0 M Ω	HJ35 9100	HF85 9100
390 Ω	HJ35 5390	HF85 5390	1.2 M Ω	HJ35 9120	*
470 Ω	HJ35 5470	HF85 5470	1.5 M Ω	HJ35 9150	HF85 9150
510 Ω	*	HF85 5510	1.8 M Ω	HJ35 9180	HF85 9180
560 Ω	HJ35 5560	HF85 5560	2.2 M Ω	HJ35 9220	HF85 9220
680 Ω	HJ35 5680	HF85 5680	3.3 M Ω	HJ35 9330	HF85 9330
820 Ω	HJ35 5820	HF85 5820	3.9 M Ω	HJ35 9390	*
910 Ω	HJ35 5910	HF85 5910	4.7 M Ω	HJ35 9470	HF85 9470
1.0 K Ω	HJ35 6100	HF85 6100			
1.2 K Ω	HJ35 6120	HF85 6120			
1.5 K Ω	HJ35 6150	HF85 6150			
1.8 K Ω	HJ35 6180	HF85 6180			
2.0 K Ω	HJ35 6200	HF85 6200			
2.2 K Ω	HJ35 6220	HF85 6220			
2.4 K Ω	HJ35 6240	HF85 6240			
2.7 K Ω	HJ35 6270	HF85 6270			
3.0 K Ω	HJ35 6300	HF85 6300			
3.3 K Ω	HJ35 6330	HF85 6330			
3.6 K Ω	HJ35 6360	HF85 6360			
3.9 K Ω	HJ35 6390	HF85 6390			
4.7 K Ω	HJ35 6470	HF85 6470			
5.1 K Ω	HJ35 6510	HF85 6510			
5.6 K Ω	HJ35 6560	HF85 6560			
6.8 K Ω	HJ35 6680	HF85 6680			
8.2 K Ω	HJ35 6820	HF85 6820			
9.1 K Ω	HJ35 6910	HF85 6910			
10 K Ω	HJ35 7100	HF85 7100			

1/4W Type
HJ35 ○○○○


1/6W Type
HF85 ○○○○
