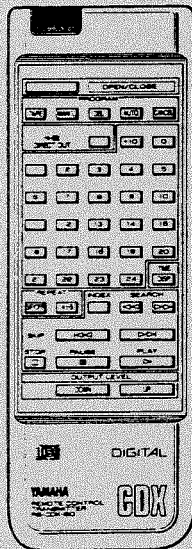
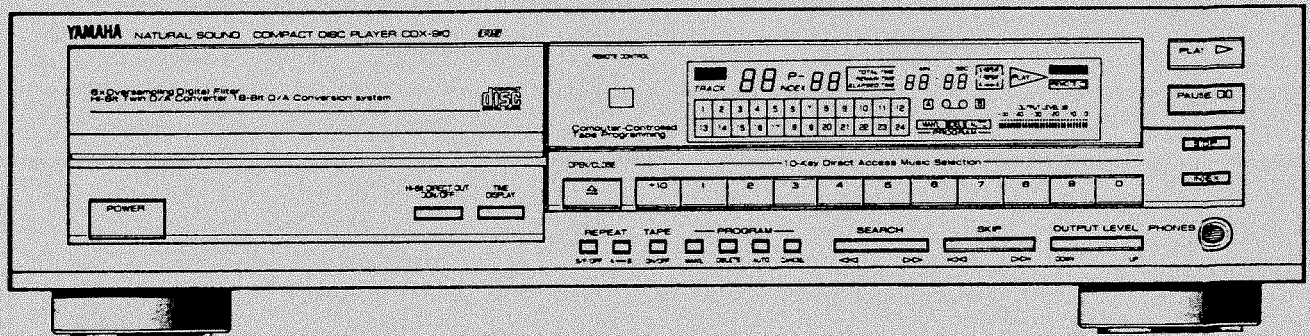


COMPACT DISC PLAYER CDX-910/U

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.

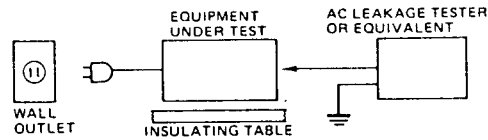
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TO SERVICE PERSONNEL

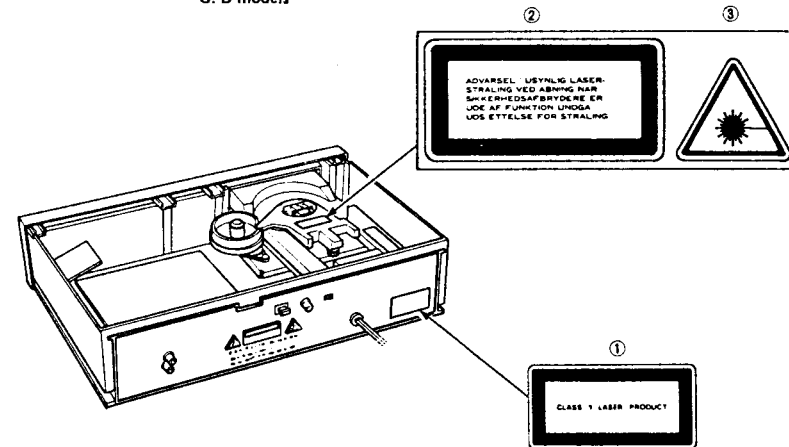
- Critical Components Information.**
Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.
- Leakage Current Measurement (For 120V Model Only).**
When service has been completed, it is imperative that you verify 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.

G, B models



English

- THIS LABEL IS ATTACHED AT THE PLACE ILLUSTRATED TO INFORM THAT THE APPARATUS CONTAINS A LASER COMPONENT.
 - THIS LABEL IS ATTACHED IN THE POSITION SHOWN IN THE ILLUSTRATION TO WARN THAT ANY FURTHER PROCEDURE WILL BRING THE USER INTO EXPOSURE WITH THE LASER BEAM.
 - THE WARNING LABEL INFORMING OF RADIATION 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 LASER PRODUCTS OF CLASS 1.
- CAUTION—USE OF CONTROLS, ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN, MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Swedish

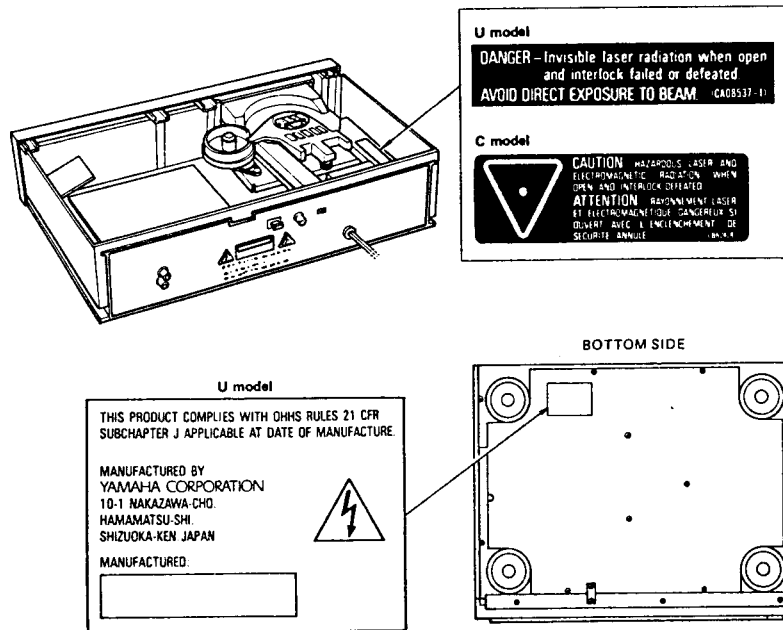
- PÅSKRIFTEN SITTER PÅ APPARATEM SOM VISAS SOM EN UPPMANING OM ATT APPARATEN OMFATTAR EN INBYGGD LASERKOMPONENT.
 - TEXTSKYLTEN FÖR LASERN ÄR PLACERAD PÅ APPARATEN SOM EN UPPMANING OM ATT APPARATEN INNEHÅLLER EN LASERKOMPONENT.
 - VARNINGSSKYLTEN FÖR STRÅLNING HAR PLACERATS I APPARATEN, SOM BILDEN VISAR, SOM EN VARNING OM YTTRE 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

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

Finnish

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



INTERLOCK OPERATION

The Digital Compact Disc Player reads the disc signals by laser beam detection. It must be avoided for the human body to be directly exposed to the laser beam. Human eyes are especially badly affected by the laser beam. This unit is therefore equipped with an interlock to prevent unnecessary laser output.

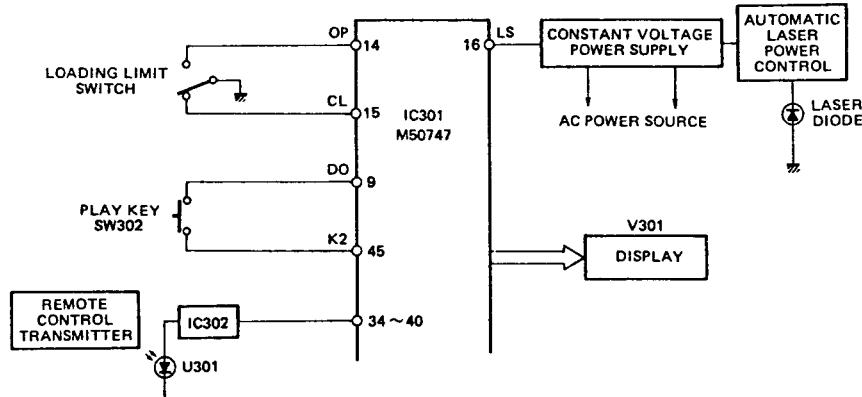
Laser output is controlled by the injection or cutoff of the constant voltage source to the laser diode at Pin 16 (LS) of IC301 (M50747), and also by Automatic Laser Power Control Circuit. When Pin 16 is in "H" (High) level, the laser emits the beam. When Pin 16 is in "L" (Low) level, the laser does not emit the beam.

Pin 16 is set in "H" level when the unit is loaded with the disc and it reads the index signals or when the unit is set in the play mode after that. 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) The pickup is located at the area of minimum internal circumference.

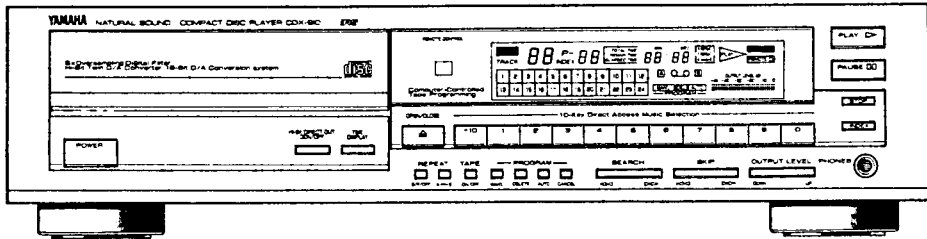
After the above conditions are met and the index signals have been read, the laser emits the beam when the following two conditions are met.

- 1) when the PLAY key (SW302) or that of Remote Control Transmitter is pressed.
- 2) when the **▶** display is ON.

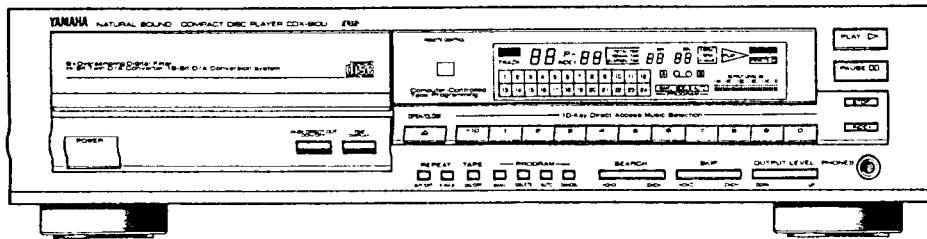


FRONT PANELS

• CDX-910

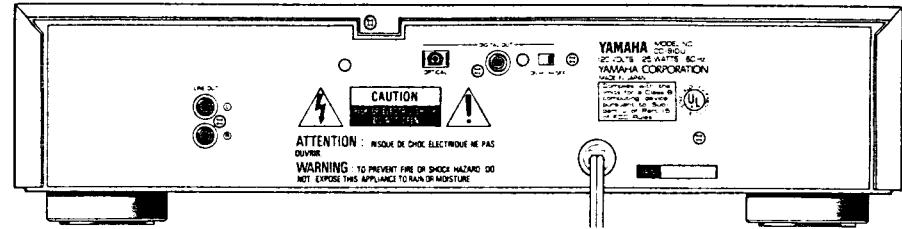


• CDX-910U

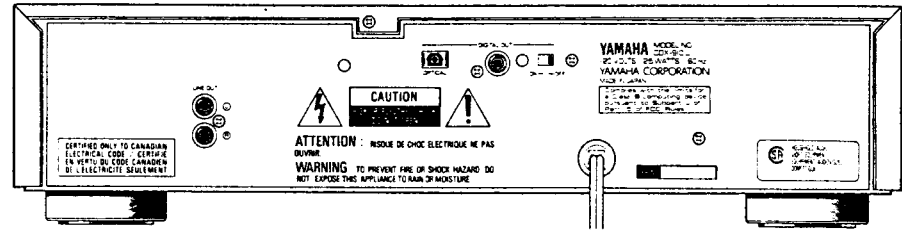


REAR PANELS

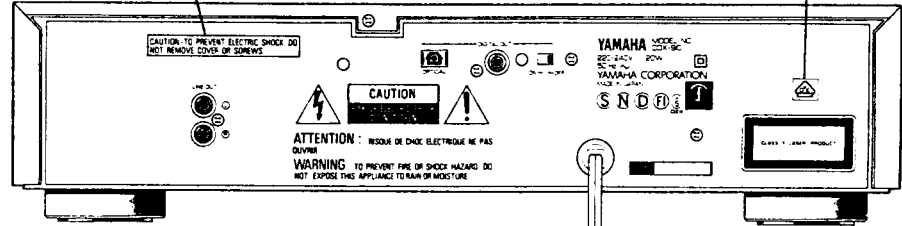
▼ U model



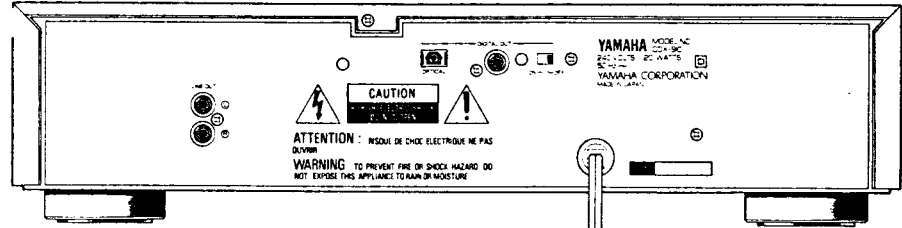
▼ C model



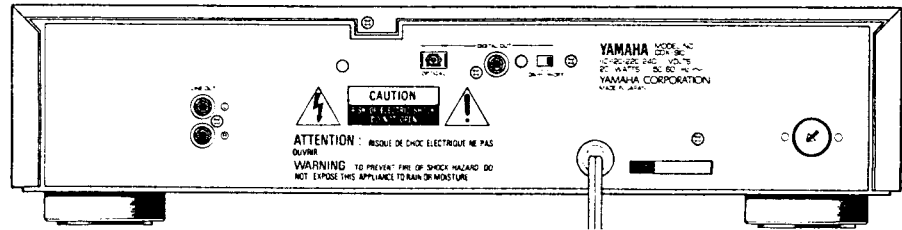
▼ G, B models



▼ A model



▼ R model



■ SPECIFICATIONS

■ AUDIO SECTION

Frequency Response	2Hz ~ 20kHz ± 0.3dB
De-Emphasis Equalization	± 0.3dB (EIAJ)
Harmonic Distortion + Noise	Less than 0.003%, 1kHz (EIAJ)
S/N Ratio	118dB (EIAJ)
Dynamic Range	More than 100dB (EIAJ)
Wow & Flutter	Unmeasurable
Channel Separation	More than 100dB, 1kHz (EIAJ)
Output Voltage	2V (EIAJ)
Output Impedance	2.2kΩ
Headphone Output	450mV/150Ω (-20dB)

■ INTERNAL SYSTEMS

Optical Pick-up	3-beam laser
Error Correction System	CIRC, dual error correction system
D/A Conversion	18 bit floating (L, R twin)
Filter	Digital filter and 3rd order new active filter

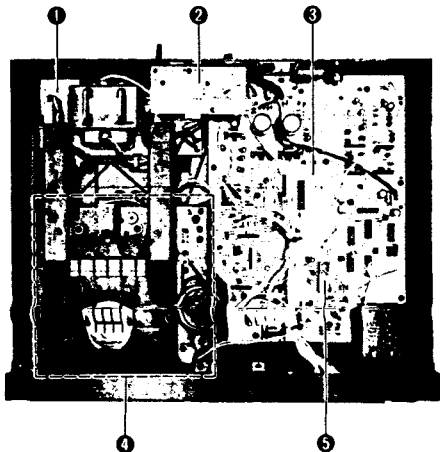
■ GENERAL

Power Requirements	
U, C models	120V AC, 60Hz
G, B models	220-240V AC, 50Hz
A model	240V AC, 50Hz
R model	110-120/220-240V AC, 50/60Hz
Power Consumption	
U, C models	25W
G, B, A, R models	20W
Dimensions (W x H x D)	
	435 x 107 x 348 mm (17-1/8" x 4-3/16" x 13-11/16")
Weight	7.5kg (16 lbs 8 oz.)
Accessories	
	Pin plug cord
	Remote control transmitter (RS-CDX910)
	Dry-cell: X2 (Size "AA", "R06")

*Specification subject to change without notice.

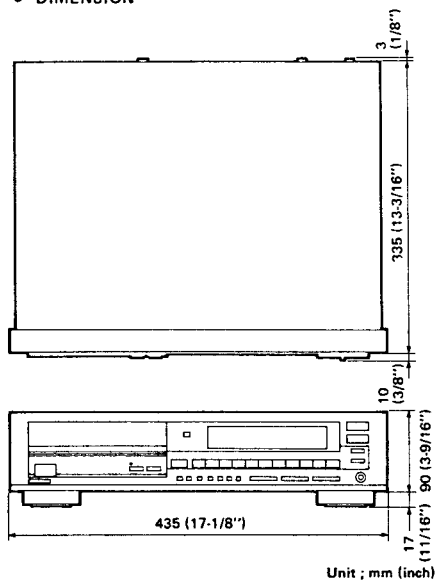
- U U. S. A model
- C Canadian model
- B British model
- A Australian model
- G European model
- R General model

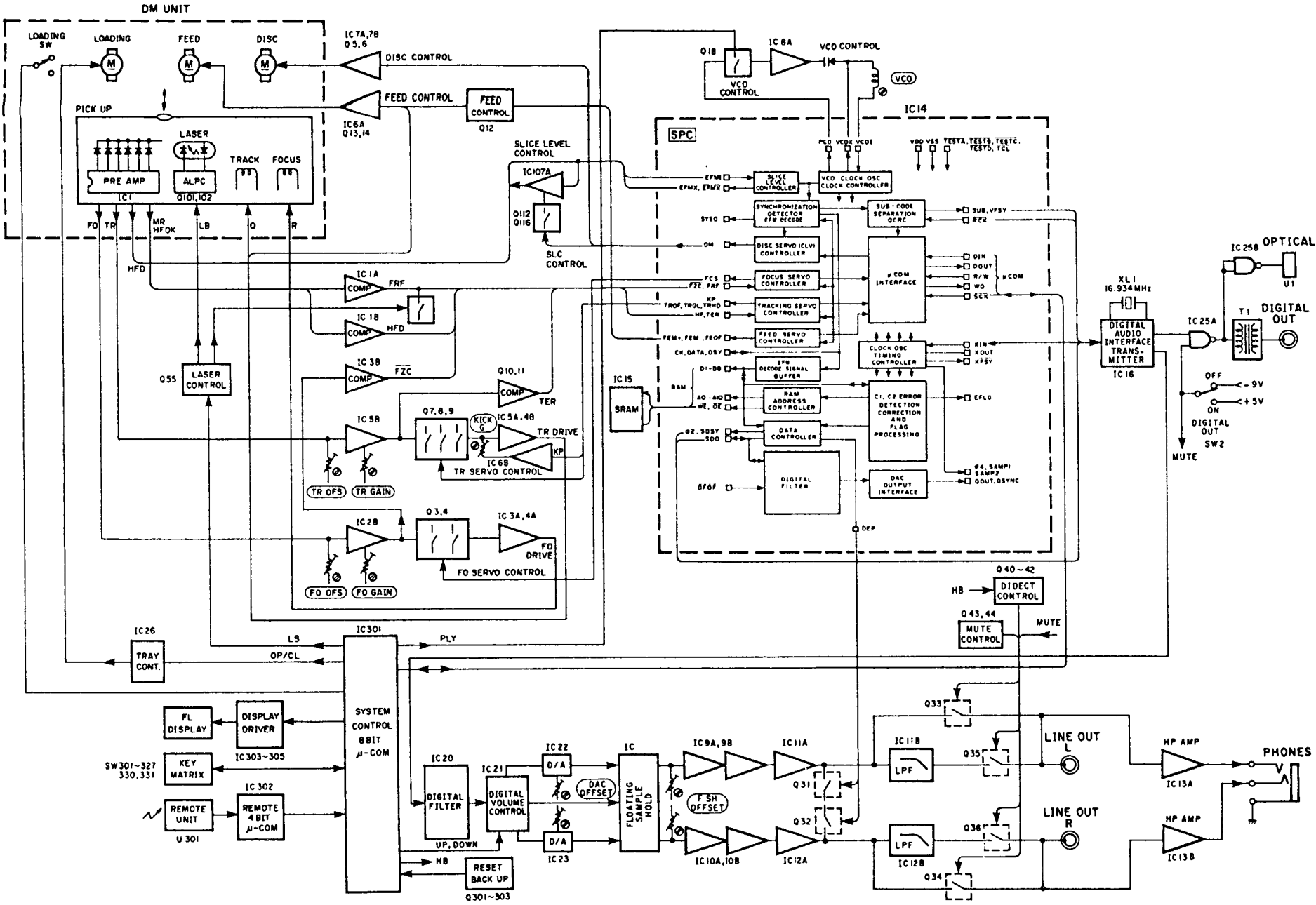
■ INTERNAL VIEW



- ① POWER SUPPLY UNIT
- ② MAIN CIRCUIT BOARD (2)
- ③ MAIN CIRCUIT BOARD (1)
- ④ DISC MECHANISM UNIT
- ⑤ IC16 : YM3613B (Digital Audio Interface Transmitter)

● DIMENSION





DISASSEMBLY PROCEDURES

(Remove parts in disassembly order as numbered.)

1. Removal of Top Cover

- a. Remove 5 screws (①) in Fig. 1, and slide the Top Cover to the back side.

2. Removal of Front Panel

- a. Remove 9 screws (②) in Fig. 1, and pull the Front Panel forward.

3. Removal of Bottom Cover

- a. Remove 12 screws (③) in Fig. 1.

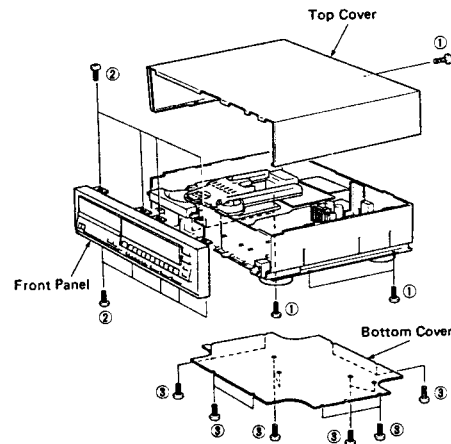


Fig. 1

4. Removal of Disc Tray Ass'y

- a. Pull out the Disc Tray Ass'y by turning the loading cam and remove it by pressing the hook.

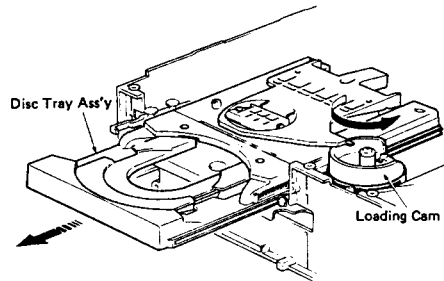


Fig. 2

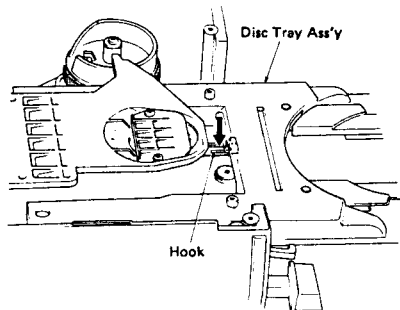


Fig. 3

5. Removal of Disc Mechanism Unit

- a. Remove 4 screws (④) in Fig. 4.

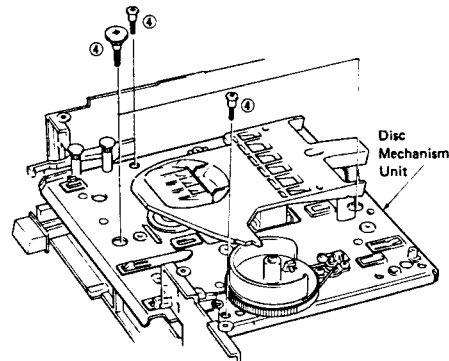


Fig. 4

6. Removal of Disc Motor

- a. Remove 2 screws (⑤) fixing Flapper in Fig. 5 and then remove the flapper.

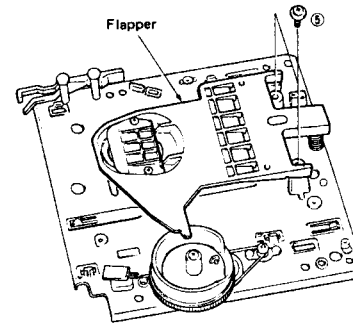


Fig. 5

- b. Pull off the disc table and remove 2 screws (⑥) in Fig. 6.

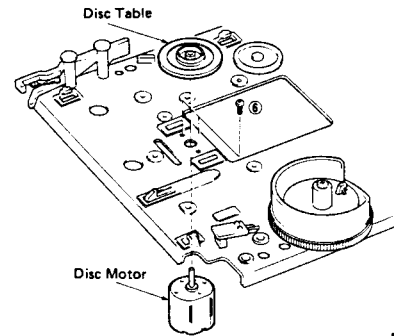
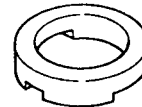


Fig. 6

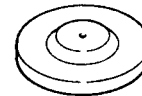
● **Installation of disc table**

※ The following tools are necessary for installation.

Height adjustment gauge (TX913130)



Disc table installer (TX913140)



- a. Install the height adjustment gauge as shown in Fig. 7.

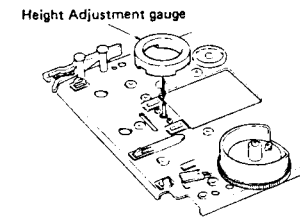


Fig. 7

- b. Carefully apply a small amount of anaerobic glue to motor shaft (Loc-Tite # 638).
- c. Install turntable onto motor shaft with disc table installer as shown in Fig. 8.
- d. Clean excess glue from top of turntable.
- e. Allow 5 minutes for glue to cure before removing disc table installer and height gauge.

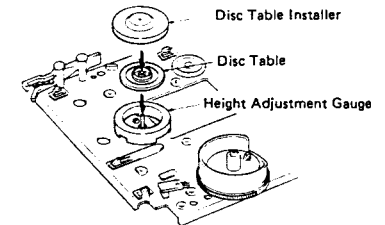


Fig. 8

- f. Check that the disc table height is as specified below.

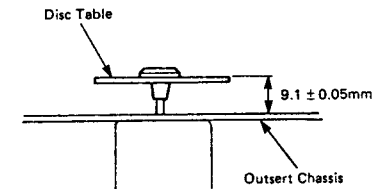


Fig. 9

ADJUSTMENTS

• Necessary items

Measuring instruments

- Oscilloscope : x 2
(At least one shall have a bandwidth of 50 MHz or more)
- Audio frequency oscillator (A.F. OSC) : x 1
- Laser power meter : x 1
(LEADER LPM-8000 (P/N TX915140) or equivalent)
- AC voltmeter (ACVM) : x 2
(One dual channel or two single channel meters)
- DC voltmeter (DCVM) : x 1
- Frequency counter (FC) : x 1

Jigs

- Test disc : x 1
(YEDS-18 P/N TX911730, YEDS-7 P/N TX911320 or Philips test sample disc)
- Filter (See Fig. A) : x 1
- Shorting cord : x 1

Tools

- Screwdriver : x 1
(For-Pre-Set Potentiometer adjustment)
- Core screwdriver : x 1

• Adjustment jig (with internal filter)

Connect the filter in Fig. A before measurement.

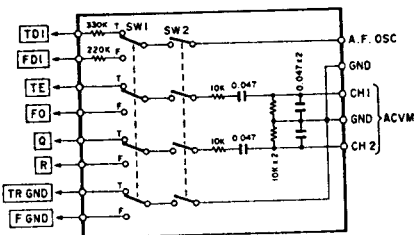


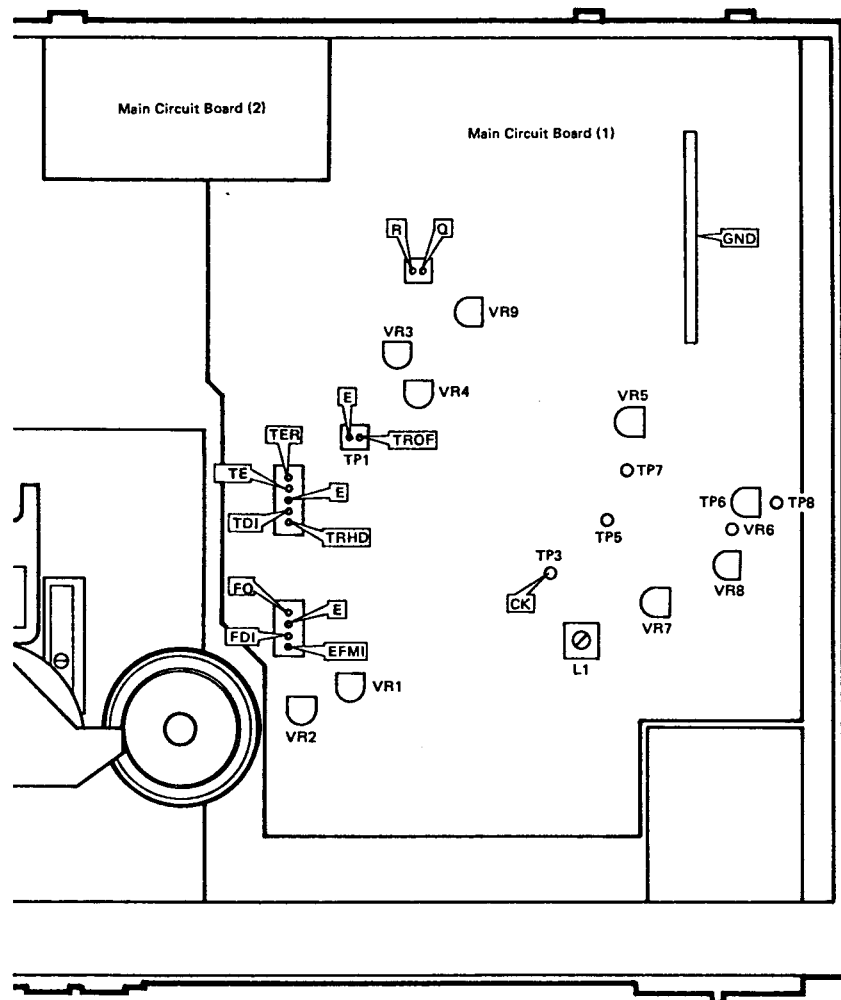
Fig. A

SW1 : FOCUS gain and TRACKING gain switching
SW2 : Filter ON/OFF switch

• Precautions or Special Notes

1. Measure the output level at the output terminal of the AF oscillator.
2. When disc tray has been removed from the mechanism, make sure the position of the loading cam and the leaf switch are correct.
3. The unit should always be in a horizontal position while performing adjustments.

• Test Point



★ Carry out following adjustments in order as numbered.

- Step 1. Confirmation of Laser Output.
- Step 2. Confirmation of Focus Actuator Operation.
- Step 3. Adjustment of VCO.
- Step 4. Adjustment of Tracking Gain
- Step 5. Adjustment of Focus Gain
- Step 6. Adjustment of Tracking Offset

- Step 7. Adjustment of Focus Offset
- Step 8. Adjustment of Kick Gain
- Step 9. Confirmation of Jitter
- Step 10. Confirmation of Skip Search Operation
- Step 11. Adjustment of DAC Offset
- Step 12. Adjustment of FSH Offset

Confirmation of Laser Output (Step 1)

- ① Do not load the disc.
- ② Remove the disc tray.
- ③ Remove the flapper.
- ④ Apply the laser power meter's sensor to the pick-up head as shown in Fig. B.

- ⑤ Press POWER key. (POWER ON)
- ⑥ Measure the laser output during the 5 seconds of FOCUS search mode.

Rating: Laser output = 0.1mW to 0.5mW

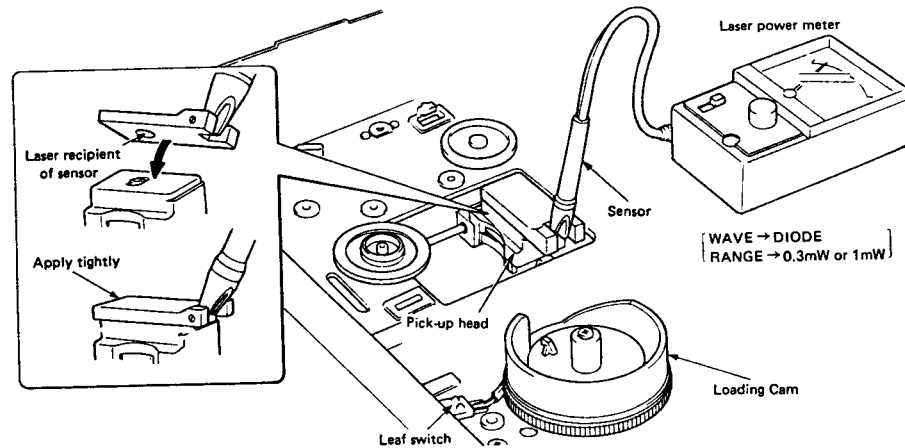


Fig. B

Precautions in handling pick-up head

- (1) No soldering necessary for the unit.
- (2) Since laser light is near-infrared, visual confirmation is difficult. While light is emitted, for safety make sure your eyes are at least 30 cm away from the objective lens.
- (3) Do not disassemble it.
- (4) Do not drop or apply shock to it.
- (5) Do not leave it under high temperature or humidity.
- (6) Do not touch the objective lens. Should there be dirt on the lens, clean using a blower for cameras.

Confirmation of Focus Actuator Operation (Step 2)

Approx. 5 sec

Oscilloscope (1) setting

- DC coupling
- 1V/div range (Vertical)
(0.1/div when 10:1 probe is used)
- 0.5 sec/div time (Horizontal)

- ① Do not load a disc.
- ② Connect the oscilloscope (1) to [R] and [E] terminals.
- ③ Press POWER key. (POWER ON)
- ④ After confirming that loading cam position is correct press OPEN/CLOSE key for CLOSE operation.

- ⑤ During 5 seconds of FOCUS search, confirm that the waveform is as shown in Fig. C.
- ⑥ Confirm that the pick-up head's objective lens moves smoothly between the lowest and highest points.

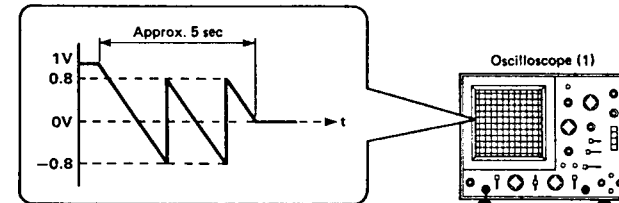
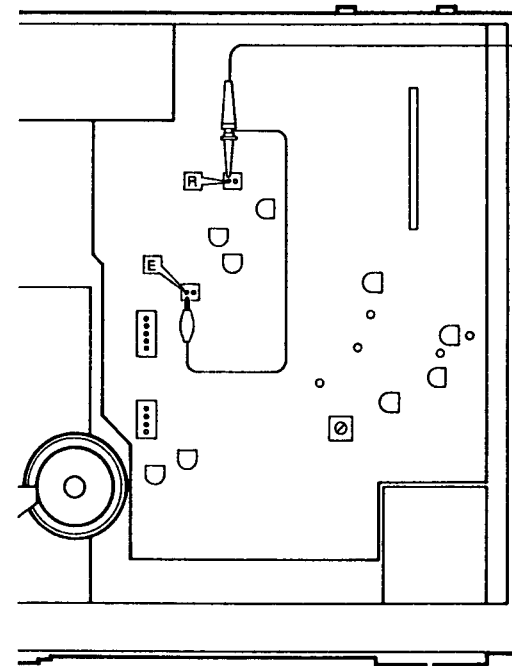


Fig. C



Adjustment of VCO (Step 3)

- ① Connect the shorting cord and measuring instruments, as shown in Fig. D.
- ② Do not load a disc.
- ③ Press POWER key. (POWER ON)

- ④ While observing the frequency counter indication (FVCO), adjust L1 so that it satisfies the rating.
Rating: $F_{VCO} = 4.3218 \text{ MHz} \pm 10 \text{ kHz}$

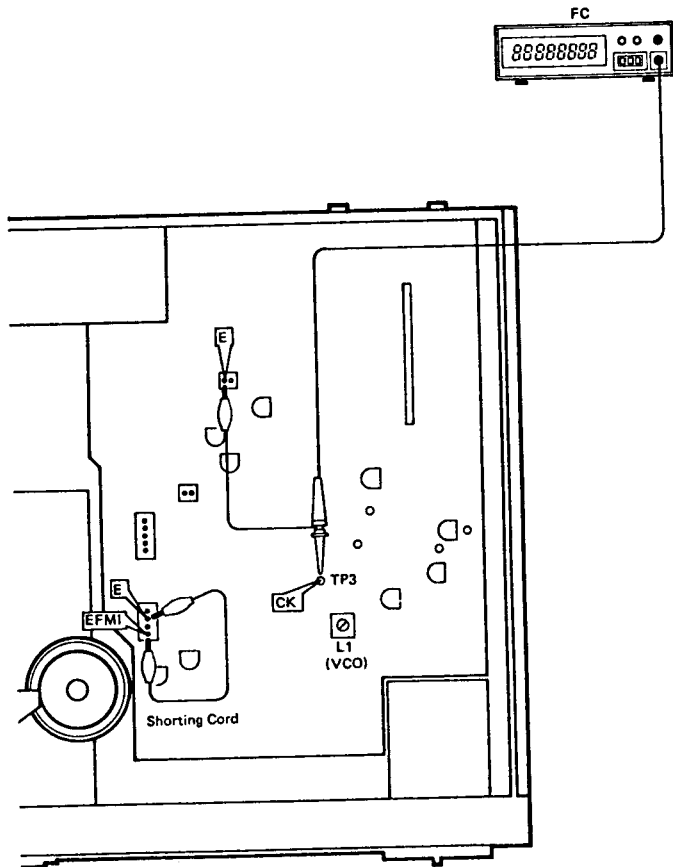


Fig. D

Adjustment of Tracking Gain (Step 4)

* This adjustment requires use of two single channel AC voltmeters or one dual channel AC voltmeter.

- ① Connect the filter and measuring instruments, as shown in Fig. E.
Apply a 800 Hz, 100 mVrms signal from the AF oscillator to [TDI] terminal via the resistor (330 kilohms) in the filter.
- ② Set SW2 to OFF.
- ③ Set SW1 to T (TRACKING).
- ④ Press POWER key. (POWER ON)
- ⑤ Load the test disc.
- ⑥ Press PLAY key.

- ⑦ Set SW2 to ON.
- ⑧ While observing the indications of the AC voltmeters (CH1: E_{TE} , CH2: E_Q), adjust VR3 (TRACKING GAIN) so that they satisfy the rating.
Rating: $E_{TE} - E_Q = 17\text{dB}$

Example [0dBV = 1V]
 $E_Q = -30\text{dBV} (30\text{mV})$
 $E_{TE} = -13\text{V} (223\text{mV})$

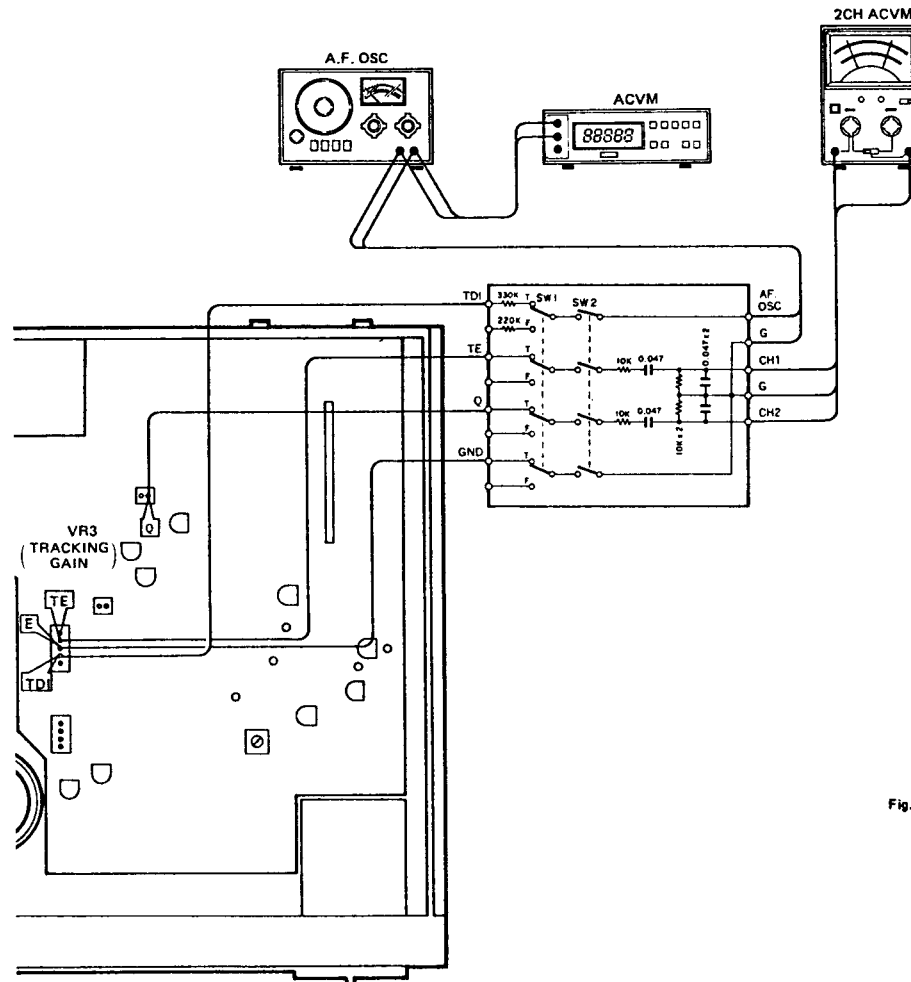


Fig. E

Adjustment of Focus Gain (Step 5)

* This adjustment requires use of two single channel voltmeter or one dual channel AC voltmeter.

- ① Connect the filter and measuring instruments, as shown in Fig. F.
- Apply an 800 Hz, 4.5 Vrms signal from the AF oscillator to [FDI] terminal via the resistor (220 kilohms) in the filter.
- ② Set SW2 to OFF.
- ③ Set SW1 to F (FOCUS).
- ④ Press POWER key. (POWER ON)
- ⑤ Load the test disc.

- ⑥ Press PLAY Key.
- ⑦ Set SW2 to ON.
- ⑧ Read the indications of the AC voltmeters (CH1: E_{FO} , CH2: E_R), adjust VR2 (FOCUS GAIN) so that they satisfy the rating.

Rating: $E_{FO} - E_R = 8dB$

Example [0dBV = 1V]
 $E_{FO} = -16dBV$ (160mV)
 $E_R = -24dBV$ (63mV)

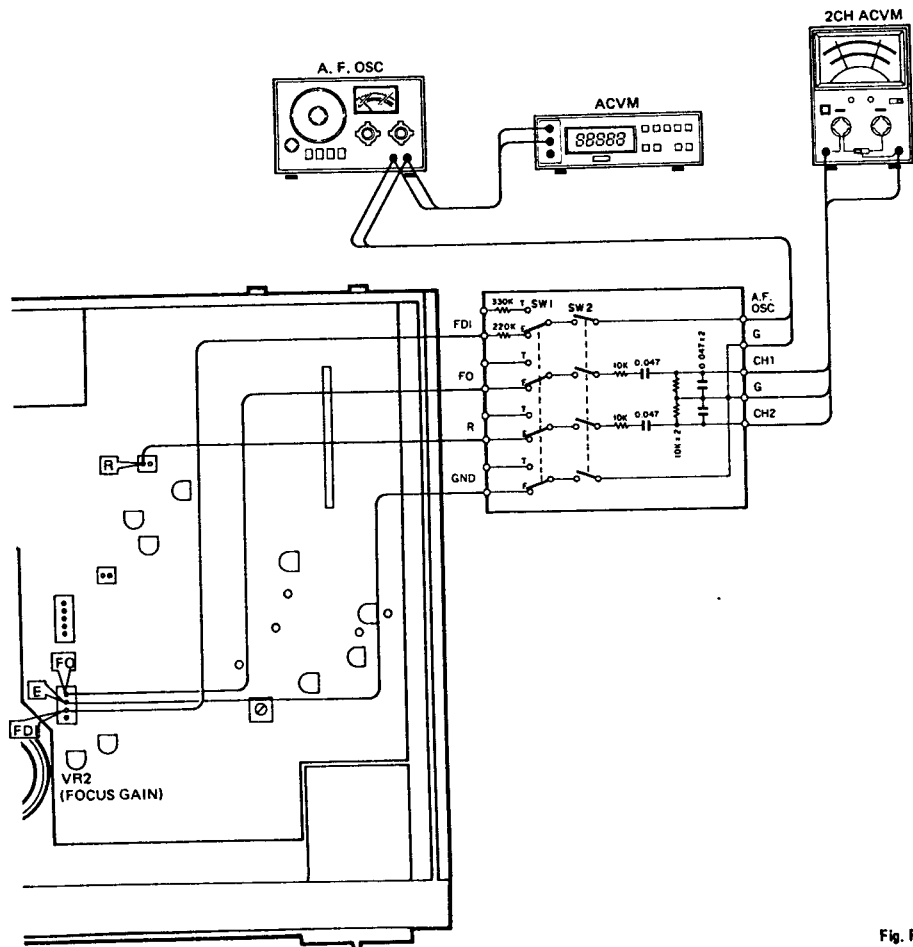


Fig. F

Adjustment of Tracking Offset (Step 6)

- ① Connect a DC voltmeter to [Q] and [E] terminals.
- ② Press POWER key. (POWER ON)
- ③ Press STOP key.
- ④ Short between the [TROF] and [E] terminals. (Laser OFF)
- ⑤ While observing the indication (E_Q) of the DC voltmeter, adjust VR4 (TRACKING OFFSET) so that it satisfies the rating.

Rating: $E_Q = 0 V DC \pm 25mV DC$

Adjustment of Focus Offset (Step 7)

- ① Connect a DC voltmeter to [R] and [E] terminals.
- ② Press POWER key. (POWER ON)
- ③ Press STOP key.
- ④ Short between the [TROF] and [E] terminals. (Laser OFF)
- ⑤ While observing the indication (E_R) of the DC voltmeter, adjust VR1 (FOCUS OFFSET) so that it satisfies the rating.

Rating: $E_R = 0V DC \pm 25mV DC$

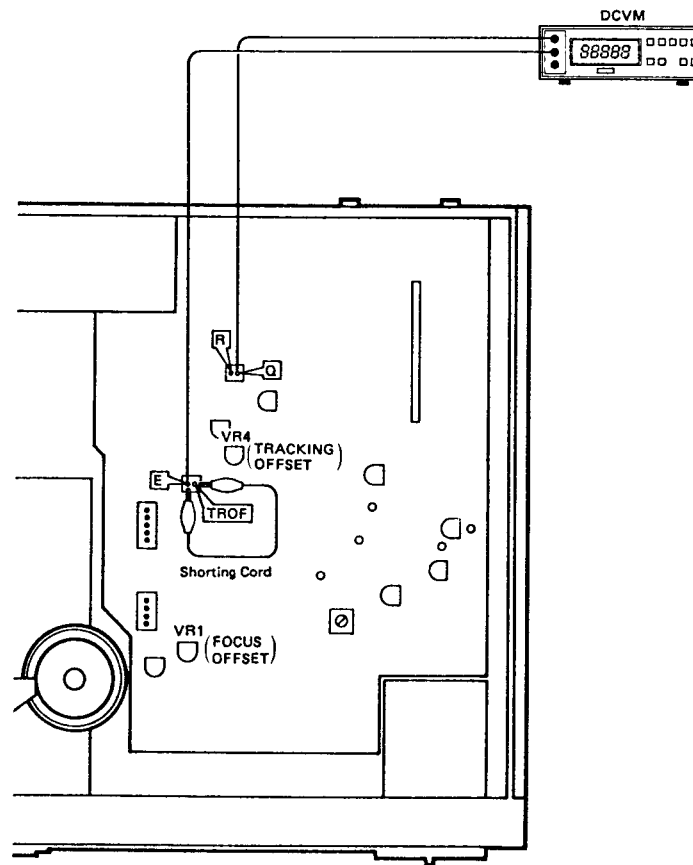


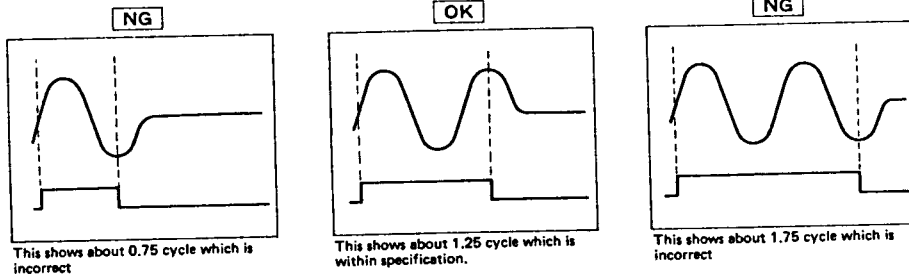
Fig. G

Adjustment of Kick Gain (Step 8)

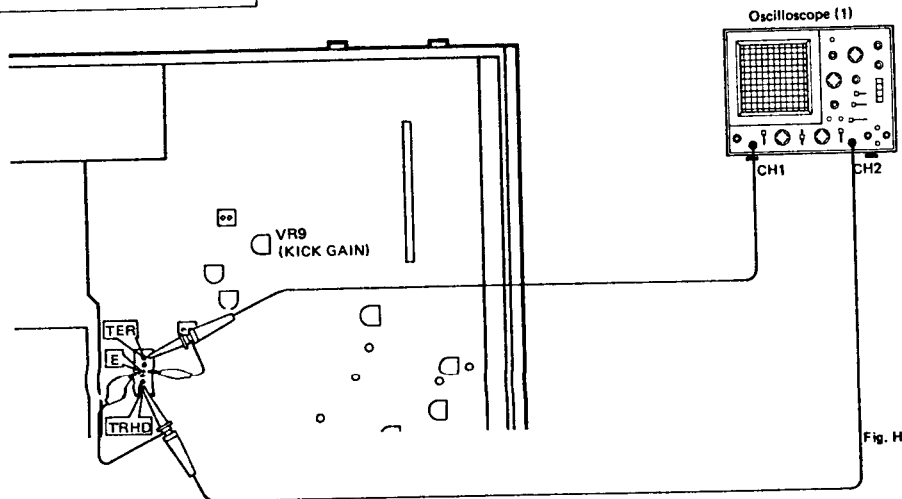
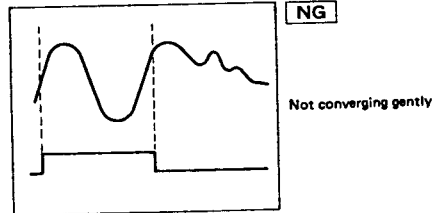
Oscilloscope (1) (2-ch oscilloscope) Settings

- DC coupling
- CH1 → **TER** terminal: 0.1V/div (Vertical) (10 mV/div when 10 : 1 probe is used)
- CH2 → **TRHD** terminal: 5V/div (Vertical) (0.5V/div when 10 : 1 probe is used)
- TRIGGER MODE: 2 CH
- 0.2msec/div time (Horizontal)

- ① Connect the measuring instruments, as shown in Fig. H.
- ② Press POWER key. (POWER ON)
- ③ Load the test disc.
- ④ Press PLAY key.
- ⑤ Observe waveform while pressing Fast Forward mode key (▶▶) for 3 seconds.
- ⑥ Adjust VR9 (KICK GAIN) so that the **TER** signal cycle is 1.0 when **TRHD** signal level is High.
 - * Adjust at the inner circumference of the disc.
- ⑦ Press Reverse mode key (◀◀) for 3 seconds and confirm that **TER** signal cycle is within the above specification but in reverse phase.



* The TER waveform after the TRHD rise should converge gently.



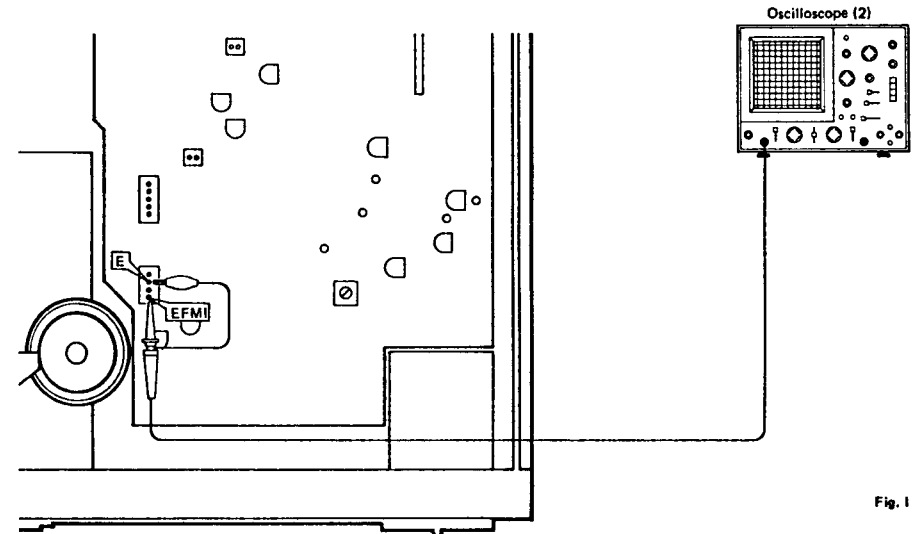
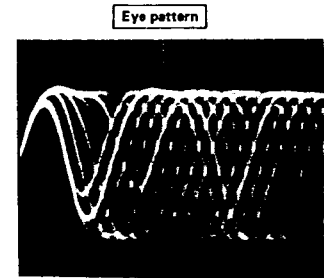
Confirmation of Jitter (Step 9)

Oscilloscope (2) Settings

- AC coupling
- 0.2 V/div range (Vertical) (50 mV/div when 10 : 1 probe is used)
- 0.2 ~ 0.5 μsec/div time (Horizontal)

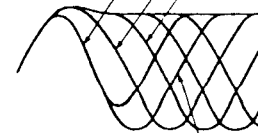
- ① Connect oscilloscope (2) to **EFMI** terminal, as shown in Fig. F.
- ② Press POWER key. (POWER ON)
- ③ Load the test disc.
- ④ Press PLAY key.
- ⑤ Confirm that the **EFMI** signal (eye-pattern) waveform is distinct and clear.
 - * Confirm at the center of the disc.

Oscilloscope (2)



Waveforms 3T - 11T.

3T, 4T, 5T, 6T, ..., 11T



This portion is referred to as the eye pattern.


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

Good waveform

Abnormal waveform



Confirmation of Skip Search Operation (Step 10)

- ① Load the disc.
- ② Press the PLAY key.
- ③ Press the skip key () or 10 key to start searching.
- ④ Confirm that the skip is searched properly.

Adjustment of DAC Offset (Step 11)

- ① Connect the DC voltmeter between TP5 and ground (L ch).
- ② Connect the DC voltmeter between TP6 and ground (R ch).
- ③ Press the STOP key.
- ④ Adjust VR7 (L ch) and VR8 (R ch) so that the specified rating is obtained.

Rating: 0V DC ± 1mV DC

Adjustment of FSH Offset (Step 12)

- ① Connect the DC voltmeter between TP5 and ground and between TP7 and ground (L ch).
- ② Connect the DC voltmeter between TP6 and ground and between TP8 and ground (R ch).
- ③ Press the STOP key.
- ④ Adjust VR5 (L ch) and VR6 (R ch) so that the voltage difference satisfies its specified rating.

Rating: 0V DC ± 1mV DC

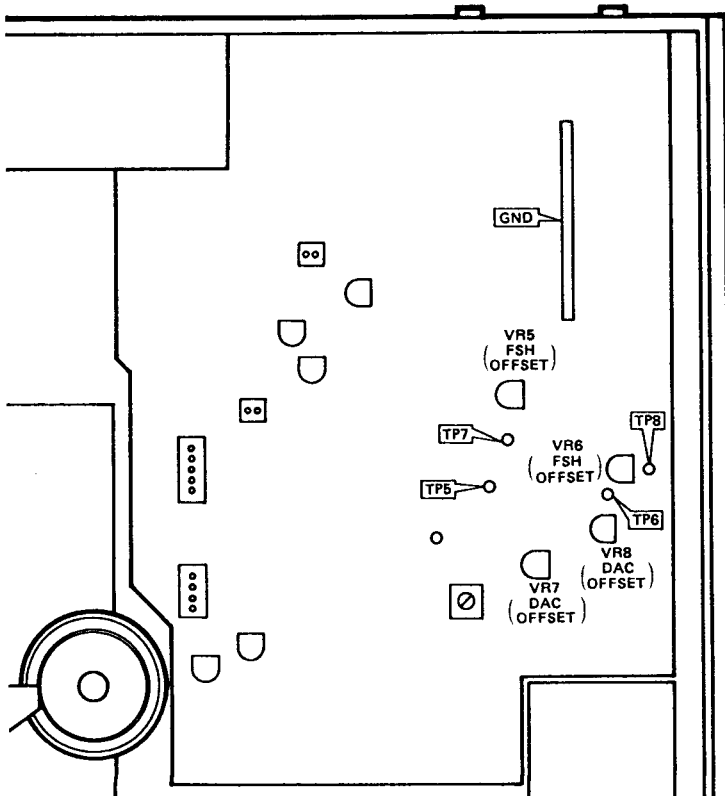
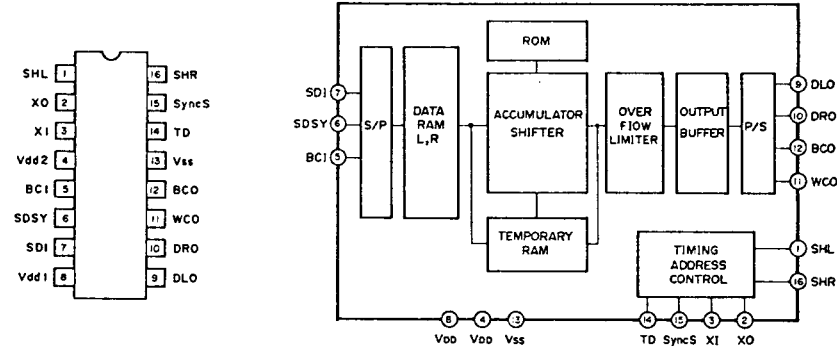


Fig. J

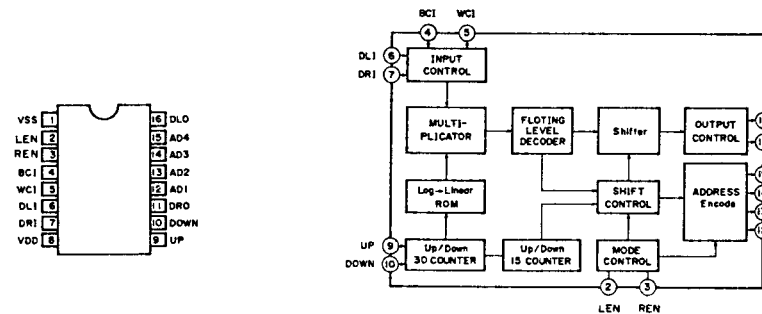
IC DATA

IC20: YM3414
Digital Filter

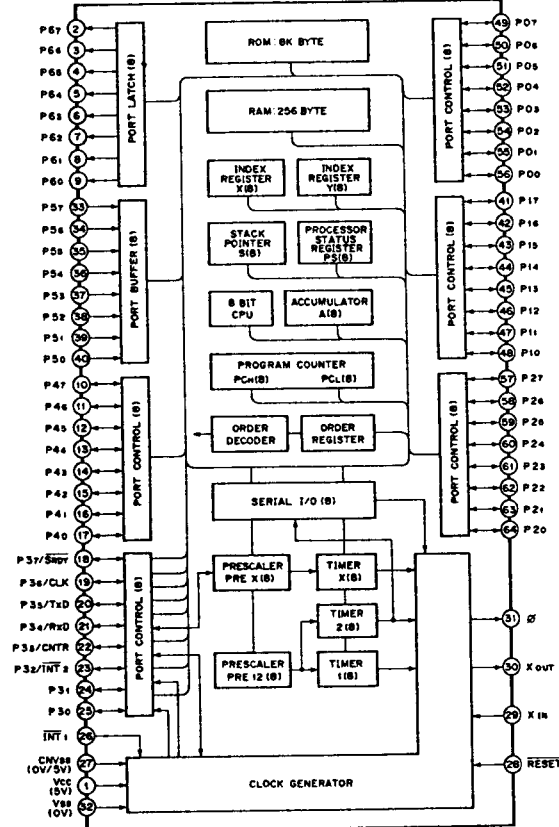
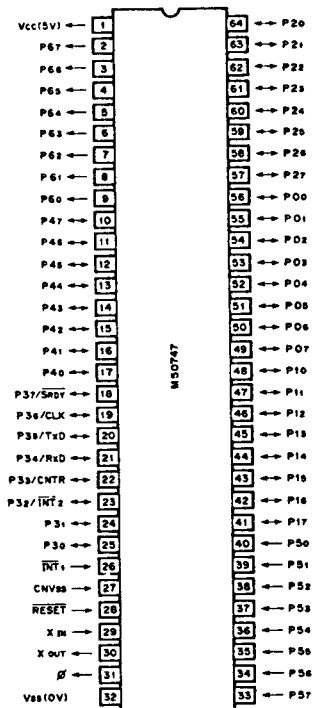


Pin Name	Pin No.	I/O	Description of function
SHL	1	O	At 1DAC (TD = 'L') : Deglitcher signal of Lch (when four-fold) At 2DAC (TD = 'H') : Deglitcher signal of L/Rch (when eight-fold)
X 0	2	O	Generates quarts oscillation between X1 and XO.
X 1	3	I	16.934MHz (Direct input into X1 from the external source is also possible.)
Vdd 2	4		+5V power source for quarts oscillation and deglitcher signal
BCI	5	I	Input terminal for bit clock of input data
SDSY	6	I	Clock to indicate L/Rch distinction of input data and input timing
SDI	7	I	Data input terminal
Vdd 1	8		+5V power source for digital signal system
DLO	9	O	At 1DAC (TD = 'L') : L and R ch data output terminal (when four-fold) At 2DAC (TD = 'H') : L ch data output terminal (when eight-fold)
DRO	10	O	R ch data output terminal
WCO	12	O	Word clock of output data DLO, DRO
BCO	12	O	Bit clock of output data
Vss	13		GND terminal
TD	14	I	1DAC/2DAC select terminal 1DAC (four-fold) = 'L' 2DAC (eight-fold) = 'H'
Sync S	15	I	Synchronous signal to absorb jitter in unsynchronous input (Syncs = 'H' : fully synchronous input = 'L' : SDSY prohibited)
SHR	16	O	R ch deglitcher signal at 1DAC

IC21 : YM6013
Digital Volume Controller



IC301 : M50747
8 bit μ-COM



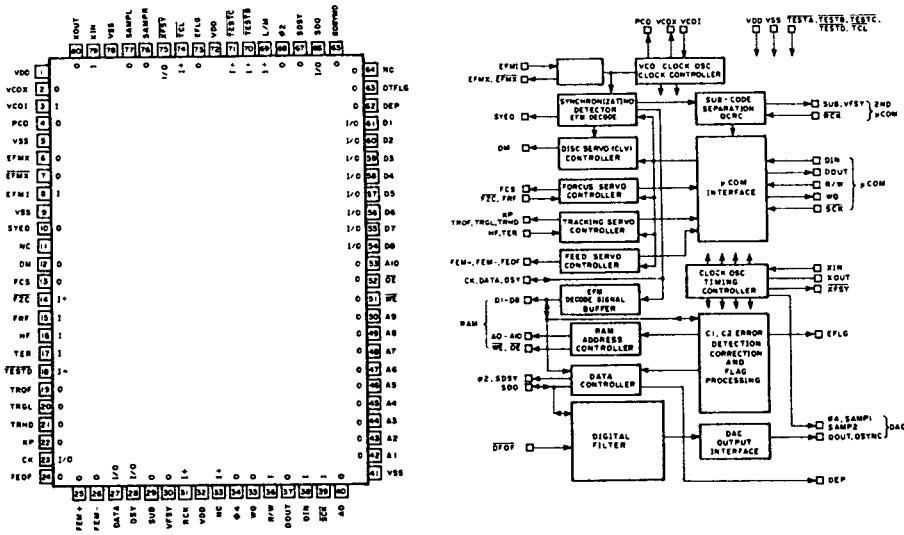
Pin No.	Pin Name	Description	I/O	Active	Function
1	Vcc				5V
2	P67 (O)				N. C.
3	P66 (O)	Sg	O	H	FLT segment n
4	P65 (O)	Sf	O	H	" m
5	P64 (O)	Se	O	H	" l
6	P63 (O)	Sd	O	H	" k
7	P62 (O)	Sc	O	H	" j
8	P61 (O)	Sb	O	H	" i
9	P60 (O)	Sa	O	H	" h
10	P47	D2	O	H	Digit line D2
11	P46	D1	O	H	" D1
12	P45	D0	O	H	" D0
13	P44	BAK	O	H	Back-up DET
14	P43	OPEN	O	H	Open switch
15	P42	CLOSE	O	H	Close switch
16	P41	LASER	O	H	Laser switch
17	P40	PLAY	O	H	PLAY mode output
18	P37/SRDY				N. C.
19	P36/CLK		I/O		
20	P35/TXD	SOUT	O		SPC Interface
21	P34/RXD	SIN	I		
22	P33/CNTR	RW	O		
23	P32/INT2	MODE	I	H/L	Mode switch
24	P30	WQ	I		SPC Interface
25	P31	CLK	O		
26	INT1				N. C.
27	CNVSS				GND
28	RESET		I		Reset
29	XIN		I		8 MHz Clock
30	XOUT		O		
31	φ		O		Timing output
32	VSS				GND
33	P57 (I)	CD STOP	I	L	System Input
34	P56 (I)	CD PLAY	I	L	
35	P55 (I)	QUICKRV	I	H	
36	P54 (I)	RM4	I		Remote control interface
37	P53 (I)	RM3	I		
38	P52 (I)	RM2	I		
39	P51 (I)	RM1	I		
40	P50 (I)	RM0	I		
41	P17	K7	I		Key input line
42	P16	K6	I		
43	P15	K5	I		
44	P14	K4	I		
45	P13	K3	I		
46	P12	K2	I		
47	P11	K1	I		
48	P10	K0	I		
49	P07	CLOSESW	O	L	END switch (close)
50	P06	OPENSW	O	L	END switch (open)
51	P05	Su	O	H	FLT segment u
52	P04	St	O	H	" t
53	P03	Se	O	H	" s
54	P02	Sr	O	H	" r
55	P01	Sg	O	H	" g
56	P00	Sp	O	H	" p
57	P27	So	O	H	" o
58	P26	Sn	O	H	" n
59	P25	Sm	O	H	" m
60	P24	Sl	O	H	" l
61	P23	Sk	O	H	" k
62	P22	Sj	O	H	" j
63	P21	Si	O	H	" i
64	P20	Sh	O	H	" h

IC14 : YM3616

Signal Processor & Controller

YM3616 is a CMOS LSI for signal processing and servo control of the compact disc player.

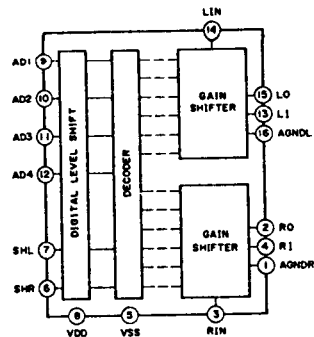
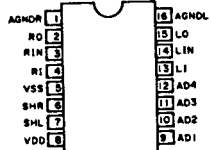
It executes such signal processing as demodulation of the EFM signal from the optical pick-up, detection and correction of the erroneous signal and digital filtering which helps to improve the sound quality, as well as such intelligent servo controlling as focus, disc, tracking and feeding.



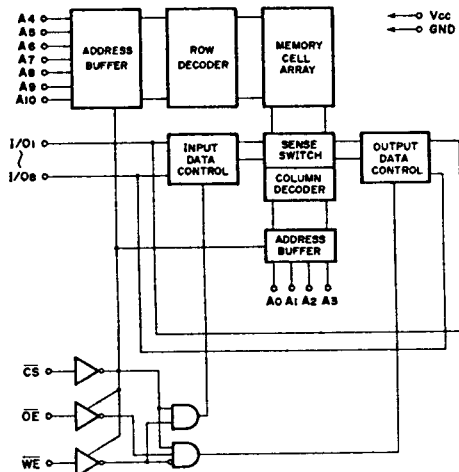
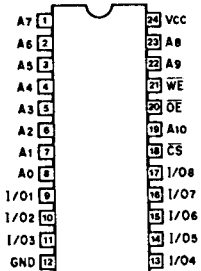
Pin No.	Pin Name	I/O	Function
1	VDD		Power Supply
2	VCOX	O	Clock Playback Circuit 4PCO
3	VCOI	I	
4	PCO	O	
5	VSS		GND
6	EFMX	O	EFM Signal External Circuit
7	EFMX	O	
8	EFMI	I	
9	VSS		GND
10	SYEQ	O	Synchronized Uniform Signal
11	N.C.		Not Use
12	DM	O	Disc Servo { LOW (0V): FORWARD OPEN (2.5V): STOP HIGH (5V): REVERSE
13	FCS	O	Focus Servo System Input
14	FZC	I	
15	FRF	I	
16	HF	I	Tracking Servo System Input
17	TER	I	
19	TROF	O	
20	TRGL	O	
21	TRHD	O	
22	KP	O	

Pin No.	Pin Name	I/O	Function	
23	CK		EFM Demodulated Signal Check Output (4.3218MHz, clock)	
24	FEOP	O		
25	FEM+	O		
26	FEM-	O	Feed Servo System	
27	DATA	I/O		
28	DSY	I/O	EFM Demodulated Signal Check Output (4.3218MHz clock)	
29	SUB	O		
30	VFSY	O	Sub-code Output	
31	RCK	I		
32	VDD		Power Supply	
33	NC		Not Use	
34	φ4		4.3218 MHz Clock	
35	WQ	O		
37	DOUT	O	Q Code Output System } Q code Output Data Output to μCOM Data I/O Control Signal Clock for Data I/O μCOM Command	
36	R/W	I		
39	SCR	I		
38	DIN	I		
41	VSS			GND
40	A0	O	RAM Connections	
42	A1	O		
43	A2	O		
44	A3	O		
45	A4	O		
46	A5	O		
47	A6	O		
48	A7	O		
49	A8	O		
50	A9	O		
51	WE	O		
52	OE	O		
53	A10	O		
54	D8	I O	DAC Interface	
55	D7	I O		
56	D6	I O		
57	D5	I O		
58	D4	I O		
59	D3	I O		
60	D2	I O		
61	D1	I O		
62	DEP	O		Deemphasis Signal
63	DTFLG	O		Data Error Signal
66	SDO	O	Digital Data Output LSB first/MSB first	
67	SDSY	O		
68	φ2	O	2.1659MHz Clock	
69	L/M	I		SB first (H)/MSB first (L) Switch for SDO
71	TESTC	I	Test Terminal	
64	NC	O	Not Use	
65	SDSYM0	O		
76	SAMPR	O	BB Word Clock for DAC	
77	SAMPL	O		
34	φ4	O	4.3218MHz Clock	
18	TESTD	I		
70	TESTB	I	Test Terminal	
74	TCL	I		
72	VDD		Power Supply	
73	EFLG	O	C1, C2 Error Correction Check Signal	
75	XFSY	I/O	Synchronized Clock Signal	
78	VSS		GND	
79	XIN	I	Clock Oscillation	
80	XOUT	O		

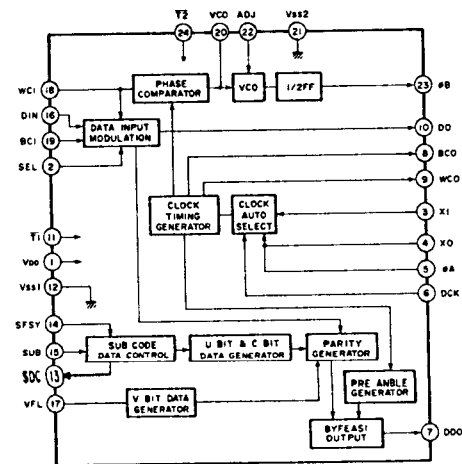
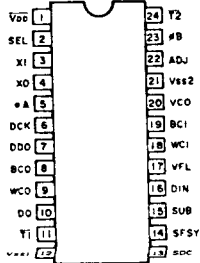
IC24: YM3023
Floating Sample Hold



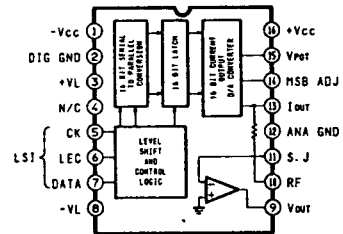
IC15: μ PD4016-CX, LC3517A-15, TMM2015BP, TMM2016BP, CXK5816SP, CXK5816PS or CXK5816PN
2048-Word x 8 bit Static RAM



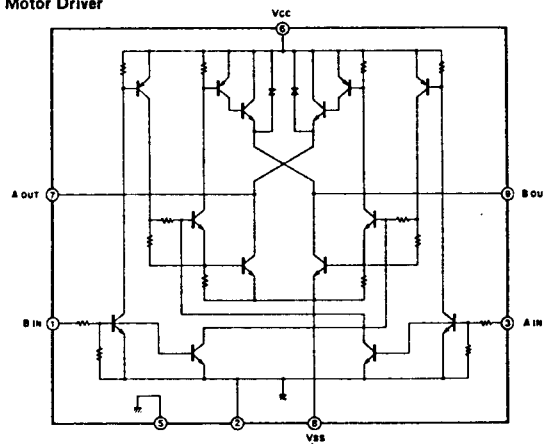
IC16: YM3613B
Digital Audio Interface Transmitter (DIT)



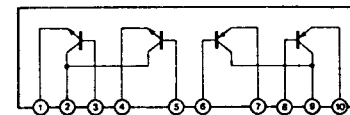
IC22, 23: PCM56J
D/A Converter



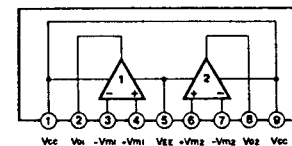
IC26: BA6218
Motor Driver



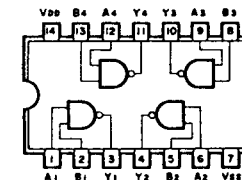
IC4: STA451C
Transistor Array



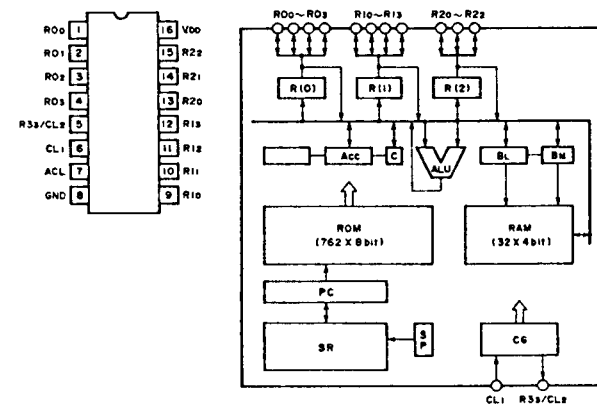
IC1, 8: NJM2043S
IC2, 3, 5 ~ 7: NJM4558S
IC9, 10: NJM2068S
IC11, 12: NJM2068S or μ PC4570HA
IC13: NJM4556S
Dual Ope-amp



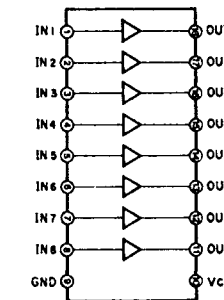
IC25: TC74HC00P
Quad 2-Input NAND Gate



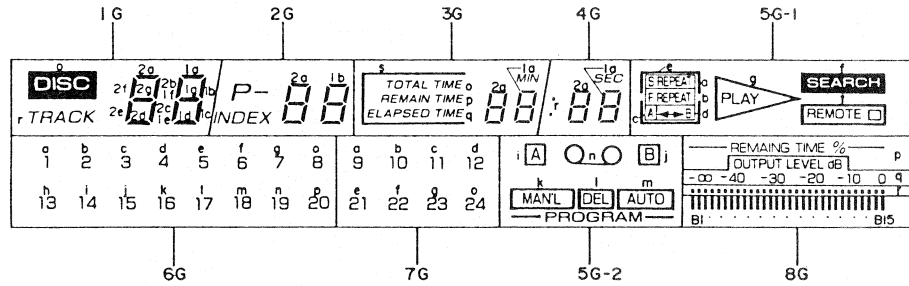
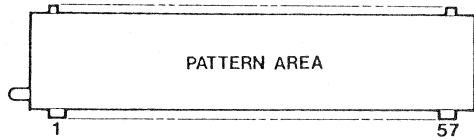
IC302: LU59521
4 bit μ -COM



IC303 ~ 305: M54564P
LED Driver



■ DISPLAY DATA (V301:FV210G)



PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35			
CONNECTION	F	F	N	P	G	G	N	C	G	3	G	2	G	1	P	N	P	a	b	c	d	N	P	e	f	g	N	P	N	P	N	P	N	P	N	P	N	P

PIN NO.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58					
CONNECTION	h	N	P	i	j	k	5	G	l	m	8	G	n	P	o	p	N	P	q	r	s	t	N	P	N	P	F	F

	8G	7G	6G	5G-2	5G-1	4G	3G	2G	1G
a	B7	9	1	-	S REPEAT	1a	1a	1a	1a
b	B6	10	2	-	F REPEAT	1b	1b	1b	1b
c	B3	11	3	-	A	1c	1c	1c	1c
d	B1	12	4	-	↔ B	1d	1d	1d	1d
e	B2	21	5	-	[]	1e	1e	1e	1e
f	B5	22	6	-	SEARCH	1f	1f	1f	1f
g	B4	23	7	-	PLAY	1g	1g	1g	1g
h	B15	-	13	-	[]	2a	2a	2a	2a
i	B14	-	14	[A]	-	2b	2b	2b	2b
j	B11	-	15	[B]	-	2c	2c	2c	2c
k	B9	-	16	MAN'L	-	2d	2d	2d	2d
l	B10	-	17	DEL	-	2e	2e	2e	2e
m	B13	-	18	AUTO	-	2f	2f	2f	2f
n	B12	-	19	Q O	-	2g	2g	2g	2g
o	B8	24	8	-	-	-	TOTAL TIME	P -	DISC
p	p	-	20	-	-	-	REMAIN TIME	INDEX	-
q	q	-	-	-	-	-	ELAPSED TIME	-	-
r	r	-	-	-	-	SEC	MIN	-	TRACK
s	-	-	-	-	-	-	[]	-	-
t	-	-	-	-	REMOTE	-	-	-	-

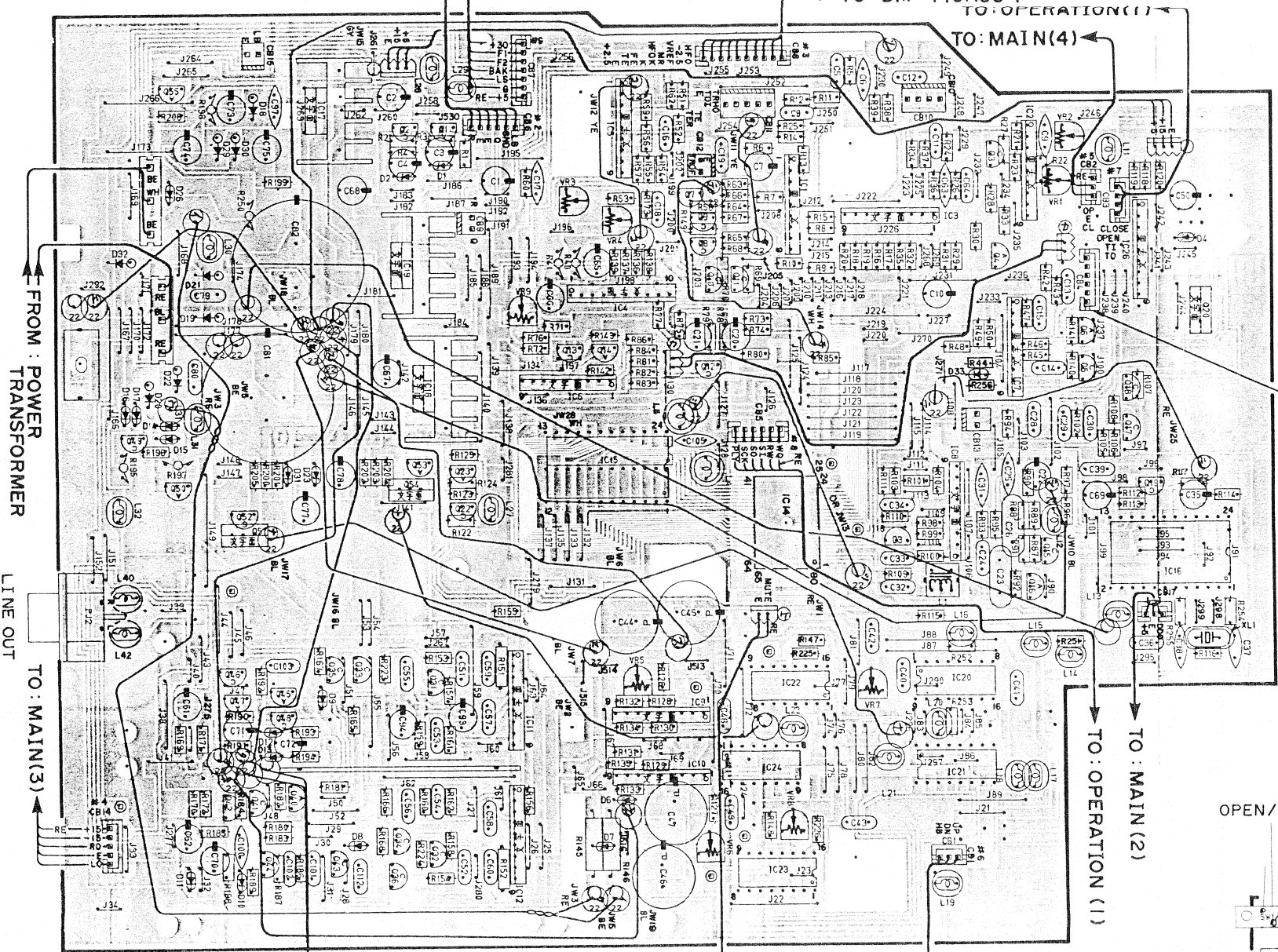
PRINTED CIRCUIT BOARD (Pattern side)

Note) 文字面 : Component side

TO : OPERATION (1)
TO : DM-710ASS'Y

Main Circuit Board (1)

TO : DM-710ASS'Y
TO : OPERATION (1)
TO : MAIN (4)



FROM : POWER TRANSFORMER

LINE OUT

TO : MAIN (3)

TO : DM-710ASS'Y

OPEN / CLOSE

Main Circuit Board (4)

TO : MAIN (2)
TO : OPERATION (1)

TO : MAIN (3)

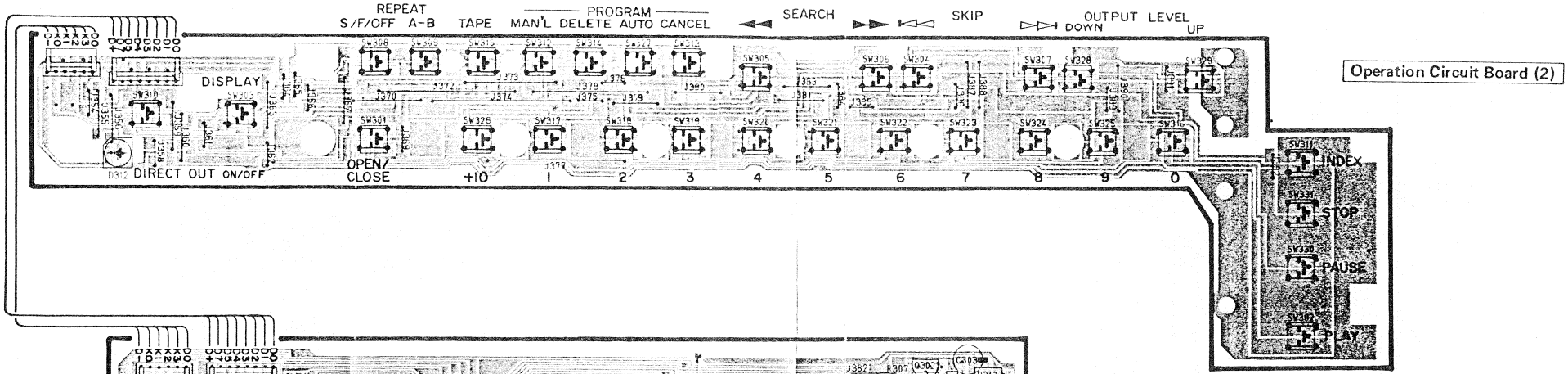
TO : MAIN (2)

TO : OPERATION (1)

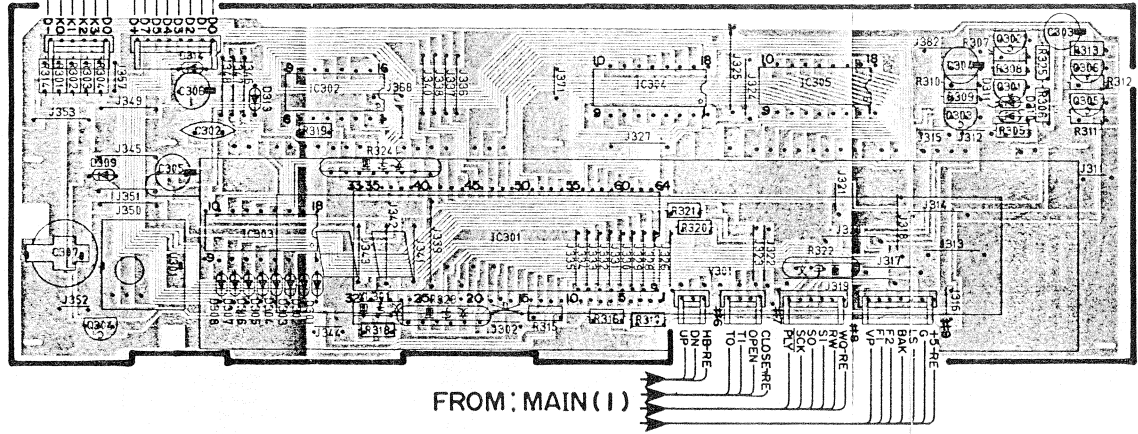
FROM : MAIN (1)

■ PRINTED CIRCUIT BOARD (Pattern side)

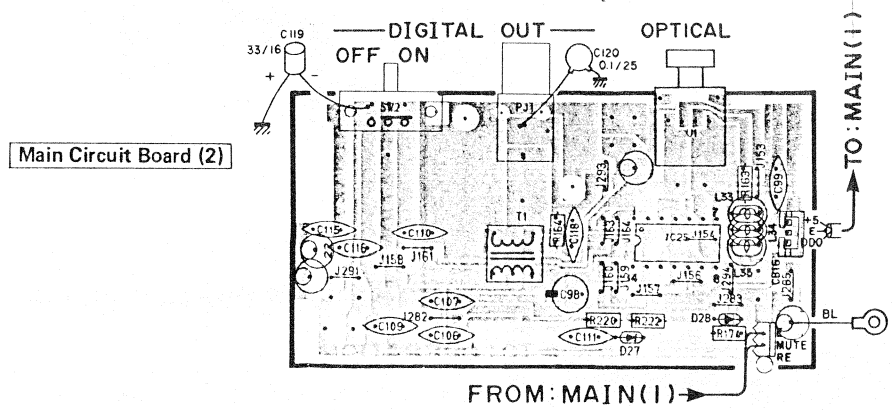
(Note) 文字面 : Component side



Operation Circuit Board (2)

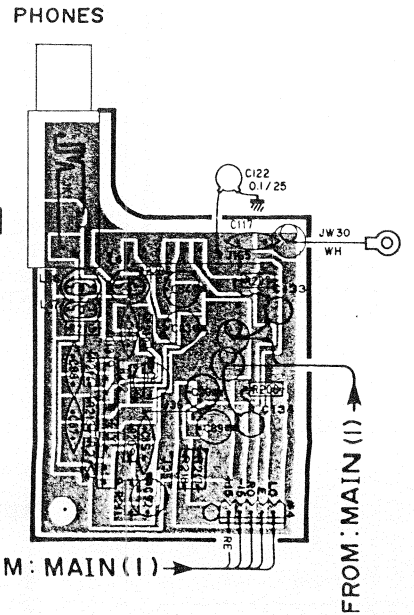


Operation Circuit Board (1)



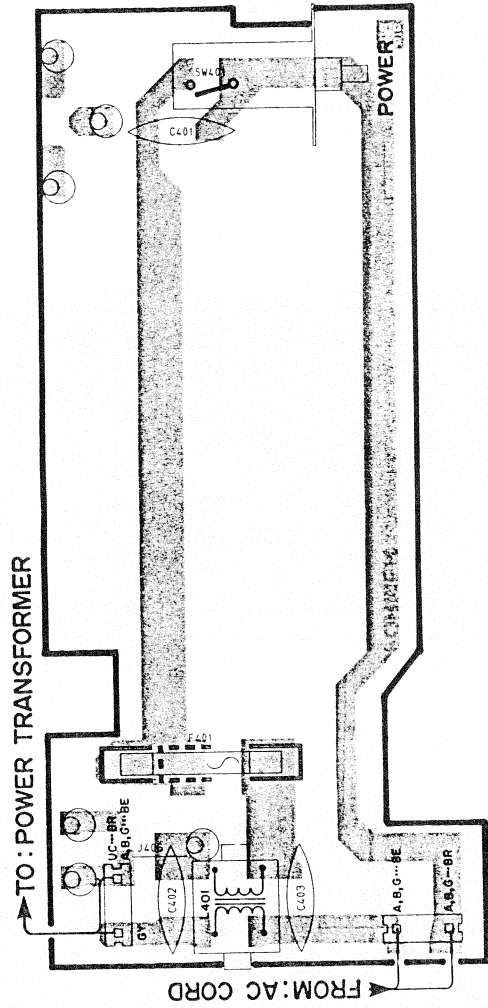
Main Circuit Board (2)

Main Circuit Board (3)



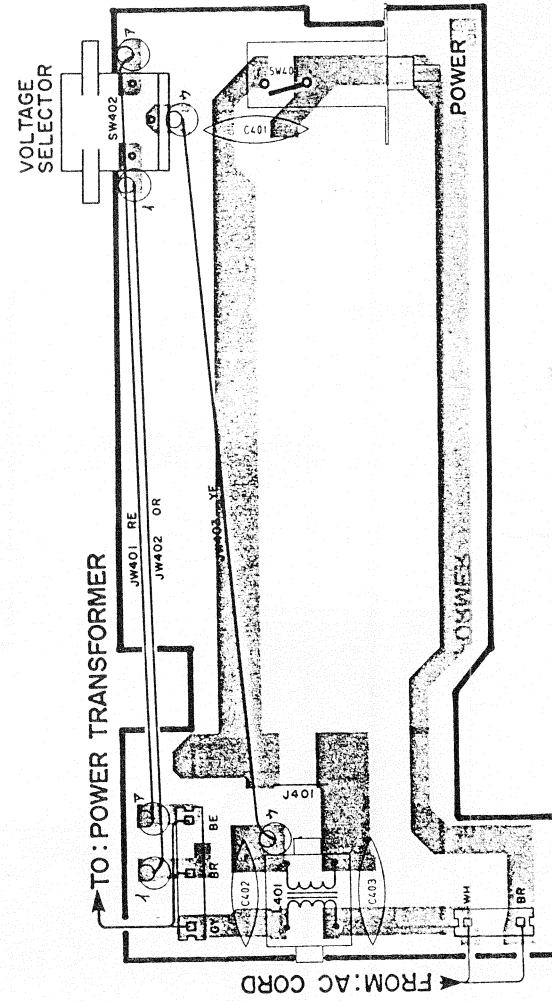
■ PRINTED CIRCUIT BOARD (Pattern side)

Power Circuit Board U, C, A, B, G models

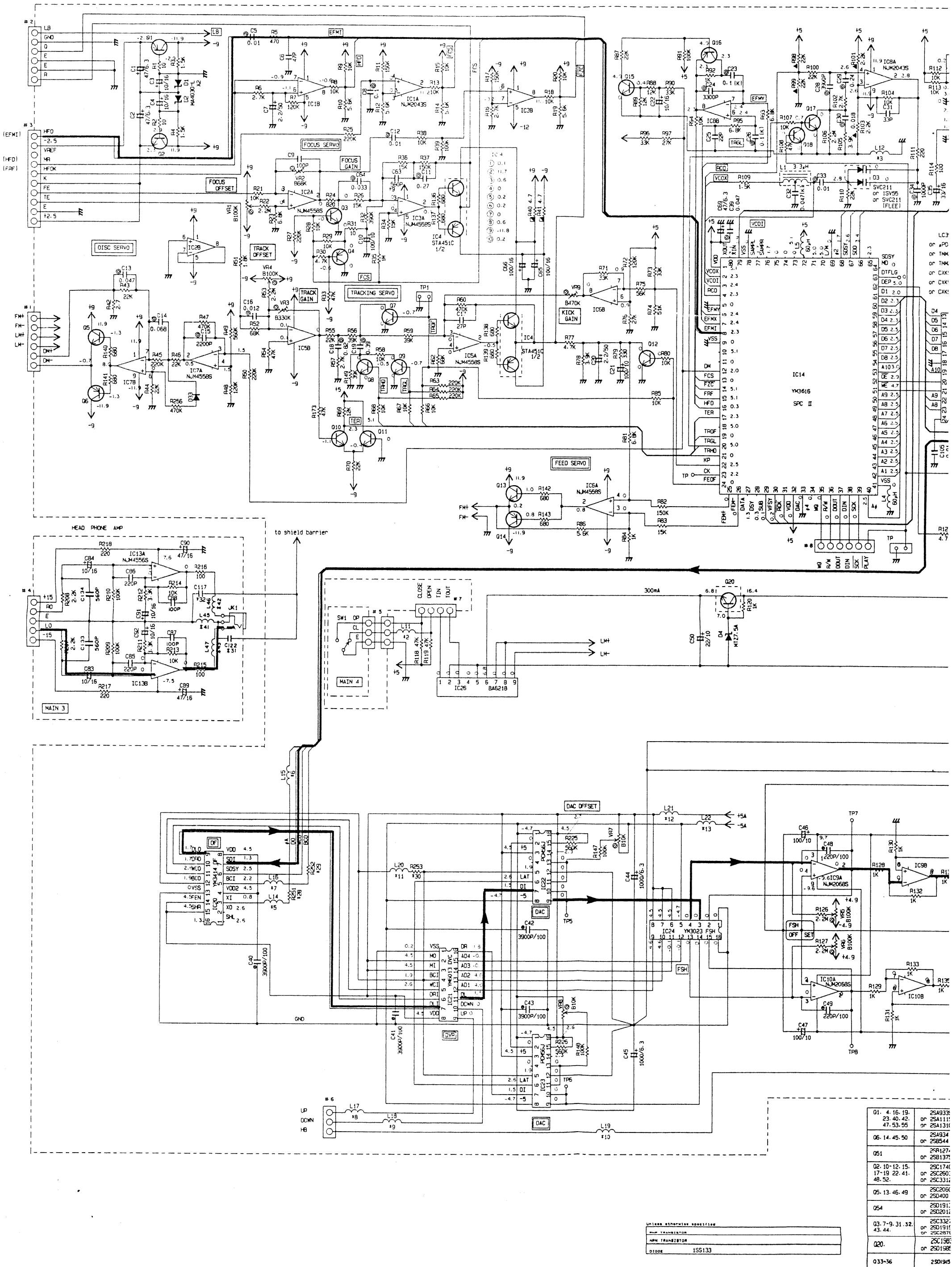


■ PRINTED CIRCUIT BOARD (Pattern side)

Power Circuit Board R model

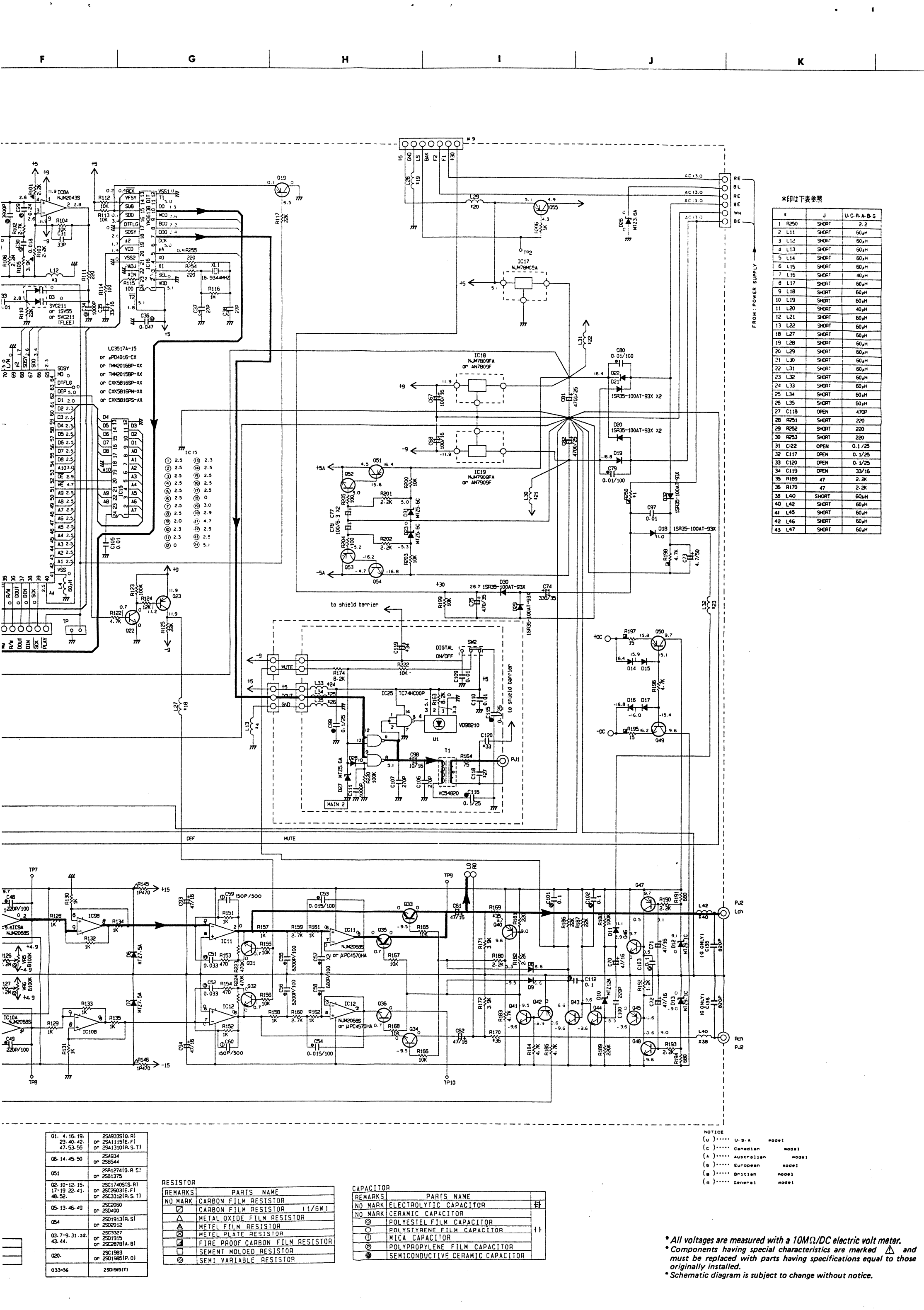


SCHEMATIC DIAGRAM 2/2



01.	4. 16. 19.	2S4938
	23. 40. 42.	or 2S4111
	47. 53. 55.	or 2S4131
06.	14. 45. 50.	2S4934
		or 2S8544
051		2S4127
		or 2S8137
02.	10. 12. 15.	2S4174
	17-19 22. 41.	or 2S260
	48. 52.	or 2S331
05.	13. 46. 49.	2S206
		or 2S400
054		2S4191
		or 2S4191
		or 2S4191
		or 2S4191
03.	7-9. 31. 32.	2S332
	43. 44.	or 2S4191
		or 2S4191
020.		2S4198
		or 2S4198
033-36		2S4195

UNLESS OTHERWISE SPECIFIED
 PNP TRANSISTOR
 NPN TRANSISTOR
 DIODE 1SS133



*印は下表参照

#	J	U.C.R.A.B.G
1	R250	SHORT 2.2
2	L11	SHORT 60μH
3	L12	SHORT 60μH
4	L13	SHORT 60μH
5	L14	SHORT 60μH
6	L15	SHORT 60μH
7	L16	SHORT 40μH
8	L17	SHORT 60μH
9	L18	SHORT 60μH
10	L19	SHORT 60μH
11	L20	SHORT 40μH
12	L21	SHORT 60μH
13	L22	SHORT 60μH
18	L27	SHORT 60μH
19	L28	SHORT 60μH
20	L29	SHORT 60μH
21	L30	SHORT 60μH
22	L31	SHORT 60μH
23	L32	SHORT 60μH
24	L33	SHORT 60μH
25	L34	SHORT 60μH
26	L35	SHORT 60μH
27	C118	OPEN 470P
28	R251	SHORT 220
29	R252	SHORT 220
30	R253	SHORT 220
31	C122	OPEN 0.1/25
32	C117	OPEN 0.1/25
33	C120	OPEN 0.1/25
34	C119	OPEN 33/16
35	R169	47 2.2K
36	R170	47 2.2K
38	L40	SHORT 60μH
40	L42	SHORT 60μH
41	L45	SHORT 60μH
42	L46	SHORT 60μH
43	L47	SHORT 60μH

01. 4. 16. 19.	25A933S(I, R)
23. 40. 42.	25A1115(E, F, I)
47. 53. 55.	25A1310(R, S, T)
06. 14. 45. 50.	25A934
	25B544
051	25R1274(I, R, S)
	25B1375
02. 10-12. 15.	25C1740(S, R)
17-19. 22. 41.	25C2603(I, F, I)
46. 52.	25C3312(R, S, T)
05. 13. 46. 49.	25C2050
	25D400
054	25D1913(R, S)
	25D2012
03. 7-9. 31. 32.	25C3327
43. 44.	25D1915
	25C2878(I, A, B)
020.	25C1983
	25D1985(I, P, O)
033-36	25D1985(I, T)

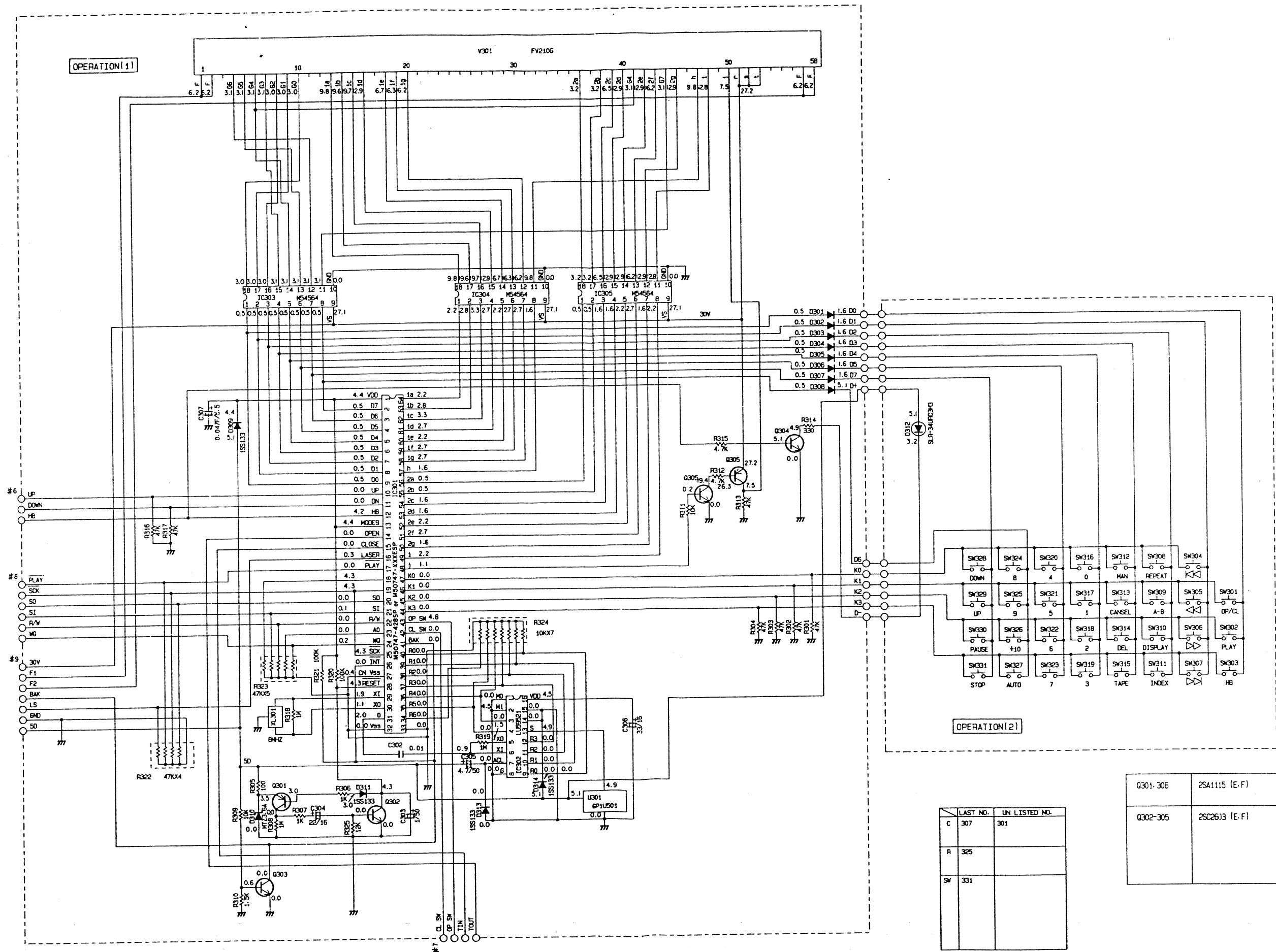
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
□	CARBON FILM RESISTOR (1/6W)
△	METAL OXIDE FILM RESISTOR
⊗	METAL FILM RESISTOR
⊙	METAL PLATE RESISTOR
⊠	FIRE PROOF CARBON FILM RESISTOR
⊞	SEMENT MOLDED RESISTOR
⊚	SEMI VARIABLE RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊙	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
⊖	MICA CAPACITOR
⊕	POLYPROPYLENE FILM CAPACITOR
⊗	SEMICONDUCTIVE CERAMIC CAPACITOR

NOTICE
 (U)..... U.S.A model
 (C)..... Canadian model
 (A)..... Australian model
 (E)..... European model
 (B)..... British model
 (G)..... General model

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

SCHEMATIC DIAGRAM 1/2

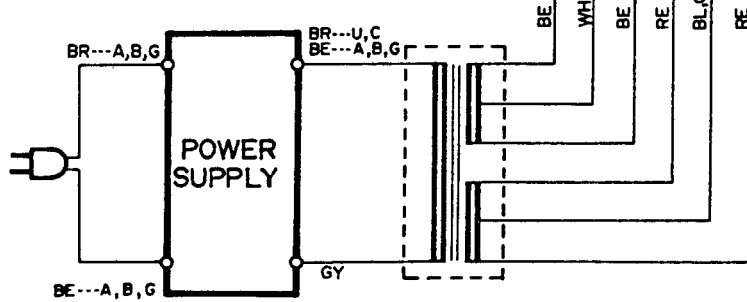
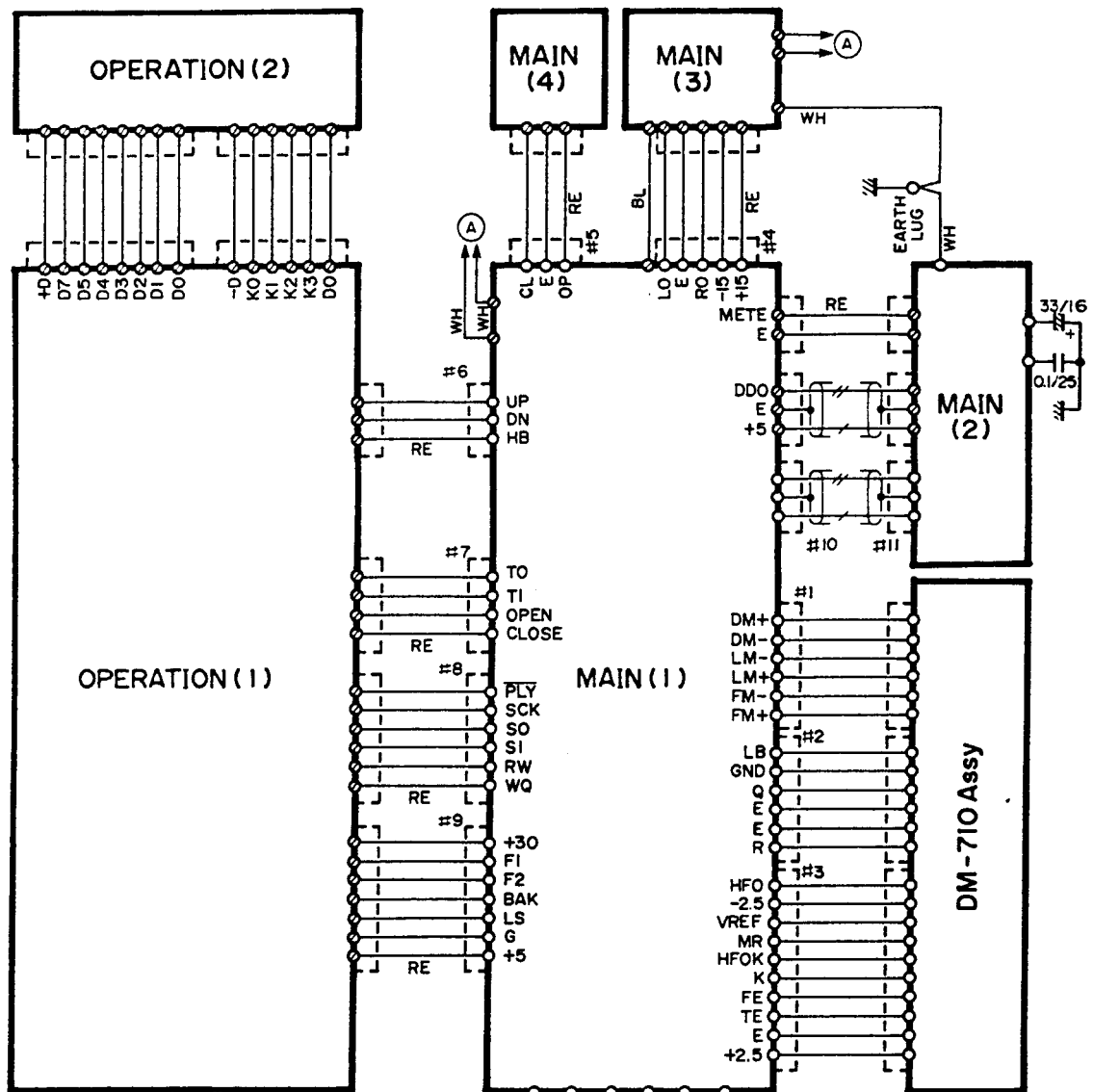


Q301-306	2SA1115 (E.F)
Q302-305	2SC26J3 (E.F)

LAST NO.	UN LISTED NO.
C 307	301
R 325	
SW 331	

1
2
3
4
5
6

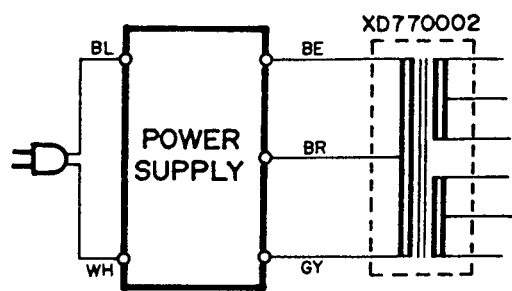
WIRING



XD769002---U,C
XD771002---A,B,G

U,C,A,B,G MODEL

R MODEL



XD770002

PARTS LIST

ELECTRICAL PARTS

■WARNING

Components having special characteristics are marked Δ 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 resistor, refer to P.48

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
*	NA 09 64 70	Operation Circuit Board	オペレーションシート	Silver, Black			
*	NA 09 76 40	"	"	Titan			
*	FG 24 41 00	Ceramic Cap.	セラコン	C302			
*	VE 63 28 00	Electrolytic Cap.	スーパーキャパシタ	C307			
*	UM 39 72 20	"	ケミコン	C304			
*	UM 39 73 30	"	"	C306			
*	UM 21 61 00	"	"	C303			
*	UM 07 64 70	"	"	C305			
*	VE 47 83 00	Resistor Array	抵抗アレイ	R322			
*	VE 35 56 00	"	"	R323			
*	HZ 00 45 40	"	"	R324			
*	IA 11 15 10	Transistor	トランジスタ	Q301,306			
*	IC 26 03 10	"	"	Q302~305			
*	IF 00 34 50	Diode	ダイオード	D301~309,311,313,314			
*	IF 00 87 30	LED (Red)	LED	D312			
*	IF 00 88 00	Zener Diode	ツェナーダイオード	D310			
*	XC 25 00 01	IC	I	C IC303~305			
*	XD 49 00 01	"	"	IC302			
*	XD 55 50 01	"	"	IC301			
*	VE 23 14 00	Display Unit	蛍光表示管	V301			
*	VE 22 24 00	Ceramic Resonator	セラミック発振子	XL301			
*	KA 90 63 80	Switch	ライトタッチスイッチ	SW301~331			
*	VD 85 31 00	Receiver Unit	受光ユニット	U301			
*	YE 31 18 00	Support, FL	サポートFL				
*	YE 31 19 00	Sheet, Filter	シートフィルター	Titan		J	
*	YE 85 88 00	"	"	Silver,Black			
*	NA 09 65 10	Power Circuit Board	電源シート		CDX-810	R	
*	NA 09 71 00	"	"			J	
*	NA 09 71 10	"	"			A,B,G	
*	NA 09 80 50	"	"			U,C	
*	VE 17 92 00	Ceramic Cap	セラコン	C401~403			
*	VA 77 84 00	Line Filter	ラインフィルター	L401			
*	LA 00 58 10	Voltage Selector	電圧切換器	SW402		R	
*	VC 09 79 00	Push Switch	プッシュスイッチ	SW401			
*	KB 00 02 20	Fuse	ヒューズ	F401		J	
*	KB 00 06 70	"	"	"		A,B,G	
*	KB 00 20 10	"	"	"		U,C	
*	LA 00 21 40	Lapping Terminal	P=10 2P i-Type 1型フッピン端子板				
*	LA 00 21 50	"	P=10 3P i-Type			R	
*	LB 20 18 80	Fuse Holder Pin	ヒューズホルダーピン			J,U,C,A,B,G	

*New Parts (新規部品) NR

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
*	NA 09 64 80	Main Circuit Board	メインシート	Black		J	
*	NA 09 64 90	"	"	"		U,C,R,A,B	
*	NA 09 65 00	"	"	"		G	
*	NA 09 68 80	"	"	Silver		U,C,R,A,B	
*	NA 09 68 90	"	"	"		G	
*	NA 09 69 30	"	"	Titan		J	
*	FA 15 31 00	Mylar Cap.	マイラーコン	1000pF 50V		C34	
*	FA 15 32 20	"	"	2200pF 50V		C15	
*	FA 15 33 30	"	"	3300pF 50V		C24	
*	FA 15 33 90	"	"	3900pF 50V		C28	
*	FA 15 41 00	"	"	0.01 μ F 50V		C5,12,33	
*	FA 15 41 20	"	"	0.012 μ F 50V		C16	
*	FA 15 41 80	"	"	0.018 μ F 50V		C30	
*	FA 15 43 30	"	"	0.033 μ F 50V		C51,52,64	
*	FA 15 44 70	"	"	0.047 μ F 50V		C13,36,39	
*	FA 15 46 80	"	"	0.068 μ F 50V		C14	
*	FA 15 51 00	"	"	0.1 μ F 50V		C8,101~103,112	
*	FA 15 53 90	"	"	0.39 μ F 50V		C19	
*	FA 15 52 70	"	"	0.27 μ F 50V		C11	
*	FA 15 52 40	"	"	0.24 μ F 50V		C29	
*	FA 15 58 20	"	"	0.82 μ F 50V		C18	
*	FC 36 51 00	"	"	0.1 μ F 50V		銅リードマイラーコン	C23,26
*	FZ 00 55 80	"	"	0.047 μ F 50V		C32	
*	FU 35 21 50	Mica Cap.	マイカコン	150pF 500V		C59,60	
*	FZ 00 41 30	Semiconductive Ceramic Cap.	半導体セラコン	0.1 μ F 25V		C89,115,116	
*	FZ 00 41 30	"	"	0.1 μ F 25V		C117	U,C,R,A,B,G
*	FG 21 12 70	Ceramic Cap.	セラコン	27pF 50V (CH)		C17,37,38	
*	FG 21 12 20	"	"	22pF 50V		C25	
*	FG 21 13 30	"	"	33pF 50V		C31	
*	FG 21 14 70	"	"	47pF 50V		C6	
*	FG 21 21 00	"	"	100pF 50V		C9,87,88	
*	FG 21 22 20	"	"	220pF 50V		C85,86,100	
*	FG 21 24 70	"	"	470pF 50V		C118	U,C,R,A,B,G
*	FG 21 25 60	"	"	560pF 50V		C63,132,134	U,C,R,A,B,G
*	FG 21 28 20	"	"	820pF 50V		C135,136	G
*	FG 21 31 00	"	"	1000pF 50V		C111	
*	FG 21 22 70	"	"	270pF 50V		C106,107	
*	FG 24 41 00	"	"	0.01 μ F 50V		C97,105,109,110	
*	UJ 11 74 70	Electrolytic Cap.	ケミコン	47 μ F 6.3V		C1,2,69	
*	UJ 13 72 20	"	"	22 μ F 10V		C50	
*	UJ 12 81 00	"	"	100 μ F 10V		C10,21	
*	UJ 13 71 00	"	"	10 μ F 16V		C3,4,22,83,84,91,92,98	
*	UJ 13 73 30	"	"	33 μ F 16V		C35	
*	UJ 13 74 70	"	"	47 μ F 16V		C70,89,90,93,94	
*	UJ 13 81 00	"	"	100 μ F 16V		C65~68	
*	UJ 16 62 20	"	"	2.2 μ F 50V		C7,20	
*	UJ 16 64 70	"	"	4.7 μ F 50V		C73	
*	VE 70 88 00	"	ケミコンDUOREX	47 μ F 16V		C61,62,71,72	
*	UJ 45 83 30	"	ケミコン	330 μ F 35V		C74	
*	UJ 15 84 70	"	"	470 μ F 35V		C75	
*	UJ 11 91 00	"	"	1000 μ F 6.3V		C44,45	
*	UJ 12 91 00	"	"	1000 μ F 10V		C46,47	
*	VE 75 93 00	"	ブロックケミコン	4700 μ F 25V		C81,82	
*	FZ 00 54 10	"	ブラックゲートコン	100 μ F 6.3V		C77,78	
*	UT 65 38 20	Polypropylene Film Cap.	ポリプロコン	8200pF 100V		C55,56	
*	UT 45 41 50	"	"	0.015 μ F 100V		C53,54	

*New Parts (新規部品) NR

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
UT	45:22:20	Polypropylene Film Cap.	220pF 100V	ポリプロロン C48,49			
UT	45:26:80	"	680pF 100V	" C57,58			
UT	45:33:90	"	3900pF 100V	" C40~43			
UT	45:41:00	"	0.01μF 100V	" C79,80			
VC	54:82:00	Pulse Trans		バルストランス T1			
GE	90:20:00	OSC Coil	3.3μH	発振コイル L1			
VD	47:37:00	Micro Inductor	60μH	マイクロインダクター L4,5			
VB	81:79:00	"	40μH	" L16,20		U.C.R.A,B,G	
VD	47:37:00	"	60μH	" L11~15,17~19,21,22,27~35,40,42,45~47		U.C.R.A,B,G	
HL	31:54:70	Metal Oxide Film Resistor	470Ω 1W	酸化金属抵抗 R145,146			
HV	45:41:50	Flame Proof Carbon Resistor	15Ω 1/4W	不燃化カーボン抵抗 R195,197			
HV	45:34:70	"	4.7Ω 1/4W	" R40,41			
HV	45:64:70	"	4.7kΩ 1/4W	" R198			
HV	45:32:20	"	2.2Ω 1/4W	" R250		U.C.R.A,B,G	
HJ	35:61:00	Carbon Resistor	1kΩ 1/4W	カーボン抵抗 R151,152			
VF	45:91:00	Metal Film Resistor	2.2kΩ 1/6W	金属被膜抵抗 R101,103			
VF	45:92:00	"	22kΩ 1/6W	" R98,99			
VB	86:15:00	Pre-Set Potentiometer	B10kΩ	半固定抵抗 VR7,8			
VB	86:19:00	"	B100kΩ	" VR1,4~6			
VB	86:22:00	"	B470kΩ	" VR9			
VB	86:21:00	"	B330kΩ	" VR3			
VC	61:25:00	"	B68kΩ	" VR2			
IA	09:33:70	Transistor	2SA933S(Q,R)	トランジスタ Q1,4,16,23,40,42,47,53,55	Inter-changeable		
IA	11:15:10	"	2SA1115(E,F)	"			
IX	60:31:70	"	2SA1310(R,S,T)	"			
IA	09:34:00	"	2SA934	" Q6,14,45,50	Inter-changeable		
IB	05:44:10	"	2SB544	"			
VC	61:40:00	"	2SB1274(Q,R,S)	" Q51			
IC	17:40:70	"	2SC1740S(S,R)	" Q2,10~12,15,17~19,22,41,48,52	Inter-changeable		
IC	26:03:10	"	2SC2603(E,F)	"			
IX	60:31:80	"	2SC3312(R,S,T)	"			
IC	20:60:00	"	2SC2060	" Q5,13,45,49	Inter-changeable		
ID	04:00:00	"	2SD400	"			
VC	40:79:00	"	2SD1913(R,S)	" Q54			
IX	60:42:00	"	2SC2878(A,B)	" Q3,7~9,31,32,43,44	Inter-changeable		
IC	33:27:00	"	2SC3327	"			
VC	50:21:00	"	2SD1915	"			
IC	19:83:00	"	2SC1983	" Q20			
VF	83:51:00	"	2SD1915(T)	" Q33~36			
IF	00:34:50	Diode	1SS133	ダイオード D8,9,11,14~17,28,33			
IF	00:84:80	"	1SR35-100AT	" D18~22,29,30,32			
IF	00:88:50	Zener Diode	MTZ12A	ツェナーダイオード D10			
IF	01:07:90	"	MTZ7.5A	" D4,6,7			
IF	01:08:70	"	MTZ9.1C	" D12,13			
IF	01:07:20	"	MTZ5.6G	" D23,31			
VE	50:71:00	"	MA4030-L	" D1,2			
IF	00:88:00	"	MTZ3.6A	" D26			
IF	00:49:10	Varactor Diode	1SV55	F.M.バラクタダイオード D3	Inter-changeable		
IF	00:49:20	"	SVC211	"			

*New Parts (新規部品) NR

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
XB	69:80:01	IC	YM3616	I			IC14
XC	85:30:01	"	YM3613B	"			IC16
XB	70:30:01	"	YM3023	"			IC24
XD	71:10:01	"	YM6013	"			IC21
XD	71:20:01	"	YM3414	"			IC20
XD	70:60:01	"	NJM7809FA	"			IC18
IG	07:68:00	"	NJM4558S	"			IC2,3,5~7
IG	07:74:00	"	NJM4556S	"			IC13
IG	08:02:00	"	NJM2043S	"			IC1,8
IG	11:94:00	"	STA451C	"			IC4
IG	15:35:00	"	BA6218	"			IC26
IG	07:56:00	"	NJM78M05A	"			IC17
XD	70:70:01	"	NJM7909FA	"			IC19
IR	00:00:00	"	TC74HC00P	"			IC25
XD	89:70:01	"	PCM56P-J	"			IC22,23
IG	11:92:00	"	μPD4016-CX	"			IC15
XA	95:60:01	"	NJM2068S	"			IC9~12
VC	39:88:00	Crystal Resonator	16.9344MHz	水晶振動子			XL1
VD	98:21:00	Optical Module	TOTX172	光伝送モジュール			UI
LB	30:24:20	Phone Jack	Gray	ホーンジャック		U.C.R.A,B,G	JK1 Silver
LB	30:24:30	"	Black	"			Black
VA	31:63:00	"	"	"			Titan
LB	20:26:10	Pin Jack	2P	ピンジャック			PJ2
VF	09:65:00	"	2P	"		U.C.R.A,B,G	"
VD	76:02:00	"	1P	"			PJ1
KA	90:63:70	Switch	MSW-1485	エンドスイッチ			SW1
KA	40:14:30	Slide Switch	"	スライドスイッチ			SW2
LB	20:13:90	Base Pin	TEB2P-SHF	2,5ピッチベースピン			CB9,12,13,15
LB	40:05:70	"	TEB4P-SHF	"			CB10
LB	50:02:50	"	TEB5P-SHF	"			CB11
VD	00:46:00	"	3P	i-Type P H ベースピン			CB1,2,16,17
VD	00:47:00	"	4P	i-Type			CB3
VD	00:49:00	"	6P	i-Type			CB4~6
VD	00:50:00	"	7P	i-Type			CB7
VD	00:53:00	"	10P	i-Type			CB8
VD	00:48:00	"	5P	i-Type			CB14
LA	00:23:20	Lapping Terminal	P=7.5 3P i-Type	i型ラッピング端子板			
LA	00:25:70	"	P=7.5 3P i-Type	"			
LA	00:41:20	Test Point Pin	1P	テストポイントピン			
BB	06:95:10	Ground Plate		ランド金具			
BB	07:04:10	Bus Bar	55mm	バスバー			
VE	19:16:00	Shield Case		シールドケース			
VC	10:18:00	Support		サポート			
BA	09:29:70	Heat Sink		放熱板			
CB	06:88:80	Plastic Rivet		プラスチックリベット			
Ei	33:01:06	Binding Head Tapping Screw	3×10 ZMC2-BI	バインドタッピングネジ			PACK
ED	33:00:86	Binding Head Screw	3×8 FCRM3-BI	バインド小ネジ			PACK
VD	78:28:00	Ferrite Core	ESD-R-16	フェライトコア			
VF	37:64:00	"	ESDR19D	"			

*New Parts (新規部品) NR

CDX-910/U

CDX-910/U

MECHANISM PARTS Note: φ : Diameter

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
* 1	VE 56 09 00	Front Panel Ass'y	フロントパネル Ass'y	Black		R,A,B,G	
* //	VE 56 07 00	//	//	//		U,C	
* //	VE 56 10 00	//	//	Silver		R,A,B,G	
* //	VE 56 08 00	//	//	//		U,C	
* //	VE 56 06 00	//	//	Titan		J	
* //	VE 56 04 00	//	//	Black		J	
* 1-1	VE 02 46 00	Panel, Side L	パネル サイド L	Black			
* //	VE 31 07 00	//	//	Silver		U,C,R,A,B,G	
* //	VE 43 39 00	//	//	Titan		J	
* 1-2	VE 22 71 00	Panel, Side R	パネル サイド R	Black			
* //	VE 31 08 00	//	//	Silver		U,C,R,A,B,G	
* //	VE 43 41 00	//	//	Titan		J	
* 1-3	VC 50 52 00	Shaft, Lid	シャフト / リッド				
* 1-4	VE 02 60 00	Spring, Lid	スプリング / リッド				
* 1-5	NX 60 12 00	Lid Ass'y	リッド Ass'y	Black			
* //	NX 60 12 10	//	//	Silver			
* //	NX 60 12 20	//	//	Titan		J	
* 1-6	VE 02 57 00	Fulcrum, Lid	リッド 変点				
* 1-7	VE 02 58 00	Cushion, Lid	クッションリッド				
* 1-8	EX 60 08 40	BW Head Tapping Screw	2×6(φ5.5)FCRM3-BI	BWヘッドタッピングネジ			
* 1-9	EI 02 00 66	Binding Head Tapping Screw	2×6 ZMC2-Y	バインドタッピングネジ	PACK		
* 1-10	EJ 02 00 66	Pan Head Tapping Screw	2×6 ZMC2-Y	ナベタッピングネジ	PACK		
* 1-11	VE 97 64 00	Damper	ダンパ / サイド				
* 2	NA 09 64 70	Operation Circuit Board	オペレーションシート	Silver, Black			
* //	NA 09 76 40	//	//	Titan		J	
* 3	VE 30 59 00	Disc Mechanism Unit	DM-710	D M ユニット			
* 4	NA 09 64 80	Main Circuit Board	メインシート	Black		J	
* //	NA 09 64 90	//	//	//		U,C,R,A,B	
* //	NA 09 65 00	//	//	//		G	
* //	NA 09 68 80	//	//	Silver		U,C,R,A,B	
* //	NA 09 68 90	//	//	//		G	
* //	NA 09 69 30	//	//	Titan		J	
* 5	NA 09 65 10	Power Circuit Board	電源シート			R	
* //	NA 09 71 00	//	//	//		J	
* //	NA 09 71 10	//	//	//		A,B,G	
* //	NA 09 80 50	//	//	//		U,C	
* 6	CB 62 01 90	Cord Stopper	CM-22B	コードストッパー		R,A,B,G	
* //	CB 62 02 00	//	CM-22C	//		J,U,C	
* 7	XD 76 80 02	Power Transformer		電源トランス		J	△
* //	XD 76 90 02	//		//		U,C	△
* //	XD 77 00 02	//		//		R	△
* //	XD 77 10 02	//		//		A,B,G	△
* 8	MG 00 12 10	Power Cord	15A	電源コード		J	△
* //	MG 00 22 20	//	10A 125V	//		U,C	△
* //	MG 00 16 30	//	6A 250V	//		R	△
* //	MG 00 23 10	//	7.5A 250V	//		A	△
* //	MG 00 23 30	//	300/300V	//		B	△
* //	MG 00 23 20	//	2.5A 250V	//		G	△
* 9	VE 26 97 00	Tray Ass'y	トレイ Ass'y	Black			
* //	VE 30 01 00	//	//	Silver		U,C,R,A,B,G	
* //	VE 45 37 00	//	//	Titan		J	
* 9-1	VE 04 12 00	Tray, Disc	トレイ / ディスク	Black			
* //	VE 30 63 00	//	//	Silver		U,C,R,A,B,G	

* New Parts (新規部品) NR

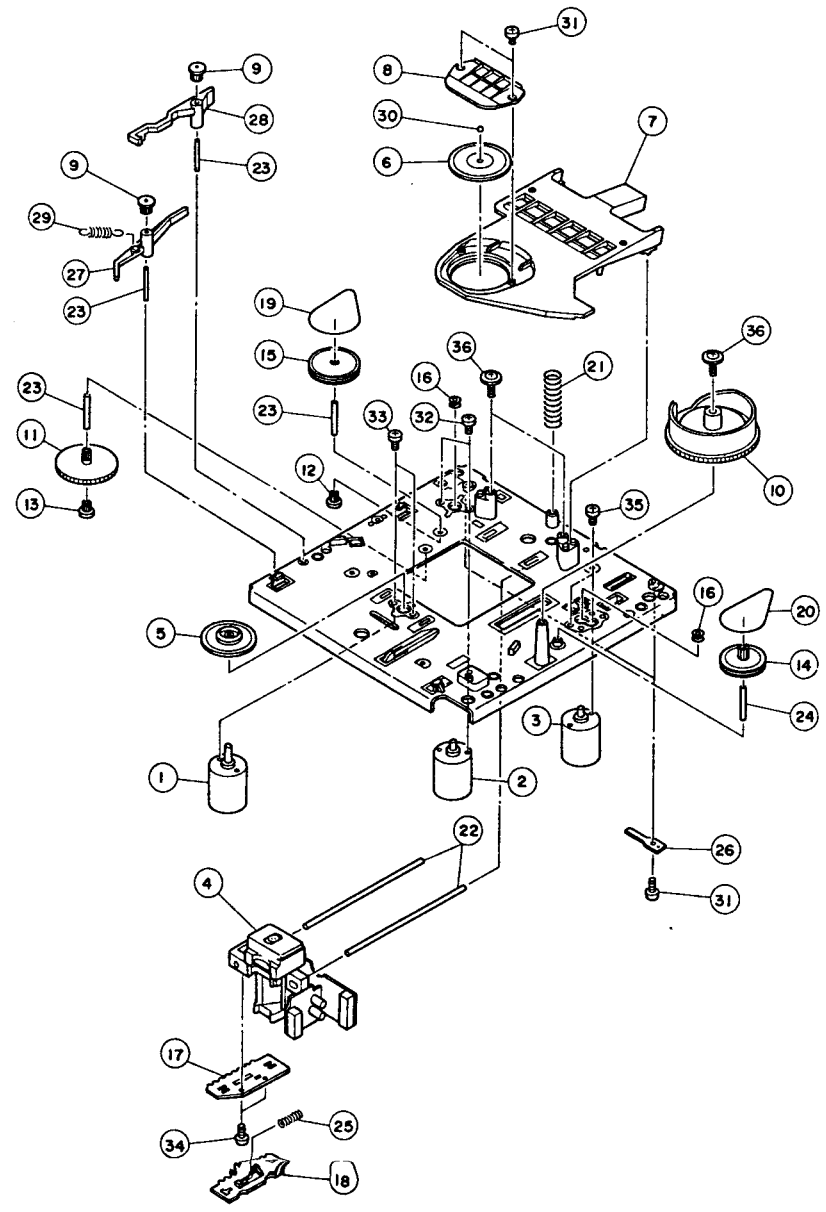
Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
* 9-1	VE 45 34 00	Tray, Disc	トレイ/ディスク	Titan		J	
* 9-2	VE 26 98 00	Lifter Ass'y(L)	リフタ Ass'y (L)	Black		U,C,R,A,B,G	
	VE 65 86 00	"	"	Silver			
	VE 65 87 00	"	"	Titan		J	
* 9-3	VE 26 99 00	Lifter Ass'y(R)	リフタ Ass'y (R)	Black		U,C,R,A,B,G	
	VE 65 88 00	"	"	Silver			
	VE 65 89 00	"	"	Titan		J	
* 9-4	VE 04 16 00	Pad,Disc	パッド/ディスク				
* 9-5	CB 62 79 60	Cushion Rubber	クッションゴム				
* 9-6	VE 04 18 00	Spring	スプリング				
* 9-7	EX 60 02 40	BW Head Tapping Screw	3×8(φ10) FCRM3-BI	BWヘッドタッピングネジ			
* 9-8	EO 33 00 86	Flat Head Tapping Screw	3×8 FCRM3-BI	皿タッピングネジ	PACK		
* 10	VE 48 36 00	Main Chassis Ass'y	メインシャーシ Ass'y			J	
	VF 70 28 00	"	"			U,C	
	VF 51 58 00	"	"			G	
	VE 48 37 00	"	"			A,B	
	VE 48 38 00	"	"			R	
10-1	VD 49 11 00	Leg Cap.	レッグキャップ			J	
10-2	VC 96 54 00	Pad	パッド				
11	NB 63 83 90	Special Screw Ass'y	特殊ネジ Ass'y				
12	VC 32 03 00	Special Screw	特殊ネジ				
13	VE 85 72 00	Ground Plate F	アースプレート F				
14	AA 63 12 30	"	アース金具				
* 15	VE 48 88 00	Bottom Cover	ボトムカバー			J	
	AA 63 12 10	"	"			U,C,R,A,B,G	
* 16	VE 43 58 00	Top Cover	トップカバー	Silver		U,C,R,A,B,G	
	VD 48 92 00	"	"	Black		U,C,R,A,B,G	
* 17	VE 83 11 00	Ground Plate L	アースプレート L				
* 18	VE 83 12 00	" R	" R				
* 19	VE 48 78 00	Side Cover (L)	サイドカバー (L)	Black		J	
	VE 48 80 00	"	"	Titan		J	
* 20	VE 48 81 00	Side Cover (R)	サイドカバー (R)	Black		J	
	VE 48 83 00	"	"	Titan		J	
* 21	VE 48 84 00	Top Cover	トップカバー	Black		J	
	VE 48 86 00	"	"	Titan		J	
* 22	ED 33 00 46	Binding Head Screw	3×4 FCRM3-BI	バインド小ネジ	PACK	J	
* 23	VD 49 08 00	Support	サポーター				
* 24	VB 95 81 00	Spring	スプリング			CLV-1	
* 25	VE 76 46 00	Support	サポーター				
* 26	CB 65 91 50	Holder	ホルダー				
* 27	VE 02 52 00	Rod	ロッド				
* 28	VE 02 37 00	Button	ボタン	POWER Black			
	VE 30 93 00	"	"	" Silver		U,C,R,A,B,G	
	VE 43 30 00	"	"	" Titan		J	
* 29	VE 30 60 00	Plate	プレート	Black			
	VE 30 61 00	"	"	Silver		U,C,R,A,B,G	
	VE 45 36 00	"	"	Titan		J	
* 30	VE 30 92 00	Damper	ダンパー				
* 31	CB 06 88 80	Plastic Rivet	プラスチックリベット				
* 32	CB 65 77 50	"	"			R	
* 33	VE 66 47 00	Washer	ワッシャー			J	
* 34	Ei 33 01 06	Binding Head Tapping Screw	3×10 ZMC2-BI	バインドタッピングネジ	PACK		
* 35	Ei 33 01 26	"	3×12 FCRM3-BI	"	PACK		

*New Parts (新規部品) NR

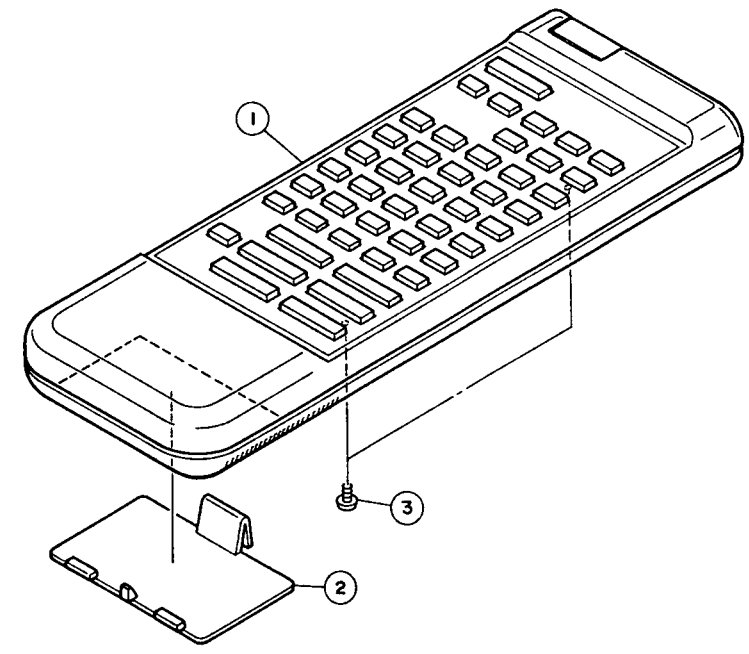
Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
36	Ei 32 61 06	Binding Head Tapping Screw	2.6×10 FCRM3-BI	バインドタッピングネジ	PACK		
37	Ei 34 01 46	"	4×14 FCRM3-BI	"	PACK		
38	EV 41 30 36	Toothed Lock Washer	φ3 FCRM3-BI	歯付座金	PACK		
39	EK 33 00 30	BW Head Tapping Screw	3×10 FCRM3-BI	BWヘッドタッピングネジ			
* 40	VE 85 73 00	Shield Plate		シールドプレート		J,R,C	
* 41	VE 48 87 00	Plate (Top)		プレート		J	
* 42	VE 64 71 00	Plate L (Top)		プレート L		J	
* 43	VE 64 72 00	Plate R (Top)		プレート R		J	
* 44	VF 01 30 00	Spacer		スペーサ		J	
* 45	VE 31 96 00	DM-710 Board In Kit		DM-710ボードインキット			
46	LA 00 02 80	Ground Lug		アースラグ			
* 47	VE 85 42 00	Ferrite Core	ESD-R25DB	フェライトコア		U,C,R,A,B,G	
48	BD 55 00 50	"	ESD-R-12	"			
49	Ei 33 00 66	Binding Head Tapping Screw	3×6 FCRM3-BI	バインドタッピングネジ	PACK		
* 50	VF 16 84 00	Shield Plate Ass'y		シールドプレート Ass'y			
51	VD 94 08 00	Lens		レンズ			
* 52	VF 27 54 00	Shield Plate		シールドプレート (HR)		U,C,R,A,B,G	
* 53	VF 27 55 00	"		" (R)		U,R,A,B,G	
54	VD 54 50 00	"		"		U,C,R,A,B	
	VF 83 18 00	"		"		G	
55	CB 09 96 00	Plastic Rivet		プラスチックリベット		U,A,B,G	
56	CB 60 32 40	"		"		J,R,A,B	
57	UJ 13 73 30	Electrolytic Cap.	33μF 16V	ケミコン C119		U,C,R,A,B,G	
58	FZ 00 41 30	Semi-Conductive Ceramic Cap.	0.1μF 25V	セラコン C120		U,C,R,A,B,G	
59	FZ 00 37 90	"	0.1μF 25V	" C122		U,C,R,A,B,G	
* 60	VF 37 65 00	Ferrite Core	FSDR25D	フェライトコア		U,C,R,A,B,G	
61	BB 07 11 70	Ground Plate		アースプレート		U	
	CB 06 92 51	Binding Tie	BK-1	インシュロックタイ	PACK		
Accessories 付属品							
	VD 29 53 00	Pin Cord		ピンコード		J	
	VD 77 99 00	"	IP	"		U,C,R,A,B,G	
* VE 62 74 00	Remote Control Transmitter	RS-CDX910		リモートコントロールトランスミッター	Black	U,C,R,A,B,G	
* VE 23 55 00	"	RS-CDX1000		"	"	J	
* VE 33 15 00	"	RS-CDX910		"	Silver	U,C,R,A,B,G	
* VE 46 11 00	"	RS-CDX1000		"	Titan	J	
		Dry Cell	AA,R6	単 3 乾電池			

*New Parts (新規部品) NR

EXPLODED VIEW (DM-710)



EXPLODED VIEW (RS-CDX910)



Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
* VE : 23 : 55 : 00	Remote Control Transmitter	RS-CDX1000	リモートコントロールトランスミッター	Black		J	
* VE : 46 : 11 : 00	"	"	"	Titan		J	
* VE : 62 : 74 : 00	"	RS-CDX910	"	Black		U.C.R.A.B.G	
* VE : 33 : 75 : 00	"	"	"	Silver		U.C.R.A.B.G	
* I CX : 60 : 20 : 90	Case Ass'y		ケース Ass'y	Black		J	
* CX : 60 : 21 : 00	"		"	Titan		J	
* CX : 60 : 20 : 60	"		"	Black		U.C.R.A.B.G	
* CX : 60 : 20 : 70	"		"	Silver		U.C.R.A.B.G	
2 CX : 60 : 19 : 50	Battery Case		電池蓋	Titan		J	
" CX : 60 : 19 : 60	"		"	Black			
* CX : 60 : 20 : 80	"		"	Silver		U.C.R.A.B.G	
3 EX : 60 : 02 : 60	Tapping Screw	2×4	ビス	ジ			

* New Parts (新規部品) NR

MECHANISM PARTS(DM-710) Note) φ : Diameter

Parts List for Carbon Resistor

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
*	VE 30:59:00	Disc Mechanism Unit	DM-710	D M ユ ニ ッ ト			
*	1	VE 35:62:00	Motor	モ ー タ	DISC		
*	2	VE 35:61:00	#	#	FEED		
*	3	VE 35:63:00	#	#	LOADING		
*	4	VE 18:84:00	Optical Pick Up Head	光ピックアップヘッド			
*	5	NB 62:99:70	Turntable Unit	ターンテーブルユニット?			
*	6	CB 64:24:00	Stabilizer	スタビライザー 2			
*	7	CB 65:55:20	Flapper	フラッパー 2			
*	8	CB 65:55:40	Thrust Bearing	スラストベアリング 2			
*	9	CB 65:55:50	Pinion Gear	ピニオンギア 2			
*	10	VE 88:79:00	Loading Cam	ローディングカム 3			
*	11	VE 02:29:00	Gear, Drive	ギヤードライブ			
*	12	VE 02:28:00	Gear, Pulley	ギヤードプーリー			
*	13	VE 49:12:00	Ring Stopper	リングストッパー			
*	14	VE 98:00:00	Idle Pulley	アイドルプーリー			
*	15	VE 02:30:00	Pulley, Feed	プーリー/フィード			
*	16	CB 65:85:10	P. Pulley	P プ ー リ ー			
*	17	VE 02:25:00	Rack, GearA	ラック/ギヤード A			
*	18	VE 02:26:00	Rack, GearB	ラック/ギヤード B			
*	19	VE 02:34:00	Belf, Feed	ベルト/フィード			
*	20	VE 80:18:00	Belf, Loading	ベルト/ローディング			
*	21	VE 64:78:00	Spring	スプリングフラッパ			
*	22	VE 02:31:00	Shaft, PU710	シャフト/PU710			
*	23	VE 02:33:00	Shaft, Drive Gear	シャフト/ドライブギヤード			
*	24	AA 61:93:30	Shaft (S)	シャフト(S)			
*	25	VE 17:93:00	Spring	スプリング/ラック110			
*	26	VD 73:24:00	#	スプリング/B E			
*	27	VE 27:00:00	Lever (A)	レバ ー (A)			
*	28	VE 27:01:00	# (B)	# (B)			
*	29	VE 27:02:00	Spring	スプリング/T E			
*	30	VD 93:87:00	Roller, SP	φ2.5 ロ ー ラ ー S P			
*	31	EI 32:60:56	Binding Head Tapping Screw	2.6×5 FCRM3-BI バインドタッピングネジ	PACK		
*	32	ED 32:00:56	Binding Head Screw	2×5 ZMC2-BI バインド小ネジ	PACK		
*	33	ED 32:00:46	#	2×4 ZMC2-BI #	PACK		
*	34	ED 32:60:66	#	2.6×6 FCRM3-BI #	PACK		
*	35	ED 33:00:66	#	3×6 FCRM3-BI #	PACK		
*	36	EK 33:00:10	BW Head Tapping Screw	3×12 FCRM3-BI B W ヘ ッ ド タ ッ ピ ン グ ネ ジ			

*New Parts (新規部品) NR

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	HJ353100	HF853100	12K Ω	HJ357120	HF857120
1.8 "	HJ353180	*	15 "	HJ357150	HF857150
2.2 "	HJ353220	HF853220	18 "	HJ357180	HF857180
3.3 "	HJ353330	HF853330	22 "	HJ357220	HF857220
4.7 "	HJ353470	HF853470	27 "	HJ357270	HF857270
5.6 "	HJ353560	HF853560	33 "	HJ357330	HF857330
10 "	HJ354100	HF854100	39 "	HJ357390	HF857390
15 "	HJ354150	HF854150	47 "	HJ357470	HF857470
22 "	HJ354220	HF854220	56 "	HJ357560	HF857560
27 "	HJ354270	HF854270	68 "	HJ357680	HF857680
33 "	HJ354330	HF854330	82 "	HJ357820	HF857820
39 "	HJ354390	HF854390	91 "	HJ357910	HF857910
47 "	HJ354470	HF854470	100 "	HJ358100	HF858100
56 "	HJ354560	HF854560	120 "	HJ358120	HF858120
68 "	HJ354680	HF854680	150 "	HJ358150	HF858150
82 "	HJ354820	HF854820	180 "	HJ358180	HF858180
100 "	HJ355100	HF855100	220 "	HJ358220	HF858220
110 "	HJ355110	HF855110	270 "	HJ358270	HF858270
120 "	HJ355120	HF855120	330 "	HJ358330	HF858330
150 "	HJ355150	HF855150	390 "	HJ358390	HF858390
160 "	HJ355160	*	470 "	HJ358470	HF858470
180 "	HJ355180	HF855180	560 "	HJ358560	HF858560
220 "	HJ355220	HF855220	680 "	HJ358680	HF858680
270 "	HJ355270	HF855270	820 "	HJ358820	HF858820
330 "	HJ355330	HF855330	910 "	HJ359100	HF859100
390 "	HJ355390	HF855390	1.2 Ω	HJ359120	*
470 "	HJ355470	HF855470	1.5 "	HJ359150	HF859150
510 "	*	HF855510	1.8 "	HJ359180	HF859180
560 "	HJ355560	HF855560	2.2 "	HJ359220	HF859220
680 "	HJ355680	HF855680	3.3 "	HJ359330	HF859330
820 "	HJ355820	HF855820	3.9 "	HJ359390	*
910 "	HJ355910	HF855910	4.7 "	HJ359470	HF859470
1.0K Ω	HJ356100	HF856100			
1.2 "	HJ356120	HF856120			
1.5 "	HJ356150	HF856150			
1.8 "	HJ356180	HF856180			
2.0 "	HJ356200	HF856200			
2.2 "	HJ356220	HF856220			
2.4 "	HJ356240	HF856240			
2.7 "	HJ356270	HF856270			
3.0 "	HJ356300	HF856300			
3.3 "	HJ356330	HF856330			
3.6 "	HJ356360	HF856360			
3.9 "	HJ356390	HF856390			
4.7 "	HJ356470	HF856470			
5.1 "	HJ356510	HF856510			
5.6 "	HJ356560	HF856560			
6.8 "	HJ356680	HF856680			
8.2 "	HJ356820	HF856820			
9.1 "	HJ356910	HF856910			
10 "	HJ357100	HF857100			

