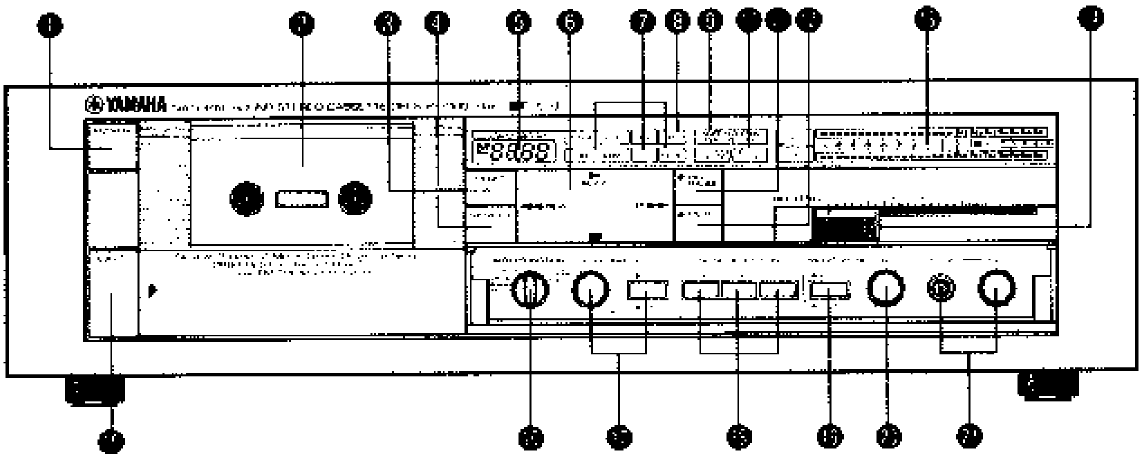
STEREO CASSETTE DECK

K-1000

SERVICE MANUAL

■FRONT PANEL



- POWER SWITCH
- CASSETTE TAPE HOLDER
- RESET BUTTON
- MEMORY BUTTON
- TAPE COUNTER/TUNING DISPLAY
- TAPE TRANSPORT CONTROL BUTTON
- AUTO TAPE SELECTOR INDICATOR
- TEST INDICATOR
- NOISE REDUCTION INDICATOR
- TAPE MONITOR INDICATOR
- REC/PAUSE BUTTON
- REC MUTE BUTTON
- PEAK LEVEL METER
- REC LEVEL CONTROL
- EJECT BUTTON
- AUTO FUNCTION SWITCH
- BIAS ADJUSTMENT KNOB/ORBIT
- NOISE REDUCTION BUTTONS
- TAPE MONITOR BUTTON
- REC BALANCE KNOB
- HEADPHONE JACK/PHONES LEVEL VOLUME

■CONTENTS

SINCE 1887 YAMAHA
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN
Printed in Japan 11.82 2.6k
00[illegible]

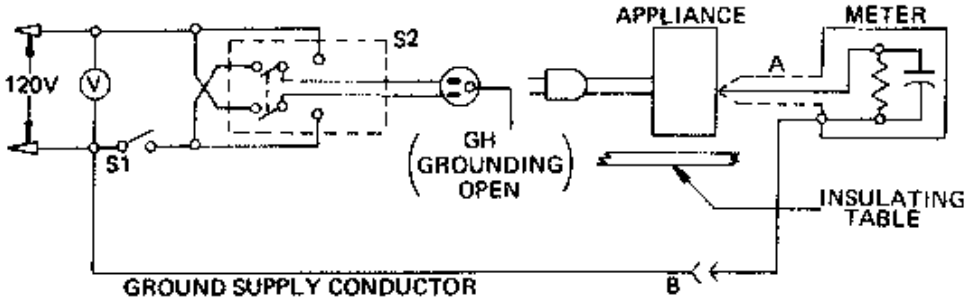
■TO SERVICE PERSONNEL

(Prepared in accordance with UL Standard 1270)

Before service of this appliance by you, please carefully read this service manual.

Please make Leakage-current or Resistance measurements by suitable meter to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

LEAKAGE CURRENT MEASUREMENT CIRCUITS



Appliance intended for connection to a 120 volt power supply.

A PROBE WITH SHIELDED LEAD.

B SEPARATED AND USED AS CLIP WHEN MEASURING CURRENTS FROM ONE PART OF APPLIANCE TO ANOTHER.

Confirm that the leakage current is not be more than 0.5mA

■SPECIFICATIONS

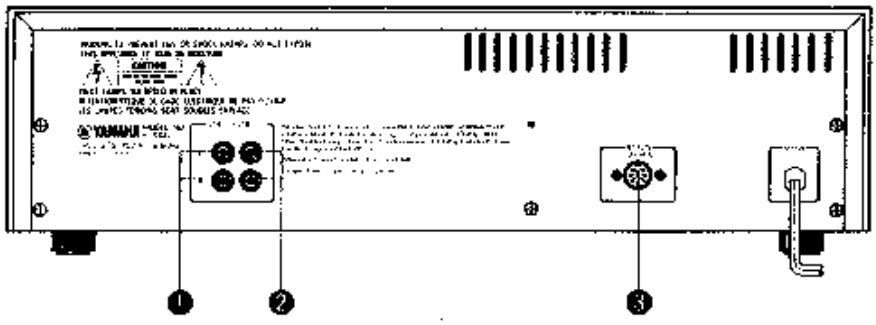
Track Configuration	4-track 2 channel Stereo Cassette Deck
Transport Controls	5-key feather touch full logic control
• MECHANICAL SECTION	
Tape Speed	4.8 cm/sec
Wow & Flutter	less than 0.08% W. Peak less than 0.02% W.RMS
Rapid Transport (F.FWD/REW)	Within 75 seconds (for C—60 cassette)
Motor	1 Pulse Servo Brush-less DD motor (Capstan) 1 Flat Torque DC motor (Reel)
Mechanism	2-motor, 2-solenoid mechanism
• HEAD SECTION	
Recording/Playback Head	Combination, Low-Impedance Sendust 2 Laminate Core
Erase Head	Double Gap Sendust Clevite
• AMPLIFIER SECTION	
REC/PB Response	
Normal	20 to 18kHz ±6dB 25 to 17kHz ±3dB
Chrome	20 to 19kHz ±6dB 25 to 18kHz ±3dB
Metal	20 to 21kHz ±6dB 25 to 20kHz ±3dB

Input Sensitivity/Impedance	LINE: 50mV/30kΩ
Maximum allowable input	LINE: 6V
Output Level/Impedance	LINE: 500mV/30kΩ PHONES: 170mV/8Ω
Signal-to-Noise Ratio	
THROUGH	more than 59dB
DOLBY	more than 68dB
dbx	more than 106dB
Harmonic Distortion	less than 0.8%
• GENERAL	
Power Supplies	
U.S & Canadian Models	120V 60Hz
European Model	220V 50Hz
British & Australian Models	240V 50Hz
General Model	110/120/220/240V 50/60Hz
Power Consumption	35W
Dimensions (W x H x D)	435 x 122.5 x 346 (17-1/8x4-7/8x13-5/8")
Weight	8.0 kg (17.6 lbs)

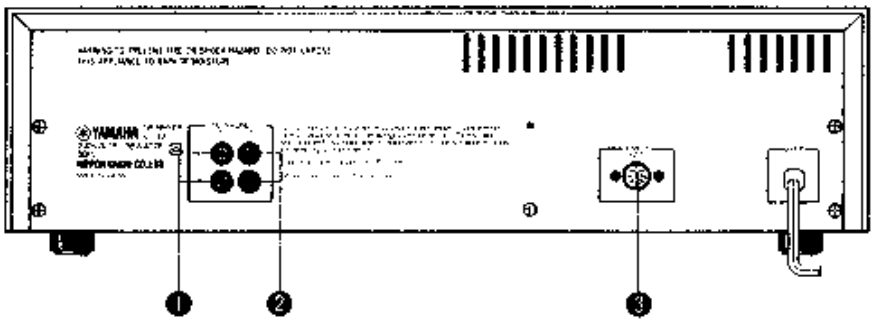
Specifications subject to change without notice.

■REAR PANEL

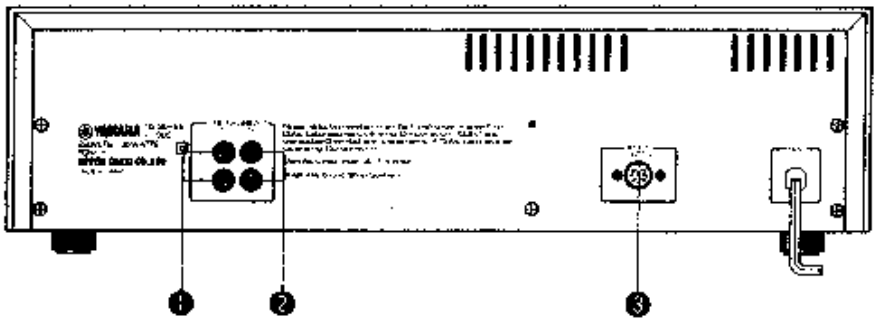
▼ U.S.A. & Canadian models



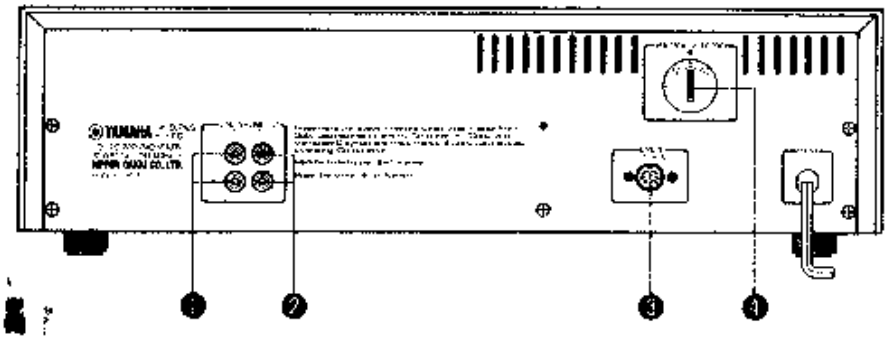
▼ British & Australian models



▼ European model



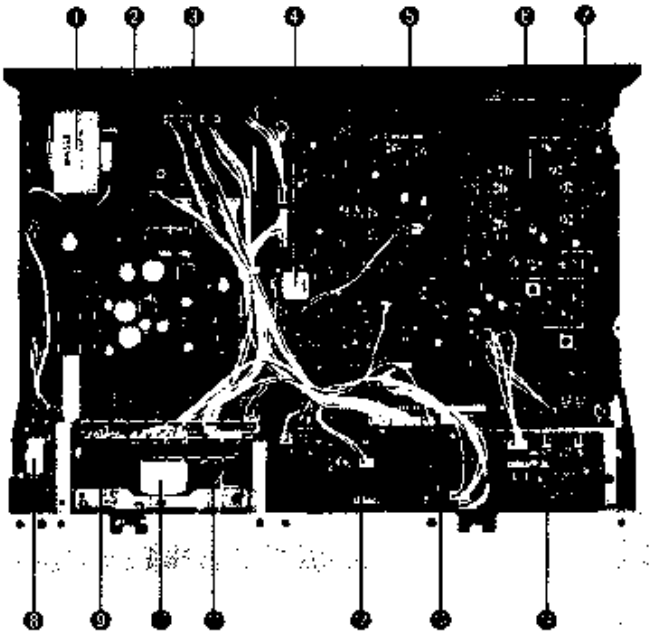
▼ General model



●LI[redacted]
●LI[redacted]KS

●REMOTE CONTROL TERMINAL
❶VOLTAGE SELECTOR

■INTERNAL VIEW



●POWER TRANSFORMER
U.S.A. & Canadian models: GA65850
British & Australian models: GA65860
European model: GA65870
General model: GA65840
●POWER SUPPLY CIRCUIT BOARD (1)
●ROGIC CONTROL IC (IC501)
●BIAS OSC. (IC115)
●MAIN CIRCUIT BOARD (1)
●dbx IC (IC107, IC108, IC109, IC110)
●DOLBY IC (IC105, IC107)
●POWER SWITCH
●RELAY CIRCUIT BOARD
●REEL MOTOR
●CAPSTAN MOTOR (D.D Motor)
●COUNTER & ORBIT IC (IC601)
●COUNTER CIRCUIT BOARD (1)
●COUNTER CIRCUIT BOARD (2)

■DISASSEMBLY PROCEDURES

DISASSEMBLY PROCEDURES OF CABINET PARTS

1. Top cover removal

Remove screws ① and ② of both left and right sides in fig. 1, and then remove the top cover.

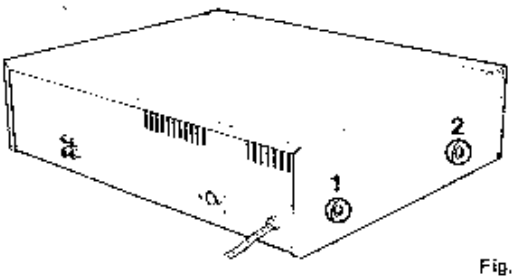


Fig. 1

2. Bottom cover removal

Remove screws ① through ⑧ in fig. 2 and then remove the bottom cover.

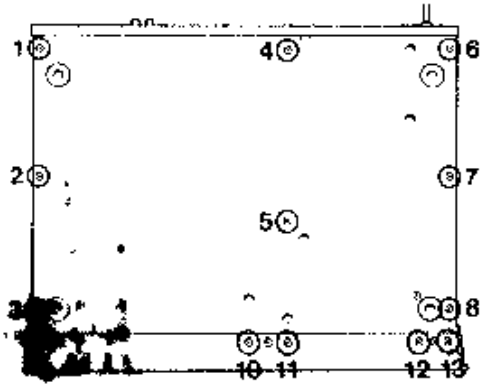


Fig. 2

3. Front panel removal

a. Remove the top cover.
b. Release the two binding ties which secure each connectors.
c. Remove screws ① and ② in fig. 3 and pull out the counter circuit board (1) backward gently (connected to the front panel by connectors.)
d. Remove screws ③ and ④ in fig. 3 and pull out the counter circuit board (2) backward gently (connected to the front panel as well as counter circuit board (1).)
e. Remove connecters #15, #16 and #17.
f. Remove screws ⑨ through ⑬ in fig. 2 and screws ⑤ through ⑨ (yellow screws only) in fig. 3, and then pull out the panel forward gently.

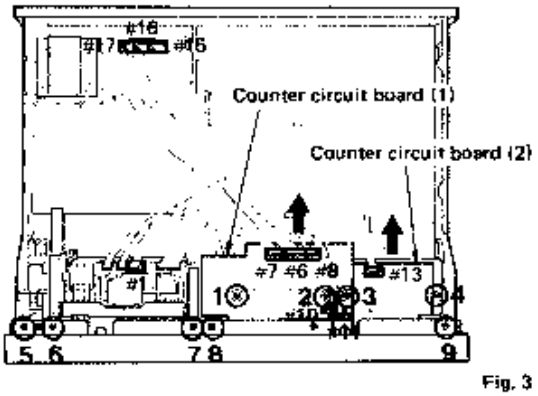


Fig. 3

DISASSEMBLY PROCEDURES OF CASSETTE MECHANISM

1. Cassette mechanism unit removal

a. Remove the top cover.

b. Disconnect the connectors (#1, #3, #4 and #5) connected to the relay circuit board. (Refer to fig. 15)

c. Disconnect the head lead wire connectors (#25, #26 and #27). (Refer to fig. 15).

d. Remove screws ⑪ and ⑫ in Fig. 2 and screws ⑨ and ⑦ in Fig. 3 and screws ① and ② in Fig. 4, and then pull out the cassette mechanism unit backward gently.

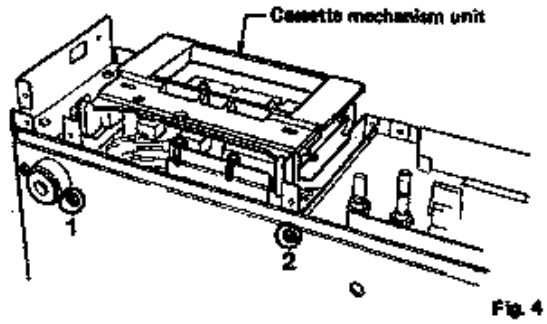


Fig. 4

2. Idler Ass'y replacement

a. Remove screw ① in fig. 5 and open the cassette holder.
   * Be careful of the spring position when assembling it.

b. Loosen the lead wires (orange and white-colored) of LED on the blind plate.

c. Remove screws ② and ③ in fig. 5 and then remove the blind plate.

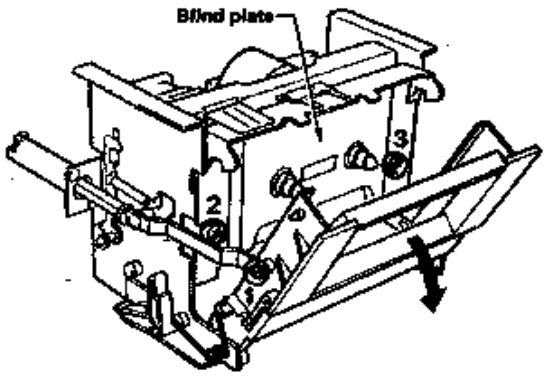


Fig. 5

d. Remove screw ① and idler spring in fig. 6, and replace the idler ass'y.

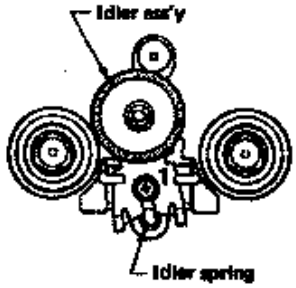


Fig. 6

3. Recording/Playback Combination Head & Erase Head replacement

a. Remove screw ① in fig. 7 and loosen screw ② in fig. 7, and then remove M circuit board plate.

b. Remove screw ③ in fig. 7 and open the cassette holder.

c. Unsolder the lead wires of heads.
   * Refer to fig. 9 when connecting them.

d. Remove screws ① and ② in fig. 8 and then replace the recording/playback combination head.

e. Remove screws ③ and ④ in fig. 8 and then replace the erase head.
   *Check head azimuth adjustment when replacing the recording/playback head.
   *Check height adjustment of erase head guide when replacing the erase head.

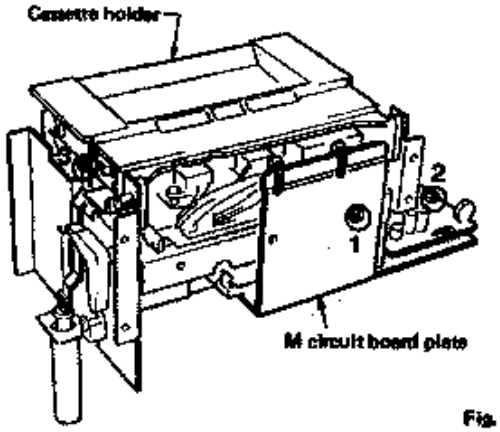


Fig. 7

4. Pinch roller replacement

a. Open the cassette holder.

b. Remove the washer ① in fig. 10 and then replace the pinch roller arm assembly.
   * Refer to fig. 10 as to the position of pinch roller spring.

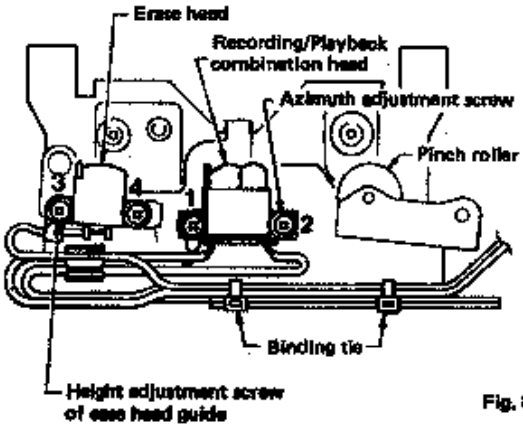


Fig. 8

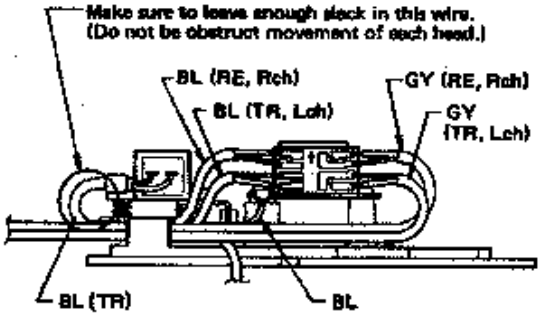


Fig. 9

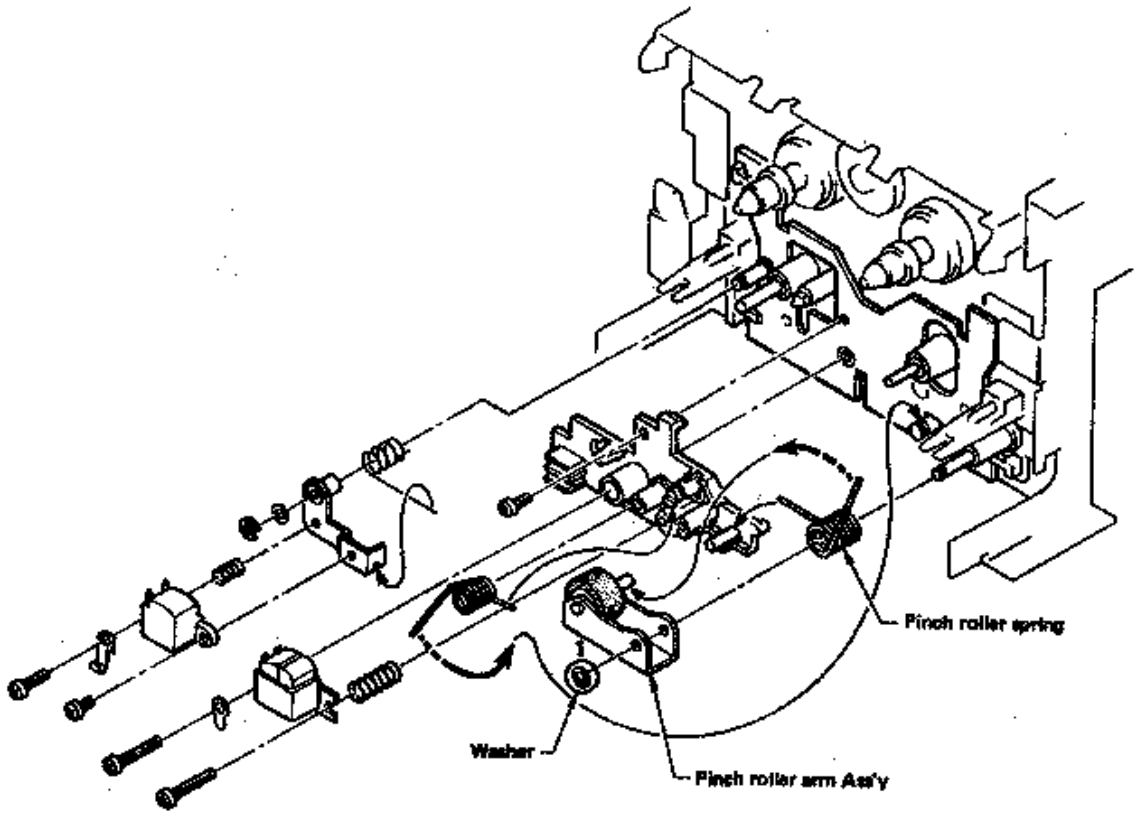


Fig. 10

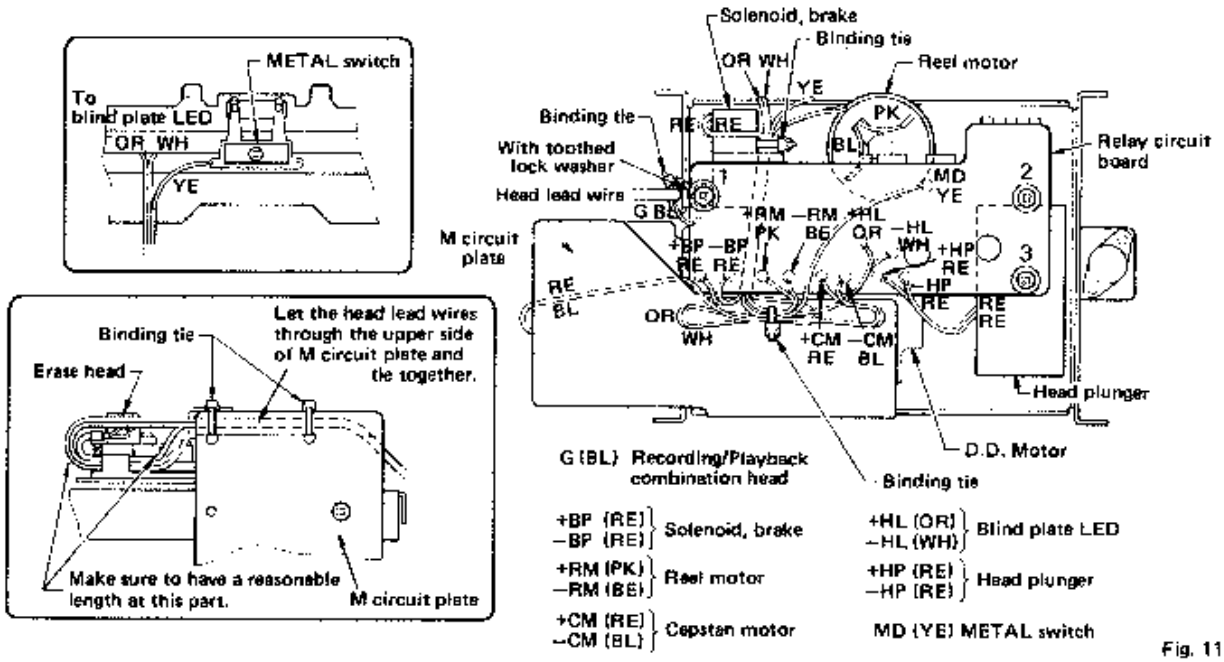


Fig. 11

5. Reel Motor replacement

a. Removing the reel motor with idler ass'y is impossible, so first remove the idler ass'y according to procedure 2 on P4.

b. Remove screws ① through ⑤ in fig. 11 and then remove the relay circuit board.

c. Remove screw ⑥ in fig. 12 and then remove the reel motor unit.

* At this time, if the idler ass'y has not been removed, you will be not able to remove the reel motor unit.

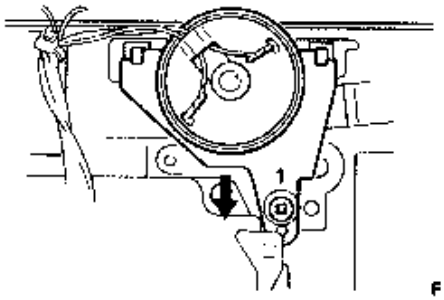


Fig. 12

d. When installing relay C. board, make sure that acrylic fibers are securely fitted into acrylic fiber holders (2 rocations).

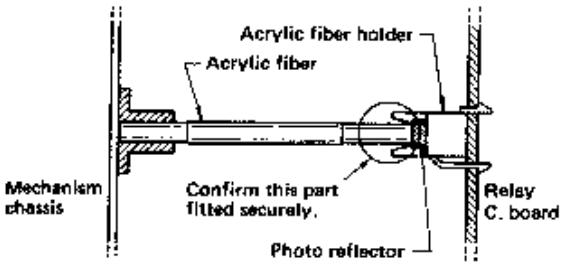


Fig. 13

6. Capstan Motor replacement

a. Remove the relay circuit board.

b. Remove M circuit plate.

c. Remove screws ① through ③ in fig. 14 and then replace the capstan motor.

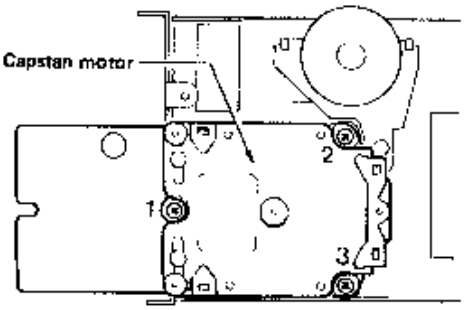


Fig. 14

PARTS OF EACH CIRCUIT BOARD REPLACEMENT

*Replacement of the parts on most circuit boards in this unit is possible by removing the top and bottom cover.

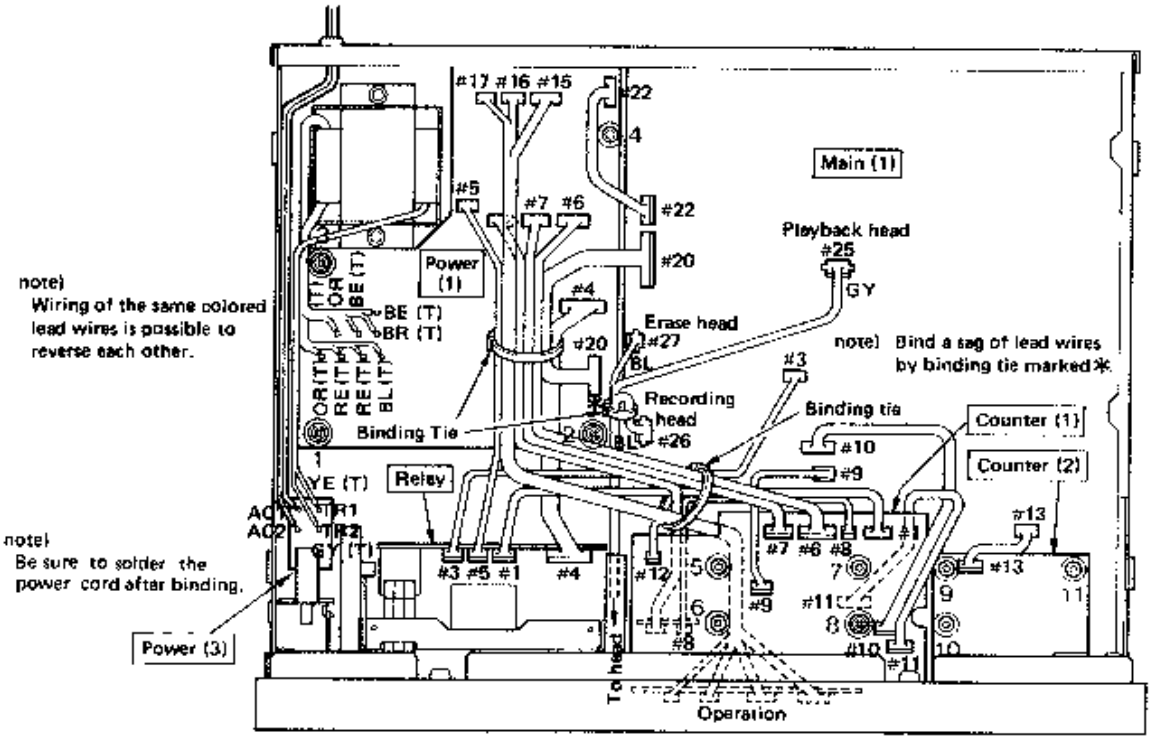


Fig. 15

1. Parts of power circuit board (1) replacement

a. Remove plastic rivets ① and ② in fig. 16 which fix the remote control terminal of rear panel.

b. Remove screws ① through ③ and plastic rivet 4 in fig. 15 and then remove the power circuit board (1). In this way, you can replace the parts.

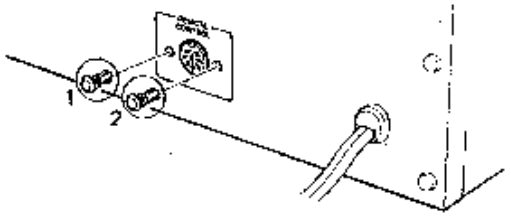


Fig. 16

2. Counter circuit board (1) removal

Remove plastic rivets ⑤ through ⑦ and screw ⑧ in fig. 15 and then pull out the counter circuit board (1) by sliding it backward.

*This circuit board is connected to the front panel with connectors.

3. Counter circuit board (2) removal

Remove plastic rivets ⑨ through ⑪ in fig. 15 and then pull out the counter circuit board (2) by sliding it backward.

*This circuit board is connected to the front panel with connectors.

4. Removals of each volume (BIAS, REC BALANCE and LEVEL)

a. Remove the front panel.

b. Remove each knobs.

c. Unsolder the soldering of volume you desire to replace.

d. Remove hexagonal nuts ① through ③ and screws ④ through ⑦ in fig. 17, and then replace the volume by sliding the sub chassis forward.

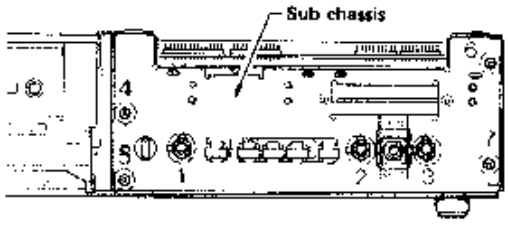


Fig. 17

■ADJUSTMENT

CASSETTE DECK ADJUSTMENT

1. Before adjustment

- Since head magnetization, dust accumulations, etc. are likely to introduce error in the various characteristics, it is very important that the heads are properly demagnetized and cleaned before commencing any adjustment, particularly frequency response and head azimuth adjustment.
- Proceed with the recording section adjustment after having finished the playback section adjustment. Should the recording section adjustment be carried out without having completed the playback section adjustment perfectly, a recorded tape may not be Played back properly with another tape deck and the adjustment itself may become impossible.

2. Instruments required

- Audio frequency oscillator
- VTVM or 2 channel VTVM
- Wow/flutter meter
- Oscilloscope
- Torque meter

3. Test tape required

a. Tape speed adjustment
3kHz −10dB (250nwb/m)
MTT-111 or equivalent

b. Azimuth adjustment
10kHz −10dB (250nwb/m)
MTT-114 or equivalent
* Playback frequency response tape level deviation, less than ± 0.5dB

c. Playback level
333Hz or 315Hz (160nwb/m)
MTT-212C or equivalent
* When using 333Hz (250nwb/m) tape as MTT212, add 4dB to the upper playback level.

d. Playback frequency response adjustment
LH (3180μs + 120μs)
The tape in which the optional frequencies from 40Hz to 10kHz are recorded
MTT-256 or equivalent
CrO_2 (3180μs + 70μs)
The tape in which the optional frequencies from 40Hz to 10kHz are recorded.
MTT-356 or equivalent

e. Reference tape
LH YAMAHA NR 60 or TDK AD C-60
CrO_2 YAMAHA CR 60 or TDK SA C-60
METAL YAMAHA MR 60 or TDK MA C-60
* C-90 differs with C-60 in the thickness and bias is unequal, so adjust with the tape whose bias is of specified value.

MECHANICAL ADJUSTMENT

CONFIRMATION OF TORQUES

Confirm that torques are within the following ratings;

Adjustment item	Ratings	Measurement conditions
TAKE UP torque	35 ± 10 g·cm	Couple the Torque Meter (SRK CT-100M) to the deck in play mode, and read the torque of take up reel's. (While in play, read the center of deflection.)
FF torque	More than 80 g·cm	Set the Torque Meter (SRK CT-100M) to the FF mode, and when it was wound completely, read the torque of take up reel's.
REW torque	More than 80 g·cm	Set the Torque Meter (SRK CT-100M) to the REW mode, and when winding is over, read the torque of supply reel's.
BACK TENSION torque	$2.5^{+1.5}_{-0.5}$ g·cm $2.5^{+1.5}_{-0.5}$ g·cm	Measure the back tension torque with the Torque Meter (CT-W) in play mode.
Pinch roller pressure	460 ± 50 g	Measure the pinch roller pressure to the capstan in play mode.
Tape tension	More than 150 g (Referential rating)	Set the power torque meter and measure the tape tension of pinch roller and capstan in play mode.

• CHECK OF FAST FORWARD AND FAST REWIND TIMES.

Insert a C-60 tape and check to ensure that time of fast forward and fast rewind is less than 75 seconds and that the tape is transported at a constant speed all the way.

• MECHANICAL ADJUSTMENT

Step	Adjustment item	Tape	Mode	Adjustment part	Rating
1	Tape speed	MTT-111 3kHz, −10dB (250nWb/m)	PB	Semi fixed variable resistor in circuit board of the D.D capstan motor.	3000^{+5}_{-15} Hz
2	Wow/flutter	MTT-111 3kHz, −10dB (250nWb/m)	PB		Less than 0.03% (JIS WRMS)
3	Azimuth	MTT-114 10kHz, −10dB (250nWb/m)	PB	Azimuth adjustment screw of REC/PB combination head.	Set both channel levels to maximum output level and the phase difference between the left and right channels to minimum.
4	Height of erase head guide	Mirror cassette (MC-09)	PB	Height adjustment screw of erase head.	Adjust the height position so that the tape runs smoothly.

① Tape Speed adjustment

a. Connect a Wow/flutter meter to either the left or right channel of the Line Out terminals.

b. Play back the MTT-111 (3kHz, −10dB) test tape, and adjust the semi variable resistor located inside the DD capstan motor circuit board to obtain a frequency counter reading of $3000 \pm^{5}_{15}$ Hz.
(This adjustment is possible from the bottom cover side.)

* Perform adjustment at the center of the test tape length if possible.

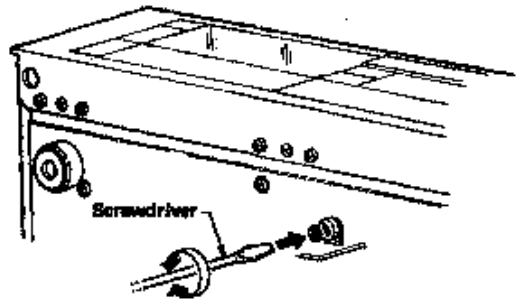
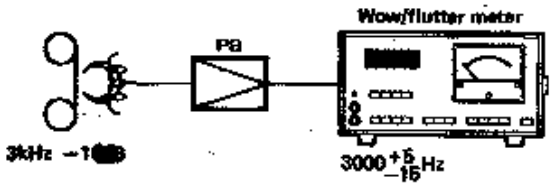


Fig. 18

② Measurement of Wow/flutter

Set the range of wow/flutter meter to 0.03% (full scale) and (JIS), and after the test tape has run about 30 seconds, check that the meter deflects less than 0.03%.



Less than 0.03% (JIS-WRMS)

Fig. 19

③ Head Azimuth adjustment

a. Connect a pair of VTVMs or a 2 channel VTVM, and oscilloscope to the left and right LINE OUT terminals.

b. Remove the cassette lid.

c. Play back MTT-114 (10kHz, −10dB) test tape, and adjust the REC/PB combination head azimuth adjustment screw to obtain maximum output level in both left and right channels, and adjust so that the phase difference between both channels becomes minimum.

* Be sure to attach importance to the phase difference and output level, since L and R level differences can be adjusted by Playback Equalizer.
(Refer to electric circuit and Playback frequency response adjustment.) If the mechanical positions of VR107 and 108 are almost the same, and L and R level differences is eminent, it will be due to the degradations of mechanism, head or test tape.

d. After the adjustment, be sure to use a screw lock paint.

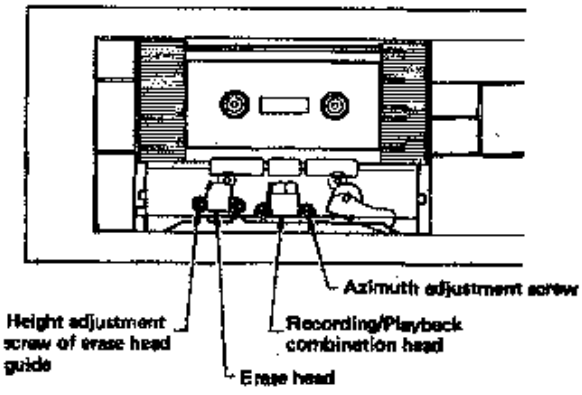


Fig. 20

• PHASE ADJUSTMENT WITH OSCILLOSCOPE

(1) Phase adjustment with 2 channel oscilloscope

a. Set the MTT-111 and connect CH1 of the oscilloscope to the left channel and CH2 to the right channel.
b. Observe the scanning of CH1 (& CH2) with TRIGGER LEVEL.
c. Adjust the head azimuth adjustment screw to obtain the same waveform in both CH1 and CH2.

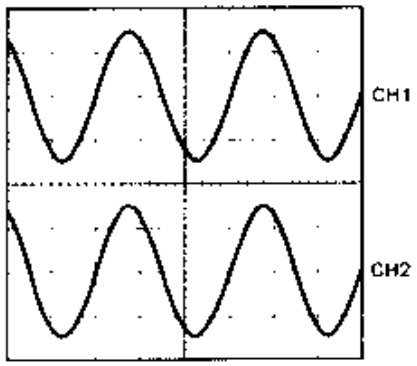
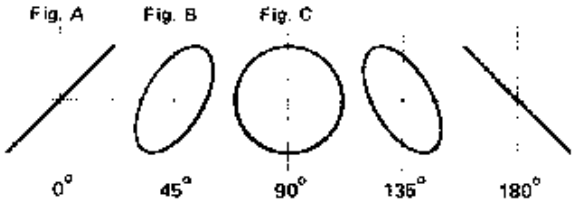


Fig. 21

(2) Phase adjustment with Lissajous figure with oscilloscope

a. Set the MTT-111 and apply the left and right channel signals to horizontal and vertical input of the oscilloscope.
b. Adjust the level in X – Y mode.
c. As the phases of the left and right channels signal are just the same, a straight line as shown in fig. A will appear on it.
   If the waveform as shown in fig. B or C appears, adjust the head azimuth adjustment screw to obtain the waveform as shown in fig. A.
   * If there is extreme difference of phase, the left and right ambiences will not be natural for stereo separation. Adjust so that the left and right phase difference becomes minimum.



(Phase difference of V:H)

Fig. 22

④ Height adjustment of erase head guide

Play mirror cassette and observe the tape running. Adjust the height position so that the tape runs smoothly.

NORMAL

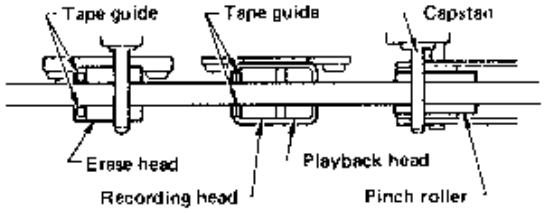


Fig. 23

INCORRECT HEAD POSITIONING

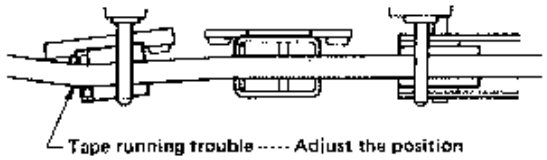
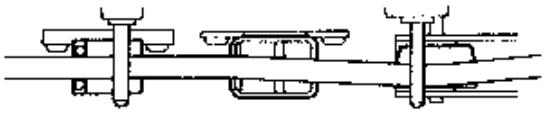


Fig. 24

DEFECTIVE PINCH ROLLER



Even if the head is set to it's proper position, tape will not run normally if there is a transformation of pinch roller. So you must take notice of it. If this happen, replace by new one.

Normal pinch roller
Condition of normal tape running

Transformed pinch roller
Tape runs on the thick part of pinch roller.

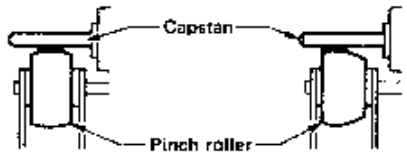
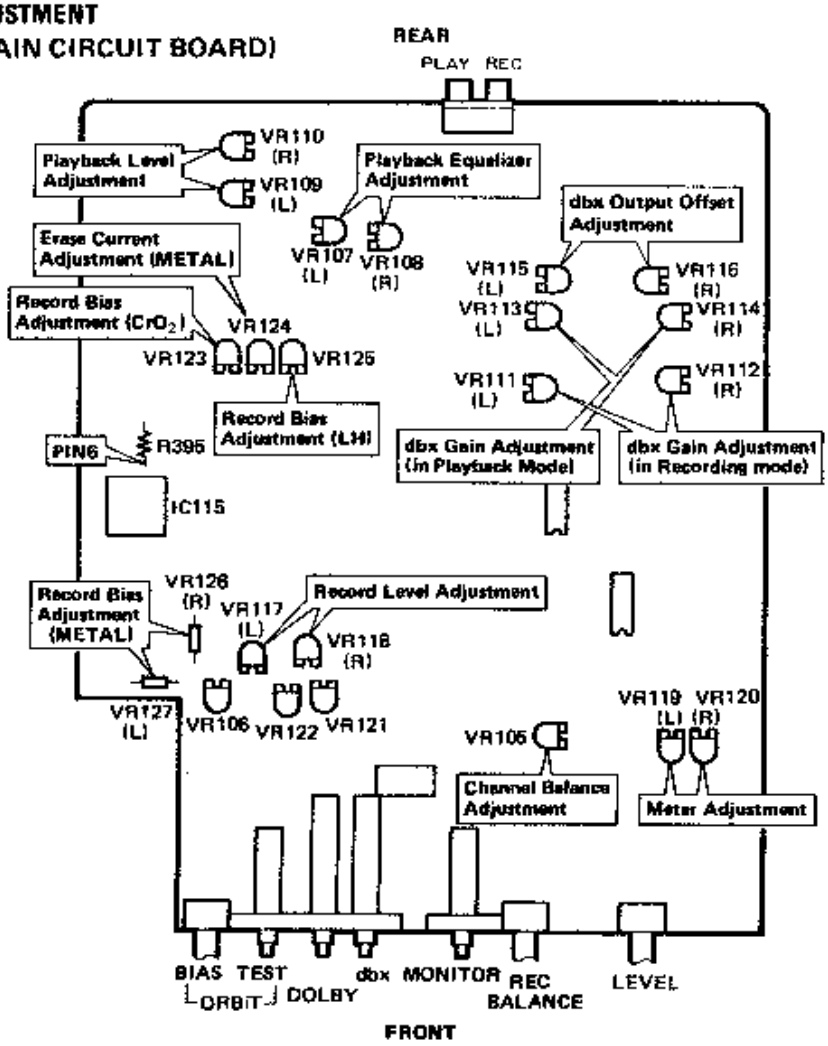


Fig. 25

ELECTRICAL ADJUSTMENT

TEST POINT (MAIN CIRCUIT BOARD)



FREQUENCY RESPONSE ADJUSTMENT

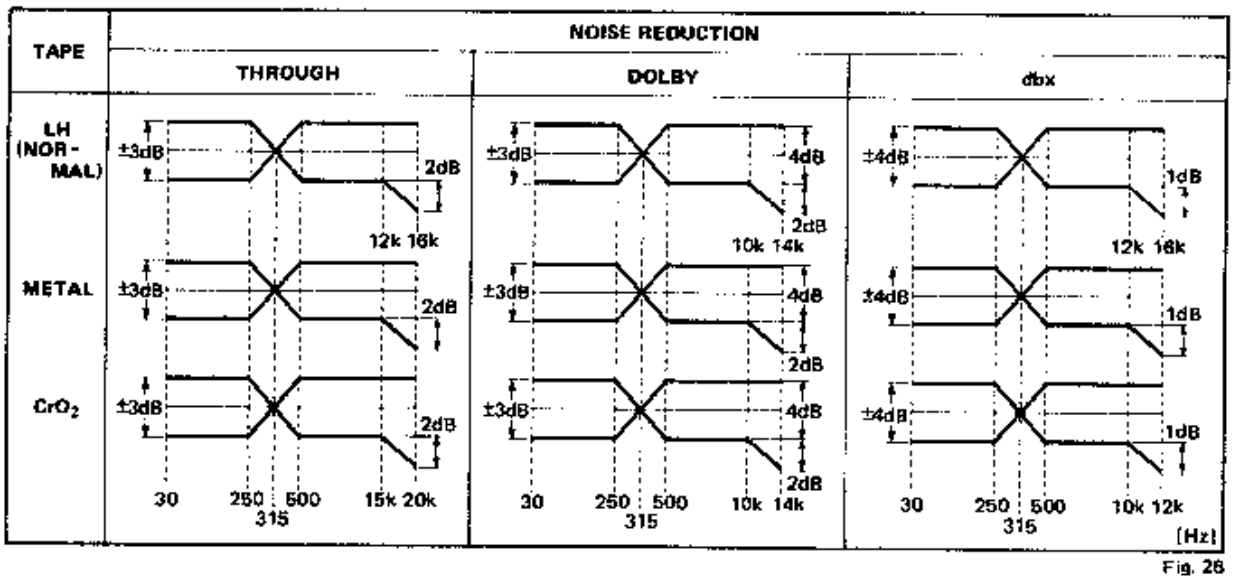


Fig. 28

- Perform each adjustment or measurement at THROUGH position of NOISE REDUCTION.

Step	Adjustment item	Tape	Mode	Required	Terminals to be connected	Adjustment part	Rating
1	Playback level	MTT-212C 315Hz 160nwb/m or MTT-212 315Hz 250nwb/m	PB		LINE OUT	VR109 (Lch) VR110 (Rch)	160nwb/m: −6dBV ± 0.5dBV (500mV ± 30mV) 250nwb/m: −2dBV ± 0.5dBV) (794 mV ± 30mV)
2	Playback equalizer	Test tape for frequency check. 3180μs+120μs(LH) 315Hz, −10dB, 10kHz, −10dB or MTT-256	PB		LINE OUT	VR107 (Lch) VR108 (Rch)	Check that the 10kHz playback level lies within 0 ± 1dB of the 315Hz playback level.
3	Playback frequency response confirmation	Test tape for frequency check. 3180μs+120μs(LH) (MTT-256) 3180μs+70μs(CrO_2) (MTT-356)	PB		LINE OUT		Check that the 14kHz playback level lies within 0 ± 2dB of the 315Hz playback level. (Refer to Fig. 27)
4	Meter		REC SOURCE	1kHz −6dBV ± 0.5dBV (500mV ± 30mV)	LINE OUT	VR119 (Lch) VR120 (Rch)	Adjust VR119 and VR120 to the lowest level where 0dB display part of the level meter light up.
5	Record level	YAMAHA CR60 (CrO_2)	REC/PB	1kHz −6dBV (500mV)	LINE OUT	VR117 (Lch) VR118 (Rch)	−6 ± 0.5dBV [500 ± 30mV]
6	Erase current	YAMAHA MR60 (METAL)	REC MUTE		PIN 6 of IC115	VR123	22.5 ± 0.5V
7	Record bias (Total frequency response) NOTE: Perform METAL tape adjustment first.	YAMAHA MR60 (METAL)	REC/PB	17kHz −26dBV (50mV)	LINE OUT	VR126 (Rch) VR127 (Lch)	17kHz record and playback level lies within 0 ± 2dB (−26dB) of the 1kHz record and playback level.
		YAMAHA CR60 (CrO_2)	REC/PB	15kHz −26dBV (50mV)	LINE OUT	VR124	15kHz record and playback level lies within 0 ± 2dB (−26dB) of the 1kHz record and playback level.
		YAMAHA NR60 (LH)	REC/PB	14kHz −26dBV (50mV)	LINE OUT	VR125	14kHz record and playback level lies within 0 ± 2dB (−26dB) of the 1kHz record and playback level.
8	Channel balance		REC	1kHz −10dBV (316mV)	LINE OUT Between Lch and Rch.	VR105	When center of REC LEVEL within 0.2dB.

PLAYBACK FREQUENCY RESPONSE ADJUSTMENT

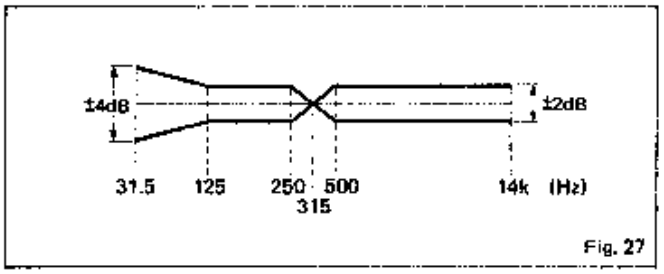


Fig. 27

− 6dBV = 500 mV = − 3.8dBm
− 2dBV = 794 mV = 0.2dBm
−26dBV = 50 mV = −23.8dBm
−10dBV = 316 mV = − 7.8dBm
−21dBV = 89.1mV = −18.8dBm
<0dBV=1V>

① **Playback level adjustment**

Play back the level readjusting test tape, and set the playback level by adjusting VR109 (Lch) and VR110 (Rch).

The standard signal level of this unit is 0dB (=−6dBV= 500mV) of 315Hz, 160nwb/m, and +4dB (=−2dBV= 794mV) in case that the level is 315Hz, 250nwb/m.

② **Playback equalizer adjustment**

Play back the test tape of 315Hz·−10dB and 10kHz·−10dB, and adjust VR107 (Lch) and VR108 (Rch) so that the high level (10kHz) is equivalent to the low level (315Hz).

If the head azimuth adjustment is not done exactly, if the high level is made up by playback equalizer, it will cause noise to increase and signal-to-noise ratio to be effected.

Be sure to do the head azimuth adjustment before adjusting the playback equalizer.

③ **Confirmation of playback frequency response**

After adjusting the playback equalizer, confirm playback frequency response.

Play back the MTT-256 (LH, 3180μs+120μs) and MTT-356 (CrO_2, 3180μs+70μs) test tape, and check the output level variation.

* If playback frequency response is not within rating, even if you could make the total frequency response flat by doing the recording bias adjustment, playing a tape recorded on another tape deck will produce unnatural sounds.

④ **Level meter adjustment**

a. Set to REC SOURCE mode, and apply 1kHz sine wave signal from LINE IN. (Input level is not provided.)

b. Adjust REC LEVEL and REC BALANCE so that the level of VTVM connected to LINE OUT becomes −6dBV (500mV).

c. Adjust VR119 (Lch) and VR120 (Rch) so that the 0dB indicator of the level meter lights up, and in addition to this, also adjust so that the 0dB indicator goes out at the same time when the input levels of Lch and Rch are decreased at the same time.

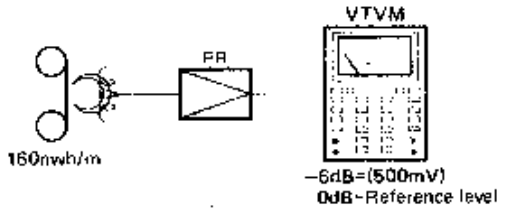


Fig. 28

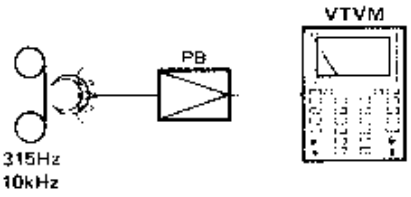


Fig. 29

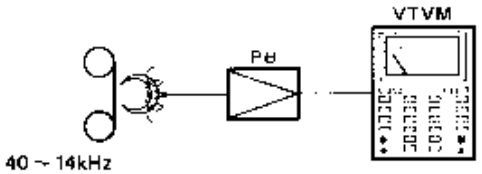


Fig. 30

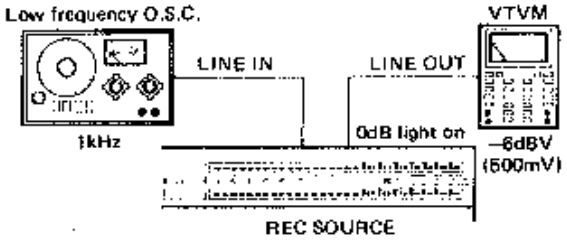


Fig. 31

⑤ **Recording level adjustment**

a. Load a YAMAHA CR60 (CrO_2 tape).

b. Set to REC/PAUSE and SOURCE position.

c. Apply 1kHz signal, and adjust the REC LEVEL so that the LINE OUTPUT becomes −6dBV (500mV).

d. Start in recording, and set to the TAPE position.

e. Adjust VR117 (Lch) and VR118 (Rch) so that the LINE OUT level becomes −6dBV.

⑥ **Erase current adjustment**

a. Load a YAMAHA MR 60 (METAL).

b. Start in recording, and push the MUTE button.

c. Adjust VR123 so that PIN 6 of IC115 (BIAS OSC.) becomes to 22.5V ±0.5V.

⑦ **Recording bias adjustment**

Adjust so that the total frequency response during recording and playing back by changing bias is flat.

a. Set the BIAS volume to the center.

b. Load a YAMAHA MR60 (METAL tape).

c. In REC mode (TAPE position), apply 1kHz and 17kHz of −20dB signal level (LINE OUTPUT, −26dbv=50mV) that is a standard recording level (500mV=0dB, 160nwb/m, added recording level to playback output level.).
d. Adjust VR126 (Rch) and VR127 (Lch) so that the level difference between 1kHz and 17kHz disappears.
e. YAMAHA CR (CrO_2 tape) also, in the same way, adjust VR124 so that the level difference between 1kHz and 17kHz disappears.
f. In the case of YAMAHA NR (LH tape), in the same way, Adjust VR125 so that the level differences between 1kHz and 14kHz disappears.

• TEST OSCILLATOR ADJUSTMENT OF ORBiT(Oplimum Record Bias Tuning) SYSTEM.

		Test point	Adjustment part	Rating
Test oscillator	1kHz	TP7 ~ E	VR121	−21 ± 0.2dBV (89.1mV ± 2mV)
	10kHz	TP8 ~ E	VR122	−21 ± 0.2dBV (89.1mV ± 2mV)

*Make sure that the difference of level between 1kHz and 10kHz is within 0.2dB.

ORBiT OSC. 1kHz

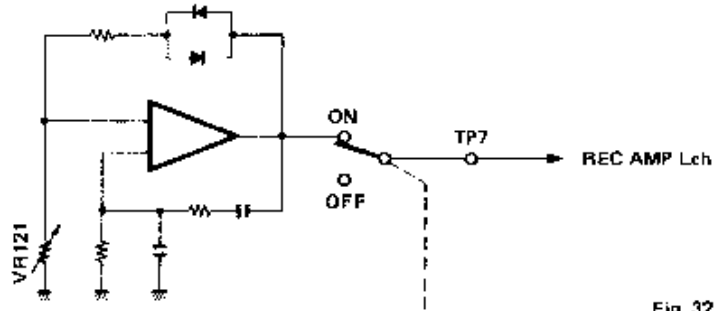


Fig. 32

ORBiT OSC. 10kHz

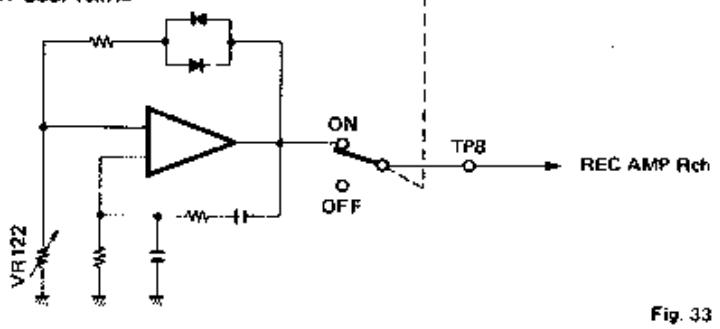


Fig. 33

Turn the TEST switch on and adjust VR121 (1kHz) and VR122 (10kHz) so that the signal levels of TR7 ~ E (1kHz) and TP8 ~ E (10kHz) becomes to −21dBV.

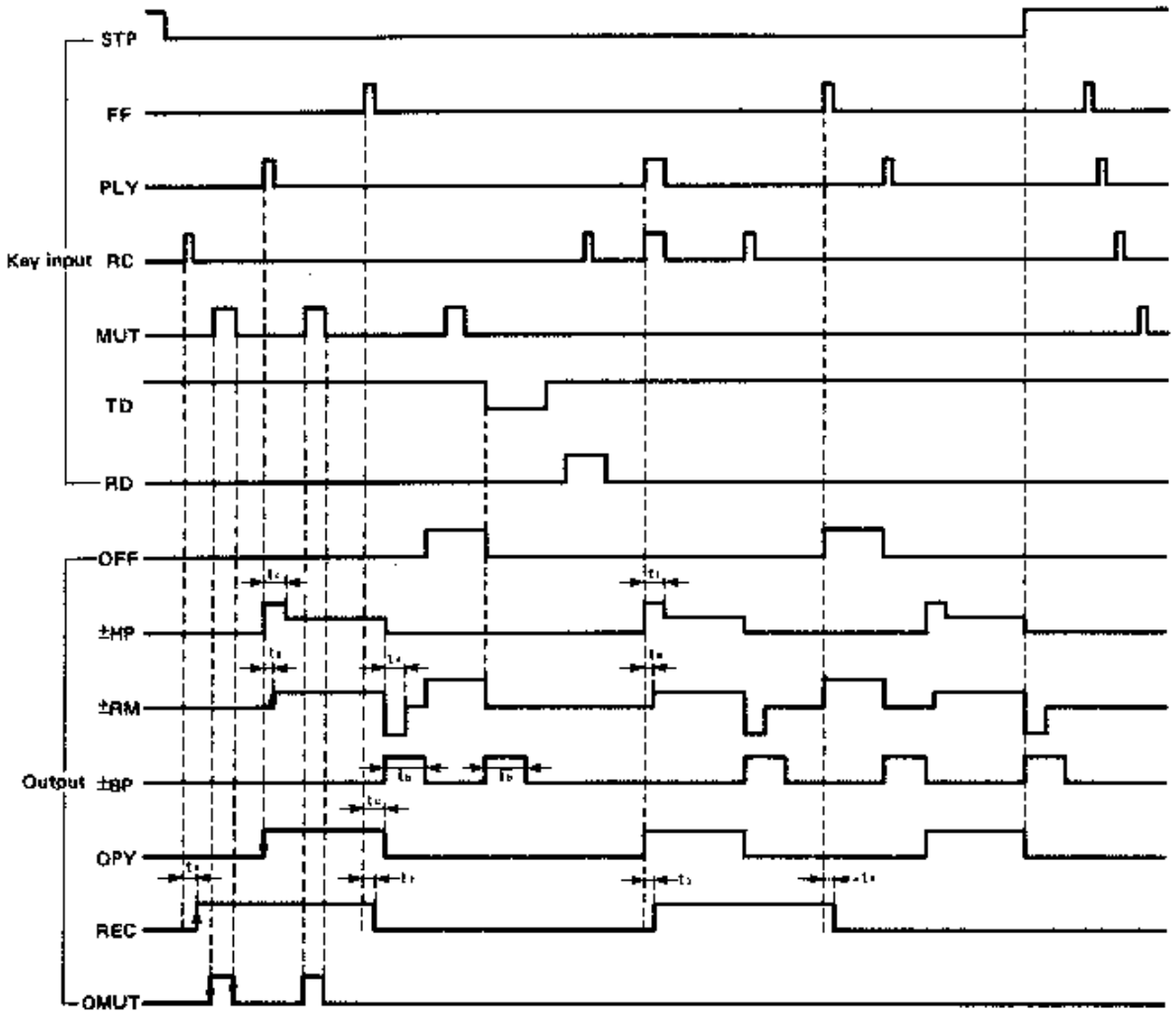
• dbx ADJUSTMENT

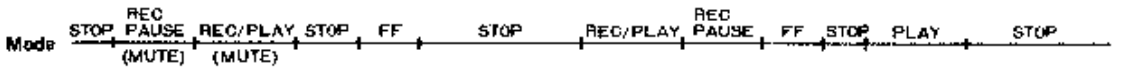
Perform this adjustment only when dbx system needs to be readjusted.

Step	Adjustment item	Input signal	Measurement condition	Measurement part	Adjustment part	Rating
1	dbx output offset		REC LEVEL : 0	TP5 (Lch) TP6 (Rch)	VR115 (Lch) VR116 (Rch)	0 ± 10mV
2	dbx gain at playback mode	TP1 (Lch) TP2 (Rch) 100Hz, 28dBV	Apply input so that the TP3 (Lch) and TP4 (Rch) becomes to 400mV.	TP5 (Lch) TP6 (Rch)	VR113 (Lch) VR114 (Rch)	400mV ± 10mV
3	dbx gain at recording mode	LINE IN 100Hz, 28.5dBV	Apply input so that the TP3 (Lch) and TP4 (Rch) becomes to 400mV.	TP5 (Lch) TP6 (Rch)	VR111 (Lch) VR112 (Rch)	400mV ± 10mV

■TIMING CHART(POWER CIRCUIT BOARD)

- **FOUNDATION MOVEMENTS**
  Set AUTO FUNCTION to the OFF position.



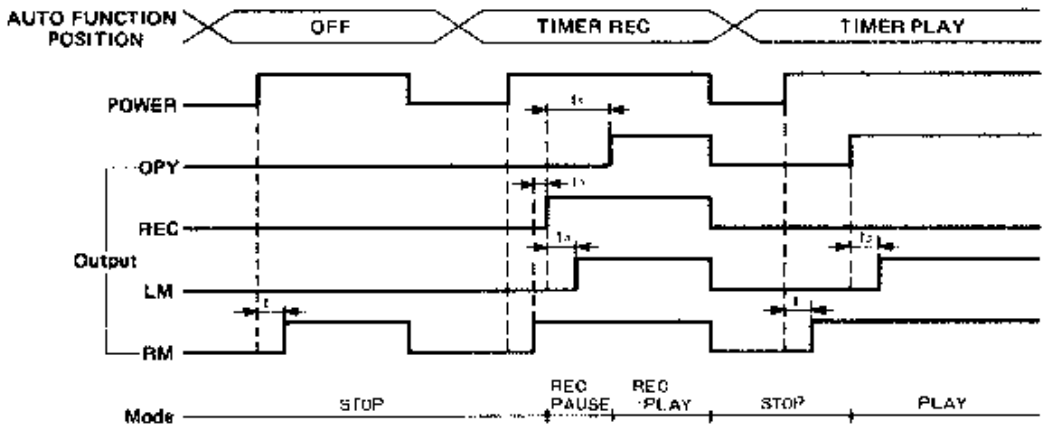


t₁ : 0.1sec.
t₂ : 0.3sec
t₃ : 0.01sec.
t₄ : 0.04sec.
t₅ : 0.1sec
t₆ : 0.2sec.
t₇ : 0.05sec.

Terms and symbols

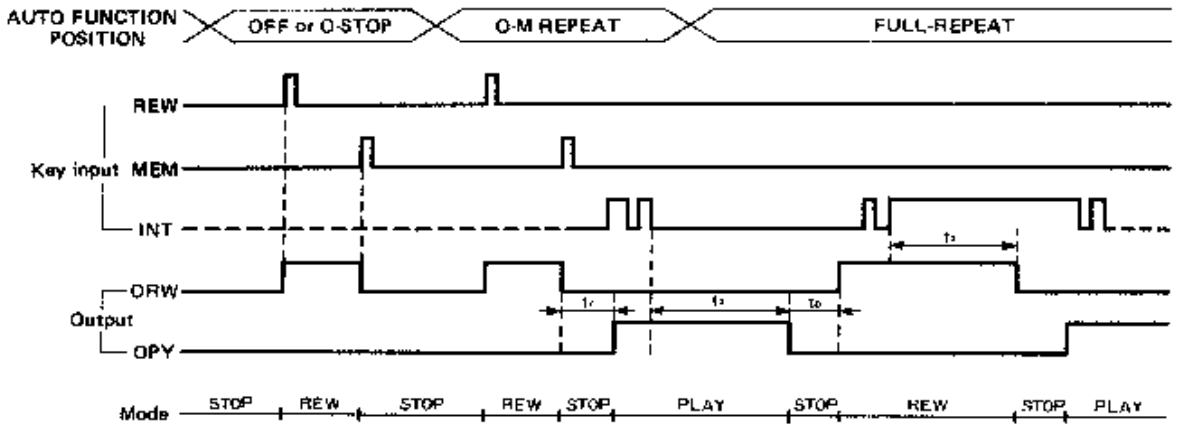
STP	: Stop	RM	: Rec mute
FF	: Fast foward	BP	: Breake plunger
PLY	: Play	OPY	: Play out
RC	: Recording	OMUT	: Muting out
MUT	: Muting	LM	: Line mute
TD	: Tape detector	MEM	: Memory
RD	: Record inhibit detector	INT	: Interrupt
HP	: Head plunger	ORW	: Rewind out

• TIMER MOVEMENT



t1 : 2 sec.
t : 0.1sec.
t2 : 0.01sec.
t3 : 0.15sec.

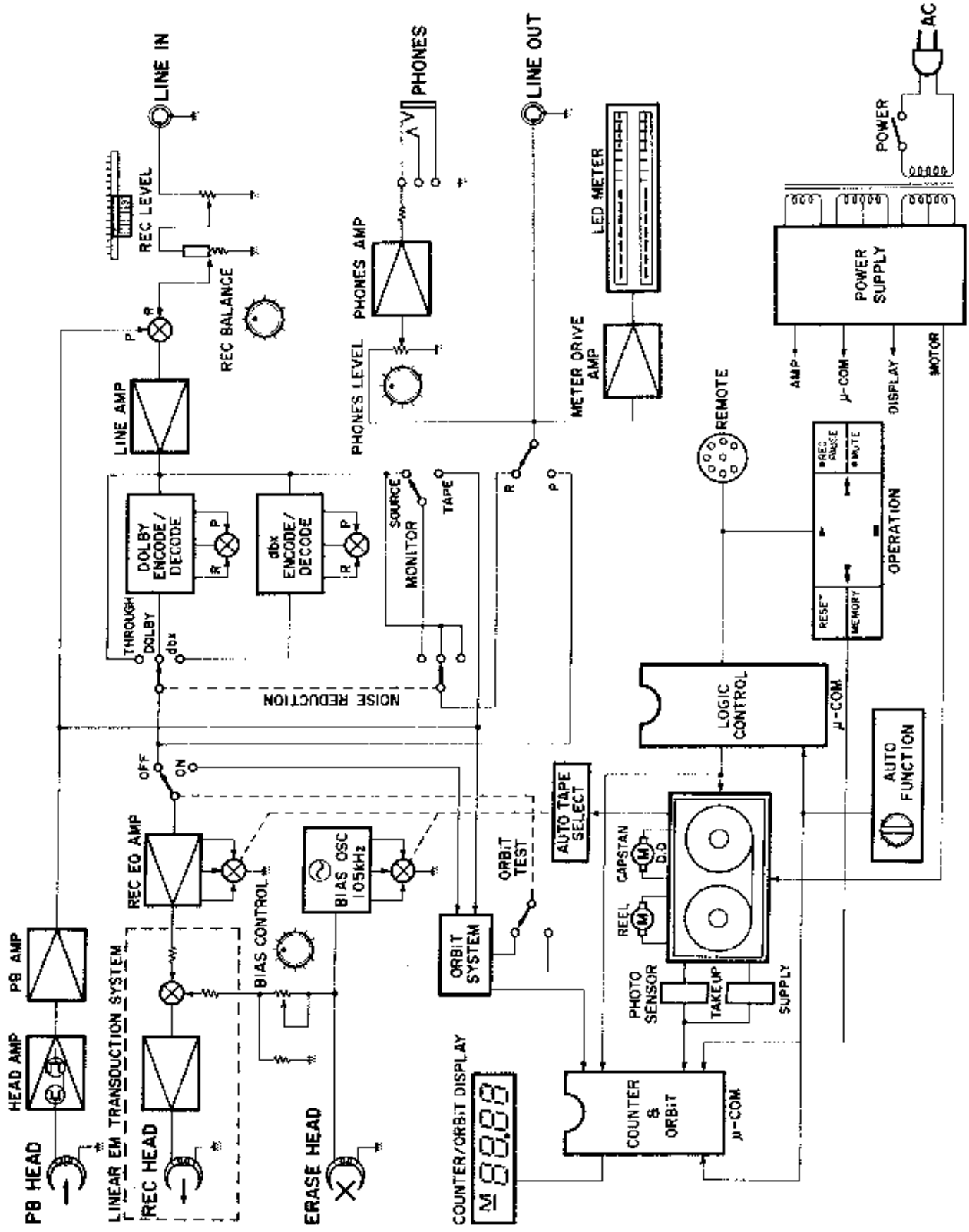
• MEMORY & REPEAT MOVEMENT

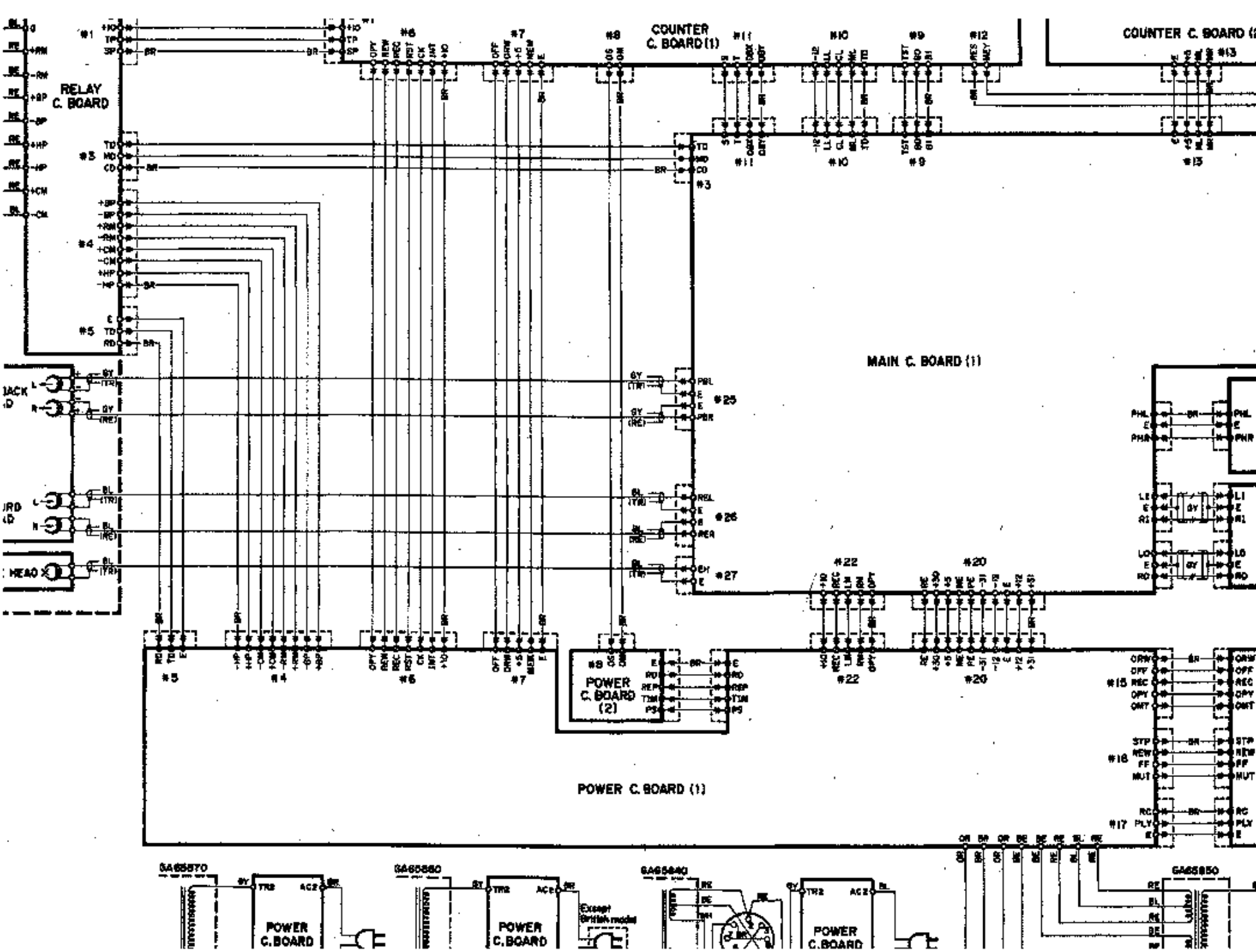


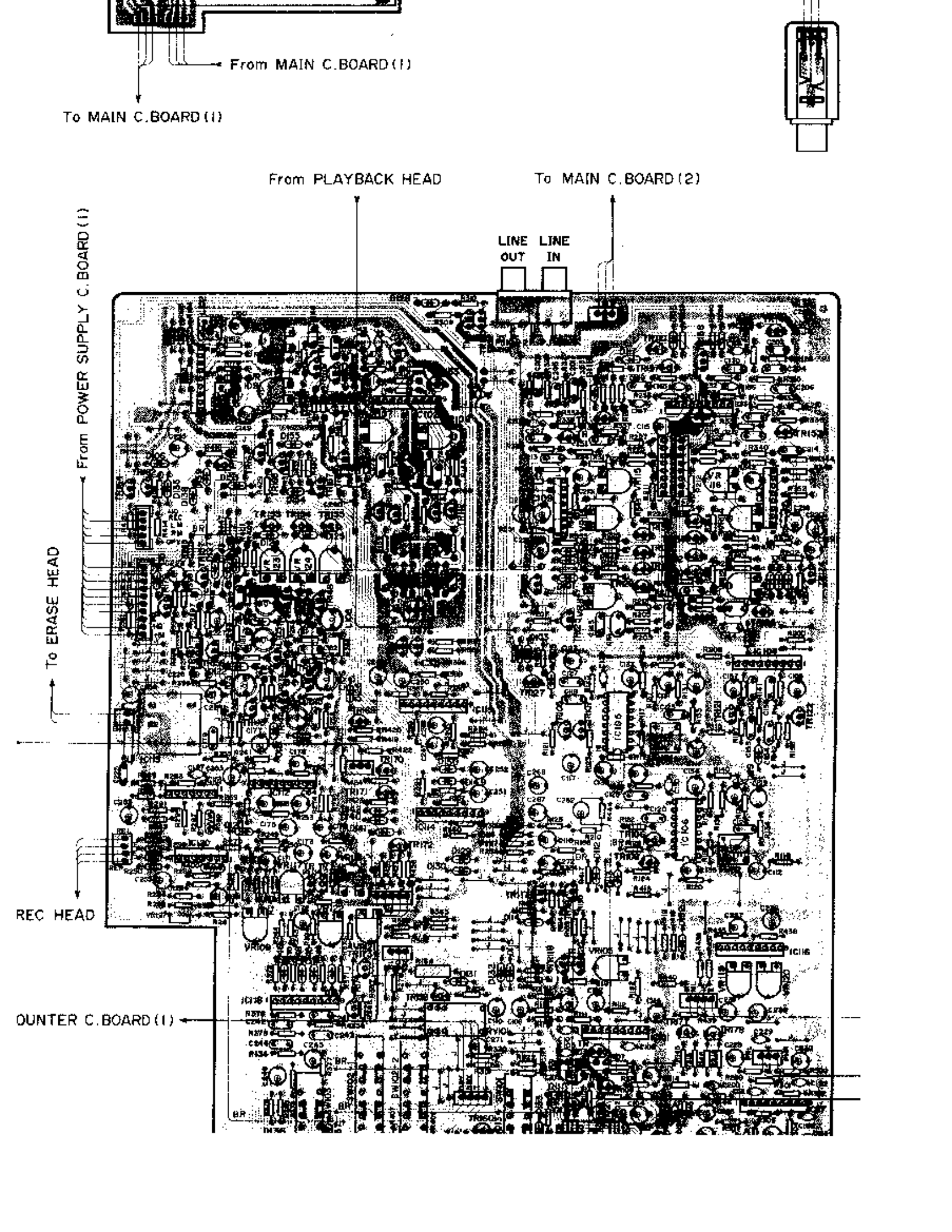
t1 : 2 sec
t2 : 0.3sec.
t3 : 0.2sec.

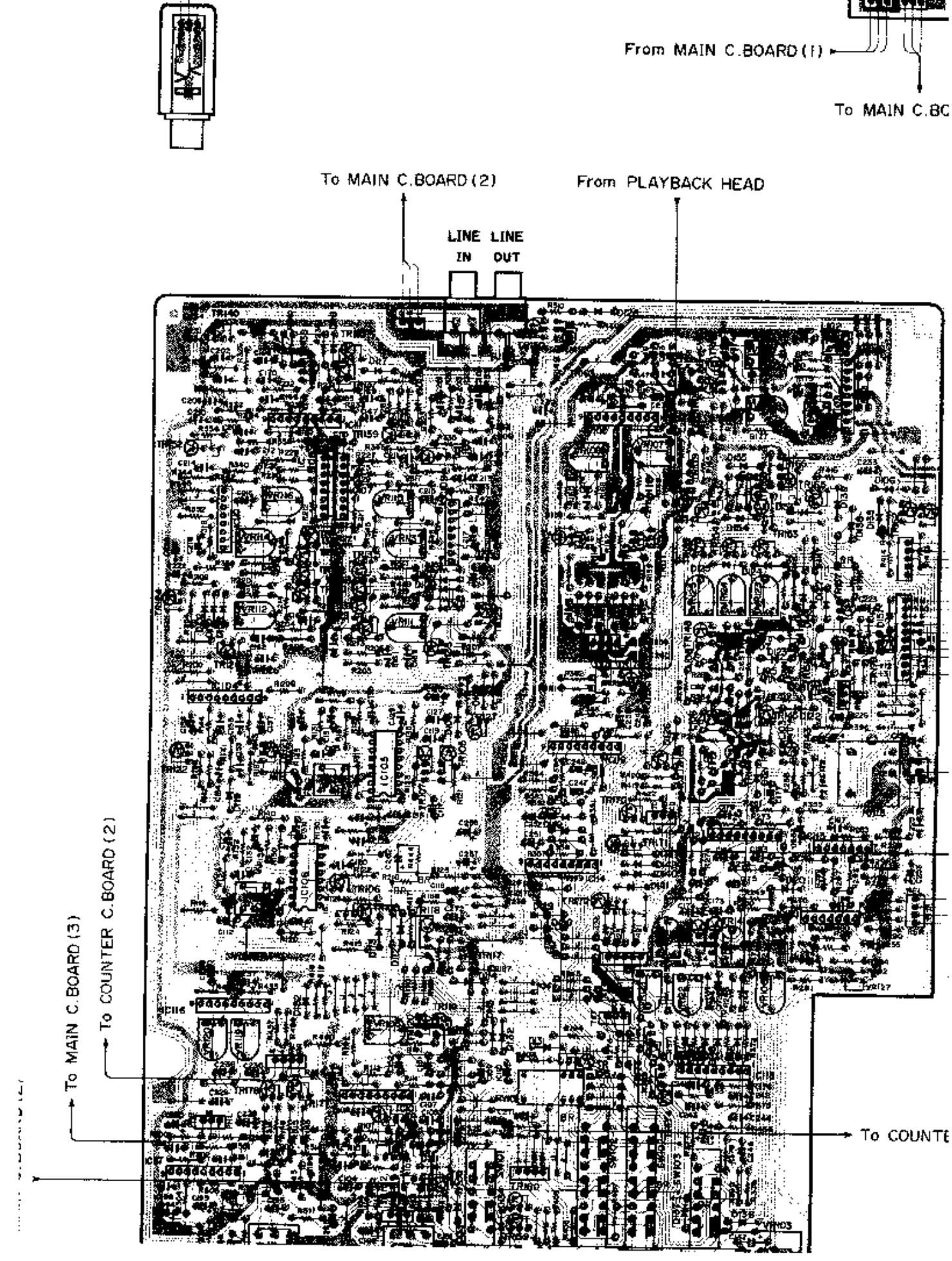
Note) AUTO STOP and AUTO REPEAT act after 2 second (t_0) when INT signal changes fast.
(Cycle of INT signal's repeat should be more than 12 msec.)

BLOCK DIAGRAM

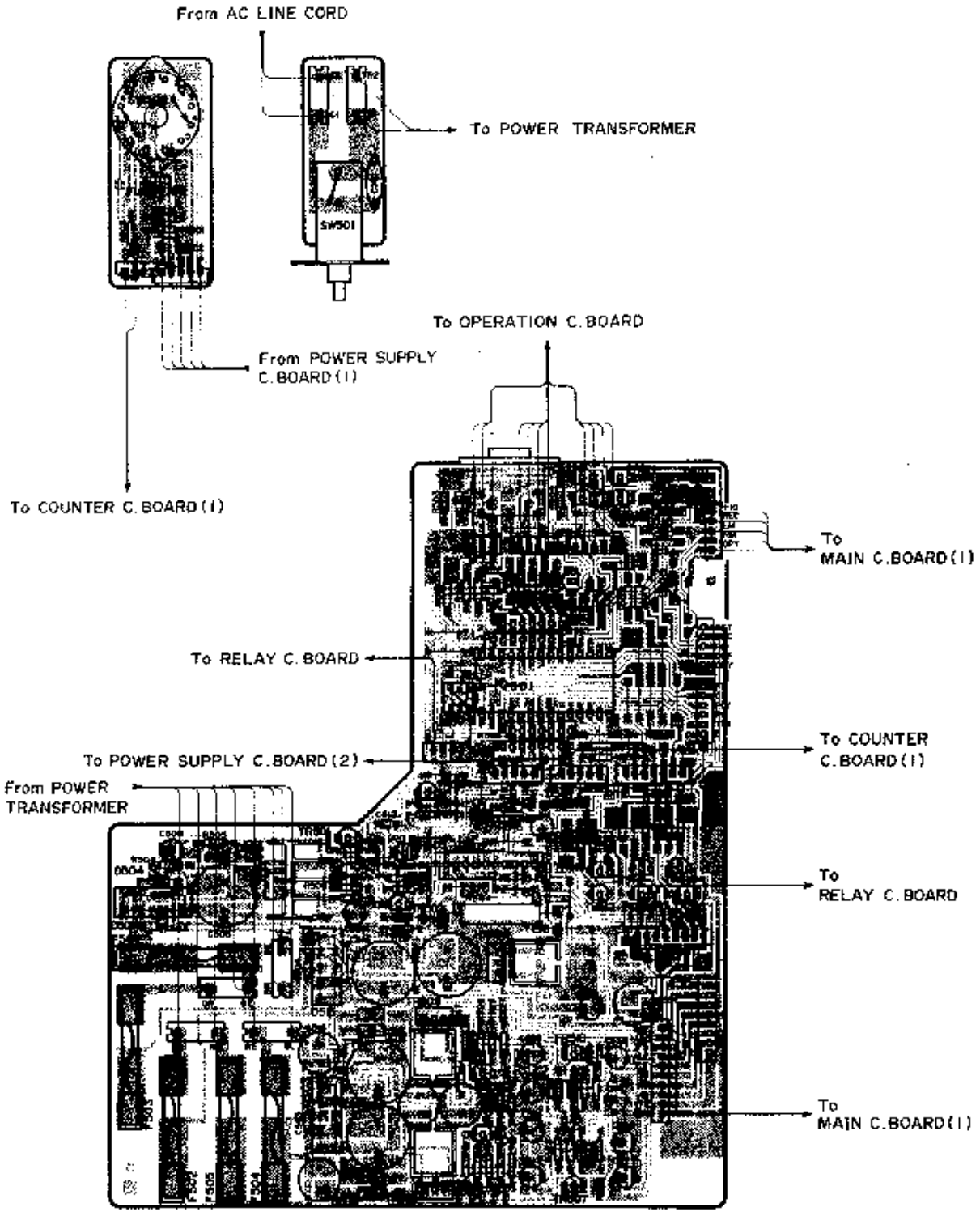



RELAY C. BOARD
COUNTER C. BOARD (1)
COUNTER C. BOARD (2)
MAIN C. BOARD (1)
POWER C. BOARD (2)
POWER C. BOARD (1)
POWER C.BOARD
POWER C.BOARD
POWER C.BOARD
Except British model
GA65870
GA65880
GA65840
GA65850

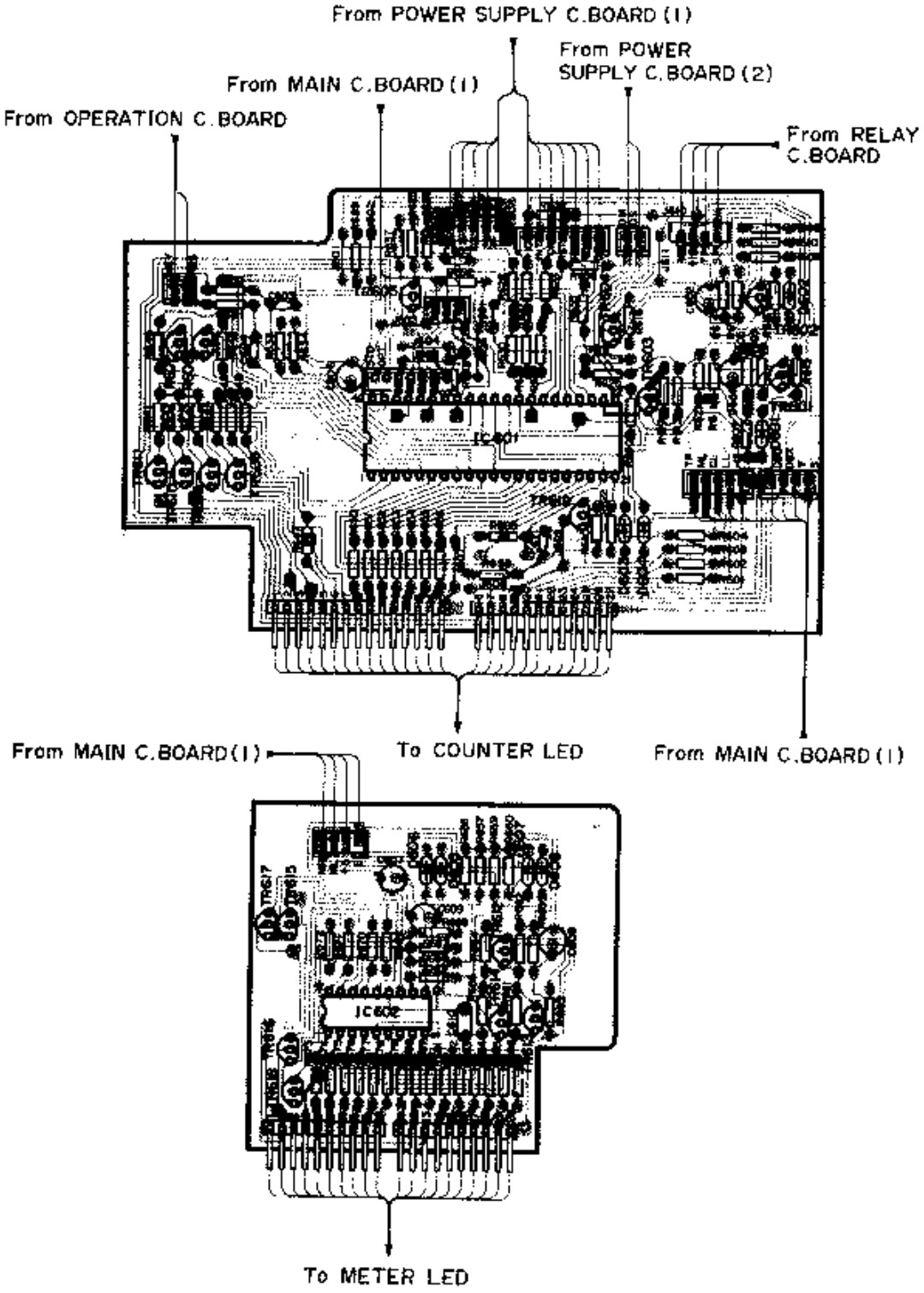

From MAIN C.BOARD (1)
To MAIN C.BOARD (1)
From PLAYBACK HEAD
To MAIN C.BOARD (2)
LINE OUT
LINE IN
From POWER SUPPLY C.BOARD (1)
To ERASE HEAD
REC HEAD
OUNTER C.BOARD (1)


From MAIN C.BOARD (1)
To MAIN C.BC
To MAIN C.BOARD (2)
From PLAYBACK HEAD
LINE IN
LINE OUT
To COUNTER C.BOARD (2)
To MAIN C.BOARD (3)
To COUNTE

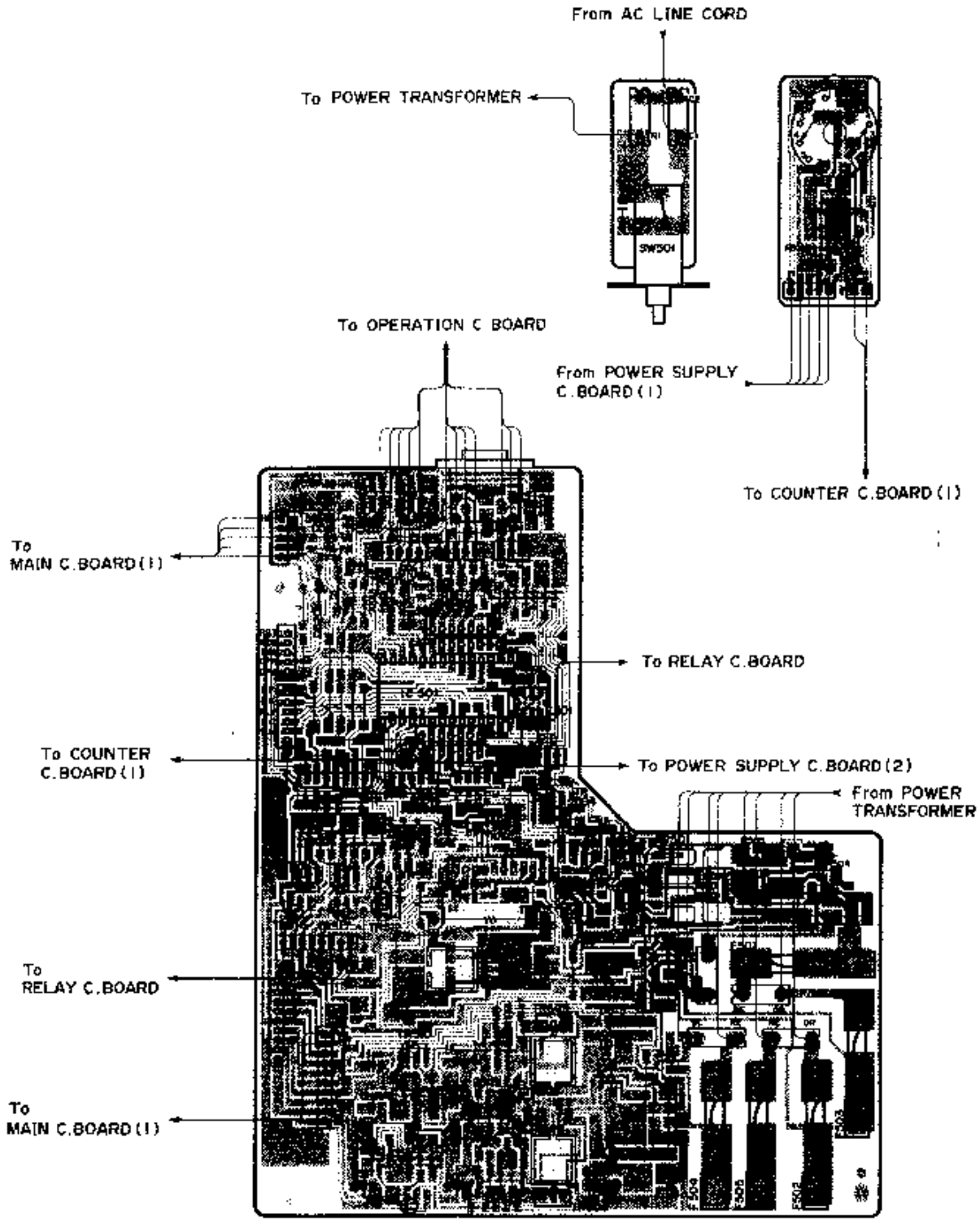
(Power circuit board) Parts side



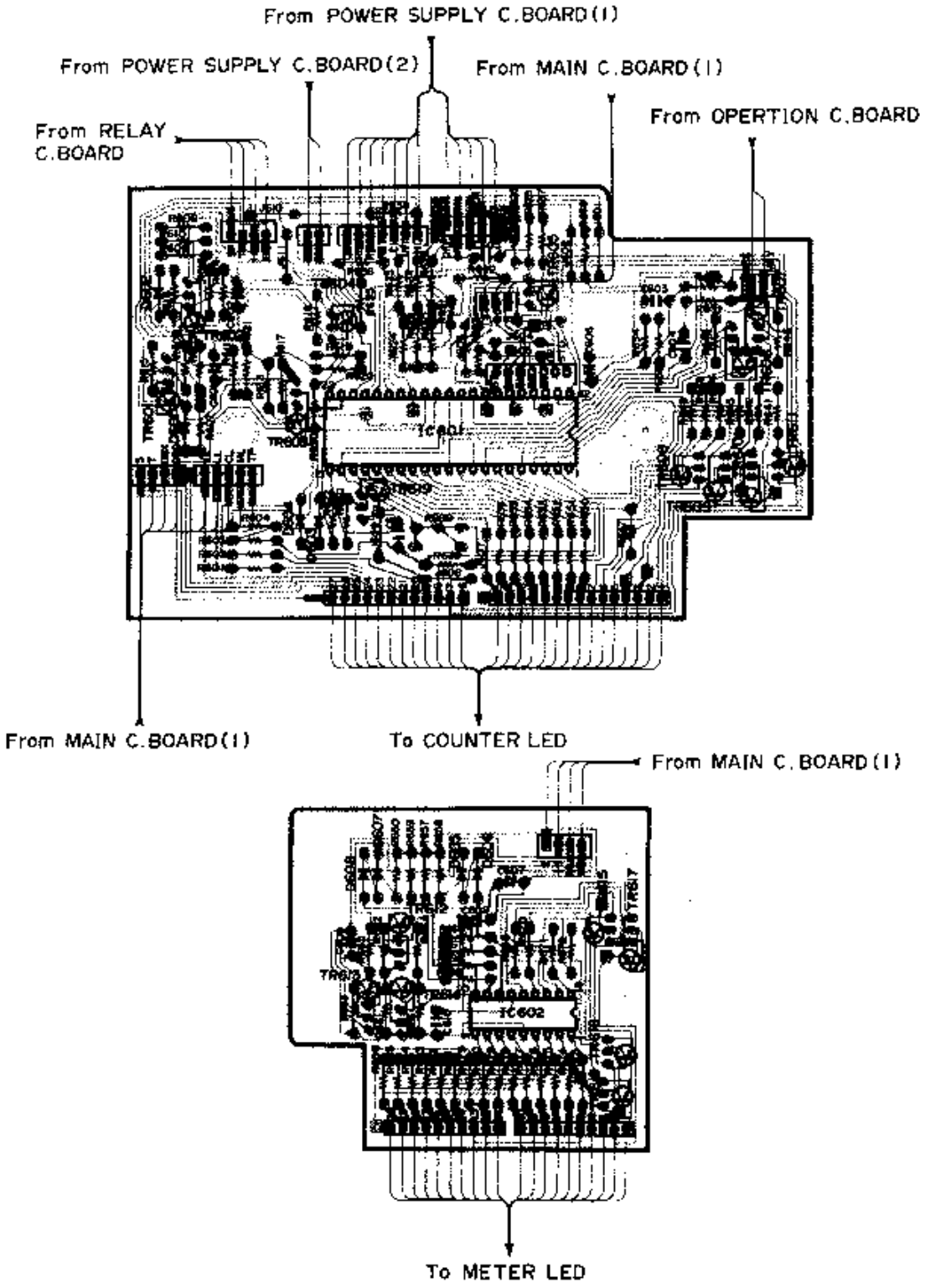
(Counter circuit board) Parts side



(Power circuit board) Pattern side

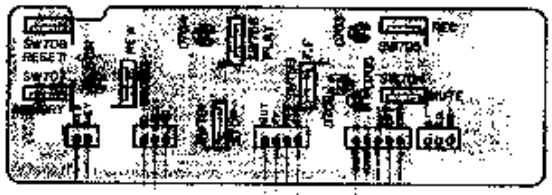


(Counter circuit board) Pattern side



(Operation circuit board)

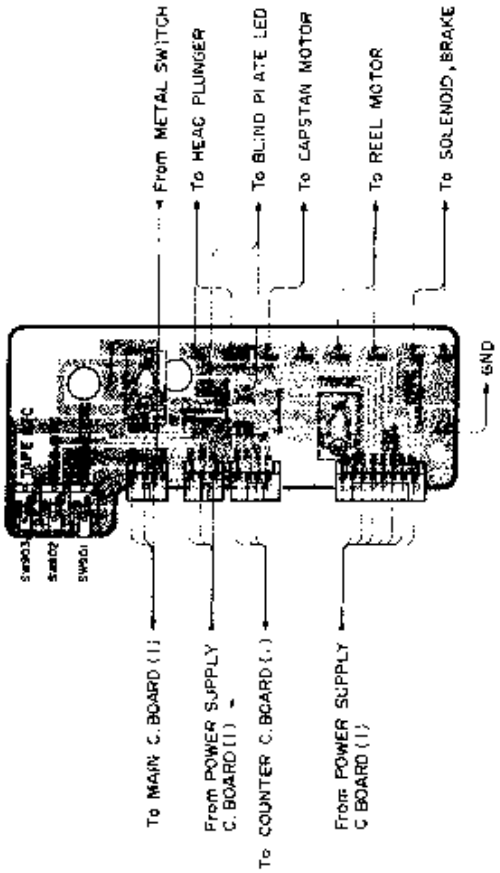
Parts side



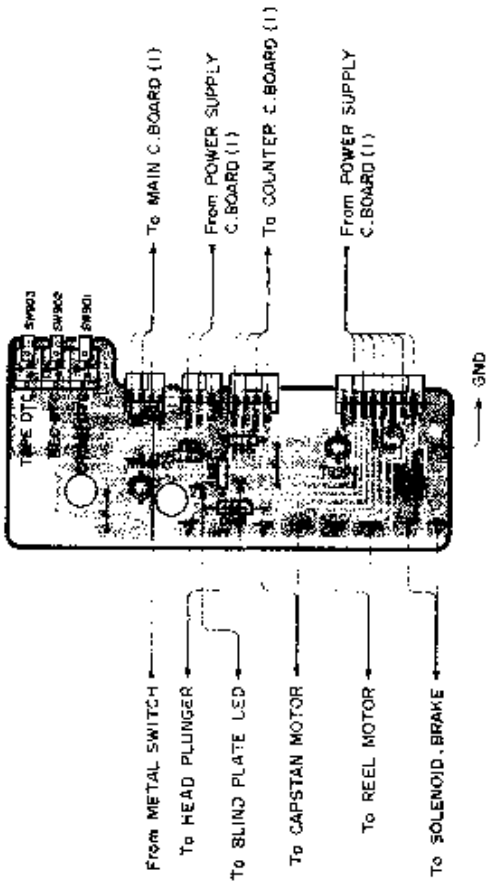
Pattern side

(Relay circuit board)

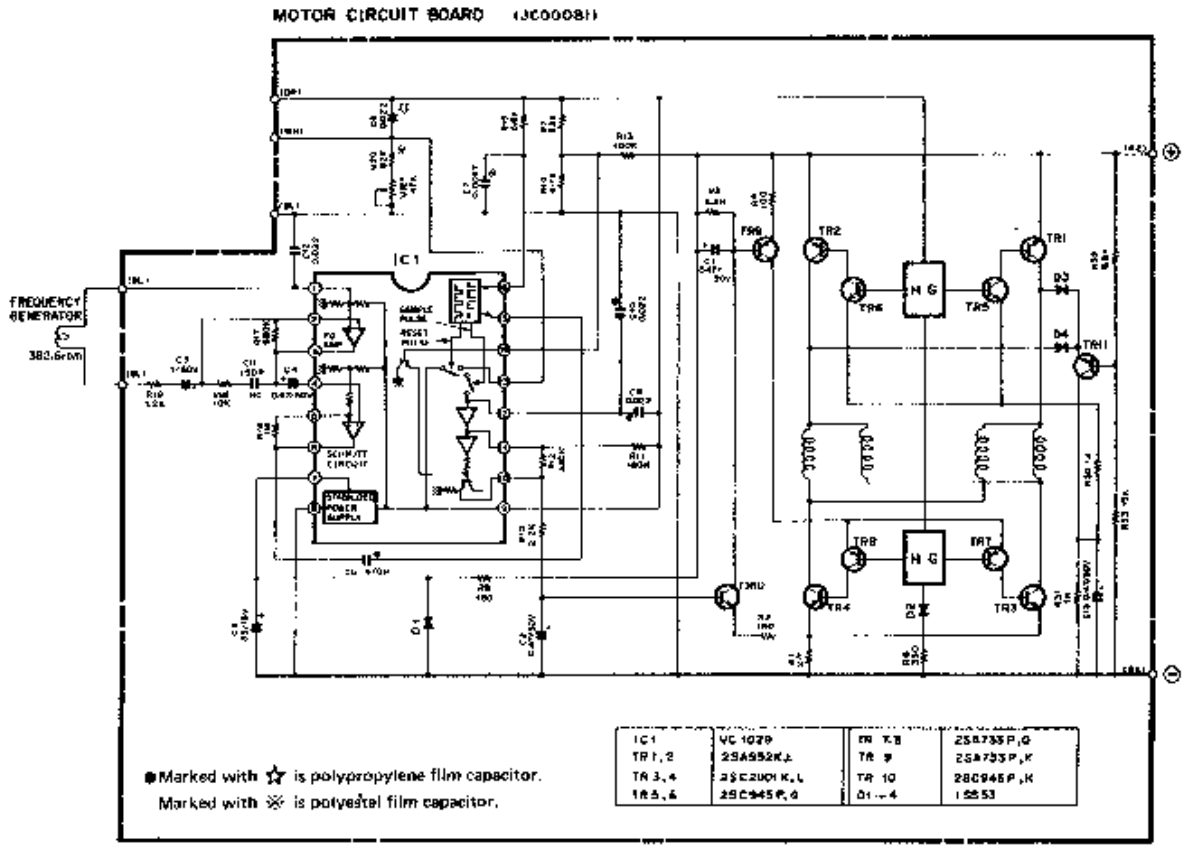
Parts side



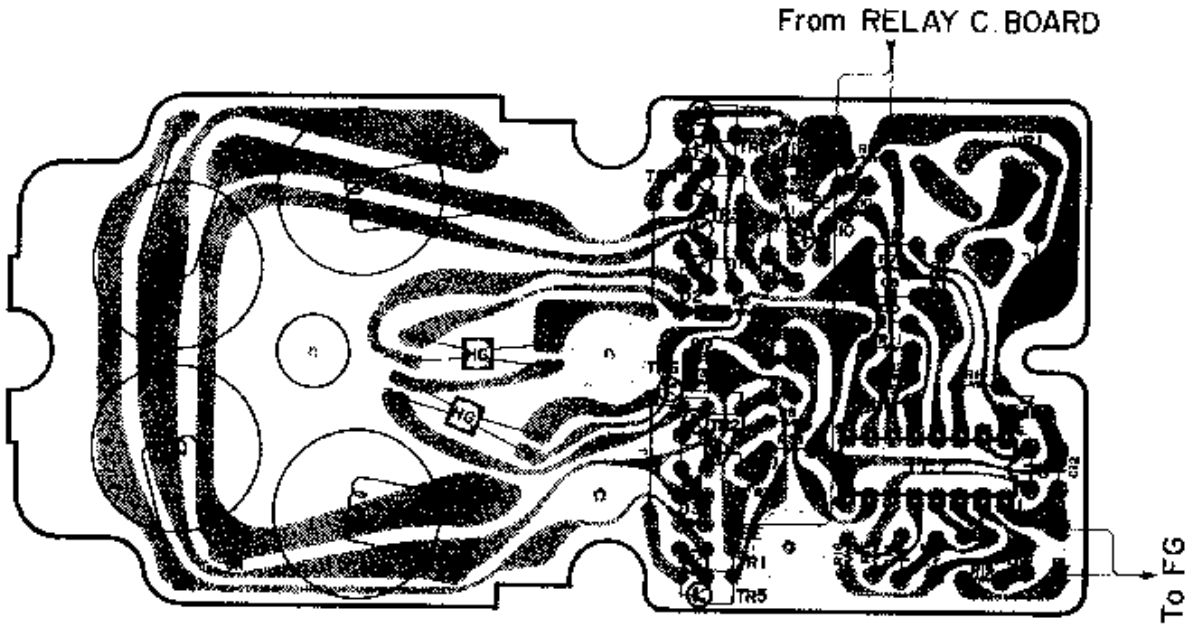
Pattern side

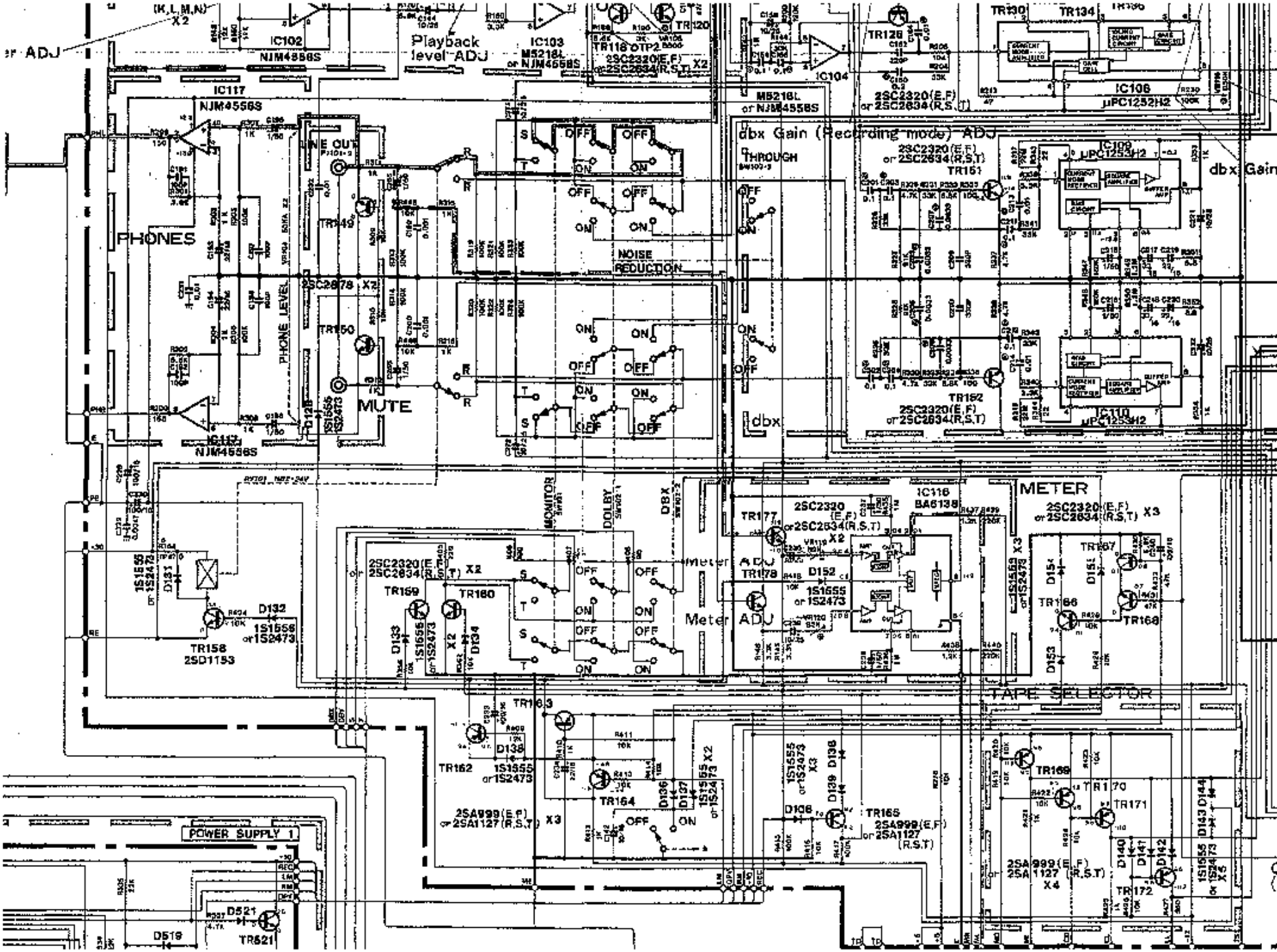


SCHEMATIC DIAGRAM (DD Motor)



(D.D Motor) Pattern side




(K,L,M,N) X2
ADJ
IC102
NJM4558S
Playback level ADJ
IC103
M5218L or NJM4558S
TR120
TR118 OTP2
2SC2320(E,F) or 2SC2634(R,S,T) X2
IC104
M5218L or NJM4558S
TR125
2SC2320(E,F) or 2SC2634(R,S,T)
TR130
TR134
IC106
μPC1252H2
IC117
NJM4558S
LINE OUT
dbx Gain (Recording mode) ADJ
THROUGH
2SC2320(E,F) or 2SC2634(R,S,T)
TR151
IC109
μPC1253H2
dbx Gain
PHONES
TR149
NOISE REDUCTION
2SC2878 X2
PHONE LEVEL
TR150
MUTE
D128
1S1555 or 1S2473
IC112
NJM4558S
TR152
2SC2320(E,F) or 2SC2634(R,S,T)
IC110
μPC1253H2
dbx
MONITOR
DOLBY
DBX
METER
IC116
BA6138
TR177
2SC2320 (E,F) or 2SC2634(R,S,T) X2
2SC2320(E,F) or 2SC2634(R,S,T) X3
ADJ
TR178
D152
1S1555 or 1S2473
TR167
TR166
TR168
D151
D154
D153
1S1555 or 1S2473 X3
D131
1S1555 or 1S2473
D132
1S1555 or 1S2473
TR158
2SD1153
2SC2320(E,F) or 2SC2634(R,S,T) X2
TR159
TR160
D133
1S1555 or 1S2473 X2
D134
Meter ADJ
TAPE SELECTOR
TR163
D138
TR162
1S1555 or 1S2473
TR164
D136
D137
1S1555 or 1S2473 X2
2SA999(E,F) or 2SA1127(R,S,T) X3
1S1555 or 1S2473 X3
D139
D138
D135
TR165
2SA999(E,F) or 2SA1127 (R,S,T)
TR169
TR170
TR171
2SA999(E,F) 2SA1127 (R,S,T) X4
D140
D141
D142
TR172
1S1555 or 1S2473 X5
D143
D144
POWER SUPPLY 1
D521
TR521
D519

PARTS LIST

K-1000

STEREO CASSETTE DECK

■ **CONTENTS**

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

■WARNING

UL Standard 1270 requires that components marked ⚠ be replaced with parts having specifications equal to those originally installed.

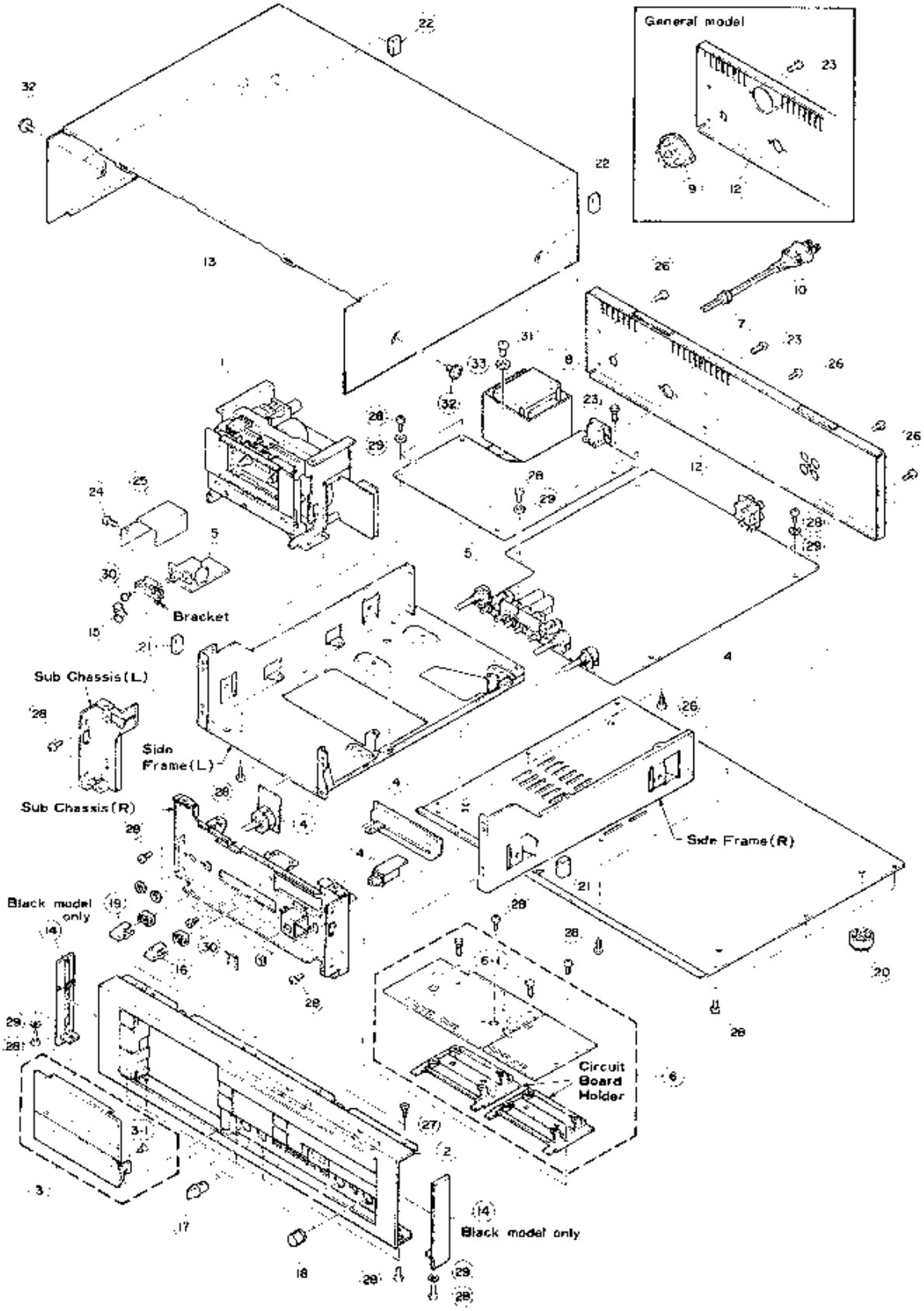
SINCE 1887 YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

004488

Printed in Japan 11.82 2.6k

■EXPLODED VIEW(All-over)



■PARTS LIST(All-over)

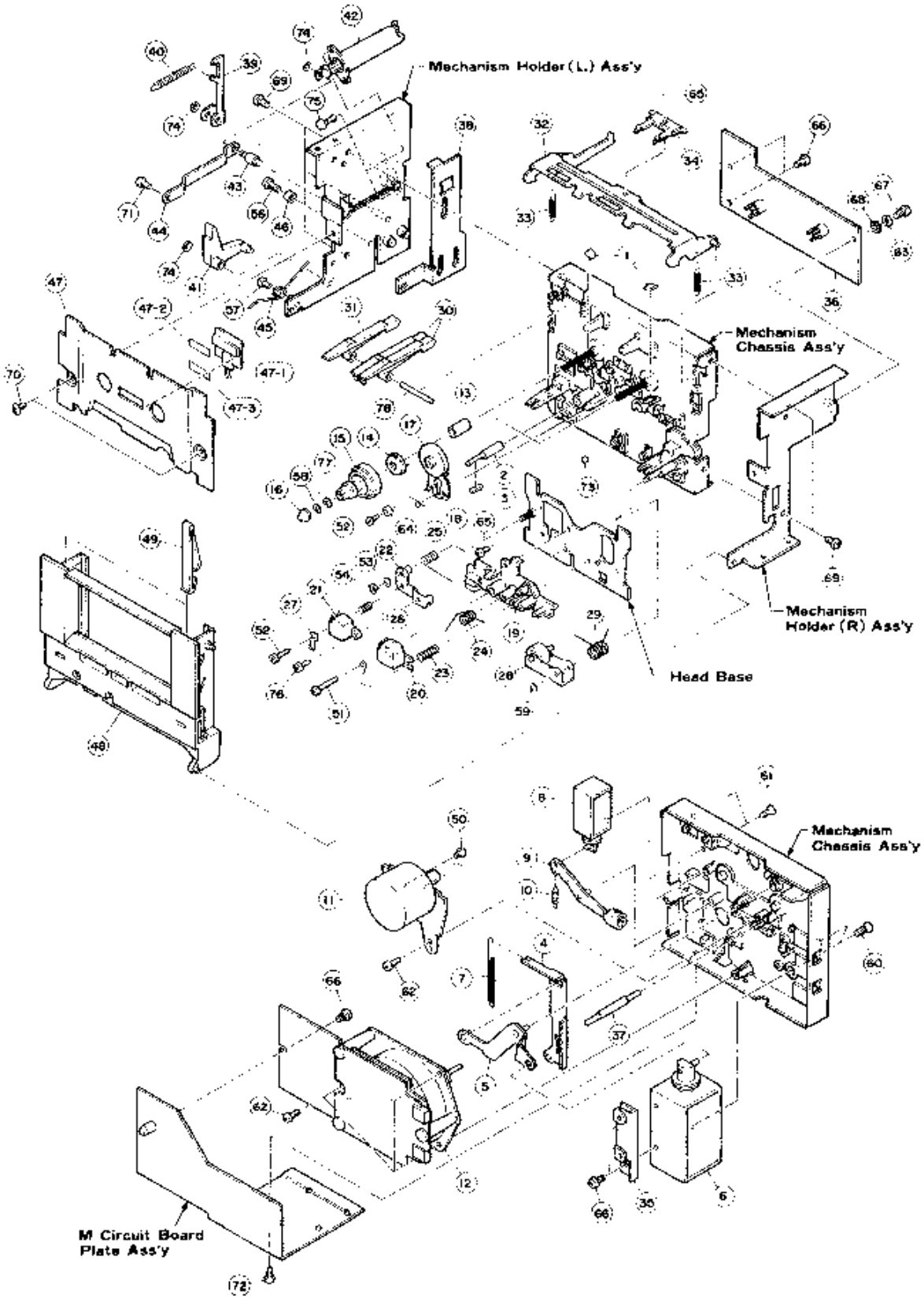
Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
※ 1	SM 60 15 00	TM-6A Mechanism Ass'y	Silver	TM－6A組立			
※ "	SM 60 24 00	"	Black	〃			
※ 2	NB 60 83 70	Panel Unit	Silver	パネルユニット			
※ "	NB 60 84 10	"	Black	〃			
※ 3	NB 60 84 00	Cassette Lid Unit	Silver	カセット蓋ユニット			
※ "	NB 60 84 40	"	Black	〃			
※ 3-1	EB 03 00 40	Flat Head Screw	3x4 ZMC2-Y	皿小ネジ			
※ 4	NA 08 00 00	Main Circuit Board	Silver	メインシート			J,R,A,G,B
※ "	NA 08 00 10	"	〃	〃			U,C
※ "	NA 08 00 20	"	Black	〃			J,R,A,G,B
※ "	NA 08 00 30	"	〃	〃			U,C
※ 5	NA 08 00 80	Power Circuit Board		電源シート			J
※ "	NA 08 00 90	"		〃			U,C
※ "	NA 08 01 00	"		〃			G,B
※ "	NA 08 07 80	"		〃			R,A
※ 6	NA 08 01 40	Counter Circuit Board		カウンターシート			J,R,A,G,B
※ "	NA 08 02 00	"		〃			U,C
※ 6-1	CB 60 56 20	Plastic Rivet		プラスチックリベット			
7	CB 61 88 10	Cord Stopper		コードストッパー			J,U,C
"	CB 60 99 50	"	SR-5N-4	〃			R,A,G,B
※ 8	GA 65 83 00	Power Transformer		電源トランス			J
※ "	GA 65 85 00	"		〃			U,C
※ "	GA 65 86 00	"		〃			A,B
※ "	GA 65 87 00	"		〃			G
※ "	GA 65 84 00	"		〃			R
9	LB 20 14 80	Voltage Selector		電圧切換器			R
10	MG 00 04 10	Power Cord	7A 125V 2.2m	電源コード	Inter changeable		J
"	MG 00 12 70	"	7A 125V 2.2m	〃			J
"	MG 00 07 80	"	6A 250V 2m	〃			R
"	MG 00 08 40	"	10A 125V 2m	〃	Inter changeable		U,C
"	MG 00 12 40	"	10A 125V 2m	〃			U,C
"	MG 00 09 20	"	7.5A 250V 2.5m	〃			A
"	MG 00 09 50	"	2.5A 250V 2m	〃			G
"	MG 00 10 00	"	6A 300/500V 2m	〃			B
※ 11	AA 61 34 70	Bottom Cover		ボトムカバー			
※ 12	AA 61 34 80	Rear Panel		リアパネル			J
※ "	AA 61 34 90	"		〃			R
※ "	AA 61 35 00	"		〃			U,C
※ "	AA 61 35 10	"		〃			A
※ "	AA 61 35 20	"		〃			G
※ "	AA 61 35 30	"		〃			B
※ 13	AA 61 35 40	Top Cover	Silver	トップカバー			
※ "	AA 61 35 50	"	Black	〃			
※ 14	CB 61 39 90	Side Plate	Black	サイドプレート			
※ 15	CB 61 40 00	Rod		ロッド	POWER		
※ 16	CB 61 36 90	Push Button	Silver	プッシュボタン			
※ "	CB 61 37 00	"	Black	〃			
※ 17	CB 61 37 10	Knob	Silver	ツマミ	AUTO FUNCTION		
※ "	CB 61 37 20	"	Black	〃	"		
※ 18	CB 61 37 30	"	Silver	〃	[illegible]		
"	CB 61 37 40	"	Black	〃	"		
※ 19	CB 61 58 40	Push Button		プッシュボタン	TEST		
20	CB 08 03 50	Leg		脚			

※ New Parts (新規部品)

Ref. No.	Part No.	Description			部品名	Remarks	Common Model	Markets
21	CB 09 98 10	Anti-Vibration Rubber			防振ゴム		M-70	
22	CB 09 85 70	Spacer			スペーサー			
23	CB 06 88 80	Plastic Rivet			プラスチックリベット			
24	CB 09 96 00	〃			〃			
25	CB 61 84 50	AC Cover			ACカバー			
26	Ei 33 00 86	Binding Head Tapping Screw	3x8	ZMC2-B8	バインドタッピングネジ			
27	EO 03 00 86	Flat Head Tapping Screw	3x8	ZMC2 Y	皿タッピングネジ			
28	EN 03 00 20	Binding Head Tapping Screw	3x8	ZMC2 Y	バインドタッピングネジ			
29	EV 20 08 00	Plain Washer	φ8	ZMC2-Y	平座金			
30	ED 03 00 46	Binding Head Screw	3x4	ZMC2-Y	バインドネジ			
31	ED 04 00 86	〃	4x8	ZMC2-Y	〃			
32	EK 13 50 20	BW Head Screw	4x8	FCM3-3g	BWヘッドネジ	Silver		
〃	EK 36 50 40	〃	4x8	FCM3-B8	〃	Black		
33	EV 20 00 46	Sems Pain Washer	φ4		セムス平座金			
	CB 08 92 50	Binding Tie			インシュロックタイ			
		Accessories Assembly			付属品Ass'y			
	Mi 06 62 10	Pin Cord	1.2m		ピンコード			

※ New Parts (新規部品)

■EXPLODED VIEW(Cassette Mechanism)



4 In this figure, apply silicone grease to the parts printed
apply diamond oil to the parts printed
apply molypaste to the parts printed

■PARTS LIST(Cassette Mechanism)

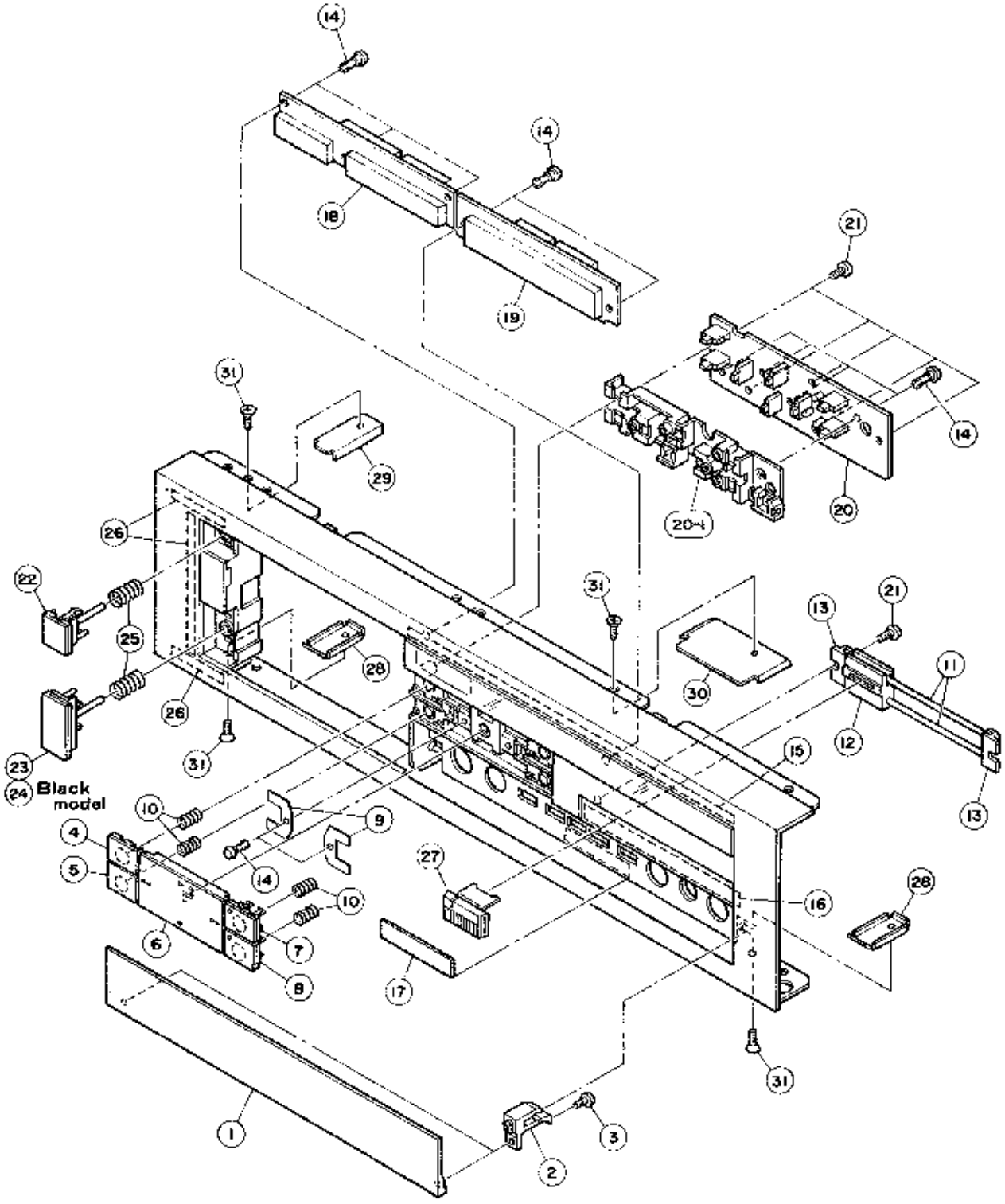
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
◆		SM 60 15 00	Cassette Mechanism Ass'y	TM-6A	TM-6A組立	Silver		
◆		SM 60 24 00	〃		〃	Black		
	1	CC 01 67 80	Felt, Brake		ブレーキフェルト			
◆	2	AA 61 09 80	Shaft, Erase Head Tension		EHテンションポスト			
◆	3	CC 01 68 90	Felt, Erase Head Tension		EHテンションフェルト			
◆	4	NB 60 51 80	Coupling Plate Ass'y		ベース連結板Ass'y			
	5	NB 09 81 50	Link Ass'y		リンクAss'y			
	6	JF 00 03 10	Solenoid, Base	TOS10E	ベースソレノイド			
◆	7	AA 61 09 90	Return Spring		リターンスプリング			
◆	8	JF 00 03 50	Solenoid, Brake	TOS07A	ブレーキソレノイド			
◆	9	CB 60 94 80	Lever, Brake		ブレーキレバー			
◆	10	AA 61 27 30	Brake Spring		ブレーキスプリング			
※	11	JC 00 07 40	Reel Motor	SFS-7B	リールモーター			
※	12	JC 00 08 10	D.D. Motor	MC-950G	DDモーター			
◆	13	AA 61 10 00	BT Spring		BTスプリングL			
	14	NB 09 81 80	BT Disk Ass'y		BTディスクAss'y			
◆	15	NB 60 52 50	Reel Base Ass'y		リール台Ass'y			
	16	CB 09 24 00	Reel Cap.		リールキャップ			
◆	17	NB 60 51 90	Idler Ass'y		アイドラーAss'y			
◆	18	AA 61 27 40	Idler Spring		アイドラースプリング			
◆	19	CB 61 53 40	Base		支持台			
◆	20	GF 00 02 20	REC/Playback Combination Head		録再コンビヘッド			
◆	21	GF 00 02 60	Erase Head		消去ヘッド			
◆	22	NB 60 52 30	Erase Head Arm Ass'y		消去ヘッドアームAss'y			
	23	AA 60 45 10	Spring		アジマススプリング			
◆	24	AA 61 10 50	〃		ベース駆動スプリング			
◆	25	AA 61 10 80	〃		消却ヘッドスプリング			
◆	26	AA 61 15 00	〃		消却ヘッドアジマススプリング			
◆	27	BB 07 01 30	Binding Plate		束線止メ			
◆	28	NB 60 52 00	Pinch Roller Ass'y		ピンチローラーAss'y			
◆	29	AA 61 10 10	Pinch Roller Spring		ピンチローラスプリング			
	30	CB 60 04 80	Lever, Sensor		センサーレバー			
◆	31	CB 61 30 40	〃		〃			
※	32	NB 60 62 70	Holder Plate Ass'y		押え板Ass'y			
◆	33	AA 61 10 20	Spring		押えスプリング			
	34	NB 60 18 50	Metal Switch Ass'y		メタルスイッチAss'y		K-20	
※	35	AA 61 29 40	Bracket		基板ブラケット			
◆	36	NA 07 87 50	Relay Circuit Board		中継シート			
◆	37	CB 60 95 00	Acrylic Fiber		アクリルファイバー			
◆	38	AA 61 28 40	Plate (Eject Operate)		イジェクト作動板			
◆	39	AA 61 28 50	Lever, Lock		ロックレバー			
◆	40	AA 61 29 30	Spring		ロックレバースプリング			
◆	41	CB 61 30 60	Lever Eject		イジェクトレバー			
◆	42	NB 60 78 70	Damper Ass'y		ダンパーAss'y			
◆	43	BB 07 00 10	Shaft, Slide		スライド軸			
◆	44	AA 61 28 60	Coupling Plate		イジェクト連結板			
◆	45	AA 61 29 10	Spring		イジェクトスプリング			
◆	46	CB 61 42 10	Stopper		ストッパー			
◆	47	AA 61 28 90	Blind Plate Ass'y		ブラインドプレートAss'y	Silver		
◆	〃	AA 61 29 00	〃		〃	Black		
	47-1	IF 00 35 70	LED		LED		K-500	
	47-2	CB 07 41 90	Adhesive Tape		ダブルタックテープ			
	47-3	CB 07 42 00	〃		〃			

◆ New Parts (新規補品)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
*	48	NB 60 52 10	Cassette Guide		カセットガイド Ass'y	Silver		
	〃	NB 60 78 80	〃		〃	Black		
*	49	CB 61 30 90	Half Spring		ハーフ押えスプリング	Silver		
	〃	CB 61 31 00	〃		〃	Black		
	50	EA 02 60 36	Pan Head Screw	2.6x3 ZMC2-Y	ナベ小ネジ			
	51	ED 02 01 46	Binding Head Screw	2x14 ZMC2-Y	バインド小ネジ			
	52	ED 02 00 66	〃	2x6 ZMC2-Y	〃			
	53	EV 90 00 50	Washer	2.6x4.7x0.25	ポリスライダーワッシャー			
	54	EV 50 12 06	E Ring	ETWT-2	E リング			
	56	EI 03 00 86	Binding Head Tapping Screw	3x8 ZMC2-Y	バインドタッピングネジ			
	57	ED 02 60 46	Binding Head Screw	2.6x4 ZMC2-Y	バインド小ネジ			
	58	CB 09 08 80	Washer	1.6x3.4-0.25	ポリスライダーワッシャー			
	59	CB 60 04 60	〃	2.1x4.5x0.5	〃			
	60	EB 03 00 86	Flat Head Screw	3x8 ZMC2-Y	皿小ネジ			
	61	EB 02 60 46	〃	2.6x4 ZMC2-Y	〃			
	62	EI 02 60 80	Binding Head Tapping Screw	2.6x8 ZMC2-Y	バインドタッピングネジ			
	63	EV 20 00 36	Plain Washer	φ3 ZMC2-Y	平座金			
	64	EZ 00 14 [illegible]	Bush EZ00142O	φ2x2 ZMC2-Y	巻きブッシュ			
	65	ED 02 00 46	Binding Head Screw	2x4 ZMC2-Y	バインド小ネジ			
	66	ED 03 00 46	〃	3x4 ZMC2-Y	〃			
	67	EA 03 00 66	Pan Head Screw	3x6 ZMC2-Y	ナベ小ネジ			
	68	EV 42 00 36	Toothed Lock Washer	M3 ZMC2-Y	歯付き座金			
	69	EI 03 00 66	Binding Head Tapping Screw	3x6 ZMC2-Y	バインドタッピングネジ			
	70	EC 12 60 66	Truss Head Screw	2.6x6 FNM3-3g	トラス小ネジ			
	71	EN 33 10 10	Binding Head Tapping Screw	2.6x6 FCM3-B9	バインドタッピングネジ			
	72	EO 03 00 66	Flat Head Tapping Screw	3x6 ZMC2-Y	皿タッピングネジ			
	73	EZ 00 19 80	Steal Ball	φ2.5	スチールボール			
*	74	CB 61 30 60	Washer	2.6x4.7x0.5	ポリスライダーワッシャー			
	75	CB 60 92 60	Plastic Rivet		プラスチックリベット			
	76	ED 02 00 36	Binding Head Screw	2x3 ZMC2-Y	バインド小ネジ			
	77	EV 90 01 30	Washer	2.1x4x0.13	ポリスライダーワッシャー			
	78	BB 06 92 50	Shaft, Senser		センサーシャフト			
*		LA 00 39 80	Ground Lug	2x4.5	アースラグ			
		CB 06 92 50	Binding Tie		インシュロックタイ			
		CB 08 01 00	Tape		アセテートテープ	1Roll=30m		

* New Parts / 新仲部品

■EXPLODED VIEW(Panel Unit)



■PARTS LIST(Panel Unit)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
*		NB 60 83 70	Panel Unit	Silver	パネルユニット			
*		NB 60 84 10	〃	Black	〃			
*	1	BA 08 42 30	Siling Panel	Silver	シーリングパネル			
*	〃	SA 08 42 40	〃	Black	〃			
*	2	CB 61 37 90	Hinge, Door	Silver	ドアーヒンジ			
*	〃	CB 61 38 00	〃	Black	〃			
	3	ED 03 00 50	Binding Head Screw	3x5 ZMC2-Y	バインド小ネジ			
*	4	NB 60 82 30	Button Ass'y	Silver	ボタンAss'y	RESET		
*	〃	NB 60 82 40	〃	Black	〃	〃		
*	5	NB 60 82 50	〃	Silver	〃	MEMORY		
*	〃	NB 60 82 60	〃	Black	〃	〃		
*	6	NB 60 82 70	〃	Silver	〃	OPERATION		
*	〃	NB 60 82 80	〃	Black	〃	〃		
*	7	NB 60 82 90	〃	Silver	〃	REC/PAUSE		
*	〃	NB 60 83 00	〃	Black	〃	〃		
*	8	NB 60 83 10	〃	Silver	〃	MUTE		
*	〃	NB 60 83 20	〃	Black	〃	〃		
*	9	AA 61 37 00	Leaf Spring		リーフスプリング	OPERATION		
*	10	AA 61 36 80	Spring	ϕ6	スプリング			
*	11	AA 61 36 70	Slide Shaft		スライドシャフト			
*	12	CB 61 38 10	Slider		スライダー			
*	13	CB 61 38 20	Shaft Holder		シャフトホルダー			
	14	CB 60 88 10	Plastic Rivet		プラスチックリベット			
	15	CB 07 41 90	Adhesive Taps		ダブルタックテープ			
	16	CB 07 42 00	〃		〃			
*	17	CB 61 71 10	Anti-Vibration Rubber		防振ゴム			
*	18	NA 08 05 60	Indication LED	1LS041-1	インジケーションLED			
*	19	NA 08 06 00	LED Meter	SLS032-S	LEDメーター	Silver		
*	〃	NA 08 06 10	〃	BLS032-B	〃	Black		
*	20	NA 08 01 60	Operation Circuit Board		オペレーションシート			
*	20-1	CB 61 36 50	Holder		ホルダー	OPERATION		
	21	EN 03 00 20	Binding Head Tapping Screw	3x8 ZMC2-Y	バインドタッピングネジ			
*	22	NB 60 81 90	Button Ass'y	Silver	ボタンAss'y	POWER		
*	〃	NB 60 82 00	〃	Black	〃	〃		
*	23	NB 60 82 10	〃	Silver	〃	EJECT		
*	24	NB 60 82 20	〃	Black	〃	〃		
*	25	AA 61 36 90	Spring	ϕ8	スプリング			
*	26	CB 61 57 80	Adhesive Taps		ダブルタックテープ			
*	27	NB 60 83 50	Slide Knob Ass'y	Silver	スライドツマミAss'y	REC LEVEL		
*	〃	NB 60 83 60	〃	Black	〃	〃		
*	28	AA 61 37 10	Clamp A		クランプA			
*	29	AA 61 37 20	Clamp B		クランプB			
*	30	AA 61 37 30	Clamp C		クランプC			
	31	EN 39 00 46	Flat Head Tapping Screw	3x8 ZMC2-B	皿タッピングネジ			

* New Parts (新規部品)

■PARTS LIST(Electrical)

Ref. No.	Part No.	Description			部品名	Remarks	Common Model	Markets
✦	NA 08 00 80	Power Supply C. Board			電源シート			J
*	NA 08 00 90	〃			〃			U, C
*	NA 08 01 00	〃			〃			G, B
✦	NA 08 07 80	〃			〃			R, A
C501	Fi 40 41 00	Ceramic Cap.	0.01μF	AC250V ID, FI	セラコン			J
✦ 〃	Fi 41 41 00	〃	0.01μF	VA-1	〃			R,U,A,G,C,
C502	UW 93 72 20	Electrolytic Cap.	22μF	16V	ケミコン			
C503 ~505	FG 44 44 70	Ceramic Cap.	0.047μF	50V	セラコン			
C506	UW 83 92 20	Electrolytic Cap.	2200μF	16V	ケミコン			
C507	UW 93 71 00	〃	10μF	16V	〃			
C508	UW 96 82 20	〃	2.2μF	50V	〃			
C509	UW 96 61 00	〃	1μF	50V	〃			
C510	FG 44 44 70	Ceramic Cap.	0.047μF	50V	セラコン			
C511	UW 64 92 20	Electrolytic Cap.	2200μF	25V	ケミコン			
C512	UW 56 52 20	〃	0.22μF	50V	〃			
C513	UW 93 71 00	〃	10μF	16V	〃			
C514	UW 86 91 00	〃	1,000μF	50V	〃			
C515 C516	UW 86 81 00	〃	100μF	50V	〃			
C517 C518	UW 64 92 20	〃	2,200μF	25V	〃			
C519 C520	UW 94 81 00	〃	100μF	25V	〃			
C521 C522	UW 93 71 00	〃	10μF	16V	〃			
C523 C524	UW 67 81 00	〃	100μF	63V	〃			
C525 C526	UW 85 72 20	〃	22μF	35V	〃			
C527 C528	UW 95 71 00	〃	10μF	35V	〃			
C529	FG 44 41 00	Ceramic Cap.	0.01μF	50V	セラコン			
C530	FG 41 22 20	〃	220μF	50V	〃			
C531	UW 84 84 70	Electrolytic Cap.	470μF	25V	ケミコン			
C532	UW 96 82 20	〃	2.2μF	50V	〃			
✦ C533 C534	FZ 00 35 70	Capacitor Array	0.01μF x 6		コンデンサアレイ			
✦ L501	GE 90 08 90	OSC Coil			発振コイル			
R501	HJ 35 84 70	Carbon Resistor	470kΩ	RD25S	カーボン抵抗			
R502 R503	HJ 35 81 00	〃	1kΩ	〃	〃			
R504	HJ 35 54 70	〃	470Ω	〃	〃			
R505	HJ 35 72 20	〃	22kΩ	〃	〃			
R506	HJ 35 81 00	〃	100kΩ	〃	〃			
R507	HJ 35 71 00	〃	10kΩ	〃	〃			
R508	HJ 35 82 20	〃	2.2kΩ	〃	〃			
R509	HJ 35 72 20	〃	22kΩ	〃	〃			
R510	HJ 35 71 50	〃	15kΩ	〃	〃			
R511	HJ 35 61 00	〃	1kΩ	〃	〃			
R512 R513	HJ 35 81 00	〃	22kΩ	〃	〃			
R514	HJ 35 71 00	〃	10kΩ	〃	〃			
R515	HJ 35 72 20	〃	22kΩ	〃	〃			
R516 R517	HJ 35 61 00	〃	1kΩ	〃	〃			
R518	HJ 35 52 20	〃	220Ω	〃	〃			
R519	HJ 35 62 70	〃	2.7kΩ	〃	〃			
R520	HJ 35 63 30	〃	3.3kΩ	〃	〃			
R521 R522	HJ 35 65 60	〃	5.6kΩ	〃	〃			
R523 R524	HJ 35 53 30	〃	330Ω	〃	〃			
R525 R526	HJ 35 61 00	〃	1kΩ	〃	〃			
R527	HJ 35 64 70	〃	4.7kΩ	〃	〃			
R528	HJ 35 65 60	〃	5.6kΩ	〃	〃			

✦ New Parts (新規部品)

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
R528 R530	HJ 35 53 30	Carbon Resistor	330Ω RD25S カーボン抵抗			
R531 R532	HJ 35 71 00	〃	10kΩ 〃 〃			
R533 ~R536	HJ 35 72 20	〃	22kΩ 〃 〃			
R537	HJ 35 64 70	〃	4.7kΩ 〃 〃			
R538 R539	HJ 35 65 60	〃	5.6kΩ 〃 〃			
R540 R541	HJ 35 71 00	〃	10kΩ 〃 〃			
R542	HJ 35 64 70	〃	4.7kΩ 〃 〃			
R543	HJ 35 62 20	〃	2.2kΩ 〃 〃			
R544	RM 55 42 20	Cement Molded Resistor	22Ω 5P セメント抵抗			
R545	HJ 35 71 00	Carbon Resistor	10kΩ RD25S カーボン抵抗			
R546	HJ 35 64 70	〃	4.7kΩ 〃 〃			
R547	HJ 35 71 00	〃	10kΩ 〃 〃			
R548	HJ 35 68 20	〃	8.2kΩ 〃 〃			
R549	HK 56 69 10	〃	9.1kΩ 〃 〃			
R550	HU 07 61 00	Metal Film Resistor	1kΩ RE35 金属被膜抵抗			
R551	HJ 35 61 00	Carbon Resistor	1kΩ RD25S カーボン抵抗			
R552	HJ 35 56 80	〃	680Ω 〃 〃			
R553	HJ 35 61 00	〃	1kΩ 〃 〃			
R554 R555	HJ 35 56 80	〃	680Ω 〃 〃			
R556	HJ 35 72 20	〃	22kΩ 〃 〃			
R557	HJ 35 64 70	〃	4.7kΩ 〃 〃			
R558 ~562	HJ 35 71 00	〃	10kΩ 〃 〃			
R563	HJ 35 61 20	〃	1.2kΩ 〃 〃			
R564	HJ 35 62 70	〃	2.7kΩ 〃 〃			
* R565 R566	HZ 00 25 80	Resistor Net Work	47kΩ x 6 抵抗ネットワーク			
R567	HJ 35 52 20	Carbon Resistor	220Ω RD25S カーボン抵抗			
* TH501	HZ 00 28 90	Thermistor	112-501-2 サーミスタ			
TR501	iA 09 99 10	Transistor	2SA999 (E,F) トランジスタ	Inter-changeable		
〃	iA 11 27 00	〃	2SA1127 (R,S,T) 〃			
TR502 ~ 504	iC 23 20 10	〃	2SC2320 (E,F) 〃	Inter-changeable		
〃	iC 26 34 00	〃	2SC2634 (R,S,T) 〃			
TR505	iC 19 83 00	〃	2SC1983 〃			
TR506	iC 23 20 10	〃	2SC2320 (E,F) 〃	Inter-changeable		
〃	iC 26 34 00	〃	2SC2634 (R,S,T) 〃			
* TR507	iD 11 53 00	〃	2SD1153 〃			
TR508	iA 09 99 10	〃	2SA999 (E,F) 〃	Inter-changeable		
〃	iA 11 27 00	〃	2SA1127 (R,S,T) 〃			
TR509	iB 05 07 00	〃	2SB507 (E,F) 〃			
* TR510	iB 08 65 00	〃	2SB905 〃			
TR511	iC 23 20 10	〃	2SC2320 (E,F) 〃	Inter-changeable		
〃	iC 26 34 00	〃	2SC2634 (R,S,T) 〃			
TR512	iA 09 99 10	〃	2SA999 (E,F) 〃	Inter-changeable		
〃	iA 11 27 00	〃	2SA1127 (R,S,T) 〃			
TR513	iC 23 20 10	〃	2SC2320 (E,F) 〃	Inter-changeable		
〃	iC 26 34 00	〃	2SC2634 (R,S,T) 〃			
* TR514	iD 11 53 00	〃	2SD1153 〃			
TR515	iC 23 20 10	〃	2SC2320 (E,F) 〃	Inter-changeable		
〃	iC 26 34 00	〃	2SC2634 (R,S,T) 〃			
* TR516	iB 08 65 00	〃	2SB856 〃			
* TR517	iD 11 53 00	〃	2SD1153 〃			
TR518 ~ 521	iC 23 20 10	〃	2SC2320 (E,F) 〃	Inter-changeable		
〃	iC 26 34 00	〃	2SC2634 (R,S,T) 〃			

* New Parts (新規部品)

Ref. No.	Part No.	Description	仕 様	名 称	Remarks	Common Model	Markets
D501 ~503	iH 00 09 70	Diode Bridge	IS2371A	ダイオードブリッジ			
D504 ~607	iF 00 00 40	Diode	IS1555	ダ イ オ ー ド	Inter-changeable		
"	iF 00 06 70	"	IS2473	〃			
D509 D510	iH 00 05 90	"	1OE-1	〃			
D511	iF 00 15 10	Zener Diode	HZ-8CIL	ツェナーダイオード			
D512 D513	iH 00 05 90	Diode	1OE-1	ダ イ オ ー ド			
* D514 D515	iF 00 41 80	Zener Diode	HZ30-3L	ツェナーダイオード			
D516	iF 00 00 40	Diode	IS1555	ダ イ オ ー ド	Inter changeable		
"	iF 00 06 70	"	IS2473	〃			
D517	iH 00 05 90	"	1OE-1	〃			
D518 ~521	iF 00 00 40	"	IS1555	〃	Inter-changeable		
"	iF 00 06 70	"	IS2473	〃			
* IC501	iG 07 50 00	IC	μPD554C-083	I C			
* IC502	iG 07 40 00	"	8A6109	〃			
* IC503	iG 07 53 00	"	AN78M05	〃	Inter changeable		
* "	iG 07 56 00	"	NJM78M05/A	〃			
* IC504	iG 07 54 00	"	AN78M10	〃	Inter-changeable		
* "	iG 07 57 00	"	NJM78M10/A	〃			
* SW501	KA 80 32 90	Power Switch	SDLC-1P	パ ワ ー ス イ ッ チ			
* SW502	KA 50 17 80	Rotary Switch	L=20 2-8	ロ ー タ リ ー ス イ ッ チ	AUTO FUNCTION		
F501	KB 00 03 40	Fuse	T1.5A 250V	ヒ ュ ー ズ			J,R,A
"	KB 00 07 40	"	T1.6A 250V	〃			G,B
* "	KB 00 27 10	"	1.5A 250V	〃			U,C
F502 F503	KB 00 03 50	"	T2A 250V	〃			J,R,A
"	KB 00 07 50	"	T2A 250V	〃			G,B
"	KB 00 12 40	"	2A 250V	〃			U,C
F504 F505	KB 00 03 10	"	T0.5A 250V	〃			J,R,A
"	KB 00 06 60	"	T400mA 250V	〃			G,B
"	KB 00 11 50	"	0.6A 250V	〃			U,C
* JK501	LB 60 50 30	DIN Jack	8P 12.5 6L	D I N ジ ャ ッ ク			
	LA 00 21 40	Wrapping Terminal	P=10 2P I-Type	I型ラッピング端子板			
	LB 20 18 60	Fuse Holder Pin	PC-FH1	ヒューズホルダーピン			
	LB 91 20 30	Short Plug	3P I-Type	シ ョ ー ト プ ラ グ			
	LB 91 20 40	"	4P I-Type	〃			
	LB 91 20 50	"	5P I-Type	〃			
*	AA 61 35 60	Bracket, Switch		スイッチブラケット			
*	BA 08 39 90	Heat Sink	#8399	放 熱 板			
*	BA 08 40 00	"	#8400	〃			
	BA 06 77 80	"	#6778	放 熱 器			
	BB 06 62 90	Ground Washer	#6629	アースワッシャー			
	EI 03 00 60	Bind Head Tapping Screw	3x6 ZMC$_2$-Y	バインドタッピングネジ			
	ED 03 00 40	Bind Head Screw	3x4 ZMC$_2$-Y	バ イ ン ド ネ ジ			

* New Parts (新規部品)

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
*	NA 08 00 00	Main Circuit Board		メインシート	Silver		J,R,A,G,B
*	NA 08 00 10	"		〃	"		U,C
*	NA 08 00 20	"		〃	Black		J,R,A,G,B
*	NA 08 00 30	"		〃	"		U,C
C101 ~104	UW 94 71 00	Electrolytic Cap.	10μF 25V	ケミコン			
C105 ~108	FG 41 21 00	Ceramic Cap.	100pF 50V	セラコン			
C109 ~118	UW 94 71 00	Electrolytic Cap.	10μF 25V	ケミコン			
C119 C120	UA 25 41 20	Mylar Cap.	0.012μF 50V	マイラーコン			
C121 C122	UK 14 64 70	Electrolytic Cap.	4.7μF 25V	BPコン			
C123 C124	UW 94 64 70	"	4.7μF 25V	ケミコン			
C125 C126	UA 25 32 20	Mylar Cap.	0.0022μF 50V	マイラーコン			
C127 C128	UA 25 41 80	"	0.018μF 50V	〃			
C129 C130	FG 41 24 70	Ceramic Cap.	470pF 50V	セラコン			
C131 C132	UW 56 53 30	Electrolytic Cap.	0.33μF 50V	ケミコン			
C133 C134	UW 96 61 00	"	1μF 50V	〃			
C135 C136	UW 94 64 70	"	4.7μF 25V	〃			
C137 C138	UA 25 31 80	Mylar Cap.	0.0018μF 50V	マイラーコン			
C139 C140	UW 91 84 70	Electrolytic Cap.	470μF 6.3V	ケミコン			
C141	UW 94 71 00	"	10μF 25V	〃			
C142	UW 93 71 00	"	10μF 16V	〃			
C143 C144	UW 94 71 00	"	10μF 25V	〃			
C145 C146	UA 25 38 20	Mylar Cap.	0.0082μF 50V	マイラーコン			
C147 C148	FG 41 23 30	Ceramic Cap.	330pF 50V	セラコン			
C149 ~152	UW 91 74 70	Electrolytic Cap.	47μF 6.3V	ケミコン			
C153 ~156	UA 25 51 00	Mylar Cap.	0.1μF 50V	マイラーコン			
C157 C158	UW 94 71 00	Electrolytic Cap.	10μF 25V	ケミコン			
C159 C160	UA 25 53 00	Mylar Cap.	0.3μF 50V	マイラーコン			
* C161 C162	FT 55 22 00	Polypropylene Cap.	200p 50V	ポリプロコン			
C163 C164	UA 25 41 00	Mylar Cap.	0.01μF 50V	マイラーコン			
C165 ~168	FG 41 21 00	Ceramic Cap.	100pF 50V	セラコン			
C169 C170	UA 25 41 00	Mylar Cap.	0.01μF 50V	マイラーコン			
C171 C172	UW 96 62 20	Electrolytic Cap.	2.2μF 50V	ケミコン			
C173 ~176	UW 56 56 80	"	0.68μF 50V	〃			
C177 C178	UW 96 61 00	"	1μF 50V	〃			
C179 C180	FA 15 36 20	Mylar Cap.	0.0062μF 50V	マイラーコン			
C181 C182	UA 25 38 20	"	0.0082μF 50V	〃			
C183 C184	UW 94 71 00	Electrolytic Cap.	10μF 25V	ケミコン			
C185 C186	UA 25 37 50	Mylar Cap.	0.0075μF 50V	マイラーコン			
C187 C188	FG 41 11 00	Ceramic Cap.	10pF 50V	セラコン			
C191 C192	FG 41 21 00	"	100pF 50V	〃			
C193 C194	UW 93 72 20	Electrolytic Cap.	22μF 16V	ケミコン			
C195 C196	UW 96 61 00	"	1μF 50V	〃			
C197 C198	FG 41 21 00	Ceramic Cap.	100pF 50V	セラコン			
C199 C200	FG 41 31 00	"	0.001μF 50V	〃			
C201 ~204	UA 25 51 00	Mylar Cap.	0.1μF 50V	マイラーコン			
C205 ~208	UA 25 33 30	"	0.0033μF 50V	〃			
C209 C210	FG 41 23 30	Ceramic Cap.	330pF 50V	セラコン			
C211 C212	UA 25 51 00	Mylar Cap.	0.1μF 50V	マイラーコン			
C213 C214	UA 25 41 00	"	0.01μF 50V	〃			
C215 C216	UW 96 61 00	Electrolytic Cap.	1μF 50V	ケミコン			
C217 C218	UW 93 73 30	"	33μF 16V	〃			
C219 C220	UW 93 72 20	"	22μF 16V	〃			
C221 C222	UW 94 71 00	"	10μF 25V	〃			
C223	UW 96 71 00	"	10μF 50V	〃			

* New Parts (新規部品)

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
C224	UW 96 61 00	Electrolytic Cap.	1μF 50V	ケミコン			
C225	FH 21 22 20	Ceramic Cap.	220pF 500V	セラコン			
C226	UW 94 71 00	Electrolytic Cap.	10μF 25V	ケミコン			
C227	UW 93 74 70	"	47μF 16V	〃			
C228	UW 93 81 00	"	100μF 16V	〃			
C229	FG 41 34 70	Ceramic Cap.	0.0047μF 50V	セラコン			
C230	UW 93 81 00	Electrolytic Cap.	100μF 16V	ケミコン			
C231 C232	FG 44 41 00	Ceramic Cap.	0.01μF 50V	セラコン			
C233	UW 93 81 00	Electrolytic Cap.	100μF 16V	ケミコン			
C234	UW 93 73 30	"	33μF 16V	〃			
C235 C236	UW 94 71 00	"	10μF 25V	〃			
C237 C238	UW 96 61 00	"	1μF 50V	〃			
C240	UW 93 81 00	"	100μF 16V	〃			
C241	UA 25 41 00	Mylar Cap.	0.01μF 50V	マイラーコン			
C242	UA 25 31 00	"	0.001μF 50V	〃			
C243	UA 25 41 00	"	0.01μF 50V	〃			
C244	UA 25 31 00	"	0.001μF 50V	〃			
C248 ~248	UW 96 61 00	Electrolytic Cap.	1μF 50V	ケミコン			
C249	UW 94 71 00	"	10μF 25V	〃			
C250	UW 96 61 00	"	1μF 50V	〃			
C251 C252	UW 96 63 30	"	3.3μF 50V	〃			
C253 C254	UW 94 71 00	"	10μF 25V	〃			
C255 C256	UW 96 71 00	"	10μF 50V	〃			
C257	UW 94 71 00	"	10μF 25V	〃			
C258	UW 93 73 30	"	33μF 16V	〃			
C259 C260	FG 44 42 20	Ceramic Cap.	0.022μF 50V	セラコン			
C262	UW 93 74 70	Electrolytic Cap.	47μF 16V	ケミコン			
C263	UW 96 63 30	"	3.3μF 50V	〃			
C264	FG 44 42 20	Ceramic Cap.	0.022μF 50V	セラコン			
C265 C266	UW 96 61 00	Electrolytic Cap.	1μF 50V	ケミコン			
C267 C268	UW 94 71 00	"	10μF 25V	〃			
C271 C272	UW 94 71 00	"	10μF 25V	〃			
C273 C274	UA 25 41 20	Mylar Cap.	0.012μF 50V	マイラーコン			
* F101 F102	GE 20 04 40	Dolby Filter		ドルビーフィルター			
* L101 L102	GE 90 08 70	Trap Coil	105kHz	トラップコイル			
* L103 L104	GE 90 04 30	Coil	15mH	固定コイル			
L105 L106	GE 90 02 40	"	8.2mH	〃			
L107 L108	GE 90 02 20	"	5.6mH	〃			
R101 R102	HJ 35 71 00	Carbon Resistor	10kΩ RD25S	カーボン抵抗			
R103 R104	HJ 35 91 00	"	1MΩ "	〃			
R105 R106	HJ 35 71 00	"	10kΩ "	〃			
R107 R108	HJ 35 74 70	"	47kΩ "	〃			
R109 R110	HJ 35 82 20	"	220kΩ "	〃			
R111 R112	HJ 35 71 00	"	10kΩ "	〃			
R113 R114	HJ 35 51 00	"	100Ω "	〃			
R115 R116	HJ 35 62 40	"	2.4kΩ "	〃			
R117 R118	HJ 35 65 60	"	5.6kΩ "	〃			
R119 R120	HJ 35 71 20	"	12kΩ "	〃			
R121 ~124	HJ 35 73 30	"	33kΩ "	〃			
R125 R126	HJ 35 81 00	"	1kΩ "	〃			
R127 R128	HJ 35 83 90	"	3.9kΩ "	〃			
R129 R130	HJ 35 85 10	"	5.1kΩ "	〃			
R131 R132	HK 58 62 00	"	6.2kΩ "	〃			

* New Parts(新規部品)

Ref. No.	Part No.	Description		摘 出 名	Remarks	Common Model	Markets		
R133 R134	HK 56 81 10	Carbon Resistor	110kΩ RD25S	カ ー ボ ン 抵 抗					
R135 R136	HJ 35 85 10	〃	5.1kΩ 〃	〃					
R137 R138	HJ 35 78 20	〃	82kΩ 〃	〃					
R139 R140	HJ 35 64 30	〃	4.3kΩ 〃	〃					
R141 R142	HJ 35 91 00	〃	1MΩ 〃	〃					
R143 R144	HK 56 73 00	〃	30kΩ 〃	〃					
R145 R146	HJ 35 63 30	〃	3.3kΩ 〃	〃					
R147 ~150	HJ 35 71 20	〃	12kΩ 〃	〃					
R151 R152	HJ 35 43 30	〃	33Ω 〃	〃					
R153 R154	HJ 35 61 00	〃	1kΩ 〃	〃					
R155 R156	HJ 35 91 00	〃	1MΩ 〃	〃					
R157 R158	HJ 35 68 20	〃	8.2kΩ 〃	〃					
R159 R160	HJ 35 51 20	〃	120Ω 〃	〃					
R161 R162	HJ 35 66 80	〃	6.8kΩ 〃	〃					
R163	HJ 35 52 20	〃	220Ω 〃	〃					
R164	HL 31 54 70	Metal Oxide Film Resistor	470Ω 1P	酸 金 属 抵 抗					
R165	HJ 35 64 70	Carbon Resistor	4.7kΩ RD25S	カ ー ボ ン 抵 抗					
R166	HJ 35 81 00	〃	100kΩ 〃	〃					
R167 R168	HJ 35 82 20	〃	220kΩ 〃	〃					
R169 R170	HJ 35 68 80	〃	6.8kΩ 〃	〃					
R171 R172	HJ 35 71 00	〃	10kΩ 〃	〃					
R173 R174	HJ 35 68 20	〃	8.2kΩ 〃	〃					
R175 R176	HJ 35 91 00	〃	1MΩ 〃	〃					
R177 R178	HJ 35 71 00	〃	10kΩ 〃	〃					
R179 R180	HJ 35 63 30	〃	3.3kΩ 〃	〃					
R181 R182	HJ 35 53 30	〃	330Ω 〃	〃					
R183 R184	HJ 35 71 00	〃	10kΩ 〃	〃					
R185 R186	HJ 35 51 00	〃	100Ω 〃	〃					
R187 R188	HJ 35 65 60	〃	5.6kΩ 〃	〃					
R189	HJ 35 63 30	〃	3.3kΩ 〃	〃					
R190	HJ 35 63 00	〃	3kΩ 〃	〃					
R191	HK 56 81 00	〃	1kΩ 〃	〃					
R192	HJ 35 56 80	〃	680Ω 〃	〃					
R193 ~196	HJ 35 71 00	〃	10kΩ 〃	〃					
R197 R198	HJ 35 74 70	〃	47kΩ 〃	〃					
R199 R200	HJ 35 81 20	〃	120kΩ 〃	〃					
R201 R202	HJ 35 74 70	〃	47kΩ 〃	〃					
R203 R204	HJ 35 73 30	〃	33kΩ 〃	〃					
R205 R206	HJ 35 71 00	〃	10kΩ 〃	〃					
R207 R208	HJ 35 74 70	〃	47kΩ 〃	〃					
R209	HJ 35 71 00	〃	10kΩ 〃	〃					
R210	HJ 35 73 30	〃	33kΩ 〃	〃					
R211 R212	HJ 35 44 70	〃	47Ω 〃	〃					
R213 R214	HJ 35 71 20	〃	12kΩ 〃	〃					
R215 R216	HJ 35 74 70	〃	47kΩ 〃	〃					
R217 R218	HJ 35 42 20	〃	22Ω 〃	〃					
R219 R220	HJ 35 81 00	〃	100kΩ 〃	〃					
R221 R222	HJ 35 42 20	〃	22Ω 〃	〃					
R223 R224	HJ 35 74 70	〃	47kΩ 〃	〃					
R225 R226	HJ 35 71 00	〃	10kΩ 〃	〃					
R227 R228	HJ 35 63 90	〃	3.9kΩ 〃	〃					
R229 R230	HJ 35 81 00	〃	100kΩ 〃	〃					
R231 R232	HJ 35 71 00	〃	10kΩ 〃	〃					
R233 R234	HJ 35 73 30	〃	33kΩ 〃	〃					

* New Parts (新規部品)

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
R235 R236	HJ 35 51 00	Carbon Resistor	100Ω RS26S	カーボン抵抗			
R237 R238	HJ 35 81 00	〃	100kΩ 〃	〃			
R239 ~242	HJ 35 74 70	〃	47kΩ 〃	〃			
R243 R244	HJ 35 65 60	〃	5.6kΩ 〃	〃			
R245 R246	HJ 35 61 20	〃	1.2kΩ 〃	〃			
R247 R248	HJ 35 62 20	〃	2.2kΩ 〃	〃			
R249 R250	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R251 R252	HJ 35 63 30	〃	3.3kΩ 〃	〃			
R253 R254	HJ 35 74 70	〃	47kΩ 〃	〃			
R255 R256	HJ 35 72 70	〃	27kΩ 〃	〃			
R257 R258	HJ 35 54 70	〃	470Ω 〃	〃			
R259 R260	HJ 35 71 30	〃	13kΩ 〃	〃			
R261 R262	HJ 35 82 20	〃	220kΩ 〃	〃			
R263 R264	HJ 35 63 30	〃	330Ω 〃	〃			
R265 R266	HJ 35 68 20	〃	8.2kΩ 〃	〃			
R267 R268	HJ 35 52 70	〃	270Ω 〃	〃			
R269 ~272	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R273 R274	HJ 35 68 20	〃	8.2kΩ 〃	〃			
R275 R276	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R277	HJ 35 52 20	〃	220Ω 〃	〃			
R278	HJ 35 71 00	〃	10kΩ 〃	〃			
R279 R280	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R281 R282	HJ 35 61 50	〃	1.5kΩ 〃	〃			
R283 R284	HJ 35 62 20	〃	2.2kΩ 〃	〃			
R285 R286	HJ 35 59 10	〃	910Ω 〃	〃			
R287 ~290	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R291 R292	HJ 35 62 20	〃	2.2kΩ 〃	〃			
R293 ~296	HJ 35 53 90	〃	390Ω 〃	〃			
R297 R298	HJ 35 41 00	〃	10Ω 〃	〃			
R299 R300	HJ 35 51 50	〃	150Ω 〃	〃			
R301 R302	HJ 35 65 60	〃	5.6kΩ 〃	〃			
R303 R304	HJ 35 61 00	〃	1kΩ 〃	〃			
R305 R306	HJ 35 81 00	〃	100kΩ 〃	〃			
R307 R308	HJ 35 61 00	〃	1kΩ 〃	〃			
R309 R310	HJ 35 71 00	〃	10kΩ 〃	〃			
R311 R312	HJ 35 61 00	〃	1kΩ 〃	〃			
R313 R314	HJ 35 81 00	〃	100kΩ 〃	〃			
R315 R316	HJ 35 61 00	〃	1kΩ 〃	〃			
R317 R318	HZ 00 22 80	Carbon Composition Resistor	22MΩ	ソリッド抵抗			
R319 ~324	HJ 35 81 00	Carbon Resistor	100kΩ RD26S	カーボン抵抗			
R325 R326	HJ 35 73 30	〃	33kΩ 〃	〃			
R327 R328	HK 58 79 10	〃	91kΩ 〃	〃			
R329 R330	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R331 R332	HJ 35 73 30	〃	33kΩ 〃	〃			
R333 R334	HJ 35 66 80	〃	6.8kΩ 〃	〃			
R335 R336	HJ 35 51 00	〃	100Ω 〃	〃			
R337 R338	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R339 R340	HJ 35 63 30	〃	3.3kΩ 〃	〃			
R341 R342	HJ 35 73 30	〃	33kΩ 〃	〃			
R343 R344	HJ 35 42 20	〃	22Ω 〃	〃			
R345 R346	HJ 35 71 20	〃	12kΩ 〃	〃			
R347 R348	HJ 35 81 80	〃	180kΩ 〃	〃			

→ New Parts (新規部品)

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
R349 R350	HJ 35 91 20	Carbon Resistor	1.2MΩ RD25S	カーボン抵抗			
R351 R352	HK 35 36 80	〃	8.8Ω 〃	〃			
R353 R354	HJ 35 61 00	〃	1kΩ 〃	〃			
R355	HJ 35 91 00	〃	1MΩ 〃	〃			
R356	HJ 35 71 00	〃	10kΩ 〃	〃			
R357 R358	HJ 35 66 80	〃	6.8kΩ 〃	〃			
R359 R360	HJ 35 81 20	〃	120kΩ 〃	〃			
R361	HJ 35 61 00	〃	1kΩ 〃	〃			
R362	HJ 35 71 00	〃	10kΩ 〃	〃			
R363 R364	HJ 35 71 20	〃	12kΩ 〃	〃			
R365 R366	HJ 35 68 20	〃	8.2kΩ 〃	〃			
R367 R368	HK 56 64 70	〃	4.7kΩ 〃	〃			
R369 R370	HJ 35 72 70	〃	27kΩ 〃	〃			
R371 R372	HJ 35 74 70	〃	47kΩ 〃	〃			
R373 R374	HJ 35 68 20	〃	8.2kΩ 〃	〃			
R375 R376	HJ 35 71 50	〃	15kΩ 〃	〃			
R377 R378	HJ 35 72 20	〃	22kΩ 〃	〃			
R379 R380	HJ 35 61 20	〃	1.2kΩ 〃	〃			
R381 R382	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R383 R384	HJ 35 71 00	〃	10kΩ 〃	〃			
R385 R386	HJ 35 81 00	〃	100kΩ 〃	〃			
R387 R388	HJ 35 54 70	〃	470Ω 〃	〃			
R389 R390	HJ 35 71 00	〃	10kΩ 〃	〃			
R391 R392	HJ 35 53 30	〃	330Ω 〃	〃			
R393 R394	HJ 35 62 20	〃	2.2kΩ 〃	〃			
R395	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R396	HJ 35 62 20	〃	2.2kΩ 〃	〃			
R397 R398	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R399 R400	HU 07 63 30	Metal Film Resistor	3.3kΩ RE35	金属皮膜抵抗			
R401 ~403	HJ 35 66 80	Carbon Resistor	6.8kΩ RD25S	カーボン抵抗			
R404	HJ 35 71 00	〃	10kΩ 〃	〃			
R405	HJ 35 52 20	〃	220Ω 〃	〃			
R406	HJ 35 53 90	〃	390Ω 〃	〃			
R407	HJ 35 52 20	〃	220Ω 〃	〃			
R408	HJ 35 53 90	〃	390Ω 〃	〃			
R409	HJ 35 71 20	〃	12kΩ 〃	〃			
R410	HJ 35 52 20	〃	220Ω 〃	〃			
R411	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R412	HJ 35 91 00	〃	1MΩ 〃	〃			
R413 R414	HJ 35 71 00	〃	10kΩ 〃	〃			
R415	HJ 35 81 00	〃	100kΩ 〃	〃			
R416	HJ 35 71 00	〃	10kΩ 〃	〃			
R417	HJ 35 81 00	〃	100kΩ 〃	〃			
R418 ~420	HJ 35 71 00	〃	10kΩ 〃	〃			
R421	HJ 35 61 00	〃	1kΩ 〃	〃			
R422 ~424	HJ 35 71 00	〃	10kΩ 〃	〃			
R425	HJ 35 61 00	〃	1kΩ 〃	〃			
R426	HJ 35 71 00	〃	10kΩ 〃	〃			
R427	HJ 35 56 60	〃	560Ω 〃	〃			
R428 R429	HJ 35 71 00	〃	10kΩ 〃	〃			
R430	HJ 35 66 80	〃	6.8kΩ 〃	〃			
R431 R432	HJ 35 74 70	〃	47kΩ 〃	〃			
R433 R434	HJ 35 71 50	〃	15kΩ 〃	〃			

* New Parts (新規部品)

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
R435 R436	HJ 35 91 00	Carbon Resistor	1MΩ RD25S カーボン抵抗			
R437 R438	HJ 35 61 20	"	1.2kΩ " 〃			
R439 R440	HJ 35 82 20	"	220kΩ " 〃			
R443	HJ 35 81 00	"	100kΩ " 〃			
R444	HJ 35 83 30	"	330kΩ " 〃			
R445 R446	HJ 35 71 00	"	10kΩ " 〃			
R448	HJ 35 64 70	"	4.7kΩ " 〃			
R449 R450	HJ 35 81 00	"	100kΩ " 〃			
※ VR101	HQ 40 01 80	Slide variable Resistor	A50kΩ x 2 スライドVR	REC LEVEL		
※ VR102	HS 41 16 80	Variable Resistor	100kΩ CC 可変抵抗器	BALANCE		
✦ VR103	HS 41 17 10	"	B10kΩ CC, CT 〃	BIAS		
※ VR104	HS 41 17 00	"	A50kΩ x 2 〃	PHONES LEVEL		
VR105	HT 37 00 40	Semi Variable Resistor	B500Ω 半固定抵抗			
VR106	HT 37 00 10	"	B1kΩ 〃			
VR107 ~114	HT 37 00 20	"	B10kΩ 〃			
VR115 VR116	HT 37 01 00	"	B50kΩ 〃			
VR117 VR118	HT 37 00 70	"	B3kΩ 〃			
VR119 ~123	HT 37 00 60	"	B2kΩ 〃			
VR124	HT 37 00 50	"	B5kΩ 〃			
VR125	HT 37 00 20	"	B10kΩ 〃			
VR126 VR127	HT 37 00 60	"	B2kΩ 〃			
TR101 TR102	iD 06 55 00	Transistor	2SD665 (D,E,F) トランジスタ		Inter-changeable	
※ "	iD 10 12 00	"	2SD1012 (G,H) 〃			
TR103 ~ 106	iC 23 20 10	"	2SC2320 (E,F) 〃		Inter-changeable	
"	iC 26 34 00	"	2SC2634 (R,S,T) 〃			
✦ TR107 TR108	iC 28 78 00	"	2SC2878 〃			
TR109 TR110	iC 23 20 10	"	2SC2320 (E,F) 〃		Inter-changeable	
"	iC 26 34 00	"	2SC2634 (R,S,T) 〃			
TR111 ~ 114	iE 10 05 00	FET	2SK68A (K,L,M,N) FET			
TR115 ~ 120	iC 23 20 10	Transistor	2SC2320 (E,F) トランジスタ		Inter-changeable	
"	iC 26 34 00	"	2SC2634 (R,S,T) 〃			
✦ TR121 ~124	iC 28 78 00	"	2SC2878 〃			
TR125 ~127	iC 23 20 10	"	2SC2320 (E,F) 〃		Inter-changeable	
"	iC 26 34 00	"	2SC2634 (R,S,T) 〃			
TR128 ~138	iC 23 20 10	"	2SC2320 (E,F) 〃		Inter-changeable	
"	iC 26 34 00	"	2SC2634 (R,S,T) 〃			
✦ TR139 TR140	iC 28 78 00	"	2SC2878 〃			
TR141 TR142	iD 06 55 00	"	2SD665 (D,E,F) 〃		Inter-changeable	
✦ "	iD 10 12 00	"	2SD1012 (G,H) 〃			
TR143 ~ 149	iC 23 20 10	"	2SC2320 (E,F) 〃		Inter-changeable	
"	iC 26 34 00	"	2SC2634 (R,S,T) 〃			
✦ TR149 TR150	iC 28 78 00	"	2SC2878 〃			
TR151 ~ 157	iC 23 20 10	"	2SC2320 (E,F) 〃		Inter-changeable	
"	iC 26 34 00	"	2SC2634 (R,S,T) 〃			

✦ New Parts (新規部品)

	Ref. No.	Part No.	Description	部品名		Remarks	Common Model	Markets
*	TR158	iD 11 53 00	Transistor	2SD1153	トランジスタ			
	TR159 TR160	iC 23 20 10	"	2SC2320 (E,F)	〃	Inter-changeable		
	"	iC 26 34 00	"	2SC2634 (R,S,T)	〃			
*	TR161	iD 03 13 00	"	2SD313 (E,F)	〃			
	TR162 ~ 165	iA 09 99 10	"	2SA999 (E,F)	〃	Inter-changeable		
	"	iA 11 27 00	"	2SA1127 (R,S,T)	〃			
	TR166 ~ 168	iC 23 20 10	"	2SC2320 (E,F)	〃	Inter-changeable		
	"	iC 26 34 00	"	2SC2634 (R,S,T)	〃			
	TR169 ~ 172	iA 09 99 10	"	2SA999 (E,F)	〃	Inter-changeable		
	"	iA 11 27 00	"	2SA1127 (R,S,T)	〃			
	TR173 ~ 176	iC 23 20 10	"	2SC2320 (E,F)	〃	Inter-changeable		
	"	iC 26 34 00	"	2SC2634 (R,S,T)	〃			
	D101 ~103	iF 00 00 40	Diode	1S1555	ダイオード	Inter-changeable		
	"	iF 00 06 70	"	1S2473	〃			
	D105 ~150	iF 00 00 40	"	1S1555	〃	Inter-changeable		
	"	iF 00 06 70	"	1S2473	〃			
	D151	iF 00 15 10	Zener Diode	HZ-8CHL	ツェナーダイオード			
	D152 ~155	iF 00 00 40	Diode	1S1555	ダイオード	Inter-changeable		
	"	iF 00 06 70	"	1S2473	〃			
*	IC10	iG 07 69 00	IC	NJM2041S	IC			
*	IC102 ~ 104	iG 07 68 00	"	NJM4558S	〃			
*	IC105 IC106	iG 06 23 00	"	μPC1180C	〃			
*	IC107 IC108	iG 06 25 00	"	μPC1252H2	〃			
*	IC109 IC110	iG 06 24 00	"	μPC1253H2	〃			
*	IC111	iG 07 68 00	"	NJM4558S	〃			
*	IC112	iG 07 74 00	"	NJM4556S	〃			
	IC113	iG 03 49 00	"	M5214L	〃			
*	IC114	iG 07 68 00	"	NJM4558S	〃			
*	IC115	iG 09 98 00	"	BIAS OSC	〃			
*	IC116	iG 07 49 00	"	BA6138	〃			
*	IC117	iG 07 74 00	"	NJM4556S	〃			
*	IC118 IC119	iG 07 68 00	"	NJM4558S	〃			
	IC120	iG 03 49 00	"	M5214L	〃			
	SW101	KA 80 28 30	Push Switch	4-2	プッシュスイッチ	MONITOR		
*	SW102	KA 80 31 60	"	6-2x2	3連プッシュスイッチ	NOISE REDUCTION		
	SW103	KA 80 26 30	"	4-2	プッシュスイッチ	TEST		
	RY101	KC 00 12 90	Relay	HB 24V	リレー			
*	JK101	LB 30 16 80	Phone Jack	HLJ0520 WH	ホーンジャック	Silver		
*	"	LB 30 16 90	"	" BL	〃	Black		
*	PJ101	LB 40 10 30	Pin Jack	4P	ピンジャック			
		LB 20 13 90	2.5 Pitch Base Pin	TE62P-SHF	2.5ピッチベースピン			
		LB 40 05 70	"	TE64P-SHF	〃			
		LB 91 20 60	Short Plug	5P I-Type	ショートプラグ			
		LB 91 21 00	"	10P I-Type	〃			
		BB 08 62 90	Ground Washer		アースワッシャー			

* New Parts (新規部品)

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets
	NA 08 01 40	Counter Circuit Board		カウンターシート			J,R,A,G,S
*	NA 08 02 00	〃		〃			U,C
C601 C602	UW 94 64 70	Electrolytic Cap.	4.7μF 25V	ケミコン			
C603 ~605	FG 44 41 00	Ceramic Cap.	0.01μF 50V	セラコン			
C606	UW 64 64 70	Electrolytic Cap.	4.7μF 25V	ケミコン			
C607	UW 91 82 20	〃	220μF 6.3V	〃			
C608 C609	UW 93 71 00	〃	10μF 16V	〃			
C610	UA 25 51 00	Mylar Cap.	0.1μF 50V	マイラーコン			
C611	FG 44 41 00	Ceramic Cap.	0.01μF 50V	セラコン			
R601	HJ 35 54 70	Carbon Resistor	470Ω RD25S	カーボン抵抗			
R602 ~604	HJ 35 56 80	〃	680Ω 〃	〃			
R605 R606	HJ 35 54 70	〃	470Ω 〃	〃			
R607 R608	HJ 35 65 60	〃	5.6kΩ 〃	〃			
R609 R610	HJ 35 61 50	〃	1.5kΩ 〃	〃			
R611 R612	HJ 35 71 20	〃	12kΩ 〃	〃			
R613 R614	HJ 35 55 60	〃	560Ω 〃	〃			
R615 R616	HJ 35 91 00	〃	1MΩ 〃	〃			
R617 R618	HJ 35 72 20	〃	22kΩ 〃	〃			
R619 R620	HJ 35 75 60	〃	56kΩ 〃	〃			
R621 ~624	HJ 35 71 00	〃	10kΩ 〃	〃			
R625	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R626 ~630	HJ 35 71 00	〃	10kΩ 〃	〃			
R631 R632	HJ 35 54 70	〃	470Ω 〃	〃			
R633 ~636	HJ 35 74 70	〃	47kΩ 〃	〃			
R637	HJ 35 66 80	〃	6.8kΩ 〃	〃			
R638	HJ 35 71 00	〃	10kΩ 〃	〃			
R639	HJ 35 74 70	〃	47kΩ 〃	〃			
R640	HJ 35 52 20	〃	220Ω 〃	〃			
R641 ~644	HJ 35 61 50	〃	1.5kΩ 〃	〃			
R645 R646	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R647 ~649	HJ 35 52 20	〃	220Ω 〃	〃			
R650 ~656	HJ 35 48 20	〃	82Ω 〃	〃			
R657	HJ 35 71 20	〃	12kΩ 〃	〃			
R658	HJ 35 56 80	〃	680Ω 〃	〃			
R659	HJ 35 71 20	〃	12kΩ 〃	〃			
R660	HJ 35 56 80	〃	680Ω 〃	〃			
R661	HJ 35 71 20	〃	12kΩ 〃	〃			
R662	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R663	HJ 35 52 20	〃	220Ω 〃	〃			
R664	HJ 35 72 20	〃	22kΩ 〃	〃			
R665	HJ 35 81 00	〃	100kΩ 〃	〃			
R666	HJ 35 74 70	〃	47kΩ 〃	〃			
R667	HJ 35 43 30	〃	33Ω 〃	〃			
R668	HJ 35 71 20	〃	12kΩ 〃	〃			
R669 ~672	HJ 35 61 50	〃	1.5kΩ 〃	〃			
R673 ~687	HJ 35 45 60	〃	56Ω 〃	〃			
R688	HJ 35 64 70	〃	4.7kΩ 〃	〃			
R689	HJ 35 72 20	〃	27kΩ 〃	〃			
R690 ~694	HJ 35 71 00	〃	10kΩ 〃	〃			
TR601 ~ 605	IC 23 20 10	Transistor	2SC2320 (E,F)	トランジスタ	Interchangeable		
〃	IC 26 34 00	〃	2SC2634 (R,S,T)	〃			

* New Parts (新規部品)

Ref. No.	Part No.		Description		部品名	Remarks	Common Model	Markets
TR606 TR607	iA	09 99 10	Transistor	2SA999 (E,F)	トランジスタ	Inter-changeable		
〃	iA	11 27 00	〃	2SA1127 (R,S,T)	〃			
◆ TR608 ~ 611	iB	05 98 00	〃	2SB698 (E,F)	〃			
TR612	iC	26 34 00	〃	2SC2634 (R,S,T)	〃			
TR613	iA	09 99 10	〃	2SA999 (E,F)	〃	Inter-changeable		
〃	iA	11 27 00	〃	2SA1127 (R,S,T)	〃			
TR614	iC	23 20 10	〃	2SC2320 (E,F)	〃	Inter-changeable		
〃	iC	26 34 00	〃	2SC2634 (R,S,T)	〃			
◆ TR615 ~ 618	iB	05 98 00	〃	2SB698 (E,F)	〃			
D601 ~ 608	iF	00 00 40	Diode	1S1555	ダイオード	Inter-changeable		
〃	iF	00 06 70	〃	1S2473	〃			
◆ IC601	iG	07 51 00	IC	LA6402A-108	IC			
◆ IC602	iG	07 52 00	〃	MSL9350RS	〃			
◆	AA	61 35 70	Holder, C. Board		基板ホルダー			
	CB	60 56 20	Plastic Rivet		プラスチックリベット			
◆	NA	08 01 60	**Operation Circuit Board**		オペレーションシート			
D701 D702	iF	00 23 70	LED	SLR-34GC GR	LED			
D703	iF	00 23 80	〃	SLR-34URC RE	〃			
D704	iF	00 23 70	〃	SLR-34GC GR	〃			
D705	iF	00 23 80	〃	SLR-34URC RE	〃			
SW701 ~ 708	KA	90 30 10	Switch		タクトスイッチ			
	CB	60 56 20	Plastic Rivet		プラスチックリベット			
◆	CB	61 36 50	Holder		ホルダー			
◆	NA	07 87 50	**Relay Circuit Board**		中継シート			
C901	UK	13 72 20	Electrolytic Cap.	22μF 16V	BPコン			
R901 ~ 903	HJ	35 54 70	Carbon Resistor	470Ω RD25S	カーボン抵抗			
D901 D902	iH	00 05 90	Diode	10E-1	ダイオード			
◆ TR901 TR902	iK	00 03 80	Photo Reflector	NJL5141EA	フォトリフレクター			
SW901 ~ 903	KA	60 04 70	Switch	MSW-S200CU	スケルトンスイッチ			
	LB	91 10 30	Short Plug	3P L-Type	ショートプラグ			
	LB	91 10 40	〃	4P L-Type	〃			
◆	LB	91 10 80	〃	8P L-Type	〃			
◆	CB	60 95 10	Holder		ファイバーホルダー			

◆ New Parts (新規部品)

Ref. No.	Part No.	Description			部品名	Remarks	Common Model	Markets
	JC 00 08 10	D.D Motor	MC-950S		D.D モーター			
C1 C2	UW 96 54 70	Electrolytic Cap.	0.47μF	50V	ケミコン			
C3	UW 86 61 00	〃	1μF	50V	〃			
C4	UW 96 54 70	〃	0.47μF	50V	〃			
C5	UW 83 73 30	〃	33μF	16V	〃			
C6	FD 21 24 70	Polystyrene Film Cap.	470pF		スチコン			
C7	FD 15 34 70	〃	0.0047μF		〃			
C8	FT 17 42 20	Polypropylene Film Cap.	0.022μF		ポリプロピレンフィルムコン			
C9 C10	FD 15 42 20	Polystyrene Film Cap.	0.022μF		スチコン			
C11	FH 61 21 50	Ceramic Cap.	150pF		セラコン			
C12	FG 74 42 20	〃	0.022μF		〃			
C13	UW 96 54 70	Electrolytic Cap.	0.47μF	50V	ケミコン			
R1	HK 15 32 70	Carbon Resistor	2.7Ω	FCR25	カーボン抵抗			
R2	HJ 35 51 80	〃	180Ω	RD25	〃			
R3	HJ 35 83 30	〃	3.3kΩ	〃	〃			
R4	HJ 35 51 00	〃	100Ω	〃	〃			
R6	HJ 35 53 30	〃	330Ω	〃	〃			
R7	HJ 35 73 30	〃	33kΩ	〃	〃			
R8	HJ 35 51 80	〃	180Ω	〃	〃			
R10	HJ 35 62 20	〃	2.2kΩ	〃	〃			
R11	HJ 35 81 80	〃	180kΩ	〃	〃			
R12	HJ 35 83 30	〃	330kΩ	〃	〃			
R13	HJ 35 81 00	〃	100kΩ	〃	〃			
R14	HJ 35 64 70	〃	4.7kΩ	〃	〃			
R15	HJ 35 68 80	〃	6.8kΩ	〃	〃			
R16	HJ 35 91 00	〃	1MΩ	〃	〃			
R17	HJ 35 86 80	〃	680kΩ	〃	〃			
R18	HJ 35 71 00	〃	10kΩ	〃	〃			
R19	HJ 35 61 20	〃	1.2kΩ	〃	〃			
R20	HU 57 78 20	Metal Film Resistor	82kΩ		金属被膜抵抗			
R30 R31	HJ 35 61 00	Carbon Resistor	1kΩ	RD25S	カーボン抵抗			
R32	HJ 35 61 80	〃	6.8kΩ	〃	〃			
R33	HJ 35 71 50	〃	15kΩ	〃	〃			
R34	HJ 35 84 70	〃	470kΩ	〃	〃			
VR1	HT 41 01 40	Variable Resistor	47kΩ		半固定抵抗			
TR1 TR2	iX 60 06 80	Transistor	2SA952	(K,L)	トランジスタ			
TR3 TR4	iC 99 01 50	〃	2SC2001	(K,L)	〃			
TR5 TR6	iC 09 45 00	〃	2SC945	(P,Q)	〃			
TR7 TR8	iA 07 33 50	〃	2SA733	(P,Q)	〃			
TR9	iA 07 33 50	〃	2SA733	(P,K)	〃			
TR10	iC 09 45 90	〃	2SC945	(P,K)	〃			
TR11	iA 07 33 50	〃	2SA733	(P,K)	〃			
D1 ~4	iF 99 04 00	Diode	1SS53		ダイオード			
IC1	iX 60 04 80	IC	VC1209		IC			

※ New Parts (新規部品)