ORDER NO. HAD8603405C0
A2

Service Manual

Cassette Deck

RS-T80R

dbx*/Dolby B-C NR, Auto-Reverse
Double Cassette Deck
with Series Recording Function

** DOLBY B•C NR

Color

(K)...Black Type

Color	Areas
(K)	[M].....U.S.A.
(K)	[MC].....Canada.
(K)	[E].....All European areas except United Kingdom.
(K)	[EK].....United Kingdom.
(K)	[EG].....F.R. Germany.
(K)	[EH].....Holland.
(K)	[XA].....Asia, Latin America, Middle Near East and Africa.
(K)	[XL].....Australia.
(K)	[PA].....Far East PX.
(K)	[PE].....European Military.
(K)	[XB].....Saudi Arabia.

RS-B49R MECHANISM SERIES

SPECIFICATIONS

Deck system Stereo cassette deck
Track system 4-track, 2-channel
Heads
(TAPE 1) REC/PLAY MX head
(TAPE 2) REC/PLAY MX head
Erasing Double-gap ferrite head
Motors
(TAPE 1) Capstan/reel table drive
2 speed electronically controlled DC motor
(TAPE 2) Capstan/reel table drive
2 speed electronically controlled DC motor
Recording system AC bias
Bias frequency 90 kHz
Erasing system AC erase
Tape speed 4.8cm/sec. ($1^7/_8$ ips.)
Frequency response (w/o Dolby N.R.)
METAL 30 Hz~18 kHz
40 Hz~17 kHz (DIN)
50 Hz~16 kHz (±3 dB)
CrO_2 30 Hz~17 kHz
40 Hz~16 kHz (DIN)
50 Hz~15 kHz (±3 dB)
NORMAL 30 Hz~16 kHz
40 Hz~15 kHz (DIN)
50 Hz~14 kHz (±3 dB)
Dynamic Range (with dbx in) 110 dB (1 kHz)
Max. Input level improvement (with dbx in) 10 dB
S/N (signal level = max recording level, CrO_2 type tape)
dbx in 92 dB (A weighted)
Dolby C NR in 75 dB (CCIR)
Dolby B NR in 67 dB (CCIR)
NR out 57 dB (A weighted)
Wow and flutter 0.08% (WRMS)
±0.18% (DIN)
Fast Forward and Rewind Time
Approx. 100 seconds with C-60 cassette tape
Input sensitivity and impedance
LINE 60 mV/47 kΩ
Output voltage and impedance
LINE 400 mV/1.5 kΩ
HEADPHONES 80 mV/8 Ω
Power consumption 25W
Power supply
[M] [MC].....AC 120V, 60Hz
[E] [EH] [EG].....AC 220V, 50Hz/60Hz
[Other].....AC 110V/127V/220V/240V, 50Hz/60Hz
Preset power voltage 240V
Dimensions (W×H×D) 430×110.7×275mm
(16-15/16"×4-11/32"×10-13/16")
Weight 5.4kg
(11.7lb.)

Note:
Specifications are subject to change without notice.
Weight and dimensions are approximate.

* The term dbx is a registered trademark of dbx Inc.
** Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Technics

Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc.
Ave. 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

Panasonic Hawaii Inc.
91-238 Kauhi St. Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774

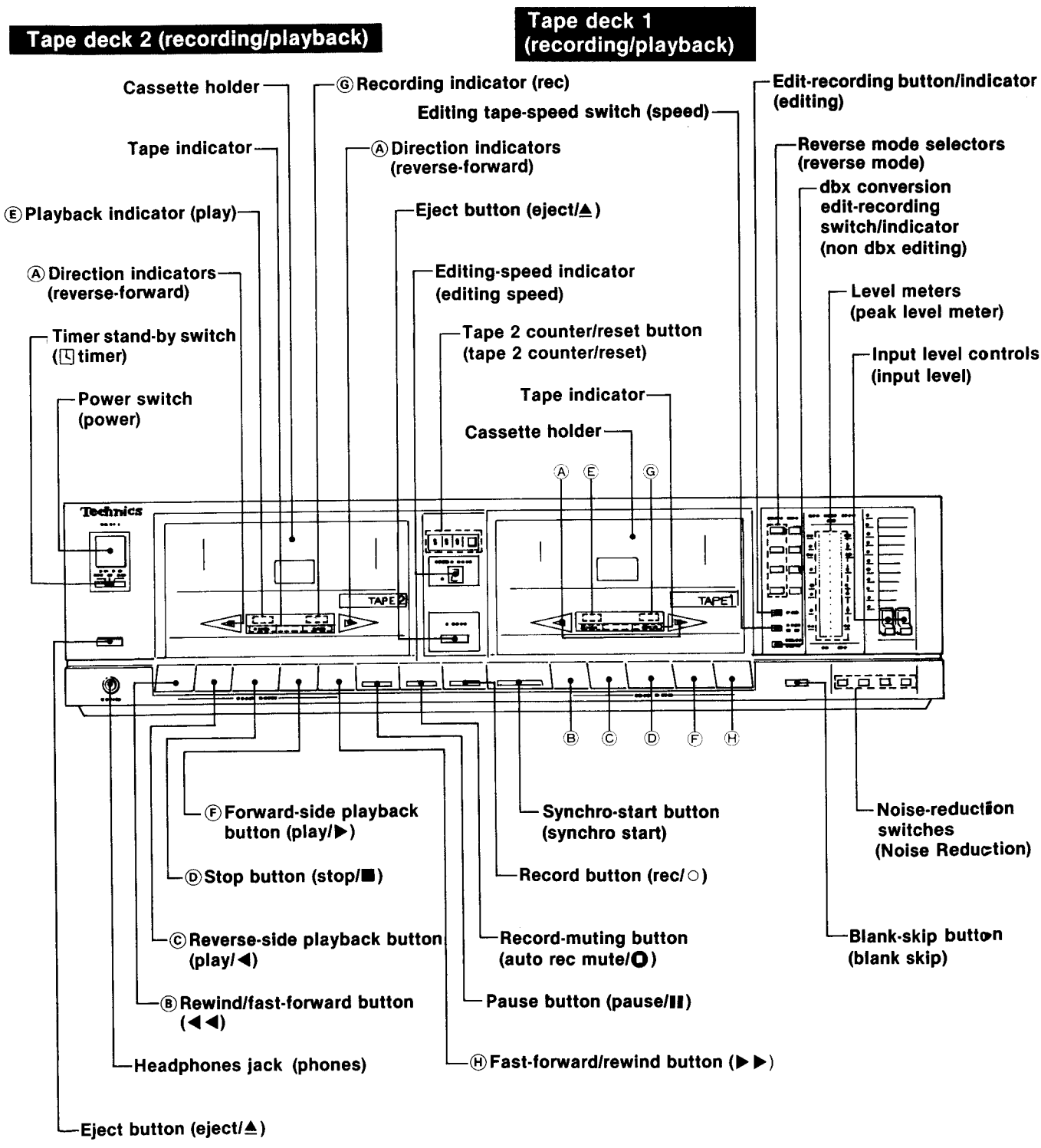
Matsushita Electric of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

Panasonic Tokyo Office
Matsushita Electric Trading Co., Ltd.
6th Floor, World Trade Center Bldg.,
No. 4-1, Hamamatsu-cho 2-Chome, Minato-ku,
Tokyo 105, Japan

■ CONTENTS

■ LOCATION OF CONTROLS



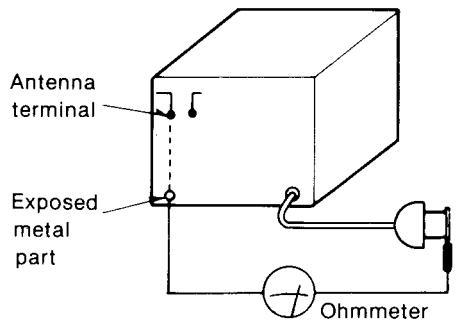
■ SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

• INSULATION RESISTANCE TEST

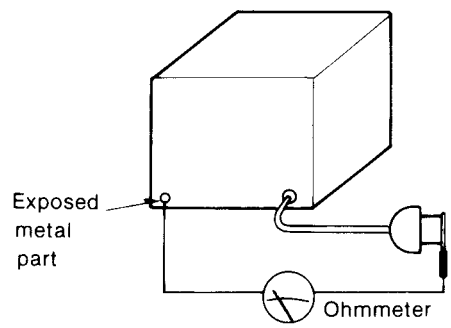
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance = 3MΩ—5.2MΩ



(Fig. B)

Resistance = Approx ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

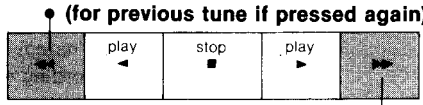
■ OPERATION

Auto music select

This feature is used to locate the beginning of the current or following song.

During playback of "front" side of tape

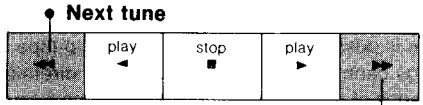
For tune now playing
• (for previous tune if pressed again)



Next tune •

During playback of "reverse" side of tape

• Next tune



For tune now playing •
(for previous tune if pressed again)

• To locate the beginning precvious or subsequent songs, repeat the auto-music select mode as necessary.

• The auto music select function can not be switched from tape deck 1 to tape deck 2 or rice-versa.

• During automatic reverse mode (⇄) or series mode (⇉) playback, if no music is located on the forward or reverse side, the tape will automatically stop when it reaches the end of the reverse side. (e.g. it does not automatically scan the other tape.)

Notes:

The following describes those instances in which the tape that is fast-forwarded or rewound does not stop at the beginning, or stops in the middle, of a song:

• When the music is very soft, e.g., classical music which is mainly pianissimo

• When there is sustained silence of 4 seconds or more within the recording (e.g., of a conversation or a lecture)

• When the interval between songs is very short or contains audible noise

• Tapes recorded using fade-in or fade-out techniques.

• Fade-in and fade-out

To start a recording with the volume level at minimum ("0" and gradually increase to the ordinary recording level is called the "fade-in" technique. Conversely, ending a recording by gradually reducing the volume level to minimum is called the "fade-out technique.

• Music select system manufactured under license of Starr S.A., Bruxelles, Belgium.

Record muting

This is a feature which makes it possible to make a non-recorded portion on the tape while a recording is in progress.

- To avoid recording unwanted commercial annoucements and to avoid recording the noise produced when the phono needle descends to a disc.

During recording···

To make the non-recorded portion of about 4 seconds between tunes:

Press once.

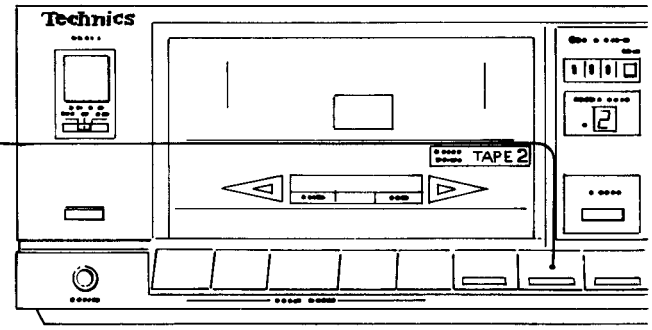
(After 4 seconds, the unit will automatically change to the recording stand-by mode.)

To make a non-recorded portion of more than 4 seconds:

Press for more than 4 seconds.

(The unit will automatically change to the recording stand-by mode when the button is released.)

- A recording can be started immediately, even during the record-muting operation, by pressing the playback button for the side to be recorded.



Edit-Recording

Edit-recording is the recording by tape deck 2 of the signals sent from tape deck 1.

1 Timer start switch: "off"

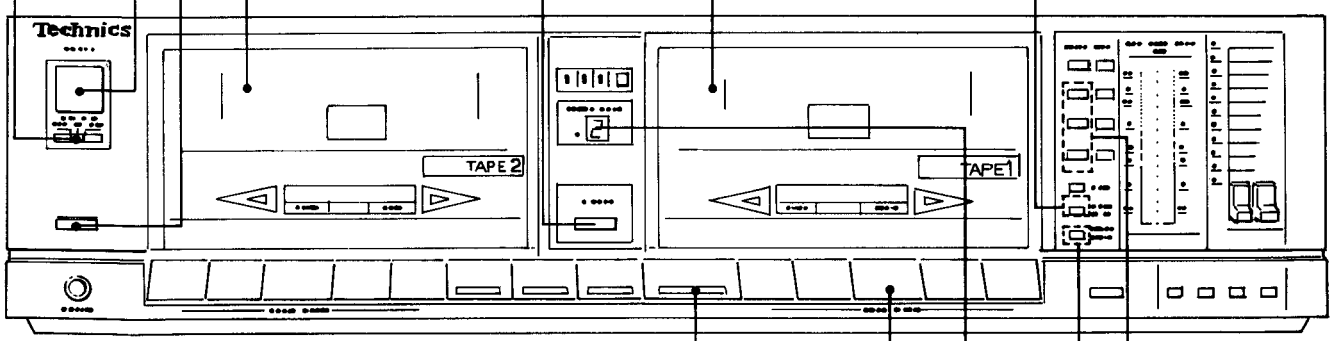
2 Power: "on" (■→ ▬)

3 Press, then insert a tape to be used recording.

4 Press, then insert a tape to be playback.

5 editing: Press

(The indication lamp will illuminate.)



8 Press.

(TAPE 1 playback and TAPE 2 recording will then begin.)

6 Select the desired reverse mode.

7 Press.

- X1 (indicator not illuminated)
  For marking a edit-recording enables you to monitor recordings.
- X2 (indicator will illuminate)
  For making high, (double) speed edit-recordings.

9 Press.

(Tape deck 1 will stop; tape deck 2 will change to the rec-pause mode after an unrecorded space of about 4 seconds has been made automatically.)

Notes:

- A edit-recording employing one of the noise-reduction systems cannot be made (except dbx-conversion edit-recordings).
  Thus, even if a noise-reduction switch is pressed while the editing switch is being pressed and held (while the indicator is illuminated), there will be no effect upon the edit-recording.
  When a edit-recording is finished and the recorded tape is played back, be sure to press the edit-recording switch to cancel the mode, and then press the noise-reduction switch.
- Edit-recording is possible only from tape deck 1 to tape deck 2. Edit-recordings cannot be made in the opposite direction.
- To avoid changes of the tone quality, use the same type of tape in tape deck 2 as the type to be played back in tape deck 1.
- Check to make sure that the correct sides of the tapes to be played or recorded are indicated by the proper direction indicator.
  To change the direction (forward or reverse), press the playback button for that direction while pressing the stop button.

■ Synchro-start function

The playback from tape deck 1 and the recording by tape deck 2 can be started simultaneously, thus assuring no loss of recorded material, by simply pressing the synchro-start button.

■ Synchro-stop function

- To stop tape deck 1 and tape deck 2 simultaneously, press the stop button on tape deck 2.
- If, during edit-recording, the tape in tape deck 1 reaches its end before the tape in tape deck 2, tape deck 2 will change to the recording stand-by (pause) mode.
- If, during edit-recording, the tape in tape deck 2 reaches its end before the tape in tape deck 1, tape deck 1 will stop.

■ Edit-recording stand-by function

If, while the edit-recording indicator is illuminated, the music-select system (see page 3) is used at tape deck 1, it will stop after the tune is located.

Monitoring normal speed edit-recordings

- **Tapes recorded by the dbx system**

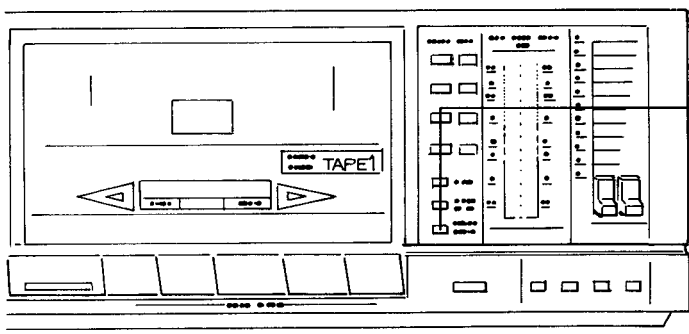
Press the noise-reduction switch marked "dbx".
(The correct monitored sound can't be heard if any other button is pressed.)

- **Tapes recorded by the Dolby type B or type C noise-reduction system**

Use the volume control, etc. of the amplifier to make adjustment.
(The noise-reduction switches do not function.)

How to make dbx-conversion edit-recordings

Add the following to the steps for edit-recording. (See page 4.)



Non-dbx editing: Press.
(The indication lamp will illuminate.)

Example
This is convenient for editing a tape which was recorded through the dbx noise-reduction system to another tape for use in a "headphones stereo" unit or for a car stereo system.

■ Cancellation of the dbx-conversion edit-recording mode

Press the dbx-conversion edit-recording switch once again and then check to be sure that the indicator is not illuminated.

- When the edit-recording switch is pressed once again, the indicator illumination will stop and the edit-recording mode will also be cancelled.
- When an edited tape is played back, be sure to cancel the edit-recording mode and then press the noise-reduction switch marked "out".

Note:
dbx-conversion edit-recordings cannot be made at the double speed. Also, you cannot change directly from the double speed edit-recording mode to the dbx-conversion edit-recording mode. First press the edit-recording switch to select "X1" (editng-speed indicator not illuminate) and then press the dbx conversion switch.

■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1	How to remove the cabinet
Procedure 1	• Remove the 5 screws (❶~❺).

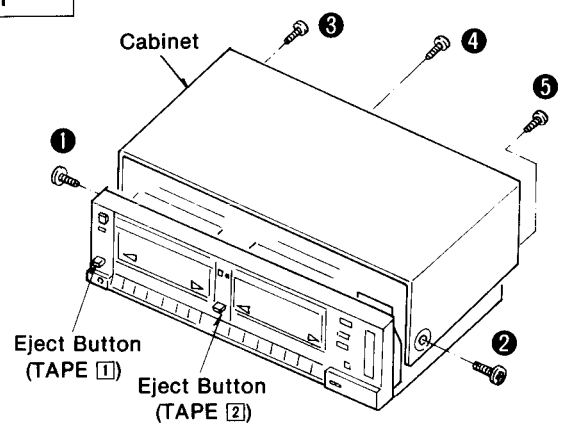


Fig. 1

Ref. No. 2	How to remove the front panel
Procedure 1→2	• Remove the 4 screws (❶~❹).

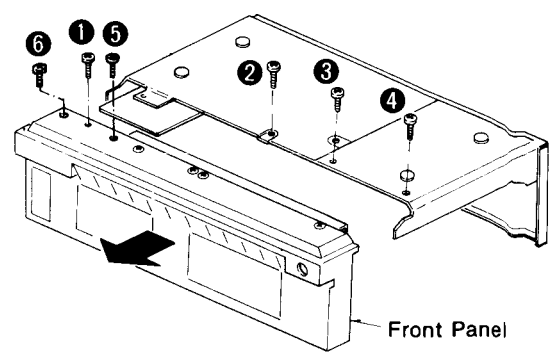


Fig. 2

Ref. No. 3	How to remove the direction P.C.B.
Procedure 3	• Push the eject button (see fig. 1). • Remove the cassette lid. • Remove the one screw (❶).

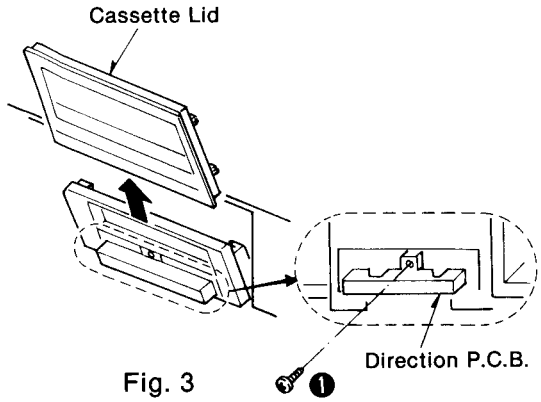


Fig. 3

Ref. No. 5	How to remove the bottom plate ass'y
Procedure 5	• Remove the 5 screws (❶~❺). • Remove the one screws (❹ of fig. 4).

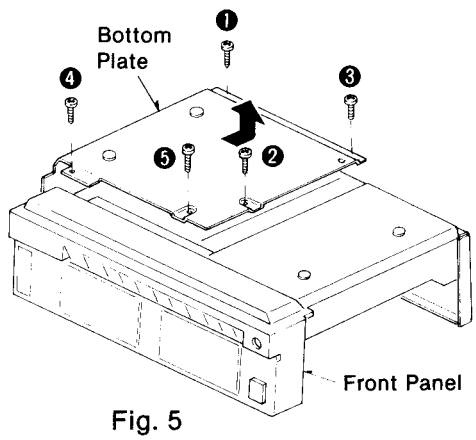


Fig. 5

Ref. No. 4	How to remove the main P.C.B.
Procedure 1→2→4	• Remove the 4 screws (❶~❹). • Pull the main P.C.B. in the direction of the arrow so that the line jack is removed from the back chassis, and then remove the main P.C.B. upward.

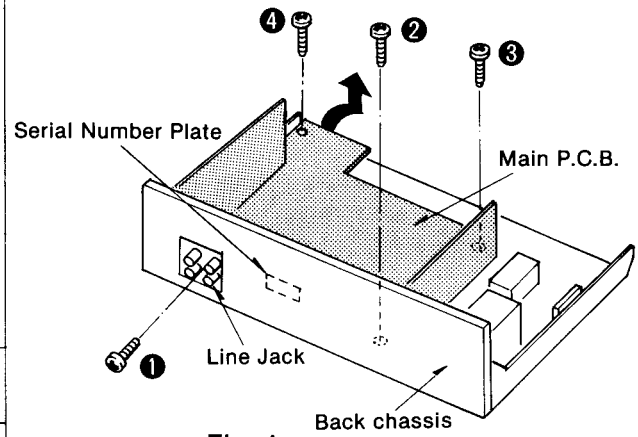


Fig. 4

Ref. No. 6	How to remove the LED P.C.B.
Procedure 1→6	• Remove the counter belt. • Remove the one screw (❶).

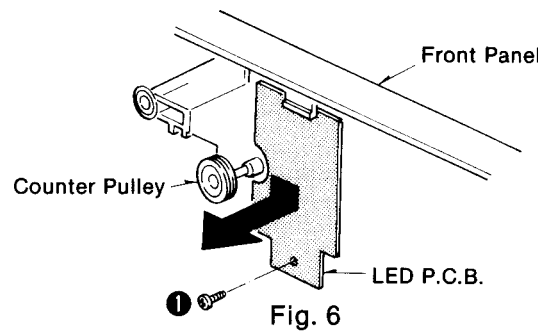


Fig. 6

Ref. No. 7	How to remove the FL meter P.C.B., volume P.C.B., mode SW P.C.B. and NR SW P.C.B.
Procedure 1→2→7	• Remove the 2 screws (❺, ❻) (see fig. 2). • Remove the 2 screws (❶, ❷) (see fig. 7), and then remove the FL meter angle ass'y from the front panel. • Remove the one screw (❸) (see fig. 7).

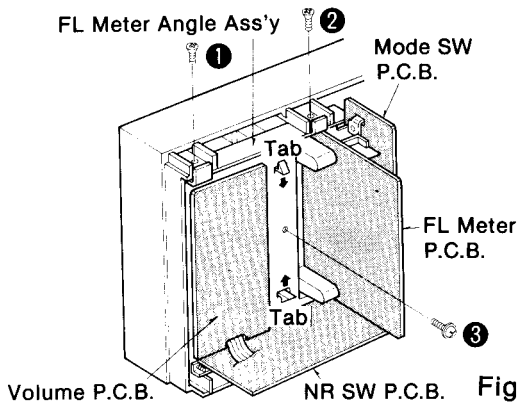


Fig. 7

- Remove the 2 tabs aside (see fig. 7), and then pull out the FL meter P.C.B. as shown in fig. 8.
- Pull out the mode button.
- Remove the one screw (❶), and then remove the mode SW P.C.B.
- Pull out the NR button, and the BS button.
- Remove the 2 screws (❷, ❸), and then remove the NR SW P.C.B.
- Remove the 2 screws (❹, ❺), and then remove the volume P.C.B.

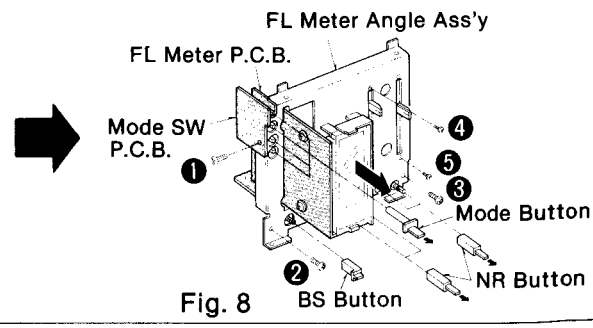


Fig. 8

Ref. No. 8	How to remove the mechanism unit
Procedure 1 → 2 → 8	• Push the eject button (see fig. 1). • Remove the counter belt (mechanism only of Tape 2). • Remove the 4 screws (❶~❹).

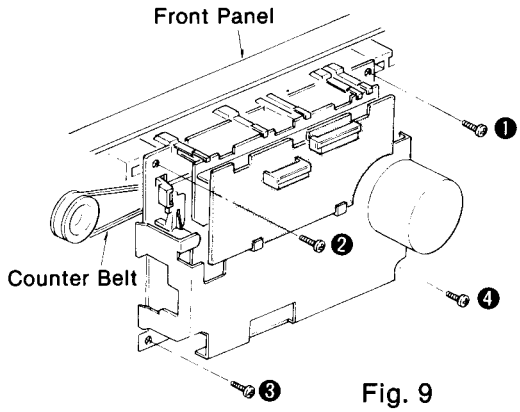


Fig. 9

Note)
Remove connectors [RP1], [T1], [E1] and [D1] (mechanism of tape 1), connectors [Y1] and [Z1] (Direction P.C.B. of tape 1), connectors [RP2], [T2], [E2] and [D2] (mechanism of tape 2) and connectors [Y2] and [Z2] (Direction P.C.B of tape 2).
When assembling, see the blue markings provided on tops or sides of connectors [RP1], [T1], [E1] and [D1] and connectors [Y1] and [Z1].

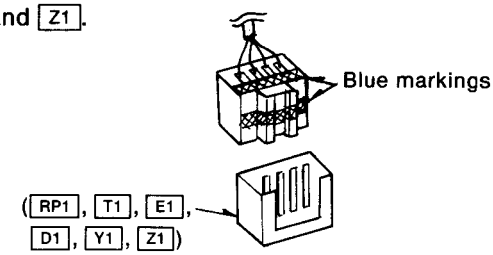


Fig. 10

Ref. No. 9	How to remove the operation P.C.B.
Procedure 1 → 2 → 8 → 9	• Remove the 4 screws (❶~❹). • Remove the damper gear ass'y. • Remove the cassette holder in the direction of arrow.

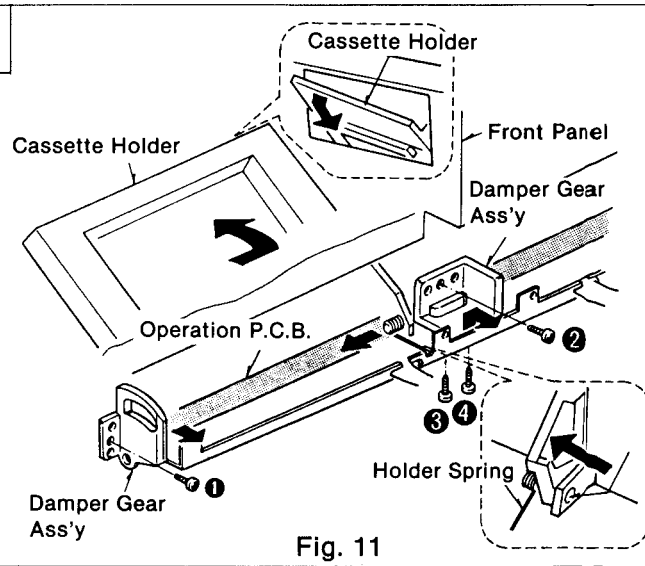


Fig. 11

Ref. No. 10	How to remove the operation button
Procedure 1 → 2 → 8 → 9 → 10	• Remove the 2 screws (❶, ❷).

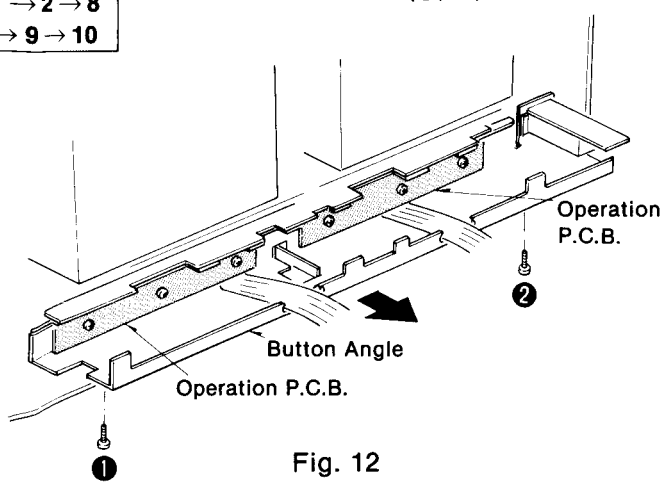


Fig. 12

• Remove the 5 screws (❶~❺).

Note)
Remove the operation P.C.B., and then slowly remove the operation button upward holding the middle.
Take care not to give excess forces to the board.

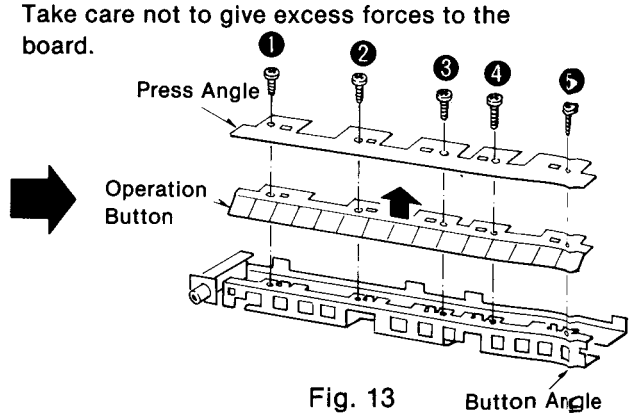


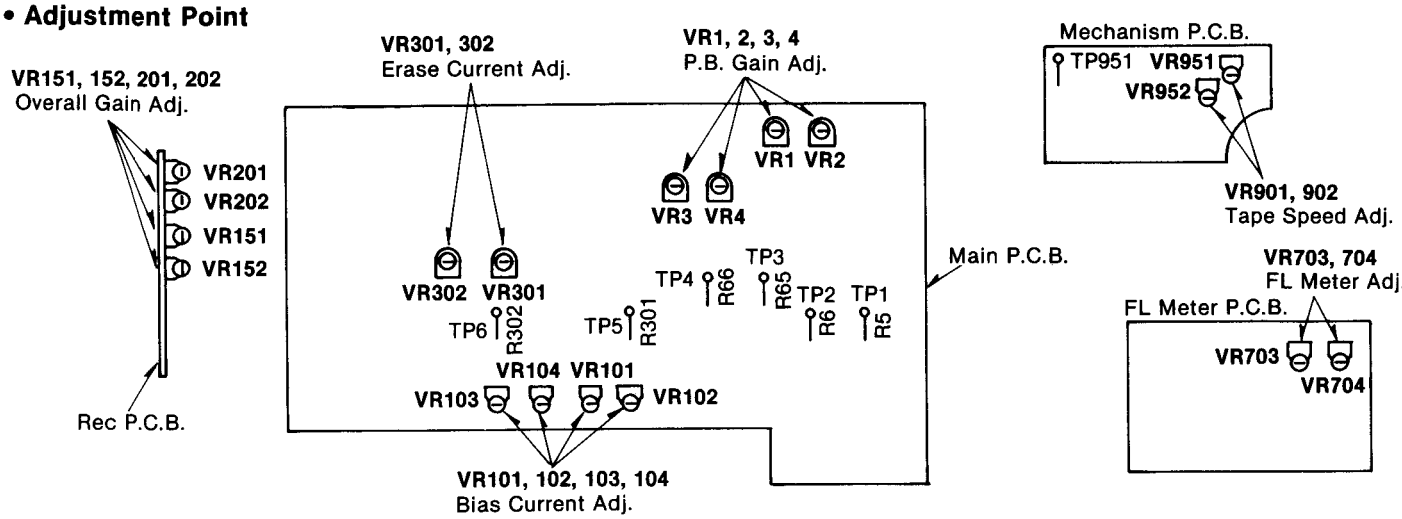
Fig. 13

* Serial No. Indication

• The serial number plate of this product is attached to the back chassis (shown in fig. 4).

■ MEASUREMENT AND ADJUSTMENT METHODES

• Adjustment Point



Measurement Condition

- Input level controls; Maximum
- Timer start switch; Off
- Noise reduction select switch; Out
- Editing switch; Off
- Editing tape speed switch; X1
- Make sure heads are clean
- Make sure capstan and pressure roller are clean.
- Judgeable room temperature 20±5°C (68±9°F)

Measuring instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator
- ATT (Attenuator)
- DC voltmeter
- Resistor (600Ω)

Test tape

- Head azimuth adjustment (8kHz, −20dB); QZZCFM
- Tape speed adjustment (3kHz, −10dB); QZZCWAT
- Playback frequency responce (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, −20dB); QZZCFM
- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
  - Normal reference blank tape; QZZCRA
  - CrO_2 reference blank tape; QZZCRX
  - Metal reference blank tape; QZZCRZ

Head azimuth adjustment

1. Test equipment connection is shown in Fig. 1.
2. Playback the azimuth adjusted part (8kHz, −20dB) of the test tape (QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximized. (When the adjusting positions are different with L-CH and R-CH, find a position where are the outputs of L-CH and R-CH are balanced, and then make the adjustment.)
3. At the same time, draw a lissajous waveform and eliminate phase deflection.
4. Perform the same adjustment in reverse play mode.

Forward and reverse rotation level difference check

5. Playback the playback gain adjusted part (315Hz, 0dB) of the test tape (QZZCFM), and then check that the forward and reverse rotation level difference is with in 1dB.
6. After the adjustment apply screw-lock to the angle adjusting screw.

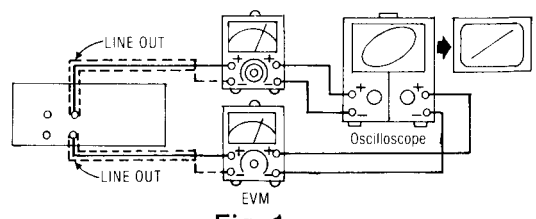


Fig. 1

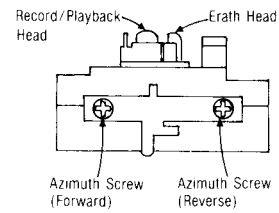


Fig. 2

Tape speed adjustment

Normal speed

1. Test equipment connection is shown in Fig. 3.
2. Playback the middle part of the test tape (QZZCWAT).
3. Adjust VR952 so that the output is within the standard.

High speed

4. Set the editing speed switch to "X2" and ground the TP951.
5. Playback the middle part of the test tape (QZZCWAT).
6. Adjust VR951 so that the output is within the standard.

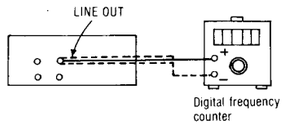


Fig. 3

Standard value: 3000±10Hz (Normal) 6000Hz±20Hz (High)

Playback frequency response

1. Test equipment connection is shown in Fig. 4.
2. Playback the playback frequency response part (315Hz, 12.5kHz~63Hz, −20dB) of the test tape (QZZCFM).
3. Check that the frequency is within the range shown in Fig. 5 for both L-CH and R-CH.

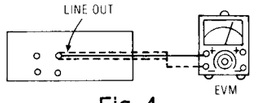


Fig. 4

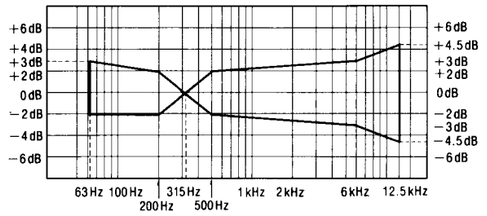


Fig. 5

Playback gain adjustment

1. Test equipment connection is shown in Fig. 4.
2. Playback the playback gain adjusted part (315Hz, 0dB) of the test tape (QZZCFM).
3. Adjust Tape 1: VR1 (L-CH) {VR2 (R-CH)} and Tape 2: VR3 (L-CH) {VR4 (R-CH)} so that the output is within the standard.

Standard value: 0.4±0.02V

Erase current adjustment

1. Test equipment connection is shown in Fig. 6.
2. Insert the metal tape.
3. Press the record and pause buttons.
4. Adjust Tape 1: VR301 and Tape 2: VR302 so that the output between Tape 1: TP5 and Tape 2: TP6 and ground is within the standard.

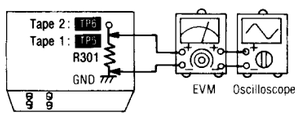


Fig. 6

$$\text{Erase current (A)} = \frac{\text{Voltage across resistor R301}}{1\,(\Omega)}$$

Standard value: 185±5mA (Metal) (185±5mV)

Bias current adjustment

1. Test equipment connection is shown in Fig. 7.
2. Insert the normal tape.
3. Press the record and pause buttons.
4. Minimize the input level control and adjust Tape 1: VR101 (L-CH) and Tape 2: VR103 (L-CH) {Tape 1: VR102 (R-CH) and Tape 2: VR104 (R-CH)} so that the output between Tape 1: TP1 (L-CH) and Tape 2: TP3 (L-CH) {Tape 1: TP2 (R-CH) and Tape 2: TP4 (R-CH)} and ground is within the standard.
5. After that check in the same way as for CrO_2 and metal tape.

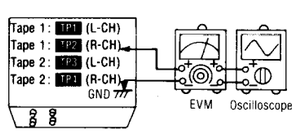


Fig. 7

Reference value: 600μA (Normal) (6mV)
800μA (CrO_2) (8mV)
1200μA (Metal) (12mV)

Overall frequency response

1. Test equipment connection is shown in Fig. 8, and ground the base of transistor Q41 (L-CH) {Q42 (R-CH)}.
2. Set a normal blank tape (QZZCRA) and record by applying signal (50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz, 10kHz, and 12.5kHz), 20dB attenuated from the reference input level signal (1kHz, −24dB).
3. Playback the signal recorded in step 2, and check that the level of each output frequency is within the range shown in Fig. 9 in comparison with the reference frequency (1kHz).
4. If it is not within the standard range, adjust the bias current by Tape 1: VR101 (L-CH) and Tape 2: VR103 (L-CH) {Tape 1: VR102 (R-CH) and Tape 2: VR104 (R-CH)} so that the frequency level is within the standard.
   - Level up in high frequency range.....Increase the bias current.
   - Level down in high frequency range...Decrease the bias current.
5. After that increase the signal recorded on CrO_2 blank tape (QZZCRX) and metal blank tape (QZZCRZ) up to 15kHz and adjust in the same way as mentioned above and check that the frequency level is within the range shown in Fig. 10.

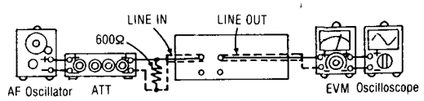


Fig. 8

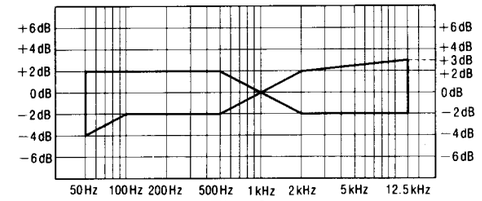


Fig. 9

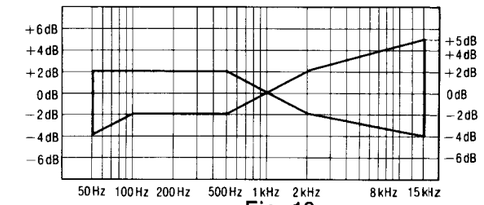


Fig. 10

Overall gain adjustment

1. Test equipment connection is shown in Fig. 8, and ground the base of transistor Q41 (L-CH) {Q42 (R-CH)}.
2. Set a normal blank tape (QZZCRA) and apply the reference input level signal (1kHz, −24dB) in record pause mode.
3. Adjust the output 0.4V by attenuator and then record.
4. Playback the signal recorded in step 3, and check that the output is within the standard.
5. If it is not within the standard, adjust Tape 1: VR151 (L-CH) and Tape 2: VR201 (L-CH) {Tape 1: VR152 (R-CH) and Tape 2: VR202 (R-CH)} and repeat the step (2), (3) and (4) until the output is within the standard.

Standard value: 0.4V±0.5dB (0.02V)

Fluorescent meter adjustment

1. Test equipment connection is shown in Fig. 8, and ground the base of transistor Q41 (L-CH) {Q42 (R-CH)}.
2. Set a normal blank tape (QZZCRA) and apply the reference input level signal (1kHz, −24dB) in record pause mode.
3. Adjust the output to 0.4V by attenuator.
4. Adjust VR703 (L-CH) {VR704 (R-CH)} so that the 0dB segment part is half lighted. (See Fig. 11.)

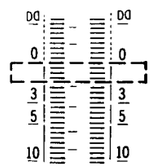


Fig. 11

Dolby NR circuit

1. Test equipment connection is shown in Fig. 2.
2. Set a normal tape and apply 1kHz signal in record pause mode.
3. Adjust by attenuator so that the output between terminal 7 of IC401 (L-CH) {IC402 (R-CH)} and ground is 12.3mV.

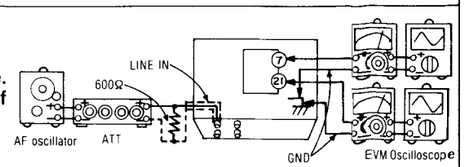


Fig. 12

— Dolby B (Encode characteristic) —

4. Set NR switch to "Dolby B" and change the input signal to 1kHz, 5kHz.
5. Check that the output between terminal 21 of IC401 (L-CH) {IC402 (R-CH)} and ground change as specified from the level in NR out mode.

Standard value: 6± 2.5dB (1kHz), 8± 2.5dB (5kHz)

— Dolby C (Encode characteristic) —

6. Set NR switch to "Dolby C" and change the input signal to 1kHz, 5kHz.
7. Check that the output between terminal 21 of IC401 (L-CH) {IC402 (R-CH)} and ground change as specified from the level in NR out mode.

Standard value: 11.5± 2.5dB (1kHz), 8.5± 2.5dB (5kHz)

■ RESISTORS AND CAPACITORS

Notes:
- Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
- The unit of resistance is Ω (ohm). K=1000Ω, M=1000kΩ
- The unit of capacitance is μF (microfarad). P=10⁻⁶μF.
- Bracketed indications in Ref. columns specify the area. Parts without these indications can be used for all area.

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W	G : ±2%
ERO : Film	12 : 1/2W	J : ±5%
ERG : Metal Oxide	25 : 1/4W	
ERC : Solid	1 : 1W	
	2 : 2W	
	S1 : 1/2W	
	S2 : 1/4W	

ERD10TLJ□□□ → Chip type carbon
ERO10MKG□□□ → Chip type metal film

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
ECEA : Electrolytic	0J : 6.3V	1H : 50V	CJ : ±0.25pF
ECCD : Ceramic	1A : 10V	2H : 500V	J : ±5%
ECKD : Ceramic	1C : 16V	1 : 100V	K : +10%
ECQM : Polyester	1E : 25V	KC : 400V	Z : +80%, −20%
ECQP : Polyester	1H : 50V		Y : ±22%
ECET : Electrolytic	1J : 63V		
ECEA...N : Non-polar Electrolytic	1V : 35V		
	25 : 25V		
	56 : 56V		

• RESISTORS

Ref. No.	Part No.	Value
R1, 2	ERDS2TJ332	3.3k
R3	ERDS2TJ561	560
R4	ERDS2TJ223	22k
R5, 6	ERD25FJ100	10
R7	ERDS2TJ103	10k
R8	ERDS2TJ221	220
R9, 10	ERDS2TJ102	1k
R11, 12	ERDS2TJ274	270k
R13, 14	ERDS2TJ101	100
R15, 16	ERDS2TJ101	100
R17, 18	ERDS2TJ224	220k
R19, 20	ERDS2TJ153	15k
R21, 22	ERDS2TJ123	12k
R23, 24	ERDS2TJ103	10k
R25, 26	ERDS2TJ563	56k
R27, 28	ERDS2TJ103	10k
R29, 30	ERDS25J103	10k
R31, 32	ERDS2TJ103	10k
R33, 34	ERDS2TJ103	10k
R35, 36	ERDS2TJ472	4.7k
R37, 38	ERDS2TJ472	4.7k
R39, 40	ERDS2TJ393	39k
R41	ERD25FJ103	10k
R43, 44	ERDS2TJ105	1M
R45, 46	ERDS2TJ183	18k
R47	ERDS2TJ562	5.6k
R49, 50	ERDS2TJ393	39k
R51, 52	ERDS2TJ622	6.2k
R53	ERDS2TJ103	10k
R55, 56	ERDS2TJ223	22k
R57, 58	ERDS2TJ474	470k
R59	ERDS25J472	4.7k
R61, 62	ERDS2TJ332	3.3k
R63	ERDS2TJ561	560
R64	ERDS2TJ223	22k
R65, 66	ERD25FJ100	10
R67	ERDS2TJ103	10k
R68	ERDS2TJ221	220
R69, 70	ERDS2TJ102	1k
R71, 72	ERDS2TJ274	270k
R73, 74	ERDS2TJ101	100
R75, 76	ERDS2TJ101	100
R77, 78	ERDS2TJ224	220k
R79, 80	ERDS2TJ103	10k
R81, 82	ERDS2TJ153	15k
R83, 84	ERDS2TJ103	10k
R85, 86	ERDS2TJ103	10k
R87, 88	ERDS2TJ563	56k
R91, 92	ERD25FJ472	4.7k
R93, 94	ERD25FJ472	4.7k
R95, 96	ERDS2TJ393	39k
R97	ERDS2TJ103	10k
R99	ERDS2TJ102	1k
R100	ERDS2TJ332	3.3k
R101	ERDS2TJ470	47
R102	ERDS2TJ683	68k
R103	ERDS2TJ473	47k
R104	ERDS2TJ103	10k
R105	ERDS2TJ102	1k
R106	ERDS2TJ103	10k
R107, 108	ERDS2TJ103	10k
R109, 110	ERDS2TJ333	33k
R111	ERDS2TJ124	120k
R112	ERDS2TJ472	4.7k
R113	ERD25FJ103	10k
R121, 122	ERDS2TJ102	1k
R123, 124	ERDS2TJ222	2.2k
R127, 128	ERDS2TJ563	56k
R129, 130	ERDS2TJ152	1.5k
R131, 132	ERDS2TJ474	470k
R135, 136	ERDS2TJ333	33k
R137, 138	ERDS2TJ273	27k
R139, 140	ERDS2TJ124	120k
R141, 142	ERDS2TJ121	120
R143, 144	ERDS2TJ680	68
R148	ERD25TJ104	100k
R149, 150	ERD25TJ473	47k
R151, 152	ERDS2TJ272	2.7k
R153, 154	ERDS2TJ182	1.8k
R155, 156	ERDS2TJ272	2.7k
R157, 158	ERDS2TJ272	2.7k
R159, 160	ERDS2TJ470	47
R161, 162	ERDS2TJ822	8.2k
R163, 164	ERDS2TJ102	1k
R165, 166	ERDS2TJ103	10k
R167, 168	ERDS2TJ272	2.7k
R169, 170	ERDS2TJ123	12k
R171	ERDS2TJ472	4.7k
R172	ERDS2TJ103	10k
R173	ERDS2TJ103	10k
R175, 176	ERDS2TJ222	2.2k
R177	ERDS2TJ104	100k
R178	ERDS2TJ103	10k
R179, 180	ERDS2TJ332	3.3k
R181, 182	ERDS2TJ103	10k
R183, 184	ERDS2TJ103	10k
R189	ERDS2TJ822	8.2k
R190	ERDS2TJ103	10k
R193, 194	ERDS2TJ103	10k
R195	ERDS2TJ822	8.2k
R196	ERDS2TJ103	10k
R199, 200	ERDS2TJ103	10k
R201, 202	ERDS2TJ272	2.7k
R203, 204	ERDS2TJ182	1.8k
R205, 206	ERDS2TJ272	2.7k
R207, 208	ERDS2TJ272	2.7k
R213, 214	ERDS2TJ470	47
R215, 216	ERDS2TJ560	56
R217, 218	ERDS2TJ473	47k
R221, 222	ERDS2TJ822	8.2k
R223, 224,	ERDS2TJ102	1k
R225, 226	ERDS2TJ103	10k
R227, 228	ERDS2TJ123	12k
R231, 232	ERDS2TJ472	4.7k
R233	ERDS2TJ472	4.7k
R237, 238	ERDS2TJ104	100k
R241, 242	ERDS2TJ155	1.5M
R243, 244	ERDS2TJ155	1.5M
R245, 246	ERDS2TJ155	1.5M
R247, 248	ERDS2TJ155	1.5M
R249, 250	ERDS2TJ223	22k
R251	ERDS2TJ821	820
R252	ERDS2TJ561	560
R253, 254	ERDS2TJ472	4.7k
R255, 256	ERDS2TJ681	680
R257	ERDS2TJ122	1.2k
R258	ERDS2TJ821	820
R259	ERDS2TJ561	560
R260	ERDS2TJ472	4.7k
R261	ERDS2TJ472	4.7k
R262	ERDS2TJ681	680
R263	ERDS2TJ681	680
R264	ERDS2TJ122	1.2k
R265	ERDS2TJ472	4.7k
R271	ERDS2TJ472	4.7k
R272	ERDS2TJ473	47k
R273	ERDS2TJ473	47k
R274	ERDS2TJ103	10k
R275	ERDS2TJ182	1.8k
R276	ERDS2TJ223	22k
R277	ERD25TJ104	100k
R278	ERD25FJ222	2.2k
R280	ERDS2TJ473	47k
R281	ERDS2TJ473	47k
R282	ERDS2TJ152	1.5k
R283	ERDS2TJ223	22k
R284	ERDS2TJ103	10k
R285	ERD25FJ472	4.7k
R286	ERDS2TJ822	8.2k
R287	ERDS2TJ563	56k
R288	ERDS2TJ103	10k
R289	ERDS2TJ151	150
R290 [M] [MC] only	ERD25FJ470	47
R290 except [M] [MC]	ERD2FCG470	47
R291	ERDS2TJ272	2.7k
R292	ERDS2TJ102	1k
R293	ERDS2TJ122	1.2k
R301, 302	ERD25FJ1R0	1
R303, 304	ERD25FJ6R8	6.8
R305, 306	ERDS2TJ393	39k
R307, 308	ERDS2TJ393	39k
R309, 310	ERDS2TJ220	22
R311, 312	ERDS2TJ220	22
R315, 316	ERDS2TJ334	330k
R317, 318	ERDS2TJ151	150
R319, 320	ERDS2TJ152	1.5k
R321 [M] [MC] only	ERD25FJ470	47
R321 except [M] [MC]	ERD2FCG470	47
R323, 324	ERDS2TJ152	1.5k
R325, 326	ERDS2TJ472	4.7k
R327, 328	ERDS2TJ472	4.7k
R329, 330	ERDS2TJ472	4.7k
R331, 332 [M] [MC] only	ERDS2TJ470	47
R333, 334	ERDS2TJ271	270
R340	ERDS2TJ472	4.7k
R341	ERD25FJ103	10k
R342	ERDS2TJ473	47k
R343	ERDS2TJ332	3.3k
R345, 346	ERD25FJ103	10k
R347	ERDS2TJ222	2.2k
R348	ERDS2TJ105	1M
R351	ERDS2TJ223	22k
R352	ERDS2TJ103	10k
R353, 354	ERDS2TJ103	10k
R355	ERD25FJ122	1.2k
R356	ERD25FJ681	680
R357 [M] [MC] [PA] [PE]	ERDS2TJ103	10k
R358 [M][MC] [PA] [PE]	ERDS2TJ471	470
R359 [M] [MC] [PA] [PE]	ERDS2TJ102	1k
R360 [M] [MC] [PA] [PE]	ERDS2TJ102	1k
R360 except [M] [MC] [PA] [PE]	ERDS2TJ561	560
R361, 362	ERDS2TJ102	1k
R363, 364	ERDS2TJ105	1M
R365, 366	ERDS2TJ103	10k
R367, 368	ERDS2TJ561	560
R369, 370	ERDS2TJ122	1.2k
R371, 372	ERDS2TJ561	560
R375, 376	ERDS2TJ103	10k
R377, 378	ERDS2TJ153	15k
R379, 380	ERDS2TJ823	82k
R401, 402	ERDS2TJ242	2.4k
R403, 404	ERDS2TJ472	4.7k
R405, 406	ERDS2TJ332	3.3k
R407, 408	ERDS2TJ102	1k
R409, 410	ERDS2TJ333	33k
R411, 412	ERDS2TJ823	82k
R413, 414	ERDS2TJ102	1k
R415, 416	ERDS2TJ512	5.1k
R417, 418	ERDS2TJ683	68k
R419, 420	ERDS2TJ222	2.2k
R421, 422	ERDS2TJ823	82k
R423, 424	ERDS2TJ472	4.7k
R431, 432	ERDS2TJ822	8.2k
R433, 434	ERDS2TJ153	15k
R502	ERDS2TJ123	12k
R503, 504	ERDS2TJ102	1k
R505, 506	ERDS2TJ104	100k
R507, 508	ERDS2TJ104	100k
R510	ERDS2TJ103	10k
R511, 512	ERDS2TJ563	56k
R513, 514	ERDS2TJ223	22k
R515, 516	ERDS2TJ332	3.3k
R517, 518	ERDS2TJ563	56k
R519, 520	ERDS2TJ153	15k
R521, 522	ERDS2TJ472	4.7k
R523, 524	ERDS2TJ822	8.2k
R525, 526	ERDS2TJ102	1k
R527, 528	ERDS2TJ103	10k
R529, 530	ERDS2TJ333	33k
R531, 532	ERDS2TJ151	150
R533, 534	ERDS2TJ472	4.7k
R535, 536	ERDS2TJ153	15k
R537, 538	ERDS2TJ154	150k
R539, 540	ERDS2TJ244	240k
R541, 542	ERDS2TJ472	4.7k
R543, 544	ERDS2TJ153	15k
R545, 546	ERDS2TJ153	15k
R547	ERD25FJ102	1k
R549, 550	ERDS2TJ332	3.3k
R551, 552	ERDS2TJ104	100k
R553, 554	ERDS2TJ102	1k
R559	ERDS2TJ222	2.2k
R560	ERDS2TJ333	33k
R562	ERDS2TJ822	8.2k
R563, 564	ERDS2TJ153	15k
R565	ERDS2TJ272	2.7k
R566	ERDS2TJ104	100k
R571, 572	ERD25FJ152	1.5k
R573, 574	ERDS2TJ682	6.8k
R581	ERDS2TJ331	330
R601	ERD25FJ682	6.8k
R602	ERD25FJ562	5.6k
R603, 604	ERX1SJ2R2	2.2
R605, 606 [M] [MC] only	ERD25FJ471	470
R605, 606 except [M] [MC]	ERD25FJ331	330
R607, 608	ERD25FJ221	220
R731, 732	ERDS2TJ103	10k
R733, 734	ERDS2TJ822	8.2k
R735, 736	ERDS2TJ103	10k
R750	ERDS2TJ472	4.7k
R752	ERDS2TJ103	10k
R753, 754	ERDS2TJ103	10k
R755	ERDS2TJ474	470k
R756	ERDS2TJ223	22k
R851	ERDS2TJ681	680
R951, 952	ERDS2TJ103	10k
R953	ERDS2TJ103	10k
R954, 955	ERDS2TJ681	680
R956	ERDS2TJ681	680
R957, 958	ERDS2TJ472	4.7k
R959	ERDS2TJ472	4.7k
R960	ERDS2TJ105	1M
R961	ERDS2TJ153	15k
R962	ERDS2TJ103	10k

• CAPACITORS

Ref. No.	Part No.	Value
C1	ECEA0JU471	470
C2	ECQM1H334JZ	0.33
C3, 4	ECKD1H391KB	390p
C5, 6	RCBS1H271KBY	270p
C7, 8	ECEA0JU101	100
C9, 10	ECQB1H123JZ	0.012
C11, 12	ECEA1CU010	1
C13, 14	ECEA1EU4R7	4.7
C15	ECQB1H103JZ	0.01
C21	ECEA0JU471	470
C22	ECQM1H334JZ	0.33
C23, 24	ECKD1H681KB	680p
C27, 28	ECEA0JU101	100
C29, 30	ECQB1H123JZ	0.012
C31, 32	ECEA1CU010	1
C35	ECEA1CU100	10
C36	ECCD1H470KC	47p
C37	ECEA1HU010	1
C41, 42	ECEA1HU010	1
C43, 44	ECEA1HUR47	0.47
C45, 46	ECCD1H101K	100p
C47, 48	ECCD1H101K	100p
C51, 52	ECEA1CN100S	10
C55, 56	ECCD1H220K	22p
C101, 102	ECCD1H221J	220p
C103, 104	ECCD1H221J	220p
C151, 152	ECQB1H223JZ	0.022
C153, 154	ECQB1H223JZ	0.022
C155, 156	ECEA1CU100	10
C157, 158	ECEA1HU010	1
C159, 160	ECQB1H822JZ	0.0082
C161, 162	ECKD1H152KB	0.0015
C163, 164	ECQB1H223JZ	0.022
C165, 166	RCBS1H221KBY	220p
C167, 168	ECEA1HU010	1
C169, 170	RCBS1H331KBY	330p
C201, 202	ECQB1H223JZ	0.022
C203, 204	ECQB1H223JZ	0.022
C209, 210	ECQB1H822JZ	0.0082
C211, 212	ECKD1H152KB	0.0015
C213, 214	ECQB1H223JZ	0.022
C215, 216	ECQB1H222JZ	0.0022
C219, 220	ECQB1H822JZ	0.0082
C221, 222	RCBS1H221KBY	220p
C223, 224	ECEA1HU010	1
C225, 226	RCBS1H331KBY	330p
C231	ECEA1EU4R7	4.7
C251	ECEA1HU010	1
C252	ECEA1CU100	10
C253	ECEA1EU102	1000
C301, 302	ECQP1682JZ	0.0068
C303, 304 [M] [MC] only	ECEA1EU4R7	4.7
C303, 304 except [M] [MC]	ECEA1CU100	10
C305, 306	ECQB1H153JZ	0.015
C307, 308	ECQB1H102JZ	0.001
C309, 310	ECQB1H102JZ	0.001
C311	ECEA1EU4R7	4.7
C312	ECQP1682JZ	0.0068
C313, 314	ECQB1H222JZ	0.0022
C315	ECQB1H103JZ	0.01
C317, 318	RCBS1H102KBY	0.001
C319	ECEA1CU100	10
C321, 322	RCBS1H102KBY	0.001
C323, 324 except [M] [MC]	ECEA1CU100	10
C331, 332	ECEA1AU331	330
C333, 334	ECEA1AU331	330
C341	ECEA1HU3R3	3.3
C342, 343	ECCD1H121J	120p
C345	ECEA1AU101	100
C346	RCBS1H102KBY	0.001
C347, 348	ECEA1CU220	22
C349, 350	ECEA1EU2R2	2.2
C352	ECEA0JU101	100
C355	ECFR1E104ZF	0.1
C356, 357	ECFR1E104ZF	0.1
C401, 402	ECKD1H152KB	0.0015
C403, 404	ECQB1H472JZ	0.0047
C405, 406	ECEA1CU100	10
C407, 408	ECQM1H473JZ	0.047
C409, 410	ECQM1H224JZ	0.22
C411, 412	ECEA50ZR68	0.68
C413, 414	ECQB1H103JZ	0.01
C415, 416	ECQB1H472JZ	0.0047
C417, 418	ECEA1CU100	10
C419, 420	ECQM1H473JZ	0.047
C421, 422	ECQM1H224JZ	0.22
C423, 424	ECEA50ZR68	0.68
C425, 426	ECEA1EU4R7	4.7
C427, 428	ECEA1CU100	10
C429, 430	ECKD1H122KB	0.0012
C500	ECQV1H333JZ	0.033
C502	ECEA1CU100	10
C503, 504	ECEA1HUR33	0.33
C505, 506	ECEA50ZR68	0.68
C507, 508	ECKD1H471KB	470p
C509, 510	ECQB1H223JZ	0.022
C511, 512	ECEA16Z10	10
C513, 514	ECQM1H333JZ	0.033
C515, 516	ECEA0JU470	47
C517, 518	ECQM1H104JZ	0.1
C519, 520	ECQM1H104JZ	0.1
C521, 522	ECEA1HUR33	0.33
C523, 524	ECCD1H391J	390p
C525, 526	ECQB1H472JZ	0.0047
C527, 528	ECQB1H223JZ	0.022
C529, 530	ECQB1H332JZ	0.0033
C531	ECEA1CU100	10
C532	ECEA1HU010	1
C533, 534	ECQB1H332JZ	0.0033
C535, 536	ECEA1CU100	10
C537, 538	ECCD1H391J	390p
C539, 540	ECEA1HUR33	0.33
C541, 542	ECEA1CU100	10
C543, 544	RCBS1H221KBY	220p
C551	ECEA0JU331	330
C601	ECEA0JU331	330
C602	ECEA1CU471	470
C603	ECEA1CU472	4700
C605	ECEA1CU220	22
C606	ECEA1CU100	10
C607, 608	ECKD1H102KB	0.001
C609, 610	ECEA1CU471	470
C611, 612	ECEA1EU222	2200
C619	ECKDKC103PF	0.01
C731, 732	ECQM1H104JZ	0.1
C733, 734	ECEA1CU330	33
C741	ECEA1EU4R7	4.7

■ ELECTRICAL PARTS LIST

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
2. Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Area

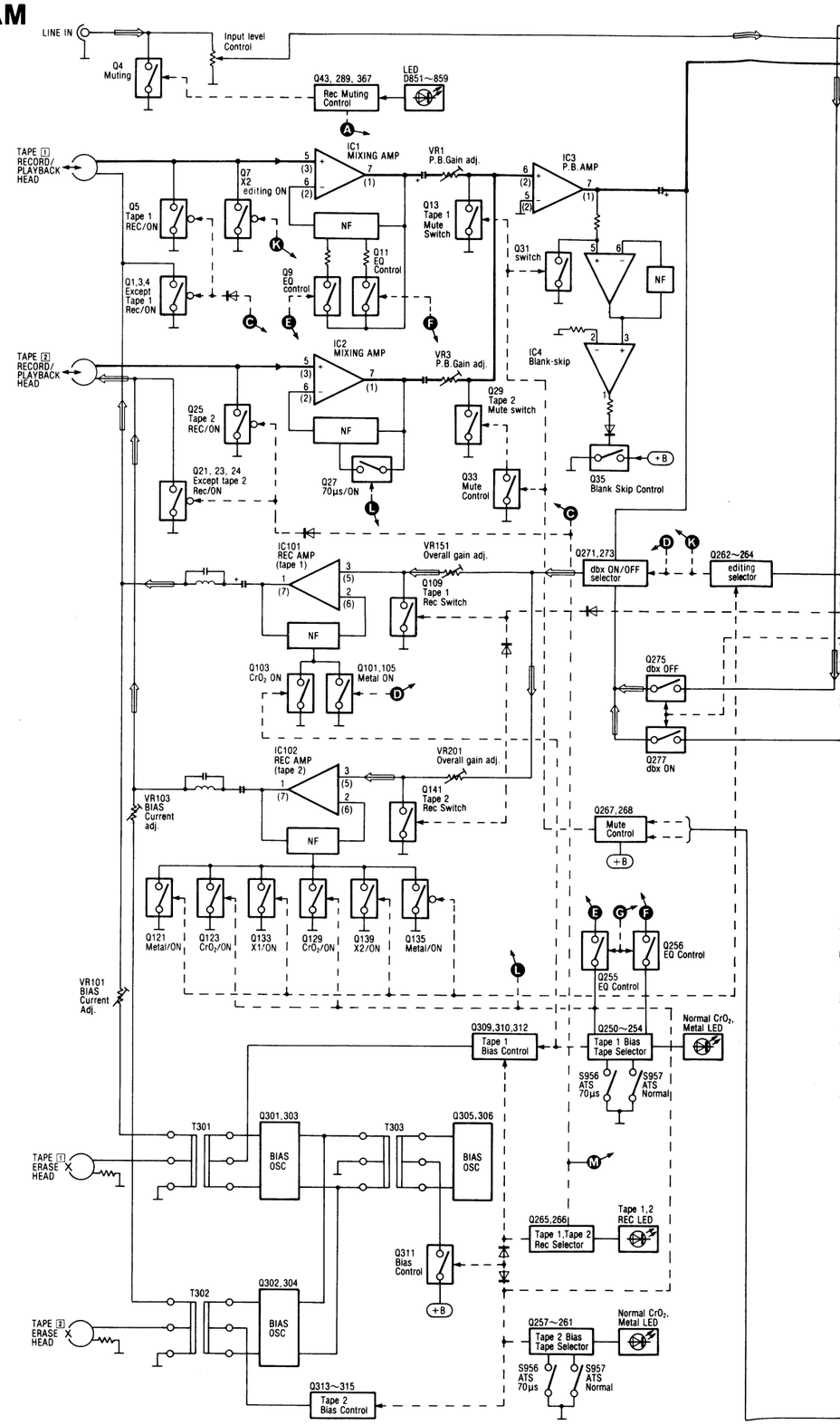
* [M].....U.S.A.
* [MC].....Canada.
* [E].....All European areas except United Kingdom.
* [EK].....United Kingdom.
* [EG].....F.R. Germany.
* [EH].....Holland.
* [XL].....Australia.
* [XA].....Asia, Latin America, Middle East and Africa.
* [PA].....Far East PX.
* [PE].....European Military.
* [XB].....Saudi Arabia.

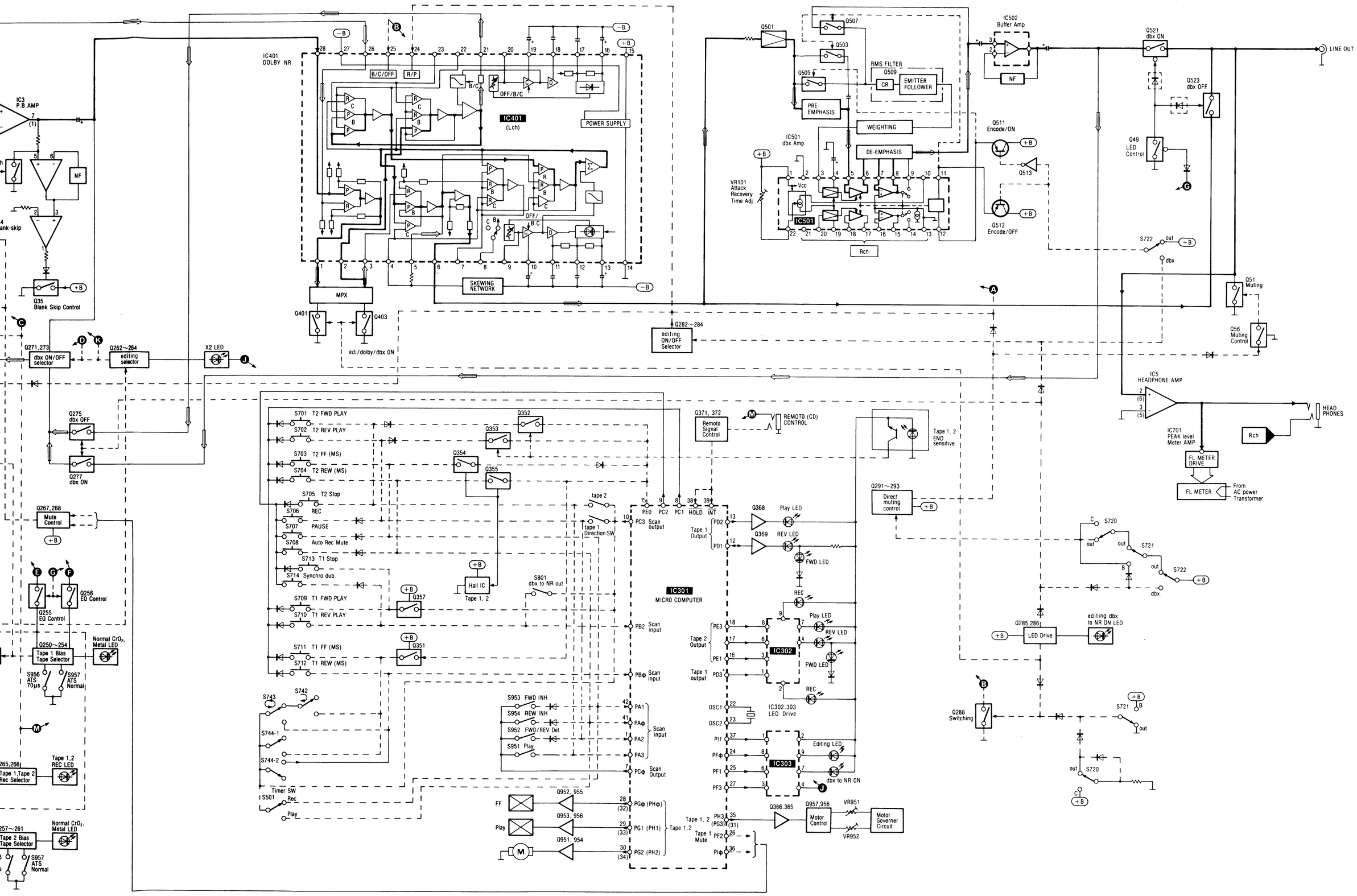
Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC1, 2	M5220L	Integrated Circuit
IC3 ~ 5, 101, 102	M5218L	Integrated Circuit
IC301	LC6510C – 3053	Integrated Circuit
IC302, 303	AN90C21	Integrated Circuit
IC401, 402	TEA0665	Integrated Circuit
IC501	AN6291	Integrated Circuit
IC502	M5218L	Integrated Circuit
IC601	AN78N05	Integrated Circuit
IC 701, 702	BA6146	Integrated Circuit
TRANSISTORS		
Q1 ~ 3	2SD1011 – T	Transistor, Si
Q4	2SA921 – T	Transistor
Q5 ~ 14	2SC2603EFG	Transistor
Q21 ~ 24	2SD1011 – T	Transistor
Q25 ~ 31, 33, 35, 41, 42	2SC2603EFG	Transistor
Q43, 49	UN4111	Transistor
Q51, 52	2SD1330R	Transistor
Q56	UN4111	Transistor
Q101 ~ 104	2SC2603EFG	Transistor
Q105, 106	2SA933SQR	Transistor
Q109, 110	2SD1330R	Transistor
Q121 ~ 124	2SC2603EFG	Transistor
Q129, 130	2SA933SQR	Transistor
Q133, 134	2SC2603EFG	Transistor
Q135, 136	2SA933SQR	Transistor
Q139, 140	2SC2603EFG	Transistor
Q141, 142	2SD1330R	Transistor
Q250 ~ 252	UN4111	Transistor
Q253, 254	UN4211	Transistor
Q255 ~ 259	UN4111	Transistor
Q260 ~ 263	UN4211	Transistor
Q264 ~ 266	UN4111	Transistor
Q267, 268	UN4211	Transistor
Q271, 272	2SK381D	FET
Q273 ~ 276	2SJ40D	FET
Q277, 278	2SK381D	FET
Q281	UN4211	Transistor
Q282 ~ 284	2SC2603EFG	Transistor
Q285, 286	UN4111	Transistor
Q287, 288	2SC2603EFG	Transistor
Q289	UN4111	Transistor
Q291	2SA933SQR	Transistor
Q292	2SC2603EFG	Transistor
Q293	2SA933SQR	Transistor
Q301 ~ 304	2SD471L	Transistor
Q305, 306	2SC2603EFG	Transistor
Q307, 308	2SA885R	Transistor
Q309	2SD471L	Transistor
Q310, 311	2SB909Q	Transistor
Q312	UN4211	Transistor
Q313	2SD471L	Transistor
Q314	2SB909Q	Transistor
Q315	UN4211	Transistor
Q350 ~ 357	2SC2603EFG	Transistor
Q361	2SD471L	Transistor
Q363, 364	2SC2603EFG	Transistor
Q365, 366	UN4211	Transistor
Q367	2SC2603EFG	Transistor
Q368, 369	UN4211	Transistor
Q371 [M] [MC] [PA] [PE] only	UN4211	Transistor
Q372 [M] [MC] [PA] [PE] only	2SA933SQR	Transistor
Q401 ~ 404, 501 ~ 510	2SC2603EFG	Transistor

Ref. No.	Part No.	Description
Q511, 512	2SA933SQR	Transistor
Q513	UN4212	Transistor
Q521, 522	2SJ40D	FET
Q523, 524	2SK381D	FET
Q601	2SA933SQR	Transistor
Q603	2SD1265 – O	Transistor
Q604	2SB941 – Q	Transistor
Q701, 702	2SD1468R	Transistor
DIODES & RECTIFIERS		
D1	1SS133	Diode
D2	MTZ5R1BT77	Zener
D4, 11	1SS133	Diode
D12	MTZ5R1BT77	Zener
D14, 15, 51, 53	1SS133	Diode
D101	SVDMC921	Diode
D151	1SS133	Diode
D201, 202	SVDMC921	Diode
D251	MA162A	Diode
D252 ~ 263 265 ~ 267, 277	1SS133	Diode
D278	MA162A	Diode
D280 ~ 285 287 ~ 291	1SS133	Diode
D286	SVDMC921	Diode
D292	MA162A	Diode
D293	MTZ8R2BT77	Zener
D294 ~ 297 301, 302	1SS133	Diode
D298	MA162A	Diode
D337, 338	MA162A	Diode
D340 ~ 345	1SS133	Diode
D346	MA162A	Diode
D347	SVDMC921	Diode
D350, 351	1SS133	Diode
D353	MTZ10BT77	Zener
D355	1SS133	Diode
D356, 357	MA162A	Diode
D358, 371 ~ 373	1SS133	Diode
D374 [M] [MC] [PA] [PE] only	MA162A	Diode
D375, 376 [M] [MC] [PA] [PE] only	1SS133	Diode
D501, 502	1SS133	Diode
D503	MTZ5R1BT77	Zener
D505	SVDMC911	Diode
D506	SVDMC921	Diode
⚠ D601	SVD1SR35200A	Rectifier
⚠ D602	MA162A	Diode
⚠ D603, 604	MA1110	Zener
D605 ~ 612	SVD1SR35200A	Rectifier
D701 ~ 714, 721	1SS133	Diode
D731	SLV31VC3	LED
D740 ~ 745, 747, 748	1SS133	Diode
D781	MA4030M	Zener
D782	MA4051M	Zener
D851	SLV31VC3	LED
D852 ~ 854	SLV31MC3	LED
D856	SLV31VC3	LED
D857	SLV31MC3	LED
D858	SVGSLV31DC3	LED
D859, 860	1SS133	Diode
D951 ~ 957	1SS133	Diode
VARIABLE RESISTORS		
VR1 ~ 4	QVNB3A00B223	P.B. Gain Adj.
VR7, 8	EWAPG0X10A54	Input Level Control
VR15	EVNM0AA00B23	Attack Recovery time Adj.
VR101 ~ 104	QVNB3A00B104	Bias Current Adj.
VR151, 152, 201, 202	EVNM0AA00B24	Overall Gain Adj.
VR301, 302	QVNB3A00B103	Erase Current Adj.

Ref. No.	Part No.	Description
VR701, 702	QVNB3A00B224	FL Meter Adj.
VR951	RVNCC14B1 – A	Tape Speed Adj.
VR952	RVNCC24B1 – A	Tape Speed Adj.
COILS		
L1 ~ 4	SLQX303 – 1K	Bias Trap Coil
L151, 152, 201, 202	QLQX2722D	Peaking Coil
L301, 302	SLO9C23 – Z	Bias Oscillation Coil
L303	SLO9C22 – Z	Erase Coil
L305 ~ 307	SLQX102 – 3K	Choke Coil
L306	QLQX102 – 3K	Choke Coil
L350, 351	QLQX1011Y	Choke Coil
L401, 402	QLM9Z10K	MPX Coil
L403, 404	SLM1B8 – K	Skewing Network
SPARK LILLERS OR COMBINATION PARTS		
Z5	EXBF5E562J8R	Combination Part
Z6	EXBF5E472J8R	Combination Part
Z7	EXBF5E562J8R	Combination Part
FLOURESCENT DISPLAY TUBE		
FL1	SADBG269Z	FL Meter
RESONATORS		
X 1	SVFCSB800K	Ceramic Filter
TRANSFORMERS		
T1 [M] [MC]	⚠ SLT5L259W	Power Transformer
T1 [EK] [XL] [XA] [PA] [PE] [XB]	⚠ SLT5L261W	Power Transformer
T1 [E] [EH] [EG]	⚠ SLT5L262W	Power Transformer
FUSES		
F1, 2 [EK] only	⚠ XBA2C10TB0	Fuse (T1.0A)
F1, 2 [E] [EH] [EG] [XA] [XL] [PA] [PE] [XB]	⚠ XBAQ0004	Fuse (T1.0A)
F3 [EK] only	⚠ XBA2C16TB0	Fuse (T1.6A)
F3 [E] [EH] [EG] [XA] [XL] [PA] [PE] [XB]	⚠ XBAQ0010	Fuse (T1.6A)
SWITCHES		
S601	⚠ SSH1057	Power Switch
S602 [EK] [XA] [XL] [PA] [PE] [XB]	⚠ SSR227	Rotary Switch (AC Power Voltage Selector)
S700	SSS157	Timer Switch
S701 ~ 714	SSG13	Touch Switch
S720 ~ 722, 725	SSH575	NR Switch
S741 ~ 744	SSH4100	Mode Switch
S801	SSG20 – 3	Touch Switch
S802	SSG20 – 5	Touch Switch
S803	SSG20 – 6	Touch Switch
S951, 952	RSH1B12ZA – U	Leaf Switch
S953 ~ 956	RSH1A46ZA – U	Leaf Switch
S957	RSH1A60ZA – U	Leaf Switch
JACKS		
J 1	SJJ126B	Headphones Jack
J 2 [M] [MC] [PA] [PE] only	SJJ73BK	M3 Jack (Remote)

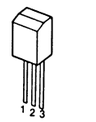
■ BLOCK DIAGRAM

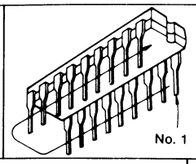



IC401
DOLBY NR
B/C/OFF
R/P
B/C
OFF/B/C
IC401
(Lch)
POWER SUPPLY
SKEWING NETWORK
MPX
Q401
Q403
edi/dolby/dbx ON
IC3
P.B.AMP
NF
Q35
Blank Skip Control
Q271,273
dbx ON/OFF selector
Q262~264
editing selector
X2 LED
Q282~284
editing ON/OFF Selector
Q501
Q507
Q503
Q505
RMS FILTER
Q509
CR
EMITTER FOLLOWER
PRE-EMPHASIS
WEIGHTING
DE-EMPHASIS
IC501
dbx Amp
VR101
Attack Recovery Time Adj.
Vcc
IC501
Rch
IC502
Buffer Amp
NF
Q511
Encode/ON
Q513
Q512
Encode/OFF
Q521
dbx ON
Q523
dbx OFF
LINE OUT
Q49
LED Control
S722
out
dbx
Q51
Muting
Q56
Muting Control
IC5
HEADPHONE AMP
HEAD PHONES
Rch
IC701
PEAK level Meter AMP
FL METER DRIVE
FL METER
From AC power Transformer
Q275
dbx OFF
Q277
dbx ON
Q267,268
Mute Control
Q256
EQ Control
Q255
EQ Control
Q250~254
Tape 1 Bias Tape Selector
Normal CrO2, Metal LED
S956
ATS 70μs
S957
ATS Normal
Tape 1,2
REC LED
Q265,266
Tape 1,Tape 2 Rec Selector
Q257~261
Tape 2 Bias Tape Selector
Normal CrO2, Metal LED
S957
ATS Normal
S701 T2 FWD PLAY
S702 T2 REV PLAY
S703 T2 FF (MS)
S704 T2 REW (MS)
S705 T2 Stop
S706 REC
S707 PAUSE
S708 Auto Rec Mute
S713 T1 Stop
S714 Synchro dub.
S709 T1 FWD PLAY
S710 T1 REV PLAY
S711 T1 FF (MS)
S712 T1 REW (MS)
Q352
Q353
Q354
Q355
Q357
Q351
tape 2
tape 1 Direction SW
Hall IC
Tape 1, 2
S801
dbx to NR out
S743
S742
S744-1
S744-2
Timer SW
S501
Rec
Play
S953 FWD INH
S954 REW INH
S952 FWD/REV Det
S951 Play
Q371, 372
Remoto Signal Control
REMOTO (CD) CONTROL
Tape 1, 2 END sensitive
Q291~293
Direct muting control
IC301
MICRO COMPUTER
PE0
PC2
PC1
HOLD
INT
PC3 Scan output
PB2 Scan input
PBΦ Scan input
PA1
PAΦ
PA2
PA3
Scan input
PCΦ Scan Output
PGΦ (PHΦ)
PG1 (PH1)
PG2 (PH2)
Tape 1,2
Tape 1 Output
PD2
PD1
Tape 2 Output
PE3
PE1
Tape 1 output
PD3
Tape 1 Mute
PF2
PIΦ
PH3 (PG3)
Q368
Play LED
Q369
REV LED
FWD LED
REC
IC302
IC303
IC302,303 LED Drive
OSC1
OSC2
PI1
PFΦ
PF1
PF3
Editing LED
dbx to NR ON
Q366,365
Q957,956
Motor Control
VR951
VR952
Motor Governer Circuit
S720
S721
S722
Q285,286
LED Drive
editing dbx to NR ON LED
Q288
Switching

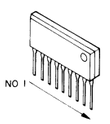
• Terminal Guide of Transistors, Diodes and IC's

AN78N05

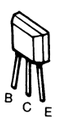




BA6146	16 Pin
AN6291	22 Pin
TEA0665	28 Pin
LC6510C-3053	42 Pin

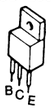


M5218L	8 Pin
M5220L	8 Pin
AN90C21	9 Pin

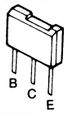


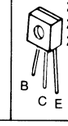
2SA921
2SC2603EFG
UN4111
UN4211
UN4212
2SA933SQR

2SB941-P
2SD1265O



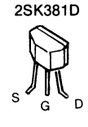
2SD471L
2SA885R



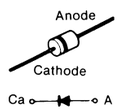


2SD1330R
2SD1011R
2SD1468R

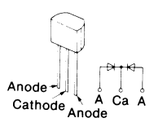
2SJ40D
2SK381D



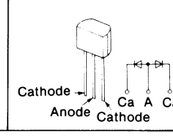
1SS133
MA162

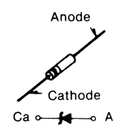


SVDMC921

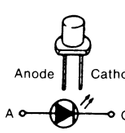


SVDMC911



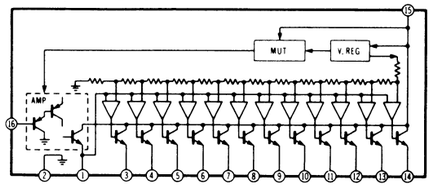


MTZ5R1BT77
MTZ10BT77
MA1110
MA4030M
MA4051M
MTZ8R2BT77



SLV31VC3
SLV31MC3
SLV31DC3

EQUIVALENT CIRCUIT
IC701, 702: BA6146



SPECIFICATIONS * Input level control ...MAX

Playback S/N ratio * Test tape...QZZCFM	Greater than 45dB
Overall distortion * Test tape ...QZZCRA for Normal ...QZZCRX for CrO_2 ...QZZCRZ for Metal	Normal..... Less than 3.5% CrO2, Metal..... Less than 4%
Overall S/N ratio * Test tape...QZZCRA	Greater than 43dB (without NAB filter)

■ SCHEMATIC DIAGRAM

Notes:

- **S601** : Power switch in "**on**" position.
- **S602** : Power voltage selector.
  ([EK] [XA] [XL] [PA] [PE] areas)
- **S700** : Timer switch in "**off**" position.
- **S701** : Tape2 forward Play switch in "**off**" position.
- **S702** : Tape2 reverse play switch in "**off**" position.
- **S703** : Tape2 FF (MS) switch in "**off**" position.
- **S704** : Tape2 REW (MS) switch in "**off**" position.
- **S705** : Tape2 stop switch in "**off**" position.
- **S706** : Rec switch in "**off**" position.
- **S707** : Pause switch in "**off**" position.
- **S708** : Auto rec mute switch in "**off**" position.
- **S709** : Tape1 forward play switch in "**off**" position.
- **S710** : Tape1 reverse play switch in "**off**" position.
- **S711** : Tape1 FF (MS) switch in "**off**" position.
- **S712** : Tape1 REW (MS) switch in "**off**" position.
- **S713** : Tape1 stop switch in "**off**" position.
- **S714** : Synchro start switch in "**off**" position.
- **S720** : Dolby C NR switch in "**out**" position.
- **S721** : Dolby B NR switch in "**out**" position.
- **S722** : dbx switch in "**out**" position.
- **S725** : Blank skip switch in "**off**" position.
- **S741** : Mode (⇐) switch in "**off**" position.
- **S742** : Mode (⇐⇐) switch in "**off**" position.
- **S743** : Mode (⇒) switch in "**off**" position.
- **S744** : Mode (⇒⇒) switch in "**off**" position.
- **S801** : Non dbx editing switch in "**off**" position.
- **S802** : Tape speed select switch in "**X1**" position.
- **S803** : Editing switch in "**off**" position.
- **S951** : Play switch in "**off**" position.
- **S952** : FF/REW switch in "**off**" position.
- **S953** : FWD inhibit switch in "**off**" position.
- **S954** : REV inhibit switch in "**off**" position.
- **S955** : 70μs switch in "**off**" position.
- **S956** : Metal switch in "**off**" position.
- **S957** : Direction switch in "**off**" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
  1K=1,000 (Ω), 1M=1,000k (Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.

( ).....Voltage values at record mode.
CrO_2.....Voltage values at CrO_2 tape mode.
Metal .....Voltage values at Metal tape mode.
edi.....Voltage values at editing mode.
X2.....Voltage values at X2 mode.
B.....Voltage values at Dolby B NR mode.
C.....Voltage values at Dolby C NR mode.
Rev.....Voltage values at reverse mode.
For measurement use EVM.

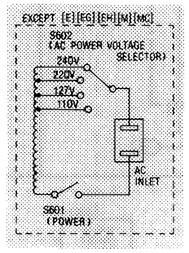
- (——) indicates B (bias).
- (▒▒) indicates the flow of the playback signal.
- (⇨) indicates the flow of the record signal.

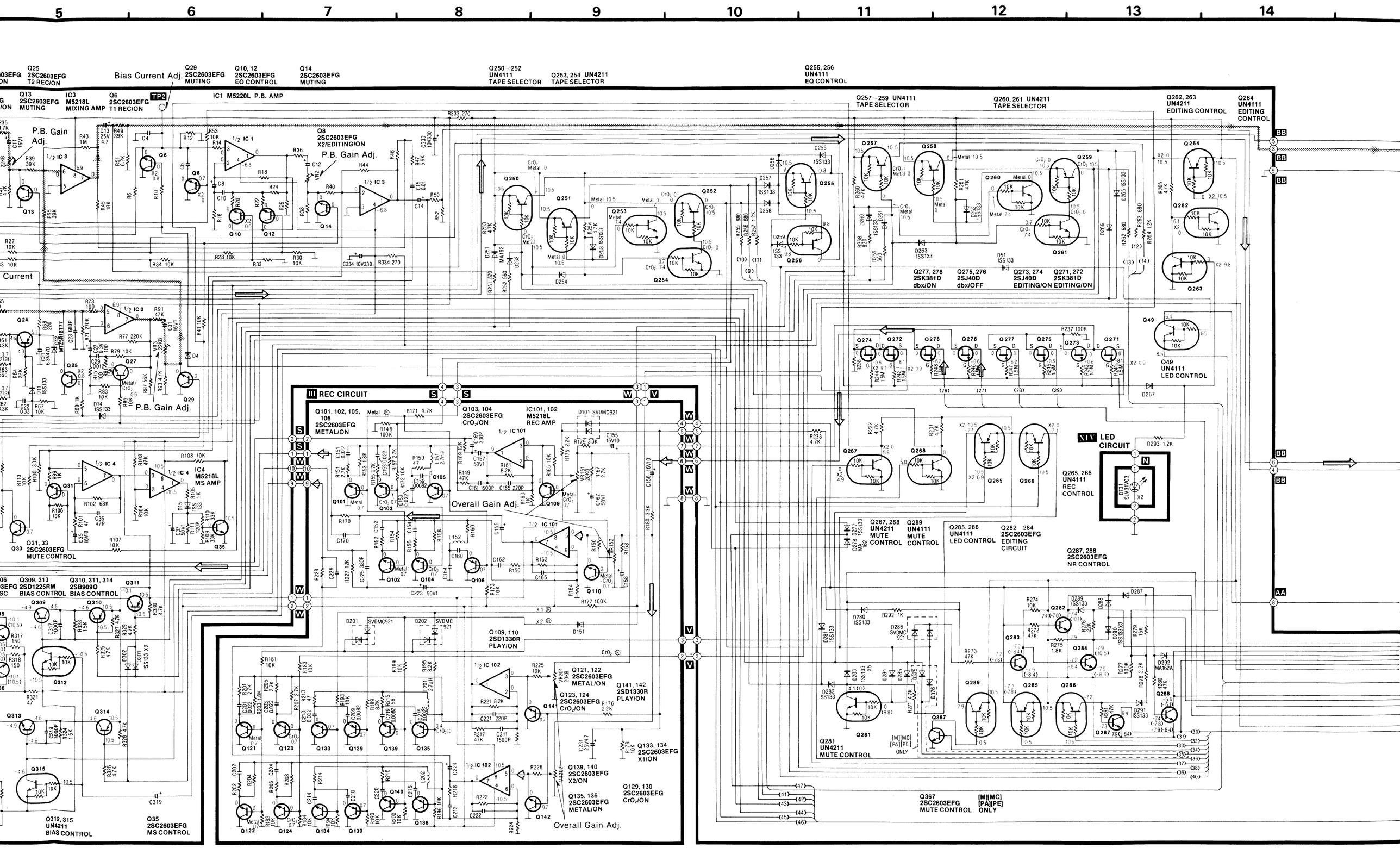
IMPORTANT SAFETY NOTICE
The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards.
When servicing it is essential that only manufacturer's specified parts be used for the cirtical components in the shaded areas of the schematic.

* Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

* Cover the parts boxes made of plastics with aluminum foil.
* Ground the soldering iron.
* Put a conductive mat on the work table.
* Do not touch the legs of IC or LSI with the fingers directly.




5 6 7 8 9 10 11 12 13 14
Q25 2SC2603EFG T2 REC/ON
Bias Current Adj.
Q29 2SC2603EFG MUTING
Q10, 12 2SC2603EFG EQ CONTROL
Q14 2SC2603EFG MUTING
Q250 252 UN4111 TAPE SELECTOR
Q253, 254 UN4211 TAPE SELECTOR
Q255, 256 UN4111 EQ CONTROL
Q13 2SC2603EFG MUTING
IC3 M5218L MIXING AMP
Q6 2SC2603EFG T1 REC/ON
TP2
IC1 M5220L P.B. AMP
P.B. Gain Adj.
Q8 2SC2603EFG X2/EDITING/ON
P.B. Gain Adj.
Q257 259 UN4111 TAPE SELECTOR
Q260, 261 UN4211 TAPE SELECTOR
Q262, 263 UN4211 EDITING CONTROL
Q264 UN4111 EDITING CONTROL
Current
Q277, 278 2SK381D dbx/ON
Q275, 276 2SJ40D dbx/OFF
Q273, 274 2SJ40D EDITING/ON
Q271, 272 2SK381D EDITING/ON
Q49 UN4111 LED CONTROL
III REC CIRCUIT
Q101, 102, 105, 106 2SC2603EFG METAL/ON
Q103, 104 2SC2603EFG CrO2/ON
IC101, 102 M5218L REC AMP
Overall Gain Adj.
Q109, 110 2SD1330R PLAY/ON
Q121, 122 2SC2603EFG METAL/ON
Q123, 124 2SC2603EFG CrO2/ON
Q141, 142 2SD1330R PLAY/ON
Q139, 140 2SC2603EFG X2/ON
Q135, 136 2SC2603EFG METAL/ON
Q133, 134 2SC2603EFG X1/ON
Q129, 130 2SC2603EFG CrO2/ON
Overall Gain Adj.
XIV LED CIRCUIT
Q265, 266 UN4111 REC CONTROL
Q267, 268 UN4211 MUTE CONTROL
Q289 UN4111 MUTE CONTROL
Q285, 286 UN4111 LED CONTROL
Q282 284 2SC2603EFG EDITING CIRCUIT
Q287, 288 2SC2603EFG NR CONTROL
Q309, 313 2SD1225RM BIAS CONTROL
Q310, 311, 314 2SB909O BIAS CONTROL
Q312, 315 UN4211 BIAS CONTROL
Q35 2SC2603EFG MS CONTROL
IC4 M5218L MS AMP
Q31, 33 2SC2603EFG MUTE CONTROL
Q281 UN4211 MUTE CONTROL
[M][MC] [PA][PE] ONLY
Q367 2SC2603EFG MUTE CONTROL
[M][MC] [PA][PE] ONLY

II NR CIRCUIT

IC401, 402
TEA0665
DOLBY NR

Q501, 502
2SC2603EFG
AMP

Q503, 504, 507, 508
2SC2603EFG
dbx/ON

Q505, 506
2SC2603EFG
Except dbx EDIT/ON

Q509, 510
2SC2603EFG
EMITTER FOLOWER

IC501
AN6291
dbx AMP

Q511, 512
2SA933SQR
dbx/ON

IC502
M5218L
BUFFER AMP

IC601
AN78N05
REGULATOR

Q601
2SA9335QR
REGULATOR

Q603
2SD1265-O
REGULATOR

Q604
2SB941-Q
REGULATOR

XVI HEADPHONES CIRCUIT

Headphone

VII NR SW CIRCUIT

XII OPERATION (2) CIRCUIT

D701~708
1SS133

F.PLAY
R.PLAY
FF
REW
STOP
REC
PAUSE
AUTO RE-C MUTE

SYNC. START

IV POWER SUPPLY CIRCUIT

EXCEPT [M] [MC] 330

XVII MECHANISM CIRCUIT

Tape Speed Adj.

V FL METER CIRCUIT

IC701, 702
BA6146
METER DRIVE

Q701, 702
2SD1468R
FL MUTING

FL Meter Adj.

FL1
SADBG269Z

IC 702

XVII MECHANISM CIRCUIT

Tape Speed Adj.

Q365, 366
UN4211
MOTOR CONTROL

Q401~ 2SC2603EFG
404 DOLBY NR/ON

Q291, 293
2SA933SQR
MUTE CONTROL

Q292
2SC2603EFG
MUTE CONTROL

Q51, 52
2SD1330R
LINE MUTING

Q56
UN4111
MUTE CONTROL

Q513
UN4212
dbx/ON

Q521, 522
2SJ40D
dbx/ON

Q523, 524
2SK380D
dbx/OFF

IC5
M5218L
HEADPHONES AMP

IC951
DN6838-S
HALL IC

Q951
2SB621A-R
MOTOR CONTROL

Q952, 953
2SB1030R
PLUNGER CONTROL

Q954, 955
2SC2603EFG
MOTOR CONTROL

Q956
2SC1740
PLUNGER CONTROL

Q957
2SK381D
MOTOR SPEED CONTROL

20 21 22 23 24 25 26 27 28 29

Q503, 504, 507, 508 2SC2603EFG dbx/ON

Q505, 506 2SC2603EFG Except dbx EDIT/ON

Q509, 510 2SC2603EFG EMITTER FOLOWER

Q511, 512 2SA933SQR dbx/ON

IC502 M5218L BUFFER AMP

IC601 AN78N05 REGULATOR

Q601 2SA9335QR REGULATOR

Q603 2SD1265-O REGULATOR

Q604 2SB941-Q REGULATOR

XVI HEADPHONES CIRCUIT

XVII NR SW CIRCUIT

IV POWER SUPPLY CIRCUIT

XII OPERATION (2) CIRCUIT

Q350 2SC2603EFG RESET

Q361 2SD1225RM POWER CONTROL

IC301 LC6510C-3053 MICRO-COMPUTER

Q351 355 2SC2603EFG OPERATION CONTROL EXCEPT [M][MC][PA][PE]

Q363, 364 2SC2603EFG PHOTO SENSER CONTROL

Q368, 369 UN4211 LED AMP

XVIII PHOTO SENSOR CIRCUIT

X DIRECTION CIRCUIT

D851, 856 SLV31VC3

D852 D854, 857 SLV31MC3

D856 SLV31VC3

D858 SVGSLV31DC3

XVII MECHANISM CIRCUIT

XVII MECHANISM CIRCUIT

Tape Speed Adj.

XV TIMER CIRCUIT

VII MODE SW CIRCUIT

IX EDITING SW CIRCUIT

IC701, 702 BA6146 METER DRIVE

Q701, 702 2SD1468R FL MUTING

V FL METER CIRCUIT

Q291, 293 2SA933SQR MUTE CONTROL

Q292 2SC2603EFG MUTE CONTROL

Q51, 52 2SD1330R LINE MUTING

Q56 UN4111 MUTE CONTROL

Q513 UN4212 dbx/ON

Q521, 522 2SJ40D dbx/ON

Q523, 524 2SK380D dbx/OFF

IC5 M5218L HEADPHONES AMP

IC951 DN6838-S HALL IC

Q951 2SB621A-R MOTOR CONTROL

Q952, 953 2SB1030R PLUNGER CONTROL

Q954, 955 2SC2603EFG MOTOR CONTROL

Q956 2SC1740 PLUNGER CONTROL

Q957 2SK381D MOTOR SPEED CONTROL

Q365, 366 UN4211 MOTOR CONTROL

Q356 2SC2603EFG SWITCHING

Q357 2SC2603EFG

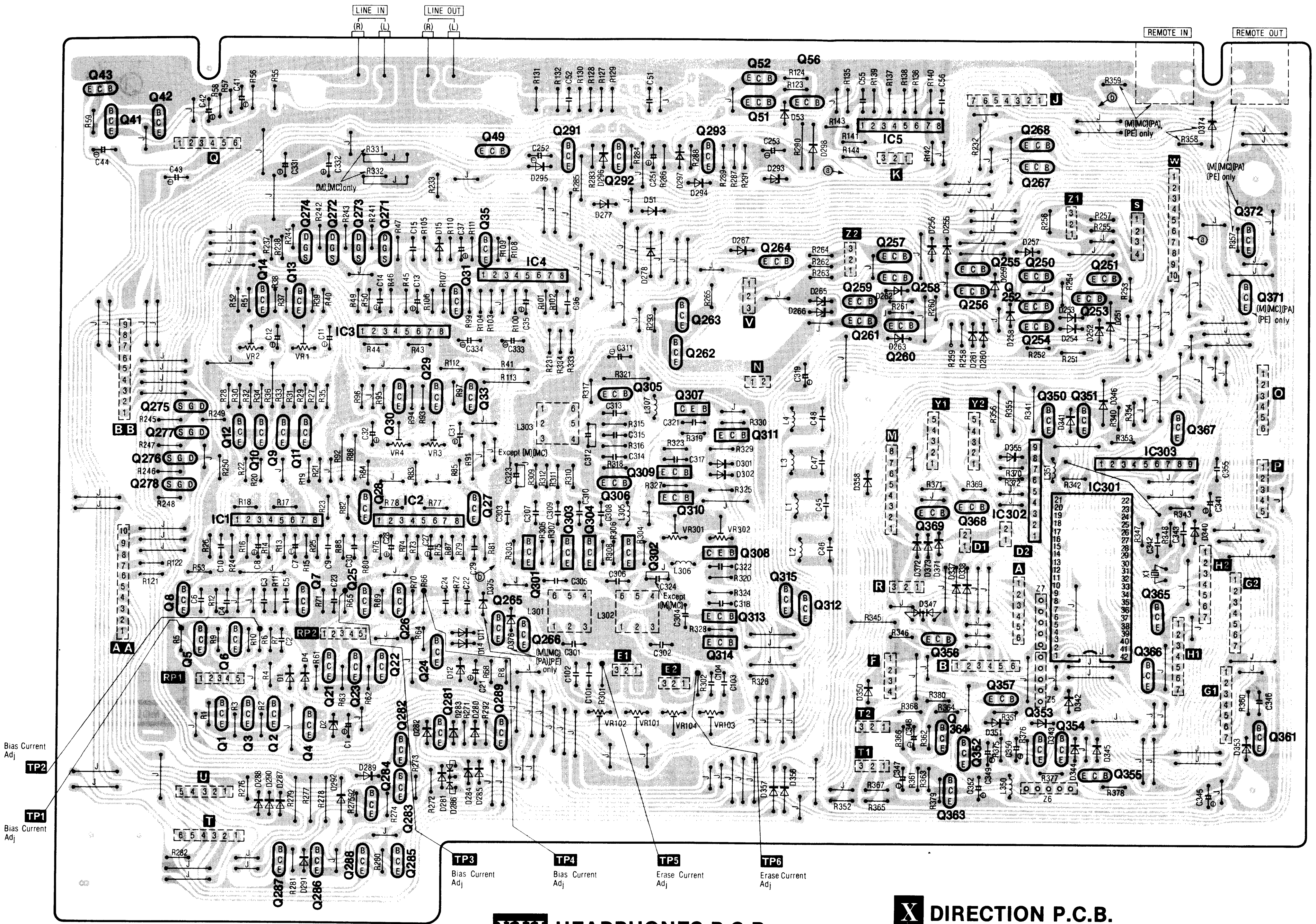
Q371 UN4211 REMOTE CONTROL

Q372 2SA933SQR REMOTE CONTROL

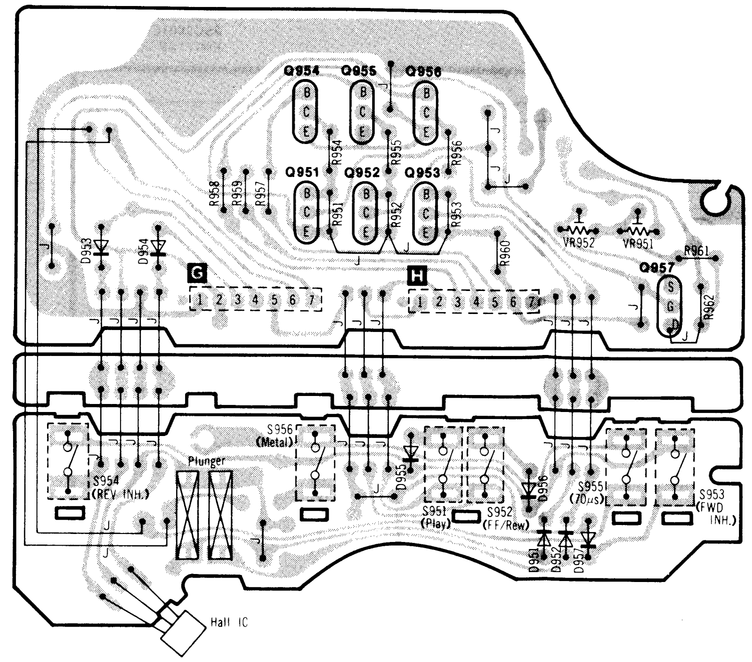
IC302, 303 AN90C21 LED AMP

■ PRINTED CIRCUIT BOARD

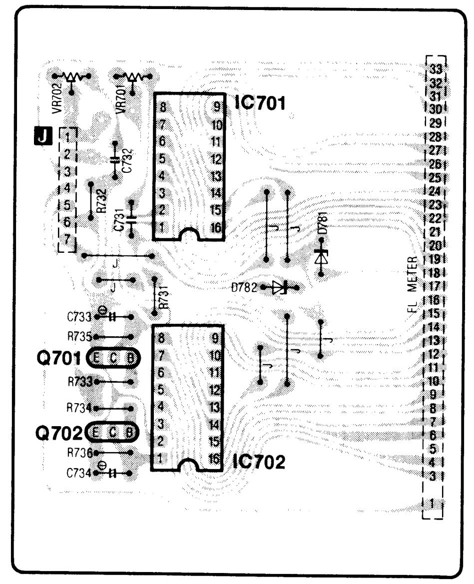
I MAIN P.C.B.



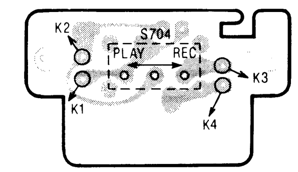
XVII MECHANISM P.C.B.



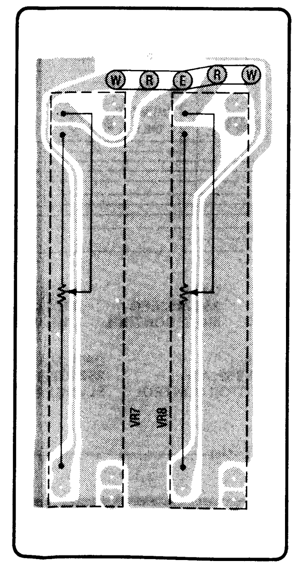
V FL METER P.C.B.



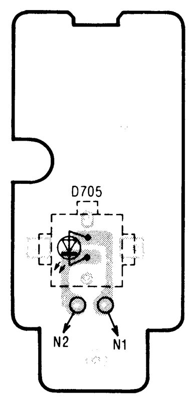
XV TIMER P.C.B.



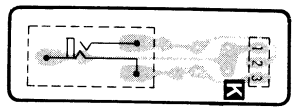
VI VR P.C.B.



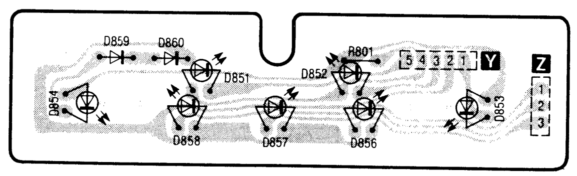
XIV LED P.C.B.



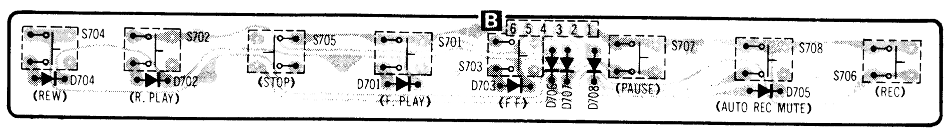
XVI HEADPHONES P.C.B.



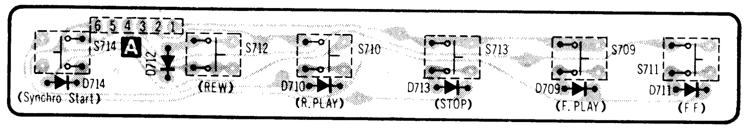
X DIRECTION P.C.B.



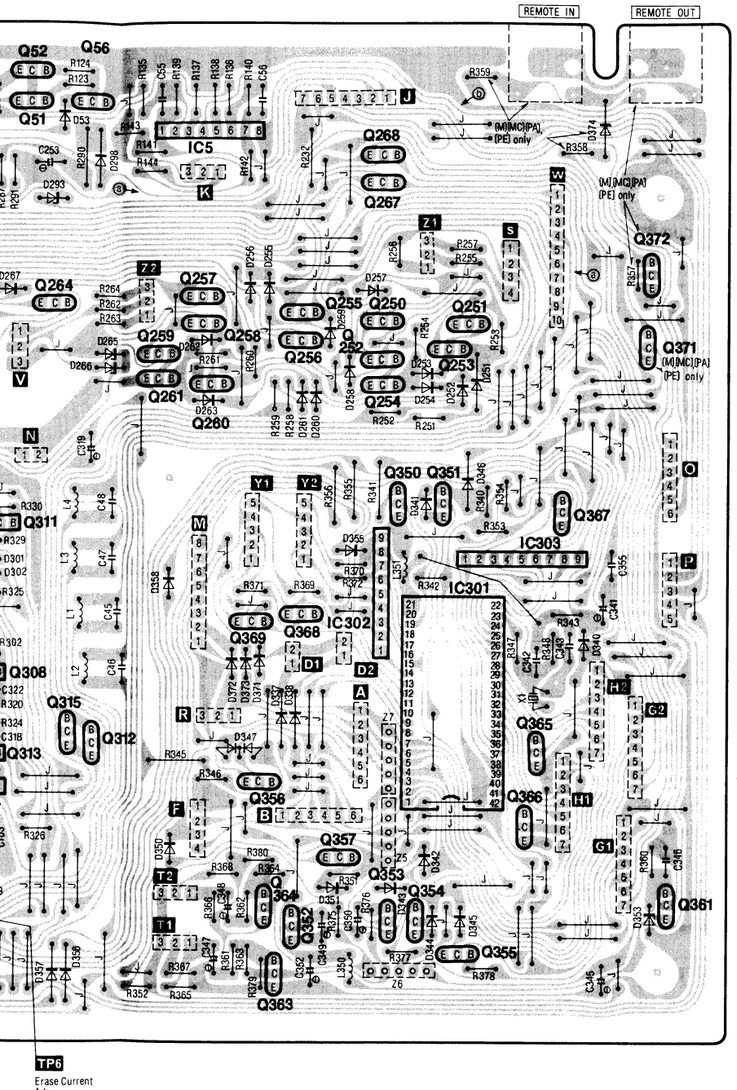
XII OPERATION (2) P.C.B.



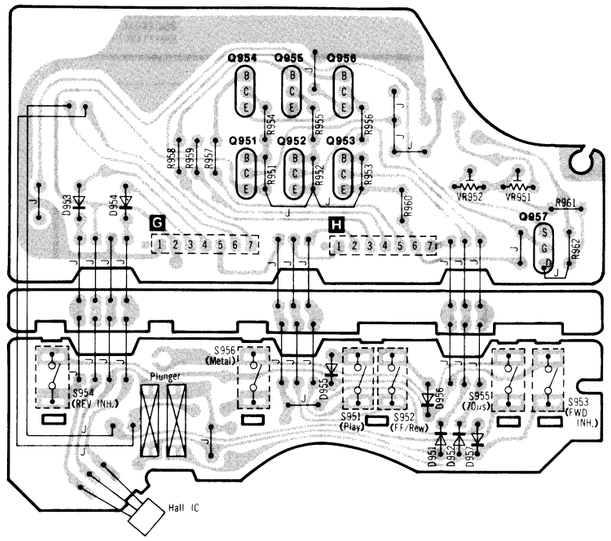
XI OPERATION (1) P.C.B.



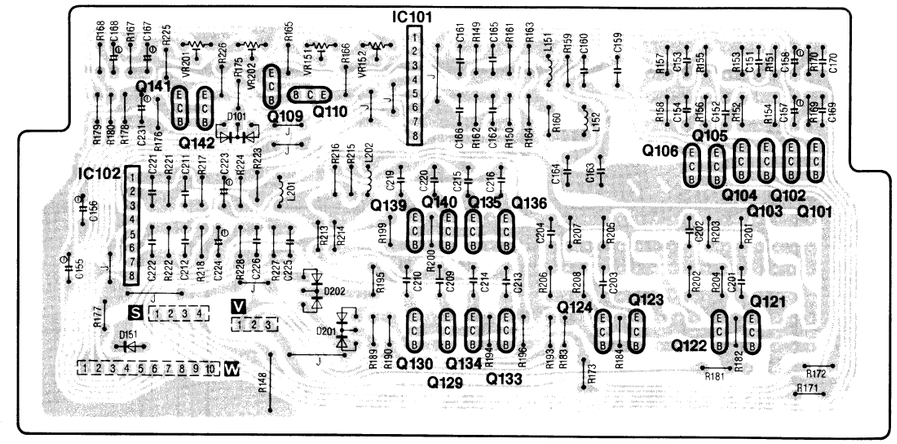
5 6 7 8 9 10 11 12 13 14



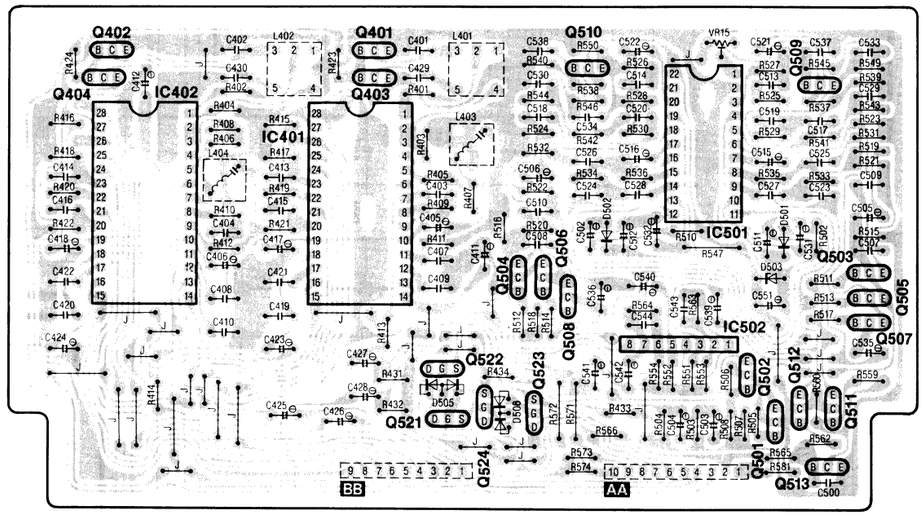
XVII MECHANISM P.C.B.



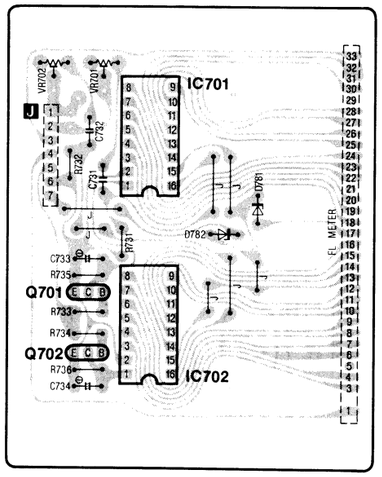
III REC P.C.B.



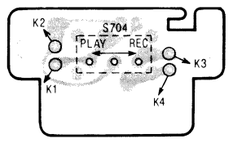
II NR P.C.B.



V FL METER P.C.B.



XV TIMER P.C.B.



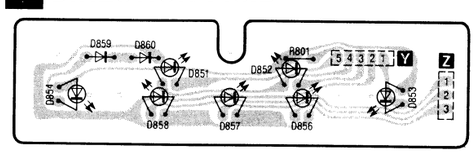
VI VR P.C.B.

IX EDITING SW P.C.B.

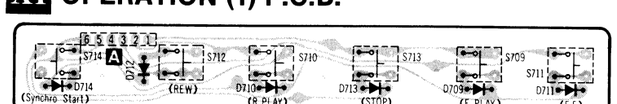
VII NR SW P.C.B.

VIII MODE SW P.C.B.

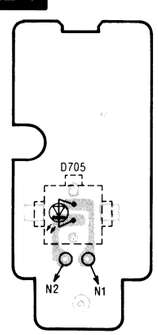
X DIRECTION P.C.B.



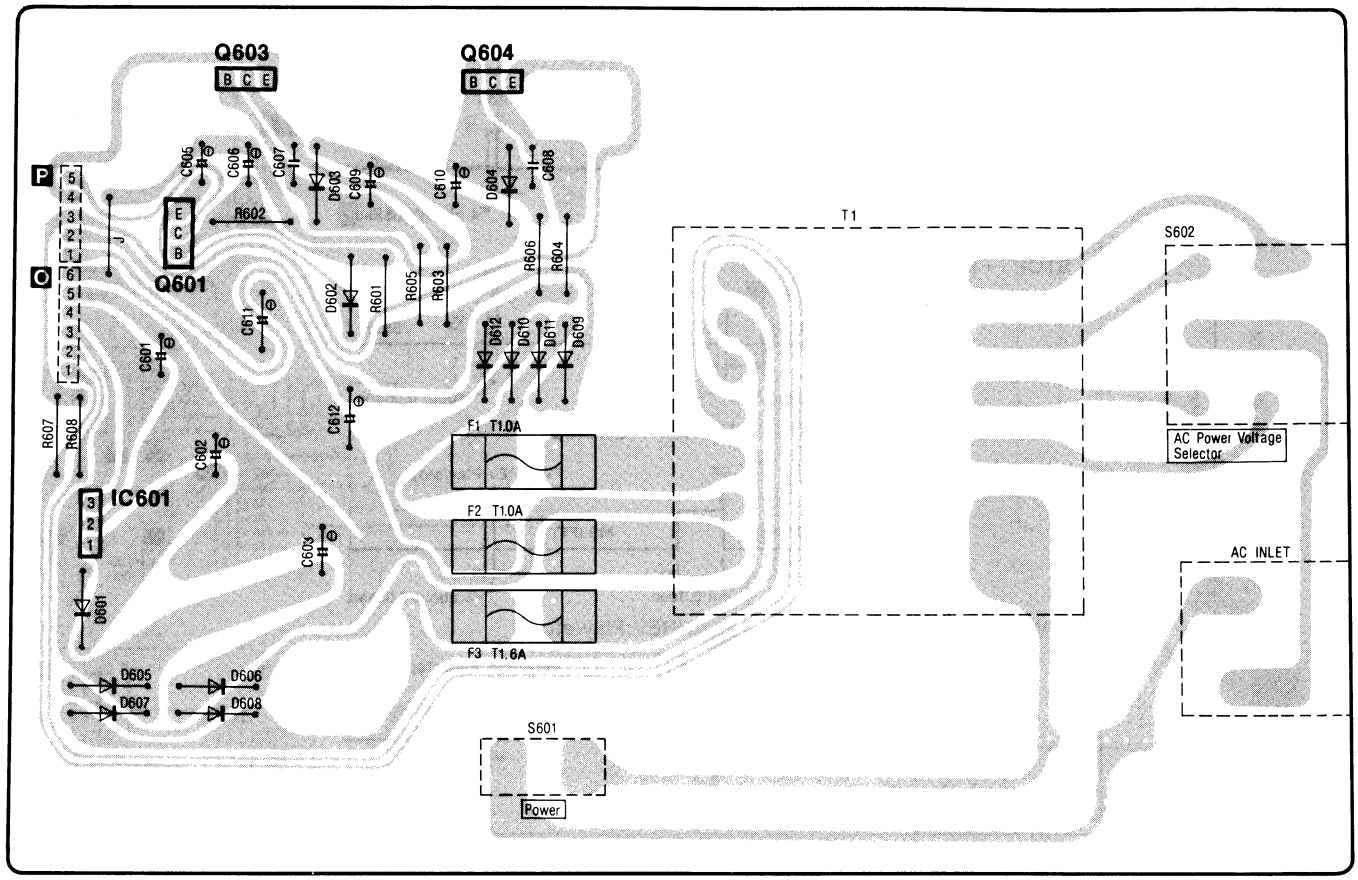
XI OPERATION (1) P.C.B.



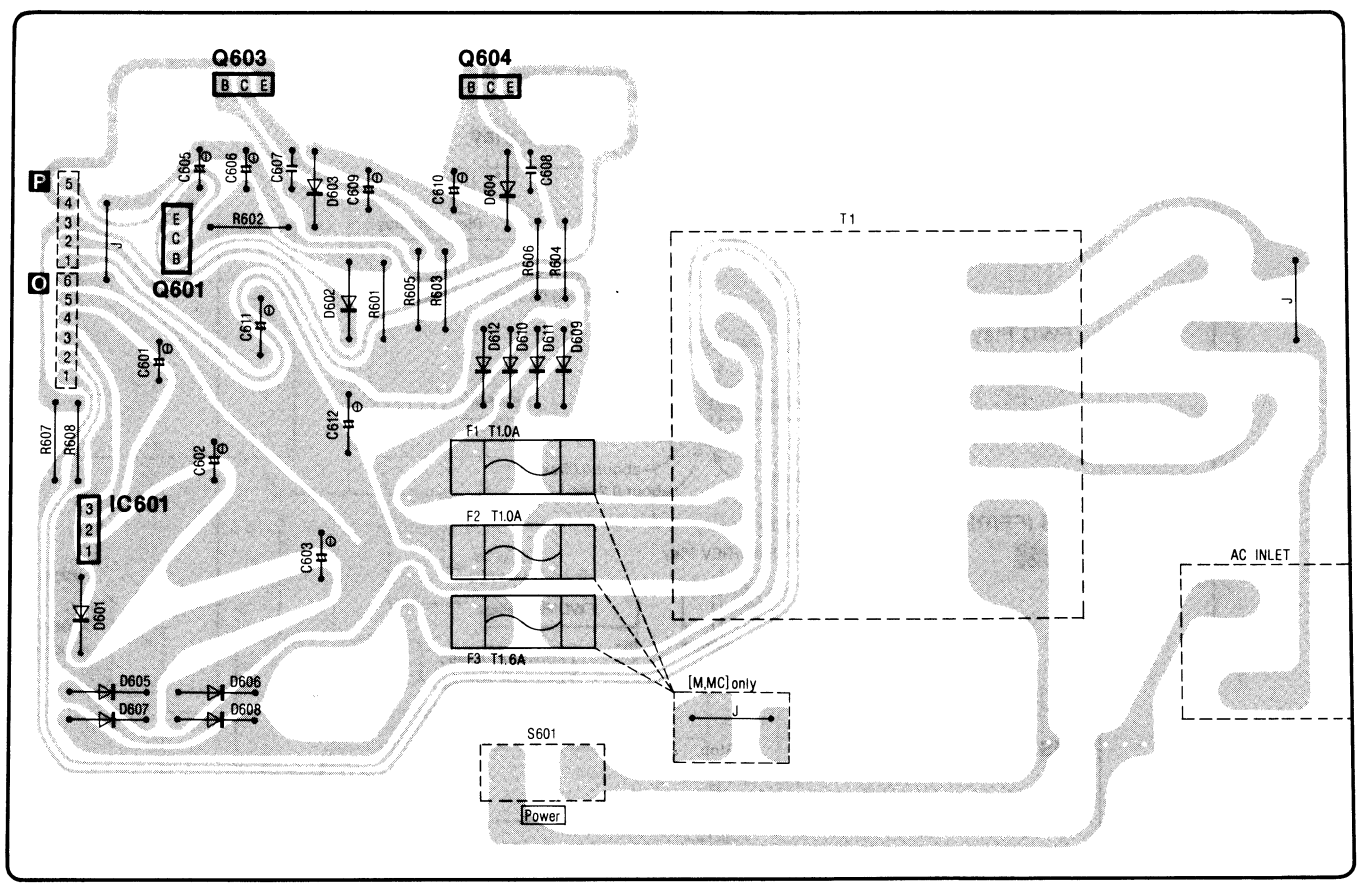
XIV LED P.C.B.



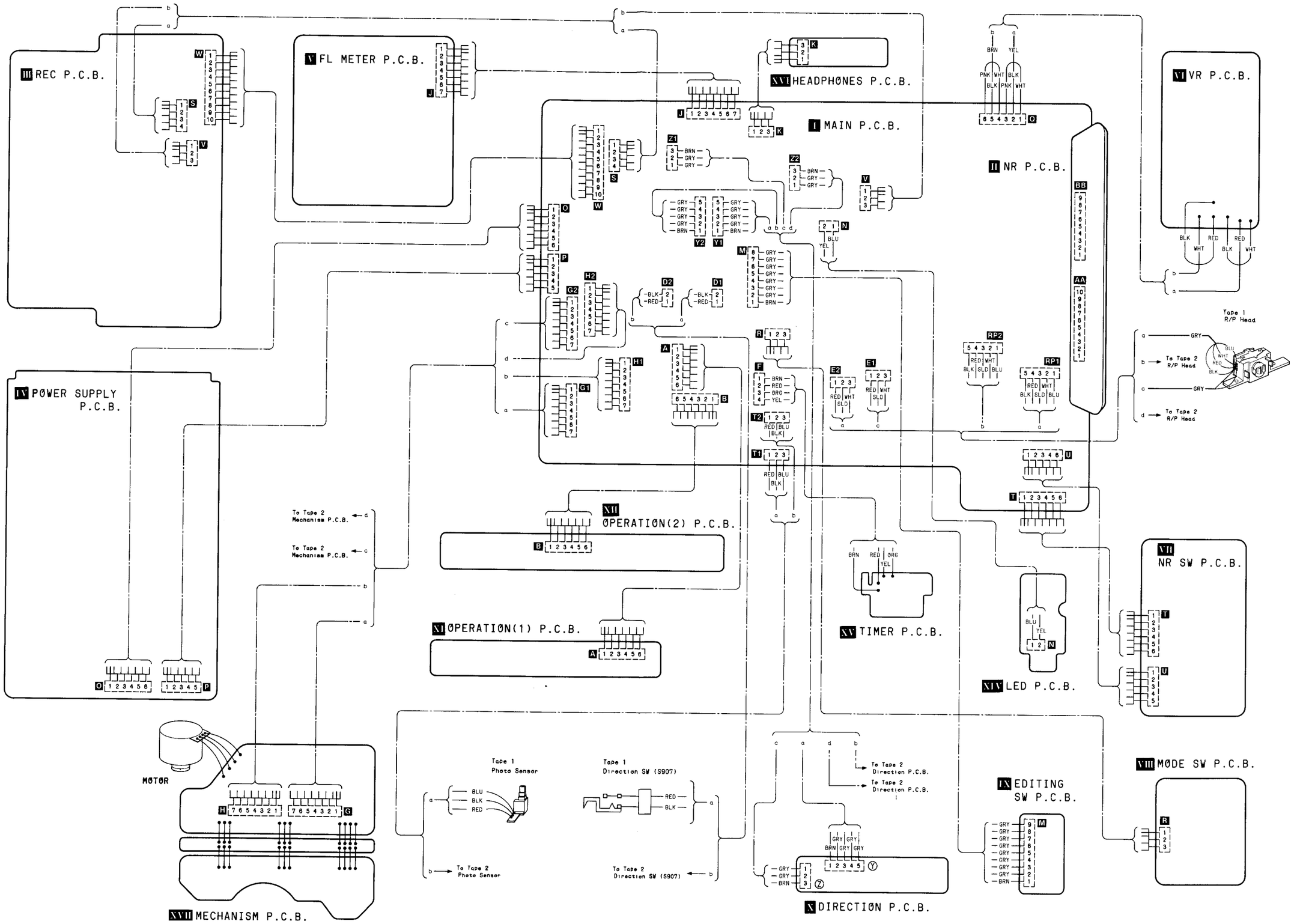
IV POWER SUPPLY P.C.B. [other]



IV POWER SUPPLY P.C.B. [EG, EH, E, M, MC]

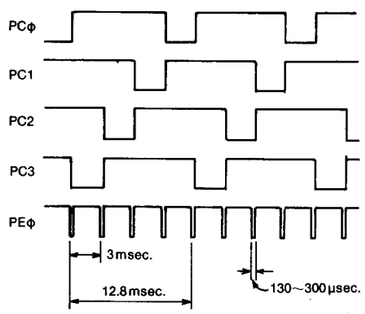
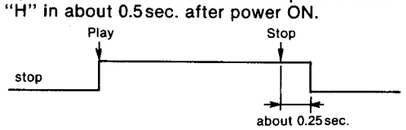


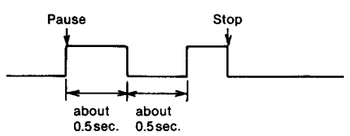
■ WIRING CONNECTION DIAGRAM

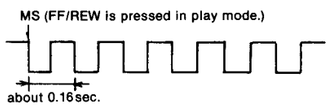


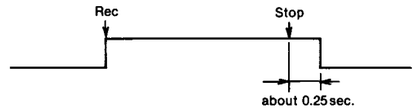
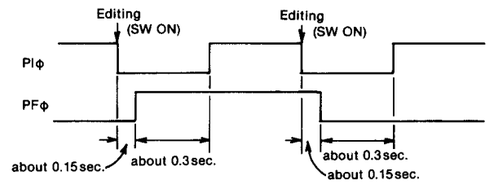
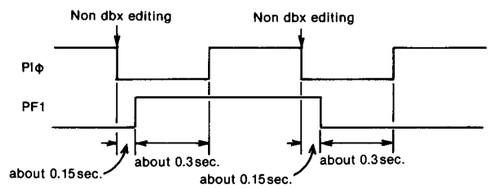
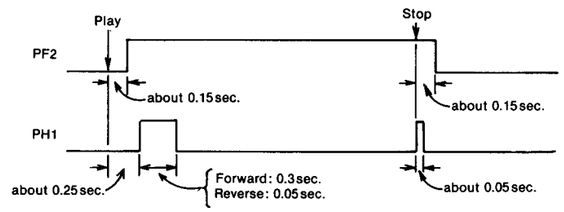
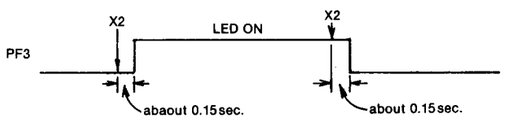
RS-T80R RS-T80R

■ MICROCOMPUTER TERMINAL FUNCTION AND WAVEFORM (IC301: LC6510C-3053)

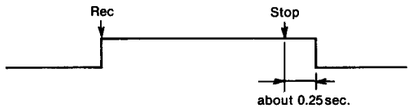
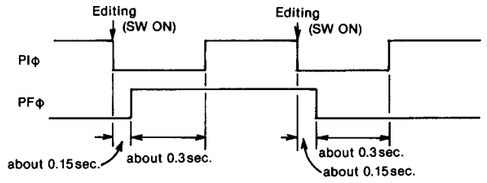
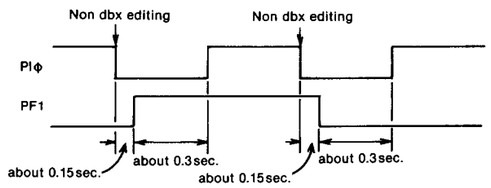
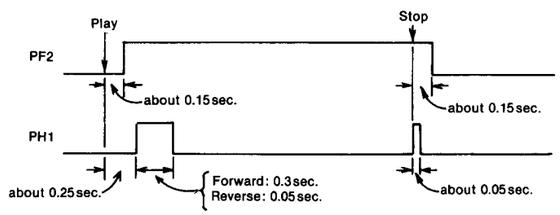
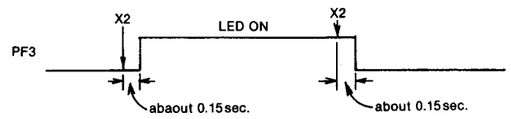
<table>
<tr><th>Terminal No.</th><th>Symbol</th><th>Function/operation</th></tr>
<tr><td>41.
42.
1.
〜
6.</td><td>PAφ
〜
PA3
PBφ
〜
PB3</td><td>Input switch scanning
• PCφ〜PC3, PEφ are scan output terminals.
• The switches in the matrix table can be turned ON with these terminals connected to PAφ〜3 and PBφ〜3 scan input terminals and diodes.
Tape 2 key scan matrix table
<table>
<tr><th></th><th>PCφ</th><th>PC1</th><th>PC2</th><th>PC3</th><th>PEφ</th></tr>
<tr><td>PAφ</td><td>REC INH (F)</td><td>REW</td><td>Auto rec Mute</td><td>Timer Play</td><td>Tape 1 Hall IC</td></tr>
<tr><td>PA1</td><td>REC INH (R)</td><td>FF</td><td>Pause</td><td>Timer Rec</td><td>Tape 2 Hall IC</td></tr>
<tr><td>PA2</td><td>FF/ REW</td><td>Reverse Play</td><td>Rec</td><td>Tape 1 Direction</td><td>Tape 1 Quick</td></tr>
<tr><td>PA3</td><td>Play</td><td>Forward Play</td><td>Stop</td><td>Tape 2 Direction</td><td>Tape 2 Quick</td></tr>
</table>
Tape 1 key scan matrix table
<table>
<tr><th></th><th>PCφ</th><th>PC1</th><th>PC2</th><th>PC3</th><th>PEφ</th></tr>
<tr><td>PBφ</td><td>REC INH (F)</td><td>REW</td><td>X2</td><td>⊂⊃</td><td>Synchro rec</td></tr>
<tr><td>PB1</td><td>REC INH (R)</td><td>FF</td><td>editing</td><td>⊃⊂</td><td>MS</td></tr>
<tr><td>PB2</td><td>FF/ REW</td><td>Reverse Play</td><td>Synchro start</td><td>dbx to NR out</td><td>Count</td></tr>
<tr><td>PB3</td><td>Play</td><td>Forward Play</td><td>stop</td><td>BS</td><td>X1/X2</td></tr>
</table></td></tr>
<tr><td>7.
〜
10.
15.</td><td>PCφ
〜
PC3
PEφ</td><td>Scan output
 
</td></tr>
<tr><td>11.</td><td>PDφ</td><td>• Non connection.</td></tr>
<tr><td>12.
16.</td><td>PD1
PE1</td><td>Direction LED
• "L" in Forward mode, "H" in Reverse mode.
• Forward and Reverse modes are set according to the state of direction switch with power ON.</td></tr>
<tr><td>13.
17.</td><td>PD2
PE2</td><td>Play LED
• "H" in play command, "L" in about 0.25sec. after stop command.
• In timer play mode, "H" in about 0.5sec. after power ON.
 

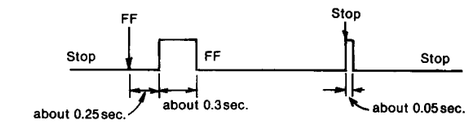
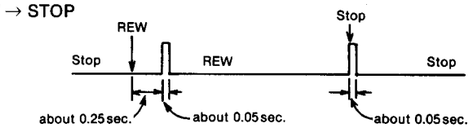
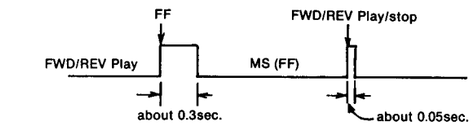
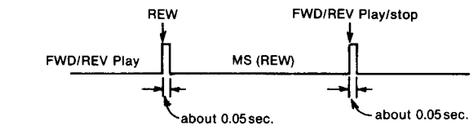
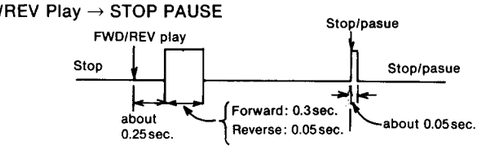
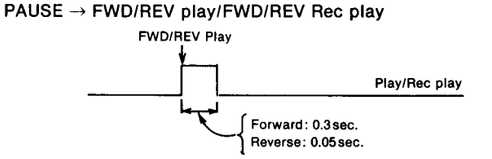
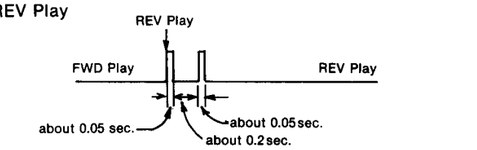
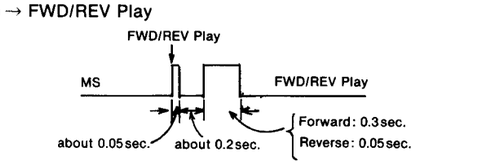
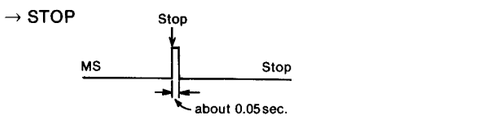
• In pause mode, with pause command given, "L" and "H" are repeated at intervals of about 1sec., "L" in immediately after stop command given.
 

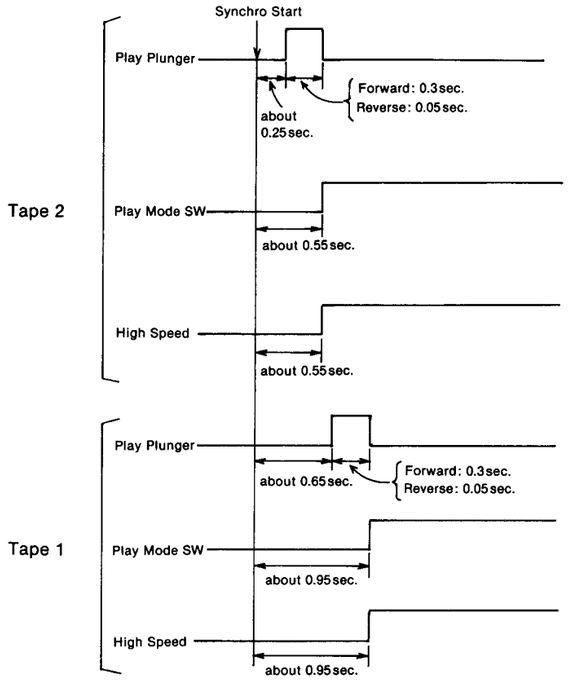
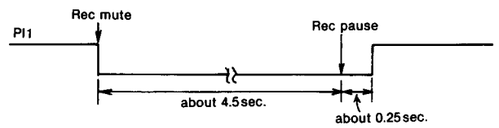
• In MS mode.
 
</td></tr>
</table>

<table>
<tr><th>Terminal No.</th><th>Symbol</th><th>Function/operation</th></tr>
<tr><td>14.
18.</td><td>PD3
PE3</td><td>REC LED
• "H" in immediately after rec command given, "L" in about 0.25sec. after stop command.
• In timer rec mode,
when ⊂⊃ mode, only when tape is loaded for both Tape 1 and Tape 2, it goes "H" about 0.5sec. after power ON.
when ⊂⊃ mode, only when tape is loaded for Tape 1, it goes "H" about 0.5sec. after power ON.
No change in ⊃⊂, ⊂⊃ mode.
 
</td></tr>
<tr><td>19.</td><td>RES</td><td>Reset terminal
• Used to reset the microcomputer when power is thrown in.
• Reset at "L" (less than 0.3 Volt).</td></tr>
<tr><td>20.</td><td>TEST</td><td>• Connection to GND.</td></tr>
<tr><td>21.</td><td>Vss</td><td>• Connection to GND.</td></tr>
<tr><td>22.
23.</td><td>OSC1
OSC2</td><td>Clock OSC Terminal
• Clock oscillation of about 800kHz.</td></tr>
<tr><td>24.</td><td>PFφ</td><td>Editing LED
• In play mode, about 0.15sec. after editing command,"L" → "H" or "H" → "L".
 
</td></tr>
<tr><td>25.</td><td>PF1</td><td>Non dbx editing LED
• In editing ON, X2 OFF, about 0.5sec. after non dbx editing command,"L" → "H" or "H"→ "L".
 
</td></tr>
<tr><td>26.</td><td>PF2</td><td>Tape 1 P.B. amp muting
• In tape 1, "H" in play, MS mode, "L" in stop, rec, pause, FF/REW, rec mode.
 
</td></tr>
<tr><td>27.</td><td>PF3</td><td>X2 LED
• In editing ON, stop mode, about 0.15sec. after X2 command, "L" → "H" or "H" → "L".
 
</td></tr>
</table>

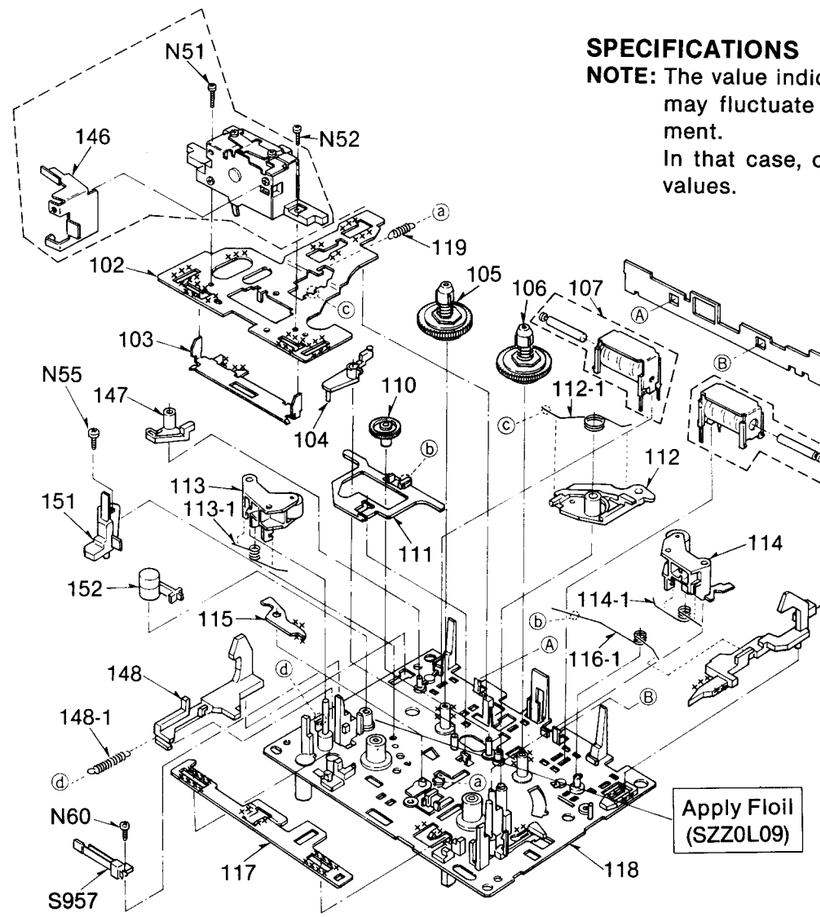
<table>
<tr><th>Terminal No.</th><th>Symbol</th></tr>
<tr><td>28.
32.</td><td>PGφ
PHφ</td></tr>
<tr><td>29.
33.</td><td>PG1
PH1</td></tr>
</table>

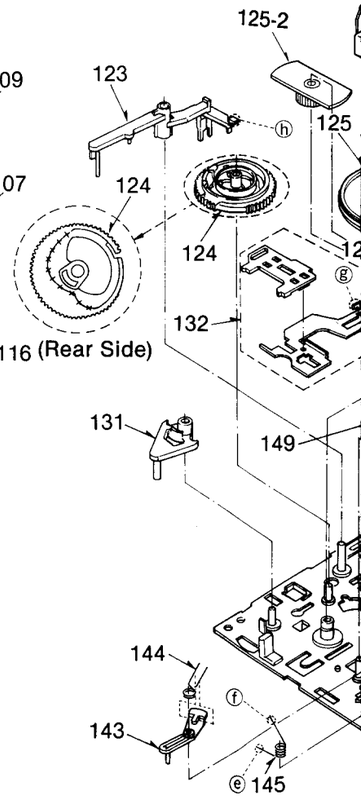
Terminal No.	Symbol	Function/operation
14. 18.	PD3 PE3	REC LED • "H" in immediately after rec command given, "L" in about 0.25sec. after stop command. • In timer rec mode, when ⊂⊃ mode, only when tape is loaded for both Tape 1 and Tape 2, it goes "H" about 0.5sec. after power ON. when ⊂⊃ mode, only when tape is loaded for Tape 1, it goes "H" about 0.5sec. after power ON. No change in ⊃, ⇄ mode. 
19.	RES	Reset terminal • Used to reset the microcomputer when power is thrown in. • Reset at "L" (less than 0.3 Volt).
20.	TEST	• Connection to GND.
21.	Vss	• Connection to GND.
22. 23.	OSC1 OSC2	Clock OSC Terminal • Clock oscillation of about 800kHz.
24.	PFφ	Editing LED • In play mode, about 0.15sec. after editing command,"L" → "H" or "H" → "L". 
25.	PF1	Non dbx editing LED • In editing ON, X2 OFF, about 0.5sec. after non dbx editing command,"L" → "H" or "H"→ "L". 
26.	PF2	Tape 1 P.B. amp muting • In tape 1, "H" in play, MS mode, "L" in stop, rec, pause, FF/REW, rec mode. 
27.	PF3	X2 LED • In editing ON, stop mode, about 0.15sec. after X2 command, "L" → "H" or "H" → "L". 

Terminal No.	Symbol	Function/operation
28. 32.	PGφ PHφ	FF/REW plunger output • "H" in a short period of time during selection of FF/REW/MS. STOP → FF → STOP  STOP → REW → STOP  FWD/REV Play → MS (FF) → FWD/REV Play/stop  FWD/REV Play → MS (REW) → FWD/REV Play/stop 
29. 33.	PG1 PH1	Play plunger output • "H" in a short period of time during selection of PLAY/REC PLAY/MS. STOP → FWD/REV Play → STOP PAUSE  PAUSE/REC PAUSE → FWD/REV play/FWD/REV Rec play  FWD Play → REV Play  MS (FF/REW) → FWD/REV Play  MS (FF/REW) → STOP 

Terminal No.	Symbol	Function/operation
30. 34.	PG2 PH2	Motor output • "L" in stop mode, and "H" in other mode.
31. 35.	PG3 PH3	High speed (Motor speed selector) • In editing ON, X2 ON.  **Note)** For Tape 1 and Tape 2 play mode switches, the actual measurement cannot be made because of scanning input.
36.	PIφ	Direct muting • In stop → play mode,"H" in about 0.85sec. after play command. • In pause → play mode,"H" in about 0.6sec. after play command. • In stop → rec pause mode,"H" in about 0.3sec. after rec command. • In MS → play mode,"H" in about 0.85sec. after play command.
37.	PI1	Rec mute • In rec pause mode, it goes "L" with auto rec mute button pressed, and "H" with it released. • In rec play mode, it goes "L" with auto rec mute button pressed, and "H" about 4.5sec. later in rec pause.  • When auto rec mute button is depressed for over 4.5sec., it goes "H" in rec pause mode on releasing the button. • When play button is pressed within about 4.5sec. after pressing the auto rec mute button, it goes "H" in rec play mode. • In a mode other than rec, the operation is the same as for direct muting.
38. 39.	HOLD INT	Input terminal of remote control serial signal • Input terminal of serial signal from external remote terminal. The serial signal is processed by the microcomputer to operate the mechanism. • "H" without input, negative logic serial signal with input given. **Note)** This microcomputer should be used with terminal No. 38 and 39 connected.
40.	V_{DD}	Power supply terminal • Operative on 5 Volts.

■ MECHANICAL PARTS LOCATION





SPECIFICATIONS

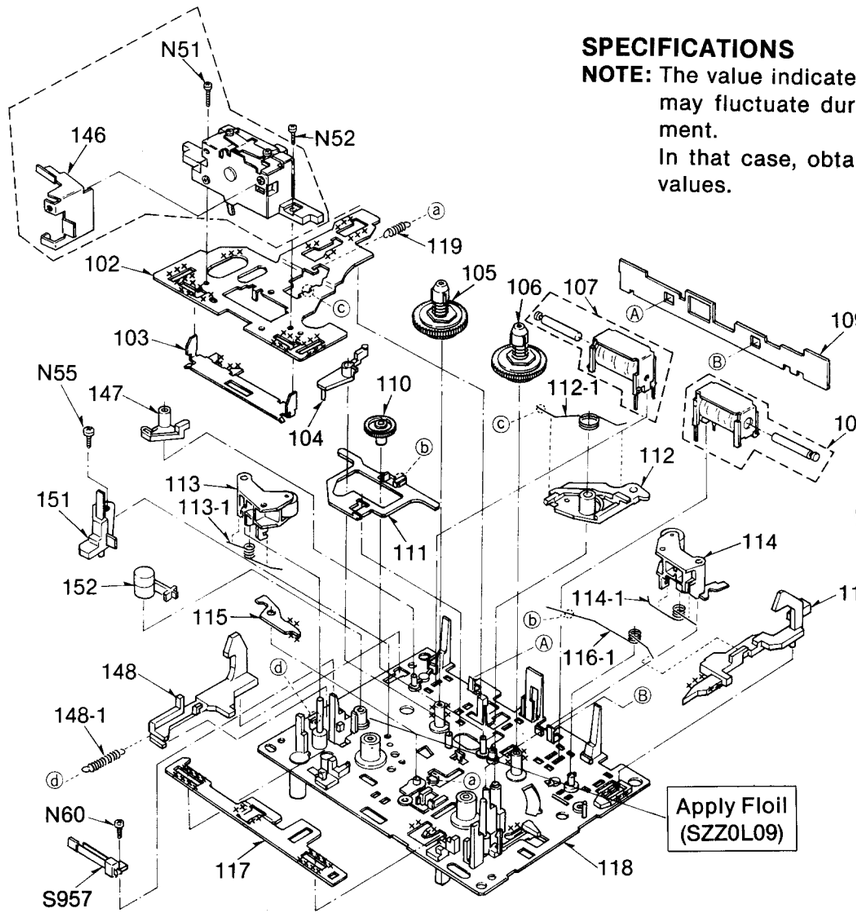
NOTE: The value indicated by the torque tape may fluctuate during torque measurement.
In that case, obtain the middle of the values.

NOTES:

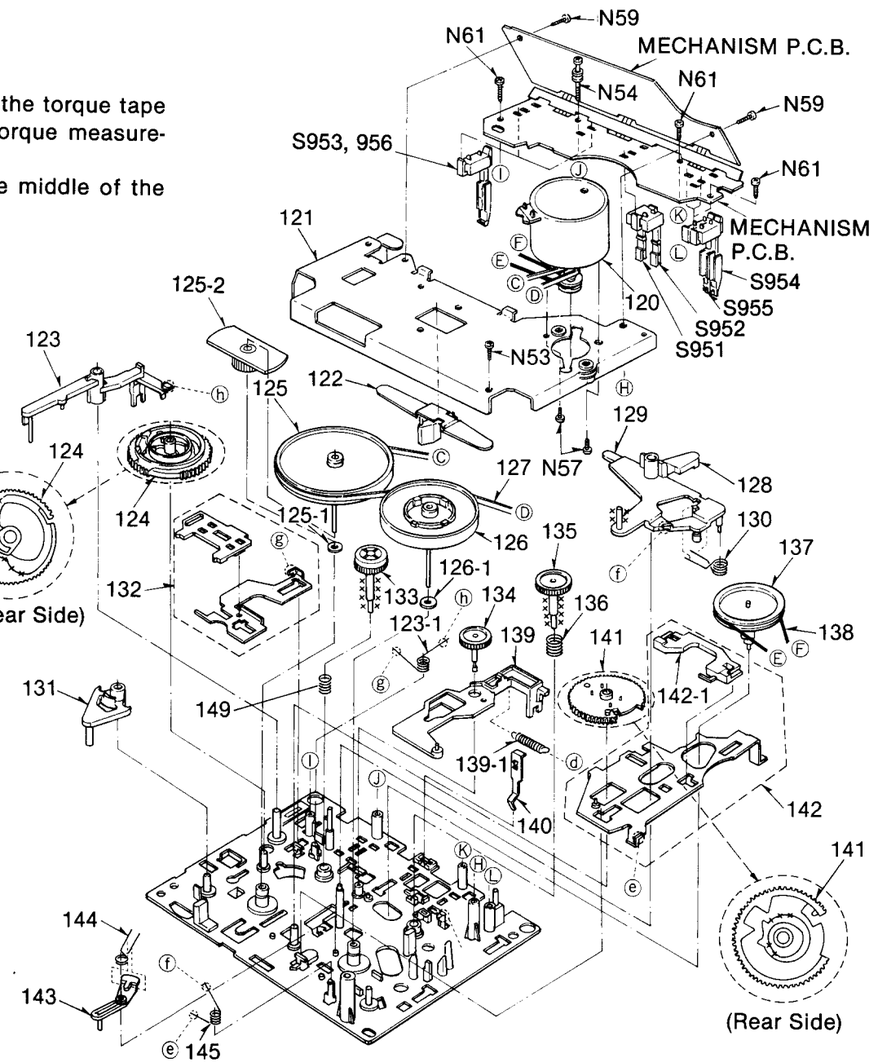
- When changing mechanism parts, apply the specified grease to the area marked "xx" shown in the drawing "Mechanical Parts Location".
- The grease and/or oil shown in the parentheses function to prevent friction (Inbrication).

■ MECHANICAL PARTS LOCATION

• Front View



• Back View



SPECIFICATIONS

NOTE: The value indicated by the torque tape may fluctuate during torque measurement.
In that case, obtain the middle of the values.

NOTES:

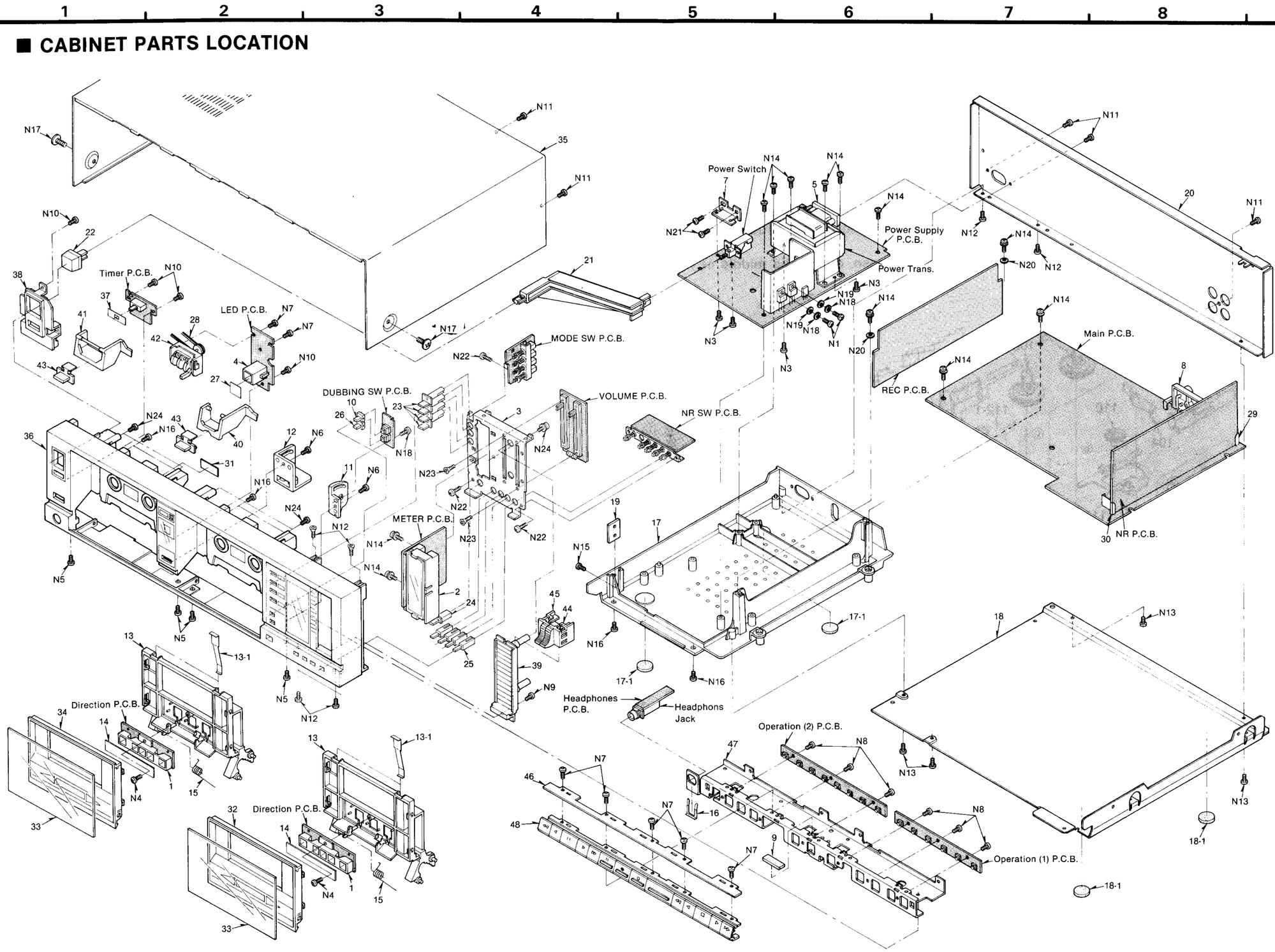
- When changing mechanism parts, apply the specified grease to the area marked "xx" shown in the drawing "Mechanical Parts Location".
- The grease and/or oil shown in the parentheses function to prevent friction (Inbrication).

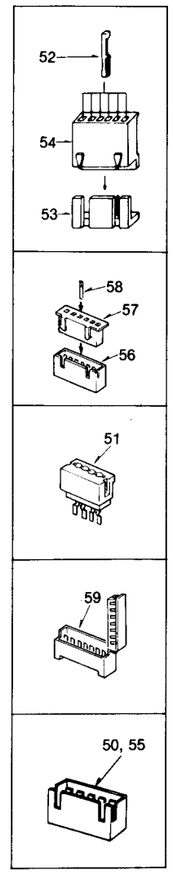
REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	
MECHANISM PARTS			
101	RMDG0014Z	Head Block Assy'	(2)
102	RUA9029X	Head Base Plate	(2)
103	RUB342Z	Rod	(2)
104	RUB347Z	Arm	(2)
105	RDMG0007Z	Reel Table (R) Ass'y	(2)
106	RDMG0008Z	Reel Table (F) Ass'y	(2)
107	RFP14Z	Plunger Ass'y	(4)
109	RUB344Z	Lever	(2)
110	RDG5772Z	Gear	(2)
111	RUB353Z	Rod	(2)
112	RUBG0001Z	Main Lever Ass'y	(2)
112-1	(RUW14Z	Spring	(2)
113	RUBG0006Z	Pinch Roller (R) Ass'y	(2)
113-1	(RUW12Z	Spring	(2)
114	RUBG0007Z	Pinch Roller (F) Ass'y	(2)
114-1	(RUW13Z	Spring	(2)
115	RUB343Z	Lever	(2)
116	RUB351Y	Rod	(2)
116-1	(RUW17Z	Spring	(2)
117	RUB341Z	Rod	(2)
118	RUAG0047Z	Mecha Chassis	(2)
119	RUD9Z	Spring	(2)
120	MMA6B2LWJSX	DC Motor Ass'y	(2)
121	RUL734Z	Bracket, Flywheel	(2)
122	RMD5001Z	Spacer	(2)
123	RUB350Z	Lever	(2)
123-1	(RUW10Z	Spring	(2)
124	RDG5776Z	Gear, Main	(2)
125	RDWG0019Z	Flywheel (F) Ass'y	(2)
125-1	{ QBW2049A	Washer (φ2.5)	(2)
125-2	{ RNG2Z	Gear, Capstan	(2)
126	RDWG0012Z	Flywheel (R) Ass'y	(2)
126-1	(QBW2099	Washer (φ2.2)	(2)
127	RDV57Z	Belt, Main (Flat)	(2)
128	RUB346Z	Arm	(2)
129	RUB348Z	Lever	(2)
130	RUW9Z	Spring	(2)
131	RUB354Z	Arm	(2)
132	RUBG0003Z	FR Rod Ass'y	(2)
133	RDGG0003Z	Reel Table Gear Ass'y	(2)
134	RDG5773Z	Gear, FF	(2)
135	RDG5769Z	Gear, Reel	(2)
136	RUQ10Z	Spring	(2)
137	RDRG0001Z	Main Pulley Ass'y	(2)
138	RDV42Z	Belt, FF (Square)	(2)
139	RUB349Z	Lever	(2)
139-1	(RUD8Z	Spring	(2)
140	RUS609Z	Spring	(2)
141	RDG5775Z	Gear, Sub	(2)
142	RUBG0004Z	FF Rod Ass'y	(2)
142-1	(RUB345Z	Rod	(2)
143	RUB359Z	Lever	(2)
144	RUW15Z	Spring Lever	(2)
145	RUW8Z	Spring	(2)
146	RMC1042Y	Shield Plate	(2)
147	RNL3Z	Arm	(2)
148	RNR3Z	Rod	(2)
148-1	(RUD22Z	Spring	(2)
149	RUQ30Z	Spring	(2)
151	RHRG0001Z	Reflection Plate Ass'y	(2)
152	RNL1Z	Arm	(2)
SCREWS			
N51	XTW2+8L	Screw, ⊕2×8	(2)
N52	XTW2+5L	Screw, ⊕2×5	(2)
N53	XTN26+7J	Screw, ⊕26×7	(2)
N54	XYC2+JF16	Screw, ⊕2×16	(2)
N55	XTN26+6F	Screw, ⊕26×6	(2)
N57	XSN26+3	Screw, ⊕26×3	(4)
N59	XTW26+8S	Screw, ⊕26×8	(4)
N60	XQN17+CF6	Screw, ⊕17×6	(2)
N61	XTW2+8S	Screw, ⊕2×8	(6)

RS-T80R RS-T80R

■ CABINET PARTS LOCATION





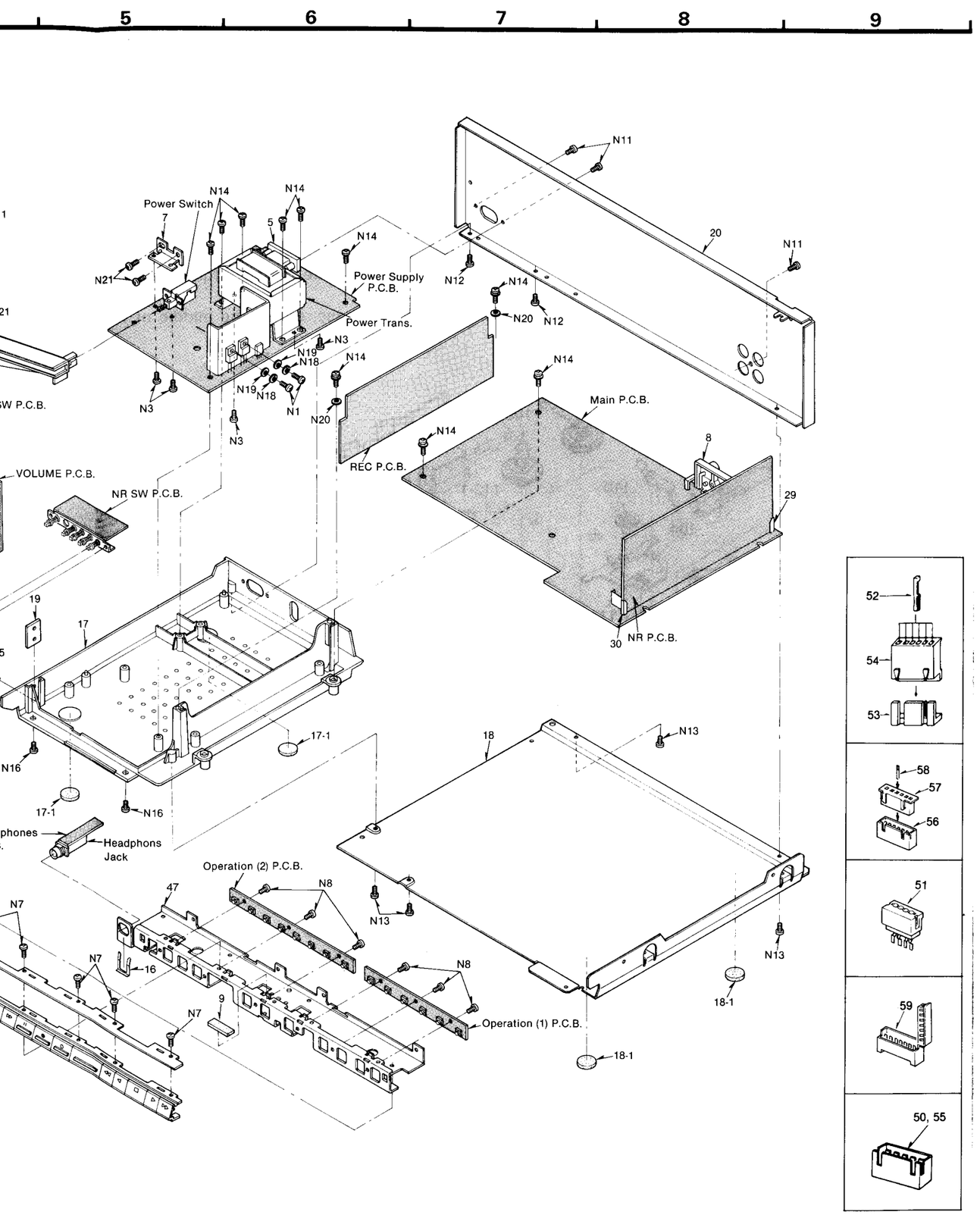
REPLACEMENT PA

Notes:
- Part numbers a Please use this
- Important safe Components i teristics impor When replacing turer's specifie

Areas

- * [M].....U.S.A.
- * [MC].....Canada.
- * [E].....All European a Kingdom.
- * [EK].....United Kingdor

Ref. No.		Part No.	Pa
CABINET and CHASSIS PA			
1		SMPM9	
2		SGXM30	
3		SUWM7	
4		SMPM10	
5 except [XL]	⚠	SJS9230 – 1	
5 [XL] only	⚠	SJS9235 – 1	
7		SUWM6	
8		QEJ5033	
9		SHGM6003 – 1	
10		SBC793	
11		QYF0627A	
12		SXDM16	
13		SGXMSW8R – KN1	
13 – 1		QBP2006A	
14		SHRM5008	
15		SUSM10	
16		QMA4624	
17		SKUST80R – KM1	
17 – 1		SKL245 – 3	
18		SKUST80R – KM2	
18 – 1		SKL245 – 3	
19		SUWM5	
20 [E]		SGP6690 – 10	
20 [M]		SGP6690 – 2	
20 [MC]		SGP6690 – 4	
20 [EK]		SGP6690 – 6	
20 [EH] [EG]		SGP6690 – 8	
20 [XA]		SGP6690 – 12	
20 [PA] [PE]		SGP6690 – 15	
20 [XL] [XB]		SGP6690 – 17	
21		SUBM12 – 2	
22		SBC666 – 3	
23		SBC791	
24		SBC792	
25		SBC794	
26		SBC793 – 1	
27		SHRM2	
28		QDB0218	
29		SME103 – 4	
30		SME103 – 5	
31		SGXM29	
32		SGXST80R – KM1	
33		SGUM21	
34		SGXST80R – KM2	
35		SKC1850K991	
36		SGYST80R – KM	
37		SHRM5007	



REPLACEMENT PARTS LIST

Notes:
- Part numbers are indicated on most mechanical parts. Please use this part number for parts order.
- Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- The parenthesized numbers in the column of description stand for the quantity per set.

Areas

* [M].....U.S.A. * [MC].....Canada. * [E].....All European areas except United Kingdom. * [EK].....United Kingdom.	* [EG].....F.R. Germany. * [EH].....Holland. * [XL].....Australia. * [XA].....Asia, Latin America, Middle East and Africa.	* [PA].....Far East PX. * [PE].....European Military. * [XB].....Saudi Arabia.

Ref. No.	Part No.	Part Name & Description	
CABINET and CHASSIS PARTS			
1	SMPM9	LED Case	(1)
2	SGXM30	FL Meter Holder	(1)
3	SUWM7	FL Angle	(1)
4	SMPM10	Case	(1)
5 except [XL]	⚠ SJS9230-1	AC Inlet	(1)
5 [XL] only	⚠ SJS9235-1	AC Inlet	(1)
7	SUWM6	Switch Angle	(1)
8	QEJ5033	Jack Board	(1)
9	SHGM6003-1	Spacer	(1)
10	SBC793	Dubbing Button	(2)
11	QYF0627A	Damper Gerar Ass'y	(1)
12	SXDM16	Damper Gear Ass'y	(1)
13	SGXMSW8R-KN1	Cassette Holder Ass'y	(2)
13-1	QBP2006A	Tape Pressure Spring	(4)
14	SHRM5008	Plastic Spacer	(2)
15	SUSM10	Holder Spring	(2)
16	QMA4624	Headphones Angle	(1)
17	SKUST80R-KM1	Bottom Cover Ass'y	(1)
17-1	SKL245-3	Case Foot	(2)
18	SKUST80R-KM2	Bottom Plate Ass'y	(1)
18-1	SKL245-3	Case Foot	(2)
19	SUWM5	Bracket (Case Cover)	(1)
20 [E]	SGP6690-10	Back Chassis	(1)
20 [M]	SGP6690-2	Back Chassis	(1)
20 [MC]	SGP6690-4	Back Chassis	(1)
20 [EK]	SGP6690-6	Back Chassis	(1)
20 [EH] [EG]	SGP6690-8	Back Chassis	(1)
20 [XA]	SGP6690-12	Back Chassis	(1)
20 [PA] [PE]	SGP6690-15	Back Chassis	(1)
20 [XL] [XB]	SGP6690-17	Back Chassis	(1)
21	SUBM12-2	Power Rod	(1)
22	SBC666-3	Power Button	(1)
23	SBC791	Mode Select Button	(4)
24	SBC792	BS Button	(1)
25	SBC794	NR Button	(4)
26	SBC793-1	Dubbing Button	(1)
27	SHRM2	Plastic Parts	(1)
28	QDB0218	Counter Belt	(1)
29	SME103-4	Shield Parts	(1)
30	SME103-5	Magnetic Shield Parts	(1)
31	SGXM29	Ornament	(1)
32	SGXST80R-KM1	Cassette Lid (1) Ass'y	(1)
33	SGUM21	Glass Plate	(2)
34	SGXST80R-KM2	Cassette Lid (2) Ass'y	(1)
35	SKC1850K991	Case Cover	(1)
36	SGYST80R-KM	Front panel Ass'y	(1)
37	SHRM5007	Plastic Spacer	(1)
38	SHRM9014	Power Button Guide	(1)
39	SHRMSW8R-KN	Slide Guide Ass'y	(1)
40	SMQM30013	Eject Lever 1	(1)
41	SMQM30014	Eject Lever 2	(1)
42	SJN17	Tape Counter	(1)
43	SBC776	Eject Button	(2)
44	SBD128	Knob R	(1)
45	SBD129	Knob L	(1)
46	SUWM3	Bracket	(1)
47	SUWM4	Button Angle	(1)
48	SBCSW8R-KN	Operation Button Ass'y	(1)
50	SJT30939MB	9 Pin Terminal	(1)
50	SJT31039MB	10 Pin Terminal	(1)
51	SJT30343-V	3 Pin Terminal	(3)
51	SJT30543-V	5 Pin Terminal	(2)
51	SJT30643-V	6 Pin Terminal	(4)
51	SJT30743-V	7 Pin Terminal	(1)
51	SJT31043-V	10 Pin Terminal	(1)
51	SJT30443-V	4 Pin Terminal	(1)
52	QJT1054	Contact	(18)
53	QJP1920TN	2 Pin Plug	(3)
53	QJP1921TN	3 Pin Plug	(2)
53	QJP1922TN	6 Pin Plug	(1)
54	QJS1920TN	2 Pin Socket	(3)
54	QJS1921TN	3 Pin Socket	(2)
54	QJS1922TN	6 Pin Socket	(1)
55	SJT30342PH	3 Pin Terminal	(2)
55	SJT30542PH	5 Pin Terminal	(2)
56	SJT3319	3 Pin Connector	(2)
56	SJT3415	4 Pin Connector	(1)
56	SJT3511	5 Pin Connector	(2)
56	SJT3809	8 Pin Connector	(1)
57	SJS5331	3 Pin Socket	(2)
57	SJS5425	4 Pin Socket	(1)
57	SJS5523	5 Pin Socket	(2)
57	SJS5811	8 Pin Socket	(1)
58	SJT795	Contact	(28)
SCREWS, NUTS & WASHERS			
N1	XSN3+8S	Screw, ⊕3×8	(2)
N3	XTB3+6J	Tapping, ⊕3×6	(3)
N4	XTB26+6JFZ	Tapping, ⊕2.6×6	(2)
N5	XTS3+10J	Tapping, ⊕3×10	(5)
N6	XTN3+10J	Tapping, ⊕3×10	(2)
N7	XTB26+6JFZ	Tapping, ⊕2.6×6	(7)
N8	XTV26+5JR	Tapping, ⊕2.6×5	(6)
N9	XTV26+6J	Tapping, ⊕2.6×6	(1)
N10	XTV26+8JR	Tapping, ⊕2.6×8	(4)
N11	XTB3+10JFZ	Tapping, ⊕3×10	(6)
N12	XTB3+10J	Tapping, ⊕3×10	(6)
N13	XTB3+10JR	Tapping, ⊕3×10	(4)
N14	XTW3+10T	Tapping, ⊕3×10	(12)
N15	XTS3+10J	Tapping, ⊕3×10	(1)
N16	XTS3+6FR	Tapping, ⊕3×6	(6)
N17	SNE2118-1	Ornament Screw	(2)
N18	XWA3B	Washer, ϕ3	(2)
N19	XWG3	Washer, ϕ3	(2)
N20	SHWM32F100	Washer	(2)
N21	XSN3+6S	Screw, ⊕3×6	(2)
N22	XTV3+6FR	Tapping, ⊕3×6	(3)
N23	XSS2+3	Screw, ⊕2×3	(2)
N24	XTW3+10TR	Tapping, ⊕3×10	(5)
ACCESSORIES			
A1 [M]	SQFM35	Instruction Book	(1)
A1 [MC]	SQFM39	Instruction Book	(1)
A1 [E] [EH] [XA] [XL] [XB]	SQFM40	Instruction Book	(1)
A1 [EK]	SQFM41	Instruction Book	(1)
A1 [EG]	SQFM42	Instruction Book	(1)
A1 [PA] [PE]	SQFM43	Instruction Book	(1)
A2	SJP2264	Connection Cord	(1)
A3 [XB]	SJA183	Power Cord	(1)
A3 [M] [MC]	⚠ SJA166	Power Cord	(1)
A3 [E] [EH] [EG]	⚠ SFDAC05E02	Power Cord	(1)
A3 [EK]	⚠ SFDAC05G02	Power Cord	(1)
A3 [XL]	⚠ SJA173	Power Cord	(1)
A3 [XA] [PA] [PE]	⚠ SJA168-1	Power Cord	(1)
A4 [XA] [XB] only	⚠ SJP9215	AC Plug Adaptor	(1)
A5 [M] [MC] [PA] [PE]	SJP2257	Synchro Cord	(1)
PACKINGS			
P1 [M]	SPGM61	Carton Box	(1)
P1 [MC] [E] [EH] [EG] [XL] [PA] [PE]	SPGM63	Carton Box	(1)
P1 [EK]	SPGM64	Carton Box	(1)
P1 [XA] [XB]	SPGM65	Carton Box	(1)
P2	SPSM10-1	Pad-F	(1)
P3	SPSM11	Pad-R	(1)
P4 except [XA] [XB]	SPSM12	Pad	(1)
P5	XZB40X60A02	Protection Cover	(1)

Printed in Japan
860308600 Ⓗ AH/TN/MS

ORDER NO. HAD8603405C0-A

Dolby B • C NR, Auto-Reverse Double Cassette Deck with Series Recording Function

RS-T80R

DEUTSCH

DEUTSCH

■ MESSUNGEN UND EINSTELL METHODEN

Meßinstrumente

- Elektronisches Voltmeter (EVM)
- Oszilloskop
- Digitaler Frequenzmesser
- Audiofrequenz-Oszillator
- Dämpfungswiderstand
- Gleichstrom-Voltmeter
- Widerstand (600Ω)

Kopfazimut-Justierung

1. Die Anschlußverbindungen für die Testgeräte sind in Abb. 1 gezeigt.
2. Den Azimut-Justierungsteil (8kHz, −20dB) des Testbandes (QZZCFM) wiedergeben und die Winkel-justierungs-Einstellschraube so verstellen, daß der Ausgang vom linken und rechten Kanal maximal wird. (Wenn die Justierpositionen für den linken und rechten Kanal verschieden sind, ist eine Position zu finden, wo der Ausgang des linken und rechten Kanals ausgelichen ist, und dann ist die Justierung durchzuführen.)
3. Gleichzeitig eine Lissajous-Wellenform ziehen und Phasenablenkung eliminieren.
4. Dieselbe Justierung ist auch für die Rückwärts-Wiedergabe-Betriebsart durchzuführen.

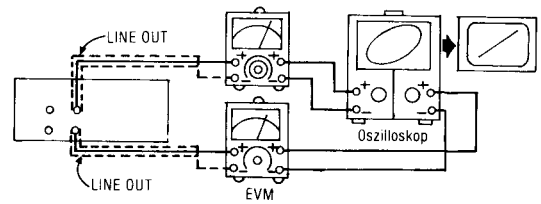


Abb. 1

Prüfung des Vorwärts-und Rückwärts-Rotationspegel-Unterschieds.

5. Den für Wiedergabe-Verstärkungsgrad justierten Teil (315Hz, 0dB) des Testbandes (QZZCFM) wiedergeben und dann prüfen, ob der Vorwärts-und Rückwärts-Rotationspegel-Unterschied innerhalb 1dB liegt.
6. Nach der Justierung ist die Winkel-Justierschraube mit Lack zu sichern.

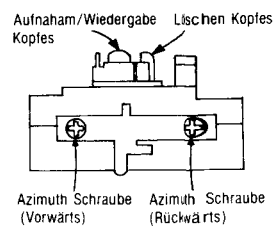


Abb. 2

Bandgeschwindigkeits-Justierung

Normalgeschwindigkeit

1. Der Testaufbau ist in Abb. 3 gezeigt.
2. Den mittleren Teil des Testbandes (QZZCWAT) wiedergeben.
3. Den Drehwiderstand 952 so justieren, daß die Ausgangsleistung dem Standard-Wert entspricht.

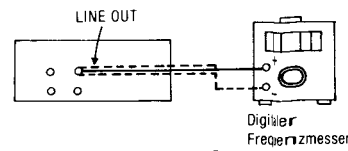


Abb. 3

Hohe Geschwindigkeit

4. Den Überspielungsgeschwindigkeits-Wahlschalter auf "X2" einstellen und den Testpunkt 951 an Masse legen.
5. Den mittleren Teil des Testbandes (QZZCWAT) wiedergeben.
6. Den Drehwiderstand 951 so justieren daß die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: 3000±10Hz (Normal), 6000±20Hz (High)

Wiedergabe-Frequenzgang

1. Der Testaufbau ist in Abb. 4 gezeigt.
2. Den Wiedergabe-Frequenzgangteil (315Hz, 12,5kHz~63Hz, −20dB) des Testbandes (QZZCFM) wiedergeben.
3. Überprüfen, ob der Frequenzgang innerhalb des in Abb. 5 für den linken und rechten Kanal gezeigten Bereichs liegt.

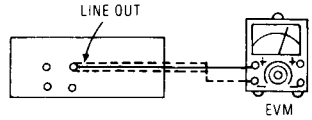


Abb. 4

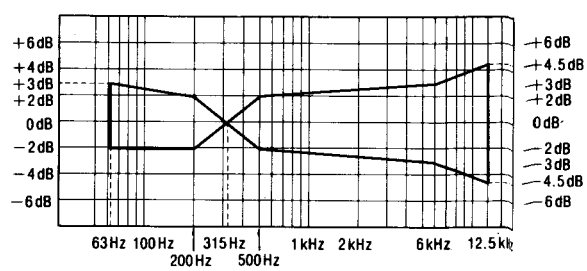


Abb. 5

Justierung des Wiedergabe-Verstärkungsgrades

1. Der Testaufbau ist in Abb. 4 gezeigt.
2. Den für den Wiedergabe-Verstärkungsgrad justierten Teil (315Hz, 0dB) des Testbandes (QZZCFM) wiedergaben.
3. Den Drehwiderstand 1 (linker Kanal) {Drehwiderstand 2 (rechter Kanal)} für TAPE [1] und den Drehwiderstand 3 (linker Kanal) {Drehwiderstand 4 (rechter Kanal)} für TAPE [2] so justieren, daß die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: 0,4±0,02V

Löschstrom-Justierung

1. Der Testaufbau ist in Abb. 6 gezeigt.
2. Eine Reineisenband-Cassette einsetzen.
3. Die Aufnahmetaste und die Pausentaste drücken.
4. Den Drehwiderstand 301 für TAPE [1] und den Drehwiderstand 302 für TAPE [2] so justieren, daß die Ausgangsleistung zwischen Testpunkt 5 für TAPE [1] und Testpunkt 6 für TAPE [2] und Masse dem Standard-Wert entspricht.

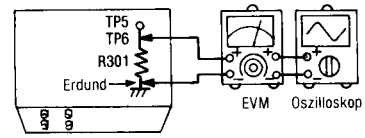


Abb. 6

Löschstrom (A) = $\frac{\text{Spannung über Widerstand R301}}{1\,(\Omega)}$

Standard-Wert: 185±5mA (Metal), (185±5mV)

Justierung des Vormagnetisierungsstroms

1. Der Testaufbau ist in Abb. 7 gezeigt.
2. Eine Normalband-Cassette einsetzen.
3. Die Aufnahmetaste und die Pausentaste drücken.
4. Den Eingangspegelregler auf Minimum einstellen und den Drehwiderstand 101 (linker Kanal) {Drehwiderstand 102 (rechter Kanal)} für TAPE [1] und den Drehwiderstand 103 (linker Kanal) {Drehwiderstand 104 (rechter Kanal)} für TAPE [2] so einstellen, daß die Ausgangsleistung zwischen Testpunkt 1 (linker Kanal) {Testpunkt 2 (rechter Kanal)} für TAPE [1] und Testpunkt 3 (linker Kanal) {Testpunkt 4 (rechter Kanal)} für TAPE [2] und Masse dem Standard-Wert entspricht.
5. Anschließend für CrO_2-und Reineisenband auf gleiche Weise prüfen.

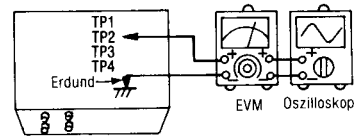


Abb. 7

Referenzwert:
600µA (Normal) (6mV)
800µA (CrO_2) (8mV)
1200µA (Metal) (12mV)

Gesamtfrequenzgang

1. Der Testaufbau ist in Abb. 8 gezeigt.
2. Die Basis des Transistors Q41 (Linker Kanal) {Q42 (Rechter Kanal)} an Masse anschließen.
3. Eine Normalband-Leercassette (QZZCRA) einsetzen und aufnehmen, während ein Signal von nacheinander 50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz, 10kHz und 12,5kHz bei 20dB, abgeschwächt vom Referenz-Eingangspegelsignal (1kHz, −24dB) eingegeben wird.

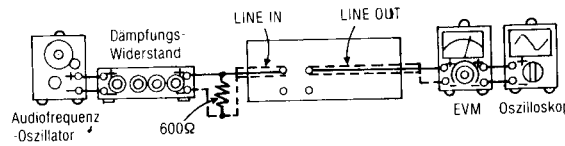


Abb. 8

4. Das in Schritt 3 aufgezeichnete Signal wiedergeben und prufen, ob der Pegel jeder Ausgangsfrequenz im Bereich liegt, der in Abb. 9 in Vergleich zur Referenzfrequenc (1kHz) gezeigt wird.
5. Falls er nicht im Standard-Bereich liegt, ist der Vormagnetisierungs-strom mit Drehwiderstand 101 (linker Kanal) {Drehwiderstand 102 (rechter Kanal)} für TAPE [1] und den Drehwiderstand 103 (linker Kanal) {Drehwiderstand 104 (rechter Kanal)} für TAPE [2] so zu justieren, daß der Frequenzpegel innerhalb des standards zuliegen kommt.
   - Erhöhter Pegel im Frequenzbereich..... Den Vormagnetisierungsstrom erhöhen.
   - Reduzierter Pegel im Frequenzbereich..... Den Vormagnetisierungsstrom senken.
6. Anschließend das auf der CrO_2-Leerband-Cassette (QZZCRX) und der Reineisenband-Leercassette (QZZCRZ) aufgezeichnete Signal auf 15kHz erhöhen und auf gleiche Weise justieren, wie vorgehend beschrieben. Dann überprüfen, ob der Frequenzpegel innerhalb des in Abb. 10 gezeigten Bereichs liegt.

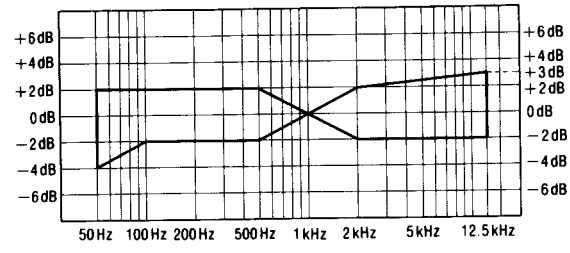


Abb. 9

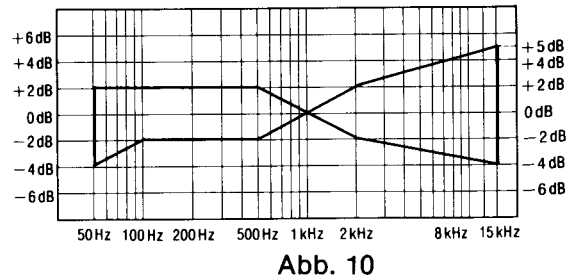


Abb. 10

Justierung des Gesamtverstärkungsgrades

1. Der Testaufbau ist in Abb. 8 gezeigt.
2. Die Basis des Transistors Q41 (Linker Kanal) {Q42 (Rechter Kanal)} an Masse anschließen.
3. Ein Normalband-Leercassette (QZZCRA) einsetzen und im Aufnahmepause-Zustand des Gerätes das Referenzsignal (1kHz, −24dB) eingeben.
4. Die Ausgangsleistung mit dem Dämpfungswiderstand auf 0.4V justieren und dann aufnehmen.
5. Das in Schritt 4 aufgezeichnete Signal wiedergeben und überprüfen, ob die Ausgongsleistung dem Standard-Wert entspricht.
6. Falls sie nicht dem Standard-Wert entspricht, ist der Drehwiderstand 151 (linker Kanal) {Drehwiderstand 152 (rechter Kanal)} für TAPE [1] und den Drehwiderstand 201 (linker Kanal) {Drehwiderstand 202 (rechter Kanal)} für TAPE [2] Zu justieren, und dann sind die Schritte (2), (3) und (4) zu Wiederholen, bis die Ausgangsleistung dem Standard-Wert entspricht.

Standard-Wert: 0,4V±0,5dB (0,02V)

Justierung des Fluoreszenzmeters

1. Der Testaufbau ist in Abb. 8 gezeigt.
2. Die Basis des Transistors Q41 (Linker Kanal) {Q42 (Rechter Kanal)} an Masse anschließen.
3. Eine Normal band-Leercassette (QZZCRA) einsetzen und im Aufnahmepause-Zustand des Gerätes das Referenz-Eingangspegelsignal (1kHz, −24dB) eingeben.
4. Die Ausgangsleistung mit dem Dämpfungswiderstand auf 0,4V justieren.
5. Den Drehwiderstand 703 (linker Kanal) {Drehwiderstand 704 (rechter Kanal)} so justieren, daß der 0dB-Segmentteil halb beleuchtet ist. (Siehe Abb. 11)

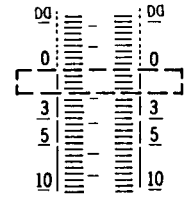


Abb. 11

Dolby-Rauschunterdrückungs-Schaltkreis

1. Der Testaufbau ist in Abb 12 gezeigt.
2. Eine Normalband-Cassette einsetzen und im Aufnahmepause-Zustand des Gerätes ein 5kHz-Signal eingeben.
3. Mit dem Dämpfungswiderstand so justieren, daß die Ausgangsleistung zwischen Anschluß ⑦ des IC401 (linker kanal) {IC402 (rechter Kanal)} und Masse 12.3mV beträgt.

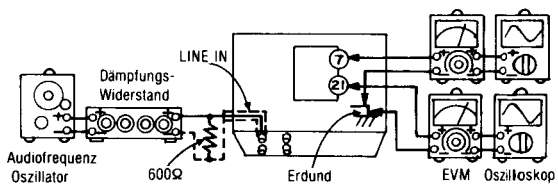


Abb. 12

— Dolby-B (Kodierungseigenschaft) —

4. Den Rauschunterdrückungs-Schaltkreis (NR) auf "Dolby B" einstellen und das Eingangssignal auf 1kHz, 5kHz verändern.
5. Überprüfen, ob die Ausgangsleistung zwischen Anschluß ㉑ des IC401 (linker Kanal) {IC402 (rechter Kanal)} und Masse wie vorgeschrieben gegenüber dem Pegel im rauschunterdrückungsfreiem Zustand verändert wird.

Standard-Wert: 6±2,5dB (1kHz), 8±2,5dB (5kHz)

— Dolby-C (Kodierungseigenschaft) —

6. Den Rauschunterdrückungs-Schalter (NR) auf "Dolby C" einstellen und das Eingangssignal auf 1kHz, 5kHz verändern.
7. Überprüfen, ob die Ausgangsleistung zwischen Anschluß ㉑ des IC401 (linker Kanal) {IC402 (rechter Kanal)} und Masse wie vorgeschrieben gegenüber dem Pegel im rauschunterdrückungsfreiem Zustand verändert wird.

Standard-Wert: 11,5±2,5dB (1kHz), 8,5±2,5dB (5kHz)

FRANÇAIS

■ METHODES DES MEASURES ET REGLAGES

Appareils de mesurage

- Voltmètre électronique
- Oscilloscope
- Compteur de fréquence numérique
- Oscillateur de fréquence audio
- A.T.T. (Atténuateur)
- Voltmètre à C.C.
- Résistance (600Ω)

Réglage de l'angle des têtes de lecture

1. Le raccordement de l'équipement d'essai est montré à la Fig. 1.
2. Faire jouer la partie réglée azimutale (8kHz, −20dB) de la bande d'essai (QZZCFM) et régler la vis de mise au point azimutale de telle sorte que les puissances de sortie du canal de gauche et du canal de droite soient au maximum. (Si les positions de réglage du canal de gauche et du canal de droite sont différentes, trouver une position où les puissances de sortie des canaux de gauche et de droite soient équilibrées, puis effectuer la mise au point.)
3. En même temps, établir une forme d'onde de Lissajous et éliminer la déviation de phase.
4. Effectuer le même réglage sur le mode d'audition en sens inverse. Vérifier la différence de niveau de rotation en marche avant et en marche arrière.

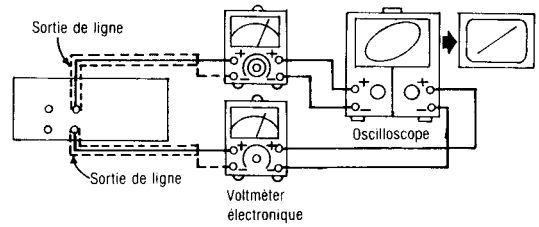


Fig. 1

Vérifier la différence de niveau de rotation en marche avant et en marche arrière.

5. Faire jouer la partie réglée de l'amplification de la lecture (315Hz, 0dB) de la bande d'essai (QZZCFM), puis vérifier que la différence de niveau de rotation de la marche avant et de la marche arrière soit en deçà de 1dB.
6. Après le réglage, appliquer un blocage de vis à la vis de réglage azimutale.

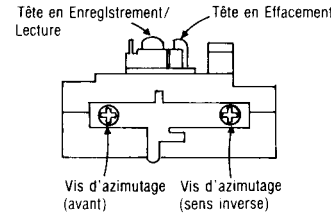


Fig. 2

Réglage de la vitesse de défilement de la bande

Vitesse de défilement normale

1. Le raccordement de L'équipement d'essai est montré à la Fig. 3.
2. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
3. Régler La VR952 de telle sorte que la puissance de sortie soit en deçà de la normale.

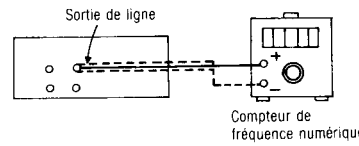


Fig. 3

Vitesse de défilement élevée

4. Régler le commutateur de vitesse de mixage sur "X2" et relier à la terre TP951.
5. Faire jouer la partie centrale de la bande d'essai (QZZCWAT).
6. Régler La VR951 de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 3000±10Hz (Normale), 6000±20Hz (Elevée)

Réponse en fréquence de la lecture

1. Le raccordement de l'équipment d'essai est montré à la Fig. 4.
2. Faire jouer la partie de la réponse en fréquence de la lecture (315Hz, 12,5kHz~63Hz, −20dB) de la bande d'essai (QZZCFM).
3. Vérifier que la fréquence soit en deçà de la plage montrée à la Fig. 5, à la fois pour le canal de gauche et le canal de droite.

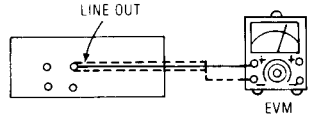


Fig. 4

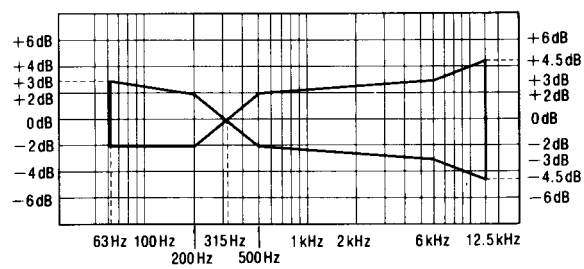


Fig. 5

Réglage d'amplification de la lecture

1. Le raccordement de l'équipement d'essai est montré à la Fig. 4.
2. Faire jouer la partie réglée d'amplification de la lecture (315Hz, 0dB) de la bande d'essai (QZZCFM).
3. Régler la BANDE [1]: VR1 (canal de gauche) [VR2 (canal de droite)] et la BANDE [2]: VR3 (canal de gauche) [VR4 (canal de droite)] de telle sorte que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 0,4±0,02V

Réglage de la tension d'effacement

1. Le raccordement de l'équipement d'essai est montré à la Fig. 6.
2. Introduire la bande métallisée.
3. Appuyer sur les touches d'enregistrement et d'intermission.
4. Régler BANDE [1]: VR301 et BANDE [2]: VR302 de telle sorte que la puissance de sortie entre BANDE [1]: TP5 et BANDE [2]: TP6 et la masse soit en deçà de la normale.

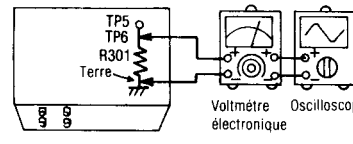


Fig. 6

Valeur normalisée: 185±5mA (Métallisée) (185±5mV)

$$\text{Caurant d'effacement} = \frac{\text{Tension à travers la résistance R301}}{1\,(\Omega)}$$

Réglage du courant de polarisation

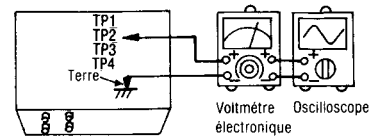


Fig. 7

1. Le raccordement de l'équipement d'essai est montré à la Fig. 7.
2. Introduire la bande normale.
3. Appuyer sur les touches d'enregistrement et d'intermission.
4. Réduire au minimum la commande du niveau d'entrée et régler BANDE [1]: VR101 (canal de gauche) {VR102 (canal de droite)} et BANDE [2]: VR103 (canal de gauche) {VR104 (canal de droite)} de telle sorte que la puissance de sortie entre BANDE [1]: TP1 (canal de gauche) {TP2 (canal de droite)} et BANDE [2]: TP3 (canal de gauche) {TP4 (canal de droite)} et la masse soit en deçà de la normale.
5. Après cela, vérifier de la même manière pour la bande CrO_2 et la bande métallisée.

Valeur de référence: **600 μA (Normale), (6 mV)**
800 μA (CrO_2) (8 mV)
1200 μA (Métallisée) (12 mV)

Réponse en fréquence globale

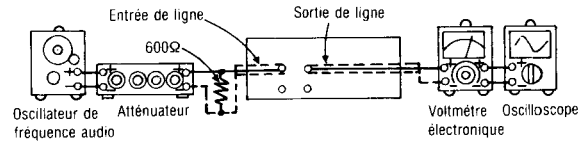


Fig. 8

1. Le raccordement de l'équipement d'essai est montré à al Fig. 8.
2. Relier à la terre la base du transistor Q41 (canal de gauche) {Q42 (canal de droite)}.
3. Installer une bande vierge normale (QZZCRA) et enregistrer en appliquant un signal (50 Hz, 100 Hz, 200 Hz, 500 Hz, 1 kHz, 4 kHz, 8 kHz, 10 kHz, et 12,5 kHz) de 20 dB atténués provenant du signal du niveau d'entrée de référence (1 kHz, −24 dB).
4. Faire jouer le signal enregistré à l'étape 3 et vérifier que le niveau de chaque fréquence de sortie soit en deçà de la plage montrée à la Fig. 9 en comparaison avec la fréquence de référence (1 kHz).
5. S'il n'est pas en deçà de la plage standard, régler le courant de polarisation avec BANDE [1]: VR101 (canal de gauche) {VR102 (canal de droite)} et BANDE [2]: VR103 (canal de gauche) {VR104 (canal de droite)} de telle sorte que le niveau de fréquence soit en deçà de la normale.
   • Niveau vers la haut dans la plage de fréquence élevée..... Augmenter le courant de polarisation.
   • Niveau vers le bas dans la plage de fréquence élevée ..... Diminuer le courant de polarisation.
6. Après cela, amplifier le signal enregistré sur la bande vierge CrO_2 (QZZCRX) et la bande vierge métallisée (QZZCRZ) jusqu'à 15 kHz et régler de la même manière que celle mentionnée ci-dessus. Puis, vérifier que le niveau de fréquence soit en deçà de la plage montrée à la Fig. 10.

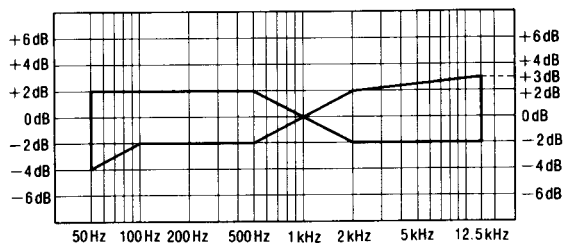


Fig. 9

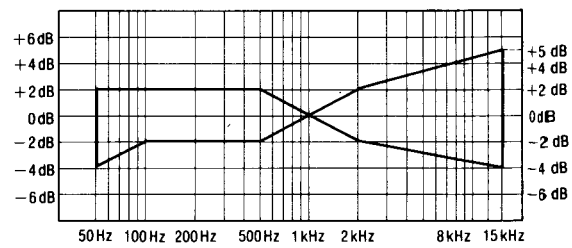


Fig. 10

Réglage d'amplification globale

1. Le raccordement de l'équipement d'essai est montré à la Fig. 8.
2. Relier à la terre la base du transistor Q41 (canal de gauche) {Q42 (canal de droite)}.
3. Installer une bande vierge normale (QZZCRA) et appliquer le signal de niveau d'entrée de référence (1 kHz, −24 dB) sur le mode d'intermission d'enregistrement.
4. Régler la puissance de sortie 0,4 V avec l'atténuateur, puis enregistrer.
5. Faire jouer le signal enregistré à l'étape 4 et vérifier que la puissance de sortie soit en deçà de la normale.
6. Si elle n'est pas en deçà de la normale, régler BANDE [1]: VR151 (canal de gauche) {VR152 (canal de droite)} et BANDE [2]: VR201 (canal de gauche) {VR202 (canal de droite)} et répéter les étapes (2), (3) et (4) jusqu'à ce que la puissance de sortie soit en deçà de la normale.

Valeur normalisée: 0,4 V ± 0,5 dB (0,02 V)

Réglage du compteur fluorescent

1. Le raccordement de l'équipement d'essai est montré à la Fig. 8.
2. Relier à la terre la base du transistor Q41 (canal de gauche) {Q42 (canal de droite)}.
3. Installer une bande vierge normale (QZZCRA) et appliquer le signal du niveau d'entrée de référence (1kHz, −24dB) sur le mode d'intermission d'enregistrement.
4. Régler la puissance de sortie sur 0,4V avec l'atténuateur.
5. Régler VR703 (canal de gauche [VR704 (canal de droite)] de telle sorte que la partie segmentée de 0dB soit à moitié éclairée. (Voir la Fig. 11.)

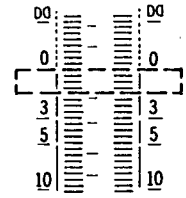


Fig. 11

Circuit de réduction des bruits Dolby

1. Le raccordement de L'équipement d'essai est montré à la Fig. 12.
2. Installer une bande normale et appliquer un signal de 5kHz sur le mode d'intermission d'enregistrement.
3. Régler avec l'atténuateur de telle sorte que la puissance de sortie entre la borne ⑦ de IC401 (canal de gauche) [IC402 (canal de droite)] et la masse soit de 12,3mV.

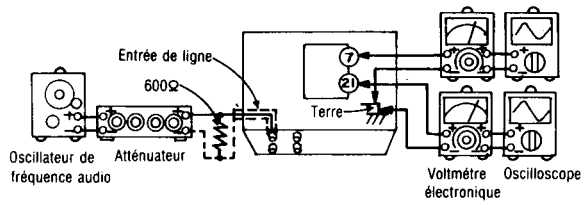


Fig. 12

— Dolby B (Caractéristiques de codage) —

4. Régler le commutateur de réduction des bruits sur "Dolby B" et changer le signal d'entrée sur 1kHz, 5kHz.
5. Vérifier que la puissance de sortie entre la borne 21 de IC401 (canal de gauche) [IC402 (canal de droite)] et la masse change tel qu'il est spécifié à partir du niveau d'entrée sur le mode de sortie de réduction des bruits.

Valeur normalisée: 6±2,5dB (1kHz), 8±2,5dB (5kHz)

— Dolby C (Caractéristiques de codage) —

6. Régler le commutateur de réduction des bruits sur "Dolby C" et changer le signal d'entrée sur 1kHz, 5kHz.
7. Vérifier que la puissance de sortie entre la borne 21 de IC401 (canal de gauche) [IC402 (canal de droite)] et la masse change tel qu'il est spécifié à partir du niveau d'entrée sur le mode de sortie de réduction des bruits.

Valeur normalisée: 11,5±2,5dB (1kHz), 8,5±2,5dB (5kHz)

ESPAÑOL

■ METODOS DE AJUSTE Y MEDIDA

Instrumento de medición

- EVM (Voltimetro electrónico)
- Osciloscopio
- Frecuencimetro digital
- Oscilador AF
- ATT (Atenuador)
- Voltimetro CC
- Resistor (600Ω)

Ajuste acimutal de cabeza

1. La conexión del equipo de prueba se muestra en la Fig. 1.
2. Reproducir la parte ajustada de acimut (8kHz, −20dB) de la cinta de prueba (QZZCFM) y regular el tornillo de ajuste de ángulo de manera que las salidas de CH-I y CH-D sean maximizadas. (Cuando las posiciones de ajuste sean diferentes de CH-I y CH-D, encontrar una posición donde las salidas de CH-I y CH-D estén equilibradas y, luego, hacer el ajuste.)
3. Al mismo tiempo, trazar una forma de onda de lissajous y eliminar la deflexión de fase.
4. Efectuar el ajuste en la modalidad de función regresiva. Comprobación de diferencia de nivel de rotación progresiva y regresiva.
5. Reproducir la parte ajustada de ganancia de reproducción (315Hz, 0dB) de la cinta de prueba (QZZCFM) y, luego, comprobar que la diferencia de nivel de rotación progresiva y regresiva esté dentro de 1dB.
6. Después del ajuste, aplicar cierre por tornillo al tornillo de ajuste de ángulo.

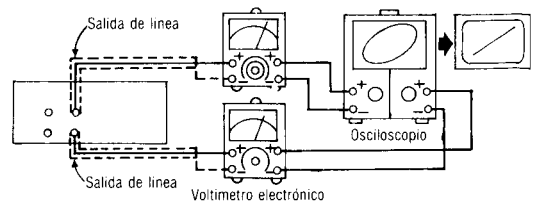


Fig. 1

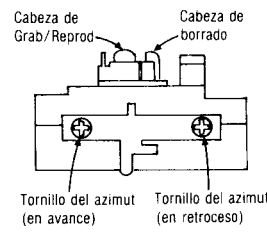


Fig. 2

Ajuste de velocidad de cinta

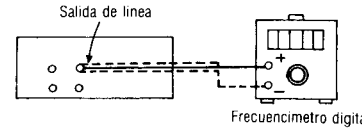


Fig. 3

Velocidad normal

1. La conexión del equipo de prueba se muestra en la Fig. 3.
2. Reproducir la parte media de la cinta de prueba (QZZCWAT).
3. Ajustar La RV952 de manera que la salida esté dentro de la estandard.

Alta velocidad

4. Poner el interruptor de velocidad de copia en "X2" (alto) y poner a tierra el La TP951.
5. Reproducir la parte media de la cinta de prueba (QZZCWAT).
6. Ajustar La RV951 de manera que la salida esté dentro de la estandard.

Valor estandard: 3000±10Hz (Normal), 6000±20Hz (Alto)

Respuesta de frecuencia de reproducción

1. La conexión del equipo de prueba se muestra en la Fig. 4.
2. Reproducir la parte de respuesta de frecuencia de reproducción (315Hz, 12,5kHz — 63Hz, −20dB) de la cinta de prueba (QZZCFM).
3. Comprobar que la frecuencia esté dentro de la gama mostrada en la Fig. 5 tanto para CH-I como para CH-D.

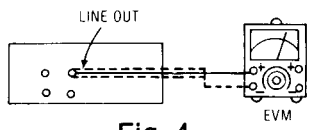


Fig. 4

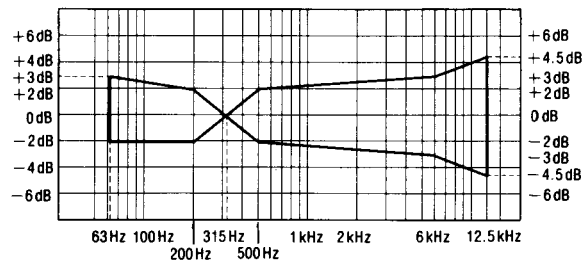


Fig. 5

Ajuste de ganancia de reproducción

1. La conexión del equipo de prueba se muestra en la Fig. 4.
2. Reproducir la parte ajustada de la ganancia de reproducción (315Hz, 0dB) de la cinta de prueba (QZZCFM).
3. Ajustar la CINTA [1]: RV1 (CH-I) {RV2 (CH-D)} y la CINTA [2]: RV3 (CH-I) {RV4 (CH-D)} de manera que la salida esté dentro de la estandard.

Valor estandard: 0,4±0,02V

Ajuste de corriente de borrado

1. La conexión del equipo de prueba se muestra en la Fig. 6.
2. Insertar la cinta metálica.
3. Apretar los botones de grabación y pausa.
4. Ajustar la CINTA [1]: RV301 y la CINTA [2]: RV302 de manera que la salida entre la CINTA [1]: TP5 y la CINTA [2]: TP6 y tierra esté dentro de la estandard.

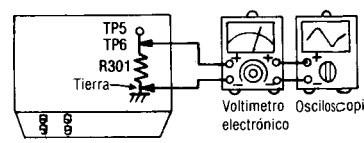


Fig. 6

Valor estandard: 185±5mA (Metal) 185±5mV

$$\text{Corriente de borrado (A)} = \frac{\text{Voltaje a través de resistor R301}}{1\,(\Omega)}$$

Ajuste de corriente de polarización

1. La conexión del equipo de prueba se muestra en la Fig. 7.
2. Insertar la cinta metálica.
3. Apretar los botones de grabación y pausa.
4. Minimizar el control de nivel de entrada y ajustar la CINTA [1]: RV101 (CH-I) {RV102 (CH-D)} y la CINTA [2]: RV103 (CH-I) {RV104 (CH-D)} de manera que la salida entre la CINTA [1]: TP1 (CH-I) {TP2 (CH-D)} y CINTA [2]: TP3 (CH-I) {TP4 (CH-D)} y tierra esté dentro de la estandard.
5. Después de eso, comprobar de la misma manera para cinta CrO2 y metálica.

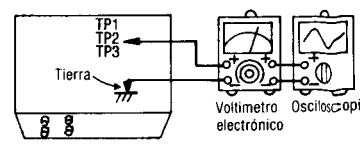


Fig. 7

Valor de referencia:
600μA (Normal) (6mV)
800μA (CrO_2) (8mV)
1200μA (Metal) (12mV)

Respuesta de frecuencia total

1. La conexión del equipo de prueba se muestra en la Fig. 8.
2. Conect a masa la base del transistor Q41 (CH-I) {Q42 (CH-D)}.
3. Colocar una cinta virgen normal (QZZCRA) y grabar aplicando señal (50Hz, 100Hz, 200Hz, 500Hz, 1kHz, 4kHz, 8kHz, 10kHz, y 12,5kHz), 20dB atenuada de la señal de nivel de entrada de referencia (1kHz, −24dB).
4. Reproducir la señal grabada en el paso 3 y comprobar que el nivel de cada frecuencia de salida esté dentro de la gama mostrada en la Fig. 9 en comparación con la frecuencia de referencia (1kHz).

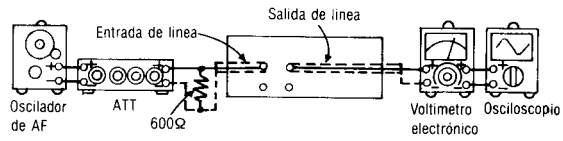


Fig. 8

5. Si no está dentro de la gama estandard, ajustar la corriente de polarización mediante la CINTA [1]: RV101 (CH-I) {RV102 (CH-D)} y la CINTA [2]: RV103 (CH-I) {RV104 (CH-D)} de manera que el nivel de frecuencia esté dentro del estandard.
   • Subir el nivel en la gama de alta frecuencia.....Incrementar la corriente de polarización.
   • Bajar el nivel en la gama de alta frecuencia.....Disminuir la corriente de polarización.
6. Después de eso, incrementar la señal grabada en la cinta virgen CrO_2 (QZZCRX) y la cinta virgen metálica (QZZCRZ) hasta 15kHz y ajustar de la misma manera como mencionado arriba y comprobar que el nivel de frecuencia esté dentro de la gama mostrada en la Fig. 10.

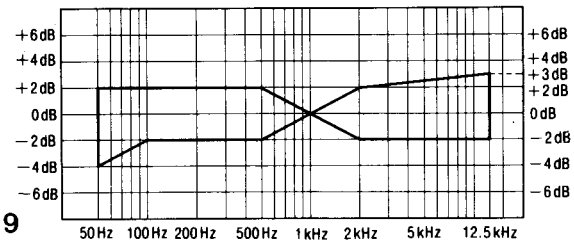


Fig. 9

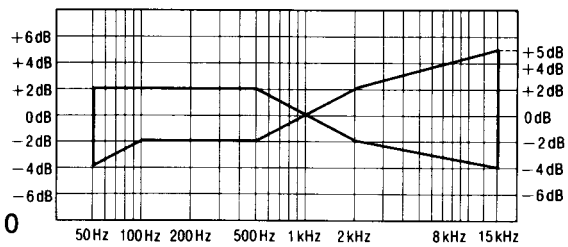


Fig. 10

Ajuste de ganancia total

1. La conexión del equipo de prueba se muestra en la Fig. 8.
2. Conect a masa la base del transistor Q41 (CH-I) {Q42 (CH-D)}.
3. Colocar una cinta virgen normal (QZZCRA) y aplicar la señal de nivel de entrada de referencia (1kHz, −24dB) en la modalidad de pausa de grabación.
4. Ajustar la salida 0,4V mediante atenuador y, luego, grabar.
5. Reproducir la señal grabada en el paso 4 y comprobar que la salida esté dentro de la estandard.
6. Si no está dentro de la estandard, ajustar la CINTA [1]: RV151 (CH-I) {RV152 (CH-D)} y la CINTA [2]: RV201 (CH-I) {RV202 (CH-D)} y repetir el paso (2), (3) y (4) hasta que la salida esté dentro de la estandard.

Valor estandard: 0,4V±0,5dB (0,02V)

Ajuste de medidor fluorescente

1. La conexión del equipo de prueba se muestra en la Fig. 8.
2. Conect a masa la base del transistor Q41 (CH-I) {Q42 (CH-D)}.
3. Colocar una cinta virgen normal (QZZCRA) y aplicar la señal de nivel de entrada de referencia (1kHz, −24dB) en la modalidad de pausa de grabación.
4. Ajustar la salida a 0,4V mediante atenuador.
5. Ajustar RV703 (CH-I) {RV704 (CH-D)} de manera que la parte de segmento 0dB esté medio iluminada. (Ver la Fig. 11.)

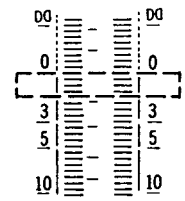


Fig. 11

Circuito RR Dolby

1. La conexión del equipo de prueba se muestra en la Fig. 12.
2. Colocar una cinta normal y aplicar señal 5kHz en la modalidad de pausa de grabación.
3. Ajustar mediante atenudador de manera que la salida entre terminal ⑦ de IC401 (CH-I) {IC402 (CH-D)} y tierra sea 12,3mV.

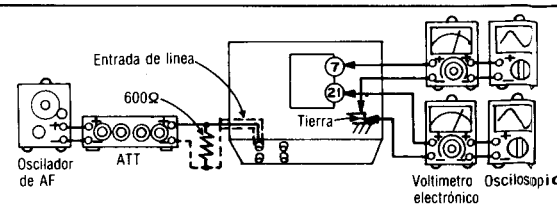


Fig. 12

— Dolby B (Codificar característica) —

4. Poner el interruptor RR en "Dolby B" y cambiar la señal de entrada a 1kHz, 5kHz.
5. Comprobar que la salida entre terminal ㉑ de IC401 (CH-I) {IC402 (CH-D)} y tierra cambie como especificado por el nivel en la modalidad de salida RR.

Valor estandard: 6±2,5dB (1kHz), 8±2,5dB (5kHz)

— Dolby C (Codificar característica) —

6. Poner el interruptor RR en "Dolby C" y cambiar la señal de entrada a 1kHz, 5kHz.
7. Comprobar que la salida entre terminal ㉑ de IC401 (CH-I) {IC402 (CH-D)} y tierra cambie como especificado por el nivel en la modalidad de salida RR.

Valor estandard: 11,5±2,5dB (1kHz), 8,5±2,5dB (5kHz

Printed in Japan
860302500 Ⓗ M.S