ORDER NO. ARD83060240C6-11

Service Manual

Cassette Deck

RS-M229X

(Silver Face
Black Face)

dbx/Dolby NR-Equipped
Stereo Cassette Deck

DOLBY SYSTEM

This is the Service Manual for the following areas.
- [D] ..... For all European areas except United Kingdom.
- [B] ..... For United Kingdom.
- [F] ..... For Asian PX.
- [J] ..... For European PX.

RS-M229X in black is also available in some countries.

RS-M24 MECHANISM SERIES

Specifications

Track system: 4-track 2-channel stereo recording and playback

Tape speed: 4.8cm/s

Wow and flutter: [D][B] ...0.05% (WRMS), ±0.14% (DIN)
[F][J] ...0.048% (WRMS)

Frequency response:

Metal tape;	[D][B] ..	20—17,000Hz 25—16,000Hz (DIN) 30—15,000Hz±3dB
	[F][J] ...	20—18,000Hz
CrO_2 tape;	[D][B] ..	20—16,000Hz 25—15,000Hz (DIN) 30—14,000Hz±3dB
	[F][J] ...	20—18,000Hz
Normal tape;	[D][B] ..	20—15,000Hz 25—14,000Hz (DIN) 30—13,000Hz±3dB
	[F][J] ...	20—17,000Hz

Dynamic range: 110dB (at 1kHz) with dbx* in

Max. input level improvement: 10dB or more improved with dbx in (at 1kHz)

Signal-to-noise ratio: dbx in; 92dB
Dolby** B NR in; [D][B] ...66dB (CCIR)
[F][J] ...67dB (CCIR)
NR out; 57dB
(Signal level = max. input level A weighted, CrO_2 type tape)

Fast forward and rewind time: Approx. 90 seconds with C-60 cassette tape

Inputs: MIC; sensitivity 0.25mV applicable microphone impedance 400Ω—10kΩ
LINE; sensitivity 60mV input impedance 47kΩ or more

Outputs: LINE; output level 400mV, output impedance 2.3kΩ or less
HEADPHONES; output level 80mV (at 8Ω) applicable headphone impedance 8Ω—600Ω

Bias frequency: 80kHz

Heads: 2-head system
1-MX head for record/playback
1-double-gap ferrite head for erasure

Motor: 1-motor system
(Electrical governor motor)

Power requirements:
- [D] .....AC; 220V, 50-60Hz
- [B][F][J] ...AC; 110/125/220/240V, 50-60Hz
- [B] .....Pre-set power voltage 240V
- [F] .....Pre-set power voltage 125V
- [J] .....Pre-set power voltage 220V

Power consumption: 12W

Dimensions: 43cm(W)×10.9cm(H)×23.3cm(D)

Weight: 4kg

Design and specifications are subject to change without notice.

*The term dbx is a registered trademark of dbx Inc.

**'Dolby' and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Technics

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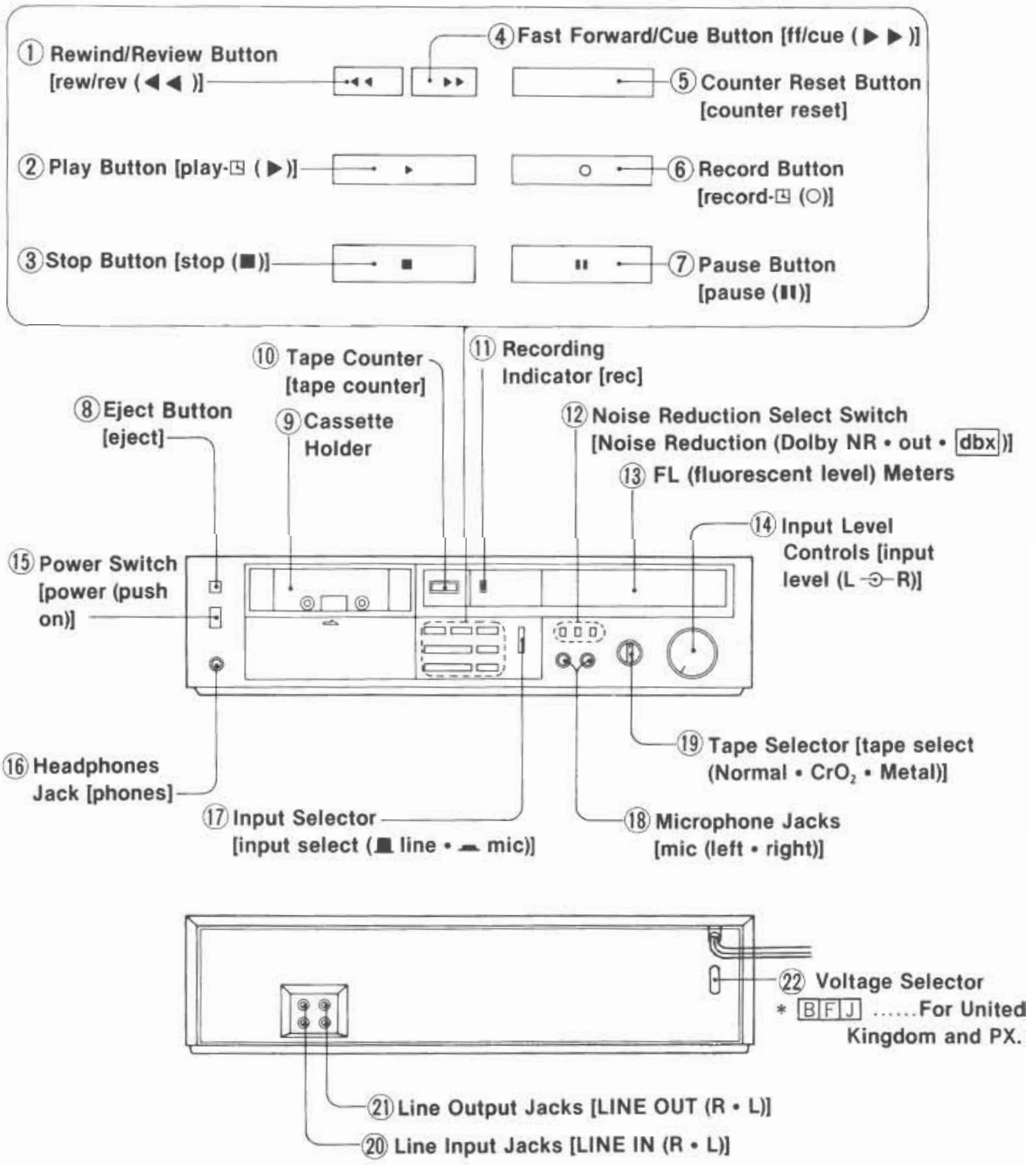
LOCATION OF CONTROLS AND COMPONENTS



DISASSEMBLY INSTRUCTIONS

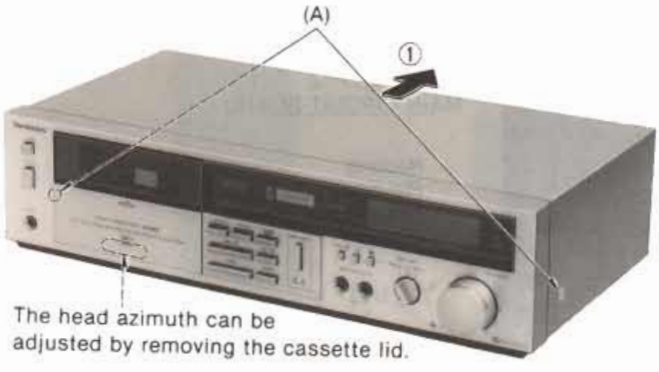


Fig. 1

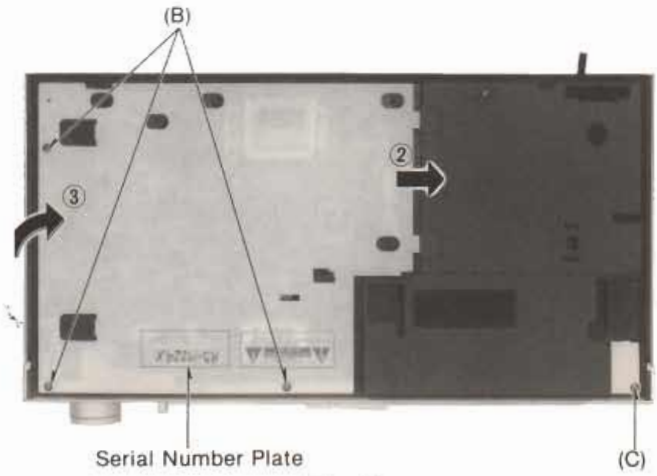


Fig. 2

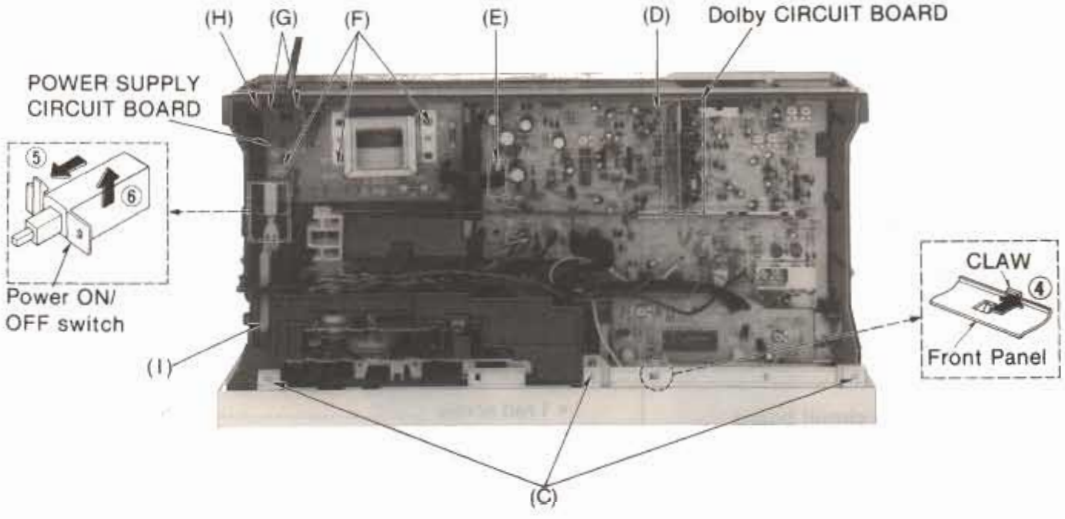
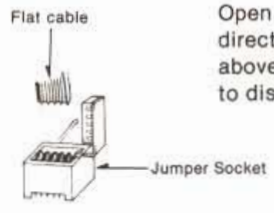


Fig. 3

(E) How to remove flat cable



Open the lid of socket in the direction of the arrow as shown above, and extract the flat cable to disconnect.

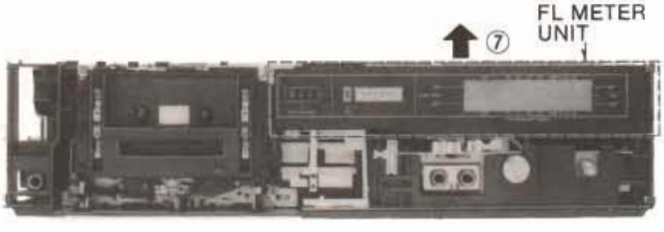


Fig. 4

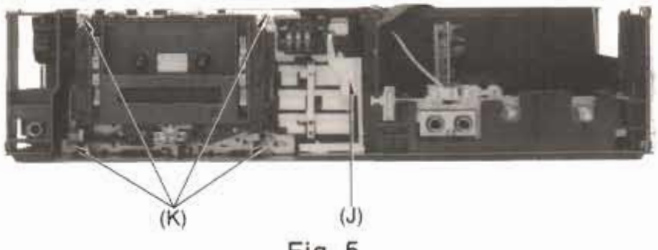


Fig. 5

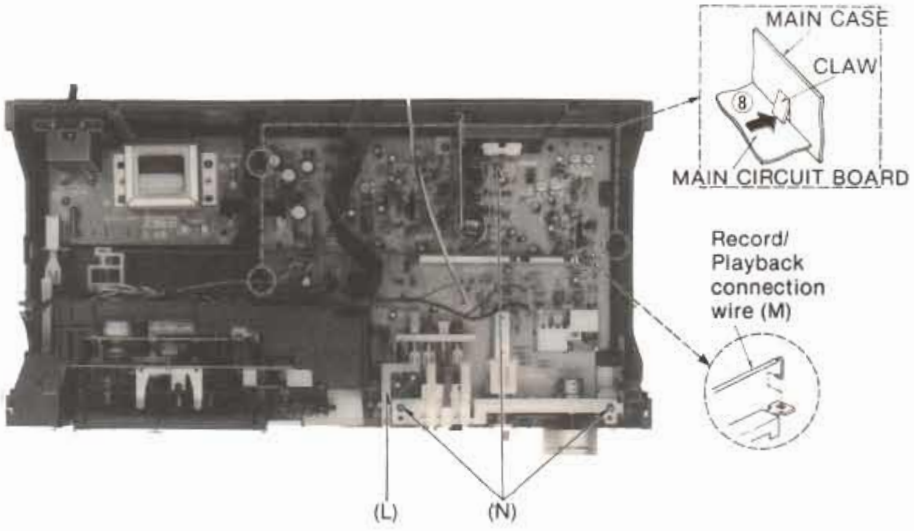


Fig. 6

Ref. No.	Procedure	To remove —.	Remove —.	Shown in fig. —.
1	1	Main case	• 2 ornament screws .....(A) • As shown in fig. 1, slide the case cover in the direction of arrow ①.	1 1
2	2	Bottom cover	• 3 screws .....(B) • Slide the bottom cover in the direction indicated by arrow ②, then raise the bottom cover in the direction indicated by arrow ③.	2 2
3	1 → 2 → 3	Front panel assembly	• 4 screws .....(C) • As shown in fig. 3, push the claw in the direction of arrow ④.	2, 3 3
4	1 → 4	Dolby circuit board	• 1 red screw .....(D) • Pull out the Dolby circuit board.	3 3
5	1 → 5	Power supply circuit board	• Connector [4] .....(E) • 3 red screws.....(F) • 2 screws .....(G) • Cord clamper .....(H) • Pull out the power switch rod .....(I) • As shown in fig. 3, push the claw in the direction of arrow ⑤, lift the power ON/OFF switch in the direction of arrow ⑥.	3 3 3 3 3 3
6	1 → 2 → 3 → 6	FL meter unit	• As shown in fig. 4, pull out the FL meter unit in the direction of arrow ⑦.	4
7	1 → 2 → 3 → 6 → 7	Mechanism unit	• Reset lever .....(J) • 4 red screws.....(K)	5 5
8	1 → 2 → 3 → 6 → 8	Main circuit board	• Pull out the switch rod .....(L) • Record/playback connection wire...(M) • 3 red screws.....(N) • As shown in fig. 6, push the claw in the direction of arrow ⑧, then pull out the main circuit board.	6 6 6 6

* Serial No. Indication

• The serial number plate of this product is attached to the bottom cover. (Shown in fig. 2.)

OPERATING PRECAUTIONS

• If the Record Button or the Play Button is pressed immediately after the power has gone off, the head section will remain raised. This means that the tape will not be ejected even when the Eject Button is pressed. In cases like this, switch on the power again.

MEASUREMENT AND ADJUSTMENT METHODS

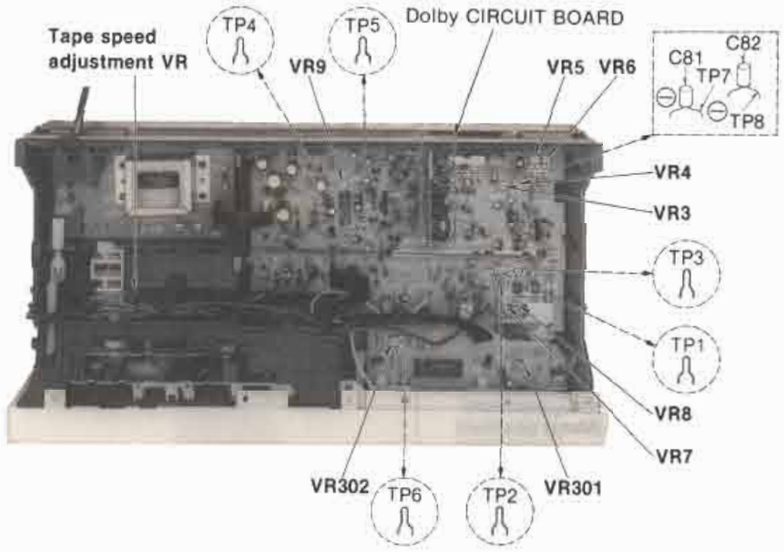


Fig. 1

NOTES: Set switches and controls in the following positions, unless otherwise specified.
- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature 20±5°C (68±9°F)
- NR switch: OUT
- Input level controls: Maximum

Ⓐ Head position adjustment

Condition:
- Playback and pause mode

(The head adjusting plate is provided to adjust the tape touch of the head in cue or review mode.)
1. Press the playback button and pause button.
2. Measure the space between the pressure roller and the capstan.

Standard value: 0.5±0.3mm

3. If the measured value is not within the standard value, untighten screw (A) and slide the head adjusting plate in the direction of arrow (B) for adjustment.

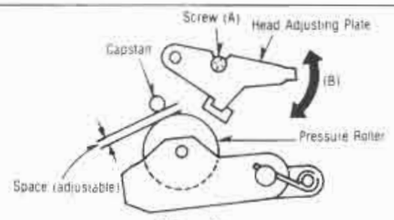


Fig. 2

Ⓑ Head azimuth adjustment

Condition:
- Playback mode
- Normal tape mode

Equipment:
- VTVM
- Oscilloscope
- Test tape (azimuth)...QZZCFM

L-CH/R-CH output balance adjustment
1. Make connections as shown in fig. 3.
2. Playback the 8kHz signal from the test tape (QZZCFM).
   Adjust screw (B) in fig. 4 for maximum output L-CH and R-CH levels.
   When the output levels of L-CH and R-CH are not at maximum at the same point adjust as follows.
3. Turn screw (B) shown in fig. 4 to find angles A and C (points where peak output levels for left and right channels are obtained). Then, locate angle B between angles A and C, i.e., and point where L-CH and R-CH outputs are balanced. (Refer to figs. 4 and 5.)

L-CH/R-CH phase adjustment
4. Make connections as shown in fig. 6.
5. Playback the 8kHz signal from the test tape (QZZCFM).
   Adjust screw (B) shown in fig. 4 so that pointers of the two VTVMs swing to maximum and a lissajous waveform as illustrated in fig. 7 is obtained on the oscilloscope.

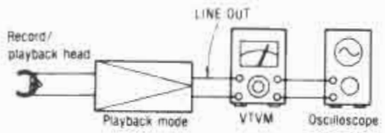


Fig. 3

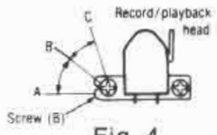


Fig. 4

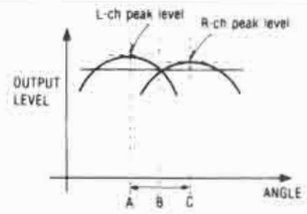


Fig. 5

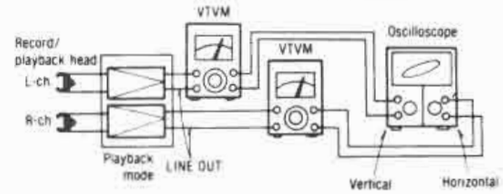


Fig. 6

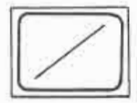


Fig. 7

Ⓒ Tape speed

Condition:
- Playback mode

Equipment:
- Digital frequency counter
- Test tape...QZZCWAT

Tape speed accuracy
1. Test equipment connection is shown in fig. 8.
2. Playback test tape (QZZCWAT 3,000Hz), and supply playback signal to the digital frequency counter.
3. Measure this frequency.
4. On the basis of 3,000Hz, determine value by following formula:

   $$\text{Tape speed accuracy} = \frac{f-3{,}000}{3{,}000} \times 100(\%)$$ where, f = measured value
5. Take measurement at middle section of tape.

Standard value: ±1.5%

6. If measured value is not within the standard value, adjust it by using the tape speed adjustment VR shown in Fig. 1.

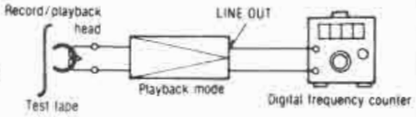


Fig. 8

Tape speed fluctuation
Make measurements in same manner as above (beginning, middle and end of tape), and determine the difference between maximum and minimum values and calculate as follows:

$$\text{Tape speed fluctuation} = \frac{f_1-f_2}{3{,}000} \times 100(\%)$$ f_1 = maximum value, f_2 = minimum value

Standard value: Less than 1%

NOTE:
Please use non metal type screwdriver when you adjust tape speed on this unit.

Ⓓ Playback frequency response

Condition:
- Playback mode
- Normal tape mode

Equipment:
- VTVM
- Oscilloscope
- Test tape...QZZCFM

1. Test equipment connection is shown in fig. 3.
2. Playback the frequency response portion of test tape (QZZCFM).
3. Measure output level at 315Hz, 12.5kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz and 63Hz, and compare each output level with the standard frequency 315Hz, at LINE OUT.
4. Make measurements for both channels.
5. Make sure that the measured values are within the range specified in the frequency response chart. (Shown in fig. 9).

Playback frequency response

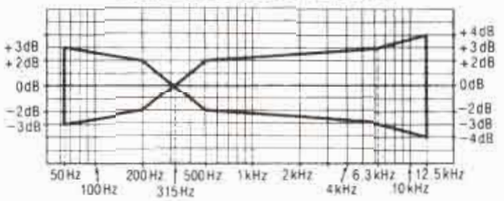


Fig. 9

Ⓔ Playback gain

Condition:
- Playback mode
- Normal tape mode

Equipment:
- VTVM
- Oscilloscope
- Test tape...QZZCFM

1. Test equipment connection is shown in fig. 3.
2. Playback standard recording level portion on test tape (QZZCFM 315Hz) and, using VTVM, measure the output level at test points [TP7 (L-CH), TP8 (R-CH)].
3. Make measurements for both channels.

Standard value: 0.42V [0.38V±1dB: at LINE OUT jack]

Adjustment
1. If the measured value is not within standard the adjust VR3 (L-CH) or VR4 (R-CH) (See fig. 1).
2. After adjustment, check "Playback frequency response" again.

Ⓕ Erase current

Condition:
- Record mode
- Metal tape mode

Equipment:
- VTVM
- Oscilloscope

1. Test equipment connection is shown in fig. 10.
2. Place UNIT into metal tape mode.
3. Press the record and pause buttons.
4. Read voltage on VTVM and calculate erase current by following formula:

$$\text{Erase current (A)} = \frac{\text{Voltage across resistor R154}}{1\ (\Omega)}$$

Standard value: 155±15mA (Metal)

5. If measured value is not within stand, adjust as follows.

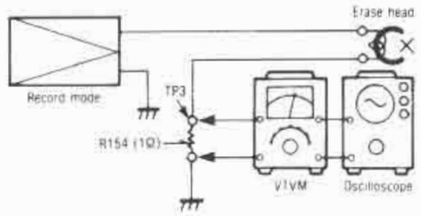


Fig. 10

Adjustment

1. Short point (B) and open point (A) on the main circuit board. Refer to the wiring connection diagram on page 15.
2. Measure the erase current.
3. If the erase current is less than 140mA, short the point (A).
4. If the erase current is more than 170mA, open the point (B).

Ⓖ Overall frequency response

Condition:
- Record/playback mode
- Normal tape mode
- CrO_2 tape mode
- Metal tape mode
- Input level controls...MAX

Equipment:
- VTVM
- ATT
- AF oscillator
- Oscilloscope
- Resistor (600Ω)
- Test tape (reference blank tape)
  ...QZZCRA for Normal
  ...QZZCRX for CrO_2
  ...QZZCRZ for Metal

Note:
Before measuring and adjusting, the overall frequency response make sure of the playback frequency response (For the method of measurement, please refer to the playback frequency response).

(Recording equalizer is fixed)
1. Make connections as shown in fig. 11.
2. Place UNIT into normal tape mode and insert the normal reference blank test tape (QZZCRA).
3. Supply a 1kHz signal from the AF oscillator through ATT to LINE IN.
4. Adjust ATT so that input level is −20dB below standard recording level (standard recording level = 0 VU).
5. Adjust the AF oscillator frequency to 1kHz, 50Hz, 100Hz, 200Hz, 500Hz, 4kHz, 8kHz, and 10kHz signal, and record these signals on the test tape.
6. Playback the signals recorded in step 6, and check if the frequency response curve is within the limits shown in the overall frequency response chart for normal tapes (fig. 12).
   (If the curve is within the charted specifications, proceed to steps 7, 8 and 9.)
   If the curve is not within the charted specifications, adjust as follows;

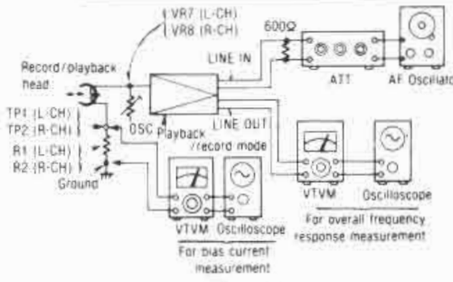


Fig. 11

Overall frequency response chart (Normal)

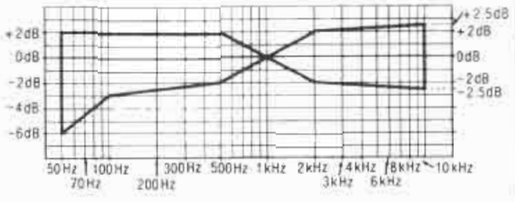


Fig. 12

Adjustment (A):
When the curve exceeds the overall specified frequency response chart (fig. 12) as shown in fig. 13.
1) Increase bias current by tuning VR7 (L-CH) and VR8 (R-CH).
   (See fig. 1 on page 5).
2) Repeat steps 5 and 6 for confirmation (Proceed to steps 7, 8 and 9 if the curve is now within the charted specifications as shown fig. 12.)
3) If the curve still exceeds the specifications (fig. 12), increase bias current further and repeat steps 5 and 6.

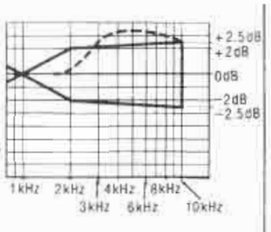


Fig. 13

Adjustment (B):
When the curve falls below the overall specified frequency response chart (fig. 12) as shown in fig. 14.
1) Reduce bias current by tuning VR7 (L-CH) and VR8 (R-CH).
2) Repeat steps 5 and 6 for confirmation (Proceed to steps 7, 8 and 9 if the curve is now within the charted specifications as shown fig. 12.)
3) If the curve still falls below the charted specifications (fig. 12), reduce bias current further and repeat steps 5 and 6.

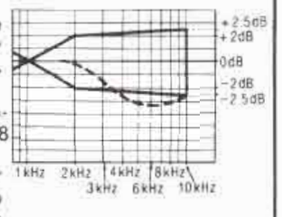


Fig. 14

7. Place UNIT into CrO_2 tape mode.
8. Change test tape to CrO_2 reference blank test tape (QZZCRX), and record 1kHz, 50Hz, 100Hz, 200Hz, 500Hz, 4kHz, 8kHz, 10kHz and 15kHz signals. Then, playback the signals and check if the curve is within the limits shown in the overall frequency response chart for CrO_2 tapes (fig. 15).
9. Place UNIT into metal tape mode and change test tape to metal reference blank test tape (QZZCRZ), and record 1kHz, 50Hz, 100Hz, 200Hz, 500Hz, 4kHz, 8kHz and 12.5kHz signals. Then, playback the signals and check if the curve is within the limits shown in the overall frequency reponse chart for metal tapes (fig. 15).
10. Confirm that bias currents are approximately as follows when the UNIT is set at different tape mode.
    - Read voltage on VTVM between ground and test point (TP1 for L-CH, TP2 for R-CH) and calculate bias current by following formula:

$$\text{Bias current (A)} = \frac{\text{Value read on VTVM (V)}}{10\ (\Omega)}$$

Standard value: around 400μA (Normal position)
around 515μA (CrO_2 position)
around 720μA (Metal position)

Overall frequency response chart (CrO_2, Metal)

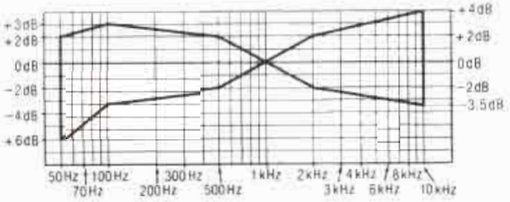


Fig. 15

Ⓗ Overall gain

Condition:
- Record/playback mode
- Normal tape mode
- Input level controls...MAX
- Standard input level;
  MIC .....−71±4dB
  LINE.....−24±4dB

Equipment:
- VTVM
- ATT
- AF oscillator
- Oscilloscope
- Resistor (600Ω)
- Test tape (reference blank tape)
  ...QZZCRA for Normal

1. Test equipment connection is shown in fig. 16.
2. Insert the normal reference blank tape (QZZCRA).
3. Place UNIT into record mode.
4. Supply a 1kHz signal through ATT (−24dB) from AF oscillator, to LINE IN.
5. Adjust ATT until monitor level at LINE OUT becomes 0.38V.
6. Playback recorded tape, and make sure that the output level at LINE OUT becomes 0.38V.
7. If measured value is not 0.38V±2dB, adjust it by using VR5 (L-CH) or VR6 (R-CH).
8. Repeat from step (2).

Standard value 0.38V−2dB (300mV)—0.38V+2dB (480mV)

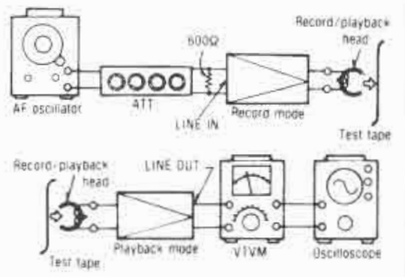


Fig. 16

Ⓘ Fluorescent meter

Condition:
- Record mode
- Input level controls...MAX

Equipment:
- VTVM
- ATT
- AF oscillator

1. Test equipment connection is shown in fig. 16.
2. Connect a wire between TP6 and ground (See fig. 16).
3. Supply a 1kHz signal through ATT (−24dB) to the LINE IN jack, then place the unit into the record mode.
4. Adjust the ATT so that the output level at LINE OUT becomes 0.38V (The input level at this condition is called the standard input level).
5. Adjustment at "−20dB":
   A. Adjust the ATT so that input level is −20dB below the standard input level.
   B. Adjust VR301 so that the −20dB segment of the FL meter lights up with the input level of −20±1dB below the standard input level (L-CH ONLY) (See fig. 20).
6. Adjustment at "0dB".
   A. Adjust the ATT so that the output level at LINE OUT becomes 0.38V. (The input level at this condition is called the standard input level).
   B. Adjust VR302 so that the +1dB segment of the FL meter lights up with the input level of 0±0.4dB range of the standard input level (See fig. 21).
7. Repeat twice between steps (5) and (6) above.
8. Adjust ATT and check that all segments light up when an input signal level is increased to 10dB higher than the standard input level (See fig. 22).
9. Disconnect the wire between peak reset terminal and ground, which had been connected at step 2.

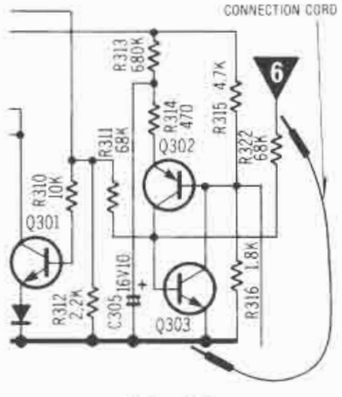


Fig. 19

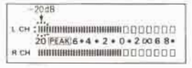


Fig. 20

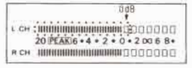


Fig. 21

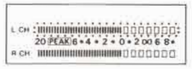


Fig. 22

J Dolby NR circuit

Condition:
- Record mode
- Input level controls...MAX
- NR select switch... OUT/Dolby NR

Equipment:
- VTVM
- AF oscillator
- ATT
- Oscilloscope
- Resistor (600Ω)

1. Make connections as shown in fig. 23.
2. Set the unit to the record mode. (NR select switch is OUT.)
3. Apply a 1kHz signal to LINE IN.
4. Adjust the ATT so that the output level at TP7 (L-CH) and TP8 (R-CH) is 17.5mV.
5. The output level at pin 14 should be 0dB.
6. Set the NR select switch to Dolby NR, and make sure that the output signal level at pin 14 of IC201 (L-CH) and IC202 (R-CH) is 8±1.5dB.

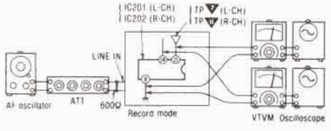


Fig. 23

K Attack recovery time adjustment (dbx circuit)

Condition:
- Record mode
- Input level control...MAX
- Balance control...Center
- Noise reduction selector ...dbx

Equipment:
- VTVM
- ATT
- AF oscillator
- DC voltmeter

1. Make the connections as shown in fig. 24 and apply 1kHz −27dB signal from LINE IN, and set the noise reduction selector to dbx position.
2. Set the unit to record mode, adjust ATT so that the signal level at C79 (L-CH) and C80 (R-CH) is 300mV.
3. Read voltage on DC volt meter.

Reference value: 15±0.5mV

4. If measured value is not within reference, adjust VR9 (shown in fig. 1).

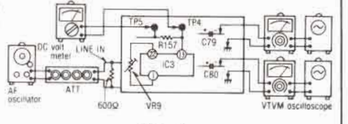
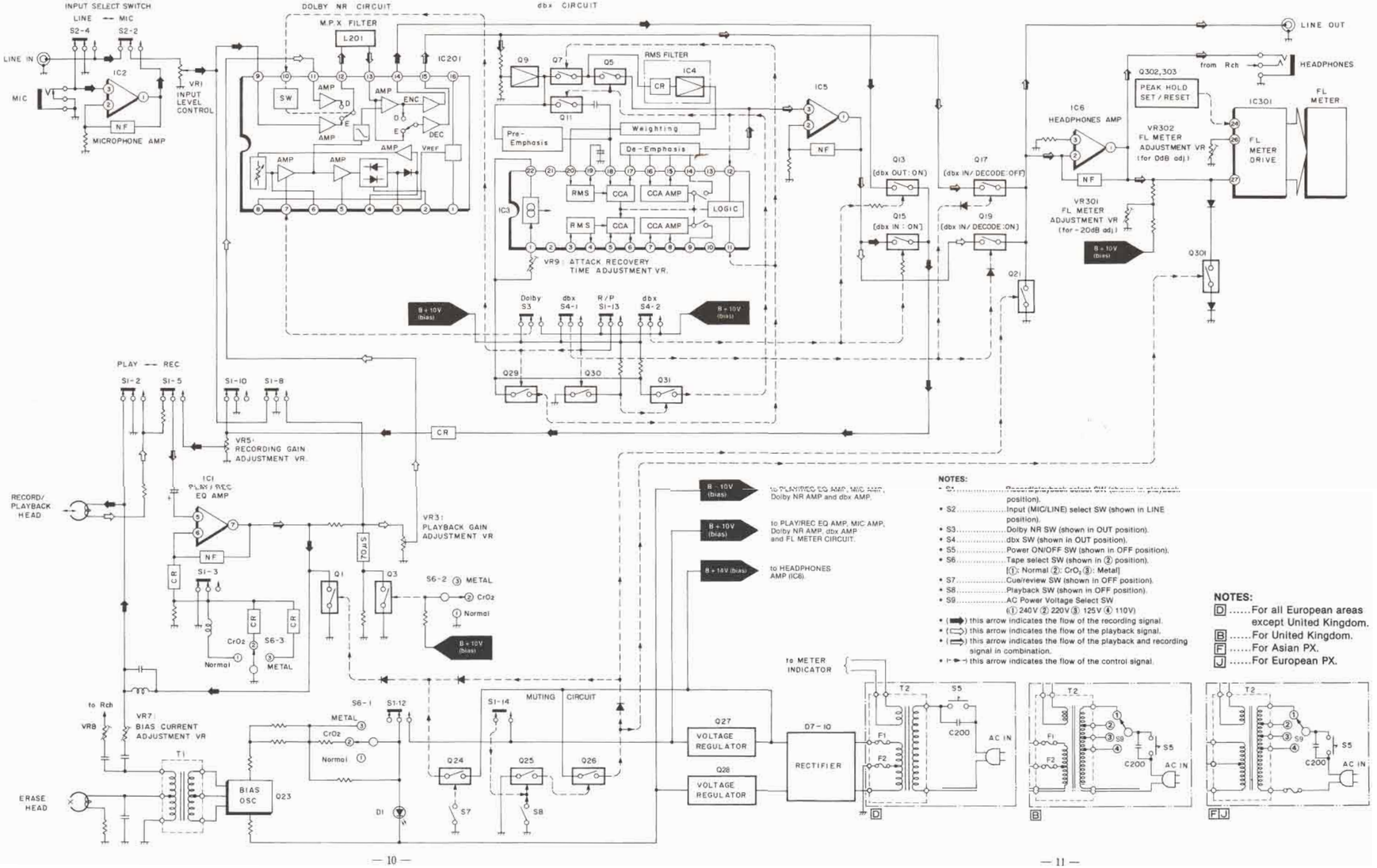


Fig. 24

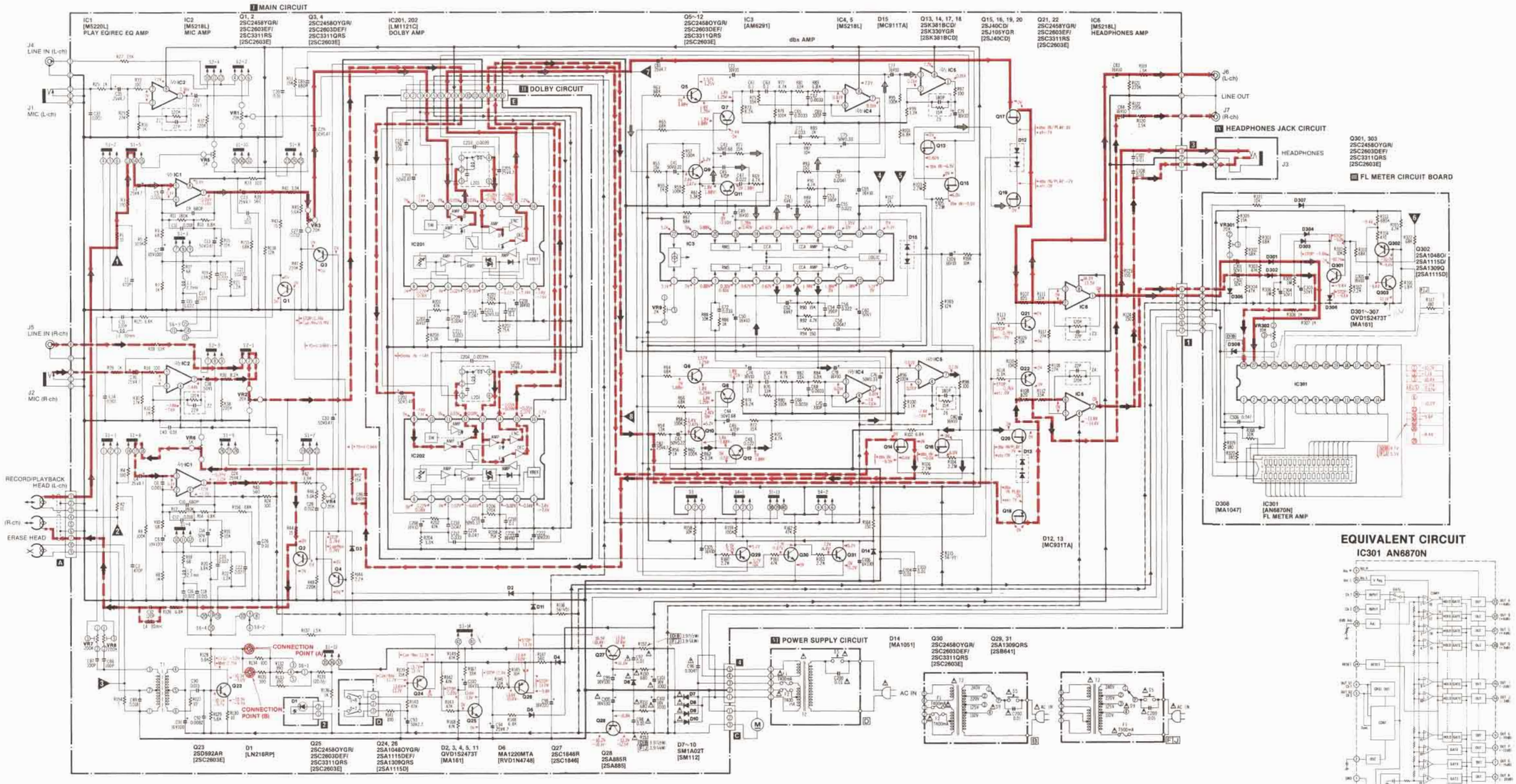
BLOCK DIAGRAM (for L-CH only)



NOTES:
- S1 ..... Record/playback select SW (shown in playback position).
- S2 ..... Input (MIC/LINE) select SW (shown in LINE position).
- S3 ..... Dolby NR SW (shown in OUT position).
- S4 ..... dbx SW (shown in OUT position).
- S5 ..... Power ON/OFF SW (shown in OFF position).
- S6 ..... Tape select SW (shown in ② position). (①: Normal ②: CrO_2 ③: Metal)
- S7 ..... Cue/review SW (shown in OFF position).
- S8 ..... Playback SW (shown in OFF position).
- S9 ..... AC Power Voltage Select SW (① 240V ② 220V ③ 125V ④ 110V)
- (➡) this arrow indicates the flow of the recording signal.
- (⇨) this arrow indicates the flow of the playback signal.
- (⟹) this arrow indicates the flow of the playback and recording signal in combination.
- (⊢➡⊣) this arrow indicates the flow of the control signal.

NOTES:
- D .....For all European areas except United Kingdom.
- B .....For United Kingdom.
- F .....For Asian PX.
- J .....For European PX.

SCHEMATIC DIAGRAM



EQUIVALENT CIRCUIT

IC301 AN6870N

NOTES:

- S1 .....Record/playback select switch (shown in playback position).
- S2 .....Input (MIC/LINE) select switch (shown in LINE position).
- S3 .....Dolby NR switch (shown in OUT position).
- S4 .....dbx switch (shown in OUT position).
- S5 .....Power ON/OFF switch (shown in OFF position).
- S6 .....Tape select switch (shown in (2) position). [(1): Normal, (2): CrO_2, (3): Metal]
- S7 .....Cue/review switch (shown in OFF position).
- S8 .....Playback switch (shown in OFF position).
- S9 .....AC Power voltage select switch.
- VR1, 2 .....Input level controls.
- VR3, 4 .....Playback gain adjustment VR.
- VR5, 6 .....Recording gain adjustment VR.
- VR7, 8 .....Bias current adjustment VR.
- VR9 .....Attack recovery time adjustment VR.
- VR301 .....FL meter adjustment VR ("0dB" indication).
- VR302 .....FL meter adjustment VR ("−20dB" indication).
- Connection points (A) and (B)...Erase current adjustment points.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise. 1K = 1,000(Ω), 1M = 1,000 kΩ).
- Capacity are in micro-farads (μF) unless specified otherwise.
- The mark (▼) shows test point, e.g. ▼= Test point 1.
- 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.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
  - No mark .....Voltage values at OUT (NR select switch) mode.
  - ( ) .....Voltage values at record mode.
  - STOP .....Voltage values at stop mode.
  - CUE/REV.....Voltage values at cue or review mode.
  - CrO_2.....Voltage values at CrO_2 tape mode.
  - Metal .....Voltage values at metal tape mode.
  - 7½ips.....Voltage values at CrO_2 or metal tape mode.
  - Dolby IN .....Voltage values at Dolby IN mode.
  - dbx IN/PLAY ...Voltage values at dbx IN and playback mode.

  For measurement, use VTVM.
- (▬) indicates B + (bias).
- (▬) indicates B − (bias).
- (▬) indicates the flow of the playback signal. (NR out).
- (▬) indicates the flow of the recording signal. (NR out).
- (▬) indicates the flow of the playback signal. (dbx IN).
- (▬) indicates the flow of the record signal. (dbx IN).
- Described in the schematic diagram are two types of numbers; the supply parts numbers and production parts number for transistors and diodes.
  One type of number is used for supply parts number and production parts number when they are identical.
  e.g. Q1
  2SC1844(E,F)——Production parts number
  [2SC1844E]——Supply parts number
  D212
  1S2473T77 ——Production parts number
  [MA161]——Supply parts numbers
- The supply parts number is described alone in the replacement parts list.

• This schematic diagram may be modified at any time with the development of new technology.

SPECIFICATIONS • Input level controls...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	Less than 4%
Overall S/N ratio • Test tape...QZZCRA	Greater than 43dB (without NAB filter)

NOTES:

- [D].....For all European areas except United Kingdom.
- [B].....For United Kingdom.
- [F].....For Asian PX.
- [J].....For European PX.

CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM

L LED CIRCUIT BOARD

M MAIN CIRCUIT BOARD

CONNECTOR A (from R/P HEAD and Erase HEAD)

1	Play Sig. IN (L-CH)
2	GND
3	REC Sig. OUT (L-CH)
4	Play Sig. IN (R-CH)
5	
6	GND
7	REC Sig. OUT (R-CH)
8	Erase Current OUT
9	Erase Current IN

CONNECTOR C (to Dolby Circuit)

1	N.R Change Sig. OUT	9	Encode Sig. OUT (R-CH)
2	Encode Sig. OUT (L-CH)	10	
3	Encode/Decode Change Sig. OUT	11	Decode Sig. OUT (R-CH)
4	Decode Sig. OUT (L-CH)	12	GND
5	B+ (bias) OUT	13	Encode Sig. IN (R-CH)
6	Encode Sig. IN (L-CH)	14	Encode/Decode Sig. IN (R-CH)
7	Encode/Decode Sig. IN (L-CH)	15	GND
8	B + (bias) OUT		

CONNECTOR E (to FL Meter Circuit)

1	Sig. OUT (R-CH)
2	Sig. OUT (L-CH)
3	GND
4	B+ (bias)
5	Muting. Sig. OUT
6	
7	AC Voltage

CONNECTOR B (to Headphones Jack)

1	Sig. OUT (R-CH)
2	GND
3	Sig. OUT (L-CH)

D DOLBY CIRCUIT BOARD

V1 POWER SUPPLY CIRCUIT BOARD

* For all European areas except United Kingdom.

T2: AC POWER TRANSFORMER

S5: POWER ON/OFF SWITCH

AC POWER CORD

V1 POWER SUPPLY CIRCUIT BOARD

S9: AC POWER VOLTAGE SELECT SWITCH

S5: POWER ON/OFF SWITCH

T2: AC POWER TRANSFORMER

AC POWER CORD

* For United Kingdom.

F FL METER CIRCUIT BOARD

S7: CUE/REV SWITCH

LUG TERMINAL (for MECHANISM)

S8: PLAYBACK SWITCH

MOTOR

V1 POWER SUPPLY CIRCUIT BOARD

S9: AC POWER VOLTAGE SELECT SWITCH

S5: POWER ON/OFF SWITCH

T2: AC POWER TRANSFORMER

AC POWER CORD

* For PX.

H HEADPHONE JACK CIRCUIT BOARD

ERASE HEAD

RECORD/PLAYBACK HEAD

CONNECTION POINT (A)

CONNECTION POINT (B)

NOTES:

D.....For all European areas except United Kingdom.
B.....For United Kingdom.
F.....For Asian PX.
J.....For European PX.

NOTES:

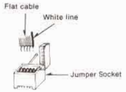
BLK.....Black
BLU.....Blue
BRN.....Brown
GRY.....Gray
GRN.....Green
L. BLU.....Light Blue
NIL.....No Color Mark
ORG.....Orange
PNK.....Pink
RED.....Red
SLD.....Shield Wire
VLT.....Violet
WHT.....White
YEL.....Yellow

NOTES:

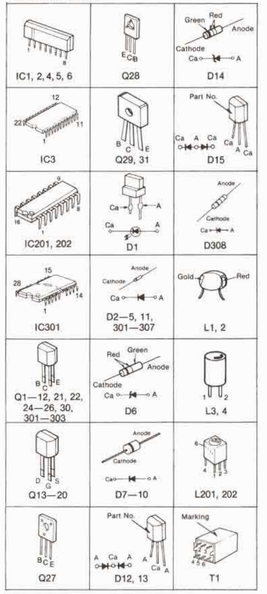
- The circuit shown in [ ] on the conductor side indicates printed circuit on the back side of the printed circuit board.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position.
  For measurement, use VTVM.
- **This circuit board diagram may be modified at any time with the development of new technology.**

Connection of a flat cable

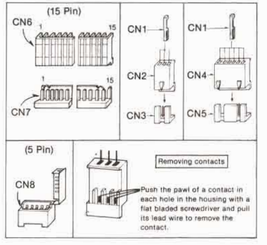
To connect a flat cable, direct the cable so that its white line faces the right side as shown below, then insert the cable into a jumper socket and close the lid of the jumper socket.



TERMINATIONS



CONNECTORS



ELECTRICAL PARTS LIST

REPLACEMENT PARTS LIST

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.

NOTES: RESISTORS

ERD.... Carbon
ERG.... Metal-oxide
ERS.... Metal-oxide
ERO.... Metal-film
ERX.... Metal-film
ERQ.... Fuse type metallic
ERC.... Solid
ERF.... Cement

CAPACITORS

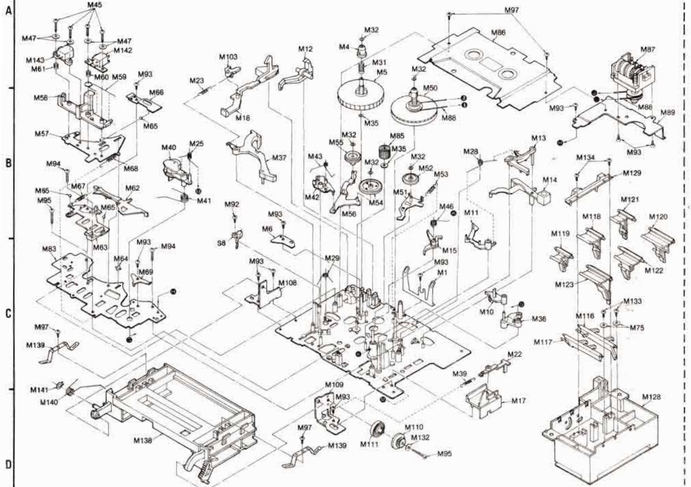
ECBA.... Ceramic
ECG□.... Ceramic
ECK□.... Ceramic
ECC□.... Ceramic
ECF□.... Ceramic
ECQM.... Polyester film
ECQE.... Polyester film
ECQF.... Polypropylene
ECE□.... Electrolytic
ECE□N.... Non polar electrolytic
ECQS.... Polystyrene
ECS□.... Tantalum
QCS.... Tantalum

Ref No.	Part No.	Ref No.	Part No.	Ref No.	Part No.	Ref No.	Part No.	Ref No.	Part No.
RESISTORS		R 146	ERD25TJ333	C 49, 50	ECEA16Z10	Q 301	2SC2603E	D 15	MC911TA
R 1, 2	ERD25FJ100	R 147	ERD25FJ561	C 51, 52	ECEA1AS470	Q 302	2SA1115D	D 301, 302, 303, 304, 305, 306, 307	MA161
R 3, 4	ERD25FJ101	R 148	ERD25FJ682	C 53, 54	ECCD1H391J	Q 303	2SC2603E	D 308 [DB]	MA1047
R 5, 6	ERD25FJ104	R 149	ERD25TJ473	C 55, 56	ECEA1HS220JZ			[For all European areas.]	
R 7, 8	ERD25FJ102	R 150, 151	△ ERD25FJ681	C 57, 58	ECQM1H472JZ	**DIODES & RECTIFIERS**			
R 9, 10	ERD25FJ680	R 152, 153		C 59	ECEA1HS100	D 1	LN216RP	**INTEGRATED CIRCUITS**	
R 11, 12	ERD25TJ184	[DB] △	ERX12ANJ3R9	C 60	ECEA50Z1	D 2, 3, 4, 5		IC 1	M5220L
R 13, 14	ERD25FJ682	[For all Europeans areas.]		C 61, 62, 63, 64			MA161	IC 2	M5218L
R 15, 16	ERD25FJ103	[FJ] △	ERD25FJ3R9		ECQM1H104JZ	D 6 △	RVD1N4748	IC 3	AN8291
R 17, 18	ERD25FJ680	[For PX.]		C 65, 66, 67, 68		D 7, 8, 9, 10		IC 4, 5, 6	M5218L
R 19, 20	ERD25FJ392	R 154	ERD25FJ1R0		ECQM1H332JZ		△ SM112	IC 201, 202	LM1121C
		R 155, 156	ERD25TJ683	C 69, 70	ECCD1H331J	D 11	MA161	IC 301	AN8870N
R 21, 22	ERD25FJ122	R 157	ERD25FJ102	C 71, 72	ECQM1H333JZ	D 12, 13	MC831TA		
R 25, 24	ERD25FJ101	R 158	ERD25FJ103	C 73, 74	ECEA1HS100	D 14	MA1051		
R 25, 26	ERD25FJ102	R 159	ERD25TJ104	C 75, 76	ECEA50ZR33				
R 27, 28	ERD25TJ333	R 160	ERD25FJ222	C 77, 78, 79, 80					
R 29, 30	ERD25TJ273	R 161, 162	ERD25TJ473		ECEA1HS100				
R 31, 32	ERD25FJ102	R 163	ERD25FJ222	C 81, 82	ECEA25ZR7				
R 33, 34	ERD25FJ101	R 164	ERD25FJ151	C 83, 84	ECEA1HS100				
R 35, 36	ERD25FJ822								
R 37, 38	ERD25TJ224	R 165	ERD25TJ123	C 85, 86	ECKD1H681KB				
R 39, 40	ERD25FJ561	R 166	ERD25FJ103	C 87, 88	ECCD1H101K				
		R 167	ERD25TJ333	C 89	ECQM1H183JZ				
R 41, 42	ERD25FJ392	R 168	ERD25TJ473	C 90	ECQM1H153JZ				
R 43, 44	ERD25FJ150	R 201, 202	ERD25TJ473	C 91	ECEA1ES101				
R 45, 46	ERD25FJ562	R 203, 204	ERD25FJ332	C 92	ECQM1H822JZ				
R 47, 48	ERD25TJ224	R 205, 206	ERD25TJ274	C 93	ECEA50Z2R2				
R 51, 52	ERD25TJ153	R 207, 208	ERD25TJ753	C 94	ECEA25ZR7				
R 53, 54	ERD25TJ133	R 301, 302	ERD25TJ683	C 95	ECEA1CS221				
R 55, 56	ERD25FJ102	R 303, 304	ERD25TJ473	C 96 △	ECKD2H472PEL				
R 57, 58, 59, 60		R 305, 306	ERD25TJ105						
	ERD25TJ104	R 307, 308	ERD25FJ102	C 97, 98 △	ECKD1H103ZF				
R 61, 62	ERD25FJ332	R 309	ERD25TJ153	C 99, 100					
R 63, 64	ERD25TJ683	R 310	ERD25FJ103	△	ECEA1CS331				
		R 311	ERD25TJ683	C 101, 102					
R 65, 66	ERD25TJ223	R 312	ERD25FJ222	△	ECEA1CS102				
R 67, 68	ERD25TJ683	R 313	ERD25FJ684	C 103, 104	ECKD1H103ZF				
R 69, 70	ERD25FJ472	R 314	ERD25FJ471	C 105	ECEA1CH100				
R 71, 72	ERD25TJ153	R 315	ERD25FJ472	C 106	ECEA1AS331				
R 73, 74	ERD25FJ822	R 316	ERD25FJ182	C 107, 108	ECKD1H103ZF				
R 75, 76	ERD25TJ333	R 317 [FJ]	ERD25FJ181	C 109	ECEA1HS100				
R 77, 78	ERD25FJ472	[For PX.]		C 110	ECEA1CS330				
R 79, 80	ERD25TJ104	R 318	ERD25FJ103	C 200 △	ECEQ2A103MF				
R 81, 82	ERD25TJ333	R 319, 320	ERD25FJ181						
R 83, 84	ERD25FJ682	R 321	ERD25FJ103	C 201, 202	ECEA50ZR47				
		R 322	ERD25TJ683	C 203, 204	ECFDD392KYY				
R 85, 86	ERD25FJ102			C 205, 206	ECEA25ZR7				
R 87, 88	ERD25FJ103	**VARIABLE RESISTORS**		C 207, 208	ECEA1HS100				
R 89, 90	ERD25TJ153			C 209, 210	ECQM1H472JZ				
R 91, 92	ERD25FJ472	VR 1, 2	EWJS3AF22A24	C 211, 212	ECQM1H333JZ				
R 93, 94	ERD25FJ151	VR 3, 4	ENVM4AA00B24	C 213, 214	ECQM1H473JZ				
R 95, 96	ERD25TJ104	VR 5, 6	EVNM4AA00B53	C 215, 216	ECQM1H223JZ				
R 97, 98	ERD25FJ101	VR 7, 8	EVNM4AA00B25	C 217, 218	ECQM1H104JZ				
R 99, 100	ERD25FJ112	VR 9	EVNM4AA00B23	C 219, 220	ECEA1HS100				
R 101, 102	ERD25FJ682	VR 301	EVNM4AA00B24	C 221, 222	ECEA1AS221				
R 103, 104, 105, 106		VR 302	EVNM4AA00B14	C 301, 302, 303, 304					
	ERD25TJ225				ECEA50Z1				
		CAPACITORS		C 305	ECEA1HS100				
R 107, 108	ERD25FJ821			C 306	ECFDD473KXY				
R 109, 110	ERD25FJ103	C 1, 2	ECKD1H471KB						
R 111, 112	ERD25TJ333	C 3, 4	ECEA2EZ4R7	**SPARK KILLERS**					
R 113, 114	ERD25FJ332	C 5, 6	ECKD1H102KB						
R 115, 116	ERD50FJ560	C 7, 8	ECEA1AS101	Z 1, 2, 3, 4	EXRP220K124				
R 117, 118	ERD25TJ273	C 9, 10	ECEA1H681KB	Z 5, 6	EXRP181K153				
R 119, 120	ERD25FJ152	C 11, 12	ECQM1H183JZ						
R 121, 122	ERD25TJ224	C 13, 14	ECEA50ZR47	**TRANSISTORS**					
R 123, 124	ERD25FJ151	C 15, 16	ECQM1H223JZ						
R 125, 126	ERD25FJ682	C 17, 18	ECQM1H153JZ	Q 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	2SC2603E				
		C 19, 20	ECFDD223KXY	Q 13, 14	2SK3818CD				
R 127	ERD25FJ100	C 21, 22	ECFDD273KXY	Q 15, 16	2SJ40CD				
R 128, 129	ERD25FJ562	C 23, 24	ECEA25Z4R7	Q 17, 18	2SK3818CD				
R 130	ERD25FJ100	C 25, 26	ECKD1H103ZF	Q 19, 20	2SJ40CD				
R 131	ERD50FJ121	C 27, 28	ECFDD123KYY	Q 21, 22	2SC2603E				
R 132, 133	ERD25FJ391	C 29, 30	ECEA50ZR47	Q 23	2SD592				
R 134, 135	ERD25FJ101	C 31, 32	ECKD2H121KBL	Q 23	2SC2603E				
R 136	ERD25FJ102	C 33, 34	ECBS1H102KBY	Q 24	2SA1115D				
R 137	ERD25FJ152	C 35, 36	ECEA25Z4R7	Q 25	2SC2603E				
R 138	ERD25TJ123	C 37, 38	ECEA50Z1						
R 139	ERD25TJ153	C 39, 40	ECBS1C103NYY	Q 26	2SA1115D				
				Q 27	2SC1846				
R 140	ERD25TJ473	C 41, 42	ECEA50ZR22	Q 28	2SA865				
R 141	ERD25FJ101	C 43, 44	ECEA50ZR68	Q 29	2SB641				
R 142, 143	ERD25TJ473	C 45, 46	ECCD1H471J	Q 30	2SC2603E				
R 144	ERD25FJ222	C 47, 48	ECQM1H223JZ	Q 31	2SB641				
R 145	ERD25FJ103								

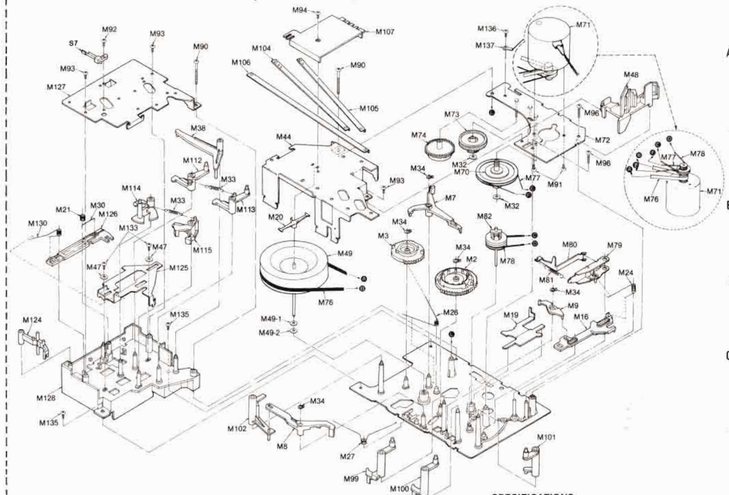
Ref No.	Part No.	Part Name & Description
FUSES		
F 1		
[DB] △	XBAQ0007	Fuse (T400mA)
[For all European areas.]		
[FJ] △	XBAZE03N55	Fuse (T500mA)
[For PX.]		
F 2		
[DB] △	XBAQ0007	Fuse (T400mA)
[For all European areas.]		
COILS		
L 1, 2	QLQX2722D	Peaking Coil
L 3, 4	QLQX0343KWA	Bias Trap Coil
L 201, 202	QLM29K	MPX Coil
TRANSFORMERS		
T 1	QLB0196	Bias Oscillation Transformer
T 2 [D] △	QLPD68EKC	AC Power Transformer
[For all European areas except United Kingdom.]		
[B] △	QLPA72EKC	AC Power Transformer
[For United Kingdom.]		
[FJ] △	QLPN73EKC	AC Power Transformer
[For PX.]		
SWITCHES		
S 1	QSSE203	Slide Switch (for Record/Playback Change)
S 2, 3, 4	QSWX416	Combination Switch (Input Selector, Dolby NR, dbx NR)
S 5 △	ESB822S	Push Switch (Power ON/OFF)
S 6	QSR4306	Rotary Switch (Tape Selector)
S 7	QSB0251	Leaf Switch (Cue/Review SW)
S 8	QSB0251	Leaf Switch (Play SW)
S 9		
[BFJ] △	QSR1410	AC Power Voltage Select Switch
[For United Kingdom and PX.]		
JACKS		
J 1, 2	QJA0451	Microphone Jack
J 3	QJA0259	Jack (for Headphones)
J 4, 5, 6, 7	QEJ5028S	Jack Board (for LINE IN/OUT)
CONNECTORS		
CN 1	QJT1054	Contact
CN 2	QJS1921TN	3 Pin Socket
CN 3	QJP1921TN	3 Pin Post
CN 4	QJS1923TN	9 Pin Socket
CN 5	QJP1923TN	9 Pin Post
CN 6	QJS1925TNL	15 Pin Socket ("L" Type)
CN 7	QJP1925TN	15 Pin Post
CN 8	QJS1961S	Jumper Socket (5 Pin)

MECHANICAL PARTS LOCATION

(FRONT VIEW)



(REAR VIEW)



When servicing this mechanism unit, refer to the disassembly notes and assembly instructions described in the service manuals of RS-M51, RS-M13, RS-M14 and RS-M04 (RS-M24 mechanism series).

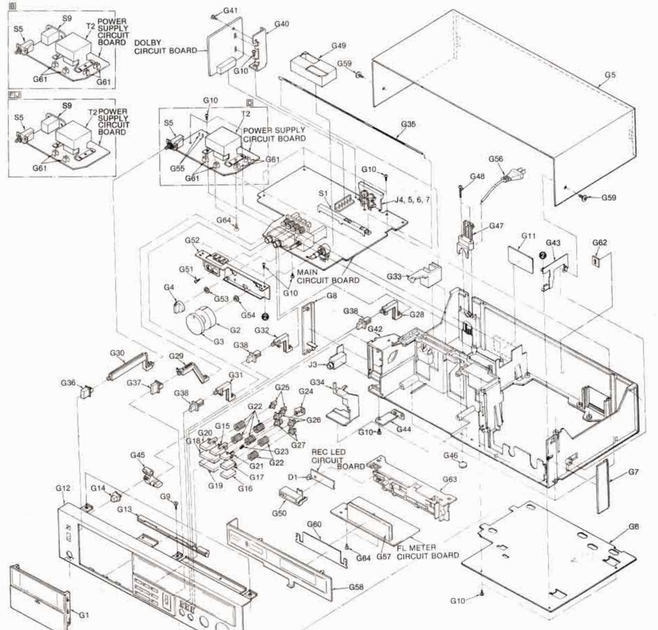
SPECIFICATIONS

Pressure of pressure roller	350±50g
Takeup tension * Use cassette torque meter.....QZZSRKCT	$45\pm\frac{15}{15}$g-cm
Wow and flutter: (JIS) * Use test tape .....QZZCWAT	Less than 0.08% (WRMS)

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description
		MECHANICAL PARTS
M 1	QBP1874	Cassette Pressure Spring
M 2	QDG1201	Main Gear
M 3	QDG1202	Sub Gear
M 4	QMB1336	Supply Reel Table Hub
M 5	QDR1139	Supply Reel Table
M 6	QMF2118	Fast Forward Arm Bracket
M 7	QML3899	Sub Control Lever
M 8	QML3898	Main Control Lever
M 9	QML3900	Record Operation Lever
M 10	QML3586	Head Base Plate Lift Lever
M 11	QML3594	Auto-Stop Release Arm
M 12	QML3603	Erase Safety Lever
M 13	QML3604	Auto-Stop Driving Lever
M 14	QML3605	Auto-Stop Detection Lever
M 15	QML3592	Change Lever
M 16	QMR2013	Record Rod
M 17	QMR2011	Auto-Stop Connection Rod
M 18	QMR2014	Eject Rod
M 19	QMR2012	Control Rod
M 20	QMZ1283	Flywheel Thrust Retainer
M 21	QBC1357	Lock Pin Pressure Spring
M 22	QML3596	Auto-Stop Selection Lever
M 23	QBT1962	Main Lever Spring
M 24	QBN1739	Selection Lever Spring
M 25	QBN1742	Pressure Roller Release Spring
M 26	QBN1744	Sub Gear Spring
M 27	QBN1697	Main Gear Spring
M 28	QBN1746	Auto-Stop Lever Spring
M 29	QBN1747	Connection Spring
M 30	QBS1137	Pause Lock Pin
M 31	QBC1372	Reel Table Spring
M 32	QBW2008	Poly Washer
M 33	QBT1961	Operating Change Lever Spring
M 34	XUB3FT	Stop Ring 3ø
M 35	QBW2012	Poly Washer
M 36	QXL1354	Sub Lever Assembly
M 37	QXL1355	Main Lever Assembly
M 38	QML3882	Pause Change Lever
M 39	QBT1682	Lock Retainer Spring
M 40	QXL1381	Pressure Roller Assembly
M 41	QBN1743	Pressure Roller Spring
M 42	QML3598	Fast Forward Lever
M 43	QBN1748	Fast Forward Spring
M 44	QMA4410	Flywheel Retainer
M 45	XSN2+10	Screw (B2×10
M 46	QBN1741	Change Lever Spring
M 47	XWG2B	Washer 2ø
M 48	QMZ1254	Cord Clamper
M 49	QXF0199	Flywheel Assembly
M 49-1	QBW2049	Poly Washer
M 49-2	QBW2026	Snap Ring
M 50	QXD1143	Takeup Reel Table Assembly
M 51	QXL1382	Idler Lever Assembly
M 52	QXI0111	Takeup Idler Assembly
M 53	QBT1893	Takeup Idler Spring
M 54	QXI0113	Fast Forward Idler Assembly
M 55	QXI0112	Rewind Idler Assembly
M 56	QXL1383	Fast Forward Arm Assembly
M 57	QMK1840	Head Base Plate
M 58	QMZ1241	Head Spacer
M 59	QBN1740	Head Pressure Spring
M 60	QBC1278	Head Spring
M 61	QBCAA0008	Head Spring
M 62	QML3591	Brake Arm
M 63	QMZ1240	Sub Head Base Plate
M 64	QMN2550	Roller
M 65	QBC1017	Steel Ball 2ø
M 66	QBP1873	Head Base Plate Pressure Spring
M 67	QBT1597	Brake Arm Spring
M 68	QBT1892	Head Release Spring
M 69	QMA3858	Head Adjustment Plate
M 70	QZK0241	Takeup Gear Assembly
M 71	QXL0297	Motor Assembly
M 72	QXK2286	Sub Chassis Assembly
M 73	QDG1199	Auto-Stop Gear
M 74	QDG1200	Cam Gear
M 75	XWG2	Washer 2 ø
M 76	QBB0324	Capstan Belt
M 77	QDB0274	Takeup Belt
M 78	QDB0273	Fast Forward Belt
M 79	QXL1360	Record/Playback Selection Arm Assembly
M 80	QML3580	Record/Playback Selection Lever
M 81	QBT1895	Record/Playback Selection Lever Spring
M 82	QXP0607	Fast Forward Connection Pulley Assembly
M 83	QMK1836	Upper Base Plate
M 85	QDP1828	Fast Forward Pulley
M 86	QXH0406	Chassis Cover Assembly
M 87	QDC0126	Tape Counter
M 88	QDB0169	Counter Belt
M 89	QMA4439	Counter Angle
M 90	XTN3+24B	Tapping Screw (B3×24
M 91	XSN26+3	Screw (B2.6×3
M 92	XTN2+6B	Tapping Screw (B2×6
M 93	XTN26+6B	Tapping Screw (B2.6×6
M 94	XTN26+10B	Tapping Screw (B2.6×10
M 95	XTN26+12B	Tapping Screw (B2.6×12
M 96	XTN3+10B	Tapping Screw (B3×10
M 97	XTN26+5BFZ	Tapping Screw (B2.6×5
M 98	QML3885	Fast Forward Driving Lever
M 100	QML3886	Rewind Driving Lever
M 101	QML3887	Record Driving Lever
M 102	QML3897	Play Changing Lever
M 103	QML3901	Eject Obstruction Lever
M 104	QMR2007	Fast Forward Connection Plate
M 105	QMR2008	Rewind Connection Plate
M 106	QMR2009	Record Connection Plate
M 107	QMZ1288	Connection Plate Retainer
M 108	QMA4411	Holding Angle-L
M 109	QMA4412	Holding Angle-R
M 110	QDG1254	Damper Gear
M 111	QDP1920	Damper Retainer
M 112	QML3878	Fast Forward Change Lever
M 113	QML3879	Rewind Change Lever
M 114	QML3880	Record Change Lever
M 115	QML3881	Play Change Lever
M 116	QML3883	Lock Arm-A
M 117	QML3884	Lock Arm-B
M 118	QML3885	Play Lever
M 119	QML3889	Stop lever
M 120	QML3890	Fast Forward Lever
M 121	QML3891	Rewind Lever
M 122	QML3892	Record Lever
M 123	QML3893	Pause Lever
M 124	QML3894	Muting Lever
M 125	QMR2006	Fast Wind Rod
M 126	QMR2010	Pause Rod
M 127	QMF2245	Operating Button Plate
M 128	QKJ0537	Operating Button Frame
M 129	QBP1953	Operating Lever Spring
M 130	QBN1898	Fast Wind Rod Spring
M 131	QBW2020	Washer
M 132	XWG26	Washer 2.6ø
M 133	XTN2+5B	Tapping Screw (B2×5
M 134	XTN2+4BFZ	Tapping Screw (B2×4
M 135	XTN3+6B	Tapping Screw (B3×6
M 136	XTN3+12B	Tapping Screw (B3×12
M 137	QJT0015	Lug Terminal
M 138	QKF2105	Cassette Holder
M 139	QBP1923	Holder Spring
M 140	QBN1937	Eject Spring
M 141	XUB5FT	Stop Ring
M 142	QWY4122Z	Record/Playback Head
M 143	QWY2136Z	Erase Head

CABINET PARTS LOCATION



NOTES:
- D.....For all European areas except United Kingdom.
- B.....For United Kingdom.
- F J ...For PX.

REPLACEMENT PARTS LIST

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.

Ref. No.	Part No.	Part Name & Description
		CABINET PARTS
G 1	QYF0640 "Silver Type" QYF0640K "Black Type"	Cassette Lid Assembly Cassette Lid Assembly
G 2	QYT0647	Volume Knob-R Assembly
G 3	QYT0648	Volume Knob-L Assembly
G 4	QGT1591	Knob (for Tape Selector)
G 5	QGC1231 "Silver Type" QGC1231K "Black Type"	Case Cover Case Cover
G 6	QGC1232	Bottom Cover
G 7	QGK3260 "Silver Type" QGK3260K "Black Type"	Side Panel-R Side Panel-R
G 8	QGK3286 "Silver Type" QGK3286K "Black Type"	Side Panel-L Side Panel-L
G 9	XTS3+10B	Tapping Screw (B3×10
G 10	XTN3+10B	Tapping Screw (B3×10
G 11	[D] QGS3088 [For all European areas except United Kingdom.] [B] QGS3089 [For United Kingdom.]	Main Name Plate Main Name Plate
G 12	[For PX.] QYF1179 "Silver Type" QYF1179K "Black Type"	Main Name Plate Front Panel Assembly Front Panel Assembly
G 13	QGK3259K	Spacer
G 14	QGO2059	Push Button (for Eject)
G 15	QGOM0089	Push Button (for F.F)
G 16	QGOM0095	Push Button (for Pause)
G 17	QGOM0093	Push Button (for Record)
G 18	QGOM0092	Push Button (for Playback)
G 19	QGOM0094	Push Button (for Stop)
G 20	QGOM0088	Push Button (for Rewind)
G 21	QGOM0097	Push Button (for Counter Reset)
G 22	QBC1414	Button Spring-A
G 23	QBC1187	Button Spring-B
G 24	QKJ0547	Spring Holder
G 25	QKJ0544	Button Rod-A
G 26	QKJ0545	Button Rod-B
G 27	QKJ0546	Button Rod-C
G 28	QMR2026	Switch Rod-D
G 29	QMR2027	Switch Rod-E
G 30	QMR2019	Switch Rod-C
G 31	QMR2028	Switch Rod-F
G 32	QMR2101	Switch Rod-G
G 33	QML3907	Record/Playback Lever
G 34	QML3909	Counter Reset Lever
G 35	QBS1139	Record/Playback Connection Wire
G 36	QGO1900	Push Button (for Power ON/OFF)
G 37	QGO2052	Push Button-B
G 38	QGO2251	Push Button-D
G 40	QMA4634	dbx P.B Holding Angle
G 41	XTN3+8BFZ	Tapping Screw (B3×8
G 42	[D] QKM1558K [For all European areas except United Kingdom.] [B·F J] QKM1585K [For United Kingdom and PX.]	Main Case Main Case
G 43	QJC0054	Earth Plate-A
G 44	QJC0057	Earth Plate-C
G 45	QML3908	Eject Lever
G 46	QKA1093	Rubber Foot
G 47	[D] QKJ0550K [For all European areas except United Kingdom.] [B] QKJ0658 [For United Kingdom.] [F J] QKJ0552K [For PX.]	Cord Clamper Cord Clamper Cord Clamper
G 48	XTN3+20B	Tapping Screw (B3×20
G 49	QTS1586	Shield Board
G 50	QKJ0549	LED Holder
G 51	XTN3+10BFZ	Screw (B3×10
G 52	QMA4440	Volume Angle
G 53	XNS8	Nut (8ø)
G 54	XNS9	Nut (9ø)
G 55	△ SJT777	Terminal
G 56	[D] △ SJA88 [For all European areas except United Kingdom.] [B] △ QFC1205 [For United Kingdom.] [F J] △ RAX5ZB-K [For PX.]	AC Power Cord AC Power Cord AC Power Cord
G 57	QSIFL006F	FL Meter
G 58	QGK3263 "Silver Type" QGK3263Y "Black Type"	Meter Cover Meter Cover
G 59	QHG1324 "Silver Type" QHG1324K "Black Type"	Ornament Screw Ornament Screw
G 60	QGL1177	Meter Filter
G 61	[DB] △ QTF1054 [For all European areas.] [F J] △ QTF1060 [For PX.]	Fuse Holder Fuse Holder
G 62	QKJ0636	Cord Clamper
G 63	QKJ0548	Meter Holder
G 64	XTN3+8B	Screw (B3×8
		ACCESSORIES
A 1	[DB] QQT3476 [For all European areas.] [F J] QQT3487 [For PX.]	Instruction Book Instruction Book
A 2	XZB24X34A04	Polyethylene Bag (for A1)
A 3	QEB0125	Connection Cord
		PACKINGS
P 1	[DB] QPN4464 [For all European areas.] [F J] QPN4485 [For PX.]	Inner Carton Inner Carton
P 2	QPA0675	Cushion-R
P 3	QPA0676	Cushion-L
P 4	QPA0683	Spacer
P 5	QPC0072	Poly Sheet
P 6	XZB40X60A02	Poly Sheet (for UNIT)

A.H ARD D DK B BK F FK J JK Printed in Japan