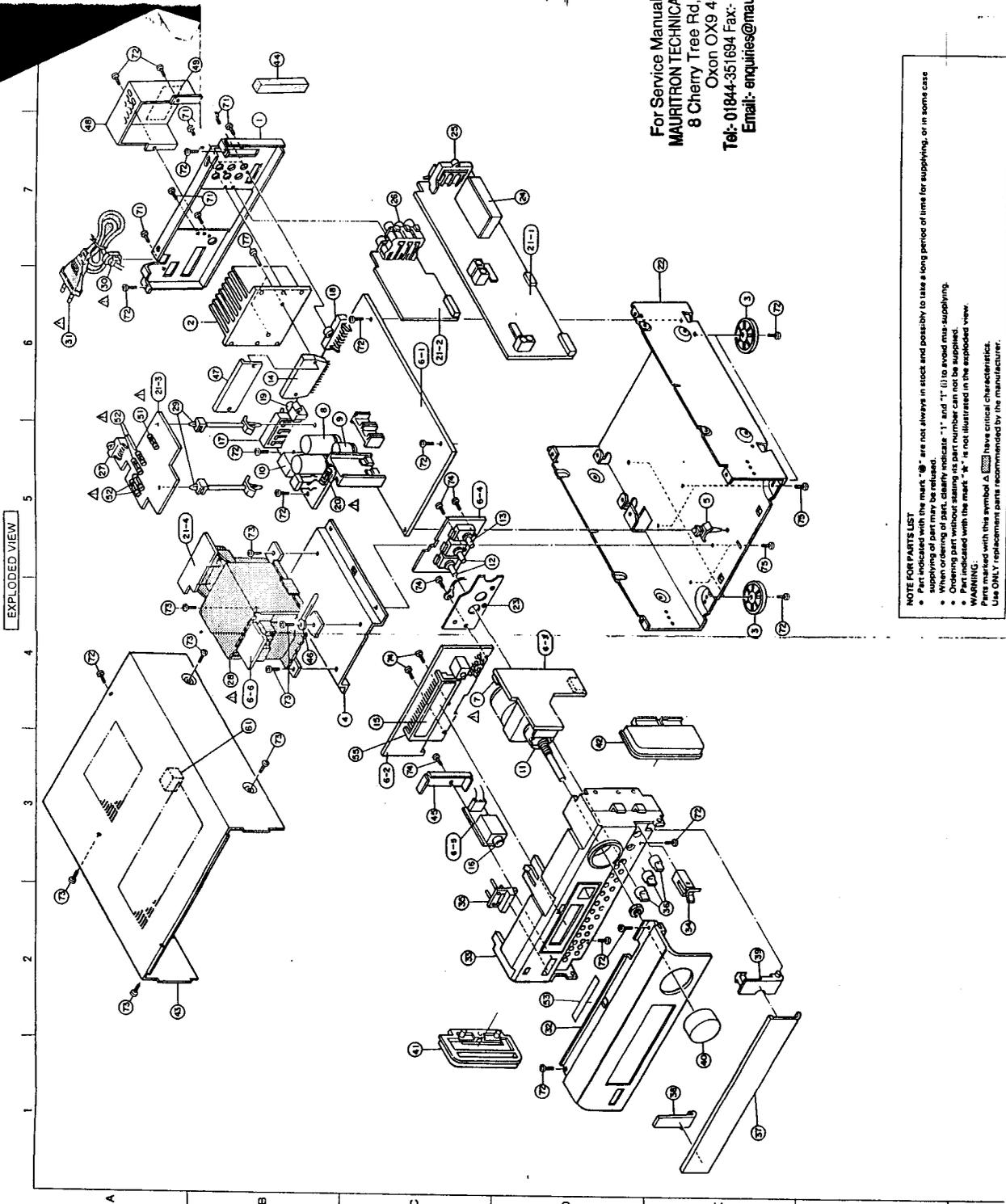


RECEIVER SECTION

EXPLODED VIEW OF PARTS LIST

Ref. No.	Part No.	Part Name	Remarks
1	105 2974 415	Rear Panel	
2	104 0253 010	Filter	
3	104 0253 010	Filter	
4	472 3331 115	Tone Bracket	
5	415 8018 018	P.C.B. Holder	
6	1U-2277 B	Main Unit Assy	for Europe model
7	1U-2277 C	Main Unit Assy	for U.K. model
8	1U-2277 C	Main Unit Assy	
9	1U-2277 C	Main Unit Assy	
10	1U-2277 C	Main Unit Assy	
11	1U-2277 C	Main Unit Assy	
12	1U-2277 C	Main Unit Assy	
13	1U-2277 C	Main Unit Assy	
14	1U-2277 C	Main Unit Assy	
15	1U-2277 C	Main Unit Assy	
16	1U-2277 C	Main Unit Assy	
17	1U-2277 C	Main Unit Assy	
18	1U-2277 C	Main Unit Assy	
19	1U-2277 C	Main Unit Assy	
20	1U-2277 C	Main Unit Assy	
21	1U-2278 B	Tuner Unit Assy	for U.K. model
22	1U-2278 C	Tuner Unit Assy	
23	1U-2278 C	Tuner Unit Assy	
24	1U-2278 C	Tuner Unit Assy	
25	1U-2278 C	Tuner Unit Assy	
26	1U-2278 C	Tuner Unit Assy	
27	1U-2278 C	Tuner Unit Assy	
28	1U-2278 C	Tuner Unit Assy	
29	1U-2278 C	Tuner Unit Assy	
30	1U-2278 C	Tuner Unit Assy	
31	1U-2278 C	Tuner Unit Assy	
32	1U-2278 C	Tuner Unit Assy	
33	1U-2278 C	Tuner Unit Assy	
34	1U-2278 C	Tuner Unit Assy	
35	1U-2278 C	Tuner Unit Assy	
36	1U-2278 C	Tuner Unit Assy	
37	1U-2278 C	Tuner Unit Assy	
38	1U-2278 C	Tuner Unit Assy	
39	1U-2278 C	Tuner Unit Assy	
40	1U-2278 C	Tuner Unit Assy	
41	1U-2278 C	Tuner Unit Assy	
42	1U-2278 C	Tuner Unit Assy	
43	1U-2278 C	Tuner Unit Assy	
44	1U-2278 C	Tuner Unit Assy	
45	1U-2278 C	Tuner Unit Assy	
46	1U-2278 C	Tuner Unit Assy	
47	1U-2278 C	Tuner Unit Assy	
48	1U-2278 C	Tuner Unit Assy	
49	1U-2278 C	Tuner Unit Assy	
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51	1U-2278 C	Tuner Unit Assy	
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60	1U-2278 C	Tuner Unit Assy	
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95	1U-2278 C	Tuner Unit Assy	
96	1U-2278 C	Tuner Unit Assy	
97	1U-2278 C	Tuner Unit Assy	
98	1U-2278 C	Tuner Unit Assy	
99	1U-2278 C	Tuner Unit Assy	
100	1U-2278 C	Tuner Unit Assy	



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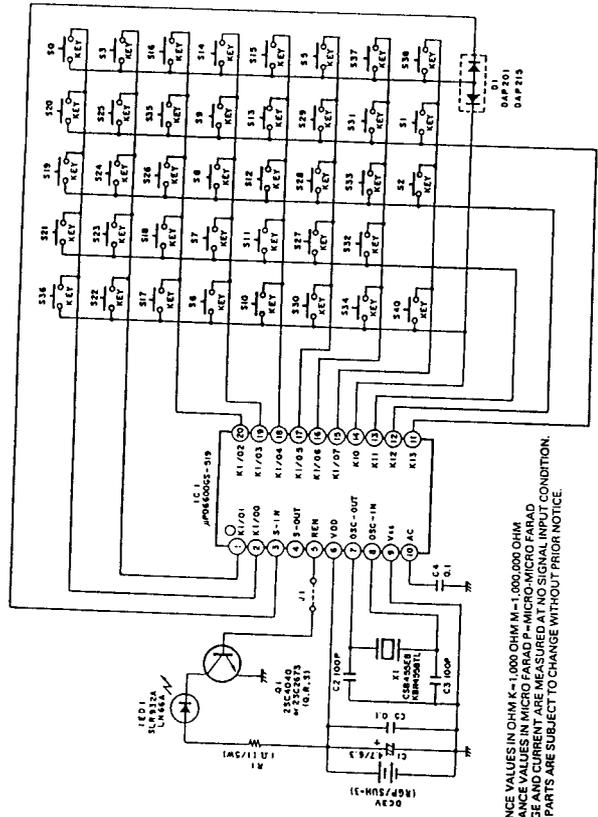
NOTE FOR PARTS LIST

- Part indicated with the mask "M" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "1" (1) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mask "R" is not illustrated in the exploded view.
- Part marked with this symbol Δ have critical characteristics.

Use ONLY replacement parts recommended by the manufacturer.

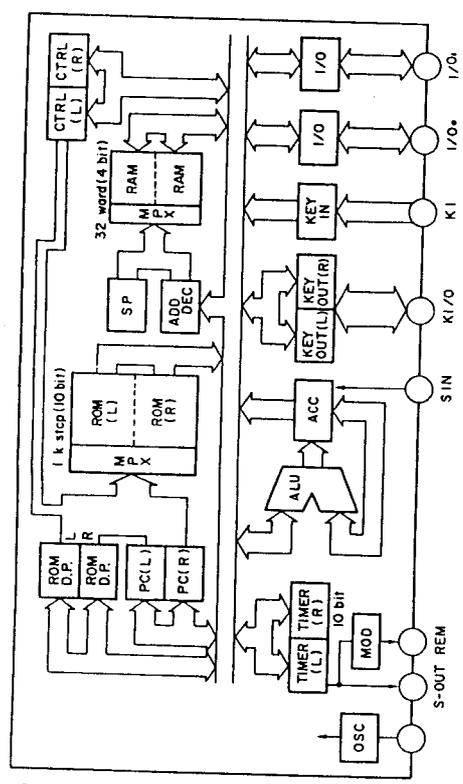
(URC-70: 3990144002)

Schematic Diagram

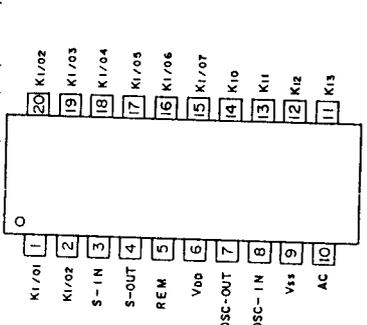


NOTES
 ALL RESISTANCE VALUES IN OHM K=1,000 OHM M=1,000,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD P=PICTO-MICRO FARAD
 ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED
 ALL COMPONENTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

Block Diagram



Pin Connection Diagram (Top View)



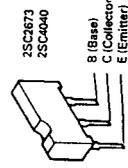
TUNER key after being switched on

KEY NO.	FUNCTION	System code	Data code	Expansion code	HEX code (Wide use F)
		C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 K			
S.6	POWER	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0030
S.1	VOLUME	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C001D
S.2	VOLUME	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0012
S.3	SLEEP	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0013
S.4	TUNER	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0072
S.5	DIRECT CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0059
S.18	PROG CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0057
S.19	PROG CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C001D
S.20	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C005C
S.21	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C005D
S.22	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C005E
S.23	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C005F
S.24	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C005A
S.25	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C005A
S.26	CANCEL CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C005A
S.27	DECK	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0067
S.28	DECK	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006E
S.29	DECK	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006C
S.30	DECK	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006B
S.31	REC. REC. MUTE DECK	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006A
S.32	REC. REC. MUTE DECK	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006F
S.33	REC. REC. PAUSE DECK	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006D
S.34	OPEN/CLOSE DECK	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0072
S.35	TIME GE	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006A
S.36	OPEN/CLOSE CF	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006A
S.37	PHONO	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0061
S.38	DATA/CLR	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0062
S.10	SDH	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006A

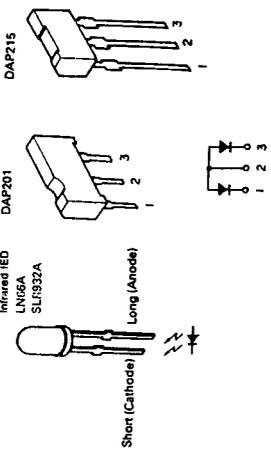
CD PROGRAM and DIRECT keys after being switched on

KEY NO.	FUNCTION	System code	Data code	Expansion code	HEX code (Wide use F)
		C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 K			
S.6	POWER	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0012
S.7	VOLUME	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0013
S.8	SLEEP	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0014
S.9	TUNER	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0015
S.10	DIRECT CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0016
S.11	PROG CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0017
S.12	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0018
S.13	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C0019
S.14	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C001A
S.15	IF CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C001B
S.16	CANCEL CD	0 0 1 1 0 0 0 0 1 1 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000C006F

Transistors



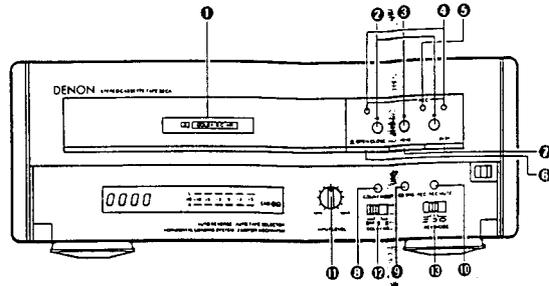
Diodes



CASSETTE DECK SECTION

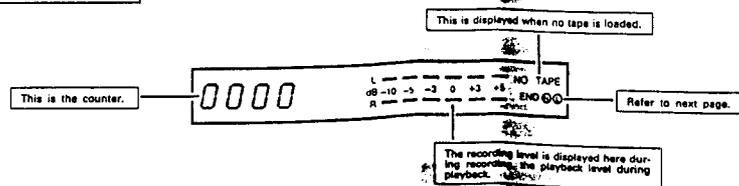
PART NAMES AND FUNCTIONS

CASSETTE DECK



- 1** **Cassette tray**
The cassette tray opens out when the OPEN/CLOSE button **6** is pressed. Insert the cassette tape with the side on which the tape is exposed facing away from you. To close the cassette tray, press the OPEN/CLOSE button **6** again.
- 2** **▶ (forward playback button):**
Press this button to record or play the tape in the forward direction.
- 4** **◀ (reverse playback button):**
Press this button to record or play the tape in the reverse direction.
- 3** **■ (stop button):**
Press this button while the tape is moving to stop the tape.
- 4** **Playback direction indicators**
This flashes during playback.
- 5** **Recording indicator**
This lights when the recording or recording standby mode is set using the REC/REC MUTE button **10**, and flashes during the recording mute mode.
- 6** **▲ OPEN/CLOSE button**
Press this button to open and close the cassette tray.
- 7** **◀◀ (rewind button):**
Press this button to rewind the tape. When pressed, the playback direction indicators **4** flash.
Also, if pressed during playback in the ▶ (forward) direction, the tape is rewound to the beginning of the current selection. If pressed during playback in the ◀ (reverse) direction, the tape is forwarded to the beginning of the next selection.
- ▶▶ (fast-forward button):**
Press this button to fast-forward the tape. When pressed, the playback direction indicators **4** flash.
Also, if pressed during playback in the ▶ (forward) direction, the tape is forwarded to the beginning of the next selection. If pressed during playback in the ◀ (reverse) direction, the tape is rewound to the beginning of the current selection.
- 8** **COUNTER RESET button**
Press this button to reset the tape counter to "0000".
- 9** **CD SRS (CD synchronized recording button)**
Use this button for CD synchronized recording. Refer to Page 77.
- 10** **REC/REC MUTE (recording / recording mute) button**
To record, press the REC/REC MUTE button and the ▶ PLAY button. If only the REC/REC MUTE button is pressed, the deck is set to the recording pause mode. If pressed during recording, the deck is set to the recording mute mode for approximately 5 seconds, after which it is set to the recording pause mode.
- 11** **INPUT LEVEL control**
Use this control to set the recording level.
- 12** **DOLBY NR selector switch**
Use this switch to select the Dolby NR mode, OFF, B or C. During playback, set this switch to the same mode in which the tape was recorded.
- 13** **REV. MODE switch**
Use this to set the reverse mode to one of the following modes:  (one side mode),  (reverse mode),  (continuous mode). In the continuous mode, the tape stops automatically after both sides are played five times.
Refer to Page 11.

CASSETTE DECK DISPLAY



Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

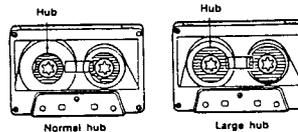
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Remaining Tape Indicators - END, (M) and (L)
 These indicators notify that the tape is reaching the end during recording and playback. The indicators differ according to the diameter of the tape hub.
END : This starts flashing when the tape is nearing the end during recording or playback, then stops flashing and remains lit once the end of the tape is reached. After this, the indicator turns off as soon as another mode is set.
(M) : For normal hubs, (M) and END light when the tape is nearing the end. Use these two indicators to determine the amount of tape remaining. The indicator lights when the tape is nearing the end, then turns off when the tape stops.
(L) : When recording or playing tapes with large hubs, (L) and END light when the tape is nearing the end. Use these two indicators to determine the amount of tape remaining. The indicator lights when the tape is nearing the end, then turns off when the tape stops.
Example 1: About 5 minutes from the end of the tape during playback in the forward direction on a 60-minute tape with normal hubs:
 END: (M)
Example 2: About 8 minutes from the end of the tape during playback in the forward direction on a 60-minute tape with large hubs:
 END: (M)(L)
Example 3: About 5 minutes from the end of the tape during playback in the reverse direction on a 60-minute tape with normal hubs:
 END: (M)(L)
Example 4: About 5 minutes from the end of the tape during playback in the reverse direction on a 60-minute tape with large hubs:
 END: (L)

* Large hubs are hubs with a diameter of about 27mm.
 Note that if the hub is larger than this, there may be a major error in indicating the remaining time.



* Use the following table to determine the approximate time to the end of the tape when the END, (M) and (L) indicators start flashing or stop flashing, remaining lit:

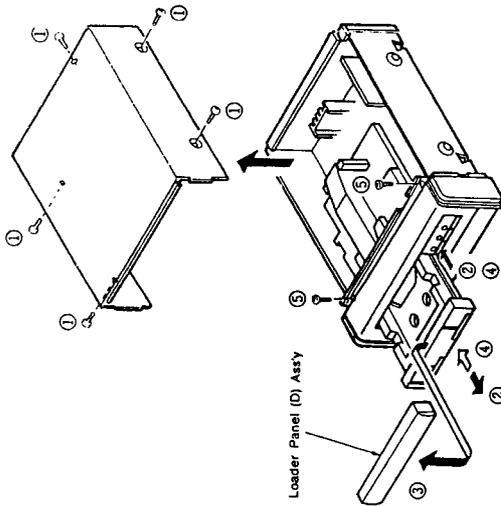
Hub diameter	Normal hub		Large hub	
	Playback in forward direction	Playback in reverse direction	Playback in forward direction	Playback in reverse direction
C-48	Approx. 1 minute	Approx. 5 minutes		
C-60	Approx. 5 minutes	Approx. 5 minutes	Approx. 8 minutes	Approx. 5 minutes
C-90	Approx. 14 minutes	Approx. 5 minutes	-	-

* There are no C-90 tapes with large hubs.

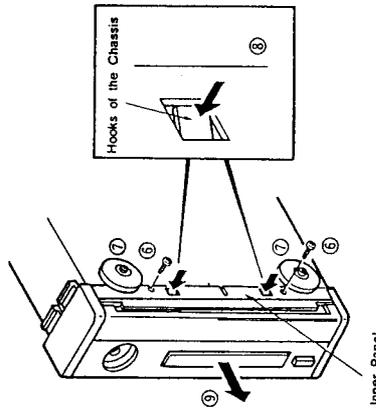
REMOVAL OF EACH SECTION

(Follow this procedure in the reverse order when assembling.)

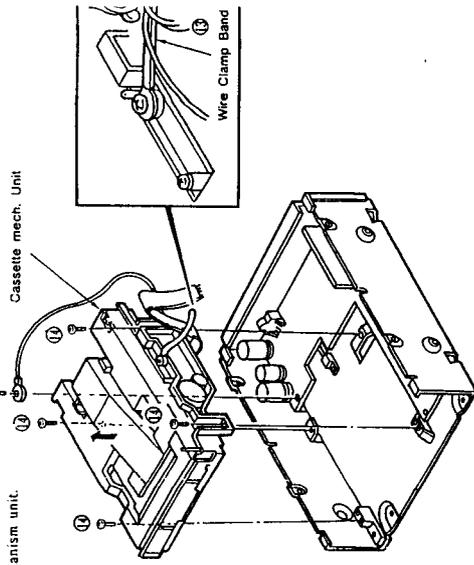
1. Removal of the top cover
 - ① Remove the 5 screws which fasten the top cover.
 - ② Press the **OPEN/CLOSE** button and eject the cassette tray.
 - ③ Remove the loader panel (D) assembly in the direction of the arrow.
 - ④ Press the **OPEN/CLOSE** button and retract the cassette tray.
 - ⑤ Remove the 2 screws which fasten the front panel assembly. At this time, remove with care the connector which connects the main unit assembly and the front panel side assembly.



2. Removal of the front panel
 - ⑥ Stand the main unit as illustrated in the diagram and remove the 2 screws which fasten the inner panel assembly.
 - ⑦ Slightly loosen the screws of the 2 front legs.
 - ⑧ Remove the hooks of the chassis from the inner panel assembly.
 - ⑨ Remove the front panel assembly in the direction of the arrow.

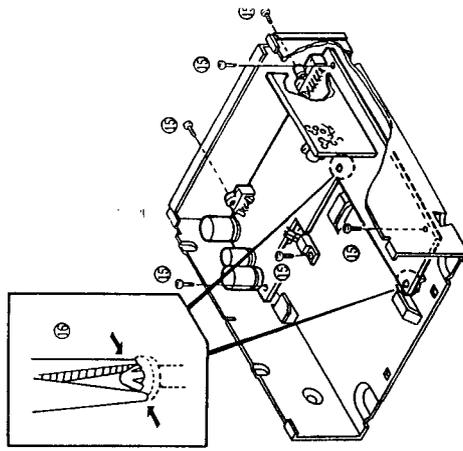


4. Removal of the cassette unit
 - ⑩ After loosening the wire clamp band which bundles the wires, remove the connector which connects the cassette mechanism unit and the main unit assembly.
 - ⑪ Remove the 4 screws which fasten the cassette mechanism unit.



MAIN UNIT ASSEMBLY (1U-2279-1)

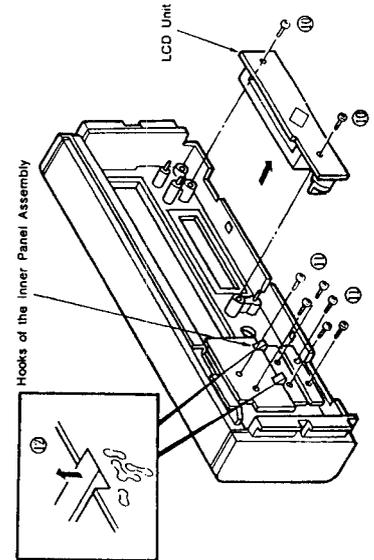
- ⑬ Remove the 6 screws which fasten the main unit assembly.
- ⑭ Use radio pliers or another suitable tool to remove the 2 PCB holders which fasten the main unit assembly.



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3. Removal of the printed wiring board assembly

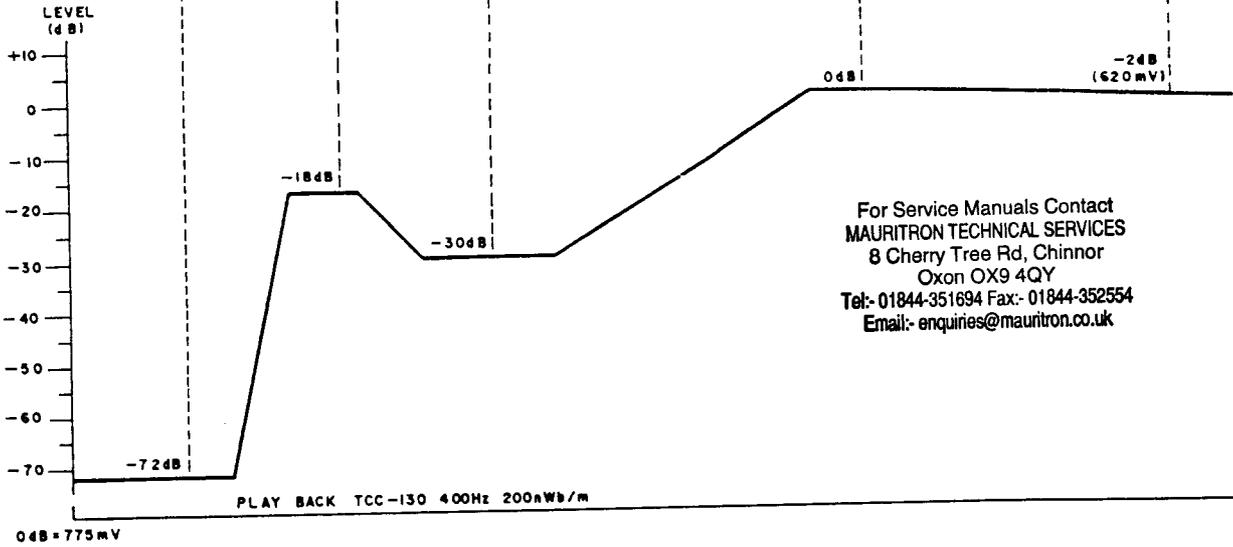
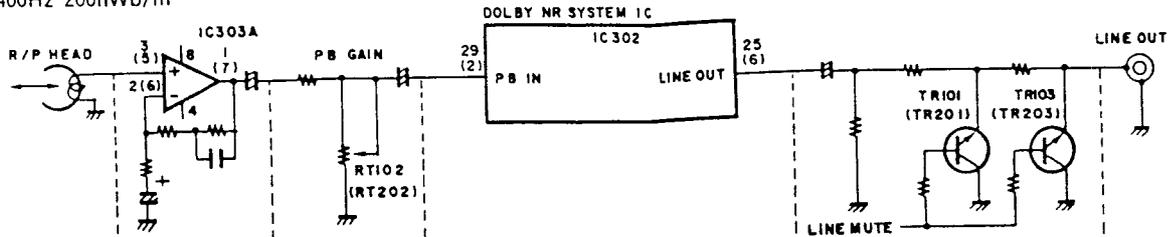
- LCD UNIT (1U-2279-4)
 - ⑯ Remove the 2 screws which fasten the LCD unit.
 - ⑰ Remove the 6 screws which fasten the various boards.
 - ⑱ Remove the hooks of the inner panel assembly from the board.



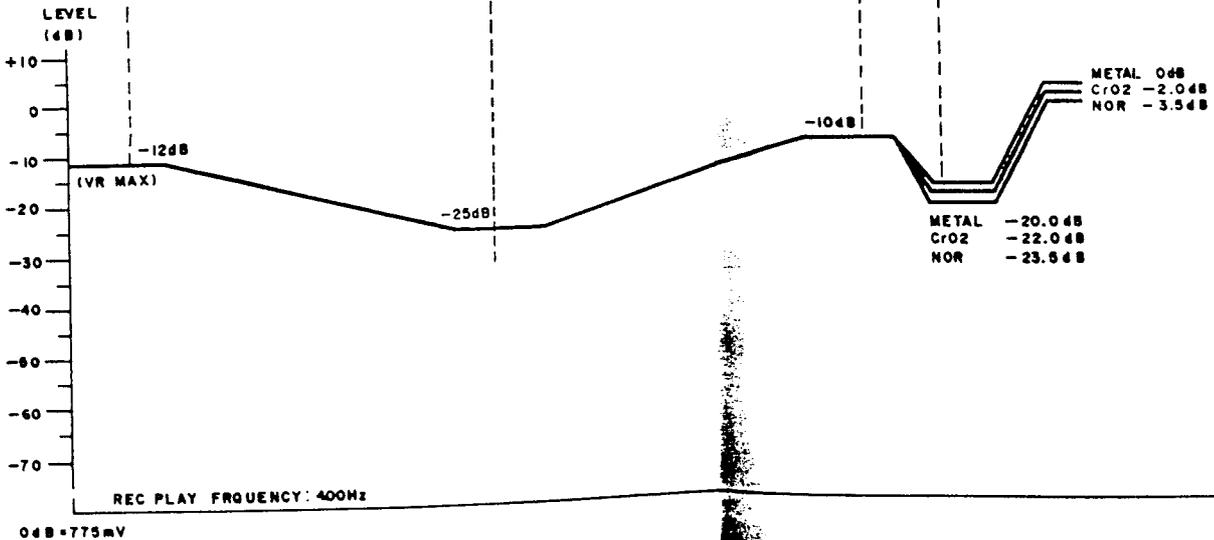
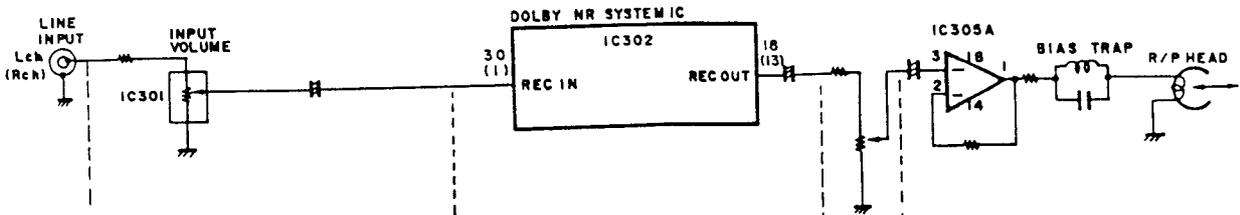
CASSETTE DECK SECTION

LEVEL DIAGRAM

(Playback)
 TCC-130 DOLBY B-TYPE
 400Hz 200nWb/m



(Recording)
 INPUT FREQUENCY
 400Hz



ADJUSTMENT

Adjustment and checking of the mechanism

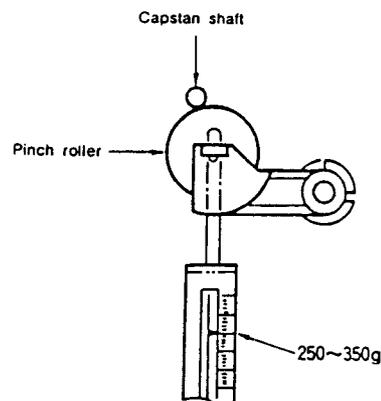
1. Replacement of the pinch roller

Before replacing the pinch roller, clean the tape contact surface of the pinch roller and the tape contact surface of the capstan shaft. After replacement, run a C-90 tape without a pad and check for the presence of tape curl at the tape guide portion of the head

2. Checking the pinch roller pressure

Set to the playback condition and hook a bar-type spring scale to the bracket above the center line of the pinch roller. Pull the pinch roller away from the capstan shaft, then allow the pinch roller to come into contact with the capstan shaft and check that the reading of the bar-type spring scale is between 250 g and 350 g when the pinch roller starts to rotate.

Replace the pinch roller when the value falls outside of the specified range.



3. Replacement of the recording/playback head assembly

Perform this procedure after removing the front panel.

3-1 Removal of the head assembly

- (1) Remove the 2 head base fastening screws.
- (2) Remove the head base from the reed holder and the wire connector.

3-2 Mounting the recording/playback head assembly

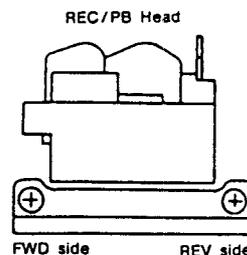
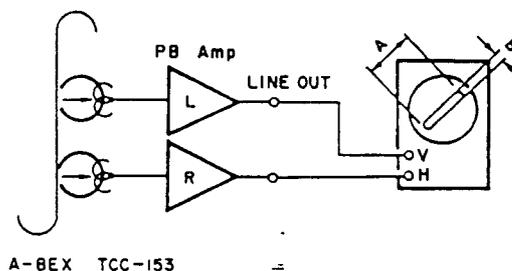
Perform by following the steps of Section 3-1 Removal of the head assembly in reverse.

4. Adjustment of the recording/playback head

Azimuth adjustment

Load side A of the A-BEX TCC-153 test tape facing forward, and adjust.

- (1) Play in the FWD direction and turn the azimuth adjustment nut for the FWD side so that the Lissajous's figure becomes maximum at (A) and minimum at (B).
- (2) Play in the REV direction and turn the azimuth adjustment nut for the REV side, adjusting the same as in Step (1).
- (3) Repeat Steps (1) and (2), making the adjustments again.
- (4) Apply screw lock to the adjustment locations.



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 8 Cherry Tree Rd, Chinnor
 Oxon OX9 4QY
 Tel:- 01844-351694 Fax:- 01844-352554
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CASSETTE DECK SECTION

5. Checking the winding torque

Load a cassette type torque meter (Sony TW2111A at the FWD side, and Sony TW2121A at the REW side) and check that the reading meter during playback is 30 to 70 g-cm at the center value.

When outside of the specified value range, check the voltage of the reel motor (approx. 4 V). When the voltage value is low, the torque when high, the torque is strong.

6. Checking the back tension torque at the time of recording and playback

Load a cassette type torque meter (Sony W2111A at the FWD side, and Sony TWG121A at the REW side) and check that the reading meter during playback is 2 to 6 g-cm and that there is no unevenness.

7. Checking the FF and REW torque

Load a cassette type torque meter (Sony TW2231) and check that the value indicated by the torque meter for winding and rewinding is 180 g-cm.

8. Checking the FF and REW time

Load a DENON HD-X/60 cassette tape, and check that the time for FF and REW is between 80 and 110 seconds. When outside of range, check Steps 5 and 6.

9. Checking the erroneous erasure prevention, and the metal and chrome switch operations

Check that the detection lever is operating the switch properly depending upon the presence or absence of a hole.

Electrical System Adjustments

● Measuring instruments needed for the adjustments

- (1) Low frequency oscillator
- (2) Variable resistance attenuator
- (3) Electronic voltmeter
- (4) Oscilloscope
- (5) Frequency counter
- (6) Adjustment screwdriver
- (7) 4-sided adjustment rod for trap coil adjustments
- (8) Test tapes
(Sony TY224)
(A-BEX TCC-153, TCC-130, TCC-262B/162B)
(DENON HDX/60)
- (9) Mirror cassette for the transport (A-BEX TCC-902)

● Adjustment precautions

- (1) Before adjustments, use gauze or a swab moistened with alcohol to wipe the surface of the heads, the capstan shaft, and the pin.
- (2) Demagnetize the record/playback head and the erase head with a head eraser.
- (3) Completely demagnetize the driver to be used for the adjustments.
- (4) Unless otherwise specified, set the various operation controls as indicated below.
Input control: Maximum (clockwise)
Dolby NR switch: Off

1. Tape transport check

Load the mirror cassette for the transport, and illuminate the area around the fixed guide of the record/playback head with a lamp and check that the tape edge is not hitting the tape guide portion.

Note that the tape transport is the greatest factor affecting the performance of the cassette deck. Never move the inspection locations with reason.

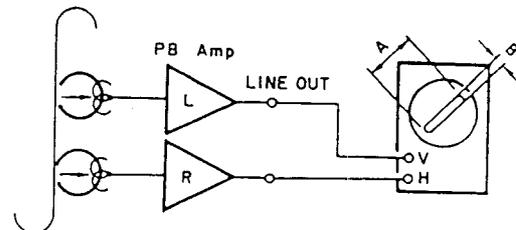
For information about replacement and adjustment of the record/playback head, see the section "Adjustment and checking of the mech

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CASSETTE DECK SECTION

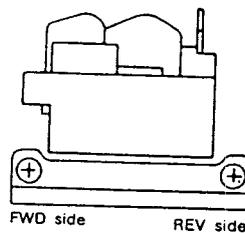
2. Azimuth adjustment

- 2.1 After making the tape transport check, load the test tape (A-BEX TCC-153).
- 2.2 Play back the test tape and turn the azimuth adjustment nut so that the Lissajous's figure becomes maximum at (A) and minimum at (B) for both the FWD and REV sides.



A-BEX TCC-153

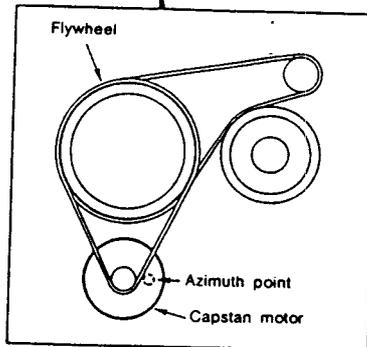
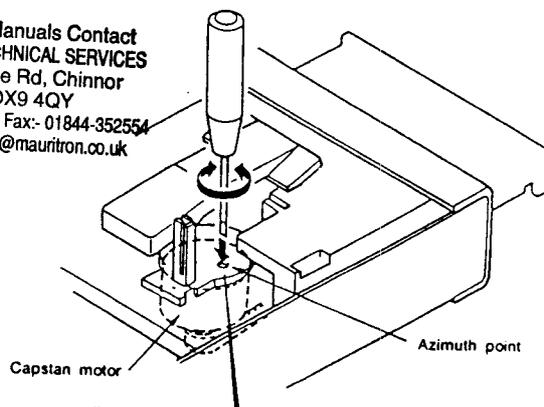
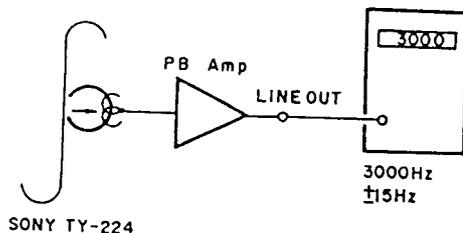
REC/PB Head



3. Tape speed check and adjustment

- 3.1 Connect the frequency counter to the LINE OUT pin and load the test tape (Sony TY-224).
- 3.2 Play back the test tape at an intermediate position of the tape for both the FWD and REW sides so that the transport is stable, and adjust the adjustment screw at the top surface of the capstan motor (Exploded View number 000) so that the reading of the frequency counter is set in a range of 3000 Hz \pm 15 Hz.

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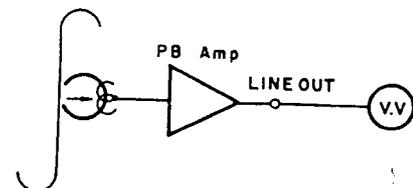
4. Adjustment of the playback system

4.1 Playback level

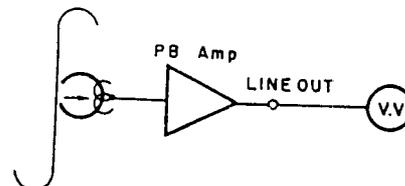
Play back the test tape for the Dolby standard level (A-BEX TCC-130), and adjust RT101 (left channel) and RT201 (right channel) so that the level of the LINE OUT pin becomes -2.0 dBm (620 mV). (Load resistance of 47 kohm)

4.2 Checking the playback frequency response

Play back the test tape (A-BEX TCC-262B/162B), and check that the frequency response satisfies the standard.



A-BEX TCC-262B/162B



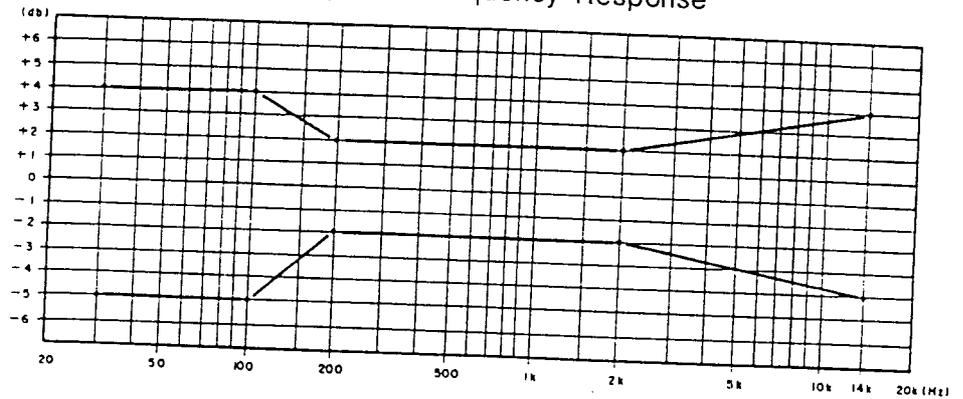
A-BEX TCC-130

NOTE:

After making the azimuth adjustment with the 8 kHz at the start of the A-BEX TCC-262B test tape, perform check of the frequency response. Also, after the check make an azimuth adjustment again with A-BEX TCC-153, then apply screw lock.

CASSETTE DECK SECTION

Playback Frequency Response

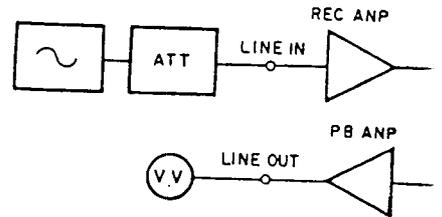


Tape : A-BEX TCC-262B/162B

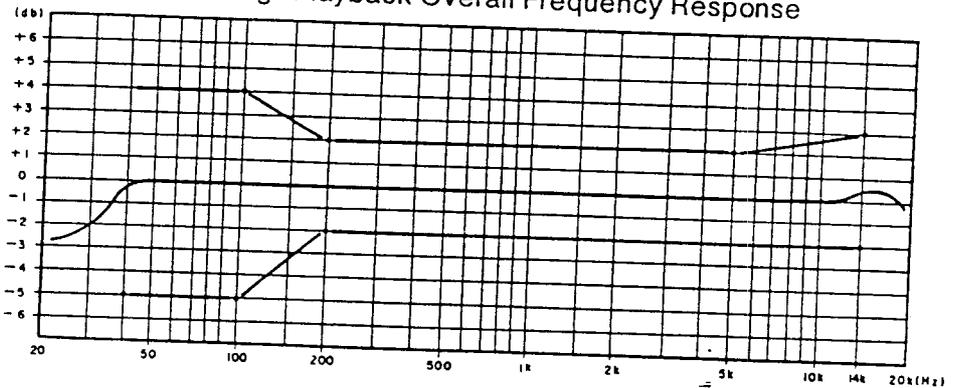
5. Adjustment of the recording system

5-1 Adjustment of the recording and playback overall frequency response

- (1) Load the DENON HDX/60 test tape, record a signal of -20 dB 1 kHz input level, and play back.
- (2) Set the input signal to 10 kHz, record, and play back. Adjust RT103 (left channel) and RT203 (right channel) so that the response specifications of the diagram below are satisfied with respect to the 1 kHz output level.



Recording/Playback Overall Frequency Response



Tape : HD-X/60
Dolby NR : Off
Level : -20 dB From Dolby Level

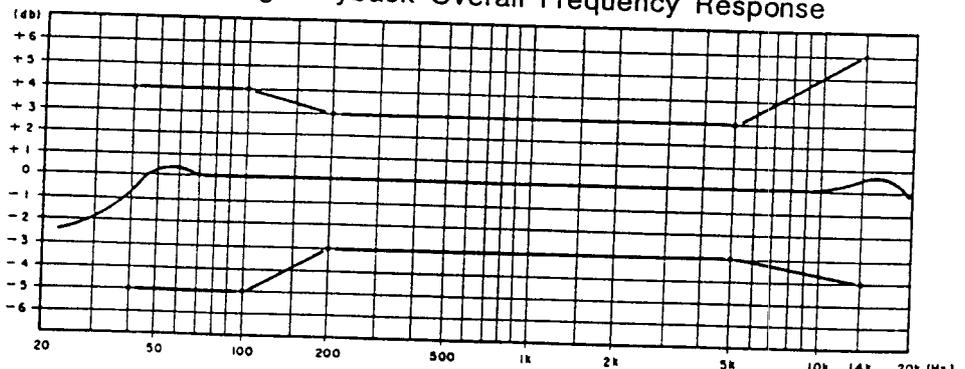
5-2 Adjustment of the recording/playback level

- (1) Load the DENON HDX/60 test tape, record a signal of 1 kHz (-20 dB), and play back.
- (2) Adjust RT-102 (left channel) and RT-202 (right channel) so that the output of the LINE OUT pin becomes the same as the output at the time of the recording monitor.

5-3 Checking the Dolby C recording and playback overall frequency response

- (1) Set the Dolby NR switch to the "C" position.
- (2) Use the DENON HDX/60 test tape to record and play according to the outline of Section 5-1, then check the response specifications have been satisfied.

Recording/Playback Overall Frequency Response



Tape : HD-X/60
Dolby NR : On C
Level : -20 dB From Dolby Level

THE QUALITY OF THIS PAGE IS THE BEST THAT IS AVAILABLE