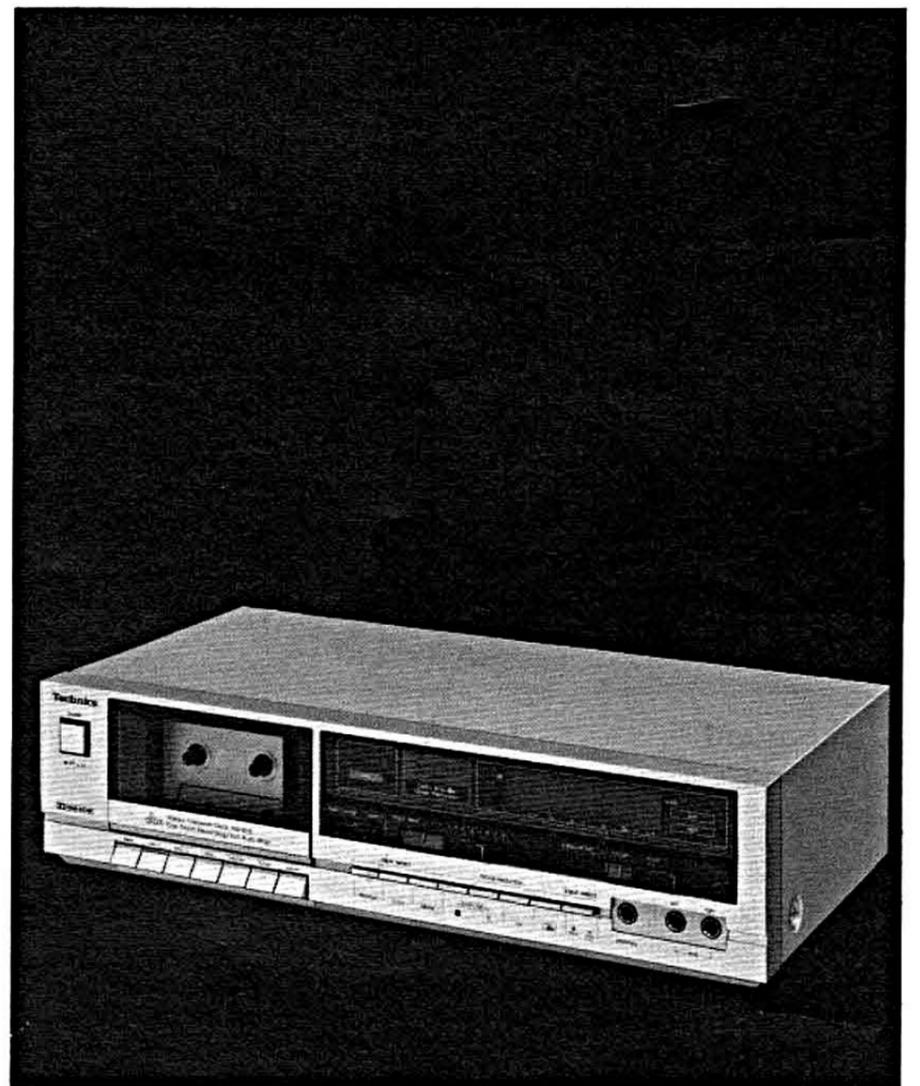


Technics

Tape Deck

RS-B18

OPERATING INSTRUCTIONS



- Also available in black.
- The unit may differ slightly from the photo in some areas.

Before operating this unit, please read these instructions completely.

Dear Stereo Fan

We want to thank you for selecting this product and to welcome you to the growing family of satisfied Technics product owners around the world.

We feel certain you will get maximum enjoyment from this new addition to your home.

Please read these operating instructions carefully, and be sure to keep them handy for convenient reference.

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FOR UNITED KINGDOM

Important

THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL

BROWN: LIVE

As the colours of the wires in the mains lead of this unit may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

This apparatus was produced to B.S.800: 1977.

FOR AUSTRALIA

For your safety

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the unit must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the unit operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

FOR SAFE USE OF THIS UNIT

■ Use a standard electrical AC wall outlet

1. Use from an AC power source of high voltage, such as for air conditioners, is very dangerous.

Be extremely careful not to make a connection to the electrical outlet for a large air conditioner or central-heating unit which uses high voltage, because there is the possibility of fire.

2. A DC power source cannot be used.

Be sure to check the power source carefully, especially on a ship or other place where DC is used.

■ Connection and removal of the power cord plug

1. Wet hands are dangerous.

A dangerous electric shock may result if the plug is touched by wet hands.

2. Don't pull the power cord.

Always grasp the plug; never pull the cord itself.

■ Never attempt to repair or reconstruct this unit

A serious electric shock might occur if this unit is repaired, disassembled or reconstructed by unauthorized persons, or if the internal parts are accidentally touched.

■ For families with children

Never permit children to put anything, especially metal, inside this unit. A serious electric shock or malfunction could occur if articles such as coins, needles, screwdrivers, etc. are inserted through the ventilation holes, etc. of this unit.

■ Turn off after use

If the unit is left for a long time with the power on, this will not only shorten its useful operation life, but may also cause other unexpected trouble.

■ If water is spilled on the unit

Be extremely careful if water is spilled on the unit, because a fire or serious electric shock might occur. Immediately disconnect the power cord plug, and consult with your dealer.

■ Place the unit where it will be well ventilated, and away from direct sunlight

■ Keep the unit away from stoves, etc.

Heat can damage the external surfaces as well as internal circuits and components.

■ Avoid spray-type insecticides

Insecticides might cause cracks or "cloudiness" in the cabinet and plastic parts of this unit. The gas used in such sprays might, moreover, be ignited suddenly.

■ Never use alcohol or paint thinner

These and similar chemicals should never be used, because they may damage the finish.

■ If trouble occurs

If, during operation, the sound is interrupted or indicators no longer illuminate, or if abnormal odor or smoke is detected, immediately disconnect the power cord plug, and contact your dealer or an Authorized Service Center.

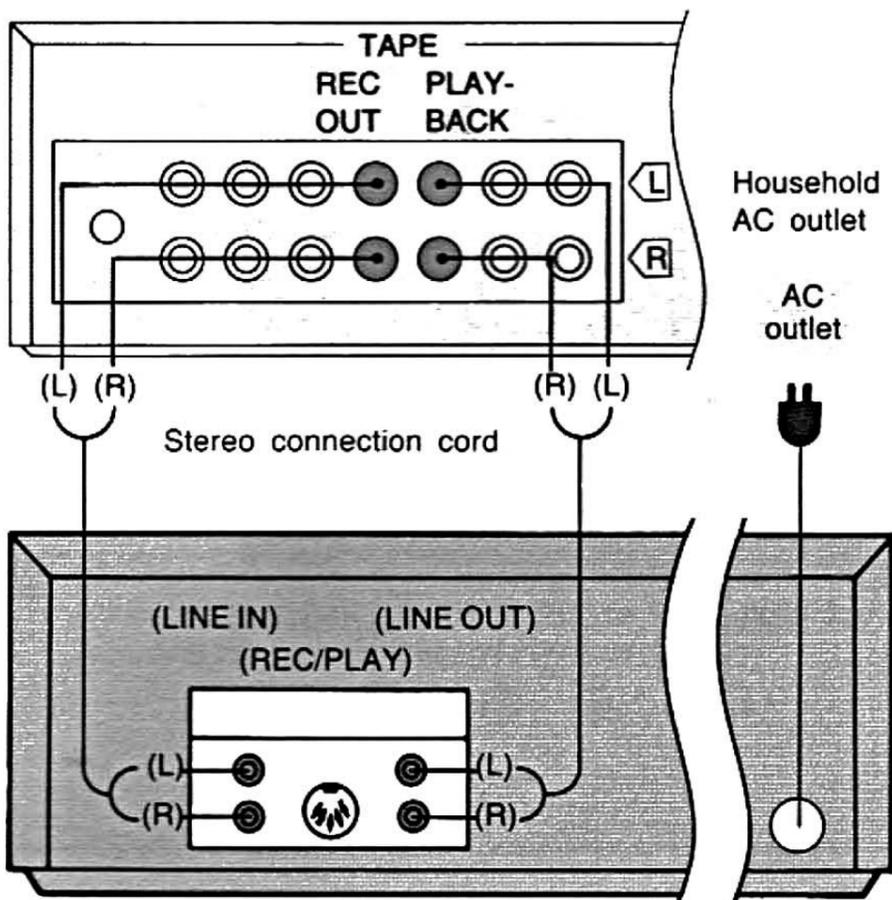
BEFORE USING THIS UNIT

Use a minus (-) screwdriver to set the voltage selector (on the rear panel) to the voltage setting for the area in which the unit will be used.

Note that this unit will be seriously damaged if this setting is not made correctly. (There is no voltage selector for some countries; the correct voltage is already set.)

CONNECTIONS

Amplifier



This unit

- Do not connect the Connecting Cords projecting from this unit and ordinary DIN Connecting Cords at the same time, because to do so will result in abnormal oscillation from the amplifier, and recording and playback will be impossible.
- Note that a DIN Connection Cord cannot be used to connect this unit with another tape deck because a complete circuit is not made.

DIN jack is also available in some countries.

Location of this unit and stereo amplifier

If this unit is placed on top or next to the stereo amplifier, a "hum" noise may be heard during tape playback. Refer to the information below in order to avoid this.

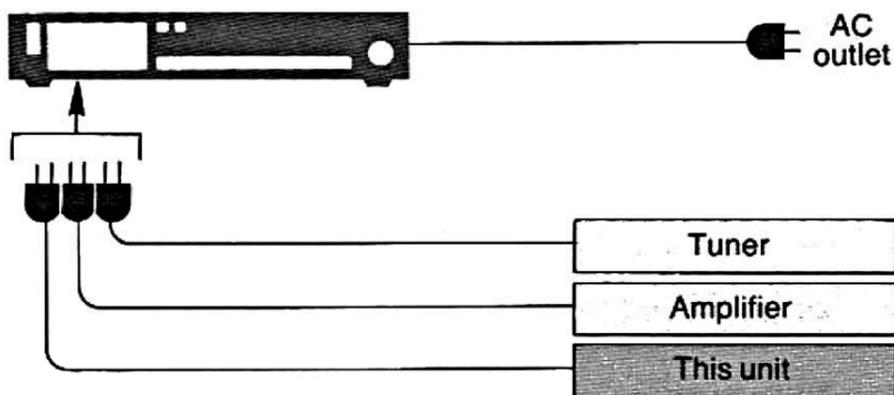
- If the stereo amplifier and this unit are placed one above the other, leave as much space as possible between them, and place them where there is the least amount of hum.
- If the stereo amplifier and this unit are placed one beside the other, try reversing their positions, and place them where there is the least amount of hum.

Note:

If this unit is placed on or near the tuner, hum or noise may occur during AM reception.

Using an audio timer

Timer



(See the operating instruction of the timer.)

- The configuration of AC power plug may differ according to area.

TECHNICAL SPECIFICATIONS

Deck system:	Stereo cassette deck
Track system:	4-track, 2-channel
Heads: REC/PLAY;	MX head
Erasing;	Double-gap ferrite head
Motor:	1 motor system
Recording system:	AC bias
Bias frequency:	80 kHz
Erasing system	AC bias
Tape speed:	4.8 cm/sec.
Frequency response:	
Metal;	20 Hz~17,000 Hz 30 Hz~17,000 Hz (DIN) 40 Hz~16,000 Hz ±3 dB
CrO₂	20 Hz~17,000 Hz 30 Hz~16,000 Hz (DIN) 40 Hz~15,000 Hz ±3 dB
Normal;	20 Hz~16,000 Hz 30 Hz~15,000 Hz (DIN) 40 Hz~14,000 Hz ±3 dB
Dynamic Range	
(with dbx in):	110 dB (1 kHz)
S/N: (Signal level=max. recording level, CrO₂ 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:	0.07% (WRMS) ±0.14% (DIN)
Max. Input level improvement	
(with dbx in):	10 dB (1 kHz)
Fast Forward and Rewind Time:	Approx. 110 seconds with C-60 cassette tape
Input sensitivity and impedance:	
MIC;	0.25 mV/400Ω~10 kΩ
DIN;	0.25 mV/5.6 kΩ
LINE;	70 mV/47 kΩ
Output voltage and impedance:	
LINE/DIN;	400 mV/1.8 kΩ
HEADPHONES;	80 mV/8 Ω
Power consumption:	11 W
Power supply:	AC 50 Hz/60 Hz, 220 V for Europe except United Kingdom, 110 V/240 V, preset power voltage 240 V for United Kingdom and Australia. 110 V/125 V/220 V/240 V, preset power voltage 240 V
Dimensions	
(W×H×D):	430×108×220 mm
Weight	3.2 kg

MAINTENANCE OF EXTERNAL SURFACES

To clean, use a soft dry cloth.

If the surfaces are extremely dirty, use a soft cloth, dipped into a soap and water solution or a weak detergent solution.

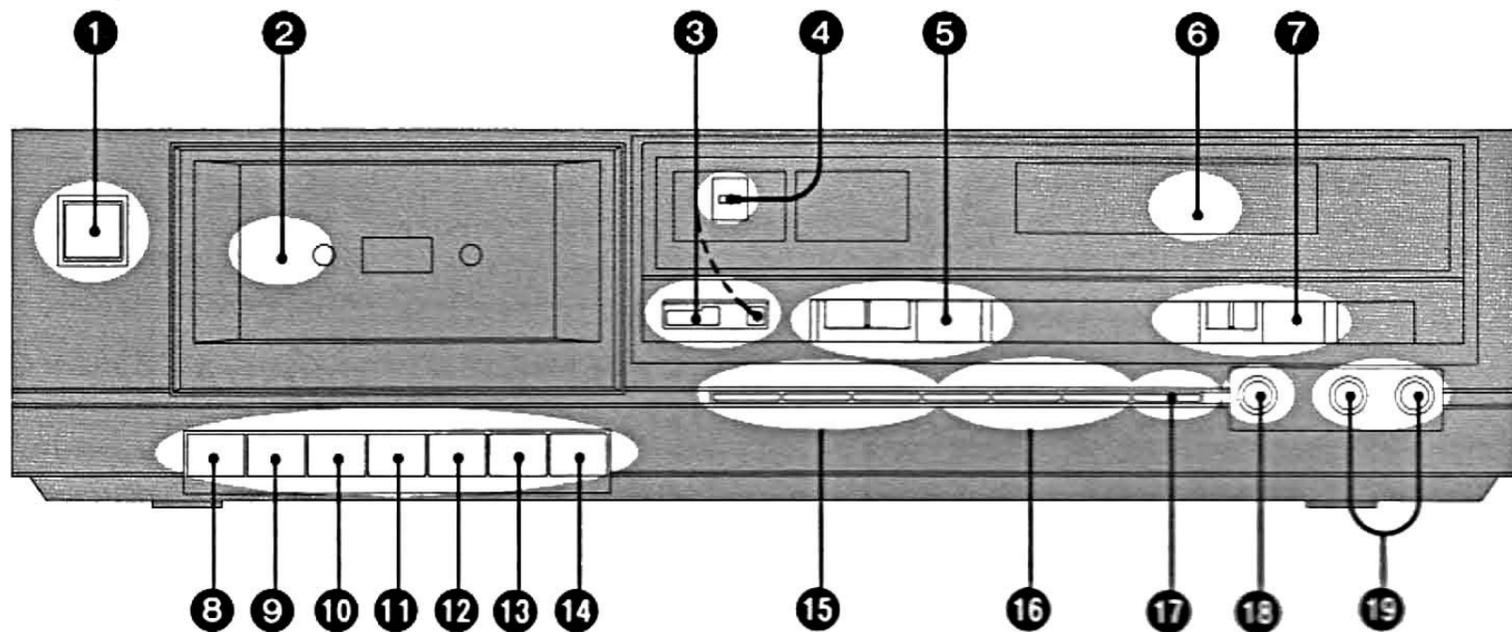
Wring the cloth well before wiping the unit.

Wipe once again with a soft dry cloth.

Never use alcohol, paint thinner, benzine, nor a chemically treated cloth to clean this unit.

Such chemicals may damage the finish of your unit.

FRONT PANEL CONTROLS AND THEIR FUNCTIONS



1 Power switch [power (■ off • ■ on)]

2 Cassette Holder

3 Tape counter and reset button [tape counter • reset]

When this button is pressed, the indication of the tape counter will change to "000". The indication changes as the tape moves.

It is convenient during playback if a notation of the tape counter reading is made when a new recording is made.

4 Recording Indicator [rec]

5 Input level control [input level]

6 Fluorescent level meters

These meters indicate the input level (during recording) and the recorded level of the tape (during playback).

7 Balance control [balance (left • center • right)]

Before making a recording, adjust the recording level balance of the left channel and right channel.
(This adjustment has no effect during playback.)

8 Eject button [eject (▲)]

9 Record button [rec-□ (●)]

Press to begin recording.

10 Play button [play-□ (▶)]

Press to begin playback.

11 Stop button [stop (■)]

12 Rewind/Review button [rew/rev (◀◀)]

13 Fast Forward/Cue button [ff/cue (▶▶)]

14 Pause button [pause (||)]

Press this button to temporarily stop the tape during recording or playback.

15 Tape select buttons

[tape select (Normal • CrO₂ • Metal)]

In order to get the best performance from tape, and to record and playback with little distortion, the Tape selector should be set.

Examples of tape commercially available

Tape Selector	Tape brand
Normal	Technics XD LN BASF LHI PROFESSIONAL I SLH MAXELL UD UDXL I FUJI FX I SONY AHF TDK AD
CrO ₂	Technics XA MAXELL UDXL II SCOTCH MASTER II FUJI FX II TDK SA
Metal	Technics MX MAXELL MX SCOTCH METAFINE FUJI SR SONY METALLIC TDK MA

• Note that there may be a difference in sensitivity of 2 or 3 dB, depending on the type of tape.

Do not use tape such as described below in this unit.

• Fe-Cr tape

The high range will be emphasized, and a flat frequency response characteristic cannot be obtained.

16 Noise Reduction Select Buttons

[Noise Reduction (Dolby NR • C • B • out • dbx)]

• dbx When recording and playback with the dbx NR system.

• out For ordinary recording and playback.

• Dolby NR B When recording and playback with the Dolby NR (type B) system.

• Dolby NR C When recording and playback with the Dolby NR (type C) system.

ABOUT CASSETTE TAPES

17 Input Selector [input select (line • mic (DIN))]

Press to select the recording source.

line...Recording from LINE IN Jacks.

mic...Recording from microphone, or DIN jack.
(DIN)

18 Headphones jack [phones]

To listen to the recording as it is being made, simply connect stereo headphones ($8\Omega\sim 600\Omega$) to the Headphones Jack. You may also listen to the program being recorded if your receiver or amplifier is equipped with a tape-monitor switch.

In the same way as for playback, an amplifier can also be used for monitoring.

19 Microphones jacks [mic (left • right)]

When a microphone is connected to the Microphone Jack, recording can be made through the microphone.

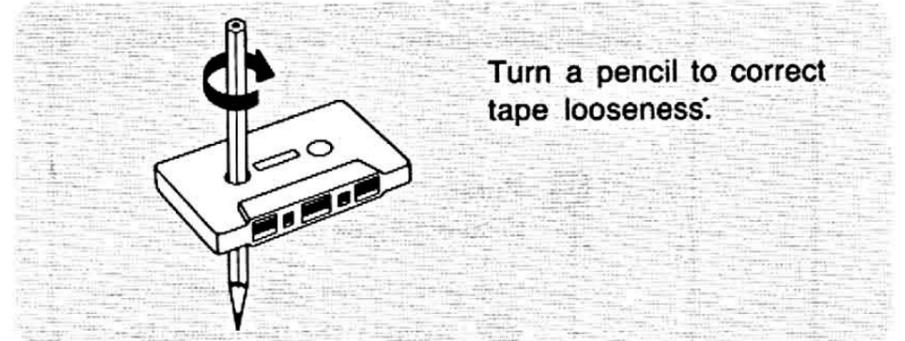
■ Notes

1. If possible, avoid using 120-minute tape.

Because this tape is very thin, it might stretch during use, become tangled with rotating parts in this unit, and/or tape movement might not be stable.

2. Tape looseness

If the tape is loose in the cassette, it may result in scratches on the tape or even tape breakage.



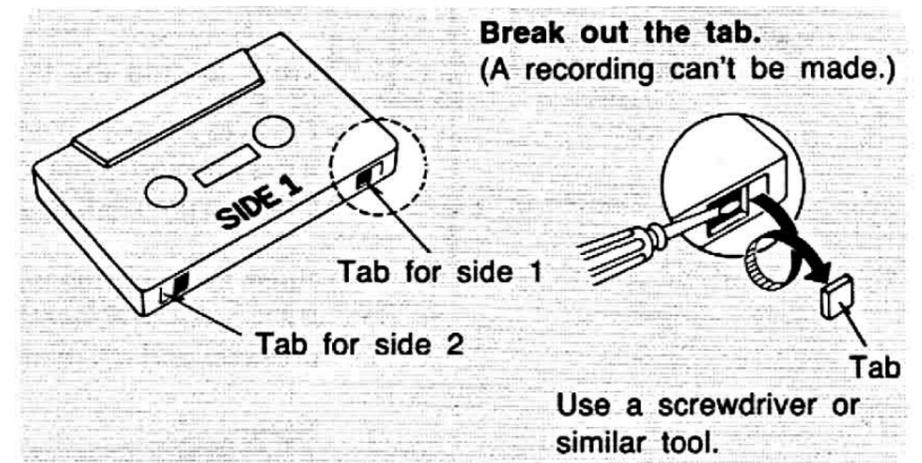
3. If tape is not wound evenly, or is wound too tightly. Fast forward and then rewind the tape on time.

4. Do not pull the tape out from the cassette; don't touch the tape.

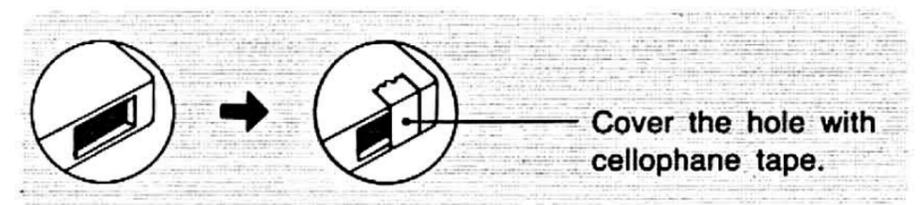
When not using a cassette, be sure to store it its case.

■ Accidental-erase-prevention tabs

Each tape cassette has two (for sides 1 and 2) tabs which, when broken out prevent recording on the tape.



■ To re-record on the tape



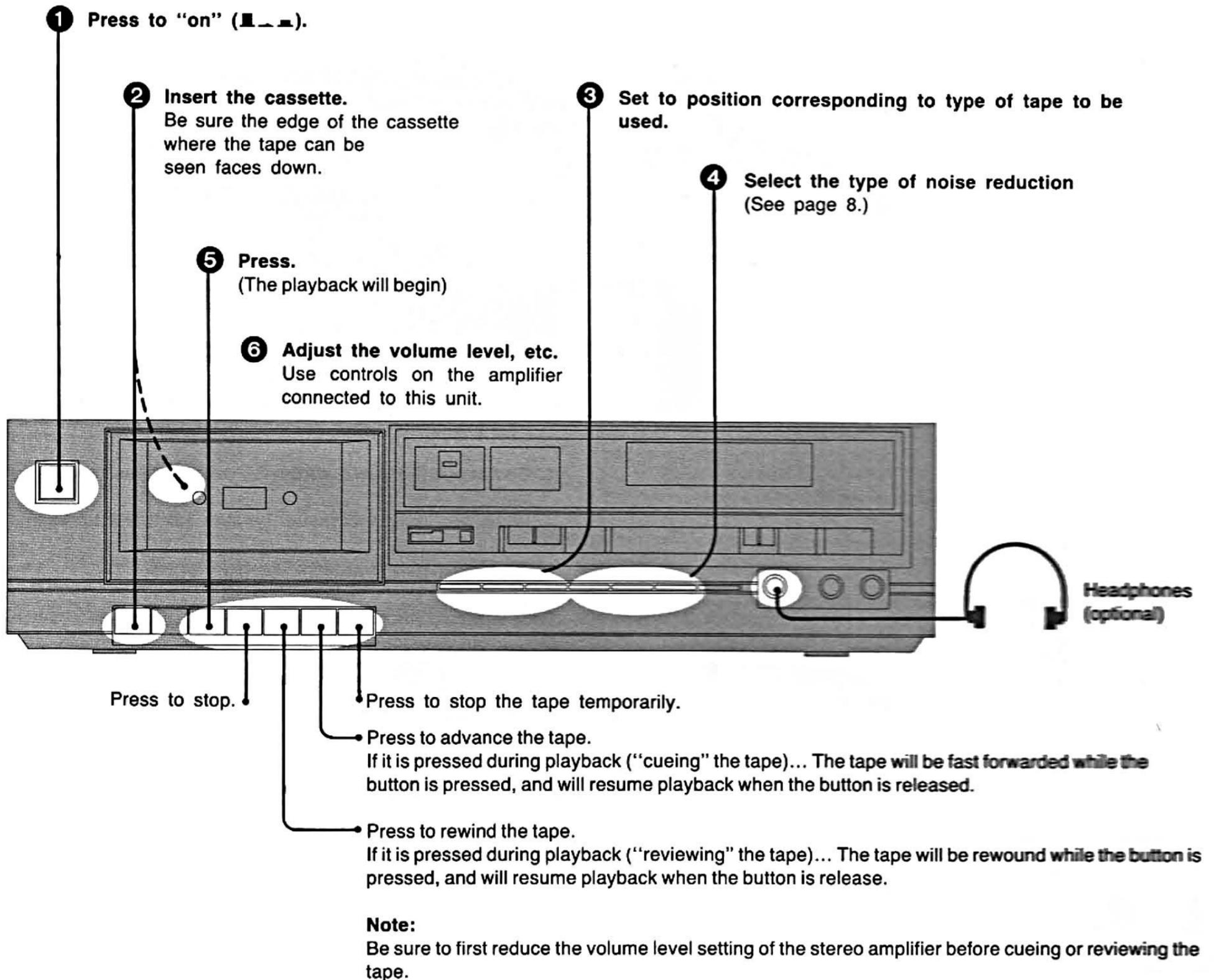
■ Avoid these places...

- Where the temperature is high (35°C or higher) or where the humidity is high (80% or higher).
- Where there is a strong magnetic field (near a speaker, on top of a TV, etc.).
- In direct sunlight.

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

- The term dbx is registered trademark of dbx Inc.

PLAYBACK



■ To use tape as a wake-up alarm

- 1** Playback the tape to be used and adjust the volume level and tone as desired.
- 2** Stop the tape at the place where you want playback to begin.
- 3** Set the timer to the desired time.
Switch off the power of other equipment connected to this unit (amplifier, tuner, tape deck, etc.).
- 4** Press the Play button.

After setting the timer

Check to be sure that the power switch is at the "on" position.

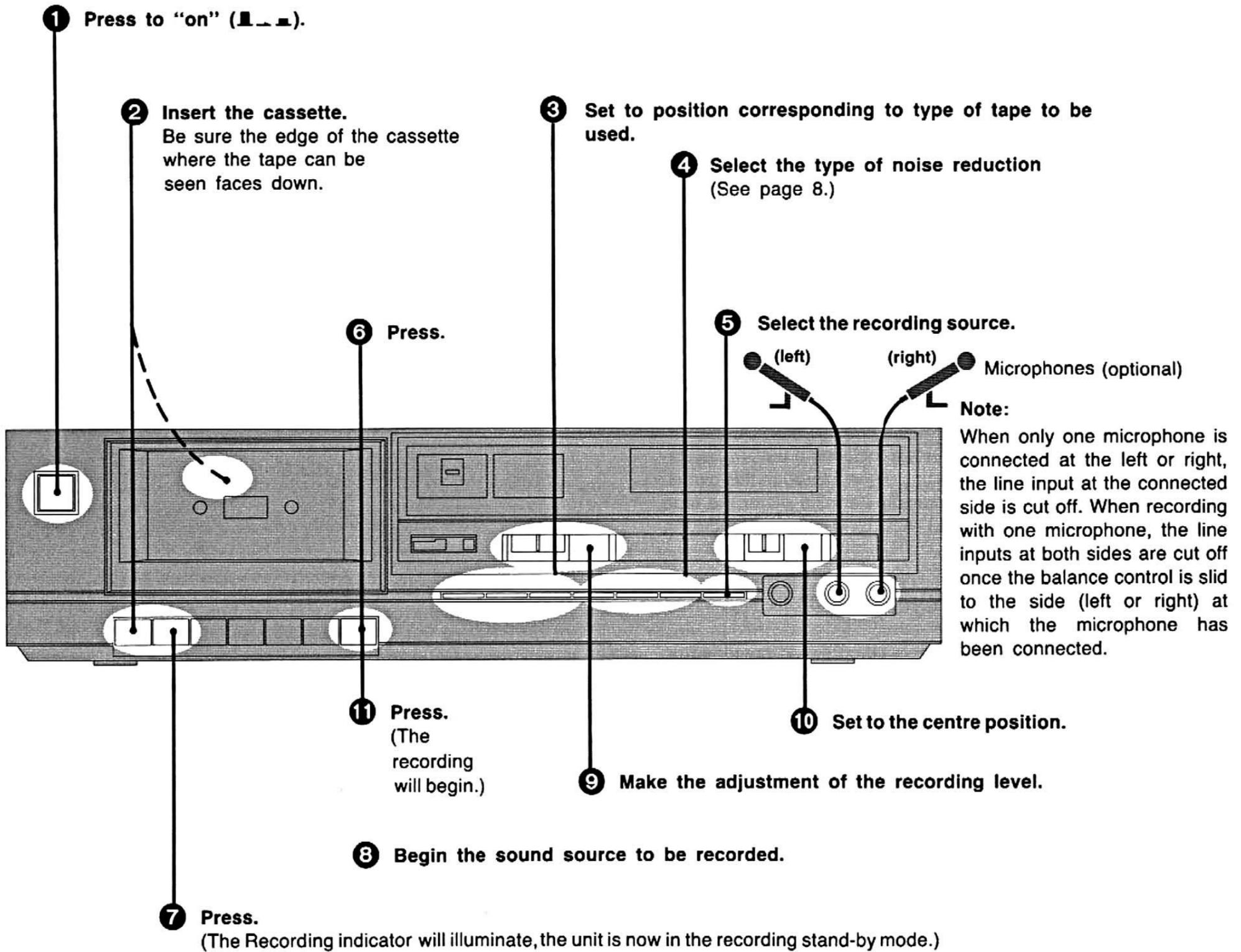
■ To make unattended recordings

- 1** Tune (on the tuner) to the broadcast station which will broadcast the program to be recorded.
- 2** Follow steps 1 to 10 of "Recording" on page 7.
•Tune to the broadcast and make the adjustment of the recording level.
- 3** Set the timer to the desired time.
Switch off the power of other equipment connected to this unit (amplifier, tuner, tape deck, etc.).
- 4** Press the Pause button to release the pause mode.

After setting the timer

Check to be sure that the power switch is at the "on" position.

RECORDING



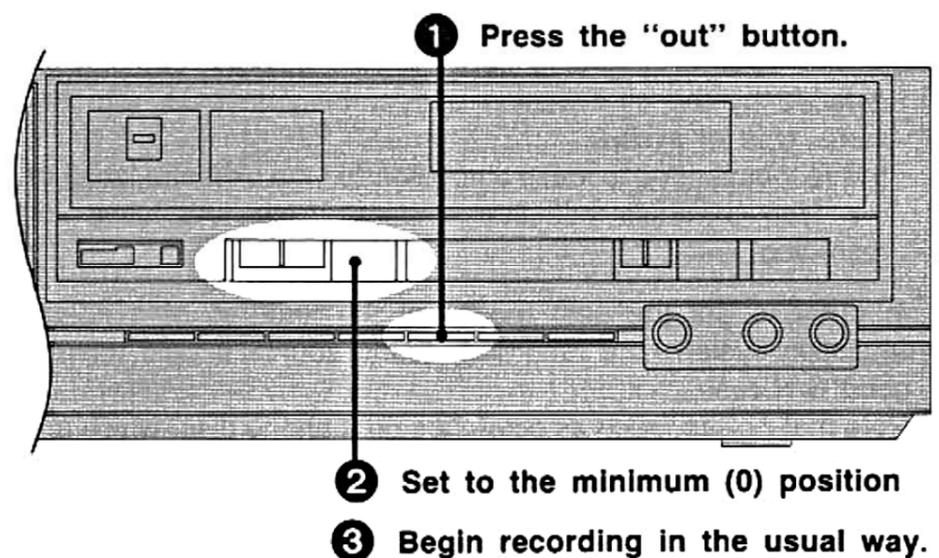
■ Adjustment of the recording level

The numbers which you should use as a guide for the adjustment of the tape level will differ depending upon the type of tape used as well as the position of the noise-reduction switch.

Noise Reduction (NR)	Normal Tape CrO ₂ Tape	Metal Tape
Dolby NR B·C NR out	+3 dB	+5 dB
dbx	+5 dB	+9 dB

■ Erasing recorded sounds

When a recording is made, any sounds previously recorded on that portion of the tape are erased, and only the new recording remains. To erase recorded sounds without making a new recording, proceed as follows.



NOISE-REDUCTION SYSTEMS

Noise-reduction systems are designed to reduce the annoying characteristic "hiss" noise during playback, by recording on the tape by the noise-reduction system.

This unit is equipped with 3 types of noise-reduction systems (the dbx, Dolby B and C-type noise-reduction system). Use whichever type is most appropriate to your other equipment, the recording sound source, tape used, etc.

■ Dolby B-type noise-reduction system

The recording is made by increasing the high-frequency components which are low level, and then, during playback, only those components increased during recording are played back at a lower level.

The result is that the noise-reduction effect is maintained in the high-frequency range, tape noise is reduced, and the dynamic range is expanded.

■ Dolby C-type noise-reduction system

The Dolby C-type noise-reduction system reduces noise in the mid-frequency range as well, and has a greater noise-reduction effect than the B-type system.

In addition, the Dolby C-type system includes a built-in saturation-prevention network. By passing signals through this circuit, there is an improvement (of approximately 3.5 dB of the tape saturation characteristic (MOL) at 10 kHz), thus reducing high-frequency distortion.

■ dbx noise-reduction system

During recording, the input signal is compressed (encoded) to one-half. Then, when the tape is played back, the compressed signals are expanded (decoded), thus returning to the original signal for playback.

With this system, large signals are decoded as large signals and small signals are decoded as small signals throughout the entire frequency spectrum, with the result that there is a significant improvement of the dynamic range and, moreover, tape hiss is remarkably reduced.

■ Examples of noise-reduction system use

- When you playback a prerecorded Dolby noise-reduction music tape.
- When you want to maintain interchangeability of tape with some other tape deck equipped with the Dolby noise-reduction system. Otherwise, use either system that you prefer.
- If a tape which was recorded through the dbx noise-reduction system is played back without using the dbx system, the sound will be ragged and distorted.

Notes:

- Be sure to use the same noise-reduction system for playback as was used for recording, because the hiss noise can only be reduced by the combination of recording/playback with the same type of system.

It is recommended to make a notation (on the cassette label) of the type of noise-reduction system which was used for recording.

In order to get the best results of the features of a noise-reduction system, the recording sound source should have a good S/N ratio.

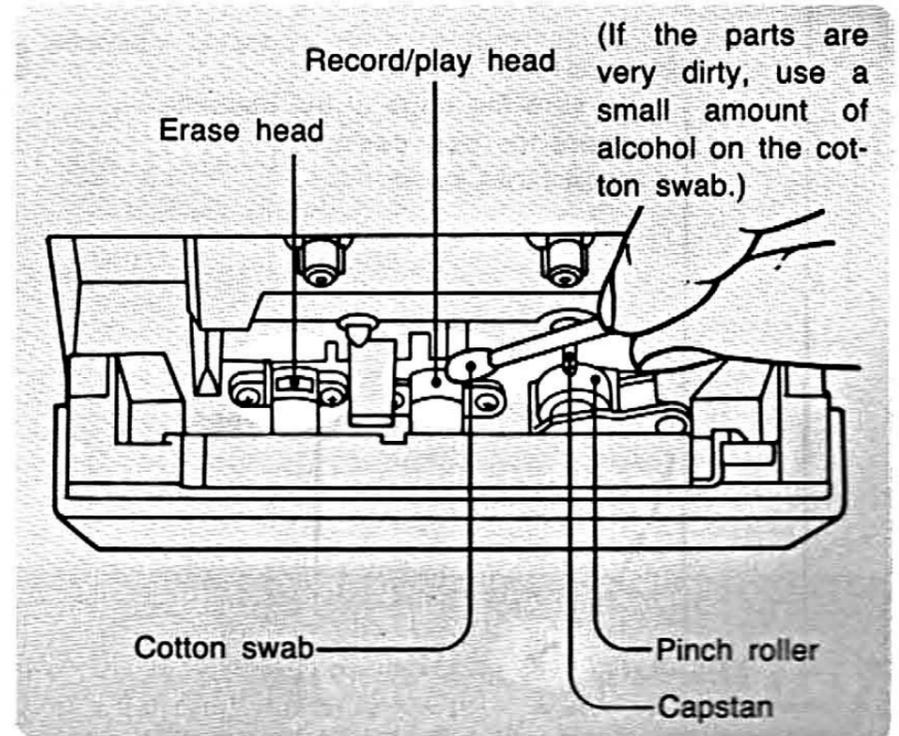
Note that noises (such as scratches on a phono disc) which are included in the sound source cannot be reduced by noise-reduction system.

HEAD CARE

■ Maintenance of the heads

The head assembly, capstans and pinch rollers should be cleaned after about each 10 hours of use in order to maintain good sound quality.

1. Cleaning with a cotton swab



2. Cleaning with a head-cleaning tape cassette (optional)

- 1) Insert the cassette into the tape holder.
- 2) Switch on the power supply in accordance with the procedure for tape operation described, and then press the play button. The surface of the heads will be cleaned in a few seconds.

■ Head demagnetization

The head assembly should be demagnetized after about each 50 hours of use in order to maintain good sound quality.

The head assembly becomes magnetized, causing noise in recordings and unwanted erasure of valuable recordings, if a magnetized screwdriver or other metal tools come near the head assembly, and when the heads have been used for a long period of time.

If the heads become magnetized, use a head demagnetizer (option).

Note:

When demagnetizing the head assembly, be sure to first push the power switch to release it outward (▶) to the "off" position.

TROUBLESHOOTING GUIDE

Before requesting service for this unit, check this table to determine if the problem can be solved as described below. If the problem still persists after making these checks, or if there are symptoms of malfunction not described in this table, it is recom-

mended that you consult the store where this unit was purchased or your local Service Center (see list included) for further information and assistance.

Problem	Probable cause	Suggested remedy
Tape moves but no sound is heard.	The volume control of the stereo amplifier is set to its minimum position.	Adjust the volume control to the desired level.
	The input selector of the stereo amplifier is not set to the "tape" position.	Set to the "tape" position.
Distorted sound	The recording level is too high.	Referring to the section "Adjustment of the recording level" on page 7, make recordings at the most suitable recording level.
Strange tone quality or ragged sound	The noise-reduction switch is not set to the correct position.	Set the switch to the position corresponding to the setting used for recording.
No recording when the record button is pressed.	The accidental-erase-prevention tab(s) of the cassette have been broken out.	Cover the tab hole(s) with cellophane tape.
Playback sound is unclear or wavering; clear recordings can't be made.	The heads are dirty.	Clean the heads as described in the section "HEAD CARE" on page 8.
	There is foreign material on the pinch rollers or capstans.	

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