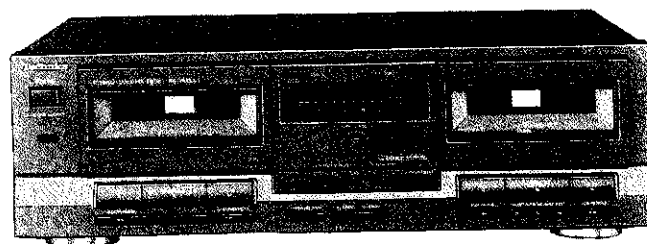


Technics®

Stereo Cassette Deck RS-TR252

Operating Instructions



Before connecting, operating or adjusting this product, please read these instructions completely.



Dear Customer

Thank you for purchasing this Technics product.
For optimum performance and safety, please read
these instructions carefully.

(For areas except Australia and N.Z.)

CAUTION:

The AC voltage is different according to the
area.

Be sure to set the proper voltage in your area
before use.

(For details, please refer to the page 5.)

Table of contents

Before use

Suggestions for safety	3
Front panel controls	4
Connections	5

Playback

Playback	6
Reverse function	7
About the automatic-tape-select function	7
About the remote control function	7
About the Dolby noise-reduction system	7
About the Dolby HX-Pro headroom extension system	7
Series playback	8
Tape counter (Deck 2 only)	8
To reset the tape counter	8
To fast-forward or rewind the tape	9
To cue or review	9

Recording

Recording (Deck 2 only)	10
To make a silent interval	11
Tape-to-tape recording	12
To record selected tracks	13
To cut unwanted parts during recording	13

Reference

Concerning cassette tapes	14
Maintenance	15
Technical specifications	15
Troubleshooting guide	Back cover

Suggestions for safety

Placement

Avoid placing the unit in areas of:

- direct sunlight
- high temperature
- high humidity
- excessive vibration
- uneven surfaces. (Place the unit on a flat level surface).

Such conditions might damage the cabinet and/or other component parts and thereby shorten the unit's service life.

Ventilation

Place the unit in a well ventilated position at least 10 cm away from wall surfaces etc.

Stacking

Never place heavy items on top of the unit or the power cord.

Voltage

- It is very dangerous to use an AC power source of high voltage such as for an air conditioner.
A fire might be caused by such a connection.
- 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.

Power cord protection

- Avoid cuts, scratches or poor connection of the AC mains cord, as this may result in fire or electric shock hazard.
Excessive bending, pulling or slicing of the cord should also be avoided.
- Do not pull on the cord when you are disconnecting the power, as this could cause an electric shock. Grasp the plug firmly when you disconnect the power supply.
- Never touch the plug with wet hands or a serious electric shock could result.

Foreign materials

- Ensure that no foreign objects, such as needles, coins, screwdrivers etc, accidentally fall into the unit or through the ventilation holes.
Otherwise, a serious electric shock or malfunction could occur.
- Be extremely careful about spilling water or liquid on/into the unit, as a fire or electric shock could occur.
(Disconnect the power plug and contact your dealer immediately if this occurs.)
- Avoid spraying insecticides onto the unit as they contain flammable gases which can be ignited.
- Insecticides, alcohol, paint thinner and similar chemicals should never be used to clean the unit as they can cause flaking or cloudiness to the cabinet finish.

Maintenance (See page 15.)

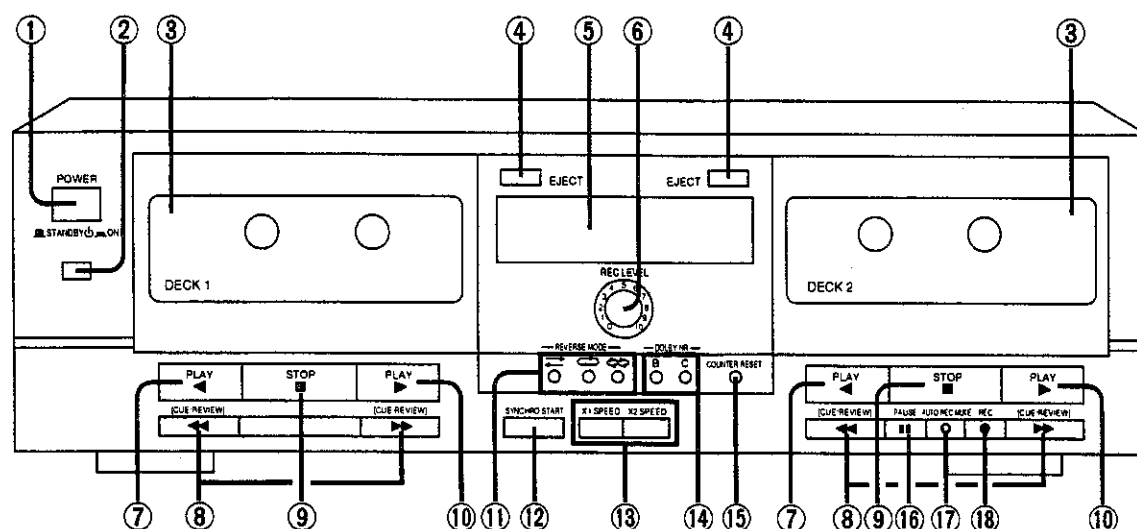
Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution.

Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

Service

- Never attempt to repair, disassemble or reconstruct the unit if there seems to be a problem.
A serious electric shock could result if you ignore this precautionary measure.
- If a problem occurs during operation (the sound is interrupted, indicators fail to illuminate, smoke is detected, etc) contact your dealer or Authorised Service Center immediately.
- Disconnect the power supply if the unit will not be used for a long time. Otherwise the operation life could be shortened.

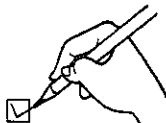
Front panel controls



No.	Name	Ref. page
①	Power “ STANDBY ON” switch (POWER, STANDBY ON)	6
	Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.	
②	Remote control signal receptor	—
	(Refer to “About the remote control function” on page 7.)	
③	Cassette holder	—
④	Eject button (EJECT)	6
⑤	Display	—
⑥	Recording-level control (REC LEVEL)	10
⑦	Reverse-side playback button (◀ PLAY)	6
⑧	Fast-forward/cue, rewind/review buttons (◀◀/▶▶ [CUE/REVIEW])	9
⑨	Stop button (■ STOP)	6
⑩	Forward-side playback button (▶ PLAY)	6

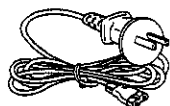
No.	Name	Ref. page
⑪	Reverse-mode select buttons (REVERSE MODE)	6, 7
⑫	Synchro-start button (SYNCHRO START)	12
⑬	Tape-to-tape recording-speed buttons (×1 SPEED, ×2 SPEED)	12
⑭	Dolby noise-reduction buttons (DOLBY NR)	6, 10
⑮	Counter reset button (COUNTER RESET)	8
⑯	Pause button (PAUSE)	6
⑰	Automatic-record-muting button (● AUTO REC MUTE)	11
⑱	Record button (● REC)	10

Connections

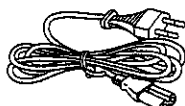


Please check and identify the supplied accessories

☐ AC power supply cord 1
(For Australia and N.Z.)



(For others)



☐ Stereo connection cables 2



☐ Power plug adaptor 1
(Not supplied for Australia and N.Z.)



Before making connections, make sure that the power to this unit and all other system components is turned off.

Note

- Avoid letting the cables touch each other as much as possible, otherwise noise will be generated.
- Although the figure below shows the AC power supply cord being connected to a household AC outlet, if the amplifier (or receiver) is equipped with an AC outlet, connect the cord to that outlet.

Placement hints

If this unit is placed near a receiver or a tuner, a "hum" noise may be heard during tape playback, recording, or AM reception of the receiver or the tuner.

If this occurs, leave as much space as possible between the units, or place them where there is the least amount of "hum".

(For areas except Australia and N.Z.)

Set the voltage selector to the voltage setting for the area in which the unit will be used.

[Use a minus (-) screwdriver]

Note

If the power supply in your area is 117 V or 120 V, set to the "127 V" position.

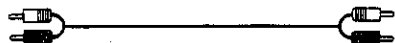
Note that this unit will be seriously damaged if this setting is not made correctly.

If the power plug will not fit your socket, use the power plug adaptor (included).

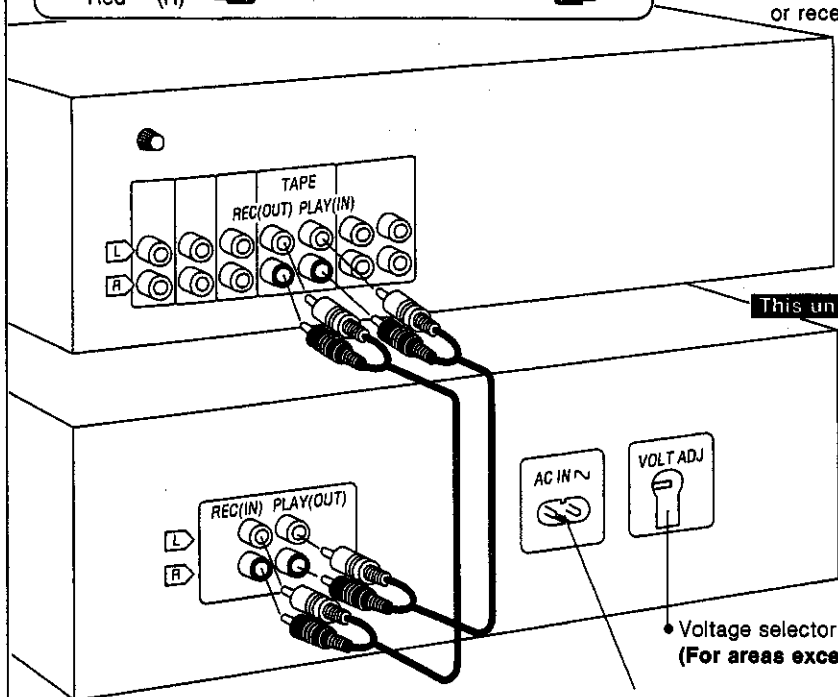


Stereo connection cable

White (L)
Red (R)



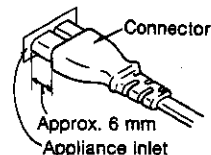
Amplifier
or receiver



(For areas except Australia and N.Z.) Insertion of Connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.

However there is no problem using the unit.

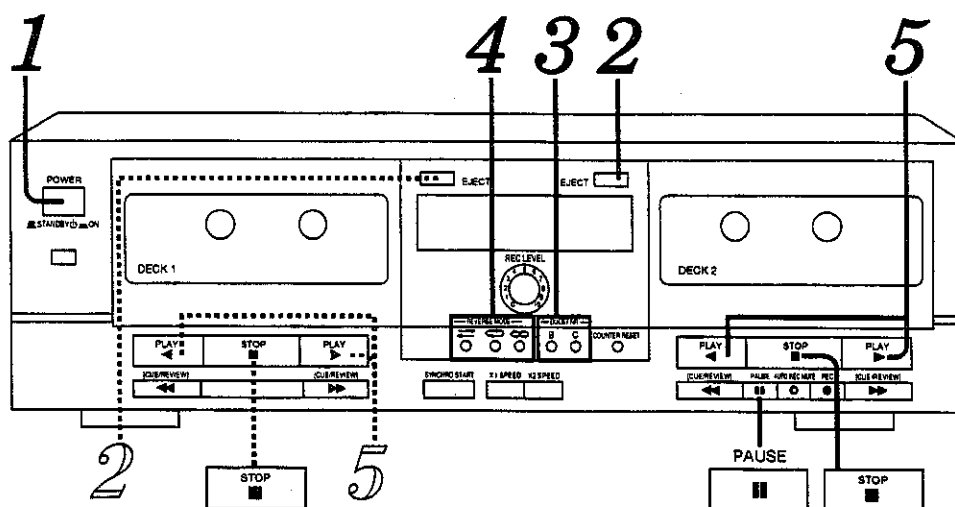


Connect this cord after all other cables and cords are connected.



Playback

Either normal, CrO₂ or metal type cassettes can be used.



The procedures described below are an example of playback on Deck 2.

1 **PRESS POWER.**
(The unit will switch on.)

2 **PRESS EJECT, and then insert the cassette tape.**

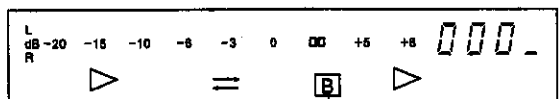
Forward side Reverse side

Tape opening facing downward.

3 **PRESS EITHER DOLBY NR B OR C TO SELECT THE APPROPRIATE NOISE-REDUCTION SYSTEM.**

B Press if the tape was recorded by the type-B Dolby NR system.
(The **[B]** Dolby noise-reduction indicator will then illuminate.)

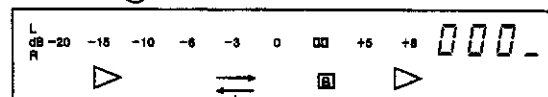
C Press if the tape was recorded by the type-C Dolby NR system.
(The **[C]** Dolby noise-reduction indicator will then illuminate.)



Dolby noise-reduction indicator (**[B]** or **[C]**)

If neither Dolby noise-reduction system was used, press the button corresponding to the Dolby noise-reduction indicator that is illuminated. (The indicator will then switch OFF.)

4 **PRESS REVERSE MODE.**
Press \rightleftarrows , $\circ\circ$ or ∞ to select the desired reverse mode.

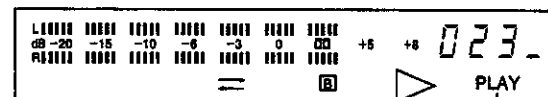


Reverse-mode indicator (\rightleftarrows , $\circ\circ$ or ∞)

\rightleftarrows : One side only.
 $\circ\circ$: Both sides repeatedly (up to 8 times).
 ∞ : Both sides, once only.
(Refer to page 7.)

5 **PRESS \blacktriangleleft PLAY or \blacktriangleright PLAY.**
(Playback will begin.)

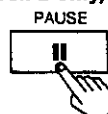
\blacktriangleright PLAY : To begin from the forward side.
 \blacktriangleleft PLAY : To begin from the reverse side.



Illuminates
Indicates the side being played.

To play back on Deck 1, in steps 2 and 5 above, press the buttons (**2** and **5**) for Deck 1.

To temporarily stop playback (Deck 2 only)

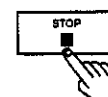


PRESS \parallel PAUSE.

The "PLAY" indicator will flash.

To resume playback, press the play button corresponding to the side of the tape being played.

To stop playback



PRESS \blacksquare STOP.

The "PLAY" indicator will switch off.

Reverse function

The reverse function on this unit has three modes (→, ↺, ∞). Read the descriptions below and select the mode as desired. (Refer to step 4 on page 6.)

Mode	Tape travel
→ ←	Only one side of the tape (either the forward side or the reverse side) will be played, and operation will automatically stop when playback has been completed.
↺	Both sides of the tape will be played repeatedly eight times, and then operation will automatically stop. (If playback is begun from the reverse side, the forward side will be played seven times.)
∞	When there is a tape in only one of the decks Both sides of the tape will be played once, and then operation will automatically stop. (If playback is begun from the reverse side, the forward side will not be played.) When there is a tape in each of the decks The forward and reverse sides of the tape in Deck 1 will be played, followed by the forward and reverse sides of the tape in Deck 2, and after this operation is repeated eight times, operation will automatically stop. (If playback is begun from Deck 2, the tape in Deck 1 will be played seven times.)

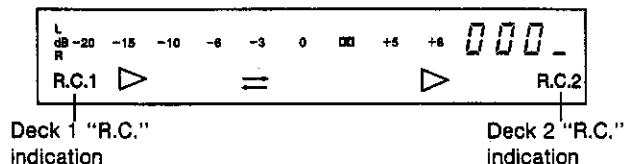
About the automatic-tape-select function

This unit is equipped with the automatic-tape-select feature; it automatically detects the type of tape being used, and then makes the suitable adjustments of the bias and equalization accordingly.

About the remote control function

This cassette deck can be operated by using the remote control provided with a Technics amplifier. (For detailed information, refer to the operating instructions of the amplifier.)

During operation from the remote control, the "R.C." indicator will light up.



About the Dolby noise-reduction system

The Dolby noise-reduction system is designed to effectively reduce the annoying high-frequency "hissing" noise typical of cassette tapes. During recording, the system functions to increase the high-frequency sound level, the sound, and then, during playback, that same portion is weakened to bring it back to the previous level.

This unit includes two types of Dolby noise-reduction systems, the Dolby B NR-type and C NR-type.

Dolby B-type noise-reduction

Noise is reduced to about one-third.

Use this system when playing back tapes recorded by the Dolby-B noise-reduction system, such as prerecorded music tapes, etc.

Dolby C-type noise-reduction

Noise is reduced to about one-tenth.

Use this system for the recording and playback of sound sources that have a wide dynamic range and good tone quality, such as FM broadcasts of live performances, etc., and for playing back such tapes.

About the Dolby HX-Pro headroom extension system

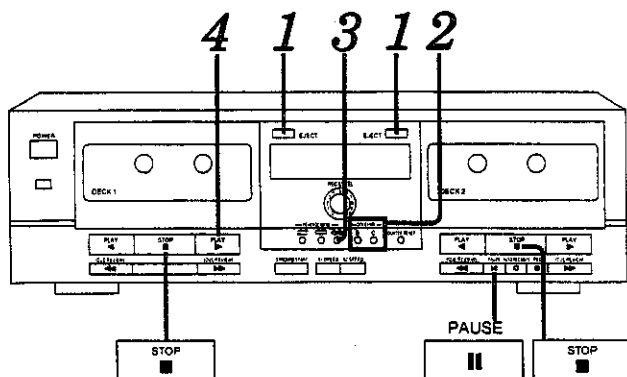
By functioning to improve the maximum output level of the tape's high-frequency range, this system permits recordings without a reduction in the level of the sound source's high-frequency range. In addition, by using the system in parallel with this unit's noise-reduction system, recording and playback with a greatly extended dynamic range is possible.

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Series playback

Both sides of the tape in Deck 1 will be played, followed by both sides of the tape in Deck 2. (Repeated up to eight times.)



Note that for series playback it is not possible to select different types of Dolby NR for Deck 1 and Deck 2. It is recommended that you use two tapes which were recorded using the same type of Dolby NR (or both recorded without Dolby NR).

1 EJECT Press EJECT on both decks, and then insert the cassette tapes.

2 DOLBY NR Press either DOLBY NR B or C to select the appropriate noise-reduction system.

3 REVERSE MODE Press .

4 PLAY Press **▶ PLAY** on Deck 1. (Series playback will begin from the forward side of the tape in Deck 1.)

To temporarily stop playback (Deck 2 only)

PAUSE Press **|| PAUSE**.
To resume playback, press the play button corresponding to the side of the tape being played.

To stop playback

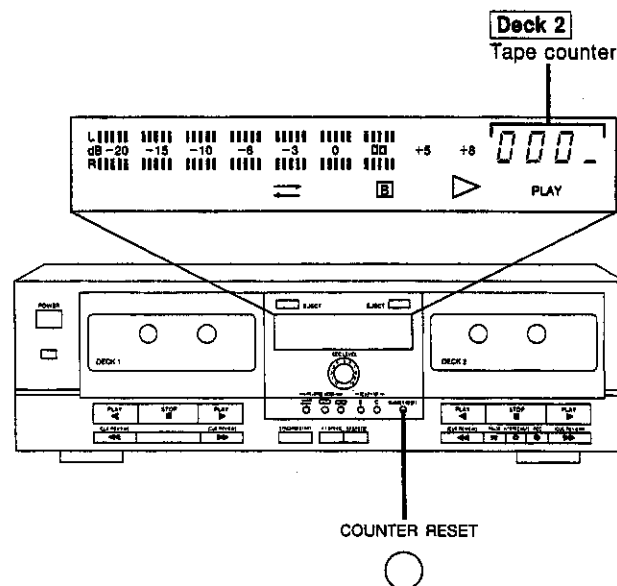
STOP Press **■ STOP** for the deck which is playing.

For your reference:

It is also possible to begin series playback from the reverse side of the tape in Deck 1 or from Deck 2. (Refer to the tape travel table on page 7.)

Tape counter (Deck 2 only)

The tape counter indicates the amount of tape travel as a numerical value based on the number of revolutions of the tape hub.



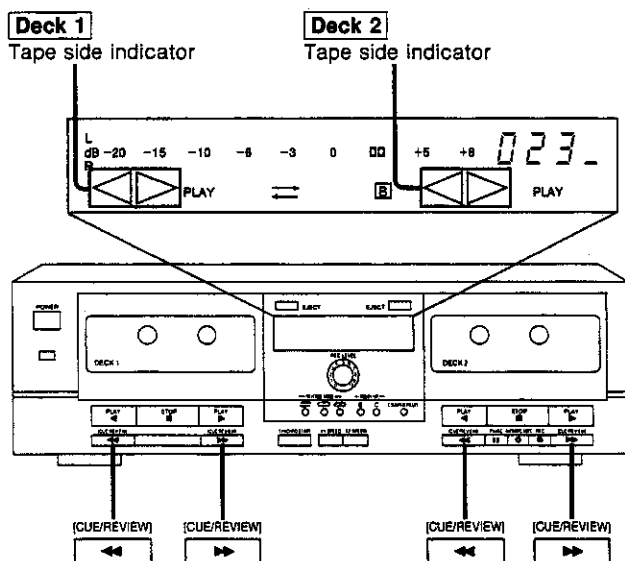
To reset the tape counter

COUNTER RESET Press COUNTER RESET.
The tape counter indication will return to "000".

For your reference:

When the tape is travelling in the reverse direction, the value displayed on the tape counter will count down. After "000" is reached, the display will switch to "999" and will then continue counting down.

To fast-forward or rewind the tape



[CUE/REVIEW] [CUE/REVIEW] [In stop mode]
Press ◀◀ or ▶▶.

Because this unit is capable of playing back both sides of the tape, the operation changes in accordance with the direction of the tape side indicator.

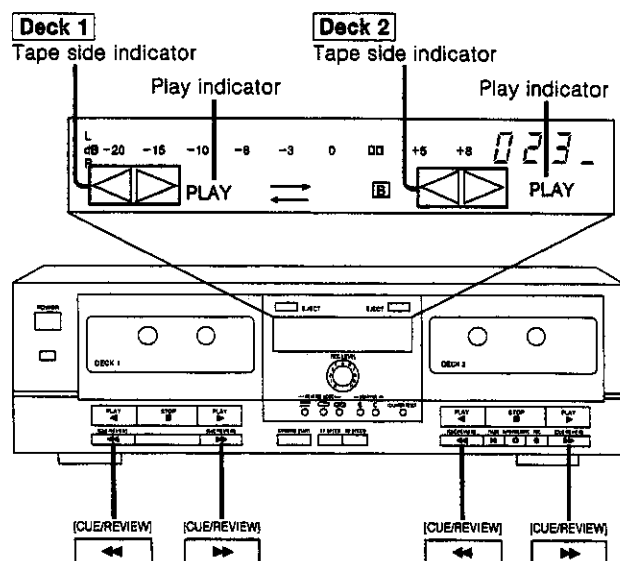
Tape side indicator	Rewind	Fast-forward
▶	[CUE/REVIEW] ◀◀	[CUE/REVIEW] ▶▶
◀	[CUE/REVIEW] ▶▶	[CUE/REVIEW] ◀◀

- Cassette tapes in deck 1 and deck 2 can be advanced or re-wound at the same time.

To cue or review

"Cue" means that the tape is fast forwarded as it is being played back.

"Review" means that the tape is rewound as it is being played back.



[CUE/REVIEW] [CUE/REVIEW] [While tape is being played back]
Press and hold ◀◀ or ▶▶.
(The play indicator will begin flashing quickly.)

Normal playback will resume at the point where the button is released.

Because this unit is capable of playing back both sides of the tape, the operation changes in accordance with the direction of the tape side indicator.

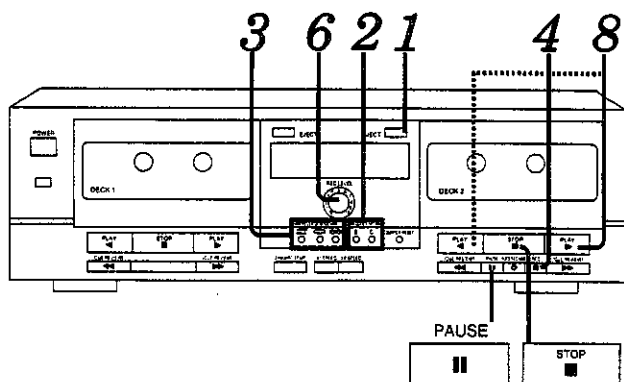
Tape side indicator	Review	Cue
▶	[CUE/REVIEW] ◀◀	[CUE/REVIEW] ▶▶
◀	[CUE/REVIEW] ▶▶	[CUE/REVIEW] ◀◀

Note

The cue/review function causes sounds to become high pitched. During this function, be sure to decrease the amplifier's volume to prevent damage to the speaker system's tweeters.

Recording (Deck 2 only)

Either normal, CrO₂ or metal type cassettes can be used.

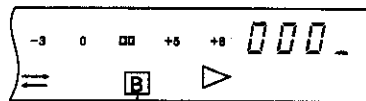


Preparation

Wind the tape past the leader tape section so that recording can begin straight away.

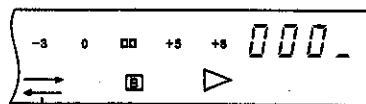
1 Press **EJECT** on Deck 2, and then insert the cassette tape to be used for recording.

2 Press either **DOLBY NR B** or **C** to select the desired noise-reduction system. (Refer to the opposite page.)



Dolby noise-reduction indicator (**B** or **C**)

3 Press **REVERSE MODE** buttons to select the desired reverse mode.

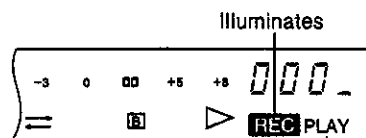


Reverse-mode indicator (**↔**, **↺↻** or **↻↺**)

↔ : Only one side will be recorded, and then operation will automatically stop.

↺↻ : Both sides (the forward side first, and then the reverse side) will be recorded, and then operation will automatically stop.

4 Press **REC**. (The unit will be in the recording standby mode.)



Illuminates

Flashes

5 Play the source in order to adjust the recording sound.

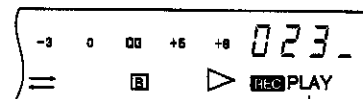
6 Use the **REC LEVEL** control to adjust the recording level. (Refer to the opposite page.)



7 Stop play of the source.

8 Press **◀ PLAY** or **▶ PLAY** to begin recording, and play the source to be recorded.

▶ **PLAY** : Forward side
◀ **PLAY** : Reverse side



Illuminates

Note

When recording on both sides of the tape, be sure to press the **▶ PLAY** button.

To temporarily stop recording

Press **PAUSE**.
To resume recording, press the play button corresponding to the side of the tape being recorded upon.

To stop recording

Press **STOP**.

About the selection of the Dolby NR type

The Dolby NR effect can be obtained by using the same type of Dolby NR during both recording and playback. Refer to the following table when selecting the type (either B or C).

Type B	Use this type when the deck on which the tape will be played back is equipped with only type B Dolby NR.
Type C	Use this type when the deck on which the tape will be played back is equipped with type C Dolby NR. (for example, when this unit is also going to be used to play back the tape.)

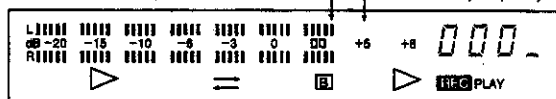
(Refer to "About the Dolby noise-reduction system" on page 7.)

About the recording level adjustment

If the recording level is too high, there will be distortion in the recorded sounds, and if it is too low, the hiss noise inherent to recording tapes will become noticeable.

In order to make high-quality recordings, use the REC LEVEL control to adjust so that highest values of the input level indicated by the level meter do not exceed the standard recording level (the number indicated in parentheses) for the tape being used.

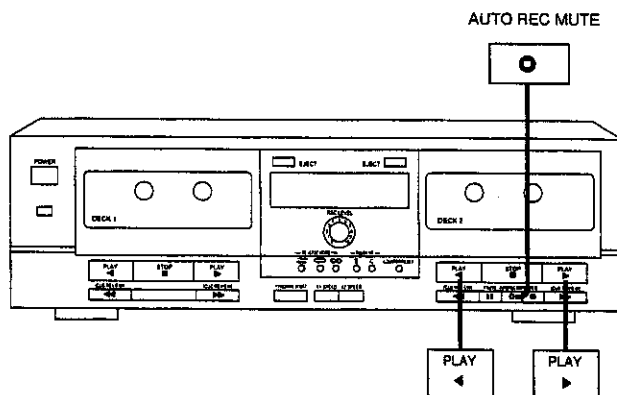
Normal or CrO₂ tape ☐ (+3) ☒ Metal tape (+5)



To make a silent interval

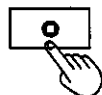
By simply pressing AUTO REC MUTE button, while a recording is being made, a silent interval (which is necessary for locating the beginning of a tune during playback) can be made.

This feature is also convenient for omitting unwanted material such as commercial messages, etc. during recording.



To make a 4-second silent interval

AUTO REC MUTE

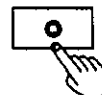


Press AUTO REC MUTE momentarily while a recording is being made.

A 4-second silent interval will be recorded, and the unit will automatically be set to the recording standby mode.

To make a silent interval more than 4 seconds

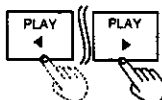
AUTO REC MUTE



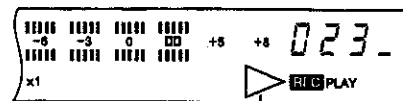
Press and hold AUTO REC MUTE for the necessary number of seconds while a recording is being made.

The unit will change to the recording standby mode when the button is released.

To resume recording



Press either ◀ PLAY or ▶ PLAY, corresponding to the side of the tape side indicator which is lit.

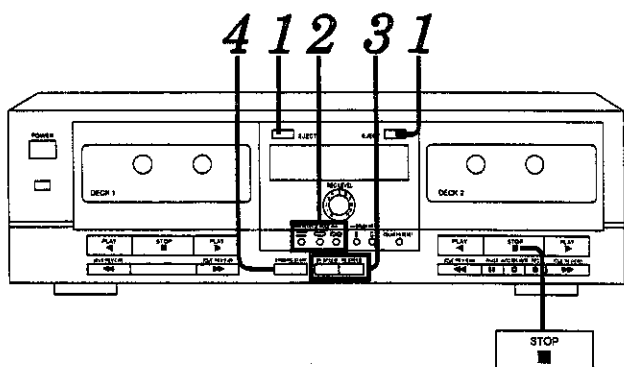


Tape side indicator (◀ or ▶)

Tape-to-tape recording

Either normal, CrO₂ or metal type cassettes can be used.

Use Deck 2 to record the sound being played back on Deck 1.

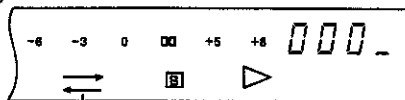


Preparation

Wind the tape past the leader tape section so that recording can begin straight away.

1 **EJECT** **Press EJECT on both decks, and then insert the cassette tapes.**
Deck 1: For playback
Deck 2: For recording

2 **REVERSE MODE** **Press , or to select the desired reverse mode.**



Reverse-mode indicator (, or)

: Only one side of the tape will be recorded, and then operation will automatically stop.

: Both sides of the tape (first the forward side and then the reverse side) will be recorded, and then operation will automatically stop.

If the recording tape is longer than the playback tape, the playback tape will be played repeatedly as many as eight times until the recording tape is finished.

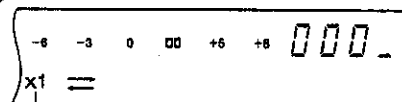
: Both sides of the tape (first the forward side and then the reverse side) will be recorded once, and then operation will automatically stop.

Note

To record on only one side of the tape, set the tape side indicators (< or >) on Deck 1 and Deck 2 in accordance with the tape sides to be played back and recorded.

To record on both sides of the tape, set the tape side indicators on both Deck 1 and Deck 2 to the forward side (>).

3 **X1 SPEED X2 SPEED** **Press either $\times 1$ SPEED or $\times 2$ SPEED to select the recording speed.**



Tape-speed indicator ($\times 1$ or $\times 2$)

$\times 1$: Normal speed

$\times 2$: Double speed

4 **SYNCHRO START** **Press SYNCHRO START.**
 (The recording will begin.)

To stop recording

STOP **Press STOP on Deck 2.**

(On Deck 2)

Note

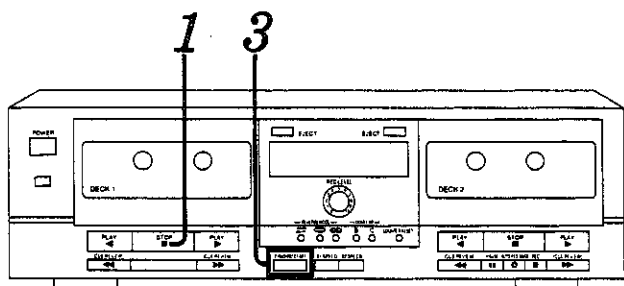
In order to avoid operation errors later, be sure to switch OFF the SPEED buttons (the " $\times 1$ " and " $\times 2$ " indicators will go out) after the tape-to-tape recording has finished.

For your reference:

- The recording level and the Dolby effect will be recorded as they are on the tape being played back.
- Because the signal being recorded from Deck 1 onto Deck 2 does not pass through the amplifier, it is possible to change the setting of the amplifier's input selector during recording in order to listen to some other sound source.

Note

When recording with the recording speed set to double speed, noise interference may be recorded onto the tape if there is a television set nearby, so make the recording in a location separated from the television set or switch off the television set during recording.

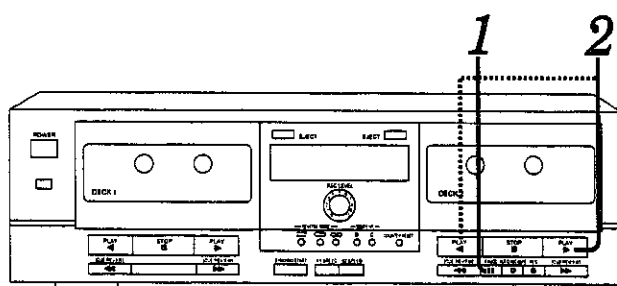


To record selected tracks

1 During recording, press **STOP** on Deck 1.
(Deck 1 will stop, and Deck 2 will record a 4-second silent interval and then enter the recording standby mode.)

2 Operate Deck 1 to find the track you wish to record.
It is also possible to change the playback tape at this time.

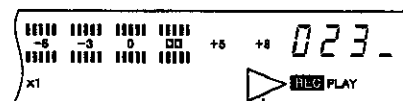
3 Press **SYNCHRO START**.
(Recording will resume.)



To cut unwanted parts during recording

1 Press **PAUSE** during recording.
(Deck 2, which was recording, will enter the pause mode, and Deck 1 will continue playback.)

2 [When Deck 1 reaches a part you wish to record]
Press either **PLAY** or **PLAY**, corresponding to the side of the tape side indicator which is lit.
(Recording will resume.)



Tape side indicator (< or >)

To erase recorded sound

When new recordings are made on a pre-recorded tape, all sounds recorded on that portion of the tape are automatically erased. To erase a tape without making a new recording, follow the steps below.

1 Press **EJECT** on Deck 2 and then insert the recorded cassette tape.

2 Press either **DOLBY NR B** or **C** so that the Dolby NR indicators are off.

3 Press **⇌**, **↺** or **↻** to select the desired reverse mode.

⇌ : To erase one side of the tape.

↺, ↻ : To erase both sides of the tape.

4 Set the **REC LEVEL** control to "0".

5 Press **REC**.
(The unit will be in the recording standby-mode.)

6 Press **PLAY** or **PLAY** to begin erasing the tape.

▶ **PLAY** : Forward side

◀ **PLAY** : Reverse side

Note

To erase both sides of the tape, be sure to press the ▶ **PLAY** button.

Concerning cassette tapes

Selection of cassette tapes

Cassette tapes exceeding 90 minutes

These tapes are handy for their long playback and recording time but be careful about repeatedly stopping and starting, rewinding and fast forwarding these tapes in short intervals as they are thin, tend to stretch and may become entangled in deck mechanism.

Endless tapes

If the proper operating method is not followed, the tape will become wrapped around the rotating parts. Be absolutely sure to read the directions for use accompanying the tape.

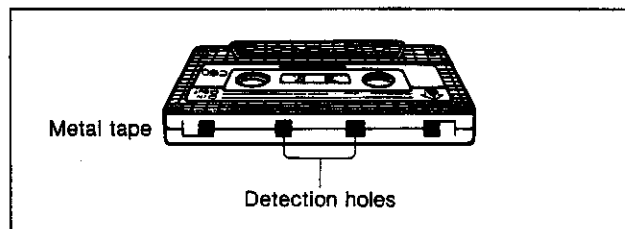
Since this unit has an auto reverse capability, the use of tapes which support this capability is recommended.

Fe-Cr tapes (TYPE III)

The high frequency range will be emphasized, and it will not be possible to obtain a flat frequency response.

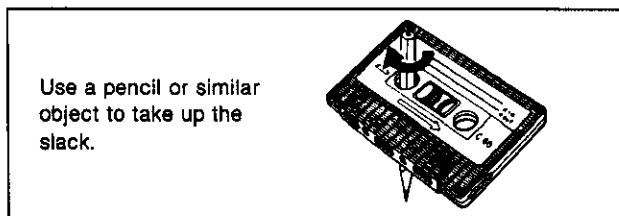
Metal tape without detection holes in the cassette

Recordings will be very distorted. (However, there will be no problem with playback.)



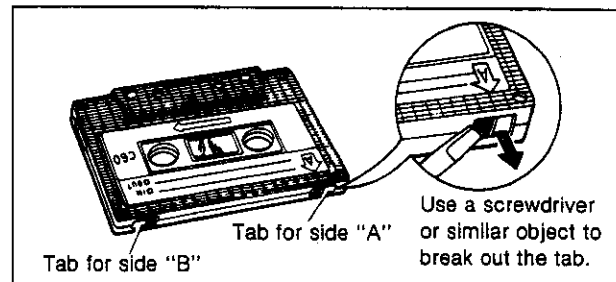
Tape slack

Tape slack may cause the tape to break.



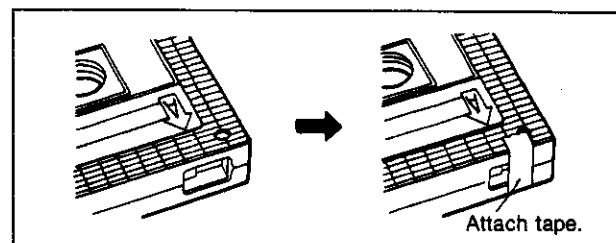
Erasure prevention

Remove the tab(s).



To re-record on a protected cassette

Cover the slot with adhesive tape.



Tape storage

Tapes can be damaged if stored in places such as those described below.

- Where the temperature is high (95° F/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.). Recording may become erased.
- In direct sunlight

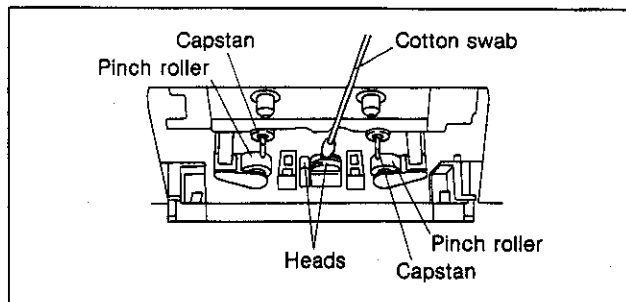
Maintenance

Head care

To assure sound quality for recording and playback, be sure to clean the heads after approximately every 10 hours of use.

- 1) Press the power switch to switch to the standby condition.
- 2) Press the eject button to open the cassette holder.
- 3) Clean the heads, pinch roller and the capstan shaft with a cotton swab (or with a soft, lint-free cloth) slightly moistened with isopropyl alcohol.

Do not use any solution other than alcohol for head cleaning.



Head demagnetization

In order to maintain good sound quality during recording and playback, it is recommended that the head assembly be demagnetized if distortion or poor sound quality persists after cleaning the heads.

If the head assembly becomes magnetized, it could create noise in the recordings, loss of high-frequency response or erasure of valuable recordings.

Several types of head demagnetizers are available and may be purchased separately at local electronics supply stores. Follow the instructions that are supplied with the device.

Do not bring any type of metal objects or tools such as magnetic screwdrivers in contact with the head assembly.

Maintenance of external surfaces

To clean this unit, 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, benzene, nor a chemically treated cloth to clean this unit.

Such chemicals may damage the finish of your unit.

Technical specifications

■ CASSETTE DECK SECTION

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase

Heads

DECK 1	Playback head (Permalloy) × 1
DECK 2	Recording/Playback head (Permalloy) × 1
	Erasing head (Double-gap ferrite) × 1

Motors

DECK 1	Capstan/Reel table drive (DC servo motor) × 1
DECK 2	Capstan/Reel table drive (DC servo motor) × 1

Tape speed

4.8 cm/s. (1-7/8 ips)

Wow and flutter

0.14% (WRMS)

Fast forward and rewind times

Approx. 110 seconds with C-60 cassette tape

Frequency response (Dolby NR off)

NORMAL	40 Hz—15 kHz, ±3 dB
	20 Hz—16 kHz (DIN)
CrO ₂	40 Hz—15 kHz, ±3 dB
	20 Hz—16 kHz (DIN)
METAL	40 Hz—16 kHz, ±3 dB
	20 Hz—17 kHz (DIN)

S/N (Signal level = max recording level, CrO₂ type tape)

NR off	56 dB (A weighted)
Dolby B NR on	66 dB (A weighted)
Dolby C NR on	74 dB (A weighted)

Input sensitivity and impedance

REC (IN)	60 mV/47 kΩ
----------	-------------

Output voltage and impedance

PLAY (OUT)	400 mV/800 Ω
------------	--------------

■ GENERAL

Power consumption

For Australia and N.Z.	20 W
For others	22 W

Power supply

For Australia and N.Z.	AC 50 Hz/60 Hz, 230—240 V
For others	AC 50 Hz/60 Hz, 110 V/127 V/220 V/230—240 V

Dimensions (W × H × D)

430 × 136 × 290 mm

Weight

4.7 kg

Note:

Specifications are subject to change without notice.

Weight and dimensions are approximate.

Troubleshooting guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to

the directory of authorized service centers (enclosed with this unit) to locate a convenient service center, or consult your Technics dealer for instructions.

Problem	Probable cause(s)	Suggested remedy
Tape moves but no sound is heard.	The volume control of the amplifier is set to its minimum position.	• Adjust the volume control to the desired level.
	The input selector of the amplifier is not set to the "TAPE" position.	• Set to the "TAPE" position.
Distorted sound.	The recording level is too high.	• Select the appropriate recording level.
Previously recorded sound has not been erased.	Erase head is dirty.	• Clean the head.
Sound output is hoarse or unsteady.	Heads are dirty.	• Clean the heads.
	Tape is damaged.	• Try operation with a new cassette; if there is no problem with the new cassette, discard the damaged cassette.
Poor sound quality (especially in the high treble and low bass ranges).	The correct Dolby noise-reduction button is not set.	• Set it to the correct position.
Sound is low, poor tone, intermittent sound noise.	Heads, capstan and/or pinch roller are dirty or tape is damaged.	• Clean the heads, capstan and/or pinch roller, or try a new cassette.
A "hum" noise is heard during tape playback or recording.	This unit is placed too close to a receiver, amplifier or tuner.	• Leave as much space as possible between the units, or place them where there is the least amount of "hum".
Recording is not possible.	The recording level control is at the "0" position.	• Select the appropriate recording level.
	One of the tape-to-tape recording-speed indicators ("×1" or "×2") is illuminated.	• Switch OFF whichever tape-to-tape recording speed indicator is illuminated (by pressing the SPEED button).
TV noise is accidentally recorded.	This unit is placed near a TV.	• Try placing this unit further away from a TV.

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan