OPERATING INSTRUCTIONS

These instructions also apply to units of different colour.

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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Accessories

- AC power supply cord .................................. 1
  (Refer to page 4.)
- Stereo connection cables ............................. 2
  (Refer to page 4.)
Suggestions for Safety

■ 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 accidently 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
Place this unit at least 10 cm (4") away from wall surfaces, etc.,
and away from direct sunlight.

■ Keep the unit away from heaters, 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,
immmediately disconnect the power cord plug, and contact your
dealer or an Authorized Service Center.

Before Use

Be sure to disconnect the mains cord before adjusting the
voltage selector.
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.

(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. (There is no voltage selector for some countries;
the correct voltage is already set.)
About Cassette Tapes

Selection of cassette tapes
Do not use tape such as described below in this unit.

- **120-minute (or longer) tapes**
  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.

- **Fe-Cr tape (TYPE III)**
  The high range will be emphasized and a flat frequency response characteristic cannot be obtained.

- **Metal tape without detection holes**
  Recordings will be very distorted. (There is no playback problem, however.)

Tape slack
This may cause the tape to break.

Use a pencil or similar object to take up the slack.

To prevent erasing of recorded sounds
Remove the erase-prevention tabs (thus preventing recording).

![Tab for side 2 Tab for side 1 Use a screwdriver or similar object to break out the tab.](image)

To record again
Cover the slot with adhesive tape.

![Attach tape](image)

Avoid tape storage in the following places
Tape can be damaged if it is stored in places such as described below.

- 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.
Front Panel Controls and Functions

- Power “standby ( )/on” switch (power “standby ( )/on”)
  This switch switches ON and OFF the secondary circuit power only. The unit is in the “standby” condition when this switch is set to the “standby ( )” position. Regardless of the switch setting, the primary circuit is always “live” as long as the power cord is connected to an electrical outlet.

- Timer stand-by switch ( timer)
  (Refer to page 10.)

- “DECK A” counter/reset button (DECK A counter/reset)
  This indicates the amount of tape travel of “DECK A”. When this button is pressed, the readout will be reset to “000”.

- Recording level indicators (peak level)
  During recording, these meters indicate the recording level. The level is adjusted by using the recording level controls. During playback, they indicate the level of the recorded sound.

- Editing tape-speed selector/indicator ( ×2 speed)

- Editing switch/indicator (editing)

- Cassette holder

- Headphones jack (phones)

- Recording indicator (rec)

- Playback indicator (play)

- Tape-select indicators (auto tape select)

- Recording-level controls (rec level)
  Used to adjust the recording level.

- Dolby noise-reduction switches/indicators (Dolby NR) (Refer to page 7.)

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When using “DECK A”

- Eject button ( eject)
- Rewind/review button (rew ◄)
- Stop button (stop ■)
- Playback button (play ►)
- Fast-forward/cue button (ff ►►)
- Pause button (pause/II)
- Record-muting button (auto rec mute/ )
  (Refer to pages 8 ~ 9.)
- Record button (rec/ )(Refer to page 8.)
- Synchro-recording-start button (synchro start)
  (Refer to page 9.)

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When using “DECK B”

- Fast-forward/cue button (ff ►►)
- Playback button (play ►)
- Stop button (stop ■)
- Rewind/review button (rew ◄)
- Eject button ( eject)
Playback

1. "off"

2. "on" (REW → PLAY)

3. Select the Dolby noise-reduction system.
   (Refer to page 7.)

4. Press, then insert the tape cassette.
   - When using "DECK A"
     - The side to be played back facing outward.
     - Part where tape is exposed facing downward.
   - When using "DECK B"
     - Press, then insert the tape cassette.

5. Press. The playback indicator will illuminate, and playback will begin.

When in the stop mode, press this button to rewind the tape rapidly.
When in the play mode, press this button to rewind the tape while monitoring the sound.

Press to stop the tape.
(The playback indicator will go out.)

When in the stop mode, press this button to advance the tape rapidly. When in the play mode, press this button to fast forward the tape while monitoring the sound.

When listening through headphones

Headphones (option)

Press to stop the tape temporarily on "DECK A".
(The playback indicator will flash.)
Series playback

One side of the tape in "DECK A"("DECK B")and then one side of the tape in "DECK B"("DECK A") are played back in succession, and this program is repeated 8 times unless the stop button is pressed sooner. The tape in "DECK A"("DECK B") is rewound while the tape in "DECK B"("DECK A") is playing.

- One time is when the playback of "DECK B" has finished.
- The playback indicator of the tape deck not being used for playback flashes continuously during tape rewind and during the playback standby mode.

When starting from "DECK A"

1 Press and hold.
The playback indicator of "DECK A", will illuminate, and playback will begin.

2 Press
(While holding "DECK A" s playback button)
The playback indicator of "DECK B" flashes continuously, and the unit changes to the pause mode.

When starting from "DECK B"

1 Press and hold.
The playback indicator of "DECK B", will illuminate, and playback will begin.

2 Press
(While holding "DECK B" s playback button)
The playback indicator of "DECK A" flashes continuously, and the unit changes to the pause mode.

Dolby noise-reduction system

The Dolby-noise reduction system boosts low level high frequency signals during recording. During playback, these high frequency signals are reduced by a corresponding amount and, therefore, noise is reduced. This unit includes two types of Dolby noise-reduction systems, the Dolby B type and C type.

- Dolby NR B type
Use this system for playback of tapes which were recorded by the conventional "Dolby noise-reduction" system, and for playback of commercially available music tapes.

- Dolby NR C type
Use this system for 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.

Automatic tape selector system

This cassette deck automatically detects the type of tape being used, and adjusts for the proper bias and equalization. The tape-select indicator indicates the type of tape being used in "DECK A".
"Metal" lights when no tape has been loaded in the cassette holder of "DECK A".

Notes

1. "DECK A" and "DECK B" cannot be used for playback at the same time.
2. While "DECK A" is being used to make a recording, "DECK B" can be used for fast-forwarding or rewinding a tape only.
3. When "DECK A" (or "DECK B") is used for playback while "DECK B" (or "DECK A") is being used for playback, "DECK B" (or "DECK A") will stop.
4. Do not press the eject button while the tape is moving; doing so might cause a malfunction or damage the tape.
5. If noise is heard while listening to a tape, switch OFF the power of the compact disc player.

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.
Recording

1 “off”

2 “on” (REC/PLAY)

3 Press, then insert the tape to be used for recording.
   The side to be recorded facing outward.
   Part where tape is exposed facing downward.
   Recording indicator
   Playback indicator

4 Press. (Recording stand-by mode)
   The recording indicator will illuminate and the playback indicator will flash.

5 Press so that the indicator does not illuminate.
   (Refer to page 7.)

6 Select the Dolby noise-reduction system.
   (Refer to page 7.)

7 Start the desired program source.

8 Adjust the recording level.
   (See below.)

9 Press.
   The playback indicator will change from flashing to a steady illumination, and the recording will begin.

   Press to make non-recorded spaces between tunes.
   (Refer to page 9.)

   Press to stop the recording temporarily. (The playback indicator will flash.)
   To start the recording again, press the “play” button.

Adjustment of the recording level

The actual level which you should use as a guide for adjusting the recording level may vary depending on the type of tape used.

<table>
<thead>
<tr>
<th>Tape type</th>
<th>Normal (TYPE I) CrO₂ (TYPE II)</th>
<th>Metal (TYPE IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level (Dolby NR off)</td>
<td>0 dB</td>
<td>+3 dB</td>
</tr>
<tr>
<td>Level (Dolby NR on)</td>
<td>+3 dB</td>
<td>+6 dB</td>
</tr>
</tbody>
</table>

To erase recorded sounds

Note that any sounds on the tape will be automatically erased if a new recording is made on that part of the tape.

1 Insert the recorded tape cassette into the cassette holder of “DECK A”.

2 Set the Dolby noise-reduction switches and editing switch to the position (indicator off).

3 Set the recording level-controls to the minimum (“0”) position.

4 Press the record button, and then let the tape run.

Notes:
- Only “DECK A” can be used for recording. “DECK B” has no record capability.
- Your attention is drawn to the fact that recording prerecorded tapes or other published or broadcast material may infringe copyright laws.
"Edit-recording" is recording from one tape to another while making some changes.

1. "off"

2. "on" ( Residents Indicators)

3. Press, then insert the tape to be used for recording.

4. Press, then insert the tape to be used for playback.

5. Press this switch so that the indicator illuminates.

6. Select the tape speed.
   "x2": For operation at double speed. (The indicator will illuminate.)
   "x1": For operation at the normal speed. (The indicator will not illuminate.)

7. Press. (DECK B playback and DECK A recording will then begin.)

Press to stop the edit-recording.
[Playback indicators (for "DECK A" and "DECK B") and recording indicator (for "DECK A") will go out.] "DECK B" will stop simultaneously.

Press to make non-recorded spaces between tunes. (See below.)

Press to stop the edit-recording temporarily.
"DECK B" will stop and after about 4 seconds, "DECK A" will automatically change to the recording standby mode and the playback indicator will flash. (This will make a non-recorded space between tunes.)
To start edit-recording again, press the synchro-recording-start button.

**To make non-recorded spaces**

With this unit, by following the steps below, it is possible to make non-recorded spaces (4 seconds long) between tunes.
- To avoid recording unwanted commercial announcements, disc jockey patter, etc.
- To make the unrecorded space that's needed between tunes for correct operation of the music selected feature.

During the recording, press the record-muting button one time.
This unit will make non-recorded spaces (4 seconds long) between tunes, and then will change to the recording standby mode.

To make a non-recorded space of more than 4 seconds on the tape
Press the record-muting button for the necessary number of seconds.
The unit will change to the recording standby mode when the button is released.

To start the recording again
Press the playback button of "DECK A".

**Notes**

1. Edit-recordings cannot be made from "DECK A" to "DECK B".
2. Recording level as well as equalizer effects and Dolby noise-reduction effects are recorded on the tape in "DECK A" exactly as they were originally recorded on the tape in "DECK B".
3. The Dolby noise-reduction systems have no effect during an edit-recording (while the editing indicator is illuminated). To listen to music recorded by a Dolby noise-reduction system while making an edit-recording, reduce the treble range by using the treble tone control on the amplifier.
4. In order to avoid mis-operations later, be sure to switch OFF the editing switch (the editing indicator illumination stops) after the edit-recording has finished.
Timer Recording/Playback

If an audio timer (option) is connected to this unit, recording of a radio broadcast, or tape playback, will automatically begin at the preset time.

- **Connections**
  Connect the AC power cord of this unit to the power source outlet of the timer. (See the operating instructions of the timer for detailed information.)

- **Notes:**
  - When setting the timer for timer-controlled recording or playback, the timer should be set to a time which will extend beyond the time of one side of the tape.
  - “DECK B” cannot be used for timer-controlled recording or playback.

- **Timer recording**
  1. **Prepare for recording.**
     (Follow steps 1 through 8 of “Recording” on page 8. After adjusting the recording level, press the stop button.)
  2. **Set the timer to the desired recording-start time.**
  3. **Set the timer stand-by switch to the “rec” position.**
     (At the specified time, the power will come on and the broadcast will be recorded.)

- **After setting the timer**
  Make sure that the power switch is set to the “on” position.

- **Timer playback**
  1. **Rewind the tape to the position from which you want playback to begin.**
     (Refer to page 6.)
  2. **Set the timer to the desired playback-start time.**
  3. **Set the timer stand-by switch to the “play” position.**
     (At the specified time, the power will be switched on and the playback will begin.)

- **After setting the timer**
  Make sure that the power switch is set to the “on” position.

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 off the electrical power supply of this unit.
  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 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 when distortion or poor sound quality persist 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, benzine, or a chemically treated cloth to clean this unit.
  Such chemicals may damage the finish of your unit.
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.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable cause(s)</th>
<th>Suggested remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape moves but no sound is heard.</td>
<td>The volume control of the stereo receiver is set to its minimum position.</td>
<td>• Adjust the volume control to the desired level.</td>
</tr>
<tr>
<td>Distorted sound</td>
<td>The input selector of the stereo receiver is not set to the “tape” position.</td>
<td>• Set to the “tape” position.</td>
</tr>
<tr>
<td>Previously recorded sound has not been erased.</td>
<td>The recording level is too high.</td>
<td>• Select the appropriate recording level.</td>
</tr>
<tr>
<td>Sound output is hoarse or unsteady.</td>
<td>Erase head is dirty.</td>
<td>• Clean the head.</td>
</tr>
<tr>
<td>Recording is not possible.</td>
<td>Heads are dirty.</td>
<td>• Clean the heads.</td>
</tr>
<tr>
<td>The Dolby noise-reduction switches do not function.</td>
<td>The recording level controls of the cassette tape deck are at the &quot;0&quot; position.</td>
<td>• Select the appropriate recording level.</td>
</tr>
<tr>
<td>Poor sound quality (especially in the high treble and low bass ranges)</td>
<td>The editing switch is pressed in. (The indicator is illuminated.)</td>
<td>• Press it once again; check to be sure that the indicator is not illuminated.</td>
</tr>
</tbody>
</table>

Technical Specifications

**Cassette Deck Section**

- **Deck system**: Stereo cassette deck
- **Track system**: 4-track, 2-channel
- **Heads**
  - (DECK A) REC/PLAY
    - Permalloy head
  - Erasing
    - Double-gap ferrite head
  - (DECK B) PLAY
    - Permalloy head
- **Motors**: Electronically controlled DC motor
- **Recording system**: AC bias
- **Bias frequency**: 80 kHz
- **Erasing system**: AC erase
- **Tape speed**: 4.8 cm/sec. (1-7/8 ips)
- **Frequency response (w/o Dolby N.R.)**
  - METAL: 20 Hz~16 kHz (±15 dB)
  - CrO₂: 20 Hz~15 kHz (±16 dB)
  - NORMAL: 20 Hz~15 kHz (±15 dB)
- **S/N** (signal level = max recording level, CrO₂ type tape)
  - Dolby C NR on: 74 dB (CCIR)
  - Dolby B NR on: 66 dB (CCIR)
  - NR off: 56 dB (A weighted)
- **Wow and flutter**: 0.07% (WRMS) ±0.2% (DIN)

**Fast Forward and Rewind Time**

Approx. 110 seconds with C-60 cassette tape

**Input sensitivity and impedance**

- **LINE**: 60 mV/47 kΩ
- **Output voltage and impedance**
  - **LINE**: 400 mV/3.2 kΩ
  - **HEADPHONES**: 30 mV/8 Ω

**General**

- **Power consumption**: 14W
- **Power supply**: AC 50 Hz/60 Hz, 220V
- **Dimensions (W×H×D)**: 430 × 125 × 235 mm
- **Weight**: 4.5 kg

**Note:**

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