Panasonic®

IC Recorder
Operating Instructions

Model No. **RR-XR320**

Follow these steps to save from an SD Memory Card to your computer.

1. Connect the USB Reader/Writer to your personal computer.
2. Install the SD Voice Editor software from the CD-ROM.

Read the operating instructions for SD Voice Editor for details.

Before connecting, operating or adjusting this product, please read these instructions completely. Please keep this manual for future reference.

P

PRINTED WITH
SOY INK ™

This manual was printed with soy based ink.

SD™

MultiMediaCard™

●SD logo is a trademark.
●Portions of this product are protected under copyright law and are provided under license by ARIS/SOLANA/4C.

RQT5626-P

Dear Customer

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

Supplied accessories

Please check and identify the supplied accessories.
Use numbers indicated in parentheses when asking for replacement parts.
To order accessories contact 1-800-332-5368 or web site (http://www.panasonic.com).

☐ SD Memory card 16MB

☐ USB Reader/Writer
    Refer below for this replacement part number.

☐ CD-ROM* (RFE0074)

*Read the operating instructions for SD Voice Editor for details.

Optional accessories

■**USB Reader/Writer**

Replacement part number:BN-SDCAPU/1B

The serial number of this product can be found on the back of the cassette compartment cover or inside the battery compartment.
Please note it in the space provided below and keep as a permanent record of your purchase to aid identification in the event of theft.

MODEL NUMBER   **RR-XR320**

SERIAL NUMBER

User memo:

DATE OF PURCHASE
DEALER NAME
DEALER ADDRESS

TELEPHONE NUMBER

RQT5626

2

Table of contents

Before use

RQT5626

3

Listening caution

Do not play your headphones or earphones at a high volume. Hearing experts advise against continuous extended play.

If you experience a ringing in your ears, reduce the volume or discontinue use.

Do not use while operating a motorized vehicle. It may create a traffic hazard and is illegal in many areas.

You should use extreme caution or temporarily discontinue use in potentially hazardous situations.

Even if your headphones or earphones are the open-air type designed to let you hear outside sounds, don't turn up the volume so high that you can't hear what's around you.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound.

So what sounds "normal" can actually be loud and harmful to your hearing.

Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

● Start your volume control at a low setting.
● Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

● Leave it there.

Inserting the batteries

❶ Slide the battery cover in the direction of the arrow.
❷ Open the cover.
❸ Insert the batteries and close the cover.

Ensure the card cover is closed.

LR03, AAA, AM-4 batteries (not included)

The year display starts flashing after you insert the batteries.

Set the date and time (☞page 7, from step ❷, ②).

If the display doesn't flash, remove the batteries and reinsert them ensuring the poles are correctly aligned.

■ If the cover comes loose
Insert the cover's hinges into the slots in the battery compartment.
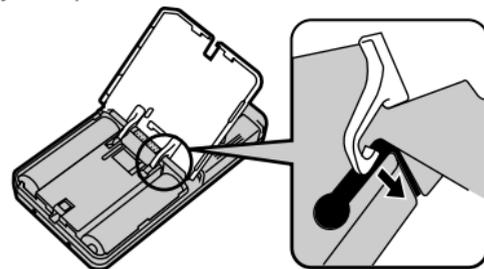
Note
If strong impacts or dropping of the unit cause the batteries, battery cover, card and card cover to come loose while recording:
● Recording can be lost.
or
● The card may not be read correctly. (Reinsert the batteries and card.)

Before use

RQT5626

4

RQT5626

5

Inserting the batteries

The battery indicator

The indicator is shown during operation.

Full ← → **Low**
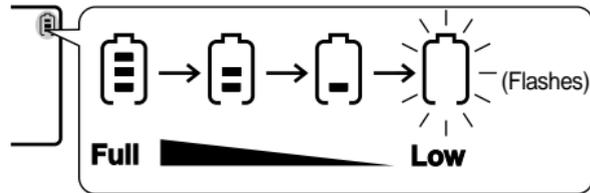
Replace the batteries when the indicator starts flashing.

Note
- The unit indicates the batteries are low even when there is still some life left in them. This is to preserve the contents of the memory.
- Replace the batteries within 30 seconds to preserve the clock settings. Recordings remain intact.

Hold function

This prevents accidental operation causing the batteries to run down.
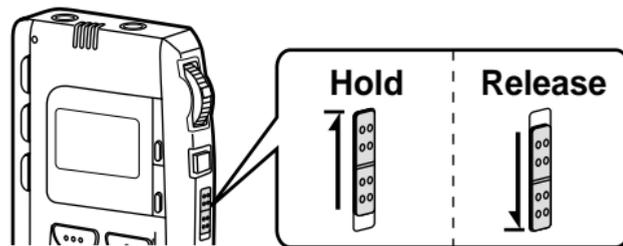
| Hold | Release |

When switched on
''HOLD'' appears for a few seconds and then the display goes out. Switch hold on when not using the unit to preserve the batteries.

Release hold before operation.

Setting the time

Set the time to keep track of when recordings were made. Start from step ❷, ② after inserting the batteries. Reset the clock regularly to maintain accuracy. (Monthly accuracy +/−60 seconds)

① **To select**
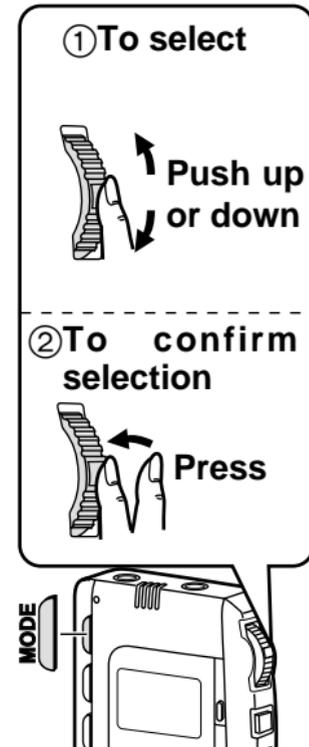
Push up or down

② **To confirm selection**

Press

MODE

❶ **Press [MODE].**
You can now select a mode (☞ page 9, "Selecting modes").

❷ ① Within 10 seconds
Push [SELECT, ENTER] up or down so "TIME ADJ" flashes.

② Within 10 seconds
Press [SELECT, ENTER].
The year display flashes.

❸ **Using the operations described in ① and ②, set the year, month, and day.**
"12 H" flashes.

❹ ① Within 10 seconds
Push [SELECT, ENTER] up or down to select 12 or 24 hour display.

② Within 10 seconds
Press [SELECT, ENTER].
The time display flashes.
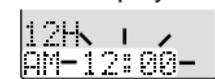
❺ **Using the operations described in ① and ②, set the time.**

Normal display
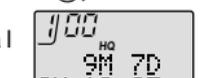
■ If the normal display appears before you finish
Start again from step ❶.

Note
The clock stops when you replace the batteries but starts again when you insert the batteries and close the battery cover.

Inserting SD Memory cards

❶ Slide the cover in the direction indicated by the arrow.
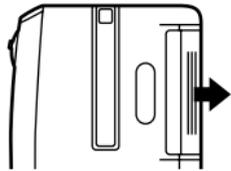
❷ Insert label-up with the cut-off corner facing in.
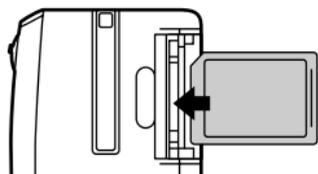
❸ Press on the center of the card so it locks into place and close the cover.
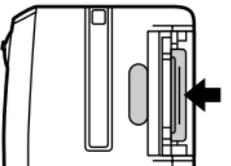
■**After you insert a card**

''Welcome to Panasonic'' appears on the display.

The unit creates four new folders if you insert a new, unused card.

Welcome to
Panasonic
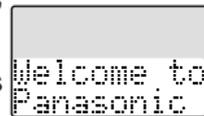
■**To remove the card**

While the unit is stopped, open the cover and press on the center of the card to unlock it.

For your reference

Do not remove the card or batteries while the unit is performing operations. This can cause data to be destroyed.

Read the notes on SD Memory Cards on page 35.

Note

You can use MultiMedia Cards in place of SD Memory Cards, but you must format them before use.

Selecting modes

Use this operation to enter the various setting modes.

❶ **Press [MODE].**

You can now select a mode.

❷ ① Within 10 seconds

Push [SELECT, ENTER] up or down so the mode flashes.

② Within 10 seconds

Press [SELECT, ENTER].

Refer to the pages indicated for further details.

MODE

STOP

①**To select**

Push up or down

②**To confirm selection**

Press
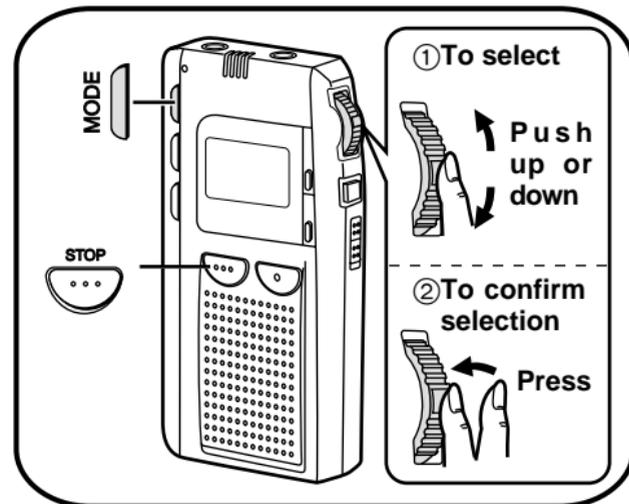
Modes

→ "FILE LOCK" (File lock)   ☞See page 19
  ↕
  "QUALITY" (Recording quality)   ☞See page 11
  ↕
  "MIC SENSE" (Microphone sensitivity) ☞See page 13
  ↕
  "VAS SET" (VAS function)   ☞See page 13
  ↕
  "BEEP SET" (Operation tone)   ☞See page 17
  ↕
  "TIMER REC" (Timer recording)   ☞See page 29
  ↕
  "TIMER PLAY" (Timer play)   ☞See page 30
  ↕
  "TIME ADJ" (Time setting)   ☞See page 7
  ↕
  "EDIT TITLE" (Title editing)   ☞See page 25
  ↕
→ "FORMAT ALL" (Format card)   ☞See page 20

Note

● The normal display is restored after 10 seconds.
● Press [STOP] to cancel.

Before use

Recording

Files are kept in folders. The unit creates four folders when a new card is used and you can create another five for a maximum of nine (☞page 21). Each folder can hold up to 99 files.

Plug-in power microphone jack

Recording indicator

Built-in microphone

FOLDER

STOP

•REC =PAUSE
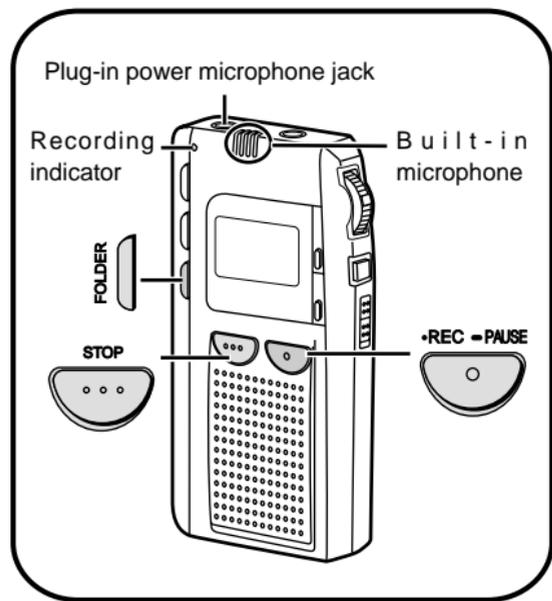
Preparation
Select the recording quality (☞page 11)

❶ Press [FOLDER] to select a folder to record into.
The folder changes with each press.

Folder number

```
101
     HQ
▣ MEMO
   No File
```

Folder title

The initial four folders are titled: ① MEMO, ② MEETING, ③ TO DO, ④ PRIVATE. You can change the titles (☞page 25).

❷ Press [REC, PAUSE] to start recording.
The recording indicator lights and sound is recorded through the built-in microphone.

File number

Recording quality

```
101
    HQ        🔋
▪▪▪▪▪▪▪▪▪▪▪▪
   0h00m15s
```

Recording time

Recording level meter
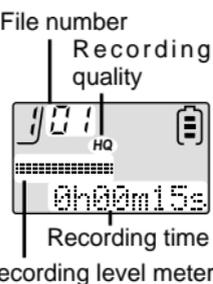
❸ Press [STOP] to stop recording.
The file information is shown in the following order.

(File title and recording time)

```
101
     HQ
▣ FILE01
   0h15m06s
```

↓

(Recording date and time)

```
101
     HQ
   10M20D
AM  9:32
```

↓

(Folder and file title)

```
101
     HQ
▣ MEMO
▣ FILE01
```
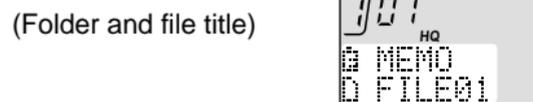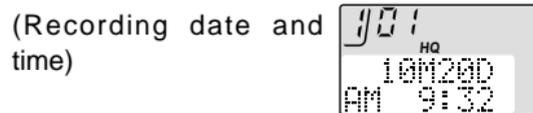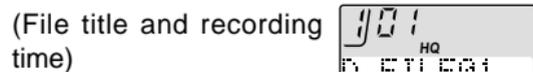
Files are given titles automatically, but you can change them (☞page 25).

• •

■To pause recording
Press and hold [REC, PAUSE] until the recording indicator starts flashing.
Press to resume recording.

■Recording quality
The total recording time depends on the recording quality you select. HQ (high quality) is factory setting and provides the best sound quality.

Approximate recording times on the included 16 MB SD Memory Card

HQ mode	SP mode	LP mode
30 min.	60 min.	150 min.

■To change the quality (☞ illustration on page 9)
This example shows how to set quality to HQ.
❶ Press [MODE].
❷ ① Within 10 seconds
   Push [SELECT, ENTER] up or down so "QUALITY" flashes.

```
—QUALITY—
MIC SENSE
```

   ② Within 10 seconds
   Press [SELECT, ENTER].
❸ ① Within 10 seconds
   Push [SELECT, ENTER] up or down to select a mode.

```
—HQ MODE—
 SP MODE
```

   HQ ↔ SP ↔ LP
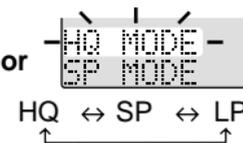
   ② Within 10 seconds
   Press [SELECT, ENTER].
   "HQ MODE SET" is displayed.

Basic operations

Recording

■Checking the remaining recording time
Press [MODE] while recording.
Press again to return to the previous display.

Remaining recording time

The above display is shown automatically when the remaining recording time becomes very short. Press [MODE] to show the recording time in this case.

■Checking the remaining memory on the card
While the unit is stopped, press and hold [STOP] for 2 seconds. The meter reduces from right to left as the remaining memory reduces.

MEMORY

Memory meter

■Connecting external microphone
Connect the microphone to the [MIC (PLUG IN POWER)] jack. The built-in microphone is turned off.
Plug type: 3.5 mm ($^1/_8$ in.) monaural

■When a "NO MORE..." display appears
There are nine folders, there are 99 files in the folder, or the card is out of memory.
Delete unneeded folders, and files or use another card.

12

RQT5626

---

① **To select**

Push up or down

② **To confirm selection**

Press

MODE
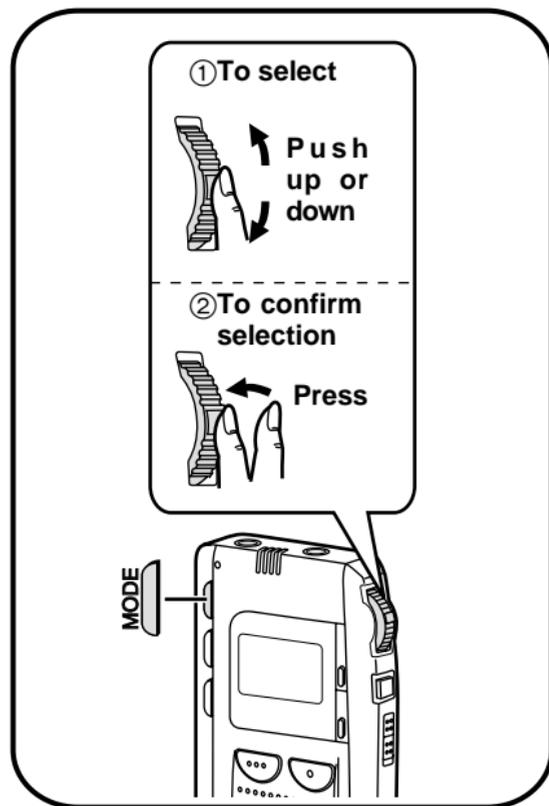
Changing microphone sensitivity

You can set sensitivity to high (to record relatively softer sounds) or low (to record only relatively louder sounds) to suit the circumstances. The recording level meter can help you determine which level is needed. The sensitivity also works if you have connected external microphone.
This example shows how to set sensitivity to "HIGH".

❶ **Press [MODE].**
You can now select a mode.

❷ ① Within 10 seconds
Push [SELECT, ENTER] up or down so "MIC SENSE" flashes.

MIC SENSE
VAS SET

② Within 10 seconds
Press [SELECT, ENTER].

❸ ① Within 10 seconds
Push [SELECT, ENTER] up or down so "SENS > H?" flashes.

SENS=LOW
SENS →H?

② Within 10 seconds
Press [SELECT, ENTER].
"SENS=HIGH SET" is displayed.

Using the voice activating system to prevent unnecessary recording

The digital voice activating system (VAS) pauses recording during periods of silence and so prevents recording unnecessarily. VAS works better when microphone sensitivity is set to "LOW".

❶ **Press [MODE].**
You can now select a mode.

❷ ① Within 10 seconds
Push [SELECT, ENTER] up or down so "VAS SET" flashes.

VAS SET
BEEP SET

② Within 10 seconds
Press [SELECT, ENTER].

❸ ① Within 10 seconds
Push [SELECT, ENTER] up or down to select "VAS> ON?".

VAS=OFF
VAS →ON?

② Within 10 seconds
Press [SELECT, ENTER].
"VAS=ON SET" is displayed and "《●》" lights.

■To turn VAS off
Select "VAS > OFF?" in step ❸ and press [SELECT, ENTER].

Turn VAS off when making important recordings. **13**

Basic operations

RQT5626

Play

To play a recording you just made, start from step ➋. When play of a file finishes, play stops and the next file number is displayed.

① **To select**

Push up or down

② **To confirm selection**

Press

RQT5626

14
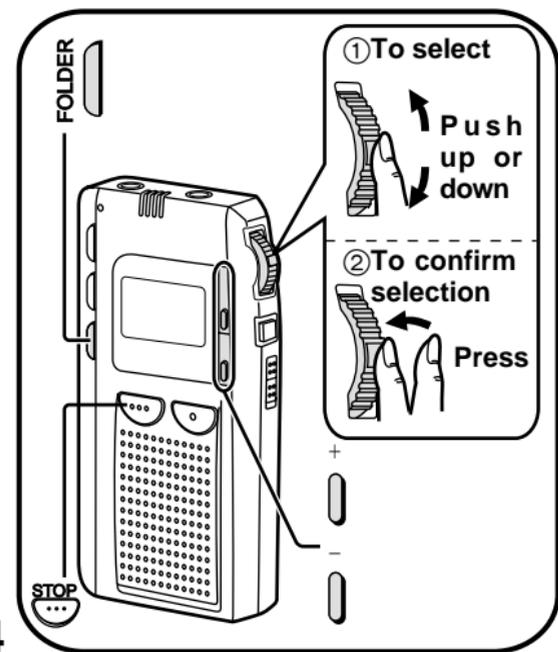
Preparation

Select the folder containing the file you want to play.

➊ **Push [SELECT, ENTER] up or down to select the file.**

The file information is shown in the following order.

File title and recording time → Recording date and time → Folder and file title
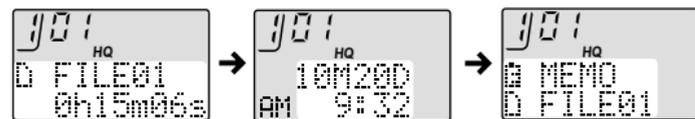
➋ **Press [SELECT, ENTER] to start play.**
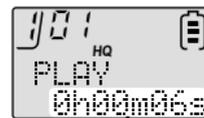
Play time

➌ **Press [VOLUME (+, −)] to adjust the volume.**

■**To stop play**

Press [STOP].

Press [SELECT, ENTER] to resume play from where you stopped.

■**Using an earphone**

Plug in firmly.
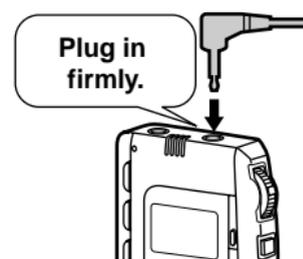
Plug type:3.5 mm ($^1/_8$ in.) monaural

Note
- Leave some slack in the earphone cord if you wind it around the unit.
- The speaker is off while the earphone is connected.
- If a gritty noise is heard, wipe away the dirt on the plug.

■**Controlling play with [SELECT, ENTER]**

To stop play	To skip to the next file during play	To return to the start of the file playing	Cue and review
Press during play	**Push down once**	**Push up once**	**Push and hold in position**
			 Up (Review) Down (Cue)
Press again to resume play from where you stopped.		To return to the start of the previous file, push within the first two seconds.	The speed increases in three steps when held in position.

Note

Volume may change during cue/review and after dividing files.

Basic operations

RQT5626

15

Play

■**Checking the remaining play time**

Press [MODE] during play.
Press again to return to
the previous display.

```
901      ▯
PLAY HQ
- 0h14m52s
```

Remaining play time

■**Scanning the files: Intro-scan**

This plays the first five seconds of all the
files in a folder in order.

While stopped, press and hold [SELECT,
ENTER] for about two seconds.

When you find the file you want to play,
press [SELECT, ENTER]. The file is played
through to the end.

Changing the play speed

There are three play speeds. The speed is factory set to
normal.


```
PLAYBACK SPEED
[888|888]
 ↑↓↑↓
SLOW NOR FAST
```

```
SLOW PLAY
0h00m12s
```
Slow
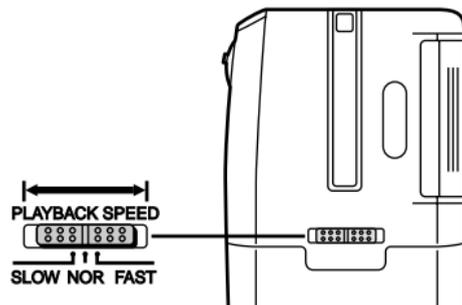
```
FAST PLAY
0h00m12s
```
Fast

The operation tone

The tone is factory set to on, but you can
turn it off.


```
①To select

Push
up or
down

②To confirm
selection

Press
```

MODE

This example shows how to turn the tone off.

❶ **Press [MODE].**
You can now select a mode.

❷ ① Within 10 seconds
**Push [SELECT, ENTER] up or
down so "BEEP SET"flashes.**

```
-BEEP SET-
 TIMER REC
```

② Within 10 seconds
Press [SELECT, ENTER].

❸ ① Within 10 seconds
**Push [SELECT, ENTER] up or
down so "BEEP > OFF?"
flashes.**

```
BEEP=ON
BEEP→OFF?
```

② Within 10 seconds
Press [SELECT, ENTER].
"BEEP = OFF SET" is displayed.

■**To turn the tone on**

Select "BEEP > ON?" in step❸, ① and press [SELECT,
ENTER].

16

17
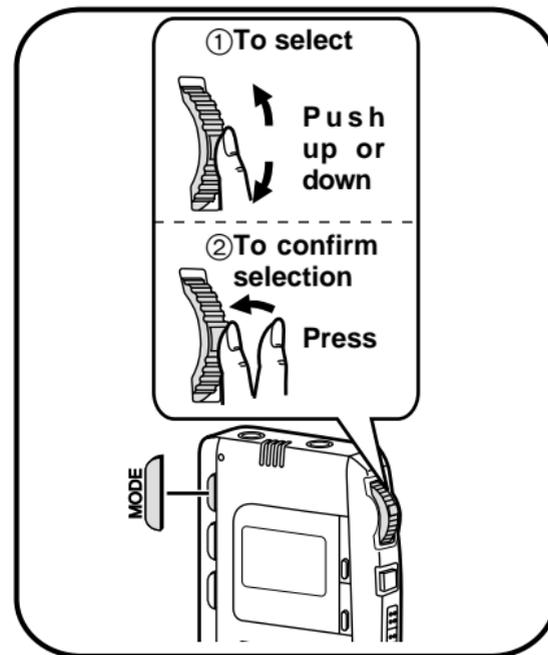
Deleting files

You can delete individual files or all files at once. You cannot restore files that you have deleted.

①To select

Push up or down

②To confirm selection

Press

FOLDER

STOP

ERASE

RQT5626
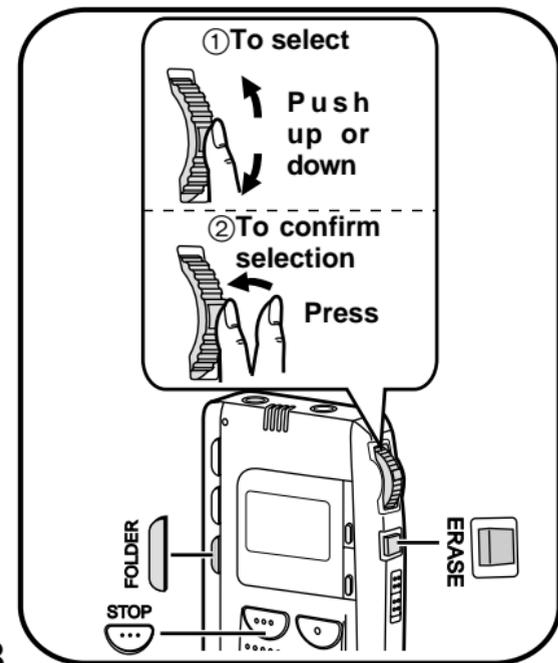
Preparation

Select the folder containing the file(s) you want to delete.

Important

Do not open the battery or card covers or remove the card during the deleting process.

❶ **Press and hold [ERASE] for 2 seconds.**
"FileErase?" is displayed.

❷ Within 10 seconds
Push [SELECT, ENTER] up or down to select the item you want to erase.
The display changes as follows.

a First file in the folder

```
001-
FileErase?
```

b Last file in the folder

```
008-
FileErase?
```

↔

↕   ↕

d All files in all folders

```
ALL-
ALL FOLDER
FileErase?
```

c All files in the folder

```
FILE ERASE
IN FOLDER?
```

↔
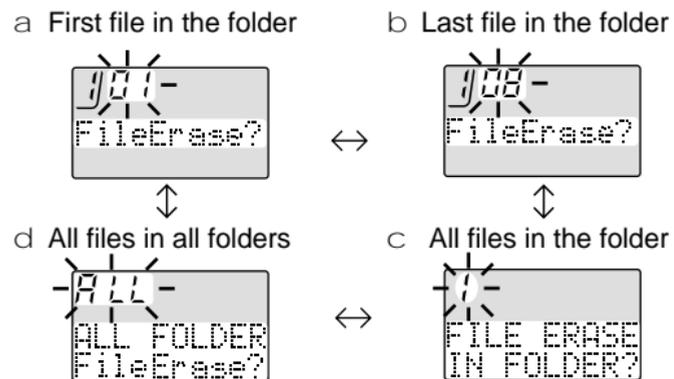
❸ **Press [ERASE].**
If you deleted one file, the file numbers after that file decrease by one.

■To cancel partway through
Press [STOP] before step ❸.

Note
● If you have selected an empty folder, "File Erase?" will not be displayed when you press and hold [ERASE].
● You cannot delete locked files. Unlock the files before deleting them (☞right, Locking files).
● After repeatedly recording and deleting files, the total possible recording time may be reduced. You can remedy this by reformatting the card (☞page 20).

18

Locking files

Locking files prevents them from being deleted in error.

Preparation
Select the file you want to lock.

❶ **Press [MODE].**
You can now select a mode. "FILE LOCK" flashes.

```
FILE LOCK
QUALITY
```

❷ **Press [SELECT, ENTER].**

❸ ① **Push [SELECT, ENTER] up or down to select "LOCK▷ ON?".**

```
01
UNLOCK
LOCK →ON?
```

② **Press [SELECT, ENTER].**
" ⚷ LOCK SET" is displayed and " ⚷ " is displayed in front of the file name.

■To cancel partway through
Press [STOP] before step ❸, ②.

■To unlock the file
Select "**LOCK▷ OFF?**" in step ❸, ① and press [SELECT, ENTER].

Basic operations

RQT5626

19

Formatting cards

Formatting is not necessary under normal circumstances. If the unit appears to be having trouble reading the card, try reinserting the card and the batteries. Use this unit to reformat the card if this is ineffective.

❶ Press [MODE].

You can now select a mode.

❷ ①Within 10 seconds
Push [SELECT, ENTER] up or down so "FORMAT ALL" flashes.

`FORMAT ALL` `FILE LOCK`

②Within 10 seconds
Press [SELECT, ENTER].
"FORMAT THE CARD?"is displayed.

`FORMAT THE` `CARD?`

❸ Within 10 seconds
Press [SELECT, ENTER].
"DELETE ALL CONTENTS?" is displayed.

`DELETE ALL` `CONTENTS?`

❹ Within 10 seconds
Press and hold [SELECT, ENTER] for about 2 seconds.
"FORMAT THE CARD NOW" is displayed and formatting starts.

■To cancel partway through
Press [STOP] before step **❹**.

For your reference
Use the appropriate software to format cards if you intend to use the card to record SD Audio and similar material.

Note

● All data on the card, including recordings made with another unit, is deleted when the card is formatted.
● You cannot format the card if the write-protect switch is engaged (☞page 35).
● Four folders are created when you format a card.

RQT5626

Adding and deleting folders

A card can have up to nine folders. You can delete unneeded folders.

①**To select**

Push up or down

②**To confirm selection**

Press

FOLDER

ERASE

STOP

Adding folders

❶ While stopped
Press and hold [FOLDER] for two seconds.

`NEW FOLDER` `OK?`

❷ Within 10 seconds
Press [SELECT, ENTER].

❸ ①**Push [SELECT, ENTER] up or down to select a title (☞below for a list of titles).**

`FOLDER05` `MEMO`

②**Press [SELECT, ENTER].**
The title is entered and the folder is added.

FOLDER ○○*, **MEMO, MEETING, TO DO, PRIVATE, SCHEDULE, OFFICE, HOME, BUSINESS, STUDY, SPEECH, IDEA, TRAVEL, LESSON, MESSAGE**

*Folder number

Note
See "Titling folders and files" on page 25 to change the title.

Advanced operations

RQT5626

20   **21**
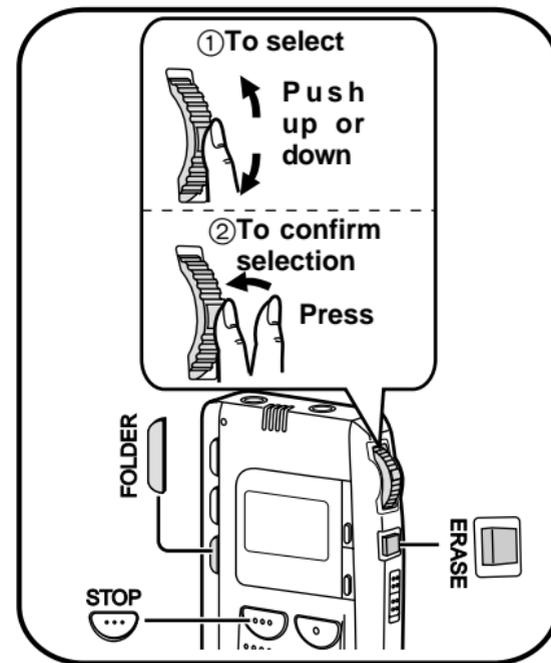
Adding and deleting folders

Deleting folders

Preparation

Select the folder you want to delete.

1 **While pressing [ERASE], press and hold [FOLDER] for two seconds.**

The folder number flashes.

2 **Press and hold [ERASE] for two seconds.**

The folder is deleted.
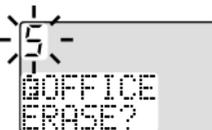
■ **To cancel partway through**

Press [STOP] before step 2.

Note

You cannot delete the four original folders with this unit.

Dividing files

When you divide a file, the part after the division takes a different file number, making it easier to find parts you want to play or save separately.
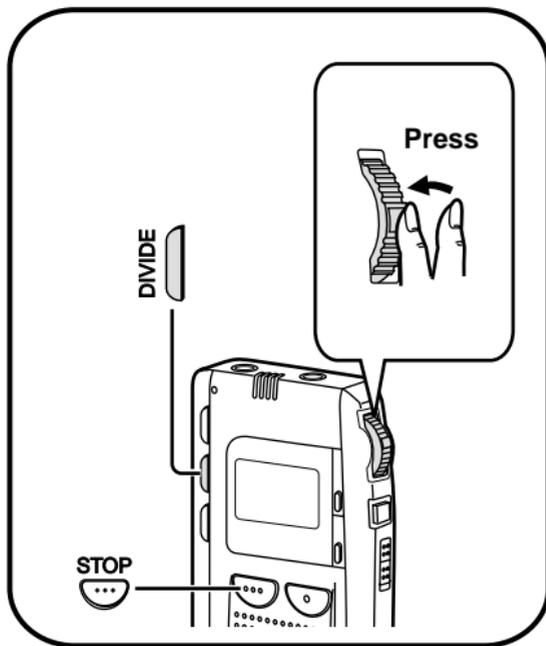
Preparation

Select the file you want to divide (☞page 14).

1 **Press [SELECT, ENTER] to play the file.**

File number

2 **Press [DIVIDE] at the point you want to divide the file.**

Play stops and the file number and play time flash.
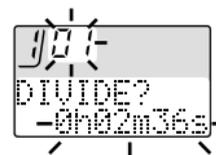
3 **Press and hold [DIVIDE] for two seconds.**

The file numbers after the file you divide increase by one.

File number after division

■ **To cancel partway through**

Press [STOP] before step 3.

Note

● You cannot divide a file if there are already 99 files in a folder.

● You may not be able to divide files less than 1 second.

● The information about the divided file may not be correct. Use it as a guide only.

● Even after the total possible recording time has been reached and "NO MORE SPACE" is displayed, it is still possible to divide files two more times.

Erase unneeded files to make further divisions.

Advanced operations

Moving files

You can move files to other folders to keep related files together.

①**To select**

Push up or down

②**To confirm selection**

Press

FOLDER

STOP

24

RQT5626
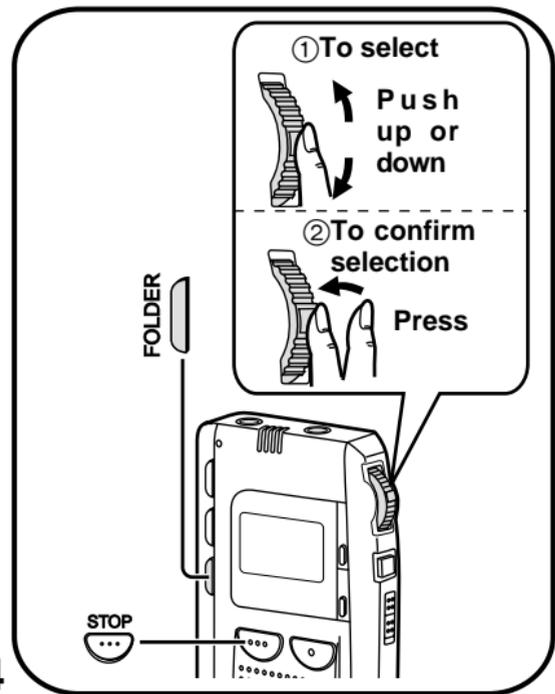
Preparation
Select the file you want to move (☞page 14).

❶ **Press [SELECT, ENTER] to play the file.**

Folder number

```
 J01
    HQ
PLAY
0h02m36s
```

❷ **Press [FOLDER].**

Number of other folder

```
-J00-
    HQ
FILE MOVE
B MEETING
```

Title of other folder

❸ ①Within 10 seconds
Push [SELECT, ENTER] up or down to select the other folder.

②Within 10 seconds
Press [SELECT, ENTER].
The file is added to the end of the other folder.

```
 J01
    HQ
B MEETING
N FILE01
```
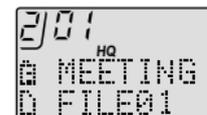
■**To cancel partway through**
Press [STOP] before step ❸, ②.

Note

You cannot move a file to a folder that already contains 99 files.

Titling folders and files

You can give folders and files titles of up to 32 characters.

Note

●You can also use SD Voice Editor (included) to title folders and files. Refer to the operating instructions for SD Voice Editor for details.
●You can make file titles of up to 200 characters with SD Voice Editor, but this unit can only make titles with 32 characters. Longer titles are still displayed.
●Some characters you can enter with a computer may not be displayed correctly on this unit.

Advanced operations

25

RQT5626

Titling folders and files

Enter titles of up to 32 characters. Write over the current title.

① **To select**

Push up or down

② **To confirm selection**

Press

MODE

STOP

26

RQT5626

---
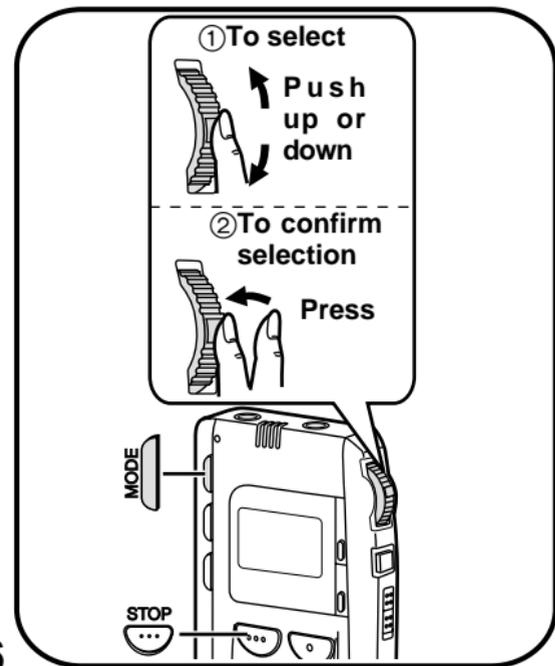
❶ Press [MODE].
You can now select a mode.

❷ ① Within 10 seconds
Push [SELECT, ENTER] up or down so "EDIT TITLE"flashes.
② Within 10 seconds
Press [SELECT, ENTER].

EDIT TITLE
FORMAT ALL

❸ When titling a folder

① **Push [SELECT, ENTER] up or down so "FOLDER?" flashes.**
② **Press [SELECT, ENTER].**

FOLDER?
FILE?

When titling a files

① **Push [SELECT, ENTER] up or down so "FILE?" flashes.**
② **Press [SELECT, ENTER].**

FILE?
FOLDER?

---

❹ ① **When "GO EDIT" is displayed, push [SELECT, ENTER] up or down to select the position where you want to start entering the title.**

MEMO

② **Press [SELECT, ENTER].**
The characters you can enter appear below the title.

MEMO
ABCDEFGHIJ

❺ Enter the characters (☞page 28).

❻ Press and hold [SELECT, ENTER] for one second.
"EXIT EDIT" is displayed.

❼ Press [SELECT, ENTER].
The normal display is restored.

■**If the normal display appears before you finish**
Start again from step ❶.

■**To cancel partway through**
Press [STOP].

Note

The unit's display can show eight characters at one time. Titles longer than this scroll across the screen when you select the folder or file.

Advanced operations

RQT5626

27

Titling folders and files

Entering characters

Use the following procedures while the folder or file entering display is shown (the cursor is flashing).

■Entering characters

❶ ①Push [SELECT, ENTER] up or down to select the character you want to enter.
②Press [SELECT, ENTER].
The cursor moves to the right.

❷ Use the same procedure to enter the next character.

■Making corrections

First display "EXIT EDIT" (☞page 27, step ❻).
❶ ①Push [SELECT, ENTER] up or down to select the character you want to correct.
②Press [SELECT, ENTER].
❷ ①Push [SELECT, ENTER] up or down to select the new character.
②Press [SELECT, ENTER].
❸ Use the same procedure to correct other characters.

■Deleting characters

First display "EXIT EDIT" (☞page 27, step ❻).
❶ ①Push [SELECT, ENTER] up or down to select the character you want to correct.
②Press [SELECT, ENTER].
❷ Press [ERASE].
The character is deleted, leaving a space.

Characters you can use

Text mode	Character
CAPITALS	ABCDEFGHIJKLMNOPQRSTUVWXYZ
lower case	abcdefghijklmnopqrstuvwxyz
Numerals and symbols	0123456789 @ □ (space) ! " # $ % & ' ( ) ✳ + , . / : ; < = > ?

Note

● Press [VOLUME (+, −)] to change the character type.
● Characters change five at a time if you push and hold [SELECT, ENTER].

28

RQT5626

Using the timers

Record timer

You can set start and finish times for recording.

①**To select**

Push up or down

②**To confirm selection**
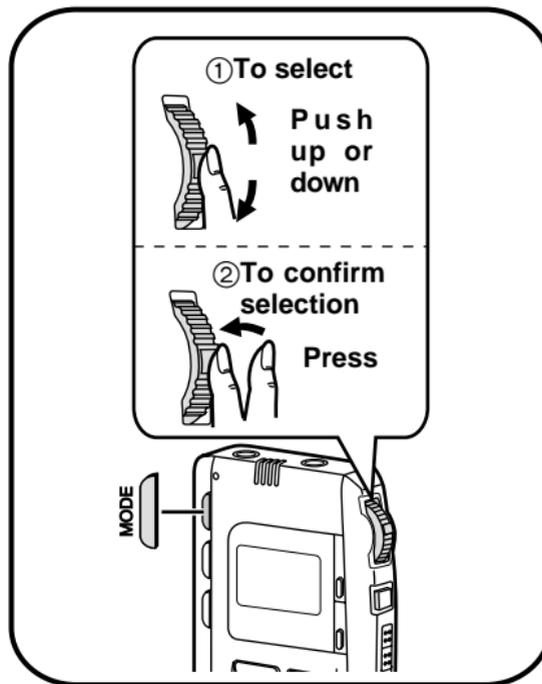
Press

MODE

Preparation
Set the clock (☞page 7).
Select the folder to record into (☞page 10).

❶ **Press [MODE].**
You can now select a mode.

❷ ①Within 10 seconds
Push [SELECT, ENTER] up or down so "TIMER REC" flashes.
②Within 10 seconds
Press [SELECT, ENTER].
The current setting is displayed for 2 seconds.

TIMER REC
TIMER PLAY

❸ ①Within 10 seconds
Push [SELECT, ENTER] up or down so "TIMER ON" flashes.
②Within 10 seconds
Press [SELECT, ENTER].
The start time flashes.

⊕REC
TIMER ON
TIMER OFF

Advanced operations

29

RQT5626

Using the timers

Record timer

❹ ①Within 10 seconds
Push [SELECT, ENTER] up or down to set the start time.
②Within 10 seconds
Press [SELECT, ENTER].

❺ **Use the same steps to set the finish time**
"TIMER REC SET" is displayed.
The start and finish times are displayed, then the normal display is restored.

. . . .
| Note |

●If VAS is on, the recording may be shorter than the set time.
●If you make recordings before the timer recording starts, be careful that there is enough time remaining for the timer.
●You cannot set the timer if there is less than one second of recording time left.
●"⏲ REC" flashes while the record timer is functioning.

Play timer

Set a time to start play.
Play stops when the file ends.

①**To select**

Push up or down

②**To confirm selection**

Press

MODE

Preparation
Set the clock (☞page 7)
Select the file you want to play (☞page 14)

❶ **Press [MODE].**
You can now select a mode.

❷ ①Within 10 seconds
Push [SELECT, ENTER] up or down so "TIMER PLAY" flashes.
②Within 10 seconds
Press [SELECT, ENTER].
The current setting is displayed for 2 seconds.

```
TIMER PLAY
TIME ADJ
```

❸ ①Within 10 seconds
Push [SELECT, ENTER] up or down so "TIMER ON" flashes.
②Within 10 seconds
Press [SELECT, ENTER].
The start time flashes.

```
         ⏲PLAY
TIMER ON
TIMER OFF
```
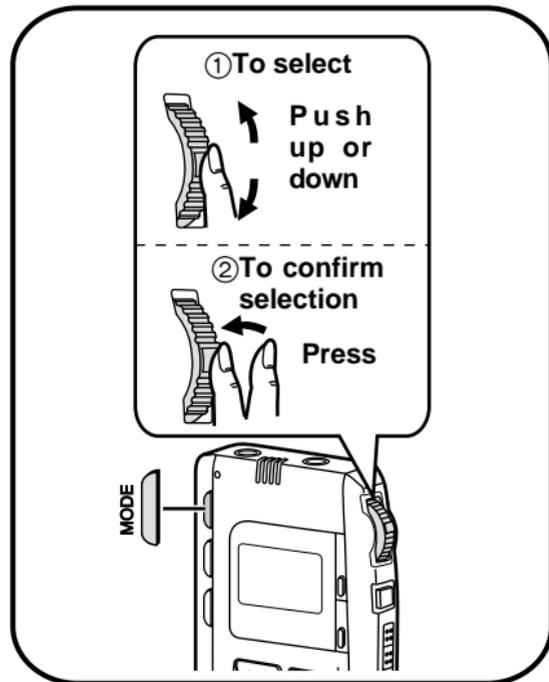
❹ ①Within 10 seconds
Push [SELECT, ENTER] up or down to set the start time.

②Within 10 seconds
Press [SELECT, ENTER].
"TIMER PLAY SET" is displayed.

The start time and file information are displayed, then the normal display is restored.

. . . .
| Note |
"⏲ PLAY" flashes while the play timer is functioning.

Advanced operations

Using the timers

Timer settings

■To cancel the timer

In step ❸ of the above two timer setting procedures, select "OFF" and press [SELECT, ENTER]. The indicator for the timer ("⏱ REC" or "⏱ PLAY") goes out.

■To check the timer settings

❶ Press [MODE].

You can now select a mode.

❷ ① Within 10 seconds

Push [SELECT, ENTER] up or down to select "TIMER REC" or "TIMER PLAY".

② Within 10 seconds

Press [SELECT, ENTER].

The timer settings are shown for about two seconds.

Note

●You can set the timer within twenty-four hours of the present time.
●You cannot use the two timers at the same time. The timer you set last will work.
●The timer settings are cleared if the batteries are removed or if the time information is lost, or the card is removed from the unit.

Product service

Do not attempt to remove the cover(s) or repair the unit yourself. Refer servicing to qualified personnel only.

■Product information

For product service, product information or assistance with product operation, refer to the servicenter directory.

Maintenance

■If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

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

●Never use alcohol, paint thinner or benzine to clean this unit.
●Before using chemically treated cloth, read the instructions that came with the cloth carefully.

Care and use

■Unit

●Avoid using or placing this unit near sources of heat. Do not leave it in an automobile exposed to direct sunlight for a long period of time with the doors and windows closed.
●To avoid product damage, do not expose this product to rain, water or other liquids.
●Do not keep this unit and magnetized cards (bank cards, commuter passes, etc.) close together.
●These speakers do not have magnetic shelding. Do not place them near televisions, personal computers or other devices easily influenced by magnetism.

■Dry cell battery

●Align the poles ($\oplus$ and $\ominus$) properly when inserting the batteries.
●Do not mix old and new batteries or different types of batteries.
●Do not recharge ordinary dry cell batteries.
●Remove the batteries if the unit is not to be used for a long time.
●Do not use the batteries if the covering has been peeled off.

Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

If electrolyte leaks from the batteries, consult your dealer. Wash thoroughly with water if electrolyte comes in contact with any part of your body.

References

Control guide
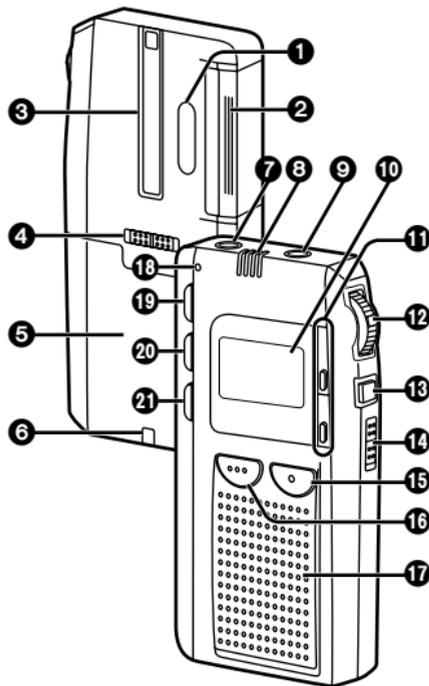
❶ Card window
❷ SD Memory Card cover
❸ Clip
❹ Play speed switch **[PLAYBACK SPEED]**
❺ Battery cover
❻ Hand strap hole
❼ Microphone jack **[MIC (PLUG IN POWER)]**
❽ Built-in microphone **[MIC]**
❾ Earphone jack **[⚭]**
❿ Display screen
⓫ Volume **[VOLUME (+, −)]**
⓬ Shuttle key **[SELECT, ENTER]**
⓭ Erase **[ERASE]**
⓮ Hold **[HOLD]**
⓯ Recording, pause **[REC, PAUSE]**
⓰ Stop **[STOP]**
⓱ Speaker
⓲ Recording indicator
⓳ Mode **[MODE]**
⓴ Divide **[DIVIDE]**
㉑ Folder **[FOLDER]**

| Note |

Ensure the battery cover can close completely if you fit a hand strap. Fitting a thick strap can cause the cover to close incompletely and lead to incorrect operation.

SD Memory Cards

SD Memory Cards are small, light, removable memory media. With one SD card, you can record sounds with this unit and graphics using other equipment.

■To protect your data

● Set the write-protect switch to LOCK. Release the switch to make other recordings.
● Use a felt pen to write on the space provided.

Write-protect switch

Rear view

Memo space
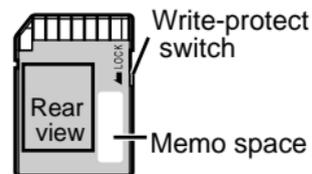
● Do not remove the card or batteries while operating the unit as this can damage your data.
● Backup your data on a computer to guard against loss due to accidental erasure or card or unit damage.

■Replacement

Purchase a new card if the included one becomes full. The total available recording time depends on the type of card (see below).

Approximate available recording times (min.)

Recording Quality	Memory		
	8MB	32MB	64MB
HQ mode	13	60	130
SP mode	26	120	260
LP mode	65	300	650

See page 11 for details about 16 MB cards.

| Note |

Memory and recording times may differ to those given above when using MultiMedia Cards.

Displays

"CARD COVER"	The card cover is open.	Close the cover.
"NO CARD"	You haven't inserted a card.	Insert a card.
"CARD WRITE PROTECTED"	The write-protect switch is engaged.	Record and edit after releasing the switch.
"ERROR"	An error has occurred.	Reinsert the card and batteries. If this doesn't remedy the situation, use a computer to make a backup of the data, then reformat the card.
"ILLEGAL FILE" "CAN'T REC"	There is a problem with the file.	Either you can continue or you can make a backup of the data and reformat the card.
"U01 LOW BATT"	The batteries are flat.	Replace the batteries.
"NO MORE 99 FILE REC"	The folder contains 99 files.	Delete unneeded files before recording or editing.
"NO MORE 9 FOLDER"	There are already nine folders on the card.	Delete unneeded folders before proceeding.
"NO MORE SPACE"	The card is out of memory.	Delete unneeded files before recording or editing.
"LOCKEDFILE"	The file cannot be deleted because it is locked.	Unlock the file before deleting it.

Troubleshooting guide

Before requesting service, make the below checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, *contact the Panasonic Customer Call Center at 1-800-211-7262, or e-mail consumerproducts@panasonic.com, or web site (http://www.panasonic.com/sd).*

No operations. No recording.	The hold function is on.	6
	The battery cover is open.	5
	The batteries are loose.	5
	The batteries are flat. If not, try reinserting them.	6
	Insert a card.	8
	The card's write-protect switch is engaged.	35
	The card is full. Delete unneeded files or use another card.	18
No sound, low level sound, or excessive noise while using an earphone.	Plug it in firmly.	15
	Wipe the plug clean.	—
The time and date of recording is not shown.	The time and date of recording is not displayed if the clock isn't set.	7

References

Troubleshooting guide

Recording stops unexpectedly.	VAS is on.	13
No sound from the speaker.	There is no sound if you connect an earphone. Raise the volume.	15 14
Play is too fast or too slow.	Check the play speed.	16
Cannot delete a folder.	The card's write-protect switch is engaged. You cannot delete the four original folders.	35 22
Cannot delete a file.	The file is locked. The card's write-protect switch is engaged.	19 35
The characters in a title are displayed incorrectly.	Some characters you can enter with a computer may not be displayed correctly on this unit.	25
The remaining time shown on this unit is shorter than that shown on a computer.	The unit's system uses some memory so the remaining time will be reduced.	—
Cannot play.	This unit can only play ADPCM 2 codec VM1 format files.	—

Specifications

Power requirement: DC 3 V (two LR03, AAA, AM-4 batteries)
Power output: 200 mW (max.)
Frequency response: 400 Hz–6000 Hz (HQ mode)
Jack:
  Output jack; Earphone, 3.5 mm ($^1/_8$ in.); 3 mW, 16 Ω
  Input jack; Mic, 3.5 mm ($^1/_8$ in.); 0.56 mV
Speaker: 28 mm ($1^3/_{32}$ in.), 8 Ω
Dimensions (W×H×D):
  Max dimensions; 47.9×91.5×16.0 mm ($1^7/_8$×$3^5/_8$×$^5/_8$ in.)
  Cabinet dimensions; 47.5×91.0×13.0 mm ($1^7/_8$×$3^9/_{16}$×$^1/_2$ in.)
Mass:
  with batteries; About 68 g (2.4 oz)
  without batteries; About 45 g (1.6 oz)

Battery life:
[When used at 25°C (77°F), on a flat, stable surface]

Batteries	Playback	Recording
Panasonic alkaline batteries	About 6 hours	About 11 hours

● The battery life may be less depending on the operating conditions.

Note
Specifications are subject to change without notice.
Mass and dimensions are approximate.

Servicenter list

Panasonic Technics *Quasar*

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:

1-800-211-PANA (7262), Monday–Friday 9 am–9 pm; Saturday–Sunday 9 am–7 pm, EST.

Web Site:http://www.panasonic.com You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.

Accessory Purchases:

1-800-332-5368 (Customer Orders Only)
Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032
(6 am to 5 pm Monday-Friday; 6 am to 10:30 am Saturday; PST)
(Visa, MasterCard, Discover Card, American Express, Check)

Factory Servicenters Locations

CALIFORNIA
6550 Katella Avenue
Cypress, CA 90630

800 Dubuque Avenue
S. San Francisco
CA 94080

20201 Sherman Way
Suite 102
Canoga Park, CA 91306

3878 Ruffin Road
Suite A
San Diego, CA 92123

COLORADO
1640 South Abilene Street
Suite D
Aurora, CO 80012

FLORIDA
3700 North 29th Avenue
Suite 102
Hollywood, FL 33020

GEORGIA
8655 Roswell Road
Suite 100
Atlanta, GA 30350

ILLINOIS
9060 Golf Road
Niles, IL 60714

1703 North Randall Road
Elgin, IL 60123
(Pick-up/Drop-off only)

MARYLAND
62 Mountain Road
Glen Burnie, MD 21061

MASSACHUSETTS
60 Glacier Drive
Suite G
Westwood, MA 02090

MICHIGAN
37048 Van Dyke Avenue
Sterling Heights, MI 48312

MINNESOTA
7850-12th Avenue South
Airport Business Center
Bloomington, MN 55425

OHIO
2236 Waycross Road
Civic Center Plaza
Forest Park, OH 45240

PENNSYLVANIA
2221 Cabot Blvd. West
Suite B
Langhorne, PA 19047

TEXAS
13615 Welch Road
Suite 101
Farmers Branch
TX 75244

WASHINGTON
20425-84th Avenue South
Kent, WA 98032

HAWAII
99-859 Iwaiwa Street
Aiea, Hawaii 96701
Phone (808) 488-1996
Fax (808) 486-4369

Service in Puerto Rico
Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/Factory Servicenter:
Ave. 65 de Infanteria, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985
Phone (787) 750-4300   Fax (787) 768-2910

RQT5626

RQT5626

Panasonic/Technics Audio Products
Limited Warranty

Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the warrantor") will repair this product with new or refurbished parts in the event of a defect in materials or workmanship, free of charge, in the U.S.A. or Puerto Rico as follows (all time periods start from the date of original purchase) :

AUDIO PRODUCTS—labor and parts for one (1) year.
ALL AUDIO RACKS(cabinets)—parts only 30 days.
TECHNICS STAND ALONE SPEAKERS, SUBWOOFER SPEAKERS—labor and parts for three (3) years.
USB READER-WRITER, PERSONAL COMPUTER CARD ADAPTERS—(when applicable)—exchange defective unit with a new or refurbished one for one (1) year.
ACCESSORIES—HEADPHONES, CARTRIDGES,
MICROPHONES, ADAPTERS—labor and parts for ninety (90) days.

RECHARGEABLE BATTERIES-–(when applicable)—exchange defective item for new one for ten (10) days. Non-rechargeable batteries are not warranted.
SD MEMORY CARDS, RECHARGEABLE BATTERY PACKS—(when applicable)—exchange defective item for new one for ninety (90) days. Non-rechargeable battery packs are not warranted.

Carry-in or mail-in service in the U.S.A. can be obtained during the warranty period by contacting a Panasonic Services Company (PASC) Factory Servicenter listed in the Servicenter Directory. Or call toll free, 1-800-211-7262 to locate a PASC authorized Servicenter. Carry-in or mail-in service in Puerto Rico can be obtained during the warranty period by calling the Panasonic Sales Company telephone number listed in the Servicenter Directory.

This warranty is extended only to the original purchaser. A purchase receipt or other proof of date of original purchase will be required before warranty service is rendered.

This warranty only covers failures due to defects in materials and workmanship which occur during normal use and does not cover normal wear to the stylus (when applicable) or a dealer installed cartridge or stylus. The warranty does not cover damages which occur in shipment or failures which are caused by products not supplied by the warrantor, or failures which result from accident, misuse, abuse, neglect, mishandling, faulty installation, misapplication, set-up adjustments, maladjustment of consumer controls, improper operation or maintenance, improper antenna, inadequate signal reception or pick-up, alteration, modification, power line surge, improper voltage supply, lightning damage, commercial use, such as; hotel, office, restaurant, or other business or rental use of the product, or service by anyone other than a PASC Factory Servicenter or a PASC authorized Servicenter, or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS

There are no express warranties except as listed above.

THE WARRANTOR SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the Consumer Affairs Department at the company address indicated above.

RQT5626

If you ship the product

Carefully pack and send it prepaid, adequately insured and preferably in the original carton. Attach a postage-affixed letter, detailing the complaint, to the outside of the carton.

Do NOT send the product to the Executive or Regional Sales offices. They are NOT equipped to make repairs.

Customer's Record

Model
No. _____

Serial
No. _____
or

Code
No. _____

Date
of
Purchase _____

Dealer's
Name _____

_____

Dealer's
Address _____

_____

RQT5626