Panasonic®

Operating Instructions
IC Recorder

Model No. **RR-US380**
RR-US360

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This product may receive radio interference caused by mobile telephones or other products during operation. If such interference is apparent, please increase separation between the product and the mobile telephone or other product.

THE FOLLOWING APPLIES ONLY IN THE U.S.A.

CAUTION:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
● Reorient or relocate the receiving antenna.
● Increase the separation between the equipment and receiver.
● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
● Consult the dealer or an experienced radio/TV technician for help.

Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Responsible Party:
Panasonic Corporation of North America
One Panasonic Way Secaucus, NJ, 07094 USA
Telephone No.: 1-800-211-7262

This statement is applied to only Canada

This Class B digital apparatus complies with Canadian ICES-003.

Preparation ① Inserting batteries

Supplied accessories
Product numbers correct as of November 2004. These may be subject to change.

RR-US380	
USB cable	(K1HA09BD0001)
CD-ROM	(Voice Editing Ver.1.0 Professional Edition)

RR-US360	
USB cable	(K1HA09BD0001)
CD-ROM	(Voice Editing Ver.1.0 Standard Edition)

● Use numbers indicated when asking for replacement parts.
For the U.S.A.
To order accessories, refer to "Accessory Purchases" on page 8.
For Canada
To order accessories, call the dealer from whom you have made your purchase.

AAA, LR03 battery (not included)

● If rechargeable batteries are to be used, rechargeable batteries manufactured by Panasonic are recommended.
(Rechargeable batteries may not last as long as regular batteries.)

The battery indicator (displayed during operation)

Full → → → Empty

Replace the batteries

● Replace the batteries within 30 seconds to preserve the settings.
Recordings remain intact.

Preparation ② Setting the time

Flashes until the time is set.

● When the year is flashing (e.g. 2005), begin from step 3 below.
● While setting the time, the clock will return to standby if there is no operation after 10 seconds have elapsed. If this happens set again from the start.

1	Enter the menu mode	• FOLDER/ – MENU	Press and hold	E.g.: Microphone sensitivity	SEnSE	● A menu is displayed.
2	Select "yEAr"	Use [|◀◀ ▶▶|] to select	YEAr → [▶] (ENTER)			
3	Set the time	■Year	Use [|◀◀ ▶▶|] to select	2005 → [▶] (ENTER)		
		■Month	Use [|◀◀ ▶▶|] to select	→ [▶] (ENTER)		
		■Day	Use [|◀◀ ▶▶|] to select	→ [▶] (ENTER)		
		■Time display (12/24H)	Use [|◀◀ ▶▶|] to select	24H → [▶] (ENTER)		
		■Time	Use [|◀◀ ▶▶|] to select	→ [▶] (ENTER)		

The clock has a monthly accuracy of +/– 60 seconds at room temperature.
When replacing the batteries, the clock stops and restarts when you reinsert them and close the battery cover.

Before use

Hint 1
Release hold before operation

Hold

There is no power button.

HOLD ↓

The unit returns to standby if there is no operation after 10 seconds have elapsed.
Press [■] to stop the operation midway/cancel the setting.

Recording/stop
Folder/menu
Erase
Meeting/dictation
Play/enter [▶], stop [■], fast forward, rewind/select [|◀◀ ▶▶|]
Volume (+, −)
Recording mode

Hint 2
(For MEETING)
Recorded contents are stored in folders

(For DICTATION)
File

A maximum of 99 files can be stored in each folder.

DICTATION
Folder

Hint 3
Use HQ to record with high sound quality and SP for long recordings

Recording mode and recording time total of all folders
Long recording time

16 hours 10 minutes
8 hours 10 minutes / 9 hours 40 minutes
4 hours 50 minutes / 2 hours 10 minutes

■ RR-US380
■ RR-US360

| SP (Standard play) | FQ (Fine quality) | HQ (High quality) |

High quality sound

Hint 4
Change the microphone sensitivity according to the distance

When recording close to the source: **LO**
When recording the source from a distance: **HI**

Menu display

File lock / **Preventing unnecessary recording** / **Play speed** / **Continuous play**

(While stopped)
• FOLDER/ – MENU → SEnSE

Use [|◀◀ ▶▶|] to change the menu and [▶] to enter

Press and hold (More than 2 seconds)

YEAr (Setting the time) / PLAY (Timer play [3]) / rEC (Timer recording [3]) / bEEP (Operation beep)

E.g.: Microphone sensitivity [1]

1 Not displayed during dictation recording.
2 Displayed only when there is a recorded file.
3 Displayed only when the time is set.

Recording

1 Select meeting or dictation recording
2 Select the folder
3 Select the recording mode
4 Select the microphone sensitivity
5 Recording (Monaural recording)

Meeting recording

MEETING

Each time you press

Folder: A B C D

Dictation recording

DICTATION

Each time you press

REC MODE: HQ FQ SP

Recoding mode

① • FOLDER/ – MENU → SEnSE
Press and hold
② [▶](Enter)
③ [|◀◀ ▶▶|] HI (Recording from a distance) or LO (Recording up-close)
④ [▶](Enter)

REC/STOP (START REC) ● ● ● ● ● REC/STOP (STOP REC) or [■]

● Recording information is displayed.
(Recording date)
(Recording start time)
(Recording time)
(Total number of files)

When dictation recording, the following settings are automatically set.
(Dictation folder is set) — Dictation folder
(HQ mode is set)
(Dictation recording mode is set)

Playing/Erasing

1 Select the folder
2 Select file or folder
3 Play/Erase

Playing

MEETING

■ A–D folder
• FOLDER/ – MENU : A B C D

■ Dictation folder
DICTATION
(The dictation folder is selected)

Use [|◀◀ ▶▶|] to select → [▶] (Play)
After selecting, information at the time of recording is displayed.
File number
■ To adjust the volume (0–20) VOL − +

Erasing

ERASE Press and hold → Use [|◀◀ ▶▶|] to select → ERASE (Erase)

■Selected file
■All files in a folder — ALL
■All folders — ALL

! You cannot restore files you erase.

■Basic operations during play

Play
● Press and hold to turn one file repeat play On/Off.
! You cannot use repeat when setting continuous play. (▸ page 4)

Backward
● Press to return to the beginning of the file.
(Press twice to return to the previous file.)
● Press and hold to search.

Forward
● Press to go to the beginning of the next file.
● Press and hold to search.

Stop play
(Press [▶] to resume play.)

■Listen to the first 5 seconds of each file (Intro scan)
1 Select the folder (▸ page 2)
2 Press and hold [▶]
(Press again to return to normal play.)
! Repeat play settings are automatically cancelled.

Organizing

Move

1 Play a file
2 Enter the move mode
3 Select the destination folder
4 Move

(Play the file you want to move) → • FOLDER/ – MENU Press and hold → Use [|◀◀ ▶▶|] to select → [▶] (ENTER)

Destination folder
Number of files in destination folder

! You cannot move a file from A–D folder to the dictation folder.

File lock

1 Select the folder
2 Select the file
3 Enter the menu mode
4 Select " 🔒 "
5 Lock

■ A–D folder
MEETING • FOLDER/ – MENU

■ Dictation folder
DICTATION

→ Use [|◀◀ ▶▶|] to select → • FOLDER/ – MENU Press and hold → Use [|◀◀ ▶▶|] to select → [▶] (ENTER) → [▶] (ENTER)

■ To unlock ➡ Do the above steps and select the file to unlock in step 2.

Other recording methods

Preventing unnecessary recording
(VAS : voice activated system)

Recording automatically pauses when there is no sound.

1 Enter the menu mode **2 Select " 🔵 "** **3 Select "On"**
• FOLDER/ – MENU Press and hold → [|◀◀ ▶▶|] → [▶] (ENTER) → [|◀◀ ▶▶|] → [▶] (ENTER)

■ To turn the function off ➡ select "OFF" in step 3.
! Turn the function off when recording important files.
! The first 3 seconds will always be recorded.

■Checking the remaining recording time available
(During recording) • FOLDER/ – MENU
● Press again to return to the elapsed recording time display.
Available recording time
! Available recording time also appears when the remaining time becomes very short.

■Recording through an external microphone (not included)
MIC (PLUG IN POWER)
Plug type: 3.5 mm (⅛ in.) monaural
(The built-in microphone switches off.)
Use a plug-in power compatible microphone monaural.

Other play methods

Changing the play speed (5 levels)

1 Enter the menu mode **2 Select "SPEEd"** **3 Select the speed**
• FOLDER/ – MENU Press and hold → [|◀◀ ▶▶|] → [▶] (ENTER) → [|◀◀ ▶▶|] → [▶] (ENTER)
(Slow) ◀——— ▶ (Fast)

■ To return to normal play
➡ While stopped, press and hold (more than 3 seconds) [■].
Plays the files in the folder continuously.

Continuous play

1 Enter the menu mode **2 Select " ▶, 🔁 "** **3 Select "On"**
• FOLDER/ – MENU Press and hold → [|◀◀ ▶▶|] → [▶] (ENTER) → [|◀◀ ▶▶|] → [▶] (ENTER)

! Repeat play settings are automatically cancelled.
■ To turn the function off ➡ Select "OFF" in step 3.

■Displaying the remaining play time
(During playing) • FOLDER/ – MENU
● Press again to return to the elapsed play time display.
Remaining play time

■Listening with the earphones (not included)
Plug type: 3.5 mm (⅛ in.) monaural

Saving (dubbing)

Recording to a cassette tape recorder

Select the file to dub and play
[▶] → Recording
Audio cable (not included)
Monaural mini plug — Stereo mini plug → Stereo MIC
Audio cable (not included)
Monaural mini plug — Monaural mini plug → Monaural MIC

Recording from a cassette tape recorder

Recording ← Select the track to dub and play
MIC (PLUG IN POWER)
Audio cable (not included)
Monaural mini plug — Stereo mini plug
Audio cable (not included)
Monaural mini plug — Monaural mini plug → Headphone jack
REC/STOP

● Read along with the operating instructions of equipment you are connecting.
● The recorded sound quality may differ from the original recording.
● Adjust the recording volume on the source to the desired level.

Using the timer

Timer recording

Preparation: Select the folder and recording mode (➜ page 2, 3)

1 Enter the menu mode **2** Select " ⊙● , rEC" **3** Set the time

• FOLDER/ – MENU
Press and hold

[|◀◀ ▶▶|] ➜ [▶] ➜ ①Use [|◀◀ ▶▶|] to select "On" ➜ [▶]
(ENTER)   (ENTER)

②Use [|◀◀ ▶▶|] to select the start time ➜ [▶]
(ENTER)

③Use [|◀◀ ▶▶|] to select the end time ➜ [▶]
(ENTER)

Timer play

Preparation: Select the file (➜ page 2, 3)

1 Enter the menu mode **2** Select " ▶⊙ , PLAy" **3** Set the time

• FOLDER/ – MENU
Press and hold

[|◀◀ ▶▶|] ➜ [▶] ➜ ①Use [|◀◀ ▶▶|] to select "On" ➜ [▶]
(ENTER)   (ENTER)

②Use [|◀◀ ▶▶|] to select the start time ➜ [▶]
(ENTER)

■ To cancel the timer ➜ select "OFF" in step 3-①.
■ To confirm the set time ➜ From the menu (➜ page 4), select " ⊙● , rEC" or " ▶⊙ , PLAy" and press [▶].
! Even when " ⊙ " or " ▶ ⊙ " are displayed during timer play, the repeat play or continuous play cannot be used.

Part names

Display

- Recording level (When recording)/ Remaining memory
- Recording mode
- Play indicator
- Folder
- File
- Recording (play) elapsed time
- Current time (In standby mode)

- Recording indicator
- Battery indicator

- External microphone jack
- Earphone jack
- Hold
- Clip
- Battery cover

- Built-in microphone
- Recording indicator

- Display
- Folder/menu
- Erase

- Play/enter [▶], stop [■], fast forward, rewind/select [|◀◀ ▶▶|]

- Speaker

- USB connector [⟷]

- Recording/stop
- Meeting/dictation
- Volume (+, –)
- Recording mode

Handstrap hole

Various functions

Canceling the operation beep

1 Enter the menu mode **2** Select "bEEP" **3** Select "OFF"

• FOLDER/ – MENU
Press and hold

[|◀◀ ▶▶|] ➜ [▶] ➜ [|◀◀ ▶▶|] ➜ [▶] ➜ [|◀◀ ▶▶|] ➜ [▶]
(ENTER)   (ENTER)   (ENTER)

■ To turn operation beep on ➜ select "On" in step 3.

Preventing accidental button presses (HOLD)

In order to prevent accidental operations while recording or while stopped, button operations are ignored.

● "hold" is displayed if a button is pressed while hold is on.

move up
■ To release ⬇ move down
● While stopped, switch to hold to save the batteries.

Using the unit with a computer

1 Install Voice Editing.
For details, read the installation instructions for Voice Editing. (➜ page 5, 6)

2 Connect this unit to a computer with the USB cable.
This unit can not be operated.

USB cable (included)

! Connect one IC Recorder only while using Voice Editing. This software does not support simultaneous use of multiple IC recorders.

When connected to a computer "PC" appears, and when transferring data "PC" flashes.
! Do not disconnect the USB cable while this is flashing.

Caution:
Use only the included USB cable with a ferrite core when connecting to computer.

Installing Voice Editing

(Save and edit sound files you have recorded with the unit.)

■ Installing Voice Editing

1 Start Windows.

2 Insert the included CD-ROM into your computer's CD-ROM drive.
The program installer starts automatically.
• When the installer does not automatically start
① From the "Start" menu click on "Run".
② Type " :\Launcher\VEdV1Launcher.exe" and click on "OK".
   is the CD-ROM drive ID.

3 Follow the on-screen instructions.
• RR-US380 The voice recognition engine and text to speech engine should start installing while Voice Editing is being installed. If they do not install, open the CD-ROM drive. Double click on
" :\SAPI5\SAPI5_Common.msi" and " :\SAPI5\SAPI5_English.msi" to install the voice recognition engine. After it is installed, double click on
" :\Speech\RealSpeak_Solo_Common_for_Panasonic.msi" and
" :\Speech\RealSpeak_Solo_English_for_Panasonic.msi ¹" to install the text to speech engine. (The order can be reversed.)
   is the CD-ROM drive ID.
¹ Double-click your preferred language icon.

4 Click "Finish" from the Installshield Wizard Complete screen.
Selecting "Yes, I want to restart my computer now" automatically re-starts the computer and completes installation.

■ Starting Voice Editing
Double click on the "Voice Editing" icon on the desktop.
After double clicking, follow the on-screen instructions.

■ Using the operating instructions (PDF file)
From the Windows "Start" menu, click on "All programs" → "Voice Editing" → "Voice Editing Operating Instructions" or from the "Help (H)" menu in the Voice Editing main screen, click on "Operating Instructions (H)".

Note
• If DirectX 8.1 or later is not installed on your computer, follow the instructions that appear on-screen.
• Adobe Acrobat Reader is necessary to view the operating instructions (PDF file). If Adobe Acrobat Reader is not installed on your computer, it is automatically installed at the same time as Voice Editing. Depending on the computer, an Adobe Acrobat Reader restart message may appear. Ignore this and continue installing Voice Editing.
• Uninstall the following before installing Voice Editing Ver.1.0 (included).
You cannot install two versions of Voice software on the same computer.
 - Voice Editor 3 - Voice Editor 2
 - Previous versions of Voice Editing software
   (for Panasonic IC Recorder RR-US360/RR-US361)
 - SD Voice Editor Ver.1.x
 - Other versions of Voice Editing Ver.1.0¹
• Sound files made with previous versions will remain intact, but you should back them up to be sure.

System Requirements

You will need an IBM PC/AT computer with the following attributes or equivalent, and the following software and hardware in order to use this application.

OS : Microsoft® Windows® 98 Second Edition
Microsoft® Windows® Millennium Edition
Microsoft® Windows® 2000 Professional
Microsoft® Windows® XP Home Edition/Professional
Only available when the user is logged in as the system administrator (Windows® 2000 / Windows® XP only)
• This software is not compatible with Microsoft Windows® 3.1, Windows® 95, Windows® 98 (except for Windows® 98SE) and Windows NT®.
• Operation is not guaranteed on an upgraded OS.
• This software is not Macintosh compatible.

Hardware :
CPU : Windows® 98 SE / Windows® Me : Intel® Pentium® II 333 MHz or higher
Windows® 2000 / Windows® XP : Intel® Pentium® III 500 MHz or higher
RAM : Windows® 98 SE / Windows® Me : 128 MB or more
Windows® 2000 / Windows® XP : 256 MB or more
Free hard disk space :
100 MB or more
• Additional free hard disk space may be necessary depending on the Windows® version and voice file being used.
• Approximately 25 MB of additional free hard disk space when installing Acrobat® Reader® (included).
• Approximately 50 MB of additional free hard disk space when installing DirectX® 9.0c (included).
• RR-US360 Temporary additional free hard disk space may be necessary when using the Waveform feature function.
• RR-US360 RR-US380
• Approximately 60 MB of additional free hard disk space when installing the voice recognition engine (included).
• Approximately 40 to 100 MB of additional free hard disk space per language when installing the text to speech engine (included).
• Temporary additional free hard disk space may be necessary when using the Waveform feature function, voice recognition function, text to speech function, CD-R writing function (Windows® XP only) and sound recorder function.
Drive : CD-ROM drive (for installation)
RR-US380 CD-R/RW drive (required to use the CD-R writing function in Windows® XP)
Sound : Windows compatible sound device
Display : High Color (16 bit) or more. Desktop resolution of 800 × 600 pixels or more.
(1024 × 768 pixels or more recommended)
Interface : USB port (Operation cannot be guaranteed if you use a USB hub or extension cable.)
Other requirements :
Mouse or equivalent pointing device

Note
The following hardware limitations should be noted.
• This software is not compatible with a multi-CPU environment.
• This software is not compatible with a multi-boot environment.
• This software may not run properly on 64-bit computers.
• Even if the system requirements mentioned in these operating instructions are fulfilled, some personal computers can not be used.
• This software may not run properly on home-made computers.
RR-US380 The following limitations should be noted.
• The voice recognition engine and text to speech engine are installed on the same drive (usually the C:drive) as the OS.
• The operating system must support the language used by the voice recognition engine and text to speech engine in order to run them.
Necessary software :
DirectX® 8.1 or later / Internet Explorer 5.5 or later

Troubleshooting Guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the solutions indicated in the chart do not solve the problem, refer to the "Customer Services Directory" on page 8 if you reside in the U.S.A., or refer to the "Product information" below if you reside in Canada.

Symptom	Checkpoints
No operation.	●The hold function is on. (➜ page 6) ●Make sure the battery cover is closed. ●Make sure the batteries are correctly inserted. ●Make sure the battery cover is attached to the rubber strap. ●You cannot operate when the unit is connected to a computer.
"U01" appears on the display.	●The battery has run down.
"2004" or "2005" flashes.	●Set the time. (➜ page 1)
"EE:EE" is displayed. Available recording time does not increase correspondingly after erasing files.	●This can occur after repeatedly recording and erasing files. Unlock all your files, then erase all folders to remedy this.
There is no sound from the earphone or it is difficult to hear or noisy.	●Ensure the plug is inserted firmly. ●Wipe the plug clean.
Recording stops.	●VAS (➜ page 4) may have functioned.
"– – – –" appears instead of the recording date.	●Set the time. (➜ page 1)
Playback speed is too fast or slow.	●Set play speed to normal. (➜ page 4)
"FULL" appears.	●There are 99 files in the folder. ●There is no remaining recording time. – Erase unneeded files. (➜ page 2, 3)
No sound from the speaker.	●There is no sound when you have connected an earphone.
Cannot erase a file or folder.	●The file is locked. (➜ page 2, 3) ●The folder is already empty.
Cannot move a file.	●You cannot move files to folders that already contain 99 files. ●You cannot move files from A–D folder to the dictation folder. (➜ page 3)
A recording disappeared.	●Recordings can disappear if the unit receives a shock (e.g. it is dropped), or if the batteries and cover come loose during recording.
Cannot set timer recording/playback.	●You can set the timers within 24 hours of the current time. (➜ page 1)
Timer recording/playback does not work.	●The settings are canceled if the batteries are removed and the clock settings clear.
Cannot set timer recording/playback at the same time.	●When you set both, only the one you set last works.
Timer recording does not work.	●You cannot set the timer if there is less than one minute of available recording time.
Cannot use a battery that can be used on other equipment.	●This unit determines the battery empty even if there is actually life left in it. This is to preserve the clock and other memory items.
Cannot select a folder.	●Press [●FOLDER/➜MENU] briefly. You will enter the menu mode if you hold the button down for 2 or more seconds.
Sound is distorted.	●When sound other than voice is recorded, this may occur during playback.
Voice Editing does not start or does not work correctly.	●Make sure that "PC" is on this unit's display, and that this unit is recognized as a drive in Voice Editing. If it is not, disconnect the USB cable from this unit, then reconnect it. ●The connection may not work if you connect via a USB hub or USB extension cable.
Cannot successfully convert sound to text on the computer.	●Refer to "Frequently Asked Questions" in the Voice Editing operating instructions (PDF file).

Maintenance

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

Product Service

1. **Damage requiring service**—The unit should be serviced by qualified service personnel if:
   (a) Objects or liquids have gotten into the unit; or
   (b) The unit has been exposed to rain; or
   (c) The unit does not operate normally or exhibits a marked change in performance; or
   (d) The unit has been dropped or the cabinet damaged.
2. **Servicing**—Do not attempt to service the unit beyond that described in these operating instructions. Refer all other servicing to authorized servicing personnel.
3. **Replacement parts**—When parts need replacing ensure the servicer uses parts specified by the manufacturer or parts that have the same characteristics as the original parts. Unauthorized substitutes may result in fire, electric shock, or other hazards.
4. **Safety check**—After repairs or service, ask the servicer to perform safety checks to confirm that the unit is in proper working condition.

Product information

For product information or assistance with product operation:
In the U.S.A., refer to "Customer Services Directory" on page 8.
For assistance in the continental U.S.A. in obtaining repairs please ship the product to:
Panasonic Services Company - Customer Servicenter
Suite B 4900 George McVay Drive
McAllen, TX 78503
In Puerto Rico contact Panasonic Puerto Rico, Inc.
Tel. (787) 750-4300   Fax. (787) 768-2910
When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone number where you can be reached.
IF REPAIR IS NEEDED DURING THE WARRANTY PERIOD THE PURCHASER WILL BE REQUIRED TO FURNISH A SALES RECEIPT/PROOF OF PURCHASE INDICATING DATE OF PURCHASE, AMOUNT PAID AND PLACE OF PURCHASE. CUSTOMER WILL BE CHARGED FOR THE REPAIR OF ANY UNIT RECEIVED WITHOUT SUCH PROOF OF PURCHASE.
Also, the purchaser will be responsible for shipping the unit to the above address.

In Canada, content the Panasonic Canada Inc. Customer Care Centre at 905-624-5505, or visit the website (www.panasonic.ca), or an authorized Servicentre closest to you.

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 _____
SERIAL NUMBER _____

User memo:
DATE OF PURCHASE _____
DEALER NAME _____
DEALER ADDRESS _____
_____
TELEPHONE NUMBER _____

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Specifications

Power output: 300 mW (max.)
Frequency response: 240 Hz – 5,100 Hz (HQ mode)
230 Hz – 3,400 Hz (FQ/SP mode)
S/N: 36 dB (HQ mode)
Jack:
Output jack:
Earphone, 3.5 mm (⅛ in.); 0.5 mW 16 Ω
Input jack:
Mic, 3.5 mm (⅛ in.); 0.56 mW plug in power
Speaker: 28 mm (1³⁄₃₂ in.) 8 Ω
Power requirement: DC 3 V
2 AAA size (LR03) batteries
Dimensions (W×H×D):
Max dimensions:
35.0 mm × 100.2 mm × 24.0 mm
(1³⁄₈ × 3 ¹¹⁄₁₆× ¹⁵⁄₁₆ in.)
Cabinet dimensions:
32.8 mm× 99.3 mm× 22.5 mm
(1⁹⁄₃₂ × 3 ²⁹⁄₃₂× ⅞ in.)
Mass:
with batteries; About 62 g (2.2 oz.)
without batteries; About 39 g (1.4 oz.)

Operational temperature range:
0 °C – 40 °C (32 °F – 104 °F)
Battery life:
[When used at 25 °C (77 °F) on a flat, stable surface]

Batteries	mode	Play back	Recording
Panasonic alkaline batteries	HQ	About 9 hours 30 minutes	About 14 hours 30 minutes
	FQ/SP	About 11 hours 30 minutes	About 19 hours 30 minutes

●The battery life may be less depending on the operating conditions.
Note:
●Specifications are subject to change without notice.
●Mass and dimensions are approximate.

Care and Use

To reduce risk of radio interference caused by headphone-, earphone- or microphone cable, only use adequate accessories with cable length less than 3 m.

■ 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.
●The speaker does not have magnetic shielding. Do not place it near televisions, personal computers or other devices easily influenced by magnetism.

■ Batteries
●Do not peel off the covering on batteries and do not use if the covering has been peeled off.
●Align the poles ⊕ and ⊖ correctly when inserting the batteries.
●Do not mix different types of batteries or old and new batteries.
●Remove the batteries if you do not intend to use the unit for a long time.
●Do not throw into fire, short-circuit, disassemble, or subject to excessive heat.
●Do not attempt to recharge dry cell batteries.
●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.
●Keep out of the reach of small children. Accidental swallowing of batteries can result in stomach and intestinal damage.

■ Allergies
●Discontinue use if you experience discomfort with the earphones or any other parts that directly contact your skin. Continued use may cause rashes or other allergic reactions.

■ Listening caution

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

If you experience a ringing in your ears, reduce 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.

Panasonic Portable Audio Products Limited Warranty

Customer Services Directory	Accessory Purchases
Obtain Product Information and Operating Assistance; locate your nearest Dealer or Servicenter; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at: **http://www.panasonic.com/consumersupport** or, contact us via the web at: **http://www.panasonic.com/contactinfo** You may also contact us directly at: 1-800-211-PANA (7262), Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST. For hearing or speech impaired TTY users, TTY : 1-877-833-8855	Purchase Parts, Accessories and Instruction Books online for all Panasonic Products by visiting our Web Site at: http://www.pasc.panasonic.com or, send your request by E-mail to: npcparts@us.panasonic.com You may also contact us directly at: 1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only) (Monday – Friday 9 am to 8 pm, EST.) Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032 (We accept Visa, MasterCard, Discover Card, American Express, and Personal Checks) For hearing or speech impaired TTY users, TTY : 1-866-605-1277
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