Panasonic

Operating Instructions IC Recorder

Model No. RR-US470 RR-US455 RR-US450 RR-US430

The illustration shows RR-US470.

Dear customer

ZOOM MIC

Thank you for purchasing this product.

For optimum performance and safety, please read these instructions carefully.

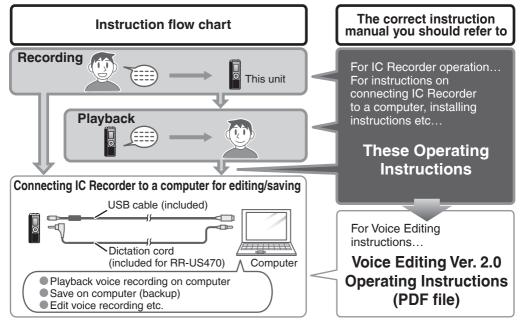
Before connecting, operating or adjusting this product, please read the instructions completely.

Please keep this manual for future reference.





Instruction flow chart



Playing files successively 18

Playing...... 16

While a file is being played

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Preparation

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Supplied accessories



Use numbers indicated in parentheses when asking for replacement parts. (Product numbers correct as of January 2007. These may be subject to change.)

All models

1 USB cable [K2KZ4CB00010]

RR-US470

1 Dictation cord [K2KC2CB00001]

RR-US470 RR-US455 RR-US450

2 CD-ROM

(Voice Editing Ver.2.0 Premium Edition)

RR-US455

4 CD-ROM

(Dragon, NaturallySpeaking 7 Preferred)

RR-US430

1 CD-ROM

(Voice Editing Ver.2.0 Standard Edition)

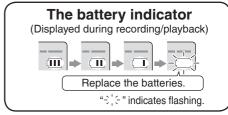
Refer to page 33 for Sales and Support Information (for the United Kingdom and Republic of Ireland).

Inserting batteries



Make sure the batteries face the right directions.

- Replace the batteries within 30 seconds to preserve the settings. (Recordings remain intact.)
- The clock, however, will stop until the batteries have been inserted.
- If rechargeable batteries are to be used, rechargeable batteries manufactured by Panasonic are recommended.
- When batteries are inserted, "200 1" flashes on the display. Set Hold off (→ page 5) and set the time (→ page 11).



● When " 🛄 {" is displayed, replace the batteries.

Before use

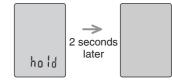


Hold function

 This function prevents accidental operation when you put the unit in your pocket or bag. It also prevents battery loss from accidental unit operation.

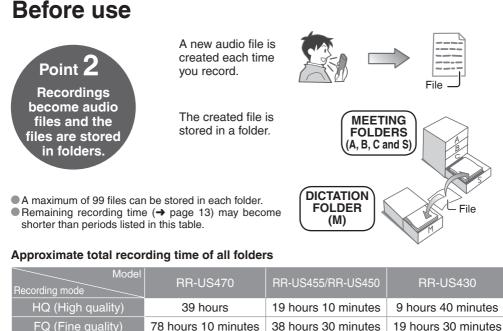
When you set Hold on

- Button operations are ignored even if you press buttons by mistake.
- When you set Hold on while recording or playing, " hn ld " appears for 2 seconds and the recording or playing display reappears.
- When you set Hold on while the unit is stopped, "hg [d]" appears for 2 seconds and the display turns off.



This unit has no power button.

• You can make batteries last longer by setting Hold on and turning the display off.



66 hours

33 hours 20 minutes

134 hours

SP (Standard play)



(MEETING RECORDING)

Using different combinations of recording modes and microphone sensitivity levels, you can adjust audio quality according to recording situations. Using the zoom function, you can also record target voice clearly (→ page 14).



To record a low-level sound source...

- Place the unit on a desk etc. closer to the source.
- Use "L" microphone sensitivity for close proximity hand-held recording.

Meeting recording settings

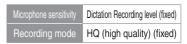
Microphone sensitivity		H (Far)	L (Near)	
Zoom	[OFF]	A normal meeting	A meeting held in a small room	
recording [ON]		A lesson, lecture	An interview during a meetin	
Recording mode HQ (high quality)/ FQ (fine qu		(fine quality)/ SP (standard play)		

DICTATION RECORDING



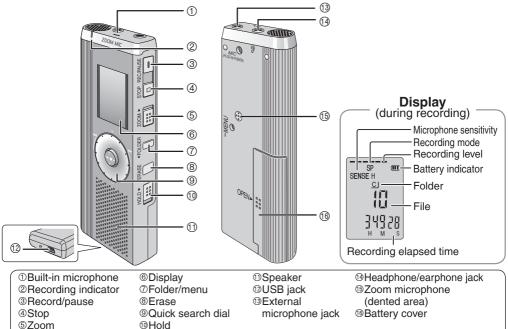
As the dictation recording settings are all factory-set, dictation can be recorded quickly and simply. Use this mode when computer voice recognition software is to be used.

Dictation recording settings



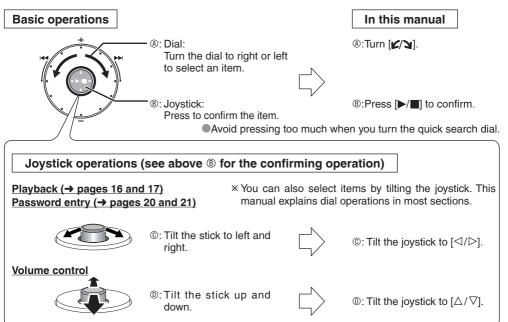
L RQT8828

Part names



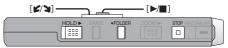
B RQT8828

How to use the quick search dial



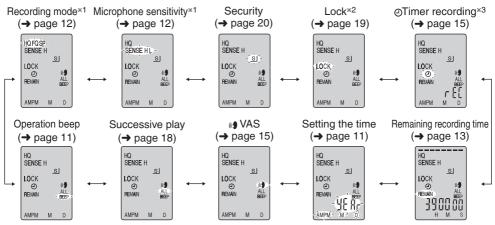
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List of menus



Press and hold [•FOLDER/- MENU] for 1 second or longer (while stopped) to display menus.
 Turn [∠/↘] and press [▷/■] to confirm.

Press [STOP] to stop an operation midway/cancel the setting.
 If an operation is not started within 60 seconds, unfinished settings are canceled.

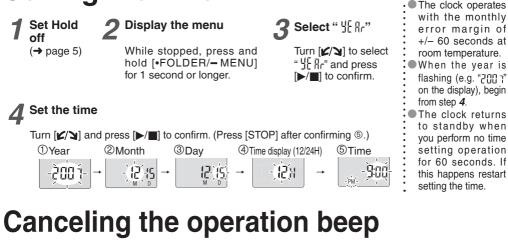


*1 Displayed only when a Meeting Recording folder (A, B, C or S) is selected.

*2 Displayed only when there is a recorded file.

*3 Displayed only when the clock is set.

Setting the time



Preparation

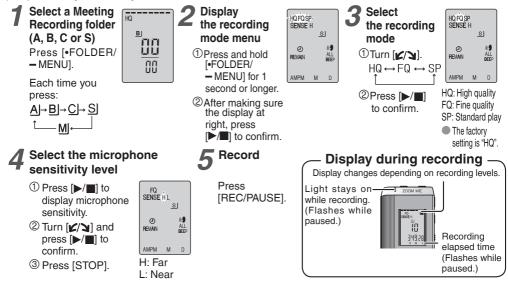
11



Recording

Meeting recording

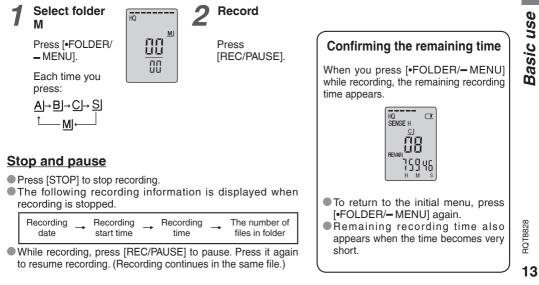
Using different combinations of recording modes and microphone sensitivity levels, you can adjust audio quality according to recording situations.



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Dictation recording

As the dictation recording settings are all factory-set, dictation can be recorded quickly and simply. Use this mode when computer voice recognition software is to be used.



Other recording methods

Zoom recording (recording target voice clearly)

Zoom recording enables you to clearly record sounds coming from the direction this unit is aimed at. It is suitable for recording lectures and interviews.

Select Meeting Recording folders (→ page12).

Aim this unit to the sound you want to record and slide [ZOOM ►] toward the arrow.



 \square Do not block the zoom microphone (\rightarrow page 8) intentionally with your fingers or other items.

Zoom recording can be switched on and off even when Hold is on.

The zoom function does not work when you select folder M or when you use an external microphone.

Recording through an external microphone

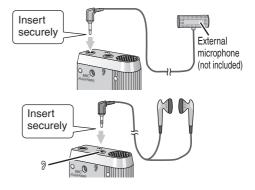
 When you attach an external microphone, the built-in microphone automatically goes off.
 Plug type: ø 3.5 mm monaural mini plug

Listening to the recording in progress

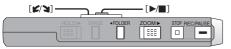
Connect earphones (not included).

Plug type: ø 3.5 mm mini plug The volume is fixed for recording.

(Sounds are monaural.)



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Preventing unnecessary recording (VAS: Voice Activated System) Recording is automatically paused if there is no sound for more than 3 seconds.



Timer recording

Timer recording can be set to make 1 recording at a specified time. After setting the timer, you can keep the unit on standby by setting hold on (\rightarrow page 5).

Preparation: Select the folder to be recorded to and the recording settings (→ page 12).



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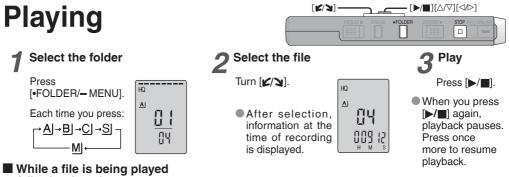
You can stop

timer recording

in progress, but

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Adjusting the volume

Tilt the joystick to $[\triangle/\nabla]$. (Volume range is 0 to 20. Factory setting is 13.)

Moving forward

Tilt the joystick to $[\triangleright]$.

Tilt and hold to search (\rightarrow page 17).

Moving backward

Tilt the joystick to $[\triangleleft]$.

Tilt it twice to play the previous file. (Tilting once starts the playback of the previous file when it has been playing for less than 3 seconds.)

Tilt and hold to search (\rightarrow page 17).

Making recorded sounds easier to catch (reducing noise)

- ①Press [•FOLDER/- MENU] while playing.
- ②Turn [∠/↘] to select " EQ " (" EQ " flashes when selected) and press [▶/■] to confirm.
- ③Turn [∠/↘] to select "[]n" and press [▶/■] to confirm.
- ●To cancel, select " [] [F " in step ③.



Other playing methods

Searching points for listening (fast forward and fast backward)

Quick search

Turn [**L**/**]** while playing.

- You can search forward/backward quickly without sound (except the operation beep).
- The fast forward and fast backward speed changes according to the dial turning speed.
- To return to normal playback, stop turning.

Slow search

While playing, tilt the joystick to $[\heartsuit / \triangleright]$ and hold it in the position for 1 second or longer.

- You can search slowly with sound.
- To return to normal playback, release your finger.

Changing the playback speed

Playback is available at 5 different speeds.

Press [•FOLDER/ - MENU] while playing.



The playback speed rises as the flashing bars move right. The illustration shows the display for the normal speed playback.

Turn $[\mathbf{L}]$ to select "SPEED" ("SPEED" flashes when selected), press $[\mathbf{L}]$ to confirm, and then turn $[\mathbf{L}]$ to select the playback speed.

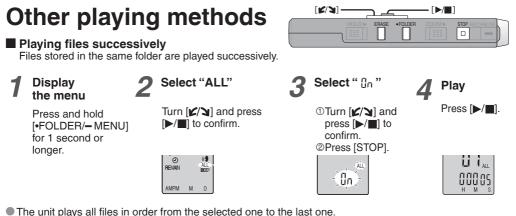
The unit performs playback at the selected speed.

 The bar flashes when listening at a playback speed other than normal.



When playing back at the double speed

 To return to the normal playback speed, move the flashing bars to the center in the way instructed at left.



- I ne unit plays all files in order from the selected one to the last When the last file finishes, playback stops automatically.
- When the last file finishes, playback stops automatically.
- Press [STOP] twice to stop successive play midway.
- To cancel, select " []] F " in step 3.

Listening with earphones

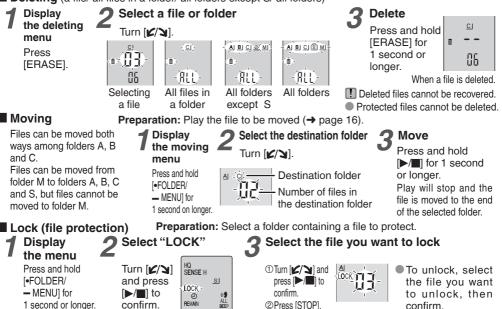
Connect earphones (not included). (Sounds are monaural.) Plug type: ø 3.5 mm mini plug

 The speaker is automatically turned off when earphones are used.



Organizing files

Deleting (a file/ all files in a folder/ all folders except S/ all folders)



Basic use/Advanced use

Security functions

Security functions of this unit

This unit has 2 security functions.

①Password set in this unit

②Authentication key set with Voice Editing (See Voice Editing Ver. 2.0 Operating Instructions (PDF file).)

MFMO

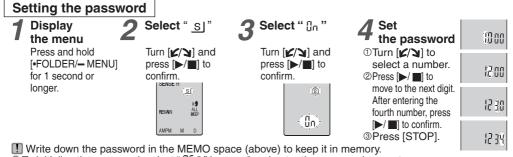
Password (This unit) Authentication key

(Voice Editing)

Folder S and password

Folder S is used to secure files. Once set, a password is necessary for playing files in this folder.

- The password is a 4-digit number. You can set the password using any combination of numbers. To play files in folder S, enter the password you set.
- You can move files in other folders to folder S, but you cannot move files in folder S to any of the other folders unless the password matches.



To initialize the password, select "

• To move among digits, tilt the joystick to $\left[< 1/> \right]$ in step 4.

[K/J]-		ר <i>ב</i>		— [▶/][
	HOLD ►	ERASE	•FOLDER	ZOOM ►	STOP REC/PAUSE



II When the password matches, the security function using the password is suspended for 10 minutes.

- When the password is released and no operation is performed for 10 minutes, the password is automatically set and files in folder S become unplayable.
- When wrong passwords are entered 5 times in succession, the unit stops accepting password entry for 15 minutes.

When you forget the password

Initialize the password by taking the steps below. ①Release all locks set on files in folder S (→ page 19). ②Delete all files in folder S. (Deleted files cannot be recovered.) ③Enter the security menu and set the password as "IIF F".

How folder S is displayed

- S Password is not set
- S Password is set
- During password entry/
- password release/playback
- S Password release to end in 10 seconds

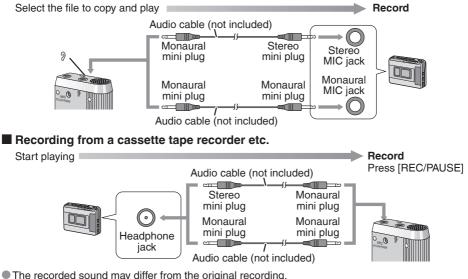
You can also keep the files in folder S and just delete the password. Connect this unit to a computer and use the computer to delete the password. (See Voice Editing Ver. 2.0 Operating Instructions (PDF file).)

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Recording to/from a cassette tape

Read the operating instructions for the connected equipment.

Recording to a cassette tape recorder etc.



Adjust the recording volume on the source to the desired level.

Using the unit with a computer

• Voice Editing Ver. 2.0 Premium Edition (hereinafter 🖻) is included for RR-US470, RR-US455 and RR-US450.

• Voice Editing Ver. 2.0 Standard Edition (hereinafter S) is included for RR-US430.

There are 2 CD-ROMs for P. S occupies 1 CD-ROM only.

Installing Voice Editing

OStart Windows.

@Insert the included CD-ROM (or CD-ROM #1) 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 "Run".
 - (2) Type "*:\Launcher\VEdV1Launcher.exe" and click "OK". * is the CD-ROM drive ID.

③Click "Voice Editing Ver. 2.0".

Installation starts.

Follow on-screen instructions for any subsequent operations.

- Change the CD-ROM #1 for #2 according to the message that will appear in the middle of installation. Installation continues automatically.
 - Change the CD-ROM #2 for #1 according to the message that will appear when the installation of #2 is complete.
 - The voice recognition engine and text to speech/translation engine should start installing while Voice Editing is being installed. (Alternatively, you can install them afterwards.)

Click "Finish" from the InstallShield Wizard Complete screen.

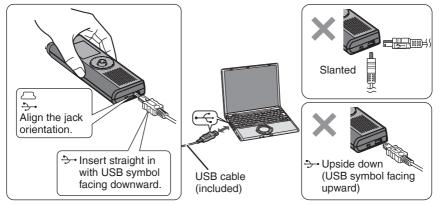
Selecting "Yes, I want to restart my computer now" automatically re-starts the computer and completes installation.

Using the unit with a computer

2 Connecting this unit to a computer with the USB cable

You cannot operate the unit while it is connected to a computer.

• Do not use any other USB connection cables except the supplied one.



Connect one IC Recorder only. This software does not support simultaneous use of multiple IC recorders.

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

When connected to a computer, " P[" appears. When transferring data, " P[" flashes.
 Do not disconnect the USB cable while " P[" is flashing.



3 Starting Voice Editing

Double-click the "Voice

Voice Editing Voice Editing

Editing" icon on the desktop. \vee

Standard

After double clicking, a dialog box for entering the authentication key appears.

$\ensuremath{\textcircled{@}}$ Enter the "authentication key".

- Enter an "authentication key" that has 1 to 128 characters.
- We recommend that you use a phrase that is easy to remember for the "authentication key". Example: *Good morning, this is Matsushita Electric Industrial Co., Ltd. How can I help you?*
- Write down the authentication key in the MEMO space (-> page 20) to keep it in memory.

③Click "Settings" in the "IC Recorder Authentication Key Settings" dialog box. ④Click "Yes" in the confirmation dialog box.

See Voice Editing Ver. 2.0 Operating Instructions (PDF file) for how to use Voice Editing and other information not provided in this manual.

Using the Operating Instructions (PDF file)

In the Windows "Start" menu, click "All Programs" -> "Panasonic" -> "Voice Editing"

-> "Voice Editing Operating Instructions" or in the "Help (H)" menu in the Voice Editing main screen, click "Operating Instructions (H)".

IC Recorder Authentication Key Settings

Complete the initial authentication settings for IC recorders supporting authentication for security. Here, specify the authentication key to identify the IC recorder. Enter up to 128 characters.

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The authentication key is required if you connect the IC recorder to another computer or reinstall Voice Editing. Make a note of the authentication key to remember it, and keep this information safe.

Information based on this authentication key will be registered on the IC recorder when you click the Settings button. If you click Cancel, the IC recorder will not be listed in the drive box.

To reassign the IC recorder authentication key settings, unplug and then plug in USB plug.



Using the unit with a computer

System requirements (through page 29)

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. Cannot be used by multiple users. (Windows® 2000 / Windows® XP only)

- Not compatible with Microsoft Windows[®] 3.1, Windows[®] 95, Windows[®] 98 (except for Windows[®] 98 SE) and Windows NT[®].
- Operation is not guaranteed on an upgraded OS.
- Not compatible with Mac OS.

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:

- Pr 150 MB or more
- Additional free hard disk space may be necessary depending on the Windows® version and voice file being used.
- Additional free space is required to install Acrobat[®] Reader[®], DirectX[®] 9.0c, and voice recognition/text-to-speech/translation engines (all included), as well as "Voice Editing Launcher" (Office Add-In and Internet Explorer Contextual Menu Add-In).
- Additional free space is temporarily required for sound waveform display, voice recognition, text-to-speech conversion, translation, sound recording, CD-R recording (Windows® XP only), and "Voice Editing Launcher".
- Installing all Voice Editing functions and engines for all languages requires approximately 1.5 GB of free space.

S 120MB or more

•Additional free hard disk space may be necessary depending on the Windows® version and voice file being used.

•Approximately 25MB of additional free hard disk space when installing Acrobat® Reader® (included).

•Approximately 50MB of additional free hard disk space when installing DirectX® 9.0c (included).

Drive: CD-ROM drive (for installation)

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 imes 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.

- Not compatible with multiprocessor computers or multiboot environments.
- Operation not guaranteed on user-built computers.
- Operation not guaranteed on 64-bit computers.
- Even if the system requirements mentioned in these operating instructions are fulfilled, some personal computers cannot be used.

The following limitations should be noted.

• Voice recognition, text-to-speech, and translation engines are installed on the same drive as the operating system (usually the C drive).

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Using the unit with a computer

- The operating system must support the languages of the voice recognition, text-to-speech, and translation engines.
- Before voice recognition, the speaker's voice must be registered in a training process. Sound files of speakers whose voices have not been registered in training cannot be converted to text correctly.

About Windows Vista

 Visit the following website for information about Voice Editing and using it on Windows Vista. <u>http://panasonic.net/support/</u> (This website is in English only.)

Necessary software:

DirectX[®] 8.1 or later / Internet Explorer 6.0 Microsoft Office 2000/XP/2003 (support for Word, Excel, and PowerPoint is required when using the Office Add-in) These features are not available in S.

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- Nuance, the Nuance logo, the Dragon logo, Dragon, NaturallySpeaking, and RealSpeak are trademarks and/or registered trademarks of Nuance Communications Inc., and/or its affiliates in the United States and/or other countries.
- Noise cancellation features of this software incorporate technology of ANIMO LIMITED.
- Adobe and its logo, Acrobat, and Acrobat Reader are trademarks of Adobe Systems Incorporated.
- FineSpeech(TM).
- Other system names and product names appearing in this document are in general the registered trademarks or trademarks of the respective developer companies.

Note that the "TM" mark and "®" mark do not appear in this document.

Install and use Voice Editing Ver. 2.0 Premium Edition with RR-US470, RR-US455 and RR-US450. Uninstall the following before installing this software.

You cannot install two versions of Sound File Management Software on the same computer. - Voice Editing Ver.1.0 Light Edition for D-snap Audio

- Voice Editing Ver.1.0 Premium Edition
- Voice Editing Ver.1.0 Professional Edition
- Voice Editing Ver.1.0 Standard Edition - Voice Editor 2
- Previous versions of Voice Editing software (for Panasonic IC Recorder RR-US360/RR-US361)

- Voice Editor 3

- SD Voice Editor Ver 1 x
- S Install Voice Editing Ver. 2.0 Standard Edition when you use RR-US430. Previous versions do not work with RR-US430. Standard Edition can be installed on the same computer on which a previous version is already installed.

If you install it on the same computer, note that the new desktop icon is as shown at right. To use only one edition, uninstall both editions and then reinstall the desired edition.

- Translation (and interpretation) results are merely one example, and accuracy cannot be guaranteed. We cannot be liable for the translation results in any way. Additionally, please refrain from publishing, selling, or distributing unedited translation results, which may violate copyright law.
- Noise cancellation may not be effective in some cases, depending on the recording environment. Choosing stronger noise cancellation in the available range (1-5) may lower the volume of the recorded voice and may change its sound characteristics.
- Recording and operating problems may occur on some computer systems. Please note that Panasonic and Panasonic dealers cannot be held liable for any lost audio data or other direct or indirect damage except in cases of intentional or gross negligence.

Includes features for use in conjunction with Dragon, NaturallySpeaking dictation software (sold separately, from Nuance Communications, Inc.). For details on Dragon, NaturallySpeaking, visit the Nuance Communications website: http://www.nuance.com/dragon/

Voice Editing Standard

RQT8828



Troubleshooting guide

Before requesting service, make the following 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, consult your dealer for instructions.

Symptom	Checkpoints		
"U01" appears on the display.	The battery has run down.		
No operation.	 Make sure the batteries are correctly inserted. You cannot operate when the unit is connected to a computer. 		
Operation is not possible when "hold" appears on the display.	 The Hold function is on (→ page 5). 		
"2007", "12:00" flashes.	 Set the time (→ page 11). 		
"EE:EE" is displayed.	This can occur after repeatedly recording and deleting files.		
Available recording time does not increase correspondingly after deleting files.	-Unlock all your files, then delete all folders to remedy this (→ page19).		
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 may be functioning (→ page 15). 		
"" appears instead of the recording date.	• Set the time (→ page 11).		
Playback speed is too fast or slow.	 Set the play speed to normal (→ page 17). 		
"FULL" appears.	 There are 99 files in the folder. There is no remaining recording time. Delete unneeded files (→ page 19). 		

Symptom	Checkpoints
No sound from the speaker.	There is no sound when you have connected earphones.
Cannot delete a file or folder.	 The file is protected (→ page 19). 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 folder A, B, C or S to the dictation folder. You cannot move files from folder S unless the password matches.
Cannot play.	 You tried to play secured files in folder S. You must enter a password set on this unit to play files in folder S (→ pages 20 and 21).
A recording disappeared.	 Recordings can disappear if the unit receives a shock (e.g. it is dropped), or the batteries go out during recording.
Cannot set timer recording.	 The timer covers 24 hours from the present time only. You cannot set a recording period longer than 24 hours using the timer. Set the time (→ page 11). You cannot set the timer if there is less than 1 minute of available recording time.
Timer recording does not work.	 The settings are cancelled if the batteries are removed and the clock settings are cleared. Timer recording does not work if the unit is used for playback or another operation at a set time.
Files created through timer recording are shorter than periods set with the timer.	 VAS may be "On" (→ page 15).
Cannot use a battery that can be used on other equipment.	 This unit considers the battery as empty even if there is actually power left in it. This is to preserve the clock and other memory items.
Recorded sounds contain noise that makes them difficult to catch.	 Reduce noise (page 16). Noise is reduced and listening becomes easier. Recording in the HQ mode is recommended. (This unit is designed for extended recording of human voice. It is not suited for recording music.)

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Troubleshooting guide

Symptom	Checkpoints
Sound is distorted.	 Non-voice recordings such as music on CDs may become distorted in playback.
Sound is distorted when listening to the recording in progress with earphones.	 Keep earphones and the microphone you are using separate.
Message appears when connecting to a computer.	 A message appears when you connect this unit to a computer for the first time. It asks you to enter an authentication key. The key is used for authenticating the unit and the computer.
I hear noises.	 Move the mobile telephone away from this unit when you use the two in the same area.
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. Set the USB cable in and out of IC Recorder's USB jack several times when the unit is not recognized as a drive. The connection may not work if you connect via a USB hub or a USB extension cable.
I used the "Dictation cord" supplied with the unit, but microphone sensitivity did not improve. Computer voice recognition level is still low.	 Depending on your computer, you may also be able to improve the sensitivity by reversing the "Straight mini plug" and the "L-shaped mini plug" connections.
Cannot successfully convert audio to text with Voice Editing.	 You should use IC Recorder in the dictation recording mode. You can make better recordings for voice recognition in this recording mode (→ page 7). (Refer to the Voice Editing Operating Instructions (PDF file).)

Sales and Support Information

(For the United Kingdom and Republic of Ireland)

Customer Care Centre

- For customers within the UK: 08705 357357
- For customers within the Republic of Ireland: 01 289 8333
- · Visit our website for product information
- E-mail: customer.care@panasonic.co.uk

Technical Support for AV Software

• For UK, ROI:08701 505610

Direct Sales at Panasonic UK

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Care Centre Monday-Thursday 9:00am-5:30pm, Friday 9:30am-5:30pm (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at www.panasonic.co.uk.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products, take a browse
 on our website for further details.

Interested in purchasing an extended guarantee? Please call 0870 240 6284 or visit our website <u>www.panasonic.co.uk/guarantee.</u>

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Care and use

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

Batteries

- Do not peel off the covering on batteries and do not use the batteries if the covering has been peeled off.
- Align the poles \oplus and \ominus 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 heat or expose to flame.
- Do not attempt to recharge dry cell batteries.
- Battery mishandling 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 batteries out of reach of small children. Accidental swallowing of batteries can result in stomach and intestinal damage.
- When carrying batteries in a pocket or bag, ensure no metal objects such as necklaces are placed together with them. Contact with metal may cause short-circuiting which can cause a fire. For safety, carry the rechargeable batteries in the battery carrying case.

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 doors and windows closed.
- To avoid product damage, do not expose this product to rain, water or other liquids.
- The unit's speaker does not have magnetic shielding. Do not place the unit near televisions, personal computers, magnetized cards (bank cards, commuter passes) or other devices easily influenced by a magnet.

Precautions for listening with the Headphones or Earphones

- 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 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.

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.

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.

Maintenance

Do not use such solvents as benzine, paint thinner and alcohol for cleaning.

- · Solvents may cause casing to deform and coating to go off.
- Wipe dust and fingerprints off using a soft, dry cloth. Soak the cloth in water, wring it thoroughly and use it for cleaning when the unit is very dirty. Wipe moisture off with a dry cloth after removing tough dirt.
- Do not use kitchen detergents or chemically-enhanced cleaning cloths.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Specifications

Power requirement: Power output: Frequency response:

S/N: Output jack: Input jack: Speaker: Dimensions (W x H x D): Max dimensions; Cabinet dimensions; Mass: With dry cell batteries; Without batteries; Operational temperature range: Memory capacity: DC 3.0 V (2 AAA size/LR03 batteries) 300 mW (max.) 300 Hz to 5,000 Hz (HQ mode) 300 Hz to 3,400 Hz (FQ/SP mode) 37 dB (HQ mode) Earphone, ø 3.5 mm; 0.5 mW 16 Ω Mic, ø 3.5 mm; 0.56 mV plug in power 20 mm 8 Ω

> 39.3 mm x 105.5 mm x 17.2 mm 38.8 mm x 105 mm x 14 mm

Approx. 62 g (RR-US470)/61 g (RR-US455/RR-US450/RR-US430) Approx. 39 g (RR-US470)/38 g (RR-US455/RR-US450/RR-US430) 0 $^\circ$ C to 40 $^\circ$ C 256 MB (RR-US470)/128 MB (RR-US455/RR-US450)/64 MB (RR-US430)

Battery life:

[When used at 25 °C on a flat, stable surface]

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

Batteries	Recording mode		Playback	Recording
Panasonic alkaline batteries	Monaural	HQ	12 hours	21 hours (When not zoom recording)
	wonaurai	FQ/SP	15 hours	30 hours (When not zoom recording)

· Specifications are subject to change without notice.

-If you see this symbol-

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis.

Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

ONLY FOR AUSTRALIA/NEW ZEALAND

Panasonic Warranty

- The product is warranted for 12 months from the date of purchase. Subject to the conditions of this warranty Parasonic of its Authoreaed Service Centre with perform measures service on the product whull change for parts or about it, in the optimion of Parasonic, the product is found to be lauly within the warranty period.
- This warrary only applies to Parasonic porches purchased in charatel and and day Parasonic Martalia or its second and the second second and where the products are used and serviced within Australia or its functions. Warrary cover only applies to second second second and service Camtre and only functions (Day Ord Day Camera) and any when warrary service is requested. N.
- This varranty only applies if the product has been instelled and used in accordance with the manufacture's recommendations (as roted in the operating instructions) under normal use an eccordance with the manufacture's recommendations (as roted in the operating instructions) under normal use and reasonable care (in the ophicin of Parasonable. The varianty corress normal domestic use only and does not cover damage, mat/unctur of aluer resulting from use of incorrect underse, normal resultant accordance mains, and the product of aluer abuse, majeduament of customer controls, mains supply problems, thurderstorm activity, infestation by insertia or vermin, tampening or repair by traditions mains supply problems, thurderstorm additions, by traditions abnormations or relations or any traditions and the product. c
 - This warranty does not cover the following items unless the fault or defect existed at the time of purchase. (a) Video x Audo Tapas (b) Video x Audo Tapas (c) Video x Audo 4
 - - from wear and tear in normal use Shaver Heads or Cutters 0

 - (bread bakery)
 - (d) Cabinel Parts
 (e) User replaceable Batteries
 (f) Thermal Paper, Toner/Ink Cartridges, Drums, Developer, Film (Ink/Rabbon), Film Cartridge, Printer Heads
- warranty service is required you should: £ ŝ
- Talephone parasonics Custamer Care care on 132600 or visit our website and use the Service Cante Stand or Inform the manualdress of the massel, Authorised Service Centre together with your pool of purchase seared or form the product of a Parasonic Authorised Service Centre together with your pool of purchase reservice as provid purchase date. Please note that fleight and insurance to and / or from your nearest. Authorised Service Centre must be arranged by you. Near that home or provident operating area of the relevant products in the major metopdian eases of Australia or the normal operating area of the reservice the advice formation function. (b) Convection/Combination Microwave Ovens
 (c) Whiteboard (except portable type) sizes greater than 66cm); Rear Projection TV's; Plasma/LCD televisions / displays (screen size greater than 103 cm) .
- The warranties hereby conferred do not extend to, and exclude, any costs associated with the installation, de-installation or e-modulation or a product, including costs feased to the monthy. Gen-monthy of remouthy of any screen (and any dather) and provides), delivery, handling, frequing, transportation for insurance of the product or any part thereof or replacement of and on or extend to and exclude, any damage of ross occurring by reason of during, associated with, or related to such screen devices any damage of ross occurring by reason of during, associated with, or related to such insulation, de-instalation, re-instalation or transit. <u>ن</u>

Panasonic Authorised Service Centres are located in major metropolitan areas and most regional centres of Australia, however, coverage will vary dependent on product For advices an axext Authored Service Tere locations for your product, pases deptived our Customer Care Centre on 172000 or visit our webste and use the Servece Centre

Unless otherwise specified to the consumer the benefits conferred by this express warranty are additional to all other conditions, warranties, guarantees, applies and reacties express dor implied by the Trade Practices Act 1974 and smiller constructions to provisions contained in agrission of the States and Territories and all other colligations and liabilities on the part of the manufacturer of supplier and nothing contained herein shall restrict or modify such grists. Reades, obligations for liabilities.

THIS WARRANTY CARD AND THE PURCHASE DOCKET (OR SIMILAR PROOF OF PURCHASE) SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

If you require assistance regarding warranty conditions or any other enquiries,

please visit the Panasonic Australia website

www.panasonic.com.au or by phone on 132 600

If phoning in, please ensure you have your operating instructions available.

Australia Pty. Limited

Panasonic

Locked Bag 505, Frenchs Forest, NSW 2086 ACN 001 592 187 ABN 83 001 592 187 www.panasonic.com.au

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