YAMAHA

POCKET RECORDER
POCKETRAK C24

Owner's Manual

Bedienungsanleitung

Mode d'emploi

Manual de instrucciones

Manuale di istruzioni

Руководство пользователя

使用说明书

ENGLISH
DEUTSCH
FRANÇAIS
ESPAÑOL
ITALIANO
РУССКИЙ
中文

EN
DE
FR
ES
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RU
ZH

FCC INFORMATION (U.S.A.)

1. **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!**
   This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.
2. **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
3. **NOTE:** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

   Relocate either this product or the device that is being affected by the interference.

   Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

   In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

   If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA90620

   The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA. (class B)

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.

CANADA

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

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

- This applies only to products distributed by Yamaha Canada Music Ltd. (class B)
- Ceci ne s'applique qu'aux produits distribués par Yamaha Canada Musique Ltée.

COMPLIANCE INFORMATION STATEMENT
(DECLARATION OF CONFORMITY PROCEDURE)

Responsible Party : Yamaha Corporation of America
Address : 6600 Orangethorpe Ave., Buena Park, Calif. 90620
Telephone : 714-522-9011
Type of Equipment : POCKET RECORDER
Model Name : POCKETRAK C24

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.

See user manual instructions if interference to radio reception is suspected.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA. (FCC DoC)

IMPORTANT
Please record the serial number of this unit in the space below.

Model

Serial No.

The serial number is located inside the battery compartment of the unit.
Retain this Owner's Manual in a safe place for future reference.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA. (Ser.No)

Entsorgung leerer Batterien (nur innerhalb Deutschlands)

Leisten Sie einen Beitrag zum Umweltschutz. Verbrauchte Batterien oder Akkumulatoren dürfen nicht in den Hausmüll. Sie können bei einer Sammelstelle für Altbatterien bzw. Sondermüll abgegeben werden. Informieren Sie sich bei Ihrer Kommune.

(battery)

이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며,모든 지역에서 사용할 수 있습니다.

About MP3

- Supply of this product does not convey a license nor imply any right to distribute content created with this product in revenue-generating broadcast systems (terrestrial, satellite, cable and/or other distribution channels), streaming applications (via Internet, intranets and/or other networks), other content distribution systems (pay-audio or audio-on-demand applications and the like) or on physical media (compact discs, digital versatile discs, semiconductor chips, hard drives, memory cards and the like). An independent license for such use is required. For details, please visit http://mp3licensing.com.
- MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

*** Please keep this manual in a safe place for future reference.**

⚠ ***DANGER***	Make sure to always observe the basic precautions listed below to prevent the likelihood of serious injury or even death from electrical shock, short-circuiting, damage, fire or other hazards.
⚠ ***WARNING***	Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards.
⚠ ***CAUTION***	Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property.

These precautions include, but are not limited to, the following:

About the Device

⚠ *DANGER*

Handling caution

- Do not operate the device or use headphones/earphones while driving a car or riding a motorcycle or a bicycle, since this could result in a serious accident.

⚠ *WARNING*

Do not open

- Do not open the device or attempt to disassemble the internal parts or modify them in any way. The device contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

Water warning

- Do not expose the device to rain, use it near water or in damp or wet conditions, or place containers near it containing liquids which might spill into any openings. If any liquid such as water seeps into the device, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified Yamaha service personnel.

If you notice any abnormality

- If this device should be dropped or damaged, immediately turn off the power and have the device inspected by qualified Yamaha service personnel.

⚠ *CAUTION*

Location

- Before moving the device, remove all connected cables.
- Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not place the device in an unstable position where it might accidentally fall over.
- Do not use the device in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Doing so may result in noise, both in the device itself and in the TV or radio next to it.

Handling caution

- Do not use the device or headphones/earphones for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.
- Do not rest your weight on the device or place heavy objects on it, and avoid use excessive force on the buttons, switches or connectors.

Saving data

- Saved data may be lost due to malfunction or incorrect operation. To protect against data loss, we recommend that you save important data to an external device such as a computer.

About the Battery

⚠ DANGER

- **If you notice battery leakage, discoloration, deformation, or any strange smell, immediately remove the battery from the device and stop operating, and also keep away from fire.**
  If you continue operating the device, it could cause battery fire, explosion, electrolyte blowout, or smoke. If a leaking battery is close to a source of flame, the battery electrolyte could catch fire, resulting in battery fire, explosion, electrolyte blowout, or smoke.

⚠ WARNING

- **Do not leave the battery installed for an extended time.**
  If the battery runs out, or if the device is not to be used for a long time (about one week), remove the battery from the device and keep it in a dry and cool place to prevent possible leakage of the battery fluid.
- **Do not deform, disassemble, or modify the battery.**
  Any modifications such as deformation, disassembly, or soldering directly to the battery terminals may cause ignition, explosion, and leakage or ejection of the electrolyte.
- **Do not allow a wire to connect the positive and negative terminals, and do not carry or store the battery together with metallic objects such as a necklaces or hairpins.**
  Doing so may short-circuit the battery, causing excessive current to flow, and possibly resulting in ignition, explosion, and leakage or ejection of the electrolyte. This may also cause the wire or necklace to heat up.
- **Do not throw the battery into a fire, heat it, or expose it to the sunlight for a long time.**
  Doing so may melt the insulation, impair the safety mechanism, or ignite the electrolyte, causing ignition or explosion.
- **Do not peel off or damage the external covering.**
  Peeling off the external covering, piercing it with a nail or sharp object, striking it with a hammer, or stepping on it may cause a short-circuit within the battery, causing ignition, explosion, leakage or ejection of the electrolyte, or overheating.
- **Insert the battery as instructed.**
  Always make sure the battery is inserted in conformity with the +/- polarity markings. Failure to do so might cause abnormal electric current flow in the battery, resulting in fire, explosion, leakage or ejection of the electrolyte, or overheating in use.
- **Be sure to use the specified battery.**
  Do not replace the battery with any battery other than the one specified (the same type or equivalent). Otherwise, the battery may ignite or explode, the battery liquid may spout or leak, or the unit may heat up.
- **Do not leave the battery within reach of children.**
  A child may swallow the battery accidentally. Also, leaking battery liquid may cause chemical reaction or inflammation. If a child swallows the battery accidentally, consult a doctor immediately.

⚠ CAUTION

- **Do not remove the battery while the device is in use.**
  Do not remove the battery while the device is being used. Doing so could corrupt the data or cause malfunctions.
- **Check the battery capacity before recording or deleting recorded material.**
  If the remaining battery capacity indication should run low during recording, immediately stop recording, and install a fresh battery. If the battery becomes exhausted during deletion, it will be impossible to delete the recorded material.

If the battery fluid leaks

If the battery does leak, avoid contact with the leaked fluid. If the battery fluid should come in contact with your eyes, mouth, skin, or clothes, wash immediately with water and consult a doctor.
Battery fluid is corrosive and may possibly cause loss of sight or chemical burns. Also if your skin should become inflamed when contacted by battery fluid, consult a doctor.

Information for Users on Collection and Disposal of Old Equipment and used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste.
For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you 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.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

[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]
These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Cd

Note for the battery symbol (bottom two symbol examples):
This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Yamaha cannot be held responsible for damage caused by improper use or modifications to the device, or data that is lost or destroyed.

Always turn the power off when the device is not in use.

The performance of components with moving contacts, such as switches, volume controls, and connectors, deteriorates over time. Consult qualified Yamaha service personnel about replacing defective components.

Be sure to discard used batteries according to local regulations.

For France, maximum output voltage requirement, laid down in NF EN 50332-2:2003 standard as required by French Article L. 5232-1.: 150 mV

Copyrights

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- Apple, Mac and Macintosh are trademarks of Apple Inc., registered in the U.S. and other countries.
- The microSD and microSDHC logos are trademarks.
- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

The illustrations and LCD screens as shown in this manual are for instructional purposes only, and may appear somewhat different from those on your instrument.

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About the manuals

Operation of the POCKETRAK C24 is explained in the Owner's Manual (this book) and also in the Reference Manual (PDF file), which is stored in the internal memory of the recorder.

Owner's Manual (this book): The Owner's Manual includes information about safety precautions, basic operation and setup.

Reference Manual (PDF file): The Reference Manual includes detailed part names and functions, troubleshooting information, and detailed descriptions and procedures that will help you take full advantage of the POCKETRAK C24.

The Reference Manual PDF file is stored in the internal memory of the recorder (see page 12). You can view this file on a computer, if necessary.
To view the PDF file, you must first install Adobe Reader on your computer. Adobe Reader can be downloaded for free at <http://www.adobe.com/>.

Features

- **Light-weight, compact, and multi-function recorder**
  A compact body with a weight of 57g (2 ounces) encasing a built-in speaker, stereo microphone, and internal memory (2GB)
- **Recording peak limiter**
  Automatically adjusts excessive mic input levels for distortion-free recording
- **Tuner and metronome functions**
  Very useful in musical applications, such as musical instrument practices
- **ALC (Auto Level Control) function**
  Automatically adjusts the recording level for easy recording
- **VAS (Voice Activated System) function**
  Automatically triggers recording on the unit by detecting audio at a certain input level (This function is useful when you want to record musical instrument practices.)
- **Mounting clip included**
  Attaches the recorder to a microphone stand or music stand
- **"Cubase AI" DAW software included**
  Enables you to edit and mix the recorded audio files

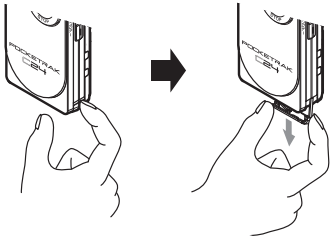
Accessories and attaching the mounting clip

- **AAA-size alkaline battery x 1**
- **Mounting clip**
- **DVD-ROM**
  The disc includes "Cubase AI" DAW (digital audio workstation) software.
  Please read "About the accessory disk" on page 32 before using the DVD-ROM package.
- **Owner's Manual**

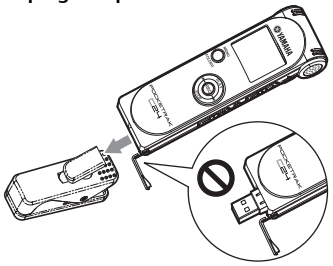
■ Attaching the mounting clip

You can attach the recorder to a microphone stand or music stand using the included mounting clip.

1. Open the USB plug compartment cover by inserting the tip of your fingernail in the groove between the cover and the side of the recorder, and pulling the cover out.

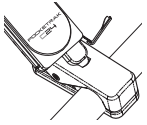


2. Leave the USB plug inside the compartment as it is, and insert the pivotal projection on the mounting clip into the USB plug compartment.

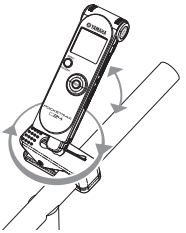


⚠ CAUTION

- *Be sure to insert the projection all the way firmly, with the USB plug retracted into the compartment. Otherwise, the recorder may detach from the mounting clip.*



The pivotal projection rotates 360 degrees so that you can position the recorder at any angle.



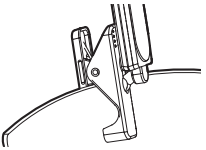
⚠ CAUTION

- *Do not apply force to the recorder or mounting clip. Do not rotate the recorder or mounting clip unnecessarily or excessively. Otherwise, damage to the mounting clip and/or injury to you or other people may occur.*

3. While holding the USB plug slide switch at the top position, remove the recorder from the mounting clip.

Note:

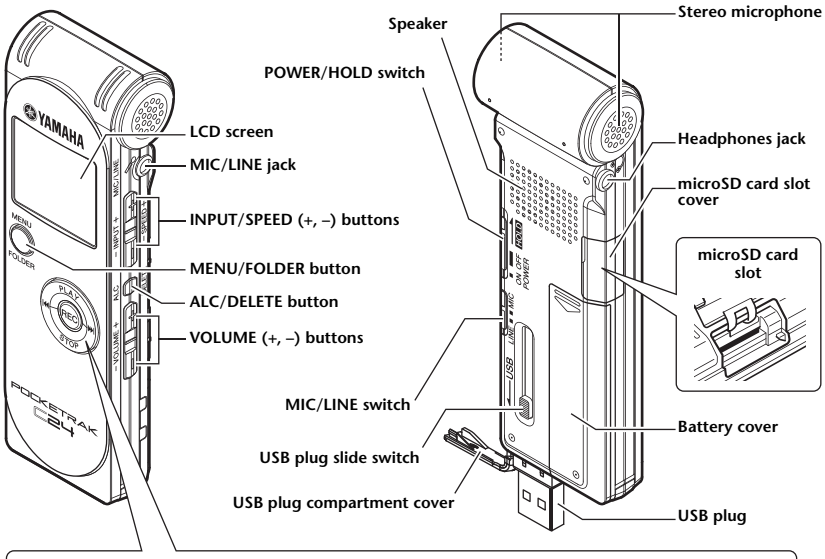
- *When you remove the recorder from the mounting clip, the USB plug may pop out of the compartment. In this case, move the USB plug slide switch toward the top (toward the built-in microphone) to retract the USB plug.*
- *The mounting clip is dedicated to the POCKETRAK C24. Do not use it for other USB devices.*
- *If you attach the mounting clip to a music stand, mount the clip onto the stand all the way firmly.*



- *Be sure to avoid touching the joint part where the lubricant is applied.*

Names and functions

Please refer to the PDF Reference Manual stored in the internal memory of the recorder for a detailed explanation of part names and functions.



REC button
Starts or pauses recording.
Press this button during the menu setting operation to confirm the selection and proceed to the next screen.

[⏮]/[⏭] (fast reverse, fast forward) button
Press these buttons during playback to fast reverse, fast forward or locate the beginning of a file.
While the recorder is stopped, use these buttons to select a file in the folders.
Press these buttons during the menu setting operation to move to the next (right or left) item or the next layer (up or down).

PLAY button
Plays a file.
Press this button during the menu setting operation to move the cursor to the next item up.

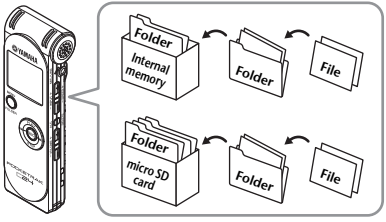
LED indicator
Lights up red during recording, and flashes red during excessive peaks or recording standby (factory default setting).

STOP button
Stops recording or playback.
Press this button during the menu setting operation to move the cursor to the next item down.

About files, folders and memory

■ Files and folders

One recorded session on the recorder is called a "file." Files are stored in a location called a "folder." A file is stored in one of the following folders in the recorder's internal memory or on the microSD card.
From a connected computer, you can view all recorder folders.



MIC (A–D) / MIC_(A–D)_SD:
These folders store audio files (in WAV or MP3 format) recorded through the microphone on the recorder. There are four folders (A–D). You can organize the files by folders. For example, you can store musical performance files in folder A and conference recording files in folder B so that it will be easier for you to find desired files later.

LINE (L) / LINE (L)_SD:
These folders store files recorded from external devices via the line connection.

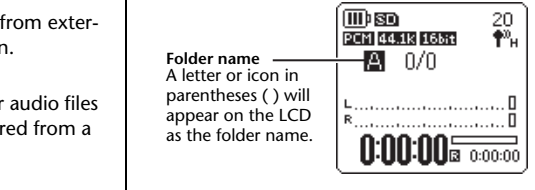
MUSIC (M):
This folder stores music and other audio files (in MP3 or WMA format) transferred from a connected computer.

- **PLAYLIST1–5 (P1–5)**
  The recorder offers five Playlist files (P1–5). You can play your favorite songs in your preferred order by creating Playlists using the files stored in the MUSIC folder.

RECYCLE (🗑):
This is the Recycle Bin folder.

DATA:
This folder stores data files. You can use the recorder as a flash drive. (The folder name will not be displayed on the recorder's LCD. This folder will be recognized only by a connected computer.)

MANUAL:
This folder stores the Owner's Manual and Reference Manual in PDF format. These manual files are organized in sub-folders by language. (The folder name will not be displayed on the recorder's LCD. This folder will be recognized only by a connected computer.)
If you initialize the internal memory, the MANUAL folder will be erased in its entirety. If necessary, download the latest manuals in PDF format from the following website:
http://www.yamaha.co.jp/manual/



■ About the file naming rules

The recorder automatically names the recorded files, in accordance with the file naming rules shown below.
The recorder does not display the file number ❶ or the folder type ❷. You can view them only via a connected computer.

001A_091121_1200.MP3
❶ ❷ ❸ ❹ ❺

❶ **File number (001–199)**
❷ **Folder type (A–D: MIC folders A-D, L: LINE folder)**
❸ **Recording date (year, month, day)**
❹ **Recorded time (hour, minute)**
❺ **File format (MP3: MP3 recording, WAV: PCM recording)**

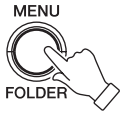
■ Memory

In addition to the internal memory, you can also use a microSD card for recording and playback.
As long as neither the maximum recording time nor maximum number of files is exceeded, you can use any folders and store any number of files in each folder.

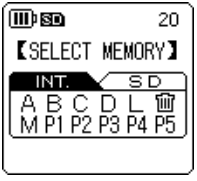
■ Selecting memory and a folder

- **Selecting memory**

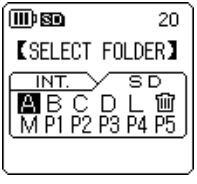
1. **Press and hold down the [MENU/FOLDER] button for at least two (2) seconds.**



2. **Press the [PLAY] button.**

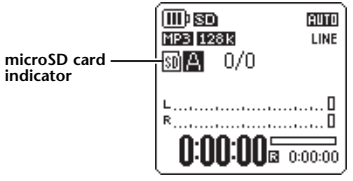


3. **Press the [I◀◀]/[▶▶I] buttons to select INT (internal memory) or SD (microSD card), then press the [REC] button.**



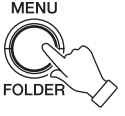
The unit displays the [SELECT FOLDER] screen for the selected memory, and the cursor moves to folder A.
Select a folder.

If SD (microSD card) was selected, the unit displays the SD indicator to the left of the folder name.

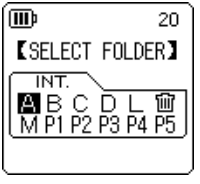


- **Selecting a folder**

1. **Press and hold down the [MENU/FOLDER] button for at least two (2) seconds.**



2. **Press the [PLAY], [STOP], or [I◀◀]/[▶▶I] buttons to select the desired folder, then press the [REC] button.**

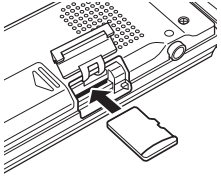


The unit switches to the selected folder. If you selected any folder A-L or the Recycle Bin (🗑), the unit will display the main screen. If you selected folder M or any folder P1–P5, the unit will display the list screen.

Inserting a microSD card

Besides the internal 2GB memory, you can use a commercially-available microSD card for recording and playback. You must format commercially-available microSD cards before you can use them for the first time (see page 26, PDF reference manual).

1. **Turn off the power to the recorder, then open the microSD card slot cover.**
2. **Insert the card straight, in the direction shown in the illustration, until it clicks.**



3. **Close the card slot cover.**
4. **Turn the power on.**
   " SD " appears on the LCD.

Note:

- *If the recorder does not recognize the card, remove the card, then insert the card again.*
- *The recorder may not recognize certain microSD cards formatted by other devices, such as a computer.*
  Be sure to format the card using the recorder (See page 26, PDF reference manual).

To remove the card, open the slot cover and push in the card gently. The card will be ejected slightly. Pull out the card carefully.

About microSD cards

If you plan to use a microSD card, choose a 1GB – 2GB microSD card, or a 4GB – 16GB microSDHC card (these cards are compatible as of October 2009). However, some cards (depending on the manufacturer or type of card) may not work with the recorder.
For more information about microSD cards, please visit the following Yamaha website:
http://www.yamahasynth.com/

Before using the microSD card

- Make sure that you insert the microSD card in the recorder correctly. Otherwise, the recorder will not record to or play from the microSD card.
- Do not apply too much force when you insert or remove the microSD card. Otherwise, you might injure your hand or finger or damage the card.
- If you insert the microSD card in the wrong orientation or upside down, the microSD card and/or the card slot may be damaged.
- If the recorder does not recognize the installed microSD card when the power to the unit is turned on, first turn off the power, remove the card, insert the card correctly, then turn the power on.
- Do not install or remove the microSD card while the power to the unit is on. Otherwise, the data on the microSD card may be damaged.
- Do not touch the terminal on the microSD card or expose the card to water or dirt.
- Do not try to bend, fold or place a heavy object on the microSD card.
- Do not use or keep the microSD card in a location subject to static electricity or electric noise.
- Do not place the microSD card in the vicinity of corrosive chemicals or corrosive gas.
- Otherwise, the card may malfunction or data on the card may be lost.
- Never place the microSD card within reach of small children. A child may swallow the card accidentally.
- If you discard the microSD card without precautions, important or personal data that remains on the card may become accessible to unauthorized individuals. To avoid this risk, erase all data on the card, destroy the card physically, then discard it.

Recording tips

The recorder enables you to record audio at a superior level of quality by setting the Recording mode, ALC (Auto Level Control) function, microphone sensitivity, recording peak limiter and other functions. Please refer to the Reference Manual (PDF file) for information on the other functions.

■ Recording mode

The recorder records audio in the MP3 or PCM (WAV) format. As a rule of thumb, select "PCM 44.1kHz/16 bit" (better sound quality) for the Recording mode to record a musical performance. Select "MP3 128kbps" (smaller data size) to record musical practice sessions or conference meetings. If you want to record audio at a much higher level of sound quality, select "PCM 96kHz."

Hint:

- *In PCM mode, non-compressed audio data will be recorded. In MP3 mode, compressed audio data will be recorded. If you choose an option that offers better sound quality, the data size will be larger and the remaining available recording time will be shorter. Select a Recording mode that will suit your purposes, based on your priorities (better sound quality or longer recording time).*
- *If you plan to create an audio CD from the recordings, select "PCM 44.1kHz/16 bit".*

Recording mode and application examples

Recording format	Sampling frequency, bit depth, bit rate	File extension	Application examples	
PCM	96kHz/16bit, 24bit	.WAV	Recording a musical performance, creating a master recording, creating a CD, and recording other original sound sources	Higher sound quality ↑
	88.2kHz /16bit, 24bit			
	48kHz/16bit, 24bit			
	44.1kHz/16bit, 24bit			
MP3	320kbps	.MP3	High-quality recording of musical practice sessions, conference meetings, etc. compressed into a smaller size file	
	192kbps			
	128kbps			Standard sound quality
	64kbps		Recordings for which extended duration is more important than sound quality ("32kbps" indicates a monaural recording.)	↓ Longer recording time
	32kbps			

Estimated available recording time (with internal 2GB memory)

Recording mode			Available recording time (estimated)
PCM	24bit	96kHz	About 55 minutes
		88.2kHz	About 1 hour
		48kHz	About 1 hour 50 minutes
		44.1kHz	About 2 hours
	16bit	96kHz	About 1 hour 25 minutes
		88.2kHz	About 1 hour 30 minutes
		48kHz	About 2 hours 50 minutes
		44.1kHz	About 3 hours

Recording mode		Available recording time (estimated)
MP3	320kbps	About 13 hours 30 minutes
	192kbps	About 22 hours 30 minutes
	128kbps	About 34 hours
	64kbps	About 68 hours
	32kbps	About 136 hours

* If you record multiple files, the total available recording time will be shorter than those estimated above.
* When you purchase the recorder, the manuals are stored in PDF format in the internal memory. Therefore, the actual available recording time is less than estimated above.
* The largest available recording space (for continuous recording) in one file is 2GB.

■ About the ALC (Auto Level Control) function

The Auto Level Control function automatically adjusts the recording level in response to the source level so that the resulting recording will be tighter dynamically.

	ALC OFF	ALC ON
Feature	The recording will accurately represent the original sound, and maintain sound dynamics as is.	The recording dynamics will be adjusted. Louder sounds will be quieter and softer sounds will be louder. This setting will reduce distortion and is better for recording dictation.
Application	Musical performance and nature recordings	Musical practice, conference meetings and interview recordings

■ Microphone sensitivity

You can set the microphone sensitivity level to high or low to accommodate the recording environment. If the recorded audio level is too low or too high, change the microphone sensitivity setting.

Setting the microphone sensitivity

Press the [MENU/FOLDER] button while the main screen is displayed, select [REC MENU] → [MIC SENS], then select [HIGH] or [LOW]. If the volume level is too low, select [HIGH]. If the volume level is too high, set [MIC SENS] to [LOW].

■ Recording peak limiter

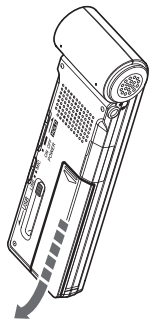
When the recording peak limiter is set to ON, the recorder reduces sound distortion by automatically adjusting excessive peaks. It is recommended that you set the limiter to ON when you record audio.

Setting the recording peak limiter

Press the [MENU/FOLDER] button while the main screen is displayed, select [REC MENU] → [REC LIMITER], then select [ON]. The peak limiter is available only when the ALC function is set to OFF.

1. Inserting a battery

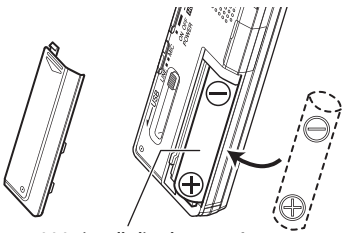
1. Open the battery cover.



2. Insert the supplied alkaline battery.

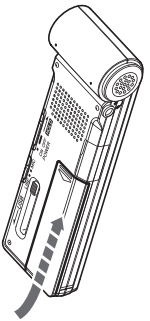
Note:

- *Insert the battery with the + and – ends in the correct orientation.*
- *You can use a AAA-size nickel-metal hydride battery. However, you cannot charge the nickel-metal hydride battery using the unit.*



AAA-size alkaline battery x1

3. Close the battery cover.



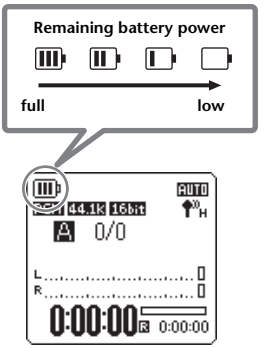
Remaining battery power

When the battery power falls to a low level, the recorder will display the message "LOW BATTERY!." At this time, replace the battery with a new one.

Battery life (of an alkaline battery used for recording to the internal memory)

PCM 96kHz, 24bit	About 7 hours
PCM 44.1kHz, 16bit	About 16 hours
MP3 64kbps	About 26 hours

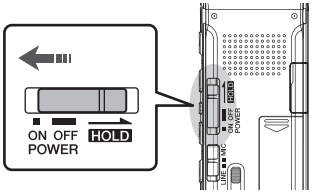
* The above estimate is based on the following assumptions: LED off, backlight off, no recording monitoring, the ALC function on.
* Battery life varies depending on the type and manufacturer of the battery, storage conditions, usage, ambient temperature, etc.



2. Turning the power on or off

Turning the power on

Slide the [POWER] switch to the [ON] position (in the direction of the thick arrow in the figure).

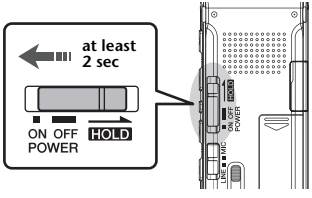


Note:

- *If you leave the recorder turned on for a specified period of time without using it, the recorder will automatically turn off (the default setting is "15min").*
- *When you turn the power on for the first time, set the calendar (see page 28).*
- *If a large-capacity (such as 16GB) microSD card is inserted into the recorder, it will take some time for the recorder to start up.*

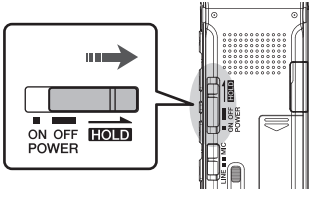
Turning the power off

Slide the [POWER] switch to the [ON] position (in the direction of the thick arrow in the figure) and hold it for at least two (2) seconds.



Preventing accidental operation (Hold function)

If you set the [POWER] switch to [HOLD], the unit will display "HOLD ON" and the control buttons will be disabled.
If you set the [POWER] switch to its original position, the unit will display "HOLD OFF" and the Hold function will be canceled.

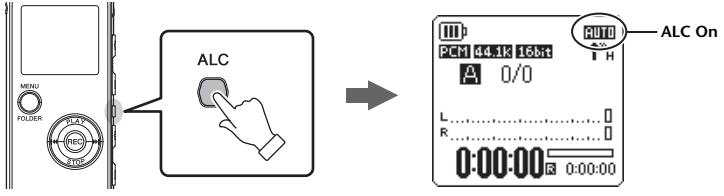


3. Recording

For more information on recording preparation, refer to "Recording tips" on page 16. Please refer to the Reference Manual (PDF file) for information on recording musical performances or recording through an external microphone.

Starting recording

1. **Press the [ALC/DELETE] button to display AUTO on the LCD.**

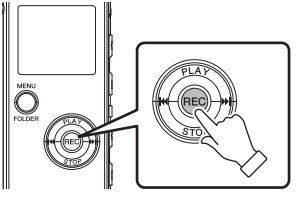


The ALC function is turned on.

Note:

- *The ALC (Auto Level Control) function automatically adjusts the recording level in response to the mic input volume level during recording.*

2. **Press the [REC] button.**
The REC LED lights up red and recording begins.

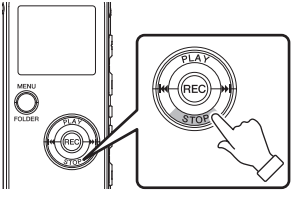


Pausing recording

Press the [REC] button during recording.
Press the [REC] button again to resume recording.

Stopping recording

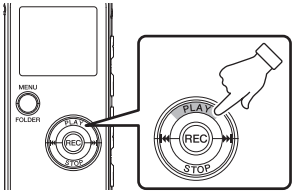
Press the [STOP] button.



4. Playback

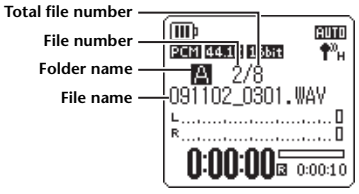
Starting playback

Press the [PLAY] button.
The recorder starts playing the file.



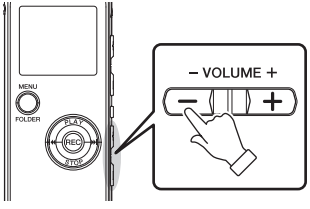
Note:

- *To select a file in the folder (see page 12), press the [◄◄]/[►►] buttons while the recorder is stopped.*



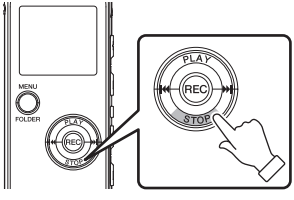
Adjusting the volume level

Press the [VOLUME] +/– buttons.



Stopping playback

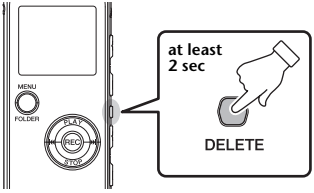
Press the [STOP] button.
Press the [PLAY] button again to resume playback from that point.



5. Deleting

Deleting a selected file

1. **Select a file to delete (see page 23), then press the [ALC/DELETE] button located on the side panel for at least two (2) seconds.**



2. **When the [DELETE MENU] screen is displayed, press the [PLAY] or [STOP] button to select [FILE], then press the [REC] button.**

3. **When the [DELETE FILE] screen is displayed, press the [⏮]/[⏭] buttons to select [DELETE], then press the [REC] button.** The unit displays the message "DELETING…" and the file is deleted. If the Recycle Bin function is active (factory default setting), the file will move to the Recycle Bin (see page 23). When the unit displays "MOVED TO RECYCLE BIN," press the [REC] button to return to the main screen.

Note:

· *To delete all files along with the folder, select [FOLDER] instead of [FILE] in Step 2.*

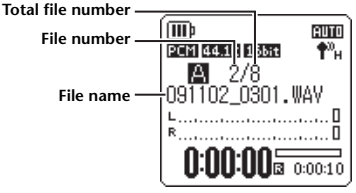
Selecting a folder or file

1. **Press and hold down the [MENU/FOLDER] button for at least two (2) seconds.**
2. **Press the [PLAY], [STOP], or [⏮]/[⏭] buttons to select a folder from which to delete a file, then press the [REC] button.**

Note:

· For more information about the folders, refer to "About files, folders and memory" on page 12.

3. **Press the [⏮]/[⏭] buttons to select a file to delete.**



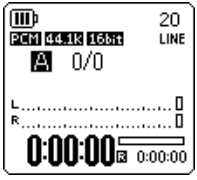
■ Managing the Recycle Bin

If you delete a file on the recorder while the Recycle Bin function is active, the file will be moved to the Recycle Bin (🗑) folder temporarily so that you can restore it later if necessary. In this way, you do not have to worry about deleting a file accidentally.
When you purchase the recorder, the Recycle Bin function is already activated.

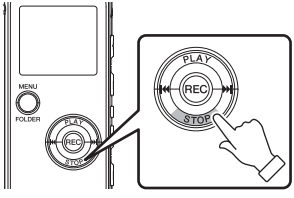
- The Recycle Bin folder can accommodate up to 199 files. If the Recycle Bin folder is full, you cannot delete any more files. In this event, move some files from the Recycle Bin folder to the original folder (see PDF reference manual) or empty the Recycle Bin folder.
- **When the Recycle Bin is full, you must empty it to increase the remaining recording time. Otherwise, if the available memory capacity is insufficient, you may be unable to record. Empty the Recycle Bin regularly (see PDF reference manual).**
- **You cannot move files from the M folder to the Recycle Bin folder, regardless of whether the Recycle Bin function is on or off. These files will be deleted completely by the delete operation.**

About the screens

[Main screen]



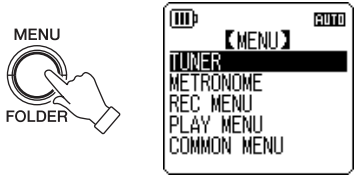
Appears when the power to the unit is turned on.



Press the [STOP] button repeatedly to select one of the indicators for the file in the following order (if the playback file exists).

- **When one of folders A-D is selected:** Main screen → [REC DATE & TIME] (Recording date & time) → [REC REMAIN TIME] (Remaining recording time) → [DATE & TIME] (Current time) → [TOTAL TIME] (Total playback time) → Main screen
- **When folder M is selected:** Main screen → [DATE & TIME] (Current time) → [TOTAL TIME] (Total playback time) →Main screen

[Menu screen]



Appears when you press the [MENU/FOLDER] button while the main screen is displayed.
This screen enables you to change Recording mode, set the date and time, initialize the recorder, and make various other settings. For details, see pages 25–28.

Note:

· *Press the [MENU/FOLDER] button to return to the main screen.*

About the menu settings

List of menus and menu items

Menu items are categorized into six menus: [TUNER] (Tuner settings), [METRONOME] (Metronome settings), [REC MENU] (Recording settings), [PLAY MENU] (Playback settings), [COMMON MENU] (Global settings), and [EDIT MENU] (Edit settings).

[TUNER] (Tuner settings)

Menu items	Description
[START]	Starts the tuner's pitch analysis.
[CALIBRATE]	Sets the standard pitch (frequency).

[METRONOME] (Metronome settings)

Menu items	Description
[START]	Starts the metronome.
[TEMPO]	Sets the metronome tempo.
[BEAT]	Sets the metronome beat pattern.
[RECORD]	Sets the metronome sound used for recording.

[REC MENU] (Recording settings)

Menu items	Description
[REC MODE]	Sets the recording quality.
[MIC SENS]	Sets the microphone sensitivity high or low.
[HPF]	Turns the High Pass (Low Cut) Filter on or off.
[REC LIMITER]	Turns the recording peak limiter on or off.
[REC PEAK HOLD]	Sets the recording peak hold time.
[EXTERNAL MIC]	Selects a source connected to the external input jack.
[AUTO DIVIDE]	Divides a file automatically after a certain period of silence during recording.
[SELF TIMER]	Sets the time for the Self Timer recording.
[VAS]	Turns the VAS (Voice activated system) on or off.

[PLAY MENU] (Playback settings)

Menu items	Description
[TIME SEARCH]	Specifies the time position of the playback start point.
[REPEAT]	Sets the Repeat mode.
[PHRASE PLAY]	Sets the Phrase playback time (the number of seconds by which the playback point will be moved back).
[SKIP PLAY]	Sets the Skip playback time (the amount of time by which the playback point will skip).
[SOUND EQ]	Adjusts the tone.

[COMMON MENU] (Global settings)

Menu items	Description
[BEEP SOUND]	Sets the beep sound.
[REC LED]	Sets the recording indicator.
[DATE & TIME]	Sets the calendar (date and time).
[TIMER & ALARM]	Sets the recording timer and playback timer (alarm).
[AUTO OFF]	Sets the Auto Power Off function.
[BACKLIGHT]	Sets the LCD backlight.
[CONTRAST]	Adjusts the LCD contrast.
[RECYCLE BIN]	Turns the Recycle Bin function on or off.
[FORMAT]	Formats the internal memory or a microSD card (erases all data).
[MENU RESET]	Initializes the menu settings.
[VERSION]	Indicates the firmware version information.

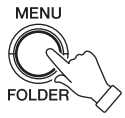
[EDIT MENU] (Edit settings)

Menu items	Description
[DIVIDE]	Divides a file into two at the specified point.
[FADE IN]	Applies a fade-in effect to the recorded file.
[FADE OUT]	Applies a fade-out effect to the recorded file.

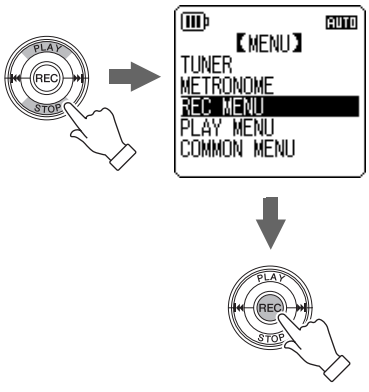
Setting the menu items

The following section explains how to set the menu items. The example here describes how to select "MP3 128kbps" for the Recording mode.

1. **While the main screen is displayed, press the [MENU/FOLDER] button.**

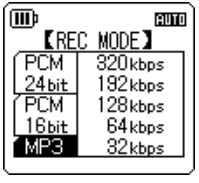


2. **Press the [PLAY] or [STOP] button to select [REC MENU], then press the [REC] button.**

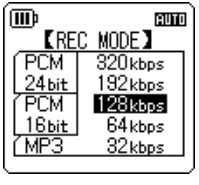


3. **Press the [PLAY] or [STOP] button to select [REC MODE], then press the [REC] button.**

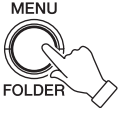
4. **Press the [PLAY], [STOP], or [⏮]/[⏭] buttons to select [MP3], then press the [REC] button.**



5. **Press the [PLAY] or [STOP] buttons to select [128 kbps], then press the [REC] button.**

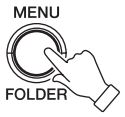


6. **Press the [MENU/FOLDER] button twice.**
The unit displays the main screen.

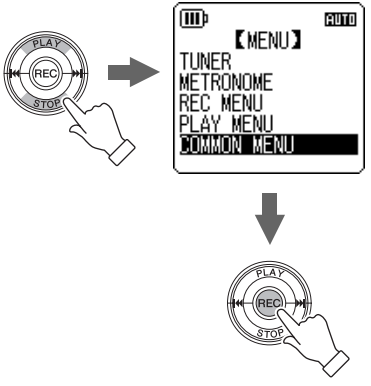


Setting the calendar

1. **While the main screen is displayed, press the [MENU/FOLDER] button.**

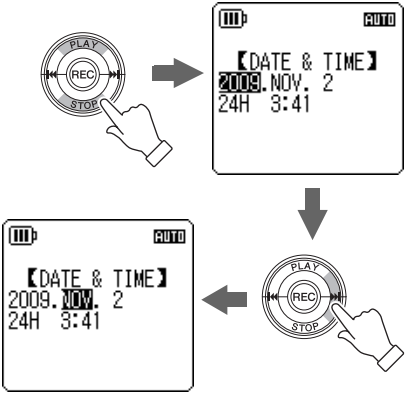


2. **Press the [PLAY] or [STOP] button to select [COMMON MENU], then press the [REC] button.**



3. **Press the [PLAY] or [STOP] button to select [DATE & TIME], then press the [REC] button.**

4. **Press the [PLAY] or [STOP] button to set the year, then press the [▶▶|] button.**



5. **In the same way, set the month, day, 24/12-hour indication (24H or AM/PM), hour and minute, then press the [REC] button.**
   The calendar setting is complete.
6. **Press the [MENU/FOLDER] button twice.**
   The unit displays the main screen.

Using the Recorder with a Computer

You can transfer audio files stored in the internal memory or on a microSD card to a computer by connecting the recorder directly to the computer. Transferred files are compatible for playback with Windows Media Player and iTunes. You can edit files using the included "Cubase AI" DAW software. You can also transfer audio files from a computer to the recorder for playback.

Computer system requirements

Windows
Computer: Windows-based computer with built-in USB interface
OS: Windows 7, Vista, XP Professional/Home Edition

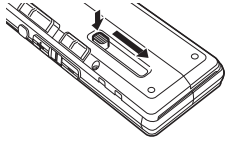
Macintosh
Computer: Macintosh computer with built-in USB interface
OS: Mac OS X 10.4, 10.5, 10.6

Note:

- *Visit the web site below for the latest information on system requirements: http://www.yamahasynth.com/*
- *The screens, menu items and buttons displayed on your computer may not exactly match those shown in this manual, depending on the OS version or manufacturer of your computer. (This manual uses Windows XP and Mac OS X as examples.)*

Connecting the recorder to your computer

1. Open the USB plug compartment cover, then move the USB plug slide switch toward the bottom (in the direction of the arrow) so that the USB plug will pop out.



2. Make sure the recorder is turned off, and then connect the USB plug to the USB terminal on the computer.

If nothing appears on the computer display, follow the steps below:

- Exit (quit) all running applications.
- Disconnect all external USB devices (excluding a properly working mouse and keyboard), then connect only the recorder.
- If the computer features multiple USB terminals, use a different USB terminal to connect the recorder.
- If the recorder is connected via a bus-powered USB hub, remove the hub, then connect the recorder directly to the computer's USB terminal.

Precautions when using the USB plug

Be sure to observe the following points when connecting to the computer's USB interface.
If you do not observe these points, you risk freezing the computer, corrupting the data, and losing the data. If the computer or the recorder freezes, restart the application software such as Windows Media Player or OS.

- **Never disconnect the USB plug while data is being transferred.**
- **Be sure to wake the computer from sleep/suspended/standby mode before making a connection to the computer's USB terminal.**
- **Quit all applications running on the computer before connecting or disconnecting the USB plug.**

About the AutoPlay dialog box

If the system displays the AutoPlay dialog box when you connect the recorder to the computer, click to select [Open folder to view files], then click [OK]. The system will display the recorder's folders.

Loading audio files

Windows:

1. Connect the recorder to the computer.
2. Open [My Computer] from the [start] menu.
3. Double-click [PRC24] or [PRC24SD].
4. Double-click the folder that contains the file that you wish to load to your computer.
5. Copy the file to the desired location on the computer.

Macintosh:

1. Connect the recorder to the computer.
2. Double-click the drive icon [PRC24] or [PRC24SD] of the recorder that appears on the desktop.
3. Double-click the folder that contains the file that you wish to load to your computer.
4. Copy the file to the desired location on the computer.

Transferring audio files from the computer to the recorder

In Step 4 (for Windows) or Step 3 (for Macintosh), drag and drop the audio files that you wish to transfer (such as MP3 files or WMA files) into the [MUSIC] folder. The MUSIC (M) folder stores music and other audio files transferred from a connected computer.

Before transferring audio files to the MIC (A–D) folders or LINE (L) folder, rename the files following the file naming rules (see page 13). The unit will not play files that do not comply with the file naming rules, unless they are in the MUSIC (M) folder.

Disconnecting the recorder from your computer

Windows:

1. Click " " on the taskbar at the bottom right on the Windows screen, then click [Safely remove USB Mass Storage Device].
2. After the computer displays the message shown on the right, disconnect the USB plug.

Macintosh:

1. Drag and drop the drive icon [PRC24] or [PRC24SD] of the recorder on the desktop into the Trash Can.
2. After the drive icon [PRC24] or [PRC24SD] disappears from the desktop, disconnect the USB plug.

About the accessory disk

SPECIAL NOTICE

- The software included in the accessory disk and the copyrights thereof are under exclusive ownership by Steinberg Media Technologies GmbH.
- Copying of the software or reproduction of this manual in whole or in part by any means is expressly forbidden without the written consent of the manufacturer.
- Yamaha makes no representations or warranties with regard to the use of the software and documentation and cannot be held responsible for the results of the use of this manual and the software.
- This disk is NOT for audio/visual purpose. Do not attempt to play the disk on an audio/visual CD/DVD player. Doing so may result in irreparable damage to your player.
- For information about the minimum system requirements and latest information of the software in the disk, check the web site below.
  →<http://www.yamahasynth.com/>
- Note that Yamaha does not offer technical support for the DAW software in the accessory disk.

About the DAW software in the accessory disk

The accessory disk contains DAW software both for Windows and Macintosh.

NOTE:

- Make sure to install DAW software under the "Administrator" account.
- In order to have continuous use of the DAW software in the accessory disk, including support and other benefits, you will need to register the software and activate your software license by starting it while the computer is connected to the Internet. Click the "Register Now" button shown when the software is started, then fill in all required fields for registration. If you do not register the software, you will be unable to use it after a limited period of time expires.

For information about the minimum system requirements and latest information on the software in the disk, check the web site below.

<http://www.yamahasynth.com/>

About software support

Support for the DAW software in the accessory disk is provided by Steinberg on its website at the following address.

http://www.steinberg.net

You can visit the Steinberg site also via the Help menu of the included DAW software. (The Help menu also includes the PDF manual and other information on the software.)

For details of products, please contact your nearest Yamaha representative or the authorized distributor listed below.

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Yamaha Corporation of America
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