# EDIROL

# AUDIO Capture UA-20

## 24 bit Digital

### USB AUDIO/MIDI Interface

# Owner's Manual

**Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (pp. 2–4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's Manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.**

# USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠WARNING and ⚠CAUTION Notices

| ⚠**WARNING** | Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly. |
|---|---|
| ⚠ **CAUTION** | Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly.<br><br>* Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets. |

About the Symbols

| ⚠ | The △ symbol alerts the user to important instructions or warnings.The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger. |
|---|---|
| ⊘ | The ◯ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled. |
| ☟ | The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet. |

-------------------------------------- **ALWAYS OBSERVE THE FOLLOWING** --------------------------------------

## ⚠WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.

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- Do not open or perform any internal modifications on the unit.

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- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

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- Never use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

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## ⚠WARNING

- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.

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- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

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- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

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# ⚠WARNING

- Immediately turn the power off, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  - If smoke or unusual odor occurs
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

- Protect the unit from strong impact. (Do not drop it!)

- DO NOT play a CD-ROM disc on a conventional audio CD player. The resulting sound may be of a level that could cause permanent hearing loss. Damage to speakers or other system components may result.

# ⚠ CAUTION

- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.

- Never climb on top of, nor place heavy objects on the unit.

- Disconnect all cords coming from external devices before moving the unit.

- Keep any optical connector caps you may remove in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

# IMPORTANT NOTES

**In addition to the items listed under "USING THE UNIT SAFELY" on page 2–3, please read and observe the following:**

## Power Supply

- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

## Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.

- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.

- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.

- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.

- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.

## Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.

- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

## Additional Precautions

- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.

- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.

- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).

- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

- Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
  - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

## Handling CD-ROMs

- Avoid touching or scratching the shiny underside (encoded surface) of the disc. Damaged or dirty CD-ROM discs may not be read properly. Keep your discs clean using a commercially available CD cleaner.

## Copyright

- Unauthorized recording, distribution, sale, lending, public performance, broadcasting, or the like, in whole or in part, of a work (musical composition, video, broadcast, public performance, or the like) whose copyright is held by a third party is prohibited by law.

- Do not use this unit for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit.

# Contents

# Features of the UA-20

Thank you, and congratulations on your choice of the UA-20. The UA-20 is a USB audio interface that can be connected to your computer by a single USB cable, allowing you to record and play back audio data in high-quality digital form.

## Awesome, high-quality, 24-bit sound

You can use your computer to digitally record and play back unbelievably high-quality audio in 24-bit format.

* *Your application must support 24-bit audio data.*

## Mic/guitar input

The high-impedance inputs allow not only mic but also guitar or bass to be connected directly. RCA phono-type output jacks and a digital output jack (optical) are also provided.

## Direct Monitor function

The Direct Monitor function allows the input signal from each input jack to be directly monitored in real time from headphones or the analog outputs, without routing the audio through your computer application. You can also switch the monitor function on/off from an ASIO 2.0 compatible application.

## WDM/ASIO 2.0 drivers included

You can enjoy high performance when using WDM-compatible applications such as SONAR, and ASIO-compatible applications such as Cubase and Logic. Of course you can also use the UA-20 with applications that support MMD (Windows) or SoundManager (Mac OS).

* *Roland will provide no guarantee or support regarding operation with sequencer software or audio editing software made by another manufacturer. Please contact the manufacturer of the software you are using.*

## MIDI IN/OUT interface

A set of MIDI IN/OUT connectors is provided for easy connection with MIDI devices.

## What is USB?

**USB** stands for Universal Serial Bus. It is a new interface used to connect various peripheral devices to a computer.

USB allows more than one peripheral device to be connected via a single USB cable, and also allows data to be transmitted more rapidly than conventional serial ports. Peripherals can also be connected or disconnected with the power turned on, and the computer will automatically recognize the peripheral that has been plugged in. (Some peripherals may require settings or other operations to be performed.)

# Check the contents of the package

● **UA-20**



● **USB cable**

Use this to connect the USB connector of your computer with the USB connector of the UA-20. For details on connections and driver installation, refer to **Getting Connected and Installing Drivers** (Windows → p. 12 or Macintosh → p. 32).

*\* Please use only the included USB cable. If you require a replacement due to loss or damage, please contact a "EDIROL/Roland Service Center" listed in the "Information" section at the end of this manual.*

● **CD-ROM**

This contains the driver required in order to use the UA-20.

● **Owner's Manual**

This is the manual you are reading. Please keep it on hand for reference.

# Names of things and what they do
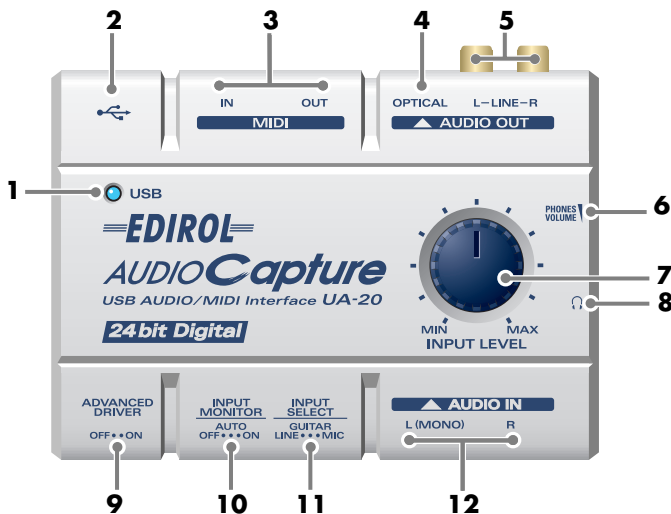


## 1. USB indicator

This will light when you use the USB cable to connect the UA-20 to your computer, and the computer has recognized the UA-20.

## 2. USB connector

Audio signals and MIDI signals can be transferred when the UA-20 is connected via a USB cable to your computer.

## 3. MIDI connector

Connect these connectors to a MIDI device (such as a sequencer) to exchange MIDI messages.

## 4. Digital output connector

Connect a coaxial cable here when you want to digitally output an audio signal to a digital recorder such an MD or DAT.

## 5. Master output jacks

These are output jacks for analog audio signals.

## 6. Headphone volume

This adjusts the volume that is output from the **Headphone jack**. It is not possible to adjust the volume that is output from the **Master output jacks**.

## 7. Input volume

This adjusts the volume at which the input signal from **Input jacks**.

## 8. Headphone jack

A set of headphones can be connected here. The **Headphone jack** will output the same sound as that of the **Master output jacks**. Sound will be output from the **Master output jacks** even when headphones are connected.

**9. ADVANCE (mode select) switch**

This switches the driver operation mode.

If you change the setting of this switch, you must close all software, disconnect the USB cable that connects the UA-20 to your computer, and then re-connect the USB cable.

**On (Advanced mode)**

You can use the included UA-20 driver to record, play, and edit audio from your sequencer software or audio editing software with high quality and stable timing.

**Off (Standard Driver mode)**

Choose this mode if you are using software that uses the standard audio driver included with your operating system.

* *The MIDI IN/OUT connectors are not available when using Standard driver mode.*

For details on these operating modes, refer to *"About the driver modes"* (Windows, p. 12; Macintosh, p. 32).

**10. Input monitor switch**

This selects whether or not the signal input to the input jacks will be output to the headphone jack and the master output jacks.

| ON | The input signal from the **Input jacks** will be output to the **Headphone jack** and the **Master output jacks**. |
|---|---|
| AUTO | Settings or operations in an ASIO 2.0 compatible application such as Cubase will be able to control the monitoring setting. |
| OFF | The input signal from the **Input jacks** will not be output to the **Headphone jack** or the **Master output jacks**. |

**11. Input select switch**

Set this as appropriate for the device that is connected to the input jacks.

| LINE | When connecting an audio source or MIDI sound module via an analog audio connection |
|---|---|
| GUITAR | When connecting a guitar |
| MIC | When connecting a dynamic mic<br>* *The miniature mics (condenser mics) included with some computers or sound cards are not supported.* |

**12. Input jacks**

These are input jacks for analog audio signals. You can connect dynamic mics, guitars, or audio devices. You must set the **Input select switch** to the position appropriate for the device you have connected.

If you connect a guitar or mic only to the L jack or R jack, the signal will be monaural.

# Block diagram
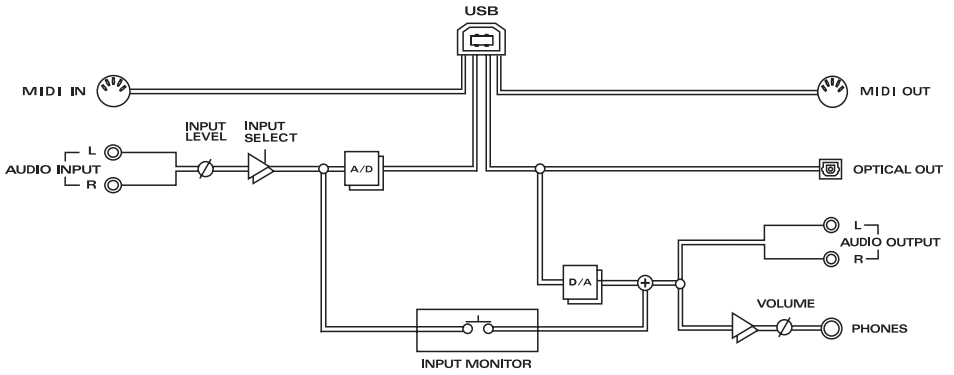
# Driver installation and settings (Windows)

If you are using a Macintosh computer, please proceed to **Driver installation and settings (Macintosh)** (p. 32).

# About the driver modes

A **"driver"** is software that transfers data between the UA-20 and application software running on your computer, when your computer and the UA-20 are connected by a USB cable. The driver sends data from your application to the UA-20, and from the UA-20 to your application.

The UA-20 has two operating modes, **Advanced mode** and **Standard driver mode**, and a different driver is used by each mode.

## Advanced mode

This is the operating mode when the rear panel **ADVANCE (mode select) switch** is **ON**. You can use the native driver included on the UA-20 Driver CD-ROM to record, play, and edit audio with high quality and stable timing. In Advanced mode, audio signals are transferred between the UA-20 and the computer at a bit depth of **24 bits** and a sample rate of **44.1 kHz**. Choose Advanced mode if you are using software that supports 24-bit audio, such as the Cakewalk series or Cool Edit; or **ASIO-compatible software** that can record, play, and edit high-quality audio, such as Cubase VST or Logic Audio.
**Normally, you should use Advanced mode.**
(→**Installing the driver** (p. 13))

* *You must use Advanced mode if you want to use MIDI.*

## Standard driver mode

This is the operating mode when the rear panel **ADVANCE (mode select) switch** is **OFF**. The standard USB audio driver provided by Windows will be used. In Standard driver mode, audio signals are transferred between the UA-20 and the computer at a bit depth of **16 bits** and a sampling rate of **44.1 kHz**. Choose this mode if you are using software that uses the standard functionality provided by Windows, such as software that uses the CD-ROM drive of your computer to play CD audio, or that uses the software synthesizer included with Windows.
(→**Installing the OS-standard driver** (p. 66))

* *The driver included with Windows does not support ASIO.*

* *The MID connectors are not available when using Standard driver mode.*

# Installing the driver

The installation procedure will differ depending on your system.
Please proceed to one of the following sections, depending on the system you use.

## ■ Windows XP users

**1**

Disconnect all USB cables except for a USB keyboard and
USB mouse (if used).

**2**

Open the System Properties dialog box.

**1.** Click the Windows **start** menu, and from the menu,
select **Control Panel**.

**2.** In **"Pick a category"**, click **"Performance and
Maintenance"**.

**3.** In **"or pick a Control Panel icon"**, click the **System**
icon.

**3**

Click the **Hardware** tab, and then click **[Driver Signing]**.

Open the **Driver Signing Options** dialog box.

**4**

In the **Driver Signing
Options** dialog box,
make sure that
**"Ignore"** is selected.

If **"Ignore"** is selected,
simply click **[OK]**. If
**"Ignore"** is not
selected, make a note
of the current setting
(Warn or Block),
change the setting to
**"Ignore"**, and click
**[OK]**.
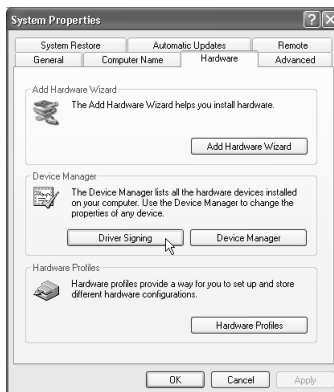
**MEMO**

You must log on to Windows
with a user name whose
account has administrative
privileges (e.g.,
Administrator).

**MEMO**

Depending on your system,
the **System** icon may be
displayed directly in the
**Control Panel** (Classic view).
If so, double-click the **System**
icon.

**MEMO**

If you change the **"Driver
Signing Options"** setting,
change it back to the original
setting after you've installed
the driver.

**5**

Click **[OK]** to close the **System Properties** dialog box.

**6**

Close all currently running software (applications).

Also close all windows that are open. If you are using software such as antivirus programs, be sure to close these programs as well.

**7**

Find the included CD-ROM.

Insert the CD-ROM into your computer's CD-ROM drive.

**8**

From the Windows **start** menu, choose **"Run..."**

The **"Run"** dialog box will appear.

**9**

Input the name into the dialog box as shown, and click **[OK]**.
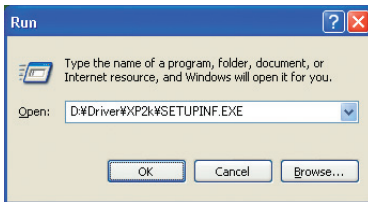
**(Drive name): \Driver\XP2k\SETUPINF.EXE**

*   *The drive name is "D:" in the example shown here, but this may be different on your system. Specify the drive name for your CD-ROM drive.*

The **SetupInf** dialog box will appear.
You are now ready to install the driver.

**10**

Set the UA-20's **ADVANCE (mode select) switch** to the **ON** position.

**MEMO**

If the screen indicates **"Windows can perform the same action each time you insert a disk or connect a device with this kind of file,"** click **[Cancel]**.

**MEMO**

**Checking the name of your drive.**
From the **start** menu, choose **My Computer**. In the window that appears, verify the name of the CD-ROM drive into which you inserted the CD-ROM in step 7.
The (D:) or (E:) displayed by the CD-ROM drive icon is the drive name.

**14**

*11*

Use the **USB cable** to connect the **UA-20** to your **computer**.

Near the task bar, your computer will indicate **"Found New Hardware"**. Please wait.

**MEMO**

This unit is equipped with a protection circuit. A brief interval (a few seconds) after connecting the USB cable is required before the unit will operate normally.

*12*

The **Found New Hardware Wizard** will appear.

Select **"Install from a list or specific location (Advanced)"**, and click **[Next]**.

**MEMO**

If the **Found New Hardware Wizard** asks you whether you want to connect to Windows Update, choose **"No"** and then click **[Next].**

*13*

The screen will indicate **"Please choose your search and installation options"**.

Select **"Don't search. I will choose the driver to install"**, and click **[Next]**.

*14*

Make sure that the **"Model"** field indicates **"EDIROL UA-20"**, and click **[Next]**. Driver installation will begin.

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If the **"What action do you want Windows to take?" (Step 4)** setting was not set to **"Ignore"**, a **"Hardware Installation"** dialog box will appear.

#### A dialog box with a "!" symbol will appear.

**1.** Click **[Continue Anyway]**.

**2.** Continue the installation.

#### A dialog box with a "x" symbol will appear.

**1.** Click **[OK]**.

**2.** When the **"Found New Hardware Wizard"** appears, click **[Finish]**.

**3.** Return to **step 1** (p. 13) and re-install the driver from the beginning of the procedure.

---

*15*

The **Insert Disk** dialog box will appear.
Click **[OK]**.

**MEMO**

The **Insert Disk** dialog may not appear. In that case, proceed to the next step.

## *16*

The **Files Needed** dialog box will appear.

Input the following into the **"Copy files from"** field, and click **[OK]**.

**(drive name):\DRIVER\USB_XP2K**

* *Specify the drive name of your CD-ROM drive.*

---

If the **"What action do you want Windows to take?"** **(Step 4)** setting was not set to **"Ignore"**, a **"Hardware Installation"** dialog box will appear.

### A dialog box with a "!" symbol will appear.

1. Click **[Continue Anyway]**.

2. Continue the installation.

---

## *17*

The screen will indicate **"Completing the Found New Hardware Wizard"**.

Click **[Finish]**.

## *18*

When driver installation has been completed, the **System Settings Change** dialog box will appear.

Click **[Yes]**. Windows will restart automatically.
If the **System Setting Change** dialog box does not appear, restart Windows from the start menu.

If you changed the **"Driver Signing Options"** setting (p. 13, step 4), restore the setting to its previous state after restarting Windows.

1. Log on to Windows using the same user account as the one used when the driver was installed.

2. From the Windows **start** menu, choose **Control Panel**.

3. In **"Pick a category,"** click **Performance and Maintenance**.

4. In **"or Pick a Control Panel icon,"** click the **System** icon. The **System Properties** dialog box appears.

* *Depending on your system, the **System** icon may be shown directly in the **Control Panel** (Classic view). If so, double-click the **System** icon.*

5. Click the **Hardware** tab, and then click **[Driver Signing]**. The **Driver Signing Options** dialog box appears.

6. In **Driver Signing Options**, restore the previous setting ("Warn" or "Block") and click **[OK]**.

7. Click **[OK]**. The **System Properties** dialog box closes.

Next, you need to set your computer so priority is given to background services, which will help to assure that audio and MIDI processing occur smoothly.
(➔ **"Giving priority to background services"** (p. 18))

## **Giving priority to background services**

Crackling may occur in the sound if you omit making this setting. To ensure that audio and MIDI are processed smoothly, make the setting as follows.

**1**

Open the **System Properties** dialog box.

1. From the Windows **start** menu, choose **Control Panel**.

2. In **"Pick a category,"** click **"Performance and Maintenance"**.

3. In **"or Pick a Control Panel icon,"** click the **System** icon.

**2**

Click the **Advanced** tab.

**3**

Click **[Settings]** located at the right of the **Performance** area.

The **Performance Options** dialog box appears.

**4**

Click the **Advanced** tab.

**5**

In **Processor Scheduling**, choose **"Background services,"** and click **[OK]**.

**6**

In the **System Properties** dialog box, click **[OK]**. The **System Properties** dialog box closes.

Next, you need to make audio device and MIDI device settings. (➔**"Driver settings"** (p. 26))

**MEMO**

Depending on your system, the **System** icon may be displayed directly in the **Control Panel** (Classic view). If so, double-click the **System** icon.

# ■ **Windows 2000 users**

*1*

Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

*2*

Open the **System Properties** dialog box.

Click the Windows **Start** menu, and from the menu that appears, select **Settings | Control Panel**. In **Control Panel**, double-click the **System** icon.

*3*

Click the **Hardware** tab, and then click **[Driver Signing]**.

The **Driver Signing Options** dialog box will appear.
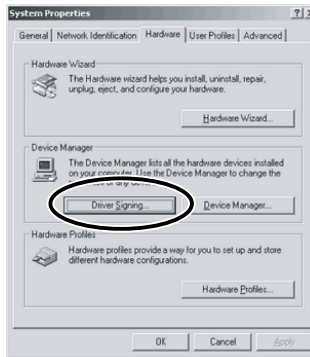
*4*

Make sure that **"File signature verification"** is set to **"Ignore"**.

If it is set to **"Ignore"**, simply click **[OK]**.
If it is not set to "Ignore", make a note of the current setting ("Warn" or "Block"). Then change the setting to **"Ignore"** and click **[OK]**.

*5*

Click **[OK]** to close the **System Properties** dialog box.

**19**

## 6

Exit all currently running software (applications).

Also close any open windows. If you are using virus checking or similar software, be sure to exit it as well.

## 7

Prepare the CD-ROM.

Insert the CD-ROM into the CD-ROM drive of your computer.

## 8

Click the Windows **Start** menu. From the menu that appears, select **"Run..."**

The **"Run..."** dialog box will appear.

## 9

In the dialog box that appears, input the following into the **"Open"** field, and click **[OK]**.
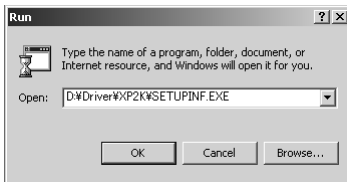


**(drive name) : \Driver\XP2k\SETUPINF.EXE**

\* *In the explanatory example shown here, the drive name is given as "D:". The drive name "D:" may be different for your system. Specify the drive name of your CD-ROM drive.*

The **SetupInf** dialog box will appear.
You are now ready to install the driver.

## 10

Set the UA-20's **ADVANCE (mode select) switch** to the **ON** position.

## 11

Use the **USB cable** to connect the **UA-20** to your **computer**.

**MEMO**

**To check the drive name**
In the Windows desktop, double-click the **My Computer** icon. In the window that appears, check the drive name of the CD-ROM drive into which you inserted the CD-ROM in step7.
The drive name is the (D:) or (E:) displayed by the CD-ROM drive.

**MEMO**

This unit is equipped with a protection circuit. A brief interval (a few seconds) after connecting the USB cable is required before the unit will operate normally.

**20**

If the **"File signature verification"** (Step 4) setting was not set to **"Ignore"**, a **"Digital Signature Not Found"** dialog box will appear.

#### If "File signature verification" is set to "Warn"

**1.** Click **[Yes]**.

**2.** Continue the installation.

#### If "File signature verification" is set to "Block"

**1.** Click **[OK]**.

**2.** When the **"Found New Hardware Wizard"** appears, click **[Finish]**.

**3.** Return to **step 1** (p. 19) and re-install the driver from the beginning of the procedure.

## 12

The **Insert Disk** dialog box will appear.

Click **[OK]**.

**MEMO**

If the **Insert Disk** dialog box does not appear, proceed to the next step.

## 13

The **Files Needed** dialog box will appear.

Input the following into the **"Copy files from"** field, and click **[OK]**.

**(drive name) : \DRIVER\XP_2k**

*   *Specify the drive name of your CD-ROM drive.*

If the **"File signature verification"** (Step 4) setting was not set to **"Ignore,"** a **"Digital Signature Not Found"** dialog box will appear.

#### If "File signature verification" is set to "Warn"

**1.** Click **[Yes]**.

**2.** Continue the installation.

## 14

The screen will indicate **"Completing the Found New Hardware Wizard"**.

Click **[Finish]**.

## 15

The **System Settings Change** dialog box will appear.

Click **[Yes]**. Windows will restart automatically.

If you changed the **"File signature verification"** (p. 19) setting, restore the original setting after Windows restarts.

1. After Windows restarts, log in to Windows as a user with **administrative privileges**, (such as **Administrator**).

2. In the Windows desktop, right-click the **My Computer** icon, and from the menu that appears, select **Properties**. The **System Properties** dialog box will appear.

3. Click the **Hardware** tab, and then click **[Driver Signing]**. The **Driver Signing Options** dialog box will appear.

4. Return the **"File signature verification"** setting to the original setting (either "Warn" or "Block"), and click **[OK]**.

5. Click **[OK]**. The **System Properties** dialog box will close.

This completes installation of the driver.
Next, we recommend that you enable background processing on your computer, so MIDI and audio processing will be as smooth as possible.
(➔ **"Enabling background processing"** (p. 23))

## Enabling background processing

In Windows 2000, make settings to enable background processing. If you fail to make this setting, you may experience interruptions in the sound. To ensure that MIDI and audio processing occurs smoothly, use the following procedure to make settings.

*1*

Click the Windows **Start** menu, and from the menu that appears, select **Settings | Control Panel**. In **Control Panel**, double-click the **System** icon.

*2*

Click the **Advanced** tab.

*3*

At the right of the **Performance** field, click **[Performance Options]**.

The **Performance Options** dialog box will appear.

*4*

In the **Application response** field, choose **"Background services"** and click **[OK]**.

*5*
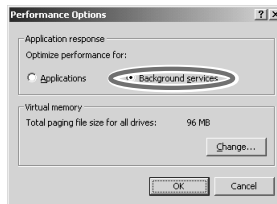
Click **[OK]** to close the **System Properties** dialog box.

Next, make MIDI device and audio device settings.
(→**"Driver settings"** (p. 26))

# ■ **Windows Me/98 users**

### *1*

With the UA-20 disconnected, start up Windows.

Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

### *2*

Exit all currently running software (applications).

Also close any open windows. If you are using virus checking or similar software, be sure to exit it as well.

### *3*

Prepare the CD-ROM.

Insert the CD-ROM into the CD-ROM drive of your computer.

### *4*

Click the Windows **Start** menu. From the menu that appears, select **Run...**.

The **"Run..."** dialog box will appear.

### *5*

In the dialog box that appears, input the following into the **"Open"** field, and click **[OK]**.

| Run | | ? × |
|---|---|---|
| 🖳 | Type the name of a program, folder, document, or Internet resource, and Windows will open it for you. | |
| Open: | D:¥Driver¥Me98¥SETUPINF.EXE | ▼ |
| | OK Cancel Browse... | |

**(drive name) : \Driver\Me98\SETUPINF.EXE**

The **SetupInf** dialog box will appear.
You are now ready to install the driver.

*   *In the explanatory example shown here, the drive name is given as "D:". The drive name "D:" may be different for your system. Specify the drive name of your CD-ROM drive.*

### *6*

Set the UA-20's **ADVANCE (mode select) switch** to the **ON** position.

**MEMO**

This unit is equipped with a protection circuit. A brief interval (a few seconds) after connecting the USB cable is required before the unit will operate normally.

*7*

Use the **USB cable** to connect the **UA-20** to your **computer**.

The driver will be installed automatically.

*8*

In the SetupInf dialog box, click **[OK]**.

Next, make MIDI device and audio device settings.
 (→**"Driver settings"** (p. 26))

**MEMO**

If a message recommends that you restart Windows, restart Windows as directed.

**25**

# Driver settings

## ■ About the input and output devices

In order to get the best performance from the software you are using, you must choose the correct device settings. The UA-20's audio driver supports WDM and ASIO 2.0.

### Audio devices

| Audio output device | EDIROL UA-20 Out | WDM |
|---|---|---|
| | MME EDIROL UA-20 Out | MME |
| Audio input device | EDIROL UA-20 | WDM |
| | MME EDIROL UA-20 In | MME |
| ASIO device | EDIROL UA-20 | ASIO |

### MIDI devices

| MIDI OUT | **EDIROL UA-20 MIDI OUT** |
|---|---|
| | If you specify EDIROL UA-20 as the output port for your sequencer software, etc., messages will be sent from the UA-20's MIDI OUT connector. |
| MIDI IN | **EDIROL UA-20 MIDI IN** |
| | If you specify EDIROL UA-20 as the input port for your sequencer software, etc., messages will be received from the UA-20's MIDI IN connector. |

* *For details on how to make settings for your software, you should also refer to the owner's manual for your software.*

* *If you are unable to select the UA-20 in the device settings of your software, it is possible that the UA-20 driver was not installed correctly. Please re-install the driver.*

### WDM

Use this if you are using the UA-20 with the following applications or situations.
* Conventional applications such as Media Player
  (for the settings, refer to **"Input/output device settings"** (p. 27))
* WDM driver mode compatible applications such as SONAR
* DirectSound compatible applications

### ASIO

Use this if you are using the UA-20 with an ASIO-compatible application such as Cubase. In the ASIO settings of your application, choose "EDIROL UA-20."

* *To prevent audio loop feedback or double monitoring, turn monitoring off in your application, or set your application to use ASIO Direct Monitor.*

* *When using the UA-20 with ASIO, we recommend that you not set your application to use the Microsoft GS Wavetable SW Synth. (This will decrease the processing load, and make it easier to change the driver buffer size.)*

### MME

Normally you should use WDM or ASIO.
Use this in the following cases when using an application that does not support WDM driver mode or ASIO.
* Recording or playing 24-bit data

# ■ Input/output device settings

If you will be using the Windows Media Player application with the UA-20, specify the input/output devices as follows. The method in which you make device settings will depend on the software you are using. For details, refer to the owner's manual for your software.

## Windows XP users

### 1

Open the **Sound, Speech, and Audio Devices Properties** dialog box.

1. From the Windows **start** menu, choose **Control Panel**.

2. In **"Pick a category,"** click **Sound, Speech, and Audio Devices**.

3. In **"or Pick a Control Panel icon,"** click the **Sounds and Audio Devices** icon.

### 2

Click the **Audio** tab.

### 3

In the **Sound playback**, **Sound recording**, and **MIDI music playback** areas, click the **Default device** field. From the list that appears for each field, choose the device shown below.
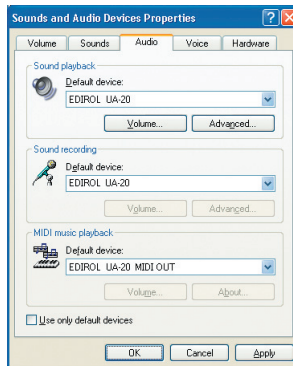
| Sound playback | EDIROL UA-20 |
|---|---|
| Sound recording | EDIROL UA-20 |
| MIDI music playback | EDIROL UA-20 MIDI OUT |

### 4

Click **[OK]** to close the **Sounds and Audio Devices Properties** dialog box.

This completes the audio and MIDI input/output settings. Proceed to **"Checking that you hear sound"** (p. 31).

**MEMO**

Depending on your system, the **System** icon may be displayed directly in the **Control Panel** (Classic view). If so, double-click the **System** icon.

**NOTE**

If you are using sequencer software, you will need to make audio and MIDI device settings from within your software. For details, refer to the owner's manual for the software you are using.

## **Windows 2000/Me users**

**1**

Open the **Sounds and Multimedia Properties** dialog box

**1.** Click the Windows **Start** menu, and from the menu that appears, select **Settings | Control Panel**.

**2.** In **Control Panel**, double-click the **Sounds and Multimedia** icon to open the **"Sounds and Multimedia Properties"** dialog box.

**MEMO**

If the **Sound and Multimedia** icon is not displayed, click **"Show all control panel options"** in the frame at the left.

**2**

Click the **Audio** tab.

**3**

For **Sound Playback**, **Sound Recording**, and **MIDI music playback** areas, click the ▼ located at the right of **[Preferred device]**, and select the following from the list that appears.
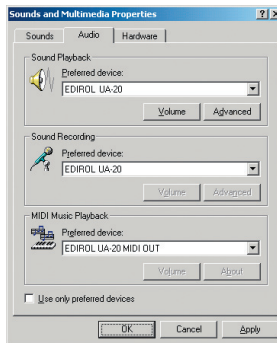
| **Sound Playback** | EDIROL UA-20 |
|---|---|
| **Sound Recording** | EDIROL UA-20 |
| **MIDI music playback** | EDIROL UA-20 MIDI OUT |

**4**

Close the **Sounds and Audio Devices Properties** dialog box.
Click **OK** to complete the settings.

This completes the audio and MIDI input/output settings.
Proceed to **"Checking that you hear sound"** (p. 31).

## Windows 98 users

### 1

Open the **Multimedia Properties** dialog box.

**1.** Click the Windows **Start** menu, and from the menu that appears, select **Settings | Control Panel**.

**2.** In **Control Panel**, double-click the **Multimedia** icon to open the **"Multimedia Properties"** dialog box.

### 2

Click the **Audio** tab.

### 3

Specify the **"Preferred device"**.

Click the **Playback** field and **Recording** field, make the following selections from the list that appears, and click **[Apply]**.

| Playback | EDIROL UA-20 |
|---|---|
| Recording | EDIROL UA-20 |
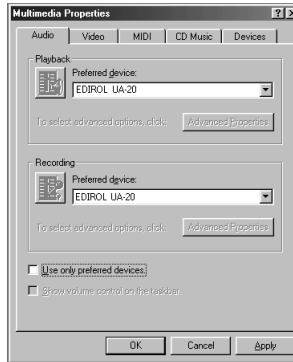
### 4

Click the **MIDI** tab.

### 5

Specify the **"MIDI output"**.

Add a check mark to **[Single instrument]**, click **[EDIROL UA-20 MIDI OUT]** in the list, and click **[Apply]**.
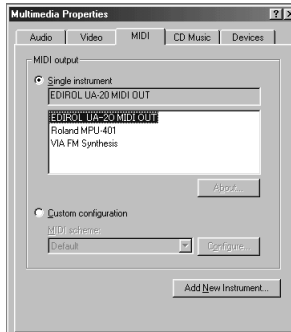
### 6

Close the **Multimedia Properties** dialog box.

Click **[OK]** to complete the settings.
This completes the audio and MIDI input/output settings.
Proceed to **"Checking that you hear sound"** (p. 31).

**29**

# ■ Software settings

Before you start up your software, use a USB cable to connect the UA-20 to your computer.

If your software allows you to specify MIDI and audio input/output settings, choose **EDIROL UA-20**. For details, refer to the owner's manual for your software.

# Checking that you hear sound

Now, let's play back the sample data to verify that the connections and settings are correct. We will use standard Windows functionality to play back the sample data provided on the included CD-ROM.
Before you continue, connect headphones or monitor speakers to the UA-20 as described in **"Basic use"** (p. 45).

**1**

Insert the CD-ROM into the CD-ROM drive of your computer.

**2**

From the **SampleSong** folder of the CD-ROM, drag **Alright(.wav)** onto your desktop.

**3**

Right-click the **Alright(.wav)** file you copied, and choose **Play** from the menu that appears.

Playback begins.

**4**

If the sample data plays correctly, the UA-20 is correctly connected to your computer, and the driver has also been installed correctly.

**NOTE**

Use of the song data supplied with this product for any purpose other than private, personal enjoyment without the permission of the copyright holder is prohibited by law. Additionally, this data must not be copied, nor used in a secondary copyrighted work without the permission of the copyright holder.

# Driver installation and settings
## (Macintosh)

If you are using a Windows computer, please proceed to **Driver installation and settings (Windows)** (p. 12).

# About the driver modes

A **"driver"** is software that transfers data between the UA-20 and application software running on your computer, when your computer and the UA-20 are connected by a USB cable. The driver sends data from your application to the UA-20, and from the UA-20 to your application.

The UA-20 has two operating modes, **Advanced mode** and **Standard driver mode**, and a different driver is used by each mode.

### Advanced mode

This is the operating mode when the rear panel **ADVANCE (mode select) switch** is **ON**. You can use the native driver included on the UA-20 Driver CD-ROM to record, play, and edit audio with high quality and stable timing. In Advanced mode, audio signals are transferred between the UA-20 and the computer at a bit depth of **24 bits** and a sample rate of **44.1 kHz**. Choose Advanced mode if you are using software that supports 24-bit audio  such as the Cubase VST or Logic Audio; or **ASIO-compatible software** that can record, play, and edit high-quality audio, such as Cubase VST or Logic Audio.
**Normally, you should use Advanced mode.**

* *You must use Advanced mode if you want to use MIDI.*

### Standard driver mode

This is the operating mode when the rear panel **ADVANCE (mode select) switch** is **OFF**. The standard USB audio driver provided by Mac OS will be used. In Standard driver mode, audio signals are transferred between the UA-20 and the computer at a bit depth of **16 bits** and a sampling rate of **44.1 kHz**. Choose this mode if you are using software that uses the standard functionality provided by Mac OS, such as software that uses the CD-ROM drive of your computer to play CD audio, or that uses the software synthesizer included with Mac OS.

* *The driver included with Mac OS does not support ASIO.*

* *The MIDI connectors are not available when using Standard driver mode.*

The installation procedure will differ depending on your system.
Please proceed to one of the following sections, depending on the system you use.

# Mac OS X users

## ■ Installing the driver

### 1
Disconnect all USB cables other than those for your keyboard and mouse, and restart your Macintosh.

### 2
Prepare the CD-ROM.

Insert the CD-ROM into the CD-ROM drive of your computer.

### 3
In the **Driver (Mac OS X)** folder of the CD-ROM, double-click **UA25USBDriver.**

### 4
The display will indicate **"Welcome to the EDIROL UA-20 USB Driver Installer"**. Click **[Continue]**.

### 5
The display will indicate **"Select a Destination"**.

Click the drive in which the operating system is installed to select it, and then click **[Continue]**.

### 6
The display will indicate **"Easy Install"**.

Click **Install** or **Upgrade**.

### 7
The display will indicate **"Installing this software requires you to restart your computer when the installation is done"**.

Click **[Continue Installation]**.

### 8
The display will indicate **"The software was successfully installed"**.

Click **[Restart]** to restart your computer.
This completes installation of the UA-20 driver.
Next, make MIDI device and audio device settings.

**MEMO**

If the **"Authenticate"** dialog box appears during the installation, input the password and click **"OK."**

**MEMO**

Select your startup disk as the drive.

# ■ Input/output device settings

If you want to use the UA-20 with the iTunes software included with your Macintosh, specify the input/output devices as follows.
The procedure for making device settings differs depending on the software you are using. For details, refer to the owner's manual for your software.

*1* Use the **USB cable** to connect the **UA-20** to your **computer**.

*2* Open **"System Preferences"** and click **"Sound"**.

*3* In the **Sound Effects** tab, set **"Play alerts and sound effects through"** to **"EDIROL UA-20 44.1 kHz"**.

*4* In the **Output** tab, set **"Choose a device for sound output"** to **"EDIROL UA-20 44.1 kHz"**.

*5* In the **Input** tab, set **"Choose a device for sound input"** to **"EDIROL UA-20 44.1 kHz"**.

When you have finished making settings, close the dialog box.

* *You'll need to make MIDI device settings within the sequencer you're using. For details, refer to the owner's manual for your sequencer software.*

**MEMO**

This unit is equipped with a protection circuit. A brief interval (a few seconds) after connecting USB cable is required before the unit will operate normally.

**MEMO**

If you want sound to be played from the internal speakers of your Macintosh, choose **"Internal speakers"** in the **Output** tab. If you don't want alerts to be played through the UA-20, choose **"Internal speakers"** for the **"Play alerts and sound effects through"** setting.

## Cautions for use

Before you use your software with the UA-20, please note the following.

• Before you start up your software, use a USB cable to connect the UA-20 with your computer.
• Do not disconnect the UA-20's USB cable while your software is running.
• Close your software before you unplug the UA-20's USB cable.
• Turn off the Sleep setting of your Macintosh.
• The UA-20 will not work in the Classic environment of Mac OS X. Use it when the Classic environment is not running.
• Depending on the model of Macintosh you are using, starting up the Macintosh when the UA-20 is connected may cause operation to become unstable. In this case, start up the Macintosh and then connect the UA-20.

## ■ Mac OS settings

You must perform this setup if you want to use MIDI.

**1**

Open the **Applications** folder of your Macintosh hard disk.
In the **Utilities** folder, double-click **Audio MIDI Setup** to
open the **Audio MIDI Setup**.
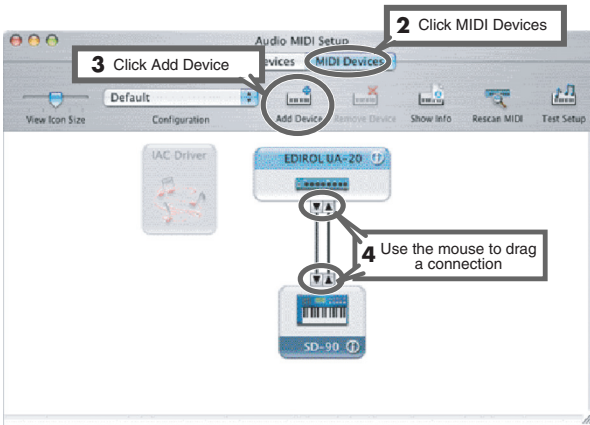


**2**

Click the **MIDI Devices** tab.

**3**

Click **Add Device**.
**New external device** will appear.

**4**

Connect the ▼ and ▲ symbols (which signify the outputs
and inputs) of the **EDIROL UA-20** icon to those of the **New
External Device** icon by using the mouse to drag between
them.

* *Change icons and set other items according to the MIDI devices that
are connected to the UA-20's MIDI connectors. If you double-click
**new external device**, the **new external device Properties**
dialog box will appear, allowing you to specify a variety of things,
such as the device name.*

### Software settings

Before you start up your software, use a USB cable to connect
the UA-20 to your computer.
If your software allows you to specify MIDI and audio input/
output settings, choose **EDIROL UA-20**. For details, refer to
the owner's manual for your software.

# Mac OS 8.6 or 9 users

## ■ Installing the UA-20driver

**Use either OMS or FreeMIDI as the MIDI driver.**

The included **UA-20 driver** is an add-on module for using the UA-20 with OMS or FreeMIDI.

\* *Either **OMS or FreeMIDI** must be installed in your Macintosh, as appropriate for the sequencer software you are using.*

If you install OMS or FreeMIDI after installing the UA-20 driver, you must install the UA-20 driver once again.

**MEMO**

OMS can be found in the **OMS 2.3.8 E** folder within the **OMS (Mac OS 9)** folder of the CD-ROM. If you would like to know more about OMS, refer to **OMS_2.3_Mac.pdf** which can be found in the same folder.

> If a UA-20 is already connected to your Macintosh when you install the driver, a message like the following will appear when the Macintosh is started up. Perform the steps described below as appropriate for the message that is displayed.
>
> If the screen indicates:
> **"Software needed for the USB device "UA-20" is not available. Would you like to look for the software on the Internet?"**
> → click **[Cancel]**.
>
> If the screen indicates:
> **"The software needed to use the USB device "UA-20" cannot be found. Please refer to the device documentation to install the necessary software".**
> → click **[OK]**.

Use the following procedure to install the UA-20 driver. Disconnect the UA-20 from the Macintosh before you perform the installation.

**1**

Exit all currently running software (applications).

If you are using a virus checker or similar software, be sure to exit this as well.

**2**

Prepare the CD-ROM.Insert the CD-ROM into the CD-ROM drive.

**3**

Double-click the **UA-20 Driver-E Installer** icon (found in the **Driver E (Mac OS 9)** folder of the CD-ROM) to start up the installer.

*4*

Verify the Install Location, and click **[Install]**.

*5*

If a message like the following is displayed, click **[Continue]**.

> This installation requires your computer to restart after installing this software. Click Continue to automatically quit all other running applications. Click Cancel to leave your disks untouched.
>
> Cancel | Continue

The other currently running applications will exit, and installation will continue.

*6*

A dialog box will indicate **Installation was successful**.

Click **[Restart]** to restart your Macintosh.

## ■ Setting the driver

If you are using FreeMIDI, proceed to **"FreeMIDI settings"** (p. 41).

### OMS settings

*1*

Set the UA-20 **ADVANCE (mode select) switch** to the **ON** position.

*2*

Use the **USB cable** to connect the **UA-20** to your **computer**.

*3*

From the CD-ROM, drag the **Driver E (Mac OS 9) - OMS Setting** folder into the **Opcode - OMS Applications** folder on the hard disk of your Macintosh to copy it there.

*4*

In the **Opcode - OMS Applications** folder where you installed OMS, double-click **OMS Setup** to start it up.

*5*

If a dialog box like the one shown here appears, click **[Turn It Off]**. A **confirmation** dialog box will then appear, so click **[OK]**.

*6*

The **Create a New Studio Setup** dialog box will appear. Click **[Cancel]**.

If you accidentally clicked **[OK]**, click **[Cancel]** in the next screen.

**MEMO**

If you are using the UA-20 in conjunction with other MIDI devices, make settings as described in **Readme_E.htm** located in the **Driver E (Mac OS 9)** folder of the CD-ROM.

**MEMO**

This unit is equipped with a protection circuit. A brief interval (a few seconds) after connecting the USB cable is required before the unit will operate normally.

**MEMO**

We recommend that you turn off **AppleTalk**, by selecting Chooser from the Apple menu.

## 7

Choose **"Open"** from the **File** menu.

From the **OMS Setting** folder that you copied in **step 3**, select the **UA-20** file, and click **[Open]**.
A screen like the one shown here will appear.
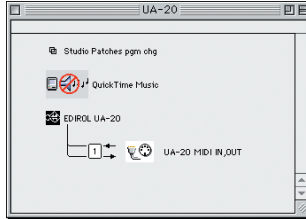
## 8

From the **Edit** menu, select **OMS MIDI Setup**.

In the **OMS MIDI Setup** dialog box that appears, check **Run MIDI in background**, and click **[OK]**.

## 9

A diamond mark (◇) indicated the settings are enabled.
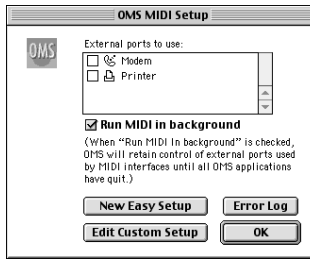
From the **File** menu, choose **Make Current**.

If you are unable to select **Make Current**, it has already been applied, and you may continue to the next step.
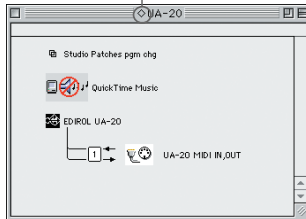
## 10

Verify that MIDI transmission and reception can be performed correctly. From the **Studio** menu, choose **Test Studio**.

## 11

When you move the mouse cursor near the MIDI connector icon, the cursor will change to a ♪ shape.

If a MIDI sound module is connected to the UA-20's MIDI OUT connector, click the MIDI connector icon shown in the diagram at the right. If you hear sound, the settings have been made correctly.

**MEMO**

For details on connecting a MIDI sound module, refer to the owner's manual for your MIDI sound module.
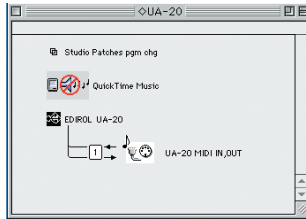
## 12

Exit **OMS Setup**.

From the **File** menu, choose **[Exit]**. If the **AppleTalk confirmation** dialog box appears, click **[OK]** to close the dialog box.

This completes installation of the driver.
Next you will install the ASIO driver.
(→**"Installing the ASIO driver"** (p. 43))

**40**

## FreeMIDI settings

*1*

Set the UA-20 **ADVANCE (mode select) switch** to the **ON** position.

*2*

Use the **USB cable** to connect the **UA-20** to your Macintosh.

*3*

From the CD-ROM, drag the **Driver E (Mac OS 9) - FreeMIDI Setting** folder into the **FreeMIDI Applications** folder on the hard disk of your Macintosh to copy it there.

*4*

Open the **FreeMIDI Applications** folder from the location into which you installed **FreeMIDI**, and double-click the **FreeMIDI Setup** icon to start it up.

*5*

The first time you start up, use the following procedure.

**1.** A dialog box saying **"Welcome to FreeMIDI!"** will appear.
Click **[Continue]**.

**2.** The **FreeMIDI Preferences** dialog box will appear.
Click **[Cancel]**.

**3.** The **About Quick Setup** dialog box will appear.
Click **[Cancel]**.

*6*

From the **File** menu, choose **Open**.

*7*

Select **UA-20** from the **FreeMIDI Setting** folder you copied in **step 3**, and click **[Open]**.

*8*

Verify that MIDI transmission and reception occur correctly.
From the **MIDI** menu, choose **Check Connections**.

### MEMO

This unit is equipped with a protection circuit. A brief interval (a few seconds) after connecting the USB cable is required before the unit will operate normally.

### MEMO

When **"OMS is installed on this computer..."** appears, click **[FreeMIDI]**.

### MEMO

If you are unable to select **Open**, make settings as follows.

**1.** From the **File** menu, choose **FreeMIDI Preference**.
**2.** Uncheck **"Use OMS when available."**
**3.** Close FreeMIDI.
**4.** Return to step 4 and continue the procedure.

**9**

Try mouse cursor will change to the shape of a keyboard.

If a MIDI sound module is connected to the UA-20's MIDI OUT connector, click the MIDI connector icon shown in the diagram at the right. If you hear sound, the settings have been made correctly.

**MEMO**

For details on connecting a MIDI sound module, refer to the owner's manual for your MIDI sound module.
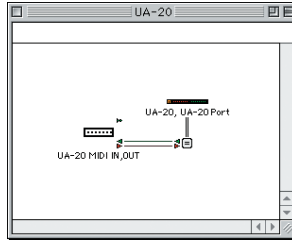
**10**

Once again choose the **MIDI** menu command **Check Connections** to end the test.

**11**

From the **File** menu, choose **Quit** to exit **FreeMIDI Setup**.

This completes installation of the driver.
Next you will install the ASIO driver.
(→**"Installing the ASIO driver"** (p. 43))

**42**

# ■ Installing the ASIO driver

**You must install the UA-20 driver even if you will be using only audio on the UA-20. Be sure to install the UA-20 driver before you install the ASIO driver. (p. 36)**

This section explains how to install the ASIO driver that allows the UA-20 to be used by your sequencer software or audio editing software.

For details on installation and settings of the ASIO driver, be sure to also read the **Driver E (Mac OS 9) - Readme_E.htm** document on the CD-ROM.

**NOTE** The UA-20 cannot play back audio data from the Macintosh's sound manager (such as audio CDs and alert sounds).

The ASIO driver of the UA-20 supports the following audio input/output channels.

- Audio input24/16 bit 1 stereo ch. (2 monaural chs.)
- Audio output24/16 bit1 stereo ch. (2 monaural chs.)

If your ASIO-compatible software supports ASIO 2.0 or recording/playback of 24 bit audio data, using the following drivers will provide a higher quality environment.

| ASIO-compatible software | | Driver to use |
|---|---|---|
| ASIO2.0-compatible | 24 bit compatible | |
| ✕ | ✕ | **UA-20 ASIO1.0 16bit** |
| ✕ | ○ | **UA-20 ASIO1.0 24bit** |
| ○ | ✕ | **UA-20 ASIO2.0 16bit** |
| ○ | ○ | **UA-20 ASIO2.0 24bit** |

Here we will explain how to install the ASIO 1.0 16 bit-compatible driver.

**MEMO**

**ASIO**
This is an audio interface standard promoted by the Steinberg Corporation. When the UA-20 is used with ASIO-compatible software, the synchronization precision will be improved, allowing a more sophisticated music production environment.

**1**

From the **Driver E (Mac OS 9) - ASIO** folder of the CD-ROM, copy **[UA-20 ASIO1.0 16bit]** to the **ASIO Drivers** folder of the ASIO-compatible software you are using (e.g., Cubase VST, Logic Audio, Digital Performer, Metro, or SPARK LE).

**2**

Start up your ASIO-compatible software.

**3**

Open the **Audio setting** dialog box of your ASIO-compatible software, and select **[UA-20 ASIO1.0 16bit]** as the **ASIO Device**.

**MEMO**

The Audio setting dialog box will be named differently depending on your software. For details refer to the manual of your software.

# UA-20 application guide

This section explains basic connections and data flow for the UA-20.
Refer to the block diagram printed on the front cover of the manual as you read this section.

* *To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.*

* *When connection cables with resistors are used, the volume level of equipment connected to the inputs (Input jacks) may be low. If this happens, use connection cables that do not contain resistors, such as those from the Roland PCS series.*

## Basic use

As shown in the diagram, you can connect headphones or monitor speakers, and monitor the playback sound from your application or the sound from the instrument or audio device to which the UA-20 is connected.
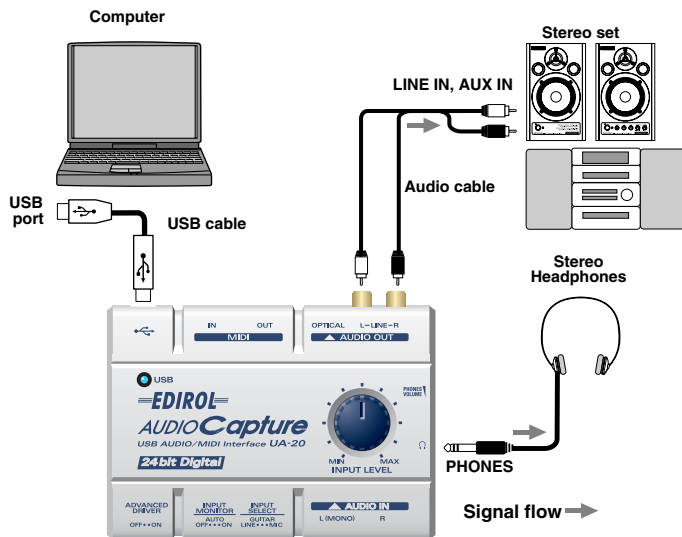
# Recording a guitar or bass

When you play your guitar along with audio data from your computer to record your performance on a sequencer, only the guitar will be recorded on the computer.
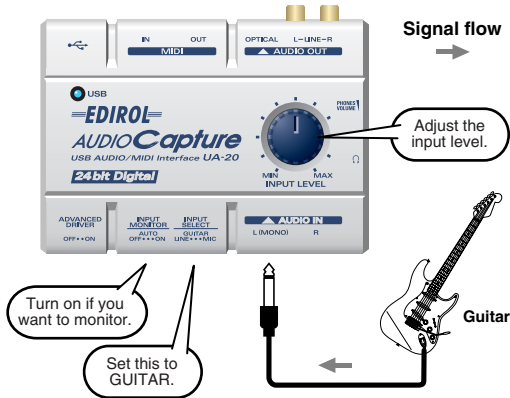


Use the **Input volume** to adjust the input level.
Check the input level on the application that you are using.

If you turn the **input monitor switch** to **ON**, the sound will be output from the **headphone jack** and the **master output jacks**.

# Recording from a mic



**Signal flow**

Adjust the input level.

Turn on if you want to monitor.

Set this to MIC.

**Microphone**

Use the **Input volume** to adjust the input level.
Check the input level on the application that you are using.

If you turn the **input monitor switch** to **ON**, the sound will be output from the **headphone jack** and the **master output jacks**.

* *Howling could be produced depending on the location of microphones relative to speakers.*
  *This can be remedied by:*

    **1.** Changing the orientation of the microphone(s).

    **2.** Relocating microphone(s) at a greater distance from speakers.

    **3.** Lowering volume levels.

# Recording from a keyboard

Here's how you can send a keyboard performance as audio data to your computer, and record it on sequencer software.



The sound that is input to **Input jack L(MONO)** will be recorded on the left channel, and the sound that is input to **R** jack will be recorded on the right channel.

Use the **Input volume** to adjust the input level.
Check the input level on the application that you are using.

If you turn the **input monitor switch** to **ON**, the sound will be output from the **headphone jack** and the **master output jacks**.

# Recording an analog signal from an audio device
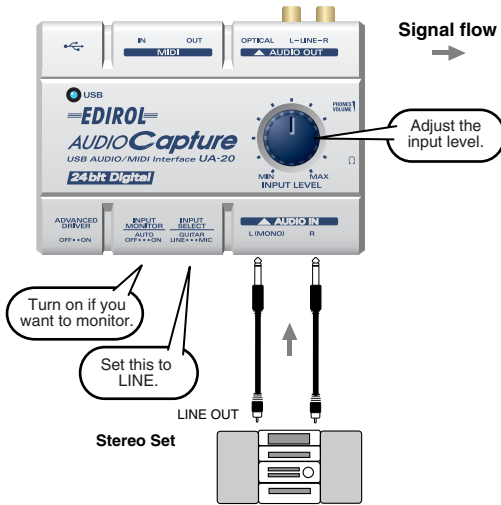
**Signal flow**

Adjust the input level.

Turn on if you want to monitor.

Set this to LINE.

**Stereo Set**

The sound that is input to **Input jack L(MONO)** will be recorded on the left channel, and the sound that is input to **R** jack will be recorded on the right channel.
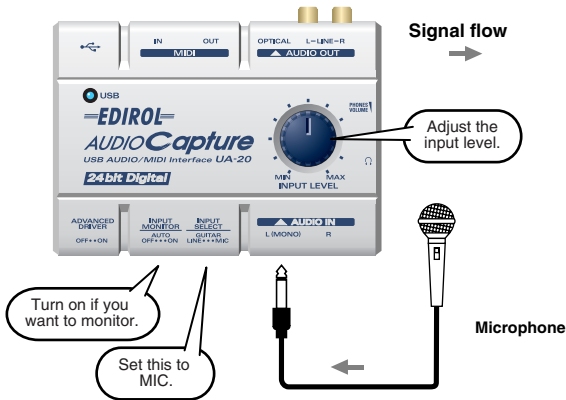
Use the **Input volume** to adjust the input level.
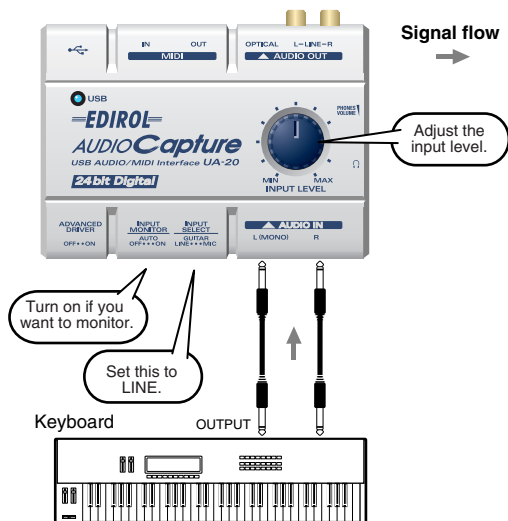Check the input level on the application that you are using.

If you turn the **input monitor switch** to **ON**, the sound will be output from the **headphone jack** and the **master output jacks**.

## Be careful of looped connections

UA-20

**Loop Connection**

LINE IN LINE OUT
LINE OUT LINE IN

Stereo Set (cassette player)
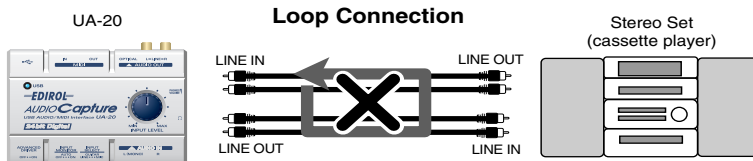
If the UA-20 is connected as shown above to a device that outputs ("thru-s") the input audio (such as a cassette player that is in recording mode), turning on the **Input monitor switch** will cause the sound to loop between the UA-20 and the other device, causing oscillation and producing an unexpectedly high volume. Be aware that such connections may cause the system to malfunction, or your speakers to be damaged.

# Recording a MIDI device
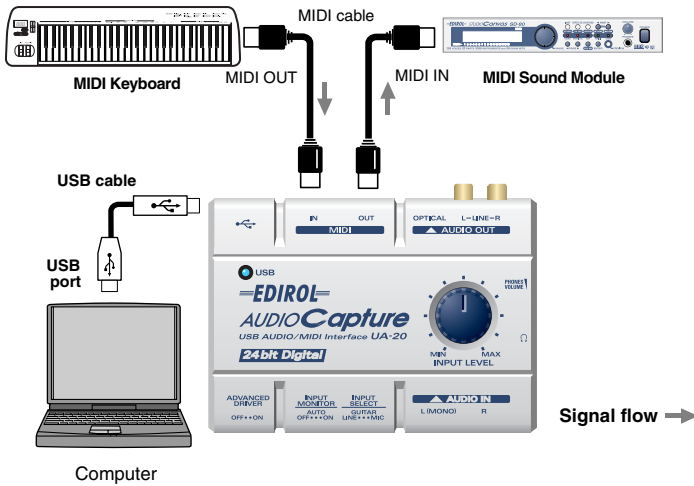


The MIDI messages from a MIDI keyboard connected to the **MIDI IN** connector can be sent via the UA-20 to sequencer software on your computer.
The MIDI messages from the sequencer software on your computer can be sent for playback to a sound module connected to **MIDI OUT**.

# Digitally recording the output of the UA-20 on an MD

Make connections as shown in the diagram.
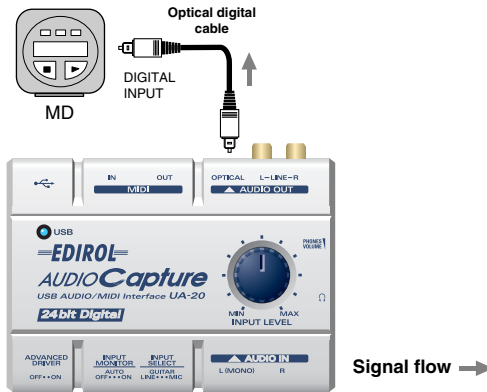


*   *The UA-20 does not support audio formats of professional digital devices.*

On the UA-20, the input from the input jacks cannot be output directly to the Digital output connector. The Digital output connector will always output only the audio signal from the computer.

# Adjusting the audio latency

When using the UA-20 in **Advanced mode**, you can change the driver settings to adjust the **latency** of the audio. To adjust the **latency**, change the **Buffer Size** in the driver settings dialog box.

* *Latency is the time delay from when an application plays back audio data until the sound is actually heard from an audio device such as the UA-20.*

**1**

Open the **"Driver Settings"** dialog box.

**Windows:**

**1.** Open the **"Control Panel"** and double-click **"EDIROL UA-20"** icon.

**2.** The **Driver Settings** dialog box will appear.

* *In Windows XP, click* **"Switch to classic view"** *to switch the display to the classic view. EDIROL UA-20 icon will not be displayed unless the classic view is selected. In Windows Me, click* **"View all Control Panel options."**

**Macintosh:**

Open the **ASIO Control Panel** from the **Audio Settings** dialog box of your ASIO-compatible application. The name of the Audio Settings dialog box and the procedure for opening the ASIO Control Panel will differ depending on your application. For details, refer to the operation manual for your application.

**2**

Adjust the driver buffer size.

The following setting will produce the shortest latency.
**Windows  :**Set **"Audio Buffer Size"** to **the far left (Min).**
**Macintosh :**Set **"Buffer Size"** to **the far left (Min).**

**3**

Click **[OK]** to close the **"Driver Settings"** dialog box.

**4**

Restart the application that is using the UA-20.

If you are using an application that has a function for testing audio devices, get it to perform its tests.

**5**

Play back audio data on your application.

If interruptions occur in the sound, repeat this procedure, and gradually increase the **buffer size** specified in **step 2** until interruptions no longer occur.

* *Depending on the application you are using, there may be a* **buffer size** *or* **latency** *adjustment function among the audio settings of the application as well. For details, refer to the operation manual for your application.*

# Using ASIO Direct Monitor

If you are using the UA-20 from an ASIO2.0-compatible application in **Advanced mode**, the UA-20's **Input monitor switch** can be controlled automatically from the application.

**1**

Open the **"Driver Settings"** dialog box.

**Windows:**

**1.**  Open the **"Control Panel"** and double-click **"EDIROL UA-20"** icon.

**2.**  The **Driver Settings** dialog box will appear.

*  *In Windows XP, click **"Switch to classic view"** to switch the display to the classic view.*
   *EDIROL UA-20 icon will not be displayed unless the classic view is selected.*
   *In Windows Me, click **"View all Control Panel options."***

**Macintosh:**

Open the **ASIO Control Panel** from the **Audio Settings** dialog box of your ASIO-compatible application. The name of the Audio Settings dialog box and the procedure for opening the ASIO Control Panel will differ depending on your application. For details, refer to the operation manual for your application.

**2**

Make the following settings.

**Windows:**  Check the **"Use ASIO Direct Monitor"** check box.
**Macintosh:** Check the **"Use ASIO Direct Monitor"** check box.

**3**

Click **[OK]** to close the **"Driver Settings"** dialog box.

*  *Depending on your application, there may also be an ASIO Direct Monitor setting among the audio settings of your application. For details, refer to the operation manual for your application.*

*  *When using ASIO Direct Monitor, monitoring may switch on/off at unexpected times, depending on the application settings and on the recording procedure. If this occurs, uncheck the check box in **step 2** to disable ASIO Direct Monitor.*

# Appendices

# Troubleshooting

If you experience problems, read this chapter first. It contains tips for solving most problems.

## Driver-related problems (Windows)

### You attempted to install as described in "Installing the driver," but did not succeed.

Install the UA-20 driver once again as described in **"Driver installation and settings (Windows)"** (p. 12). Also check the Device Manager to see whether "Other device," "Unknown device," "?," "!," or "x" is shown for any device. If you see such a device, delete it.

#### Does the Device Manager show "Other device," "Unknown device," or any device marked with "?," "!," or "x"?

If driver installation did not end successfully, the installed driver may remain in an incomplete state.

Install the UA-20 driver once again as described in **"Driver installation and settings (Windows)"** (p. 12).

#### Is the UA-20 connected correctly?

Make sure that you have used a USB cable to correctly connect the UA-20 to the USB connector of your computer.

#### Could other USB devices be connected?

When installing, all USB devices other than the UA-20 should be disconnected from your computer.

If you have connected the UA-20 to an external USB hard disk, please connect the UA-20 directly to a USB connector on the computer itself.

#### Could other applications or resident software (such as an anti-virus program) be running?

Installation may not occur correctly if other programs are running. Be sure to close all other programs before installing.

#### Are you attempting to install from a networked CD-ROM drive?

You cannot install from a networked CD-ROM drive.

**Could the CD-ROM or the lens of your CD-ROM drive be dirty?**

If the CD-ROM or the lens of your CD-ROM drive are dirty, the installer may not work correctly. Use a commercially available CD cleaner or lens cleaner to clean the CD-ROM and/or lens.

**Are the power conservation settings of your computer turned off?**

If power conservation settings are turned on for your computer, disable these settings. (For details on how to disable them, refer to the owner's manual of your computer.)

**Is there enough free space on your hard disk?**

Delete unneeded files to increase the amount of free space.

After deleting the file(s), empty the recycling bin.

**Is the USB connector enabled on your computer?**

Refer to the owner's manual for your computer, and verify that the USB connector of your computer is enabled. The driver cannot be installed unless the USB connector is enabled.

**Does your computer or USB hub have a sufficient power supply?**

If you are using bus power, the UA-20 cannot be connected if insufficient power is being supplied to it.

Check whether the following cases might apply.

- If you are using a notebook computer running on its battery, operation may be unstable with some computers. If this is the case, connect your computer to its AC adaptor.

- The power conservation mode of your computer may be limiting the power it supplies to the USB connector. Re-examine the settings of your computer.

- The UA-20 cannot be used with some bus-powered hubs (hubs that do not have their own power supply). Use a self-powered hub (a hub that has its own power supply).

**Does your computer meet the USB specification?**

Operation may be unstable if you are using a computer that does not electrically meet the USB specification. If so, you may be able to solve the problem by connecting a USB hub that has its own power supply.

## Can't install/uninstall the driver

**Did you log onto Windows as a user with administrative privileges?**

In order to install/uninstall/reinstall the UA-20 driver in Windows, you must log onto Windows as a user with administrative privileges, such as Administrator.

**Did you make the "Driver Signing Options" setting?**

You must set **"Driver Signing Options"** in order to install/reinstall the driver. (p. 13)

## Windows displays an "Installing Hardware," "Did not find digital signature" dialog box.

**Did you make the "Driver Signing Options" setting?**

You must set **"Driver Signing Options"** in order to install/reinstall the driver. (p. 13)

## The "Welcome to the Found New Hardware Wizard" dialog box appears even though you installed the driver.

**Did you connect the UA-20 to a different USB connector than the one you used when installing the driver?**

If your computer or USB hub has two or more USB connectors, and you connect the UA-20 to a USB connector to which you have not previously connected it, this dialog box may appear even though you have already installed the driver. (This is not a malfunction.)

Install the UA-20 driver once again as described in **"Driver installation and settings (Windows)"** (p. 12).

# No sound

## Can't record or play back audio or MIDI
## No sound

**Is your audio playback system (e.g., stereo) connected correctly?**

Make sure that the UA-20's output jacks are correctly connected using audio cables to the input jacks of your audio playback system. For details on connections, refer to **"Basic use"** (p. 45).

**Did you connect/disconnect the UA-20 while your software was running?**

Close all software that uses the UA-20, then disconnect and reconnect the USB cable that connects the UA-20 to your computer.

If you start up your computer with the UA-20 connected, operation may become unstable for some computers.

In this case, connect the UA-20 after starting up your computer.

**Have you specified the audio and MIDI data output destination in the operating system?**

Depending on the software you are using, you may need to specify the UA-20 as the audio data output destination for your computer. For details on this setting, refer to **"Driver settings"** (p. 26), **"Input/output device settings"** (p. 34), **"OMS settings"** (p. 38), **"FreeMIDI settings"** (p. 41).

**Is the driver installed correctly?**

In order to use the UA-20 to play back audio/MIDI data, the driver must be installed. For details on installation and settings, refer to **"Driver installation and settings"** (Windows, p. 12 / Mac OS, p. 32).

**Are you running numerous software programs?**

An error message may appear if numerous software programs are running simultaneously. If this occurs, close the software you are not using.

In Windows, a program is still running if it remains in the taskbar even after you close its window; close any unneeded software shown in the taskbar.

**Are your input/output devices connected correctly?**

In order to play back audio/MIDI using the UA-20, you must make the appropriate input/output device settings. For details on making these settings, refer to **"Driver settings"** (p. 26), **"Input/output device settings"** (p. 34), **"OMS settings"** (p. 38), **"FreeMIDI settings"** (p. 41).

**Have you selected "Game compatible device" or "Voice modem" as the output for the audio track?**

If game compatible device or voice modem (the actual name will depend on the computer you are using) is selected for the audio track of your software, the audio track may not play back. Do not select these devices as the port.

**Could the UA-20 have been connected when you started up the computer?**

Start up the computer with the UA-20 disconnected, and then connect the UA-20. Depending on the type of computer you are using, starting up the computer when the UA-20 is already connected may cause operation to be unstable. In this case, start up your computer and then connect the UA-20.

**Are the faders of the Windows volume control raised**

Adjust the faders of the Windows volume control. For details, refer to your Windows manual or the on-line Windows Help.

**If the main volume level of your Macintosh raised?**

In **System Preferences – Sound**, make sure that **Output Volume** is raised (toward the right).

**Have you specified the audio data output destination in your playback software?**

You need to make settings in your software to select the UA-20 as the destination for the output of audio data. For details on how to make this setting, refer to the owner's manual for the software you are using.

**Could your computer have entered Standby (Suspend) mode or Sleep mode?**

In this case, after your computer wakes up, close all software that had been using the UA-20, and then connect the UA-20. If this does not solve the problem, close your software and then restart your computer. We also recommend that you set your computer so that it does not enter Sleep mode.

## A device connected to the input jacks can't be heard through headphones

**Is the headphone volume set appropriately?**

Turn the headphone volume clockwise to adjust the volume.

**Is the Input monitor switch turned on?**

**Is the Input select switch set correctly?**

## Recording produces a silent file

**Did you specify the correct audio data input source within the operating system?**

Depending on the software you are using, you may need to specify the UA-20 as the audio data input source for your computer. For details on this setting, refer to **"Driver settings"** (p. 26), **"Input/output device settings"** (p. 34), **"OMS settings"** (p. 38), **"FreeMIDI settings"** (p. 41).

**Did you specify the correct audio data input source within your software?**

## Can't play/record 24-bit audio data

**Does your software support 24-bit audio data?**

You will need to use software that supports 24-bit audio data.

**Is your software set to record/play 24-bit audio data?**

Set your software to 24-bit.

## Can't record/play MIDI

**Have you correctly specified the MIDI device you want to use?**

In order to record/play MIDI tracks via the UA-20, you must install the UA-20 driver correctly (➔ **"Driver installation and settings"** (Windows, p. 12 / Mac OS, p. 32)). You must also specify the MIDI device that you want to use with your software. For details on this setting, refer to **"Driver settings"** (p. 26), **"Input/output device settings"** (p. 34), **"OMS settings"** (p. 38), **"FreeMIDI settings"** (p. 41).

# Noise or pops are heard when recording/playing on your computer

## Noise is heard during audio playback
## Pops/clicks occur during audio playback
## Noise is heard in the recorded sound

**In Windows, did you make the setting described in "Giving priority to background services"?**

In order to ensure that audio/MIDI processing occurs smoothly, make the setting described in "Giving priority to background services." (➔ Windows XP, p. 18/ Windows 2000, p. 23)

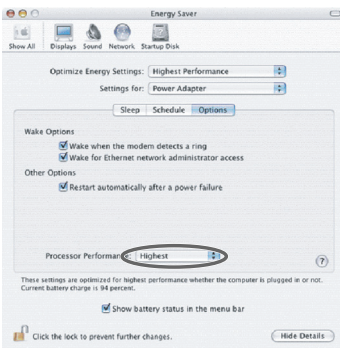**In Macintosh, check the Energy Saver settings.**

In the Mac OS **System Setup**, set **Energy Saver** as follows.
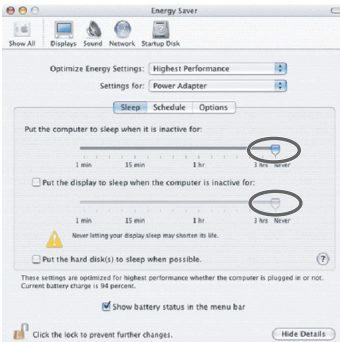


Click the **Sleep** tab.
Set **"Put the computer to sleep when it is inactive for:"** to **Never**.
Set **"Put the display to sleep when the computer is inactive for:"** to **Never**.



Click the **Options** tab.
If there is a **Processor Performance** setting, set it to **Highest**.

**In Windows, Power Management settings in the Control Panel may cause clicks or pops to occur in the audio playback.**

> The power management properties that appear when you double-click Power Management will differ depending on your computer system. The explanation that follows is for a typical situation, but you should refer to the owner's manual for your computer to verify these settings.
>
> Some computers may not have the following items.

> **1.** In the Windows **Control Panel**, double-click the **System** icon. The **System Properties** dialog box will appear.
> **2.** Click the **Hardware** tab.
> **3.** Click **Device Manager** to see the list of devices.
> **4.** From the list, choose **Advanced Power Management Support**, and click **Properties**.
> The **Advanced Power Management Support Properties** dialog box will appear.
> **5.** Click the **Settings** tab, and in **Troubleshooting**, check the **"Don't Poll Power Supply Status"** check box. Then click **[OK]**.
> **6.** In the **System Properties** dialog box, click **[OK]**.
> **7.** Restart Windows.

**Could two or more computers be connected to the UA-20 or to your mixer or audio devices?**

> Try connecting the UA-20 to only one computer. Check whether the noise disappears when the UA-20 is connected to only one computer. Connecting numerous audio devices to a computer may produce noise in some situations. If this occurs, connect only the UA-20 to your computer.

**Are you using a USB device in addition to the UA-20?**

> Try switching off USB audio devices other than the UA-20.
> If you have connected the UA-20 to an external USB hard disk, please connect the UA-20 directly to a USB connector on the computer itself.

**In Windows, you may be able to solve the problem by adjusting the buffer size in the UA-20 Driver Settings dialog box.**

> Adjust the buffer size as described in **"Adjusting the audio latency"** (p. 52).
> After changing the buffer size, you must restart any software that uses the UA-20.
> If your software has an audio device test function, execute the test function.

> *  *After changing the buffer size, you must be sure to exit, then restart any software that uses the UA-20.*

**Are numerous software programs running?**

> Playback may be interrupted if numerous software programs are running at the same time, or when you start up another software program. Close any unneeded software, and try again. If this does not solve the problem, try restarting your computer.

**Clicks or pops may occur in the sound if a LAN is operating.**

Try disabling the LAN in the Device Manager. If this eliminates the clicks or pops, you may be able to solve the problem by updating your LAN driver or BIOS.

**Does your sequencer software support ASIO 2.0?**

If your ASIO-compatible software does not support ASIO 2.0, it will not operate correctly if you use **[UA-20 ASIO2.0 16bit]** or **[UA-20 ASIO2.0 24bit]** as the ASIO driver.

In this case, select either **[UA-20 ASIO1.0 16bit]** or **[UA-20 ASIO1.0 24bit]** as the ASIO driver.

**Does your sequencer software support 24-bit audio?**

If your ASIO-compatible software does not support 24-bit audio input/output, it will not operate correctly if you select **[UA-20 ASIO1.0 24bit]** or **[UA-20 ASIO2.0 24bit]** as the ASIO driver. In this case, select either **[UA-20 ASIO1.0 16bit]** or **[UA-20 ASIO2.0 16bit]** as the ASIO driver.

**Is the UA-20 connected to a USB hub?**

Try connecting the UA-20 directly to the USB connector of your computer itself.

**Noise may be entering via the line inputs or mic inputs.**

If a MIDI sound module with a USB connector is connected via USB to the same computer as the UA-20, and the output of the MIDI sound module is connected to the input jacks of the UA-20, noise from the computer may be heard via the MIDI sound module from the UA-20. In this case, you can either connect the MIDI sound module and UA-20 in parallel via a self-powered hub, or connect the MIDI sound module in series or via a MIDI interface.

**Try making the following changes to the disk drive settings.**

Some computers may not have the following settings.

**1.** In the Windows **Control Panel**, double-click **System**.

**2.** Click the **Device Manager** tab.

**3.** Double-click **Disk Drives** to see the list of devices.

**4.** From the list, select **GENERIC IDE DISK TYPE??**, and click **Properties** to access the **GENERIC IDE DISK TYPE?? Properties** dialog box.

  * *In the **??** field of **GENERIC IDE DISK TYPE??**, there will be a number that differs depending on your computing environment.*

**5.** Click the **Settings** tab, place a check mark in the check box for the **DMA** option, and click **[OK]** to close the dialog box.

  * *Depending on your system, a dialog box for DMA settings may appear. Verify the contents of the dialog box, and click **[OK]** or **[Cancel]**.*

**6.** In System Properties dialog box, click **[OK]** to close the dialog box.

**7.** Restart your computer so that the above settings will take effect.

**Depending on the virtual memory setting or network-related settings, noise may occur.**

Please make the following settings before use.

- **[Mac OS 8.6 or 9]** In Chooser of the **Apple menu**, set AppleTalk to **"Inactive."**
  (This setting is not changed as a result of turning off AppleTalk, as requested by OMS when sequencer software is started up. You must change the setting yourself using the **"Chooser."**)

- **[Mac OS 8.6 or 9]** In the **"Memory"** **Control Panel**, set **Virtual Memory** to **"Off."**

- Depending on the way in which you connect to the Internet, use the UA-20 with the following settings.

  **If you connect to the Internet via a LAN cable**

  Use while the LAN cable is connected.

  **If you connect to the Internet via the internal modem port, or are not connected to the Internet**

  In the **"TCP/IP"** Control Panel, set **"Connect via"** to **"PPP."**

  After you have made the settings, restart your Macintosh.

* *Do not use software that accesses the network (such as a Web browser) at the same time that you are using sequencer software or audio editing software.*

## Playback/recording stops midway, and subsequent playback/recording is not possible

**While you were using the UA-20, could your computer have performed a task with a heavy processing load, such as accessing a CD-ROM drive or network?**

If a heavy processing load occurs while the UA-20 is being used, it may not work correctly. In this case, stop playback/recording, and then start playback/recording once again. If you are still unable to play/record correctly, close all software that had been using the UA-20, and re-connect the UA-20.

# Noise or distortion occurs when the UA-20 is not connected to your computer/The sound is too weak

### Has a mic or guitar been left connected?

If a mic or guitar is connected to the UA-20, disconnect the mic or guitar and turn the input volume knob all the way toward the left (lowering the input level).

### Have you connected the grounding terminal?

Connecting the chassis of your computer or the grounding terminal of your computer's AC power cord to an electrical ground may solve the problem. Also, make sure that a device that produces a strong magnetic field, such as a television or microwave oven, is not located nearby.

### Could numerous audio devices be connected?

Noise may occur if numerous audio devices are connected. Do not connect audio devices you are not using.

### Are two or more audio devices such as the UA-20 or a mixer connected to your computer?

Try connecting only a single UA-20 unit, and check whether the noise disappears. If numerous audio devices are connected to a computer, noise may occur depending on your system. In such cases, connect only the UA-20 to your computer.

## Volume from a device connected to the input jacks is too low

### Are you using a cable that has a built-in resistor?

Use a cable without a built-in resistor (e.g., Roland PCS series).

### Is the Input volume raised appropriately?

Turn the knob clockwise to adjust the volume.

## A substantial amount of noise is present in the guitar sound

**Does the noise decrease when you turn down the volume of your guitar?**

If the noise decreases when you turn down the volume of your guitar, the guitar pickup may be affected by noise from your computer or display. Try locating the guitar as far away from the computer as possible.

## Insufficient volume from your guitar

**Connect your guitar to input jack L.**

**Set the Input select switch to GUITAR.**

## Insufficient volume from a mic

**Is the Input volume raised appropriately?**

Turn the knob clockwise to adjust the volume.

# Others

## The volume changed when you resumed from Suspend or Hibernation status

**When Windows 2000 resumes from Suspend or Hibernation, the output volume setting is changed due to a problem of Windows.**

Using the Windows volume controls, adjust the USB audio (speaker) volume slider.

# Installing the OS-standard driver

The procedure for installation and settings will depend on your system.
Proceed to the appropriate section as follows.

## ■Windows XP/2000 users

**1.** With the UA-20 disconnected, start up Windows.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

**2.** Exit all currently running software (applications).
If you are using a virus checker or similar software, be sure to exit it as well.

**3.** Place the UA-20's **ADVANCED (mode select)** switch in the **OFF** position.

**4.** Use the **USB cable** to connect the **UA-20** to your **computer**.
The UA-20 will be detected automatically, and the driver will be installed

### MEMO

If you are using Windows XP, the installation has been completed when the message
near the taskbar saying that **"Found New Hardware"** has disappeared.

### MEMO

This unit is equipped with a protection circuit. A brief interval (a few seconds) after
connecting a USB connector is required before the unit will operate normally.

**5.** When installation is complete, restart Windows.
Next, you will need to make the driver settings.
(→**"Driver settings"** (p. 26))

# ■Windows Me users

**1.** With the UA-20 disconnected, start up Windows.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

**2.** Exit all currently running software (applications).
If you are using a virus checker or similar software, be sure to exit it as well.

**3.** Place the UA-20's **ADVANCED (mode select) switch** in the **OFF** position.

**4.** Use the **USB cable** to connect the **UA-20** to your **computer**.

## MEMO

This unit is equipped with a protection circuit. A brief interval (a few seconds) after connecting a USB connector is required before the unit will operate normally.

**5.** Windows will detect the UA-20, and the **"Add New Hardware Wizard"** dialog box will appear.
Make sure that **Automatic search for a better driver (Recommended)** is selected, and click **[Next]**.

**6.** Driver detection will begin.

   \* *Depending on your system, a certain amount of time may be required for the device to be detected after the driver has been installed.*

**7.** When the driver has been found, driver installation will begin.

**8.** Once the driver has been installed, a dialog box will inform you of this.
Click **[Finish]**.

**9.** Restart Windows.

**10.** Next, you will need to make the driver settings.
(→**"Driver settings"** (p. 26))

# ■Windows 98 users

The **USB composite device** driver is installed first, then the **USB audio device** driver is installed. Use the following procedure to install the drivers.

1. With the UA-20 disconnected, start up Windows.
   Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

2. Exit all currently running software (applications).
   If you are using a virus checker or similar software, be sure to exit it as well.

3. Place the UA-20's **ADVANCED (mode select) switch** in the **OFF** position.

4. Use the **USB cable** to connect the **UA-20** to your **computer**.

**MEMO**

This unit is equipped with a protection circuit. A brief interval (a few seconds) after connecting a USB connector is required before the unit will operate normally.

5. **USB composite device** will be detected automatically, and the **"Add New Hardware Wizard"** dialog box will appear. Click **[Next]**.

6. When **"What do you want Windows to do?"** appears, select **"Search for the best driver for your device (Recommended)"**, and click **[Next]**.



7. A dialog box like the one shown will appear. Check **CD-ROM drive**, and click **[Next]**.

**MEMO**

If the display indicates **"Can't find an updated driver for this device"**, check **"Updated driver"**, and click **[Next]**.



8. A dialog box like the one shown will appear. Click **[Next]**.

**NOTE**

Depending on your system, the **Driver location** may differ from the illustration, but this is not a problem.

9. File (driver) copying will begin.

If the Windows CD-ROM is not inserted in the CD-ROM drive, a **"Insert Disk"** dialog box may appear. In this case, insert the Windows CD-ROM into the CD-ROM drive and click **[OK]**.

10. When installation of the **USB Composite Device** driver is completed, a dialog box like the one shown here will appear. Click **[Finish]**.



11. Next, the **USB audio device** will be detected automatically, and the **"Add New Hardware Wizard"** dialog box will appear.
    Click **[Next]**, and proceed with the installation in the same way as in steps **8-11**.

12. When installation of the **USB audio device** driver is complete, a dialog box like the one shown here will appear.
    Click **[Finish]**.



Installation of the **USB composite device** driver and **USB audio device** driver has been completed.
Restart Windows.
Next, you will need to make the driver settings.(→ **Driver settings** (p. 26))

## Volume Control setting

If you installed the standard Windows driver, set the Windows volume control.

**NOTE**

If the Volume Control is not installed on your computer, use the **Control Panel** icon **Add or Remove Programs** to install it. For details on installation, refer to the Windows manual or Help.

**NOTE**

If Mute is checked or if the slider is lowered all the way, no sound will be output from the UA-20.

**1.** Open the **Volume Control**.
Click the Windows **Start** menu, and select **Programs | Accessories | Entertainment | Volume Control**.

**2.** Raise or lower the slider to adjust the volume of the UA-20.
If you have installed the Standard driver, the UA-20 can use the Windows **volume control** to adjust the output volume.

**MEMO**

You will be able to use the UA-20 at the best audio quality if you set the Volume Control volume to the maximum setting.

**Items that can be set**

| | |
|---|---|
| **CD Player** | Controls the volume of "audio CDs" on the internal CD-ROM drive of the computer. (*1) |
| **WAVE** | Controls the volume of sound output from the "EDIROL UA-20" audio output device. Digital output and analog output will change. |
| **SW Synth** | Controls the volume of the software synthesizer built into Windows. |

*1
If the CD playback volume does not change when you adjust this control, then change the WAVE volume.

## When playing audio CDs from the computer's internal CD-ROM drive, or using the UA-20 to play game music (Standard driver mode only)

**Windows XP/2000 users:**

**1.** Open the **System Properties** dialog box.
Select **Start | Settings | Control Panel**, and in the **Control Panel**, double-click the **System** icon.
(**Windows XP–** Click the Windows **start** menu, and from the menu that appears, select **Control Panel**.)

**2.** Open the **Device Manager**.
Click the **Hardware** tab, and click the **Device Manager** button.

**3.** Open the CD-ROM drive's **Properties**.
In CD-ROM drive, double-click the **CD-ROM drive** that you are using. In **Digital CD Playback**, check the **"Enable digital CD audio for this CD-ROM device"** item.

**Windows Me users:**

**1.** Open **System Properties**.
Select **Start | Settings | Control Panel**, and in **Control Panel**, double-click the **System** icon.

**2.** Open the CD-ROM drive's **Properties**.
Double-click the **CD-ROM** icon, and then double-click the CD-ROM drive that you are using.

**3.** Click the **Properties** tab, and in **Digital CD Playback**, check the **"Enable digital CD audio for this CD-ROM device"** item.

**Windows 98 users:**

**1.** Open the **Multimedia Properties** dialog box.
Select **Start | Settings | Control Panel**, and in **Control Panel**, double-click the **Multimedia** icon.

**2.** Click the **Music CD** tab, and check the **"Enable digital CD audio for this CD-ROM device"** item.

> \* *Depending on your system, playback may still not be possible. For details, please contact the manufacturer of your computer. If you are using a PC-card (PCMCIA) type CD-ROM drive, playing back WAVE data from a CD-ROM or playing an audio CD may cause interrupted sound, or possibly no sound at all.*

# ■Mac OS X Users

**1.** With the UA-20 disconnected, start up the Macintosh.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

**2.** Exit all currently running software (applications).
If you are using virus checking or similar software, be sure to exit it as well.

**3.** Place the UA-20's **ADVANCED (mode select)** switch in the **OFF** position.

**4.** Use a USB cable to connect the UA-20 to your Macintosh.

**5.** Open the **System Preference** dialog box and click **Sound**.

**6.** In the **Sound Effects** tab, click **Play alerts and sound effects through** and choose
**UA-20** as the playback device for sound effects.

## MEMO

If no sound is output from the speaker (internal speaker) of the Macintosh, choose
**"Built-in audio controller"** in the Input tab and Output tab.

**7.** Click the **Output** tab, and choose **UA-20** as the device that will output sound.

**8.** If the **Input** tab is displayed, choose **UA-20** as the device for inputting sounds.

## NOTE

The output volume of the UA-20 cannot be adjusted with the Mac OS sound dialog
box. Make volume adjustments through other means, such as on the speaker system
you are using.

---

**Known issues: UA-20**

**Caution**

Please check the following before you use your software.
- If your software allows you to make audio input/output settings, choose **UA-20**.
  For details, refer to the owner's manual of the software you are using.
- Use a USB cable to connect the UA-20 to your computer before you start up your
  software.
- Do not disconnect the UA-20's USB cable while your software is running.
- Exit your software before you disconnect the UA-20's USB cable.
- Turn off the Sleep settings of your Macintosh.
- The UA-20 will not operate in the Mac OS X Classic environment. You can not use
  it if the Classic environment is running.

---

# ■Mac OS 8.6 or 9 Users

**1.** With the UA-20 disconnected, start up the Macintosh.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

**2.** Exit all currently running software (applications).
If you are using virus checking or similar software, be sure to exit it as well.

**3.** After starting up Mac OS, select **Apple System Profiler** from the **Apple** menu.
The **"Apple System Profiler"** dialog box will appear.

**4.** Click the **Devices and Volumes** tab.

**5.** Set the UA-20's **ADVANCE (mode select) switch** to the **ON** position.

**6.** Use a USB cable to connect the UA-20 to your computer.

## MEMO

This unit is equipped with a protection circuit. A brief interval (a few seconds) after
connecting a USB connector is required before the unit will operate normally.'

**7.** Wait for approximately five seconds.
UA-20 uses a driver included with Mac OS.
While you are waiting, the screen display will not change, but the UA-20 is being detected. Do
not touch the mouse or keyboard.

**8.** In order to check that detection has been completed, once again go to **"Apple System Profiler"**,
and select **"Update all information"** from the **Commands** menu.
In the **USB** area, three audio devices will be displayed.

If these are displayed correctly, driver installation has succeeded. In the **File** menu, click
**Quit** to close **"Apple System Profiler."**
If they are not displayed correctly, disconnect the UA-20, wait for about ten seconds,
and then repeat the procedure from **step 2**.

## Settings the sound input/output

**1.** From the **Apple** menu, select **Control Panel** – **Sound**.
The **Sound** dialog box will appear.

**2.** Click the **Speakers** tab or **Speaker Settings**.

**3.** With the volume turned down on the **UA-20** and on your peripheral audio equipment, click **[Start Test]**.
Test signals will be output from the UA-20; left first, then right, as indicated in the screen.

# NOTE

The output volume of the UA-20 cannot be adjusted with the Mac OS sound dialog box. Make volume adjustments through other means, such as on the speaker system you are using.

**4.** In the **Sound** dialog box, click the **Input** tab.
In **Choose a source for sound input (Device)**, select **USB audio**.

    \* *Do not check **"Play sound through output device"**.*

# NOTE

If **USB audio** is not displayed, close the **"Sound"** dialog box, and disconnect the UA-20's USB cable from the Macintosh. Perform the driver installation once again.

**5.** In the **Sound** dialog box, click the **Input** tab.
In **Choose a source for sound input**, select **USB audio**.

    \* *Do not check **"Play sound through output device."***

**6.** When you are finished making settings, close the **Sound** dialog box.
From the **File** menu, select **Quit**.

# Main Specifications

## UA-20: USB Audio/MIDI Interface

● **Number of Audio Record/Playback Channels**
Record:     1 pair of stereo
Playback:   1 pair of stereo
Full duplex

● **Signal Processing**
PC interface:     24 bit

● **Sampling Rate**
Digital output:     44.1 kHz

● **Nominal Input Level**
-45 – -10 dBu

● **Input Impedance**
LINE:       22 k ohms
GUITAR:     470 k ohms
MIC:        22 k ohms

● **Nominal Output Level**
-10 dBu

● **Output Impedance**
1 k ohms

● **Residual Noise Level**
(input terminated with 1 k ohm,
Master Volume = max.,
Input Monitor = off, IHF-A, typ.)
Master Out:     -105 dBu or less

● **Interface**
USB
Digital output
        Optical Type
(conforms to IEC60958 consumer format)

● **Connectors**
Input Jack (1/4 inch phone type) x 2

Digital Out Connector
 (Optical type)

Headphones Jack
 (Stereo miniature phone type)

Master Out Jack
 (RCA phono type)

MIDI Connectors

● **Power Supply**
Supplied from the computer

● **Current Draw**
170 mA

● **Dimensions**
149 (W) x 110.5 (D) x 42.8 (H) mm
5-7/8 (W) x 4-3/8 (D) x 1-11/16 (H) inches

● **Weight**
210 g / 8 oz

● **Accessories**
Owner's Manual
USB cable
CD-ROM

(0 dBu = 0.775 V rms)

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

# Information

When you need repair service, call your nearest EDIROL/Roland Service Center or authorized EDIROL/Roland distributor in your country as shown below.

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London W4 5PY
U. K.
TEL: +44 (0)20 8747 5949
FAX:+44 (0)20 8747 5948
http://www.edirol.com/europe

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Nordhavnsvej 7, Postbox 880,
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DENMARK
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G2 Calmount Park, Calmount
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Republic of IRELAND
TEL: (01) 4294444

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TEL: (0)8 702 00 20

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SWITZERLAND
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P.O. Box 180
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Corniche Road, Aldossary
Bldg., 1st Floor, Alkhobar,
SAUDI ARABIA

P.O.Box 2154, Alkhobar 31952
SAUDI ARABIA
TEL: (03) 898 2081

**SYRIA**

**Technical Light & Sound
Center**
Rawda, Abdul Qader Jazairi St.
Bldg. No. 21, P.O.BOX 13520,
Damascus, SYRIA
TEL: (011) 223-5384

**TURKEY**

**ZUHAL DIS TICARET A.S.**
Galip Dede Cad. No.37
Beyoglu - Istanbul / TURKEY
TEL: (0212) 249 85 10

**U.A.E.**

**Zak Electronics & Musical
Instruments Co. L.L.C.**
Zabeel Road, Al Sherooq Bldg.,
No. 14, Grand Floor, Dubai,
U.A.E.
TEL: (04) 3360715

As of December 10, 2005 (EDIROL-1)

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