

**EDIROL**

**USB AUDIO INTERFACE/  
MIDI KEYBOARD CONTROLLER**

# **PC-80**

## **Owner's Manual**

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (OWNER'S MANUAL 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.

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# USING THE UNIT SAFELY

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

### About ⚠ WARNING and ⚠ CAUTION Notices

<b>⚠ WARNING</b>	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
<b>⚠ CAUTION</b>	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * 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.
- Do not open (or modify in any way) the unit or its AC adaptor.
- 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.
- 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.
- 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.

#### ⚠ WARNING

- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.
- Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.
- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!
- 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.
- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

## **WARNING**

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the “Information” page when:
  - The AC adaptor, the power-supply cord, or the plug has been damaged; or
  - 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 force the unit’s power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord’s outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.



- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the “Information” page.



- 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**

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.



- Always grasp only the plug on the AC adaptor cord when plugging into, or unplugging from, an outlet or this unit.



- At regular intervals, you should unplug the AC adaptor and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.



- 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.



- Never handle the AC adaptor or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit.



- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.



- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet.



- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.



- Should you remove the ground terminal screw, keep them 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 3, please read and observe the following:

## Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- 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.
- Do not allow objects to remain on top of the keyboard. This can be the cause of malfunction, such as keys ceasing to produce sound.

## 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.

## Repairs and Data

- Please be aware that all data contained in the unit’s memory may be lost when the unit is sent for repairs. Important data should always be written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Roland assumes no liability concerning such loss of data.

## Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of losing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit’s memory on paper.
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit’s memory once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- 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.
- Never strike or apply strong pressure to the display.
- A small amount of noise may be heard from the display during normal operation.
- 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 only the specified expression pedal (Roland EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.
- 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.
- Unauthorized duplication, reproduction, hiring, and lending prohibited.
- Before you open the included CD-ROM, you must read the "license agreement." Opening the CD-ROM will be taken to mean your acceptance of the license agreement.
- Depending on the material and temperature of the surface on which you place the PC-80, its rubber feet may discolor or mar the surface.  
You can place a piece of felt or cloth under the rubber feet to prevent this from happening. If you do so, please make sure that the PC-80 will not slip or move accidentally.

## 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.
- 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.

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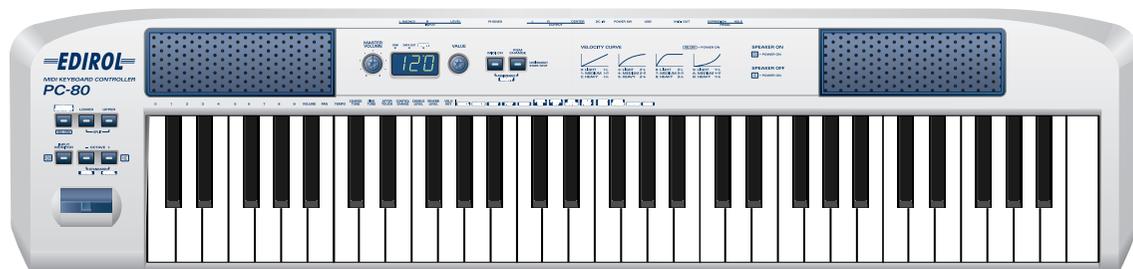
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# Contents of the package

The PC-80 package contains the following items. As soon as you open the package, please check that you have all of these items. If anything is missing, please contact your dealer.

## ● MIDI Keyboard Controller: PC-80



## ● AC Adaptor

This AC adaptor is designed specifically for the PC-80. Do not use any other AC adaptor, since doing so will cause malfunctions.

## ● USB Cable

Use this cable to connect the PC-80's USB connector to your computer's USB connector. If it becomes damaged or if you need a replacement for the included USB cable, please contact one of the "Service locations" listed on the warranty envelope.

## ● CD-ROM

### ● PC-80 Software CD-ROM

This contains the driver that you'll need in order to use the PC-80, and the PC-80 software synthesizer.

### ● SONAR LE CD-ROM

This contains the SONAR LE sequencer software. SONAR LE can be used only with the Windows operating system.

\* Before you open the included CD-ROM, you must read the "license agreement." Opening the CD-ROM will be taken to mean your acceptance of the license agreement.

\* 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.



\* 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.

## ● Owner's manual

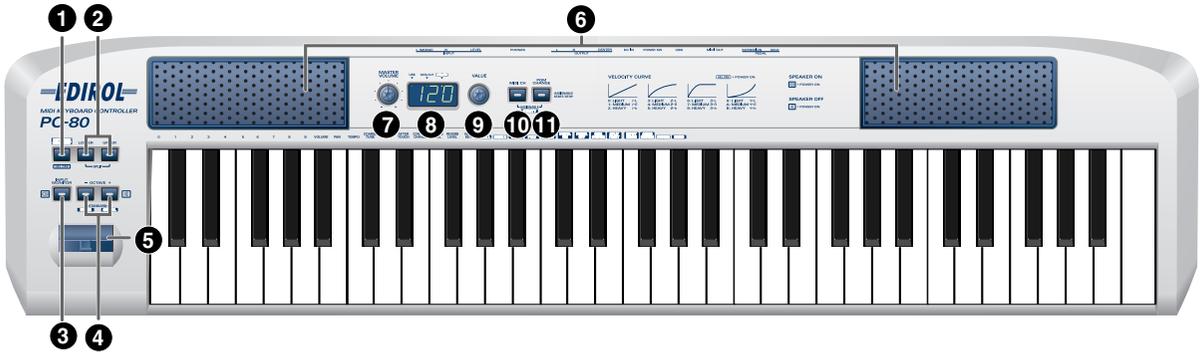
This is the document you're reading. Keep it at hand for easy reference.

## ● Roland Software License agreement

This agreement grants you permission to use certain software for which Roland is the copyright owner. You must read this before you open the CD-ROM package. A license agreement is also displayed in the screen when you install the software, so please read this as well.

# Names of things and what they do

## Panel



### 1 Software Synthesizer Button (SOFTWARE SYNTHESIZER)

If the PC-80 is connected to your computer via USB, this button starts up the included PC-80 software synthesizer (p. 33).



### 2 Split Buttons (SPLIT)

Use the LOWER button and UPPER button to switch between Lower mode, Upper mode, and Split mode (p. 35, p. 37).



### 3 Direct Monitor Button (DIRECT MONITOR)

This button switches on/off the Direct Monitor function (which sends the input signal from the audio input jacks directly from the PC-80's speakers, headphone jacks, and master output jacks).



ON	The input signal from the audio input jacks will be output to the PC-80's speakers, headphones jacks, and master output jacks.
OFF	The input signal from the audio input jacks will not be output to the PC-80's speakers, headphones jacks, and master output jacks.

\* The Direct Monitor function cannot be controlled from ASIO 2.0 compatible applications such as Cubase.

### 4 Octave Shift Buttons (OCTAVE +/-)

Use the **octave shift buttons** to shift the pitch of the keyboard up or down an octave at a time. When you're not in Play mode (p. 60), you can use these buttons to finalize an item (the **ENTER** button) or cancel a setting and return to Play mode (the **CANCEL** button).



## ■ SPEAKER ON/OFF setting

You can change the SPEAKER ON/OFF setting by holding down the **[DIRECT MONITOR]** or the **[OCTAVE +]** button while turning the power on. (→ SPEAKER ON/OFF, p. 87)

				<b>SPEAKER ON</b>	Turn on the power while holding down the [DIRECT MONITOR] button
				<b>SPEAKER OFF</b>	Turn on the power while holding down the [Octave +] button

**5 Pitch Bend/Modulation Lever**

Use this to vary the pitch or to apply vibrato.

**6 SPEAKER**

These speakers output the sound of the PC-80 software synthesizer, the sequencer software you're using, or an instrument or audio device you've connected to the PC-80.

The speakers will output the same sound as the master output jacks and headphone jacks. If you connect headphones, no sound will be heard from the speakers, but the sound will still be output from the master output jacks.

For details on how to switch the output of the built-in speakers on/off, refer to “**SPEAKER ON/OFF setting**” (p. 10).

**7 Master Volume Knob (MASTER VOLUME)**

This adjusts the volume that is output from the PC-80's built-in speakers, master output jacks, and headphone jacks.

**8 Display**

This shows the current operating state and various other information.

<b>Number</b>	When you operate a controller, its value will appear briefly.
<b>USB</b>	This will light if the PC-80 is connected via USB to your computer.
<b>DATA OUT</b>	This will blink when a MIDI message is transmitted to USB or MIDI OUT.
<b>UTILITY</b>	This will light in Utility mode (p. 61).

**9 VALUE Encoder (VALUE)**

This controls the MIDI transmit channel or program change number.

In **Controller mode** (p. 67), it controls a specific parameter (p. 78).

The value is finalized when you turn the VALUE encoder.

**10 MIDI Channel Button (MIDI CH)**

This sets the transmit channel (current channel, p. 62) of the keyboard and bender lever.

In **Controller mode** (p. 67) it transmits a Start message (FAh). If the PC-80 software synthesizer is running, this sets parameters of the PC-80 software synthesizer.

**11 Program Change Button (PGM CHANGE)**

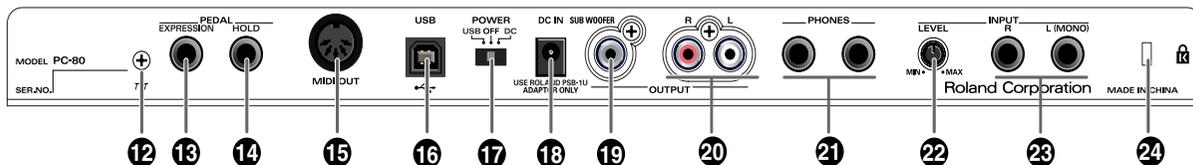
This transmits a program change on the current channel.

In **Controller mode** (p. 67) it transmits a Stop message (FCh).



If you do not play the PC-80 or perform any operation for a certain amount of time, the display and button illumination will darken.

# Rear Panel



## 12 Grounding Terminal

Depending on the circumstances of a particular setup, you may experience a discomforting sensation, or perceive that the surface feels gritty to the touch when you touch this device, microphones connected to it, or the metal portions of other objects, such as guitars. This is due to an infinitesimal electrical charge, which is absolutely harmless. However, if you are concerned about this, connect the ground terminal (see figure) with an external ground. When the unit is grounded, a slight hum may occur, depending on the particulars of your installation. If you are unsure of the connection method, contact the nearest Roland Service Center, or an authorized Roland distributor, as listed on the “Information” page.

### Unsuitable places for connection

- Water pipes (may result in shock or electrocution)
- Gas pipes (may result in fire or explosion)
- Telephone-line ground or lightning rod (may be dangerous in the event of lightning)

\* You must make the ground connection using the screw that came with the PC-80.

## 13 Expression Pedal Jack (EXPRESSION)

You can connect an expression pedal (Roland EV-5) here, and use it to control the tone or volume in real time.

EXPRESSION



## 14 Hold Pedal Jack (HOLD)

You can connect a pedal switch (Roland DP series) here, and use it as a hold pedal.

HOLD



## 15 MIDI OUT Connector

You can connect this to the MIDI IN connector of another MIDI device, and transmit MIDI messages to that device.



MIDI OUT

## 17 USB Connector

Use this to connect the PC-80 to your computer via a USB cable.

USB



## 17 Power Switch (POWER)

DC	Power is turned on, when using the AC adaptor
OFF	Power is off
USB	Power is on, when connected via a USB cable (not using the AC adaptor) * USB (bus power) can be used if the PC-80 is connected to your computer via a USB cable. In this case, the power is supplied from the computer via the USB cable. If you want to use bus power, set the power switch to the USB position. With some computers, the PC-80 may not operate on bus power. If so, please use the included AC adaptor.



**18 AC Adaptor Jack (DC IN)**

Connect the included AC adaptor here.

DC IN

**19 Sub-woofer Output Jack (SUB WOOFER)**

Use this if you want to connect a sub-woofer to the PC-80.

**20 Master Output Jacks**

These jacks output an analog audio signal.

**21 Headphone Jacks (PHONES)**

Connect headphones to these jacks. The headphone jacks output the same sound as from the speakers and the master output jacks. If headphones are connected, sound will not be output from the speakers, but will still be output from the master output jacks.

**22 Input Level Knob (LEVEL)**

This adjusts the input level from the audio input jacks.

**23 Audio Input Jacks**

These are input jacks for analog audio signals. You can connect dynamic mics, guitars, or audio devices here. When you connect a device to the audio input jacks, you must specify the type of device as described in “Setting the Input Mode” (p. 83). If you connect a guitar or mic only to the L (MONO) jack, the input will be monaural.

**24 Security Slot (K)**

A commercially available security lock can be attached here.

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



# MEMO

# Setup

This section explains how the software you'll need in order to use the PC-80 should be installed in your computer. In order to use all of the PC-80's functionality, you must install both the driver and the PC-80 software synthesizer.

<b>Installation and settings (Windows)</b> .....	p. 16
<b>Installation and settings (Macintosh)</b> .....	p. 29

## **What is the driver?**

The driver is software that transfers data between the PC-80 and the application software on your computer when the PC-80 is connected to your computer via a USB cable. The driver sends data from your application software to the PC-80, and sends data from the PC-80 to your application.

## **PC-80 software synthesizer**

This is a software synthesizer created specifically for the PC-80. It runs on Windows 2000/XP and Mac OS X (10.3 or later). Simply by connecting the PC-80 to your computer, you'll be able to enjoy performing high-quality sounds.

# Installation and settings (Windows)

In order to use the PC-80, you'll need to install both the driver and the PC-80 software synthesizer.

## Installing the driver

The procedure for installation and settings will differ depending on your system. Proceed to the appropriate section for your system.

- Windows XP users ..... (p. 16)
- Windows 2000 users ..... (p. 21)

## Windows XP users

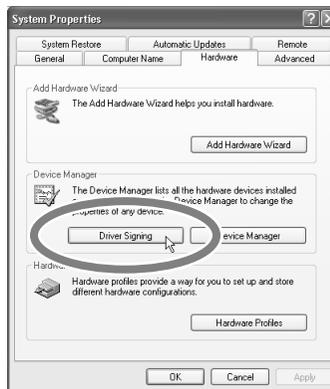
1 Start up Windows with the PC-80 disconnected.  
Log on to Windows using a user name that has administrative privileges (such as Administrator).

2 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.

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

The **Driver Signing Options** dialog box will open.



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

If “**Ignore**” is selected, simply click [**OK**]. If this is not set to “**Ignore**,” make a note of the current setting (“Warn” or “Block”), change the setting to “**Ignore**,” then click [**OK**]

### MEMO

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

### MEMO

If you've changed the “**Driver Signing Options**,” return the setting to its original state after you've finished installing the driver.

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

6 Exit all currently running software (applications).

Also close any currently open windows. If you are using antivirus or similar software, you must exit all of these programs as well.

7 Prepare the CD-ROM.

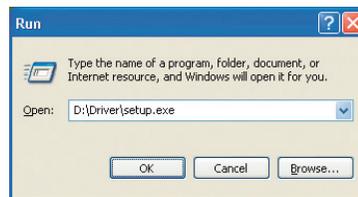
Insert the CD-ROM into your computer's CD-ROM drive.

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

The **Run** dialog box will appear.

9 In the Open field of the dialog box, type the following and click **[OK]**.

**(Drive name): \Driver\Setup.exe**



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

10 The **Driver Setup** dialog box will appear.

Click **[Next]**.

11 To begin the installation, click **[Next]** once again. Installation will begin.

If the "Driver Signing Options" setting is other than "Ignore" a dialog box like the following will appear.

#### If a dialog box with an "!" mark appears

1. Click **[Continue Anyway]**.
2. Installation will begin.

#### If a dialog box with an "X" symbol appears

1. Click **[OK]**.
2. When the "**Found New Hardware Wizard**" appears, click **[Finish]**.
3. Return to **step 1** (p. 16), and reinstall the driver from the beginning.

#### MEMO

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

#### MEMO

#### Checking the drive name

If you need to check the drive name, choose **start** → **My Computer**. In the window that appears, note the drive name of the CD-ROM drive into which you inserted the CD-ROM in **step 7**.

The (D:) or (E:) that is indicated for that CD-ROM drive  is the drive name.

- 12** The “**Ready to install the driver.**” dialog box will appear.  
Now you are ready to install the driver.
- 13** Use a USB cable to connect the PC-80 to your computer.
1. With the power switch in the standby position, connect the AC adaptor to the PC-80.
  2. Connect the power cord of the AC adaptor to an AC outlet.
  3. Use a USB cable to connect the PC-80 to your computer.
- 14** Set the PC-80’s **power switch** to the **ON** (DC position).  
A message of “**Found New Hardware**” will appear near the task bar. Please wait.
- 15** The **Found New Hardware Wizard** will appear.  
If the message “**Can Windows connect to Windows Update to search for software?**” appears, choose “**No,**” then click [**Next**].
- 16** Make sure that “**EDIROL PC-80 MIDI**” or “**EDIROL PC-80 WAVE**” is indicated. Then, choose “**Install the software automatically (Recommended)**” and click [**Next**].

If the “Driver Signing Options” setting is other than “Ignore,” a dialog box like the following will appear.

**If a dialog box with an “!” mark appears**

1. Click [**Continue Anyway**].
2. Installation will begin.

- 17** The **Completing the Found New Hardware Wizard** dialog box will appear.  
Click [**Finish**].  
A message of “**Found New Hardware**” will appear near the task bar. Please wait.
- 18** The **Found New Hardware Wizard** will appear.  
If the message “**Can Windows connect to Windows Update to search for software?**” appears, choose “**No,**” then click [**Next**].
- 19** Make sure that “**EDIROL PC-80 MIDI**” or “**EDIROL PC-80 WAVE**” is indicated. Then, choose “**Install the software automatically (Recommended)**” and click [**Next**].



Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.



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

If the “Driver Signing Options” setting is other than “Ignore,” a dialog box like the following will appear.

**If a dialog box with an “!” mark appears**

1. Click [**Continue Anyway**].
2. Installation will begin.

**20** The **Completing the Found New Hardware Wizard** dialog box will appear. Click [**Finish**].

**21** In the **Driver Setup** dialog box, click [**Close**]. This completes driver installation.

If you changed the “**Driver Signing Options**” setting (step 4 on p. 16), restore the original settings after Windows has restarted.

1. Log onto Windows as the user who installed the driver.
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 will appear.

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

5. Click the **Hardware** tab, then click [**Driver Signing**]. The **Driver Signing Options** dialog box will appear.
6. In the **Driver Signing Options** dialog box, restore the original setting (“Warn” or “Block”) and click [**OK**].
7. Click [**OK**]. The System Properties dialog box will close.

Next, in order to ensure that audio and MIDI processing occurs smoothly, you need to make settings so that Background Services is given priority. (→ “**Giving priority to background services**” (p. 20))



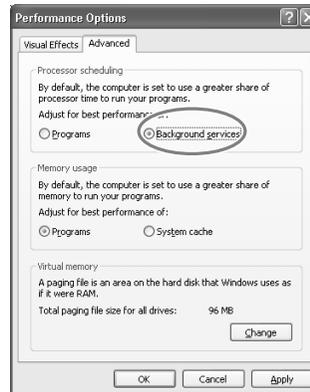
If the Change System Settings dialog box appears, click [Yes]. Windows will restart automatically.

## ■ Giving priority to background services

If you don't make this setting, you may experience problems such as clicks or pops in the sound. To ensure that audio and MIDI data is handled smoothly, proceed as follows to make this setting.

- 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 In the right side of the **Performance** area, click [**Settings**].  
The **Performance Options** dialog box will open.

- 4 Click the **Advanced** tab.
- 5 In the **Processor scheduling** area, choose “**Background services**,” and click [**OK**].



- 6 In the **System Properties** dialog box, click [**OK**].  
The **System Properties** dialog box will close.

Next, you need to install the PC-80 software synthesizer.

(→ “Installing the PC-80 software synthesizer” (p. 26))

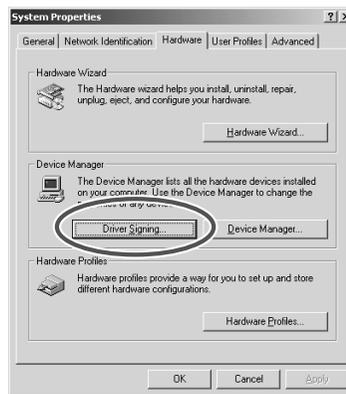
### MEMO

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

## Windows 2000 users

- 1 Start up Windows with the PC-80 disconnected.  
Log on to Windows using a user name that has administrative privileges (such as Administrator).
- 2 Open the **System 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 **System** icon.

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

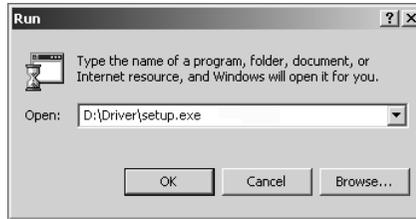


- 4 Make sure that **"File signature verification"** is set **"Ignore."**  
If it is set to **"Ignore,"** simply click **[OK]**.  
If this is not set to **"Ignore,"** make a note of the current setting ("Warn" or "Block"), change the setting to **"Ignore,"** then click **[OK]**
- 5 Click **[OK]** to close the **System Properties** dialog box.
- 6 Exit all currently running software.  
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.

### MEMO

If you've changed the **"File signature verification,"** you must restore the previous setting after you have installed the driver.

- 9 In the dialog box that appears, input the following into the “Open” field, and click [OK].



**(drive name):\Driver\setup.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.

- 10 The **Driver Setup** dialog box will appear.  
Click [Next].
- 11 To begin the installation, click [Next] once again. Installation will begin.

If the “**File signature verification**” (Step 4) (p. 21) 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. Return to **step 1** (p. 21) and re-install the driver from the beginning of the procedure.

- 12 The “**Ready to install the driver**” dialog box will appear.  
Now you are ready to install the driver.

**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 step 7. The drive name is the (D:) or (E:) displayed by the CD-ROM drive  .

- 13** Use a USB cable to connect the PC-80 to your computer.
1. With the power switch in the standby position, connect the AC adaptor to the PC-80.
  2. Connect the power cord of the AC adaptor to an AC outlet.
  3. Use a USB cable to connect the PC-80 to your computer.

- 14** Set the PC-80's **power switch** to the **ON** (DC position).  
Near the task bar, your computer will indicate "**Found New Hardware.**"  
Please wait.

If the "**File signature verification**" (Step 4) (p. 21) setting was not set to "**Ignore,**" a "**Digital Signature Not Found**" dialog box will appear.

1. Click [**Yes**].
2. Continue the installation.

- 15** The screen will indicate "**Completing the Found New Hardware Wizard.**"  
Make sure that "**EDIROL PC-80 MIDI**" or "**EDIROL PC-80 WAVE**" is indicated.  
Click [**Finish**].  
The **System Settings Change** dialog box may appear. Click [**Yes**].  
Windows will restart automatically.  
Then, log on to Windows as the same user as in step 1.

If the "**File signature verification**" (Step 4) (p. 21) setting was not set to "**Ignore,**" a "**Digital Signature Not Found**" dialog box will appear.

1. Click [**Yes**].
2. Continue the installation.

- 16** The **Completing the Found New Hardware Wizard** dialog box will appear.  
Click [**Finish**].

- 17** If the **Driver Setup** dialog box appears, click [**Close**].  
This completes driver installation.  
The **System Settings Change** dialog box may appear. Click [**Yes**].  
Windows will restart automatically.

### NOTE

Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

### MEMO

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

If you changed the “Driver Signing Options” setting (step 4 on p. 20), restore the original settings after Windows has restarted.

1. Log onto Windows as the user who installed the driver.
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.

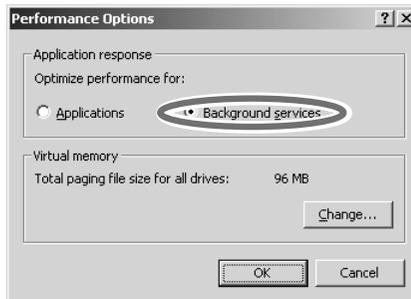
Next, in order to ensure that audio and MIDI processing occurs smoothly, you need to make settings so that Background Services is given priority. (→ “**Giving priority to background services**” (p. 25))

## ■ Giving priority to background services

If you don't make this setting, you may experience problems such as clicks or pops in the sound. To ensure that audio and MIDI data is handled smoothly, proceed as follows to make this setting.

- 1 Click the Windows **Start** menu, and from the menu that appears, select **Settings** | **Control Panel**.
- 2 In **Control Panel**, double-click the **System** icon.
- 3 Click the **Advanced** tab.
- 4 At the right of the **Performance** field, click [**Performance Options**].  
The **Performance Options** dialog box will appear.

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



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

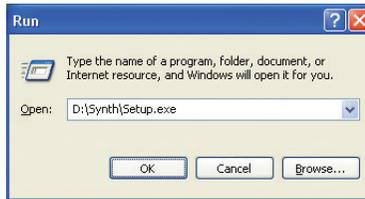
Next, you need to install the PC-80 software synthesizer.

(→ "Installing the PC-80 software synthesizer" (p. 26))

# Installing the PC-80 software synthesizer

- 1 Log on to Windows as the user who will be using the PC-80. Exit all software that may be running.
- 2 Make sure that the included CD-ROM is inserted in your computer's CD-ROM drive.
- 3 Click the Windows **Start** button. In the menu that appears, choose **Run...** The **Run...** dialog box will appear.
- 4 In the Open field, type the following and click **[OK]**.

**(Drive name): \Synth\Setup.exe**



\* The drive name is given as "D:" in the example here. The drive name could be a name other than "D:" on your system. Type the appropriate drive name (a single alphabetical character) for your CD-ROM drive.

- 5 The installer will start up. When the welcome screen appears, click **[Next]**.
- 6 The **Choose Destination Location** dialog box will appear. If you are satisfied with the destination shown, simply click **[Next]**. If you want to change the folder in which the software will be installed, click **[Browse]** and specify the desired folder.



## NOTE

If you want to use the PC-80 as a different user, you'll need to log in as that user and perform the installation again.

## MEMO

You must also close any windows that are open. Anti-virus software and all other software running in the background must also be closed.

## MEMO

### Checking the drive name

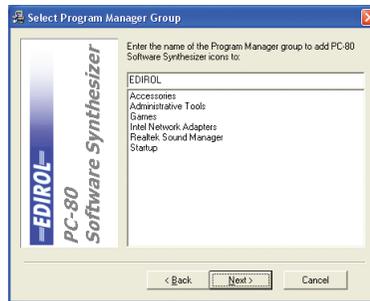
If you're using Windows XP, refer to **MEMO "Checking the drive name"** (p. 17).

If you're using Windows 2000, refer to **MEMO "To check the drive name"** (p. 22).

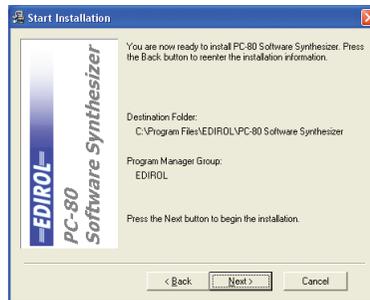
## MEMO

If the PC-80 software synthesizer is already installed, the **Choose Destination Location** dialog box will not appear. If you want to change the folder in which the software is installed, you'll need to uninstall the software (p. 126) and then reinstall it.

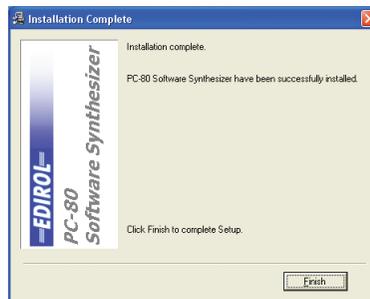
- 7 If the **Select Program Manager Group** screen appears, click **[Next]**.



- 8 The **Start Installation** screen will appear. Click **[Next]**.

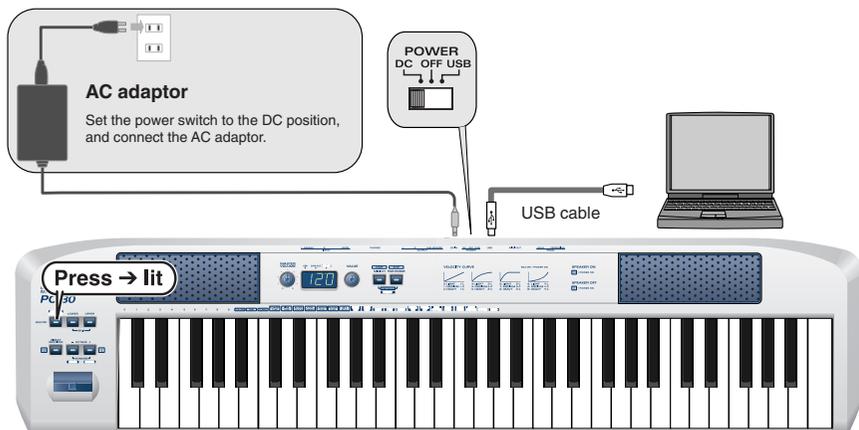


- 9 When the files have been copied, the **Installation Complete** will appear. Click **[Finish]**.



This completes installation of the PC-80 software synthesizer.  
Now, let's try starting up the PC-80 software synthesizer.  
(→ **"Starting up the PC-80 software synthesizer"** (p. 28))

## Starting up the PC-80 software synthesizer



### NOTE

You can't start up the PC-80 software synthesizer if the PC-80 is not connected to your computer via USB.

- 1 Press the **SOFTWARE SYNTHESIZER** button to turn it on (lit).

The PC-80's display will indicate "SYN," and it will be in Soft Synth mode.



The computer screen will show the PC-80 software synthesizer screen (Synth panel).



- 2 When the Synth panel appears, try playing the PC-80's keyboard.

If the installation was done correctly, you will hear sound from the PC-80's built-in speakers (or from the headphones if connected) when you play the PC-80's keyboard.

- 3 To exit Soft Synth mode, press the **SOFTWARE SYNTHESIZER** button once again to turn it off.

### MEMO

If the Synth panel does not open, refer to the Troubleshooting section "Won't start up" (p. 121).

### MEMO

If you don't hear sound, refer to the Troubleshooting section "No sound" (p. 122).

### MEMO

#### About the PC-80's built-in speakers

Depending on your system, you may experience problems such as a poor S/N ratio for the audio when using the PC-80's built-in speakers. If so, you can take the following measures.

- Lower the master volume.
- Turn the PC-80's built-in speakers off (use headphones)
- Connect the AC adaptor and set the power switch to the DC position

# Installation and settings (Macintosh)

## Installing

In order to use the PC-80, you'll need to install both the driver and the PC-80 software synthesizer.

When you use the following procedure to install the software, both the driver and the PC-80 software synthesizer will be installed in your Macintosh.



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

- 1 Log on as the user who will be using the PC-80.
- 2 Disconnect all USB cables other than those for your keyboard and mouse, and restart your Macintosh.
- 3 Prepare the CD-ROM.  
Insert the CD-ROM into the CD-ROM drive of your computer.
- 4 In the **Driver** folder of the CD-ROM, double-click **PC80USBDriver.pkg**.  
*\* A message such as “**This Installer package needs to...**” may appear.  
Click “**Continue.**”*
- 5 The display will indicate “**Welcome to the EDIROL PC-80 Driver Installer.**” Click [**Continue**].
- 6 The display will indicate “**Select a Destination.**”  
Click the drive in which the operating system is installed to select it, and then click [**Continue**].
- 7 The display will indicate “**Easy Install.**”  
Click [**Install**] or [**Upgrade**].
- 8 The display will indicate “**Installing this software requires you to restart your computer when the installation is done.**”  
Click [**Continue Installation**].
- 9 The display will indicate “**The software was successfully installed.**”  
Click [**Restart**] to restart your computer.

This completes installation of the PC-80 driver and the PC-80 software synthesizer.

Now, let's try starting up the PC-80 software synthesizer.

(→“**Starting up the PC-80 software synthesizer**” (p. 30))



If you will be using the PC-80 as a different user, you must log in as that user and reinstall the software.

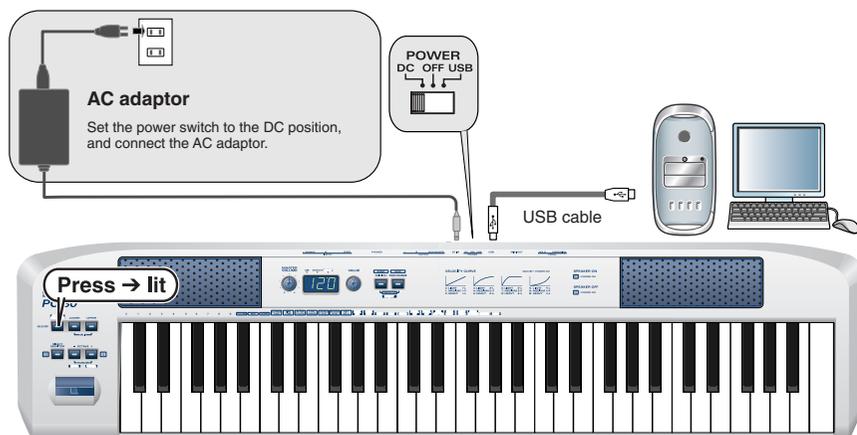


What you actually see on your computer screen may be different, depending on your computing environment and the operating system you're using.



Select your startup disk as the drive.

# Starting up the PC-80 software synthesizer



- 1 Use a USB cable to connect the PC-80 to your Macintosh.

You can't start up the PC-80 software synthesizer if the PC-80 is not connected to your Macintosh via USB.

1. With the power switch in the standby position, connect the AC adaptor to the PC-80.
2. Connect the power cord of the AC adaptor to an AC outlet.
3. Use a USB cable to connect the PC-80 to your Macintosh

- 2 Set the PC-80's **power switch** to the **ON** (DC position).

- 3 Press the **SOFTWARE SYNTHESIZER** button to turn it on (lit).

The PC-80's display will indicate "SYN," and it will be in Soft Synth mode.



The screen of your Macintosh will show the PC-80 software synthesizer screen (Synth panel).



- 4 When the Synth panel appears, try playing the PC-80's keyboard. If the installation was done correctly, you will hear sound from the PC-80's built-in speakers (or from the headphones if connected) when you play the PC-80's keyboard.

- 5 To exit Soft Synth mode, press the SOFTWARE SYNTHESIZER button once again to turn it off.

## NOTE

Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

## MEMO

When you install the PC-80 software synthesizer, a  icon will appear in the Mac OS dock and will remain active. If you've closed this inadvertently, go to the Mac OS **Application** folder and double-click the **PC-80 synth** icon.

## MEMO

If the Synth panel does not open, refer to the Troubleshooting section "**Won't start up**" (p. 121).

## MEMO

If you don't hear sound, refer to the Troubleshooting section "**No sound**" (p. 122).

## NOTE

### About the PC-80's built-in speakers

Depending on your system, you may experience problems such as a poor S/N ratio for the audio when using the PC-80's built-in speakers. If so, you can take the following measures.

- Lower the master volume.
- Turn the PC-80's built-in speakers off (use headphones)
- Connect the AC adaptor and set the power switch to the DC position

# Operation

Playing the PC-80 keyboard .....	p. 32
Playing back songs (Standard MIDI Files) on the PC-80 .....	p. 43
Recording your performance in sequencer software (SONAR LE) .....	p. 46

# Playing the PC-80 keyboard

This chapter explains the basics of using the PC-80 software synthesizer. For details on operation, refer to the online help.



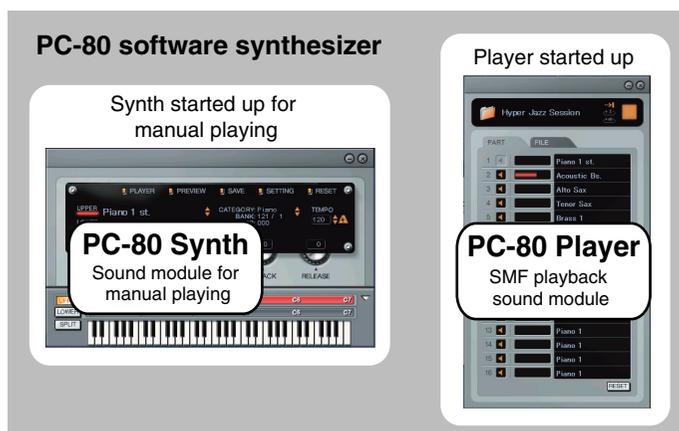
For details on accessing the online help, refer to **“Accessing the online help”** (p. 45).

## What is the PC-80 software synthesizer?

The PC-80 software synthesizer is a software synthesizer with a high-quality synthesizer engine and effects. It provides General MIDI level 2 (GM2) compatible sounds, and can be played directly from the PC-80’s keyboard or used in a sophisticated music production system.

### ■ How the PC-80 software synthesizer is structured

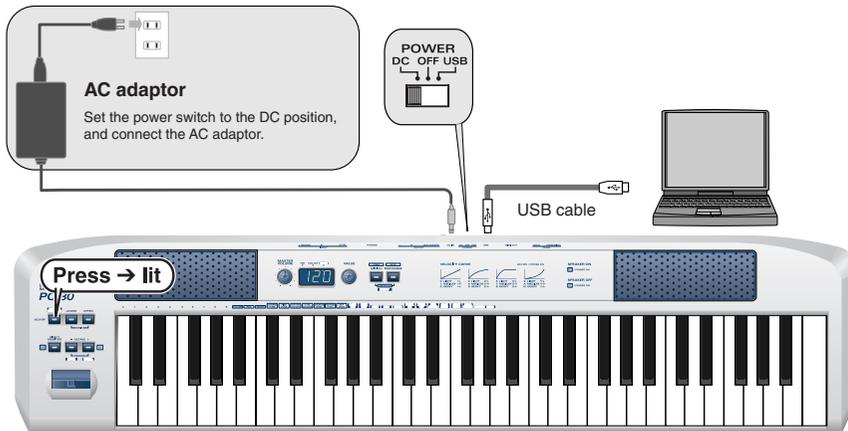
The PC-80 software synthesizer consists of a **Synth** that you can play manually from the PC-80’s keyboard, and a **Player** that can play back SMF data or be played from external software.



The Synth and Player each have their own sound generator.

The synth sound generator is selected when you start up the Synth for manual playing, and the SMF playback sound generator is selected when you start up the Player.

# Starting up the PC-80 software synthesizer



- 1 Press the **SOFTWARE SYNTHESIZER** button to turn it on (lit).

The PC-80's display will indicate "SYN," and it will be in Soft Synth mode.



The screen of your computer will show the PC-80 software synthesizer screen (Synth panel).



- 2 When the Synth panel appears, try playing the PC-80's keyboard. You will hear sound from the PC-80's built-in speakers (or from the headphones if connected) when you play the PC-80's keyboard.
- 3 To exit Soft Synth mode, press the **SOFTWARE SYNTHESIZER** button once again to turn it off.

## You can adjust the sensitivity of the keyboard

You can use the Velocity Curve settings to adjust the sensitivity of the keyboard and specify the curve by which the velocity values will change. (→ "VELOCITY CURVE" (p. 92))

### NOTE

You can't start up the PC-80 software synthesizer if the PC-80 is not connected to your computer via USB.

### NOTE

If the Synth panel does not open, refer to the Troubleshooting section "Won't start up" (p. 121).

### MEMO

If you don't hear sound, refer to the Troubleshooting section "No sound" (p. 122).

### MEMO

#### About the PC-80's built-in speakers

Depending on your system, you may experience problems such as a poor S/N ratio for the audio when using the PC-80's built-in speakers. If so, you can take the following measures.

- Lower the master volume.
- Turn the PC-80's built-in speakers off (use headphones)
- Connect the AC adaptor and set the power switch to the DC position

## Selecting sounds

Now let's change the sound that is heard when you play the keyboard. You can either use the PC-80's VALUE encoder to select a sound, or select a sound in the PC-80 software synthesizer's screen (Synth panel).

### ■ Using the PC-80's VALUE encoder to select sounds

- 1 Make sure that the PC-80's **SOFTWARE SYNTHESIZER** button is lit.



- 2 Press the **PGM CHANGE** button. The **PGM CHANGE** button will light.



- 3 Use the **VALUE encoder** to select a sound.



Turning the VALUE encoder toward the right will select the next sound, and turning it toward the left will select the preceding sound. The selected sound is shown in the Synth panel.

Play the keyboard to hear the selected sound.



Sound name

### ■ Using the Synth panel to select sounds

- 1 In the Synth panel screen on your computer, use your mouse to select sounds.

Use your mouse to click ▲/▼. Clicking ▲ will select the next sound, and clicking ▼ will select the preceding sound.

Play the keyboard to hear the selected sound.



Sound name

Click

#### MEMO

Alternatively, you can click the sound name to view a menu, and choose a sound from this list.

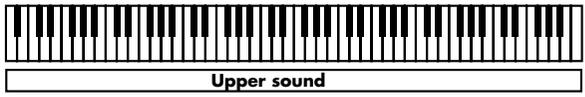
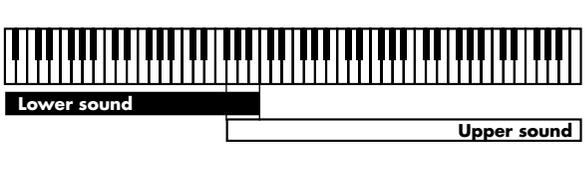
#### MEMO

For a more detailed explanation of the PC-80 software synthesizer, refer to "Using the Synth panel to select a sound" (online help).

## Selecting the Lower/Upper sounds

The PC-80's keyboard has two zones called Lower and Upper. Different sounds can be selected and played in each zone.

There are three “**keyboard modes**” — **Lower mode**, **Upper mode**, and **Split mode** — which you can use to play only the Lower sound, only the Upper sound, or both the Lower and Upper sounds at the same time.

<b>Lower mode</b>	Play the Lower sound across the entire keyboard (→ “ <b>Selecting the Lower sound</b> ” (p. 35))	
<b>Upper mode</b>	Play the Upper sound across the entire keyboard (→ “ <b>Selecting the Upper sound</b> ” (p. 36))	
<b>Split mode</b>	Specify the Lower keyboard zone and the Upper keyboard zone, and play different sounds (Lower and Upper) with the right and left hands. Keys located in areas where the Lower and Upper zones overlap will play both the Lower and Upper sounds.	

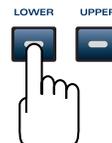
### Selecting the Lower sound

Use Lower mode to select the Lower sound.

#### ■ Selecting the Lower sound from the PC-80

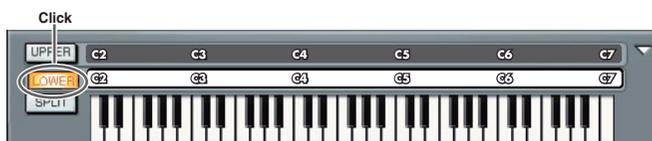
- 1 Press the PC-80's **LOWER** button.

The PC-80's **LOWER** button will light; Lower mode is selected. The sound name field shows the name of the sound currently selected for the Lower part.



- 2 Select the sound. (→ “**Selecting sounds**” (p. 34))

#### ■ Selecting the Lower sound from the Synth panel



- 1 In the Synth panel, click the **LOWER** button.

The Synth panel's **LOWER** button will light; Lower mode is selected. The sound name field shows the name of the sound currently selected for the Lower part.

- 2 Select the sound. (→ “**Selecting sounds**” (p. 34))

Play the keyboard, and you will hear the sound selected for Lower mode.

## Selecting the Upper sound

Use Upper mode to select the Upper sound.

### ■ Selecting the Upper sound from the PC-80

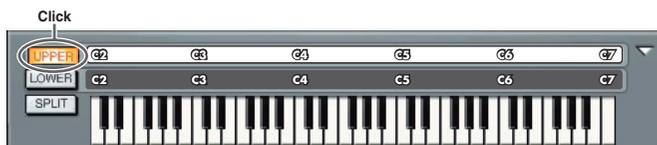
- 1 Press the PC-80's **UPPER** button.

The PC-80's **UPPER** button will light; Upper mode is selected. The sound name field shows the name of the sound currently selected for the Upper part.



- 2 Select the sound. (→ “**Selecting sounds**” (p. 34))

### ■ Selecting the Upper sound from the Synth panel



- 1 In the Synth panel, click the **UPPER** button.

The Synth panel's **UPPER** button will light; Upper mode is selected. The sound name field shows the name of the sound currently selected for the Upper part.

- 2 Select the sound. (→ “**Selecting sounds**” (p. 34))

Play the keyboard, and you will hear the sound selected for Upper mode.

## Combining two sounds (Split)

Split mode (p. 35) lets you play two sounds — Upper and Lower — from the PC-80's keyboard.

### MEMO

In Split mode, operations of the VALUE encoder and in the Synth panel will apply only to the Upper sound. If you want to control the Lower sound, you must switch to Lower mode.

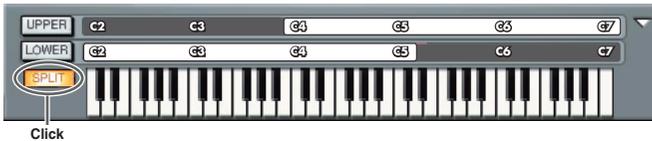
### ■ Selecting Split mode from the PC-80

- 1 Simultaneously press the **LOWER** button and **UPPER** button.

The PC-80's LOWER button and UPPER button will light, and it will be in Split mode.



### ■ Selecting Split mode from the Synth panel



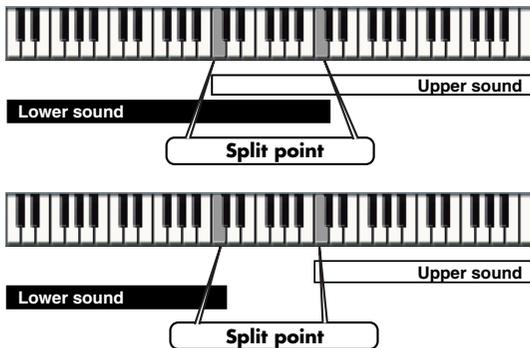
- 1 Click the **SPLIT** button so it's lit.

The Synth panel's **SPLIT** button will light; Split mode is selected.

Play the Lower region of the keyboard and you will hear the sound selected in Lower mode.

## Changing the split points

The “split points” are the boundary keys for the Lower and Upper regions.



The Lower sound extends from the leftmost key to the specified key.

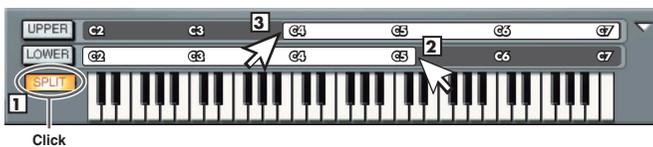
The Upper sound extends from the rightmost key to the specified key.

These keys are the **split points**.

### MEMO

For details on how you can set the Split point by operating the PC-80 itself, refer to “**Setting the split points**” (p. 77).

## ■ Changing the Split Point in the Synth panel



- 1 Click the **SPLIT** button so it's lit.
- 2 Drag the right edge of the LOWER bar to left or right to set the right edge of the Lower region.
- 3 Drag the left edge of the UPPER bar to left or right to set the left edge of the Upper region.



If the Lower and Upper regions overlap as shown in the illustration, notes played in the overlapping region will sound both the Lower and Upper sounds.



If the Lower and Upper regions are discontinuous as shown in the illustration, there will be no sound for notes played in this region.

## Using the metronome

The PC-80 software synthesizer provides a Metronome function that is convenient to use when you're practicing. Here's how to play along with the metronome.

### ■ Sounding the metronome

- 1 Click the  icon.

The metronome will begin sounding.

Click the  once again to stop the metronome.



Click

### ■ Changing the tempo

- 1 Click  to adjust the tempo. The current tempo of the metronome is shown as the number of beats per minute.

Click  to speed up the tempo.

Click  to slow down the tempo.



Click



The metronome time signature can be changed in the System Settings window. To access the System Settings window, click the SETTING button in the Synth panel.



You can also double-click the TEMPO value and type the desired value directly.



In Controller mode, you can assign Tempo to the VALUE encoder and use it to control the tempo.

## Editing the sound

You can edit a parameter either by using the PC-80's VALUE encoder or by using the Synth panel.

If you use the Edit screen of the Synth panel, you'll be able to edit a variety of parameters to modify the sound.

### ■ Using the PC-80's VALUE encoder to edit the sound

If you assign a specific parameter to the PC-80's VALUE encoder, you can control that PC-80 parameter while editing or while playing.

- 1 Click the **[Normal/Edit screen select]** button to switch to the Edit screen.



[Normal/Edit screen select] button

- 2 Press the PC-80's **MIDI CH** button to turn it on (lit).



- 3 In the Synth panel, right-click the parameter that you want to control. (For Macintosh, hold down the Control key and click.)



Right-click

- 4 From the menu that appears, choose **"Assign."**



- 5 Operate the PC-80's **VALUE encoder**.

The value of the assigned parameter will change.

You will hear the edited sound when you play the keyboard.



## ■ Using the Synth panel to edit the sound

- 1 Click the **[Normal/Edit screen select]** button to switch to the **Edit screen**.



[Normal/Edit screen select] button

- 2 Use your mouse to operate the knobs in the screen.  
If you move the mouse over a parameter knob, the cursor will change to a shape that indicates the direction (up/down) in which you can drag. Drag the mouse up or down.



For details on editing sounds on the PC-80 software synthesizer, refer to “Using the mouse” (online help).

## Saving an edited sound

After editing a sound, you can save it as a “user sound.”

- 1 In the Synth panel, click the **SAVE** button.



- 2 Choose one of the categories that appear (U.Patch 1–4).
- 3 In the menu that appears, select the number at which you want to save the user sound. The sound you edited will be overwritten onto the selected number.

## ■ Convenient functions for performance

<b>Changing the pitch (Pitch Bend)</b>	When you move the pitch bend/modulation level to the left or right, Pitch Bend messages will be transmitted, creating slight variations in the pitch of the sounds that are playing. * The range of the change (bend range) can be adjusted on the sound generator.
<b>Adding modulation to the sound (Modulation)</b>	When you push the pitch bend/modulation level away from yourself, Modulation messages (CC#01) will be transmitted, and vibrato will be applied to the sound. * The way in which the sound changes can be specified on the sound generator.
<b>Sustaining the notes (Hold)</b>	If you connect a pedal switch or foot switch (DP series pedal or Boss FS-5U; available separately) to the rear panel HOLD jack, notes will be held as long as you are pressing the pedal, even after you take your finger off of the key. This transmits the MIDI message Hold 1 (CC#64). Hold On (127) is transmitted when you press the pedal, and Hold Off (0) when you release the pedal.
<b>Controlling the tone or volume in real time (Expression)</b>	If you connect an expression pedal (Roland EV-5; available separately) to the rear panel EXPRESSION jack, you can use the pedal to control the volume or tone.
<b>Switching the octave (Octave Shift)</b>	You can use the [OCTAVE-] [OCTAVE+] buttons to shift the pitch of the keyboard upward or downward (Octave Shift). Pressing [OCTAVE-] once will lower the pitch by one octave. Press it again to lower the pitch by an additional octave. The pitch can be adjusted within the range of -4 through 5 octaves. [OCTAVE-] or [OCTAVE+] will light according to the current octave shift setting. If you press [OCTAVE-] and [OCTAVE+] simultaneously, the Octave Shift setting will be reset to 0, returning the keyboard to its normal pitch range.

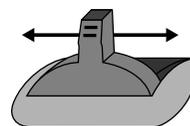
\* MIDI messages are transmitted on the channel according to the current keyboard mode setting (Lower/Upper/Split).

	Pitch Bend/Modulation/Hold/Expression	Octave Shift
<b>LOWER mode</b>	Transmitted on the Lower MIDI channel	Octave-shifts the Lower range
<b>UPPER mode</b>	Transmitted on the Upper MIDI channel	Octave-shifts the Upper range
<b>SPLIT mode</b>	Transmitted on both the Lower and the Upper MIDI channel	Octave-shifts the Upper range

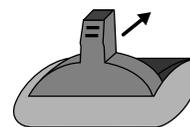
Moving the pitch/bend modulation lever to the left will lower the pitch, and moving it to the right will raise the pitch. This is called Pitch Bend. Pushing the lever away from yourself will apply vibrato. This is called Modulation.

Both will be applied simultaneously if you push the lever away from yourself while moving it to left or right.

\* The range of pitch change that occurs (the bend range) can be specified on the sound generator.



Pitch bend



Modulation

# Playing back songs (Standard MIDI Files) on the PC-80

This chapter explains basic use of the Player function.  
For more details, refer to the online help.

## MEMO

For details on how to access the online help, refer to “**Accessing the online help**” (p. 45).

## What is the Player?

The PC-80 software synthesizer provides a Player function that provides 16-part SMF playback functionality (with 256 sounds and 9 drum sets for GM2 compatibility). This is independent of the sound generator designed for playing from the PC-80’s keyboard.

You can use this to play back SMF data as according while you play the PC-80’s keyboard, or enjoy repeated playback of your favorite SMF data.

## Starting up the Player

- 1 In the Synth panel, click the **PLAYER** button.  
The Player panel will appear.



## Selecting songs

- 1 In the Player panel, click the folder icon.  
The dialog box that appears, select the desired SMF.



- 2 In the dialog box that appears, select the desired SMF.

The song title or file name will appear, and playback will begin.



During playback, the play button ► will change to a stop button ■.

You can click the stop button ■ to stop playback.



## MEMO

The song title will appear if the SMF data contains a song title.

## Playing/stopping a song

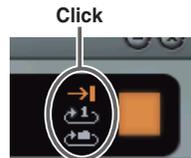
When you want to	Do this
Start playback	Click ►
Stop playback	Click ■

### MEMO

When you click ►, playback will always start from the beginning of the song. You can't start playback from the middle of a song.

### ■ Repeat playback

Click the repeat button to switch the Repeat mode.



Repeat mode	Operation
No repeat: When the song ends, playback will stop	Click →
Repeat 1 song: When the song ends, that song will continue playing from the beginning.	Click ↺ 1
Repeat folder: When the song ends, the next song in that folder will play.	Click ↺

## Muting a specific part (Minus-one Playback)

You can mute (silence) a specific part of a song for “minus-one” playback. This is convenient when you want to play the muted part yourself from the PC-80’s keyboard, using the remaining parts of the song as accompaniment.

- 1 Click the **PART** tab.  
The Part screen will appear.



- 2 Play back the song.

- 3 In the Part screen, click the mute button  of the part you want to mute, so that the button is dimmed.

The muted part will no longer be heard. Play the PC-80’s keyboard along with the song.



- 4 Click the **mute** button once again.  
The Mute setting will be defeated.



You can adjust the volume balance between the backing and the keyboard. For details, refer to “Option window (Balance setting)” in the online help.

### ■ Accessing the online help

1. Display the menu.

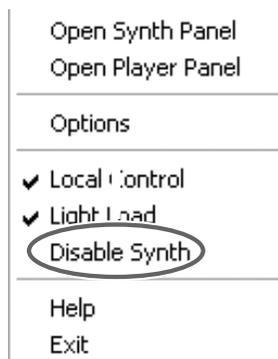
#### Windows

In the taskbar, right-click the PC-80 Software Synthesizer icon .

#### Macintosh

In the Dock, Control-click the PC-80 Software Synthesizer icon .

2. From the menu that appears, choose **Help**. The online help will appear.

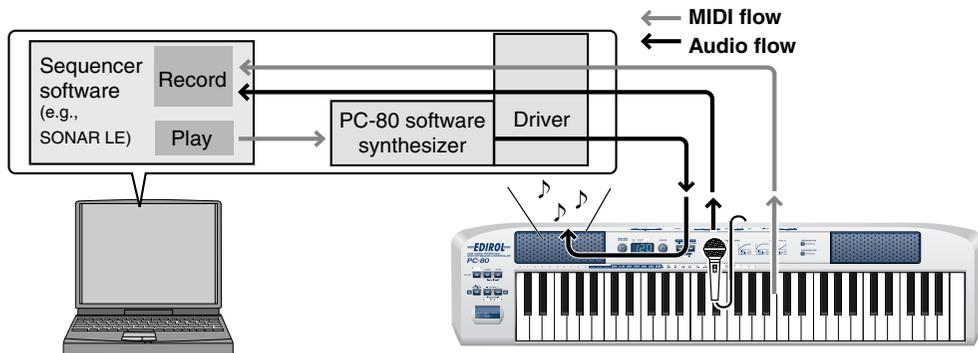


# Recording your performance in sequencer software (SONAR LE)

Here's how to use the PC-80 with sequencer software to record and play back MIDI and audio.

\* *In the example given here, we'll assume you're using SONAR LE as your sequencer software.*

## Signal flow when using sequencer software

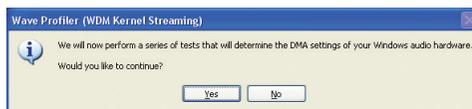


## Starting up SONAR LE and making settings

In order to use SONAR LE, you must first install it in your computer. For the installation procedure, refer to the CD-ROM package.

1 Start up SONAR LE.

2 The first time you start up, the **Wave Profiler** dialog box will appear automatically.



Be sure you click **[Yes]**.

3 When the display indicates **“Audio hardware has been successfully profiled.”** click **[Close]** to close the dialog box.

If an **Audio Device Error** appears, click **[Cancel]** at this point.

4 The **Tip Of The Day** may appear. Click **[Close]** to close the dialog box.

5 A dialog box indicating **“No MIDI Outputs Selected”** may appear.



If so, choose **“Continue With No MIDI Output.”**

If a dialog box indicating **“No MIDI Inputs Selected”** appears, choose **“Continue With No MIDI Input.”**

6 The **Quick Start** dialog box will appear. Click **[Close]** to close this window.



For details on operating SONAR LE, refer to the online help for SONAR LE.



Online Activation Dialog box

This dialog box allows you to activate SONAR LE.

Please activate the software using one of the methods provided.

When you have read the contents of the dialog box, click **[OK]** or **[Cancel]** to close the dialog box.

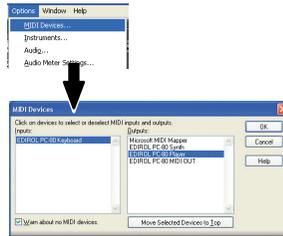


## MIDI device settings

- 1 Choose **Options | MIDI Devices** to open the **MIDI Devices** dialog box.

In the MIDI Devices dialog box, choose the following devices for the Input Device and Output Device field.

<b>Inputs</b>	EDIROL PC-80 Keyboard
<b>Outputs</b>	EDIROL PC-80 Player



- 2 Click **[Move Selected Devices to Top]**.
- 3 Click **[OK]** to close the dialog box.

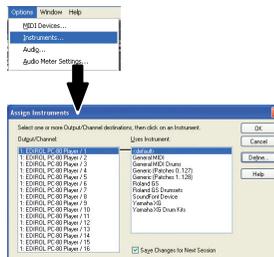
## Instrument definition settings

### ■ What is an instrument definition?

An instrument definition is a file that contains settings describing the banks, patches, and controllers of a MIDI sound module. If you don't use an instrument definition, SONAR LE will display bank select, program change, control change, and NRPN values in numerical form. If you specify the appropriate instrument definition, the bank names, patch names, controller names, and NRPN functions specific to the PC-80 will be displayed by name.

### ■ Importing an instrument definition for the PC-80

- 1 Choose **Options | Instruments** to open the **Assign Instruments** dialog box.
- 2 In the **Assign Instruments** dialog box, click the **[Define]** button.
- 3 When the **Define Instrument and Names** dialog box appears, click **[Import]**.



The **Import Instrument Definitions** dialog box will appear.

### MEMO

Here you will specify the EDIROL PC-80 Player as the output device. If you select EDIROL PC-80 Player, you'll be able to use the PC-80 software synthesizer's SMF playback sound generator (16 parts) for playback.

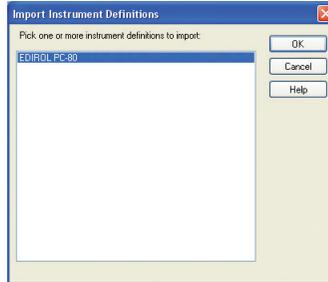
### MEMO

For details on how the PC-80 software synthesizer is structured, refer to "How the PC-80 software synthesizer is structured" (p. 32).

- 4 In the **PC-80 software CD-ROM**, navigate to the **SONAR Instrument Definition** folder, specify the “**EDIROL PC-80 (.ins)**” instrument definition file, and click **[Open]**.

- 5 The **Import Instrument Definitions** dialog box will appear, and a list of the instrument definitions in the instrument definition file will appear.

In this list, select “**EDIROL PC-80**” and click **[OK]**.



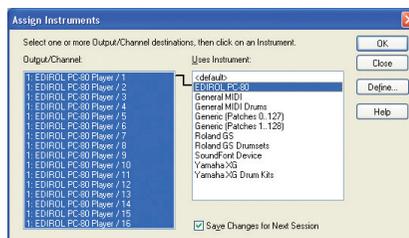
- 6 In the **Define Instruments and Names** dialog box, click the **[Close]** button to close the dialog box.

Now the **Assign Instruments** dialog box will show the imported instrument definitions.

## ■ Specifying the PC-80 instrument definition

- 7 In the **Output/Channel** field, select all items from EDIROL PC-80 Player /1 through EDIROL PC-80 Player /16. (To select all of these, click EDIROL PC-80 Player /1, and then hold down the Shift key and click EDIROL PC-80 Player /16.)
- 8 In the list of **Uses Instrument**, choose “**EDIROL PC-80.**”

- 9 Click **Output/Channel** and **Uses Instrument**. A black line will appear, indicating that these have been associated.



- 10 Click **[OK]** to close the dialog box.

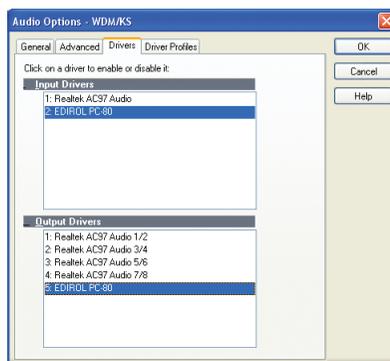
## Audio device settings

- 1 Choose **Options | Audio** to open the **Audio Options** dialog box.



- 2 Click the **Drivers** tab. In the **Input Drivers** and **Output Drivers** lists, click the following items to highlight them (white characters on a blue background). Make sure that the remaining items are not highlighted.

<b>Input driver</b>	EDIROL PC-80
<b>Output driver</b>	EDIROL PC-80



- 3 In the **General** tab, set **Audio Device Bit Depth** to **24**.

This completes the device settings. In the **Audio Options** dialog box, click **[OK]** to close the dialog box.

When a dialog box recommending that you restart SONAR LE appears, restart SONAR LE.

### MEMO

#### If EDIROL PC-80 is not shown

If EDIROL PC-80 is not shown in the Audio Options Dialog box, close SONAR LE, wait for a while, and then restart SONAR LE again.

### MEMO

#### If you're using ASIO-compatible sequencer software in Windows

In the PC-80 software synthesizer's **Options screen**, change the driver type to **WDM**.

### ■ If the Audio Device Error dialog box appears

If the **Audio Device Error** dialog box appears when you restart SONAR LE, and the dialog box indicates **EDIROL PC-80**, make sure that the PC-80's sampling rate is set to **44,100 Hz** (44.1 kHz), and perform the "Audio device settings" procedure in this page again from the beginning.

The PC-80's sampling frequency is set to **44,100 Hz** (44.1 kHz) when it is shipped from the factory. For details on changing or checking the PC-80's sampling frequency, refer to "**System settings**" (p. 85) in the PC-80 owner's manual.



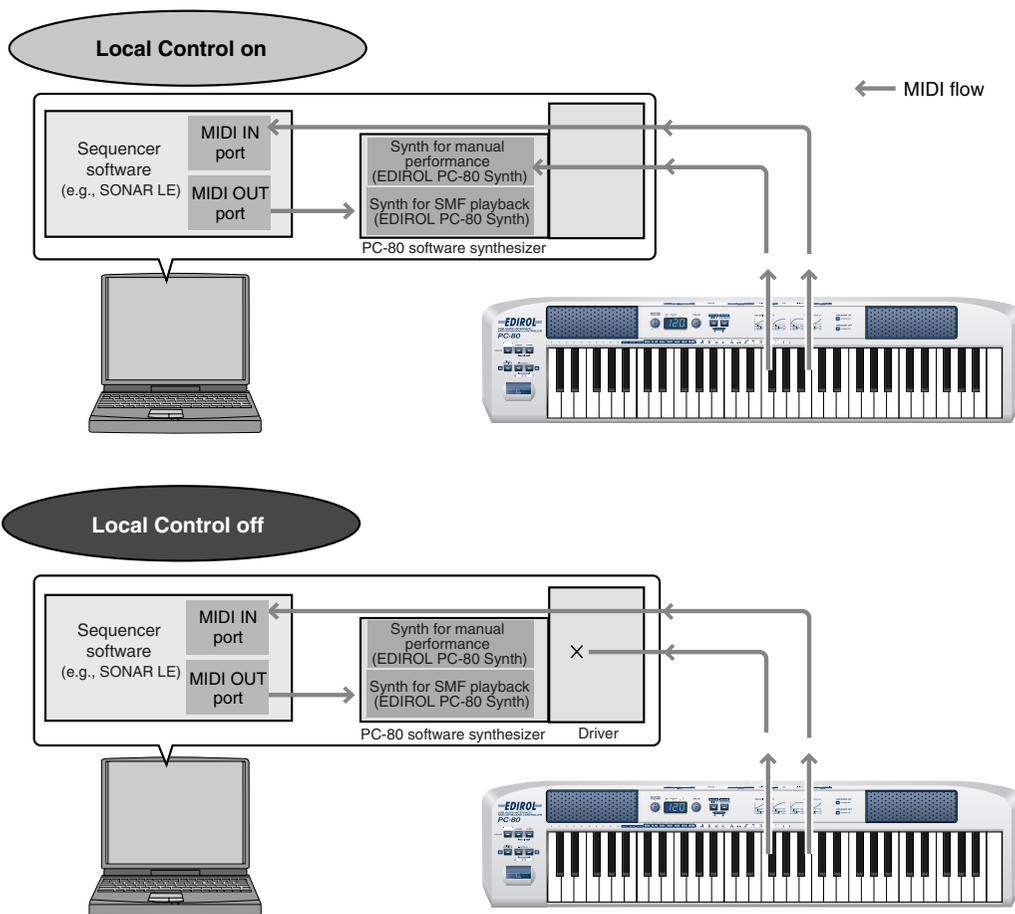
## Local Control settings

If you're using SONAR LE with the PC-80 and PC-80 software synthesizer, turn the Local Control setting off.

- 1 In the taskbar, right-click the PC-80 Software Synthesizer icon.
- 2 In the menu that appears, select **Local Control** to uncheck it.  
The Local Control setting will be off.

### Local Control

If the Local Control setting is on, performance data from the PC-80 will be sent both to the synth sound generator for manual performance as well as to SONAR LE's MIDI IN port. When you play the keyboard, the synth sound generator for manual performance as well as the SMF playback sound generator (via SONAR LE) will both sound, causing notes to be sounded in duplicate.



# Recording a MIDI performance from the PC-80

## Putting a track in record-ready mode

If you put a track in record-ready mode, you'll be able to record data on that track. A track that is in record-ready mode will record data from the device that's assigned as the input for that track. If a track is in record-ready mode, the record-ready button of the track will light red, and the clip indicator area will turn to a reddish color.

1 Select the MIDI track on which you want to record.

2 In the **Track** window, click the **Record** button  of the MIDI track you want to record, placing the track in record-ready mode.

\* The record-ready button of a track will turn red when the track is in record-ready mode.



## Starting and stopping recording

1 Make sure that the track to be recorded is in record-ready mode.

2 In the transport toolbar, click the **record** button  .



3 Play the PC-80 keyboard.

The clip indicator area will show a clip that contains the newly recorded data.

4 In the **transport** toolbar, click the **stop** button  .

Recording will stop.

## Playing back the recorded performance

Now let's play back the data you recorded.

### ■ Starting and stopping playback

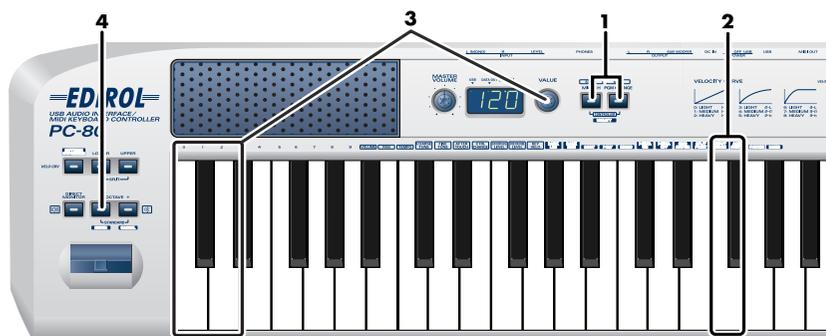
When you want to	Do this
Start playback	<ul style="list-style-type: none"> <li>• Press the <b>Space</b> key</li> <li>• Click </li> <li>• Execute the <b>Transport   Play</b> command</li> </ul>
Stop	<ul style="list-style-type: none"> <li>• Press the <b>Space</b> key</li> <li>• Click </li> <li>• Execute the <b>Transport   Stop</b> command</li> </ul>
Rewind to the beginning of the project	<ul style="list-style-type: none"> <li>• Press the <b>"w"</b> key</li> <li>• Click </li> <li>• Execute the <b>Transport   Rewind</b> command</li> </ul>

## Recording audio from a guitar or mic

Now let's connect an audio device such as a guitar or mic to the PC-80, and record it.

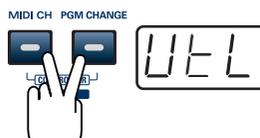
### Selecting the Input Mode

When recording audio, you must set the PC-80's Input Mode to either Line, Guitar, or Mic, as appropriate for the device from which you're recording.



- 1 Simultaneously press the PC-80's **MIDI CH** button and **PGM CHANGE** button, and hold them down.

The PC-80's display will indicate "UTL".



- 2 Press the **[INPUT MODE]** key on the keyboard.

- 3 Use the **VALUE encoder** or the **[0]–[2]** keys of the keyboard to choose the setting that's appropriate for the device that is connected to the audio input jacks.

Key	Indication	Setting	Explanation
0		<b>LINE</b>	Choose this if an audio device or MIDI sound module is connected
1		<b>GUITAR</b>	Choose this if a guitar is connected
2		<b>MIC</b>	Choose this if a dynamic mic is connected * The PC-80 is not compatible with the miniature mics (condenser mics) sometimes included with a computer or sound card.

- 4 Press the **ENTER** button.



#### MEMO

If you press any other button without pressing the **ENTER** button, the setting you made will be discarded.

## Putting a track in record-ready mode

If you put a track in record-ready mode, you'll be able to record data on that track. A track that is in record-ready mode will record data from the device that's assigned as the input for that track. If a track is in record-ready mode, the record-ready button of the track will light red, and the clip indicator area will turn to a reddish color.

- 1 Select the track on which you want to record, and in the In field, choose the recording source that corresponds to the device you connected to the audio input jacks.

- 2 In the **Track** view window, click the **Record** button  of the track you want to record, placing the track in record-ready mode.



\* *The record-ready button of a track will turn red when the track is in record-ready mode.*

## Adjusting the input level

When recording audio, use the PC-80's **Input Level Knob (LEVEL)** (p. 13) to adjust the input level.

Use SONAR LE to check the input level. For details on how to do this, refer to the online help for SONAR LE.

## Starting and stopping recording

Connect your audio device, mic, or guitar to the PC-80, and record it as follows.

- 1 Make sure that the track to be recorded is in record-ready mode.

- 2 In the **transport toolbar**, click the **record** button .



- 3 Play back the data you want to record, or begin performing.

- 4 In the **transport toolbar**, click the **stop** button .

Recording will stop.

The **track** view of SONAR LE will show the recorded data as a clip.

### MEMO

If in the General tab of the **Global Options** dialog box, the **Display Waveform Preview While Recording** is on, the recorded data will appear in red in the clip display area. If this option is off, the recorded region is displayed in red.

## Playing back the recorded performance

Now let's play back the data you recorded.

### Starting and stopping playback

When you want to	Do this
Start playback	<ul style="list-style-type: none"> <li>Press the <b>Space</b> key</li> <li>Click </li> <li>Execute the <b>Transport   Play</b> command</li> </ul>
Stop	<ul style="list-style-type: none"> <li>Press the <b>Space</b> key</li> <li>Click </li> <li>Execute the <b>Transport   Stop</b> command</li> </ul>
Rewind to the beginning of the project	<ul style="list-style-type: none"> <li>Press the <b>"w"</b> key</li> <li>Click </li> <li>Execute the <b>Transport   Rewind</b> command</li> </ul>

### Recording the output of the PC-80 synthesizer as audio

The audio that can be recorded by your synthesizer software will differ depending on how the PC-80's Loopback function is set.

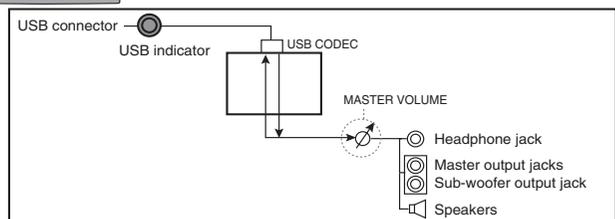
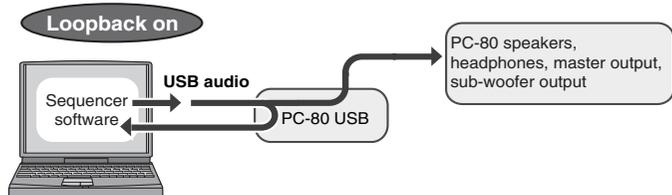
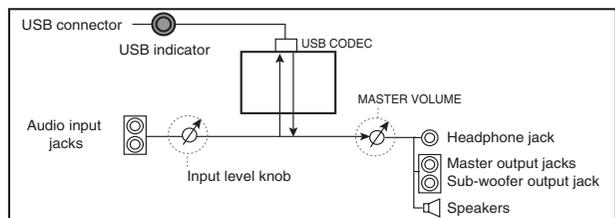
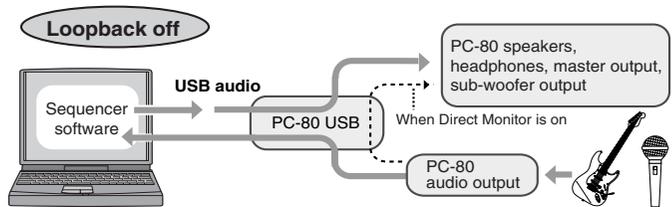
If the Loopback function is turned off, the audio from the mic or guitar connected to the PC-80's audio input jacks will be sent to the computer.

If the Loopback function is turned on, the audio from the sequencer or other software being output from the computer will be routed through the PC-80 and returned to the computer.

If you want the sound of the PC-80 software synthesizer to be recorded as audio on the computer, turn the Loopback function on.

*\* If SONAR LE's Input Monitor setting is on when you record, high volumes may damage the speakers. Please turn the Input Monitor setting off.*

For details on how to turn the Loopback function on/off, refer to **Loopback On/Off** (p. 88).



← Audio flow →

# MEMO

# Appendix

<b>Using the PC-80 as a MIDI controller keyboard</b> .....	p. 58
<b>Using the PC-80 as a MIDI interface</b> .....	p. 79
<b>Using the PC-80 as an audio interface</b> .....	p. 80
<b>System settings for the PC-80</b> .....	p. 84
<b>PC-80 driver settings</b> .....	p. 99
<b>Troubleshooting</b> .....	p. 113
<b>MIDI implementation</b> .....	p. 127
<b>Main specifications</b> .....	p. 130

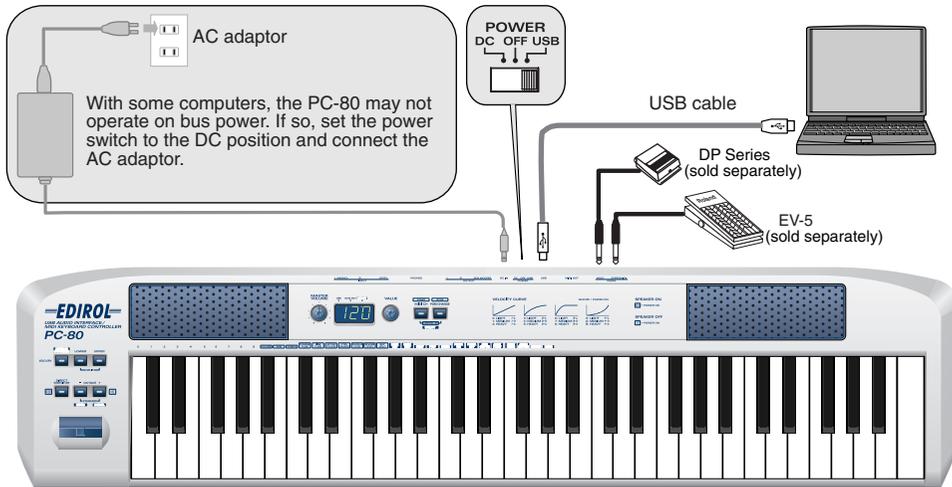
# Using the PC-80 as a MIDI controller keyboard

This section explains the basic connections for the PC-80 and the flow of MIDI messages.

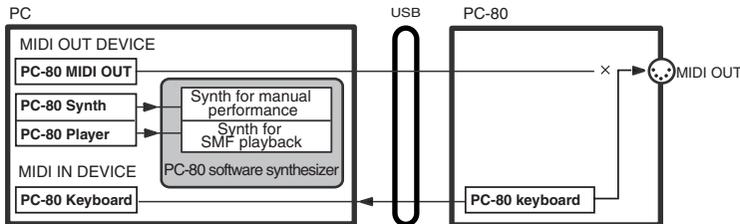
- \* To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.
- \* Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

## Basic connection example and signal flow

### Connecting to a computer via USB—Sending MIDI messages to your software



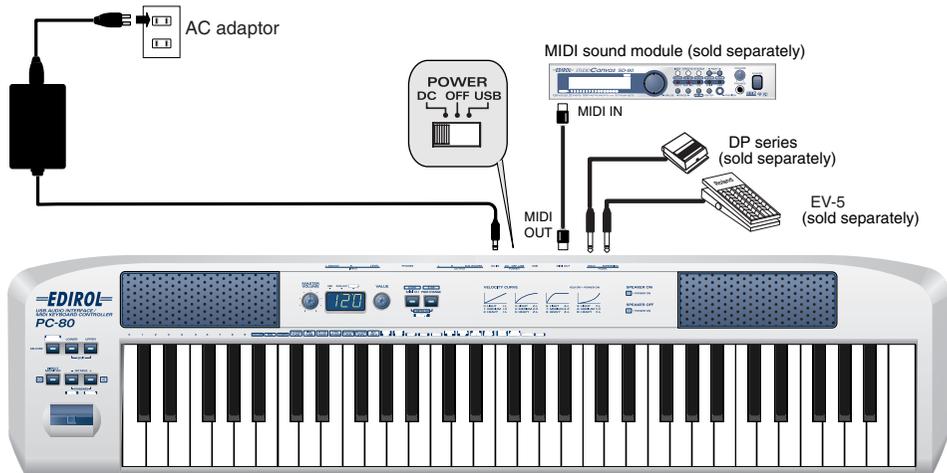
### ■ MIDI flow



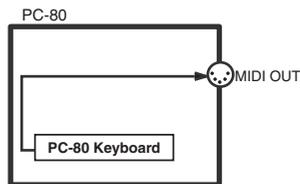
MIDI OUT device	
PC-80 Synth	Choose PC-80 Synth if you want to play MIDI data using the included PC-80 software synthesizer for manual performance. * For details on the sound generator for manual performance, refer to “How the PC-80 software synthesizer is structured” (p. 32).
PC-80 Player	Choose PC-80 Player if you want to play MIDI data using the included PC-80 software synthesizer for SMF playback. * For details on the software synthesizer for SMF playback, refer to “How the PC-80 software synthesizer is structured” (p. 32).
MIDI IN device	
PC-80 Keyboard	This section transmits MIDI messages from the keyboard, pitch bend/modulation lever, VALUE encoder, hold pedal, and expression pedal.

- \* If you want to connect a MIDI sound module to the MIDI OUT connector, refer to “Connecting to your computer via USB—Using the PC-80 as a MIDI interface” (p. 79).

## Connecting an external MIDI device—Transmitting MIDI messages to an external MIDI sound module



### ■ MIDI flow



# The PC-80's basic operating modes

## Play mode

**PLAY**

### ■ What is PLAY mode?

This is the mode in which you play the PC-80.

When you play the keyboard, note messages will be transmitted, causing a connected MIDI device to produce sound.

In addition to playing the keyboard to produce sound on a connected sound module, Play mode also lets you use the pitch bend/modulation lever to change the pitch of the sound (Pitch Bend) or apply vibrato (Modulation), and also to switch octaves (Octave Shift).

In addition, you can change the MIDI transmit channel, send program change messages, transmit specific parameters, or transmit start/stop messages.

### ■ To enter Play mode

The PC-80 will automatically be in Play mode when you turn on its power.

To switch from **Utility mode** (p. 61) to Play mode, simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments, or press the **CANCEL** button.

- You're returned to Play mode after you complete a setting or operation in Utility mod
- You are also returned to Play mode if you cancel an operation in Utility mode. In this case, the setting you were in the process of making will be cancelled.



To switch from **Soft Synth mode** (p. 33) to Play mode, press the **SOFTWARE SYNTHESIZER** button to turn it off.

### ■ Functions in PLAY mode

<b>Perform</b>	Use the keyboard, pitch bend/modulation lever, HOLD pedal, and EXPRESSION pedal to transmit MIDI messages.		p. 32
<b>Specify the MIDI transmit channel</b>	Use the VALUE encoder to specify the transmit channel for the keyboard, pitch bend/modulation lever, HOLD pedal, and EXPRESSION pedal.	MIDI CH 	p. 62
<b>Specify the keyboard mode</b>	Set the keyboard mode to Lower mode, Upper mode, or Split mode.		p. 35, p. 37
<b>Transmit a program change message</b>	Use the VALUE encoder to transmit a program change message. * For details on transmitting a bank select message refer to p. 65 and pp. 66.	PGM CHANGE 	p. 64
<b>Start playback (START)</b>	In Controller mode (p. 67) you can press the MIDI CH button to transmit a Start (FAh) message.	START MIDI CH   STOP PGM CHANGE   START MIDI CH →	p. 68
<b>Stop playback (STOP)</b>	In Controller mode (p. 67) you can press the PGM CHANGE button to transmit a Stop (FCh) message.	START MIDI CH   STOP PGM CHANGE   STOP PGM CHANGE →	p. 69
<b>Transmit a specific parameter value</b>	In Controller mode (p. 67) you can operate the VALUE encoder to transmit a specific parameter value.	START MIDI CH   STOP PGM CHANGE   VALUE →  →	p. 78

## Utility mode

UTILITY

### ■ What is Utility mode?

In Utility mode you can transmit specific control messages and make various settings for the PC-80 itself.

In Utility mode you will use the keyboard to select the function you want to

### ■ To enter Utility mode

To switch from Play mode to Utility mode, simultaneously hold down the MIDI CH button and PGM CHANGE button for a few moments.

The display will indicate “UTL” and the PC-80 will be in Utility mode.



### ■ Functions in Utility mode

<b>Transmit a Bank Select LSB</b>	Switches the bank. A Bank Select LSB (CC#32) message is transmitted.	<b>BANK LSB</b>	p. 65
<b>Transmit a Bank Select MSB</b>	Switches the bank. A Bank Select MSB (CC#00) message is transmitted.	<b>BANK MSB</b>	p. 65
<b>Continues playback from the current location</b>	A Continue message (FBh) is transmitted, causing the paused data to continue playing from the current location.	<b>CONT</b>	p. 70
<b>Transmit a Poly Mode On message</b>	Sets the sound generator to Poly mode	<b>POLY</b>	p. 71
<b>Transmit a Mono Mode On message</b>	Sets the sound generator to Mono mode.	<b>MONO</b>	p. 72
<b>Transmit a Portamento On message</b>	Switches the Portamento function on, creating a smooth change in pitch from one note to the next.	<b>PORTA ON</b>	p. 73
<b>Transmit a Portamento Off message</b>	Switches the Portamento function off.	<b>PORTA OFF</b>	p. 74
<b>Transmit a GM2 System On message</b>	Transmits a GM2 System On message.	<b>GM2 SYS ON</b>	p. 75
<b>Set the split point</b>	Specifies the split point of the keyboard.	<b>SPLIT POINT</b>	p. 77
<b>Set the input mode</b>	Specify the type of device connected to the audio input jacks.	<b>INPUT MODE</b>	p. 83
<b>Make audio system settings</b>	Makes settings related to the PC-80's audio system.	<b>AUDIO SYSTEM</b>	p. 84
<b>Make system settings</b>	Makes settings related to the PC-80's system.	<b>SYSTEM</b>	p. 89
<b>Transmit a Reset message</b>	If you experience “stuck notes” or other problems with the sound on a connected MIDI sound module, transmit a Reset message (All Sound Off, All Notes Off, Reset All Controllers) to resolve the problem.	<b>PANIC</b>	p. 76

## Transmitting various MIDI messages from the PC-80

Each of the PC-80's modes uses the transmit channel listed in the following table.

Mode	Channel
UPPER	UPPER
LOWER	LOWER
SPLIT	UPPER

### Setting the MIDI transmit channel

PLAY

In order to control a sound module, you must set the PC-80's **current channel** to match the **MIDI receive channel** of your sound module.

#### Current channel

The "**current channel**" is the MIDI transmit channel for the keyboard, pitch bend/modulation lever, VALUE encoder, hold pedal, and expression pedal.



Make sure that the PC-80's **SOFTWARE SYNTHESIZER** button is not lit. If you're in Controller mode (p. 67), switch to Play mode.

- 1 Press the **MIDI CH** button.  
The **MIDI CH** button will light. The display will indicate the current channel.
- 2 Use the **VALUE encoder** to specify the channel number you want to use.



Range	1-16
-------	------

The **current channel** has now been set.

## Selecting sounds—Transmitting Program Change and Bank Select Messages

You can select sounds on your MIDI sound module by transmitting Program Change messages to it. If you want to select a sound from a different bank, first transmit a Bank Select message to switch banks. Then transmit a Program Change message.

\* *You must transmit the Bank Select message before the Program Change message.*

### What are banks?

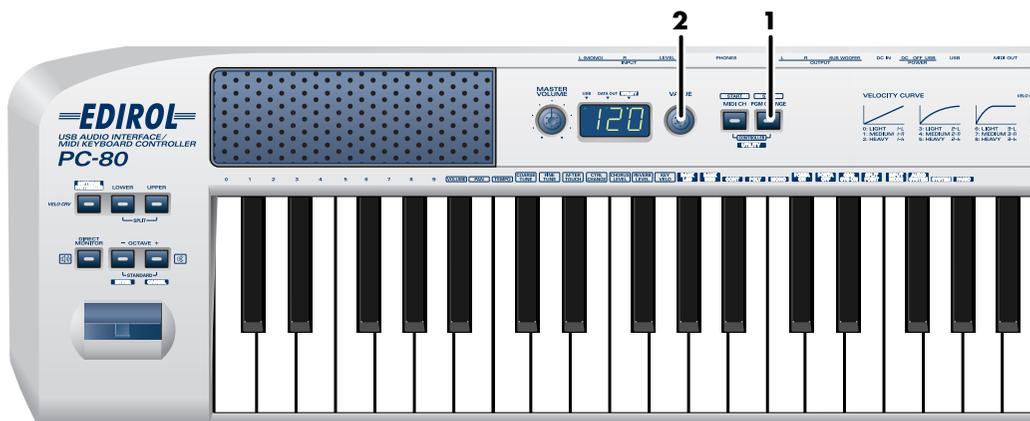
MIDI sound modules organize their numerous sounds into groups called “banks.” Program Change messages select sounds only within the same bank. However, by using Bank Select messages in conjunction with Program Change messages, you can access a much larger range of sounds.

\* *The way in which sounds are organized will depend on the sound module. For details, refer to the owner’s manual for your sound module.*

- **Transmitting a program change message**..... p. 64
- **Transmitting a bank select LSB message** ..... p. 65
- **Transmitting a bank select MSB message** .....p. 66

## ■ Transmitting a program change message **PLAY**

Here's how to transmit a Program Change message on the current channel (p. 62).



Make sure that the PC-80's **SOFTWARE SYNTHESIZER** button is not lit. If you're in Controller mode (p. 67), switch to Play mode.

- 1 Press the **PGM CHANGE** button.

The **PGM CHANGE** button will light. The display will show the most recently transmitted Program Change number.



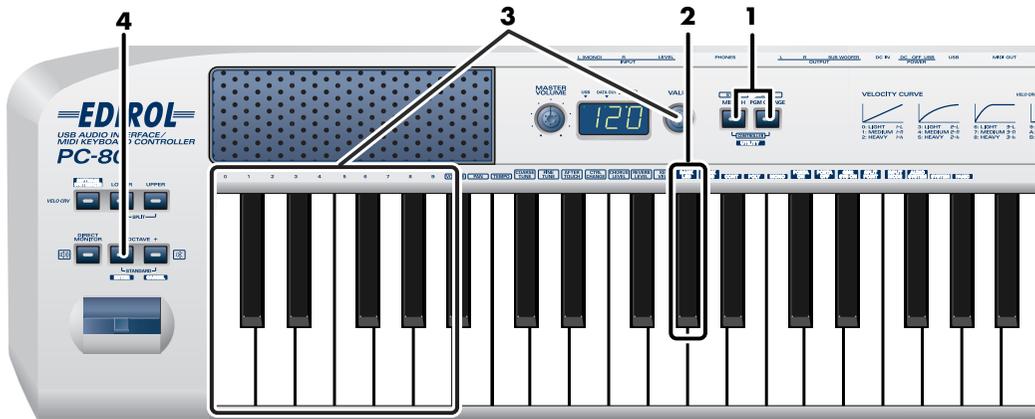
- 2 Use the **VALUE encoder** to specify the Program Change number you want to transmit.

Range	1-128
-------	-------

The Program Change message has been sent.

## ■ Transmitting a bank select LSB message UTILITY

Here's how to transmit a **bank select LSB** (CC#32) message on the current channel (p. 62). When you do this, the most recently transmitted **bank select MSB** message and **Program Change message** you transmitted (specified) as described in “**Transmitting a bank select MSB message**” (p. 66) and “**Transmitting a program change message**” (p. 64) will also be transmitted.



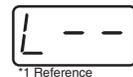
- 1 Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.



The display will indicate “UTL” and you will be in Utility mode.

- 2 Press the keyboard key marked **[BANK LSB]**.

- 3 Use the **VALUE encoder** or the keyboard keys marked **[0]–[9]** to specify the Bank Select LSB you want to transmit.



- 4 Press the **ENTER** button.

\* If you press another button without pressing the **ENTER** button, the transmission will be cancelled.

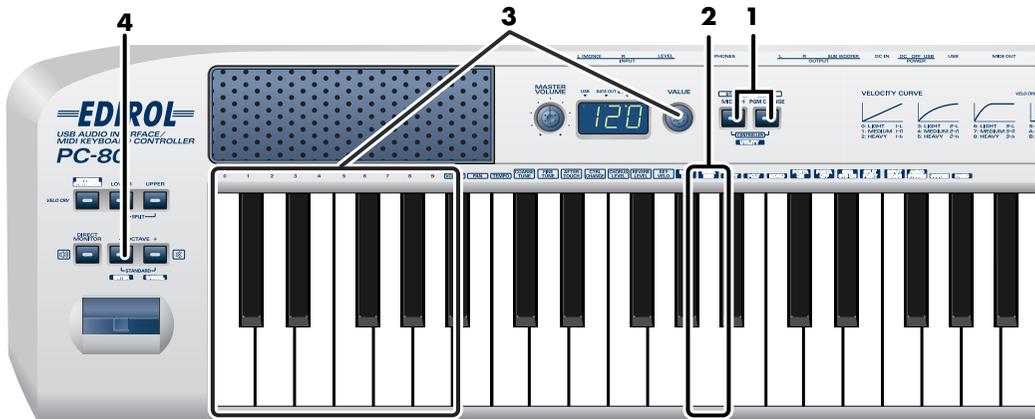


The **Bank Select LSB** message has been sent.

\*1 The -- area displays the currently set value. If it has not been set, the default setting will be displayed. Even if you change the type or mode of the MIDI message that is assigned, the default setting will be displayed. This will be lit if the value is the same as the currently set value, or will blink if the value is different.

## ■ Transmitting a bank select MSB message UTILITY

Here's how to transmit a **bank select MSB (#CC00) message** on the **Current channel** (p. 62). The **bank select LSB** and **program change message** you most recently transmitted (specified) as described in “Transmitting a bank select LSB message” (p. 65) and “Transmitting a program change message” (p. 64) will also be transmitted.



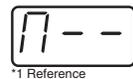
- 1 Simultaneously hold the **[MIDI CH]** button and **[PGM CHANGE]** button down.



The display will indicate “UTL,” and the PC-80 enters UTILITY mode.

- 2 Press **[BANK MSB]** key.

- 3 Use the **Value Encoder** or the **[0]–[9]** keys of the keyboard to specify the bank select MSB that you want to transmit.



\*1 Reference

- 4 Press the **[ENTER]** button.

*\*The setting will be cancelled if you press another button instead of the **[ENTER]** button.*



The **bank select MSB message** has now been transmitted.

## Starting/stopping playback data—Transmitting a Start/Stop/Continue message

You can transmit a **Start message** (FAh) or **Stop message** (FCh) to an external sequencer to make it start or stop playing its sequence data.

By transmitting a **Continue message** (FBh) you can make the sequencer resume playing the sequence data from the point where it was last stopped.

- You'll use Controller mode to transmit Start messages and Stop messages.

### What is Controller mode?

In this mode, the **MIDI CH** button, **PGM CHANGE** button, and **VALUE** encoder will perform different functions than when in Play mode (the normal condition).

	<b>MIDI CH button</b>	<b>PGM CHANGE button</b>	<b>VALUE encoder</b>
<b>Controller mode</b>	Transmits a Start message	Transmits a Stop message	Transmits the specified parameter
<b>Play mode (the normal condition)</b>	Specifies the MIDI transmit channel	Specifies a Program Change	Specifies the MIDI transmit channel or transmits a Program message

### To enter Controller mode

Simultaneously press the **MIDI CH** button and **PGM CHANGE** button; the **MIDI CH** button and **PGM CHANGE** button will light, and you will be in Controller mode.

When you once again press the **MIDI CH** button and **PGM CHANGE** button simultaneously, the **PGM CHANGE** button will go out, and you will return to Play mode (the normal condition).

\* *Controller mode works only from Play mode. It is not available from Utility mode.*

- You will use **Utility mode** to transmit **Continue messages** (p. 61).

## ■ Starting playback—Transmitting a Start message PLAY CONTROLLER

Here's how to transmit a **Start message** (FAh) to start SMF playback or recording.



- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button.  
The **MIDI CH** button and **PGM CHANGE** button will light, and you will be in Controller mode.



- 2 Press the **MIDI CH** button.



The **Start message** has been sent.

## ■ Stopping playback—Transmitting a Stop message PLAY CONTROLLER

Here's how to transmit a **Stop message** (FCh) to stop SMF playback or recording.



- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button.  
The **MIDI CH** button and **PGM CHANGE** button will light, and you will be in Controller mode.



- 2 Press the **PGM CHANGE** button.

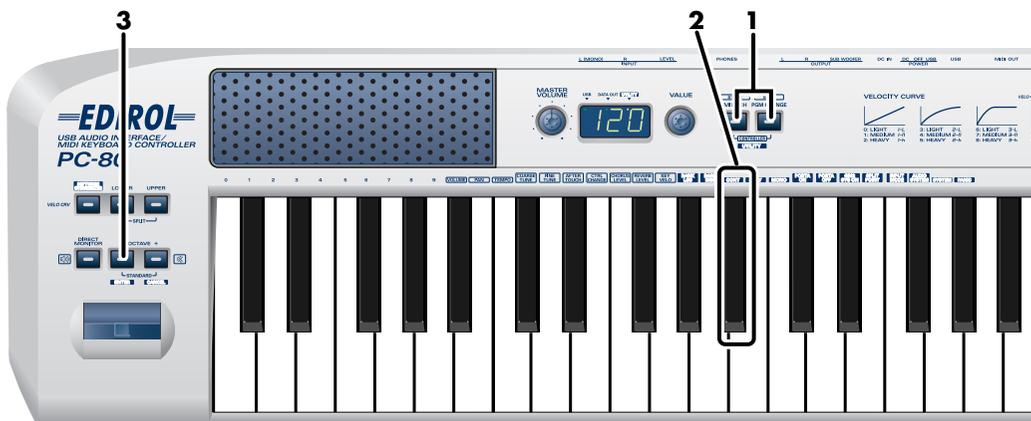


The **Stop message** has now been transmitted.

## ■ Continuing playback from the current location —Transmitting a Continue message

UTILITY

Here's how to transmit a **Continue message** (FBh) to resume playback from the current location.



- 1 Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.

The display will indicate “UTL” and you will be in Utility mode.



- 2 Press the keyboard key marked **[CONT]**.

The indication “CNT” starts blinking in the display.



- 3 Press the **ENTER** button.

*\*If you press a different button without pressing the **ENTER** button, the setting will be cancelled.*



The **Continue message** has been sent.

## Transmitting messages to an external MIDI sound module

You can transmit various messages from the PC-80 to your external MIDI sound module to control it.

Messages	Explanation
Poly Mode On	p. 71
Mono Mode On	p. 72
Portamento On	p. 73
Portamento Off	p. 74
GM2 System On	p. 75
Reset	p. 76

You will use Utility mode (p. 61) to transmit these messages to your external MIDI sound module.

### ■ Transmitting a Poly Mode On message UTILITY

Here's how to transmit a **Poly Mode On message** to switch your sound module to Poly mode. Poly mode allows multiple notes to be played simultaneously.



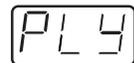
- 1 Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.

The display will indicate "UTL" and you will be in Utility mode.



- 2 Press the keyboard key marked **[POLY]**.

The indication "PLY" starts blinking in the display.



- 3 Press the **ENTER** button.

\* If you press a different button without pressing the **ENTER** button, the setting will be cancelled.



The **Poly Mode On message** has been sent.

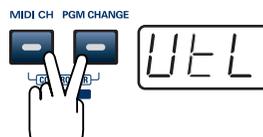
## ■ Transmitting a Mono Mode On message UTILITY

Here's how to transmit a **Mono Mode On message** to switch your sound module to Mono mode. Mono mode allows only single notes to be played at a time.



- 1 Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.

The display will indicate "UTL" and you will be in Utility mode.



- 2 Press the keyboard key marked **[MONO]**.

The indication "MNO" starts blinking in the display.



- 3 Press the **ENTER** button.

\* If you press a different button without pressing the **ENTER** button, the setting will be cancelled.



The **Mono Mode On message** has been sent.

## ■ Transmitting a Portamento On message UTILITY

Here's how to transmit a **Portamento On message** to enable Portamento on your sound module so that the pitch will change smoothly between each note you play.



- 1 Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.

The display will indicate "UTL" and you will be in Utility mode.



- 2 Press the keyboard key marked **[PORTA ON]**.

The indication "PON" starts blinking in the display.



- 3 Press the **ENTER** button.

\* If you press a different button without pressing the **ENTER** button, the setting will be cancelled.



The **Portamento On message** has been sent.

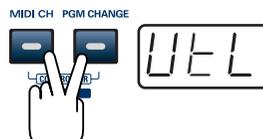
## ■ Transmitting a Portamento Off message UTILITY

Here's how to transmit a **Portamento Off message** to disable Portamento on your sound module.



- 1 Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.

The display will indicate "UTL" and you will be in Utility mode.



- 2 Press the keyboard key marked **[PORTA OFF]**.

The indication "POF" starts blinking in the display.



- 3 Press the **ENTER** button.

\* If you press a different button without pressing the **ENTER** button, the setting will be cancelled.



The **Portamento Off message** has been sent.

## ■ Transmitting a GM2 System On message UTILITY

Here's how to transmit a **GM2 System On** message.



- 1** Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.

The display will indicate "UTL" and you will be in Utility mode.



- 2** Press the keyboard key marked **[GM2 SYS ON]**.

The indication "GM2" starts blinking in the display.



- 3** Press the **ENTER** button.

\* If you press a different button without pressing the **ENTER** button, the setting will be cancelled.



The **GM2 System On** message has been sent.

## ■ Transmits a Reset message UTILITY

If you experience “stuck notes” or other problems with the external MIDI sound module that’s connected, you can transmit a **Reset message** to solve the problem.

This operation will transmit **All Sound Off**, **All Notes Off**, and **Reset All Controllers** messages on all channels.



- 1 Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.

The display will indicate “UTL” and you will be in Utility mode.



- 2 Press the keyboard key marked **[PANIC]**.

The indication “PNC” starts blinking in the display.



- 3 Press the **ENTER** button.

\* If you press a different button without pressing the **ENTER** button, the setting will be cancelled.



The **Reset message** has been sent.

## Setting the split points

UTILITY

### Split points

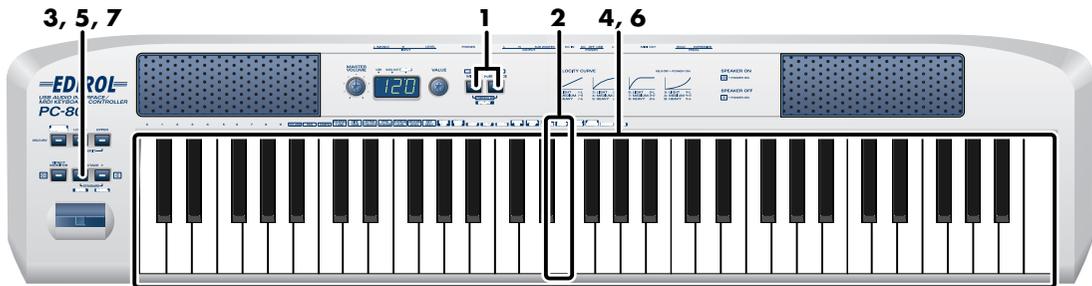
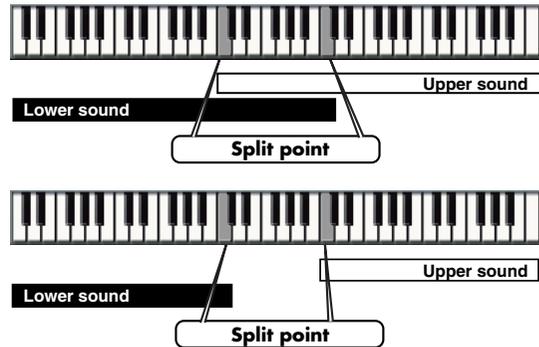
In **Split mode**, the keyboard is divided into Lower and Upper regions, allowing you to play separate sounds in each region.

The Lower region extends from the leftmost key to the key you specify.

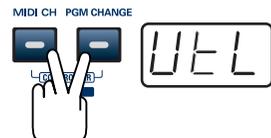
The Upper region extends from the rightmost key to the key you specify.

The keys that specify these regions are called the “**split points**.”

\* “**Combining two sounds (Split)**” (p. 37)



- 1 Simultaneously hold down the **MIDI CH** button and **PGM CHANGE** button for a few moments.  
The display will indicate “UTL” and you will be in Utility mode.



- 2 Press the keyboard key marked [**SPLIT POINT**].  
The indication “SPL” starts blinking in the display.



- 3 Press the **ENTER** button.

- 4 Press the keyboard key that you want to specify as the Lower split point.

- 5 Press the **ENTER** button.

- 6 Press the keyboard key that you want to specify as the Upper split point.

- 7 Press the **ENTER** button.



\* If you press a different button without pressing the **ENTER** button, the setting will be cancelled.

The **split points** have now been set.

\* In **Split mode**, the MIDI channels used for transmission will be the MIDI channels specified for Upper mode and Lower mode. (→ “**Setting the MIDI transmit channel**” (p. 62))

## Using the VALUE encoder to transmit values for a specified parameter

PLAY CONTROLLER

### A specified parameter

The instrument can be set so values for a certain parameter you specify are transmitted when you operate the PC-80's VALUE encoder.

### To specify the parameter

In Utility mode, use **System Settings** to specify the parameter to be assigned to the VALUE encoder.

 “System settings” (p. 89)

When you operate the VALUE encoder in **Controller mode** (p. 67), values for the specified parameter will be transmitted.



- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button.  
The **MIDI CH** button and **PGM CHANGE** button will light, and you will be in Controller mode.



- 2 Operate the **VALUE encoder**.  
Values for the specified parameter will be transmitted.



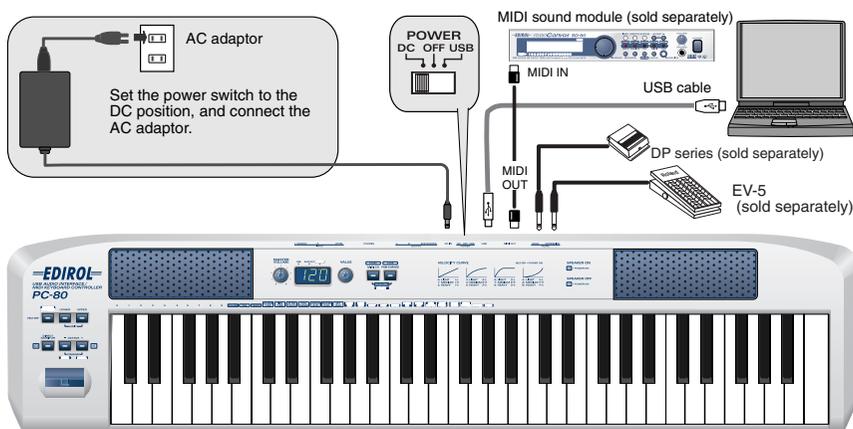
# Using the PC-80 as a MIDI interface

This section explains the basic connections and MIDI signal flow when using the PC-80 as a MIDI interface.

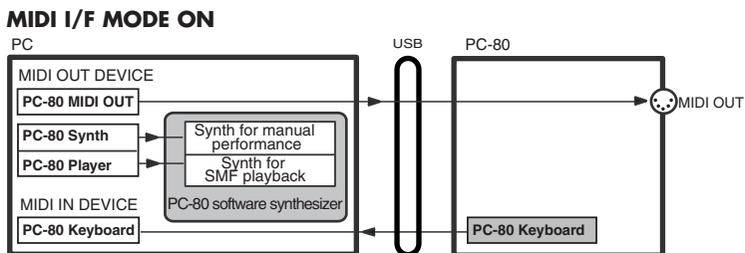
- To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.
- Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

## Basic connections and signal flow

### Connecting to your computer via USB—Using the PC-80 as a MIDI interface



#### ■ MIDI flow



\*Turn MIDI I/F mode **ON** as described in “MIDI I/F MODE” (p. 94).

<b>PC-80 MIDI OUT</b>	If you specify PC-80 MIDI OUT as the output port for your sequencer software, messages will be transmitted from the PC-80's MIDI OUT connector. * If the MIDI I/F mode is turned off, MIDI messages from your computer will not be transmitted. You must turn MIDI I/F mode on. (→ “MIDI I/F MODE” (p. 94))
<b>PC-80 Synth</b>	Choose PC-80 Synth if you want to play MIDI data on the PC-80 software synthesizer for manual performance. * For details on the sound generator for manual performance, refer to “How the PC-80 software synthesizer is structured” (p. 32).
<b>PC-80 Player</b>	Choose PC-80 Player if you want to play MIDI data on the included PC-80 software synthesizer for SMF playback. * For details on the software synthesizer for SMF playback, refer to “How the PC-80 software synthesizer is structured” (p. 32).
<b>PC-80 keyboard</b>	This section transmits MIDI messages from the keyboard, pitch bend/modulation lever, VALUE encoder, hold pedal, and expression pedal.

# Using the PC-80 as an audio interface

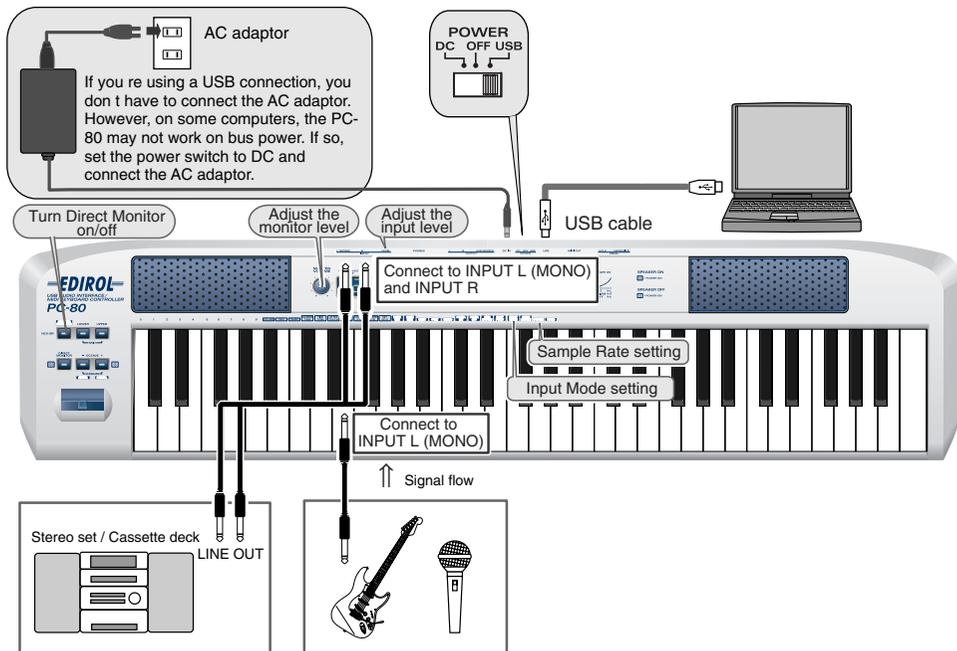
This section explains basic connections and audio signal flow when using the PC-80 as an audio interface.

You can refer to the block diagram (p. 82) together with this explanation.

- \* 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 connection example and signal flow

### Recording on your computer—Using software to record sound from a mic, guitar, and external audio device



## Connections

The sound of the device connected to INPUT L (MONO) will be recorded in your computer on the L channel, and the sound of the device connected to INPUT R will be recorded on the R channel. If you connect only one of these, it will be recorded in monaural on your computer. (The same sound will be recorded on the L channel and R channel.)

\* *Don't connect anything to an input jack you're not using.*

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

- Changing the orientation of the microphone(s).
- Relocating microphone(s) at a greater distance from speakers.
- Lowering volume levels.

## Input Mode setting

Select either LINE, GUITAR, or MIC as appropriate for the device you've connected to the audio input jacks.

(→ “**Setting the Input Mode**” (p. 83))

## Sample Rate setting

Select the same sample rate as is selected in your recording software.

(→ “**SAMPLE RATE SETTING**” (p. 85))

\* *If you change the sample rate on the PC-80, you'll need to switch it off, then switch it back on again in order for the new setting to take effect.*

## Input level knob

Use the **Input Level Knob (LEVEL)** (p. 13) to adjust the input level appropriately for the input device you've connected. Use your software to check the input level.

## Direct Monitor button

Use this to switch the Direct Monitor function on/off.

If Direct Monitor is on, the input signal from the audio input jacks will be output from the PC-80's speakers, headphone jack, and master output jacks.

\* *This cannot be controlled from ASIO 2.0 compatible software such as Cubase.*

## Master volume knob

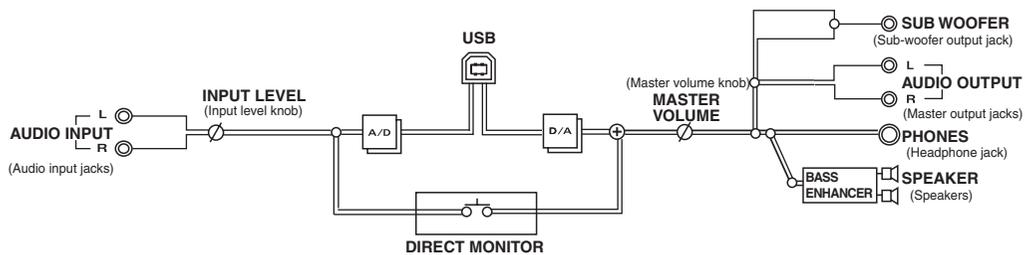
If Direct Monitor is on, this adjusts the monitor level.

\* *Adjusting the monitor level won't change the recording level.*

## Device setting

In order to use the PC-80's audio functionality with your software, you'll need to make the correct device settings. For details on how to do this, refer to the owner's manual for your software. For details on settings for using the PC-80 with software (such as Media Player) that uses the standard device settings of your operating system, refer to “**PC-80 driver settings**” (p. 99).

## Audio signal flow (block diagram)



### Using the PC-80's built-in speakers

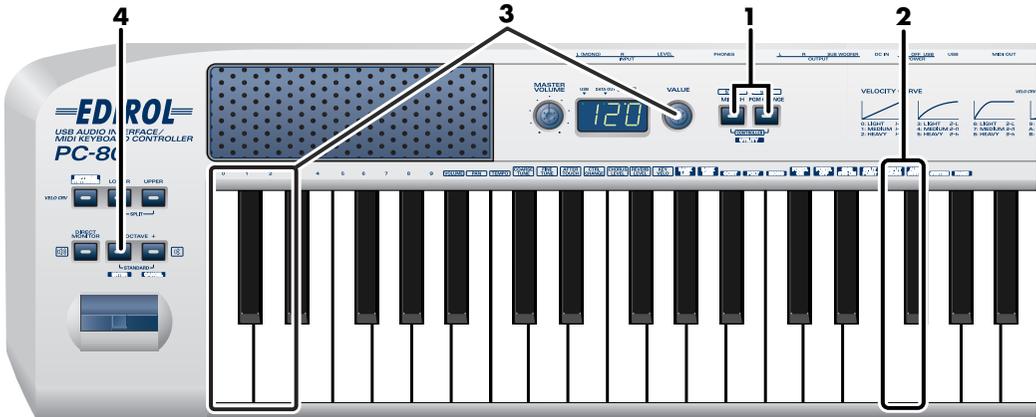
Depending on your system, you may experience problems such as a poor S/N ratio for the audio when using the PC-80's built-in speakers. If so, you can take the following measures.

- Lower the master volume.
- Turn the PC-80's built-in speakers off (use headphones)
- Connect the AC adaptor and set the power switch to the DC position

# Setting the Input Mode

UTILITY

You need to select the Input Mode that is appropriate for the device you've connected to the audio input jacks; either Line, Guitar, or Mic.



- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.

The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[INPUT MODE]** key on the keyboard.
- 3 Use the **VALUE encoder** or the [0]-[2] keys of the keyboard to choose the setting that's appropriate for the device you've connected to the audio input jacks.

Key	Indication	Setting	Explanation
0		<b>LINE</b>	Choose this if a MIDI sound module or other analog audio device is connected
1		<b>GUITAR</b>	Choose this if a guitar is connected
2		<b>MIC</b>	Choose this if a dynamic mic is connected * The PC-80 is not compatible with the miniature mics (condenser mics) sometimes included with a computer or sound card.

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the **ENTER** button, the setting you made will be discarded.

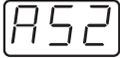
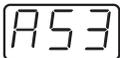


# System settings for the PC-80

## Audio System settings

Here you can make settings for the PC-80's audio functionality.

### Audio System setting items

Key	Display	Mode	Contents of setting	Factory setting	Procedure
0		<b>SAMPLE RATE SETTING</b>	Specifies the sample rate for USB audio. * Changes go into effect upon next power-up.	44.1 kHz	p. 85
1		<b>AUDIO ADVANCED DRIVER ON/OFF</b>	Specifies the driver mode for USB audio. * Changes go into effect upon next power-up.	ON	p. 86
2		<b>SPEAKER ON/OFF</b>	Turns the PC-80's built-in speakers on/off.	ON	p. 87
3		<b>BASS ENHANCER ON/OFF</b>	Turns the Bass Enhancer function on/off. Turn this on if you want to strengthen the bass.	ON	p. 88
4		<b>LOOP BACK ON/OFF</b>	Turns the Loop Back function on/off. If this is on, the audio sent by your sequencer or other software from the computer will be routed through the PC-80 and back to the computer.	OFF	p. 88

## SAMPLE RATE SETTING



- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.  
The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[AUDIO SYSTEM]** key on the keyboard.  
"AS0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[0]** key of the keyboard to choose "AS0."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or the **[0]–[3]** keys of the keyboard to specify the sample rate for USB audio.

Key	Indication	Setting
0	44	44.1 kHz
1	48	48 kHz
2	96P	96 kHz playback
3	96r	96 kHz recording

- 6 Press the **ENTER** button.

\* The Sample Rate setting will be applied the next time you turn on the power.

## AUDIO ADVANCED DRIVER ON/OFF

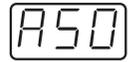
- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.

The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[AUDIO SYSTEM]** key on the keyboard.

"AS0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[1]** key of the keyboard to choose "AS1."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or press the **[0]** or **[1]** key of the keyboard to specify the USB audio driver mode.

The display will indicate either "ON" or "OFF."

Key	Setting	Explanation
0	ADVANCED OFF	<p><b>Standard driver mode</b></p> <p>This mode uses the standard driver provided by the operating system. You can use this mode without installing the dedicated driver. Audio signals can be transferred between the PC-80 and the computer with <b>16-bit</b> resolution and <b>44.1/48 kHz</b> sample rates. You can't use the PC-80 software synthesizer with this Advance Off setting.</p> <p>* The PC-80 will operate at 44.1 kHz if you use 96 kHz playback or 96 kHz recording.</p>
1	ADVANCED ON	<p><b>Advance mode</b></p> <p>This mode uses a dedicated driver written specifically for the PC-80. By using the dedicated driver, you can record and play back audio with high quality and stable timing. We recommend that you use this mode. Audio signals can be transferred between the PC-80 and the computer with <b>24-bit</b> resolution and <b>44.1/48/96 kHz</b> sample rates. Choose this mode if you're using software that supports 24-bit audio or software that supports ASIO.</p>

- 6 Press the **ENTER** button.

\* The Audio Advanced Driver On/Off setting will be applied the next time you turn on the power.

## SPEAKER ON/OFF

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.
- The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[AUDIO SYSTEM]** key on the keyboard.
- "AS0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[2]** key of the keyboard to choose "AS2."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or press the **[0]** or **[1]** key of the keyboard to switch the PC-80's internal speaker output on or off.

The display will indicate either "ON" or "OFF."

Key	Setting
0	OFF
1	ON

- 6 Press the **ENTER** button.

### Speaker On/Off Setting

You can change the SPEAKER ON/OFF setting by holding down **[DIRECT MONITOR]** or **[OCTAVE+]** while you turn on the power.



<b>SPEAKER ON</b>	Turn on the power while holding down <b>[DIRECT MONITOR]</b> .
<b>SPEAKER OFF</b>	Turn on the power while holding down <b>[OCTAVE+]</b> .

## BASS ENHANCER ON/OFF

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.  
The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[AUDIO SYSTEM]** key on the keyboard.  
"AS0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[3]** key of the keyboard to choose "AS3."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or press the **[0]** or **[1]** key of the keyboard to switch the BASS ENHANCER function on or off.  
The display will indicate either "ON" or "OFF."

Key	Setting
0	OFF
1	ON

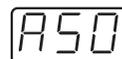
- 6 Press the **ENTER** button.

## LOOP BACK ON/OFF

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.  
The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[AUDIO SYSTEM]** key on the keyboard.  
"AS0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[4]** key of the keyboard to choose "AS4."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or press the **[0]** or **[1]** key of the keyboard to switch the LOOP BACK function on or off.  
The display will indicate either "ON" or "OFF."

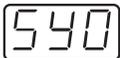
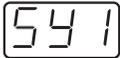
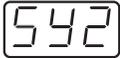
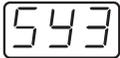
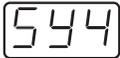
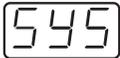
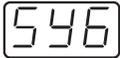
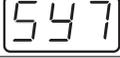
Key	Setting
0	OFF
1	ON

- 6 Press the **ENTER** button.

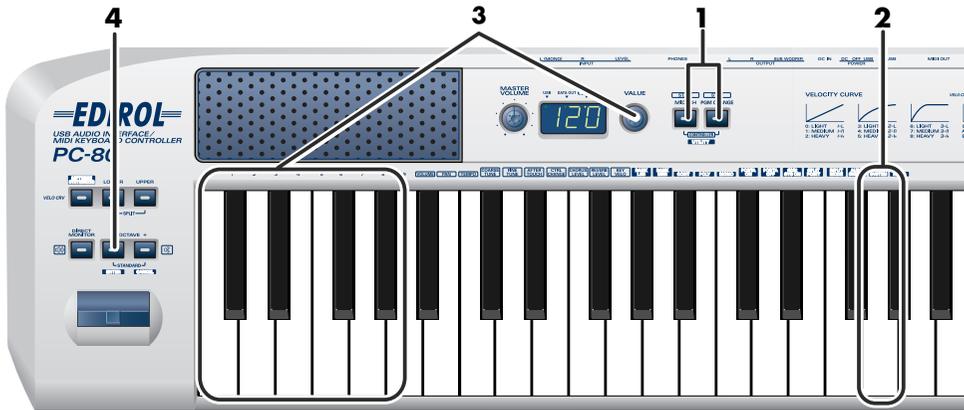
## System settings

Here you can make system settings for the PC-80.

### System setting items

Key	Display	Mode	Contents of setting	Factory setting	Procedure
0		<b>F8 CLOCK ON/OFF</b>	Determines whether or not F8 Clock will be transmitted.	OFF	p. 90
1		<b>F8 CLOCK DEFAULT TEMPO</b>	If "F8 CLOCK ON/OFF" is on, this specifies the initial tempo of the F8 Clock. After the power is turned on, this tempo will be transmitted until you move the VALUE encoder to which Tempo has been assigned.	120	p. 91
2		<b>VELOCITY CURVE</b>	When you play the PC-80's keyboard, velocity values corresponding to the force with which you strike the keys will be transmitted. The Velocity Curve setting specifies the keyboard sensitivity and how velocity values will change in response to your playing strength.	1-MEDIUM	p. 92
3		<b>KEY VELOCITY</b>	Specifies whether the velocity value will be fixed or whether it will vary according to the Velocity Curve you selected.	TOUCH	p. 93
4		<b>MIDI I/F MODE</b>	Specifies whether the PC-80 will operate as a MIDI interface via its MIDI connectors.	ON	p. 94
5		<b>VALUE ENCODER</b>	Specifies the parameter that will be transmitted when you operate the VALUE encoder.	VOLUME	p. 95
6		<b>FACTORY RESET</b>	Restores all of the PC-80's setting to the factory-set condition.	-	p. 97
7		<b>MIDI ADVANCED DRIVER ON/OFF</b>	Specifies the type of USB MIDI driver that will be used when connected via USB.	ON	p. 98

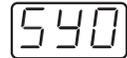
## F8 CLOCK ON/OFF



- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.  
The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[SYSTEM]** key on the keyboard.  
"SY0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[0]** key of the keyboard to choose "SY0."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or press the **[0]** or **[1]** key of the keyboard to switch F8 Clock on or off.  
The display will indicate either "ON" or "OFF."

Key	Setting
0	OFF
1	ON

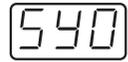
- 6 Press the **ENTER** button.

## F8 CLOCK DEFAULT TEMPO

- 1** Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.
- The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2** Press the **[SYSTEM]** key on the keyboard.
- "SY0" appears (blinking) in the display.



- 3** Use the **VALUE** encoder or the **[1]** key of the keyboard to choose "SY1."

- 4** Press the **ENTER** button.

*\* If you press any other button without pressing the ENTER button, the setting will be cancelled.*



- 5** Use the **VALUE** encoder or press one of the **[0]–[9]** keys of the keyboard to set the F8 Clock Default Tempo to a value in the 20–250 range.
- The display will indicate the value you specified.

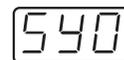
- 6** Press the **ENTER** button.

## VELOCITY CURVE

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.  
The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[SYSTEM]** key on the keyboard.  
"SY0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[2]** key of the keyboard to choose "SY2."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or press one of the **[0]–[PAN]** keys of the keyboard to specify the keyboard sensitivity and how you want the velocity values to change.

Key	Display	Setting	Curve	Keyboard Sensitivity
0	1-L	1-LIGHT	<p>1</p>	High velocity values will be produced even if you play the keyboard softly.
1	1-M	1-MEDIUM		The keyboard sensitivity will be normal.
2	1-H	1-HEAVY		High velocity values will be produced only if you play the keyboard strongly.
3	2-L	2-LIGHT	<p>2</p>	High velocity values will be produced even if you play the keyboard softly.
4	2-M	2-MEDIUM		The keyboard sensitivity will be normal.
5	2-H	2-HEAVY		High velocity values will be produced only if you play the keyboard strongly.
6	3-L	3-LIGHT	<p>3</p>	High velocity values will be produced even if you play the keyboard softly.
7	3-M	3-MEDIUM		The keyboard sensitivity will be normal.
8	3-H	3-HEAVY		High velocity values will be produced only if you play the keyboard strongly.
9	4-L	4-LIGHT	<p>4</p>	High velocity values will be produced even if you play the keyboard softly.
VOLUME	4-M	4-MEDIUM		The keyboard sensitivity will be normal.
PAN	4-H	4-HEAVY		High velocity values will be produced only if you play the keyboard strongly.

- 6 Press the **ENTER** button.

## Velocity Curve setting

You can also access the Velocity Curve setting screen by holding down the **VELO CRV** button while you turn on the power.

## KEY VELOCITY

The Key Velocity mode specifies whether velocity values will be transmitted according to the keyboard sensitivity you specified in “**VELOCITY CURVE**” (p. 92) or at a single fixed value.

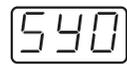
The PC-80 detects the force with which you strike each key and transmits this as the velocity value, but you can set the Key Velocity mode to a fixed value so that the same value will be transmitted each time, regardless of how strongly (or softly) you strike the key. If you don't want your playing dynamics to affect the sounds you play, proceed as follows to set the Key Velocity mode to a fixed value.

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.



The PC-80's display will indicate “UTL,” and you will be in Utility mode.

- 2 Press the **[SYSTEM]** key on the keyboard.  
“SY0” appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[3]** key of the keyboard to choose “SY3.”

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the **ENTER** button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or the **keyboard** to specify the Key Velocity mode.

Key	Display	Mode	Explanation
0		<b>TOUCH</b>	Velocity values will be transmitted according to the keyboard sensitivity and curve you selected in “ <b>VELOCITY CURVE</b> ” (p. 92).
1–127		<b>Fixed value</b>	Velocity will be transmitted at the specified value regardless of how strongly you play the keyboard.

- 6 Press the **ENTER** button.

\* If you change the Key Velocity in Controller mode, that value will take priority.

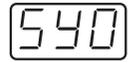
\* The value you specify here will take effect the next time the PC-80 is powered up.

## MIDI I/F MODE

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.  
The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[SYSTEM]** key on the keyboard.  
"SY0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[4]** key of the keyboard to choose "SY4."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or press the **[0]** or **[1]** key of the keyboard to switch MIDI I/F Mode on or off.

Key	Display	Mode	Explanation
0		<b>MIDI I/F MODE OFF</b>	<p>MIDI messages from your computer will not be sent from the PC-80's MIDI OUT connector. MIDI messages from the PC-80's keyboard will be sent both to your computer and to the PC-80's MIDI OUT connector.</p>
1		<b>MIDI I/F MODE ON</b>	<p>The PC-80's MIDI OUT connector will act as a MIDI interface. MIDI messages from the computer connected via USB to the PC-80 will be sent to the MIDI device that's connected to the PC-80's MIDI OUT connector.</p> <p><b>MIDI I/F MODE ON</b></p>

- 6 Press the **ENTER** button.

## VALUE ENCODER

Here's how to assign a specified parameter to the VALUE encoder.

### Specified parameter

This setting lets you transmit a specified parameter by turning the PC-80's VALUE encoder.

### To transmit the parameter value

When you operate the VALUE encoder in **What is Controller mode?** (p. 67), the corresponding value for the parameter you specified will be transmitted.



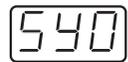
“Using the VALUE encoder to transmit values for a specified parameter” (p. 78)

\* The assignment of the VALUE encoder is valid only in **Play mode** (p. 60) and in **Controller mode** (p. 67).

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.  
The PC-80's display will indicate “UTL,” and you will be in Utility mode.



- 2 Press the **[SYSTEM]** key on the keyboard.  
“SY0” appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[5]** key of the keyboard to choose “SY5.”

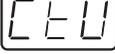
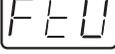
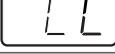
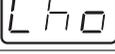
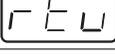
- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or the keyboard to specify the parameter.

## List of parameters that can be assigned

Key	Display	Parameter	Contents of setting
VOLUME		VOLUME	Assigns the VOLUME parameter to the Value Encoder. VOLUME: 0–127
PAN		PANPOT	Assigns the PANPOT parameter to the Value Encoder. PANPOT: 0–127
TEMPO		TEMPO	Assigns the tempo of the F8 Clock messages to the Value Encoder. TEMPO: 20–250
COARSE TUNE		COARSE TUNING	Assigns the COARSE TUNING parameter to the Value Encoder. COARSE TUNING: 0–127
FINE TUNE		FINE TUNING	Assigns the FINE TUNING parameter to the Value Encoder. FINE TUNING: 0–127
AFTER TOUCH		AFTERTOUCH	Assigns the AFTERTOUCH parameter to the Value Encoder. AFTERTOUCH: 0–127
CONTROL CHANGE		CONTROL CHANGE	Assigns the CONTROL CHANGE parameter to the Value Encoder. CONTROL CHANGE: 0–127
CHORUS LEVEL		CHORUS LEVEL	Assigns the CHORUS LEVEL parameter to the Value Encoder. CHORUS LEVEL: 0–127
REVERB LEVEL		REVERB LEVEL	Assigns the REVERB LEVEL parameter to the Value Encoder. REVERB LEVEL: 0–127
VELO KEY		KEY VELOCITY	Assigns the KEY VELOCITY parameter to the Value Encoder.  In KEY VELOCITY MODE, the velocity value is fixed. The PC-80 transmits velocity values that correspond to the force with which you play the keyboard, but if KEY VELOCITY is assigned to the Value Encoder, the fixed velocity value you specify using the Value Encoder will be transmitted regardless of how you actually play the keyboard. Use KEY VELOCITY MODE if you don't want the velocity values to be affected by how you play the keyboard.  KEY VELOCITY: tch, 1–127  * If you use the Value Encoder to set the value to "tch", the transmitted velocity will correspond to the force with which you actually play the keyboard.

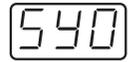
6 Press the **ENTER** button.

## FACTORY RESET

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.  
The PC-80's display will indicate "UTL," and you will be in Utility mode.



- 2 Press the **[SYSTEM]** key on the keyboard.  
"SY0" appears (blinking) in the display.



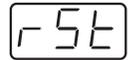
- 3 Use the **VALUE** encoder or the **[6]** key of the keyboard to choose "SY6."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 The display will indicate "RST."



- 6 Press the **ENTER** button.  
The display will blink "YES."



- 7 Press the **ENTER** button.

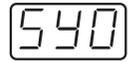
## MIDI ADVANCED DRIVER ON/OFF

- 1 Simultaneously press the **MIDI CH** button and **PGM CHANGE** button, and hold them down for a few moments.



The PC-80's display will indicate "UTL," and you will be in Utility mode.

- 2 Press the **[SYSTEM]** key on the keyboard.  
"SY0" appears (blinking) in the display.



- 3 Use the **VALUE** encoder or the **[7]** key of the keyboard to choose "SY7."

- 4 Press the **ENTER** button.

\* If you press any other button without pressing the ENTER button, the setting will be cancelled.



- 5 Use the **VALUE** encoder or press the **[0]** or **[1]** key of the keyboard to specify the USB MIDI Driver Mode.

Key	Setting
0	OFF
1	ON

The display will indicate either "ON" or "OFF."

Key	Setting	Explanation
0	ADVANCED OFF	<b>Standard driver mode</b> This mode uses the standard MIDI driver provided by the operating system. You can use this mode without installing the dedicated driver. You won't be able to use the PC-80 software synthesizer.
1	ADVANCED ON	<b>Advance mode</b> This mode uses a dedicated driver written specifically for the PC-80. By using the dedicated driver, you can take advantage of *FPT technology for high-speed MIDI transfer. We recommend that you use this mode.

\* **FPT = Fast Processing Technology for MIDI Transmission:**

Effective use is made of the USB bandwidth according to the amount of MIDI data to be transmitted, ensuring that MIDI data processing will always occur optimally.

- 6 Press the **ENTER** button.

# PC-80 driver settings

## Input and output devices

In order to use the PC-80 with your software, you'll need to make input/output device settings. For details, refer to the owner's manual for the software you are using.

\* If you are unable to select a PC-80 device in the device settings of your software, it may be that the PC-80 driver was not installed correctly. Please reinstall the driver. (→ Windows: p. 16; Macintosh: p. 29)

You do not need to make device settings in order to use the included PC-80 software synthesizer. The PC-80 device will be assigned automatically. However, if you change the device from its default setting in the PC-80 software synthesizer Option window, you will need to re-specify the PC-80 as the device.

### ■ AUDIO DEVICES

#### Windows

##### AUDIO OUTPUT DEVICE (WDM)

<b>EDIROL PC-80</b>	Sends the audio signal from the computer to the PC-80. Normally, such as when using Media Player, you will choose this device. You will also choose this device when using software such as SONAR in WDM driver mode, and when using DirectSound software.
---------------------	--

##### AUDIO INPUT DEVICE (WDM)

<b>EDIROL PC-80</b>	Receives the audio signal sent from the PC-80 to the computer. Normally, you will choose this device. You will also choose this device when using software such as SONAR in WDM driver mode.
---------------------	--

##### ASIO DEVICE

<b>EDIROL PC-80</b>	If you are using the PC-80 with ASIO-compatible software such as Cubase, choose "PC-80" in the ASIO settings of your software. To prevent audio feedback loops or duplicate monitoring, turn monitoring off in your software. <i>* If you are using ASIO-compatible sequencer software in Windows, set the driver type to WDM in the Option window of the PC-80 software synthesizer.</i>
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#### Macintosh

##### AUDIO OUTPUT DEVICE

<b>EDIROL PC-80</b>	Sends the audio signal from your computer to the PC-80.
---------------------	---

##### AUDIO INPUT DEVICE

<b>EDIROL PC-80 ?? kHz</b>	Receives the audio signal sent from the PC-80 to the computer.
----------------------------	--

### ■ MIDI DEVICES

#### MIDI OUT DEVICES

<b>PC-80 MIDI OUT</b>	If you choose <b>PC-80 MIDI OUT</b> as the output port in your sequencer software, the messages will be transmitted from the PC-80's MIDI OUT connector. <i>* Turn on MIDI I/F Mode as described in "MIDI I/F MODE" (p. 94).</i>
<b>PC-80 Synth</b>	Choose <b>PC-80 Synth</b> if you want to play MIDI data using the manual performance synth sound generator of the included PC-80 software synthesizer. <i>* For details on the synth sound generator for manual playing, refer to "How the PC-80 software synthesizer is structured" (p. 32).</i>
<b>PC-80 Player</b>	Choose PC-80 Player if you want to play MIDI data on the included PC-80 software synthesizer for SMF playback. <i>* For details on the software synthesizer for SMF playback, refer to "How the PC-80 software synthesizer is structured" (p. 32).</i>

#### MIDI IN DEVICE

<b>PC-80 keyboard</b>	Messages received from the keyboard, bender lever, and VALUE encoder are input via this port.
-----------------------	---

## Input/output device settings

If you are using the PC-80 with software (such as Media Player) that uses the standard device settings of the operating system, use the following procedure to choose the input/output device.

The method for making device settings will depend on the software you're using. For details, refer to the owner's manual of your software.

### Windows XP users

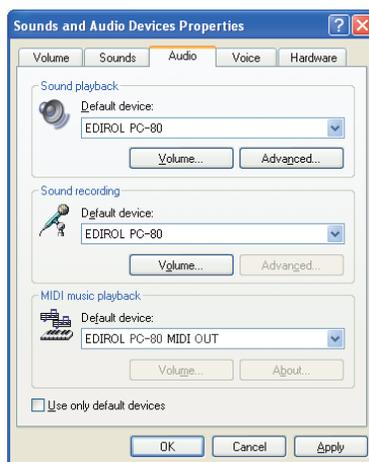
- 1 Use the USB cable to connect the PC-80 to your computer.
- 2 Turn on the PC-80's power switch.
- 3 Open the **Sounds and Audio Devices Properties** dialog box.
  1. Click the Windows **start** menu, and from the menu that appears, select **Control Panel**.
  2. In "Pick a category," click "**Sound, Speech, and Audio Devices.**"
  3. Next, in "or pick a Control Panel icon," click the **Sounds and Audio Devices** icon.
- 4 Click the **Audio** tab.
- 5 In each of the **Sound playback**, **Sound recording**, and **MIDI music playback** areas, click the **Default device** field and choose the following devices from the list that appears.

<b>Sound playback</b>	EDIROL PC-80
<b>Sound recording</b>	EDIROL PC-80
<b>MIDI music playback</b>	EDIROL PC-80 MIDI OUT
	EDIROL PC-80 Synth
	EDIROL PC-80 Player

\* In **MIDI music playback**, choose one of the three devices that appears. If you're using *Media Player*, choose **EDIROL PC-80 Player**.

\* For more about each device, refer to "**MIDI DEVICES**" (p. 99).

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



### NOTE

In order to make device settings, you must have already installed the driver.

(→ "**Installation and settings (Windows)**" (p. 16))

### MEMO

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

### MEMO

Choose the device that's appropriate for your system. You do not necessarily have to choose the devices shown at the left.

### MEMO

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

## Windows 2000 users

- 1 Use the USB cable to connect the PC-80 to your computer.
- 2 Turn on the PC-80's power switch.
- 3 Open **Control Panel**.  
Click the Windows **Start** menu, and from the menu that appears, select **Settings | Control Panel**.
- 4 Open the **Sounds and Multimedia Properties**.  
In **Control Panel**, double-click the **Sounds and Multimedia** icon to open the **Sounds and Multimedia Properties** dialog box.
- 5 Click the **Audio** tab.

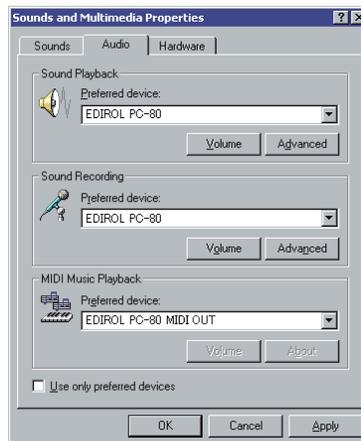
- 6 In each of the **Sound Playback**, **Sound Recording**, and **MIDI Music Playback** areas, click the **Preferred device** field and choose the following devices from the list that appears.

<b>Sound Playback</b>	EDIROL PC-80
<b>Sound Recording</b>	EDIROL PC-80
<b>MIDI Music Playback</b>	EDIROL PC-80 MIDI OUT
	EDIROL PC-80 Synth
	EDIROL PC-80 Player

\* In **MIDI music playback**, choose one of the three devices that appears. If you're using *Media Player*, choose **EDIROL PC-80 Player**.

\* For more about each device, refer to "**MIDI DEVICES**" (p. 99).

- 7 Close the **Sounds and Multimedia Properties** dialog box.  
Click **[OK]** to complete the settings.



### NOTE

In order to make device settings, you must have already installed the driver.  
(→ "**Installation and settings (Windows)**" (p. 16))

### MEMO

Choose the device that's appropriate for your system. You do not necessarily have to choose the devices shown at the left.

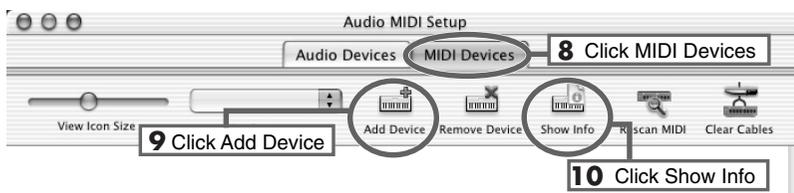
### MEMO

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

## Macintosh users

- 1 Use the USB cable to connect the PC-80 to your computer.
- 2 Turn on the PC-80's power switch.
- 3 Open **"System Preferences"** and click **"Sound"**.
- 4 In the **Sound Effects** tab, set **"Play alerts and sound effects through"** to **"EDIROL PC-80 44.1 kHz"**.
 

\* *If you don't want alerts to be played through the PC-80, choose **"Internal speakers"** for the **"Play alerts and sound effects through"** setting.*
- 5 In the **Output** tab, set **"Choose a device for sound output"** to **"EDIROL PC-80 44.1 kHz"**.
- 6 In the **Input** tab, set **"Choose a device for sound input"** to **"EDIROL PC-80 44.1 kHz"**.
- 7 Open the **Applications** folder of your Macintosh hard disk. In the **Utilities** folder, double-click **Audio MIDI Setup** to open the **Audio MIDI Setup**.



- 8 Click the **MIDI Devices** tab.
- 9 Click **Add Device** four times.  
Four new external MIDI devices will appear.

### NOTE

In order to make device settings, you'll first have to install the driver.

### 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

Although **"44.1 kHz"** is used for the purpose of explanation within this document, this changes depending on the actual setting of the **SAMPLE RATE SETTING** on your PC-80.

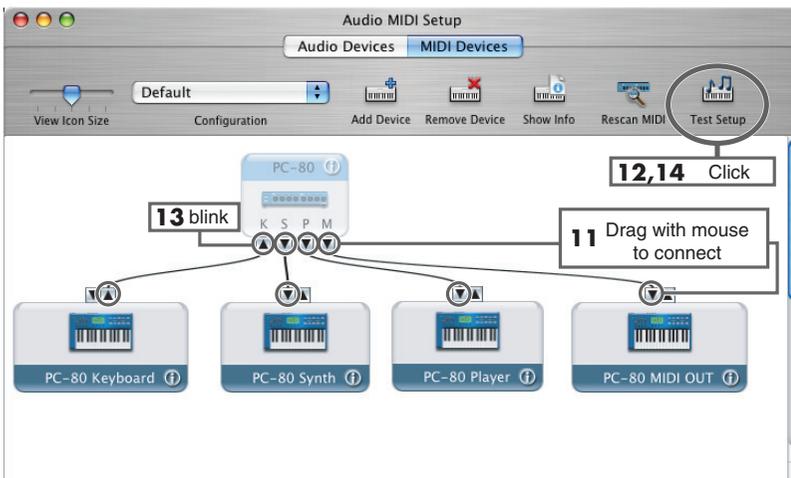
**10** Specify a name for each **new external device**.

1. Click **Show Info**.
2. Enter a name in the **Device Name** field. For each **new external device**, enter the following names.



	First new external device	Second new external device	Third new external device	Fourth new external device
Device Name	PC-80 Keyboard	PC-80 Synth	PC-80 Player	PC-80 MIDI OUT

**11** Using your mouse, drag the ▼ and ▲ symbols that indicate the output and input of the **PC-80** icon and the **new external device** icons so that they are connected as shown in the illustration below.



- 12** Click **Test Setup**.  
The mouse cursor will change to a ♪ shape.
- 13** Try playing the keyboard of the PC-80.  
If the ▲ in the diagram blinks, the settings are correct.
- 14** Click **Test Setup** once again to complete the check.
- 15** Close the **Audio MIDI Setup** dialog box.

**MEMO**

If the software you're using allows you to make MIDI and audio input/output settings, select the PC-80. For details, refer to the owner's manual of the software you're using.

## Changing the driver settings

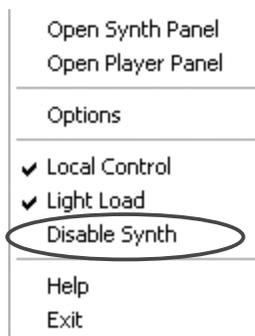
### Windows users

The Settings dialog box of the EDIROL PC-80 Driver lets you change the buffer size of the driver, and uninstall the driver if necessary.

#### ■ Accessing the Settings dialog box of the EDIROL PC-80 Driver

- 1 With the PC-80 connected, start up Windows.  
Leave all USB cables disconnected, except those for a USB keyboard and USB mouse (if used).
- 2 Disable the PC-80 software synthesizer.

1. In the taskbar, right-click the **PC-80 Software Synthesizer** icon .
2. From the menu that appears, choose **Disable Synth**.
3. A dialog box indicating “**Disable the PC-80 Software Synthesizer**” will appear.  
Click **[OK]**.

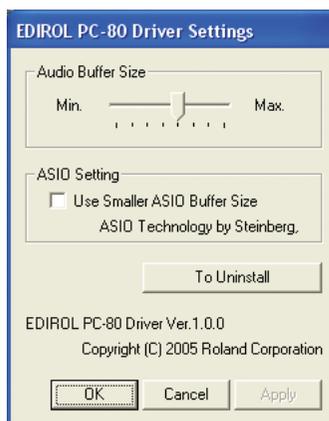


- 3 Open the **Control Panel**.  
If you're using Windows XP, open the **Control Panel** from the **start** menu. If you're using Windows 2000, choose **Settings | Control Panel** from the Windows **Start** menu.

\* If you're using Windows XP, click “Switch to Classic View” to select the Classic view. If the Classic view is already selected, proceed to the next step.

- 4 In the **Control Panel**, double-click the **EDIROL PC-80** icon.

The Settings dialog box for **EDIROL PC-80 Driver Settings** will appear.



## ■ Adjusting the buffer size of the driver

By minimizing the buffer size of the driver, you can shorten the audio latency.

By increasing the buffer size of the driver, you can sometimes solve problems with pops or crackles in the sound.

Latency is the time delay from when the software plays back audio data until the sound is actually heard from an audio device such as the PC-80.

Use the following procedure to adjust the buffer size of the driver.

- 1 As described in “**Accessing the Settings dialog box of the EDIROL PC-80 Driver**” (p. 104), open the **EDIROL PC-80 Driver Settings** dialog box.

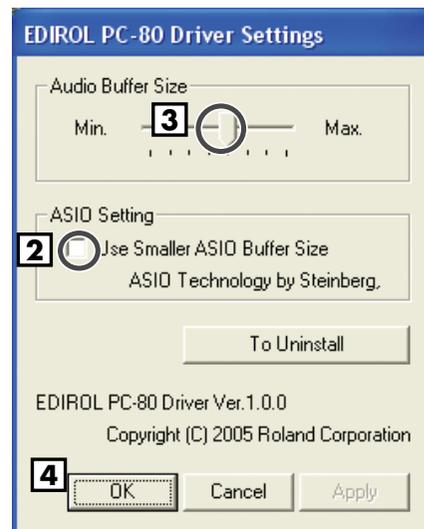
- 2 If the “**Use Smaller ASIO Buffer Size**” check box is selected, clear the check mark.

- 3 Move the slider to left or right to adjust the “**Audio buffer size.**”

- Moving the slider toward the **left** (toward **Min.**) will shorten the latency.
- Moving the slider toward the **right** (toward **Max.**) will decrease the likelihood of clicks or pops in the sound.

\* Normally, you should set the buffer size to a position about five steps from the left.

- 4 Click [**OK**] to close the driver EDIROL PC-80 Driver settings dialog box.

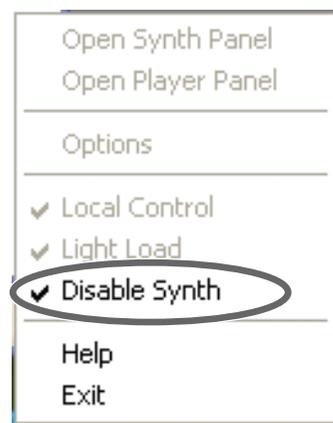


- 5 Enable the PC-80 software synthesizer.

1. In the taskbar, right-click the **PC-80 Software Synthesizer icon** .
2. From the menu that appears, choose **Disable Synth** to clear the check mark.
3. A dialog box indicating “**Enable the PC-80 Software Synthesizer**” will appear. Click [**OK**].

\* After you change a setting in the EDIROL PC-80 Driver Settings dialog box, you must restart any software that uses the PC-80. If you are using software that has an audio device test function, please execute the test function.

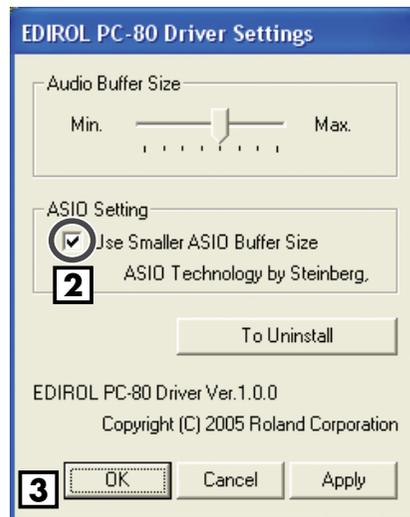
\* The audio settings of some software also allow you to adjust the buffer size. For details, refer to the owner’s manual of the software you’re using.



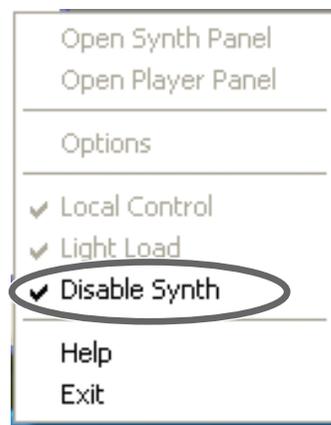
## ■ Decreasing the ASIO buffer size

If you're using the PC-80 with ASIO-compatible software, you can minimize the buffer size. If you experience clicks or pops in the sound, clear the check mark from this check box.

- 1 As described in “**Accessing the Settings dialog box of the EDIROL PC-80 Driver**” (p. 104), open the EDIROL PC-80 Driver Settings dialog box.
- 2 Place a check mark in the “**Use Smaller ASIO Buffer Size**” check box.
- 3 Click **[OK]** to close the **EDIROL PC-80 Driver Settings** dialog box.



- 4 Enable the PC-80 software synthesizer.
  1. In the taskbar, right-click the **PC-80 Software Synthesizer icon** .
  2. From the menu that appears, choose **Disable Synth** to clear the check mark.
  3. A dialog box indicating “**Enable the PC-80 Software Synthesizer**” will appear. Click **[OK]**.



\* After you change a setting in the **EDIROL PC-80 Driver Settings** dialog box, you must restart any software that uses the PC-80. If you are using software that has an audio device test function, please execute the test function.

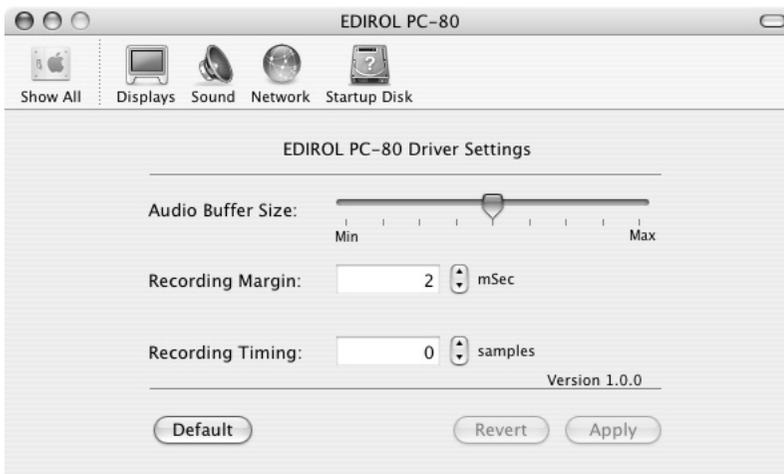
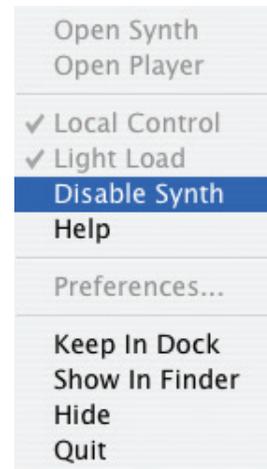
\* The audio settings of some software also allow you to adjust the buffer size. For details, refer to the owner's manual of the software you're using.

## Macintosh users

The EDIROL PC-80 Driver Settings panel lets you change the buffer size of the driver, and adjust the recording margin and timing.

### ■ Accessing the EDIROL PC-80 Driver Settings panel

- 1 Use a USB cable to connect the PC-80 to your Macintosh, and **turn on the power switch** of the PC-80.
- 2 Close all software that uses the PC-80.
- 3 Disable the PC-80 software synthesizer.
  1. Hold down the **Control** key and click the **PC-80 Software Synthesizer icon**  shown in the Dock.
  2. From the menu that appears, choose **Disable Synth**.
  3. A dialog box indicating “**Disable the PC-80 Software Synthesizer**” will appear. Click **[OK]**.
- 4 In the Mac OS **System Preferences**, click “**EDIROL PC-80.**”
- 5 The **EDIROL PC-80 Driver Settings** panel will appear.



## ■ Adjusting the audio input/output buffer size

You can adjust the driver buffer size for audio input and output.

If you still experience clicks or noise during playback or recording even after adjusting the audio buffer size in the software you're using, you can increase the buffer size here.

\* *Some software does not allow you to adjust the buffer size.*

1 As described in “**Accessing the EDIROL PC-80 Driver Settings panel**” (p. 107), open the EDIROL PC-80 Driver Settings dialog box.

2 Move the slider to left or right to adjust the “**Audio input/output buffer size.**”

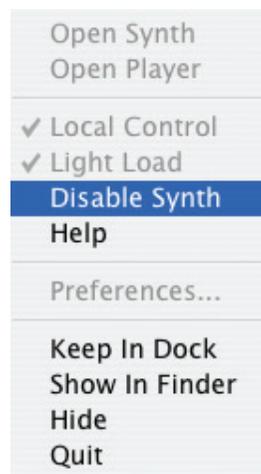
- Moving the slider toward the **left** (toward **Min**) will shorten the latency.
- Moving the slider toward the **right** (toward **Max**) will decrease the likelihood of clicks or pops in the sound.



Latency is the time delay from when the software plays back audio data until the sound is actually heard from an audio device such as the PC-80.

3 Enable the PC-80 software synthesizer.

1. Hold down the **Control** key and click the **PC-80 Software Synthesizer icon**  shown in the Dock.
2. From the menu that appears, choose **Disable Synth** to clear the check mark.
3. A dialog box indicating “**Enable the PC-80 Software Synthesizer**” will appear. Click **[OK]**.



\* *After you change a setting in the **EDIROL PC-80 Driver Settings** dialog box, you must restart any software that uses the PC-80. If you are using software that has an audio device test function, please execute the test function.*

\* *The audio settings of some software also allow you to adjust the buffer size. For details, refer to the owner's manual of the software you're using.*

## ■ Adjusting the recording margin

If you still experience clicks or noise during playback or recording even after adjusting the audio buffer size in the software you're using, you can increase the recording margin here.

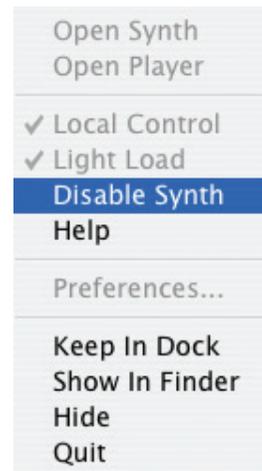
- 1 As described in “**Accessing the EDIROL PC-80 Driver Settings panel**” (p. 107), open the **EDIROL PC-80 Driver Settings** dialog box.

- 2 Adjust the “**Recording Margin.**”  
By clicking ▲ to increase the margin setting, you can reduce the occurrence of clicks or noise.



- 3 Enable the PC-80 software synthesizer.

1. Hold down the **Control** key and click the **PC-80 Software Synthesizer icon**  shown in the Dock.
2. From the menu that appears, choose **Disable Synth** to clear the check mark.
3. A dialog box indicating “**Enable the PC-80 Software Synthesizer**” will appear. Click **[OK]**.



\* After you change a setting in the **EDIROL PC-80 Driver Settings** dialog box, you must restart any software that uses the PC-80. If you are using software that has an audio device test function, please execute the test function.

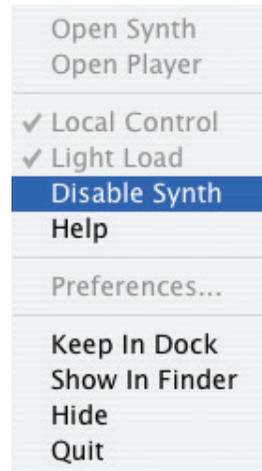
## ■ Adjusting the recording timing

If the timing of the recorded audio data seems off, adjust the timing value as follows.

- 1 As described in “**Accessing the EDIROL PC-80 Driver Settings panel**” (p. 107), open the **EDIROL PC-80 Driver Settings** dialog box.
- 2 Adjust the “**Recording Timing.**”  
Click ▲▼ to adjust the timing.



- 3 Enable the PC-80 software synthesizer.
  1. Hold down the **Control** key and click the **PC-80 Software Synthesizer icon**  shown in the Dock.
  2. From the menu that appears, choose **Disable Synth** to clear the check mark.
  3. A dialog box indicating “**Enable the PC-80 Software Synthesizer**” will appear.  
Click [OK].



\* After you change a setting in the **EDIROL PC-80 Driver Settings** dialog box, you must restart any software that uses the PC-80. If you are using software that has an audio device test function, please execute the test function.

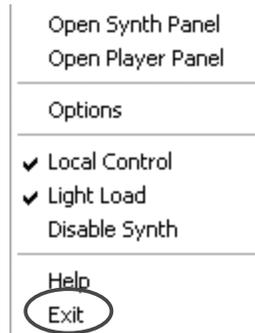
# Uninstalling the driver

## Windows users

**1** With the PC-80 disconnected, start up Windows.  
All USB cables should be disconnected, with the exception of those for a USB keyboard or USB mouse (if used).

**2** Close the PC-80 software synthesizer.

- 1.** In the taskbar, right-click the **PC-80 Software Synthesizer icon** .
- 2.** From the menu that appears, choose **Exit**.
- 3.** A dialog box indicating “**Close the PC-80 Software Synthesizer**” will appear. Click **[OK]**.



**3** Open the **Control Panel**.

If you're using Windows XP, open the **Control Panel** from the **Start** menu. If you're using Windows 2000, choose **Settings | Control Panel** from the Windows Start menu.

**4** If you're using Windows XP, click “Switch to Classic View” to select the Classic view. If the Classic view is already selected, proceed to the next step.

**5** Double-click the **EDIROL PC-80** icon.

**6** In the dialog box, click **[Uninstall]**.

**7** Follow the instructions in the dialog box that appears to proceed with the uninstallation.

If you are unable to uninstall the driver using the above method, close the PC-80 software synthesizer as described in step 2, and then use **Uninstal.exe** (located in the **Driver** folder of the CD-ROM) to uninstall the driver.

For details, refer to Readme\_E.txt on the CD-ROM.

## Macintosh users

On the Macintosh, you can use PC-80\_Uninstaller (located in the Driver folder of the CD-ROM) to uninstall the driver.

Refer to Readme\_E.txt on the CD-ROM along with the explanation that follows.

- 1 Disconnect all USB cables from your Macintosh (with the exception of those for a USB keyboard and USB mouse), and start up the Macintosh.
- 2 Close the PC-80 software synthesizer.
  1. Hold down the Control key and click the **PC-80 Software Synthesizer icon**  shown in the Dock.
  2. From the menu that appears, choose **Exit**.
- 3 Place the PC-80 software CD-ROM in the CD-ROM drive of your Macintosh.
- 4 In the **Driver** folder of the CD-ROM, double-click **PC80\_Uninstaller**.
- 5 The message “**This uninstalls EDIROL PC-80 Driver from this Macintosh.**” will appear. Click [**Uninstall**].

*\* If any other message appears, proceed as directed by that message.*
- 6 The display will indicate “**Are you sure to uninstall the driver?**” Click [**OK**].
- 7 The “**Authenticate**” dialog box will appear. Enter the password, and press [**OK**].
- 8 The display will indicate “**Uninstallation is completed.**” Click [**Restart**] to restart your Macintosh.

# Troubleshooting

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

## Driver-related problems (Windows)

### Can't install the driver correctly

#### **You attempted to install as described in "Driver installation," but were unable to perform the installation**

Install the driver again. (→ "Installing the driver" (p. 16))

Then, after setting the PC-80 to the driver mode shown below, cycle the power to the PC-80, and reinstall the driver.

"SAMPLE RATE SETTING" (p. 85)	0:	44.1 kHz
"AUDIO ADVANCED DRIVER ON/OFF" (p. 86)	1:	ON
"MIDI ADVANCED DRIVER ON/OFF" (p. 98)	1:	ON

#### **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 PC-80 driver once again as described in "Installing the driver" (p. 16).

#### **Is the PC-80 connected correctly?**

Make sure that you have used a USB cable to correctly connect the PC-80 to the USB connector of your computer.

#### **Is the PC-80 powered up?**

Make sure that the PC-80's power is turned on.

#### **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 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 repeater 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 PC-80 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.  
(→Windows XP (p. 16), Windows 2000 (p. 21))

## Windows displays an "Installing Hardware," "Digital Signature Not Found" dialog box

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

You must set "Driver Signing Options" in order to install/reinstall the driver.  
(→Windows XP (p. 16), Windows 2000 (p. 21))

## Computer is sluggish

### **Have you updated Windows XP?**

If you have not updated Windows XP, the CPU may be heavily burdened when you record or play back audio, and your system will not operate correctly.

Before you begin using the PC-80, please perform either of the following actions. For details on updating, refer to the enclosed pamphlet.

- Update to Windows XP SP2 (recommended)
- Install the update module in Windows XP SP1

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

### Is the volume on the PC-80 itself set appropriately?

Use the PC-80's master volume knob to adjust the volume.

### Could the Speaker On/Off setting be turned off?

If the PC-80's Audio System setting Speaker On/Off is turned off, the output from the PC-80's speakers will be muted. Turn the speaker setting on. (→ "SPEAKER ON/OFF" (p. 87))

### Did you connect/disconnect the USB cable or cycle the power to the PC-80 while your software was running?

You must close all software that uses the PC-80 before powering off the PC-80.

If you start up your computer with the PC-80 connected, operation may become unstable for some computers. In this case, connect the PC-80 after starting up your computer.

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

After your computer wakes up, close all software that had been using the PC-80, and then cycle the power to the PC-80.

### 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 PC-80 as the audio data output destination for your computer. (→ "Input/output device settings" (p. 100))

### Are the faders of the Windows volume control raised?

Adjust the faders of the Windows volume control.

For details, refer to the Windows operating manual or on-line help.

### Is the main volume level of the Macintosh raised?

In System Preferences → Sound, make sure that the Output volume slider is raised (set toward the right).

### Is the driver installed correctly?

If you're using Windows, you'll need to install a driver in order to play back audio/MIDI data via the PC-80. (→ "Installation and settings (Windows)" (p. 16), "Installation and settings (Macintosh)" (p. 29))

### 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.

### Do the recording and playback sample rates match?

Use the same sample rate for recording and playback.

### Could the PC-80's sample rate be set to "96 kHz recording"?

With this setting, only recording is possible. You won't be able to play back sound from the computer.

Conversely, recording is not possible if the sample rate is set to "96 kHz playback."

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

In order to play back audio/MIDI using the PC-80, you must make the appropriate input/output device settings. For details on making these settings, refer to "Input/output device settings" (p. 100).

### Could the PC-80 have been connected when you started up the computer?

Start up the computer with the PC-80 disconnected, and then connect the PC-80.

Depending on the type of computer you are using, starting up the computer when the PC-80 is already connected may cause operation to be unstable. In this case, start up your computer and then connect the PC-80.

**Could you have headphones connected?**

If headphones are connected, there will be no sound from the PC-80's built-in speakers.  
(→ "Input/output device settings" (p. 100))

**Can't hear sound from equipment connected to the input jacks**

**Is the input level knob raised appropriately?**

Turn the knob toward the right to adjust the volume.

**Is the master volume knob raised appropriately?**

Turn the knob toward the right to adjust the volume.

**Could the Direct Monitor button be turned off?**

Turn the Direct Monitor button on.

**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 PC-80 as the audio data input source for your computer.

**Can't record/play 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 made the correct settings for the MIDI device you're using?**

In order to record/play MIDI via the PC-80, you must install the PC-80 driver correctly.

In addition, you must also make settings in your software to specify the MIDI device you want to use.  
(→ "Input/output device settings" (p. 100))

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

## Sound is distorted

**Depending on your system, you may experience problems such as distortion or poor audio S/N ratio when using the PC-80's built-in speakers.**

In such cases, you can take the following measures:

- Reduce the master volume
- Turn the PC-80's built-in speakers off (p. 87). (Use headphones.)
- Connect the AC adaptor and set the power switch to the DC position

## 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."

**In Windows, graphic accelerators may cause noise to be heard during audio playback.**

Use the following procedure to set graphic acceleration to "None."

1. In the Windows **Control Panel**, double-click **Display** to open the **Display Properties** dialog box, and click the **Settings** tab.
2. Click **Advanced** to open **Properties**, and click the **Troubleshoot** tab.
3. In the **Hardware acceleration** section, set the **Hardware acceleration** slider to **None**, and then click **[OK]**.
4. In the **Display Properties** dialog box, click **[OK]** to close the dialog box.
5. Then restart your computer.

**You may be able to solve the problem by adjusting the buffer size in the PC-80 Driver Settings dialog box.**

**Windows users:**

Adjust the buffer size as described in "Adjusting the buffer size of the driver" (p. 105) or "Decreasing the ASIO buffer size" (p. 106).

**Macintosh users:**

Adjust the buffer size as described in "Adjusting the audio input/output buffer size" (p. 108).

\* After changing the buffer size, you must restart any software that uses the PC-80. If your software has an audio device test function, execute the test function.

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

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

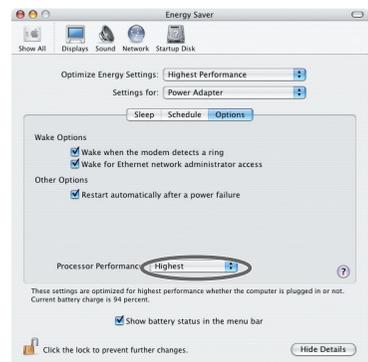
Click the **Sleep** tab.

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**.



**Could two or more audio devices (such as the PC-80 and a mixer) be connected to your computer?**

Try connecting only the PC-80 by itself to your computer. See whether the noise disappears when just a single PC-80 is connected. If multiple audio devices are connected to your computer, noise may occur in some situations. If so, connect only the PC-80 to your computer.

**Are you using a USB device in addition to the PC-80?**

Try switching off USB audio devices other than the PC-80.

**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.

**Is the sample rate setting in your software the same as the PC-80’s sample rate setting?**

Set your software and the PC-80 to the same sample rate.

If you switch the PC-80’s sample rate, you must turn the power of the PC-80 off, then on again to get the setting to take effect.

**Try adding memory.**

Adding memory will improve the processing capability of your computer. For details on how to add memory, refer to the owner’s manual of your computer.

**Is the PC-80 connected to a USB hub?**

Try connecting the PC-80 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 PC-80, and the output of the MIDI sound module is connected to the input jacks of the PC-80, noise from the computer may be heard via the MIDI sound module from the PC-80. In this case, you can either connect the MIDI sound module and PC-80 in parallel via a self-powered hub, or connect the MIDI sound module in series or via a MIDI interface.

**Could audio data monitoring be turned on?**

If your sequencer software has a function that allows the monitoring of audio data during recording and you have it turned on, an audio data loop may occur, so that recording cannot occur correctly.

Turn audio data monitoring off during recording.

For details on this setting, refer to the owner's manual for the software you're using.

**Playback/recording stops midway, and subsequent playback/recording is not possible****While you were using the PC-80, 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 PC-80 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 PC-80, and re-connect the PC-80.

## Noise or distortion occurs when the PC-80 is not connected to your computer The sound is too weak

### Noise is heard in the sound

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

If a mic or guitar is connected to the PC-80, disconnect the mic or guitar and turn the input sensitivity 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.

### Sound of a device connected to the input jacks is distorted Insufficient volume from a device connected to the audio input/output jacks

#### Is the input level appropriate?

Use the input level knob located on the PC-80's back panel to adjust the input level.

#### Is the Input Mode setting appropriate?

Select the appropriate setting for your equipment as described in Setting the Input Mode (p. 83).

#### Is the master volume knob set appropriately?

Turn the knob to adjust the volume.

#### Could you be using a connection cable that contains a resistor?

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.

### 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.

### Guitar sound is not loud enough

#### Is the Input Mode setting appropriate?

Select the appropriate setting for your equipment as described in Setting the Input Mode (p. 83).

## Problems with the PC-80 Software Synthesizer

### Won't start up

#### Is the PC-80 connected to your computer via USB?

The PC-80 software synthesizer cannot start up unless the PC-80 is connected to your computer. Connect the PC-80 to the USB connector of your computer.

#### Is the PC-80 driver installed correctly?

Unless the PC-80 driver is installed correctly, the PC-80 will not be recognized correctly even if it is connected to your computer, and you won't be able to start up the PC-80 software synthesizer. Install the PC-80 driver, and then reconnect the PC-80 to the USB connector of your computer.

(→“Setup” (p. 15))

#### Are you logged in as the user who installed the PC-80 software synthesizer?

The PC-80 software synthesizer will not start up if you are logged in as a user other than the one who installed the PC-80 software synthesizer. You can either log in again as the user who installed the software, or log in as the user who will be using the software and then install the PC-80 software synthesizer.

#### Is the PC-80 software synthesizer installed?

The PC-80 software synthesizer will not start up unless it has been installed in your computer. Install the software as directed.

#### Is the PC-80 software synthesizer disabled?

You won't be able to start up the PC-80 software synthesizer if the Disable Synth item is selected in the PC-80 software synthesizer Settings menu. Open the Settings menu, and remove the check mark from Disable Synth.

#### Is the PC-80 Software Synthesizer icon running?

You won't be able to start up the PC-80 software synthesizer if the PC-80 software synthesizer icon is not running in the Taskbar (for Macintosh, in the Dock). Use the following procedure to start up the PC-80 software synthesizer icon.

##### Windows users:

From the **start** menu, choose **All Programs** (in Windows 2000, **Programs**) | **EDIROL** | **PC-80 Software Synthesizer** | **PC-80 Software Synthesizer**.

##### Macintosh users:

In the **Applications** folder, double-click the **PC-80 Software Synthesizer** icon.

### The menu does not appear correctly (can't select it)

#### Is the PC-80 connected to the USB connector of your computer?

The PC-80 software synthesizer menu won't be displayed correctly if the PC-80 is not connected to your computer. Connect the PC-80 to the USB connector of your computer.

#### Restart the PC-80 software synthesizer.

From the PC-80 software synthesizer's menu, choose Exit, and then use the following procedure to restart it.

##### Windows users:

From the **start** menu, choose **All Programs** (in Windows 2000, **Programs**) | **EDIROL** | **PC-80 Software Synthesizer** | **PC-80 Software Synthesizer**.

##### Macintosh users:

In the **Applications** folder, double-click the **PC-80 Software Synthesizer** icon.

## No sound

### **Is the PC-80 software synthesizer running?**

If the PC-80 software synthesizer is not running, there will be no sound when you play the keyboard. Start up the PC-80 software synthesizer, and make sure that the [SOFTWARE SYNTHESIZER] button of the PC-80 itself is lit.

### **Is the volume adjusted appropriately for each Part of the PC-80 software synthesizer?**

Use the VOLUME knob of the Synth panel to adjust each Part to an appropriate volume.

### **Is the volume balance of the Synth panel and Player panel adjusted appropriately?**

In the PC-80 software synthesizer's Option window, make sure that the volume balance of the Synth panel and Player panel is adjusted appropriately.

### **Is the Split setting active?**

If you're using Split, the key range of each part may be set so that some keys of the PC-80 may not produce sound when you play them. Adjust the bars for the UPPER and LOWER parts to change the key range of each part.

### **Have you correctly specified the audio output device of the PC-80 software synthesizer?**

If the PC-80 software synthesizer's audio output device is not specified correctly, the sound will not be output from the desired audio device. In the Options window, use the Devices area to select the desired audio device. If you want the sound to be output from the PC-80 itself, choose the PC-80 in the Devices area.

### **Could other sequencer software be running?**

If other sequencer software is running, it is possible for that software and the PC-80 software synthesizer to be competing for the audio output device, so that sound is not output. If this is the case, exit the other sequencer software.

### **Is the PC-80 connected correctly?**

Connect the PC-80 correctly.

If you're using a playback device other than the PC-80, connect your equipment correctly as described in the owner's manual for your playback device or sound module.

### **Is the PC-80's master volume knob set to an appropriate volume?**

If the master volume knob of the PC-80 itself is turned down, sound will not be output from the PC-80. Use the PC-80's master volume knob to adjust the volume appropriately.

### **Could the PC-80's Local Control setting be turned off?**

If the Local Control setting is off, the sound generator for manual synth playing will not produce sound. Turn Local Control on. (→ "Local Control settings" (p. 51))

### **Could the PC-80's Speaker Output setting be turned off?**

If the Speaker Output setting is off, the sound from the PC-80's speaker will be muted. Turn the Speaker setting on. (→ "SPEAKER ON/OFF" (p. 87))

### **Is the power of your playback system turned on?**

If you're using a playback system other than the PC-80, make sure that your playback system is powered up.

### **Is the volume of your playback system turned up?**

Make sure that the volume of the PC-80 and of your playback system other than the PC-80 is turned up.

## Sound is too loud/too soft

### Is the PC-80's master volume knob set to an appropriate volume?

Use the PC-80's master volume knob to adjust the volume appropriately.

### Is the volume adjusted appropriately for each Part of the PC-80 software synthesizer?

Use the VOLUME knob of the Synth panel to adjust each part to an appropriate volume.

### Is the volume balance of the Synth panel and Player panel adjusted appropriately?

In the PC-80 software synthesizer's Option window, make sure that the volume balance of the Synth panel and Player panel is adjusted appropriately.

### Could the Key Velocity setting be too low?

If the Key Velocity setting is too low, you may hear no sound when you play the keyboard. Check the "Key Velocity" setting (p. 93).

## Clicks, pops, or noise occurs in the sound

The performance of the PC-80 software synthesizer depends on the processing power of your computer. This means that if the PC-80 software synthesizer requires more processing power than your computer can provide, you may hear clicks, pops, or noise in the sound. If this occurs, try adjusting the following settings in the Settings menu and Option window of the PC-80 software synthesizer.

- In the Settings menu, check the Light Load mode option
- In the Option window, click Control Panel and increase the buffer size of the driver (only if Windows-ASIO is selected).
- In the Option window, increase the Buffer size (Macintosh only)
- In the Option window, raise the Priority (Macintosh only)
- In the Option window, lower the Max Polyphony

## Sounds you play from the keyboard are delayed

The performance of the PC-80 software synthesizer depends on the processing power of your computer. This means that if you have adjusted the PC-80 software synthesizer so that its requirements stay within the processing power that your computer can provide, the speed of response may be slower. If this occurs, try adjusting the following items in the Option window of the PC-80 software synthesizer.

- In the PC-80 software synthesizer's Option window, click Control Panel and decrease the buffer size of the driver (only if Windows-ASIO is selected)
- Decrease the Buffer size (Macintosh only)

## Can't control sounds or parameters from the PC-80

### Is the PC-80 software synthesizer running?

If the PC-80 software synthesizer is not running, you won't be able to control it by operating the PC-80. Start up the PC-80 software synthesizer, and make sure that the PC-80's SOFTWARE SYNTHESIZER button is lit. (→ "Starting up the PC-80 software synthesizer" (p. 33))

### Is the correct mode selected for the PC-80's VALUE encoder?

If the PC-80's VALUE encoder is not set to the correct mode, you won't be able to operate it as desired. If you want to use the encoder to switch the sounds of the PC-80 software synthesizer, make sure that the PGM CHANGE button is lit. If you want to control parameters, make sure that the MIDI CH button is lit.

### Is the desired parameter assigned to the VALUE encoder?

If the desired parameter is not assigned to the PC-80's VALUE encoder, you won't be able to operate that parameter. Right-click (on Macintosh, Control-click) a parameter in the Synth panel (or elsewhere), and choose an assignment from the menu that appears.

## Can't play back song data/Playback is incorrect

### Is the selected song data in SMF (Standard MIDI File) format?

Only SMF (Standard MIDI File) format song data can be played back in the Player panel of the PC-80 software synthesizer. Song data in other formats cannot be played back.

### Was the selected song data created for GM or GM2?

The synthesizer section of the Player panel is compatible with GM2 (General MIDI Level 2). This means that it will be able to correctly play back song data that was created for GM (General MIDI Level 1) or GM2, but not song data that was created with other sound generator formats in mind (such as the GS format).

### Is the volume balance of the Synth panel and Player panel adjusted appropriately?

In the PC-80 software synthesizer's Option window, make sure that the volume balance of the Synth panel and Player panel is adjusted appropriately.

### Could a specific part be muted?

If a specific part is muted in the Player panel, there may be no sound or the playback may not be as you expect. Access the Part screen of the Player panel, and check whether any parts might be muted. (→ "Muting a specific part (Minus-one Playback)" (p. 45)\*)

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## Can't use the PC-80 software synthesizer from other software

### **Have you made MIDI device settings in your software?**

If you want other software to be able to use the PC-80 software synthesizer as a MIDI sound generating device, you must make MIDI device settings in the software you're using. The way in which such MIDI device settings are made differs depending on the software you're using. For details, refer to the owner's manual of your software.

### **Could audio devices be conflicting? (Windows only)**

If other software and the PC-80 software synthesizer use the same audio output device, competition for the audio device may occur depending on the driver type settings, causing the audio device to be unavailable from one or the other software. If this occurs, try switching the driver type in the Option window of the PC-80 software synthesizer, or select a different device.

## Uninstalling the PC-80 software synthesizer

### Windows users

- 1 With the PC-80 disconnected, start up Windows.  
Leave all USB cables disconnected, except those for a USB keyboard and/or USB mouse (if used).  
*\* Log in as a user who has administrative privileges on your computer (e.g., Administrator).*
- 2 Close the PC-80 software synthesizer.
  1. In the task bar, right-click the **PC-80 Software Synthesizer** icon .
  2. From the menu that appears, click **Exit**.
  3. A dialog box indicating “**Close the PC-80 Software Synthesizer**” will appear. Click **[OK]**.
- 3 From the **start** menu, choose **Control Panel**.  
(In Windows 2000, choose **Start** menu | **Settings** | **Control Panel**.)
- 4 Click **Add or Remove Programs** to open the dialog box.  
(In Windows 2000, double-click **Add/Remove Programs**)
- 5 In the left side of the dialog box, click the **Change or Remove Programs** button.
- 6 In the list shown in the dialog box, click **PC-80 Software Synthesizer**.
- 7 Click the **Change/Remove** button located at the right of **PC-80 Software Synthesizer**.
- 8 Follow the instructions that appear in the dialog box to proceed with the uninstallation.
- 9 When the uninstallation is complete, close the dialog box.
- 10 After uninstallation, be sure to restart Windows.

### Macintosh users

When you uninstall the driver, the PC-80 software synthesizer will also be uninstalled.  
For details on uninstalling the driver, refer to “**Uninstalling the driver**” (p. 111)

# MIDI implementation

Model: PC-80 Version 1.002005.04.1

## 1. Transmit data

### ■ Channel voice messages

#### ● Note off

Status	2nd byte	3rd byte
9nH	kkH	00H

n = MIDI channel number: 0H – FH (Ch.1 – 16)

kk = note number: 00H – 7FH (0 – 127)

\* Transmitted when you release a key in Play mode.

#### ● Note on

Status	2nd byte	3rd byte
9nH	kkH	vvH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

kk = note number: 00H – 7FH (0 – 127)

vv = note on velocity: 01H – 7FH (1 – 127)

\* Transmitted when you push a key in Play mode.

#### ● Control change

Status	2nd byte	3rd byte
BnH	ccH	vvH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

cc = controller number: 00H – 7FH

vv = control value: 00H – 7FH

#### ○ Bank Select (Controller number 0, 32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

mm = Bank number MSB: 00H – 7FH

ll = Bank number LSB: 00H – 7FH

#### ○ Modulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

vv = Modulation depth: 00H – 7FH (0 – 127)

\* Transmitted when you press the Pitch bend/Modulation lever in Play mode.

#### ○ RPN MSB/LSB (Controller number 100, 101)

Status	2nd byte	3rd byte
BBnH	65H	mmH
BnH	64H	llH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

mm = upper byte of parameter number specified by RPN

ll = lower byte of parameter number specified by RPN

RPN	Data entry	Explanation
MSB LSB	MSB LSB	
00H 01H	mmH	Master Fine Tuning mm: 00H-7FH
00H 02H	mmH	Master Coarse Tuning mm: 00H-7FH

#### ● Program change

Status	2nd byte
CnH	ppH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

pp = Program number: 00H – 7FH (prog. 1 – prog. 128)

#### ● Channel pressure

Status	2nd byte
DnH	vvH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

vv = Channel pressure: 00H – 7FH (0 – 127)

#### ● Pitch bend change

Status	2nd byte	3rd byte
EnH	llH	mmH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

mm, ll = Pitch Bend value: 00 00H – 40 00H – 7FH 7FH  
(-8192 – 0 – +8191)

\* Transmitted by rightward/leftward operation of the Pitch bend/Modulation lever in Play mode.

### ■ Channel mode messages

#### ● Channel mode messages

Status	2nd byte	3rd byte
BnH	ccH	vvH

n = MIDI channel number: 0H – FH (Ch.1 – 16)

cc = controller number: 78H – 7FH (120 – 127)

vv = control value: 00H – 7FH (0 – 127)

#### ○ All sounds off (Controller number 120)

Status	2nd byte	3rd byte
BnH	78H	00H

n = MIDI channel number: 0H – FH (Ch.1 – 16)

#### ○ Reset all controllers (Controller number 121)

Status	2nd byte	3rd byte
BnH	79H	00H

n = MIDI channel number: 0H – FH (Ch.1 – 16)

\* Transmitted in Panic.

#### ○ All notes off (Controller number 123)

Status	2nd byte	3rd byte
BnH	7BH	00H

n = MIDI channel number: 0H – FH (Ch.1 – 16)

## ■ System realtime message

### ● Timing Clock

Status

F8H

\* Transmitted if the System setting F8 CLOCK is ON.

### ● Start

Status

FAH

### ● Continue

Status

FBH

### ● Stop

Status

FCH

### ● Active sensing

Status

FEH

\* Transmitted at intervals of approximately 250 ms.

## ■ System exclusive message

### ○ GM2 System On

Status	Data byte	Status
F0H	7EH 7FH 09H 03H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
7FH	Device ID (Broadcast)
09H	Sub ID#1 (General MIDI Message)
03H	Sub ID#2 (General MIDI 2 On)
F7H	EOX (End Of Exclusive)

## 2. Supplementary material

### ● Decimal and Hexadecimal table

(An "H" is appended to the end of numbers in hexadecimal notation.)

In MIDI documentation, data values are expressed as hexadecimal values for each 7 bits.

The following table shows how these correspond to decimal numbers.

Dec.	Hex.	Dec.	Hex.	Dec.	Hex.	Dec.	Hex.
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	59	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

\* The decimal expression of the MIDI channel, program change, etc., is one greater than the decimal value shown in the table above.

\* The hexadecimal expression for each 7 bits allows a maximum of 128 steps (0-127) to be expressed by one byte of data. Multiple bytes are used if the data requires greater resolution than this. For example, a value expressed by two 7-bit bytes "aa" and "bbH" would be  $aa \times 128 + bb$ .

\* In the case of signed (+/-) data, 00H = -64, 40H = +/-0, and 7FH = +63; i.e., a value 64 less than the decimal value shown in the above table is used. In the case of a two-byte value, 00 00H = -8192, 40 00 = +/-0, and 7F 7F = +8191. For example, a value of "aa" and "bbH" would have a decimal expression of  $aa \times 128 + bb - 64 \times 128$ .

#### <Example1>

What is the decimal expression of 5AH?

From the preceding table, 5AH = 90.

#### <Example2>

What is the decimal expression of the 7-bit hexadecimal value 12 34H?

From the preceding table, 12H = 18, and 34H = 52.

Thus, this is  $18 \times 128 + 52 = 2356$

MIDI KEYBOARD CONTROLLER

Date :Jun. 01, 2005

Model PC-80

**MIDI Implementation Chart**

Version : 1.00

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1 1—16	X X	
Mode Default Messages Altered	Mode 3 OMNI ON, MONO, POLY *****	X X X	
Note Number : True Voice	0—127 *****	X X	
Velocity Note On Note Off	O (9n v=1—127) O (9n v=0)	X X	
After Touch Key's Channel's	X O	X X	
Pitch Bend	O	X	
Control Change 0-119	O	X	
Program Change : True Number	O (0—127) *****	X X	
System Exclusive	O *1	X	
System Common : Song Position : Song Select : Tune Request	X X (0—127) X	X X X	
System Real Time : Clock : Commands	O O	X X	
Aux Messages : All Sound Off : Reset All Controllers : Local On/Off : All Notes Off : Active Sensing : System Reset	O *2 (120) O *2 (121) X O *2 (123) O O	X X X X X X	
Notes	* 1 GM2 SYSTEM ON only. * 2 When PANIC is transmitted.		

Mode 1 : OMNI ON, POLY  
Mode 3 : OMNI OFF, POLYMode 2 : OMNI ON, MONO  
Mode 4 : OMNI OFF, MONOO : Yes  
X : No

# Main specifications

## ■ PC-80: USB Audio Interface / MIDI Keyboard Controller

### Hardware Specifications

---

- **Number of Audio Record/Playback Channels**  
Record: 1 pair of stereo  
Playback: 1 pair of stereo  
Full duplex (except for 96 kHz setting)
- **Signal Processing**  
AD/DA Conversion: 24 bits  
PC Interface: 24 bits
- **Sampling Rate**  
44.1/48/96 kHz
- **Nominal Input Level**  
-45–8 dBu
- **Nominal Output Level**  
Master Output Jacks: +5 k ohms
- **Input Impedance**  
LINE: 10 k ohms  
GUITAR, MIC: 680 k ohms
- **Output Impedance**  
1 k ohms
- **Residual Noise Level**  
-80 dBu or less (INPUT MONITOR: OFF,  
MASTER VOLUME: MAX, IHF-A, typ.)
- **Connectors**  
Audio Input Jacks (L/MONO, R): 1/4 inch phone type  
Audio Output Jacks (L, R, SUBWOOFER): RCA phono type  
Headphones Jacks: Stereo 1/4 inch phones type x 2  
Hold Pedal Jack: 1/4 inch phone type  
Expression Pedal Jack: 1/4 inch TRS phone type  
MIDI OUT Connector  
USB Connector  
DC IN Connector
- **Keyboard**  
61 Keys (with velocity)
- **Controllers**  
Master Volume Knob  
MIDI Channel Button  
Program Change Button  
Software Synthesizer Button  
Split Buttons (LOWER/UPPER)  
Direct Monitor Button  
Octave Shift Buttons (+/-)  
Pitch Bend/Modulation Lever  
Value Encoder  
Audio Input Level Knob
- **Display**  
7 segments, 3 characters (LED)
- **Rear Panel**  
Power Switch (USB/OFF/DC)  
Audio Input Level Knob
- **Power Supply**  
DC 9 V (AC Adaptor) or USB Bus Power
- **Current Draw**  
2000 mA (AC Adaptor)  
500 mA (USB Bus Power)
- **Dimensions**  
1000 (W) x 232 (D) x 86.4 (H) mm  
39-3/8 (W) x 9-3/16 (D) x 3-7/16 (H) inches
- **Weight**  
4.1 kg / 9 lbs 1 oz (excluding AC adaptor)
- **Accessories**  
AC Adaptor (PSB-1U)  
CD-ROM  
USB Cable  
Owner's Manual  
Roland Software License Agreement
- **Options**  
Pedal Switch: DP-2  
Expression Pedal: EV-5

### Software Synthesizer Specifications

---

- **Number of Part**  
18 (For Keyboard: 2, For MIDI Player: 16)
- **Maximum Polyphony**  
256 (For Keyboard: 128, For MIDI Player: 128)
- **Signal Processing**  
32-bit Floating Point Processing Precision
- **Preset Tone**  
256 Tones + 9 Drum Sets (GM2 Compatible)
- **User Tone**  
512 Tones + 128 Drum Sets
- **Effects**  
Reverb, Chorus, Part EQ
- **Playable File Format**  
Standard MIDI File (Format 0/1)
- **Metronome Tempo**  
Quarter note = 20 to 250

(0 dBu = 0.775 Vrms)

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

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For EU Countries

This product complies with the requirements of European Directive 89/336/EEC.

For the USA

## FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.  
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

### NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

### AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For the USA

## DECLARATION OF CONFORMITY Compliance Information Statement

Model Name : PC-80  
Type of Equipment : USB AUDIO INTERFACE / MIDI KEYBOARD CONTROLLER  
Responsible Party : Roland Corporation U.S.  
Address : 5100 S. Eastern Avenue, Los Angeles, CA 90040-2938  
Telephone : (323) 890 3700

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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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