Roland

MOBILE STUDIO CANVAS SD-50

BATTERY
COMPUTER
MENU    V-LINK
TEMPO    KEY CTRL    MINUS ONE    A ◄ ► B
CENTER CANCEL
VALUE
FAVORITE
PART    INST    PLAYER
1        2        3
STOP    PLAY/PAUSE    PREV    NEXT
EXIT    ENTER

L LINE OUT R    LINE IN    MIC IN    SENS    SETTING    MIC/GUITAR IN    MIDI IN    MIDI OUT    COMPUTER    DC IN    ▲ POWER
MIC/GUITAR IN

MEMORY

VOLUME

# SD-50
## MOBILE STUDIO CANVAS

**Owner's Manual**

Roland

MOBILE STUDIO CANVAS
# SD-50
## Owner's manual

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (p. 4) and "IMPORTANT NOTES" (p. 7). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

# USING THE UNIT SAFELY

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

About ⚠ WARNING and ⚠ CAUTION Notices

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

About the Symbols

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

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

## ⚠WARNING

● 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 separate sheet titled "Information."

..................................................................................

● Never install the unit in any of the following locations.
  ❍ 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
  ❍ Exposed to steam or smoke; or are
  ❍ Subject to salt exposure; or are
  ❍ Humid; or are
  ❍ Exposed to rain; or are
  ❍ Dusty or sandy; or are
  ❍ Subject to high levels of vibration and shakiness.

..................................................................................

## ⚠WARNING

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

..................................................................................

● 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!

..................................................................................

## ⚠WARNING

● 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.

..........................................................................................................

● If you encounter any of the following circumstances, immediately switch off the power and disconnect the AC adaptor (if one is being used) from the power outlet. And request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the separate sheet titled "Information" 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!)

..........................................................................................................

## ⚠WARNING

● 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 separate sheet titled "Information."

..........................................................................................................

● Batteries must never be recharged, heated, taken apart, or thrown into fire or water.

..........................................................................................................

● Never expose Battery to excessive heat such as sunshine, fire or the like.

..........................................................................................................

## ⚠ 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.

..........................................................................................................

**5**

## ⚠ CAUTION

● 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 (p. 20).

..........................................................................................

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

..........................................................................................

## ⚠ CAUTION

● If used improperly, batteries may explode or leak and cause damage or injury. In the interest of safety, please read and observe the following precautions (p. 20).
   ❍ Carefully follow the installation instructions for batteries, and make sure you observe the correct polarity.
   ❍ Avoid using new batteries together with used ones. In addition, avoid mixing different types of batteries.
   ❍ Remove the batteries whenever the unit is to remain unused for an extended period of time.
   ❍ If a battery has leaked, use a soft piece of cloth or paper towel to wipe all remnants of the discharge from the battery compartment. Then install new batteries. To avoid inflammation of the skin, make sure that none of the battery discharge gets onto your hands or skin. Exercise the utmost caution so that none of the discharge gets near your eyes. Immediately rinse the affected area with running water if any of the discharge has entered the eyes.
   ❍ Never keep batteries together with metallic objects such as ballpoint pens, necklaces, hairpins, etc.

..........................................................................................

● Used batteries must be disposed of in compliance with whatever regulations for their safe disposal that may be observed in the region in which you live.

..........................................................................................

● 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.

..........................................................................................

● Always turn the phantom power off when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it.
(This instrument's phantom power: 48 V DC, 10 mA Max)

..........................................................................................

# IMPORTANT NOTES

## Power Supply: Use of Batteries

- 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.

- When installing or replacing batteries, always turn off the power on this unit and disconnect any other devices you may have connected. This way, you can prevent malfunction and/or damage to speakers or other devices.

- 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.

- Depending on the material and temperature of the surface on which you place the unit, 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 unit will not slip or move accidentally.

## Maintenance

- For everyday cleaning, use a soft, dry cloth (such as those used to clean eyeglasses) to wipe the unit clean. If dust or dirt has settled on the surface, we recommend that you gently dust off the unit before you wipe it, since dust particles can act like an abrasive and scratch the unit's surface if you wipe it without clearing away the dust first. For stubborn dirt, use a cloth dampened with mild detergent. Note that some detergents may contain solvents; make sure that the detergent you use does not contain a solvent.

- 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 backed up on a USB memory, or 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 loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a USB memory.

- 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.

● 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.

● 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 DVD-ROM, you must read the "license agreement." Opening the DVD-ROM will be taken to mean your acceptance of the license agreement.

## Before Using USB Memories

### Using USB Memories

● Carefully insert the USB memory all the way in—until it is firmly in place.



USB Memories

● Never touch the terminals of the USB memory. Also, avoid getting the terminals dirty.

● USB memories are constructed using precision components; handle the cards carefully, paying particular note to the following.
  ❍ To prevent damage to the cards from static electricity, be sure to discharge any static electricity from your own body before handling the cards.

❍ Do not touch or allow metal to come into contact with the contact portion of the cards.
❍ Do not bend, drop, or subject cards to strong shock or vibration.
❍ Do not keep cards in direct sunlight, in closed vehicles, or other such locations.
❍ Do not allow cards to become wet.
❍ Do not disassemble or modify the cards.

## Copyright

● This product can be used to record or duplicate audio or visual material without being limited by certain technological copy-protection measures. This is due to the fact that this product is intended to be used for the purpose of producing original music or video material, and is therefore designed so that material that does not infringe copyrights belonging to others (for example, your own original works) can be recorded or duplicated freely.

● 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.

* GS ( ) is a registered trademark of Roland Corporation.

* Microsoft, Windows and Windows Vista are registered trademarks of Microsoft Corporation.

* The screen shots in this document are used in compliance with the guidelines of the Microsoft Corporation.

* Windows® is known officially as: "Microsoft® Windows® operating system."

* Apple and Macintosh are registered trademarks of Apple Inc.

* Mac OS is a trademark of Apple Inc.

* All product names mentioned in this document are trademarks or registered trademarks of their respective owners.

* MPEG Layer-3 audio compression technology is licensed from Fraunhofer IIS Corporation and THOMSON Multimedia Corporation.

* MMP (Moore Microprocessor Portfolio) refers to a patent portfolio concerned with microprocessor architecture, which was developed by Technology Properties Limited (TPL). Roland has licensed this technology from the TPL Group.

* MatrixQuest™ 2007 TEPCO UQUEST, LTD. All rights reserved. The SD-50's USB functionality uses Matrix-Quest middleware technology from TEPCOUQUEST, LTD.

# Contents

# Operation 43

# Appendix 79

# Check the Contents of the Package

When you open the package, check that all items are present. If anything is missing, please contact your dealer.

❏ **SD-50 (main unit)**



❏ **SD-50 Owner's Manual (the document you're reading)**

This explains how to use the SD-50, and includes cautions and other notes. Keep it at hand for reference.

❏ **Software Disc (DVD-ROM)**

This disc contains the following.

- SONAR LE (music production application software)
- Playlist Editor (application software for managing songs)
- SD-50 driver

\* Do not touch the data surface (unprinted surface) of the disc. Doing so might make the data unreadable.
If the disc gets dirty, clean it using a commercially available disc cleaner.

❏ **AC adaptor (with power cord)**

This is a dedicated AC adaptor for the SD-50. You must use only the supplied adaptor.

❏ **USB cable**

This cable connects the SD-50 to your computer's USB connector.

\* Please use the included USB cable. If you need a replacement because the included USB cable becomes damaged, please contact one of the service locations listed at the back of this manual.

# Getting Ready

# Names of Things and What They Do

## Front Panel
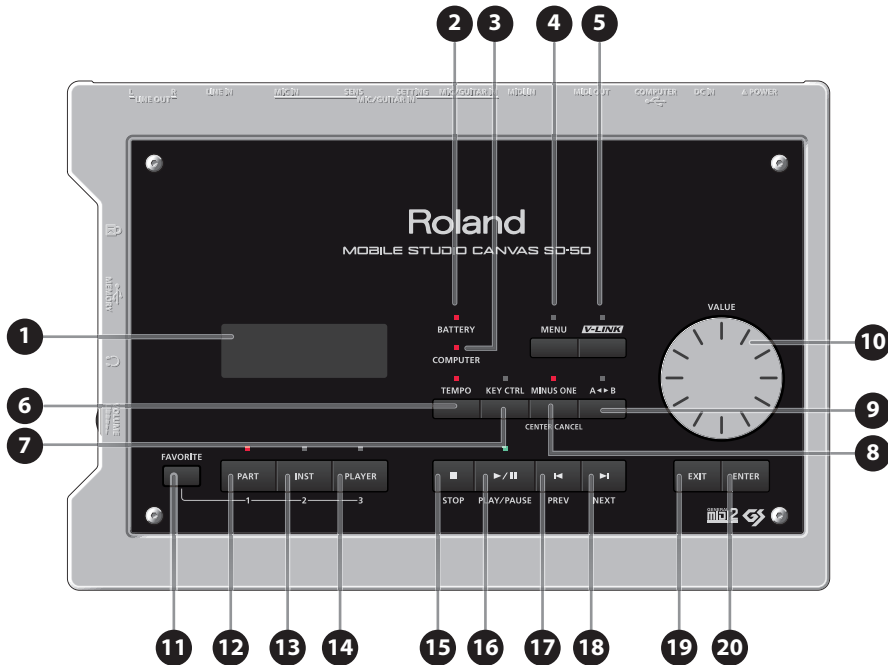


### ① Display

Useful information relevant to the procedure at hand is shown here.

\* The explanations in this manual include illustrations that depict what should typically be shown by the display. Note, however, that your unit may incorporate a newer, enhanced version of the system (e.g., includes newer sounds), so what you actually see in the display may not always match what appears in the manual.

### ② BATTERY indicator

When running on batteries, this shows the amount of battery power that remains (p. 21).

Normally, this will be extinguished. It will light when the batteries run low. If you continue using the unit, the indicator will eventually start blinking; stop using the unit and replace the batteries.

\* If you continue playing even when the indicator is blinking, the display will indicate "Battery Low!" and further operation will not be possible.

### ③ COMPUTER indicator

This will light when the SD-50 is able to exchange data with the computer that's connected to the COMPUTER connector.

### ④ [MENU] button

This button lets you make system settings (p. 72) or use the utility functions (p. 74).

### ⑤ [V-LINK] button

This button turns V-LINK on/off (p. 81).

**6** **[TEMPO] button**

This button changes the tempo of the song (p. 68).

**7** **[KEY CTRL] button**

This button changes the key of the song (p. 68).

**8** **[MINUS ONE] (CENTER CANCEL) button**

This button lets you mute a part in a song or reduce the volume of the melody (e.g., vocal), so that you can play that part or melody yourself (p. 69).

**9** **[ A ◄ ► B ] button**

This button lets you repeatedly play a region between two points (the A-B region) of the song (p. 67).

**10** **[VALUE] dial**

Use this dial to move the cursor, select parameters, or edit values.

**11** **[FAVORITE] button**

You can register a favorite song (p. 70) or studio set (p. 54) for instant recall.

**12** **[PART] button**

This button accesses a screen where you can edit the part settings (p. 49).

**13** **[INST] button**

This button accesses a screen where you can edit the part's sound (p. 46).

**14** **[PLAYER] button**

This button accesses a screen where you can select songs (p. 63).

**15** **[ ■ ] (STOP) button**

This button stops song playback.

**16** **[ ►/ II ] (PLAY/PAUSE) button**

This button starts or pauses song playback.

**17** **[ I◄ ] (PREV) button**

This button moves to the beginning of the song or selects the previous song. By holding down this button, you can rewind the song.

You can perform these operations while the song is playing or stopped.

**18** **[ ►I ] (NEXT) button**

This button selects the next song. By holding down this button, you can fast-forward the song.

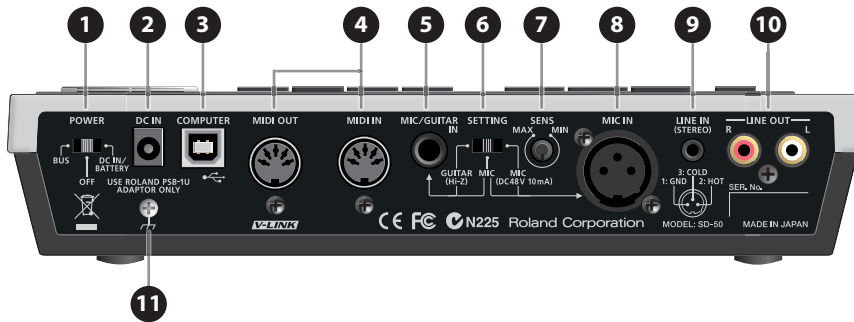You can perform these operations while the song is playing or stopped.

**19** **[EXIT] button**

This button cancels the operation, taking you back to the previous screen.

**20** **[ENTER] button**

Press this button to confirm a value or execute an operation.

# Rear Panel



## ❶ [POWER] switch

This switch turns the power on/off (p. 22).

| Setting | Explanation |
|---------|-------------|
| BUS | When connected to a computer and using bus power, this setting turns the power on. |
| OFF | Turns the power off. |
| DC IN/ BATTERY | When using an AC adaptor or batteries (sold separately), this setting turns the power on. |

## ❷ DC IN connector

Connect the AC adaptor here (p. 20).

* You must use the supplied AC adaptor.

## ❸ COMPUTER connector

Use a USB cable to connect the SD-50 to your computer (p. 23).

## ❹ MIDI connectors (OUT, IN)

Use MIDI cables to connect the SD-50 to another MIDI device (p. 60).

These connectors allow MIDI messages to be transmitted and received.

## ❺ MIC/GUITAR IN connector

Connect your guitar or microphone here (p. 55).

This is an analog audio input jack with a microphone preamp. It can accept either balanced or unbalanced connections.

* This instrument is equipped with balanced (TRS) type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.



**TIP:** **HOT**
**RING:** **COLD**
**SLEEVE:** **GND**

## ❻ [SETTING] switch

- Set this appropriately for the device connected to the MIC/ GUITAR IN jack.
- This switch will turn on the phantom power that is supplied to the MIC IN jack.

| Setting | Explanation | Nominal input level |
|---------|-------------|---------------------|
| GUITAR (Hi-Z) | Use the "GUITAR (Hi-Z)" setting if an electric guitar is connected to the MIC/GUITAR IN jack. | -30– -10 dBu |
| MIC | Use the "MIC" setting if a microphone that does not require phantom power is connected to the MIC IN jack, or if a microphone is connected to the MIC/GUITAR IN jack. | -50 -30 dBu |
| MIC (DC 48V 10mA) | Use the "MIC (DC 48V 10mA)" setting if a phantom-powered condenser microphone is connected to the MIC IN jack. | -50– -30 dBu |

**NOTE**
Set the [SETTING] switch to "GUITAR" or "MIC" unless you've connected a condenser microphone that requires phantom power.
Supplying phantom power to a dynamic microphone will cause malfunction. For details on the specifications of the microphone you're using, refer to the owner's manual for your microphone.

**NOTE**
Before you change the position of the [SETTING] switch, set the volume to "0" using the [VOLUME] dial on the side panel. If you change the position of the [SETTING] switch while the volume is raised, loud noise may be emitted, possibly damaging your amp and speakers.

**7 [SENS] knob**

This knob adjusts the input level of the device that's connected to the MIC IN jack or MIC/GUITAR IN jack. When recording, use this knob to adjust the recording level (p. 56).

\* Setting [SENS] to the minimum position will not silence the input completely. If you want to silence the microphone input completely, set the Mic Input SW to the OFF setting (p. 59).

**8 MIC IN jack**

You can connect a microphone here (p. 55).

This is an analog audio input jack with a microphone preamp. It can accept either balanced or unbalanced connections.

\* The MIC/GUITAR IN jack and MIC IN jack cannot be used simultaneously.

\* The MIC IN jack can provide 48 V phantom power, allowing a phantom-powered condenser microphone to be connected.
Set the [SETTING] switch to the "MIC (DC 48 V 10 mA)" if a phantom-powered condenser microphone is connected to the MIC IN jack.

\* This instrument is equipped with balanced (XLR) type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.



2: HOT    1: GND
3: COLD

**9 LINE IN jack**

You can connect a portable audio player or similar device here (p. 58).

**10 LINE OUT jacks**

These jacks output the audio signal of the amp and mixer in stereo (p. 56).

**11 Ground terminal**

If necessary, you can connect this to an external electrical ground.

\* 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 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 separate sheet titled "Information."

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)

# Side Panel



### ❶ Security Slot ( 🔒 )

http://www.kensington.com/
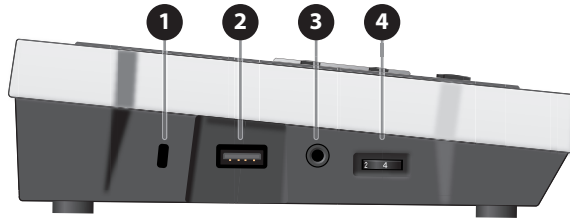
### ❷ USB MEMORY connector

Connect USB memory (sold separately) here (p. 64).

 * Carefully insert the USB memory all the way in—until it is firmly in place.

### ❸ PHONES jack

Connect headphones here.

### ❹ [VOLUME] dial

This dial adjusts the overall volume of the output from the rear panel LINE OUTPUT jacks and PHONES jack.

# Bottom Panel
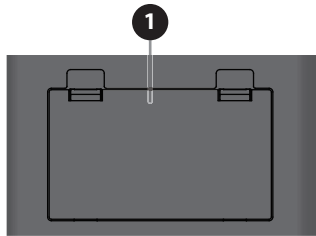


### ❶ **Battery compartment**

Install six commercially available AA nickel-metal hydride batteries or alkaline batteries in the battery compartment.

This allows the unit to be used even when the AC adaptor is not connected.

---

#### **Batteries that can be used**

Please use nickel-metal hydride batteries or alkaline batteries.

* Do not use zinc-carbon batteries.

Battery life for continuous operation is as follows.

| Type of battery | Continuous use |
|---|---|
| Nickel-metal hydride | Approximately 4 hours |
| Alkaline batteries | Approximately 3 hours |

* These times are for operation at room temperature. The length of continuous operation will differ depending on conditions of use.

#### **Battery handling**

- If batteries are installed, and the power is turned on with the AC adaptor connected, the AC adaptor will be used preferentially.
- If you want to use batteries, disconnect the AC adaptor from the SD-50.
- If you want to switch the power from battery or AC adaptor, you must turn off the power first.
- If batteries are installed, unplugging the power cord from the AC outlet while the power is turned on will cause the power to turn off.
- The indication shown by the battery indicator is an approximation.
- Do not use new batteries together with used batteries, and do not mix batteries of different types.
- Improper use of batteries, rechargeable batteries, or chargers may cause electrolyte leakage, overheating, fire, or explosion.
- Before use, you must carefully read and observe the cautions and instructions included with your batteries, rechargeable batteries, and charger.

# Turning the Power On/Off

## Before You Turn the Power On

### Using the AC Adaptor

1. **Connect the included AC adaptor and power cord.**

2. **Connect the AC adaptor to the DC In connector on the rear panel.**

**Indicator**

**AC adaptor**

**Power cord**    **To an electrical outlet**

*   Place the AC adaptor so the side with the indicator (see illustration) faces upwards and the side with textual information faces downwards.
*   The indicator will light when you plug the AC adaptor into an AC outlet.

### Using Batteries

1. **Press the latches of the bottom panel battery compartment lid, and remove the lid.**

**NOTE**

*   When opening the battery compartment cover, make sure that no foreign objects (flammable items, coins, pins, etc.) or liquids (water, juice, etc.) enter the compartment.

*   When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.

*   When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.

**2. Making sure that each battery is oriented in the correct polarity (+/−), insert the batteries into the battery compartment.**
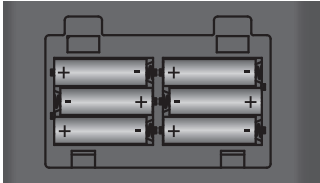


**3. Securely close the battery compartment lid.**

## Battery remaining indication

When the batteries run low, the BATTERY indicator will light.

If you continue use, the BATTERY indicator will blink. Please stop using the unit, and replace the batteries.
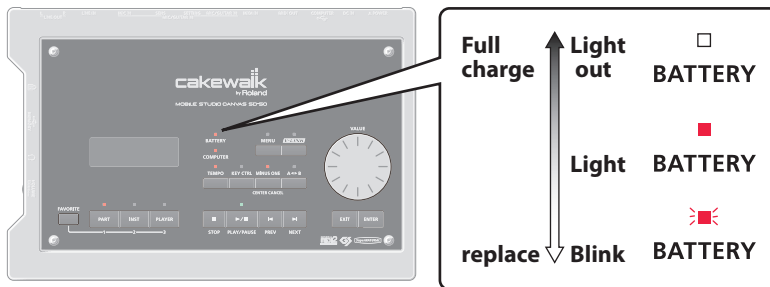


* If you continue playing even when the indicator is blinking, the display will indicate "Battery Low!" and further operation will be impossible.

* The indication shown by the battery indicator is an approximation.

## Using Bus Power

If the SD-50 is connected to your computer, it can operate using power supplied from your computer via the USB cable.

You must install the driver if you want to connect the SD-50 to your computer (p. 23).

* With some computers, the SD-50 might not operate using bus power.
  If so, please use the included AC adaptor.

* When using the SD-50 on bus power, you won't be able to use phantom power with the MIC IN connector.

**21**

# Turning the Power On/Off

## Turning the Power On

**NOTE**
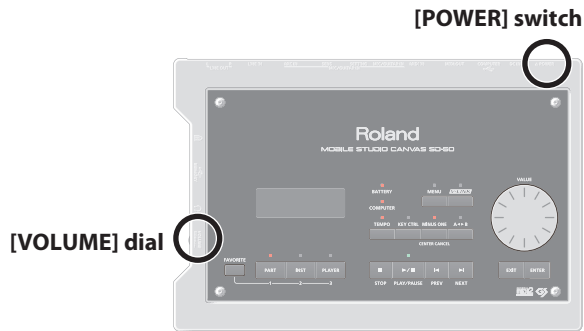Once the connections have been completed (p. 20), turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

**[POWER] switch**

**[VOLUME] dial**

**1.** **Verify the following before you turn on the power.**
  - The AC adaptor is correctly connected, or batteries are correctly installed.
  - If using bus power, the SD-50 is correctly connected to the computer and the driver is installed.
  - The peripheral devices are correctly connected.
  - The volume of the SD-50 and of the connected equipment is minimized.

**2.** **Set the [POWER] switch to DC IN/BATTERY.**

If you're using bus power, set the [POWER] switch to BUS.

* 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.

**3.** **Use the [VOLUME] dial to adjust the volume.**

**4.** **Adjust the volume of the connected equipment.**

## Turning the Power Off

**1.** **Minimize the volume of the SD-50 and the connected equipment.**

**2.** **Switch off the power on the connected audio equipment.**

**3.** **Turn the [POWER] switch OFF.**

The display will go dark and the power will turn off.

**22**

# Installing the Driver

A driver is software that transfers data between the SD-50 and the application software on your computer when the SD-50 is connected to your computer.

The procedure for installation and checking will depend on your system. Perform the following three steps to install and check the driver.

| The procedure for installation and checking | Windows 7 / Windows Vista | Windows XP | Mac OS X |
|---|---|---|---|
| **1. Install the driver** | p. 24 | p. 28 | p. 33 |
| **2. Input/output device settings** | p. 26 | p. 31 | p. 34 |
| **3. Verifying that you hear sound** | p. 38 | p. 38 | p. 38 |

\*  If you are using the SD-50's player function (p. 61), the SD-50 cannot be used while connected to a computer.

# Windows 7/Windows Vista Users

Steps to be performed on the SD-50 sound module itself are marked by a `Operation of the SD-50` symbol. Don't connect the SD-50 to your computer until you are told to do so.

*   The example screen shots included here are taken from Windows 7.

**1.  With the SD-50 disconnected, start up Windows.**

Disconnect all USB cables from your computer, with the exception of those for a USB keyboard and USB mouse (if used).

**2.  Close all currently running software.**

**3.  Insert the included DVD-ROM into your DVD-ROM drive.**

When the auto-play dialog box appears, click [Open folder to view files].

**4.  In the appropriate folder within the included DVD-ROM, double-click the [Setup] icon to start up the installer.**

| OS | Folder |
| --- | --- |
| Windows 7 | Open the folders [Driver] and then [Win7] |
| Windows Vista | Open the folders [Driver] and then [Vista] |
| Windows 7 64-bit edition | Open the folders [x64Driver] and then [Win7] |
| Windows Vista 64-bit edition | Open the folders [x64Driver] and then [Vista] |

If you get a message saying "The operating system you are using is not supported" or "The version of this file is not compatible with the version of Windows you're running," or if you don't know the version of your operating system, check your operating system as described below.

If "System type" indicates "64-bit Operating System," you have the 64-bit version.

### Windows 7 users

Open "Control Panel," click "System and Security," and then click [System].

If the Control Panel shows the icon view, click [System].

### Windows Vista users

Open "Control Panel," click [System and Maintenance], and then click [System].

If the Control Panel shows the classic view, double-click the "System" icon.

**5. A user account control confirmation screen will appear.**

Click [Yes] if you're using Windows 7, or click [Continue] if you're using Windows Vista.
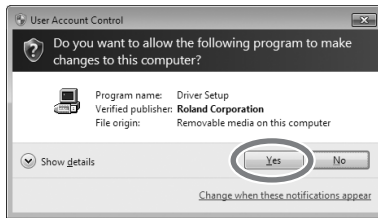


**6. The screen will indicate "SD-50 Driver will be installed on your computer." Click [Next].**

If any other message appears, proceed as directed by the message.

**7. To begin the installation, click [Next] once again.**

Installation will begin.

If a Windows security dialog box appears, click [Install].



**8.** Operation of the SD-50 **Turn the SD-50's [POWER] switch OFF (p. 22).**

**9.** Operation of the SD-50 **When the screen indicates "Ready to install the driver," use a USB cable to connect the SD-50 to your computer.**



If any other message appears, proceed as directed by the message.

**25**

**10.** `Operation of the SD-50`  **Switch on the SD-50's power (p. 20).**

The driver will be installed automatically.
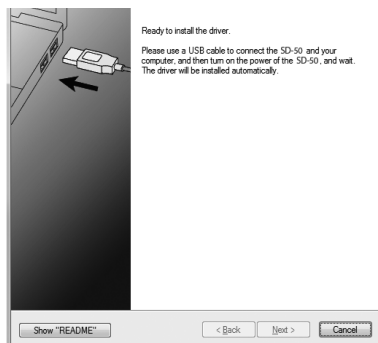
\*  It can take several minutes for the driver installation to complete.

When the installation is completed, the "SD-50 Driver Setup" dialog box will indicate "Installation has been completed."

**11. Click [Close] to close the "SD-50 Driver Setup" dialog box.**

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

Now let's check to make sure that installation was successful.

# Input/Output Device Settings

In order to use the SD-50 with your software, you'll need to select the SD-50 as the audio and MIDI input/output device. For details on how to do this, refer to the documentation for your software.

\*  If you're unable to select the SD-50 as the audio input/output device in your software, it may be that a problem has occurred. Refer to "Problems with Settings" (p. 94) in the Troubleshooting section.

### Audio input/output device

| | |
|---|---|
| **Audio output device** | OUT (SD-50) |
| **Audio input device** | IN (SD-50) |

\*  If you're using ASIO compatible software, select the SD-50 in the ASIO settings of your software.

### MIDI input/output device

| | |
|---|---|
| **MIDI output device** | SD-50 |
| | SD-50 MIDI |
| | SD-50 CONTROL |
| **MIDI input device** | SD-50 |
| | SD-50 MIDI |
| | SD-50 CONTROL |

\*  The Windows Media Player included with Windows 7 or Windows Vista cannot use the SD-50's MIDI input/output device.

## Settings when using the SD-50 in Windows Media Player

Here's how to specify the SD-50 as the system default playback device so that it can be used with Windows Media Player.

\* In "Verifying That You Hear Sound" (p. 38), you'll use Windows Media Player to play back sample data. Be sure to make the settings described below.

**1. Open the "Control Panel," click the Hardware and [Sound and click Sound].**

If you're using the Icon view or the Classic view, double-click [Sound].

**2. Open the [Playback] tab, select the SD-50's [OUT], and click [Set Default].**

**3. Click [OK] to complete the setting.**

If you select the "SD-50" as the default playback device, audio alerts and other sounds from Windows will also be output from the SD-50, and therefore will not be heard from your computer's speakers.

---

### Caution when recording or playing back with your software

Check the following points before you use the SD-50 to record or play back.

- Connect the SD-50 to your computer before you start up the software you're using.
- Do not disconnect the SD-50's USB cable from your computer while your software is running. Close the software you're using before you disconnect the SD-50's USB cable from your computer.

---

This completes driver installation and settings.

Next, verify that you hear sound from the SD-50. → "Verifying That You Hear Sound" (p. 38).

# Windows XP Users

Steps to be performed on the SD-50 sound module itself are marked by a  Operation of the SD-50  symbol. Don't connect the SD-50 to your computer until you are told to do so.

**1. With the SD-50 disconnected, start up Windows.**

Disconnect all USB cables from your computer, with the exception of those for a USB keyboard and USB mouse (if used).

**2. Close all currently running software.**

**3. Insert the included DVD-ROM into your DVD-ROM drive.**

**4. On the included DVD-ROM, open the [Driver] folder and then the [XP] folder, and double-click the [Setup] icon.**

If you get a message saying "The operating system you are using is not supported" or saying that the application is invalid, check the version of your operating system.

If the "Install Program As Other User" dialog box appears, click [Cancel] to terminate the installation, log on to Windows using an administrator account, and perform the installation once again.

**5. The screen will indicate "SD-50 Driver will be installed on your computer." Click [Next].**

If any other message appears, proceed as directed by the message.

**6. To begin the installation, click [Next].**

If the "Software Installation" dialog box appears, click [Continue Anyway] to continue the installation.



If you are unable to proceed, click [OK] in the dialog box to terminate the installation. Then change the setting as described in "Driver Signing Option Settings (Windows XP)" (p. 99), and perform the installation once again.

**7.**  Operation of the SD-50  **Switch off the SD-50's power (p. 22).**

**8.** Operation of the SD-50 **When the "Ready to install the driver" message appears, use a USB cable to connect the SD-50 to your computer.**



If any other message appears, proceed as directed by the message.

**9.** Operation of the SD-50 **Switch on the SD-50's power (p. 20).**

The indication "Found New Hardware" will appear in the lower right corner of your screen.

\* It may take several minutes for the "Found New Hardware Wizard" to appear.

**10. If you are asked whether you want to connect to Windows Update, choose [No, not this time] and click [Next].**
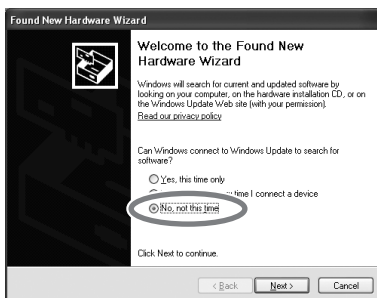


**11. Choose [Install the software automatically (Recommended)], and click [Next].**
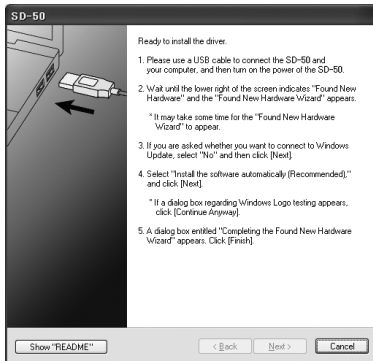


**29**
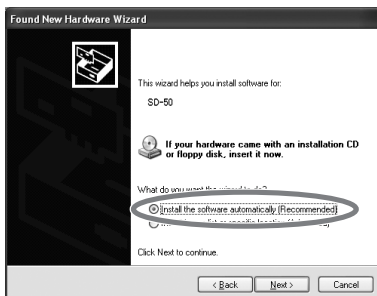
**12.** **If the "Hardware Installation" dialog box appears, click [Continue Anyway] to continue the installation.**



If you are unable to proceed, click [OK] in the dialog box to terminate the installation. Then change the setting as described in "Driver Signing Option Settings (Windows XP)" (p. 99), and perform the installation once again.

**13.** **The screen will indicate "Completing the Found New Hardware Wizard." Click [Finish].**

When installation is complete, the "SD-50 Driver Setup" dialog box will indicate "Installation has been completed."

**14.** **Click [Close] to close the "SD-50 Driver Setup" dialog box.**

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

## Input/Output Device Settings

In order to use the SD-50 with your software, you must select the SD-50 as the audio input/output device. For details on how to make this setting, refer to the documentation for the software you're using.

\* If you're unable to select the SD-50 as the audio input/output device in your software, it may be that a problem has occurred. Refer to "Problems with Settings" (p. 94) in the Troubleshooting section.

### Audio input/output device

| | |
|---|---|
| **Audio output device** | OUT (SD-50) |
| **Audio input device** | IN (SD-50) |

\* If you're using ASIO compatible software, select the SD-50 in the ASIO settings of your software.

### MIDI input/output device

| | |
|---|---|
| **MIDI output device** | SD-50 |
| | SD-50 MIDI |
| | SD-50 CONTROL |
| **MIDI input device** | SD-50 |
| | SD-50 MIDI |
| | SD-50 CONTROL |

## Settings when using the SD-50 in Windows Media Player

Here's how to specify the SD-50 as the system default playback device so that it can be used with Windows Media Player.

\* In "Verifying That You Hear Sound" (p. 38), you'll use Windows Media Player to play back sample data. Be sure to make the settings described below.

**1. Open the "Control Panel," click [Sounds, Speech, and Audio Devices], and then double-click the [Sounds and Audio Devices].**

\* If you're using the Classic view, double-click the [Sounds and Audio Devices icon].

**2. Click the Audio tab to open it, and in the Sound playback area, select OUT (SD-50). In the MIDI Music Playback area, select SD-50.**

**3. Click [OK] to complete the setting.**

\* If you select the SD-50 as the default playback device, audio alerts and other sounds from Windows will also be output from the SD-50, and therefore will not be heard from your computer's speakers.

---

### Caution when recording or playing back with your software

Check the following points before you use the SD-50 to record or play back.

- Connect the SD-50 to your computer before you start up the software you're using.
- Do not disconnect the SD-50's USB cable from your computer while your software is running. Close the software you're using before you disconnect the SD-50's USB cable from your computer.

---

This completes driver installation and settings.

Next, verify that you hear sound from the SD-50. → "Verifying That You Hear Sound" (p. 38)

# Mac OS X Users

Steps to be performed on the SD-50 sound module itself are marked by a `Operation of the SD-50` symbol. Don't connect the SD-50 to your computer until you are told to do so.

\* If the "Authenticate" or "Installer requires that you type your password" dialog box appears during the installation, enter an administrator password and click [OK].

\* What you actually see on the screen may differ depending on your system.

1. **With the SD-50 disconnected, start up your computer.**

   Disconnect all USB cables from your computer, with the exception of those for a USB keyboard and USB mouse (if used).

2. **Close all currently running software.**

3. **Insert the included Mobile Studio Canvas DVD-ROM into your DVD-ROM drive.**

4. **Double-click one of the following icons on the DVD-ROM to start up the installer.**

   | OS | Installer |
   |---|---|
   | Mac OS X 10.6 or later | [SD-50_USBDriver.pkg] (/Driver/10.6) |
   | Mac OS X 10.5 or earlier | [SD50USBDriver.pkg] (/Driver/10.4_10.5) |

   A message concerned with checking whether installation is possible may appear.

   If so, click [Continue].

   If a message indicating that installation is not possible appears, check the operating system you're using, and perform step 4.

5. **The screen will indicate "Welcome to the SD-50 Driver Installer." Click [Continue].**

   

6. **If the screen asks you to select a destination, click your start-up disk to select it, and then click [Continue].**

7. **When the display asks you to select the type of installation, click [Install] or [Upgrade].**

**33**

**8.** In the next screen, click [Continue Installation].

**9.** When installation is completed, click [Restart] to restart your computer.

   * It may take some time for your computer to restart.

**10.** Operation of the SD-50  Switch off the SD-50's power (p. 22).

**11.** Operation of the SD-50  When your computer has restarted, use a USB cable to connect the SD-50 to your computer.

**12.** Operation of the SD-50  Switch on the SD-50's power (p. 22).

## Input/Output Device Settings

In order to use the SD-50 with your software, you'll need to select the SD-50 as the audio input/output device (p. 35) and MIDI input/output device. For details on how to do this, refer to the documentation for your software.

### Audio input/output device settings

| | |
|---|---|
| **Audio output device** | SD-50 44.1kHz |
| **Audio input device** | SD-50 44.1kHz |

   * If you're unable to select the SD-50 as the audio input/output device in your software, it may be that a problem has occurred. Refer to "Problems with Settings" (p. 94) in the Troubleshooting section.

## Using the SD-50 with iTunes

Here's how to specify the SD-50 as the sound output device so that it can be used with iTunes.

In  "Verifying That You Hear Sound" (p. 38), you'll use iTunes to play back sample data. Be sure to make the settings described below.

\* The content displayed may differ depending on your system.

**1.  In [System Preferences], click [Sound].**

**2.  Click the [Output] tab.**

Select [SD-50 44.1kHz].

**3.  When you've finished making the setting, close [System Preferences].**

## MIDI input/output device settings

**1.  Double-click [Audio MIDI Settings] (/Applications/Utility) to start it up.**

**2.  Access the dialog box.**

### Mac OS X 10.6 or later

From the [Window] menu, choose [Show MIDI Window] to open "MIDI Studio"

### Mac OS X 10.5 or earlier

Click the [MIDI Devices] tab.

**3.  Verify that [SD-50] is shown in the "MIDI Studio" or "Audio MIDI Settings" dialog box.**
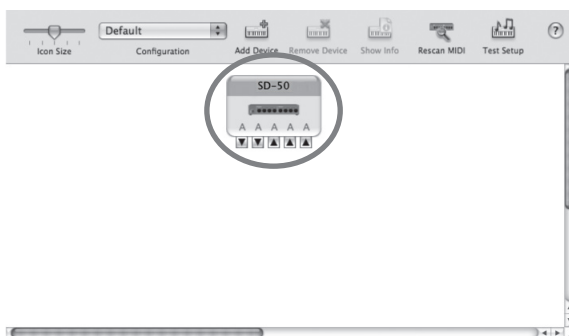


If the SD-50 is not shown or is grayed-out, the SD-50 has not been recognized correctly. Try clicking [Rescan MIDI].
You can also try disconnecting the USB cable connected to the SD-50, then re-connecting it.

**4. Click [Add Device] three times.**
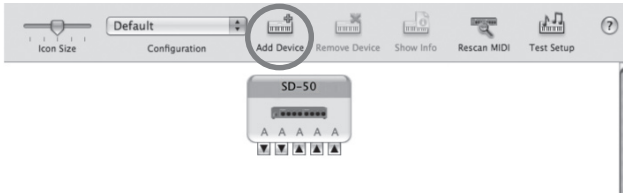


Three [New Device] items will appear.

**5. Specify the device name for each [New Device].**

1. Select the [New Device] you added, and click [Show Info].

2. Enter the name in the [Device Name] field. For each [New Device], enter the following names.



| New Device | Device Name |
|---|---|
| First [New Device] | SD-50 |
| Second [New Device] | SD-50 MIDI |
| Third [New Device] | SD-50 CONTROL |

**6. Use the mouse to drag between the ▲ and ▼ symbols (representing input and output, respectively) of [SD-50] and each [New Device] so that they are connected as shown in the illustration below.**
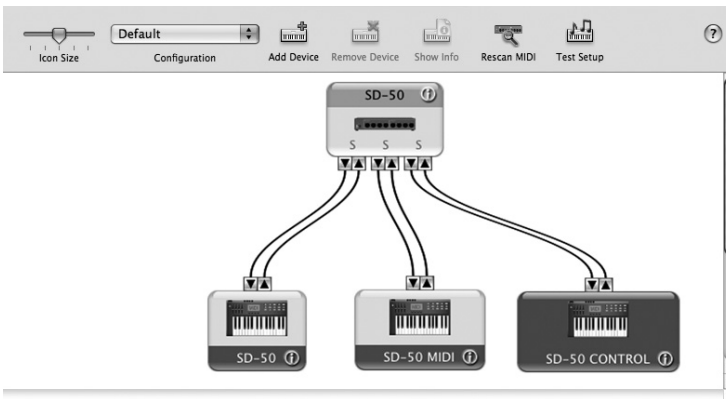
**7.** **Check to make sure that MIDI transmission and reception takes place normally.**

   **1.** Click "Test Setup."

   **2.** Turn down the SD-50's volume.
      The following step will cause a fairly loud sound to be produced from the SD-50.

   **3.** Click the SD-50's downward arrow.
      If the SD-50 produces sound, the settings are correct.
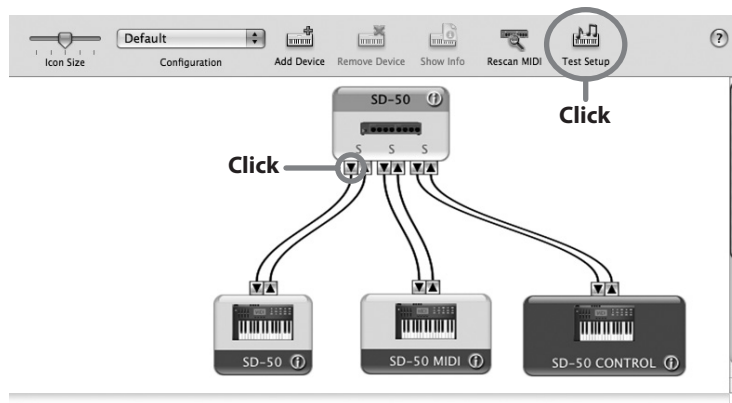


   **4.** Click "Test Setup" once again to end the test.

**8.** **From the [Audio MIDI Setup] menu, select [Quit Audio MIDI Setup] to finish making settings.**

---

**Caution when recording or playing back with your software**

Check the following points before you use the SD-50 to record or play back.

- Connect the SD-50 to your Macintosh before you start up the software you're using.
- Do not disconnect the SD-50's USB cable from your Macintosh while your software is running. Close the software you're using before you disconnect the SD-50's USB cable from your Macintosh.
- The SD-50 will not work with the Mac OS X Classic environment. Use the SD-50 when the classic environment is not running.

# Verifying That You Hear Sound

Now let's play back some sample data to verify that the connections and settings are correct.

*   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.

## Connecting Your Audio Playback System

As shown in the illustration, connect your headphones or monitor speakers so that you can hear the sound played back from the computer.

**Amplified Speakers**

**Computer**

**USB connector**

**LINE OUT jacks**

**COMPUTER connector**

**Headphones**

**PHONES jack**

Roland
MOBILE STUDIO CANVAS SD50
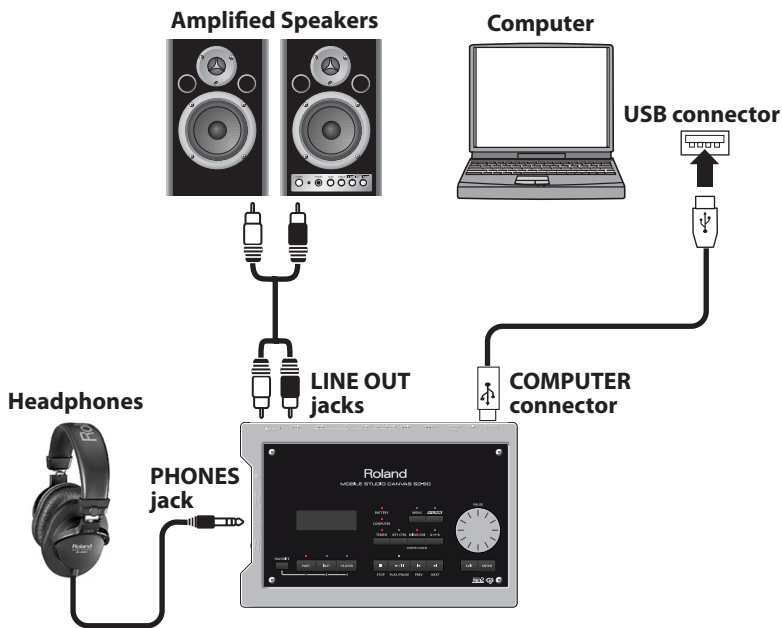
## Playing Back the Sample Data

Here we will play back sample data using the standard functionality provided by your operating system. The sample data "TTears(.mp3)" is in the included DVD-ROM.

* Copyright law prohibits you from using the song data included with this product for any purpose other than personal enjoyment unless you have obtained permission from the copyright holder. You may not copy this data or use it in a derivative work without permission from the copyright holder.

**1. Insert the included DVD-ROM into the DVD-ROM drive of your computer.**

**2. From the Sample folder of the DVD-ROM, copy the file TTears(.mp3) to your desktop.**

**3. Play back the sample data "TTears"(.mp3).**

Double-click the TTears(.mp3) file you copied to your desktop.

If you're using Windows, Windows Media Player will start. If you're using Macintosh, iTunes will start. Click the play button, and the sample data will start playing.

* Depending on your system, other playback software may start up. If so, play the sample data as described in the documentation for the software you're using.

**4. Adjust the volume.**

Use the SD-50's [VOLUME] dial to adjust the volume.

You should hear the sample data played from the headphones or speakers connected to the SD-50.

> **Did you hear the sample data?**
>
> If you could hear the sample data, the SD-50 is correctly connected to your computer and the driver has been installed correctly.
>
> If you could not hear the sample data, refer to "Troubleshooting" (p. 88). If there's no sound, or if there's something wrong with the playback, information provided in that section will help you solve the problem.

# Using Playlist Editor

You can create playlists for playing SMFs or audio files on the SD-50 using the Playlist Editor.

When using the SD-50 to play backing tracks (accompaniment), it's convenient to create a playlist that specifies the desired order for the songs.

For details on using this, refer to the PDF manual that is installed together with Playlist Editor.

## Installing Playlist Editor

The procedure for installing Playlist Editor will depend on your system.

### Windows 7 / Windows Vista users

1. **Insert the included DVD-ROM into your DVD-ROM drive, and double-click the [Setup.exe] file located in the Editor folder.**

2. **A user account control dialog box will appear; click [Continue].**

3. **The installer will start up. Follow the instructions that appear on the screen to install Playlist Editor.**

### Windows XP Users

1. **Insert the included DVD-ROM into your DVD-ROM drive, and double-click the [Setup.exe] file located in the Editor folder.**

2. **The "Welcome" screen will appear. Click [Next].**

3. **Follow the instructions that appear on the screen to install Playlist Editor.**

### Mac OS X Users

1. **On the included DVD-ROM, open the Editor folder and double-click [Playlist Editor Installer.pkg].**

2. **The installer will start up. Follow the instructions that appear on the screen to install Playlist Editor.**

# Creating a Playlist

Start up Playlist Editor and create a playlist.



* For details on how to create a playlist, refer to "PlaylistEditorManual.E.pdf" from the "Playlist Editor" help.

* You'll need to use the included "Playlist Editor" to create playlists. They cannot be created on the SD-50 itself.

* You can play songs individually without creating a playlist. To do so, place the SMF or audio files in the root directory of your USB memory.

**Viewing the online manual**

Playlist Editor's online manual is located in the Manual folder within the folder in which Playlist Editor was installed. The online manual is provided as a PDF file. You'll need Adobe Reader (available free of charge) in order to view PDF files.

# MEMO

# Operation

# Using the SD-50 as a MIDI Sound Module

## About the Sound Generator

The SD-50's sound generator has the following two modes. In Normal mode, you can select sounds from the SD-50 itself. For more about selecting sounds, refer to "Selecting a Tone For Each Part" (p. 46).

### Normal mode

This is the normal state of the SD-50. You'll be able to select and play sounds from three groups: PRESET, GM2, and Solo.

| Group | Number of sounds | Explanation |
|---|---|---|
| PRESET | 640 sounds+14 drum sets | This is the SD-50's original set of sounds. |
| GM2 | 256 sounds +9 drum sets | These are sounds that comply with GM2, which standardizes MIDI sound modules across manufacturers and models.<br>*  You can choose the following two types of GM sounds. Specify the desired GM type as described in "System Settings" (p. 72).<br>•  Classical<br>This is the basic set of sounds that will blend easily into an ensemble. You should also use this sound set if GM2 data compatibility is an important consideration.<br>•  Contemporary<br>This is a set of sounds that emphasizes the realism of each individual instrument. This set is selected when the SD-50 is powered up. |
| Solo | 3 sounds | These sounds realistically simulate the tonal characteristics of acoustic instruments and the unique performance techniques used with a variety of instruments.<br>For more about settings for Solo sounds and how to play them, refer to "The Solo sounds and how to play them" (p. 106). |

### GS mode

Use this mode when you play back GS performance data. GS mode is activated when the SD-50 receives a GS Reset MIDI message (system exclusive message).

| Group | Number of sounds | Explanation |
|---|---|---|
| GS | 226 sounds +9 drum sets | This sound set complies with the "GS" sound generator format promoted by Roland Corporation.<br>*  If GS mode is selected, the following settings will be unavailable.<br>•  "Selecting a Tone For Each Part" (p. 46)<br>•  "Adjusting the Pan and Effect Depth" (p. 51)<br>•  "Adjusting the Effect Settings" (p. 52)<br>•  "Saving a Studio Set" (p. 54) |

## Explanation of Terms

### Tone

On the SD-50, a "tone" is the unit of sound (e.g., piano, organ, guitar) that you can select. For the available tones, refer to PDF "Tone List."

### Drum set

A "drum set" is a group of percussion instrument sounds. Since percussion instruments are not usually used to play a melody, it's not necessary that you be able to play different pitches of the instrument from the keyboard. Rather, it's important that you be able to use a large number of percussion instrument sounds simultaneously.
For this reason, a drum set produces the sound of a different percussion instrument for each key (note number).

For the available drum sets, refer to PDF "Tone List."

### Part

On the SD-50, a "part" is a unit to which a tone or drum set is assigned.
The SD-50 provides sixteen parts, and you can assign a different tone or drum set to each part.

### Effect

An "effect" refers to processing that can be applied to modify the sound. By switching effects, you can significantly alter the character of the sound.
The SD-50 contains the following effects; you can modify the depth and type of each effect (p. 52).

| Type | Explanation |
| --- | --- |
| Chorus | Adds depth and spaciousness to the sound. |
| Reverb | Adds the reverberation that is characteristic of a performance in a hall. |
| Mastering | Makes the overall sound more consistent and powerful. |

### Studio set

A "studio set" is a collection of settings for the sixteen parts and the effects.
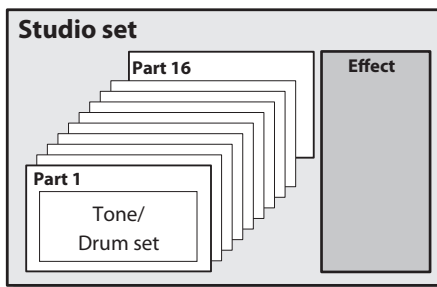


## Polyphony

The number of notes (polyphony) that the SD-50 can produce simultaneously will depend on the tones that are selected. The SD-50's maximum polyphony is 128 notes, but the actual polyphony will be less depending on the tones you use.

If your performance exceeds the maximum polyphony, newly played notes will be given priority, while notes that were sounded previously will be turned off one by one.

# Selecting a Tone For Each Part

## Selecting From the Tone List

Here's how to select a tone from a list. Refer to PDF "Tone List" for information on the available tones.

**1. Press the [PART] button a number of times to access the MIDI part screen.**

PRE 001 St.Piano 1

**2. Turn the [VALUE] dial to select the part whose tone you want to change.**

PRE 001 St.Piano 1

**3. Press the [INST] button to access the tone list screen.**

Preset
001  St.Piano 1
002  St.Piano 2
003  St.Piano 3

**4. Turn the [VALUE] dial to select a tone.**

Preset
007  Stage Piano
008  Honky Tonk
009  Pop Piano 1

**MEMO**

Press the [ ▶/ ❚❚ ] button and Sample notes will be played so you can audition the tone.

**5. Press the [ENTER] button.**

The tone has now been selected.

PRE 008 Honky Tonk

**MEMO**

If you save the studio set, your selections will be saved to internal memory (p. 54).

## Selecting by Category or Group

Here's how to select a tone by category such as piano or organ, or from a group such as PRESET, GM2, or Solo.

**1. Press the [PART] button a number of times to access the MIDI part screen.**

PRE 001 St.Piano 1

**2. Turn the [VALUE] dial to select the part whose tone you want to change.**

PRE 001 St.Piano 1

**3. Press the [INST] button a number of times to access the category group screen.**

GROUP
CATEGORY

**4. Turn the [VALUE] dial to select either "CATEGORY" or "GROUP," and then press the [ENTER] button.**

The category list or group list will appear.

Group
Rhythm
Preset
Solo

**5. Turn the [VALUE] dial to select the desired category or group, and then press the [ENTER] button.**

The first tone in the selected category or group will be selected.

For information on the tones in each category or group, refer to PDF "Tone List."

Solo
001  Violin
002  Trombone
003  Shakuhachi

**MEMO**

Press the [ ▶/ II ] button and Sample notes will be played so you can audition the tone.

**MEMO**

Your selection will be saved to internal memory if you save the studio set (p. 54).

**47**

## Viewing a Tone's Program Change and Bank Select Numbers

Here's how to check the program change and bank select numbers of the currently selected tone.

**1. Press the [INST] button a number of times to access the tone information screen.**

```
Program Change      0
Bank Select LSB     0
Bank Select MSB    87
```

# Adjusting the Settings of Each Part

For each part, you can adjust its volume and other settings, and apply effects to the sound.

## Muting/Soloing a Part

You can "mute" a specific part so that it will not produce sound.

Conversely, you can "solo" a specific part so that it will play while all of the other parts are muted.

**1.** **Press the [PART] button a number of times to access the MIDI part screen.**

PRE 001 St.Piano 1

**2.** **Turn the [VALUE] dial to select the part that you want to mute or solo, and then press the [ENTER] button.**

PRE 001 St.Piano 1

**3.** **Turn the [VALUE] dial to change the setting.**

PRE 001 St.Piano 1

| Setting | Explanation |
|---------|-------------|
| M | Muted |
| S | Soloed |

**MEMO**

The mute and solo settings will be saved in internal memory if you save the studio set (p. 54).

**49**

## Adjusting Each Part's Volume

Here's how to adjust the volume of a specific part.

**1.** **Press the [PART] button a number of times to access the MIDI part screen.**

```
PRE 001  St.Piano 1
```
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

**2.** **Turn the [VALUE] dial to select the part whose volume you want to adjust, and then press the [ENTER] button twice.**

```
Level                100
```
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

**3.** **Turn the [VALUE] dial to adjust the setting.**

| Value |
|-------|
| 0–127 |
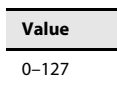
**MEMO**

The adjusted volume of each part will be saved in internal memory if you save the studio set (p. 54).

## Adjusting the Pan and Effect Depth

You can specify the pan (stereo position) of each part, and adjust the depth of the reverb and chorus effects for each part.

**1.** **Press the [PART] button a number of times to access the Part Edit screen.**

```
   Part Edit:Part 1
Level              92
Pan                 0
Reverb Send        40
```

**2.** **Turn the [VALUE] dial to select the effect whose settings you want to adjust, and then press the [ENTER] button.**

```
   Part Edit:Part 1
Pan                 0
Reverb Send        40
Chorus Send         0
```

| Setting | Value | Explanation |
|---------|-------|-------------|
| Pan | 0–127 | Left/right balance of the sound. |
| Reverb Send | 0–127 | Depth of reverb. Choose "0" if you don't want to apply reverb. |
| Chorus Send | 0–127 | Depth of chorus. Choose "0" if you don't want to apply chorus. |

**3.** **Turn the [VALUE] dial to adjust the setting.**

**MEMO**

The pan and effect settings you specify will be saved in internal memory if you save the studio set (p. 54).

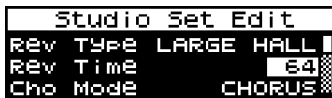# Adjusting the Effect Settings

Here's how to adjust the effect settings and other settings of the studio set.

**1.  Press the [PART] button a number of times to access the Studio Set Edit screen.**

```
    Studio Set Edit
Rev Type LARGE HALL
Rev Time          64
Cho Mode      CHORUS
```

**2.  Turn the [VALUE] dial to select the item you want to edit, and then press the [ENTER] button.**

```
    Studio Set Edit
Rev Type LARGE HALL
Rev Time          64
Cho Mode      CHORUS
```

| Setting | Value | Explanation |
|---|---|---|
| Rev Type | SMALL ROOM, MEDIUM ROOM, LARGE ROOM, MEDIUM HALL, LARGE HALL, PLATE | SMALL ROOM, MEDIUM ROOM, LARGE ROOM: Reverb simulating the acoustics of a room, producing a crisp and spacious reverberation. MEDIUM HALL, LARGE HALL: Reverb simulating the acoustics of a hall, producing reverberation with more space than Room. PLATE: Simulation of a plate reverb unit (a device using the vibration of a metal plate). |
| Rev Time | 0–127 | Adjusts the duration of the reverb. Higher settings produce longer reverb. |
| Cho mode | CHORUS, DELAY | Selects either Chorus or Reverb. |
| When "CHORUS" has been selected for "Cho mode." | | |
| Cho Type | CHORUS1, CHORUS2, CHORUS3, CHORUS4, FB CHORUS, FLANGER | CHORUS1, CHORUS2, CHORUS3, CHORUS4: Typical chorus effect, adding depth and spaciousness to the sound. FB CHORUS: Chorus effect that produces a soft, flanger-like sound. FLANGER: Produces a sound that's reminiscent of a jet airplane taking off and landing. |
| Cho Rate | 0–127 | Chorus with feedback applied to it. |
| Cho Depth | 0–127 | Adjusts the rate of modulation. |
| Feedback | 0–127 | Adjusts the depth of modulation. |
| Rev Send | 0–127 | Adjusts the amount of chorus sound to be fed back into the input. |
| When "DELAY" has been selected for "Cho mode." | | |
| Dly Time | 0–1000 ms, note | Adjusts the amount of time it is to take for the delay sound to be heard after the original sound has sounded. |
| Dly FB | -98– +98 % | Adjusts the proportion of the delay sound to be fed back to the input. (Minus: reversed phase) |
| Dly HF DMP | 200– 8000 Hz, BYPASS | Adjusts the frequency at which the high-frequency components of the delay sound fed back to the input will be cut. (BYPASS: no cut) |

**3.** **Turn the [VALUE] dial to adjust the setting.**

**MEMO**

The effect settings you adjust will be saved in internal memory if you save the studio set (p. 52).

# Saving a Studio Set

You can save the studio set you've edited. This means that the sounds you've selected for the SD-50's parts, as well as other settings, will be saved in internal memory. You can save three different studio sets in internal memory.

**1. Edit the studio set as desired.**

Make settings as described in "Selecting a Tone For Each Part" (p. 46), "Adjusting the Settings of Each Part" (p. 49), and "Adjusting the Effect Settings" (p. 52)

**2. Press the [FAVORITE] button for a number of seconds until the REGIST SONG screen appears.**

```
   REGIST SONG
      no data
      no data
      no data
```

**3. Press the [FAVORITE] button a number of times to access the REGIST STUDIO SET screen.**

```
  REGIST STUDIO SET
     Studio Set 1
     Studio Set 2
     Studio Set 3
```
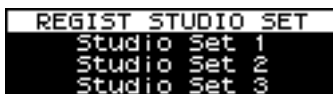
**4. Press one of the [PART](1) – [PLAYER](3) buttons.**

Once the following screen appears, the studio set has been saved.

```
      Write
      Completed.
```

## Recalling a Studio Set

**1. Press the [FAVORITE] button a number of times to access the screen shown below.**

The saved studio sets will be displayed, and the LEDs for the [PART](1) – [PLAYER](3) buttons will blink.

```
      Studio Set
     Studio Set 1
     Studio Set 2
     Studio Set 3
```

**2. Press one of the [PART](1) – [PLAYER](3) buttons.**

The studio set will be recalled.

# Using the SD-50 as an Audio Interface

By connecting the SD-50 to your computer, you can use it as an audio interface.

This also allows you to connect a microphone or guitar, and record your vocal or instrumental performance into the computer.

* Howling could be produced depending on the location of microphones relative to speakers. This can be remedied by:
    1. Changing the orientation of the microphone(s).
    2. Relocating microphone(s) at a greater distance from speakers.
    3. Lowering volume levels.
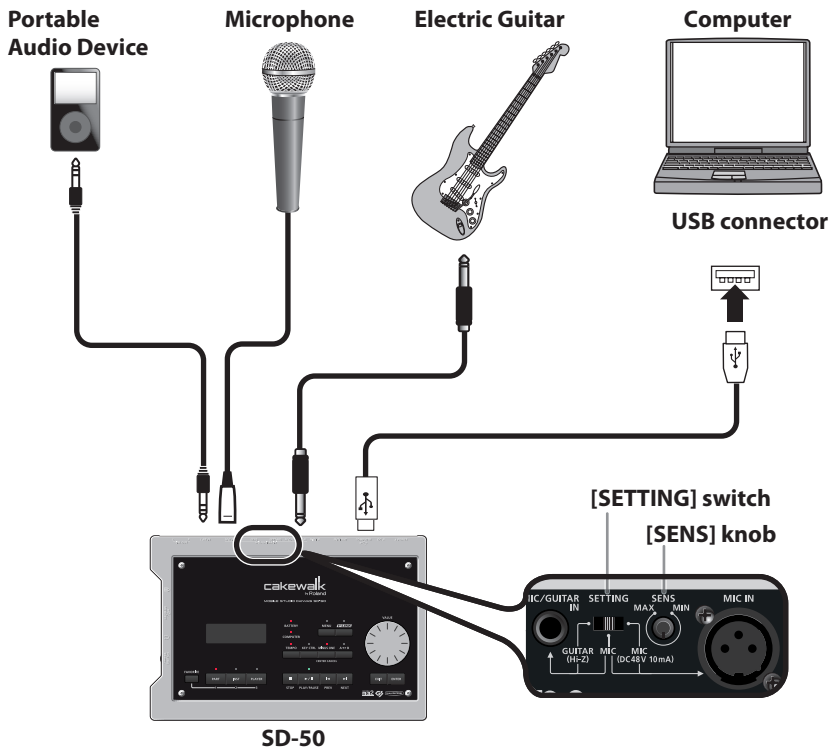
# Listening to Playback from Your Computer

**1. Use a USB cable to connect the SD-50 to your computer.**

**2. Play back an audio file (e.g., WAV or MP3) on your computer.**

The playback of your computer will be heard from the SD-50.

# Recording Your Microphone or Guitar

If you connect a microphone or guitar to the SD-50, you'll be able to record a vocal or guitar performance into the computer.

## Getting Ready to Record

### Connect your microphone or guitar

**1. Use a USB cable to connect the SD-50 to your computer.**

**2. Set the [SETTING] switch to the appropriate position.**

Set the [SETTING] switch as appropriate for the jack or device you're connecting.

| Connected device | Connected jack | Setting | Nominal input level |
|---|---|---|---|
| Guitar | MIC/GUITAR IN jack | GUITAR (Hi-Z) | -30– -10 dBu |
| Dynamic microphone (phantom power not required) | MIC/GUITAR IN jack | MIC | -50– -30 dBu |
| | MIC IN jack | MIC | -50– -30 dBu |
| Condenser microphone (phantom power required) | MIC IN jack | MIC (DC 48 V 10 mA) | -50– -30 dBu |

**3. Connect your microphone or guitar to the MIC IN jack or the MIC/GUITAR IN jack.**

Connect a microphone to the MIC IN jack or MIC/GUITAR IN jack. Connect a guitar to the MIC/GUITAR IN jack.

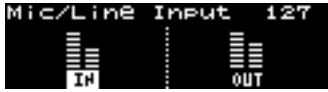\* You can't use both the MIC/GUITAR IN and MIC IN jacks simultaneously.

**(MEMO)**
You can apply echo to the microphone (p. 59).

## Adjust the input level

**1. Press the [PART] button a number of times to access the audio part screen.**

The level meters will appear.



**2. Turn the [SENS] knob to adjust the input volume.**

In order to record with the best audio quality, use the [SENS] knob to increase the level as far as possible without allowing an overload to occur; i.e., don't let the level meter reach the maximum point.

**MEMO**
You can apply echo to the sound of the connected microphone or guitar (p. 59).

\* If the indication below appears, the input level has overloaded even though the level meter did not reach the maximum point.



## Recording

**1. Operate your computer to start recording.**

For details on how to start recording, refer to the user's guide for the software you're using.

**57**

# Recording Sound From the Line Input

You can connect your portable audio player or other audio device to the SD-50's line input, and record the sound into the computer from that device.

## Getting Ready to Record

### Connect your audio device

1. **Use a USB cable to connect the SD-50 to your computer.**

2. **Connect your portable audio player or other audio device to the LINE IN jack.**

### Adjust the input level

1. **Press the [PART] button a number of times to access the audio part screen.**

   The level meters will appear.

   

2. **Adjust the output level of the connected audio device.**

   **(MEMO)**
   You can apply echo (p. 59) or center cancel (p. 69) to the sound of the audio device connected to LINE IN, or modify its pitch (p. 68).

   \* If the indication below appears, the input level has overloaded even though the level meter did not reach the maximum point.
   In this case, you should keep the input at a low level by turning ON the "Audio Input Att" in the Audio Settings screen (p. 59).

   

## Recording

1. **Operate your computer to start recording.**

   For details on how to start recording, refer to the user's guide for the software you're using.

# Input/Output and Effect Settings

Here you can apply an effect to the external audio input via a microphone or guitar, and specify how the audio is to be output.

**1. Press the [PART] button a number of times to access the Audio Setting screen.**

```
     Audio Setting
Mic Input Sw      ON
Mic Echo Level     5
Audio Input Att   ON
```

**2. Turn the [VALUE] dial to select the item you want to edit, and then press the [ENTER] button.**

```
     Audio Setting
Direct Mon Sw     ON
Direct Mon Level 127
TG to Computer    ON
```

| Indication | Values | Explanation |
|---|---|---|
| Mic Input Sw (Mic input switch) | ON, OFF | Switches on/off the audio input via the MIC IN jack. If this is "OFF," no audio will be input via the MIC IN jack. This allows you to reduce the input noise when you're recording the audio from the MIDI sound generator on an external device. |
| Mic Echo Level | 0 –10 | Adjusts the amount of echo applied to the microphone connected to the MIC IN jack or MIC/GUITAR IN jack. Higher values produce a deeper echo effect. |
| Audio Input Att (Audio input attenuator) | ON, OFF | Reduces the input level from the MIC IN jack, MIC/GUITAR IN jack, and LINE IN jack. This will reduce input noise. |
| Direct Mon Sw (Direct Monitor Switch) | ON, OFF | Specifies whether the audio signal being input via the MIC IN jack, MIC/GUITAR IN jack, or LINE IN jack will be output from the PHONES jack and LINE OUT jacks. ON:   The audio input signal will be output. OFF:  The audio input signal will not be output. |
| Direct Mon Level (Direct Monitor Level) | 0–127 | Adjusts the output volume for direct monitors. |
| TG to COMPUTER | ON, OFF | Specifies whether the audio signal of the SD-50's MIDI sound generator will be output to the computer. ON:   The audio signal of the SD-50's sound generator will be output. OFF:  The audio signal of the SD-50's sound generator will not be output. |

**MEMO**
The settings "Direct Mon Sw," "Direct Mon Level" and "TG to COMPUTER" are displayed only when the unit has been connected to a computer.

**3. Turn the [VALUE] dial to edit the setting.**

# Using the SD-50 as a MIDI Interface

You can connect a MIDI keyboard to the SD-50 and use it as a MIDI interface for your computer.
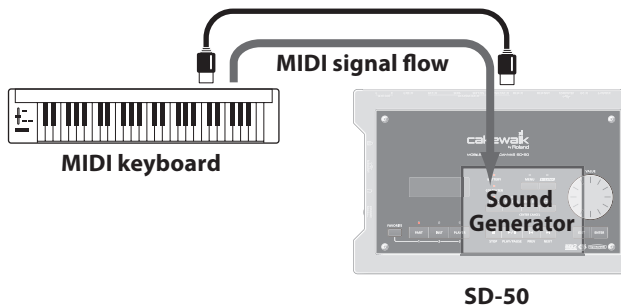
This lets you create song data by playing your MIDI keyboard. For details on how to make the necessary settings, refer to the user's guide for the software you're using.

If the SD-50 is not connected to a computer, you can use your MIDI keyboard to play the SD-50's sound generator.

**When connected to a computer**
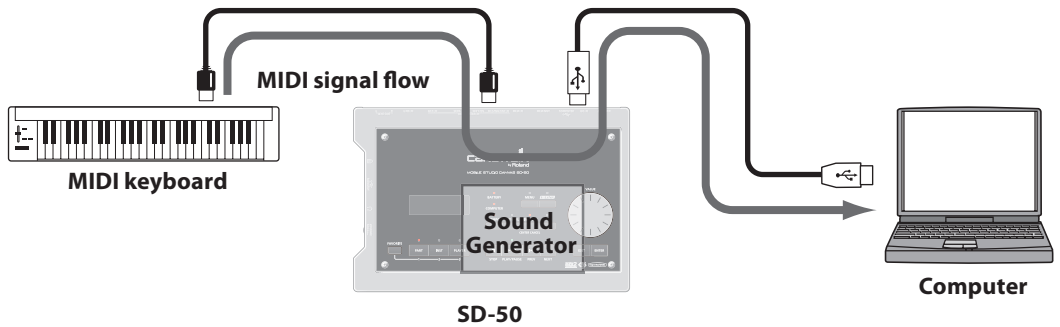


**When not connected to a computer**

# Using the SD-50 as an SMF/Audio Player

The SD-50 can function as a music player that can play SMF or audio files.

You can use your computer to create a "playlist" that specifies a playback order for "songs" (SMF/audio files), and then transfer this via USB memory and use it on the SD-50.

In addition to playing songs in the order specified by a playlist, you can also select and play individual songs from the playlist.

## Getting ready to use the SD-50 as a player

**1. Copy the data to USB memory**



SMF, WAV, AIFF, MP3 files
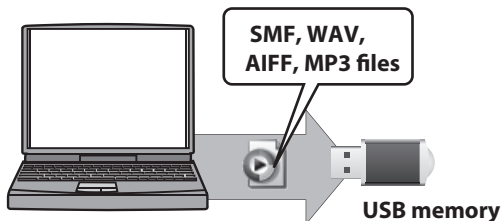
USB memory

**2. Connect the USB memory to the SD-50**
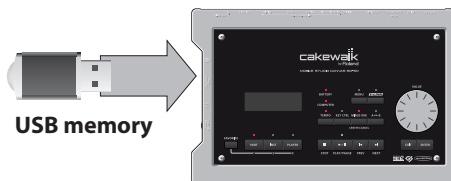


USB memory

* Carefully insert the USB Memory all the way in—until it is firmly in place.

* Please use USB memory sold by Roland. Operation cannot be guaranteed if you use other products.

* If you're using new USB memory, you must first format it using the SD-50 (p. 74).

* The SD-50 cannot be used as a music player while it's connected to your computer via USB.

### What is SMF?

SMF (Standard MIDI File) is a data format that was created in order to standardize music data across manufacturers. Many collections of SMF music data are available in a wide range of musical styles for listening enjoyment, instrument practice, or karaoke.

### SMF/audio files that can be played

| SMF | | |
|---|---|---|
| MID | **Format** | 0 or 1<br>*   SMF format 1 limits the tracks that can be played back. |
| | **File size** | Maximum of approximately 240 KB<br>(differs slightly depending on the content of the SMF) |
| | **System exclusive** | Packet size of 512 bytes or less |
| **Audio files** | | |
| WAV/AIFF | **Sampling frequency** | 44.1 kHz |
| | **Bit depth** | 8/16/24 bits |
| MP3 | **Format** | MPEG-1 audio layer 3 |
| | **Sampling frequency** | 44.1 kHz |
| | **Bit rate** | 32/40/48/56/64/80/96/112/128/160/192/224/256/320 kbps,<br>VBR (Variable Bit Rate) |

*   You can't use SMF/audio file playback employing USB memory while the SD-50 is connected to a computer.

*   Some utility functions (p. 74) cannot be executed while the player is playing back a song.

# Listening to the Demo Songs

Here's how to listen to the demo songs that are built into the SD-50.

**1. Switch on the SD-50's power (p. 22).**

**2. Press the [PLAYER] button twice; the playlist screen will appear.**

The button's indicator will light.

```
USB Memory
 Playlist Library
 NewPlaylist1
 NewPlaylist2
```

**3. Turn the [VALUE] dial to move the cursor to "Demo Songs."**

```
 NewPlaylist1
 NewPlaylist2
 NewPlaylist3
 Demo Songs
```

**4. Press the [ ▶/❙❙ ].**

Playback will start from the first demo song.

```
 NewPlaylist1
 NewPlaylist2
 NewPlaylist3
▶ Demo Songs
```

**5. To stop song playback, press the [ ■ ].**

* If you've connected USB memory in which you've saved song files, choose "Demo Songs" in the playlist screen. For more about playing from a playlist, refer to page 64.

* No data for the music that is played will be output from MIDI OUT.

* Use of the demo song 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.

# Playing Back

## Selecting a Song

**1. Connect USB memory containing playlists and songs to the SD-50.**

**2. Press the [PLAYER] button a number of times to access the playlist screen.**

The button's indicator will light.

```
┌ USB Memory
├┐ Playlist Library
├┐ NewPlaylist1
└┐ NewPlaylist2
```

\*  If a 🔒 is shown at the left of the playlist name, you cannot edit that playlist's settings or change the settings of the songs within that playlist.

**3. Turn the [VALUE] dial to move the cursor to the playlist that you want to play.**

```
├┐ NewPlaylist1
├┐ NewPlaylist2
└┐ NewPlaylist3
┐ Demo Songs
```
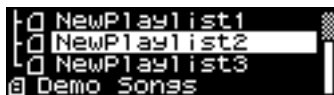
**MEMO**

When you press the [ ▶/❚❚ ] button, playback will start from the first song in the playlist.

To stop playback, press the [ ■ ] button.

The next time you press the [ ▶/❚❚ ] button, playback will resume from where you stopped it.

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

The playlist will be selected, and the song list will appear.

```
001   Opening
002   BassBGM
003   Ballad Song
004   Closing
```

\*   If the song is not of a file type that can played by the SD-50, a "?" symbol will appear. This song will not be played.

**5. Turn the [VALUE] dial to move the cursor to the song that you want to play.**

```
006   Drums2
007   Piano BGM1
008   Piano BGM2
009   Opening
```

**MEMO**

When you press the [ ▶/❚❚ ] button, the song will start playing.

To stop playback, press the [ ■ ] button.

The next time you press the [ ▶/❚❚ ] button, playback will resume from where you stopped it.

6. **Press the [ENTER] button.**

The play screen will appear.

**Opening**
00:00

## Playing a Song

1. **From the play screen, press the [ ▶/❙❙ ] button to start playing the song.**

   **Playback operation buttons**

   | Operation | Explanation |
   |---|---|
   | Press the [ ▶/❙❙ ] button | Play |
   | Press the [ ▶/❙❙ ] button | Pause |
   | Press the [ ■ ] button | Stop |
   | Press the [ ▶❙ ] button | Next song |
   | Press the [ ❙◀ ] button | Previous song |

   \* If A-B Repeat is on, pressing [ ▶❙ ] moves you to marker B, and pressing [ ❙◀ ] moves you to marker A (p. 67).

### Playing back from the middle of a song

1. **In the play screen, press the [ENTER] button.**

   The play screen cursor will be shown as follows.

   **Opening**
   00:00

   **Cursor**

2. **Turn the [VALUE] dial to specify the desired point within the song that you want to play.**

## Adjusting the volume of the song

**1. In the play screen, turn the [VALUE] dial.**

The screen will appear as follows, you can change the volume.

**MEMO**

You can also adjust the song volume from the audio part screen (p. 59).
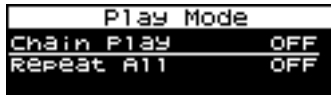
```
Opening
AUDIO LEVEL 113 ...mmIII
```

## Chain Play / Repeat All settings

You can use Chain Play for the songs in the playlist, or play all songs repeatedly.

\* This screen will not appear if 🔒 is shown at the left of the playlist name.

**1. Press the [PLAYER] button a number of times to access the play mode screen.**

```
        Play Mode
Chain Play      OFF
Repeat All      OFF
```

**2. Turn the [VALUE] dial to specify how the song is to play, and then press the [ENTER] button.**

```
        Play Mode
Chain Play     OFF
Repeat All     OFF
```
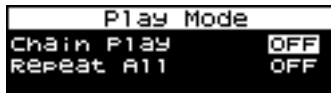
| Play mode | Values | Explanation |
|-----------|--------|-------------|
| Chain Play | ON, OFF | The songs in the playlist will play consecutively. When the last song finishes playing, playback will stop. |
| Repeat All | ON, OFF | The songs in the playlist will play consecutively, and when the last song finishes playing, playback will return to the first song and continue playing consecutively. |

**3. Turn the [VALUE] dial to turn the play mode setting on or off.**

If you decide to cancel, press the [EXIT] button.

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

The play mode setting will be stored.

---

### If the following screen appears

If you attempt to exit play mode without saving the play mode settings, the screen shown at right will appear.

If you want to execute the changes you made in play mode, press the [ENTER] button. If you want to cancel them, press the [EXIT] button.

```
⚠  Playlist Write
   [ENTER]:Execute
   [EXIT]:Cancel
```

## A-B Repeat

This lets you repeatedly play back a specific region within a song.

This is a convenient way to listen repeatedly to a passage of interest.

**1. Play back the song.**

**2. During playback, press the [ A ◄ ► B ] button.**

Start point (A) has now been specified.

The [ **A** ◄ ► **B** ] button's indicator will blink.

**3. Press the [ A ◄ ► B ] button once again.**

End point (B) has now been specified.

The [ **A** ◄ ► **B** ] button's indicator will light.

The region (A-B) you specified in steps 2 and 3 will play repeatedly.

To cancel repeat playback, press the [ **A** ◄ ► **B** ] button once again.

**(MEMO)**
If you set point A and then allow the song to play to its end without specifying point B, playback will repeat between point A and the end of the song.

### Playback operation buttons when using A-B Repeat

| Button operation | Explanation |
| --- | --- |
| Press the [ ◄◄ ] button | Stop playback and move to point A. |
| Press the [ ►►| ] button | Stop playback and move to point B. |
| Hold down the [ ►►| ] button several seconds | Fast-forward. Playback will stop at point B. |
| Hold down the [ |◄◄ ] button several seconds. | Rewind. Playback will stop at point A. |
| Press the [ ■ ] button | Playback will stop, with point A and B settings remembered. |

### Cancelling the A-B Repeat settings

- With point A and point B specified, press [ **A** ◄ ► **B** ]; the point A and point B settings will be cleared.
- The point settings will also be cleared if you select a different song.

## Changing the Tempo

**1. Play back a song.**

* If you change the tempo while the song is stopped, the song's playback tempo will not be changed.

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

The tempo screen will appear.

Speed **100%**   Audio          Tempo **128**   MIDI

**3. Turn the [VALUE] dial.**

The song's tempo will change.

When you play back a MIDI file, the [TEMPO] button's indicator will blink in time with the tempo. It will blink red at the beginning of the measure, and green on other beats.

| Data type | Tempo range |
|-----------|-------------|
| Audio file | 50%–125% |
| MIDI file | 5–300 (BPM) |

* You can't change the tempo of audio that's being input via the MIC IN jack or LINE IN jack.

**4. Press the [TEMPO] button to exit the Tempo screen.**

## Changing the Key

**1. Play back a song.**

**2. Press the [KEY CTRL] button.**

The Key Control screen will appear.

Key Control **0**

**3. Turn the [VALUE] dial.**

The song's key will change.

If key control is set to a value other than 0, the [KEY CTRL] button's indicator will light.

| Key control range |
|-------------------|
| -6–0–5 (semitone units) |

**(MEMO)**
You can also change the key of audio that's being input via the MIC IN jack or LINE IN jack (p. 55).

**4. Press the [KEY CTRL] button to exit the screen.**

## Using Minus-One and Center Cancel (MINUS ONE/CENTER CANCEL)

When playing back a song, you can use these functions to mute the specified part(s) so that you can perform it yourself, or minimize the melodic portion so that you can perform it.

**MEMO**
If you've connected a microphone or guitar, you can use the SD-50 to play back an accompaniment while you perform on vocals or guitar.

**1. Press the [MINUS ONE] (CENTER CANCEL) button so it's lit.**

The minus-one or center cancel function will turn on.

When you play back a song, the following will occur depending on the file type of the song.

| File type | Function | Explanation |
|---|---|---|
| SMF | Minus One | The sound of the specified part(s) will be muted. |
| Audio file | Center Cancel | Sounds in the center (the melodic portion of the sound) will be reduced. |

**2. Press the [MINUS ONE] (CENTER CANCEL) button once again.**

The [MINUS ONE] (CENTER CANCEL) button will go out, and the minus-one or center cancel function will be turned off.

**MEMO**
The center cancel function can also be applied to audio being input via the LINE IN jack (p. 55).

## Changing the Minus-One part
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**1. Press the [MENU] button.**

The menu screen will appear.

```
GM Map  CONTEMPORARY
Master Tune 440.0Hz
Output Gain      0dB
MinusOne      PART 1
```

**2. Turn the [VALUE] dial to select "Minus One," and then press the [ENTER] button.**

| Value | Explanation |
|---|---|
| PART 1–PART16, 4&5, 1&4&5, EXCEPT 10, EXCEPT 2&10 | The part(s) for which this setting is ON will be muted.<br>PART 1–PART16: The specified part from 1 through 16 will be muted.<br>4&5: Parts 4 and 5 will be muted.<br>1&4&5: Parts 1, 4, and 5 will be muted.<br>EXCEPT 10:    All parts except part 10 will be muted.<br>                       Normally, only the drum sound will be heard.<br>EXCEPT 2&10: All parts except parts 2 and 10 will be muted. |

**3. Turn the [VALUE] dial to change the setting.**

# Selecting Favorite Songs (FAVORITE)

You can register up to three songs as "favorites," so they can later be instantly recalled at the press of a button.

## Registering a Favorite Song

**1.** **Access the song list (p. 64).**
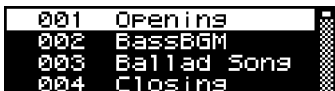
```
001  Opening
002  BassBGM
003  Ballad Song
004  Closing
```

**2.** **Press the [FAVORITE] button for a number of seconds until the REGIST SONG screen appears.**

```
REGIST  SONG
   no data
   no data
   no data
```

**3.** **Press one of the [PART](1) – [PLAYER](3) buttons.**

Once the following screen appears, the studio set has been saved.

```
Write
Completed.
```

## Selecting a Favorite Song

**1.** **Press the [FAVORITE] button.**

The registered songs will be displayed, and the [PART](1) – [PLAYER](3) button LEDs will blink.

```
         Song
NEWPL_001 Opening
         no data
         no data
```

**2.** **Press one of the [PART](1) – [PLAYER](3) buttons.**

The corresponding favorite song will be selected.

# Adjusting the Input/Output Volume

Here's how to adjust the playback level for an SMF or audio file, or adjust the input level for a microphone or guitar.

**1.** **Press the [PART] button a number of times to access the audio part screen.**



**2.** **Turn the [VALUE] dial to select the item that you want to edit, and then press the [ENTER] button.**

The available items will differ depending on whether or not the SD-50 is connected via USB to a computer.

### When not connected to a computer



| Indication | Values | Explanation |
|---|---|---|
| Mic/Line Input | 0–127 | Adjusts the level of the input to the MIC IN jack, MIC/GUITAR jack, and LINE IN jack. |
| MP3/Audio Player | 0–127 | Adjusts the volume of audio data playback. |
| SMF Player | 0–127 | Adjusts the volume of SMF playback. |

### When connected to a computer
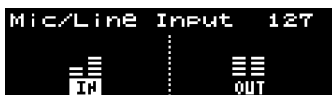


| Indication | Values | Explanation |
|---|---|---|
| Mic/Line Input | 0–127 | Adjusts the input level to the MIC IN jack, MIC/GUITAR jack, and LINE IN jack. |

**3.** **Turn the [VALUE] dial to edit the setting.**

**71**

# System Settings

Here you can make "system" settings that apply to the overall operation of the SD-50, such as the tuning and the brightness of the display.

## Basic Procedure for System Settings

**1. Press the [MENU] button.**

The menu screen will appear.

```
LCD Contrast        5
GM Map  CONTEMPORARY
Master Tune 440.0Hz
Output Gain     0dB
```

**2. Turn the [VALUE] dial to select the parameter that you want to edit, and then press the [ENTER] button.**

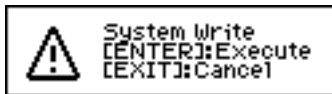The value of the selected parameter will be highlighted.

```
LCD Contrast        5
GM Map  CONTEMPORARY
Master Tune 440.0Hz
Output Gain     0dB
```

**3. Turn the [VALUE] dial to edit the value, and then press the [ENTER] button.**

**4. When you've finished making settings, press the [MENU] button.**

The following message will appear.

```
⚠   System Write
    [ENTER]:Execute
    [EXIT]:Cancel
```

If you decide to cancel, press [EXIT].

**5. If you decide to execute, press the [ENTER] button.**

When the settings have been written, the following screen will appear, and then you'll return to the menu screen.

```
System
Write
Completed!
```

# System Setting List

| Indication | Range | Explanation |
|---|---|---|
| LCD Contrast | 1–10 | Adjusts the brightness of the display.<br>Higher settings make the display brighter. |
| GM TYPE | CLASSICAL, CONTEMPORARY | Switches the GM sound type.<br>• Classical<br>   The basic sound set that blends well with an ensemble.<br>   You can also choose this if GM2 data compatibility is important.<br>• Contemporary<br>   A sound set that emphasizes the realism of each instrument. This setting is selected when the power is turned on. |
| Master Tune | 415.3–466.2 Hz | Adjusts the tuning of the entire SD-50. The displayed value is the frequency of the A4 key (middle A). |
| Output Gain | -12– +12 dB | Adjusts the SD-50's output gain so that the output level will be suitable when recording to an external device. |
| Minus One | PART 1–PART16, 4&5, 1&4&5, EXCEPT 10, EXCEPT 2&10 | This specifies the part(s) that will be muted when you use the Player function to play back SMF data (p. 69). |
| Battery | ALKALINE, Ni-MH | Selects the type of battery that's being used.<br>ALKALINE: Alkaline batteries<br>Ni-MH: Nickel-metal hydride batteries |
| Mastering | OFF, SHARP, CLEAR, POWER | This effect is provided for use on the output of the sound generator; it makes the sound more consistent and powerful. Choose the setting that's appropriate for your particular song. Use this if you're creating music that will be made into an audio CD.<br>SHARP: The low-frequency and high-frequency ranges will be emphasized.<br>CLEAR: The high-frequency range will be controlled.<br>POWER: The mid-frequency range will be emphasized. |
| Auto Power Off Time | OFF, 5min, 30min | Specifies the time after which the power will automatically turn off if the SD-50 has not been operated. |
| Auto Save Mode | OFF, 1min, 3min, 5min, 10min, 15min, 20min, 30min, 60min | Specifies the time after which the SD-50 will automatically enter power-conservation mode if no operation has been performed. When power-conservation mode is activated, the SD-50 will be in the following state to conserve power consumption.<br>• Display backlight will turn off<br>• BATTERY indicator will blink<br>• MIDI IN will not operate<br>Press the [ENTER] button to cancel power-conservation mode. |

# Utility Functions

Utility functions let you perform various operations for the SD-50 and for USB memory.

Settings (user data) you made on the SD-50 can be saved to USB memory, and data from USB memory can be returned to the SD-50.

## Utility functions

| Item | Function | Page |
|------|----------|------|
| BACKUP | Back up user data | p. 75 |
| RESTORE | Restore backed-up data into the SD-50 | p. 75 |
| USB MEM FORMAT | Format (initialize) USB memory | p. 76 |
| FACTORY RESET | Return settings to their factory-set state | p. 77 |
| INFORMATION | View information about the SD-50 | p. 78 |

**MEMO**
For details on the settings that can be saved as user data, refer to p. 105.

* Please use USB memory sold by Roland. Operation cannot be guaranteed if any other product is used.

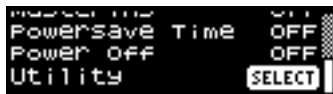* "BACKUP," "RESTORE" and "USB MEM FORMAT" are not available while the SD-50 is connected via USB to a computer.

# Basic Procedure

**1. Press the [MENU] button.**

The menu screen will appear.

```
LCD Contrast        5
GM Map CONTEMPORARY
Master Tune 440.0Hz
Output Gain      0dB
```

**2. Turn the [VALUE] dial to select "Utility."**

```
Master Tu?       OFF
Powersave Time   OFF
Power Off         OFF
Utility       SELECT
```

**3. Press the [ENTER] button.**

The utility screen will appear.

```
User Backup      EXEC
User Restore     EXEC
USB Mem Format   Exec
```

## Backing Up User Data (BACKUP)

Here's how to save user data to USB memory. This operation is called "backup."

**1.** **Connect your USB memory device to the SD-50.**

**2.** **In the utility screen, select "User Backup."**

```
User Backup      EXEC
User Restore     EXEC
USB Mem Format   EXEC
```

**3.** **Press the [ENTER] button.**

The following screen will appear.

```
⚠    Backup all data?
     [ENTER]:Execute
     [EXIT]:Cancel
```

To cancel without executing, press the [EXIT] button.

**4.** **To execute the backup, press the [ENTER] button.**

When the backup is completed, the following screen will appear.

```
      User Backup
      Completed!
```

**MEMO**

For details on the user data settings that are saved, refer to p. 105.

## Restoring Backed-Up Data to The SD-50 (RESTORE)

Here's how user data backed-up to USB memory can be returned to the SD-50. This operation is called "restore."

**1.** **Connect the USB memory device containing your backup data to the SD-50.**

**2.** **In the utility screen, select "User Restore."**

```
User Backup      EXEC
User Restore     EXEC
USB Mem Format   EXEC
```

**75**

**3. Press the [ENTER] button.**

The following screen will appear.

Restore all data?
[ENTER]:Execute
[EXIT]:Cancel

To cancel without restoring, press the [EXIT] button.

**4. To execute the restore operation, press the [ENTER] button.**

When the restore is completed, the following screen will appear.

Completed.
Cycle Power
to Continue.

**5. Turn the SD-50's power off, then on again.**

## Formatting USB Memory (USB MEM FORMAT)

Here's how to format USB memory.

**NOTE**

If the USB memory contains important data, be aware that formatting USB memory will cause all data saved on that USB memory to be lost.

**1. Connect your USB memory device to the SD-50.**

**2. In the utility screen, select "USB Mem Format."**

User Backup    [EXEC]
User Restore   [EXEC]
USB Mem Format [EXEC]

**3. Press the [ENTER] button.**

The following screen will appear.

USB Mem Format?
[ENTER]:Execute
[EXIT]:Cancel

To cancel without formatting, press the [EXIT] button.

**4. To execute the format operation, press the [ENTER] button.**

When formatting is completed, the following screen will appear.

Format
Completed!

**76**

## Returning to the Factory Settings (FACTORY RESET)

Here's how you can return all settings in the SD-50 to their factory-set condition. This operation is called "factory reset."

**NOTE**

If the SD-50 contains important data you've created, be aware that all of your data will be lost when the factory reset operation is executed.

If you want to keep your data, save it to USB memory before you proceed.

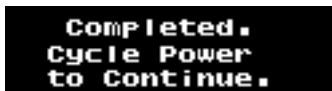**1.** **In the utility screen, select "Factory Reset."**



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

The following screen will appear.



To cancel without executing, press the [EXIT] button.

**3.** **To execute the factory reset operation, press the [ENTER] button.**

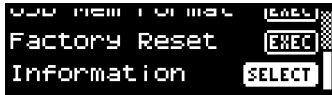When the factory reset has been completed, the following screen will appear.



**4.** **Turn the SD-50's power off, then on again.**

## Viewing Information About the SD-50 (INFORMATION)

Here's how to view the version of the SD-50's system software, and the remaining battery power.

**1.** **In the utility screen, select "INFORMATION."**



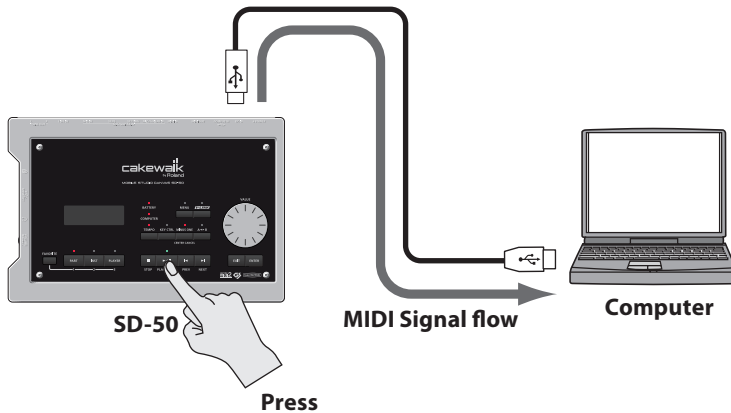**2.** **Press the [ENTER] button.**

The following screen will appear.



Press the [EXIT] button to return to the previous screen.

# Appendix

# Controlling DAW Software

When the SD-50 is connected to your computer, you can use the SD-50 to control your DAW software. For example, you can press the SD-50's [ ▶/❚❚ ] button to play a song in your DAW software.



The MIDI messages transmitted from the SD-50 are compatible with Mackie Logic Control.

As described in the owner's manual of your DAW software, set your DAW software so that it can be controlled by the following MIDI messages.

| Button operation | Transmitted MIDI message | | | |
|---|---|---|---|---|
| [ ■ ] button | Press | 90 5D 00 | Release | 90 5D 7F |
| [ ▶/❚❚ ] button | Press | 90 5E 00 | Release | 90 5E 7F |
| [ ◀❚ ] button | Press | 90 5B 00 | Release | 90 5B 7F |
| [ ❚▶ ] button | Press | 90 5C 00 | Release | 90 5C 7F |
| Hold down the [EXT] button and turn the [VALUE] dial | Clockwise | B0 3C 01 | Counterclockwise | B0 3C 41 |

# About V-LINK

## What is V-LINK?

V-LINK ( **V-LINK** ) is a function that lets you present music and video simultaneously. When V-LINK compatible devices are connected via MIDI, you'll be able to easily enjoy a variety of visual effects that are linked to the expressive elements of your performance.

For example, if you use the SD-50 with the EDIROL P-10, you'll be able to do the following.

- Use the various controllers of the SD-50 console to switch and control images on the EDIROL P-10.
- In order to enjoy V-LINK with the SD-50 and the EDIROL P-10, you'll need to make connections using MIDI cables (sold separately).

## Example Connection

Here we explain an example of connecting the SD-50 to the EDIROL P-10. Use a MIDI cable to connect the SD-50's MIDI OUT connector to the EDIROL P-10's MIDI IN connector.

\* To prevent malfunction and speaker damage, you must minimize the volume on all equipment and turn off their power before you make any connections.



**MIDI cable**

**MIDI OUT**　　　　　　　　**MIDI IN**

**SD-50**

**EDIROL P-10**
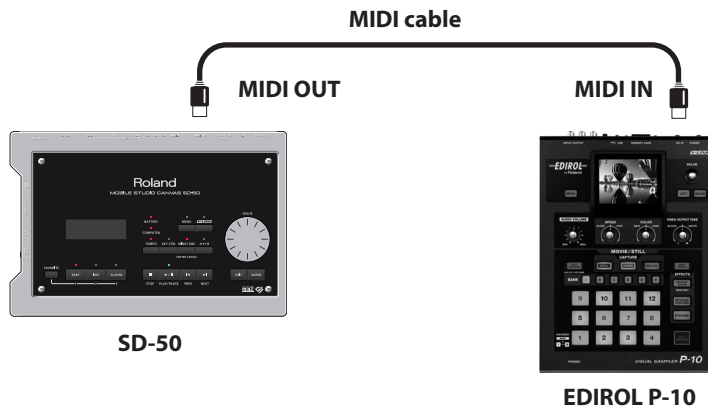
## Turning V-LINK On/Off

**1.  Press the [V-LINK] button.**

The button will light, and the following screen will appear.

V-LINK

V-LINK will turn on.

When the V-LINK button is on, the video can be controlled in tandem with operations of the SD-50.

**2.  Press the [V-LINK] button once again.**

The V-LINK button will go out, and V-LINK will turn off.

## Controllers Used with V-LINK

| Button operation | V-LINK function | Transmitted MIDI message |
|---|---|---|
| Press the [TEMPO] button | Switch images (switch clips) | C0 00 |
| Press the [KEY CTRL] button | Switch images (switch clips) | C0 01 |
| Press the [MINUS ONE] button | Switch images (switch clips) | C0 02 |
| Press the [ A ◀ ▶ B ] button | Switch images (switch clips) | C0 03 |
| Press the [ ■ ] button | Switch images (switch clips) | C0 04 |
| Press the [ ▶/▌▌ ] button | Switch images (switch clips) | C0 05 |
| Press the [ �◀ ] button | Switch images (switch clips) | C0 06 |
| Press the [ ▶▐ ] button | Switch images (switch clips) | C0 07 |
| Press the [PART] button and then turn the [VALUE] dial | Control the image Image Bank Select | B0 00 00–13 |
| Press the [INST] button and then turn the [VALUE] dial | Control the image Color Cr Control | B0 47 00–7F |
| Press the [PLAYER] button and then turn the [VALUE] dial | Control the image Playback Speed | E0 00 00–40 00–7F 7F<br>-8192–0–8191 |

# Driver Settings

The settings window of the SD-50 driver allows you to make settings such as the audio input/output buffer size.

Decreasing the buffer size will decrease the latency and improve the realtime response. However, depending on the processing power of your computer and the complexity of your song data, this may make clicks and pops during recording or playback more likely.

Increasing the buffer size will increase the latency, but will make audio data transfer more stable, decreasing the likelihood of clicks and pops.

If you're playing a software synthesizer in real time or using your DAW software to monitor the "thru" signal of the audio input, you should decrease the buffer size in order to improve the realtime response.

Conversely, if you're recording or playing back song data that contains numerous tracks and imposes a heavy processing load on your computer, you should increase the buffer size in order to decrease clicks and pops.

Change the buffer size as appropriate for your situation in order to achieve a balance between realtime response and audio data transfer, while avoiding problems such as clicks and pops.
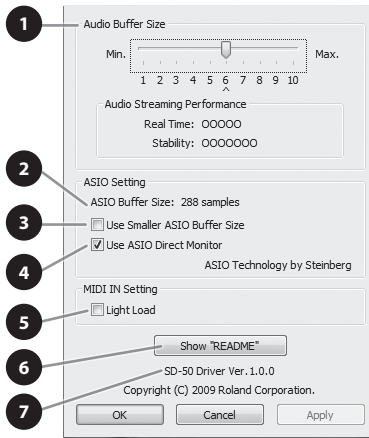
## Windows Users

\* If the Windows monitoring function is enabled, it won't be possible to change the driver settings on Windows 7. Refer to "Windows Monitoring Function Settings (Windows 7)" (p. 103) and disable monitoring.

**1. Use a USB cable to connect the SD-50 to your computer, then switch on the SD-50's power.**

**2. Open the Control Panel, then change the method of display to Icon View (Windows 7) or to Classic View (Windows Vista/Windows XP).**

**3. Double-click the SD-50 icon that appears.**

The SD-50 Driver Settings dialog box will appear.

# About the Items in the Settings Dialog Box



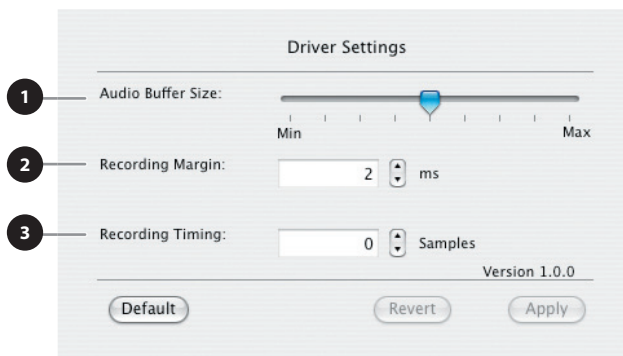| No. | Setting | Description |
|-----|---------|-------------|
| 1 | Audio Buffer Size | This lets you adjust the buffer size for the audio input/output. (The default setting is the sixth position from the left.)<br>* If you change the buffer size, you must restart the application that's using the SD-50, or if you're using an application that has an audio device test function, you must execute that test function.<br>* Depending on the application that you're using, its audio settings may also contain a buffer size adjustment. |
| 2 | ASIO Buffer Size | This is the minimum buffer size that can be specified for an ASIO application.<br>* Depending on the application you're using, there may be settings other than the minimum buffer size, meaning that in some cases the buffer size shown here might not match the actual buffer size.<br>For details on how to set and view the buffer size, refer to the owner's manual for your application. |
| 3 | Use Smaller ASIO Buffer Size | By selecting this check box, you can decrease the buffer size when using ASIO compatible software.<br>If you experience dropouts in the sound with this check box selected, clear the check box.<br>* Clear this check box if you want to adjust the Audio Buffer Size. |
| 4 | Use ASIO Direct Monitor | Select this check box if you want to use ASIO Direct Monitor functionality with your ASIO compatible software. |
| 5 | Light Load | Normally, you should leave this check box cleared.<br>* A setting change will take effect after you've switched off the SD-50's power, then switched it back on again. |
| 6 | Show "README" | Displays the README file. |
| 7 | Driver version | This displays the version of the currently installed driver. |

# MAC OS X Users

**1. Use a USB cable to connect the SD-50 to your computer, then switch on the SD-50's power.**

**2. In "System Preferences," click "SD-50."**

The Driver Settings screen will appear.

## About the Items in the Settings Dialog Box



| No. | Setting | Description |
|---|---|---|
| **1** | Audio Buffer Size | This adjusts the driver's audio input/output buffer size.<br>If you experience dropouts or noise when playing or recording even after you have adjusted the audio buffer size in your software, try increasing this buffer size setting.<br>*   Some software does not allow you to adjust the buffer size. |
| **2** | Recording Margin | If there are dropouts or noise in the recorded audio data even after you have adjusted the audio buffer size in your software and have also adjusted the Audio Buffer Size, try increasing this recording margin setting.<br>*   Some software does not allow you to adjust the buffer size. |
| **3** | Recording Timing | Adjust this setting if the timing of the recorded audio data is incorrectly aligned.<br>*   If audio software is running, these settings will not be applied immediately even if you click [Apply]. Close all audio software; the settings will be applied the next time you start up the software. |

# Reinstalling the Driver

If a problem occurred while installing the driver, use the following procedure to reinstall it.

1. **Uninstall the SD-50 driver as described in "Removing the driver."**

2. **Install the driver once again as described in "Installing the Driver" (p. 23).**

## Removing the Driver

Your computer may fail to correctly recognize the SD-50 if the driver could not be installed according to the specified procedure. If so, use the following procedure to remove the driver, and then install the driver once again according to the procedure given in "Installing the Driver" (p. 23).

* The displayed content may differ depending on your system.

### Windows Users

1. **Start up Windows with the SD-50 disconnected.**
   Make sure that all USB cables other than those for a USB keyboard and USB mouse (if used) are disconnected.
   Log on using a user name whose account type is computer administrator (such as Administrator).

2. **Insert the included Mobile Studio Canvas DVD-ROM into your computer's DVD-ROM drive.**

3. **On the DVD-ROM, navigate to the following folder and double-click [Uninstal].**

| OS | Folder |
| --- | --- |
| Windows 7 | Open the folders [Driver] and then [Win7] |
| Windows 7 64-bit edition | Open the folders [x64Driver] and then [Win7] |
| Windows Vista | Open the folders [Driver] and then [Vista] |
| Windows Vista 64-bit edition | Open the folders [x64Driver] and then [Vista] |
| Windows XP | Open the folders [Driver] and then [XP] |

4. **If a user account control message appears, click [Yes] or [Continue].**

5. **The screen will indicate "The installed SD-50 Driver will be uninstalled." Click [OK].**
   If any other message appears, proceed as directed by the message.

6. **The screen will indicate "Uninstallation was completed." Click [OK] to restart Windows.**

## Mac OS X Users

**1. Start up your computer with all USB cables disconnected.**

Make sure that all USB cables other than those for a USB keyboard and USB mouse (if used) are disconnected.

**2. Insert the included DVD-ROM into the DVD-ROM drive of your computer.**

**3. Double-click one of the following icons on the DVD-ROM to start up the uninstaller.**

| OS | Uninstaller |
|---|---|
| Mac OS X 10.6 or later | [SD50_Uninstaller] (/Driver/10.6) |
| Mac OS X 10.5 or earlier | [SD50_Uninstaller] (/Driver/10.4_10.5) |

**4. The screen will indicate "This uninstalls SD-50 driver from this Macintosh". Click [Uninstall].**

If any other message appears, proceed as directed by the message.

**5. The screen will indicate "Are you sure to uninstall the driver?" Click [OK].**

**6. An Authenticate dialog box or the dialog that asks to type your password will appear. Enter the password and click [OK].**

**7. The screen will indicate "Uninstallation is completed." Click [Restart] to restart your computer.**

\* It may take some time for the computer to restart.

# Troubleshooting

If you experience a problem, read this chapter first. It contains information that may help you solve the problem. If the information here does not help you solve the problem, try accessing the Roland website. If you are still unable to solve the problem, please contact a service location listed at the end of this manual.

## Problems Using The SD-50 as a Player

If a message appears in the screen during use, refer to "Error Messages" (p. 104).

### Overall

#### Power will not turn on

- Make sure that the SD-50's AC adaptor is correctly connected to an outlet and to the SD-50 (p. 20).
- Check to see if you have enough battery power remaining (p. 21).

### Problems with the Sound

#### No sound

  Check the following points.

- Are the connected amp and speaker powered up? Could the volume be lowered?
- Could the [VOLUME] knob be turned down?
- Are the connections correct?
- Can you hear sound through headphones?
- If you can hear sound through headphones, it may be that the connection cables are broken, or that your amp or speaker has malfunctioned. Check the cables and your equipment once again.
- Could the part level settings have been minimized? Check the level of each part (p. 50).
- Are the effect settings appropriate? Check the effect on/off, effect balance, and level settings (p. 50).
- Could a MIDI message received from an external MIDI device (volume message or exclusive message) have lowered the volume?

- Is the SD-50 connected to a computer? The Player function cannot be used when the SD-50 is connected to a computer. Nor is it possible to play the SD-50's sound generator via the MIDI IN connector.

#### No sound from a specific part

  Check the following points.

- Could the volume of that part be turned down? Raise the Level setting of that part to increase the volume (p. 50).
- Could the part be set to "M" (Mute)? Change the setting to "-" (p. 49).

#### Sound is distorted

  Check the following points.

- If the overall sound is distorted, use [VOLUME] dial to lower the volume.
- Could the Output Gain be raised excessively? Check the system setting Output Gain (p. 73).

#### Pitch is incorrect

  Check the following points.

- Could the SD-50's tuning be incorrect? Check the Master Tune setting (p. 73).
- Could the pitch have been changed by a pitch bend message received from an external MIDI device?

#### Notes are interrupted

- If a large number of notes are played, notes might be interrupted. Reduce the number of tones being used.

### Even though you set a tone's pan all the way to one channel, sound is still heard from the opposite channel

The SD-50's built-in effects are stereo. This means that if you've applied an internal effect, the effect sound will still be heard from the opposite channel even if a tone is panned all the way to one side.

### The sound becomes strange when you play high notes

Playing high notes on the SD-50 might produce an unexpected result, including no sound at all, failure of the sound to go higher in pitch, or noise that changes depending on the key you play (warbling, chirping, beeping, buzzing, etc.)
This is mainly caused by exceeding the limit of high notes that the SD-50 is able to produce; this occurs for notes that are not normally played, and does not indicate a malfunction.

### Insufficient volume from a device connected to the SD-50's INPUT

Could you be using a connection cable that contains a built-in resistor?
Use a connection cable that does not contain a resistor.

## Problems with Effects

### Effect not applied

Check the following points.
- Are the various effect settings appropriate? (p. 51)
- There will be no effect if the corresponding effect's send level is at 0. Check the settings.
- Even if the effect's send level is above 0, there will be no effect if the multi-effect output level, chorus level, or reverb level are at 0. Check these settings.

### The effect is difficult to notice even if you raise the chorus or reverb send level of each part

The send level to the chorus and reverb effects can be specified for each part, but these values specify the amount that will be used of the patch's own chorus and reverb send levels.

This means that even if these are set to their maximum value of 127, there will be no effect if the send level of the patch you're using has been lowered.

If you want to apply the effect more deeply, you'll need to edit the settings of the patch. The patch's send levels to chorus and reverb can be specified separately depending on whether you're using multi-effects.

## Problems when Saving Data

### Settings are different than those saved in the studio set

Check the following points.
- The settings of the mastering effect may have changed. (These settings are not included in the studio set.)

## Problems with MIDI and External Devices

### Playback on your external sequencer lags or is interrupted

If the playback lags or is interrupted, it is likely that the sequencer or sound module is experiencing a heavy processing load.
Here are the main causes and what you can do about them.
- Could the polyphony be exceeding 128?
Try reducing the number of notes that are played simultaneously.
- Could a large amount of data be concentrated at the beginning of a beat in the sequence data?
Try staggering the timing by one or two clocks so that data does not occur at the same timing.
It's easy for song data to be concentrated at the beginning of a beat if you use step recording to create song data, or if you apply quantization after real-time recording from a keyboard. This may cause a large amount of data to be transmitted to the SD-50 at the same time, causing playback to lag.
- Could there be program changes at the locations where the playback lags?
Try changing the location of the program change data.
If you insert program changes in your song, processing time may be required in order to switch tones, causing the playback to lag.

• Could there be system exclusive data at the locations where the playback lags?

Try changing the location of the system exclusive data. Since system exclusive messages involve a large amount of data, they can place a significant processing load on the sequencer or sound module.

Try changing the location of the data, or if possible, replace the system exclusive data with a control change.

• Could there be a large amount of control change data (such as aftertouch) at the locations where the playback lags?

Try changing the location of the data. If you don't need the data, delete it.

If the keyboard you use for recording is transmitting aftertouch messages, a large amount of aftertouch data may be recorded without your noticing.

This large amount of data can place an excessive processing load on the sequencer or sound module.

### You've connected an external sequencer or MIDI keyboard to the MIDI IN connector and are attempting to play the SD-50's sounds, but you don't hear anything

Check the following points.

• Make sure that the external MIDI device's MIDI transmit channel matches the SD-50's MIDI receive channel.

• Could the SD-50 be connected via USB to your computer?

If you've connected the SD-50 to a computer and are trying to use an external device to play the SD-50's sound generator, you should switch on your software's "MIDI Thru" setting.

### The bend range is set to the maximum, but the pitch does not rise all the way when pitch bend messages are received via MIDI

The bend range can be set in the range of 0–24, but depending on the wave that's used, there are cases in which the pitch will not rise all the way; i.e., the pitch might stop rising at a certain pitch.

Sounds are guaranteed to rise through a bend range setting of 12, but please be aware that bend range settings greater than this are not guaranteed to work.

## Problems with External Input

### No sound (or insufficient volume) from a device connected to MIC/GUITAR IN or LINE IN

Check the following points.

• Are the audio cables connected correctly?
Check the connections.

• Could an audio cable be broken?

• Could you be using a connection cable that contains a resistor?
Use a connection cable that does not contain a resistor.

• Could the [SENS] knob be set to "MIN"?
Adjust the level appropriately.

• Is the [SETTING] switch at the appropriate position?
Set the [SETTING] switch as appropriate for the device that's connected.

### No sound from the microphone

• Could you have connected a condenser microphone?
If you're using a condenser microphone, you'll need to supply phantom power to it.
Set the [SETTING] switch to "DC 48 V 10 mA" (p. 56).

• Could the microphone cable be broken?

## Problems with USB Memory

### USB memory is not recognized
### Files are not displayed

- It may be that the USB memory has not been formatted correctly. If the USB memory was formatted by a device other than the SD-50, use the SD-50 to format it (p. 76).

### Can't back up to USB memory

Check the following points.
- Could the USB memory be write protected?
- Does the USB memory has sufficient free space?

## Problems with Songs

### Playlist is not displayed

This might be due to one of the following reasons.
- The playlist might not be displayed if you directly add/delete/modify the song data in the SD-50 folder without using Playlist Editor.
- It may be that the USB memory has not been formatted correctly. If the USB memory was formatted by a device other than the SD-50, use the SD-50 to format it (p. 76).

### Songs are not displayed

This might be due to one of the following reasons.
- Is the song located in the root directory?
- The song might not be displayed if you directly add/delete/modify the song data in the SD-50 folder without using Playlist Editor.
- It may be that the USB memory has not been formatted correctly. If the USB memory was formatted by a device other than the SD-50, use the SD-50 to format it (p. 76).

### Song does not play

This might be due to one of the following reasons.
- Is a "?" symbol shown in the list of songs for the playlist?
- The song's file type is not one that the SD-50 can play.
- The song data might be damaged.
- The song cannot be played if you directly add/delete/modify the song data in the SD-50 folder without using Playlist Editor.

### Can't hear the playback

- Is the playback volume set correctly?
  Go to the play screen and adjust the playback volume (p. 66).

# Problems that Can Occur when Connected to a Computer

For help with Windows or Mac OS X operation, refer to the documentation for your computer or operating system.

## Problems when Installing the Driver

### Can't start up the installer

**Is the DVD-ROM inserted correctly in your DVD-ROM drive?**

Make sure that the DVD-ROM is correctly inserted in the DVD-ROM drive.

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

The installer may not operate correctly if the DVD-ROM or the lens of your DVD-ROM drive is dirty. Use a commercially available CD cleaner or lens cleaner to clean the disc or lens.

**Are you attempting to install from a networked DVD-ROM drive?**

The driver cannot be installed from a DVD-ROM drive on the network.

### A warning or error appears during the installation (Windows)

**Could you have connected the SD-50 to your computer before installing the driver?**

If you connect the SD-50 to your computer before installing the driver, an error message may appear when you begin the installation.

Reinstall the SD-50 driver as described in "Reinstalling the Driver" (p. 86).

### Are there any devices labeled "Other," "Unknown," or "?/!/X" in the Device Manager?

If driver installation was not completed successfully, the partially installed driver may remain in an incomplete state.

Reinstall the SD-50 driver as described in "Reinstalling the Driver" (p. 86).

### Can't install the driver

**Did you log on to Windows with the appropriate user privileges?**

You must log onto Windows using one of the following user names.

- A user name belonging to the Administrators group, such as Administrator
- A user name whose account type is Computer Administrator

\* For details, ask the system administrator for your computer.

**In some cases, you may be unable to install the driver because of the "Driver signing option" settings (Windows XP)**

Refer to "Driver Signing Option Settings (Windows XP)" (p. 99) and make the appropriate settings.

### Could other software be running, perhaps in the background (such as anti-virus software)?

The installation may not occur correctly if other software is running. Be sure to close all other software before you perform the installation.

## Installation is not successfully completed

### After you connect the SD-50, it may take several minutes before it is recognized by your computer

This is not a malfunction.

Please wait until the Found New Hardware Wizard appears.

### Is the SD-50 connected?

Make sure that the SD-50 is correctly connected to your computer.

### Could your computer be operating on its battery?

Operation may be unstable if your computer is operating on battery power.

Please use your computer with its power supply connected.

### Could a USB device other than a mouse or keyboard be connected?

Disconnect all USB devices (other than a mouse and keyboard, if used) from your computer before performing the installation.

### Does your computer meet the requirements of the USB specification?

Operation may be unstable if your computer does not meet the electrical requirements of the USB specification.

In this case, you may be able to solve the problem by connecting a self-powered USB hub (a USB hub that has an internal power supply or an AC adaptor).

## "Found New Hardware Wizard" appears even though you've installed the driver (Windows XP)

### Could you have connected the SD-50 to a different USB connector than the one you used when installing the driver?

If your computer or USB hub has two or more USB connectors, connecting the SD-50 to a different USB connector may cause your computer to ask for the driver file even though the driver has already been installed.

This behavior does not indicate a malfunction.

Install the driver as described in step 9 of Installing the driver (p. 23).

## A number such as "2-" appears at the beginning of the device name (Windows)

### Could you have connected the SD-50 to a different USB port?

If you connect the SD-50 to a different USB port, some operating systems may automatically add a number to the beginning of the device name, but this should not be a problem when using the SD-50. If you want to return to the device name that does not have this number, you can either connect the SD-50 to the same USB port as when you installed it, or install the driver once again.

→ "Reinstalling the Driver" (p. 86)

## Problems with Settings

### Can't select/use the SD-50 within software or in system settings

#### Could the SD-50 be in use by other software?

Close all software you currently have running. Next, switch off the SD-50's power, then turn it back on again.

If this does not solve the problem, reinstall the driver.

→ "Reinstalling the Driver" (p. 86)

#### Is the driver installed correctly?

Driver installation may have failed. Please reinstall the driver.

→ "Reinstalling the Driver" (p. 86)

#### Is the SD-50 device name shown?

If the device name is not displayed, it may be that the driver installation failed. Please reinstall the driver.

→ "Reinstalling the Driver" (p. 86)

#### Could the computer to which the SD-50 is connected have entered standby (suspend) mode, hibernate mode, or sleep mode?

Close all software that's using the SD-50. Next, switch off the SD-50's power, then turn it back on again.

If this does not solve the problem, restart your computer.

#### Could you have disconnected and reconnected the USB cable while using the SD-50?

Close all software that's using the SD-50. Next, switch off the SD-50's power, then turn it back on again.

If this does not solve the problem, restart your computer.

#### Could the SD-50 have been connected when the computer started up?

On some computers, the SD-50 may be unusable if it is already connected when the computer starts up.

Start up your computer, and then connect the SD-50.

#### Could you be using the Media Player included with Windows?

The SD-50's MIDI device cannot be selected for Media Player on Windows 7 or Windows Vista.

#### Have you made "Audio MIDI Settings"? (Mac OS X)

Make the appropriate Audio MIDI Settings as described in "Mac OS X Users" (p. 33).

### Can't make driver settings (Windows 7)

#### Could the monitoring function of Windows be enabled?

Refer to "Windows Monitoring Function Settings (Windows 7)" (p. 103) and disable the monitoring function.

## Problems with Playback or Recording

### Can't play or record

#### Was the driver installed correctly?

Driver installation may have failed. Reinstall the driver.

→ "Reinstalling the Driver" (p. 86)

#### Did you make input/output device settings for your software?

Refer to the owner's manual of your software and to the following pages, and select the SD-50 as the input/output device.

- Windows 7/Windows Vista:
  → "Input/Output Device Settings" (p. 26)
- Windows XP: → "Input/Output Device Settings" (p. 31)
- Mac OS X: → "Audio input/output device settings" (p. 34), "MIDI input/output device settings" (p. 35)

#### Could the SD-50 be in use by other software?

Close all software that's currently running, disconnect the SD-50's USB cable, and then reconnect it.

If this does not solve the problem, reinstall the driver.

→ "Reinstalling the Driver" (p. 86)

#### Could the computer to which the SD-50 is connected have entered standby (suspend) mode, hibernate mode, or sleep mode?

Close all software that uses the SD-50, disconnect the SD-50's USB cable, and then reconnect it.

If this does not solve the problem, restart your computer.

#### Could you have disconnected and reconnected the USB cable while using the SD-50?

Close all software that uses the SD-50, disconnect the SD-50's USB cable, and then reconnect it.

If this does not solve the problem, restart your computer.

#### Could you have connected or disconnected the USB cable during playback or recording, or switched off the SD-50, then turned it back on again?

If you disconnect and reconnect the USB cable during playback or recording, or switch off the SD-50, then turn it back on again, the SD-50 may become unable to play back or record. Stop playback or recording, and then perform playback and recording again.

If you are still unable to play back or record, close all applications that are using the SD-50, and then turn the SD-50's power off, then on again.

#### Could the SD-50 have been connected when the computer started up?

On some computers, the SD-50 may be unusable if it is already connected when the computer starts up.

Start up your computer, and then connect the SD-50.

#### Could there have been a heavy processing load while using the SD-50?

If your computer experiences a heavy processing load while you're using the SD-50, it may stop operating correctly. If this occurs, stop playback/recording, and then perform playback/recording again.

If you are still unable to play back or record, close all applications that are using the SD-50, and then turn the SD-50's power off, then on again.

## No sound from your computer's speakers

### If you connect the SD-50 to your computer, sound will not be heard from your computer's speakers

This is not a malfunction.

Connect your headphones or audio playback system (external monitors) to the SD-50.

## Sound played by your computer is inaudible or too soft

### Can you hear sound by connecting headphones?

If you can hear sound through headphones connected to the SD-50's headphone jack, check that you have correctly connected your audio playback system (external monitors), and adjust the volume of your equipment.

If the sound in your headphones is inaudible or too soft, check the other troubleshooting items.

### Are the volume settings of the SD-50 itself set appropriately?

Use the SD-50's [VOLUME] dial to adjust the volume.

### Could the Windows or Macintosh system volume be turned down?

Set the volume of your computer system to the appropriate level.

→ "System Volume Settings" (p. 102)

### Could you be using voice communication software? (Windows 7)

If you're using voice communication software, the volume of the audio device might be automatically adjusted according to the status of your conversation.

In this case, disable the automatic volume adjustment.

→ "Voice communication Software Settings (Windows 7)" (p. 103)

## Insufficient volume from your guitar or microphone

### Is the [SETTING] switch set correctly?

Check the [SETTING] switch (p. 56).

### Is the input level appropriate?

Try turning the SD-50's [SENS] knob toward the right to increase the input level (p. 56).

### Could you be using a cable that contains a resistor?

Make connections using a cable that does not contain an internal resistor.

## Playback contains clicks, dropouts, or other problems

### Try adjusting the audio buffer size of your software

If your software allows you to adjust the audio buffer size, try changing the setting. Normally, clicks and pops can be eliminated by increasing the buffer size.

### Try adjusting the audio buffer size of the driver

If your software does not allow you to adjust the buffer size, or if adjusting the buffer size in your software does not solve the problem, you may be able to solve the problem by changing the driver's audio input/output buffer size.

Try adjusting the buffer size as described in "Driver Settings" (p. 83).

### Try increasing the "Recording margin" (Mac OS X)

If there are still clicks and pops in the recorded audio data even after you've adjusted the audio buffer size, try increasing the "Recording margin" as described in "About the Items in the Settings Dialog Box" (p. 85).

## Check the power management settings

You may be able to eliminate clicks and pops by changing your system's power management settings.

→ "Power Management Settings" (p. 100)

## Try updating the driver of your display adaptor (Windows)

You may be able to eliminate clicks and pops by updating the driver for the display adaptor installed in your computer.

## Have you set the system's "Performance" setting? (Windows)

You may be able to solve the problem by changing the "Performance" setting of the system.

→ "System "Performance" Settings (Windows)" (p. 101)

## Could other software programs be running?

Close software that you're not using.

If the window of a Windows program has been closed but it is still shown in the taskbar, that program is still running. Close all unneeded software that's shown in the taskbar.

## Have you tried Windows Update or Microsoft Update? (Windows)

Try using Windows Update or Microsoft Update (provided by the Microsoft Corporation) to update your system to the latest version.

## In the driver settings dialog box, try selecting the "Light Load" check box

To view or change the settings, proceed as described in "Driver Settings" (p. 83).

This change will take effect after you turn the SD-50's power off, then on again. Unless you are experiencing problems, you should leave this check box cleared (the default state).

## Try disabling the LAN

In your computer's Device Manager, try disabling LAN (wired/wireless).

If this eliminates the clicks and pops, it may be that updating your LAN driver or BIOS may solve the problem. Check whether updated software is available.

## Could you have connected the SD-50 to a USB hub?

Try connecting the SD-50 directly to a USB connector on your computer.

## Are you using the included USB cable?

You must use the included USB cable when using the SD-50. Some commercially available USB cables do not meet the requirements of the USB standard, and this may prevent the SD-50 from operating correctly.

## Could you have updated the Mac OS X software while SD-50 was connected?

It has been found that clicks or pops can occur if you performed a Mac OS X software update while the SD-50 was connected. If so, install the driver once again (p. 87).

## Could the monitoring function of Windows be enabled? (Windows 7)

If the monitoring function of Windows is enabled, the input sound might be heard in duplicate (doubled) or as a loop (feedback).

In this case, disable the monitor function of Windows.

→ "Windows Monitoring Function Settings (Windows 7)" (p. 103)

## Click or pops may occur in the playback/recording immediately after you start up your computer, or immediately after it has been waken from sleep

Please wait for a while before you play back or record.

**97**

### Try adjusting "Hardware Acceleration" in the advanced display properties (Windows XP)

In some cases, adjusting your graphics acceleration settings may solve problems with noise during audio playback.

→ "Hardware Acceleration Settings (Windows XP)" (p. 99)

## Noise or distortion occurs elsewhere than in the playback from your computer

### Is a guitar connected?

If the noise decreases when you lower your guitar's volume, it may be that your guitar's pickups are being affected by noise from your computer or display. Move the guitar as far away from your computer as possible.

### Could you have left an unused microphone or guitar connected?

If an unused microphone or guitar is connected to the SD-50, disconnect the microphone or guitar, and turn the [SENS] knob to MIN in order to lower the input level.

### Have you connected the ground terminal?

You may be able to solve the problem by grounding a metal component of your computer or the ground pin of your computer's AC adaptor. Also check whether there might be a device nearby that is emitting a strong electromagnetic field, such as a television or microwave oven.

## Recorded sound is too loud or too soft

### Is the input level appropriate?

Use the SD-50's [SENS] knob to adjust the input level. If your software is able to adjust the input level, check its input level setting.

# Settings for Your Computer that Can Prevent Problems

This section explains how to make settings on your computer to avoid the problems described in "Problems that Can Occur when Connected to a Computer" (p. 92).

## Driver Signing Option Settings (Windows XP)

Driver installation may not be possible due to your settings for "Driver Signing Options." Refer to the following, and make the appropriate settings.

1. **Open the "Control Panel," click [Performance and Maintenance], and then click the [System] icon.**

   If you're using the Classic view, double-click [System].

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

   The "Driver Signing Options" dialog box will appear.

3. **In the "Driver Signing Options" dialog box, choose [Warn] or [Ignore], and click [OK].**

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

5. **Install the driver as described in the procedure for "Windows XP Users" (p. 28).**

   Once you've finished installing the driver, change the driver signing options back to their original settings.

## Hardware Acceleration Settings (Windows XP)

In some cases, adjusting your graphics acceleration setting may solve problems with noise during audio playback.

1. **Open the "Control Panel," and double-click [Display].**

   If you don't see the above icon, click "Desktop view and themes," and then click [Display].

2. **Click the "Settings" tab.**

3. **From [Advanced Settings], click the [Troubleshooting] tab.**

4. **Adjust the "Hardware Acceleration" slider, and click [OK].**

5. **In "Display Properties," click [OK] to close the dialog box. Then restart your computer.**

6. **Restart Windows.**

## Power Management Settings

If you experience problems such as interrupted notes or dropouts in the sound, you may be able to solve the problem by changing your computer's power management settings.

### Windows 7 users

1. **Open the "Control Panel," click [System and Security], and then click [Power Options].**

    If you're using an icon display, double-click the [Power Options] icon.

2. **In "Select a power plan," choose [High performance].**

3. **In the [High performance] area, click [Change plan settings].**

    If you don't see [High performance], click [Show additional plans].

4. **Click [Change advanced power settings].**

5. **In "Power Options" [Advanced Settings], click the [+] symbol for "Hard Disk," and click the [+] symbol for "Turn off hard disk after" to open it.**

6. **Click [Setting (Minutes)], and click the down arrow to change the setting to [Never].**

7. **Click [OK] to close the "Power Options" window.**

8. **Close the "Edit Plan Settings" screen.**

### Mac OS X users

\* Depending on the version of Mac OS X that you use, you may not be able to make the setting below.

1. **In "System Preferences," click [Energy Saver].**

### Windows Vista users

1. **Open the "Control Panel," click [System and Maintenance], and then click [Power Options].**

    If you're using the Classic view, double-click the [Power Options] icon.

2. **In "Select a power plan," choose [High performance].**

3. **In the [High performance] area, click [Change plan settings].**

4. **Click [Change advanced power settings].**

5. **In "Power Options" [Advanced Settings], click the [+] symbol for "Hard Disk," and click the [+] symbol for "Turn off hard disk after" to open it.**

6. **Click [Setting (Minutes)], and click the down arrow to change the setting to [Never].**

7. **Click [OK] to close the "Power Options" window.**

8. **Close the "Edit Plan Settings" screen.**

### Windows XP users

1. **Open the "Control Panel," click [Performance and Maintenance], and click [Power Options].**

    If you're using the Classic view, double-click the [Power Options] icon.

2. **Click the [Power Schemes] tab, and in the "Power Schemes" field, select [Always On].**

3. **Click [OK] to close "Power Options Properties."**

2. **Click [Options].**

3. **In the "Processor Performance" field, choose [Highest].**

## System "Performance" Settings (Windows)

You may be able to solve the problem by changing the "Performance" setting of the system as described below.

### Windows 7 users

1. **Open the "Control Panel," click [System and Security], and click [System].**

   If you're using an icon display, double-click the [System] icon.

2. **At the left, click [Advanced system settings].**

3. **A User Account Control dialog box will appear; click [Yes].**

   If you're asked to enter an administrator password, log on to Windows as a user whose account type is administrator, and make the setting again.

4. **Click "Performance" [Settings], and click the [Advanced] tab.**

5. **Choose [Background services] and click [OK].**

6. **Click [OK] to close "System Properties."**

### Windows Vista users

1. **Open the "Control Panel," click [System and Maintenance], and click [System].**

   If you're using the Classic view, double-click the [System] icon.

2. **In the list of "tasks" shown at the left, click [Advanced System Settings].**

3. **A User Account Control dialog box will appear; click [Continue].**

   If you're asked to enter an administrator password, log on to Windows as a user whose account type is administrator, and make the setting again.

4. **Click "Performance" [Settings], and click the [Advanced] tab.**

5. **Choose [Background services] and click [OK].**

6. **Click [OK] to close System Properties.**

### Windows XP users

1. **Open the "Control Panel," click [Performance and Maintenance], and click [System].**

   If you're using the Classic view, double-click the [System] icon.

2. **Click the [Advanced] tab, and click "Performance" [Settings].**

3. **Click the [Advanced] tab.**

4. **Choose [Background services], and click [OK].**

5. **Click [OK] to close "System Properties."**

## System Volume Settings

### Windows 7 users

1. **Open the "Control Panel," and switch "View by:" to "Category."**

2. **Click [Hardware and Sound], and then click [Adjust system volume].**

3. **The volume mixer will appear. From the pulldown menu of the "Device" item, choose the SD-50's [OUT], and adjust the volume.**

    You can also access the volume mixer by right-clicking the speaker icon in the lower right of the screen, and choosing "Open Volume Mixer."

### Windows Vista users

1. **Open the "Control Panel," and click [Hardware and Sound].**

    If you're using the Classic View, click Control Panel Home to exit the Classic View.

2. **In "Sound," click [Adjust system volume].**

3. **The Volume Mixer will appear. From the "Device" menu, select the SD-50's [OUT] and adjust the volume.**

4. **Adjust the Device or Application volume.**

    If the Mute button is on, click the mute button once again to turn it off.

    You can also access the volume mixer by right-clicking the speaker icon located in the bottom right corner of your screen, and choosing Open "Volume Mixer."

### Windows XP users

1. **Open the "Control Panel," and double-click [Sounds and Audio Devices].**

    If you're using the Classic view, double-click "Sounds and Audio Devices."

2. **Click the [Audio] tab.**

3. **In the "Sound playback" area, make sure that [OUT (SD-50)] is selected as the "Default device," and click [Volume].**

4. **The Volume Control will appear; adjust the Wave volume.**

    If the Mute setting is checked, clear the check mark.

### Macintosh users

1. **In "System Preferences," click [Sound].**

2. **Click the [Output] tab.**

3. **In the Choose a device for sound output field, make sure that the [SD-50] is selected, and use the Output volume slider to adjust the volume.**

    If Mute is checked, clear the check mark.

## Voice communication Software Settings (Windows 7)

If you're using voice communication software, the volume of the audio device might be adjusted automatically according to the status of your conversation.

In this case, proceed as follows to disable automatic volume adjustment.

1. **Open the "Control Panel," click "Hardware and Sound," and then click "Sound."**

   * If the "Control Panel" shows the Icon view, click [Sound].

2. **In the [Communications] tab, change the setting "When Windows detects communications activity" to [Do nothing].**

3. **Click [OK] to close "Sound."**

## Windows Monitoring Function Settings (Windows 7)

If the monitoring function of Windows is enabled, the input sound might be heard in duplicate (doubled) or might cause an oscillating loop (feedback).

In this case, proceed as follows to disable the monitoring function in Windows.

1. **Open the "Control Panel," click [Hardware and Sound], and then click [Sound].**

   * If the Control Panel shows the Icon view, click "Sound."

2. **In "Recording," select the SD-50 [IN], and click [Properties].**

3. **Open the "Listen" tab, and clear the [Listen to this device] check box.**

4. **Click [OK] to close "Properties."**

5. **Click [OK] to close "Sound."**

# Error Messages

If an incorrect operation is performed, or if processing could not be performed as you specified, an error message will appear.

Refer to the explanation for the error message that appears, and take the appropriate action.

| Message | Meaning | Action |
|---|---|---|
| **USB Mem Not Ready!** | USB memory is not connected. | Connect USB memory. |
| **Read Error!** | Failed to load data from USB memory. | Make sure that USB memory is correctly connected. |
| | It may be that the file is damaged. | Do not use this file. |
| | This file cannot be loaded since its format is incorrect. | Do not use this file. |
| | The target file was not found in USB memory. | Make sure that the target file exists in USB memory. |
| **Write Error!** | Failed to write data to USB memory. | Make sure that USB memory is correctly connected. |
| | Data cannot be written because the USB memory has no more free space. | Delete unneeded files from the USB memory. Alternatively, use a different USB memory device, one that has more free space available. |
| | The file or the USB memory itself is write protected. | Make sure that the file or the USB memory is not write protected. |
| **Incorrect File!** | This is a file that the SD-50 is unable to play. | Do not use this file. |
| | This song has not been transferred from Playlist Editor to USB memory. | Select the song for transfer from Playlist Editor, and transfer the data once again to USB memory. |
| | Playback is not possible, since you have exceeded the number of songs that the SD-50 can handle. | The SD-50 can handle up to 99 songs in the root directory, and a total of up to 399 songs in all other playlists. |
| **Sys Mem Damaged!** | It is possible that the contents of system memory have been damaged. | Please execute a Factory Reset. If this does not resolve the problem, contact your dealer or a nearby Roland service center. |
| **MIDI Buffer Full!** | An unusually large amount of MIDI data was received, and could not be processed. | Reduce the amount of MIDI messages that are being transmitted. |
| **MIDI Offline!** | The MIDI IN connection was broken. | Check that there is no problem with the MIDI cable connected to the SD-50's MIDI IN, and that the MIDI cable was not disconnected. |
| **Now Playing!** | The Song Player is currently playing. | Either stop playback, or wait until playback has ended. |
| **Battery Low!** | The battery has run down. | Recharge the batteries, or use an AC adaptor. |

# Settings Saved as User Data

The following settings are saved when you back up user data (p. 75).

### System settings (p. 75)

| Setting |
|---|
| LCD Contrast |
| Master Tune |
| Output Gain |
| Battery |
| Mastering |
| PowerSave |
| Power Off |

### Input/output volume settings (p. 71)

| Setting |
|---|
| Mic/Line Input |
| MP3/Audio Player |
| SMF Player |

### Audio settings (p. 59)

| Setting |
|---|
| Mic Input SW |
| Mic Echo Level |
| Audio Input Att |
| Direct Mon Sw |
| Direct Mon Level |
| TG to COMPUTER |

### Studio set (p. 54)

# Solo Tone

## Solo Tone

### The Solo sounds and how to play them

The Solo sounds allow you to reproduce the natural tonal changes (changes in dynamics) that are distinctive of each instrument as you range from delicate soft notes to strongly played powerful notes—not merely changes in the volume.

* Dynamics can be controlled by Note-on Velocity, Modulation controller (CC01), and Expression (CC11).

* Since the Modulation controller is assigned to dynamics, Vibrato has been assigned to be controlled by channel pressure messages.

After pressing a key, you can operate the Modulation controller (CC01) or Expression pedal (CC11) to continuously control the dynamics.

By playing legato (i.e., by pressing the next note before you release the previous note) you can create smooth transitions between notes.

* In order to obtain the legato effect, set the Mono/Poly mode (CC126=Mono/CC127=Poly) to Mono. With the Solo sounds, set to Mono upon power-up.

Normally, even an instrument that is set to play in Mono mode will allow you to sound a chord by pressing two or more notes simultaneously. When all notes turn off, the instrument will return to Mono mode.

* This effect will be obtained if the Mono/Poly mode is set to Mono.

Wind instruments (Shakuhachi, Trombone) allow you to control Growl Sens (CC18). This lets you vary the distinctive nuance (growl) that occurs when you blow strongly into a wind instrument.

You can use CC16 to vary the Noise Level. This controls the breath noise of a wind instrument, or the bowing noise or picking noise of a string instrument.

You can use CC17 to vary the Play Stability (accuracy of the performance). If this value is 0, the pitch during the attack of the sound will be unstable. Higher values allow you to play more precise pitches.

### Variations for the Solo sounds

Each instrument provides effective performance variation sounds, and you can use control changes (CC80/CC81) to instantly switch between these while you play.

| No. | ToneName | Variation | |
| --- | --- | --- | --- |
| | | CC80 | CC81 |
| 001 | Violin | Staccato | Pizzicato |
| 002 | Trombone | Staccato | Fall |
| 003 | Shakuhachi | Staccato | - |

**Features of the Solo sounds**

| Sound | Features |
|-------|----------|
| Violin | • If you play two or more notes simultaneously, a chord will sound, simulating the double-stop playing technique of a violin. When all notes turn off, the instrument will return to mono mode.<br>* Vibrato will not automatically be applied below the lowest note that a violin can sound (note number 55). This simulates the resonance of the open strings. |
| Trombone | • Playing legato with the portamento switch ON will produce the glissando effect that is typical of a trombone.<br>• Moving the bender up will produce the discontinuous pitch change that is distinctive of brass instruments. (*1)<br>• Moving the bender down will produce a "fall" effect. (*1) |
| Shakuhachi | • The distinctive breath noise of the shakuhachi is simulated.<br>• Play strongly (note-on velocity 115) to produce the effect of allowing a large amount of breath to be heard in the sound.<br>• When you play legato, notes will be connected as if they were played with a single breath. While playing legato, play strongly (note-on velocity 115) to simulate a grace note characteristic of a shakuhachi. |

*1:    This effect will be obtained if control change (CC82) is ON. If this is OFF, the normal pitch bend effect will occur.
(CC82: 0–63 = OFF, 64–127 = ON)

# MIDI Implementation Chart

Date : Jan. 5, 2010
Version : 1.00

| Function... | | Transmitted | Recognized | Remarks |
|---|---|---|---|---|
| Basic<br>Channel | Default<br>Changed | X<br>X | 1-16<br>1-16 | |
| Mode | Default<br>Messages<br>Altered | X<br>X<br>************* | Mode 3<br>Mode 3, 4 (M=1) | *1 |
| Note<br>Number | True Voice | X<br>************* | 0-127<br>0-127 | |
| Velocity | Note ON<br>Note OFF | X<br>X | O<br>O | |
| Aftertouch | Key's<br>Channel's | X<br>X | O<br>O | |
| Pitch Bend | | X | O | |
| Control<br>Change | 0,32<br>1<br>5<br>6,38<br>7<br>10<br>11<br>16<br>17<br>18<br>19<br>64<br>65<br>66<br>67<br>68<br>71<br>72<br>73<br>74<br>75<br>76<br>77<br>78<br>80<br>81<br>82<br>83<br>84<br>91<br>93<br>96,97<br>98,99<br>100,101<br>102–119 | O<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X | O<br>O<br>O<br>O<br>O<br>O<br>O<br>O (Tone Modify 1)<br>O (Tone Modify 2)<br>O (Tone Modify 3)<br>O (Tone Modify 4)<br>O<br>O<br>O<br>O<br>O<br>O<br>O<br>O<br>O<br>O<br>O<br>O<br>O<br>O (Tone Modify 5)<br>O (Tone Modify 6)<br>O (Tone Modify 7)<br>X<br>O<br>O (Reverb)<br>O (Chorus)<br>X<br>X<br>O<br>X | Bank select<br>Modulation<br>Portamento time<br>Data entry<br>Volume<br>Panpot<br>Expression<br>General purpose controller 1<br>General purpose controller 2<br>General purpose controller 3<br>General purpose controller 4<br>Hold1<br>Portamento<br>Sostenuto<br>Soft<br>Legato foot switch<br>Resonance<br>Release time<br>Attack time<br>Cutoff<br>Decay time<br>Vibrato rate<br>Vibrato depth<br>Vibrato delay<br>General purpose controller 5<br>General purpose controller 6<br>General purpose controller 7<br>General purpose controller 8<br>Portamento control<br>General purpose effects 1<br>General purpose effects 3<br>Increment, Decrement<br>NRPN LSB,MSB<br>RPN LSB,MSB |
| Program<br>Change : | True Number | O<br>************* | O<br>0-127 | Program Number 1-128 |
| System Exclusive | | O | O | |
| System<br>Common | : Song Postion<br>: Song Select<br>: Tune | X<br>X<br>X | X<br>X<br>X | |
| System<br>Realtime | : Clock<br>: Command | X<br>X | O<br>X | |
| Aux<br>Messages | : All Sound Off<br>: Reset All Controllers<br>: Local ON/OFF<br>: All Note Off<br>: Active Sensing<br>: System Reset | X<br>X<br>X<br>X<br>X<br>X | O<br>O<br>X<br>O (123-127)<br>O<br>X | |
| Notes | | *1 Recognized as M=1 even if M1. | | |

| | | |
|---|---|---|
| Mode 1: OMNI ON, POLY | Mode 2: OMNI ON, MONO | O: Yes |
| Mode 3: OMNI OFF, POLY | Mode 4: OMNI OFF, MONO | X: No |

# Specifications

SD-50:
128 Voices Sound Module with Audio Interface

## Sound Generator Section

### Parts
16 parts

### Maximum Polyphony
128 voices

### Wave Memory
128 M bytes (16-bit linear equivalent)

### Internal Sounds
Preset Sounds: 1,125 Tones

Rhythm Sets: 32

* 3 Solo tones and GM2/GS compatible sounds are included.

### User Memory
Studio Sets: 3

### Effects
Reverb

Chorus

Mastering

## Audio Interface Section

### Number of Audio Input/Output Channels
Input: 1 pair of stereo (MIC, GUITAR: Monaural/LINE: Stereo)

Output: 1 pair of stereo

### Signal Processing
USB Audio: 16 bits / 24 bits

AD/DA Conversion: 24 bits

### Sampling Frequency
USB Audio: 44.1 kHz

AD/DA Conversion: 44.1 kHz

### Nominal Input Level
Input jack (MIC/GUITAR IN)

  Mic: -50– -30 dBu

  Guitar: -30– -10 dBu

Input jack (LINE IN)

  Line: -30– +4 dBu

### Nominal Output Level
Output jacks: 0 dBu

## SMF/Audio Player Section

### File Format
Standard MIDI File: format-0/1

Audio File: WAV, AIFF, MP3

## Others

### Display
122 x 32 dots LCD display

### Jacks and Connectors
MIDI connectors (OUT, IN)

LINE IN jack (Stereo Mini)

LINE OUT jacks (Stereo RCA-PIN)

PHONES jack (Stereo Mini)

MIC IN jack (XLR type, phantom power available)

MIC/GUITAR IN connector (1/4 inch phone type, Hi-Z available)

USB Connectors

• COMPUTER (supports USB 2.0 Full-Speed USB MIDI and USB Audio)

• MEMORY (supports USB 2.0 Hi-Speed Flash Memory)

## Power Supply

DC 9 V (AC Adaptor)

Battery (AA x 6, ALKALIN or Ni-MH)

USB Bus power available

## Expected battery life under continuous use

Nickel-metal hydride: 4 hours

Alkaline: 3 hours

\* These figures will vary depending on the actual conditions of use.

## Current Draw

500 mA (Bus power)

400 mA (AC Adaptor, Battery)

## Dimensions

249.9 (W) x 166.9 (D) x 55.15 (H) mm

9-7/8(W) x 6-5/8 (D) x 2-3/16 (H) inches

## Weight

0.8 kg / 1 lbs 13 oz (excluding batteries)

## Accessories

Owner's Manual

USB Cable

DVD-ROM (USB Driver, SONAR LE)

AC Adaptor

Power Cord

## Options

USB Memory

(0 dBu = 0.775 V rms)

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

# Index

**111**

# MEMO

# MEMO

# MEMO

# DECLARATION OF CONFORMITY
## Compliance Information Statement

Model Name : SD-50
Type of Equipment : Sound Module with Audio Interface
Responsible Party : Cakewalk, Inc.
Address : 268 Summer Street Boston, MA 02210
Telephone : (617) 423-9004

---

**For EU Countries**

**UK** This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.

**DE** Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit den Hausmüll entsorgt werden.

**FR** Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.

**IT** Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici. Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.

**ES** Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como esté regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.

**PT** Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.

**NL** Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.

**DK** Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.

**NO** Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.

**SE** Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall.

**FI** Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.

**HU** Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbólummal ellátott termékeket nem szabad a háztartási hulladék közé dobni.

**PL** Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.

**CZ** Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.

**SK** Tento symbol vyjadruje, že v krajinách EÚ sa musí zber tohto produktu vykonávať oddelene od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhadzovať spolu s domovým odpadom.

**EE** See sümbol näitab, et EL-i maades tuleb see toode olemprügist eraldi koguda, nii nagu on igas piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.

**LT** Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženklinti produktai neturi būti išmetami kartu su buitinėmis atliekomis.

**LV** Šis simbols norāda, ka ES valstīs šo produktu jāievāc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produktus ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.

**SI** Ta simbol označuje, da je treba proizvod v državah EU zbirati ločeno od gospodinjskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinjskimi odpadki.

**GR** Το σύμβολο αυτό υποδηλώνει ότι στις χώρες της Ε.Ε. το συγκεκριμένο προϊόν πρέπει να συλλέγεται χωριστά από τα υπόλοιπα οικιακά απορρίμματα, σύμφωνα με όσα προβλέπονται σε κάθε περιοχή. Τα προϊόντα που φέρουν το συγκεκριμένο σύμβολο δεν πρέπει να απορρίπτονται μαζί με τα οικιακά απορρίμματα.

# 有 关 产 品 中 所 含 有 害 物 质 的 说 明

本资料就本公司产品中所含的特定有害物质及其安全性予以说明。

本资料适用于 2007 年 3 月 1 日以后本公司所制造的产品。

### 环 保 使 用 期 限

此标志适用于在中国国内销售的电子信息产品，表示环保使用期限的年数。所谓环保使用期限是指在自制造日起的规定期限内，产品中所含的有害物质不致引起环境污染，不会对人身、财产造成严重的不良影响。

环保使用期限仅在遵照产品使用说明书，正确使用产品的条件下才有效。

不当的使用，将会导致有害物质泄漏的危险。

### 产 品 中 有 毒 有 害 物 质 或 元 素 的 名 称 及 含 量

| 部件名称 | 有毒有害物质或元素 | | | | | |
|---|---|---|---|---|---|---|
| | 铅(Pb) | 汞(Hg) | 镉(Cd) | 六价铬(Cr(VI)) | 多溴联苯(PBB) | 多溴二苯醚(PBDE) |
| 外壳（壳体） | × | ○ | ○ | ○ | ○ | ○ |
| 电子部件（印刷电路板等） | × | ○ | × | ○ | ○ | ○ |
| 附件（电源线、交流适配器等） | × | ○ | ○ | ○ | ○ | ○ |

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

因根据现有的技术水平，还没有什么物质能够代替它。

## WARNING

This product contains chemicals known to cause cancer, birth defects and other reproductive harm, including lead.

**Roland**