V-STUDIO 20
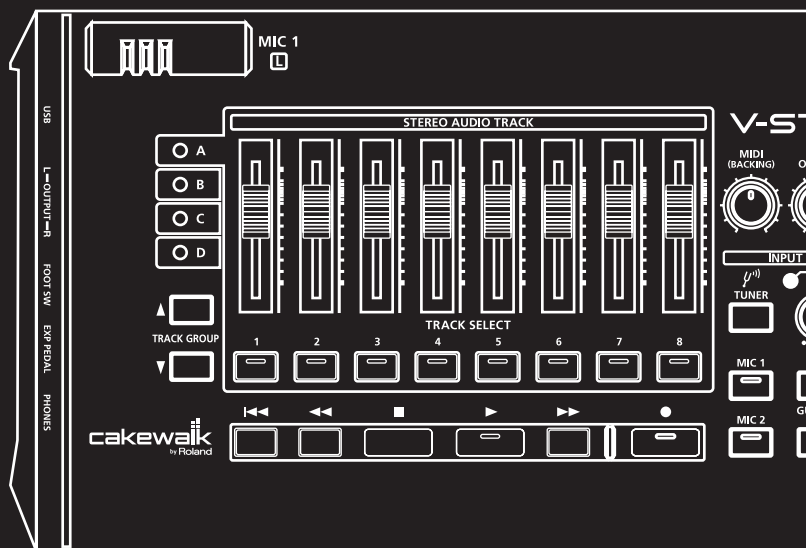
Owner's Manual

HARDWARE GUIDE

INSTALLING

REGISTERING

CONFIGURING

RECORDING

TROUBLESHOOTING

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (p. 3) and "IMPORTANT NOTES" (p. 5). 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.

*   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."

*   ASIO is a trademark of Steinberg Media Technologies GmbH.

*   Cakewalk is a registered trademark of Cakewalk Inc.

*   Cakewalk logo is a trademark of Cakewalk Inc.

*   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.

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

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. * 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 perform any internal modifications on the unit.

....

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

....

- 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.

....

- 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.

....

3

⚠ WARNING

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

....

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

....

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

....

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

....

⚠ CAUTION

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

....

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

....

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

....

- 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)

....

4

Important Notes

Power Supply

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

Placement

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

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

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

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

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

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

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

Additional Precautions

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

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

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

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

- Use only the specified expression pedal (Roland EV-5, BOSS FV-500L, FV-500H; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

- Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

Handling DVD-ROM

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

Copyright

- Recording, duplication, distribution, sale, lease, performance, or broadcast of copyrighted material (musical works, visual works, broadcasts, live performances, etc.) belonging to a third party in part or in whole without the permission of the copyright owner is forbidden by law.

- 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.

About This Manual

This manual (V-STUDIO 20 Owner's Manual) provides basic information about how to set up the V-STUDIO and set up your system. It also provides troubleshooting information.

● This manual uses the following icons to call your attention to explanations of terms or to important points you should note. These contain important information, so please be sure to read them.

(MEMO) Explanation of terms, or tips

NOTE Points you should be aware of

cf. Related information or detailed explanations

● In order to explain operations as simply as possible, this manual uses the following conventions.
- The steps for selecting a menu item are delineated by "|" (vertical bar) symbols. For example, **File|New** means that you are to choose the "**File** menu command **New**."
- Material that is distinct from the main text or operating procedure, such as operating tips or related information, is enclosed by a heavy border.
- Unless otherwise specified, Windows 7, Windows Vista and Windows XP are referred to simply as Windows.
- Unless otherwise specified, the Guitar Tracks 4 software included with this product is referred to simply as V-STUDIO 20, and the controller included with the V-STUDIO 20 as "the VS-20 hardware."

● V-STUDIO 20 is designed accommodate the individual needs of the customer. Unless otherwise specified, this manual assumes that V-STUDIO 20 is in the state immediately after installation. If you set up your V-STUDIO 20 differently than how is described in this manual, you may get different results.

● If you have difficulty understanding the explanations included in this manual (for example, when you're using Windows for the first time), please refer to the documentation for your computer or for Windows.

● 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.

Contents

Troubleshooting 33

Appendix 44

Checking the Contents of the Package

As soon as you open the package, check that you have all of the included items.

If anything is missing, contact your dealer.

❏ **V-STUDIO 20 Hardware**

■ **Owner's Manual**

This is the manual you're reading. It explains how to get V-STUDIO 20 up and running. It also explains what you need to know when setting up this product, and what you should know when using it. Keep this manual at hand for reference.

❏ **V-STUDIO 20 DVD-ROM**

This DVD-ROM contains Guitar Tracks 4 and VS-20 USB Drivers.

❏ **USB cable**

Use this cable to connect the V-STUDIO 20 hardware to the USB connector of your computer.

❏ **V-STUDIO 20 USB Setup sheet**

This is an easy manual for the setup of the VS-20.

❏ **Customer service leaflet**

This tells you where to direct your questions about operation.

Installation and Registration

Here's how to install the VS-20 driver and Guitar Tracks 4 on your computer.

> DO NOT CONNECT THE VS-20 Hardware to your computer until the installer asks you too.
>
> Guitar Tracks 4 cannot be installed unless the VS-20 driver is installed first.

Please note before installing

When installing, you must log on as a user with administrative privileges

In order to install Guitar Tracks 4, you must log on as a user who has administrative privileges. Once installed, the program can also be used by users who do not have administrative privileges.

Close system monitoring software before installing

If system monitoring software such as anti-virus programs are installed on your computer, you must close them until you've finished installing Guitar Tracks 4. You must also remember to close applications that are not shown in the Windows taskbar.

Installing the VS-20 Driver

What is a Driver?

A driver is software that transfers data between the V-STUDIO 20 hardware and application software on your computer when your computer and the V-STUDIO 20 hardware are connected via a USB cable. You will need to install the driver before connecting the V-STUDIO 20 hardware with your computer.

Log on to Windows as "Administrator", or with an account that has administrator rights.

- **Windows 7 and Windows Vista Users:p. 12**
- **Windows XP Users:p. 14**

Windows 7/Vista Users

1. Disconnect all USB cables (except those for a USB keyboard and/or USB mouse, if used), then start up Windows.

2. Close all currently running software (applications).

Also close all windows that are open. If you are using software such as antivirus programs, be sure to close these programs as well including any monitoring software such as anti-virus programs.

3. Insert the included "V-STUDIO 20 DVD-ROM" into your computer's DVD-ROM drive.

> If you are using a Netbook or do not have a DVD-ROM drive, please visit
> http://www.cakewalk.com/register
> to register your product and download the software installers included on the V-STUDIO 20 DVD-ROM.

4. Select "Start-Run" and enter "d:\Drivers\win7\setup.exe" to start the driver installer.

(where d:\ is your disc drive.)

MEMO

Please be sure to select the correct driver for your operating system. x64 and x32 drivers are included on the DVD-ROM.

- x64Drivers\Win7 folder (for Windows 7 64-bit)
- Drivers\Win7 folder (for Windows 7 32-bit)
- x64Drivers\Vista folder (for Windows Vista 64-bit)
- Drivers\Vista folder (for Windows Vista 32-bit)

MEMO

If a message informs you that "Driver installation must be performed by an administrator," you must log on to Windows as a user whose Account Type is Administrator, and then perform the installation.
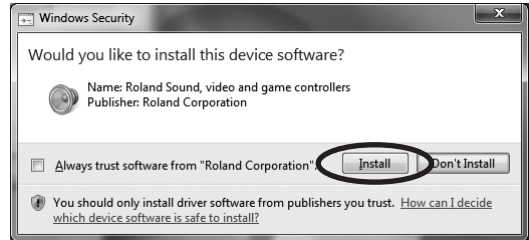
5. A confirmation screen regarding User Account Control appears, click [Continue].

6. The message "VS-20 Driver will be installed on your computer." appears. Click [Next].

* If any other message appears, follow the directions of the message.

7. Click [Next] to begin installation.

8. **If a dialog box regarding Windows Security appears, click [Install].**
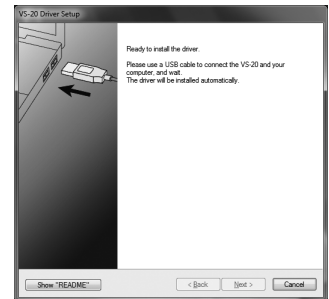

9. **The message "Ready to install the driver." appears.**

Leave the screen open; do not close it at this point.

* If any other message appears, follow the directions of the message.

10. **Perform the following procedure before you connect the VS-20 Hardware to your computer.**

1. Minimize the V-STUDIO 20 hardware's **[OUTPUT LEVEL]** knob.

2. Use the included USB cable to connect the V-STUDIO 20 hardware to your computer.

3. The lower right corner of the screen will indicates "Installing device driver software," and the driver will be installed automatically.

* If any other message is displayed, note the contents and close the message.

4. When the "Installation has been completed." message appears, installation has been completed.
   Click **[Close]** to close the "Driver Setup" dialog box.

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

NOTE

It is very important the driver is installed successfully before installing other components. Please be sure to follow all instructions and verify the "Installation has been completed" messages appears before continuing. If the installation was not completed successfully, disconnect the USB cable from the V-STUDIO 20 hardware, and uninstall the driver by executing **"Uninstall"**, found in the same folder as the driver setup. Then install the driver once again, being careful to follow the instructions for the installation procedure.

13

Windows XP Users

1. **Disconnect all USB cables (except those for a USB keyboard and/or USB mouse, if used), then start up Windows.**

2. **Close all currently running software (applications).**

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

3. **Insert the included "V-STUDIO 20 DVD-ROM" into your computer's DVD-ROM drive.**

> If you are using a Netbook or do not have a DVD-ROM drive, please visit
> http://www.cakewalk.com/register
> to register your product and download the software installers included on the V-STUDIO 20 DVD-ROM.

4. **Select "Start-Run" and enter "d:\Drivers\XP\setup.exe" to start the driver installer.**

(where d:\ is your disc drive).

* If a "Install Program As Other User" dialog box appears, click **[Cancel]** to quit the installation and then perform the installation as an administrative account.

5. **The message "VS-20 Driver will be installed on your computer." appears. Click [Next].**

* If any other message appears, follow the directions of the message.

6. **Click [Next] to begin installation.**

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

If the "Driver Signing Options" setting was not set to "Ignore," a "Hardware Installation" dialog box appears.

A dialog box with a "!" symbol appears.

1. Click **[Continue Anyway]** and continue the installation.

A dialog box with a "x" symbol appears.

1. Click **[OK]**.
2. When the "Found New Hardware Wizard" appears, click **[Finish]**.
3. Return to step 1 (p. 14) and re-install the driver from the beginning of the procedure.

7. The message "Ready to install the driver." appears.

Leave the screen open; do not close it at this point.

* If any other message appears, follow the directions of the message.

8. Perform the following procedure before you connect the VS-20 Hardware to your computer.

1. Minimize the V-STUDIO 20 hardware's **[OUTPUT LEVEL]** knob.

2. Use the included USB cable to connect the V-STUDIO 20 hardware to your computer.

3. Wait until the lower right of the screen indicates "Found New Hardware" and the "Found New Hardware Wizard" appears.

* It may take some time for the "Found New Hardware Wizard" to appear.

4. If you are asked whether you want to connect to Windows Update, choose "No" and then click **[Next]**.

5. Choose "Install the software automatically (Recommended)" and click **[Next]**.

6. If the "Hardware Installation" dialog box appears, click **[Continue Anyway]** to proceed with the installation.

* If you cannot proceed with the installation, click **[OK]** to cancel the installation, and then refer to "Driver Signing Options setting."

7. If the "Completing the Found New Hardware Wizard" appears, Click **[Finish]**.

When the "Installation has been completed." message appears, installation has been completed.

Click **[Close]** to close the "Driver Setup" dialog box.

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

NOTE
It is very important the driver is installed successfully before installing other components. Please be sure to follow all instructions and verify the "Installation has been completed" messages appears before continuing. If the installation was not completed successfully, disconnect the USB cable from the V-STUDIO 20 hardware, and uninstall the driver by executing **"Uninstall"**, found in the same folder as the driver setup. Then install the driver once again, being careful to follow the instructions for the installation procedure.

Connecting your audio equipment

NOTE
Before connecting the VS-20 Hardware to a computer, read the **Installing the VS-20 Driver** (p. 11) and install the VS-20 driver on the computer. If the driver is not installed, Guitar Tracks 4 cannot be operated correctly from the computer.

- Use a USB cable to connect your computer to the VS-20 Hardware.
- Connect your audio output devices such as headphones or speakers to the VS-20 Hardware.

* This package does not include sound reproduction equipment such as headphones or speakers.

You must connect headphones or monitor speakers as shown in the illustration, monitor the playback audio from the V-STUDIO 20.

NOTE
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.

Monitor amplified speakers

Headphones

USB Cable

Computer
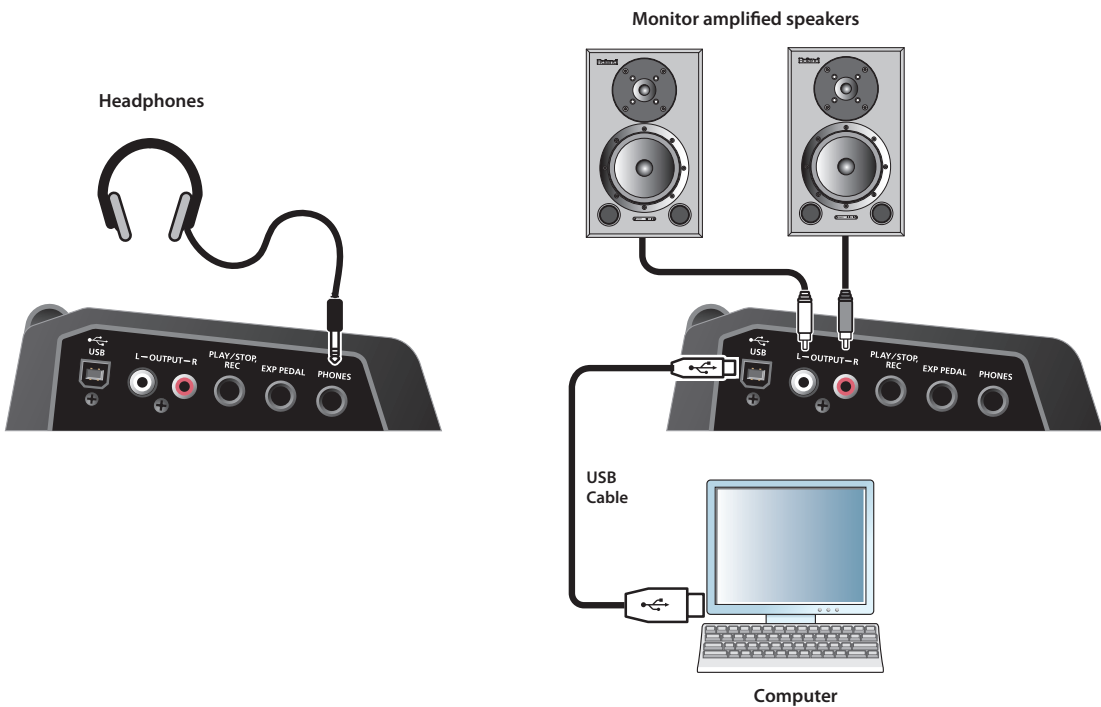
Installing V-STUDIO 20 Software

V-STUDIO 20 is easy to install. All you need to do is choose the folder where the program and sample project files should be stored. Before you start, make sure you have your serial number handy. Your serial number is located on the back of the V-STUDIO 20 DVD-ROM case.

To Install Guitar Tracks 4

1. **Place the V-STUDIO 20 DVD-ROM in your disc drive.**

2. **Select "Start-Run" and enter "d:\Guitar Tracks\setup.exe" to start the Guitar Tracks installer.**

3. **Follow the installation instructions on the screen.**

To Install VS-20 Editor

1. **Place the V-STUDIO 20 DVD-ROM in your disc drive.**

2. **Select "Start-Run" and enter "d:\Editor\setup.exe" to start the VS-20 Editor installer.**

3. **Follow the installation instructions on the screen.**

Register V-STUDIO 20

Before you install V-STUDIO 20, take a minute to register the software so we can let you know when updates become available and provide you with technical support. Registration is required for continued use of the product. To register anytime, log onto
http://www.cakewalk.com/register,
or call 888-CAKEWALK (U.S.) or +1 (617)-423-9004 (outside the U.S.) between 9 AM and 8 PM Eastern Standard Time. If you live outside of North America, please visit our distributor's page at
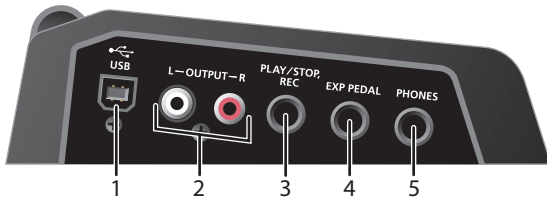**http://www.cakewalk.com/ Dealers/International.asp**
to get the telephone number of your local distributor.

You'll need to supply your serial number, your name, and a valid email address.

Panel Descriptions

Input/output component

Side panel (Left)

1. **USB connector**

Use a USB cable to connect the V-STUDIO 20 hardware to a personal computer.

2. **OUTPUT L and R (RCA pin output jack)**

Analog audio signal output jacks. The effect sound and the signal from your computer are mixed and output here.

3. **Footswitch jack**

You can use the foot switch (sold separately) to control playback or recording on the V-STUDIO from your computer.

For more information about footswitch, see **"Connecting footswitches (optional)"** (p. 23).
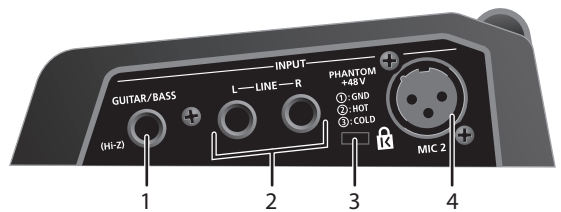
4. **EXP PEDAL jack**

Connect an expression pedal (sold separately).

The expression pedal can be used to control the volume, or as a wah effect pedal. See **Connecting footswitches (optional)** (p. 23).

5. **Headphone output**

This output delivers the same signal as the MAIN output. To adjust the headphone volume, use the **[Output Level]** knob.

Side panel (Right)

1. **GUITAR/BASS (Hi-Z)**

This is an input jack for connecting an electric guitar, bass, or Hi-Z microphone.

2. **LINE L/R**

These input jacks for connecting line-level analog audio signals, such as an Synth, mp3 player, or other line-level devices.

3. **Security slot (🔒)**

Connect a commercially available anti-theft security cable here.

http://www.kensington.com/

4. **MIC 2 (XLR balanced input)**

This is an analog audio signal input jack that supports XLR balanced input.

* The VS-20 Hardware can supply phantom power. If you've connected a condenser mic that requires phantom power, start up the editor, click System Settings, and turn on phantom power.

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.
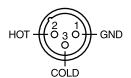
Top panel

Track section

This section controls the tracks.

1. Stereo audio track fader

Use this to adjust the level for each track in Guitar Tracks.

2. Track group select buttons/indicators

Here you can select one of the track groups "A/B/C/D."

The indicator shows the currently selected track group.

There are four track groups (A--D), and each group contains eight tracks.

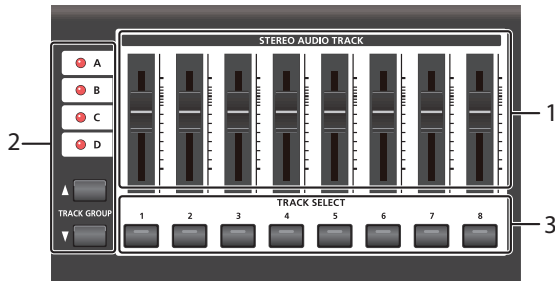By switching between track groups you can view eight tracks at a time.

TRACK GROUP	TRACK SELECT button							
	1	2	3	4	5	6	7	8
A	1	2	3	4	5	6	7	8
B	9	10	11	12	13	14	15	16
C	17	18	19	20	21	22	23	24
D	25	26	27	28	29	30	31	32

3. TRACK SELECT buttons/indicators

These buttons select the track to be recorded. The indicator of the selected track will light.

Output section
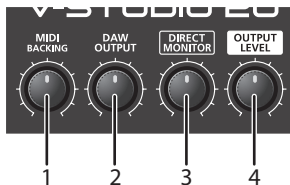
1. MIDI BACKING knob

This controls the MIDI Backing Track volume within the Guitar Tracks 4 software.

2. DAW OUTPUT knob

This controls the overall volume of the tracks in Guitar Tracks.

* The MIDI BACKING knob and DAW OUTPUT knob are used when Guitar Tracks 4 software is running.

3. DIRECT MONITOR knob

This controls the level of the output from the effects processor that's built into the V-STUDIO 20. This level does not affect the signal recorded to the track.

4. OUTPUT LEVEL knob

This controls the overall volume to the headphones and speakers when connected to the VS-20 Hardware.

19

Input section

1. [TUNER] button

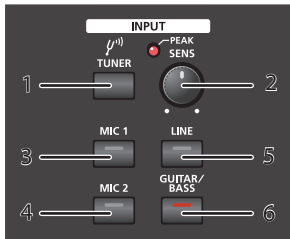If you press this while the editor is running, the Tuner in the VS-20 Editor will appear.

Here you can tune your instrument.

2. SENS knob/PEAK indicator

This adjusts the sensitivity of the signal that's being input to the MIC 1, MIC 2, LINE, and GUITAR/BASS jacks.

If an excessive input signal is detected, the PEAK indicator will light.

TIP

For the best possible recording quality, input the signal and adjust the **[SENS]** knob until it is as high as you can get it without causing the PEAK indicator to light.

3. [MIC 1] button

This button enables the signal input from MIC 1 (built-in stereo mics).

4. [MIC 2] button

This button enables the signal input from MIC 2 jack.

5. [LINE] button

This button enables the signal input from LINE jacks.

6. [GUITAR/BASS] button

This button enables the signal input from GUITAR/BASS jack.

By pressing **[MIC 2]** and **[GUITAR/BASS]** simultaneously, you can make input settings for simul-recording. For more about simultaneous recording, refer to p. 28.

Transport section

Here you can control the V-STUDIO's playback and recording.
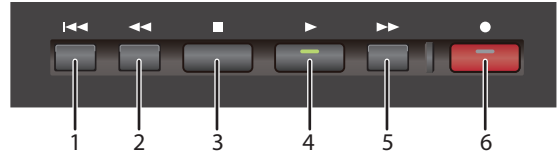
1. [|◄◄] button

Press this button to move the Now Time to the beginning of the project.

2. [◄◄] button

Press this button to rewind the Now Time.

3. [■] button

Press this button to stop playback.

4. [►] button

Press this button to start playback.

If you press this button during playback, the playback pauses. Press again, to resume playback.

5. [►►] button

Press this button to fast-forward the current time.

6. [●] button

Press this button to start recording on tracks that are selected for recording (record enabled).

If you press this button during playback, you can start recording tracks that are record-enabled without stopping playback.

20

AMP&EFFECT section
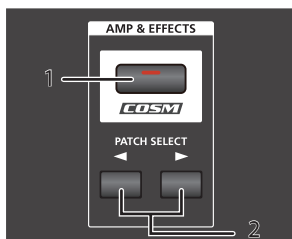
1. [COSM] button/indicator

This switches the effect between on and bypass.

If this indicator is lit, you will hear the input sound with the effects. If the indicator is unlit, the effects will be bypassed and you will hear the input sound only.

* The **[COSM]** button can be used when the included VS-20 Editor is running.
  You can start up VS-20 Editor by pressing the **[COSM]** button while using Guitar Tracks 4.

2. PATCH SELECT [◄][►]

These buttons switch effect patches.

The PATCH SELECT **[◄][►]** buttons can only be used when the included VS-20 Editor is running.

Connections

Connecting musical instruments

Guitar/Bass

**Digital Audio Player,
or other device**

**Synthesizer,
or other device**

INPUT
GUITAR/BASS   L —LINE— R   PHANTOM +48 V
①:GND
②:HOT
③:COLD
(Hi-Z)   MIC 2

Use a commercially available cable
that's appropriate for the device
to which you are connecting.

Connecting microphone

The V-STUDIO 20's balanced (XLR) type
connectors that are wired as shown in the
illustration. Be sure to check the wiring of
your equipment before making connections.

HOT — COLD — GND

**Microphone with
a phone plug**

**Microphone with
an XLR plug**

INPUT
GUITAR/BASS   L —LINE— R   PHANTOM +48 V
①:GND
②:HOT
③:COLD
(Hi-Z)

If you're using a condenser microphone
that has a balanced (XLR) plug and requires
phantom power to be supplied, set the
VS-20 Editor's PHANTOM switch to "ON."
For details on how to use the VS-20 editor,
refer to VS-20 Editor's online help (PDF).

**You must turn phantom power off
unless you're using a condenser mic
that requires a phantom power
supply. Malfunctions will occur if
phantom power is supplied to a
dynamic microphone or audio
playback device. For details on the
specifications of your microphone,
refer to its owner's manual.**

Connecting footswitches (optional)

You can use footswitches to control the Guitar Tracks 4.

	Function
Footswitch 1	Playback
Footswitch 2	Recording

* Footswitch pedal and Expression pedal are not included.

* When connection cables with resistors are used, the volume level of equipment connected to the INPUT connectors may be low. If this happens, use connection cables that do not contain resistors.

* 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.

* Do NOT connect anything to input terminals that you are not using.

* Use only the specified expression pedal (Roland EV-5, BOSS FV-500L, FV-500H; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

From initial settings to recording

Audio Driver Settings

As described below, configure Guitar Tracks 4 so that you can use the V-STUDIO 20 hardware as an audio driver.

- Immediately after installing V-STUDIO 20
- If you've newly installed the VS-20 driver, or updated the driver

Setting up Audio Devices

1. Choose "**Options | Audio**" to display the "Audio Options" dialog box in Guitar Tracks 4.

2. Click the "ASIO Panel" Button.

3. The VS-20 Driver Settings dialogue box will be shown.

4. If you are trying to eliminate "pops" and "clicks" in what you hear, try setting the "Audio Buffer Size" to "8" or higher by moving the slider to the right.

5. When you have finished setting the Audio Buffer Size to the desired setting, click "OK" to close the VS-20 Driver Settings Dialogue.

6. In the "Audio Options" dialogue, click "Apply" and "OK" to close. You will not need to restart Guitar Tracks in order for these changes to take effect.

```
VS-20 Driver Settings

Audio Buffer Size
  Min. [========|========] Max.
       1  2  3  4  5  6  7  8  9  10
                    ^
  Audio Streaming Performance
       Real Time:  OOOOO
       Stability:  OOOOOOO

ASIO Setting
  ASIO Buffer Size:  288 samples
  [ ] Use Smaller ASIO Buffer Size
  [✓] Use ASIO Direct Monitor
                    ASIO Technology by Steinberg

MIDI IN Setting
  [ ] Light Load

           [ Show "README" ]

       VS-20 Driver Ver. 1.0.0
   Copyright (C) 2009 Roland Corporation.
  [  OK  ]    [ Cancel ]    [ Apply ]
```

If the driver is not shown

1. Is the driver installed correctly?
2. Did you connect the VS-20 Hardware before launching Guitar Tracks 4?

Refer to **"Installing the VS-20 Driver"** (p. 11), and verify that the VS-20 driver is installed correctly.

3. Is the V-STUDIO 20 hardware correctly connected to your computer?

---

7. Click "OK" to close the dialog box.

MEMO
  If the screen indicates "Audio Driver Error", click **[Use Anyway]**.

* If the window does not close or the settings are not applied when you click **[OK]**, refer to **"Problems When Installing Guitar Tracks 4 or Changing Settings"** (p. 36).

24

Setting up MIDI Devices

If the V-Studio components are not installed in the correct order you may see this dialogue.
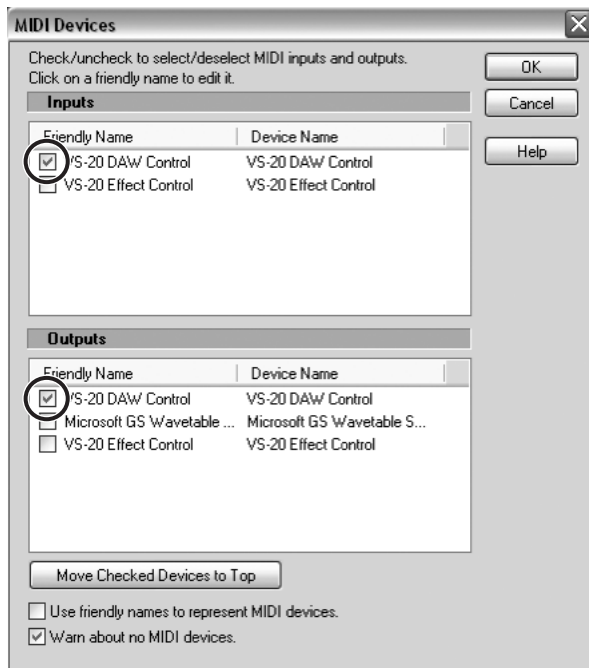

Here are the steps to set up the VS-20 as a MIDI device for use as a Control Surface.

1. To setup the MIDI connections, choose "**Options | MIDI Devices**".

In the input field and output field of the **"MIDI Devices"** dialog box, select the following MIDI devices that you will use with V-STUDIO 20.

2. The MIDI Devices dialogue box will be shown.

3. Check the boxes next to "VS-20 DAW Control" in both the Input and Output section.

4. Click **[OK]** to close the dialog box.

25

Playing a Demo Song

Playing an Audio Demo Song

V-STUDIO 20 contains audio demo songs. Here's how to enjoy these demo songs.

1. Start up Guitar Tracks 4, choose "**File | Open**" command to open the "Open" dialog box.

2. Select the project file "Guitar_Tracks_Demo.cwp" within the "My Documents\Cakewalk\Guitar Tracks 4\Tutorials\Guitar_Tracks_Demo" folder.

3. Click **[Open]** to open the project. Wait until the project has finished loading.

4. Press the V-STUDIO 20 hardware's [▶] button.
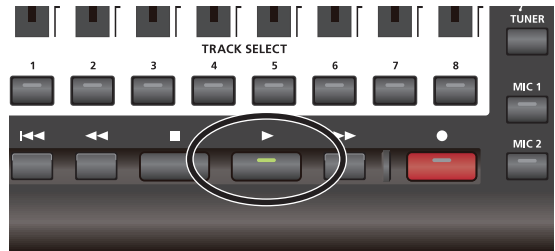
5. Adjust the volume of the V-STUDIO 20 hardware and your sound reinforcement equipment (monitor speakers, etc.).

This controls the volume that's output from OUTPUT and PHONES.

6. When you've finished listening to the demo song, choose "**File | Close**." If you're asked whether you want to save the changes, click **[No]**.

* 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.

If you don't hear demo project

Review the following steps to try to resolve it.

I did not see any meters move in Guitar Tracks or hear any sound

The most common cause of this is if the playback device is not set correctly.

In most cases, you can correct this by following these steps:

- On the Options menu, click Audio to open the Audio Options dialog.
- Make sure the driver mode is set to "ASIO"
- Make sure you have "VS-20" selected for both playback and recording devices.

If you do not see an option for VS-20, check the settings described in **"Audio Driver Settings"** (p. 24).

I can see meters moving in Guitar Tracks, but I don't hear anything

- Make sure the "Output Level" on the VS-20 Hardware is turned up
- Make sure the "DAW Output" on the VS-20 Hardware is also turned up

Audio starts to play, but I get a message that says DROPOUT or AUDIO STOPPED either in a dialog or across the bottom of the screen

A dropout is a symptom of audio hardware when it is unable to pass audio data fast enough. There are a few things that may alleviate this:

- Check the settings described in **"Setting up Audio Devices"** (p. 24)
- Ensure nothing else is trying to use the sound device at the same time. Guitar Tracks will perform best when there are no other software applications attempting to use the sound device, such as web browsers, video players, instant messaging clients and other sound applications.
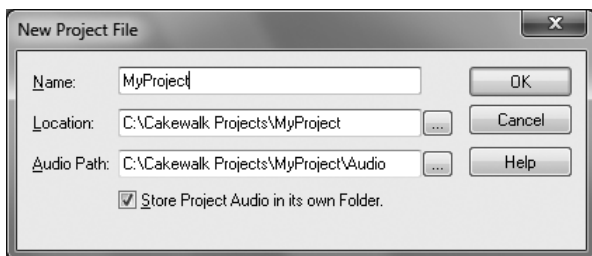
Recording audio

1. Connect your instrument or microphone

In order to record audio, you'll connect your instrument or microphone to the V-STUDIO 20.

2. Create a new file

1. Launch Guitar Tracks 4.

2. From the **File** | **New** to open the New Project File dialog box.

3. In the Name field of the New Project File dialog box, enter the name of the song that you want to create.

A new project will be created.

In this example we're going to record on track 1.

3. Select the input source

Now we'll configure input settings in Guitar Tracks 4 as appropriate for the input you connected.

1. From the top panel of the VS-20 Hardware, choose the input according to the table below:

| Source	Selected device
Record onboard mic (MIC 1) in stereo	Press **[MIC 1]**
Record MIC 2	Press **[MIC 2]**
Record LINE L/R in stereo	Press **[LINE]**
Record GUITAR/BASS	Press **[GUITAR/BASS]**
Record GUITAR/BASS on the left channel, and MIC 2 on the right channel (Simultaneous Recording)	Hold **[MIC 2]** and press **[GUITAR/BASS]**

4. Adjust the level

In order to record with the best possible audio quality, adjust the input level so that V-STUDIO 20's PEAK indicator slightly lights even during the loudest passages.

TIP

With the DIRECT MONITOR knob turned down, turn the SENS knob until you see the red light come on. Then turn SENS knob down just until the peak light goes off.

1. Use the **[SENS]** knob on the VS-20 Hardware to adjust the input level.
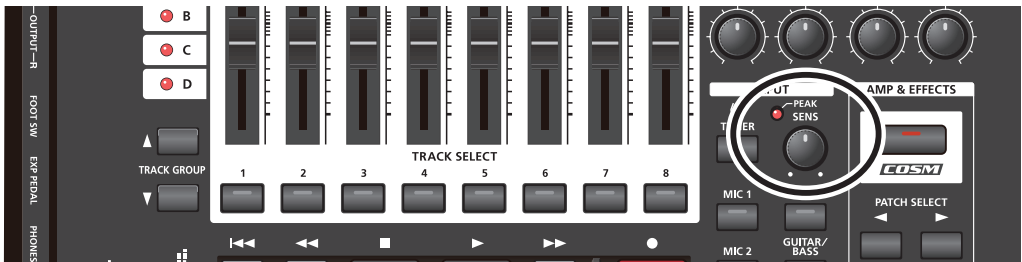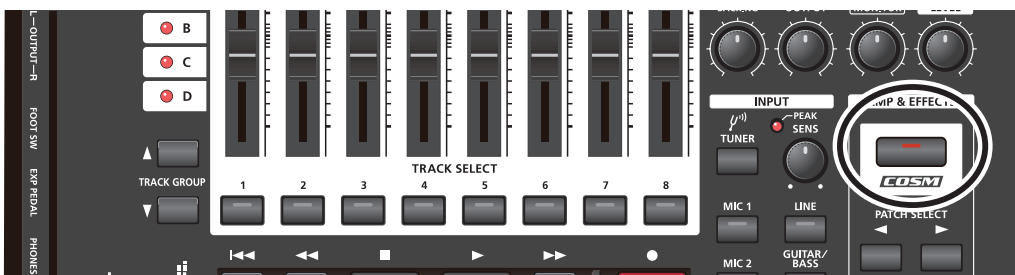

5. Try out an effect.

V-STUDIO 20 provides a wide variety of effects.

In this example, we'll apply a effect to the input signal you perform.

1. Press the **[COSM]** button on the VS-20 Hardware.

The VS-20 Hardware's **[COSM]** button indicator will light, and VS-20 Editor will start up.

NOTE

If the Editor is already open, pressing the COSM button will bypass the effect. To view the Editor simply click on the VS-20 Editor button in the Windows Taskbar.

2. Use PATCH SELECT **[<] [>]** to select the desired effect patch.

cf.

For details on how to edit the effects, refer to VS-20 Editor's online help (PDF).

6. Arm the desired track for recording.

We'll arm track 1 for recording (i.e. put it in record-ready mode).

1. Press the V-STUDIO 20 hardware's TRACK SELECT **[1]** button.

The V-STUDIO 20's TRACK SELECT **[1]** button and Guitar Tracks 4's track 1 button will both light, indicating that this track is armed for recording.
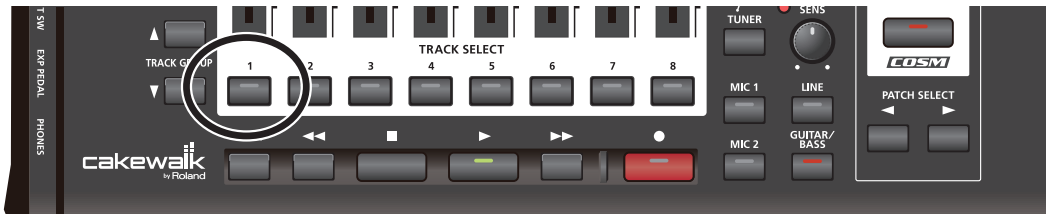
MEMO

You can also arm the track by clicking the TRACK SELECT button on Track 1 in Guitar Tracks.

7. Set tempo.

1. In Guitar Tracks 4's toolbar, double-click the tempo display and enter the desired tempo.

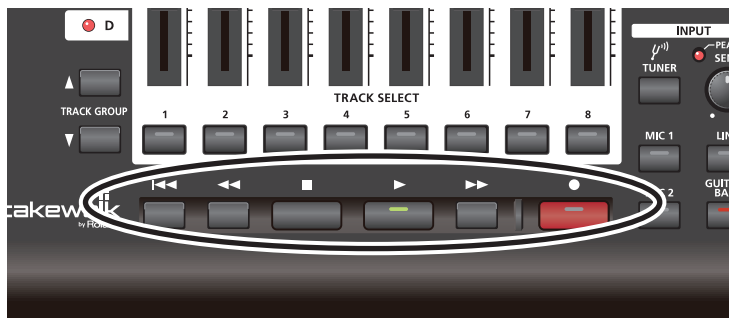Enter a numerical value from your computer keyboard, and press the Enter key to confirm it.

This completes preparations for recording.

8. Record your performance.

Press the **[●]** record button to start recording.

Press the **[■]** stop button to stop recording.

Press the **[▶]** play button to hear the recorded result.

If you're not satisfied with your performance, you can easily re-record it. After you've stopped recording but before you've performed any other operation, choose "Undo" from the Edit Menu (CTRL + Z). The recorded waveform will disappear. Since you can re-record as easily as this, you can feel free to try as many times as you like until you've captured a performance you're happy with.

NOTE
The sound of playback or recording may be interrupted if you connect or disconnect USB memory or another USB device or turn the power on/off during these operations.

NOTE
Using a USB-connected hard disk may decrease the hard disk data transfer rate due to congestion on the USB data bus. Do not use a USB-connected hard disk to save the audio data that you are playing or recording.

NOTE
Dropouts in playback or recording may occur immediately after the system has started up or resumed from the sleep state. Please wait for a time before you perform playback or recording.

You've successfully used the included software to make a recording.

About the online help video

If you need help at anytime during the process, you can select a topic from the integrated help menu in the console view and a video will show you how to use the feature.

You will need an active internet connection in order to view the videos.

- SELECT INPUT
- ADD EFFECTS
-SELECT TRACK
-RECORD
-ADD BACKING
-FINALIZE/EXPORT

Troubleshooting

1. **This chapter lists problems that might occur when setting up this product, and explains how to solve these problems. If you experience a problem during installation, read this chapter first.**

2. **If the system still does not operate as you expect even though you've checked the points listed in this chapter, refer to the following documents as well.**

Online Help

Guitar Tracks 4's online Help is an organized collection of information that covers everything from operation to full details of all functions and commands. To view this, launch Guitar Tracks 4, and from the **Help | Help Topics.** You can open the Search tab and type a keyword to search for related topics.

README.RTF (online document; Rich Text Format)

This contains supplementary information about Guitar Tracks 4, information about changes from older versions of Cakewalk products, and cautions regarding use in specific types of systems. To view this, access Guitar Tracks 4's **Help | View README.RTF.**

Cakewalk Website

For the latest information, tech tips and knowledge base articles visit;

http://www.cakewalk.com/support/vstudio

For registration visit;

http://www.cakewalk.com/register

For Support and Service Contact Information;

http://www.cakewalk.com/support/contact.aspx

Problems When Installing Driver or Changing Settings

Problem	Points to check	Action
Installer won't start up	Is the DVD-ROM correctly inserted in the DVD-ROM drive?	Make sure that the DVD-ROM is correctly inserted in the drive.
	Could the DVD-ROM or the DVD-ROM drive's lens be dirty?	The installer might not start correctly if the DVD-ROM or the DVD-ROM drive's lens is dirty. Use a commercially available CD cleaner or lens cleaner to clean the disc or lens.
	Are you attempting to install the driver from a network computer?	Install the driver from a local drive.
	V-STUDIO 20 is presented on DVD Media. You must have a DVD-ROM drive in order to use the included DVD-ROM. If you do not have a DVD-ROM driver, please register your product at; http://www.cakewalk.com/register and follow the instructions on screen to download a copy of the install software.	
A warning or error is displayed during installation	Could you have connected the V-STUDIO 20 to your computer before installing the driver?	If you connect the V-STUDIO 20 to your computer before installing the driver, an error message may appear when you begin the installation. Uninstall the VS-20 driver as described in **"Uninstalling VS-20 Driver"** (p. 45), and then reinstall it as described in **"Installing the VS-20 Driver"** (p. 11).
	Could the device manager be showing "Other devices," "Unknown devices," or a device with an "? / ! / X" symbol?	If driver installation was not completed successfully, the installed driver will remain in an incomplete state, causing an error message to appear when you begin the installation. Uninstall the VS-20 driver as described in **"Uninstalling VS-20 Driver"** (p. 45), and then reinstall it as described in **"Installing the VS-20 Driver"** (p. 11).
Can't install the driver according to the procedure	What user privileges did you use to log on to Windows?	You must log on to Windows as one of the following users. - A user belonging to the Administrators group, such as Administrator - A user whose account type is computer administrator * For details, refer to the system administrator of your computer.
	Driver installation may be impossible depending on the "Driver signing options" setting.	You may be unable to install the driver because of the "Driver Signing Option" setting. Check the following points, and make the appropriate setting. 1. Open the System "Properties" dialog box. 1. From the Windows "Start" menu, open the "Control Panel." 2. In "Pick a category," click "Performance and maintenance." 3. Under "Pick a Control Panel icon," click the "System" icon. * Depending on your setup, the System icon may be shown directly in the Control Panel (the Classic view). If so, double-click the System icon. 2. Click the "Hardware" tab, and then click **[Driver Signing]**. 3. The "Driver Signing Options" dialog box appears. In the "Driver Signing Options" dialog box, choose "Warn" or "Ignore," and then click **[OK]**. 4. Click **[OK]** to close the "System Properties" dialog box. 5. Install the driver as described in the "Installation" procedure. * After you've completed the installation, you can return the driver signing options setting to its original state.
	Could other software or background programs (such as anti-virus software) be running?	The installation may not be successful if other software is running. Be sure to close all other software before you begin the installation.

Problem	Points to check	Action
Installation does not finish successfully when you connect the V-STUDIO 20 hardware.	It may take between several tens of seconds and several minutes after you power-on the V-STUDIO 20 until it is recognized by your computer.	This is not a malfunction. Please wait until the Found New Hardware Wizard appears.
	Is the V-STUDIO 20 connected?	Once again, make sure that the V-STUDIO 20 is correctly connected to your computer.
	Could your computer be operating on its battery?	Operation may not be stable if your computer is operating on its battery. Please connect your computer to a power supply.
	Could other USB devices be connected?	Perform the installation with all USB devices (other than a mouse and keyboard) disconnected from your computer.
	Does your computer meet the USB specifications?	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 AC adaptor).
"Found New Hardware Wizard" appears even though you installed the driver (Windows XP)	Could you have connected the V-STUDIO 20 to a different USB connector of your computer than when you installed the driver?	If your computer or USB hub has two or more USB connectors, connecting the V-STUDIO 20 to a different USB connector may cause the "Found New Hardware Wizard" to appear even though the driver has already been installed. This is not a malfunction. Install the driver as described in **"Installing the VS-20 Driver"** (p. 11).
A numeral such as "2-" has appeared in front of the device name (Windows Vista)	Could you have connected the V-STUDIO 20 to a different USB port?	If you connect the V-STUDIO 20 to a different USB port, the operating system may automatically add a number at the beginning of the device name; this is not a problem for using the V-STUDIO 20. If you want to return to the device name without this number, you can either connect the V-STUDIO 20 to the same USB port as when you installed the driver, or reinstall the driver. -> **"Installing the VS-20 Driver"** (p. 11)

Problems When Installing Guitar Tracks 4 or Changing Settings

Problem	Points to check	Action
Can't install Guitar Tracks 4	Could you have attempted to install Guitar Tracks 4 as a user without administrative privileges?	In order to install Guitar Tracks 4, you must log on as a user who has administrative privileges. Installation will not occur correctly if any other user attempts this.
	Is the V-STUDIO 20 DVD-ROM correctly inserted in the DVD drive?	If the DVD drive or the V-STUDIO 20 DVD-ROM is dirty, use a commercially available cleaner to clean it.
	Could system monitoring software such as an anti-virus program be running?	Close such software until installation is completed. For details on how to close the software, refer to the documentation for your computer or for the software you're using.
	Did you attempt to install from a network drive?	You must install from a local drive.
	Is there enough hard disk space?	Your hard drive must have at least 6 GB of free space.(Recommended)
Plug-ins are installed but not shown	It may be that a plug-in is disabled.	Check whether the plug-in might be disabled in the plug-in manager. For more about the plug-in manager, refer to the Guitar Tracks 4's Online Help.
"Audio Driver Error" appears	Is the Audio Driver setting appropriate?	If an audio driver not being used by Guitar Tracks 4 is installed, try either disabling that driver or disconnecting the corresponding audio interface from your computer. Try changing the **"Audio Driver Settings"** (p. 24).
Clicking **[OK]** in the Audio Options dialog does not close the dialog box	Could an input-only or output-only audio driver be installed, such as for a USB speaker or USB microphone?	In this case, your settings might not be applied when you click **[OK]** in the Audio Options dialog box. Try disabling those audio drivers.
	Could your computer's internal sound card be enabled?	Some internal sound cards may cause problems for other audio drivers. In this case, try disabling the internal sound card in the device manager or in your computer's BIOS screen.

Problems at Startup with Guitar Tracks 4

Problem	Points to check	Action
Can't start up	Could numerous applications be running?	It may be that Guitar Tracks 4 cannot start up because there is insufficient memory. Close other applications before you start up Guitar Tracks 4. If an error still appears, try restarting Windows.
	Could memory-resident programs be running?	Memory-resident programs such as anti-virus software may prevent Guitar Tracks 4 from running correctly. Try closing such software before starting Guitar Tracks 4.
"Audio Driver Error" is displayed	Could you be using other music application software?	If Media Player or any other application that has audio playback capability is running, Guitar Tracks 4 won't be able to use the audio driver, and an error appears when Guitar Tracks 4 is started. Close the audio playback application, and then start Guitar Tracks 4 again.
	Are the audio driver settings appropriate?	If an audio driver not being used by Guitar Tracks 4 is installed, try either disabling that driver or disconnecting the corresponding audio interface from your computer. Try changing the **"Audio Driver Settings"** (p. 24).
The VS-20's knob positions do not match the parameter values in Guitar Tracks 4	When you start up Guitar Tracks 4, the parameters will be at their fixed values, regardless of the physical positions of the SENS knob, MIDI BACKING knob, DAW OUTPUT knob, DIRECT MONITOR knob, and OUTPUT LEVEL knob, so the parameters will not match the state of the VS-20's panel. In addition, INPUT SELECT will automatically be set to GUITAR/BASS.	Adjust the knobs once again.

Problems with Playback

Problem	Points to check	Action
Can't open song data	Is there sufficient free space on the hard disk?	When opening a song data, make sure that there is sufficient space on the hard disk (at least as much as the size of the song data)
	A message indicates "Not a Cakewalk Format File."	It may be that the file has been damaged. You may be able to recover some of the data by opening the file in Safe Mode. For details, refer to the Guitar Tracks 4's online Help section File Recovery Mode.
No sound at all	Is your sound reproduction equipment (speakers, headphones) connected correctly?	Connect your audio reproduction equipment. **"Connecting your audio equipment"** (p. 16)
	Is the power switch turned on?	Make sure that your sound reproduction system and the V-STUDIO 20 hardware is powered up.
	Are the volume knobs raised?	Make sure that the volume knobs of your sound reproduction system, the V-STUDIO 20's **[MIDI BACKING]** knob, **[DAW OUTPUT]** knob, and **[OUTPUT LEVEL]** knob are raised.
	Is the VS-20's driver correctly installed?	Make sure that the VS-20's driver is installed correctly.
	Could you have disconnected the USB cable while Guitar Tracks 4 was running?	If you perform such actions while Guitar Tracks 4 is running, communication between Guitar Tracks 4 and the V-STUDIO 20 hardware will be interrupted, and Guitar Tracks 4 may stop responding. Check the connection to the V-STUDIO 20 hardware, restart your computer, and restart Guitar Tracks 4.
	Could your computer have entered Suspend or sleep mode while Guitar Tracks 4 was running?	
	Could a message be indicating "Unable to Open Audio Playback Device"?	If Media Player or another application that has audio playback capability is running, Guitar Tracks 4 won't be able to use the audio driver. Close the audio playback application, and then start Guitar Tracks 4 again.

Problem	Points to check	Action
There are Interruptions, Dropouts, or Other Problems in the Sound During Playback	Could you have connected/ disconnected another USB device, such as a memory key?	Dropouts may occur during playback or recording if you connect/disconnect another USB device (such as a memory key), or switch a device's power on/off at the same time that the V-STUDIO 20 is being used.
	Are you using a hard disk that is connected via USB?	Data transfer using USB could get congested if you use the V-STUDIO 20 and a USB-connected hard disk at the same time. As a result, the data transfer speed for the hard disk could be significantly reduced. As a storage location for the audio data that you record and play back, you should avoid using a hard disk that is connected via USB.
	Did the dropout occur immediately after the system started up, or after it woke from sleep?	Dropouts during playback/recording sometimes occur immediately after the system has started up, or after it has woken from sleep. Wait for a while, then try the playback/recording again.
	Windows Update/ Microsoft Update	Use Microsoft Corporation's Windows Update or Microsoft Update to update your system to the most recent state.
	"Audio Buffer Size" in the setting dialog box	See **Audio Driver Settings** (p. 24)
	I did not see any meters move in Guitar Tracks or hear any sound	The most common cause of this is if the playback device is not set correctly. In most cases, you can correct this by following these steps: • On the Options menu, click Audio to open the Audio Options dialog. • Make sure the driver mode is set to "ASIO" • Make sure you have "VS-20" selected for both playback and recording devices. If you do not see an option for VS-20, check the settings described in "Audio Driver Settings" (p. 24).
	I can see meters moving in Guitar Tracks, but I don't hear anything	• Make sure the "Output Level" on the VS-20 Hardware is turned up • Make sure the "DAW Output" on the VS-20 Hardware is also turned up
	Audio starts to play, but I get a message that says DROPOUT or AUDIO STOPPED either in a dialog or across the bottom of the screen	A dropout is a symptom of audio hardware when it is unable to pass audio data fast enough. There are a few things that may alleviate this: • Check the settings described in "About Mixing Latency" (p. 46) • Ensure nothing else is trying to use the sound device at the same time. Guitar Tracks will perform best when there are no other software applications attempting to use the sound device, such as web browsers, video players, instant messaging clients and other sound applications.
	Clicks or pops may occur in the sound if a LAN is operating	Try disabling the LAN in Device Manager. If this eliminates the clicks or pops, you may be able to solve the problem by updating your LAN driver or BIOS.
	Could you have connected the VS-20 to a USB hub?	Try connecting the VS-20 directly to a USB connector on your computer.
Playback Halts Midway, and Subsequent Playback is Not Possible	While you were using the V-STUDIO 20, could your computer have performed a task with a heavy processing load, such as accessing a DVD-ROM drive or the network?	If a heavy processing load occurs while the V-STUDIO 20 is being used, it may not work correctly. In this case, stop playback, and then start playback once again. If you are still unable to play, close all software that was using the V-STUDIO 20, disconnect the USB cable from the V-STUDIO 20 hardware, and then reconnect it.

Problems with Recording

Problem	Points to check	Action
Can't record	Could a message be indicating "Unable to open audio record device"?	If Media Player or another application that has audio playback capability is running, Guitar Tracks 4 won't be able to use the audio driver, and an error appears when Guitar Tracks 4 is started. Close the audio playback application, and then start Guitar Tracks 4 again.
		If an audio driver not being used by Guitar Tracks 4 is installed, try either disabling that driver or disconnecting the corresponding audio interface from your computer. Try changing the **"Audio Driver Settings"** (p. 24)
Dropouts occur in the recording	Could you have connected/ disconnected another USB device, such as a memory key?	Dropouts may occur during playback or recording if you connect/disconnect another USB device (such as a memory key), or switch a device's power on/off at the same time that the V-STUDIO 20 is being used.
	Are you using a hard disk that is connected via USB?	Data transfer using USB could get congested if you use the V-STUDIO 20 and a USB-connected hard disk at the same time. As a result, the data transfer speed for the hard disk could be significantly reduced. As a storage location for the audio data that you record and play back, you should avoid using a hard disk that is connected via USB.
	Did the dropout occur immediately after the system started up, or after it woke from sleep?	Dropouts during playback/recording sometimes occur immediately after the system has started up, or after it has woken from sleep. Wait for a while, then try the playback/ recording again.
Recording Halts Midway, and Subsequent Recording is Not Possible	While you were using the V-STUDIO 20, could your computer have performed a task with a heavy processing load, such as accessing a DVD-ROM drive or the network?	If a heavy processing load occurs while the V-STUDIO 20 is being used, it may not work correctly. In this case, stop playback, and then start playback once again. If you are still unable to play, close all software that was using the V-STUDIO 20, disconnect the USB cable from the V-STUDIO 20 hardware, and then reconnect it.
Guitar Sound is Not Loud Enough	Are you using the correct connector?	Connect your guitar to the GUITAR/BASS jack.
	Could you be using a connection cable that contains a resistor?	Use a connection cable that does not contain a resistor.
Microphone is Not Loud Enough	Are you using the correct connector?	Connect your microphone to the MIC 2 jack (XLR type jack).
	Is the input level set appropriately?	Adjust the input level. (p. 29)
	Could you be using a connection cable that contains a resistor?	Use a connection cable that does not contain a resistor.

Problem	Points to check	Action
Noise or distortion occurs	Is a guitar connected?	If the noise diminishes when you lower the volume of your guitar, it could be that your guitar's pickups are being affected by electrical interference from your computer or display. Try moving your guitar as far away as possible from your computer.
	Could a microphone or guitar be connected?	If a microphone or guitar is connected, unplug the microphone or guitar and turn **[SENS]** knob all the way to the left so that the input level is lowered.
	Could the level meter peak indicator be lit?	Try lowering the input level. Use the **[SENS]** knob to adjust the input level. Or, use REC LEVEL knob to adjust the recording level in the VS-20 Editor.
	Check connections with your other equipment.	If the audio output of another USB device is connected to the V-STUDIO 20, noise from your computer may be heard via the V-STUDIO 20. Try connecting via a self-powered USB hub (a USB hub that has an internal power supply or AC adaptor) or changing the audio output connections.
	Is your equipment grounded?	You may be able to solve the problem by connecting the chassis of your computer or the ground pin of your computer's power supply to an electrical ground. Also make sure that there is no nearby device that might be producing a strong electromagnetic field, such as a television or microwave oven.
	Is there a Preset or Patch loaded in the VS-20 Editor that has heavy distortion or other setting?	Press COSM button to bypass effect, and then check clean signal.

Other Problems

Problem	Points to check	Action
No sound from your computer's speakers	If the V-STUDIO 20 is connected to your computer, sound will no longer be heard from your computer's speakers.	This is not a malfunction. Connect your headphones or audio playback system (external monitors) to the V-STUDIO 20.

Eliminating Clicks and Dropouts

If data cannot be recorded while recording audio, or if data cannot be fully processed during playback, Guitar Tracks 4 will automatically halt. This is called a **dropout**. Clicks or pops may also occur if problems occur in communication between Guitar Tracks 4 and the V-STUDIO 20 hardware.

There are a variety of possible reasons why clicks, pops, and dropouts might occur. To eliminate the cause of the problem, follow the checkpoints listed below.

If problems occurs even with small projects

Increase the Mixing Latency

Extremely short Mixing Latency settings will place an excessive processing load on your computer.

cf. **"About Mixing Latency"** (p. 46)

Try changing the Driver Mode

Since the V-STUDIO 20 hardware supports both WDM/KS and ASIO, you can try changing the **"Audio Driver Settings"** (p. 24).

cf. **"Audio Driver Settings"** (p. 24)

Install the correct device driver

Even for your non-audio devices, make sure that the correct device drivers for your computer system are installed and that your computer is running correctly. You should pay particular attention to this if you've modified your computer or added peripheral devices, or if you're using a computer that you assembled yourself.

Lower the screen resolution

Some computers have graphics functionality that places a heavy load on the CPU. You may be able to lighten this load by lowering the screen resolution.

Uninstall the drivers of audio interfaces you're not using

Some audio interfaces not intended for use in music production may cause problems with other audio interfaces (e.g. the V-STUDIO 20 hardware). If Guitar Tracks 4 does not perform as well as you expect, try using the Device Manager to disable the standard audio functionality of your computer, or physically remove it and then uninstall the device.

Disable other hardware devices

Other hardware devices may interfere with the performance of your audio device. We recommend that you disable any unnecessary hardware devices, such as network adapters and internal sound cards.

If problems occur more frequently with large (heavy) projects

Increase the Mixing Latency

Extremely short Mixing Latency settings may place an excessive load on your computer.

cf. **"About Mixing Latency"** (p. 46)

Use freezing or bouncing to reduce the load on your computer

If the size of the project exceeds the processing capability of your computer, you can reduce the processing load by freezing synthesizers or bouncing audio tracks.

Update the driver of your audio device

In most cases, newer driver versions of the audio interface will have fewer problems and improved performance.

Close other programs

If other programs are running, they will reduce the CPU resources and memory that are available to Guitar Tracks 4. It is best to close all programs that are not needed for your work.

Change the VS-20 driver's buffer size

In some cases, reducing the VS-20 driver's buffer size may allow stable operation even with a shorter Mixing Latency.

1. **Before you change the driver settings, you must close all programs that are using the V-STUDIO 20 hardware. This is not necessary if you're merely viewing the settings.**

2. **Got to your Windows task bar and select Start | Control Panel | VS-20.**

   * If you don't see the above icon, click "Switch to classic view."
   The **"VS-20 Driver settings"** dialog box appears.

3. **Adjust the "Audio Buffer Size."**

   To change the setting, make the desired setting and click **[OK]**. If you merely want to view the setting without changing it, be sure to click **[Cancel]** after you've noted the setting.

   * "Launch Audio Profiler..." in the Audio Options dialogue in Guitar Tracks if you've changed the buffer size (unless you're using ASIO mode).

Appendix

VS-20 Driver settings

Changing or Viewing the Settings

1. **When changing driver settings, always make sure to first quit all applications using the V-STUDIO 20 hardware. If you are only verifying the settings you do not need to quit applications.**

2. **Open the "Control Panel," and double-click "VS-20."**

   * If the above icon cannot be found, click the "Switch to Classic View."

   The "VS-20 Driver Settings" dialog box appears.

3. **To modify the settings, make the changes and click [OK]. To simply check the settings, be sure to click [Cancel] after viewing the settings.**

Controls in the Settings Dialog Box

Audio Buffer Size

Ordinarily, set the sixth position from the left for the buffer size.

NOTE

After you've changed the "Audio Buffer Size," make sure to restart all applications which are using the V-STUDIO 20 hardware. Then, if you are using a program that offers a function for testing audio devices, we recommend that you run such tests.

Also, you may want to check to see if your application is one of those that provides a setting for adjusting the buffer size.

"Use Smaller ASIO Buffer Size" check box

If this check box is selected, the buffer size when using ASIO-compatible applications will be made smaller.

If you experience pops or clicks when this check box is selected, deselect this check box.

* You must deselect this check box when adjusting the "Audio Buffer Size."

Information

This field shows the driver version.
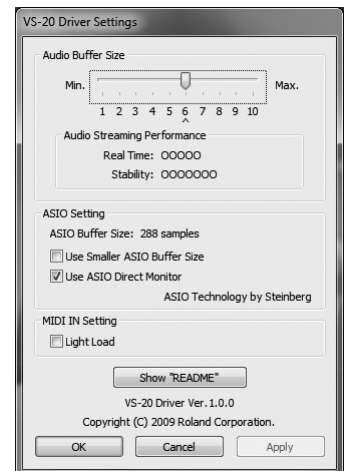
Uninstalling VS-20 Driver

If you connect the VS-20 Hardware to your computer before installing the driver, an error message may appear when you begin the installation. In this case, please uninstall the VS-20 driver by following the procedure below.

Then install the VS-20 driver as described in **Installing the VS-20 Driver** (p. 11).

Windows 7 and Windows Vista Users

1. **Start up Windows with all USB cables disconnected (except those for a USB keyboard and/or USB mouse, if used).**

2. **Close all applications before performing the uninstallation.**

3. **Insert the included "V-STUDIO 20 DVD-ROM" into your computer's DVD-ROM drive.**

4. **Select "Start-Run" and enter "d:\Drivers\Win7\Uninstal.exe" to start the driver installer.**

(where d:\ is your disc drive.)

5. **If a dialog box regarding User Account Control appears, click [Continue].**

* If you are asked to enter the password for an administrative account, log on to Windows as a user whose account type is Administrator, and then perform the uninstallation.

6. **The display will indicate "The installed VS-20 Driver will be uninstalled." Click the [OK].**

7. **When the message "Uninstallation was completed." is displayed, click [OK] to restart Windows.**

Windows XP Users

1. **Start up Windows with all USB cables disconnected (except those for a USB keyboard and/or USB mouse, if used).**

2. **Close all applications before performing the uninstallation.**

3. **Insert the included "V-STUDIO 20 DVD-ROM" into your computer's DVD-ROM drive.**

4. **Select "Start-Run" and enter "d:\Drivers\XP\Uninstal.exe" to start the driver installer.**

(where d:\ is your disc drive.)

5. **The display will indicate "The installed VS-20 Driver will be uninstalled." Click the [OK].**

* If any other message appears, follow the directions of the message.

6. **When the message "Uninstallation was completed." is displayed, click [OK] to restart Windows.**

About Mixing Latency

(MEMO) If the driver mode is set to ASIO, you won't be able to adjust the Mixing Latency from Guitar Tracks 4.
Adjust the "Audio Buffer Size" from the [ASIO Panel].
To access the ASIO panel, Choose **Option|Audio**... then click the button labelled ASIO Panel.

The Mixing Latency setting is closely related to how Guitar Tracks 4 can take full advantage of your computer's performance. Increasing the mixing latency will allow more audio processing to be performed within Guitar Tracks 4. However, increasing the mixing latency will lengthen the time (latency) from when Guitar Tracks 4 begins processing the audio until you actually hear the sound. Increasing the latency will adversely affect your MIDI keyboard playing.

The most suitable Mixing Latency setting will depend on the performance of your computer and on various settings. If you experience the following problems with the default settings, try adjusting the mixing latency.

Interruptions or dropouts occur during playback in Guitar Tracks 4

You may be able to reduce interruptions or dropouts by increasing the Mixing Latency. To adjust the latency, go to **Options|Audio**...

cf. About procedure for setting the Mixing Latency, see **"Setting up Audio Devices"** (p. 24).

Multi-user Use

In order to install and unlock (register) Guitar Tracks 4, you must log on as a user who has administrative privileges.

Once installed, Guitar Tracks 4 can be used by any user (in Windows Vista) or a limited user (in Windows XP), as well as by a user who has administrative privileges.

Uninstalling Guitar Tracks 4 and Other Components

If you want to uninstall a component of Guitar Tracks 4, use the following procedure to uninstall that component.
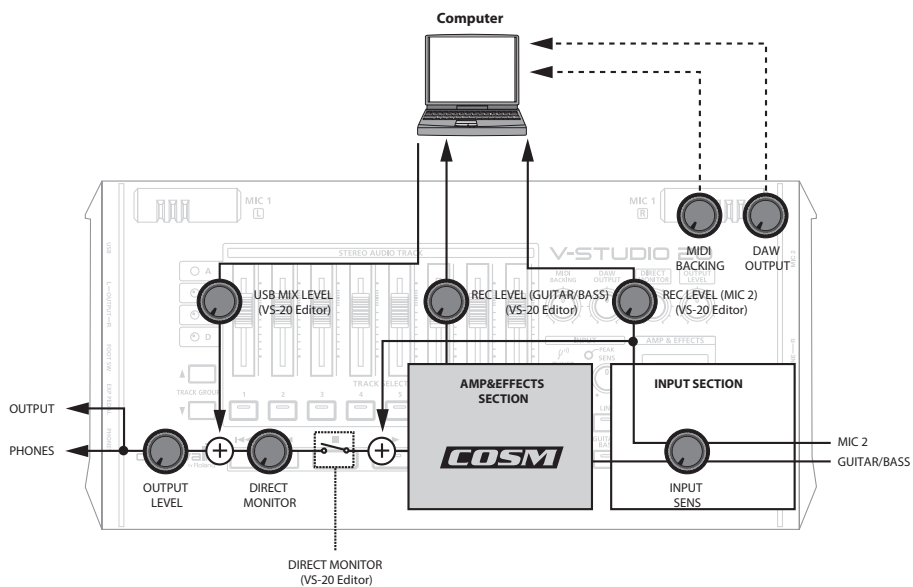
1. Log on as a user who has administrative privileges.

2. Click the Windows "Start" button, and then click "Control Panel."

3. Click "Programs and Features" (in Windows XP, "Add or Remove Programs").

4. In the list of programs, click the component that you want to uninstall.

   * Choose from "Guitar Tracks 4," etc.

5. Click "Uninstall" (in Windows XP, "Remove") to uninstall Guitar Tracks 4.

   * If a user account control dialog box appears, click Continue.

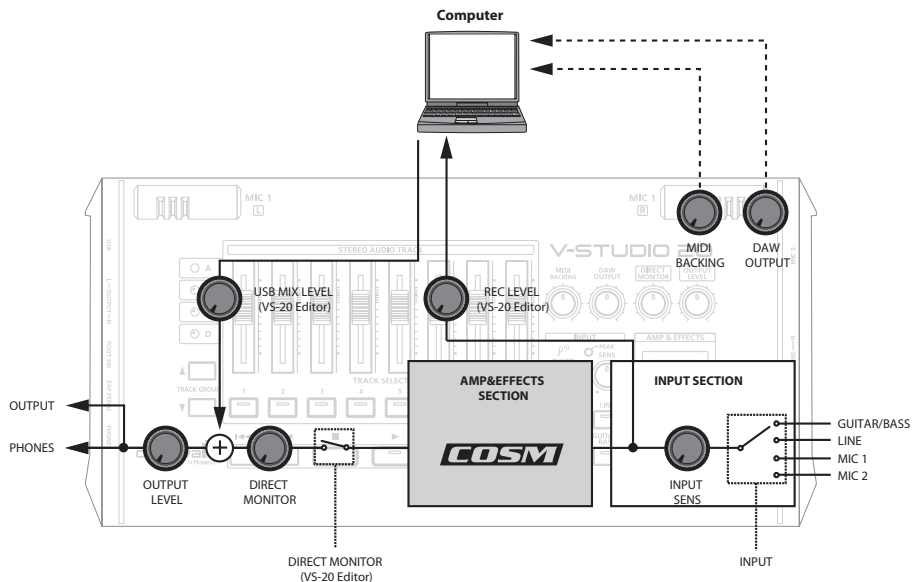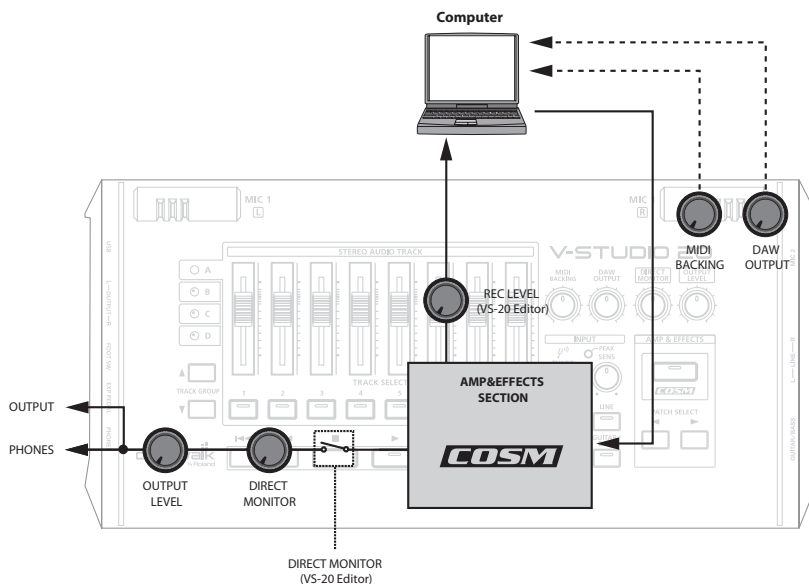**6. After uninstalling Guitar Tracks 4, restart Windows.**

Signal Flow

Normal
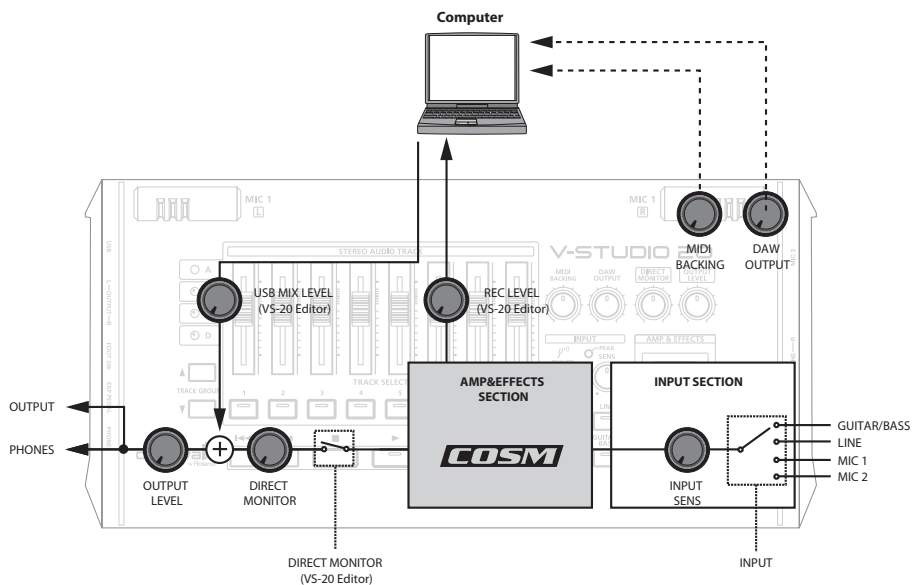
Simultaneous Recording

Dry Recording

Reamping

Specifications

Digital Audio Workstation: V-STUDIO 20

Audio Interface	
Number of Input Channels	2
AD/DA Conversion	Sample Rate: 44.1 kHz Signal Processing: maximum 24-bit (depending on software)
Frequency Response	20 Hz to 20 kHz (+0/-3 dB)
Residual Noise Level	-90 dBu or less (INPUT: GUITAR/BASS, 47 k ohm terminated, INPUT SENS knob = center, DIRECT MONITOR knob = center, OUTPUT LEVEL knob = center, IHF-A, Typical, Effect = OFF)
Nominal Input Level	GUITAR/BASS: -10 dBu MIC 2: -40 dBu LINE: -10 dBu
Input Impedance	GUITAR/BASS: 1 M ohm MIC 2: 4 k ohms LINE: 10 k ohms
Nominal Output Level	OUTPUT: -10 dBu
Output Impedance	OUTPUT: 2 k ohms PHONES: 44 ohms
Recommended Load Impedance	OUTPUT: 20 k ohms or greater PHONES: 32–100 ohms
Connectors	GUITAR/BASS: 1/4 inch phone type MIC 2: XLR type (balanced/phantom power +48 V) LINE: 1/4 inch phone type OUTPUT: RCA pin type PHONES: Stereo 1/4 inch phone type REC, PLAY (FOOT SW): TRS 1/4 inch phone type EXP PEDAL: TRS 1/4 inch phone type USB: B type

OTHERS	
Current Draw	320 mA
Phantom Power	+48 V/10 mA
Dimensions	299(W) x 144 (D) x 53 (H) mm 11-13/16 (W) x 5-11/16 (D) x 2-1/8 (H) inches
Weight	760 g, 1 lb 11 oz (VS-20 hardware)
Options	Foot Switch: BOSS FS-5U Dual Foot Switch: BOSS FS-6 Expression Pedal: Roland EV-5 BOSS FV-500L, FV-500H

* 0 dBu = 0.775 Vrms

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

For China

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。

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.

510001 1058-01

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com