WAVE/4™

4 channel
PC digital audio card

User s Guide

IMPORTANT STUFF INSIDE: PLEASE REVIEW

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WAVE/4™ 4 channel PC Digital Audio Card

User s Guide

First things first!

Thank you for purchasing the Wave/4 card. We "gadgeteers" genuinely appreciate your patronage. This guide contains information on installing and using the card, and we tried to make it as brief as possible (because no one has time to read manuals anyway).

If you have ideas about how we can improve our products, we'd like to hear from you. *Our contact information is on the back cover of this manual.*

"Virtual" product registration

Gadget Labs maintains a customer e-mail list and periodically (every other month or so), we send out notices about driver updates, special offers and new product announcements.

If you would like to be included on this e-mail list,
send an e-mail to 'support@gadgetlabs.com' or
visit our web site, 'www.gadgetlabs.com', and sign up.

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Getting started

Here s a list of stuff that s included with this package:

- Wave/4 card
- Y-adapter cables for RCA connections (4 adapters included)
- 9-pin to MIDI adapter cable for In / Out / Thru
- Wave/4 software drivers & GoldWave disk
- Quick Installation Guide and this User s Guide (duh)

Before you begin installing the Wave/4 card please note:

Static electricity can damage electronic components!

Take the following precaution before you install the Wave/4 card:

Shut down and turn off the PC but leave it plugged in. Touch the metal chassis of the PC to drain the static from your bod ☺ ***before*** you touch the Wave/4 card.

Installing the Wave/4 card and software drivers

The Wave/4 card and drivers are designed to be truly Plug and Play. Unlike other cards you may have installed in the past, there are no switches on the Wave/4 card to configure (or hassle with). Installation in most systems should take only a few minutes. ***If you have any difficulties with the installation or operation of the Wave/4 card, check the Troubleshooting section later in this user guide.***

The Quick installation Guide is included to give you graphical, step-by-step instructions on installing the Wave/4 card. Here s a recap of the process:

- Shut down your PC and Unplug it.
- Open the case cover and locate a free ISA slot. Please be aware that some some circuit cards in the PC can cause interference and noise in your audio. To minimize audio interference with the Wave/4 card, select a slot that is away from your graphics card or other sound cards.
- Close up the case and turn on the PC
- As Windows® starts up, it will find the Wave/4 card and automatically install it.
- The following prompts will be displayed by the system:
  New Hardware Found
  Gadget Labs Wave/4
  Select which driver you want to install for your new hardware

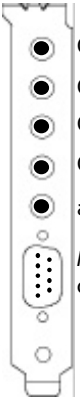
- Choose: Driver from disk provided by hardware manufacture
- Make sure that Copy Manufacturer s files from: shows, A:\
- Insert the Wave/4 Drivers Disk, and click OK
- The driver files will be copied and the system automatically setup to use the Wave/4 card

Connecting audio & MIDI
to the external connector

Here s the connector layout from top to bottom ➔

For audio, all connectors are standard line level, stereo left + right.

NOTE: Microphones do not have enough signal strength and must be amplified by a mixer or preamplifier prior to connecting to the Wave/4 card.



Channel 1 (Ch1), audio IN (stereo)

Channel 2 (Ch2), audio IN (stereo)

Channel 1 (Ch1), audio OUT (stereo)

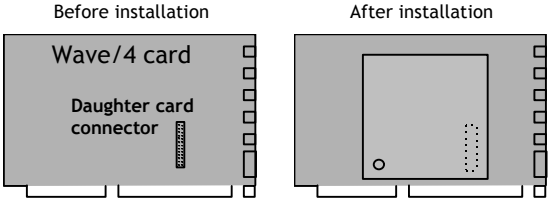
Channel 2 (Ch2), audio OUT (stereo)

audio OUT from Wavetable synth card (stereo)

MIDI adapter with DIN connectors. The DIN connectors are labeled In, Out and Thru

Connecting a wavetable synthesizer daughter card to the Wave/4

The Wave/4 card includes a special, 26 pin connector (13 x 2) for adding a wavetable synthesizer daughter card. These cards are available from several manufacturers. Due to mechanical constraints, the Wave/4 card will accommodate a reduced-size, mini wavetable card, but a full-sized card will NOT fit. For example, the ***Yamaha DB50XG wavetable card will NOT fit*** on the Wave/4 card, but the Kurzweil synth wavetable card from Gadget Labs will fit fine. Contact us if you have any questions or need assistance in locating an appropriate wavetable card.



IMPORTANT !
Make sure that all pins are seated in the daughter card connector. If any pins are showing on either side of the connector, it is seated incorrectly. If this occurs, gently remove the daughter card by pulling it straight up from the Wave/4 card and repeat Step 4 below. Failure to correctly install the daughter card WILL result in damage to the daughter card when you turn on your computer.

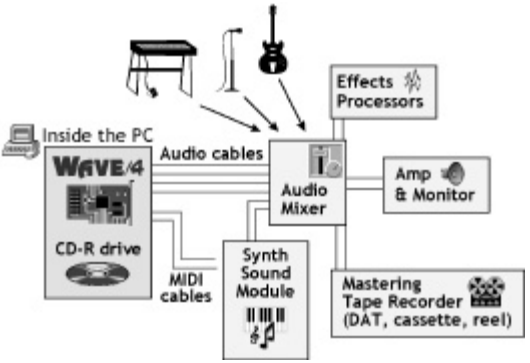
Installing the daughter card

1. Turn off your computer and open the case.
2. Remove the Wave/4 card from your computer.
3. Locate the 26-pin interface connector JP2 on the Wave/4 card.
4. Orient the daughter card with respect to the Wave/4 card as shown in the diagram. Center the card connector on the pins. Carefully push the daughter card until it is firmly seated. All 26 pins should be seated in the daughter card connector.

Connecting the Wave/4 card to your music studio system

Like any multi-channel audio recorder, the Wave/4 is designed to work seamlessly within your music recording system. Typically, major components of the recording system are:

- microphones and preamplifiers
- effects processors such as limiters, noise gates, reverb units
- multi-channel mixer
- multi-channel audio recorder
- power amplifier and monitor speakers



At the heart of the system is the mixer whose inputs and outputs are connected to all the other pieces of equipment. The mixer is the router or traffic cop and it connects signals together and controls volume levels and equalization. Thus, the mixer is essential part of the system and it's often built-in to mini-studio products such as multi-track cassette recorders. In a professional environment, the mixer is nearly always a separate piece of equipment.

The mixer and the sound card

Typical multimedia sound cards are not designed for multi-channel recording. They usually include a low-quality, integrated mixer that controls the volume of stereo audio streams from wave file output, music synthesizer and CD-audio player that are produced by games and applications.

When you get started with serious music recording on your PC, it's important to recognize that *achieving the full benefits of multiple channels requires using an external mixer to route and mix the channels down to two channel stereo*.

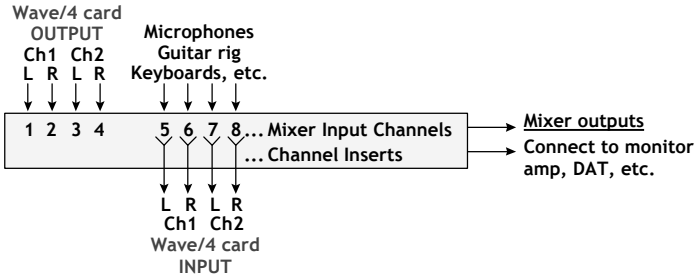
Folks sometimes ask us, "why isn't there extra mixer circuitry included with the Wave/4"? When we designed the Wave/4 card, we concluded that having a built-in mixer would make it more complicated to use the card in conjunction with an external mixer. Also, when extra mixer circuitry is included in a sound card, an extra level of amplification is required. This might diminish audio quality and add noise. So the Wave/4 design follows the same model set by the popular CardD+ PC audio card (a very high quality card). We decided to avoid needless complexity and preserve the highest audio quality.

Connecting the Wave/4 to a mixer

Below are some block diagrams for connecting the Wave/4 card to a mixer. The Wave/4 card can be used with a wide variety of mixers that are available from many different manufacturers. If you are considering the purchase of a mixer for your recording setup, you can buy a small line-level mixer; we've seen them as low as US $150. A more flexible option would be a small console with prices that start at around US $300.

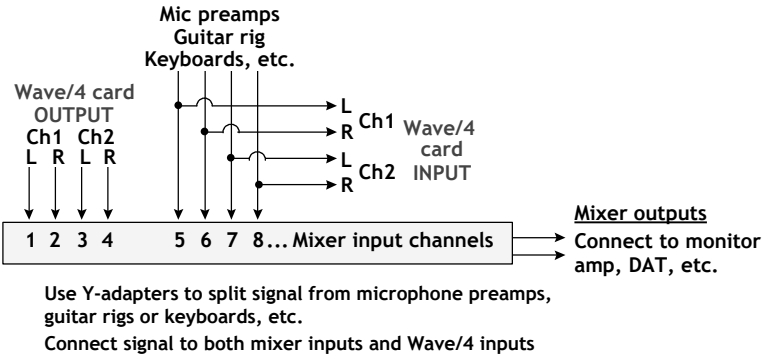
If your mixer has channel inserts (also called patch points), for quietest operation, we recommend that you directly patch the Wave/4 inputs to the channels at the inserts points. This offers maximum mixing flexibility and allow you to monitor all the Wave/4 inputs and outputs as you're recording.

Connections for Wave/4 to mixer with channel inserts



If your mixer does not have channel inserts, you can achieve similar flexibility by splitting the input signal prior to the mixer with Y-adapters. Since the Wave/4 requires a line level signal, you will need to make sure that any low-level signals, such as microphones, are preamplified prior to the signal split.

Connections for Wave/4 to mixer without channel inserts



Setting up applications to use the Wave/4 card

To most Windows applications,the Wave/4 card appears as 2 separate, stereo sound card devices. To use the Wave/4 card with your applications, its input and output ***must be selected*** as the active devices. The steps to accomplish this vary from application to application. Typically, there is a menu item in the application which brings up a dialog box that s used to select and setup devices. A list of available audio or MIDI devices is displayed and you select the active devices. Once the Wave/4 is installed, the following additional devices will be found:

- Wave/4 Wave IN Ch1 L+R — first, stereo wave audio input
- Wave/4 Wave IN Ch2 L+R — second, stereo wave audio input
- Wave/4 Wave OUT Ch1 L+R — first, stereo wave audio output
- Wave/4 Wave OUT Ch2 L+R — second, stereo wave audio output
- Wave/4 MIDI In — MIDI port input
- Wave/4 MIDI Out — MIDI port output

Specific application configuration

Really important note! Configuring your application
Music & audio software places special demands on the capabilities of your PC. Although Windows provides a standard sound card programming interface to applications, there are differences and nuances in both applications and sound cards. ***It s pretty much guaranteed that some tweaking of your application software s settings will be required.***
We accumulated the following information as we tested the Wave/4 card with various software. The settings represent starting points for your setup and you may need to fine-tune them for your particular PC configuration. ***This is important stuff; please take the time to review it.*** To be bluntly honest, the likelihood of you having problems with your PC digital audio recording setup increases substantially if you ignore these details.

Setting up Cakewalk for the Wave/4 card

The Wave/4 card works great with Cakewalk Pro Audio. You ll need version 6 or 7 to use the multiple channel capabilities of the Wave/4 card. Also, make certain that you have version 6.01 (or higher) which includes important updates from Cakewalk.

In addition to selecting the Wave/4 as the active input & output ports, here are ***essential steps*** to using the card. These steps will configure your card for optimum performance and synchronization. Any settings not mentioned can be left at the default values.

NOTE: Cakewalk has a feature called the Wave Profiler which can be used automatically calibrate the software to an audio card. To configure Cakewalk correctly for the Wave/4 card, please **use the steps below and ignore the Wave Profiler**.

- select the menu item, Settings | Audio Options . The Audio Options dialog box will be displayed.
- for Audio Sampling Rate , select **32,000, 44,100 or 48,000 Hz**
- for Playback Timing Master and Record Timing Master, select **Wave/4 Wave OUT Ch1 L+R** and **Wave/4 Wave IN Ch1 L+R**
- Click on the Advanced button and the Advanced options dialog box will appear.
- **Use Wave Out Position for Timing** should be **checked.**
- DMA section: Set **size** equal to 61440 **bytes**
  Set **offset** equal to -**1**
- **Enable Simultaneous Record/Play** should be **checked.**

Setting up Cool Edit Pro for the Wave/4 card

Cool Edit Pro is a new, multitrack version of the popular Cool Edit program from Syntrillium. It s a really good tool for recording and processing digital audio. Here are the steps to configure this application the Wave/4 card. Note: Cool Edit Pro is a new application, and we tested the Wave/4 card with a pre-release version; you may need to tweak these settings depending on the performance characteristics of your PC. Any settings not mentioned may be left in their default state.

- select the menu item, Options | Settings . A tabbed dialog box will appear.
- click on the System tab
- in the section, Play/Record Buffer , set Total Buffer Size to: **4** seconds using **8** buffers.
- in the Wave Cache section, set the Cache Size to **2048.**
- click on tab labeled, Multitrack
- set Playback Buffer Size (response time) to **0.8** seconds
- set Playback Buffers to **10**.
- set Recording Buffer Size to **.5** seconds
- set Recording Buffers to **10.**
- set Background Mixing Priority to **0.8**.
- click on the Devices tab.
- select the Wave/4 devices.

You ll also need to assign the Wave/4 card to individual tracks. The menu item File | New Session is used to select sample rates and modes. After a New Session is created, you ll find some small windows that display Pan (P) and Volume (V) settings. Next to these are 2 small buttons that are used to select the Playback and the Record devices for each track. Click on these buttons to assign the Wave/4 devices to individual tracks.

Setting up Cubase VST for the Wave/4 card

Cubase VST is a powerful MIDI & digital audio program from Steinberg.

Important note: Cubase VST has lots of nice features and power but it needs a powerful PC to run properly. *We recommend your have at least a 233 MHz Pentium® processor (or equivalent) and 64 MB of RAM. Also, have a large powerful hard disk -- SCSI or EIDE with Ultra DMA.*

Here are the steps to configure Cubase VST for the Wave/4 card. Any settings not mentioned can remain in their default configurations.

- run Cubase VST and select the menu item, 'Audio | System'. A dialog box titled, 'Audio System Setup' will be displayed.
- in the section 'Audio Performance'
  - set 'Number of Channels' to **24**
  - set 'Memory per channel' to **192KB**
  - set 'Disk Block Buffer Size' to **64KB**
- in the 'Monitor' section, select '**Global Disable**'.
- in the 'Priority' section, select '**Highest**'
- Click on the pull-down menu, 'ASIO Device' and select the item, '**ASIO Multimedia Driver**'. Click on the button, 'ASIO Control Panel' and an advanced setup dialog box will be displayed
- select each of the Input and Output Ports for the Wave/4 and enter the settings for each line:

	Audio buffers	Buffer size
Wave/4 Wave **OUT** (all lines)	**3**	**6144**
Wave/4 Wave **IN** (all lines)	**16**	**5632**

- **Important:** in the section, 'Global Settings', set the 'Sync Reference' to '**Sample Position - Output**'
- As you're using Cubase VST, make sure you map the tracks to the Wave/4 input and output ports as required.

High performance playback and mixing with Cubase VST

The Wave/4 driver for Windows 95/98 also supports a special DirectX/ DirectSound playback mode. This mode is more efficient, making sliders and meters more responsive and freeing up processor power for effects processing and other tasks. *Recording of audio or MIDI is not supported by VST in this mode*. To switch to this mode:

- Click on the pull-down menu, 'ASIO Device' and select the item, '**ASIO DirectX Driver**'. When you need to record audio or MIDI, re-select the 'ASIO Multimedia Driver'.
- To setup this mode, click on the button, 'ASIO Control Panel' and an advanced setup dialog box will be displayed.
- select each of the Input and Output Ports for the Wave/4 and enter the settings for each line:

	Buffer size
Wave/4 Direct Sound (all lines)	**1536**

Setting up Musicator Audio for the Wave/4 card

Musicator Audio combines rich support for MIDI sequencing and notation with support for multi-channel digital audio features. Here are the steps to configure Musicator Audio for the Wave/4 card. Any settings not mentioned may be left with their default values.

- create at least one audio part by selecting Edit | Add part
- then, select the menu item, Window | Audio setup . A setup dialog box will appear.
- first, configure the Device Setup portion of the dialog box
- **Stereo** should be checked
- select a sample rate (e.g. 44 kHz); the higher the rate, the better the sound quality but the bigger the recorded files.
- next, the Parts need to be mapped to the audio output devices.
- make sure the **Ster.** (stereo) option is **checked** on each line.
- assign the Parts to **Wave/4 Wave OUT Ch1 L+R** or Wave/4 **Wave OUT Ch2 L+R**

Next, assign the input channels by clicking on the button Set Input Devices . This causes another dialog box to open for mapping Parts to input devices. Assign the parts to **Wave/4 Wave IN Ch1 L+R** or **Wave/4 Wave IN Ch2 L+R** . Finally, to fine tune Musicator, you may wish to run the audio auto-calibrate function.

Setting up Samplitude for the Wave/4 card

Samplitude is a popular multi-track digital audio program from Germany. Follow these steps to configure the program for the Wave/4 card. Settings not mentioned here can be left at their default values.

- The initial step in using Samplitude is to setup a new virtual project (a VIP). To do this, select the menu item File | New Multitrack project . A dialog box will appear. Choose **Stereo** and specify the number of tracks. (Note: these are virtual tracks and you are not limited to 4. The maximum number of tracks is determined by the performance capability of your PC).
- After the VIP is setup, make sure that **Multi-card mode** is **active** (green). This option can also be set with the menu item, File | Properties | Multiple cards .
- Recording: select File | Record or click on the Record button (it s a red circle). The Record dialog box will be displayed.
- Make sure that the record mode is set to **Stereo**.
- Select the desired **Wave/4 IN** Device for input.
- Make sure that Playback while Recording is **checked**.
- Set the Record Offset to **0**.

Samplitude 4 also has a number of **buffer settings** for digital audio. These can be left at their default value of **8192.** The **Buffer number** should be set to **6.**

Setting up SAW for the Wave/4 card

SAW is one of the original multi-track digital audio programs for the PC and it is designed to fully utilize multi-channel cards like the Wave/4. Here are the steps to configure SAW for the Wave/4 card.

- select the menu item, Options | Audio Hardware Setup . A setup dialog box will appear.
- for Wave Device **1** select **Wave/4 Wave OUT Ch1 L+R**
- make sure that Device **1** interrupt Hook is set to **None**
- for Wave Device **2** select **Wave/4 Wave OUT Ch2 L+R**
- make sure that Device **2** interrupt Hook is set to **None**
- set Preload Buffer Queue to **8** .

If you have difficulties, SAW has lots of good troubleshooting information within the application help files.

Setting up Sound Forge for the Wave/4 card

Sound Forge is a very popular digital audio editor that has a number of advanced features. Use the following steps to configure Sound Forge.

- select the menu item, Options | Preferences . A tabbed dialog will be displayed.
- For Playback , select the desired **Wave/4 OUT** device.
- Leave the option, Interpolate play position for inaccurate devices **unchecked**. Oh yes, the Wave/4 card is indeed an accurate device ☺. Also, leave the Play position bias at **0**.
- For Record , select the desired **Wave/4 IN** device.
- Again, leave the option, Interpolate record position for inaccurate devices unchecked and leave the Record position bias at **0**.
- Set Total Buffer Size (kilobytes) to **512**.
- Set Preload Size (kilobytes) to **64**.

Installing GoldWave digital audio editor software

We included the GoldWave audio editor with the Wave/4 card to give you a nice, basic tool to manipulate digital audio and to make sure you can quickly test the basic audio health of the Wave/4 card. GoldWave is a stereo editor and can be used with either stereo channel of the Wave/4 card but it does not support multi-channel mode. This special version of GoldWave can only be used on systems that have a Wave/4 card.

Follow these simple steps to install the GoldWave:

- Insert the disk labeled, Wave/4 software drivers & GoldWave disk into floppy drive A.
- From the Windows Start menu, select Run and type: a:setup.exe and press enter .
- Follow the prompts and GoldWave will be installed.

Setting up GoldWave to use the Wave/4 card is straightforward. Follow the steps below.

- Select the menu item, Tools | Device controls and the Device controls panel will be displayed.
- Click on the setup button: 
- In the Recording Options section, **check** Monitor input .
- In the Buffer options section, **check** Triple buffering
- Set Record (s) to **0.5** seconds.
- Set Playback (s) to **0.5** seconds.
- Click on the Input button to select the desired **Wave/4 IN** device.
- Click on the Output button to Select the desired **Wave/4 OUT** device.

To learn to **how to use GoldWave**, lots of good information is contained in the **Help file**.

Please note the following GoldWave quirk ☺: If you switch audio INPUT devices in GoldWave, you must first **play some audio before you can begin recording**.

A few basic tips about multi-track recording with your PC

Multi-channel, multi-track recording consumes a great deal of resources on your PC. Depending on how serious you are about the results and how many tracks you need, you should have the fastest processor and the biggest and fastest hard drive that you can afford. Of course, most of us working folks can t afford to rush out and buy the fastest PC and besides, at today s pace of technology change, it would start to become obsolete before we got it home. So in the interest of making the best use of what we have, here s a couple of very basic tips (most of which are obvious, but sometimes forgotten).

- don t skimp on RAM it s really cheap and it can help performance quite a bit. Windows swaps applications to and from your hard disk disk when it runs out of RAM and this can wreak havoc on your digital audio recording. Have at least 32MB.
- before recording, shut-down any applications that aren t necessary to the recording. You can never tell if an application is really idle; it could be doing something stupid in the background that sucks up some of the PC s processing power.
- turn off unnecessary background tasks like screen savers, virus scanners and power management
- clean up your hard drive: delete all of those little files in your web browser s cache directory. They take up more space then you might think and also cause drive fragmentation.
- If you can afford it, a wise incremental investment to your PC would be to purchase a good-sized hard drive (2-6 GB drives are a real bargain these days) and dedicate it to digital audio. This can improve performance and reduce fragmentation and clutter.
- finally, immediately before you start recording, do the obvious and run your **hard disk defragmenter** utility. Along with processor speed, Hard drive performance is the most important factor in determining how many tracks you can record and whether or not you ll get any dropouts in your audio.

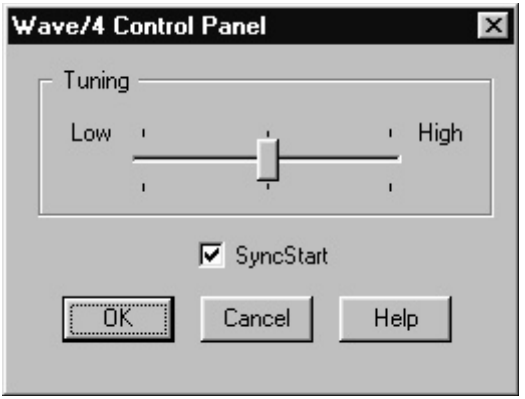
Advanced Configuration: Wave/4 Control Panel Applet

We've included a small control panel applet to help you fine tune the Wave/4 Sound Cache hardware to your system. There is also a special SyncStart feature.

To start the Wave/4 applet, select 'Start | Settings | Control Panel' and double click on the 'Wave/4 Applet' icon.

Tuning: This setting manages the amount of PC processing that is used to maintain the audio data flow to the Wave/4 card. ***Usually, this setting does not need to be changed from its default***. The lower the setting, the lower the possibility that you will experience any audio dropouts when recording or playing. However, the low and medium settings consume more of your PC's overall performance and leave less processing power available for other application functions. You may also be able to increase the number of audio tracks that your PC can plan by tweaking the Tuning setting.

SyncStart: Windows and software applications control all multichannel sound card's channels as separate left+right channel pairs. This means that there will be a slight delay (between 10-100 milliseconds) between stereo pairs when playing or recording on all 4 channels on a Wave/4 card. The SyncStart feature can be enabled to ensure that all the channels start playing or recording together. This setting will provide *very* tight sync but it may not be supported by all applications. Disable SyncStart when you use 2 separate software applications to access each of the Wave/4's stereo channel pairs.



Troubleshooting

- **I installed the Wave/4 card, but now, my PC system won't boot.**

  This happens rarely, but when it does, it is usually caused by a card that s not seated properly in its slot. Check all of your PC s expansion bus cards and make sure they are completely plugged into slots and their retaining screws are tight.

- **I installed the Wave/4 card, and the PC starts-up fine but when I play a wave file, I can t hear any sound.**

  Believe it or not, we ve had a few users that called us with this problem and didn t have the Wave/4 card audio outputs connected. Check your cables and make sure that the card s outputs are connected correctly to your music audio system.

- **The Wave/4 card seemed to install properly and the outputs *ARE* connected properly, but I still can t hear any sound.**

  Make sure that your music/audio software application is configured to use one of the Wave/4 Wave OUT... devices. Check the prior section in this guide, Setting up applications ... , for information.

- **The Wave/4 card seemed to install properly, but its is not show-**

ing up in my software application s list of available devices.

This usually indicates an IRQ hardware resource conflict between the Wave/4 card and another device in your system. First, make sure that your PC's **BIOS Setup** is correct (usually accessed by pressing DEL while the system is booting but sometimes a function key is used). In the section, PnP/PCI Setup, make sure that the setting **'Using Plug and Play OS'** (operating system) is **'Enabled' or 'Yes'**. Also, make sure that **resources are controlled automatically**. If this doesn't resolve the issue, the next step is to determine if Windows is identifying a conflict.

- run the Windows Control Panel and select 'System'.
- Click on the 'Device Manager' tab
- Click on the '+' sign next to the line, Sound, video, and game controllers .
- The list should show the Wave/4 card. If the Wave/4 line is showing an ! (exclamation mark) then the driver has not been loaded by Windows.

Check to see if Windows has found the resource conflict by viewing the Properties | Resources information for the Wave/4. If a resource conflict is indicated, you may need to reconfigure any non-plug and play card that's in your PC by changing its switches see the card's documentation. You can also try manually moving the Wave/4 IRQ to a different value by unchecking the 'use automatic settings' box. The Wave/4 card can be set to IRQ 3, 5, 7, 10, 11, 12 or 15.

Even if a resource conflict is not indicated by Windows, there still may be a resource conflict. The purpose of plug and play support in Windows is to assign system resources to each card "auto-magically" but sometimes, Windows "gets confused". This can happen if you have older cards with switches for IRQ setting(s). Make sure that these IRQ numbers are reserved in your BIOS Setup (see the PnP/PCI section) or reserve the IRQ's in the Windows control panel (System | Device Manager | Computer). Unfortunately, when installing a new card, Windows does not always display alert messages when there is a conflict. ***If you have a resource conflict, you can also get info by running run the 'Hardware Conflict Troubleshooter' that is found in the Windows Help file.***

- **The Wave/4 card installed fine and it s playing sounds OK, but now another card in my system won t work.**

This could indeed be caused by a device conflict with the another card. See the previous item for information on resolving this. Alternately, there could be a basic electrical problem with your PC s bus. Trying moving the cards into different slots.

- **Audio from the Wave/4 card is garbled or distorted.**

If you have a "generic" PC (AKA a clone), you may need to adjust a system timing setting in your PC's **BIOS Setup**. To enter the BIOS Setup, you will

have to press a key during the PC boot-up (which key depends on the make/model and is sometimes the 'Delete' key, F1, F2 or even F10; watch your PC's screen as it boots up for instructions on entering BIOS Setup).

Once you are in the BIOS Setup, look for a configuration section that's typically called, "**chipset features".** Look for a setting called, "**16-bit I/O recovery time**". Make sure this setting is set to it's lowest value, typically it's 0, 1 or N/A.

Check the prior sections in this manual titled, Setting up applications.. and the Specific application configuration . Make sure that your application settings are correct

Check the resources (IRQ, I/O ranges) used by the other cards in your system. This difficulty could be cause by a device conflict. See the information in prior troubleshooting items.

- **When I input audio into the Wave/4 card, I can't here it through the Wave/4 outputs**

  The Wave/4 card was designed to fit in with your music studio setup and does not include in internal mixer. Please read the section, "Connecting the Wave/4 card to your music studio system" for tips on how to be able to monitor your audio.

Support & warranty information

Support

Problems with PC products can sometimes be tricky to resolve. We ll need some assistance from you so that we can help resolve issues quickly. The most important thing you can do is prepare a good description of the problem. If you send us e-mail or call us, please include or have the following information ready:

- your name and e-mail address
- your PC hardware configuration (processor, RAM, hard drive, other cards installed in your system).
- operating system and software applications
- problem report: Please be as specific as you can. If possible, list any error message that was displayed, how you were using the program, any observations about audio problems, etc.

E-mail: The best and fastest way for us to provide support is with e-mail sent to **support@gadgetlabs.com** .

World Wide Web: surf to our web site at **www.gadgetlabs.com** . The support section includes details about common technical issues and how to resolve them. **Driver updates** can be downloaded from the web site as well.

Telephone support: Alternately, you can call us at **503-827-7372** from 9AM to 5PM US Pacific time.

Customer Satisfaction guarantee

If the Wave/4 card is purchased directly from Gadget Labs, you may return it to us for any reason within 30-days of the purchase for a full refund. Before returning the card, you must first contact us to obtain a return authorization number (RMA number).

> NOTE: If you purchased the Wave/4 card from a dealer, you must contact the dealer regarding their product return policies.

Warranty

After our 30-day guarantee period, the Wave/4 card is warranted against defects in materials and workmanship for a period of ***five years*** from the date of delivery. We will repair or replace products which prove to be defective during the warranty period provided they are returned to us.

If you have difficulties with your Wave/4 card, please follow these steps:

- Verify that the Wave/4 card was installed and configured according to the information in this manual and the Quick Installation Guide.
- Read the Troubleshooting section of this User s Guide to see if you can find a solution. (this is certainly the quickest and easiest way to resolve difficulties).
- If you purchase the card from a dealer, contact the dealer where you purchased the card for additional help. If the dealer is unable to resolve the issue with you, contact us (see our technical support contact information, above). Don t return the card to Gadget Labs without authorization.
- If you must return the card for warranty repair or replacement, you must first obtain a return authorization number (RMA) from Gadget Labs. Please pack the card in its original box.

FCC and other compliance stuff

American user s information - FCC compliance statement

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Canadian user s information - Industry Canada compliance statement:

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulation of Industry Canada.

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