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# DIRECT PRO Q10

## OWNERS MANUAL


Aardvark
Superior sound. Simplified.

MANUAL REVISION 1.5

# Q10 OWNERS MANUAL
# TABLE OF CONTENTS

INTRODUCTION

# WELCOME TO THE WONDERFUL WORLD OF COMPUTER RECORDING

## THE AARDVARK STORY

Aardvark has over a decade's worth of experience in designing digital audio master clocks that make the world's best recording studios sound even better. We've incorporated that expertise into the new Direct Pro Series to give you all the quality of a professional studio, at a fraction of the cost. Our premium sound quality and user–friendly features will change the way you make music and will give you the easy-to-use professional studio you've always wanted. We know you'll enjoy being a part of the Direct Pro Series revolution.

## THE Q10 REVOLUTION

The powerful Q10 is the pinnacle of the Direct Pro Series and brings a fresh new approach to computer recording. Its unique 8 XLR mic inputs and mixer-like monitoring features allow you to professionally record 10 channels direct-to-disk, without needing a mixer. Even if you don't need all 8 mic preamps at once, the flexible XLR / 1/4" connectors can be cleverly used as 1/4" line inputs. This allows studios with analog mixers to easily take advantage of Aardvark's legendary low-jitter clocks and premium A/D converters for enhanced stereo imaging and sonic clarity. As an added bonus for guitarists, we added 2 warm sounding, proprietary E.F.R.™ guitar preamps. With the Q10, Aardvark continues to break down the barriers of traditional audio interfaces. It will elegantly integrate your audio software with your studio and dramatically expand the capabilities of your workstation.

## BOX CONTENTS
# WHAT'S INCLUDED

The Direct Pro Q10 box should contain all of the following items:

- **1- Direct Pro Q10 PCI host card**
  Connects directly to the motherboard of your computer
- **1- Direct Pro Q10 Interface Box**
- **1- 6' shielded 25-pin cable**
- **1- Direct Pro Driver CD--ROM**
- **1- Digital Audio Software CD--ROM**
- **1- Direct Pro Q10 Manual**

If any items are missing or damaged, please contact your dealer or Aardvark Customer Support at:

**E-mail: Support@aardvark-pro.com**

**Tel: 734-665-8899 - Fax: 734-665-0694**

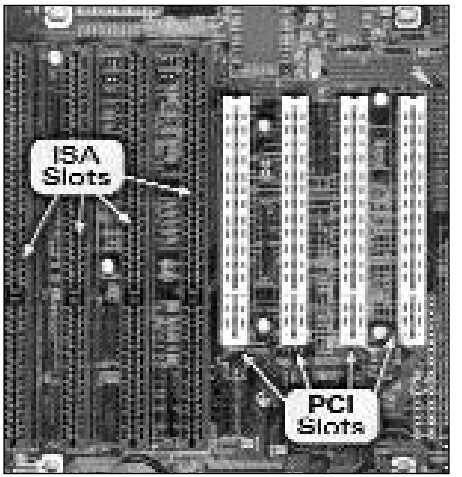
CE
This product complies with

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide a reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

PCI HOST INTERFACE CARD

# INSTALLING THE DIRECT PRO Q10 INTERFACE

1. Please unplug you computer before connecting or disconnecting the Direct Pro Q10 interface box and PCI host card. Connecting or disconnecting the hardware with electricity present will cause physical damage to the Direct Pro Q10 or your computer. It's best to disconnect the power cable completely before proceeding. If you are unfamiliar with installation of computer peripherals, please seek assistance from a qualified computer technician. Aardvark will not be held responsible nor liable for damages resulting from improper installation.
2. Remove the cover from your computer. Most computers have a series of screws on the back of the case that keeps the cover in place.
3. Choose an empty PCI slot. It will look like the PCI slots shown to the right.
4. Remove the small outer cover from the chosen PCI slot .This cover will likely be held in place by a screw. Ground yourself by touching an empty slot on the computer 's metal chassis.
5. Gently align the Direct Pro Q10 PCI Host Card with the chosen PCI slot and press it slowly but firmly into place. It should be seated tightly, with the metal connection bracket matching up perfectly through the hole in the back of the computer.
6. Use the screw from the small outer cover to lock the Direct Pro Q10 Host Card in place while providing maximum grounding.




7. Replace the computer 's cover.
8. Connect one end of the 6-ft shielded cable to the 25 pin connector on the Direct Pro Q10 Host Card, and the other end on the back of the Direct Pro Q10 interface box labelled To Host. Tighten the screws to assure a firm connection and maximum grounding for the Direct Pro Q10 system. For Proper installation, the breakout box must be connected to the PCI host card.
9 .Avoid putting the Direct Pro Q10 interface box near your computer or TV screen. This may cause interference and degrade the quality of the audio.
10. Keep analog cables connected to the Direct Pro Q10 away from power cords and monitors.
11. Reconnect the computer's power supply, then turn on the computer. The Direct Pro Q10 system is completely powered by your computer. Because of this, you must never detach the shielded interface cable without first turning off the computer, otherwise, damage will occur.
12. Once you've physically installed the Q10, move on to the installation instructions for your operating system:
    - For Windows XP/2000 users, proceed to page 4
    - For Macintosh users, proceed to page 6
    - For Windows 95 users, proceed to page 8
    - For Windows 98/ME users, proceed to page 10

SOFTWARE INSTALLATION

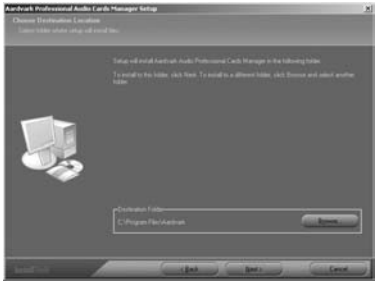
# WINDOWS XP/2000 DRIVER & CONTROL PANEL INSTALLATION

1. Before installing the drivers/control panel, make sure the Aardvark PCI card is physically installed, and the Q10 breakout box is attached to the PCI card via the 25-pin cable. Once this is verified, power up the computer.

2. When windows starts, the "found new hardware" wizard will likely appear. Cancel out of this and proceed into windows.

3. Put the Aardvark Driver CD in your CD-ROM drive. Once the CD is in the drive, one of three things may occur, depending on your Windows setup.

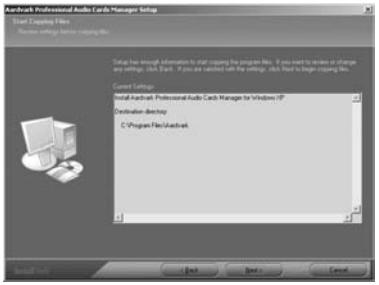
- If the contents of the CD appear on screen, enter the XP 2K folder, then double click SetupXP2K.EXE (this file may appear without EXE at the end, but it's still the correct file)



- If a Window appears, asking what you would like to do with the contents of the CD, choose "Open Folder to View files". Enter the XP 2K folder, then double click SetupXP2K.EXE (this file may appear without EXE at the end, but it's still the correct file)
- If Windows does not respond when the CD is placed in the drive, go to MY COMPUTER, and select the CD-ROM drive that contains the Aardvark CD. Enter the XP 2K folder, then double click SetupXP2K.EXE (this file may appear without EXE at the end, but it's still the correct file)

4. Double clicking SetupXP2K will start the installer. A message will appear, asking if you want to proceed with the installation. Click NEXT.

# WINDOWS XP/2000 DRIVER & CONTROL PANEL INSTALLATION



5. You will be asked what directory the drivers should install in. Stick with the default folder and click NEXT to proceed

6. A final verification will appear, showting you the location where the files will be installed. Click NEXT to proceed


7. A warning message may appear regarding Windows logo testing. Don't let Microsoft scare you! Click CONTINUE ANYWAY to proceed. If a second warning appears, simply click CONTINUE ANYWAY again

8. Finally, the installer will ask you to reboot the computer. Click FINISH to reboot. Once you have rebooted, the Aardvark drivers and control panel will be installed on your computer.

SOFTWARE INSTALLATION

# MAC OSX DRIVER & CONTROL PANEL INSTALLATION


1. Once the hardware is physically installed on your computer, plug the computer back in and power up.

2. Put the Macintosh Driver/Control panel CD in the CD drive. On most machines, the contents of the CD will automatically appear. If the CD contents don't appear automatically, go to Finder and have it view the contents of the CD.


3. Double click "AARKHOST.dmg" on the CD then double click "Q10_install.pkg" to start the installer

4. The installer will begin with the "Welcome to the Aardvark CoreAudio Installer" screen. Click CONTINUE

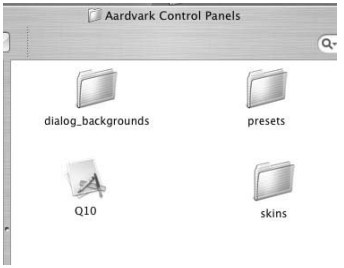
5. Next, a "Read Me" section will appear with information regarding the driver you're about to install. Click CONTINUE


6. You will then be asked to select the destination of the software you're about to install. Choose your main hard drive and click CONTINUE to proceed.

7. You will then be asked to verify that you would like to perform a basic installation on the destination you just selected. Click INSTALL to continue.


8. An AUTHENTICATE screen will appear, requesting a name and password.
If these values are already filled in, click OK to proceed. If they are not filled in, enter the same name and password of whomever has admin privileges on the OS. Click OK to proceed.

9. The installer will inform you that the computer must be restarted when the installation is done.
Click CONTINUE INSTALLATION to proceed.



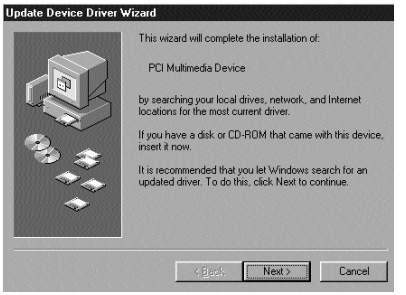

10.The computer will then restart. When the restart is complete, the Q10 drivers and control panel will be installed.

11.To access the Q10 control panel, browse the main hard drive, choose the
Applications folder, then the Aardvark Control Panels Sub folder. A file named Q10 is located in this folder. Double click it to access the Q10 control panel.


12.To verify that OSX recognizes the Q10 driver, go to SYSTEM PREFERENCES |
SOUND, and on the INPUT and OUTPUT tabs, Direct Pro Q10 should be an available option.

## SOFTWARE INSTALLATION
# WINDOWS 95 DRIVER & CONTROL PANEL INSTALLATION


1. When Windows restarts, it will automatically detect the card you installed. Since it is a PCI card, it will identify itself as a "Plug and Play" device.




Windows will indicate detecting the hardware with these dialogs:


2. Insert the Driver CD-ROM packaged with the Direct Pro Q10 , and click Next. The Following dialog should appear:

3. Click Next. Windows may now ask for the location of the drivers. If this is the case, specify the CD-ROM drive (usually D:). Otherwise, simply click Next again. Windows will copy the files from the Direct Pro Q10 CD-ROM.


4. When the files have been copied, Windows will ask to restart the computer. This is because the files just installed will not take effect until the next time Windows is loaded. Click NO, since you will restart the computer after completing the Direct Pro Q10 software installation in the next section.

# WINDOWS 95 DRIVER & CONTROL PANEL INSTALLATION


5. Once Windows has finished loading, the Direct Pro Q10 Control Panel installation program may appear automatically. If not, go to My Computer, find your CD-ROM drive, and click the setup.exe icon.

6. Click Next when you see the welcome screen:


7. Setup will allow you to select the Destination Directory. Otherwise, it will put the Direct Pro Q10 software and drivers in the "C:\Program Files\Aark manager" directory. If you would like the files elsewhere, simply type the new destination or select Browse to put the files in another directory.

8. Click the Next button to continue. The Ready to Install!! Dialog should now appear. Click Next again to begin installation.

9. When the installation is complete, a new folder for the Direct Pro Q10 Control Panel application will reside in the destination directory, and a shortcut will automatically appear on the desktop for easy access.

10. You must now turn your computer off for the changes to take place. Instead of restarting, select Shut Down from the Start Menu/Shut down menu. If you choose restart the installation will not be compete, and you will have to repeat this process!

NOTE: Always turn off your monitors or speakers when rebooting! The speakers may pop during startup, causing potential damage!

## SOFTWARE INSTALLATION
# WINDOWS 98 DRIVER & CONTROL PANEL INSTALLATION


1. When Windows restarts, it should automatically detect the card you installed. Since it is a PCI card, it will identify itself as a "Plug and Play" device.


Windows will indicate detecting the new hardware with these dialogs:

2. Click Next then select the option Search for the best driver for your device, then click Next again.


3. Insert the driver CD-ROM that came with the Direct Pro Q10. Place a check mark beside CD-ROM drive by clicking on it. All other boxes must be cleared. Click Next.

4. Windows will now locate the Direct Pro Q10 driver software. Click Next to begin installation. Windows will copy the files from the Direct Pro Q10 driver CD-ROM.


5. When the installation is complete, you must press Finish to exit the setup.

Windows will ask to restart the computer. This is because the files you just installed will not take effect until the next time Windows is loaded. Click NO, since you will restart the computer after installing the Direct Pro Q10 Control Panel software in the next section.

# WINDOWS 98 DRIVER & CONTROL PANEL INSTALLATION


6. IF the welcome screen does not automatically appear, run Setup.exe from your CD-ROM. This can be done from Windows by opening your CD-ROM drive (usually D: ) in My Computer and double clicking the Setup.exe icon.

7. Click Next when you see the Welcome Screen.


8. Setup will allow you to select the Destination Directory. Otherwise, it will put the Direct Pro Q10 software and drivers in the C:\Program Files\Aark Manager Control Panel directory. If you would like the files elsewhere, simply type the new destination or select Browse to put the files in another directory.

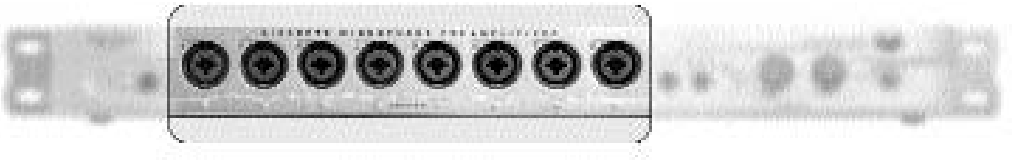
9. Click the Next button to continue. The Ready to Install!! Dialog should now appear. Click Next again to begin installation.

10. When the installation is complete, a new folder for the Direct Pro Q10 Control Panel application will reside in the destination directory, and a shortcut will automatically appear on the desktop for easy access.

11. You must now turn your computer off for the change to take place. Instead of restarting, select Shut Down from the Start Menu/Shut down menu. If you choose restart the installation will not be compete, and you will have to repeat this process!

NOTE: Always turn off your monitors or speakers when rebooting! Often, the speakers will pop during startup, causing potential damage!

# FRONT PANEL
# ANALOG COMBO INPUTS



The Q10 has eight analog inputs located on the front of the interface box. (An additional S/PDIF digital input is located on the back, we'll get to that later)
The inputs are designed to accept either 1/4" line level signals, such as the output of mixers, synthesizer, and drum machine, or direct connection of XLR Microphones.

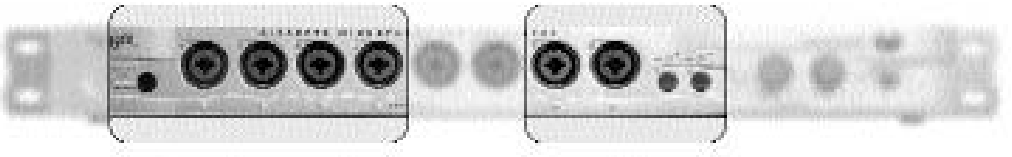
**!** IMPORTANT: Do not connect XLR line level outputs to the Q10.

- The 1/4 " inputs accept both balanced (+4dBu) and unbalanced (-10dBv) signals. The Q10 control panel allows you to configure each input to accommodate balanced or unbalanced, allowing use of balanced and unbalanced gear at the same time.
- The XLR inputs are designed specifically for use with microphones. Some line level devices such as mixers or synthesizers have XLR outputs. The Q10 XLR inputs are not intended for use with these devices, and potential damage can occur. The XLR inputs will work with any microphone.

NOTE: You may use any combination of 1/4" line level or XLR mic for any of the 8 inputs.

Each DIRECT PRO Q10 input is mono. If you want to connect a stereo device such as a synthesizer or CD player, you must use two inputs.

## FRONT PANEL
# ADDITIONAL FEATURES OF SPECIFIC INPUTS



- Analog inputs 1 - 4 are equipped to provide 48v phantom power. Phantom power is activated by pressing the Phantom button on the front panel. Phantom power is used with condensers and other powered microphones. If you are not sure your microphone needs phantom power, simply try the microphone with and without the phantom enabled. A powered microphone will become more responsive, while a non-powered mic will not be affected. There is no risk of damage if a non-powered mic is plugged into an XLR jack with phantom power.
- Inputs 1 - 4 also have independent effects inserts. Effects inserts allow outboard effects to be applied to signals that have already gone through our preamp. This is especially useful for applying compression, limiting, or EQ to a pre-amplified mic, prior to it being recorded. More on using these inserts later in the manual.
- Inputs 7 and 8 can be used for direct guitar recording By pressing in either one of the Hi-Z guitar buttons, you enable input 7 and/or 8 as a direct guitar input. This allows you to connect a guitar, bass or other Hi-Z sound source without the need for a DI (direct) box or preamp. Armed with Aardvarks exclusive E.F.R.™ technology these inputs yield a vibrant, natural sound quality. If you are recording through a guitar amp, or using a cab simulator like the Line 6 POD, E.F.R. is probably unnecessary. E.F.R. is designed for guitars plugged directly into the Q10. If you're unsure as to whether E.F.R. is right for your guitar setup, simply try it out and use your ears to decide.

☞ NOTE: Although inputs 1-4 provide phantom power and effects inserts, and inputs 7-8 provide direct guitar inputs, they do not have to be used this way. They can also be used for standard XLR microphone and 1/4" line operation.


## Q10 FRONT PANEL
## PHANTOM POWER BUTTON

Pressing this button will light its corresponding LED, and send phantom power to mics connected to XLR inputs 1-4. Phantom power is needed for powered microphones like condenser mics. As long as XLR mics or 1/4" line level devices are connected to inputs 1-4, it is fine to use the Phantom power.

**!** IMPORTANT: The phantom power does not affect any of the 1/4" line inputs.

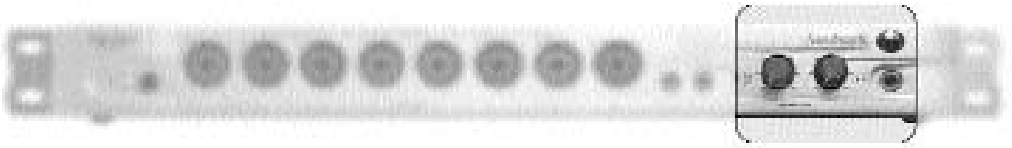

## Q10 FRONT PANEL
## E.F.R™ HI-Z GUITAR BUTTONS

These enable E.F.R.™ for inputs 7 and/or 8, which allows you to plug a guitar directly into these inputs!

Inputs 7 and 8 can be used for direct guitar recording by pressing the guitar buttons (the two buttons on the right with the little guitar drawings next to them). There are separate buttons for inputs 7 and 8. No preamps, DI boxes or pedals needed. Just plug the guitar right into the Q10! This is done using Aardvark's exclusive E.F.R.™ (Enhanced Frequency Response). technology. E.F.R.™ optimizes for direct guitar recording by altering the impedance and frequency response of the input. The end result is a warm, rich tone that will sound great in your mix, accompanied by the convenience of direct recording.

FRONT PANEL

# MONITOR VOLUME KNOB
# HEADPHONE VOLUME KNOB
# HEADPHONE JACK



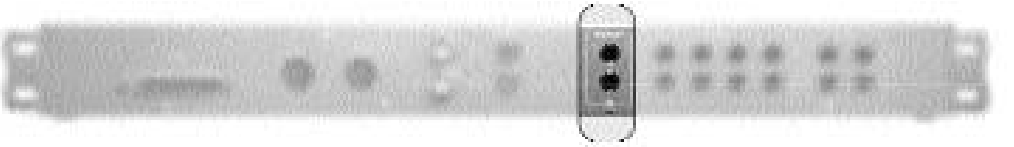
- The monitor Volume Knob: This controls the volume of the Monitor L and Monitor R outputs on the back of the Q10. Allowing you to adjust the monitor levels from the front of the Q10
- Headphone Volume Knob: This controls the volume of the headphone jack.
- Headphone Jack: This is where to plug in your headphones. We recommend using headphones with an impedance of 160 Ohms or less. The headphone jack also comes in handy if the only speakers you have are PC speakers with one 1/8" connection. Simply connect a stereo 1/8" to 1/4" adapter, and plug the speakers into the headphone jack!

## Q10 REAR PANEL ANALOG OUTPUTS

The Q10 has eight stereo output pairs on the back of the interface box.

Although these outputs can be used in many ways by tweaking the Q10 software, Outputs 1-8 are typically used if you want to send tracks to separate outputs, allowing you to use a hardware mixer, or add external effects.

## Q10 REAR PANEL MONITOR OUTPUTS



The Q10 also has a monitor output pair on the back of the interface box.

Although the monitor outputs can be used in many ways, Monitor L and Monitor R are commonly used to listen to the full mix of your project. In the control panel, these should be set to Monitor L and Monitor R. This way you can use these as the main outputs that allow you to monitor incoming signals, as well as previously recorded tracks. The volume of these outputs can be adjusted with the Monitor Volume Knob on the front of the Q10 (discussed earlier).

# REAR PANEL
# S/PDIF DIGITAL INPUTS/OUTPUTS.

For those of you unfamiliar, S/PDIF inputs and outputs look like RCA jacks, but they process very different information. They allow you to transmit and receive audio digitally, so it is not subject to the signal degradation and interference that is present in analog transfers. S/PDIF transfers a stereo audio signal through one cable. Standard RCA cables can be used, but it is best to work with a cable designed specifically for S/PDIF. Our S/PDIF can accept digital information with a bit depth of 16, 24 or any in between. Our S/PDIF inputs and outputs only work with other S/PDIF devices.

To activate the S/PDIF input for recording, go to the Q10 control panel and select ADVANCED, then select the General tab. In the lower left, you will have the option to select the Channels 9/10 recording source. Select S/PDIF. Once this is selected, you can record S/PDIF by choosing Q10 input 9,10 in your audio recording software.

If you are recording with the S/PDIF input, you must have the "Source Select" in the Q10 control panel set to S/PDIF, otherwise, unwanted digital noise will occur.

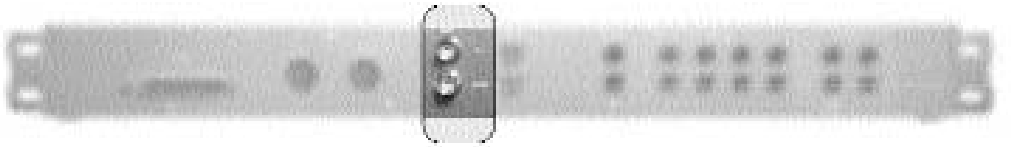
You can designate what comes from this output in the Q10 Routing menu. However, S/PDIF is not listed as a choice in Routing. Instead, the S/PDIF output will carry the same signal as Analog outputs 7 & 8.

# Q10 REAR PANEL MIDI INPUTS AND OUTPUTS

The MIDI inputs and outputs are provided for interfacing with other MIDI products and producing MIDI time code (MTC). These are standard MIDI ports that will be recognized by any MIDI software. Don't look for any MIDI controls in the Q10's software, these MIDI ports are controlled by whatever audio software you choose to use.

NOTE: The Q10 does not have a built in synthesizer. These ports can be used to trigger MIDI sounds in a separate sound module, but the ports themselves do not Transmit/Receive sound in any way.

# Q10 REAR PANEL WORD CLOCK I/O



This allows the Q10 to send or receive clock from other word clock enabled devices. Word clock is used to synchronize the clocks of multiple digital devices, so they all share the same sample rate. Because word clock deals with synchronization, a common misconception is that word clock is used to synchronize the transports of devices, so when one plays or rewinds, the other device/s follow. Word clock is not used to sync the transports of devices, nor is it used to send or receive audio. It is used to synchronize the sample rates of multiple devices, to prevent jitter and other potential digital audio flaws. If you are not using multiple Q10s or other digital devices, Word Clock is not necessary.

NOTE: You can run up to 4 Q10 units in the same computer. To keep them synchronized, connect the WC output of the first unit to the WC input of the second unit and so on. In the first units control panel, you will need to set the synchronization to INT. On all the slave units, you need to set synchronizzation to WC (Word Clock).

# Q10

## REAR PANEL
## HOST ATTACHMENT & PCI HOST CARD

This is where you connect the Q10 interface box to the Q10 host card (pictured below) with the included 25 pin cable.

**!** IMPORTANT: Use only the included cable to connect the host card to the Q10 unit or you may damage your Q10 interface, host card or computer.


☛ NOTE: The extra shielding on the PCI card is to protect the card and keep out harmful computer interference.

As mentioned earlier, inputs 1-4 (either XLR mic or 1/4" line level) on the front of the Q10 can be used with these effects inserts.

Those of you unfamiliar with effects inserts may find the concept a bit odd at first, but we assure you, they're very nice to have around! The effects inserts allow you to use our preamps on incoming signals, then run them though external hardware effects before they go through the A/D converter and are recorded to your computer. These effects inserts allow you to use the Q10s high quality mic preamps with outboard effects processors.

The insert number directly corresponds to the input on the front panel. Insert 1 is connected to input 1, insert 2 is connected in input 2, etc. Two things are required to use the Q10 inserts. First, you need to have an external effects device that you want to apply to an incoming signal. Also, you'll need to use a "Y" cable, with a 1/4" TRS (Tip-Ring-Sleeve) connection on one end, that splits into two 1/4" mono connections.

☞ NOTE: If you are having trouble telling the difference between a TRS jack and a mono jack, a 1/4" TRS plug has two black lines, and a 1/4" mono plug has only one black line.

The 1/4" TRS (2 black lines) end of the "Y" cable plugs into one of the Q10 inserts.

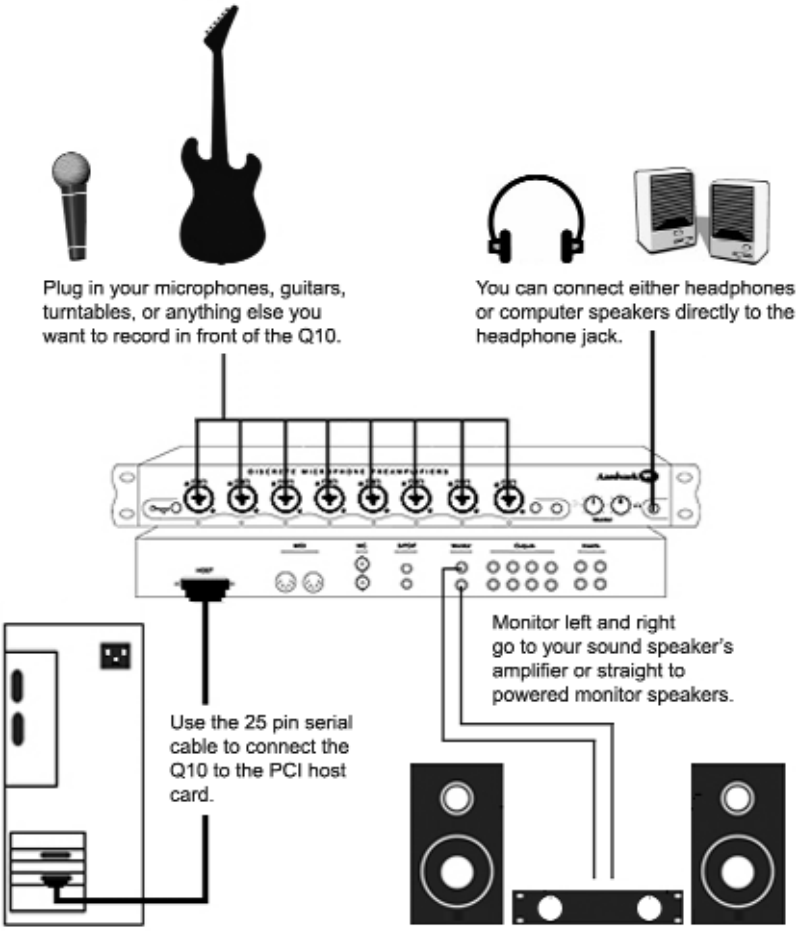
The end of the "Y" cable that corresponds to the "tip" of the 1/4" TRS plug should be plugged into the hardware processor's input.

The end of the "Y" cable that corresponds to the "ring" of the 1/4" TRS plug should be plugged into the hardware processor's output.

☞ NOTE: Each 1/4" insert is both the "send" and the "receive". So only one cable is needed per channel.

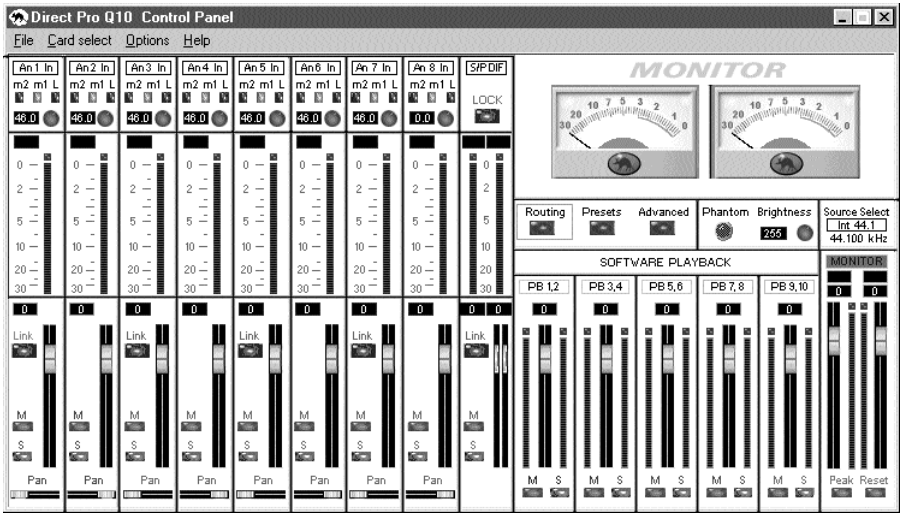
REMEMBER: If an insert is connected to an effect that is not turned on, no signal will pass through that input.

# CONNECTION DIAGRAM



# CONNECTION NOTES

# Q10 CONTROL PANEL




The Q10 control panel is very powerful & easy to master. It may seem a bit complex at first, but it becomes user-friendly rather quickly. The control panel is the cornerstone of the Q10, and provides unparalleled flexibility and power!

All of the knobs and faders on the Q10 control panel are adjusted with the mouse. If you want to fine tune a control with more precision than the mouse allows, first click it with the mouse, then use the arrow keys on your keyboard to fine tune it.

You will find this control panel works just like any analog mixer used for mixing and monitoring, but it also has many cool features that make it easier to use and more powerful.

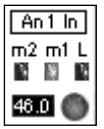
Mac users will notice an additional SKINS menu when running the Q10 control panel. This allows you to change the look of your Q10 panel by applying different graphic skins. If no skins are listed, choose "Browse For Skin". The default location for skins is MAIN HARD DRIVE> APPLICATIONS>AARDVARK CONTROL PANELS>SKINS

INPUT GAIN


At the top of each channel, there are 3 buttons that allow you to provide different levels of gain to the corresponding inputs. Just beneath these buttons is a trim knob, which allows you to fine tune the volume of the incoming signal.

NOTE: Although M1 and M2 are typically used with the XLR inputs, and L is typically used with the 1/4" inputs, these buttons provide gain to both the 1/4" and XLR inputs

From Left to Right:




The M2 button provides the highest amount of gain, anywhere from 52 dB to 75 dB. This is a substantial amount of gain, and should not be necessary for most applications. Unless you are recording a very quiet signal, or the microphone is not very responsive, M2 should rarely be necessary.

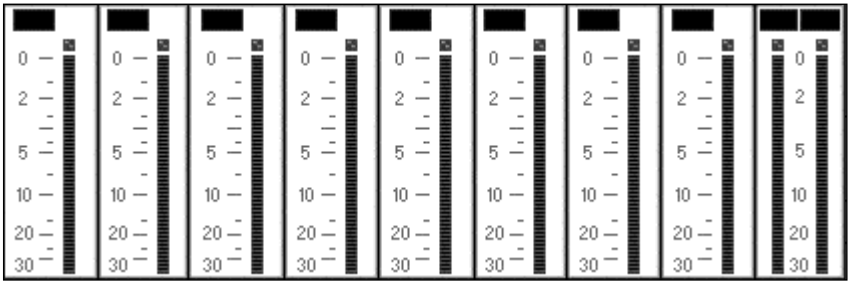
The M1 button provides the second highest level of gain, 32 to 55 dB. This is used for most microphone applications, or for quieter line level devices that require a bit more gain.

The L button provides the lowest amount of gain, and can reduce the volume of the incoming signal as well. It provides up to 15 dB of gain, to –8 dB volume reduction.

The Trim Knob, located beneath these buttons allows you to fine tune the applied gain. Directly to the left of each trim know is a numeric display of how much gain is applied to the signal, measured in dB.

NOTE: All the gain applied with MC2, MC1, L, and the trim knob is done in the analog stage before the A/D converter. This lets you monitor your audio levels and ultimately get better sound.

INPUT METERS

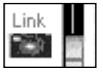



These meters operate two different ways: If you click Advanced, go to the Meters section, and choose Pre-Fader, the meters will respond to the exact dB level of the incoming signal. If you choose Post-Fader in the Meters section, the meter will measure the level of the incoming signal, as well as the gain or attenuation applied to the signal with the channel faders. Because of this, Post-Fader does not accurately measure your recording volume.

Just above each meter is a numeric display that measures the incoming signal in dB.

NOTE: To get the best recording quality, record your incoming signals as loud as you can with out letting them go into the upper red portion of the meters.

Link




The Link button is used to link the controls of channel 1 to channel 2, channel 3 to channel 4, channel 5 to channel 6, and channel 7 to channel 8. This button is used for recording devices with individual left/right outputs, such as a synthesizer or drum machine, and is ideal for stereo mics or mic pairs recording the same source.

You'll notice that if Link is pressed on channel 1, and you adjust the channel 1 volume, channel 2 will change as well.

# INPUT CONTROLS

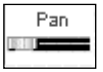
Mute


The Mute button allows you to remove an incoming signal from the monitor mix. You should be aware that Mute does not actually mute the input, and the signal can still be recorded. Mute simply removes the incoming signals from the monitor. This is helpful if you want to record Microphones or other instruments that could potentially feed back.

Solo

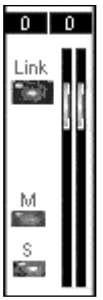

Solo will make the selected channel the only audible channel in the monitor mix, all other inputs, and playback from audio software, will be muted.

Pan




At the bottom of each input is a Pan control. Pan does not affect how an incoming signal is recorded, it only affects the way it is heard in your monitor mix. An example of why Pan is helpful: if you are monitoring with headphones, and recording a guitar with channel 1, it is easiest to hear the guitar in both sides of the headphones, even though you are recording a mono track.

S/PDIF input controls



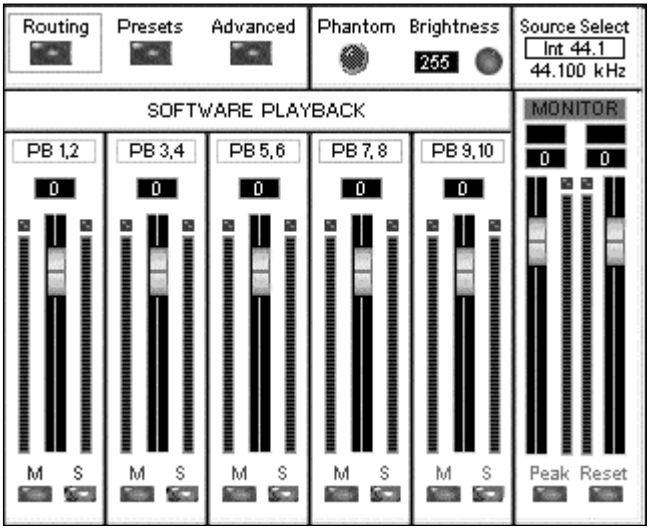

This channel strip allows you to adjust the signals entering the S/PDIF input on the back of the Q10.

On the top of the strip is a LOCK light. This will light if our S/PDIF input is receiving valid S/PDIF.

Directly beneath are the S/PDIF input meters, which measure the dB level of the incoming S/PDIF signal.

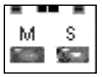
You may notice that the "Link" light for S/PDIF is always lit. This is because S/PDIF is a stereo format.

PLAYBACK CONTROLS



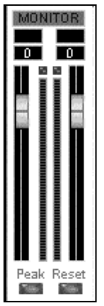

Just to the right of the input controls are five groups of faders to control the output channels. Although it may seem like it, these faders are not hard wired to the hardware outputs on the back of the Q10

These faders are used to boost and cut playback in the monitor mix. You will hear the adjustments of these faders in your headphones, the Monitor L/R outputs, as well as any other output that has been assigned the monitor bus in the Routing section.




Mute (M) & Solo (S)
Mute silences a channel in the monitor mix, while solo will solo an output channel, and will mute all other channels, both input and output.

Monitor




On the far right there are faders labelled MONITOR. This allows you to boost and cut the main monitor mix. These faders typically affect the headphone output and the Monitor L/R outputs. The Monitor fader can affect the other 1/4" outputs if MONITOR L/R is connected to them the Routing menu.

The Peak button, if activated, will take note of the highest volume that has gone through the monitor, measured in dB.

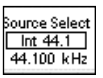
The Reset button will reset the peak volume to zero.


Phantom

If this light is on, it means you have activated Phantom Power, by pressing the Phantom button on the front of the Q10


Brightness

This knob allows you to control the brightness of the appealing Aardvark logo on the front of the Q10. Turn it up high to show off your Q10, or dim it down, to make the Q10 less noticeable in darker studios.

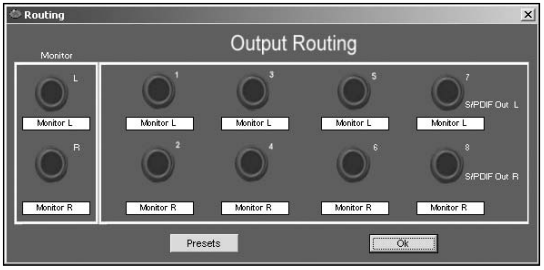



Source Select

This lets you select what sample rate you want to use the Q10 at. You can select internal sample rates of 32kHz, 44.1kHz, 48kHz, 88.2 kHz and 96 kHz. Additional options allow you to slave to Word Clock or S/PDIF. Standard WC is for slaving to word clock at 48 kHz and lower, WC 96 is for slaving to word clock at sample rates higher than 48 kHz, and WC2X is for slaving to word clocks that implement 2X operation to achieve higher sample rates.

☞ NOTE: If you are recording S/PDIF, you must have Source Select set to S/PDIF.

ROUTING




The Routing section allows you to control what signals are sent to each output on the back of the Q10. A picture of the Q10 outputs is provided, with a menu beneath each output. Double click a menu to access a list of signal paths that can be routed to an output.

NOTE: Whatever is routed to outputs 7 & 8 will be routed to the S/PDIF output as well

If Analog Input 1-8 is selected, the output will only monitor the incoming signal of the input assigned to it.

If Playback 1-8 is selected, the output will only monitor playback tracks from audio software routed to that playback channel.

If Monitor L or Monitor R is selected, the output will monitor all playback tracks, and all inputs.

If Tone is selected, the output will generate a 1khz test tone, allowing you to verify your hardware is working.

IMPORTANT: This tone is rather loud. To avoid a nasty surprise, Turn down your speaker volume before assigning tone to an output.

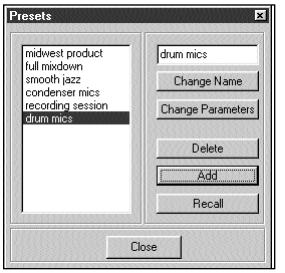
If Silence is selected, nothing but digital silence will come out of the output. This is useful for system calibration and other diagnostics.

NOTE: Most users will have output L, R set to monitor L, R. This is the output of the Control Panel Mixer, and will always be monitoring the 10 physical inputs and the 10 playback channels.

Additionally, it is common to have Outputs 1-8 assigned to playback 1-8 respectively. This directly links these tracks in the recording software to the physical outputs of the Q10 allowing you to send the signals from these outputs to any outboard analog gear for processing or mixing.

PRESETS


The Q10 is very flexible, allowing you to have multiple configurations for different situations. You can load and save these various configurations by using the Presets menu. The Presets menu saves and loads the entire Q10 software configuration, including fader levels, volume, sample rate, -10/+4, and routing settings. It's like taking a "screenshot" of all your settings so you can save and recall them at a later time.




When you open a Presets menu, either for the entire control panel, or for a specific effect, you have the option to load a saved configuration, or save your current settings.

- To save a preset, type a new name in the text box in the upper right, click add, then close the window.
- To recall a preset, double click a name from the box on the left, and it should appear on the upper right, click recall, then close the window.

ADVANCED


Clicking the Advanced button on the Q10 control panel brings up a menu that provides access to additional features.

GENERAL TAB:

Registration: You may be asked for this number if you contact tech support. Other than that, you do not need to be concerned with it.

Issue Warnings On Sample Rate Errors: If activated, the Q10 will provide a warning if you are trying to play an unsupported sample rate, or if your multitrack software is set to a different sample rate than what is set in the SOURCE SELECT of the Q10 Control Panel, or if you are trying to record S/PDIF with out changing SOURCE SELECT to S/PDIF.

Channels 9,10 Recording Source: In your multitrack software, inputs 9,10 are among the available Q10 recording devices. Here, you can choose what inputs 9,10 actually record.

- If S/PDIF is selected, software inputs 9,10 will record the S/PDIF input on the back of the Q10
- If Monitor is selected, software inputs 9,10 will record the full Q10 monitor mix, which consists of all inputs and playback.

METERS:

- If you select Post-Fader, the Q10 input meters to measure the incoming signal and any changes applied to that signal by the channel faders.
- If you select Pre-Fader , the meters will measure the unaltered input signal, which is also the level that your multitrack software records.

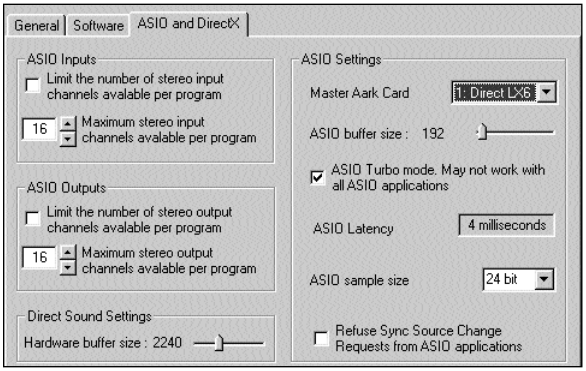
SOFTWARE TAB

This tab lets you know which Q10 input and output channels are currently in use by a software application. Some low-latency programs, especially software synthesizers, will report a device "In use" simply by having the program open, even if it is not playing audio. If a device says IDLE, it simply means that a program is not using that device. It does not mean that inputs or playback are having problems.

OUTPUT LEVELS TAB

This lets you select between -10dBV (unbalanced) or +4dBu (balanced) for the eight 1/4" channel outputs on the back of the Q10. This is not required for the inputs, because the adjustments can be made by using the monitor volume knob.

ASIO AND DIRECTX TAB




Direct Sound Buffer Size: This lets you choose a buffer size for fine tuning performance in DirectSound applications. This does not apply to multitrack software. Direct Sound is most commonly used by software synthesizers, such as Rebirth, Fruityloops, Retro, Reality, and others.

ASIO Configuration: This is for using the Direct Pro with ASIO compatible programs, such as Steinberg Cubase VST, Emagic Logic Audio, and Native Instruments Reaktor. You can choose between 16 bit and 24 bit ASIO operation, as well as the ASIO buffer size. Lowering your ASIO buffer size will reduce the latency in your ASIO software. However, if your ASIO buffers are too low, you may get unwanted clicks and pops in your audio. The ideal ASIO buffer size varies from computer to computer.

ASIO Turbo Mode; works on almost all computers and software, but occasionally it will not. Simply give it a try, if it works, great! If not, don't use it.

NOTE: If ASIO Turbo Mode is enabled, the second to lowest ASIO buffer size is the fastest.

ASIO configuration: Provides the option for selecting a master Aardvark Aark card. This is for when multiple Aardvark cards are on the same computer.

It is also possible in this menu to limit the number of ASIO inputs and outputs a program can see. Some programs, like Logic Audio, use all ASIO inputs and outputs, even if they are not currently in use. Limiting the number of inputs and outputs the program sees allows you to conserve the computer's resources.

Ignore this menu unless you are using an ASIO compatible program. Programs such as Cakewalk, Cool Edit Pro, Vegas, Samplitude, Sound Forge are among the programs that are not ASIO compatible.

# SOFTWARE
# MOTU DIGITAL PERFORMER™ & EMAGIC LOGIC AUDIO™ QUICKSTART

The following guides are not intended to replace the manuals that came with your audio software. Your audio recording software already came with documentation and help menus to help you along. Rather, think of them as a supplement to the documentation that addresses Q10-specific setups.

Unfortunately, the sheer number of available programs makes it difficult to include a guide for each one. If your software of choice is not listed here, it's still safe to assume it works with the Q10.

MAGIX Audio Studio 7 Deluxe

The first time you open the program, you will be prompted to create a new project. Do this, and choose your preferred sample rate and track count.

If the Q10 is properly installed, Magix should automatically see it as an available device, without the need for additional configuration.

Clicking the number for any given track will bring up a window labeled "Track Info", followed by the name of the track. The OUTPUT dropdown menu allows you to select which playback channels the track will play through, and the RECORD DEVICE drop down menu is where you choose what input gets recorded to the track.

For additional instructions in Magix, hit the F1 key to access instructions, help menus and tutorials.

# MOTU DIGITAL PERFORMER™ & EMAGIC LOGIC AUDIO™ QUICKSTART

MOTU DIGITAL PERFORMER (Mac only):

First, be sure you have copied the Aardvark ASIO driver into Digital Performer's ASIO DRIVERS folder. If you are unsure how to do this, please refer to step 10 of the Mac installation instructions on page ((())).

In Digital Performer, go to BASICS | AUDIO SYSTEM, and make sure MOTU AUDIO SYSTEM is selected.

Once you have verified this, go to BASICS | CONFIGURE AUDIO SYSTEM | CONFIGURE HARDWARE DRIVER. In the first dropdown menu, choose ASIO. In the second dropdown menu, choose Aardvark as your ASIO driver.

Please note: If Aardvark is not listed as an available driver, you probably need to copy the Aardvark ASIO driver to Digital Performer's ASIO DRIVERS folder.

"Sample rate" can be set to any supported rate you plan to work with. Keep "Clock Source" set to "Internal" and do not enable the "Override internal buffer size" option.

EMAGIC LOGIC AUDIO (mac only):

Go to AUDIO | AUDIO HARDWARE AND DRIVERS

ASIO should be the only driver type with a checkmark in it. Use the dropdown menu to choose AARDVARK ASIO DRIVER

Please note: If Aardvark is not listed as an available driver, you probably need to copy the Aardvark ASIO driver to Logic's ASIO DRIVERS folder.

STEINBERG CUBASE SX/SL /NUENDO (Mac & PC)

For Mac users, be sure you have copied the Aardvark ASIO driver into Digital Performer's ASIO DRIVERS folder. If you are unsure how to do this, please refer to step 10 of the Mac installation instructions on page ((())).

Open the program and go to the DEVICES menu, then select DEVICE SETUP. Next, select VST MULTITRACK. On the right, you'll see a dropdown menu labeled ASIO DRIVER. Use the dropdown menu to select the Aardvark ASIO driver. There should be no checkmarks in "Release ASIO driver in background" or "Direct Monitoring". All other settings here are a matter of preference, and in most cases, you'll want to stick with the program defaults. Click OK

Go to DEVICES | VST INPUTS, and make sure all Aardvark inputs are enabled.

Mac Users Please note: If Aardvark is not listed as an available driver, you probably need to copy the Aardvark ASIO driver to Cubase/Nuendo's ASIO DRIVERS folder.

STEINBERG WAVELAB (Mac & PC)

Go to OPTIONS | PREFERENCES and select the AUDIO CARD tab.

Set Playback/Record to ASIO AARDVARK CARDS DRIVER

Depending on your setup, the ASIO selection may be worded differently. Just be sure the selection says both ASIO and AARDVARK

CAKEWALK PRO AUDIO (PC only)

Go to OPTIONS | AUDIO | ADVANCED (tab)

Playback and record timing master should be 9,10 Direct Pro Q10

There should be no Checkmark in MONO

Set Buffers in playback Queue to 4 and the Buffer Size slider to the middle (this may be different on some computers, but is appropriate for most users)

All other settings are based on preference

- On the DRIVERS tab

Be sure all Q10 drivers are highlighted, and other drivers non-highlighted

- On the ADVANCED tab

Data and Picture Directory can be set to whatever you prefer, as long as they are not the same directory

Checkmarks SHOULD be in the following boxes:

- Copy and Manage imported files
- Simultaneous record/playback
- Stop on Driver Underrun
- WavePipe Acceleration (if this option is grayed out, then it is already running)
- Unpack >16 Bit audio
- Left Justify Unpacked Data

Checkmarks SHOULD NOT be in the following boxes:

- Enable read caching
- Enable write caching
- Clip Audio Mix Upon Overflow
- Apply Dither

Set I/O buffer size to 128

All other settings based on preference

- On the DEVICE PROFILES tab, no adjustments should be necessary

# CAKEWALK SONAR™ & SONIC FOUNDRY ACID™/VEGAS™ QUICKSTART

How to set up Sonar 3.x:

Go to OPTIONS | AUDIO | ADVANCED (tab). In the "Driver Mode" dropdown menu, select ASIO. Click OK and restart Sonar.

(please note, it is also possible to select MME (32 bit) instead of ASIO. ASIO has provided the best results for most users, but you may want to try both, to see which works best in your setup). If you choose MME (32 bit, set the DRIVER PROFILES to the settings listed for Sonar 2.1 and prior)

Go to OPTIONS | AUDIO | again

On the GENERAL tab:

· Set the playback and record timing master to Channels 9,10 of the Q10.

· Sample Rate bit depth, and other settings on this tab can be set to whatever you prefer

On the ADVANCED tab:

· Do not put checkmarks in ENABLE READ CACHING or ENABLE WRITE CACHING

· Set I/O BUFFER SIZE to 128

· Driver mode should still say ASIO

· All other settings can be set to what you prefer.

On the DRIVERS tab:

· This allows you to select which Aardvark inputs/outputs are seen by SONAR. Unless you plan on using additional audio programs while Sonar is running, simply highlight every Aardvark channel listed.

Click OK, then restart Sonar to complete the setup

# CAKEWALK SONAR™ & SONIC FOUNDRY ACID™/VEGAS™ QUICKSTART

How to set up Sonar 2.2:

Go to OPTIONS | AUDIO | ADVANCED (tab). In the "Driver Mode" dropdown menu, select ASIO. Click OK and restart Sonar.

(please note, it is also possible to select MME (32 bit) instead of ASIO. ASIO has provided the best results for most users, but you may want to try both, to see which works best in your setup). If you choose MME (32 bit, set the DRIVER PROFILES to the settings listed for Sonar 2.1 and prior)

Go to OPTIONS | AUDIO | again

On the GENERAL tab:

· Playback and record timing master should be 9,10 Direct Pro Q10, · Number of Aux Buses, Number of Virtual mains, Sample Rate and bit depth can be set to whatever you prefer

· Some entries on this page will be grayed out. This is normal, there is no need to change these settings.

On the ADVANCED tab:

· Do not put checkmarks in ENABLE READ CACHING or ENABLE WRITE CACHING

· Set I/O BUFFER SIZE to 128

· Driver mode should still say ASIO

· All other settings can be set to what you prefer.

On the INPUT MONITORING tab:

· If you would like to apply Direct X effects on incoming signals, highlight the input channels listed here. If you do not plan on using Direct X effects on the incoming signals, do not select any of these

On the DRIVERS tab:

· This allows you to select which Aardvark inputs/outputs are seen by SONAR. Unless you plan on using additional audio programs while Sonar is running, simply highlight every Aardvark channel listed.

Click OK, then restart Sonar to complete the setup.

# CAKEWALK SONAR™ & SONIC FOUNDRY ACID™/VEGAS™ QUICKSTART

How to set up Sonar, versions 2.1 and prior

Go to OPTIONS | AUDIO | ADVANCED (tab)

Put a checkmark in "Always use MME interface", click OK and restart Sonar.

Return to OPTIONS | AUDIO, and configure in this order:

On the DRIVER PROFILES tab:

· Use the dropdown menu to show the Profile for your Aardvark product. If you have multiple Aardvark interfaces, you must configure this section for each.

· There should be no checkmark in "Access Driver in Mono"

· Stream >16 bit data should be set to 32 bit PCM, left-justified

· Set all DMA buffer sizes to 48.

On the GENERAL tab:

· Playback and Record Timing Master should be (depending on what product you own): 9,10 Direct Pro Q10, 9,10 Aark 24, 5,6 Direct Pro LX6 or 5,6 Direct Pro 24/96

· Aux Bus, Virtual Mains, Sampling rate, Audio Driver and File bit Depth can be whatever you prefer.

· Under Mixing latency, Buffers in playback Queue can be 2 or 4, the best setting depends on your specific setup. Lower the buffer size sliderif you want to reduce latency.

· The wave profiler is not necessary for Aardvark Hardware, and it will change the settings just made on the DRIVER PROFILES tab, so don't use it.

On the ADVANCED tab:

· The Data Directory and Picture Directory must be different directories, regardless of where they are.

· No Checkmarks in Enable Read Caching or Enable write Caching

· A checkmark should be in "Copy and Manage Imported Files"

· A checkmark should still be in "Always use MME interface"

· No checkmark in "Apply Dither"

· No checkmark in "Share Drivers with other programs"

· "Play effect tails after stopping" can be whatever you prefer.

On the INPUT MONITORING tab:

· No Aardvark device should be highlighted, since we already have zero latency hardware monitoring of inputs.

On the DRIVERS tab:

· Make sure all your Aardvark Devices are highlighted

SONIC FOUNDRY VEGAS / ACID (PC Only)

Go to OPTIONS | PREFERENCES and select the AUDIO tab

Under AUDIO DEVICE, select WINDOWS CLASSIC WAVE DRIVER. Or ASIO AARDVARK CARDS. Both will work, choose whichever performs best on your setup.

# SOUND FORGE™, COOL EDIT™ & PROPELLERHEAD REASON™ QUICKSTART

SONIC FOUNDRY SOUND FORGE (PC only)

Go to OPTIONS | PREFERENCES and select the WAVE tab. Use the Dropdown Menus to choose which Q10 inputs and outputs you wish to use.

SYNTRILLIUM COOL EDIT PRO / ADOBE AUDITION(PC only)

Go to OPTIONS | DEVICE ORDER

The following steps are required on both the PLAYBACK DEVICES and RECORD DEVICES tab

If there are any Q10 devices listed on the left, under the "Unused Playback Devices" window, highlight these devices and click USE to send them to the "Multitrack Deivce Preference Order" box on the right.

If there's a particular input/output you want to use in CEPs "edit view" highlight this device and click "Use in EV"

PROPELLERHEAD REASON (Mac & PC)

Go to EDIT | PREFERENCES, and on the PAGE menu, select AUDIO.

Go to the AUDIO CARD Menu, PC users should select the Aardvark ASIO driver, Mac users select the Aardvark Q10 driver.

☞ MAC USERS PLEASE NOTE: If Aardvark is not listed as an available driver, you probably need to copy the Aardvark ASIO driver to Cubase/Nuendo's ASIO DRIVERS folder.

# SOFTWARE
# NEMESYS GIGASTUDIO™, NATIVE INSTRUMENTS & PROPELLERHEAD REASON™ QUICKSTART

NEMESYS GIGASTUDIO™:

Go to the SETTINGS menu

On the Hardware Routing Tab the hardware choice is Aardvark Pro Q10 Multichannel

Sample rate 44.1 (or whatever sample rate you prefer), and bit depth 32

You can enable as many outputs as you wish. Keep in mind, though, that if you plan on using other software at the same time as Gigastudio, they will not be able to use these outputs.

On the Sampler Tab the buffer is set to 1 meg. The optimal buffer size depends a great deal on the computer you are using, though.

NATIVE INSTRUMENTS REAKTOR™, B4™, PRO52™, ETC.


For best performance, be sure that these programs are configured to use ASIO.

For ultra low latency performance, you should also try the "ASIO Turbo Mode" found in the Advanced Tab of the Q10 Control Panel

# FREQUENTLY ASKED QUESTIONS

Presented below are answers to some common questions about the Q10 and soundcards in general that may come up. We'll try to cover as many as possible here.

QUESTION: What kind of cable do I need to use word clock?

ANSWER: Fortunately, most dealers sell cables conveniently named "word clock cable", making it relatively easy to find the proper cable. Sometimes, these cables are referred to as "75 ohm BNC"

QUESTION: What kind of cable do I need to use S/PDIF?

ANSWER: It is possible to buy cables designed for use with S/PDIF, but in most cases, any RCA cable will do. S/PDIF optimized cables are typically unnecessary unless the signal is traveling over 10 feet.

QUESTION: Does the Q10 replace the soundcard that came with my computer?

ANSWER: The Q10 functions differently that a consumer soundcard such as SoundBlaster. If your computer is used strictly for high resolution pro audio, the Q10 will be the only soundcard necessary. If you plan on using the computer for games and other applications with low resolution audio, you'll want an additional consumer soundcard.

QUESTION: How many tracks can I record with the Q10?

ANSWER: The amount of tracks you can record with the Q10 depends on the audio software you use, and how powerful your computer is. The only limitation of the Q10 is that 10 (8 analog and 2 digital) tracks can be recorded simultaneously.

The total number of tracks available depends on a number of factors. Bit depth, sample rate, (higher ones mean less tracks), installed RAM, hard drive speed and processor speed, are among the most significant.

# FREQUENTLY ASKED QUESTIONS

QUESTION: Can I put multiple Q10 units in the same computer, or can I use the Q10 with another Aardvark card?

ANSWER: Up to four (4) Aardvark products, Q10 or otherwise, can be used in the same computer. In order for them to be synchronized, you must choose one of the cards as the master, and the other cards as slaves. Use the WC I/O on the Q10 to lock multiple units together.

QUESTION: When I have multiple cards on the same system, how does the Aardvark control panel recognize them?

ANSWER: Each card has its own control panel. When multiple Q10s, or other Aardvark cards are on the same system, a "card select" menu will be available in your control panel software to select which control panel you want to configure.

QUESTION: Can I potentially damage non-powered microphones by using the phantom power?

ANSWER: Your microphones will not be damaged. Phantom power is designed to go to only microphones that need it.

QUESTION: Is the Direct Pro Q10 full duplex (can it record audio while playing previously recorded tracks back)?

ANSWER: Yes, the Direct Pro Q10 is a full duplex device.

QUESTION: What is the Latency of the Direct Pro Q10?

ANSWER: This is not as simple a question as it seems. There are different types of latency that can occur on a system, and latency itself can vary a great deal depending on what audio software is used, and how powerful the computer is. Here is a simple breakdown of the different latencies you need to be concerned with.

- Monitoring Latency: This is the ability to listen to the incoming signal through the outputs of the Q10, and overdub tracks so they are in sync with one another. The Q10 provides zero Monitoring latency.
- Mixing Latency: Mixing latency refers to how long it takes for audio software to respond to commands such as volume changes, and transport controls. In ASIO programs such as Cubase, it can get as low as 4ms. Non-ASIO programs may experience anywhere from 50 to 300ms latency.
- SoftSynth Latency: This refers to the time it takes for a software synthesizer to respond to an incoming MIDI command, such as pressing the key on a controller keyboard. Most Software Synthesizers are ASIO compatible, so you're likely to encounter 4ms to 12ms latency on a decent machine. Many factors, in addition to obvious ones such as processor speed and memory, determine how low latency can go.

QUESTION: I have a SoundBlaster™ (or similar) sound card. Can I keep this on my computer if I install the Q10?

ANSWER: Yes, the Q10 will co-exist with SoundBlaster™ and other consumer sound cards.

PROBLEM: My inputs/outputs don't seem to be working.

SOLUTION: With all of the variables involved with audio software and instruments, its tough to figure out what is at fault if something is not working correctly.

Here's a way to test your inputs and outputs simultaneously:

First, go to ROUTING and assign Tone to all the Q10 outputs.

Next, with 1/4" cables, plug the Q10 output 1 into input 1, output 2 into input 2, output 3 into input 3, etc.

Doing this generates a tone from the Q10 1/4" outputs, that will be picked up by the Q10 inputs.

You can find out if the inputs see the tone by checking the input meters at the bottom of each input channel.

If you are short on cables, you do not need to test all eight inputs at the same time.

PROBLEM: The Q10 is not coming through your "Computer Speakers"

SOLUTION: In order to hear the Q10, you need to have speakers or headphones plugged into output(s) on the Q10 breakout box. If your speaker are plugged into something other than the Q10, you won't be able to hear it, due to them being plugged into something other than the Q10

Note: if the only available speakers happen to be "computer speakers" with a single 1/8" connection, you can still use these with the Q10. Use a 1/8" to 1/4" adapter to connect the speakers to the Q10 headphone jack.

PROBLEM: Some combination of inputs 1-4 are not working

SOLUTION: Most often, this is due to miswiring of the channel inserts in back. Remove cables from all inserts, and the inputs will probably work.

PROBLEM: When Windows starts, the opening sound does not sound the way I'm accustomed to hearing it

SOLUTION: The Q10 is optimized for professional, high-resolution audio recording and playback. Most Windows system sounds are low resolution. On PCs intended for pro audio use, it's best to disable Windows system sounds anyway.

To disable system sounds, go to the Windows Control Panel, and select "Sounds & Audio devices" (in some versions of windows, this menu may be called "Sounds & Multimedia" or "sounds") Go to the SOUNDS tab, and under schemes, select "no sounds" Be sure it actually says "No Sounds", as opposed to being blank.

PROBLEM: I'm not sure that my S/PDIF input/output is working

SOLUTION: Here is a simply way to verify your S/PDIF works.

On the back of the Q10 breakout box, connect the Q10 S/PDIF input to the Q10 S/PDIF output to create a loop. In the Q10 control panel, SOURCE SELECT can be set to anything that begins with INT.

Go to ROUTING, and assign TONE to output 7-S/PDIF L and output 8-S/PDIF R. Click OK to exit ROUTING.

If S/PDIF is working properly, the input meters should register around -12 dB.

PROBLEM: I can't hear audio CDs through the Q10.

SOLUTION: If you are a mac user, you will be unable to listen to audio CDs through the Q10, as the Q10 is an ASIO-only device

In Windows 2000/XP, be sure your CD-ROM drive is configured to support digital audio playback. Here's how:

Go to the Windows Control Panel, select SYSTEM, go to the HARDWARE tab, click DEVICE MANAGER.

Open the DVD/CD-ROM drives branch, then double-click the drive you plan to play CDs through.

Go to the PROPERTIES tab, and be sure a checkmark is in "Enable digital CD audio for this CD-ROM device". If this box is grayed out, then your CD-ROM does not support this feature, and is unable to play CDs through the Q10.

PROBLEM: I can't hear my MIDI device through the Q10

SOLUTION: Be sure the audio outputs of your MIDI device are attached to the Q10 MIDI inputs. Although MIDI is capable of transferring data, it is unable to transmit audio.

NOTE: If you are using a MIDI device to trigger a virtual instrument or softsynth, then there's no need to attach the audio outputs

PROBLEM: There are clicks & pops in my audio

SOLUTION: If your software uses ASIO (Cubase, Sonar, etc), you may need to boost the ASIO buffer size. To do this, go to the Q10 control panel, click ADVANCED, go to the ASIO and DIRECTX tab, and use the slider to boost the ASIO buffer.

Also, your hard drive(s) may not be functioning at the proper speed. Even if a drive has excellent specs, there may be a system bottleneck preventing the drive from running at the speed it is capable of. There are several programs on the market capable of testing hard disk speed. One of our favorites is called Fresh Diagnose, and can be found at http://www.freshdevices.com/freshdiag.html This program will benchmark your drive, revealing what speed the drive is actually performing at. A drive should read and write at a minimum of 15 MB/sec. to work well with audio.

Also, some computers using Via or Sis chipsets have poor PCI bus throughput, which could result in clicks and pops, especially at lower buffer sizes. To determine what chipset you have, consult the documentation supplied with your motherboard and/or computer.

PROBLEM: I'm a Macintosh user, and the Q10 does not appear in Sound Manager

SOLUTION: This is normal, as the Q10 Macintosh driver supports ASIO only.

PROBLEM: I can't see the pan controls on the bottom of the Q10 control panel.

SOLUTION: You need to increase the screen size your monitor accepts. Go to the Windows control panel and select DISPLAY. Then, select the SETTINGS tab. Your SCREEN AREA should be set to 800 x 600 pixels or larger. Otherwise, you will not be able to see the entire Direct Pro control panel.

PROBLEM: I can't load a PRESET.

SOLUTION: Once you have selected the preset you want to load, be sure you click RECALL before returning to the Q10 control panel.

PROBLEM: My input meters are responding, but I don't hear anything from the outputs

SOLUTION: Be sure the volume knob on the front is up, and you have MONITOR L,R assigned to the output you are listening through.

PROBLEM: The Q10 display does not look right

SOLUTION: You may need to increase the screen size your monitor accepts, and the color scheme it uses. Go to the Windows control panel and select DISPLAY. Then, select the SETTINGS tab. Your SCREEN AREA should be set to 800 x 600 pixels or larger. Colors should be set to "High Color (16bit)" or more.

PROBLEM: The Audio software I am using says that the Q10 does not support 24 bit

SOLUTION: There are several ways for a program to interpret 24 bit audio data. The Q10 does this by left justifying 24 bit data in a 32 bit word. In some audio programs, you will have to specify this particular 24 bit format in order for it to work. Depending on the program, it may also be referred to as "24 bit unpacked", "24 bit left-justified" or "24 bit alternate".

PROBLEM: I am recording an instrument/microphone, and it's only coming out of one side when it plays back

SOLUTION: Keep in mind that each input of the Q10 is mono. In order to record a stereo signal, you must record two inputs at the same time. It is also possible to record a mono track, then send it to the left and right channels in equal amounts.

PROBLEM: I can't record S/PDIF.

SOLUTION: In order to record S/PDIF, be sure that you have instructed your recording software to use inputs 9,10. In addition, you must go to the ADVANCED menu of the Q10 control panel, and verify that the Channels 9,10 recording source is set to S/PDIF. Finally, you should make sure that the Q10 Source Select is set to S/PDIF.

PROBLEM: The Q10 sync selection keeps switching to 32kHz.

SOLUTION: This is usually due to Windows attempting to play a 32 kHz system sound through the Q10. It's best to simply disable system sounds. You can do this by going to START | SETTINGS | CONTROL PANEL, select SOUNDS

CAKEWALK PRO AUDIO™

PROBLEM: Cakewalk Says the Q10 does not support 24 bit

SOLUTION: Go to OPTIONS | AUDIO | ADVANCED (tab) and make sure there are checkmarks in "Left Justify Unpacked data" and "Unpack >16bit audio"

PROBLEM: I'm unable to hear the Demos/Tutorials included with Cakewalk.

SOLUTION: The majority of Cakewalk's demos and tutorials have MIDI data, but do not contain any audio. In order to hear a Cakewalk project through the Q10, the project must include audio. The cakewalk demo "Don't matter-Audio and MIDI demo" can be heard through the Q10.

PROBLEM: I'm trying to record a stereo track, but when I play it back, it only comes out on one side.

SOLUTION: This will happen if you're try to record one input to a track, but the track is configured to record in Stereo. If you are only recording one input, you are recording a mono track. To record in stereo, you need to record two inputs, one for the left and one for the right.

A mono track can still be present in the left and right speakers, however. If you choose the proper SOURCE for your track, you'll be able to pan it anywhere in the stereo image.

- To record Input 1 to a track, choose "Left 1,2 Direct Pro Q10" as the SOURCE
- To record Input 2 to a track, choose "Right 1,2 Direct Pro Q10" as the SOURCE
- To record Input 3 to a track, choose "Left 3,4 Direct Pro Q10" as the SOURCE
- To record Input 4 to a track, choose "Right 3,4 Direct Pro Q10" as the SOURCE
- To record Input 5 to a track, choose "Left 5,6 Direct Pro Q10" as the SOURCE
- To record Input 6 to a track, choose "Right 5,6 Direct Pro Q10" as the SOURCE
- To record Input 7 to a track, choose "Left 7,8 Direct Pro Q10" as the SOURCE
- To record Input 8 to a track, choose "Right 7,8 Direct Pro Q10" as the SOURCE
- To record Input 9 to a track, choose "Left 9,10 Direct Pro Q10" as the SOURCE
- To record Input 10 to a track, choose "Right 9,10 Direct Pro Q10" as the SOURCE

Keep in mind that choosing Left or Right as the SOURCE does not force the track to be stuck on the left or right side of the mix.

SONAR™

PROBLEM: My Q10 is not recognized as an available device in Sonar

SOLUTION: In Sonar, go to OPTIONS | AUDIO and select the DRIVERS tab. Make sure all Q10 inputs and outputs are selected here.

If the Q10 inputs/outputs are not listed here, go to the ADVANCED tab. The next step is different, depending on what version of Sonar is running.

If you are on 2.2 or newer: Make sure DRIVER TYPE is set to ASIO

If you are on a version earlier than 2.2, make sure there is a checkmark in "Always Use MME, even when WDM is available"

PROBLEM: When recording in Sonar, the input is echoing.

SOLUTION: This will occur if Sonar is configured to use input monitoring. To prevent this echo, go to the Q10 control panel and mute the input you're trying to record. Once muted, you will still be able to hear & record the input, but the echo will no longer be present.

PROBLEM: A message appears in Sonar claiming the Q10 does not support 24 bit audio.

SOLUTION: If you are on 2.2 or newer: Go to the Q10 control panel, select ADVANCED, then the ASIO and DIRECT X tab. Make sure the ASIO SAMPLE SIZE is set to 24 bit.

If you are on a version earlier than 2.2: In Sonar, go to OPTIONS | AUDIO | DRIVER PROFILES (tab). Make sure "Stream >16 bit data" is set to "32 bit PCM, left justified"

PROBLEM: Sonar does not see all of the Q10s outputs.

SOLUTION: First, make sure that all Q10 outputs are enabled in OPTIONS | AUDIO | DRIVERS (tab). After verifying this, go to the GENERAL tab, and set the number of virtual mains to 5.

PROBLEM: I'm trying to record a stereo track, but when I play it back, it only comes out on one side.

SOLUTION: This will happen if you're try to record one input to a track, but the track is configured to record in Stereo. If you are only recording one input, you are recording a mono track. To record in stereo, you need to record two inputs, one for the left and one for the right.

A mono track can still be present in the left and right speakers, however. If you choose the proper SOURCE for your track, you'll be able to pan it anywhere in the stereo image.

- To record Input 1 to a track, choose "Left ASIO Aardvark Cards Driver 1 1 Direct Pro Q10" as the track input
- To record Input 2 to a track, choose "Right ASIO Aardvark Cards Driver 1 1 Direct Pro Q10" as the track input
- To record Input 3 to a track, choose "Left ASIO Aardvark Cards Driver 3 3 Direct Pro Q10" as the track input
- To record Input 4 to a track, choose "Right ASIO Aardvark Cards Driver 3 3 Direct Pro Q10" as the track input
- To record Input 5 to a track, choose "Left ASIO Aardvark Cards Driver 5 5 Direct Pro Q10" as the track input
- To record Input 6 to a track, choose "Right ASIO Aardvark Cards Driver 5 5 Direct Pro Q10" as the track input
- To record Input 7 to a track, choose "Left ASIO Aardvark Cards Driver 7 7 Direct Pro Q10" as the track input
- To record Input 8 to a track, choose "Right ASIO Aardvark Cards Driver 7 7 Direct Pro Q10" as the track input
- To record Input 9 to a track, choose "Left ASIO Aardvark Cards Driver 9 9 Direct Pro Q10" as the track input
- To record Input 10 to a track, choose "Right ASIO Aardvark Cards Driver 9 9 Direct Pro Q10" as the track input

Keep in mind that choosing Left or Right as the input does not force the track to be stuck on the left or right side of the mix.

CUBASE™ SX/SL & NUENDO™

PROBLEM: If you select the Q10 control panel or another program while playing audio, the program stops playing.

SOLUTION: Go to DEVICES | DEVICE SETUP | select VST MULTITRACK. Make sure there is no checkmark in RELEASE ASIO DRIVER IN BACKGROUND

PROBLEM: A message appears in claiming the Q10 does not support 24 bit audio.

SOLUTION: Go to the Q10 control panel, select ADVANCED, then the ASIO and DIRECT X tab. Make sure the ASIO SAMPLE SIZE is set to 24 bit.

PROBLEM: Tracks are playing faster/slower than they are supposed to

SOLUTION: Be sure the sample rate for your project matches the sample rate on the Q10. A sample rate mismatch can make audio play at the incorrect speed and pitch.

PROBLEM: The program does not see every Q10 input

SOLUTION: Go to DEVICES | VST INPUTS, and make sure all Q10 inputs are enabled

WAVELAB™

PROBLEM: Wavelab does not allow 24 bit recording

SOLUTION: Wavelab supports two 24 bit formats, "24 bit" and "24 bit alt" To use 24 bit with the Q10, you need to choose " 24 bit alt"

REASON™ / REAKTOR™
AMD SIMILAR SOFT SYNTHS:

PROBLEM: There are clicks & Pops in playback

SOLUTION: First, be sure the program is configured to use ASIO, as opposed to DirectSound or other driver models.

You may need to boost the ASIO buffer size. To do this, go to the Q10 control panel, click ADVANCED, go to the ASIO and DIRECTX tab, and use the slider to boost the ASIO buffer

# Q10 ADDENDUM
# CONFIGURING WINDOWS FOR AUDIO

The following are basic steps you can take to optimize windows for use with the Q10.

- Disable windows system sounds: Sounds such as the "ding" when a window appears, or the chimes that play when windows boots are example of windows system sounds. The majority of these sounds are encoded at low resolutions inappropriate for use with the Q10. In addition, they can potentially disrupt a recording session. To disable system sounds, go to the Windows Control Panel, and select "Sounds & Audio devices" (in some versions of windows, this menu may be called "Sounds & Multimedia" or "sounds") Go to the SOUNDS tab, and under schemes, select "no sounds" Be sure it actually says "No Sounds", as opposed to being blank.
- Pull extraneous programs from startup: Without you knowing, Windows may have several programs configured to automatically start & run in the background. These programs eat up valuable computer resources, and may conflict with Pro Audio software. To remove programs from startup, go to START | RUN. In the OPEN: dialog, type MSCONFIG and click OK. This will take you to the system configuration utility. Go to the STARTUP tab, and remove checkmarks from all entries. However, if you are on Windows 98/ME, keep the checkmark in "Scan Registry". Removing checkmarks from these entries will not remove the programs altogether, it simply stops them from running in the background at all times. You can still use the programs when needed. As practical as it may seem to keep utility programs such as Norton in startup, these sort of programs tend to be the most disruptive on pro audio PCs. After using MSCONFIG for the first time the rebooting, windows will inform you that the System Configuration Utility is in use. Instruct Windows to "not show this message again" and proceed. Note: Windows 2000 does not come with an MSCONFIG utility, but it is available as a free download. Online, use a search engine to look up "msconfig2k" to find several sites hosting this program.

- Create alternate hardware profiles for audio use and standard computer use: This is performed differently depending on the version of windows installed. Consult your Windows documentation for exact steps on how to do this. When you create multiple hardware profiles in Windows, you will be asked which profile you want to use every time you boot the computer. After creating a new device profile for the Q10, you can access device manager and disable any device you don't use while working with audio. Although the Q10 is quite good at coexisting with other devices, disabling Network Adapters, Modems, Consumer Soundcards, etc will help free up resources for audio, and reduce the chances of unwanted interruptions.
- In Windows XP, reduce video priorities: Windows XP is a graphics heavy OS, but these graphics use resources that are better off allocated to Audio software. Go to the windows control panel, select SYSTEM, and select the ADVANCED tab. Under PERFORMANCE, click SETTINGS. Select "Adjust for best performance".

# Q10 ADDENDUM
# USING MULTIPLE Q10s

Up to four Aardvark cards can be used on the same computer. Each unit requires its own PCI card and Breakout box. After installing additional Q10s, your recording software will automatically recognize additional inputs and outputs available for use. When multiple Q10s are installed on the PC, the CARD SELECT menu in the Q10 control panel allows you to switch between control panels for Q10 #1, Q10 #2, etc.

☛ Note: If you are unsure which Q10 is #1, #2, etc. here is a very simple way to find out: go to CARD SELECT, and choose any Q10 #1. Then, toggle the BRIGHTNESS knob, found on the right side of the Q10 control panel. While turning the BRIGHTNESS knob, take a look at the Aardvark light on each Q10 breakout box. The light on Q10 #1 will brighten/dim in as you turn the knob.

Once you have confirmed which Q10 is #1, #2, etc, here's how to set them up for simultaneous use.

IF YOU HAVE 2 Q10s:

There are several ways to go about this, but the following is the most common: In this setup, you should have your monitors/headphones connected to Q10 #2. You will be able to hear both Q10 units through Q10 #2

Q10 #1
BOX- connect the S/PDIF out to the S/PDIF in of Q10 #2,
In the panel for Q10 #1, set "source select" the sample rate you intend to use

Q10#2
This is the box you will monitor through, connect your speakers/headphones to this box)
BOX- all necessary wiring was done in the prior steps
In the panel for Q10 #2, set "source select" to S/PDIF.

# USING MULTIPLE Q10s

IF YOU HAVE 3 Q10s:

Q10 #1
BOX- connect the S/PDIF out to the S/PDIF in of Q10 #2, and connect the Word Clock In to the Word Clock Out of Q10 #2
In the panel for Q10 #1, set "source select" to WC

Q10#2
BOX- it should already have two cables connected to box one. In addition, connect the S/PDIF out to the S/PDIF in of BOX #3
In the panel for Q10 #2, set "source select" to whatever sample rate you intend to record with.

Q10#3
(This is the box you will monitor through, connect your speakers/headphones to this box)
BOX- all necessary wiring was done in the prior steps
In the panel for Q10 #3, set "source select" to S/PDIF.

IF YOU HAVE 4 Q10s:

Q10 #1
BOX- connect the S/PDIF out to the S/PDIF in of Q10 #2, and connect the Word Clock In to the Word clock out of Q10 #2
In the panel for Q10 #1, set "source select" to WC

Q10#2
BOX- it should already have two cables connected to box one. In addition, connect the S/PDIF out to the S/PDIF in of BOX #3
In the panel for Q10 #2, set "source select" to whatever sample rate you intend to record with.

Q10#3
BOX- Connect the S/PDIF out to the S/PDIF in of Box #4
In the panel for Q10 #3, set "source select" to S/PDIF.

Q10#4
(This is the box you will monitor through, connect your speakers/headphones to this box)
BOX-Connect the Word clock output of Box #3 to The Word clock input of Box #4
In the Panel for Q10 #4, set "source select to WC