VX222 *v2*

Professional Stereo Sound Card

User's manual

Digigram

**For technical support,
please contact your local distributor.**

list available at

www.digigram.com

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VX222*v2*
User's Manual

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INFORMATION FOR THE USER

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.

This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions contained in this data sheet, may cause harmful interference to radio and television communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
* reorient or relocate the receiving antenna
* increase the separation between the equipment and the receiver
* connect the equipment into an outlet on a circuit different from that of the receiver
* consult the dealer or an experienced audio television technician.

NOTE: *Connecting this device to peripheral devices that do not comply with CLASS B requirements or using an unshielded peripheral data cable could also result in harmful interference to radio or television reception. The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. To ensure that the use of this product does not contribute to interference, it is necessary to use shielded I/O cables.*

IMPORTANT NOTICE

This card has been tested and found to comply with the following standards:
• International: CISPR22 Class B
• Europe: EMC 89/336/CEE (1992) specifications
• United States: FCC Rules-Part 15-Class B (digital device)

In order to guarantee compliance with the above standards in an installation, the following must be done:
• the provided cable must not be modified
• additional cables used must have their respective shield connected to each extremity

CONTENTS OF THIS PACKAGE

Thank you for purchasing a Digigram VX222$_{v2}$ card.
The package consists of the following components:

* the VX222$_{v2}$ sound card,
* two breakout cables (analog and digital)**
* a CD-Rom with drivers, installation notices, FAQs, etc…**
* the registration card**
* this User's Manual

**These items are not delivered with the OEM version*

We invite you to return the completed registration card to be informed in case of new driver releases.

Feel free to visit our web site **www.digigram.com** to download the latest driver release**, to get more technical information, consult FAQs, and discover our complete and updated audio product line!

* *in case you use an application developed by a Digigram partner, make sure that the driver provided for download has been approved by your application supplier!*

FEATURES

VX222$_{v2}$ is an audio card for PCI bus. It is 'Universal PCI 32-bit/33 MHz', which means it can be plugged in 5 V PCI slots as well as in 3.3 V keyed PCI slots. The cards are also compatible with PCI-X interfaces.

Main hardware features

- 2 balanced analog mono line inputs
  Maximum input level selectable by means of the jumper on the card:
  +22 dBu (jumper ON)
  +10 dBu (jumper OFF)
- 2 servo-balanced* analog mono line outputs, with software programmable analog and digital gain
  Maximum output level: +22 dBu
- 1 digital AES/EBU** stereo input
  The selection of the digital input for recording excludes the selection of the analog inputs.

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* *electronically servo-balanced outputs provide automatic level adjustment to accommodate either balanced or unbalanced lines*

** *can be used as S/PDIF interface as well*

It is possible to use the signal on the digital input as reference sampling clock for recording / playback on the analog I/Os.

- 1 digital AES/EBU** stereo output
  Always plays the digital version of the analog outputs 1 and 2.
- 1 mini jack headphone stereo output
  This output is in parallel of the analog outputs 1 and 2.
- 2 general purpose inputs and 2 outputs (GPIO).
- Inter-card synchronization connector.
  If this connector is not used, synchro switches must be ON.
  If it is used, one of the connected cards must have the synchro switches ON, all the other linked cards must have the switches OFF.

HARDWARE REQUIREMENTS

- One free PCI slot (5 V or 3.3 V)
- Minimum Apple Macintosh configuration:
  PowerMac G3, G4 or G5 with 128 MB RAM.
- Minimum PC configuration:
  Pentium III (or equivalent), 128 MB RAM.

SOFTWARE REQUIREMENTS

The VX222*v2* requires installation of the drivers included in VX kit 5.0 or higher. Certain applications designed by Digigram partners may require some particular driver, such as np Runtime 6.01 or higher. For more information, please contact your software vendor.

Supported operating systems

Mac OS 10.1 and higher

Windows 98 SE, Windows ME, Windows 2000, XP•, and Windows Server 2003•

** *can be used as S/PDIF interface as well*

• *32-bit version*

Drivers

The table underneath shows the drivers of the VX kit available for each supported operating system.

	Wave	DirectSound	ASIO2	Core Audio
Windows 98 SE & ME	Yes	No	Yes	No
Windows 2000	Yes	Yes	Yes	No
Windows XP[*]	Yes	Yes	Yes	No
Windows Server 2003[*]	Yes	Yes	Yes	No
Mac OS X	No	No	No	Yes

Note: *"MME driver" is sometimes mentioned on software requirement charts. It refers to as "Wave".*

"DirectX driver" is sometimes mentioned on software requirement charts. It refers to as "DirectSound".

HARDWARE INSTALLATION

The card has to be installed in the computer prior to installing its driver.

Installing the card

Turn off the computer and disconnect its power cord. Open the computer and position it so that you may easily access its PCI slots. Smoothly insert the card into a free PCI slot. Press it down to position it firmly. Tighten the screw, close the computer, connect the power cord and start the computer.

Interrupt and memory address

Hardware interrupt and addresses are automatically set up at start-up by the PCI PnP BIOS.

SOFTWARE INSTALLATION

Please visit the Digigram web site at **www.digigram.com** for the most recent driver.

In case you run a specific application developed or installed by a Digigram partner, it might require the use of a specific driver version. In this case, make sure that the updated driver has been approved by your supplier.

Under Windows 9x, the driver is a *Wave* driver.

Under Windows 2000, XP[*], and Server 2003[*], the driver is *DirectSound*. In addition, a Wave driver is available, its installation is optional.

Under Mac OS X, the driver is a *Core Audio* driver

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[*] *32-bit version*

Installation under Mac OS X

- Switch off your Mac, and plug the VX222v2 in a free PCI slot.
- Restart the machine.
- Double click on the installation file included on the VX CDROM or downloaded from the Digigram web site. This creates the VX Driver volume on the desktop.
- Double click on the VXDriver volume icon.
- A window appears with the following items:
  1- Read me first
  2- Install VX Control
  3- Install the driver
  4- Uninstall
- Read the read me first document.
- Copy the VX Control to the desktop or to any location in your disk.
- In the 'Install VX Driver section', choose VX222v2.
- Double click on the driver package '*VX222v2driver x-y-z.pkg*'.
- Give a login/password that has administrator rights.
- The installation session opens.
- Click **Continue** in the welcome window.
- Click **Continue** in the '*readme*' window.
- Select the disk you boot OS X from as destination drive; click **Continue**.
- Click Install.
- Click Continue Installation.
- Restart the Mac.

Removing the VX driver for Mac OS X

- Open the VX Driver volume.
- In item "4 - Uninstall", run the uninstaller.
- Click on the "list installed packages" icon.
- Select the VX222v2Driver x-y-z.pkg package.
- Select the "remove selected package icon" (red cross).
- Give a login/password with administrator rights, and click **Ok**.
- Click on **Ok**, in the alert window.
- Restart the computer.

Updating the VX driver for Mac OS X

Just install the new version as described above to overwrite the previous version installed.

Installation under Windows 98 SE and Millennium

If the driver has been downloaded from our web site, it has to be expanded prior to the driver's installation as follows. Double-click on the downloaded file (self-expanding). You can use the default destination location (Windows temporary folder) or select another directory.

- Turn off the computer and insert the card.
- Restart the computer.
- The wizard will detect the card when it is inserted, and prompt for a new driver.
- Click **Next** to start the driver installation.
- Select Display **a list of all the drivers**… to select a specific driver and click **Next**.
- Select the **<Sound, video and game controllers>** category and click **Next**.
- Click on the **Have Disk** button.
- Browse to the drive where the installation files are located (on the CD-Rom or in the update's extracting destination folder) and click **OK**.
- The wizard displays the suitable driver. Click **OK** to continue.
- Click on the **Next** button to start copying the driver files.
- Click on the **Finish** button to complete the driver installation.

The registry database is updated so that the ASIO compliant programs show the Digigram VX ASIO driver in the list of available ASIO drivers. To take full advantage of your VX222*v2*, select the Digigram VX ASIO driver from the application program's specific audio I/O settings.

Removing the driver under Windows 98 SE and Millennium

To remove the VX driver, make sure the card is present before starting the following procedure:

- Go to **<Start> <Settings> <Control panel> <Add/Remove Programs>**.
- Select the '**Digigram VX Kit …**' and remove it.
- Follow the instructions of the InstallShield wizard.

Updating the driver under Windows 98 SE and Millennium

- Go to **<Start> <Settings> <Control panel> <System>**.
- Select the Device **Manager** tab.
- Open the Sound, video and game controllers category.
- Select the 'Digigram VX222*v2*' item.
- Click on the **Properties** button.
- Select the **Driver** tab.
- Click on the **Update driver** button.
- Click **Next**.
- Select **Display a list of all the drivers…** to select a specific driver and click **Next**.
- Click on the **Have Disk** button.
- Browse to the folder where the installation files are located and click **OK**.
- The wizard displays the proper driver. Click **OK** to continue.
- Click on the **Next** button to start copying the driver files.
- Click on the **Finish** button to complete the driver installation. Reboot is not necessary.

Installation under Windows 2000, XP, and Windows Server 2003

- Turn off the computer and insert the card.
- Restart the computer. Windows Plug and Play wizard will detect it and request for a driver.
- Click on **Cancel** to close the Windows Plug and Play wizard.
- Insert the VX kit CD-ROM. The welcome page opens automatically in your web browser. Go to your soundcard's driver page and click on the link of the Windows 2000/XP/Server 2003 version.
- If you have downloaded the driver package from the web, double-click on the downloaded file (self-extracting). Select the temporary location where to expand the files, and click on **Start**. Click on **Ok** in the **Finished** window. The installation program is then automatically started.
- Otherwise double-click on *setup.exe* to start the installation program.
- Click on **Next**.
- Read the License agreement and click on **Yes** to confirm.

- Select the components to install. Select **Wave** if you want to install the Wave driver in addition to the DirectSound driver. Click on **Next**.
- Under XP and Server 2003, select **Continue anyway** when the following message is displayed:
  "*The software has not passed Windows Logo testing*".
  If you have chosen to install the Wave driver, this message will appear a second time. Select again **Continue anyway.**
- Click on **Finish**.

  The DirectSound, ASIO, (and Wave if selected) drivers are now installed.

Removing the VX driver under Windows 2000, XP, and Windows Server 2003

- Go to <Start> <Settings> <Control panel> <Add/Remove Programs>.
- Select the '**Digigram VX Kit …**' and remove it.
- Follow the instructions of the InstallShield wizard.

Updating the VX driver under Windows 2000, XP, and Windows Server 2003

- Remove the driver as described above.
- Run the installation program of the new driver, as described above.

Note: *If you have done an installation without selecting the Wave driver, and you now want to install it, it is necessary to remove the (DirectSound) driver, and then re-install it.*

HOW TO CHECK THE INSTALLATION

Under Windows

Once the driver and the cards are installed according to the procedure described in this manual, you can verify that the card is properly installed and works fine as follows:

- Go to *<Start> <Programs> <Digigram>* and select *Digigram Control Center*.
- In the **Digigram drivers** window, select the **General Information** tab. In the **Modules Information** window the installed VX Kit modules are displayed along with their versions.
- In the **Digigram drivers** window, select the **VX Setup** tab for a list oft the installed cards. Each card is represented by an icon.
- Click on the 'Windows Multimedia properties' button to open the 'Sound & Multimedia properties' window. Select the Audio tab.
- The card devices are listed:
  - *VX222*v2 *Out #1* in *Sound playback, Preferred device*. This is a Wave device.
  - *VX222*v2 *In #1* in *Sound recording, Preferred device*. This is a Wave device.
  - *VX222*v2 *Audio Card (WDM)* in both *Playback* and *Recording, preferred device*. This is a *DirectSound* device.

In case the card is not displayed:

- make sure that the card is correctly inserted in the PCI slot, and screwed on the PC chassis.
- if necessary, uninstall the VX Kit package as described in this manual, and re-install it.

Under Mac OS X

Once the driver and the card are installed, the card is listed in the **VX Control** panel, the **Sound** panel, and the **Audio Midi Setup** panel.

You can then use the card with your audio application.

D i g i g r a m

VX222$_{v2}$ SETTINGS UNDER MAC OS X

Several control panels are available to adjust the settings of the VX222$_{v2}$. Some parameters can be adjusted from different panels. If a parameter is modified in a panel, its value is automatically updated in another panel.

VX Control panel

Use the VX Control panel to set the following parameters of your VX card:

- choice of VX card (if several VX cards are installed, they are noted as: VX222:0, VX222:1, etc...)
- latency (Internal Buffer Latency): a low latency value may lead to overloads in the audio causing clicks. If this happens, increase the latency value
- sample size: 16 or 24 bits
- selection of the input source: digital, line, line with digital synchronization
- hardware monitoring: can be activated or disabled by (un)checking "Monitoring Input 1 2" (Monitoring Input 3 4 is inactive).
- digital input gain from -72 dB to +18 dB: the active cursor (Digital Input 1 2) allows simultaneous adjustment of the digital gain for both inputs.
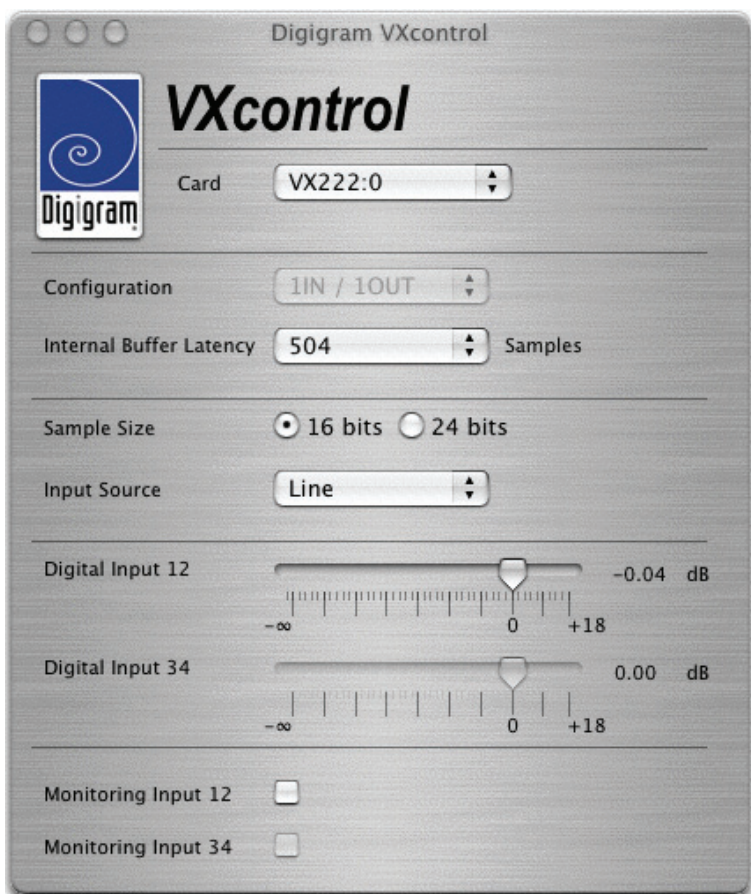
Sound panel

Use the Sound panel to set the following parameters of your VX card:

- Input tab:
  - source: digital (VX222 Digital), line (VX222 Line), line with digital synchronization (VX222 Line + Sync).
  - digital input gain for both inputs (from –72 dB to +18 dB).
- Output tab:
  - analog balance

The analog output gain (applied to both output channels) is always accessible at the bottom of the Sound panel window.
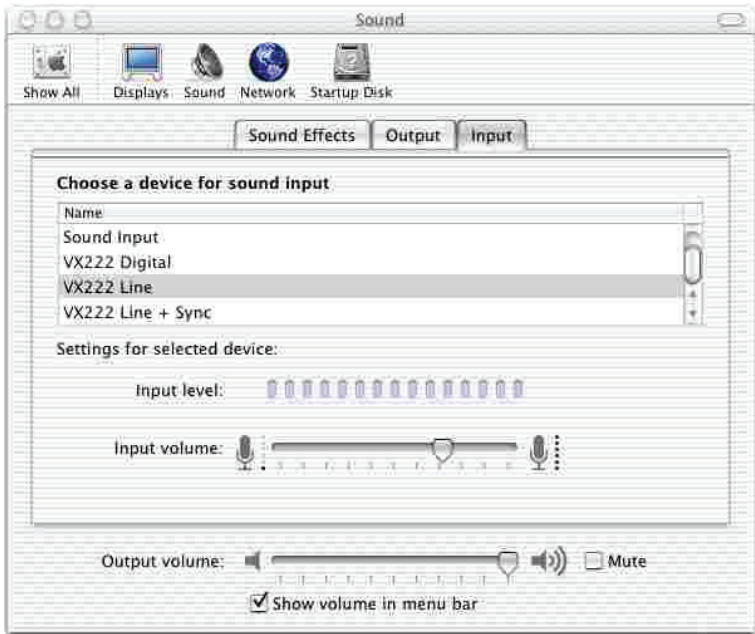
Note: *When adjusting the output balance and the analog output gain from this panel, the positions of the sliders allowing to adjust the analog output gains in the Audio Midi setup panel are updated.*

When adjusting the digital input gain from this panel, the positions of the sliders allowing to adjust the digital input gains in the Audio Midi setup panel are updated, as well as the slider in the VX Control panel.

Audio Midi setup panel

This panel is accessible via **Applications**, **Utilities**.

Use the Audio Midi setup panel to set the following parameters of your VX card:

- Hardware monitoring: Play through.
- Mute of the output: Device Mute.
- Source: digital (VX222 Digital), line (VX222 Line), line with digital synchronization (VX222 Line + Sync).
- Audio format for input and output Current Format): sample size, sampling frequency.
- Digital input gain for each input channel (from –72 dB to +18 dB).
- Analog output gain for each output channel.
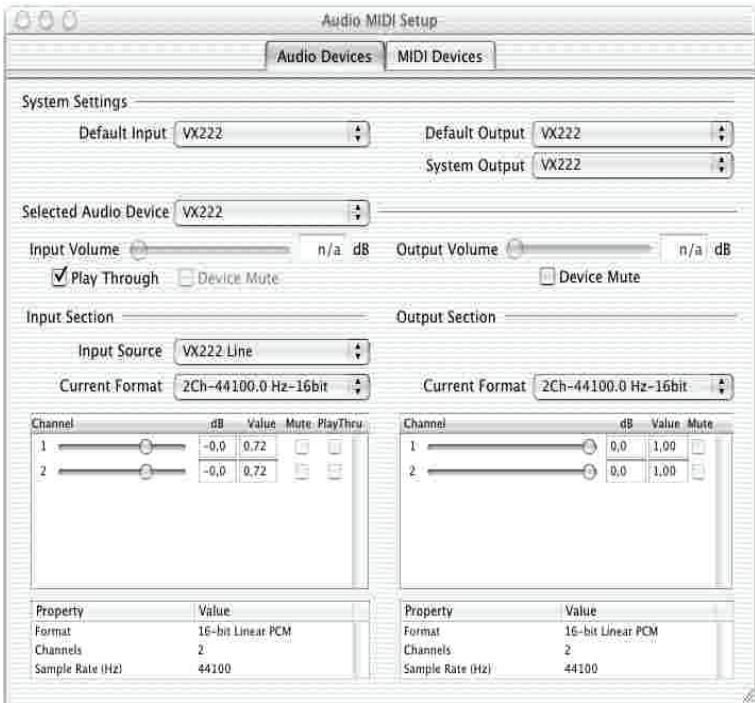
VX222_v2_ SETTINGS UNDER WINDOWS

DIGIGRAM WAVE MIXER

Note: *The Digigram Wave Mixer is only available if the Digigram Wave driver has been properly installed!*

The Digigram Wave Mixer serves to set input and output levels as well as other settings such as input type and digital data format.
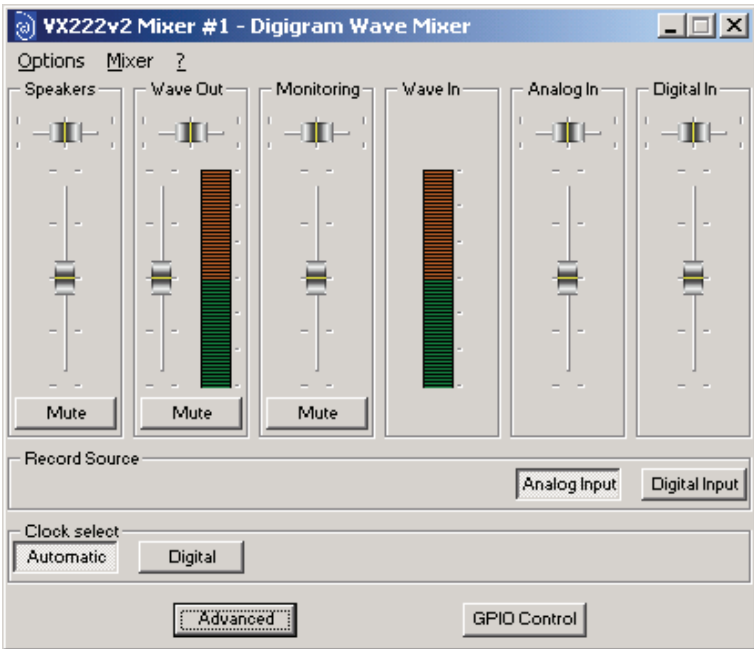
General operation

Running the program

The installation routine installs the Digigram Mixer icon in the Windows taskbar. By default, the program is automatically launched at system start-up. To access the program, double click on its icon or right click on it for a context menu.

In case you have closed the program during your session, you can restart it from the menu *<Start><Programs><Digigram><Digigram Mixer>*.

Run at start-up

To enable/disable automatic run at start-up, right click on the Mixer icon in the taskbar, or go to the Mixer *<Options>* menu.

Select/unselect **run at startup**.

General configuration

The mixer configuration options allow selection of: input and output nominal level, input and output headroom, input type.

The input and output nominal level and input and output headroom define the maximum value of the acceptable input signal. Set the nominal level to the currently used nominal level. The headroom should be set to avoid any risk of overload. If set beyond the installed card's capabilities, the driver automatically sets the correct values. In this case, the displayed values are wrong.

The record source selection allows selecting digital input or analog input selection. On the VX222*v2* only the first stereo channel may be selected for digital input. *Nominal* and *Headroom* apply simultaneously to all four channels.

Always on top of the display

Right click on the mixer icon in the taskbar, or go to the mixer *<Options>* menu.

Select **Always on top**.

Resetting the faders to their default values

Click on the *Options* menu.

Select **Reset levels**.

Selecting the input/output mixer channel

Click on the *Mixer* menu.

Select the required board and channel mixer.

Setting the default values for each mixer line selected

Right click on the mixer icon in the taskbar, or go to the mixer *Options* menu.

Select **Save current configuration as default**.

Getting the default configuration values for the mixer line selected

Right click on the mixer icon in the taskbar, or go to the mixer *Options* menu.

Select **Load default configuration**.

Leaving the mixer program

Click on the right button over the mixer icon in the taskbar.

Select **Exit**.

General settings

Record source

The record source section contains two buttons allowing selection of the input type used.

- **Digital Input:** selects the digital input.
- **Analog Input:** selects analog input.

Clock source

This option allows the selection of the synchronization clock source.

- **Automatic:** selects the internal clock when analog input is selected, the digital input clock when digital input is selected.
- **Digital:** selects the digital input regardless of the source input selection.

Faders

Various faders allow you to adjusting input, output and hardware monitoring levels. The faders can be reset by double clicking on their respective buttons.

Speakers (Output)

Applies an analog gain on the selected output device.

Wave out (Output)

Applies a digital gain on all files played as well as on software monitoring.

Monitoring

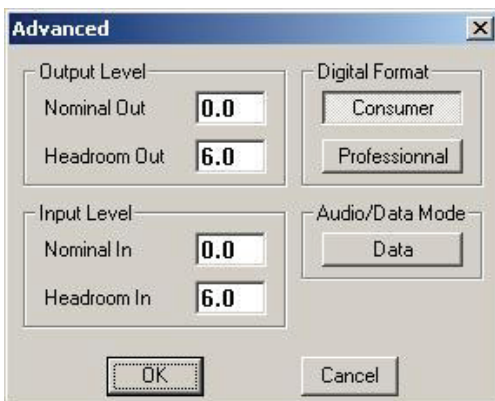Applies a digital gain on the hardware monitoring.

Analog In

As the VX222v2 does not dispose of an adjustable analog input gain, this cursor applies the digital input gain.

Digital In (Input)

Applies a digital gain to the digital signal coming from the digital input.

Advanced settings

Audio/Data mode

In data mode, all digital level processing is disabled in the driver to ensure a digital stream free of any sample modification. This mode must be used to play non-PCM audio data on the digital output (Dolby AC-3 for instance).

Note: *Do not listen to the analog output in such a case, as clicking may cause disturbing noises!*

Digital format

Sets the digital format of the digital output in real time: AES/EBU (professional) or S/PDIF (consumer).

Nominal Out and Headroom Out

Sets the nominal line output level and the available headroom during playback at nominal level. Addition of headroom and nominal level must not exceed the maximum output level of the board (+22 dBu).

Note: *The sum of Nominal Out plus Headroom Out defines the equivalence between the maximum analog level and the maximum digital level (0 dBfs).*

Nominal In and Headroom In

Sets the nominal input level for recording and the available headroom while recording at nominal level. Addition of headroom and nominal level must not exceed the maximum input level of the board (+10 dBu or +22 dBu, depending on the position of the jumper (SW1, cf. appendix) on the board).

Note: *The VX222$_{v2}$ does not dispose of an adjustable analog input gain. A modification of Nominal In or Headroom In applies the digital input gain.*

On VX222$_{v2}$, the sum of Nominal plus Headroom must be situated between -8 dBu and +10 dBu if the jumper is in "-10" position (=absent), or between +4 dBu and +22 dBu if the jumper is in "+4" position (=on the board).

The sum of Nominal In plus Headroom In defines the equivalence between the maximum analog level and the maximum digital level (0 dBfs).

ASIO CONTROL PANEL FOR PC

The purpose of this control panel is to set all the parameters of your Digigram card when used with its ASIO2 driver. It must be launched from the ASIO compatible application you use.

Detected Digigram boards are displayed in the left upper corner with their serial number and their I/O stereo pairs. General settings of the selected card are displayed in the right upper corner. IN and OUT settings of the selected device are displayed underneath.
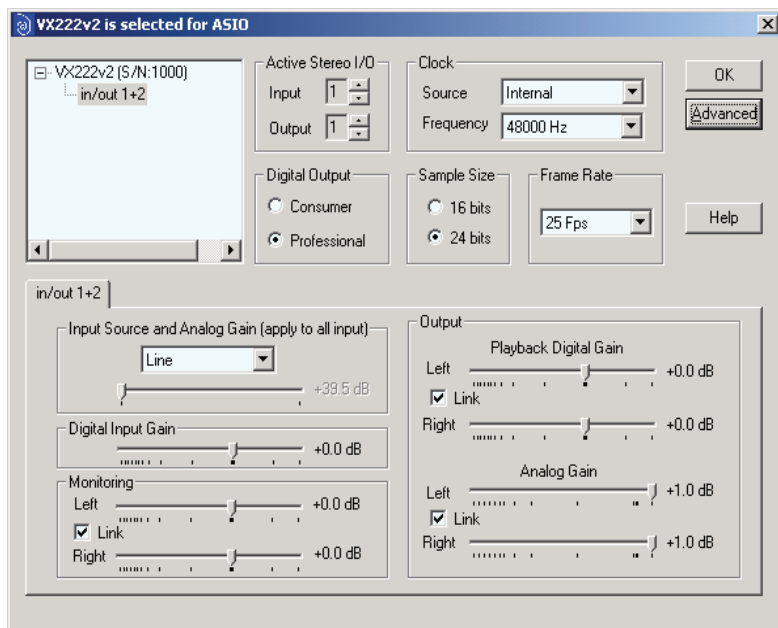
General settings

Active stereo I/O

It is recommended to activate only the required I/Os in order to save CPU resources.

Clock

The clock corresponds to the digital bit clock to which the card refers.

When an analog input is selected, the clock source can be either the internal clock or taken from the digital input. As soon as the digital input is selected, the clock is read from this input.

The **Frequency** flip menu allows selecting the sampling frequency of the selected card: 32, 44.1 or 48 kHz. It must be set according to the sampling frequency of the project you are working on.

Sample size

Defines the number of bits per sample. It must be set in accordance with the sample size of the project you are working on.

Digital output

Defines the format of the digital output signal:

- Consumer (S/PDIF) or
- Professional (AES/EBU).

Level settings

Click on the tab of the I/O device you want to set. Leaving the mouse pointer a few seconds on a slider shows the available settings range (tooltip box). The exact setting value is displayed near each slider.

Input

The flip box allows switching between the different types of input: line or digital.

For any input type, a digital gain can be added to the signal, if necessary. Its default position is in front of the bold dot (0 dB).

All these input settings apply on both channels of the selected stereo device.

Output

The *playback digital* control applies a digital gain to the selected output (i.e. to what the application plays, including the software monitoring). It can be set for each channel of the selected device, or for both channels at the same time by clicking the *Link* box. This gain applies to both digital and analog outputs. Its default position is in front of the bold dot.

The analog output gain can be set for each channel, or for both channels at the same time by clicking the *Link* box. This gain only applies to the analog outputs. Its default position is in front of the bold dot, unless you use headphones. In this case, decrease the levels of analog outputs 1 & 2 to prevent you from hearing damage.

Monitoring

ASIO applications basically use two monitoring modes: software monitoring and hardware monitoring (the latter also known as 'ASIO direct monitoring').

In software monitoring mode, the recorded signal is immediately played back, just as if it were read from the hard disk. This allows monitoring through effects for instance, but induces latency that can be annoying to the recording musician. In hardware monitoring mode, the recorded signal is directly routed from the inputs to the outputs of the card without passing through your audio application, avoiding the latency in the monitoring path.

The monitoring slider controls the hardware monitoring level (ASIO direct monitoring) but does not control the software monitoring. Its default position is in front of the bold dot. It can be set independently for each channel. ASIO compliant applications featuring ASIO direct monitoring control this level directly using their integrated mixer.

Time Error Compensation

Audio data transfer may suffer from buffer underrun, in most cases due to temporary CPU overload.

To avoid the loss of synchronization between input and output signals, click on the **Advanced** button and select:
<Skip samples on outputs to compensate audio time drift>

Note: *This option can only fix a limited amount of errors. Too many errors occurring will result in a loss of sound quality.*
            To avoid errors, reduce CPU load.

D i g i g r a m

SPECIFICATIONS

CONFIGURATION

Bus/Format	PCI slave mode
Size	175 mm × 99 mm
Digital Signal Processor	56303 at 100 MHz
Power requirements (+3.3 V / +5 V / +12 V / –12V)	0.5A / 0.1A / 0.2A / 0.1A
Operating: temp / humidity (non-condensing)	0°C/+50°C • 5%/90%
Storage: temp/humidity (non-condensing)	-5°C/+70°C • 0%/95%

INPUTS / OUTPUTS

Analog line inputs (mono)	2 balanced[*]
Maximum input/impedance	+22 dBu / >10kΩ (jumper ON) +10 dBu / >10kΩ (jumper OFF)
Programmable input gain	digital
Digital inputs (stereo)	1 AES/EBU[**]
Other inputs	2 GPI (dry contact)
Analog line outputs (mono)	2 servo-balanced[***]
Maximum output/impedance	+22 dBu/low impedance
Programmable output gain	digital and analog
Digital outputs (stereo)	1 AES/EBU[**]
Other outputs	headphone (600 Ω), two GPO (relay, 0.5A, 48 VCC)
Access to main status bits of digital frame	Yes
AES11 synchronization	Yes
Connectors	15-pin SUB-D for analog I/O, 15-pin HD SUB-D for digital I/O, and GPIO; headphone jack (female TRS 3,5 mm)

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[*] can be used with unbalanced signals

[**] can be used as S/PDIF interface as well

[***] electronically servo-balanced outputs provide automatic level adjustment to accommodate either balanced or unbalanced lines

AUDIO SPECIFICATIONS

|	
Sampling frequencies available	Programmable from 8 to 50 kHz
A/D and D/A converter resolution	24 bits
Frequency response	20 Hz–20 kHz: ±0.2 dB
Signal to noise ratio	>97 dB
Distortion + noise at 1 kHz	<-92 dB (0.0025 %)
Channel phase difference: 20 Hz/20 kHz	<0.5°/2°
Analog channel cross talk at 1kHz	<-115 dB

Note: *All measurements are done at Fs=48 kHz, in rec+play mode. Results are unweighted.*

APPENDICES

SCHEMATIC DIAGRAM
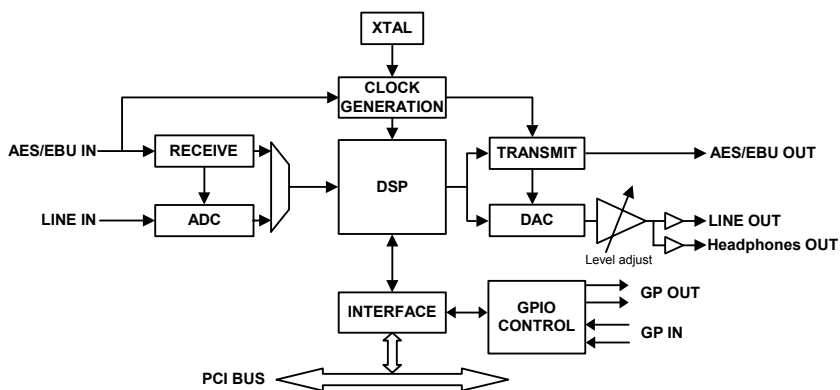
LAYOUT
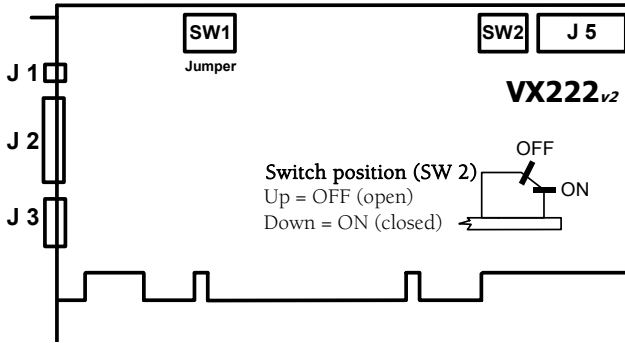
SW1: Jumper input impedance:

Position	Nominal Input Level	Maximum Input Level
ON	+4 dBu	+22 dBu
OFF	-10 dBV	+10 dBu

SW2: Inter board synchronization:

(both levers must be set together)

Position	Status
OFF	Slave card
ON	Master card

J1: Headphone connector:

(3.5 mm TRS female jack)

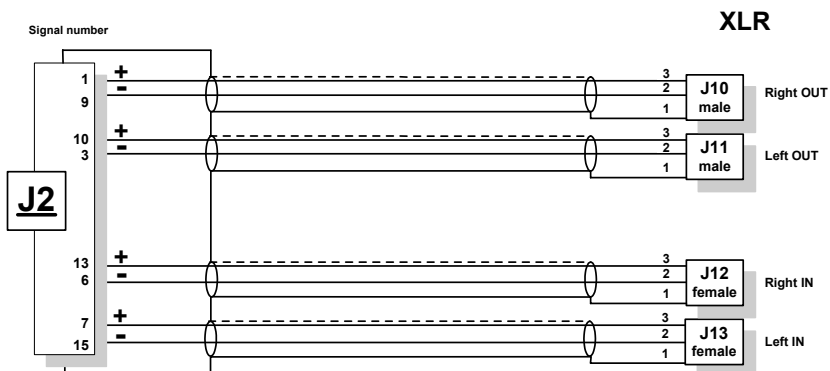| Contact	Signal
Sleeve	Ground
Tip	Left channel
Ring	Right channel

J2: Analog cable connector

J3: Digital cable connector

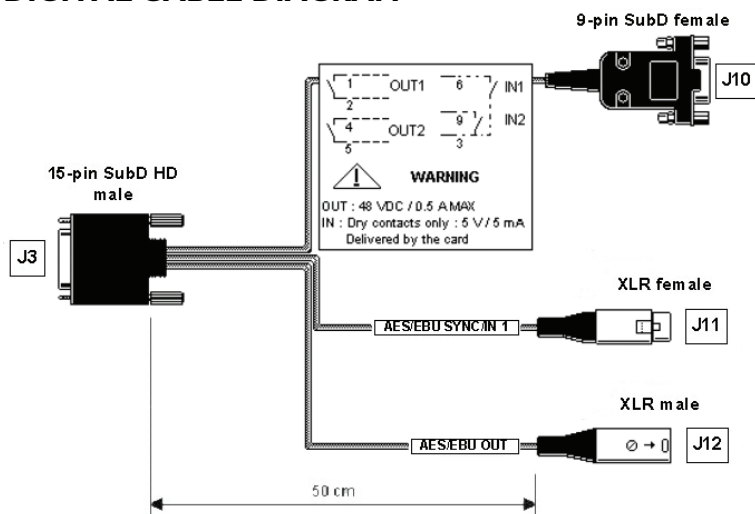**J5: Inter-card synchronization connector**
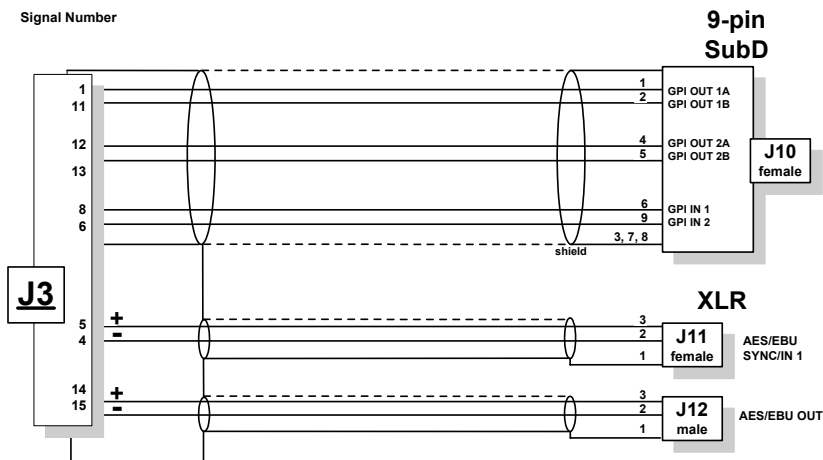
ANALOG CABLE DIAGRAM
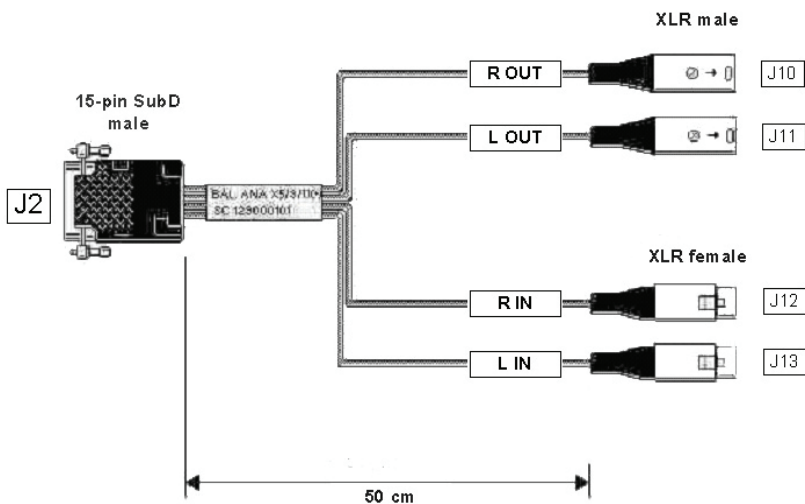
WIRING DIAGRAM – Analog Cable

DIGITAL CABLE DIAGRAM

WIRING DIAGRAM – Digital Cable with GPIOs

CABLE PINOUT

Pin #	ANALOG	DIGITAL
1	R OUT +	GPI OUT 1A
2	GND	NC
3	L OUT -	NC
4	GND	AES/EBU IN -
5	NC	AES/EBU IN +
6	R IN -	GPI INPUT 2
7	L IN +	GND/GPI INPUT COMMON
8	GND	GPI INPUT 1
9	R OUT -	GND
10	L OUT +	NC
11	GND	GPI OUT 1B
12	NC	GPI OUT 2A
13	R IN +	GPI OUT 2B
14	GND	AES/EBU OUT +
15	L IN -	AES/EBU OUT -