# SIERRA

## User's Guide

**FRONTIER** DESIGN GROUP

# Contents

# ≡ Introduction ≡

Sierra™ is a multiport MIDI and SMPTE input/output box in a 1U rackmount enclosure. It connects directly to Dakota, Frontier Design Group's PCI card that integrates multichannel audio, MIDI and sync I/O.  Sierra's features include:

- 8 MIDI input ports and 8 MIDI output ports on standard 5-pin MIDI connectors (a total of 128 MIDI channels in and out).  The Sierra front panel includes one pair of MIDI ports for easy access.

- SMPTE timecode in and out on ¼" phone jacks

- Front panel LEDs — activity indicators for each input and output

- Dakota's software provides controls for Sierra features such as MIDI routing and SMPTE output level.

In addition to this User's Guide, your Sierra package should contain:
- Sierra MIDI/SMPTE box
- AC power adapter
- 15-foot cable for connecting Sierra to Dakota's 8-pin port

## About the Company

Frontier Design Group develops, manufactures and sells digital audio hardware and software. Our goal is to provide high-quality, high-value tools to help our customers be more creative and productive.

We're always interested in receiving your feedback on our products, as well as your suggestions for improvements and new products.  You can send e-mail to feedback@FrontierDesign.com or send a fax to 603-448-6398.

## Technical Support

If you have any problems or questions that aren't addressed in this Guide, there are three ways to get more help:

- Refer to our web site (http://www.FrontierDesign.com) for information on current revisions, answers to frequently asked questions, troubleshooting procedures, and additional documentation. The web site is available every day, 24 hours a day.

- Send specific questions via e-mail to support@FrontierDesign.com. We'll respond promptly (usually within one business day).

- For time-critical questions, you can call Frontier Design Group at 1-800-928-3236 (outside the USA, call 603-448-6283). Phone support is normally provided weekdays from 9:30 am to 5:30 pm EST.

# ⫞ Setting Up ⫤

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WARNING!  Windows 95 is limited to a maximum of 10 MIDI input ports and 10 MIDI output ports.  Adding Sierra's 8 MIDI inputs and 8 MIDI outputs may put your system beyond the limit, causing it to crash with the "blue screen" message:

"MSGSRV32 caused a general protection fault…"

There is no easy way to recover from this crash, so before you install Sierra, make sure you have no more than 2 other MIDI inputs and outputs enabled in your system.

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1. You can install Sierra in a standard 19" rack.

2. Connect either end of Sierra's 15-foot cable to the 8-pin COMPUTER port on Sierra's back panel. Connect the other end to Dakota's 8-pin MIDI port.

3. Attach standard MIDI cables to the appropriate MIDI inputs and outputs on Sierra's back panel and/or front panel as needed.

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4. To receive SMPTE timecode, connect a ¼" phone cable from the SMPTE timecode source to the SMPTE IN port on Sierra's back panel.

5. To transmit SMPTE timecode, connect a ¼" phone cable from the SMPTE OUT port on Sierra's back panel to the SMPTE destination.
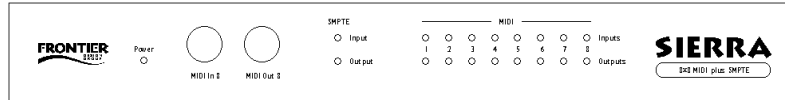
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WARNING! Before you connect the AC power adapter, verify that its prong style and input voltage rating are appropriate for your local AC power source — a prong adapter may be required in some countries.

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6. Connect the AC power adapter to an acceptable power outlet, and connect its barrel plug to the Power input on Sierra's back panel. If the power outlet is active, the Power indicator on Sierra's front panel should be on.

7. On the computer, open Dakota's control panel and select the 'System' tab.

8. Enable the 'Sierra' checkbox, and then reboot the computer.

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Note: Sierra must be properly connected to Dakota and configured in the Dakota control panel. After rebooting the computer, all of Sierra's front panel lights blink four times to indicate that it is ready to use.

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# ≡ Front Panel ≡

Sierra's front panel has status indicators and one pair of MIDI ports.



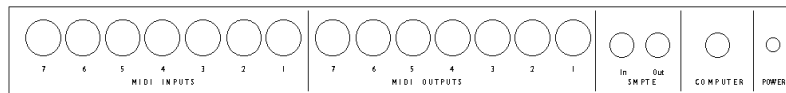**Power Indicator** ⎯ Lights green when Sierra's power is on.

**MIDI IN8 & OUT8** ⎯ MIDI input port 8 and output port 8 are located on the front panel for quick and easy access.

**SMPTE Indicators** ⎯ The green (bottom) indicator lights when the SMPTE output is active. The red (top) indicator lights when the SMPTE input is active. The red SMPTE input indicator has four states:

| | |
|---|---|
| Off | The SMPTE input is inactive. |
| Fast blink | The SMPTE input is active, but is not receiving a valid stream of SMPTE frames. |
| Slow blink | The SMPTE input is receiving a valid stream of SMPTE frames, but Sierra is not locked to the incoming SMPTE timecode. |
| On | Sierra is locked to the incoming SMPTE timecode. |

**MIDI Status Indicators** ⎯ The green (bottom) indicators show MIDI output activity. The red (top) indicators show MIDI input activity. Each indicator briefly lights when there is any activity on its corresponding MIDI input or output port.

# ≡ Back Panel ≡



### MIDI I/O

MIDI input and output ports 1–7 are located on the back panel. (For convenience, MIDI ports for input 8 and output 8 are located on the front panel). All MIDI ports are standard DIN-5 connectors.

### SMPTE I/O

SMPTE input and output connectors are ¼" phone jacks. The SMPTE output level can be adjusted in the Dakota control panel. See the "Software Reference" chapter in the Dakota User's Guide for details.

### Computer port

The 8-pin port transmits 8 MIDI input channels, 8 MIDI output channels, and SMPTE input and output information between Sierra and Dakota, using the 15-foot cable included with Sierra.

### Power

The Power jack is a barrel connector that receives power from Sierra's external AC power adapter.

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WARNING! Use only a power adapter approved for Sierra by Frontier Design Group. Using an unapproved power adapter will void all warranties and may harm Sierra's

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# ≡ Sierra Specifications ≡

These specifications are subject to revision without notice.

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| MIDI inputs | 8 MIDI-standard DIN-5 connectors (1 on front panel) |
| MIDI outputs | 8 MIDI-standard DIN-5 connectors (1 on front panel) |
| SMPTE timecode input | ¼" phone jack, 100mV (-26dBu) sensitivity |
| SMPTE timecode output | ¼" phone jack; output level set by software to:<br>+4dB (approx. -2dBu output level), or<br>-10dB (approx. -16dBV output level) |
| System requirements | Dakota PCI card |
| Computer connection | 15-foot (4.5-meter) cable connected to 8-pin port |
| Power supply | 9VAC or 9VDC with center positive, 500mA,<br>2.1mm x 5mm barrel jack connector |
| Dimensions | 19" x 4.23" x 1.73" (1U rackmount enclosure)<br>485mm x 107mm x 44mm |
| Weight | 5 lbs (2.3kg) including power adapter |

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