Snake Card

For Digidesign VENUE FOH Rack

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email: techpubs@digidesign.com

Communications and Safety Regulation Information

Compliance Statement
This model Digidesign Snake Card complies with the following standards regulating interference and EMC:

- FCC Part 15 Class B
- EN 55103-1 E3
- EN 55103-2 E3
- AS/NZS 3548 Class B
- CISPR 22 Class B

Radio and Television Interference

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.

DECLARATION OF CONFORMITY

We Digidesign,

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tel: 650-731-6300

declare under our sole responsibility that the product

Snake Card

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.

Communication Statement

NOTE: 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, may cause harmful interference to radio 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 and correct the interference by one or more of the following measures:

- Reorient or locate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Digidesign **Snake Card**

Tested To Comply with FCC Standards

FOR HOME OR OFFICE USE

Any modifications to the unit, unless expressly approved by Digidesign, could void the user's authority to operate the equipment.

Canadian Compliance Statement:

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Australian Compliance

European Compliance

CE 97

Contents

Chapter 1. Overview 1

Snake Card Components 1

Snake Card Features and Capabilities 1

Conventions Used in This Guide 2

Chapter 2. Installing a Snake Card 3

Installing a Snake Card 3

Confirming Snake Card Installation 5

Connecting the Stage Rack to the FOH Rack 6

Chapter 3. Digital Snake Cables 9

Chapter 1: Overview

The Snake card allows you to connect a Stage Rack to your FOH Rack via a Digital Snake cable, transmitting a maximum of 48 inputs and outputs to and from your console. Adding a second Snake card to your FOH Rack allows you to add a second Stage Rack, expanding your system's I/O capacity to a maximum of 96 inputs and outputs.

For Snake card installation instructions, see "Installing a Snake Card" on page 3.

For instructions on connecting Stage Racks to your FOH Rack using the Snake card, see "Connecting the Stage Rack to the FOH Rack" on page 6.

Snake Card Components

The Snake card package includes the following items:

- Snake card
- Ribbon cable
- Mounting screws
- Digidesign Registration Information Card
- BNC jumper cable

Figure 1. Snake card

Snake Card Features and Capabilities

- Two pairs of Snake inputs and outputs (Snake 1 and Snake 2) via BNC-style connector ports
- Optional redundant snake capability via Snake 2 ports
- Word Clock In and Out connectors for synchronizing external digital devices
- Active and Sig LEDs for all ports

Conventions Used in This Guide

All Digidesign guides use the following conventions to indicate menu choices and key commands in D-Show and Pro Tools:

Convention	Action
File > Save Session	In Pro Tools, choose Save Session from the File menu
Options > System Config	In the D-Show software screen, click Options to display the Options page, then click the System Config tab.
Ctrl+N	Hold down the Control key and press the N key
Ctrl-click	Hold down the Control key and click the mouse button

The following symbols are used to highlight important information:

User Tips are helpful hints for getting the most from your D-Show system.

Important Notices include information that could affect data or performance.

Shortcuts show you useful keyboard or mouse shortcuts.

Cross References point to related sections in the D-Show or Pro Tools Guides.

Chapter 2: Installing a Snake Card

Adding a second Snake card expands your VENUE system's I/O capacity by allowing you to connect a second Stage Rack to your FOH Rack.

You also need a second Snake card in order to use the HDx2 TDM Record option, even if you are not using a second Stage Rack.

Installing a Snake Card

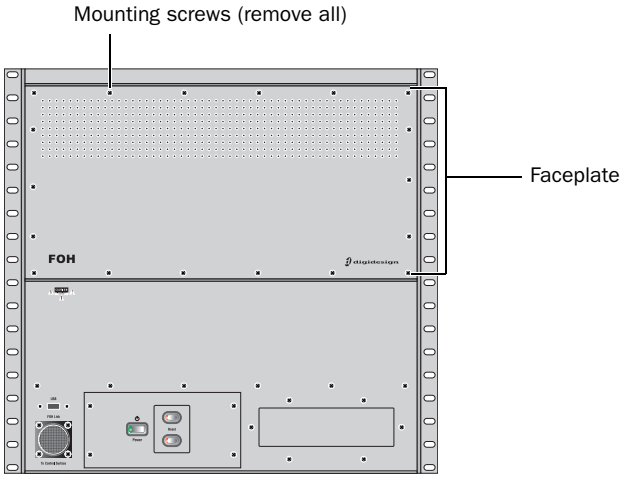
The Snake card is installed in the FOH Rack and is connected with a ribbon cable to a Mix Engine Card inside the FOH Rack.

To install the Snake card:

1 Power down your system.

2 Disconnect all audio and power cables attached to the FOH Rack.

3 Remove the FOH Rack front panel faceplate by unscrewing its mounting screws (#1 Phillips).



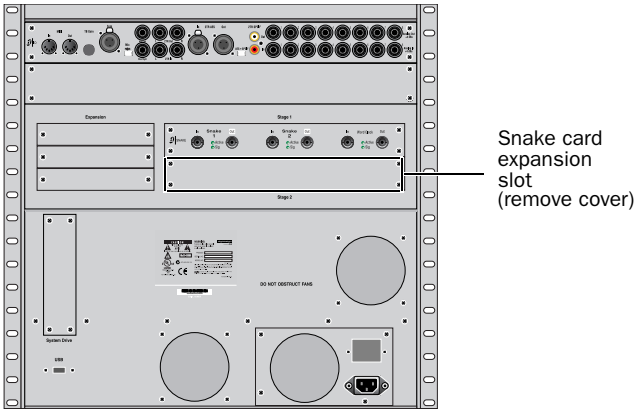
Front panel of the FOH Rack

4 On the back panel of the FOH Rack, do one of the following:

- If you are adding a second Snake card, remove the Snake card expansion slot cover by removing the four screws holding it in place.

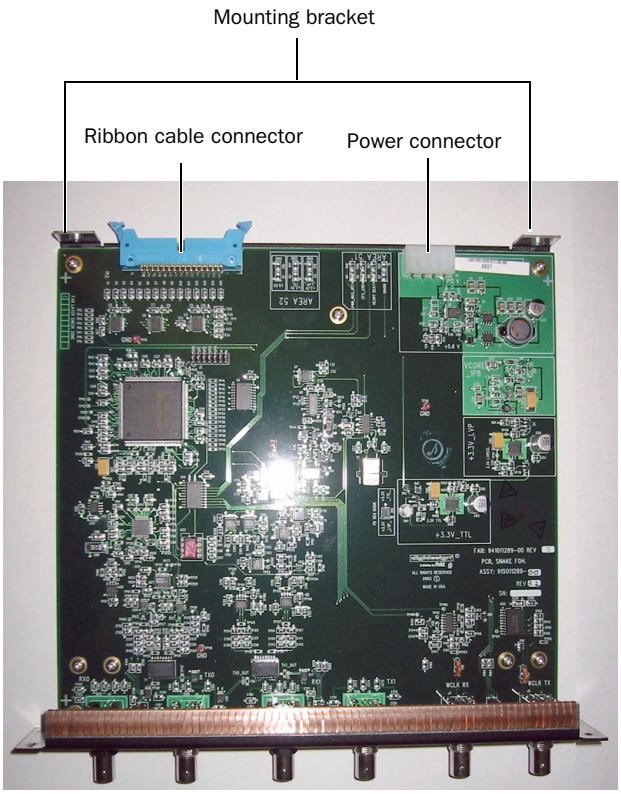
– or –

- If you are replacing the existing Snake card, remove the four screws holding it in place, disconnect the ribbon and power cables located inside the FOH Rack (accessible from the open front panel of the FOH Rack), and remove the existing card from the FOH Rack.



Back panel of the FOH Rack

5 Remove the Snake card from its packing material. Hold the card by its edges.

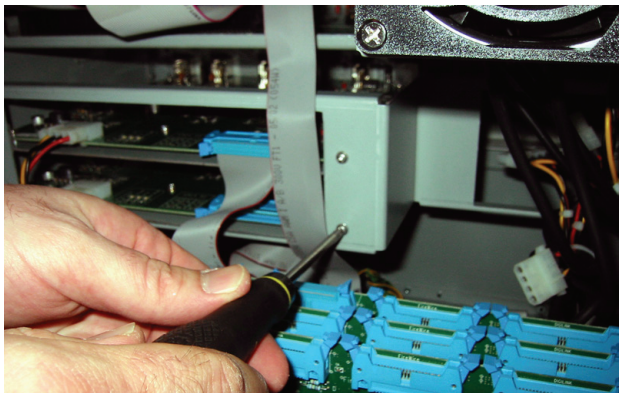


Snake card showing brackets and connectors

6 Gently slide the Snake card into a Snake card slot.

Installing the Snake card in the FOH Rack's expansion slot

7 When the card is seated in its slot, secure both sides of the Snake card to the inside of the FOH Rack chassis with the two provided mounting screws (accessible from the open front panel of the FOH Rack).



Securing the Snake card to the FOH Rack chassis

8 Secure the Snake card to the back panel of the FOH Rack using four of the provided mounting screws.

Securing the Snake card to the back panel of the FOH Rack

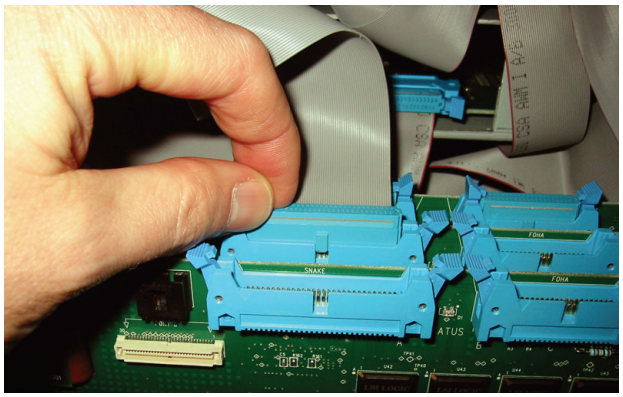
9 Do one of the following:

- If you are installing a second Snake card, attach the provided ribbon cable from the connector labeled "Snake" on the *second* Mix Engine card (the card *just in front of* the rear-most Mix Engine card) to the ribbon connector on the second Snake card.

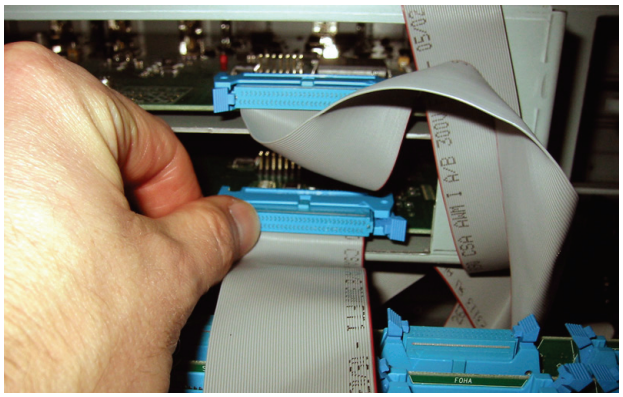
– or –

- If you are replacing the existing Snake card, attach the provided ribbon cable from the connector labeled "Snake" on the *first* (rear-most) Mix Engine card to the ribbon connector on the Snake Card.

Make sure the keyed connector is oriented correctly in each socket. Secure each connection by moving the tabs on each side of the connector inward. Check to make sure the cable is connected securely.

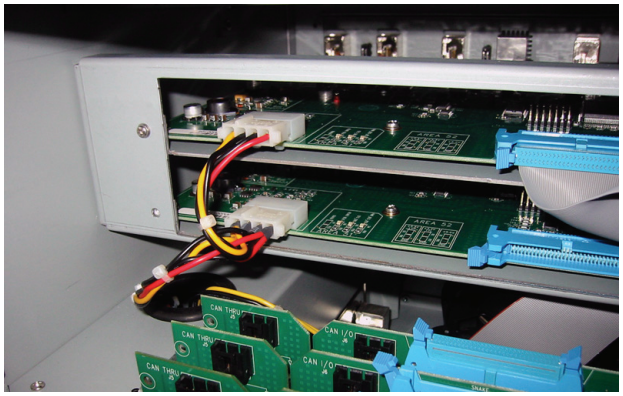


Connecting the ribbon cable to the Mix Engine card (second Snake Card connection shown)



Connecting the ribbon cable to the Snake card (second Snake card shown)

10 Plug an available power connector into the power socket on the Snake card. Make sure it is connected securely.



Power connections to the Snake cards

11 If you have installed a second Snake card, connect the Word Clock Out of the first Snake card to the Word Clock In of the second Snake card using the provided BNC jumper.

Confirming Snake Card Installation

After installing the Snake card, you should confirm that you have installed it properly. You can confirm installation by checking your system hardware status.

To complete and confirm installation:

1 Reattach the FOH Rack faceplate.

2 Reconnect the power, FOH Link, and any audio and MIDI cables to the FOH Rack.

3 Connect your snake to the Stage Rack and the FOH Rack. See "Connecting the Stage Rack to the FOH Rack" on page 6.

4 Turn on your VENUE system.

5 Do one of the following to put your system into Config mode:

- Press the Console Config switch on the console

– or –

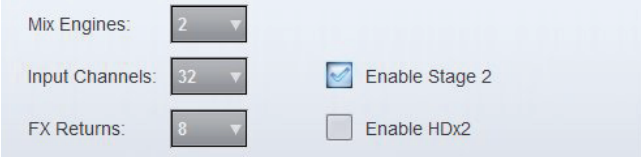
- Double-click the Mode box in the bottom-right corner of the screen.

6 Go to the Options page and click the System tab.

7 Click Edit in the System Configuration page.

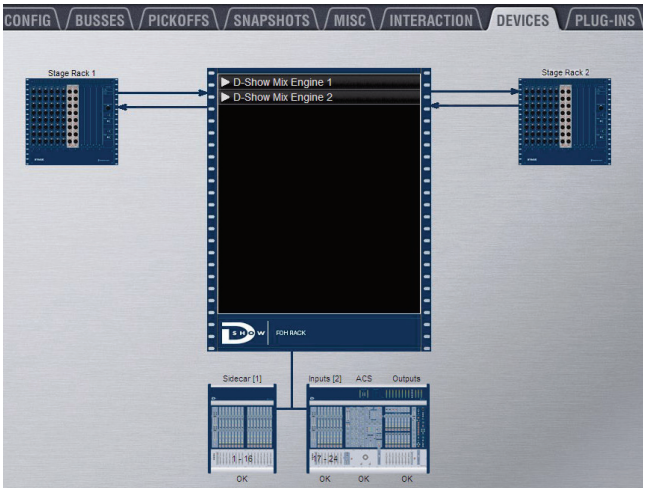
8 Select Enable Stage 2.

9 Click Apply. Console software restarts.



Enabling the second Stage Rack

10 Go to the Options page and click the Devices tab to view your system hardware status. The connection to the second Stage Rack should be displayed in the FOH Rack graphic.



Detail of Devices page showing connection to second Stage Rack

Connecting the Stage Rack to the FOH Rack

The Stage Rack is connected to the FOH Rack with the Digital Snake cable (purchased separately) via the Snake card. It is recommended that you use a second, redundant Digital Snake cable connected to the Snake card's Snake 2 ports.

To connect the Stage Rack to the FOH Rack:

1 Connect the send snake to the Stage 1 Out port of the Stage Rack to the Stage 1 In port on the FOH Rack.

2 Connect the return snake to the Stage 1 Out Port of the FOH Rack to the Stage 1 In port on the Stage Rack.

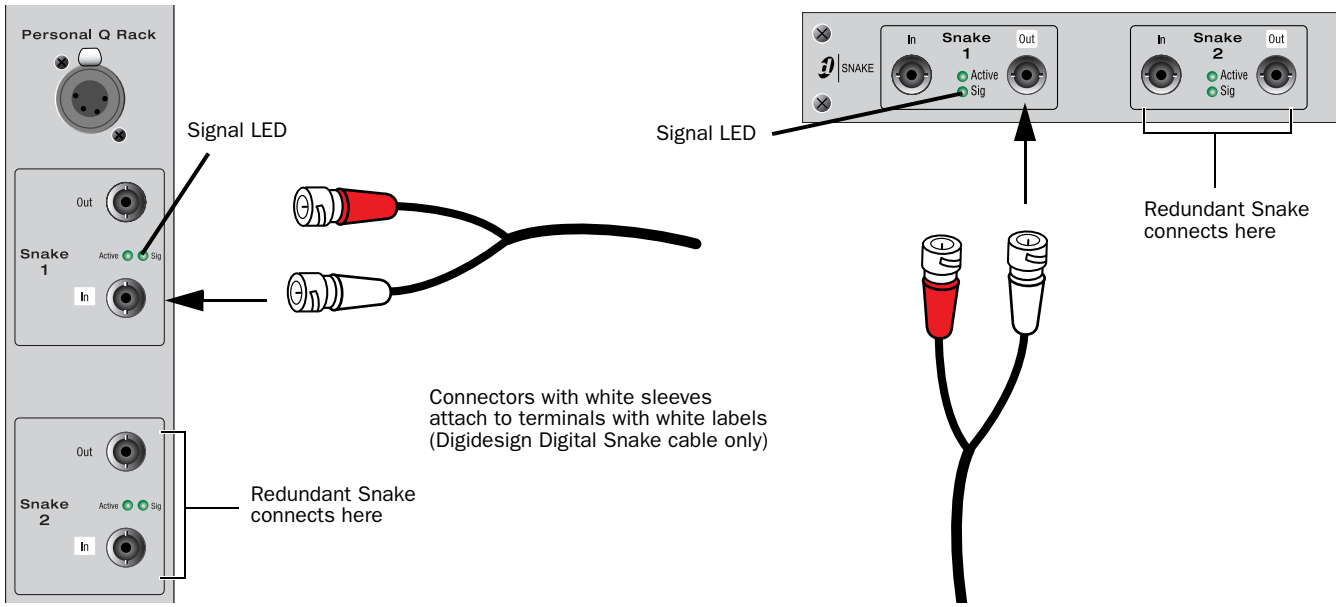
The connectors on Digidesign's Digital Snake cable are color coded, so that the white connector connects to the white-outlined ports on the Stage Rack and the FOH Rack.

3 If you are using a second redundant snake, connect it to the Snake 2 ports on each unit in the same manner.

If you are using a second redundant snake, the primary and the redundant snake must be the same length.

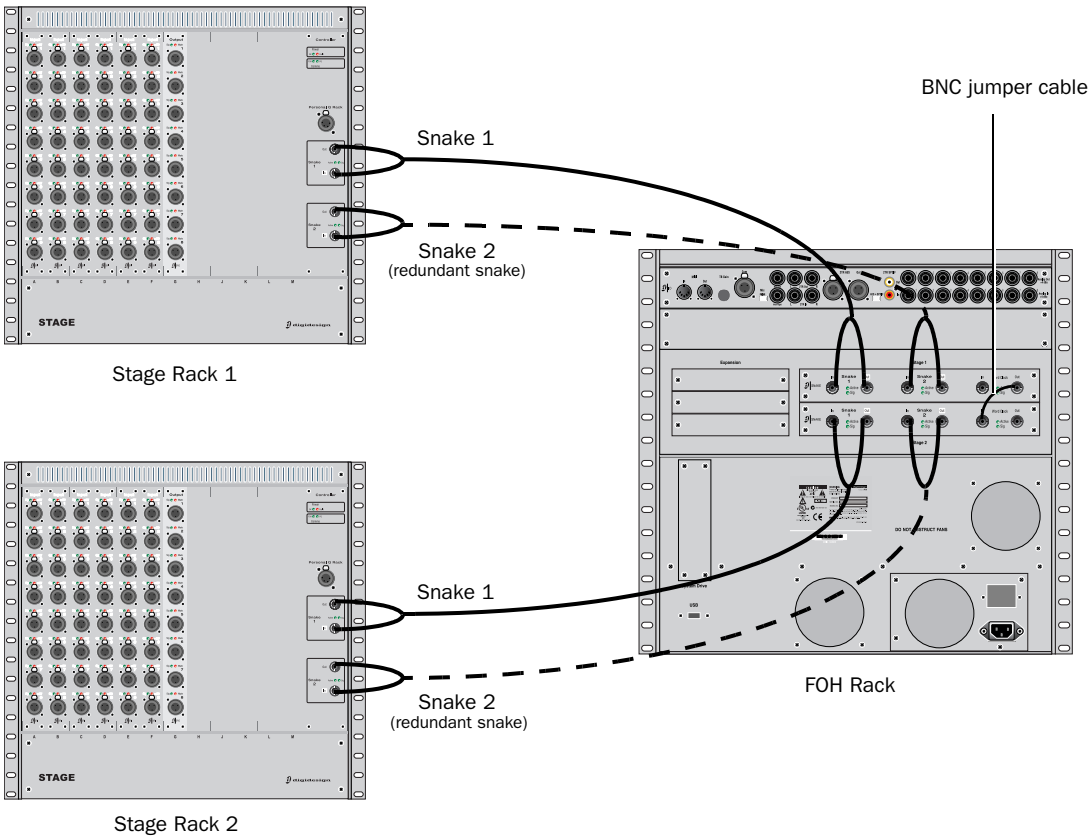
When the FOH Rack and the Stage Rack are powered up, the primary snake connection is indicated by the solid Active LED (marked "Active"). If the Snake Signal LEDs flash, a Snake connection has not been established.

If there are problems with the Digital Snake connection, double check that all the BNC connectors are fully secured. If the problem persists, try reversing the connectors connected to the In and Out ports on one end.



Detail of Digital Snake cable connection between a single Stage Rack (left) and an FOH Rack (right)

When connecting two Stage Racks with redundant snake connections, make sure each Stage Rack is connected to a single Snake card on the FOH Rack, as shown in the following figure.



Detail of Digital Snake cable connections for a fully redundant dual Stage Rack system

Chapter 3: Digital Snake Cables

You can purchase 250-foot Digital Snake cables from Digidesign for use with VENUE systems. For more information on purchasing a Digital Snake cable, visit the Digidesign website at www.digidesign.com.

Alternatively, you can build your own snake cable assembly using various brands of copper coaxial cable and BNC connectors. When building your own digital snakes for use with VENUE systems, please adhere to the following connector, cable type and length requirements:

Snake Connector (x4)

BNC Male, 75 ohm

Snake Cable Type

Coaxial, 75 ohm

Max Cable Length 250 ft (76 m)

- Belden 1694A - single conductor
- Belden 7710A - three conductor
- Belden 7711A - four conductor

Max Cable Length 500 ft (152 m)

- Belden 1694A - single conductor
- Belden 7710A - three conductor
- Belden 7711A - four conductor
- Gepco VSD2001 – single conductor
- Gepco VS32001 – three conductor
- Gepco VS42001 – four conductor
- Gepco VS52001 – five conductor
- Van damme Cable (VDC) 278-175-00 - single conductor