FAIRLIGHT

I/O options

SX-8, SX-12V, SX-20, SX-20R, SX-36, CMI and CMO 3 June 2016 Issue 0002

Important Notice

Copyright

The material in this document is copyright to Fairlight.AU Pty Ltd, and may not be quoted or reproduced in any form without written permission from the company.

Fairlight is a trademark of Fairlight.AU Pty Ltd. All other trademarks are the property of their respective owners.

Product Warranty

Please refer to http://www.fairlight.com.au/legal-notices/

End User License Agreement

Please refer to http://www.fairlight.com.au/legal-notices/

Obtaining Technical Support

Users requiring technical support should contact their local distributor.

Information can also be found at: http://www.fairlight.com.au

Manual Errors and Omission

To help ensure that Fairlight provides the most accurate and comprehensive documentation, please report any errors or omissions to:

documentation@fairlight.com.au

Table of Contents

INTRODUCTION	4
SX-8 INSTALLATION	6 6 6
Connecting SX-8 to CC-1	6 7
SX-12V INSTALLATION Hardware Overview Optional Breakout cable Installing the hardware Connecting SX-12V to CC-1 Connecting SX-12V to CC-2	8 8 8 9 9
SX-20 INSTALLATION Hardware Overview Installing the hardware Connecting to CC-1/CC-2	10 10 11 11
SX-20R INSTALLATION Hardware Overview Installing the hardware Connecting to CC-1/CC-2 Front Panel Controls Adjusting Analog Input settings	12 12 12 12 13 13
SX-36 INSTALLATION Hardware Overview Installing the hardware Connecting to CC-1/CC-2. Front Panel Controls. Adjusting Analog Input settings	15 15 16 16 16
CMI/CMO INSTALLATION Hardware Overview Installing the hardware Connecting to CC-1 Connecting to CC-2	18 18 18 19 19
I/O CONFIGURATION Fairlight Setup Utility	20 20

4	NAMING I/O22
6 6	I/O UNIT FIRMWARE REPROGRAMMING 23
6 6 6	APPENDIX 1 – SX8/SX12V DB-25 PINOUTS25
7	APPENDIX 2 – SX-20R DB-25 PINOUTS26
8	LTC/GPIO/AES Loom
8 8 9 9 9 10	APPENDIX 3 – SX-36 DB-25 PINOUTS.27 LTC/GPIO/AES Loom 27 AES Loom #1 27 AES Loom #2 28 Analog Loom #1 29 Analog Loom #2 30 GPIO connections (LTC/GPIO/AES Loom) 31
. 11 . 11	APPENDIX 4 - SX-20, SX-20R AND SX-36 9-PIN PORTS33

Introduction

Fairlight offers a variety of all-in-one I/O, synchronisation and control interfaces for audio post production systems powered by Fairlight's Crystal Core audio engine. External and internal versions are available, including:

- External 1U rack mount unit versions, including: the SX-36, the SX-20R and the SX-20.
- PCB cards for mounting inside a host PC, including: the SX-12V and SX-8.

Full specifications of all cards are detailed in the following table.

FAIRLIGHT | I/O and Sync Solutions

Features	SX-8	SX-12V	SX-20	SX-20R	SX-36
Simultaneous 9-Pin Control ports	0	1	2	2	2
Video Reference	0	SD+HD, in only, BNC		SD+HD, in & thru, BNC	SD+HD, in & thru, BNC
Digital Sync In	Sy	nc to any digital i	nput	Sync to any AES/ EBU input	Sync to any AES/ EBU input
Word Clock Sync In			Yes, BNC		
Word Clock Sync Out	Switcha	ble, BNC	Adaptor cable, BNC	Yes, BNC	Yes, BNC
MTC In	Yes, 25	i-pin 'D'	Yes, 5-pin DIN	Yes, 5-pin DIN	Yes, 5-pin DIN
MTC Out	Yes, 25	i-pin 'D'	Yes, 5-pin DIN	Yes, 5-pin DIN	Yes, 5-pin DIN
LTC In		Un-balanced, 25-pin 'D'	Un-balanced, Phono	Balanced, 25-pin 'D'	Balanced, 25-pin 'D'
LTC Out		Un-balanced, 25-pin 'D'	Un-balanced, Phono	Balanced, 25-pin 'D'	Balanced, 25-pin 'D'
GPI/GPO				1 in, 1 out, 25-pin 'D'	1 in, 1 out, 25-pin 'D'
Analogue Mic/ Instrument Inputs			2 x gain control pot, XLR/TRS combo	2 x remote gain control, XLR/TRS combo	2 x remote gain control, XLR/TRS combo
Analogue Line In	2 x +18dBu, 25-pin 'D'	2 x +18dBu, 25-pin 'D'	2 x +24dBu, TRS	2 x +24dBu, TRS	8 x +24dBu, 25-pin 'D'
Analogue Line Out	6 x +18dBu, 25-pin 'D'	6 x +18dBu, 25-pin 'D'	12 x +24dBu, TRS	12 x +24dBu, TRS	4 x 24dBu TRS + 8 x 24dBu 25-pin 'D'
Headphone Out	Stereo 3.5mm mini-jack	Stereo 3.5mm mini-jack			
AES/EBU In				1 on 25-pin 'D'	9 x 25-pin 'D'
AES/EBU Out				3 on 25-pin 'D'	11 x 25-pin 'D'
Sony/Philips Digital Interface Format (S/ PDIF) In	1 x 25-pin 'D'	1 x 25-pin 'D'	2 x phono	1, with SRC, phono	1, with SRC, phono
S/PDIF Out	1 x 25-pin 'D'	3 x 25-pin 'D'	4 x phono	1 x phono	1 x phono
Digital I/O	2 x in, 2 x out	2 x in, 6 x out	4 x in, 8 x out	4 x in, 8 x out	20 x in, 24 x out
Analog I/O	2 x in, 6 x out	2 x in, 6 x out	4 x in, 12 x out	4 x in, 12 x out	10 x in, 12 x out
Metering			Analog signal present	8 x switchable bar graphs	12 x switchable bar graphs
Format	Internal	Internal	1U rack	1U rack	1U rack

If you require to interface to other devices such as switches and lights then Fairlight offers an optional GPI/O solution. These cards with 8 optically isolated inputs and 8 relay outputs, all of which can be integrated in any Fairlight system to control external equipment. The GPIO card is available in both and in-console mounted version as well as a remote Ethernet-interfaced version.

For high-density audio connections Fairlight offers optional additional MADI interfaces. This interface mounts inside the host PC, and provides 3 MADI in and 3 MADI output ports. The card comes in two versions, either coax or optical.

SX-8 Installation

Hardware Overview

The SX-8 unit provides a compact option to the traditional SX-20 interface box. With 6 analog outputs it provides the basis for a fully-functional 5.1 mixing suite. The SX-8 is also a perfect solution for those users who are looking for a more compact CC-2 powered solution for small project and music studios which do not require video sync capability.

Please refer to the Fairlight I/O and Sync Solution Comparison table for technical specifications.

Optional Breakout cable

The digital, LTC and MTC I/O is all combined on a single D-25 connector. An optional breakout cable called AIOX104-A is available which breaks these signals out to individual connectors.

Installing the hardware

The SX-8 is physically a standard single lane PCIe form-factor card, but does not actually use the PCIe connection. The SX-8 card itself connects to the Host CC-card via a standard SATA cable.

The SX-8 fits easily within any standard ATX Host PC chassis.

The SX8 requires a power connection from the Host PC. This can be via either SATA or Molex hard drive power connection. However, some hard drive power looms have restricted cable length. Extension hard drive power cables may be required.

The SX-8 backplane provides 2 x Analog In and 6 x Analog Out connections on a 25-pin 'D' connector. The pin-out for this connection can be found in Appendix 1 of this document.

The SX-8 backplane also provides access to the Wordclock Input/Output BNC connector, and the Headphone Out 3.5mm stereo mini jack.

The SX8 is supplied with a secondary breakout backplane. This connects to the SX8 via an internal ribbon cable.



This secondary backplane provides access to the LTC, MTC, and S/PDIF I/O connections via a 25-pin 'D' connector.

Connecting SX-8 to CC-1



Connecting SX-8 to CC-2



SX-12V Installation

Hardware Overview

The SX-12 provides an internal I/O solution, it will fit in any available PC slot position, with or without a PCI slot making the CC-2 Audio engine totally self-contained with no external equipment required to make the system run. It is most commonly used in a system like Pyxis but can be used for any CC-2 solution when the extended features provided by the SX-20 are not required.

The SX-12V is also a perfect solution for those users who are looking for a more compact CC-2 powered solution for project studios and mobile recording and editing systems which require video sync capability.

Please refer to the Fairlight I/O and Sync Solution Comparison table for technical specifications.

Optional Breakout cable

The digital, LTC and MTC I/O is all combined on a single D-25 connector. An optional breakout cable called AIOX104-A is available which breaks these signals out to individual connectors.

Installing the hardware

The SX-12V is physically a standard single lane PCIe form-factor card, but does not actually use the PCIe connection. The SX-12V card itself connects to the Host CC-card via a standard SATA cable.

The SX-8 fits easily within any standard ATX Host PC chassis.

The SX12V requires a power connection from the Host PC. This can be via either SATA or Molex hard drive power connection. However, some hard drive power looms have restricted cable length. Extension hard drive power cables may be required.

The SX12V backplane provides 2 x Analog In and 6 x Analog Out connections on a 25-pin 'D' connector. The Pin-out for this connection can be found in Appendix 1 of this document.

The SX12V backplane also provides access to the Video Sync In, Word clock Input/Output BNC connectors, and the Headphone Output 3.5mm stereo mini jack.

The SX12V is supplied with a secondary breakout backplane. This connects to the SX8 via TWO internal ribbon cables.

This second backplane provides access to the LTC, MTC, and S/PDIF I/O connections via a 25-pin 'D' connector. Sony 9-pin control is also mounted on this secondary breakout backplane, via a 9-pin 'D'.



Connecting SX-12V to CC-1



Connecting SX-12V to CC-2



SX-20 Installation

Hardware Overview

Fairlight's SX-20 is a versatile "Sync I/O Toolbox". It offers an extensive range of analog and digital I/O, high-resolution sound, pristine mic preamps, precise lock to timecode and ultra low latency, making it the perfect setting for most demanding media productions.

The SX-20 is a 1U rack mountable interface with a host of features. It provides a complete I/O solution for the CC-2, with enough outputs to feed a full 5.1 monitoring setup including multiple near field monitors, two independent 9-pin ports, tri-level sync, word clock, LTC and MTC. The SX-20 provides for sync at any frame rate including HD Trilevel sync, Video Sync, Word Clock, AES and LTC. The unit also generates LTC at any standard rate. Please refer to the <u>Fairlight I/O and Sync Solution</u> <u>Comparison table</u> for technical specifications.

Front Panel



Installing the hardware

The SX-20 I/O unit presents as a standard 1RU device. Rack mounting ears and screws are provided in the accessory pack, within the SX-20 shipping carton.

The rack mounting ears have multiple sets of screw holes to enable flush, or recessed mounting of the SX-20 unit in the equipment rack. A recessed mounting configuration may be useful for situations where the front panel connectors protrude beyond the front surface of the equipment rack. Use a #2 Pozi screwdriver to install the rack mounting ears to the SX-20 enclosure.

It is recommended that the SX-20 be mounted in close proximity to the Host PC. It is typical to mount the Host PC and SX-unit in the same rack.

Connecting to CC-1/CC-2

Once the SX-20 unit is mounted within the rack, connect the SX-20 to the Host PC CC-card with the 2metre DVI-I cable provided.

NOTE!

- SX-20 must use a DVI-I cable for connection to the Host CC-card.
- DVI-I cable length must NOT exceed 5 metres.
- DVI-D cables are not suitable for this purpose.
- Active DVI Extenders of any format are NOT suitable for this purpose.

The SX-20 will now automatically power-on only when the Host PC is powered on. There is no need to manually turn the SX-20 mains power on or off under normal operations.

SX-20R Installation

Hardware Overview

The SX-20R is a versatile, all-in-one I/O, synchronisation and control interface, designed for audio post production systems powered by Fairlight's Crystal Core. The SX-20R offers an extensive range of analog and digital I/O, high-resolution sound, pristine remote-controlled mic preamps, precise lock to timecode and ultra low latency, making it the perfect setting for most demanding media productions.

Please refer to the Fairlight I/O and Sync Solution Comparison table for technical specifications.

Front Panel



Rear Panel



Installing the hardware

The SX-20R I/O unit presents as a standard 1RU device. Rack mounting ears and screws are provided in the accessory pack, within the SX-20R shipping carton.

The rack mounting ears have multiple sets of screw holes to enable flush, or recessed mounting of the SX-20R unit in the equipment rack. A recessed mounting configuration may be useful for situations where the front panel connectors protrude beyond the front surface of the equipment rack. Use a #2 Pozi screwdriver to install the rack mounting ears to the SX-20R enclosure.

It is recommended that the SX-20R be mounted in close proximity to the Host PC. It is typical to mount the Host PC and SX-unit in the same rack.

Connecting to CC-1/CC-2

Once the SX-20R unit is mounted within the rack, connect the SX-20R to the Host PC CC-card with the 2metre DVI-I cable provided.

NOTE!

- SX-20R must use a DVI-I cable for connection to the Host CC-card.
- DVI-I cable length must NOT exceed 5 metres.
- DVI-D cables are not suitable for this purpose.
- Active DVI Extenders of any format are NOT suitable for this purpose.

The SX-20R will now automatically power-on only when the Host PC is powered on. There is no need to manually turn the SX-20R mains power on or off under normal operations.

Front Panel Controls

The SX-20R front panel is equipped with a number of controls and indicators.



At left, the SX-20R has 4 status indicators. These give an at-a-glance indication of the SX-20R operating status:

- The blue "Power" LED indicates presence of mains power and correct connection to an operating CC-1 or CC-2 equipped Host PC.
- The flashing green "Pulse" LED indicates correct SX-20R internal operating status.
- The orange "Comms" LED indicates data transfer between SX-20R unit and the Host CC-1/CC-2 card.
- The red "Status" LED is a mute status indicator. This indicator will be ON any time the system has its analog outputs muted.

Both front panel Analog Inputs are equipped with a pair of LED indicators.

- The "48V" LED indicates whether the 48V phantom-power function is currently enabled or not.
- The "Inst" LED indicates the current Analog Input mode.
 - When "Inst" is ON, the Analog Input is operating in "Instrument" mode, and the TRS (1/4" Jack) line-level connections are active.
 - When "Inst" is OFF, the Analog Input is operating in "Microphone" mode, and the XLR mic-level connections are active.

The SX-20R Meter section has a "Signal Level Select" button. Pressing this button cycles through the various sets of Analog and Digital Inputs and Outputs, and determines which signal levels are being shown on the meter displays. The currently displayed signals are indicated by the Signal Level Select LEDs.

Adjusting Analog Input settings

Analog Input 48V Phantom Power

To enable +48V Phantom power on the SX-20R front panel mic inputs:

- Patch the front panel Analog Input (1 or 2) to a Track or Live (Example shows Track1).
- Invoke the Virtual Channel Panel (Double-click the appropriate Track/Live name tile on the Mixer).

• Enable the "48V" button as shown below.



Analog Input Mic/Inst

To change between "Mic" mode (microphone level via XLR connections) and "Inst" mode (Instrument Line level via TRS connections) on the SX-20R front panel mic inputs:

- Patch the front panel Analog Input (1 or 2) to a Track or Live (Example shows Track1).
- Invoke the Virtual Channel Panel (Double-click the appropriate Track/Live name tile on the Mixer).
- To invoke Inst mode select the "INST" button as shown below.



Analog Input Mic Gain/Level

To adjust the Analog Input Gain on the SX-20R front panel mic inputs:

- Patch the front panel Analog Input (1 or 2) to a Track or Live (Example shows Track1).
- Invoke the Virtual Channel Panel (Double-click the appropriate Track/Live name tile on the Mixer).
- Use the PC mouse to adjust the gain control as required.



SX-36 Installation

Hardware Overview

The SX-36 is a high-end, all-in-one I/O, synchronisation and control interface, designed for audio post production systems powered by Fairlight's Crystal Core Media Engine. The SX-36 offers an extensive range of analog and digital I/O, high-resolution sound, pristine remote-controlled mic preamps, precise lock to timecode and ultra low latency, making it the perfect setting for most demanding media productions.

Please refer to the Fairlight I/O and Sync Solution Comparison table for technical specifications.

Front Panel



Rear Panel



Installing the hardware

The SX-36 I/O unit presents as a standard 1RU device. Rack mounting ears and screws are provided in the accessory pack, within the SX-36 shipping carton.

The rack mounting ears have multiple sets of screw holes to enable flush, or recessed mounting of the SX-36 unit in the equipment rack. A recessed mounting configuration may be useful for situations where the front panel connectors protrude beyond the front surface of the equipment rack. Use a #2 Pozi screwdriver to install the rack mounting ears to the SX-36 enclosure.

It is recommended that the SX-36 be mounted in close proximity to the Host PC. It is typical to mount the Host PC and SX-unit in the same rack.

Connecting to CC-1/CC-2

Once the SX-36 unit is mounted within the rack, connect the SX-36 to the Host PC CC-card with the 2metre DVI-I cable provided.

NOTE!

- SX-36 must use a DVI-I cable for connection to the Host CC-card.
- DVI-I cable length must NOT exceed 5 metres.
- DVI-D cables are not suitable for this purpose.
- Active DVI Extenders of any format are NOT suitable for this purpose.

The SX-36 will now automatically power-on only when the Host PC is powered on. There is no need to manually turn the SX-36 mains power on or off under normal operations.

Front Panel Controls

The SX-36 front panel is equipped with a number of controls and indicators.



At left, the SX-36 has 4 status indicators. These give at-a-glance indication of the SX-36 operating status:

- The blue "Power" LED indicates presence of mains power and correct connection to an operating CC-1 or CC-2 equipped Host PC.
- The flashing green "Pulse" LED indicates correct SX-36 internal operating status.
- The orange "Comms" LED indicates data transfer between SX-36 unit and the Host CC-1/CC-2 card.
- The red "Status" LED is a mute status indicator. This indicator will be ON any time the system has its analog outputs muted.

Both front panel Analog Inputs are equipped with a pair of LED indicators.

- The "48V" LED indicates whether the 48V phantom-power function is currently enabled or not.
- The "Inst" LED indicates the current Analog Input mode.
 - When "Inst" is ON, the Analog Input is operating in "Instrument" mode, and the TRS (1/4" Jack) line-level connections are active.
 - When "Inst" is OFF, the Analog Input is operating in "Microphone" mode, and the XLR mic-level connections are active.

The SX-36 Meter section has a "Signal Level Select" button. Pressing this button cycles through the various sets of Analog and Digital Inputs and Outputs, and determines which signal levels are being shown on the meter displays. The currently displayed signals are indicated by the Signal Level Select LEDs.

Adjusting Analog Input settings

Analog Input 48V Phantom Power

To enable +48V Phantom power on the SX-36 front panel mic inputs:

• Patch the front panel Analog Input (1 or 2) to a Track or Live (Example shows Track1).

- Invoke the Virtual Channel Panel (Double-click the appropriate Track/Live name tile on the Mixer).
- Enable the "48V" button as shown below.



Analog Input Mic/Inst

To change between "Mic" mode (microphone level via XLR connections) and "Inst" mode (Instrument Line level via TRS connections) on the SX-36 front panel mic inputs:

- Patch the front panel Analog Input (1 or 2) to a Track or Live (Example shows Track1).
- Invoke the Virtual Channel Panel (Double-click the appropriate Track/Live name tile on the Mixer).
- To invoke Inst mode select the "INST" button as shown below.

Track 1	
DREAM II	Virtual Channel
Y Mic Mic Track RecLev	In Post Direct
	Pre

Analog Input Mic Gain/Level

To adjust the Analog Input Gain on the SX-36 front panel mic inputs:

- Patch the front panel Analog Input (1 or 2) to a Track or Live (Example shows Track1).
- Invoke the Virtual Channel Panel (Double-click the appropriate Track/Live name tile on the Mixer).
- Use the PC mouse to adjust the gain control as required.



CMI/CMO Installation

Hardware Overview

The Fairlight CMI/CMO cards are MADI adapter daughter boards for the CC-2 card. They are designed to mount in a spare PCIe backplane slot within the Host PC.



Fairlight's CMI connects to 3 x SATA connectors on the CC-2 card and adapts them to 3 x BNC MADI In/Out pairs of connectors.

A CMI requires an ATX MOLEX specification power connection to operate.

Fairlight's CMO connects to 3 x SATA connectors on the CC-2 card and adapts them to 3 x SC fibreoptic MADI In/Out pairs of connectors.

The CMO requires a 5-wire SATA specification power connection to operate.

Installing the hardware

Fairlight CMI/CMO adapter units are designed to be installed in a PCIe backplane slot of the Host PC. The cards do not actually use an electrical PCIe slot, but occupy a backplane position. This is important when specifying the configuration of a Host PC for any given Fairlight system.

The CMI/CMO unit CANNOT be mounted independently of the Host PC.

For the CMI variant, once mounted in the Host PC chassis, use a 14mm tube spanner to install the 2x locking plates + washers + locking nuts as shown below.

Connecting to CC-1



Connecting to CC-2



I/O Configuration

Fairlight Setup Utility

Initial configuration of an SX-IO unit need only be performed one time during initial commissioning. It is easily achieved via the Fairlight Setup Utility.

To launch Fairlight Setup Utility, navigate to:

START > All Programs > Fairlight > DreamII > DreamII Utils > Fairlight Setup Utility

Click on the "I/O" tab, to view the I/O config and SX-selection menu. Notice that the default value for the "Installed IO Card" field is "SX20".

No. Type: Particle Particle Particle Particle Particle Particle Loos L	INSTALLED I/O CARD	
BDUE Analog 1 SOUR A1 Analog BDUE Analog 3 SOUR A1 Analog BDUE Dight 1 SOUR A1 Analog BDUE Dight 1 SOUR A1 Analog BDUE Dight 1 SOUR A1 Bould BDUE Dight 3 SOUR A1 Dight BDUE Dight 3 SOUR A1 Dight BDUE Dight 4 SOUR A1 Dight BDUE MAD1 1-1 Dight Dight Dight BDUE MAD1 1-2 Dight Dight Dight BDUE MAD1 1-5 Dight Dight Dight BDUE MAD1 1-5 Dight Dight Dight BDUE MAD1		
Book Addition Contract Addition Stock Analog 3 Stock Analog Stock Analog 4 Stock Analog Stock Analog 4 Stock Analog Stock Analog 4 Stock Analog Stock Digital 1 Stock Digital Stock Stock Digital 2 Stock Digital Digi	\$120	
Note: Analog 3 SOD A4 + Analog Topol: Deptsil 1 SOD A4 + Analog Topol: Deptsil 1 SOD A4 + Deptsil Topol: Deptsil 1 SOD A4 + Deptsil Topol: Deptsil 1 SOD A4 + Deptsil Topol: Deptsil 3 SOD A4 + Deptsil Topol: Deptsil 3 SOD A4 + Deptsil Topol: Deptsil 4 SOD A4 + Deptsil Topol: Deptsil 4 SOD A4 + Deptsil Topol: MAD1 1 -1 Deptsil Deptsil Deptsil Topol: MAD1 1 -2 Deptsil Deptsil Deptsil Topol: MAD1 1 -5 Deptsil Deptsil Deptsil Topol: MAD1 1 -5 Deptsil Deptsil Deptsil Topol: MAD1 1 -5 Deptsil Deptsil Deptsil Topol: MAD1 1 -7 Deptsil </td <td>1.00</td> <td></td>	1.00	
Paper Deptil 1 S200011 Deptil Paper Deptil 2 S200012 Deptil Paper Deptil 2 S200012 Deptil Paper Deptil 3 S200013 Deptil Paper Deptil 3 S200013 Deptil Paper Deptil 4 S200013 Deptil Paper Deptil 4 S200014 Deptil Paper MAD1 2 MAD1-2 Deptil Paper MAD1 4 MAD1-3 Deptil Paper MAD1 4 MAD1-4 Deptil Paper MAD1 4 MAD1-5 Deptil Paper MAD1 6 MAD1-4 Deptil Paper MAD1 6 MAD1-5 Deptil Paper MAD1 6 MAD1-6 Deptil Paper MAD1 10 MAD1-10 Deptil Paper MAD1		-
Part Dopini 2 SIGD 01 2 Dopini 2 SIGD 01 2 Dopini Part Dopini 3 SIGD 01 3 Dopini Dopini SIGD 01 3 Dopini Part Dopini 4 SIGD 01 3 Dopini Dopi	and the second s	
No.K Deptil 3 SIGD 013 Deptil No.K Deptil 4 SIGD 013 Deptil No.K Deptil 4 SIGD 014 Deptil No.K MAD1 1 C Deptil 4 No.K MAD1 2 MAD1 1-2 Deptil No.K MAD1 3 MAD1 3-3 Deptil Spot MAD1 4 MAD1 3-4 Deptil Spot MAD1 4 MAD1 3-5 Deptil Spot MAD1 5 MAD1 3-5 Deptil Spot MAD1 5 MAD1 3-6 Deptil Spot MAD1 6 MAD1 3-6 Deptil Spot MAD1 9 MAD1 3-6 Deptil Spot MAD1 9 MAD1 3-6 Deptil Spot MAD1 10 MAD1 3-6 Deptil Spot MAD1 11 MAD1 3-6 Deptil Spot MAD1 12 MAD1 3-6 Deptil Spot MAD1 12 MAD1 3-6 Deptil	100	
Jopus Optimil 4 SIGD 114 Optimil Control Topus MADI 1 MADI-1-1 Doptimil Dop		
Insult MADI 1 MADI 1-1 Deptal Input MADI 2 MADI 3-2 Deptal Input MADI 3 MADI 3-2 Deptal Input MADI 3 MADI 3-2 Deptal Input MADI 3 MADI 3-2 Deptal Input MADI 4 MADI 4-4 Deptal Input MADI 6 MADI 4-4 Deptal Input MADI 6 MADI 6 Deptal Input MADI 10 MADI 10 Deptal Input MADI 12 MADI 12 Deptal Input MADI 13 MADI		
NADI 2 MADI 1-2: Dopt Nov. MADI 2 MADI 1-2: Doptal Nov. MADI 4 MADI 1-4: Doptal Nov. MADI 5 MADI 1-5: Doptal Nov. MADI 5 MADI 1-5: Doptal Nov. MADI 6 MADI 1-5: Doptal Nov. MADI 7 MADI 1-7: Doptal Nov. MADI 7 MADI 1-7: Doptal Nov. MADI 9 MADI 1-7: Doptal Nov. MADI 9 MADI 1-7: Doptal Nov. MADI 9 MADI 1-7: Doptal Nov. MADI 10 MADI 1-7: Doptal Nov. MADI 11: MADI 1-10: Doptal Nov. MADI 1-11: MADI 1-12: Doptal Nov. MADI 1-13: MADI 1-13: Doptal Nov. MADI 1-14: MADI 1-14:	CCA DETICAL	
Paper MADI 3 MADI-3-3 Deptal Paper MADI 4 MADI-4 Deptal Paper MADI 5 MADI-5 Deptal Paper MADI 6 MADI-6 Deptal Paper MADI-8 Deptal Deptal Deptal Paper MADI-16 Deptal Deptal Deptal Paper MADI-110 MADI-170 Deptal Deptal Paper MADI 12 MADI-122 Deptal Deptal Paper MADI 13 MADI-144 Deptal Deptal Paper MADI 15 MADI-145 Deptal Deptal Paper MADI-16 MADI-165 Deptal	CC-1 OF ILOND	
Joput MADI 4 MADI-4 Deptal Joput MADI 5 MADI-5 Deptal Joput MADI 6 MADI-6 Deptal Joput MADI 7 Neptal Deptal Joput MADI 10 Neptal Deptal Joput MADI 11 MADI-16 Deptal Joput MADI 11 MADI-17 Deptal Joput MADI 12 Deptal Deptal Joput MADI 13 MADI-16 Deptal Joput MADI 14 MADI-16 Deptal Joput MADI 15 MADI-16 Deptal Joput MADI M	MADI Format: 6	56 C 64
Input MADI 5 MADI-1-5. Doptal Input MADI 6 MADI-6. Doptal Input MADI 7 MADI-7. Doptal Input MADI 6 MADI-6. Doptal Input MADI 10 MADI-7. Doptal Input MADI 10 MADI-1.0 Doptal Input MADI 11 MADI-1.1 Doptal Input MADI 12 MADI-1.12 Doptal Input MADI 13 MADI-1.14 Doptal Input MADI 14 MADI-1.14 Doptal Input MADI 15 MADI-1.15 Doptal Input MADI 15 MADI-1.15 Doptal Input <t< td=""><td></td><td></td></t<>		
Input MADI 6 MADI 1-6 Doptal Input MADI 7 Doptal Doptal Input MADI 9 MADI 1-6 Doptal Input MADI 9 MADI 1-6 Doptal Input MADI 10 MADI 1-6 Doptal Input MADI 10 MADI 1-10 Doptal Input MADI 11 MADI 1-10 Doptal Input MADI 11 MADI 1-11 Doptal Input MADI 11 MADI 1-12 Doptal Input MADI 13 MADI 1-13 Doptal Input MADI 14 MADI 1-14 Doptal Input MADI 14 MADI 1-14 Doptal Input MADI 14 MADI 1-14 Doptal Input MADI 14 MADI 1-16 Doptal Input MADI 15 MADI 1-16 Doptal Input <td>CONTRACTOR STREET, ST</td> <td></td>	CONTRACTOR STREET, ST	
Input MADI 7 MADI 7 Deptal Input MADI 8 MADI 9 Deptal Input MADI 9 MADI 9 Deptal Input MADI 10 MADI 9 Deptal Input MADI 10 MADI 9 Deptal Input MADI 10 MADI Deptal - Input MADI 11 MADI Deptal - Input MADI 12 MADI 13 Deptal Input MADI 13 MADI Deptal Input MADI 14 MADI Deptal Input MADI 16 MADI Deptal Input MADI 17	CPS Card precased	100 A
Input MADI 0 MADI-0 Digital Input MADI 9 Digital Digital Input MADI 1-0 Digital Digital Input MADI 10 MADI-1-0 Digital Input MADI 11 MADI-1-1 Digital Input MADI 12 MaDI-1-1 Digital Input MADI 13 MADI-1-12 Digital Input MADI 14 MADI-1-12 Digital Input MADI 15 MADI-1-12 Digital Input MADI 15 MADI-1-15 Digital Input MADI 16 MADI-1-16 Digital Input MADI 17 MADI-1-16 MADI		
Input MADI 9 MADI 1-9 Digital Input MADI 10 MADI 1-10 Digital - Input MADI 11 MADI 1-11 Digital - - Input MADI 12 MADI 1-12 Digital - - Input MADI 13 MADI 1-13 Digital - - Input MADI 13 MADI 1-13 Digital - - Input MADI 14 MADI 1-14 Digital -		
Insult MADI 10 MADI 3-10 Digital Insult MADI 11 Digital Digital Insult MADI 11 Digital Digital Insult MADI 12 MADI Digital Insult MADI 13 MADI Digital Insult MADI 14 MADI Digital Insult MADI 15 MADI Digital Insult MADI 15 MADI Digital Insult MADI MADI 1-15 Digital Insult MADI MADI 1-16 Digital Insult MADI 1-17 MADI Insult MADI 1-16 Digital Insult MADI 1-17 MADI		
Insuk MADI 11 MADI-1-11 Digital Insuk MADI 1-2 Digital Digital Insuk MADI 1-2 Digital Digital Insuk MADI 1-3 Digital Digital Insuk MADI 1-4 Digital Digital Insuk MADI 1-5 Digital Digital Insuk MADI 1-6 MADI-1-6 Digital Insuk MADI 1-7 MADI-1-7 MADI Insuk MADI 1-7 MADI MADI	EXTERNAL I/O	
Input MADI 12 MADI-1-12 Digital Viput MADI 1-13 Digital Input MADI 1-14 Digital Input MADI 1-14 Digital Input MADI 1-15 Digital Input MADI 15 MADI-1-16 Digital Input MADI 1-16 Digital Digital Input MADI 1-17 MADI MADI		
Next NAD1 13 NAD1 1-13 Digital Sput MAD1 1-14 Digital Digital Sput MAD1 1-15 Digital Digital Sput MAD1 15 MAD1-1-15 Digital Sput MAD1 16 MAD1-1-16 Digital Sput MAD1 16 MAD1-1-17 MAD1 Sput MAD1 17 MAD1-1-17 MAD1	Studii Cont	in a shore
Input MADI 14 MADI 1-14 Digital Input MADI 15 MADI 5 Digital Input MADI 16 MADI 16 Digital Input MADI 16 Digital Digital Digital Input MADI 17 MADI MADI Digital Input MADI 17 MADI MADI MADI		day or a
Input MADI 15 Digital Input MADI 16 MADI 16 Input MADI 16 MADI 16 Input MADI 17 MADI 16 Input MADI 17 MADI 16		
Input MADI 16 MADI1-16 Degial Input MADI 17 MADI1-17 MADI Input MADI 18 MADI1-18 MADI		
Input MADI 17 MADI 1-17 MADI Input MADI 18 MADI 1-18 MADI		
Input MADI 18 MADI 1-18 MADI		
Input MADI 19 MADI 1-19 MADI		
Input MADI 20 MADI 1-20 MADI		
Input MADI 21 MADI 1-21 MADI		
Input MADI 22 MADI 1-22 MADI		
Input MADI 23 MADI 1-23 MADI		
And		

Click on the drop-down menu, and select the appropriate SX-unit option. (SX12 is selected in the example below)

	×
INSTALLED I/O CARD	

A dialog box will appear confirming that the IO Config file and user names will be adjusted to suit the selected SX-unit. Please click "Yes"

FairlightS	ietup
2	Changing the card will Reset all of the Names of the Analog and Digital Channels to their Default - Continue?
	Yes No

I/O	Type	#	Name	Page	Lock	-	INSTALLED I/O CARD
input	Analog	1	5X12 AI 1	Analog			
input	Analog	2	SX12 AI 2	Analog			SX12 -
nput	Digital	1	SX12 DI 1	Digital			
nput	Digital	2	SX12 DI 2	Digital			0.0
nput	MADI	1	MADI 1-1	Digital			Reprogram
nput	MADI	2	MADI 1-2	Digital			
nput	MADI	3	MADI 1-3	Digital			
nput	MADI	4	MADI 1-4	Digital			
nput	MADI	5	MADI 1-5	Digital			CC-1 OPTIONS
nput	MADI	6	MADI 1-6	Digital			
nput	MADI	7	MADI 1-7	Digital			MADI Format: @ 56 C 64
nput	MADI	8	MADI 1-8	Digital			
nput	MADI	9	MADI 1-9	Digital			CMI Card Installed:
input	MADI	10	MADI 1-10	Digital			
nput	MADI	11	MADI 1-11	Digital			
nput	MADI	12	MADI 1-12	Digital			
input	MADI	13	MADI 1-13	Digital			
input	MADI	14	MADI 1-14	Digital			EXTERNAL I/O
nput	MADI	15	MADI 1-15	Digital			
nput	MADI	16	MADI 1-16	Digital			SX-48 Configurator
nput	MADI	17	MADI 1-17	MADI			
nput	MADI	18	MADI 1-18	MADI			
nput	MADI	19	MADI 1-19	MADI			
nput	MADI	20	MADI 1-20	MADI			
nput	MADI	21	MADI 1-21	MADI			
input	MADI	22	MADI 1-22	MADI			
nput	MADI	23	MADI 1-23	MADI			
nput	MADI	24	MADI 1-24	MADI			
nput	MADI	25	MADI 1-25	MADI			
input	MADI	26	MADI 1-26	MADI			
nput	MADI	27	MADI 1-27	MADI			
input	MADI	28	MADI 1-28	MADI		-1	Update IO Config

To confirm and save the change to the SX-Unit settings, click "OK"



A dialog box will appear prompting to accept the changes made to the IO Configuration. Click "Yes" The Host PC is now configured to use the selected SX unit.

Naming I/O

For clarity during operation, all Fairlight Inputs and Outputs can be named by end users. This is most easily accomplished within Fairlight Setup Utility.

- Ensure the LIVE application is closed before proceeding.
- Navigate to

START > All Programs > Fairlight > LIVE > LIVE Utils

- Click "Fairlight Setup Utility 64"
- Click the "I/O Config" tab
- Select the Input or Output to rename
- Click in the "Name" column. The existing name will highlight as shown, ready for data entry (Example shows the default name "AP AI 1")

Fairlight Set	up Utility						
Surface Config	I/O Config	Bus/M	Ionitor Formats	Panel Test			
I/O	Туре		Name		Page	Lock	Ext De
Input	Analog	1	AP AI 1		Analog		***
Input	Analog	2	AP 412	_	Analog		***
Input	Analog	3	AP AI 3		Analog		
Input	Analog	4	AP AI 4		Analog		
Input	Digital	1	AP DI 1		Digital		
Input	Digital	2	AP DI 2		Digital		
Innut	Digital	3	AP DI 3		Digital		

Type in the required name (Example shows "Mic 1")

Surface Config	I/O Config	Bus/M	Ionitor Formats Panel Test			
I/O	Туре		Name	Page	Lock	Ext De
Input	Analog	1	Mic 1	Analog		
Input	Analog	2	AP ALL	Analog		
Input	Analog	3	AP AI 3	Analog		
Input	Analog	4	AP AI 4	Analog		
Input	Digital	1	AP DI 1	Digital		
Input	Digital	2	AP DI 2	Digital		
Input	Digital	3	AP DI 3	Digital		

- Click away from the Name column to confirm the change.
- Once configured, click "Update IO Config", and accept all prompts.
- Click "OK" to close Fairlight Setup Utility.

I/O unit Firmware Reprogramming

Under some conditions (for example, specific software updates), it may be required to reprogram the I/O unit. This is easily achieved via the Fairlight Setup Utility.

To launch Fairlight Setup Utility, navigate to:

START > All Programs > Fairlight > DreamII > DreamII Utils > Fairlight Setup Utility

Click on the "I/O" tab, to view the I/O config and SX-selection menu. Ensure the correct SX unit is selected in the "Installed IO card" menu.

For diagnostic purposes, it is worth noting the existing Crystal Card and SX-device information *before* reprogramming. (Example below shows an SX-12V)

To start the Re-Program sequence, click "ReProgram". This will launch the SX-Flash Utility.

BX-Flash Ver 2.1.0		×
Progress	Crystal Card detected Type: 1, Rev: 1, Class: 2, Build: 394 Purge addr: 0x60, data: 0x0 SX12 is SW Type: 1, Rev: 2, Build: 7 HW Type: 1, Rev: 2, Build: 11	
Program Flash Quit		

To begin the I/O unit reprogramming, click "Program Flash"

Progress	Crystal Card detected Type: 1, Rev: 1, Class: 2, Build: 394 Purge addr: 0x60, data: 0x0 SX12 is
	HW Type: 1, Rev: 2, Build: 11

As the reprogramming process occurs, the status of the procedure will be displayed in real-time, as shown below.

👬 SX-Flash Ver 2.1.0		×
Progress	Programing Flash SX12 Programed block 0 SX12 Programed block 1	•
	SX12 Programed block 2 SX12 Programed block 3 SX12 Programed block 4 SX12 Programed block 5 SX12 Programed block 6	II
Program Flash Quit	SX12 Programed block 7	-

When the reprogramming process is complete, the utility will display the new I/O unit firmware and status. To exit the SX-Flash Utility, click "Quit".

💑 SX-Flash 🛛 Ver 2.1.0		X
Progress	Purge addr: 0x66, data: 0x0	*
	Purge addr: 0x66, data: 0x0 Purge addr: 0x66, data: 0x0 Purge addr: 0x66, data: 0x0	
	Purge addr: 0x66, data: 0x0 Purge addr: 0x66, data: 0x0 SX12 is	E
Program Flash Quit	SW Type: 1, Rev: 2, Build: 7 HW Type: 1, Rev: 2, Build: 11	-

To exit the Fairlight Setup Utility, click "OK".

I/O	Type	#	Name	Page	Lock 🔺	INSTALLED I/O CARD
Input	Analog	1	5X12 AI 1	Analog		
Input	Analog	2	SX12 AI 2	Analog		SX12 •
Input	Digital	1	5X12 DI 1	Digital		
Input	Digital	2	SX12 DI 2	Digital		1
Input	MADI	1	MADI 1-1	Digital		ReProgram
Input	MADI	2	MADI 1-2	Digital		
Input	MADI	3	MADI 1-3	Digital		
Input	MADI	4	MADI 1-4	Digital		
Input	MADI	5	MADI 1-5	Digital		CC-LOPTIONS
Input	MADI	6	MADI 1-6	Digital		CC-1 OF HOND
Input	MADI	7	MADI 1-7	Digital		MADI Format: @ 56 C 64
input	MADI	8	MADI 1-8	Digital		
Input	MADI	9	MADI 1-9	Digital		CMI Card Installed:
Input	MADI	10	MADI 1-10	Digital		Cha Colora a ocoroa. T
Input	MADI	11	MADI 1-11	Digital		
Input	MADI	12	MADI 1-12	Digital		
Input	MADI	13	MADI 1-13	Digital		
Input	MADI	14	MADI 1-14	Digital		EXTERNAL I/O
Input	MADI	15	MADI 1-15	Digital		
input	MADI	16	MADI 1-16	Digital		SV-48 Configurator
Input	MADI	17	MADI 1-17	MADI		Sh to comparator
input	MADI	18	MADI 1-18	MADI		
Input	MADI	19	MADI 1-19	MADI		
input	MADI	20	MADI 1-20	MADI		
Input	MADI	21	MADI 1-21	MADI		
input	MADI	22	MADI 1-22	MADI		
Input	MADI	23	MADI 1-23	MADI		
input	MADI	24	MADI 1-24	MADI		
input	MADI	25	MADI 1-25	MADI		
input	MADI	26	MADI 1-26	MADI		
Input	MADI	27	MADI 1-27	MADI		
Input	MADI	28	MADI 1-28	MADI	-	Update IO Config

Appendix 1 – SX8/SX12V DB-25 Pinouts

	CU1	24
1	CHI_HUI	12
_	CH1_COLD	25
	CH1_GND	10
2	CH2_HOT	22
2	CH2_COLD	11
	CH2_GND	21
-	сн3_нот	21
3	CH3_COLD	9
1011	CH3_GND	22
	СН4_НОТ	7
4	CH4_COLD	20
	CH4_GND	8
2	СН5_НОТ	18
5	CH5 COLD	6
2	CH5 GND	19
	сн6 нот	4
6		17
0		5
7		15
7		3
1	CH7_COLD	16
	CH7_GND	1
0	CH8_HOT	14
ð	CH8_COLD	2
	CH8_GND	12
	NC_1	13

Appendix 2 – SX-20R DB-25 Pinouts

LTC/GPIO/AES Loom

	Ch_1_Hot	24
AES In 3/4	Ch_1_Cold	12
	Ch_1_GND	25
	Ch_2_Hot	10
LTC In	Ch_2_Cold	23
	Ch_2_GND	11
	Ch_3_Hot	21
GPIO In	Ch_3_Cold	9
	Ch_3_GND	22
	Ch_4_Hot	7
GPIO Out	Ch_4_Cold	20
	Ch_4_GND	8
	Ch_5_Hot	18
AES Out 3/4	Ch_5_Cold	6
	Ch_5_GND	19
	Ch_6_Hot	4
AES Out 5/6	Ch_6_Cold	17
	Ch_6_GND	5
	Ch_7_Hot	15
AES Out 7/8	Ch_7_Cold	3
	Ch_7_GND	16
	Ch_8_Hot	1
LTC Out	Ch_8_Cold	14
	Ch_8_GND	2
	NC	13

Appendix 3 – SX-36 DB-25 Pinouts

LTC/GPIO/AES Loom

		~ (
	Ch_1_Hot	24
AES In 3/4	Ch_1_Cold	12
	Ch_1_GND	25
	Ch_2_Hot	10
LTC In	Ch_2_Cold	23
	Ch_2_GND	11
	Ch_3_Hot	21
GPIO In	Ch_3_Cold	9
	Ch_3_GND	22
	Ch_4_Hot	7
GPIO Out	Ch_4_Cold	20
	Ch_4_GND	8
	Ch_5_Hot	18
AES Out 3/4	Ch_5_Cold	6
	Ch_5_GND	19
	Ch_6_Hot	4
AES Out 5/6	Ch_6_Cold	17
	Ch_6_GND	5
	Ch_7_Hot	15
AES Out 7/8	Ch_7_Cold	3
	Ch_7_GND	16
	Ch_8_Hot	1
LTC Out	Ch_8_Cold	14
	Ch_8_GND	2
	NC	13

AES Loom #1

	Ch_1_Hot	24
AES In 5/6	Ch_1_Cold	12
	Ch_1_GND	25
	Ch_2_Hot	10
AES In 7/8	Ch_2_Cold	23
	Ch_2_GND	11
	Ch_3_Hot	21
AES In 9/10	Ch_3_Cold	9
	Ch_3_GND	22
	Ch_4_Hot	7
AES In 11/12	Ch_4_Cold	20
	Ch_4_GND	8
	Ch_5_Hot	18
AES Out 9/10	Ch_5_Cold	6
	Ch_5_GND	19
	Ch_6_Hot	4
AES Out 11/12	Ch_6_Cold	17
	Ch_6_GND	5
	Ch_7_Hot	15
AES Out 13/14	Ch_7_Cold	3
	Ch_7_GND	16
	Ch_8_Hot	1
AES Out 15/16	Ch_8_Cold	14
	Ch_8_GND	2
	NC	13

AES Loom #2

	Ch_1_Hot	24
AES In 13/14	Ch_1_Cold	12
	Ch_1_GND	25
AES In 15/16	Ch_2_Hot	10

Installation, Configuration & Service Manual Page 28

		1
	Ch_2_Cold	23
	Ch_2_GND	11
	Ch_3_Hot	21
AES In 17/18	Ch_3_Cold	9
	Ch_3_GND	22
	Ch_4_Hot	7
AES In 19/20	Ch_4_Cold	20
	Ch_4_GND	8
	Ch_5_Hot	18
AES Out 17/18	Ch_5_Cold	6
	Ch_5_GND	19
	Ch_6_Hot	4
AES Out 19/20	Ch_6_Cold	17
	Ch_6_GND	5
	Ch_7_Hot	15
AES Out 21/22	Ch_7_Cold	3
	Ch_7_GND	16
	Ch_8_Hot	1
AES Out 23/24	Ch_8_Cold	14
	Ch_8_GND	2
	NC	13

Analog Loom #1

Analog In 3	Ch_1_Hot	24
	Ch_1_Cold	12
	Ch_1_GND	25
Analog In 4	Ch_2_Hot	10
	Ch_2_Cold	23
	Ch_2_GND	11
Analog In 5	Ch_3_Hot	21
	Ch_3_Cold	9

		1
	Ch_3_GND	22
	Ch_4_Hot	7
Analog In 6	Ch_4_Cold	20
	Ch_4_GND	8
	Ch_5_Hot	18
Analog In 7	Ch_5_Cold	6
	Ch_5_GND	19
	Ch_6_Hot	4
Analog In 8	Ch_6_Cold	17
	Ch_6_GND	5
	Ch_7_Hot	15
Analog In 9	Ch_7_Cold	3
	Ch_7_GND	16
	Ch_8_Hot	1
Analog In 10	Ch_8_Cold	14
	Ch_8_GND	2
	NC	13

Analog Loom #2

	Ch_1_Hot	24
Analog Out 1	Ch_1_Cold	12
	Ch_1_GND	25
	Ch_2_Hot	10
Analog Out 2	Ch_2_Cold	23
	Ch_2_GND	11
	Ch_3_Hot	21
Analog Out 3	Ch_3_Cold	9
	Ch_3_GND	22
Analog Out 4	Ch_4_Hot	7

	1	
	Ch_4_Cold	20
	Ch_4_GND	8
	Ch_5_Hot	18
Analog Out 5	Ch_5_Cold	6
	Ch_5_GND	19
	Ch_6_Hot	4
Analog Out 6	Ch_6_Cold	17
	Ch_6_GND	5
	Ch_7_Hot	15
Analog Out 7	Ch_7_Cold	3
	Ch_7_GND	16
	Ch_8_Hot	1
Analog Out 8	Ch_8_Cold	14
	Ch_8_GND	2
	NC	13

GPIO connections (LTC/GPIO/AES Loom)

The SX-36 supports a single set of GPIO remote Input and Output. For basic GPI "trigger switch" contact closure, the following shows a simple trigger input example. The GPI terminals are Opto-Isolated. Therefore they will need a power source in order to function. The example below shows a simple SPST switch, using an external 5VDC and GND supply (PSU plug pack or similar).





For use with 12VDC external supplies, a different value resistor will be necessary.



Appendix 4 - SX-20, SX-20R and SX-36 9-Pin Ports

These units are all equipped with two RS-422 9-pin deck control ports. One is configured as a Master (Output), and the other as a Slave (Input).

- The "Master" port is hardwired to **send** deck control commands to a slave device with a standard RS-422 "Straight Through" cable.
- The "Slave" port is hardwired to **receive** deck control commands from a master/controlling device with a standard RS-422 "Straight Through" cable.

Both ports may be configured to run as Master (Outputs) simultaneously, by:

- Forcing the Slave port into "Chase" mode via the DREAM software, and
- Using a RS-422 "cross-over" cable on the SX-unit's "Slave" port.

One reason for configuring both RS-422 ports as "Master" would be to allow the DREAM Constellation control surface to simultaneously control an external Video feeder device such as a Digital Betacam deck, and a separate external video recording device, such as a standalone PYXIS Ingest PC. (See example schematic below).

