

# ECLIPSE<sub>SX</sub>

**Midnight Finish**

*Compact Color Grading Control Surface*






Users Manual





*EclipseSX Midnight Finish and EclipseSX are trademarks of JLC Cooper Electronics. All other brand names are the property of their respective owners.*

*Eclipse SX User's Manual, First Edition  
Part Number 932114*

© 2009 JLC Cooper Electronics, 142 Arena Street, El Segundo, CA 90245 USA  
 (310) 322-9990    (310) 335-0110    [www.jlcooper.com](http://www.jlcooper.com)



# Table of Contents

<b>Introduction.....</b>	<b>6</b>
<b>Installation.....</b>	<b>7</b>
<i>Unpacking.....</i>	<i>7</i>
<i>Setup.....</i>	<i>7</i>
<i>Connecting the Eclipse SX.....</i>	<i>7</i>
<i>Self Test.....</i>	<i>8</i>
<i>Mode Selection.....</i>	<i>8</i>
<b>Technical Reference.....</b>	<b>9</b>
<i>Electrical Connections.....</i>	<i>9</i>
<i>Troubleshooting.....</i>	<i>15</i>
<i>Care and Service.....</i>	<i>15</i>
<i>Configuring the Host Application.....</i>	<i>15</i>
<b>Using the Eclipse SX.....</b>	<b>16</b>
<b>Technical Reference.....</b>	<b>17</b>
<i>Troubleshooting.....</i>	<i>17</i>
<i>Care and Service.....</i>	<i>20</i>

# Introduction

---

The EclipseSX Midnight is a tactile control surface intended for color grading application such as Apple Color, Iridas SpeedGrade, Assimilate Scratch and IFX Piranha Cinema HD.

The EclipseSX Midnight is identical to the left side of the EclipseCX with the following enhancements:

- Darker unit finish with black sides,
- White LED and VFD displays and,
- The addition of six reset pushbutton switches next to the high resolution encoders above the trackballs.

The unit features a 10/100 RJ-45 Ethernet connector and a DC power jack. The unit can be power from the supplied power adaptor or powered from 12 volts DC. LED indicators show status of Ethernet activity.

# Installation

---

## Unpacking

When you receive your Eclipse SX Midnight, you should receive the following items:

- EclipseSX Midnight
- This Users Manual
- Power Supply
- Power Cord

Please take a moment to register your product at:

<http://www.jlcooper.com>

This will allow us to notify you of important updates and changes to software or features.

## Setup

The compact design of the Eclipse SX makes it easy to locate wherever you need it. The Eclipse SX must be setup up in a location that does not experience vibration, excessive humidity, dust or temperature extremes.

## Connecting the Eclipse SX

The EclipseSX can connect to the host directly using an interface card installed in slot 1. This can be an RS-422, RS-232, USB or Ethernet card. Refer to the next section for specific instructions on how to connect the EclipseSX to your host computer.

The Eclipse SX typically uses the MCS-Ethernet Interface which connects to any 10baseT or 100baseTX Ethernet network.

1. Connect the Eclipse SX to the Ethernet network
2. Connect the included power supply to the Eclipse SX.

## Self Test

The EclipseSX has a self test mode which aids in troubleshooting the controller. The self mode is accessed by pressing and holding Page 1 and Page 2 during power up.

Buttons and LEDs are tested by pressing any button. When a button is pressed, the corresponding LED illuminates indicating that the button and LED are functioning.

The trackballs and rings are tested by rolling the balls or turning the rings. The direction and control will be indicated in the left display.

The encoders are tested by turning the knobs. The direction and value of each encoder will be indicated on the right display.

## Mode Selection

To accommodate a wide variety of applications, the EclipseSX can emulate the protocol of an EclipseCX or the MCS-Spectrum. There are two ways to switch the protocol of the EclipseSX:

1. **Manually**

This method allows the user to manually set the operational mode.

- To select EclipseCX mode, press and hold Page 6 during power on.
- To select MCS-Spectrum mode, press and hold Page 5 during power on.

2. **Automatically**

When the EclipseSX receives an EclipseCX message from the host software application (such as Apple Color), the unit will switch to EclipseCX mode.



# Technical Reference

---

## Electrical Connections

The EclipseSX can have a variety of interface cards. Among these are:

- MCS-3000 Series RS-422 Card #920320
- MCS-3000 Series RS-232 Card #920321
- MCS-3000 Series USB Card #920384
- MCS-3000 Series Ethernet Card #920394
- MCS-3000 Series GPI card #920355

## **MCS-3000 Series RS-422 Interface Card**

The RS-422 Interface is intended for operation with a VTR, controller or a host computer. It provides the advantages of RS-422, which allows for long cable runs. With low loss, low capacitance cable, the RS-422 Interface Card can accommodate cable runs up to 1km.

The RS-422 Interface has a female D-Sub connector. The interface can be configured to connect to either a deck or a host. Five jumpers on the interface card configure the pinout. All five jumpers must be placed in either the "To Computer" or "To Machine" position. The port is configured to communicate at 38400 bits/sec, 1 start bit, 8 data bits, 1 stop bit and odd parity.

### **MCS-RS422 Interface Pinout**

	Setting on Card	
	"To Computer"	"To Machine"
1	Ground	Ground
2	Transmit A	Receive A
3	Receive B	Transmit B
4	Ground	Ground
5	not used	not used
6	Ground	Ground
7	Transmit B	Receive B
8	Receive A	Transmit A
9	Ground	Ground

*Note: These signals are at the RS-422 Interface card.*

## **MCS-3000 Series RS-232 Interface Card**

The RS-232 Interface is intended for operation with a host computer. It provides the advantages of a standard interface, which is found on many computers.

The RS-232 Interface has a male D-Sub connector. The port is configured to communicate at 1 start bit, 8 data bits, 1 stop bit and odd parity. Five jumpers allow the port speed to be set for 38400, 19200, 9600, 4800 and 2400 bits/sec to accommodate various situations.

**MCS-RS232 Interface Pinout**

1	DCD*
2	Transmit
3	Receive
5	Ground
6	DSR*
8	CTS*

*Note: These signals are at the RS-232 Interface card*

*\* These pins are not used by the card and are connected together for ports that require handshake.*

## **MCS-3000 Series USB Interface Card**

The USB Interface is intended for operation with a host computer. It provides the advantages of a standard interface, which is found on most modern computers.

The USB Interface has a female USB B type connector and uses the USB v1.1 protocol. For Windows computers, there is a driver that allows the device with this interface card to appear as a com port. This driver can be downloaded from the JLC Cooper support web site, <http://www.jlcooper.com/pages/downloads.html>. With the driver, the virtual com port is configured to communicate at 38400 bits/sec, 1 start bit, 8 data bits, 1 stop bit and no parity.

## ***MCS-3000 Series Ethernet Interface Card***

The Ethernet Interface is intended for operation with a host computer. It provides the advantages of a standard interface, long cable runs, use over private/public/wired/wireless networks, the ability of being shared among computers and the ability to work with any platform that supports TCP/IP.

To use the Ethernet Interface, the software application **MUST** be written to specifically support the Ethernet Interface. Consult your software's users documentation for details on how to configure the software.

To configure the EclipseSX Ethernet settings, an Ethernet Interface card must be in slot 1. You can verify this by visually checking slot 1 for the presence of an Ethernet card.

To set the IP address, press Page4 + Page8 to access the configuration page. The right display will show:



Press Page7 to set the IP Address and TCP Port Number of the EclipseSX.

The displays will show:

Set IP Address	Set Port
255 . 255 . 255 . 255	65535

Use the knobs below each number to set values necessary for your network. Press Page8 when you are done.

To set the IP mask, press Page4 + Page8 once again to access the configuration page. The right display will show:

Pg6	Pg7	Pg8
Mask	IP Add.	Exit

Press Page6 to set the IP subnet mask of the EclipseSX. The displays will show:

Set Mask Address
255 . 255 . 255 . 255

Use the knobs below each number to set values necessary for your network. Press Page8 when you are done.

*Note: You must power cycle the EclipseSX for the Ethernet settings to take effect.*

## Power

The EclipseSX requires a 12 volt DC supply capable of delivering at least 1.25 amps. The unit comes with a power supply appropriate for the country in which the unit was sold. If you need a power supply specific to your location, please contact your local distributor or JLC Cooper Electronics.

Location	JLC Cooper Part Number
North America	TBD
Outside North America	TBD + appropriate cord for location

**Table 2: JLC Cooper approved Power Supplies**

*Warning: Using a power supply other than the units specified in the above table can result in damage to the EclipseSX and/or other equipment which is **not** covered by the JLC Cooper Factory Warranty.*

## Troubleshooting

If for some reason the EclipseSX does not give you the expected results, take a moment to do some investigating. The most important concept is that you have your EclipseSX connected properly as outlined in *Installation and Use*. Take a moment to double check your setup.

A common problem is forgetting to turn the power switch on or turning the unit on after the software application has launched.

In addition, the JLCopper website ([www.jlcooper.com](http://www.jlcooper.com)) will contain up to date information on drivers, applications and troubleshooting.

If all else fails, you can contact the JLCopper Service Department at: [service@jlcooper.com](mailto:service@jlcooper.com).

## Care and Service

If properly cared for, your EclipseSX should provide years of troublefree performance. While the EclipseSX is built in a rugged metal enclosure, please avoid dropping the EclipseSX.

Clean with a soft, damp cloth. Do not allow liquids, dust or other foreign matter to get inside the unit.

There are no user-serviceable parts in the EclipseSX. Please refer to the JLCopper Electronics Limited Factory Warranty on the following page for detailed warranty and service information

## Configuring the Host Application

Now that the IP settings of the Eclipse SX have been set, the host application must be configured to connect to the Eclipse SX.

To configure Apple Color to connect to the Eclipse SX, refer to Appendix C, “Setting Up a Control Surface“ in the Apple Color User Manual.

## Using the Eclipse SX

---

Refer to the user documentation of your host application for details on how to use the Eclipse SX with your application.



# Technical Reference

---

## **Ethernet Interface**

The Ethernet Interface is intended for operation with a host computer. It provides the advantages of a standard interface, long cable runs, use over private/public/wired/wireless networks, the ability of being shared among computers and the ability to work with any platform that supports TCP/IP.

The Ethernet interface in the Eclipse SX is a standard auto switching 10baseT/100baseTX, twisted pair interface with an RJ-45 connector. Use a straight through cable to connect the Eclipse SX to an Ethernet hub or switch. Use a crossover cable to connect the Eclipse SX directly to a host computer.

## **Power**

The Eclipse SX requires a 12 volt DC power supply capable of delivering at the minimum, 5 amps. The unit comes with a power supply (JLCooper part number 561024-3). If you need a power supply specific to your location, please contact your local distributor or JLCooper Electronics.

*Warning: using a power supply other than, the unit specified could result in damage to the Eclipse SX and/or other equipment, which is not covered by the JLCooper Factory Warranty.*

## **Troubleshooting**

If for some reason the Eclipse SX does not give you the expected results, take a moment to do some investigating. The most important concept is that you have your Eclipse SX connected properly as outlined in *Installation and Use*. Take a moment to double check your setup.

A common problem is forgetting to turn the power switch on or turning the unit on after the software application has launched.

In addition, the JLC Cooper website ([www.jlcooper.com](http://www.jlcooper.com)) will contain current information on drivers, applications and troubleshooting.

Below are listed some possible issues and solutions.

**Issue**

Can't connect to Eclipse SX with the host software through an Ethernet hub or switch.

**Cause**

Eclipse SX not properly connected to ethernet hub or switch.

**Solution**

Connect Eclipse SX to ethernet hub or switch with a straight through cable not a crossover cable.

**Issue**

Can't connect to Eclipse SX directly to my computer with the host software.

**Cause**

Eclipse SX not properly connected to PC.

**Solution**

Connect Eclipse SX to ethernet port on your PC with a crossover cable not a straight through cable.

**Issue**

Can't connect to Eclipse SX with the host software.

**Cause**

Ethernet settings on Eclipse SX and computer are not compatible.

**Solution**

Set the ethernet settings on your Eclipse SX and PC to work together.

For example, with the Eclipse SX factory defaults of:

IP Address	192.168.254.101
Subnet Mask	255.255.255.0
Gateway	192.168.254.198

Set your PC ethernet settings to:

IP Address	192.168.254.nnn
Subnet Mask	255.255.255.0

nnn is anything except 101

*Note: You can verify that the computer can communicate with the Eclipse SX by pinging the Eclipse SX. In Windows, click Start | Run... and type: ping 192.168.254.101. If everything is configured correctly, the Eclipse SX will reply.*

### **Issue**

I still can't connect to Eclipse SX with the host software.

### **Cause**

There may be another device on the network that uses the same address as the Eclipse SX.

### **Solution**

Change the IP address of the conflicting device or remove the conflicting device.

### **Issue**

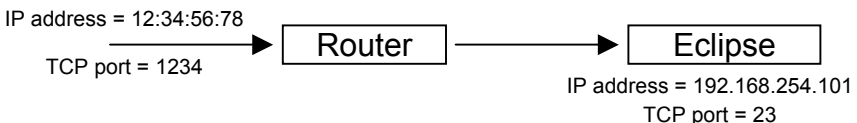
Can't connect to Eclipse SX with the host software behind a router.

### **Cause**

An ethernet router may block and/or translate ethernet traffic.

### **Solution**

Ask your network administrator for assistance. If the Eclipse SX is set as a server and is behind a router, you will need to perform port forwarding. Configure your router to forward TCP traffic on one port to the IP address and port number of your Eclipse SX. You will also need to configure the Eclipse SX gateway address to match the router's address.



If all else fails, you can contact the JLC Cooper Service Department at: [service@jlcooper.com](mailto:service@jlcooper.com).

## **Care and Service**

If properly cared for, your Eclipse SX should provide years of troublefree performance. While the Eclipse SX is built in a rugged enclosure, please avoid dropping the Eclipse SX.

Clean with a soft, damp cloth. Do not allow liquids, dust or other foreign matter to get inside the unit.

There are no user-serviceable parts in the Eclipse SX. Please refer to the JLC Cooper Electronics Limited Factory Warranty on the following page for detailed warranty and service information.

## **JLCooper Electronics Limited Factory Warranty**

JLCooper Electronics ("JLCooper") warrants this product to be free of defects in materials or workmanship for a period of 12 months from the date of purchase. This warranty is non-transferable and the benefits apply only to the original owner. Proof of purchase in the form of an itemized sales receipt is required for warranty coverage. To receive service under this warranty, customers in the United States should contact the JLCooper factory at (310) 322-9990 and talk to a service technician. If necessary, a Return Authorization number may be issued. For our customers outside the United States, it is recommended that you first contact your Dealer or Distributor, since they may offer their own service or support policy. If local support is not obtainable, please send a FAX to JLCooper's Service Department at +1 310 335 0110 with a detailed description of the service required. Upon issuance of return authorization, the product should be packed in the original shipping materials and shipped prepaid and insured to: Service Department, JLCooper Electronics, 142 Arena Street, El Segundo, CA 90245. Please include the following: copy of the sales receipt, your name and address (no P.O. Boxes, please), a brief description of the problem, and any other related items discussed with the service department and considered necessary to evaluate the product or effect a repair. The return authorization number must be clearly written on the outside of the package. JLCooper will at its option, without charge for parts or labor, either repair or replace the defective part(s) or unit. Shipping costs are not covered by this warranty. JLCooper's normal repair turn around time at the factory is approximately 15 business days from receipt of product to shipping. Your actual turn around time will include return shipping. Actual turn around time will vary depending upon many factors including the repeatability of the customer's reported complaint, the availability of parts required for repair, the availability of related products needed to evaluate the product if necessary. Priority services are available at additional cost. These should be discussed with the service technician at the time the return authorization is issued. This warranty provides only the benefits specified and does not cover defects or repairs needed as result of acts beyond the control of JLCooper including but not limited to: abuse, damage by accident/negligence, damage from using incorrect power supply, modification, alteration, improper use, unauthorized servicing, tampering, or failure to operate in accordance with the procedures outlined in the owner's manual; nor for natural or man-made events such as, but not limited to flooding, lightning, tornadoes, earthquake, fire, civil unrest, war, terrorism, etc.

THE DURATION OF ANY OTHER WARRANTIES, WHETHER IMPLIED OR EXPRESS, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN. JLCOOPER HEREBY EXCLUDES INCIDENTAL AND CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO: LOSS OF TIME, INCONVENIENCE, DELAY IN PERFORMANCE OF THIS WARRANTY, THE LOSS OF USE OF THE PRODUCT OR COMMERCIAL LOSS, AND FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY APPLICABLE TO THIS PRODUCT. JLCOOPER SHALL NOT BE LIABLE FOR DAMAGES OR LOSS RESULTING FROM THE NEGLIGENT OR INTENTIONAL ACTS OF THE SHIPPER OR HIS CONTRACT AFFILIATES. THE CUSTOMER SHOULD CONTACT THE SHIPPER FOR PROPER CLAIMS PROCEDURES IN THE EVENT OF DAMAGE OR LOSS RESULTING FROM SHIPMENT. THIS WARRANTY SHALL BE GOVERNED BY THE LAWS OF THE STATE OF CALIFORNIA.