ECLIPSE BTX

Midnight Finish

Primary Transport Controller

Users Manual

JL COOPER ELECTRONICS

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Eclipse BTX Midnight User's Manual, First Edition
Part Number 932125

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Introduction

The Eclipse BTX is a tactile control surface intended for video editing applications such as Apple Final Cut Pro.

The Eclipse BTX has numerous interface options. It has two slots to accommodate the MCS-Interface Cards. These are available in:

- RS-232
- RS-422
- Quad RS-422
- USB
- Ethernet
- GPI (8 in / 8 out)

Since the Eclipse BTX can be used with any of these interfaces, the unit does not come with an interface. This allows the user to choose the interface that is appropriate for their application. The interface must be purchased separately.

Additionally, the Eclipse BTX has an expansion port, which allows it to be connected to other Eclipse and MCS-3000 series peripherals.

Installation

Unpacking

When you receive your Eclipse BTX, you should receive the following items:

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

Using the Ethernet Interface

Installing the Ethernet Interface

Connecting the Eclipse BTX is quite straightforward. The Eclipse BTX typically connects to any 10baseT or 100baseTX Ethernet network.

1. Install the MCS-3000 Series Ethernet Interface in Slot 1.
2. Connect the Eclipse BTX to the Ethernet network
3. Connect the included power supply to the Eclipse BTX.

Configuring the Ethernet Interface

Before using the Eclipse BTX, it must be configured properly.

To set initialize the Eclipse BTX to factory defaults, perform the following steps:

1. Holding the Up and Down buttons,
2. switch the Power switch on,
3. release the Up and Down buttons.

Note: The Up and Down buttons are located in the circular cluster of five buttons at the center of the unit towards the back edge.

The factory defaults are:

IP Address	192.168.254.101
Subnet Mask	255.255.255.0
Gateway	192.168.254.198

To configure the IP address of the Eclipse BTX, press SHIFT and ASSIGN/UTILITY on the Eclipse BTX.

To change the IP address or port of the Eclipse BTX, perform the following steps:

1. While the unit is powered, hold down the SHIFT key and press the ASSIGN/UTILITY button.

2. The current IP Address will be shown in the display. If you do not wish to change this address, press ENTER.

3. If you wish to change this, press numeric pad keys. This does not scroll. If you make a mistake, press the CLEAR button once, and the current number will reappear.

4. When satisfied with the displayed value, press the ENTER key. The display will then display the Gateway value. If you don't wish to change this, press ENTER again. Press ENTER again to step past the Subnet Mask.

5. The Port number will now appear as a five-digit number. If you do not wish to change it, press ENTER. If you do wish to change it, it must be entered as a five-digit number. For instance, if you wish for port #80, you must enter 00080. If a mistake is made, press the CLEAR button once.

6. After the ENTER key is pressed this last time, the changes will be made to internal non-volatile memory, and a message will appear.

As the message indicates, the changes will not take place on the Ethernet Card until the power has been turned off and back on.

If you cannot access the Eclipse BTX, please refer to the troubleshooting section.

Configuring the Host Application

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

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

Using the USB Interface Card

Installing the USB Interface

Connecting the Eclipse BTX is quite straightforward. The Eclipse BTX with the USB Interface connects to any USB 1.1 or 2.0 port. It is self powered so it does not require any power from the USB bus. This means that it can be used with a powered or unpowered USB hub.

1. Install the MCS-3000 Series USB Interface in Slot 1.
2. Connect the included power supply to the Eclipse BTX.
3. Connect the Eclipse BTX to the USB port.

Installing the USB Drivers

There is no hardware configuration for the MCS-3000 Series USB Interface Card. However, a driver must be installed on your computer. For Windows computers, a driver allows the device with this interface card to appear as a COM port can be downloaded from the JLCooper support web site at:

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.

Using the RS-232 Interface Card

Installing the RS-232 Interface

Connecting the Eclipse BTX is quite straightforward. The Eclipse BTX with the RS-232 Interface connects to any standard RS-232C port.

1. Install the MCS-3000 Series RS-232 Interface in Slot 1.
2. Connect the included power supply to the Eclipse BTX.
3. Connect the Eclipse BTX to an RS-232 port.

Configuring the RS-232 Interface

To configure the MCS-3000 Series RS-232 Interface Card for use with a computer based application:

1. Remove power from the Eclipse BTX.
2. Remove the MCS-3000 Series RS-232 Interface Card from the Eclipse BTX.
3. Set the jumper found on the card to the serial port rate position. The factory default is 38400 bits/second.
4. Insert the MCS-3000 Series RS-232 Interface Card into Slot 1 of the Eclipse BTX.

Using the RS-422 Interface Card

Installing the RS-422 Interface

Connecting the Eclipse BTX is quite straightforward. The Eclipse BTX with the RS-422 Interface connects to a RS-422 port.

1. Install the MCS-3000 Series RS-422 Interface in Slot 1.
2. Connect the included power supply to the Eclipse BTX.
3. Connect the Eclipse BTX to an RS-422 port.

Configuring the RS-422 Interface

To configure the MCS-3000 Series RS-422 Interface Card for use with a computer based application:

1. Remove power from the Eclipse BTX.
2. Remove the MCS-3000 Series RS-422 Interface Card from the Eclipse BTX.
3. Set the 5 jumpers found on the card to the “Computer” position.
4. Insert the MCS-3000 Series RS-422 Interface Card into Slot 1 of the Eclipse BTX.

Using the GPI Interface Card

The GPI card is intended to reside in Slot 2. No configuration is required for the MCS-3000 GPI Card. Simply insert the MCS-3000 Series GPI Card into Slot 2 of the Eclipse BTX.

Using the Eclipse BTX

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

For Apple Mac users, there is also the Eclipse Mapping Application available that allows you map the controls of the Eclipse BTX to any function in your applications. This can be downloaded from the JLCooper web site. Details on its setup and use are included with the download.

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

Power

The Eclipse BTX requires a 12 volt DC, center pin positive, 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 BTX and/or other equipment, which is not covered by the JLCooper Factory Warranty.*

Details of the 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.*

Details of the 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 places in either the "To Computer" or "To Machine" position. The port is configured to communicate at the industry standard of 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.

Troubleshooting

If for some reason the Eclipse BTX does not give you the expected results, take a moment to do some investigating. The most important concept is that you have your Eclipse BTX 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 JLCooper website (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 BTX with the host software through an Ethernet hub or switch.
Cause
Eclipse BTX not properly connected to ethernet hub or switch.
Solution
Connect Eclipse BTX to ethernet hub or switch with a straight through cable not a crossover cable.

Issue
Can't connect to Eclipse BTX directly to my computer with the host software.
Cause
Eclipse BTX not properly connected to PC.
Solution
Connect Eclipse BTX to ethernet port on your PC with a crossover cable not a straight through cable.

Issue
Can't connect to Eclipse BTX with the host software.
Cause
Ethernet settings on Eclipse BTX and computer are not compatible.

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

For example, with the Eclipse BTX 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

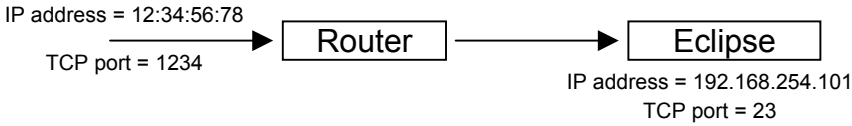
Note: You can verify that the computer can communicate with the Eclipse BTX by pinging the Eclipse BTX. In Windows, click Start | Run… and type: `ping 192.168.254.101`. *If everything is configured correctly, the Eclipse BTX will reply.*

Issue
I still can't connect to Eclipse BTX with the host software.
Cause
There may be another device on the network that uses the same address as the Eclipse BTX.
Solution

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

Issue
Can't connect to Eclipse BTX 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 BTX 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 BTX. You will also need to configure the Eclipse BTX gateway address to match the routers address.



If all else fails, you can contact the JLCooper Service Department at: service@jlcooper.com.

Care and Service

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

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 BTX. Please refer to the JLCooper Electronics Limited Factory Warranty on the following page for detailed warranty and service information.

RoHS Statement of Compliance

June 28, 2006

Re: Eclipse BTX Midnight

This is a declaration that the items described (herein as RoHS "Class 1") do not contain one or more than one:

RoHS restricted substances above the homogeneous material concentration limit (Threshold Level) per the EU/RoHS directive effective July 1, 2006 and amending document(s).

JLCooper Electronics products will meet MIL-I 45208. The Company is currently implementing procedures for ISO 9000:2000, after which feasibility research will begin for ISO 14000 considerations.

RoHS Class 1 OEM Products:

Hazardous Substance	**Allowed PPM Level**
Cadmium (Cd)	100ppm (0.01%)
Lead (Pb)	1000ppm (0.1%)
Mercury (Hg)	1000ppm (0.1%)
Hexavalent Chromium (CrVI)	1000ppm (0.1%)
Polybrominated Biphenyl's (PBB's)	1000ppm (0.1%)
Polybrominated Diphenyl Ethers (PBDE's)	1000ppm (0.1%)

Supplier evidence of compliance on file meets or exceeds trace ability requirements of ISO 9000:2000. Where feasible, JL Cooper seeks suppliers with ISO 9000:2000 Quality and ISO 14000 Environmental Certification.

Sincerely,

Thomas L Lowry

Thomas L. Lowry
Quality Assurance Department

Declaration of Conformity

JLCooper Electronics declares that the product named below conforms to:

Low Voltage Directive (LVD) 2006/95/EC
(Superceded LVD73/23/EEC) on 16th January 2006.

Low Voltage Directive (LVD) 73/23/EEC
(Directive 73/23/EC has recently been the subject of a codification, requiring a new number)

Eclipse BTX

Warning: *The installer is responsible for protection against personal contact with all live connections to power supplies, which contain hazardous voltages.*

Company Address:
142 Arena Street
El Segundo, CA, 90245 U.S.A.

Product Name: Media Command Station
Product Type: Multimedia Controller
Model Number: Eclipse BTX
Date of Issue: 16 September 2009

Authorized by: Thomas L Lowry

Title of Authority: Quality Assurance
Declaration Reference: CE/EEC2007TLL

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.

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