
# JLCooper Electronics

## Control, Automation and Interfacing Products










# Serious About Control

*"Precision control unleashes creativity."*

JLCooper is serious about precise control. We're devoted to producing professional–quality Control, Interfacing and Automation Products. We succeed when a difficult task is accomplished faster, easier and with increased reliability.

*"Effortless control expands your imagination."*

JLCooper controllers let you work faster and with increased proficiency. They provide the ease–of–use and mission critical tactile assurance that's missing from mouse-based or touch screen user interfaces.

With the largest line of control products for computer based systems and specialized applications, our products set the standards that others follow.

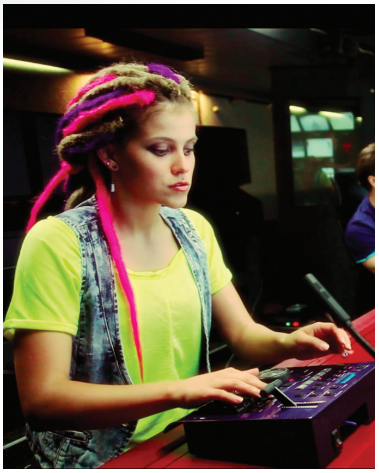
Hundreds of third party software and hardware developers support and utilize JLCooper control products as part of their user interface. Nearly every product we make has a host mode, so that developers have complete control of how our products interact with their applciations and systems.

Our record speaks for itself with over 30 years of award winning products hard at work every day.

Our clients include ABC, Agfa Healthcare, Apple, BBC, CBC, CBS, CNN, DIRECTV, ESPN, FOX, HBO, Heartlab, IBM, IMAX, Intel, Industrial Light & Magic, The Juliard Academy, Lockheed Martin, MIT, MTV, National Center for Macrobiological Research, NBA, NBC, NFL, NFL Films, Pixar, Sony Pictures, Technicolor, Universal Studios, Walt Disney Studios, Warner Brothers Studios, the U.S. Congress and the Library of Congress.

Thousands of leading companies in audio and video production, television and radio broadcast, animation, sound reinforcement, lighting, aerospace, education, scientific research, medical imaging, recording artists and others rely on JLCooper products daily in key applications.

Contact us today to find out how serious we are about making your job faster and easier at 310-322-9990 or email sales@jlcooper.com



*slomo.tv operator*

*US Senate Chambers*



JLCOOPER ELECTRONICS
Control, Automation & Interfacing Products
WWW.JLCOOPER.COM

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# Proton


# Switcher Control Surface

## Compact Broadcast Switcher Panel for BlackMagic Design ATEM

*with Developer Host Mode for Easy Integration into Custom Software Applications*

JLCooper's new Proton™ – Switcher Control Surface is a full featured compact hardware control panel for fast video switching in live production environments.

It controls Blackmagic Design ATEM 1 M/E Production Switcher, ATEM 2 M/E Production Switcher, ATEM Production Studio 4K, ATEM 1 M/E Production Studio 4K, ATEM 2 M/E Production Studio 4K and ATEM Television Studio models.

Its fast, intuitive control and low cost make Proton a game changer for mobile, sports, educational, corporate, computer, house of worship and other applications.

- Lightning Fast Tactile Control Panel - No More Mouse!
- Precision Control Knobs with Push-Button Encoders
- Backlit Relegendable Buttons
- 16.77 Million Colors on Switcher Buttons
- 240 x 96 Backlit Graphic Display
- 2 x 40 Backlit LCD Display
- Variable Brightness on All Displays and Buttons
- 4 Assignable Macro Buttons
- Precision Hall Effect Aluminum T-Bar Transtion Control
- LED Bar Displays Transition Progress
- Nearly All Functions of Larger and More Costly Panels
- Extensive ATEM Parameter Control
- Labels Automatically Appear on Scribble Strip
- Fast Selection of Macros at the Push of a Button
- Fade to black
- Graphic Display of Wipe Patterns
- Internal Universal Switching Power Supply
- Install it on a Sliding Rack Shelf or 19" Rack Tray
- UDP - Multiple Panels Can Be Used Simultaneously
- Free Update Supports New ATEM Models/Features



8.25 in
20.9 cm

15 in
38.1 cm

Weight
4.7 lbs
2.13 kg

3.5 in
8.89 cm

# Switcher Control Surface

## Compact Broadcast Switcher Panel for BlackMagic Design ATEM

*Developer Host Mode for Easy Integration into Custom Software Applications*


The new JLCooper "*ion*™ " is an even smaller hardware control panel for fast video switching in live production environments with Blackmagic Design ATEM.

It's a perfect tactile companion to the ATEM software with your laptop or desktop computer or use it stand-alone with ATEM, as a primary or secondary controller. Add ion rack ears and it's ready to mount in just two rack spaces for mobile fly packs.

It controls Blackmagic Design ATEM 1 M/E Production Switcher, ATEM 2 M/E Production Switcher, ATEM Production Studio 4K, ATEM 1 M/E Production Studio 4K, ATEM 2 M/E Production Studio 4K and ATEM Television Studio models.

It's perfect for for mobile, sports, educational, corporate, computer, house of worship and other applications.

*ion 19" rack mount configuration*

3.5 in
8.89 cm

15.25 in
38.74 cm

Weight
2 lbs
.91 kg

3.75 in
9.53 cm

1.5 in
3.81 cm

- Lightning Fast Tactile Control Panel - No More Mouse!
- Smallest Professional Switcher Control Surface Available
- Pro Quality Features and Controls
- Desktop Use or Rack Mountable - Just Two Rack Spaces!
- Backlit Relegendable Buttons
- 16.77 Million Colors on Switcher Buttons
- 2 x 40 Backlit LCD Display
- Variable Brightness on All Displays and Buttons
- Precision Hall Effect Aluminum T-Bar Transtion Control
- LED Bar Displays Transition Progress
- Nearly All Functions of Larger and More Costly Panels
- Extensive ATEM Parameter Control
- Labels Automatically Appear on Scribble Strip
- Fade to black
- Free Update Supports New ATEM Models/Features
- Install it on a Sliding Rack Shelf or 19" Rack Tray
- UDP - Multiple Panels Can Be Used Simultaneously
- Host Mode for Software Developers

# Eclipse BTX Midnight

*Primary Transport Controller*


Weight
7.35 lbs
3.34 kg


11.5 in
29.21 cm

3.25 in
8.255 cm

13.5 in
34.29 cm

Eclipse BTX is the heart of the Eclipse product family and our standard transport/edit controller for computer-based applications. It's a low profile, compact design with professional controls and quality construction.

It features JLCooper's custom optically encoded jog wheel with concentric shuttle ring, professional transport buttons and 23 white illuminated function keys, Navigational Switches, 5 Rotary Encoders with aluminum knobs, 2 x 40 VF Display and LED Timecode Displays.

Eclipse BTX can combine with other Eclipse Midnight controllers to form a larger console. It's supported in Eclipse Ethernet Software for Mac. (920394 Ethernet Interface Required)

Software developers can connect to it using built in MIDI or optional (Standard) USB, Ethernet, RS-422 or RS-232 Interface Cards.

# Eclipse TX Midnight

*Compact Transport Controller*

Eclipse TX is a basic transport and jog/shuttle controller for computer based applications. It's compact size lets you arrange your workspace to incorporate tablets, keyboards and other expansion options like the Eclipse MXL or Eclipse 24 Midnight.

It features JLCooper's custom optically encoded jog/wheel with concentric shuttle ring, professional transport buttons and 23 function keys, with white LED indicators. Optional Compact interface cards provide stand-alone flexibility for developers.

Supported in JLCooper Eclipse Ethernet Software for Mac.
Requires 920444-4 (Compact) Ethernet Interface. *(Supports TCPIP and UDP)*

8 in
20.32 cm


11.5 in
29.21 cm

3.25 in
8.255 cm

Weight
6 lbs
2.72 kg

# Eclipse 24 Midnight

## *Tactile Command Palette*

Eclipse 24 Midnight is a desktop controller for mission critical playback and control for broadcast automation, playout, production and other applications.

It features 24, next–generation, hi-res, RGB, remotely-relegendable 64 x 32 LCD keyswitches, 10 bank buttons, and 17 additional function and navigation switches.

The hi-res LCD keyswitches can display text up to 40 characters (multiple fonts) and graphics using built in command driven serial interfaces. Software controls the interface, display, and backlighting (64 colors). Data only needs to be transmitted when a change is made to the display or back-ground colors.

Eclipse 24 Midnight can be used as a stand alone controller or it can be physically connected with other Eclipse Midnight units, including Eclipse MXL. Interfaces include built-in Ethernet *(TCPIP and UDP)* and USB, along with optional serial connections.

New Eclipse Software for Mac offers enhanced support for Eclipse 24, allowing users to program custom controls for any applications.



11.5 in
29.21 cm

3.25 in
8.255 cm

10 in
25.4 cm

Weight
5.35 lbs
2.42 kg


*New Eclipse 24 Software for Mac lets you customize it for use with ANY applications using built in messages, Keystrokes, Mouse Clicks MIDI and more! Keysets for Pro Tools, Final Cut X, Logic Pro and other Applications included.*

JLCooper has the most complete line of standard products using remotely relegendable LCD keyswitches.

# Eclipse MXL Midnight

*Fader Controller/Expander with LCD Buttons*

Eclipse MXL™ is our professional fader controller, featuring high-quality, touch-sensitive, 100mm motorized faders and high-resolution backlit LCD display buttons.

New for 2017 - we've updated the product with higher quality faders for better feel and improved reliability.

The LCD buttons can display 64 colors and up to 32 characters of text and graphics. Optional USB, 10/100 Ethernet, RS-232 and RS-422 compact interface cards provide connections to host systems. It displays channel labels, color coded track arming status and other mission critical information.

Eclipse MXL is supported by LAWO (L-S-B) Virtual Studio Manager (VSM), Peavey MediaMatrix NWare, Sony ELC Enhanced Live Production Control System, Viz MOSART Studio Automation and other advanced software applications.

Weight
5.75 lbs
2.62 kg

11.5 in
29.21 cm


3.25 in
8.255 cm

10 in
25.4 cm

# Eclipse MXL2 Midnight

*Fader Controller/Expander w/LCD Buttons & Rotary Encoders*

Eclipse MXL2™ is our newest professional fader controller, featuring high-quality, touch-sensitive, 100mm motorized faders and high-resolution backlit LCD display buttons and push-button rotary encoders. Includes high quality faders with better feel and improved reliability.

The LCD buttons can display 64 colors and up to 32 characters of text and graphics. It can display channel labels, color coded track arming status and other mission critical information. Built in USB and Ethernet interfaces provide connections to host systems without the need for interface cards. Ethernet is TCPIP and UDP compatible.

JLCooper Developer Program provides engineering support, SDK's and protocol documents for all of our products.

Updated Eclipse Software for Mac supports Eclipse MXL and MXL2 with Pro Tools, Logic Pro, Waves and other applications.

Weight
5.75 lbs
2.62 kg

11.5 in
29.21 cm


3.25 in
8.255 cm

10 in
25.4 cm

*Eclipse Products can be combined in various configurations to provide a custom tailored surface for your specific needs. Units are physically joined using the Eclipse Joiner. (See examples of joined Eclipse Midnight controllers below)*

**Eclipse Joiner - Midnight**
*(sold separately)*

*Two Eclipse MXL units using one Eclipse Joiner*

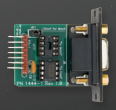

*Eclipse 24, joined with two Eclipse MXL units, using two Eclipse Joiners*

## Unequalled Interfacing Flexibility

As you can see, JLCooper control products have a variety of interface types to work in many different applications. Some Eclipse Series units can interconnect using our internal bus with modular cable. Additional interface card slots provide you with a the ability to adapt the controller to your requirements. Plug-in interface cards provide additional functionality with various applications that include direct support. Contact your JLCooper representative to discuss interfacing requirements for your specific applications.

## Compact Interface Cards

**920444-1 - Compact RS-422 Interface Card** - This provides direct 9-Pin control of professional VTRs, DDRs and servers, or it can be used to interface your controller directly to a RS-422 serial port on your computer.



**920444-2 - Compact RS-232 Interface Card** - Lets your controller interface with computers, messaging systems or any device that can be controlled via RS-232.

**920444-3 - Compact USB Interface Card** - This compact interface card option allows convenient connection to computers via USB.

**920444-4 - Compact Ethernet Interface Card** - Provides a direct 10/100 Ethernet (TCPIP or UDP) connection for controlling network-based applications. Simplifies connection to your computer or LAN, and keeps cable clutter to a minimum.

## Standard Interface Cards

**920394 Ethernet Interface Card**
This interface card provides a direct 10/100 Ethernet (TCPIP) connection for controlling network based applications . It simplifies the connection to your computer or LAN, and keeps the clutter of cables to a minimum.

**920467 USB Interface Card**
This interface card allows connection to computers via USB. It simplifies the connection to your computer.
This card is supported in some special applications. Not supported on Eclipse CX with Davinci Resolve .

**920466 RS-232 Interface Card**
The addition of this plug in card lets you configure your Eclipse or other JLC product for direct computer control. Simply plug the interface card into one of the slots in an Eclipse and you're in control. Baud rate is adjustable.

**920465 RS-422 Interface Card**
This card provides direct 9-Pin control of professional VTRs and DDRs, or it can be used to interface directly to a RS-422 serial port on your computer. Commands from a host computer can be directed to the individual machines.

# Eclipse Software for Mac OS X

Mapping software for Mac allows Ethernet equipped units to control Cubase, Final Cut Pro X, Logic Pro, Media Composer, Premiere Pro, Nuendo and any other Mac software applications.

It provides context-sensitive Jog/Shuttle and user control of text displays and user mapping of controls in any software.

Our smart software driver knows which application is in the foreground and switches automatically for seamless control.

Enhanced support for Eclipse 24, Eclipse MXL/MXL2 and Eclipse MX make the Eclipse Midnight Series the most powerful programmable controller series for Mac.


# Eclipse PX - *Surround Panning Joystick Controller*

Eclipse PX combines a high-quality, three axis joystick with five touch-sensitive, push-button, rotary encoders, nine illuminated buttons and a three digit white LED display for indicating track number.

The controller can be connected to a computer, using its own built in 10/100 Ethernet interface (TCPIP and UDP supported) or to some other Eclipse units via internal expansion port. It can be physically attached to other Eclipse units using Eclipse Joiner Kit.

Eclipse PX is functionally identical to the Nuage Panner and can be used to directly control surround mixing in Steinberg Nuendo and other applications.

3.25 in
8.255 cm

11.5 in
29.21 cm

Weight
6 lbs
2.72 kg

6 in
15.24 cm

With its own custom software plug-in for Steinberg Nuendo, Eclipse PX provides precise control of all automatable surround automation parameters.

Controls include real time control and automation of Joystick X, Y, Global Divergence, Auto Orbit, Front Divergence, Rear Divergence, Center Distribution, Front-Rear Divergence, LFE Level, Manual Orbit and more.

Software developers can take advantage of the Eclipse PX as a stand alone unit or combine it with other Eclipse components to make a specialized controller for your specific needs.

Eclipse PX is also compatible with Pro Tools (Mac Only) and Logic Pro.

Direct support in Dolby ATMOS Tools 1.6.


# Professional Surround Panner for ProTools HD and Logic Pro X

JLCooper's new AXOS Panner for AVID Pro Tools is a high–quality professional controller. It combines a Touch-Sensitive Joystick, 5 Rotary Encoders and 9 Tactile Switches for lightning fast, real–time mastery of surround panning and mixing parameters.

AXOS gives you comprehensive control including Pan, Divergence, Volume, Mute, LFE, Center Percentage and Channel Navigation.

It's plug and play, connecting to your Pro Tools System on Mac or Windows with no additional software required.

Optional software plug-ins for Mac OSX gives the AXOS Panner the added ability to precisely control automated surround mixing in Apple Logic Pro, Steinberg Nuendo and Cubase. Controls X/Y, Track Next/Prev., Angle, Radius, LFE, Spread, Center and more.

Direct support in MDA Creator version 1.2.

New - Direct support in Dolby ATMOS Tools 1.6.

- *Lightning Fast and Easy To Use*
- *Works with AVID Pro Tools HD for Mac/Windows*
- *Plug In Support for Apple Logic Pro on Mac*
- *Works with Steinberg Nuendo and Cubase Mac*
- *Touch-Sensitive Joystick*
- *3m Captive USB cable Included - USB Powered*
- *Low Profile Compact USB Class Compliant Design*
- *Durable All Metal Construction*
- *Host Mode for Software Developers*


# **SharpShot** - *Ultra-Compact Command Palette*

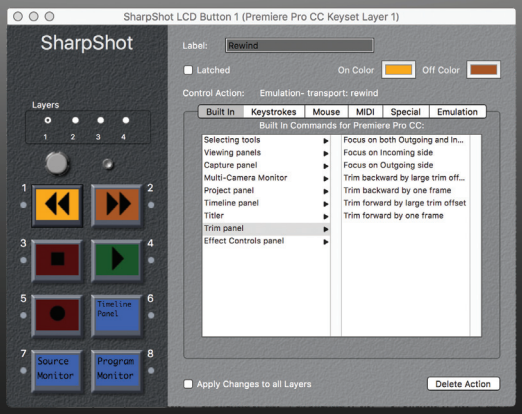
SharpShot™ is an ultra–compact desktop controller with eight, hi-res, remotely-relegendable 64 x 32 LCD keyswitches along with one push-button, rotary encoder. The keyswitches display text (up to 40 characters) and graphics using built in command driven serial interfaces. They integrate a graphical LCD with RGB backlighting and are capable of displaying up to 64 colors. Software controls the interface, display and backlighting.

SharpShot is the perfect size for instant audio or video playback and control in broadcast automation and has many other possible specialized uses. It can alert users to changing operating conditions by showing different colors, text and icons. This enables a customized user interface that reacts instinctively to the task at hand. It helps users work faster and reduces the possibility of human error in critical applications. Its unique, compact shape fits anywhere and uses minimal space.

Other uses include control systems, automation systems, call centers, studios, boardrooms, financial services, telecom, industrial controls and more.

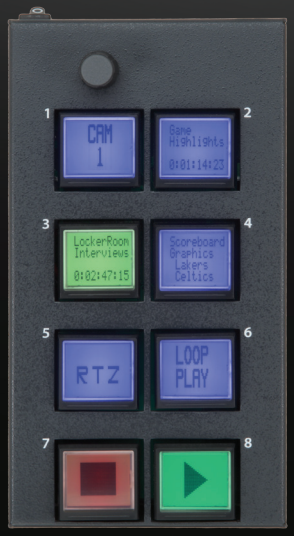
New SharpShot Software for Mac lets you customize it for use with ANY applications using built in messages, Keystrokes, Mouse Clicks, MIDI and more! Keysets for Pro Tools, Final Cut X, Logic Pro and other applications included. 920444-4 Compact Ethernet Interface Card Required for use with Mac software.

Our Developer Program provides engineering support, and protocol for all of our products.


*New SharpShot Software for Mac lets you customize it for use with ANY applications using built in messages, Keystrokes, Mouse Clicks, MIDI and more!*

*Keysets for Pro Tools, Final Cut X, Logic Pro and other applications included.*




Length
6.25in
15.88 cm


2.25 in
5.7 cm

Weight - 1.25 lbs
.57 kg

2.88 in
7.3 cm

Compact Interface Card for USB, Ethernet, RS-232 or RS-422 connection Available. (Optional Ethernet Interface Shown)

# VTC1

## Video Transport Controller





VTC1 is a compact remote for file-based recorders including: AJA Ki Pro/Ki Pro Rack, Ki Pro Ultra, Blackmagic Hyperdeck Studio/Studio Pro, Datavideo HDR-60/70 DN-600/700, Fast Forward Video Studio Pro Replay/Micron/Omega, Video Devices PIX 250i/260i/270i and other recorders. It works with most RS-422 VTRs.

It's small enough to fit in your pocket or toolbox, but tough enough to stand up to daily use in professional environments.

It provides remote control of standard transport functions like Play, Reverse Play, Still, Stop, Shuttle and automatically configures itself to provide clip browsing on AJA, FFV, Video Devices and other decks that support this feature. For most other machines, the Clip+/- feature provides a shortcut to quickly skip 10 seconds forward or back in time.

VTC1 is made with professional transport buttons and a durable steel enclosure and. It requires no external power supply, making it even more convenient and portable, and it quickly connects using integrated 3m 9-Pin/RS-422 cable.

- *Compact Universal RS-422 Remote*
- *Play, Reverse Play, Still, Stop, Record, 2x, 4x, 8x, 16x Shuttle*
- *Supports Frame +/- With Most Recorders*
- *Professional Transport Buttons - Steel Enclosure*
- *No External Power Supply Required*
- *Supplied 3m cable*
- *Automatically configures for clip browsing on KiPro, Micron, Video Devices and other decks*

- *Controls Most Disk-Based Video Recorders Including:*
- *Blackmagic Design HyperDeck Studio/Studio Pro*
- *AJA Ki Pro, Ki Pro Rack, Ki Pro Ultra*
- *Datavideo HDR-60/70 - DN-600/700*
- *FFV Studio Pro Replay, Micron, Omega HD*
- *Video Devices PIX 250i, 260i, 270i*
- *Most Professional RS-422/9PIN VTRs*



Weight
.55 lbs
.249 kg

# ***ES-450J RS-422 -*** *Universal Jog/Shuttle Remote*

The ES-450 J RS-422 - Universal Jog/Shuttle Remote makes operation of professional video recorders fast and easy.

ES-450 is a fully functional RS-422/9-Pin Universal Jog/Shuttle Remote that controls most professional video servers, file–based recorders and VTRs.


It's compatible with most professional machines including AJA, Blackmagic Design, Datvideo Fast Forward Video, Video Devices, BVW, UVW, DSR, DVW, HVR, DVCAM, XDCAM and other 9-pin equipped VTRs, DDRs and servers from Sony, Panasonic, FFV, Grass Valley and others.

The remote is designed for fast and easy operation. It incorporates a key layout that minimizes key strokes and features JLCoopers custom, aluminum, weighted, optically–encoded, all metal, Jog/Shuttle mechanism for years of trouble free use. It also has an easy to read back lit LCD Time Code display.

The ES-450's functions are laid out for fast and intuitive operation without having to tediously scroll through menus to get to often accessed features.

Functionality is at your fingertips with clearly labeled buttons and a natural-feeling key arrangement that helps you work efficiently.

Fast access to Forward Play, Reverse Play, Rewind, Fast Forward, Still/Stop, Shuttle Select, Frame +, Frame, Mark In, Mark Out and Eject are arranged in an array around the wheel in easy reach. Record controls include Crash/Full, Assemble, Insert Video, A1, A2, A3 and A4 modes.

New for 2017, ES-450 supports clip browsing on AJA, FFV, Video Devices and other decks that support this function.

A numeric keypad function provides easy entry of "search to time" locate operations.

There's an alternative to large, costly and cumbersome remotes that consume valuable desk space. ES-450 is the first choice for professionals in control.

Audio Editing - The ES-450 employs an audio split function, which allows the audio edit in-point to be set differently from the video edit in-point.

***ES-450 Physical Specifications***
- *Size - 6.5" x 10.5" x 3.5"*
- *Weight - 4 Lbs.*

*(ES-450 J Side View)*

***ES-450 Features***
- *Professional Quality Compact Remote Control*
- *High–Quality, Tactile Transport Keys*
- *Function Keys Provide Direct Access to Frequently Used Editing Features Including Shuttle Select, Frame+, Frame-, Mark In, Mark Out, Eject & More*
- *Back-Lit LCD Time-Code Display*
- *RS-422/9-Pin Interface*
- *Numeric Keypad for Time Code Entry*
- *FFV mode for Omega and Micron*
- *Durable All Metal Construction*
- *7 Easily Programmed, One Touch Locate Points*
- *Direct Time Code Entry*

# Multi-Channel RS-422 Controllers

## ES-450 J2 RS-422

*Two Channel Jog/shuttle remote*

A version of the proven ES-450 J that incorporates a Dual Channel RS-422 interface. It provides fast, precise control of 2 VTRs, DDRs or two channel servers. Now supports remote clip browsing on AJA, FFV & Video Devices.

## ES-450 J4 RS-422

*Four Channel Jog/shuttle remote*

All the features of the single channel version with a Four Channel RS-422 interface. It provides fast, precise control of up to four VTRs, DDRs or server channels. Breakout cable included.



*(ES-450 J2 Rear Panel)*


*(ES-450 J4 Rear Panel)*

*• Integrated quad snake/power cable minimizes desktop clutter*

# Ethernet Controllers


## ES-450 Je *Ethernet Jog/shuttle remote*

***ES-450 Physical Specifications***
- *Size - 6.5" x 10.5" x 3.5"*
- *Weight - 4 Lbs.*

ES-450 Je™ is a version of the ES-450 featuring the JLCooper Jog/Shuttle mechanism. A 10/100 Ethernet Interface provides long distance control over LAN, WAN or the internet. It interfaces directly with Doremi Labs Video Servers and Disk Recorders, or use it with eBOX to remotely control serial equipped RS-422 servers or other devices over 10/100 Ethernet.


*(ES-450 Je Rear Panel)*

*(ES-450 Je Side View)*

## Combine ES-450 Ethernet Controllers with EBOX

***Ethernet Control of up to four Serial channels***


*( eBOX Rear Panel )*

ES-450 Je can be used along with eBOX for remote long distance control over LAN, WAN, or even over the internet, for remote control of decks anywhere. And... it works with your existing standard wiring.

Since eBOX provides four RS-422 or RS-232 ports for controlling serial devices, this facilitates control of up to 4 serial VTRs, DDRs or servers.

Read more about the versatile eBOX on pages 26-27.

# ES Edit Suite Series


*Browse Clips and View Clip Names with AJA Ki Pro and other decks*


## ES-SloMo J RS-422 *Universal Instant Replay Controller*

ES-SloMo™ is a compact controller for News, Sports, QC, transfer, dubbing and other editing operations. It makes precise control of professional disk based video servers and other decks quick and easy. It's a full featured 4-machine editor and universal remote that provides silultaneous control of up to four decks. It's compact design and low cost, make it the perfect addition to edit suites, remote trucks, sports facilities and other applications.

ES-SloMo has professional transport buttons, JLCooper's Custom, Optically–Encoded Jog Wheel with Shuttle Ring, a high-quality T-Bar for slomo, shuttle and variable speed play, an easy to read 2 x 16 VF display, full size numeric keypad and fast access function keys. It provides Odetics seamless clip playout functions for use with compatible servers. GangWay integration allows individually selectable control of up to 16 or 32 machines or server channels!

New One Touch Replay, Deferred Replay and In/Out Replay modes simplify operation so that even inexperienced operators can get reliable and consistent results with minimal training.

***Controls Most Professional RS-422 File-Based Servers including AJA KiPro, KiPro Ultra BlackMagic Hyperdeck, Fast Forward Video, Video Devices and more!***

*• Included 10' quad snake/power cable minimizes desktop clutter.*

*ES-SloMo J Side View*


### *ES-SloMo Features*

- *Assemble, Insert, Crash and Disable (Lock Out) Editing Modes*
- *Quickly store up to 1000 Cues or 400 In and Out Points with Varispeed*
- *Dynamic Slow-Motion Replays Directly Accessed from Integrated T-Bar*
- *T-Bar Control for slow motion control sends Shuttle, Jog or Variable Play*
- *T-Bar Programmable - Min-Max, Preset Speeds, Active or Passive Modes*
- *Full Size Numeric Keypad with Long Life Cherry Mechanical Keyswitches*
- *Programmable Cueing Modes - Automatic Play All Cues Function*
- *Log Operation useful in QC Applications*
- *Mark In and Out Keys to Quickly Store Cue Points*
- *Two User Assignable Buttons*
- *EE/PB switching*

### *ES-SloMo Hilights*

- *Compact Design*
- *Lightning Fast Operation*
- *Global Record Lock*
- *16 Variable Replay Speeds*

### *Physical Specifications*

- *Size 10" x 10.25" x 3"*
- *Weight 6 Lbs.*

## *SloMo & GangWay Together = 16 to 32 Channel SloMo + Gang Roll Power*

GangWay16 and GangWay 32 are compact, easy-to-use, multi-port RS-422 Gang Roll Switchers. ES-SloMo J RS-422 and SloMo Mini can interface directly with GangWay to provide simultaneous control up to 16/32 RS-422 machines or server channels. GangWay's port assignments are remotely controlled and indicated on SloMo. They combine to form the largest and most advanced control system we've ever created.

ES-SloMo and Gangway are the perfect low cost alternative to overpriced control systems costing thousands more!

- *Simultaneous Control of up to 16 or 32 VTRs, DDRs or Server Channels*
- *Remote Channel Enable/Disable*
- *Gang Roll Any Combination of Decks/Channels*
- *Fast Access Front Panel Enable/Disable All Button*
- *Three Preset Channel Groups*
- *Front and Rear Mounted RS-422 Ports Standard*
- *Built In GPI and Tally Inputs and Outputs on GangWay Models*


## *ES-SloMo Je*

*SloMo Control Surface with Ethernet Interface*

ES-SloMo Je is made for computer–based Slow Motion applications. It has all of the same controls as the RS-422 Version, but with a built in TCPIP Ethernet interface in place of the RS-422 ports. Requires software that supports it directly or custom software development.

ES-SloMo Je uses JLCooper's Custom, Optically–Encoded Jog Wheel and Concentric Shuttle Ring, Full Size Cherry MX Numeric Keypad and High Quality T-Bar.

Developers and OEMs can easily build direct support into your applications. Use ES-SloMo Je as your front end controller.



*ES-SloMo Ethernet Rear View*

## *ES-SloMo J USB*

*SloMo Control Surface with USB Interface*

ES-SloMo J USB is made for computer–based Slow Motion applications. It's virtually identical to the RS-422 Version, with a built in USB interface and it's USB powered.

ES-SloMo J USB uses JLCooper's Custom, Optically–Encoded Jog Wheel and Concentric Shuttle Ring, Full Size Cherry MX Numeric Keypad and High Quality T-Bar.

Developers and OEMs can easily build direct support into your applications. Use ES-SloMo J USB as your front end controller.

ES-SloMo J USB is directly supported by 3rd party applications including Intel 360 Replay, Dalet BRIO3 Server and vMIX Replay.



*ES-SloMo USB Rear View*

# SloMo Mini

## Four Channel Instant Replay Controller

- **New Automated Replay Features!**
- **One Touch Replay with Hyperdeck & KiPro**
- **Browse Clips and View Clip Names**


SloMo Mini's small footprint and low cost makes it perfect for sports, scoreboard, trucks, transfer, QC, dubbing and other editing operations.

It makes precise control of professional servers, file-based recorders and VTRs incredibly fast and easy.

Features include illuminated transport buttons, Optical Jog Mechanism, High-Quality T-Bar, Backlit LCD Display, Numeric Keypad & Fast Access Function Keys.

New One Touch Replay, Deferred Replay and In/Out Replay modes simplify Slomo operation, so even inexperienced operators can get reliable and consistent results with minimal training.

Expandable by connecting SloMo Mini™ to GangWay for remote control of up to 16 or 32 decks/channels!

**Controls... AJA Ki Pro, Ki Pro Rack, Ki Pro Ultra BlackMagic Hyperdeck Studio, Studio Pro, FFV Micron HD, Omega HD, Studio Pro Replay, Video Devices Pix 250i, 260i, 270i and Most Professional RS-422 VTRs, Servers and File Based Video Recorders!**


- Simultaneous Control of up to 4 RS-422 Video Decks and file-based Video Recorders
- Quickly store up to 1000 Cues - 500 In and Out Points with Varispeed
- T-Bar for Dynamic Slow Motion - Sends Shuttle, Jog or Variable Play
- Programmable T-Bar Min-Max, Preset Speeds, Active or Passive Modes
- Log Operation useful in QC Applications
- Ultra Compact Design Saves Desk Space
- Durable All Metal Construction
- JLCooper Optical Jog Wheel
- Host Mode for Developers (ES-SloMo Code Compatible)

Included 10' (3m) quad snake/power cable minimizes desktop clutter.


3.75 in
9.53 cm


7.5 in
19.05 cm

7.75 in
19.69 cm

Weight
2.1 lbs
1.70 kg

# SloMo + GangWay Together = 16 to 32 Channel SloMo + Gang Roll Power


GangWay16 Front Panel


GangWay16 Rear Panel Shown with Optional 920444-4 Ethernet Interface



ES-SloMo J RS422 and the new SloMo Mini make precise control of professional video servers, file based recorders and VTRs incredibly fast and easy.

Even inexperienced operators can get reliable and consistent results with minimal training.

They use professional transport buttons, high-quality T-Bar for slow motion and shuttle operations, an easy-to-read display, numeric keypad and fast access function keys. They have Odetics seamless clip playout functions for use with video servers.

They're great for News, Sports, QC, transfer, dubbing, scoreboard, remote trucks, sports facilities, event review and other editing operations.

Awesome all by themselves, for up to four channels, but what if you want to control more channels?

Enter the GangWay 16 and GangWay 32.

GangWay Interfaces provide the connections necessary for controlling additional channels.

GangWay16 and GangWay32 are compact, easy-to-use, 16 port and 32 port Gang Roll Switchers.

Their front panels include lighted buttons for clear indication, as to the status of each machine.

A front mounted RS-422 port provides a convenient remote connection. GangWay16 has sixteen RS-422 ports on the rear panel and a rear mounted RS-422 control input. GangWay32 has thirty-two ports on the rear panel and a rear mounted RS-422 control input.

ES-SloMo and SloMo Mini interface directly with GangWay to provide simultaneous control, using the GangWay as the machine interface. GangWay's port assignments are remotely controlled and indicated on ES-SloMo and SloMo Mini display.

ES-SloMo and Gangway combine to form the largest and most advanced control systems we've ever created.

ES-SloMo and Gangway are the perfect low cost alternative to overpriced control systems costing thousands more.

### *GangWay + SloMo Features*

- Control of up to 32 VTRs, DDRs or Server Channels
- Controls a Wide Range of VTRs, DDRs and Servers
- Direct support for Odetics compatible video servers
- Dynamic Slow Motion Replays
- Programmable T-Bar Behavior
- 16 Variable Replay Speeds
- Mark In & Mark Out Keys to Quickly Store Cue Points
- 1000 Cue Points or 400 In and Out Points w/Varispeed
- Assemble, Insert, Crash and (Lock Out) Editing Modes
- Programmable Cueing Modes
- Log Operation - Useful in QC Applications
- Transfer Cues to/from Another ES-SloMo or Computer
- Ability to Import/Export Cues from/to Ash Vale SM-2a
- Global Record Lock Feature
- Two User Assignable Buttons
- Integrated 10' (3m) Detachable, Quad Snake/Power Cable, with Recessed Connector to Minimize Desktop Footprint and Cable Clutter

# **MCS5 USB -** *Media Control Station*

## *With Relegendable LCD Button Labels*

MCS5 is our newest desktop controller. It provides professional transport buttons, a precision optically-encoded jog wheel, assignable function keys with live LCD labels (Key Function and label change on-the-fly for different editing operations).

You can create and customize banks of hot keys for your specific needs, including built-in/pre-named commands for popular applications.

Programmable messages, including standard key command combinations, MIDI messages, mouse clicks and others. These can be assigned to any key and named.

The end result is that you can make a custom arrangement of controls to best suit your purpose, and you will always know what function you are going to get when you press a key.


Arrange editing functions into different banks, to logically group frequently used commands. For example, have one bank for ingest, a bank for tracking, a bank for editing, etc.) Raised display for easy viewing.

Use and customize supplied keysets for advanced control of applications including Final Cut Pro X, iMovie, Premiere Pro, AVID Media Composer, Pro Tools, Nuendo and others, or make your own keyset for any program.

JLCooper controllers let you work faster. They provide speed, ease–of–use and tactile assurance that's missing when you use a mouse and keyboard for editing. Professionals can depend on JLC control products to provide reliable service that far outlasts any alternatives.

*MCS5 Top View*


8"
20.32 cm

Weight
2 lbs
.91 kg

5.75" - 14.68 cm

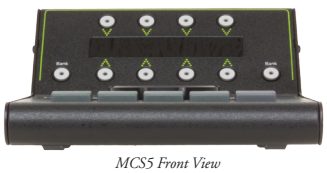
### *MCS5 Keysets Included*

- Final Cut Pro X
- AVID Media Composer
- Premiere Pro
- Pro Tools
- Nuendo
- Logic Pro
- GarageBand
- iTunes
- Others
- Customise Your Own Keyset for any Mac Application


MCS5 Software for Mac

3"
7.62 cm

*MCS5 Side View*



*MCS5 Front View*

*New User Adjustable Jog Speed with Pro Tools!*

# **FaderMaster Professional -** *Programmable MIDI Automation Controller*

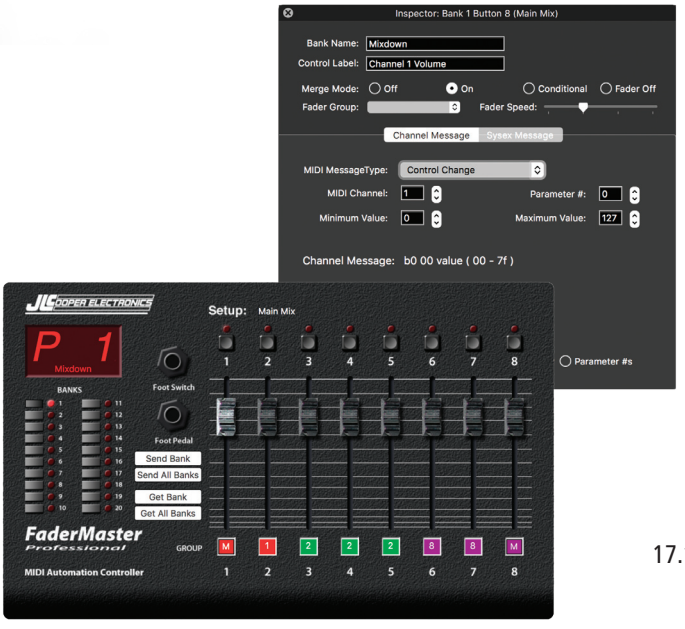
*FaderMaster Professional™ is perfect for the audio or video professional involved with automation or digital audio recording. You can easily control, mix and edit with MIDI sequencers, hard disk recorders, MIDI-controlled audio mixers, synths, samplers, signal processors and other computer based editing systems.*


Professional Automated Mixdown FaderMaster Pro – MIDI Automation Controller provides the hands-on, tactile control you've been missing in your system. It features high-quality, 100mm long-throw faders. These smooth tracking faders give you precision control of your audio mix.

FaderMaster Pro eliminates the aggravation encountered when using a keyboard or mouse to tediously mix or edit the volume of multiple tracks, just one–at–a–time, and it's fully programmable, for volume, panning, EQ, effects and other MIDI parameters.

If eight faders and buttons aren't enough, multiple FM Pro units can be linked to form a larger console.

FaderMaster Pro has 20 programmable banks for storing your own setups, plus 50 Factory Preset banks for remotely controlling classic synthesizers.




FaderMaster Pro Software for Mac

## *FaderMaster Professional Features*

- Eight Programmable High-Quality 100mm Faders
- Eight Programmable MIDI Buttons
- 1/4" Programmable Footswitch & Foot Pedal Inputs
- Internal Grouping, Scaling and End Point Adjustments
- Supported in Roland R-88
- All Metal Construction


6.75"
17.14 cm

Weight
7 lbs
3.2 kg

12.25" - 31.12 cm

*FaderMaster Pro Side View*

1.5"
3.81 cm


*FaderMaster Pro Rear View*

# **MCS6** - *Media Control Station*


"The addition of JKL shuttle control, a speed slider, key command sequences, and multiple keysets, make the MCS6 the controller of choice for Mac editing professionals."

MCS6™ is a modernized and updated version of our popular MCS3 Media Control Station with a compact new enclosure style.

The familiar button layout and Jog/Shuttle is identical to the MCS3.

It features professional transport buttons for Record, Play, Stop, Fast Forward and Rewind. It has 18 physical buttons for a variety of editing functions and the V/Stick Navigation Control.

A precision, optically encoded jog wheel with a concentric shuttle ring lets you control audio or video effortlessly and with frame accuracy.

***Available Models (Specify When Ordering)***

**MCS6 USB w/ Software for Mac Only**
**MCS6 RS-422/9-Pin for VTR Control**


*MCS6 USB Universal Software for Mac*

## *MCS6 USB Version*

*Controls All Macintosh Applications*

MCS6 USB lets you use and customize supplied keysets for advanced control of applications including Final Cut Pro X, iMovie, Premiere Pro, Pro Tools, Nuendo, Vegas Video, Media Composer and others. MCS6 works with any Mac software program.

JLCooper controllers let you work faster by providing the tactile elegance that's missing from "mouse-based" user interfaces. Professionals can depend on JLCooper control products to provide reliable service that far outlasts plastic alternatives.

Developers can use our USB drivers for Mac and Windows to add custom direct control to your applications.


## *MCS6 RS-422 Version*

*Universal 9-Pin Remote*

MCS6 RS-422 makes operation of pro video recorders fast and easy. It features our custom, aluminum, optically–encoded Jog/Shuttle Wheel for years of trouble free use.

There's finally an alternative to large, costly and cumbersome remotes that consume valuable desktop real estate.

MCS6 is compatible with most professional recorders including AJA, Blackmagic Design, Datvideo Fast Forward Video, Video Devices, BVW, UVW, DSR, DVW, HVR, DVCAM and other 9-pin equipped VTRs, DDRs and servers from Sony, Panasonic, FFV, Grass Valley and others.

Includes captive 3m cable and power supply.

# **SloMo Elite-C** *(Compact) Video Server Controller*

The SloMo Elite-C is a new, physically smaller version of our SloMo Elite, Sports/SloMo control surface, expressly made for software developers and OEMs.

This new third generation product consumes 33% less counter space, but retains full size controls and buttons making it perfect for remote trucks and other locations where space is at a premium.

A new Electro-Magnetic Jog Wheel includes a host controlled brake that prevents accidental jogging when not in use. Other Jog Wheel Versions J and O are also available.

SloMo Elite-C is the first JLCooper product to incorporate our new Hall effect T-Bar, with superior strength and increased 10 bit resolution (1024 steps).


SloMo Elite-C closely integrates with your proprietary software to create an elegant and complete Slow Motion control package.

It's is a completely new product, built for speed and designed to withstand the rigors of daily use in broadcast, sports, instant replay, scoreboard and other applications. It has built in USB and Ethernet Interfaces supporting TCPIP (Client/Server) and UDP (Static or DHPCP) configuration.

Contact JLCooper today for complete customization options, protocol, developer documents and other details.

**SloMo Elite-C Models...**
ELITE-C-ELLHN (Model as shown with Electro-Magnetic Jog Wheel)
ELITE-C-JLLHN (Model as shown with JLCooper Jog/Shuttle)
ELITE-C-OLLHN (Model as shown with JLCooper Jog Only Wheel)


10.06"
26.92 cm


4.75"
12.065 cm

8.2" - 20.828 cm

Weight
4.6 lbs
2.09 kg

- Precision, Professional Quality Components
- 4.5" x 2.5" LED Backlit White Graphic Display, 240 x 128 pixels
- Jog/Shuttle Options; New JLC Electro-Magnetic Jog Wheel, JLC Jog/Shuttle, JLC Tall Jog Only Knob w/Rubber Cap
- New Tri Color LED Relegendable Keyswitches
- New Hi-Res 10 Bit Hall Effect T-Bar Mechanism (1024 Steps)
- USB 2.0 Full Speed - Drivers for Windows and Mac OS
- USB Serial Port Emulation
- Both USB and 10/100 Ethernet Interface (Standard)
- Supports TCP (Client/Server) & UDP - Static or DHCP Configuration
- Custom finishing and silkscreen available for quantity orders
- Internal international switching power supply (Standard)
- Field Software Updates can be installed via USB or Ethernet

33% SMALLER


Standard SloMo Elite shown for Size Comparison

# **SloMo Elite -** *Video Server Controller*


*ELITE-SM-JLLHN model w/JLC Jog/Shuttle & Dual Color LED Relegendable Keyswitches*

SloMo Elite is a new Sports/SloMo control surface, expressly made for software developers and OEMs. New options include Hall effect T-Bar with 10 bit resolution (1024 steps) and Electro-Magnetic Jog Wheel.

Its advanced design provides an incredible number of configuration options, without any of the costs normally associated with developing hardware, by allowing us to create custom configurations using standard parts.

It's packed with every possible feature we could think of, plus future upgrade capabilities. It closely integrates with your proprietary software, creating an elegant and complete control package. Virtually every aspect of the product can be customized to your precise needs.

This is a complete controller, built for speed and designed to withstand the rigors of daily use in broadcast, sports, instant replay, scoreboard and other applications.

Contact JLCooper today for additional configuration, customization options, protocol, development documents and other details.

Weight
7.35 lbs
3.34 kg


11.5″
29.21 cm


3.25″
8.255 cm

13.5″ - 34.29 cm


*ELITE-SM-S66HN model w/Jog Only Mechanism & NKK Remotely Relegendable LCD Keyswitches*

Options Include...

- Precision, Professional Quality Components
- New Hall effect T-Bar with 10 bit resolution (1024 Steps)
- Dual Color LED Relegendable or NKK LCD Remotely Relegendable Compact Hi-Res 64 x 32 Pixel, RGB Backlit Keyswitches (either group of 5 switches can be LED or LCD Type)
- 4.5" x 2.5" LED Backlit White Graphic Display, 240 x 128 pixels
- Jog/Shuttle Options; New JLC Electro-Magnetic Jog Wheel, JLC Jog/Shuttle, JLC Tall Jog Only Knob w/Rubber Cap
- New Tri Color LED Relegendable Keyswitches
- USB 2.0 Full Speed - Drivers for Windows and Mac OS
- USB Serial Port Emulation
- Both USB and 10/100 Ethernet Interface (Standard)
- Supports TCP (Client/Server) & UDP - Static or DHCP Configuration
- Custom finishing and silkscreen available for quantity orders
- Internal international switching power supply (Standard)
- Field Software Updates can be installed via USB or Ethernet

**SloMo Elite Standard Models...**

*SloMo Elite with Re-Legendable LED Illuminated Buttons*

ELITE-SM-JLLHN SloMo Elite with JLCooper Optical Jog/Shuttle
ELITE-SM-OLLHN SloMo Elite with JLCooper Optical Jog Only mechanism
ELITE-SM-ELLHN SloMo Elite with JLCooper Electro-Magnetic Jog mechanism

*SloMo Elite with Remotely Re-Legendable Hi Res 64 x 32 RGB LCD Buttons*

ELITE-SM-J66HN SloMo Elite with JLCooper Optical Jog/Shuttle
ELITE-SM-O66HN SloMo Elite with JLCooper Optical Jog Only Mechanism
ELITE-SM-E66HN SloMo Elite with JLCooper Electro-Magnetic Jog mechanism

# **EBOX -** *Quad Serial / Ethernet / GPI Interface*


eBOX is a 10/100BASE-T (Ethernet) to Quad RS-232/422 (9-Pin) and GPI/Tally hardware interface.

It acts as a portal for controlling devices across your facility or across the world.

It eliminates information bottlenecks and overcomes distance limitations typically inherent to serial communication.

It simplifies long distance cabling by using IP addressable, point-to-point architecture to send control messages over existing 10/100 BASE-T wiring.

eBOX features 4 serial connectors, activity LED's, 24 GPI Inputs and 24 GPI Outputs as a standard feature (Tally or General Purpose Interface - facilitates switch closure control).

It's ideal for LAN, WAN and Internet control of VTRs, DDRs, switchers, computer based editing systems, cameras, projectors and other devices that use RS-232/422 (9-Pin) and GPI.

Commands from a host NLE, Browser or RS-422 switcher/controller are directed to individual devices on the network.

This allows broadcast or networked facilities to control distant machine rooms from a facility's central server.

eBOX is ideal for broadcast television, streaming media networks, multi-room editing facilities, news production, alert systems, monitor switching or in any audio/video/multimedia studio where remote hosts need to control devices over long distances or via the Web.

Host to eBOX, eBOX to host and eBOX to eBOX communication is possible. An unlimited number of units can be addressed.

eBOX can also be used as an IP remote RS-422 interface, controlled by ES-450 Je controllers.

JLCooper's Developer Documentation provides comprehensive tools for software developers to link Visual Basic, C++, HTML or embedded devices for direct control of any device connected to any eBOX.

eBOX converts 4 serial ports and 24 GPI (General Purpose Interface and Tally) inputs and 24 GPI outputs to 100/10 baseT Ethernet.

The serial ports can be configured in the field to appear as EIA/TIA RS-232E and CCITT V.28 or as EIA/TIA RS-422A, RS-423 and Federal Standards 1020 & 1030 ports. Additionally, the port direction can independently be configured as DTE or DCE.

eBOX is directly supported by Chyron Hego (Vidigo Live), Click Effects, Ensemble Designs (Avenue), Imagine Communications, Newtek (Tricaster), Yamaha (Nuage version 1.7 or newer), and other professional broadcast applications.

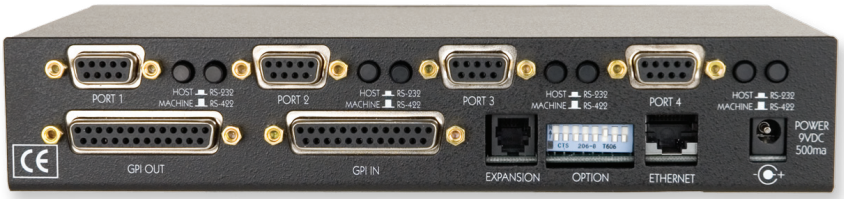
eBox communicates over standard TCP/IP which allows it to be used with any host computer. With TCP/IP, traffic can be routed over internal LANs, wireless LANs, MANs, WANs and even over the Internet.

Configurataion is accomplished through a software application for Mac and Windows. Items such as port speed, parity, IP address, remote IP address and TCP port are set using supplied software. Settings are stored in nonvolatile memory.

***eBOX Features***

- *Four 9-Pin D Sub Serial Connectors*
- *Two 24Pin D Sub GPI Connectors*
- *RJ-45 Ethernet Connector*
- *LAN, WAN or Internet Control*
- *Ultra Low Latency < 20 ms*
- *1/2 of a single 19" Rack Space*
- *Use with eBOX io and sBOX*
- *Dimensions 8.5" x 4.7" x 1.75"*
- *Weight 3 lbs.*

Typically, the eBOX functions as a server, passively waiting for client devices to connect to it. The device can be a computer or another eBOX configured as a client. When the eBOX is configured as a client, it will actively attempt to connect to the server eBOX. Once accomplished, eBOX will then pass data received in the serial or GPI ports to the remote eBOX. If there is no data received, eBOX will not send any TCP packets.




*eBOX Rear Panel*

**Ethernet**
This eBOX port is just like an Ethernet port on a computer, and can be connected to a hub, switch or router.

eBOX supports IEEE 802.3u clause 28 Auto-Negotiation which automatically senses the Ethernet port speed & duplex operation and chooses the highest performance settings. Front panel LEDs indicate various operating conditions of the Ethernet connection.

**Serial**
The four serial ports along the top of the rear panel are 9 pin D-Sub connectors which can be configured for RS-232C or RS-422A operation.

In RS-422 mode, eBOX direction can be configured to appear as a Controller or a Device. In RS-232 mode, the eBOX appears as a DCE or DTE.

**GPI**
The GPI ports on the rear of the eBOX are 25 pin D-sub connectors. The GPI In connector has 24 TTL/CMOS compatible inputs with internal pull-ups to +5 volts.

The GPI Out connector has 24 TTL/CMOS compatible outputs. On both connectors, pin 1 is the ground reference and pins 2-25 are the GPI signals.

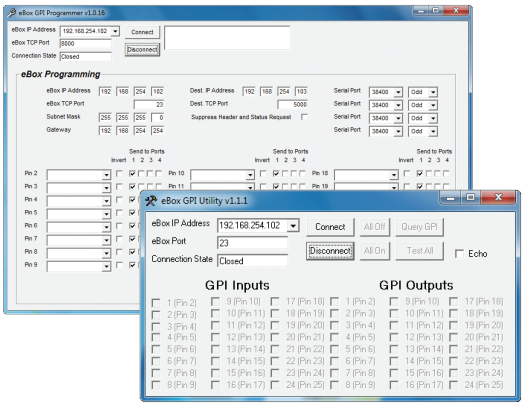
When eBOXes connected together in a client/server manner establish a connection, both client and server will send the state of its GPI In ports to each other so it can be shown on the GPI Output port on the remote eBOX.

After that, only changes to a GPI In port will cause an eBOX to send a GPI message to the remote eBOX. A packet/keep alive message is sent every 5 seconds.

GPI to Serial Converter
eBOX can act as a GPI to Serial converter. Each of the 24 GPI Inputs can be assigned to send P2 or Odetics Commands. Assignments are retained in non-volatile memory. Basic tally back information is provided via GPI outputs.

GPI /Serial to Ethernet Converter
eBOX can also work as an interface for GPI or serial. eBOX supports older P2 controllers via LAN, WAN and Internet.

**Security**
EBOX contains a basic security mechanism that prevents unintended hosts from passing data through a secured eBOX. A password is set on the configuration page and stored in nonvolatile memory. When password protection is enabled, eBOX embeds the password in the transmitted IP packet. At the remote end, the receiving eBOX must have password protection enabled and be programmed with a matching password.




*eBOX GPI Programmer & Utility for Wondows*

## *eBOX - Remote Software for Mac*

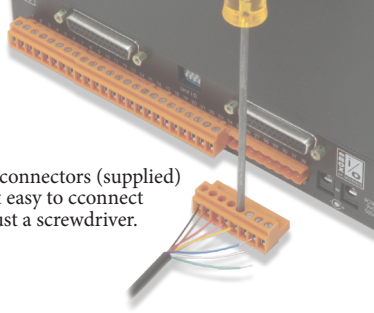
JLCooper Electronics announces the eBOX Software for Mac OSX. This software provides real time control of eBOX features using the Mac mouse and keyboard. It allows your Mac to become a powerful GPI controller for triggering any external switched or serially controlled devices.

Software like Final Cut Pro X, Soundtrack Pro, Logic, Pro Tools, Cubase, Nuendo and others can take advantage of eBOX to automate control of external devices, including RS-422 tape machines, DDRs & others.

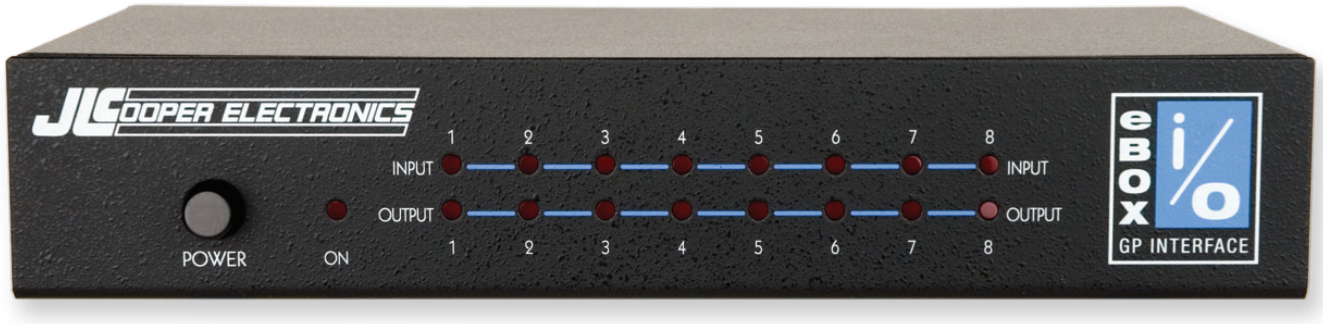
- Trigger GPIs and Transport functions from any Mac
- Live Mode lets you click on-screen buttons to trigger 24 GPI Contacts
- GPI Inputs can be mapped to key command for remote control of Mac software features
- Mapping of key commands to control Transport functions on Serial Outputs
- GPI Activity Indicators for Real Time Monitoring of GPI Activity• Map computer keys to control GPI Outputs
- On-Screen Transport Controls for each of the 4 Serial Outputs
- Remotely Configurable, Off-Location Setup
- Add Delays to precisely control Macro timing
- Gang Roll of up to 4 RS-422 or RS-232 Ports
- 8 GPI Presets

# **EBOX io -** *Real World Interface*

***Add Relay outputs and opto-isolated inputs to eBOX and gBOX***



Removable connectors (supplied) make it easy to cconnect with just a screwdriver.




eBOX io a companion to eBox and gBOX. It converts 8 GPI outputs to electrically isolated, relay outputs. The eBOX io also accepts 8 GPI inputs via opto-isolated inputs.

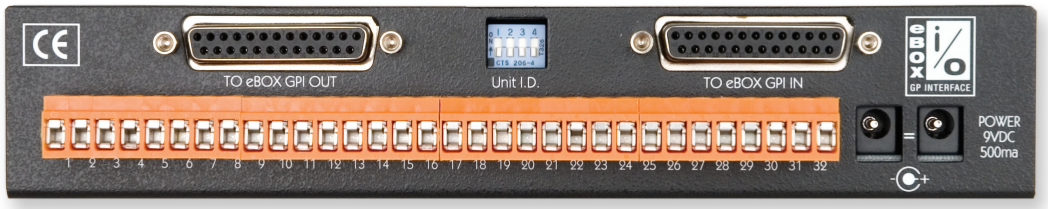
eBOX and gBOX GPI inputs and outputs are CMOS compatible circuits. The CMOS GPI inputs require that the input signals be 0 to 5 volts and referenced to ground. The CMOS GPI outputs can deliver 0 to 5 volts at up to +/- 6mA and referenced to ground.

In most cases, this will be compatible with your equipment. However, in some cases, equipment may not be compatible with 0 to 5 volts. In this case, the eBOX io can be added.

Each eBOX io buffers 8 inputs and 8 outputs. Inputs are buffered with an optoisolators and outputs are buffered with a dry relay contact.

eBOX io comes with a pair of cables that allow you to connect a single eBOX io to an eBOX. Up to 3 eBOX io's can be cascaded to convert all 24 eBOX GPI inputs and outputs. To connect two or three eBOX io's to a single eBOX, order the optional "EBOX-I/O-EXPCAB".

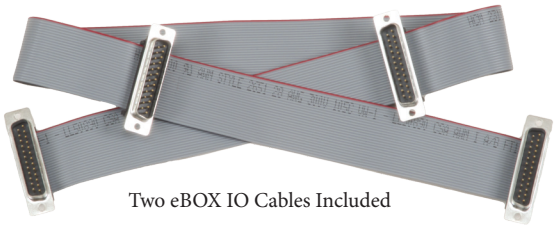
All connections are made on the rear panel via high density screw terminals. Front panel LEDs indicate status for easy monitoring. eBOX io is a half rack unit and fits alongside eBOX in a single rack space. It can be rack mounted using "JLC-RACKTRAY" shown below.



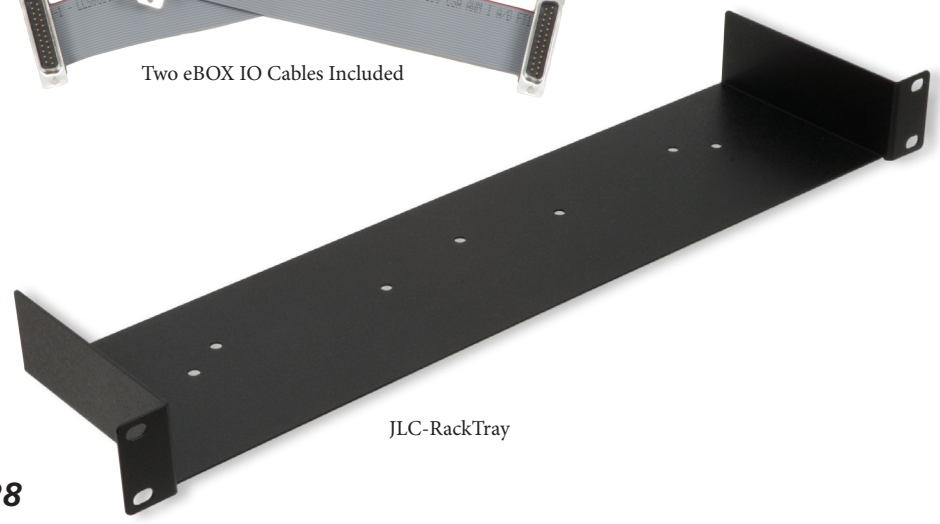

eBOX IO Rear Panel

***eBOX io Dimensions***

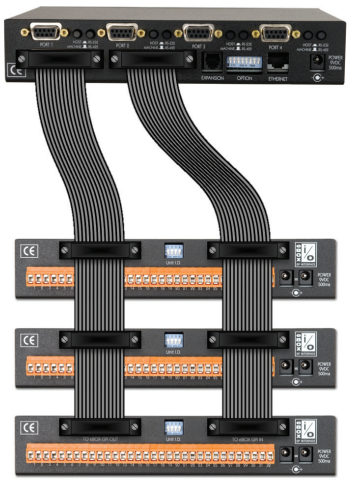
- *Dimensions 8.5" x 4.7" x 1.75"*
- *Weight 3 lbs.*



Two eBOX IO Cables Included



JLC-RackTray



eBOX io includes a pair of cables to connect with eBOX or gBOX

# **eBOX GPI8** *Ethernet IP/GPI Interface* - *8 Opto-Isolated Inputs/8 Relay Outputs*

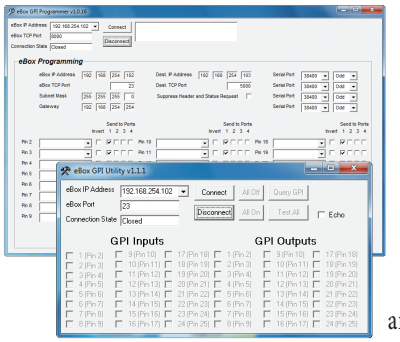

eBOX GPI8 is a portal for controlling devices across your facility or across the world. It's a general purpose interface that converts 8 GPI inputs and outputs to 10/100 Ethernet. For compatibility, it uses the same messages as the original eBOX and it's fully compatible with eBOX and sBOX. Think of it as a simpler eBOX without the serial ports, with eBOX IO functionality built in.

Detachable Weidmüller terminal block connectors provide 8 optically-isolated GPI Inputs and 8 dry relay outputs. It includes parallel CMOS level GPI inputs with internal pull-ups to +5volts and GPI output ports on 25 pin D-sub connectors. It's ideal for LAN, WAN and Internet control with switchers, computer based systems, cameras, monitors, projectors and other devices.


eBOX GPI8 Rear Panel

eBOX GPI8 is the perfect solution for broadcast television, streaming media networks, multi-room editing facilities, news production or in any audio/video/multimedia studio where remote hosts need to control devices with GPI and Tally over long distances, or via the Internet.

It simplifies long distance control by using IP addressable, point-to-point architecture to send GPI messages over existing 10/100 BASE-T wiring. Host to eBOX, eBOX to host, or eBOX to eBOX communication is possible.



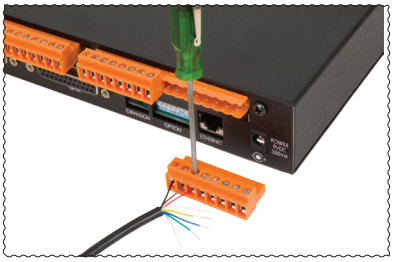

It communicates using standard TCP/IP. Traffic can be routed over internal LANs, wireless LANs, MANs, WANs and over the Internet.

Configuration is accomplished through a provided Windows application. Parameters such as port speed, parity, IP address, remote IP address and TCP port are set. Settings are stored in nonvolatile memory.

When eBOXes establish a connection, both client and server will send the state of its GPI In ports to each other so it can be shown on the GPI Output port on the remote eBOX. After that, only changes to a GPI In port will cause an eBOX to send a GPI message to the remote eBOX.

It supports IEEE 802.3u clause 28 Auto-Negotiation which automatically senses the Ethernet port speed & duplex operation and chooses the highest performance settings. Front panel LEDs indicate GPI and Ethernet status.

The unit functions as a server, passively waiting for client devices to connect to it. The device can be a computer or another eBOX configured as a client. When the eBOX is configured as a client, it will actively attempt to connect to the server eBOX. Once accomplished, eBOX will then pass data received in the serial or GPI ports to the remote eBOX. If there is no data received, eBOX will not send any TCP packets.

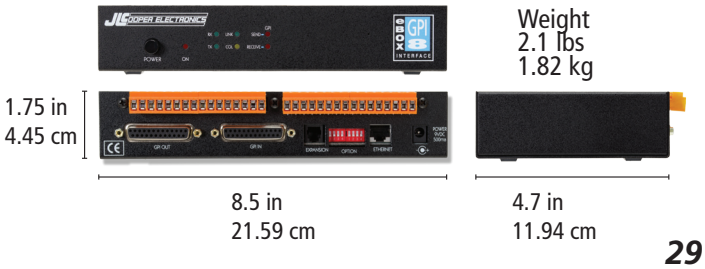


Rear Panel Terminal Block

Physical connections are easily accomplished using supplied high density, removable, terminal block screw connectors with 8 opto-isolated, inputs. The GPI output connector has 8 electrically isolated dry relay outputs.

Parallel CMOS level GPI inputs with internal pull-ups to +5 volts and GPI output ports are available on 25 pin D-sub connectors.

JLCooper's Developer Documentation provides comprehensive tools for software developers to link Visual Basic, C++ or embedded devices for direct control of any device connected to any eBOX.



# gBOX - GPI Trigger Box


gBOX is a general purpose interface that converts up to 48 GPI (General Purpose Interface) or Tally inputs and outputs into 100/10baseT Ethernet, USB or to a a serial interface.

Up to 8 gBOXes may be slaved to a master gBOX to convert up to a total of 432 GPI inputs and outputs.

It's an economical and professional GPI interface for computer-based automation and control systems. gBOX provides a portal for controlling devices across your facility or across the world.

gBOX can also be remotely connectred to other gBOX units to allow longer runs than traditional GPI cables. Since gBOX typically uses TCP/IP, traffic can be routed over internal LANs, wireless LANs, MANs, WANs and internet.

It's ideal for LAN, WAN and Internet control with switchers, computer based switching and monitoring systems, cameras, video monitors, projectors and other devices.

It's the perfect solution for broadcast television, streaming media networks, multi-room editing facilities, news production or in any audio/video/multimedia studio where you need to transfer a large number of GPI contacts over long distances.

When the gBOX has a "Standard" JLCooper P/n #920394 Ethernet Interface installed, it has two distinct modes of operation that are set by the rear panel DIP switches. It functions as either a server or client using standard TCPIP messages.

An ethernet equipped gBOX communicates over TCP/IP which allows it be used with any host computer running any operating system that uses TCP/IP protocol.

When configured as a server, it passively waits for client devices to connect to it. The device can be a computer or another gBOX configured as a client.

When gBOX is configured as a client, it will actively attempt to connect to the server gBOX. Once this is accomplished, the gBOX will pass data received in the serial or GPI ports to the remote gBOX. If there is no data received in the gBOX, the gBOX will not send any TCP packets.

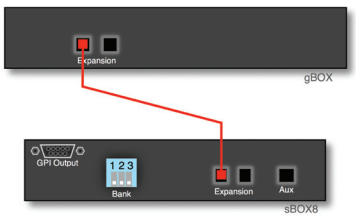
When the gBOX has a serial Interface installed, it has just one distinct mode of operation. This is GPI to serial conversion.

When the gBOX has an Ethernet or serial interface installed, it is a master unit, which communicates directly with another master unit or host computer. gBox works with optional eBOX io to provide opto-isolated inputs and relay outputs.

gBOX features 48 TTL/CMOS compatible GPI Inputs on 25 Pin D-sub connectors with with internal pull ups to +5 volts, 48 TTL/CMOS compatible GPI Out connectors, rear panel power switch, locking power connector and universal switching power supply.

Connect with our sBOX8D or sBOX 8R - Remote Trigger Boxes using the included modular expander cable, for convenient, relegendable, hot buttons to trigger GPI Outputs.


*gBOX Rear Panel*




***Connecting an gBOX to an sBOX8***

***Compatible Interface Cards***
920394 - Ethernet Interface Card
920467 - USB Interface Card
920466 - RS-232 Interface Card
920465 - RS-422 Interface Card

# **sBOX8D** *Desktop Version*

## ***Remote Trigger Box for gBOX & eBOX***


The compact sBOX8D sits behind your computer keyboard.

sBOX8D and sBOX 8R are used as companion products to eBOX and gBOX. They connect using an included expansion cable and provide a convenient user interface with illuminated user relegendable buttons.

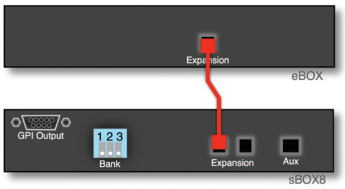
Connect the new sBOX to eBOX (Quad Serial/Ethernet/GPI Interface) or gBOX (GPI Trigger Box) as a simple, relegendable remote, to trigger GPI events. You can also use sBOX with eBOX to trigger the sending of user programmed serial or ethernet messages.

For flexibility, an sBOX can be configured to be able to bank switch among groups of 8 GPI outputs or it can be configured to address a fixed bank of 8 GPI outputs.

Multiple sBOXes can be chained together to form larger user interfaces or to allow for multiple control areas. The expansion cable that connects the sBOX to either the eBOX or gBOX carries the data signals and power, so separate power supply is not required for the sBOX.

sBOX features 8 LED backlit buttons, an illuminated bank switch that allows a single sBOX to control up to 24 GPI outputs. Multiple sBOX units (up to 3 with eBOX) can provide dedicated buttons for up to 24 GPI outputs.

It also has a built in GPI Out on the rear panel, allowing sBOX to be used as a stand alone GPI and Tally trigger box.




***Connecting an eBOX to an sBOX8***

2.5" - 6.5 cm


8.5" - 21.59 cm

2.625"
6.668 cm

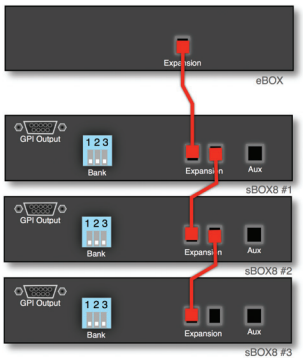
Weight
1.2 lbs
.544 kg

# **sBOX8R** *1/2 Rack Version* - ***Remote Trigger Box for BOX & eBOX***


Standard 1/2 Rack Size


sBOX8D Rear Panel


Combine eBOX or eBOX GPI8 with sBOX8R in optional JLC RackTray




***Connecting an eBOX to multiple sBOX8s***

# ATLAS
## GPI Smart Matrix


### *GPI/Tally Programmable Crosspoint Switch Matrix and Logic Processor*

Atlas™ is Highly Programmable Crosspoint Smart Switch Matrix and Logic Processor for GPI and Tally.

It's the ideal solution for correcting any GPI/Tally interface incompatibility, in that it provides a variety of connections and a number of methods of modifying them to perfectly suit the task at hand.

***Inputs***
Atlas offers 24 TTL/CMOS compatible inputs with internal pull-ups to +5 volts and referenced to ground on 25 pin D-sub connectors.

It also has 24 parallel, Opto-isolated inputs, on high density, removable, terminal block screw connectors.

***Outputs***
The D-sub GPI Out connector has 24 TTL/CMOS compatible outputs and there are 24 electrically isolated dry relay outputs on high density, removable, terminal block screw connectors.

Atlas GPI Smart Matrix Rear Panel

CMOS GPI outputs can deliver 0 to 5 volts at up to 6 mA and referenced to ground.

Relay Outputs can handle up to 500 mA @ 200 VDC max.

Opto-isolated inputs and Relay outputs use high quality removable terminal block connectors (pairs).

***Connections***
Interfacing options include CMOS In to CMOS Out, CMOS in to Relay Out, Opto-Isolator In to CMOS Out and Opto-Isolator In to Relay Out functionality.

***Logic Processing***
Outputs can be programmed to use a boolean expression of input or inputs including functions AND, OR, and XOR, with inversion of inputs and/or outputs.

Modification of output characteristics include inversion, delay (up to 999 minutes with millisecond resolution) and pulse (up to 999 minutes with millisecond resolution).

Program and review all functions using front panel controls and 2 x 40 backlit LCD or via free software application for Mac and Windows.

It's ideal for broadcast television, streaming media networks, broadcast video editing facilities, news production, alert systems, monitor switching or in any audio/video/multimedia studios and more.

Includes internal universal switching power supply with detachable IEC connector and cable.

**Atlas GPI Smart Matrix Features**

- 24 CMOS GPI Inputs and Outputs
- 24 GPI Opto-Isolated Inputs
- 24 GPI Relay Outptus
- Built In USB and 10/100 Ethernet
- 99 Memory Presets
- Software for Mac and Windows
- 2 x 40 Backlit LCD Display
- Detachable terminal strip connectors
- Front panel power switch
- Single 19" rack space
- Heavy duty rack enclosure
- Dimensions 19" x 1.75" x 3.87"
- Weight 3.25 lbs

# Gangway16

## 16 Port Gang Roll Switcher


GangWay16 is a compact, easy-to-use, 16 port RS-422 Gang Roll Switcher and GPI Trigger Box. The front panel includes lighted buttons for clear indication as to the status of each machine, an All button to quickly enable all machines, 3 User Preset Groups and a Tally Select button. A built in front mounted RS-422 port provides a convenient connection for a remote.

It has 16 RS-422 ports on the rear panel and a standard rear RS-422 input. The rear panel also includes two 25 pin D-Sub connectors for GPI I/O, power switch and an additional interface card slot.

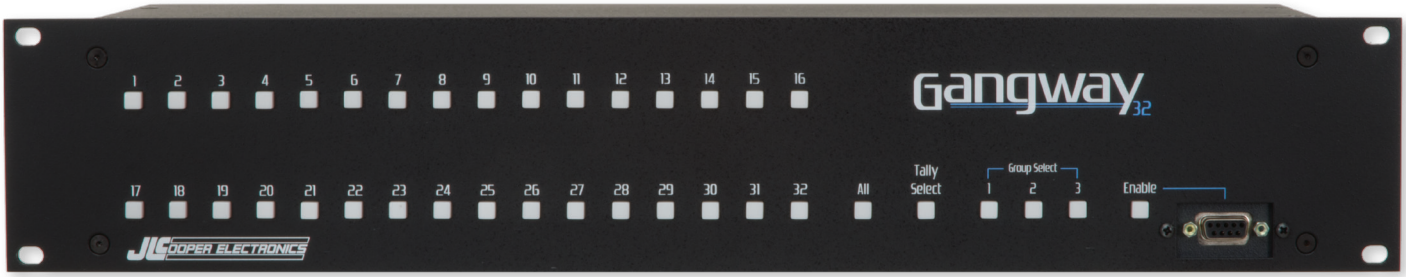
An optional additional compact interface card can act as a Master Input, connecting GangWay to 10/100 Ethernet, USB, RS-232 or RS-422. This can be used to remotely change the switching configuration of the GangWay itself, or as the source of commands for controlling connected VTRs, DDRs or Servers.

You can communicate with GangWay16 over LAN or over the internet, for remote control and switching. It's ideal for remote truck or studio applications. ES-SloMo and SloMo Mini can directly interface with GangWay16 to provide for control up to 16 RS-422 recorders.


GangWay16 Rear Panel

# Gangway32

## 32 Port Gang Roll Switcher




The big boss of all gang roll switchers! GangWay32 is a massive 32 port RS-422 Gang Roll Switcher and GPI Trigger Box.

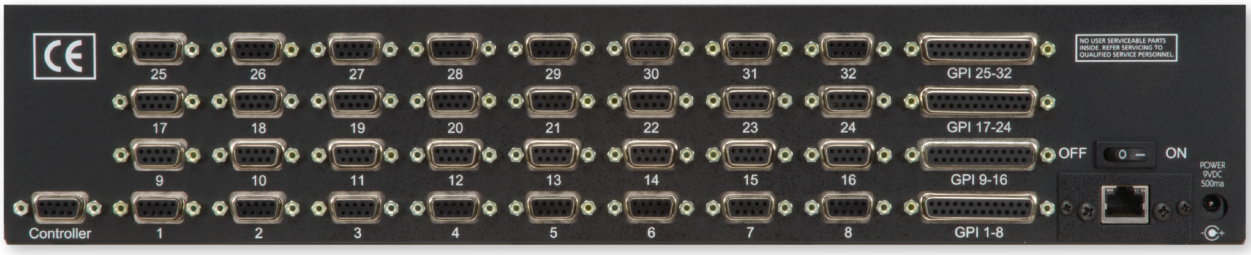
Like the smaller GangWay 16, this monster is an easy-to-use, RS-422 Gang Roll Switcher and GPI Trigger Box. The front panel includes lighted buttons for clear indication as to the status of each machine, an All button to quickly enable all channels, 3 User Preset Groups and a Tally Select button. A built-in front mounted RS-422 port provides a convenient connection for a jog/shuttle remote or other device.

It has 32 RS-422 ports on the rear panel and a rear mounted RS-422 input. The rear panel also includes 2 - 25 pin D-Sub connectors for GPI I/O, a power switch and an additional interface slot.

An optional additional compact interface card can act as a Master Input, connecting the GangWay to 10/100 Ethernet, USB, RS-232 or RS-422. This can be used to remotely change the switching configuration of the GangWay itself or as the source of commands for controlling connected VTRs, DDRs or Servers.

You can communicate with GangWay16 over LAN, or over the internet, for remote control and switching. It's ideal for remote truck or studio applications. Sofware developers can completely control GangWay switching and GPI functions.

ES-SloMo and SloMo Mini can directly interface with Gang-Way32 to provide for control up to 32 RS-422 recorders.




GangWay32Rear Panel with optional 920444-4 Ethernet interface Interface Installed

*The need to run MIDI signals over long distance is essential for use in recording facilities, theatres, arenas, churches, schools, cruise ships, casinos, nightclubs and other venues using simple twisted pair wiring. Touring professionals also rely on JLCooper MIDI Line Amplifiers to carry MIDI signals long distances over standard audio snakes.*

# MLA-XLR MIDI Line Amplifier


MLA-XLR is a single channel, bi-directional, long distance amplifier or driver for MIDI signals. It extends the range of MIDI to over 1000 feet using standard balanced audio lines (audio snakes, mic cables, etc.).

MLA-XLR is refreshingly simple to use. There are no settings to configure. Just plug in the power supply and connect two MLA- XLRs together with a pair of standard mic cables. Then, connect your MIDI gear as you would normally.

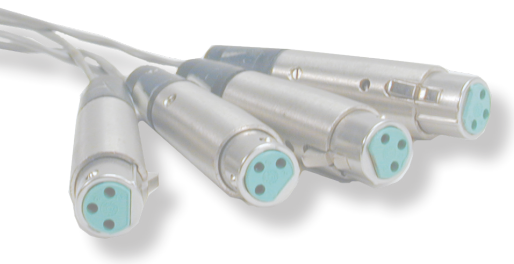
While the MIDI protocol specifies a maximum cable distance of about 50 feet (more or less, depending on the type of cable and other variables), more than 50 feet of MIDI transmission requires amplification.

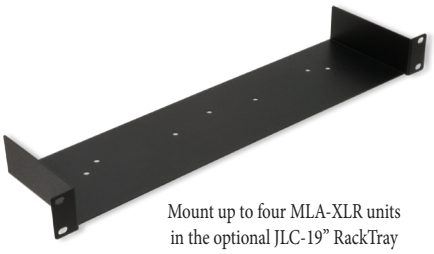
MLA-XLR takes a MIDI input and converts it to a balanced, differential signal using the RS-422 specification. At the other end, another MLA-XLR detects the signal using a sensitive receiver that has a high degree of noise immunity. This combination lends itself to long distance, error free installations required in professional applications with abosolutely no latency.

Since the MIDI signal is converted into a non-MIDI signal, an installation requires a MIDI Line Amplifier at each end of the cable.

MLA-XLR also provides a lower cost expansion option for interfacing with other MLA-1 and MLA-10 units in a network application with custom wiring.


MLA-XLR Rear Panel XLR Connectors





Mount up to four MLA-XLR units in the optional JLC-19" RackTray

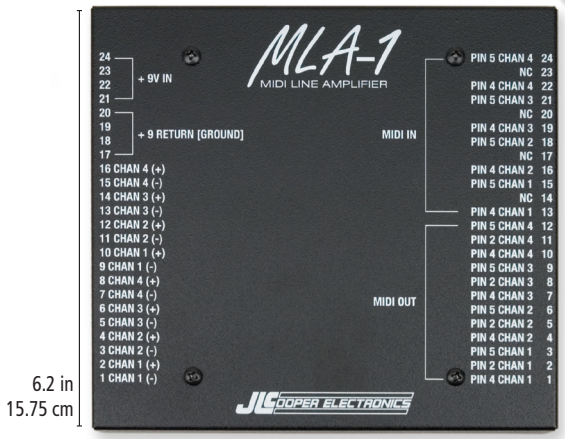
### MLA-XLR MIDI Line Amplifier Features

- *1 MIDI Input - 1 MIDI Output*
- *XLR and MIDI connections*
- *1/4 Rack or desktop use*
- *MIDI cable runs over 1000' Using common twisted pair wire, XLR Cables or Audio Snake*
- *Multiple units may be networked*
- *Can be used in pairs or in combination with MLA-1's and MLA-10's*
- *Sold Individually*
- *Dimensions 4.25" x 4.7" x 1.6"*
- *Weight 3 lbs.*

# MLA-1 MIDI Line Amplifier

The MLA-1 is a four channel MIDI Line Amplifier that can be surface mounted and used with a separate MIDI jack panel. This facilitates greater flexibility for installations where MLA units can be in every required location.

MLA-1 can be powered by an MLA-10 or used alone with a separate power supply. Its compact size allows it to be mounted on or inside a wall or panel, truss mounted, etc. A single output can be connected to as many as 4 inputs of another MLA-1 or MLA-10.




6.2 in
15.75 cm

6.6 in - 16.76 cm

.85 in
2.16 cm

***MLA-1 MIDI Line Amplifier Features***

- *4 MIDI Inputs - 4 MIDI Outputs*
- *Panel mount version*
- *All barrier strip connections*
- *Multiple units may be networked*
- *Can be used with other MLA units.*
- *Dimensions 6.6" x 6.2" x 0.85"*
- *Weight 2 lbs. - .91 kg*

***The choice between the MLA-1 and MLA-10 depends on mounting requirements. Combine MLA units in whatever configurations best suits your needs. MLA-10 and MLA-1 are functionally identical and offer different form factors. Each provides 4 long distance connections in either direction. MLA-1 or MLA-10 can be combined with up to 4 MLA-XLR units.***

# MLA-10 MIDI Line Amplifier

***"Best in Show Winner – AES"***
***- EQ Magazine***


JLCooper Electronics extends the distance of MIDI with the MLA - MIDI Line Amplifiers. They let you effectively extend MIDI cable length using twisted pair wire or a standard audio snake.

MIDI Line Amplifiers sending MIDI data over long distances with the capability to send information in excess of 1000 feet without latency, delays or errors.

Ideal for touring systems or permanent installations, MLA's can be used in schools, recording and production facilities, boardrooms, live performances, convention centers, churches, theaters, stadiums, amusement parks and more.

**When to Use a MIDI Line Amplifier**
MIDI (Musical Instrument Digital Interface) is an increasingly important consideration for schools, recording facilities, stadiums, arenas, hotels, amusement parks, or other facilities where MIDI messages are required to be sent a long distance, or to multiple locations.

The MIDI standard only permits a maximum cable run of less than 50 feet. The innovative MLA Series MIDI Line Amplifiers overcome this limitation.

The MLA's convert the MIDI signal into a balanced high speed digital protocol that can travel over common twisted pair wire. The signal is converted back to MIDI through another MLA at the other end of the cable run.

MLA's are ideal for permanent installations or anywhere a longer MIDI cable run is required.

The MLA's can be easily networked to multiple locations such as from the master control room to a series of separate MIDI rooms in a recording studio, broadcast facility or educational lab. This allows you to de-centralize the location of MIDI devices in the system.

MLA-10™ is designed to fit in a standard single 19" rack space. Each MLA-10 features 8 MIDI lines configured as 4 inputs and 4 outputs. It has 4 MIDI input connectors, 4 MIDI output connectors and individual activity LEDs.

***MLA-10 MIDI Line Amplifier Features***

- *4 MIDI Input connectors*
- *4 MIDI Output connectors*
- *Detachable terminal strip connectors*
- *MIDI activity LEDs*
- *MIDI cable runs over 1000'*
- *Uses common twisted pair wire*
- *Multiple units may be networked*
- *Low power consumption*
- *Can supply power to multiple MLA-1's*
- *Front panel power switch*
- *Single 19" rack space*
- *Heavy duty rack enclosure*

- *Dimensions 19" x 1.75" x 3.87"*
- *Weight 3.25 lbs*


MLA-10 Rear Panel with Weidmüller terminal block screw connectors

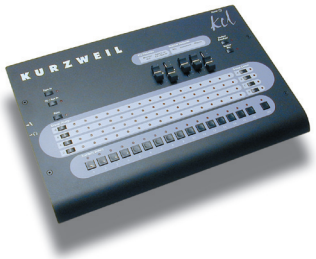
# Success Through Innovation and Partnership

## Developers and OEMs Welcome

JLCooper Electronics successfully works with industry leading companies and educational institutions in a variety of OEM, private label, custom engineering, software development and other relationships.

Successfully working in many OEM relationships, JLCooper Electronics develops and manufactures products for companies on the forefront of digital audio, video, multimedia and other technologies.

JLCooper can partner at any level with your company to cooperatively develop products that perfectly meet your requirements and budget.



We provide an established developer program to provide documentation and support for our products. We offer a variety of "off the shelf" products that can be supported "as is" or customized to meet your needs. JLCooper will also help to support and evangelize your compatible products, creating additional strategies and opportunities.

Let us strengthen your existing development efforts by providing hardware and software products tailored to meet your needs. JLCooper's range of services include circuit board and enclosure design, manufacturing and testing, packaging and documentation. All this from the team consistently chosen by dozens of world–class manufacturers as the best in the business.

Visit our Developer page at jlcooper.com for additional information.


editware
LAUNCH PAD
SideCar
Music Tutor interactive
RCS-848 HUB
TRCS-1
Kameleon
HARRIS


OMNIBUS


iMove
iMove


musicineducation
mie


VIDIGO


BVS XU
9000
VTR
BVS TR
9000
CONTROL PRO
GRANDE VITESSE


{iew}
XPROMPTER
MCS3


LSB


Level
Mute
Ref. Level
Presets


eevs
SPORTS


OMNIBUS
Innovate | Integrate | Deliver
itx
INTELLIGENT TRANSMISSION
OMNIBUS


Left
Right
Master
Mic.1
Mic.2
Music
Volume


Cam2
Cam3
Cam4

# The JLCooper Story

JLCooper Electronics is truly a pioneer in the development of professional control, automation, synchronization and interfacing products.

Our solid reputation for design innovation is a testimony to the quality, reliability and performance of every product we make.

The company was founded in 1979 to make accessories for the growing music synthesizer market. Over the years, JLCooper has expanded to become a multimillion dollar corporation servicing audio and video production, television and radio broadcast, film editing, medical research and imaging, aerospace, education and many other specialized markets.

All products are manufactured in the U.S.A. and carry a full one year warranty. JLC products are sold by dealers and distributors worldwide.

JLCooper offers a complete range of branded products for the professional audio, video and multimedia markets. Our additional success as an OEM supplier can be attributed to our remarkable versatility. We understand the pressures involved in creating new product designs and we can help you define objectives and achieve them on time.

JLCOOPER ELECTRONICS

Control, Automation, Synchronization, & Interfacing Products

WWW.JLCOOPER.COM

With 38 years of manufacturing experience and hundreds of finished product designs, leading companies look to JLCooper as a partner for custom control applications. We want to be your partner too.

Contact us now to get your wheels turning fast.

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