

# JLCooper Electronics

Control, Automation, Synchronization 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, Synchronization and Automation Products. Our mission succeeds when an impossible problem is solved or a difficult job is made easier.

Effortless control expands your imagination. JLCooper controllers let you work faster and with increased proficiency. They provide the ease-of-use and tactile elegance that is missing from "software only" user interfaces.

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

Our record speaks for itself with over 25 years of award winning products hard at work every day.

Our clients include ABC, Agfa Healthcare, Apple, BBC, CBC, CBS, CNN, Direct TV, ESPN, HBO, Heartlab, IBM, IMAX, Industrial Light & Magic, The Julliard Academy, Lockheed Martin, MIT, MTV, National Center for Macrobiological Research, NBA, NBC, 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 every day.

Contact us today to find out how serious we are about making your job easier. Call today or email us at [sales@jlcooper.com](mailto:sales@jlcooper.com).

*Jérôme Sabourin  
Iridas Speedgrade*



*Oracle Laser Productions  
Singapore*



*Doremi Labs*



*Frank Serafine*

**JLCOOPER ELECTRONICS**

**Control, Automation, Synchronization, & Interfacing Products**

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# MCS-3000 SERIES MEDIA COMMAND STATIONS



*MCS-3800w – Media Command Station*

***MCS-3000 Series products are the pinnacle of our control station product line. The winner of Videography magazine's "Editors Choice Award", MCS-3800 and other Media Command Stations are in daily use with systems from Apple, AVID, BitCentral, Doremi Labs, Digidesign, DVS, Enco, Grass Valley, Leitch, IBIS, IFX, Harris, Inscribe, IRIDAS, MOTU, Merging Technologies, Panasonic, Roland, Steinberg, Yamaha and many others.***

MCS-3000 Series – Media Command Stations provide tactile control of popular computer-based workstations for audio/video production, post production, color correction, broadcast automation and other applications.

You can edit and refine your work to perfection, using tactile controllers from JLC Cooper Electronics, the A/V industrie's most widely used control surface technology.

MCS-3000 Series products are designed with a modular approach. This lets you customize the control surface for your specific needs. Custom desks can be configured for virtually any application. No other control product offers the advanced flexibility and proven reliability.

MCS-3000 Series product features include touch-sensitive motorized faders, programmable function keys, innovative, dynamically-relegendable LCD keys, back lit LCD displays, VF displays, rotary encoders, professional transport controls and full size numeric keypads.

The MCS-3000 Series truly advances the state of modular, control for non-linear audio and video editing systems. They expand to offer as many as 64 moving faders. Models include JLC Cooper's custom, optically-encoded, concentric jog wheel with shuttle ring. The SP jog/shuttle mechanism (available on MCS-Transport SP) offers a more traditional feel for video applications.

Interfacing options including Ethernet, USB, RS-422, Quad RS-422, RS-232, MIDI and GPI. (*See individual models for specific interface compatibility*)

Beautifully sculpted with an optional simulated stone (granite) trim and wrist rest\*, Media Command Stations are solid, professionally crafted controllers.

Media Command Stations are a proven control solution in demanding professional environments. With the variety of configuration and expansion options, their applications are limited only by your imagination!

## ***MCS-3000 Series Features***

- Adds Tactile Controls to Digital Audio and Video Workstations
- Provides Access to On-Screen Mixing and DSP Functions
- A Variety of Flexible Configuration Options
- Software Lets You Add Additional Controls to Most Applications

- Low Profile and Compact Design with Heavy Duty Construction
- P2, Odetics, VDCP, MIDI and Host Protocols
- Interface Card Slots for Control Options including Ethernet, USB, RS-422 (9-PIN for VTR Control), Quad RS-422, RS-232 and GPI
- \*"W" Models Include Contoured Simulated Granite Wrist Rest



## MCS-3000 SERIES MODELS AND EXPANSION OPTIONS

The demands placed on a controller differ widely, depending on the type of editing and the amount of space available. That's why Media Command Stations are designed with a unique, modular approach.

MCS-3000 Series controllers are offered in a variety of flexible configurations. Units can be combined to form a custom configuration for your specific requirements and budget.

### MCS-3800 MEDIA COMMAND STATION

The MCS-3800™ is an eight fader main console with a full complement of necessary controls. It features touch-sensitive motorized faders, 60 function keys, full size numeric keypad, professional transport controls, LCD and LED displays. Includes built in MIDI I/O and two card slots for optional interface cards. It serves as a hub for an expanded system with a wide variety of optional accessories. Customize by adding MCS-3000x, MCS-Panner and MCS-Bridge and other expansion options. See some expanded configuration examples on Page 12.

#### **MCS-3800 Physical Specifications**

- 20.15" x 9.75" x 2.00" (W/O Wrist Rest)
- Weight 15 lbs.

#### **MCS-3800w Physical Specifications**

- 22" x 12.5" x 2.00" (W/Wrist Rest)
- Weight 18 lbs.



### MCS-3400 MEDIA COMMAND STATION

The MCS-3400™ is a smaller main console for applications where space is at a premium or fewer than eight faders are required. It features four touch-sensitive, motorized faders and its smaller size makes it the ideal addition to personal editing suites. It may be fully expanded with a variety of options and it can be used with a many computer-based editing systems. It is otherwise identical to the MCS-3800. MCS-3000 Series controllers provide fast access to on-screen mixing and software DSP functions. MCS-3400 has built in MIDI I/O and two card slots for optional interface cards.

#### **MCS-3400 Physical Specifications**

- 16.5" x 9.75" x 2" (W/O Wrist Rest)
- Weight 10 lbs.

#### **MCS-3400w Physical Specifications**

- 18" x 12.5" x 2.00" (W/Wrist Rest)
- Weight 12 lbs.



### MCS-3000 MEDIA COMMAND STATION

The MCS-3000™ is the heart of the MCS-3000 Series product family. It is a smaller main console for applications where space is at a premium or no faders are required. MCS-3000 Series controllers are used daily in audio, video editing, compositing, broadcast, slo-motion, virtual reality, live sound, lighting, security and other specialized applications. It's a low profile, compact design, with professional controls and quality construction. Supports the MCS-3000x and new MCS-3000XL 8 channel fader expanders and other expansion options. MCS-3000 has built in MIDI I/O and two card slots for optional interface cards.

#### **MCS-3000 Physical Specifications**

- 13" x 9.75" x 2" (W/O Wrist Rest)
- Weight 8 lbs.

#### **MCS-3000w Physical Specifications**

- 14.5" x 12.5" x 2" (W/Wrist Rest)
- Weight 10 lbs.



### MCS-3000X 8 CHANNEL EXPANDER/CONTROLLER

The MCS-3000X™ is a fader expander for the MCS-3000, MCS-3400, and MCS-3800. Alternately, it can be used as a stand alone controller with most MIDI software programs. It features 8 touch-sensitive motorized faders, 32 switches, and built in MIDI I/O. Up to seven MCS-3000X's can be joined to form a console with up to 64 physical faders. It controls AVID Symphony Nitris, Newscutter Adrenaline, Media Composer Adrenaline, Xpress Pro, Digidesign Pro Tools, Apple Logic Pro, Steinberg Nuendo and most computer based MIDI software. See our on-line compatibility guide for additional compatibility details. Check out the new MCS-3000XL 8 Channel Expander/Controller on Page 6.

#### **MCS-3000x Physical Specifications**

- 9.25" x 9.75" x 2.00" (W/O Wrist Rest)
- Weight 8 lbs.

#### **MCS-3000xw Physical Specifications**

- 11" x 11.25" x 2.00" (W/Wrist Rest)
- Weight 9 lbs.



## MCS-3800L MEDIA COMMAND STATION



MCS-3800 LW

MCS-3800L™ is an eight fader main console with a full complement of necessary controls. It's an updated version of the MCS-3800, adding 8 high-resolution backlit relegendable LCD buttons. This new model has the ability to display channel labels, color-coded track arming and other status information. These state-of-the-art LCD keyswitches can display 64 colors and up to 40 characters of text and graphics

Like the MCS-3800 it features touch-sensitive motorized faders, 60 function keys, full size numeric keypad, professional transport controls, LCD and LED displays, MIDI I/O and 2 expansion slots for other optional interfaces. It has 4 internal banks for 32 virtual fader channels, or it can be expanded with MCS-3000XL Fader Expanders for an expanded console of up to 64 physical faders.

### MCS-3800 Physical Specifications

- 20.15" x 9.75" x 2.00" (W/O Wrist Rest)
- Weight 18 lbs.

### MCS-3800 LW Physical Specifications

- 22" x 12.5" x 2.00" (W/Wrist Rest)
- Weight 21 lbs.

## MCS-3000 XL - FADER EXPANDER/CONTROLLER



MCS-3000 XL™ is our newest 8 channel fader controller, featuring high-quality, touch-sensitive, 100mm motorized faders and 8 high-resolution backlit LCD display buttons. Building on the popular MCS-3000x, this new model has the potential to display channel labels, color-coded track arming status and other mission critical information. State of the Art LCD keyswitches can display 64 colors and up to 32 characters of text and graphics.

Built in MIDI ports with optional USB, 10/100 ethernet, RS-232 and RS-422 interface cards provide connections to host systems or stand-alone control.

### MCS-3000x Physical Specifications

- 9.25" x 9.75" x 2.00" (W/O Wrist Rest)
- Weight 8 lbs.

### MCS-3000xw Physical Specifications

- 11" x 11.25" x 2.00" (W/Wrist Rest)
- Weight 9 lbs.

## MCS-PANNER - THREE AXIS JOYSTICK CONTROLLER

The MCS-Panner™ is a high-quality, 3-axis joystick mechanism with five rotary encoders and 10 switches that controls surround panning for digital audio mixers and workstations or camera PTZ. You can join it to MCS-3000, MCS-3400 or MCS-3800 to form a larger console or or you can use it by itself as a stand alone Surround Panning Controller using the optional MCS-Panner MIDI Adapter. It interfaces with Pro Tools, DP5, Nuendo, Yamaha and other digital mixing consoles to control surround features.



### Physical Specifications

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.

## MCS-ORBITER

### TOUCH-SENSITIVE - MOTORIZED JOYSTICK CONTROLLER

MCS-Orbiter™ is a motorized joystick controller for the MCS-3000 Series. It features a high-quality professional joystick that is both motorized and touch sensitive, making it the essential controller for lighting, camera control and other applications. The joystick allows you to precisely input position-related automation moves. It dynamically tracks previously written moves. Touch-sensitivity lets you perform "takeover" edits; you can grab the joystick at any time to enter new positional information.

The MCS-Orbiter features 5 rotary encoders and 9 function keys. It operates as a stand-alone controller or may be joined to other MCS-3000 Series products. Optional MCS-Orbiter MIDI Adapter sold separately.

### Physical Specifications

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.



## MCS-TRANSPORT - COMPACT TRANSPORT CONTROL - J AND SP VERSIONS



MCS-Transport J

MCS-Transport™ is a new MCS-3000 Series - Media Command Station accessory that provides basic transport and jog/shuttle controls in a compact desktop unit. MCS-Transport is an ideal add-on for use with MCS-Spectrum, MCS-ClipShot, MCS-Clip24 and MCS-QuickShot.

MCS-Transport J features the JLCopper jog/shuttle mechanism with a custom, weighted, jog wheel and a concentric shuttle ring. MCS-Transport SP features a traditional VTR style jog/shuttle wheel. MCS-Transport connects to other MCS3k units with a modular cable.

### Physical Specifications

- Size - 11.5" x 8.0" x 2.5"
- Weight - 6 lbs.



MCS-Transport SP

## MCS-TRACKER 3000 - TRACK ARMING CONTROLLER



MCS-Tracker™ provides dedicated track arming buttons, function keys and track status indicators for the MCS-3000 Series. It features 32 track arming buttons and dual LED's for each channel provide highly visible confirmation of track status. Function keys provide track grouping, all safe, bank change, and three user-definable groups. Works with MOTU Digital Performer and other applications.

(The MCS-Tracker is also available as a MCS-Pro Series low profile package, that operates as a stand alone MIDI/MMC version. See Page 18 for more information.)

### Physical Specifications

- Size - 11.5" x 8.0" x 2.5"
- Weight - 6 lbs.

## MCS-BRIDGE - CHANNEL DISPLAY AND PAN OPTION

MCS-Bridge™ further expands the physical controls of Media Command Station. It mounts behind the fader section of an MCS-3800 or MCS-3000X when used as an expander. The MCS-Bridge provides a large, remotely relegendable back-lit/push-button LCD display for each channel. The unique LCD display/buttons can show text (like channel and parameter labels) and graphics. They can change color to indicate track status or other information. Additional controls include two push-button, rotary encoders and a 2-axis joystick on each channel.

MCS-Bridge is compatible with Apple Logic Pro, MOTU DP5, Digidesign Pro Tools, Soundscape 32 and other professional audio editing systems.

### Physical Specifications

- Size - 9.25" x 6.25" x 2.0"
- Weight - 3 lbs.



## MCS-WIPER - TRANSITION CONTROLLER

MCS-Wiper™ is a video fader that controls cuts, dissolves, slo-mo and other transitions in video editing and other software. It provides a smooth, high quality T-Bar with five rotary encoders and eight buttons for controlling on screen functions. It can be attached to an MCS-3000, MCS-3400, MCS-3800 or MCS-ClipShot and other base units to form a larger console.

### Physical Specifications

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.



## MCS-CLIPSHOT - TACTILE COMMAND PALETTE



*MCS-ClipShot W*

### Physical Specifications

- Size - 13" x 10" x 2.5"
- Weight - 20 lbs.

MCS-ClipShot™ is a switch palette with 40 relegendable multi-colored 24 x 36 LCD buttons (capable of displaying text and graphics), 18 lighted buttons, 9 function keys and a 2 x 40 backlit LCD display.

It can be used as a stand-alone controller or it can be interfaced with other MCS-3000 Series modules to form a larger console. It has 2 - MCS-3000 Interface Card Slots for a variety of connections including RS-232, RS-422, USB, Ethernet, Quad RS-422/9Pin and GPI.

MCS-ClipShot provides Instant Video Clip Access or Audio Playback Triggering in broadcast, post production and other professional applications where relegendable buttons are very useful. Its LCD buttons can also function as a QWERTY keyboard for your computer, eliminating the need for a traditional keyboard for naming clips.

Advanced features in MCS-ClipShot provide direct support for Doremi, Leitch and other video servers via RS-422 or ethernet. Odetics and VDCP (Louth) protocols are also supported.

New mapping software for Mac OSX lets you customize your ClipShot to work efficiently with any software application. Seamlessly controls key commands, mouse clicks and macros. This innovative application is the first to provide all of this, combined with programmable MIDI, over a USB or Ethernet connection. Imagine using ClipShot to control your Video System or DAW!

Works with MCS-3000x, MCS-Transport and other MCS modules as well. See Page 13 for additional information.



## MCS-CLIP24 RGB - TACTILE COMMAND PALETTE

MCS-Clip24 RGB™ is a mid-sized desktop controller with 24, next generation, hi-res, 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) 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. Data only needs to be transmitted when a change is made to the display or background colors.

Couples with MCS-Transport, MCS-3000XL, MCS-3000, MCS-3400 or MCS-3800 to form a larger console. MCS-Clip24 has an interface card slot and requires a JLC interface card for USB, Ethernet, RS-232 or RS-422 connection.

MCS-Clip24 provides instant audio or video playback and control for broadcast automation, post production and other applications.

### Physical Specifications

- Size - 9.25" x 10" x 2.5"
- Weight - 17 lbs.



## MCS-QUICKSHOT - MCS-3000 SERIES COMMAND PALETTE

MCS-QuickShot™ is a compact version of our MCS-ClipShot. It offers the same controls as the KeyShot and RackShot, in an MCS-3000 Series enclosure. It accepts MCS-3000 Series interface cards including Ethernet, USB, RS-232, and RS-422, and it has a built in interface for connecting as an expander with other Media Command Station components.

It can be physically coupled with other MCS-3000 Series Media Command Stations using an optional joiner kit.

### Physical Specifications

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.

MCS-QuickShot features 10 remotely relegendable, multi-color, backlit LCD push-button switches. Other controls include 13 lighted function keys and a push-button rotary encoder.

QuickShot also acts as a stand-alone Odetics controller, triggering clips and providing basic transport functions.



## KEYSHOT - COMPACT DESKTOP CONTROL PALETTE

KeyShot™ is a new addition to our line of control products using remotely relegendable push-button switches which allow the user to instantly recognize the key function. It's unique, compact shape uses minimal space and it fits behind most computer keyboards.

KeyShot features 10 remotely relegendable, multi-color, backlit liquid crystal display (LCD) push-button switches. The LCD's can display 36 x 24 pixel bitmaps or 3 lines of text ( 6 characters per line), or a combination of text, graphic symbols or animation. They can alert users to changing operating conditions by showing any of 8 different colors. This enables a customized user interface that changes to suit the task at hand and helps users work faster and with fewer mistakes. Other controls include 13 lighted function keys and a rotary encoder. The KeyShot is capable of accepting Ethernet, USB, RS-232 or RS-422 Compact Interface Cards.

It provides instant audio or video playback triggering in broadcast, post and other professional applications. Other uses include control systems, call centers, financial services, telecommunications, industrial controls, and automation systems.



*KeyShot sits behind your computer keyboard*

### Physical Specifications

- Size - 14.5" x 2.5" x 2"
- Weight - 3 lbs.

## RACKSHOT - RACKMOUNT CONTROL PALETTE

RackShot™ provides the exact same control capabilities as our KeyShot in a convenient single space, 19" rack mount package. It connects via RS-232, RS-422, USB or Ethernet and to provide instant audio or video clip playback triggering in broadcast automation, post and other professional applications where relegendable push-button switches in a rack are useful.



### Physical Specifications

- Size - 19" x 3" x 1.75"
- Weight - 3 lbs.

### NEW - MACRO SOFTWARE FOR RACKSHOT, KEYSHOT & MCS-QUICKSHOT

A new "Macro Feature" allows users to define the behavior of all controls by means of a PC based editor. The controllers can be equipped with Ethernet, USB, RS-232 or RS-422 Compact Interfaces. Once programmed, the internal memory is non-volatile and the software is no longer required for use. This lets you completely customize the controller for use in any application.

With 10 LCD buttons and 8 bank buttons, the controllers provide a total of 80 virtual LCD buttons. Each may be individually programmed for On/Off message, color, and display, with latching or momentary operation. You can choose from 7 colors + backlight off, and colors may be selected separately for the ON and OFF states. A given button can be programmed to display 3 lines of 6 text characters, a large single alphanumeric letter/number, an icon selected from an internal set, or a user icon that you can define using the built in icon editor. There are 4 F-buttons and a Shift button, resulting in 8 virtual F-buttons, each of which may be individually programmed. Finally, there is a push-button programmable encoder.

Any number of buttons may be grouped together to act as a radio-button group. That is, when a given button within a group is caused to go into the ON state, it will have its screen/color go to the ON state, its ON message will be sent, and all other buttons within that group will go to the OFF state, and individual OFF messages, if desired, will be sent out.

Separate ON and OFF messages may be defined per key, between 0 and 31 bytes long. If an OFF message is not needed, the ON message may be up to 62 bytes long. Provision for auto insertion of a checksum is included.



## COMPACT INTERFACE CARDS - FOR KEYSHOT, RACKSHOT, MCS-3000XL AND GANGWAY16

### 920444-1 - RS-422/9PIN COMPACT INTERFACE CARD

This card provides direct 9-Pin control of professional VTR's, DDR's and servers, or it can be used to interface your controller directly to a RS-422 serial port on your computer.

### 920444-2 - RS-232 COMPACT INTERFACE CARD

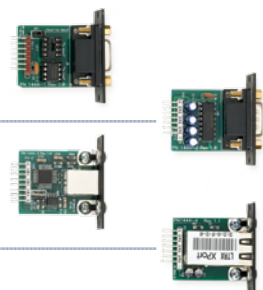
This card lets your controller interface with computers, DVD players, Video Recorders, Messaging Systems or any device that can be controlled via RS-232.

### 920444-3 - COMPACT USB INTERFACE CARD

This plug in card option for the KeyShot, Rackshot, MCS-3000XL and GangWay16 allows convenient connection to computers via USB.

### 920444-3 - COMPACT ETHERNET INTERFACE CARD

This interface card provides a direct 10/100 ethernet connection for controlling network based applications or situations where a long cable run is required. It simplifies the connection to your computer or LAN, and keeps the clutter of cables on your desktop to a minimum.



## MCS-SPECTRUM - COLORIST COMMAND STATION



*MCS-Spectrum W*

MCS-Spectrum™ - Colorist Command Station is one of the newest additions to the family of award winning MCS-3000 Series - Media Command Station products.

It is designed for use with advanced video color correction software and other applications where multiple trackballs with control rings are beneficial.

Controls include 3 transparent, backlit, trackball mechanisms with purpose-designed free spinning control rings, 6 high-resolution rotary encoders, Dual VF displays, and 14 function keys.

It can be used as a stand-alone controller or it can be interfaced with other MCS-3000 Series modules to form a larger console. It connects with a MCS-3000, MCS-3400 or MCS-3800 using a modular cable and has 2 - MCS-3000 Interface Card Slots for a variety of connections including Ethernet, USB, RS-232, and RS-422.

MCS-Spectrum is compatible with Apple Final Cut Pro, Final Touch, Assimilate Scratch, DVS ClipSter, IFX Piranha Cinema, Iridas Speedgrade and other software applications.

### Physical Specifications

- Physical Specifications - Size 13" x 10" x 2.5"
- Weight 20 lbs.

- For Use With Advanced Color Correction Software
- Provides Tactile Feedback for Colorist Workflow
- Precise, High-Resolution, Professional Quality Controls
- Optional Simulated Stone Wrist Rest
- Attractive, Low Profile and Compact Design
- 2 Card Slots for Flexible Interfacing Capability
- Optional USB Interface and Software Lets You Add Additional Controls to Any Application

## MCS-NAVIGATOR - PRECISION TRACKBALL CONTROLLER

MCS-Navigator™ is a single trackball version of our MCS-Spectrum. It can be used with advanced video color correction software or as a mouse replacement and navigational device.

It has a single transparent, back-lit, trackball mechanism with specially designed free spinning control ring, 6 high-resolution rotary encoders, and 8 function keys.

MCS-Navigator can be used as a stand-alone controller, or it can be physically connected with MCS-3000 or MCS-Spectrum. It interfaces via USB, RS-232, RS-422, MIDI (specify when ordering).

MCS-Navigator is available with or without simulated stone wrist rest and trim.



### Physical Specifications

- Size - 6.25" x 11.25" x 2.5"
- Weight - 3 lbs.

## MCS-BRIDGE VF-4 - CONTROLLER/EXPANDER FOR MCS-SPECTRUM

The new MCS-Bridge VF-4™ couples to the MCS-Spectrum - Colorist Command Station, adding 4 additional banks of vacuum fluorescent displays, 3 hi-res, push-button rotary encoders per bank (with reset buttons) and 8 global function keys. The VF-4 places additional displays at a convenient viewing angle and close at hand, without consuming additional desk space.

### Physical Specifications

- Size - 12.75" x 5.75" x 2"
- Weight - 3 lbs.



*MCS-Bridge VF-4 shown with MCS-Spectrum W and MCS-3000 W*

*MCS-Bridge VF-4 with MCS-Spectrum*





# ECLIPSE<sub>CX</sub>

INTEGRATED COLORIST COMMAND STATION



**JLCooper's new Eclipse CX - is our first fully integrated Colorist Command Station** for use with advanced video color correction and editing software.

It's a professional-quality color grading control surface with conveniently placed controls at your fingertips, in a newly designed enclosure style, with metallic finish and brushed aluminum end caps.

It features a full array of controls including 3 custom transparent, backlit trackball mechanisms with purpose designed, free-spinning control rings. New molded ring surface insures precise control.

You get fast access to color parameters with 6 smooth, high-resolution rotary encoders and 5 detented rotary encoders. There are 41 illuminated function keys, 7 edit keys, 3 VF displays, blue LED timecode display, professional transport buttons with status indicators and JLCooper's custom optically encoded jog/wheel with concentric shuttle ring.

Eclipse CX includes 2 interface card slots for connection via 10/100 Ethernet, USB, RS-422 or RS-232.

Eclipse CX is the newest addition to the JLCooper family of award winning products. No other control surfaces offer the compatibility or proven reliability.

JLCooper controllers let you zip through work flow faster and with increased proficiency. They empower you with the ease-of-use and tactile elegance that is missing from "software only" user interfaces.

With the worlds largest line of control products for computer based editing systems, our products set the standards others follow.

## New Mapping

**Software for OSX** allows Ethernet or USB equipped controllers to access most editing functions in Final Cut Pro and other professional applications. It provides context-sensitive Final Cut Pro Jog/Shuttle and user control of text displays. User mapping of controls in any software.



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

Based on MCS-3000 Series - Media Command Station components, it's compatible with Apple (Final Cut Studio 2/Color), Assimilate (Scratch), IFX (Piranha Cinema HD), IRIDAS (Speedgrade) and others.

A new Eclipse Bridge Controller/Expander (not shown) adds 4 additional banks of VF displays, 3 hi-res push-button rotary encoders per bank (with reset buttons) and 8 global function keys.

Can't wait to see the Eclipse CX? Contact JLCooper today for compatibility information about your system.

Eclipse CX is the perfect addition to your digital intermediate or finishing suite.

- For Use With Advanced Color Correction Software
- Speeds Color Grading Workflow
- Integrated Compact Control Surface Saves Space
- Precise, Hi-Resolution, Professional Quality Controls
- Easy-to-See Illuminated Keyswitches
- Attractive, Low Profile and Compact Design
- 2 Card Slots for Flexible Interfacing Capability
- Optional Software for OSX Lets You Add Additional Controls to Any Applications (A JLCooper Exclusive)

- Physical Specifications - Size 13" x 10" x 2.5"
- Weight 14 lbs.

**JLCOOPER ELECTRONICS**

WWW.JLCOOPER.COM



## MODULAR MCS-3000 SERIES - MEDIA COMMAND STATION EXPANDED CONFIGURATION EXAMPLES

*MCS-3800W - MCS-SpectrumW in custom chassis with simulated stone wrist rest and trim.*



*MCS-3800W - Media Command Station with (1) MCS-3000XW, (2) MCS-Bridge and MCS-PannerW in a single chassis.*



*"JLCooper has been a proven leader in controllers for years ... and it shows!"*  
*"MCS-3800 is totally professional"*  
*"MCS-3800 is an excellent choice"*  
- Electronic Musician



*MCS-3800 - Media Command Station with (3) MCS-3000x, (4) MCS-Bridge and MCS-Panner*

*"the MCS-3800 stands out as a quality piece of equipment...rock solid"*  
*"First-Class Jog Shuttle Controller"*  
- Mac Video UK

*MCS-Clip24 and MCS-Transport SP*



*MCS-3800W and MCS-SpectrumW in custom chassis with simulated stone wrist rest and trim.*



*MCS-SpectrumW, MCS-NavigatorW and MCS-Bridge VF-4 with simulated stone wrist rest and trim.*



## UNEQUALLED INTERFACING FLEXIBILITY

As you can see, Media Command Stations have a variety of interface types to work in virtually any application. All MCS-3000 Series expansion options interface via our internal bus and connect with a modular cable.

Built in MIDI ports are included on some models. 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 specific interfacing requirements for your specific applications or check out our on-line product compatibility guide.



*Media Command Station  
Rear View shows MIDI In/Out,  
JLC Expansion Port and Two Expansion  
Card Slots for unequalled interfacing flexibility.*

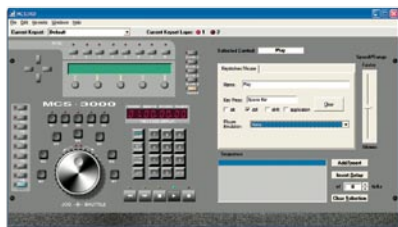


## MCS-3000 SERIES SOFTWARE

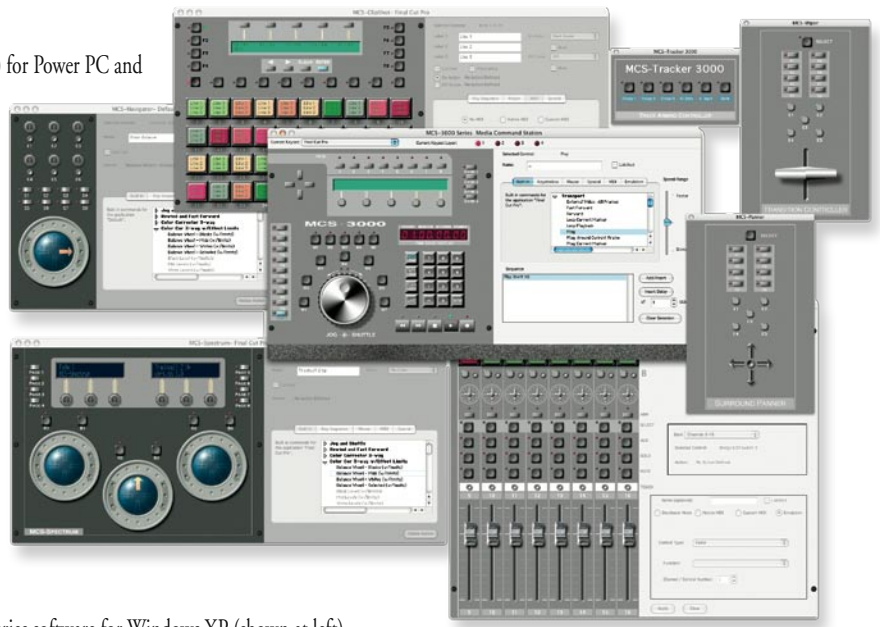
Check out the latest MCS-3000 Series software for Mac OSX (universal) for Power PC and Intel Processors. It allows USB and Ethernet Equipped MCS-3000 Series Controllers to access most editing functions in Final Cut Pro, Logic Pro, Pro Tools, and other applications. It provides context-sensitive Final Cut Pro Jog/Shuttle and user control of LCD displays.

User programmable keysets can be saved for all your favorite applications. Our smart software driver knows which application is running in the foreground and switches keysets automatically for seamless control of key commands, mouse clicks, macros and MIDI.

This innovative application is the first to provide all of this combined with programmable MIDI control over a USB or Ethernet connection.



MCS-3000 Series software for Windows XP (shown at left) allows USB Equipped MCS-3000 Series Controllers to control most software programs with key command macros and mouse clicks.



## MCS-3000 SERIES INTERFACE CARDS

### MCS-3000 SERIES ETHERNET INTERFACE CARD #920394

This interface card provides a direct 10/100 ethernet connection for controlling network based applications or situations where a long cable run is required. It simplifies the connection to your computer or LAN, and keeps the clutter of cables in your facility to a minimum. Use MCS-3000 Series software to work efficiently with virtually any application on OSX.



### MCS-3000 SERIES USB INTERFACE CARD #920384

This interface card allows connection to computers via USB. It simplifies the connection to your computer. Use MCS-3000 Series software to adapt the Media Command Station to work efficiently with virtually any application. Software keysets are included for popular audio and video programs.



### MCS-3000 SERIES RS-232 INTERFACE CARD #920321

The addition of this plug in card for the MCS-3000 Series lets you configure your Media Command Station for direct computer control. Simply plug the interface card into one of the slots in a MCS-3000, MCS-3400 or MCS-3800 and you're in control. Baud rate is adjustable.



### MCS-3000 SERIES 9-PIN/RS-422 INTERFACE CARD - #920320

This card provides direct 9-Pin control of professional VTR's and DDR's, or it can be used to interface your Command Station directly to a RS-422 serial port on your computer. Commands from a host computer can be passed through the MCS and be directed to the individual machines.



### MCS-3000 SERIES QUAD 422 CARD #920353

This card allows connection of up four professional VTR's or DDR's for control of transport, track arming, locates and other functions. Commands from a host computer can be passed through and directed to individual machines. With the addition of the Quad 422 Card, MCS-ClipShot can also serve as an interface for multi-machine control. Includes Custom Quad Cable.



### MCS-3000 SERIES GPI INTERFACE CARD #920355

This plug in card for the MCS-3000 Series – Media Command Station interfaces to any device that needs a General Purpose Interface (switch closure) connection. It provides eight GPI Outputs and one GPI input. Simply install the interface card into a slot in the MCS-3000, MCS-3400 or MCS-3800.



# EDIT SUITE SERIES



**Controls Most Professional  
VTRs, DDRs, Servers and  
Computer Based Systems.**

*Editors Work Faster and with Greater  
Precision Using JLCooper's Tactile  
Control Products.*

## ES-SLOMO 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 VTRs, DDRs or Server Channels quick and easy. It's a full featured 4-machine editor and universal Jog/Shuttle remote. It's sleek design and low cost, make it the perfect addition to edit suites, remote trucks and other studio applications.

ES-SloMo features include professional transport buttons, VTR style Jog/Shuttle mechanism for convenient picture search operations, a high-quality T-Bar for slo-mo and shuttle tape operation, an easy to read 2 x 16 VF display for accurate editing, a full size numeric keypad, fast access function keys. Odetics mode for seamless clip payout and new GangWay16 integration that allows individual control of up to 16 machine/server channels.

### ES-SloMo Features

- Controls a wide range of VTRs, DDRs and video servers
- Assemble, Insert, Crash and Disable (Lock Out) Editing Modes
- Mark In and Mark Out keys store up to 500 total cue location points
- Simultaneous Control up to 4 VTRs, DDRs or Server Channels via 4 RS-422 9Pin Serial Ports
- T-Bar Control for slow motion control sends Shuttle, Jog or Variable Play
- Dynamic slow motion replays directly accessed from the 'T' bar
- T-Bar Programmable - Min-Max, Preset Speeds, Active or Passive Modes
- Programmable Cueing Modes - Automatic Play All Cues Function
- Log Operation useful in QC Applications
- 16 Variable Replay Speeds
- EE/PB switching
- Global record lock feature
- USB Version available for Developers/OEMs
- Integrated quad snake/power cable minimizes desktop clutter. A single cable extends 10' so that all connections can be hidden neatly away from the operator including a remote power connection.

#### ES-SloMo Features

- Compact Design
- Controls 4 Machines
- VF Timecode Display
- Numeric Keypad

#### Physical Specifications

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

## ES-4/100 MOTORIZED FADER CONTROLLER

ES-4/100™ and ES-8/100™ are Edit Suite Series compact automation controllers.

Audio mixing has never been this fast and easy. The ES-4/100 features four 100mm touch-sensitive, motorized faders, 16 channel switches, 4 function keys and bank shift buttons for control of Select, Solo, Mute and other functions.

It's easy to refine and perfect your mix with the right tool for the job. The ES-4/100 is available in RS-232, RS-422, USB and MIDI versions.

#### ES-4/100 Physical Specifications

- Size - 6.5" x 10.5" x 3"
- Weight - 4 Lbs.



## ES-8/100 MOTORIZED FADER CONTROLLER

ES-8/100 features 8 touch-sensitive motorized faders, 32 channel switches, 4 function keys and bank buttons.

The ES-8/100 is available in RS-232, RS-422, USB and MIDI versions.

#### ES-8/100 Physical Specifications

- Size - 10.75" x 10.5" x 3"
- Weight - 6 Lbs.





# ES-450 SP UNIVERSAL JOG/SHUTTLE REMOTE

The ES-450 SP™ - Universal Jog/Shuttle Remote makes operation of professional video recorders fast and easy.

Controls Most Professional VTR's and DDR's

The ES-450™ is a fully functional 9-Pin/P2 Universal Jog/Shuttle Remote Controller for VTR's or DDR's.

It's completely compatible with most professional machines including most BVW, UVW, DSR, DVW, HVR, DVCAM and other 9-pin equipped VTR's and DDR's and servers from Sony, Panasonic, JVC, Doremi, Grass Valley, Harris and others.

The remote is designed for fast and easy editing. It incorporates a key-board layout which minimizes key strokes, a VTR style Jog/Shuttle Wheel for convenient picture search operations, a back-lit LCD Time Code display for easy and accurate editing and much more.

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

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.

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.

A numeric keypad 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. The ES-450 can effectively edit sound or music as well as it does video.



## ES-450 Physical Specifications

- Size - 6.5" x 10.5" x 3.5"
- Weight - 4 Lbs.

## ES-450 SP Features

- Professional Quality Compact Remote Control
- Sony Jog/Shuttle Mechanism
- 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
- Durable All Metal Construction



## ES-450 JE

### ETHERNET JOG/SHUTTLE REMOTE

ES-450 JE™ is a new 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 the our eBOX (listed on page 20) to remotely control serial equipped RS-422 servers or RS-232 devices over ethernet.

# MCS3-Media Control Station<sup>3</sup>

Media Control Station<sup>3</sup> is a central component of our MCS-Pro Series.

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 new 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. MCS3 is available in a number of different versions, as listed below.

## General MCS<sup>3</sup> Features

- Provides Remote Transport Control
- Balanced, Optical Jog Wheel with Shuttle Ring
- Permits Remote Track Arming
- RTZ and Shuttle Back at Play Speed
- Durable All Metal Construction
- Professional Remote Control for VTR's, MIDI, Audio, Video and Multimedia Software
- Available Models (Specify When Ordering)
  - MCS<sup>3</sup> USB w/ Software for Windows or Mac
  - MCS<sup>3</sup> SP USB w/ Software for Mac
  - MCS<sup>3</sup> RS-422/9-Pin for VTR Control
  - MCS<sup>3</sup> SP RS-422/9-Pin w/ SP Jog/Shuttle
  - MCS<sup>3</sup> RS-232 with Software for Windows
  - MCS<sup>3</sup> MIDI with MIDI Machine Control



**MCS<sup>3</sup> Physical Specifications**

- Size - 6.5" x 7" x 1.25"
- Weight - 5 Lbs.

"The addition of JKL shuttle control, a speed slider, key command sequences, and multiple keysets per application, make the MCS3 the controller of choice for professionals."

"MCS3™ V2 software for Windows is included with USB and RS-232 versions. It lets you use and create keyset (templates) for all of your favorite audio and video editing applications and more"

## MCS<sup>3</sup> USB Version

Controls All Macintosh and Windows Applications

Media Control Station<sup>3</sup> USB version features professional transport buttons, a precision optically encoded jog wheel with a concentric shuttle ring and 18 function keys.

MCS<sup>3</sup> USB software for supports Mac OS9 & OSX, Windows 98, 2000, Me, XP and Vista. It lets you use and customize supplied keysets for advanced control of applications including Final Cut Pro, iMovie, Premiere Pro, Pro Tools, Nuendo, DP5, Vegas Video, Virtual VTR and others.

JLCooper controllers let you work faster. They provide the ease-of-use and tactile elegance that's missing from "software only" user interfaces. Professionals can depend on JLCooper control products to provide reliable service that far outlasts plastic alternatives.

MCS<sup>3</sup> works with virtually any software program.



MCS<sup>3</sup> USB Universal Software for Macintosh OSX



MCS<sup>3</sup> USB and MCS<sup>3</sup> RS-232 Software for Windows

## MCS<sup>3</sup> RS-232 Version

Controls Windows Applications

Media Control Station<sup>3</sup> RS-232 features professional transport buttons, a precision optically encoded jog wheel with a concentric shuttle ring and 18 function keys. Supplied software is compatible with Windows 98, 2000, NT, Me, XP and Vista, and can be used with any editing software program. MCS<sup>3</sup> works with Premiere Pro, Cakewalk Pro, MPEG Edit Studio and other systems.

## MCS<sup>3</sup> MIDI/MMC Version

Controls Audio Hard Disk Recorders

Media Control Station<sup>3</sup> MIDI/MMC version sends MIDI Machine Control messages for controlling compatible hard disk recorders and computer based editing systems. Use it with recorders from Alesis, Akai, Mackie, Roland, Tascam and others. It can be coupled with FaderMaster Pro, FM 4/100 or MCS-ProTracker to form a compact custom console.



*The MCS-Pro Series provides a number of custom configuration options for improved control of computer-based editing systems, VTR's and DDR's.*



## MCS3 SP RS-422/9-Pin Version

### *MCS3 SP™ – with VTR Style Jog/Shuttle Mechanism*

Features the familiar push-push jog/shuttle controller. Push wheel once for Jog mode. Push wheel again for shuttle mode. In shuttle mode, it features a detent “click” when stopped. Available in a RS-422/9-Pin version for controlling AVID Symphony Nitris, Canopus Edius, professional P2 compatible VTRs and hard-disk based VTR emulators. Couples to MCS-Locator as a full function controller, capable of controlling up to 4 professional VTR's.

#### **MCS3 Physical Specifications**

- Size - 6.5" x 7" x 2.75"
- Weight - 5 Lbs.



## MCS3 RS-422/9-Pin Version

### *MCS3 RS-232™ – with JLCoper Jog/Shuttle Mechanism*

Media Control Station3 RS-422/9Pin version features professional transport buttons, a precision optically encoded jog wheel with a concentric shuttle ring and 18 function keys. It's a 9-Pin/P2 compatible universal VTRor DDR jog/shuttle remote with Sony BVU 800/900 emulation. It couples to MCS-Locator as a full function controller, capable of controlling up to 4 professional video decks.

#### **MCS3 Physical Specifications**

- Size - 6.5" x 7" x 1.25"
- Weight - 5 Lbs.



## MCS-Locator Video Cue Controller

### *MCS-Locator™ – Affordable Control of up to 4 Video Decks*

This low profile machine controller has the ability to quickly cue up to four VTR's or DDR's via RS-422/9-Pin. Typical applications include Start, Stop and Cueing of video tape recorders and digital disk recorders. MCS-Locator features a full size numeric keypad for inputting locate points and a large 7 segment LED time-code display. It can be physically joined with MCS3 and other MCS-Pro Series Controllers. An optional deep chassis is available to match the MCS3 SP.

#### **MCS3 Physical Specifications**

- Size - 6.5" x 7" x 1.25"
- Weight - 5 Lbs.



## MCS3 SP USB Version

### *MCS3 SP USB™ – with VTR Style Jog/Shuttle Mechanism*

Media Control Station3 SP USB™ features professional transport buttons, a VTR Style Jog/Shuttle Mechanism and 18 function keys. MCS3 SP USB is the first Mac compatible USB controller with VTR style Jog/Shuttle and the best way for classic video editors to work with a familiar jog wheel on the Mac.



Supplied software lets you use and customize keysets for advanced control of Quicktime compatible applications including Final Cut Pro, Pro Tools, DP5, Virtual VTR and others.

#### **MCS3 Physical Specifications**

- Size - 6.5" x 7" x 2.75"
- Weight - 5 Lbs.



MCS3 9Pin with MCS-Locator

MCS3 MIDI with FaderMaster Pro

MCS3, FaderMaster Pro and MCS-Locator

### EXPANDED MCS-PRO SERIES EXAMPLES

## FaderMaster Professional - Programmable MIDI Automation Controller

**Works with**  
**AVID Media Composer,**  
**NewsCutter Adrenaine,**  
**Liquid, Apple Logic,**  
**DP5 and others!**



FaderMaster Pro has 20 programmable banks for storing setups, plus 50 Factory Preset banks.

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 computer based video editing systems.

### Professional Automated Mixdown

FaderMaster Pro – MIDI Automation Controller provides the hands-on, tactile control you've been missing from 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 is fully programmable, for volume, panning, EQ, effects, and other parameters.

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

### 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
- More than 50 Factory Presets
- All Metal Construction
- FMPro Software for Mac OSX
- 12.25" x 6.75" x 1.5"
- Weight - 7 lbs.

## FADERMASTER 4/100



FaderMaster 4/100 is our newest, MCS-Pro Series Automation Controller. It features 4-100mm touch-sensitive, motorized faders, bank shift buttons and function keys.

It's available in MIDI, RS-232, RS-422 and USB versions. FM 4/100 can be used as a stand-alone device or it may be physically coupled with the MCS<sup>3</sup>SP for use with computer-based editing software including Apple Logic Pro, AVID Symphony Nitris, NewsCutter Adrenaline, Canopus Edius, Digidesign Pro Tools and others. The MIDI version emulates the MCS-3000x and can be used with most MIDI and audio software programs.

### FaderMaster 4/100 Features

- Controls MIDI, Audio, Video and Multimedia Software
- Select, Solo, Mute and Other Functions
- Durable All Metal Construction
- Available Models (Specify When Ordering)
- Fadermaster 4/100 MIDI
- Fadermaster 4/100 RS-232
- Fadermaster 4/100 RS-422
- Fadermaster 4/100 USB

### FM 4/100 Physical Specifications

- Size - 6.5" x 8.5" x 3"
- Weight - 5 Lbs.



FaderMaster 4/100 USB Universal Software for Macintosh OSX

## MCS-ProTracker - Low Profile MIDI Version

The "MCS-Tracker" features 32 track arming buttons and additional function keys. Dual LED's for each channel provide highly visible confirmation of track status. Function keys provide track grouping, all safe, bank change and other functions.

It may be interfaced with most popular HDR audio recording devices that support remote track arming via MIDI Machine Control, including units from Akai, Alesis, Mackie, Roland and Tascam. MCS-Tracker may also be used with a variety of computer-based editing systems and music software programs for track arming and status functions.

### MCS-ProTracker Physical Specifications

- Size - 6.5" x 8.5" x 1.25"
- Weight - 3 Lbs.





# MCS2 Media Control Station<sup>2</sup>

Media Control Station<sup>2</sup> is the ultimate compact remote. It features large buttons for Record, Play, Stop, Fast Forward, Rewind and other editing functions. A custom precision optically encoded jog/shuttle wheel, equipped to handle both jog and shuttle functions, lets you effortlessly edit and perfect your project with frame accuracy.

Four interface versions are available. New USB and RS-232 versions for controlling computer-based software programs, a 9-Pin/RS-422 compatible version for professional video tape recorders and video editing systems, and a MIDI version that makes a great low-cost remote for audio hard disk recorders and most MIDI compatible audio applications.



## MCS<sup>2</sup> Features

- Professional Quality Compact Controller
- Provides Remote Transport Control
- Remotely Controls up to 20 Functions
- Durable All Metal Construction
- Our lowest cost controller
- 4 Models (Specify When Ordering)
  - MCS<sup>2</sup> USB for OSX and Windows
  - MCS<sup>2</sup> RS-232 for Windows
  - MCS<sup>2</sup> 9-Pin for VTR AND DDR Control
  - MCS<sup>2</sup> MIDI with MIDI Machine Control

## MCS<sup>2</sup> Physical Specifications

- Size - 8.5" x 3.25" x 1.5"
- Weight - 2 lbs.

## New MCS<sup>2</sup> USB and RS-232 Versions

MCS<sup>2</sup> USB and RS-232 versions feature professional transport buttons a precision, optically encoded jog wheel and jog/shuttle control button. Shift and Option modifier keys let the MCS<sup>2</sup> send more than 20 different control messages. The USB versions includes software for OSX and Windows. MCS<sup>2</sup> RS-232 is compatible with Windows XP and Vista. They can be used with any editing software programs.



## MCS<sup>2</sup> MIDI/MMC Version

Media Control Station<sup>2</sup> MIDI/MMC features transport buttons, a precision optically encoded jog wheel and jog/shuttle control button. Shift and Option modifier keys let the MCS send more than 20 different MIDI Machine Control (and General Purpose Controller) messages.



MCS<sup>2</sup> sends MMC messages for controlling a variety of compatible hard disk recorders and computer based editing systems. Use it with recorders from Akai, Alesis, Mackie, Roland, Tascam and others.

## MCS<sup>2</sup> RS-422/9-Pin Version

Media Control Station<sup>2</sup> 9Pin features professional transport buttons, a precision optically encoded jog wheel and jog/shuttle control button. Shift and Option modifier keys let the MCS<sup>2</sup> send more than 20 different control messages including RTZ, Video, Insert, Reverse Shuttle at Play Speed, Audio Track Arming and more. MCS<sup>2</sup> 9Pin is our compact, low-cost RS-422/P2 compatible universal VTR or DDR jog/shuttle remote.

## EBOX - QUAD SERIAL / ETHERNET / GPI INTERFACE



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

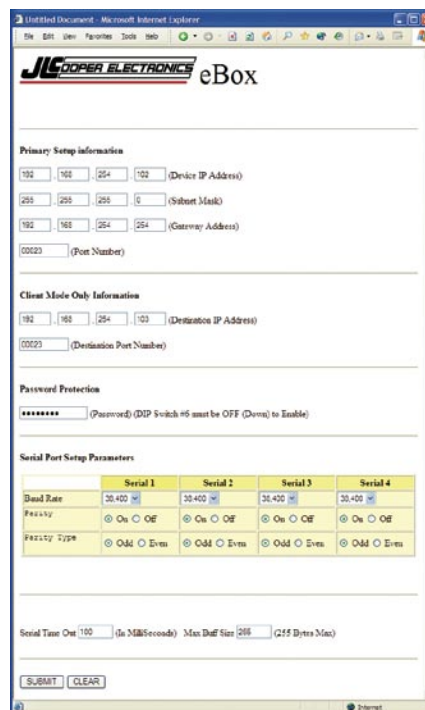
eBOX features four serial connectors, activity LED's, 24 GPI Inputs and 24 GPI Outputs as a standard feature (General Purpose Interface - facilitates switch closure control).

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 distanced machine rooms from a facility's central server.

eBOX is ideal 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 over long distances or via the Web.



eBOX Internal Web Configuration Page

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

JLCooper's SDK 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) inputs and 24 GPI outputs to 100/10baseT 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 Features

- Four 9-Pin D Sub Serial Connectors
- 1/2 of a single 19" Rack Space
- Two 24Pin D Sub GPI Connectors
- RJ-45 Ethernet Connector
- LAN, WAN or Internet Control
- Dimensions 8.5" x 4.7" x 1.75"
- Weight 3 lbs.



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.

Configuration is accomplished through a web page server built into the eBox. Items such as port speed, parity, IP address, remote IP address and TCP port are set using a standard web browser. Settings are stored in nonvolatile memory.

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.

### 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.



eBOX Rear Panel

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 is sent whenever a change to the GPI Input is sensed.

### 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.

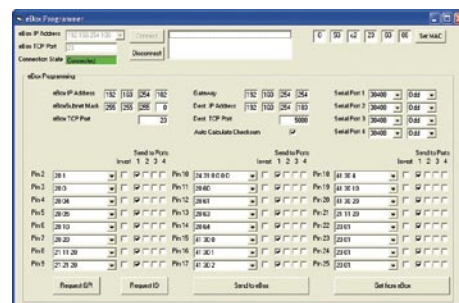
### GPI/Serial to Ethernet Converter

eBox can also work as an interface for GPI or serial to Doremi Labs V1 or MCS (2R2P) Servers. 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

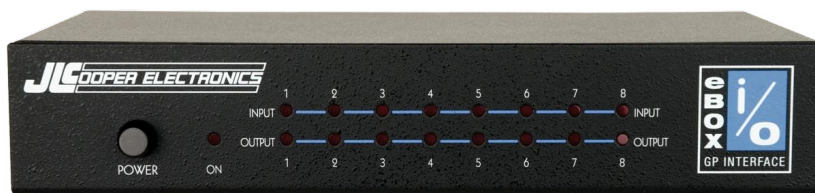
configuration page and stored in nonvolatile memory. When password protection is enabled, eBox embeds the password in the transmitted IP packet. At the remote end, the receiving eBox must have password protection enabled and be programmed with a matching password.



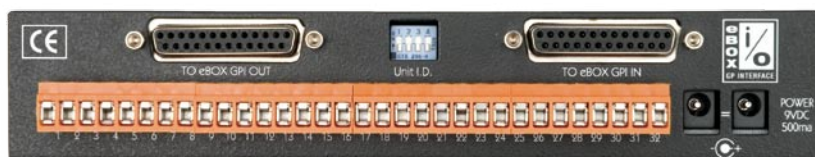
eBOX GPI Programmer

## EBOX IO - REAL WORLD INTERFACE

Relay outputs and opto-isolated inputs for eBOX

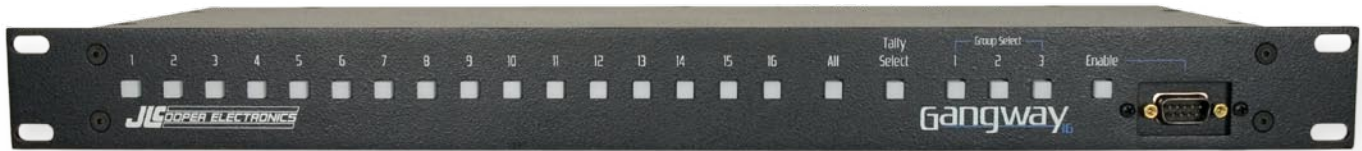


Introducing the companion to the eBox, the eBOX io. The eBOX io converts 8 GPI outputs to electrically isolated, relay outputs. The eBOX io also accepts 8 GPI inputs via optoisolated inputs. All connections are made on the rear panel via high density screw terminals. Up to 3 eBOX io's can be cascaded to convert all 24 eBOX GPI inputs and outputs. Front panel LEDs indicate status for easy troubleshooting. eBOX io is a half rack unit and fits alongside eBox in a single rack space.



# Gangway<sub>16</sub> - 16 PORT GANG ROLL SWITCHER

**GangWay 16 Physical Specifications**  
 ■ Size - 19" x 5.5" x 1.7"  
 ■ Weight - 5 Lbs.



GangWay16™ is a compact, easy-to-use, 16 port RS-422 Gang Roll Switcher and GPI Trigger Box.

The front panel includes a lighted button for clear indication as to the status of each machine, a gang roll button to quickly enable all machines, 3 User Preset Groups and a Tally Select button.

A front mounted RS-422 port provides a convenient connection for a jog/shuttle remote or other device. GangWay has 16 RS-422 ports on the rear panel and a rear mounted RS-422 control 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 interface card can act as a Master Input, connecting the GangWay16 to 10/100 Ethernet, USB, RS-232 or RS-422. This can be used to remotely change the switching configuration of the GangWay16 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 functionality. It's ideal for remote truck or studio applications.

A new feature allows the ES-SloMo - Universal Instant Replay Controller to directly interface with GangWay16 to provide for control up to 16 RS-422 machines or server channels, using the GangWay16 as the machine interface.



GangWay16 Rear Panel

## BUSALYZER - SERIAL COMMUNICATIONS ANALYZER

**BusAlyzer Physical Specifications**  
 ■ Size - 5.5" x 3.75" x 1.25"  
 ■ Weight - 1 Lb.

BusAlyzer™ is a serial communications analyzer and monitor, designed specifically for use with the P2 protocol commonly used by Sony, Panasonic and other professional VTRs, DDRs, and Video Servers. It helps you solve communication problems and remotely monitor machines.

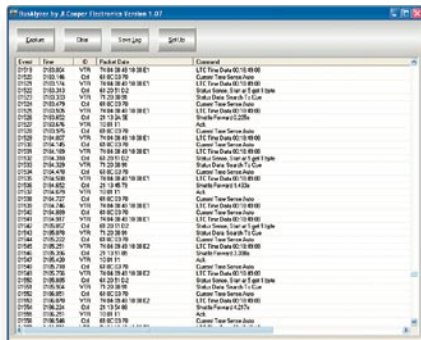
BusAlyzer has 2 serial ports to monitor the exchange of commands and responses between a controller and a deck.

It works with a Windows-based host computer and connects over 10/100 Ethernet. The supplied software displays the time-stamped raw data.

Advanced features let you filter and decode raw messages into easy to interpret commands. Captured data can be saved for later analysis.

The unit features a 10/100 RJ-45 Ethernet connector, 2 - 9 pin RS-422 D-Sub connectors and a DC power jack. LED indicators show status of Ethernet and serial port activity.

BusAlyzer is an invaluable tool for remote monitoring and analysis, or for use as an RS-422 to Ethernet converter. Either way you use it, it's a innovative device that you'll wonder how you got along without.





*Unique and Innovative MIDI products are a hallmark of JLC Cooper Electronics. New products for audio/video interfacing and control allow you to streamline the way you work and enhance the way your existing products function together.*

## MMC/9PIN+ MIDI Machine Control to 9-Pin Converter

MMC/9PIN+™ is an innovative device integrating the world of MIDI to the world of professional video. It allows computer-based sequencers, audio mixing consoles and digital editing systems to control 422/P2 compatible video recorders (VTRs) and disk based recorders. Audio editors, film and video composers can control both a VTR and workstation at the same time.

MMC/9PIN+ translates MMC transport functions, locate points, shuttle and track arming messages into corresponding RS-422 (Sony 9 Pin/P-2) commands. Sony BVU-800/900 emulation is supported. By referencing 9-Pin sync with video, it outputs SMPTE and MTC without wasting an audio track for SMPTE.



### MMC/9PIN Features

- Converts MMC Transport Functions, Autolocates, Track Arming and Shuttle Commands to 9-Pin (Sony BVU-800/900 Emulation)
- Allows remote control of VTRs from any PC
- Size - 8.5" x 4.7" x 1.75" Weight - 3 lbs.

## 9PIN/MMC 9-Pin to MIDI Machine Control Converter

JLCooper's 9Pin/MMC™ connects popular hard disk recorders including Tascam X-48, MX-2424, Mackie HDR24/96, Roland VS Series and most computer-based audio editing systems to a standard video edit controller or switcher, for automated audio-follows-video control.

9Pin/MMC Interface interprets standard RS-422/P2 protocol messages and converts them to corresponding MIDI Machine Control (MMC) messages. This allows most hard disk audio recorders and computer based editing systems to be controlled by video editing systems that were originally intended to control professional Video Tape Recorders and DDRs.

Supported functions include play, stop, fast forward, rewind, record, locates, track arming, time code frame rate, program change, track record, set locate in/out points, pre-roll, post-roll and more.



### 9PIN/MMC Features

- Interfaces Hard Disk Recorders like Tascam, Mackie, Roland, Fostex and Computers-based Systems with most Video Edit Controllers
- Supports GVG, ESAM2, MIDI, MMC Protocols
- Size - 8.5" x 4.7" x 1.75" Weight - 3 lbs.

## DAFV<sup>2</sup> Digital Audio Follows Video Interface

DAFV<sup>2</sup> connects digital audio mixers including Yamaha DM1000, DM2000, 02R96, 02R, 01V, 03D, Sony DMX-R100, Ramsa WR-DA7, Tascam TM-D8000, Roland VM-C7100 and Mackie D8B to a video edit controller/switcher, for automated audio-follows-video applications.

DAFV<sup>2</sup> adds the essential interface which is missing from most popular digital audio mixers, the ability to respond to ESAM, Grass Valley GVG and Kayak DD protocols.

Commands from the edit controller are converted to allow your mixer to automatically perform audio transitions, cuts and dissolves in perfect sync with video. Start and Stop Transition, Set Rate, Set Program and Preset Crosspoint and Set Fader Level Commands are supported.

Your edit controller's EDL (Edit Decision List) lets you specify the in and out points and the type of edit. The DAFV<sup>2</sup> automatically detects commands from the edit controller, determines which protocol is being sent and configures itself to receive either GVG or ESAM2 protocols.



### DAFV Features

- Interfaces Digital Mixers like Sony DMX-R100, Ramsa WR-DA7, Yamaha DM1000, DM2000, 02R96, and others with Video Edit Controllers
- Supports GVG and ESAM2 Protocols
- Size - 8.5" x 4.7" x 1.75" Weight - 3 lbs.

**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 JLC Cooper MIDI Line Amplifiers to carry MIDI signals long distances over standard audio snakes.**

## **MLA-10 MIDI Line Amplifier**

**"Best in Show Winner – 91st AES"  
- EQ Magazine**



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

MIDI Line Amplifiers are specifically designed for sending MIDI data over long distances with the capability to send information in excess of 1000 feet.

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**

The MLA-10™ is designed to fit into 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 MIDI 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-XLR MIDI Line Amplifier**



MLA-XLR™ extends the range of MIDI cables to over 1000 feet using standard balanced audio lines (audio snakes, mic cables, etc.).

It requires no configuration and it's simple to use. Just connect the cables and go.

MLA-XLR pairs can carry data over two standard XLR Mic cables and provides a lower cost expansion option for interfacing with other MLA-1 and MLA-10 units in a network application.

### **MLA-XLR MIDI Line Amplifier Features**

- 1 MIDI Input
- 1 MIDI Output
- 1/4 Rack mount version
- XLR and MIDI connections
- MIDI cable runs over 1000'
- Uses common twisted pair wire
- Multiple units may be networked
- Can be used in pairs or in combination with MLA-1's and MLA-10's
- Dimensions 4.25" x 4.7" x 1.6"
- Weight 3 lbs.



**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-1 MIDI Line Amplifier

### MLA-1

The MLA-1™ can be wall panel mounted or used with a separate MIDI jack panel. This facilitates greater flexibility for installations where MLA-1 units can be in every required room.

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.



MLA-1 Side View

### 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.

*JLCooper Electronics was one of the developers of the MIDI Time Code Standard. In 1987 we designed and manufactured the world's first synchronizer that supported MTC. We continue to offer the most reliable and innovative solutions to solve the complex synchronization challenges in today's studio and post environments.*

## PPS-2 SYNCHRONIZER

JLCooper's PPS-2™ is ideal for anyone who owns a sequencer, drum machine, workstation or hard disk recording system, and needs to sync to tape.

PPS-2 offers the advantages of several synchronizers in one versatile package. It reads and generates SMPTE time code and converts SMPTE into MIDI Time Code or Direct Time Lock. It also reads and generates JLCooper's "Smart FSK" sync and converts it into MIDI Clock with Song Position Pointer. Jam Sync/Regeneration, Flywheeling, Auto-Merge and a low price make the PPS-2 the best choice for an affordable synchronizer.

Optional PPS-2 remote software for Windows and Macintosh lets you set SMPTE frame rate and start time when striping.



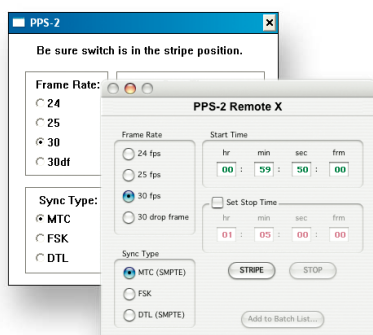
### PPS-2 Features

- Easy to Use
- SMPTE Jam Sync/Regeneration
- 1 MIDI In with Auto Merge and 1 MIDI Out
- SMPTE Stripe can be Started at any Time
- SMPTE 24, 25, 30 & 30 Drop Rates Supported
- 4.25" x 4.7" x 1.6" Weight - 3 lbs.

### PPS-2 Plus Option (Now Included)

The revolutionary PPS-2 Plus enhancement adds the ability to read MIDI Time Code (MTC) from any source and convert it into SMPTE time code.

This option is user-installed and lets your hard disk recorder or computer based digital workstation control machine synchronizers, automation systems and other devices requiring SMPTE Time Code.



PPS-2 Rear Panel

# 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.

Dedication to optimum control surface and interface engineering, quality, and reliability makes JLCooper the preeminent partner, helping your company achieve its goals on time and within budget.



We have 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.

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.

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 [www.jlcooper.com/dev.html](http://www.jlcooper.com/dev.html) for additional information.







## *The JLC Cooper 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 multi-million 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.



Control, Automation, Synchronization, & Interfacing Products

WWW.JLCOOPER.COM



With 25 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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For your added convenience, credit card orders may also be faxed. Our FAX number is 310-335-0110.

We cannot process COD shipments.

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