9Pin/MMC Interface
9-Pin to MIDI Machine Control Converter

Users Manual

JLCooper ELECTRONICS

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Description

The JLCooper 9Pin/MMC Interface is a RS422 to MIDI Machine Control protocol converter. This device receives RS422 commands from an video editor or VTR controller and converts them to standard MMC commands. Conversely, this device receives MMC status and MTC timecode and, converts them into RS422 tally responses.

The 9Pin/MMC Interface allows you to control your MIDI based hard disk recorder or computer based application from a video editor of VTR controller as if it were a VTR.

The 9Pin/MMC Interface supports hard disk recorders and most computer-based applications. The 9Pin/MMC Interface IDs itself to the controller as a Sony BVW-75. Experience has shown that most editors support this type of machine.

Unpacking and Setup

When you receive your 9pin-MMC INTERFACE, you should receive the following items:

- 9Pin – MMC Interface
- Users Manual
- Power Supply
- Accessory pack
    - 4 adhesive rubber feet
    - 2 screws to attach the unit to a rack shelf

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Unit Configuration

S1,S2 Timecode Select

*This only sets the "Time Type" flags in MIDI Timecode messages.
This **does not** affect the actual timecode passed through the box in
either direction.*

S2	S1	Frame Rate
DN	DN	24 fps
DN	UP	25 fps
UP	DN	30 fps drop frame
UP	UP	30 fps nondrop

Table 1 – Frame Rate Selection

S3 Record Enable/Disable

*Record Lockout of the slave device. RECORD commands are
translated to PLAY.*
UP = Record Enabled
DN = Record Disabled

S4 Instant Cueup Replay

This is for devices that don't correctly respond to motion control tally.
UP = Enabled
DN = Disabled

S5 Still Command Remap

*This translates the 9-pin STILL command to MIDI STOP for devices
that do not interpret the MIDI STILL command properly.*
UP = Send MIDI STOP command when 9-pin STILL is received
DN = Send MIDI STILL command when 9-pin STILL is received

S6 not defined

S7 not defined

S8 not defined

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Technical Reference

Electrical Interface

The FROM EDITOR connector adheres to the EIA RS-422A electrical interface and pinout for a slave device.

1	Ground
2	Transmit A
3	Receive B
4	Receive Common
5	not used
6	Transmit Common
7	Transmit B
8	Receive A
9	Ground

Table 2 – 9 Pin Pinout

The MIDI IN and MIDI OUT ports follow the MIDI specification.

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Commands

The 9pin – MMC performs the following translations:

RS422	MIDI
Play	Play
Stop	Stop
Record Strobe	Record
Fast Forward	Fast Forward
Rewind	Rewind
Cue Up	Locate
Timecode Request	Return MTC
Track Arm	Track Arm
Variable Speed Play	Variable Speed Play

MIDI	RS422
MIDI Timecode	SMPTE Timecode
Machine Status	Machine Status

RS422	RS422
Any supported command	ACK
Nonsupported command	NAK

Troubleshooting

If for some reason the 9PIN/MMC INTERFACE does not give you the expected results, take a moment to do some investigating. The most important concept is that you have your 9PIN/MMC INTERFACE connected properly as outlined in *Setting up the 9PIN/MMC INTERFACE*. Take a moment to double check this setup.

The 9PIN/MMC INTERFACE has three LEDs to aid you in troubleshooting your setup. There is one LED that indicates the presence of power.

Care and Service

If properly cared for, your 9PIN/MMC INTERFACE should provide years of troublefree performance. While the 9PIN/MMC INTERFACE is built in a rugged steel enclosure, please avoid dropping the 9PIN/MMC INTERFACE.

Clean with a soft, damp cloth. Do not allow liquids to get inside the unit.

There are no user-serviceable parts in the 9PIN/MMC INTERFACE. Please refer to the JLCooper Electronics Limited Factory Warranty for detailed warranty and service information.

JLCooper Electronics Limited Factory Warranty

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

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