



## ***Serial Digital (D1) I/O Cards Installation Guide***



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## **How to Install Your New Slave D1 Output Encoder Card Within GlobeCaster**

### ***Please read this before you start!***

It is important to make a point about electrostatic discharge, or ESD. Even if you are an experienced technician, you should be aware of the danger of ESD.

Almost everyone is aware of static electricity and its effect when you rub your feet on the carpet and zap someone on the earlobe. But did you know how damaging static electricity can be to computer components?

For a human being to feel a static shock, the voltage must be around 1,500 volts. Really nasty shocks can be over 30,000 volts! Electronic components can be damaged by much lower voltages, about 20-30 volts. Therefore the static electricity your body accumulates is enough to damage circuit boards by merely touching them.

Sometimes ESD damage is not readily apparent, and can cause a board to fail months after it was improperly handled. To avoid this type of failure, please take the following steps when working inside your GlobeCaster:

- Remove any articles of clothing that gather static electricity. Wool sweaters are especially prone to this.
- Work on the GlobeCaster in a reasonably ESD-free area. Don't work on the unit if it's sitting on a shag carpet.
- When working on the GlobeCaster, keep it turned off and unplugged.
- Before touching any boards inside GlobeCaster, touch the edges of the chassis *lightly* to discharge any static buildup you may have.
- Handle only the boards you need to handle. Don't go poking around in the unit without a reason.

An ESD wrist strap costs \$5 - \$20 at any electronic supply house, and ensures that your body does not have any static charge. Having an ESD wrist strap is recommended, but not required. Attach the alligator clip of the wrist strap cord to the Trinity chassis or another common ground point.



### **34-210 Slave D1 Output Encoder**

The slave D1 encoder board has 4 BNC output connectors that send signals corresponding to the SMPTE 259M specification for digital transmission (270 MBps). This transmission standard is also referred to as **SDI** or **Serial Digital Interface**. This signal specification is widely used to interface with the new digital tape format VTRs, like DVCPro, Digital-S, and Digital Betacam. The SDI standard supports cable length up to 300 meters when using high-quality cable.

The slave D1 output encoder must be used with a master output encoder: either the 34-075 Master Composite/YC encoder or the 34-208 Master Multi-format Encoder. A Slave output encoder does not provide video timing information. Master encoders do, and a GlobeCaster without a master output encoder will not function.

In a typical GlobeCaster configuration, the master output encoder belongs in slot 9. The slave output encoders can be installed in external slots 10-12.

### **34-058 D1 Input Module**

The D1 input module features a single BNC input connector, 2 buffered and relocked D1 loop-thru outputs and a composite Monitor loop-thru output. This card is designed to receive signals corresponding to the SMPTE 259M specification (270 MBps). This transmission spec is also called Serial Digital Interface.

The input module can be installed in external slots 1-7 in a typical GlobeCaster configuration. To use the card as an 8th input, place the card in one of the available slots labeled 10-12. Only one input card can be placed in slots 10-12; the first input card that GlobeCaster sees in one of these slots will show up as Input 8 on the Switcher panel and in the other applications.

### **Card Installation**

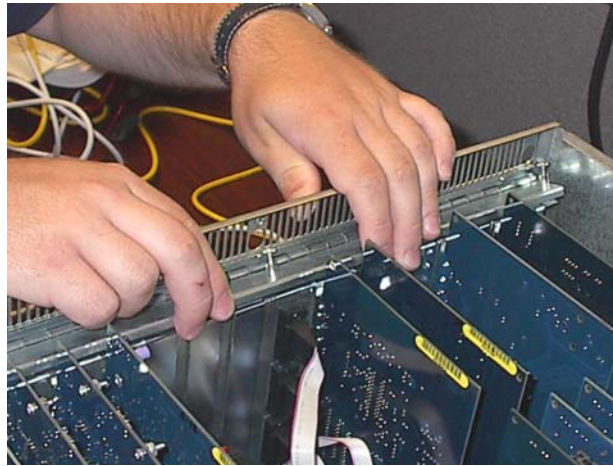
1. Unscrew the three thumbscrews along the edge of the top cover.
2. Slide the top cover toward the back of the GlobeCaster about halfway, and lift off.



*Figure 1.1: Removing the Retaining Bar*

3. Unscrew the thumbscrew on the retaining bars running across the GlobeCaster, figure 1.1.
4. Remove the retaining bar.

5. Locate the lockdown panel that holds the backs of the cards in place. It is on the inside of the back of the unit. It is hinged in place, and held down with three thumbscrews, see figure 1.2.



*Figure 1.2: Rear Lockdown Panel*

6. Unscrew the three thumbscrews on the rear lockdown panel.
7. Lift and rotate the lockdown panel out of the way.
8. Remove the backplate from the hole in the back of the slot.
9. Line up the new card in the socket.
10. Push lightly down on the card, **BUT DO NOT PUSH THE CARD IN YET!** Double-check a second time to make sure that the card is properly aligned and not binding within the socket. **PLEASE NOTE: THESE HIGH SPEED SOCKETS ARE MUCH MORE FRAGILE THAN STANDARD PC SOCKETS AND EXTREME CARE MUST BE TAKEN TO MAKE SURE THAT THE MOTHERBOARD IS NOT DAMAGED DURING INSTALLATION.**
11. Using equal pressure, push the card into the socket. Make sure the card is in the socket evenly.
12. Rotate the rear lockdown panel back into place, and tighten up the thumbscrews.



13. Replace the retaining bar and tighten the thumbscrew on it.
14. Replace the top cover. Make sure the bottom edges of the top cover fit into the slots on the bottom cover.
15. Tighten the three thumbscrews on the top cover.
16. Hook the Videonet cables back up to the GlobeCaster. Remember to hook RX to TX and TX to RX.
17. Now that the card(s) have been installed, we'll fire up the GlobeCaster and test the configuration of the cards.
18. Turn the GlobeCaster and the PC on.
19. Run the Switcher application from the host PC.
20. Click on the **Configure** button and open up the **Installed Cards** configure panel.

The cards should be listed in the panel.



## **Troubleshooting Tips**

One quick note to remember while troubleshooting: If for any reason you need to remove or reseat a card, **ALWAYS** turn off the power to your GlobeCaster before removing or reseating any card. Failure to do so will damage your GlobeCaster system and void the warranty.

### ***I get an error stating "I couldn't find attached GlobeCaster system."***

First, check the Videonet cables between the PC and the GlobeCaster. The cables run from the **TX connector** on the PC to the **RX connector** on the GlobeCaster. The **RX connector** on the PC runs to the **TX connector** on the GlobeCaster. If the coordinator card in the GlobeCaster was removed for any reason, it might not be properly seated in the sockets. Pull the card and reseat it.

### ***I get an error saying "Failure during creation of VEMain Bus..."***

The card may not be seated properly in the slot. Pull the card and reseat it, making sure that the card is fully inserted in the slot.

Check to make sure that no other cards have been popped loose from their sockets.

Make sure you have one master encoder card. More than one master encoder card will generate conflicting timing signals, confusing your GlobeCaster.

### ***When I turn on the power for my GlobeCaster, it doesn't do anything. The fans don't start and the light doesn't even turn on.***

A card is improperly seated in the sockets on the motherboard. Immediately turn the power off and re-seat the card. Make sure that the card is inserted into all appropriate sockets and is pushed down evenly in the unit.

If the unit still won't start, pull the installed card and inspect the sockets on the motherboard for damage. There is a slim possibility that the motherboard sockets have been damaged. Look for any pins in the socket that look bent or out of shape. If so, contact tech support immediately.

### ***The installed card is not listed in the Installed Cards configure panel***

The card was not recognized by GlobeCaster when the system powered up. It may not be plugged in properly. Please turn everything off, open the unit and reseat the card. If this doesn't work, try a different input module slot. It could be the slot is bad. If this persists, please contact technical support or your dealer.





***The Program video screen is showing Pink or Green when I select the D1 module.***

Verify that the video signal is a D1 video signal, and that the connector is hooked to the top connector of the D1 module. A pink or green screen means the signal is not a cohesive D1 video signal.

Also, check the cable. This can be caused by a bad connector on the cable.





## **FCC Notice**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.





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