



# Time Machine Installation Guide

*This guide walks you through installing the Time Machine hardware and setting up the software. The following topics are covered:*

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## Package Contents

Before you begin setting up your Time Machine, please take a moment to check that the contents of the Time Machine shipping package you received matches the list below.

- One (1) Time Machine card
- One (1) TDM Audio Router card
- One (1) Hard Drive Bay Unit
- Two (2) 24-pin ribbon cables
- Three (3) 14-pin ribbon cables
- One (1) Internal Pass Through card
- Two (2) power cable splitter/extenders
- Hard Drive Bay Unit cover
- One (1) Coordinator Card SRAM module (a 1 MB ram stick which is installed on the Coordinator card)

## Time Machine Requirements

Your host PC must have Windows NT 4.0, service pack 3 or higher (service pack 5 is recommended), and GlobeCaster 2.0 software installed for GlobeCaster to operate properly. Your GlobeCaster also must be equipped with the following options for Time Machine to operate correctly:

- Audio Mixer Module
- A ClipGrab card (not required, but recommended)
- 128MB of RAM in the Switcher card (not required, but recommended)
- 128MB of RAM in the Warp Engine card (not required, but recommended)
- One input card in addition to the Internal Pass Through card (component, SDI, or DV I/O recommended).
- One Coordinator card SRAM module, included.
- Two SCSI ribbon cables (see “Time Machine SCSI Cable Specifications” on page 38 for more information about SCSI ribbon cable requirements).
- Three hard drives (see “Hard Drive Requirements” on page 40 for more information about hard drive requirements).

### Time Machine SCSI Cable Specifications

Connecting Time Machine requires **two** very specific SCSI cables. You may make your own cables using the following specifications, or you may use the “off the shelf” model:

- **Adaptec Inc.** part number **ACKW2W-5IT** or

Two cables that meet these requirements:

**NOTE:** Proper termination at the end of the SCSI cables is required. The recommended hard drive type is LVD. These drives do not have internal terminators. External terminators are at the end of the SCSI cables instead.

- 68-conductor SCSI internal flat ribbon cable for Ultra SCSI (Fast 20).
- Single-ended wide application with 68-pin male connectors.
- Active SE Terminator at end of each cable. (SE means single ended, very important. *Do not* use differential termination!)
- Maximum cable length of each cable is 1.5 meters.

- Distance between controller connector and first device should be about 0.5 meters or 20 inches.
- Distance between devices should be about 0.3 meters, or 12 inches. (The Adaptec cable has one of these distances as low as 9 inches and it works fine.)
- Distance between last device and terminator should be about 3 cm, or 1.5 inches.
- Three connectors total on one of the two SCSI cables. This cable attaches the J4 connector on the Time Machine with an audio and video drive.
- At least two connectors total on the other SCSI cable. This cable attaches the J5 connector on the Time Machine with a video drive.
- The cables must be assembled so that when viewing the side of the cable, the pin one side (the end marked red) of the cable is on the far side of the cable from the observer. This allows the cable to feed in the proper directions.

See the SCSI-2 Specification Manuals (not included) for more detail.

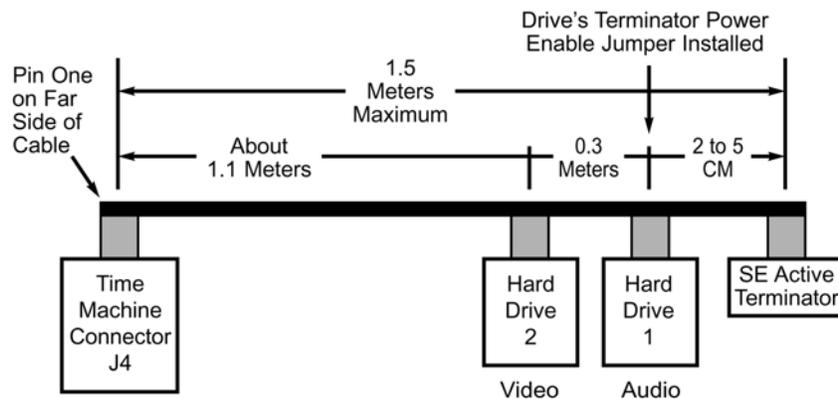


Figure 1.1: Odd SCSI Bus, to J4 on the Time Machine Card

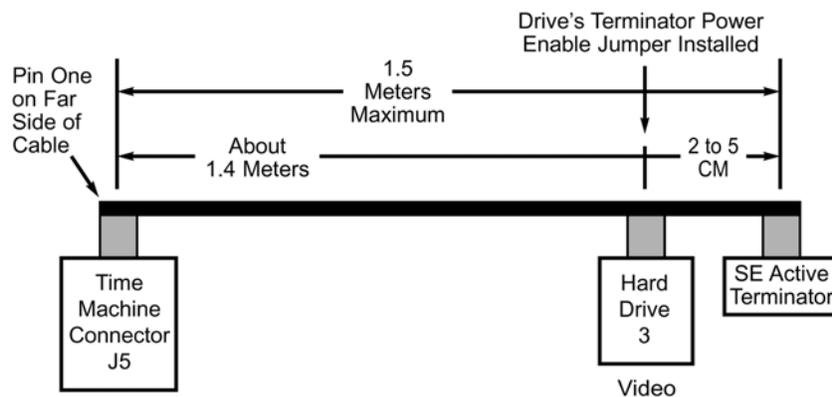


Figure 1.2: Even SCSI Bus, to J5 on the Time Machine Card

## Technical Notes

- The 0.5-meter distance between the Time Machine (controller) and the first drive is sufficient for the first few GlobeCaster processor slot positions, farthest left positions as viewed from the front. Time Machine is installed in these slots to minimize the cable lengths.



- The same cable (specified for the “Odd”) can be used for the “Even” bus with the extra connector ignored.

### **Hard Drive Requirements**

Basic requirements for hard drives:

- High-performance Fast20 (Ultra) Wide SCSI hard drives or Ultra2 LVD SCSI drives, 10K RPM, 68-pin connector.

**NOTE:** In the future, more than three internal hard drives will be supported. A power supply upgrade (available from GlobalStreams) will be required. The current power supply can safely power three hard drives using 2.75 amps peak at spin up or seek per drive.

Examples:

- **IBM UltraStar 9LZX** model **DRVS-09V**, part number **08L8261**, 9 GB
- **Seagate Cheetah** model **ST39102LW**, part number **9J8005-001**, 9 GB
- Variations may include larger cache sizes.

## Electrostatic Discharge Reminder

### **Please Read This Before You Start!**

We’d like to make a point about a phenomenon known as electrostatic discharge, or ESD. Even if you are an experienced technician, you should be aware of the danger of ESD (See “Electrostatic Discharge” on page 20 for more information on ESD procedure). Please remember to be aware of all ESD hazards when installing hardware in your GlobeCaster. *It’s good Karma.*

## Preparing the Hard Drives

Before we dive into installing the Time Machine card in GlobeCaster, let’s take some time to set up the three required hard drives (not included).

There are three phases to preparing the three hard drives. They are:

- Lining up the hard drives
- Setting hard drive power termination
- Setting hard drive SCSI IDs

### **Lining Up The Hard Drives**

Before we do anything to our hard drives, we need to line them up in the order we’ll be working on them. In your work area, line them up in a row with their boards facing up (following figure). The left hard drive will be the Video 2 drive, the middle drive will be the Audio drive, and the right drive will be the Video 1 drive.



Keeping the hard drives in this order makes it easier to remember each hard drive's function and the order in which they will be installed in GlobeCaster.

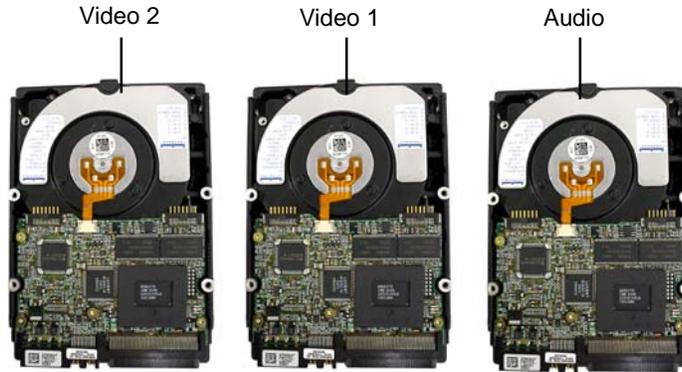


Figure 1.3: The Three Hard Drives Lined Up

### Setting Hard Drive Power Termination

First, we must set the hard drive power termination on the two hard drives that will be closest to the active terminators when connected to the SCSI ribbon cables. These drives are the Video 2 (left) and Audio (right) drives.

**NOTE:** Pins are jumpered by pushing a small jumper plug (included with the hard drives) over the two pins. A jumper plug (following figure) is a metal bridge that closes an electrical circuit.

Power is provided to the terminators by installing jumpers on pins on the hard drives.

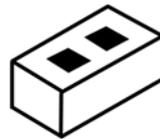


Figure 1.4: A Typical Jumper Plug

To enable the power termination, jumper the pins as illustrated in the following figures, or refer to your hard drive documentation for further information.

To set power termination on the Seagate Cheetah hard drive, jumper the pins as shown in the following diagram:

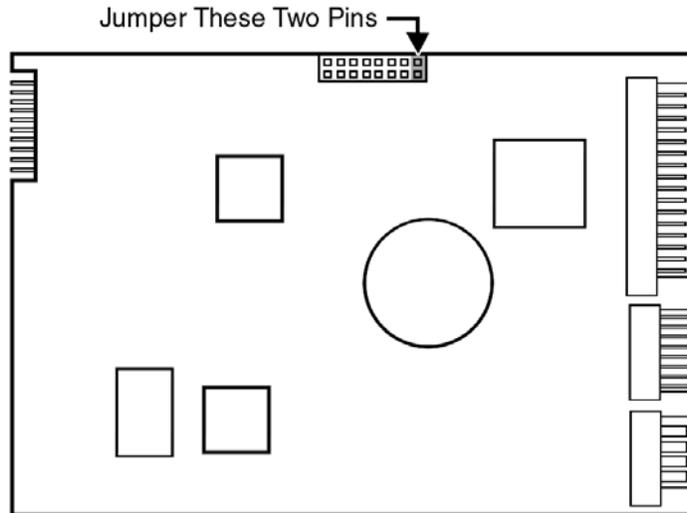


Figure 1.5: Power Termination for the Seagate Cheetah Hard Drive

To set power termination on the IBM UltraStar hard drive, jumper the pins as shown in the following diagram:

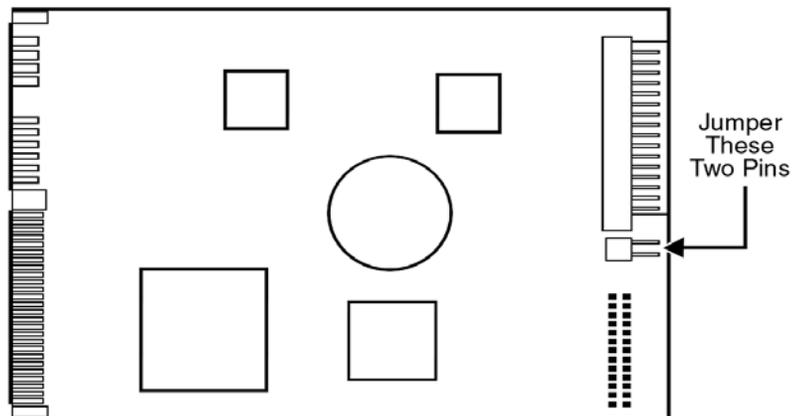


Figure 1.6: Power Termination for the IBM UltraStar Hard Drive

## Setting Hard Drive SCSI IDs

The three hard drives must be jumpered with unique SCSI IDs for identification purposes. SCSI ID is set by installing jumpers on pins on the hard drives.

The Video 2 (left) and Audio (right) drives should have their SCSI IDs set to **0**. Since this is the default setting for new drives, we don't need to jumper pins on either of these drives.

**NOTE:** Be sure any other hard drive jumper options that may hamper performance are not installed. Refer to your hard drive manual.

The Video 1 (middle) drive should have its SCSI ID set to **1**. To set the SCSI ID to **1**, jumper the pins illustrated in the following figures, or refer to your hard drive documentation for further information.

To set the SCSI ID on the Seagate Cheetah hard drive, jumper the pins as shown in the following diagram:

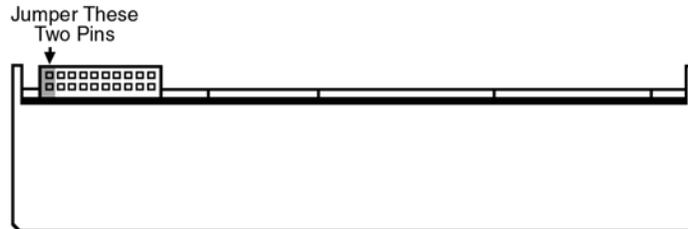


Figure 1.7: Jumper These Pins to Set SCSI ID to 1 for the Seagate Cheetah Hard Drive

To set the SCSI ID on the IBM UltraStar hard drive, jumper the pins as shown in the following diagram:

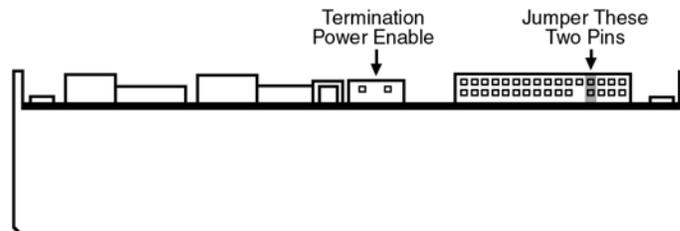


Figure 1.8: Jumper These Pins to Set SCSI ID to 1 for the IBM UltraStar Hard Drive

That's all there is to setting up the three hard drives. Now it's time to move on to the next step.

## Installing Hard Drives into the Hard Drive Bay Unit

Now that we've prepared Time Machine's three hard drives, it's time to install them into the Hard Drive Bay Unit (following figure).

**TIP:** Solicit the help of a friend. An extra set of hands may be necessary.

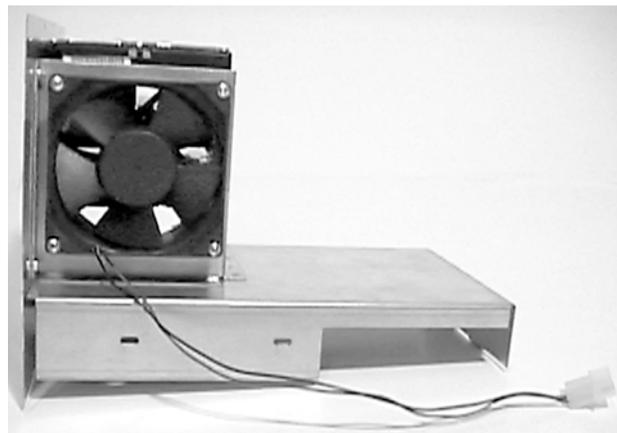


Figure 1.9: The Hard Drive Bay Unit

**NOTE:** The drives are installed so that the end *opposite* the SCSI and power connectors is facing the fan in the Hard Drive Bay Unit. Also, the hard drive's boards should face down.

Remember the order that we have the three hard drives laid out in our workspace: on the left is Video 2, in the right is Audio, and on the middle is Video 1. When we install these drives into the Hard Drive Bay Unit,

the Video 2 drive will be the top drive, the Audio drive will be the middle drive, and the Video 1 drive will be the bottom drive.

Follow these steps to install the three hard drives into the Hard Drive Bay Unit:

1. Using two of the screws included with your hard drives, attach the **Audio** drive to the lower set of holes in the Hard Drive Bay Unit.
2. Using two of the screws included with your hard drives, attach the **Video 1** drive to the middle set of holes in the Hard Drive Bay Unit.
3. Using two of the screws included with your hard drives, attach the **Video 2** drive to the top set of holes in the Hard Drive Bay Unit.
4. Locate the Hard Drive Bay Unit cover (included) and remove the plastic protective coating from it.
5. Attach the Hard Drive Bay Unit cover to the front of the Hard Drive Bay Unit.

The indentions of the indented holes should face the hard drive. This is where the cover attaches to the three hard drives.

The two holes to the right of the rows of indented holes line up with the two holes on the plate holding the fan on the Hard Drive Bay unit. This is where the metal plate is secured to the Hard Drive Bay Unit.

With the drives and cover installed in the Hard Drive Bay Unit, it should look like the following figure.

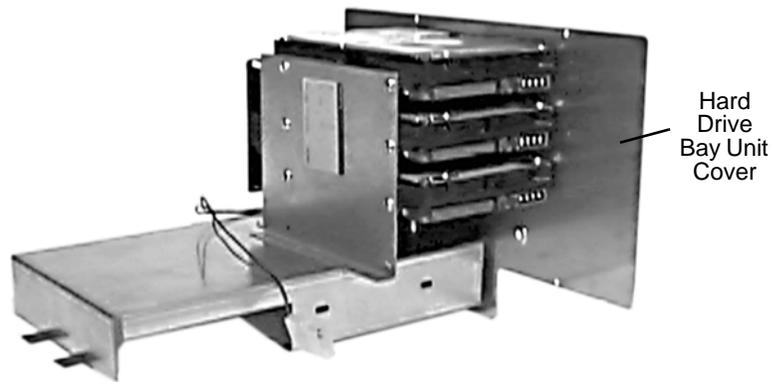


Figure 1.10: The Hard Drive Bay Unit with Hard Drives Installed

The Hard Drive Bay Unit is ready to be installed in the GlobeCaster chassis. But first we must remove the cover from GlobeCaster.

## Removing GlobeCaster's Cover

Now that the hard drive bay unit is ready, let's remove GlobeCaster's covers so we can begin installing Time Machine's components. If you're continuing after installing other cards, the top cover is already off and you can skip ahead to step 4.

**TIP:** Solicit the help of a friend. An extra set of hands may be necessary.

Follow these steps to remove GlobeCaster's cover:

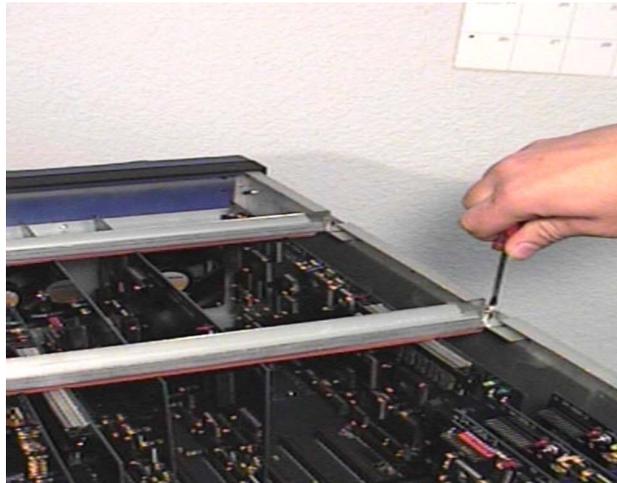
1. Turn off the power to the GlobeCaster and unplug it.
2. At the back of the GlobeCaster, unscrew the three thumbscrews along the edge of the top cover.
3. Slide the top cover about 4 inches toward the back, and lift off.
4. At the back of the GlobeCaster, unscrew the three thumbscrews along the edge of the bottom cover.

5. Tilt the GlobeCaster on its front corner, and slide the bottom cover back and out of the way (following figure).



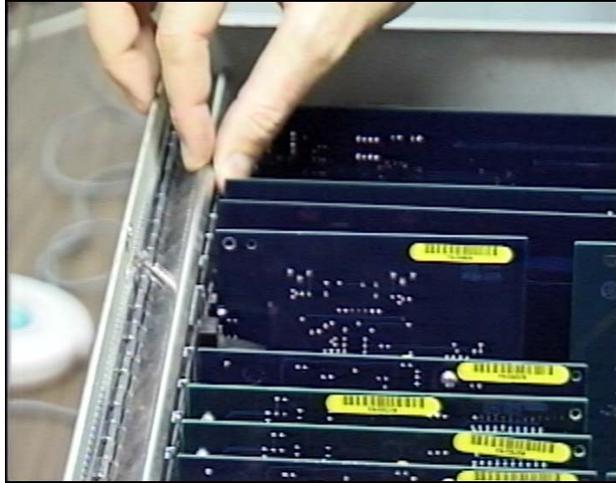
*Figure 1.11: Removing the Bottom Cover of GlobeCaster*

6. Back at the top of the GlobeCaster, unscrew the thumbscrew on the retaining bars running across the GlobeCaster (following figure).



*Figure 1.12: Removal of Retaining Bar*

7. Locate the lock-down panel that holds the backs of the cards in place (following figure). It is on the inside of the back of the unit. It is hinged in place and held down with three thumbscrews.



*Figure 1.13: The Rear Lock-Down Panel*

8. Unscrew the three thumbscrews on the rear low-down panel.
9. Lift and rotate the low-down panel out of the way.

With GlobeCaster's covers removed, it's now time to move on to the next step.

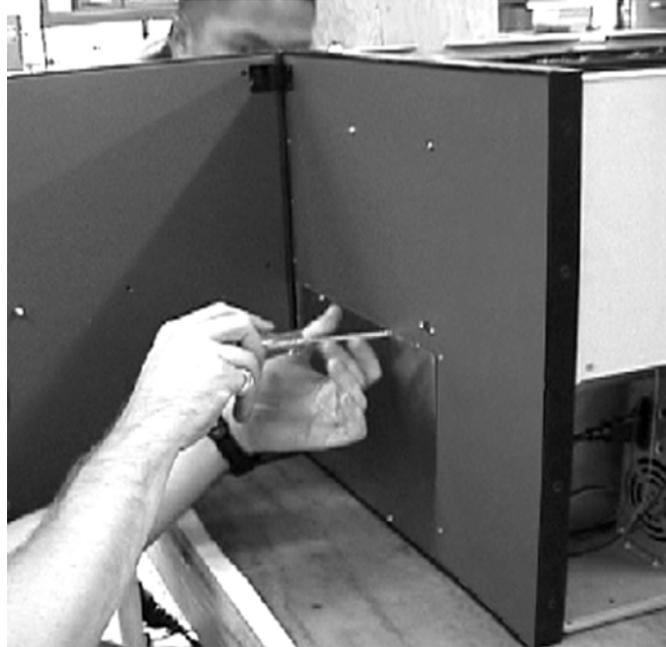
## Installing the Hard Drive Bay Unit in GlobeCaster

Now we're ready to install the Hard Drive Bay Unit in GlobeCaster!

Follow these steps to install the Hard Drive Bay Unit:

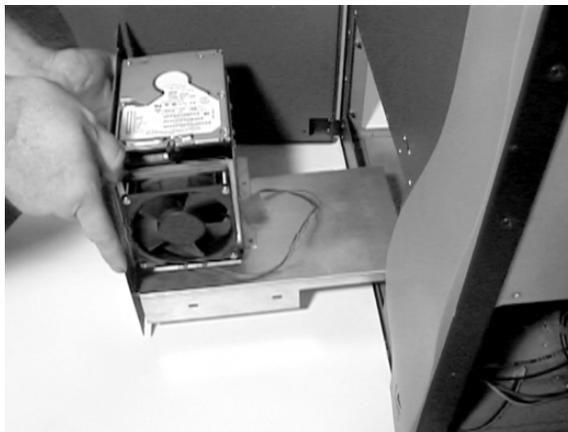
1. At the front of GlobeCaster, open the faceplate of the GlobeCaster unit and remove the metal plate (following figure). This allows you to insert the Hard Drive Bay Unit. (Now you know why there is a door).

Set the screws for the metal plate aside. You will need them later when we install the Hard Drive Bay Unit.



*Figure 1.14: Removing the Metal Plate from Behind the Door*

1. Slide Hard Drive Bay Unit into the GlobeCaster chassis (following figure).



*Figure 1.15: Placement of the Hard Drive Bay Unit*

The two metal tabs on the Hard Drive Bay Unit fit securely into the slots in the GlobeCaster chassis (following figure).



Figure 1.16: Behind the Hard Drive Bay Unit

- On the front of the GlobeCaster, replace the screws that hold the new Hard Drive Bay Unit cover in place and close the GlobeCaster door.

Now that the Hard Drive Bay Unit is in place, we're ready to move to the next step.

## Connecting SCSI Ribbon Cables to the Hard Drives

Now we'll connect the SCSI cables to Time Machine's hard drives.

Remember the order the hard drives are arranged in the Hard Drive Bay Unit: the top drive is the Video 2 drive, the middle is the Video 1 drive, and the bottom is the Audio drive.

**NOTE:** In case of sharp edges inside the GlobeCaster, take extra care to prevent injury to yourself and damage to the SCSI cables. SCSI cables are fragile and can be easily damaged by minor scrapes, nicks, or abrasions. We suggest covering sharp edges with gaffer's tape or packing tape to protect cables.

The following diagram shows how these drives will be connected to the Time Machine card when we are finished.

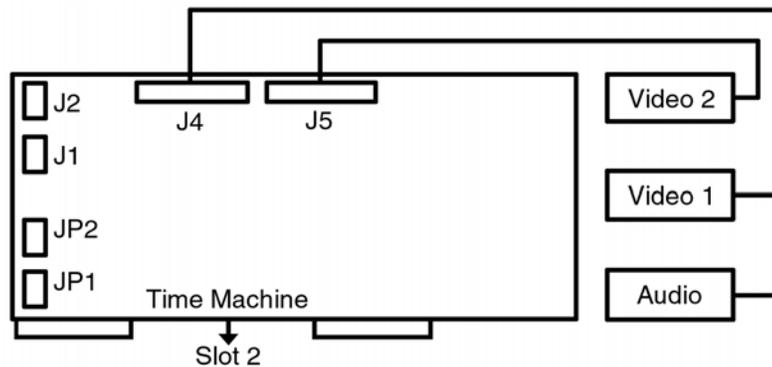


Figure 1.17: Connecting SCSI Cables to Hard Drives

Follow these steps to connect the SCSI ribbon cables to Time Machine's hard drives:

1. Route one of the SCSI ribbon cables (if you constructed your own ribbon cable, it is the one with five connectors) from the Hard Drive Bay Unit up through the narrow hole between the chassis wall and slot 1 in the GlobeCaster (following figure). Be sure to feed the cables from the bottom. Only one connector (the one at the end without the active terminator) should go through the hole in the chassis.

This cable connects the Audio and Video 1 drive to the Time Machine card.

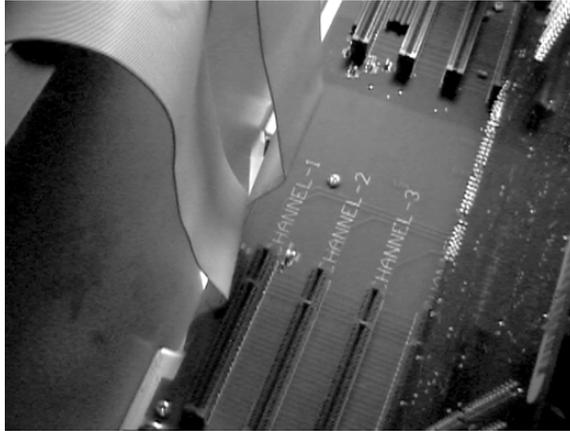


Figure 1.18: Routing of the SCSI Ribbon Cables

2. With a felt tip pen, write **J4** on the end of the ribbon you just fed through the chassis hole. This will help you identify the cable when connecting it to the Time Machine card.
3. In the Hard Drive Bay Unit, connect the SCSI ribbon cable to the Audio (bottom) drive. The connector on the SCSI ribbon cable nearest the active terminator connects to this drive.
4. Connect the next connector on the SCSI ribbon cable to the Video 1 (middle) drive.
5. Route the other SCSI ribbon cable (if you constructed your own ribbon cable, it is the one with four connectors) from the Hard Drive Bay Unit up through the narrow hole between the chassis wall and slot 1 in the GlobeCaster (following figure). Be sure to feed the cables from the bottom. Only one connector (the one at the end without the active terminator) should go through the hole in the chassis.

This cable connects the Video 2 drive to the Time Machine card.

6. With a felt tip pen, write **J5** on the end of the ribbon cable you just fed through the chassis hole. This will help identify the cable when connecting it to the Time Machine card.
7. In the Hard Drive Bay Unit, connect the SCSI ribbon cable to the Video 2 (top) drive. The connector on the SCSI ribbon cable nearest the active terminator connects to this drive.

The power cables still need to be connected to the three hard drives and fan, but we'll get to that step later. While we have the SCSI ribbon cables ready to connect to the Time Machine card, let's install the card.

## Installing the Time Machine Card

Now let's install the Time Machine card (following figure).

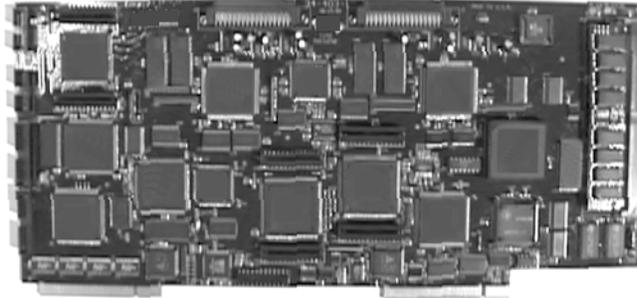


Figure 1.19: The Time Machine Card

Follow these steps to install this card:

**NOTE:** THESE HIGH-SPEED SOCKETS ARE MUCH MORE FRAGILE THAN STANDARD PC SOCKETS. EXTREME CARE MUST BE TAKEN TO MAKE SURE THE MOTHERBOARD IS NOT DAMAGED DURING INSTALLATION.

1. Line up the Time Machine card in the slots marked **Channel 2**. Make sure the card is lined up in all the sockets it plugs into.

The Time Machine Card installs into a channel of upstream processing slots. It can fit into either slot 1 or slot 2, but for the best positioning to accommodate the SCSI cables, GlobalStreams engineers recommend placing the Time Machine card in slot 2, leaving slot 1 open to make room for the SCSI cables.

2. Push down lightly on the card BUT DO NOT PUSH THE CARD IN YET! Double-check a second time to make sure the card is properly aligned and not binding within the socket.
3. Using equal pressure along the length of the card, push the card into the sockets. Make sure the card is in the slots evenly.
4. Locate the **J5** connector on the Time Machine Card and connect the cable we marked **J5** to it (following figure). This connector has a keyed slot.
5. Locate the **J4** connector on the Time Machine Card and connect the cable we marked **J4** to it (following figure). This connector has a keyed slot.



Figure 1.20: Connecting the Cables to J4 and J5 on the Time Machine Card

Now that the Time Machine card is installed, let's connect our input modules to it.

## Connecting Input Cards to Time Machine

Time Machine requires two input cards. When connecting input cards to your Time Machine, the cable that connects to **JP1** on the Time Machine must connect to the input that is in the corresponding slot to the Time Machine. For example: If the Time Machine is installed in **Input 1**, the cable connected to **JP1** must connect to the Input Card in **Input 1**. The cable connected to **JP2** on the Time Machine must connect to the Input card in the slot directly to the left of the Input Card connected to **JP1** (if looking at the GlobeCaster from the rear).

**NOTE:** We recommend using D1, component, or Analog I/O modules for connection to Time Machine. Time Machine uses these modules for playback of clips. By routing the clips through an Input card, you can take advantage of the real-time color correction on the module. Composite/YC Input cards are constructed differently than other inputs, and some color correction features are disabled if used for Time Machine playback. This does not affect or limit digitizing clips. Clips are digitized from any input in GlobeCaster, and full color correction is applied during digitizing. This only affects color correction during playback of digitized clips.

The following diagram shows how these cards connect to the Time Machine card.

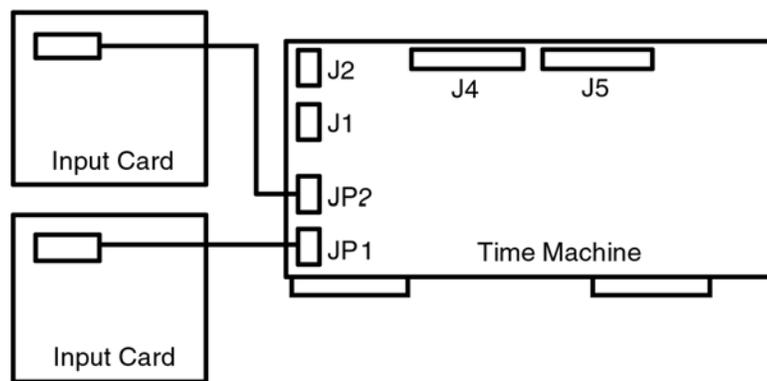


Figure 1.21: Connecting Input Cards to Time Machine

### Choosing Which Input Cards to connect to Time Machine

Before you connect your Input Cards to Time Machine, there are a few things that need to be taken into consideration.

- First, **Composite and YC** input cards *do not* allow for color correction. This means that if a video source is connected to a Composite and YC input card that is connected to Time Machine, you will not have the functionality of color correction when you digitize clips from this source.

To take advantage of color correction, your video source must be connected to a **D1** input card that is connected to your Time Machine. This means that you must connect at least one D1 input card to Time Machine to have color correction.

- Before connecting your Input Cards, you will also want to note that GlobeCaster does not currently allow for simultaneous playback of a digitized clip and an external video source from the same Input Card. This means that if you digitize a clip from one external video source through an input card in input 3, you can not play back that clip at the same time that you play video from an external source connected to that input card. This is due to the fact that both the external video source and digitized clip would play back through the input card in input 3.

For the same reason, a transition such as fade can not be performed from an external video source connected to an input card and a digitized clip that was recorded through the same input.

## Connecting the Input Cards

Follow these steps to connect input cards to Time Machine:

1. Use one of the two 24-pin ribbon cables to connect **JP1** on the Time Machine card to the input card that corresponds with the Channel Time Machine is connected to. For example: If Time Machine is installed in **Input 1**, the cable connected to **JP1** must connect to the Input Card in **Input 1**.

On Input cards, the ribbon cable connects to the pins in the upper corner of the card closest to the front of the GlobeCaster. On Input cards that are not keyed, the red stripe goes toward the front of the GlobeCaster.

2. Connect the other 24-pin ribbon cable from connector **JP2** on the Time Machine card to the Input card in the slot directly to the left of the Input Card connected to **JP1** (if looking at the GlobeCaster from the rear).

On Input cards, the ribbon cable connects to the pins in the upper corner of the card closest to the front of the GlobeCaster. On Input cards that are not keyed, the red stripe goes toward the front of the GlobeCaster.

Now that we've connected our Input cards to the Time Machine card, we're ready to move to the next set of instructions.

## Connecting Time Machine to the Audio Router Card

The Audio Router card (following figure) is a card designed to handle 128 channels of digital audio. It works to route audio from external devices to internal storage (Time Machine).

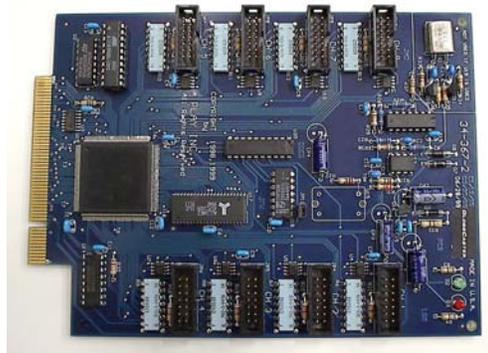


Figure 1.22: The Audio Router Card

The Audio Router card is installed in the slot directly on the right side of the Coordinator card, if you are looking at the GlobeCaster from the front.

The following diagram details cable connection. Note that the Audio Router is connected to **J1** on the Time Machine card. This card could also connect to **J2** on the Time Machine.

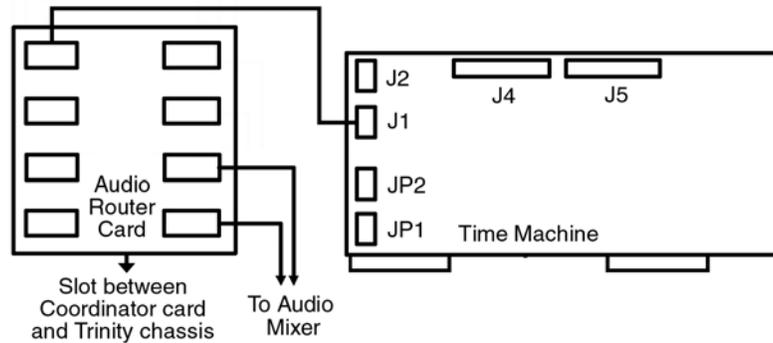


Figure 1.23: Connecting the Time Machine to the Audio Router Card

Follow these steps to connect the Time Machine to your Audio Router card:

1. Locate the **Audio Router Card** inside the GlobeCaster. It is the card installed in the slot directly to the right of the Coordinator card, if you are looking at the GlobeCaster from the front.
2. First, connect the small 14-pin ribbon cable (included) to any of the connectors on the **Audio Router** card.

The red stripe on the ribbon cables must be toward the center of the card.

3. Connect the other end that ribbon cables to the **J1** or **J2** connector on the Time Machine card.
4. Using equal pressure, push the card into the socket. Make sure the card is in the slots evenly.

Now that we've completed the installation of the Audio Router card, we can move ahead.

## Installing SRAM on the Coordinator Card

**NOTE:** Adding DRAM will actually blow up the card, and since we have not registered GlobeCaster as a Class B explosive, we recommend you do not use it for this purpose.

GlobeCaster's Time Machine requires the addition of SRAM to the Coordinator card. SRAM, or static RAM, provides faster access to data and is a bit more expensive than DRAM. We want to emphasize this difference and point out the fact that adding anything other than the specified SRAM will result in the destruction of the Coordinator card.

To install SRAM on the Coordinator card, follow these simple steps:

1. Disconnect the two Evident Cables connected to the inputs at the back of the Coordinator card.
2. Remove the Coordinator card from its slot.
3. On the back of the Coordinator card locate the SIMM socket (marked "Static Ram Only").
4. Using the included SRAM module, line up the notch in the center of the SRAM module with the center of the SIMM socket (SRAM is keyed so it can be installed only in one direction).
5. Place the SRAM module into the socket at a 45-degree angle.
6. Making sure the module is lined up, push it down until a click is heard and it lies flat on the Coordinator card.
7. Verify that the posts on each end of the SIMM socket pass through the allocated holes on SRAM module.

8. Verify that the SRAM module is locked into place with the metal clips.
9. Locate the pins labeled **Expansion Wait State** on the Coordinator card (following diagram).

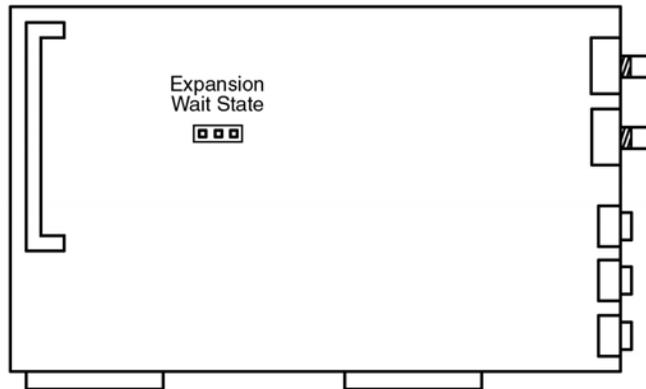


Figure 1.24: Locating the Pins Labeled Expansion Wait State

10. Make sure the jumper is set to **1** (following diagram).



Figure 1.25: Expansion Wait State's Pins Jumpered to 1.

Now that your SRAM is installed, let's reinstall the Coordinator card:

1. Place the Coordinator card back into its slot.
2. Reconnect the two VideoNet Cables to the card's output connectors.
3. Verify that all connections are secure.

Now that we've finished installing the SRAM on the Coordinator card, let's install the TDM Audio Router card.

## Connecting Power Cables to the Hard Drives

Now let's go back to the Hard Drive Bay Unit and connect the power cables to Time Machine's three hard drives.

To connect these cables, follow these steps:

1. Locate the round plastic grommet from the hole above and behind the power supply.
2. Remove the grommet by pushing the back of it (in HDBU).
3. Carefully route two power cables from the GlobeCaster power supply through the plastic grommet.
4. Route power cables through the hole, and replace the grommet.
5. Connect splitters/extenders (included) to power cables.
6. Connect one power connector to the fan.
7. Connect the remaining three power connectors to the three hard drives.

Now that we've connected the power cables, it's time to put the cover back on GlobeCaster.



## Putting The Cover Back On

Now that all of Time Machine's components are installed, it's time to put the cover back on.

Follow these steps to put the cover back on.

1. Rotate the rear low-down panel back into place, and tighten the thumbscrews.
2. Replace the retaining bars and tighten the thumbscrews on each.
3. Tilt the GlobeCaster on its front corner, and slide the bottom cover back into place.
4. At the back of the GlobeCaster, tighten the three thumbscrews along the edge of the back cover.
5. Replace the top cover. Make sure the bottom edges of the top cover fit into the slots in the bottom cover.
6. Tighten the three thumbscrews on the top cover.

## Checking Installed Cards

Now that the cards are installed, we'll fire up the GlobeCaster and test the configuration of the cards.

Follow these steps to check the installed cards:

1. Plug the GlobeCaster in and turn it and the PC on.
2. Format the hard drives (see below).
3. Run the **Switcher** application from the host PC.

To make sure the GlobeCaster recognizes the new cards, click on the **Configure** button in the lower right corner of the screen and select **Installed Cards** from the pop-up menu. The **Installed Cards** panel appears, and the cards you just installed should be listed there, except the internal pass through card, which does not show up in this panel.

### Trouble-shooting

If you don't see the Time Machine, TDM Audio Router, or Audio Mixer in the **Installed Cards** panel, the card was not recognized by GlobeCaster when the system powered up. The card(s) may not be plugged in properly. Please turn everything off, open the unit and check the connections. If this doesn't work, please contact your dealer or GlobeCaster Technical Support.

## Formatting the Hard Drives

After installing Time Machine's components, you must format the hard drives before you can use them. To do this, open the GlobeCaster 2.0 program directory from the programs menu and launch the **Time Machine Format** program (following figure). This program is self-explanatory and takes only a brief moment to perform, as it is very efficient. It's so brief that you'll wonder whether it did anything!



**NOTE:** In the **Drives detected** window, the drives should be listed in this order: **0, 1, 16**. If they are not, it is possible that the SCSI ribbon cables connected to **J4** and **J5** on the Time Machine card have been swapped. If this is the case, try disconnecting the SCSI ribbon cables from the **J4** and **J5** connectors and swapping them.

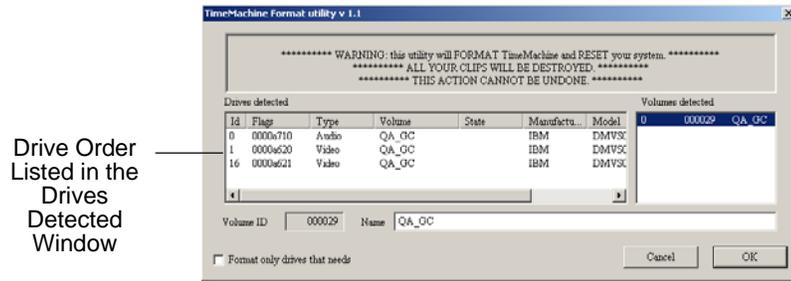


Figure 1.26: The Time Machine Format Program

After you have formatted your hard drives, it is necessary to restart your software.

Once your software starts up, you're ready to begin digitizing clips! Refer to the manuals for the individual applications or the GlobeCaster updates on GlobalStreams Web site ([www.globalstreams.com](http://www.globalstreams.com)) for more information on digitizing clips with Time Machine.

## Time Machine Backup

### Time Machine Backup

Now it is possible to backup Time Machine and manage your content between Time Machine and your hard drive. The following figure shows the Time Machine Backup screen.

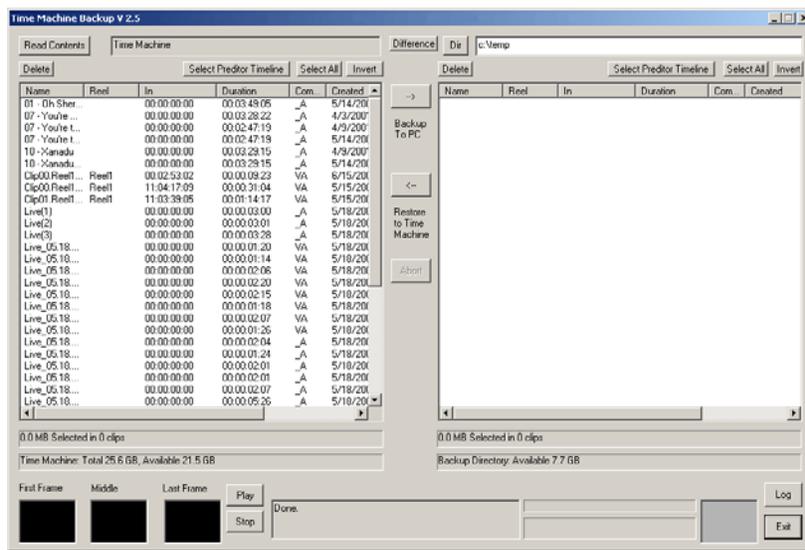


Figure 1.27: Time Machine Backup Screen

### Top left of Time Machine Backup

The top left side of the Time Machine Backup is the Time Machine side (following figure).

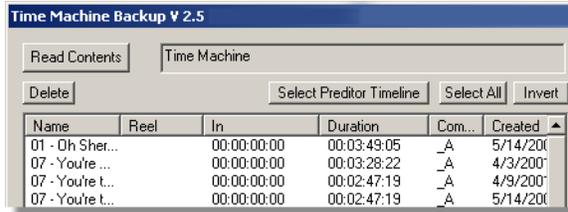


Figure 1.28: Top left of Time Machine Backup

The following table contains the button names and descriptions for the top left of Time Machine Backup.

<b>Read Contents</b>	Refreshes the window.
<b>Delete</b>	Deletes the selected files. Be careful! Once deleted the files are permanently deleted.
<b>Select Predator Timeline</b>	Selects all the Time Machine clips that are used in the Predator Timeline.
<b>Select All</b>	Selects all the files listed.
<b>Invert</b>	Selects the files opposite of the files currently selected.

This section also contains file information such as name, reel, in point, duration, content, time, and quality.

### Top right of Time Machine Backup

The top right side of the Time Machine Backup screen (following figure) is the hard drive side.

**NOTE:** When clips larger than 1 gig (around four minutes) are moved from Time Machine to the PS, the files are split into smaller files. Ex. A large clip called clip.tmb is moved to the PC. Then files would read, clip.tmb, clip.002, clip.003, etc. So, when you need to move that clip, all files must be selected.

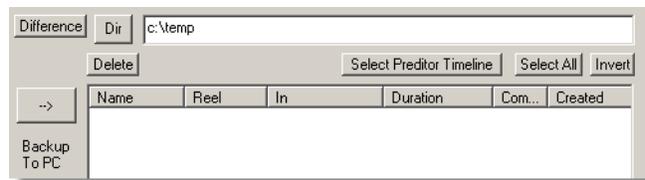


Figure 1.29: Top right of Time Machine Backup

The following table contains the button names and descriptions for the top right of Time Machine Backup.

<b>Dir</b>	Allows you to choose the correct directory you wish to work from. The file path appears in the window to the right of the button
<b>Delete</b>	Deletes the selected files. Be careful! Once deleted the files are permanently gone.



- Select Predator Timeline**      Selects all the Time Machine clips that are used in the Predator Timeline.
- Select All**                      Selects all the files listed.
- Invert**                              Selects the files opposite of the files currently selected.

In this section also contains file information such as name, reel, in point, duration, content, time, and quality.

**Top center of Time Machine Backup**

There are two buttons in the top center of Time Machine Backup (following figure).



Figure 1.30: Top Center of Time Machine Backup

The following table contains the button names and descriptions for the top right of Time Machine Backup.

- Difference**                      Displays what you currently have backed up versus what remains to be backed up.
- Backup to PC**                  Moves the files from the Time Machine to your hard drive.
- Restore to Time Machine**      Moves the files from your hard drive to Time Machine.
- Abort**                              Stops the file movement.

**Bottom of Time Machine Backup**

The bottom of the Time Machine (following figure) displays the following.

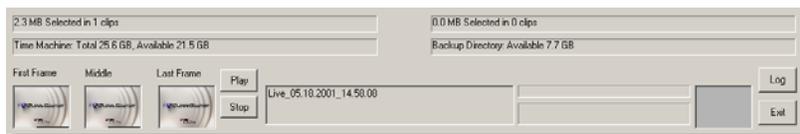


Figure 1.31: Bottom of the Time Machine Backup screen



The following table contains the names and descriptions for the bottom section of Time Machine Backup.

<b>First Row</b>	Displays the size and number of files you have selected in the Time Machine and your hard drive.
<b>Second Row</b>	Displays the total used and available space in the Time Machine and your hard drive.
<b>First Frame</b>	Displays the first frame of the selected clip.
<b>Middle</b>	Displays the middle frame of the selected clip.
<b>Last Frame</b>	Displays the last frame of the selected clip.
<b>Play</b>	Plays the selected clip.
<b>Stop</b>	Stops the playing of the selected clip.
<b>Next Empty Box</b>	Displays the clip name.
<b>Progress Indicator</b>	Displays the audio and video tracks of the selected clips.
<b>Log</b>	Displays an event log of the files that have been transferred.
<b>Exit</b>	Exits Time Machine Backup.