INSTALLATION MANUAL

800 MB Travan™ Internal Minicartridge Drive

CONNER
The Storage Answer

FCC Notice

This equipment generates and uses radio frequency energy and, if not installed and used in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception which could void the user's authority to operate the equipment. It has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If interference does occur, try to correct it by taking one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the computer and the receiver.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Further, this equipment complies with the limits for Class B digital apparatus in accordance with Canadian Radio Interference Regulations.

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Introduction

Using software data compression, the Conner internal Travan cartridge drive stores up to 800 Megabytes (MB) of data on a single Travan cartridge tape.

The drive transfers data at 1 Megabit/second (Mbps) or 500 kilobits/second (kbps). If your floppy disk controller does not support the 1 Mbps rate, you might want to contact your supplier to obtain a high-speed Conner controller. A high-speed controller can reduce backup and restore times by half.

This manual guides you through installing the internal drive in a 5.25-inch by half-high or 3.5-inch drive bay in an IBM PC/AT or compatible computer. Before you begin the installation, you must check that the drive select is correctly set for the floppy disk controller in your computer. Also, brief operating instructions and maintenance guidelines are included in this manual.

Before You Begin

Before you begin the installation, check to see that your package contains the following hardware parts:

- Appropriate tape drive unit (5.25-inch by half-high or 3.5-inch by 1 inch)
- Installation Manual

▶ **Note:** If you are installing the drive as a third internal device, a data cable from the floppy controller and a power cable might not be available within your computer. In that case, contact your supplier to get a third drive installation kit.

Tools Needed for the Installation

To install the drive in your computer, you need one or both of the these tools:

- A flat-bladed screwdriver
- A Phillips screwdriver

▶ **Note:** Be sure that the screwdrivers are the correct size for the screws, or you could strip the screw heads.

Precautions for the Installation

To protect your equipment from electrostatic damage, perform the installation at a static-safe workstation. If one is not available, follow these guidelines.

- Work in an uncarpeted area.
- Before you remove any equipment from its antistatic bag, discharge static electricity by touching the metal chassis of your computer (or touching any other grounded object) while touching the antistatic bag.
- Do not touch circuit boards unless instructed to do so.

Choosing the Correct Drive Select Setting

The drive select setting is determined by the requirements of your floppy disk controller board. For most systems, you do not need to change the factory drive select setting. As shipped, the drive is set for soft select, which enables most systems to recognize the drive, regardless of its position in the floppy chain.

However, some floppy disk controller boards require that you "hard select" the drive select setting. Check the manual that you received with your floppy disk controller

manual that you received with your floppy disk controller to determine whether or not you need to "hard select" the drive setting.

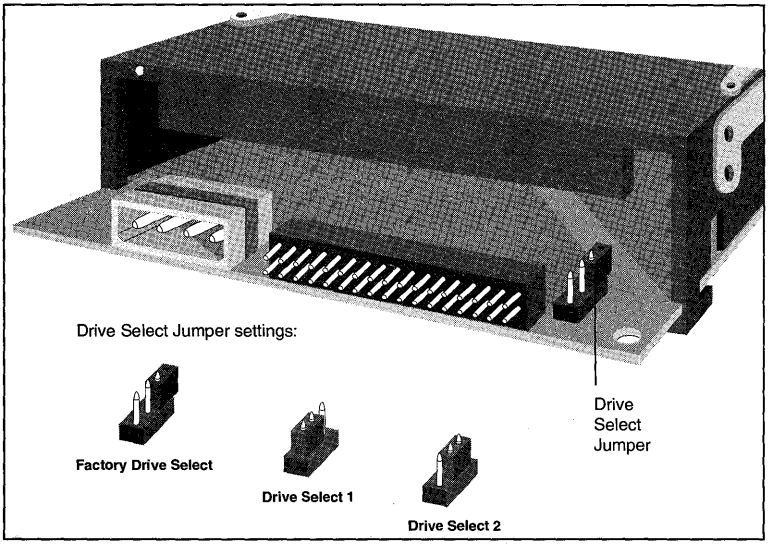
If you need to "hard select" the drive setting, follow these simple steps:

1. Refer to the manual that you received with your floppy controller and set the jumper on the floppy controller board to recognize either drive select 1 or drive select 2.

2. Set the drive select jumper on the Conner internal drive to match the drive select setting (drive select 1 or drive select 2) on the floppy controller board. To configure the drive select, remove the plastic jumper and install it in the correct position as shown in Figure 1.

   The figure presents the upside down, rear view of the tape drive.

Figure 1
Drive Select Jumper Configurations



Installing the Drive in a 5.25-Inch Drive Bay

The following steps guide you through installing the internal drive in a 5.25-inch drive bay.

Caution: Turn off your computer before you begin the installation. Failure to do so might result in damage to your equipment or electrical shock to you.

▶ **Note:** Because computer models vary between manufacturers, refer to your computer manual for specific installation instructions.

1. Write down the serial number and model number shown on the drive and put this information in a safe place. You need this information if you ever call for service.

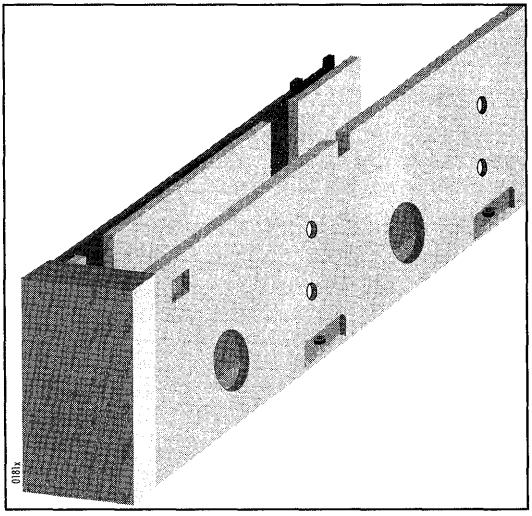
2. Refer to the manual that you received with your computer for instructions about removing the computer cover and the face plate from the drive bay in which you plan to install the drive.

▶ **Note:** If devices are installed in any drive bays adjacent to the one your are using for the internal drive, partially removing those devices might give you more working space.

3. Check that the drive select setting is correct. (Refer to the previous text under ***Choosing the Correct Drive Select Setting***.)

4. Locate the mounting screw holes in the drive brackets. Each side contains two sets of holes (as shown in Figure 2). Use the set that aligns the drive properly within the drive bay.

Figure 2
Mounting Hole Sets



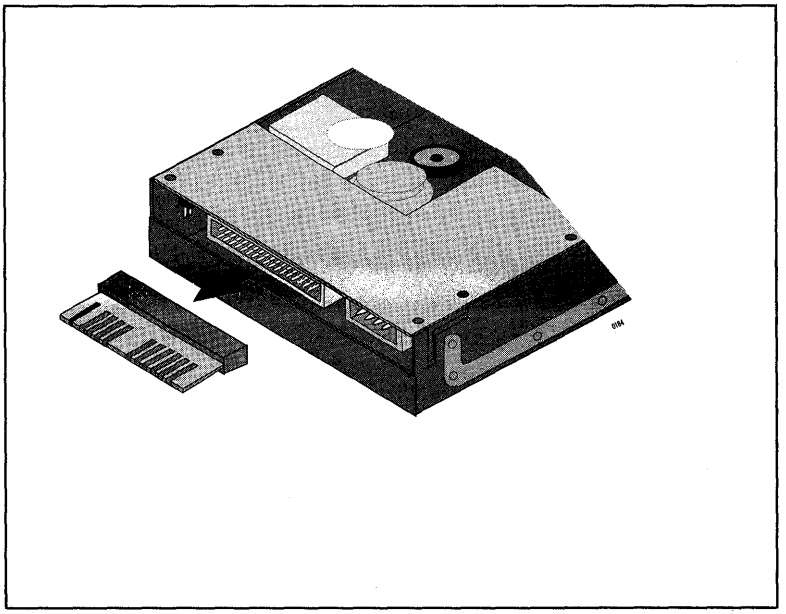
5. **ONLY** if one or more of the following conditions exist, remove the card edge adapter installed over the 34-pin header connector of the drive:

   - The drive does not fit into the computer with the adapter board installed.

   - Only header connectors are available on the data cable from the floppy controller.

To remove the adapter board, pull it straight out. Figure 3 illustrates removing the card edge adapter.

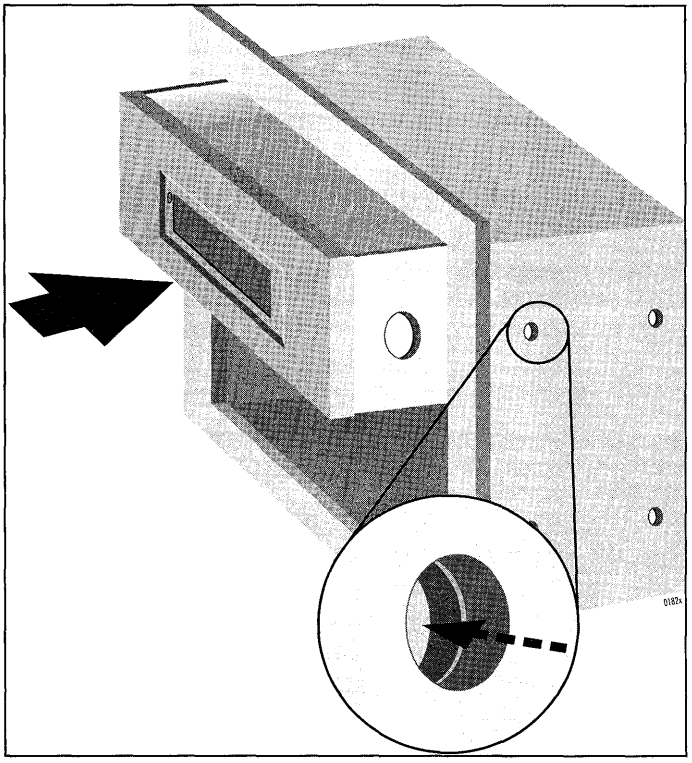
Figure 3
Removing the Card Edge Adapter



6. Slide the drive into the 5.25-inch drive bay so that the mounting screw holes on the drive brackets are aligned with the mounting screw holes in the drive bay.

Slide the tape drive into the computer so that the drive bezel and the computer face plate are flush. Then, align the mounting holes. Figure 4 illustrates this step.

Figure 4
Aligning the Drive in the Computer



7. Connect the computer floppy device data cable connector to the drive connector. That is, align pin 1 of the data cable with pin 1 of the drive connector; then push the connectors together until they are firmly seated. The colored stripe on the data cable designates pin 1.

Figure 5 shows the pin 1 end (with the notch) of the connector if the card edge adapter is in place.

Make sure that the connection is secure and that the cable will not bind or become crimped when you replace the cover.

▶ **Note:** If you are installing the drive as a third internal device and do not have available data and power cables, contact your supplier to get a third drive installation kit.

Figure 5
Pin 1 End of Card Edge Adapter Connector

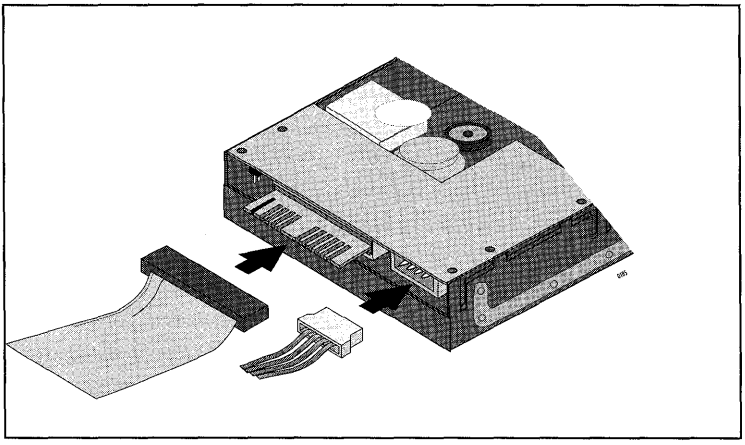
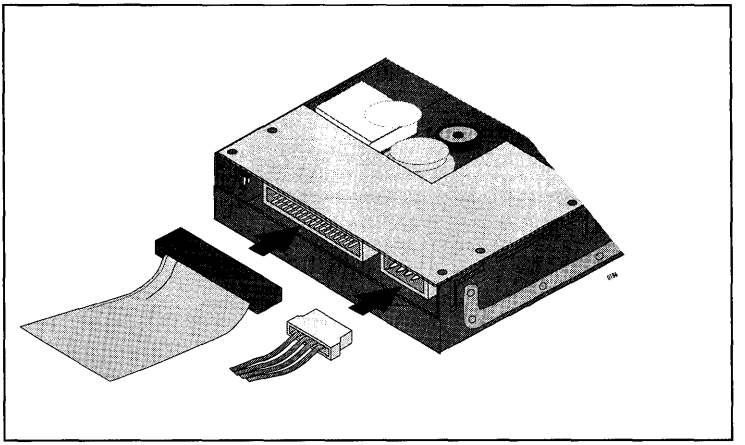


Figure 6 shows the pin 1 end of the connector if the card edge adapter is NOT in place.

Figure 6
Pin 1 End of Connector without Card Edge Adapter



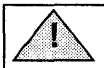
8. Connect an available power cable to the power connector as shown in Figures 5 and 6. The power cable is shaped to fit one way only.

9. Replace the computer cover and reconnect any peripherals that you disconnected during the installation.

10. Plug the computer and any peripherals into an AC power outlet.

Installing the Drive in a 3.5-Inch Drive Bay

The following steps guide you through installing the internal drive in a 3.5-inch drive bay.



Caution: Turn off your computer before you begin the installation. Failure to do so might result in damage to your equipment or electrical shock to you.

▶ **Note:** Because computer models vary between manufacturers, refer to your computer manual for specific installation instructions.

1. Write down the serial number and model number shown on the drive and put this information in a safe place. You need this information if you ever call for service.

2. Refer to the manual that you received with your computer for instructions about removing the computer cover and the face plate from the drive bay in which you plan to install the drive.

▶ **Note:** If devices are installed in any drive bays adjacent to the one your are using for the internal drive, partially removing those devices might give you more working space.

3. Check that the drive select setting is correct. (Refer to the previous text under ***Choosing the Correct Drive Select Setting***.)

4. Attach any special mounting hardware to the drive that your system might require. Refer to the manual that you received with your computer for requirements.

5. Slide the tape drive into the drive slot, making sure to align the tape drive mounting holes. If the drive does not fit into the drive bay, refer to step 5 in ***Installing the Drive in a 5.25-Inch Drive Bay***.

6. Connect the computer floppy device data cable connector to the drive connector and connect an available power cable to the power connector on the drive.

Refer to steps 7 and 8 in ***Installing the Drive in a 5.25-Inch Drive Bay*** for details and figures that show making these connections.

7. Replace the computer cover and reconnect any peripherals that you disconnected during the installation.

8. Plug the computer and any peripherals into an AC power outlet.

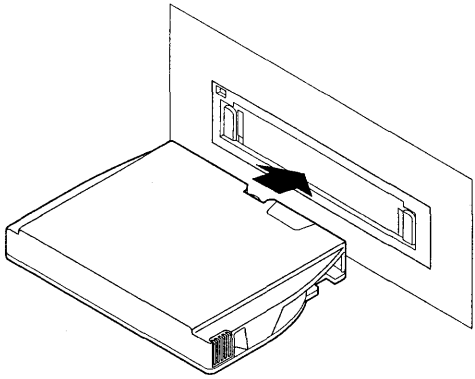
Loading and Unloading Travan Cartridges

Your tape drive has a flip-up door that covers the cartridge opening when a tape cartridge is not installed in the drive. Once a tape is inserted, it is held firmly in place by the drive's positive locking mechanism.

Caution: DO NOT remove a tape cartridge while the drive is active. Complete any tape operations and wait until the tape activity light emitting diode (LED) is OFF before ejecting a tape.

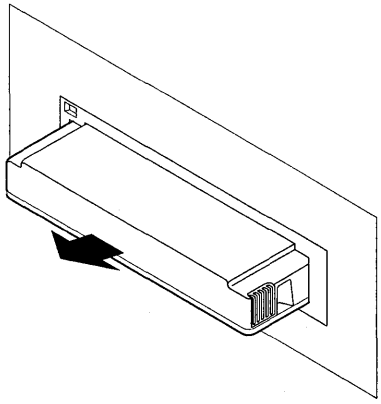
To load a cartridge, insert it with the metal base plate down and the tape access door facing into the drive. Figure 7 illustrates loading a cartridge. Once the cartridge is correctly loaded, the cartridge protrudes from the drive.

Figure 7
Loading a Travan Cartridge



To unload a cartridge, wait until the drive activity LED is OFF and then pull the cartridge straight out. Figure 8 illustrates unloading a cartridge.

Figure 8
Unloading a Cartridge



Recommended Tapes

The internal Travan cartridge drive operates with the tapes listed in the following table.

Description	Conner	Sony	3M
Travan (750 ft) • **400 MB capacity** • **800 MB capacity with data compression**	800TT	N/A	TR-1
Standard length (205 ft) • **83 MB capacity** • **166 MB capacity with data compression**	N/A	QDC2080	DC2080 (DC2080 XIMAT if QIC formatted)
Long length (307.5 ft) • **124 MB capacity** • **250 MB capacity with data compression**	250QT	QDC2120	DC2120 (DC2120 XIMAT if QIC formatted)
QIC Wide (420 ft) • **208 MB capacity** • **416 MB capacity with data compression**	420QT	QW5122F	N/A
AccuTrak standard length • **80 MB capacity** • **160 MB capacity with data compression**	2000-80	N/A	DC2080 Rhomat
AccuTrak long length • **120 MB capacity** • **250 MB capacity with data compression**	2000-120	N/A	DC2120 Rhomat

Setting the Write–Protect Switch

Travan cartridges feature a write protect switch located in the upper left corner of the cartridge. You can set the switch to keep data from being written on the tape. Use this switch when you want to make sure that important data on the tape will not be overwritten.

Figure 9 shows the switch in the nonprotected (read/write) or unlocked position.

Figure 9
Tape Cartridge Read/Write Switch Position

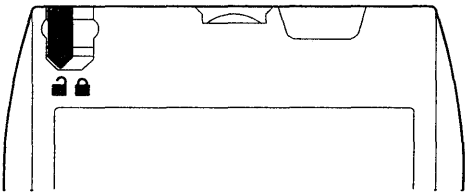
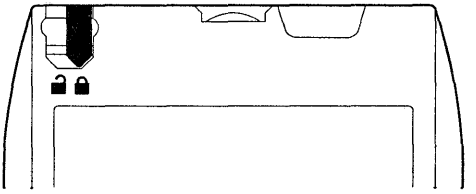


Figure 10 shows the switch in the protected (read only) or locked position.

Figure 10
Tape Cartridge Read-Only Switch Position



To return a cartridge to the "writable" state, push the red tab to the unlocked position.

Caring for Travan Cartridges

Although tape cartridges are ruggedly built, they must be handled with care to preserve the data that they contain.

The following points are guidelines for storing and using cartridges.

- Do not open the tape access door of the cartridge or touch the tape itself. One fingerprint can prevent the drive from reading the tape.
- Keep the cartridge away from sources of electromagnetic fields, such as telephones, dictation equipment, mechanical or printing calculators, motors, and bulk erasers. Do not lay cartridges on the computer monitor or on the base unit of the computer.
- Keep the cartridge away from direct sunlight and heat sources, such as radiators or warm air ducts.
- Keep the cartridge free of moisture. Do not wet or submerge a cartridge in any liquid.
- Do not expose the cartridge to temperature extremes. Allow the cartridge to assume room temperature slowly.
- Retention tape cartridges that have not been used for more than a month before restoring or backing up data. This retentioning removes unwanted tight spots that develop naturally on reeled media.

Cleaning the Tape Drive Head and Capstan

To properly maintain the tape drive, you should periodically clean the read/write head and the capstan. No other periodic maintenance is required.

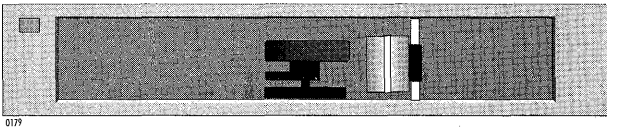
Follow these guidelines to help ensure that your drive provides long, reliable service:

- Operate the drive in a clean, dust-free environment.
- Never apply a lubricant to the drive.
- Clean the tape drive head and capstan every month or after each 8 hours of continuous read/write operations.

Follow these steps to clean the drive head and capstan.

1. Moisten a clean, lint-free swab in 90% isopropyl alcohol so that it is wet but not dripping.
2. Hold the drive access door open and wipe the head gently using a side-to-side motion. The upright rectangle with the white stripe in Figure 11 is the head.

Figure 11
The Drive Head and Capstan



3. Use a new swab saturated in 90% isopropyl alcohol to wipe the capstan. The capstan is the flat, roller to the left of the head as shown in Figure 11. Rotate the capstan until its entire surface is clean.
4. Allow the drive to dry for 3 minutes before using.

Troubleshooting

If a power interruption occurs during a backup or restore operation, start over when the power is restored. If the drive appears to fail during a backup or restore operation, try the following steps:

1. Remove and replace the cartridge and try again. Make sure you are using the correct type of tape cartridge.

2. Turn off all power to the computer and drive. Wait for the computer to power down and then start over.

3. Try a different tape—preferably one that has never been used.

4. Check all cable connections for proper contact.

5. Clean the tape drive head as previously instructed. Then try the operation again.

If any of the following apply, you need to change the drive select setting as described in ***Choosing the Correct Drive Select Setting***.

- You are using a high-speed controller board which requires that you hard select a drive select setting.

- One of your floppy disk drives does not work.

- One of your floppy disk drives makes a clicking sound when the tape backup software is run.

- The tape drive cannot be found by the tape drive software.

If your floppy disk drive does not respond and its access light remains lit, you may have connected the data cable backwards. Check your installation.

If problems persist, contact Conner technical support at

(800) 4 CONNER	US and Canada
44-294-315333	Outside US and Canada

Be sure that you have the documentation for your computer and all installed devices before you call technical support.

Notes

Notes

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