

Mini Tabletop Cartridge Tape Subsystem

# Installation



520156-000

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## FCC Notice

This equipment has been tested and found to comply with the limits for a Class B 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 residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician.
- Shielded cables are required for this device to comply with FCC Rules.  
**Use shielded cables when connecting this device to others.**

# W elcome

Thank you for selecting the Mini Tabletop 8mm Cartridge Tape Subsystem (CTS). You have chosen the leading half-high 8mm cartridge tape subsystem, fully enclosed in an air-cooled, shielded container complete with a universal self-switching power supply, two Small Computer Standard Interface (SCSI) connectors, a SCSI ID switch, and a Monitor port. The Mini Tabletop CTS is available in either a single-ended or differential SCSI configuration. The CTS in your Mini Tabletop CTS offers helical scan recording on 8mm tape with data compression.

Use this guide to help you unpack, install, and maintain your new CTS.

**Read Section 1** to learn about the features of the Mini Tabletop CTS, the enclosed CTS, and EXATAPE™, the data-grade, metal-particle data cartridges we recommend using with your new Mini Tabletop CTS.

**Read Section 2** to learn about saving your packaging, how to repack your Mini Tabletop CTS, and which power cord you should use with your Mini Tabletop CTS.

**Read Section 3** to learn how to install your Mini Tabletop CTS including setting the SCSI ID, placing orientation pads, connecting SCSI cables and terminators, and powering on the Mini Tabletop CTS.

**Read Section 4** to learn about maintaining your Mini Tabletop CTS, including cleaning instructions and how to remove and replace the cover of the Mini Tabletop CTS.

## For Quick Reference...

NAME	NUMBER
Sales Representative's Name	
Sales Representative's Number	
Service Number	
Mini Tabletop CTS Serial Number	
Purchase Date	

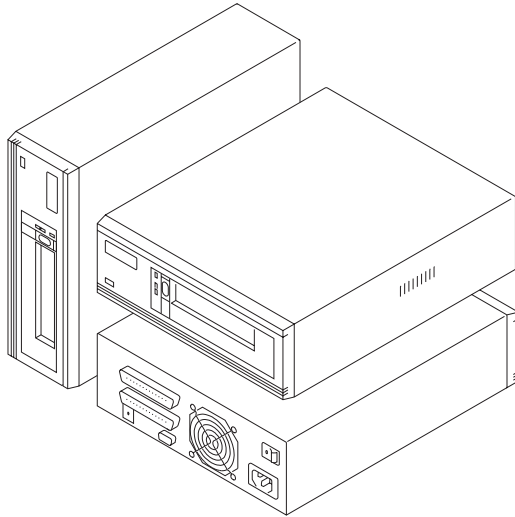
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# 1 Mini Tabletop CTS overview

The Mini Tabletop CTS is a fully integrated, half-high, tabletop 8mm cartridge tape subsystem. The EXABYTE® design provides temperature control and allows the CTS to stand alone in either a vertical or horizontal position. The Mini Tabletop enclosure offers the following features:

- A thermistor-controlled fan
- A universal self-switching power supply
- A SCSI ID switch
- Two SCSI connectors
- A Monitor port used for diagnostics by your vendor



## Cartridge tape subsystem overview

The enclosed CTS offers the following features:

- Advanced helical scan recording technology
- Sophisticated error detection, correction, and recovery procedures
- Ability to record on data quality 8mm data cartridges
- Read and write compatibility with other 8mm CTSs

- 1-MByte speed-matching data buffer to enable operation as a streaming or start/stop tape device
- High-speed search capability
- SCSI-1 and SCSI-2 support
- Custom EEPROM options
- Intelligent IDRC data compression

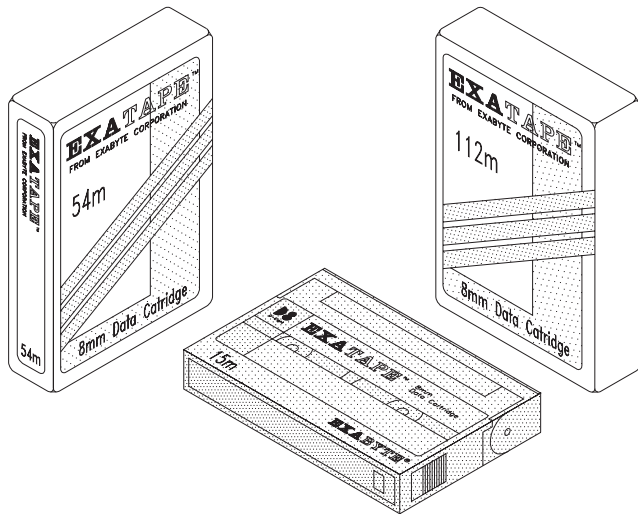
For more information about your CTS, contact your vendor.

## EXATAPE™ overview

**We strongly recommend that you use EXATAPE data-grade metal-particle media with your CTS.**

EXATAPE media is specifically controlled for use in a data storage environment and offers extended durability, long-term archivability, and greater reliability. In addition, exclusive use of EXATAPE media with 8mm tape storage systems prolongs head and tape life. EXATAPE data cartridges are available in the following three lengths:

- EXATAPE 15m
- EXATAPE 54m
- EXATAPE 112m



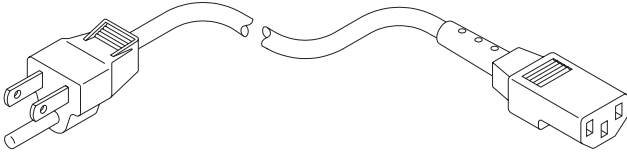
## 2 Before you begin...

Before installing your Mini Tabletop CTS, save the original packing materials. If you need to ship the Mini Tabletop CTS, use the original shipping carton and packing materials. Do not ship any other items with the CTS.

### Checking the power cord

Before you begin, check that you have the proper power cord to connect your Mini Tabletop CTS.

**Your package includes a 120 VAC three-conductor power cord for use in the United States and Canada as shown below.**



**If you are using 220 volts within the United States or Canada,** you must provide a power cord that meets the following requirements:

- NEMA 6-15P male connector on one end
- IEC type CEE-22 female connector on the other end
- SJT type, three-conductor, 18 AWG cord

**If you are using 220 volts outside the United States or Canada,** you must provide a power cord that meets the following requirements:

- IEC type CEE-22 female connector on one end
- Attachment plug appropriate for your country on the other end
- Cord that meets the requirements of CENELEC publication HD-21



### 3 Installing your Mini Tabletop CTS

As described in this section, installing the Mini Tabletop CTS includes the following steps:

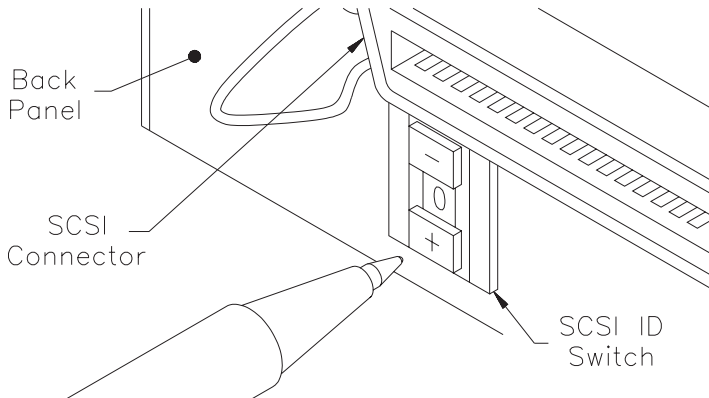
1. Setting the SCSI ID
2. Placing the orientation pads
3. Placing the external terminator
4. Connecting the SCSI cable
5. Powering on the Mini Tabletop CTS
6. Observing the power-on self-test

#### 1. Setting the SCSI ID

The SCSI ID is the address of the CTS on the SCSI bus. The Mini Tabletop CTS can have a SCSI ID of 0 through 7. Each device on the bus must have a unique SCSI ID. The Mini Tabletop's SCSI ID setting is 0 when shipped.

**Note:** Changes in the SCSI ID setting take effect after a normal power-on, SCSI bus reset, or Bus Device Reset message has been sent.

➔ **To set the SCSI ID,** use a fine-tipped instrument to depress the incremental switch until you reach the address number desired for your device.



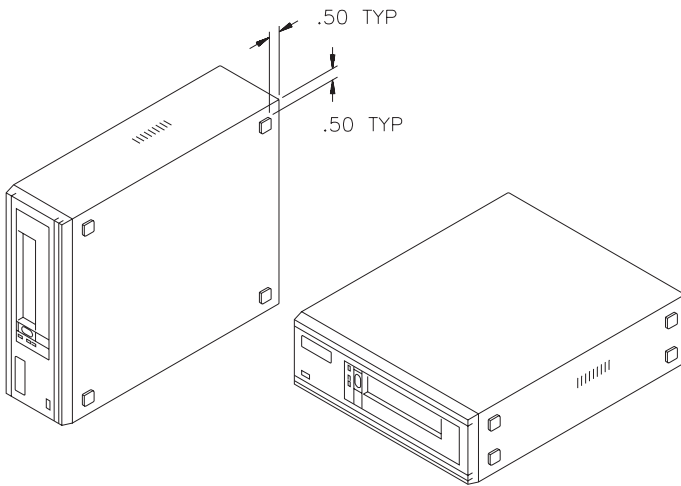
## 2. Placing the orientation pads

When shipped, the Mini Tabletop CTS includes five self-adhesive orientation pads. You apply four pads to either the bottom or right side of your Mini Tabletop CTS depending on the orientation. The pads protect the surface of the CTS and allow air to flow through the vents in the vertical orientation.

If you use a vertical orientation, place the pads on the right side of the device (the side with the external vents).

If you use a horizontal orientation, place the pads on the bottom of the device.

➔ **To place the orientation pads**, remove the backing from the orientation pads. Place the pads within  $\frac{1}{2}$  inch (1.3 cm) from the sides at each corner with the adhesive side against the Mini Tabletop CTS.



### CAUTION

Failure to place pads on the Mini Tabletop CTS for a vertical orientation can block the air flow vents and cause overheating of the enclosed CTS.

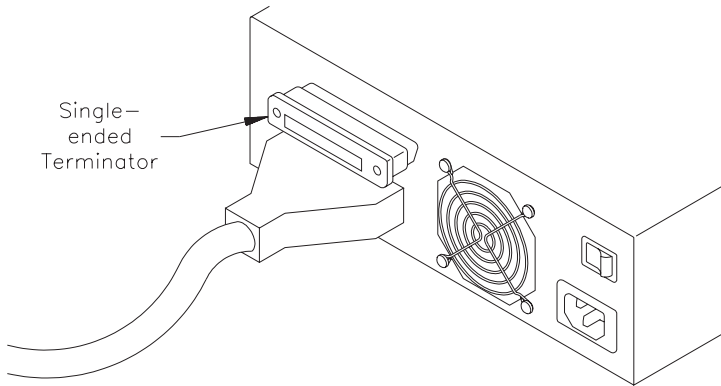
### 3. Placing the external terminator

If the Mini Tabletop CTS is the last device on the SCSI bus, place an external terminator into either SCSI connector. Single-ended and differential configurations use different terminators.

If you use a single-ended configuration, we recommend a Methode Electronics, Inc. dataMate® DM800-09-0 single-ended external terminator or equivalent.

If you use a differential configuration, we recommend a Methode Electronics, Inc. dataMate DM800-08-0 differential external terminator or equivalent.

➡ **Place the terminator into either connector on the Mini Tabletop CTS.**



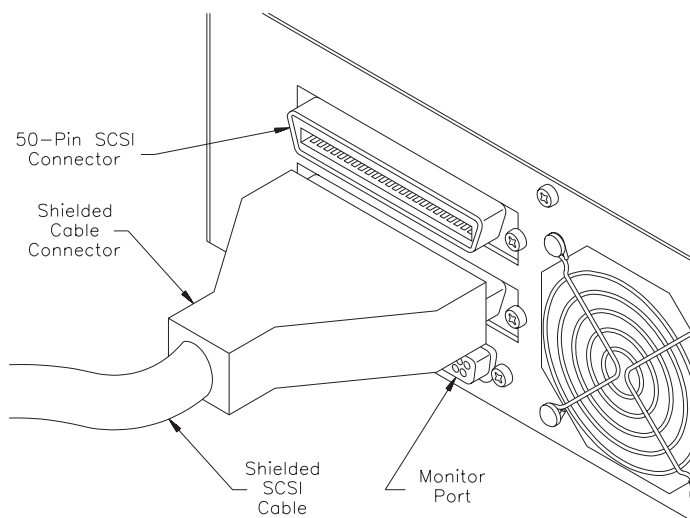
### 4. Connecting the SCSI cable

You must provide a shielded SCSI cable that complies with the appropriate safety and regulatory agency requirements. To comply with FCC, Canadian DOC, and VDE limits, you must use shielded cables with the Mini Tabletop CTS. To minimize discontinuities and signal reflections, make sure all cables on the bus have the same impedance.

The SCSI connectors on the back of the Mini Tabletop CTS are 50-pin female ribbon cable connectors. Use the following table to select the correct SCSI cable and connectors.

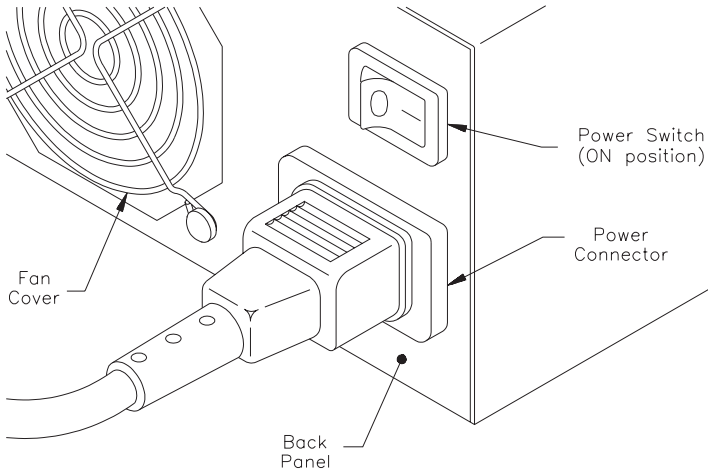
	Configuration type	
	Differential	Single-ended
<b>Recommended cable impedance</b>	122 ohms	132 ohms
<b>Acceptable cable impedance</b>	greater than 90 ohms	
<b>Maximum cable length</b>	25 meters (82 feet)	6 meters (19.7 feet)
<b>Minimum conductor size</b>	28 AWG (same for both cable types)	
<b>Shielded ribbon male connector</b>	AMP™ No. 554953-1	

➔ **To connect the SCSI cable, plug the shielded SCSI cable into either one or both of the connectors.**



## 5. Powering on the Mini Tabletop CTS

- ➔ **To connect the power**, plug in the appropriate power cord described in “Checking the power cord” on page 8.



Before powering on the Mini Tabletop CTS, check the following:

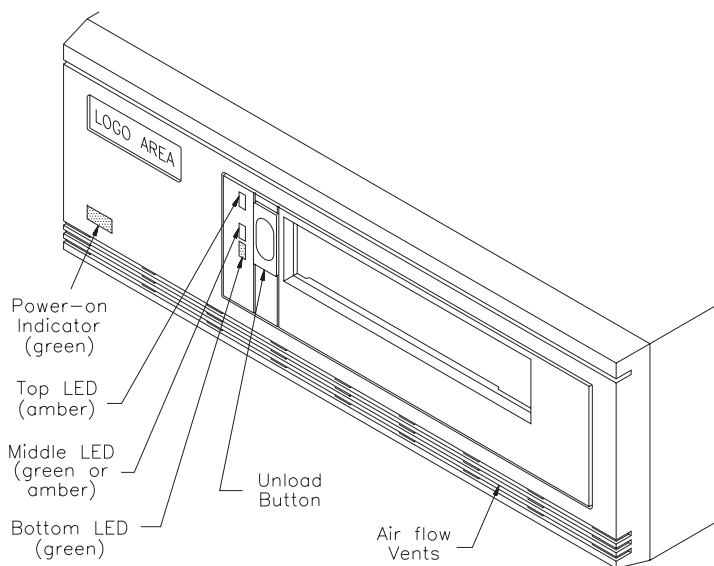
- Is the power cord fully inserted correctly?
- Is the power source providing power?
- Is the CTS connected to the SCSI bus?
- Is the SCSI bus properly terminated?
- Is the SCSI ID set?

- ➔ **To power on the Mini Tabletop CTS**, flip the power switch on the back to the 1 position.

## 6. Observing the power-on self-test (POST)

When you turn on the power, the power-on LED on the front of the Mini Tabletop CTS turns green, the thermistor-controlled fan mounted at the back of the Mini Tabletop CTS begins to rotate, and the CTS's 32-second power-on self-test (POST) begins.

The illustration below shows the placement of the power-on indicator and the LEDs. The table on the following page shows the LED combinations you may observe during the POST.



The following table shows the LED combinations that you may observe during CTS operation. Occasionally, you may observe some LED combinations and sequences not shown in this table.

	CTS State										
	POST start	POST end	POST fail	ready (no tape)	ready (tape)	normal tape motion	high speed tape motion	SCSI bus reset	error	time to clean	
top LED (errors)	●	●	* fast	○	○	○	○	●	* slow	* fast	
middle LED (SCSI) <sup>a</sup>	● green	* irreg	* irreg	* irreg	* irreg	* irreg	* irreg	* irreg	* irreg	* irreg	
bottom LED (motion)	●	○ <sup>b</sup>	○	○	●	* slow	* fast	●	○	* fast	

<sup>a</sup> Green—uncompressed format tape.

Amber—compressed format tape.

<sup>b</sup> If a data cartridge is loaded, the bottom LED will flash slow and then fast during the second part of the power-on self-test.

Key for table

●	○	*
The LED is on.	The LED is off.	The LED is flashing: * slow = 1 flash/second (0.94 Hz) * fast = 4 flashes/second (3.76 Hz) * irregular = Rate of flash varies with SCSI bus activity. If the device is not connected to the bus, the LED is off.

## 4 Maintenance

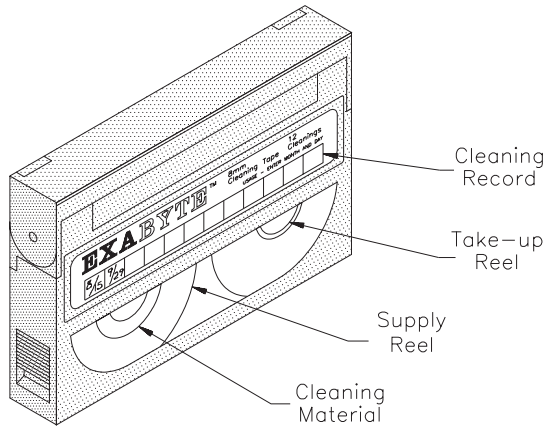
The Mini Tabletop CTS requires only one maintenance procedure (cleaning of the enclosed CTS) and has only one field replaceable part (the power cord). The following sections give information on cleaning the CTS and how to remove and replace the cover if you need to check the label of the enclosed CTS. If you need to replace the power cord, read the section titled “Checking the power cord” on page 8.

### Cleaning the CTS

The only cleaning material authorized for use with the CTS is an EXABYTE 8mm Cleaning Cartridge.

- Do not use cloth swabs, cotton swabs, or any cleaning agents other than an EXABYTE-approved cleaning cartridge.
- After every 30 tape motion hours you should clean the heads and tape path
- The format in which you write and read data does not affect cleaning frequency.
- A dirty environment or infrequent operation requires that you clean the CTS more often than every 30 tape motion hours.
- After 30 hours, the top and bottom LEDs will flash rapidly and the middle LED will flash irregularly, depending on SCSI bus activity.
- To prevent contamination and damage to the heads, do not use the cleaning cartridge for more than the number of cleaning cycles specified on the cartridge label.
- Do not rewind the cleaning cartridge and attempt to reuse it.





To use the cleaning cartridge, follow these steps:

**1. Apply power to the CTS.**

When the power-on self-test is complete, press the unload button and remove any data cartridge from the CTS.

**2. Check the cleaning record.**

If there are no cleaning cycles remaining, discard the cleaning cartridge and use a new one.

**3. Insert the cleaning cartridge into the CTS.**

The remainder of the cleaning cycle is performed automatically by the CTS. When the cleaning cycle is complete, the cleaning cartridge is unloaded and ejected from the CTS. The cleaning cycle is about 2 minutes.

**Note:** If there are no more cleaning cycles remaining for the cleaning cartridge, it is ejected.

**4. Confirm that a cleaning was done.**

Look at the LEDs on the front panel. If the cleaning cycle was successful, the top and bottom LEDs will be off.

**5. Record the date on the cleaning record.**

Store the cleaning cartridge for future use if it still has cycles remaining. Or, discard it if no more cleaning cycles remain.

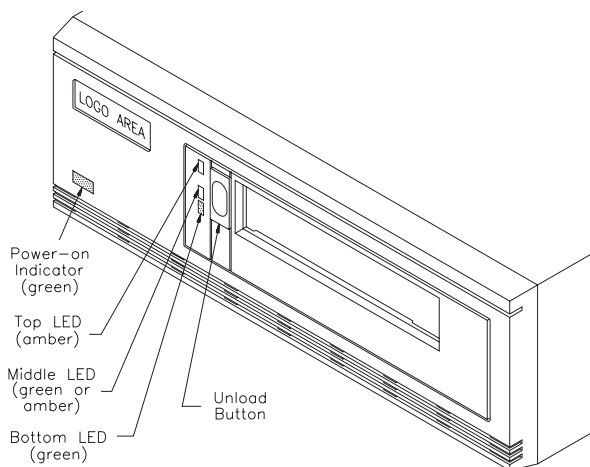
## Removing and replacing the cover

If you need to remove the cover to view the information on the enclosed CTS, follow the procedures listed below.

### Before you begin...

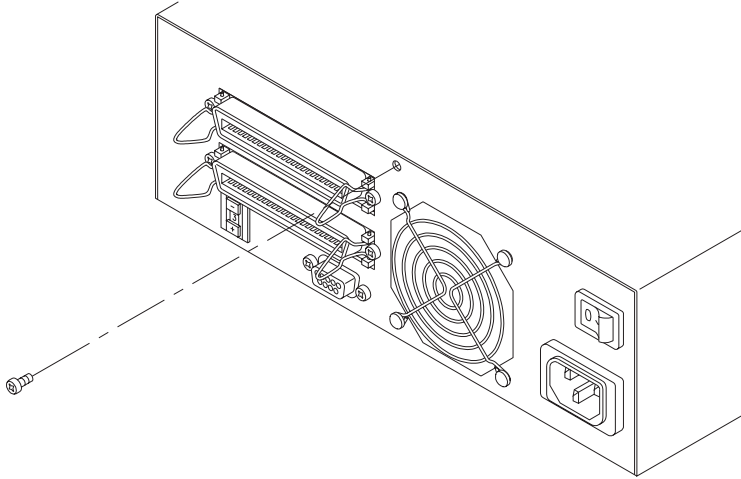
- Make sure the current operation has completed and that the tape motion has stopped. The bottom LED stops blinking when motion has stopped.
- If necessary, unload the data cartridge by pressing the unload button.
- Place a static protection mat on the work surface. Use a 1-megaohm resistor to ground the static protection mat.
- Make sure there is no activity on the SCSI bus before you disconnect the SCSI cable from the CTS. The middle LED does not blink when there is no SCSI bus activity.
- Turn off the power switch.
- Disconnect the power cord and SCSI cable from the Mini Tabletop CTS.

**Note:** If this is the terminating device on the SCSI bus, you must terminate the bus at another device before disconnecting the SCSI cable.

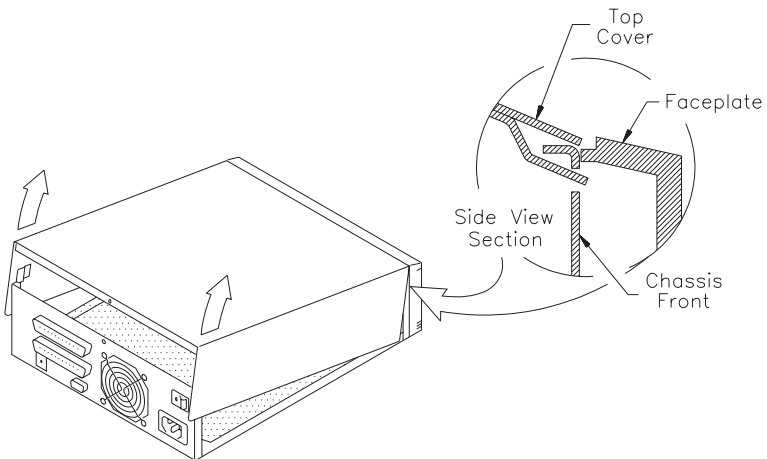


## 1. To remove the cover:

- ➔ Using a #1 Phillips screwdriver, remove the single screw on the rear panel.

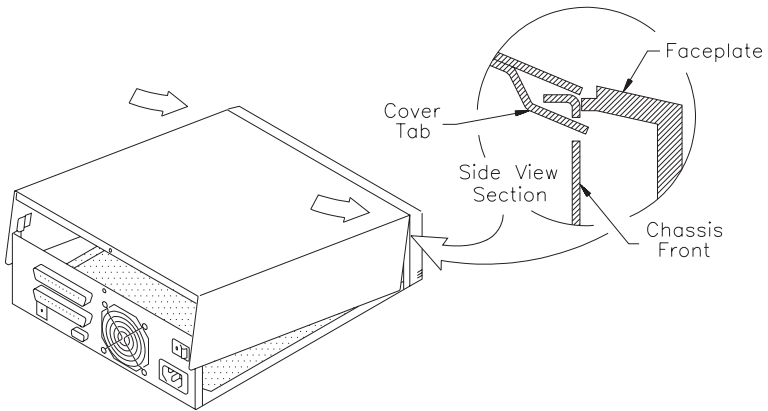


- ➔ Rotate the top cover upward on the front hinge and lift it off the front hinge as shown.

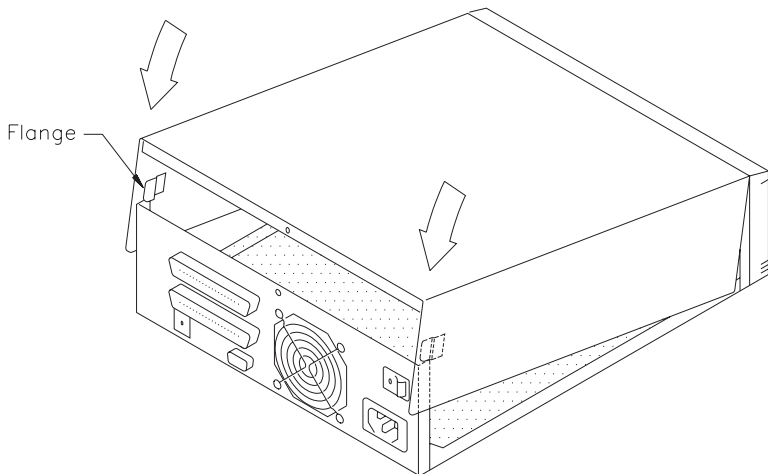


## 2. To replace the cover:

- ➔ Slide the cover tabs through the chassis slot as shown.



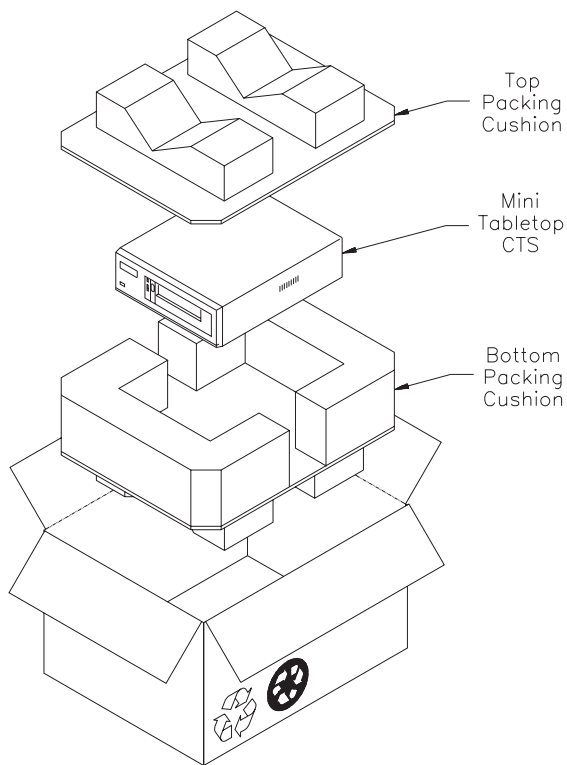
- ➔ Rotate the top cover down and engage the flanges on the interior sides of the cover with the side panels of the Mini Tabletop CTS as shown.



- ➔ Using a #1 Phillips screwdriver, replace the screw on the back panel.

## Repacking instructions

To pack the Mini Tabletop CTS for shipment, place the Mini Tabletop CTS in the static protection bag and assemble the packing materials as shown. If you do not have your original packing materials, contact your vendor.



The Mini Tabletop CTS's packing materials are unbleached, reusable, recyclable, and environmentally safe. The materials contain no chlorofluorocarbons (CFCs) or heavy metals.

**Notes:**