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# Installing the TZ87 Tabletop Cartridge Tape Subsystem

Order Number: EK-TZ87T-IG. A01

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NOTE: 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 in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

The TZ87 shielded interconnect cable as supplied with the unit may not be substituted, nor altered or modified in any way.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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 for help

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# Preface

## Introduction

### Contents

This guide describes how to install the TZ87 tabletop cartridge tape subsystem. It provides information about:

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- Unpacking
  - Choosing a site
  - Affixing decals
  - Configuring the TZ87
  - Connecting cables
  - Running the power-on self-test
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### Intended Audience

This guide is intended for owners of the TZ87 tabletop cartridge tape subsystem.

Follow the instructions in the order presented:

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Task	Action
1.	Read “Before You Start” in the next section to prepare for the installation.
2.	Set up the installation.
3.	Do the physical installation.
4.	Test the installation.

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## Before You Start

### Tools

Installing the TZ87 tabletop cartridge tape subsystem requires no special tools. If you need to change the switchpack settings on the rear panel, you will need a pointed instrument, such as a pen.

### Related Documents

Along with your system documentation, the following documents supplement this guide:

Title	Order Number
TZ87 Series Cartridge Tape Subsystem Owner's Manual	EK-OTZ87-OM
TZ87 Tape Drive Operator's Reference Card	EK-OTZ87-RC

### To Solve Problems

If you have problems during the installation, see Appendix A, Solving Problems, or call Digital Services at your local Customer Support Center.

# 1

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## Installation Setup

### 1.1 Overview

#### 1.1.1 How To Set Up the Installation

Follow these steps to set up the installation.

Step	Action
1	Unpack and check your shipment.
2	Choose a site for the TZ87 tabletop subsystem.
3	Do you need to use foreign language decals? <ul style="list-style-type: none"><li>• If <i>yes</i>, affix the decals.</li><li>• If <i>no</i>, go to step 4.</li></ul>
4	Power off the system on which the TZ87 tabletop subsystem is to be installed.

### 1.2 Unpack

#### 1.2.1 Check Your Shipment

Make sure your shipment has all the items listed on the contents listing. If any item is missing or damaged, contact your delivery agent or your Digital sales representative.

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**Note**

Save the packing materials until you are sure you will not reship any items.

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## Installation Setup

### 1.2 Unpack

#### 1.2.2 Contents Listing

The TZ87 tabletop subsystem and its accessories are:

Part Number	Description
<input type="checkbox"/> TZ87-TZ87	Tabletop subsystem: a 5-1/4-inch drive in a tabletop enclosure
<input type="checkbox"/> TK85K-01	One CompacTape III cartridge
<input type="checkbox"/> TK85-HC	One CleaningTape III cartridge
<input type="checkbox"/> 36-28816-03	Sheet of foreign language decals for front panel
<input type="checkbox"/> 36-36963-01	Sheet of foreign language decals for remote panel
<input type="checkbox"/> EK-TZ87T-IG	Installation Guide
<input type="checkbox"/> EK-OTZ87-OM	Owner's Manual
<input type="checkbox"/> EK-OTZ87-RC	Operator's Reference Card
<input type="checkbox"/> U.S.A.	Power cord
<input type="checkbox"/> 12-30552-01	Terminator
<input type="checkbox"/> Standard/ system-specific	SCSI signal cable(s)

### 1.3 Choose a Site

#### 1.3.1 Site Setup

Place the TZ87 on a flat, sturdy, level area such as a desk or tabletop—*not on the floor*.

#### 1.3.2 Site Guidelines

Be sure to follow these guidelines for your TZ87:

- Avoid a site that is dusty or humid.
- Allow enough space around the TZ87 for ventilation and for easy access to the front and rear.

### 1.4 Affix Decals

#### 1.4.1 For Foreign Language Decals Only

If applicable, choose the foreign language decals with the language appropriate for your country. Affix them over the English labels. (*See the diagrams in Section 1.4.3.*)

## Installation Setup 1.4 Affix Decals

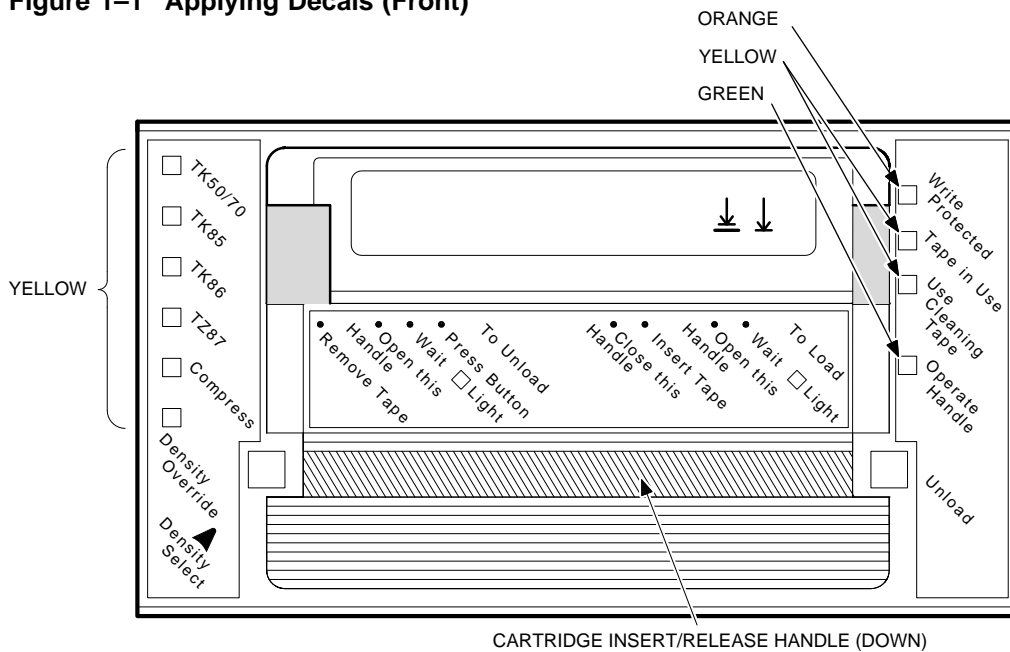
### 1.4.2 Not Using the Decals?

If you are not using the foreign language decals, go to Section 1.5.

### 1.4.3 Front Decals

On the front of the TZ87, one decal adheres to the cartridge insert/release handle; the others adhere to the indicator panel as seen in Figure 1-1:

Figure 1-1 Applying Decals (Front)



ZKO-1217-28-DG

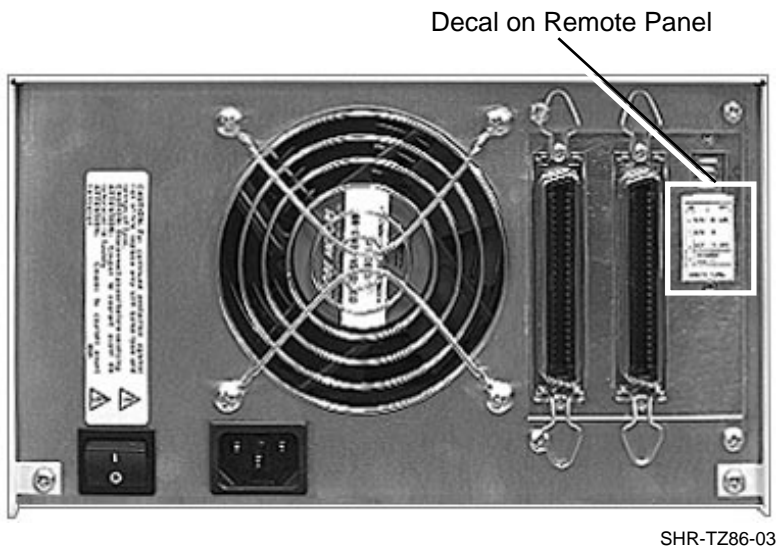


## Installation Setup

### 1.4 Affix Decals

At the rear of the TZ87, another decal adheres to the remote panel as seen in Figure 1-2.

Figure 1-2 Applying Decals (Rear)



## 1.5 Power Off the System

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### Caution

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Verify that the system manager performed the following steps:

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## Installation Setup

### 1.5 Power Off the System

Step	Action
1	Checked and note SCSI IDs.
2	Backed up all disks.
3	Shut down the operating system.
4	Halted the system.
5	Removed power from the system.

# 2

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## Physical Installation

### 2.1 Overview

#### 2.1.1 How to Install the TZ87

To install the TZ87:

Step	Action						
1	Note the TZ87 factory settings.						
2	Review Section 2.2.2.						
3	Configure the TZ87 for use on your system:						
	<table border="1"><thead><tr><th>If you need to. . .</th><th>See page. . .</th></tr></thead><tbody><tr><td>Disable parity checking</td><td>2-4</td></tr><tr><td>Change the SCSI ID</td><td>2-4</td></tr></tbody></table>	If you need to. . .	See page. . .	Disable parity checking	2-4	Change the SCSI ID	2-4
If you need to. . .	See page. . .						
Disable parity checking	2-4						
Change the SCSI ID	2-4						
4	Review Section 2.3.1.						
5	Connect the cables.						

**Physical Installation**  
**2.2 Configure the TZ87**

**2.2 Configure the TZ87**

**2.2.1 TZ87 Factory Settings**

The TZ87 is factory set to SCSI ID 5, the usual ID for tape devices on the SCSI bus. If your system generates parity, the TZ87 can check for correct parity on the SCSI bus.

**2.2.2 Configuration Guidelines**

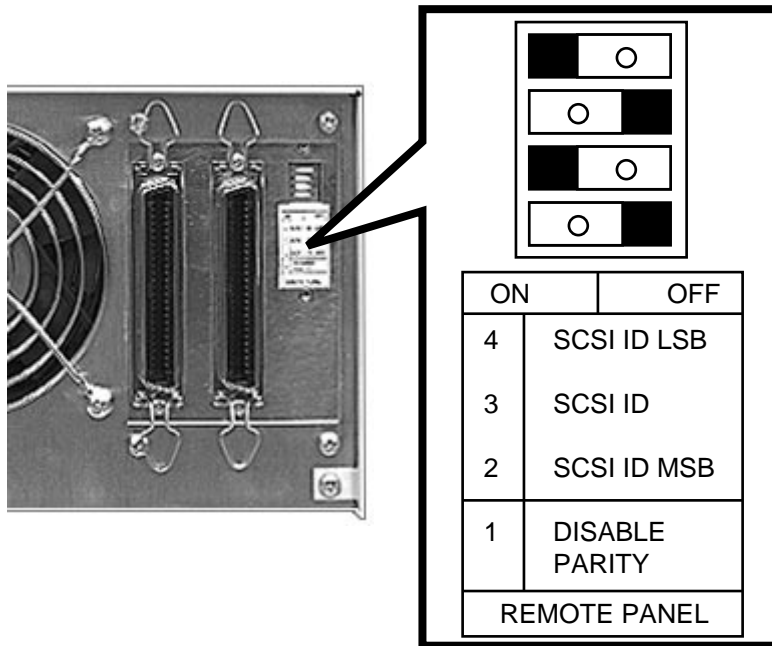
Your system uses the SCSI ID to identify, or address, the TZ87. Follow these guidelines when configuring the TZ87 for your system:

1. Verify that your drive has a unique SCSI ID from any other device on the SCSI bus.
2. If your drive is the last device on the bus, you must install a terminator on the drive—to terminate the bus.

Figure 2-1 shows the location of the DISABLE PARITY and SCSI ID switchpack.

## Physical Installation 2.2 Configure the TZ87

Figure 2–1 ID Switchpack Location



SHR-TZ86-04

### 2.2.3 Disable Parity Checking

If your system does not generate parity, you must disable parity checking on the TZ87. To do so, set the **DISABLE PARITY** switch to **ON** by pressing down on the left side of the switch with a pen. (See Table 2–1 for switch 1.)

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#### Caution

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Never use a pencil to press the switches on the switchpack. Use only a pen.

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### 2.2.4 To Change the SCSI ID

If you need to change the SCSI ID, see Section 2.2.5 and:

- If a setting is 1 (ON), make sure the left side of the switch is down.
- If a setting is 0 (OFF or OPEN), make sure the right side of the switch is down.

## Physical Installation

### 2.2 Configure the TZ87

#### 2.2.5 SCSI ID Switch Settings

Use the following table to determine SCSI ID switch settings. (See Table 2-1 for switches 2, 3, and 4.) Switch 2 is the most significant bit (MSB) and switch 4 is the least significant bit (LSB):

Table 2-1 Switches 1, 2, 3, and 4

	SCSI ID	Switch (1 = ON; 0 = OFF)		
		2	3	4
	0	0	0	0
	1	0	0	1
	2	0	1	0
	3	0	1	1
	4	1	0	0
<b>Factory Setting</b>	5	1	0	1
	6	1	1	0
	7	1	1	1

## 2.3 Connect the Cables

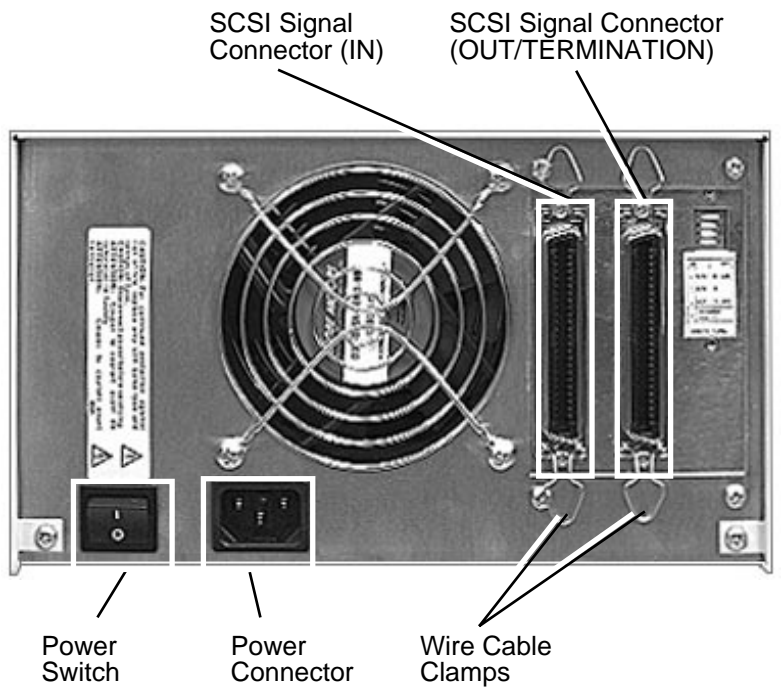
### 2.3.1 TZ87 Rear Panel

Become familiar with the components on the TZ87 rear panel to complete the physical installation (Figure 2-2):

## Physical Installation

### 2.3 Connect the Cables

Figure 2–2 Rear Panel



SHR-TZ86-05

#### 2.3.2 Connect the SCSI Signal Cable

To connect the SCSI signal cable, follow these steps:

1. Connect one end of the SCSI cable to the leftmost SCSI signal connector on the TZ87 rear panel.
2. Snap the wire cable clamps into place to secure the cable.
3. Connect the other end of the SCSI signal cable to the SCSI connector on your system or, for daisy-chained configurations, another SCSI device.

See your system documentation for system SCSI connections.

## Physical Installation

### 2.3 Connect the Cables

#### 2.3.3 Terminate the SCSI Bus

If the TZ87 is the last or only device on the SCSI bus, follow these steps to install the terminator:

1. Connect the SCSI terminator to the rightmost SCSI signal connector on the TZ87 rear panel.
2. Snap the wire cable clamps into place to secure the terminator.

If the TZ87 is not the last or only device on the SCSI bus, be sure to install the terminator at the end of the bus.

#### 2.3.4 Connect the Power Cord

To connect the power cord, follow these steps:

1. Be sure the TZ87 power switch is set to 0.
2. Connect the power cord to the TZ87 power connector. Make sure the connector is fully seated.
3. Connect the other end of the power cord to a nearby ac outlet.



# 3

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## Installation Testing

### 3.1 Overview

#### 3.1.1 To Test the Installation

Perform these steps to test the installation:

Step	Action
1	Turn on system power.
2	Set the power switch on the TZ87 rear panel to on. <b>Result:</b> The power-on self-test (POST) runs automatically when you turn on the TZ87.
3	Observe the TZ87 front panel indicators.
4	Did POST succeed (Section 3.2.1)?  <ul style="list-style-type: none"><li>• If <i>yes</i>, go to step 5.</li><li>• If <i>no</i>, see Section 3.2.2.</li></ul>
5	Bring up the system and run the optional system tests. <b>Result:</b> You are ready to operate the TZ87.

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## Installation Testing

### 3.2 Run the Power-On Self-Test

## 3.2 Run the Power-On Self-Test

### 3.2.1 POST Success

When you turn on system power, the drive performs the POST. The sequence of events follows:

Stage	What Happens
1	The lights on the right front panel turn on sequentially, from top to bottom. All lights stay on for a few seconds.
2	All lights on the left side turn on at the same time for about three seconds and then turn off.
3	The green Operate Handle, the orange Write Protected, and the yellow Use Cleaning Tape lights turn off. The yellow Tape in Use light blinks while the tape drive initializes.
4	After initialization, if no cartridge is loaded, the yellow Tape in Use light turns off, the green Operate Handle light turns on, the handle unlatches, and the beeper sounds.

POST completes in about 13 seconds and the subsystem responds normally to all commands. However, it might take longer for the media to become ready. After a bus reset, the tape drive responds within a bus selection timeout period.

### 3.2.2 POST Failure

If all left- or right-side lights on the TZ87 front panel blink repeatedly, POST did not run successfully. Follow these steps:

Step	Action
1	Make sure your cable connections are secure.
2	Make sure the SCSI bus is terminated correctly.
3	Power the TZ87 off and then on again to rerun POST.

If all front panel indicators blink again, you most likely have a hardware failure. Call Digital Services at your local Customer Support Center.

## 3.3 Bring Up the System

### 3.3.1 System Startup

After successful completion of POST, have the system manager perform the following steps:

Step	Action
1	Restart the operating system.
2	Configure the system to recognize the TZ87.

### 3.3.2 Other Tests

See your system documentation for instructions on running a full system or SCSI bus test.

## 3.4 Ready To Operate

### 3.4.1 For Operating Instructions

Once you have verified a successful installation, see the *TZ87 Cartridge Tape Subsystem Owner's Manual* (EK-OTZ87-OM) for information on using the TZ87.

# A

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## Solving Problems

### A.1 What to Do

#### A.1.1 Troubleshooting Chart

If the TZ87 fails during power-up or operation, use the following chart to determine the problem and the action to take. If you cannot solve the problem, call Digital Services at your local Customer Support Center.

<b>If. . .</b>	<b>Then. . .</b>	<b>You should. . .</b>
Your system does not recognize the TZ87	Your system is not configured to see the SCSI ID	Configure your system to see the ID. For example, use SYSGEN AUTOCONFIG on the VMS operating system.
	The SCSI ID is not unique	Change the SCSI ID and reconfigure the system. New ID effective at next power-on.
	The parameters for your SCSI adapter are incorrect	Check your SCSI adapter installation.
	The SCSI signal cable is loose	Make sure the connector on each end of the cable is fully seated.
	The SCSI terminator is not present or is loose	Install the terminator; make sure the terminator is fully seated.

## Solving Problems

### A.1 What to Do

If. . .	Then. . .	You should. . .
	<p>The SCSI bus is not correctly terminated</p> <p>The SCSI terminator is not at the end of the bus, or more than two terminators are present</p> <p>The SCSI bus is too long, or too many devices are on the bus</p>	<p>If the TZ87 is the last or only device on the bus, make sure the terminator is installed on the TZ87.</p> <p>If the TZ87 is not the last or only device on the bus, check the cable connections and make sure the terminator is installed at the end of the bus.</p> <p>Be sure to install a terminator at each end of the bus. One terminator is usually installed at the system.</p> <p>Limit the bus length to the ANSI SCSI standard of 6 meters (19 feet) and the number of devices on the bus (including the system) to eight. Check your system configuration rules.</p>
The TZ87 does not power up	The TZ87 has no power	Check the TZ87 power cord connections, with the TZ87 power switch off.
All right or left side lights on the TZ87 front panel blink	A drive fault has occurred	Press the Unload button on the TZ87 front panel or turn drive power off and then on again to clear the error. If the error does not clear, call Digital Services.
You are finding fatal or nonfatal errors for which you cannot determine the cause	The bus termination or SCSI signal cable connections may be incorrect	Make sure the SCSI bus is terminated.
	The ac power source grounding may be incorrect	Use an ac outlet for the TZ87 on the same ac line that is powering the system.