

Installation Manual

Tektronix

Profile

PDR 200

9GB Disk Drive Upgrade

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Tektronix Product Support

You can get technical assistance, check on the status of problems, or report new problems by contacting our Product Support Group.

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Monday–Friday 6:00AM–5:00PM Pacific Time (800) 547-8949

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Safety Summaries



WARNING: *These instructions are for use by qualified service personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries before performing service.*

General Safety Summary

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it.

Only qualified personnel should perform service procedures.

Injury Precautions

- | | |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use Proper Power Cord | To avoid fire hazard, use only the power cord specified for this product. |
| Ground the Product | This product is grounded through the grounding conductor of the power cord. To avoid electric shock, the grounding conductor must be connected to earth ground. Before making connections to the input or output terminals of the product, ensure that the product is properly grounded. |
| Do Not Operate Without Covers | To avoid electric shock or fire hazard, do not operate this product with covers or panels removed. |
| Do Not operate in Wet/Damp Conditions | To avoid electric shock, do not operate this product in wet or damp conditions. |
| Do Not Operate in an Explosive Atmosphere | To avoid injury or fire hazard, do not operate this product in an explosive atmosphere. |
| Avoid Exposed Circuitry | To avoid injury, remove jewelry such as rings, watches, and other metallic objects. Do not touch exposed connections and components when power is present. |



Product Damage Precautions

- | | |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------|
| Use Proper Power Source | Do not operate this product from a power source that applies more than the voltage specified. |
| Provide Proper Ventilation | To prevent product overheating, provide proper ventilation. |
| Do Not Operate With Suspected Failures | If you suspect there is damage to this product, have it inspected by qualified service personnel. |

Safety Terms and Symbols

Terms in This Manual These terms may appear in this manual:



WARNING: Warning statements identify conditions or practices that can result in personal injury or loss of life.



CAUTION: Caution statements identify conditions or practices that can result in damage to the equipment or other property.

Terms on the Product These terms may appear on the product:



DANGER indicates a personal injury hazard immediately accessible as one reads the marking.



WARNING indicates a personal injury hazard not immediately accessible as you read the marking.



CAUTION indicates a hazard to property including the product.

Symbols on the Product

The following symbols may appear on the product:



DANGER high voltage



Protective ground (earth) terminal



ATTENTION – refer to manual

Service Safety Summary

Do Not Service Alone

Do not perform internal service or adjustment of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect Power

To avoid electric shock, disconnect the main power by means of the power cord or, if provided, the power switch.

Use Care When Servicing With Power On

Dangerous voltages or currents may exist in this product. Disconnect power and remove battery (if applicable) before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections



Certifications and Compliances

Canadian Certified Power Cords

Canadian approval includes the products and power cords appropriate for use in the North America power network. All other power cords supplied are approved for the country of use.

FCC Emission Control

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

Canadian EMC Notice of Compliance

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

EN55022 Class A Warning

For products that comply with Class A. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Certification

Category	Standard
Safety	<i>Designed/tested for compliance with:</i> UL1950 - Safety of Information Technology Equipment, including Electrical Business Equipment (Third Edition, 1995) IEC 950 - Safety of Information Technology Equipment, including Electrical Business Equipment (Second edition, 1991) CAN/CSA C22.2, No. 950-95 - Safety of Information Technology Equipment, including Electrical Business Equipment EN60950 - Safety of Information Technology Equipment, including Electrical Business Equipment



Certifications and Compliances

PDR 200 9GB Disk Drive Upgrade

Introduction

This upgrade adds four internal 9GB hard disks to the PDR200 system.

The manual assumes that you are adding four internal 9GB disk drives either to a 2-channel PDR200 (one with only a Master Enhanced Disk Recorder board) or as part of upgrading to a 4-channel PDR200 (one with both Master and Slave Enhanced Disk Recorder boards). If you are upgrading your Profile system from a 2-channel to a 4-channel, you will need to install the Slave Enhanced Disk Recorder board before you perform this upgrade.

This installation manual includes instructions for:

1. Installing the additional internal 9GB disk drives.
2. Verifying the PDR200 can access the new drives.

NOTE: Before performing this upgrade, be sure to back up any material you want to save. Creating the disk file system destroys all material on the hard disk drives.

Related Documents

Related documents are:

- Profile Family User Manual
- PDR200 Installation Manual
- PDR200 Service Manual



System Requirements

The Profile System Software installed in the PDR 200 must be version 2.1 or higher. To check the software version installed in your PDR 200, use the **Help | About VdrPanel** as shown in Figure 1. The software version is listed in the Product Version field in the displayed dialog box.

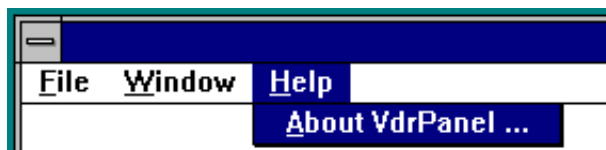


Figure 1. Checking the Software Version

Kit Contents

In addition to these instructions, the 9GB Disk Drive Upgrade kit includes the following:

- Four 9GB disk drives in caddies
- One SCSI cable
- One SCSI cable clamp
- Hardware to install the kit

Tools Required

Installation of the 9GB Disk Drive Upgrade kit requires the tools listed below, which are not provided:

- Torx tool with T10 and T15 tips.
- ESD wrist band

You may also need diagonal cutters to dress or redress cabling.

Handling Precautions



CAUTION: *Observe the following precautions when handling the 9GB disk drives.*

- *Media disk drives are very sensitive to shock and vibration. To prevent damage, do not drop or bang a drive when handling. Do not stack drives upon each other.*
- *Media disk drives are very sensitive to magnetic fields. Do not use magnetized tools when working with the media drives.*
- *Media disk drives are also very sensitive to electrostatic discharge (ESD), particularly the SCSI connector. To prevent damage, take ESD precautions when handling the drives. Also, when returning a drive, it should only be transported and stored in the ESD bags in which the replacement drive was shipped.*



Installation Procedures

The procedures that follow take you step by step through the installation of the 9-GB Disk Drive Upgrade into your PDR200. The physical installation of the upgrade involves the following tasks:

- Removing the top covers.
- Removing the two disk drives adjacent to the SCSI board connectors.
- Installing the SCSI cable.
- Installing the disk drive caddies previously removed and the four new ones.
- Reassembling the PDR200.
- Creating a new disk file system.
- Reinstalling the PDR200 in the rack.

NOTE: Do not discard any items unless instructed to do so. Meeting EMI specifications for the Profile system requires replacement of all chassis screws.

Before You Begin

Tektronix recommends that you remove the PDR200 from the rack and place it on a suitable work surface such as a table or workbench. The installation instructions assume that the PDR200 rests on a flat surface.



WARNING: The PDR200 is too heavy for one person to remove from an equipment rack. To avoid possible injury, get help when removing the PDR200 from the rack.

To remove the PDR200 from the rack:

1. Shut down the PDR200, unplug the power cord and disconnect all cables from the rear panel.

2. Loosen the front panel retaining screw and pull the chassis out of the rack until the slide stop latches engage.
3. Press the stop latch buttons (visible in the stop latch holes) to disengage the stop latches and with a helper, carefully slide the chassis free of the rack and place on a suitable work surface.

Removing the Top Covers

Use the Torx tool with the T10 tip to remove the top covers. Note that the front cover (❶ in Figure 2) must be removed first, since its rear edge overlaps the front edge of the rear cover (❷ in Figure 2).

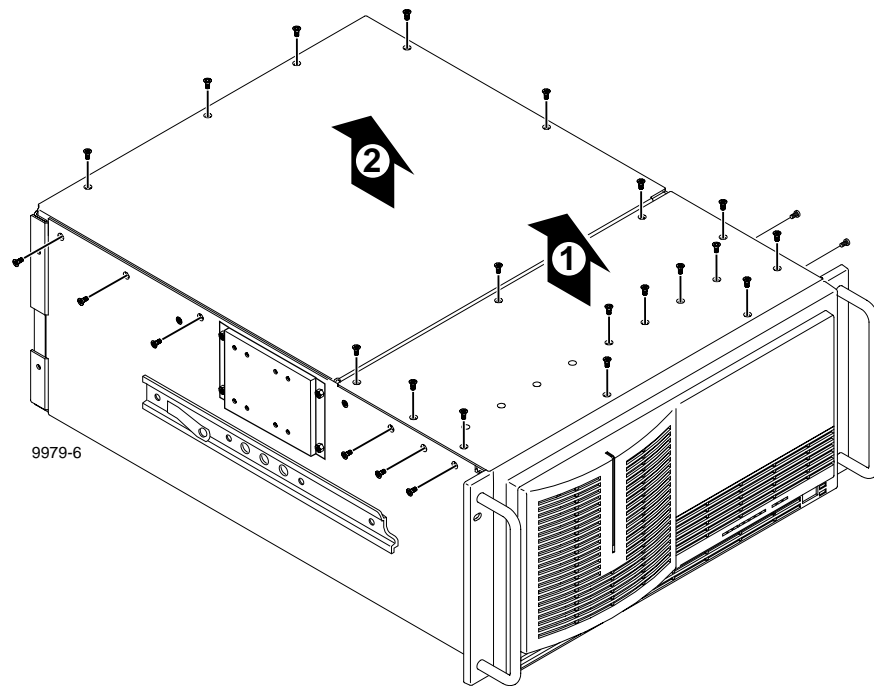


Figure 2. Removing the Top Covers



Removing Disk Drives

The disk drives for drive IDs A3 and A4 must be removed from the drive tray to access the SCSI cable connectors on the SCSI backplane. Drive ID A3 is adjacent to the SCSI backplane connectors and A4 is adjacent to A3.



CAUTION: Media disk drives are very sensitive to shock and vibration. To prevent damage, do not drop or bang a drive when handling. Do not stack drives upon each other.



CAUTION: Media disk drives are also very sensitive to electrostatic discharge (ESD), particularly the SCSI connector. To prevent damage, take ESD precautions when handling the drives. Also, the drives should only be transported and stored in the ESD bags in which they were shipped.

To remove these disk drives, pull up on the caddies, lift them out of the chassis and place on a static-free surface. See Figure 3.

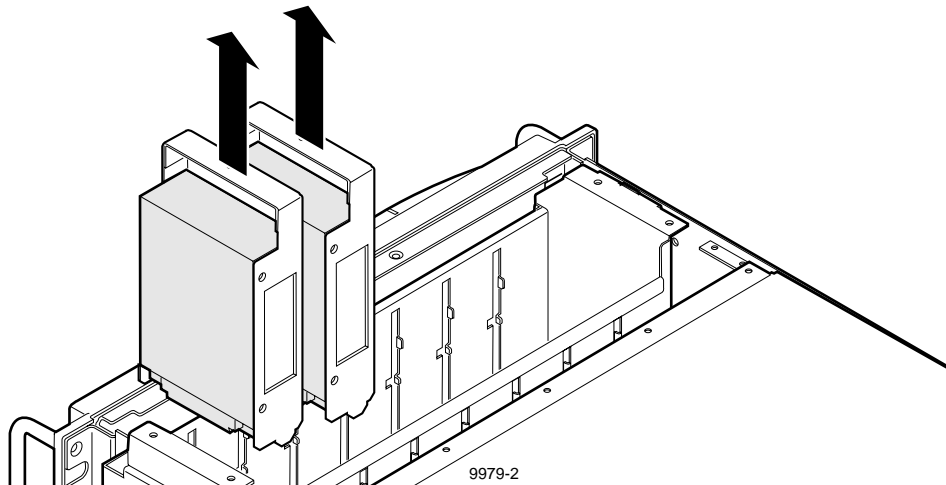


Figure 3. Removing Disk Drive Caddies

Installing the SCSI Cable

There are two possibilities for installing the SCSI cable:

- You are installing the upgrade in a 2-channel PDR200.
- You are installing the upgrade in a 4-channel PDR200.

SCSI Cable Installation in a 2-channel PDR 200

In a 2-channel PDR200, the four drives you are installing are controlled by the second SCSI port on the Master EDR. To install the SCSI cable:

1. Remove the adhesive backing on the cable clamp and attach it to the top of the power supply parallel to and adjacent to the existing clamp.
2. Connect one end of the SCSI cable to the unused connector on the SCSI backplane. See Figure 4.

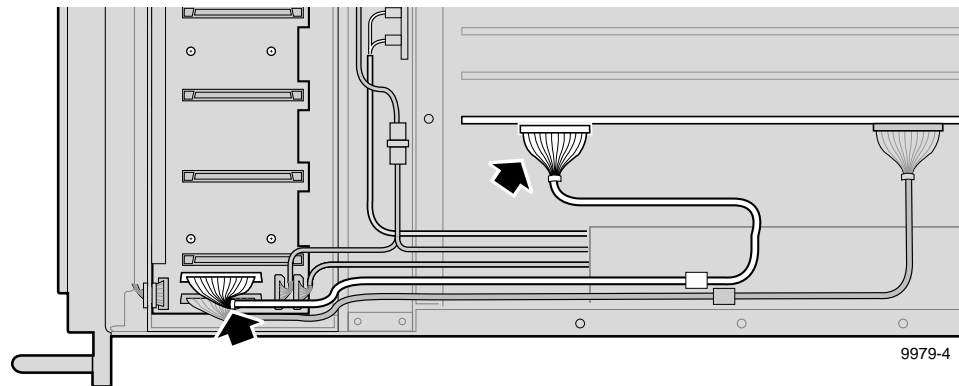


Figure 4. 2-channel PDR200 SCSI Cable Installation

3. Position the cable in the clamp so that both SCSI cables are parallel.
4. Connect the free end of the cable to the SCSI header connector on the rear of the Master EDR board (Figure 4).
5. Dress the SCSI cables through the channel at the right of the fan carrier tray.



SCSI Cable Installation in a 4-channel PDR 200

The following assumes that you have upgraded from a 2-channel Profile system to a 4-channel Profile system. The Slave EDR board controls the four drives you are installing. The PCI board, which connects over the top of the Master and Slave EDR boards, must be removed to install the SCSI cable on the Slave EDR board.

For a 4-channel PDR 200:

1. Remove the adhesive backing on the cable clamp and attach it to the top of the power supply parallel to and adjacent to the existing clamp.
2. Connect one end of the SCSI cable to the unused connector on the SCSI backplane. See Figure 5.

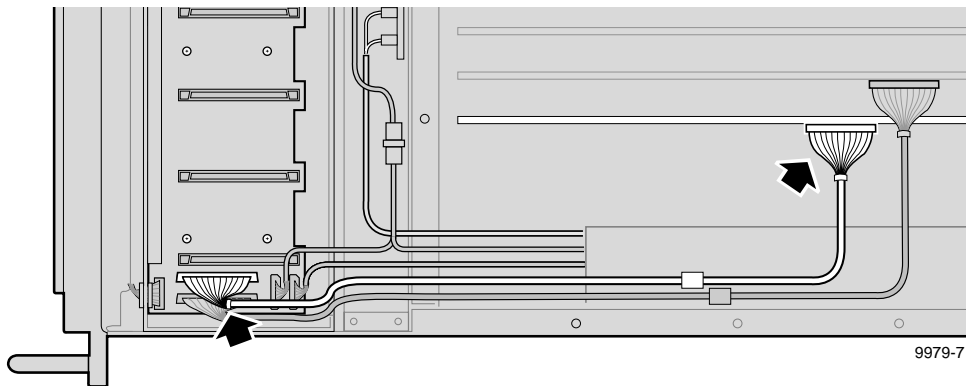


Figure 5. 4-channel PDR 200 SCSI Cable Installation

3. Position the cable in the clamp so that both SCSI cables are parallel.

4. Remove the PCI board (Figure 6) by pulling straight up and off the boards to which the PCI is connected.

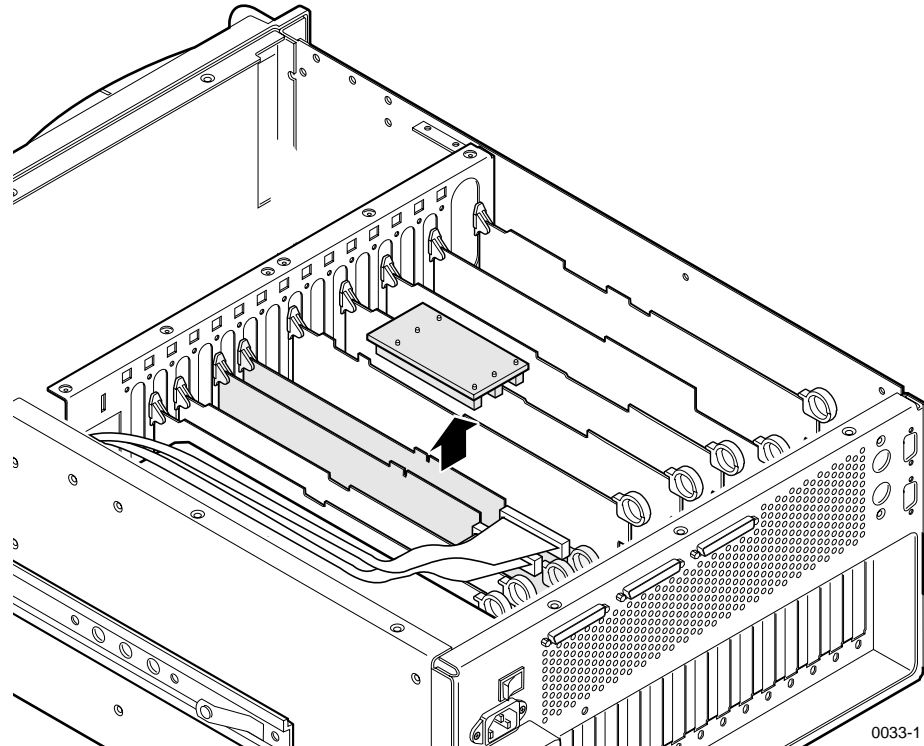


Figure 6. PCI Board Removal

5. Connect the free end of the cable to the SCSI header connector on the front of the Slave Enhanced Disk Recorder board (Figure 5).
6. Noting the connector keying, reinstall the PCI board so that the MASTER connector on the PCI board is connected to the Master Enhanced Disk Recorder board (Figure 6).
7. Dress the SCSI cables through the channel to the right of the Fan Carrier Tray.



Installing Disk Drives

To install the new disk drives:

1. Observe ESD cautions and shock warnings on page 6.
2. Being sure to observe the connector orientation, reinstall the disk drives previously removed by sliding the drive caddy into the drive tray and firmly pressing down to connect the drive connector to the SCSI Backplane (Figure 3, page 6).
3. Being sure to observe the connector orientation, in turn, slide each new drive into an unused caddy slot in the drive tray and firmly press down to connect the drive connector to the SCSI Backplane (Figure 7).

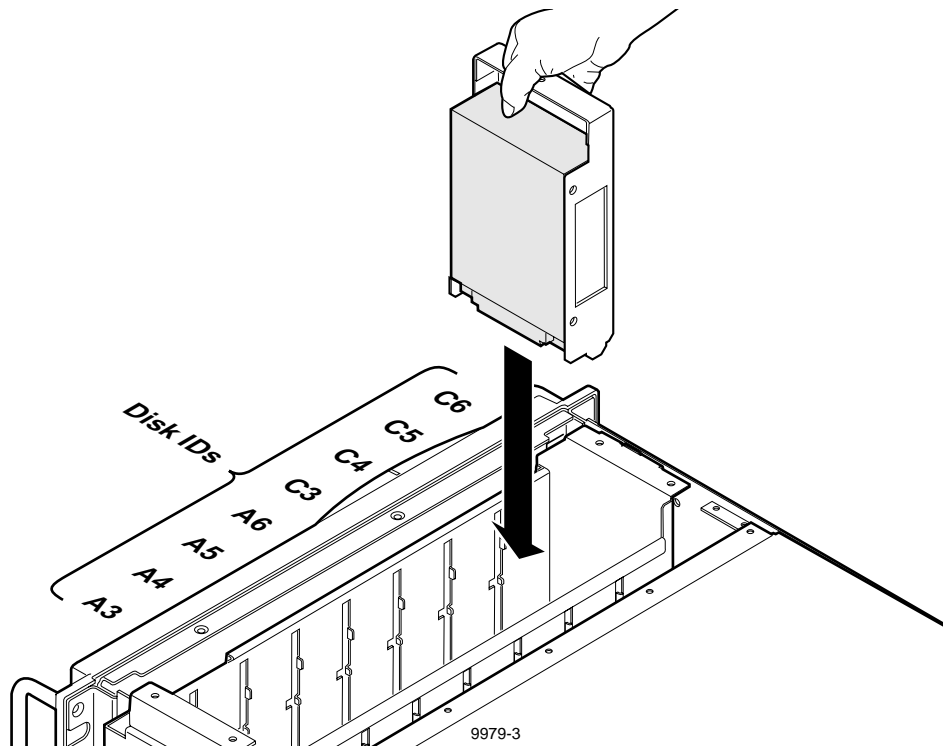


Figure 7. Installing Disk Drive Caddies

Reassembling the PDR 200

To reassemble the PDR 200:

1. Use the Torx tool with the T10 tip to replace the top rear cover with the screws previously removed.
2. With a non-metallic, flat-bladed tool, pry the screw hole plugs out of the four screw holes on the top front cover.
3. Use the Torx tool with the T10 tip to replace the top front cover with the screws previously removed and the four additional screws included with the kit.

Creating the Disk File System

The VdrPanel normally starts automatically when you power up the PDR 200, but you first need to create the disk file system to include the new disk drives. Perform the following to prevent the VdrPanel from starting and to create the disk file system.

1. Reconnect the power cord and all previously disconnected cables.
2. Turn on the PDR 200 and hold the Shift key down during the start up process until the login window appears.
3. Log in as administrator.
For *Username*, enter: **administrator**
For *Password*, enter: **triton**
4. Double-click the **PDR Disk Utility** in the PDR Applications group.
5. Check the listing of SCSI drives in the *C:\Profile.log* window. The list should include all the drives (IDs A.03-A.06 and C.03-C.06 for a 4-channel PDR 200; IDs A.03-A.06 and B.03-B.06 for a 2-channel PDR 200). If any of the drive IDs do not appear, shut down the PDR 200 and check:
 - The installation of the cables inside the chassis and the cable connectors for bent or broken pins.
 - Proper seating of the drives in the SCSI backplane.
 - The drive connectors for bent or broken pins.



9GB Disk Drive Upgrade

6. Use PDR Disk Utility to arrange the hard disks in logical groups. Refer to “Using the PDR Disk Utility” in the *Profile Family User Manual* for information and instructions.
7. Test the File System by:
 - Exiting PDR Disk Utility
 - Opening VdrPanel
 - Recording and playing some clips
8. Log off and then back on as User: Profile, Password: Profile.
9. Turn power off and disconnect the power cord and all cables.

Reinstalling the PDR200 in the Rack

To reinstall the PDR200 into the rack:



WARNING: The PDR200 is too heavy for one person to install into an equipment rack. To avoid possible injury, get help when installing the PDR200 in the rack.

1. Engage the rack slides on each side of the chassis with those in the rack and slide the chassis into the rack until the stop latches engage.
2. Press the stop latch buttons (visible in the stop latch holes) to disengage the stop latches and slide the chassis completely into the rack.
3. Tighten the front panel retaining screw.
4. Reconnect the power cord and all previously disconnected cables to the rear panel.
5. Turn the rear panel power switch On and then turn the front panel switch to On.