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2104 Model DL1 Expandable Storage Plus Installation Guide

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2104 Model DL1 Expandable Storage Plus Installation Guide

Hardware

May 2000

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Year 2000

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Communications Statements

The following statements apply to this product. The statements for other products intended for use with this product appear in their accompanying manuals.

Federal Communications Commission (FCC) Statement

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 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.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Neither the provider nor the manufacturer is responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Japanese Voluntary Control Council for Interference (VCCI) Statement

This product is a Class A Information Technology Equipment and conforms to the standards set by the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). In a domestic environment, this product might cause radio interference, in which event the user might be required to take adequate measures.

Korean Government Ministry of Communication (MOC) Statement

Please note that this device has been approved for business purposes with regard to electromagnetic interference. If you find that this device is not suitable for your use, you can exchange it for one that is approved for non-business purposes.

New Zealand Compliance Statement

This is a Class A product. In a domestic environment this product might cause radio interference, in which event the user might be required to take adequate measures.

International Electrotechnical Commission (IEC) Statement

This product has been designed and built to comply with (IEC) Standard 60950.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Industry Canada Compliance Statement

This Class A digital apparatus complies with IECS-003.

United Kingdom Telecommunications Requirements

This apparatus is manufactured to the International Safety Standard EN60950 and as such is approved in the U.K. under approval number NS/G/1234/J/100003 for indirect connection to public telecommunications systems in the United Kingdom.

European Union (EU) Statement

This product is in conformity with the protection requirements of EU council directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. Neither the provider nor the manufacturer can accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of option cards not supplied by the manufacturer.

This product is in conformity with the EU council directive 73/23/EEC on the approximation of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits. This conformity is based on compliance with the following harmonized standard: EN60950.

Radio Protection for Germany

Zulassungsbescheinigung laut Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 30. August 1995.

Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen EMVG das EG-Konformitätszeichen zu führen.

Der Aussteller der Konformitätserklärung ist die IBM Deutschland.

Informationen in Hinsicht EMVG Paragraph 3 Abs. (2):

Das Gerät erfüllt die Schutzanforderungen nach EN 50082-1 und EN 55022 Klasse A.
--

EN55022 Klasse A Geräte bedürfen folgender Hinweise:

Nach dem EMVG: "Geräte dürfen an Orten, für die sie nicht ausreichend entstört sind, nur mit besonderer Genehmigung des Bundesministeriums für Post und Telekommunikation oder des Bundesamtes für Post und Telekommunikation betrieben werden. Die Genehmigung wird erteilt, wenn keine elektromagnetischen Störungen zu erwarten sind." (Auszug aus dem EMVG, Para.3, Abs.4). Dieses Genehmigungsverfahren ist nach Paragraph 9 EMVG in Verbindung mit der entsprechenden Kostenverordnung (Amtsblatt 14/93) kostenpflichtig.

Nach der EN 55022: "Dies ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Massnahmen durchzuführen und dafür aufzukommen."

Anmerkung: Um die Einhaltung des EMVG sicherzustellen, sind die Geräte wie in den Handbüchern angegeben zu installieren und zu betreiben.

Taiwan Class A Compliance Statement

警告使用者:

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Safety Notices

Definitions of Safety Notices

A *danger* notice indicates the presence of a hazard that has the potential of causing death or serious personal injury.

This book contains no *danger* notices.

A *caution* notice indicates the presence of a hazard that has the potential of causing moderate or minor personal injury.

This book contains *caution* notices in sections “Removing the Disk Drive Modules and Dummy Disk Drive Modules” on page 8 and “Installing the 2104 Model DL1 into an RS/6000 Rack” on page 14.

An *attention* notice indicates an action that could cause damage to a program, device, system, or data.

Safety Notice for Installing, Relocating, or Servicing

Before connecting or removing any cables to or from connectors at the using system, be sure to follow the steps in the installation or relocation checklist specified in the *Installation and Service Guide*, or equivalent, for your using system.

For safety checks when servicing the IBM Expandable Storage Plus, refer to “Service Inspection Guide” in the *IBM Expandable Storage Plus: 2104 Service Guide*.

About This Book

This book provides installation instructions for any person who is required to install a 2104 Model DL1, which is a rack-mounted Small Computer Systems Interface (SCSI) disk enclosure.

Numbering Convention

In this book, one gigabyte (GB) equals 1 000 000 000 bytes.

Related Publications

This section lists the publications that are related to IBM Expandable Storage Plus.

IBM Expandable Storage Plus: 2104 Operator's Guide, SA33-3294

IBM Expandable Storage Plus: 2104 Service Guide, GY33-0194

IBM Expandable Storage Plus: 2104 Hardware Technical Information, SA33-3296.

For publications that are related to RISC systems, see "Appendix A. Operating with RISC Systems" on page 29.

Installing a 2104 Model DL1

Important: The installation of this product is a customer responsibility.

Attention:

Before continuing with any of the actions described in this book, PLEASE READ THE SAFETY NOTICES NOW. These are in “Appendix B. Translated Safety Notices” on page 47.

Attention:

When you handle field-replaceable units (FRUs) and other computer parts, take these precautions to avoid static damage:

- **Limit your movement. Movement can cause static electricity to build up around you.**
- **Always touch computer parts carefully. Hold adapters and memory-modules by their edges. Never touch any exposed circuits. Prevent other people from touching computer parts.**
- **Before you install a new part, touch the static-protective package that contains the part against an unpainted metal part of the 2104 or using system for at least two seconds. This action reduces static electricity in the package and in your body.**
- **Remove the part from its package and, if possible, install it directly into the 2104 without putting the part down. If you need to put the part down, first place the static-protective package that contained the part onto a smooth, level surface, then place the part onto the package. Do not place the part onto any metal surface.**

These instructions describe how to:

- Install a 2104 Model DL1 disk enclosure into an RS/6000™ rack (system rack or expansion rack)
- Connect the 2104 Model DL1 to a power source
- Connect the 2104 Model DL1 to the using system
- Switch on and test the installation

The instructions assume that:

- The rack has already been set up
- A stabilizer has been correctly attached to the bottom front of the rack to prevent the rack from tipping forward while the 2104 disk enclosure is being installed into the rack. (If necessary, see the *Installation and Service Guide*, or equivalent, for the rack.)
- You have access to:
 - preinstallation planning information for the system
 - the disk enclosure configuration information

If the 2104 disk enclosure has already been installed in the rack:

- Go to “Connecting the 2104 Model DL1 to the Power Source” on page 22 if the power cables for the 2104 have not been installed.
- Go to “Connecting the 2104 to the Using System” on page 24 if the power cables for the 2104 have been installed.

Notes:

1. Each rack-mounted 2104 disk enclosure requires an airflow of 1.1 m³ per minute (40 ft³ per minute). When racks containing many 2104 disk enclosures are to be installed together, the following requirements must be met to ensure that the 2104 disk enclosures are adequately cooled:
 - The airflow enters at the front of the rack and leaves at the back. To prevent the air that is leaving the rack from entering the intake of another piece of equipment, racks should be positioned in alternate rows, back-to-back and front-to-front.
 - The front of racks should be positioned on floor-tile seams, with a full line of perforated tiles immediately in front of the racks. Each perforated tile should have an air flow of at least 11.34 m³ per minute (400 ft³ per minute). The underfloor temperature must not exceed 15°C (60°F).
 - Where racks are in rows front-to-front or back-to-back, there should be a gap of at least 1220 mm (48 in) separating the rows.
 - To ensure correct air flow within each rack, the rack filler plates must be installed in unused positions. Also, all the gaps in the front of the racks must be sealed, including the gaps between the 2104 disk enclosures.
2. The recommended operating temperature is 22°C (72°F) or lower.

Installing a 2104 Model DL1 into an RS/6000 Rack

Installing a 2104 Model DL1 into an RS/6000 Rack is done by:

1. Preparing the RS/6000 rack
2. Removing the disk drive modules from the 2104 Model DL1
3. Installing the 2104 Model DL1 into the rack
4. Reinstalling the disk drive modules into the 2104 Model DL1

The procedure that is recommended is described in the next four sections of this book, but first you need to check that you have received all the parts required for your 2104 Model DL1.

Checking the Items for an RS/6000 Rack

1. Refer to Figure 1.

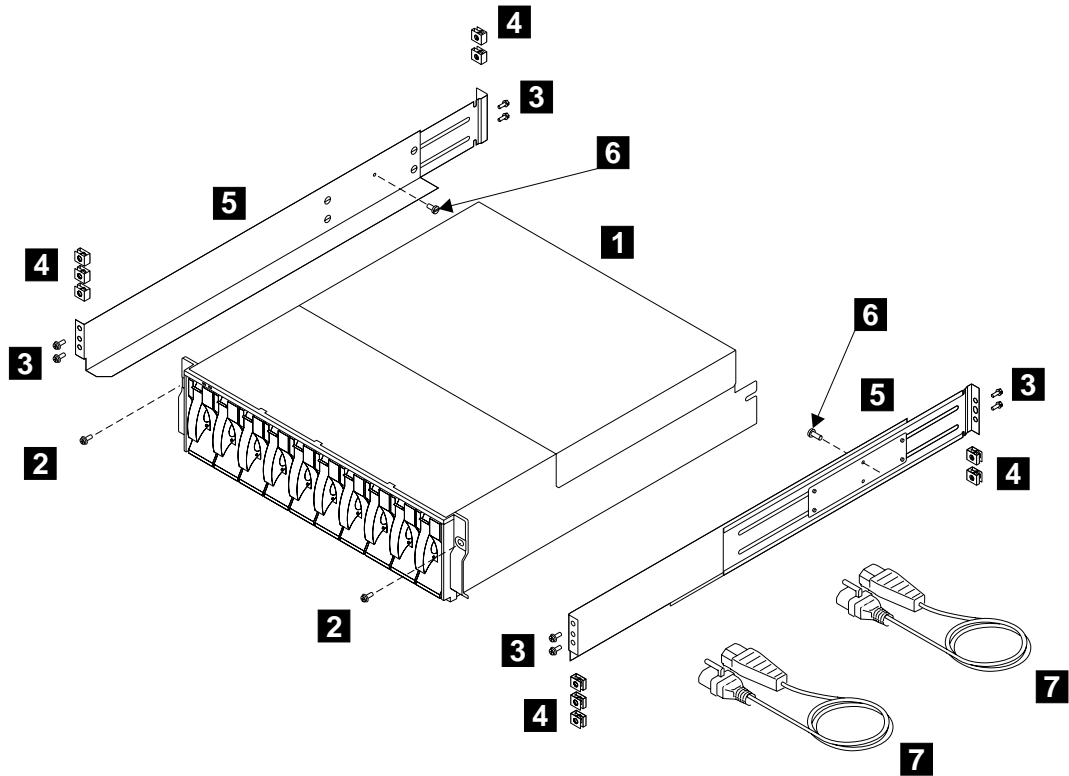


Figure 1. Items for the 2104 Model DL1

1	2104 Model DL1	5	Support rails
2	Mounting screws (front)	6	Mounting screws (back)
3	Rail mounting screws	7	Power cable(s)
4	Nut clips		

Note: If your 2104 Model DL1 has only one fan-and-power-supply assembly, only one power cable is supplied.

2. Ensure that you have all the items that are shown on the list.
In addition to the items shown there is also a sheet of labels. Use these to label your disk enclosure (see 4 on page 20).
3. Refer to the website described at “Web Support Pages” on page 44 for the latest microcode and system software levels. Ensure that the using-system software is at the correct level for the 2104, and that the correct level of microcode for the disk drive modules has been loaded.

Preparing the RS/6000 Rack (System or Expansion)

Notes:

- If you are installing the 2104 disk enclosure into an empty rack, install it into the lowest available position so that the rack does not become unstable.
 - If you are installing more than one 2104 disk enclosure into the rack, start at the lowest available position, and work upward.
 - You might need to remove the rack power distribution unit before you install the support rails (see the *Installation and Service Guide*, or equivalent, for the rack).
1. Find the two support rails (**5** in Figure 1 on page 4) that are supplied with the 2104.
 2. The 2104 Model DL1 is three Electronics Industries Association (EIA) units high. Using the preinstallation planning information, or other relevant information, determine where you are going to locate the 2104 Model DL1 in the rack.
 3. Refer to the EIA markings on the rack and decide where you are going to install the support rails. If appropriate, allow for possible future installation of other disk enclosures.

4. Refer to Figure 2.

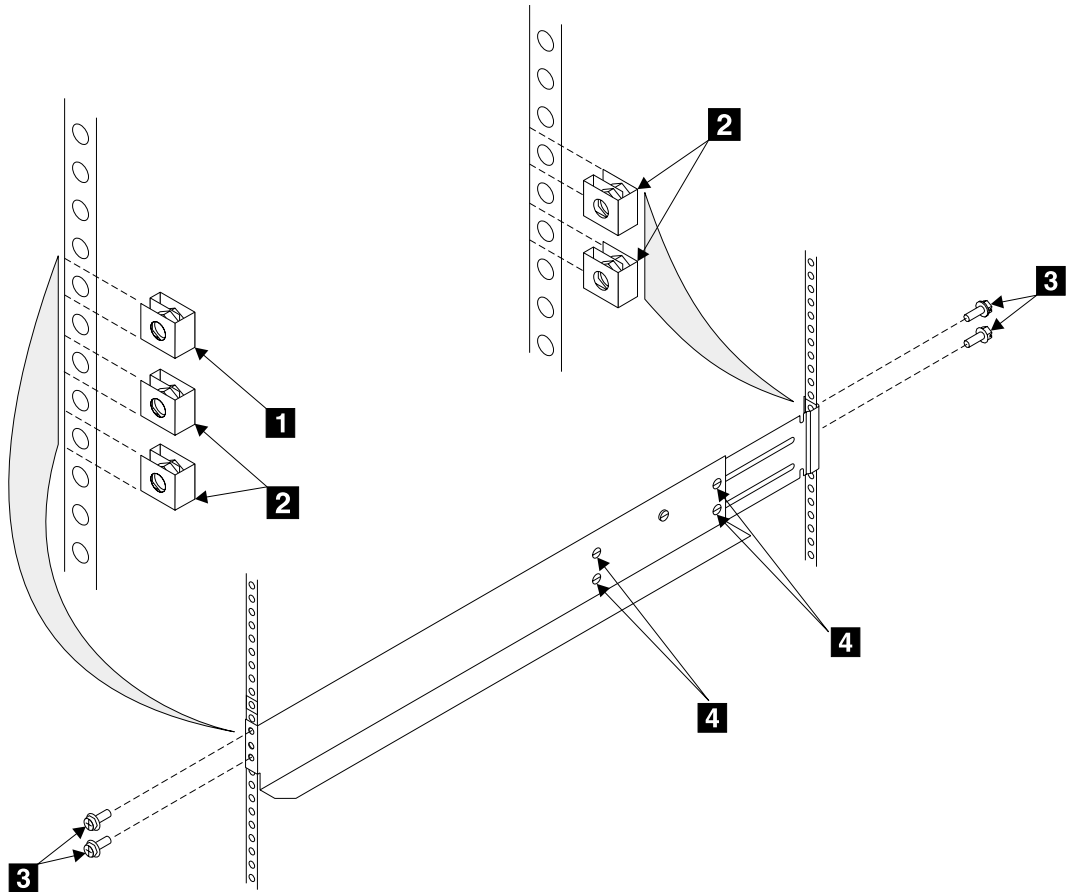


Figure 2. Installing the Support Rails

5. For each support rail:
- Attach nut clips **1** and **2** at the selected holes in the rack. The selected holes should be at the same positions at the front and back of the rack.
 - Loosen the five screws **4** and **5** on the support rail so that the support rail can be extended to fit the rack.
 - Hold the support rail so that it is horizontal, and position it so that the screws **3** can be inserted into the matching holes at which the nut clips **2** were attached.
Note that the middle of the three holes at each end of the rail is not used. Only the top and bottom holes are used.
Note also that the ends of the rail should be positioned outside the rack supports.
 - Verify that the support rail is horizontal. If it is not horizontal, remove it from the rack, then repeat from step 5a.
 - Tighten the rail screws **4** so that the rail is held firmly in the rack.

Leave the rail screw **5** loose; it will be tightened later.

6. Go to “Removing the Disk Drive Modules and Dummy Disk Drive Modules” on page 8.

Removing the Disk Drive Modules and Dummy Disk Drive Modules

CAUTION:

A fully-configured 2104 Model DL1 weighs up to 38.5 kg (85 lb) with disk drive modules installed. Do not attempt to lift the 2104 disk enclosure into the rack unless all the disk drive modules have been removed.

Attention: Disk drive modules are fragile. Handle them with care, and keep them well away from strong magnetic fields.

1. Refer to Figure 3.

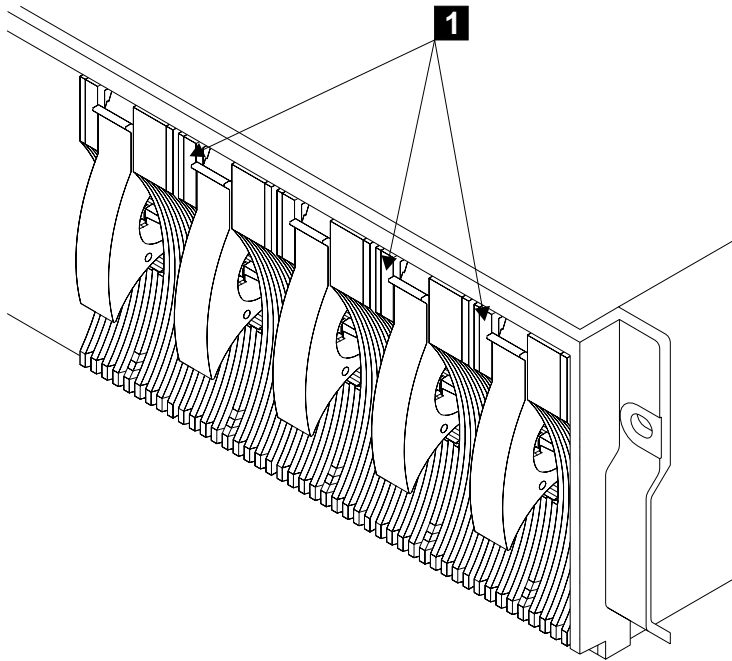


Figure 3. Disk Drive Modules showing position of the Serial Number Label

2. Before you start to remove any modules, make a list of which disk drive modules are in which slots in the 2104 disk enclosure. This action helps you to reinstall the modules into their correct slots after you have installed the 2104 into the rack.

Disk drive modules have a serial number label **1**. This label carries the last 8 to 10 digits of the serial number of the disk drive, and also the disk drive type (SCSI) and capacity (for example, 18.2 GB).

Note: Each disk drive module also has an SCSI address that is related to its position in the 2104 Model DL1. The addresses used are 0, 1, 2, 3, 4, 8, 9, 10, 11, 12. In the 2104 Model DL1, these addresses are assigned, in sequence, from left to right (viewed from the front of the 2104 Model DL1).

Disk drive modules **must** be reinstalled in the same slots that they were removed from.

3. Refer to Figure 4.

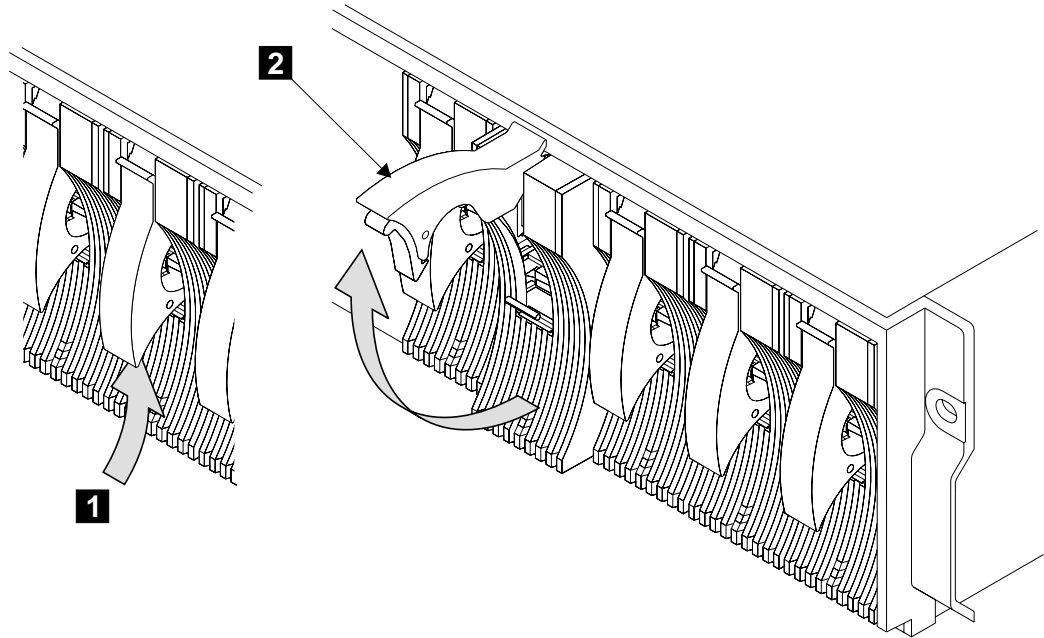


Figure 4. Opening the Handle of a Disk Drive Module

4. Press the blue latch **1**, and pull the handle **2** fully up. This action pulls the disk drive module partially out of its slot.

5. Refer to Figure 5.

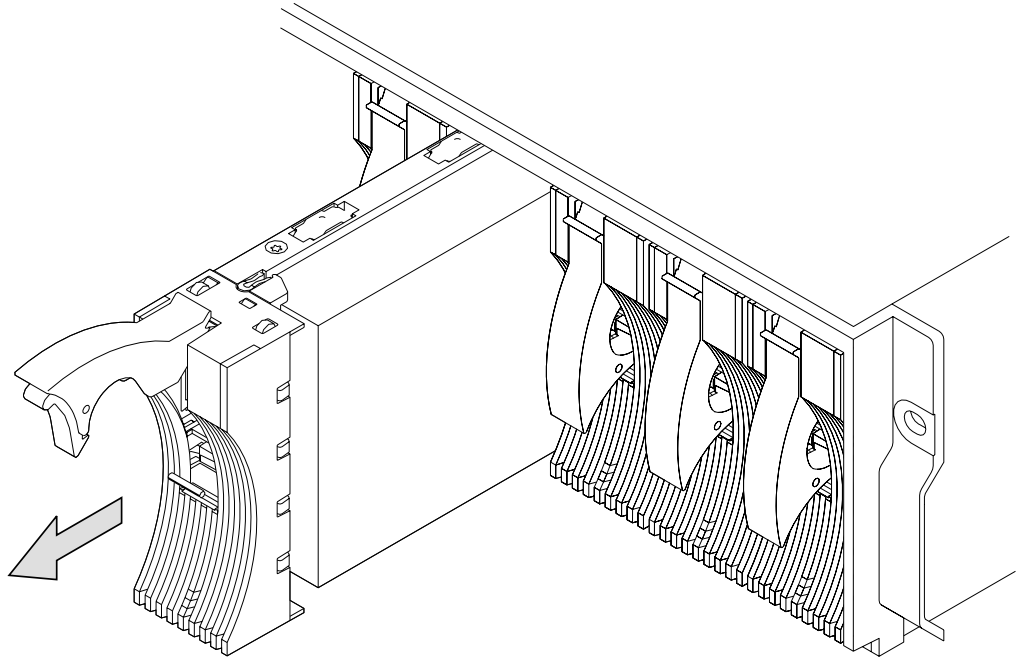


Figure 5. Removing a Disk Drive Module

6. Grip the handle, and carefully pull out the disk drive module. As the module comes out, put one hand under its base to prevent it from falling.

7. Lay the disk drive module on its side as shown in Figure 6. It rests on four blue supports (not visible in the figure) on the bottom of the disk drive module. This prevents the disk drive module from falling over and becoming damaged.

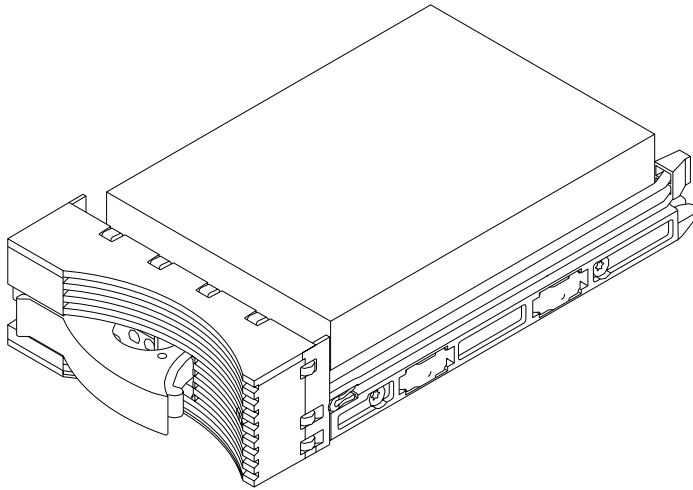


Figure 6. Disk Drive Module on its Side for Safe Storage

- Note:** It is recommended that the removed disk drive modules be kept in the sequence they were in before they were removed from the 2104 disk enclosure.
8. Repeat steps 3 through 7 for each disk drive module. Ensure that you remove all the disk drive modules from the 2104 disk enclosure.

9. You may also wish to remove the dummy disk drive modules. A dummy disk drive module has a simple handle. There is no latch to be pulled upward. Refer to Figure 7.

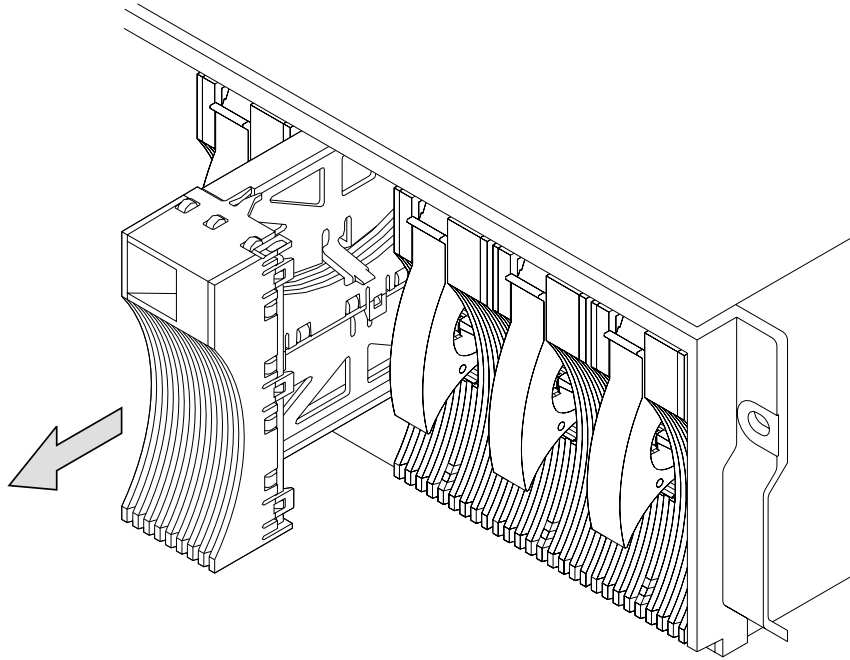


Figure 7. Removing a Dummy Disk Drive Module

Installing the 2104 Model DL1 into an RS/6000 Rack

CAUTION:

The stabilizer must be correctly attached to the bottom front of the rack to prevent the rack from tipping forward while the 2104 disk enclosure is being installed into the rack. Do not install or pull out any unit if the stabilizer is not attached to the rack.

CAUTION:

A 2104 Model DL1 weighs up to 38.5 kg (85 lb) with disk drive modules installed. Do not attempt to lift the 2104 disk enclosure into the rack unless all the disk drive modules have been removed.

CAUTION:

Do not attempt to lift the 2104 disk enclosure by yourself. Ask another person to help.

1. If you have not already done so, remove all the disk drive modules from the 2104 disk enclosure (see "Removing the Disk Drive Modules and Dummy Disk Drive Modules" on page 8).
2. Stand at the front of the rack and, with help from another person, place the back of the 2104 Model DL1 onto the support rails, then slide the 2104 disk enclosure into the rack.

3. Refer to Figure 8.

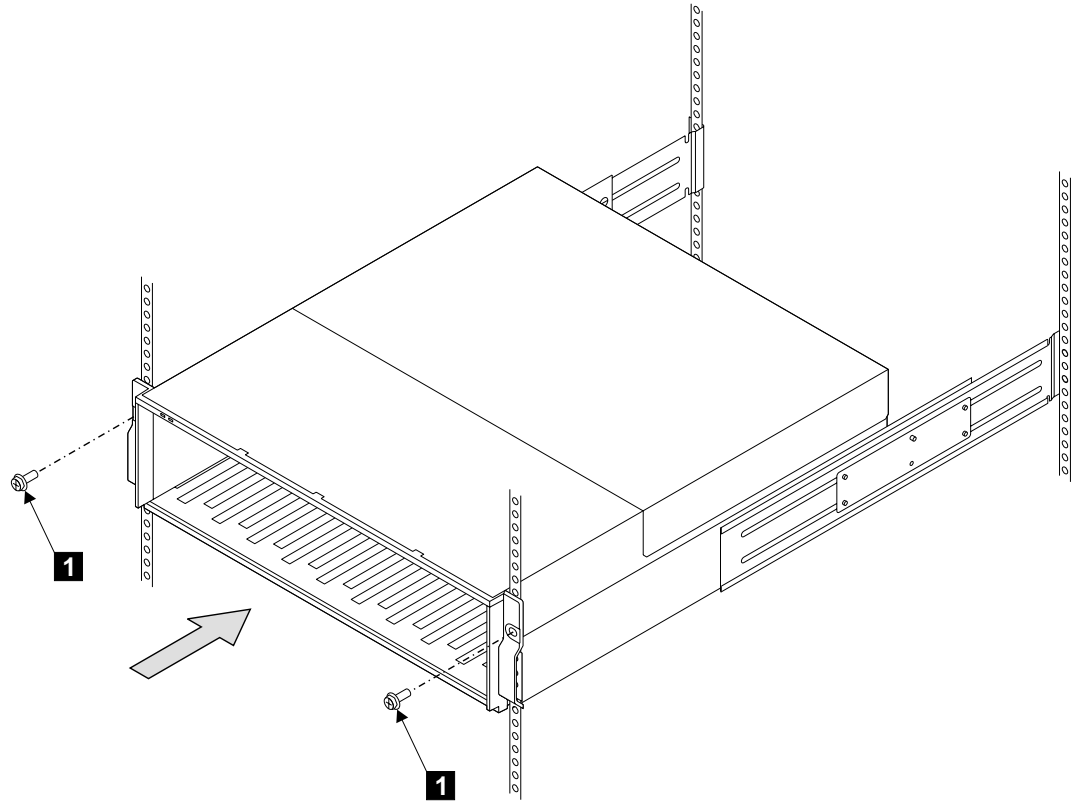


Figure 8. Installing the Front Mounting Screws

4. Install the two front mounting screws **1** and tighten them.

5. Refer to Figure 9.

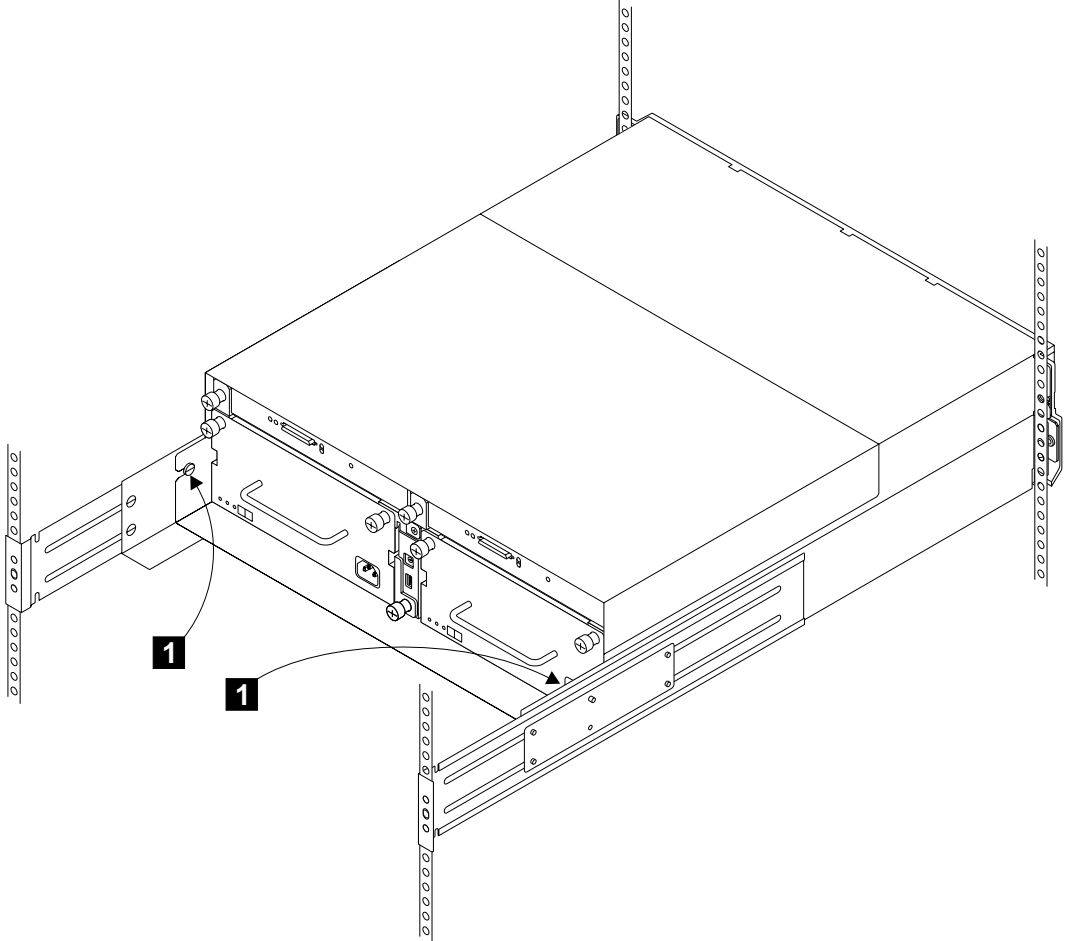


Figure 9. Installing the Back Mounting Screws

6. At the back of the rack, install and tighten the two screws **1**.
Note: These are the screws identified as **5 in Figure 2 on page 6.**
7. Go to “Reinstalling the Disk Drive Modules and Dummy Disk Drive Modules” on page 17.

Reinstalling the Disk Drive Modules and Dummy Disk Drive Modules

Attention:

- Disk drive modules are fragile. Handle them with care, and keep them well away from strong magnetic fields.
 - Any slot that has no disk drive module installed *must* contain a dummy disk drive module. The dummy disk drive module ensures that the correct airflow is maintained around the disk drive modules in the other slots.
1. Referring to the note that you made about the original locations of the modules, reinstall the modules (in the same sequence that they were removed) as described in the following steps.
 2. Refer to Figure 10.

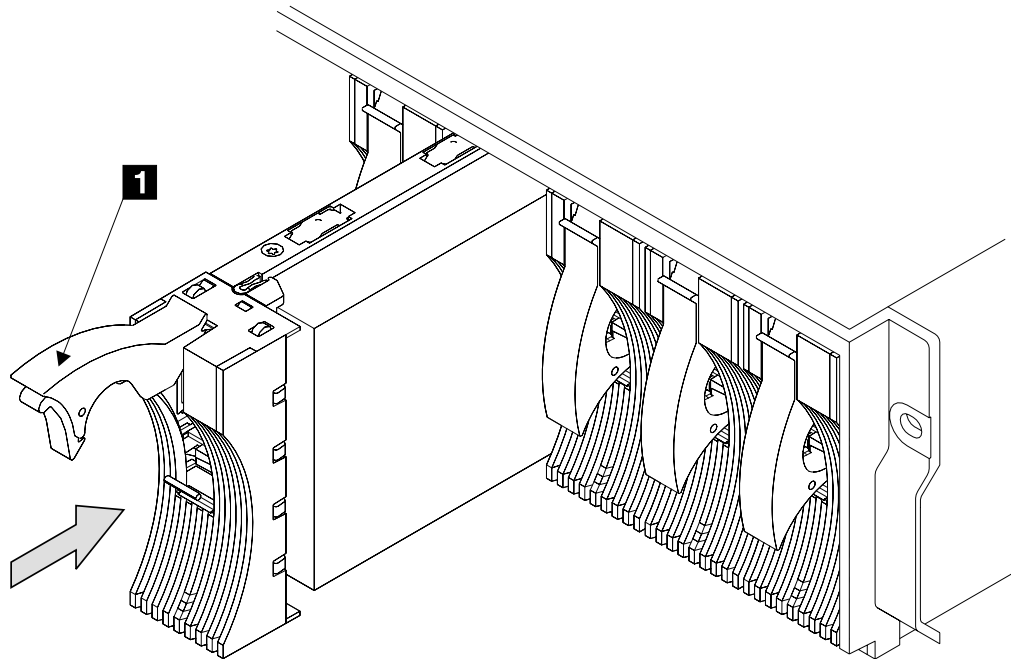


Figure 10. Reinstalling a Disk Drive Module

3. Ensure that the handle **1** is fully open on the disk drive module that you are going to install.
4. With one hand giving support to the base of the module and the other hand holding the handle **1**, insert the module and push it into the slot. When the handle touches the front surface of the enclosure, the module stops. Note that the module is not yet fully home.

5. Refer to Figure 11.

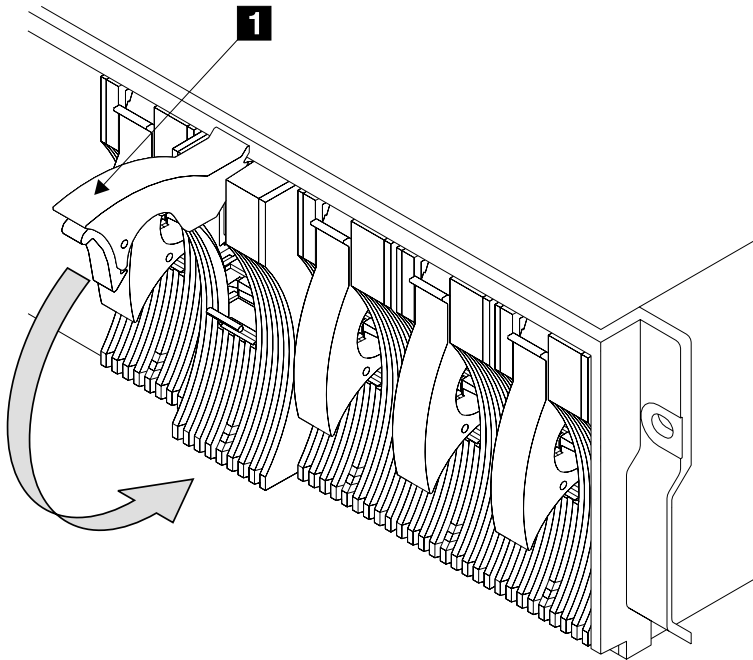


Figure 11. Closing the Handle of a Disk Drive Module

6. While continuing to push the disk drive module into the slot, slowly close the handle **1** until it stops with a click. This action pushes the module fully home.
7. Verify that the disk drive module that you have just installed is aligned with the sides of the 2104 and that no gap exists between this module and the modules that are next to it.

Verify also that the front edge of this disk drive module aligns with the front edges of the modules that are next to it.

If the disk drive module is not correctly aligned, remove it (see “Removing the Disk Drive Modules and Dummy Disk Drive Modules” on page 8) and reinstall it (steps 2 through 6 above).

8. Repeat steps 2 through 7 for each disk drive module.

Attention: Any slot that has no disk drive module installed *must* contain a dummy disk drive module. The dummy disk drive module ensures that the correct airflow is maintained around the disk drive modules in the other slots.

9. Ensure that the 2104 disk enclosure has no empty slots. Install dummy disk drive modules if necessary.
10. Refer to Figure 12.

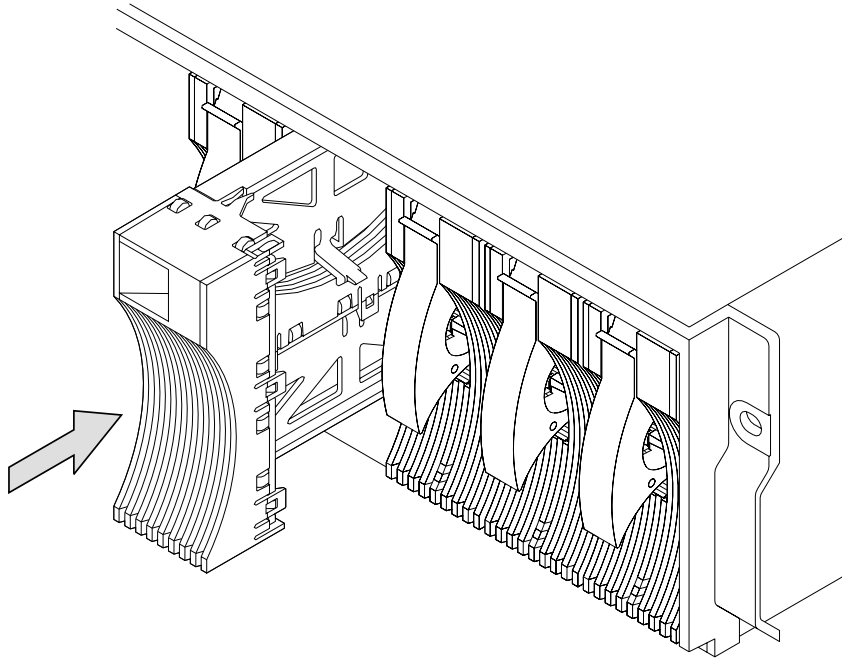


Figure 12. Reinstalling a Dummy Disk Drive Module

11. Go to “Connecting the 2104 Model DL1 to the Power Source” on page 22.

Getting Ready to Connect the 2104 Model DL1

1. Referring to your preinstallation planning information, check how the 2104 is to be connected to the using system.
2. Refer to Figure 13.

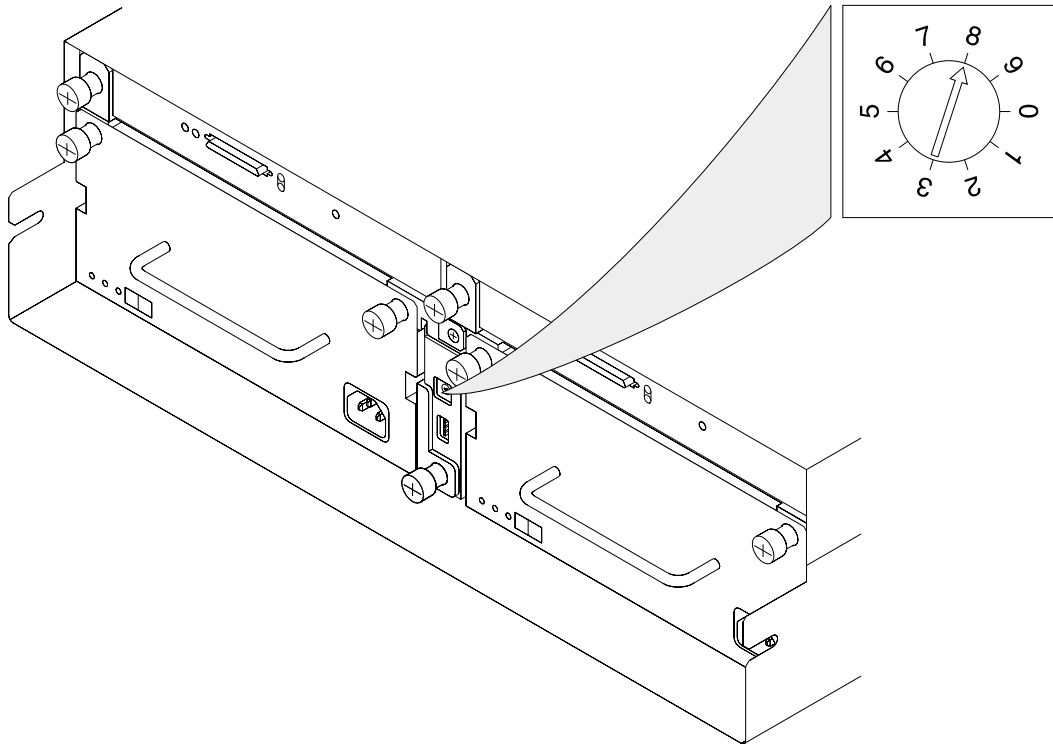


Figure 13. Setting the Box ID

3. Rotate the Box ID rotary switch to the ID you have chosen for this 2104 disk enclosure. You need a small screwdriver to do this.
4. Find the sheet of labels supplied with your 2104 Model DL1. These are numbers 0 through 9. Select the one that represents your setting of the Box ID rotary switch and attach it to the front of the 2104 Model DL1.

5. Now look at the option switches. Refer to Figure 14.

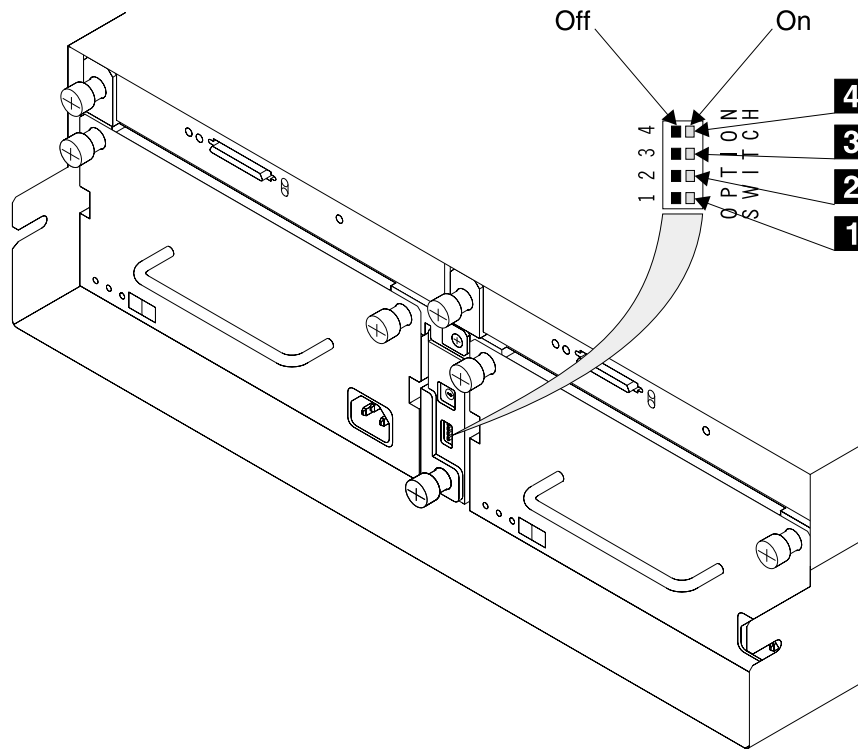


Figure 14. Option Switches

6. Switch **1**, the Power Control Switch, if set ON, means that this 2104 Model DL1 does not automatically switch on or off when the host machine is switched on or off. If you want this 2104 Model DL1 to switch on automatically when the host machine is switched on, set this switch OFF.

Switch **2** is not used and can be set either OFF or ON.

Switch **3**, the Enable Enclosure Services Switch, and Switch **4**, the Select Enclosure Services Switch, should both be set ON to allow ANSI SCSI-3 Enclosure Services (SES) to operate.

Note: The switch card has other switches that are accessible only when the switch card is removed from the 2104 disk enclosure.

One of these switches is used to indicate whether the disk enclosure is a 2104 Model DL1 or a 2104 Model TL1, and another allows the order of the SCSI addresses of the disk drive modules to be reversed.

More information about these switches is given in the *IBM Expandable Storage Plus: 2104 Service Guide, GY33-0194*

Connecting the 2104 Model DL1 to the Power Source

1. Refer to Figure 15.

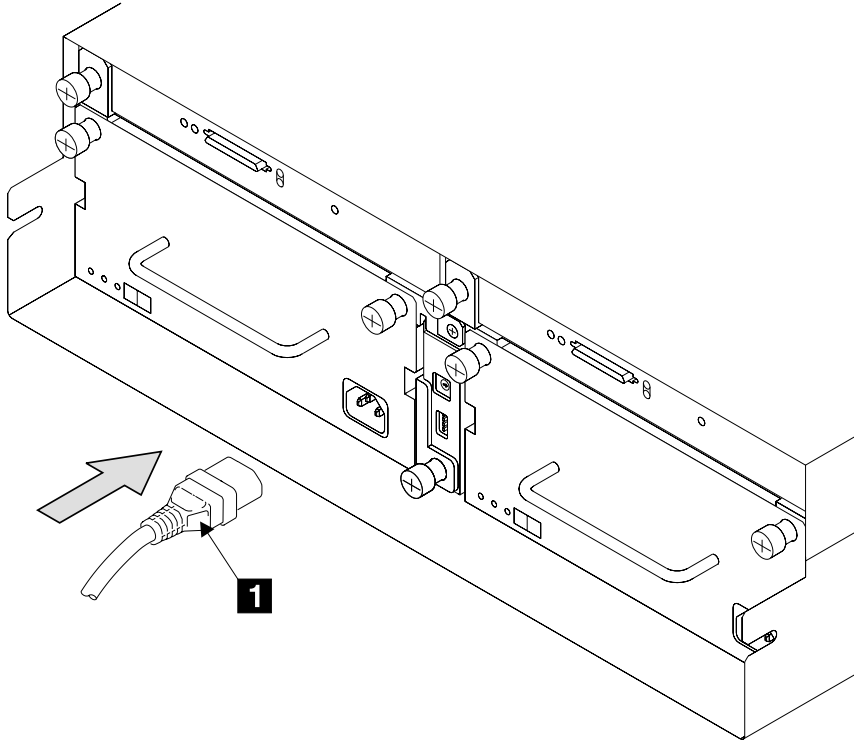


Figure 15. Connecting the Power Plugs

2. At the back of the 2104, plug a power cable into the mainline power connector **1** on each fan-and-power-supply assembly.

Attention: *Never use power cables from another drawer to connect a 2104 to the mainline power outlet. Use only the shielded power cables that are supplied with the 2104.*

3. Refer to Figure 16.

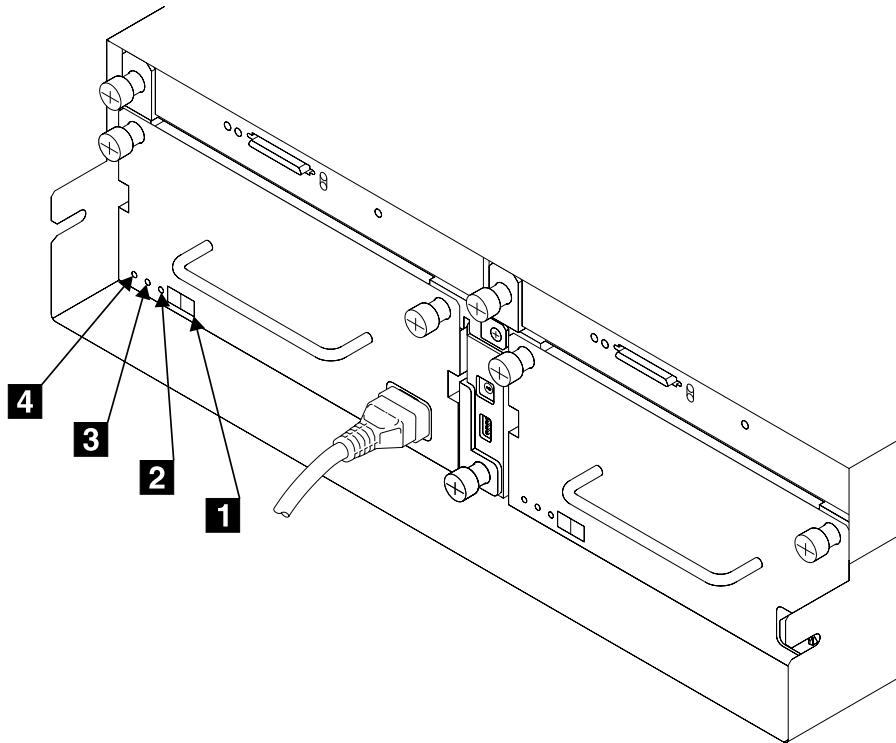


Figure 16. Check Power Supply Switch and Lights

4. Ensure that the DC On/Standby switch **1** is set to standby.
5. Ensure that all power is removed from the rack.
6. Plug the other end of the power cable into the power source in the rack (see the *Installation and Service Guide*, or equivalent, for the rack).
7. Perform the grounding checks described in the *IBM Expandable Storage Plus: 2104 Service Guide, GY33-0194*.
8. If the grounding check is satisfactory, switch on power to the rack. The green AC PWR light **4** comes on.
9. Switch on the DC On/Standby switch **1** on each power supply. If option switch 1 (see Figure 14 on page 21) is on, the green DC PWR light **3** comes on. If option switch 1 (see Figure 14 on page 21) is off, the green DC PWR light **3** stays off. It will come on when the 2104 is connected to the using system.
10. Go to “Connecting the 2104 to the Using System” on page 24.

Connecting the 2104 to the Using System

1. Referring to your preinstallation planning information, check how the 2104 is to be connected to the using system. Verify your configuration by referring to “2104 Configurations” on page 30.
2. Attach identification labels to the external SCSI signal cables (see the appropriate *Adapters, Devices and Cables Information* manual for details).
3. Refer to Figure 17.

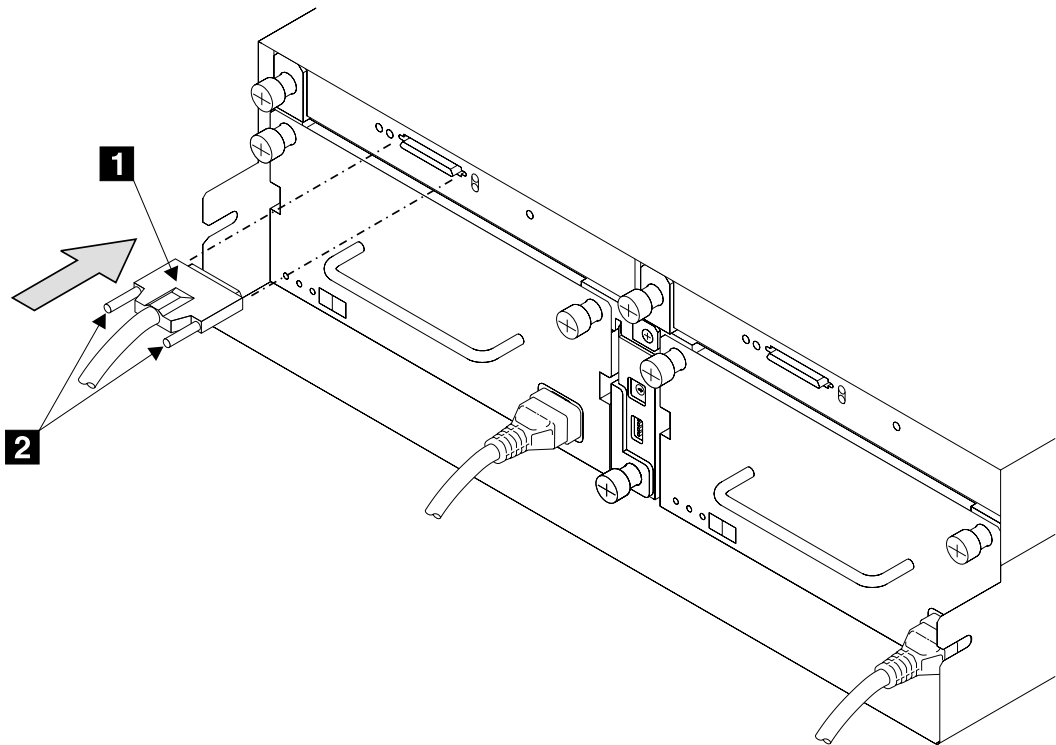


Figure 17. Plug in the SCSI Signal Cable

4. Plug the SCSI signal cables into the connectors **1** on the SCSI interface cards.
5. Tighten the retaining screws **2**. You need a small screwdriver to do this. **DO NOT USE A POWER-DRIVEN SCREWDRIVER.**
6. Ensure that all signal cables are correctly connected. An incorrect connection can prevent the 2104 from becoming ready.

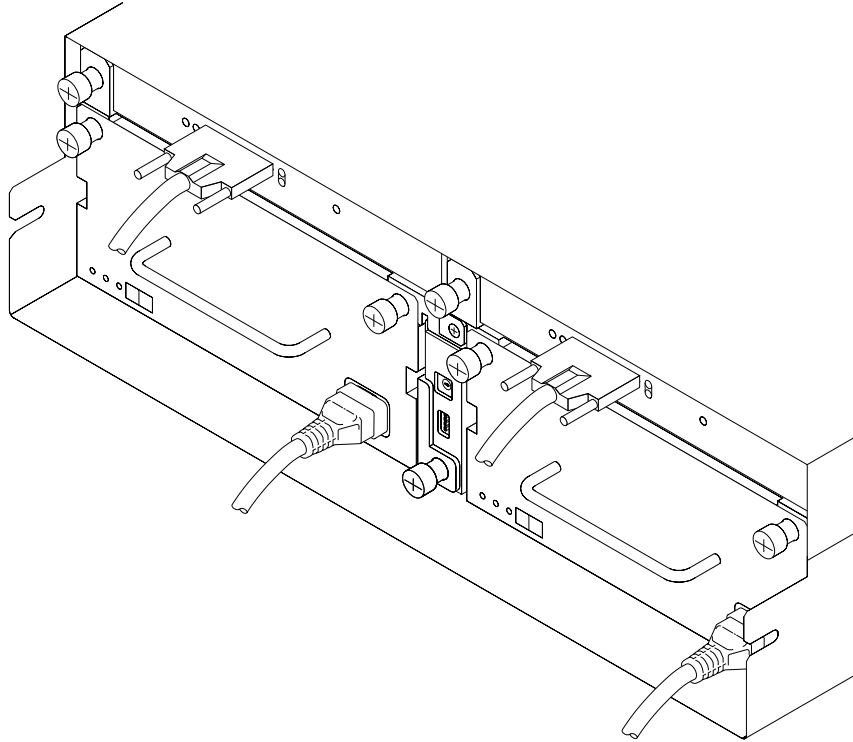


Figure 18. Back of Fully Configured 2104 Model DL1 After Connection to the Using System

Switching On and Testing the 2104

1. If the power to the using system is switched off, switch it on.
2. Refer to Figure 19.

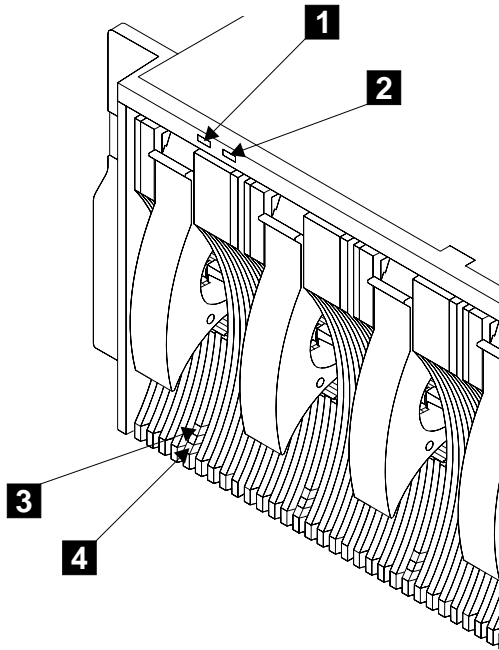


Figure 19. Checking the Lights

3. The 2104 disk enclosure has two lights. The green 2104 Activity light **1** comes on and stays on. The amber 2104 Check light **2** comes on for approximately two seconds and goes off.
4. Each disk drive module has two lights.
The green Activity light **3** comes on for approximately two seconds when power is first supplied to the disk drive; it then goes off.
The amber Check light **4** then comes on for approximately two seconds and then goes off.

Note: Dummy disk drive modules have no lights.

Configuration is complete when the lights on the 2104, and its installed disk drive modules, are as described here (refer to Figure 19):

2104 Power light **1** : On

2104 Check light **2** : Off

Activity light **3** on each installed disk drive module: Off

Check light **4** on each installed disk drive module: Off

If the lights are correct, go to “Appendix A. Operating with RISC Systems” on page 29 which gives information about how to configure your 2104 to the using system, what service aids are available, and how to collect statistics during the operation of your 2104.

If the 2104 Check light **2** is ON, there is a fault with your 2104 disk enclosure. Refer to the *IBM Expandable Storage Plus: 2104 Service Guide*, GY33-0194, for help in identifying the cause of this fault.

Appendix A. Operating with RISC Systems

This appendix gives advice for operating RISC systems to which IBM Expandable Storage Plus disk enclosures are attached.

SCSI Adapters

An RS/6000 uses one of the following SCSI adapters to connect to the 2104:

- SCSI-2 Fast/Wide Adapter/A (type 4-7, feature 2415)
- PCI SCSI-2 F/W RAID Adapter (type 4-H, feature 2493)
- PCI 3-Channel Ultra2 SCSI RAID Adapter (type 4-T feature 2494)
- PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205)
- PCI Single-Ended Ultra SCSI Adapter (type 4-K, feature 6206)
- PCI Single-Ended Plus SCSI RAID Adapter (type 4_A, feature 6208)

SCSI Service Aids

Service aids are available on the using system to help you service the IBM Expandable Storage Plus disk enclosure. Service aids described in the *IBM Expandable Storage Plus: 2104 Service Guide* are:

- Format Media
- Certify Media
- SCSI Device Identification and Removal
- Download Microcode

Identifying IBM Expandable Storage Plus Disk Enclosures and Disk Drive Modules

You can identify an IBM Expandable Storage Plus disk enclosure and the disk drive modules installed in it either by the location code contained in system messages that refer to that unit, or by using the service aid SCSI Device Identification and Removal.

See "Location Codes" in the operator guide for your system for general information about location codes.

Configuring a 2104 to the using system

Use the `cfgmgr` command to configure or reconfigure a 2104 to the using system.

Unconfiguring a 2104 from the using system

To remove a 2104 from the using system, use the following command:

```
rmdev -l [enclosurenumber] -d
```

where [enclosurenumber] is the enclosure device that was generated by the **cfgmgr** command (for example, [ses0], [ses1], [ses2]).

Remove the ses_healthcheck job from the system cron table.

2104 Configurations

This part of the appendix shows examples of cable configurations for the 2104. Some of the configurations are valid for all the adapters that the 2104 supports; others are valid only for particular types of adapter. Also shown are configurations that are not valid. Do not use any configuration that is shown as not valid; unexpected results might occur.

Modes

The 2104 supports high-availability cluster multiprocessing (HACMP) in standby and mutual takeover modes for these non-RAID adapters:

- PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205)
- PCI Single-Ended Ultra SCSI Adapter (type 4-K, feature 6206)
- PCI SCSI-2 Single_Ended Fast/Wide Adapter (type 4_A, feature 6208)
- SCSI-2 Fast/Wide Adapter/A (type 4-7, feature 2415)

HACMP standby mode consists of two systems. One system is active, the other passive. The passive system can take control if the active system fails.

HACMP mutual takeover mode also consists of two systems. Both systems are active, but they do not share disk drives. The good system can take control of the disk drives in the failed system.

Note: The 2104 does not support concurrent access to the disk drives of both systems.

Configurations That Are Valid

One Adapter in One Using System Connected to One 2104

A 2104 that has only one SCSI interface card can be attached to only one SCSI adapter. A 2104 that has two SCSI interface cards can be attached to two SCSI adapters. Figure 20 and Figure 26 on page 37 show the possible cable configurations.

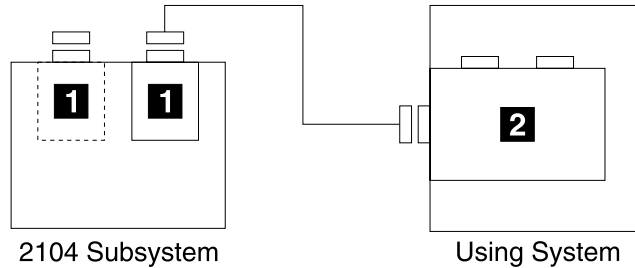


Figure 20. One Adapter in One Using System connected to One 2104

1	SCSI interface card Note: The second SCSI interface card that is in the 2104 is optional.
2	SCSI or SCSI RAID adapter of one of these types: <ul style="list-style-type: none"> • PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205) • PCI 3-Channel Ultra2 SCSI RAID Adapter (type 4-T, feature 2494) • PCI Single-Ended Ultra SCSI Adapter (type 4-K, feature 6206) • PCI SCSI-2 Single_Ended Fast/Wide Adapter (type 4_A, feature 6208) • PCI SCSI-2 Fast/Wide RAID Adapter (type 4-H, feature 2493) • SCSI-2 Fast/Wide Adapter/A (type 4-7, feature 2415)

Attention: The SCSI address of the adapter that is connected to the 2104 must be different from the addresses of the installed disk drive modules.

Two Adapters in One Using System Connected to Two 2104s

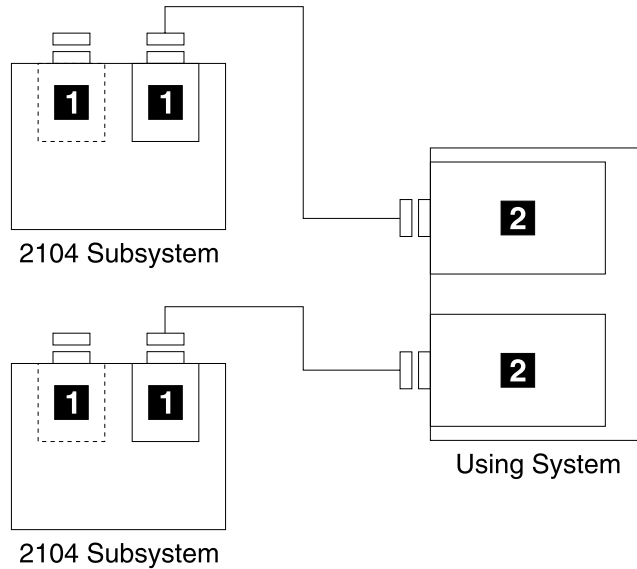


Figure 21. Two Adapters in One Using System Connected to Two 2104s

1	<p>SCSI interface card</p> <p>Note: The second SCSI interface card that is in the 2104 is optional.</p>
2	<p>SCSI or SCSI RAID adapter of one of these types:</p> <ul style="list-style-type: none"> • PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205) • PCI 3-Channel Ultra2 SCSI RAID Adapter (type 4-T, feature 2494) • PCI Single-Ended Ultra SCSI Adapter (type 4-K, feature 6206) • PCI SCSI-2 Single_Ended Fast/Wide Adapter (type 4_A, feature 6208) • PCI SCSI-2 Fast/Wide RAID Adapter (type 4-H, feature 2493) • SCSI-2 Fast/Wide Adapter/A (type 4-7, feature 2415)

Attention: The SCSI address of the adapter that is connected to the 2104 must be different from the addresses of the installed disk drive modules.

Two Adapters in Two Using Systems Connected to Two 2104s

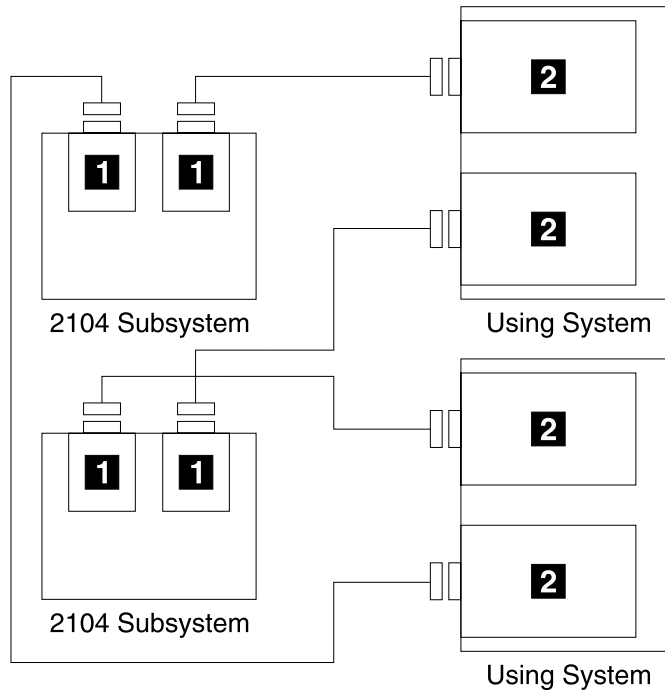


Figure 22. Two Adapters in Two Using Systems Connected to Two 2104s

1	SCSI interface card
2	<p>Non-RAID SCSI adapter of one of these types:</p> <ul style="list-style-type: none"> • PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205) • PCI Single-Ended Ultra SCSI Adapter (type 4-K, feature 6206) • PCI SCSI-2 Single_Ended Fast/Wide Adapter (type 4_A, feature 6208) • SCSI-2 Fast/Wide Adapter/A (type 4-7, feature 2415) <p>This configuration is valid when the adapter is using high-availability cluster multiprogramming (HACMP) in standby and mutual takeover modes (see “Modes” on page 30).</p> <p>Note: For additional connections, more than two SCSI adapters can be installed in each using system.</p>

Attention: The SCSI address of the adapter that is connected to the 2104 must be different from the addresses of the installed disk drive modules. When a second adapter is connected to a 2104, the SCSI addresses of that adapter must be different from the address of the first adapter and the addresses of the installed disk drive modules.

One Adapter in One Using System Connected to Two 2104s

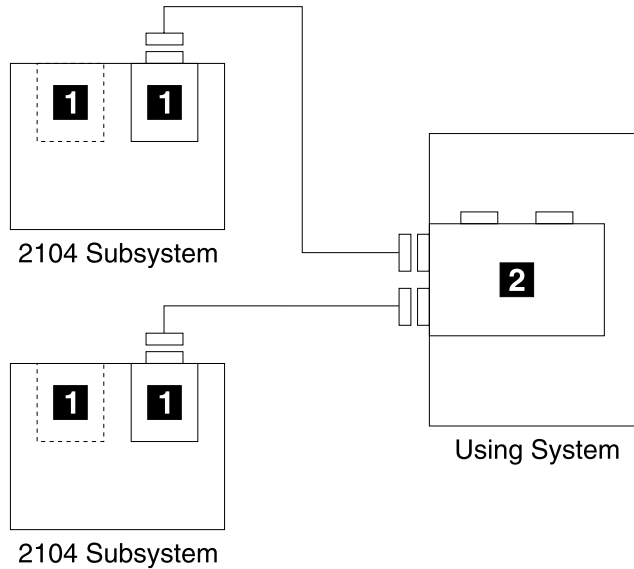


Figure 23. One Adapter in One Using System Connected to Two 2104s

1	SCSI interface card Note: The second SCSI interface card that is in the 2104 is optional.
2	SCSI adapter of one of these types: <ul style="list-style-type: none"> • PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205) • PCI 3-Channel Ultra2 SCSI RAID Adapter (type 4-T, feature 2494)

Attention: The SCSI address of the adapter that is connected to the 2104 must be different from the addresses of the installed disk drive modules.

One Adapter in One Using System Connected to Two 2104s and an Internal RAID Array

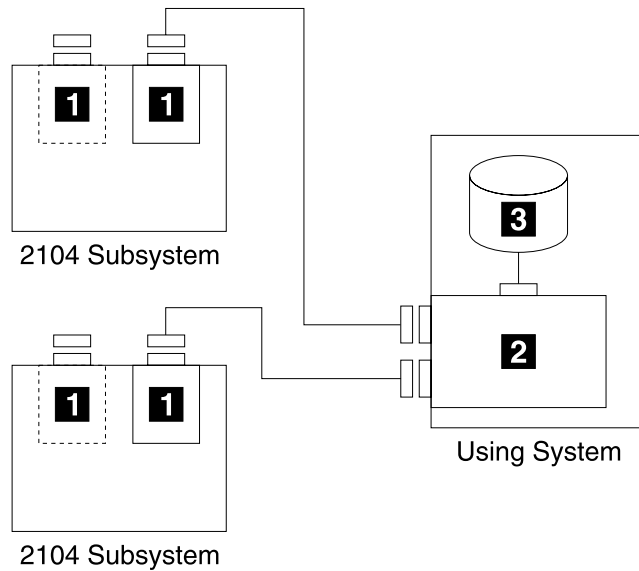


Figure 24. One Adapter, One Using System with Internal RAID Array, and Two 2104s

1	SCSI interface card Note: The second SCSI interface card that is in the 2104 is optional.
2	PCI 3-Channel Ultra2 SCSI RAID Adapter (type 4-T, feature 2494) only
3	Internal RAID-5 array

Attention: The SCSI address of the adapter that is connected to the 2104 must be different from the addresses of the installed disk drive modules.

One Adapter in Each of Two Using Systems Connected to Two 2104s

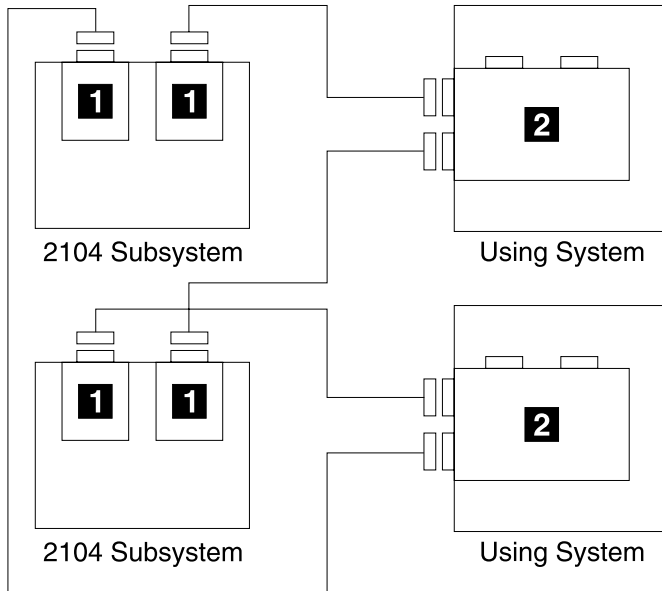


Figure 25. One Adapter in Each of Two Using Systems Connected to Two 2104s

1	SCSI interface card
2	<p>PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205) only.</p> <p>This configuration can use high-availability cluster multiprogramming (HACMP) in standby and mutual takeover modes (see "Modes" on page 30).</p> <p>Note: For additional connections, more than one dual-channel adapters can be installed in each using system.</p>

Attention: The SCSI address of the adapter that is connected to the 2104 must be different from the addresses of the installed disk drive modules. When a second adapter is connected to a 2104, the SCSI addresses of that adapter must be different from the address of the first adapter and the addresses of the installed disk drive modules.

One Adapter in Each of Two Using Systems Connected to One 2104

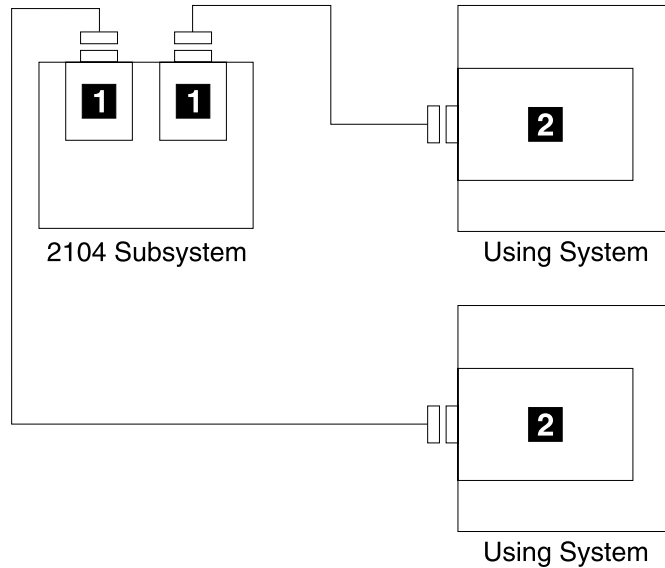


Figure 26. One Adapter in Each of Two Using Systems Connected to One 2104

1	SCSI interface card
2	<p>Non-RAID SCSI adapter of one of these types:</p> <ul style="list-style-type: none"> • PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205) • PCI Single-Ended Ultra SCSI Adapter (type 4-K, feature 6206) • PCI SCSI-2 Single_Ended Fast/Wide Adapter (type 4_A, feature 6208) • SCSI-2 Fast/Wide Adapter/A (type 4-7, feature 2415) <p>This configuration is valid when the adapter is using high-availability cluster multiprogramming (HACMP) in standby and mutual takeover modes (see "Modes" on page 30).</p>

Attention: The SCSI address of the adapter that is connected to the 2104 must be different from the addresses of the installed disk drive modules. When a second adapter is connected to a 2104, the SCSI addresses of that adapter must be different from the address of the first adapter and the addresses of the installed disk drive modules.

Configurations That Are Not Valid

Two Adapters in One Using System Connected to One 2104

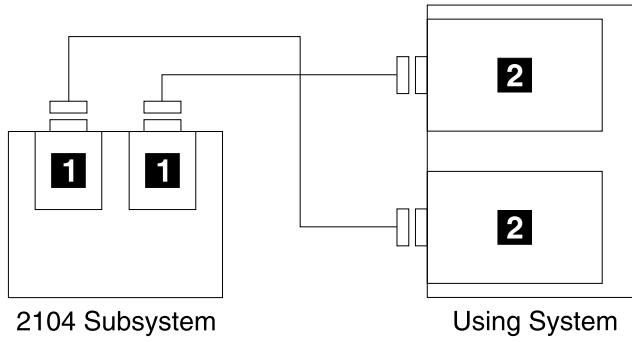


Figure 27. Two Adapters in One Using System Connected to One 2104. **This configuration is not valid.**

1	SCSI interface card
2	SCSI adapter. This configuration is not valid for any type of adapter.

One Adapter in One Using System Connected to Two 2104s via the SCSI Interface Cards

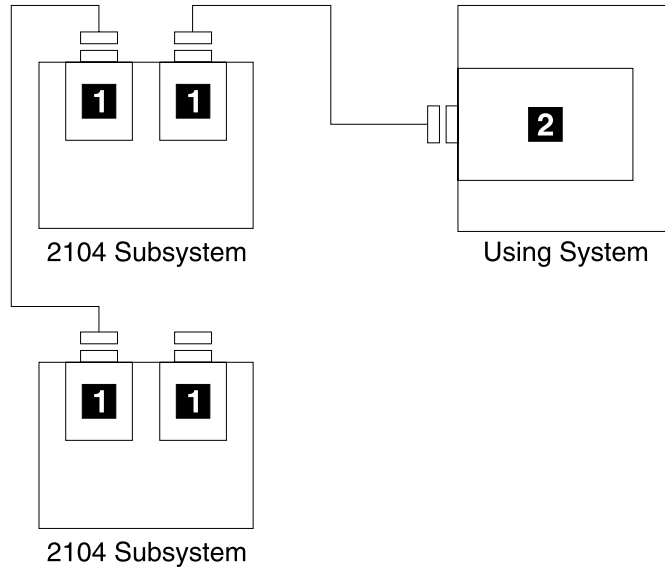
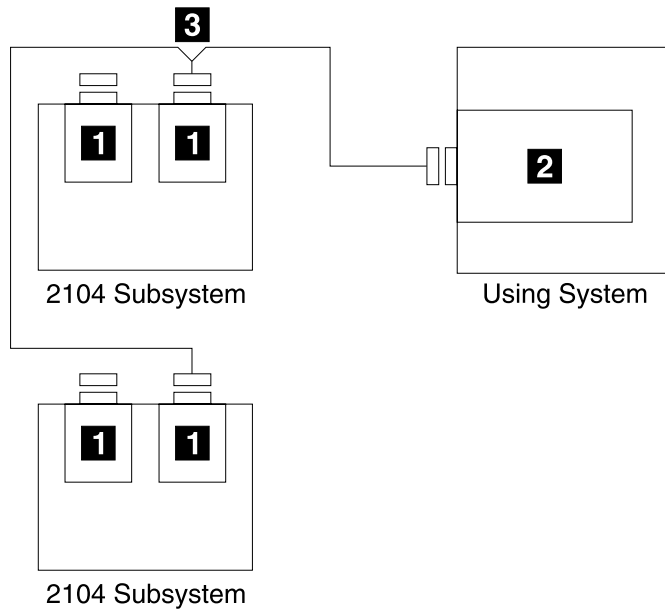


Figure 28. One Adapter in One Using System Connected to Two 2104s via the SCSI Interface Cards. **This configuration is not valid.**

1	SCSI interface card
2	SCSI adapter. This configuration is not valid for any type of adapter.

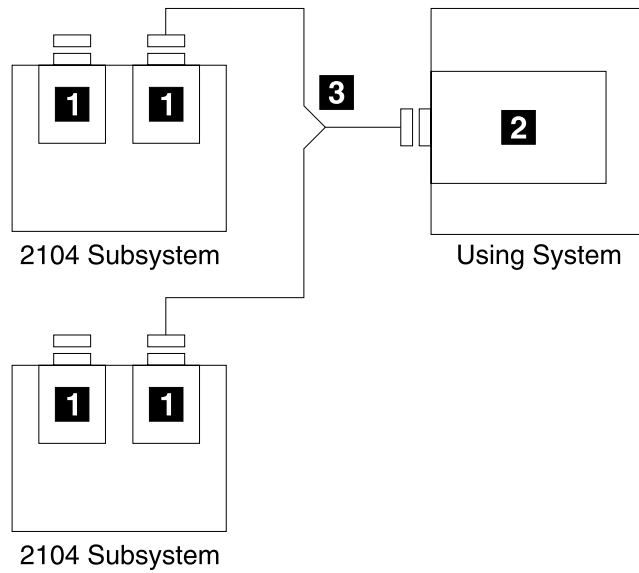
One Adapter in One Using System Connected to 2104s via a Y-Cable (1)



*Figure 29. One Adapter in One Using System Connected to 2104s via a Y-Cable (1).
This configuration is not valid.*

1	SCSI interface card
2	SCSI adapter. This configuration is not valid for any type of adapter.
3	Y-cable. Not supported for any type of adapter that is used with the 2104.

One Adapter in One Using System Connected to 2104s via a Y-Cable (2)



*Figure 30. One Adapter in One Using System Connected to 2104s via a Y-Cable (2).
This configuration is not valid.*

1	SCSI interface card
2	SCSI adapter. This configuration is not valid for any type of adapter.
3	Y-cable. Not supported for any type of adapter that is used with the 2104.

One Dual-Channel Adapter in One Using System Connected to Two 2104s and Internal Disk Drives

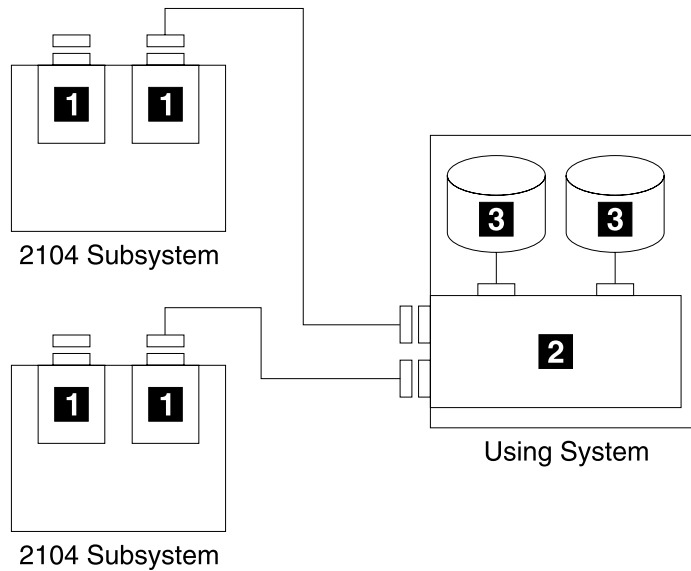


Figure 31. One Dual-Channel Adapter in One Using System Connected to Two 2104s and Internal Disk Drives. **This configuration is not valid.**

1	SCSI interface card
2	PCI Dual Channel Ultra2 SCSI Adapter (type 4-R, feature 6205). This configuration is not valid on this adapter because two internal and two external attachments that are on the same SCSI bus exceed the capacity of the adapter.
3	Internal disk drives.

One RAID Adapter in Each of Two Using Systems Connected to Two 2104s

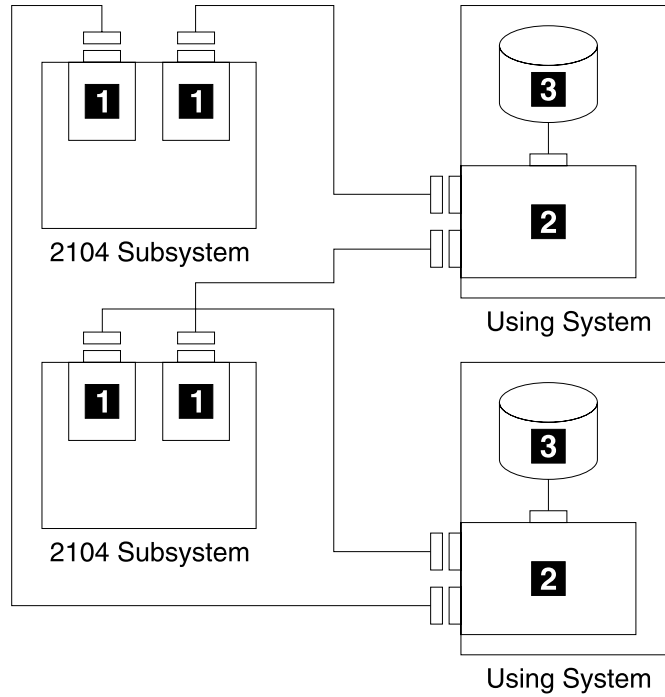


Figure 32. One RAID Adapter in Each of Two Using Systems Connected to Two 2104s. This configuration is not valid.

1	SCSI interface card
2	This configuration is not valid for RAID adapters, including the PCI 3-Channel Ultra2 SCSI RAID Adapter (type 4-T, feature 2494) because it cannot use high-availability cluster multiprogramming (HACMP).
3	Internal RAID-5 disk drive array

Collecting Errors

To enable the collection of 2104 disk enclosure errors, add this cron job SES Healthcheck to the system cron table.

Note: Root permissions will be required to perform this update.

Edit the system crons with the **crontab -e** command. At the bottom of the file, enter:

```
15 * * * * /usr/lpp/diagnostics/bin/run_ses_healthcheck 1>/dev/null 2>/dev/null
```

Details of the **crontab** command are in the following URL:

http://www.rs6000.ibm.com/doc_link/en_US/a_doc_lib/cmds/aixcmds1/crontab.htm#A1599114e

This cron runs at 15 minutes after each hour, and sends mail to the "root user" with details of any errors that are present in the enclosure. It also presents a console message indicating which enclosure has a problem.

The cron requires a script. To create this script, generate a file named `run_ses_healthcheck` in directory `/usr/lpp/diagnostics/bin`. The contents of the file must be:

```
#!/bin/ksh
#Name: run_ses_healthcheck
#Location: /usr/lpp/diagnostics/bin
#Function: SCSI SES hourly healthcheck

/usr/sbin/lisdev -Cc container -t ses -s scsi -F name -S available |
    /usr/bin/xargs -n1 -i /bin/nice --10 /usr/lpp/diagnostics/bin/diagela -t {}
```

Note: Although, because of page width, the final line of the contents is shown here split between two lines, you must enter it all on one line.

Give the following command so that the script can be run:

```
chmod 544 /usr/lpp/diagnostics/bin/run_ses_healthcheck
```

Web Support Pages

Adapter microcode is available from the following web support page:

<http://www.rs6000.ibm.com/support/micro/download.html>

PTFs for AIX 4.3.3 and AIX 4.2.1 are available from the following web support page:

<http://service.boulder.ibm.com/cgi-bin/support/rs6000.support/downloads>

Related Publications

- *Diagnostic Information for Micro Channel Bus Systems, SA23-2765*
- *Diagnostic Information for Multiple Bus Systems, SA38-0509*
- *Site and Hardware Planning Information, SA38-0508*
- *Adapters, Devices and Cable Information for Micro Channel Bus Systems, SA23-2764*
- *Adapters, Devices and Cable Information for Multiple Bus Systems, SA38-0516*

Appendix B. Translated Safety Notices

This appendix contains the danger and caution notices that are used in the various books related to the Expandable Storage Plus: 2104 Models DL1 and TL1. The notices are shown in English and in various other languages.

Danger notice	A danger notice calls attention to a situation that is potentially lethal or extremely hazardous to people.
Caution notice	A caution notice calls attention to a situation that is potentially hazardous to people because of some existing condition.

Always use safe working procedures whenever you work on machines. Use your own judgment to identify safety conditions that these notices do not describe.

Danger Notices

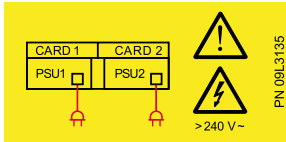
DANGER

In the following step you are going to remove the power cables. These cables are live if the rack power distribution unit or battery-backup unit is still switched on.

DANGER

Do not try to open the covers of the fan-and-power-supply assembly.

Caution Notices



CAUTION:

This unit may have two linecords, to remove all power, disconnect both linecords.



CAUTION:

This unit weighs 38.5 Kg.

CAUTION:

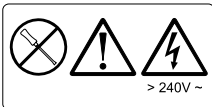
The stabilizer must be correctly attached to the bottom front of the rack to prevent the rack from tipping forward while the units are being removed from the rack. Do not pull out or install any unit if the stabilizer is not attached to the rack.

CAUTION:

A 2104 Model DL1 weighs up to 38.5 kg (85 lb) with disk drive modules installed. Do not attempt to remove the 2104 from the rack unless all the disk drive modules have been removed.

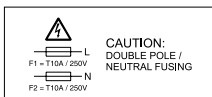
CAUTION:

Do not attempt to lift the 2104 by yourself. Ask another service representative for aid.



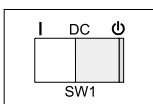
CAUTION:

Do not remove cover, do not service, no serviceable parts.



CAUTION:

Double pole/neutral fusing



CAUTION:

A "Standby" condition is indicated by the symbol to the right of "DC" directly above the switch, SW1. When SW1 is toggled to the right position directly under the "Standby" symbol, the unit's AC-power is not shut off.

Traduction des consignes de sécurité

Français

Cette annexe contient la traduction des consignes de type Danger et Attention figurant dans les différents manuels concernant Expandable Storage Plus: 2104 Models DL1 and TL1.

Consignes de type Danger	Les consignes de sécurité de type Danger indiquent la présence d'un risque de blessures graves, voire mortelles.
Consignes de type Attention	Les consignes de sécurité de type Attention indiquent la présence d'un risque de blessures légères.

Respectez toujours les consignes de sécurité lorsque vous travaillez sur des machines. Mettez vous même en place les conditions de sécurité nécessaires dans les cas non prévus par ces consignes.

Consignes Danger

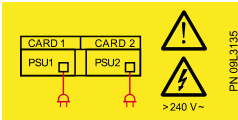
DANGER

Dans l'étape qui suit, vous allez devoir débrancher les cordons d'alimentation. Ces cordons sont toujours alimentés si le cordon d'alimentation de l'armoire ou la batterie de secours sont en fonction.

DANGER

N'essayez pas d'ouvrir le bloc ventilateur-alimentation.

Consignes Attention



ATTENTION:

Cette unité peut posséder deux cordons d'alimentation. Pour supprimer toutes les tensions dans l'unité, débranchez les deux cordons.



ATTENTION:

Cette unité pèse 38.5 kg.

ATTENTION:

Le stabilisateur doit être solidement fixé au bas de la face avant de l'armoire pour empêcher cette dernière de basculer lorsqu'on en retire des unités. Ne retirez pas ou n'installez pas d'unité avant d'avoir vérifié que le stabilisateur est bien fixé à l'armoire.

ATTENTION:

Un 2104 Modèle DL1 peut peser jusqu'à 38.5 kg, disque dur compris. N'essayez pas de retirer le 2104 de l'armoire avant d'avoir retiré le disque dur.

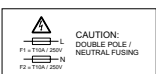
ATTENTION:

N'essayez pas de soulever seul le 2104. Faites-vous aider pour le déplacer en toute sécurité.



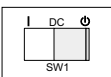
ATTENTION:

Ne pas ouvrir. Ne tenter aucune réparation. Aucune pièce n'est réparable en clientèle.



ATTENTION:

L'un des deux fusibles est sur le neutre.



ATTENTION:

Un état "Attente" est indiqué par le symbole à droite de "DC" au-dessus de l'interrupteur SW1. Lorsque Sw1 bascule dans la bonne position sous le symbole "Attente", l'alimentation (courant alternatif) de l'unité n'est pas coupée.

Sicherheitshinweise

Deutsch

Dieser Abschnitt enthält die Sicherheitshinweise VORSICHT und ACHTUNG, die in den Veröffentlichungen zum IBM Expandable Storage Plus 2104, Modelle DL1 und TL1 verwendet werden.

Hinweis VORSICHT

Der Hinweis VORSICHT macht auf eine Gefahr aufmerksam, die tödliche oder schwere Verletzungen zur Folge haben kann.

Hinweis ACHTUNG

Der Hinweis ACHTUNG macht auf mögliche Probleme aufmerksam, die zu einer Personengefährdung führen können.

Beachten Sie bei Arbeiten an Maschinen stets die Sicherheitsbestimmungen. Es liegt in der Verantwortung jedes einzelnen selbst, mögliche Sicherheitsrisiken zu erkennen.

Hinweise VORSICHT

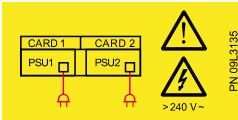
VORSICHT

Im folgenden Schritt werden die Netzkabel gelöst. Ist die Stromversorgungseinheit oder Notstromversorgungseinheit des Gehäuses noch eingeschaltet, führen diese Kabel Strom.

VORSICHT

Abdeckungen des Netzteils nicht abnehmen.

Hinweise ACHTUNG



ACHTUNG:

Sollte die Einheit zwei Stromversorgungskabel besitzen, beide Stromversorgungskabel lösen, um die Einheit ganz von der Netzspannung zu trennen.



ACHTUNG:

Diese Einheit wiegt ungefähr 38.5 kg.

ACHTUNG:

Der Stabilisator muß ordnungsgemäß unten an der Vorderseite des Gehäuses angebracht werden, um ein Vorkippen beim Entfernen der Einheiten aus dem Gehäuse zu verhindern. Die Einheiten nicht installieren oder entfernen, wenn der Stabilisator nicht am Gehäuse montiert ist.

ACHTUNG:

Ein IBM 2104 Modell DL1 kann mit installierten Plattenlaufwerkmodulen bis zu 38.5 kg wiegen. Den IBM 2104 Modell DL1 nicht aus dem Gehäuse entfernen, bevor alle Plattenlaufwerkmodule entfernt wurden.

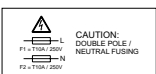
ACHTUNG:

Nicht versuchen, den IBM 2104 alleine anzuheben. Zum Anheben sind zwei Personen erforderlich.



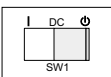
ACHTUNG:

Verkleidung nicht entfernen, nicht reparieren. Es sind keine zu wartenden Teile enthalten.



ACHTUNG:

Zweipolige bzw. Neutralleitersicherung



ACHTUNG:

Eine "Standby"-Bedingung wird durch das Symbol rechts von der Gleichstromkontrolleuchte (DC) direkt über dem Schalter Sw1 angezeigt. Wenn der Schalter Sw1 rechts direkt unter dem Symbol "Standby" steht, ist die Einheit nicht ausgeschaltet.

Greek

Ελληνικά

Το παράρτημα αυτό περιέχει μεταφράσεις των σημειώσεων κινδύνου και προσοχής που χρησιμοποιούνται στα διάφορα εγχειρίδια που σχετίζονται με το προϊόν Expandable Storage Plus: 2104 Τύπος DL1 και TL1.

Σημείωση κινδύνου: Μια σημείωση κινδύνου επισημαίνει μια κατάσταση που μπορεί να είναι πολύ επικίνδυνη ή και θανατηφόρος για τους ανθρώπους.

Σημείωση προσοχής: Μια σημείωση προσοχής επισημαίνει μια κατάσταση που μπορεί να είναι επικίνδυνη για τους ανθρώπους λόγω ορισμένων συνθηκών.

Ακολουθείτε πάντα ασφαλείς διαδικασίες εργασίας όταν εργάζεστε με μηχανές. Χρησιμοποιείτε τη δική σας κρίση για να αναγνωρίζετε άλλες συνθήκες που τυχόν επηρεάζουν την ασφάλεια και δεν περιγράφονται σε αυτές τις σημειώσεις.

Σημειώσεις κινδύνου

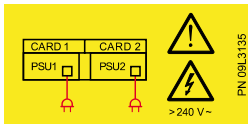
ΚΙΝΔΥΝΟΣ

Στο ακόλουθο βήμα θα αφαιρέσετε τα καλώδια ρεύματος. Στα καλώδια αυτά υπάρχει ηλεκτρικό ρεύμα αν η μονάδα διανομής ρεύματος του ικριώματος (rack) ή η εφεδρική μπαταρία είναι ακόμα σε λειτουργία.

ΚΙΝΔΥΝΟΣ

Μην επιχειρήσετε να ανοίξετε τα καλύμματα της συσκευής που περικλείει την πηγή ρεύματος και τον ανεμιστήρα.

Σημειώσεις προσοχής



ΠΡΟΣΟΧΗ:

Ο σταθεροποιητής πρέπει να προσαρτηθεί σωστά στο κάτω εμπρόσθιο μέρος του ικρίωματος ώστε να μην γείρει προς τα εμπρός το ικρίωμα κατά την αφαίρεση των μονάδων από το ικρίωμα. Μην αφαιρέσετε ή εγκαταστήσετε καμία μονάδα αν δεν έχει προσαρτηθεί στο ικρίωμα ο σταθεροποιητής.



ΠΡΟΣΟΧΗ:

Η μονάδα αυτή έχει βάρος 38,5 Kg.

ΠΡΟΣΟΧΗ:

Μια μονάδα 2104 Τύπου DL1 έχει βάρος 38,5 Kg με εγκατεστημένες τις μονάδες δίσκου. Μην επιχειρήσετε να αφαιρέσετε τη μονάδα 2104 από το ικρίωμα αν δεν έχουν αφαιρεθεί όλες οι μονάδες δίσκου.

ΠΡΟΣΟΧΗ:

Μην επιχειρήσετε να ανυψώσετε τη μονάδα 2104 μόνοι σας. Ζητήστε τη βοήθεια ενός ακόμα τεχνικού υπηρεσιών.

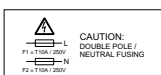
ΠΡΟΣΟΧΗ:

Μην αφαιρέσετε το κάλυμμα, μην επιχειρήσετε να κάνετε συντήρηση της μονάδας, δεν υπάρχουν εξαρτήματα των οποίων μπορεί να γίνει συντήρηση.



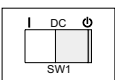
ΠΡΟΣΟΧΗ:

Η μονάδα αυτή μπορεί να έχει δύο καλώδια γραμμής. Για να διακόψετε πλήρως την παροχή ρεύματος, αποσυνδέστε και τα δύο καλώδια γραμμής.



ΠΡΟΣΟΧΗ:

Ασφάλεια δύο πόλων/ουδέτερου.



ΠΡΟΣΟΧΗ:

Η κατάσταση "Standby" σημειώνεται με το σύμβολο που βρίσκεται στα δεξιά της σήμανσης "DC" πάνω από το διακόπτη SW1. Αν ο διακόπτης SW1 είναι στη δεξιά θέση, κάτω ακριβώς από το σύμβολο "Standby", η παροχή εναλλασσόμενου ρεύματος της μονάδας δεν έχει διακοπεί.

הודעות בטיחות מתורגמות

עברית

נספח זה מכיל תרגומים של הודעות הסכנה והזהירות המופיעות בספרים השונים הקשורים אל Expandable Storage Plus: 2104 דגמים DL1 ו-TL1.

הודעת סכנה הודעת סכנה מפנה את תשומת הלב למצב העלול לגרום מוות או להיות מסוכן ביותר לבני אדם.

הודעת זהירות הודעת זהירות מפנה את תשומת הלב למצב העלול להיות מסוכן לבני אדם בגלל תנאים קיימים מסוימים.

יש לנהוג תמיד לפי כללי הזהירות בעת העבודה עם מכונות. השתמשו בשיפוטכם כדי לזהות תנאי בטיחות שהודעות אלה אינן חלות עליהם.

הודעות סכנה

סכנה

בשלב הבא אתם עומדים לנתק את כבלי החשמל. כבלים אלה מכילים זרם חשמלי אם יחידת מפצל המתח ויחידת אל-פסק במסד המכשירים עדיין פועלים.

סכנה

אל תנסו לפתוח את המכסים של מכלול המאוורר וספק הכוח.

הודעות זהירות

זהירות:

המייצב חייב להיות מחובר כראוי בתחתית מסד המכשירים כדי למנוע מהמסד ליפול קדימה בזמן הוצאת היחידות מהמסד. אל תמשכו החוצה או תתקינו יחידות אם המייצב אינו מחובר אל מסד המכשירים.

זהירות:

יחידה זו שוקלת 38.5 ק"ג.

זהירות:

יחידת 2104 דגם DL1 שוקלת 38.5 ק"ג כאשר המודולים של כונני הדיסקים מותקנים בתוכה. אל תנסו להוציא את היחידה מהמסד לפני שתנתקו את כל המודולים של כונני הדיסקים.

זהירות:

אל תנסו להרים לבדכם את יחידת 2104. בקשו עזרה מנציג שירות אחר.

זהירות:

אל תסירו את המכסה, אל תבצעו טיפול שירות, אין חלקים שאפשר לטפל בהם.

זהירות:

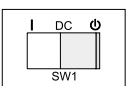
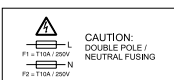
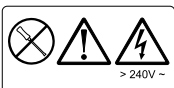
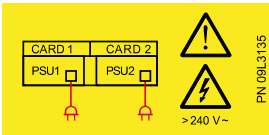
ליחידה זו יכולים להיות שני כבלי חשמל. לניתוק הזרם, יש לנתק את שני הכבלים.

זהירות:

הגנת נתיך כפולה (פאזה/אפס)

זהירות:

חיווי מצב "כוננות" (standby) מופיע מימין לציון DC בדיוק מעל המתג SW1. כאשר מתג SW1 מוסט ימינה, בדיוק מתחת לחיווי הכוננות, מתח הרשת של היחידה אינו מנותק.



Lefordított biztonsági előírások

Magyar

Ez a függelék a veszélyre és az óvatosságra figyelmeztető előírások fordítását tartalmazza, amely a bővíthető tárolók: 2104 Modell DL1 és TL1 berendezésekre vonatkozó különféle könyvekben fordul elő.

Veszélyre utaló megjegyzés

A veszélyre utaló megjegyzés olyan helyzetre hívja fel a figyelmet, amely halálos vagy rendkívüli veszélyt jelent az emberekre.

Figyelmeztető megjegyzés

A figyelmeztető megjegyzés olyan helyzetre hívja fel a figyelmet, amely bizonyos meglévő feltételek miatt veszélyt jelent az emberekre.

Mindig a biztonságos munkavégzésre helyezze a hangsúlyt, valahányszor a berendezésekkel dolgozik. A biztonságos helyzet megítélésében saját véleményére támaszkodjon, ha az alábbi megjegyzések nem ismertetik az adott szituációt.

Veszélyre utaló megjegyzések

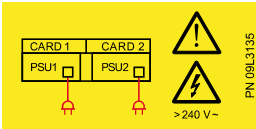
Vigyázat, veszély!

A következő lépésben eltávolítja a tápkábeleket. Ezek a kábelek áram alatt vannak, ha a tartókeret tápfeszültség elosztó egysége vagy a tartalék akkumulátor egysége még bekapcsolt állapotban van.

Vigyázat, veszély!

Ne próbálja meg a ventilátor és a tápegység szerelvény borítóit kinyitni.

Figyelmeztető megjegyzések



Figyelem:

A stabilizátort (rögzítőt) megfelelően szerelje fel a tartókeret elejének alsó részére, hogy megakadályozza a keret megbillenését, amikor az egységeket kihúzza a keretből. Ne húzzon ki és ne telepítsen egyetlen egységet sem, ha a rögzítő nincs felszerelve.



Figyelem:

Az egység súlya 38.5 kg.

Figyelem:

A 2104 Modell DL1 súlya 38.5 kg (85 lb) is lehet, ha a lemezegység modulok telepítve vannak. Ne próbálja meg eltávolítani a 2104-es berendezést a keretből addig, amíg ki nem vette az összes lemezegység modult.

Figyelem:

Ne kísérelje meg egyedül megemelni a 2104-es berendezést. Kérjen meg másik szervíz szakembert, hogy segítsen.

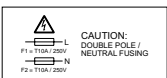
Figyelem:

Ne távolítsa el a borítót, ne szervizeljen nem szervizelhető részeket.



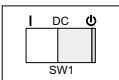
Figyelem:

Ez az egység két tápkábellel rendelkezhet, ezért a teljes áramtalanításhoz húzza ki mind a kettő tápkábelt.



Figyelem:

Dupla pólus/nulla biztosítása



Figyelem:

A "Standby" feltételt a közvetlenül az SW1 kapcsoló felett lévő "DC" felirattól jobbra látható szimbólum jelzi. Amikor az SW1 kapcsolót jobbra kapcsolja közvetlenül a "Standby" szimbólum alá, akkor az egységek AC tápforrása nincs lekapcsolva.

Informazioni relativi alla sicurezza

Italiano

Questo opuscolo contiene la traduzione degli avvisi di pericolo e di attenzione presenti nei manuali relativi all'Expandable Storage Plus: 2104 Modelli DL1 e TI1.

Avviso di pericolo Un avviso di pericolo richiama l'attenzione su una situazione potenzialmente mortale oppure estremamente pericolosa per le persone.

Avviso di attenzione Un avviso di attenzione richiama l'attenzione su una situazione che, in presenza di alcune condizioni, è potenzialmente pericolosa per le persone.

Rispettare sempre le norme di sicurezza quando si utilizzano le macchine. Valutare con attenzione eventuali condizioni di rischio che non sono descritte in questi avvisi.

Avvisi di pericolo

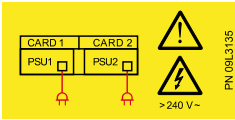
PERICOLO

Al prossimo passo, sarà necessario rimuovere i cavi di alimentazione. Se l'unità di distribuzione dell'energia nel rack e l'unità batteria di riserva sono ancora accese, tali cavi sono in tensione.

PERICOLO

Non tentare di aprire i coperchi dell'assieme ventilatore-alimentatore.

Avvisi di attenzione



ATTENZIONE:

Quest'unità può avere due cavi di alimentazione; per disattivare completamente l'alimentazione, scollegare entrambi i cavi.



ATTENZIONE:

Questa unità pesa 38.5 KG.

ATTENZIONE:

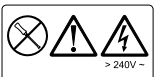
Lo stabilizzatore deve essere correttamente assicurato alla parte frontale, estremità inferiore del rack per evitare che quest'ultimo si inclini in avanti durante la rimozione delle unità dal rack. Non installare o non estrarre alcuna unità se lo stabilizzatore non è installato.

ATTENZIONE:

Un'unità 2104 pesa fino a 38.5 kg (85 lb) con i moduli disco installati. Rimuovere tutti i moduli disk driver prima di estrarre l'unità 2104.

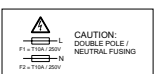
ATTENZIONE:

Non tentare di sollevare l'unità 2104 da solo. Chiedere l'aiuto di un'altra persona del servizio assistenza.



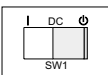
ATTENZIONE:

Non rimuovere il coperchio, non effettuare manutenzione, non contiene parti soggette a manutenzione.



ATTENZIONE:


Fusibili fase e neutro




ATTENZIONE:

La condizione di "Standby" (attesa) viene indicata dal simbolo "DC Standby" posto a destra sopra l'interruttore Sw1. Quando l'interruttore Sw1 è attivato, in basso a destra viene indicata la dicitura "DC ON"; l'unità "AC power" (alimentazione ca) risulta accesa.

ここでは、Exp Plus:2104 モデル DL1 および TL1 に関連する各種マニュアルの中で使われている危険と注意について記述しています。

 **危険** この表示を無視して誤った取り扱いをすると、人が死亡または重傷を負う可能性がある危険が存在する内容を示しています。

 **注意** この表示を無視して誤った取り扱いをすると、人が障害を負う可能性が想定される内容または物的障害の発生が想定される内容を示しています。

機器を作動させているときは常に、安全で正しい手続きに従って使用してください。また、ここでの注意書きに記述されていないケースについても、ユーザー自身の判断で安全な条件のもとで機器を使用するようにしてください。

 **危険**

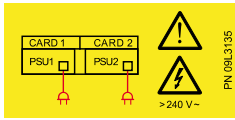
 **危険**

次のステップで電源ケーブルを抜きます。電力配分装置のラックやバッテリー・バックアップ装置の電源がオンの場合、このケーブルには電流が通っています。

 **危険**

ファン / 電源機構のカバーを開けないでください。

⚠ 注意



⚠ 注意

装置をラックから取り外す時には、ラックが前に傾かないように、ラックの底面の前部に安定板を正しく取り付けてください。安定板がラックに付いていないときには、装置をラックに取めたり、ラックから引き出すことはしないでください。



⚠ 注意

この装置の重量は 38.5 kg です。

⚠ 注意

2104 モデル DL1 の重量は、ディスク・ドライブ・モジュールをインストールすると、38.5 kg になります。すべてのディスク・ドライブ・モジュールを取り外してから、ラックから 2104 を取り出すようにしてください。

⚠ 注意

2104 をひとりで持ち上げないでください。他の保守担当員の助けを借りてください。

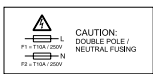
⚠ 注意

この装置には電源コードが 2 本あります。遮断を完全に行うには、2 本とも引き抜いてください。



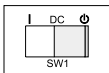
⚠ 注意

カバーを外さないでください。保守作業をしないでください。保守可能な部品はありません。



⚠ 注意

両極 / 中性線ヒューズ



⚠ 注意

「スタンバイ」状態は、SW1 スイッチの真上の DC の右に記号で示されます。SW1 が「スタンバイ」記号の真下で右側に倒されている場合、装置の AC 電源は遮断されていません。

안전 주의사항

한글

이 부록에는 Expandable Storage Plus: 2104 모델 DL1 및 TL1과 관련된 여러 책에서 사용되는 위험 및 경고 주의사항을 번역한 내용이 들어 있습니다.

위험 주의사항	사용자에게 치명적일 수 있거나 매우 위험한 상황에 대해 주의를 환기시킵니다.
경고 주의사항	기존의 조건때문에 사용자에게 위험할 수 있는 상황에 대해 주의를 환기시킵니다.

기계 작업을 할 때는 항상 안전 작업 절차를 따르십시오. 이 주의사항에 나와있지 않은 안전에 관한 사항은 스스로 판단해서 조치를 취하십시오.

위험 주의사항

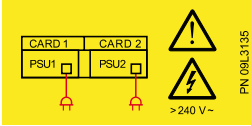
위험

다음 단계에서 전원 케이블을 제거하는 경우, 랙 분산 장치 또는 배터리 백업 장치의 전원이 켜져 있으면 이 케이블에는 전류가 흐르고 있는 상태입니다.

위험

송풍기 및 전원 공급 장치의 덮개를 열지 마십시오.

경고 주의사항



경고:

이 장치에는 두 개의 라인코드가 있습니다. 모든 전원을 차단하려면 두 개의 라인코드를 모두 연결 해제하십시오.



경고:

이 장치의 무게는 38.5 kg입니다.

경고:

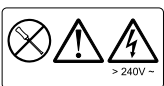
장치가 랙에서 제거되는 동안 앞으로 넘어지는 것을 방지하기 위해서는 스테블라이저가 랙의 앞쪽 아래 부분에 제대로 설치되어 있어야 합니다. 스테블라이저가 랙에 접속되어 있지 않다면 어떤 장치도 꺼내거나 설치하지 마십시오.

경고:

디스크 드라이브 모듈이 설치되어 있는 2104 모델 DL1은 38.5 kg (85 파운드) 까지 무게가 나갑니다. 모든 디스크 드라이브 모듈이 제거되지 않은 경우, 2104를 랙에서 제거하지 마십시오.

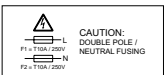
경고:

2104를 혼자 들어올리려고 하지 마십시오. 다른 서비스 직원에게 도움을 요청하십시오.



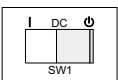
경고:

덮개를 제거하지 마십시오. 서비스 가능 부품이 아니오니 서비스하지 마십시오.



경고:

이중 중성극 퓨즈



경고:

"Standby" 상태는 SW1 스위치 바로 위쪽의 "DC" 오른쪽에 기호로 표시됩니다. SW1이 "Standby" 기호 아래의 오른쪽 위치로 설정되면 장치의 AC 전원은 차단되지 않습니다.

Avisos de Segurança Traduzidos

Português

Este apêndice contém traduções dos avisos de perigo e cuidado utilizados em diversos manuais relacionados ao produto Expandable Storage Plus: 2104 Modelos DL1 e TI1.

Aviso de perigo

Um aviso de perigo adverte sobre uma situação potencialmente letal ou extremamente prejudicial às pessoas.

Aviso de cuidado

Um aviso de cuidado adverte sobre uma situação potencialmente prejudicial às pessoas devido a alguma condição existente.

Sempre utilize procedimentos de trabalho seguros ao operar máquinas. Utilize seu próprio julgamento para identificar as condições de segurança não descritas nestes avisos.

Avisos de Perigo

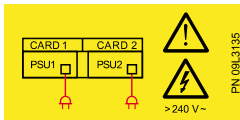
PERIGO

Na etapa a seguir você removerá os cabos de alimentação. Estes cabos conduzirão corrente elétrica, se a unidade de distribuição de energia do rack ou a unidade de bateria de backup ainda estiverem ligadas.

PERIGO

Não tente abrir as tampas do conjunto de ventilador e fonte de alimentação.

Avisos de Cuidado



CUIDADO:

Esta unidade pode ter dois cabos de alimentação; para desligar toda a energia, desconecte os dois cabos.



CUIDADO:

Esta unidade pesa 38,5 kg.

CUIDADO:

O estabilizador deve estar conectado corretamente à parte frontal inferior do rack para evitar que o rack caia para frente quando as unidades estiverem sendo removidas do rack. Não retire ou instale nenhuma unidade, se o estabilizador não estiver conectado ao rack.

CUIDADO:

Um subsistema 2104 Modelos DI1 e TI1 pode pesar até 38.5 kg (85 lb) com os módulos de unidade de disco instaladas. Não tente remover o subsistema 2104 do rack, a menos que todos os módulos da unidade de disco tenham sido removidos

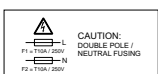
CUIDADO:

Não tente erguer o subsistema 2104 sozinho. Peça ajuda de outro representante técnico.



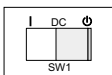
CUIDADO:

Não remova a tampa, não faça manutenção, não existem peças que possam ser consertadas.



CUIDADO:

Fusão dupla polo/neutro



CUIDADO:

Uma condição de "Standby" é indicada pelo símbolo à direita de "DC", diretamente acima da chave, Sw1. Quando a chave SW1 é comutada para a direita, diretamente abaixo do símbolo "Standby", a energia AC da unidade não é desligada.

Avisos de seguridad traducidos

Español

Este apéndice contiene las traducciones de los avisos de peligro y precaución que se utilizan en diversos manuales relacionados con los Modelos DL1 y TL1 del Expandable Storage Plus: 2104.

Aviso de peligro

Un aviso de peligro llama la atención ante una situación potencialmente mortal o extremadamente peligrosa para los usuarios.

Aviso de precaución

Un aviso de precaución llama la atención ante una situación potencialmente peligrosa para los usuarios debido a alguna condición existente.

Deben utilizarse siempre procedimientos de trabajo seguros en el trabajo con máquinas. Utilice su propio criterio para identificar las condiciones de seguridad que no están descritas en estos avisos.

Avisos de peligro

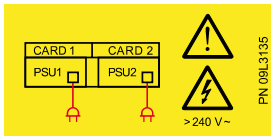
PELIGRO

En el próximo paso va a eliminar los cables de alimentación. Estos cables están activos si la unidad de distribución de alimentación del bastidor o la unidad de batería de reserva todavía está conectada.

PELIGRO

No intente abrir las cubiertas del conjunto del ventilador y la fuente de alimentación.

Avisos de precaución



PRECAUCIÓN:

Esta unidad puede tener dos cables de línea; para eliminar toda la alimentación, desconecte ambos cables.



PRECAUCIÓN:

Esta unidad pesa 38,5 kg.

PRECAUCIÓN:

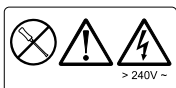
El estabilizador debe estar correctamente conectado a la parte frontal inferior del bastidor, para evitar que el bastidor se incline hacia adelante cuando se extraigan las unidades de su interior. No extraiga ni instale ninguna unidad si el estabilizador no está conectado al bastidor.

PRECAUCIÓN:

Un 2104 Modelo DL1 pesa hasta 38,5 kg. (85 libras) si tiene instalados los módulos de unidad de disco. No intente extraer el 2104 del bastidor a menos que se hayan extraído los módulos de unidad de disco.

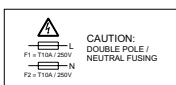
PRECAUCIÓN:

No intente levantar usted mismo el 2104. Solicite ayuda de otro representante del servicio técnico.



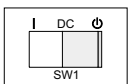
PRECAUCIÓN:

No quite la cubierta, no preste servicio de mantenimiento, estas piezas no son susceptibles de recibir servicio de mantenimiento.



PRECAUCIÓN:

Fusión neutra/polo doble



PRECAUCIÓN:

Una condición de "Espera" se indica mediante el símbolo que aparece a la derecha de "DC" (CC), directamente encima del conmutador, SW1. Cuando SW1 está conmutado a la posición derecha directamente debajo del símbolo de "Espera", la alimentación CA de la unidad no está desactivada.

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