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COMPAQ

Server Console Switch

User Guide

Second Edition (August 2000)
Part Number 141555-002
Compaq Computer Corporation

Notice

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Compaq Server Console Switch User Guide
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About This Guide

This guide is designed to be used as step-by-step instructions for installation and as a reference for operation, troubleshooting, and future upgrades.

Text Conventions

This document uses the following conventions to distinguish elements of text:

Keys	Keys appear in boldface. A plus sign (+) between two keys indicates that they should be pressed simultaneously.
USER INPUT	User input appears in a different typeface and in uppercase.
FILENAMES	File names appear in uppercase italics.
Menu Options, Command Names, Dialog Box Names	These elements appear in initial capital letters.
COMMANDS, DIRECTORY NAMES, and DRIVE NAMES	These elements appear in uppercase.
Type	When you are instructed to *type* information, type the information **without** pressing the **Enter** key.
Enter	When you are instructed to *enter* information, type the information and then press the **Enter** key.

Symbols in Text

These symbols may be found in the text of this guide. They have the following meanings.



WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.

NOTE: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Symbols on Equipment

These icons may be located on equipment in areas where hazardous conditions may exist.



Any surface or area of the equipment marked with these symbols indicates the presence of electrical shock hazards. Enclosed area contains no operator serviceable parts.

WARNING: To reduce the risk of injury from electrical shock hazards, do not open this enclosure.



Any surface or area of the equipment marked with these symbols indicates the presence of a hot surface or hot component. If this surface is contacted, the potential for injury exists.

WARNING: To reduce the risk of injury from a hot component, allow the surface to cool before touching.



Power Supplies or Systems marked with these symbols indicate the equipment is supplied by multiple sources of power.

WARNING: To reduce the risk of injury from electrical shock, remove all power cords to completely disconnect power from the system.

Rack Stability

WARNING: To reduce the risk of personal injury or damage to the equipment, be sure that:

- The leveling jacks are extended to the floor.
- The full weight of the rack rests on the leveling jacks.
- The stabilizing feet are attached to the rack, if it is a single-rack installation.
- The racks are coupled in multiple-rack installations.
- A rack may become unstable if more than one component is extended for any reason. Extend only one component at a time.

Getting Help

If you have a problem and have exhausted the information in this guide, you can get further information and other help in the following locations.

Compaq Technical Support

You are entitled to free hardware technical telephone support for your product for as long you own the product. A technical support specialist will help you diagnose the problem or guide you to the next step in the warranty process.

In North America, call the Compaq Technical Phone Support Center at 1-800-OK-COMPAQ[1]. This service is available 24 hours a day, 7 days a week.

[1] For continuous quality improvement, calls may be recorded or monitored.

Outside North America, call the nearest Compaq Technical Support Phone Center. Telephone numbers for world wide Technical Support Centers are listed on the Compaq website. Access the Compaq website: http://www.compaq.com.

Be sure to have the following information available before you call Compaq:

- Technical support registration number (if applicable)
- Product serial number(s)
- Product model name(s) and number(s)
- Applicable error messages
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level
- Detailed, specific questions

Compaq Website

The Compaq website has information on this product as well as the latest drivers and Flash ROM images. You can access the Compaq website at http://www.compaq.com.

Compaq Authorized Reseller

For the name of your nearest Compaq Authorized Reseller:

- In the United States, call 1-800-345-1518.
- In Canada, call 1-800-263-5868.
- Elsewhere, see the Compaq website for locations and telephone numbers.

Chapter **1**

Introduction

Product Overview

Compaq Server Console Switches enable you to control large computer networks using a single keyboard, monitor, and mouse. On a single video screen, you can select as many as 64 computers running different operating systems.

The 4-Port and 8-Port switches use an On-Screen Display (OSD) interface, which has menus for accessing each attached computer. Computers can be identified by name or number, enabling you to view and select server names that make sense to you. The 2-Port switch uses a simplified OSD.

A typical Compaq Server Console Switch, also know as keyboard/monitor mouse (KMM) or keyboard/video/mouse (KVM) configuration, consists of the console (monitor, keyboard, and mouse), the switch unit, and the attached computers. You can choose from a single-user system or a multiple-user system. Additional Server Console Switches can be connected to the primary switch, called tiering, to increase computer access from 4 or 8 computers to as many as 64 computers. Tiering allows you to modify your Server Console Switch system, as your network system needs change.

Two 8-Port switch units offer dual console capabilities, allowing switch configurations to be controlled from more than one location or by more than one user.

To switch between computers, simply type a command at the keyboard. The selected computer receives characters typed at the keyboard and displays its video output on the monitor. You can also use the mouse to interact with the graphic interface of the selected computer.

The Compaq Server Console Switch family of products is available in 2-, 4-, and 8-Port versions and can be used in various configurations to accommodate large or small systems. All versions are packaged in space-efficient 1U height (1.71-inch) cases.

This chapter provides an overview of the Server Console Switch features, functionality, and sample configurations.

Features

You can use the Server Console Switch in various configurations to connect from 2 to 64 servers.

The features of the Server Console Switch include:

- **On-Screen Display (OSD)** — Displays system-related information on the monitor, such as power-up test data and configuration menus.
- **Programmable Scanning** — Evaluates system performance by sequentially scanning any or all of the computers in the system. Programmable scanning allows you to determine which computers to include as well as the duration of the connection.
- **Configuration NVRAM** — Makes it easy to set configuration information using commands entered from the keyboard. The NVRAM (non-volatile RAM) stores the resulting configuration until you decide to change the information, even if the unit loses power.
- **Hardware Reset Switch** — Resets the unit without interrupting power to the system if the keyboard or mouse communication is disrupted.
- **Password Protection** — Protects against unauthorized users by providing a password option for security purposes.
- **Switch Firmware Update** — Allows quick and easy update since the application code of the switch resides in FLASH. The port communications settings are automatically configured to allow direct downloading from the connected computer.
- **Alternate Language Selection** — Provides alternate languages, available on the Compaq Server Console Switch Software Utility CD. (Not available for use with the 2-Port switch.) See this CD for additional information.

- **Support for Optional Switch Box Connector Kit** — Provides frontal access to the 4- or 8-Port switches for a keyboard, monitor, mouse, and power cord.

Configurations

There are many ways to configure your Server Console Switch to meet your specific organizational needs. Additional information on configuring multiple Server Console Switches can be found in Chapter 3.

- A single switch box is used to connect four or eight servers. In this configuration, the keyboard, monitor, and mouse are connected directly to the unit by their respective cables. You can connect the Server Console Switch to servers located in the same or adjoining racks. See Figure 1-1.

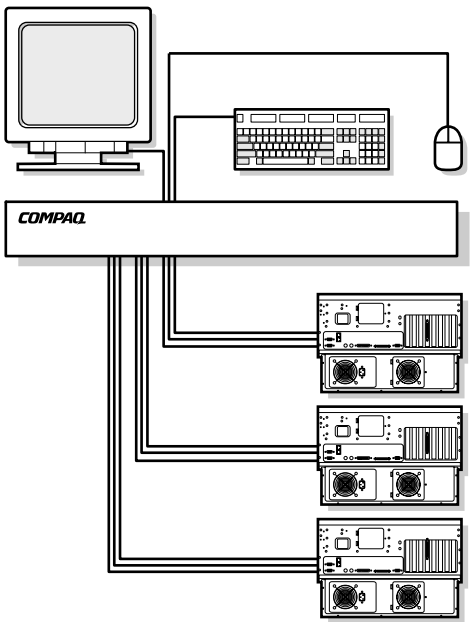


Figure 1-1. Single 4-Port unit

- You can tier multiple Server Console Switch units to connect up to 64 servers. This configuration is illustrated in Figure 1-2, where the device port from the secondary unit is connected to one of the computer ports on the original, or primary unit. Multiple Server Console Switch units can be tiered from the primary unit.

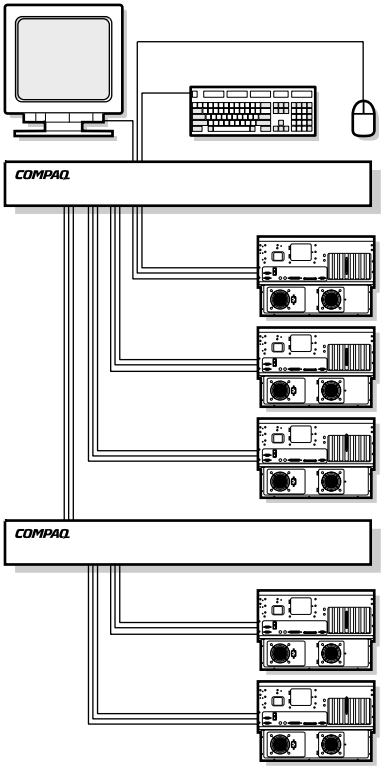


Figure 1-2. Tiered configuration

- The Dual Console 8-Port models allow you to set up two consoles, as shown in Figure 1-3, so that your switch system can be controlled from more than one location, or by two users.

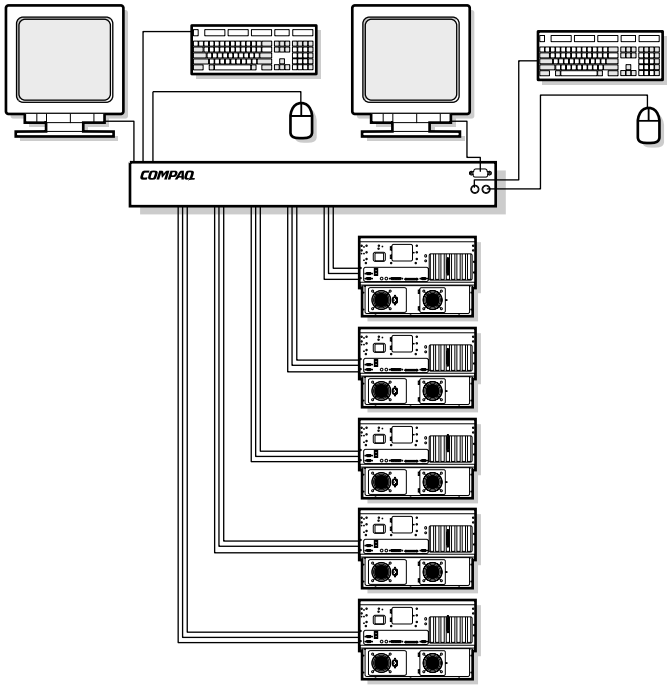


Figure 1-3. Dual console configuration

Available Models

The Server Console Switch is available in 2-, 4-, or 8-Port versions. Table 1-1 shows a comparison of these models.

Table 1-1
Model Comparison Chart

	2-Port	4-Port	8-Port	Dual Console 8-Port	Dual Console 8-Port DC
# of computer ports	2	4	8	8	8
# of consoles (monitor, keyboard, mouse)	1	1	1	2	2
# of tiered computers	N/A	32	64	64	64
Switch connection mode control	No	No	No	Yes	Yes
Power Supply	110/220V AC	110/220V AC	110/220V AC	110/220V AC	48V DC

Chapter **2**

Hardware Installation

This chapter provides hardware installation information for the Compaq Server Console Switch.



WARNING: To reduce the risk of personal injury or damage to the equipment, be sure that the following items are completed BEFORE performing any work on the rack:

- The leveling jacks are extended to the floor.
- The full weight of the rack rests on the leveling jacks.
- The stabilizing feet are attached to the rack, if it is a single-rack installation.
- The racks are coupled in multiple-rack installations.
- Only one component is extended at a time. (A rack may become unstable if more than one component is extended for any reason.)

Installation Checklist

Ensure that you have the following items available before beginning installation:

- Compaq Server Console Switch Rack Option Kit
  - Main switch unit
  - Power cord (except Dual Console 8-Port DC model)
  - Rails with hardware
  - *Compaq Server Console Switch User Guide*
  - Serial cable
  - Warranty Card

You must supply:

- Interconnecting cables for video, keyboard, and mouse (included in 2-Port Rack Option Kit)
- Monitor, keyboard, and mouse for each user console

2-Port 0U Installation

The 2-Port unit should only be installed using the side-mount procedure described below.

1. Attach the side-mount rails to your 2-Port unit.

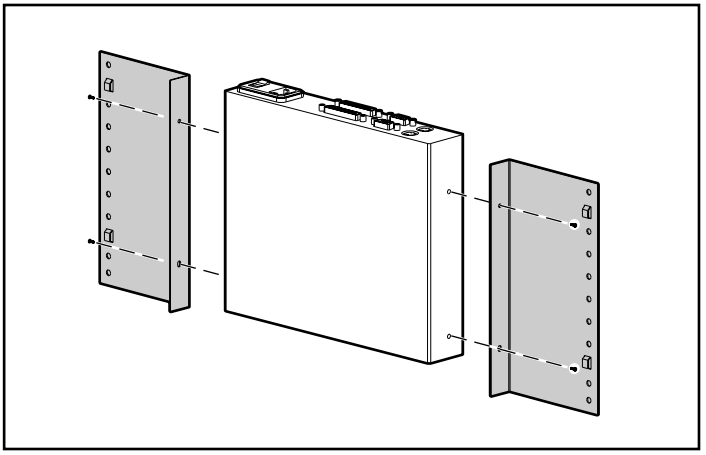


Figure 2-1. Attaching the 2-Port side-mount rails

2. Slide the tabs on the rails into the same U location on each side of the rack.

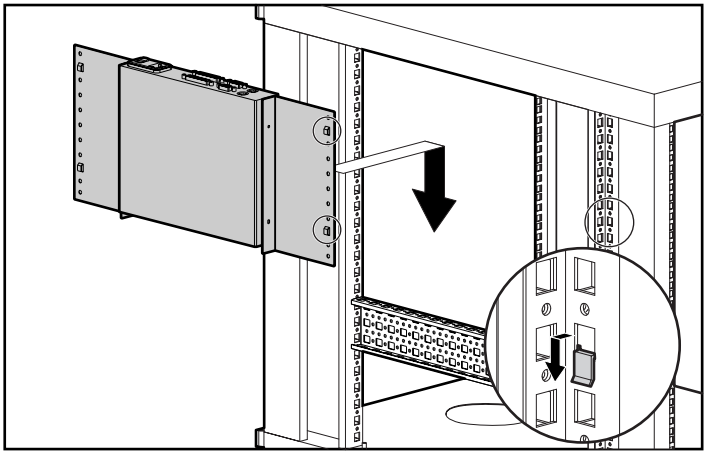


Figure 2-2. Mounting the 2-Port unit to the side of the rack

3. Use a screw on each side to secure the side-mounted unit to the rack.

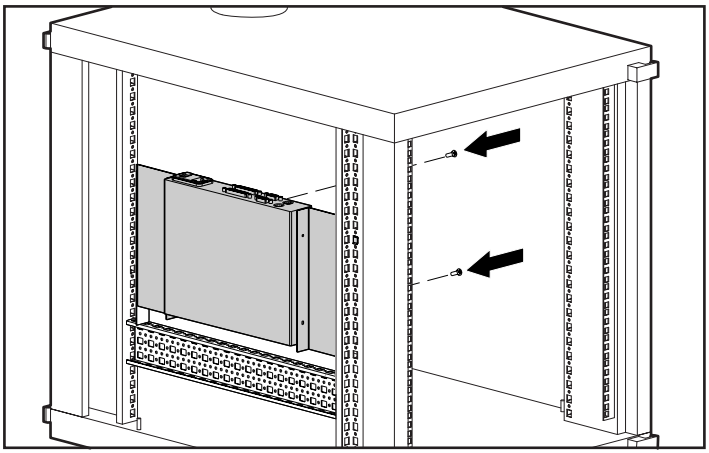


Figure 2-3. Securing the 2-Port side-mount installation

Connecting the 2-Port Keyboard/Video/Mouse Cable

Connect the 2-Port KVM cable as shown in Figure 2-4.

WARNING: To reduce the risk of electric shock or damage to your equipment:

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) outlet that is easily accessible at all times.
- Disconnect the power from the unit by unplugging the power cord from either the electrical outlet or the unit.

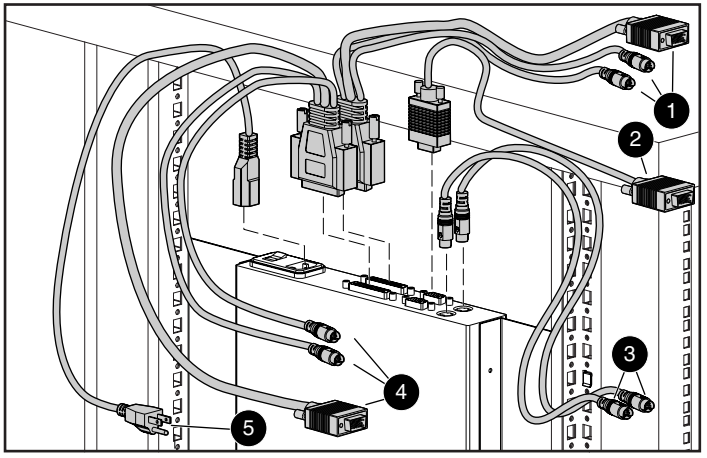


Figure 2-4. Connecting the 2-Port KVM cable

❶ Keyboard, monitor, and mouse connectors to computer 1

❷ Monitor connector to switch box console

❸ Keyboard and mouse connectors to the switch box console

❹ Keyboard, monitor, and mouse connectors to computer 2

❺ Power cord

4-Port and 8-Port Side-Mount 0U Installation

Use the following procedure to install the 4-Port, 8-Port, or Dual Console 8-Port units on the side of a rack.

1. Attach the side-mount rails to your Server Console Switch unit.

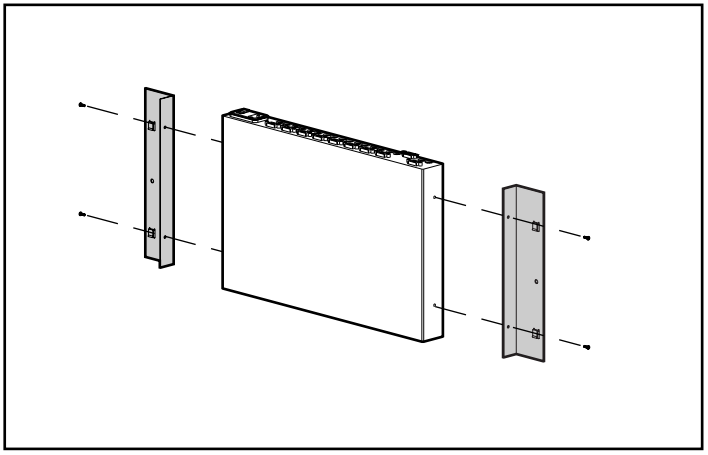


Figure 2-5. Attaching the side-mount rails

2. Slide the tabs on the rails into the same U location on each side of the rack.

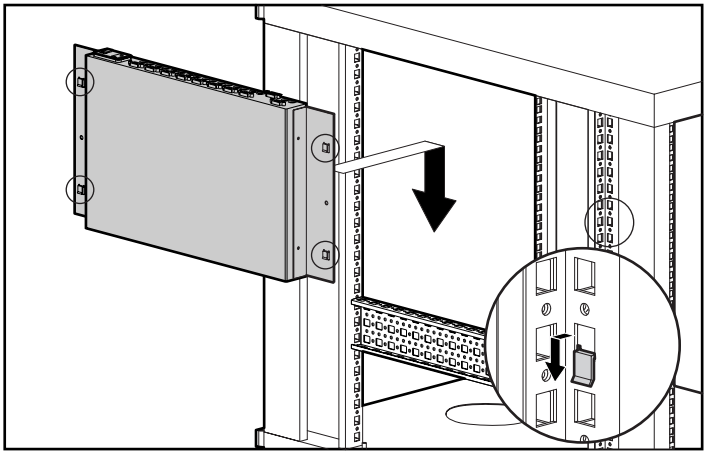


Figure 2-6. Mounting the unit to the side of the rack

3. Use a screw on each side to secure the side-mounted unit to the rack.

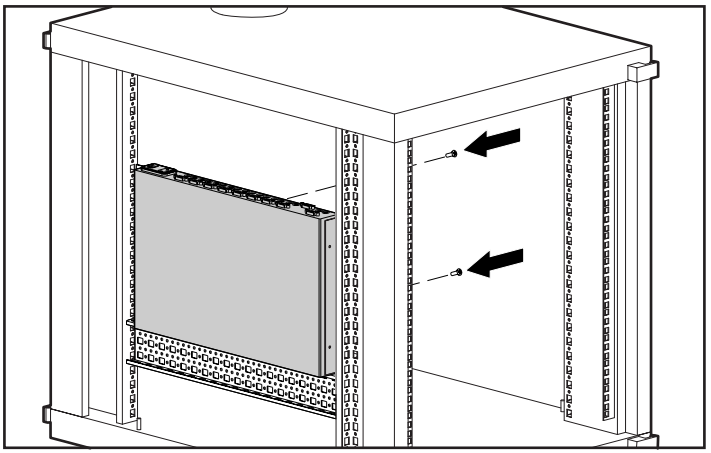


Figure 2-7. Securing the side-mount installation

4-Port and 8-Port Rear Rack 0U Installation

If you are using your 4-Port, 8-Port, or Dual Console 8-Port unit in conjunction with the Compaq 1U Keyboard Drawer Rack Option Kit, no additional rack space is required.

Attaching the slide rail brackets

1. Attach the rails to each side of the switch box, using the screws provided.

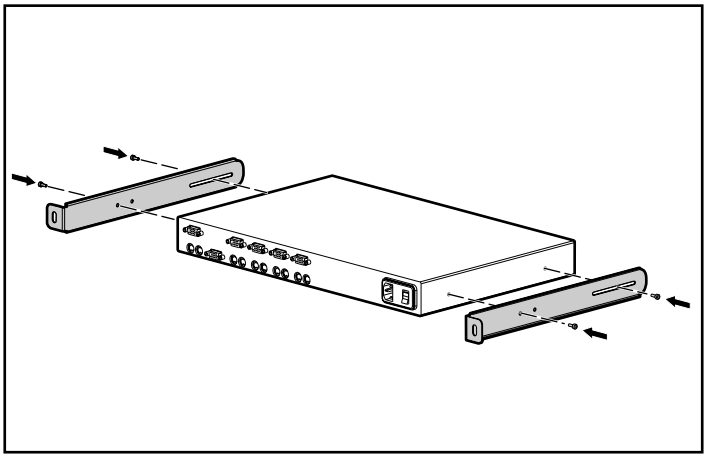


Figure 2-8. Attaching the slide rail brackets

2. Verify that a cage nut has been installed under the rail at the rear of the rack.

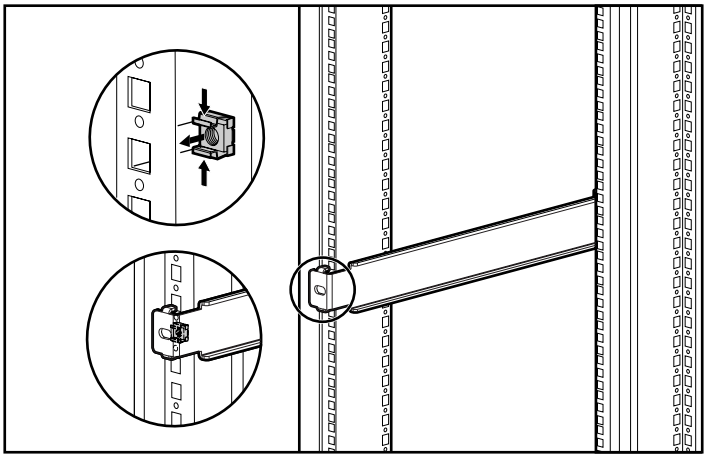


Figure 2-9. Installing cage nut in the rear of the rack

NOTE: If a cage nut was not installed during the installation of the 1U Keyboard Drawer, this option must be removed and reinstalled with the cage nut in place.

3. Slide the switch box with rails into the rail mounting brackets.

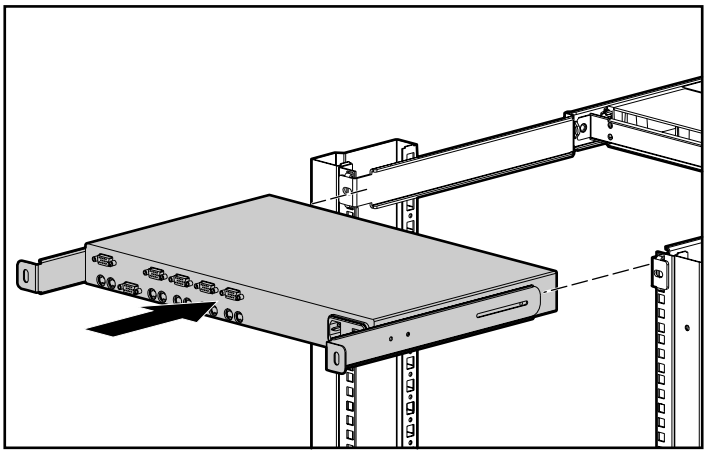


Figure 2-10. Sliding the switch box into the rack

4. Use two M6 screws to secure the rails to the back of the rack.

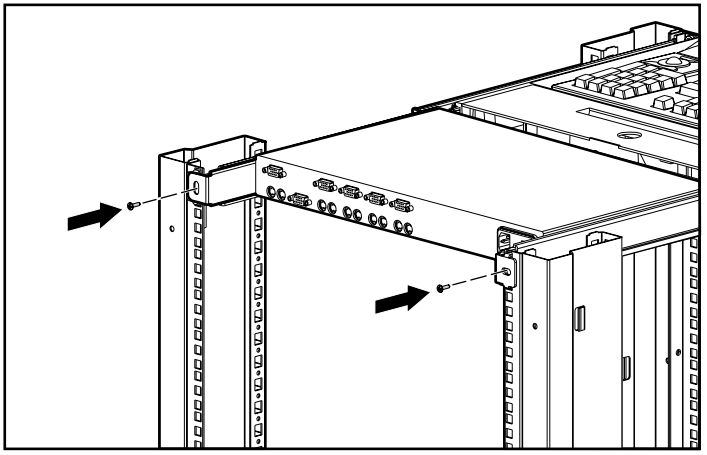


Figure 2-11. Securing the rails

4-Port and 8-Port Standard 1U Installation

Use the following procedure to install the 4-Port, 8-Port, or Dual Console 8-Port units in a rack in a standard 1U configuration.

Attaching the slide rail brackets

Figure 2-12 shows how to attach the slide rail brackets to the switch box.

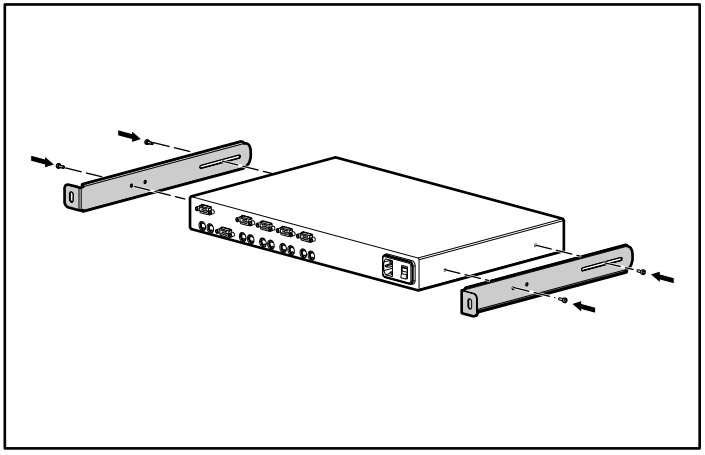


Figure 2-12. Attaching the slide rail brackets

Measuring with the template

From the printed report generated by the Rack Builder software, determine the rack position of the keyboard drawer. Then, measuring from the top of the component below, use the template to carefully measure on the front and rear of the rack frame to mark the attachment points for the mounting brackets and rear cage nuts.

When using the template on the back of the rack, mark the rack at the top of the template to help align the next component.

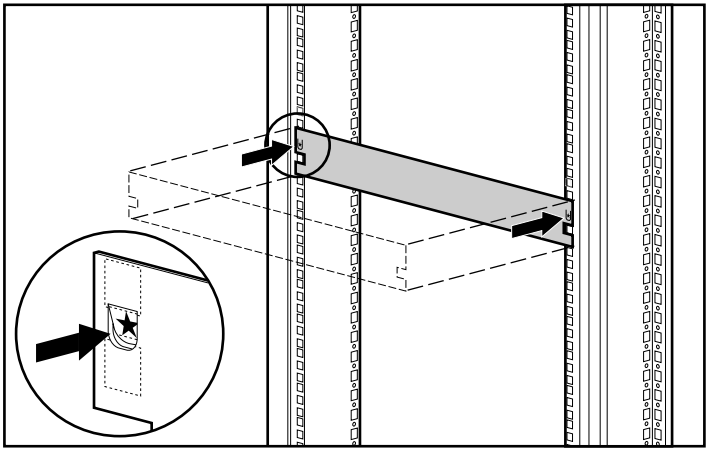


Figure 2-13. Measuring with the template

Attaching the adjustable rack-mounting brackets

To attach the adjustable rack-mounting brackets:

1. Loosely attach the wing nuts ❶ to allow adjustment of the length of the rails ❷ to fit your rack.

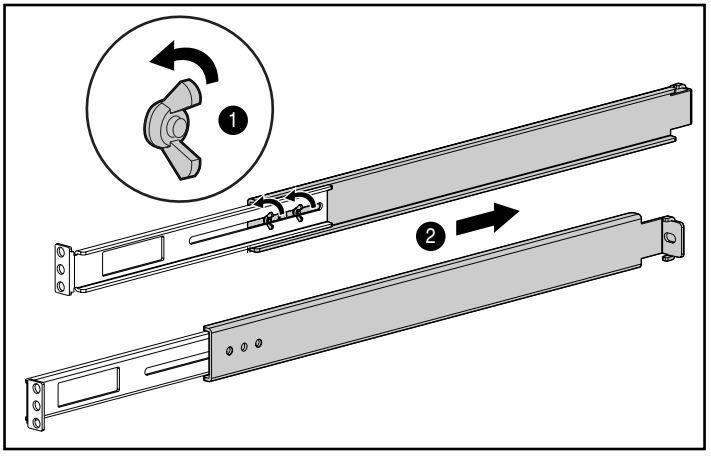


Figure 2-14. Adjusting the length of a rack-mounting bracket

2. Insert a cage nut in the marked hole on the rear or the rack.

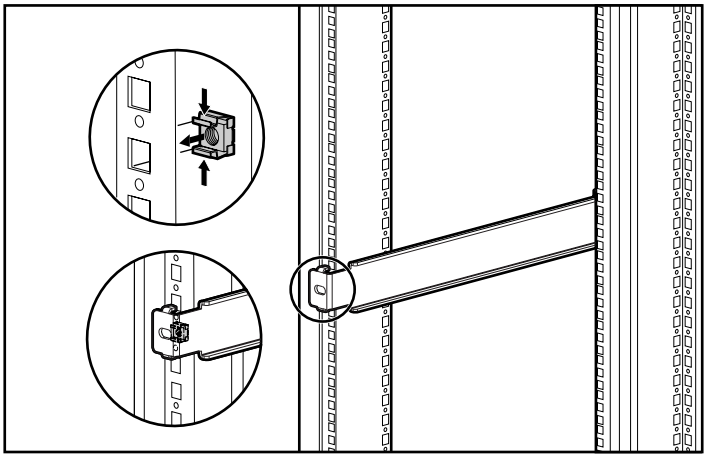


Figure 2-15. Inserting a cage nut

3. Insert an adjustable rack-mounting bracket into the rack and hook the tabs into the appropriate holes in the rear of the rack, aligning the screw holes at the front of the rack.

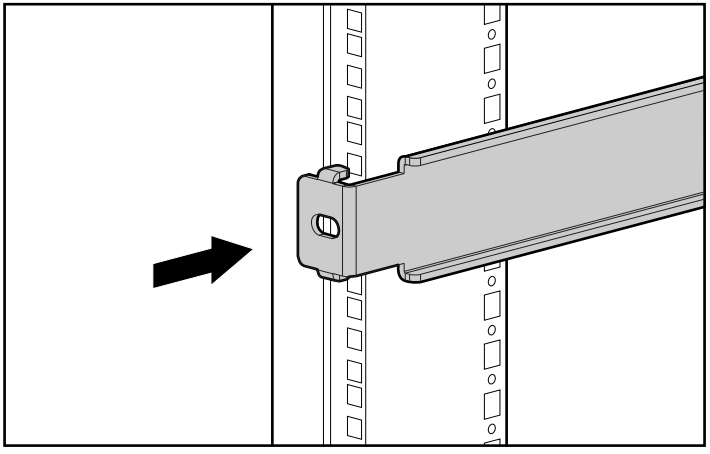


Figure 2-16. Attaching the mounting brackets to the rear of the rack

4. Use two M6 screws to attach the mounting bracket to the front of the rack.

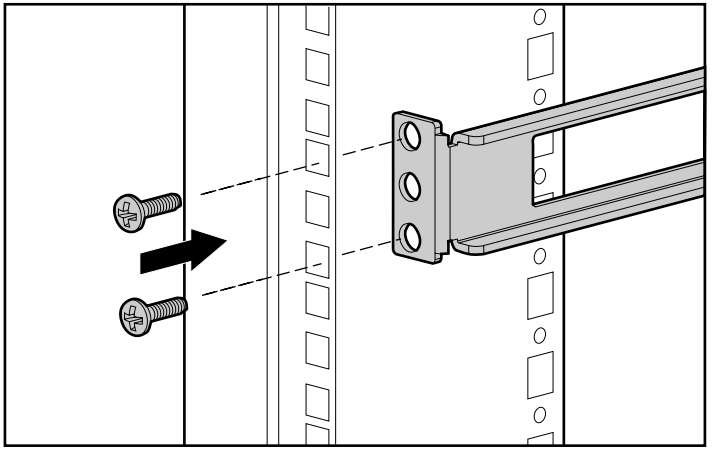


Figure 2-17. Attaching the mounting brackets to the front of the rack

5. Tighten the wing nuts.

Rack-mount Installation

Slide the switch box into the rack-mount brackets as shown in Figure 2-18, then secure with a screw on each side.

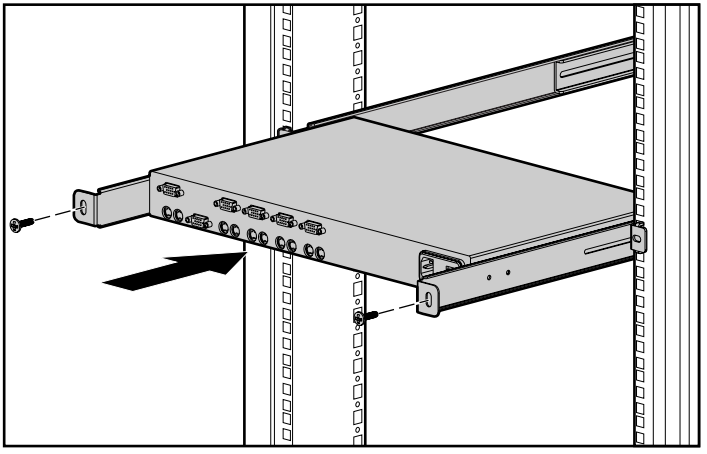


Figure 2-18. Sliding the switch box into the rack-mount brackets

Cover Panel Installation

After the unit is fully installed, secure the front cover panel using the middle hole, as shown in Figure 2-19.

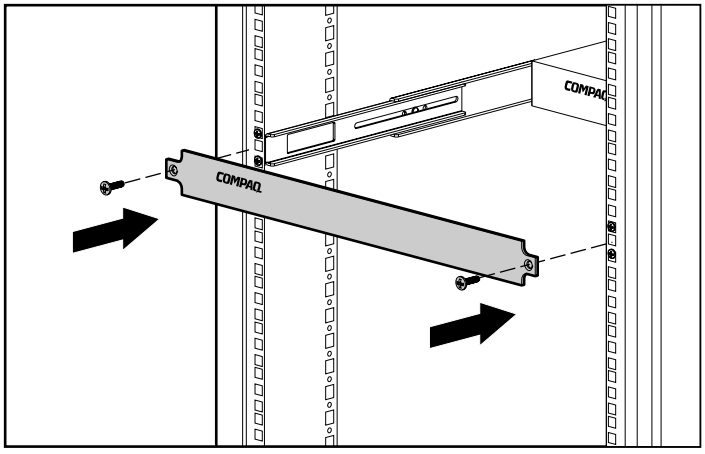


Figure 2-19. Securing the front cover panel

NOTE: This installation supports the optional Switch Box Connector Kit, which provides frontal access to a 4- or 8-Port switch for a keyboard, monitor, mouse, and power cord. If desired, use this option in place of the front cover panel.

Completing the Installation

After your Server Console Switch is installed in the rack using one of the methods listed in this chapter, proceed to Chapter 3, "Cabling."

Chapter **3**

Cabling

Cable Information

Cable length affects video quality as well as keyboard and mouse data timing. The maximum cable length is determined in part by the computer and peripherals used. Not all systems give satisfactory results at the maximum length.

Cable Locking Mechanism

The keyboard and mouse cable options for the 4-Port, 8-Port, and Dual Console 8-Port units have a locking mechanism to provide a secure connection. You must use proper procedures when disconnecting these cables.



CAUTION: Failure to follow proper disconnect procedures could result in damage to the cable or your unit.

To disconnect the keyboard or mouse cable properly:

❶ Grasp the housing.

❷ Slide it back to release the locking mechanism.

❸ Remove the cable.

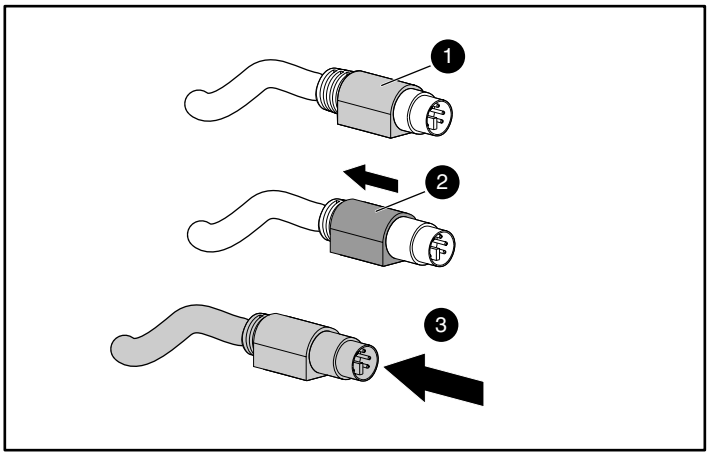


Figure 3-1. Disconnecting the keyboard or mouse cable

To insert the cable, simply plug it into the appropriate connector. The locking mechanism automatically locks the cable in place.

You should connect the cables to the switch in this order:

1. Mouse
2. Monitor
3. Keyboard

This cable connection sequence is particularly important later when you install new devices to your system. You can connect a mouse and/or keyboard to the switch when the system is running. When you connect the new device, the switch recognizes the device and configures it to the settings of the currently selected computer. This allows you to replace failed devices without having to restart the system.

Whenever you make changes to the switch system, you should save the hardware configuration settings. If you do not save the settings, they are lost when power is lost or turned off. To reestablish keyboard and mouse communication to the switch, you might have to reboot each computer. To save your hardware settings, click Snapshot on the Commands screen. See Chapter 4 for additional information on using the OSD.

Connecting the Cables

WARNING: To reduce the risk of electric shock or damage to your equipment:

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) outlet that is easily accessible at all times.
- Disconnect the power from the unit by unplugging the power cord from either the electrical outlet or the unit.

Figures 3-2 through 3-6 show the location of the keyboard, monitor and mouse ports for each of the switch boxes.

1. Connect the mouse, video, and keyboard cables to the appropriate switch connectors. Note that all keyboard and mouse cables are 6-pin mini-DIN PS/2 style, and all the video cables are 15-pin VGA/SVGA style. (These connectors are located on the left rear of each of the switch boxes, with additional connectors on the front for the Dual Console 8-Port switches.)



Figure 3-2. 2-Port connectors

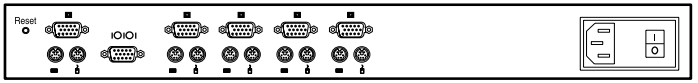


Figure 3-3. 4-Port connectors

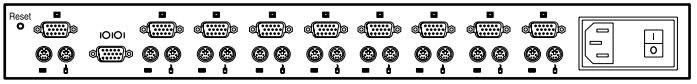


Figure 3-4. 8-Port connectors

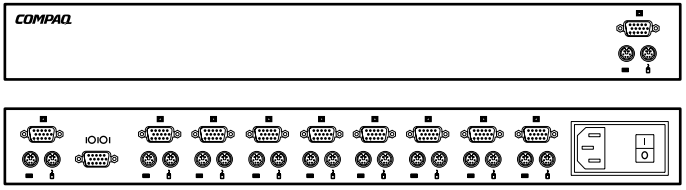


Figure 3-5. Dual Console 8-Port AC connectors

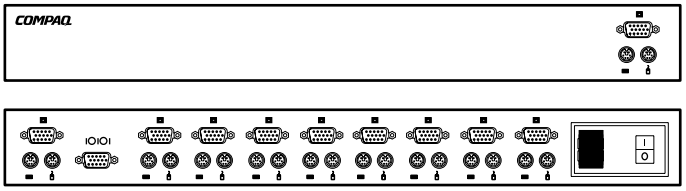


Figure 3-6. Dual Console 8-Port DC connectors

2. Decide which computer is to be connected to port 1.
   a. Connect the computer's mouse to the appropriate connector beneath the port labeled 1.
   b. Connect the computer's monitor to the 15-pin VGA connector.
   c. Connect the computer's keyboard to the appropriate connector.
   d. Bundle and label the cables for easy identification.
3. Repeat step 2 for all remaining computers to be connected to the switch box.

WARNING: To reduce the risk of electric shock or damage to your equipment, do not disable the power cord grounding feature. This equipment is designed to be connected to a grounded (earthed) power outlet that is easily accessible to the operator. The grounding plug is an important safety feature.

4. Connect the power cord to the switch box.

Connecting the Power Cable to the Dual Console 8-Port DC Switch Box

Use only #18 AWG stranded wire UL 1007 or UL 1015 (not included with the switch). The maximum length should not exceed 10 meters (32.8 feet).



WARNING: Always disconnect power before changing any wiring.



WARNING: To reduce the risk of electric shock or damage to the equipment this product must be installed in accordance with the following guidelines:

- This product is intended to be connected to a DC power source that can be classified as a secondary circuit in accordance with applicable National requirements for Information Technology Equipment. Generally, these requirements are based on the International Standard for Safety for Information Technology Equipment, IEC 950. The source must have one pole (Neutral/Return) referenced to earth ground in accordance with local/regional electric codes and/or regulations.
- This product is intended to be installed only in areas that comply with ETSI-300-132-2.
- This product must be connected to a power distribution device that provides a means for disconnecting power from the branch supply circuit. The power distribution device must be provided with an overcurrent protective device suitable for interrupting fault currents available from the main source, and rated no more than 0.3 Amps at the distribution device. The green/yellow lead of the power cable assembly must be connected to a suitable ground/earth terminal on the power distribution unit. Do not rely on the rack or cabinet chassis to provide adequate ground/earth continuity.

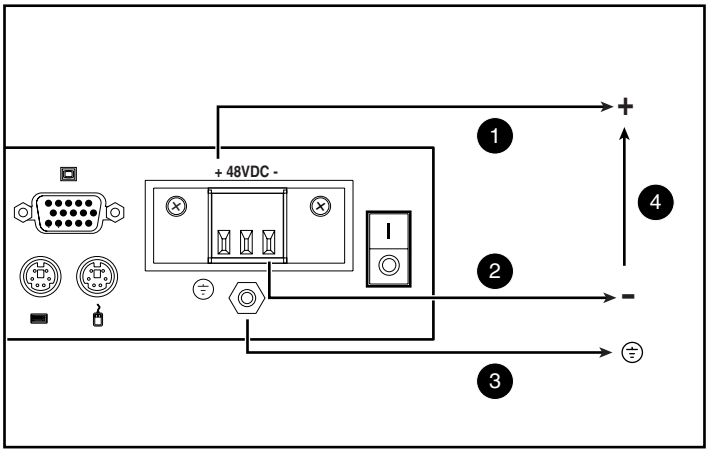


Figure 3-7. Wiring diagram

❶ Red wire

❷ Black wire

❸ Green/Yellow striped wire. Use chassis ground connection only

❹ 48 Volt DC (to external fused 48 volt DC supply)

1. Plug connector ❶ into receptacle. Do not use ground connection through connector.

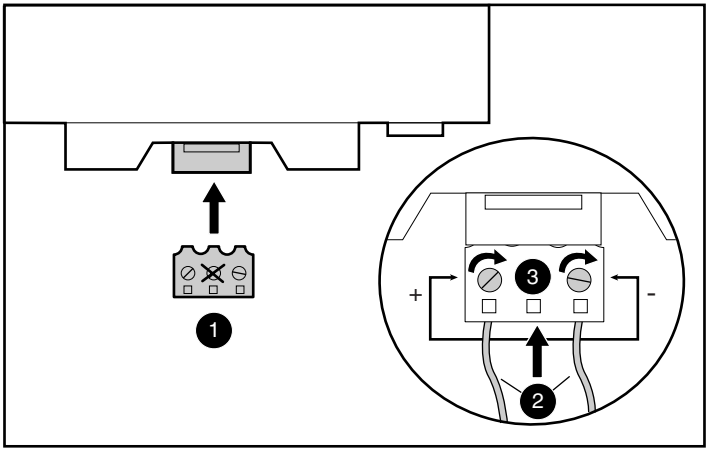


Figure 3-8. Connecting the wires

2. Insert stripped wires ❷ and tighten screws ❸.

Switch Box Startup Behavior

It is important to turn on the switch box before turning on the computers because when the servers boot up, their drivers send device settings to the switch. During startup, the switch box unit does the following:

- Identifies the mouse and keyboard and puts them into default states.
- Switches to port 1 by default, and displays the number "1" in the status flag displayed on the monitor. If the status flag default setting has been changed to Names mode, the status flag displays the port name instead of the port number. If a status flag is not shown on the monitor, make sure the computer is connected and powered up.

Power up the system as follows:

1. Press the power switch located on the rear panel of the switch box to the on (1) position.
2. Power on the computers.

Computer Startup Behavior

During startup, the computers send device settings to the switch box. The unit then generates standard responses to these commands and allows the computers to boot successfully without being physically connected to the keyboard, monitor, or mouse. Once the switch is installed, you can save these settings to non-volatile RAM (NVRAM). See Chapter 4 for additional information.

Configuring the Switch Box

When you first turn on the switch box, no configuration is needed for basic switching operation. To configure the unit to meet your specific needs, such as assigning unique names for the computers or displaying the computers by their assigned names or port numbers, see Chapter 4.

Unattended Reboot

After a power outage, each server connected to the switch box reboots (if configured to do so) without operator intervention, when power returns. The switch generates responses to ensure that the reboot is successful and that it is ready to switch between computers.

Resetting the Unit

If the keyboard or mouse locks up, you can push the **Reset** button on the back panel to reset the switch. Pressing the **Reset** button may allow you to recover the device settings without power cycling the computers.

Making Connections Under Power

You can connect additional computers to the switch while it is powered up. When you power up the newly connected computers, the switch recognizes them, and you can switch to the new computers without taking any additional steps.

You can also connect the mouse and/or keyboard to the switch while the system is powered up. When you connect a new device, the switch recognizes it and configures it to the settings of the currently selected computer. This technique allows failed devices to be replaced without having to restart the system.

NOTE: When new computers are added to the switch, or when existing connections are changed, the new configurations should be saved in NVRAM by using the Snapshot option from the OSD.

Alternate Configurations

There are other ways to configure your system, including tiered switch configurations and dual console configurations.

Tiered Switch Configurations

In tiered systems, you can connect additional switches to ports on a primary unit. That is, switches can be tiered in primary/secondary configurations to allow one primary switch to switch between computers or other switch units. Tiering simply involves linking the physical keyboard, mouse, and monitor of the secondary units to computer ports on the primary unit. For example, one 8-Port primary unit can accommodate eight secondary switch units. A system with eight servers connected to each of the eight secondary switches would provide a 1x64 concentration.

An example of a tiered switch configuration is shown in Figure 3-8.

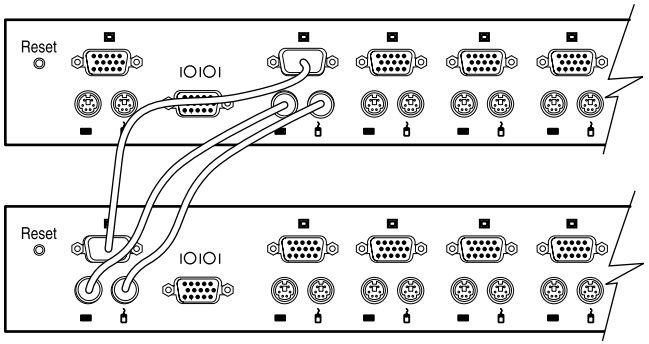


Figure 3-9. Tiered configuration

When connecting a secondary unit to one of the ports of the master unit, you need to indicate this connection to the primary unit by performing the "Assigning Specific Device Types" procedure described in Chapter 4. This involves entering a secondary unit designation for the associated port number instead of a monitor type. Use the designation **4-Port** for a four-port secondary and **8-Port** for an eight-port secondary.

The OSD allows secondary ports to be treated much like ports on the primary switch. It may be helpful to name each secondary unit as described in "Assigning Unique Names to Computers" in Chapter 4.

Connecting Tiers while the System is Powered Up

If necessary, you can connect a primary unit to a secondary unit while the system is powered up. This technique can be used to isolate any problems with minimum disruption to the system. When plugging a primary switch box into a secondary unit, first connect the mouse and video cables, then connect the keyboard cable. This is important because the primary unit interprets the keyboard connection as the secondary unit's power up. At this point, the primary unit sends initialization codes to the secondary unit, triggering device configuration.

See Chapter 4 for information on switching tiered systems.

Dual Console Configuration

The dual console configuration is available using either of the Dual Console 8-Port switches. Use the same methods described previously to connect the cables to your unit. Then use the ports on the front of the switch box to connect an additional keyboard, monitor, and mouse. See “Menu Screen” in Chapter 4 for information on switching connection modes.

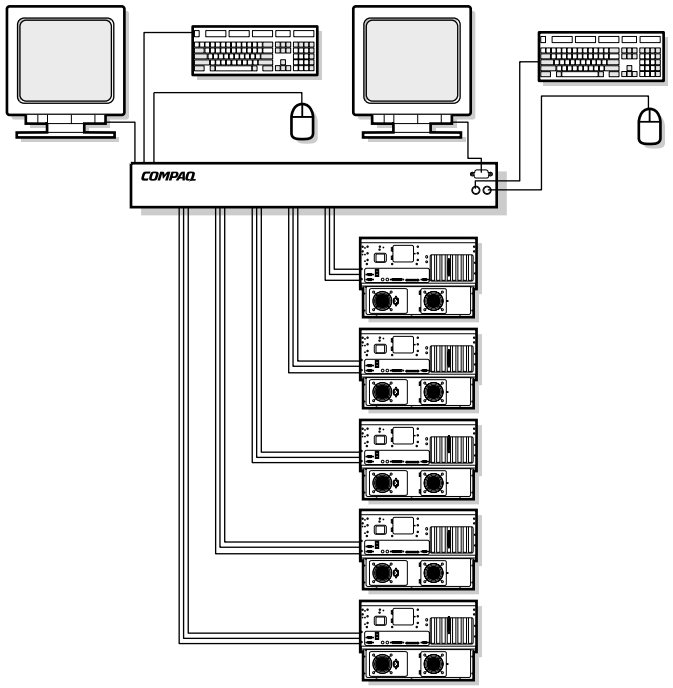


Figure 3-10. 8-Port dual console configuration

Chapter **4**

Using the On-Screen Display

On-Screen Display

The On-Screen Display (OSD) is for use with the 4-Port, 8-Port, and Dual Console 8-Port units. If you are using a 2-Port switch box, see Chapter 5, "Using the Simplified OSD."

Alternate Languages

The Compaq Server Console Switch Software Utility CD contains an update to the OSD for languages other than English. See the CD for information on using this utility.

NOTE: Language selection is not available on the 2-Port switch.

Functions

Use the OSD to perform the following basic functions:

- Assign device types if you have secondary switches attached to a primary switch (tiering)
- Assign unique names to computers
- Choose switch connection mode if you are using the Dual Console 8-Port switch
- Save the hardware settings
- View information about your switch system

Additional functionality is described in this chapter under each of the screen headings.

NOTE: The OSD operates independently of your computer operating system.

Navigation

You can navigate the OSD menus and enter commands using the mouse and keyboard; however, because the switch operates independently of the computer operating systems, OSD keyboard and mouse conventions may differ from those you use when controlling the selected computer. Table 4-1 lists the special conventions used while navigating the OSD.

Table 4-1
Conventions for Navigating OSD Menus

Item	Function
Mouse	
Left mouse button	Activates commands, highlights line items, and repositions OSD menus on the desktop (click and drag the title bar).
Right mouse button	Closes the current screen and returns to the previous. Exits OSD from the Main screen.
Keyboard	
Print Scrn	Opens the OSD Selection screen.*
Page Up/Page Down	Pages up and down through the name and port lists.
Enter	Completes switch operation on the Main screen and exits OSD menus.
Caps Lock	Disabled. (Use **Shift** to change case.)
Esc	Closes the current screen and returns to the previous. Exits OSD from the Main screen.
Alt	Use in combination with underlined letter to open menus or execute actions.
Alt + **X**	Closes the current screen.
F1	Opens online help.
Screen	
	Pages up and down through the name and port lists.
	Closes the current screen and returns to the previous screen without changing settings.
	Opens Online Help for each screen.
	Accepts changes, closes the current screen, and returns to the previous screen.

***NOTE:** To print a screen, see "Performing a Screen Capture" in this chapter.

Once the OSD is activated by pressing **Print Scrn**, you can use the mouse instead of the arrow keys to highlight menu options.

Menu Overview

Table 4-2 shows the options available from each OSD menu.

Table 4-2
OSD Menu Tree

MAIN MENU	
Setup	**Commands**
Scan	Scan Enabled
Menu	Broadcast Active
Flag	Snapshot
Set Flag Position	Reset
Security	Version
Broadcast	
Devices	
Modify	
Names	

OSD Main Screen

Press **Print Scrn** to open the OSD menus. The OSD Main screen appears first.

The Main screen lists all of the ports in the system, the associated computer names, and the status of each port. If you have a Dual Console 8-Port switch, an **A** or **B** next to the status symbol identifies the console.

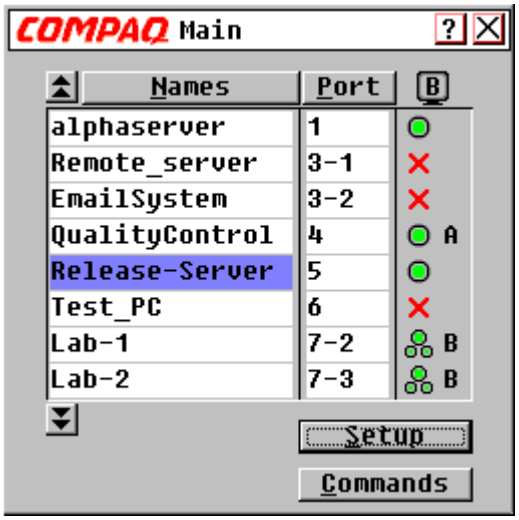


Figure 4-1. OSD Main screen

Table 4-3
Status Port Symbols

	Computer is connected and running
	Connected computer is not running or not operating properly
	Tiered switch is connected and running
	Tiered switch is not running or not operating properly
	Identifies which user you are in a Dual Console configuration
A, **B**	Console identifier in a Dual Console 8-Port switch

Primary ports have a single port number. Secondary ports have the port number of the primary switch they are attached to followed by a dash, and then the number of the secondary port.

Table 4-4
Main Screen Functions

Button	Click to…	Alternate Method
Names	sort alphabetically by names	Press **Alt** + **N**
Port	sort by port numbers	Press **Alt** + **P**
Setup	display Setup screen	Press **Alt** + **S**
Commands	display Commands screen	Press **Alt** + **C**

NOTE: Highlighted port indicates selected device.

Setup Screen

The Setup screen lists menu options to change configurations.

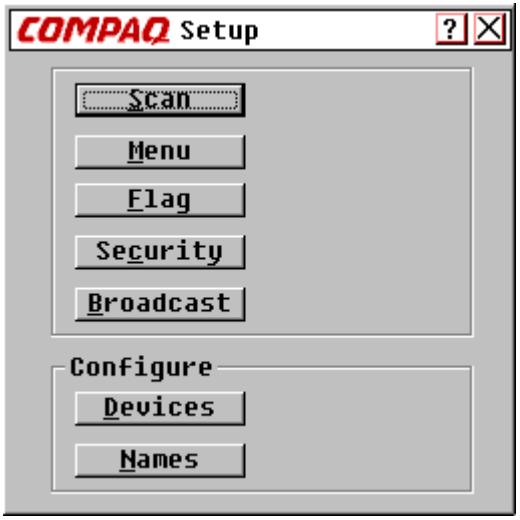


Figure 4-2. Setup screen

Table 4-5
Setup Screen Functions

Button	Click to…	Alternate Method
Scan	set sequential or customized scan pattern	Press **Alt** + **S**
Menu	set display order, delay time, and cooperative or preemptive mode	Press **Alt** + **M**
Flag	customize the flag display	Press **Alt** + **F**
Security	set a password and screen saver	Press **Alt** + **C**
Broadcast	set the keyboard and mouse for simultaneous control	Press **Alt** + **B**
Devices	establish monitor and port settings	Press **Alt** + **D**
Names	assign names to computers	Press **Alt** + **N**

Commands Screen

The Commands screen lists actions you can initiate.

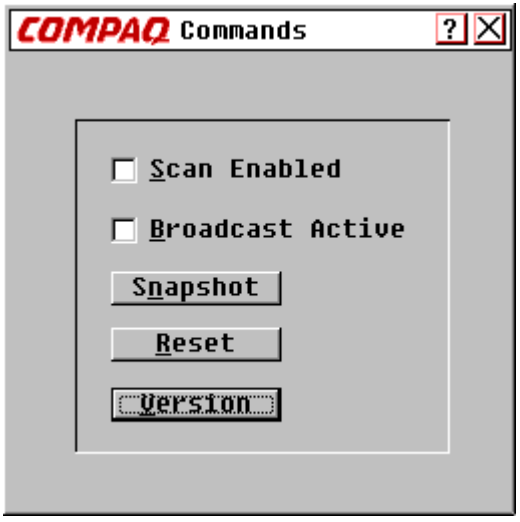


Figure 4-3. Commands screen

Table 4-6
Commands Screen Functions

Field/Button	Select/Click to…	Alternate Method
Scan Enabled	automatically switch video from port to port	Press **Alt** + **S**
***Broadcast Active**	simultaneously control more than one computer in a single system	Press **Alt** + **B**
****Snapshot**	record current keyboard and mouse settings	Press **Alt** + **N**
Reset	return to mouse and keyboard default settings	Press **Alt** + **R**
Version	view firmware version information	Press **Alt** + **V**

***NOTE 1:** Only one user may select Broadcast Active at a time.

****NOTE 2:** Snapshot saves the mouse and keyboard information the switch uses to boot up the computers. If you do not save the hardware settings when you install a switch system, add or remove computers from the system, or change the mouse, keyboard, or monitor, they are lost when power to the switch is lost or turned off and each computer must be rebooted.

Version Screen

You can display the version number of the switch firmware as well as information about any auxiliary devices connected to the switch to facilitate system troubleshooting and support.

The Version screen also displays specific device information for the currently selected computer. Keyboard information includes enabled/disabled, typematic rate, LED settings, port mode, and keyboard type. Mouse information includes enabled/disabled, sample rate, resolution, and mouse type.

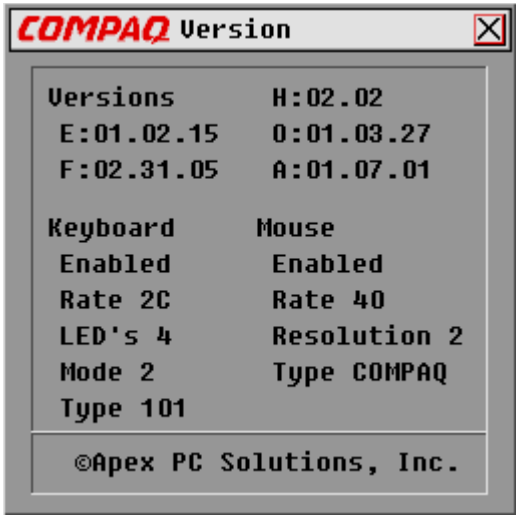


Figure 4-4. Version screen

Reset Command

The switch unit stores mouse and keyboard connection and rate data and uses this information to emulate the physical mouse and keyboard. If communication between the switch and mouse and keyboard fails, the selected server may not function. The Reset command takes the mouse and keyboard information that was saved in Snapshot and sends it to the server to reestablish connection with the mouse and keyboard. Resetting the mouse and keyboard attempts to restore the correct settings for the selected computer.

Because the switch emulates the physical mouse and keyboard, it allows a computer without an attached keyboard or mouse to operate as though there were a physical device attached to it.

To reset the mouse and keyboard values, click **Reset**.

NOTE: If this does not correct the problem, press the Reset button on the back panel of the switch.

Devices Screen

If your system includes one or more secondary switches in a tiered configuration, you must make the primary switch aware of the secondary switch by assigning a specific device type. In addition, if one or more of the computers in your switch system have a special type of monitor, it may be necessary to assign that monitor type to the port associated with that computer.

To modify a device, double-click it or highlight it then click **Modify**.

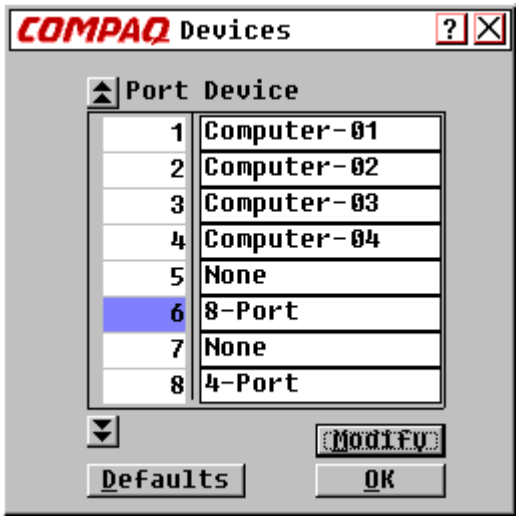


Figure 4-5. Devices screen

Table 4-7
Devices Screen Functions

Button	Click to…	Alternate Method
Modify	display Device Modify screen to modify port settings	Press **Alt** + **M**
Defaults	use the default device type and port settings	Press **Alt** + **D**
OK	accept changes, close the current screen, and return to the previous screen	Press **Alt** + **O**

NOTE: Highlighted port indicates selected device.

Device Modify Screen

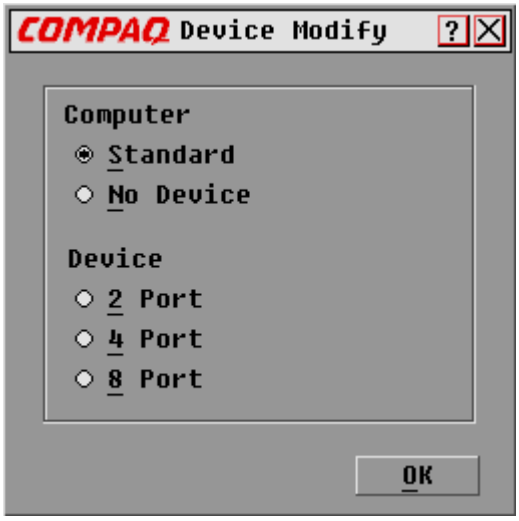


Figure 4-6. Device Modify screen

Table 4-8
Device Modify Screen Functions

Field/Button	Select/Click to…	Alternate Method
Standard	use basic computer connection	Press **Alt** + **S**
No Device	delete this number or name from the list of computers on the Main screen if you have no switch or computer connected to it	Press **Alt** + **N**
2 Port	assign a 2-Port switch as your secondary system	Press **Alt** + **2**
4 Port	assign a 4-Port switch as your secondary system	Press **Alt** + **4**
8 Port	assign an 8-Port switch as your secondary system	Press **Alt** + **8**
OK	accept changes, close the current screen, and return to the previous screen	Press **Alt** + **O**

Names Screen

Use this screen to identify a computer by name rather than port number.

NOTE: Before you can assign names to computers attached to secondary switches, you must first associate the secondary device with a port. Once this is done, the port numbering structure is reorganized so that the secondary ports are visible to the user. See "Devices Screen" and "Devices Modify Screen" previously in this chapter.

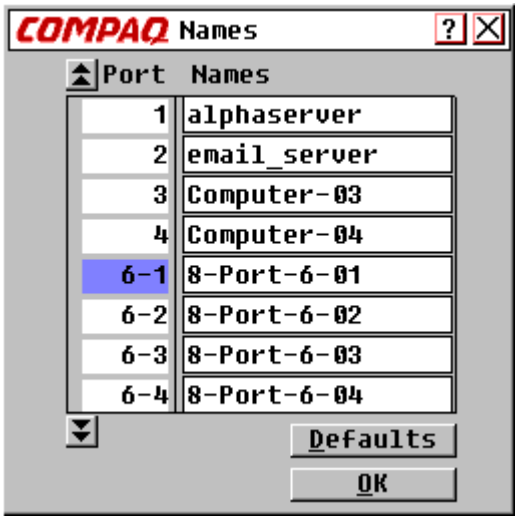


Figure 4-7. Names screen

Table 4-9
Names Menu Functions

Button	Click to…	Alternate Method
Defaults	restore default settings	Press **Alt** + **D**
OK	accept changes, close the current screen, and return to the previous screen	Press **Alt** + **O**

NOTE: Highlighted port indicates selected device.

To assign a unique name to a computer:

1. Click the port number of the computer.
2. Type the device name in the Names field.

   Computer names can be up to 15 characters long, including only A-Z upper and lower case, 0-9, and the dash character. Press **Backspace** or **Delete** to delete an incorrect entry. Click the cursor anywhere on the line to overtype.
3. Repeat steps 1 and 2 for each computer to be named.
4. Click **OK**.

To edit an existing port or name double-click it, make any changes, then click **OK**.

Menu Screen

Use this screen to set the display order of the computers on the Main screen. If you are using a Dual Console 8-Port switch, use this screen to select a switch connection mode.

NOTE: Switch Mode is grayed out in single user switches, and Cooperative and Preemptive are not selectable.

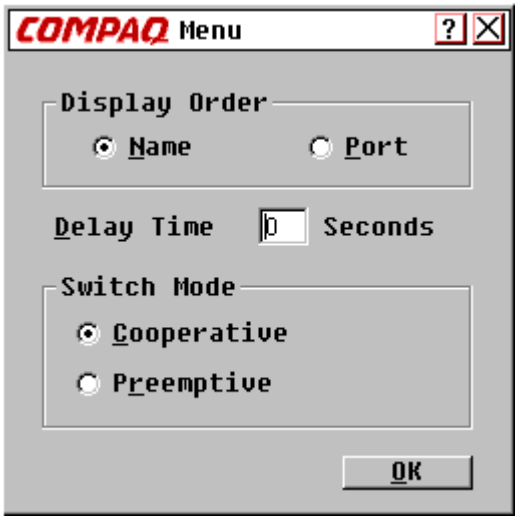


Figure 4-8. Menu screen

Table 4-10
Menu Screen Functions

Field/Button	Select/Click to…	Alternate Method
Name	sort computer display order by name	Press **Alt** + **N**
Port	sort computer display order by port number	Press **Alt** + **P**
Delay Time	enter the number of seconds to delay display to allow soft switch*	Press **Alt** + **D**
Cooperative	have the switch maintain the current user connection; this user won't be disconnected if another user console requests connection (default setting)	Press **Alt** + **C**
Preemptive	have the switch allow any user console to select any computer at any time	Press **Alt** + **R**
OK	accept changes, close the current screen, and return to the previous screen	Press **Alt** + **O**

***NOTE:** Delay Time allows you to complete a soft switch without the OSD menus displaying. See "Performing a Soft Switch" in this chapter.

Scan Screen

In scan mode, the switch automatically switches from port to port (computer to computer). You can scan the entire system sequentially or designate a custom scan pattern by specifying computers and durations.

If you have a Dual Console 8-Port switch, scan behavior is influenced by multiple users and tiered switches. A multi-user switch in the primary position and any single user switch in the secondary position can create situations that change the scan pattern.

Example 1 — User A is accessing computer 2-4 attached to the secondary switch at Port 2 on the primary switch while user B scans computers attached to the secondary switch at Port 1 on the primary switch.

Behavior — Switch at Port 1 is available to scan; no user is accessing it. Any key pressed at the keyboard or a mouse click stops the scanning and passes the keystrokes or mouse movements to the currently selected computer.

Example 2 — User A is accessing computer 2-4 while user B scans computer 2-4.

Behavior — WATCH, monitor activities of user A. Cannot use the keyboard or mouse to pass the keystrokes or mouse movements to the currently selected computer.

Example 3 — User A is accessing computer 2-4 while user B wants to scan computer 2-6.

Behavior — SKIP, because user A occupies the primary port connection at Port 2 making 2-6 unavailable to user B.

Example 4 — User A is accessing computer 2-4 while user B scans computer 3-2.

Behavior — Switch at port 3 is available to scan; no user is accessing it. Any key pressed at the keyboard or a mouse click stops the scanning and passes the keystrokes or mouse movements to the currently selected computer.

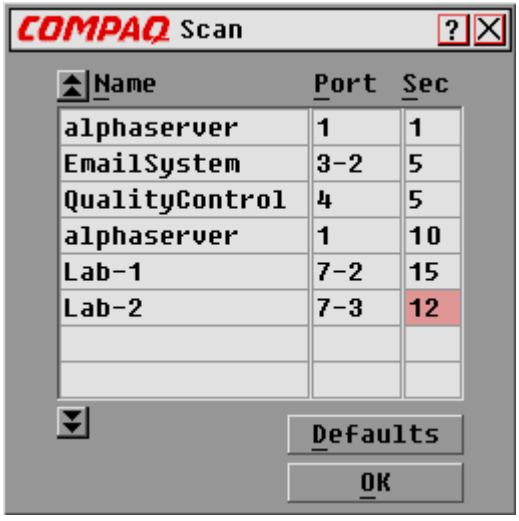


Figure 4-9. Scan screen

Table 4-11
Scan Screen Functions

Field/Button	Click to…	Alternate Method
Names	sort computers alphabetically by name	Press **Alt** + **N**
Port	sort computers by port number	Press **Alt** + **P**
Sec	enter the length of time a computer is selected before the scan switches to the next computer	Press **Alt** + **S**
Defaults	return to default settings	Press **Alt** + **D**
OK	save changes and return to the previous menu	Press **Alt** + **O**

NOTE: Highlighted port indicates selected device.

To set a custom scan pattern:

1. Type the name or port number of the computer in the Name and Port boxes for the computer you want to include in the scan.
2. In the Sec column, type the number of seconds, from 1 to 255, that you want this computer to be selected before switching to the next computer in the sequence.
3. Repeat for each of the remaining computers to be included in the scan.
4. Click **OK**. The new scan pattern replaces the standard or previous custom scan pattern.

To start the scan mode, select **Scan Enabled** from the Commands screen.

To cancel scan mode, deselect **Scan Enabled** from the Commands screen.

To remove a computer from the scan list:

1. Click the computer you want to remove from the scan list.
2. Press **Delete**

   or

   Press **Shift + Delete** to delete the current computer and all computers below it.
3. Click **OK**.

Flag Screen

The status flag indicates the name or port number of the currently selected computer. If you have a Dual Console 8-Port switch, each console can have different flag attributes.

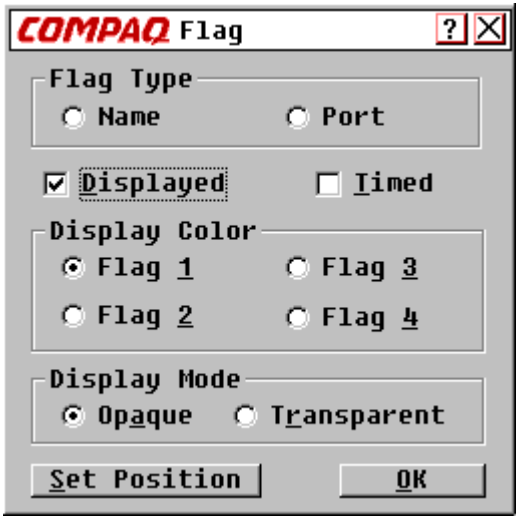


Figure 4-10. Flag screen



Figure 4-11. Status flag showing the user is connected to a computer sorted by name order



Figure 4-12. Status flag showing that broadcasting is enabled and the user is connected to a tiered computer sorted by port order

Table 4-12
Flag Screen Functions

Field/Button	Select/Click to…	Alternate Method
Name	Identify computers by name	Press **Alt** + **N**
Port	Identify computer by port	Press **Alt** + **P**
Displayed	show flag at all times	Press **Alt** + **D**
Timed	display flag for only 5 seconds after switching	Press **Alt** + **T**
Flag 1, 2, 3, 4	select a color palette	Press **Alt** + **1**, **2**, **3**, or **4**
Opaque	have the flag cover the desktop image	Press **Alt** + **A**
Transparent	have the desktop image seen through the flag	Press **Alt** + **R**
Set Position	position flag on the screen	Press **Alt** + **S**
OK	save current settings and return to the previous screen	Press **Alt** + **O**

To position the status flag on the desktop:

1. Click **Set Position**.
2. Click and drag the title bar to where you want the status flag to display on the desktop.
3. Click **X** to exit the dialog box. The setting is saved.

Security Screen

The security feature enables you to lock the keyboard and monitor. When the keyboard and monitor are locked, you must type a password before resuming operation. You can also set a time delay before the system is locked by entering the number of seconds to delay the screen saver.

You must provide a password to access the fields in the Security screen. After you type the correct password, the other fields on the screen are activated. If you have a Dual Console 8-Port switch, each console can have a different password.

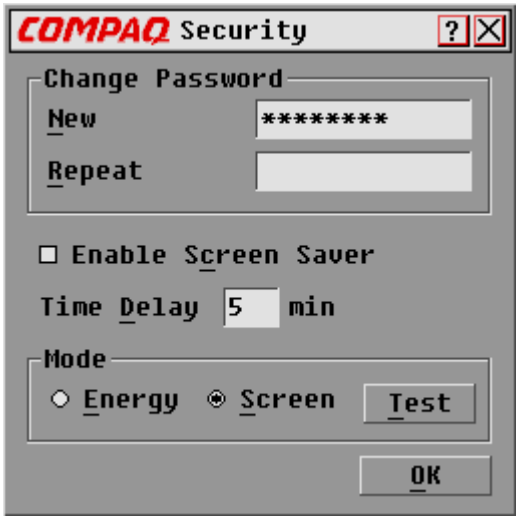


Figure 4-13. Security screen

Table 4-13
Security Screen Functions

Field/Button	Select/Click to…	Alternate Method
New	enter new password or confirm current password	Press **Alt** + **N**
Repeat	confirm new password	Press **Alt** + **R**
Enable Screen Saver	enable screen saver	Press **Alt** + **C**

continued

Table 4-13
Security Screen Functions *continued*

Field/Button	Select/Click to…	Alternate Method
Time Delay	enter the number of minutes before the keyboard and monitor are locked	Press **Alt** + **D**
Energy	set the energy saver feature if your monitor is Energy Star compliant (see Caution below)	Press **Alt** + **E**
Screen	operate monitor in normal mode	Press **Alt** + **S**
Test	immediately start screen saver mode	Press **Alt** + **T**
OK	save settings and return to the previous menu	Press **Alt** + **O**



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant. DO NOT use this mode if your monitor is not Energy Star compliant.

To change the password:

1. Type the new password in the New field. Passwords can be up to 8 characters in length. Passwords are case sensitive and may contain both letters and numbers.
2. Type the new password in the Repeat field to confirm the new password.
3. Click **OK**.

To lock the keyboard and monitor:

1. Type your password in the New field.
2. Select **Enable Screen Saver**.
3. In the Time Delay field, type the number of minutes (from 1 to 254) that you want to delay activation of the screen saver.

4. Choose **Energy** if your monitor is Energy Star compliant, or **Screen** if it is not.



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant. DO NOT use this mode if your monitor is not Energy Star compliant.

5. Click **Test** to view the screen saver.
6. Click **OK**.

To blank the monitor without locking the console:

1. Delete the text in the New field and leave the box blank.
2. Select Enable Screen Saver.
3. In the Time Delay field, type the number of minutes (from 1 to 254) that you want to delay activation of the screen saver.
4. Choose Energy if your monitor is Energy Star compliant, or Screen if it is not.



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant. DO NOT use this mode if your monitor is not Energy Star compliant.

5. Click **Test** to view the screen saver.
6. Click **OK**.

IMPORTANT: This action overrides the use of a password. Pressing any key on the keyboard unlocks the console. Your system IS NOT secure.

To disable the screen saver:

1. In screen saver mode, press any key on the keyboard then type your password if your console is password protected.
2. Press **Print Screen** to display the Main screen.
3. Click **Setup** | **Security**.
4. Type your password in the New field.
5. Deselect **Enable Screen Saver**.
6. Click **OK**.

Screen Saver Test

Click **OK** to activate the Screen Saver Test. After 10 seconds you are returned to the Security screen.

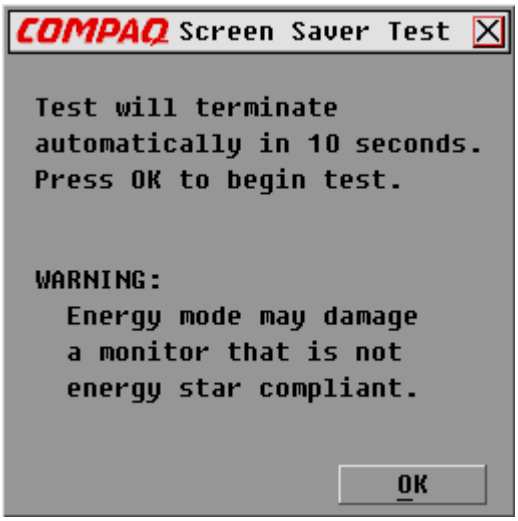


Figure 4-14. Screen Saver Test

Broadcast Screen

The broadcast feature enables you to simultaneously control more than one computer in a system. This feature is useful when you want to ensure that all selected computers receive identical input. In a tiered system, you can broadcast to any combination of computers on the entire system.

Keyboard

The keyboard state must be identical for all computers receiving a broadcast to interpret keystrokes identically. Specifically, the **Caps Lock** and **Num Lock** modes should be the same on all keyboards.

Mouse

For the mouse to work accurately, all systems must have identical mouse drivers, identical desktops (that is, identically placed icons), and identical video resolutions. In addition, the mouse must be in exactly the same place on all screens. *Because these conditions are extremely difficult to achieve, broadcasting mouse movement to multiple systems may have unpredictable results*.

The switch attempts to send keystrokes and mouse movements to the selected computers simultaneously; however, some computers may inhibit and thus delay the transmission.

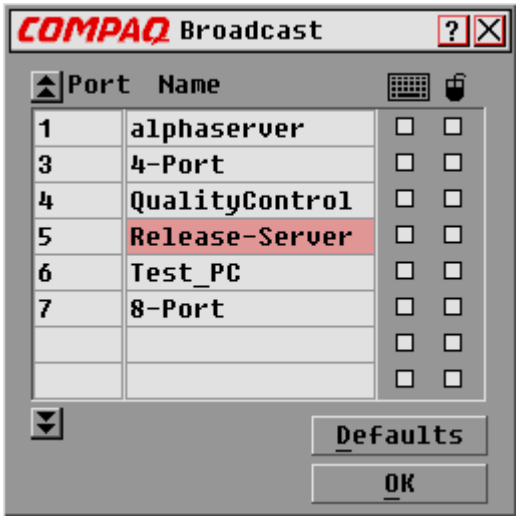


Figure 4-15. Broadcast screen

Table 4-14
Broadcast Screen Functions

Field/Button	Select/Click to…	Alternate Method
Defaults	return to default settings (all off)	Press **Alt** + **D**
OK	save changes and return to previous menu	Press **Alt** + **O**

NOTE: Highlighted port indicates selected device.

To broadcast to selected computers:

1. Select the keyboard and/or mouse box to receive keystrokes and/or mouse movements.
2. Click **OK**.
3. Select **Broadcast Active** from the Commands screen to start broadcasting.

To turn off broadcast mode, deselect Broadcast Active from the Commands screen.

Broadcasting to Tiered Configurations

In a tiered system, you can broadcast to any combination of computers on the entire system.

To broadcast to tiered configurations:

Setting Up Computers Attached to Secondary Switches

1. From the Main screen, double-click the computer name or port number of the secondary switch to which you want to broadcast; press **Print Scrn** twice; the Main screen for the secondary switch displays.
2. Click **Setup | Broadcast**.
3. Check the keyboard and mouse box for each computer that receives keystrokes and/or mouse movements, then click **OK**.
4. From the Commands screen, select **Broadcast Active** to turn on the broadcast mode for the secondary switch.
5. Press **Print Scrn** to open the Main menu on the primary switch.
6. Repeat steps 1 through 5 to send broadcast commands to computers attached to additional secondary switches.

Setting Up Computers Attached to Primary Switches

1. From the Main menu on the primary switch, click **Setup | Broadcast**.
2. Check the keyboard and mouse for each computer that receives keystrokes and/or mouse movements, then click **OK**.
3. From the Commands screen, select **Broadcast Active** to turn on the broadcast mode for the primary switch.

4. From a user console attached to the primary switch and connected to the secondary switch, type information and/or make mouse movements you want to broadcast.

   NOTE: Only broadcast to systems directly connected to a primary switch or only to secondary switches connected to a primary switch.

To turn off broadcast mode for a tiered configuration:

1. From the Commands screen at the primary switch, deselect **Broadcast Active**.
2. From the Main screen, double-click the port number or name of the secondary switch for which you want to stop broadcasting commands; press **Print Scrn** twice; the Main screen at the secondary switch displays.
3. Click **Commands**.
4. Deselect **Broadcast Active**.

Accessing the OSD at a Secondary Switch

Configuration of the switch system is accomplished at the primary switch. All naming, scanning, status flag attributes, menu attributes, device settings, passwords, and so on must be set at the primary switch. The factory defaults for the OSD should not be changed in a secondary switch because adjustments can cause conflicts between the secondary and primary switches.

Access OSD menus at the secondary switch to:

- Check version information of your firmware
- Set up broadcasting
- Add another level of security in tiered configurations
- Use Snapshot to save the hardware settings at the secondary switch
- Reset mouse and keyboard information at the secondary switch

To open the Main screen at a secondary switch:

1. Press **Print Scrn** to open the Main screen at the primary switch.
2. Double-click the number of the tiered port you want to access, or highlight the tiered port and press **Print Scrn**; the Main screen at the secondary switch displays.

Switching Between Computers

Switching from one computer to another is a simple process with the Server Console Switch. Switching disconnects the keyboard, mouse, and monitor from one computer and connects them to another.

Whenever you switch between two computers, the Server Console Switch reconfigures the keyboard and mouse using the settings stored in its memory. For example, if the current computer selected has **Caps Lock** turned on, but the user is switching to a second computer that has **Caps Lock** turned off, then the unit turns **Caps Lock** off to match the setting for the second computer.

To switch computers:

1. Press **Print Scrn** to display the Main menu screen.
2. Double-click the computer name or port.

   or

   Highlight the port and press **Enter.**

   or

   Type the port number or first few letters of the computer name to establish it as unique, then press **Enter**.

Performing a Soft Switch

After opening the OSD menus, you can switch between computers without having the OSD menus display. To perform a soft switch:

1. Click **Setup | Menu**.
2. Type in a time to delay displaying the Main OSD menu after **Print Scrn** is pressed.
3. Click **OK**.
4. At the Main menu screen, type the port number or first few letters of the computer name to establish it as unique and press **Enter**.
5. To switch to another computer, press **Print Scrn** and type the port number or first few letters of the computer name. If the switch is performed before the Delay time has expired, the OSD menus do not display.

Performing a Screen Capture

In the Server Console Switch system, pressing **Print Scrn** opens the OSD Menus. To print a screen capture displayed by a computer, use the following procedures:

- *On a computer connected to a primary switch*: press **Print Scrn** twice. The first keystroke opens OSD menus in the primary switch. The second keystroke clears the screen, sends the keystrokes through to the other device, then captures or prints the screen.
- *On a computer connected to a secondary switch in a tiered configuration*: press **Print Scrn** four times. The first keystroke brings up the OSD in the primary switch. The second keystroke brings up the OSD in the secondary switch. The third keystroke brings up both OSDs. The fourth keystroke clears the screen, then captures or prints the screen.

Chapter 5

Using the Simplified OSD

The Simplified OSD is used only with the 2-Port switch.

Launching the OSD

Press **Print Scrn** to access the keyboard/monitor/mouse OSD menus. To print a screen capture displayed by a computer, follow this procedure:

Conducting a screen capture

- On a computer connected to a **primary** switch, press **Print Scrn** twice.

  The first keystroke opens Simplified OSD menus in the primary switch. The second keystroke clears the screen, then captures or prints the screen.

- On a computer connected to a **secondary** switch in a tiered configuration, press **Print Scrn** four times.

  The first keystroke displays the Simplified OSD in the primary switch. The second keystroke displays the Simplified OSD in the secondary switch. The third keystroke displays both Simplified OSDs. The fourth keystroke clears the screen, then captures or prints the screen.

Simplified OSD Selection Screen

When you press the **Print Scrn** key to open the Simplified OSD menus, the first screen that appears is called the Simplified OSD Selection screen. Basic functions such as selecting computers and checking port/computer status are performed from the Selection screen.

The Selection screen lists all the ports in the system, the associated computer names, and the status of each port. It can be organized either by port number or by computer name. To identify your computers by name, see "Assigning Unique Names to Computers," in this chapter. To change the order in which computers are listed, see the section "Changing Menu Attributes." On large systems, you may need to use the arrow keys or the **Page Down** key to scroll through the list of ports.

Opening the Simplified OSD or accessing the Simplified OSD Selection screen on a primary switch

1. Press **Print Scrn** to access the Simplified OSD Selection screen at the primary switch.
2. Highlight the number of the port you want to access. Press **Print Scrn**; the Simplified OSD Selection screen at the secondary switch appears.

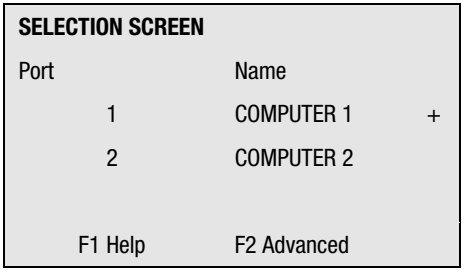


Figure 5-1. Selection Screen

The factory defaults for the Simplified OSD should not be changed in a secondary switch because adjustments can cause conflicts between the secondary and the primary switch.

Simplified OSD Status Port Symbols

+ Computer connected and running.

x Secondary switch connected and running.

NOTE: The Simplified OSD screens in this document are examples. Your screens may vary depending on your configuration.

Simplified OSD Advanced Menus screen

All commands other than selecting computers are performed from the Simplified OSD Advanced Menus. The Advanced Menus screen contains two menus. The Commands menu shows the commands that cause an action to take place; the Setup menu shows menu screens to set configurations.

Opening the Simplified OSD Advanced Menus

1. Press **Print Scrn** to open Simplified OSD Selection.
2. Press **F2**.

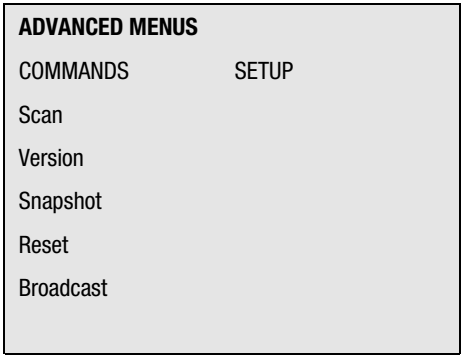


Figure 5-2. Advanced Menus, Commands

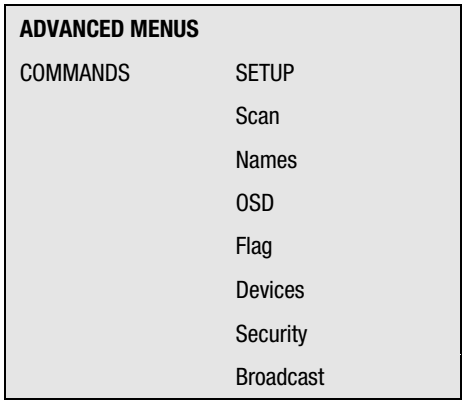


Figure 5-3. Advanced Menus, Setup

The Simplified OSD Advanced Menus screen appears showing the commands listed under the Commands menu. Highlighting Setup shows screen selections available for configuring your switch. Moving the highlight with the arrow keys or mouse in either menu selects a specific command or menu screen.

NOTE: Broadcast is not an available option for the 2-Port switch.

Exiting the Simplified OSD

To exit the Simplified OSD, press **Esc**.

Selecting Computers

Use the Simplified OSD menus to switch computers, that is, to select which computer receives commands from and displays output to the console. When you select a computer, the switch reconfigures the keyboard and mouse for the selected computer using the settings stored in its memory. The current information (for example, the state of the **Caps Lock** key) is maintained for each computer in the system. When configuration is complete, the video output of the selected computer passes to the monitor.

Switching computers

1. If your computers are ordered by the number of the port, in the Simplified OSD Selection screen, type the port number of the computer you want to switch to.

   or

   Use the arrow keys or mouse to select a computer.

   or

   If your computers are ordered by name, type the first letters of the computer name to establish it as unique in order to select it. To identify computers by name, see the section, "Assigning Unique Names to Computers."

2. Press **Enter**.

3. When you are finished switching, press **Esc** to exit the Simplified OSD and remove the Simplified OSD menus from your monitor display. If the status flag is enabled, it remains displayed to indicate the currently selected computer.

Assigning Unique Names to Computers

You may find it easier to identify the computers in a system by name, rather than by port number. For example, in a network environment, you can assign the same names as those assigned by the network for each computer. To list the computers by name in the Simplified OSD menus, see the section, "Changing Menu Attributes."

NOTE: Before you can assign names to computers attached to a secondary switch, you must first associate the secondary device with a port. See the section, "Assigning Specific Device Types."

To assign unique names to computers:

1. In the Advanced Menus screen, move the highlight to the Setup menu.
2. Highlight **Names** and press **Enter**; the Port Name Setup screen appears.

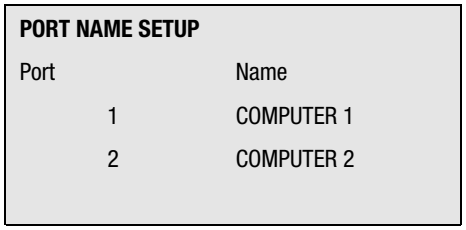


Figure 5-4. Port Name Setup screen

3. Select the port number for which you want to enter or change a computer name.
4. Type a name for the computer.

Computer names may be up to 12 characters long, including only A-Z, 0-9, and the dash character. Lowercase letters are converted to uppercase. Press **Backspace** to delete an incorrect entry.

5. If necessary, repeat steps 3 and 4 for each computer in the system.
6. Press **Enter** to save the settings and exit the menu.

   or

   F10 to restore default settings.

   or

   Esc to exit the menu without saving the settings.

Changing Menu Attributes

In the Simplified OSD Attributes screen you can change the order of computer ports from displaying the port number to displaying the port name. Other attributes of the Simplified OSD screens, such as the position and color, can be changed to suit the particular use of the system.

To change menu attributes:

1. In the Advanced Menus screen, move the highlight to the Setup menu.
2. Highlight **OSD** and press **Enter**; the Simplified OSD Attributes screen appears.

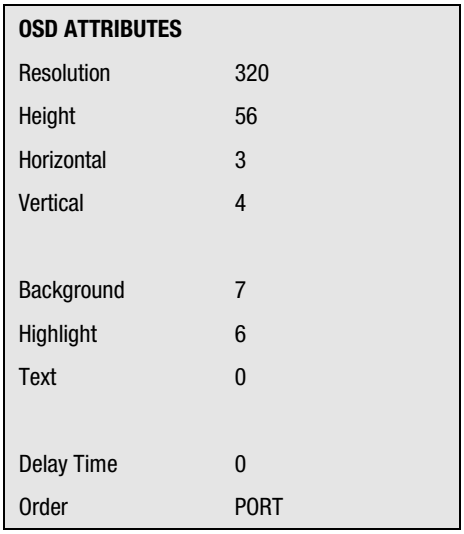


Figure 5-5. OSD Attributes screen

3. Highlight the settings you want to change and use the + or – keys to obtain the desired value.

   As you select different values, the effect of the changes is reflected immediately on the display. Table 5-1 describes each of the available menu attributes.

   NOTE: While changing Simplified OSD attributes, it is possible to scramble the menu and screens, making it difficult to correct the problem. If this occurs, reset the switch to its default Simplified OSD values by pressing:

   Esc + **Esc** + **Print Scrn** + **F10** + **Y** + **Enter**

4. Press **Esc** to save the settings and exit the menu.

   or

   F10 to restore default settings.

   or

   Esc to exit the menu without saving the settings.

Effects of Settings on Screen Appearance

Table 5-1
Screen Appearance Settings

To change…	Select…	Values
Size of screen	Resolution	Select either 320, 480 or 640; the lower the value, the larger the size.
Size of text	Height	Higher values display larger text.
Location of screen	Horizontal	0 – 127
	Vertical	0 – 255
Color of screen and text	Background	0 – 7
	Highlight	0 – 7
	Text	0 – 7
Timing of Simplified OSD	Delay Time	Time in seconds the Selection screen is delayed before appearing after display **Print Scrn** is pressed. Increasing delay can prevent the screen from being a distraction when performing simple computer switching operations.
Order of computers	Order	Choose to list computers by port number or alphabetically by name.

Changing Status Flag Attributes

The status flag indicates the name or port number of the currently selected computer. You can choose to display the status flag at all times, for a few seconds after switching, or not at all. You can also change the color of the status flag and its location on the screen.

To change status flag attributes:

1. In the Advanced Menus screen, move the highlight to the Setup menu.
2. Highlight **Flag** and press **Enter**; the Flag Configuration screen appears.

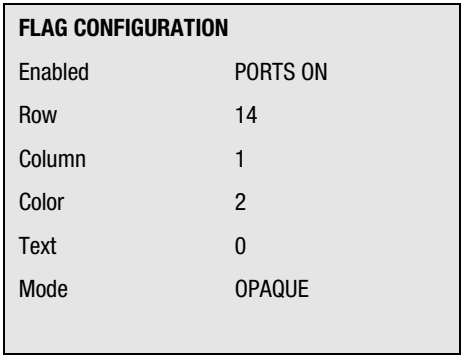


Figure 5-6. Flag Configuration screen

3. Highlight the settings you want to change and use the **+** or **–** keys to adjust the values. Table 5-2 describes each of the available menu attributes.
4. Press **Esc** to save the settings and exit the menu.

   or

   F10 to restore default settings.

   or

   Esc to exit the menu without saving the settings.

Values and Effects of Settings on Flag Appearance

Table 5-2
Flag Appearance Settings

Setting	Values	Effect
Enabled	Flag Off	Flag does not appear.
	Ports On	Indicates selected port number.
	Names On	Indicates selected computer by name.
	Ports Timed	Port number displays for 5 seconds after switching.
	Names Timed	Name displays for 5 seconds after switching.
Row	0 – 14	Positions the flag vertically on the screen.
Column	0 – 25	Positions the flag horizontally on the screen.
Color	0 – 7	Sets the flag color.
Text	0 – 7	Sets the flag text color.
Mode	Opaque	Makes the flag opaque.
	Transparent	Makes the flag transparent.

Scanning the Computers

In scan mode, the switch automatically switches from port to port (computer to computer). You can scan the entire system sequentially or designate a custom scan pattern by specifying computers and durations.

Placing the switch in scan mode

To place the switch in scanning mode:

1. From the Commands menu in the Advanced Menus screen, move the highlight to **Scan**.
2. Press **Enter**.

Canceling scan mode

Press any key (except **Print Scrn**) or move the mouse; the scan stops at the currently selected computer.

Setting a custom scan pattern

To set a custom scan pattern:

1. In the Advanced Menus screen, move the highlight to the Setup menu.
2. Highlight **Scan** and press **Enter**; the Scan Pattern Setup screen appears with the first port position (or computer name) highlighted.

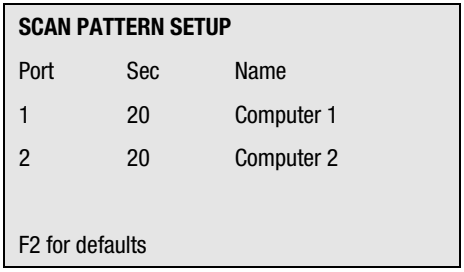


Figure 5-7. Scan Pattern Setup screen

3. Type the port number of the first computer to be included in the scan.

   or

   If your computers are listed by name, type the first few letters of the name of the first computer to be included in the scan.

4. Move the highlight to the **Sec** column, and then type the number of seconds you want this computer to be selected before switching to the next computer in the sequence.
5. Move the highlight to the next line and repeat steps 3 and 4 for each of the remaining computers.
6. Press **Enter** to save the settings and exit the menu; the new scan pattern replaces the standard or previous custom scan pattern.

   or

   F10 to restore default settings.

   or

   Esc to exit the menu without saving the settings.

Removing a computer from the scan list

To remove a computer from the scan list:

1. In the Scan Pattern Setup screen, type the port number of the computer to be removed.

   or

   If your computers are listed by name, type the first few letters of the name of the computer.

2. Move the highlight to the **Sec** column.
3. Type **0** for the number of seconds.

   Press **Delete** while in the Scan Pattern Setup screen to delete the highlighted computer and all entries below it.

4. Press **Enter** to save the settings and exit the menu; the new scan pattern replaces the standard or previous custom scan pattern.

   or

   F10 to restore default settings.

   or

   Esc to exit the menu without saving the settings.

Securing Server Access

Advanced server applications should be protected against unauthorized users. The switch security feature enables you to lock the keyboard and monitor, requiring you to type a password before resuming operation. You can also set a time delay before the system is locked.

You must always provide a password to access the fields in the Security Configuration screen. After you type the correct password, the other fields on the screen are activated.

Locking the screen and keyboard

To lock the screen and keyboard:

1. In the Advanced Menus screen, move the highlight to the Setup menu.
2. Highlight **Security** and press **Enter**; the Security Configuration screen appears.

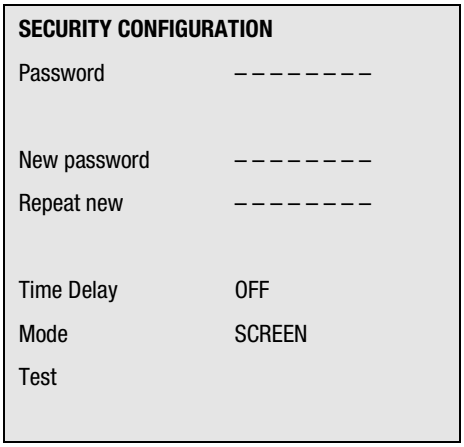


Figure 5-8. Security Configuration screen

3. Type your password and press **Enter**.

   Passwords can be up to eight characters (case sensitive). You must enter the new password twice for confirmation.

   NOTE: The factory default password is OSCAR. Because the **Caps Lock** is disabled by default, you must hold down **Shift** as you type each letter.

4. Highlight **Time Delay** and select the number of minutes from 1 to 254 before you want your screen saver to turn on.

5. Highlight **Mode** and select **Energy** if you are using an Energy Star compliant monitor or **Screen** if your monitor is not of that type.



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant.

6. To enable the screen saver mode press **Enter** either in the Time Delay or Mode fields.

   or

   Highlight **Test** and press **Enter** to start the screen saver mode immediately. Table 5-3 describes the possible settings.

Table 5-3
Security Configuration Settings

Setting	Action	
Password	Enter current password to activate other fields.	
New Password	Type new password.	
Repeat new	Retype new password to confirm	
Time Delay	Set a value from 1 to 254 minutes or select OFF	
Mode	Energy	Turns off monitor. Use **only** with Energy Star-compliant monitors that go into low-power mode when time delay has elapsed.
	Screen	Turns off video when time delay has elapsed. Use with non-Energy Star-compliant monitors.
Test	Immediately activates selected mode.	



CAUTION: Monitor damage can result from use of Energy Mode with monitors that are not Energy Star compliant.

Turning off the screen saver

To turn off the screen saver:

1. If you are in screen saver mode, press any key on your keyboard and then type your password if your console is password protected.
2. In the Advanced Menus screen, move the highlight to the Setup menu.
3. Highlight **Security** and press **Enter**; the Security Configuration screen appears.
4. Highlight **Time Delay** and select **OFF**. Press **Enter**.

Blanking the monitor without locking the console

To blank the monitor without locking the console:

1. If you are in screen saver mode, press any key on your keyboard and then type your password if your console is password protected.
2. In the Advanced Menus screen, move the highlight to the Setup menu.
3. Highlight **Security** and press **Enter**; the Security Configuration screen displays.
4. In the Security Configuration screen, press **Enter** twice with the New Password and Repeat New fields empty.
5. Highlight the settings you want to change and use the + or – keys to adjust values.
6. Highlight **Test** and press **Enter** to immediately start screen saver mode.

This action overrides the use of a password. Pressing any key on the keyboard unlocks the console. **Your computer will not be protected against unauthorized users**.

Displaying Version Information

To facilitate system troubleshooting and support, you can display the version number of the switch firmware as well as information about any auxiliary devices connected to the switch.

The Version screen also displays specific device information for the currently selected computer, including enabled/disabled, typematic rate, LED settings, port mode, and keyboard type for the keyboard; and enabled/disabled, sample rate, resolution, and mouse type for the mouse.

To display version information and device settings:

1. From the Commands menu in the Advanced Menus screen, move the highlight to **Version** and press **Enter**; the Version screen appears.

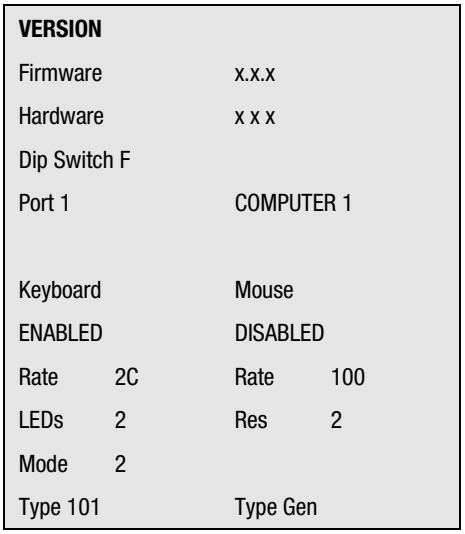


Figure 5-9. Version screen

2. To display version information for an auxiliary device, press **F2**.
3. Press **Esc** to close the Version screen.

Saving the Hardware Settings

Whenever you add or remove computers to or from the system, or whenever you change the mouse or monitor, you should save the hardware settings. If you do not save the settings, they are lost when power is lost or turned off, and it might be necessary to reboot each computer to reestablish keyboard and mouse communication.

To save the hardware settings:

1. From the Commands menu in the Advanced Menus screen, highlight **Snapshot**.
2. Press **Enter**.

Resetting the Mouse and Keyboard

If the keyboard or mouse locks up, you may be able to recover the device settings by resetting the switch. Resetting the mouse and keyboard attempts to restore the correct settings for the selected computer.

To reset the mouse and keyboard values:

1. From the Commands menu in the Advanced Menus, highlight **Reset** and press **Enter.**
2. If step 1 does not correct the problem, press the Reset button on the back panel of the switch.

Assigning Specific Device Types

If your system includes one or more secondary switches in a tiered configuration, you must make the primary switch aware of the secondary switches by assigning a specific device type. In addition, if one or more of the computers in your system need a special type of monitor or other device, it may be necessary to assign that device type to the port associated with that computer.

To assign a device type:

1. In the Advanced Menus screen, move the highlight to the Setup menu.
2. Highlight **Devices** and press **Enter**; the Device Settings screen appears.

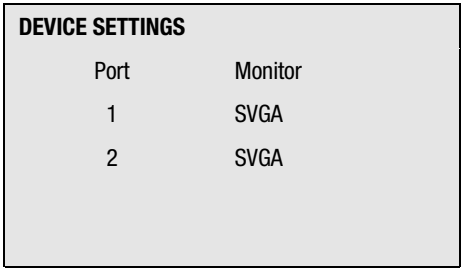


Figure 5-10. Device Settings screen

3. To assign a secondary switch to a port, highlight the port and use the **+** or **–** keys to obtain the appropriate values.

   or

   To assign a monitor type, highlight the port you want and use the **+** or **–** keys to obtain the value that corresponds to the particular monitor.

4. Press **Enter** to save the settings and exit the menu.

   or

   F10 to restore default settings.

   or

   Esc to exit the menu without saving the settings.

Switching Tiered Systems

To switch the Keyboard/Monitor/Mouse Switch Box to a computer that is connected to the primary through a secondary unit, proceed as follows:

1. Press **Print Scrn**. The OSD Selection window appears on the monitor.
2. Type the number of the port to which the slave unit is connected followed by a dash and the number of the port (on the secondary unit) to which the computer is connected. For example, to switch to the computer connected to port 3 of a secondary unit connected to port 1 of the primary, press **Print Scrn**, **1**, **-**, **3**.

   If the computer/secondaries are listed in the window by name (as described in "Assigning Names to Switch Ports"), then type the assigned name of the computer. If no secondary unit is connected to the selected primary port, the command is canceled when you enter the secondary number.

3. Press **Enter**.

Appendix ***A***

Regulatory Compliance Notices

Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, your Compaq Server Console Switch has been assigned a Compaq Series Number. The Compaq Series numbers for this product are:

- 2-Port—EO1002
- 4-Port—EO1004A
- 8-Port—EO1004B
- Dual Console 8-Port—EO1004C
- Dual Console 8-Port DC—EO1003

The Compaq Server Console Switch Series Number can be found on the Regulatory Compliance label, along with all required approval markings and information. The Regulatory Compliance label is located on the bottom of your switch. When requesting certification information for this product, always refer to this Series Number. This Series Number should not be confused with the marketing name or model number for your Compaq Server Console Switch.

Federal Communications Commission Notice

Part 15 of the Federal Communications Commission (FCC) Rules and Regulations has established Radio Frequency (RF) emission limits to provide an interference-free radio frequency spectrum. Many electronic devices, including computers, generate RF energy incidental to their intended function and are, therefore, covered by these rules. These rules place computers and related peripheral devices into two classes, A and B, depending upon their intended installation. Class A devices are those that may reasonably be expected to be installed in a business or commercial environment. Class B devices are those that may reasonably be expected to be installed in a residential environment (i.e., personal computers). The FCC requires devices in both classes to bear a label indicating the interference potential of the device as well as additional operating instructions for the user.

The rating label on the device shows which class (A or B) the equipment falls into. Class B devices have an FCC logo or FCC ID on the label. Class A devices do not have an FCC logo or FCC ID on the label. Once the class of the device is determined, refer to the following corresponding statement.

Class A Equipment

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 instructions, 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 personal expense.

Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:.

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

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Compaq Computer Corporation may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods in order to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity for Products Marked with the FCC logo – United States Only

This device complies with Part 15 of the 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.

For questions regarding your product, contact:

Compaq Computer Corporation

P. O. Box 692000, Mail Stop 530113

Houston, Texas 77269-2000

Or, call

1-800- 652-6672 (1-800-OK COMPAQ)

For questions regarding this FCC declaration, contact:

Compaq Computer Corporation

P. O. Box 692000, Mail Stop 510101

Houston, Texas 77269-2000

Or, call

(281) 514-3333

To identify this product, refer to the Part, Series, or Model number found on the product.

Canadian Notice (Avis Canadien)

Class A Equipment

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Class B Equipment

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms (in brackets are the equivalent international standards):

- EN55022 (CISPR 22) - Electromagnetic Interference
- EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity
- EN60950 (IEC950) - Product Safety

Japanese Notice

ご使用になっている装置にVCCIマークが付いていましたら、次の説明文をお読み下さい。

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

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Taiwanese Notice

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。

Appendix ***B***

Power Cord Set Requirements

The power cord set meets the requirements for use in the country where you purchased your equipment. The voltage selection switch allows you to select the appropriate line voltage for your server.

Power cord sets for use in other countries must meet the requirements of the country where you use the server. For more information on power cord set requirements, contact your Authorized Compaq Dealer.

General Requirements

The requirements listed below are applicable to all countries:

- The length of the power cord must be at least 6.0 feet (1.8 m) and a maximum of 12 feet (3.7 m).
- The power cord set must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord will be used.
- The power cord set must have a minimum current capacity and nominal voltage rating of 10 A/125 volts AC, or 10A/250 volts AC, as required by each country's power system.
- The appliance coupler must meet the mechanical configuration of an EN60320/IEC 320 Standard Sheet C13 Connector, for mating with the appliance outlet on the computer.

Country-Specific Requirements

Use the following table to identify the appropriate accredited agency in your country.

Table B-1
Power Cord Set Requirements - By Country

Country	Accredited Agency	Applicable Note Numbers
Australia	EANSW	1
Austria	OVE	1
Belgium	CEBC	1
Canada	CSA	2
Denmark	DEMKO	1
Finland	SETI	1
France	UTE	1
Germany	VDE	1
Italy	IMQ	1
Japan	JIS	3
Norway	NEMKO	1
Sweden	SEMKO	1
Switzerland	SEV	1
United Kingdom	BSI	1
United States	UL	2

Notes:

1. Flexible cord must be <HAR> Type HO5VV-F, 3-conductor, 1.0 mm^2 conductor size. Power cord set fittings (appliance coupler and wall plug) must bear the certification mark of the agency responsible for evaluation in the country where it will be used.
2. Flexible cord must be Type SVT or equivalent, No. 18 AWG, 3-conductor. Wall plug must be a two-pole grounding type with a NEMA 5-15P (15A, 125V).
3. Appliance coupler, flexible cord, and wall plug must bear a "T" mark and registration number in accordance with the Japanese Dentori Law. Flexible cord must be Type VCT or VCTF, 3-conductor, 1.0 mm^2 conductor size. Wall plug must be a two-pole grounding type with a Japanese Industrial Standard C8303 (7A, 125V) configuration.

Appendix C

Specifications

Table C-1
Compaq Server Console Switch 2-Port Specifications

Dimensions	
Height	1.71 in (4.34 cm)
Depth	7.0 in (17.8 cm)
Width	10 in (25.4 cm)
Weight	3.25 lbs. (1.47 kg)
Input Power Requirements	
Rated Voltage	100 – 240V AC
Rated Frequency	50 – 60 Hz
Rated Input Current	.5 - .25A
Temperature Range	
Maximum Ambient Operating Temperature	50° – 104° F (10° – 40° C)
Ambient Storage and Shipping Temperature	-40° – 185° F (-40° – 85° C)
Maximum Internal Rack Temperature for the Switch Box	122° F (50° C)

continued

Table C-1
Compaq Server Console Switch 2-Port Specifications *continued*

Relative Humidity (non-condensing)	
Operating	20% – 80%
Nonoperating	5% – 90%
Video Modes Supported	VGA, SVGA, XGA

Table C-2
Compaq Server Console Switch 4-Port, 8-Port, and Dual Console 8 Port Specifications

Dimensions	
Height	1.75 in (4.5 cm)
Depth	8.0 in (20.3 cm)
Width	17 in (43.2 cm)
Weight	
4-Port	5.25 lbs (2.38 kg)
8-Port	5.25 lbs (2.38 kg)
Dual Console 8-Port	5.70 lbs (2.59 kg)
Input Power Requirements	
Rated Voltage	
4-Port, 8-Port, Dual Console 8-Port AC	100 – 240V AC
Dual Console 8-Port DC	36-72V DC
Rated Frequency	
4-Port, 8-Port, Dual Console 8-Port AC	50 – 60 Hz
Dual Console 8-Port DC	N/A
Rated Input Current	
4-Port, 8-Port	1 - .5A
Dual Console 8-Port AC	120mA

continued

Table C-2
Compaq Server Console Switch 4-Port, 8-Port, and Dual Console 8 Port Specifications *continued*

Temperature Range	
Maximum Ambient Operating Temperature	50° – 104° F (10° – 50° C)
Ambient Storage and Shipping Temperature	-40° – 185° F (-40° – 85° C)
Maximum Internal Rack Temperature for the Switch Box	122° F (50° C)
Relative Humidity (non-condensing)	
Operating	20% – 80%
Nonoperating	5% – 90%
Video Modes Supported	VGA, SVGA, XGA

Appendix D

Troubleshooting Tips

Table D-1
Video Troubleshooting

Symptom	Probable Cause	Recommended Solution
No video on any computer	Loose video connection	Reconnect video cable.
	Defective video cable	Replace video cable.
	No power to switch or monitor	Check the power switch.
		Reconnect the power cable.
		Check AC outlet for power.
No video on one computer	Video cable problem	Tighten loose video cable connections.
		Replace video cable.
		Turn on the computer connected to that port.

continued

Table D-1
Video Troubleshooting *continued*

Symptom	Probable Cause	Recommended Solution
OSD colors or setup incompatible	Incorrect settings in Names, Flag or Device dialog boxes	Confirm that settings in these menus are properly defined (for 2-Port also check OSD menu). In the Commands screen, click on Reset (all models except 2-Port). *Or–* Reset settings to default if necessary by pressing **F10** + **Enter** (for 2-Port switch only).

Table D-2
Status Symbol Troubleshooting

Symptom	Probable Cause	Recommended Solution
No  or  shows next to computer number or name (all models except 2-Port) No + shows next to computer number or name (2-Port only)	No live keyboard signal	Tighten loose keyboard cable connections between the computer and the switch. *or* Disconnect and reconnect the keyboard cable at the computer port on the switch. (*It may be necessary to power cycle the computer if the cable is disconnected. For this reason, only perform these tests when maintenance time can be scheduled.*) Then at the switch console press **Esc** + **Print Scrn**.

continued

Table D-2
Status Symbol Troubleshooting *continued*

Symptom	Probable Cause	Recommended Solution
 shows up on tiered port (all models except 2-Port)	Loose keyboard connection	Disconnect and reconnect the keyboard cable at the computer port on the switch. (*It may be necessary to power cycle the computer if the cable is disconnected. For this reason, only perform these tests when maintenance time can be scheduled.*) Replace the keyboard cable.
 shows next to computer number or name when you expected it to be a  (all models except 2-Port)	An interconnecting cable (m–m) from another switch connected to port in error	Disconnect the switch and connect the computer to the port.
Primary computer shows  when  is expected (all models except 2-Port)	Incorrect settings in Device dialog box for primary switch	Verify the selection of the correct number of ports (4 or 8) for a secondary switch. Verify that all port settings are set to DEFAULT if not connected to a secondary switch.

Table D-3
Keyboard Troubleshooting

Symptom	Probable Cause	Recommended Solution
Keyboard is not working	OSD Delay Time in effect	Turn off Delay Time as follows: **All models except 2-Port:** Press **Print Scrn** + **Alt** + **S** + **Alt** + **M**. Type 0 secs for Delay Time. **2-Port only:** Press **Print Scrn** + **F2**. Select OSD. Type 0 secs for Delay Time.

continued

Table D-3
Keyboard Troubleshooting *continued*

Symptom	Probable Cause	Recommended Solution
Keyboard is not working on one computer	Keyboard worked, but then stopped working	Tighten loose keyboard cable connection between the computer and the switch. Replace keyboard cable. Check maximum cable length. Press the Reset button on the back panel of the switch. Check maximum length of console cable extensions.
	Keyboard never worked	Check cable for crossed connections. Replace keyboard cable. Disconnect and reconnect the keyboard cable at the computer port on the switch. (*It may be necessary to power cycle the computer if the cable is disconnected. For this reason, only perform these tests when maintenance time can be scheduled.*) Check for maximum cable length. Check maximum length of console cable extensions. Replace the console keyboard.

continued

Table D-3
Keyboard Troubleshooting *continued*

Symptom	Probable Cause	Recommended Solution
Keyboards are not working on all computers	Keyboard signal did work on all computers but then stopped	Tighten loose keyboard cable connections between the computers and the switch. Check maximum length of console cable extensions. Replace the console keyboard. Press the Reset button on the back panel of the switch.
	Keyboard signal never did work	Check the keyboard console cable. Check maximum length of console cable extensions. Replace the console keyboard. Press the Reset button on the back panel of the switch. Tighten loose computer keyboard cable connections. Check computer to switch cables for maximum length.
Keyboard strokes shifted (swaps upper case for lower case)	Computer left keyboard in shifted state when last connected	Press both **Shift** keys.
Keystrokes are not functioning properly	Keyboard in locked mode	On the console keyboard press the following keys: On the left side of the keyboard Press **Caps Lock**. Press **Shift**. Press **Control**. Press **Alt**. On the right side of the keyboard Press **Alt**. Press **Control**. Press **Shift**.

Table D-4
Mouse Troubleshooting

Symptom	Probable Cause	Recommended Solution
Mouse error on boot, all computers	Loose mouse cable connection	Tighten loose mouse cable connections. Check for cross-connections
	Incompatible or defective mouse	Replace mouse with PS/2 or mouse-port compatible mouse.
Mouse error on boot, one computer	Loose mouse cable connection	Tighten loose mouse cable connections.
	Defective mouse cable	Replace mouse cable.
	Using serial port on computer	Install PS/2-to-serial protocol converter.
Mouse displays erratic behavior	Computer left mouse in indeterminate state	Reset mouse through OSD or reset switch.
Mouse pointer frozen on display	Mouse not initialized	Reset mouse through OSD or reset switch.

Table D-5
Switch Troubleshooting

Symptom	Probable Cause	Recommended Solution
Unit switches from one system to the next at will	Scan mode initiated	Halt scanning by pressing any key or moving mouse.
Keyboard or mouse input appears on more than one computer	Broadcast mode initiated	Use OSD to exit broadcast mode.
Broadcasting grayed out in OSD menus	In use by another user console	Request other user console to deactivate Broadcasting in their OSD Menus.

Table D-6
Firmware Update Troubleshooting

Symptom	Probable Cause	Recommended Solution
Firmware does not download	Cable problems	Tighten loose cable connections. Replace serial cable. Check that the serial cable is connected to the com port on the PC computer and to the serial port on the switch.
File Not Found or *Can't Open* messages received after typing the filename	Incorrect filename or path	Verify that the filename was typed correctly. Verify that the path to the file is correct. Check that file extension is correct (.bin)
Invalid Port Number message received after typing number	Incorrect com port	Check that the com port number is a numeric entry not greater than 4.
Download timed out when updating firmware	Cannot access port	Verify that the correct port was selected. If another program is using the same port, quit the program. If a serial cable is not installed or is defective, install a new cable.

Appendix ***E***

Updating the Firmware

You can update the firmware of the switch. The application code of the switch resides in FLASH, and therefore can be quickly and easily updated. The port communication settings are automatically configured to allow direct downloading from the connected computer.

To update the firmware you need the following:

- Computer running MS-DOS or Microsoft Windows 3.1 or Windows 95/98
- Available serial communications port on the computer
- Standard serial cable (DB9-male) that connects between the switch and the PC computer
- Firmware update

To update the firmware:

1. Connect the standard serial cable to the serial jack on the PC computer and to the serial jack on the back panel of the switch.
2. Press **Print Scrn** to open the OSD menus.
3. Follow steps 4 through 6 if using the prompted input mode. Go to step 7 if using the single entry mode.

Prompted Input

4. If C is the drive to which the file is saved, at the DOS prompt type:

   C:\Update.exe

   then press **Enter**.

5. At the prompt type the filename. The filename will have a .bin extension. Press **Enter**.
6. At the prompt type the serial port number of the computer to which the switch is attached. Press **Enter**.

   If the data was typed correctly, a message appears on your computer notifying you that the update for the switch is in process.

   Go to step 8.

Single Entry

7. If C is the drive to which the file is saved, at the DOS prompt type:

   C:\UPDATE.EXE filename port number

   then press **Enter**.

   If data was typed correctly, a message appears on the computer notifying you that the update is in process.

8. Once the firmware is updated, a message displays:

   100% Complete. Download completed successfully. Thank you for using COMPAQ products.

   The switch automatically reboots after the update is completed.

   NOTE: If the update was unsuccessful (due to a power outage, for example), repeat the process.

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