



User Guide

EL-40DT / EL-80DT / EL-80DTF



EL-80DC



EL-280DT / EL-480DT



EL-100DT



Innovation & Technology by Design



APEX™
PC SOLUTIONS

OutLook User Guide

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Technical Support

Along with your OutLook switch, you receive a variety of support services to give you the results you need quickly and professionally.

Where to go for assistance

Visit our web site for the latest technical information
and to download upgrades **www.apexpc.com**

Contact your distributor or reseller

E-mail Apex Technical Support **service@apexpc.com**

Phone Apex Technical Support Monday through Friday between
7 am and 6 pm Pacific Time **800 861-5858**

What information you need to provide to Apex Technical Support

Unit model number and serial number.

Make and model of keyboard and mouse attached to the unit.
These numbers are on the underside of each unit.

Make and model of computers used.

Name and version of operating systems used.

Communications Regulation Information

ENGLISH

Federal Communications Notice (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 interference when the equipment is operated in a commercial environment.

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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.

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This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Department of Communications.

FRANÇAIS

Observation des normes—Classe A

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numérique de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numérique," NMB-003 édictée par le ministre des Communications.

DEUTSCH

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Limited Warranty

Apex PC Solutions warrants that the Outlook Switch (Product) will be free from defects in materials and workmanship under normal use and service for a period of one year from the date of receipt. Any implied warranty on the switch is limited to one year.

Customer Remedies

Apex PC Solutions' entire liability and your exclusive remedy shall be, at Apex's option, either (a) return of the price paid or (b) repair or replacement of the Product that does not meet Apex's Limited Warranty and which is returned to Apex with a copy of your receipt. THIS LIMITED WARRANTY IS VOID IF FAILURE OF THE PRODUCT HAS RESULTED FROM ACCIDENT, ABUSE, OR MISAPPLICATION. Any replacement Product will be warranted for the remainder of the original warranty period or six months, whichever is longer.

No Other Warranties

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1 INTRODUCTION

APEX OUTLOOK SWITCHES

Overview

Features

Illustrations of Switch Systems

Model Comparison Chart

OVERVIEW

Apex PC Solutions offers the OutLook® family of switches to 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 100 computers running different operating systems. The OutLook switch patented On-Screen Configuration and Activity Reporting (OSCAR) interface has intuitive 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.

A typical OutLook switch system 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. The OutLook family includes switches specifically designed for use in telecommunications systems, financial and trading applications, and Sun/Unix networks. Additional OutLook switches can be connected to the primary OutLook switch, called tiering, to increase computer access from 4, 8, or 10 computers

to as many as 16, 64, or 100 computers. Tiering allows you to modify your OutLook switch system, as your network system needs change.

Switching between computers is accomplished by typing 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 OutLook family of products is available in 4, 8, and 10-port versions and can be used in various configurations to accommodate large or small systems. All versions are packaged in space-efficient 1-U height (1.75-in) or 2-U (3.5-in) cases for desktop or rack-mounted systems.

FEATURES

Compatible with major computer and peripheral devices, including:

- Industry standard PS/2 mouse and keyboard
- RS/6000 keyboard and mouse
- Computers requiring serial pointing devices (Via the Apex PS/2-to-serial port converter)
- Sun Microsystems workstations

Offers customization and adaptability to network needs

- Flexible configurations for a variety of networks
- Adapts easily to changing network needs
- Integrates computers running different operating systems

Support standard display converters and high-resolution video, specifically:

- Analog VGA, SVGA, and XGA video
- Maximum resolution of 1024 x 768 for video with a 25-ft video cable, except for EL-100DT which has a maximum resolution of 1600 x1200 with a 12-ft video cable.
- Sun, RS/6000, HP 9000, and Apple Macintosh video (using converters purchased separately).

Ease of Use and Maintenance

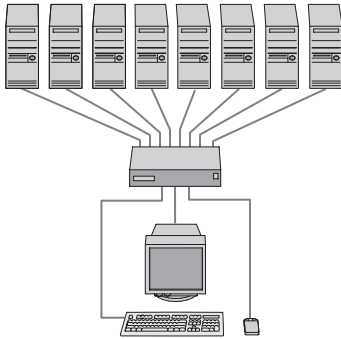
- On-Screen Configuration and Activity Reporting (OSCAR)
OSCAR displays system-related information on the monitor, including power-up test data and configuration menus.
- Programmable scanning
Lets you observe system default performance by automatically switching computers in sequence, or you can set the sequence and duration for each computer in the system.
- Nonvolatile memory
Stores system settings and display options even if the unit is turned off or unplugged.
- External reset switch
Reinitializes attached devices without interrupting power to the system
- External keypad
Can take the place of the keyboard for switching between computers.
- Password security feature
Protects network resources by locking the keyboard and monitor.

ILLUSTRATIONS OF SWITCH SYSTEMS

Single-Switch Systems

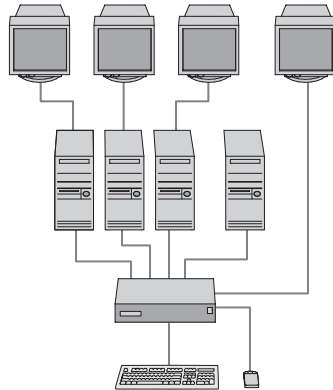
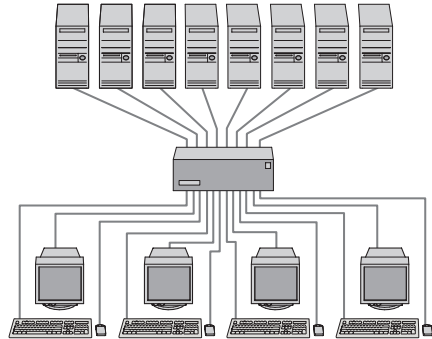
Single-user units connecting 4 or 8 computers. Access up to 64 computers in tiered configurations.

EL-40DT and EL-80DT



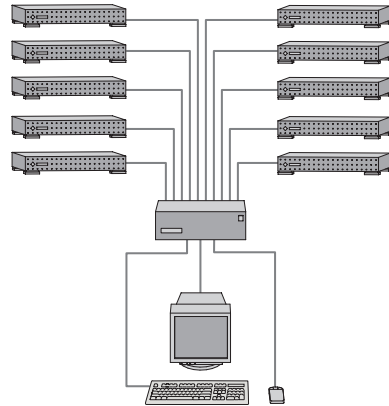
Multiple-user units allowing 2 or 4 users to select up to 8 computers. Access up to 64 computers in tiered configurations.

EL-280DT and EL-480DT



EL-80DFT

Single-user unit connecting 8 computers with only keyboard and mouse switching. Designed for financial and trading applications.



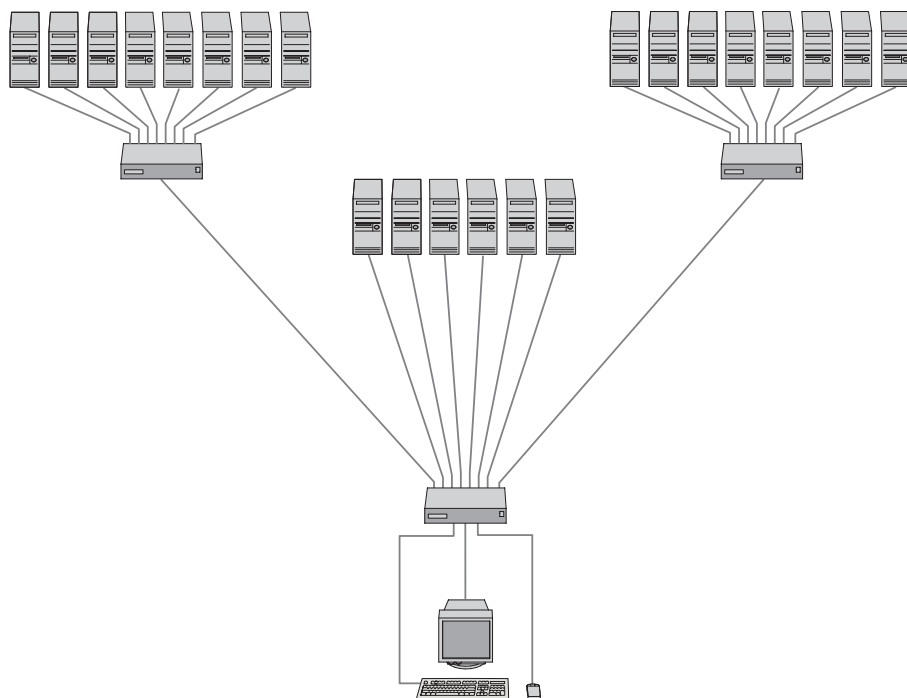
EL-100DT

Single-user unit connecting up to 10 computers. Access up to 100 Sun computers in tiered configurations. Designed for SunUnix networks.

1 Introduction

Multiple-Switch or Tiered System

This sample tiered configuration shows the EL-80DT switch connected to two secondary EL-80DT switches.



Model Comparison Chart

MODEL COMPARISON CHART

EL-40DT	EL-80DT	EL-80DTF	EL-100DT	EL-80DC	EL-280DT	EL-480DT
Number of computer ports						
4	8	8	10	8	8	8
Number of consoles (monitor, keyboard, mouse)						
1	1	K & M only	1	1	2	4
Number of tiered computers						
32	64	64	100	64	64	64
Switches keyboard, video, mouse						
yes	yes	K & M only	yes	yes	yes	yes
Switch connection mode control						
no	no	no	no	no	yes	yes
Specific system environment						
no	no	Financial & trading	SunUnix	Telecom systems	no	no
Power supply						
110/220V AC	110/220V AC	110/220V AC	110/220V AC	48V DC	110/220V AC	110/220V AC

2 INSTALLATION

APEX OUTLOOK SWITCHES

Installation Checklist

Connecting the Console

Connecting the Primary Switch to a
Secondary Switch (Tiering)

Connecting the Computers

Turning On the System

INSTALLATION CHECK LIST

Your Outlook switch package contains

- The Outlook switch main unit
- Its power cord
(not included with EL-80DC)
- This User Guide
- A warranty card

You need to provide

- Interconnecting cables for video, keyboard, and mouse
Interconnecting and extension cables may be purchased separately from Apex. (see *Appendix B Options and Accessories*)
- Your monitor, keyboard, and mouse for each user console
- Your computers

Save your Outlook switch package

Apex ships the Outlook switch in packaging designed to protect the system during shipping and handling. We recommend that you save the carton and packing materials until your equipment is fully installed and operational.

If you should find that anything is missing or arrived damaged, please contact Apex PC Technical Support. If you do need to return the product, you must get an authorization number from technical support. Apex PC Solutions will not accept any returned materials without first issuing a return materials authorization number.

2 Installation

Select switch connection mode for EL-280DT/EL-480DT

If you have purchased the multiple user system EL-280DT or EL-480DT, you must choose which switch connection mode you prefer, either cooperative or preemptive. Both models ship with the factory-default “cooperative” switch connection mode. Cooperative switching maintains established port connections. If another console attempts to select that port, the request is denied. If you want to change the default setting to have the switch favor new connections, you need to move the DIP switch 1 to the “preemptive” setting. For additional information and instructions, see Appendix G, *Setting DIP Switches*.

Select location for the OutLook switch

OutLook switches can be used in desktop or rackmounted systems. Rackmount kits are available from Apex PC Solutions if you would like to mount your switch in an EIA-standard 19-inch equipment rack. Contact your Apex sales representative for more information regarding rackmount kits for specific computers. See Appendix F for instructions for mounting brackets that fit EIA-standard equipment racks.

Maximum Cable Length Distance for Components

12 ft	console to switch
50 ft	computer to switch
50 ft	switch to switch

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

CONNECTING THE CONSOLE

Standard connection

The console consists of the keyboard, mouse or other pointing device, and the monitor. The keyboard and mouse connections on the back panel of the switch are 6-pin mini-DIN PS/2 style. The video connection is HD15-pin VGA/SVGA style. If the cables on your keyboard, mouse, or monitor require different connectors, you can obtain a converter from Apex (see *Appendix B Options and Accessories*) or from the manufacturer of the device.

Special connections

The EL-100DT OutLook switch

You will need a video cable with HD13W3 connectors and a keyboard cable with 8-pin mini-DIN connectors for each computer. (see *Appendix B* for cable kits)

IBM RS/6000 and HP 9000 Workstations

When connecting workstations that use the “composite sync on green” video option, you must use the Apex video sync converter (see *Appendix B Options and Accessories*), which converts video transmission to the more common “separate sync” and improves color balance. The video sync converter must be connected to both the keyboard and video cables between the switch and the workstation.

Sun Microsystems Workstations

Use the Apex Sun-to-PC keyboard and mouse converter (see *Appendix B Options and Accessories*) to convert the video and keyboard signals from the Sun Microsystems workstation to PC-compatible signals. The converter must be connected to both the keyboard and video cables between the switch and the workstation. This converter is not needed for the OutLook EL-100DT switch.

Remote connection

Systems with External Keypad

The optional Apex external keypad (see *Appendix B Options and Accessories*) allows remote operation of the OutLook switch without access to the keyboard. The keypad cable terminates with an RJ45 modular plug that is connected to the AUX jack on the back panel of the switch.

2 Installation

Sequence of cable connection

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

- 1 mouse
- 2 video
- 3 keyboard

This cable connection sequence is particularly important later when you install new devices to your OutLook system. You can connect a mouse and/or keyboard to the OutLook 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.*

Save the hardware settings when you make changes

Whenever you make changes to the switch system, you should save the hardware configuration settings. If you do not save the settings, they will be lost when power is lost or turned off. To reestablish keyboard and mouse communication to the switch, you might have to reboot each computer. For procedure, see in Chapter 3, *Saving the Hardware Settings*.

Required Connectors for Switch

ALL MODELS EXCEPT EL-100DT

Mouse	6-pin mini-DIN PS/2 style
Keyboard	6-pin mini-DIN PS/2 style
Monitor	HD15-pin VGA/SVGA style

EL-100DT ONLY

If attaching Sun console

Mouse/	
Keyboard	8-pin mini-DIN
Monitor	HD13W3

*If attaching PC console**

Mouse	6-pin mini-DIN PS/2 style
Keyboard	6-pin mini-DIN PS/2 style
Monitor	HD15-pin VGA/SVGA style

*(see table, *Enabling Alternate Connection on EL-100DT*, later in this section)

Maximum Cable Length Distance for Console

ALL MODELS

12 ft	keyboard, monitor, and mouse extension cables for console connection
-------	--

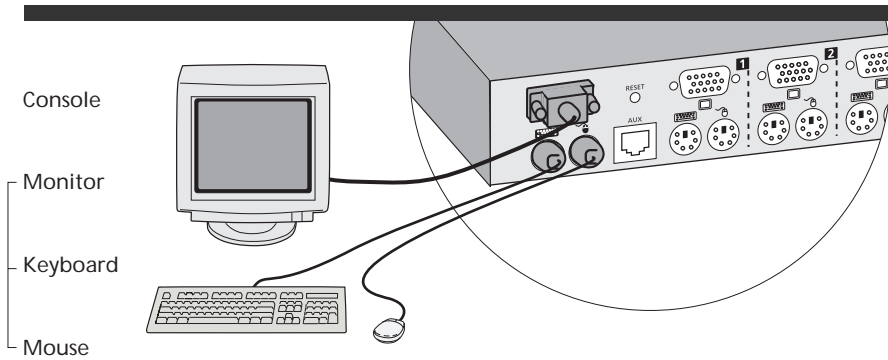
If you need longer than 12 foot connections, contact your Apex sales representative for information about SwitchBack®.



Outlined symbols represent jacks for interconnecting cables



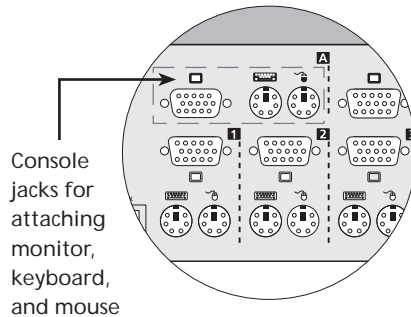
Solid-colored symbols represent jacks for attaching physical devices



1 Console connection for EL-40DT/EL-80DT, EL-80DTF, EL-80DC

To connect the console:

- 1 Make sure the Outlook switch is turned off and unplugged.
- 2 Place the switch in the desired location. The maximum distance the console can be from the switch is 12 feet. If rackmounting see *Appendix F* for instructions.
- 3 Locate your model number below for procedure on connecting the console. When you have completed step 4, you can skip the next section and go to section *Connecting the Computers* if you are not tiering computers.



Console jacks for attaching monitor, keyboard, and mouse

2 Console connection for EL-280DT/EL-480DT

**MODELS EL-40DT/EL-80DT
EL-80DTF, EL-80DC**
(refer to fig. 1)

- 4 Connect the mouse, monitor, and keyboard cables to their respective jacks on the back panel of the switch.

2 Installation

MODELS EL-280DT/EL-480DT

(refer to fig. 2)

- 4 On the back panel of the switch locate the keyboard, mouse, and monitor jacks grouped by labels, for example A, B, etc., and connect the mouse, monitor, and keyboard cables to their respective jacks.

MODEL EL-100DT

(refer to fig. 3)

- 4 You have the option of attaching a Sun console or a PC console. The PC console connects to the Alternate Connection jacks. Enabling one set of console jacks disables the other set. If you wish to connect a PC console then you must move its DIP switch. If you are tying an EL-100DT switch from a primary switch that has a PC console attached, then you must move the switch to enable Alternate Connection. For the procedure see table *Enabling Alternate Connection on EL-100DT*.

To attach a Sun console:

Connect the monitor and keyboard cables to its respective jacks in the "Sun Console Connection" on the back panel of the switch.

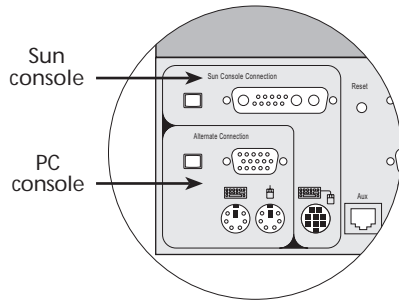
To attach a PC console:

Connect the mouse, monitor, and keyboard cables to their respective jacks in the Alternate Connection area on the back panel of the switch.

Enabling Alternate Connection on EL-100DT

FOR ATTACHING A PC CONSOLE

- 1 Unplug the power cable, if it is connected, from the switch.
- 2 Remove the two screws holding the access cover on the bottom of the unit.
- 3 Inside the unit, set switch 1-1 to the On position to enable the Alternate Connection jacks, the Off position to enable the Sun Console Connection jacks.
- 4 Replace the access cover.



- 3 Console connection for EL-100DT

CONNECTING THE PRIMARY SWITCH TO A SECONDARY SWITCH (TIERING)

Tiered configurations

Multi-switch systems or tiered configurations allow the greatest flexibility and capacity. In a tiered system, the Outlook switch connected to the console becomes the “primary” switch. Tiers consist of one or more “secondary” Outlook switches, which are connected to the computer ports on the primary switch. One 8-port primary unit can accommodate eight secondary switches and access up to 64 servers. One 10-port primary unit can accommodate ten secondary switches and access up to 100 servers.

Adding a secondary switch while the system is running

If you are installing a secondary switch to an existing Outlook switch system, you can attach the secondary switch while the system is running. To do this, you must first connect the mouse and video cables, then the keyboard cable. When you power on the secondary switch, the keyboard connection sends data to the primary switch allowing the secondary switch to boot up.

Whenever you add new devices to the system, you have to let the Outlook switch know you added an additional device. For procedure see *Saving the Hardware Settings* in Chapter 3.

Port numbering scheme

Secondary computer ports have a different numbering scheme from the primary computer ports. The port numbering scheme for the primary switch is Port 1, Port 2, Port 3, etc. The numbering scheme for the secondary switch is the number of the port on the primary switch followed by a dash, then the number of the port on the secondary switch. For example, a secondary switch connected to Port 2 on the primary switch has the number Port 2-1. Other ports on the secondary unit would be Port 2-2, Port 2-3, Port 2-4, etc. You can assign names to computers. For procedure see in Chapter 3 *Assigning Unique Names to Computers*.

Required Connectors for Switch

ALL MODELS EXCEPT EL-100DT

Mouse	6-pin mini-DIN PS/2 style
Keyboard	6-pin mini-DIN PS/2 style
Monitor	HD15-pin VGA/SVGA style

EL-100DT ONLY

Mouse/	
Keyboard	8-pin mini-DIN
Monitor	HD13W3

2 Installation

Maximum Cable Length Distance

50 ft	switch to switch
50 ft	switch to computer

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

To connect a secondary switch to a primary switch:

- 1 Make sure the secondary Outlook switch is turned off and unplugged.
 - 2 Place the secondary switch in the desired location. The maximum distance a secondary switch can be from the primary unit and computers is 50 feet. If rackmounting see *Appendix F* for instructions.
 - 3 Locate your model number below for procedure on connecting a secondary switch.
-

MODELS EL-40DT/EL-80DT, EL-80DTF, EL-80DC

Refer to fig. 4

MODELS EL-280DT/EL-480DT

Refer to fig. 5

- 4 *For EL-40DT/EL-80DT, EL-80DTF, EL-80DC*

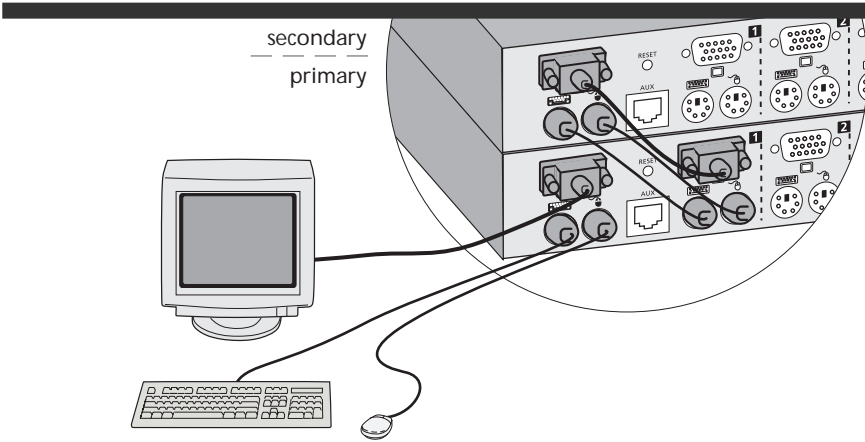
On the far left side of the back panel of the secondary switch, connect the video, mouse, and keyboard interconnecting cables to their respective console jacks.

—or—

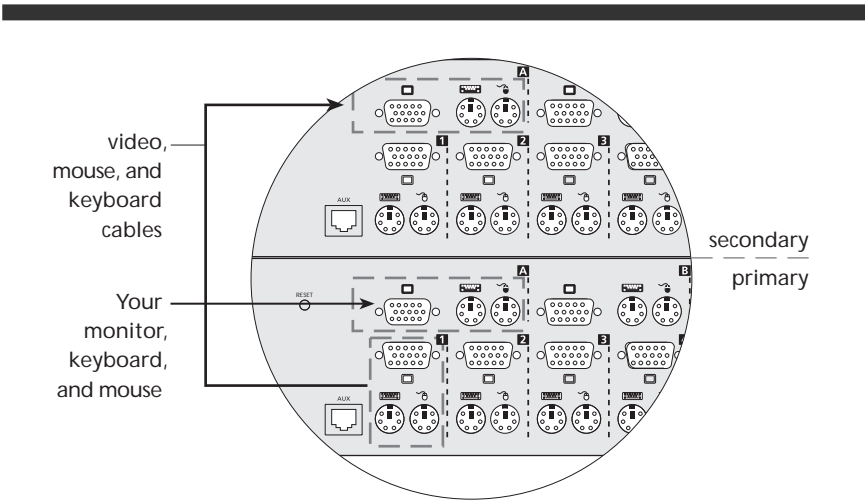
For EL-280DT/EL-480DT

On the far left side of the back panel of the secondary switch, connect the video, mouse, and keyboard interconnecting cables to their respective jacks in console “A.”

- 5 On the back panel of the primary switch, connect the other end of the video and mouse cables to their respective jacks beneath one of the numbered port labels.
 - 6 Connect the other end of the keyboard cable to its respective jack in the same port.
 - 7 Bundle and label cables for easy identification.
 - 8 Connect the power cord to the switch.
-



4 Tiered switch connection for EL-40DT/EL-80DT, EL-80DTF, EL-80DC

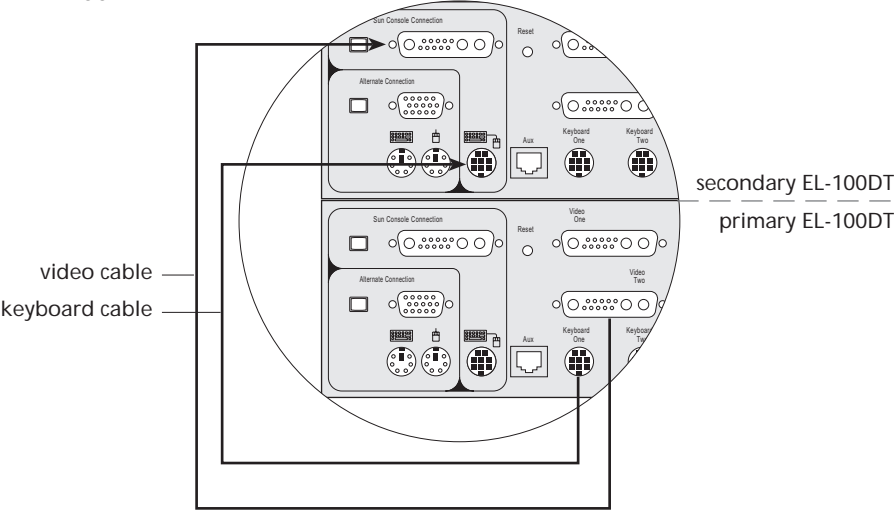


5 Tiered switch connection for EL-280DT/EL-480DT

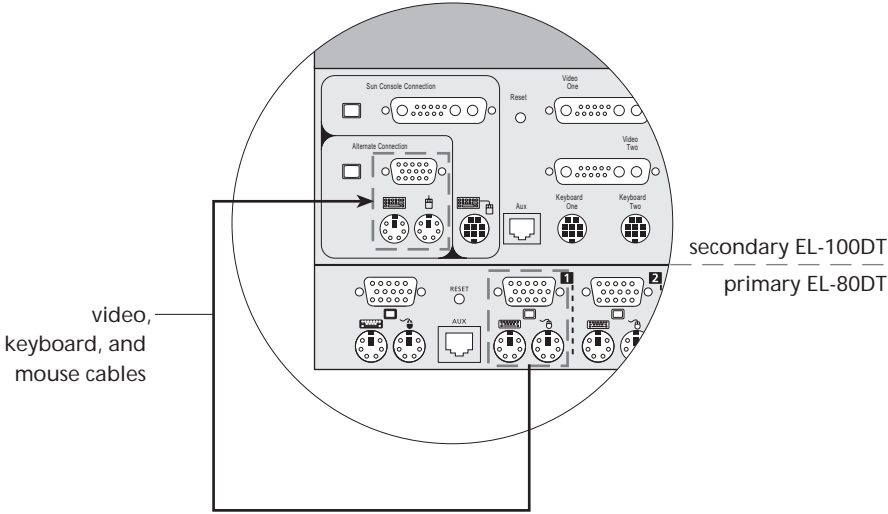
Connecting the Primary Switch to a Secondary Switch

2 Installation

EL-100DT



6 Tiered Sun Configuration for EL-100DT



7 Tiered PC/Sun Configuration for EL-100DT

Connecting the Primary Switch to a Secondary Switch

MODEL EL-100DT

For an EL-100DT to another EL-100DT switch with a Sun console (refer to fig. 6)

- 4 On the far left side of the back panel of the secondary switch, connect the video and keyboard interconnecting cables to their respective jacks on the Sun Console Connection.
- 5 On the back panel of the primary switch select one of the available computer ports to connect the other end of the video and keyboard cables to their respective jacks.
- 6 Bundle and label cables for easy identification.
- 7 Connect the power cord to the switch.

For an EL-100DT to a primary switch, such as an EL-80DT with a PC console (refer to fig. 7)

- 4 If you are integrating both PC and Sun computers, you must enable the Alternate Connection jacks. To do this, you must move the DIP switch. For

procedure, see table *Enabling Alternate Connection on EL-100DT* in previous section, *Connecting the Console*, for model EL-100DT. Then proceed to step 5.

- 5 On the far left side of the back panel of the EL-100DT switch, connect the video, mouse, and keyboard interconnecting cables to their respective jacks in Alternate Connection.
- 6 On the back panel of the primary switch, connect the other end of the video cable to the HD15-pin VGA jack beneath one of the numbered port labels. Under the same port label connect the mouse cable to its respective jack.
- 7 Connect the other end of the keyboard cable to its respective jack in the same port label as step 6.
- 8 Bundle and label cables for easy identification.
- 9 Connect the power cord to the switch.

CONNECTING THE COMPUTERS

Required Connectors for Switch

ALL MODELS EXCEPT EL-100DT

Mouse	6-pin mini-DIN PS/2 style, male
Keyboard	6-pin mini-DIN PS/2 style, male
Video	HD15-pin VGA/SVGA style, male

EL-100DT ONLY

Mouse/ Keyboard	8-pin mini-DIN, male
Video	HD13W3, male

Maximum Cable Length Distance

50 ft switch to computer

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

If your computer has a different keyboard or mouse connector, you can obtain a converter from Apex (see *Appendix B Options and Accessories*) or from the manufac-

turer of the device. Any graphics system that uses sync on green requires a video converter. A variety of other video converters are also available. (contact Apex PC Solutions Technical Support for help) See Appendix E for diagrams of monitor, keyboard, and mouse connector pin specifications.

Adding a computer while the system is running

If you are installing a computer to an existing OutLook switch system, you can attach the computer while the system is running. To do this, you must first connect the mouse and video cables, then the keyboard cable. When you power on the computer, the keyboard connection sends data to the switch, allowing the computer to boot up.

Save the hardware settings when you make changes

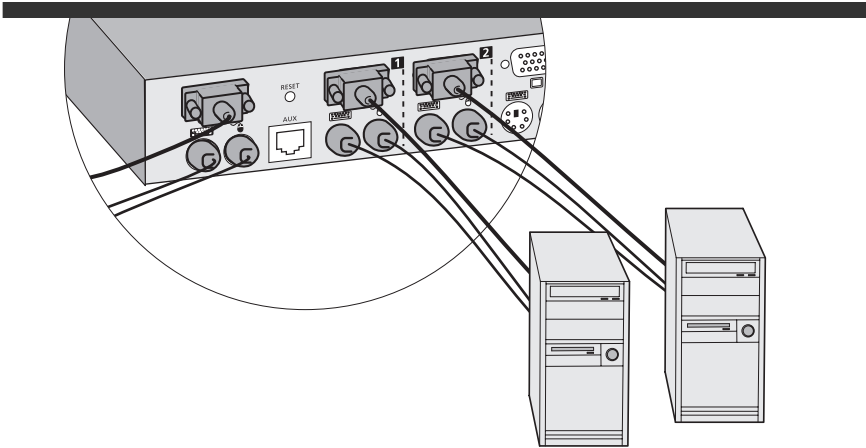
Whenever you make changes to the switch system, you should save the hardware configuration settings. If you do not save the settings, they will be lost when power is lost or turned off to the switch, and you might have to reboot each computer to reestablish keyboard and mouse communication. For procedure see in Chapter 3, *Saving the Hardware Settings*.



Outlined symbols represent jacks for interconnecting cables



Solid-colored symbols represent jacks for attaching physical devices



8 Computer connection for EL-40DT/EL-80DT, EL-80DC

To connect a computer to the Outlook switch:

- 1 Make sure the computer is turned off and unplugged.
- 2 Place the computer in the desired location. Maximum distance a computer can be from the switch is 50 feet. If rackmounting see Appendix F for information.
- 3 Locate your model number below for procedure on connecting a computer.

MODELS EL-40DT/EL-80DT, EL-80DC

(refer to fig. 8)

MODELS EL-280DT/EL-480DT

(refer to fig. 9)

- 4 Connect video, mouse, and keyboard cables to their respective jacks on the computer.
- 5 On the back panel of the switch in one of the numbered ports, connect the mouse and video cables to their respective jacks.
- 6 Connect the keyboard cable to its respective jack in the same numbered port as step 5.

2 Installation

- 7 Repeat steps 4–6 for additional computers. Bundle and label the cables for easy identification.

- 8 Connect the power cord to the switch.

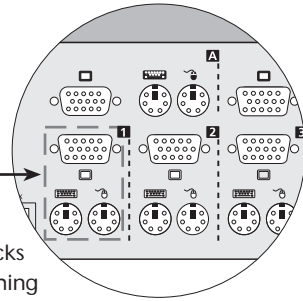
MODEL EL-80DTF

(refer to fig. 10)

- 4 Connect mouse, keyboard, and video cables to their respective jacks on the computer.
- 5 Determine which computer to connect to Port 1. Locate Port 1 on the back panel of the switch. Connect the other end of the video, mouse, and keyboard cables to their respective jacks.
- 6 For additional computers, connect the mouse and keyboard cables to their respective jacks in Ports 2–8. Connect the video cable of the computer directly to the video jack on the monitor. *It does not connect to the switch.*

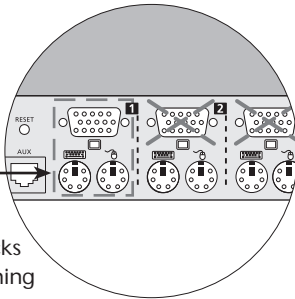
- 7 Bundle and label the cables for easy identification.

- 8 Connect the power cord to the switch.



Port 1 jacks
for attaching
video,
keyboard,
and mouse
computer
cables

- 9 Computer connection for
EL-280DT/EL-480DT



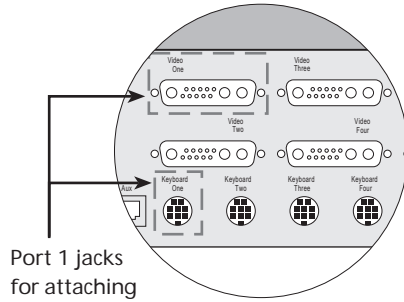
Port 1 jacks
for attaching
video,
keyboard,
and mouse
computer
cables

- 10 Computer connection for
EL-80DTF

MODEL EL-100DT

(refer to fig. 11)

- 4 Connect the video and keyboard cables to their respective ports on the computer.
- 5 Determine which computer to connect to Port 1. Connect the other end of the video and keyboard cables to their respective jacks labeled “Video One” and “Keyboard One” on the switch.
- 6 Repeat steps 4 and 5 for connecting additional computers. Bundle and label the cables for easy identification.
- 7 Connect the power cord to the switch.



Port 1 jacks
for attaching
keyboard
and video
computer
cables

- 11** Computer connection for EL-100DT

TURNING ON THE SYSTEM

Startup sequence

When a computer boots up, the attached keyboard, mouse, and monitor send device configuration/commands settings out of the computer port. The OutLook switch stores these device settings. If the switch is turned on before the computers, the OutLook switch can boot up computers that do not have physically connected to them, a keyboard, monitor, or mouse. If the computers are turned on before the OutLook switch, the computers will probably either hang, crash, or exhibit abnormal behavior because the computers need the keyboard, mouse, and monitor device configuration/commands settings in order to boot properly. For your switch system to work, *the switch must be turned on before the computers.*

Startup behavior

When you turn on the switch, it performs the following actions:

- Identifies the mouse and keyboard and puts them into default states.
- Displays copyright information about the OutLook switch and firmware.

- Selects Port 1 and displays the number 1 in the status flag on the monitor as shown here.



—or—

If you have models EL-280DT/EL-480DT, selects Port 0 and displays the number 0 in the status flag instead of number 1.

If the copyright information and status flag do not appear on the monitor, make sure that the monitor is connected and turned on.

OutLook switch behavior with power outages

The OutLook switch system will help your computers recover from power outages. After a power outage, each computer connected to the switch reboots (if designed to do so) automatically when power is restored. The switch generates responses to ensure that the reboot is successful and that the switch is ready to select computers when regular operation resumes. If you are using an uninterruptible power supply, connect the switches to the same power source as the rest of the system.

To start the system:

- 1 Plug in the power cord.
- 2 Turn on the monitor according to the manufacturer's instructions.
- 3 Turn on the switch by pressing the power switch located on the back panel to the On (I) position.
- 4 Turn on the computers according to the manufacturer's instructions.
- 5 From the console press <PRINT SCREEN> to open OSCAR menus and then <F2>; OSCAR Advanced Menus screen appears.
- 6 Highlight Snapshot and press <ENTER> to save the hardware settings, used when the switch reinitializes. (For more information see in Chapter 3 the procedure *Saving the Hardware Settings*.)
- 7 *If you have a tiered configuration*
Designate that the numbered port is connected to a secondary switch rather than a computer by performing the procedure *Assigning Specific Device Types*. You will find the procedure in Chapter 3.

3

OPERATION GUIDE

NAVIGATING WITH OSCAR

Operate with keyboard and mouse

OSCAR, On-Screen Configuration and Activity Reporting, is the interface you use to communicate with the OutLook switch. You'll navigate the OSCAR menus and enter commands using the mouse and keyboard; however, because the switch operates independently of the computer operating systems, OSCAR keyboard and mouse conventions may differ from those you use when controlling the selected computer. See the following table, *Keyboard Conventions for OSCAR Menus*, for keyboard sequences used to navigate OSCAR.

APEX OUTLOOK SWITCHES

Navigating with OSCAR

Selecting Computers

Assigning Unique Names to Computers

Changing Menu Attributes

Changing Status Flag Attributes

Scanning the Computers

Broadcasting Commands

Securing Server Access

Displaying Version Information

Saving the Hardware Settings

Resetting the Mouse and Keyboard

Assigning Specific Device Types

Adjusting the Video Impedance Value

3 Operation

Keyboard Conventions for OSCAR Menus

THIS KEY	DOES THIS
PRINT SCREEN	Opens OSCAR Selection screen. (To print a screen, see in this section the procedure <i>To conduct a screen capture</i> .)
F2	When in OSCAR Selection screen, opens OSCAR Advanced Menus screen.
ARROWS	Moves highlight to select command feature or setup.
+ / -	Changes the value of the selected option.
ENTER	Saves current settings or changes and returns to OSCAR Advanced Menus screen.
ESCAPE	Cancels unsaved changes and returns to OSCAR Advanced Menus screen. When in OSCAR Selection or Advanced Menus screens, ESCAPE exits OSCAR.
NUMERIC KEYPAD	Always in the numeric state, although the indicator on the keyboard may indicate otherwise.
CAPS LOCK	Disabled. (Use the SHIFT key to change case.)

Once OSCAR is activated, you can use the mouse instead of the arrow keys to highlight menu options. Use the left mouse button as you would the ENTER key, to select menu options and move between data entry fields. Use the right mouse button as you would the ESCAPE key, to cancel an entry and return to the previous screen.

Using the Print Screen key

In the Outlook switch system pressing the PRINT SCREEN key opens the OSCAR Menus. If you want to print a screen capture displayed by a computer, follow this procedure:

To conduct a screen capture:

- On a computer connected to a **primary** OutLook switch press PRINT SCREEN twice.

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

- On a computer connected to a **secondary** OutLook switch in a tiered configuration, press PRINT SCREEN 4 times.

The first keystroke brings up OSCAR in the primary switch. The second keystroke brings up OSCAR in the secondary switch. The third keystroke brings up both OSCARs. The fourth keystroke clears the screen, then captures or prints the screen.

OSCAR Selection screen

When you press the PRINT SCREEN key to open the OSCAR menus, the first screen that appears is called the OSCAR Selection screen (see the following procedure for illustration of screen). Basic functions such as selecting computers and checking port/computer status are performed from the OSCAR Selection screen.

The OSCAR Selection lists all the ports in the system, the associated computer names, and the status of each port (see following table *OSCAR Status Port Symbols*). It can be organized either by port number or by computer name. To identify your computers by name see procedure *Assigning Unique Names to Computers*. To change the order in which computers are listed, see the procedure *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.

3 Operation

To open OSCAR or access the OSCAR Selection screen on a primary switch:

- Press <PRINT SCREEN> once.

All naming, scanning, status flag attributes, OSCAR attributes, device settings, passwords, etc. must be set at the primary switch.

OSCAR SELECTION	
Port	Name
1	COMPUTER 1
2	COMPUTER 2 +
3	COMPUTER 3 +
4	COMPUTER 4
5	COMPUTER 5 +
6	COMPUTER 6
7	COMPUTER 7 +
8	COMPUTER 8
F1 Help F2 Advanced	

If your primary switch has secondary switches connected to it, the OSCAR Selection screen shows a different port-numbering scheme. The numbering scheme for the secondary switch is the number of the port on the primary switch followed by a dash, then the number of the port on the secondary switch.

OSCAR SELECTION	
Port	Name
1-1	COMPUTER 1 x
1-2	COMPUTER 2 x
1-3	COMPUTER 3 x
1-4	COMPUTER 4 x
1-5	COMPUTER 5 x
1-6	COMPUTER 6
1-7	COMPUTER 7 x
1-8	COMPUTER 8
F1 Help F2 Advanced	

To open OSCAR or access the OSCAR Selection screen on a secondary switch:

- 1 Press < PRINT SCREEN > to access OSCAR Selection screen at the primary switch.
- 2 Highlight the number of the port to which you want to access. Press <PRINT SCREEN>; OSCAR Selection at the secondary switch appears.

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

OSCAR Status Port Symbols

- + Computer connected and running.
- X Secondary switch connected and running.

■ Note

The OSCAR screens in this User Guide show the default screens of model EL-80DT. Your screens will show the OSCAR features and the computer names and port numbers associated with your particular OutLook switch system.

OSCAR Advanced Menu screen

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

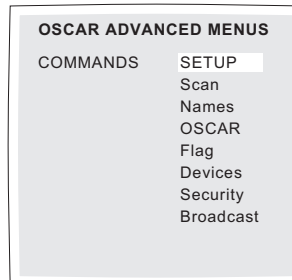
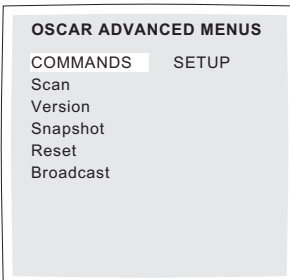
To exit OSCAR:

- Press <ESCAPE>.

To open the OSCAR Advanced Menu:

- 1 Press <PRINT SCREEN> to open OSCAR Selection.
-
- 2 Press <F2>.

The OSCAR Advanced Menu screen appears showing the commands listed under the Commands menu. Highlighting Setup shows the commands listed under the Setup menu. Moving the highlight with the arrow keys or mouse in either menu selects a command.



SELECTING COMPUTERS

Use the OSCAR 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 OutLook switch reconfigures the keyboard and mouse for the selected computer using the settings stored in its memory. In this way OutLook maintains current information, (e.g., the state of the CAPS LOCK key) for each computer in the system. When configuration is complete, the video output of the selected computer passes to the monitor.

To switch computers:

- 1 If your computers are ordered by the number of the port, in the OSCAR 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 procedure *Assigning Unique Names to Computers*.

OSCAR SELECTION	
Port	Name
1	COMPUTER 1
2	COMPUTER 2 +
3	COMPUTER 3 +
4	COMPUTER 4
5	COMPUTER 5 +
6	COMPUTER 6
7	COMPUTER 7 +
8	COMPUTER 8
F1 Help F2 Advanced	

- 2 Press <ENTER>.
- 3 When you are finished switching, press <ESC> to exit OSCAR and remove the OSCAR menus from your monitor display. If the status flag is enabled, it will remain displayed to indicate the currently selected computer.

■ Note

Your OSCAR Selection screen will look different from the example above. It will show the computer names and port numbers assigned to your particular OutLook switch system.

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 OSCAR menus, see the procedure *Changing Menu Attributes*.

■ Note

Before you can assign names to computers attached to secondary switches, you must first associate the secondary device with a port. See the procedure *Assigning Specific Device Types* found later in this chapter.

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.

PORT NAME SETUP	
Port	Name
1	COMPUTER 1
2	COMPUTER 2
3	COMPUTER 3
4	COMPUTER 4
5	COMPUTER 5
6	COMPUTER 6
7	COMPUTER 7
8	COMPUTER 8

- 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.

3 Operation

CHANGING MENU ATTRIBUTES

In the OSCAR Attributes screen you can change the order of computer ports from displaying the number to displaying the name of the port. Other attributes of the OSCAR 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 OSCAR and press <ENTER>; the OSCAR Attributes screen appears.

OSCAR ATTRIBUTES	
Resolution	320
Height	56
Horizontal	3
Vertical	4
Background	7
Highlight	6
Text	0
Delay Time	0
Order	PORT

- 3 Highlight the setting(s) 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. The following table, *Effects of Settings on Screen Appearance*, describes each of the available menu attributes.

■ Note

While changing OSCAR attributes, it is possible to garble the menu and screens, making it difficult to correct the problem. If this occurs, you can reset the switch to its default OSCAR values by pressing:

<ESCAPE, ESCAPE, PRINT SCREEN, F10, Y, ENTER>.

Effects of Settings on Screen Appearance

TO CHANGE THIS	SELECT THIS SETTING	CHOOSE 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 sized 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 OSCAR Selection screen display	DELAY TIME	Time in seconds the OSCAR Selection screen is delayed before appearing after PRINT SCREEN 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.

- 3 Highlight the setting you want to change and use the + or - keys to adjust the values. The following table, *Values and Effects of Settings on Flag Appearance*, describes each of the available menu attributes.

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.

1

FLAG CONFIGURATION	
Enabled	PORTS ON
Row	14
Column	1
Color	2
Text	0
Mode	OPAQUE

Values and Effects of Settings on Flag Appearance

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 flag opaque.
	Transparent	Makes flag transparent.

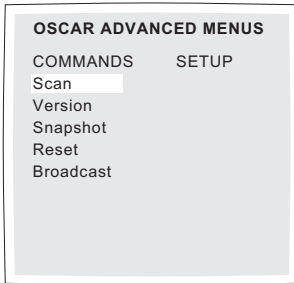
3 Operation

SCANNING THE COMPUTERS

In scan mode, the OutLook 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.

To place the switch in scan mode:

- 1 From the Commands menu in the Advanced Menus screen, move the highlight to Scan.



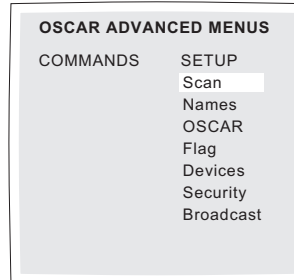
- 2 Press <ENTER>.

To cancel scan mode:

- Press any key (except PRINT SCREEN) or move the mouse; the scan stops at the currently selected computer.

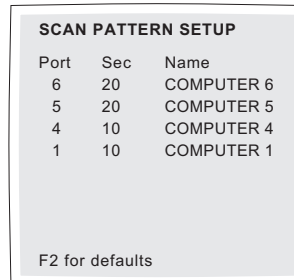
To set a custom scan pattern:

- 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.

In the Scan Pattern Setup screen shown, the order-by-port mode is selected. Your menu may appear different (see the procedure *Changing Menu Attributes*).



-
- 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 that 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. The new scan pattern replaces the standard or previous custom scan pattern.

■ Note

Pressing ESCAPE at any time prior to pressing ENTER retains the previous scan pattern. To return all Port and Sec values to factory defaults, press <F2> while in the Scan Pattern Setup screen.

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.
Pressing <DELETE> (not the DEL key on the numeric keypad) while in the Scan Pattern Setup screen deletes the highlighted computer and all entries below it.
-

- 4 Press <ENTER> to save the settings. The new scan pattern replaces the standard or previous custom scan pattern.

3 Operation

BROADCASTING COMMANDS

FOR MODELS EL-40DT/EL-80DT, EL-80DTF, EL-40DC/EL-80DC ONLY

The broadcast feature (OutLook version 1.5.0 or later) 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. For each computer receiving the broadcast, you can choose to broadcast keystrokes and/or mouse movements independently.

■ Notes

For all computers receiving a broadcast to interpret commands identically, the keyboard and mouse states for the computers must be identical. Specifically, the CAPS LOCK and NUMLOCK modes should be the same on all keyboards. For the mouse to work accurately, all systems must have identical mouse drivers, identical desktops, 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.

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

To broadcast to selected computers:

- 1 From the Setup menu in the Advanced Menus screen, highlight Broadcast and press <ENTER>; the Broadcast Settings menu appears.

OSCAR ADVANCED MENUS

COMMANDS	SETUP
	Scan
	Names
	OSCAR
	Flag
	Devices
	Security
	Broadcast

- 2 For each port select which computers receive keyboard and/or mouse commands by using the + or - key to choose YES or NO.

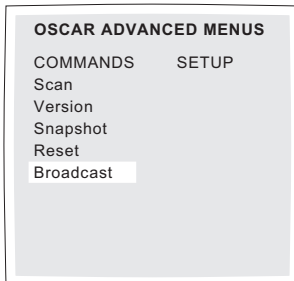
BROADCAST SETTINGS

Port	Keyboard	Mouse
1	YES	YES
2	NO	NO
3	YES	NO
4	YES	YES
5	NO	NO
6	YES	NO
7	YES	YES
8	YES	YES



When broadcast mode is on, its symbol appears in the status flag as shown here.

- 3 Press <ENTER> to save the settings.
- 4 From the Commands menu in the Advanced Menus screen, highlight Broadcast. Press <ENTER> to turn on the broadcast mode. Type information and/or make mouse movements you want to broadcast.



To turn off the broadcast mode:

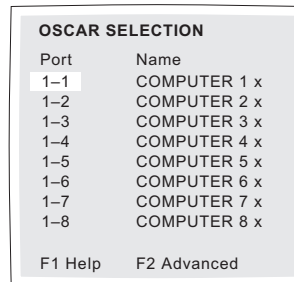
- From the Commands menu in the Advanced Menus, highlight Broadcast and press <ENTER>.

Broadcasting to tiered configurations

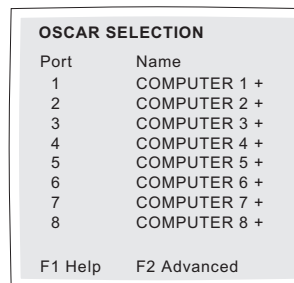
In a tiered system you can broadcast to any combination of computers on the entire system.

To broadcast to tiered configurations:

- 1 From the OSCAR Selection screen at the primary switch, highlight the port number of the secondary switch (for example, Port 1-1, 2-1, 3-1, etc) to which you want to broadcast commands; press <ENTER>.



- 2 Press <PRINT SCREEN> twice; the OSCAR Selection screen of the secondary switch appears. Press <F2> to access the Advanced Menus screen.



3 Operation

- 3 From the Setup menu, highlight Broadcast. Press <ENTER> to access the Broadcast Settings menu.

OSCAR ADVANCED MENU	
COMMANDS	SETUP
	Scan
	Names
	OSCAR
	Flag
	Devices
	Security
	Broadcast

- 4 For each port select which computers receive keyboard and/or mouse commands by using the + or - key to choose YES or NO.

BROADCAST SETTINGS		
Port	Keyboard	Mouse
1	YES	YES
2	NO	NO
3	YES	NO
4	YES	YES
5	NO	NO
6	YES	NO
7	YES	YES
8	YES	YES

- 5 Press <ENTER> to save the settings.

- 6 Press <PRINT SCREEN> once to access the primary switch.

- 7 Repeat steps 1–6 to send broadcast commands to computers attached to additional secondary switches.

- 8 From the Setup menu in the Advanced Menus at the primary switch, highlight Broadcast. Press <ENTER>; the Broadcast Settings menu appears.

BROADCAST SETTINGS		
Port	Keyboard	Mouse
1-1	YES	YES
1-2	NO	NO
1-3	YES	NO
1-4	YES	YES
1-5	NO	NO
1-6	YES	NO
1-7	YES	YES
1-8	YES	YES

- 9 For each port select which computers receive keyboard and/or mouse commands by using the + or - key to choose YES or NO.

- 10 Press <ENTER> to save the settings.

- 11 From the Commands menu in the Advanced Menus screen at the primary switch, highlight Broadcast. Press <ENTER> to turn on the broadcast mode.

-
- 12 From the OSCAR Selection screen at the primary switch, highlight the port number of the secondary switch for which you want to broadcast commands; press < ENTER> .
-

- 13 Press < PRINT SCREEN> twice; then press < F2> . From the Commands menu in the Advanced Menus screen highlight Broadcast, then press < ENTER> to turn on the broadcast mode on the secondary switch.
-

- 14 From a computer attached to the primary switch and connected to the secondary switch, type information and/or make mouse movements you want to broadcast.
-

■ Note

Broadcast only to systems directly connected to a primary Outlook switch or only to secondary Outlook switches connected to a primary Outlook switch.

To turn off broadcast mode for a tiered configuration:

- 1 From the OSCAR Selection screen at the primary switch, highlight the port number of the secondary switch for which you want to stop broadcasting commands; press < ENTER> .

- 2 Press < PRINT SCREEN> twice; then press < F2> . From the Commands menu in the Advanced Menus screen highlight Broadcast, then press < ENTER> to turn off the broadcast mode on the secondary switch.

- 3 From the Commands menu in the Advanced Menus screen at the primary switch, highlight Broadcast. Press <ENTER> to turn off the broadcast mode.

SECURING SERVER ACCESS

Advanced server applications should usually be protected against unauthorized users. The Outlook 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.

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.

SECURITY CONFIGURATION

Password

New password

Repeat new

Time delay OFF

Mode SCREEN

Test

- 3 Type your password and press <RETURN>. 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 in OSCAR, you must hold down the SHIFT key as you type each letter.

- 4 Highlight the setting(s) you want to change and use the + or – keys to obtain the desired value.


The following table, *Effects of Settings on Security Configuration*, describes the available menu attributes.

To blank the monitor when it is not in use and remain unlocked:

- In the Security Configuration screen press <ENTER> twice with the New password and Repeat new fields empty. This action overrides the use of a password. Pressing any key on the keyboard will unlock the console. Your system will not be secure.

Effects of Settings on Security Configuration

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 0 to 99 minutes.	
MODE	Energy	Turns off monitor. Use with EnergyStar™-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-EnergyStar-compliant monitors.
TEST	Immediately activates selected mode.	



Warning

Monitor damage can result from use of Energy Mode with monitors that are not EnergyStar™ compliant.

3 Operation

DISPLAYING VERSION INFORMATION

To facilitate system troubleshooting and support, you can display the version number of the Outlook 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.

- 2 To display version information for an auxiliary device, press <F2>.
- 3 Press <ESCAPE> to close the Version screen.

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.

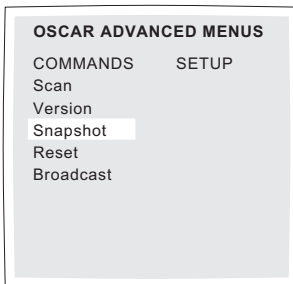
VERSION	
Firmware	x.x.x
Hardware	x x x
Dip Switch F	
Port 1	COMPUTER 1
Keyboard	Mouse
ENABLED	DISABLED
Rate 2C	Rate 100
LEDs 2	Res 2
Mode 2	
Type 101	Type Gen

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 will be 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>.

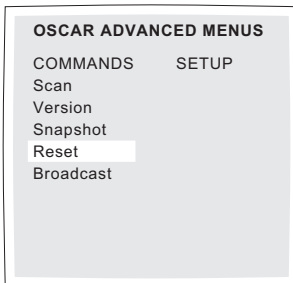
3 Operation

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 Menu, 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.

DEVICE SETTINGS	
Port	Monitor
1	SVGA
2	SVGA
3	8515
4	SVGA
5	Default
6	Default
7	Default
8	8port

- 3 To assign a secondary switch to a port, highlight the port and use the + or – keys to obtain the appropriate 4-port or 8-port or 10-port 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.

3 Operation

ADJUSTING THE VIDEO IMPEDANCE VALUE

FOR MODEL EL-100DT ONLY

If you have a video card that uses low voltage/low impedance video sync termination, you can set the impedance value to 75 ohms from the default value of 1000 ohms at TTL voltage levels.

To change the impedance value of a system port video sync connection:

- 1 Press < PRINT SCREEN > to enter OSCAR.
- 2 Press < F2 > to view OSCAR Advanced Menus screen.
- 3 From the Setup menu select Sync Imp. Press < ENTER > ; the Video Sync Impedance menu appears.

VIDEO SYNC IMPEDANCE

Port	Impedance
1	1000
2	1000
3	75
4	1000
5	75
6	1000
7	1000
8	1000
9	75
10	1000

- 4 Highlight the port number for which you want to change the value.

Use the + or - key to toggle between the values of 1000 or 75. 1000 is the default setting. 75 is only required for special video boards.

- 5 Press < ENTER > to save the settings.

Your video board version

If you have a unit with a video board older than revision 03, then you will not be able to access the video sync impedance feature. The Video Sync Impedance menu will appear as follows:

VIDEO SYNC IMPEDANCE

Feature not supported
with this hardware.
Press Enter or Esc
to continue.

To check your video board version:

- 1 From the Commands menu in the OSCAR Advanced Menus, highlight Version. Press < ENTER> ; the Version menu appears.

VERSION	
Firmware	X.XX
Hardware	0 3 10 Port
Port 1	COMPUTER 1
Keyboard	Mouse
ENABLED	ENABLED
Rate 12	Rate 12
LEDs 2	Res 2
SUN	3 Button

- 2 Locate Hardware; the version of the video board is the second number.

Impedance values in tiered systems

If you are tiering an EL-100DT switch from another EL-100DT, setting the device type of the primary port to 10-port forces its video sync impedance setting to 1000. To set individual values for secondary switches you must access the Video Sync Impedance menu in OSCAR at the secondary EL-100DT switch.

To access the Video Sync Impedance menu at a secondary EL-100DT switch:

- 1 Press < PRINT SCREEN> once to access OSCAR at the primary EL-100DT switch. Highlight the port with the tiered device for which you want to set values. Press < ENTER> .
- 2 Press < PRINT SCREEN> twice; OSCAR at the secondary switch appears.
- 3 Press < F2> . From the Setup menu in the OSCAR Advanced Menus screen, highlight Sync Imp. Press < ENTER> ; the Video Sync Impedance menu appears.

■ Note

If you are specifying device types for tiering EL-100DT switches after you have set impedance, the video sync impedance value is automatically reset to the 1000 ohms value in the Video Sync Impedance menu.

APPENDICES

APEX OUTLOOK SWITCHES

A Specifications

B Options and Accessories

C Troubleshooting

D Firmware Upgrade Instructions

E Connector Pin Specifications

F Optional Rackmounting

G Setting OutLook DIP Switches

A SPECIFICATIONS

Dimensions

EL-40DT/EL-80DT, EL-80DC, EL-80DTF	HEIGHT	1.75 in	(4.5 cm)
EL-280DT/EL-480DT, EL-100DT		3.5 in	(8.9 cm)
ALL MODELS	DEPTH	10.80 in	(27.5 cm)
ALL MODELS	WIDTH	17.00 in	(43.2 cm)
EL-40DT/EL-80DT, EL-80DC, EL-80DTF	WEIGHT	9.1 lb	(4.1 kg)
EL-280DT/EL-480DT		10.3 lb	(4.6 kg)
EL-100DT		11.0 lb	(5.0 kg)

Voltage

ALL MODELS EXCEPT EL-80DC	INPUT VOLTAGE	100–120V AC 200–240V AC
EL-80DC		48V DC
ALL MODELS	POWER SUPPLY	30W Internal

Temperature

ALL MODELS	AMBIENT RANGE	50–104° F 0–40° C
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Video Modes Supported

ALL MODELS EXCEPT EL-100DT	VGA, SVGA, XGA, RISC System 6000 GTX, GTX1XX
EL-100DT	Color with HD13W3 connector Monochrome with HD13W3 connector

Agency Approvals

EL-40DT/EL-80DT, EL-80DTF	FCC-A, UL, cUL, TUV/GS, CISPER-A, CE mark, VCCI-1, NEMKO, SEMKO, FIMKO,DEMKO
EL-280DT/EL-480DT, EL-80DC, EL-100DT	FCC-A, UL, cUL, TUV/GS, CISPER-A, CE mark

B OPTIONS AND ACCESSORIES

PART NUMBER	DESCRIPTION
EL-40DT	4-Port OutLook Switch
EL-80DT	8-Port OutLook Switch
EL-80DC	8-Port OutLook Switch with 48V Power Supply
EL-80DTF	8-Port OutLook Switch, Financial Trader Model
EL-280DT	2-User by 8-Port OutLook Switch
EL-480DT	4-User by 8-Port OutLook Switch
EL-100DT	10-Port OutLook Switch for Sun Workstations
ELC-15TE	ASCII Terminal Adapter (TE Trap)
ELC-11KM	Serial to PS/2 Converter (MouseTrap)
ELC-12KM	Apple Macintosh ADB Keyboard and Mouse Adapter
ELC-11ST	Sun Microsystems Keyboard and Mouse Adapter
ELC-11RV	Video Sync Adapter
EL-08DK	External Keypad, Desktop
BR-11SB	19-inch Switch Mounting Bracket Kit (1 U)
BR-01SB	19-inch Switch Mounting Bracket Kit, Adjustable (1 U)
BR-01AP	19-inch Switch Mounting Bracket Kit (2 U)
CZ-XXXX	Cable Sets (include keyboard, SVGA monitor and mouse cables) in 3, 7, 10, 12, 25, and 50-ft lengths
CZ-1220	12-ft Console Device Extension Cable Kit
CB-0021	PS/2 to AT Adapter (6-pin mini-DIN male to 5-pin DIN female)
CB-0011	PS/2 to AT Adapter (6-pin mini-DIN female to 5-pin DIN male)
CB-07R3	7-ft (2.14 m) Video Sync Adapter Cable Set
CB-1213W3	12-ft (3.66 m) 13W3 to HD15 Video Cable

The Apex product line is highly adaptable. Please contact your sales representative for more information on system configuration using Apex options and accessories.

C TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	RECOMMENDED SOLUTION
No OSCAR or video on any computer	Loose monitor connection	Reconnect monitor
	No power to concentrator or monitor	Check power switch Reconnect power cable Check AC outlet for power
	OSCAR colors or setup incompatible	Reset OSCAR colors to defaults
No video on one computer	Loose video connection	Reconnect video cable
	Defective video cable	Replace video cable
	Computer off	Turn on the computer connected to that port
Can't select computers	Keyboard did not initialize	Reset keyboard (and mouse) by pressing reset button on the back panel of the OutLook switch
	Keyboard incompatible	Replace keyboard
	Computer off	Turn on computer connected to that port
Keyboard error on boot, all computers	Loose keyboard connection	Check that all cables are well seated
	Incompatible or defective keyboard	Replace keyboard

Keyboard error on boot, one computer	Loose keyboard connection	Check that all cables are well seated Ensure mouse and keyboard cables are not swapped
	Defective cable	Replace keyboard cable
Keyboard strokes shifted (swaps upper case for lower case)	Computer left keyboard in shifted state when last connected	Press both SHIFT keys
Mouse error on boot, all computers	Loose mouse connection	Check that all cables are well seated Ensure that mouse/keyboard cables are not swapped
	Incompatible or defective mouse	Replace mouse with PS/2 style mouse or one compatible with port
Mouse error on boot, one computer	Loose mouse connection	Check that all cables are well seated Ensure that mouse/keyboard cables are not swapped
	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 OSCAR or back panel reset switch
Mouse pointer frozen on display	Mouse not initialized	Reset mouse through OSCAR or back panel reset switch
OutLook switches from one system to the next at will	Scan mode initiated	Stop scanning by pressing any key or moving mouse
Keyboard or mouse input appears on more than one computer	Broadcast mode initiated	Use OSCAR to exit broadcast mode

D FIRMWARE UPGRADE INSTRUCTIONS

Follow the instructions below to upgrade the processor firmware of your Apex OutLook switch. The processor firmware is stored on an EPROM chip. The enclosed chip replaces the chip currently installed in your Outlook switch.

If you have any questions regarding this procedure, contact Apex technical support at: service@apexpc.com or 800 861-5858

Tools required:

- small Phillips screwdriver
- chip puller or small, flat-blade screwdriver

To install the EPROM upgrade:

- 1 Save current system settings using the Snapshot command.

See *Saving the Hardware Settings* in Chapter 3 for using the Snapshot command.

- 2 Turn off power and disconnect the power cord.

Warning



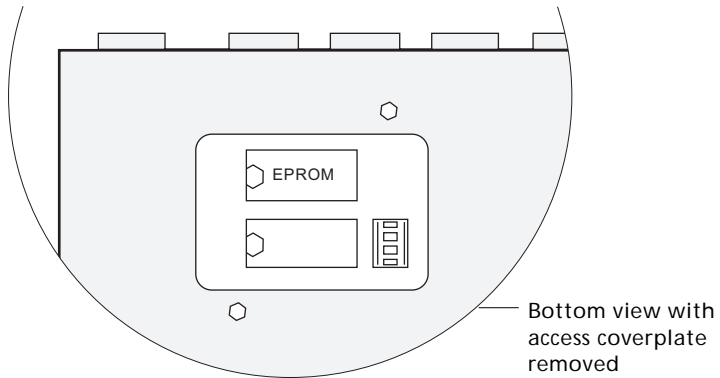
Before installation, make sure that the power cord is unplugged from the OutLook switch.

- 3 Remove the 2 screws holding the access coverplate on the bottom of the unit.
- 4 Carefully remove the firmware EPROM from its socket using a chip puller. The chip can also be removed with a small flat blade screwdriver by alternately prying from each end. Use extreme caution to avoid damage to the circuit board or IC socket.

Warning



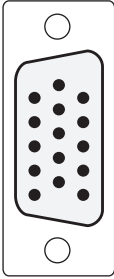
The EPROM chip and the components inside the OutLook switch can be damaged by static electricity. Follow standard electrostatic discharge precautions for all work involving the switch printed circuit board.



- 5 Carefully insert the new firmware EPROM into the socket, ensuring that the orientation notch on the EPROM chip matches the outline of the socket and drawing on the circuit board. Refer to the drawing above. Note the orientation mark on both the IC socket and the circuit board. Press firmly to ensure the chip is seated. Visually check that all the pins on the new chip go straight into the IC socket.
- 6 Replace the access coverplate and return the unit to service.

E CONNECTOR PIN SPECIFICATIONS

DB-15 HD Video Cable, Male



11	6	1
Monitor Sense 0	Red Ground	Red Drive
12	7	2
Monitor Sense 1	Green Ground	Green Drive
13	8	3
Horizontal Sync	Blue Ground	Blue Drive
14	9	4
Vertical Sync	Plug	Reserved
15	10	5
Reserved	Ground	Ground

IBM PC 5-Pin DIN Keyboard Cable, Male



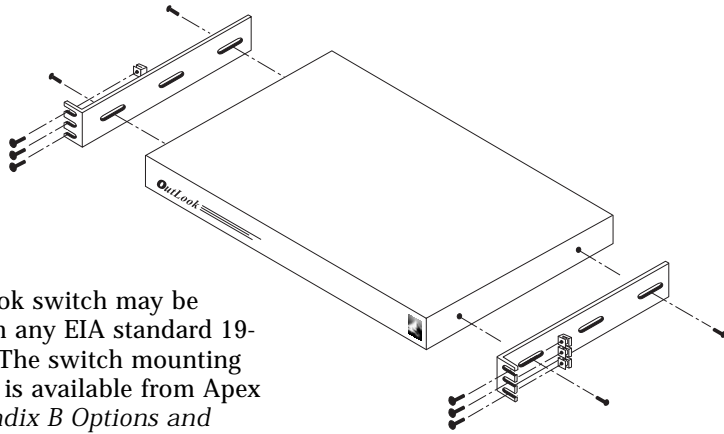
1	3
Keyboard Clock	Keyboard Reset
4	5
Ground	+5 Volts
2	
Keyboard Data	

IBM PS/2 6-Pin Mini DIN Keyboard Cable, Male



5	6
Keyboard Clock	Reserved
3	4
Ground	+5 Volts
1	2
Keyboard Data	Reserved

F OPTIONAL RACKMOUNTING



The OutLook switch may be mounted in any EIA standard 19-inch rack. The switch mounting bracket kit is available from Apex (see *Appendix B Options and Accessories*).

Follow safety measures when installing equipment

Before installing the OutLook switch and other components in the cabinet, stabilize the cabinet in a permanent location. Start rackmounting your equipment at the bottom of the cabinet, then work to the top. Avoid uneven loading or overloading of cabinets.

Caution



Do not exceed your cabinet load rate. Overloading or uneven loading of cabinet may result in shelf or cabinet failure, causing damage to equipment and possible personal injury.



Connect only to power source specified on the unit. Do not exceed circuit capabilities. Overloaded power sources and extension cords present fire and shock hazards.

To rackmount the OutLook switch:

- 1 With an Allen wrench fasten the mounting brackets to the switch using two 8-32 button head socket cap screws per side.
- 2 Attach the rack nut/holders to the mounting rail of the rack so that the nut is positioned on the inside of the cabinet.
- 3 Mount the switch assembly to the cabinet by inserting the 10-32 Phillips screws through the slots in the bracket and the holes in the mounting rail and then into the rack nut/holders.

G SETTING OUTLOOK DIP SWITCHES

FOR MODELS EL-280DT/EL-480DT

In its factory default state, the Outlook switch always resolves port contention in favor of existing connections. This switch connection mode is called cooperative. If you would prefer the switch to favor new connections, you must move the DIP switch to the preemptive setting. In preemptive switch connection mode the Outlook switch is set to allow any console to select any computer port at any time.

To set the DIP switch:

- 1 Make sure that the Outlook switch is turned off and unplugged.
- 2 Open the little panel on the bottom of the Outlook unit, exposing an area of the circuit board that contains a block of four DIP switches
- 3 Move the switch marked 1-1 on the left end of the block to the ON position to select the preemptive setting. Or move the switch marked 1-1 to the OFF position for the cooperative setting.
- 4 Close the panel and re-connect the power cord.

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