

# Web Switch

WSW-2620

**Web/SNMP Manageable Switch**

## **Trademarks**

Copyright © PLANET Technology Corp. 1999.  
Contents subject to revision without prior notice.  
PLANET is a registered trademark of PLANET Technology Corp.  
All other trademarks belong to their respective owners.

## **FCC Warning**

This device has been tested and found to comply with 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 user's manual, may cause interference in which case user will be required to correct the interference at his own expense.

## **CE Mark Warning**

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

## **REVISION**

PLANET Web Switch Series User's Guide for model

### **WSW-2620**

Revision 1.0 (April 1999)

Part No.: EM-WSW26v1

# Table of Contents

<b>Chapter 1 Introduction</b> .....	1-1
About Web Switch WSW-2620 .....	1-1
Key Features.....	1-1
Front Panel.....	1-3
Ports.....	1-4
10BASE-T ports .....	1-4
10BASE-T/100BASE-TX port.....	1-4
Mini-Console .....	1-4
Console Keys.....	1-5
Rear Panel.....	1-5
<b>Chapter 2 Installation and Setup</b> .....	2-1
Rack Mounting.....	2-1
Connecting a Terminal to the Console Port .....	2-2
100BASE-TX Connections.....	2-3
Connecting Workstations.....	2-4
Connecting to Other Ethernet Hubs .....	2-4
<b>Chapter 3 Mini-Console</b> .....	3-1
Message Zone .....	3-2
Observing Basic Port Information.....	3-2
Port Group Indicators.....	3-3
Port Indicators .....	3-4
Port Indicator Definitions.....	3-4
Bar Gauge .....	3-5
Unit ID.....	3-5
Lock.....	3-5
Console Keys.....	3-6
Port Group Selection .....	3-7
Menu Tree.....	3-8
Utilization .....	3-8
Collision.....	3-8
Group Selection.....	3-9

Statistics .....	3-9
Port Status .....	3-10
Port Configuration .....	3-11
Unit Configuration .....	3-12
Observing Utilization .....	3-13
Observing Collision Level .....	3-14
Monitoring Ports Status .....	3-14
Monitoring Port Statistics .....	3-15
Configuring Ports .....	3-15
Lock the Mini-Console .....	3-15
Unlock the Mini-Console .....	3-16
Secure Your Switch .....	3-18
Set Password .....	3-18
In Case You Forget the Mini-Console Password .....	3-19
Restart the Switch .....	3-19
<b>Chapter 4 Setting-Up for Management .....</b>	<b>4-1</b>
Managing The Switch .....	4-1
Console Program .....	4-1
Terminal Program .....	4-2
Navigating the Console Program Screens .....	4-7
Booting the Switch for the first time .....	4-8
Login Screen .....	4-9
Main Menu .....	4-10
System Download .....	4-11
Network Configuration .....	4-12
<b>Chapter 5 Console Management .....</b>	<b>5-1</b>
Using a Telnet Session .....	5-1
Console Management Command Overview .....	5-2
Configuring the System .....	5-3
Main Menu .....	5-4
System Information .....	5-4
Management Setup .....	5-6
Network Configuration .....	5-7
Management Port Configuration .....	5-8
SNMP Community Setup .....	5-9
Trap Receiver Menu .....	5-10
Management Capability Setup .....	5-12
Trap Filter Setup .....	5-13

Device Control .....	5-14
Switch Control/Status .....	5-16
Switch Port Control/Status .....	5-17
Static Address Configuration.....	5-20
Static Unicast Address Configuration Menu.....	5-21
Static Group Address Configuration .....	5-23
Static Group Address Forward Unregister Configuration .....	5-25
VLAN Control.....	5-26
VLAN Configuration Menu.....	5-27
GVRP Configuration.....	5-30
GVRP Port Configuration .....	5-32
Spanning Tree Protocol Group Configuration .....	5-33
Spanning Tree Protocol Port Configuration .....	5-35
Trunk Group Configuration.....	5-37
User Authentication.....	5-37
System Utility.....	5-39
System Download.....	5-40
System Restart.....	5-43
Factory Reset.....	5-44
Download Port Setting .....	5-45
Login Timeout Interval .....	5-46
Configuration Upload Setting.....	5-47
Configuration Upload Request/Status .....	5-48
Ping To Another Host .....	5-49
<b>Appendix A Product Specifications .....</b>	<b>A-1</b>

## Chapter 1

# Introduction

## About Switch WSW-2620

Switch WSW-2620 is an innovative new design in network switching, with many features that make monitoring, configuring and expanding a network, better and easier than ever before.

## Key Features

- ◆ **Smart Mini-Console Operation**  
The Mini-Console (Vacuum Florescent Display) is a major new technological breakthrough, a brilliant display panel that provides text and graphics information and extensive management capability for the user.
- ◆ **Web-Based Management**  
Built in Web-Based management enables management from a web browser allowing management from any remote location.
- ◆ **SNMP Network Management**  
SNMP functionality has been built in providing comprehensive management capabilities for HP OpenView and other network management platforms.
- ◆ **VLANs (Virtual LANs)**  
VLAN capability provides up to 31 LANs within the Switch. The GVRP function allows you to designate dynamic VLANs.

## ◆ Ports

- 24 10BASE-T (RJ-45) ports
- 1 10BASE-T/100BASE-TX auto-sensing port (RJ-45)
- 1 MDI-II Uplink port (RJ-45) shared with port 1
- 2 expansion slots allow you to add 10BASE-T/100BASE-TX or 100BASE-FX ports
- 1 EIA-232 port

## ◆ Expansion Slot

Switch WSW-2620 provides two expansion slots for the addition of 2 10BASE-T/100BASE-TX MDI-II or MDI-X ports or 1 100BASE-FX port.

## ◆ Optional Modules

The following two types of expansion modules are available for this system.

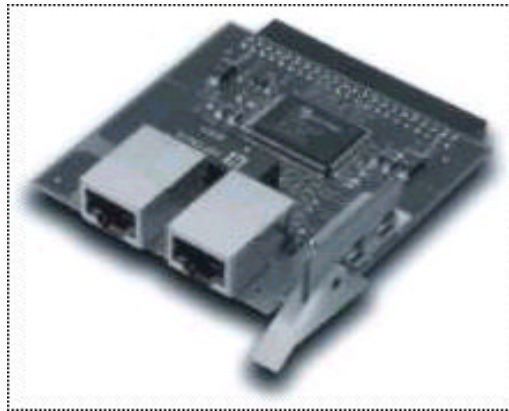
---

**Note: The power must be turned off before inserting or removing Modules.**

---

• **Module WSW-BTX**

This 10BASE-T/100BASE-TX module with two RJ-45 connectors is configured for either MDI-II or MDI-X.



*Figure 1.1 Module WSW-BTX*

---

- **Module WSW-BSC**  
This 100BASE-FX module is for use with fiber optics cable with one SC type connector.



*Figure 1.2 Module WSW-BSC*

## Front Panel

The front panel consists of the Mini-Console, the Console Keys and Ethernet ports.



*Figure 1.3 Front Panel*



## Ports

### 10BASE-T ports

The front panel supports 24 10Mbps ports (ports 1 through 24) and 1 MDI-II port shared with Port 1.

### 10BASE-T/100BASE-TX port

Also located on the right side of the front panel, Port 25 is a 10/100Mbps auto-sensing port. This port is one way the WSW-2620 can connect to Fast Ethernet devices with RJ-45 plugs.

## Mini-Console

The Mini-Console actively displays the network status information. Together with the build-in Console Keys, users are able to monitor and configure all the ports simultaneously or individually.

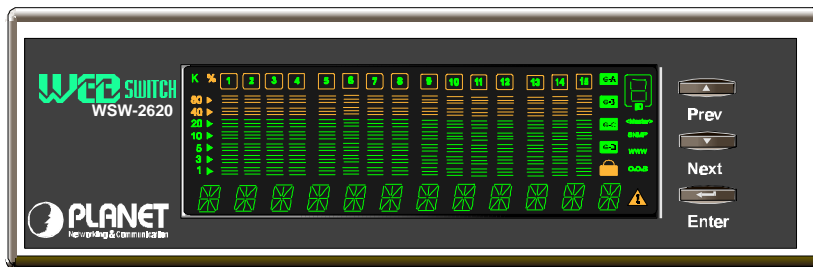


Figure 1.4 Mini-Console

## Console Keys

The Console Keys are used to cycle through the menu tree, make selections and configure settings.

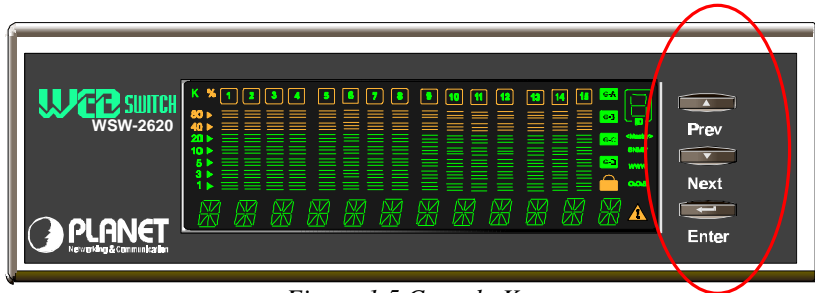


Figure 1.5 Console Keys

## Rear Panel

Ports 26 and 27 are located on the rear panel and accept slide-in modules for high-speed data transfer. Module WSW-BTX or Module WSW-BSC can be added to meet the requirement of complex network environments.



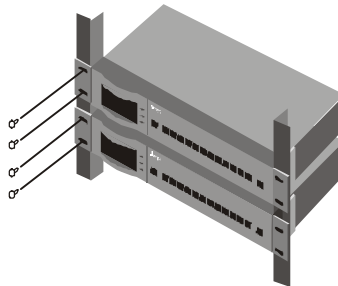
Figure 1.6 Rear Panel

## Chapter 2

# Installation and Setup

## Rack Mounting

Switch WSW-2620 is 1.25U high and fits into standard 19-inch racks. Put the mounting brackets over the mounting holes on the sides of unit. Insert screws and fully tighten with suitable screwdriver. Then insert the device into the 19-inch rack. Please make sure that the ventilation holes are not be obstructed.



*Figure 2.1 Rack Mounting*

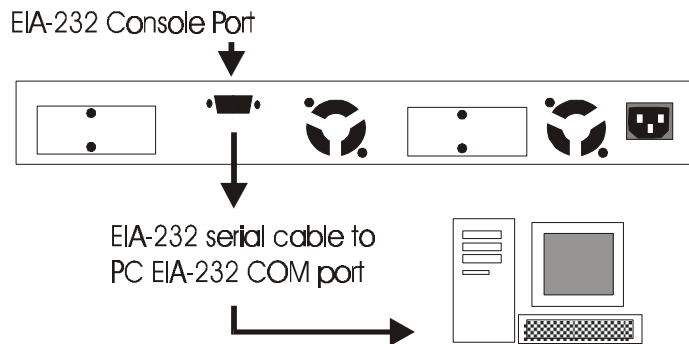
## Connecting a Terminal to the Console Port

Connect an EIA-232 serial cable to a COM port on a PC or notebook computer and to the Console Port of the Switch WSW-2620 as show below.

---

**Note:** Do not use a null modem cable.

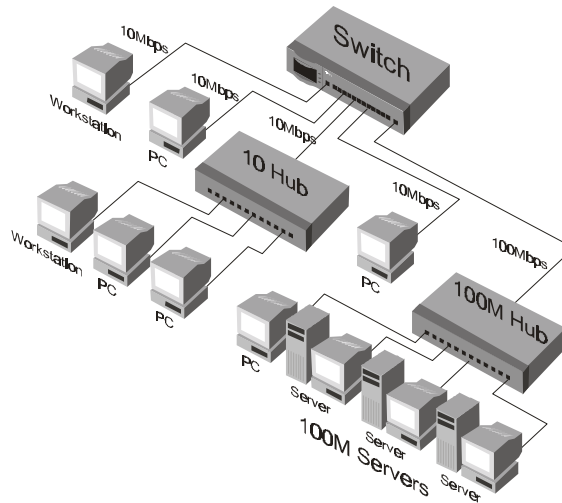
---



*Figure 2.2 Connecting a PC via Console Port.*

## 100BASE-TX Connections

Switch WSW-2620 provides 100BASE-TX connections at port 25 through UTP cables with RJ-45 plugs as well as through the optional slide-in modules.



*Figure 2.3 100BASE-TX Connections*

## Connecting Workstations

Figure 2.4 shows Switch WSW-2620 as a desktop switch in a client server mode.

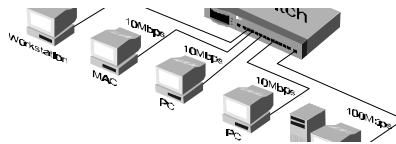


Figure 2.4 Connecting Workstations.

## Connecting to Other Ethernet Hubs

10BASE-T hubs can be connected to ports 1~24 as shown in Figure 2.5.

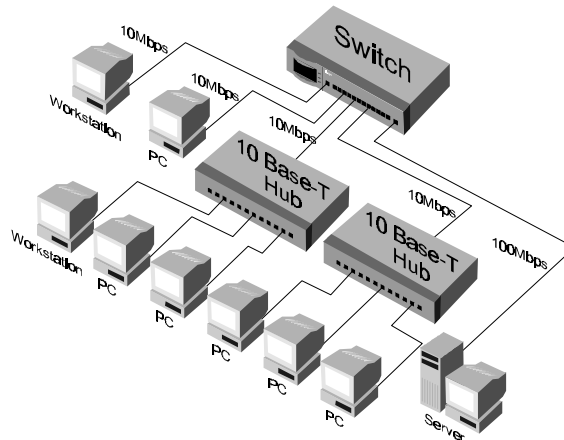


Figure 2.5 Connecting to other Ethernet hubs

## Chapter 3

# Mini-Console

The Mini-Console is a high definition vacuum florescent display panel that provides brilliant text and graphics. It continuously displays information about the ports status. Configuration settings can be viewed or changed when used in combination with the Console Keys.

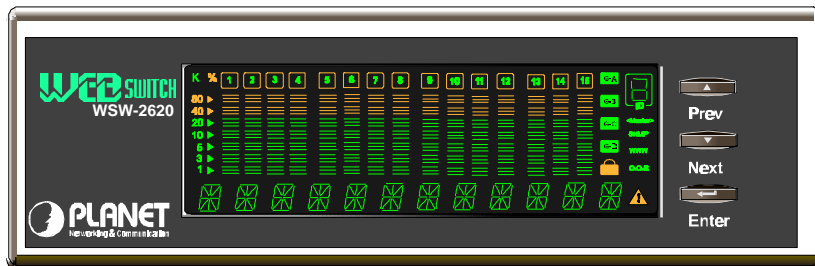


Figure 3.1 Mini-Console

## Message Zone

The Message Zone displays the menu items of the menu tree. The large alphanumeric characters are easy to read and are an important navigational tool.



*Figure 3.2 Message Zone*

## Observing Basic Port Information

The basic port information, such as link up, link down, transmit/receive activity, enabled/disabled as well as auto partition can be easily spotted through the Port Indicators located in the first row of the Mini-Console.

---



## Port Group Indicators

On the right-hand side of the Message Zone, there are two port group indicators, G-A and G-B. When the G-A icon is illuminated, port indicators 1 through 13 represent ports 1 through 13. When the G-B icon is illuminated, port indicators 1 through 14 represent ports 14 through 27.

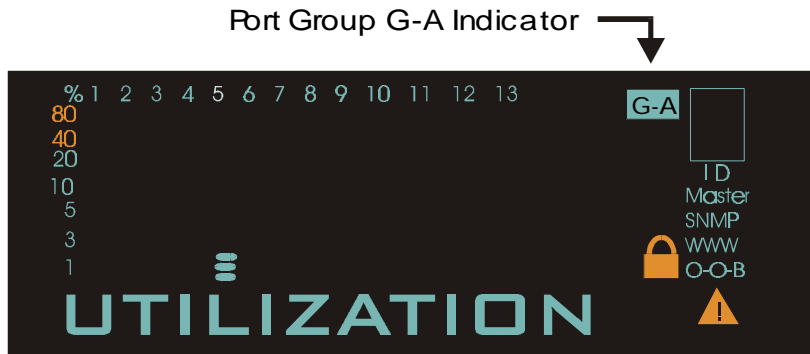


Figure 3.3 Port Group G-A, Representing Ports 1 Through 13



Figure 3.4 Port Group G-B, Representing Ports 14 Through 27

## Port Indicators

The Port Indicators show the ports that are linked up by intensifying the light for the ports that are available. While the ports are receiving or transmitting data, the port's number will be flashing.

Port Indicators show the ports that are not linked as slightly on or dimmed.

An amber rectangular frame appears around the port number of ports that are disabled through the Mini-Console or other management programs. If the amber rectangular frame is blinking, it means it has been partitioned automatically due to some error condition such as a loop or broadcast storm that has been detected.

1 2 3 4 5 6 7 8 9 10 11 12 13

*Figure 3.5 Port Indicators*

## Port Indicator Definitions

The port indicators define the ports status and activity by the way they are illuminated, such as ON, OFF, blinking, flashing and a frame around the numbers.

The following table summarizes the definition of the port indicators.

Port Indicator Definitions		
Port No.	Frame	Indicates
Slightly on	Off	Port is available but link is down.
On	Off	Port is available and link is up.
Flashing	Off	Link is up and transmitting/receiving data.
On	On	The port is disabled by the administrator.
On	Blinking	The port is partitioned by machine itself due to errors.

*Table 3.1 Port Indicator Definitions*

## Bar Gauge

There are Bar Gauges below every port indicator that ascend/descend indicating an approximate percentage of usage relevant to the menu item in the message zone. As the bar gauge rise the relevant percentage can be measured against the percentage scale.



Figure 3.6 Bar Gauge

## Unit ID

A unique ID number in the ID frame identifies each switch in the stack. The master switch assumes the ID number “1”. Additional managed switches such as 10S will assume ID numbers based on the port that they are connected to, plus one. For instance a 10S switch connected to port one will assume the ID number “2”.

## Lock

When the system is powered up, a lock icon appears below the ID number in Mini-Console indicating the console is locked. Unlocking the console removes the lock icon. See the section “*Locking the Console*” in this chapter for more information.

## Console Keys

The Console Keys are used to cycle through the menu tree, to make selections and settings. Pressing the Prev or Next Console Keys moves one position in the menu. Do not hold the keys down in an effort to auto cycle through the menus. Holding down keys is used to change default settings.

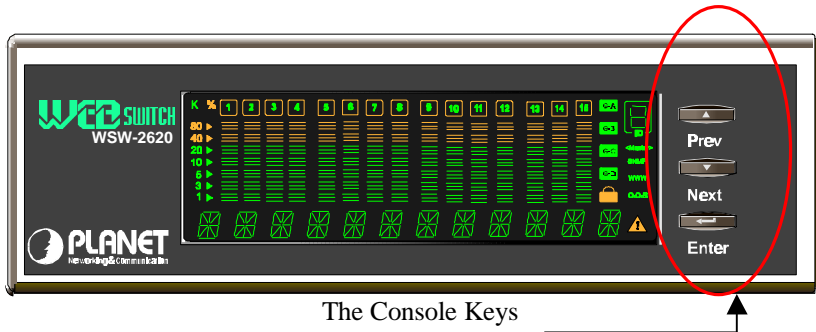


Figure 3.7 Console Keys

The following table summarizes the Console Keys functions.

Console Keys	
Previous Key	Cycles back through the menus.
Next Key	Cycles forward through the menus.
Enter Key	Select the displayed menu item or when pressed and held changes a setting.
Enter Key Hold Down	Holding down the Enter key changes the default setting and places an “*” before the item indicating it is the current default.

Table 3.2 Console Keys

---

**Note: When the Message Zone is in Collision or Utilization mode, the Enter key can be pressed to scroll between port group A and port group B.**

---

# Port Group Selection

The port group selection function allows you to monitor and configure all of the ports available on the switch. Including expansion modules, there can be a total of 27 ports available.

In both the UTILIZATION and COLLISION modes, you can select a port group by pressing the Enter button. The corresponding port group indicator will be illuminated.

To configure the default port group to be displayed, follow these steps:

1. Press the Prev or Next buttons to select GROUP SEL from the main menu.
2. Press the Enter button.
3. Press the Prev or Next buttons to select the port group that you want to be displayed as the default port group.
4. Press and hold the Enter button for 4 seconds. An asterisk will appear to the left of the port group, indicating that it is the default port group to be displayed.
5. Press the Prev or Next buttons to select MAIN MENU.
6. Press the Enter button to return to the main menu.

## Menu Tree

The menu tree consists of six main menu items, Utilization, Collision, Group Selection, Statistics, Port Status, Port Configuration and Unit Configuration.

### ***Utilization***

The main menu item Utilization, displays utilization status for all linked ports by the rising/falling gauge bars below the linked ports.

<b>MAIN MENU</b>
<b>UTILIZATION</b>
Actively displays the utilization for linked ports.

*Table 3.3 Utilization*

### ***Collision***

The main menu item Collision, displays collision status for all linked ports by the rising/falling gauge bars below the linked ports.

<b>MAIN MENU</b>
<b>COLLISION</b>
Actively displays collision for linked ports.

*Table 3.4 Collision*

---

## Group Selection

The main menu item Group Selection allows you to select the default port group that is displayed in the Message Zone. An asterisk indicates the default port group. To select a default port group, press the Next/Prev key to cycle to the desired group. When the desired port group is displayed, press and hold the Enter key until an asterisk is displayed.

<b>MAIN MENU</b>
<b>GROUP SEL</b>
Select default port group display.

*Table 3.5 Group Selection*

## Statistics

The main menu item Statistics has 16 sub menus, one for each port 1~27 and one to return to the main menu. Press the Next/Prev key to cycle to a port and then press the Enter key to view the different statistics available. Pressing the Enter key again shows the count for the selected statistic.

Cycle to Back to select another statistic or cycle to MAIN MENU to exit to the main menu.

MAIN MENU		
STATISTICS		
Sub-Menu	Statistic	Count
PORT 1~27	RX-FRAMES RX OCTETS MULTICAST-RX BROADCAST-RX RX-ALIGN ERR RX-CRC ERR RX-JABBERS RX-FRAGMENTS OVERSIZE RX UNDERSIZE RX TX FRAMES TX OCTETS MULTICAST-TX BROADCAST-TX RX OVERUN BACK MAIN MENU	<i>Press Enter            at any of the            Statistic to            view the            count for            that statistic</i>

*Table 3.6 Statistics*

## **Port Status**

The Port Status menu displays status information about each port individually or all the ports simultaneously. When viewing individual ports the status will automatically cycle through the current settings for the port.

When ALL PORTS is selected, use the Next/Prev key to cycle through the settings. The gauge bars indicate the ports that are set to the particular setting and the message zone displays the status setting for the ports.



MAIN MENU		
PORT STATUS		
PORT 1~27	SHOW STATUS	<i>Auto cycles through all settings</i>
ALL PORTS	10M PORTS 100M PORTS HALF DUPLEX FULL DUPLEX ENABLED DISABLED STORE—FWD BACK MAIN MENU	<i>Press the Enter console key once and then the Prev/Next keys to cycle through all settings, the gauge bars indicate the ports setting.</i>

Table 3.7 Port Status

## Port Configuration

The Port Configuration menu allows the configuring of ports 1~27 when the console is unlocked. Table 3.6 lists typical default settings and the possible optional settings. An “\*” appears before each current setting. To change a setting hold down the Enter key until an “\*” appears before the setting, the “\*” is removed from the previous setting.

---

**Note: Only ports 25, 26 and 27 can be configured to 100Mbps speed.**

---

When the Console is locked, this menu cannot be entered. See “*Unlocking the Console*” for information on unlocking the console.

MAIN MENU			
PORT CONFIG			
Sub Menu	Default Setting	Options	
PORT 1~27	*AUTO-NEGO	FULL DUPLEX	HALF DUPLEX
ALL PORTS			
MAIN MENU			
	*ENABLE	DISABLE	
	*BS ENABLE	BS DISABLE	
	BACK		
	MAIN MENU		

Table 3.8 Port Configuration

## Unit Configuration

The Unit Configuration menu allows configuring the system and viewing the current system information.

MAIN MENU	
UNIT CONFIG	
Sub-Menu	Options
CONSOLE LOCK	ENABLE DISABLE/BACK
NETWORK CONF	IP ADDRESS SUBNET MASK DEF GATEWAY (Default Gateway) SLIP ADDR (Slip Address) BACK
SET PASSWORD	
SYS RESTART	<i>Pressing Enter will restart the Switch</i>

SYS INFO	<i>Pressing Enter will scroll through the Switch's setting information. Pressing any key will return you to the SYS INFO menu.</i>
MAIN MENU	

*Table 3.9 Unit Configuration*

## Observing Utilization

The network manager may want to see the traffic load for every segment and try to balance the load. It is easy to do so with Switch WSW-2620 by selecting the UTILIZATION item, the system startup default. While the item is selected, the level of Utilization for the enabled ports goes up and down as the traffic load varies.

The reference for the level of utilization is based on the speed of the port that is running. For example, a port that is running in 10M half duplex, the 100% stands for the bandwidth of 10M. The following table shows the relation for each speed:

Observing Utilization	
SPEED	100% Stands for:
10M half duplex	10M
10M full duplex	20M
100M half duplex	100M
100M full duplex	200M

*Table 3.10 Port Speed*

## Observing Collision Level

When “COLLISION” is the menu item in the Message Zone, the Port Number will flash for each port that is connected and the Bar Gauge will indicate the percentage of collision for these ports. Collision occurs when two or more ports send data to the same port at approximately the same time. The Collision percent can be calculated with the following formula.

**Collision Ratio = (number of packets collided / number of packets transmitted) \* 100.**

## Monitoring Ports Status

The status of each port can be viewed by selecting Ports Status from the Main Menu. Ports 1~24 can be running in Full Duplex or Half Duplex. Furthermore, Ports 25, 26 and 27 can be running at different speeds, say 10M or 100Mbps. It is useful to check the port setting to see if it has been running in the right mode. When the ports are running in Auto Negotiation Mode, it is easier to manage them.

---

**Note: If it is difficult to connect to a remote device, the first thing to check is that both sides are running at the same mode.**

---

You can watch the status of all the ports at same time when “ALL PORTS”, a sub menu of PORT STATUS, is selected. Press the PREV/NEXT console keys to scroll through all items. The bar gauge illuminates for the ports that are configured with the setting in the message zone.

After selecting a port to view, press the Enter console key and the message zone will automatically display and rotate through all the current settings. To stop displaying the settings press any console key.

---

## Monitoring Port Statistics

The statistic counters of individual ports can be read from the STATISTICS menu. It may be helpful to look at the counters to isolate network problems. All the counters display the accumulated value from Power On.

With STATISTICS in the message zone, press the Enter console key and PORT 1 appears. Use the Prev/Next console keys to scroll between ports. Press the Enter console key to view the type of statistic and press the Enter console key again to view the count.

## Configuring Ports

Ports are configured through the main menu PORT CONFIG. Press the Enter console key and “PORT 1” appears in the message zone. Press the Prev/Next console key until the port number to be configured is in the message zone. Press the Enter console key to select the port. Use the Prev/Next console keys to rotate through the possible settings. When the desired setting appears in the message zone, press and hold the Enter console key until an “\*” appears before the setting option. Return to the main menu.

---

**Note: If the console is locked, “SYS LOCKED” appears in the message zone and automatically returns to the main menu. To unlock the system see the “Unlock the Console” section.**

---

## Lock the Mini-Console

The Console’s default setting is locked and can be changed to unlocked, however, will return to the locked setting whenever the Switch is powered down or reset to protect the settings from being altered by unauthorized personnel.

---

**Note: The Console will automatically “Lock” when there is no key activity for 15 minutes.**

---

To lock the Console, the Console Lock must be set to “\*ENABLE”. Follow these steps:

1. From the main menu of the Console, press the NEXT key until “UNIT CONFIG” appears in the message zone.
2. Press the Enter Console key once.
3. You will see “CONSOLE LOCK” displayed.
4. Press the Enter console key. “ENABLE” will be shown in the message zone.
5. Press and hold down the Enter console key. The Utilization display will be seen in the Message Zone and the Lock Icon will be illuminated.

## Unlock the Mini-Console

The Console’s default setting is locked and can be unlocked, however will return to the locked setting whenever the Switch is powered down, reset, or when there is no Console Key activity for 15 minutes. This is intentional to protect the settings from being altered by unauthorized personnel. When the console is locked, a yellow lock icon is displayed in the Mini-Console. To unlock the console, the Console Lock must be set to “\*DISABLE”. The correct password will need to be entered before the console can be unlocked. Follow these steps to unlock the Mini-Console:

1. From the main menu of the Mini-Console press the Next console key until “UNIT CONFIG” appears in the message zone.
  2. Press the Enter key once. “SYS LOCKED” will appear in the Message Zone for a moment, then “ \*\*\*\* \* \_\_\_\_\_ PSW” will be displayed. The first “\*” will blink indicating that it is ready to be set.
-

3. Enter the four-digit password. (See the table below illustrating these steps.)
4. Press the Enter console key. You will see “OK” displayed for a moment, then “CONSOLE LOCK” will be displayed.
5. To return to the main menu, press the Next console key until “MAIN MENU” appears in the message zone and press the Enter console key.
6. If you entered your password incorrectly, press the Next again. The “\_\_PSW” message will change to “\_\_BACK.” Pressing the Next key again will return you to the first password digit. Repeat steps 3 and 4 to enter the correct password.

The following table illustrates the procedures for unlocking the Mini-Console.

MAIN MENU			
UNIT CONFIG			
Sub Menu	Displayed	Prev key	Next key
SYS LOCKED	****_PSW	Scroll through numbers 0~9	Move to next password digit
Example: This examples illustrates the steps necessary for unlocking the console <i>for the password “0121”</i> . (The factory default password is “0000”.)			
	Displayed	Prev key	Next key
	****_PSW	Press once	Press once
	0***_PSW	Press twice	Press once
	01**_PSW	Press three times	Press once
	012*_PSW	Press twice	<i>Don't press</i>
	0121_PSW	Press the Enter console key	
	OK	<i>OK will be displayed for a moment</i>	
	CONSOLE LOCK	<i>The Mini-Console is now unlocked.</i>	

Figure 3.8 Unlock Console

---

**Note: If the password is entered incorrectly, “FAIL” will display in the message zone and the system will remain locked.**

---

## Secure Your Switch

The switch can be secured with the use of a password and the console lock. When the console is locked a yellow Lock icon is displayed in the Mini-Console and it can only be unlock by entering the 4-digit password number.

### ***Set Password***

In order to unlock the system, you must first unlock the console. See “*Unlock the Console*” for more information.

1. Unlock the console. After unlocking the console, you will see “CONSOLE LOCK.”
  2. Press the Next console key twice. You will see “SET PASSWORD.”
  3. Press the Enter console key. You will see “\*\*\*\*\* PSW.”
  4. Press the Prev key to scroll through the numbers 0~9. The first “\*” changes to a numeric value increasing each time the Prev console key is pressed.
  5. When the first number is selected, press the Next console key to move to the second “\*” and repeat step 4.
  6. Repeat steps 3 and 4 until four digits are selected, then press the Enter console key. An “OK” message will blink and “SET PASSWORD” will appear in the message zone. Your password is set.
  7. Remember your password.
-



## ***In Case You Forget the Mini-Console Password***

If you forget your password you can display and change the password from the Console Management Program. See the chapter “Console Management” for more details.

## **Restart the Switch**

The switch can be re-started at any time without losing configuration settings.

1. Select “UNIT CONFIG” from the main menu. Press the Next console key until “SYS RESTART” is in the message zone.
2. Press the Enter console key. The switch will then restart.

## Chapter 4

# Setting-Up for Management

Several parameters of the Switch must be configured before you are able to access it via a Telnet session, the Web-Based Management interface or SNMP. The parameters include the IP address, subnet mask, default gateway and User Authentication Password. These parameters can be configured via the Mini Console or the Console program, which is accessed through a PC terminal emulation program that supports VT100.

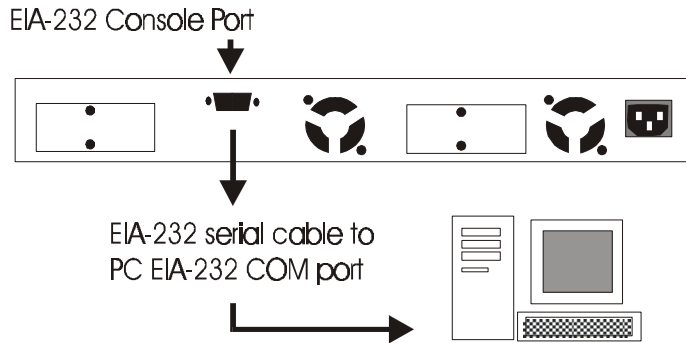
## Managing The Switch

The Switch can be managed through the Console Program, Telnet, Web Management or SNMP. This chapter describes setting up for management, which is done through the Console program.

## Console Program

To configure the system, connect an EIA-232 serial cable to a COM port on a PC or notebook computer and to the Console Port of the Switch as shown in the following figure.

---



*Connecting a PC via Console Port.*

---

**Note: Do not use a null modem cable.**

---

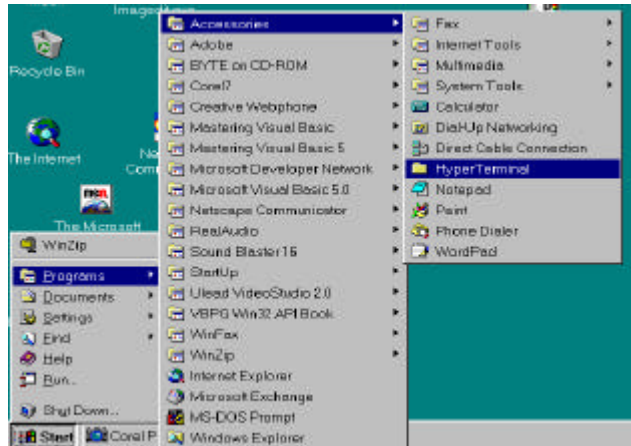
### **Terminal Program**

A Terminal Program is required to communicate with The Switch's internal software. An MSDOS based program such as PC-PLUS can make the connection with the device's built-in software. The COM port should be configured as:

Baud: 9600  
Parity: None  
Data bits: 8  
Stop bits: 1  
Flow control: None

Windows95 provides a suitable program called HyperTerminal and is accessed from the Start menu. Click START, then Programs, Accessories and then HyperTerminal.

---



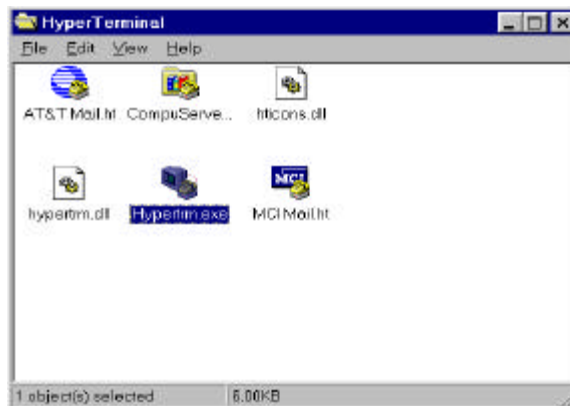
*Terminal Program.*

---

**An MS-DOS type terminal program can also make the connection with the Switch's built in software. However, this section describes using Windows 95 or 98 HyperTerminal.**

---

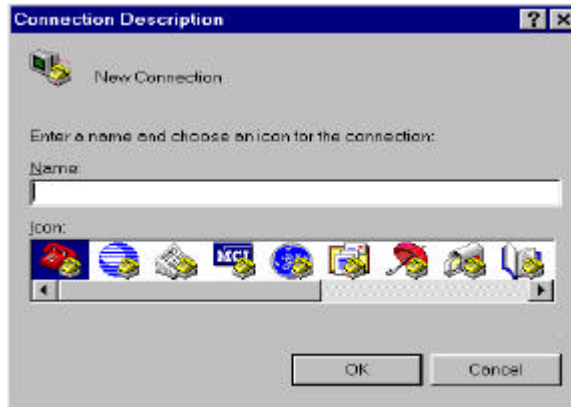
From the **HyperTerminal Screen**, double click the Hypertrm.exe icon.



*Hypertrm.exe Icon*

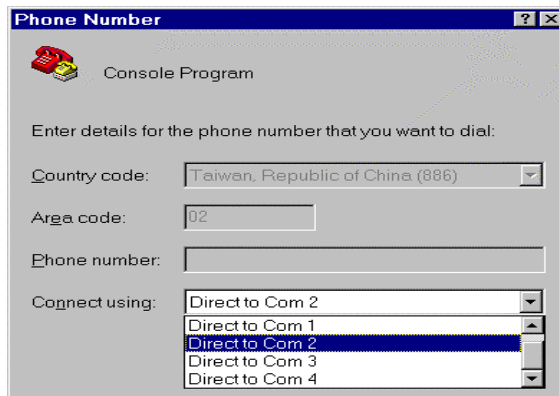
---

The **Connection Description Screen** is displayed. Type a name in the Name panel to identify the connection, choose an icon (optional) and click **OK**.



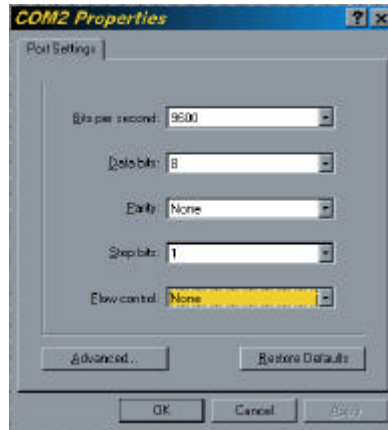
*New Connection Screen.*

The following screen prompts for your country info, area code, telephone number and the modem type. Since you won't be dialing out via a modem you only need to set the COM port. Click the arrow at the right of the "Connect using" label. Select the correct COM port and press the keyboard ENTER key. (Usually COM 2 when a mouse is connected to COM1)



*Selecting a COM port.*

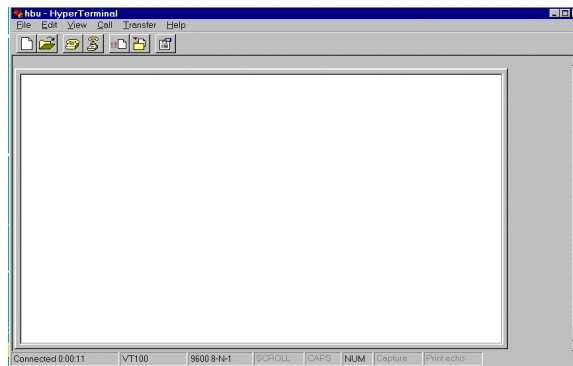
In the next screen all settings must be set correctly; Bits/sec “9600”, Data bits “8”, Parity “None”, Stop bits “1” and Flow Control “None” as in the figure below.



*Port Settings*

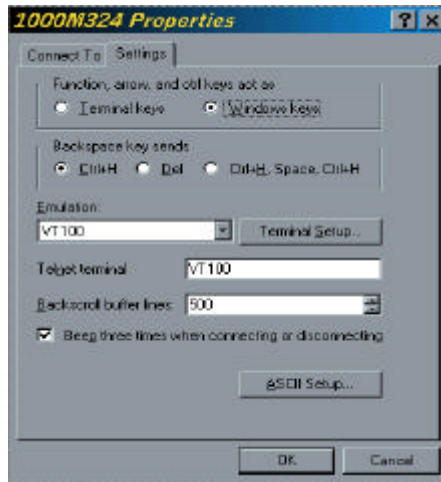
Click the OK button and the connection to the terminal program will be complete.

The Terminal program is now running and you will see this screen:



*The Terminal Program*

Next, check to be sure that the Windows keys radio button is selected and the Emulation is set to VT100 in the File/Properties menu.



*The Terminal Emulation Properties Menu*

When the Switch is powered up, the Power On Self Test, appears in the HyperTerminal window. As the Switch's tests are run through, the test and their results will be displayed. These tests can also be seen in the Mini Console's display on the Switch. After the tests are complete, the Console program's logon screen appears.

---

**Note: The first time the device is booted, an additional Menu will appear before the Login Screen. See "Booting the Switch for the first time"**

---

```
POWER-ON SELF TEST
-----
BOOT ROM Integrity Test           ..... OK
DRAM Test (04096 Kbytes)         ..... OK
Secondary BOOT LOADER Detect      ..... OK
Extracting second bootrom code...
.....
..... OK
NMU <--> Switch Communication Channel Test ..... OK

Flash Memory (2048 Kbytes) Installed ..... OK
Run Time Image Integrity Test    ..... OK
Web-Pages Integrity Test        ..... OK
EEPROM Read/Write Test          ..... OK
Switch Controller Access Test    ..... OK

MAC address changed to default value!
MAC Address = 00 e0 95 00 00 00
```

### *Power On Self Test*

---

**Note:** If the Switch was already powered up when HyperTerminal was started, then the screen will be blank because the Switch's Power On Self Test will have run already. Therefore, the screen needs to be refreshed in order for the Login Screen to appear. Press CTRL + R to refresh the screen.

---

## Navigating the Console Program Screens

Use the following keyboard keys to navigate through the menu and select a sub-menu. These keyboard commands are common to all menus.

- |            |  |
|------------|--|
| TAB KEY:   | Use the TAB key to select screen menus.  |
| ENTER KEY: | Press the ENTER key after selecting a menu item with the TAB key to view the selection's sub-menu. |
| EXIT:      | Return to the previous menu.   |
| HELP:      | Select HELP to view keyboard commands.   |
-



## Booting the Switch for the first time

The very first time the device is booted the following screen appears after the Power On Self Test.

Since the default configuration enables the Bootp Request, the device is asking for its IP parameters from the network Bootp server.

If the administrator has assigned an IP address to the switch in the network Bootp server and the Switch successfully receives this information, the following screen will appear briefly, then the download procedure will continue automatically.

If you have no Bootp server connected, you will see following screen. You have to disable the Bootp request and assign IP parameters to the switch manually.

```
Start to read boot server information from remote BOOTP server...
-- No. of BOOTP request sent:      6
-- Time elapsed (seconds):        65

[Enter] : Abort Boot Loader
-- open switch port 1 --
```

*Boot Loader*

---

Press Enter to abort this session and the Login Screen will be loaded. Follow the steps outlined below to assign IP parameters to the switch.

---

**Note: If no action is taken, and the switch does not detect a network Bootp server after 3 minutes, this screen will automatically close and the Login Screen will be displayed.**

---

## Login Screen

The login screen appears, similar to Figure 4.9. Enter the User Name as “planet” and Password as “planet”.

---

**If there is no text in the Hyper Terminal screen at this point, press Enter a few times and the will appear.**

---

```

WW      WW EEEEEEEE BBBB BBBB  SSSSSS WW      WW IIIIII TTTTTT  CCCCC  HH
WW      WW EE      BB  BB  SS  SS WW      WW  II    TT    CC    CC  HH
WW      WW EE      BB  BB  SS  SS WW      WW  II    TT    CC    HH
WWW WW WWW EEEEEEEE BBBB BBBB  SSSS  WWW WW WWW  II    TT    CC    HHHHH
WW WW WW EE      BB  BB  SS  SS WW WW WW  II    TT    CC    HH
WWW WWW EE      BB  BB  S  SS  WWW WWW  II    TT    CC    CC  HH
WW      WW EEEEEEEE BBBB BBBB  SSSSSS WW      WW IIIIII  TT    CCCCC  HH

                                User Name:[ ██████████ ]
                                Password :[ ██████████ ]

                                Use <Tab> key to move between User Name and Password, then press <Enter>

```

*The Login Screen*

---

**The Error message “*Login incorrect !!!! Press <Enter> to retry*” appears at the bottom of the login screen if the Password or User Name is entered incorrectly. Press ENTER and enter them again making sure the spelling is correct. Press ENTER on the keyboard to load the Main Menu.**

---

## Main Menu

After passing through the login security screen, the Main Menu for console management is displayed. There are 5 sub-menu selections for Switch WSW-2620 management: System Information, Management Setup, Device Control, User Authentication and System Utility.

From the Main Menu select System Utility.

```
PLANET WebSwitch-2620
- Main Menu -

System Information
Management Setup
Device Control
User Authentication
System Utility

LOGOUT          HELP
Use <Tab> key to select the item, then press <Enter>
```

*Main Menu*

From the System Utility Menu select System Download.

```
PLANET WebSwitch-2620
- System Utility Menu -

System Download
System Restart
Factory Reset
Download Port Setting
Login Timeout Interval
Configuration Upload Setting
Configuration Upload Request/Status
Ping to Another Host

EXIT          MAIN MENU          HELP
Use <Tab> key to select the item, then press <Enter>
```

*System Utility Menu*

## System Download

The default setting for the Bootp Request is “Enabled”. Disable the Bootp Request by pressing Ctrl+S to remove the “X”. Use the tab key to select the SAVE command and press Enter, then select EXIT and press Enter.

```
PLANET WebSwitch-2620
- System Download Menu -

( X ) Bootp Request
File Download Request:
TFTP Server IP Address:   [ 0.0.0.0 ]

( ) Boot ROM Code Download
File Name: [ ]

( ) Configuration File Download
File Name: [ ]

( ) Web-Pages Database Information Download
File Name: [ ]

( ) System Software Download
File Name: [ ]

SAVE          EXIT          MAIN MENU          HELP
```

### *System Download*

Use the Escape key to return to the Main Menu and select Management Setup. In the Management Setup menu, select Network Configuration.

## **Network Configuration**

Use the tab key to highlight IP Address listed under the heading New. Enter the IP address for the switch. Repeat this step for the Subnet Mask and Default Gateway. Select the SAVE command and press Enter to save your configuration settings.

```

          PLANET WebSwitch-2620
        - Network Configuration Menu -

Network Interface <1>

Interface Type: Ethernet

Management MAC Address : 80-E8-95-01-13-32
Switch MAC Address    : 80-E8-95-01-13-33

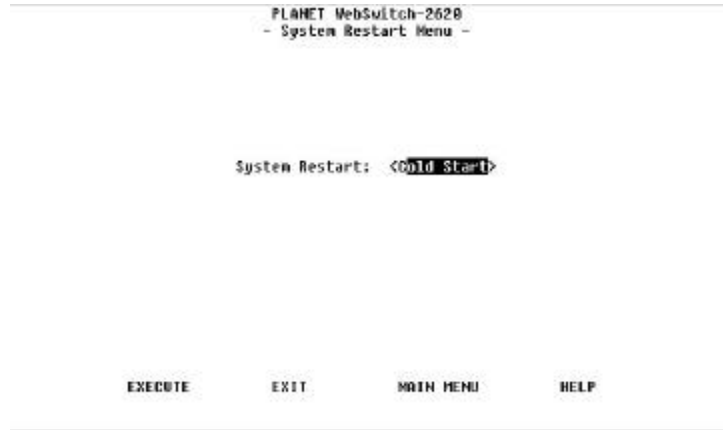
Configuration:      Current      New
IP Address:        203.70.249.212  [203.70.249.212]
Subnet Mask:       255.255.255.0   [255.255.255.0 ]
Default Gateway:  203.70.249.254  [203.70.249.254]

SAVE              EXIT              MAIN MENU        HELP
```

### *Network Configuration Menu*

Select the EXIT command and press Enter to return to Management Setup Menu.

Now it is necessary to restart the system so that the settings will take effect. Press the Escape key to return to the Main Menu and select System Utility. In the System Utility Menu, select System Restart. In the System Restart Menu select Cold Start, then EXECUTE. Hit Enter to confirm Cold Start. Your Switch will then restart and assign the new settings.



### *System Restart*

At this point, you should conduct a ping from the terminal you are using to ensure that the IP address is assigned properly.

---

**Note: If you had an Ethernet connection established when assigning the IP address, the ping may be timed out. If this happens, simply plug your Ethernet connection into a different port and conduct another ping.**

---

The Switch is now setup for management. The following chapter, “Console Management,” describes establishing a Telnet session and using the Console management program.

---

## Chapter 5

# Console Management

Console Management is used to manage the switch. It runs from a terminal program on a computer connected to the switch's Console port via an RS-232 cable. See "*Setting Up for Management*" for information about using a terminal program. Console Management is also used to configure settings that enabling using the more user-friendly Web-Based management and for more detailed SNMP management. Some of the configuration settings will be visible in the VFD Console, such as isolated port. After configuring this switch with Console Management, it can then be monitored and configured with the either Console Management, Web-Based management using a web browser, SNMP using programs such as HP OpenView or any combination of these three.

## Using a Telnet Session

The following management interface is the same, whether you are using the Console management, or a Telnet session.

In order to conduct a Telnet management session, you must first configure the WSW-2620's IP address. This can be done via the Mini-Console or a Console management session. Please refer to the respective sections in this manual for the relevant information on setting the switch's IP address.

---

Using any Telnet application that emulates VT100 over a TCP/IP network, please establish a connection to the WSW-2620. If you need help doing this, please refer to your Telnet application documentation.

## Console Management Command Overview

The Console management uses limited keyboard keys such a **Tab**, **Enter**, and **Ctrl** + “*letter*” combinations to execute its commands. A glossary of commands can be found in the Help menu. These command keys and their functions are described as:

Keyboard Commands	
Tab	Move between selectable items in each menu.
Enter	Select an items sub menus or confirm a setting or command
Ctrl + R	Refresh the current menu screen.
Ctrl +S or Ctrl +A	Switch between possible optional settings.
Ctrl +Q	Invokes the Help Menu.
Ctrl +Z	Go to the next Tab stop.
Ctrl +W	Go to the previous Tab stop.

*Table 5.1 Keyboard Commands*

---



# Configuring the System

To configure the system, first logon through a terminal program and enter the Username and Password. The default username is “planet” and the default password is “planet”. Press Enter to load the main menu.

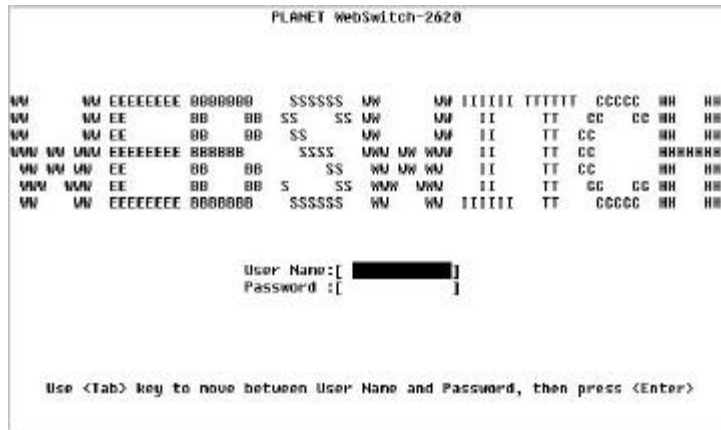


Figure 5.1 Logon Screen

---

**Note:** If the Switch is running before starting the terminal program press **Ctrl + R** to refresh the logon screen.

---

To navigate through the menu, use the keyboard Tab key to move the highlight to the next item or command. Press the keyboard Enter key to select the highlighted item. To view other command keys select the *Help* command.

## Main Menu

The main menu consists of five sub-menus, grouping different system configuration topics.

---

```

PLANET WebSwitch-2620
- Main Menu -

System Information
Management Setup
Device Control
User Authentication
System Utility

LOGOUT          HELP
Use <Tab> key to select the item, then press <Enter>

```

Figure 5.2 Main Menu

## System Information

The System Information Menu provides version identification of the systems built-in software, which may be useful in the-event of any future upgrades becoming available.

```

PLANET WebSwitch-2620
- System Information Menu -

System Description: PLANET WebSwitch-10/100Mbps Managed Switch

Product Version:          1
BOOT ROM Version:        1.01
System Software Version:  2.11
Web-Pages Version:       2.11

System Object ID: 1.3.6.1.4.1.2260.180.2.0
System Up Time: 3 day 1 hr 11 min 4 sec
System Contact: [REDACTED]
System Name: [PLANET WebSwitch-WSN-2620]
System Location: [REDACTED]
System Manager: [Web and SNMP]

MIBs Supported:
RFC1213, RFC1215, RFC1493, RFC1640, RFC1757 and proprietary MIB.

SAVE          EXIT          MAIN MENU      HELP

```

*Figure 5.3 System Information Menu*

The following information settings can be edited and saved to memory by users that logon with Read/Write privileges.

<b>System Information</b>	
System Contact	Up to 48 alpha numeric characters
System Name	Up to 48 alpha numeric characters
System Location	Up to 48 alpha numeric characters

*Table 5.2 System Information*

To save and write the system information to memory, select SAVE and press the Enter keyboard key. The new information is written to memory and permanently stored until it is edited or changed by users with Read/Write privileges.

## **Management Setup**

The Management Setup Menu has 5 sub-menus for Network configuration and for configuring the SNMP community and Trap community.

<b>Management Setup</b>	
Network Configuration	Set IP, Subnet Mask and Default Gateway address.
Management Port Configuration	View management port (RS-232) configuration.
SNMP Community Setup	Configure community names and access.
Trap Receiver	Configure addresses to which trap messages will be sent.
Management Capability Setup	Enable or Disable Web and Out-of-Band management.
Trap Filter Setup	Configure trap filters

*Table 5.3 Management Setup*

```

PLANET WebSwitch-2620
- Management Setup Menu -

Network Configuration
Management Port Configuration
SNMP Community Setup
Trap Receiver
Management Capability Setup
Trap Filter Setup

EXIT          MAIN MENU      HELP
Use <Tab> key to select the item, then press <Enter>

```

*Figure 5.4 Management Setup Menu*

## Network Configuration

The Network Configuration menu is used to configure the IP Address, Subnet Mask and Default Gateway.

```

PLANET WebSwitch-2620
- Network Configuration Menu -

Network Interface <1>
Interface Type: Ethernet
Management MAC Address : 00-E0-95-01-13-32
Switch MAC Address : 00-E0-95-01-13-33

Configuration:      Current      New
IP Address:         203.70.249.212  [203.70.249.212 ]
Subnet Mask:        255.255.255.0   [255.255.255.0 ]
Default Gateway:    203.70.249.254  [203.70.249.254 ]

SAVE          EXIT          MAIN MENU      HELP

```

*Figure 5.5 Network Configuration*

<b>Network Configuration</b>	
IP Address	Internet Protocol address, identifying the switch, consisting of four numbers from 0 to 255, separated by periods.
Subnet Mask	This number together with the IP address identifies the network your computer is On.
Default Gateway	A gateway is a connection or interchange point that connects two networks that would otherwise be incompatible. For example, a local area network (LAN) may need a gateway to connect it to a wide area network (WAN) or to the internet.

*Table 5.4 Network Configuration*

The MAC address of the switch is read only and cannot be re-configured.

### **Management Port Configuration**

The Management Port Configuration menu allows you to select Console or Out-of-Band management. The listed settings are required for the terminal connection that allows the Switch to communicate with a computer via the console port connected by an RS-232 cable to a computer's serial port.

---

```
PLANET WebSwitch-2628
- Management Port Configuration Menu -

Operation Mode: <CONSOLE > Mode

Baud Rate:      9600  Bps
Character Size: 8   Bits
Parity:         NO   Parity
Stop Bits:      1   Bits

*** Fixed configuration, can not be changed. ***

EXIT          MAIN MENU          HELP
```

*Figure 5.6 Management Port Configuration Menu*

## SNMP Community Setup

The SNMP (Simple Network Management Protocol) Community Setup is similar to setting up passwords and access rights for Console Management or Web-Based management. Up to six community names can be configured with access and status rights.

SNMP Community Setup	
Index	1~6
SNMP Community Name	A name of up to 16 characters.
Access Rights	Read/Write or Read Only
Status	Enabled or Disabled

*Table 5.5 SNMP Community Setup*

Figure 5.7 illustrates SNMP Community Setup Menu with the factory defaults.

```

      PLANET WebSwitch-2628
    - SNMP Community Setup Menu -

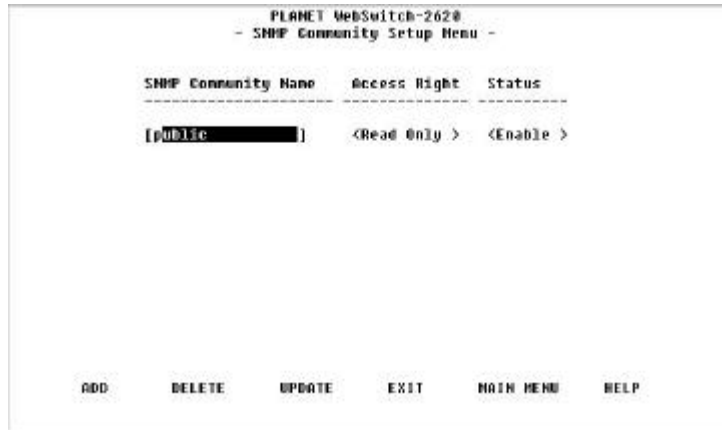
  Index  SNMP Community Name  Access Right  Status
  -----
  1      public                Read Only    Enable
  2      PLANET                 Read/Write   Enable
  3
  4
  5
  6

  EXIT          HATH MENU          HELP
  Use <Tab> or arrow keys to select entry; <Enter> to EDIT
  
```

*Figure 5.7 SNMP Community Setup Menu*

To add or edit an SNMP Community entry, highlight the desired index number and press Enter. This will bring you to the SNMP

Community Menu edit panel.



*Figure 5.8 SNMP Community Menu Edit Panel*

Enter the information as needed. Add the new name to the list by highlighting the ADD command and press the Enter keyboard key, highlight the UPDATE command. To return to the SNMP Community Menu, select Exit.

## Trap Receiver Menu

Trap messages will be sent to all entries that have an Active status. The trap receivers can be configured by entering their names, setting their IP address' and enabling their Status.



```

PLANET WebSwitch-2620
- Trap Receiver Menu -

-----
Index  Community Name      IP Address      Status
-----
1      PUBLIC                203.70.240.200  Inactive
2      0.0.0.0                0.0.0.0         Inactive
3      0.0.0.0                0.0.0.0         Inactive
4      0.0.0.0                0.0.0.0         Inactive
5      0.0.0.0                0.0.0.0         Inactive
6      0.0.0.0                0.0.0.0         Inactive

EXIT      MAIN MENU      HELP
Use <Tab> or arrow keys to select index; <Enter> to EDIT

```

Figure 5.9 Trap Receiver Menu

Trap Receiver Menu	
Index	1~6
Community Name	Name of a trap receiver.
IP Address	IP Address of the trap receiver.
Status	Inactive or Active

Table 5.6 Trap Receiver Menu Commands

To add a new name or edit an existing name to the Trap Manager Community names list, highlight an Index number and press Enter from the keyboard. The Trap Receiver Menu edit panel appears with the highlighted Index number available for adding or editing a name, IP address and status.

```
PLANET WebSwitch-2620
- Trap Receiver Menu -
```

Index	Community Name	IP Address	Status
1	[PUBLIC ]	[203.78.249.200 ]	<Inactive>

```
UPDATE          EXIT          MAIN MENU      HELP
```

*Figure 5.10 Trap Receiver Menu Edit Panel*

Type in a name, press the Tab key to move to the IP Address and enter a valid IP address number, press the Tab key to move to the Status field and set the status with the Ctrl + S command.

To save the information, highlight the UPDATE command and press the Enter key. Exit to return to the Trap Manager Community Setup Menu where the new entry will be visible. A valid IP Address must be entered and the Status set to active in order for packets to be sent to the trap managers listed.

## Management Capability Setup

The Management Capability Setup menu is used to enable or disable Web-Based management and Out-of-Band management.



*Figure 5.11 Management Capability Setup Menu*

Highlight and select Enabled to allow access via Web-Based management or Out-of-Band management. Select Disabled to block access via Web-Based management or Out-of-Band management. The Out-Of-Band Management Status line is for your information only; it cannot be changed.

## ***Trap Filter Setup***

The Trap Filter Setup Menu allows you to control which traps are sent.

---

```
PLANET WebSwitch-2628
- Trap Filter Setup Menu -

(x) Link Up Trap
(x) Link Down Trap
(x) SNMP Authentication Failure Trap
(x) New VLAN Created
(x) VLAN Deleted
(x) Bridge New Root Trap
(x) Bridge Topology Change Trap
(x) Broadcast Storm Alarm Trap
(x) Fan Failure Trap

*** Note ***
(x): the trap filter is turned-off and its associated trap is enabled.
( ): the trap filter is turned-on and its associated trap is disabled.

SAVE          EXIT          MAIN MENU      HELP
```

*Figure 5.12 Trap Filter Setup Menu*

To have a trap message sent when a trap event occurs, place an “X” before the function listed. To prevent a trap message from being sent when a trap event occurs, remove the “X” before the function listed. Select SAVE before exiting to save the new settings.

## ***Device Control***

The Device Control Menu is used to view and or configure the Switch, its ports and virtual LANs. The switch’s ports can be configured without regard to any actual link ups, managed slaves hubs by contrast must be linked before they can be configured.

```

PLANET WebSwitch-2628
- Device Control Menu -

Switch Control/Status
Switch Port Control/Status
Static Address Configuration
VLAN Control
Spanning Tree Protocol Group Control/Status
Spanning Tree Protocol Port Control/Status
Trunk Group Configuration

EXIT          MAIN MENU          HELP
Use <Tab> key to select the item, then press <Enter>

```

*Figure 5.13 Device Control Menu*

The following is a brief overview of the Device Controls sub-menus:

<b>Device Control</b>	
Switch Control/Status	Set the monitoring port.
Switch Port Control/Status	Name ports and set their status.
Static Address Configuration	Set the Mac Address for slaves.
VLAN Control	Assign the switch's 26 ports to virtual LANs.
Spanning Tree Protocol Group Configuration	Naming and configuring the virtual LANs.
Spanning Tree Protocol Port Configuration	Naming and configuring individual ports within the virtual LANs.
Trunk Group Configuration	Naming and configuring trunk groups

*Table 5.7 Device Control*

## Switch Control/Status

The switch Control/Status Menu displays the settings of the switch and allows the configuration of several settings.

```

PLANET NetSwitch-2620
- Switch Control/Status Menu -

Switch Board Version: 1
Max VLAN Groups: 31          Max Trunk Groups: 1
Learning Database Capacity: 2048 Nodes
Number of Addresses Used: 158
Address Aging Time: [300 ] Seconds
Static Unicast Address Capacity: 32
Number of Configured Static Unicast Address: 0
Registered Group Address Capacity: 32
Number of Configured Group Address: 0
Port Monitoring Function Status: <Disable>
Mirrored Port ID : [2 ]      Monitoring Port ID : [1 ]
Management VLAN ID: 1        Management Restart VLAN ID: [1 ]

[SAVE]      [EXIT]      [BACK MENU]      [HELP]

```

Figure 5.14 Switch Control/Status Menu

### Switch Control/Status Menu Settings

- **Dynamic Entry Aging Time** Set the amount of time a dynamically learned IP address will be kept before being removed from the table.
- **Port Mirror Function Status** Enable or disable the Port Mirror function. The Port Mirror function allows you to monitor a specific port's static MAC address frames. A network analyzer can be used to capture these frames for analysis.
- **Mirrored Port ID** Specifies the port to be monitored by the Port Mirror function.
- **Monitoring Port ID** Specifies the port to which the monitored static MAC address frames are sent to by the Port Mirror Function. This port cannot be a member of the "Trunk Group."

- **Management Restart VLAN ID** Specifies which VLAN the system Network Management Unit will join after the next switch restart.

---

**Note:** To save changes in this menu, select **SAVE** before exiting.

---

### Switch Port Control/Status

The switch Port Control/Status Menu is used to individually configure the Switch's ports.

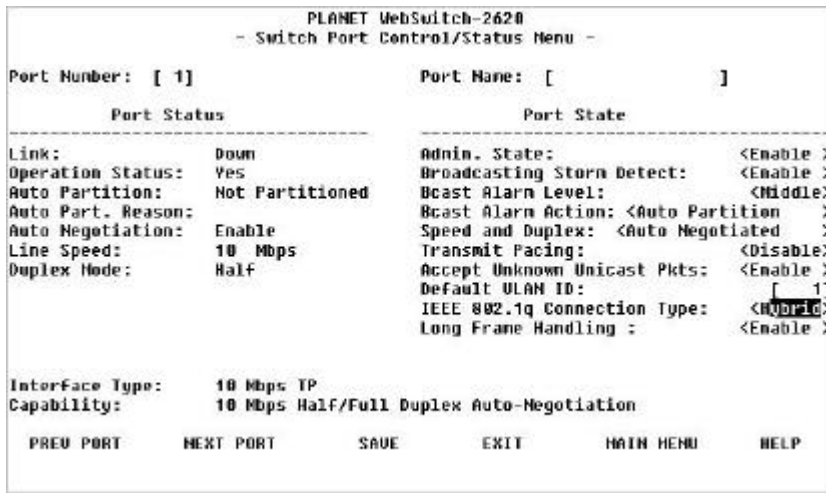


Figure 5.15 Switch Port Control/Status Menu

The current port settings are listed on the left, under the **Port Status** heading. The configurable settings are listed on the right, under the **Port State** heading.

---

**Note:** Once a port is configured, select **SAVE** and press **Enter** before configuring the next port.

---

### Switch Port Control/Status Menu Settings

---

- **Port Number** Specifies which port is displayed. You can enter a port number here and press the Enter key to select different ports.
- **Port Name** Specifies the name given to the port that is currently displayed. You can use up to sixteen characters to designate a port name.
- **Admin. State** Enables or disables the current port. If Disable is selected, the port will be partitioned and the amber frame enclosing the port number on the Mini-Console will become lit.
- **Broadcasting Storm Detect** Enables or disables the detection of a broadcast storm on the current port. If you disable this setting, the **Bcast Alarm Level** and **Bcast Alarm Action** options will also be disabled.
- **Bcast Alarm Level** Sets the broadcast storm alarm threshold. The settings are High (30%), Middle (20%) and Low (10%). The threshold percentage is calculated as:

$(\text{broadcast packets}/\text{total packets}) * (\text{utilization})$

- **Bcast Alarm Action** Specify the action taken in the event of a broadcast storm alarm. The settings are:
    - **Trap-Autopartition** Sends a trap message to the trap receivers and partitions the port. When the broadcast storm falls below the alarm level, the port is automatically enabled.
    - **Send Trap** Sends a trap message to the trap receivers. The port is not partitioned.
    - **No Action** No action is taken.
    - **Auto Partition** Partitions the port. When the broadcast storm falls below the alarm level, the port is automatically enabled.
  - **Speed and Duplex** Specify the speed and mode of the port. The settings are: Auto-Negotiated, 10Mbps Half Duplex, 10Mbps Full Duplex, 100Mbps Half Duplex, and 100Mbps Full Duplex.
  - **Transmit Pacing** Enables or disables the insertion of an extra amount of delay between transmission attempts under
-



conditions of high network traffic. Transmit pacing reduces the switch's CPU utilization, reduces the number of retransmissions and reduces collision rates, which improves the switches overall performance under high traffic conditions.

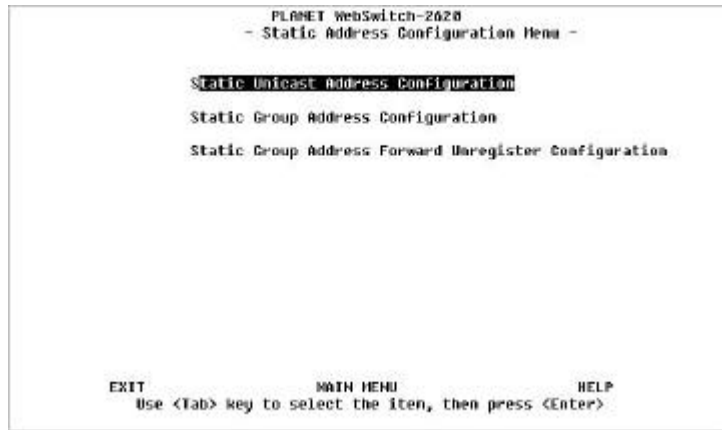
- **Accept Unknown Unicast Pkts** Enables or disables the acceptance of unknown unicast packets. If enabled, the unknown unicast packets are sent to the device connected to the port, if disabled, they are not sent.
- **Default VLAN ID** Specifies the default VLAN ID. The range can be from 1 to 4094. In the IEEE 802.1q standard, this is the PVID.
- **IEEE 802.1q Connection Type** Specifies the IEEE 802.1q connection type. The settings are:
  - **Access** Configures the port as an access link. An access link is a LAN segment that allows the multiplexing of one or more VLAN unaware devices into a port of a VLAN bridge.
  - **Hybrid** Configures the port as a hybrid link. A hybrid link allows VLAN unaware end stations to be added to a trunk link.
- **Long Frame Handling** Enables or disables long frames to pass through the switch. Priority, VLAN, or tagged frames may require long frame handling. If this function is not enabled, long frames will be considered oversized and discarded. When enabled, the long packets will be included in the 1024-1518 octets packet size statistic.

---

**Note: Once a port is configured, select SAVE and press Enter before configuring the next port.**

---

## Static Address Configuration



*Figure 5.16 Static Address Configuration Menu*

The Static Address Configuration Menu offers the following options:

- **Static Unicast Address Configuration** Assign static MAC addresses to individual ports.
- **Static Group Address Configuration** Assign group addresses to sets of ports.
- **Static Group Address Forward Unregister Configuration** Specify which ports are to be forwarded for the unregistered static group address.

### *Static Unicast Address Configuration Menu*



```
PLANET NetSwitch-2020
- Static Unicast Address Configuration Menu -
-----
MAC Address      VLAN ID      Port ID      Admin Status  Operation Status
-----
[REDACTED]

PREVIOUS PAGE    NEXT PAGE    EXIT    MAIN MENU    HELP
Use <Tab> or arrow keys to select MAC address; <Enter> to EDIT
```

*Figure 5.17 Static Unicast Address Configuration Menu*

---

**Note:** The MAC addresses must be specified in canonical (LSB) format.

---

Up to 16 static MAC addresses can be assigned in this menu. Once a MAC address is assigned to a port and the status is Active, the device associated with the MAC address can then only be connected to the assigned port. If the device is connected to a port other than the assigned port, a violation occurs and the packets are not sent.

When a MAC address is assigned to a port and its Admin Status is set to Yes, copies of all frames sent to that MAC address will be sent to the monitor port. When Monitored is set to “No”, no copies of the packets are sent to the Monitor port.

---

**Note:** In order to capture the copies of the frames, you must have a network analyzer connected to the monitor port.

---

Follow these steps to add or edit a static MAC address:

1. Use the Tab key to select a MAC address. If there are no MAC addresses assigned, use the Tab key to highlight a space under the Mac Address column.
2. Press Enter to edit.
3. Configure the MAC address, VLAN ID, Port ID and Admin Status columns.
4. Select UPDATE.
5. Select EXIT.
6. Repeat steps 1 through 5 for each MAC address.

---

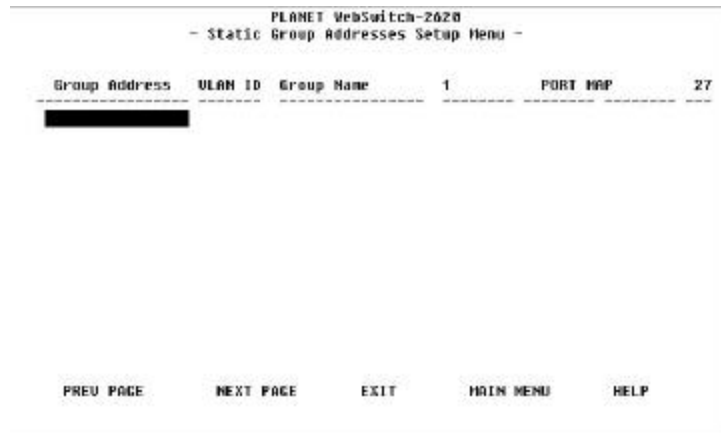
**Note: There are 2 pages of MAC addresses. At least one MAC address must be entered in the first page before the second page can be entered. Use the Next Page command to enter the second page.**

---

Follow these steps to delete a MAC address:

1. Select the MAC address you want to delete.
  2. Press Enter.
  3. Select DELETE.
  4. Press Enter.
  5. Select EXIT.
-

### *Static Group Address Configuration*



```

PLANET WebSwitch-2020
- Static Group Addresses Setup Menu -

Group Address  VLAN ID  Group Name      1      PORT MAP      27
-----
[REDACTED]

PREV PAGE      NEXT PAGE      EXIT      MAIN MENU      HELP

```

*Figure 5.18 Static Group Addresses Setup Menu*

This menu allows you to assign a single MAC address and VLAN ID to a group of ports. This creates what is called a static group.

The following is a description of the setting columns:

- **Group Address** The MAC address of the specified group.
- **VLAN ID** The VLAN ID of the specified group. The VLAN ID range can be from 1 to 4094.
- **Group Name** The name of the specified group.
- **PORT MAP** Indicates the ports that are members of the specified group.

Follow these steps to configure the static group settings:

1. Use the Tab key to select a MAC address. If there are no MAC addresses assigned, use the Tab key to highlight a space under the Group Address column.
2. Press Enter to edit.

3. Configure the Group Address (the specified group's MAC address), VLAN ID, Group Name and Admin Status.
4. Select UPDATE.
5. Select EXIT.
6. Tab to highlight the group's Port Map area. Press Enter.
7. Place an X beside the ports that you want to add. Ports with no X will not be members of the group.
8. Select SAVE.
9. Select EXIT.
10. Repeat steps 1 through 5 for each group address.

Follow these steps to delete a group address:

1. Select the group address you want to delete.
  2. Press Enter.
  3. Select DELETE.
  4. Press Enter.
  5. Select EXIT.
-

### *Static Group Address Forward Unregister Configuration*

```

                                PLANET WebSwitch-2628
                                - Static Group Addresses Forward Unregistered Menu -

Port 1 : (x)      Port 2 : (x)      Port 3 : (x)
Port 4 : (x)      Port 5 : (x)      Port 6 : (x)
Port 7 : (x)      Port 8 : (x)      Port 9 : (x)
Port 10: (x)     Port 11: (x)     Port 12: (x)
Port 13: (x)     Port 14: (x)     Port 15: (x)
Port 16: (x)     Port 17: (x)     Port 18: (x)
Port 19: (x)     Port 20: (x)     Port 21: (x)
Port 22: (x)     Port 23: (x)     Port 24: (x)
Port 25: (x)     Port 26: (x)     Port 27: (x)

SAVE             EXIT             MAIN MENU      HELP
```

*Figure 5.19 Static Group Addresses Forward Unregistered Menu*

This menu allows you to select ports that will receive packets that have group addresses that are not defined and registered within the system. A port number with an X will receive these packets. If you remove the X, the port will not receive these packets.

## VLAN Control



*Figure 5.20 Switch VLAN Control Menu*

The VLAN Control Menu offers the following options:

- **VLAN Configuration** Configure up to 31 VLANs.
- **GVRP Configuration** Configure the GVRP function.
- **GVRP Port Configuration** Enable or disable the GVRP function for each port.



### VLAN Configuration Menu

PLANET WebSwitch-2620					
- VLAN Configuration Menu -					
VLAN ID	VLAN NAME	Attribute	1	Port Map	27
1	Group 1	Static	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX
2	Group 2	Static	XXXX	_____	_____

PREV PAGE      NEXT PAGE      EXIT      MAIN MENU      HELP

Figure 5.21 VLAN Configuration Menu

This menu allows you to configure up to 31 VLANs.

A VLAN shares packets only with the ports assigned to the given VLAN. This allows the user to create virtual workgroups within one WSW-2620 switch. For example, if you want to keep the information in the Accounting and Sales departments separate, you can assign only Accounting staff ports to the Accounting VLAN, and only the Sales staff ports to the Sales VLAN.

The VLANs created in this manner are called 'static' VLANs because membership must be reconfigured each time a change is desired. If a VLAN is created by GVRP, it is called 'dynamic' because the switch can allow a temporary membership to a VLAN automatically.

---

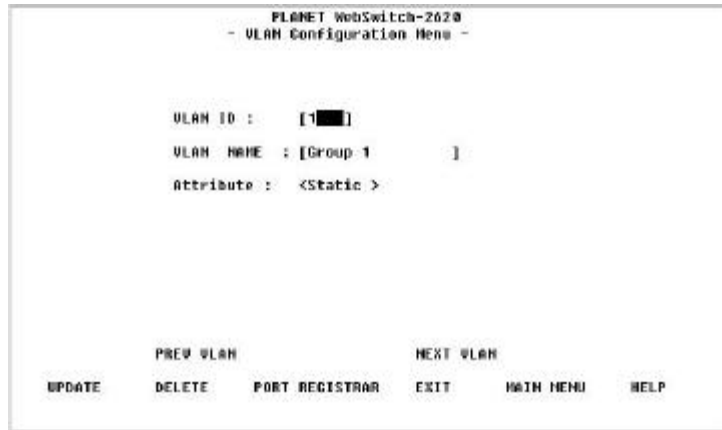
**Note: All management connections requiring a switch port connection must be in VLAN 1.**

---

Follow these steps to configure VLAN settings:

---

1. Use the Tab key to select a VLAN ID. If there are no VLAN IDs assigned, use the Tab key to highlight a space under the VLAN ID column.
2. Press Enter to edit. You will see this screen:



*Figure 5.22 VLAN Configuration Menu*

3. Configure VLAN ID, VLAN NAME and Attribute.
4. Tab to select PORT REGISTRAR. Press Enter. You will see this screen:

```

PLANET WebSwitch-2628
- VLAN Port Registrar Administrative Control Menu -

VLAN ID : 1          VLAN NAME : Group 1

Port 1 : (F)        Port 2 : (F)        Port 3 : (F)
Port 4 : (F)        Port 5 : (F)        Port 6 : (F)
Port 7 : (F)        Port 8 : (F)        Port 9 : (F)
Port 10 : (F)       Port 11 : (F)       Port 12 : (F)
Port 13 : (F)       Port 14 : (F)       Port 15 : (F)
Port 16 : (F)       Port 17 : (F)       Port 18 : (F)
Port 19 : (F)       Port 20 : (F)       Port 21 : (F)
Port 22 : (F)       Port 23 : (F)       Port 24 : (F)
Port 25 : (F)       Port 26 : (F)       Port 27 : (F)

          N: Normal   F: Fixed   B: Forbidden

SAVE          EXIT          NATH MENU    HELP

```

Figure 5.23 VLAN Port Registrar Administrative Control Menu

---

**Note:** You can access this screen directly from the VLAN Configuration Menu by highlighting the Port Map for the given VLAN and pressing Enter.

---

5. Tab to highlight individual port numbers. Select N, F or B for each port. The settings are defined as:
  - **Fixed** Creates a static VLAN membership.
  - **Normal** The specified port becomes a member of the VLAN only if it is dynamically assigned by the GVRP function.
  - **Forbidden** The specified port is not allowed to join the current VLAN, even if the GVRP function requests it to join.
6. Select SAVE.
7. Select EXIT.
8. Repeat steps 1 through 5 for each group address.

Follow these steps to delete a group address:

1. Select the VLAN that you want to delete.
-

2. Press Enter.
3. In the VLAN Configuration Menu, select DELETE.
4. Press Enter.
5. Select EXIT.

### ***GVRP Configuration***

```
PLANET WebSwitch-2620
- GVRP Configuration Menu -

GVRP :      <Enable >
Join Time :  [20 ] Centi-Second
Leave Time  :  [60 ] Centi-Second
Leave All Time : [1000] Centi-Second

SAVE      EXIT      MAIN MENU      HELP
```

*Figure 5.24 GVRP Configuration Menu*

The GARP VLAN Registration Protocol (GVRP) provides a mechanism for the dynamic maintenance of the contents of Dynamic VLAN Registration Entries for each VLAN. The GVRP function also propagates information for each VLAN to other bridges.

This information allows GVRP-aware devices to dynamically establish and update their knowledge of the set of VLANs that currently have members, and through which ports those members are reached.

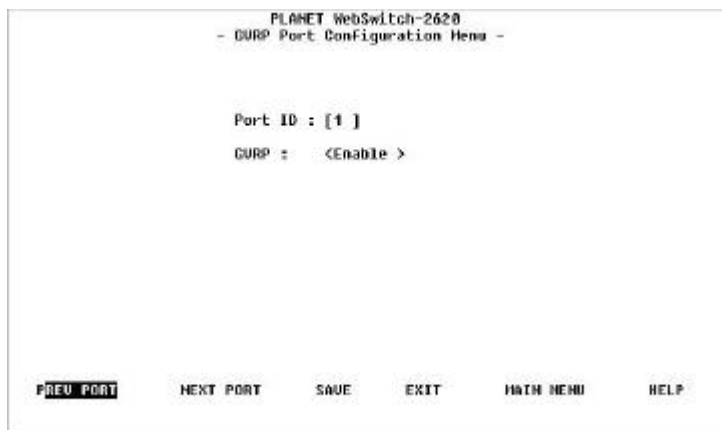
The GVRP function can be enabled or disabled per switch and per port basis. The dynamic registration and de-registration feature will not be available once the GVRP function is disabled.

This menu allows you to enable or disable GVRP and set the join and leave times.

The settings are defined as:

- **Join Time** The range can be between 10 and 200 centi-seconds.
  - **Leave Time** The range can be between 30 and 600 centi-seconds.
  - **Leave All Time** The range can be between 200 and 6000 centi-seconds.
-

### *GVRP Port Configuration*



*Figure 5.25 GVRP Port Configuration Menu*

This menu allows you to enable or disable GVRP for each port.

To enable or disable GVRP for a port, enter the port number in the Port ID field and press Enter. Tab to GVRP and make selection. You must highlight SAVE and press Enter after each change.

## Spanning Tree Protocol Group Configuration

```

PLANET WebSwitch-2620
- Spanning Tree Protocol Group Control/Status Menu -

STP Specification:                IEEE 802.1D
STP Base MAC Address:             00-E0-95-01-13-02
STP Topology Change Count:       1
STP Time Since Topology Changed:  3 day 2 hr 7 min 20 sec
STP Designated Root:             0000:00E0:9501:1302
STP Root Port:                   0
STP Root Cost:                   0
STP Max. Age:                    2000 (1/100 seconds)
STP Hello Time:                  200 (1/100 seconds)
STP Forward Delay:              1500 (1/100 seconds)
STP Hold Time:                  100 (1/100 seconds)
Group STP Operation Mode:        <Enable>
STP Bridge Priority:              [32768] (0..65535)
STP Bridge Max. Age:             [20] (6..40)seconds
STP Bridge Hello Time:           [ 2] (1..10)seconds
STP Bridge Forward Delay:        [15] (4..30)seconds
Role of STP Bridge:              Root Bridge

SAVE          EXIT          MAIN MENU      HELP

```

Figure 5.26 Spanning Tree Protocol Control/Status Menu

This menu allows you to monitor and configure the switch's STP system. The switch uses one STP system with a single MAC address.

The settings are defined as:

- **STP Specification** Read only. States the IEEE STP specification used.
- **STP Base MAC Address** Read only. States the MAC address used by STP to identify the switch.
- **STP Topology Change Count** Read only. States the number of changes in the network topology since the last switch reset or initialization.
- **STP Time Since Topology Changed** Read only. States the time elapsed since the last network topology change.
- **STP Designated Root** Read only. States the root bridge's bridge identifier.
- **STP Root Port** Read only. States the switch's root port.

- **STP Root Cost** Read only. States the switch to root bridge path cost.
  - **STP Max. Age** The maximum age of STP information learned from the network on any port before it is discarded.
  - **STP Hello Time** The amount of time between the transmission of PDUs by this node on any port when it is the root of the spanning tree or trying to become so.
  - **STP Forward Delay** This time value controls how much time is used when a port changes its spanning state while moving towards the forwarding state. Before preceding to the forwarding state, this value determines how long the port stays in both the listening and learning states. This value is also used to age all dynamic entries in the forwarding database when a topology change has been detected and is underway.
  - **STP Hold Time** Read only. States the amount of time during which no more than 2 BPDUs may be transmitted.
  - **Group STP Operation Mode** Enable or disable the STP function.
  - **STP Bridge Priority** Specifies the priority of the switch. A low priority (smaller number value) increases the likelihood that the switch will become the STP root bridge. A high priority (larger number value) decreases the likelihood that the switch will become the STP root bridge.
  - **STP Bridge Max. Age** Specifies, in seconds, the amount of time that all bridges in the spanning tree will use for max. age when this bridge is acting as the root for the spanning tree. The setting range is between 6 and 40 seconds.
  - **STP Bridge Hello Time** Specifies, in seconds, the amount of time that all bridges in the spanning tree will use for hello time when this bridge is acting as the root for the spanning tree. The setting range is between 1 and 10 seconds.
  - **STP Bridge Forward Delay** Specifies, in seconds, the amount of time that all bridges in the spanning tree will use for forward delay when this bridge is acting as the root for the spanning tree. The setting range is between 4 and 30 seconds.
-



- **Role of STP Bridge** Read only. States whether or not the STP bridge is acting as the root bridge.

## Spanning Tree Protocol Port Configuration

```

PLANET WebSwitch-2628
- Spanning Tree Protocol Port Control/Status Menu -
Port ID: [ 0 ]
-----
STP Port ID: 01:01
STP Port Designated Root: 8000:00E095011332
STP Port Designated Cost: 0
STP Port Designated Bridge: 8000:00E095011332
STP Port Designated Port: 01:01
STP Port Forward Transitions Count: 0
STP Port State: Disable
Role of STP Port: Disconnected Port

STP Port Enable Status: <Enable >
Port Join STP: <Enable >
STP Port Priority: [129](0..255)
STP Port Path Cost: [ 100](1..65535)

PREV PORT  NEXT PORT  SAVE  EXIT  MAIN MENU  HELP

```

Figure 5.27 Spanning Tree Protocol Port Control/Status Menu

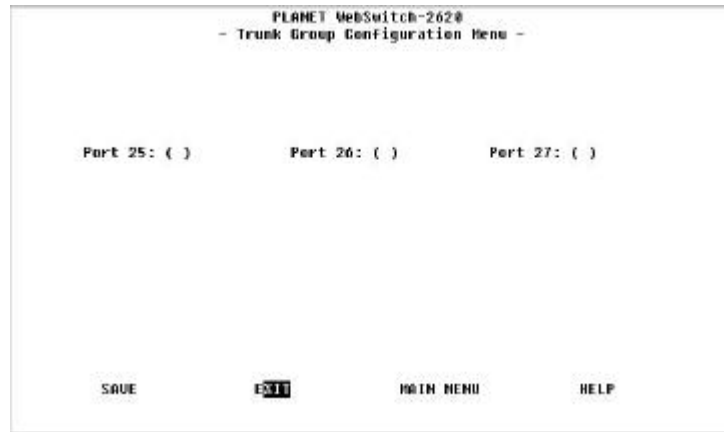
This menu allows you to monitor and configure the STP settings for each of the switch's ports.

The settings are defined as:

- **Port ID** Read only. States which port the settings are for. Scroll through the ports by selecting **PREV PORT** or **NEXT PORT**.
- **STP Port ID** Read only. States the designated bridge port ID for the current port's VLAN.
- **STP Port Designated Root** Read only. States the bridge identifier of the root bridge.
- **STP Port Designated Cost** Read only. States the path cost of the designated port of the segment connected to the given port.

- **STP Port Designated Bridge** Read only. States the current port's designated bridge's bridge identifier.
  - **STP Port Designated Port** Read only. States the ID of the designated bridge port for the current port's segment.
  - **STP Port Forward Transitions Count** Read only. States how many times the current port has switched between learning and forwarding modes.
  - **STP Port State** Read only. State whether the port is enabled or disabled.
  - **Role of STP Port** Read only. States the current status of the given port.
  - **STP Port Enable Status** Enable or disable the current STP port.
  - **Port Join STP** Enable or disable joining of STP. Selecting enable allows the port to join STP.
  - **STP Port Priority** Specify the priority of the port. A low priority (smaller number value) increases the likelihood that the port will become the STP root port. A high priority (larger number value) decreases the likelihood that the port will become the STP root port.
  - **STP Port Path Cost** Specify the path cost of the port toward the spanning tree root.
-

## Trunk Group Configuration



*Figure 5.28 Trunk Group Configuration Menu*

This menu allows you to monitor and configure the switch's Trunk Groups. Choose a trunk group ID and name and select the ports to be included in the group.

The switch provides a Port Trunking algorithm that supports two or more 100 Mbps ports to be connected in parallel between switches, which increases the overall bandwidth between the devices. Each trunk group uses a single STP port instance (STP port 28). However, the port control state is separate.

## User Authentication

Up to 6 User Authentication configuration can be set up. The User Name of up to 12 characters can be entered after selecting an index number and pressing Enter.

---

```
PLANET WebSwitch-2620
- User Authentication Menu -
```

Index	User Name	Password	Privilege
1	PLANET	*****	Read/Write
2	GUEST	*****	Read Only
3			
4			
5			
6			

```
Control Panel Password: ****
```

```
EXIT          MAIN MENU          HELP
Use <Tab> or arrow keys to select index; <Enter> to EDIT
```

*Figure 5.29 User Authentication Menu*

A User Name of up to 12 characters and Password of up to 6 characters can be entered, and its Read/Write privilege can be set in this menu. Use the ADD command to add a name to memory. A User Name and Password can also be deleted using the DELETE command. Select the EXIT command to return to the previous screen and view the results.

## System Utility

```

PLANET WebSwitch-2628
- System Utility Menu -

System Download
System Restart
Factory Reset
Download Port Setting
Login Timeout Interval
Configuration Upload Setting
Configuration Upload Request/Status
Ping to Another Host

EXIT          BATH MENU          HELP
Use <Tab> key to select the item, then press <Enter>

```

Figure 5.30 System Utility Menu

Summary of the System Utility Menu items:

System Utility	
System Download	Configure type of download
System Restart	Restart the Switch
Factory Reset	Reset to factory configuration
Download Port Setting	Set the port that will receive the download
Login Timeout Interval	Specify the period of inactivity time required before an automatic telnet logout
Configuration Upload Setting	Configure software upload to server setting
Configuration Upload Request/Status	Specify software upload request and view upload status
Ping to Another Host	Ping to another host.

## System Download

```

                                PLANET WebSwitch-2620
                                - System Download Menu -

(*) BootP Request
File Download Request:
  TFTP Server IP Address:   [0.0.0.0   ]

  ( ) Boot ROM Code Download
    File Name: [                               ]

  ( ) Configuration File Download
    File Name: [                               ]

  ( ) Web-Pages Database Information Download
    File Name: [                               ]

  ( ) System Software Download
    File Name: [                               ]

SAVE          EXIT          MAIN MENU        HELP

```

*Figure 5.31 System Download Menu*

The System Download Menu is used to configure the setting to download new system software.

### *System Download Notes*

The system software can be downloaded from a remote computer that is TFTP server enabled and connected to the network.

If your network has a properly configured Bootp server, select Bootp Request.

If your network does not have a properly configured Bootp server, do not select Bootp Request. In this case, you can select Boot ROM Code Download to download boot ROM code from the software.

To execute a download, you must enter the IP address of a remote computer that is TFTP server enabled in the TFTP Server IP Address field.

---

**Note: Before executing a system software download, be sure that the TFTP server on the remote computer is enabled.**

---

### *Executing a System Download*

Follow these steps to perform a system software download:

1. Copy the switch software files to a computer's C drive. Be sure that the computer you are using is connected to the switch and that the TFTP server is enabled.
  2. In the System Download Menu, if you want to use your network's Bootp server, select the Bootp Request option by typing Ctrl+S to place and X in the Bootp Request check box. If you do not want to use your network's Bootp server, or if your network does not have an enabled Bootp server, be sure that the Bootp Request option is not selected.
  3. Tab to the TFTP Server IP Address field. In this field, enter the IP address of the computer that contains the software files.
  4. Tab to highlight the Boot ROM Code Download check box. If you want to download new Boot ROM code, type Ctrl+S to place and X in the check box. Tab to File Name and enter the complete file path and name.
  5. Tab to highlight the Web-Pages Database Information Download check box. Type Ctrl+S to place and X in the check box. Tab to File Name and enter the complete file path and name.
  6. Tab to highlight the System Software Download check box. Type Ctrl+S to place and X in the check box. Tab to File Name and enter the complete file path and name.
  7. Tab to SAVE and press Return. Tab to EXIT and press Return.
  8. In the System Utility Menu, select Download Port Setting and press Return.
-

9. In the Switch Port Used to Communicate with TFTP Server field, enter the switch port number that your TFTP server enabled computer is connected to.

---

**Note: The switch port used to communicate with the TFTP server enabled computer must be in VLAN #1.**

---

10. Tab to SAVE and press Return. Tab to EXIT and press Return.
11. In the System Utility Menu, select System Restart and press Return.
12. Select Cold Restart then select Execute. Press Return. Press Return again to execute the cold restart. The switch will now execute the software download. This process will take several minutes. Do not attempt to issue any commands until the Login screen appears.

---

**Note: If the Login Screen text is unusual after a software download, simply disconnect and reconnect your terminal emulation program.**

---

13. At this point, you should conduct a ping from the terminal you are using to ensure that the new software is configured properly.

---

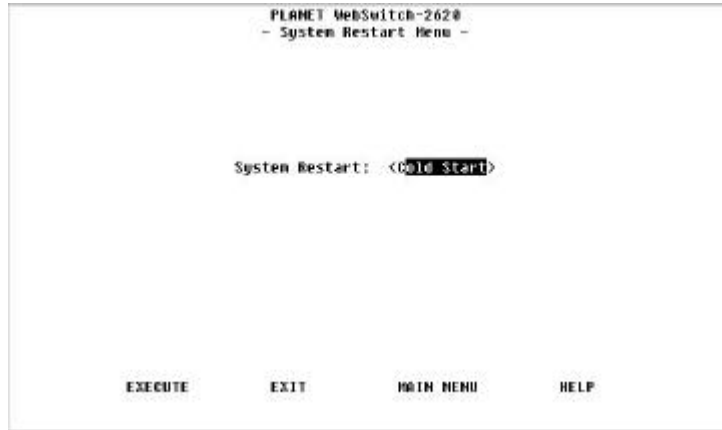
**Note: If the ping is timed out, simply plug your Ethernet connection into a different port and conduct another ping.**

---

14. Your new software is now installed and functioning properly.
-



## System Restart



*Figure 5.32 System Restart Menu*

The system can be restarted “Warm” or “Cold”. A Cold restart starts the system’s Boot ROM (required in the case of a system download) and a Warm restart starts the system directly from the Run Time. (Used after making configuration settings)

## Factory Reset

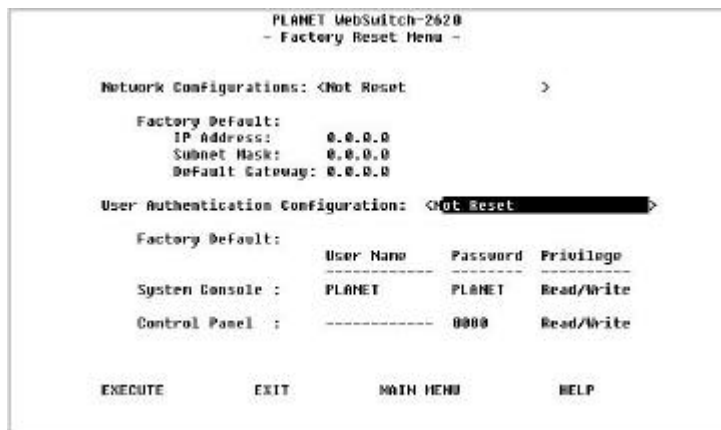


Figure 5.33 Factory Reset Menu

Network Configuration and User Authentication Configurations can both be reset according to the option selected for each. (Ctrl +S to alternate options)

### Network Configuration Options

Network Configuration Options	
Not Reset	The system will not reset
Reset from Bootp	The IP Address, Subnet Mask and Default Gateway will be reset.
Reset from Factory Default	The system will load the factory defaults from flash memory.

Table 5.8 Network Configuration

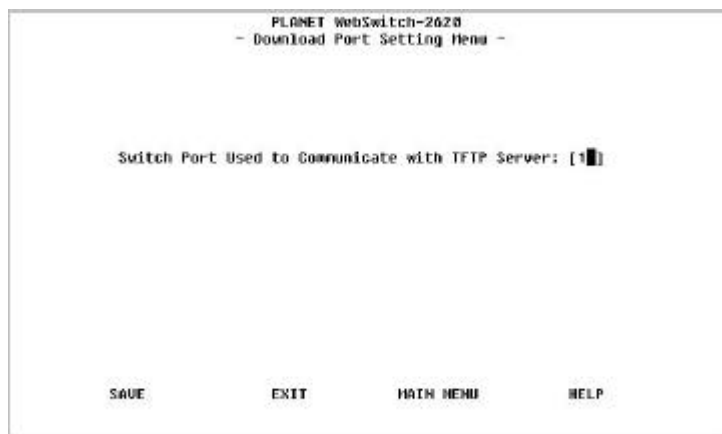
### *User Authentication Configuration Options*

<b>User Authentication Configuration Options</b>	
Not Reset	The system will not reset.
Reset from Factory Default	Reset to the factory defaults.
User Name	A name users logon with
Password	Password used with User Name
Privilege	Read/Write or Read Only
Device Panel	Set the password number used with the VFD Console

*Table 5.9 User Authentication Configuration*

Press the tab key to highlight Network Configuration or User Authentication Configuration and Ctrl +S to cycle through the available settings of each item.

### **Download Port Setting**

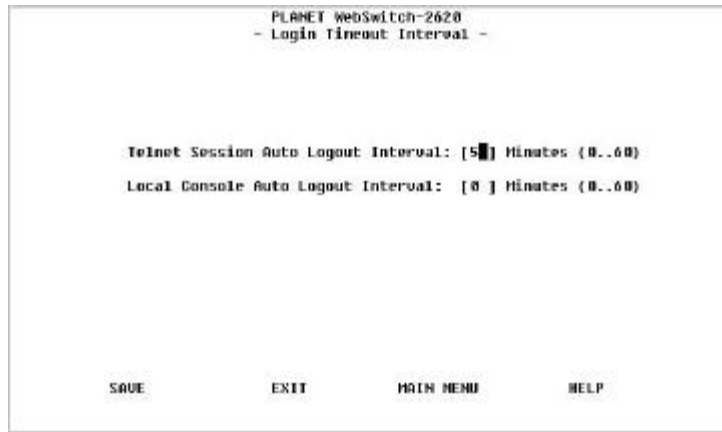


*Figure 5.34 Download Port Setting Menu*

Before System Download can download file or send Bootp requests, the port that will be used to receive the download must be selected. Enter the port number (1 through 27) in the field provided.

For Factory Default Downloads, the port need not be set.

## Login Timeout Interval



*Figure 5.35 Login Timeout Interval Menu*

This menu allows you to select the amount of time an established Telnet session is inactive before it is automatically logged out. The selectable range is from 0 to 60 minutes. If you specify 0, will not automatically log out.

## Configuration Upload Setting

```
PLANET WebSwitch-2620
- Configuration Upload Setting Menu -

TFTP Server IP Address : [0.0.0.0]
Configuration File Name : [ ]

SAVE      EXIT      MAIN MENU  HELP
```

*Figure 5.36 Configuration Upload Setting Menu*

This menu allows you to specify the TFTP server IP address and file name under which the configuration data will be stored. Remember to select SAVE before exiting.

## Configuration Upload Request/Status

```
PLANET WebSwitch-2628
- Configuration Upload Request/Status Menu -

TFTP Server IP Address : 0.0.0.0
Configuration File Name :
Current State           : Completed
Time Elapsed           : 0 Seconds
Upload Status          : No-Error

████████████████████████████████████████████████████████████████████████████████
                                0 %

SUBMIT      ABORT      EXIT      MAIN MENU      HELP
```

*Figure 5.37 Configuration Upload Request/Status Menu*

This menu allows you to execute the configuration file upload. It also shows the real-time status of the upload. Select SUBMIT to start the TFTP upload operation.

This menu includes the following information:

- **Current State** State whether the current upload is in progress, completed, waiting or aborted.
- **Time Elapsed** States the time remaining to complete the upload.
- **Upload Status** Once the upload is completed, this information states whether the upload experienced no errors, no such file found, access violation, a full disk, or was timed out.

## Ping To Another Host



*Figure 5.38 Ping Another Host Request Menu*

This menu allows you to execute a ping to another host.

## Appendix A

# Product Specifications

**Standards Compliance**

IEEE 802.3 10BASE-T Ethernet

IEEE 802.3u 100BASE-TX Fast Ethernet

**Number of Ports**

24 10BASE-T (RJ-45) ports

1 10/100BASE-TX auto-sensing (RJ-45) port

1 MDI-II Uplink port (RJ-45) shared with port 1

1 expansion slot with 10/100BASE-TX module

1 expansion slot for flexible module connection of 100BASE-FX or 100BASE-TX

1 RS-232-C Console port

**Smart Mini Console Operation**

Device configuration, device/port management, and network statistics monitoring

Traffic utilization and collision status for all the ports

Status and statistics monitoring for all the ports

Port configuration

Three console keys on the front panel to perform all the Mini-Console functions

VFD (Vacuum Fluorescent Display) panel providing text & graphic information

IP addresses setting and display

**Switch Parameters**

RAM: 8MB

Per port buffer memory: Dynamic allocation

Packet filtering/forwarding rate:

100M port – 148,800 pps

10M port – 14,880 pps

MAC address learning capability: up to 2K



**Switch Features**

Broadcast storm protection

Supporting static multicast filtering

Supporting up to 31 tagged VLAN groups per port and 1 untagged VLAN group per port

Supporting IEEE 802.1Q GVRP for automatic VLAN learning and configuration distribution

Fan fail detection

**Trucking Capability**

Providing proprietary port trucking (multiple parallel active link) capability in 100Mbps ports to enhance bandwidth. Two or three 100Mbps ports can be assigned as a trucking port via Web-Based/SNMP Management

**Expansion Slots**

1 slot for 10/100BASE-TX

1 slot for either 10/100BASE-TX or 100BASE-FX module

**Optional Modules**

100BASE-TX transceiver module with 2 RJ-45 connectors (MDI-X and MDI-II [Cat. 5 UTP])

100BASE-FX transceiver module with one SC connector (62.5/125 U fiber)

**Web-Based Management**

Management from anywhere and any platform, using a web browser

Complete web server embedded in device

Integrated HTML forms and Java™

Standard web server security for total network protection

Photographic-quality views to configure/monitor the device

**SNMP Network Management**

Supporting standard SNMP, MIB II, Repeater MIBs, Bridge MIB, and proprietary MIBs

Supporting RMON Groups 1, 2, 3, and 9

BOOTP server and TFTP software download supported

Supporting standard IEEE 802.1Q VLAN

Supporting standard IEEE 802.1D spanning tree protocol

Console management via EIA-232 (DB-9) port using a VT-100 terminal

Device Managers for standard platforms such as HP OpenView

**Power Requirement**

100-240 VAC, 50/60 Hz

Internal universal power supply

**Environment**

Operating Temperature: 0°C to 50° C

Storage Temperature: -30° C to 60° C

Operating Humidity: 5% to 95% non-condensing

**Safety Regulations**

CUL (UL & CSA)

LVD

---

**EMI Certifications**

CE Mark

FCC Class-A

VCCI Class A

**Dimensions**

W x D x H: 440 x 221 x 56.5 mm

**Weight**

3.0 kg

**Mounting**

Standard EIA 19" rack mount

---