

CONFIGURATION VIA TERMINAL Commands

You can use terminal emulation on your PC/workstation for the initial and future configuration of your product. If you prefer, a telnet session can be opened directly. Telnet provides the same type of terminal emulation. For security purposes, the product uses port **333** for telnet. All of the following Terminal Mode Configuration menus are identical in the telnet session, with the exception that any saved changes that result in the product rebooting, will require user to open a new telnet session to reestablish a connection with the product. For more information on telnet configuration, please see “How to Start Telnet” section below

How to start Telnet

1. The instructions below are for using this unit with its default settings (i.e. DHCP enabled, Local Port IP address: 192.168.1.254, SubnetMask: 255.255.255.0).
2. Go to **Start→Run**.

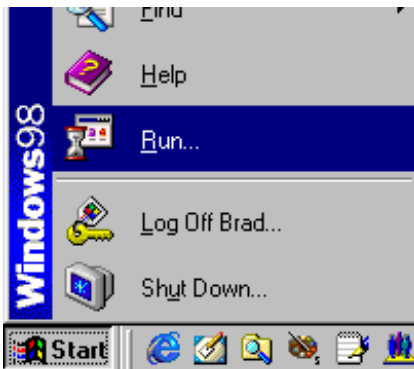


Figure 16

3. Type “**telnet 192.168.1.254 333**” and click on **OK**. If the local port’s IP address was set to something other than the factory default (“192.168.1.254”), enter that IP address.

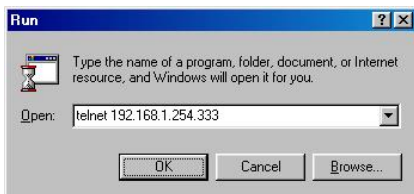


Figure 17

Starting the Configuration

1. Once the connection is made successfully via Telnet, the following information will appear,

Dual Ethernet IP Share for Cable/xDSL Modem, version X.XX

Administrator password:

2. No password is required the first time you log in. Press <**ENTER**> to enter Configure mode. The screen prompts you for the following command.

command>

3. Type **?** and hit “Enter” for a list of the commands.

Refer to the next section “**Terminal Commands**” for detail description of terminal commands.

TERMINAL COMMAND

Type **?** or **help** and hit “Enter” to list the main menu commands as below.

command>help

Dual Ethernet IP Share for Cable/xDSL Modem, version X.XX

=====

Command	Description

help	Show this message
session	List active internet sessions
show	Display active configuration
user	List active local IP address leases
filter	Set packet filters
passwd	Change administrator's password
ping <x.x.x.x>	Ping the specified host
tracert <x.x.x.x>	Trace the specified host
release	Abandon the dynamic Global port configuration
renew	Refresh the dynamic Global port configuration
set	Configure device in batch
connect	Make PPPoE connection
disconnect	Break PPPoE connection
status	Show PPPoE connection status
vserv	Publish internal server for access from internet
route	Set static routing table
wantel	Enable/Disable wan port telnet
upgrade	Upgrade firmware
quit	Exit to login prompt
reboot	Restart device

=====

session

List active Internet sessions through this device.

Example:

```
command>session
```

		IP	Port	Port	IP	Port		
T/U	Flag	client	client	fake	remote	remote	idle	AP Type
tcp	37	192.168.10.27	1062	4133	210.66.41.132	110	0	GENERAL
tcp	7	192.168.10.31	1032	4136	211.75.84.154	80	0	GENERAL
tcp	7	192.168.10.31	1033	4138	211.75.84.154	80	0	GENERAL
tcp	7	192.168.10.32	1729	4139	140.113.39.195	110	0	GENERAL
tcp	7	192.168.10.27	1063	4140	210.66.41.132	110	0	GENERAL
udp	1	192.168.10.31	1028	16385	168.95.192.1	53	20	GENERAL
udp	1	192.168.10.32	1726	16386	168.95.1.1	53	5	GENERAL
udp	1	192.168.10.32	1728	16387	168.95.192.1	53	5	GENERAL

Active >> TCP:5,UDP:3 (Maximum >> TCP:128,UDP:64)

show

Displays the current configuration. For first-time login, the current configuration is the factory default settings. Refer to section titled “**Factory Default Setting**” for detail.

Example:

```
command>show
```

Wan Mac Address: AB CD 12 34 56 78

IP address of local port: [192.168.1.254]

Subnet Mask of local port: [255.255.255.0]

Distribute IP addresses to local computers: [Yes]

Continuous IP address pool starts at: [192.168.1.1]

Number of IP address in pool: [128]

Enable PPPoE: [No]

Obtain global port configuration from ISP : [Yes] .. under claiming

IP address of global port : [0.0.0.0]

SubNetmask of global port : [0.0.0.0]

Device name : [Untitled]

Domain name : [Domain]

Gateway : [0.0.0.0]

Primary DNS server : [0.0.0.0]

Secondary DNS server : [0.0.0.0]

user

Displays the current active users (up to 128 users).

Example:

```
command>user
```

IP address	Node address	Remainder time	Host name
192.168.10.1	0080-C8F8-8A64	5:47:17	Allen
192.168.10.2	0080-C8F8-8A64	expired	Calvin
192.168.10.3	0080-C8F8-8A64	0:12:25	Edward
192.168.10.4	0080-C8F8-8A64	2:55:48	Victoria
192.168.10.5	0080-C8F8-8A64	expired	SNL

Total 5 users, 3 active leases.

Elapsed 0:01:03

filter

This device supports three types of filter. Each type of filter can be set to perform **filter (drop)** or **forward (pass)** function. User can input up to six sets of filter in this device.

MAC address filter:

Example: Set the MAC address filter to prohibit the computer with network adapter address 0080C8123456 to access Internet.

Set filter (maximum 6), or <ESC> to escape

Operations => 1)Show 2)Add 3)Del 0)Quit **2** *add a new filter*

Filter Type => 1)MAC 2)LAN IP 3)WAN IP 4)TCP 5)UDP **1** *for MAC address*

Action => 1)Forward 2)Filter **2** *drop on match*

MAC Address (12 HEX-digit): **0080c8123456** *the MAC address to be examined*

Show Setting:

Operations => 1)Show 2)Add 3)Del 0)Quit 1

Item	Type	Action	From	To
====	=====	=====	=====	=====
1.	MAC	Filter	0080C8123456	

IP address filter :

Example 1: Set IP address filter to allow those local computers with IP address from 192.168.0.25 to 192.168.0.32 to access Internet.

Operations => 1)Show 2)Add 3)Del 0)Quit **2**

Filter Type => 1)MAC 2)LAN IP 3)WAN IP 4)TCP 5)UDP **2** *filter on IP address of local computers.*

Action => 1)Forward 2)Filter **1** *pass on match*

IP Address (x.x.x.x): **192.168.0.25-192.168.0.32** *IP address range*

Example 2: Inhibit all local users from accessing a web server on the Internet.

Operations => 1)Show 2)Add 3)Del 0)Quit **2**

Filter Type => 1)MAC 2)LAN IP 3)WAN IP 4)TCP 5)UDP **3** *filter on IP address of remote server*

Action => 1)Forward 2)Filter **2** *drop on match*

IP Address (x.x.x.x): **203.66.99.100** *remote web server IP address*

Show Settings:

Operations => 1)Show 2)Add 3)Del 0)Quit 1

Item	Type	Action	From	To
------	------	--------	------	----

==== =====

LAN IP	Forward		192.168.0.25	192.168.0.32
--------	---------	--	--------------	--------------

WAN IP	Filter		203.66.99.100	203.66.99.100
--------	--------	--	---------------	---------------

With the combination of the above two filter examples, the workstations with IP address **192.168.0.25, 192.168.0.26, 192.168.0.27, ... to 192.168.0.32** can access the Internet via the Internet Router, but none of the workstations can access the **203.66.99.100** Web Server (web site).

Port Filter

Example 1: Allows to access the Web service only.

Operations => 1)Show 2)Add 3)Del 0)Quit **2**

Filter Type => 1)MAC 2)LAN IP 3)WAN IP 4)TCP 5)UDP **4** *filter on server service*

Action => 1)Forward 2)Filter **1** *allow access*

TCP port (xxx, or xxx-yyy): **80** *port number for web service*

Note: xxx-yyy is the format for a range of ports (i.e. 80-168)

Example 2: Inhibits all local computers from accessing some services.

Operations => 1)Show 2)Add 3)Del 0)Quit **2**

Filter Type => 1)MAC 2)LAN IP 3)WAN IP 4)TCP 5)UDP **5**

Action => 1)Forward 2)Filter **2**

UDP port (xxx, or xxx-yyy): **20-25** *services of FTP(20,21), TELNET(23), E-MAIL(25) are disabled.*

passwd

- No password is required when logging in for the first time.
- At command>, type in **passwd** and hit “Enter” to enter the password setup screen.
- Password can be up to six characters long.
- Password can contain letters, numbers, and spaces.
- Password is case sensitive.
- To set or change your password, key in up to six characters and hit “Enter”. You will be prompted to reenter your password again for verification. Return to the Start screen by typing quit.

Test your new password to verify it has taken effect.

Example:

```
command>passwd

Please type old password :

type new password (0 to 6 characters) : ****

re-type new password (0 to 6 characters) : ****
```

ping

Ping is a basic Internet program that lets you verify that a particular IP address exists and can accept requests. At **command>** type in **ping** and then the **IP address** that you wish to detect and hit “Enter”. If the screen shows “reply ok!” from that IP, the device can communicate with that IP address. If the screen shows “no response!” then that IP address is unreachable.

Example:

```
command>ping 192.168.1.1

Reply OK.

command>ping 192.168.1.5

No response!

command>
```

tracert

You can trace the routes via which packets arrive at specified network destinations.

Example:

```
command>tracert 210.59.144.191
```

Tracing route to 210.59.144.191 over a maximum of 30 hops

1	0 ms	10 ms	0 ms	203.66.99.254
2	30 ms	30 ms	30 ms	202.39.252.126
3	30 ms	20 ms	20 ms	168.95.222.62
4	30 ms	30 ms	30 ms	168.95.2.10
5	30 ms	30 ms	30 ms	168.95.2.41
6	20 ms	30 ms	30 ms	211.20.43.81
7	30 ms	30 ms	40 ms	210.59.144.191

Trace complete!

release

Gives up the obtained global port configuration. Executing this command disables the device, unless the user executes the “**renew**” command as described below to retrieve configurations.

Example:

```
command>release
```

Give up the obtained global port configuration

Note: if you choose NOT to obtain the global port configuration from your ISP, this command won't be executed and the following message will appear.

```
command>release
```

works only if 'Obtain global port configuration from ISP' is enabled

renew

You must renew the global port configuration after you have released it. Otherwise the device is disabled. The 'Show' command enables you to see the configuration. The device will not work until you renew the global port configurations.

Example :

```
command>renew
```

```
Update global port configuration
```

(You can type 'Show' command to view the new configuration)

Note: If you choose NOT to obtain the global port configuration from your ISP, this command won't be executed and the following message will appear.

```
command>renew
```

```
Works only if 'Obtain global port configuration  
from ISP' is enabled
```

set

After executing the **set** command, the current settings will appear on the screen one at a time. Press **Enter** to accept the current values in the brackets or input new values and then press **Enter** to change the value. Press <Esc> at any time to abort this command.

Example:

```
command>set
```

```
Press <ENTER> if you agree with the default value,  
or <ESC> to escape.
```

```
IP address of local port [192.168.1.254]:
```

```
SubNetmask of local port [255.255.255.0]:
```

```
Distribute IP address to local computers? (Yes/No) [Yes]:
```

```
Continuous IP address pool start at [192.168.1.1]:
```

```
Number of IP address in pool [128]:
```

```
Enable PPPoE? (Yes/No) [No]:
```

```
Obtain global port configuration from ISP? (Yes/No) [Yes]:
```

IP address of global port [0.0.0.0]:
Subnet Mask of global port [0.0.0.0]:
Device name (0 to 20 characters) [Untitled]:
Domain name (0 to 36 characters) [Domain]:
Gateway [0.0.0.0]:
Primary DNS server [0.0.0.0]:
Secondary DNS server [0.0.0.0]:
New configuration will be:
IP address of local port: [192.168.1.254]
Subnet Mask of local port: [255.255.255.0]
Distribute IP addresses to local computers: [Yes]
Continuous IP address pool starts at: [192.168.1.1]
Number of IP address in pool: [128]
Enable PPPoE: [No]
Obtain global port configuration from ISP: [Yes]
IP address of global port: [0.0.0.0]
Subnet Mask of global port: [0.0.0.0]
Device name: [Untitled]
Domain name: [Domain]
Gateway: [0.0.0.0]
Primary DNS server: [0.0.0.0]
Secondary DNS server: [0.0.0.0]
Save and reboot? (Yes/No): [No] <type **yes** and hit "Enter" to
save settings,
Or type **No** to cancel the settings.

connect

Make a PPPoE connection manually when PPPoE is already enabled.

Example 1: PPPoE connection was already made.

command>connect

Already connected.

Example 2: To manually make a PPPoE connection.

command>connect

Connecting... *←System is making a PPPoE connection.*

Example 3: When PPPoE was not enabled, no connection can be made. Refer to command “set” for setting up PPPoE.

command>connect

PPPoE is not enabled.

disconnect

Cut off a PPPoE connection manually when PPPoE is enabled.

Example 1: PPPoE connection was already disconnected.

command>disconnect

Already disconnected.

Example 2: To manually cut off a PPPoE connection.

command>disconnect

Disconnecting... *←System is cutting off a PPPoE connection.*

Example 3: When PPPoE was not yet enabled, no disconnection can be made. Refer to command “set” for setting up PPPoE.

command>connect

PPPoE is not enabled.

status

Display the current PPPoE connection status.

Example 1: PPPoE is enabled and the connection is successful.

command>status

PPPoE connected.

Example 2: PPPoE is enabled but the connection is cut off.

command>status

PPPoE disconnected.

vserv

Displays the internal virtual server mapping. You can set (including add, delete) the applications' names and the corresponding IP addresses of the local servers. “**Natural firewall**” allows requests for Internet access from the Local network, but requests from the Internet to the local network are blocked. Computers outside the Intranet are allowed to access specific ports by using the **vserv** command.

There are four operation choices for **vserv** command: 1) Show, 2) Add, 3) Del, 0) Quit.

Example:

```
command>vserv
```

```
Set local virtual server mapping (maximum 12),
```

```
or <ESC> to escape
```

```
Operations => 1)Show 2)Add 3)Del 0)Quit: 2 ←Add a virtual server
```

```
Port number/application name: 80 ←it's a Web server
```

```
Type => 1)tcp 2)udp : 1 ← select TCP port
```

```
Server IP address: 192.168.0.254 ← IP address of the local Web server
```

route

You can set static routes to manually administrate the network topology/traffic when the dynamic route is not effective enough.

```
command>route
```

```
Set static routing table (max 2),
```

```
or <ESC> to escape
```

```
operations => 1)Show 2)Add 3)Del 0)Quit: 2 ←Add a static router
```

```
Static routing network IP address (x.x.x.x): 203.66.99.1
```

```
Static routing network SubNetmask (x.x.x.x): 255.255.255.0
```

```
Gateway IP address (x.x.x.x): 200.200.200.200
```

operations => 1)Show 2)Add 3)Del 0)Quit: 1 **←display**
current established static route

Item	Network IP	SubnetMask	Gateway
------	------------	------------	---------

=====

1.	203.66.99.1	255.255.255.0	200.200.200.200
----	-------------	---------------	-----------------

Operations => 1)Show 2)Add 3)Del 0)Quit: 3 **←Delete a static router**

Item	Network IP	SubnetMask	Gateway
------	------------	------------	---------

=====

1.	203.66.99.1	255.255.255.0	200.200.200.200
----	-------------	---------------	-----------------

Which item will be deleted:1

wantel

You may manage this device remotely from outside of the network through Telnet.

command>wantel

Enable(Disable) Wan Port Telnet?(Yes:enable/No:disable)[No] y

You must know the Internet Station's Global Port IP address to be able to perform Telnet configuration. For example, if the Global Port IP is 69.126.2.123, after enabling the **wantel**, from a computer that can access Internet, open a DOS prompt and the execute **telnet 69.126.2.123 333**, you should see the Internet Station's login page.

Note: If the Global Port is set to obtain IP automatically, the global port IP address can be different every time the Station login the ISP. Please find the global port IP address before performing remote Telnet configuration.

upgrade

You can upgrade this IP Sharing device by activating the TFTP Server on the net to acquire the latest software.

Before you start the upgrade, make sure you have a **TFTP server** well installed on any kind of operating system and the new firmware image i.e.**FIRMWARE.BIN** copied onto it.

Example:

With TFTP server IP address at **192.168.1.200**, and new firmware image named is **FIRMWARE.BIN** and located at the TFTP server's C drive.

At the Telnet program, enter the following command:

command> upgrade 192.168.1.200 C:\FIRMWARE.BIN (*press Enter*)

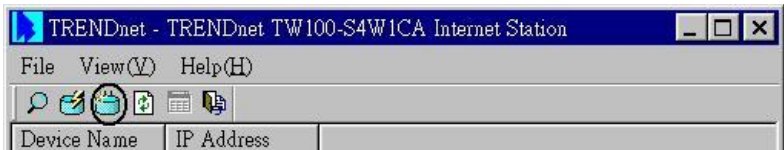
*(Note: it is recommended that you enter the **drive:\path** before the file name.)*

The upgrade takes about 70 seconds to complete. When finished, wait another 20 seconds for the device to restart.

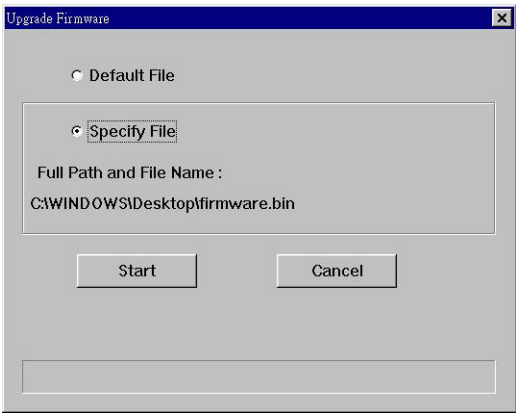
FIRMWARE UPGRADE

Upgrading the firmware

1. Connect the device to a computer that can configure the device using the GUI. Copy the latest firmware to the directory where the *setup.exe* is located or to any desired location on the hard driver (e.g. C:\IPS).
2. Back to the **management utility** window, click on “File” from the Tool Bar, select “Find Device” from the drop down menu. You will see a list of the IP Sharing Devices on the screen. Select the one that you are going to update the firmware and click  on the Tool Bar. The Upgrade Firmware window will appear.



3. If you have copy the latest firmware to the directory where *setup.exe* is, click on “**Default File**” and click “**Start**”, the program will upgrade the firmware with the latest version of firmware, (i.e. **firmware.bin**). If you copy the firmware file to a desired location, in the **Upgrade Firmware** window, select “**Specify File**”, enter the firmware file’s path (e.g. C:\WINDOWS\Desktop\firmware.bin), and then click “**Start**” to upgrade the firmware.



4. The upgrade will take a couple of minutes to complete, do not interrupt the process. After the upgrade process completes, you will see a “**Finish**” button, click on it to finish the procedure.

CHANGING PASSWORD

The device has no password at default. It is recommended that you change the default passwords to ensure that someone cannot adjust the device’s settings.

From GUI

1. Start this device by running **setup.exe** as described in the chapter titled “**Configuration**”.
2. Check “Change Administrator’s Password.”
3. Enter the desired new password in “New Password” and enter the new password again in the “Confirm New Password” field and then click “**Save**” at the bottom.

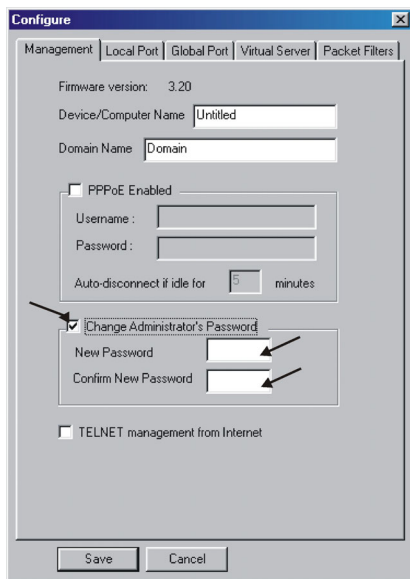


Figure 18

From Terminal

Refer to the previous section titled “**Configuration in Terminal Program**” for terminal emulation. After seeing the following command prompt, follow the instructions in italic fonts to setup the new password. Please note that passwords are case sensitive.

```
command>passwd
```

Please type old password: **** *Type in old password and press <Enter>*

Note: In default, there is no password in the device, so just leave this entry blank and hit "Enter" to enter the configuration mode.

type new password (0 to 6 characters) : ***** ***Type the new password and press <Enter>***

re-type new password (0 to 6 characters) : ***** ***Re-type the new password and press <Enter>***

Forgot your password?

Refer to **FAQ** section for "Factory Reset" procedures.

PPP OVER ETHERNET (PPPOE)

What is PPPoE?

PPPoE is known as a dial-up DSL service. It is designed to integrate the broadband services into the current widely deployed, easy-to-use, and low-cost dial-up-access networking infrastructure. Thus, customer can get greater access speed without changing the operation concept.

How can I know I am using PPPoE?

PPPoE client software is provided by our ISP and should be installed onto your computer first. You run the program to connect/disconnect to the Internet. User Account information (User Name and Password) is also required each time you connect to the Internet access.

***Note:** After you have entered the PPPoE information during the device setup, after starting up the device, the device will provide your Internet Service the PPPoE information and login automatically. It is not necessary to install and run the PPPoE software on the computers and you can just uninstall the PPPoE software from your computers.*

Checking PPPoE Connections

1.For GUI Setup program

1. Go to **Start**→ **Programs**→**IP Share Setup**.
2. When the **configure** screen appears, select the Global Port tab. Refer to the previous section titled “**Configuration in GUI**”.
3. Check if the value of Global port IP address is **0.0.0.0**, if it is, that means that the PPPoE connection failed. If the value is **non-zero**, then the PPPoE connection is good.

2. Checking PPPoE status through Terminal Mode

1. Start Telnet as described in the previous section titled “**Configuration in Terminal Program**” for terminal emulation.
2. At the command prompt, type **show** command.
`command>show`
3. If the string of IP address of global port is 0.0.0.0, this means you are not connected. If it is anything other than 0.0.0.0 (non-zero), it means the connection is good.

***Note:** Once the PPPoE setup is completed on this device, do not run any PPPoE client software on the local workstations.*

FAQ

Factory Reset

If you have lost the device’s password or you would like to set the device back to its default state, you can do the Factory Reset. **Performing the Factory Reset will erase all previously entered device settings.**

To reset to factory default setting, go to the **Management Utility** window and click  on the tool bar and then click “OK” to confirm the reset.

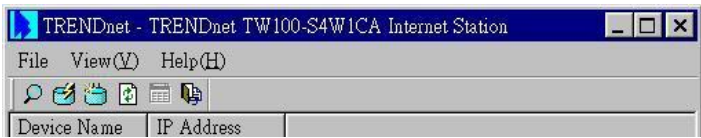


Figure 19

The factory default values are detailed in the section **Factory Default Settings**.

“I can’t find the product using the GUI Setup Software”

For the GUI Setup Software to find the device, it has to be accessed from a client. This means that the computer you are trying to use to run the software must be setup as described in the section **Configuration in GUI**. Also, the computer should be restarted to ensure that it is receiving IP address from the device.

To verify that your computer’s TCP/IP protocol is setup properly, use the "winipcfg" utility in Windows (95, 98, and ME). To run this, go to Start-->Run, type "winipcfg" in the Run box, and then click “OK”. Make sure the Network Adapter Card is selected and then press the "More Info" button on the bottom right hand corner. **For Win2000 and NT stations, open the “Command Prompt” (DOS window) and type in ipconfig /all and hit “Enter” to obtain the adapter’s IP information.**

Look at the box labeled DHCP Server, this should be the product's IP address (192.168.0.1 at default). If it is not, or it is blank or reads 255.255.255.255 then you may have a cabling problem, or you may have another DHCP server on your network. In either case, please follow the installation guide again, and **ONLY** connect the device, the client, and your modem together. If you are on a network, it is recommended that you contact your IS or IT Manager for further assistance with DHCP settings. Placing an IP Sharing Device that passes out IP addresses on a LAN with an existing DHCP server may cause problems throughout a network. It is recommended you disable other DHCP servers on the network if you plan on using this product on the network.

IP address conflict

When you see the message box prompted for IP address conflict, this means two or more workstations have the same IP address. If you have setup the device as a DHCP server, on the problem workstation, please run the "**winipcfg**" utility, select the correct Network Adapter, click "release all" to release all current configuration first, then click "renew all" to renew the IP information again. If the DHCP function is disabled and static IP addresses are assigned to each workstation, please double check each workstation's IP address for duplicate IP.

My Internet application won't work

To protect your computer from Hackers on the Internet, this product uses "port blocking" technology. A port is like a door into your computer. Each service on the Internet has an associated port. The device protects your computer by closing certain ports, so that malicious programs can't access your computer. However, if you are using an application that requires communicating via one (or more) of these blocked ports, the application will not work. In this case, you will have to manually open these ports to allow the application to work properly.

Some applications that may be affected are

*Some **Email Programs** (most of the e-mail programs should work fine)*

*Some **Multi-Player Games***

*Some **Internet Phone/Video Conferencing Applications** (i.e. NetMeeting, ICQ, PCanyWhere)*

Also, there are some applications, which require reverse connection over the Internet. In other words, when you are connected to these applications, you have to open your ports for two-way connection.

The first thing you will need to do is determining what port (or ports) the application uses. The fastest way to find this information is to go to the software maker's web site, go to the support section, and look for information related to NAT, Proxy Server, or Firewall. This information will typically list 1 to 3 ports that need to be opened for proper operation of the software. If you can't find the necessary information, call the software maker and ask for what ports need to be opened for the software to work through a firewall.

Once you have the necessary port information, follow the instructions below to setup the "Virtual Server".

A. Launch the Windows GUI Setup Software, click to select the device you want to configure and click  on the tool bar to configure the selected device.

B. Choose the "Virtual Server" tab:

C. Enter one of the port numbers or a port range that your application requires. Press **"Browse"** to select the Local server mapping to the port(s) number you just entered.

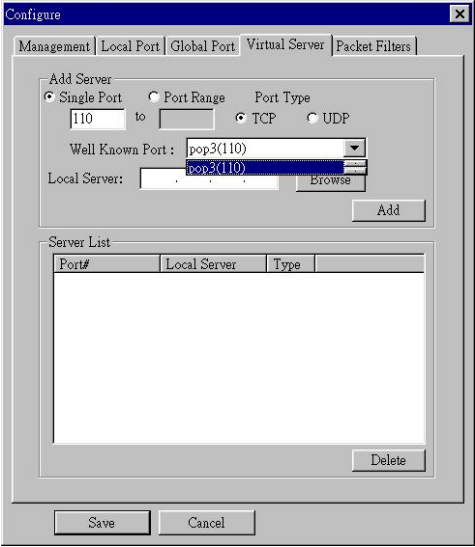


Figure 20

D. Select the internal server (the computer that is using the Internet Application) in the following window.

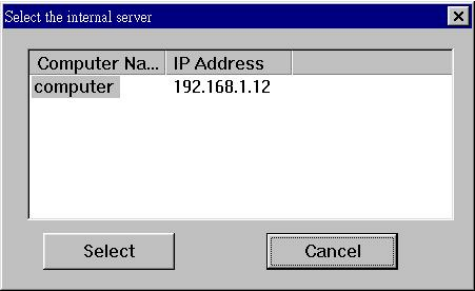


Figure 21

E. Press **Add**. Repeat this process for each individual port you need to open.

F. Press **Save**. Wait 30 seconds for the device to reboot and then try the application again. It may be necessary to restart your application or your computer for the application to recognize the change.

Note: In rare occasion that the Internet Application requires a random number of ports to be opened, in this case, configure the Virtual Server to open all ports (range from 1 to 65535)

and both TDP and UTP ports). However, this makes your network vulnerable to Internet attacks.

Can not access the Internet

For **Cable Modem** users, find the workstation’s “Computer” name and then input this name in the device’s “Device/Computer Name” field. Do this only when your cable Modem Internet Service Provider provides you with a specific “Computer Name”.

1. On the Workstation (95, 98, and ME), go to **Start → Control Panel → Network**, and select **Identification** tab. Copy the Computer name as shown in the left figure below. For Win2000, right click on “my computer”, select “properties”, click on “network identifications”, click on “properties”, and then copy the computer name.
2. Run the GUI setup program, select the device, and click on “Configure” to go to the **Management** tab.
3. Paste the name on to the field “**Device/Computer Name**” as shown in the right figure below.

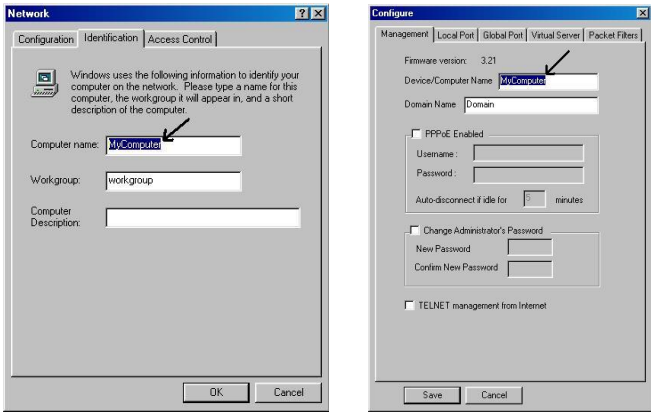


Figure 22

For DSL PPPoE users, open the Management page, at the PPPoE Username field, enter the Username follow by your ISP’s domain name and then click “Save”. For example, *username@earthlink.net*, which is composed by username (provided by your ISP) followed by your ISP’s domain name.

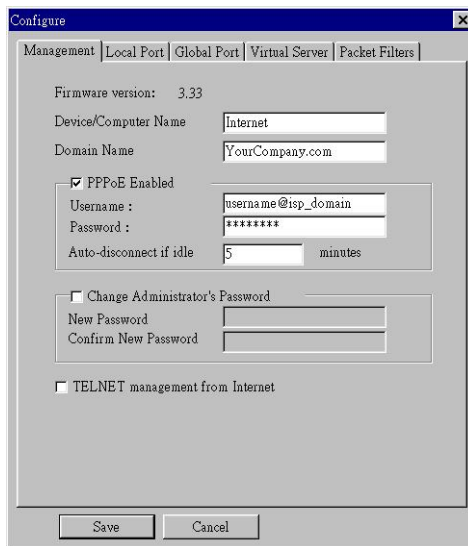


Figure 23

Check the physical connectivity of local network.

Check if both the LEDs of Local and Global on the product's front panel are lit. If yes, go to next step. Otherwise, make sure you are using the correct cables and the cables are connected to the network devices properly. Push the MD/MDIX button once and see if the LED lit up.

Check the physical connectivity of broadband device.

Examine the LED of LAN port and the LED of the broadband signal input on the Cable Modem/xDSL Modem. If the LAN LED is off, make sure you are using the correct cables and the cables are connected to the devices properly. If the LED of the broadband signal is off, please contact your ISP.

Note: You can also call your ISP and make sure the Internet service is still online.

Check the status of this product.

If your ISP assigned you an IP address, please skip this step. Otherwise, use the telnet program to "release" and "renew" the current IP address of the Global port. After that, type "Show" command to see if "obtain global port configuration from ISP" shows the address is "claiming" or "under claiming". If the IP address is "claiming", go to next step. If the result is "under claiming", reboot the product and check it again. If the result still is "under claiming", please contact your ISP and find out if the service is still available.

Check the logical connectivity from your computer to the Internet.

Refer to the section "PING.EXE" in the "TCP/IP Network diagnosis" chapter. Follow the described steps to find out where the problem is.

Diagnosis

TCP/IP Network Diagnosis

Execute *WINIPCFG.EXE* or *PING.EXE* for TCP/IP network diagnosis.

WINIPCFG

The WINIPCFG program (for Win95, 98, and ME) is used to gather information about the TCP/IP connections that are active on your system. It cannot be used to dynamically adjust TCP/IP connections. You can also renew leases (if allowed by the network), and get the current IP address assignments through this program.

From Windows, go to **Start**, click **Run**, enter **WINIPCFG**, and click **OK**.

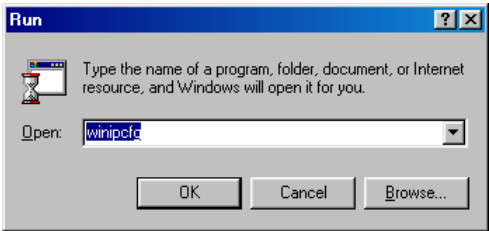
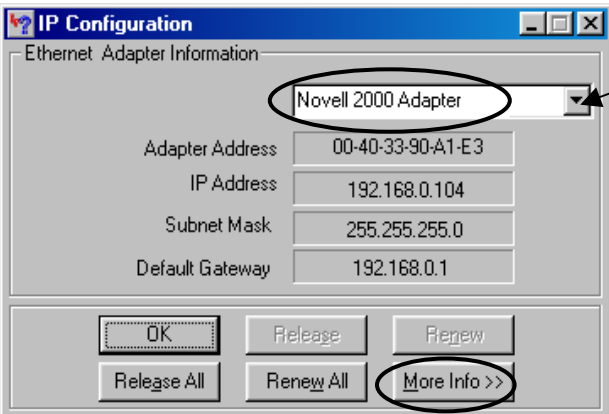


Figure 24: Run

The following figure displays the adapter address and current TCP/IP address.

Note: At the “Ethernet Adapter Information”, select the correct Ethernet adapter that is installed in this computer.



Select the correct Ethernet adapter.

Figure 25: IP Configuration

Click the **More Info** button to get detailed configuration information.

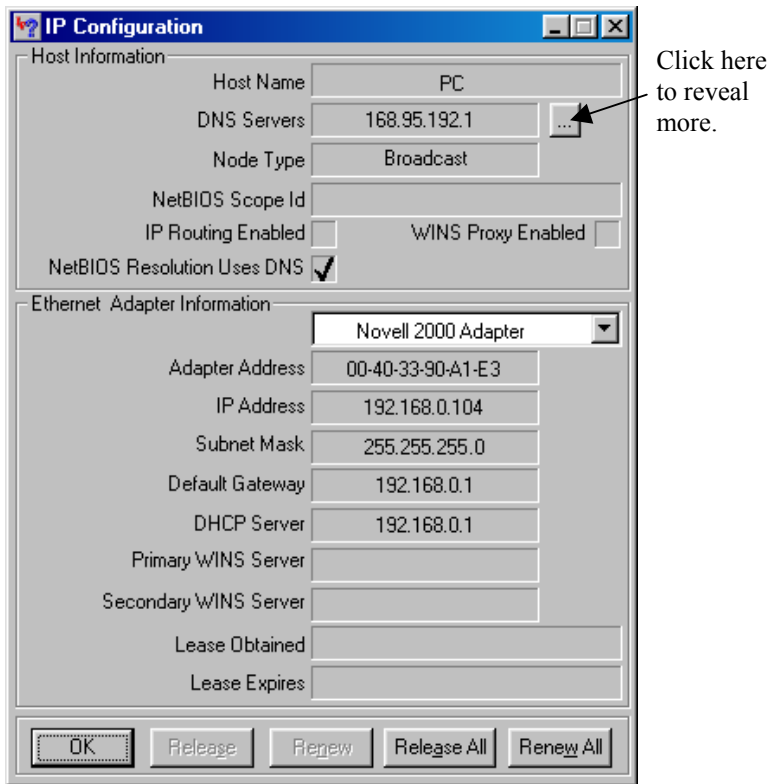


Figure 26: IP Configuration

On the top, the “Host Name” and “DNS server” of the computer are configured to call when it is looking for a named resource. The default gateway is the server through which the client connects to the Internet. The DHCP Server identifies the network server that assigns IP addresses to computers on the network.

If the product is working properly, the following should be apparent from this screen:

- 1) The Client should have an IP address within the prescribed range.
- 2) The “DHCP” and “Default Gateway” should list the product’s local port address (the device’s IP address).
- 3) The DNS server IP addresses should match the DNS server IP addresses set in the device.

IPCONFIG

For Win NT and Win2000, go to “Start”→”Programs”→”Accessories”→”Command Prompt” to open the Command Prompt. Type in **IPCONFIG /ALL** and hit “Enter” to see the adapter’s information. Type in **IPCONFIG /RELEASE** to release all adapters’ IP address

and **IPCONFIG /RENEW** to renew IP addresses. For a list of the **IPCONFIG** commands, type in **IPCONFIG /?** .

PING.EXE

Ping is used to verify that a computer is active and available. Users can ping a specific destination domain name or just the IP address.

Example :

For example, to find the server 168.95.192.1, type the following command at the MS-DOS prompt and then press “Enter”:

```
C:\>ping 168.95.192.1
```

PING can be executed in Windows as shown below:

1. Go to the **Start** menu.
2. Click **Run**.
3. Type **ping 168 . 95 . 192 . 1** and click **OK**.
4. The server (IP address) is online if the following message appears.
Reply from 192.168.0.1: bytes=32 time=3ms TTL=100
5. The destination device is not reachable if the following message appears.
Reply from 192.168.0.1: Destination host unreachable
or **Request timed out**.

ISP Connectivity Checkup

Issue a PING command to the IP address of your ISP’s Gateway or DNS server.

Note: If the global port was set to obtain configuration automatically, you need to check Gateway and DNS server information under “Global Port” via the Windows GUI setup program.

For Example:

From the GUI setup program, if the DNS server address is 203.66.81.254, at C:\> prompt, enter **Ping 203.66.81.254**. If successful, you can reach your ISP server.

If unsuccessful, you may have trouble connecting to your ISP, please verify that the product is properly configured to connect to your ISP. Also verify that your Cable/DSL modem and the line are functioning properly.

Internet Connectivity Checkup

PING to an IP address or domain name on Internet.

For Example:

C:\> PING 168.95.192.1 -w 5000

C:\> PING www.yahoo.com -w 5000

If successful, you are connected to the Internet.

If you can ping the ISP's gateway, but cannot ping a specific site (e.g. www.yahoo.com) on the Internet, chances are, your ISP has an internal problem. Please call them for support.

Getting Technical Support

For further problems, please contact the distributor.

APPENDIX A SPECIFICATIONS

Protocols

IP, NAT, ARP, ICMP, DHCP client/server, PPPoE, PPP, PAP, CHAP

Management/Setup

Using Telnet through network.

Using GUI program in Windows 95/98/NT/2000 via network.

Local

4 x RJ-45, 10/100Mbps NWay Switching ports.

Internet

10Base-T Ethernet port or 10/100Base-T NWay Fast Ethernet port (dependent on your purchase.)

MDIX/MDI Buttons

One for local port uplink

One for Cable/DSL modem connection.

LED Indicators

Power/Error	Green/Red
Local x 4 100/10	Green/Orange
Internet 10 or 100/10	Orange only or Green/Orange
Have Mail	Green

Electronic Specifications

Input Power DC 5V, @2.4A

Agency and Regulatory: FCC part 15 Class B, VCCI, CE

Physical specification

Dimension: 160 x 105.4 x 27 mm³ (L x W x H)

Weight: 218g

Operating Temperature: 0° to 50°

Operating Humidity: 0-90% non-condensing

APPENDIX B SUPPORTED INTERNET APPLICATIONS

Application	Settings for Outgoing Connection	Setting for Incoming connection
ICQ98a,99b	None	None
NetMeeting 2.1 & 3.0	None	1503(tcp) 1720(tcp)
AOE	2300-2400(tcp) 2300-2400(udp) 47624(tcp)	2300-2400(tcp) 2300-2400(udp) 47624(tcp)
VDO Live	None	None
MIRC	None	None
Cu-Seeme	7648(tcp) 7648(udp) 24032(udp)	7648(tcp) 7648(udp) 24032(udp)
PCAnywhere	5632(udp), 22(udp), 5631(tcp), 65301(tcp)	5632(udp), 22(udp), 5631(tcp), 65301(tcp)