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**IP-1000R**

**Wired Broadband Router**

# User's Manual



**Made by OvisLink Corp.**

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## **FCC Interference Statement**

The **IP-1000R** has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

## **CE Declaration of Conformity**

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022/A1 Class B.

**The specification is subject to change without notice.**

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## Chapter 1 Introduction

Congratulations on your purchase of this outstanding IP-1000R. This product is specifically designed for Small Office and Home Office needs. It provides a complete SOHO solution for Internet surfing, and is easy to configure and operate even for non-technical users. Instructions for installing and configuring this product can be found in this manual. Before you install and use this product, please read this manual carefully for fully exploiting the functions of this product.

### Functions and Features

#### Router Basic functions

- **Auto-sensing Ethernet Switch**  
Equipped with a 4-port auto-sensing Ethernet switch.
- **WAN type supported**  
The router supports some WAN types, Static, Dynamic, PPPoE , PPTP ,L2TP, Dynamic IP with Road Runner.
- **Firewall**  
All unwanted packets from outside intruders are blocked to protect your Intranet.
- **DHCP server supported**  
All of the networked computers can retrieve TCP/IP settings automatically from this product.
- **Web-based configuring**  
Configurable through any networked computer's web browser using Netscape or Internet Explorer.
- **Virtual Server supported**  
Enable you to expose WWW, FTP and other services on your LAN to be accessible to Internet users.
- **User-Definable Application Sensing Tunnel**  
User can define the attributes to support the special applications requiring multiple connections, like Internet gaming, video conferencing, Internet telephony and so on, then this product can sense the application type and open multi-port tunnel for it.
- **DMZ Host supported**  
Lets a networked computer be fully exposed to the Internet; this function is used when special application sensing tunnel feature is insufficient to allow an application to function correctly.
- **Statistics of WAN Supported**  
Enables you to monitor inbound and outbound packets

## Wireless functions

- **High speed for wireless LAN connection**  
Up to 54Mbps data rate by incorporating Orthogonal Frequency Division Multiplexing (OFDM).
- **Roaming**  
Provides seamless roaming within the IEEE 802.11b (11M) and IEEE 802.11g (54M) WLAN infrastructure.
- **IEEE 802.11b compatible (11M)**  
Allowing inter-operation among multiple vendors.
- **IEEE 802.11g compatible (54M)**  
Allowing inter-operation among multiple vendors.
- **Auto fallback**  
54M, 48M, 36M, 24M, 18M, 12M, 6M data rate with auto fallback in 802.11g mode.  
11M, 5.5M, 2M, 1M data rate with auto fallback in 802.11b mode.

## Security functions

- **Packet filter supported**  
**Packet Filter** allows you to control access to a network by analyzing the incoming and outgoing packets and letting them pass or halting them based on the IP address of the source and destination.
- **Domain Filter Supported**  
Let you prevent users under this device from accessing specific URLs.
- **URL Blocking Supported**  
URL Blocking can block hundreds of websites connection by simply a **keyword**.
- **VPN Pass-through**  
The router also supports VPN pass-through.
- **802.1X supported**  
When the 802.1X function is enabled, the Wireless user must authenticate to this router first to use the Network service.
- **Support WPA-PSK and WPA**  
When the WPA function is enabled, the Wireless user must authenticate to this router first to use the Network service
- **SPI Mode Supported**  
When SPI Mode is enabled, the router will check every incoming packet to detect if this packet is valid.
- **DoS Attack Detection Supported**

When this feature is enabled, the router will detect and log the DoS attack comes from the Internet.

### **Advanced functions**

- **System time Supported**

Allow you to synchronize system time with network time server.

- **E-mail Alert Supported**

The router can send its info by mail.

- **Dynamic dns Supported**

At present,the router has 3 ddns.dyndns,TZO.com and dhs.org.

- **SNMP Supported**

The router supports basic SNMP function.

- **Routing Table Supported**

Now, the router supports static routing.

- **Schedule Rule supported**

Customers can control some functions, like virtual server and packet filters when to access or when to block.

### **Other functions**

- **UPNP (Universal Plug and Play)Supported**

The router also supports this function. The applications: X-box, Msn Messenger.

### **Packing List**

- Wireless broadband router unit
- Installation CD-ROM
- Power adapter
- CAT-5 UTP Fast Ethernet cable

## Chapter 2 Hardware Installation

### 2.1 Panel Layout

#### 2.1.1. Front Panel



Figure 2-1 Front Panel

LED:

LED	Function	Color	Status	Description
POWER	Power indication	Green	On	Power is being applied to this product.
Status	System status	Green	Blinking	Status is flashed once per second to indicate system is alive.
WAN	WAN port activity	Green	On	The WAN port is linked.
			Blinking	The WAN port is sending or receiving data.
W.LAN	Wireless activity	Green	Blinking	Sending or receiving data via wireless
Link/Act. 1~4	Link status	Green	On	An active station is connected to the corresponding LAN port.
			Blinking	The corresponding LAN port is sending or receiving data.
10/100	Data Rate	Green	On	Data is transmitting in 100Mbps on the corresponding LAN port.

## 2.1.2. Rear Panel

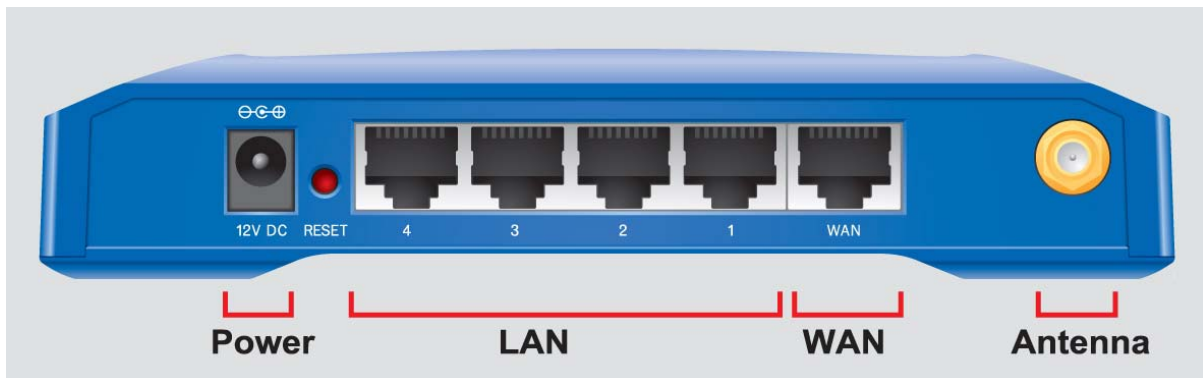


Figure 2-2 Rear Panel

Ports:

Port	Description
PWR	Power inlet
WAN	The port where you will connect your cable (or DSL) modem or Ethernet router.
Port 1 - 4	The ports where you will connect networked computers and other devices.
RESET	To reset system settings to factory defaults



## 2.2 Procedure for Hardware Installation

### 2. Decide where to place your IP-1000R Wireless Broadband Router

You can place your **IP-1000R** Wireless Broadband Router on a desk or other flat surface, or you can mount it on a wall. For optimal performance, place your **IP-1000R** Wireless Broadband Router in the center of your office (or your home) in a location that is away from any potential source of interference, such as a metal wall or microwave oven. This location must be close to power and network connection.

### 2. Setup LAN connection

- a. Wired LAN connection: connects an Ethernet cable from your computer's Ethernet port to one of the LAN ports of this product.
- b. Wireless LAN connection: locate this product at a proper position to gain the best transmit performance

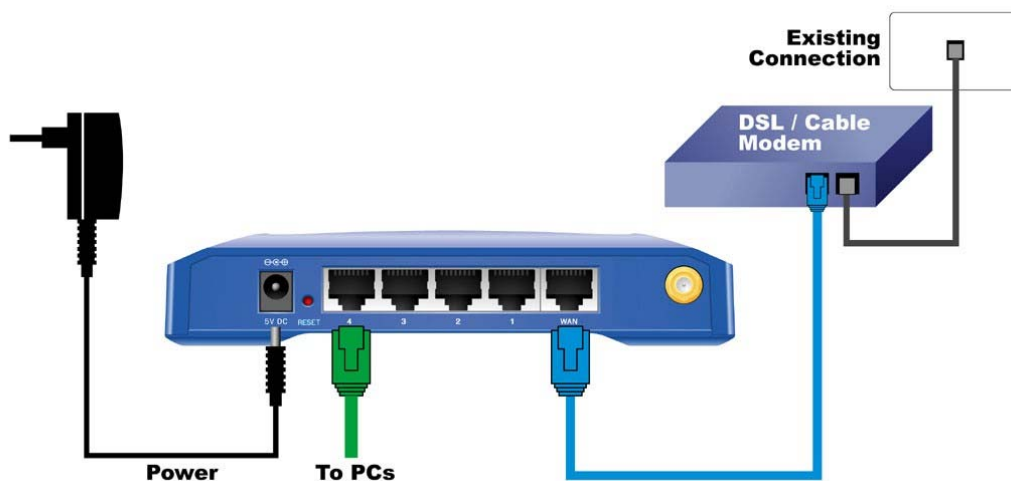


Figure 2-3 Setup of LAN and WAN connections for this product.

### 3. Setup WAN connection

Prepare an Ethernet cable for connecting this product to your cable/xDSL modem or Ethernet backbone. Figure 2-3 illustrates the WAN connection.

### 4. Power on

Connecting the power cord to power inlet and turning the power switch on, this product will automatically enter the self-test phase. When it is in the self-test phase, the indicators M1 will be lighted ON for about 10 seconds, and then M1 will be flashed 3 times to indicate that the self-test operation has finished. Finally, the M1 will be continuously flashed once per second to indicate that this product is in normal operation.

## Chapter 3 Network Settings and Software Installation

To use this product correctly, you have to properly configure the network settings of your computers and install the attached setup program into your MS Windows platform (Windows 95/98/NT/2000).

### 3.1 Make Correct Network Settings of Your Computer

The default IP address of this product is 192.168.1.254, and the default subnet mask is 255.255.255.0. These addresses can be changed on your need, but the default values are used in this manual. If the TCP/IP environment of your computer has not yet been configured, you can refer to **Appendix A** to configure it. For example,

1. configure IP as 192.168.1.1, subnet mask as 255.255.255.0 and gateway as 192.168.1.254, or more easier,
2. configure your computers to load TCP/IP setting automatically, that is, via DHCP server of this product.

After installing the TCP/IP communication protocol, you can use the **ping** command to check if your computer has successfully connected to this product. The following example shows the ping procedure for Windows 95 platforms. First, execute the **ping** command

```
ping 192.168.1.254
```

If the following messages appear:

```
Pinging 192.168.1.254 with 32 bytes of data:
```

```
Reply from 192.168.1.254: bytes=32 time=2ms TTL=64
```

a communication link between your computer and this product has been successfully established. Otherwise, if you get the following messages,

```
Pinging 192.168.1.254 with 32 bytes of data:
```

```
Request timed out.
```

There must be something wrong in your installation procedure. You have to check the following items in sequence:

1. Is the Ethernet cable correctly connected between this product and your computer?

**Tip:** The LAN LED of this product and the link LED of network card on your computer must be lighted.

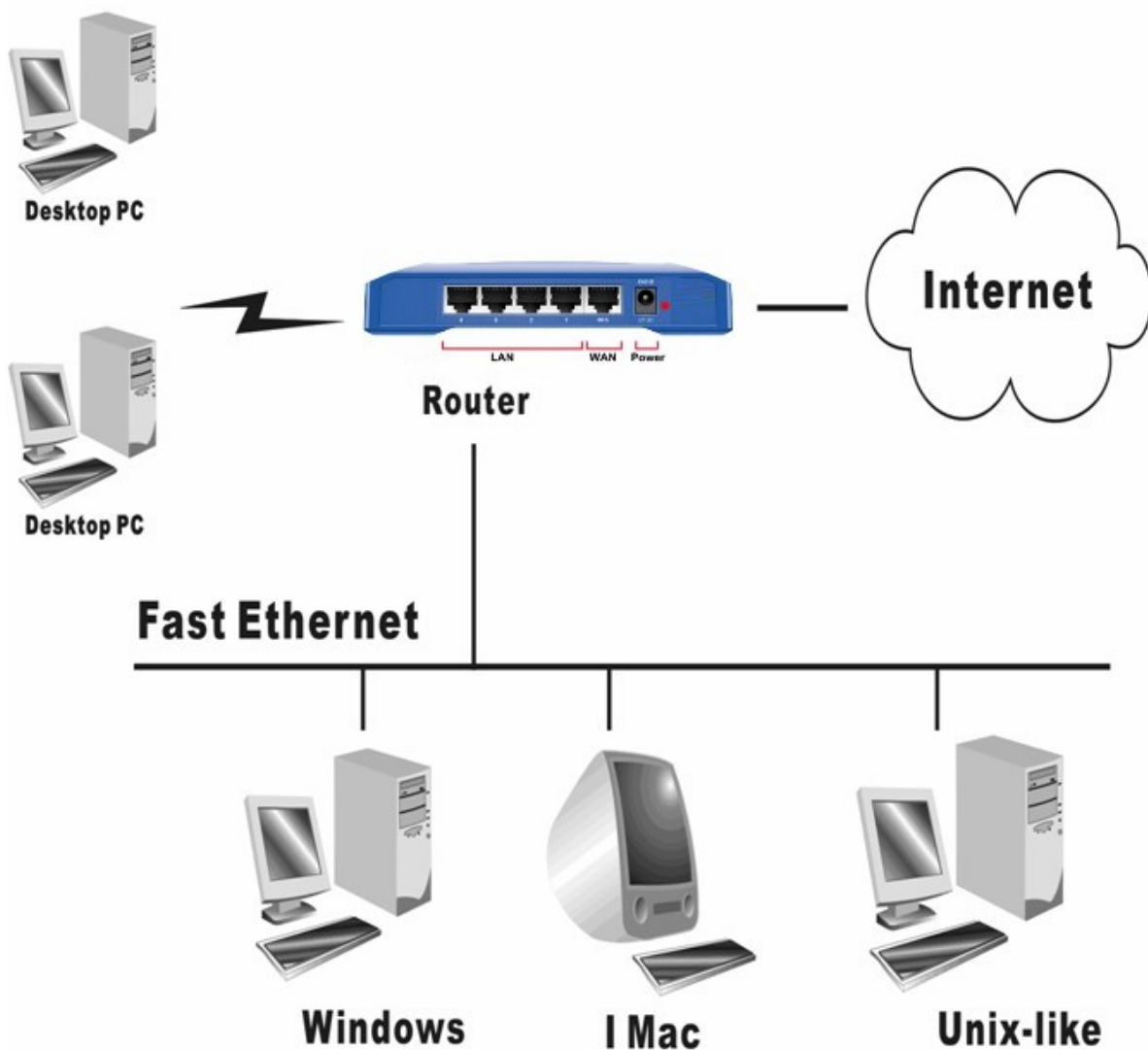
2. Is the TCP/IP environment of your computers properly configured?

**Tip:** If the IP address of this product is 192.168.1.254, the IP address of your computer must be 192.168.1.X and default gateway must be 192.168.1.254.

## Chapter 4 Configuring IP-1000R Broadband Router

This product provides Web based configuration scheme, that is, configuring by your Web browser, such as Netscape Communicator or Internet Explorer. This approach can be adopted in any MS Windows, Macintosh or UNIX based platforms.

### Wireless LAN



## 4.1 Start-up and Log in

**System Status**

Item	WAN Status	Sidenote
IP Address	0.0.0.0	PPPoE
Subnet Mask	0.0.0.0	
Gateway	0.0.0.0	
Domain Name Server	0.0.0.0	
Connection Time	-	<input type="button" value="Connect"/>

Item	Peripheral Status	Sidenote
Printer(USB0)	Not ready	

Statistics of WAN	Inbound	Outbound
Octets	0	0
Unicast Packets	0	0
Non-unicast Packets	0	0

System Time: Tue Feb 01 00:01:09 2005

Activate your browser, and **disable the proxy** or **add the IP address of this product into the exceptions**. Then, type this product's IP address in the Location (for Netscape) or Address (for IE) field and press ENTER. For example: **http://192.168.1.254**.

After the connection is established, you will see the web user interface of this product. There are two appearances of web user interface: for general users and for system administrator.

A window would pop-up asking for Login and Password. Please enter "**admin**" for login, and "**airlive**" or "**ovislink**" for password

## 4.2 Status

**OvisLink** Quick Setup Status

+ Basic Setting  
+ Port Forwarding  
+ Firewall Setting  
+ Advanced Setting  
+ Maintenance

Log out

### System Status

Item	WAN Status	Sidenote
IP Address	0.0.0.0	PPPoE
Subnet Mask	0.0.0.0	
Gateway	0.0.0.0	
Domain Name Server	0.0.0.0	
Connection Time	-	Connect

Statistics of WAN	Inbound	Outbound
Octets	0	0
Unicast Packets	0	0
Non-unicast Packets	0	0

View Log... Clients List... Help Refresh

System Time: Tue Feb 01 00:01:09 2005

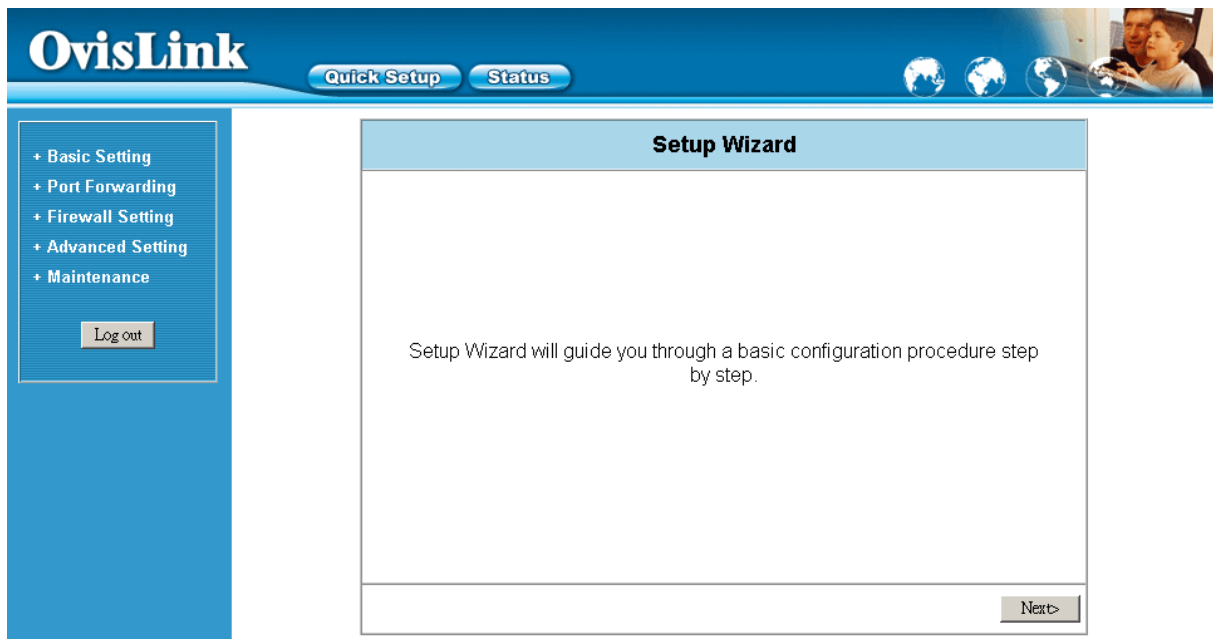
This option provides the function for observing this product's working status:

A. WAN Port Status.

If the WAN port is assigned a dynamic IP, there may appear a **“Renew”** or **“Release”** button on the Sidenote column. You can click this button to renew or release IP manually.

B. Statistics of WAN: enables you to monitor inbound and outbound packets

## 4.3 Wizard



Setup Wizard will guide you through a basic configuration procedure step by step. Press "Next "



**Setup Wizard - Select WAN Type:** For detail settings, please refer to **4.4.1 primary setup**.

## 4.4 Basic Setting

**OvisLink** Quick Setup Status

**Basic Setting**

- **Primary Setup**
  - Configure LAN IP, and select WAN type.
- **DHCP Server**
  - The settings include Host IP, Subnet Mask, Gateway, DNS, and WINS configurations.
- **Wireless**
  - Wireless settings allow you to configure the wireless configuration items.

Log out

### 4.4.1 Primary Setup – WAN Type, Virtual Computers

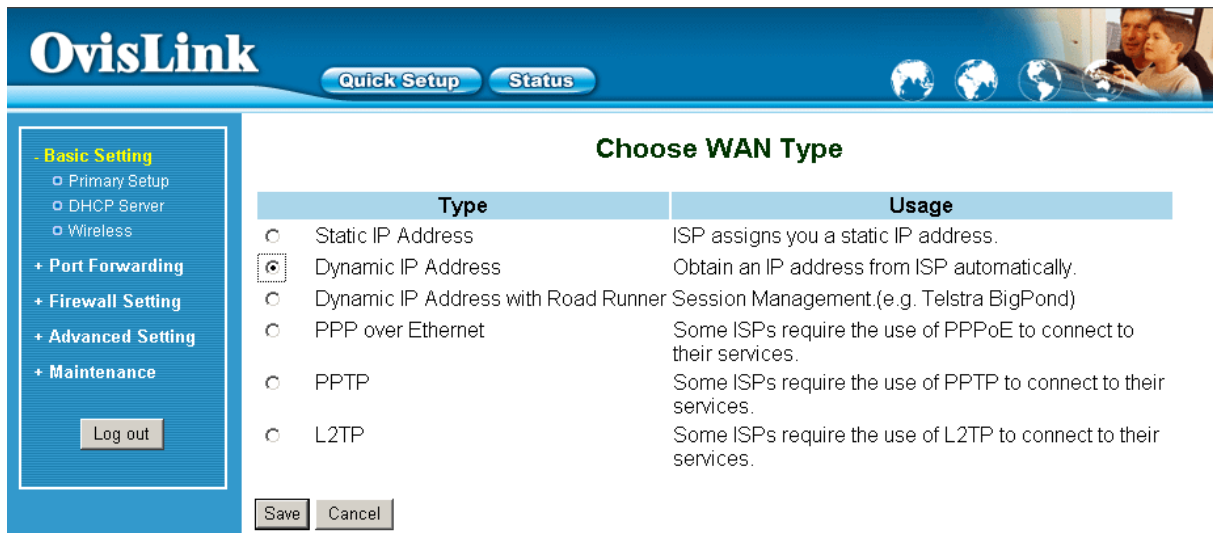
**OvisLink** Quick Setup Status

**Primary Setup**

Item	Setting
▶ LAN IP Address	192.168.1.254
▶ WAN Type	Static IP Address <input type="button" value="Change..."/>
▶ WAN IP Address	0.0.0.0
▶ WAN Subnet Mask	255.255.255.0
▶ WAN Gateway	0.0.0.0
▶ Primary DNS	0.0.0.0
▶ Secondary DNS	0.0.0.0

Save Undo Virtual Computers... Help

Press “Change”



This option is primary to enable this product to work properly. The setting items and the web appearance depend on the WAN type. Choose correct WAN type before you start.

1. **LAN IP Address:** the local IP address of this device. The computers on your network must use the LAN IP address of your product as their Default Gateway. You can change it if necessary.
2. **WAN Type:** WAN connection type of your ISP. You can click **Change** button to choose a correct one from the following four options:
  - A. Static IP Address: ISP assigns you a static IP address.
  - B. Dynamic IP Address: Obtain an IP address from ISP automatically.
  - C. Dynamic IP Address with Road Runner Session Management.(e.g. Telstra BigPond)
  - D. PPP over Ethernet: Some ISPs require the use of PPPoE to connect to their services.
  - E. PPTP: Some ISPs require the use of PPTP to connect to their services.
  - F. L2TP: Some ISPs require the use of L2TP to connect to their services



#### 4.4.1.1 Static IP Address

WAN IP Address, Subnet Mask, Gateway, Primary and Secondary DNS: enter the proper setting provided by your ISP.

#### 4.4.1.2 Dynamic IP Address

1. Host Name: optional. Required by some ISPs, for example, @Home.
2. Renew IP Forever: this feature enables this product to renew your IP address automatically when the lease time is expiring-- even when the system is idle.

#### 4.4.1.3 Dynamic IP Address with Road Runner Session Management.(e.g. Telstra BigPond)

1. LAN IP Address is the IP address of this product. It must be the default gateway of your computers.
2. WAN Type is Dynamic IP Address. If the WAN type is not correct, change it!
3. Host Name: optional. Required by some ISPs, e.g. @Home.
4. Renew IP Forever: this feature enable this product renew IP address automatically when the lease time is being expired even the system is in idle state.

#### 4.4.1.4 PPP over Ethernet

1. PPPoE Account and Password: the account and password your ISP assigned to you. For security, this field appears blank. If you don't want to change the password, leave it empty.
2. PPPoE Service Name: optional. Input the service name if your ISP requires it. Otherwise, leave it blank.
3. Maximum Idle Time: the amount of time of inactivity before disconnecting your PPPoE session. Set it to zero or enable Auto-reconnect to disable this feature.
4. **Maximum Transmission Unit (MTU):** Most ISP offers MTU value to users. The most common MTU value is 1492.
5. Connection Control: There are 3 modes to select:

Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.

Auto-Reconnect(Always-on): The device will link up with ISP until the connection is established.

Manually: The device will not make the link until someone clicks the connect-button in the Status-page.

#### 4.4.1.5 PPTP

1. My IP Address and My Subnet Mask: the private IP address and subnet mask your ISP assigned to you.
2. Server IP Address: the IP address of the PPTP server.
3. PPTP Account and Password: the account and password your ISP assigned to you. If you don't want to change the password, keep it empty.
3. Connection ID: optional. Input the connection ID if your ISP requires it.
4. Maximum Idle Time: the time of no activity to disconnect your PPTP session. Set it to zero or enable Auto-reconnect to disable this feature. If Auto-reconnect is enabled, this product will connect to ISP automatically, after system is restarted or connection is dropped.
5. Connection Control: There are 3 modes to select:

Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.

Auto-Reconnect(Always-on):The device will link upw with ISP until the connection is established.

Manually: The device will not make the link until someone clicks the connect-button in the Status-page.

Item	Setting
▶ LAN IP Address	192.168.1.254
▶ WAN Type	PPTP <input type="button" value="Change..."/>
▶ My IP Address	10.0.0.140
▶ My Subnet Mask	255.255.255.0
▶ Server IP Address	<input type="text"/>
▶ PPTP Account	<input type="text"/>
▶ PPTP Password	<input type="text"/>
▶ Connection ID	<input type="text"/> (optional)
▶ Maximum Idle Time	600 seconds
▶ Connection Control	Connect-on-demand

Saved! The change doesn't take effect until router is rebooted!

#### 4.4.1.6 L2TP

First, please check your ISP assigned and Select Static IP Address or Dynamic IP Address.

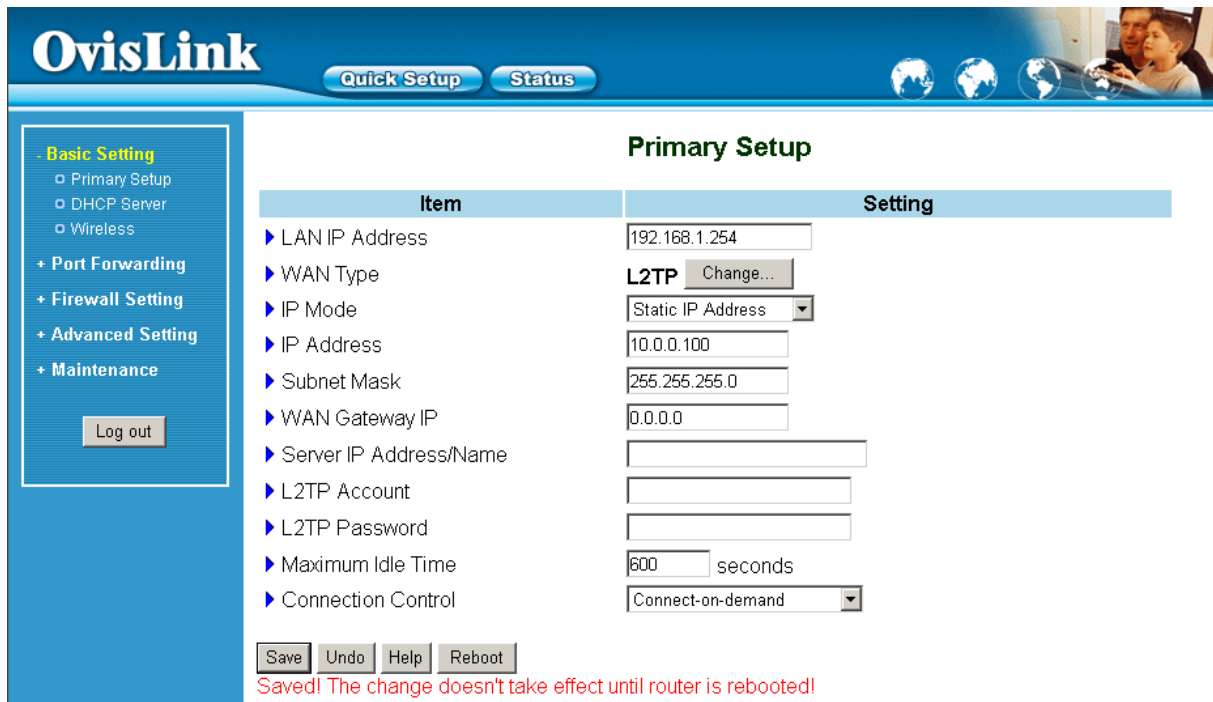
For example: Use Static

1. My IP Address and My Subnet Mask: the private IP address and subnet mask your ISP assigned to you.
2. Server IP Address: the IP address of the PPTP server.
3. PPTP Account and Password: the account and password your ISP assigned to you. If you don't want to change the password, keep it empty.
3. Connection ID: optional. Input the connection ID if your ISP requires it.
4. Maximum Idle Time: the time of no activity to disconnect your PPTP session. Set it to zero or enable Auto-reconnect to disable this feature. If Auto-reconnect is enabled, this product will connect to ISP automatically, after system is restarted or connection is dropped.
6. Connection Control: There are 3 modes to select:

Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.

Auto-Reconnect(Always-on):The device will link up with ISP until the connection is established.

Manually: The device will not make the link until someone clicks the connect-button in the Status-page.



**OvisLink** Quick Setup Status

**Primary Setup**

Item	Setting
▶ LAN IP Address	192.168.1.254
▶ WAN Type	L2TP <input type="button" value="Change..."/>
▶ IP Mode	Static IP Address
▶ IP Address	10.0.0.100
▶ Subnet Mask	255.255.255.0
▶ WAN Gateway IP	0.0.0.0
▶ Server IP Address/Name	<input type="text"/>
▶ L2TP Account	<input type="text"/>
▶ L2TP Password	<input type="text"/>
▶ Maximum Idle Time	600 seconds
▶ Connection Control	Connect-on-demand

Save Undo Help Reboot

Saved! The change doesn't take effect until router is rebooted!

**Basic Setting**

- Primary Setup
- DHCP Server
- Wireless

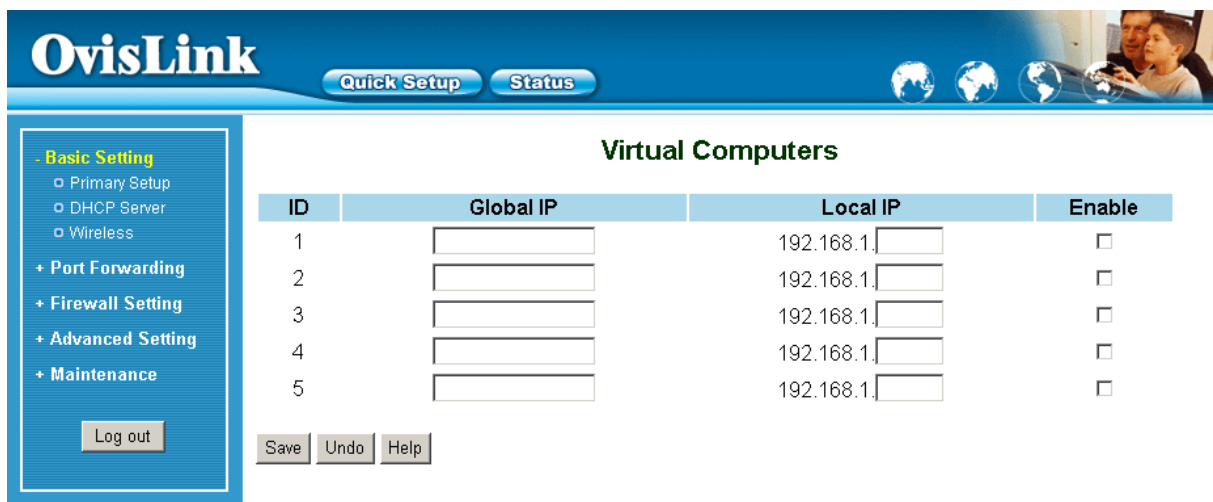
+ Port Forwarding

+ Firewall Setting

+ Advanced Setting

+ Maintenance

#### 4.4.1.7 Virtual Computers



**OvisLink** Quick Setup Status

**Virtual Computers**

ID	Global IP	Local IP	Enable
1	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>

Save Undo Help

**Basic Setting**

- Primary Setup
- DHCP Server
- Wireless

+ Port Forwarding

+ Firewall Setting

+ Advanced Setting

+ Maintenance

Virtual Computer enables you to use the original NAT feature, and allows you to setup the one-to-one mapping of multiple global IP address and local IP address.

- Global IP: Enter the global IP address assigned by your ISP.
- Local IP: Enter the local IP address of your LAN PC corresponding to the global IP address.
- Enable: Check this item to enable the Virtual Computer feature.

## 4.4.2 DHCP Server

Item	Setting
▶ DHCP Server	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
▶ IP Pool Starting Address	<input type="text" value="100"/>
▶ IP Pool Ending Address	<input type="text" value="199"/>
▶ Domain Name	<input type="text"/>
▶ Primary DNS	<input type="text" value="0.0.0.0"/>
▶ Secondary DNS	<input type="text" value="0.0.0.0"/>
▶ Primary WINS	<input type="text" value="0.0.0.0"/>
▶ Secondary WINS	<input type="text" value="0.0.0.0"/>
▶ Gateway	<input type="text" value="0.0.0.0"/> (optional)

Press “More”

The settings of a TCP/IP environment include host IP, Subnet Mask, Gateway, and DNS configurations. It is not easy to manually configure all the computers and devices in your network. Fortunately, DHCP Server provides a rather simple approach to handle all these settings. This product supports the function of DHCP server. If you enable this product’s DHCP server and configure your computers as “automatic IP allocation” mode, then when your computer is powered on, it will automatically load the proper TCP/IP settings from this product. The settings of DHCP server include the following items:

1. **DHCP Server:** Choose “Disable” or “Enable.”
2. **IP pool starting Address/ IP pool starting Address:** Whenever there is a request, the DHCP server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.
3. **Domain Name:** Optional, this information will be passed to the client.
4. **Primary DNS/Secondary DNS:** This feature allows you to assign DNS Servers
5. **Primary WINS/Secondary WINS:** This feature allows you to assign WINS Servers
6. **Gateway:** The Gateway Address would be the IP address of an alternate Gateway. This function enables you to assign another gateway to your PC, when DHCP server offers an IP to your PC.

#### 4.4.3 Wireless Setting, and 802.1X setting

Item	Setting
▶ Network ID(SSID)	<input type="text" value="ovislink"/>
▶ Channel	<input type="text" value="11"/>
▶ Security	<input type="radio"/> Disable <input checked="" type="radio"/> WEP <input type="radio"/> 802.1x and RADIUS <input type="radio"/> WPA-PSK <input type="radio"/> WPA
▶ WEP	<input checked="" type="radio"/> Enable IEEE 64 bit Shared Key security <input type="radio"/> Enable IEEE 128 bit Shared Key security
<input checked="" type="radio"/> WEP Key 1	<input type="text"/>
<input type="radio"/> WEP Key 2	<input type="text"/>
<input type="radio"/> WEP Key 3	<input type="text"/>
<input type="radio"/> WEP Key 4	<input type="text"/>

Save Undo WDS Setting... MAC Address Control... Help

Wireless settings allow you to set the wireless configuration items.

1. **Network ID (SSID):** Network ID is used for identifying the Wireless LAN (WLAN). Client stations can roam freely over this product and other Access Points that have the same Network ID. (The factory setting is “default”)
2. **Channel:** The radio channel number. The permissible channels depend on the Regulatory Domain. The factory setting is as follow: **channel 6** for North America; **channel 7** for European (ETSI); **channel 7** for Japan.
3. **WEP Security:** Select the data privacy algorithm you want. Enabling the security can protect your data while it is transferred from one station to another. The standardized IEEE 802.11 WEP (128 or 64-bit) is used here.
4. **WEP Key 1, 2, 3 & 4:** When you enable the 128 or 64 bit WEP key security, please select one WEP key to be used and input 26 or 10 hexadecimal (0, 1, 2...8, 9, A, B...F) digits.
5. **Pass-phrase Generator:** Since hexadecimal characters are not easily remembered, this device offers a conversion utility to convert a simple word or phrase into hex.
6. **802.1X Setting**

## 802.1X

Check Box was used to switch the function of the 802.1X. When the 802.1X function is enabled, the Wireless user must **authenticate** to this router first to use the Network service.

RADIUS Server

IP address or the 802.1X server's domain-name.

RADIUS Shared Key

Key value shared by the RADIUS server and this router. This key value is consistent with the key value in the RADIUS server.



**OvisLink** Quick Setup Status

**Wireless Setting**

Item	Setting
▶ Network ID(SSID)	ovislink
▶ Channel	11
▶ Security	<input type="radio"/> Disable <input type="radio"/> WEP <input checked="" type="radio"/> 802.1x and RADIUS <input type="radio"/> WPA-PSK <input type="radio"/> WPA
▶ Encryption Key Length	<input type="radio"/> 64 bits <input checked="" type="radio"/> 128 bits
▶ RADIUS Server IP	192.168.1.123
▶ RADIUS port	1812
▶ RADIUS Shared Key	11111111111111111111

Save Undo WDS Setting... MAC Address Control... Help

## WPA-PSK

### 1. Select Preshare Key Mode

If you select HEX,you have to fill in 64 hexadecimal (0, 1, 2...8, 9, A, B...F) digits

If ASCII,the length of preshare key is from 8 to 63.

### 2. Fill in the key, Ex 12345678

**OvisLink** Quick Setup Status

**Wireless Setting**

Item	Setting
▶ Network ID(SSID)	<input type="text" value="ovislink"/>
▶ Channel	<input type="text" value="11"/>
▶ Security	<input type="radio"/> Disable <input type="radio"/> WEP <input type="radio"/> 802.1x and RADIUS <input checked="" type="radio"/> WPA-PSK <input type="radio"/> WPA
▶ Encryption	<input checked="" type="radio"/> TKIP <input type="radio"/> AES
▶ Preshare Key Mode	<input type="text" value="ASCII"/>
▶ Preshare Key	<input type="text"/>

Save Undo WDS Setting... MAC Address Control... Help



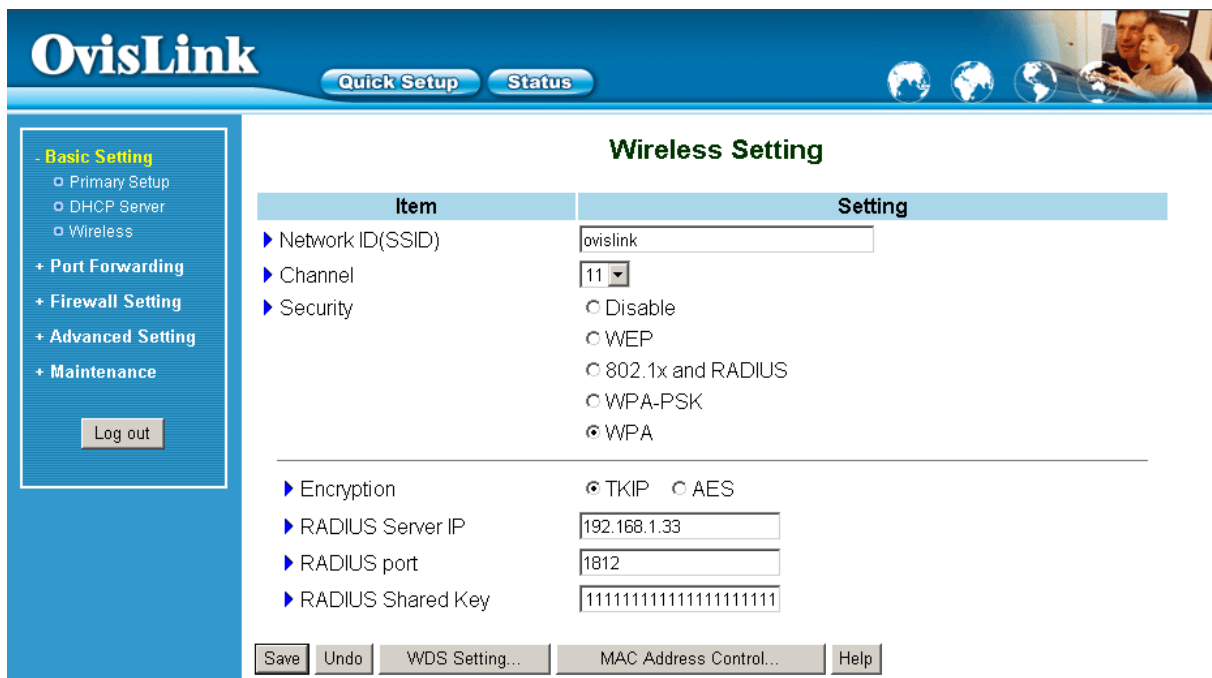
## WPA

Check Box was used to switch the function of the WPA. When the WPA function is enabled, the Wireless user must **authenticate** to this router first to use the Network service. RADIUS Server

IP address or the 802.1X server's domain-name.

RADIUS Shared Key

Key value shared by the RADIUS server and this router. This key value is consistent with the key value in the RADIUS server.



**OvisLink** Quick Setup Status

**Wireless Setting**

Item	Setting
▶ Network ID(SSID)	ovislink
▶ Channel	11
▶ Security	<input type="radio"/> Disable <input type="radio"/> WEP <input type="radio"/> 802.1x and RADIUS <input type="radio"/> WPA-PSK <input checked="" type="radio"/> WPA
▶ Encryption	<input checked="" type="radio"/> TKIP <input type="radio"/> AES
▶ RADIUS Server IP	192.168.1.33
▶ RADIUS port	1812
▶ RADIUS Shared Key	11111111111111111111111111111111

Save Undo WDS Setting... MAC Address Control... Help

## 4.5 Port Forwarding

**OvisLink** Quick Setup Status

- + Basic Setting
- **Port Forwarding**
  - o Virtual Server
  - o Special AP
  - o Miscellaneous
- + Firewall Setting
- + Advanced Setting
- + Maintenance

Log out

### Port Forwarding

- **Virtual Server**
  - Allows others to access WWW, FTP, and other services on your LAN.
- **Special Application**
  - This configuration allows some applications to connect, and work with the NAT router.
- **Miscellaneous**
  - IP Address of DMZ Host: Allows a computer to be exposed to unrestricted 2-way communication. Note that, this feature should be used only when needed.
  - Non-standard FTP port: You have to configure this item if you want to access an FTP server whose port number is not 21 (when Client uses active mode).

### 4.5.1 Virtual Server

**OvisLink** Quick Setup Status

- + Basic Setting
- **Port Forwarding**
  - o **Virtual Server**
  - o Special AP
  - o Miscellaneous
- + Firewall Setting
- + Advanced Setting
- + Maintenance

Log out

### Virtual Server

ID	Service Ports	Server IP	Enable	Use Rule#
1	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
2	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
3	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
4	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
5	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
6	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
7	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
8	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
9	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>
10	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="text"/>

This product's NAT firewall filters out unrecognized packets to protect your Intranet, so all hosts behind this product are invisible to the outside world. If you wish, you can make some of them accessible by enabling the Virtual Server Mapping.

A virtual server is defined as a **Service Port**, and all requests to this port will be redirected to the computer specified by the **Server IP**. **Virtual Server** can work with **Scheduling Rules**, and give user more flexibility on Access control. For Detail, please refer to **Scheduling Rule**.

For example, if you have an FTP server (port 21) at 192.168.1.1, a Web server (port 80) at 192.168.1.2, and a VPN server at 192.168.1.6, then you need to specify the following virtual server mapping table:

Service Port	Server IP	Enable
21	192.168.1.1	V
80	192.168.1.2	V
1723	192.168.1.6	V

## 4.5.2 Special AP

ID	Trigger	Incoming Ports	Enable
1	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Popular applications -- select one -- Copy to ID --

Save Undo Help

Some applications require multiple connections, like Internet games, Video conferencing, Internet telephony, etc. Because of the firewall function, these applications cannot work with a pure NAT router. The **Special Applications** feature allows some of these applications to work with this product. If the mechanism of Special Applications fails to make an application work, try setting your computer as the **DMZ** host instead.

1. **Trigger:** the outbound port number issued by the application..
2. **Incoming Ports:** when the trigger packet is detected, the inbound packets sent to the specified port numbers are allowed to pass through the firewall.

This product provides some predefined settings. Select your application and click **Copy to** to add the predefined setting to your list.

Note! At any given time, only one PC can use each Special Application tunnel.

## 4.5.3 Miscellaneous Items

**OvisLink** Quick Setup Status

+ Basic Setting  
 - Port Forwarding  
 o Virtual Server  
 o Special AP  
 o Miscellaneous  
 + Firewall Setting  
 + Advanced Setting  
 + Maintenance

Log out

### Miscellaneous Items

Item	Setting	Enable
▶ IP Address of DMZ Host	192.168.1. <input type="text"/>	<input type="checkbox"/>
▶ Non-standard FTP port	<input type="text" value="0"/>	<input type="checkbox"/>
▶ UPnP Setting	<input type="radio"/> Enable	<input checked="" type="radio"/> Disable

Save Undo Help

### IP Address of DMZ Host

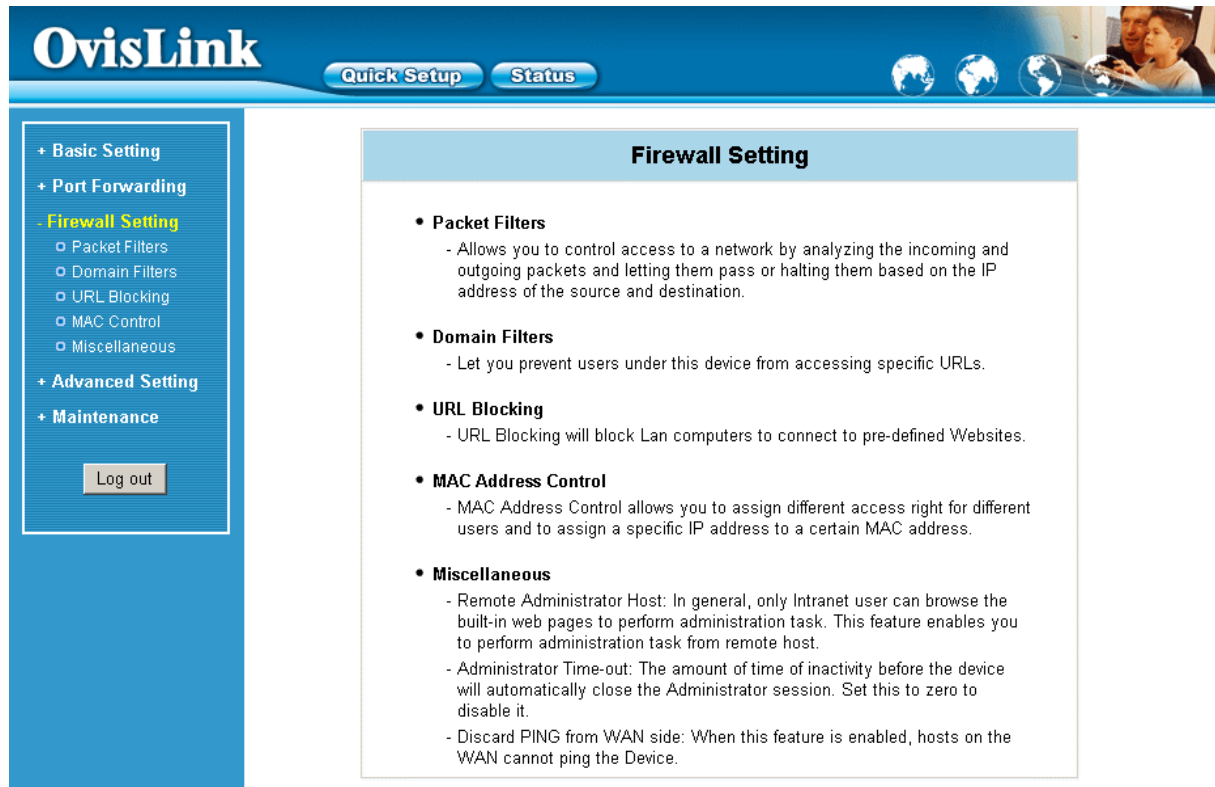
DMZ (DeMilitarized Zone) Host is a host without the protection of firewall. It allows a computer to be exposed to unrestricted 2-way communication for Internet games, Video conferencing, Internet telephony and other special applications.

NOTE: This feature should be used only when needed.

### Non-standard FTP port

You have to configure this item if you want to access an FTP server whose port number is not 21. This setting will be lost after rebooting.

## 4.6 Firewall Settings



The screenshot displays the OvisLink web interface. At the top, the 'OvisLink' logo is on the left, and 'Quick Setup' and 'Status' buttons are in the center. On the right, there are three globe icons and a small photo of a man and a child. A left-hand navigation menu is visible, with 'Firewall Setting' highlighted in yellow. The main content area is titled 'Firewall Setting' and contains a list of configuration options.

**OvisLink** Quick Setup Status

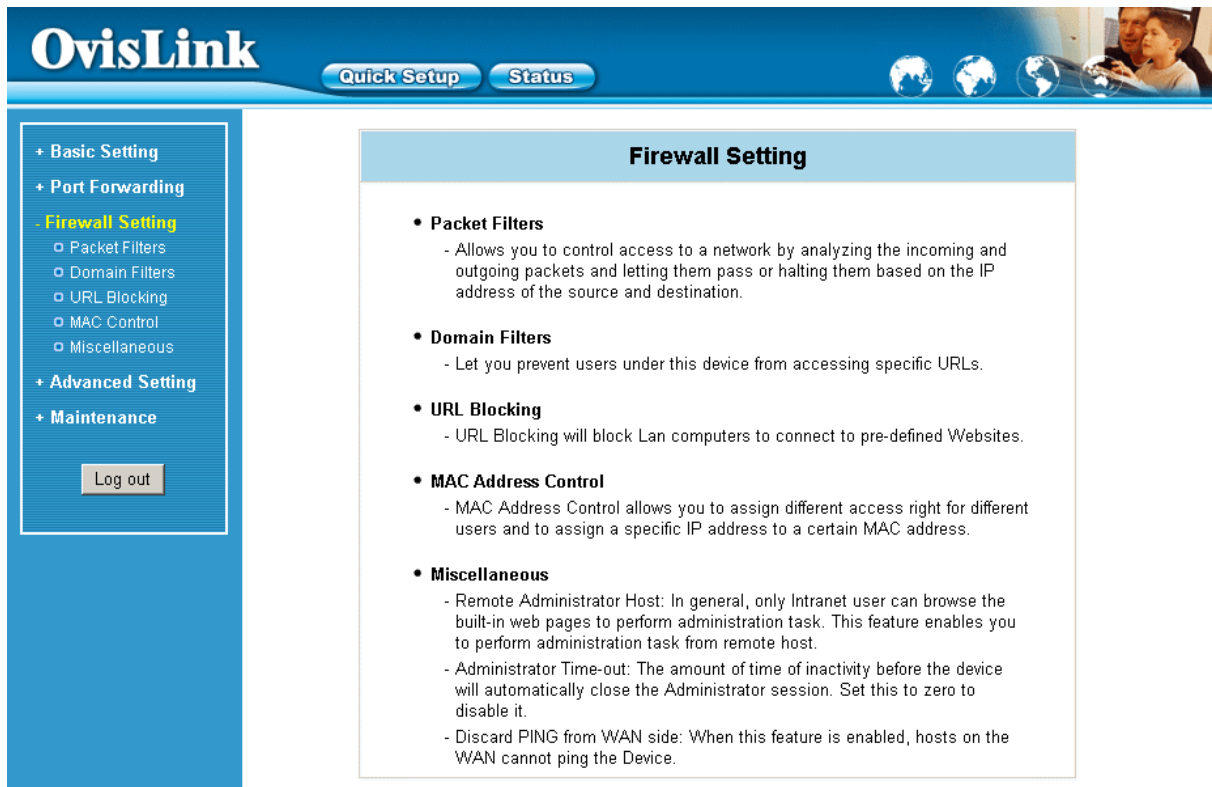
+ Basic Setting  
+ Port Forwarding  
**- Firewall Setting**  
o Packet Filters  
o Domain Filters  
o URL Blocking  
o MAC Control  
o Miscellaneous  
+ Advanced Setting  
+ Maintenance

Log out

### Firewall Setting

- **Packet Filters**
  - Allows you to control access to a network by analyzing the incoming and outgoing packets and letting them pass or halting them based on the IP address of the source and destination.
- **Domain Filters**
  - Let you prevent users under this device from accessing specific URLs.
- **URL Blocking**
  - URL Blocking will block Lan computers to connect to pre-defined Websites.
- **MAC Address Control**
  - MAC Address Control allows you to assign different access right for different users and to assign a specific IP address to a certain MAC address.
- **Miscellaneous**
  - Remote Administrator Host: In general, only Intranet user can browse the built-in web pages to perform administration task. This feature enables you to perform administration task from remote host.
  - Administrator Time-out: The amount of time of inactivity before the device will automatically close the Administrator session. Set this to zero to disable it.
  - Discard PING from WAN side: When this feature is enabled, hosts on the WAN cannot ping the Device.

## 4.6.1 Packet Filter



**OvisLink** Quick Setup Status

- + Basic Setting
- + Port Forwarding
- **Firewall Setting**
  - o Packet Filters
  - o Domain Filters
  - o URL Blocking
  - o MAC Control
  - o Miscellaneous
- + Advanced Setting
- + Maintenance

Log out

### Firewall Setting

- **Packet Filters**
  - Allows you to control access to a network by analyzing the incoming and outgoing packets and letting them pass or halting them based on the IP address of the source and destination.
- **Domain Filters**
  - Let you prevent users under this device from accessing specific URLs.
- **URL Blocking**
  - URL Blocking will block Lan computers to connect to pre-defined Websites.
- **MAC Address Control**
  - MAC Address Control allows you to assign different access right for different users and to assign a specific IP address to a certain MAC address.
- **Miscellaneous**
  - Remote Administrator Host: In general, only Intranet user can browse the built-in web pages to perform administration task. This feature enables you to perform administration task from remote host.
  - Administrator Time-out: The amount of time of inactivity before the device will automatically close the Administrator session. Set this to zero to disable it.
  - Discard PING from WAN side: When this feature is enabled, hosts on the WAN cannot ping the Device.

Packet Filter enables you to control what packets are allowed to pass the router. Outbound filter applies on all outbound packets. However, Inbound filter applies on packets that destined to Virtual Servers or DMZ host only. You can select one of the two filtering policies:

1. Allow all to pass except those match the specified rules
2. Deny all to pass except those match the specified rules

You can specify 8 rules for each direction: inbound or outbound. For each rule, you can define the following:

- Source IP address
- Source port address
- Destination IP address
- Destination port address
- Protocol: TCP or UDP or both.
- Use Rule#

For source or destination IP address, you can define a single IP address (4.3.2.1) or a range of IP addresses (4.3.2.1-4.3.2.254). An empty implies all IP addresses.

For source or destination port, you can define a single port (80) or a range of ports (1000-1999). Add prefix "T" or "U" to specify TCP or UDP protocol. For example, T80, U53, U2000-2999. No prefix indicates both TCP and UDP are defined. An empty implies all port addresses. **Packet Filter** can work with **Scheduling Rules**, and give user more flexibility on Access control. For Detail, please refer to **Scheduling Rule**.

Each rule can be enabled or disabled individually.

Inbound Filter:

To enable **Inbound Packet Filter** click the check box next to **Enable** in the **Inbound Packet Filter** field.

Suppose you have SMTP Server (25), POP Server (110), Web Server (80), FTP Server (21), and News Server (119) defined in Virtual Server or DMZ Host.

**Example 1:**

The screenshot shows the OvisLink web interface for Firewall Settings. The 'Outbound Packet Filter' section is active, showing a table of rules. Rule 1 is enabled and allows traffic from 1.2.3.100-1.2.3.149 to port 25-100. Rule 2 is enabled and allows traffic from 1.2.3.10-1.2.3.20. Rules 3-8 are disabled.

ID	Source IP : Ports	Destination IP : Ports	Enable	Use Rule#
1	1.2.3.100-1.2.3.149 : [ ]	[ ] : 25-100	<input checked="" type="checkbox"/>	[0]
2	1.2.3.10-1.2.3.20 : [ ]	[ ] : [ ]	<input checked="" type="checkbox"/>	[0]
3	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
4	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
5	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
6	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
7	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
8	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]

(1.2.3.100-1.2.3.149) They are allow to send mail (port 25), receive mail (port 110), and browse the Internet (port 80)

(1.2.3.10-1.2.3.20) They can do everything (block nothing) Others are all blocked.



**Example 2:**

**OvisLink** Quick Setup Status

**Outbound Packet Filter**

Enable  
 Allow all to pass except those match the following rules.  
 Deny all to pass except those match the following rules.

ID	Source IP : Ports	Destination IP : Ports	Enable	Use Rule#
1	1.2.3.100-1.2.3.119 : [ ]	[ ] : 21	<input checked="" type="checkbox"/>	[0]
2	1.2.3.100-1.2.3.119 : [ ]	[ ] : 119	<input checked="" type="checkbox"/>	[0]
3	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
4	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
5	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
6	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
7	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
8	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]

Schedule rule (00)Always Copy to ID --

Save Undo Inbound Filter... MAC Level... Help

(1.2.3.100-1.2.3.119) They can do everything except read net news (port 119) and transfer files via FTP (port 21)

Others are all allowed.

After **Inbound Packet Filter** setting is configured, click the **save** button.

Outbound Filter:

To enable **Outbound Packet Filter** click the check box next to **Enable** in the **Outbound Packet Filter** field.

**Example 1:**

**OvisLink** Quick Setup Status

**Outbound Packet Filter**

Enable  
 Allow all to pass except those match the following rules.  
 Deny all to pass except those match the following rules.

ID	Source IP : Ports	Destination IP : Ports	Enable	Use Rule#
1	192.168.1.149 : [ ]	[ ] : 25-100	<input checked="" type="checkbox"/>	[0]
2	192.168.1.20 : [ ]	[ ] : [ ]	<input checked="" type="checkbox"/>	[0]
3	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
4	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
5	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
6	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
7	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]
8	[ ] : [ ]	[ ] : [ ]	<input type="checkbox"/>	[0]

Schedule rule (00)Always Copy to ID --

Save Undo Inbound Filter... MAC Level... Help

(192.168.1.100-192.168.1.149) They are allowed to send mail (port 25), receive mail (port 110), and browse Internet (port 80); port 53 (DNS) is necessary to resolve the domain name.

(192.168.1.10-192.168.1.20) They can do everything (block nothing)

Others are all blocked.

## Example 2:

The screenshot shows the OvisLink web interface for configuring an Outbound Packet Filter. The interface includes a navigation menu on the left with options like Basic Setting, Port Forwarding, Firewall Setting, Advanced Setting, and Maintenance. The main content area is titled 'Outbound Packet Filter' and contains a table of filter rules. The table has columns for ID, Source IP : Ports, Destination IP : Ports, Enable, and Use Rule#. Two rules are configured: Rule 1 blocks traffic from 192.168.1.149 to port 21, and Rule 2 blocks traffic from 192.168.1.119 to port 119. Both rules are enabled. Below the table, there are controls for scheduling rules and a 'Copy to ID' button. At the bottom, there are buttons for Save, Undo, Inbound Filter..., MAC Level..., and Help.

ID	Source IP : Ports	Destination IP : Ports	Enable	Use Rule#
1	192.168.1.149 :	: 21	<input checked="" type="checkbox"/>	0
2	192.168.1.119 :	: 119	<input checked="" type="checkbox"/>	0
3	:	:	<input type="checkbox"/>	0
4	:	:	<input type="checkbox"/>	0
5	:	:	<input type="checkbox"/>	0
6	:	:	<input type="checkbox"/>	0
7	:	:	<input type="checkbox"/>	0
8	:	:	<input type="checkbox"/>	0

(192.168.1.100-192.168.1.119) They can do everything except read net news (port 119) and transfer files via FTP (port 21)

Others are allowed

After **Outbound Packet Filter** setting is configured, click the **save** button.

## 4.6.2 Domain Filter

**OvisLink** Quick Setup Status

+ Basic Setting  
+ Port Forwarding  
- Firewall Setting  
  o Packet Filters  
  o Domain Filters  
  o URL Blocking  
  o MAC Control  
  o Miscellaneous  
+ Advanced Setting  
+ Maintenance

Log out

### Domain Filter

Item	Setting
▶ Domain Filter	<input checked="" type="checkbox"/> Enable
▶ Log DNS Query	<input checked="" type="checkbox"/> Enable
▶ Privilege IP Addresses Range	From <input type="text" value="1"/> To <input type="text" value="20"/>

ID	Domain Suffix	Action	Enable
1	<input type="text" value="www.msn.com"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
2	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
3	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
4	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
5	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
6	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
7	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
8	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
9	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
10	* (all others)	<input type="checkbox"/> Drop <input type="checkbox"/> Log	-

Save Undo Help

### Domain Filter

Let you prevent users under this device from accessing specific URLs.

### Domain Filter Enable

Check if you want to enable Domain Filter.

### Log DNS Query

Check if you want to log the action when someone accesses the specific URLs.

### Privilege IP Addresses Range

Setting a group of hosts and privilege these hosts to access network without restriction.

### Domain Suffix

A suffix of URL to be restricted. For example, ".com", "xxx.com".

### Action

When someone is accessing the URL met the domain-suffix, what kind of action you want.

Check drop to block the access. Check log to log these access.

### Enable

Check to enable each rule.

**Example:**

**OvisLink** Quick Setup Status

**Domain Filter**

Item	Setting
▶ Domain Filter	<input checked="" type="checkbox"/> Enable
▶ Log DNS Query	<input checked="" type="checkbox"/> Enable
▶ Privilege IP Addresses Range	From <input type="text" value="1"/> To <input type="text" value="20"/>

ID	Domain Suffix	Action	Enable
1	<input type="text" value="www.msn.com"/>	<input checked="" type="checkbox"/> Drop <input checked="" type="checkbox"/> Log	<input checked="" type="checkbox"/>
2	<input type="text" value="www.sina.com"/>	<input type="checkbox"/> Drop <input checked="" type="checkbox"/> Log	<input checked="" type="checkbox"/>
3	<input type="text" value="www.google.com"/>	<input checked="" type="checkbox"/> Drop <input type="checkbox"/> Log	<input checked="" type="checkbox"/>
4	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
5	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
6	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
7	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
8	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
9	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
10	* (all others)	<input type="checkbox"/> Drop <input type="checkbox"/> Log	-

Save Undo Help

In this example:

1. URL include “www.msn.com” will be blocked, and the action will be record in log-file.
2. URL include “www.sina.com” will not be blocked, but the action will be record in log-file.
3. URL include “www.google.com” will be blocked, but the action will not be record in log-file.
4. IP address X.X.X.1~ X.X.X.20 can access network without restriction.

## 4.6.3 URL Blocking

**OvisLink** Quick Setup Status

**URL Blocking**

Item	Setting
▶ URL Blocking	<input type="checkbox"/> Enable

ID	URL	Enable
1	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="checkbox"/>
9	<input type="text"/>	<input type="checkbox"/>
10	<input type="text"/>	<input type="checkbox"/>

Save Undo Help

**URL Blocking** will block LAN computers to connect to pre-defined Websites.

The major difference between “Domain filter” and “URL Blocking” is Domain filter require user to input suffix (like .com or .org, etc), while URL Blocking require user to input a keyword only. In other words, Domain filter can block specific website, while URL Blocking can block hundreds of websites by simply a **keyword**.

### URL Blocking Enable

Checked if you want to enable URL Blocking.

### URL

If any part of the Website's URL matches the pre-defined word, the connection will be blocked.

For example, you can use pre-defined word "sex" to block all websites if their URLs contain pre-defined word "sex".

### Enable

Checked it to enable each rule.

**OvisLink** Quick Setup Status

**URL Blocking**

Item	Setting
▶ URL Blocking	<input checked="" type="checkbox"/> Enable

ID	URL	Enable
1	msn	<input checked="" type="checkbox"/>
2	sina	<input checked="" type="checkbox"/>
3	cnnsi	<input checked="" type="checkbox"/>
4	espn	<input checked="" type="checkbox"/>
5		<input type="checkbox"/>
6		<input type="checkbox"/>
7		<input type="checkbox"/>
8		<input type="checkbox"/>
9		<input type="checkbox"/>
10		<input type="checkbox"/>

Save Undo Help

In this example:

1. URL include “msn” will be blocked, and the action will be record in log-file.
2. URL include “sina” will be blocked, but the action will be record in log-file
3. URL include “cnnsi” will not be blocked, but the action will be record in log-file.
4. URL include “espn” will be blocked, but the action will be record in log-file

## 4.6.4 MAC Address Control

**MAC Address Control**

Item	Setting
▶ MAC Address Control	<input checked="" type="checkbox"/> Enable
<input type="checkbox"/> Connection control	Wireless and wired clients with <b>C</b> checked can connect to this device; and <input type="text" value="allow"/> unspecified MAC addresses to connect.
<input type="checkbox"/> Association control	Wireless clients with <b>A</b> checked can associate to the wireless LAN; and <input type="text" value="deny"/> unspecified MAC addresses to associate.

ID	MAC Address	IP Address	C	A
1	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

DHCP clients:  Copy to ID:

<< Previous   Next >>   Save   Undo   Help

MAC Address Control allows you to assign different access right for different users and to assign a specific IP address to a certain MAC address.

**MAC Address Control** Check "Enable" to enable the "MAC Address Control". All of the settings in this page will take effect only when "Enable" is checked.

**Connection control** Check "Connection control" to enable the controlling of which wired and wireless clients can connect to this device. If a client is denied to connect to this device, it means the client can't access to the Internet either. Choose "allow" or "deny" to allow or deny the clients, whose MAC addresses are not in the "Control table" (please see below), to connect to this device.

**Association control** Check "Association control" to enable the controlling of which wireless client can associate to the wireless LAN. If a client is denied to associate to the wireless LAN, it means the client can't send or receive any data via this device. Choose "allow" or "deny" to allow or deny the clients, whose MAC addresses are not in the "Control table", to associate to the wireless LAN.



## Control table

ID	MAC Address	IP Address	C	A
1	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="text"/>	192.168.1. <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

DHCP clients   ID

"Control table" is the table at the bottom of the "MAC Address Control" page. Each row of this table indicates the MAC address and the expected IP address mapping of a client. There are four columns in this table:

<b>MAC Address</b>	MAC address indicates a specific client.
<b>IP Address</b>	Expected IP address of the corresponding client. Keep it empty if you don't care its IP address.
<b>C</b>	When " <b>Connection control</b> " is checked, check " <b>C</b> " will allow the corresponding client to connect to this device.
<b>A</b>	When " <b>Association control</b> " is checked, check " <b>A</b> " will allow the corresponding client to associate to the wireless LAN.

In this page, we provide the following Combobox and button to help you to input the MAC address.

DHCP clients   ID

You can select a specific client in the "DHCP clients" Combobox, and then click on the "Copy to" button to copy the MAC address of the client you select to the ID selected in the "ID" Combobox.

**Previous page and Next Page** To make this setup page simple and clear, we have divided the "Control table" into several pages. You can use these buttons to navigate to different pages.

## 4.6.5 Miscellaneous Items

Item	Setting	Enable
▶ Remote Administrator Host / Port	0.0.0.0 / 88	<input type="checkbox"/>
▶ Administrator Time-out	600 seconds (0 to disable)	<input type="checkbox"/>
▶ Discard PING from WAN side		<input type="checkbox"/>
▶ SPI mode		<input type="checkbox"/>
▶ DoS Attack Detection		<input type="checkbox"/>

### Remote Administrator Host/Port

In general, only Intranet user can browse the built-in web pages to perform administration task. This feature enables you to perform administration task from remote host. If this feature is enabled, only the specified IP address can perform remote administration. If the specified IP address is 0.0.0.0, any host can connect to this product to perform administration task. You can use subnet mask bits "/nn" notation to specified a group of trusted IP addresses. For example, "10.1.2.0/24".

**NOTE:** When Remote Administration is enabled, the web server port will be shifted to 88. You can change web server port to other port, too.

### Administrator Time-out

The time of no activity to logout automatically. Set it to zero to disable this feature.

### Discard PING from WAN side

When this feature is enabled, any host on the WAN cannot ping this product.

### SPI Mode

When this feature is enabled, the router will record the packet information pass through the router like IP address, port address, ACK, SEQ number and so on. And the router will check every incoming packet to detect if this packet is valid.

### DoS Attack Detection

When this feature is enabled, the router will detect and log the DoS attack comes from the Internet. Currently, the router can detect the following DoS attack: SYN Attack, WinNuke, Port Scan, Ping of Death, Land Attack etc.

## 4.7 Advanced Settings

**OvisLink** Quick Setup Status

- + Basic Setting
- + Port Forwarding
- + Firewall Setting
- **Advanced Setting**
  - o System Time
  - o System Log
  - o Dynamic DNS
  - o SNMP
  - o Routing
  - o Schedule Rule
- + Maintenance

Log out

### Advanced Setting

- **System Time**  
- Allow you to set device time manually or consult network time from NTP server.
- **System Log**  
- Send system log to a dedicated host or email to specific receipts.
- **Dynamic DNS**  
- To host your server on a changing IP address, you have to use dynamic domain name service (DDNS).
- **SNMP**  
- Gives a user the capability to remotely manage a computer network by polling and setting terminal values and monitoring network events.
- **Routing**  
- If you have more than one routers and subnets, you may want to enable routing table to allow packets to find proper routing path and allow different subnets to communicate with each other.
- **Schedule Rule**  
- Apply schedule rules to Packet Filters and Virtual Server.

### 4.7.1 System Time

**OvisLink** Quick Setup Status

- + Basic Setting
- + Port Forwarding
- + Firewall Setting
- **Advanced Setting**
  - o System Time
  - o System Log
  - o Dynamic DNS
  - o SNMP
  - o Routing
  - o Schedule Rule
- + Maintenance

Log out

### System Time

Item	Setting
▶ <input type="radio"/> Get Date and Time by NTP Protocol	Sync Now ! Time Server: time.nist.gov Time Zone: (GMT-08:00) Pacific Time (US & Canada)
▶ <input type="radio"/> Set Date and Time using PC's Date and Time	PC Date and Time: 2005年4月1日 下午 04:16:36
▶ <input checked="" type="radio"/> Set Date and Time manually	Date: Year: 2005, Month: Feb, Day: 1 Time: Hour: 0 (0-23), Minute: 0 (0-59), Second: 0 (0-59)
▶ Daylight Saving	<input type="radio"/> Enable <input checked="" type="radio"/> Disable Start: Month: Jan, Day: 1, Hour: 0 End: Month: Jan, Day: 1, Hour: 0

Save Undo Help

### Get Date and Time by NTP Protocol

Selected if you want to Get Date and Time by NTP Protocol.

### Time Server

Select a NTP time server to consult UTC time

### Time Zone

Select a time zone where this device locates.

### Set Date and Time manually

Selected if you want to Set Date and Time manually.

### Set Date and Time manually

Selected if you want to Set Date and Time manually.

### Function of Buttons

**Sync Now:** Synchronize system time with network time server

**Daylight Saving:**Set up where the location is.

## 4.7.2 System Log

Item	Setting	Enable
▶ IP Address for Syslogd	192.168.1.	<input type="checkbox"/>
▶ IP Address of Outgoing Mail Server		<input type="checkbox"/>
• Log or Alert Recipient		<input type="checkbox"/>

This page support two methods to export system logs to specific destination by means of syslog(UDP) and SMTP(TCP). The items you have to setup including:

## IP Address for Syslog

Host IP of destination where syslogs will be sent to.

Check **Enable** to enable this function.

## E-mail Alert Enable

Check if you want to enable Email alert (send syslog via email).

## SMTP Server IP and Port

Input the SMTP server IP and port, which are connected with ':'. If you do not specify port number, the default value is 25.

For example, "mail.your\_url.com" or "192.168.1.100:26".

## Send E-mail alert to

The recipients who will receive these logs. You can assign more than 1 recipient, using ';' or ',' to separate these email addresses.

## 4.7.3 Dynamic DNS

Item	Setting
▶ DDNS	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
▶ Provider	DynDNS.org(Dynamic)
▶ Host Name	kink.dyndns.org
▶ Username / E-mail	12345
▶ Password / Key	*****

To host your server on a changing IP address, you have to use dynamic domain name service (DDNS).

So that anyone wishing to reach your host only needs to know the name of it. Dynamic DNS will map the name of your host to your current IP address, which changes each time you connect your Internet service provider.

Before you enable **Dynamic DNS**, you need to register an account on one of these Dynamic DNS servers that we list in **provider** field.

To enable **Dynamic DNS** click the check box next to **Enable** in the **DDNS** field.

Next you can enter the appropriate information about your Dynamic DNS Server.

You have to define:

Provider

Host Name

Username/E-mail

Password/Key

You will get this information when you register an account on a Dynamic DNS server.

**Example:**

Item	Setting
▶ DDNS	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
▶ Provider	DynDNS.org(Dynamic)
▶ Host Name	kink.dyndns.org
▶ Username / E-mail	12345
▶ Password / Key	*****

Save Undo Help

After Dynamic DNS setting is configured, click the save button.

## 4.7.4 SNMP Setting

Item	Setting
▶ Enable SNMP	<input checked="" type="checkbox"/> Local <input type="checkbox"/> Remote
▶ Get Community	<input type="text" value="public"/>
▶ Set Community	<input type="text" value="private"/>
▶ WAN Access IP Address	<input type="text" value="0.0.0.0"/>

Save Undo Help

In brief, SNMP, the Simple Network Management Protocol, is a protocol designed to give a user the capability to remotely manage a computer network by polling and setting terminal values and monitoring network events.

### Enable SNMP

You must check either Local or Remote or both to enable SNMP function. If Local is checked, this device will response request from LAN. If Remote is checked, this device will response request from WAN.

### Get Community

Setting the community of GetRequest your device will response.

### Set Community

Setting the community of SetRequest your device will accept.

## 4.7.5 Routing Table

ID	Destination	Subnet Mask	Gateway	Hop	Enable
1					<input type="checkbox"/>
2					<input type="checkbox"/>
3					<input type="checkbox"/>
4					<input type="checkbox"/>
5					<input type="checkbox"/>
6					<input type="checkbox"/>
7					<input type="checkbox"/>
8					<input type="checkbox"/>

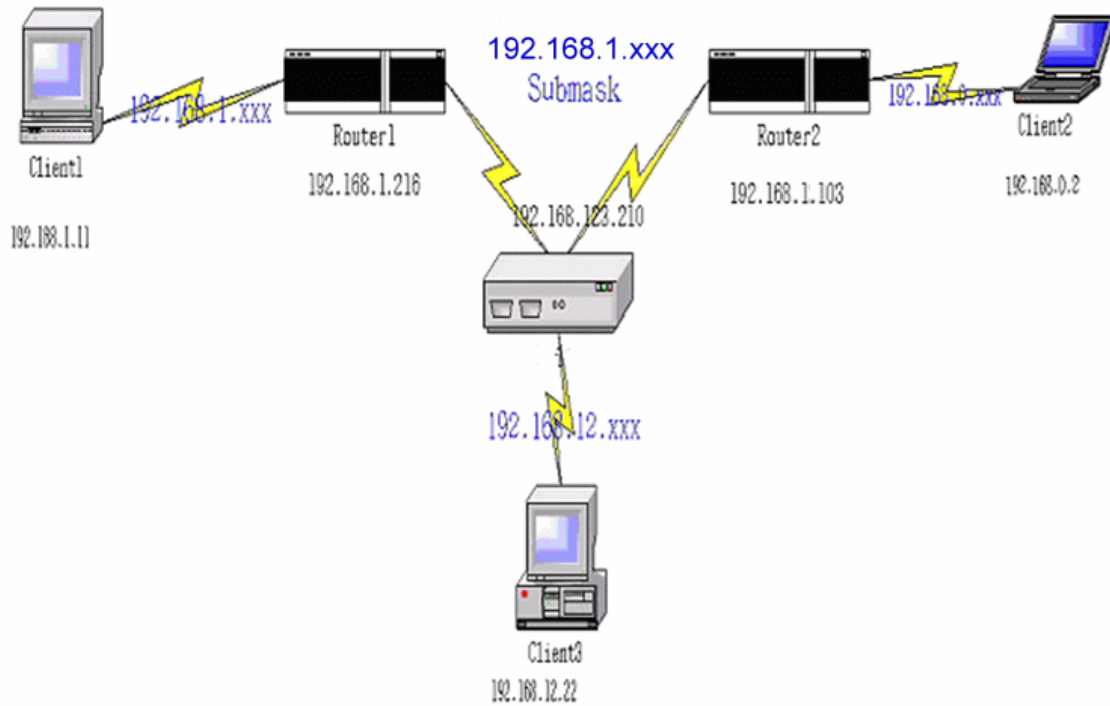
**Routing Tables** allow you to determine which physical interface address to use for outgoing IP data grams. If you have more than one routers and subnets, you will need to enable routing table to allow packets to find proper routing path and allow different subnets to communicate with each other.

Routing Table settings are settings used to setup the functions of static.

**Static Routing:** For static routing, you can specify up to 8 routing rules. You can enter the destination IP address, subnet mask, gateway, hop for each routing rule, and then enable or disable the rule by checking or unchecking the Enable checkbox.



**Example:**



**Configuration on NAT Router**

Destination	SubnetMask	Gateway	Hop	Enabled
192.168.1.0	255.255.255.0	192.168.123.216	1	✓
192.168.0.0	255.255.255.0	192.168.123.103	1	✓

So if, for example, the client3 wanted to send an IP data gram to 192.168.0.2, it would use the above table to determine that it had to go via 192.168.1.103 (a gateway),

And if it sends Packets to 192.168.1.11 will go via 192.168.1.216

Each rule can be enabled or disabled individually.

After **routing table** setting is configured, click the **save** button.

## 4.7.6 Schedule Rule

**OvisLink** Quick Setup Status

**Schedule Rule**

Item	Setting
▶ Schedule	<input checked="" type="checkbox"/> Enable

Rule#	Rule Name	Action

Save Add New Rule... Help

Log out

You can set the schedule time to decide which service will be turned on or off. Select the “enable” item.

Press “**Add New Rule**”

You can write a rule name and set which day and what time to schedule from “Start Time” to “End Time”. The following example configure “ftp time” as everyday 14:10 to 16:20

**OvisLink** Quick Setup Status

**Schedule Rule Setting**

Item	Setting
▶ Name of Rule 1	ftp time

Week Day	Start Time (hh:mm)	End Time (hh:mm)
Sunday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>
Monday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>
Tuesday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>
Wednesday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>
Thursday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>
Friday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>
Saturday	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>
Every Day	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>

Save Undo Help Back

After configure Rule 1→

**OvisLink** Quick Setup Status

+ Basic Setting  
+ Port Forwarding  
+ Firewall Setting  
- **Advanced Setting**  
o System Time  
o System Log  
o Dynamic DNS  
o SNMP  
o Routing  
o Schedule Rule  
+ Maintenance

Log out

### Schedule Rule

Item	Setting
▶ Schedule	<input type="checkbox"/> Enable

Rule#	Rule Name	Action
1	ftp time	Edit Delete

Save Add New Rule... Help

#### Schedule Enable

Selected if you want to Enable the Scheduler.

#### Edit

To edit the schedule rule.

#### Delete

To delete the schedule rule, and the rule# of the rules behind the deleted one will decrease one automatically.

Schedule Rule can be apply to Virtual server and Packet Filter, for example:

Example1: **Virtual Server** – Apply Rule#1 (ftp time: everyday 14:10 to 16:20)

**OvisLink** Quick Setup Status

**Virtual Server**

ID	Service Ports	Server IP	Enable	Use Rule#
1	21	192.168.1.33	<input checked="" type="checkbox"/>	1
2		192.168.1.	<input type="checkbox"/>	0
3		192.168.1.	<input type="checkbox"/>	0
4		192.168.1.	<input type="checkbox"/>	0
5		192.168.1.	<input type="checkbox"/>	0
6		192.168.1.	<input type="checkbox"/>	0
7		192.168.1.	<input type="checkbox"/>	0
8		192.168.1.	<input type="checkbox"/>	0
9		192.168.1.	<input type="checkbox"/>	0
10		192.168.1.	<input type="checkbox"/>	0
11		192.168.1.	<input type="checkbox"/>	0
12		192.168.1.	<input type="checkbox"/>	0
13		192.168.1.	<input type="checkbox"/>	0
14		192.168.1.	<input type="checkbox"/>	0
15		192.168.1.	<input type="checkbox"/>	0

Log out

Example2: **Packet Filter** – Apply Rule#1 (ftp time: everyday 14:10 to 16:20).

**OvisLink** Quick Setup Status

**Outbound Packet Filter**

Item Setting

▶ Outbound Filter  Enable

Allow all to pass except those match the following rules.

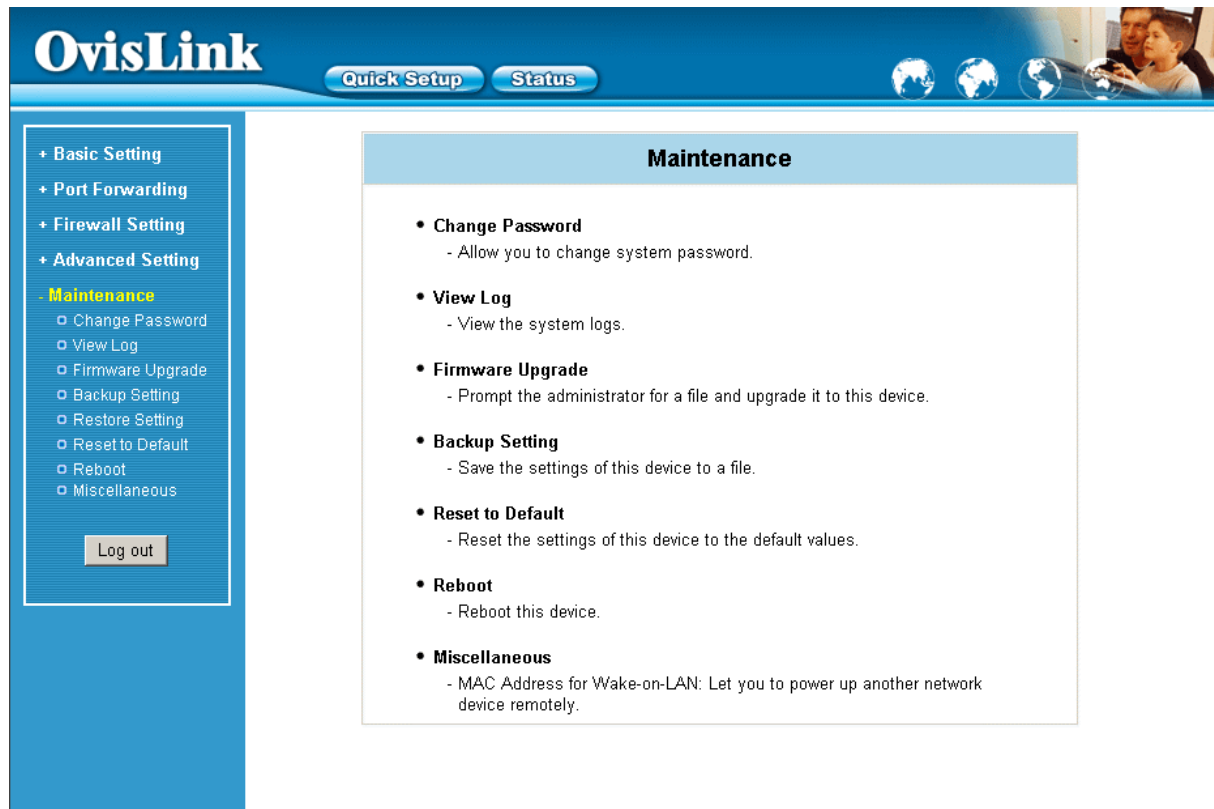
Deny all to pass except those match the following rules.

ID	Source IP : Ports	Destination IP : Ports	Enable	Use Rule#
1			<input type="checkbox"/>	1
2			<input type="checkbox"/>	0
3			<input type="checkbox"/>	0
4			<input type="checkbox"/>	0
5			<input type="checkbox"/>	0
6			<input type="checkbox"/>	0
7			<input type="checkbox"/>	0
8			<input type="checkbox"/>	0

Schedule rule (00)Always Copy to ID --

Save Undo Inbound Filter... MAC Level... Help

## 4.8 Maintenance



The screenshot displays the OvisLink web interface. At the top, the 'OvisLink' logo is on the left, and 'Quick Setup' and 'Status' buttons are in the center. On the right, there are three globe icons and a small photo of a man and a child. A left-hand navigation menu is visible, with 'Maintenance' highlighted in yellow. The main content area is titled 'Maintenance' and contains a list of options with their descriptions.

**OvisLink** Quick Setup Status

+ Basic Setting  
+ Port Forwarding  
+ Firewall Setting  
+ Advanced Setting  
**- Maintenance**  
o Change Password  
o View Log  
o Firmware Upgrade  
o Backup Setting  
o Restore Setting  
o Reset to Default  
o Reboot  
o Miscellaneous

Log out

### Maintenance

- **Change Password**
  - Allow you to change system password.
- **View Log**
  - View the system logs.
- **Firmware Upgrade**
  - Prompt the administrator for a file and upgrade it to this device.
- **Backup Setting**
  - Save the settings of this device to a file.
- **Reset to Default**
  - Reset the settings of this device to the default values.
- **Reboot**
  - Reboot this device.
- **Miscellaneous**
  - MAC Address for Wake-on-LAN: Let you to power up another network device remotely.

## 4.8.1 Change Password

Item	Setting
Old Password	<input type="text"/>
New Password	<input type="text"/>
Reconfirm	<input type="text"/>

You can change Password here. We **strongly** recommend you to change the system password for security reason.

## 4.8.2 System Log

WAN Type: Static IP Address (R1.97d7a)  
Display time: Wed Feb 02 06:17:59 2005

```
2005年2月2日 上午 06:15:50 DOD:TCP trigger from 192.168.1.154:2200 to 130.237.66.69:80
2005年2月2日 上午 06:15:50 DHCP:discover ()
2005年2月2日 上午 06:15:54 DHCP:discover ()
2005年2月2日 上午 06:16:02 DHCP:discover ()
2005年2月2日 上午 06:16:18 DHCP:discover ()
2005年2月2日 上午 06:16:52 DOD:TCP trigger from 192.168.1.154:2219 to 129.2.76.114:15273
2005年2月2日 上午 06:16:52 DOD:TCP trigger from 192.168.1.154:2220 to 129.2.74.33:54764
2005年2月2日 上午 06:16:52 DOD:TCP trigger from 192.168.1.154:2213 to 221.115.77.171:57257
2005年2月2日 上午 06:16:52 DOD:TCP trigger from 192.168.1.154:2215 to 220.211.229.136:59812
2005年2月2日 上午 06:16:52 DOD:TCP trigger from 192.168.1.154:2218 to 130.91.161.204:62995
2005年2月2日 上午 06:16:52 DOD:TCP trigger from 192.168.1.154:2216 to 131.175.30.68:5472
2005年2月2日 上午 06:16:52 DOD:TCP trigger from 192.168.1.154:2214 to 220.157.144.128:43383
2005年2月2日 上午 06:17:52 DOD:TCP trigger from 192.168.1.154:2292 to 24.245.11.248:37781
2005年2月2日 上午 06:17:52 DHCP:discover ()
2005年2月2日 上午 06:17:56 DHCP:discover ()
```

You can View system log by clicking the **View Log** button

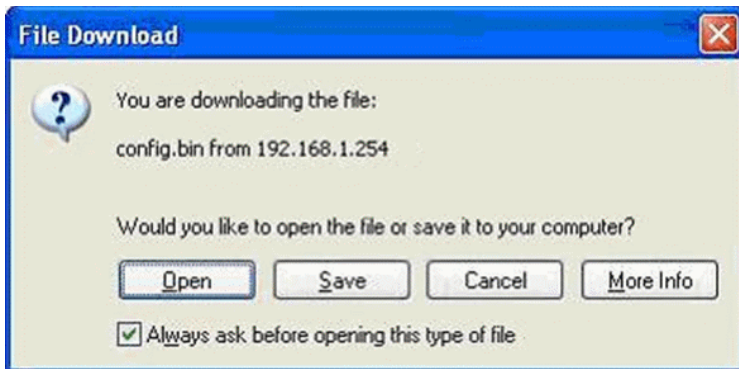
## 4.8.2 Firmware Upgrade



The screenshot displays the OvisLink web management interface. At the top, the 'OvisLink' logo is on the left, and 'Quick Setup' and 'Status' buttons are in the center. On the right, there are three globe icons and a small photo of a man and a woman. A left-hand navigation menu is visible, with 'Maintenance' selected and expanded to show options like 'Change Password', 'View Log', 'Firmware Upgrade', 'Backup Setting', 'Restore Setting', 'Reset to Default', 'Reboot', and 'Miscellaneous'. A 'Log out' button is at the bottom of this menu. The main content area is titled 'Firmware Upgrade' and features a 'Firmware Filename' label above a text input field and a '浏览...' (Browse...) button. Below this, a note states: 'Current firmware version is R1.97d7a. The upgrade procedure takes about 20 seconds. Note! Do not power off the unit when it is being upgraded. When the upgrade is done successfully, the unit will be restarted automatically.' At the bottom of the main area are 'Upgrade' and 'Cancel' buttons.

You can upgrade firmware by clicking **Firmware Upgrade** button.

### 4.8.3 Backup Setting



You can backup your settings by clicking the **Backup Setting** button and save it as a bin file. Once you want to restore these settings, please click **Firmware Upgrade** button and use the bin file you saved.

### 4.8.4 Reset to default



You can also reset this product to factory default by clicking the **Reset to default** button.

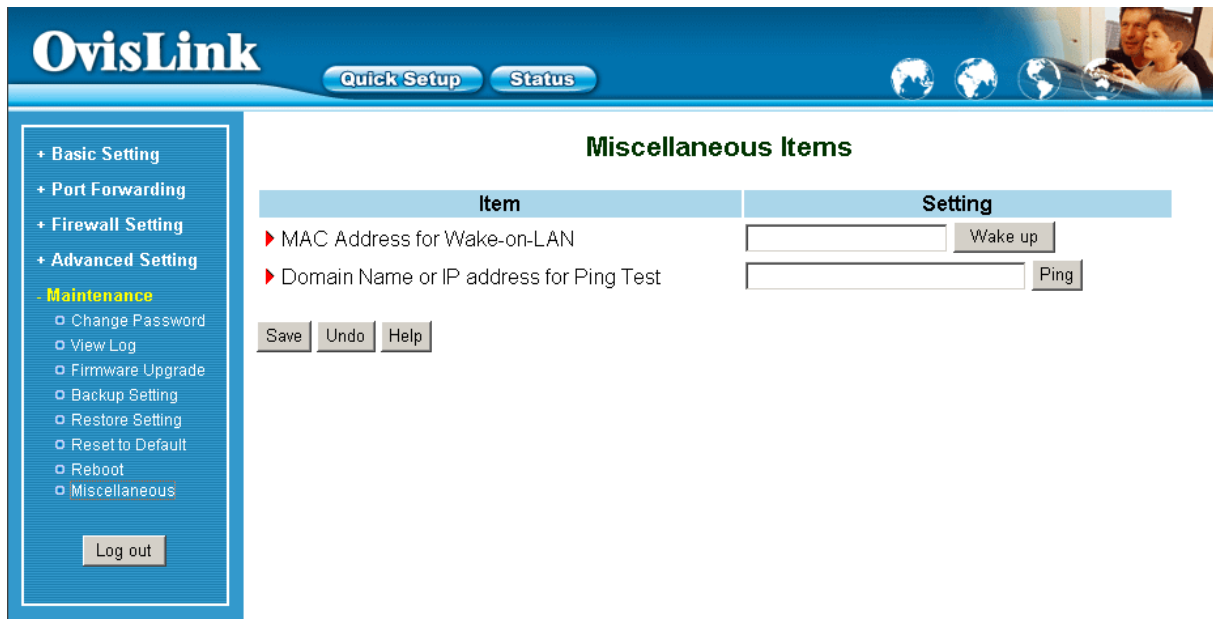
### 4.8.5 Reboot



You can also reboot this product by clicking the **Reboot** button.



## 4.8.6 Miscellaneous Items



The screenshot shows the OvisLink web interface. At the top, there is a blue header with the "OvisLink" logo on the left, "Quick Setup" and "Status" buttons in the center, and a small image of a family on the right. Below the header is a navigation menu on the left with the following items: "+ Basic Setting", "+ Port Forwarding", "+ Firewall Setting", "+ Advanced Setting", "- Maintenance" (highlighted), "Change Password", "View Log", "Firmware Upgrade", "Backup Setting", "Restore Setting", "Reset to Default", "Reboot", and "Miscellaneous". A "Log out" button is located at the bottom of the menu. The main content area is titled "Miscellaneous Items" and contains a table with two columns: "Item" and "Setting".

Item	Setting
▶ MAC Address for Wake-on-LAN	<input type="text"/> Wake up
▶ Domain Name or IP address for Ping Test	<input type="text"/> Ping

Below the table are three buttons: "Save", "Undo", and "Help".

### MAC Address for Wake-on-LAN

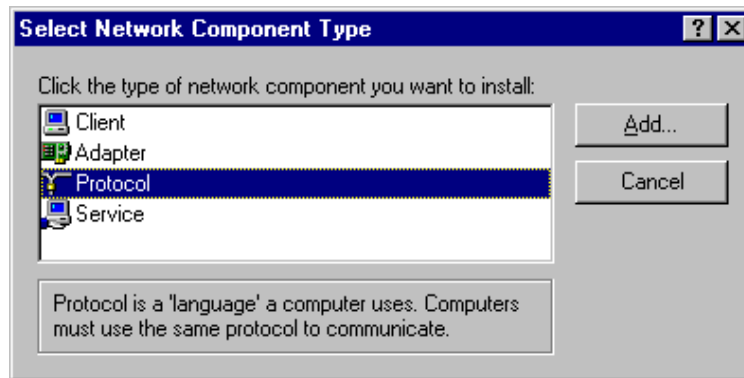
Wake-on-LAN is a technology that enables you to power up a networked device remotely. In order to enjoy this feature, the target device must be Wake-on-LAN enabled and you have to know the MAC address of this device, say 00-11-22-33-44-55. Clicking "Wake up" button will make the router to send the wake-up frame to the target device immediately.

## Appendix A TCP/IP Configuration for Windows 95/98

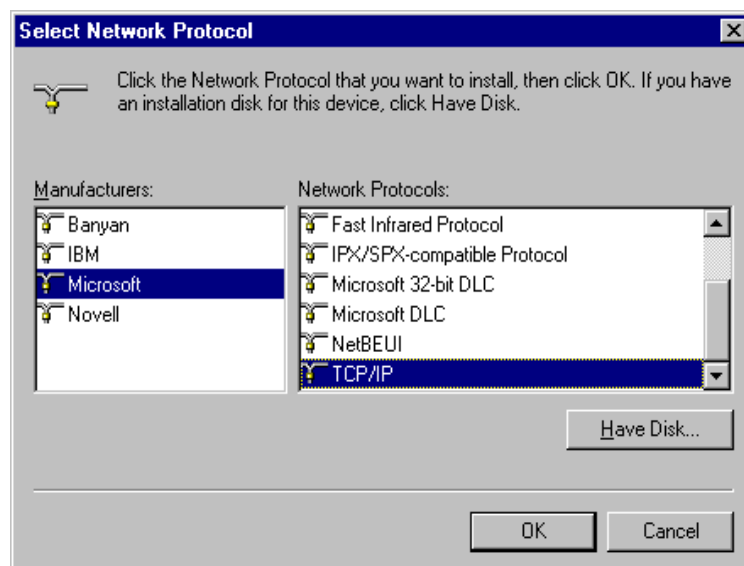
This section introduces you how to install TCP/IP protocol into your personal computer. And suppose you have been successfully installed one network card on your personal computer. If not, please refer to your network card manual. Moreover, the Section B.2 tells you how to set TCP/IP values for working with this NAT Router correctly.

### A.1 Install TCP/IP Protocol into Your PC

1. Click **Start** button and choose **Settings**, then click **Control Panel**.
2. Double click **Network** icon and select **Configuration** tab in the Network window.
3. Click **Add** button to add network component into your PC.
4. Double click **Protocol** to add TCP/IP protocol.



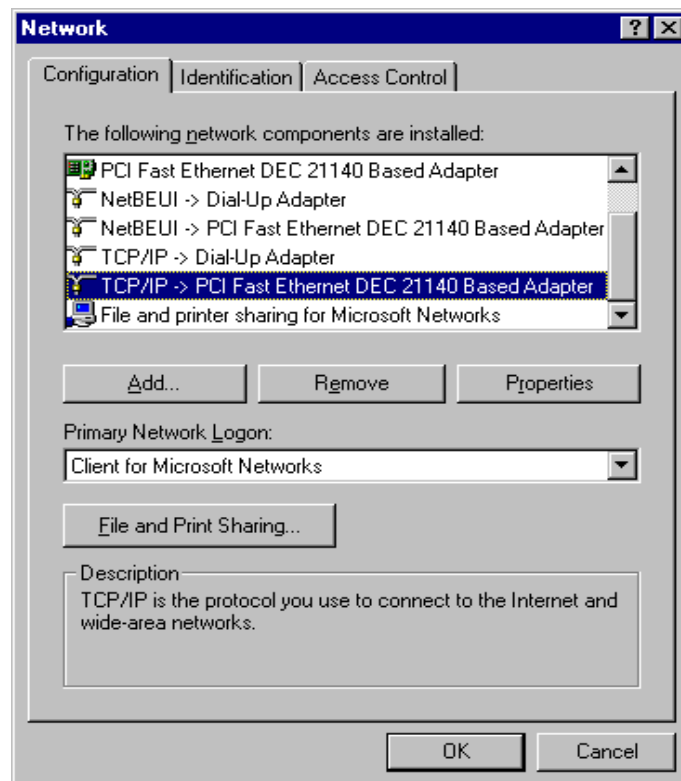
5. Select **Microsoft** item in the manufactures list. And choose **TCP/IP** in the Network Protocols. Click **OK** button to return to Network window.



6. The TCP/IP protocol shall be listed in the Network window. Click **OK** to complete the install procedure and restart your PC to enable the TCP/IP protocol.

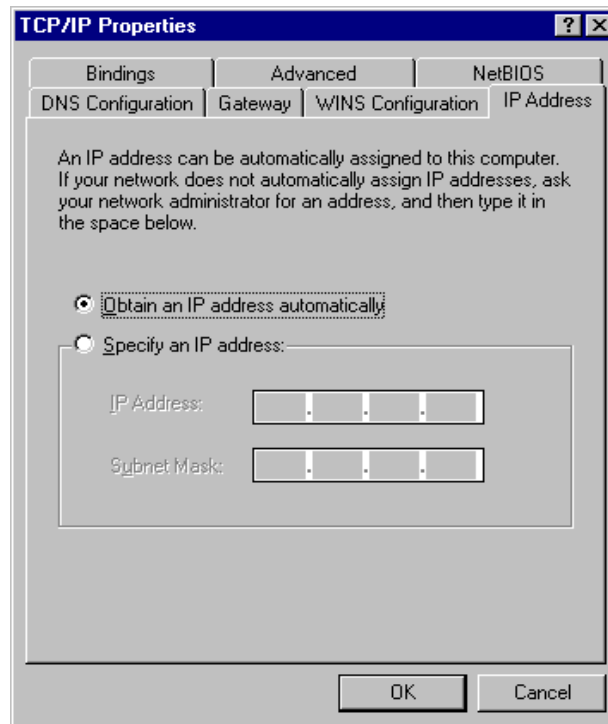
## A.2 Set TCP/IP Protocol for Working with NAT Router

1. Click **Start** button and choose **Settings**, then click **Control Panel**.
2. Double click **Network** icon. Select the TCP/IP line that has been associated to your network card in the **Configuration** tab of the Network window.

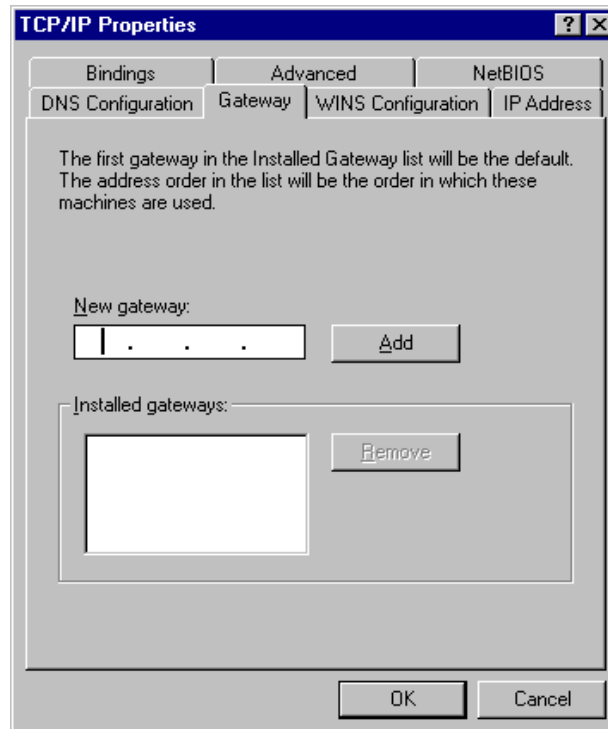


3. Click **Properties** button to set the TCP/IP protocol for this NAT Router.
4. Now, you have two setting methods:

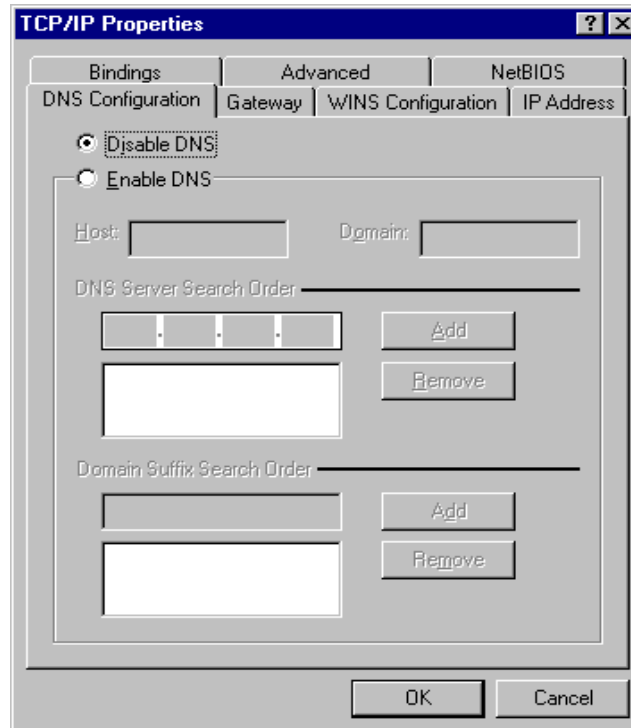
- a. Select **Obtain an IP address automatically** in the IP Address tab.



- b. Don't input any value in the Gateway tab.

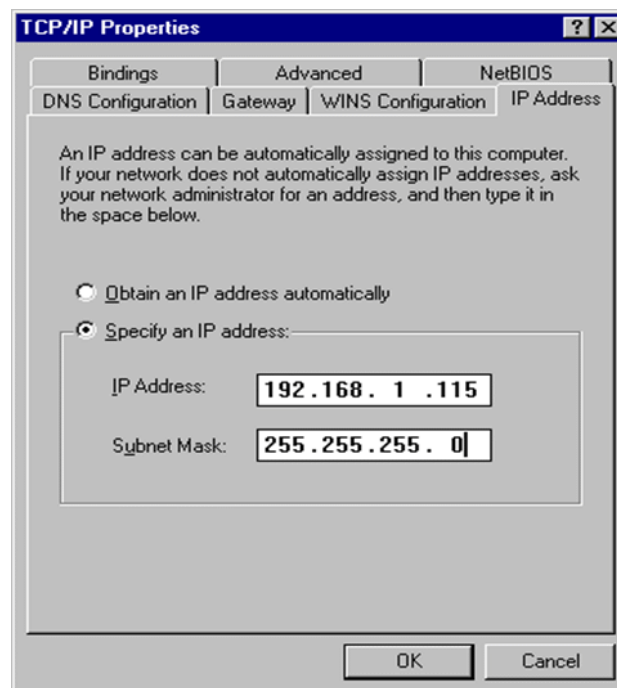


- c. Choose **Disable DNS** in the DNS Configuration tab.



B. Configure IP manually

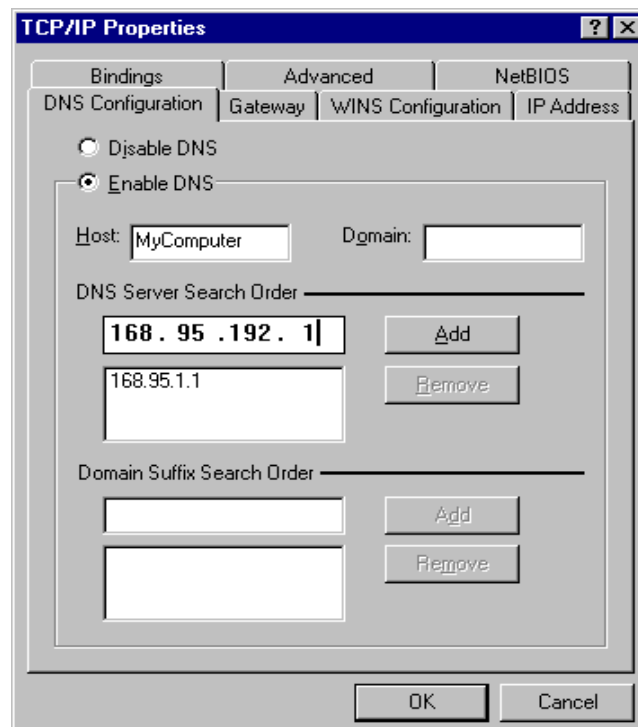
- a. Select **Specify an IP address** in the IP Address tab. The default IP address of this product is 192.168.1.254. So please use 192.168.1.xxx (xxx is between 1 and 253) for IP Address field and 255.255.255.0 for Subnet Mask field.



- b. In the Gateway tab, add the IP address of this product (default IP is 192.168.1.254) in the New gateway field and click **Add** button.



- c. In the DNS Configuration tab, add the DNS values which are provided by the ISP into DNS Server Search Order field and click **Add** button.



## **Appendix B FAQ and Troubleshooting**

### **Reset to factory Default**

There are 2 methods to reset to default.

#### **1. Restore with RESET button**

First, turn off the router and press the RESET button in. And then, power on the router and push the RESET button down until the M1 and or M2 LED (or Status LED) start flashing, then remove the finger. If LED flashes about 8 times, the RESTORE process is completed. However, if LED flashes 2 times, repeat.

#### **2. Restore directly when the router power on**

First, push the RESET button about 5 seconds (M1 will start flashing about 5 times), remove the finger . The RESTORE process is completed.