



PLANEX COMMUNICATIONS INC.

USER'S MANUAL

English Version 1.0

BLW-54MF
IEEE802.11g Wireless Multi-Function Broadband Router

USER'S MANUAL

***IEEE802.11g Wireless Multi-Function
Broadband Router***

BLW-54MF

Foreword

Explanation of the signals

In order to let you set up and use this product correctly, please pay attention when reading or browsing the manual as you see these signals listed below.



Warning/ Danger

Users should read the explanation carefully and understand it completely, otherwise users might be in danger or even be injured.



Caution/ Be Careful

Remind users to be careful when setting up the product and to avoid damaging the product or its system programs.

Seeking for service or searching for an agent or a distributor

Thank you for purchasing products from Planex Communications Inc. If you have any operational problems while configuring or setting up the product, you may contact with our Customer Service Department or ask the agent or the distributor from which you bought the product for help. Moreover, during warranty, if you find any defect or breakdown of the product, you may bring the product, assembly, and its warranty card to our company or to where you bought the product to ask for repair.

★Every product has different warranty period and contract; please refer to our company for further information or consult the agent or the distributor.

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1

Introduction

1. Package Contents

After purchasing BLW-54MF Wireless Router form a distributor or an agency, please open the package and check that all the components listed below are included. If there is any item missing or damaged, please contact with the distributor or the agency at once.

- BLW-54MF
- 2dBi Antenna
- User' s Manual
- UTP Cable
- AC Adapter
- Warranty Card



If plug the AC adapter which includes in the product package into a socket with different voltage power supply, it will cause damage and that is not included in warranty.

2. Introduction to BLW-54MF

Thank you for purchasing BLW-54MF IEEE802.11g Wireless Multi-function Broadband Router. This 802.11b/g wireless router is a multi-function device which provides **(1) shared broadband Internet access for LAN users through 4-port switching hub**, **(2) WDS Bridge/Repeater function**, and **(3) unique EZ-GO function**. Moreover, it has an external switch to switch between AP and Router function that makes BLW-54MF an easy-to-use broadband router.

BLW-54MF has a built-in Web server, thus you can access its settings through Web browsers, such as IE, Netscape, Firefox, and so on. You can set up and configure the settings easily and completely, and enjoy the convenience instantly. The following chapters will introduce you the configuration steps and fantastic functions of BLW-54MF. With all these features, BLW-54MF Wireless Broadband Router must be the best solution for both beginners and advanced users.

Special Features of BLW-54MF

●Support EZ-GO (Eazy Go to Link) Function

Just press the button and then the wireless network will be connected and the authentication will be set up. ※ BLW-54MF must collocate with the designated adapter **GW-US54SG**.

●Support AP/Router Switching

Users can use the switch at the back of BLW-54MF to choose AP or Router mode to use.

●Support WDS, Repeater

Extended the coverage of wireless network.

● **Support Wireless Authentication**

BLW-54MF supports 64/128 Bit WEP, WPA, WPA AUTO, WPA-PSK/EAP and WPA2-PSK/EAP which can prevent others from stealing your bandwidth and avoid information leak.

● **Support Anti-DoS Function**

SPI Anti-DoS Firewall can prevent hacker's invasion.

● **Support Virtual Server & DMZ**

Virtual server and DMZ functions can let BLW-54MF access LAN service through Internet.

● **Support English/Chinese Language Switching Function**

Configuration page of BLW-54MF can auto-select languages depending on Windows O.S.

System Requirements

- Windows, Macintosh, or Linux-based Operating System with an installed Ethernet adapter.
- Internet Explorer 6.x above, Netscape Navigator 6.x above, or other web browsers with JavaScript function.
- Network cables. Use standard 10/100BaseT network (UTP) cables with RJ45 connectors.
- TCP/IP protocol must be installed on all PCs.

3. Product Housing

■ Front Panel



LEDs	Status	Meaning
Power	On/Off	When starting up BLW-54MF, the Power LED will be on.
Status EZ-GO	Blinking	Press the EZ-GO button at the back of BLW-54MF and enable EZ-GO function. After pressing EZ-GO button, the LED will be blinking for 5 minutes that means GW-US54SG can search for BLW-54MF and connect with it.
	On	If BLW-54MF has connected with GW-US54SG successfully, EZ-GO LED will be on all the time.
WAN	On/Off/Blinking	When the connection is established between BLW-54MF and a modem, the WAN LED will be on. And the WAN LED will be blinking when transmitting or receiving data via WAN port.
LAN	On/Off/Blinking	When the power is on, the LAN LED will be on all the time. If it is transmitting data, the LAN LED will be blinking.
Wireless	On/Off/Blinking	When BLW-54MF finds any available wireless connection, the wireless LED will be on. And the LED will be blinking when transmitting or receiving data via wireless connection.
AP mode	On/Off	When switch to AP mode, the AP mode LED will be on all the time; if it has not been switched to AP mode, the LED will be off.

Rear Panel



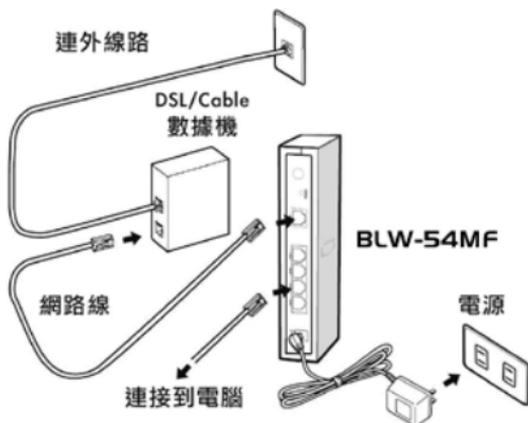
Ports	Function
AC	Plug the power cord into this port and the other side of the adaptor should be plugged into the socket.
WAN	Connect a DSL or Cable Modem to the WAN port and link to the internet. If your modem came with a cable, use the supplied cable. Otherwise, use a standard cable.
LAN	Use standard LAN cables (RJ45 connectors) to connect your PCs to these ports. Any LAN port can be connected with another hub, if required.
Reset	Press the button for 3-5 seconds and then release it. BLW-54MF will automatically restart and back to the default settings.
Status EZ-GO	Press this button to enable EZ-GO function.
AP/Router	Users can use this switch to manually switch AP/Router mode.



If plug the AC adapter which includes in the product package into a socket with different voltage power supply, it will cause damage and that is not included in warranty.

2 Basic Setup & Configuration

1. Hardware Installation



1. Unwrap the package of BLW-54MF Wireless Router and check if the components are complete with nothing missing.

2. Choose a Proper Installation Site.

Select a suitable place on the network to install BLW-54MF Wireless Router. And make sure that the wireless router and the DSL/Cable modem are not powered on yet.



For best Wireless reception and performance, the Wireless Router should be positioned in a central location with minimum obstructions between the Wireless Router and the PCs. Also, if using multiple Access Points, adjacent Access Points should use different Channels.

3. Connect LAN Cables.

Use standard LAN cables (RJ-45) to connect PCs to the switching hub ports on BLW-54MF. Both 10 Base-T and 100 Base-T connections can be used simultaneously.

4. Connect WAN Cable.

Connect the DSL or Cable modem to the WAN port on BLW-54MF.

5. Power On.

Power the DSL or Cable modem on. At last, connect the adapter with BLW-54MF and plug the other side of the power cord into the power socket. Power BLW-54MF Wireless Router on. While detecting, the **Power** LED will be on and then the BLW-54MF will be ready in a short time.

2. Client's Computer Setup

The computers on your LAN need to be set up to cooperate with BLW-54MF Wireless Router.

Please make sure that your operating system already enabled your interface card on the host and connected to one of the LAN ports on BLW-54MF through CAT-5 cable. Be sure that LEDs on BLW-54MF are already on and the LED corresponds with the port which you connected. If you switch on BLW-54MF for the first time, owing to the default status, it will automatically enable the embedded DHCP server and start to distribute IP to your host. In addition, the default IP address of BLW-54MF is “192.168.1.1.” If your operating system is Windows 98/2000/XP, you may be able to use command of “**ipconfig**” to inquire whether you have the correct IP address or not. If you are using Linux/Unix-Like system, you can use “**ifconfig**” to check your NIC (Network Interface Card) address. The instructions are as follows:

● Windows98

1. Click “**Start**→**Programs**→**MS-DOS**” or “**Start**→**Run**” and type in “**command.exe**” and then press enter.

2. “**MS-DOS**” window will appear.
- 3.Type “**ipconfig**” after the command of “**c:>**” and then press enter.
- 4.MS-DOS will appear your NIC address in the window, please take notice of the value of “**IP Address**” and “**Default Gateway.**”
- 5.The value of “**Default Gateway**” is the IP address of BLW-54MF.

●Windows2000/XP

- 1.Please make sure that you do have the authority to access as an “**Administrator**” or you are already one of the “**System Administrators.**”
- 2.Click “**Start→Programs→Accessories→Command Prompt**” or “**Start→Run ,**” and then type in “**cmd.exe**” and press enter.
- 3.It will appear a “**MS-DOS**” window.
- 4.Type “**ipconfig**” after the command of “**c:>**” and then press enter.
- 5.MS-DOS will appear your NIC address in the window, please take notice of the value of “**IP Address**” and “**Default Gateway.**”
- 6.The value of “**Default Gateway**” is the IP address of BLW-54MF.

●Linux / Unix-Like

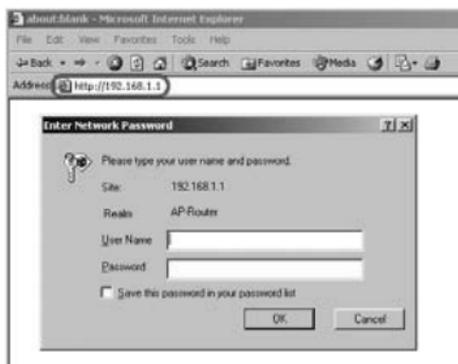
- 1.At first please make sure that your NIC are already enabled and works properly.
- 2.And be sure you have “**root**” number or your already are one of the members of a “**root**” group.
- 3.Please type “**ifconfig**” of “**ifconfig -a**” after “**#**” and then press enter.
- 4.It will appear your present NIC address in the window, please take notice of the value of “**IP Address**” and “**Gateway.**”
- 5.The value of “**Gateway**” is the IP address of BLW-54MF.

If you can get “**IP Address**” and “**Gateway,**” normally, it means that you may use web browser to configure BLW-54MF. Type your destination — “**http://192.168.1.1**” (default IP Address of BLW-54MF) on the Address Bar in the web browser. If you have changed the default IP Address of BLW-54MF, please type in the new address on the address bar.

3. Web Configuration

To establish a connection between your PC and the BLW-54MF Wireless Router:

1. Start the web browser. In the Address box, enter “**http://192.168.1.1**” which is the default IP Address of the BLW-54MF Wireless Router. Press “**Enter**” on your keyboard, and the pop-up will ask you to enter the **User Name** and **Password** to get into the program.



2. Enter the default User Name “**admin**” and Password “**admin**” (case-sensitive) and then click “**OK**” to enter the system. You can also put a check in the “**Save this password in your password list**” check box, and next time you do not need to enter password to enter the system.



3. After entering the system, BLW-54MF will show you the Main page. During configuration, you can use the tabs on the top of the page and menu at the left side of the page to navigate. Besides, it is necessary that, after configuring, you should click “**Apply**” to enable the settings you have made.



If your BLW-54MF Wireless Router does not response, and you cannot enter the web configuration page, please follow the steps below to check if there is any problem:

1. Make sure that BLW-54MF Wireless Router is properly installed and powered on, and LAN connection is O.K. You can test the connection by using “**Ping**” command:

- ◆ Open MS-DOS window or click “**Start→Run**” on the desktop to show the command prompt window.



- ◆ Enter the command: **ping 192.168.1.1**

- ◆ If it shows the message of “**Request time out,**” the problem can be either disorder of connection, or the conflict between your PC's IP address and the router's IP address.

2. If your PC uses static IP address, the IP address must be in the range of 192.168.1.2~192.168.1.254, in order not to occupy the BLW-54MF's default IP address “**192.168.1.1.**” In addition, the subnet mask must be “**255.255.255.0.**” To know more details of your PC and Internet connection, please check the TCP/IP settings on your PC.

3. You have to make sure that your PC and BLW-54MF are on the same segment. Besides, you have to use the wired LAN interface when first accessing the web configuration page, the wireless interface only works when the settings of BLW-54MF matches your PC's wireless settings.



4. Setup Wizard

After logging in the configuration page, a “**Setup Wizard**” dialog box pops up. You may choose to use setup wizard to set up BLW-54MF or use configuration page to set up all the settings. You may use wizard to help you complete setting up and start connect with Internet through simply a few steps. Please follow the instructions below to do the configuration.



If you do **NOT** want to see setup wizard popping up whenever you open the main page, please click “**No**” after the words “**display wizard next time?**” on the setup wizard window. And when next time you enter the main page of BLW-54MF, it will not activate setup wizard.



4.1 Set Password

Step 1 : The default User Name of BLW-54MF Wireless Router is “**admin**” and Password is “**admin.**” It is recommended that you should change the default password to have better protection over the router and the LAN. You must memorize the password set by you to enter the system; otherwise, you have to restore the whole systems and then configure the settings again. Please enter your new password twice on the following page and then click “**Next**” to keep on setting up.



The screenshot shows a web browser window titled "wizard - Microsoft Internet Explorer". The page content is titled "Welcome to Wireless Router Setup Wizard" and "Set Password". It features two input fields: "Password" and "Verify Password", each with a small eye icon to the right. Below these fields are three buttons: "< Back", "Next >", and "Exit".

4.2 Choose Time Zone

Step 2 : You can set the system time according to the time zone where you locate now. You may scroll down the list to find a suitable time zone.



The screenshot shows a web browser window titled "wizard - Microsoft Internet Explorer". The page content is titled "Welcome to Wireless Router Setup Wizard" and "Choose Time Zone". It features a dropdown menu with the selected option "(GMT-08:00) Pacific Time (US & Canada)". Below the dropdown are three empty input fields. At the bottom, there are three buttons: "< Back", "Next >", and "Exit".

4.3 Set LAN & DHCP Server

Step 3 : You can do LAN port configuration and enable/disable DHCP server through this page.



- **LAN IP Address** : Here is the IP address of the LAN side of BLW-54MF. The default IP address is “192.168.1.1” .
- **LAN Subnet Mask** : The Subnet Mask of the LAN side of BLW-54MF is “255.255.255.0” .
- **DHCP Server** : DHCP stands for **D**ynamic **H**ost **C**ontrol **P**rotocol. BLW-54MF Wireless Broadband Router has a built-in DHCP server which can automatically assign an IP address to those computers on the LAN/private network. Click to enable/disable DHCP server.
- **Range Start** : The first IP address which DHCP server of BLW-54MF starts to distribute.
- **Range End** : The last IP address which DHCP server of BLW-54MF distributes.
- **Next** : Click this button to save the settings and go to next page.

4.4 Select Internet Connection Type

Step 4 : The followings are the most common used connection types: Obtain IP automatically (DHCP client), Fixed IP address, and PPPoE. If you want to know more about the other types of WAN configurations, please refer to “**Main**” configuration page.

After auto-detecting WAN, the setup wizard might skip the page of “**Select Internet Connection Type**” page and directly shows the detected connection type. If BLW-54MF shows the connection mode which you do not want to use, click “**Back**” to the previous page to select the Internet connection type.



→Obtain IP automatically (DHCP client)

1. If you use cable modem, or you are a DHCP client, you may choose this entry and use the wizard to configure.



2.The following are the WAN settings; please configure the settings according to the real environment.



- **Host Name** : You may follow the demands of your ISP, if needed, you may fill in the designated host name.
- **MAC** : The default MAC address of BLW-54MF is the Network Interface Card's (NIC) MAC address on the WAN side. If you were asked to use the NIC provided by the ISP, you may click "**Clone MAC Address**" and use the MAC address of NIC provided by the ISP. We do not suggest you to change the default MAC address, if your ISP does not ask you to change it. °
- **Next** : Click this button to save the settings and go to next page.

→ **Fixed IP address**

1.If you have already had a Static IP address, you can choose this entry and use the wizard to configure.



2.The following are the WAN settings; please configure the settings according to the real environment.

Welcome to Wireless Router Setup Wizard	
Set Fixed IP Address	
Enter in the static IP information provided to you by your ISP. Click Next to continue.	
WAN IP Address	192.168.254.108
WAN Subnet Mask	255.255.255.0
WAN Gateway Address	0.0.0.0
DNS Server Address 1	0.0.0.0
DNS Server Address 2	0.0.0.0
DNS Server Address 3	0.0.0.0
<input type="button" value="Back"/> <input type="button" value="Next"/> <input type="button" value="Exit"/>	

- **WAN IP Address** : Enter the IP address provided by your ISP.
- **WAN Subnet Mask** : Enter the Subnet Mask address provided by your ISP.
- **WAN Gateway Address** : Enter the Default Gateway address provided by your ISP.
- **DNS Server Address 1~3** : Enter the DNS IP address provided by your ISP.
- **Next** : Click this button to save the settings and go to next page.

→PPPoE

1.If you use PPPoE, you may choose this entry and use the wizard to configure.

Welcome to Wireless Router Setup Wizard	
Select Internet Connection Type	
<input type="radio"/>	Obtain IP automatically (DHCP client)
<input type="radio"/>	Fixed IP address
<input checked="" type="radio"/>	PPPoE
<input type="radio"/>	PPTP
<input type="radio"/>	L2TP
<input type="radio"/>	BigPond Cable
<input type="button" value="Back"/> <input type="button" value="Next"/> <input type="button" value="Exit"/>	

2.The following are the WAN settings; please configure the settings according to the real environment.



- **Obtain IP Automatically/Specify IP** : Choose a mode according to the service provided by your ISP.
- **User Name** : Please enter the User Name/Account provided by your ISP. (case-sensitive)
- **Password** : Please enter the Password provided by your ISP. (case-sensitive)
- **Verify Password** : Enter the Password again to be verified.
- **IP Address** : Please enter the information provided by your ISP.
- **Service Name** : If your ISP provides you service name, please enter the name according to the provided information.
- **Next** : Click this button to save the settings and go to next page.

4.5 Set Wireless Connection

Step 5 : Choose if you want to use wireless connection.



- **Wireless** : You may choose if you want to enable wireless function to let users connect with BLW-54MF through wireless network.
- **SSID** : Every SSID is unique in the WLAN (SSID can be 16-digit ASCII characters and case-sensitive). SSID can prevent two nearby WLAN from combining to be one. You can give BLW-54MF an SSID, and only whose SSID is the same with it can connect with it.
- **Channel** : : Here shows the channels provided by the local wireless connection. The setting of the channels of the wireless network should be the same as the wireless APs.
- **Next** : Click this button to save the settings and go to next page.

4.6 Setup Completed

Step 6 : After completing the five steps above, please click **“Restart”** to save all the settings and restart the system. When restarting the system, please do not close the window or unplug the power cord. The system will ask you to click **“Close”** to go back to the homepage and show the latest system status after restarting.



5. Main

The **Main** page of BLW-54MF can let users configure the basic settings related to network connection. These settings also appear in the **Setup Wizard**. If you want to modify some of the details, you do not need to enter Setup Wizard, but configure the settings through the **Main** page.

5.1 LAN & DHCP Server

This page shows if the LAN settings and the DHCP server are enabled or not. The bottom of the page shows the device which is connecting with BLW-54MF.

The screenshot shows the web interface for the BLW-54MF device. The title bar includes the DCI logo and the device name 'BLW-54MF'. Below the title bar, there are tabs for 'LAN/DHCP Server', 'WAN', 'Password', 'Time', and 'Dynamic DNS'. The 'LAN/DHCP Server' tab is active, displaying the following settings:

- Host Name: AP-Phone
- IP Address: 192.168.1.1
- Subnet Mask: 255.255.255.0
- DHCP Server: Enabled Disabled
- Range Start: 192.168.1.100
- Range End: 192.168.1.199
- Domain Name: [Empty]
- Lease Time: 1 week 2d

At the bottom of the form, there are 'Cancel' and 'Apply' buttons. Below the form, a table displays the current configuration:

Host Name	IP Address	MAC Address
apphone	192.168.1.100	08-00-39-c0-29-e5

- **Host Name** : You may follow the request of your ISP, and enter the designated Host Name, if needed.
- **IP Address** : Enter the LAN address of BLW-54M. The default LAN IP address is “192.168.1.1” .
- **Subnet Mask** : The default Subnet Mask of the LAN side of BLW-54MF is “255.255.255.0” .
- **DHCP Server** : Choose if you want to enable the embedded DHCP Server of BLW-54MF.
- **Range Start** : The first IP address which DHCP server of BLW-54MF starts to distribute.

- **Range End** : The last IP address which DHCP server of BLW-54MF distributes.
- **Domain Name** : If you had applied a Domain Name, you may enter it here.
- **Lease Time** : DHCP server can let a PC get the same IP address whenever it starts up on the LAN. You can distribute an appointed IP address to a specific computer according to the PC's MAC address and also set a period of time of leasing IP.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Save** : Click this button to save/apply the settings and restart the system.

5.2 WAN

In the WAN settings, BLW-54MF Wireless Router provides many kinds of access. You can configure the WAN side according to the real environment.

→DHCP Client or Fixed IP



- **WAN IP Address** : Please choose the service provided by your ISP.
- **IP Address** : Enter the IP address provided by your ISP.
- **Subnet Mask** : Enter the Subnet Mask address provided by your ISP.

- **GateWay** : Enter the default Gateway address provided by your ISP.
- **DNS 1~3** : Enter the DNS IP address provided by your ISP.
- **MAC Address** : The default MAC address of BLW-54MF is the Network Interface Card's (NIC) MAC address on the WAN side. If you were asked to use the NIC provided by the ISP, you may click “**Clone MAC Address**” and enter the MAC address of NIC provided by the ISP. We do not suggest you to change the default MAC address, if your ISP does not ask you to change it.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

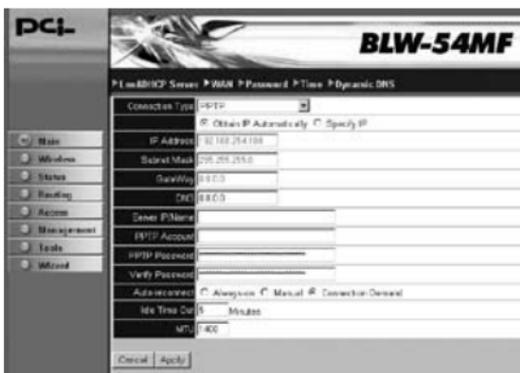
→PPPoE

- **WAN IP Address** : Please choose the service provided by your ISP.
- **Service Name(optional)** : If your ISP provides you Service Name, please enter the provided information.
- **User Name** : Please enter the User Name/Account provided by your ISP. (case-sensitive)
- **Password** : Please enter the Password provided by your ISP. (case-sensitive)

- **Verify Password** : Please enter the Password again.
- **DNS 1~3** : You may enter the first, second, and third DNS Server provided by your ISP.
- **Auto-reconnect** : When BLW-54MF disconnects with your xDSL service, you can chose to reconnect online automatically, manually or connect-on-demand. If you choose “**Always-On**” , BLW-54MF Wireless Router will automatically reconnect to your ISP when you restart the system or the connection is stopped. “**Manual**” means you have to reconnect through your own configuration. “**Connect-On-Demand**” means when there is a need (e.g. open a web browser), and then the system may reconnect.
- **Idle Time Out** : Idle Time Out means a period of idle time before you go offline. Enter a maximum period of time (minutes) to define the maximum idle time. If the idle time is above the defined maximum idle time, it will go offline immediately. You can set the value to be 0 or Auto Reconnect to disable this function.
- **MTU** : MTU means **Maximum Transmission Unit**, the largest physical packet size, measured in bytes, which a network can transmit. The default value is **1492**. Please set up the MTU according to your system environment. Only enter a new MTU when your ISP requires, otherwise, please leave it as the default setting. When using PPPoE connection, you may need to change MTU settings to maintain the connection with your ISP, however, if the incorrect value was entered, you may be unable to access certain websites. Reducing the packet size can help connecting to certain websites or speeding up the transmission rate.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

→PPTP

Point-to-Point Tunneling Protocol (PPTP), a protocol that allows corporations to extend their own corporate network through private "tunnels" over the public Internet. Effectively, a corporation uses a wide-area network as a single large local area network. A company no longer needs to lease its own lines for wide-area communication but can securely use the public networks. This kind of interconnection is known as a virtual private network (VPN)

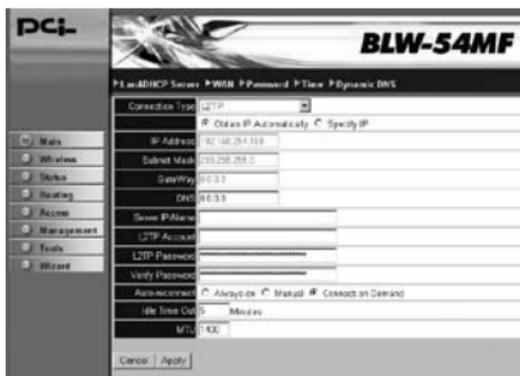


- **WAN IP Address** : Please choose the service provided by your ISP.
- **IP Address** : Enter the IP address provided by your ISP.
- **Subnet Mask** : Enter the Subnet Mask address provided by your ISP.
- **GateWay** : Enter the default Gateway address provided by your ISP.
- **DNS 1~3** : You may enter the first, second, and third DNS Server provided by your ISP.
- **Server IP/Name** : Please enter the VPN Server IP and its Name.
- **PPTP Account** : Please enter your PPTP Account number.
- **PPTP Password** : Please enter the Password collocated with your PPTP Account.
- **Verify Password** : Enter your Password again for verification.

- **Auto-reconnect** : When BLW-54MF disconnects with your xDSL service, you can choose to reconnect online automatically, manually or connect-on-demand. If you choose “**Always-On**”, BLW-54MF Wireless Router will automatically reconnect to your ISP when you restart the system or the connection is stopped. “**Manual**” means you have to reconnect through your own configuration. “**Connect-On-Demand**” means when there is a need (e.g. open a web browser), and then the system may reconnect.
- **Idle Time Out** : Idle Time Out means a period of idle time before you go offline. Enter a maximum period of time (minutes) to define the maximum idle time. If the idle time is above the defined maximum idle time, it will go offline immediately. You can set the value to be 0 or Auto Reconnect to disable this function.
- **MTU** : MTU means **Maximum Transmission Unit**, the largest physical packet size, measured in bytes, which a network can transmit. The default value is 1400. Please set up the MTU according to your system environment. Only enter a new MTU when your ISP requires, otherwise, please leave it as the default setting. When using PPPoE connection, you may need to change MTU settings to maintain the connection with your ISP, however, if the incorrect value was entered, you may be unable to access certain websites. Reducing the packet size can help connecting to certain websites or speeding up the transmission rate.
- **Cancel** : If you do not want to configure this setting right now, click this button to exit this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

→L2TP

Layer 2 Tunneling Protocol (L2TP) is a tunneling protocol used to support virtual private network. L2TP is original from Cisco's Layer 2 Forwarding (L2F) and Microsoft's Point-to-Point Tunneling Protocol (PPTP). L2TP provides additional security features other than PPTP. L2TP acts as data link layer protocol for tunneling network traffic between clients and VPN server over an Internet. It builds up Point-to-Point Protocol (PPP) sessions within an L2TP tunnel.



- **WAN IP Address** : Please choose the service provided by your ISP.
- **IP Address** : Enter the IP address provided by your ISP.
- **Subnet Mask** : Enter the Subnet Mask address provided by your ISP.
- **GateWay** : Enter the default Gateway address provided by your ISP.
- **DNS 1~3** : You may enter the first, second, and third DNS Server provided by your ISP.
- **Server IP/Name** : Please enter the VPN Server IP and its Name.
- **L2TP Account** : Please enter your L2TP Account number.
- **L2TP Password** : Please enter the Password collocated with your L2TP Account.
- **Verify Password** : Enter your Password again for verification.

- **Auto-reconnect** : When BLW-54MF disconnects with your xDSL service, you can choose to reconnect online automatically, manually or connect-on-demand. If you choose “**Always-On**”, BLW-54MF Wireless Router will automatically reconnect to your ISP when you restart the system or the connection is stopped. “**Manual**” means you have to reconnect through your own configuration. “**Connect-On-Demand**” means when there is a need (e.g. open a web browser), and then the system may reconnect.
- **Idle Time Out** : Idle Time Out means a period of idle time before you go offline. Enter a maximum period of time (minutes) to define the maximum idle time. If the idle time is above the defined maximum idle time, it will go offline immediately. You can set the value to be 0 or Auto Reconnect to disable this function.
- **MTU** : MTU means **Maximum Transmission Unit**, the largest physical packet size, measured in bytes, which a network can transmit. The default value is **1400**. Please set up the MTU according to your system environment. Only enter a new MTU when your ISP requires, otherwise, please leave it as the default setting. When using PPPoE connection, you may need to change MTU settings to maintain the connection with your ISP, however, if the incorrect value was entered, you may be unable to access certain websites. Reducing the packet size can help connecting to certain websites or speeding up the transmission rate.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

→BigPond Cable

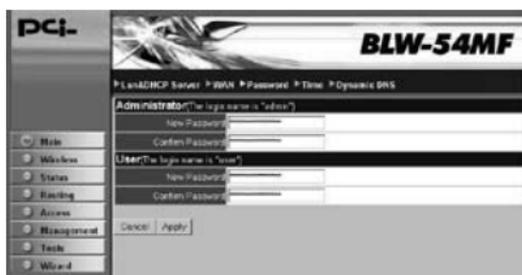
Telstra Bigpond is the largest ISP in Australia, so the BigPond Cable is mainly used in Australia.



- **User Name** : Please enter the User Name/Account provided by your ISP. (case-sensitive)
- **Password** : Please enter the Password provided by your ISP. (case-sensitive)
- **Verify Password** : Please enter the Password again.
- **Server IP/Name** : Please enter the Server IP and its Name provided by the ISP. (optional)
- **Auth Server** : Please scroll down the list to select the authentication server you use.
- **MAC Address** : The default MAC address of BLW-54MF is the Network Interface Card's (NIC) MAC address on the WAN side. If you were asked to use the NIC provided by the ISP, you may click “**Clone MAC Address**” and enter the MAC address of NIC provided by the ISP. We do not suggest you to change the default MAC address, if your ISP does not ask you to change it.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

5.3 Password

The default User Name of BLW-54MF Wireless Router is “**admin**” and Password is “**admin.**” It is recommended that you should change the default password to have better protection over the router and the LAN. You must memorize the password set by you to enter the system; otherwise, you have to restore the whole systems and then configure the settings again.



- **Administrator** : Enter the Password for the Administrator. (Enter 15 alphanumeric characters at most.)
- **User** : Enter the Password collocated with the User account. (Enter 15 alphanumeric characters at most.) The default user password is **null/no password** which means users just need to enter “**user**” for the account, and do not need to enter password to get in.
- **Confirm Password** : Enter the Password again for verification.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.



In this manual, “**User**” refers to people who can use BLW-54MF Wireless Broadband Router. And “**Administrator**” means someone who can configure BLW-54MF Wireless Broadband Router and can provide limits of authority to others.

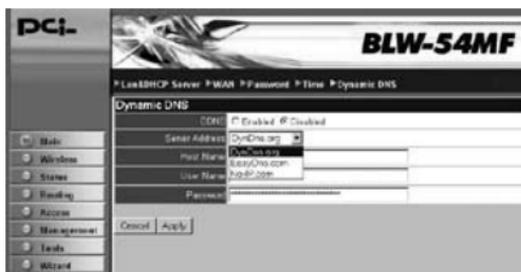
You can set the system time according to the time zone where you locate now.



- **Local Time** : If you synchronize with NTP Server or manually set up the time, you may see the local time here.
- **Time Zone** : Scroll the list to choose the time zone for BLW-54MF.
- **Synchronize the clock with** : You can choose “**Automatic**” to let system use NTP to synchronize with the system, or choose “**Manual**” and enter your local time by your own.
- **Default NTP Server** : Scroll down the list to select a NTP Server to let system synchronize with.
- **Set the time** : If you choose “**Manual**” set up the time, you may configure the local time here.
- **Set Time** : Click this button and the system will synchronize with the time you set.
- **Daylight Saving** : If the time zone you are in now is using daylight saving, please enable this function and set a period of time for daylight saving.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button; the system will synchronize with the NTP Server and save the settings.

5.5 Dynamic DNS

Dynamic DNS can let you connect with one or more DDNS services to update your current dynamic IP address.



- **DDNS** : You can enable this function and scroll the list to choose the DDNS service which you want to use.
- **Server Address** : There are three server addresses you can choose from: **DynDns.org**, **EasyDns.com**, and **No-IP.com**.
- **Host Name** : Enter the Host Name which you registered.
- **User Name** : Enter the User Name which you use to login your account.
(case-sensitive)
- **Password** : Enter the Password which you use to login your account.
(case-sensitive)
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

6. Wireless

6.1 Basic

This page includes all the fundamental and basic parameters. After changing any parameters, you have to apply and restart the device and then the new settings can be effective.



- **Wireless** : Click “**Enabled**” and start to set up the Wireless LAN Interface and start using wireless network.
- **Wireless Mode** : There are two wireless rate mode: **802.11 b/g**, and **802.11 b**.
- **SSID** : Every SSID is unique in the WLAN (SSID can be 16-digit ASCII characters and case-sensitive). SSID can prevent two nearby WLAN from combining to be one. You can give BLW-54MF an SSID, and only whose SSID is the same with it can connect with it.
- **Region** : Scroll down the list to choose a region for collocating with the appropriate channels.
- **Channel** : Here shows the channels provided by the local wireless connection. The setting of the channels of the wireless network should be the same as the wireless APs.
- **Extended Range Mode** : Choose “**Enabled**” and start to use wireless **XR (eXtended Range)** mode which can enhance the wireless coverage of BLW-54MF.
- **SSID Broadcast** : If you want to let other users to find you on the LAN, you may choose “**Enabled**” to start SSID Broadcast, yet you should enter a Network Name (SSID) before enabling this function; otherwise, you can choose “**Disabled.**”
- **WDS** : Enabling the WDS function can let BLW-54MF Wireless Router connect with other specific WDS AP through wireless interface. If two wireless AP need to connect with each other, they can use BLW-54MF as the Repeater or as the Bridge to bridge the other two APs. There are three modes: Disabled, Repeater, and Bridge. Please choose a proper mode according to the real environment.

- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

6.2 Authentication

In this page, you can configure the security of your wireless network. Selecting different method can make different levels of security. However, no matter what kind of authentication or encryption you use to prevent data packets from being eavesdropped by people without authentication, it may cause decrease of the data throughput of the wireless connection.

Authentication

There are four kinds of authentication of BLW-54MF Wireless Router: **WEP**, **WPA**, **WPA2**, and **WPA-AUTO (PSK)**. After selecting the authentication mode, it has to cooperate with the encryption type. The settings of authentication on the destination network must be the same with BLW-54MF.

→WEP

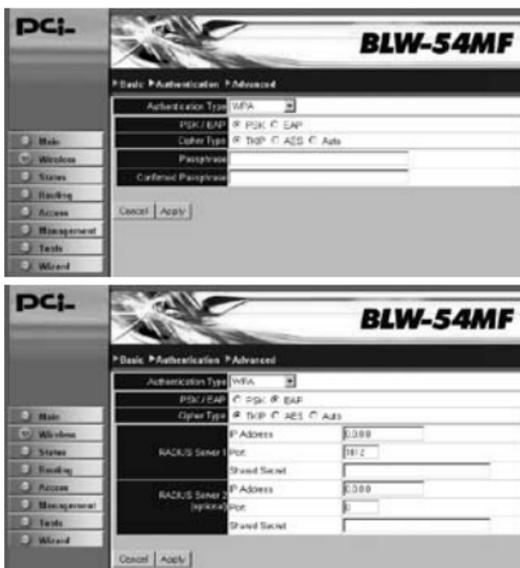
WEP is short for Wired Equivalent Privacy, a security protocol for WLANs defined in the 802.11b standard. WEP is designed to provide the same level of security as that of a wired LAN. WEP aims to provide security by encrypting data over radio waves so that it is protected as it transmitted from one end point to another. There are two kinds of WEP encryption: 64 bit and 128 bit. 64 bit needs 10 hex characters to be the key and 128 bit needs 26 hex characters.



- **WEP : Open System** – It does not need authentication when connecting to the AP. **Shared Key** –Only wireless adapters using a shared key (WEP Key identified) are allowed to connecting to the AP.
- **Mode : HEX** – Only “A~F,” “a~f,” and “0~9” are allowed to be set in a WEP key. **ASCII** –Numerical values, characters or signs are all allowed to be arranged into a WEP key. It is more recognizable for user.
- **WEP Key : 64-bit** –Enter 10-digit Hex values or 5-digit ASCII values as the encryption keys. For example: “0123456aef” or “Guest.”
128-bit –Enter 26-digit Hex values or 13-digit ASCII values as the encryption keys. For example: “01234567890123456789abcdef” or “administrator.”
- **Key1~4** : This setting only takes effect under “WEP” and “Shared” mode. There are four types of WEP key settings, please set the key depending on the real environment.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

→WPA

WPA is short for Wi-Fi Protected Access. It was designed to improve upon the security features of WEP. The technology is designed to work with existing Wi-Fi products that have been enabled with WEP. Through the data encryption, access control and authentication, it provides better protection over data transmission. WPA uses 128-digit keys to ensure the wireless network privacy and security.



→WPA2

WPA2 is short for Wi-Fi Protected Access 2. It is the follow on security method to WPA for wireless networks that provides stronger data protection and network access control. It provides enterprise and consumer Wi-Fi users with a high level of assurance that only authorized users can access their wireless networks. There are two versions of WPA2: WPA2-Personal, and WPA2- Enterprise. WPA2-Personal protects unauthorized network access by utilizing a set-up password. WPA2-Enterprise verifies network users through a server. WPA2 is backward compatible with WPA.





→WPA-AUTO

WPA-PSK is short for Wi-Fi Protected Access-Pre-Shared Key. WPA-PSK uses the same encryption way with WPA, and the only difference between them is that WPA-PSK recreates a simple shared key, instead of using the user's certification.



- **PSK/EAP : PSK** – Short for **Pre-shared Key**. It is the use of secret passwords or encryption keys that are entered into both sides of the message exchange ahead of time. Pre-shared keys (PSK) are typed into the clients and servers (authentication servers, access points, etc.) or entered via floppy, CD-ROM or smart card. Contrast with "server-based keys," in which one side generates a key and sends it to the other side during the authentication session. **EAP** – Short for **Extensible Authentication Protocol**. A protocol that acts as a framework and transport for other authentication protocols. EAP uses its own start and end messages, but then carries any number of third-party messages between the client (supplicant) and access control node such as an access point in a wireless network.
- **Cipher Type : TKIP** –It is short for **Temporal Key Integrity Protocol**. TKIP scrambles the key using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. **AES** – Short for **Advanced Encryption Standard**, a symmetric 128-bit block data encryption technique. It works at multiple network layers simultaneously and has a fixed block size of 128-bits and a key size of 128, 192, or 256-bits.
- **Passphrase** : Passphrase (also called a shared secret) that must be entered in both the wireless access point and the WPA clients (computers). The WPA pre-shared key should be a random sequence of either keyboard characters (upper and lowercase letters, numbers, and punctuation). You have to enter the same Passphrase or Hexadecimal key into both your access points and computers but the length requirement is changed. The more random your WPA pre-shared key, the safer it is to use.
- **Confirmed Passphrase** : Please enter the Passphrase you just key in again for confirmation.
- **RADIUS Server** : **RADIUS** is short for Remote Authentication Dial-In User Service, an authentication and accounting system used by

many Internet Service Providers (ISPs). RADIUS setup is used to set up additional parameters for authorizing wireless clients through RADIUS server. The RADIUS setup is required when you select to use WPA authentication.

- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

6.3 Advanced



- **Beacon Interval** : Beacon Interval is the amount of time between beacon transmissions. Before a station enters power save mode, the station needs the beacon interval to know when to start up again and receive the beacon.
- **RTS Threshold** : Here you can define the minimum value of RTS (Request to Send) packets and prevent “**Hidden Nodes**” problems. Please enter a value between 0~2346, and when the packets are bigger than the RTS value the function will start to work.
- **Fragment Threshold** : This value can define the maximum packet sized, so the packets bigger than this size will be segmented. If you set the lower value, and found there is higher packets error value, you can set the value higher, however, that may decrease the whole performance of BLW-54MF. The default value is **2346**, and you can set a value between **256~2346**.

- **DTIM間隔**：此數值代表「送達資料流指示訊息」的間隔時間。DTIM欄位是一個倒數計時欄位，可通知用戶端下一個傾聽端的緩衝廣播或多重傳播訊息時，它會以DTIM間隔數值寄送下一個DTIM。AP用戶端會聽到信標並知道應該接收廣播和多重傳播。
- **TX Rates (Mbps)**：The transmission rate can be: Auto/1/2/5.5/11/6/9/12/ 18/24/36Mbps. When you choose “Auto,” BLW-54MF will automatically find the proper transmission rate for you. If you choose higher transmission rate, the distance between the AP and the Wireless NIC must be closer. Besides, when the Wireless NIC is 802.11b type, the maximum transmission rate is 11Mbps.
- **11g only mode**：Click to use only 802.11g mode.
- **Antenna transmit power**：Please manual choose the transmitting power for BLW-54MF. There are several levels to choose. The system default is **full** which means BLW-54MF has the maximum Tx Power on wireless network.
- **Cancel**：If you do not want to configure this setting right now, click this button to exist this page.
- **Apply**：Click this button to save/apply the settings and restart the system.

7. Status

7.1 Device Information

After entering the system, you can click “**Status**” on the left menu to check all the settings and firmware version.

The screenshot shows the web interface for a PCI BLW-54MF device. The left sidebar contains a menu with options: Main, Wireless, Status (selected), Routing, Access, Management, Tools, and Wizard. The main content area displays the following information:

Device Information | Log | Log Setting | Statistic | Wireless

Firmware Version: 1.00 , Nov 14, 2006

WAN	
MAC Address	00-32-99-aa-01-32
Connection Type	DHCP Client Connected <input type="button" value="DHCP Release"/> <input type="button" value="DHCP Renew"/>
IP Address	192.168.254.108
Subnet Mask	255.255.255.0
GateWay	192.168.254.1
DNS	192.168.254.1

Wireless	
Connection Type	802.11g AP Enable
ESSID	default
Channel	6
Authentication Type	Disabled

LAN	
MAC Address	00-32-99-aa-01-31
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
DHCP Server	Enabled DHCP Table

7.2 Log

BLW-54MF Wireless Router can record various types of activities. System Log records every events happened on the BLW-54MF Wireless Router. These data are useful for troubleshooting. If BLW-54MF restarts, the logs will be deleted automatically.

The screenshot shows the web interface of the BLW-54MF Wireless Router. The top navigation bar includes links for Device Information, Log, Log Setting, Statistic, and Wireless. Below this, there are buttons for First Page, Last Page, Previous Page, Next Page, Clear Log, and Refresh. A sidebar menu on the left contains icons and labels for Main, Wireless, Status, Routing, Access, Management, Tools, and Wizard. The main log area displays a table with the following data:

Time	Message	Source/Destination	Note
Nov/22/2006 22:30:06	Connected		Connected
Nov/22/2006 22:22:29	Connected		Connected
Nov/22/2006 22:22:28	Connected		Connected
Nov/22/2006 21:38:37	DHCP Request success		192.168.254.100
Nov/22/2006 21:38:37	DHCP Request		192.168.254.100
Nov/22/2006 21:38:37	DHCP Discover		
Nov/22/2006 21:38:32	DHCP Discover		
Nov/22/2006 21:38:30	DHCP Discover		
Nov/22/2006 21:38:30	System started		
Nov/22/2006 21:38:30	AP 2.4GHz mode Ready, Channel : 6 TxRate : best (SSD) : default		

- **Clear Log** : Click this button to delete all the logs recorded from the system started till now.
- **Refresh** : Click this button to update the log status and check the latest status.

7.3 Log Setting

When the log generates, the system can send a warning e-mail to the appointed e-mail address.



- **SMTP Server** : Enter the IP address of SMTP Server for mail delivery.
- **Sent to** : Enter the correct E-Mail Address of the recipient. If there is any error occurring when connecting, the system will generate related log and send to this E-Mail address. If you want to send the email immediately, click **“Email Log Now”** to send it right away.
- **Syslog Server** : You can send the Syslog to your Linux Server, just enter the remote IP address of your Linux Server.
- **Log Type** : You may choose the types of log you want to check: **System Activity, Debug Information, Attacks, Dropped Packets, or Notice.**
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Apply** : Click this button to save/apply the settings and restart the system.

7.4 Statistic

Click “**Statistics**”, the page will display the transmitted and received results.

Utilization (bytes/sec)		LAN	Wireless	WAN
Send	Average	12	4	3
	Peak	125	30	78
Receive	Average	20	0	23
	Peak	165	0	266

Reset

● **Reset** : Click this button to reset all the statistics back to zero and start to calculate again.

7.5 Wireless

You may see the information of the users which is connection with BLW-54MF now, including **Connected Time**, **MAC Address**, and **Mode**.

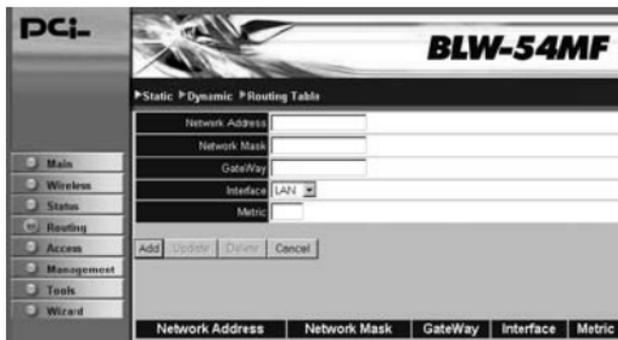
Connected Time	MAC Address	Mode
----------------	-------------	------

3 *Advanced Setup & Configuration*

1. Routing

1.1 Static

If you connect several routers with BLW-54MF Wireless Router, you may need to set up a predefined routing rule to have more effective network topology/traffic. To set Static Route, please enter the IP address of the route, route mask, route gateway, and choose the route interface from LAN or WAN.

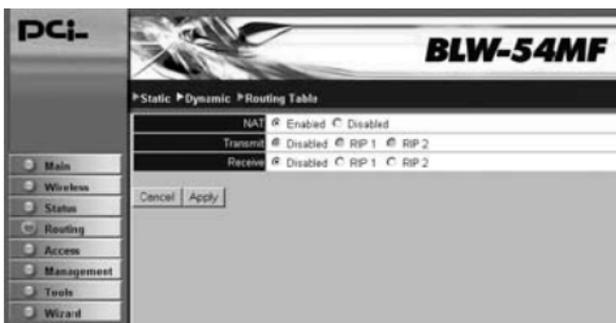


- **Network Address** : Enter the IP address of the destination LAN segment which needs routing. When a packet with destination IP address that matches to this field, it will route to the device set in the route gateway field.
- **Network Mask** : Enter the Route Subnet Mask of the destination LAN segment. It should be a C class LAN segment.
- **GateWay** : Enter the Route GateWay of the destination LAN segment.
- **Interface** : You can use the LAN side or the WAN side to be the physical interface, which is the location where the packets sending out.

- **Metric** : Metric determines which route the router should use to forward a packet.
- **Add** : Click this button to add a new route and the added route will be listed on the list at the bottom of the page.
- **Update** : Update the modification you have made to the Static Routing function.
- **Delete** : Delete the route which you set before.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.

1.2 Dynamic

The ability for a router to forward data via a different route based on the current conditions of the communications circuits. For example, it can adjust for overloaded traffic or failing lines and is much more flexible than static routing, which uses a fixed forwarding path.



- **NAT** : Enable NAT (Network Address Translation) function to receive/transmit your dynamic routing path.
- **Transmit/Receive** : You may choose to “**Disabled**” the function or use **RIP1**, **RIP2**, the interior gateway protocol to choose the path.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Save** : Click this button to save/apply the settings and restart the system.

1.3 Routing Table

This page shows all the route you made related to BLW-54MF.

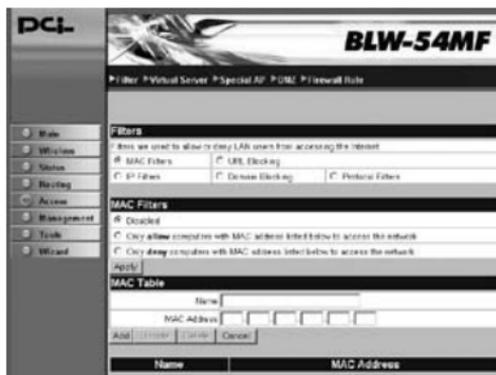


2. Access

2.1 Filters

→MAC Filters

MAC Filters is used to “Allow” or “Deny” computers on LAN to access to the Internet. In the list at the bottom of the screen, there are several default MAC addresses from the DHCP client computers connecting to BLW-54MF. If you want to use these MAC addresses, choose an address you want to use and click the check box on the list. The default status is “Disabled” .



- **Disabled** : If you do not need MAC address at the moment, you may choose this option.
- **Only allow computers with MAC address listed below to access the network** : Choose this option to allow computers with MAC addresses listed below to access to the network and Internet. All the other computers will be denied to access to the network and Internet.
- **Only deny computers with MAC address listed below to access the network** : Choose this option to deny computers with MAC addresses listed below to access to the network and Internet. All the other computers will be allowed to access to the network and Internet.
- **Name** : You can name the host which you want to configure.
- **MAC Address** : Enter a user's MAC address which needs to be filtered.
- **Add** : Enter the blocking MAC address and then click this button to add it to the rule.
- **Update** : Update the modification you have made to the MAC Filter function.
- **Delete** : Click the MAC address you want to delete from the list and then click this button.
- **Cancel** : If you do not want to do this setting right now, you may click this button to exist.

→ URL Blocking

Use URL Blocking to prevent PCs from accessing websites including the following URL strings. Users can enter some key words such as adult, hacker or other related words to prevent PCs on the LAN from connecting with these websites.



- **URL string pattern to be blocked** : Enter the strings/key words which you want to filter. Click “**Enabled**” and then the website related to these strings will be blocked and cannot be connected with.
- **Delete** : Click the URL you want to delete and then click this button.
- **Add** : Enter the blocking string and then click this button to add it to the rule.
- **Cancel** : If you do not want to do this setting right now, you may click this button to exist.

→ IP Filters

By using IP Filters, you can allow or deny the access to login certain IP addresses on the Internet.



- **Enabled** : Click “**Enabled**” to apply IP filter, or “**Disabled**” to apply it later.
- **Range Start/Range End** : Type in a range of IP address to apply IP filtering on. If you only want to apply on a single computer, please enter the IP address of the computer in the beginning blank, and leave the ending part blank.
- **Add** : Enter the filter string and then click this button to add it to the rule.
- **Update** : Update the modification you have made to the IP Filter function.
- **Delete** : Delete the IP filter string you set before.
- **Cancel** : If you do not want to do this setting right now, you may click this button to exist.

→ Domain Blocking

To use Domain Blocking to allow or deny computers on the LAN to access to certain domains, no matter they are services under WWW, FTP, SMTP, and so on. You can have a maximum of 32 sets of domain names.



- **Disabled** : If you do not want to use domain blocking function, you can choose this option.
- **Allow Users to access all domains except “Blocked Domains”** : Choose this option to block users to access to certain Internet domains listed below, but users can still access to all the other Internet domains.

- **Deny users to access all domains except “Permitted Domains”** :
Choose this option to allow users to access to certain Internet domains listed below, but users cannot access to all the other Internet domains.
- **Add** : Type in the suffix of the domain which you want to block/permit, for example, shopping.com or sprots.net. and then click this button to add it to the rule.
- **Cancel** : If you do not want to do this setting right now, you may click this button to exist.

→ Protocol Filters

Use Protocol Filter function to allow or deny the computer to use specific TCP/UDP port.



- **Enabled** : Click “**Enabled**” to apply Protocol Filter, or “**Disabled**” to apply it later.
- **Name** : You can name the protocol which you want to configure.
- **Protocol** : You can set the protocol to be **TCP**, **UDP**, or **ICMP**.
- **Port** : Enter the port range which you want to filter.
- **Add** : Enter the filtered protocol and then click this button to add it to the rule.
- **Update** : Update the modification you have made to the Protocol Filter function.

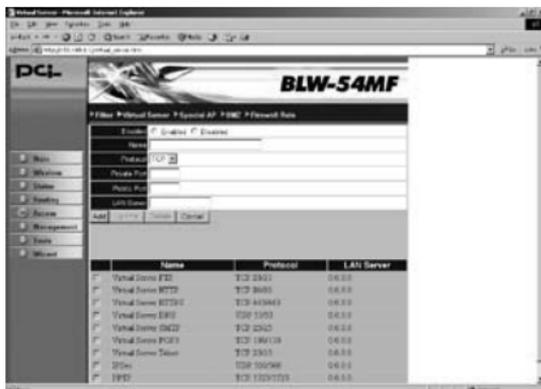
- **Delete** : Delete the protocol you set before.
- **Cancel** : If you do not want to do this setting right now, you may click this button to exist.

2.2 Virtual Server

BLW-54MF can enable Virtual Server function, and remote hosts can use public IP address to connect with the Internet and FTP and then enter the LAN, but all the PCs on the LAN will not be seen from the outside. Virtual Server function can let users set a local server with specific port number which stands for the specific port, such as Web (80), FTP (21), and Telnet (23). When BLW-54MF receives an incoming access request to the specific port, it will forward the request to the corresponding internal server which means the external request for accessing a specific port will be reassigned to a different port



To enable Server Port is like to open the firewall, which exposes your LAN to users on the Internet. It is to say that the NAT function of BLW-54MF will not be able to provide protection and prevent hackers.



- **Enabled** : You can choose to “**Enabled**” or “**Disabled**” this function.
- **Name** : If you want to add a new server and its collocated port number, please enter a service name here.
- **Protocol** : You can set the protocol of the virtual server to be TCP or UDP.
- **Private Port** : Enter the port number that you want to set for virtual server port which might be different from the external port number. It can be a single port number or a range of ports. When receiving an incoming packet corresponding with the specific port number, the packet will be transferred to the appointed port.
- **Public Port** : Enter the port number used for Internet application, for example, port 20 which is usually used for FTP, port 80 for WWW, and so on. If applications require multiple ports, you should assign a range of port for it.
- **LAN Server** : Please enter the IP address of the server on the LAN side which provides virtual server service.
- **Add** : Click this button to add a server, and the server will be listed on the list under the page.
- **Update** : Update the modification you have made to the Virtual Server function.
- **Delete** : Delete the Virtual Server you set before.
- **Cancel** : If you do not want to do this setting right now, you may click this button to exist.

2.3 Special AP

3

If the Internet applications do not use standard connections or port numbers, it might be unable to work because the connections of the applications could probably be blocked by the firewall of BLW-54MF Wireless Router. In this case, you can define these kinds of Internet applications as “**Special Applications**” to make them work properly.

You can define the special applications by your own, but you need detailed information about the applications such as port number, which normally can be available from the application providers. Moreover, you have to check “**Enable**” before add or edit an application.



- **Enabled** : You can choose to “**Enabled**” or “**Disabled**” this function.
- **Name** : Enter the name of the application which you want configure.
- **Trigger Protocol** : Scroll down the list to choose the trigger type: **TCP** or **UDP** type.
- **Trigger Port Range** : Enter the starting port number as the starting outbound port for the special application and then enter the finish port number as the ending outbound port.

- **Incoming Protocol** : Scroll down the list to choose the incoming application type: **TCP** or **UDP** type.
- **Incoming Port** : Enter a port or a range of port to be the incoming port. Once the trigger port is detected, the incoming packets are allowed to pass the firewall to the specified incoming ports.
- **Add** : Enter the special application and then click this button to add it to the rule.
- **Update** : Update the modification you have made to this function.
- **Delete** : Delete the application you set before.
- **Cancel** : If you do not want to do this setting right now, you may click this button to exist.

2.4 DMZ

If your computer cannot use Internet applications or cannot provide services to remote users when applying BLW-54MF at the same time, you can let the host which wants to access to the Internet using DMZ function. Enter the host's LAN IP address to enable this function, but be aware that one BLW-54MF can only correspond to a single DMZ host.



- **DMZ Host IP** : Click “**Enable**” check box to start entering the DMZ host's IP address and then the “**DMZ Host IP**” will begin to receive all unknown connections and data. Besides, you must enter the IP address of the PC which is being the “**DMZ Host IP.**”

- **Apply** : Click this button to save/apply the settings and restart the system.



Adding a client host to DMZ might expose it to a variety of danger such as virus or worm attacks because of unrestricted Internet access; therefore, only use this option as the last means. Besides, before using DMZ function, you should update the up-to-date settings of security system and virus signatures on the host.

2.5 Firewall Rule

Firewall is an advanced function which can be used to allow or deny TCP/IP data packets passing through BLW-54MF Wireless Router. It works like an IP filter, but has some additional settings; therefore, you can create more detailed regulations of accessing to BLW-54MF.



- **Name** : Enter the name of the application which you want configure.
- **Action** : .
- **Source** : Enter the starting port number as the starting outbound port for the special application and then enter the finish port number as the ending outbound port.

- **Destination** : Scroll down the list to choose the incoming application type: **TCP** or **UDP type**. Choose the protocols (TCP, UDP or IP) which used by remote systems or services.
- **Add** : Enter the special application and then click this button to add it to the rule.
- **Update** : Update the modification you have made to this function.
- **Delete** : Delete the rule you set before.
- **Cancel** : If you do not want to do this setting right now, you may click this button to exist.

3. Management

3.1 Settings

You can **save settings**, **load settings**, **restore factory default settings** and enable unique **EZ-GO** function on this page.



→ Save Settings

- **Save** : You can click this icon to save current system settings to your local disk. (The format will be “.bin” file)



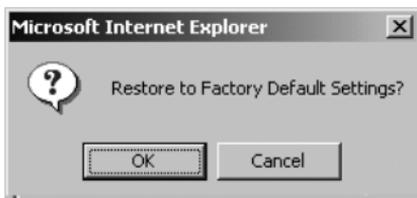
→Load Settings

- **Browse /Load** : Make sure the saved system setting file is in the local host disk and then click “**Browse**” to search for the saved system setting file. Click “**Open**” to select the system setting file that you want and then click “**Load**” to start restore the settings.



→Restore Factory Default Settings

- **Restore** : Click “**Restore**” and then click “**OK**” on the pop-up dialog box, the system will restart to the factory default value afterward.



→EZ-GO

All you have to do is (1) **press EZ-GO button at the back of the device** or (2) **enable EZ-GO function on the “Management→Settings” page**, and then you may connect with wireless network and set encryption in a short time, but it must collocate with our company's **GW-US54SG wireless adapter** to make it work.

Please install the driver and the utility of GW-US54SG first, and then use **JumpStart** utility to cooperate with **EZ-GO** function to make a connection.

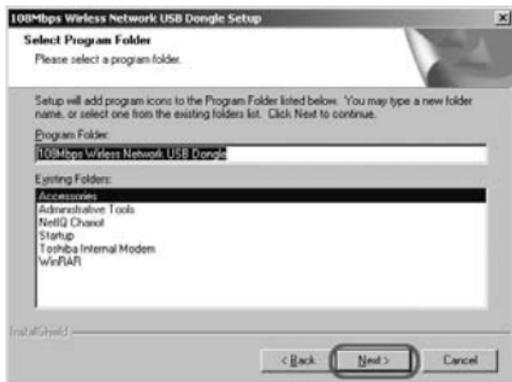
1. To install the driver and utility of GW-US54SG, please click “**Next**” to proceed.



2. Choose a destination location to install GW-US54SG, and then click “Next” to continue installing.



3. After selecting the location for GW-US54SG and then choose the program name of the destination folder, please click “Next” to proceed.



4.If the warning dialog box pops up, please click “Yes” to complete the installation.

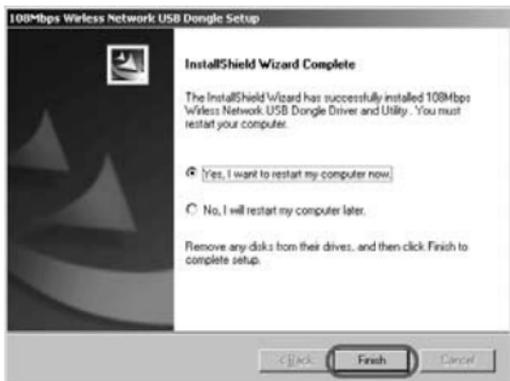


5.After completing the installation, there will be a grey running little man icon exist on the desktop  which is the utility icon of GW-US54SG, users can use this program to configure GW-US54SG. And there is another icon of the utility which is called **JumpStar**  , and it is used for making connection with **EZ-GO**.

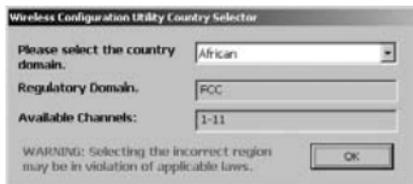
6.After the icons appear, the **InstallShield Wizard Complete** window shows. Please click “**Finish**” to complete the installation.



7. The InstallShield Wizard will ask if you want to restart your computer right after finishing installation, please click **“Finish”** after you finish and save the work at hand.



8. After the computer restarts, the following window will show, please scroll down the list to choose a country domain for the utility.



9. After choosing the country domain, please enter the configuration page of BLW-54MF. Go to “**Management**→**Settings**” page and then choose “**Enable**” EZ-GO function, and the **Status EZ-GO** LED on the front panel of BLW-54MF will be blinking. The other way to enable EZ-GO function is to press EZ-GO button on the back panel of BLW-54MF, and you can also see **Status EZ-GO** LED blinking as well. The blinking LED means that you can use **JumpStart** to start searching BLW-54MF and make a connection. The searching time period is **5 minutes** long. If GW-US54SG cannot connect with BLW-54MF in 5 minutes, this LED will be off and the EZ-GO function will be disabled automatically. If you want to restart EZ-GO function, please press EZ-GO button at the back of BLW-54MF again or choose “**Reset EZ-GO**” function on the configuration page of BLW-54MF again.



- 10.If you want to continue connecting GW-US54SG with BLW-54MF, please double click on the **JumpStart** icon on the desktop to enter configuration page. If this is the first time you set up wireless connection for GW-US54SG and BLW-54MF, please choose “**Create a new wireless network**” ; if you want to connect with an existing network, please choose “**Connect to an existing wireless network**” . Click “**Next**” to continue setting up.



- 11.This page reminds you to check if the EZ-GO LED on BLW-54MF is blinking steadily as it shows here. If the LED is blinking correctly, click “**Yes**” to proceed.



12. After JumpStart does the auto-detection, it will ask you to set a password for adding devices to your network. And this password will become the **Pre-shared Key** for GW-US54SG and BLW-54MF. Meanwhile, the wireless authentication mode of BLW-54MF will become “**WPA-AUTO**” and “**PSK**” automatically. Click “**Next**” to complete the settings.



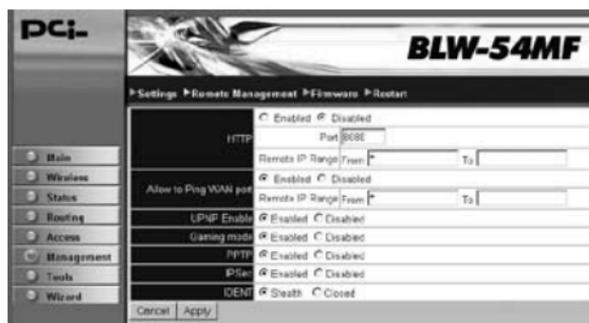
13. The following screen shows and it means GW-US54SG has successfully connect with BLW-54MF. Click “**Finish**” to complete the settings.



3.2 Remote Management

3

BLW-54MF Wireless Router can be managed by any PC from your LAN. If the router has connected to the Internet, the administrator can also configure it via the Internet. Owing to the security, however, you must have the MAC address before performing remote management.



- **Enable Remote Management Function** : You may choose to **Enable** or **Disable** the function of managing BLW-54MF from the remote host.
- **HTTP/Port** : Enter the port number of remote management host.
- **HTTP/Remote IP Range** : Enter an IP address or a range of IP addresses of the remote management interface.
- **Allow to Ping WAN port/Remote IP Range** : You can choose if you want to enable and reply the Ping test from the WAN side. After that, you may set a range of IP addresses to allow to reply the Ping test.
- **UPnP Enable** : If your Windows Operating System supports UPnP service, when you enable the UPnP service and the BLW-54MF Wireless Router is connecting with the computer, the task bar will show the icon of BLW-54MF to inform you that a new device is found and inquire you whether if you want to set a shortcut on the desktop.

- **Gaming mode** : If you are experiencing difficulties when playing online games or even certain applications that use voice data, you may need to enable **Gaming Mode** for these applications to work correctly. When not playing games or not using these voice applications, it is recommended that Gaming Mode should be disabled.
- **PPTP/IPSec** : Users who use remote host or VPN can choose IPSec or PPTP for authentication. These functions can provide maximum compatibility for your VPN server and make it work fine.
- **IDENT** : Auth/Ident servers — which are supposed to run on the local user's machine — open port 113 and listen for incoming connections and queries from remote machines. These querying machines provide a local and remote "port pair" describing some other already-existing connection between the machines. The user's "**IDENT**" server is tasked with looking up and returning the connection's "USER ID" and perhaps additional information, such as an E-Mail address, full name, or whatever. You may choose to use **Stealth** or **Closed** which is not to use this function.
- **Cancel** : If you do not want to configure this setting right now, click this button to exist this page.
- **Save** : Click this button to save/apply the settings and restart the system.

3.3 Firmware

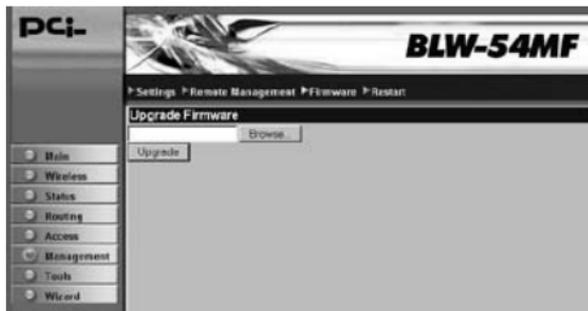
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You can upgrade the firmware of BLW-54MF via Web Browser.

First, please go to the website: <http://www.planex.com.tw/download/index.htm> to download the latest firmware of BLW-54MF. Be sure that the firmware is stored in your PC's disk and then click "**Browse...**" to search for the firmware file which you just downloaded. Click "**Open**" to use the firmware and click "**Update.**" After the dialog box pops up and ask you if you want to continue upgrading the firmware, you can click "**OK**" to start upgrading immediately. Upgrading firmware will not change any settings, but it is recommended that you should save the settings before upgrading the firmware.



It takes about 2~3 minutes to upgrade the firmware. When upgrading, please do not turn off the power of BLW-54MF. After finishing upgrading, BLW-54MF will restart automatically.



- **Upgrade Firmware** : Please go to the website of Planex Communications Inc. to download the latest firmware. After that, you may use "**Browse**" and "**Upgrade**" to update firmware.
- **Browse** : Click this button to search for the downloaded firmware file in your hard disk.
- **Upgrade** : Click this button to start upgrading firmware.

3.4 Restart

Click **Restart** and then click **OK** on the pop-up dialog box to restart the system.

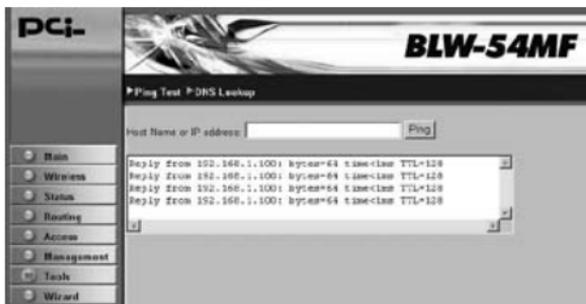
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4. Tools

4.1 Ping Test

This function can help you send **Ping** packets to detect if the remote host is O.K. The response messages will appear below and they can also help to diagnose the network problems.



- **Host Name or IP address** : Enter the **IP address** or the **Host Name** which you want to test.
- **Ping** : Click this button to start performing ping test and the results will show on this page.

4.2 DNS Lookup

3

DNS is short for **Domain Name System** (or **Service**, or **Server**). It is an Internet service that translates domain name into IP addresses. Because domain names are alphabetic, they're easier to remember. The Internet, however, is really based on IP addresses. Every time you use a domain name, therefore, a DNS service must translate the name into the corresponding IP address. You may enter a domain name or IP address on this page, **DNS Lookup** function can enquire for the corresponding IP address or domain name. For example, the domain name `www.planex.net` might translate to `202.210.129.35`.



4 AP Setup & Configuration

BLW-54MF supports AP/Router switching function. Users can use the switch at the back of BLW-54MF to choose AP or Router mode to use. All the AP Configuration pages are the same as Router's. There are only a few functions that cannot be configured under AP mode, and the rest of the settings are the same as the router's. Please refer to Chapter 1~3 in the Users' Manual for detailed configuration. Here listed the functions that **can be configured and cannot be configured**:

8.Setup Wizard : can be configured

9.Main

9.1.LAN & DHCP Server : **Host Name, IP address, Subnet Mask** can be configured

9.2.WAN : cannot be configured

9.3.Password : can be configured

9.4.Time : **Time Zone** can be configured

9.5.Dynamic DNS : cannot be configured

10.Wireless

10.1.Basic : can be configured

10.2.Authentication : can be configured

10.3.Advanced : can be configured

11.Status

11.1.Device Information : can be configured

11.2.Log : can be configured

11.3.Log Setting : can be configured

11.4.Statistics : can be configured

11.5.Wireless : can be configured

12.Routing

12.1.Static : cannot be configured

12.2.Dynamic : cannot be configured

12.3.Routing Table : cannot be configured

13.Access

13.1.Filters : cannot be configured

13.2.Virtual Server : cannot be configured

13.3.Special AP (Application) : cannot be configured

13.4.DMZ : cannot be configured

13.5.Firewall Rules : cannot be configured

14.Management

14.1.Settings : can be configured

14.2.Remote Management : cannot be configured

14.3.Firmware : can be configured

14.4.Restart : can be configured

15.Tools

15.1.Ping Test : cannot be configured

15.2.DNS Lookup : cannot be configured

