

ADSL2+ Router iB-LR6111A



User Guide

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FCC STATEMENT

FC

This equipment 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 pro-vide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE Mark Warning

CE

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

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Package Contents

The following items should be found in your package.

- > One iB-LR6111A ADSL2+ Router
- > One Power Adapter for iB-LR6111A ADSL2+ Router
- Quick Installation Guide
- > One RJ45 cable
- One USB cable
- Two RJ11 cables
- > One ADSL splitter
- > One Resource CD, including
 - This User Guide
 - USB Driver
 - Other Helpful Information

P Note:

If any of the listed contents is damaged or missing, please contact the retailer from whom you purchased the product for assistance.

Chapter 1. Introduction

Thank you for choosing the iB-LR6111A ADSL2+ Router.

1.1 Product Overview

The device is designed to provide a simple and cost-effective ADSL Internet connection for a private Ethernet network.

iBall Baton iB-LR6111A connects to an Ethernet LAN or computers via standard Ethernet ports. The ADSL connection is made using ordinary telephone line with standard connectors. Multiple workstations can be networked and connected to the Internet using a single Wide Area Network (WAN) interface and single global IP address. The advanced security enhancements, **IP/MAC Filter**, **Application Filter** and **URL Filter** can help to protect your network from potentially devastating intrusions by malicious agents from the outside of your network.

Quick Start of the Web-based Utility is supplied and friendly help messages are provided for the configuration. Network and Router management is done through the Web-based Utility which can be accessed through local Ethernet using any web browser.

ADSL

iB-LR6111A supports full-rate ADSL2+ connectivity conforming to the ITU and ANSI specifications. In addition to the basic DMT physical layer functions, the ADSL2+ PHY supports dual latency ADSL2+ framing (fast and interleaved) and the I.432 ATM Physical Layer.

1.2 Main Features

- > Complies with IEEE 802.3 & IEEE 802.3u standards.
- > Complies with ADSL protocols (ADSL / ADSL2 / ADSL2+).
- > One 10/100M RJ45 LAN port (Auto MDI/MDIX) & one USB Port.
- > One RJ11 (WAN) Port.
- > Supports Multiple PVC (Permanent Virtual Circuit).
- Supports IPTV Ready feature.
- Supports downstream data rates up to 24Mbps, upstream data rates up to 3.5Mbps (With Annex M enabled).
- > Triple Active Firewall: SPI, NAT & Packet filtering.
- Supports firewall filtering as IP/MAC filter, Application filter and URL filter.
- > Supports Virtual Server, DMZ host and IP Address Mapping.
- > Supports Dynamic DNS, UPnP and Static Routing.

- Built-in DHCP server.
- Supports long transfers, the max line length can reach to 6.5Km.
- > Supports remote configuration and management through SNMP.
- > Real-time Configuration and device monitoring.
- > Supports system log and flow Statistics.
- > Supports firmware upgrade and Web management.

1.3 Conventions

The Router or device mentioned in this User Guide stands for iB-LR6111A or iBall Baton Adsl2+ Router without any explanations.

Parameters provided in the pictures are just references for setting up the product, which may differ from the actual situation.

Chapter 2. Hardware Installation

2.1 The Front Panel



Figure 2-1

The LEDs are located on the front panel. They indicate the device's working status. For details, please refer to LED Explanation.

LED Explanation:

LED	Status	Indication			
	On	There is a successful connection on USB port but no activity.			
USB	Flash	Data is being transferred over the USB connection.			
	Off	There is no connection on USB port or the connection is abnormal.			
	On	There is a successful connection on LAN port but no activity			
LAN	Flash	Data is being transferred over the LAN connection			
	Off	There is no connection on LAN port or the connection abnormal			
	On	The LINE port is linked up			
ADSL	Flash	The ADSL2+ Router is training			
	Off	The LINE port is linked down			
	On	A successful PPP connection has been established			
Internet	Flash	Data is being transferred over the Internet			
	Off	There is no successful PPP connection or the Router works on Bridge mode			
Power	On	Power is OK			
1 00001	Off	Power is failed			

2.2 The Back Panel



Figure 2-2

- > ON/OFF: The switch for the power.
- > POWER: The Power plug is where you will connect the power adapter.
- LAN: Through the port, you can connect the Router to your PC or the other Ethernet network devices.
- > RESET: There are two ways to reset the Router's factory defaults.

Method one: With the Router powered on, use a pin to press and hold the Reset button for at least 5 seconds. And the Router will reboot to its factory default settings.

Method two: Restore the default setting from "Maintenance-SysRestart" of the Router's Web-based Utility

- > USB: Connect with your computer's USB interface
- > LINE: Through the port, you can connect the Router with the telephone.

2.3 Installation Environment

- > The Product should not be located where it will be exposed to moisture or excessive heat.
- Place the Router in a location where it can be connected to the various devices as well as to a power source.
- Make sure the cables and power cord are placed safely out of the way so they do not create a tripping hazard.
- > The Router can be placed on a shelf or desktop.

2.4 Hardware installation procedures

The procedure to install the Router can be described in the following steps:

First Step: Connect the Modem port of Splitter with the LINE port of the Router by telephone line.

Second Step: Connect category 5 cable with RJ45 jacks to Router's LAN port and your computer's NIC. Or connect USB cable to ADSL2+ Router's USB port and your computer's USB interface. (When you connect your PC to the Router through the USB port, please install the USB driver first. For the detailed operation please refer to "3.2 USB Configuration" in User Guide.)

Third Step: Plug one end of the provided Power Adapter into the Power jack on the Router and the other end to a standard electrical outlet.

Last Step: Check the line connection to see if everything is ready. Power on finally.



Figure 2-3

Chapter 3. Quick Installation Guide

3.1 Configure PC

After you directly connect your PC to the iB-LR6111A or connect your adapter to a Hub/Switch which has connected to the Router, you need to configure your PC's IP address. Follow the steps below to configure it.

Step 1: Click the Start menu on your desktop, right click My Network Places, and then select Properties (shown in Figure 3-1).



Figure 3-1

Step 2: Right click Local Area Connection (LAN), and then select Properties.



Figure 3-2

Step 3: Select **General** tab, highlight Internet Protocol (TCP/IP), and then click the **Properties** button.

🕹 Local Area Connection Properties 🛛 🔹 💽
General Authentication Advanced
Connect using:
Realtek RTL8139 Family PCI Fast Etł <u>Configure</u>
This connection uses the following items:
 Client for Microsoft Networks Client for Microsoft Networks QoS Packet Scheduler Internet Protocol (TCP/IP)
Install Uninstall Properties Description
wide area network protocol that provides communication across diverse interconnected networks.
Show icon in notification area when connected Notify <u>m</u> e when this connection has limited or no connectivity
OK Cancel



Step 4: Configure the IP address as Figure 3-4 shows. After that, click **OK**.

Internet Protocol (TCP/IP) Proper	rties 🛛 🛛 🔀
General	
You can get IP settings assigned autom this capability. Otherwise, you need to a the appropriate IP settings.	atically if your network supports isk your network administrator for
Obtain an IP address automatically	,
O Use the following IP address	
<u>I</u> P address:	192.168.1.2
S <u>u</u> bnet mask:	255 . 255 . 255 . 0
Default gateway:	192.168.1.1
Obtain DNS server address autom	atically
• Use the following DNS server add	resses:
Preferred DNS server:	192.168.1.1
<u>A</u> lternate DNS server:	· · ·
	Ad <u>v</u> anced
	OK Cancel

Figure 3-4

P Note:

You can configure the PC to get an IP address automatically, select "Obtain an IP address automatically" and "Obtain DNS server address automatically" in the screen above.

Now, you can run the Ping command in the command prompt to verify the network connection. Please click the **Start** menu on your desktop, select **run** tab, type **cmd** or **command** in the field and press **Enter**. To continue, please type *ping 192.168.1.1* on the following appeared command prompt screen and then presses **Enter**.

If the result displayed is similar to the screen below, the connection between your PC and the Router has been established.

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = Oms, Maximum = Oms, Average = Oms

Figure 3-5

If the result displayed is similar to the screen shown below, it means that your PC has not

connected to the Router.

```
Pinging 192.168.1.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.1:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Figure 3-6

You can check it follow the steps below:

1) Is the connection between your PC and the Router correct?

The LED of LAN port which you link to the device and the LEDs on your PC's adapter should be lit.

2) Is the TCP/IP configuration for your PC correct?

If the Router's IP address is 192.168.1.1, your PC's IP address must be within the range of 192.168.1.2 ~ 192.168.1.254.

3.2 USB Configuration

If you use the USB interface, first, you must install the USB's driver to the computer. You can obtain the drivers from the provided CD, or download from our website. (http://www.iBallBaton.com)

USB Drive installation procedures

- **Step 1:** Please connect your PC to the Router through the USB port at first, then open the relative operating system folder in the CD, and double click **Setup.exe** to install the USB driver.
- Step 2: Soon, Figure 3-7 will display after a moment. Click Next to continue.



Figure 3-7

Step 3: You will see Figure 3-8 as follow, please wait a moment.

iBall Baton ADSL2+ Router Installat	ion 🔀
Setup Status	2
iBall Baton ADSL2+ Router is configuring your new sol	tware installation.
InstallShield	Cancel

Figure 3-8

Step 4: After that, you will see Figure 3-9. Click Finish to complete the installation.

iBall Baton ADSL2+ Router Installation						
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed iBall Baton ADSL2+ Router. Click Finish to exit the wizard.					
	< Back Finish Cancel					

Figure 3-9

P Note:

- 1) All of the above settings are under windows XP.
- 2) If you want to pull out the USB device you must disconnect the network of USB first.
- 3) In the Vista operating system, maybe the "Unknown Device" screen will pop up when you insert the USB cable of the Router to a computer, please just unplug the USB cable and try again.

3.3 Login

Once your host PC is properly configured, please proceed as follows to use the Web-based Utility: Start your web browser and type the private IP address of the Router in the URL field: **192.168.1.1**.

```
Address 192.168.1.1
```

After that, you will see the screen shown below, enter the default User Name **admin** and the default Password **admin**, and then click **OK** to access to the **Quick Start** screen. You can follow the steps below to complete the Quick Start.



Figure 3-10

Step 1: Select the Quick Start tab, then click RUN WIZARD, and you will see Figure 3-11. Click the NEXT button.

	Quick Start
	The Wizard will guide you through these following quick steps. Begin by clicking on NEXT.
	Step 1. Choose your time zone
	Step 2. Set your Internet connection
	Step 3. Save your current ADSL Router configuration
	NEXT
	Figure 3-11
Step 2:	Configure the time for the Router, and then click the NEXT button.
	Quick Start - Time Zone
	Select the appropriate time zone for your location and click NEXT to continue.
	(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi

BACK	NEXT	EXIT

Figure 3-12

Step 3: Select the connection type to connect to the ISP (We select **PPPoE/PPPoA** mode for example here), and then click the **NEXT** button.

Quick Start - ISP Connection Type Select the Internet connection type to connect to your ISP. Click NEXT to continue. Opnamic IP Address Choose this option to obtain a IP address automatically from your ISP. Static IP Address Choose this option to set static IP information provided to you by your ISP. PPPoE/PPPoA Choose this option if your ISP uses PPPoE/PPPoA. (For most DSL users) Bridge Mode Choose this option if your ISP uses Bridge Mode.

Figure 3-13

Step 4: Configure the following options provided by your ISP: Username, Password, VPI, VCI and Connection Type. Then click NEXT.

Quick Start - PPPoE/PPF	PoA
Enter the PPPoE/PPPoA informa	tion provided to you by your ISP. Click NEXT to continue.
Username:	
Password:	
VPI:	0 (0~255)
VCI:	33 (1~65535)
Connection Type:	PPPoe LLC
	BACK NEXT EXIT
	Figure 3-14

Step 5: Click NEXT to finish the Quick Start.



Figure 3-15

Chapter 4. Software Configuration

This User Guide recommends using the "Quick Installation Guide" for first-time installation. For advanced users, if you want to know more about this device and make use of its functions adequately, maybe you will get help from this chapter to configure the advanced settings through the Web-based Utility.

After your successful login, you can configure and manage the device. There are main menus on the top of the Web-based Utility, submenus will be available after you click one of the main menus. On the center of the Web-based Utility, there are the detailed configurations or status information. To apply any settings you have altered on the page, please click the **SAVE** button.

4.1 Status

Choose "**Status**", you can see the next submenus: **Device Info**, **System Log** and **Statistics**. Click any of them, and you will be able to configure the corresponding function.





4.1.1 Device Info

Choose "**Status** \rightarrow **Device Info**" menu, and you will be able to view the device information, including LAN, WAN and ADSL. The information will vary depending on the settings of the Router configured on the Netwok Setup screen.

Device Information System Log Statistics Device Information Emmware Version: 3.0.0 Build 110615 Rel.08523 MAC Address: 48.54.4c:99.28.71 LAN IP Address: 192.168.1.1 Submet Mesk: 255.255.50 DHCP Server: Enabled VAN VVAN PVC VP/VC IP Address: Submet Mesk: Colspan="2">Colspan="2">Ovvn VVAN VVAN PVC VP/VC IP Address: Submet Mesk: Colspan="2">Colspan="2">Ovvn VVAN VVAN PVC VP/VC IP Address Submet Gate/Way DNS Server Encapsulation Status PVC VP/VC IP Address Submet Gate/Way DNS Server Encapsulation Status PVC1 0.05 N/A N/A N/A N/A Bridge Down PVC2 102 N/A N/A N/A N/A Dridge Down PVC4<	Status	Quick Start	k Ne S	twork etup	Advanced Setup	Acces Manager	is nent	Maintenanc	e Status	Help	
Device Information Firmware Version: 3.0.0 Build 110615 Rel.08523 MAC Address: 48:54:40:99:28:71 LAN P. Address: 48:54:40:99:28:71 LAN P. Address: 192:168.1.1 Submet Mesk:: 255:255:50 DHCP Server: Enabled VAN PVC VP/VC IP Address: Submet Gate/Way DNS Server Encapsulation Status PVC1 VP/VC IP Address: Submet Gate/Way DNS Server Encapsulation Status PVC1 V000 VIA N/A N/A N/A Bridge Down PVC1 0.05 N/A N/A N/A N/A Bridge Down PVC1 0.05 N/A N/A N/A N/A Bridge Down PVC2 0.05 N/A N/A N/A N/A Bridge Down PVC4 8/3 0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Proce Down PVC4 8/3 0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Proce Down PVC5		Devi	ce Info	Syste	m Log	Statistics					
Device Information Firmware Version: 3.0.0 Build 110615 Rel.08523 McC. Address: d8:5d:4c:99:28:71 LAN IP Address: 192:168:1.1 Subnet Mask: 255:255:50 DHCP Server: Enabled WAN PVC VP/CD VPI/VCI IP Address: Subnet GateWay DNS Server Encapsulation Status PVC VDIO IP Address Subnet Mask: 255:255:26 Output DNS Server Encapsulation Status PVC VDIO IP Address Subnet GateWay DNS Server Encapsulation Status PVC0 0.05 N/A N/A N/A N/A Bridge Down PVC1 0.05 N/A N/A N/A N/A Bridge Down PVC2 0.03 0.0.0 0.0.0 0.0.0.0 0.0.0.0 Down PVC4 0.03 N/A N/A N/A Bridge Down PVC3 0.03 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Down PVC4 0.03 0.0.0.0 0.0.0.0 0.0.0.0 Down <th></th>											
Image: Procession is 0.0.0 Build 110615 Rel.08523 MAC Address : d8:5d 4c; 99:28:71 LAN IP Address : 192:168.1.1 Subnet Mask : 255:255:255:0 DHCP Server : Enabled VAN IP Address : 192:168.1.1 Subnet Mask : 255:255:255:0 DHCP Server : Enabled VAN PVC VP/C IP Address : 100:100 Source Final Server : Enabled VAN PVC VP/C VP/C IP Address : 102:108 Subnet : GeteWiey : DNS Server : Encapsulation : Status : Drown : PVC1 : 032 : NVA : NVA : NVA : NVA : NVA : Pridge : Drown : PVC1 : 032 : NVA : NVA : NVA : NVA : NVA : Pridge : Drown : PVC3 : 010 : NVA : NVA : NVA : NVA : PVC3 : 020 : NVA : NVA : NVA : NVA : PVC3 : 020 : NVA : NVA : NVA : NVA : PVC3 : 020 : NVA : NVA : NVA : NVA : PVC3 : 020 : 0.0.0 : 0	Device Information										
Initiation of stability of the sta			Fire	nwara Vare	ion : 3.0.0 Built	4 110615 Rai 09	523				
Invit Productives Use of the second					ion : d9:5d:4a:	00:09:74	525				
Lini IP Address: 192.163.1.1 Subnet Mask: 255.255.255.0 DHCP Server: Enabled WAI PVC VP/IVC IP Address: Subnet Mask: 255.255.255.0 DHCP Server: Enabled WAI PVC VP/IVC IP Address: Subnet Mask: 255.255.255.0 WAI PVC VP/IVC IP Address: Subnet Mask: 255.255.255.0 PVCI DOS Server: Encapsulation Status PVC0 0.05 N/A N/A N/A N/A PVC1 0.05 N/A N/A N/A N/A Bridge Down PVC2 1/32 N/A N/A N/A N/A Bridge Down PVC2 1/32 N/A N/A N/A N/A Bridge Down PVC3 0/30 N/A N/A N/A N/A Bridge Down PVC4 0/33 0.0.0 0.0.0 0.0.0.0 0.0.0.0 D/0.0.0 D/0.0.0 D/0.0.0 D/0.0.0 D/0.0.0<	1.01			MAC Addre	iss : uo.ou.40.	33.20.71					
IP - Address 12:552.25:25:0 DHCP Server Endatest 12:552.25:25:0 DHCP Server Endatest IIII PVC0 VIAN N/A N/A N/A Bridge Down PVC1 0.05 N/A N/A N/A N/A Bridge Down PVC1 0.03 N/A N/A N/A N/A Bridge Down PVC2 1/32 N/A N/A N/A N/A Bridge Down PVC3 0.03 N/A N/A N/A N/A Bridge Down PVC3 0.03 0.00.0 0.00.0 0.00.0 0.00.0 Processor ADSL ADSL Endet Version: Ev/Ver.311.2.175_TC3086 Hw/Ver.T14.F7_6.0 Line State: Down Modulation: N/A Annex Mode: N/A N/A db Endet EndetEndet Endet Endet Endet EndetEndetEndet Endet Endet En	LAN			ID A datum							
Sublet Mask: 255.255.0 DHCP Server: Enabled VVAN PVC VPA PIAdress Subnet Gate/Way DNS Server Encapsulation Status PVC0 0.05 N/A N/A N/A N/A N/A Bridge Down PVC1 0.025 N/A N/A N/A N/A Bridge Down PVC1 0.025 N/A N/A N/A N/A Bridge Down PVC2 1.02 N/A N/A N/A N/A Bridge Down PVC2 0.03 N/A N/A N/A N/A Bridge Down PVC6 0.03 0.0.0.0 0.0.0.0 0.0.0.0 POWR Down PVC6 0.03 0.0.0.0 0.0.0.0 0.0.0.0 POWR Down PVC6 0.03 DOU.0.0 0.0.0.0 0.0.0.0 POWR Down PVC6 0.03 DOU.0.0 0.0.0.0 0.0.0.0				IP Addre	SS: 192.166.1						
DHOP Server: Enabled WAN PVC VPVC IP Address Subnet GeteWlay DNS Server Encapsulation Status PVC VO0 05 N/A N/A N/A N/A Bridge Down PVC1 032 N/A N/A N/A N/A Bridge Down PVC2 1/32 N/A N/A N/A N/A Bridge Down PVC3 0/30 N/A N/A N/A N/A Bridge Down PVC4 6/35 N/A N/A N/A N/A Bridge Down PVC4 6/35 N/A N/A N/A N/A Bridge Down PVC4 6/35 0.0.0 0.0.0 0.0.0.0 D0.0.0 Down PVC5 0/38 0.0.0.0 0.0.0.0 0.0.0.0 D0.0.0 Down PVC5 0/33 0.0.0.0 0.0.0.0 0.0.0.0 D0.0.0 Down				Subnet Ma	ISK: 255.255.2	255.0					
WAN PvC VPI/VCI IP Address Subnet GateWay DNS Server Encapsulation Status PvC0 0.05 N/A N/A N/A N/A N/A Bridge Down PvC1 0.032 N/A N/A N/A N/A Bridge Down PvC2 1.032 N/A N/A N/A N/A Bridge Down PvC3 0.032 N/A N/A N/A N/A Bridge Down PvC3 0.03 0.0.0.0 0.0.0.0 0.0.0.0 Down Bridge Down PvC4 8/35 N/A N/A N/A N/A Bridge Down PvC4 0/33 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Down PvC4 Bridge Down ADSL ADSL Firmware Version : Fir/Ver3.11.2.175_TC3086 Hw/Ver.T14.F7_6.0 Line State : Down Modulation : M/A Annex Mode : N/A Annex Mode : N/A Modulation : M/A Bridge Down Modula				DHCP Serv	/er : Enabled						
PVC VPI/VCI IP Address Subnet Oate/Way DNS Server Encapsulation Status PVC0 0/35 N/A N/A N/A N/A N/A Bridge Down PVC1 0/35 N/A N/A N/A N/A Bridge Down PVC1 0/32 N/A N/A N/A N/A Bridge Down PVC1 0/32 N/A N/A N/A N/A Bridge Down PVC2 1/32 N/A N/A N/A N/A Bridge Down PVC3 8/35 N/A N/A N/A N/A Bridge Down PVC4 8/35 N/A N/A N/A N/A Bridge Down PVC5 0/38 N/A N/A N/A N/A Bridge Down PVC5 0/38 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 D/D/D D/D/D Bridge Down <td>WAN</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	WAN										
PVC0 Q35 N/A N/A N/A N/A Bridge Down PVC1 U32 N/A N/A N/A N/A Bridge Down PVC1 U32 N/A N/A N/A N/A Bridge Down PVC1 U32 N/A N/A N/A N/A Bridge Down PVC2 1/3 N/A N/A N/A N/A Bridge Down PVC3 0/30 0/100 N/A N/A N/A N/A Bridge Down PVC4 8/35 N/A N/A N/A N/A N/A Bridge Down PVC5 0/3 0/0.0.0 0/0.0.0 0/0.0.0 0/0.0.0 D/0.0.0 P/0.0.0		PVC	VPI/VCI	IP Addres	s Sub	net Ga	teWay	DNS Server	Encapsulation	Status	
PVC1 0.02 N/A N/A N/A Bridge Down PVC2 1.12 N/A N/A N/A N/A Bridge Down PVC3 0.100 N/A N/A N/A N/A N/A Bridge Down PVC4 4.05 N/A N/A N/A N/A N/A Bridge Down PVC4 8.05 N/A N/A N/A N/A Bridge Down PVC4 8.05 N/A N/A N/A N/A Bridge Down PVC5 0.03 0.0.0 0.0.0 0.0.0 0.0.0.0 PPoe Down PVC5 0.03 0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 PPoe Down ADSL Firmware Version: Fw/Ver3.11.2.175_TC3086 Hw/Ver.T14.F7_6.0 Line State: Down Modulation: K/A Annex Mode: N/A Annex Mode: N/A ILine Attenuation: N/A N/A db Bridge Down Bridge Down Bridge Down B		PVC0	0/35	N/A	N/	A	N/A	N/A	Bridge	Down	
PVC2 1/2 N/A N/A N/A Bridge Down PVC3 0/100 N/A N/A N/A N/A Bridge Down PVC3 0/100 N/A N/A N/A N/A N/A Bridge Down PVC4 8/35 N/A N/A N/A N/A Bridge Down PVC5 0/36 N/A N/A N/A N/A Bridge Down PVC5 0/36 N/A N/A N/A N/A Bridge Down PVC5 0/37 0/30.0.0 0.0.0.0 0.0.0.0 Do.0.0 Down PVC6 0/37 0/30.0.0 0/0.0.0 0.0.0.0 Down PO/S Down ADSL ADSL Firmware Version : F/vVer.3.112.175_TC3086 HwVer.T14.F7_6.0 Line State : Down Annex Mode : N/A Annex Mode : N/A Annex Mode : N/A Annex Mode : N/A Mark Mode Environment Mode : N/A Mark Mode : N/A Mark Mark Mark Mark Mark Mark Mark Mark		PVC1	0/32	N/A	N/	A	N/A	N/A	Bridge	Down	
PVC3 0/100 N/A N/A N/A Bridge Down PVC4 8/5 N/A N/A N/A N/A Bridge Down PVC5 0/36 N/A N/A N/A N/A Bridge Down PVC5 0/38 N/A N/A N/A N/A Bridge Down ADSL ADSL 0.0.0 0.0.0 0.0.0 0.0.0 PPoE Down ADSL ADSL Firmware Version: Fw/Ver3112.175_TC3086 Hw/Ver.T14.F7_6.0 Line State: Down Modulation: N/A Annex Mode: N/A Annex Mode: N/A Annex Mode: N/A Annex Mode: N/A Modulation: N/A Annex Mode: N/A Annex Mode: N/A Modulation: N/A Modulation: N/A Modulation: N/A Modulation: N/A Modulation: N/A Modulation: N/A N/A Modulation: N/A N/A Modulation: N/A		PVC2	1/32	N/A	N/	A	N/A	N/A	Bridge	Down	
PVC4 8/35 N/A N/A N/A Bridge Down PVC5 0/8 N/A N/A N/A N/A Bridge Down PVC6 0/3 0.0.0 0.0.0 0.0.0 0.0.0 PVC6 0/8 Down ADSL ADSL Firmware Version : FwVer:3.11.2.175_TC3086 Hw/Ver:T14.F7_6.0 Distribution : Firmware Version : FwVer:3.11.2.175_TC3086 Hw/Ver:T14.F7_6.0 Distribution : N/A N/A Modulation : N/A Annex Mode: N/A Sint Modulation : N/A N/A Modulation : N/A N/A Modulation : N/A Sint Margin : N/A N/A Modulation : N/A N/A Modulation : N/A Sint Margin : N/A N/A Modulation : N/A N/A Modulation : N/A N/A Modulation : N/A N/A Margin : N/A		PVC3	0/100	N/A	N/	A	N/A	N/A	Bridge	Down	
PVCS 0/38 N/A N/A N/A Bridge Down ADSL PVC6 0/38 0/0.0 0.0.0.0 0.0.0.0 0.0.0.0 PPoE Down ADSL ADSL ADSL Firmware Version FirmVer:3.11.2.175_TC3086 Hw/Ver:T14.F7_6.0 Display Down Modulation N/A Annex Mode: N/A Annex Mode: N/A Max Mathematication N/A		PVC4	8/35	N/A	N/	A	N/A	N/A	Bridge	Down	
PVC6 0/33 0.0.0.0 0.0.0.0 0.0.0.0 PPPeE Dewn ADSL ADSL Firmware Version: FwVer:3.11.2.175_TC3086 Hw/Ver:T14.F7_6.0 Line State: Down Modulation: IV/A Annex Mode: N/A Downstream Downstream <td colsp<="" td=""><td></td><td>PVC5</td><td>0/38</td><td>N/A</td><td>N/</td><td>A</td><td>N/A</td><td>N/A</td><td>Bridge</td><td>Down</td></td>	<td></td> <td>PVC5</td> <td>0/38</td> <td>N/A</td> <td>N/</td> <td>A</td> <td>N/A</td> <td>N/A</td> <td>Bridge</td> <td>Down</td>		PVC5	0/38	N/A	N/	A	N/A	N/A	Bridge	Down
ADSL ADSL Firmware Version : FwVer:3.11.2.175_TC3086 HwVer:T14.F7_6.0 Line State : Down Modulation : N/A Annex Mode : N/A Downstream SNR Margin : N/A N/A db Line Attenuation : N/A N/A db Data Rate : N/A N/A db Data Rate : N/A N/A db CRC : N/A N/A dbm		PVC6	0/33	0.0.0.0	0.0.	.0.0 0.	0.0.0	0.0.0.0	PPPoE	Down	
ADSL Firmware Version : FwVer:3.11.2.175_TC3086 HwVer:T14.F7_6.0 Line State : Down Modulation : N/A Annex Mode : N/A Downstream Upstream SNR Margin : N/A N/A db Line Attenuation : N/A N/A db Data Rate : N/A N/A db Max Rate : N/A N/A dbm CRC : N/A N/A dbm	ADSL										
Continues e vessor : weeksor :					ion - Eurit (or 2	44 0 475 TC209	e Hunddor	T14 E7 C 0			
CRC: N/A N/A db POWRT: N/A N/A db Data Rate: N/A N/A db Data Rate: N/A N/A db Cate Atternuation : N/A N/A db Data Rate: N/A N/A kbps POWRE: N/A N/A kbps			Aboutin	Line St	nta : Dawn	.11.2.115_10500	011111101				
Modulation : WA Annex Mode : N/A Downstream Upstream SNR Margin : N/A N/A db Line Attenuation : N/A N/A db Datk Rate : N/A N/A kbps Max Rate : N/A N/A kbps Max Rate : N/A N/A kbps CRC : N/A N/A dbm				Line St							
Annex Mode : N/A Downstream Upstream SNR Margin : N/A N/A db Line Attenuation : N/A N/A db Data Rate : N/A N/A kbps Max Rate : N/A N/A kbps POWRE : N/A N/A dbm CRC : N/A N/A dbm				Modulat	ION : IN/A						
Downstream Upstream SNR Margin : N/A N/A db Line Attenuation : N/A N/A db Data Rate : N/A N/A kbps Max Rate : N/A N/A kbps POWER : N/A N/A dbm CRC : N/A N/A				Annex Mo	ide : N/A						
Downstream Upstream SINR Margin: N/A N/A db Line Attenuation : N/A N/A db Data Rate : N/A N/A kbps Max Rate : N/A N/A kbps POWER : N/A N/A dbm CRC : N/A N/A											
SNIT Margini: NVA NVA ob Line Attenuation: NVA NVA db Data Rate: NVA NVA kbps Max.Rate: NVA NVA kbps POVKER: NVA NVA dbm CRC: NVA NVA					Downstr	eam Upstream	n				
Data Rate: NIA NA kbps Max Rate: NIA NA kbps POWER: NIA NIA kbps CRC: NIA NIA dbm				SNR Mar	gin: N/A	N/A	db				
Max Rate : N/A N/A ktps POWER : N/A N/A dam CRC: N/A N/A			L	Data R	ate: N/A	N/A	kbps				
POWER: N/A N/A dbm CRC: N/A N/A				Max R	ate: N/A	N/A	kbps				
CRC: N/A N/A				POW	ER : N/A	N/A	dbm				
				С	RC: N/A	N/A					

Figure 4-2

4.1.2 System Log

Choose "Status→System Log" menu, and you will be able to query the logs of the Router.

Quick Start	Network Setup	Advanced Setup	Access Management	Maintenance	Status	Help
Device Ir	nfo Sy	stem Log	Statistics			
Device Ir 1/1/2000 1/1/2	Info Sy 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:30:14> 0:31:14> 0:31:14> 0:31:14> 0:31:14>	No DNS serv Last errori adjTimeTas) adjtime tas No DNS serv Last errori adjTimeTas) adjtime tas No DNS serv Last errori adjTimeTas) adjtime tas No DNS serv Last errori adjTimeTas)	Statistics ver available tog repeat 10 % a fail: no serve sk pause 60 secver available tog repeat 10 % c fail: no serve sk pause 60 secver available tog repeat 10 % c fail: no serve sk pause 1 day ver available tog repeat 10 % c fail: no serve sk pause 1 day ver available tog repeat 10 %	Fimes ver conds Fimes ver conds Fimes ver		
1/1/2000 1/1/2000 1/1/2000 1/1/2000 available 1/1/2000	0:31:14> 0:31:14> 0:31:14> 0:31:14> e 0:31:14>	adjtime ta: No DNS serv Last errorl adjTimeTas} adjtime ta:	sk pause 60 sed ver available Log repeat 10 3 r fail: no serv sk pause 60 sed	conds Fimes ver conds		
		CLEARIC	G SAVELOG			

Figure 4-3

The Router can keep logs of all traffic. You can query the logs to find what happened to the Router.

Click the CLEAR LOG button to clear the logs.

Click the **SAVE LOG** button to save the logs.

4.1.3 Statistics

Choose "**Status→Statistics**" menu, and you will be able to view the network traffic over Ethernet, and ADSL.

Douioo Info		Setup	Manager	ment Maintenance	Status	Help
Device into	Syst	em Log	Statistics			
Т	Interface	: • Ethernet	ADSL	Receive Statisti	CS.	
Transmit Fra	ames		2663632	Receive Frames		2841439
Transmit Mu	Iticast Frames		19869	Receive Multicast Frames		29325
Transmit tot	al Bytes		187011641	Receive total Bytes		394520379
Transmit Co	llision		0	Receive CRC Errors		4
			0	Receive Under-size Frames		0

Figure 4-4

- Interface: You can select Ethernet and ADSL to view the corresponding network traffic over different ports.
- > Select **Ethernet**, and you will see the statistics table as below.

Interface : 💿 Ethernet 🔘 ADSL						
Transmit Statistics		Receive Statistics				
Transmit Frames	740	Receive Frames	695			
Transmit Multicast Frames	1	Receive Multicast Frames	25			
Transmit total Bytes	586798	Receive total Bytes	111715			
Transmit Collision	0	Receive CRC Errors	0			
Transmit Error Frames	0	Receive Under-size Frames	0			

Statistics Table:

	Transmit Frames	The frames transmitted over the Ethernet port.		
	Tronomit Multicoot Fromos	The multicast frames transmitted over the Ethernet		
	Transmit Multicast Frames	port.		
Transmit	Transmit total Bytes	The total bytes transmitted over the Ethernet port.		
Statistics	Transmit Collision	The collision occurred over the Ethernet port when		
	Transmit Comsion	data is being transmitted.		
	Tronomit Frank Fromos	The error frames over the Ethernet port when data is		
	Transmit Error Frames	being transmitted.		
	Receive Frames	The frames received over the Ethernet port.		
	Receive Multicast Frames	The multicast frames received over the Ethernet port.		
	Receive total Bytes	The total bytes received over the Ethernet port.		
Receive		The CRC errors occurred over the Ethernet port when		
Statistics	Receive CRC Errors	data is being received.		
	Dessive Under size Frames	The Under-size frames received over the Ethernet		
	Receive Under-Size Frames	port.		

Select **ADSL**, and you will see the statistics table as below.

Interface : 🔿 Ethernet 💿 ADSL					
Transmit Statistics		Receive Statistics			
Transmit total PDUs	0	Receive total PDUs	0		
Transmit total Error Counts	0	Receive total Error Counts	0		

Statistics Table:

Transmit Statistics	Transmit total PDUs	The total PDUs transmitted over the ADSL port.
	Transmit total Error Counto	The total errors occurred over the ADSL port when data
	Transmit total Error Counts	is being transmitted.
Receive Statistics	Receive total PDUs	The total PDUs transmitted over the ADSL port.
	Dessitive total Erman Counts	The total errors occurred over the ADSL port when data
	Receive total Error Counts	is being received.

4.2 Quick Start

Please refer to "3.3: Login".

4.3 Network Setup

Choose "Network Setup", you can see the next submenus: WAN and LAN.





Click any of them, and you will be able to configure the corresponding function.

4.3.1 WAN

Choose "**Network Setup** \rightarrow **WAN**" menu, you can configure the parameters for WAN ports in the next screen (shown in Figure 4-6).

WAN LAN	
Virtual Circuit : PVC0 V PVCs Summary	
Status : Activated Deactivated	
VPI : 0 (range: 0~255)	
VCI: 35 (range: 1~65535)	
ATM QoS : UBR	
PCR : 0 cells/second	
SCR : 0 cells/second	
MBS: 0 cells	
ISP : O Dynamic IP Address	
O Static IP Address	
O PPPoA/PPPoE	
Bridge Mode	
Encapsulation : 1483 Bridged IP LLC	
SAVE DELETE	

Figure 4-6

- ATM VC: ATM settings are used to connect to your ISP. Your ISP provides VPI (Virtual Path Identifier), VCI (Virtual Channel Identifier) settings to you. In this Device, you can totally set up 8 VCs on different encapsulations, if you apply 8 different virtual circuits from your ISP. You need to activate the VC to take effect. For PVCs management, you can use ATM QoS to set up each PVC traffic line's priority.
 - Virtual Circuit: Select the VC number you want to set up, PVC0~PVC7.
 - Status: If you want to use a designed VC, you should activate it.
 - **VPI:** Identifies the virtual path between endpoints in an ATM network. The valid range is from 0 to 255. Please input the value provided by your ISP.
 - VCI: Identifies the virtual channel endpoints in an ATM network. The valid range is from 32 to 65535 (1 to 31 is reserved for well-known protocols). Please input the value provided by your ISP.
 - **PVCs Summary:** Click the button, you can view the summary information about the PVCs.
 - QoS: Select the Quality of Service types for this Virtual Circuit, including CBR (Constant Bit Rate), UBR (Unspecified Bit Rate) and VBR (Variable Bit Rate). These QoS types are all controlled by the parameters specified below, including PCR (Peak Cell Rate), SCR (Sustained Cell Rate) and MBS (Maximum Burst Size), please configure them according your needs.
- Encapsulation: There are four connection types: Dynamic IP Address, Static IP Address, PPPoA/PPPoE and Bridge Mode. Please choose the designed type that you want to use. After that, you should follow the configuration below to proceed.

1. Dynamic IP Address

Select this option if your ISP provides you an IP address automatically. This option is typically used for Cable services. Please enter the Dynamic IP information accordingly.

ISP :	Oynamic IP Address
	◯ Static IP Address
	O PPPoA/PPPoE
	OBridge Mode
Encapsulation :	1483 Bridged IP LLC 🛛 🔽
Bridge Interface :	Activated O Deactivated
NAT :	Enable 💌
Default Route :	⊙ Yes ◯ No
TCP MTU Option :	TCP MTU(default:1500) 1500 bytes
Dynamic Route :	RIP1 💙 Direction : Both 💙
Multicast :	Disabled 💌
MAC Spoofing :	C Enabled 💿 Disabled
	00:00:00:00:00:00

Figure 4-7

- Encapsulation: Select the encapsulation mode for the Dynamic IP Address, you can leave it default.
- **Bridge Interface:** Activate the option, the Router can also work in Bridge mode.
- NAT: Select this option to Enable/Disable the NAT (Network Address Translation) function for this VC. The NAT function can be activated or deactivated per PVC basis.
- Default Route: If enable this function, the current PVC will be considered as the default gateway to internet from this device.
- > **TCP MTU Option:** Enter the TCP MTU as your desire.
- Dynamic Route: Select this option to specify the RIP (Routing Information protocol) version for WAN interface, including RIP1, RIP2-B and RIP2-M. RIP2-B and RIP2-M are both sent in RIP2 format, the difference is that RIP2-M using Multicast, while RIP2-B using Broadcast format.
 - Direction: Select this option to specify the RIP direction. None is for disabling the RIP function. Both means the ADSL Router will periodically send routing information and accept routing information, and then incorporate them into routing table. IN only means the ADSL router will only accept but will not send RIP packet. OUT only means the ADSL router will only send but will not accept RIP packet.
- Multicast: Select IGMP version, or disable the function. IGMP (Internet Group Multicast Protocol) is a session-layer protocol used to establish membership in a multicast group. The ADSL ATU-R supports both IGMP version 1 (IGMP v1) and IGMP v2. Select "Disabled" to disable it.
- > MAC Spoofing: MAC Spoofing feature allows you to change the assigned MAC address of

the ADSL Router to a different one, which may allow the bypassing of access control lists on servers either hiding a computer on a network or allowing it to impersonate another computer. You can select **Enable** and specify a MAC Address for the Router here, or keep the default setting as **Disable**.

2. Static IP Address

Select this option if your ISP provides static IP information to you. You should set static IP address, IP subnet mask, and gateway address in the screen below (shown in Figure 4-8).



Figure 4-8

P Note:

Each IP address entered in the fields must be in the appropriate IP form, which is four IP octets separated by a dot (x.x.x.x), such as 192.168.1.100. The Router will not accept the IP address if it is not in this format.

3. PPPoE/PPPoA

Select this option if your ISP requires you to use a PPPoE connection. This option is typically used for DSL services. Select Dynamic PPPoE to obtain an IP address automatically for your PPPoE connection. Select Static PPPoE to use a static IP address for your PPPoE connection. Please enter the information accordingly.

ISP :	 Dynamic IP Address Static IP Address PPPoA/PPPoE Bridge Mode
Servicename : Username : Password : Encapsulation : Bridge Interface :	PPPoE LLC Activated
Connection : TCP MSS Option :	Always On (Recommended) Connect On-Demand (Close if idle for minutes) Connect Manually TCP MSS(default:1400) 1400 bytes
Get IP Address : Static IP Address : IP Subnet Mask : Gateway : NAT : Default Route : TCP MTU Option : Dynamic Route : Multicast : MAC Spoofing :	Static ● Dynamic 0.0.0.0 0.0.0.0 0.0.0.0 Enable ● ● Yes ● No TCP MTU(default:1480) TCP MTU(default:1480) Idefault:1480 Direction : Both ● ● Disabled ● ● Enable ●

Figure 4-9

- **Service name:** Specify a name for the PPPoA/PPPoE connection for recognition.
- Username: Enter your username for your PPPoA/PPPoE connection to identify and verify your account to the ISP.
- > **Password:** Enter your password for your PPPoA/PPPoE connection.
- Encapsulation: For both PPPoA/PPPoE connection, you need to specify the type of Multiplexing, either LLC or VC Mux.
- **Bridge Interface:** Activate the option, the Router can also work in Bridge mode.
- Connection: For PPPoA/PPPoE connection, you can select Always on or Connect on-Demand or Connect Manually. Connect on demand is dependent on the traffic. If there is no traffic (or Idle) for a pre-specified period of time), the connection will tear down automatically. And once there is traffic send or receive, the connection will be automatically on.
- Static/Dynamic IP Address: For PPPoA/PPPoE connection, you need to specify the public IP address for this ADSL Router. The IP address can be either dynamically (via DHCP) or given IP address provided by your ISP. For Static IP, you need to specify the IP address, Subnet Mask and Gateway IP address.

- Default Route: You should select Yes to configure the PVC as the default gateway to internet from this device.
- MAC Spoofing: MAC Spoofing feature allows you to change the assigned MAC address of the ADSL Router to a different one, which may allow the bypassing of access control lists on servers either hiding a computer on a network or allowing it to impersonate another computer. You can select **Enable** and specify a MAC Address for the Router here, or keep the default setting as **Disable**.

4. Bridge Mode

If you select this type of connection, the modem can be configured to act as a bridging device between your LAN and your ISP. Bridges are devices that enable two or more networks to communicate as if they are two segments of the same physical LAN.

ISP : Opynamic IP Address Static IP Address PPPoA/PPPoE Bridge Mode
Encapsulation : 1483 Bridged IP LLC

Figure 4-10

P Note:

After you finish the Internet configuration, please click SAVE to make the settings take effect.

4.3.2 LAN

Choose "**Network Setup** \rightarrow **LAN**" menu, and you will see the LAN screen (shown in Figure 4-11). Please configure the parameters for LAN ports according to the descriptions below.

Quick Start	Netwo Setup	rk D	Advanced Setup	Access Management	Maintenan	се	Status	Help
WAN	L L	AN						
	IP Ad IP Subnet Dynamic Mu IGMP S	dress : Mask : Route : Iticast : Snoop :	192.168.1.1 255.255.255.0 RIP2-B Disabled Disabled Disabled	Direction : Both	v			
SI	tarting IP Ad IP Pool	DHCP : dress : Count :	Disabled	Enabled CRelay				
	Lease	e i ime :	259200 sec	conds (0 sets to defau	It value of 25920	00)		
Hostn	ame	IP A	ddress	MAC Addres	s S	tatus	Expire Time	
		192.16	8.1.101 💙	Manual Config	∨ St	atic 💌		
		192.1	68.1.100	00:07:BA:CE:AE	:C7 /	Auto	2days, 23:44:44	
Pri Secor	DNS imary DNS S ndary DNS S	Relay : Server : Server :	Use Auto Disco N/A N/A	overed DNS Server Oni	y 🗸			



- Router Local IP: These are the IP settings of the LAN interface for the device. These settings may be referred to as Private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.
 - **IP Address:** Enter the Router's local IP Address, then you can access to the Web-based Utility via the IP Address, the default value is 192.168.1.1.
 - **IP Subnet Mask:** Enter the Router's Subnet Mask, the default value is 255.255.255.0.
 - **Dynamic Route:** Select this option to specify the RIP (Routing Information protocol) version for LAN interface, including **RIP1**, **RIP2-B** and **RIP2-M**. RIP2-B and RIP2-M are both sent in RIP2 format, the difference is that RIP2-M using Multicast, while RIP2-B using Broadcast format.
 - Direction: Select this option to specify the RIP direction. None is for disabling the RIP function. Both means the ADSL Router will periodically send routing information and accept routing information, and then incorporate them into routing table. IN only means the ADSL router will only accept but will not send RIP packet. OUT only means the ADSL router will only send but will not accept RIP packet.
 - Multicast: Select IGMP version, or disable the function. IGMP (Internet Group Multicast Protocol) is a session-layer protocol used to establish membership in a multicast group. The ADSL ATU-R supports both IGMP version 1 (IGMP v1) and IGMP v2. Select "Disabled" to disable it.
 - **IGMP Snoop:** Enable the IGMP Snoop function if you need.
- > **DHCP Server:** Select **Enabled**, then you will see the screen below (shown in Figure 4-12).

The Router will work as a DHCP Server, it becomes the default gateway for DHCP client connected to it. DHCP stands for Dynamic Host Control Protocol. The DHCP Server gives out IP addresses when a device is booting up and request an IP address to be logged on to the network. That device must be set as a DHCP client to obtain the IP address automatically. By default, the DHCP Server is enabled. The DHCP address pool contains the range of the IP address that will automatically be assigned to the clients on the network.

Starting IP IP P Le	Address : 192.168.1.100 ool Count : 101 ease Time : 259200 se	conds (0 sets to default value of	259200)	
Hostname	IP Address	MAC Address	Status	Expire Time
	192.168.1.101 💌	Manual Config 👻	Static 🗸	
	192.168.1.100	00:07:BA:CE:AE:C7	Auto	2days, 23:44:44
D Primary DN Secondary DN	NS Relay : Use Auto Disc IS Server : N/A IS Server : N/A	overed DNS Server Only 💙		

Figure 4-12

- Starting IP Address: Enter the starting IP address for the DHCP server's IP assignment. Because the default IP address for the Router is 192.168.1.1, the default Start IP Address is **192.168.1.100**, and the Start IP Address must be 192.168.1.100 or greater, but smaller than 192.168.1.254.
- **IP Pool Count:** The max user pool size.
- Lease Time: The length of time for the IP lease. After the dynamic IP address has expired, the user will be automatically assigned a new dynamic IP address. The default is **259200** seconds.
- **DNS Relay:** If you want to disable this feature, you just need to set both Primary and secondary DNS IP to 0.0.0.0. If you want to use DNS relay, you can set up DNS server IP to 192.168.1.1 on their Computer. If not, the device will perform as no DNS relay.
- Primary DNS Server: Type in your preferred DNS server.
- Secondary DNS Server: Type in your preferred DNS server.
- **Current Pool Summary:** Click the button, you can view the IP addresses that the DHCP Server gives out.

P Note:

If **Use Auto Discovered DNS Server Only** is selected in DNS Relay, this router will accept the first received DNS assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s) during the connection establishment. If **Use User Discovered DNS Server Only** is selected in DNS Relay, it is necessary for you to enter the primary and optional secondary DNS server IP addresses. After type in the address, click SAVE button to save it and invoke it.

> DHCP Relay: Select Relay, then you will see the next screen (shown in Figure 4-13), the

Router will work as a DHCP Relay. A DHCP relay is a computer that forwards DHCP data between computers that request IP addresses and the DHCP server that assigns the addresses. Each of the device's interfaces can be configured as a DHCP relay. If it is enabled, the DHCP requests from local PCs will forward to the DHCP server runs on WAN side. To have this function working properly, please run on router mode only, disable the DHCP server on the LAN port, and make sure the routing table has the correct routing entry.

DHCP: 🔘 Disabled 🔘 Enabled 💿 Relay	
DHCP Server IP for Relay Agent : 0.0.0.0	

Figure 4-13

DHCP Server IP for Relay Agent: Enter the DHCP server IP Address runs on WAN side.

P Note:

If you select **Disabled**, the DHCP function will not take effect.

4.4 Advanced Setup

Choose "Advanced Setup", you can see the next submenus:

Quick Start	Network Setup	Advanced Setup	Access Managem	ent Main	tenance	Status	Help
Firewall	Routing	NAT	QoS	VLAN	ADSL		
			Figure	4-14			

Click any of them, and you will be able to configure the corresponding function.

4.4.1 Firewall

Choose "**Advanced Setup→Firewall**" menu, and you will see the next screen (shown in Figure 4-15).

Quick Start	Network Setup	Advanced Setup	Access Manageme	ent Mair	itenance	Status	Help
Firewall	Routing	NAT	QoS	VLAN	ADSL		
	Firewal	I : Enabled (WARNING: If y SYN Flooding, I C Enabled (WARNING: If y DMZ, Virtual Se) Disabled rou enabled Firew Ping of Death, Tea) Disabled rou enabled SPI, a erver, and ACL W	vall, the modem arDropetc) ill traffics initiat AN side.)	can block suc	th attack:Denial (would be blocke	of Service, ed, including
		SAVE CAN	ICEL				



> Firewall: Select this option can automatically detect and block Denial of Service (DoS)

attacks, such as Ping of Death, SYN Flood, Port Scan and Land Attack.

SPI: If you enable SPI, all traffics initiated from WAN would be blocked, including DMZ, Virtual Server, and ACL WAN side.

4.4.2 Routing

Choose "Advanced Setup→Routing" menu, and you will see the routing information in the next screen (shown in Figure 4-16).



Figure 4-16

Click ADD ROUTE button to add a new route in the next screen (shown in Figure 4-17).

Static Route		
	Destination IP Address :	0.0.0.0
	IP Subnet Mask :	0.0.0.0
	Gateway IP Address :	O.0.0.0
	Metric :	0
	Announced in RIP :	Yes 🕶
		SAVE DELETE BACK CANCEL



- Destination IP Address: This parameter specifies the IP network address of the final destination.
- > **IP Subnet Mask:** Enter the subnet mask for this destination.
- Gateway IP Address: Enter the IP address of the gateway. The gateway is an immediate neighbor of your ADSL Router that will forward the packet to the destination. On the LAN, the gateway must be a router on the same segment as your Router; over Internet (WAN), the gateway must be the IP address of one of the remote nodes.
- Metric: Metric represents the "cost" of transmission for routing purposes. IP Routing uses hop count as the measurement of cost, with a minimum of 1 for directly connected networks. Enter a number that approximates the cost for this link. The number need not to be precise, but it must between 1 and 15. In practice, 2 or 3 is usually a good number.
- Announced in RIP: This parameter determines if the ADSL router will include the route to this remote node in its RIP broadcasts. If set to Yes, the route to this remote node will be propagated to other hosts through RIP broadcasts. If No, this route is kept private and is not included in RIP broadcasts.

4.4.3 NAT

Choose "Advanced Setup→NAT" menu, you can set up the NAT (Network Address Translation)

function for the Router (shown in Figure 4-18).

Advanced	Quick Start	Network Setup	Advanced Setup	Access Managemen	nt Mai	ntenance	Status	Help			
	Firewall	Routing	NAT	QoS	VLAN	ADSL					
NAT											
		Virtual Circuit : PVC0 Y									
		Number of IPs	🗧 💿 Single 🔘 I/	lultiple							
		0	DMZ								
		Virtual Server									



- > Virtual Circuit: Enter Virtual Circuit Index that you plan to set up for the NAT function.
- NAT Status: This field shows the current status of the NAT function for the current VC. You can go to the previous screen (shown in Figure 4-6) to activate the function.
- Number of IPs; This field is to specify how many IPs are provided by your ISP for current VC. It can be single IP or multiple IPs. We select Multiple to explain.

P Note:

For VCs with single IP, they share the same DMZ and Virtual servers; for VCs with multiple IPs, each VC can set DMZ and Virtual servers. Furthermore, for VCs with multiple IPs, they can define the Address Mapping rules; for VCs with single IP, since they have only one IP, there is no need to individually define the Address Mapping rule.

4.4.3.1. DMZ

Choose "Advanced Setup \rightarrow NAT \rightarrow DMZ" in Figure 4-18, you can configure the DMZ host in the next screen. A DMZ (demilitarized zone) is a host between a private local network and the outside public network. It prevents outside users from getting direct access to a server that has company data. Users of the public network outside the company can access to the DMZ host.



Figure 4-19

> **DMZ Host IP Address:** Enter the specified IP Address for DMZ host on the LAN side.

4.4.3.2. Virtual Server

Choose "Advanced Setup \rightarrow NAT \rightarrow Virtual Server" in Figure 4-18, you can configure the Virtual Server in the next screen.

The Virtual Server is the server or server(s) behind NAT (on the LAN), for example, Web server or FTP server, that you can make visible to the outside world even though NAT makes your whole

inside network appear as a single machine to the outside world.

Virtual Server							
	Virtual	Server for :	Single IP Acc	ount			
		Rule Index :	1 💌				
	,	Application :	-	-		¥	
		Protocol :	ALL 💙				
	Start D	art Number :	•				
	Start F	on number .	v				
	End Po	ort Number :	0				
	Local I	P Address :	0.0.0.0				
virtual server Listing							
	Rule	Appli	cation	Protocol	Start Port	End Port	Local IP Address
	1		-	-	0	0	0.0.0
	2		-	-	0	0	0.0.0.0
	3		-	-	0	0	0.0.00
	4		-	-	0	0	0.0.0
	5		-	-	0	0	0.0.0
	6		-	-	0	0	0.0.0
	7		-	-	0	0	0.0.0
	8		-	-	0	0	0.0.0
	9		-	-	0	0	0.0.0
	10		-	-	0	0	0.0.0
	11		-	-	0	0	0.0.0
	12		-	-	0	0	0.0.00
	13		-	-	0	0	0.0.0
	14		-	-	0	0	0.0.00
	15		-	-	0	0	0.0.0
	16		-	-	0	0	0.0.0
			SAVE DE	LETE BACK	CANCEL		

Figure 4-20

- Rule Index: The Virtual server rule index for this VC. You can specify 10 rules in maximum. All the VCs with single IP will use the same Virtual Server rules.
- Start & End port number: Enter the specific Start and End Port number you want to forward. If it is one port only, you can enter the End port number the same as Start port number. For example, you want to set the FTP Virtual server, you can set the start and end port number to 21.
- > Local IP Address: Enter the IP Address for the Virtual Server in LAN side.
- Virtual Server Listing: This displays the information about the Virtual Servers you establish.
 To add a virtual server entry:

Step 1: Select the "Virtual Circuit" and select "Number of IPs". (shown in Figure 4-18).

P Note:

For VCs with single IP, select **Single**; For VCs with multiple IPs, select **Multiple** for the option.

- **Step 2:** Select the Rule index for the rule as shown in Figure 4-20.
- Step 3: Select the application you want from drop-down list, then the protocol and port number will be added to the corresponding field automatically, you only need to configure the IP address for the virtual server; If the application list does not contain the service that you want, please configure the Port number, IP Address and Protocol manually.
- **Step 4:** After that, click **SAVE** to make the entry take effect.

Other operations for the entries are as follows:

Enter the index of assigned entry, click the **DELETE** button to delete the entry.

Click the **Back** button to return to the previous screen.

Click the **CANCEL** button to cancel the configuration which is made just now.

4.4.3.3. IP Address Mapping

Choose "Advanced Setup \rightarrow NAT", select Multiple in Number of IPs. Click IP Address Mapping, then you can configure the Address Mapping Rule in Figure 4-22. The IP Address Mapping is for those VCs that configured with multiple IPs. The IP Address Mapping rule is per-VC based (only for Multiple IPs' VCs).

Advanced	Quick Start	Networ Setup	rk Ad	lvanced Setup	A Mana	ccess Igemen	nt Ma	aintenance	Status	Help		
	Firewall	Routir	ng	NAT	QoS		VLAN	ADSL				
NAT												
		Virtual C		(C0 ×								
		NAT Status : Activated										
		Number of IRs :										
		Number of ins. Single Multiple										
			D	IZ								
			🚺 Vir	tual Serve	er							
			•									
				Figur	re 4-2	1						
IP Address Mappi	ng											
	A	ddress Ma	pping Rule	PVC0								
		I	Rule Index	: 1 💌			_					
			Rule Type	One-to-O	ne		¥					
		Lo	cal Start IP	0.0.0.0								
		Lo	ocal End IP	N/A								
		Puk	olic Start IP	0.0.0.0		(0.0.0.0	for moder	's WAN IP)				
		Pu	iblic End IP	N/A								
Address Mapping L	ist											
		Duda	Trans			a a al Faral		ublic Chart ID	Dashlia Fard ID	1		
		Rule	Type I	.ocal start	17 L	ocar Enu	IF F		Fublic thuir	_		
		1	-							-		
		3	-							-		
		4	-									
		5										
		6	-									
		7	-									
		8	-									
				SAVE		BACK	CANCEL					

Figure 4-22

- Rule Index: Select the Address Mapping Rule index for this VC. You can specify 8 rules in maximum.
- Rule Type: There are four types, one-to-one, Many-to-One, Many-to-Many Overload and Many-to-Many No-overload.
- Local Start & End IP: Enter the local IP Address you plan to mapped to. Local Start IP is the starting local IP address and Local End IP is the ending local IP address. If the rule is for all local IPs, then the Start IP is 0.0.0.0 and the End IP is 255.255.255.255.
- Public Start & End IP: Enter the public IP Address you want to do NAT. Public Start IP is the starting public IP address and Public End IP is the ending public IP address. If you have a dynamic IP, enter 0.0.0.0 as the Public Start IP.
- > Address Mapping List: This displays the information about the Mapping addresses.

To add a mapping rule:

Step 1: Select the "Virtual Circuit" and Multiple for the "Number of IPs". Then select the tab IP

Address Mapping (shown in Figure 4-21).

P Note:

IP Address Mapping is only available for VCs with Multiple IPs.

- Step 2: Select the Rule index for the rule as shown in Figure 4-22.
- **Step 3:** Select the rule type you want from the drop-down list.
- Step 4: Enter the local and public IP addresses in the corresponding fields.
- Step 5: After that, click SAVE to make the entry take effect.

Other operations for the entries are as follows:

Enter the index of assigned entry, click the **DELETE** button to delete the entry.

Click the **Back** button to return to the previous screen.

Click the **CANCEL** button to cancel the configuration which is made just now.

4.4.4 QoS

Choose "Advanced Setup→QoS", you can configure the QoS in the next screen. QoS helps to prioritize data as it enters your router. By attaching special identification marks or headers to incoming packets, QoS determines which queue the packets enter, based priority. This is useful when there are certain types of data you want to give higher priority, such as voice data packets give higher priority than Web data packets. This option will provide better service of selected network traffic over various technologies.

Advanced	Quick Start	Network Setup	Advanced Setup	Access Management	Main	tenance	Status	Help
	Firewall	Routing	NAT	QoS	VLAN	ADSL		
Quality of Service								
Data		QoS Summary	QoS Setti	Deactivated ings Summary				
Kule		Rule Index	1 🗸					
		Active	· Activated	Deactivated				
		Physical Ports	USB Enet	1				
		Destination MAC	:					
		IP	:					
		Mask	:					
		Port Range						
		Source MAC	:					
		IP	:					
		Mask	:					
		Port Range						
		Protocol ID	~					
		Vlan ID Range	-					
		IPP/DS Field	: OIPP/TOS	DSCP				
	IP Pr	ecedence Range		-				
		Type of Service		~				
		DSCP Range		(Value Range:	0~63)			
Action		802.1p						
Atton		IPP/DS Field	: O IPP/TOS	DSCP				
	IP Prece	dence Remarking	~					
	Type of S	ervice Remarking	:	~				
		DSCP Remarking	: (Valu	e Range: 0 ~ 63)				
	ε	02.1p Remarking	~		~			
		Queue #	~					
			ADD DELET	E CANCEL				

Figure 4-23

- QoS: Select this option to Activate/Deactivate the IP QoS on different types (IP ToS and DiffServ).
- **Summary:** Click the button to view the configurations of QoS.
- Rule: Configure the rules for QoS. If the traffic complies with the rule, then the Router will take the corresponding action to deal with it.
 - **Rule Index:** Select the index for the rule you want to configure.
 - Active: Activate the rule. The rule can take effect only when it is activated.
 - **Application:** Select the application that the rule aimed at.
 - **Physical Ports:** Select the port whose traffic flow are controlled by the rule.
 - **Destination MAC & IP & Mask & Port Range:** Enter the IP information about the Destination host for the rule.
 - Source MAC & IP & Mask & Port Range: Enter the IP information about the Source host for the rule.
 - **Protocol ID:** Select one among TCP/UDP, TCP, UDP or ICMP protocols for the application.
 - Vian ID Range: Enter the Vian range, then the rule will be effective to the selected Vians.
 - **IPP/DS Field:** Select the type of the action to assign the priority.

When you select IPP/TOS, you can assign the priority via IP information. IP QoS function is intended to deliver guaranteed as well as differentiated Internet services by giving network resource and usage control to the Network operator.

- **IP Precedence Range:** Enter the IP precedence range that the Router takes to differentiate the traffic.
- **Type of Service:** Select the type of service that the Router takes to deal with the traffic.
- **802.1p:** Select the priority range for the rule.

When you select DSCP, you can assign the priority via DHCP (the header of IP group). It maps the IP group into corresponding service class.

- **DSCP Range:** Enter the DSCP range to differentiate the traffic.
- **802.1p:** Select the priority range for the rule.
- Action: Configure the action that the Router takes to deal with the traffic which accord with the rule.
 - **IPP/DS Field:** Select the type for the action.
 - **IP Precedence Remarking:** Select the number to remark the priority for IP precedence.
 - Type of Service Remarking: Select the type to remark the service.
 - **DSCP Remarking:** Enter the number to remark the DSCP priority.
 - **802.1p Remarking:** Select the type to remark the 802.1p priority.
 - **Queue:** Select the priority type for the action.

4.4.5 VLAN

Choose "Advanced Setup→VLAN", you can activate the VLAN function in the next screen.

Virtual LAN (VLAN) is a group of devices on one or more LANs that are configured so that they can communicate as if they were attached to the same LAN, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, it is very flexible for user/host management, bandwidth allocation and resource optimization. There are two types of VLAN as follows:

Port-Based VLAN: Each physical switch port is configured with an access list specifying membership in a set of VLANs.

ATM VLAN: Using LAN Emulation (LANE) protocol to map Ethernet packets into ATM cells and deliver them to their destination by converting an Ethernet MAC address into an ATM address.



Figure 4-24

1. Assign VLAN PVID for each Interface

Click **Assign VLAN PVID for each Interface** in Figure 4-24, you can assign the PVID for each interface in the next screen (shown in Figure 4-25).

PVID Assign		
	ATM VC #0 : PVID 1	
	VC #1 : PVID 1	
	VC #2: PVID 1	
	VC #3 : pviD 1	
	VC #4 : PVID 1	
	VC #5 : pviD 1	
	VC #6 : PVID 1	
	VC #7 : pvid 1	
	Ethernet Port #1 : PVID	
	USB: pvid	
	SAVE	

Figure 4-25

PVID: Each physical port has a default VID called PVID (Port VID). PVID is assigned to untagged frames or priority tagged frames (frames with null (0) VID) received on this port.

2. Define VLAN Group

Click **Define VLAN Group** in Figure 4-24, you can define VLAN groups in the next screen (shown in Figure 4-26).

VLAN Group Setting				
	VLAN	Index : 1 💌		
		Active : 💿 Yes	○ No	
	v	LAN ID : 1	(Decimal)	
	AT	M VCs: Port #	V V V V V 0 1 2 3 4 5 6	☑ ☑ 7
	E	hernet : Port #	✓1	
		USB : Tagged Port #		
VLAN Group Summary	· · · · · · · · · · · · · · · · · · ·			
	Group Active II		/LAN Group Ports	VLAN Tagged Ports
	1 Yes 1 p:pvc, e:ethernet, u:us	e1,; b	0,p1,p2,p3,p4,p5,p6,p7	
		SAVE	DELETE CANCEL	

Figure 4-26

- > VLAN Index: Select the VLAN index for this VC. You can specify 8 groups in maximum.
- > VLAN ID: This indicates the VLAN group.
- ATM VCs: Select the ATM VCs as members of VLAN, and if you leave the Tagged blank, the tag in frames will be deleted when transmitted from the VC.
- Ethernet: Select the Ethernet port as a member of VLAN, and if you leave the Tagged blank, the tag in frames will be deleted when transmitted from the port.
- **USB:** Select the USB port as a member of VLAN, and if you leave the Tagged blank, the tag

in frames will be deleted when transmitted from the port.

> VLAN Group Summary: This displays the information about the VLAN Groups.

4.4.6 ADSL

Choose "**Advanced Setup** \rightarrow **ADSL**", you can select the ADSL Type and ADSL Mode in the next screen. The ADSL feature can be selected when you meet the physical connection problem. Please check the proper settings with your Internet service provider.

Advanced	Quick Start	Network Setup	Advanced Setup	Access Management	Maintenance	e Status	Help				
	Firewall	Routing	NAT	QoS	VLAN ADS	L					
ADSL		ADSI Mode	Auto Sveo IIa								
		ADSL Mode : Auto Sync-Up Y ADSL Type : ANNEX A/WJ/L/M									
			Ritewan F	nable							
			SRA Enab	le							
			SAVE								
			SAVE								

Figure 4-27

- > **ADSL Mode:** Select the ADSL operation mode which your ADSL connection uses.
- > **ADSL Type:** Select the ADSL operation type which your ADSL connection uses.

4.5 Access Management

Choose "Access Management", you can see the next submenus:





Click any of them, and you will be able to configure the corresponding function.

4.5.1 ACL

Choose "Access Management \rightarrow ACL", you can see the next screen (shown in Figure 4-29). You can specify the client to access the ADSL Router once setting his IP as a Secure IP Address through selected applications.

Access	Quick Start	Netwo Setuj	rk Adv o S	vanced Setup	Access Management	Maintenance	Status	Help			
Management	ACL	Fil	ter	SNMP	UPnP	DDNS C	WMP				
Access Control Setup											
	ACL: Activated Deactivated 										
Access Control Editing											
ACL Rule Index : 1 V											
		/ ecure ID Ad	Active : 💽	Yes ONo	0.000		0.0				
		Application : ALL					1.0.0 means all iPS)				
		Inte	rface: LAI	N 🕶							
Access Control Listing	Γ	he day.		6.		A	L.A., C., .				
	-	Index 1	Active	Se		Application	LAN				
	L		165		0.0.0.0-0.0.010		CAN				
			SA	VE DELE	TE CANCEL						
			_								



- ACL: If Activated, the IP addresses which are contained in the Access Control List can access to the Router. If Deactivated, all IP addresses can access to the Router.
- > ACL Rule Index: Select the ACL rule index for the entry.
- > **Active:** Enable the ACL rule.
- Secure IP Address: Select the IP addresses which are permitted to access to the Router remotely. With the default IP 0.0.0.0, any client would be allowed to remotely access the ADSL Router.
- Application: Select the application for the ACL rule, and then you can access the Router through it.
- > Interface: Select the interface for access: LAN, WAN or Both.
- > Access Control of Listing: This displays the information about the ACL Rules.

4.5.2 Filter

Choose "Access Management→Filter", you can see the Filter screen (the default is IP/MAC Filter screen shown in Figure 4-30). The filtering feature includes IP/MAC Filter, Application Filter, URL Filter. The feature makes it possible for administrators to control user's access to the Internet, protect the networks.

4.5.2.1. IP Filter

Select **IP/MAC Filter** as the Filter type, and select **IP** as the Rule type (shown in Figure 4-30), then you can configure the filter rules based on IP address. The filtering includes **Outgoing** and **Incoming**, the detailed descriptions are provided below.

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Access Management	Quick Start	Network Setup	Advanceo Setup	Access Managem	ent Mai	ntenance	Status	Help
	ACL	Filter	SNM	P UPnP	DDN	18 C/	NMP	
Filter								
Filter Type								
	Filte	er Type Selection :	IP / MAC Filt	er 🗸				
IP / MAC Filter Set Editing								
	IP / MA	C Filter Set Index :	1 🗸					
		Interface	PVC0 V					
		Direction :	Both	*				
IP / MAC Filter Rule Editing								
	IP / MAC	Filter Rule Index :	1 🕶					
		Rule Type :	IP 🐱					
		Active	🔿 Yes 💽	No				
	So	ource IP Address :		(0.0.0.0 m	neans Don't car	e)		
		Subnet Mask :						
		Port Number :	0	(0 means Don't c	are)			
	Dectin	otion ID Address			D	->		
	Desti	Subnet Mask :		(0.0.0.0 M	leans Dont car	e)		
		Port Number	0	(0 magna Dant a	oro)			
		For Number .	0	Lo means point o	arej			
		Protocol	тср 🔽					
		Rule Unmatched :	Forward	*				
IP / MAC Filter Listing								
	IP / MAC F	Filter Set Index	1 💌	Interface	-		Direction	-
	# Active	Src Address	Mask	Dest IP/Mask	Src Port	Dest	Protocol	Unmatched
	1 -	-		-	-	-	-	•
	2 -	-		-	-	-	-	-
	3 -			-	-	-	-	-
	4 -	-		-	-	-	-	-
	 -	-		-	-	-		
	0 -	-		-	-	-	-	-
			SAVE D	ELETE CANCEL				

Figure 4-30

- > Filter Type Selection: Select the filter type for the configuration below.
- IP/MAC Filter Set Index: Select the Set index for the IP Filter entry. This index can match with six IP / MAC Filter Rule Indexes.
- > Interface: Select the interface for the entry.

P Note:

If select PVC0~PVC7 as a interface, the filter will match the IP traffic of WAN port with specified IPs (Source IP Address and Destination IP Address), If select LAN as a interface, the filter will match the IP traffic of LAN port with specified IPs.

Direction: Select the direction for this IP Filter rule. There are three filtering directions: Both, Incoming, Outgoing.

P Note:

Incoming means that IP traffic which is coming into the router, and the Outgoing means that IP traffic which is going out the router.

> **IP/MAC Filter Rule Index:** Select the Rule index for the IP Filter entry.

P Note:

You should set the IP/MAC Filter Set Index and IP/MAC Filter Rule Index together to appoint the address (shown in the Filter List) for the IP Filter rule. For example, (1, 2), it means the rule will be shown in the row 2 IP/MAC Filter Set Index 1.

- > Rule Type: For IP Filter, please select IP here.
- > Active: Select "Yes" to make the rule to take effect.
- Source IP Address: Enter the source IP address for the rule. You can enter 0.0.0.0; it means that all IP addresses are controlled by the rule.
- Subnet Mask: Enter the Subnet Mask for the rule.
- Port Number: Enter the Port Number for the rule. You can enter 0, it means that all ports are controlled by the rule.
- Destination IP Address: Enter the destination IP address for the rule. You can enter 0.0.0.0, it means that all IP addresses are controlled by the rule. The set of Subnet Mask and Port Number are same as Source IP Address.
- > Protocol: Select the protocol: TCP, UDP or ICMP for the filter rule.
- Rule Unmatched: If the current rule can not match, and you select Forward, the router will skip the rule and transmit directly. If you select Next, the router will find the next filter rule (show in Filter list) to match.
- > **IP/MAC Filter Listing:** This displays the information about the IP Filter rules.

To add an IP Address filtering entry:

For example: If you desire to block E-mail received and sent by the IP address 192.168.1.7 on your local network; And wish to make the PCs with IP address 192.168.1.8 unable to visit the website of IP address 202.96.134.12, while other PCs have no limit. You can configure the rules as follows. Presume the rules are both aimed at the interface PVC0, and their indexes are (1, 1), (1, 2) and (1, 3).

Step 1: Select the "IP/MAC Filter" as the Filer Type Selection (show in Figure 4-30).

Filter Type Selection : IP / MAC Filter 🛛 🗸

Select the "IP" as the Rule Type on the Filter screen, then you can configure the specific rule for the example.



Step 2: Select the IP/MAC Filter Set Index and IP/MAC Filter Rule Index for the rule, then select the Interface "PVC0", and select the Direction "Both" for the first rule.

IP / MAC Filter Set Index :	1 💌
Interface :	PVC0 🔽
Direction :	Both 🖌
IP / MAC Filter Rule Index :	1 💌
Rule Type :	IP 🔽
Active :	💿 Yes 🔘 No

P Note:

If you want to make the rule take effect, please select Yes to active the rule.

Step 3: Enter the "Source IP Address", "Destination IP Address", "Subnet Mask" and "Port

Number" in the corresponding field.

Source IP Address :	192.168.1.7	(0.0.0.0 means Don't care)
Subnet Mask :	255.255.255.255	
Port Number :	0 (0 mea	ans Don't care)
Destination IP Address :	0.0.0.0	(0.0.0.0 means Don't care)
Subnet Mask :	0.0.0.0	
Port Number :	25 (0 mea	ans Don't care)
Protocol :	TCP	
Rule Unmatched :	Next 💌	

- Step 4: Select the Protocol as "TCP" and select the Unmatched rule as "Next".
- **Step 5:** Finally, click the **SAVE** to save the entry.
- Step 6: Go to Step 2 to configure the next two rules: Block E-mail received by the IP address 192.168.1.7 on your local network; Make the PC with IP address 192.168.1.8 unable to visit the website of IP address 202.96.134.12.

Note:

After you complete the IP filter rules for the example, the Filter list will show as follows. You can enter the **IP / MAC Filter Set Index** to view the information about the rule.

#	Active	Src Address/Mask	Dest IP/Mask	Src Port	Dest Port	Protocol	Unmatched
1	Yes	192.168.1.7/ 255.255.255.255	0.0.0.0/ 0.0.0.0	0	25	TCP	Next
2	Yes	192.168.1.7/ 255.255.255.255	0.0.0.0/ 0.0.0.0	0	110	TCP	Next
3	Yes	192.168.1.8/ 255.255.255.255	202.96.134.12/ 255.255.255.255	0	0	TCP	Forward

Other operation for the entries as shown in Figure 4-30:

Select the IP / MAC Filter Set Index and IP/MAC Filter Rule Index to view or modify the entry.

Select the **IP / MAC Filter Set Index** and **IP/MAC Filter Rule Index** to locate the specific rule, and then click the **DELETE** button to delete the entry.

4.5.2.2. MAC Filter

Select **IP/MAC Filter** as the Filter type, and select **MAC** as the Rule type (shown in Figure 4-31), then you can configure the filter rules based on MAC address.

Filter									
Filter Type									
		Filter	Type Selection :	IP / MAG	CFilter 🗸				
ID / MAC Eilter Cot Editing			.,,						
IP / MAC Filter Set Editing									
	IF	P/MAC	Filter Set Index :	1 💌	_				
			Interface :	PVC0	•				
			Direction :	Both	*				
IP / MAC Filter Rule Editing									
	10		Tithers Dude Jacobson	4					
	P	IMACI	-liter Rule Index :	1 💌					
			Rule Type :	MAC N	/				
			Active :	○ Yes	💿 No				
			MAC Address :	00:00:00	0:00:00:00				
		F	Rule Unmatched :	Forwar	d 🔽				
IP / MAC Filter Listing									
	IP / N	MAC Fi	iter Set Index	1 👻	Interface	PVC7		Direction	Both
	# A	ctive	Src Address/I	Nask	Dest IP/Mask	Src Port	Dest Port	Protocol	Unmatched
	1	-	-		-	-	-	-	-
	2	-	-		-	-	-	-	-
	3	-	-		-	-	-	-	-
	4	-	-		-	-	-	-	
	5	•	-		-	-	-		
	Б	-	-		-	-	-	-	-
				SAVE	DELETE CANCEL				

Figure 4-31

- **Rule Type:** Select MAC for the MAC Filter rule.
- > Active: Select "Yes" to make the rule to take effect.
- > **MAC Address:** Enter the MAC address for the rule.
- Rule Unmatched: If the current rule can not match, and you select Forward, the router will skip the rule and transmit directly. If you select Next, the router will find the next filter rule (show in Filter list) to match.
- > **IP/MAC Filter Listing:** This displays the information about the MAC Filter rules.

To add a MAC Address filtering entry:

For example: If you want to block the PCs with MAC addresses 00-0A-EB-00-07-BE and 00-0A-EB-00-07-5F to access the Internet, you can configure as follows. Presume the rules are both aimed at the interface PVC0, and their indexes are (1, 1) and (1, 2).

Step 1: Select the "IP/MAC Filter" as the Filer Type Selection:

Filter Type Selection : IP / MAC Filter 🛛 🔽

Select the "MAC" as the Rule Type on the Filter screen (show in Figure 4-31).

Rule Type : MAC VI. Then you can configure the specific rule for the example.

Step 2: Select the IP/MAC Filter Set Index and IP/MAC Filter Rule Index for the rule, then select the Interface "PVC0", and select the Direction "Outgoing" for the first rule.



P Note:

If you want to make the rule take effect, please select Yes to active the rule.

Step 3: Enter the "MAC Address" and select the Unmatched rule as "Next".

MAC Address :	00:0A:EB:00:07:BE	
Rule Unmatched :	Next 🔽	

Step 4: Finally, click the SAVE to save the entry.

Step 5: Go to Step 2 to configure the next rule: Block the PC with MAC address 00-0A-EB-00-07-5F to access the Internet.

Note:

After you complete the MAC filter rules for the example, the Filter list will show as follows. You can enter the **IP / MAC Filter Set Index** to view the information about the rule.

#	Active	Src Address/Mask	Dest IP/Mask	Src Port	Dest Port	Protocol	Unmatched
1	Yes	00:0a:eb:00:07:be	-	-	-	-	Next
2	Yes	00:0a:eb:00:07:5f	-	-	-	-	Forward

Other operation for the entries as shown in Figure 4-28:

Select the IP / MAC Filter Set Index and IP/MAC Filter Rule Index to view or modify the entry.

Select the **IP / MAC Filter Set Index** and **IP/MAC Filter Rule Index** to locate the specific rule, and then click the **DELETE** button to delete the entry.

4.5.2.3. Application Filter

Select **Application Filter** as the Filter type (shown in Figure 4-32), then you can configure the filter rules based on application.

Filter	
Filter Type	
Application Eilter Edition	Filter Type Selection : Application Filter
Application Filter Editing	
	Application Filter : 🔘 Activated 💿 Deactivated
	ICQ : 💿 Allow 🔘 Deny
	MSN : 💿 Allow 🔘 Deny
	YMSG : 💿 Allow 🔘 Deny
	Real Audio/Video: 💿 Allow 🔘 Deny
	SAVE CANCEL



Filter Type Selection: Select the Application Filter for the next configuration.

- > Application Filter: Activate or deactivate the function.
- ICQ & MSN & YMSG & Real Audio/Video: Select Allow or Deny for these applications. If you select Allow, the Router will accept the application; if you select Deny, the Router will forbid the application.

4.5.2.4. URL Filter

Select **URL Filter** as the Filter type (shown in Figure 4-33), then you can configure the filter rules based on URL.

IIDI Filter Editing	Filter Type Sel	lection : URL Filter							
oke rinter cutting	Active : Oyes • No								
	URL	Index : 1 V URL :							
URL Filter Listing									
	Index	URL							
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
	11								
	12								
	13								
	14								
	15								
	16								

Figure 4-33

- > Filter Type Selection: Select the URL Filter for the next configuration.
- > Active: Select "Yes" to make the rule to take effect.
- > URL Index: Select the index for the URL Filter entry.
- > **URL:** Enter the URL for this URL Filter.
- > **URL Filter Listing:** This displays the information about the URL Filter rules.

To add a URL filter entry:

For example, if you want to forbid the user to access the website: <u>www.yahoo.com</u>. Presume its index is "1".

- **Step 1:** Select the "URL Filter" as the Filer Type Selection (show in Figure 4-33).
- Step 2: Select the Index for the rule, and then enter the website in the URL field.
- Step 3: Finally, Select Yes to active the rule, and then click the SAVE to save the entry.

Other operation for the entries as shown in Figure 4-30:

Select the **URL Index** to view or modify the entry.

Select the **URL Index** to locate the specific rule, and then click the **DELETE** button to delete the entry.

4.5.3 SNMP

Choose "Access Management→SNMP", you can see the SNMP screen. The Simple Network Management Protocol (SNMP) is used for exchanging information between network devices.

Access	Quick Start	Network Setup	Advanced Setup	Access Management	Maintenan	ce Status	Help
management	ACL	Filter	SNMP	UPnP	DDNS	CWMP	
SNMP							
		SNMP	: Activated (Deactivated			
		Get Community	: public				
		Set Community	: public				
		Trap Host	: 0.0.0.0				
			SAVE				

Figure 4-34

- Get Community: Set the password for the incoming Get and Get next requests from the management station.
- > Set Community: Set the password for incoming Set requests from the management station.

4.5.4 UPnP

Choose "Access Management \rightarrow UPnP", you can configure the UPnP in the screen (shown in Figure 4-35).

UPnP (Universal Plug and Play) is a distributed, open networking standard that uses TCP/IP for simple peer-to-peer network connectivity between devices. An UPnP device can dynamically join a network, obtain an IP address, convey its capabilities and learn about other devices on the network. In turn, a device can leave a network smoothly and automatically when it is no longer in use. UPnP broadcasts are only allowed on the LAN.

Access	Quick Start	Network Setup	Advanced Setup	Access Management	Maintenand	ce Status	Help				
management	ACL	Filter	SNMP	UPnP	DDNS	CWMP					
Universal Plug & Play	Universal Plug & Play										
		UPni Auto-configured	Activated	Deactivated (by UP)	D enabled Applic	ation					
		Auto-configured : O Activated O Deactivated (by UPnP-enabled Application)									
			SAVE								

Figure 4-35

- UPnP: Activate or Deactivate the UPnP function. Only when the function is activated, can the UPnP take effect.
- Auto-Configure: If you activate the function, then the UPnP network devices can automatically configure network addressing, announce their presence in the network to other UPnP devices and enable exchange of simple product and service descriptions.

4.5.5 DDNS

Choose "Access Management→DDNS", you can configure the DDNS function in the screen

(shown in Figure 4-36).

The router offers a Dynamic Domain Name System (**DDNS**) feature. The feature lets you use a static host name with a dynamic IP address. User should type the host name, user name and password assigned to your ADSL Router by your Dynamic DNS provider. User also can decide to turn on DYNDNS Wildcard or not.

Access	Quick Start	Network Setup	Advanced Setup	Access Management	Maintenance	Status	Help
management	ACL	Filter	SNMP	UPnP	DDNS C	WMP	
Dynamic DNS							
		Dynamic DNS	: Activated (Deactivated			
		Service Provider	: www.dyndns.d	om			
		My Host Name	:]		
		E-mail Address	:]		
		Username	:]		
		Password	:		1		
		Wildcard support	: OYes 💿 No		-		
			SAVE				

Figure 4-36

- > Dynamic DNS: Activate the DDNS function or not.
- > Service Provider: This field displays the service provider of DDNS.
- > My Host Name: Enter your host name here.
- **E-mail Address:** Enter your E-mail address here.
- **Username & Password:** Type the "User Name" and "Password" for your DDNS account.
- > Wildcard support: Select the option to use Wildcard function

4.5.6 CWMP

Choose "Access Management→CWMP", you can configure the CWMP function in the screen (shown in Figure 4-37).

The router offers CWMP feature. The function supports TR-069 protocol which collects information, diagnoses the devices and configures the devices automatically via ACS (Auto-Configuration Server).

Access	Quick Start	Network Setup	Advanced Setup	Access Management	Maintenance	Status	Help
management	ACL	Filter	SNMP	UPnP	DDNS C\	MMP	
CWMP Setup							
		CWMP	Activated	Deactivated			
Login ACS							
		URL	:				
		User Name					
		Password					
Connection Request							
		Path	/tr069				
		Port	7547		_		
		UserName					
		Password					
Periodic Inform							
		Periodic Inform	Activated (Deactivated			
		Interval(s)	86400				
			SAVE CAN	CEL			

Figure 4-37

- **CWMP:** Select activate the CWMP function.
- > URL: Enter the website of ACS which is provided by your ISP.
- > User Name/Password: Enter the User Name and password to login the ACS server.
- > **Path:** Enter the path that connects to the ACS server.
- > **Port:** Enter the port that connects to the ACS server.
- User Name/Password: Enter the User Name and Password that provided the ACS server to login the router.
- Periodic Inform: Activate or deactivate the function. If Activated, the information will be informed to ACS server periodically.
- > Interval: Enter the interval time here.

4.6 Maintenance

Choose "Maintenance", you can see the next submenus:



```
Figure 4-38
```

Click any of them, and you will be able to configure the corresponding function.

4.6.1 Administration

Choose "**Maintenance→Administration**", you can set new password for admin in the screen (shown in Figure 4-39).

Maintenance	Quick Netw Start Set	vork Advand up Setu	ced Acces p Manager	nent Mainte	nance Statu	s Help
	Administration	Time Zone	Firmware	SysRestart	Diagnostics	
Administrator	[]4	sername : admin				
	New Pa	New Password :				
	Confirm Pa	issword :				
		SAVE	CANCEL			



P Note:

- 1) There is only one account that can access Web-Management interface. The default account is "admin", and the password is "admin". Admin has read/write access privilege.
- 2) When you change the password, you should enter the new password twice, and then click **SAVE** to make the new password take effect.

4.6.2 Time Zone

Choose "**Maintenance** \rightarrow **Time Zone**", you can configure the system time in the screen (shown in Figure 4-39).

The system time is the time used by the device for scheduling services. There are three methods to configure the time. You can manually set the time or connect to a NTP (Network Time Protocol) server. If a NTP server is set, you will only need to set the time zone. If you manually set the time, you may also set Daylight Saving dates and the system time will automatically adjust on those dates.

1. NTP Server automatically

Select **NTP Server automatically** as the Synchronize time, you only need to set the time zone.

Maintenance	Quick Start	Network Setup	Advanced Setup	Access Managem	ent	Maintenance	Status	Help
	Administr	ation Tim	ne Zone 🛛 🛛 F	Firmware	SysRes	start Diag	nostics	
Time Zone								
	c	Jurrent Date/Time	e : 01/01/2000 01:	:04:07				
Time Synchronization			~					
	Sync	hronize time with	1: 💽 NTP Serve	r automatically				
			O PC's Clock					
			Manually					
		Time Zone	e : (GMT+05:30)	Chennai, Kolkata,	, Mumbai, N	lew Delhi	*	
		Daylight Saving	: O Enabled 🧕	Disabled				
	NTP	Server Address	s: 0.0.0.0	((0.0.0.0: De	efault Value)		
			SAVE CAI	NCEL				

Figure 4-40

P Note:

The ADSL Router built-in some NTP Servers, when the Router connects to the Internet, the Router will get the system time automatically from the NTP Server. You can also configure the NTP Server address manually, and then the Router will get the time from the specific Server firstly.

2. PC's Clock

Select **PC's Clock** as the Synchronize time, you don't need to set any items.

Maintenance	Quick Start	Network Setup	Advanced Setup	Access Manageme	Maintena	nce Status	Help
	Administr	ation Tir	ne Zone 🛛 🛛 🕅	Firmware	SysRestart	Diagnostics	
Time Zone	c	Current Date/Tim	e : 07/01/2011 12	02:14			
Time synchronization	Sync	hronize time wit	h : ONTP Serve	r automatically			
			PC's Clock Manually				
		Dat Tim	e: 7 / 01 e: 12 : 02	/ 2011 : 14 (h	(Month/Date/Year) our:min:sec)		
			SAVE	NCEL			
			Figure	e 4-41			

3. Manually

Select **Manually** as the Synchronize time, you need to set the date and time corresponding to the current time.

Maintenance	Quick Net Start Se	work Advanced tup Setup	Access Management	Maintenance	Status	Help	
	Administration	Time Zone	Firmware Sy	sRestart Diag	nostics		
Time Zone	Current	Date/Time : 07/01/2011 12	:02:40				
Time Synchronization							
	Synchronize	Synchronize time with : ONTP Server automatically					
		PC's Clock Manually	:				
		Date : 7 / 01	/ 2011 (Mont	h/Date/Year)			
		Time : 12 : 02	: 40 (hour:m	in:sec)			
		SAVECA	NCEL				
		— ••••••••••••••••••••••••••••••••••••					

Figure 4-42

4.6.3 Firmware

Choose "**Maintenance** \rightarrow **Firmware**", you can upgrade the firmware of the Router in the screen (shown in Figure 4-43). Make sure the firmware or romfile you want to use is on the local hard drive of the computer. Click **Browse** to find the local hard drive and locate the firmware or romfile to be used for upgrade.

Maintenance	Quick Net Start Se	twork Advance Setup Setup	d Access Managemen	Maintenance	Status	Help
	Administration	Time Zone	Firmware	SysRestart Di	agnostics	
Firmware/Romfile Upgrade						
	Current Firmwar New Firmwar	e Version : 3.0.0 Build f e Upgrade :	10615 Rel.08523	Browse		
	Restor Backu	e settings : settings : Save Se	ttings	Browse		
		Status :	several minutes, don't r	power off it during upgr	adino. Device will r	estart after
		the upgrade				
		UPGRAD				

Figure 4-43

To upgrade the router's firmware, follow these instructions below:

- Step 1: Download a more recent firmware upgrade file from the website (http://www.iballbaton.com)
- **Step 2:** Type the path and file name of the update file into the "New Firmware Location" field. Or click the **Browse** button to locate the update file.
- Step 3: Click the UPGRADE button.

P Note:

- New firmware versions are posted at (http://www.iBallBaton.com) and can be downloaded for free. If the router is not experiencing difficulties, there is no need to download a more recent firmware version, unless the version has a new feature that you want to use.
- 2) When you upgrade the router's firmware, you may lose its current configurations, so please back up the router's current settings before you upgrade its firmware.
- 3) Do not turn off the router or press the Reset button while the firmware is being upgraded.
- 4) The router will reboot after the upgrading has been finished.

To back up the Router's current settings:

Step 1: Click the **ROMFILE SAVE** button (shown in Figure 4-43), click **Save** button in the next screen (shown in Figure 4-44) to proceed.



Figure 4-44

Step 2: Save the file as the appointed file (shown in Figure 4-45).

Save As						? 🛛
Save jn:	🗀 IB-LR611	1A	*	G 🦻	ب 🔝 🔊	
My Recent Documents						
Desktop						
My Documents						
My Computer						
	File <u>n</u> ame:	rom-0			~ (<u>S</u> ave
My Network	Save as <u>t</u> ype:	Document			• (Cancel

Figure 4-45

To restore the Router's settings:

- **Step 1:** Click the **Browse** button to locate the update file for the device, or enter the exact path in "New Romfile Location" field.
- **Step 2:** Click the **UPGRADE** button to complete.

4.6.4 SysRestart

Choose "**Maintenance→SysRestart**", you can select to restart the device with current settings or restore to factory default settings in the screen (shown in Figure 4-46).

Maintenance	Quick I Start	Network Setup	Advanced Setup	Access Managem	s Main	tenance	Status	Help
	Administratio	on Time	Zone Fi	rmware	SysRestart	Diag	nostics	
System Restart	Systen	n Restart with :	 Current Sett Factory Def 	tings fault Settings				
			RESTART					

Figure 4-46

4.6.5 Diagnostics

Choose "Maintenance→Diagnostics", you can view the test results for the connectivity of the physical layer and protocol layer for both LAN and WAN sides in the screen (shown in Figure 4-47).

Maintenance	Quick Start	Network Setup	Advanced Setup	Acces Manager	nent	Maintena	ince	Status	Help
	Administr	ation Tir	ne Zone I	Firmware	SysRe	estart	Diag	nostics	
Diagnostic Test									
	Virt	ual Circuit: PVC	0 🗸						
	>>	Testing Etherne	t LAN connection		PAS	ss			
	>>	Testing ADSL 9	Synchronization .		FAI	L			
		Testing ATM 0	AM segment ping . AM and to and pin		SKIPI				
	>> Testing ATM OAM end to end ping				SKIPI	PED			
	>>	Testing ATM 0	AM F4 end to end	ping	SKIP	PED			
	>>	Ping Primary Do	main Name Serve	er.	SKIP	PED			
	>>	Ping www.yah	oo.com		SKIPPED				
Ping Tool									
	IP A	ddress/Domain	Name:			Ping			
	-	Info -							

Figure 4-47

4.7 Help

Choose "**Help**", you can view the help information for configuration of any function.

Help	Quick Start	Network Setup	Advanced Setup	Access Management	Maintenance	Status Help
Quick Start		•				
Naturala Catura		U	QUICK Start			
Network Setup		•	WAN Sottings			
		ŏ	LAN Settings			
Advanced Setup		-				
		0	Firewall			
		0	Routing			
		0	NAT			
		ŏ	VLAN			
		ŏ	ADSL			
Access Management						
		0	ACL			
		0	IP Filter			
		ŏ	SNMP			
		ŏ	DDNS			
		0	CWMP			
Maintenance						
		0	Administration	1		
		0	Time Zone			
		ŏ	SvsRestart			
		ŏ	Diagnostics			
Status						
		0	Device Info			
		0	System Log			
		0	Statistics			

Figure 4-48

P Note:

Click the tab, and you will be able to get the corresponding information.

Appendix A: Specifications

	General				
	ANSI T1.413, ITU G.992.1, ITU G.992.2, ITU G.992.3, ITU G.992.5				
Standards and Protocols	IEEE 802.3, IEEE 802.3u, TCP/IP, PPPoA , PPPoE, SNTP, HTTP,				
	DHCP, ICMP, NAT,CWMP				
Safety & Emission	FCC, CE				
Ports	1 10/100M Auto-Negotiation RJ45 port (Auto MDI/MDIX)				
	1 RJ11 port				
	1 USB 1.1 port				
LEDs	USB, LAN, ADSL, Internet, Power				
	10Base-T: UTP category 3, 4, 5 cable				
Network Medium	100Base-TX: UTP category-5				
	USB: USB cable				
	Max line length: 6.5Km				
Data Rates	Downstream: Up to 24Mbps				
Data Nates	Upstream: Up to 3.5Mbps (With Annex M enabled)				
System Requirement	Internet Explorer 5.0 or later, Netscape Navigator 6.0 or later				
System Requirement	Windows 9x/ME/2000/XP/Vista/7				
	Physical and Environment				
Working Temperature	0 ℃ ~ 40℃				
Working Humidity	10% ~ 90% RH (non-condensing)				
Storage Temperature	-40°C ~ 70°C				
Storage Humidity	5% ~ 90% RH (non-condensing)				

Appendix B: Contact Information

For any technical help on iBall Baton products please contact:

support@iballbaton.com

www.iBallBaton.com