

# MSW-V2010p4 Manual

## 1. Overview

### 1.1 About MSW-V2010p4

MSW-V2010p4 is a high quality multifunction internet access device offering ADSL, WiFi, VoIP and LAN switch. The advanced QoS ensures high quality in the bandwidth-consuming services like IPTV, IP Camera and so on. It simply enable user to build their wireless network upon LAN network and play a role in the overall management and coordination to provide users with convenience. It also provides users with VoIP service, cutting down their cost on telephoning.



### 1.2 Advanced features and benefits

1. Support IEEE 802.11b/g WiFi, simply enable user to build wireless network upon LAN network, and access internet through high speed ADSL router.
2. Support ADSL2+ ( maximum downstream 24Mbps and upstream 1Mbps )
3. Support Advanced QoS (Quality of Service) feature. it ensures high quality with smooth connection for any type of data. Particularly latency-sensitive and bandwidth-consuming applications such as IPTV etc.
4. Support TR-069 remote management: configuration, software upgrade, troubleshooting etc.

### 1.3 Features and Technical Specifications

#### ADSL

- ANSI T1.413 issue 2 compliant
- ITU-T G.992.1(G.DMT) compliant: Up to 8Mbps downstream and 896Kbps upstream
- ITU-T G.992(G.lite) compliant: supports splitter-less implementation.

- ITU G.992.3/4(ADSL2) compliant: enhanced performance on long lines
- ITU G.992.5(ADSL2+) compliant:(up to 24Mbps downstream and 1Mbps upstream)
- PVCs : 16
- PVC supported model : PPPoE/PPPoA/Static/Bridge IP
- NAT/NAPT
- Firewall , support SPI(stateful packet inspection)
- DHCP server
- Port forwarding(support DMZ)
- IP filtering , bridge filtering , Web filtering
- Static routing
- Dynamic routing(RIP and RIP2)
- SNTP
- VPN, support PPTP
- Multicast : IGMP Proxy/IGMP Snooping
- ALG
- UPnP

#### **Ethernet**

- IEEE 802.3
- 4 port Ethernet: 10/100M Ethernet Auto MDI-X

#### **WiFi**

- IEEE 802.11b/g compliance
- Security : WEP 64/124/256 bits、 WPA/WPA2
- WMM QoS
- WDS wireless AP
- Multiple SSID configuration
- RF power : 20dBm
- Antenna type : Outside Omini-directional Antenna
- RF on/off
- ACS(Automatic channel selection)
- MAC address white-black filter

#### **Operation and Management (OAM)**

- Support Web based management
- Support Samba
- UPnP
- Telnet/SSH
- Software upgrade through HTTP/TFTP/FTP
- TR069 ( CPE management through WAN interface )

## QoS

- Support input rate limit
- IP QoS : base on source IP address, source and destination port, protocol and DSCP
- ATM QoS : support CBR , UBR , nrt-VBR , rt-VBR

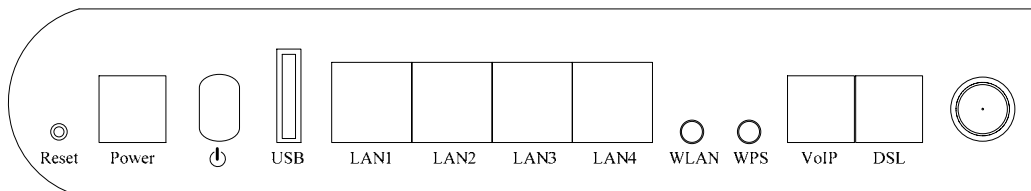
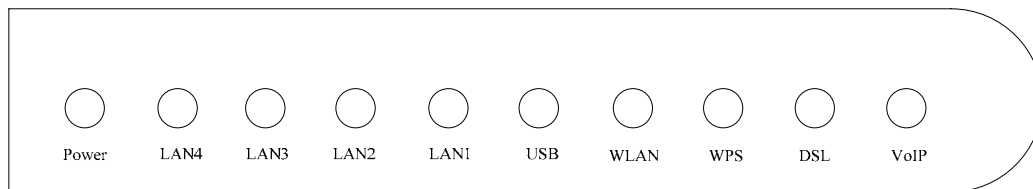
## VoIP

- Support SIP (RFC3261) protocol
- SIP-to-PSTN and PSTN-to-SIP switching
- Support 2 analog phones
- Support 1 analog line
- Call forward
- Flexible dial plan customization
- Support multiple CODECs (G.711a, G.711u, G.729a/b, G.723.1, G.726)
- T.38U fax over IP


# 2. Specification

## 2.1 Interface introduction

### 2.1.1 Interface & Indicator Light Introduction



Item	Label	Description
Indicator Light	Power	ON : MODEM power on

		OFF : MODEM power off
	LAN1/ LAN2/ LAN3/ LAN4	OFF : Ethernet is disconnected
		BLINK : Ethernet Traffic flows
		ON : Ethernet is connected
	USB	OFF : USB interface NC
		ON : MODEM linked to devices via USB interface
	WLAN	OFF : WiFi is disable
		ON : WiFi is enable
		BLINK: WiFi Traffic flows
	WPS	On: WPS enable
		Off: WPS disable
	VoIP	On : the analog phone off-hook
		Off : the analog phone on-hook
	DSL	BLINK Slowly : MODEM idle
BLINK Quickly : MODEM training, but not synchronized		
ON : MODEM synchronized to the DSLAM		
Interface Introduction	Reset	Restore to factory default settings
	Power	For 12V DC power adaptor
		Power switch
	USB	Connect to USB devices
	LAN1/ LAN2/ LAN3/LAN4	LAN interface for connecting to computer
	WLAN	WiFi switch
	WPS	WPS switch
	VoIP	Connecting to analog telephone
	DSL	Connecting to ADSL enabled telephone line
	Internal Antenna	Sending & receiving wireless signal

*Notice: the LAN port support 10M/100M, AUTO MDI-X.*

## 2.1.2 Interface of splitter

Label	Introduction
LINE	Connect to the ADSL line
MODEM	Connect to 'ADSL' port of the MODEM
PHONE	Connect to the phone

## 2.1.3 Package checking

Your ADSL Router is shipped with the following items:

Item	Quantity	Remark
Power Adapter	1	
Phone line	2	
RJ45 Network Line	1	
MODEM	1	
User Manual	1	
Splitter	1	

## 2.2 Hardware Connection

Introduction :

- 1、 Use a telephone cord to connect the LINE port of the splitter with the RJ-11 port (the phone jack) on the wall.
- 2、 Use another telephone cord to connect the ADSL port of the splitter with the LINE port of the ADSL Modem.
- 3、 Use another telephone cord to connect the telephone set with the PHONE port of the splitter.
- 4、 Connect Ethernet port of the ADSL MODEM with 10/100BASE-T port of the computer using the network cable that comes with the modem.

5、 Plug in the power cord, and turn on the power.

If you do not want Internet services and telephone voice services simultaneously, please just connect the LINE port of the ADSL Modem with the RJ-11 port (the phone jack) on the wall using a telephone cord. In this case, the splitter is not necessary.

## 2.3 Layout



## 3. Configuration Guide

### 3.1 Default Configuration

ADSL MODEM has pre-configured with the VCI/VPI which is in common use. The default dial-up mode is bridge encapsulation. For bridge mode, no need to configure any more parameter. However, the third party dial-up software is needed for connection with the Internet.

## 3.2 Computer Configuration

The default IP address for ADSL MODEM is: **192.168.1.1**; The Subnet Mask is : **255.255.255.0**. Users can configure ADSL MODEM through an Internet browser. ADSL MODEM can be used as gateway and DNS server; users need to set the computer's TCP/IP protocol as follow:

- 1、 Set the computer IP address at same segment of ADSL MODEM, such as set the IP address of the network card to one of the “192.168.1.2” ~ “192.168.1.254” **excluding “192.168.1.1”**.
- 2、 Set the computer's gateway the same IP address as the ADSL Modem's.
- 3、 Set computer's DNS server the same as ADSL Modem's IP address or that of an effective DNS server.

### 3.2.1 Log In

Power on to start the device, making sure your computer can PING via LAN port of ADSL (the factory default IP is 192.168.1.1), then run IE. Inputting <http://192.168.1.1> in the address column, press ENTER, and authentication interface will pop up as below:



The default user and password is **admin** for web log-on. Press ENTER or click on ‘OK’ to enter into ADSL main page to perform configuration after entering the accurate user name and password in the dialog box.

**Warning:** Please be sure IP of the computer network card is in the same IP range as ADSL LAN port before trying to log on (ex: 192.168.1.2 and 192.168.1.1 are in the same IP range). Please follow the steps below to enter: IE---Tool---Internet Option---Connection---LAN

Setup--Proxy server, disable the function 'Proxy for LAN', that disable the proxy server.

If log on successfully, the main page will be displayed as follows:

Device Info	
Board ID:	96358VW2
Software Version:	3.12L.01_A8v10301008.sip
Bootloader (CFE) Version:	1.0.37-10.3
Wireless Driver Version:	4.150.10.15.cpe2.2

This information reflects the current status of your DSL connection.

Line Rate - Upstream (Kbps):	
Line Rate - Downstream (Kbps):	
LAN IPv4 Address:	192.168.1.1
Default Gateway:	
Primary DNS Server:	192.168.1.1
Secondary DNS Server:	192.168.1.1

### 3.2.2 Introduction for the Structure of WEB Interface

Web interface consists of five menu options. Each option is for configuring certain part of the whole system. User can perform the configuration of each part individually in accordance with their own needs.

- 1) Device Info  
Here include "Summary", "WAN" information, "Statistic" information, "Route" information, "ARP" information etc.
- 2) Advanced setup  
Here include "WAN setup", "LAN setup", "Security", "Route", "DSL", "Print Server", "IPSec", "Samba Config" etc.
- 3) Wireless  
Here include "Basic", "Security", "MAC Filter", "Wireless Bridge", "Advanced", "Station Info" etc.
- 4) Voice  
Here include "SIP Basic Setting", "SIP Advanced Setting", "SIP Debug Tool", etc.
- 5) Diagnostics  
For check connection and test result
- 6) Management  
Here include "Settings", "System Log", "TR-069 Client", "Internet Time", "FTP", "Access Control", "Update Software" "Save/Reboot" etc.

### 3.2.3 Save / Reboot

If we change some setting and want to keep it after reboot. You can click “**Save/Reboot**” after change the setting in each page. You also can change all setting and go to “**Management**”→ “**Save/Reboot**” to save all.



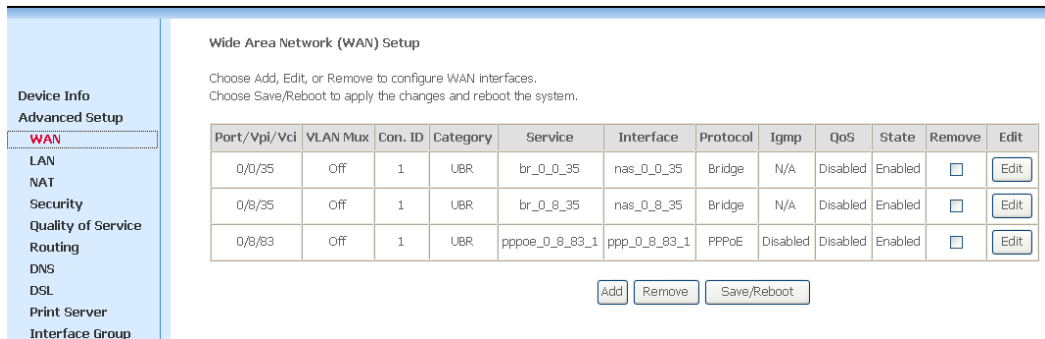
### 3.2.4 WAN Configuration

If the configuration is bridge encapsulation, there is no need to configure any more parameters. Only need to use the third party dial-up software to connect the Internet.

This router supports : PPPoA、PPPoE、MER”Dynamic IP”、IPoA、 Bridging. For detail configuration information, please check the following configuration guide.

#### 3.2.4.1 Configuration Guide

Choose “Advanced Setup”→ “WAN”, enter Wide Area Network (WAN) Setup interface.



- 1) Click “Add”, enter the configure guide.

**Notice: Default we can have eight connections. The Maximum number of connection is 16.**

**ATM PVC Configuration**  
This screen allows you to configure an ATM PVC identifier (PORT and VPI and VCI) and select a service category. Otherwise choose an existing interface by selecting the checkbox to enable it.

PORT: [0-3]

VPI: [0-255]

VCI: [32-65535]

VLAN Mux - Enable Multiple Protocols Over a Single PVC

Service Category: **UBR Without PCR** ▼

**Enable Quality Of Service**

Enabling packet level QoS for a PVC improves performance for selected classes of applications. QoS cannot be set for CBR and Realtime VBR. QoS consumes system resources; therefore the number of PVCs will be reduced. Use **Advanced Setup/Quality of Service** to assign priorities for the applications.

Enable Quality Of Service

- 2) The value for VPI/VCI is assigned by your ISP. After inputting the PVC value, press “Next” into “Connection type”.

**Connection Type**

Select the type of network protocol and encapsulation mode over the ATM PVC that your ISP has instructed you to use. Note that 802.1q VLAN tagging is only available for PPPoE, MER and Bridging.

PPP over ATM (PPPoA)

PPP over Ethernet (PPPoE)

MAC Encapsulation Routing (MER)

IP over ATM (IPoA)

Bridging

Encapsulation Mode  
**LLC/SNAP-BRIDGING** ▼

The Modem supports five ADSL protocol modes. Choose the protocol which is appointed by ISP and PVC encapsulation, click “Next” enter to the protocol configure. Below, we introduce the configuration of the five protocol modes.

- PPP over ATM (PPPoA)
- PPP over Ethernet (PPPoE)
- MAC Encapsulated Routing (MER)
- IP over ATM (IPoA)
- Bridging

- 3) Some connection lines need to confirm the LLC or VC, if you can’t confirm, please don’t modify the default value or ask your ISP.

### 3.2.4.2 RFC1483 Bridge Configuration

Select the Bridging mode. Then Press to specify the Service Name, and select the “Enable Bridge Service”.

- Device Info
- Advanced Setup**
- WAN
- LAN
- NAT
- Security
- Parental Control
- Quality of Service
- Routing

Unselect the check box below to disable this WAN service

Enable Bridge Service:

Service Name:

Press “Next” to enter into “WAN configuration”, click “save” to save configuration, if you need to modify the parameter, click “back”.

- Device Info
- Advanced Setup**
- WAN
- LAN
- NAT
- Security
- Parental Control
- Quality of Service
- Routing
- DNS
- DSL
- Print Server
- Interface Group
- IPSec
- Certificate
- Samba Config
- Wireless

WAN Setup - Summary

Make sure that the settings below match the settings provided by your ISP.

PORT / VPI / VCI:	0 / 0 / 35
Connection Type:	Bridge
Service Name:	br_0_0_35
Service Category:	UBR
IP Address:	Not Applicable
Service State:	Enabled
NAT:	Disabled
Firewall:	Disabled
IGMP Multicast:	Not Applicable
Quality Of Service:	Disabled

Click "Save" to save these settings. Click "Back" to make any modifications.

NOTE: You need to reboot to activate this WAN interface and further configure services over this interface.

**Notice : When you use bridge mode, please close “DHCP SERVER”**

**Local Area Network (LAN) Setup**

Configure the DSL Router IP Address and Subnet Mask for LAN interface. Save button only saves the LAN configuration data. Save/Reboot button save data and reboots the router to make the new configuration effective.

IP Address:

Subnet Mask:

Enable UPnP

Enable IGMP Snooping

Standard Mode

Blocking Mode

Disable DHCP Server

Enable DHCP Server

Start IP Address:

End IP Address:

Subnet Mask:

Leased Time (hour):

Static IP Lease List: Please click on Save/Reboot button to make the new configuration effective. (A maximum 32 entries can be configured)

MAC Address	IP Address	Remove

### 3.2.4.3 PPPoE Configuration

PPPoE is also known as RFC 2516. It is a method of encapsulating PPP packets over Ethernet.

PPPoA is also known as RFC2364 and named as Peer to Peer Protocol over ATM. As PPPoE, it also has all the features of PPP. Although it's based on ATM protocol, the setting of all the other parameters is similar with PPPoE. So we only introduce PPPoE in detail here.

Select PPP over Ethernet (PPPoE), press "Next" entering the configuring interface.

**PPP Username and Password**

PPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you.

PPP Username:

PPP Password:

PPPoE Service Name:

Authentication Method:

Enable Fullcone NAT

Dial on demand (with idle timeout timer)

PPP IP extension

Use Static IP Address

- PPP Account: Your account from ISP to access Internet.
- Password: Input the password assigned by your ISP.
- PPPoE server name: Server name of network ISP. No need to set.
- Authentication Mode: Authentication mode of network ISP. Default is AUTO.

Press "Next" when configuration is finished. Notice that PPPoE mode does not work until the

modem is reset.

### 3.2.4.4 Static Address

Select Mac Encapsulation Routing (MER), press “Next” and the configuration can be queried from your ISP.

Click “Save/Apply” when configuration is finished.

The screenshot shows the WAN IP Settings configuration page. On the left is a navigation menu with categories: Device Info, Advanced Setup (WAN, LAN, NAT), Security, Quality of Service, Routing (DNS, DSL), Print Server, Interface Group, Certificate, Samba Config, Wireless, Voice, Diagnostics, and Management. The main content area is titled "WAN IP Settings" and contains the following text: "Enter information provided to you by your ISP to configure the WAN IP settings. Notice: DHCP can be enabled for PVC in MER mode or IP over Ethernet as WAN interface if 'Obtain an IP address automatically' is chosen. Changing default gateway or the DNS effects the whole system. Configuring them with static values will disable the automatic assignment from DHCP or other connection. If you configure static default gateway over this PVC in MER mode, you must enter the IP address of the remote gateway in the 'Use IP address'. 'Use WAN interface' is optional." Below this text are several radio button options: "Obtain an IP address automatically" (unselected), "Use the following IP address:" (selected), "Obtain default gateway automatically" (unselected), "Use the following default gateway:" (selected), "Obtain DNS server addresses automatically" (selected), and "Use the following DNS server addresses:" (unselected). There are input fields for "WAN IPv4 Address", "WAN Subnet Mask", "Use IPv4 Address", "Primary DNS server", and "Use WAN Interface" (with a dropdown menu showing "pppoe\_0\_8\_83\_1/ppp\_0\_8\_81\_1").

### 3.2.5 Wireless Configuration

Press “Wireless” on the left of web pages to enter wireless section. You can select to configure wireless setup, security and management.

The screenshot shows the "Wireless - Basic" configuration page. The left navigation menu is the same as in the previous screenshot, but "Wireless" is selected. The main content area is titled "Wireless - Basic" and contains the following text: "This page allows you to configure basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, from active scans, set the wireless network name (also known as SSID) and restrict the channel set based on country requirements. Click 'Apply' to configure the basic wireless options." Below this text are several checkboxes: "Enable Wireless" (checked), "Hide Access Point" (unchecked), "Clients Isolation" (unchecked), and "Disable WMM Advertise" (unchecked). There are input fields for "SSID:", "BSSID:" (with value "00:1A:A9:00:00:01"), "Country:" (with dropdown menu showing "UNITED STATES"), and "Max Clients:" (with value "16").

#### 3.2.5.1 Wireless Setup

Click “Basic” on the left menu to setup basic wireless parameters. In default, check “Enable Wireless” box to launch wireless AP.

- **SSID** (Service Set Identifier): The mobile users cannot access WLAN until setting their SSID as the same value of the wireless ADSL. The SSID value of the ADSL is “default”
- **Hidden Access Point:** If checked, wireless station will no see SSID of the ADSL. Click “Save/Apply” when configuration is finished.

### 3.2.5.2 Wireless Security

Press “**Security**” on the left menu to construct wireless security. You can select to configure WEP encryption, Shared, 802.1x, WPA, and WPA2 authentication.

- WEP Encryption

Select “Enabled” of the WEP encryption list. You can enter WEP encryption page.

**Encryption Strength:** Key length: 128bits or 64bits.

**Network Key 1-4:** Up to four keys that are in form of hex digitals could be set. Mobile users can’t access the AP if they haven’t set the same key as AP. For 64bits and 128bits keys, you should input 10 and 26 hexadecimal digitals or 5 and 13 ASCII characters respectively. Every two digitals should be comparted with others by a space character. For example: “7890ABCDEF” (hexadecimal digitals) or “QWERT” (ASCII characters) for a key length of 64bits.

The screenshot shows the 'Manual Setup AP' configuration page. On the left is a navigation menu with options: Device Info, Advanced Setup, Wireless, Basic, Security, MAC Filter, Wireless Bridge, Advanced, Station Info, Diagnostics, and Management. The 'Security' option is selected. The main content area is titled 'Manual Setup AP' and contains the following fields and instructions:

- Select SSID: A dropdown menu showing 'teeeeeee'.
- Network Authentication: A dropdown menu showing 'Shared'.
- WEP Encryption: A dropdown menu showing 'Enabled'.
- Encryption Strength: A dropdown menu showing '128-bit'.
- Current Network Key: A dropdown menu showing '2'.
- Network Key 1, 2, 3, and 4: Four empty text input fields.

Below the input fields, there is a note: "Enter 13 ASCII characters or 26 hexadecimal digits for 128-bit encryption keys. Enter 5 ASCII characters or 10 hexadecimal digits for 64-bit encryption keys." At the bottom of the form is a 'Save/Apply' button.

- 802.1x Authentication

Select “802.1x” to enter 802.1x authentication page.

The 802.1x authentication needs a Radius server in LAN. In this page, you can input Radius server IP address, port number and secret key.

**Manual Setup AP**

You can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Save/Apply" when done.

Select SSID:

Network Authentication:

RADIUS Server IP Address:

RADIUS Port:

RADIUS Key:

### 3.2.5.3 Wireless Mac Filter

In fact, the Access List function is just like MAC address filtering and selected to permit or forbid access of wireless station with specified MAC address.

Method: select "Allow" or "Deny" mode, and click "Add" button, and input MAC address which you want to allow or deny.

**Wireless -- MAC Filter**

Select SSID:

MAC Restrict Mode:  Disabled  Allow  Deny

*Notice: You only can select one of allow mode or deny mode.*

## 4. VoIP Configuration

### 4.1 Register to VoIP service provider

Press "Voice" on the left of web pages to enter VoIP section:

**Voice -- SIP configuration**

Enter the SIP parameters and click Start/Stop to save the parameters and start/stop the voice application.

Interface name:

Locale selection:

Preferred codec list:

Preferred ptime:

SIP domain name:

Use SIP Proxy.

Use SIP Outbound Proxy.

Use SIP Registrar.

**Note:** in order to use the VoIP function, users should choose PPPoE to connect to the internet.

**Interface name:** The interface name match along with the PPPoE you choose, for example: ppp\_0\_8\_35\_2.

**Locale selection:** means users choose their Location where the ADSL is used.

**Preferred codec list:** refers to the priority of the codec in the order left-to-right

**Use SIP Proxy:** enable to allow using SIP Proxy. Should be enabled when doing registration

**Use SIP Outbound Proxy:** enable to allow using SIP Outbound Proxy.

**Use SIP Registrar:** enable to register to a SIP server. Should be enabled when doing registration.

Use SIP Outbound Proxy.

Use SIP Registrar.

LineDisabled	Extension	Display Name	Authentication Name	Password
1 <input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2 <input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Extension:** the number which will be registered to the SIP Server.

**Display Name:** the name which will be displayed when making outgoing calls.

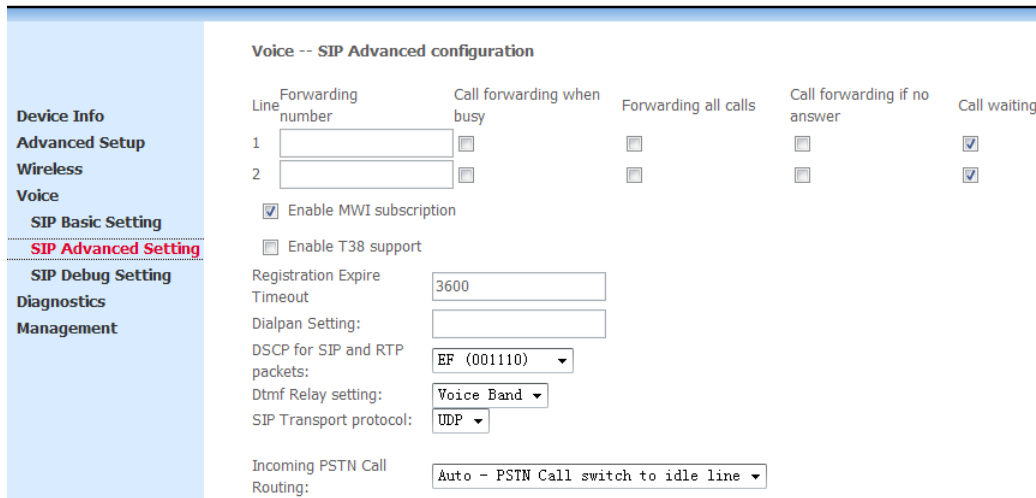
**Authentication Name:** the authentication name which is provided by the SIP server.

**Password:** the identification which should match the Extension number.

Once the configuration is done, click “Stop SIP client”, and then click “Start SIP client” to save and enable the configuration.

## 4.2 SIP advanced setting

Click “SIP advance setting” to go to “SIP Advanced configuration” page.



Line number	Forwarding number	Call forwarding when busy	Forwarding all calls	Call forwarding if no answer	Call waiting
1	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Enable MWI subscription  
 Enable T38 support

Registration Expire Timeout:

Dialplan Setting:

DSCP for SIP and RTP packets:

Dtmf Relay setting:

SIP Transport protocol:

Incoming PSTN Call Routing:

**Forwarding Number:** set a number to do call forwarding. Users can choose the way of call forwarding by click any one of the box behind.

**Dialpan Setting:** the outgoing rules which could be used to define the outgoing calls.

X refers to a digital number;

| refers to a signal between different outgoing rules.

For example:

9XXX|(1~8)XXXXXX

This rule refers to:

Any number dialed from FXS1 or FXS2 starting with 9, following with three digital numbers will go to the SIP server.

At the mean time, any number dialed from FXS1 or FXS2 starting with 2~8, following with six digital numbers will go to the SIP server.

Other dialing rule will fail.

**Incoming PSTN Call Routing:** users could define the destination of the incoming calls.

Once the configuration is done, click “Stop SIP client”, and then click “Start SIP client” to save and enable the configuration.

## 5. Other Configuration

### 5.1 LAN Configuration

Configuration of Modem’s IP address and password.

## 5.1.1 Configuration of Modem's IP Address

As a network device, ADSL Modem has its own IP address and MAC address. The factory sets the MODEM, at a default IP address of 192.168.1.1 and subnet mask of 255.255.255.0. The user can configure these addresses through the “LAN” on “Configuration” like this:

For example, change IP address to “192.168.1.10”. Click “LAN”, input “IP address”: 192.168.1.10, then “subnet mask”: 255.255.255.0, Press “Save” when configuration is finished.

Local Area Network (LAN) Setup

Configure the DSL Router IP Address and Subnet Mask for LAN interface. Save button only saves the LAN configuration data. Save/Reboot button data and reboots the router to make the new configuration effective.

IP Address:

Subnet Mask:

Enable UPnP

Enable IGMP Snooping

Standard Mode

Blocking Mode

Disable DHCP Server

Enable DHCP Server

Start IP Address:

End IP Address:

Subnet Mask:

Leased Time (hour):

Static IP Lease List: Please click on Save/Reboot button to make the new configuration effective. (A maximum 32 entries can be configured)

MAC Address	IP Address	Remove
-------------	------------	--------

**Notice :** *If you change IP address, it will take effect after you reboot the modem. You must use the new IP address to login.*

## 5.1.2 DHCP Configuration

- Click “LAN ”
- Click “DHCP server”;
- Define the “Start IP address” and the “End IP address” of DHCP server (for example, from 192.168.1.11 to 192.168.1.254).
- Input the value of lease (Measured by the second, 0 indicates permanently valid).  
Enable DHCP server, computer will set the IP Address of network card with one of the address 192.168.1.2 ~ 192.168.1.254 (Excluding 192.168.1.1).

**Notice :** *When you use the DHCP Server, please pay attention to having multi-DHCP Server in one LAN.*

## 5.2 Password Configuration

When you configure ADSL MODEM through an Internet browser, the system requires user name and password to validate access permission. The factory sets the modem at a default username of “**admin**” and the password of “**admin**”. Choose “Management” -> “Access Control” -> “Passwords”, you can choose the username and change the password.

Access Control -- Passwords

Access to your DSL router is controlled through three user accounts: admin, support, and user.

The user name "admin" has unrestricted access to change and view configuration of your DSL Router.

The user name "support" is used to allow an ISP technician to access your DSL Router for maintenance and to run diagnostics.

The user name "user" can access the DSL Router, view configuration settings and statistics, as well as, update the router's software.

Use the fields below to enter up to 16 characters and click "Apply" to change or create passwords. Note: Password cannot contain a space.

Username:

Old Password:

New Password:

Confirm Password:

**Attention:** please remember the password after change, otherwise you need to reset the device to change configuration after saving setting.

## 6. Troubleshooting

### 6.1 Unable to Access Internet

#### 6.1.1 Check the Line and the Device

- 1、 Check the indicator of power supply is on, if not, Make sure the connection of power supply is correct; Make sure the output of power supply is correct; Make sure the switch of power supply is turned on ;
- 2、 Check the indicator of PC is on, if not, Make sure the connection of cable and network adapter; Make sure that the correct cable is used;
- 3、 Check the DSL LED to see if it is twinkling. If no fast twinkling is observed within 3 minutes, please check whether phone line has been correctly placed; whether ADSL separator is correctly used. If multiple extensions have been installed, make sure that the separator is installed prior to the junction box of phone line. If the above items are

confirmed and still no fast twinkling of DSL LED is observed, call the ISP to query whether ADSL service has been provided on your line;

4. Check the DSL LED to see whether it is unable to change status from fast twinkling to always light, or whether it changes status to fast twinkling after sometime of always light. If these phenomena occur constantly, please contact your ISP with a demand to check lines and signal quality;

If there is no problem in the above items, the line and the device shall be working. Problems may come from your computer configuration or device configuration.

## 6.1.2 CHECK YOUR CONFIGURATION

We explain here the configuration of PPPOE using Windows XP operation system as an example. For other operation systems the process is similar.

1. Enter the device manager to check if Ethernet adapter is correctly installed. If any problem exists, please re-installed it;
2. Check the configuration of Ethernet adapter in PC. Try to manually set IP address that is in band 192.168.1.X without conflict.
3. Try to run command “ping 192.168.1.1” on command line mode. If the response returns “time out”, please check Ethernet connection and IP settings;

Note 1 : The precondition is that LAN settings in the modem has not been modified.

Note 2 : We usually start command line mode in Windows XP as follows: click on the “RUN” item of Windows Start Menu, input characters “cmd” in the input box popped up with an “Enter”. The window subsequently popped up is the command line window.

Note 3 : The returned values of ping command in the following format show the standard of “reachable”

4. If ping of the modem is reachable but ping of the outer fixed IP is unreachable, attention should be concentrated upon device settings. Please enter the configuring interface following the instructions in this manual.

- ( 1 ) Check first the number of connections. If more than one connection exists, for troubleshooting , delete unused connections and remain the one connection you are

using.

- ( 2 ) Check the connection to see whether correct “type” is selected. It’s normal to choose login type of PPPoE. When you use PPPoE to login, the following information should be provided: VPI and VCI, which can be queried from your ISP, user name and password.
- ( 3 ) Then make sure that “using NAT” and “default gateway” have been selected with a tick. Check whether “connect on demand” has been selected with a tick. If it is selected, the connection is activated only when traffic to outer networks arrives. If not selected, check “keep connection”, which should be set to 0 if you demand to keep connection

Make sure that the above parameters are saved after configuration. Internet is now available since the configuration is properly done.