

WIRELESS G BROADBAND ROUTER USER MANUAL

MODEL 523431



INT-523431-UM-1106-01

TABLE OF CONTENTS

Section 1: Introduction.....	3
1.1 Warnings	3
1.2 Package Contents.....	3
1.3 Specifications	3
Section 2: Installation	7
2.1 Before Installation	7
2.2 Installation	7
Section 3: Local Computer Setup.....	9
3.1 Windows 2000 Setup	9
3.2 Windows XP Setup.....	14
Section 4: Router Setup	18
4.1 Start Internet Explorer to Log In	18
4.2 PPPoE Configuration	19
4.3 Dynamic IP (Cable Modem) Configuration.....	23
4.4 Static IP Configuration	25
4.5 Status.....	27
4.5.1 WAN Status.....	27
4.5.2 Wireless Status	28
4.5.3 LAN Status	29
4.6 Basic Setup	30
4.6.1 WAN Setup.....	30
4.6.2 Wireless Setup	31
4.6.3 LAN Setup.....	33
4.6.4 Link Setup/Info	34
4.6.5 Routing Table.....	36
4.7 System.....	37
4.7.1 Administrator Setup	37
4.7.2 Firmware Upgrade	38
4.7.3 System Log	40
4.7.4 Miscellaneous Configurations.....	41
4.8 QoS.....	43
4.8.1 Basic Setup	43
4.8.2 IP QoS	43
4.8.3 Application QoS	44
4.8.4 Ports QoS.....	45
4.9 NAT.....	46
4.9.1 Applications	46
4.9.2 Internal Server.....	49
4.9.3 Port Forwarding.....	51
4.9.4 Port Trigger	52
4.9.5 NAT On/Off.....	53
4.10 Advanced Setup.....	54
4.10.1 Firewall	54
4.10.2 DDNS	55

4.10.3 WOL (Wake-on LAN).....	56
4.10.4 URL Filter	57
4.10.5 Remote Management	58
4.10.6 Scheduler	59
4.10.7 VPN	60
Appendix A: UTP Cable Specifications	61

Thank you for purchasing the INTELLINET™ NETWORK SOLUTIONS Wireless G Broadband Router, Model 523431. This user manual includes hardware specifications, installation guidelines, configuration guidelines and directions for using the device.

1. INTRODUCTION

1.1 Warnings

- **Only use the power adaptor provided by manufacturer.**
- **Do not drop the router: It can damage the router’s electronic components.**
- **Do not disassemble the router. Doing so voids the warranty.**
- **Avoid extended exposure to sunlight to prevent overheating.**
- **Keep the router in a dry place and away from fire.**

1.2 Package Contents

- Wireless G Broadband Router, Model 523431
- Switching DC Power Adapter (7.5 V, 1.5 A)
- RJ-45 Ethernet Cable
- User manual

1.3 Specifications

This Wireless G Broadband Router is a highly integrated device with many functions, such as Gateway, Switch, DHCP server and Firewall.

11g 54 Mbps: Supports data rates up to 54 Mbps for 802.11g and 11 Mbps for 802.11b.

Network Address Transform (NAT): With the provided Internet application, this device allows more than one user to connect with the Internet at the same time by sharing one public IP address. It supports many connection options: xDSL, cable modem LAN/leased line and so on.

4 Ports 10/100 M Switch: Four 10/100 Mbps ports with MDI/MDI-X support (Auto Uplink, which eliminates the need for using a crossover cable when connecting to a different switch port).

PPPoE (ADSL) Automatic Disconnection/Connection: Users have the option of choosing automatic disconnection based on idle time and re-connect on demand.

DHCP Server Supported: All of the networked computers can retrieve TCP/IP settings automatically from this device.

Static IP Address Binding: Authorizes users to manage and configure a PC in LAN in most cases by binding the MAC address and IP address together.

System Log: History of all activity.

UPnP: Supports Microsoft's UPnP (Universal Plug and Play Service).

Web-Based Management: The router is easily and conveniently configured by any standard Internet Web browser.

Internet Access Control: Different settings can be set up for different users.

Packet Filter: Port filter, IP address filter, MAC address filter, key word filter.

Virtual Server: Allows other users from the Internet to access WWW, the FTP server or other servers in the LAN.

QoS (Quality of Service): Allows control of your Internet bandwidth. Set a minimum bandwidth for a certain application, or limit the bandwidth an application can consume. The router features IP- and port-based bandwidth control, as well.

Scheduler: Manage and control the Internet access for individual users.

DMZ Host: Set up one computer to operate in the Demilitarized Zone without any firewall interference.

Remote Management: Remotely configure the router settings.

DDNS: Support for dynamic DNS services, such as www.dyndns.org.

Remote Wake-up: Remotely wake up PCs in the LAN.

Support VPN Pass-through: Supports VPN pass-through PPTP traffic. A user connected to the device can establish outgoing connections to remote VPN servers.

VPN server: An integrated VPN server allows five simultaneous client connections.

ITEM		WIRELESS G BROADBAND ROUTER		
SPECIFICATIONS	Standards	IEEE 802.11g IEEE 802.11b; IEEE 802.3; IEEE 802.3u; IEEE 802.3x		
	Protocols	TCP/IP, NAT, DHCP, UDP, FTP, PPPoE, PPTP, L2TP, HTTP, DNS, IP Sec/VPN Pass-through		
	External Ports	WAN	One 10/100 Mbps RJ-45 port, automatic sense cross cable	
		LAN	Four 10/100 Mbps speed Ethernet switch ports, auto sense cross cable	
	Wireless Parameters	Frequency Range	2.412 –2.472 GHz	
		Forward Speed	1, 2, 5.5, 11 Mbps (802.11b) 6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11g)	
		Opt. Channel	14	

		Data Modulation	CCK, DQPSK, DBPSK, OFDM
		RF Power	16 – 18 dBm
		Antenna Type	1*2.4 Ghz Dipole Antenna 1*2.4 Ghz Embedded Antenna
	Cable	UTP 100Base-TX UTP/STP 5 or above standard	
	Control interface	Based on Web application	

	<p>Inside functions</p>	<p> 10/100 Mbps switch LAN/WAN port auto sense cross cable WAN port static/dynamic IP flexible setting up Support 64/128 bit WEP and MAC Support AP client Bridge-Point-to Point mode Support client mode PPPoE dial-up and connection time setting up PPPoE dial-up and automatic/manual connection Double IP configuration Support VPN pass-through DHCP service DNS relaying DMZ server Static IP address binding System memorandum forwarding Broadband router configuration back-up UPNP Connection setting up and status Time control on access to internet Firewall NAT On/Off Port/IP/MAC/Key word filtration Remote control Remote wake-up DDNS Gateway Virtual server QoS & VPN server </p>
--	--------------------------------	--

Product Specifications	CPU	KENDIN KS8695PX (ARM9)
	FLASH	2MB Flash
	Memory	16 MB SDRAM
	LAN connection	Static or dynamic IP address
	WAN connection	XDSL Cable Modem Special cable LAN
	Power supply	DC 7.5 V / 1.5 A switch power adapter
	Size	179 mm x *119mm x *39mm
	Temperature	0 – 60°
	Humidity	10 – 85%

Compatible OS: Windows 95/98/Me/NT/2000/XP, Mac OS, Linux or other UNIX system



Note: Features and specifications are subject to change without notice.

2. INSTALLATION

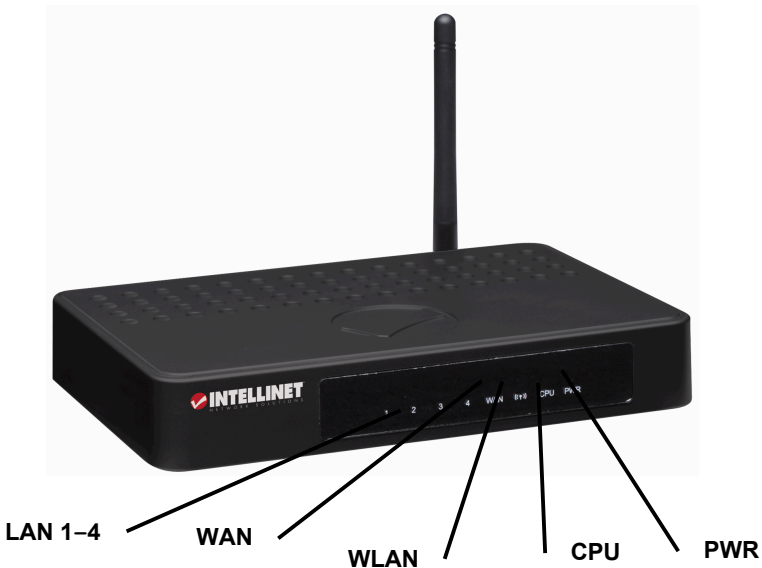
2.1 Before Installation

- First, confirm that your computer has a Java Script-capable Web browser installed.
 - Make sure that your computer has a LAN card installed and correctly configured for TCP/IP.
 - If using xDSL, you will need the username and password provided by your ISP.
- NOTE:** If your computer has ADSL PPPoE dial-up software installed, back up your installation software and uninstall your ADSL PPPoE dial-up software before proceeding with the installation.

2.2 Installation

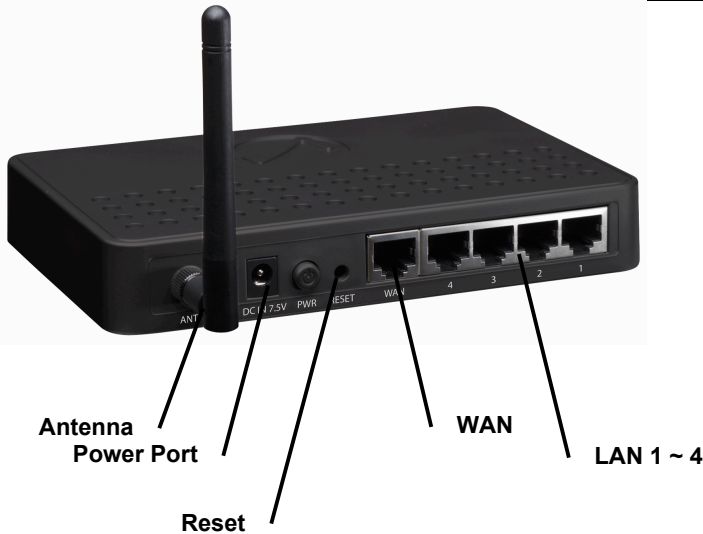
1. Set up the WAN connection: Connect the broadband RJ-45 cable (xDSL, Cable modem or LAN/leased cable) with the WAN port of the router.
2. Set up the LAN connection: Connect your computer's LAN card port or your switch's UPLINK port with one LAN port of the router using a common network cable. **NOTE:** All LAN ports of the router can automatically sense cross cable, so straight-through or cross cable can be used to connect the LAN card or switch.
3. Turn on the power by pressing the power button on the back of the router. The device will perform a self test. During the self test, the PWR LED, CPU LED, Wireless LED and LAN port LEDs of connected ports are lit. After the self test, the CPU LED starts flashing (on-off-on-off).
4. Start the computer.

LED	Description	Explanation
PWR	Power LED	Long light
CPU	System status LED	LED flashes (on-off-on-off) during normal operation. Any other state indicates a problem with the device.
WLAN	WLAN port connection LED	ON, flashing during data transmission.
WAN	WAN port connection LED	ON, flashing during data transmission.
LAN	LAN port connection LED	Flashing refers to data transformation.



Port explanation	
Antenna	Antenna provides wireless LAN functionality and ensures optimal signal strength.
Power jack	Connect power adapter (7.5 V / 1.5 A)
Reset	Press the Reset button. Switch the power off/on. After about 5 seconds, the RUN LED will flash rapidly. Release the button. After router startup, all configurations will be restored to the default configuration.

WAN	Connect xDSL/cable modem or LAN cable.
LAN 1-4	Connect personal computers, hubs or switches.



3. LOCAL COMPUTER SETUP

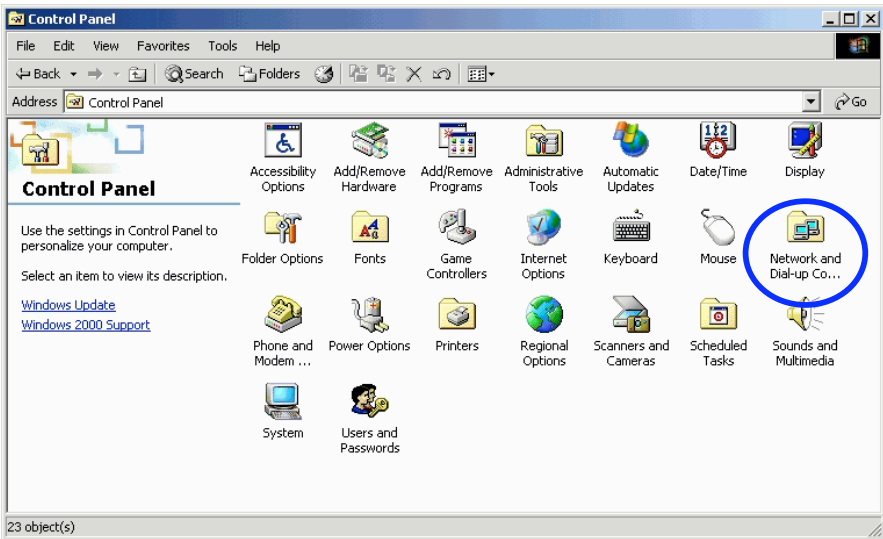
The Wireless G Broadband Router acts as a DHCP server, which means that it provides IP addresses to all connected computers. By default, Windows, Linux and Mac OS systems will try to obtain an IP address from a DHCP server, if present, and no configuration of the computer's IP settings are necessary. In order to test your IP settings, simply start your computer while connected to the router. Then open your Web browser and open <http://192.168.0.1>.

If the router's Web Admin screen appears, you can skip this section and proceed directly to Section 4.

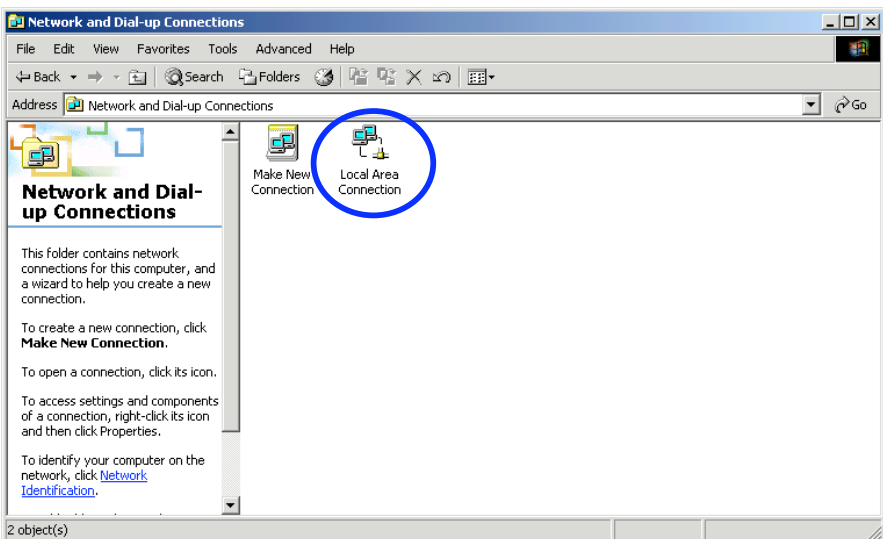
If you are unable to open the router's Web Admin screen, follow whichever instructions below apply to the operating system you use.

3.1 Windows 2000 Setup

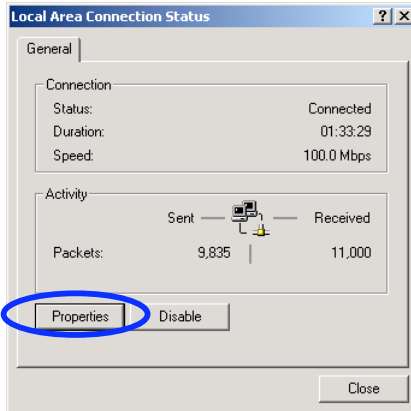
1. Install the Wireless G Broadband Router.
2. Start Windows 2000 and check whether the LAN LED is on or off. If off, confirm the connection between the computer and the router is correct.
3. Click "Start" → "Setting" → "Control Panel."



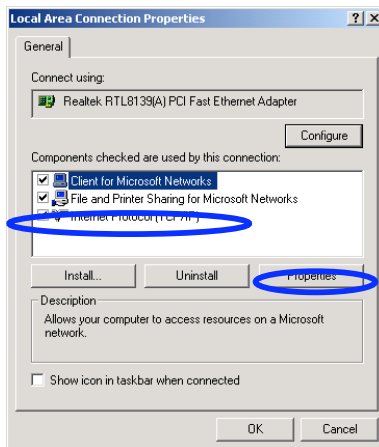
4. Double-click "Network and Dial-up Connection" in "Control Panel."

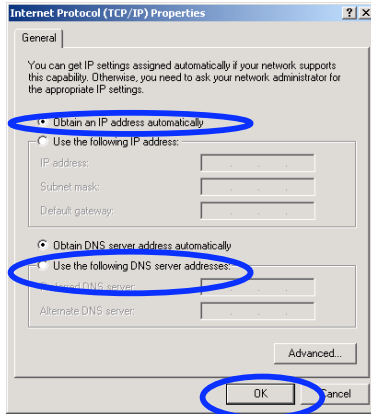


5. Click "Local Area Connection" —> "Properties" —> "Internet Protocol (TCP/IP)" and "Properties."



6. Click the "General" tab; select "Obtain an IP address automatically" and "Obtain DNS server address automatically."
7. Click "OK."





8. Click "Start" —> "Run."

9. Input "cmd"; then click "OK."

10. Input "ipconfig" in the pop-up command window.

NOTE: Make sure your IP is the same that listed below. If it's the same, then your configuration is successful. If not, redo the above steps and restart your computer.

- The IP address is between **192.168.0.2** and **192.168.0.254**
- The subnet mask is **255.255.255.0**
- The default gateway is **192.168.0.1** (the router's default IP address)

```

C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [版本 5.1.26001]
(C) 版权所有 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : local
    IP Address. . . . .               : 192.168.0.2
    Subnet Mask . . . . .             : 255.255.255.0
    Default Gateway . . . . .         : 192.168.0.1

C:\Documents and Settings\Administrator>_

```

10. Type “ping 192.168.0.1,” then hit “Enter.”

11. If you can see “Reply from 192.168.0.1: bytes=32 time=2ms TTL=64,” then the connection between your computer and Broadband Router is completed.

```

C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [版本 5.1.26001]
(C) 版权所有 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64

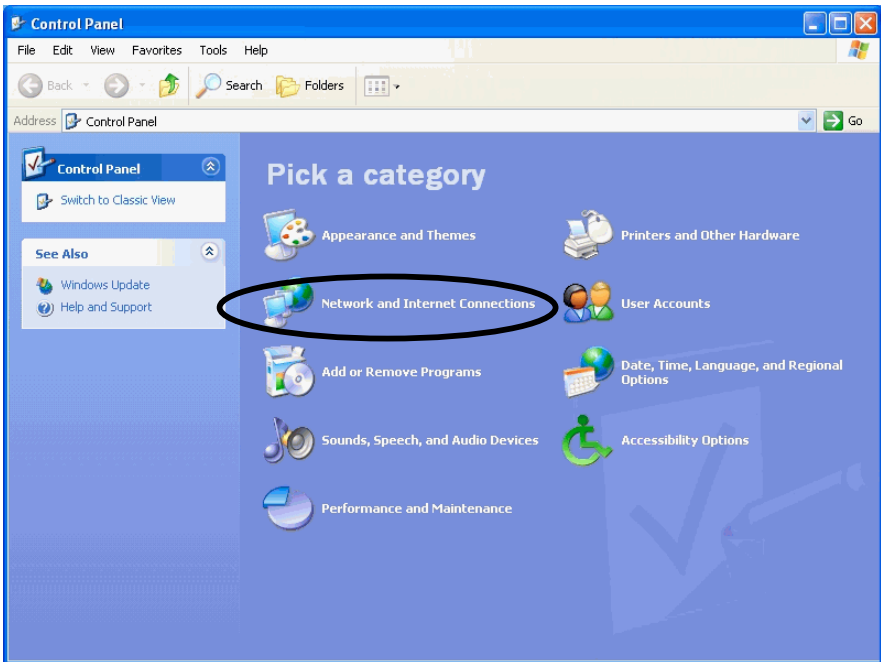
Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

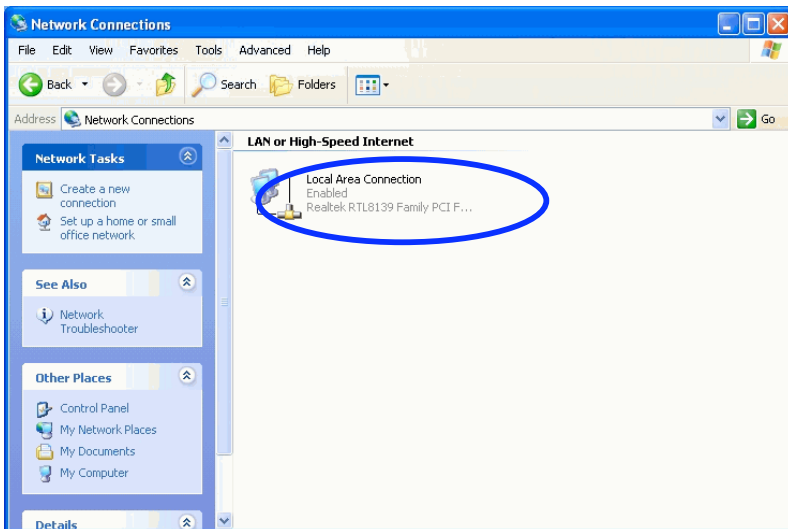
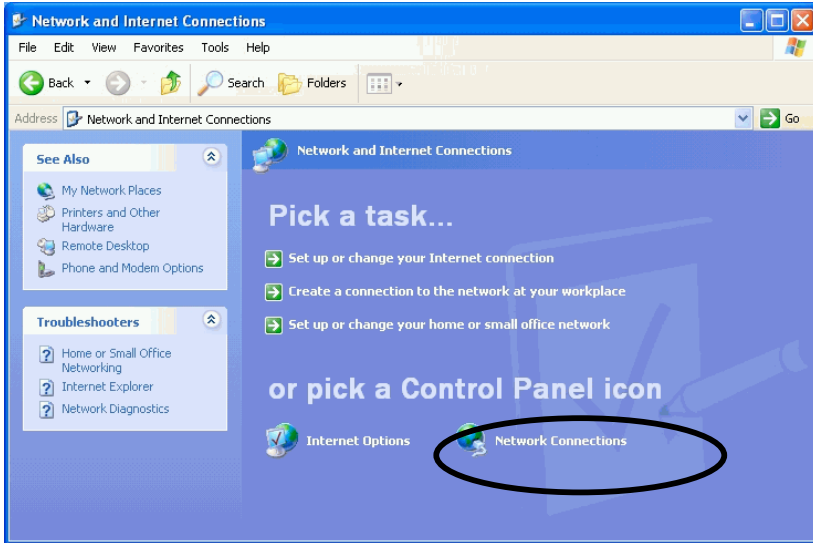
C:\Documents and Settings\Administrator>_

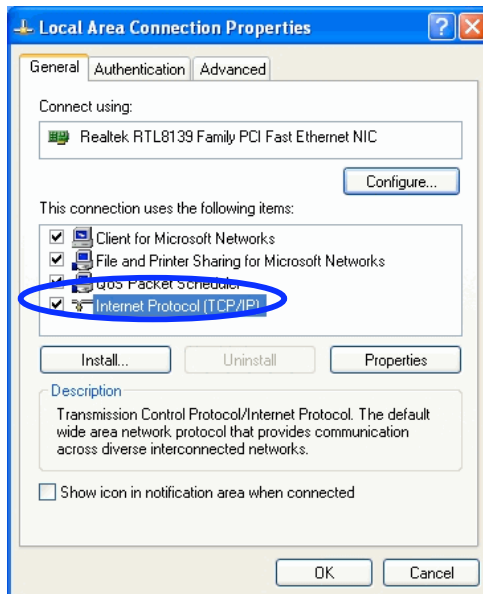
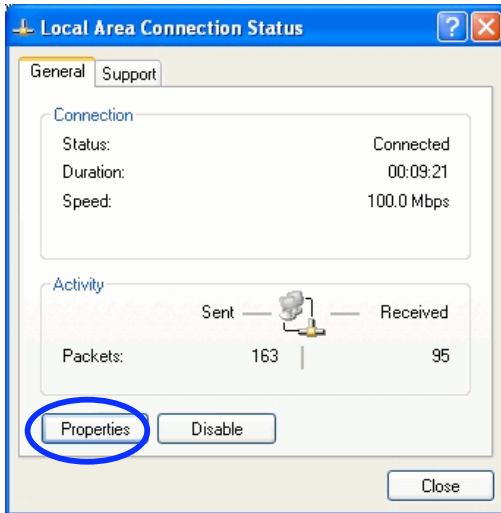
```

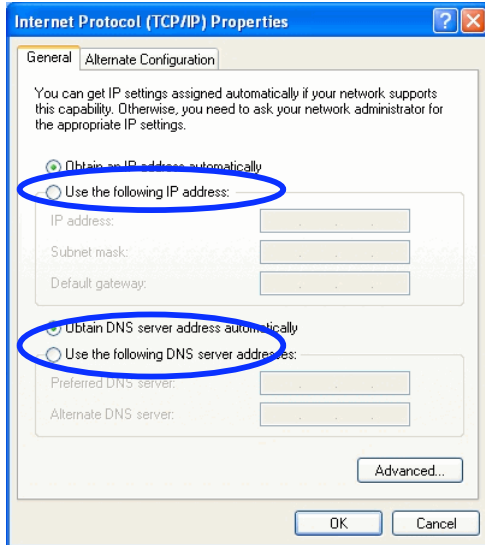
3.2 Windows XP Setup

1. Install the Wireless G Broadband Router.
2. Start Windows XP and check whether the LAN LED is on or off. If off, confirm that the connection between the computer and the router is correct.
3. Click “Start” → “Setting” → “Control Panel.”
4. Double-click “Network and Internet Connections” in “Control Panel.”
5. Click “Network Connection” → “Local Area Connection” → “Properties” → “Internet Protocol (TCP/IP)” and “Properties.”
6. Click “General”; select “Obtain an IP address automatically” and “Obtain DNS server address automatically.”
7. Click “OK.”









8. Click “Start” → “Run”; enter “cmd”; click “OK.”

9. Type “ipconfig” in the pop-up command window.

NOTE: Make sure the IP information is the same as shown below.

- The IP address is between **192.168.0.2** and **192.168.0.254**
- The subnet mask is **255.255.255.0**
- The default gateway is **192.168.0.1**

```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [版本 5.1.2600]
(C) 版权所有 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ipconfig

Windows IP Configuration

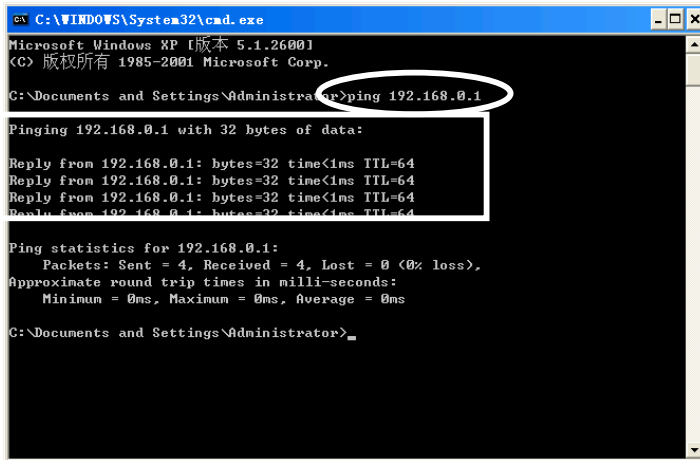
Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : local
    IP Address. . . . .               : 192.168.0.2
    Subnet Mask . . . . .             : 255.255.255.0
    Default Gateway . . . . .         : 192.168.0.1

C:\Documents and Settings\Administrator>
```

11. Input “ping 192.168.0.1,” then “Enter.”

12. If you can see “Reply from 192.168.0.1: bytes=32 time=2ms TTL=64,” then the connection between your computer and the router is completed.



```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [版本 5.1.2600]
(C) 版权所有 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64
Reply from 192.168.0.1: bytes=32 time<1ms TTL=64

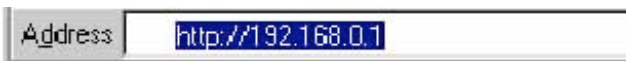
Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\Administrator>
```

4. ROUTER SETUP

4.1 Start Internet Explorer to Log In

1. Start your Web browser.
2. Enter in the Web browser’s address bar. (192.168.0.1 is the default IP address of the router.)



3. You will then see the following login Web page. Click the “Login” button to enter the configuration and configure the router manually. This may be required if the Internet Wizard or Wireless Wizard fail to detect the settings automatically.



The Internet Wizard lets you configure your Internet connection quickly and conveniently. The Wireless Wizard helps you configure all important wireless-related settings.

You can login directly without account and password confirmation because there is no account information required by default. It is recommended that a password is assigned immediately.

Conn. Type: The router’s current connection type. Dynamic IP (DHCP) is the default value.

Conn. Status: The router’s current connection status.

WAN IP: The router’s current WAN (Internet) IP address.

Connected PC: The IP address of the computer that connects to the router.

4.2 PPPoE Configuration

This connection option is suitable for a virtual dial-up Internet connection.

1. Open the external ADSL modem and check the WAN LED of the router. If the WAN LED is off, check the network cable between the external modem’s LAN/Ethernet port and the router’s WAN port.
2. Click “Basic setup” —> “WAN setup” as shown.

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Status **Basic Setup** System QoS NAT Advanced

WAN Setup Wireless Setup LAN/DHCP Setup Link Setup/Info Routing Table

Basic Setup >> WAN Setup Refresh Save Help

WAN Setup

DHCP User (Cable Modem, VDSL, LAN, IP ADSL)

Physical Address Clone

Allow private ip to be accepted

MTU

PPPoE User (ADSL)

User ID

Password

MTU

Disconnect PPP session if idle time is longer than Min

Connect On Demand Connect Manually

Prevent reconnection although no response from PPP server

3. Select the “PPPoE User (ADSL)” radio button.
4. Key in the “User ID” and “Password” provided by your Internet service provider.
5. Click the “Apply” button. You will then see the following pop-up window:

Conn. Type	PPPoE User (ADSL)
Conn. State	Connecting to internet
<input type="button" value="Close"/>	

If “Conn. State” shows “Successfully connected,” the configuration is correct.

6. Click “Show Internet connection status” and proceed to section 4.5.1.

If “Conn. Status” shows “Invalid ID/password.” the configuration is incorrect. Click the “Close” button and check your ID and password.

Conn. Type	PPPoE User (ADSL)
Conn. State	Invalid ID/Password
<input type="button" value="Close"/>	

If “Conn. Status” is unchanged, check whether your service type is correct.

Conn. Type	PPPoE User (ADSL)
Conn. State	Connecting to internet
<input type="button" value="Close"/>	

7. Confirm the WAN connection status: If the WAN connection is successfully established, then by clicking “Show Internet Information” you can enter the WAN status Web page; or click “Status” —> “WAN status” and verify the following.

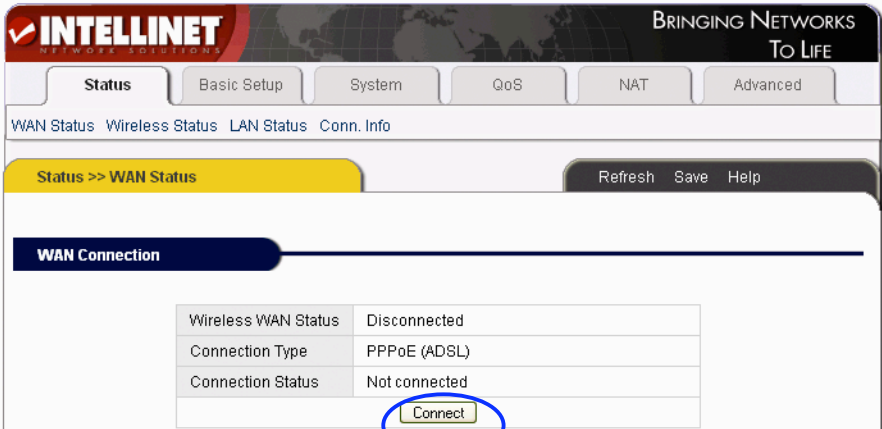
- Connection Type should be PPPoE (ADSL)
- Connection Status should be “successfully connected”
- Physical Address shows the router’s WAN port MAC address.
- WAN IP Address, Subnet Mask, Default Gateway, Primary DNS Server and Secondary DNS Server can be different from the following values. (These addresses are provided by your ISP.)

The screenshot shows the Intellinet router's web interface. At the top, there is a navigation menu with 'Status' selected. Below it, the 'WAN Status' page is displayed. The page title is 'Status >> WAN Status'. A table shows the following connection details:

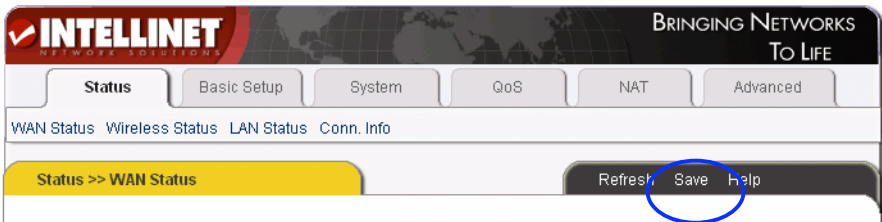
Connection Type	PPPoE (ADSL)
Connection Status	Successfully connected
Physical Address	00-0E-E8-12-11-11
WAN IP Address	10 . 0 . 0 . 3
Subnet Mask	255 . 255 . 255 . 255
Default Gateway	10 . 0 . 0 . 3
Primary DNS Server	202 . 96 . 134 . 133
Secondary DNS Server	202 . 96 . 128 . 68

At the bottom of the table, there is a 'Disconnect' button, which is circled in blue.

Click “Disconnect” to disconnect from the Internet.



“Connect” is a manual connection button. By clicking it, the system can be connected to the Internet again.
Click “Save” to save the current configuration.
Restart all PCs connected to the router.



 **NOTE: Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.**

Other configuration options of the PPPoE WAN setup screen:

MTU: Input the MTU value of the data package (the default value is 1454). Do not change it unless you are experiencing connection problems. Your ISP can give you the correct value in case the default value does not work.

Disconnect PPP session if idle time is longer than _ Min: If you choose this option and set up the time “T,” then the router automatically disconnects from the Internet after “T” minutes of idle time.

Connect On Demand: The router can automatically connect with the Internet if there is Internet access after disconnection. Note: During usage, if there is disconnection due to external causes, then the router will try to connect with the Internet at once until a successful re-connection is made. This function is a router

internal function and does not affect the **Connect On Demand** function. **Connect On Demand** is only effective for **Disconnect PPP session if idle time is longer than _ Min.**

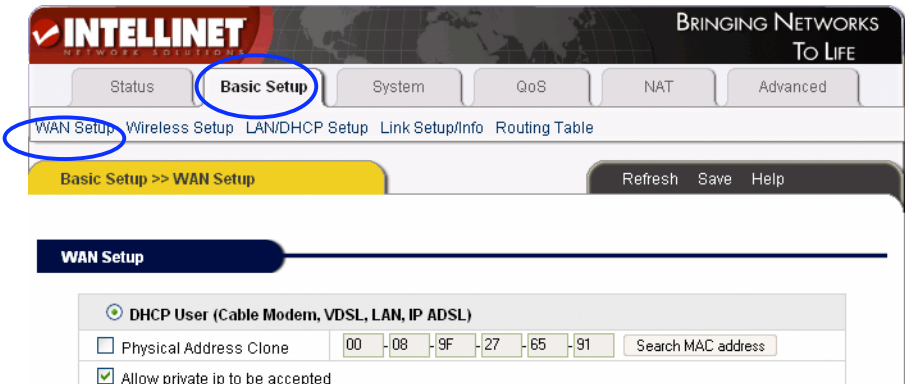
Connect Manually: With this option, users have to connect with the Internet manually after disconnection. This option is only effective with **Disconnect PPP session if idle time is longer than _ Min.**

Prevent reconnection although no response from PPP server: This option is for shutting off the router's internal automatic re-connection function. By choosing this option, the router will not try to re-connect at once if an external network (ISP) disconnects the connection.

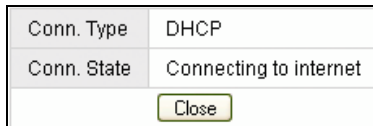
4.3 Dynamic IP (Cable/Modem) Configuration

With this connection option, the router can get IP addresses automatically from an ISP. It is suitable for connection options such as cable modem, LAN and so on.

1. Turn on the external cable modem and check the WAN LED of the router. If the WAN LED is off, confirm that the network cable connection between the modem and the WAN port is correct.
2. Click "Basic Setup" → "WAN Setup."
3. Choose DHCP User (Cable modem, VDSL, LAN, ...)
4. Click "Apply" to complete.



5. You will see the following pop-up window:



If Conn. State shows "Successfully connected," the configuration is correct. Click "Show Internet Information" and proceed to section 4.5.1.

Conn. Type	DHCP
Conn. State	Successfully connected
<input type="button" value="Close"/>	

6. If Conn. State remains as “Connecting to Internet,” do the following:
 - Close the pop-up window.
 - Turn the cable modem power off then on, and check the WAN LED status.
7. Re-click the “Apply” button.
8. Check the WAN Connection Status: If the status is “Successfully connected,” click “Show Internet Information” to enter the WAN status page; or click Status → WAN Status, as shown.

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Status Basic Setup System QoS NAT Advanced

WAN Status Wireless Status LAN Status Conn. Info

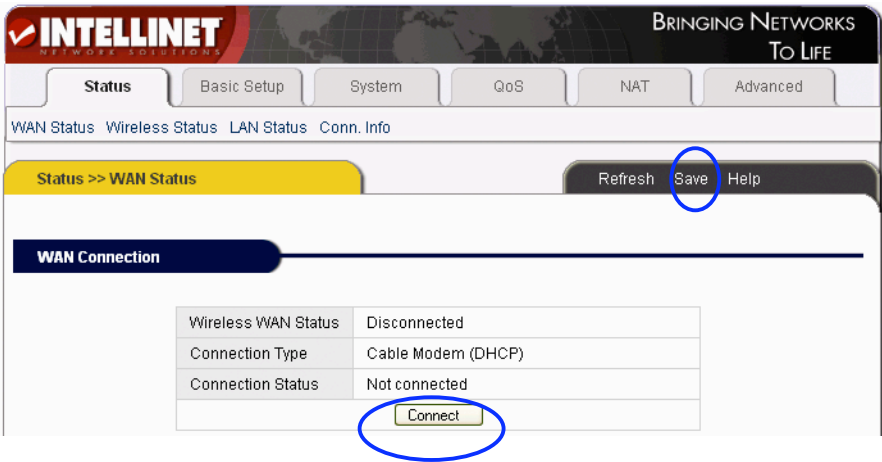
Status >> WAN Status Refresh Save Help

WAN Connection

Connection Type	Cable Modem (DHCP)
Connection Status	Successfully connected
Physical Address	00-0E-E8-12-11-11
WAN IP Address	192 . 168 . 2 . 67
Subnet Mask	255 . 255 . 255 . 0
Default Gateway	192 . 168 . 2 . 254
Primary DNS Server	202 . 96 . 134 . 133
Secondary DNS Server	202 . 96 . 128 . 68
<input type="button" value="Disconnect"/>	

- If the WAN connection is successfully established, you can see the following:
- Connection Type should be “Cable Modem (DHCP)”
 - Connection Status should be “Successful connected”
 - Physical Address shows the router WAN port MAC address
 - WAN IP Address, Subnet Mask, Default Gateway, Primary DNS Server and Secondary DNS Server depend on your system configuration and information provided by the ISP.

The “Disconnect” button causes the router to release the WAN port IP address and disconnect from the Internet.



The “Connect” button is a manual WAN port IP address refresh function button. If clicked, the WAN port will re-obtain a dynamic IP address and connect with the Internet.

Click the “Save” button to save the current configuration, then restart all PCs connected with router.

Other configuration options:

Physical address Clone: If you want to change a WAN port MAC address, you can choose this option. If not selected, the WAN MAC address is the default value. If using this option, the displayed MAC address is your current MAC address. You can also manually add the WAN port MAC address; without the option, the WAN port MAC address will restore to its default value.

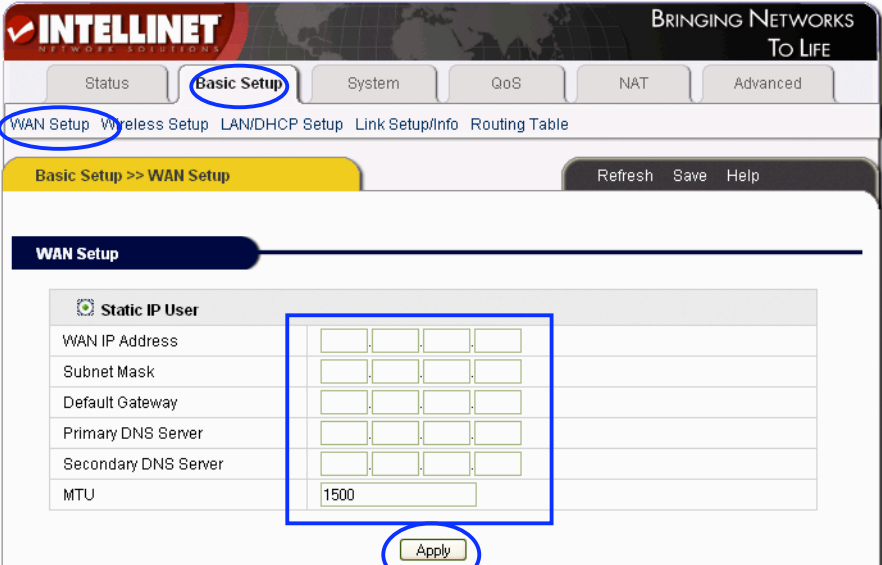
Allow private IP to be accepted: Allows a WAN port to be assigned a private IP address.

4.4 Static IP Configuration

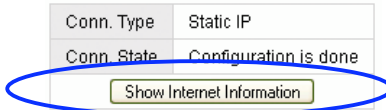
If you have a static IP address provided by your ISP, you must choose this option.

1. Turn on the external modem and check the WAN LED of the router. If the WAN LED is off, check the network cable between the external modem and the WAN port.

2. Click “Basic Setup” —> “WAN Setup” as shown:



3. Input WAN IP Address, Subnet Mask, Default Gateway, Primary DNS Server and Secondary DNS Server as provided by your ISP.
4. Click “Apply” to complete. You will see the following pop-up window:



5. Check WAN Conn. State by clicking “Show Internet Information” or click on “Status” → “WAN status.”

INTELLINET NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

[Status](#) | [Basic Setup](#) | [System](#) | [QoS](#) | [NAT](#) | [Advanced](#)

[WAN Status](#) | [Wireless Status](#) | [LAN Status](#) | [Conn. Info](#)

Status >> WAN Status Refresh Save Help


WAN Connection

Wireless WAN Status	Disconnected			
Connection Type	Static IP			
Connection Status	Successfully connected			
Physical Address	00-08-9F-27-65-91			
WAN IP Address	12	12	12	2
Subnet Mask	255	255	255	0
Default Gateway	12	12	12	1
Primary DNS Server	12	12	12	1
Secondary DNS Server				

If the WAN connection is successfully established, you can see the following:

- Connection Type should be “Static IP”
- Connection Status should be “Successfully connected”
- Physical Address shows the router’s WAN port MAC address (physical address).
- WAN IP Address, Subnet Mask, Default Gateway, Primary and Secondary DNS server as entered.

6. Click the “Save” button to make the configuration permanent.

 **Note: Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.**

4.5 Status

4.5.1 WAN Status

Click “Status” → “WAN Status.”

INTELLINET NETWORK TECHNOLOGIES BRINGING NETWORKS TO LIFE

Status Basic Setup System QoS NAT Advanced

WAN Status Wireless Status LAN Status Conn. Info

Status >> WAN Status Refresh Save Help

WAN Connection

Wireless WAN Status	Disconnected			
Connection Type	Static IP			
Connection Status	Successfully connected			
Physical Address	00-08-9F-27-65-91			
WAN IP Address	12	12	12	2
Subnet Mask	255	255	255	0
Default Gateway	12	12	12	1
Primary DNS Server	12	12	12	1
Secondary DNS Server

This page shows current Internet connection status (WAN port), including Connection Type, Connection Status, WAN IP Address, Subnet Mask, Default Gateway and DNS server. With dynamic IP or PPPoE DSL connections, the “Connect” or “Disconnect” button will be shown on this page. Click the “Connect” button to connect with the Internet; click the “Disconnect” button to disconnect from the Internet.

Refresh: Refreshes the current Web page. All of the following Web pages will have this button with the same function.

Save: Saves the configuration of the router whenever you make a change to the configuration on any screen. Failing to save the configuration will result in a loss of all parameter changes made since the last time the configuration was saved.

4.5.2 Wireless Status

Click “Status” —> “Wireless Status.”

The screenshot shows the Intellinet router's status page. At the top, there is a navigation bar with the Intellinet logo and the slogan "BRINGING NETWORKS TO LIFE". Below this, there are several tabs: "Status", "Basic Setup", "System", "QoS", "NAT", and "Advanced". The "Status" tab is selected and circled in blue. Underneath the tabs, there are links for "WAN Status", "Wireless Status", "LAN Status", and "Conn. Info". The "Wireless Status" link is also circled in blue. Below these links, there is a yellow bar with the text "Status >> Wireless Status" and a dark grey bar with "Refresh", "Save", and "Help" buttons. The main content area is titled "Wireless Configuration" and contains a table with the following data:

Wireless Status	Running - AP Mode
Wireless MAC Address	00-08-9F-28-65-91
SSID(Network Name)	Wireless G Router 523431
Mode	G and B
Region	Others
Channel	6
SSID broadcasting	Started
Authentication Type	Automatic
Encryption Strength	Disable
MAC Authentication	Accept All

This shows the current wireless configuration, including:

Wireless Status: Current wireless connector status.

Wireless MAC Address: Physical address of the wireless interface.

SSID (Network Name): Current wireless SSID of the router.

Mode: Wireless modes (g only; g and b; b only).

Region: Current channel region setup.

Channel: Channel currently used by the router.

SSID Broadcasting: Status of SSID broadcast (started, stopped).

Authentication Type: Open System, Shared Key, WPA, automatic.

Encryption Strength: Shows WEP encryption key length (64/128 bits).

MAC Authentication: Displays status of wireless MAC address filter.

4.5.3 LAN Status

Click "Status" ->"LAN Status":

INTELLINET NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

[Status](#)
[Basic Setup](#)
[System](#)
[QoS](#)
[NAT](#)
[Advanced](#)

[WAN Status](#)
[Wireless Status](#)
[LAN Status](#)
[Conn. Info](#)

Status >> LAN Status Refresh Save Help

LAN Information

Physical Address	00-08-9F-26-65-91
System IP Address	192 .168 .0 .1
Subnet Mask	255 .255 .255 .0
DHCP IP Pool	192 .168 .0 .2 - 192 .168 .0 .254
Number of IP allocated	1

IP allocated

Number	IP Address	Physical Address	Etc.
1	192.168.0.2 (LAPTOP)	08:00:46:C4:B2:FA	Wired : Dynamic

LAN Information: Shows the router's current LAN connecting status, DHCP server settings, including MAC address (physical address) of the LAN port, and quantities of IP address handed out to other computers or LAN clients.

IP allocated: Overview of all connected computers with IP Address, Physical Address (MAC Address) and the connection type (wired, wireless, dynamic IP, etc.)

4.6 Basic Setup

4.6.1 WAN Setup

Click "Basic Setup" → "WAN Setup."

INTELLINET NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

[Status](#)
[Basic Setup](#)
[System](#)
[QoS](#)
[NAT](#)
[Advanced](#)

[WAN Setup](#)
[Wireless Setup](#)
[LAN/DHCP Setup](#)
[Link Setup/Info](#)
[Routing Table](#)

Basic Setup >> WAN Setup Refresh Save Help

Wireless WAN Setup

Use Wireless Port for Internet Connection

PPPoE (ADSL), Dynamic IP and Static IP setup procedures are illustrated in sections 4.2, 4.3 and 4.4, respectively.

The Wireless G Broadband Router not only can connect to the Internet by cable, but also by wirelessly connecting to another access point, called “Wireless Client Mode.” In this mode, the router does not accept any wireless connections from any PC: PCs can only connect to the router via RJ-45 cable.

To activate this mode, check the option “Use Wireless Port for Internet Connection” and click “Apply” and “Reload.”



NOTE: If the client mode is activated, no wireless connections from any PC will be accepted by the router. Also, if client mode is activated, the router’s WAN port is disabled.

4.6.2 Wireless Setup

Click “Basic Setup” —> “Wireless Setup.”

This page shows the basic wireless parameters.

INTELLINET BRINGING NETWORKS TO LIFE

Status **Basic Setup** System QoS NAT Advanced

WAN Setup **Wireless Setup** LAN/DHCP Setup Link Setup/Info Routing Table

Basic Setup >> Wireless Setup Refresh Save Help

Basic Setup

Status	Running - AP Mode		
Operation	ON <input type="button" value="v"/>		
SSID	Wireless G Router 523	Mode	g and b <input type="button" value="v"/>
Region	Others <input type="button" value="v"/>	Channel	ch 6 <input type="button" value="v"/> <input type="button" value="Search the best channel"/>
<input checked="" type="checkbox"/> Broadcast of SSID option			
<input type="button" value="Apply"/>			

Status: Shows wireless operational status (on/off, AP/Client mode).

Operation: Activate/Deactivate the wireless function.

SSID: Define the SSID of your wireless network.

Mode: If some of your wireless cards are older and do not support the Wireless G standard, activate “g and b.” But if all of your wireless cards support Wireless G connections, “g only” should be selected for increased wireless performance.

Region: Configure the region depending on your location.

Channel: Select the channel manually, or use the “Search for best channel” function. Only in regular AP Mode is the channel selection available.

Broadcast of SSID Option: Turn on or off broadcasting of the SSID. Click “Apply” to save the settings.

Authentication Type	Automatic
Encryption Strength	64 Bit
Key Input Method	String
Basic KEY	
Fill the values of Key	
<input checked="" type="radio"/> KEY 1	<input type="text"/>
<input type="radio"/> KEY 2	<input type="text"/>
<input type="radio"/> KEY 3	<input type="text"/>
<input type="radio"/> KEY 4	<input type="text"/>
Apply	

Authentication Type: Choose the authentication type (automatic/open system/sharing key/wpa-psk).

Encryption Strength: Choose the Key length (WEP 64/128-bit).

Key Input Method: Choose string or HEX.

Basic Key: Fill in the Key value.

After finishing the configuration, click “Apply.”

Policy		Accept	Apply
MAC Address List To Be Rejected		MAC Addresses Currently Online	
REMOVE	Check items to be removed	<== ADD	Check items to be added
Manual Input		<input type="checkbox"/> Get MAC address of this host	
<input type="text"/>		<input type="text"/>	

MAC Authentication: Configure MAC authentication, choose type (Open/Accept/Reject) and click “Apply.”

- In Open mode: All the wireless clients can connect.
- In Accept mode: Specified clients can connect
- In Reject mode: Specified client can not connect.



Note: Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

4.6.3 LAN Setup

Click “Basic Setup” —> “LAN/DHCP Setup.”

The screenshot shows the Intellinet router configuration interface. At the top, there is a navigation bar with tabs for Status, Basic Setup, System, QoS, NAT, and Advanced. Below this is a secondary navigation bar with links for WAN Setup, Wireless Setup, LAN/DHCP Setup, Link Setup/Info, and Routing Table. The main content area is titled 'Basic Setup >> LAN/DHCP Setup' and includes a 'Refresh Save Help' button. There are two main sections: 'System IP Setup' and 'DHCP Setup'.

System IP Setup

System IP Address	192	168	0	1
Subnet Mask	255	255	255	0

Apply

DHCP Setup

DHCP Server Status	Running
DHCP Server Operation	Start
DHCP IP Pool	192 . 168 . 0 . 2 - 192 . 168 . 0 . 254
<input type="checkbox"/> Manual DNS configuration	192 . 168 . 0 . 1 ,

Apply

This page lets you configure the LAN IP settings of the router, along with the DHCP server settings.

System IP Setup:

System IP address: The IP address of the router. Use this address to access the router's administrator menu.

Subnet Mask: The standard network mask is 255.255.255.0. It normally should not be changed.

DHCP Setup: TCP/IP protocol configuration includes IP address, subnet mask, Gateway and DNS server. The DHCP function automatically configures the TCP/IP protocol for all connected computers.

DHCP Server Status: The current status of the DHCP server.

DHCP Server Operation: Enable or disable the DHCP server.

DHCP IP Pool: The IP address range the router assigns to connected computers. It is 192.168.0.2 – 192.168.0.254 by default.

Manual DNS configuration: Manually configure the DNS server the DHCP server assigns to the connected computers. Normally, this option is not required.

Static Lease Management: This function is often referred to as Static DHCP. With this function enabled, you can assign a "fixed" IP address to one or more computers in your network via DHCP, where you normally would not have control over which IP address is assigned to which computer.

Static Lease Management		
<input checked="" type="radio"/> Add hardware address & IP pair on the real network <input type="radio"/> Add hardware address & IP pair manually		
	IP Address	Physical Address
<input checked="" type="checkbox"/>	192.168.0.2	00-A0-B0-13-F5-10
Add		

Add hardware address & IP pair on the real network: This function lets you find all computers currently connected and allows you to make their IP address assignment permanent. Check the box in front of the IP address and click on “Add.”

Add hardware address & IP pair manually: If this option is enabled, the IP address and physical address (MAC address) need to be entered manually.



Note: In order to use DHCP function of the router, the TCP/IP protocol of the connected computers must be configured as “Obtain an IP Address automatically” (default setting). Also, save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

4.6.4 Link Setup/Info

Click “Basic setup” —> “Link Setup/Info.”

INTELLINET NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

Status **Basic Setup** System **QoS** NAT Advanced

WAN Setup Wireless Setup LAN/DHCP Setup Link Setup/Info Routing Table

Basic Setup >> Link Setup/Info Refresh Save Help

Link Setup

Port	Mode	Speed	Duplex	Apply
WAN	Only available in the AP mode			
1	Auto <input checked="" type="checkbox"/>	10Mbps	HALF	<input type="button" value="Apply"/>
2	Auto <input checked="" type="checkbox"/>	10Mbps	HALF	<input type="button" value="Apply"/>
3	Auto <input checked="" type="checkbox"/>	10Mbps	HALF	<input type="button" value="Apply"/>
4	Auto mode only			

Link Information

Port	WAN(Wireless)	1	2	3	4
Link	Off	Off	Off	Off	On
Speed	-	-	-	-	100 Mbps
Duplex	-	-	-	-	Full

Link Statistics

Port	1	2	3	4
Rx-Packets	0	0	0	5149
Rx-Bytes	0	0	0	1352388
Rx-Broadcast	0	0	0	0
Rx-Multicast	0	0	0	126
Rx-Error	0	0	0	0
Tx-Packets	0	0	0	5447
Tx-Bytes	0	0	0	4232739
Tx-Collision	0	0	0	0

Link information, port speed and port statistics are shown on this page.

Link Setup:

Port: The router's WAN and LAN ports.


Mode: Automatic mode and manual mode on/off. In Manual mode, you can define

the connection speed. Auto is the default and recommended mode.
Speed: When in Manual mode, you can define the port speed here: either 10 Mbps or 100 Mbps.
Apply: Apply current settings.

Link Information:

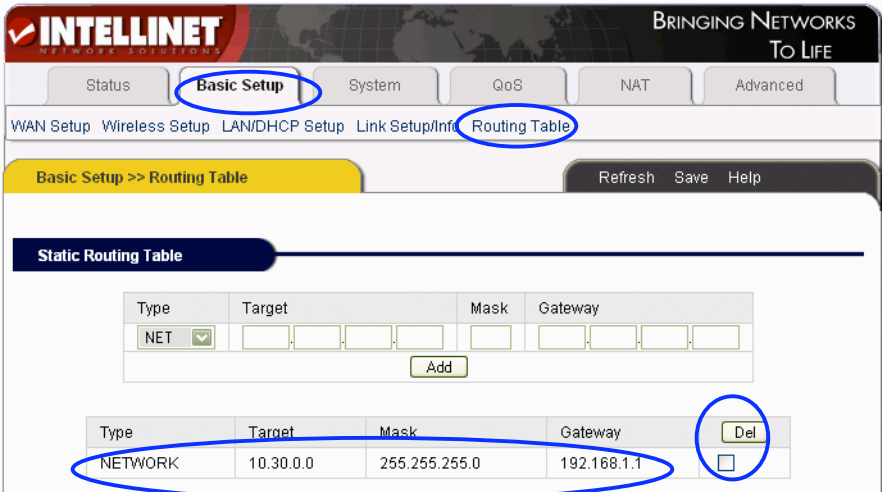
Port: The router's WAN and LAN ports.
Link: Port is in use (on) or not connected (off).
Speed: Current port speed: 10 or 100 Mbps.
Duplex: Full or half duplex.

Link Statistics: Detailed traffic statistic for each port.

 **NOTE:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

4.6.5 Routing Table (for advanced users only)

Click "Basic setup" → "Routing Table" to set up static routes:



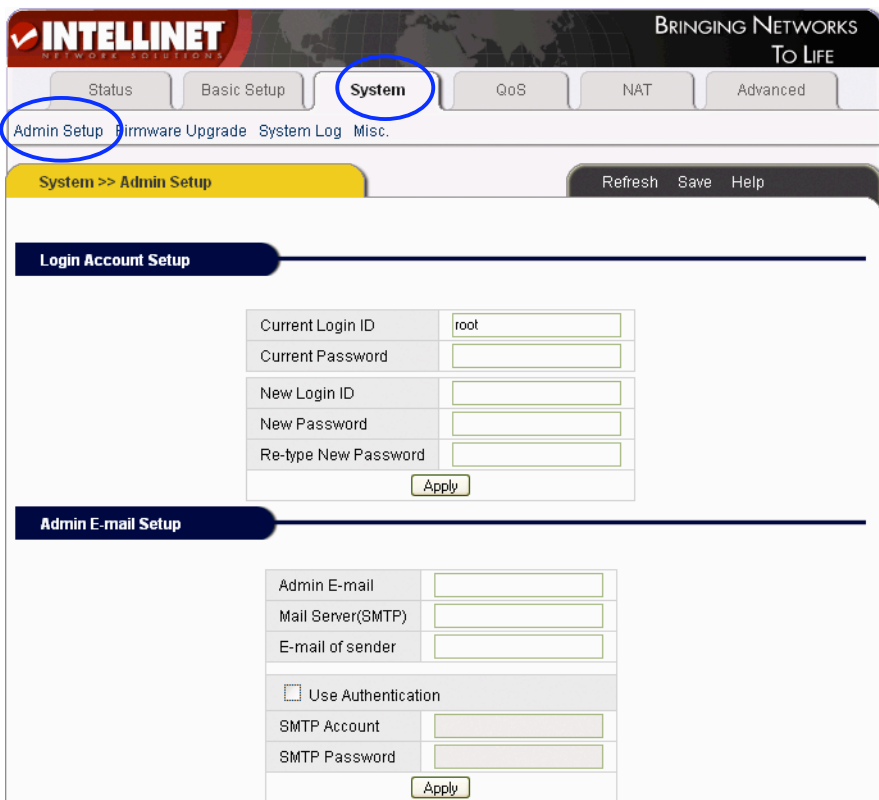
Type: Routing Type NET or Host.
Target: Enter the IP address of the specified network or host you want to access using the static route.
Mask: Enter the subnet mask to be used for the specified network; e.g., 255.255.255.0 => 24.
Gateway: Enter in the gateway IP address for the specified network.
To save the new routing rule, click on the "Add" button. To delete a routing rule, check the selection box behind the entry and click on the "Del" button.

 **Note:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

4.7 System

4.7.1 Administrator Setup

Click “System” → “Admin Setup.”



The screenshot shows the INTELLINET router configuration interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT, and Advanced. The 'System' tab is selected and circled in blue. Below it, a sub-menu shows 'Admin Setup' circled in blue, along with 'Firmware Upgrade', 'System Log', and 'Misc.'. The main content area is titled 'System >> Admin Setup' and contains two sections: 'Login Account Setup' and 'Admin E-mail Setup'. The 'Login Account Setup' section has fields for Current Login ID (root), Current Password, New Login ID, New Password, and Re-type New Password, with an 'Apply' button below. The 'Admin E-mail Setup' section has fields for Admin E-mail, Mail Server(SMTP), E-mail of sender, a checkbox for 'Use Authentication', SMTP Account, and SMTP Password, with an 'Apply' button below.

Login Account Setup: Enter your old ID and password and the new values. Click “Apply” to save the changes. The default Login ID is “root”; the default password is blank (no password).

Admin E-Mail Setup: If you want to receive router’s the system log via e-mail, configure e-mail address, SMTP server and authentication information here. Click “Apply” to save the changes.



NOTE: It is strongly recommend that you change the administrator username and password during the initial setup. Failing to do so will allow any user to access the router's administrator menu and change the configuration.

NOTE: If want to restore the factory default values, turn off the router, press the Reset button on the back of the device, and turn on the router while keeping the Reset button pressed. About 5 seconds later, the RUN LED will flash rapidly and you can then release the button. Once the startup sequence is complete, all configuration data will be restored to the default onfiguration.

4.7.2 Firmware Upgrade

Click "System" → "Firmware Upgrade."

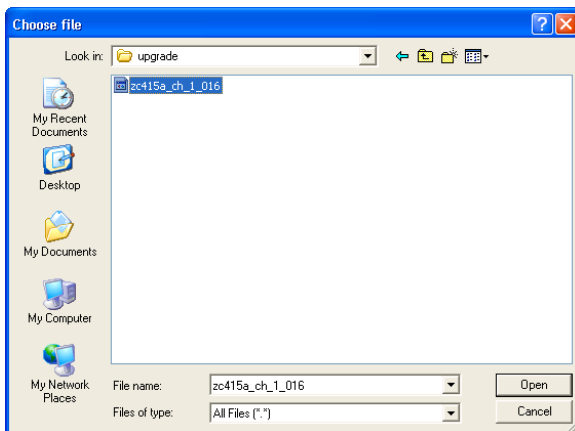
The screenshot shows the Intellinet router's web interface. At the top, there is a navigation bar with the Intellinet logo and the slogan "BRINGING NETWORKS TO LIFE". Below this is a menu with tabs for "Status", "Basic Setup", "System", "QoS", "NAT", and "Advanced". The "System" tab is selected and circled in blue. Under the "System" tab, there are sub-menu items: "Admin Setup", "Firmware Upgrade", "System Log", and "Misc.". The "Firmware Upgrade" sub-menu item is also circled in blue. The main content area shows the "System >> Firmware Upgrade" page. It has a "Refresh Save Help" button. Below this is a "Firmware Upgrade" section with a table showing the current firmware version (2.18) and build date (Fri Sep 29 10:52:24 KST 2006). There is a "New Firmware" field with a "Browse..." button circled in blue, and an "Upgrade" button below it.

Firmware updates may be available from time to time for the router. Before contacting technical support, make sure that you have the latest firmware version installed on the router.

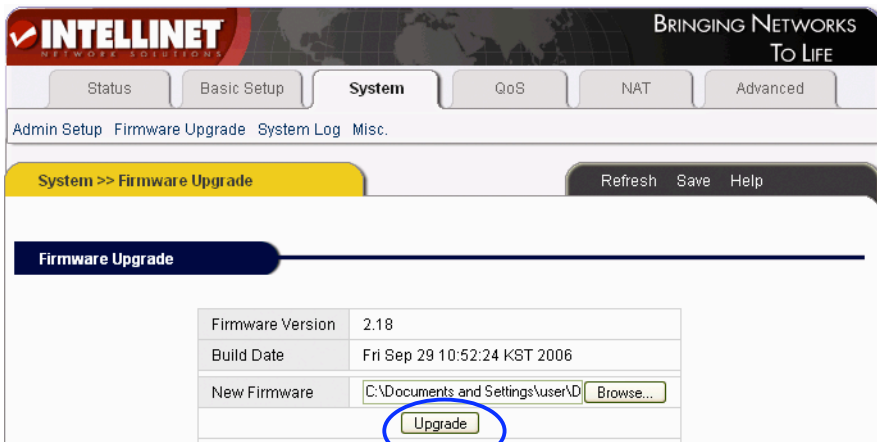
Upgrade procedure:

1. Download an updated firmware version from www.intellinet-network.com.
2. Save the file on your local hard drive.
3. Uncompress the ZIP file.

4. Click on “Browse” and select the new firmware file. Click “Open.”



5. Click “Upgrade” to start the upgrade process.



Firmware Upgrade

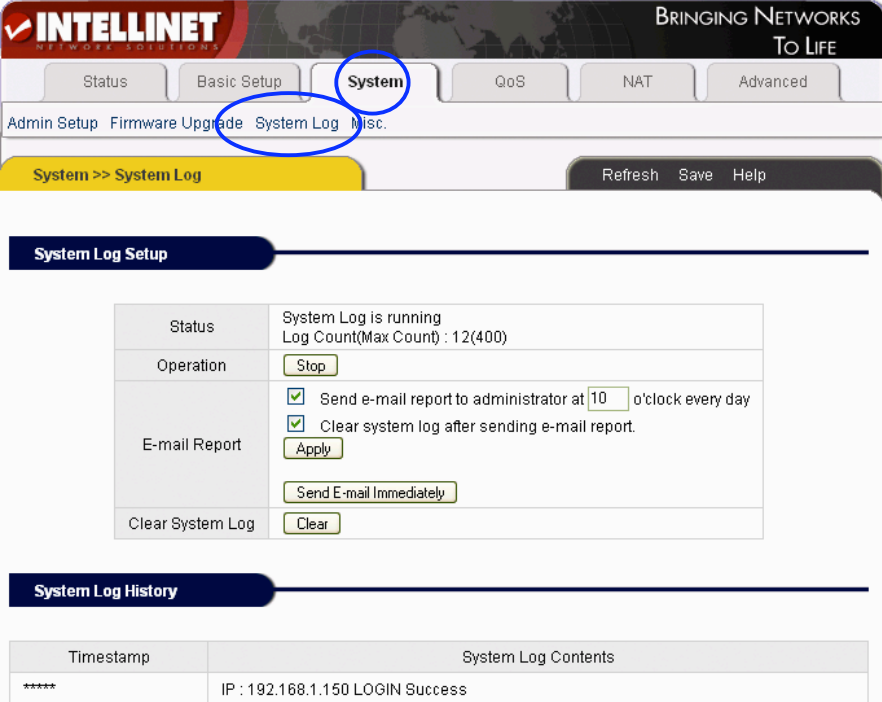
Upgrade process is completed.
When the system is restarted, configuration page will be opened automatically.
Please, wait a minute

The Router will restart automatically after the upgrade process is completed. After the upgrade, verify the firmware version.

 **NOTE: The upgrade process takes about 60 seconds. During this time, do not turn off the power; otherwise, router will be damaged.**

4.7.3 System Log

Click “System” → “System log.”



The screenshot shows the INTELLINET router web interface. The top navigation bar includes 'Status', 'Basic Setup', 'System', 'QoS', 'NAT', and 'Advanced'. The 'System' menu item is circled in blue. Below the navigation bar, the 'System Log' page is displayed. The page title is 'System >> System Log'. The main content area is titled 'System Log Setup' and contains a table with the following information:

Status	System Log is running Log Count(Max Count) : 12(400)
Operation	<input type="button" value="Stop"/>
E-mail Report	<input checked="" type="checkbox"/> Send e-mail report to administrator at <input type="text" value="10"/> o'clock every day <input checked="" type="checkbox"/> Clear system log after sending e-mail report. <input type="button" value="Apply"/>
Clear System Log	<input type="button" value="Send E-mail Immediately"/> <input type="button" value="Clear"/>

Below the 'System Log Setup' section is the 'System Log History' section, which contains a table with the following information:

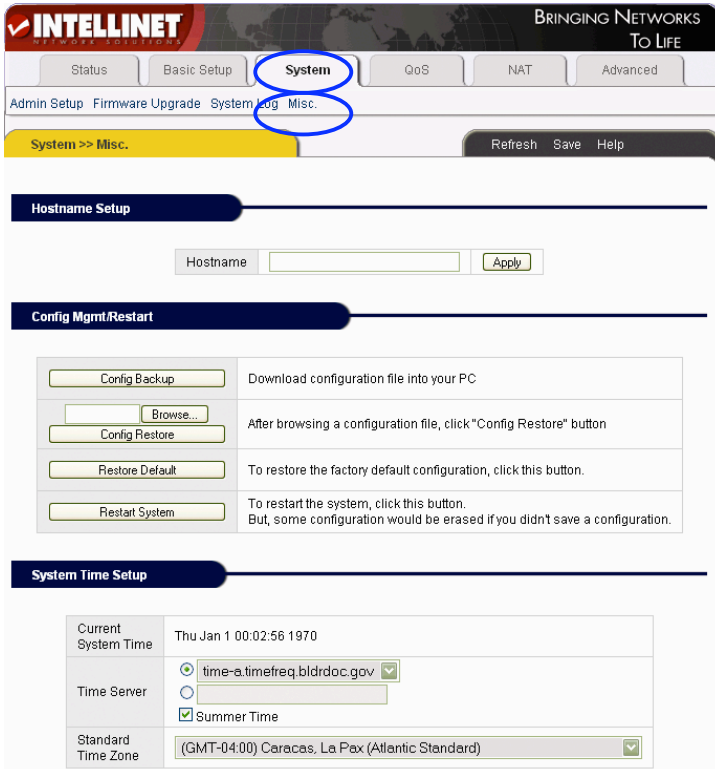
Timestamp	System Log Contents
*****	IP : 192.168.1.150 LOGIN Success

The router keeps track of system events. This screen allows you to activate or deactivate the service. You can also have the system log delivered to your e-mail

(the E-Mail Setup in the Admin Configuration must be completed for this to work) and view the real-time system log of the router.

4.7.4 Miscellaneous Configurations

Click “System” —>“Misc.”



Hostname Setup: Configure the router’s device name used in the network.

Config Mgmt/Restart:

Config Backup: Back up the configuration data.

Config Restore: Restore previously saved the configuration data.

Restore Default: Restore the factory default configuration.

Restart System: Reboot the router.

System Time Setup: For the Scheduler. Configure an accurate time system.

Refresh the router’s current time in the proper time zone, or choose another system server until the time to be refreshed.

UPnP Setup	
<input checked="" type="checkbox"/>	Enable UPnP Server <input type="button" value="Apply"/>
Auto Connecting Setup-Page	
<input checked="" type="checkbox"/>	Connect with a system setup-page automatically when a internet was disconnected <input type="button" value="Apply"/>
Login Page Setup	
<input checked="" type="radio"/>	The login page would be displayed
<input type="radio"/>	The login page would not be displayed <input type="button" value="Apply"/>

UPnP Setup: UPnP allows devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications and entertainment) and corporate environments. UPnP achieves this by defining and publishing UPnP device control protocols built upon open, Internet-based communication standards. The term UPnP is derived from Plug and Play, a technology for dynamically attaching devices to a computer directly. This option is enabled by default, and normally there is no need to disable it.

Auto Connecting Setup-Page: Displays the router's admin menu login page automatically, if the Internet connection is lost for whatever reason.

4.8 QoS

4.8.1 Basic Setup

Click “QoS” → “Basic Setup.”

The screenshot shows the INTELLINET router configuration interface. At the top, there is a navigation bar with tabs for Status, Basic Setup, System, QoS (highlighted with a blue circle), NAT, and Advanced. Below this, a sub-navigation bar contains links for Basic Setup, IP QoS, Application QoS, and Port QoS, with Basic Setup also highlighted by a blue circle. The main content area is titled "QoS >> Basic Setup" and includes a "Refresh Save Help" button. Under the "QoS Basic Setup" section, there is a "QoS Status" field set to "Started" and a "QoS Operation" field with a "Stop" button. Below this is the "WAN Speed Setup" section, which includes a dropdown menu for "Internet Type" set to "Cable Modem Lite", "Download Rate" set to "4 Mbps", and "Upload Rate" set to "2 Mbps". An "Apply" button is located below these fields. A note at the bottom states: "Not allow to use a radix point. ex) 2.5Mbps -> 2500Kbps".

QoS Basic Setup: QoS stands for “Quality of Service.” It allows the control of Internet bandwidth based on different criteria such as IP address, port or application. Using QoS, you can limit the amount of bandwidth for a specific user, or you can guarantee a minimum amount of bandwidth for a specific application; e.g., HTTP/WEB.

WLAN Speed Setup: Define the speed of your Internet connection. You can either choose the type that is right for you from the list, or you can select “User Definition” and specify Download and Upload rate manually (2.5 Mbps should be entered as 2500 kbps). Changing these values will erase all QoS rules currently entered in the configuration.

4.8.2 IP QoS

Click “QoS” → “IP QoS.”


The screenshot shows the INTELLINET router configuration interface. At the top, there is a navigation bar with tabs for Status, Basic Setup, System, QoS, NAT, and Advanced. The QoS tab is selected. Below the navigation bar, there are sub-tabs for Basic Setup, IP QoS, Application QoS, and Port QoS. The IP QoS sub-tab is active. The main content area is titled 'QoS >> IP QoS' and includes a 'Refresh Save Help' button. A section titled 'Setup by IP Address' contains a table with columns for Internet Rate, Download, and Upload. The table shows a single entry for IP address 192.168.1.42 with a download rate of 1 Mbps and an upload rate of 512 Kbps. Below the table, there are fields for IP Address (radio buttons for '192.168.1.42' and 'Twin IP'), Operation Mode (dropdown menu set to 'Max. Limit'), Download Rate (input field '1' and dropdown 'Mbps'), and Upload Rate (input field '512' and dropdown 'Kbps'). An 'Apply' button is located at the bottom of the form.

Setup by IP Address: You can limit or guarantee bandwidth for a single IP address or an IP address range.

IP Address: IP address or range to which this rule should be applied.

Operation Mode: Either “Max. Limit” or “Min. Guarantee.”

Download/Upload Rate: Specify individual values here.

 **Notes:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).

4.8.3 Application QoS

Click “QoS” → “Application QoS.”

INTELLINET NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

Status Basic Setup System **QoS** NAT Advanced

Basic Setup IP QoS **Application QoS** Port QoS

QoS >> Application QoS Refresh Save Help

Setup by Application

Internet Rate Download 4 Mbps Upload 2 Mbps

Apps	Operation Mode	Download		Upload	
<input type="checkbox"/> WWW(HTTP)	Max. Limit	0	Kbps	0	Kbps
<input type="checkbox"/> Soribada	Max. Limit	0	Kbps	0	Kbps
<input type="checkbox"/> GuruGuru	Max. Limit	0	Kbps	0	Kbps
<input type="checkbox"/> WinMX	Max. Limit	0	Kbps	0	Kbps
<input type="checkbox"/> eDonkey	Max. Limit	0	Kbps	0	Kbps
<input type="checkbox"/> MS Streaming	Max. Limit	0	Kbps	0	Kbps

Apply

Define the maximum bandwidth available, or the minimum guaranteed bandwidth for pre-defined applications.

Setup Method: Choose the application program; select the operation mode (Max. Limit or Min. Guarantee) and specify the bandwidth throughput value for download and upload. Click “Apply” to save the settings.



Notes: Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

4.8.4 Ports QoS

Click “QoS” → “Port QoS.”

INTELLINET NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

Status Basic Setup System **OoS** NAT Advanced

Basic Setup IP QoS Application QoS **Port QoS**

QoS >> Port QoS Refresh Save Help

Setup by Port

Internet Rate Download 4 Mbps Upload 2 Mbps

External. Port #	<input type="text"/> - <input type="text"/>	Protocol	TCP <input type="button" value="v"/>
Operation Mode	Max. Limit <input type="button" value="v"/>		
Download	0 <input type="button" value="v"/> Kbps	Upload	0 <input type="button" value="v"/> Kbps
<input type="button" value="Apply"/>			

Port #	Protocol	Op. Mode	Download	Upload	Del
					<input type="button" value="Del"/>

Define the maximum bandwidth available, or the minimum guaranteed bandwidth for TCP or UDP ports and port ranges.

Setup Method: Enter the port or port range, select the protocol type, select the operation mode (Max. Limit or Min. Guarantee) and specify the bandwidth throughput value for download and upload. Click “Apply” to save the settings. If you want to delete current configuration, select the row to be deleted, and click “Del.”



Notes: Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

4.9 NAT

4.9.1 Applications

Click “NAT” —> ”Applications.”

INTELLINET NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

Status Basic Setup System QoS **NAT** Advanced

Applications Internal Server Port Forwarding Port Trigger NAT On/Off

NAT >> Applications Refresh Save Help


Application Setup

Application	Internal IP Address
<input type="checkbox"/> BuddyBuddy	192 . 168 . 1 .
<input type="checkbox"/> WinAmp Broadcasting	192 . 168 . 1 .
<input type="checkbox"/> GuruGuru	192 . 168 . 1 .
<input type="checkbox"/> NetMeeting	192 . 168 . 1 .
<input type="checkbox"/> WinMx	192 . 168 . 1 .
<input type="checkbox"/> Windows XP/2000 Remote Desktop	192 . 168 . 1 .
<input type="checkbox"/> Network Drive	192 . 168 . 1 .
<input type="checkbox"/> H.323 Internet Phone	192 . 168 . 1 . 1719
<input type="checkbox"/> Soribada2	192 . 168 . 1 .
<input type="checkbox"/> Multicast Forward	To receive/send a Multicast data
The connected PC's IP address is 192.168.1.150	
<input type="button" value="Apply"/>	

Some programs, such as Internet network games, filesharing programs and Internet phones, need more than one connection. Because of the NAT firewall, some of the programs do not work correctly. The “Applications” function can make those programs work well with the Wireless G Broadband Router.

Setup Method:

1. Select the application program from the list.
2. Specify the IP address of the computer in your network that runs this application.
3. Click “Apply” to activate it.

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup —> LAN/DHCP). The following list shows all applications and the ports they use:

Application	Port
BuddyBuddy	TCP 812, TCP 987
WinAmp Broadcasting	TCP 8000
GuruGuru	TCP 9292 TCP 9999
NetMeeting	TCP 1720
WinMX	TCP 6699 UDP 6257
Windows XP/2000 Remote Desktop	TCP 3389 UDP 3389
Soribada2	UDP22321

4.9.2 Internal Server

Click “NAT” —> “Internal Server.”

The screenshot shows the INTELNET router configuration interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT (circled in blue), and Advanced. Below the navigation bar, there are sub-tabs for Applications, Internal Server (circled in blue), Port Forwarding, Port Trigger, and NAT On/Off. The main content area is titled "NAT >> Internal Server" and contains a section for "Internal Server Setup".

Protocol	Internal Server IP Address	External Port #	Internal Port #
<input type="checkbox"/> DNS	192 .168 .1 .	53	53
<input type="checkbox"/> SMTP	192 .168 .1 .	25	25
<input type="checkbox"/> POP3	192 .168 .1 .	110	110
<input type="checkbox"/> HTTP	192 .168 .1 .	80	80
<input type="checkbox"/> News	192 .168 .1 .	119	119
<input type="checkbox"/> FTP	192 .168 .1 .	21	21
<input type="checkbox"/> Telnet	192 .168 .1 .	23	23
<input type="checkbox"/> SSH	192 .168 .1 .	22	22
<input type="checkbox"/> PPTP	192 .168 .1 .	1723	1723

The connected PC's IP address is 192.168.1.150

Apply

DMZ Host Setup

DMZ 192 .168 .1 . ALL

The connected PC's IP address is 192.168.1.150

Apply

The NAT firewall protects the computers in the local network from unauthorized access from the Internet. Sometimes, however, it is required to allow access to a local computer; e.g., a local FTP server. The router's Internal Server function is designed to let you do that. Each internal server operates on one service port. All service requests to this port will be forwarded to the IP address specified.

Function: After setup, the router can allow some services, such as DNS, SMTP, POP3, HTTP, NEWS, FTP, Telnet, PPTP in LAN, to be accessed from the Internet. Or, by setting up a DMZ server you can have the router redirect all incoming requests to one local computer, bypassing the NAT firewall completely.

Setup Method:


1. Select the LAN service from the list below:

Protocol	Server
DNS	DNS (Domain Name Server)
SMTP	SMTP (Simple Message Transfer Protocol)
POP3	POP3 (Post Office Protocol)
HTTP	Web Server
News	News Server
FTP	FTP File Transfer Server
Telnet	Telnet Server
PPTP	VPN (Virtual Private Network)

2. Input the server's local IP address. Click "Apply" to activate the settings.
3. If you want to set up "DMZ Host," choose the "DMZ " option, then input the internal server's IP address you want to be opened to the Internet. The router transfers all received data packages except those that have been set up in "Internal Server" to the DMZ Host and allows the unlimited 2-way communication between the DMZ server and the Internet.

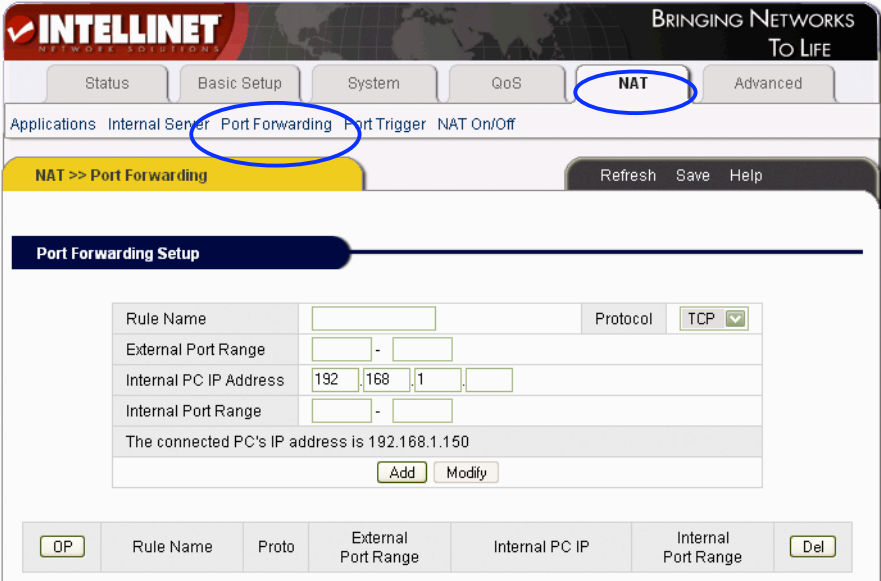
We strongly recommend enabling a local firewall on the DMZ host computer, as it is no longer protected by the router's integrated NAT firewall.

Keep in mind: Placing a computer in the DMZ (demilitarized zone) is exposing the computer to potentially harmful attacks from the Internet.

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).

4.9.3 Port Forwarding

Click “NAT” → ”Port Forwarding.”



Port Forwarding functions the same way as Internal Server, but it allows entering ranges of ports instead of single ports only. It also does not limit you to pre-defined services. Instead, you can control the entire TCP/IP port range.

Setup Method:

Rule Name: Enter a name which best describes the function of this rule.

Protocol: Port transfer protocol. There are two choices: TCP and UDP.

External Port Range: Port range that is open to the outside.

Internal PC IP Address: Where the router forwards traffic to the local computer.

Internal Port Range: Internal PC Port Range (in most cases this is identical to the External Port Range).

Example: You wish to run a “Silent Hunter III” server behind the router and want Internet users to be able to access the server remotely. Silent Hunter III requires ports (http://www.portforward.com/english/applications/port_forwarding/SilentHunterIII/SilentHunterIIIindex.htm) 17997–18003 for both TCP and UDP to be opened and forwarded. Your local Silent Hunter Server has the IP address 192.168.0.150.


Rule Name: SHIII TCP

Protocol: TCP

External Port Range: 17997–18003
Internal PC IP Address: 192.168.0.150
Internal Port Range: 17997–18003

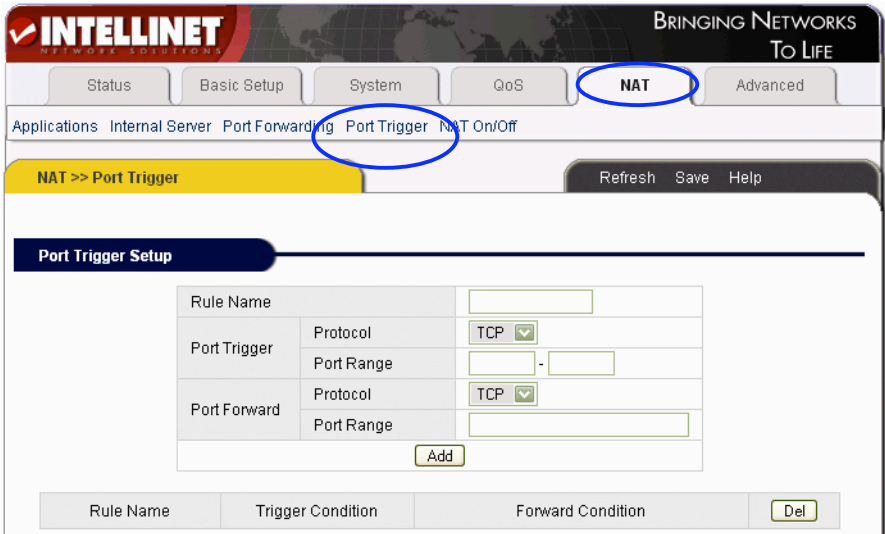
Click “Add.” Repeat the same steps, but this time with UDP (as Silent Hunter requires both TCP and UDP). After completion, you should have two new rules:

<input type="checkbox"/>	OP	Rule Name	Proto	External Port Range	Internal PC IP	Internal Port Range	<input type="checkbox"/>	Del
<input checked="" type="checkbox"/>		SHIII TCP	tcp	17997~18003	192.168.0.150	17997~18003	<input type="checkbox"/>	
<input checked="" type="checkbox"/>		SHIII UDP	udp	17997~18003	192.168.0.150	17997~18003	<input type="checkbox"/>	

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).

4.9.4 Port Trigger

Click “NAT”→”Port Trigger.”



The screenshot shows the Intellinet router configuration interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT, and Advanced. The NAT tab is selected and circled in blue. Below the navigation bar, the 'Port Trigger' sub-tab is also circled in blue. The main content area is titled 'NAT >> Port Trigger' and contains a 'Port Trigger Setup' form. The form has the following fields:

- Rule Name: [Text input field]
- Port Trigger:
 - Protocol: [TCP dropdown menu]
 - Port Range: [Text input field] - [Text input field]
- Port Forward:
 - Protocol: [TCP dropdown menu]
 - Port Range: [Text input field]

Below the form is an 'Add' button. At the bottom of the screen, there is a table with columns for Rule Name, Trigger Condition, Forward Condition, and a Del button.

Some applications require a special port trigger setup. Simple port forwarding does not work.

Setup Method: Key in the rule name, define the protocol and range of the trigger port, then set up the protocol and range of the forward port. Click “Add” to add the rule.

Rule Name: The description of adding the trigger port.

Port Trigger: Set up the trigger port.

Protocol: Select the trigger port's protocol (TCP/UDP).

Port Range: Trigger port's range.

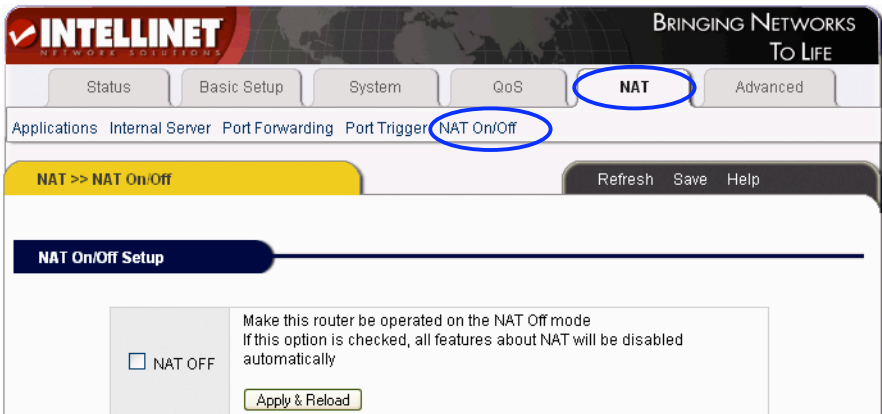
Port Forward: Set up the forward port.

Protocol: Select the forward port's protocol (TCP/UDP).

Port Range: Forward port's range.

4.9.5 NAT On/Off

Click "NAT" → "NAT On/Off."



Use this function to completely disable the NAT function of the router.

4.10 Advanced Setup

4.10.1 Firewall

Click "Advanced" → "Firewall."

INTELLINET NETWORK SOLUTIONS BRINGING NETWORKS TO LIFE

Status Basic Setup System QoS NAT **Advanced**

Firewall **DNS** WOL URL Filter Remote Mgmt Scheduler VPN Setup

Advanced >> Firewall Refresh Save Help

Blocking DoS

SYN Flooding Smurf IP source routing IP Spoofing

Blocking ICMP (ping) from internet

Blocking ICMP (ping) from LAN to internet

Apply

Connection Filtering

Direction	LAN → WAN	
Source HW address	[][][][] [][][][] Search MAC address	
Source IP Address	<input checked="" type="radio"/> [][][][] Net Mask [][][][]	<input type="radio"/> [][][][] - [][][][][][][][]
Destination IP Address	<input checked="" type="radio"/> [][][][] Net Mask [][][][]	<input type="radio"/> [][][][] - [][][][][][][][]
Protocol	any	Destination Port [] ~ []
Accept/Drop	Accept	

Add

Direction	Source Address	Destination IP Address	Protocol	Dest. Port	A/D	Modify	Del
-----------	----------------	------------------------	----------	------------	-----	--------	-----

The router's firewall consists of two main functions.

- 1. Blocking DoS:** This function helps to prevent so-called denial-of-service attacks.
- 2. Connection Filtering:** Set of rules to accept or deny data traffic.

Blocking DoS:

SYN Flooding, Smurf, IP source routing, IP Spoofing: These are common attack types. These options should be enabled.

Blocking ICMP (ping) from Internet: A successful ping command is typically how a hacking attempt starts, because the attacker first needs to know if a target is available or not. With this option activated, the router won't respond to any ping commands sent from the Internet.

Blocking ICMP (ping) from LAN to Internet: With this option activated, the router will not transport any outgoing ping command sent by a local station. It is for the protection against shock-wave attacks.

Connection Filtering Setup Method: Enter the parameters of connection filter. Click "Add" to apply the filter. If you want to delete a rule, then select the rule and click "Del."

Direction: Set up the orientation of the connection filter. There are two options: "WAN" → "LAN" and "LAN" → "WAN."

Source IP Address: IP address of the computer that sends the data.


Net Mask: Subnet mask of the computer that sends the data. For example, a network mask of 255.255.255.0 would be 24.

Destination IP Address: IP address of the computer that receives the data.

Protocol: There are four options: Any, TCP, UDP and ICMP. Any refers to all protocols.

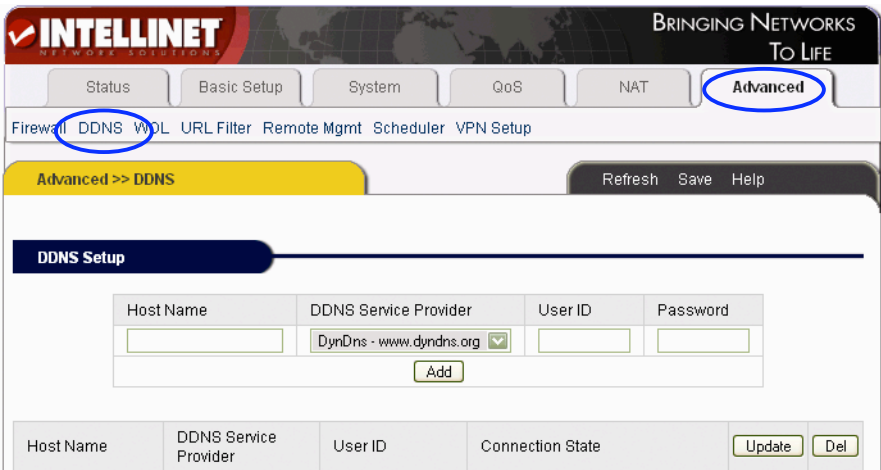
Destination Port: Protocol port of destination computer (not available if protocol option Any is chosen).

Accept/Drop: Set up "Connection Filtering" to accept or drop data package.

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).

4.10.2 DDNS

Click "Advanced" → "DDNS" as follows:



The screenshot shows the Intellinet router configuration interface. The top navigation bar includes tabs for Status, Basic Setup, System, QoS, NAT, and Advanced (circled in blue). Below the navigation bar, there are links for Firewall, DDNS (circled in blue), WOL, URL Filter, Remote Mgmt, Scheduler, and VPN Setup. The main content area is titled "Advanced >> DDNS" and contains a "DDNS Setup" section. This section has a table for adding DDNS entries with columns for Host Name, DDNS Service Provider (set to DynDns - www.dyndns.org), User ID, and Password. An "Add" button is located below the table. At the bottom, there is a table with columns for Host Name, DDNS Service Provider, User ID, and Connection State, with "Update" and "Del" buttons.

Dynamic DNS (DDNS) is a system that allows the domain name data held in a name server to be updated in real time. The most common use for this is in allowing an Internet domain name to be assigned to a computer (or router) with a dynamic IP address. This makes it possible for other sites on the Internet to establish connections to the machine without needing to track the IP address themselves. A common use is for running server software on a computer that has a dynamic IP address, as is the case with many consumer Internet service providers.

We recommend the free DDNS provider DYNDNS.ORG. Before you can use the DDNS feature, you need to set up an account with DYNDNS.ORG and create a domain name; e.g., myrouter.dyndns.org.

Host Name: Enter the domain/host name you have registered with DYNDNS.ORG. This must be the full domain name; e.g., mydomain.dyndns.org, and not mydomain.

DDNS Service Provider: Select “DynDns.org.”

User ID: Enter the DYNDNS username.

Password: Enter the DYNDNS password.

Click “Add” to create the account.

Remember to first create an account and host name at <http://www.dyndns.org>.

Once activated, the router will update the IP address automatically every time your ISP assigns a new address to you. That way, your DDNS domain name always points to your current public IP address.

4.10.3 WOL (Wake-on LAN)

Click “Advanced” —> ”WOL.”

The screenshot shows the Intellinet router configuration interface. At the top, there is a navigation bar with tabs for Status, Basic Setup, System, QoS, NAT, and Advanced (circled in blue). Below the navigation bar, there is a sub-menu with options: Firewall, DDNS, WOL (circled in blue), URL Filter, Remote Mgmt, Scheduler, and VPN Setup. The main content area is titled "Advanced >> WOL" and contains a "WOL PC Registration" section. This section has a form for adding a PC with fields for PC Name, Physical Address (with a dropdown set to "Auto" and a search button), and an "Add" button. Below the form is a table listing registered PCs.

PC Name	Physical Address	Wake Up	Del
My Desktop PC	08:00:46:C4:B2:FA	Wake-up PC	Del

This function allows sending a wake-up signal to a connected computer in the LAN. Wake-on-LAN-capable computer systems reserve a minimum amount of power for the network adapter when turned off. The network card listens for a specific packet,

called the Magic Packet. The router sends such a Magic Packet to a specific computer.

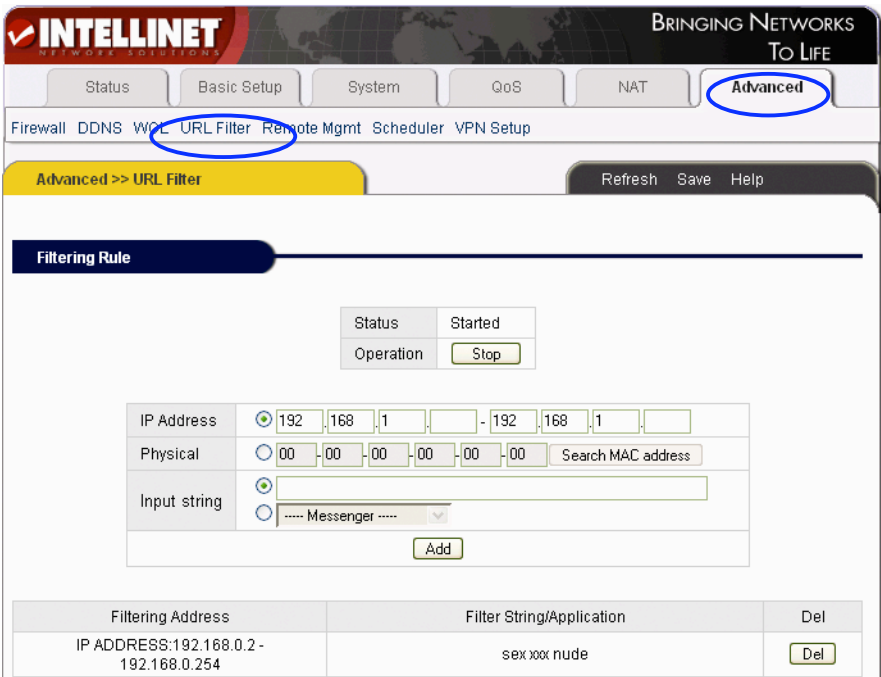
Setup Method:

1. Enter the computer’s name and the LAN card’s MAC address. Then click “Add” to add new rule. You can search for the MAC addresses of all connected computers using the “Search MAC address” button.
2. Clicking on the “Wake-up PC” button sends the Magic Packet to the computer, which causes the computer to start up.
3. If you want to delete a rule, select the rule and click “Del.”

NOTE: This function only works with WOL-enabled computers.

4.10.4 URL Filter

Click “Advanced ” —> ”URL Filter.”



Control the content your LAN users access on the Internet through keywords that can be applied to all users, single IP addresses or single MAC addresses. If you want the filter to apply to all local IP addresses, you should enter the IP address range as defined by the DHCP server (default: 192.168.0.2 – 192.168.0.254). The input string holds the keywords to be blocked. Multiple keywords are entered with a space (e.g., keyword1 keyword2 keyword3). Alternatively, you can select an

application from the drop-down list (e.g., eMule) to prevent local users from using those programs.

Setup Method:

Status: Current status of the URL filter: “Started” or “Stopped.”


Operation: Click “Start” or “Stop” to activate or deactivate the URL filter.

IP Address: Enter a single IP address or an IP address range for which this filter should be applied.

Physical: Enter the MAC address of the client computer for which this filter should be applied. Using the MAC address as opposed to the IP address always makes sure that the filter is applied to the same computer, regardless of its IP address.

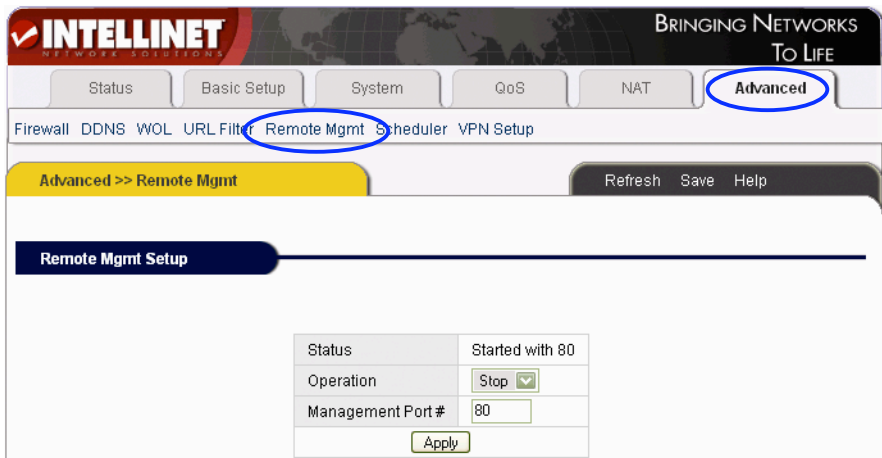
Input String: Enter the keywords that should be filtered.

- Input “http://www.xxx.com” to limit users to access http://www.xxx.com.
- Input Web sites’ keywords, such as “sex xxx” (note the blank space) to forbid users to access www.sex.com and www.xxx.com.
- Or, select an application from the drop-down list to prevent usage.

 **NOTES:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted. Also, the use of a static lease IP for the client PC is recommended (Basic Setup → LAN/DHCP).

4.10.5 Remote Management

Click “Advanced” → “Remote Mgmt.”



This page is to set up the router’s remote management. Remote Management allows configuration of the router from the Internet. By default, this function is turned off. On this page you can start or stop the remote management service and define the management port (default = 80). In order to access the remote management from the Internet, the user has to enter the following address in the Web browser: “http://public_ip_of_router:remote_management_port.”

Example: <http://123.456.789:8081> (remote management port set to 8081).

NOTE: Remote Management should be kept turned off, unless you are certain you are going to need the functionality. Remote Management should never be enabled if the default administrator password has not been changed.

4.10.6 Scheduler

Click “Advanced” → ”Scheduler” as follows:

The screenshot shows the INTELLINET web interface. At the top, there is a navigation bar with tabs: Status, Basic Setup, System, QoS, NAT, and Advanced (circled in blue). Below the navigation bar, there is a sub-menu with options: Firewall, DDNS, WOL, URL Filter, Remote Mgmt, Scheduler (circled in blue), and VPN Setup. The main content area is titled "Advanced >> Scheduler" and includes a "Refresh Save Help" button. The "Schedule Setup" section contains the following configuration options:

- User Message: Font Size 1, Text Color #000000, Maximum character length is 64. Buttons: View, Apply.
- Days To Block: Sun Mon Tue Wed Thu Fri Sat Everyday
- Time To Block: 00:00 ~ 00:00 (24 Hour) ALL Day
- Address To Block:
 - IP: 192.168.1.192.168.1 ALL IP
 - Netmask: 192.168.1.1
 - Physical: 00-00-00-00-00-00 Search MAC address

At the bottom, there is a table with columns: Days To Block, Time Of Day To Block, Address To Block, and Del.

Using this function, you can disable Internet access for a specific computer or range of computers based on the time and day of week.

Setup Method:

1. Specify the days on which the access should be limited. Or you can select “Everyday” if you wish the restriction to occur every day during the week.
2. Specify the time window access should be restricted or select “ALL Day.”
3. Input the IP address, IP address range or MAC address of the computers you want to keep from accessing the Internet. Or select “ALL IP.”
4. Click “Add.”
5. If you want to delete a rule, select the rule and click “Del.”

4.10.7 VPN Setup

Click “Advanced” → ”VPN Setup.”

The screenshot shows the INTELLINET router configuration interface. At the top, the 'Advanced' tab is selected. Below it, the 'VPN Setup' sub-tab is active. The 'VPN(PPTP) Setup' section contains the following configuration options:

- VPN Server Status: Started : MPPE encryption
- Encryption(MPPE): ON
- Operation: Start
- Apply button

The 'VPN(PPTP) Account' section contains the following input fields:

- VPN Account: [Empty text box]
- VPN Password: [Empty text box]
- Assign IP Address: 192 . 168 . 1 . [Empty text box]
- Add button

At the bottom of the page, there is a table header with the following columns:

VPN Account	Assign IP Address	Connection State	Disconnection	Del
-------------	-------------------	------------------	---------------	-----

The device allows five users to establish a VPN tunnel (PPTP) to the router. A VPN tunnel is a secure and encrypted connection between the client and the server. The router supports the PPTP (Point-to-Point Tunneling Protocol) implementation of VPN with optional Microsoft Point-to-Point Encryption (MPPE). You can set up five different users with different passwords. Each user gets its own IP address. The connection state of each user is shown on this page, as well.

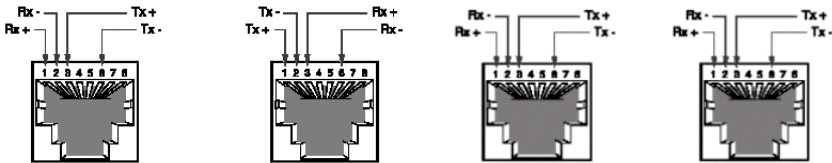
Setup Method:

- 1. Start the VPN Service:** Select “Operation” → “Start” and click “Apply.” The router performs a restart, after which the VPN server is active.
- 2. Create VPN Users:** Enter a VPN username and password. Assign an IP address to the username (e.g., 192.168.0.200). Click “Add.” Repeat for additional users.
- 3. Delete VPN Users:** Select the user in the table shown under VPN (PPTP) Account and click “Del.”

 **NOTE:** Save the router configuration after completion; otherwise, the configuration will be lost after the router is restarted.

Appendix A: UTP Cable Specifications

Twisted pair Category-5 straight-through cable
Twisted pair Category-5 Cross over cable



Pin No.	Pin No.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

Straight-through Cable

Pin No.	Pin No.
1	2
2	1
3	6
4	4
5	5
6	3
7	7
8	8

Crossover Cable



www.intellinet-network.com

Are you completely satisfied with this product?
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