4-PORT BROADBAND ROUTER USER MANUAL MODEL 524957





INT-524957-UM-1210-02

INTRODUCTION

Thank you for purchasing the INTELLINET NETWORK SOLUTIONS[™] 4-Port Broadband Router, Model 524957.

Combining a router, firewall and four-port Fast Ethernet switch, this handy device lets you experience fast speeds as you surf the Web, download music or photos, and play online games. A DHCP server that automatically assigns IP addresses to users on the LAN — plus UPnP that supports gaming — makes this the perfect router for the home network.

Keeping intruders out of your network can be a challenge, but this feature-rich router is designed to make that task easier. It includes a true firewall that secures your network against hackers. With Network Address Translation (NAT) to shield your networked devices from intruders plus content control using URL and MAC filtering, you can rest assured that you have taken the necessary precautions to protect the data on your network.

The easy-to-follow instructions in this user manual help make setup and operation quick and simple, so you'll also soon be enjoying the benefits of these additional features:

- Integrated 10/100 Mbps LAN switch with Auto MDI/MDI-X support
- Supports virtual server and DMZ (demilitarized zone)
- Supports DDNS (dynamic DNS)
- Supports VPN pass-through (PPTP, L2TP)
- · QoS (Quality of Service) bandwidth management
- VPN Pass Through (PPTP, IPSec, L2TP)
- DHCP server supports static lease management
- Supports remote management
- · Supports static routing
- · Firmware updates via Web-based user interface
- Three-Year Warranty

Package Contents

- 4-Port Broadband Router
- · User manual on CD, plus quick installation guide
- RJ45 Ethernet cable: 1.0 m (3 ft.)
- Power adapter

INTRODUCTION



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1 HARDWARE INSTALLATION

Using the included RJ45 Ethernet cable (and more, as needed), make your 4-Port Broadband Router network connections by following the steps below and referring to the Port and LED descriptions (presented from left to right).

- 1. Turn off all devices to be incorporated into the network, including any PCs, switches/hubs, the modem and the router.
- 2. Connect the LAN or Ethernet network port of the cable/DSL modem to the router's WAN port.
- 3. Connect PCs (and any switch/hub used to expand the network) to the router's LAN ports.
- 4. Turn on the cable/DSL modem.
- 5. Use the included power adapter to connect the router to an AC outlet.
- 6. Turn on the PC you'll be using to configure the router.

1.1 Rear Panel Ports & Jacks



WAN — This 10/100Mbps port connects the cable/DSL modem.

- PC1-4 These four LAN ports connect networked devices, such as PCs, print servers and remote hard drives. If you connect a LAN port to a switch or hub, check that both the device's Power LED and the router's corresponding PC/LAN LED (see below) light to confirm the connection.
- *Reset* Push this recessed button to clear all established router configuration settings and reset to the factory default settings. See Section 3: Restore Defaults.
- *PWR* This jack is for the included external 9 V DC, 500 mA power adapter.

HARDWARE INSTALLATION



1.2 Front Panel LEDs



PWR — This lights when the router is turned on.

- 4-1 These correspond to the four LAN ports on the router's rear panel. Lighted indicates a successful connection; blinking means data is being transmitted or received through that port.
- *WAN* Lighted indicates a successful Internet connection; blinking indicates data is being transmitted or received through that port.

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To configure the router using a Web browser-based configuration utility, at least one properly configured computer needs to be connected to the router via the Ethernet. This 4-Port Broadband Router is configured with the default IP address of 192.168.2.1 and subnet mask of 255.255.255.0, and its DHCP server is enabled by default.

At this point, you can proceed to Section 2.3: Logging In to the Web Browser. If you encounter problems from there, return here and follow the steps in Sections 2.1: IP Address Setup and 2.2: Confirming the Connection.

2.1 IP Address Setup

2.1.1 Windows 98SE / Me

- 1. On your PC's desktop, click "Start" and go to the Control Panel.
- 2. Double-click the "Network" icon to display the Network dialog box.
- 3. Click the Configuration tab and ensure that you have the appropriate network card installed.
- 4. Select "TCP/IP." NOTE: If "TCP/IP" is listed more than once, select



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the item that has an arrow (\rightarrow) pointing to the network card installed on your computer. Do not choose the TCP/IP listing that has the words "Dial Up Adapter" beside it.

- 5. Click "Properties" to display the TCP/IP Properties dialog box.
- 6. Ensure "Obtain IP Address Automatically" is selected/checked.
- 7. In the WINS Configuration dialog box, ensure that "Disable WINS Resolution" is checked.
- 8. In the Gateway dialog box, remove all entries from the "Installed gateways" section by selecting them and clicking "Remove."
- In the DNS Configuration dialog box, remove all entries from the DNS Server Search Order box by selecting them and clicking "Remove." Remove all entries from the Domain Suffix Search Order box by selecting them and clicking "Remove." Click "Disable DNS."
- 10. Click "OK" to return to the Network Configuration dialog box.
- 11. Click "OK." If prompted to restart, click "Yes."

2.1.2 Windows 2000

- 1. On your PC's desktop, click "Start" and "Settings," then go to the Control Panel.
- 2. Double-click the "Network and Dial-up Connections" icon.





NETWORK SETTINGS

3. Right-click on the "Local Area Connections" icon to display the pop-up menu, then click "Properties."

📴 Network and Dial-up Connections	; ·			
File Edit View Favorites Tools	Advanced	Help		1
🗢 Back 🔹 🔿 👻 🔂 😡 Search 🔍	🔁 Folders 🛛 🔇) R R)	< m [≣ •
Address 📴 Network and Dial-up Conne	ctions			▼ 🖓 Go
	æ	արհ ե 🚜	թե ղ է 👍	
Network and Dial-up Connections	Make New Connection	Local Area Connection	Local Arc Connecti	ea Disable Status
Local Area Connection 2 Type: LAN Connection				Create Shortcut Delete Rename
Status: Enabled			-	Properties
Realtek RTL8139(A) PCI Fast Ethernet Adapter				
🖳 Displays the properties of the selected	d connection.			1

4. Highlight "Internet Protocol (TCP/P)" and click "Properties."

	2 Properties	
eneral Sharing		
Connect using:		
B Realtek RTL813	9(A) PCI Fast Ethernet Ad	apter
		Configure
Components checked	are used by this connectio	n:
Client for Micro	soft Networks	
Read Printer	Sharing for Microsoft Netv	vorks
Internet Protoc	ol (TCP/IP)	
	and the second	
Instal	Uninstall	Properties
Install	Uninstall	Properties
Description Transmission Contro wide area network p	Uninstall	I. The default
Description Transmission Control wide area network p across diverse interc	I Protocol/Internet Protoco rotocol that provides comm connected networks.	I. The default
Description Transmission Control wide area network p across diverse interc	I Protocol/Internet Protoco rotocol that provides comm	I. The default
Description Transmission Control wide area network p across diverse interc	I Protocol/Internet Protoco rotocol that provides comm connected networks.	I. The default
Description Transmission Control wide area network p across diverse interc	I Protocol/Internet Protoco rotocol that provides comm connected networks.	I. The default



5. Select "Obtain an IP address automatically" and "Obtain DNS server address automatically"; click "OK" to return to the previous screen.

rnet Protocol (TCP/IP) Prop	berties	
neral		
'ou can get IP settings assigned nis capability. Otherwise, you nee ne appropriate IP settings.		
 Obtain an IP address autom 	atically	
C Use the following IP address	s:	
IP address:	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
Subnet mask:	t) to 22	_
Default gateway:	4	
Obtain DNS server address	automatically	
C Use the following DNS serv	er addresses:	
Preferred DNS server:	V V C	_
Alternate DNS server.	+ + ·	
	A	dvanced
		-

6. When the Local Area Connection Properties screen displays again, click "OK."

re used by this conne	Configure action:
	Networks
ITCP/IPJ	
Uninstall	Properties
Protocol/Internet Pro otocol that provides o onnected networks.	the state of the state states
	oft Networks Sharing for Microsoft ((TCP/IP) Uninstall Protocol/Internet Pro

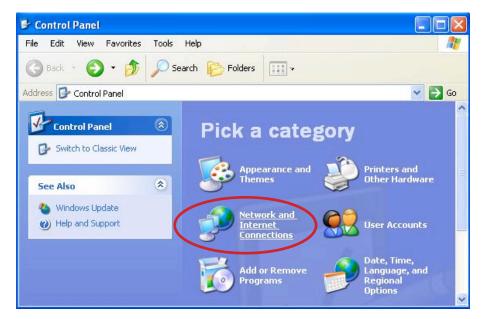


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2.1.3 Windows XP

- 1. On your PC's desktop, click "Start" and go to the Control Panel.
- 2. Select "Network and Internet Connections."

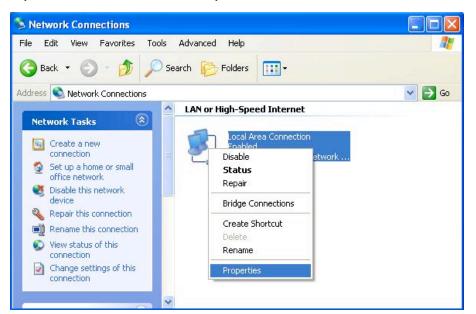


3. Click "Network Connections."





4. Right-click on the "Local Area Connections" icon to display the pop-up menu, then click "Properties."



5. On the subsequent Local Area Connection Properties screen, select "Internet Protocol (TCP/IP)" and click "Properties."

	Authentication Advanced
Connec	st using:
1139 h	ntel(R) PR0/100 VM Network Connection
This are	Configure
	nnection uses the following items:
- 7	Client for Microsoft Networks
	File and Printer Sharing for Microsoft Networks
-	QoS Packet Scheduler
N X	Internet Protocol (TCP/IP)
-	
	nstal Uninstal Properties
Descr	ription
Tran	smission Control Protocol/Internet Protocol. The default
	area network protocol that provides communication
acro	ss diverse interconnected networks.
100	w icon in notification area when connected
Cha	witcon in notrication area when connected
Sho	



)

NETWORK SETTINGS

6. Select both "Obtain an IP address automatically" and "Obtain DNS server address automatically"; then click "OK."

General	Alternate Configuration	n
this cap		ed automatically if your network supports need to ask your network administrator for
📀 OI	otain an IP address auto	omatically
OU	se the following IP addr	ess:
IP ad	ddress:	
Subr	net mask:	
Defa	ult gateway:	1 10 10 10 10 10 10 10 10 10 10 10 10 10
o د)	otain DNS server addre	ess automatically
OU:	se the following DNS se	erver addresses:
Prefe	erred DNS server:	
Alter	nate DNS server:	
		Advanced

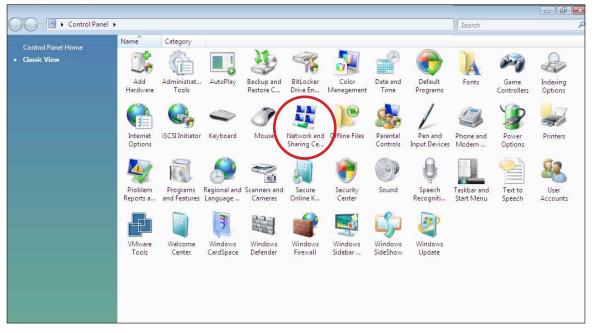
7. When Local Area Connection Properties displays again, click "Close."

			uvan	ced					
Connec	t using:								
119 le	ntel(R) PRO/	100 VN	A Net	work (Connec	tion			
						ſ	Con	figure.	
This co	nnection use	s the fo	ollowir	ng iten	ns:				
	Client for M	icrosof	t Netv	works					
_	File and Pri				crosoft	Netv	vorks		
🗹	QoS Packe	t Sche	duler						
2 8	Internet Pro	tocol (TCP/	IP)					
		24		100					
	nstall		Uni	install			Prop	erties	
Descr	iption				_	_			
Allow	is your comported	uter to	acce:	ss reso	ources	on a	Micro	soft	
Sho	w icon in noti	fication	n area	when	conne	ected			



2.1.4 Windows Vista/7

- 1. On your PC's desktop, click "Start" and go to the Control Panel.
- 2. Click "Network and Sharing Center."



3. With the Network and Sharing Center screen displayed, select "Manage network connections."

Tasks View computers and devices	Network and Sharing C	lenter	View full map
Connect to a network Set up a connection or network		🌆 🛶	0
Manage network connections Diagnose and repair	TECH-PC (This comput	ver)	Internet
	In Network (Private network)	k)	Customize
	Access	Local only	
	Connection	Local Area Connection	View status
	3 Sharing and Discovery		
	Network discovery	• On	\odot
	File sharing	• Off	\odot
	Public folder sharing	• Off	\odot
	Printer sharing	 Off (no printers installed) 	\odot
	Password protected sharing	• On	\odot
	Media sharing	● Off	\odot

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4. Right-click on the "Local Area Connection" icon to display the popup menu, then click "Properties."

00		ol Panel 🕨 Networl			• 4 ₉	Search	<mark>ے ا ہے</mark> م
Urgan Name	iize ▼ 📲 Vie Status	ws 📼 💥 Disable Device Name	e this network devi Connectivity	ce 🔛 Diagnose this o Network Category	onnection G Owner	Rename th Type	is connection » (?) Phone # or Host Addre
	igh-Speed Inter Local Area Con Network Intel(R) PRO/10	nection	Disable Status Diagnose Bridge Connecti Create Shortcut Delete Rename Properties	ons			~

5. Highlight "Internet Protocol Version 4 (TCP/IPv4)" and click "Properties."

Connect usina:		
-		142.00
Intel(R) PRO/10	00 MT Network Conne	ction
		Configure
This connection uses t	he following items:	_
🗹 🍕 Client for Micr	osoft Networks	
QoS Packet S		
	er Sharing for Microsoft	Networks
and the second	col Version 6 (TCP/IPv	
	col Version 4 (TCP/IPv	
ALT AND CONTRACTOR OF A	pology Discovery Map	
	pology Discovery Resp	
El 🚥 Link-Layer To	pology biodololy risop	
Install	Uninstall	Properties
		Properties
Install Description		
Install Description Transmission Contro wide area network p	Uninstall	ocol. The default



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6. Select both "Obtain an IP address automatically" and "Obtain DNS server address automatically"; then click "OK."

General	Alternate Configuration				
this cap	n get IP settings assigned autor ability. Otherwise, you need to appropriate IP settings.				
() Oł	otain an IP address automatical	У			
- Us	e the following IP address:				
IP ac	ldress:	8		(95)	
Subr	et mask:			14	
Defa	ult gateway;	4		÷.	
() Oł	otain DNS server address auton	natically			
O Us	e the following DNS server add	resses:			
Prefe	erred DNS server:		+	3	
Alter	nate DNS server:	i.	÷.	1	
				Adva	anced

7. When Local Area Connection Properties displays again, click "OK" to close the screen.

2.2 Confirming the Connection

Once the configuration for obtaining an IP address is complete, you can use the ping command to verify that the computer is able to communicate with the router. Open the DOS window (as detailed below) and ping the IP address of the router at the DOS prompt.

- For Windows 98SE / Me: Click "Start," then "Run"; enter "command" and click "OK."
- For Windows 2000 / XP / Vista / 7: Click "Start," then "Run"; enter "cmd" and click "OK."

If the Command window returns something similar to the lines below, the connection between the router and your computer has been successfully established.



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C:\Documents and Settings\admin>ping 192.168.2.1 Pinging 192.168.2.1 with 32 bytes of data: Reply from 192.168.2.1: bytes=32 time=1ms TTL=64 Ping statistics for 192.168.2.1: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 1ms, Maximum = 1ms, Average = 1ms

If the computer fails to connect to the router, the Command window will return the following (which indicates that the computer network settings and cable connections between the router and the computer should be checked):

C:\Documents and Settings\admin>ping 192.168.2.1 Pinging 192.168.2.1 with 32 bytes of data: Request timed out. Request timed out. Request timed out. Request timed out. Ping statistics for 192.168.2.1: Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

Remember, in order for your network to operate properly, the router needs to be configured through your Web browser, as explained in the following section.

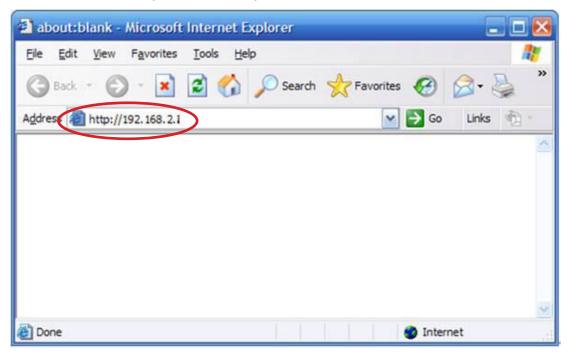


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2.3 Logging In to the Web Browser

1. Open a Web browser (Microsoft Internet Explorer, Firefox, Safari, etc.) on the computer you've just connected to the router and enter the IP address (192.168.2.1) in the address bar.



Press <Enter> on your keyboard to display a login window (below).

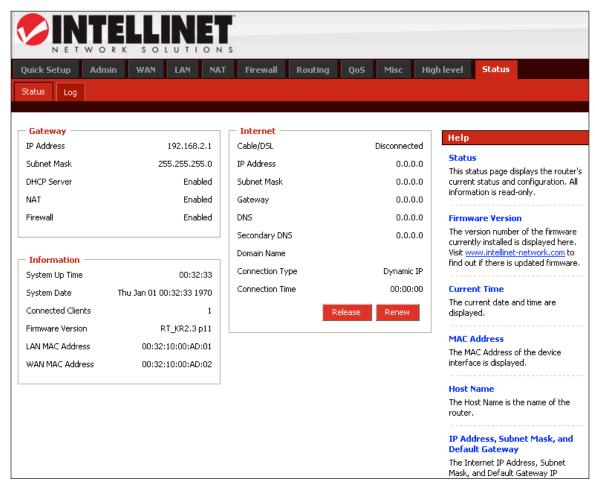
2. With the Enter Network Password screen displayed, fill in the "User Name" and the "Password" fields, using the default values ("admin" for the username; "1234" for the password) if this is the first time you're logging in and you haven't changed your security settings yet (see Section 3.2.1: Management). *NOTE:* For security reasons, it's always recommended that you change the password from the factory-set default value as soon as you can.



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This secu	e Web Site (at 192.168.2.1) requires you to	log on.
Please typ	e the User Name and Password that you us	se for Device.
<u>U</u> ser Nam	e admin	•
Password	мжи	
∏ <u>S</u> ave	this password in your password list	
	ОК	Cancel

Once you've logged in, the router's user interface will display.





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3 ROUTER SETUP

With the user interface displayed, you have the option of proceeding with the Quick Setup procedure (Section 3.1 below) or selecting any of the 10 additional menu options (Admin, WAN, etc. — Sections 3.2–3.11), which allow you to modify the default settings to customize your router and network configuration.

3.1 Quick Setup

The Quick Setup Wizard will guide you through the initial configuration of the router. It's best that you follow the Quick Setup Wizard step by step.

 Enter an easily recognized/remembered name for the router in the Host Name field, then select a time zone from the drop-down menu. (Enabling and configuring the Daylight Saving settings is optional.) Click "Next."

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc	Hiq
Wizard									
HOST Setting	js								
Host Name			intelinet_router						
Time Zone			L		istern Time (US			*	
Daylight Saving			En	abled Fro	om FEB 💌	2 🚩 to FEI	B 💙 2	*	
				Next					

 Specify the WAN (wide area network) connection type required by your Internet service provider. You can select "Auto Detect," which will display the connection type in the Result field when you click "Detect":





Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc	н	
Wizard										
WAN Mode										
Specify	the WAN co	onnectior	n type re	quired b	y your Inter	net Service P	rovider.	Please		
	Specify the WAN connection type required by your Internet Service Provider. Please select your WAN connection from the following:									
Auto Detect	: OManual	Select								
Auto detect res	ult :			Dete	ect					
			Ba	ck	Next					

or you can select "Manual Select," which presents you with four options. Select one and click "Next" or click "Back" to return to the previous screen. *NOTE:* Additional configuration options for each of these four connection types are explained in detail in Section 3.3: WAN.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc
Wizard								
WAN Mode				enenerererererer				nenenenenenenenen
Specify	the WAN c	onnection	a tyne re	ouired h	v vour Interi	net Service P	Provider.	Please
speeny					on from the			, ieuse
	t 💽 Mapual	Soloct						
- Adio Delec	t 🕑 Manuar	Delect						
💿 Dynamic IP	Address							
🔘 Static IP								
O PPPOE								
O BigPond								
			Ba	ck	Next			



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Dynamic IP Address — This connection type means you obtain an IP address from your Internet service provider (ISP) automatically. (ISPs that supply a cable modem always use this.) Click "Next" to advance to the next screen.

Quick Setup	Admin	WAN	LAN	NAT	Firewal	l Routing	
Wizard							
- DHCP Mode							
MAC Cloning			MA	C Addres	s		
Clone MAC:		00:00:00:00:00:00 Clone MAC					
			Bac	k	Next		

- **Clone MAC:** The WAN port of the router has a unique Media Access Control (MAC) address assigned to it referred to as "Default MAC." The "Clone MAC" option is available for special situations; for example, since an ISP allows only certain MAC addresses access to the Internet, selecting "MAC Address" and clicking "Clone MAC" modifies your WAN port's MAC address in order to avoid detection of the router, which can lead to a service disconnect.
- Static IP This connection type allows you to maintain the same IP address over time (unlike "temporary" dynamic IP addresses that are assigned with each Internet connection). Click "Next" to

Quick Setup	Admin	WAN	LAN	NAT	Firewall		
Wizard							
IP Address	P		0.0.0.	0			
Subnet Mask		255.25	255.255.255.0				
Gateway IP			0.0.0.	0			
			Bac	:k	Next		



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advance to the next screen.

IP Address: Enter the address provided by your ISP. Subnet Mask: Enter the address provided by your ISP. Gateway IP: This is provided by your ISP.

PPPoE — This connection type (Point-to-Point Protocol over Ethernet) is typically used with DSL and ADSL service. Click "Next" to advance to the next screen.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	
Wizard						
PPPOE Mode						,
User Name						
Password			•••••	•		
Retype passwor	ď		•••••	•		
Service Name						
MTU (546-1492)	1		1492			
Maximum Idle Ti	me (60-3600))	300	seconds	(0: No time	out)
			Deed		N Instein	1233
			Bac		Next	

User Name: Enter the PPPoE user name provided by your ISP. **Password:** Enter the PPPoE password provided by your ISP. Retype Password: For confirmation.

Service Name: For reference.

MTU: Enter a value for the largest packet size to be permitted for network transmission. The default value of 1496 is recommended.

Maximum Idle Time: Enter a figure within the range in order to cut your connection with your ISP after that period of time.

BigPond — Select if this service (Australia's largest ISP) is used. Click "Next" to advance to the next screen.

BigPond Account: Enter the user name provided by the ISP. **BigPond Password:** Enter the password provided by the ISP. **Retype Password:** For confirmation.

Authentication Server: This is provided by the ISP.



Quick Setup Admin WAN	LAN NAT Firewall I
Wizard	
BigPond Mode BigPond Account	
BigPond Password	•••••
Retype password	•••••
Authentication Server (IP or Domain name)	
	Back Next

3. When the appropriate fields have been filled in for the selected connection type, click "Next" to advance to the DNS Server screen.

Quick Setup	Admin	WAN	LAN	NAT	Firewall
Wizard					
DNS Server					
Static DNS Serve	er		En En	abled	
Primary DNS					
Secondary DNS					
			Bac	k I	Finish

- Static DNS Server: Select to enable/disable the server.
- Primary DNS: Your ISP will provide at least one Domain Name System (DNS) IP address. (DNS translates readable/ recognizable domain names into numerical IP addresses.) Enter the IP address of your DNS server here.
- Secondary DNS: As an option, you can enter the IP address of a backup DNS server here.
- 4. Once all the necessary or preferred settings have been established, click "Finish" to exit the Quick Setup wizard. At this point, your router is operational: To take advantage of the numerous added features, continue through the following sections of the manual.



3.2 Admin

This submenu presents numerous basic, yet popular, configuration options and features, including modifying your network password. **NOTE:** As you finish making changes to the settings on any of the menu screens, click "OK" to implement the changes or click "Cancel" to clear the fields and revert to previous selections.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Ro	uting	Qo5	Mis	c Hig
Management	System Set	tings	Firmware	Upgrade	Configurat	ion	Tools	Langu	Jage	Log Set
User Name	nt		admin							
Current Passwo	ord									
New Password			••••	-						
Re-type Passw	ord		••••							
Idle Time Out (f			300	second	s (0: No timeou	ut)				
— Demote Ma	agement									
Enabled	layement									
IP Address			0.0.0.	0						
Port			8080]						
							10101010101010			
			ОК		Cancel					

3.2.1 Management

User Name: This is the one field that cannot be altered. Current / New / Re-type Password: Enter as indicated. Idle Time Out: Enter a figure within the range in order to cut your connection with your ISP after that period of time. **Remote Management:** Select to enable/disable the function, and enter the number of the port you want to manage.



3.2.2 System Settings

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	Qo5 Mi			
Management	System Set	tings	Firmware	Upgrade	Configurati	ion Tools	Language			
Time —										
NTP Server (IP	pool.r	tp.org			(Optional)					
Time Zone			(GMT	-05:00) Eas	tern Time (US	& Canada)	*			
Daylight Saving			🗌 En	Enabled From FEB 💙 2 💙 to FEB 💙 2 💙						
Name										
Host Name			intelin	intelinet_router						
— Operating M	lode —									
NAPT			🗹 En	abled						
			ОК		Cancel					

NTS Server: For reference.

Time Zone: Select from the drop-down menu.

Daylight Saving: Select to enable/disable, then set the date range using the drop-down menus.

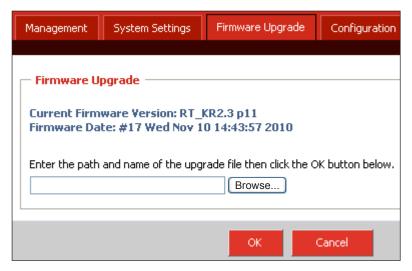
Host Name: For reference.

NAPT: Select to enable/disable Network Address Port Translation.

3.2.3 Firmware Upgrade

This important function allows you to upgrade the router's firmware. To do so, you need to download the firmware file to your local hard disk, then enter that file name and path in the appropriate field on this screen. You can also use the "Browse" button to find the firmware file on your PC. Once you've selected the new firmware file, click "OK" to start the upgrade process. (You may need to wait a few minutes for the upgrade to complete.) Once the upgrade is complete, you can start using the router. **NOTE:** It is always important that you take every precaution against a loss of power or network disconnect during any





firmware upload procedure, as such an occurence can cause damage both to the file and the router itself.

3.2.4 Configuration

Management	System Settings	Firmware Upgrad	le Configura	ation Tools
- Settings -				
Restore Factor	y Default	\circ		
Backup Setting	s	0		
Restore Setting	js	0		浏览
		ок	Cancel	

- **Restore Factory Default:** Select to put everything into factory configuration. Make sure you have made a copy of what you've configured. The default settings are "admin" for Username; "1234" for Password; "192.168.2.1" for IP Address; and "255.255.255.0" for Subnet Mask.
- **Backup Settings:** Select to back up the current settings in your computer.
- **Restore Settings:** Select to restore the settings that are stored in your computer. Click "Browse" to select the proper files, then click "OK."



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3.2.5 Tools



Reboot: Click to restart the router.

3.2.6 Language

Management	System Settings	Firmware Upgrade	Configuration	Tools	Language
- Settings		English 🔽			

Language: Make a selection from the drop-down menu.

3.2.7 Log Settings

- Settings	
Remote Log	
Log Server	0.0.0.0
Email Log	
Send Email	Send
Sender Email Address	
Receiver Email Address	
SMTP Server	0.0.0.0
Enable Authentication	
Account Name	
Password	
Re-type Password	

Settings: This section displays the logs of various activites and events, and also allows you to send these records to another location via e-mail.

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SMTP Server: Enter the address of the Simple Mail Transfer Protocol server that will be used to send the log information.

Sender/Receiver Email Address: Enter the addresses that logs will be sent from/to, then select "Email Log" and click "Send."

3.2.8 Logout

Click "OK" to log out from the Web.

3.3 WAN

As mentioned in Section 3.1: Quick Setup, this menu presents details about the numerous options available in the four connection types you can choose from: Dynamic IP Address, Static IP, PPPoE and BigPond.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc
WAN Mode								
~	ection Mode							
🔘 Dynamic :	IP Address		Obt	ain an IP (address autom	atically from yo	our service	e provider.
🔵 Static IP		Use a static IP address. Your service provider gives a static IP address to access Internet services.						
O PPPOE		PPP over Ethernet is a common connection method used for xDSL						
O BigPond			Aus	tralia ISP	service.			

3.3.1 Dynamic IP Address

Make this selection in the WAN Connection Mode panel to obtain an IP address from your Internet service provider (ISP) automatically. (ISPs that supply a cable modem always use this.)

- Request IP Address: If your ISP supports this function, you can enter an IP address you would prefer.
- **MTU:** Maximum Transmission Unit specifies the largest packet size permitted for network transmission. Most DSL users should use the value 1492. You can set MTU manually, but it should be left in the 576 to 1500 range. **NOTE:** If the value entered isn't in accord with the value the ISP provides, it can cause problems, such as failure to send e-mail or to browse. (If a problem occurs, contact your ISP.)





Dynamic IP Address	
Request IP address	
MTU(576-1500)	1500
Static DNS Server	
Primary DNS	
Secondary DNS	(Optional)
MAC Cloning	Enabled
MAC Address (XX:XX:XX:XX:XX:XX)	00:00:00:00:00 Clone MAC
	OK Cancel

- **Primary DNS:** Your ISP will provide at least one Domain Name System (DNS) IP address. (DNS translates readable/recognizable domain names into numerical IP addresses.) Enter the IP address of your DNS server here.
- **Secondary DNS:** As an option, you can enter the IP address of a backup DNS server here.
- **MAC Address:** The WAN port of the router has a unique Media Access Control (MAC) address assigned to it referred to as "Default MAC." The "Clone MAC" option is available for special situations; for example, since an ISP allows only certain MAC addresses access to the Internet, selecting "MAC Address" and clicking "Clone MAC" modifies your WAN port's MAC address in order to avoid detection of the router, which can lead to a service disconnect.

3.3.2 Static IP

This connection type allows you to maintain the same IP address over time (unlike "temporary" dynamic IP addresses that are assigned with each Internet connection).

IP Address: Enter the address provided by your ISP.

Subnet Mask: Specify a subnet mask for your WAN segment.

Gateway IP: This is provided by your ISP.

MTU: The MTU (Maximum Transmission Unit) setting specifies the largest packet size permitted for network transmission. Most DSL





WAN Static IP	
Static IP Address	
IP Address	0.0.0.0
Subnet Mask	255.255.255.0
Gateway IP	0.0.0.0
MTU (576-1500)	1500
Static DNS Server	\checkmark
Primary DNS	
Secondary DNS	(Optional)
MAC Cloning	Enabled
MAC Address (XX:XX:XX:XX:XX:XX)	00:00:00:00:00 Clone MAC
More IP addresses	
Does ISP provide more IP addresses?	
	OK Cancel

users should use the value 1492. You can set MTU manually, and you should leave this value in the 576 to 1500 range. **NOTE:** If the value entered isn't in accord with the value the ISP provides, it can cause problems, such as failure to send e-mail or to browse. (If such a problem occurs, contact your ISP for information about correcting the MTU value.)

Primary DNS: Your ISP will provide at least one Domain Name System (DNS) IP address. (DNS translates readable/recognizable domain names into numerical IP addresses.) Enter the IP address of your DNS server here.

Secondary DNS: Enter the IP address of a backup DNS server here.

MAC Address: The WAN port of the router has a unique Media Access Control (MAC) address assigned to it referred to as "Default MAC." The "Clone MAC" option is available for special situations; for example, since an ISP allows only certain MAC addresses access to the Internet, selecting "MAC Address" and clicking "Clone MAC" modifies your WAN port's MAC address in order to avoid detection of the router, which can lead to a service disconnect.



3.3.3 PPPoE

This connection type (Point-to-Point Protocol over Ethernet) is typically used with DSL and ADSL service.

— РРРОЕ	
Address Mode	💿 Dynamic PPPoE 🔵 Static PPPoE
IP Address	
PPPOE Account	
PPPOE Password	•••••
Please retype your password	•••••
Service Name	
MTU (546-1492)	1492
Maximum Idle Time (60-3600)	300 seconds (0: No timeout)
Connection Mode	keep-alive 💙
Static DNS Server	
Primary DNS	
Secondary DNS	(Optional)
MAC Cloning	Enabled
MAC Address (XX:XX:XX:XX:XX:XX)	00:00:00:00:00 Clone MAC

Address Mode: Select whichever service you're provided.

IP Address: If you select Static PPPoE, you must enter an IP address here.

Cancel

PPPoE Account: Enter the PPPoE username provided by your ISP. **PPPoE Password:** Enter the PPPoE password provided by your ISP. **Please retype your password:** For confirmation.

MTU: The MTU (Maximum Transmission Unit) setting specifies the largest packet size permitted for network transmission. Most DSL users should use the value 1492.You can set MTU manually, and you should leave this value in the 576 to 1500 range. *NOTE:* If the value entered isn't in accord with the value the ISP provides, it can cause problems, such as failure to send e-mail or to browse. (If such



a problem occurs, contact your ISP for information about correcting the MTU value.)

Primary DNS: Your ISP will provide at least one Domain Name System (DNS) IP address. (DNS translates readable/recognizable domain names into numerical IP addresses.) Enter the IP address of your DNS server here.

Secondary DNS: Enter the IP address of a backup DNS server here.

MAC Address: The WAN port of the router has a unique Media Access Control (MAC) address assigned to it referred to as "Default MAC." The "Clone MAC" option is available for special situations; for example, since an ISP allows only certain MAC addresses access to the Internet, selecting "MAC Address" and clicking "Clone MAC" modifies your WAN port's MAC address in order to avoid detection of the router, which can lead to a service disconnect.

Connection Mode: There are three options in the drop-down menu:

- **Keep-Alive** keeps you connected to the Internet indefinitely, even when your connection sits idle.
- **Auto-Connect** is suitable for Internet connections that need to record the online time. It doesn't connect to the Internet when the power is on, only when an access request is made (it will connect automatically.) When there is no access request within a set timeframe (60-3600 seconds), it will disconnect
- **Manual On** is suitable when the access method is controlled by an administrator using a password. It doesn't connect to the Internet when the power is on, only when you connect or disconnect manually.

3.3.4 BigPond

This connection option is used in conjunction with Telstra, Australia's largest ISP.

BigPond Account: Enter the user name provided by the ISP. BigPond Password: Enter the password provided by the ISP. Please Retype Your Password: For confirmation.

MTU: The MTU (Maximum Transmission Unit) setting specifies the largest packet size permitted for network transmission. Most DSL users should use the value 1492. You can set MTU manually, and you should leave this value in the 576 to 1500 range. **NOTE:** If the



- BigPond	
BigPond Account	
BigPond Password	
Please retype your password	
BigPond Server (IP or Domain name)	
Request IP address	
MTU (576-1500)	1500
Static DNS Server	
Primary DNS	
Secondary DNS	(Optional)
MAC Cloning	Enabled
MAC Address (XX:XX:XX:XX:XX:XX)	00:00:00:00:00 Clone MAC
	OK Cancel

- **MTU:** Maximum Transmission Unit specifies the largest packet size permitted for network transmission. Most DSL users should use the value 1492. You can set MTU manually, but it should be left in the 576 to 1500 range. *NOTE:* If the value entered isn't in accord with the value the ISP provides, it can cause problems, such as failure to send e-mail or to browse. (If a problem occurs, contact your ISP.)
- **Primary DNS:** Your ISP will provide at least one Domain Name System (DNS) IP address. (DNS translates readable/recognizable domain names into numerical IP addresses.) Enter the IP address of your DNS server here.

Secondary DNS: Enter the IP address of a backup DNS server here. **MAC Address:** The WAN port of the router has a unique Media Access Control (MAC) address assigned to it referred to as "Default MAC."

Control (MAC) address assigned to it referred to as "Default MAC." The "Clone MAC" option is available for special situations; for example, since an ISP allows only certain MAC addresses access to the Internet, selecting "MAC Address" and clicking "Clone MAC" modifies your WAN port's MAC address in order to avoid detection of the router, which can lead to a service disconnect.



3.4 LAN

This menu — with its two submenu screens: LAN Settings and DHCP Client List — presents options for configuring your local area network.

Quick Setup	Admin	WAN	LAN	NAT	Firewall
LAN Settings	DHCP Client	List			
Settings —					
IP Address			192.16	58.2.1	
Subnet Mask			255.25	5.255.0	
The Gateway a	cts as DHCP S	erver	🗹 En	abled	
IP Pool Starting	Address		192.16	8.2. 10	00
IP Pool Ending	Address		192.16	8.2. 20	00
Lease Time			Eight	hours 💌	
DNS Proxy			🗹 En	abled	
			ОК		Cancel

3.4.1 LAN Settings

IP Address: This is the router's LAN port IP address (your LAN clients' default gateway IP address), shown with the default value. Subnet Mask: Specify a subnet mask for your LAN segment. **DHCP Server:** Select to enable/disable the DHCP server. By enabling, the router will automatically give your LAN clients an IP address. IP Pool Starting/Ending Address: If desired, define a specific range for your DHCP server to issue IP addresses to your LAN clients. **Lease Time:** From the drop-down menu, select the time interval after



which the connected client computers are instructed to request a new IP address from the router.

DNS Proxy: When activated, the router acts as a DNS server in your network, which means that the computer sends the DNS request to the router, which in turn queries the ISP's DNS server. Since the router is caching the results, subsequent requests to the same domain name benefit from a performance gain. *NOTE:* These gains are negible in smaller networks, so leaving this option disabled — thus having the client doing the DNS look-up itself — is more often than not the best option.

Quick Setup	Admin WAN	LAN	NAT Fire	ewall f	Routing	QoS	Misc Hi
LAN Settings	DHCP Client List						
— DHCP Client	List						
Host Name	IP Address		MAC Addre	ss	Remai	ning Time	Static
76a4433c5i	192.168.2.100		00:1A:4B:69:0	5:A9	07:	18:55	
			Refresh				
🖵 Static Client	Configuration ——						
Host Name							
IP Address		192.1	168.2.				
MAC Address (>	(X:XX:XX:XX:XX)			Add			
L							
		O	K Cance	el			

3.4.2 DHCP Client List

- **DHCP Client List:** This table displays information relevant to clients connected to the router.
- **Host Name:** Enter the name of a static client allowed access to the router.
- **IP Address:** Enter the IP address of a static client allowed access to the router.
- **MAC Address:** Enter the MAC address of a static client allowed access to the router.





3.5 NAT

The network address translation (NAT) menu presents options that make it possible to open ports, create a DMZ and perform other functions.

3.5.1 Virtual Server

Some games, servers and applications don't work in conjunction with NAT unless a virtual server is established to provide WAN-to-LAN port mapping.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc	Hiç
Virtual Server	Port Trigge	ring	Port Mapping		Mapping Passthrough DMZ				
Settings Enabled Private IP Private Port Public Port Comment			Тур		✓				
	Rules Listing						0,	/20(using/n	nax)
	Comment		Privat	:e IP	Private	Port F	ublic Port	Acti	on
			ОК		Cancel				

Enabled: Select to enable/disable the function.

Private IP: This is the address of the internal host for which you want to open a port.

Private Port: Enter an internal port number.

Public Port: Enter an external port number.

Type: Select the protocol that's required for the service you're setting up (TCP or UDP).

Comment: Enter any description of the current virtual server item. Add/Modify: Click to add/edit rules you've configured.



3.5.2 Port Triggering

The port trigger module dynamically registers virtual server rules when any IP host generates the packet from the specified trigger protocol and port. The port trigger module uses a forward protocol type and port number, and uses the IP address of the host that generates the trigger packet when it registers a rule.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc	Hi
Virtual Server	Port Trigge	ering	Port Mapping Pa:		assthrough	DMZ			
Settings Enabled Trigger Port Trigger Type Public Port Type Comment				~ P V	odify				
	Rules Listing						0,	/10(using/m	nax)
	Comment		ıT	igger Port		Public I	Port	Actio	n
			ОК		Cancel				

Enabled: Select to enable/disable the function.

Trigger Port: Enter a range of ports.

Trigger Type: Select either "TCP" or "UDP" from the drop-down menu. **Public Port:** Enter a range of ports.

Public Type: Select either "TCP" or "UDP" from the drop-down menu. **Comment:** Enter any description of the configured trigger.

Add/Modify: Click to add/edit rules you've configured.

3.5.3 Port Mapping

This submenu/function allows you to set up public services on your



network, such as Web servers, FTP servers, e-mail servers and other specialized Internet applications (for example, videoconferencing or online gaming). When users send this type of request to your network via the Internet, the router will forward the request to the appropriate PC.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc	Hig
Virtual Server	Port Trigge	ering	Port Mappi	ng Pa	ssthrough	DMZ			
— <mark>Settings</mark> — Enabled]					
Comment									
Server IP			192	2.168.2.					
Mapping Ports (port1, port2,	port3-po	_						
	Rules Listing		A	dd Mo	odify		0,	/10(using/m	ıax)
	Comment		Serve	er IP		Mapping Po	rts	Actio	on
			ОК		Cancel				

Enabled: Select to enable/disable the function.

Comment: Enter any description of the current mapping rules.

Server IP: Enter the server IP address.

Mapping Ports: Select either a protocol from the drop-down menu and enter the mapping ports.

Add/Modify: Click to add/edit rules you've configured.

3.5.4 Passthrough

- **VPN:** Some applications require an application-level gateway through the router. You can select any of the three "passthroughs" here: "Point-to-Point Tunneling Protocol"; "IPSec," or Internet Protocol Security, which is a suite of protocols used to implement secure exchanges; and "Layer 2 Tunneling Protocol."
- FTP / Non-Standard FTP Port: If the FTP server is using a nonstandard FTP port number, this can prevent FTP data connections



Quick Setup	Admin WAN	I LAN N	T Firewall	Routi
Virtual Server	Port Triggering	Port Mapping	Passthrough	DMZ
VPN				
PPTP passthrou	gh	✓		
Ipsec passthrou	ıgh	✓		
L2TP passthrou	gh			
FTP				
Non-Standard F	TP Port (0-65535)			
NetMeeting				
H323/Netmeetir	ng passthrough	✓		
		ОК	Cancel	

from being established. You should leave this in the 0-65535 range. **NetMeeting / H323/Netmeeting Passthrough:** To accept the connection request from any outside NetMeeting client, the virtual server for H323/Netmeeting (Port 1720) must be enabled.

3.5.5 DMZ

Enabled: Select to enable/disable the function.

Public IP Address: Make a selection from the drop-down menu. **Virtual Host Option:** Choose either "DMZ" or "SDMZ":

• **Demilitarized Zone**, or DMZ, allows one local user to be exposed to the Internet for use of a special-purpose service, such as Internet gaming or videoconferencing. It forwards all the ports at the same



- Settings	
Enabled	
Public IP Address	0.0.0.0 🐱
Virtual Host Option	DMZ 🗸
IP Address of Virtual DMZ Host	192.168.2.
	Get current LAN IP automatically
	Add Modify
Rules Listing	0/6(using/max)
Public IP Address	IP/MAC Address of Virtual DMZ/SDMZ Host Action
	OK Cancel

time to one PC. The Port Forwarding feature is more secure because it only opens the ports you want to be opened, while DMZ hosting opens all the ports of a computer, exposing the computer so the Internet can see it.

- **Super Demilitarized Zone**, or SDMZ, is similar to DMZ except that the local user (DMZ host) uses the public IP address of your Internet service instead of a private IP address.
- **IP Address of Virtual DMZ** (if "DMZ" is selected): Enter the local IP address of the client PC that you want to place in the DMZ.
- **MAC Address of Virtual SDMZ** (if "SDMZ" is selected): When SDMZ is activated, enter the MAC address of the local computer designated as the SDMZ host.
- Get Current LAN IP automatically: If the computer you're currently using is supposed to be the DMZ host, you can select this option and the IP address will be entered automatically.
- Add/Modify: Click to add/edit rules you've configured.



3.6 Firewall

This series of submenu options lets you establish a variety of network usage and access limits for better control and security.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc H
Firewall Options	Client Fil	Itering	ing URL Filtering		MAC Filtering]		
Settings —								
Enabled			✓					
				Opti	ons			
Discard PING fro	om WAN side		✓		IP Spoofing			✓
Deny PING to th	ie Gateway				Smurf Attack			✓
Detection Port S	ican Packets		✓		Ping of Death			✓
Deny to Scan Se	ecurity Port (113)	✓		Land Attack			✓
Discard NetBios	Packets				Snork Attack			✓
Deny Fragment	Packets				UDP Port Loop			✓
Disable ICMP Pa	ckets When I	Error is			TCP Null Scan			✓
Encountered					TCP Syn Flood			
					Syn Threshold	300 packa	ets per sec	ond (1-3000)
					ICMP Flood			
					Ping Threshold	packe	ets per sec	ond (1-3000)
			OK		Cancel			

3.6.1 Firewall Options

Enabled: Select to enable/disable the items selected or the limits established in the Options table.

3.6.2 Client Filtering

This screen allows you to block Internet access for local clients based on IP addresses, application types and time of day. **Enable Client Filter:** Select to enable/disable the function.



Firewall Options	Client Filtering	URL Filtering	MAC Filtering
Settings Enable Client Filter		V	
Enable			
IP Address		192.168.2	. ~
Port			~
Туре		TCP 🔽	
Block Time		🔘 Alway	s 🔘 Block
Day		SUN SUN	Mon Tue wed Thu Fri sat
Time		Always	🗸 🗸 Always 💙
Comment			
		Add	Modify
Rules Listing			0/20(using/max)
IP A	ddress	PortType	Block Time Comment Action
		ОК	Cancel

Enable: Select to establish rules based on the configuration options that follow.

- IP Address: Enter the address (or the range of addresses) you want to control.
- Port/Type: You can manually enter your preferences and click "Add," which will then display your new filter configuration in the Rules Listing.

Block Time / Day / Time: Make selections as desired to define rules so they are applied only to specific days and/or times of day.

Comment: Enter a description to differentiate among the various client filters you configure.

Add/Modify: Click to add/edit rules you've configured.



3.6.3 URL Filtering

This screen allows you to prevent users from accessing specific Web sites using broad or narrowly defined filters.

Firewall Options	Client Filtering	URL Filtering	MAC Filtering	
Settings URL Filter Control IP Address URL filter string Enable		Deny Int 192.168.1		he following URL addresses 💌
Rules Listing				0/20(using/max)
	IP Address		URL filte	r string Action
		ОК	Cancel	

- **URL Filter Control:** Select one of three options: "Disable URL Filter function"; "Deny Internet Access for the following URL addresses"; and "Allow Internet Access for the following URL addresses."
- IP Address: Enter the address (or range) you want to filter.
- **URL Filter String:** Enter a specific Web site name or domain name or any defining keywords (for example: games, youtube, nude) that could help focus the filter.

3.6.4 MAC Filtering

This screen allows you to allow or restrict communication between specified nodes.

MAC Access Control: Select one of three options: "Disable MAC Address Control function"; "Deny Internet Access for the following MAC addresses"; and "Allow Internet Access for the following MAC addresses."

MAC Address: Enter the MAC address (using the format shown) you



Firewall Options Client Filtering	URL Filtering	MAC Filtering	
- Settings			
MAC Address Control	Deny Inl	ernet access for t	he following MAC addresses 🔽
MAC Address (XX:XX:XX:XX:XX:XX)			
Comment			
	A 44	an diffe	
	Add	Modify	
Rules Listing			0/20(using/max
MAC Address			omment Action
	ОК	Cancel	

want to control. The format is 00:00:00:00:00:00, using the characters 0-9 and a-f.

Comment: Enter a description to differentiate among the various filters you configure.

3.7 Routing

This menu presents options for optimizing pathways for information packets, thus maximizing the efficiency and speed of the router.

3.7.1 Routing Table

uick Setup	Admin WA	N LAN NAT	Firewall	Routing	QoS Misc
outing Table	Static Routing	Dynamic Routing			
Routing Tab	le List				
Dest	ination Network IP	Su	ubnet Mask		Gateway IP
	192.168.2.0	255	5.255.255.0		192.168.2.0
		Refre	esh		

The Routing Table List displays the current routing information as it pertains to the network. Click "Refresh" to update.



3.7.2 Static Routing

A static route is a pre-determined pathway that network information must travel in order to reach a specific host or network.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc	ł
Routing Table	Static Rou	ting	Dynamic Routing						
Static Route Destination Net Subnet Mask Gateway IP	_	tion —							
Destinatio	n Network IP			dd 🛛 🕅	4odify	Gateway	·IP	Actio	on
			ОК		Cancel				

Destination Network IP: Specify an address you want information packets forwarded to.

Subnet Mask: Specify a subnet mask to distinguish the network and host portions of the IP address.

Gateway IP: Enter the gateway IP address.

3.7.3 Dynamic Routing

Dynamic routing can be used to cache routes learned by routing protocols, thus allowing the automation of static routing maintenance. The router, using RIP (Routing Information Protocol), determines a network packet's route based on the fewest number of hops between the source and the destination. *NOTE:* The RIP function is available only when the WAN connection mode is designated as either Static IP or Dynamic IP Address (see Section 3.3: WAN).

Enable Dynamic Routing:

Select to enable/disable the function.



Working Mode: Select	Routing Table	Static Routing	Dynamic Routing	
"Router" or "Default				
Gateway."				
Listen Mode: Select	Dynamic Ro	-		
"Disabled," "RIP1,"	Enable Dynamic	Routing	 Image: A start of the start of	
"RIP2" or "Both"	Working Mode		Router	*
(RIP1 & 2).	Listen Mode		Disabled	*
Supply Mode: Select	Supply Mode		Disabled	*
"Disabled," "RIP1,"				
"RIP2 (Broadcast)"				
or "RIP2 (Multicast)."			ОК	Cancel

3.8 QoS

This menu presents Quality of Service options so you can provide different priorities to different applications, users or data flows - or to guarantee a certain level of performance to a data flow - based on your specific network needs.

3.8.1 Port Based

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS
Port based D	SCP						
Settings —							
Enable Port rate	e Control		~				
			0				
LAN-1			0	k	(bps		
LAN-2			0	k	(bps		
LAN-3			0	k	(bps		
LAN-4			0	k	(bps		
WAN			0	k	(bps		
					•		
			ОК		Cancel		



Enable Port Rate Control: Select to enable/disable the function. **LAN 1--4 / WAN:** For each network connection, enter a maximum uplink/downlink bandwidth.

3.8.2 DSCP

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc Hi
Port based D	SCP							
— Settings —								
Enable DSCP			~					
High queue wei	aht		8	(1-15)	,			
Medium queue v			4					
				(1-15)				
Low queue weig	iuc		2	(1-15))			
Enable Rule								
DSCP value				(0-63))			
Queue map			Lo	w Priority	*			
Description								
				dd Mo	odify			
			A		JUILA		_	
Rules Listing							0,	(10(using/max)
DSCP v	alue	Queue map			Descrip	tion		Action
		-						
			_					
			ОК		Cancel			

Enable DSCP: Select to enable/disable the function.
High / Medium / Low Queue Weight: Enter your preferred values.
Enable Rule: Select to enable/disable the function.
DSCP Value: Enter your preferred value.

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Queue Map: Select a priority level from the drop-down menu. **Description:** Enter a description to differentiate among any number of

rules that are established.

3.9 Miscellaneous

This menu presents a couple of popular functions that can be configured and put to use: Universal Plug and Play (UPnP) and Dynamic Domain Name Service (DDNS).

3.9.1 UPnP

UPnP (Universal Plug and Play) allows the automatic discovery and configuration of equipment attached to your LAN, providing compatibility with networking equipment, software and peripherals of the 400-plus vendors that participate in the Universal Plug and Play forum.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc	ŀ
UPnP DDNS	7								
🖵 Settings —									
Enable UPnP			💌 Ena	abled					
Advertise Time ((60-1800)		1800						
Refresh Port Ma	apping		Refr	esh					
Remote H		ternal Port	Interna	l Client	Internal Port	Protocol	Des	cription	
0.0.0.0) 9	9043	192.168	.2.100	9043	top	Thu	under5	
0.0.0.0) 9	9043	192,168	.2.100	12524	udp	Thu	under5	
			04		Canad				
			OK		Cancel				

Enable UPnP: Select to enable/disable the function. Advertise Time: Enter the preferred value. Refresh Port Mapping: Click to update the list.



3.9.2 DDNS

The DDNS (Dynamic Domain Name Service) feature allows you to use a domain name instead of an IP address) to access Internet sites. Before you can use this feature, however, you need to register an account for DDNS service at a DDNS service provider such as DynDNS.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	Qo5	Misc
UPnP DDNS	7							
🗆 Settings —								
Enable DDNS			🗹 En	abled				
Host Name								
DDNS Server			dyndr	ns.org	*			
User Name								
Password								
DDNS Update Ir	iterval		0	(0-86400)	Minutes			
			D	ONS Ping T	est			
			OK		Cancel			

Enable DDNS: Select to enable/disable the DDNS server.

- Host Name / User Name / Password: After you register a DDNS account with a DDNS service, you'll receive the information to enter in each of these fields.
- **DDNS Server:** Select the service you've registered with from the drop-down menu.

DDNS Update Interval: Specify the update interval.

DDNS Ping Test: Click to check the connectivity to the DDNS provider.





3.10 High Level

This menu offers activation of an extra security measure to protect the network.

Quick Setup	Admin	WAN	LAN	NAT	Firewall	Routing	QoS	Misc	High level
Security									
ARP spoofing	g correspon	dence –							
Enabled									
IP	Address			MAC Add	dress		Binding)	
				Refrest					
				Kerresi					
			ОК		Cancel				

Enabled: Select to enable/disable ARP (Address Resolution Protocol) spoofing correspondence. When enabled, this function will perform IP/MAC binding on the WAN side at the first ARP reply in order to prevent ARP spoofing, which is a type of Ethernet attack on a network.

3.11 Status

This menu presents two informative submenus: Status and Log.

3.11.1 Status

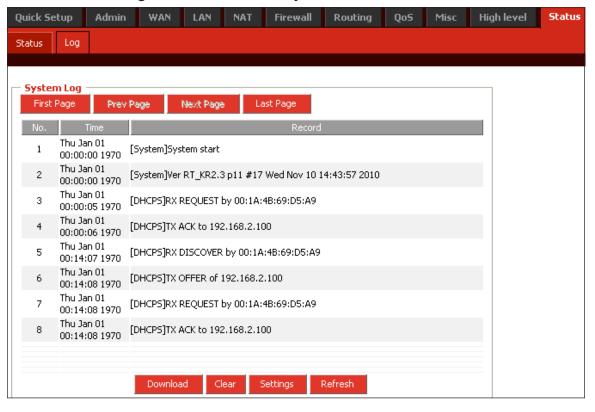
This screen displays the router's current status and configuration.

Quick Setup Adr	min WAN LAN NAT	Firewall	Routing QoS Misc Hi	igh level Status
Status Log				
— Gateway ———		— Internet —		1
IP Address	192.168.2.1	Cable/DSL	Disconnected	
Subnet Mask	255.255.255.0	IP Address	0.0.0.0	
DHCP Server	Enabled	Subnet Mask	0.0.0.0	
NAT	Enabled	Gateway	0.0.0.0	
	C 11-1	-		



3.11.2 Log

The router keeps a running log of events and activities, which are displayed on the screens accessed here. *NOTE:* When the router is rebooted, the logs are automatically cleared.



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4 TROUBLESHOOTING

If you forget your password....

Press the Reset button for 5 seconds or more (with the router on) to restore factory settings. The default username is "admin" and the password is "1234."

If problems arise with the cable modem connection....

Confirm that the cable modem is working properly and the signal is stable. Normally, there will be LEDs on the modem that indicate its operational status. If any LED indicates improper operation, contact your ISP.

Check the LEDs on the front panel of the router. When the cable connections are good, the PWR LED should be on and the WAN LED should be blinking. If you use your computer, the corresponding LAN port LED should also be blinking. If not, confirm that the cables are good. If they check out okay, re-visit Section 3.2.4: Configuration to make sure your configuration is correct. If you can't access the Internet, go to the next step

Open Internet Explorer (or another Web browser) and enter "192.168.2.1" in the address bar, then press <Enter>. Enter "admin" in the User Name field and "1234" in the Password field, then click "OK." Click "LAN" in the top menu, select "DHCP Server," then click "OK" and close the browser window.



TROUBLESHOOTING

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5 SPECIFICATIONS

Standards

- IEEE 802.3 (10Base-T Ethernet)
- IEEE 802.3u (100Base-TX Fast Ethernet)

General

- LAN ports: 4 RJ45 10/100 Mbps data ports
- LAN ports with Auto MDI/MDI-X
- WAN port: 10/100 Mbps RJ45 connector
- Certifications: FCC Class B, CE

Router

- Supported WAN connection types:
 - Dynamic IP (DHCP for cable service or DSL)
 - Static IP
 - PPPoE/PPTP (for DSL)
- Protocols:
 - CSMA/CD
 - TCP/IP
 - UDP
 - ICMP
 - PPPoE
 - NTP
 - NAT
 - DHCP
 - DNS
 - DDNS
 - ARP
- NAT:
 - Virtual server
 - Special applications (port trigger)
 - DMZ (demilitarized zone)
- Firewall:

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- URL filter
- MAC address filter
- Connection Filtering: Limit access to the Internet to PCs in the LAN based on a time schedule



SPECIFICATIONS

- Supports UPnP (Universal Plug and Play)
- Supports DHCP (client/server)
- Supports PPPoE (DSL), DHCP (cable/DSL) and static IP
- Supports VPN PPTP L2TP pass-through

LEDs

- Power
- WAN Link/Act
- LAN 1-4 Link/Act

Environmental

- Dimensions: 155 (W) x 85 (L) x 35 (H) mm (6.1 x 3.3 x 1.4 in.)
- Weight: 0.41 kg (0.9 lbs.)
- Operating temperature: 0 40°C (32 104°F)
- Operating humidity: 10 95% RH, non-condensing
- Storage temperature: -40 70°C (-40 158°F)

Power

• External power adapter: 9 V DC, 500 mA

Package Contents

- 4-Port Broadband Router
- RJ45 Ethernet cable: 1.0 m (3 ft.)
- · Power adapter
- · Quick install guide, plus user manual on CD



WASTE ELECTRICAL & ELECTRONIC EQUIPMENT

Disposal of Electric and Electronic Equipment (applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or its packaging indicates that this product shall not be treated as household waste. Instead, it should be taken to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. If your equipment contains easily removable batteries or accumulators, dispose of these separately according to your local requirements. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, contact your local city office, your household waste disposal service or the shop where you purchased this product. In countries outside of the EU: If you wish to discard this product, contact your local authorities and ask for the correct manner of disposal.

FEDERAL COMMUNICATIONS COMMISSION REGULATORY STATEMENT

FCC Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of Federal Communications Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

C E F©



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