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Introduction

Thank you for purchasing the 11N Wireless Broadband Router. This user guide will assist you with the installation procedure.

WR153ND Router is a hybrid design product which combines Ethernet technology and wireless access into a single stand-alone unit. The device allows you to take advantages of both mobility and fast connection. All PCs whenever on wireless LAN or Ethernet LAN can share files, printers and other network resources. Moreover, all users can share single account of Internet access by having this device connect to a DSL/Cable modem.

It complies with IEEE 802.11n (Draft 2.0) standards, supports up to 150Mbps (1Tx-1Rx) wireless connection speed, adopting MIMO technology to ensure a good performance, stability and coverage to bring you an enjoyable new experience. It's wireless data transmission rate can be 3 times better and coverage 4 times better than a normal 802.11g/b router. It is a high performance and cost-effective solution for Home and Small office.

The router provides multiple security protection, which can protect the wireless access security effectively. It is easy to install and configure with user friendly interface. For better application of the router functions, please read this user manual carefully.

4 Package List

Open the box carefully, check the contents listed below:

- Wireless Broadband Router
- Power adapter
- User Manual
- UTP Lan Cable
- 1x 5dBi antenna
- CD

Note: If any of the listed contents are damaged or missing, please contact the retailer from whom you purchased the Wireless Router for assistance

Section one Product Overview

1.1 Product Features

- Complies with IEEE 802.11n, 802.11g, 802.11b standard for 2.4GHz Wireless LAN
- 1 10/100M WAN RJ45 port, 4 10/100M LAN RJ45 ports
- Supports Auto MDI/MDIX
- Supports Wireless Roaming, can move among different AP and no break
- Provides 64/128 bit WEP, WPA and WPA2 authentication and TKIP/AES encryption security
- Supports wireless Relay/Bridging/WDS/WDS+AP mode, WPS Settings .
- Provides wireless LAN ACL (Access Control List) filtering
- Built-in NAT and DHCP server supporting dynamic IP address distributing
- Supports Virtual Server, Special Application, and DMZ host
- Built-in firewall supporting IP address filtering, Domain Name filtering, and MAC address filtering
- Supports TCP/IP, PPPoE, DHCP, ICMP, NAT
- Supports UPnP, Dynamic DNS, Static Routing,
- Supports Flow Statistics
- Firmware upgrade, and configuration file backup and restore
- Supports Remote and Web management

1.2 Specification

	IEEE802.11n current draft、IEEE 802.11g、IEEE 802.11b		
Standard	IEEE 802.3、IEEE 802.3u、IEEE 802.3x		
Protocol	CSMA/CA、CSMA/CD、TCP/IP、ICMP、NAT、PPPoE、DHCP、PPTP、UDP、 NAT、DNS、DDNS、VPN		
Port LAN	4*100BaseTX (Auto MDI/MDIX)		
Port WAN	1*100BaseTX (Auto MDI/MDIX)		
RF Frequency	2.4~2.4835GHz		
	11n: 150/135/121.5/108/81/54/40.5/27/13.5Mbps		
	130/117/104/78/52/39/26/13Mbps		
Data Rate	72/65/58.5/52/39/26/19.5/13/6.5Mbps		
	11g: 54/48/36/24/18/12/9/6Mbps		
	11b: 11/5.5/2/1Mbps		
	135M: -68dBm@10% PER		
Receive	54M: -68dBm@10% PER		
	11M: -85dBm@8% PER		
Sensitivity	6M: -88dBm@10% PER		
	1M: -90dBm@8% PER		

	1-11 (North America)
Channels	1-13 (General Europe)
	1-14 (Japan)
Transmission	BPSK, QPSK, CCK and OFDM (BPSK/QPSK/16-QAM/ 64-QAM)
Technology	
Antenna Type	1*2.4GHz Dipole Antenna (1TX*1RX)
Operation Mode	Standard Access Point; Wireless WAN mode (Client Mode Wireless), WDS, WPS
Wireless Security	SSID Enable/Disable; MAC Address, IP and URL Filter ; 64/128/152-bit WEP Encryption
	WPA/WPA2/WPA-PSK/WPA2-PSK (AES/TKIP) Encryption
	11g:14-16dbm
RF power	11b:17-19dbm
	11n:13-15dbm
Chipset	RTL8196BU+8191RE
LED	1*Power, 1*CPU Status,1*Wireless, 1*WAN, 4*LAN
Management	Local/Remote Web-based configuration
Operating Temperature	0 ~ 55℃
-	
Storage	-20 ~ 65°C
Humidity	5 ~ 95% non-condensing
External Power	Input 100V~240V
Adapter	Output DC5V 1A;

Section Two Hardware Installation

2.1 Panel layout

2.1.1 Front panel

The front panel of the 11N Wireless Router consists of several LED indicators, which is designed to indicate connections.



LED indicators:

Led Name	Action	Description
Power	off	no power
	on	power on
CPU	off	the router has a hardware error
	flashing	the router is working properly
WLAN	off	wireless function is disabled
	flashing	wireless function is enabled
	off	there is no device connected to the corresponding port
WAN /LAN1 、 2、3、4	on	there is a device connected to the corresponding port
	flashing	there is an active device connected to the corresponding port

2.1.2 Rear panel



2.2 System Requirements

- Broadband Internet Access Service (DSL/Cable/Ethernet)
- One DSL/Cable modem that has an RJ45 connector (you do not need it if you connect the router to Ethernet)
- Each PC on the LAN needs a working Ethernet Adapter and an Ethernet cable with RJ45 connectors
- TCP/IP protocol must be installed on each PC
- Web browser, such as Microsoft IE 5.0 or later, Netscape Navigator 6.0 or later

2.3 Installation Environment

- Not in direct sunlight or near a heater or heating vent
- Not cluttered or crowded. There should be at least 2 inches (5cm) of clear space on all sides of the router
- Well ventilated (especially if it is in a closet)
- Operating temperature: 0°C-40°C
- Operating Humidity: 5%~90%RH, Non-condensing

2.4 Hardware Installation Steps

Before you install the router, you should connect your PC to the Internet through your broadband service successfully. If there is any problem, please contact your ISP. After that, please install the router according to the following steps. Don't forget to pull out the power plug and keep your hands dry.

- Power off your PC(s), Cable/DSL modem, and the router.
- Locate an optimum location for the router. The best place is usually near the center of the area in which your PC(s) will wirelessly connect. The place must accord with the Installation Environment Requirements.
- Adjust the direction of the antenna. Normally, upright is a good direction.
- Connect the PC(s) and each Switch/Hub on your LAN to the LAN Ports on the router.
- Connect the DSL/Cable Modem to the WAN port on the router.
- Connect the AC power adapter to the AC power socket on the router, and the other end into an electrical outlet. The router will start to work automatically.
- Power on your PC(s) and Cable/DSL modem.



Section Three Quick Installation Guide

After connecting the 11N Wireless Router into your network, you should configure it. This chapter describes how to configure the basic functions of your 11N Wireless Router. These procedures only take you a few minutes. You can access the Internet via the router immediately after successfully configured.

3.1 TCP/IP configuration

The default IP address of the Wireless Router is 192.168.0.1, and the default Subnet Mask is 255.255.255.0. These values can be seen from the LAN. They can be changed as you desire, as an example we use the default values for description in this guide.

Connect the local PC to the LAN ports on the router. There are then two means to configure the IP address for your PC.

Configure the IP address manually

1. Set up the TCP/IP Protocol for your PC(s).

2. Configure the network parameters. The IP address is 192.168.0.xxx ("xxx" is from 2 to 254), Subnet Mask is 255.255.255.0, and Gateway is 192.168.0.1(The router's default IP address)

Obtain an IP address automatically

1. Set up the TCP/IP Protocol in "Obtain an IP address automatically" mode on your PC(s)

2. Power off the router and PC(s). Then turn on the router, and restart the PC(s). The built-in DHCP server will assign IP addresses for the PC(s).

Now, you can run the Ping command in the **command prompt** to verify the network connection between your PC(s) and the router.

Open a command prompt, and type ping **192.168.0.1**, then press Enter.

Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time<1ms TTL=255
Ping statistics for 192.168.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = Oms, Maximum = Oms, Average = Oms

If the result displayed is similar to that shown in the top of figure, the connection between your PC and the router has been established.

```
Pinging 192.168.0.1 with 32 bytes of data:
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.
Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\Documents and Settings\Administrator>
```

If the result displayed is similar to that shown in the top of figure, it means that your PC has not connected to the router. Please check it following these steps:

1. Is the connection between your PC and the router correct?

Notice: The 1/2/3/4 LEDs of LAN port on the router and LEDs on your PC's adapter should be lit

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

Notice: If the router's IP address is 192.168.0.1, your PC's IP address must be within the range of 192.168.0.2 ~ 192.168.0.254, the gateway must be 192.168.0.1

3.2 Quick Setup wizard

With a Web-based (Internet Explorer or Netscape® Navigator) utility, the 11N 150bps Wireless Router is easy to configure and manage. The Web-based utility can be used on any Windows, Macintosh or UNIX OS with a web browser.

Connect to the router by typing http://192.168.0.1 in the address field of web browser.

http:// 192.168.0.1	-
---------------------	---

After a moment, a login window will appear similar to that shown in Figure. Enter **admin** for the User Name and Password, both in lower case letters. Then click the **OK** button or press the **Enter** key.

Connect to 192.168.0.1		
User name:	🕵 admin 🕑	
Password:	•••••	
	Remember my password	
	OK Cancel	

NOTE:

If the above screen does not prompt, it means that your web-browser has been set to a proxy. Go to Tools menu>Internet Options>Connections>LAN Settings, in the screen that appears, cancel the Using Proxy checkbox, and click OK to finish it.

If the User Name and Password are correct, you can configure the router using the web browser. Please click the Setup Wizard link on the left of the main menu and the Setup Wizard screen will appear.

Click Setup Wizard, the Setup Wizard will appear.



The router supports three modes: gateway, bridge, wireless ISP. You can setup different modes to LAN and WLAN interface for NAT and bridging function.



Click next, Time Zone Setting will appear. You can select the time zone what you need.



Click next, LAN Interface setup will appear. In this page, you can set IP address, Subnet Mask.

IP Address - Enter the IP address of your router in dotted-decimal notation (factory default: 192.168.0.1).

Subnet Mask - An address code that determines the size of the network. Normally use 255.255.255.0 as the subnet mask.

Notice: All PCs' Subnet Mask is the same with router in you LAN.

EVOLVE	
Operation Mode Wireless TCP/IP This page is used to configure th	erface Setup ne parameters for local area network which connects to the LAN port of your nge the setting for IP address, subnet mask, DHCP, etc
🖬 💼 Management	192 168 1 1
Subnet Mask:	255-255-255-0
	Cancel Back Next

Click **next**, **WAN Interface Setup** will appear. In this page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point.

WAN Access Type: Here you can select the access method to static IP, DHCP, PPPoE or PPTP by click the item value of WAN Access type.



If you choose "**PPPoE**", the router will automatically receive the IP parameters from your ISP without needing to enter any parameters.

WR153ND System Status Setup Wizard	WAN Interface Setup	
Operation Mode Wireless TCP/IP Firewall Management	This page is used to configure the parameters for Internet network which connects to the WAN port of Access Point. Here you may change the access method to static IP, DHCP, PPPoE or PPTP by click the value of WAN Access type.	
	WAN Access Type: PPPoE	
	User Name:	

User Name and Password - Enter the User Name and Password provided by your ISP.

If you choose " **DHCP**", the router will automatically receive the IP parameters from your ISP without needing to enter any parameters.



If you Choose "PPTP", the Static IP settings page will appear, shown in the figure.

EVOLVE		
 WR153ND System Status Setup Wizard Operation Mode Wireless TCP/IP Firewall Management 	This page is used to configure th	nterface Setup he parameters for Internet network which connects to the WAN port of your ange the access method to static IP, DHCP, PPPoE or PPTP by click the item
	WAN Access Type:	РРТР
	IP Address:	172.1.1.2
	Subnet Mask:	255-255-255-0
	Default Gateway:	172.1 1.254
	Server IP Address:	172.1.1.1
	User Name:	
	Password:	
		Cancel Back Next

You can get IP Address Subnet Mask, server IP Address, User Name and Password from your ISP. If you Choose "**Static IP**", the Static IP settings page will appear, shown in figure.

EVOLVE	
WR153ND System Status Setup Wizard Operation Mode Wireless	terface Setup
	e parameters for Internet network which connects to the WAN port of your
🗉 🧰 Firewall 🛛 👘 Access Point. Here you may char	ige the access method to static IP, DHCP, PPPoE or PPTP by click the item
• Management value of WAN Access type.	
WAN Access Type:	Static IP 🗸
IP Address:	172.1.1.1
Subnet Mask:	255-255-255-0
Default Gateway:	172-1 -1 -254
DNS :	0.0.0.0
	Cancel Back Next

Notice: The IP parameters should have been provided by your ISP.

IP Address - This is the WAN IP address as seen by external users on the Internet (including your ISP). Enter the IP address into the field.

Subnet Mask - The Subnet Mask is used for the WAN IP address, it is usually 255.255.255.0

Default Gateway - Enter the gateway into the box if required.

DNS - Enter the DNS Server IP address into the boxes if required.

Click next, Wireless Basic Setting will appear.

EVOLVE						
WR153ND System Status Setup Wizard Operation Mode Wireless CP/IP Firewall Management	This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters					
	Wireless LAN Interface:	O Disabled	• Enabled			
	Mode:	AP	~			
	SSID:	WR153ND				
	Band:	2.4 GHz (B	I+G+N) 🔽			
	Channel Number:	5 - 2432MH	łz 💌			
				Cancel Back Next		

[This page is used to configure these parameters]

Band - Indicates the current mode 2.4GHz(B+G+N), 2.4GHz(G+B), 2.4GHz(B)

Mode- Default is AP, you can select Infrastructure Client or AP

SSID - Enter a value of up to 32 characters. The default SSID is Noganet, but it is recommended strongly that you change your networks name (SSID) to a different value.

Channel –This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you meet interference problems with another nearby access point.

Click **next**, **Wirelss Basic Settings** will appear. This page allows you to setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network. You can select Open, WEP, WPA-PSK, WPA2-PSK.

EVOLVE			
Geration Mode		Turn on WEP or W	VPA by using Encryption Keys could
Authentication:	Open	*	
	Open WEP WPA-PSK WPA2-PSK WEP-SHARE WEP-AUTO		Cancel Back Finished

Click **Finished** to finish the configuration

Notice: If you change the parameters of wireless, The router will reboot automatically.

WPA-psk: Provides TKIP [Temporal Key Integrity Protocol] or AES [Advanced Encryption Standard]. The default is TKIP mode

WPA2-psk : (Wi-Fi Protected Access version 2) provides higher security than WEP (Wireless Equivalent Privacy) and WPA (Wi-Fi Protected Access).

3.3 Operation mode



Gateway : (default) In this mode, the device is supposed to connect to internet via ADSL/Cable Modem. The NAT is enabled and PCs in LAN ports share the same IP to ISP through WAN port. The connection type can be setup in WAN page by using PPPOE, DHCP client, PPTP client or static IP.

Bridge: In this mode, all ethernet ports and wireless interface are bridged together and NAT function is disabled. All the WAN related function and firewall are not supported.

Wireless ISP: In this mode, all ethernet ports are bridged together and the wireless client will connect to ISP access point. The NAT is enabled and PCs in ethernet ports share the same IP to ISP through wireless LAN. You must set the wireless to client mode first and connect to the ISP AP in Site-Survey page. The connection type can be setup in WAN page by using PPPOE, DHCP client, PPTP client, L2TP client or static IP..

Section four Configuration Guide

4.1 Login

After you login successful, Browser will show administrator WEB. on the left is contents. it contains: Wireless setting, WAN Settings, LAN Settings, Network Security, System Services, Management, Status Show ect..

EVOLVE								
 ₩R153ND System Status Setup Wizard Operation Mode Wireless 	Select Language:	English V						
Wireless Status Basic Settings	Select Language.	English						
Repeater Settings	WAN Status							
 Virtual AP Settings WDS Settings Advanced Settings Access Control WPS TCP/IP 	Attain IP Protocol:	(DHCP) -Disc	onnected					
	IP Address:	0.0.0						
	Internet connect time:	Oday Ohour Ominutes Osecond						
	LAN Status IP Address:	192 168 1 1						
🖬 🛄 Firewall	DHCP Server:							
😐 🧮 Management	blief server.	Linabled						
	Ethernet port link status							
	Port:	WAN	LAN4	LAN3	LAN2	LAN1		
	Link:				Link	-		
	Speed:	8. <u>00</u>	1225	P. <u>22</u>	100M	84 <u>83</u>		
	WLAN Status							
	Mode:	AP+WDS(F	Enabled)					
	SSID:	WR153ND (E	Broadcast)					
	Encryption:	Open						
	Repeater:	Infrastructure	Client(Disabl	ed)				

4.2 Wireless Setting

It contains Wireless Basic settings, Repeater settings, Virtual AP settings, WDS Settings, Advanced Settings, Access Control and WPS

4.2.1 Wireless Status

WR153ND System Status Setup Wizard Operation Mode	WLAN	Status			
Wireless Status	WLAN Status				
Basic Settings	WLAN Status:	AP+WDS(Enabled)			
 Repeater Settings Virtual AP Settings WDS Settings Advanced Settings Access Control 	Channel-Band:	2.4GHz (B+G+N); channel:5			
	Rate:	auto			
	SSID:	WR153ND (Broadcast)			
	BSSID:	78:44:76:12:94:60			
WPS	Encryption:	Open			
	MAC Address:	78:44:76:12:94:b0			
Hanagement	Access Control Mode: Allow All				
	Repeater Status				
	WLAN Status:	Infrastructure Client(Disabled)			
	Signal Strength:	0%			
	Rate:	auto			
	SSID:	repeater			
	BSSID:	00:00:00:00:00			
	Encryption:	Open			
	Client Table	Refresh			
	MAC Address Band	TX Rate(Mbps) TX Packets RX Packets Time Expired(s)			

This page shows the current status and some basic settings of the device. you can check system Information, Repeater Interface Information, WLAN Interface Information.

4.2.2 Wireless Basic settings

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

ration Mode	Basic Settii	0	
Vireless Status This page is used to configure the par Basic Settings Point. Here you may change wireless e			
Repeater Settings	O Disabled Enable	d	
VDS Settings Mode:	AP	•	
Advanced Settings SSID:	WR153ND		
Access Control Band:	2.4 GHz (B+G+N)		
IPS Rate:	Auto	*	
31	Channel Width:	20/40MHz Auto	*
ement Channel:	Control Sideband:	Upper	~
	Channel Number:	5 - 2432MHz	~
Broadcast SSID:	ODisabled OEnable	ed	
WMM:	ODisabled 💿 Enable	ed	
Security:	Authentication:	Open	*

WEP (Wired Equivalent Privacy), a basic encryption method, usually encrypts wireless data using a series of digital keys (64 bits or 128 bits in length). By using the same keys on each of your wireless network devices, you can prevent unauthorized wireless devices from monitoring your transmissions or using your wireless resources. Select Mixed WEP to enter the following window

Security : From the drop-down menu select the corresponding security encryption modes.

WEP : Set the WEP key with the format of ASCII and Hex. You can enter ASCII code (5 or 13 ASCII characters. Illegal character as "/" is not allowed.) Or 10/26 hex characters..

4.2.3 Repeater settings

WR153ND System Status Setup Wizard Operation Mode Wireless		ss Repeater S	U
Wireless Status Basic Settings	Point. Here you may change wire		lients which may connect to your Access as wireless network parameters.
Repeater Settings	Wireless LAN Interface:	Disabled Enabled	
	wireless LALV interface;		
Virtual AP Settings			
WDS Settings	Mode:	Infrastructure Client	ScanAP
WDS Settings	Mode: SSID:		ScanAP
WDS Settings		Infrastructure Client	ScanAP
WDS Settings Advanced Settings Access Control	SSID:	Infrastructure Client	Open
WDS Settings Advanced Settings Access Control WPS	SSID: Channel:	Infrastructure Client v repeater 5 v	

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

Mode: Default is AP

SSID: Enter a value of up to 32 characters. The same name (SSID) must be signed to all wireless devices in your network. The default SSID is repeater, but it is recommended strongly that you change your networks name (SSID) to a different value.

Channel: This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.

4.2.4 Virtual AP settings

		s VAP Sett					
VAP Interfac	e:	Disabled Ena	bled				
SSID:							
Band:		2.4 GHz (B)	~				
Rate:			*				
Broadcast SS	SID:	O Disabled O Enabled					
WMM:		Disabled Enabled					
		Authentication:	Open	2			
Security:		Key Length: O Wep 64 Bit O Wep 128 Bit					
		Key Format:	ASCII(5 characters)				
		Key:					
			Appl	y Changes	Reset		
		VAP netwo	ork information				
Status	Band	SSID	Broadcast SSID	Rate	WMM	Security	Edit
((p)) (Off)	2.4GHz (B+G+N)	VAP0	Enabled	Auto	Enabled	Open	0
((p))	2.4GHz (B+G+N)	VAP1	Enabled	Auto	Enabled	Open	0

This page shows and updates the wireless setting for multiple Aps

4.2.5 WDS Settings

EVOLVE				
₩R153ND	the same channel	to communicate and set MAC ad		
Virtual AP Settings	: Disabled	Enabled		
Advanced Settings Security	: Authentication	n: Open	×	
Access Control			Apply Ch	anges Reset
TCP/IP AP BSSID			ScanAP	
B Firewall Comment Comment	: /			Add
	Curr	ent WDS AP Lis	st	
AP BSSID		Rate	Comment	Delete

Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.

4.2.6 Advanced Settings

EVDLVE					
Basic Settings this, yo	ss Distribution System use nu must set these APs in th nicate with in the table and	s wireless media to ne same charmel ar	nd set MAC addr		
Virtual AP Settings WDS Settings	WDS:	O Disabled	OEnabled		
Advanced Settings	Security:	Authentication:	Open	×	
Access Control				Apply Cha	anges Reset
TCP/IP	AP BSSID:			ScanAP	
 Firewall Management 	Comment:				Add
		Curren	t WDS AP List		
	AP BSSID		Rate	Comment	

These settings are only for more technically advanced users who have a sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your Access Point.

4.2.7 Access Control

	1			
System Status Setup Wizard Coperation Mode Coperation Mode		ireless Acce	ss Contr	ol
Wireless Wireless Wireless Basic Settings Besic Settings Fepeater Settings Virtual AP Settings	will be able to connec			ddresses are in the access control list ted, these wireless clients on the list
WDS Settings	Wire	less Access Control Mode:	Allow All	~
Advanced Settings				
Access Control		Acce	ss Control Setup	
TCP/IP	Delete	Access Control List	Add	Association STA list
a 🧰 Management				

If you choose 'Allow Listed', only those clients whose wireless MAC addresses are in the access control list will be able to connect to your Access Point. When 'Deny Listed' is selected, these wireless clients on the list will not be able to connect the Access Point.

4.2.8 WPS Settings

WPS (Wi-Fi Protected Setting) can easily and quickly establish the connection between the wireless network clients and the device through an encrypted way. The users only enter PIN code or press RST/WPS button on the panel to configure it. In the "Wireless settings" menu, click "WPS settings" to enter the next screen.

This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automatically synchronize its setting and connect to the Access Point in a minute without any hassle.

Writeess Status wireless client automatically synchronize its hassle.	for WPS (Wi-Fi Pro	etup tected Setup). Using this feature could let your at to the Access Point in a minute without any
Repeater Settings WPS:	Oisabled	O Enabled
WPS Status:	Unconfigured	
Advanced Settings Self-PIN Number:	38923937	Regenerate PIN & Apply
WPS Push Button Configuration:	start PBC	
Firewall Management Client PIN Number:		Start PIN
WPS log:		

WPS : To enable or disable WPS function. The default is "disable".

Self -PIN Number: The effective key generated by AP automatically.

Push-Button Configuration: Provide two ways: PBC (Push-Button Configuration) and PIN code.

PBC: Select the PBC or press the RST/WPS button on the front panel of the device for about one second (Press the button for about one second and WPS indicator will be blinking for 2 minutes, which means the WPS is enabled. During the blinking time, you can enable another device to implement the WPS/PBC negotiation between them. Two minutes later, the WPS indicator will be off, which means the WPS connection is completed. If more clients are added, repeat the above steps. At present, the WPS supports up to 32 clients access.)

Client PIN Number: If this option is enabled, you need to enter a wireless client's PIN code in the field and keep the same code in the WPS client.

4.3 TCP/IP Setting

4.3.1 LAN Status

EVOLVE							
 WR153ND System Status Setup Wizard Operation Mode Wireless TCP/IP LAN Status WAN Status 		LAN S	tatus				
	LAN Statu	IP Address:	192.168.1.1				
		Subnet Mask:	255.255.255.0				
LAN Interface	Default Gateway:						
WAN Interface	DHCP Server:						
🖬 🧰 Firewall 🖬 🔤 Management		DHCP Range:					
		MAC Address:					
	DHCP O	lient List			Refresh		
		IP Address		MAC Address	Time Expired(sec)		
	1	192.168.1.2		bc:ae:c5:dd:8b:c1	84311		

This page shows the current status and some basic settings of the device. you can check system Information, LAN Interface Information

MAC Address - the physical address of the router, as seen from the LAN. The value can't be changed.

IP Address - Enter the IP address of your router in dotted-decimal notation (factory default: 192.168.0.1).

Subnet Mask- An address code that determines the size of the network. Normally use 255.255.255.0 as the subnet mask.

DHCP: You can select None, Client, Serve. The router is set up by default as a DHCP (Dynamic Host Configuration Protocol) server, which provides the TCP/IP configuration for all the PCs that are connected to the router on the LAN.

DHCP Client Range: This field specifies the first of the addresses in the IP address pool.

4.3.2 WAN Status

WR153ND System Status	WAN S	totus
Setup Wizard	WAINS	latus
Departion Mode		
TCP/IP		
LAN Status	WAN Status	
WAN Status	Attain IP Protocol:	(DHCP) -Disconnected
LAN Interface	IP Address:	0.0.0.0
	Subnet Mask:	0.0.0.0
n 🖻 Management	Default Gateway:	0.0.0.0
	DNS:	
	MAC Address:	78:44:76:12:94:b3
		Refresh

This page shows the current status and some basic settings of the device. you can check system Information, WAN Interface Information.

MAC Address - the physical address of the router, as seen from the LAN. The value can't be changed.

IP Address - Enter the IP address of your router in dotted-decimal notation (factory default: 192.168.0.1).

Subnet Mask- An address code that determines the size of the network. Normally use 255.255.255.0 as the subnet mask.

4.3.3 LAN Interface Setup

WR153ND System Status Coperation Mode Wrieless	X LAN	Interface	e Setup	
	This page is used to config Access Point. Here you ma			h connects to the LAN port of your
LAN Status	Access Found Here you ma	y change the setting for i	r address, subtiet in	isk, DHOF, etc
LAN Interface	IP Addr	ess: 192 168 1	1	
WAN Interface	Subnet Ma	ask: 255.255.255.	0	
Firewall	Default Gater	way: 192.168.1	254	
Management				Apply Changes Reset
	DHCP Ser	ver: ODisabled 🖲	Enabled	
	DHCP Client Rat	nge: 192-168-1	2 ~ 192-168-1	- 254
	Lease Time(s	ec): 86400		
				Apply Changes Reset
		Stati	c DHCP Setup	
	Delete	Static DHCP List	Add	IP-MAC List
			192-168-1 192.168.1.27	BC:AE:C5:DD:8B:C1

This page is used to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP address, subnet mask, DHCP, etc.

4.3.4 WAN Interface Setup

WR153ND System Status Setup Wizard Operation Mode	X WAN	Interf	ace Setup			
TCP/IP LAN Status WAN Status LAN Interface			Internet network which connects to the WAN port of ethod to static IP, DHCP, PPPoE or PPTP by click the i			
WAN Interface	WAN Access Type:	DHCP	~			
 Firewall Management 	MTU Size:	1492	(1400-1492) Bytes			
Management	Set DNS Manually	Set DNS Manually				
	DNS1:	: 0 0 0				
	DNS2: 0.0.0					
	Clone MAC Address:	00:00:00:	00 00 00			
	Fnable uPnP					
	Enable IGMP Proxy					
	Enable Ping Access on WA	IN				
	Enable Web Server Access	on WAN	Remote management port : 8080			
	🗹 Enable IPsec pass through	on VPN connec	tion			
	Enable PPTP pass through	on VPN connec	tion			
	Enable L2TP pass through	on VPN connec	tion			
	Disable 802.3az					

This page is used to configure the parameters for Internet network which connects to the WAN port of your Access Point. Here you can select the access method to static IP, DHCP, PPPoE or PPTP by click the item value of WAN Access type.

4.4 Firewall

4.4.1 IP/Port Filtering

153ND System Status Setup Wizard Operation Mode	IP/Por	rt Filteri	ng		
Vireless CP/IP Trewall IP/Port Filtering MAC Filtering	Entries in this table are used to re the Gateway. Use of such filters o through the Gateway. Use of such	an be helpful in secu	ring or restricting your l	local network. netwo	rk to Interne
URL Filtering	IP/Port Filtering	Disabled 🔽			
Port Forwarding	IP Address Range:	192-168-1	~192.168.1		
DMZ	Port Range:	-			
Management	Protocol:	TCP+UDP V			
	Comment:		-		
		1.00		Add	Cance
				Add	ouriour
		Current	Filter Table:	Add	Curro

Entries in this table are used to restrict certain types of data packets from your local network to

Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network.

IP/Port filtering: If you choose 'White list', only those clients whose IP addresses are in the list will be able to connect to your Access Point. When 'Blacklist' is selected, these IP Addresses on the list will not be able to connect the Access Point.

IP Address Range: input the IP address range for the rule

Port range: input the filter port, for example 20-220

Protocol: you can select both TCP and UDP

Current filter table: The list of port filter.

4.4.2 MAC Filtering

EVDLVE			
WR153ND System Status Setup Wizard Operation Mode Wireless TCP/IP Firewall	Entries in this table are used to re	Filtering strict certain types of data packets from your l an be helpful in securing or restricting your lo	
MAC Filtering	MAC Filtering	Disabled 💌	
Port Forwarding	MAC Address: Comment:	Scan M.	AC Address
🖬 🦰 Management			Add Cancel
		Current Filter Table:	
	MAC Address	Comment	Delete

Entries in this table are used to restrict certain types of data packets from your local network to Internet through the Gateway. Use of such filters can be helpful in securing or restricting your local network

MAC Filtering: If you choose 'White list', only those clients whose MAC addresses are in the list will be able to connect to your Access Point. When 'Blacklist' is selected, these MAC Addresses on the list will not be able to connect the Access Point.

MAC Address: type the MAC Address, for example: 00:E0:4C:3F:2D:C5.

Current Filter table: The list of MAC filter.

4.4.3 Port Forwarding

EVOLVE	
WR153ND System Status Setup Wizard Operation Mode Wireless	orwarding
Entries in this table allow you to a firewall. The se settings	automatically redirect common network services to a specific machine behind are only necessary if you wish to host some sort of server like a web server or etwork behind your Gateway's NAT firewall.
URL Filtering Port Forwarding	Disabled Enabled
Port Forwarding IP Address:	192.168.1 . Local Port Range:
DMZ Protocol:	TCP+UDP V Wan Port Range:
Management Comment:	
	Add Cancel
	Current Filter Table:
IP Address Local Po	rt Range Wan Port Range Protocol Comment

Entries in this table allow you to automatically redirect common network services to a specific machine behind the NAT firewall. These settings are only necessary if you wish to host some sort of server like a web server or mail server on the private local network behind your Gateway's NAT firewall.

Port Forwarding: select it to Enable

IP Address: The IP Address of the PC running the service application

Protocol - The protocol used for this application, either **TCP**, **UDP**, or **both** (all protocols supported by the router).

Port Range- The numbers of External Ports. You can type a service port or a range of service ports (the format is XXX – YYY, XXX is Start port, YYY is End port).

Current Port Forward Table: port forward services already list.

4.4.4 URL Filtering

EVOLVE		
WR153ND System Status Setup Wizard Operation Mode	URL Filtering	
□	URL filter is used to deny LAN users from accessing the internet. Block those URLs w listed below.	which contain keywords
MAC Filtering	URL Filtering Disabled 🗸	
URL Filtering	URI Address:	
Port Forwarding DMZ Management		Add Cancel
	Current Filter Table:	
	URI Address	Delete

URL filter is used to deny LAN users from accessing the internet. Block those URLs which contain keywords listed below.

URL Filtering : If you choose 'White list', only those URL Addresses are in the list will be able to connect to your Access Point. When 'Blacklist' is selected, these URL Addresses on the list will not be able to connect the Access Point.

URL Address: Input the URL address for the rule, Click apply changes.

4.4.5 DMZ

I53ND System Status Setup Wizard Deperation Mode	DMZ		
Vireless			
	arized Zone is used to provide Inter		ficing unauthorized access to its loca
ing main			to Internet traffic, such as Web (HTT
	twork. Typically, the DMZ host con TP servers, SMTP (e-mail) servers a		to Internet traffic, such as Web (HTI
IP/Port Filtering servers, F	TP servers, SMTP (e-mail) servers a		to Internet traffic, such as Web (HTI
IP/Port Filtering servers, F MAC Filtering URL Filtering Ena Port Forwarding Ena	TP servers, SMTP (e-mail) servers a		to Internet traffic, such as Web (HTI
IP/Port Filtering servers, F MAC Filtering URL Filtering Ena Port Forwarding DMZ	TP servers, SMTP (e-mail) servers a	and DNS servers.	to Internet traffic, such as Web (HTI
IP/Port Filtering servers, F MAC Filtering URL Filtering Ena Port Forwarding Ena	TP servers, SMTP (e-mail) servers a	and DNS servers.	to Internet traffic, such as Web (HTI Apply Changes Can

The DMZ host feature allows one local host to be exposed to the Internet for a special-purpose service such as Internet gaming or videoconferencing. DMZ host forwards all the ports at the same time. Any PC whose port is being forwarded must have its DHCP client function disabled and should have a new static IP Address assigned to it because its IP Address may change when using the DHCP function.

DMZ Enable: Select it, DMZ can be edit..

DMZ Host IP Address: input IP Address. for example 192.168.1.34.

Click apply changes, complete set DMZ.

4.5 Management

4.5.1 QOS

WR153ND System Status Setup Wizard Operation Mode	QoS					
	QoS:	Disabled	OEna	abled		
🗉 🧰 Firewall		UP Link:	512	Range:(32-102400	Kbps	
Management I QoS	The Bandwidth provided by ISP:	Down Link:	512	Range:(32-102400		
Traffic Statistics DDNS Time Zone Setting Denial-of-Service		QoS Rule Setti	ings		Apply C	hanges
Log	IP Address Range:	192-168-1	~ 19:	2.168.1		
Upgrade Firmware	O MAC Address:			Scan MAC	Address	
Save/Reload Settings	Mode:	Share total bandwidth with all IP addresses.				
Password	Mode:	Assign bandwidth for each IP address				
	Bandwidth:	UP Link:	0	Kbps		
		Down Link:	0	Kbps		
	Comment					
					Add	Cancel
		Current QoS Rule	es Table			
	IP Address Range MAC Address	Mode		oLink DownLin adwidth Bandwidt		Delete

Note: If you add any QoS rules, the DoS function will have no effect.

This page is used to help users configure the parameters of QoS.

The Maximum Bandwidth provided by ISP----Indicate the network max bandwidth for up and down data stream

Direction----Direction of data stream, Up stream means data go out the LAN, Downstream means go in the LAN

IP Address Range----The IP address of the PC in LAN

Mini. Rate & Max. Rate----The minimum & maximum rate you assign to the IP

Bandwidth sharing----The way to share bandwidth

Enable----Enable or disable this rule

4.5.2 DDNS Setting

EVOLVE			
WR153ND System Status Setup Wizard Operation Mode Wireless TCP/IP Firewall			anging, internet domain name (an URL) to go
QoS	Enabled DDNS		
Traffic Statistics	Service Provider:	TZO	
DDNS Time Zone Setting	Domain Name:	host.dvndns.ora]
Denial-of-Service	User Name/Email:		
	Password/Key:]
Upgrade Firmware Save/Reload Settings Password	Note: For IZO, you can have a 30 day For DynDNS, you can create yo		our TZO account in control panel Apply Changes Cancel

Dynamic DNS is a service, that provides you with a valid, unchanging, internet domain name (an URL) to go with that (possibly ever changing) IP-address. DDNS. lets you assign a fixed host and domain name to a dynamic Internet IP Address. It is useful when you are hosting your own website, FTP server, or other server behind the router. Before using this feature, you need to sign up for DDNS service providers such as <u>www.DynDNS.org</u> or <u>www.TZO.com</u>. The Dynamic DNS client service provider will give you a password or key.

To set up for DDNS, follow these instructions:

- 1. Type your Service Provider.
- 2. Type the User Name for your DDNS account.
- 3. Type the **Password** for your DDNS account.

4. **Domain Name -** the domain names are displayed here. Click **Apply Changes** to logout the DDNS service.

4.5.3 Time Zone Setting

EVOLVE		
WR153ND System Status Setup Wizard Operation Mode Wireless TCP/IP		e Zone Setting
= 🚍 Management	Current Time:	2011-03-19 09:16:04
QoS Traffic Statistics	Time Zone Select:	Sync with host
DDNS	Time Lone Select.	(GMT+01:00)Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna 💌
Denial-of-Service		Enable NTP client update
		Automatically Adjust Daylight Saving
Upgrade Firmware	NTP Server:	192.5.41.41 - North America
Save/Reload Settings		O 0.0.0 (Manual IP Setting)
Password		Apply Changes Cancel Refresh

You can maintain the system time by synchronizing with a public time server over the Internet.

Current time: type the date and time.

Time Zone Select: Select your local time zone from this pull down list.

Enable NTP client update: select it, you can get the time from NTP.

NTP server: select a server from list.

Click the Apply changes get the time from Internet if you have connected to Internet.

4.5.4 Denial of Service

/R153ND System Status Setup Wizard Operation Mode Wireless	Denial of Serv	ice	
TCP/IP	A DoS(denial-of-service) attack is characterized by a	n explicit attempt by hack	ers to prevent legitimate users of
Firewall	a service from using that service.		
Management QoS	Enable DoS Prevention	Sele	ct All
Traffic Statistics		Sele	Packets/Second
DDNS	Whole System Flood: SYN	110	Packets/Second Packets/Second
Time Zone Setting	Whole System Flood: FIN	110	
Denial-of-Service	Whole System Flood: UDP	100	Packets/Second
Log	Whole System Flood: ICMP	100	Packets/Second
Upgrade Firmware	Per-Source IP Flood: SYN	100	Packets/Second
Save/Reload Settings	Per-Source IP Flood: FIN	100	Packets/Second
	Per-Source IP Flood: UDP	100	Packets/Second
	Per-Source IP Flood: ICMP	1000	Packets/Second
	Enable Source IP Blocking	100	Block time(sec)
	TCP/UDP PortScan	Low 🛩	Sensitivity
	ICMP Smurf		Tr.
	IP Land		
	IP Spoof		

A "denial-of-service" (DoS) attack is characterized by an explicit attempt by hackers to prevent legitimate users of a service from using that service.

Enable DoS Prevention: select it, you can modify DOS Prevention.

Enable Source IP Blocking: you can input source IP Blocking time

Click apply changes, DoS take effect.

4.5.5 Log



This page can be used to set remote log server and show the system log.

4.5.6 Upgrade Firmware

EVDLVE	
WR153ND System Status Setup Wizard Operation Mode	de Firmware
Firmware Version:	EVOLVE-WR153ND-IP04166-SPI-GW-1T1R-V1.2.2
🕂 🦲 Firewall Build Time:	2012.02.17-10:59+0800
Management Select File: GoS Traffic Statistics DDNS	Browse Upgrade
Time Zone Setting INote: do not power off the device du Denial-of-Service do not power off the device du Denial-of-Service Log Degrade Firmware Save/Reload Settings Password	ring the upload because it may crash the system!!

This page allows you upgrade the Access Point firmware to new version. Please note, do not power off the device during the upload because it may crash the system

4.5.7 Save/Reload settings

EVDLVE		
/R153ND System Status Setup Wizard Operation Mode Wireless	Save/Relo	oad Settings
		ngs to a file or reload the settings from the file which was saved
Firewall	previously. Besides, you could reset the	e current configuration to factory default.
🛿 Management		
📕 QoS		
📲 Traffic Statistics	Save Settings	Save Settings to File
DDNS	Browse	Load Settings from File
📑 Time Zone Setting	Upload Settings	
Denial-of-Service		
🖆 Log	Reset Settings	Reset Settings to Default
🖣 Upgrade Firmware	System Reboot	
📑 Save/Reload Settings		
📑 Password		

This page allows you save current settings to a file or reload the settings from the file which was saved previously. Besides, you could reset the current configuration to factory default.

4.5.8 Password setup

EVOLVE				
 ₩R153ND System Status Setup Wizard Operation Mode Wireless Wireless Status 	This page is used to set the account to	access the web server of Access Point. Empty user name and password		
Basic Settings	will disable the protection.			
Virtual AP Settings	User Name:			
WDS Settings	New Password:			
Advanced Settings	Confirmed Password:			
Access Control	Confirmed rassword:			
WPS				
		Apply Changes Cancel		
LAN Status				
WAN Status				
WAN Interface				
Management				
QoS				
Traffic Statistics				
DDNS				
Time Zone Setting				
Denial-of-Service				
E Llog				
Upgrade Firmware				

This page is used to set the account to access the web server of Access Point.