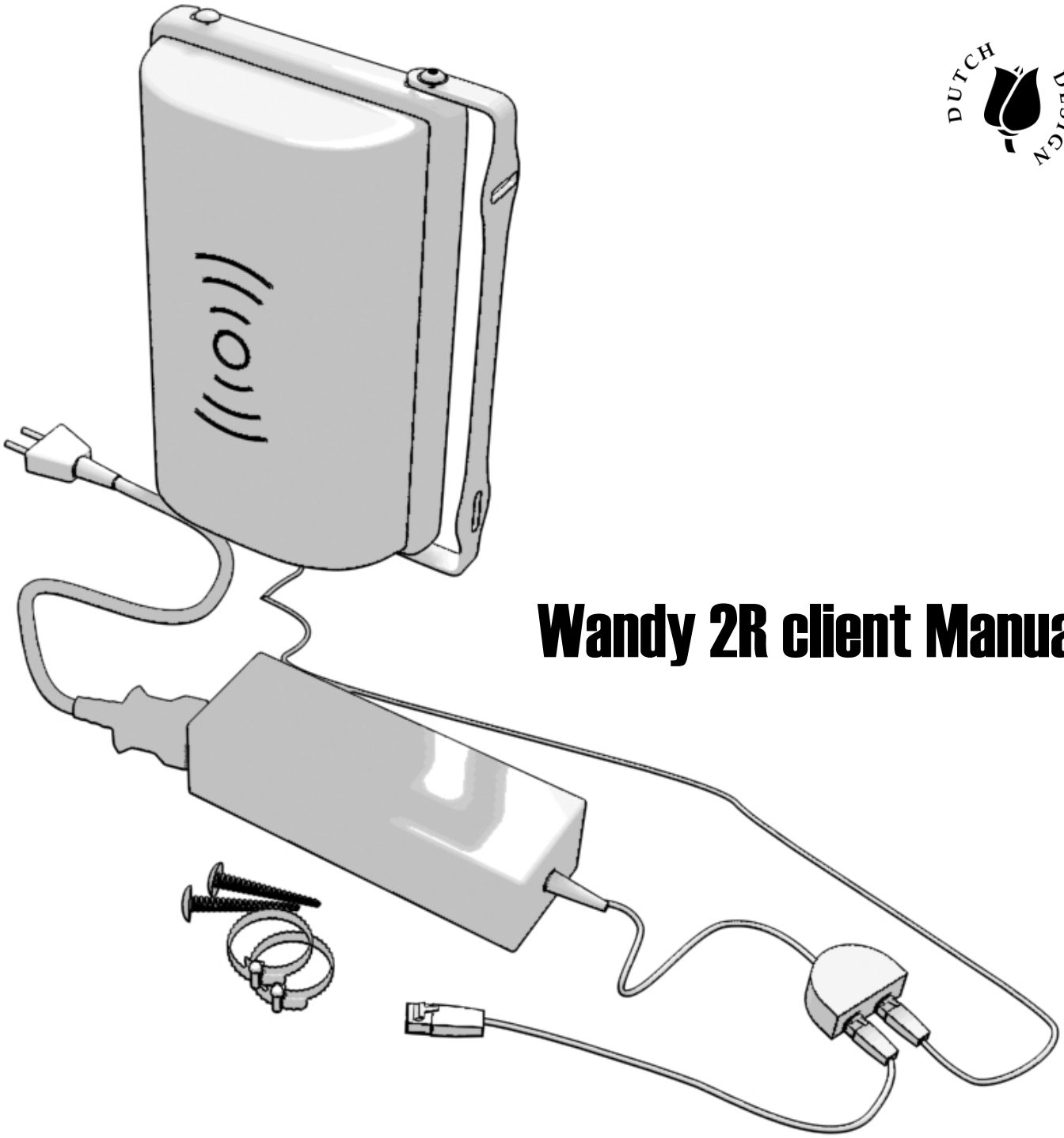


Wandy 2R client Manual

The Wandy unit is an “Active WiFi outdoor antenna”. The unit consist of an antenna with high gain and a WiFi-Ethernet-client. The slim line enclosure is compact and made of all weather ABS for years of uninterruptible operation. Long distance connections are easy with the Wandy 2R. Simple installation with Power Over Ethernet. Build in router function provides extra security for internet connections. Wandy 2R for fast, stable and long range WiFi connections.

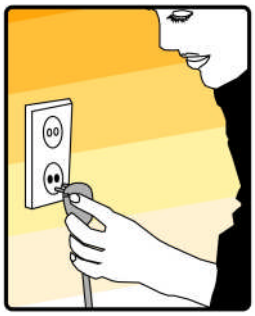
Version 0.91

Table of Contents

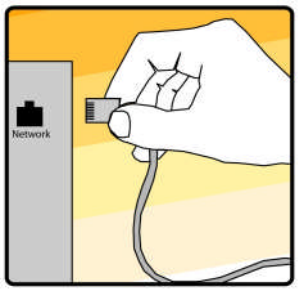
1 Preface

Thank you very much for buying the Wandy 2R unit. With this unit you do have a powerful combination of electronics and antenna technology. Long distance outdoor WiFi connections are easily made by the simple installation. Optimal performance is possible by free line of signed between the Wandy2R and the access point.

The setup procedure is



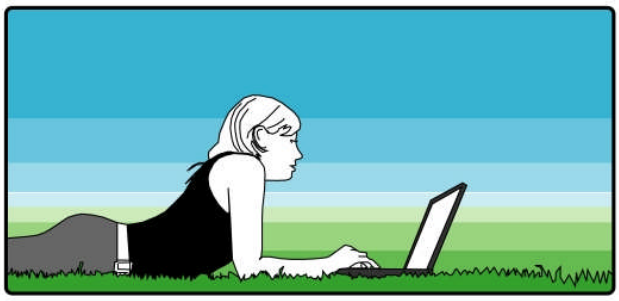
Connect the power to the Wandy2R unit



Connect the PC to the Wandy 2R unit

Configure the Wandy2R for wireless network

Install Wandy2R outdoor

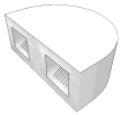


Enjoy years of uninterruptible use of the Wandy2R

- Connect the power to the Wandy 2R unit
- Connect the PC to the Wandy 2R unit
- Configure Wandy 2R for wireless network
- Install Wandy 2R outdoor
- Enjoy the years of uninterruptible use of the Wandy 2R

2 Packing List

Before you start to install the Wandy 2R, make sure the package contains the following items

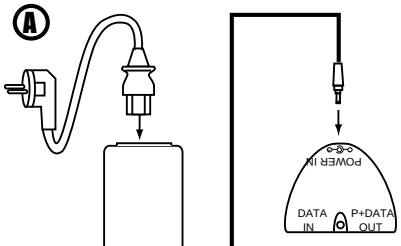
This package contains			Manual		Quick start
	Wandy2R unit		Power adapter		Wall mount plugs
	Mounting bracket		Power cable		Wall mount screws
	1M cross cable		Pole mount hardware		Mounting bracket bolts
	POE inserter unit		Inbus tool		

If anything is missing contact your supplier of the Wandy 2R

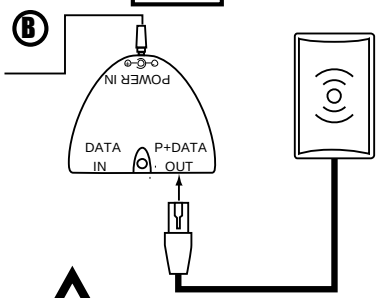
3 Configuration Wandy 2R

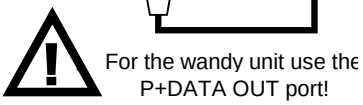
Before installing the Wandy 2R unit outside it is best to configure first the unit indoor.

Connect the power supply to the POE inserter unit.

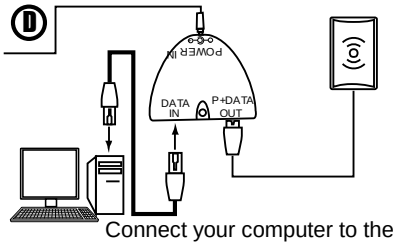


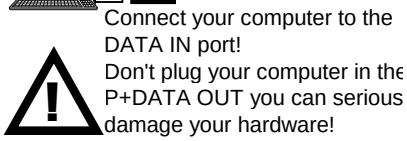
Connect the Wandy 2R unit to the POE inserter unit. Wait one minute to let the unit boot.



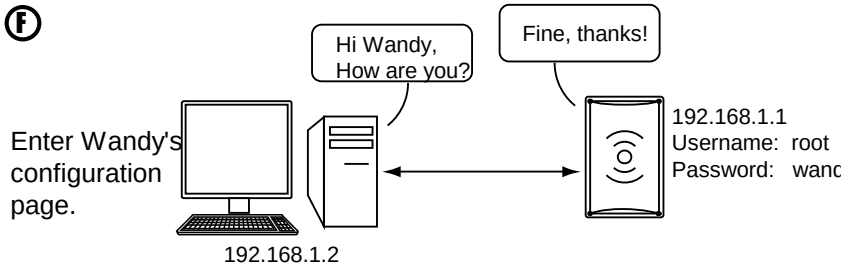


Connect the PC to the POE inserter unit.





Configure the wandy unit by the web interface

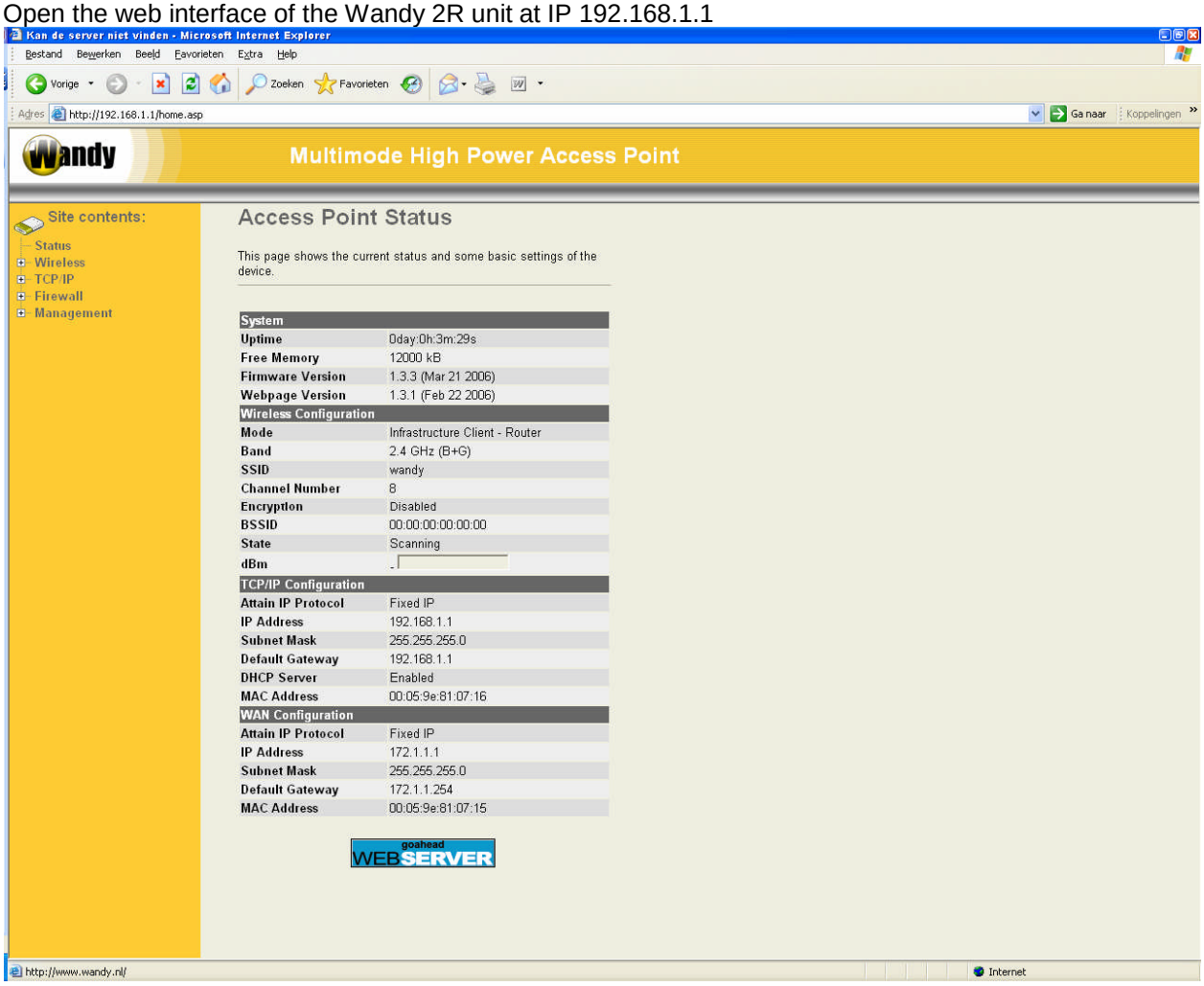


3.1 Wandy 2R in WISP mode

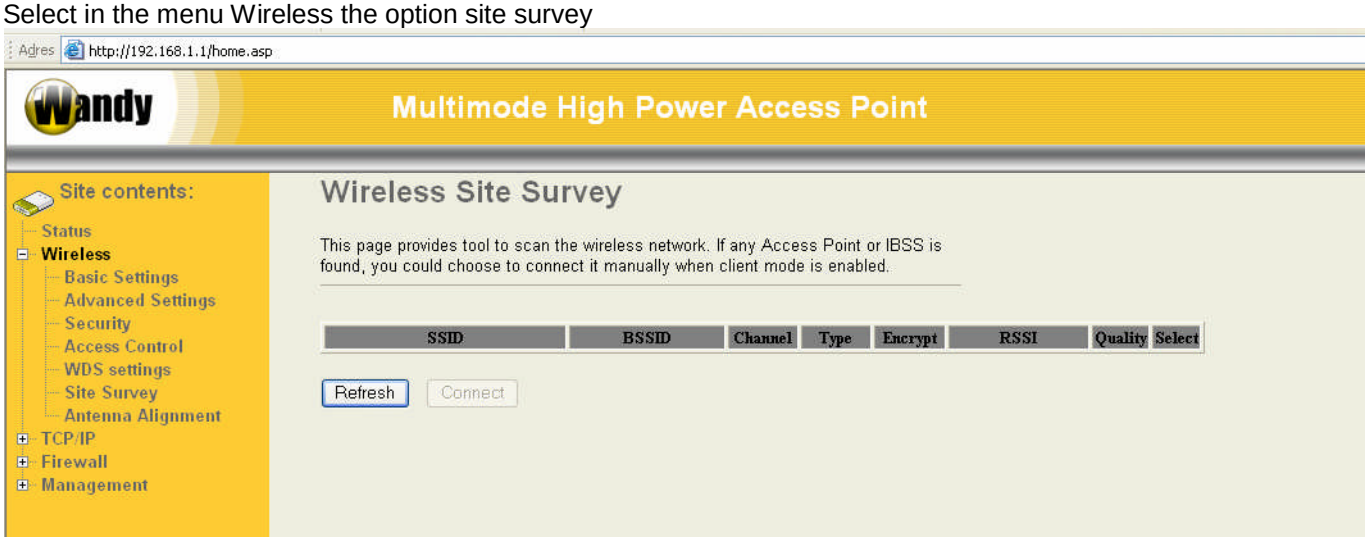
In this setup we will configure the default Wandy 2R unit to connect to an AP with SSID gamma1 and use the build in router function.

The default config of the Wandy 2R unit is WISP mode. The wireless interface is in WiFi client mode and connected to the Ethernet interface trough a router.
The default IP number if the Ethernet interface is 192.168.1.1

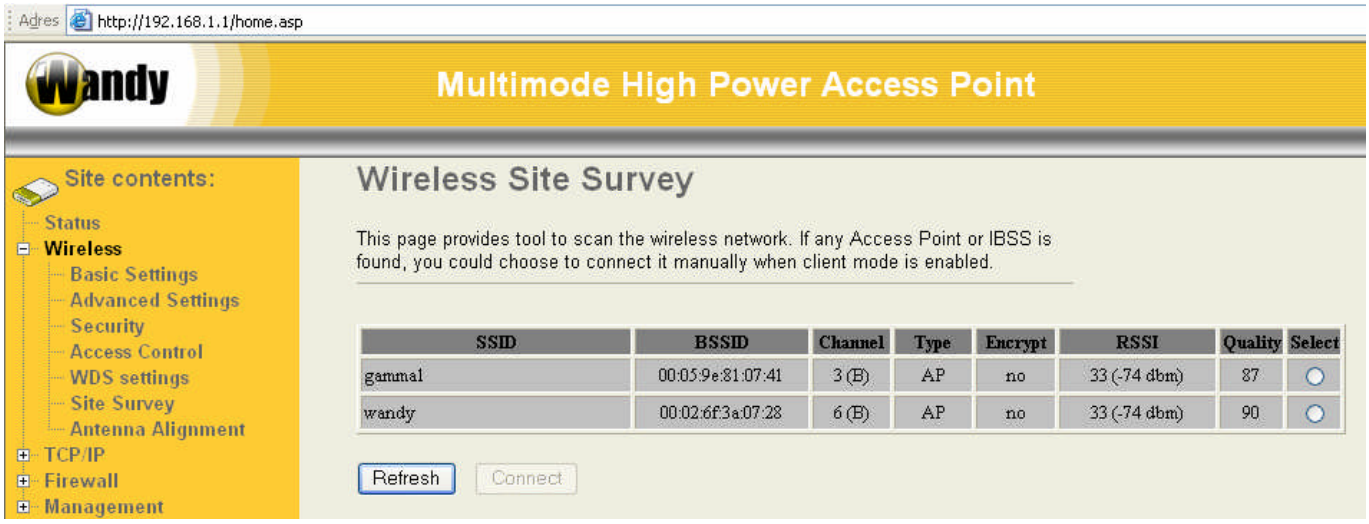
Open the web interface of the Wandy 2R unit at IP 192.168.1.1



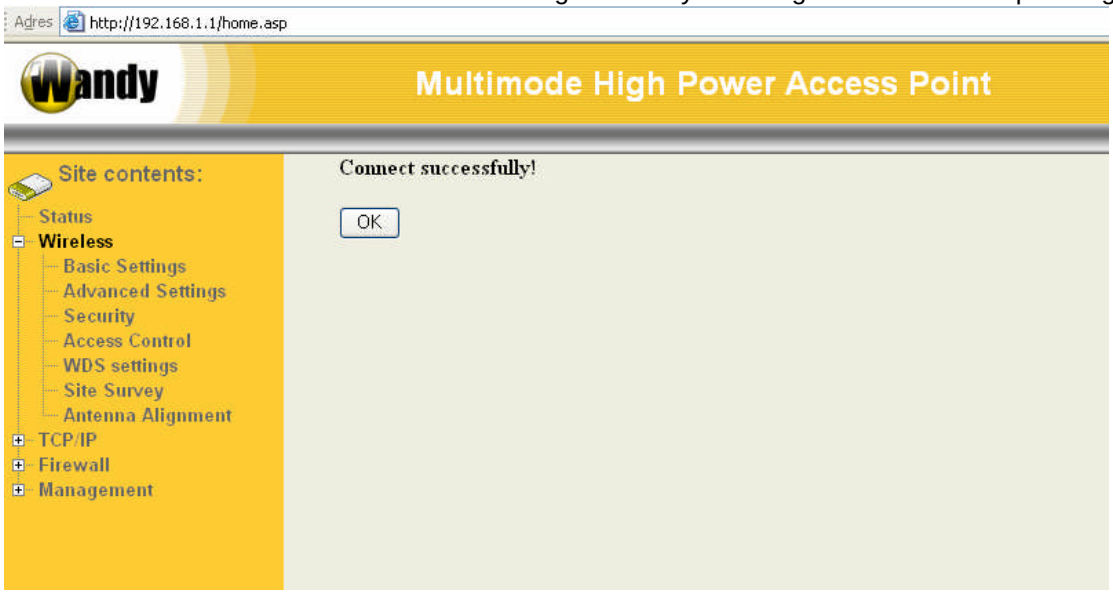
Select in the menu Wireless the option site survey



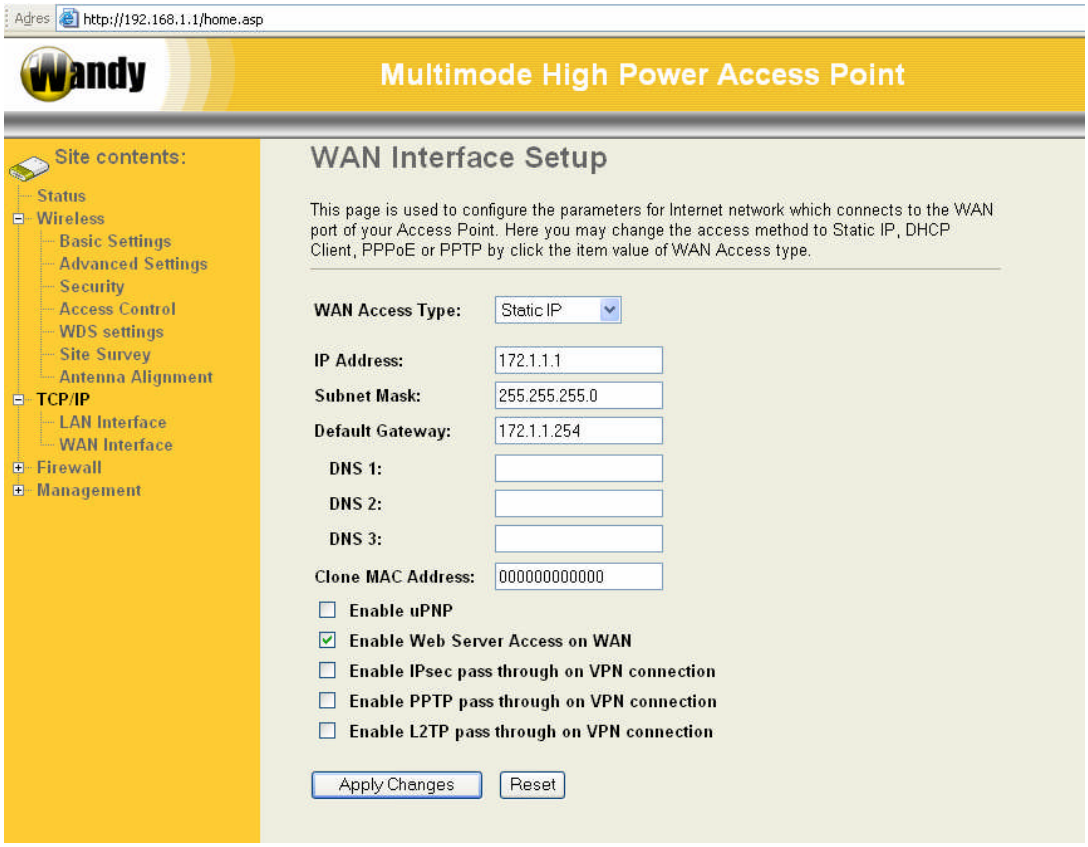
Press refresh to let the Wandy 2R unit make site survey



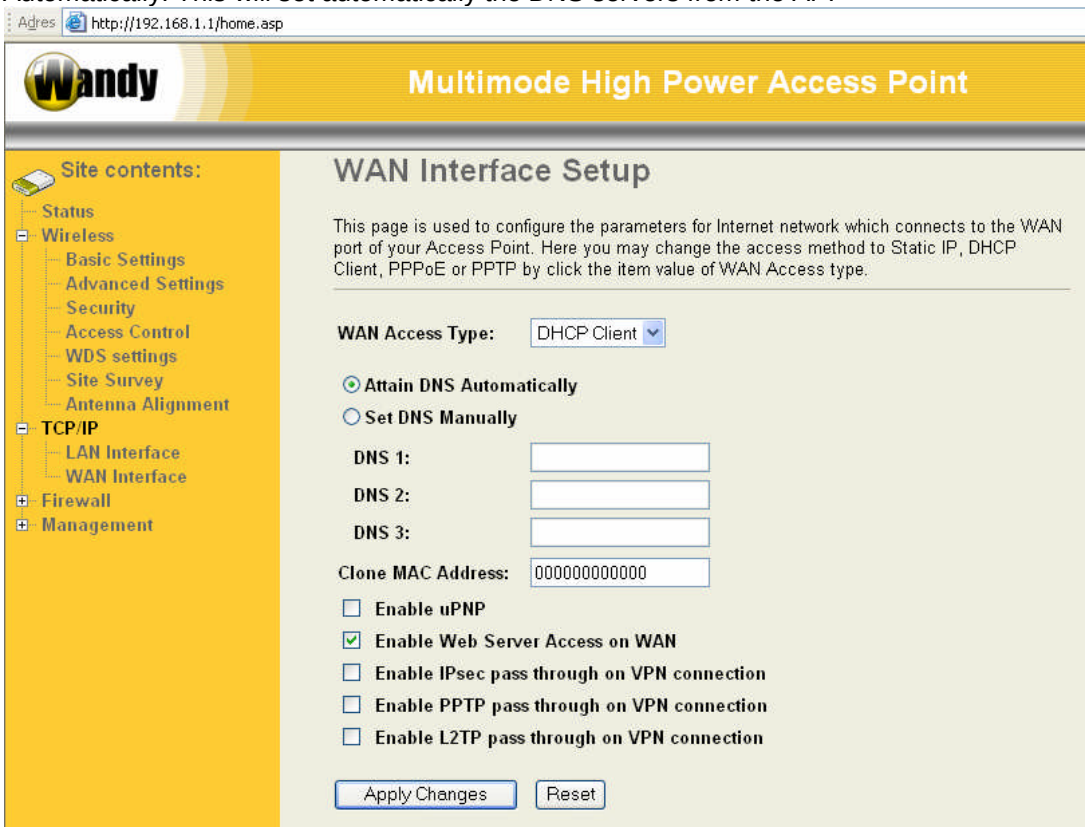
We connect to the wireless network with SSID gamma1 by selecting this network and pressing connect.



We now configure the Wandy 2R unit to get an IP address from the AP.
Open the menu TCP/IP and then WAN interface

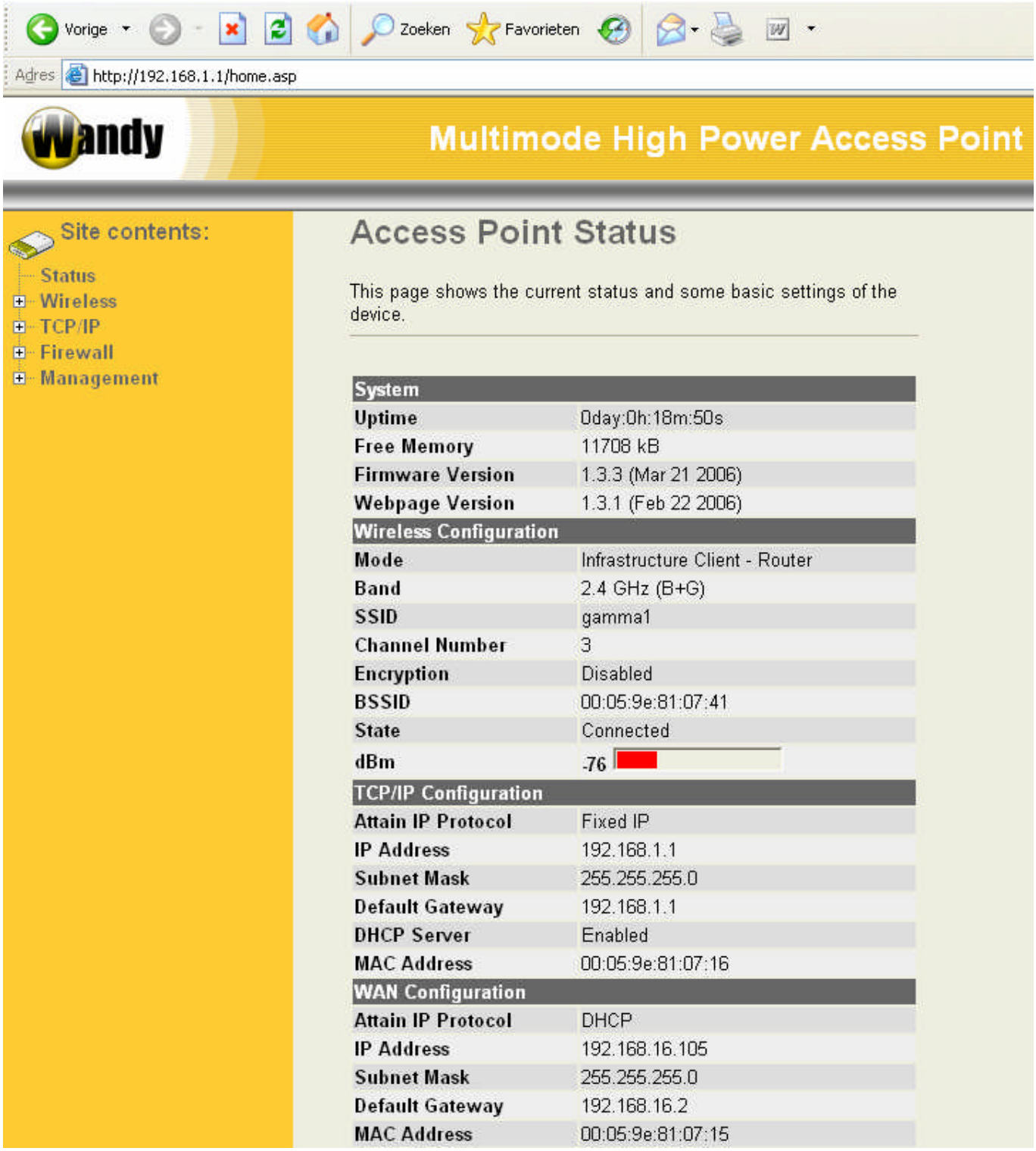


Change WAN access Type to DHCP client to get an IP address form the AP to the Wandy 2R. Set the Attain DNS Automatically. This will set automatically the DNS servers from the AP.



Press Apply Changes to make the setting effective

Click on status to see the current status of the unit



In the status screen we can see that the unit is connected to AP with SSID gamma1
The Wireless interface (WAN) does have IP number 192.168.16.105 with gateway 192.168.16.2
The LAN interface does have IP number 192.168.1.1 with a DHCP server enabled.
Signal strength is -76 dBm.

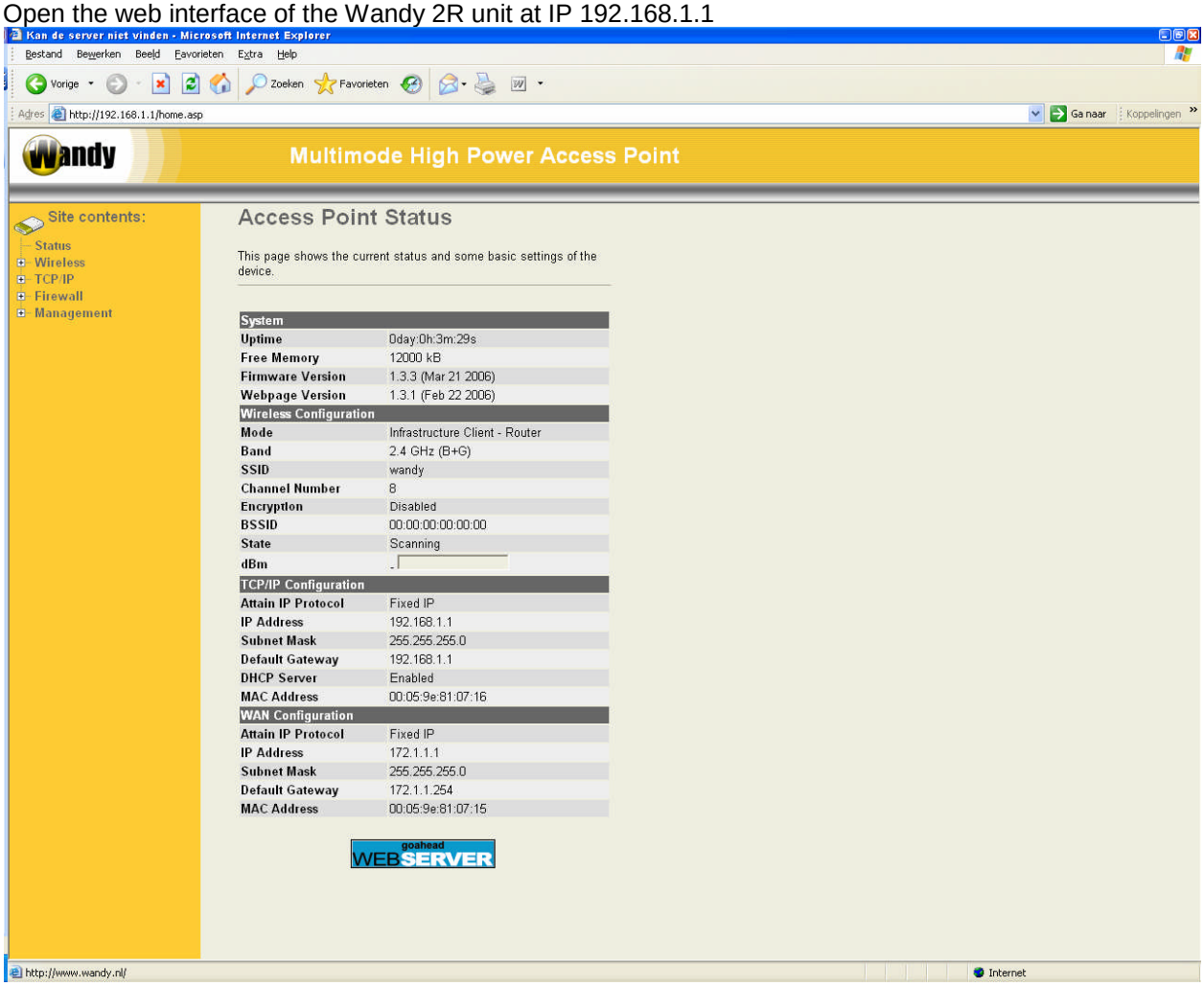
The Wandy 2R is connected to an access point and has a router between the wireless interface and the wired.

On the PC set the gateway to the wandy 2R unit 192.168.1.1 to complete the setup.

3.2 Wandy 2R in Bridge mode

In this setup we will configure the default Wandy 2R unit to connect to an AP with SSID gamma1 and make a transparent connection between the wireless interface and wired.

Open the web interface of the Wandy 2R unit at IP 192.168.1.1



First change the operation mode of the Wandy 2R into bridge mode

Select in management Operation Mode

4 Concept of the Wandy 2R radio hardware

The Wandy 2R has two interfaces

- Wireless interface
- Wired interface

These two interfaces are connected together with or without a router between them.

In bridge mode the wireless and Ethernet are directly connected. No routing or translating is done. In this mode the unit can be used as a transparent device. The Wandy 2R can be even in different IP range.

4.1 Wireless Interface

The wireless radio of the device can acts as the following roles.

AP (Access Point)
The wireless radio of device serves as communications “hub” for wireless clients and provides a connection to a wired LAN.

AP Client
This mode provides the capability to connect with the other AP using infrastructure/Ad-hoc networking types. With bridge operation mode, you can directly connect the wired Ethernet port to your PC and the device becomes a wireless adapter. And with WISP operation mode, you can connect the wired Ethernet port to a hub/switch and all the PCs connecting with hub/switch can share the same public IP address from your ISP.

WDS (Wireless Distribution System)
This mode serves as a wireless repeater, the device forwards the packets to another AP with WDS function. When this mode is selected, all the wireless clients can’ survey and connect to the device. The device only allows the WDS connection.

WDS+AP
This mode combines WDS plus AP modes, it not only allows WDS connections but also the wireless clients can survey and connect to the device.

4.2 Wireless to Wired connection

The Wireless and Wired interface can be connected together with or without a router function.

Router
The wired Ethernet (WAN) port is used to connect with ADSL/Cable modem and the wireless NIC is used for your private WLAN. The NAT is existed between the 2 NIC and all the wireless clients share the same public IP address through the WAN port to ISP. The default IP configuration for WAN port is static IP. You can access the web server of device through the default WAN IP address 172.1.1.1 and modify the setting base on your ISP requirement.

Bridge
The wired Ethernet and wireless NIC are bridged together. Once the mode is selected, all the WAN related functions will be disabled.

WISP (Wireless ISP)
This mode can let you access the AP of your wireless ISP and share the same public IP address form your ISP to the PCs connecting with the wired Ethernet port of the device. To use this mode, first you must set the wireless radio to be client mode and connect to the AP of your ISP then you can configure the WAN IP configuration to meet your ISP requirement.

The following table shows the supporting combination of operation and wireless radio modes.

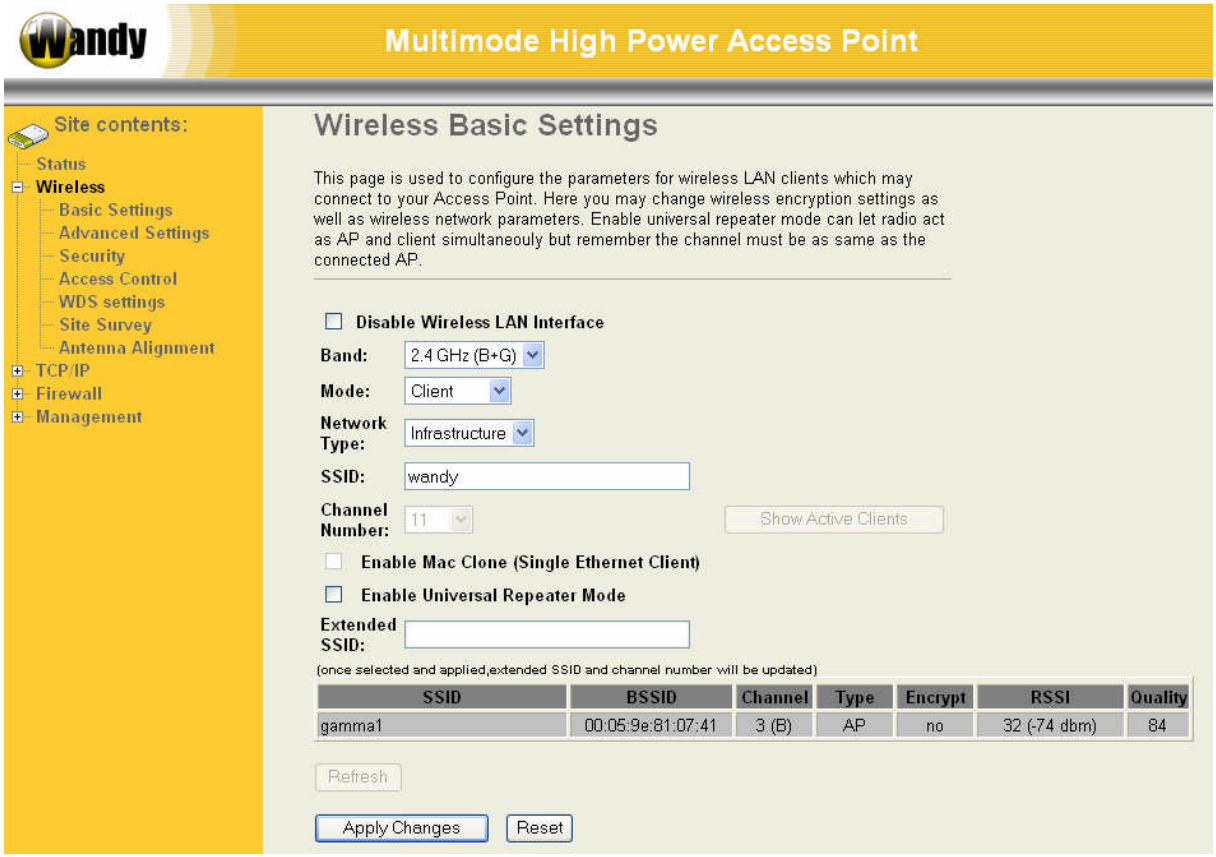
	Bridge	Router	WISP
AP	Yes	Yes	No

WDS	Yes	Yes	No
Client	Yes	No	Yes
AP+WDS	Yes	Yes	No

5 Wireless

In this menu it will be possible to configure the device for all the wireless settings. To change to operation mode go the menu Management.

5.1 Basic settings



Disable Wireless LAN Interface

Disable the wireless interface of device

Band

The device supports 2.4GHz(B), 2.4GHz(G) and 2.4GHz(B+G) mixed modes. Mode:
The radio of device supports different modes as following:

Mode:

AP

The radio of device acts as an Access Point to serves all wireless clients to join a wireless local network.

Client

Support Infrastructure and Ad-hoc network types to act as a wireless adapter.

WDS

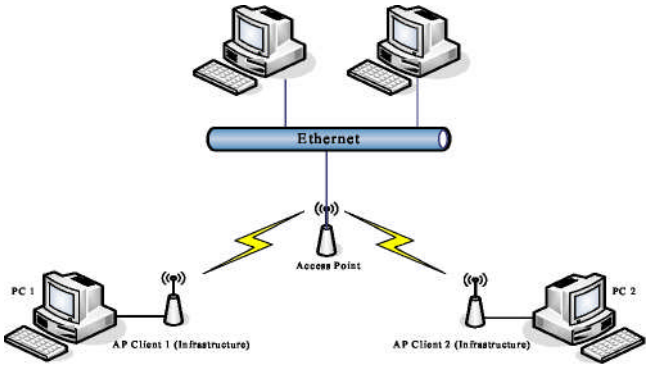
Wireless Distribution System, this mode serves as a wireless repeater, only devices with WDS function supported can connect to it, all the wireless clients can't survey and connect the device when the mode is selected.

AP+WDS

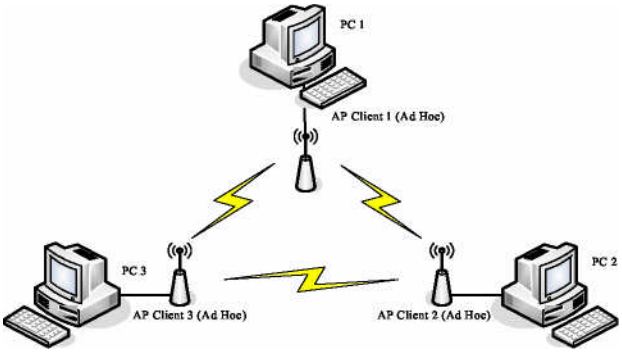
Support both AP and WDS functions, the wireless clients and devices with WDS function supported can survey and connect to it.

Network type:

Infrastructure:
This type requires the presence of 802.11b/g Access Point. All communication is done via the Access Point.



Ad Hoc:
This type provides a peer-to-peer communication between wireless stations. All the communication is done from Client to Client without any Access Point involved. Ad Hoc networking must use the same SSID and channel for establishing the wireless connection.



Channel Number
The channel the unit will operate on. When set to “Auto”, the device will find the least-congested channel for use.

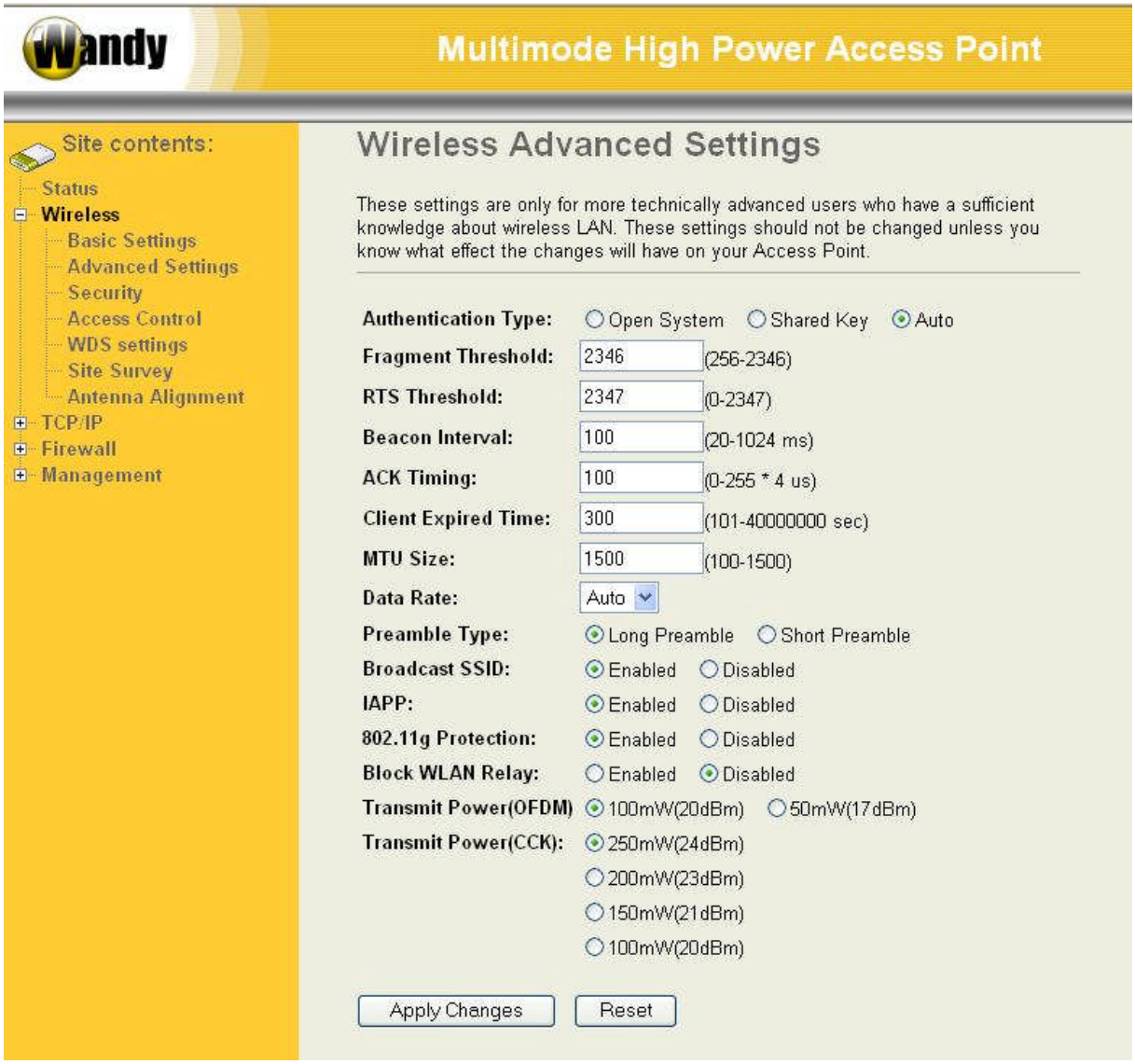
Enable Mac Clone (Single Ethernet Client)
The MAC address of the unit will be the MAC address of the PC connected to the Wandy 2R unit. This canb only be done in Client mode.

Enable Universal Repeater Mode
Universal repeater mode will make the Wandy 2R unit become client as well as AP on the same radio. In this mode it can repeater any vendor AP.

Extended SSID:
The SSID of the Universal repeater mode can be different from the AP the client is connected to.

5.2 Advanced settings

These settings are only for more technically advanced users who have sufficient knowledge about wireless LAN. These settings should not be changed unless you know what effect the changes will have on your device. The default setting is optimized for the normal operation. For specific application, setting configuration will required highly attention to reach optimistic condition.
Any unreasonable value change to default setting will reduce the throughput of the device.



Authentication Type
The device supports two Authentication Types “Open system” and “Shared Key”. When you select “Share Key”, you need to setup “WEP” key in “Security” page (See the next section). The default setting is “Auto”. The wireless client can associate with the device by using one of the two types.

Fragment Threshold
The fragmentation threshold determines the size at which packets are fragmented (sent as several pieces instead of as one block). Use a low setting in areas where communication is poor or where there is a great deal of radio interference. This function will help you to improve the network performance.

RTS Threshold
The RTS threshold determines the packet size at which the radio issues request to send (RTS) before sending the packet. A low RTS Threshold setting can be useful in areas where many client devices are associating with the device, or in areas where the clients are far apart and can detect only the device and not each other. You can enter a setting ranging from 0 to 2347 bytes.

ACK timing.
For long distance 802.11G it will be necessary to increase the ACK timing value. When operating at 802.11B the ACK timing value needs to be at least 100. For short distance 802.11G the value can be less.

Data Rate
The standard IEEE 802.11b/11g supports 1, 2, 5.5,11/6, 9, 12, 18, 24, 36, 48 and 56 Mbps data rates. You can

choose the rate that the device uses for data transmission. The default value is “auto”. The device will use the highest possible selected transmission rate.

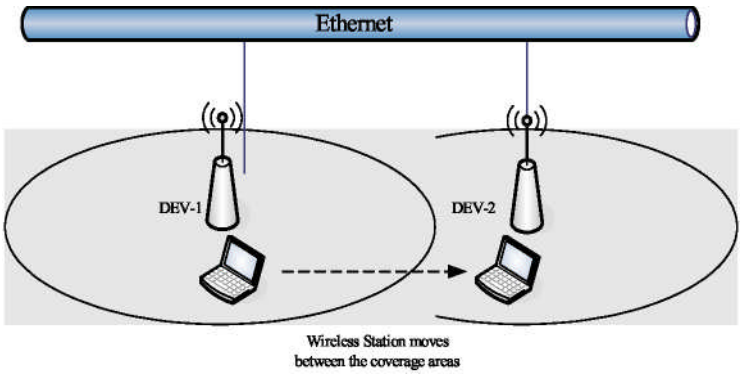
Beacon Interval
The beacon interval is the amount of time between access point beacons in microseconds. The default beacon interval is 100.

Broadcast SSID
Broadcasting the SSID will let your wireless clients find the device automatically. If you are building a public Wireless Network, disable this function can provide better security. Every wireless stations located within the coverage of the device must connect this device by manually configure the SSID in your client settings.

Int. Roaming
This function will let Wireless Stations roam among a network environment with multiple devices. Wireless Stations are able to switch from one device to another as they move between the coverage areas. Users can have more wireless working range. An example as the following figure
You should comply with the following instructions to roam among the wireless coverage areas.

For implementing the roaming function, the setting MUST comply the following two items.

1) All the devices must be in the same subnet network and the SSID must be the same.
2) If you use the 802.1 x authentication, you need to have the user profile in these devices for the roaming station.

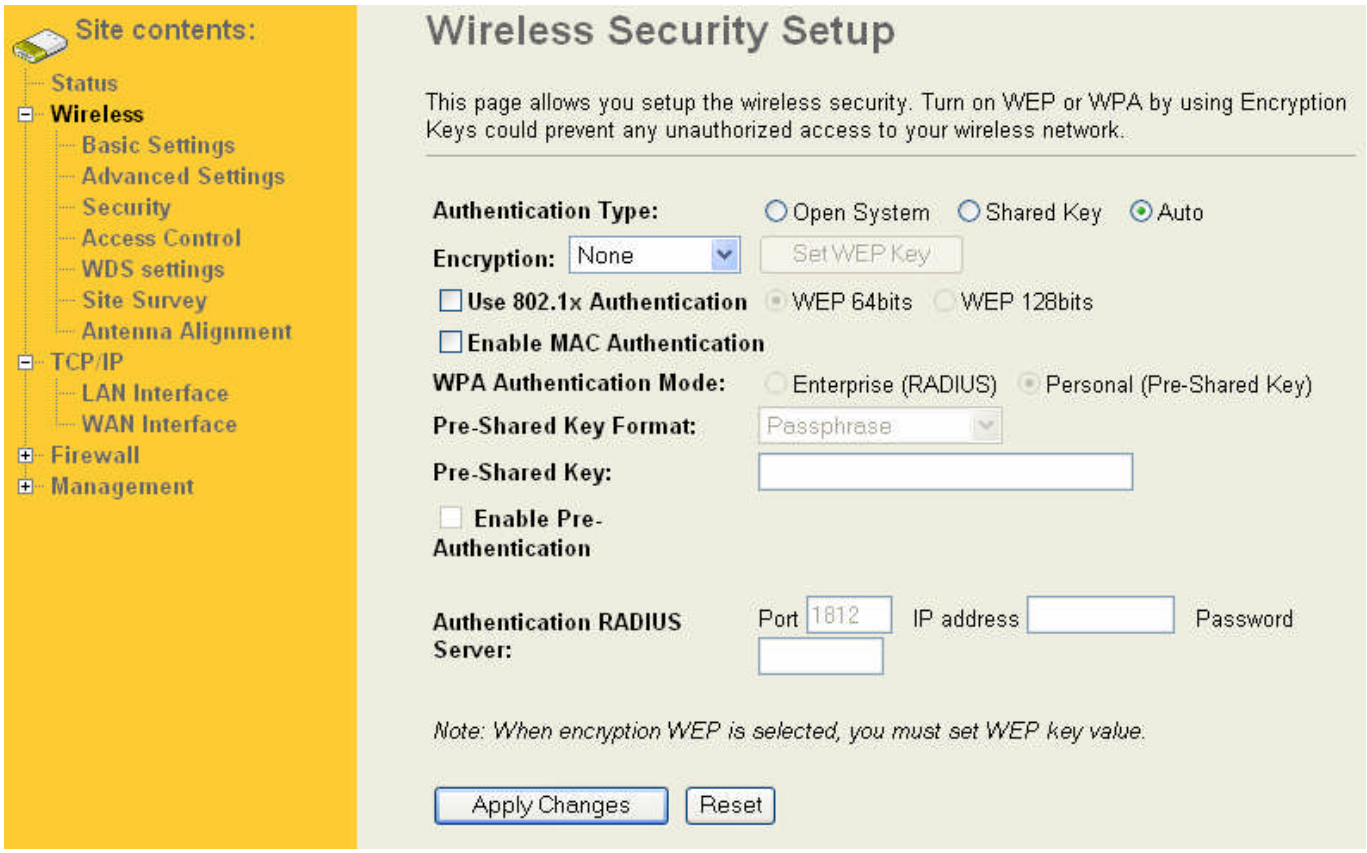


Block WLAN Relay (Isolate Client)
The device supports isolation function. If you are building a public Wireless Network, enable this function can provide better security. The device will block packets between wireless clients (relay). All the wireless clients connected to the device can’t see each other.

Transmit Power
The device supports four transmission output power levels 250, 200, 150 and 100mW for CCK (802.11b) mode and two transmission output power levels 100 and 50mW for OFDM (802.11g) mode. User can adjust the power level to change the coverage of the device. Every wireless stations located within the coverage of the device also needs to have the high power radio. Otherwise the wireless stations only can survey the device, but can’t establish connection with device.

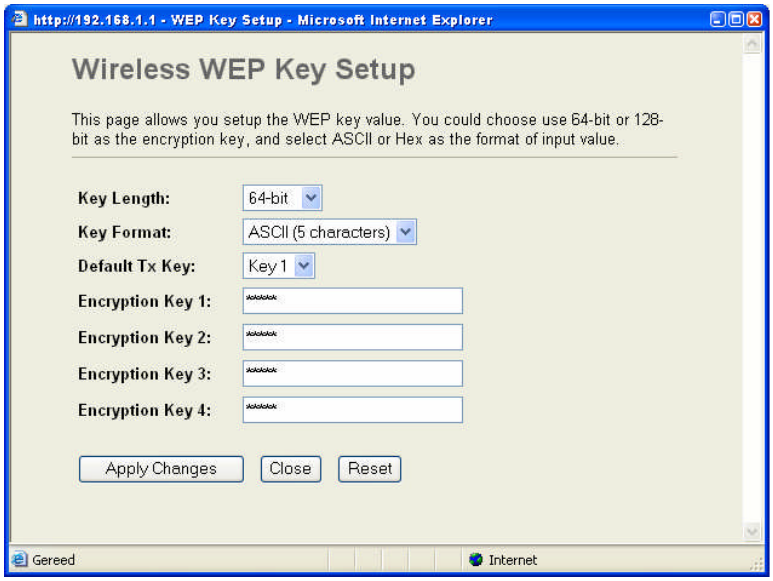
5.3 Security

This device provides complete wireless security function include WEP, 802.1x, WPA-TKIP, WPA2-AES and WPA2-Mixed in different mode (see the Security Support Table).
The default security setting of the encryption function is disabled. Choose your preferred security setting depending on what security function you need.



5.3.1 WEP Encryption Setting

Wired Equivalent Privacy (WEP) is implemented in this device to prevent unauthorized access to your wireless network. The WEP setting must be as same as each client in your wireless network. For more secure data transmission, you can change encryption type to “WEP” and click the “Set WEP Key” button to open the “Wireless WEP Key setup” page.



When you decide to use the WEP encryption to secure your WLAN, please refer to the following setting of the WEP encryption:

5.3.2 64-bit WEP Encryption

64-bit WEP keys are as same as the encryption method of 40-bit WEP. You can input 10 hexadecimal digits (0-9,

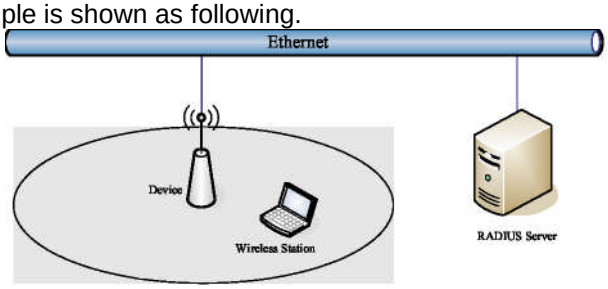
a-f or A-F) or 5 ACSII chars.
The Default Tx Key field decides which of the four keys you want to use in your WLAN environment.

5.3.3 128-bit WEP Encryption

128-bit WEP Encryption 128-bit WEP keys are as same as the encryption method of 104-bit WEP. You can input 26 hexadecimal digits (0-9, a-f or A-F) or 10 ACSII chars.
The Default Tx Key field decides which of the four keys you want to use in your WLAN environment.

5.3.4 WEP Encryption with 802.1x Setting

The device supports external RADIUS Server that can secure networks against unauthorized access. If you use the WEP encryption, you can also use the RADIUS server to check the admission of the users. By this way every user must use a valid account before accessing the Wireless LAN and requires a RADIUS or other authentication server on the network. An example is shown as following.



You should choose WEP 64 or 128 bit encryption to fit with your network environment first. Then add user accounts and the target device to the RADIUS server. In the device , you need to specify the IP address Password (Shared Secret) and Port number of the target RADIUS server

5.3.5 WPA Encryption Setting

WPA feature provides a high level of assurance for end-users and administrators that their data will remain private and access to their network restricted to authorized users. You can choose the WPA encryption and select the Authentication Mode.

5.3.6 WPA Authentication Mode

This device supports two WPA modes. For personal user, you can use the Pre-shared Key to enhance your security setting. This mode requires only an access point and client station that supports WPA-PSK. For Enterprise, authentication is achieved via WPA RADIUS Server. You need a RADIUS or other authentication server on the network.

Enterprise (RADIUS):
When WPA Authentication mode is Enterprise (RADIUS), you have to add user accounts and the target device to the RADIUS Server. In the device , you need to specify the IP address~ Password (Shared Secret) and Port number of the target RADIUS server.

Pre-Share Key:
This mode requires only an access point and client station that supports WPA-PSK. The WPA-PSK settings include Key Format, Length and Value. They must be as same as each wireless client in your wireless network. When Key format is Passphrase, the key value should have 8~63 ACSII chars. When Key format is Hex, the key value should have 64 hexadecimal digits (0~9, a~f or A~F)

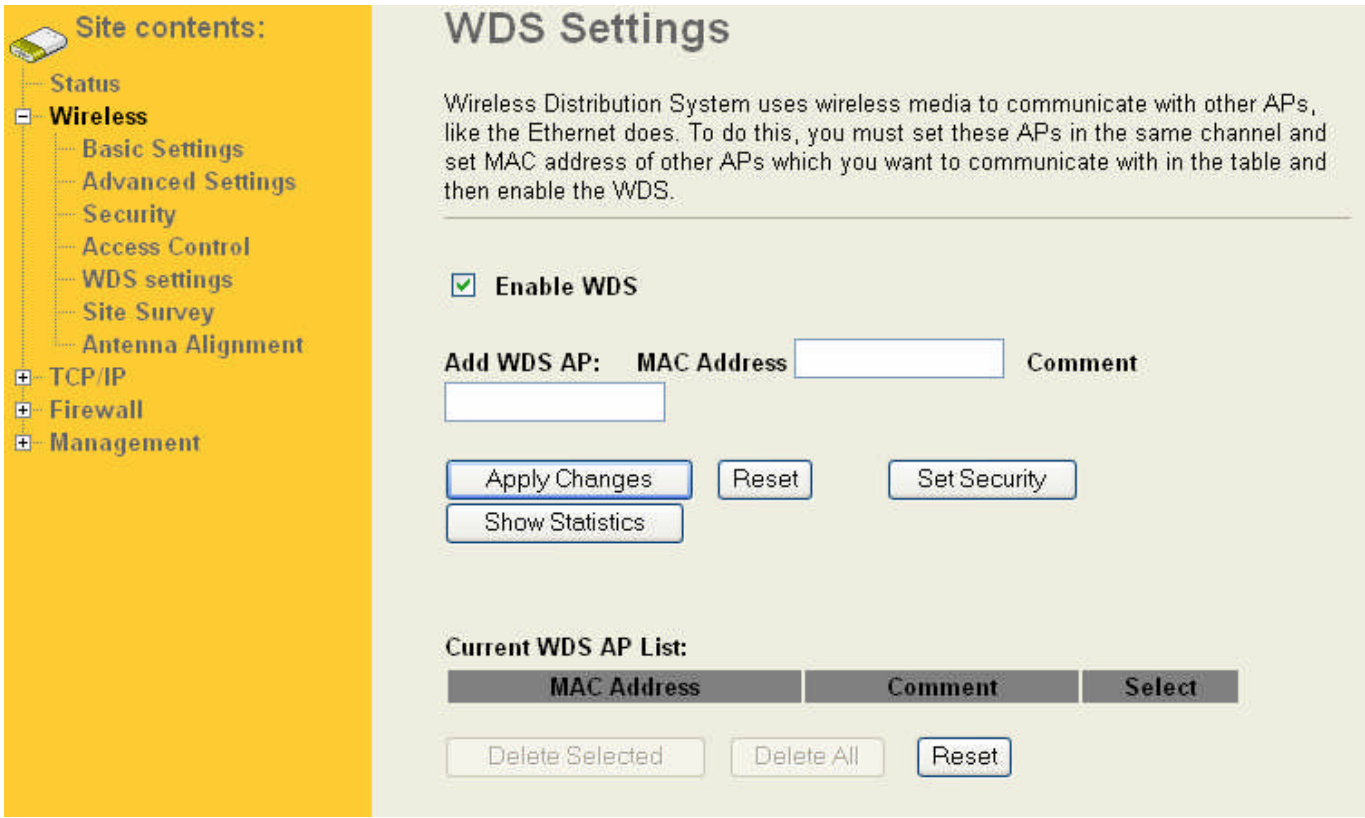
5.4 Access Control

Access Control provide the possibility to Allow or Deny connections to the Access point. The connections are filtered based on the MAC address of the Wifi devices that are “trying” to connect to the AP.

This mode is only available when the wireless radio is configured as an access point. Comment field provide the option of adding readable text to a MAC address to make recognition easier.

5.5 Configuring WDS

Wireless Distribution System (WDS) uses wireless media to communicate with the other devices, like the Ethernet does. This function allows one or more remote LANs connect with the local LAN. To do this, you must set these devices in the same channel and set MAC address of other devices you want to communicate with in the WDS AP List and then enable the WDS.



When you decide to use the WDS to extend your WLAN, please refer the following instructions for configuration.

- The bridging devices by WDS must use the same radio channel.
- When the WDS function is enabled, all wireless stations can't connect the device.
- If your network topology has a loop, you need to enable the 802.1d Spanning Tree function.
- You don't need to add all MAC address of devices existed in your network to WDS AP List. WDS AP List only needs to specify the MAC address of devices you need to directly connect to.
- The bandwidth of device is limited, to add more bridging devices will split the more bandwidth to every bridging device.

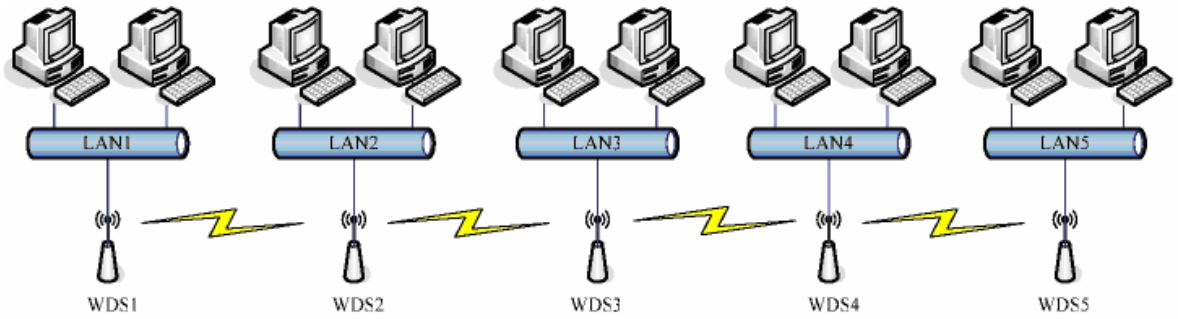
5.6 WDS network topology

In this section, we will demonstrate the WDS network topologies and WDS AP List configuration. You can setup the four kinds of network topologies:

- Bus
- Star
- Ring
- Mesh

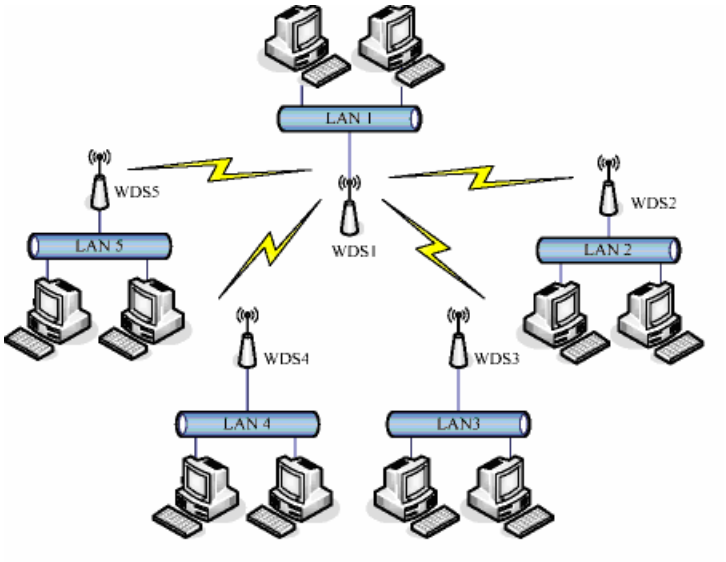
In this case, there are five devices with WDS enabled: WDS1, WDS2, WDS3, WDS4 and WDS5.

5.6.1 Bus topology



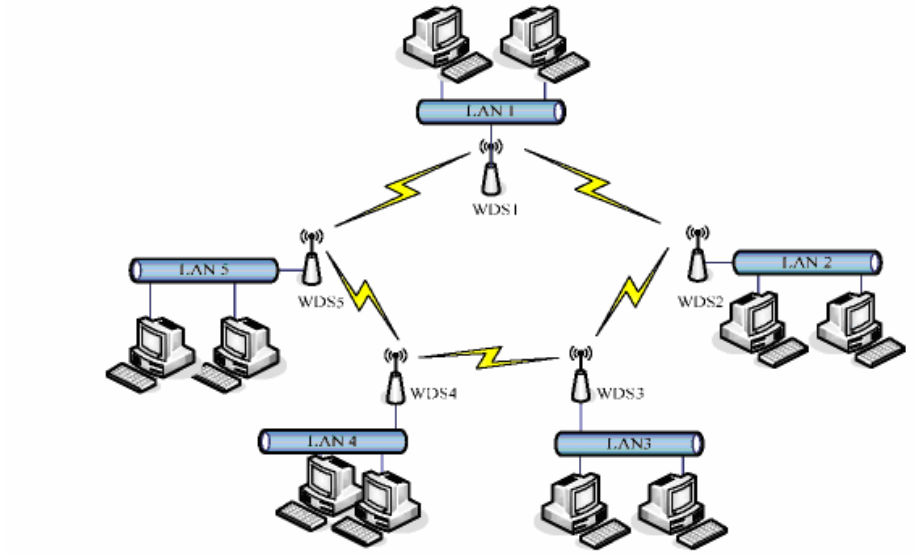
Device	Entries of WDS AP List	Spanning Tree Protocol Required
WDS1	The MAC Address of WDS2	No
WDS2	The MAC Addresses of WDS1 and WDS3	No
WDS3	The MAC Addresses of WDS2 and WDS4	No
WDS4	The MAC Addresses of WDS3 and WDS5	No
WDS5	The MAC Address of WDS4	No

5.6.2 Star topology



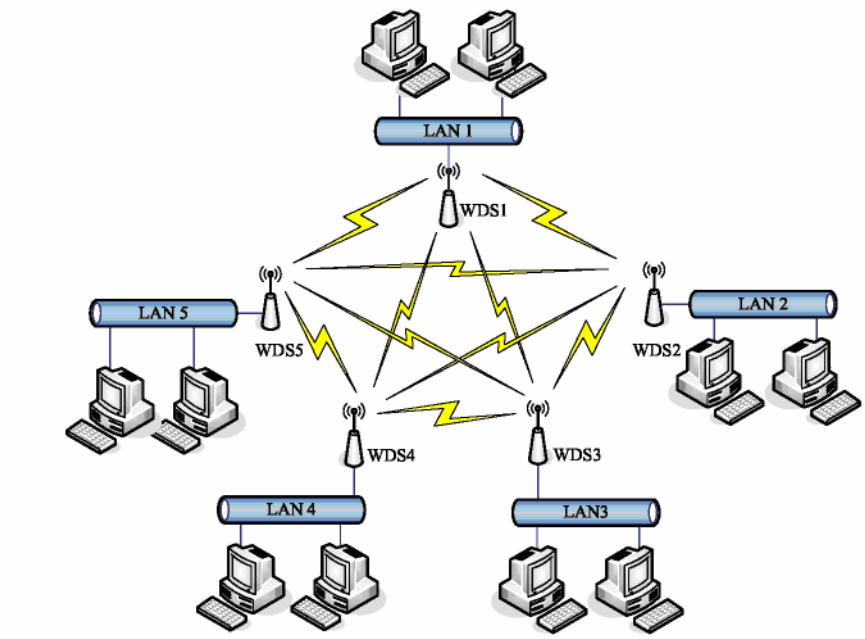
Device	Entries of WDS AP List	Spanning Tree Protocol Required
WDS1	The MAC Addresses of WDS2, WDS3, WDS4 and WDS5	No
WDS2	The MAC Address of WDS1	No
WDS3	The MAC Address of WDS1	No
WDS4	The MAC Address of WDS1	No
WDS5	The MAC Address of WDS1	No

5.6.3 Ring Topology



Device	Entries of WDS AP List	Spanning Tree Protocol Required
WDS1	The MAC Addresses of WDS2 and WDS5	Yes
WDS2	The MAC Addresses of WDS1 and WDS3	Yes
WDS3	The MAC Addresses of WDS2 and WDS4	Yes
WDS4	The MAC Addresses of WDS3 and WDS5	Yes
WDS5	The MAC Addresses of WDS4 and WDS1	Yes

5.6.4 Mesh topology



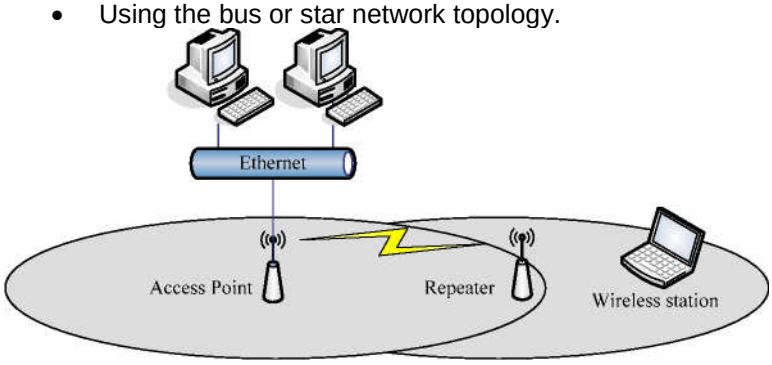
Device	Entries of WDS AP List	Spanning Tree Protocol Required
WDS1	The MAC Addresses of WDS2, WDS3, WDS4 and	Yes
WDS2	The MAC Addresses of WDS 1, WDS3, WDS4 and	Yes
WDS3	The MAC Addresses of WDS 1, WDS2, WDS4 and	Yes
WDS4	The MAC Addresses of WDS 1, WDS2, WDS3 and	Yes
WDS5	The MAC Addresses of WDS 1, WDS2, WDS3 and	Yes

5.7 WDS Application

5.7.1 Wireless Repeater

Wireless Repeater can be used to increase the coverage area of another device (Parent AP). Between the Parent AP and the Wireless Repeater, wireless stations can move among the coverage areas of both devices. When you decide to use the WDS as a Repeater, please refer the following instructions for configuration.

- In AP mode, enable the WDS function.
- You must set these connected devices with the same radio channel and SSID.
- Choose “WDS+AP” mode.
- Using the bus or star network topology.

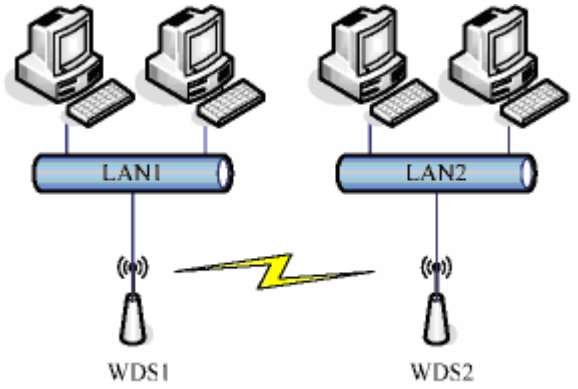


Description	Entries of WDS AP List	Spanning Tree Protocol Required
Access Point	The MAC Address of Repeater	Yes
Repeater	The MAC Address of Access Point	Yes

5.7.2 Wireless Bridge

Wireless Bridge can establish a wireless connection between two or more Wired LANs. When you decide to use the WDS as a Wireless Bridge, please refer the following instructions for configuration.

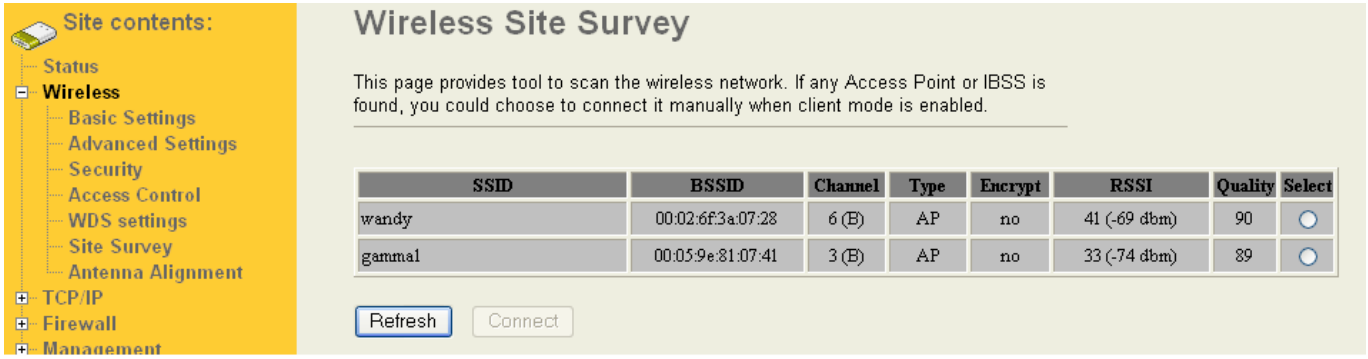
- In AP mode, enable the WDS function.
- You must set these connected devices with the same radio channel, but you may use different SSID.
- Choose “WDS” mode for only wireless backbone extension purpose.
- You can use any network topology, please refer the WDS topology section.



Description	Entries of WDS AP List	Spanning Tree Protocol Required
WDS1	The MAC Address of WDS2	No
WDS2	The MAC Address of WDS1	No

5.8 Site Survey

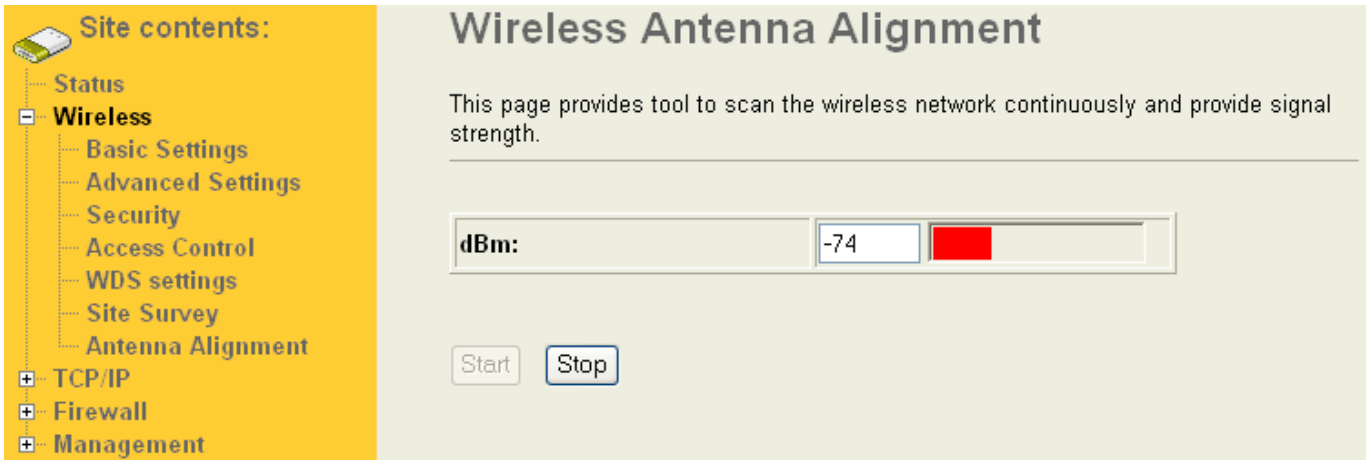
This page provides tool to scan the wireless network. If any Access Point or IBSS is found, you could choose to connect it manually when client mode is enabled.



The RSSI provides the Received Signal Strength Indication . By selecting one AP and pressing connect the Wandy 2R unit will try to connect to the AP.

5.9 Antenna Aligment

This page provides tool to scan the wireless network continuously and provide signal strength.



By pressing start the Wandy 2R will constant update the receive signal strength. In this mode it is easy to direct the unit optimal to the central access point.

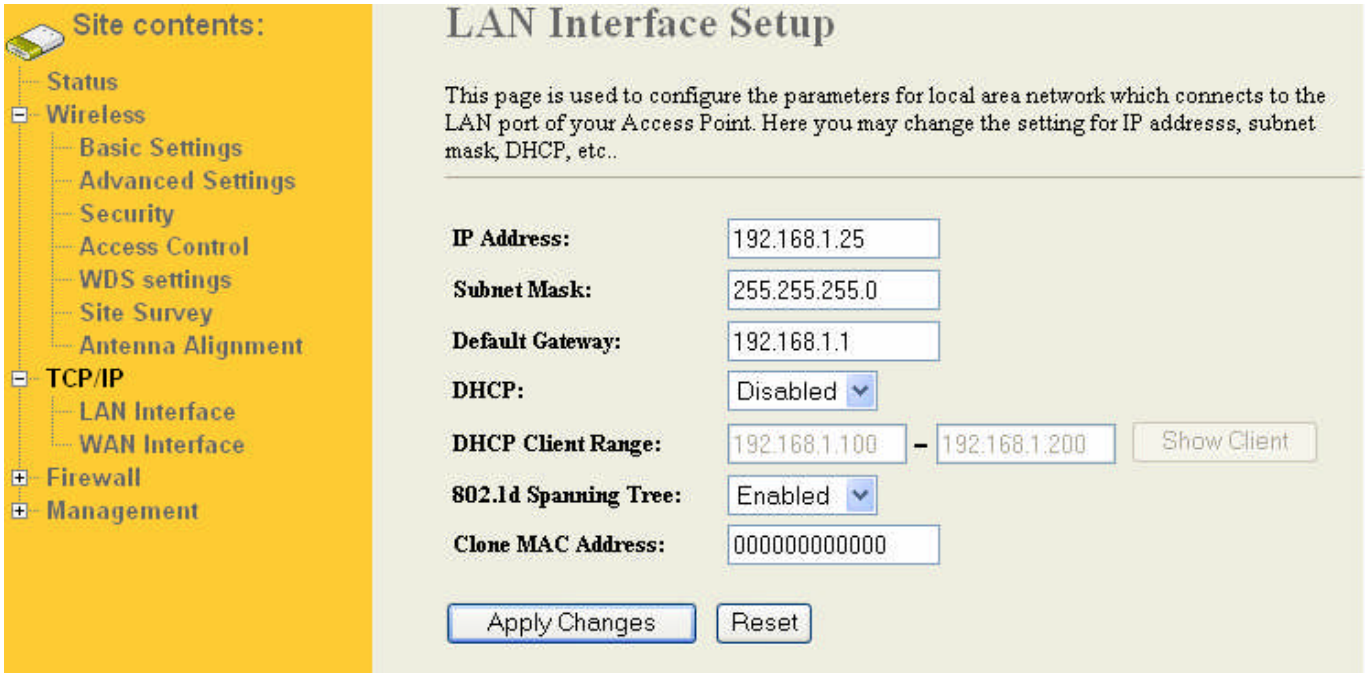
6 TCP/IP

In the TCP/IP menu it is possible to set the IP configuration of the LAN and WAN interface.

6.1 Configuring LAN Interface

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 addresss, subnet mask, DHCP, etc..
In the condigurationb there are 3 option

- DHCP disabled
- DHCP Client
- DHCP Server



6.1.1 DHCP disabled

In this mode the IP address of the LAN side will be set to fixed adress
IP address:
The Internet Protocol (IP) address of WAN interface provided by your ISP or MIS. The address will be your network identifier besides your local network.
Subnet Mask:
The number used to identify the IP subnet network, indicating whether the IP address can be recognized on the LAN or if it must be reached through a gateway.
Default Gateway:
The IP address of Default Gateway provided by your ISP or MIS. Default Gateway is the intermediate network device that has knowledge of the network IDs of the other networks in the Wide Area Network, so it can forward the packets to other gateways until they are delivered to the one connected to the specified destination.

6.1.2 DHCP Client

In this mode the LAN side of the Wandy 2R will get its IP address from a DHCP server in the network. Itr will not be possible to set the IP address of the device.

6.1.3 DHCP Server

In this mode the IP address of the LAN side will be set to fixed address The DHCP server will provide IP address to other devices that are connected to the LAN interface of the Wandy 2R

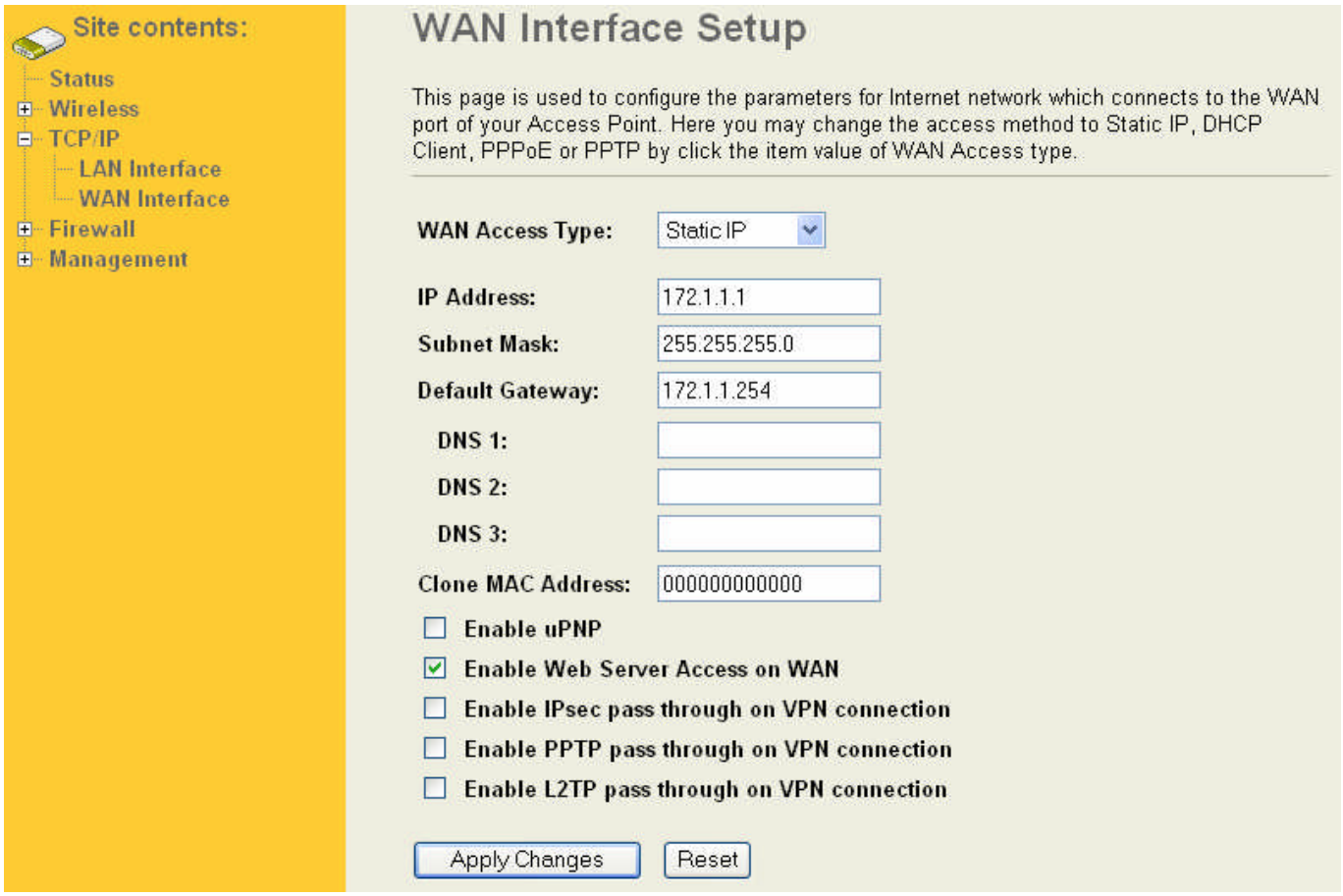
IP address:
The Internet Protocol (IP) address of WAN interface provided by your ISP or MIS. The address will be your network identifier besides your local network.
Subnet Mask:
The number used to identify the IP subnet network, indicating whether the IP address can be recognized on the LAN or if it must be reached through a gateway.
Default Gateway:
The IP address of Default Gateway provided by your ISP or MIS. Default Gateway is the intermediate network device that has knowledge of the network IDs of the other networks in the Wide Area Network, so it can forward the packets to other gateways until they are delivered to the one connected to the specified destination.
DHCP Client Range:
The IP range that the DHCP server will provide to the client that will are connected to the LAN interface.
Show Client:
This table shows the assigned IP address, MAC address and time expired for each DHCP leased client.

6.2 Configuring WAN Interface

The device supports four kinds of IP configuration for WAN interface,

- Static IP,
- DHCP Client,
- PPPoE
- PPTP.

You can select one of the WAN Access Types depend on your ISP required. The default WAN Access Type is "Static IP".



6.2.1 Static IP

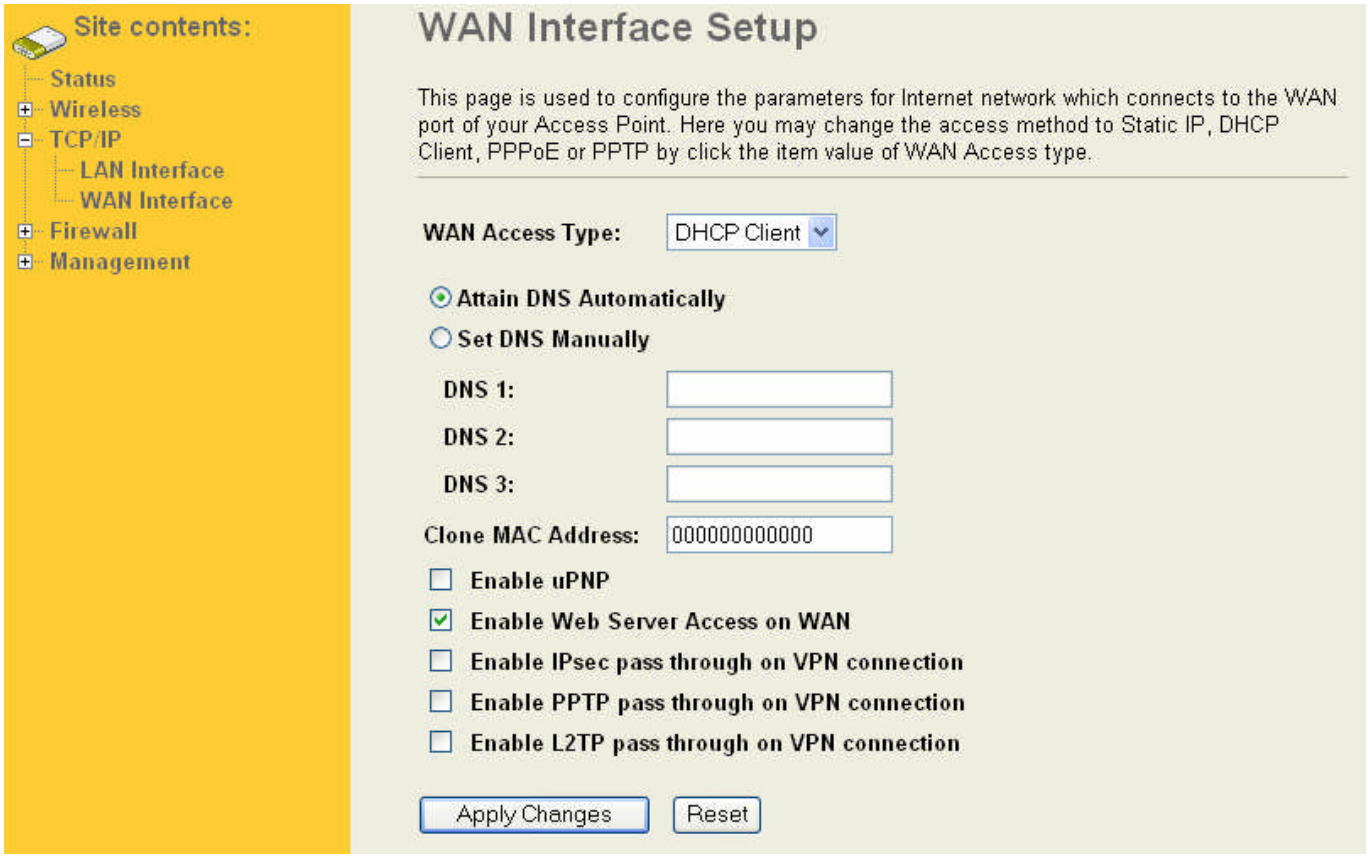
You can get the IP configuration data of Static-IP from your ISP. And you will need to fill the fields of IP address,

subnet mask, gateway address, and one of the DNS addresses.

IP address:
The Internet Protocol (IP) address of WAN interface provided by your ISP or MIS. The address will be your network identifier besides your local network.
Subnet Mask:
The number used to identify the IP subnet network, indicating whether the IP address can be recognized on the LAN or if it must be reached through a gateway.
Default Gateway:
The IP address of Default Gateway provided by your ISP or MIS. Default Gateway is the intermediate network device that has knowledge of the network IDs of the other networks in the Wide Area Network, so it can forward the packets to other gateways until they are delivered to the one connected to the specified destination.
DNS 1-3
The IP addresses of DNS provided by your ISP.
DNS (Domain Name Server) is used to map domain names to IP addresses. DNS maintain central lists of domain name/IP addresses and map the domain names in your Internet requests to other servers on the Internet until the specified web site is found.
Clone MAC adress
Clone device MAC address to the specify MAC address required by your ISP
Enable uPnP:
Enable uPnP, this function allows the device to be found and configured automatically by the system. (Ex. Window XP)

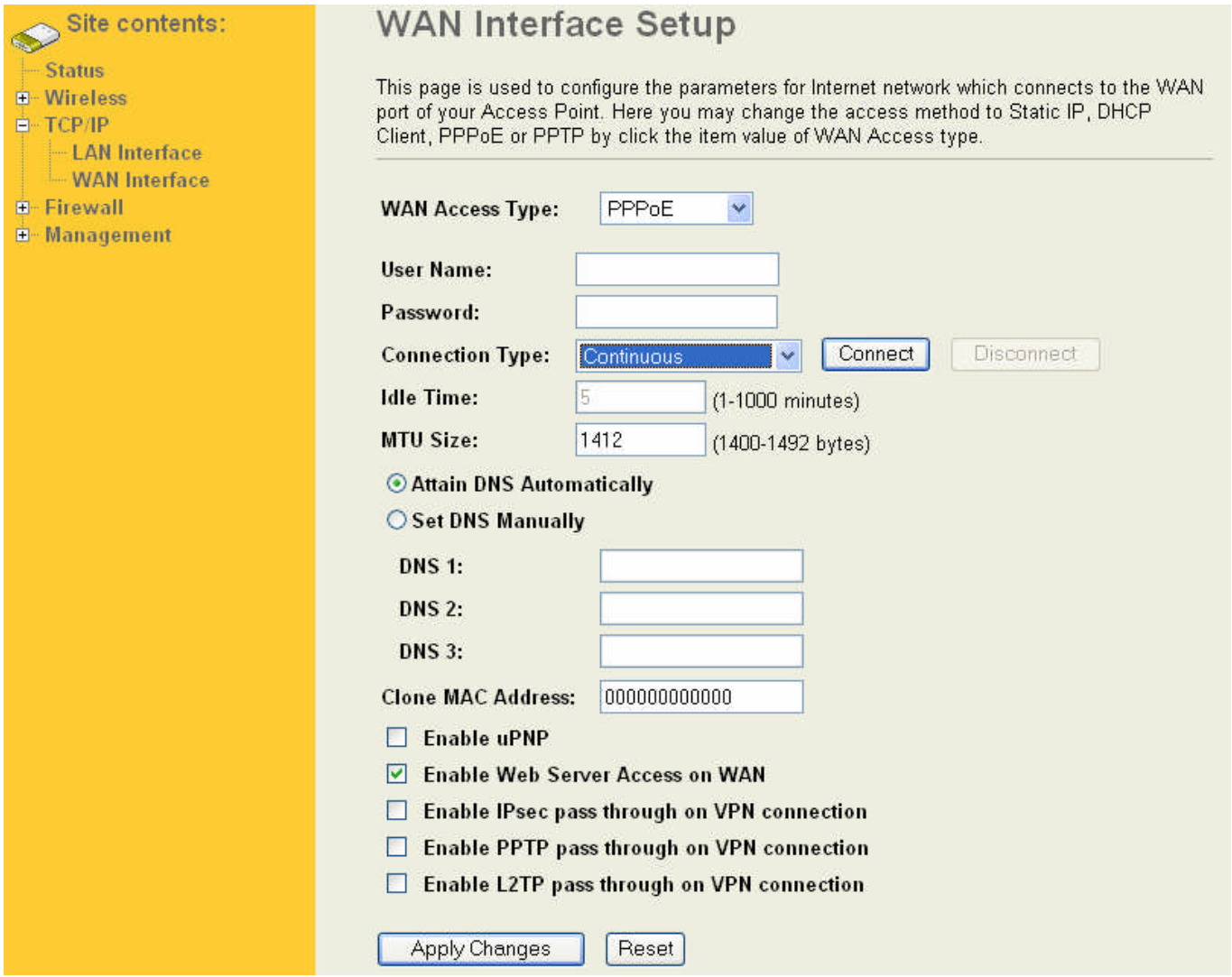
6.2.2 DHCP Client (Dynamic IP)

All IP configuration data besides DNS will obtain from the DHCP server when DHCP-Client WAN Access Type is selected. It is possible to receive the DNS from the DHCP server.



6.2.3 PPPoE

When the PPPoE((Point to Point Protocol over Ethernet) WAN Access Type is selected, you must fill the fields of User Name, Password provided by your ISP. The IP configuration will be done when the device successfully authenticates with your ISP

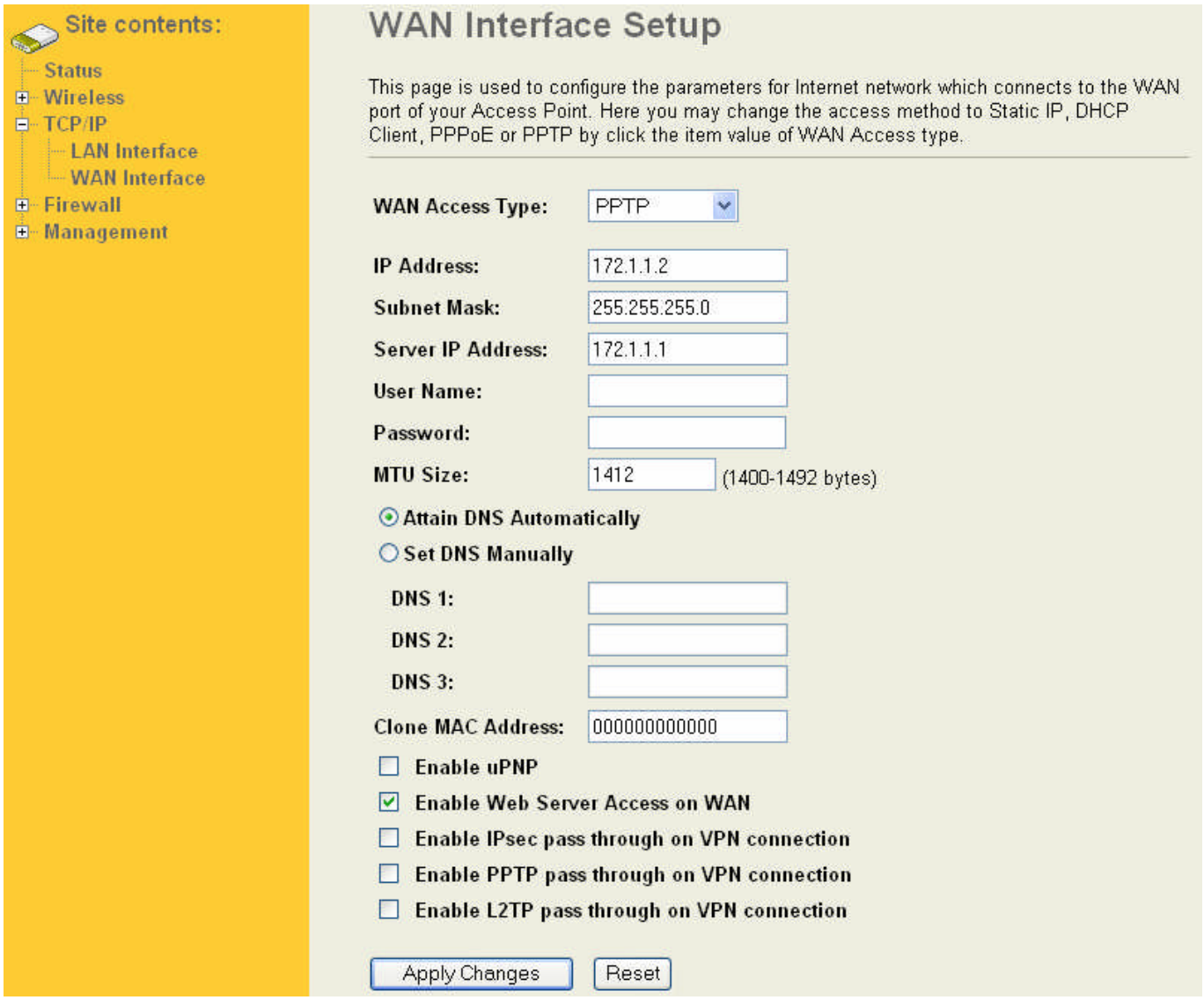


User Name
The account provided by your ISP
Password
The password for your account.
Connection Type
“Continuous “ : connect to ISP permanently
“Manual” : Manual connect/disconnect to ISP
“On-Demand” : Automatically connect to ISP when user need to access the Internet.
Idle Time
The number of inactivity minutes to disconnect from ISP. This setting is only available when “Connect on Demand” connection type is selected.
MTU Size
Maximum Transmission Unit, 1412 is the default setting, you may need to change the MTU for optimal performance with your specific ISP.
DNS1-3
The IP addresses of DNS provided by your ISP.
DNS (Domain Name Server) is used to map domain names to IP addresses. DNS maintain central lists of domain name/IP addresses and map the domain names in your Internet requests to other servers on the Internet until the specified web site is found.

Clone device MAC
Clone device MAC address to the specify MAC address required by your ISP.
Enable UPnP, this function allows the device to be found and configured automatically by the system. (Ex. Window XP)

6.2.4 PPTP

Point to Point Tunneling Protocol (PPTP) is a service that applies to connections in Europe only



IP Address:
The Internet Protocol (IP) address of WAN interface provided by your ISP or MIS. The address will be your network identifier besides your local network.
Subnet Mask:
The number used to identify the IP subnet network, indicating whether the IP address can be recognized on the LAN or if it must be reached through a gateway.
Server IP Address:
The IP address of PPTP server (Default Gateway)
User Name:
The account provided by your ISP
Password:
The password of your account
MTU Size:

Maximum Transmission Unit, 1412 is the default setting, you may need to change the MTU for optimal performance with your specific ISP.

DNS1 -:

The IP addresses of DNS provided by your ISP.

DNS (Domain Name Server) is used to map domain names to IP addresses. DNS maintain central lists of domain name/IP addresses and map the domain names in your Internet requests to other servers on the Internet until the specified web site is found.

Clone MAC Address:

Clone device MAC address to the specify MAC address required by your ISP.

Enable uPnP:

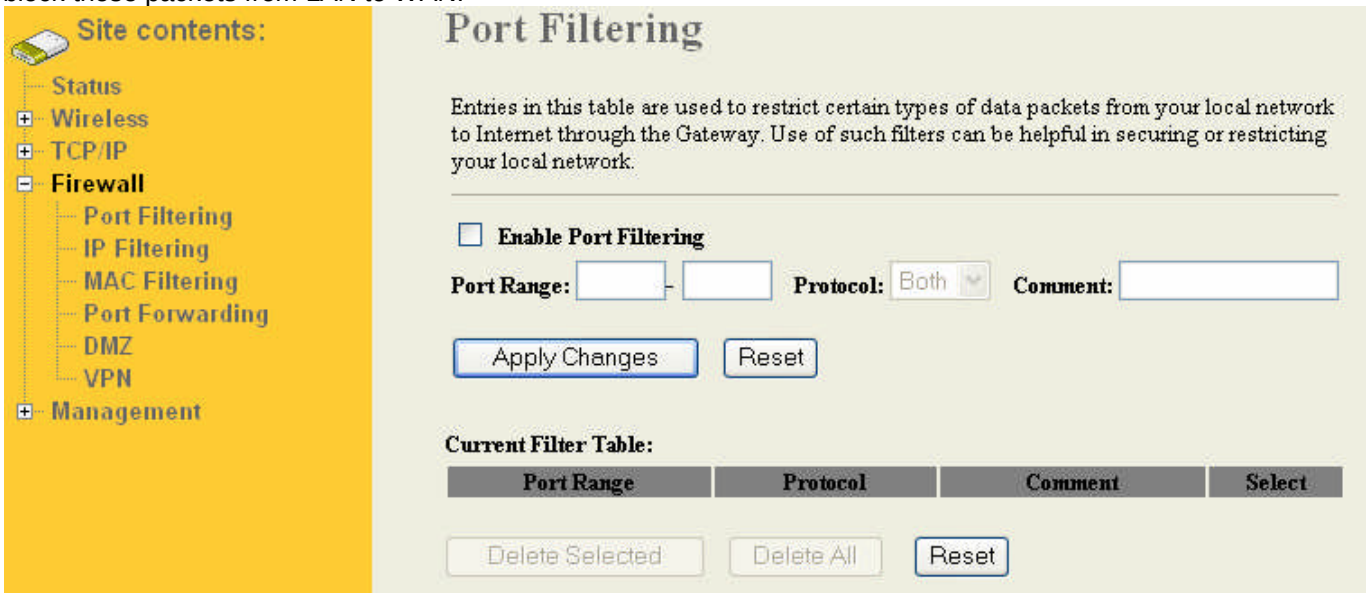
Enable uPnP, this function allows the device to be found and configured automatically by the system. (Ex. Window XP)

7 Firewall

Filtering function is used to block packets from LAN to WAN. The device supports three kinds of filter Port Filtering, IP Filtering and MAC Filtering. All the entries in current filter table are used to restrict certain types of packets from your local network to through the device. Use of such filters can be helpful in securing or restricting your local network.

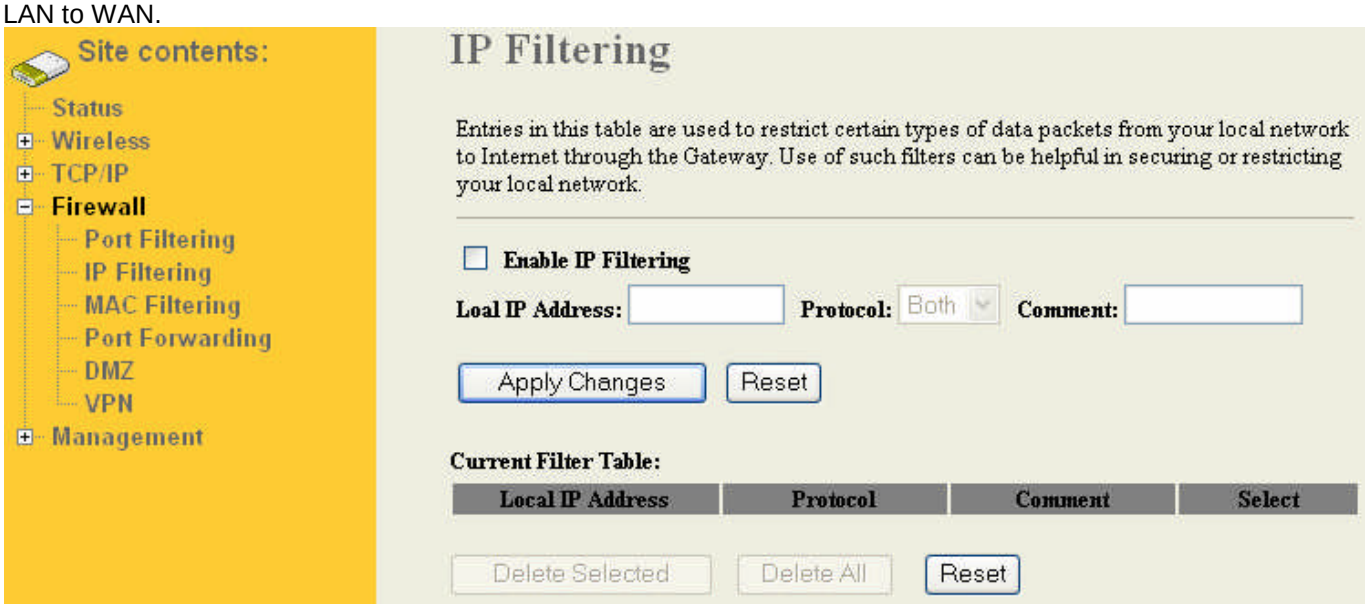
7.1 Port Filtering

When you enable the Port Filtering function, you can specify a single port or port ranges in current filter table. Once the source port of outgoing packets match the port definition or within the port ranges in the table, the firewall will block those packets from LAN to WAN.



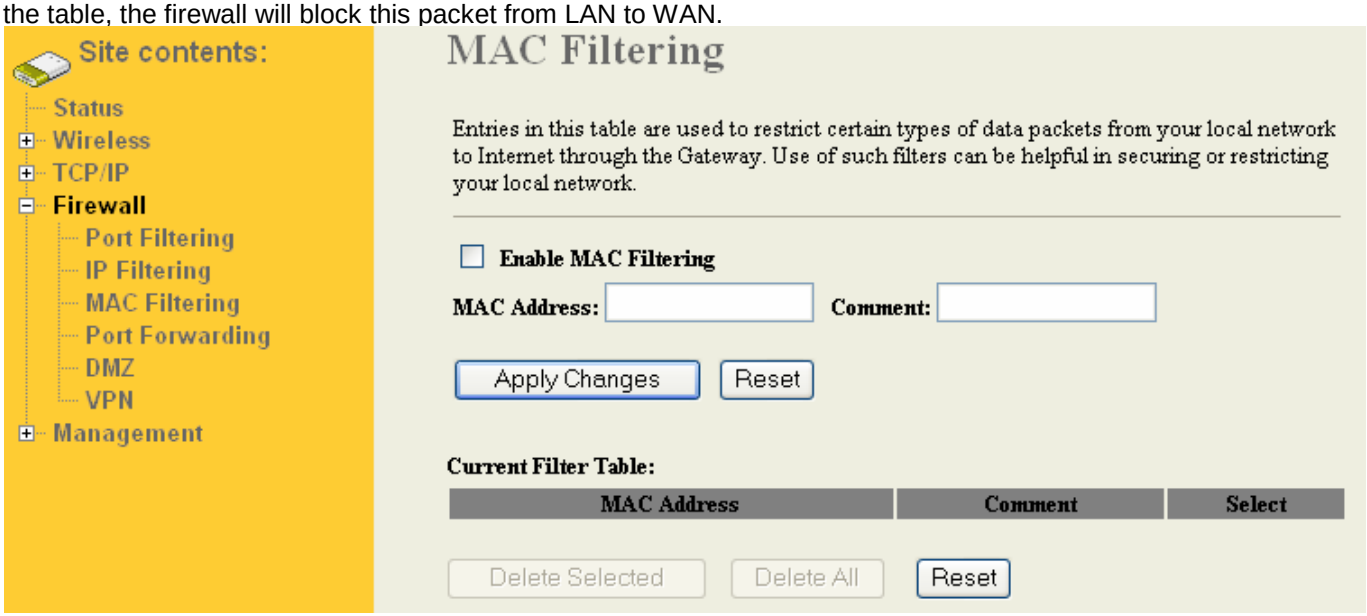
7.2 IP Filtering

When you enable the IP Filtering function, you can specify local IP Addresses in current filter table. Once the source IP address of outgoing packets match the IP Addresses in the table, the firewall will block this packet from LAN to WAN.



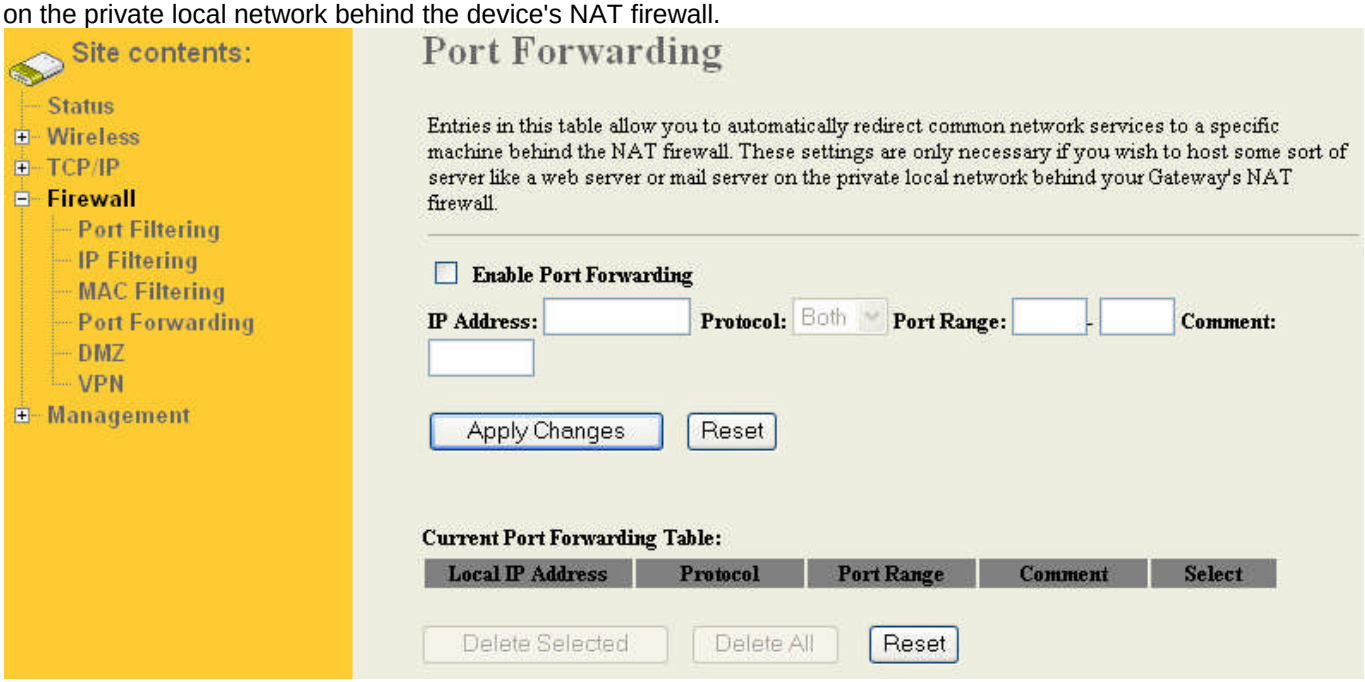
7.3 MAC Filtering

When you enable the MAC Filtering function, you can specify the MAC Addresses in current filter table. Once the source MAC Address of outgoing packets match the MAC Addresses in the table, the firewall will block this packet from LAN to WAN.



7.4 Port Forwarding (Virtual Server)

This function allows 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 the device's NAT firewall.



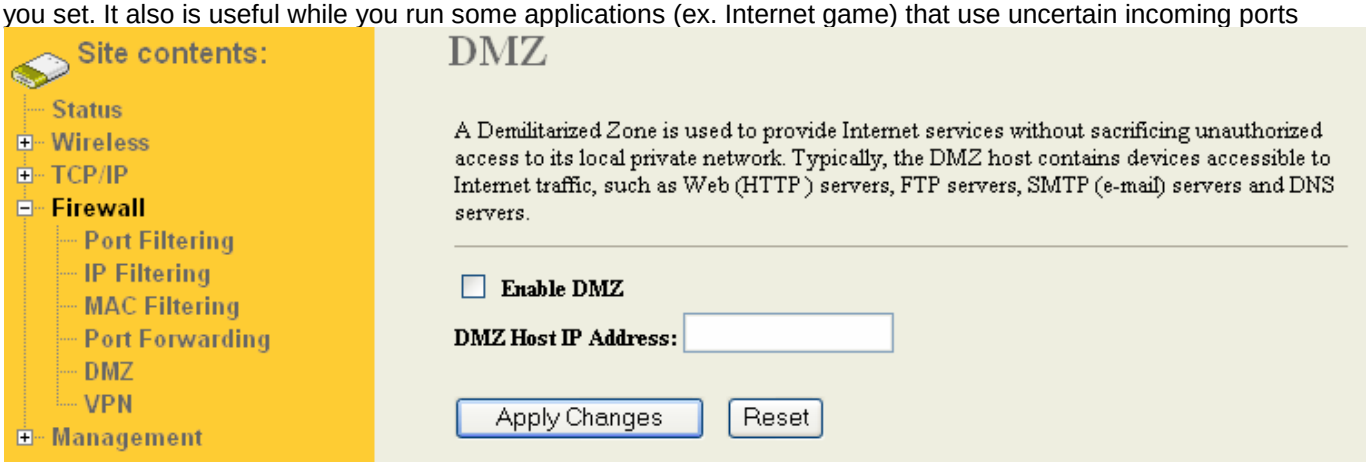
The most often used port numbers are shown in the following table.

Services	Port Number
ECHO	7
FTP (File Transfer Protocol)	21
Telnet	23
SMTP (Simple Mail Transfer Protocol)	25
DNS (Domain Name System)	53

Finger	79
HTTP (Hyper Text Transfer Protocol)	80
POP3 (Post Protocol)	110
NNTP (Network News Transport Protocol)	119
SNMP (Simple Network Management Protocol)	161
SNMP trap	162
SIP (Session Initiation Protocol)	5060
PPTP (Point-to-Point Tunneling Protocol)	1723

7.5 DMZ

A Demilitarized Zone is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic, such as Web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers. So that all inbound packets will be redirected to the computer you set. It also is useful while you run some applications (ex. Internet game) that use uncertain incoming ports

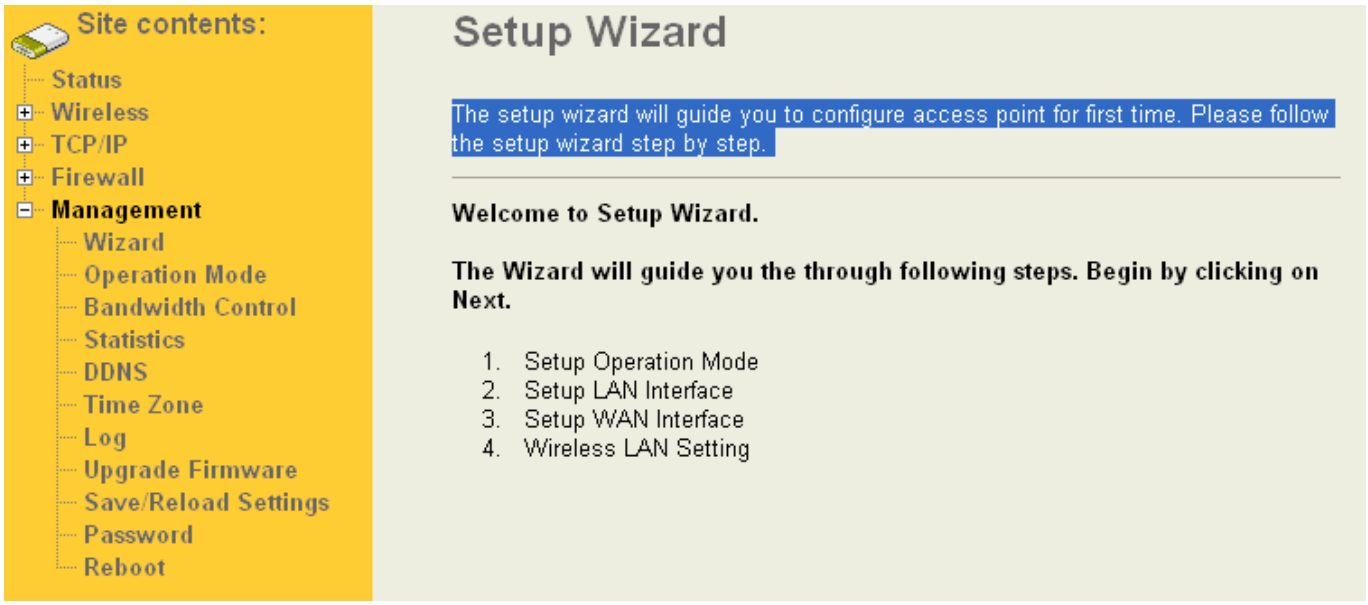


8 Management

In this menu it is possible to configure the operation mode of the Wandy 2R. Monitor functions as logging and save/resore config with new firmware upload functions provide the tools to keep the unit up to date.

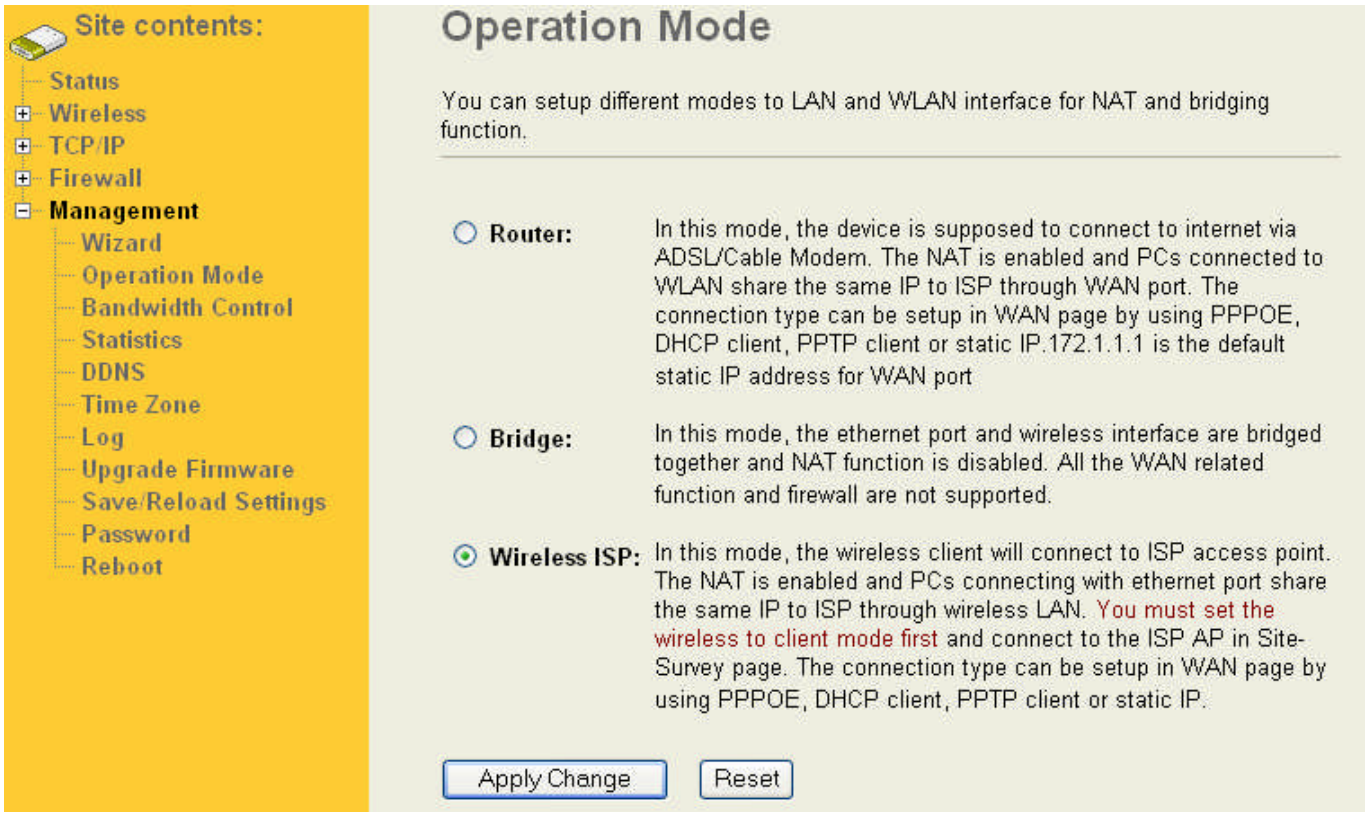
8.1 Wizard

The setup wizard will guide you to configure access point for first time. Please follow the setup wizard step by step.



8.2 Operation Mode

You can setup different modes to LAN and WLAN interface for NAT and bridging function.



8.2.1 Router

The wired Ethernet (WAN) port is used to connect with ADSL/Cable modem and the wireless NIC is used for your private WLAN. The NAT is existed between the 2 NIC and all the wireless clients share the same public IP address through the WAN port to ISP. The default IP configuration for WAN port is static IP. You can access the web server of device through the default WAN IP address 172.1.1.1 and modify the setting base on your ISP requirement.

8.2.2 Bridge

The wired Ethernet and wireless NIC are bridged together. Once the mode is selected, all the WAN related functions will be disabled.

8.2.3 WISP (Wireless ISP)

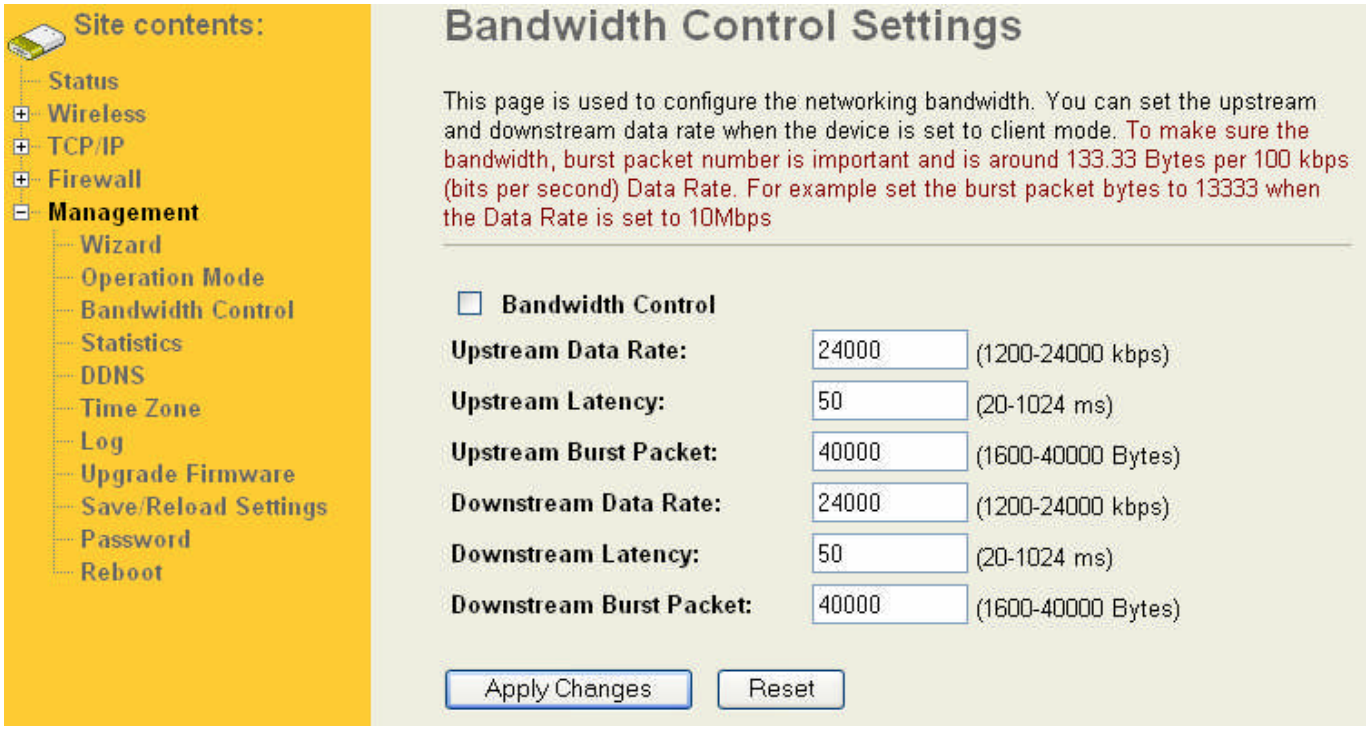
This mode can let you access the AP of your wireless ISP and share the same public IP address form your ISP to the PCs connecting with the wired Ethernet port of the device. To use this mode, first you must set the wireless radio to be client mode and connect to the AP of your ISP then you can configure the WAN IP configuration to meet your ISP requirement.

The following table shows the supporting combination of operation and wireless radio modes.

	Bridge	Router	WISP
AP	Yes	Yes	No
WDS	Yes	Yes	No
Client	Yes	No	Yes
AP+WDS	Yes	Yes	No

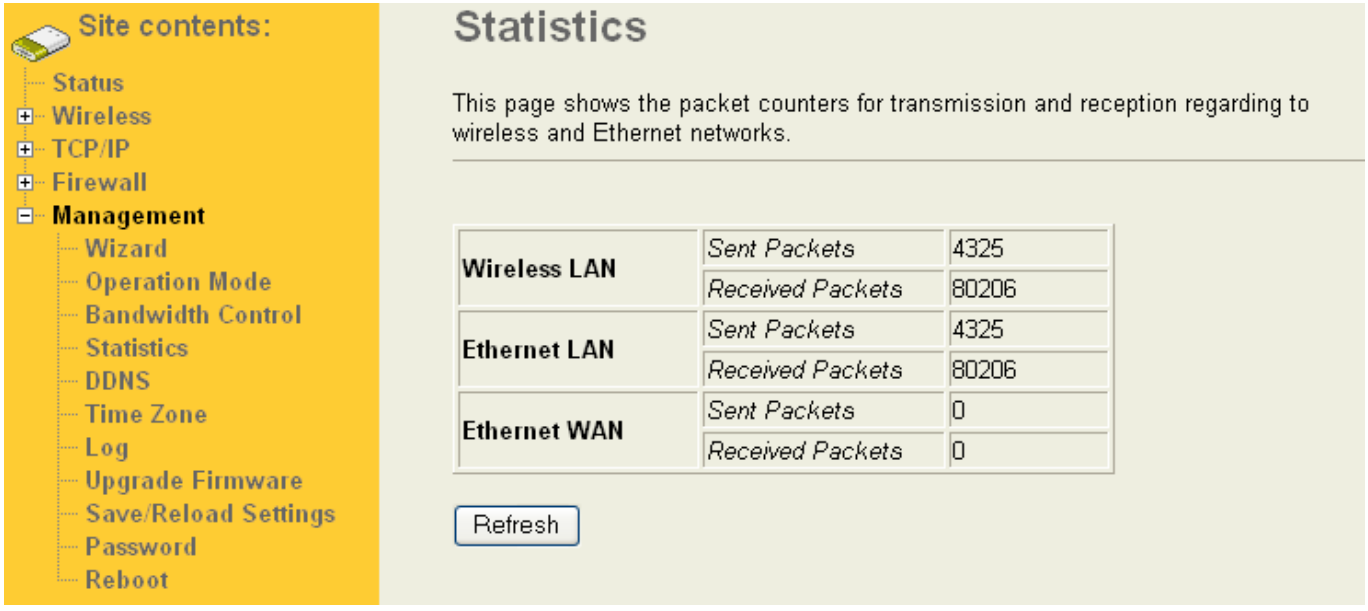
8.3 Bandwidth Control

This page is used to configure the networking bandwidth. You can set the upstream and downstream data rate when the device is set to client mode.



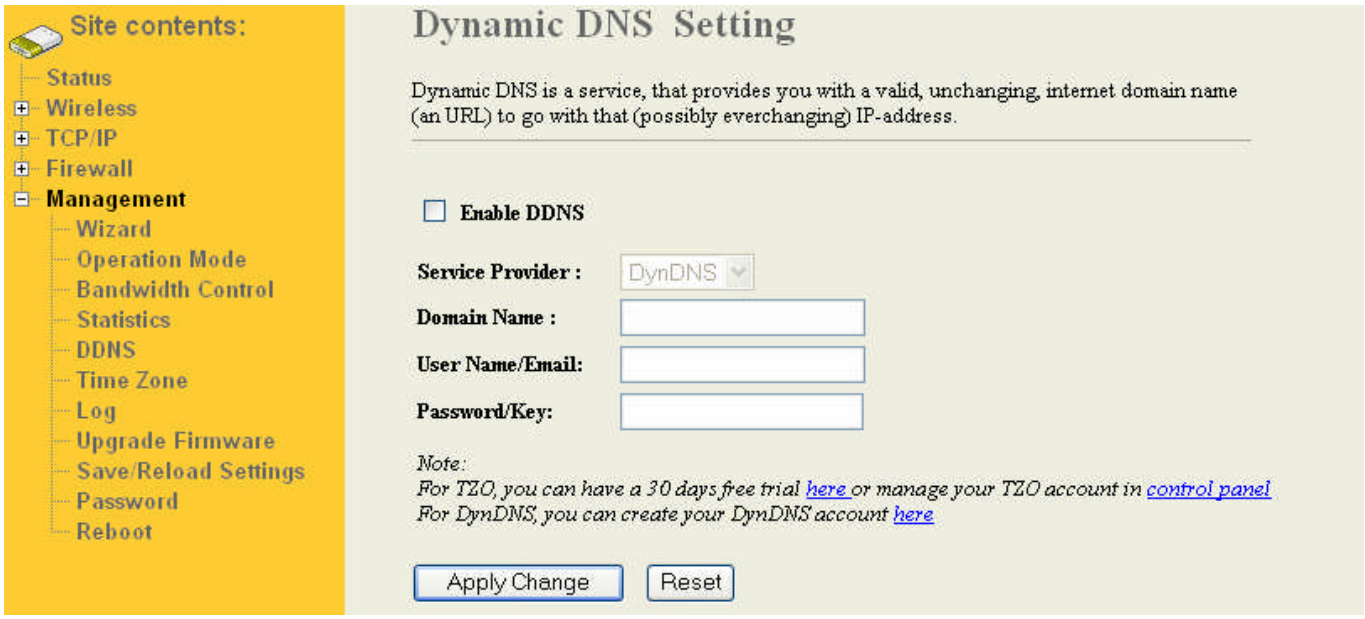
8.4 Statistics

This page shows the packet counters for transmission and reception regarding to wireless and Ethernet networks.



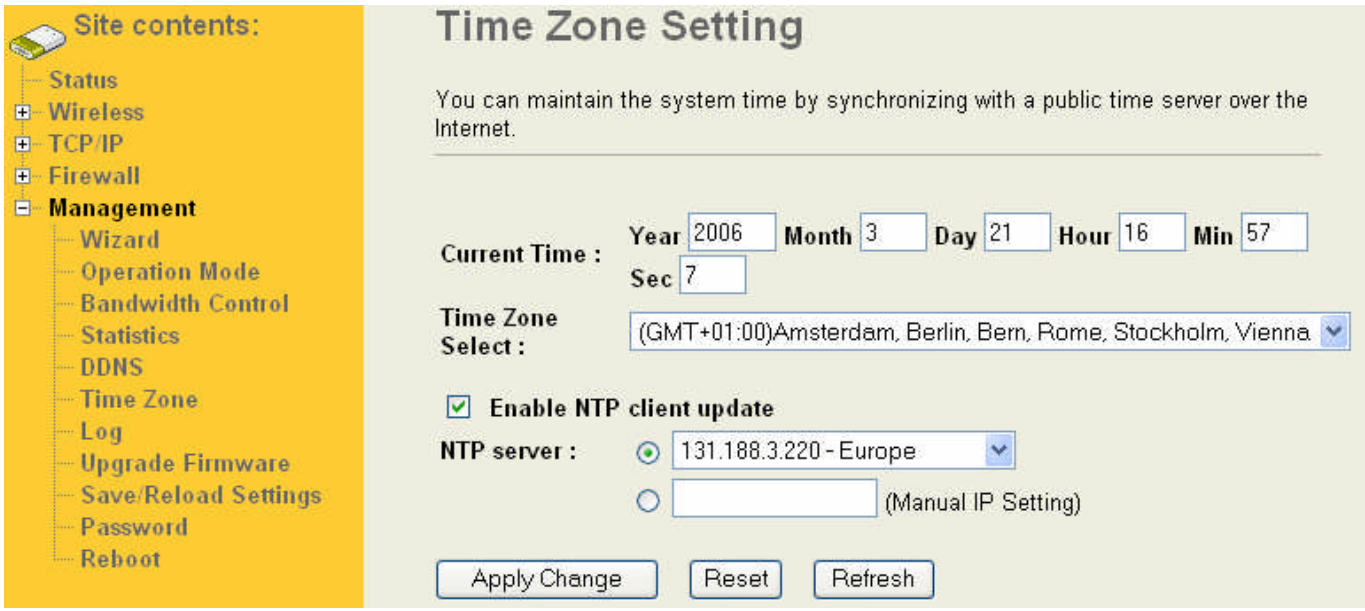
8.5 Dynamic DNS Setting

Dynamic DNS is a service, that provides you with a valid, unchanging, internet domain name (an URL) to go with that (possibly everchanging) IP-address.



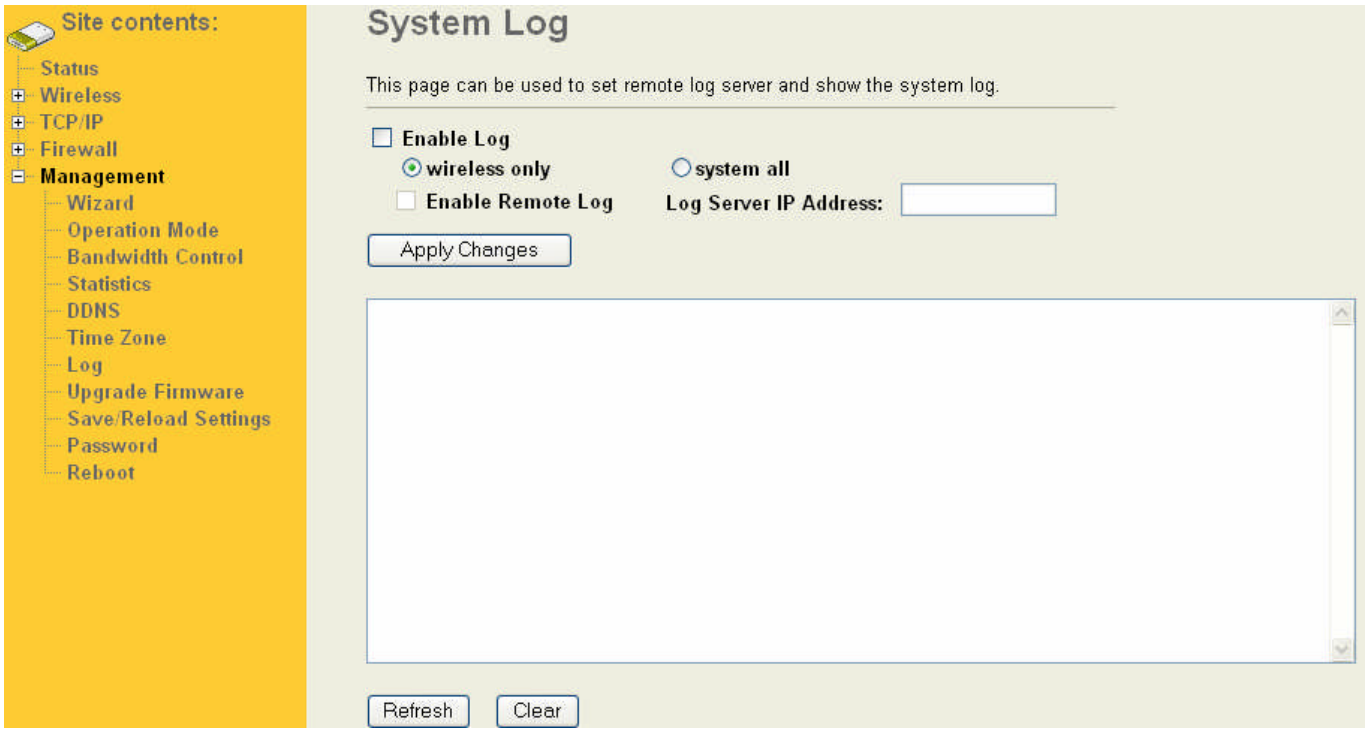
8.6 Time Zone

The Wandy 2R can maintain the system time by synchronizing with a public time server over the Internet.



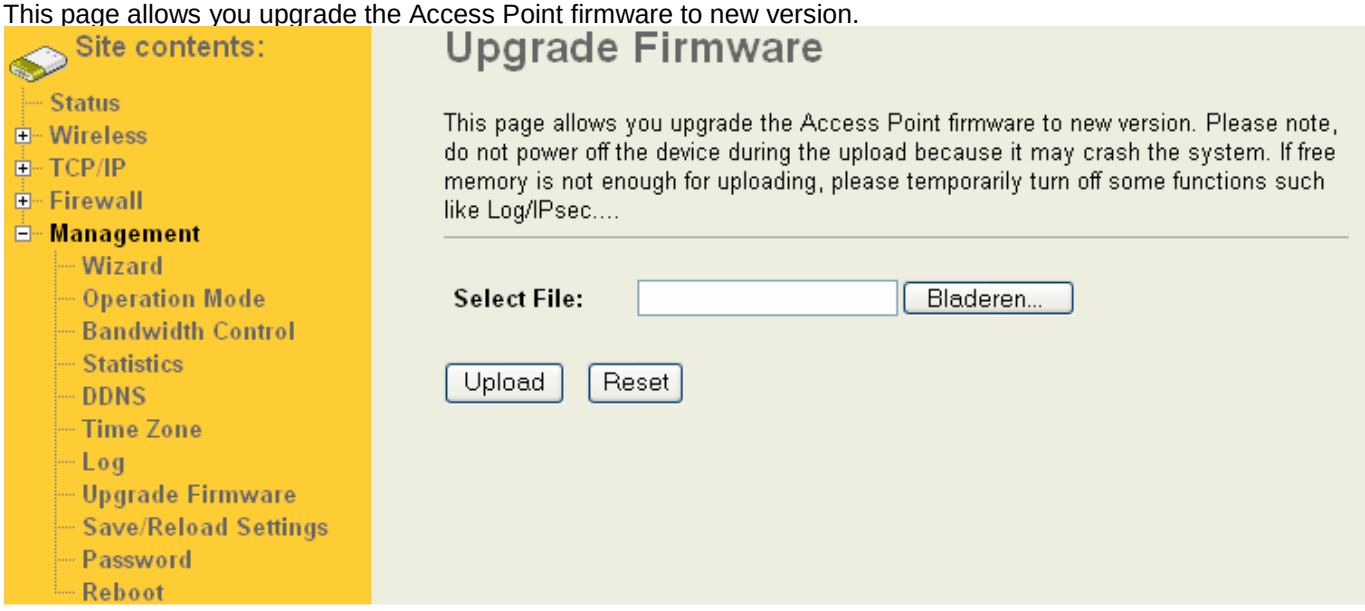
8.7 Log

The Wandy 2R has a log funtion. On this page you can set what to log en where the unit must send its log to. A remote log server is possible by setting the IP address of the log server.



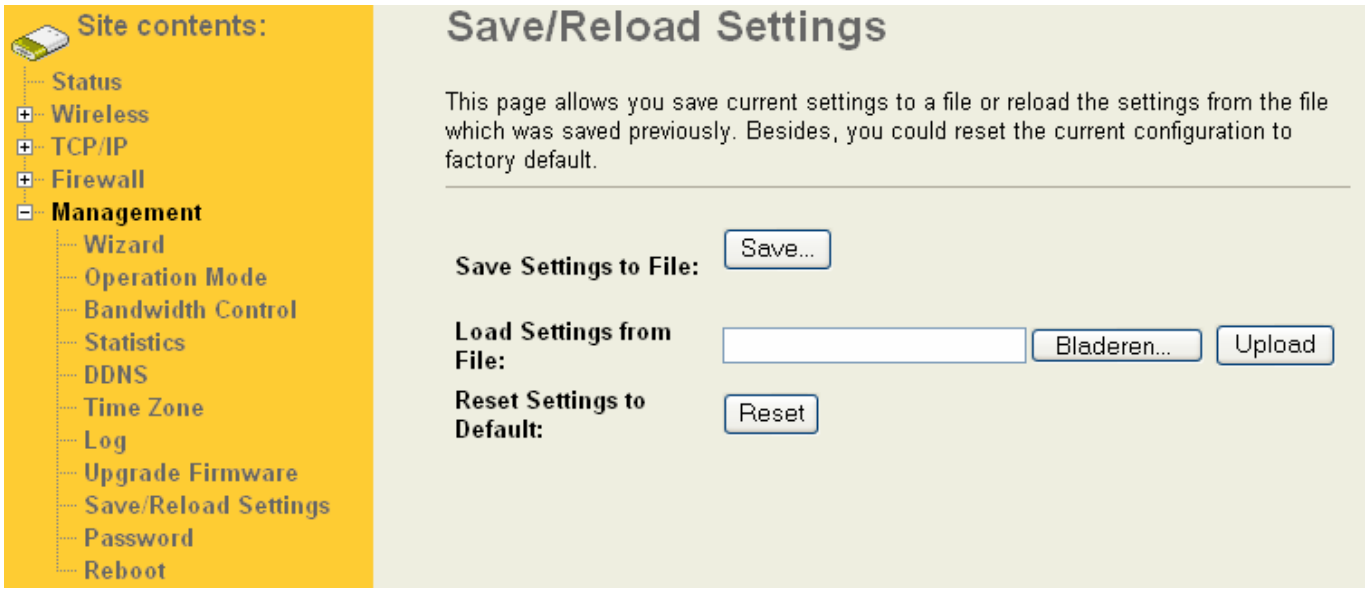
8.8 Upgrade Firmware

This page allows you upgrade the Access Point firmware to new version.



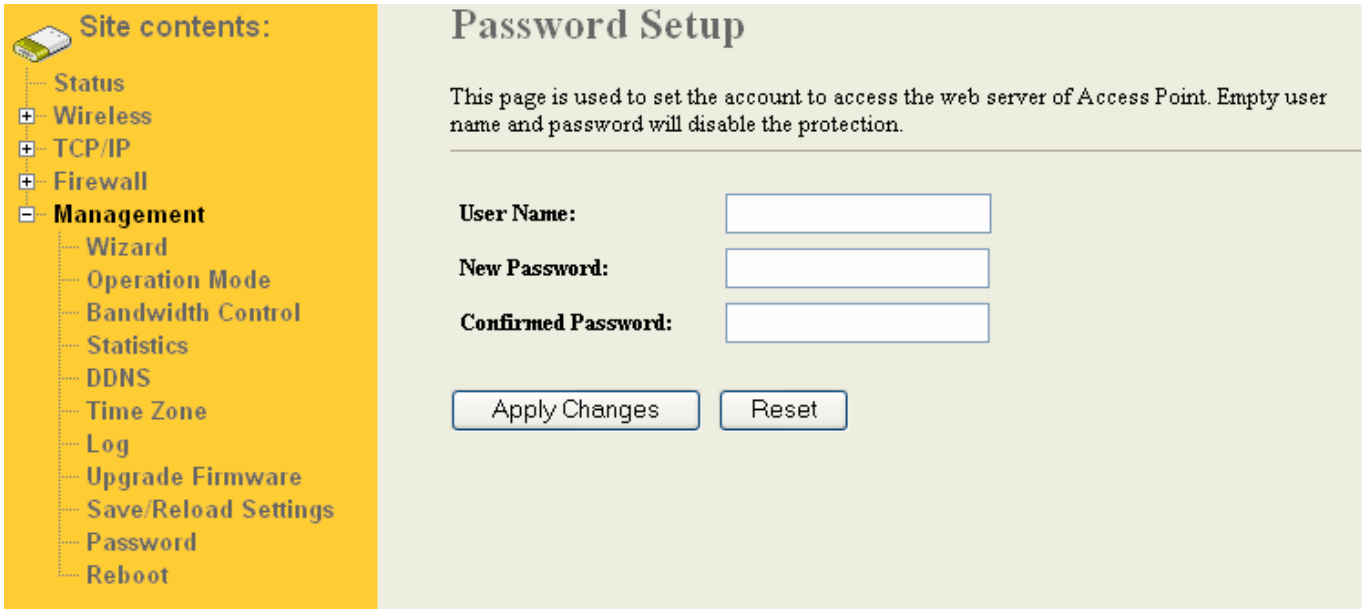
8.9 Save/Reload Settings

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.



8.10 Password

This page is used to set the account to access the web server of Access Point. Empty user name and password will disable the protection.



The username and password must be smaller then 20 characters. Best to use a combination of numbers and characters.

8.11 Reboot

This page is used to reboot the device. It will take up to 55 sec to fully reboot the device.


Site contents:
Status
Wireless
TCP/IP
Firewall
Management
Wizard
Operation Mode
Bandwidth Control
Statistics
DDNS
Time Zone
Log
Upgrade Firmware
Save/Reload Settings
Password
Reboot
Reboot
This page is used to reboot the device.
Reboot

9 SSH login

Start a SSH(Secure Shell) client session to login the device
The SSH server daemon inside device uses well-known TCP port 22. User must use SSH client utility such like Putty to login the device.
The default password for user “root” is “wandy”, once user login the device then can change the password by CLI command.
Execute CLI program
This program won’t execute automatically when user login the device. User must manually execute it by typing the case-sensitive command “cli”. Please note that any modified settings won’t save permanently until user “Apply Changes to Flash” or reboot it. The new settings modified by CLI will take effect after rebooting the device.

Before Start to Configure

To configure the device there is a web-browser interface. To access the web interfaces, make sure you are using a computer connected to the same network as the device. The default IP address of the device is 192.168.1.1, and the subnet-mask is 255.255.255.0.
The default configuration of the device is WISP mode.
The WISP mode can let you access the AP of your wireless ISP and share the same public IP address form your ISP to the PCs connecting with the wired Ethernet port of the device.
Please note that the DHCP server inside the device is default to up and running with the IP range 192.168.1.100-192.168.1.200. Do not have multiple DHCP servers in your subnet, otherwise it will cause abnormal situation.
Inside the CD, we provide the device auto-discovery tool, the tool can detect the device even your PC is not in the same subnet as the device in case the IP address of device is changed and forgot by user. The tool only can discover the device in your local area network.

The Wandy 2R unit can operate in many more modes then WISP with routing function of Wifi Brigde.
More information about these modes in chapter.