WROC

Wireless Office Communication System

User Manual

Applicable to Version 2.2.5.78

Contents

Chapter I Overview

Overview

Product Appearance

Device Buttons

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ON/OFF	Turn on or off the WROC as required. This button takes effect after the device is connected to the power outlet through an adaptor. Turn on the device, if the PWR indicator blinks red and then turns to solid green, it means the WROC is started normally.
RST	Restore the factory default settings of the WROC. Press this button for about three seconds until the STU and PWR indicators turn solid red.
WLAN	Enable or disable the wireless network function. When the wireless function is disabled, the wireless local area network (WLAN) indicator is off; when it is enabled, the indicator turns to solid green.
WPS	Wi-Fi Protected Setup (WPS). This setting enables you to easily and safely connect a wireless terminal to the WROC while saving the trouble of remembering the service set identifier (SSID) and password. To add a terminal to the WROC wireless network, first press this button, so the WPS indicator will blink, waiting for the connection of the terminal, then you need to press the WPS button (or click the WPS button in the GUI) on the wireless terminal within two minutes. If the connection is established, the WPS indicator will stop blinking and go off. **Note**: If the WPS indicator goes off after blinking three times, it means that the WPS function fails to be enabled, and you have to enable the WPS function in the configuration interface of the device.

Login Interface

Enter **w.com** in the address bar of the IE/Firefox browser to visit the login interface of WROC. The language mode of the interface can be shifted between Chinese and English. You can access the configuration interface with a proved username and password. The default username and password are both **admin.**
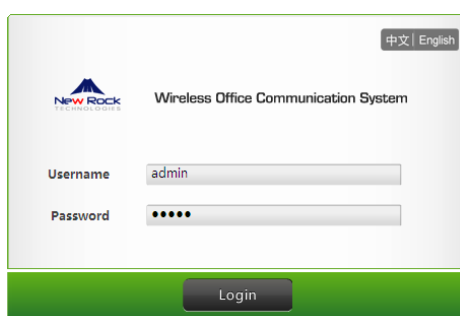
Service Menu

After login, you can see the following menus:

Service Name	Function
Network	Set network parameters such as network connection mode, wireless network security and USB storage.
Voice	Set telephony parameters such as auto-attendant, call forwarding, 3-way conference call.
Mgmt (Management)	Provide settings such as password change, software upgrade, configuration management, system reset and restoration of the factory default settings.
Status	Allow you to check the transmission status of network, statistics on data sending and receiving, log management, call status, call log, and product information.
Wizard	Provide guidance on quick installation of the WROC. For details, see the **Quick Start Guide**.

Interface Buttons

Common buttons in the GUI are as follows:

	Reboot
	Logout
	Go back to the home page
	Save the configuration
	Back to the top of the interface page

Function Description

WROC is a converged All-In-One communication device delivering multiple services developed for small office and home users. It can connect to terminals on the Internet or local area network (LAN), such as computer, network phone (called IP phone), smart phone, tablet PC and video surveillance camera, through Ethernet, 3G, Wi-Fi or other broadband IP network. In addition, the WROC provides telephone interfaces to support the connection with public telephone network, ordinary telephone and fax machine. Integrating such functions as wireless router, office telephony system, media server and storage sharing, this intelligent device provides you a new experience of communication.

Wireless Office – Saving Time, Efforts and Cost

The WROC provides 802.11N wireless access point to establish connections with wireless terminals including iPad, computer, printer, fax machine and smart phone, saving the trouble of cabling.

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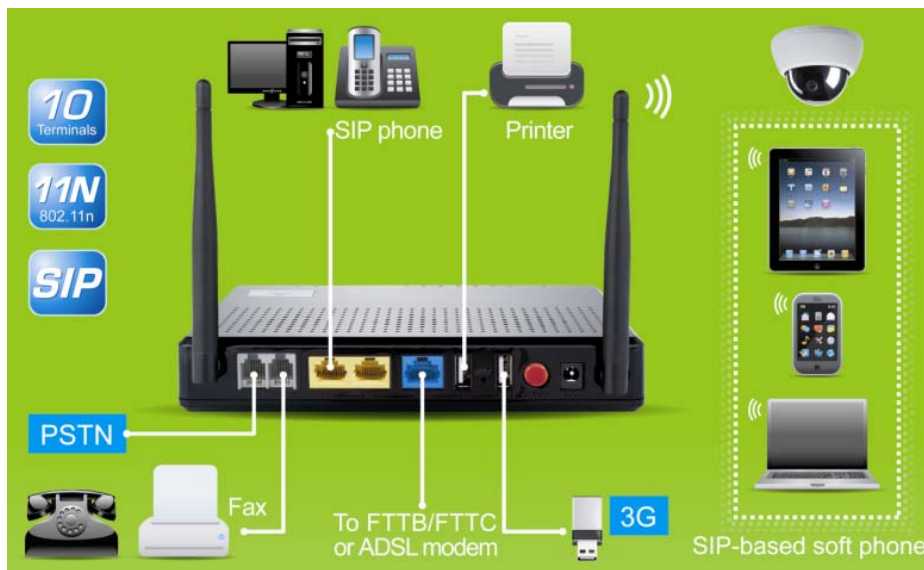
Mobile Extension – In contact with your customers anytime and anywhere

The WROC supports a maximum of eight IP extensions. After being registered in WROC through 3G or WiFi, your iPad or smart phone can be used as an IP extension, allowing you to make or take phone calls and enjoy rich phone features wherever you are (in the office, at home or in journey).

Storage Sharing – Timely, Effective and Convenient

WROC provides two USB2.0 interfaces for external storage devices (USB disk or mobile hard disk). You can get remote access to the information saved in WROC external storage device.

Chapter II   Network

Network Settings

WAN

The wide area network (WAN) access mode of the WROC depends on the service provided by the network service provider.

WAN Settings

1. Click **Network** from the home page.
2. Click **Network > WAN**, and select a connection mode for the available network.

STATIC (Fixed IP)	In this mode, a static IP address provided by the network service provider is used. Parameters such as subnet mask, default gateway and DNS server need to be set.
DHCP (Auto config)	In this mode, IP address, subnet mask and DNS server and other relevant information are automatically obtained from the front-end network, and the network connection is established automatically.
PPPoE (ADSL)	In this mode, the WROC is connected to the network via ADSL modem by means of Point-to-Point Protocol over Ethernet (PPPoE) dial-up.
L2TP/PPTP	In this mode, the WROC serves as the client of virtual private network (VPN), providing safe access to the business network by dialing in to the Internet Service Provider (ISP) or connecting to the Internet or other networks.
3G	In this mode, a 3G USB dongle needs to be inserted into the USB interface of the WROC before a proper ISP is selected.

3. Click **Save**.

Note: After choosing the connection mode, you can check the status of the WAN connection from **Status > WAN**. If the connection is successfully established, the **Connection status** will be displayed as **Connected**.

MAC Cloning

To prevent multiple users from sharing the broadband service, the ISP may need to identify the MAC address of the terminal. The WROC supports MAC address cloning, in which the MAC address identified by the ISP can be duplicated to the WAN port for network connection.

Enabling MAC Cloning

1. Click **Network** from the home page.
2. Click **Network > WAN**, and tick off the **Enable** option in the **MAC Clone** box.
3. Enter the MAC address identified by the ISP. If it happens to be the MAC address of your PC, click **Fill my MAC**.

4. Click **Save**.

LAN

The LAN IP address needs to be configured for the WROC. The default is 192.168.10.1 and the value can be changed as required. LAN users can access the WROC through this IP address or w.com.

LAN Settings

1. Click **Network** from the home page.
2. Click **Network > LAN**, and enter the LAN **IP address** and **Subnet mask**. If there is no special requirement, you can use the default. The effective LAN IP address ranges from 10.0.0.0 to 10.255.255.255, 172.16.0.0 to 172.31.255.255, 192.168.0.0 to 192.168.255.255 and 169.254.0.0 to 169.254.255.255.
3. Click **Save**.

Note: If the LAN IP address is changed, PCs connected to the WROC by wireless or wired network need the new IP address to access the Web GUI of the WROC or have to log in from through **w.com**.

DHCP Server

Based on the preset IP address range, the DHCP server on the WROC automatically assigns IP addresses to terminals accessing the WROC and implementing DHCP services.

Enabling DHCP Server

1. Click **Network** from the home page.
2. Click **Network > DHCP server**, and tick off the **Enable** option. The start IP and end IP addresses are generated automatically and can be changed as required. Note that the new IP addresses should fall into the same network segment with the LAN IP address. By default, the **Primary DNS server** uses the LAN IP address, and the **Lease time** needs to be set.
3. Click **Save**.

Note: Before the lease expiration, the DHCP server will not assign any IP address in use to another terminal.

MAC Address Binding

If an IP address is bound to a MAC address, the IP address will be assigned only to the terminals with the bound MAC address. MAC address binding can effectively prevent illegitimate users from occupying network resources.

Settings of MAC Address Binding

1. Click **Network** from the home page.
2. Click **Network > DHCP server**, and enter the MAC address and IP address to be bound in the **MAC address binding** box. The IP address must be in the same network segment with the LAN IP address.
3. Click **Save**.

DHCP Clients

The DHCP client list displays the information about terminals to which the DHCP server has assigned IP addresses, including hostname, MAC address, acquired IP address and expiration time of the IP address.

Hostname	Client name.
MAC address	Client MAC address.
IP address	IP address assigned to the client host by the DHCP server.
Expires in	Remaining time before the IP address expires. Every IP address has an expiration time, and the client software will automatically renew it before the expiration time.

Wireless Network

Basic Wireless Network Settings

Wireless terminals can get access to the Internet by connecting to the wireless network of the WROC.

Enabling/Disabling Wireless Services through WLAN Button

Wireless network can be enabled or disabled through the WLAN button on the front panel of the WROC. If the WLAN indicator on the WROC is on, it means the wireless network is enabled, otherwise, it is disabled.

Configuration of Basic Wireless Network Parameters

1. Click **Network** from the home page.
2. Click **Wireless > Basic**, and tick off the **On** option.
3. Select the **Network mode** based on the wireless mode of the terminal. Network modes supported by the WROC include 802.11b/g/n. The selection of the network mode depends on the network environment. If 802.11b and 802.11g terminals co-exist on the network, a mixed mode is needed, and the default of 802.11b+g+n is recommended.

802.11b+g	The connection of both 802.11b and 802.11g terminals is supported, and the maximum connection rates are 11 Mbps and 54 Mbps respectively.
802.11b	Only the connection of the 802.11b terminal is supported, and the maximum connection rate is 11 Mbps.
802.11g	Only the connection of 802.11g terminal is supported and the maximum connection rate is 54 Mbps.
802.11n	Only the connection of the 802.11n terminal is supported, and the maximum connection rate is 150 Mbps or 300 Mbps.
802.11b+g+n	The connection of the 802.11b, 802.11g, and 802.11n terminals is supported, and the maximum connection rates are 11Mbp, 54 Mbp, and 150 or 300 Mbp respectively.

4. **SSID** indicates the name of the wireless network. The default is **NewRock** and can be changed as required.
5. Select the wireless **Channel**. The default is **Auto**. If the signals are unstable, try another channel.
6. Click **Save**.

Note: You can view the basic information of clients on the wireless network of the WROC from **Wireless > Clients List**.

AP Isolation

For the sake of information security, wireless terminals connected to the same WROC can be isolated to prevent mutual communications. With this function, public hotspots can be set in large public

spaces (such as airports and hotels) to ensure safe network access.

Enabling Wireless Terminal Isolation

1. Click **Network** from the home page.
2. Click **Wireless > Basic > AP Isolation**, and tick off the **Enable** option.
3. Click **Save**.

High Speed Mode

This setting is located under **Wireless > Basic**. All parameters in this setting take effect only when the network mode is 802.11n or 802.11b+g+n. The default is recommended for the following parameters.

Operating mode	Mixed mode, which can improve the compatibility of wireless network but will affect its throughput. Green mode, which can increase the throughput but will affect the compatibility and system security.
Channel bandwidth	In 802.11n mode, two 20-MHz channels are bundled into a 40-MHz channel. In real situations, the 40-MHz channel can be used as two 20-MHz channels (a primary channel and a secondary channel). Data can be sent and received from the 40-MHz channel or a single 20-MHz channel, which doubles the transmission rate and improves the throughput of wireless network.
Guard interval	The space transmission of wireless signals may be delayed in some occasions. If the subsequent data block is transmitted before the previous one is processed, the transmission of the previous data block may be affected. This parameter can be configured to avoid such interference.
Modulation and Coding Scheme (MCS)	The wireless rate of 802.11n mode is configured through the index value of Modulation and Coding Scheme (MCS). Each MCS index value corresponds to a communication rate determined by a set of parameters.
Reverse direction grant (RDG)	This parameter allows the WROC to receive response packets while sending packets.
Space time block coding (STBC)	This parameter allows the WROC to transmit multiple copies of a data stream through antenna or other receiving means, improving data transmission reliability.
Aggregation MSDU (A-MSDU)	Aggregated MAC Service Data Unit (A-MSDU) indicates a frame aggregation mode. In this mode, multiple MSDUs are combined into one MSDU for transmission, which reduces the amount of additional MAC head information in each MSDU and increases the MAC-layer transmission rate.
Auto block ACK	This parameter increases the transmission rate by combining exchange sequences.
Decline BA request	This parameter increases the transmission rate by rejecting automatic block response requests from other wireless devices.
HT disallow TKIP	On the wireless network of high throughput, the encryption mode is Advanced

Encryption Standard (AES) or none, instead of Temporal Key Integrity Protocol (TKIP).

Wireless Network Security

By factory default, the security mode of WROC wireless network is **WPA/WPA2-PSK**, with the encryption type of **TKIP&AES** and the key of **12345678**.

Settings of Wireless Network Key

1. Click **Network** from the home page.
2. Click **Wireless > Security**, and select the **Security mode**. The security mode can be selected based on the wireless network standard supported by the wireless terminal. The most common mode is the default of **WPA/WPA2-PSK**.

Wireless Network Standard	WEP Protocol	WPA Protocol	WPA2 Protocol
IEEE 802.11a	Supported	Supported	Not supported by early wireless terminals
IEEE 802.11b	Supported	Not supported by early wireless terminals	Not supported by early wireless terminals
IEEE 802.11g	Supported	Not supported by early wireless terminals	Not supported by early wireless terminals
IEEE 802.11n	Supported	Supported	Support

3. Select the **Security mode** and change the **Pass phrase** accordingly. If the **WEPAUTO** is selected, you can directly set the wireless network key without selecting the security mode. To set a 64-bit key, enter 10 hexadecimal characters or 5 ASCII characters; to set a 128-bit key, enter 26 hexadecimal characters or 13 ASCII characters.
4. Set the **Key renewal interval**, which indicates the interval at which the broadcast and multicast keys are refreshed. The default is 3600 seconds.
5. Click **Save**.

Advanced Wireless Network Settings

The advanced wireless network settings are located under **Network > Wireless > Advanced**. The default is recommended for the following parameters.

BG protection mode	This parameter indicates a self-adjustment mechanism which helps 802.11b+g wireless clients to successfully connect to 802.11n wireless network under complex situations. The default is **Auto**.
Beacon interval	This parameter represents the amount of time between beacon transmissions. The smaller the interval, the faster the access speed of the wireless client; the larger the interval, the higher the data transmission efficiency of the wireless network. The default is 100, and you are not recommended to change the default.
Data beacon rate (DTIM)	This parameter indicates the interval of beacon transmission. The

	default is 1.
Fragment threshold	This parameter indicates the threshold for data fragmentation. When the data size exceeds the threshold, the data packet will be fragmented into several pieces. The default is 2346 and you are not recommended to change the default.
RTS threshold	When the data packet exceeds the threshold, the sender will first send a Request to Send (RTS) and wait for the response. Upon receiving the permission, the sender can send data packets. The default is 2347. In the scenario where the access of long-distance client is interfered, you can set a smaller threshold value. To ensure better AP performance, you are not recommenced to change the default for small offices.
TX power	Indicates the distance and range that wireless signals can cover. The default value is 100.
Preamble type	The value for this parameter can be **Short** or **Long**.
TX burst	This parameter indicates a mechanism in which the AP attempts to send multiple packets after receiving an ACK message from the client. This mechanism assures the AP a higher throughput without changing the network environment and increasing the transmission duration.
Packet aggregate	This parameter indicates that multiple small packets are aggregated into a large packet for transmission, which can reduce the network bandwidth to be occupied, but may reduce network performance in the case of poor network environment or serious interference.
IEEE 802.11H support	Only applicable to A bandwidth.

Wi-Fi Multi-Media

Wi-Fi Multimedia	Wi-Fi multimedia (WMM) is a wireless Quality of Service (QoS) protocol, ensuring the preferential transmission of voice and video data. To perform WMM, the wireless client is also required to support WMM. By default, WMM is enabled.
APSD	Automatic Power Save Delivery (APSD) saves power when no data is transmitted. Enabling this function may reduce the wireless network performance. By default, APSD is disabled.

WPS

WPS (Wi-Fi Protected Setup) is used to establish encrypted connections between wireless client and WROC in a simple and quick manner. You are not required to select the encryption type and set a key for WPS. You only need to enter the PIN code or press the **WPS** button on the terminal.

Enabling WPS

1. Click **Network** from the home page.
2. Click **Wireless > WPS**, and tick off the **Enable** option.

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3. Click **Save**.

Selection of WPS Setting Mode

PIN	In this mode, you need to add the PIN code of the wireless client to the Personal Identification Code box and click **Start to connect**. Alternatively, you can enter the PIN code generated by the WROC into the wireless terminal to establish the connection.
PBC	One-key encryption to establish a safe connection between the WROC and wireless terminal, you only need to press the **WPS** button on the WROC (or tick off **PBC** in the GUI and click **Start to connect**) and then press the **WPS** button on the wireless terminal within two minutes.
Reset OOB	After the Out-of-Band (OOB) button under **Wireless > WPS** is pressed, the WPS client will be in an idle state and the WPS indicator will turn off. In this situation, the wireless network of the WROC is open to the public, allowing the access of wireless terminals without entering the password.

Note: After resetting OOB, you are recommended to re-set the security mode for the wireless network of the WROC.

WDS

Wireless distribution system (WDS) enables the WROC to extend its wireless network coverage by establishing connections with other routers through lazy, bridge or repeater mode.

Configuration of WDS in the GUI

1. Click **Network** from the home page.
2. Click **Wireless > WDS**. Select the **WDS mode** and enter the **encryption type** and **key**. If the bridge or repeater mode is selected, the AP MAC address needs to be entered.

WDS Mode	Applicable to the Master AP	Applicable to the Extended AP	Able to Provide the AP Function	Remarks
Lazy	Yes	Yes	Yes	The MAC address of the extended AP is not required.
Bridge	Yes	Yes	No	The MAC address of the extended AP is required.
Repeater	Yes	Yes	Yes	The MAC address of the extended AP is required.

3. Click **Save**.

Example for Extending the Wireless Network Coverage in WDS: Lazy and Repeater Modes

1. Log in to the WROC and click **Network** from the home page. Click **Wireless > Basic**, select 802.11b+g+n as the network mode, and then select channel 11. Write down the SSID.

2. Set the encryption mode and key for WROC wireless network. If the default security mode of **WPA/WPA2-PSK** is applied, the encryption type should be **AES** and the key **12345678**.
3. Select Lazy as WDS mode, AES as the encryption mode and set the key to **12345678**.
4. Set the SSID, operating mode, security mode, encryption type, key and channel of a router to be identical with those on the WROC. If the WDS mode is repeater, the settings of encryption type and key are the same with that of WROC. Click **AP scanning** to add the MAC address of the WROC.
5. Disable DHCP services on the router and set the LAN port address of the router in the same network segment with that of the WROC. After that, all configurations are completed. Reboot both the WROC and the router.

Notes

- Both the connected wireless routers are required to support WDS and come with the same SSID, operating mode, security mode, encryption type, key, and channel.
- If the WDS mode of one wireless router is Repeater, its DHCP services should be disabled, and its LAN port address should be in the same network segment with the other one.

MAC Filtering

MAC addresses can be filtered to prevent certain terminals from joining the WLAN.

Settings of MAC Filtering

1. Click **Network** from the home page.
2. Click **Wireless > MAC address filter**, and tick off the **Enable** option.
3. **Add** MAC addresses to the **Reserved MAC address table**.
4. Select the **Access control policies**. There are two options. One option is allowing the wireless connection based on the MAC address in the list, but prohibiting the wireless connection based on other MAC addresses. The other option is prohibiting the wireless connection based on the MAC address in the list, but allowing the wireless based on other MAC addresses.
5. Click **Save**.

Note: A maximum of 20 MAC addresses can be added to the **Reserved MAC address table.**

Firewall

Access Control

This feature controls the access of users by accepting or rejecting the connection request submitted by the client according to the rule parameters. The connection request can be filtered based on one or several control rules.

Setting Access Control

1. Click **Network** from the home page.
2. Click **Firewall > Access control**, set the **Rules**, then click **Add**. The filtering based on the MAC address and source IP address can prevent a terminal from connecting to the Internet. The filtering based on the destination IP address can prevent the access to this IP address. The filtering based on ports can prevent the access to some services, such as WEB and File Transfer Protocol (FTP).
3. Tick off the **Enable** option in the **Basic settings** box.
4. Select **Default policy**, which is a measure adopted to deal with the network packets that don't conform to the rule.
5. Click **Save**.

Notes

- A maximum of 32 control rules can be added to the control rule list.
- When you disfavor a certain filtering rule added to the control list, you can set it as empty.

Advanced Filtering

This feature filters network packets passing through the WROC in a more specific and precise manner. It can filter Java applets and ActiveX applications based on contents, prevent illegitimate websites based on URL filtering and block specified types of websites by keywords.

Setting Filtering In the GUI

1. Click **Network** from the home page.
2. Click **Firewall > Advanced filtering**.

Filtering mode	Description
Content	Prevent access to websites containing such content as Proxy, Java or AxtiveX.
URL	Prevent access to a certain website. For example, when sohu.com is input to URL, no access can be got to the website www.sohu.com or the second- and third-level domain names of sohu.com, such as mail.sohu.com.
Keyword	Prevent access to a certain type of website. For example, if **sports** is configured as a keyword, no access can be got to any sports-involved websites, such as **sports.sina.com** and **sports.sohu.com**.

3. Click **Save** or **Add** as required.

Remote Management

Remote management enables you to access the WROC with a WAN port address. For example, you can enter **http://202.248.56.108:8080** in the address bar.

Enabling Remote Management in the GUI

1. Click **Network** from the home page.
2. Click **Firewall > System security**, and tick off the **Enable** option and fill in the **Remote management port**.
3. Click **Save**.

Note: The default remote management port is 80. In the scenario where the port 80 is disabled by the ISP, you are recommended to change the remote management port.

QoS

QoS

QoS can give different bandwidths and priorities to every traffic type. In the scenario where bandwidth resources are insufficient, QoS reasonably allocates the bandwidth for different data packets, ensuring an efficient bandwidth usage.

Setting QoS

1. Click **Network** from the home page.
2. Click **QoS** and select the **QoS mode**. Available QoS modes include Bi-direction traffic control, Upload control and Download control.
3. Set values for the upload and download bandwidths based on the network condition.
4. Select the **QoS policy**.

DRR(Rate limit)	This parameter sets the minimum and maximum bandwidth for rules of each level. In addition, this parameter can set QoS rules.
SPQ(Priority)	If this parameter is selected, only QoS rules, not upload and download rules, can be configured. Services are processed by priorities. Services with the highest priority take the precedence over services with a lower priority. It ensures that high-priority services are processed before low-priority services. However, if there are too many high-priority services to be processed, low-priority services may be blocked.
SPQ+DRR(Speed limit + priority)	This parameter can set the minimum and maximum bandwidth for rules of the lowest level and the default. If this parameter is selected, QoS rules can be configured in addition to upload and download rules.
DSCP	DSCP is short for Differentiated Services Code Point. If this parameter is selected, only QoS rules, not upload and download rules, can be configured.

5. Set the minimum and maximum bandwidth of different levels (highest, high, default, and low) for the upload and download rules. The total minimum bandwidth of each level cannot exceed 100%.
6. Select a **Reserved bandwidth**. The default of 10% is recommended.
7. Configure parameters for the upload or download rules.

Name	Specify the name of a rule.
Priority	Set the priority for a rule.
Destination (Dest.) IP address	Specify the destination IP address over which QoS takes effect.
Source IP address	Specify the local IP address.
Package length	Specify the length of packets passing through the router.
DSCP	Differentiated Services Code Pointdistinguishes priorities by code values. If there are no special requirements, the default is recommended.
Protocol	Specify the protocol type over which QoS takes effect.

8. Click **Save**.

Note: By default, the WROC gives the priority to voice services, so QoS settings do not take effect over voice services.

Application

Virtual Server

The virtual server achieves the port range mapping between the WAN and LAN terminals of the WROC. The access of WAN to this port range will be located by the specified terminals in LAN.

Setting Virtual Server

1. Click **Network** from the home page.
2. Click **Application > Virtual server**, and configure the following parameters:

Host IP address	Specify the IP address of the host serving as the virtual server of the LAN.
Port range	Specify the start and end ports which the virtual server monitors.
Protocol	Specify the network protocol used by the virtual router. For example, you need to select **UDP** for DNS server and **TCP** for Web server. If you are not sure which protocol is suitable, select **TCP&UDP**.
Comment	Custom name.

3. Click **Add**.

Note: If the service port 80 is included in the port range configured for the virtual server, click **Firewall > System security** to change the remote management port to any value other than 80, such as 8888, or a conflict will occur, causing the virtual server unavailable.

Port Forwarding

Port mapping enables Internet users to access certain applications (such as FTP server) on the specified LAN terminal of the WROC.

Setting Port Mapping

1. Click **Network** from the home page.
2. Click **Application > Port** forwarding, and configure the following parameters:

Host IP address	Specify the IP address of the host where port mapping is enabled on the LAN.
Public port	Specify the external network port corresponding to the LAN server port.
Private port	Specify the server port of the LAN host.
Protocol	Specify the protocol applied for port mapping. If the protocol to be used is not clear, you are recommended to select TCP&UDP.
Comment	Custom name.

3. Click **Add**.

Note: A maximum of 32 port mapping rules can be added to the **Port forwarding list.**

DMZ

Enabling De-militarized Zone (DMZ) exposes a certain device in the LAN to the WAN for unrestricted two-way communications.

Setting DMZ

1. Click **Network** from the home page.
2. Click **Application > DMZ**, and tick off the **Enable** option. Enter the IP address of the DMZ host on the LAN.
3. Determine whether to tick off **Except TCP port 80**. If this option is selected, you can access the WROC through a WAN address when remote management (the remote management port is 80) is enabled; if not, you cannot access the WROC through the WAN address.
4. Click **Save**.

Note: After DMZ is enabled, the firewall will fail to protect the device.

UPnP

Universal Plug and Play (UPnP) helps devices to access the network and connect to other devices as needed. Hosts equipped with UPnP components on the LAN can automatically enable the corresponding ports on the WROC as required so that applications supporting UPnP on the external host can access internal host resources when necessary.

Enabling UPnP

1. Click **Network** from the home page.
2. Click **Application > UPnP**, and tick off **Enable**.
3. Click **Save**.

USB Storage

This feature enables you to access the storage device connecting to the USB interface of the WROC.

Enabling USB Storage

1. Click **Network** from the home page.
2. Click **Application > USB storage**, and tick off **Network connection** (local access) or **HTTP** (local or remote access), and you can change the username and password for HTTP access.
3. Click **Modify** in the **Available Network Folders** box to change the shared name and password for the network connection.
4. Click **Save**.

How to View the Shared information

Network connection	Double click **My Computer** and enter **\\usb\share** in the address bar. Enter the username and password (both are **admin** by default), and open the **sda** file to get the information you want.
HTTP	Open the browser and enter **http://w.com/usb** in the address bar. Enter

the username and password (both are **user** by default), and open the
sda file to get the information you want.

Notes

- After the first access to the USB storage, the PC will remember the password so that no password is required for subsequent accesses. You only need to enter the address and press **Enter**. If you use network connection to access the storage device, the message **Windows cannot find \\usb\share** will be displayed after the password is changed. The problem can be avoided by rebooting your PC after changing the password.
- If you access the USB storage device through the Internet, enter the WAN IP address of the WROC in the address bar of the browser, such as **http://220.245.148.97/usb**.
- You can read and write the USB storage device only when accessing the storage device through network connection mode. Tick off **Allow** from the **Available Network Folders > Modify.**

USB Printer

A non-network printer can be connected to the USB interface of the WROC for public sharing through the network.

Checking the Availability of the Printer

1. Click **Network** from the home page.
2. Click **Application > USB printer** to view the information of the installed printers from the USB print list.

Note: A printer is available only after the printer driver is installed in the computer, which can gets access to the WROC. The WROC address needs to be entered during the installation.

Advanced Settings

Static Routing

Static routing is a way of route forwarding other than the default route for a specified host or network.

Configuration of Static Routing

1. Click **Network** from the home page.
2. Click **Advanced > Static routing**. Select the route type (Host/Net) and configure the corresponding parameters. The rule name can be customized.

Destination	Specify the destination IP address of the packet.
Netmask	Specify the subnet mask of the destination IP address.
Gateway	Specify the IP address of the next hop. The IP address must be in the same network segment as the IP address of the WAN or LAN interface on the WROC.
Interface	Specify the interface from which data packets are sent.

3. Click **Add**.

Note: Take cautions in enabling this function when the surrounding network environment of the WROC is complex or the topology of the surrounding network is unclear.

System Time

Click **Advanced > System time** to set the system time. You can click **Time synchronization** to get the time from the connected PC, or set the **Synchronization** cycle and select a **Time zone**, and enter the IP address of the **Time server** on the LAN or Internet to obtain the time from the time server and synchronize with it.

Note: The WROC automatically obtains the time from the Internet or LAN for synchronization after each boot. Some functions, such as recording, are related to the system time.

DDNS

If the IP address of the WROC is not fixed, the IP phone terminal on the Internet needs to find and register to the WROC based on a fixed Dynamic Domain Name Server (DDNS).

Configuration of DDNS

1. Click **Network** from the home page.
2. Click **Advanced > DDNS**. Select the **Service provider**, and enter the account, password and domain name obtained from the DDNS service provider. The **Renewal interval** can be set as required. For example, you can set it to 600, the default unit is second.

3. Click **Save**.

Note: DDNS service providers that the WROC supports include Dyndns.org，freedns.afraid.org，www.zoneedit.com，www.no-ip.com，www.3322.org.

Chapter III   Voice

Auto-Attendant

The auto attendant allows callers to locate the people in the office without talking to a receptionist. Callers can also choose to talk to a receptionist for assistance. You can customize the greeting prompt to the callers.

Auto-Attendant and the Receptionist

When a call comes in the device will answer the call and play the user-configurable welcome prompt and the voice menu. Following the voice menu, the caller can choose to use the DTMF key and enter the extension number or 0 to talk to the receptionist who is assigned with an extension 200 by default. The receptionist can further manually transfer the call to an extension.

Here are the steps for changing the settings of auto attendant:

1. Click **Voice** from the home page.
2. Click **Basic > Auto-attendant** to make the changes.

Auto attendant	The device can be configured to play different greeting prompts or the same greeting prompt for the business hours and non-business hours.
Greeting	After answering an incoming call the device play the greeting to the caller. You are allowed to customize the greeting through voice synthesis by clicking the **Text to voice greeting**.
First digit timeout	The greeting and the voice menu prompts will be played continuously until the caller making the selection with the DTMF keys or the timeout. When timeout is accursed the call will be directed back to the receptionist.
Operator	**Operator**: Enter the extension of the receptionist, and the default is 200. **Press**: Enter the short number of receptionist, and the default is 0. **Ring the phone**: When the incoming call is directed to the extension and ring number of times defined here without getting answered, a prompt will be played to the caller and the caller can choose either to wait or get back to the receptionist.

3. Click **Save**.

Greeting

There are two greetings, one for office hours and one for non-office hours.

Default greeting prompt

Item	File name	Content
Business hours	welcome	Thank you for calling. If you know your party's extension, please dial it now. Or, to transfer to an operator, press zero.

Non-Business hours	offhour	Thank you for calling. Our office is closed. If you know the extension, please dial it now.

Customize the greeting prompt

Synthesizing greetings

You are allowed to customize the greeting prompts by using the voice synthesis service provided New Rock Technologies, Inc. You simply enter the English text stream in the interface of **Basic > Text to voice greeting** and device will send the request to the server and get back the voice file generated by the server. Here are the steps for performing the text to speech synthesis on the Web GUI:

1. Click **Voice** from the home page.
2. Click **Basic > Text to voice greeting**, input the content of greeting and click **Start**.
3. Play and save the file either **Business hour** or **Non-Business hour**.
4. Go to the **Basic > Auto-attendant** page to select the greeting file.

Note: To perform the synthesis the device is required to connect to the Internet.

Preparing the greeting file your own way

You can also prepare the greeting file in whatever means that available to you. The file you prepared must be in PCMU format with .pcm and the size of the file has to be limited to 300KB.

1. Click **Voice** from the home page.
2. Go to the **System> Greeting** page, click **Browse** to select a greeting file in PCMU format, such as **user1.pcm**, and click **Upload**.
3. Go to the **Basic > Auto-attendant** page to select the greeting file.

Outbound Call Transfer

This feature allows the operator to transfer trunk calls to external phone terminals.

For example, if a call comes in for a colleague who is not in the office, the operator can transfer the call to his or her mobile phone.

Setting Outbound Call Transfer

4. Click **Voice** from the home page.
5. Click **Extension > Analog extension > PHONE**. Configure a proper authority for the attendant extension (the default is 200).
6. Click **Extension > Analog extension > Advanced**. In the displayed dialog box, tick off **Outbound transfer** in the **Other** box.
7. Click **Save**.

Notes

- Transferring an incoming call to the external third party occupies two trunks.
- For information about the call-out authority, see **Call Barring**.

Magic Phone

IP Extension Registration

IP voice terminals, such as SIP softphone and SIP phone, can register to the WROC through networks. This terminal is called an IP extension.

For example, a CounterPath softphone **Bria** can be installed in your iPad as an App and registers to the WROC in any places with Wi-Fi hotspots, allowing you to communicate with your colleagues and clients in extension mode. The call service from the IP extension to the WRCO is free of charge.

An IP extension can register to the WROC after an account is opened on the WROC and the phone number and registration password are allocated.

Configuring Account Information for an IP Phone

1. Click **Voice** from the home page.
2. Click **Extension > IP extension** to add an IP extension.
3. Enter the phone number and password, and then click **Add**.
4. After the above setting, information about the IP extension account will be displayed in the **Current account** box.
5. To modify the account information, click .
6. Click **Save**.

Notes

- The WROC supports a maximum of eight IP extension accounts.
- The phone number and the password cannot be the same.

How to register an IP Extension

1. Prepare an IP voice terminal. For example, install a softphone in the iPad.
2. Enter account information of the IP extension on the terminal, including the phone number and password (IP extension account of the WROC).
3. Enter the domain and proxy on the terminal. The domain value can be the IP address and port number of the WROC. The default port is 5060. Click **Trunk > IP trunk** to change local ports.For details, see the **Quick Star Guide** of the WROC.

Note: The WROC supports IP extensions with video function and SIP-based camera.

Call Barring

The WROC provides five levels of authority for outgoing calls.

Intercom: Only internal calls are allowed.
Local: Internal and local calls are allowed.
Domestic: Internal, local and domestic long-distance calls are allowed.
International: Internal, local, domestic long-distance and international calls are allowed.

None: Only incoming calls are allowed. A busy tone will be heard after the phone is picked up.

For example, in the scenario where the call-out restriction is set to **Domestic**, but you attempt to make an international call, the system will prompt you that **You are not allowed to make the call. Please contact the adminstrator**.

Changing the Call-Out Restriction of an Analog Extension

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension > PHONE**.
3. Select a proper call-out restriction from the **Call barring** drop-down option.
4. Click **Save**.

Changing the Call-Out Restriction of an IP Extension

1. Click **Voice** from the home page.
2. Click **Extension > IP extension >** .
3. Select a proper call-out restriction from the **Call barring** drop-down option.
4. Click **Modify**.

Call Forwarding

The WROC can forward incoming calls to a specified phone, including a mobile phone.

Forward all calls to another phone: All incoming calls are unconditionally forwarded to a specified phone. This function is not available for the attendant extension.

Forward unanswered calls to another phone: When an incoming call is not answered or the extension is in occupied, the incoming call will be forwarded to a specified phone.

For example, if you do not want to miss any calls when you are out or off work, you can enable **forward all calls to another phone** on your extension to forward all incoming calls to your mobile phone. During work hours, you can enable **forward unanswered calls to another phone** to forward the incoming calls to your mobile phone when you are not at your desk.

Setting Call Forwarding in the GUI

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension**.
3. Select either of the call forwarding modes: **Forward all calls to another phone** or **Forward unanswered calls to another phone**.
4. Enter the call forwarding number (the phone to which calls are forwarded), such as 13812345678.
5. Click **Save**.

Setting Call Forwarding through a Phone

Forward all calls to another phone (unconditional forwarding)	Pick up the phone and dial ***99**+**1**+**1**. The system will inform you that the service has been registered successfully.
Forward unanswered calls to another phone (only when busy or unanswered)	Pick up the phone and dial ***99**+**1**+**2**. The system will inform you that the service has been registered successfully.

Setting of the call forwarding number	Pick up the phone and dial ***99**+**1**+**3**+call forwarding number.
Query	Pick up the phone and dial ***99**+**1**+*****. The system will inform you of the current settings. For example, if the system prompts you that the current setting is 1, it means that **forward all calls to another phone** is enabled.
Cancel	Pick up the phone and dial ***99**+**1**+**0**. The system will prompt you that the service has been cancelled successfully.

Notes

- If the do-not-disturb function is enabled, all incoming calls will be rejected and the call forwarding function does not take effect.
- If **forward all calls to another phone** is enabled, all incoming calls will be forwarded to a specified phone and the simultaneous ringing function on your extension does not take effect. **Forward all calls to another phone** is not available for the switchboard.
- **Forward unanswered calls to another phone** does not take effect when call waiting is enabled. Instead, incoming calls will be held when the line is busy.
- In the scenario where the route type of a call answering group is set to **IP trunk sequential** or **IP trunk circular** and the call forwarding function is enabled on an extension of the group, when the extension rings, the WROC will forward the call to a specified phone. Even though the phone is not answered, the call will not be forwarded back to another extension in the group.
- When the call forwarding number is an external phone number, please first check the call-out authority of the extension.

Phone Lock

Phone lock requires a PIN (Personal Identification Number) for making outbound calls.

For example, the phone lock function can be enabled on extensions to control phone expenses. Employees are allowed to set a PIN for their own extension. If an extension is locked, one has to get the valid PIN before making a call with this extension.

Setting Phone Lock in the GUI

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension > Advanced/** .
3. Enter the PIN number and tick off the **Calling with PIN** item.

PIN	The PIN is required for phone lock and authorized dialing. Please keep it safe.
Calling with PIN	If this option is selected, a PIN will be required before making an outbound call through the extension. If the PIN is invalid, the system will prompt you that **You are not allowed to make the call. Please contact the adminstrator**.

4. Click **Save.**

Setting Phone Lock through a Phone

Lock	Pick up the phone and dial ***77**+**1**. The system will prompt you that the service

|	has been registered successfully.
Unlock	Pick up the phone and dial ***77**+**0**+PIN+**#**. The system will prompt you that the service has been cancelled successfully. Note that the PIN needs to be set in the GUI.
Query	Pick up the phone and dial ***77**+*****. The system will prompt you whether the service is available or not.

PIN

When you are out for business and want to make a call through a telephone line of your office, you can dial in to the phone system of your office. Once your mobile number or the PIN pass the system check, you are allowed to make an outbound call under the system prompt.

If you are in office and want to make an outbound call through another extension which is not locked or does not have the authority to make the call, you can enter your PIN for call making.

For example, an insurance company stipulates that all of its business representatives communicate with clients through the company's phone system. To meet this requirement, the administrator can allocate the PIN to each representative or input their mobile number to the system as authorized numbers. So they only need to dial the phone number of the company and enter the PIN before making a call.

Setting the PIN and Mobile Number

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension > Advanced/** .
3. Enter the PIN or mobile number, and tick off the **Call with PIN** box.

PIN	For phone lock and authorized dialing. Please keep it safe.
Calling with PIN	If this option is selected, a PIN will be required before making an outbound call through the extension. If the PIN is invalid, the system will display a prompt indicating that the service registration fails.
Mobile	Input the mobile number. After dialing a line of the WROC outside the office, the mobile can make a direct call to others without entering the PIN number.

4. Click **Save**.

Using PIN

For internal usage	This parameter allows you to make a call through another extension with your PIN (extension number + PIN), and enjoy the same call-out authority of your extension. Pick up the phone and dial ***33**+extension number + PIN+**#**+number of the called party.
For external usage (**PIN authentication**)	Dial to the line of the WROC+***33**+extension number + PIN +**#**+number of the called party.
For external usage	Dial to the line of the WROC+***33**+number of the called party.

(**mobile authentication**)

Call Hold

This feature allows you to hold a call while making a new one. Music will be played for the waiting party when the call is on hold.

For example, you need to consult with party B during your call with party A, so you can hold the on-going call and call party B without terminating the connection with party A. During the call with party B, you can switch back to party A and put party B on hold. Music will be played for the waiting party. When the call with party B is over, you hang up the phone and pick up the phone to resume the conversation with party A after the bell rings.

Enabling Call Hold in the GUI

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension > Advanced/** .
3. Tick off the options from **Call hold**.
4. Click **Save**.

Using Call Hold

Hold the current call for another one	During a call, press** to make a new call without hanging up the phone.
Change the call object	If a call is on hold, press ****** to resume the conversation with the waiting party.
Terminate the current call and switch to the waiting party	If there is a call on hold, hang up the phone. When the bell rings, pick up the phone to resume the conversation with the waiting party.

Note: Call hold must be enabled when such functions as blind transfer, consultation transfer, call park, or call waiting are applied.

Call Transfer

This service allows you to transfer the on-going conversation to another extension or an external phone. If the current conversation party and the transfer party are external phones, your extension needs to have the authority of **outbound transfer**.

Blind transfer: directly transfer the on-going call to intended recipient (another internal extension).

Consultation transfer: you discuss the transferred call with the intended recipient (an internal extension or an external phone) after consultation.

For example, a call comes in for the manager. If the calling party is acquainted with the manager, you can directly transfer the call to the manager (in blind transfer mode). Otherwise, you can hang on the phone and confirm with the manager before transferring the call (in consultation transfer mode).

For another example, when an inbound call comes in for a salesman who is out for business, if you

have the authority of **outbound transfer**, you can transfer the call to the salesman through consultation transfer mode. If you do not have such authority, you have to tell the calling party that the salesman is out and unavailable for the phone.

Setting Call Transfer in the GUI

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension > Advanced/** .
3. Tick off **Call hold** and **Outbound transfer** options.
4. Click **Save**.

Using Call Transfer

Blind transfer	During an on-going call, dial ****+*38**+transfer phone number and hang up.
Consultation transfer	During an on-going call, dial ******+transferred phone number and consult with the intended recipient before hanging up.

Notes

- If the transfer phone number is an external phone, the intermediate needs the corresponding authorities of both **outbound call** and **outbound transfer**.
- In blind transfer mode, if the line of the transfer party is occupied, a busy tone will be heard by the transferred party, unless the call waiting function is enabled.
- In blind transfer mode, the number of the transferred party will be displayed on the phone of the transfer party. In consultation transfer mode, the number of the intermediate will be displayed on the phone of the transfer party.

Call Park

This service allows you to put a call on hold with music played for the calling party, and hang up the phone, then continue the conversation from any other extension.

For example, a call comes in for the manager, but the manager is not at his desk at the moment. You can transfer the call to an unoccupied park in the device, such as parking line 8, and hang up. Then, you inform the manger that he is wanted in parking line 8 through the broadcast. The manager can pick up the call from a nearby extension by dialing the line number of the parked call.

Enabling Call Park in the GUI

In the GUI, call park and call hold functions share the same button. For details, see Call Hold.

Using Call Park

|	
Call park	During a call, dial ****+*30**+parking line number (available from 1 to 9) and hang up.
Parking retrieval	Pick up any extension, dial **#30**, and enter the parking line number.

Note: If the line selected for parking is already in use, the system will prompt you that the service registration fails. In this case, you have to change to other number.

Call Waiting

If a new call comes in when the extension is busy, you will hear a Du-Du tone. Then you can choose to answer, reject, or ignore it without terminating the current call.

For example, when you are on an important call, but a new call comes in, you can hold it to answer the new one. If necessary, you can switch between the two calls.

Enabling Call Waiting

5. Click **Voice** from the home page.
6. Click **Extension > Analog extension/IP extension** > **Advanced/** .
7. Tick off **Call waiting** option.
8. Click **Save**.

Using Call Waiting

Continue the current call	No action is required when the system prompts you with the Du-Du tone for a new call. After a certain period of time, the Du-Du tone will automatically disappear.
Pause the current call for a new one	After hearing the Du-Du tone, press ****** to answer the new call.
Switch call objects	During a new call, press ****** to resume the original conversation.

Note: The call waiting function is not available for the switchboard.

Call Forking

This feature enables you to set the device to simultaneously forward incoming calls to both an extension and a pre-set terminal (such as a mobile phone), avoiding missing important calls.

For example, if the mobile phone 13812345678 is set as a forking number for the extension 204, the device forwards incoming calls to both the extension and the mobile phone so that you can answer calls using your mobile phone when absent from office. As soon as you answer the mobile phone, the extension automatically stops ringing.

Set the Forking number in the Interface

1. Click **Voice** on the main page.
2. Click **Extension > Analog extension/IP extension** > **Advanced/** .
3. Enter the **Forking number**, such as 13812345678.
4. Click **Save**.

Set the Forking number Using the Phone

You can also set the simultaneous ringing number through the phone by the following way: picking up the phone, and then pressing *75, the simultaneous ringing number, and # in sequence.

Note: *75 refers to the service code of simultaneous ringing, and the simultaneous ringing number can be an extension or a mobile phone number. After setting, the system voice prompt will inform you of the successful service registration and repeat the simultaneous ringing number that you have

entered.

Query/Cancel the Forking number Using a Phone

Query	Pick up the phone and press ***75***. The system voice prompt will inform you of the existing simultaneous ringing number.
Delete	Pick up the phone and press ***75#**. The system voice prompt will inform you that the service has been cancelled successfully.

Notes

- Call forking does not take effect if functions such as no-disturbing, unconditional call-forwarding, and phone secretary are enabled.
- Call forking does not take effect if the incoming call is in the call waiting mode.
- If incoming calls ring on an external terminal through analog external lines, the external lines need to send polarity reversal signals to the device. If no polarity reversal signal is sent by the external lines, the device enables the external terminal to ring only after the extension is not answered for a specified period.

Call Pickup and Pickup Deny

The call pickup function allows you to pick up calls that are not answered on other extensions. The pickup deny function prevents unanswered calls from being picked up by others. The pickup deny function can be enabled in the GUI or using a phone.

For example, in the scenario where you are waiting for an important call and do not want other people to pick it up, you can enable the pickup deny function on your extension. After the call ends, you can disable the pickup deny function through the phone.

Enabling Pickup Deny in the GUI

1. Click **Voice** in the main page.
2. Click **Extension > Analog extension/IP extension > Advanced/** .
3. Tick off the **Pickup deny** option.
4. Click **Save**.

Setting Pickup Deny through a Phone

Enable	Pick up the phone and dial ***73**+**1**. The system will prompt you that the service has been registered successfully. Others cannot pick up the calls to your extension.
Disable	Pick up the phone and dial ***73**+**0**. The system will prompt you that the service has been cancelled successfully.
Query	Pick up the phone and dial ***73**+*****. The system will prompt you whether the service is available or not.

Using Pickup

Pickup	When an extension rings and is not answered, pick up your phone and press ***51** to

pick up the call. If multiple extensions are ringing, the call to the extension that rings first will be taken over.

Three-Way Calling

This feature allows you to have a three-way "conference call" by adding another party to an existing call. You can make conversions with both of the parties at the same time or either of them alternately.

For example, you can invite a third party to the existing call. You can talk to one party with the other party waiting and hearing music, and switch the calls as required. Any party can quit from the three-way calling by hanging up the phone, and the on-going conversation will be not affected. You can hang up to terminate the three-way calling.

Using Three-Way Calling

Inviting the third party	During the two-way conversation, press ****** and dial the number of the third party. **Note**: During the invitation, the system will hold the current call and play music for the waiting party.
Establishing a three-way conversation	Press **##** during the two-way conversation while there is a waiting party aside.
Splitting a three-way conference into two-way conversation	Press **##** during the three-way conversation.
Talking to the waiting party	Press ****** during the two-way conversation while there is a waiting party aside.

Outbound Call

IP Trunk

You can apply for an IP trunk account from an IP telephony service provider. After registering to the service provider platform, the IP trunk becomes available for the WROC.

Setting IP Trunk

1. Click **Voice** from the home page.
2. Click **Trunk > IP trunk**.
3. Enter the IP address and port in the **Registration server** item of the **Service provider** box, then click **Save**.
4. Add or modify account information in the **Add/Modify IP trunk** box and click **Save**.

Registration server	The IP address and port of the registration server is provided by the service provider, such as 192.168.8.12:9999. Note that the IP address and port number of the registration server is separated by a colon.
Trunk ID	The Trunk ID is provided by the service provider, such as 62019550185.
Password	The password is provided by the service provider, such as 12345678.
Registration	Tick off the **Registration** option.

5. Check the registration status in the **Current account** box.

Note: If the registration fails, try the preceding steps again, and carefully check the **Registration server**, **Trunk ID** and **Password** provided by the service provider.

Dialing a Trunk Number

You can make an outbound call in either of the following two dialing modes:

Direct dialing: an external phone number can be dialed directly. This is the default mode for the home user.

Using prefix: a prefix needs to be added to the target external phone number. This is the default mode for the enterprise user.

For example, to reduce call charges, a company sets an intelligent trunk with the prefix of 9. In this case, number **"9"** should be added before dialing an external phone number. The WROC gives priority to analog trunk for local calls and IP trunk for long-distance calls.

Setting Dialing Method for Outbound Calls

1. Click **Voice** from the home page.
2. Click **Basic > Dialing rule > Method for outbound calls**. Choose **Direct dialing** or **Prefix**

dialing as needed.

3. Configure the **outbound** box.

Auto line	The WROC automatically selects the analog trunk (LINE port) or IP trunk for outbound calls. Usually, the WROC gives priority to analog trunk for local calls and IP trunk for long-distance calls. When the IP trunk is not available or faulty, the WROC will use the analog trunk.
Analog trunk	Calls are made through LINE port.
IP trunk sequential	When there are multiple external IP numbers, the WROC will select the idle trunk based on trunks that are sequentially listed in the outbound box.
IP trunk circle	When there are multiple external IP numbers, the WROC selects the idle trunk in forward circular way based on trunks that are sequentially listed in the outbound box.
Route	The WROC selects the outbound call trunk following rules that are defined in the routing table.

Note: If Direct dialing is selected, please avoid the conflict between the extension number and the default function key of the WROC (such as *30 and *75). If **Using prefix** is selected, please configure the following parameters:

Prefix	This parameter is used to select different trunks for outbound calls. The default prefix for IP trunk is 9, for analog trunk is 7, and for IP phone circle is 6.
Second dial tone	If this option is selected, the system will send out the second dial tone after the prefix is dialed.
Trunk	• WROC2011 supports one analog trunk and eight IP trunks. • Before dialup, please ensure that your extension has the corresponding call-out authority. • If the type of a trunk is set to **DID**, the trunk can only be used by the bound extension for outgoing calls.

4. Click **Save**.

Dialing Method

	Making an External Call	Making an Internal Call
Direct dialing	Pick up the phone and dial the external phone number	Pick up the phone and dial the number of another extension.
Using prefix	Pick up the phone, and dial the prefix plus the external phone number.	Pick up the phone and dial the number of another extension.

Hotline

The WROC provides the following auto-dial modes:

Immediate: the device automatically dials the preset hotline number after off-hook.
Delayed: the device automatically dials the preset hotline number if no dialing is performed five

seconds after off-hook.

For example, you can enable the delayed dialing function on the WROC at your home, and set the emergency service number as the hotline. At peacetime, your aged parents can make a call in a normal way. In an emergency situation when the phone is picked up without dialing, the WROC will automatically dial the emergency service number.

Set Hotline in the GUI

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension > Advanced**.
3. Select **Immediate** or **Delayed** from the **Hot line** drop-down list.
4. Enter the number in the **Hot line** item, such as 4006172700.
5. Click **Save**.

Notes

- By default, the hotline function is disabled.
- Once the immediate hotline function is enabled, the telephone will be dedicated to a private line and can't make other normal calls.

Speed Dialing

You can replace a multi-digit phone number with a double-digit number, which is easily remembered and saves the dialing time. The WROC supports a maximum of 30 abbreviated numbers.

For example, you can replace the mobile number 13812345678 with the abbreviated number 20. To dial the number, you only need to enter **20.

Editing the Speed Dialing List in the GUI

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension > Advanced/** .
3. Enter the **abbreviated code-phone number** in the **Speed dial list** item, such as 20-13812345678.
4. Click **Save**.

Note: The abbreviated number ranges from 20 to 49. You can set a maximum of 30 pairs of **abbreviated number-phone number**, with each pair being separated by **/**.

Setting/Using Speed Dialing through a Phone

Add	Add an **abbreviated number-phone number** pair to the speed dialing table. Pick up the phone and dial ***74**+abbreviated number + phone number to be abbreviated+**#**. The system will prompt you that the service has been registered successfully and repeat the abbreviated number.
Use	Pick up the phone and dial ******+abbreviated number.
Delete	Remove an **abbreviated number-phone number** pair from the speed dialing table. Pick up the phone and dial ***74**+abbreviated number+**#**. The system voice prompt will

tell you that the service has been cancelled successfully.

Emergency Call and Black List

You can configure a list for emergency call. Dialing numbers on the list is not limited by the extension authority. You can also configure a call-out black list. Dialing numbers on this list is prohibited.

Setting Call Filtering

1. Click **Voice** from the home page.
2. Click **Advanced > System > Call filter**.
3. Configure **White list** or **Black list**.

White list	Set external numbers the dialing of which is always allowed, and separate them by "|", such as 110|112. Dialing these numbers is not limited by the extension authority.
Black list	Set external numbers that are not allowed to dial, such as the toll number 900. Even the extension with the international call authority cannot dial this number. The system will send out a busy tone when numbers on the black list are dialed, but calls from these numbers can be answered.
Domestic long distance call prefix	Specify the identifier of the domestic long distance call, such as 0.
International call prefix	Specify the identifier of the international call, such as 00.

4. Click **Save**.

Digitmap

Digitmap is used to identify the end of the dialing, so as to start the call in time. A well-designed digitmap reduces the waiting time of the WROC and increases the speed of connection establishment.

Querying/Adding Digitmap

1. Click **Voice** from the home page.
2. Click **System > Dialing**.
3. Query and check matching rules in the text box of **Digitmap**. For detailed information about the matching rules, see **Digitmap Rules**.
4. Click **Save**.

Note: Digitmap can define a maximum of 250 matching rules. The length of each rule cannot exceed 32 digits or 38 characters. The total length of the character string cannot exceed 6000 bytes.

Digitmap Rules

0-9, *, #	Equal to the dial keys on the telephone.
x	Represent a single digit from 0 to 9.

.	Represent a multi-digit number. For example, **1** represents a multi-digit number starting with 1.
T	Indicate a timeout terminator.
[ ]	Represent a number set. For example, [1-3, 5, 7-9] represents a number among 1, 2, 3, 4, 5, 7, 8, and 9.
x.T	Stand for a phone number starting with a number from 0 to 9, with unlimited length. If no new number is received after the preset dialing time expires, the WROC will send out the detected number.
x.#	Stand for a phone number starting with a number from 0 to 9, with unlimited length. If **#** is added after the dialed number, the WROC will stop receiving phone numbers and send out all dialed numbers before **#**.
[2-8]xxxxxxx	Stand for an 8-digit number starting from 2 to 8.
02xxxxxxxxx	Stand for an 11-digit number starting from 02.
013xxxxxxxxx	Stand for a 12-digit number starting from 013.
13xxxxxxxxx	Stand for an 11-digit number starting from 013.
11x	Stand for a 3-digit number starting from 11.
9xxxx	Stand for a 5-digit number starting from 9.

IMS

IP Multimedia Subsystem (IMS) is a new multimedia service form, applied to satisfy more innovative and diverse multimedia service requirements of terminal clients. IMS adopts SIP as voice signaling protocol.

Enabling IMS

1. Click **Voice** from the home page.
2. Click **Advanced > SIP > IMS**.
3. Tick off the **IMS** option.
4. Fill in **Access network info**, including the IP address and port number of the access network, such as 192.168.100.200:5060.
5. Click **Save**.

Configuring Information about the Service Provider

1. Click **Voice** from the home page.
2. Click **Trunk > IP trunk** to configure the IP address and port number of the service provider in the **Registration server** item. The information is identical with that of the access network. For procedures of the setting, see **IP Trunk**.
3. Click **Reboot** to reboot the system and validate the setting.
4. Log in to the WROC again, and then click **Voice**.
5. Click **Trunk > IP trunk > Current account** to check the registration status. If the prompt **Register success** is displayed, it indicates that the registration has succeeded.

Making the Call-Answering Mode More Comfortable

DID

Direct Inward Dialing feature binds an external trunk to the extension. When a call comes in, the WROC will transfer the call to the bound extension without access to the auto-attendant.

For example, DID numbers can be assigned to their salesmen or leaders for convenient contact with clients.

Setting DID in the GUI

1. Click **Voice** from the home page.
2. Click **Trunk > Analog trunk/IP trunk**.
3. Select **DID** from the **Trunk type** drop-down option.
4. Enter a DID number, such as the extension 205.
5. Click **Save** or **Add** as required.

Notes

- When the trunk type is set to **DID**, this trunk can only be used by the bound extension for making outgoing calls.
- The default number of the analog trunk is 201. You need to change it to the external number provided by the service provider, such as 61202700.
- Before setting a DID number for an IP trunk, please register the number in the service platform of the service provider.

Hunting Group

Multiple extensions can be added to the same hunting group. When a group number is dialed, the WROC will ring the idle extension in the group. If there are several idle extensions in the group, the WROC will select one according to the preset hunting type, which may be sequential, circular and simultaneous.

For example, extensions 201 and 202 in the sales department are added to a hunting group under the group number of 1. When a call comes in for the sales department after entering 1 under the voice menu (IVR), the WROC will direct the incoming call to the idle one between extensions 201 and 202. If the hunting type is set to circular, the WROC will ring the two extensions alternately.

Adding A Phone Number to the Hunting Group in the GUI

1. Click **Voice** from the home page.
2. Click **Basic > Dialing rule > Group**. Click **Add**, then set a group number, and select the hunting type.

3. Click ![icon] to add numbers to the group.

Number	Specify the group number of the hunting group. The value shouldn't be identical with that of other prefix, extension number, and function key.
Hunting	When there are multiple extensions, you need to select a proper hunting type. **Sequential**: the WROC selects one of the idle extensions in sequence. **Circular**: the WROC selects one of idle extensions in turn. **Simultaneous**: all idle extensions in the group ring simultaneously. Note: In the scenario where the hunting type is set to **sequential** or **circular** and call forwarding is enabled for an extension in the group, when the extension rings, the WROC will forward the call to a specified phone. Even though the phone is not answered, the call will not be forwarded back to other extensions in the group.
Extensions	Specify the phone number (including the IP phone) of the group member. The same extension number can be added to multiple hunting groups.

4. Click **Save**.

Note: When a call comes in for a group but is not answered, a busy tone will be played if it is an internal call or it will be forwarded to the operator if it is an external incoming call.

Secretary Extension

This feature allows you to bind your extension with that of the secretary, so all calls heading for your extension will be transferred to the secretary. You can enable or disable this feature through a phone.

External calls: The WROC will only transfer external incoming calls to the secretary.
All calls: The WROC will transfer all incoming calls to the secretary.

For example, if you are a boss, and do not want to be disturbed by any unexpected calls, you can enable this feature and let the secretary to handle your calls. The secretary will transfer the calls to you at required. For procedures of transferring a call, see **Call Transfer**.

Setting Secretary Extension in the GUI

1. Click **Voice** from the home page.
2. Click **Basic > Auto-attendant > Secretary**.
3. Tick off **External call** or **All call** as needed.
4. Click **Extension > Analog extension/IP extension > Advanced/** ![icon] to enter the secretary number.
5. Click **Save**.

Setting Secretary Extension through a Phone

Enable	Pick up the phone and dial ***35**+**1**. The system will prompt you that the service has been registered successfully.
Disable	Pick up the phone and dial ***35**+**0**. The system will prompt you that the service has been cancelled successfully.

Query	Pick up the phone and dial ***35**+*****. The system will prompt you whether the service is available or not.

Distinctive Ring

The WROC provides the following ring tones to distinguish different calls:

Internal call: De-De-De-De-De
External call: DeDe-DeDeDe
Call from an abbreviated number: DeDeDeDeDe-De-De

Enabling Distinctive Ring in the GUI

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension > Advanced/** 🖼.
3. Tick off the **Distinctive ring** option.
4. Click **Save**.

Setting Distinctive Ring Using a Phone

Enable	Pick up the phone and dial ***99**+**7**+**1**. The system will prompt you that the service has been registered successfully.
Disable	Pick up the phone and dial ***99**+**7**+**0**. The system will prompt you that the service has been cancelled successfully.
Query	Pick up the phone and dial ***99**+**7**+*****. The system will prompt you whether the service is available or not.

Do not Disturb

This feature allows you to reject any calls with voice prompts.

For example, if you do not want to answer incoming calls or to be disturbed by the ringtone while you are in the meeting, you can enable this function. The called party will hear the voice prompt **We are sorry, the line is busy at this time. Please dial other numbers, or dial zero for an operator**.

Enabling Do not Disturb in the GUI

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension > Advanced/** 🖼.
3. Tick off the **Do not disturb set by feature code** option.
4. Click **Save**.

Enabling Do not Disturb through a Phone

Activate	Pick up the phone and dial ***72**+**1**. The system will prompt you that the service has been registered successfully. Note: If you do not tick off the **Do not disturb set by feature code** option in the GUI, the system will prompt you that the service registration fails.
Deactivate	Pick up the phone and dial ***72**+**0**. The system will prompt you that the service

	has been cancelled successfully.
Query	Pick up the phone and dial ***72**+*****. The system will prompt you whether the service is available or not.

Notes

- Once Do not Disturb is enabled, all settings related to the incoming call automatically becomes invalid, including call forwarding, call waiting, simultaneous ringing, and secretary extension.
- This setting is unavailable for the operator's extension.

Call Block

This feature allows you to block unwanted calls with a busy tone. But you can call the blocked number back.

For example, if you are always harassed by an unknown number 13012345678, you can put it to the **Black list**. Or you can set a blocked number for all extensions on the WROC so that no extension will receive calls from this number.

Setting the Black List for a Single Extension

1. Click **Voice** from the home page.
2. Click **Extension > Analog extension/IP extension > Advanced/** .
3. Add numbers to the **Black list,** and separate them by commas, such as 13012345678, 13112345678.
4. Click **Save**.

Setting Blocked Numbers for All Extensions

1. Click **Voice** from the home page.
2. Click **System > Blocked phone numbers**.
3. Enter the blocked phone numbers.
4. Click **Save**.

Notes

- You can set a maximum of 30 blocked phone numbers.
- This function requires you to click **Trunk > Analog trunk** and tick off the **Call ID detect** option in the **LINE** box.

Chapter IV   Management

Management

Password

For the sake of security, you are recommended to change the initial password when you first log into the WROC.

1. Click **Mgmt** from the home page.
2. Click **Password**.
3. Change the **Administrator password** and **Login timeout value**.

Administrator password	**New password**: a complex password consisting of numbers, lowercase and uppercase letters is recommended.
	Confirm new password: enter the new password again.
Timeout	If the login time exceeds this value, the system will automatically log out.

4. Click **Save**.

Software Upgrade

To ensure a good performance, you are recommended to upgrade the WROC software to the latest version.

1. Click **Mgmt** in the main page.
2. Click **Firmware**.
3. Click **Browse**, select the upgrade file with extension of **.gz**, and click **Upload**.

Notes

- Do turn off the WROC, disconnect the network, or reboot the WROC during software upgrade. After software upgrade, the WROC will reboot automatically.
- The upgrade file is provided by your local dealers or you can send us your request to gs@newrocktech.com.

Configuration

You are allowed to download or upload the configuration files of the device.

Import Data

1. Click **Mgmt** from the home page.
2. Click **Configuration > Import data**.
3. Click **Browse**, select the configuration files with extension of **.gz**, and click **Upload**.

Export Data

1. Click **Mgmt** from the home page.
2. Click **Configuration > Export data**.
3. Click **Download** to select the storage path.

Notes

- Do not turn off the device, disconnect the network, or reboot the WROC during the import process. After configuration files are successfully imported, the WROC will reboot automatically.
- The upload and download speed may be affected by the network situation, please wait patiently.

Recover

If necessary, you can reboot the WROC or restore the factory settings.

1. Click **Mgmt** from the home page.
2. Click **Recover**.
3. Reboot the system or restore factory settings.

Reboot	The setting of some parameters takes effect only after reboot.
Restore factory settings	There are three options, namely, **Network**, **Voice** and **All**.

Acronym and Abbreviation

Acronym and Abbreviation	Full Name
AES	Advanced Encryption Standard
A-MSDU	Aggregated Mac Service Data Unit
APSD	Automatic Power Save Delivery
DDNS	Dynamic Domain Name System
DID	Direct Inward Dialing
DMZ	De-militarized Zone
DSCP	Differentiated Services Code Point
DTMF	Dual-tone multifrequency
DTIM	Data beacon rate
IMS	IP Multimedia Subsystem
MCS	Modulation and Coding Scheme
OOB	Out-of-Band
QoS	Quality of Service
RDG	Reverse Direction Grant
RTS	Request to Send
SIP	Session Initiation Protocol
STBC	Space-Time Block Code
TKIP	Temporal Key Integrity Protocol
UPnP	Universal Plug and Play
WDS	Wireless distribution system
WMM	Wi-Fi multimedia
WPS	Wi-Fi Protected Setup