Grandstream Networks, Inc.

WP820 - User Guide

WELCOME

Thank you for purchasing Grandstream WP820. This powerful Enterprise Portable Wi-Fi Phone features dual-band 802.11a/b/g/n Wi-Fi, supports Wi-Fi roaming, and integrated Bluetooth. The combination of advanced telephony features and durability make it ideal for mobilizing your VoIP network in residences, warehouses, retail stores, hotels and many more environments. Due to a durable design, this sleek phone is drop safe from 1.2 meters, with 150 hours standby time and 7.5 hours talk time making it an ideal addition for homes and businesses alike.

PRODUCT OVERVIEW

Feature Highlights

The following table contains the major features of the WP820:

- 2 SIP accounts and 2 lines.
- 3-way audio conference calls.
- Dual-band 802.11a/b/g/n Wi-Fi.
- Wi-Fi roaming and integrated Bluetooth.
- 150 hours standby time.
- 7.5 hours talk time.

WP820 Features at a Glance

Technical Specifications

The following table resumes all the technical specifications including the protocols/standards supported, voice codecs, telephony features, languages, and upgrade/provisioning settings for the Base station WP820.

Protocols/Standards	SIP RFC3261, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, ARP, ICMP, DNS (A record, SRV,NAPTR), DHCP, SSH, TFTP, NTP, STUN, SIMPLE, LDAP, TR-069, 802.1x, TLS, SRTP, IPv6
Voice Codecs and Capabilities	Support for G.711μ/a, G.729A/B, G.722 (wide-band), iLBC, Opus, in-band, and out-of-band DTMF (In audio, RFC2833, SIP INFO), VAD, CNG, AEC, PLC, AJB, AGC, ANS
Wi-Fi	Yes, integrated dual-band Wi-Fi 802.11 a/b/g/n (2.4GHz & 5GHz)
Wi-Fi Encryption	WEP, WPA/WPA2, WPA Enterprise
Graphic Display	2.4-inch (240×320) TFT color LCD
Peripherals	3 soft keys, dial, hang up, speakerphone, phonebook, backlit keypad, proximity sensor, accelerator, vibration motor, volume button and navigation keys

Push-to-Talk	Customizable button for push-to-talk, panic call and other related functions
Bluetooth	Yes, Bluetooth integrated.
Auxiliary Ports	3.5 mm headset jack, Micro-USB port for charging, dual-MIC, dual-color LED.
Telephony Features	Hold, transfer, forward, 3-way audio conference, downloadable phonebook (XML, up to 1000 items), call waiting, call log (up to 100 records), off-hook auto dial, auto answer, click-to-dial, flexible dial plan, hot desking, personalized music ringtones and music on hold, server redundancy and fail-over, push to talk
Security	User and administrator level passwords, MD5 and MD5-sess based authentication, 256-bit AES based secure configuration file, SRTP, TLS, 802.1x media access control
HD Audio	Yes, both on handset and speakerphone with support for wideband audio, HAC supported
QoS	802.11e (WMM) and Layer 3 (ToS, DiffServ, MPLS) QoS
Multi-language	English, Arabic, Chinese, Czech, Dutch, German, French, Hebrew, Italian, Japanese, Polish, Portuguese, Russian, Spanish, Turkish, Hungarian, and Slovenian.
Upgrade/ Provisioning	Firmware upgrade via TFTP/HTTP/HTTPS, manual upload, mass provisioning using TR-069 or encrypted XML configuration file, manual upload, USB upgrade
Power & Green Energy Efficiency	Universal power adapter included Input: 100-240VAC; Output: +5VDC, 1A (5W) 1500mA Li-ion battery, 150h standby time and 7.5h talk time
Physical	Handset dimensions: 168.5 x 52.5 x 21.8mm Charger cradle dimensions : 76 x 73 x 81mm Handset weight: 161g Handset package weight (not including QIG): 456g
Temperature and Humidity	Operating Temperature: 0~45°C; Operating Humidity: 10~90%(non-condensing) Storage Temperature: -20~60°C; Storage Temperature:10~90%(non-condensing)
Package Contents	Handset unit, universal power supply, charger cradle, belt clip, 1 Li-ion battery. Quick Installation Guide.
Durability	Drop-safe from 1.2 meters height
Compliance	FCC, CE, RCM, IC

*WP820 Technical Specifications*

GETTING STARTED

This chapter provides basic installation instructions including the list of the packaging contents and also information for obtaining best performance with the WP820.

Equipment Packaging

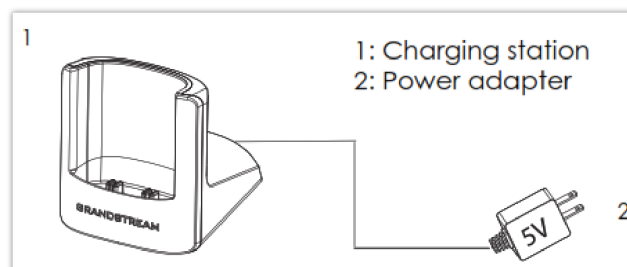| WP820 |
|---|
| • 1x Handset unit
• 1x Universal power supply 5V
• 1x Charger cradle
• 1x Belt clip
• 1x Rechargeable battery
• 1x Quick Installation Guide
• 1x GPL Statement |

Equipment Packaging
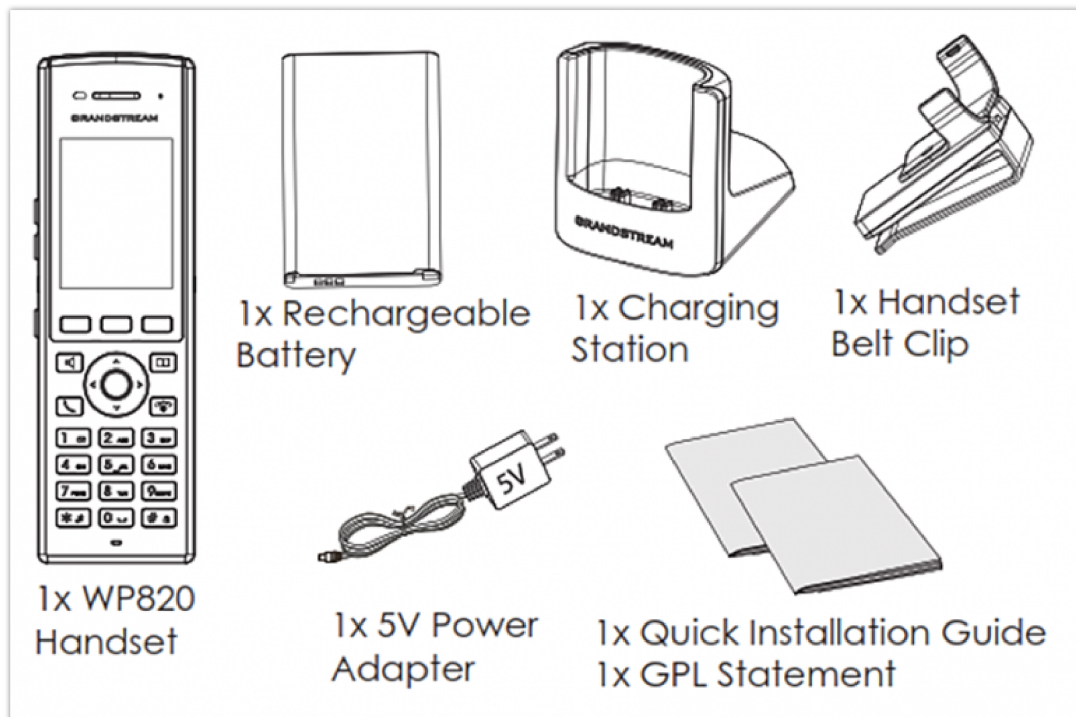
WP820 Package Content

Important

Check the package before installation. If you find anything missing, contact your system administrator.

Setting up the WP820

Charging Station

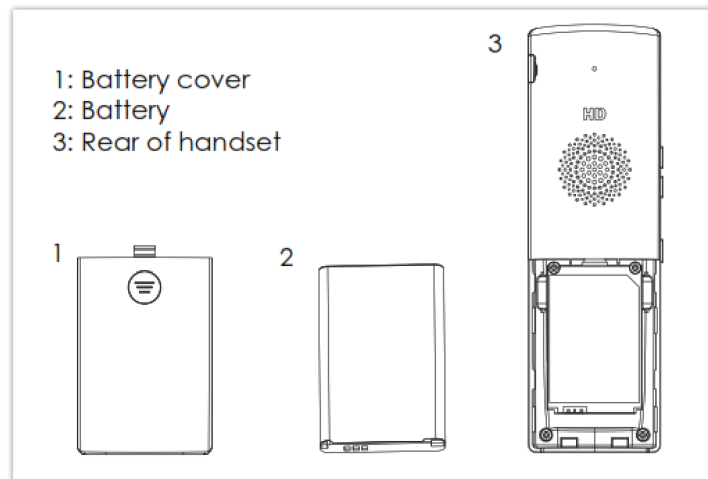Plug the power adapter into a power source socket to start using the charging station.

Handset

Please refer to the following steps in order to setup your WP820:

1. Open the battery cover.

2. Insert the battery with the electrodes in the bottom left corner.

3. Close the battery cover.

WP820 Handset Setup

Battery Information

- **Technology:** Rechargeable Li-ion Battery

- **Voltage:** 3.8V (Nominal Voltage 3.8V / Limited charge Voltage: 4.35 V)

- **Capacity:** 1500mAh

- **Standby time:** up to 150 hours

- **Talk time:** up to 7.5 hours' active talk time

In order to get the best performance of your WP820, we recommend using original battery provided in the package. The specifications may differ depending on the age and capacity of the battery used.

Notes

- WP820 Wi-Fi phone generates a warning tone when device's battery level becomes 15% and 5%.

- WP820 auto boots up once placed on charger when device was powered off abnormally (Battery too low, battery removed suddenly, etc..).

Important

Be careful when inserting the battery into your handset to avoid any risk of short-circuit, which lead to damage your battery and/or the handset itself. Do not use damaged batteries which can increase the risk of serious harm.

WP820 Handset Keys Description

The WP820 enhances communication and combines usability and scalability in industries such as warehousing, catering, and retail as well as in factory settings. The following screenshot describe the WP820 LCD screen and the main hardware components.
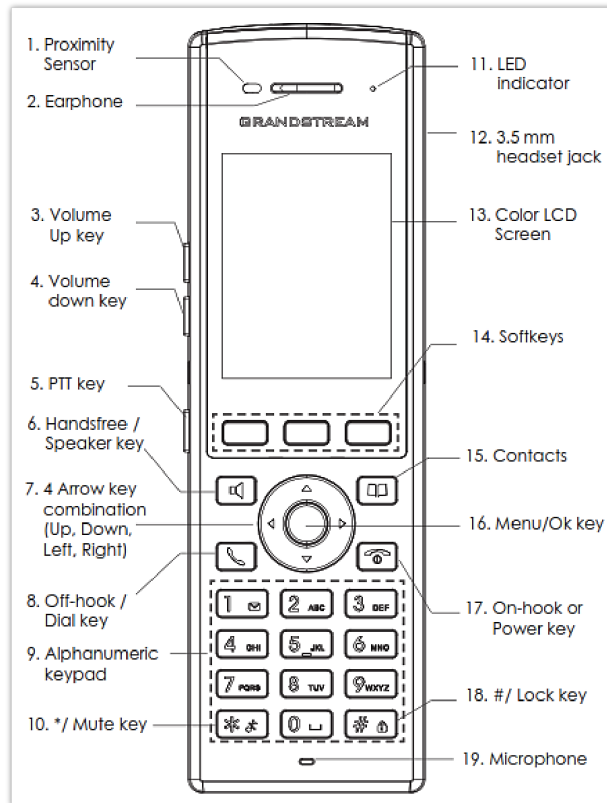
WP820 Description

The following table describes the WP820 keypad keys.

	Key	Description
1	Proximity sensor	The proximity senor can detect the presence of a human ear. This sensing is done for two purposes: Reduce display power consumption by turning off the LCD backlight and to avoid inadvertent touches.
2	Earphone	Delivers audio output.
3,4	Volume up / Down Keys	Configure the handset and ringtone volume.
5	PTT Key	PTT (Push-to-Talk) button to initiate PTT call. Note: PTT button can also be configured from Web GUI to have other functions such as: SAFE/Panic Call & Mute/Unmute during calls.
6	Hands-free / Speaker key	Switches between Handset and Hands-free / Speaker modes.
7	Arrow key combination (Up, Down, Left, Right)	Allows navigation of the cursor through the displayed menu options.
8	Off-hook / Dial key	Enters dialing mode, or dials number entered.

9	Alphanumeric Keypad	Provides the digits, letters, and special characters in context-sensitive applications. For + sign, press and hold key 0.
10	* / Mute key	Activates or deactivates the mute feature when keep pressing on * in idle screen.
11	LED indicator	1dual-color LED indicator indicating: power, call, battery, message waiting …
12	3.5 mm headset jack	Phone connector for the headphones/headsets.
13	Color LCD Screen	2.4-inch (240×320) TFT color LCD
14	Softkeys	Correspond to functions displayed on the LCD. These functions change depending on the current context, and they can be customized on Home screen and Call screen from the Web GUI.
15	Contacts	Access to contacts list.
16	Menu/OK key	Selects the option chosen by the cursor or enters the main menu from the home screen.
17	On-hook or Power key	Terminates calls or turns the handset on / off.
18	# / Lock key	Locks keypad against unintentional entries when keep pressing #. Press and hold # key for approximately 2 seconds to lock the keys. Press Unlock softkey and then # to unlock the keys.
19	Microphone	Picks up audio earpiece and hands-free calls.

WP820 Icons Description

Following table contains description of each icon that might be displayed on the screen of the WP820.

	Battery status Charging	
	Wi-Fi not enabled/configured	
	Wi-Fi signal status	
	Outgoing Call notification	
	Missed Call notification	

	Incoming Call notification
	Voicemail notification (Urgent)
	Voicemail notification (Normal)
	Mute enabled icon
DND	**DND enabled icon**
	Bluetooth enabled icon
	Bluetooth connected icon
	SRTP & TLS enabled icon
	Contacts
	SMS
	Call History
	Voice Mail
	Diagnosis
	Settings
	Applications
	Status
XSI	**Broadsoft XSI**

WP820 Icons Description

Note

SRTP & TLS enabled icon will be displayed only in case signaling and media are both encrypted.

WP820 LED Status

Red Fast Flashing	Upgrading
Green Slow Flashing	Incoming call
Green Blinking	Charging but not full
Green Solid	Charging (full)
Red Slow Flashing	• Missed call (s) • New voicemail (s) • New SIP Message (s)
Red Solid	Network disconnected
LED OFF	Normal

WP820 LED Status

WP820 Handset Menu

The handset has an easy-to-use menu structure. Every menu opens a list of options. To open the main menu, unlock first the handset and press "Menu" (softkey in the middle). Press Arrow keys to navigate to the menu option you require. Then press "Select" (left softkey) or **OK/Selection key** to access further options or confirm the setting displayed.

To go to the previous menu item, press "Back" (right softkey). You can press **Power** key at any time to cancel and return to standby mode.
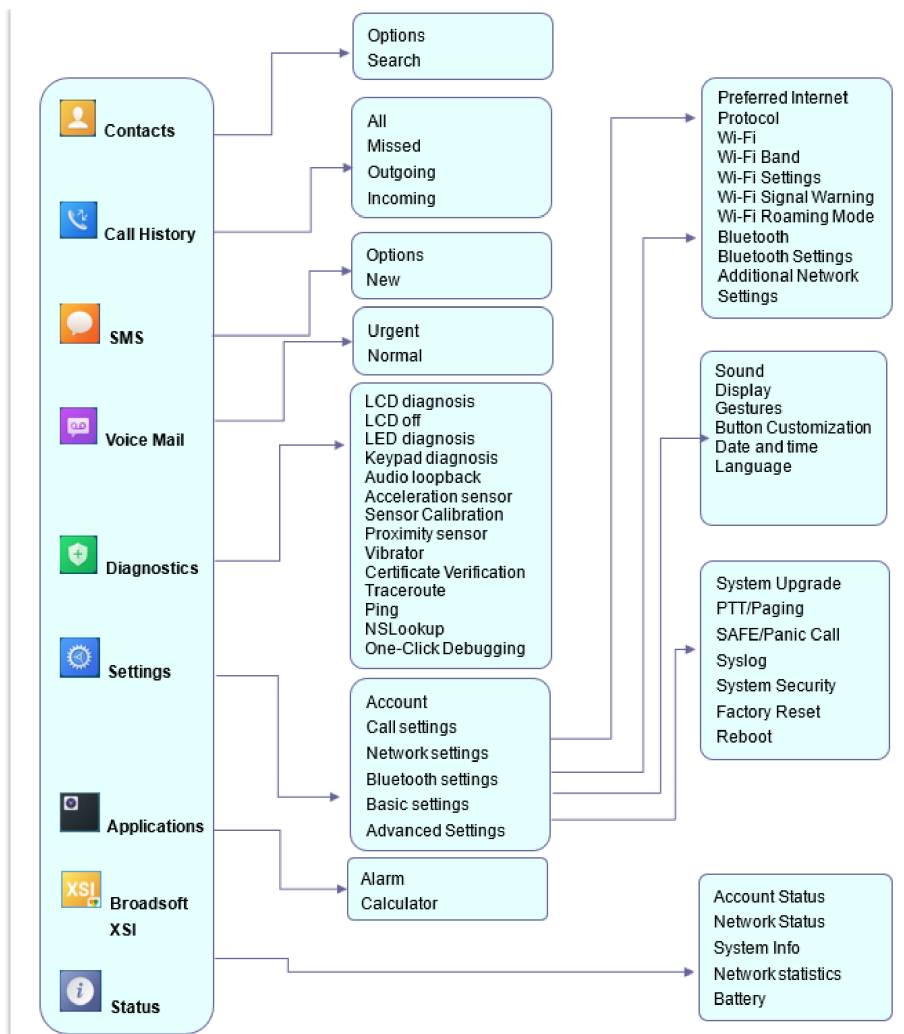
Contacts	Display the list of the registered contacts and also the groups contacts with the ability of searching, adding, or editing the entries and also deleting the selected contacts. The maximum number of contacts is 1000.
Call History	Display the call history: Missed Calls, Accepted Calls, Outgoing Calls or All Calls. You can add contacts to Shared Contacts directly from call logs.
SMS	SMS stands for Short Message Service and referred to as a "text message". With a SMS, you can send a message by pressing "New" of up to 160 characters to another device or check the received ones.
Voice Mail	Play Message: Play voice mail messages received. Set Voice Mail: Configure voice mail parameters.
Diagnostics	LCD diagnosis LCD off LED diagnosis Keypad diagnosis Audio loopback Acceleration sensor Sensor calibration Proximity sensor Vibrator Certificate Verification Traceroute Ping NSLookup One-click Debugging

Settings	Account Configure/View SIP accounts settings and account ringtone. Call settings Configure the account auto answer, call forward, DND and speed dial settings. Network Settings Configure the networks settings including Wi-Fi settings and additional networks settings. Bluetooth Settings Configure the Bluetooth settings including discovery, pairing and connection actions. Basic Settings Configure the basic settings including voice settings, display settings, Gestures and button customization, language settings and date/time settings. Advanced Settings Configure the advanced settings including system upgrade, PTT/Paging settings, system security settings, syslog settings and factory reset / reboot.
Applications	Alarm Clock: Configures the alarm clock settings Calculator: performs arithmetic operations on numbers.
Broadsoft XSI	Broadsoft account.
Status	Displays account status, system info, Network status and network statistics Account status. Network status: Press to enter the sub menu for MAC address, IP setting information (DHCP/Static IP), IPv4 address, IPv6 address, Subnet Mask, Gateway; DNS server and VPN. System Info: Press to enter the sub menu for Running memory, Storage status, MAC address, System version, Recovery version, U-boot version, Kernel version, Hardware version, PN number, Country code and Running time. Network Statistics: Press to enter the sub menu for Network SSID, BSSID, IP address, Signal strength, Connection speed, Channel, Frequency, Tx packets, Tx error packets, Tx error rate, Tx drop packets, Tx drop rate, Rx packets, Rx error packets, Rx error rate, Rx drop packets, Rx drop rate. Battery: Displays the battery status and the battery usage details.

WP820 Keypad

The WP820 keypad can be used by tapping on an input field. WP820 keypad has 4 modes "ABCabc2", "ABC", "abc" and "123". Default mode is "ABCabc2". **Note:** If the input field is accepting only digits, only "123" mode will be available.
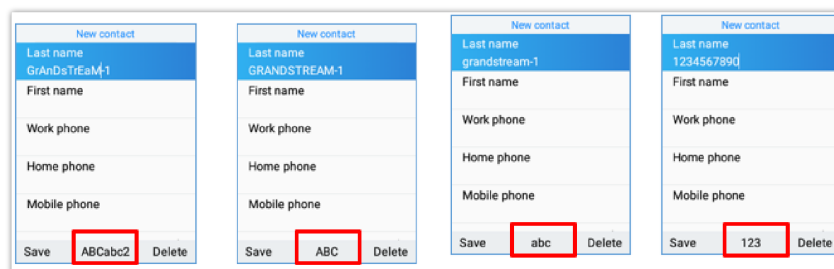
WP820 Keypad Modes

- ○ **"ABCabc2" Mode:**

This mode allows to enter capital letters, small letters, digits, and symbolic characters.

Following table describes allowed characters for each key.

Key	Description	Key	Description	Key	Description
1	. , ' ? ! " – 1	2	A B C a b c 2	3	D E F d e f 3
4	G H I g h i 4	5	J K L j k l 5	6	M N O m n o 6
7	P Q R S p q r s 7	8	T U V t u v 8	9	W X Y Z w x y z 9
*	. , ' ? ! " – ( ) @ / : _ ; + % * = < > $ [ ] { } ~ ^ #	` &	0	Space	#	Switch mode

- **"ABC" Mode:**

This mode allows to enter capital letters, digits, and symbolic characters.

Following table describes allowed characters for each key.

Key	Description	Key	Description	Key	Description
1	. , ' ? ! " – 1	2	A B C 2	3	D E F 3
4	G H I 4	5	J K L 5	6	M N O 6
7	P Q R S 7	8	T U V 8	9	W X Y Z 9
*	. , ' ? ! " – ( ) @ / : _ ; + % * = < > $ [ ] { } ~ ^ #	` &	0	Space	#	Switch mode

- **"abc" Mode:**

This mode allows to enter small letters, digits, and symbolic characters.

Following table describes allowed characters for each key.

Key	Description	Key	Description	Key	Description
1	. , ' ? ! " – 1	2	a b c 2	3	d e f 3
4	g h i 4	5	j k l 5	6	m n o 6
7	p q r s 7	8	t u v 8	9	w x y z 9
*	. , ' ? ! " – ( ) @ / : _ ; + % * = < > $ [ ] { } ~ ^ #	` &	0	Space	#	Switch mode

- **"123" Mode:** This mode allows to enter digits and . only.

Following table describes allowed characters for each key.

Key	Description	Key	Description	Key	Description
1	1	2	2	3	3
4	4	5	5	6	6
7	7	8	8	9	9
*	.	0	0	#	Switch mode

Tips using the keypad:

- To switch between the modes, users could press the middle softkey or # key.
- Press multiple times on same key to move forward between the allowed characters.
- Use Right/Left arrow keys to change the cursor's position on the text entered.

QUICK SETUP WIZARD

The WP820 offers a Setup Wizard tool to help users to quickly configure basic settings on the device such as language, time zone, Wi-Fi, and SIP account. The setup wizard appears automatically upon initial boot up of a factory default device.
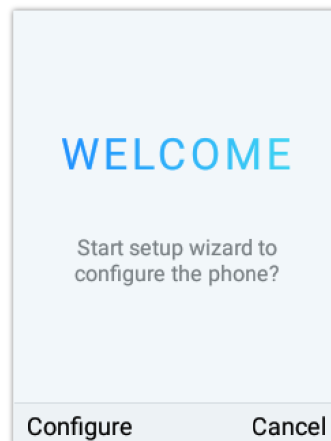
Setup wizard

WP820 WEB GUI ACCESS CONFIGURATION

The WP820 can be configured using:

- Web GUI embedded on the WP820 using PC's web browser.
- LCD Configuration Menu using the WP820 keypad.

> **Note**
>
> From the Web GUI, you can configure all the functions supported by the WP820; while via keypad menu, you can access limited configuration.

Configuration via Web Browser

The WP820 embedded Web server responds to HTTP/HTTPS GET/POST requests. Embedded HTML pages allow a user to configure the WP820 through a Web browser such as Google Chrome, Mozilla Firefox.

Accessing the Web UI

1. Connect the computer to the same network as WP820.

2. Make sure the WP820 is booted up and powered correctly.

3. You may check WP820 IP address via a subscribed WP820 on its LCD menu **Settings → Network Status.** Please see [WP820 Network Status]

4. Open Web browser on your computer and enter the WP820 IP address in the address bar of the browser.

5. Enter the administrator's username and password to access the Web Configuration Menu.

Web GUI Languages

Currently the WP820 web GUI supports English, Chinese languages.
Users can select the displayed language in web GUI login page, or at the upper right of the web GUI after logging in
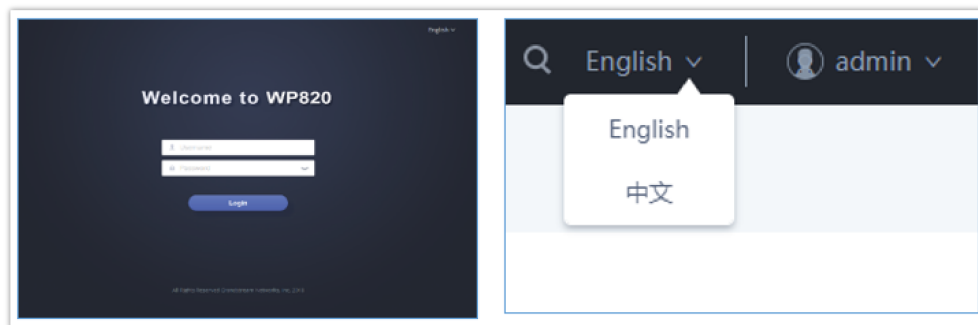
WP820 Web GUI Language

Saving the Configuration Changes

When changing any settings, always submit them by pressing **Save** and **Apply** buttons. If using the **Save** button, after making all the changes, click on the **Apply** button on top of the page to submit.

Web UI Access Level Management

There are two default passwords for the login page:

User Level	Username	Password	Web Pages Allowed
End User Level	user	123	Only Status, Phone Settings, System Settings, Maintenance and System

			Application with limited options.
Administrator Level	admin	admin	All pages

Changing User Level Password

1. Access the Web GUI of your WP820 using the admin's username and password. (Default username and password are: admin/admin).

2. Press **Login** to access your settings.

3. Go to **System Settings → Security Settings.**

4. In **User Info Management**, locate **user password** section:
   - Type in the admin password in the **Current Admin Password** field.
   - Type in your new user password in **New User Password** field.
   - Type in again same entered password in **Confirm New User Password** field.

5. Press **Save** and **Apply** buttons to save your new settings.

User Level Password

Note

- DO NOT USE same password for both user and admin accounts.
- The password is case sensitive with maximum length of 25 characters.

Changing Admin Level Password

1. Access the Web GUI of your WP820 using the admin's username and password. (Default username and password is: admin/admin).

2. Press **Login** to access your settings.

3. Go to **System Settings → Security Settings.**

4. In **User Info Management**, locate **admin password** section:
   - Type in the admin password in the **Current Admin Password** field
   - Type in your new user password in **New Admin Password** field.
   - Type in again same entered password in **Confirm New Admin Password** field.

5. Press **Save** and **Apply** buttons to save your new settings.

Admin Level Password

Note

- DO NOT USE same password for both user and admin accounts.
- The password is case sensitive with maximum length of 25 characters.

Changing HTTP / HTTPS Web Access Port

1. Access the Web GUI of your WP820 using the admin's username and password. (Default username and password are: admin/admin).

2. Press **Login** to access your settings.

3. Go to **System Settings → Security Settings.**

4. In **Web/SSH Access** page, select the access method depending on desired protocol (HTTP or HTTPS)

5. Locate **HTTP / HTTPS Web Port** field and change it to your desired/new HTTP / HTTPS port.
   Note: By default, the HTTP port is 80 and HTTPS is 443.

6. Press **Save** and **Apply** buttons to save your new settings.

Note

After modifying the connection method or port, the web GUI will be automatically logged out and redirected to the new address
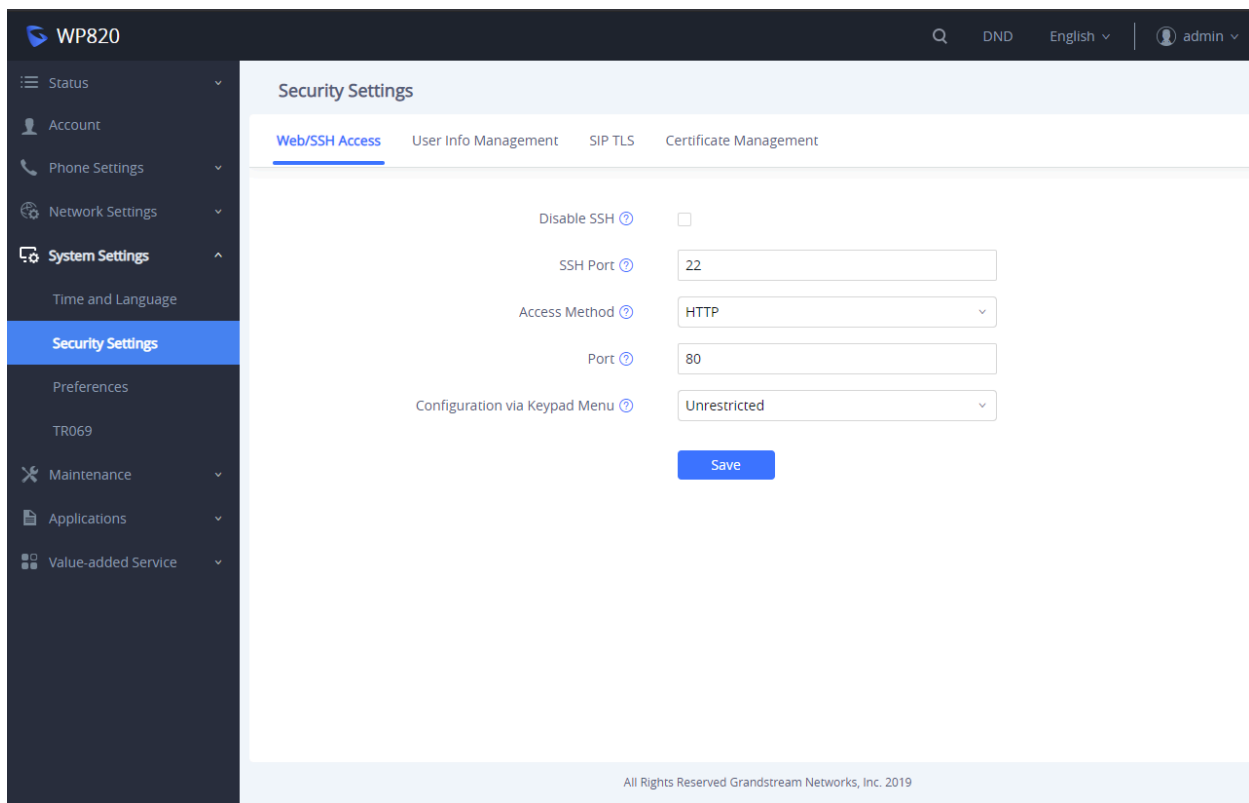
Web/SSH access

BASIC OPERATIONS

WP820 Home Screen

The WP820 Home screen comprises three pages that make it easy for the customer to access some settings, parameters, or notifications. *Please refer to the following screenshots:*
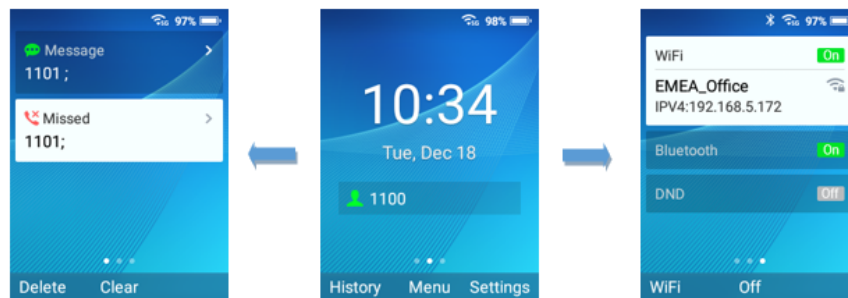
Home screen pages

Left Home Screen Page:

- This page lists all the notifications that users need to check: Missed calls, unread SMS, unread Voice mails, etc ...
- Users can access the notification by tapping on OK button, delete the notification by tapping on the left softkey or clear all the notifications by tapping on the middle softkey.

Middle Home Screen Page:

- The middle page of Home screen shows date/time and the registered SIP account(s) on the WP820.
- Users can access by default to History, Menu or Setting by using softkeys, and Administrator is able to change the functions of softkeys on Home screen from the Web GUI.

Right Home Screen Page:

- The right page is providing the users quick access to Wi-Fi, Bluetooth and DND option and configuration.

- Users can turn on/off the option using the middle softkey, while they also can access to the settings of each option by tapping on the left softkey.

Turning the Handset ON/OFF

To turn ON the handset: Long press on **Power key** [icon] until the LCD screen lights up.

To turn OFF the handset: Long press on **Power key** [icon] again when the handset is idle and press the softkey to choose to power off or reboot.

Connecting WP820 to Wi-Fi Network

Auto Connection

For easy deployment, WP820 out of the box is preconfigured to connect to a default SSID named **wp_master** with a password (WPA/WPA2 PSK) equal to **wp!987@dmin,** users can adapt these settings from the web UI as well to make it easier for deployment on customer site.

Go under the web interface of the "**Network Settings → Wi-Fi Settings → Wi-Fi Security**".
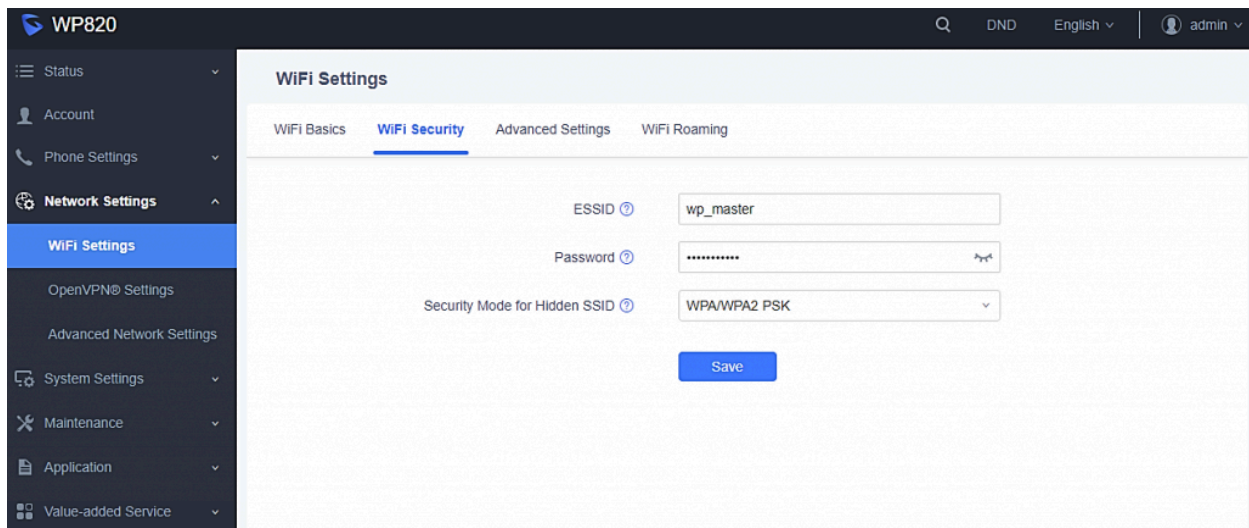
Default Wi-Fi Network

For example, the user can pre-configure the WP to automatically connect to the Wi-Fi network at the client site, making it easier for the client to use the phone without going through the setting up manually the Wi-Fi network. Also, the client could have the SSID hidden by default, and the WP820 handset would still be able to connect to the Wi-Fi network since they have SSID and password information configured.

Manual connection

The WP820 supports dual-band 802.11a/b/g/n Wi-Fi, please refer to the following steps in order to connect your WP820 to the Wi-Fi networks:

1. On LCD menu, press Menu key and navigate to **Settings → Network Settings → Wi–Fi**.

2. Set Wi-Fi to "On " and navigate to "Wi-Fi Settings ". A list of Wi-Fi networks will be displayed.

3. Select the desired network to connect to. (Enter the correct password to connect if requested)

WP820 will display Wi-Fi icon on the main LCD menu if the connection to the Wi-Fi network is successful.
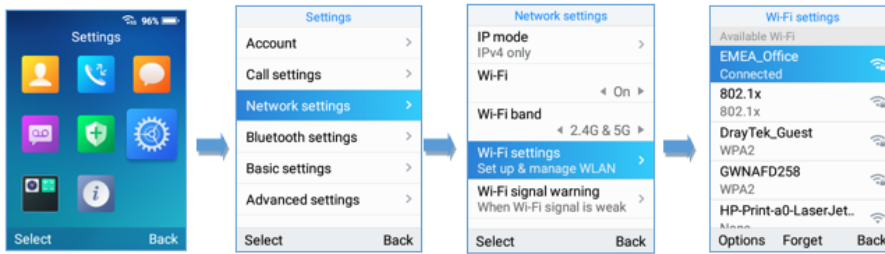
Connecting WP820 to Wi-Fi Network

Note

WP820 supports connection to Wi-Fi with captive portal enabled that requires additional credentials to sign up or login before it is allowed to use Wi-Fi.

Note

If you receive a Wi-Fi association reject message from AP, it will show Disabled on available WI-FI networks, and this is not set or configured at WP820 side, the possible reasons are: blacklisted by AP, open band steering or load balance on AP, reach max connection limit of AP, etc…

Wi-Fi Band Configuration

If 5GHz and 2.4Ghz are both available, the WP820 will use 5GHz, but it may switch to 2.4GHz if the signal of 5GHz is poor. Users may also specify the Wi-Fi Band in order to fix it or to keep it Dual Band under **Settings→Network Settings→Wi-Fi Band**.
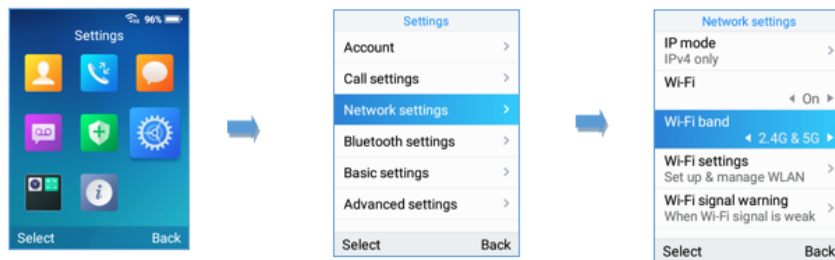
Wi-Fi Band configuration

Note

Wi-Fi will restart after changing Wi-Fi frequency.

Wi-Fi Signal Warning Configuration

Users Can configure Wi-Fi signal warning sensitivity or disable it under **Settings→Network Settings→Wi-Fi signal warning**. Five sensitivity levels are available: Level 1 is the lowest and level 5 is the highest.
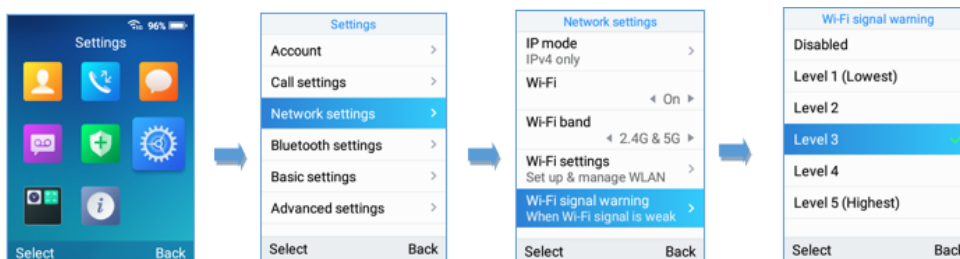
Wi-Fi Signal Warning Sensitivity

Note

A message prompt also appears to notify users about poor Wi-Fi signal. While during the call, a beep tone will be played to notify users that Wi-Fi connection is lost.

Wi-Fi Roaming Mode Configuration

Wi-Fi Roaming settings configuration can also be done by users under **Settings→Network Settings→Wi-Fi Roaming Mode**.
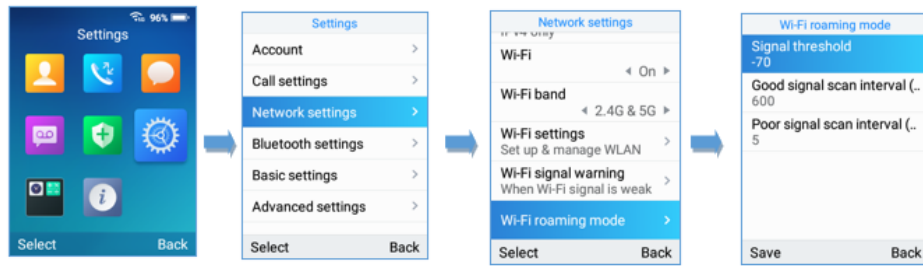
Wi-Fi Roaming Mode

The options that can be configured under "Wi-Fi Roaming Mode" are the following:

- **Signal Threshold:** When the Wi-Fi signal strength of the device drops below this value, the device will scan for a hotspot above the threshold value and connect to it. The default setting is -70.

- **Good Signal Scan Interval:** The time interval for signal scanning when the Wi-Fi signal strength is higher than the signal threshold. The default setting is 600s.

- **Poor Signal Scan Interval:** The time interval for signal scanning when the Wi-Fi signal strength is lower than the signal threshold and there is no hotspot which is higher than the current signal strength. The default setting is 5s.

Connecting WP820 to Bluetooth Devices

Bluetooth is a proprietary, open wireless technology standard for exchanging data over short distances from fixed and mobile devices, creating personal area networks with high levels of security. The WP820 supports Bluetooth.

To connect to a Bluetooth device, turn on the WP820's Bluetooth radio first. The first time when using a new Bluetooth device with the WP820, "pair" the device with WP820 so that both devices know how to connect securely to each other. After that, users could simply connect to a paired device. Turn off Bluetooth if it is not used.

Bluetooth settings are under WP820's **Settings→Network Settings→Bluetooth Settings.**

Turn On/Off Bluetooth

1. Go to WP820's **Settings→Network Settings→Bluetooth.**

2. Turn On or Off the Bluetooth option.

Change Bluetooth Device Name

The WP820 uses "WP820_XXXXXX" as Bluetooth device name by default where "XXXXXX" are the last 6 digits of the phone's Bluetooth MAC address plus 1. The device name will be visible to other devices when connecting them. Follow the steps below to change the name:

1. Go to WP820's **Settings→Network Settings→Bluetooth**

2. Turn on **Bluetooth**.

3. Go to WP820's **Settings→Network Settings→Bluetooth Settings.**

4. Press "Device name".

5. Enter a name and tap on "Save"

Pair WP820 with a Bluetooth Device

Before connecting the WP820 with other Bluetooth device, users must pair them first. They will stay paired afterwards unless they are unpaired.

1. Go to WP820's **Settings→Network Settings→Bluetooth.**

2. Turn on **Bluetooth**.

3. Go to WP820's **Settings→Network Settings→Bluetooth Settings** and set "**Visible to nearby Bluetooth devices**" to **ON** and set the **Visibility timeout** settings to make the WP820 phone visible to all nearby Bluetooth devices.

4. Set the **Bluetooth headset mode** parameter to ON in order to allow the WP820 to pair with other Bluetooth mobile devices to make calls. After successful pairing, users can press the call key and then press "Accounts" to select the Bluetooth account.
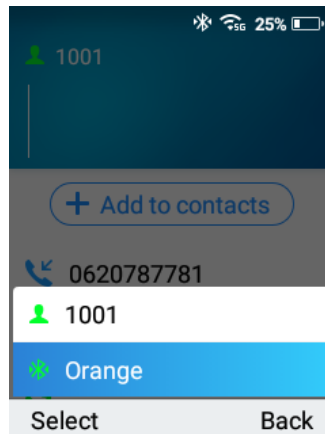
Make calls using Bluetooth account

5. Access the **Bluetooth devices settings** and press on **Refresh** softkey, the WP820 will scan and display the IDs of all available Bluetooth devices in range. If the device you would like to pair with does not show up in the list (available devices), ensure that the other device is turned on and set to be discoverable.

Once the Bluetooth device shows up in the result, press on it and specify if you want to allow it to access your contacts and call history then press on **Pair**. Confirm the passkey in the prompted message (if any).
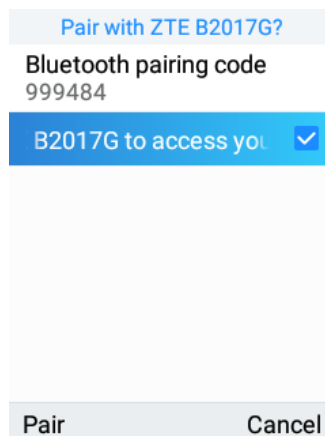
Pair WP820 to a Bluetooth Device

Unpair a Bluetooth Device

1. In the **Bluetooth devices** settings → **Paired devices,** select, and press on the already paired Bluetooth device name you want to unpair.

2. Press on **Unpair**.

Connect to a Bluetooth Device

1. In the **Bluetooth devices** settings → **Paired devices**, select the paired device you want to connect to.

2. Press on **Connect.**
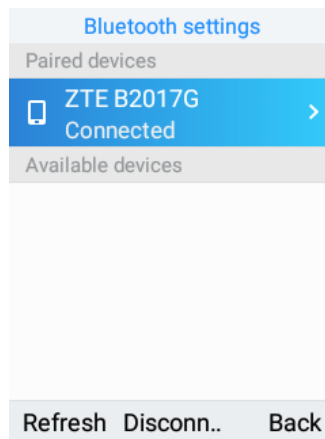
Connect to a Bluetooth Device

The Bluetooth connected device's name will be showing in the Bluetooth devices menu.
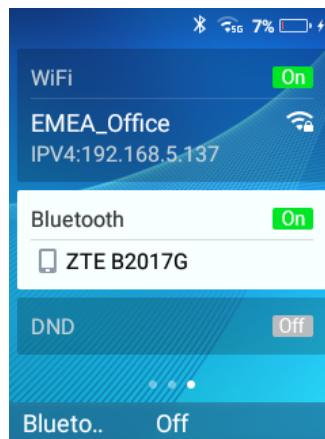
Connect to a Bluetooth device

Connect to a Bluetooth Device from Web Interface

Turn On/Off Bluetooth

1. Go to WP820's GUI →**Network Settings**→**Bluetooth.**

2. Turn On or Off the Bluetooth option.

Change Bluetooth Device Name

The WP820 uses "WP820_XXXXXX" as Bluetooth device name by default where "XXXXXX" are the last 6 digits of the phone's Bluetooth MAC address plus 1. The device name will be visible to other devices when connecting them. Follow the steps below to change the name:

1. Go to WP820's GUI→**Network Settings**→**Bluetooth**

2. Change the "Device name" then click on "Save".

Pair WP820 with a Bluetooth Device

Before connecting the WP820 with other Bluetooth device, users must pair them first. They will stay paired afterwards unless they are unpaired.

1. Go to WP820's GUI →**Network Settings**→**Bluetooth.**

2. Turn on **Bluetooth**.

3. Enable "Bluetooth Headset Mode" and press Scan.

4. Select device from the discovered list and then click "save" then "**Pair**" and enter the key PIN on the paired device.

Checking WP820 Status

WP820 Account Status

To check the SIP accounts status, follow these steps:

1. Press **Menu** key to bring up operation menu.

2. Use arrow keys to Reach **Status** menu and navigate to **Account status**.
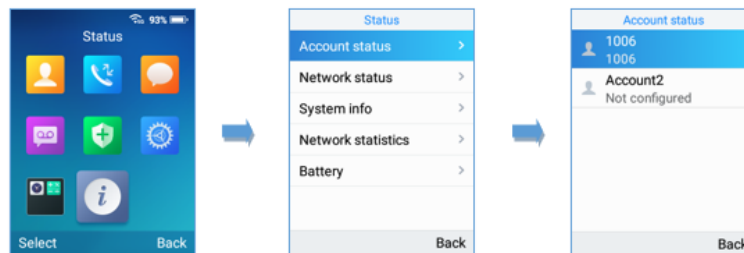
WP820 Account Status

The following information will be displayed:

Item	Description
Account 1	Displays the information about the first account including name, number, and the status of its registration.
Account 2	Displays the information about the second account including name, number, and the status of its registration.

WP820 Account Status Description

WP820 Network Status

To check the handset network information status, follow these steps:

1. Press **Menu** key to bring up operation menu.

2. Use arrow keys to reach **Status** menu and navigate to **Network Status.**
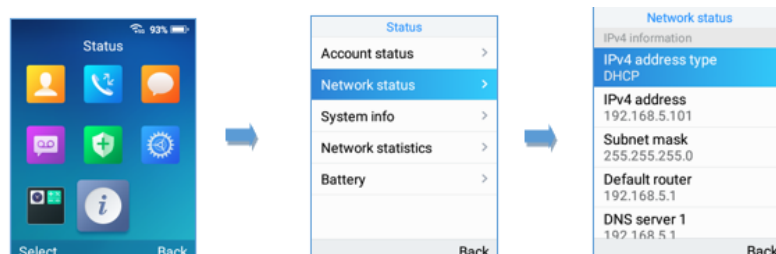
Item	Description
IPv4 information	
IPv4 Address Type	Displays the IPv4 address type.
IPv4 Address	Displays the IPv4 address.
Subnet mask	Displays the subnet mask address.
Default router	Displays the IPv4 address of the router.
DNS Server 1	Displays the IPv4 address of the primary DNS Server.
DNS Server 2	Displays the IPv4 address of the secondary DNS Server.
IPv6 information	
IPv6 Address Type	Displays the IPv6 address type.
IPv6 Address	Displays the IPv6 address.
DNS Server 1	Displays the IPv6 address of the primary DNS Server.
DNS Server 1	Displays the IPv6 address of the secondary DNS Server.
Other Network Information	
MAC address	Displays the handset's MAC address.
NAT Type	Displays the NAT type.
VPN	
VPN address	Displays the VPN IPv4 address.

WP820 Network Status Description

WP820 System Info

To check the system info, follow these steps:

1. Press **Menu** key to bring up operation menu

2. Use arrow keys to reach **Status** menu and navigate to **System Info** section.
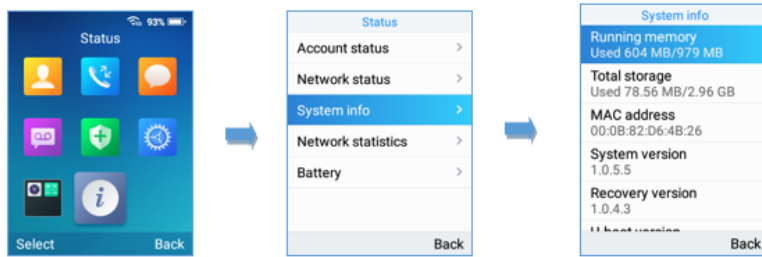
System Info

The following information will be displayed:

Item	Description
Running Memory	Displays information about the memory.
Total Storage	Displays information about the storage space on the phone.
MAC Address	Displays the MAC Address of the phone.
System Version	Displays the current firmware version installed.
Recovery Version	Displays the recovery version installed.
U-boot Version	Displays the u-boot version installed.
Kernel Version	Displays the kernel version installed.
Hardware Version	Displays the hardware version.
LCD_SN	Displays the LCD serial number.
DDR_SN	Displays the DDR serial number.
FCT_SN	Displays the FCT serial number.
SN	Displays the unit's serial number.
PN Number	Displays the Part Number.
Country code	Displays the country code.
Running Time	Displays the time during which the WP820 is powered on and working.

WP820 System Info Description

WP820 Network Statistics

To check the handset network information status, follow these steps:

1. Press **Menu** key to bring up operation menu.

2. Use arrow keys to reach **Status** menu and navigate to **Network Statistics.**
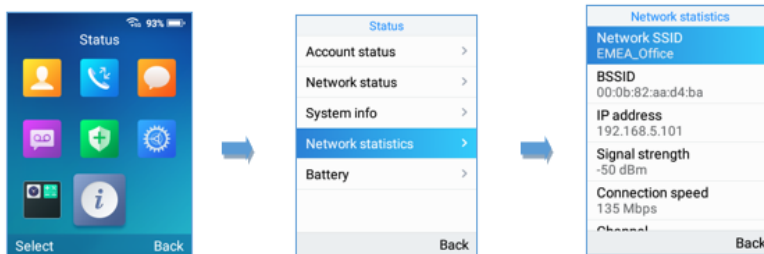
WP820 Network statistics

The following information will be displayed:

Item	Description
Network SSID	Displays the SSID Name on which the handset is connected.
BSSID	Displays the MAC address of the Access Point on which the handset is connected.
IP Address	Displays the IP address of the handset.
Signal strength	Displays the Wi-Fi signal strength.
Connection Speed	Displays the connection speed value.
Channel	Displays the channel on which handset is placed.
Frequency	Displays the channel frequency.
TX Packets	Displays the total packets volume sent by handset.
TX error packets	Displays the number of packets that failed to be transmitted.
TX error rate	Displays the global percentage of packets that failed to be transmitted.
TX drop packets	Displays the amount of TX packets that were dropped by router.
TX drop rate	Displays the global percentage of TX packets that were dropped by router.
RX Packets	Displays the total packets volume received by handset.
RX error packets	Displays the number of packets that failed to be received.

Network statistics

WP820 Battery

To check the Battery information, follow these steps:

1. Press **Menu** key to bring up operation menu.
2. Use arrow keys to Reach **Status** menu and navigate to **Battery**.

WP820 Battery

The following information will be displayed:

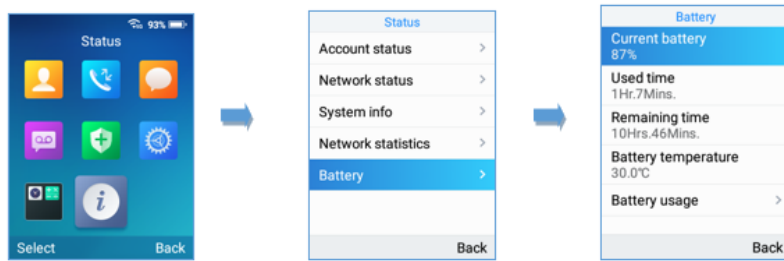| Item	Description
Current Battery	Displays the current Battery percentage.
Used Time	Displays the handset used time on Battery since the last full charge.
Remaining time	Displays the remaining battery time.
Battery Temperature	Displays the current Battery temperature.
Battery usage	Displays the percentage of battery consumption of each app.

WP820 Battery Description

Screen Lock

Setting the Key Lock from Handset

To configure Key lock from the handset, follow below steps:

1. Access WP820's menu → Settings → Basic Settings → Display → Lock Screen.

2. Set "Lock screen" to "On".

3. (Optional). Configure "Set Password' to define a PIN code (6-digit numerical password) to unlock the keypad and press "Save".
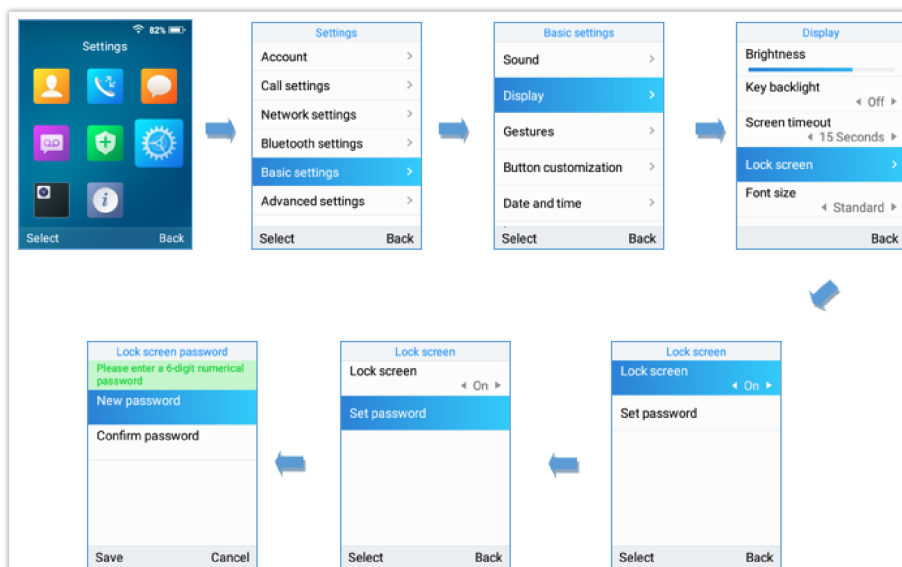
Keypad lock from handset

Lock Screen Settings from Web GUI

User can configure lock screen functions on the web UI. The screen lock password was also added to provide additional security. Default Disabled.

1. Proceed from System Settings → Security Settings → Lock Screen Settings.

2. Enable option "Screen Lock Function".

3. On Screen Lock Password, click on Add Password then once done, click OK then Save then Apply.
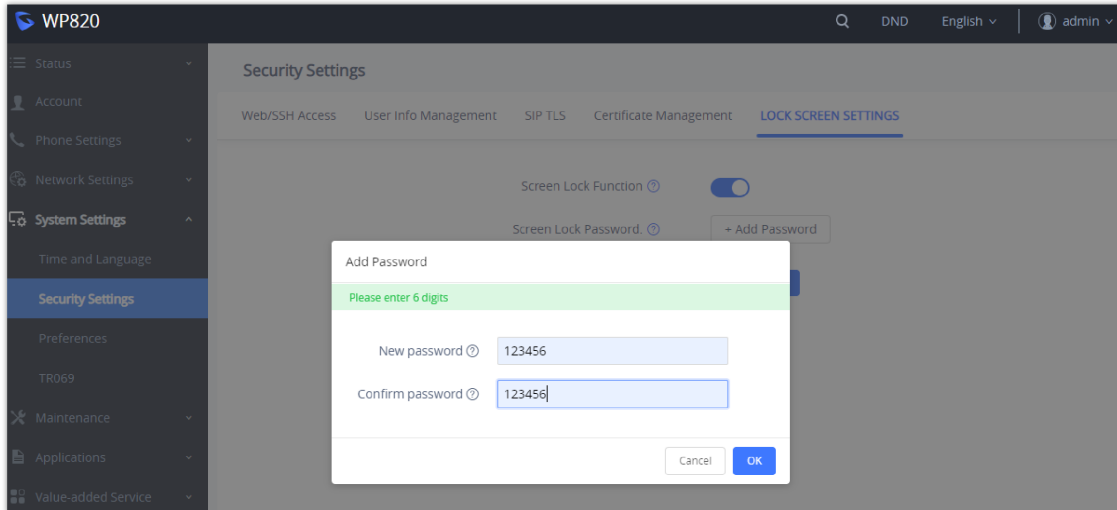
Lock Screen Settings

Locking/Unlocking the Screen

- **To lock the Screen**

- Press the **Pound key "#"** and hold for approximately 2 seconds, or

- Press **On-hook / power key** while the LCD is idle.

- **To unlock the Screen**

- Press **Unlock** button (Left softkey) and **Pound key "#"** to unlock the keys.
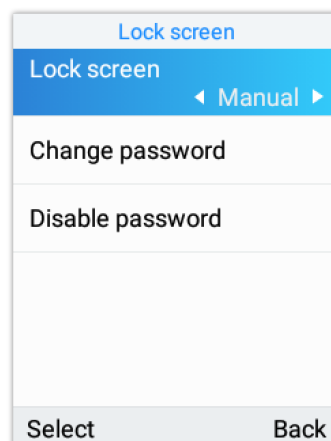
Lock screen options

If set to "On," the device will perform screen lock based on screen timeout. If set to "Manual," the screen lock needs to be trigger manually by holding down the "#" key.

Unlock Keypad

Note

When the phone is locked, it is still possible to pick up incoming calls.

Configuring the LCD Brightness and Screen Timeout

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **Settings**.

3. Navigate to **Basic Settings**, and then select **Display**.

4. Configures the LCD brightness, key backlight, lock screen, screen time out and the font size.

5. Press "**Back**" (right softkey) to save and apply the new settings.
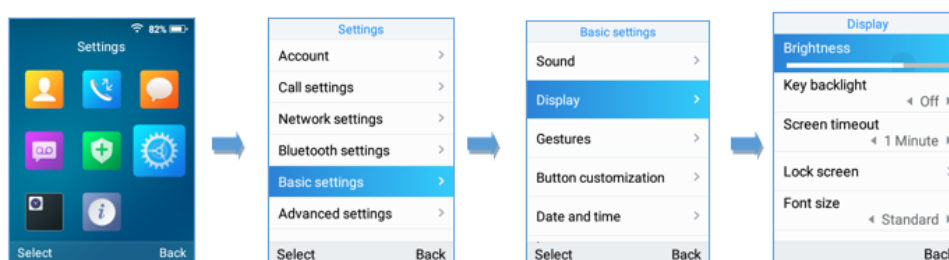
LCD Display Configuration

Return to Idle Screen

Press the **Power Key** to quickly exit the menu and return back to the main idle screen.

When you are navigating on the handset's menu, and you receive an incoming call, the LCD screen will automatically exit the menu and you can either accept or reject the call, when the call is terminated, the LCD screen will return to the idle screen.

Register a SIP Account

The WP820 supports up to 2 SIP accounts and they can be configured either using the web GUI or via the keypad menu as described on the following section.

Register Account via Web User Interface

1. Access your WP820 base station web UI by entering its IP address in your favorite browser.

2. Enter your admin's username and password (default username and password: admin/admin).

3. Press **Login** to access your settings.

4. Go to **Account** tab and select the account to configure.

5. In **General Settings**, set the following:
   - **Account Active** to **Yes.**
   - **Account Name**: Any name to identify this specific user.
   - **SIP Server** field with your SIP server IP address or FQDN.
   - **Secondary SIP Server** with your secondary SIP server IP address or FQDN. Leave empty if not available.
   - **SIP User ID**: User account information, provided by VoIP service provider (ITSP). Usually in the form of digit similar to phone number or actually a phone number.
   - **SIP Authenticate ID**: SIP service subscriber authenticate ID used for authentication. Can be identical to or different from SIP User ID.
   - **SIP Authentication Password**: SIP service subscriber's account password to register to SIP server of ITSP. For security reasons, the password field will be shown as empty.
   - **Outbound Proxy:** configure this field with your outbound proxy IP address or FQDN. Leave empty if not available.

6. Press **Save and Apply** to save your configuration.

After applying your configuration, your phone will register to your SIP Server. You can verify if your WP820 has registered with your SIP server from its web interface under **Status → Account Status** ("**Registered**" with green color when the account is correctly registered, or "**Unregistered**" with grey when the account is not properly registered)

Account Status

Register Account via LCD Menu

To register your SIP account via the LCD menu, please refer to following steps:

1. Unlock your WP820 and press **Menu** to bring up operation menu.

2. Use arrow keys to reach **Settings** and then select **Account** tab.

3. Select which account you want to configure and then set the following:
   - **Account Activation** to "On".
   - **Account Name**: Any name to identify this specific user.
   - **SIP Server** field with your SIP server IP address or FQDN.
   - **SIP User ID**: User account information, provided by VoIP service provider (ITSP). Usually in the form of digit similar to phone number or actually a phone number.
   - **SIP Authenticate ID**: SIP service subscriber authenticate ID used for authentication. Can be identical to or different from SIP User ID.
   - **SIP Authentication Password**: SIP service subscriber's account password to register to SIP server of ITSP. For security reasons, the password field will be shown as empty.
   - **Outbound Proxy:** configure this with outbound proxy IP address or FQDN. Leave empty if not available.
   - **Voicemail Access Number:** The voicemail number of your account.
   - **Display Name:** The name that will be used for caller ID name in SIP INVITE.
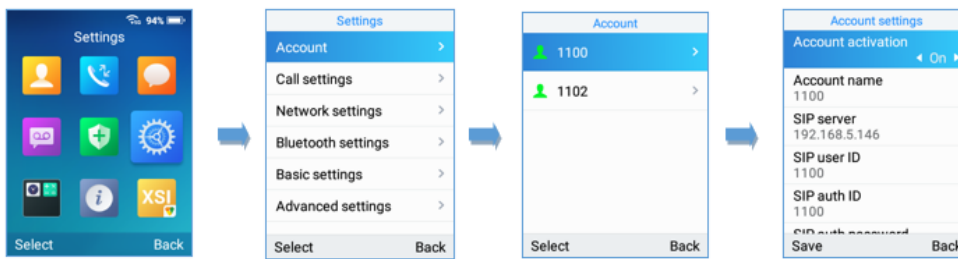
SIP Accounts Configuration

Guest Login

The Guest Login feature provides the ability to share the same wireless phone by multiple users at different periods of time.

Configuration

This feature can be enabled from the WEB GUI under **Phone Settings → General Settings → Guest Features**.
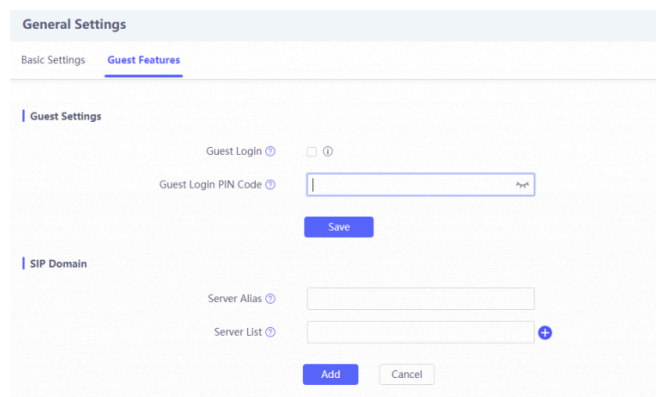
Guest Login settings

1. Enable the Guest login by checking the Guest Login parameter.

2. Enter the PIN to be used for authentication.

3. Configure the SIP domain to be used as SIP server for registration:

4. Server Alias: The server alias is used to customize the server name.

5. The Server list will contain the IP addresses/Domain names to be used as SIP registration servers

> **Note**
>
> A reboot is required for these settings to take effect.

User Login

Once the phone boots up with the Guest Login feature enabled users can follow these steps to login:

1. Press the dial button or press any numeric button.

2. The Guest Login page will be opened, and the user is asked to enter the Extension credentials.

3. Enter the Account ID, the SIP password and choose the Alias of the SIP server configured on the WEB GUI as mentioned on steps above.

4. Set the "Expire parameter" to the number of hours this login will stay valid.

Guest Login Window

Note

When the "Expire" parameter is set to "Always" users are asked to enter the PIN code that was previously configured on the WEB GUI.

User Logout

To logout from the Guest Login mode users can follow these steps:

1. On idle screen, press the **Settings** soft-key.

2. Select **Logout**.

3. Confirm the logout by pressing the **Logout** soft-key
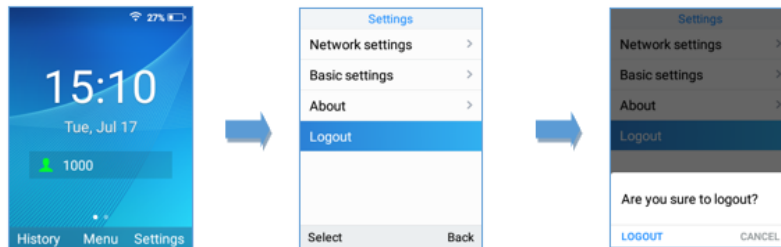
Guest Logout

PHONE SETTINGS

Selecting Phone Language

The WP820 supports different languages. The default language of the handset is English. To change the language of the handset, please proceed as follows:

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **Settings**.

3. Navigate to **Basic Settings**, and then select **Language**.

4. Choose the desired language from the available list and press "**Select**" and then the phone will apply the selected language.

Configuring Phone Language

Activate/Deactivate Hands-Free Mode

○ Press the **Hands-free key**

while making a call or on the idle screen to activate hands free mode.

○ Press the **Hands-free key**

again to deactivate the hands-free function.

Muting the Microphone

1. Press the button "**Options**" **(Left softkey)** during an established call and a list of the options will be displayed.

2. Choose" **Mute"** and press "**Select**" button (left softkey / OK button) to switch on the microphone.

Notes:

○ While muted, the icon

will be displayed on the screen.

○ To unmute the microphone during an established call, press the button "**Options**" **(Left softkey)**, choose "**Unmute**" and press "**Select**" button (left softkey or OK button) to switch off the microphone.
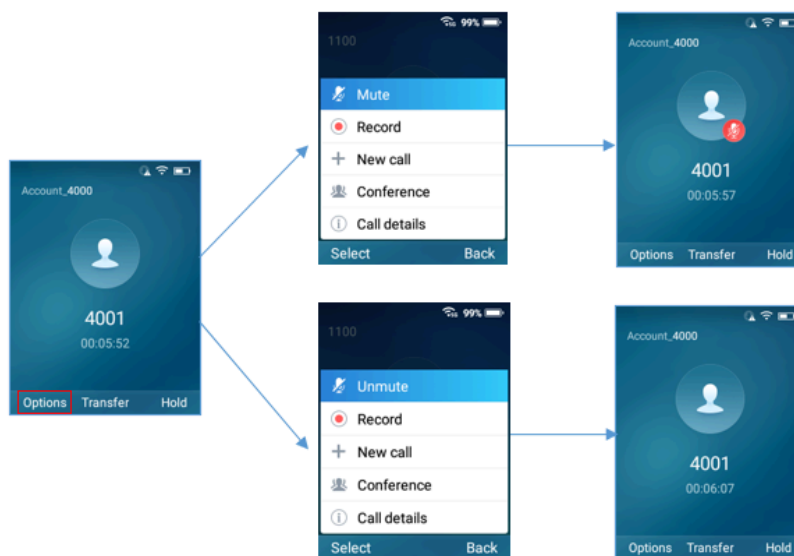
Muting the Microphone

Note

If PTT/Paging button is customized by the administrator to be Mute/Unmute, users can press the Multi-function button to Mute/Un-mute the MIC during calls.

Adjusting Speaker and Earpiece Volume

Press volume up and down keys on the left side of your phone while you are on an established call to set the volume of the earphone / speaker. You can choose between 8 different levels. The default level is 4.

Ringtones

Setting the Ringer Volume on the WP820

To configure the desired ringer volume, proceed as follows:

1. Press **Menu** to bring up operation menu and go to **Settings**.

2. Navigate to **Basic Settings**, and then select **Sound** tab.

3. User can configure the silent and vibrate modes and also the voice ringtones by pressing the left and right arrow keys to change repeatedly and set the desired volume.

4. Press "**Back**" (right softkey) to confirm the new configuration settings.

Notes:

- 15 levels are supported. Level 15 is the highest level. Level 8 is default.

- ▲

    appears when silent mode is enabled. In this mode no ring will be played for incoming calls.

Ringer Volume

Setting the Ringtones on the WP820

You can change the ringer melody for an incoming call. The device has different ringer melodies and in order to configure the desired melody, proceed as follows:

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **Settings → Basic Settings**, and then select **Sound** tab.

3. Go to "**Default Ringtone**", and choose the desired ringtones, press "**Save"** to confirm the ringtones selected and the new ringtones will be set successfully.
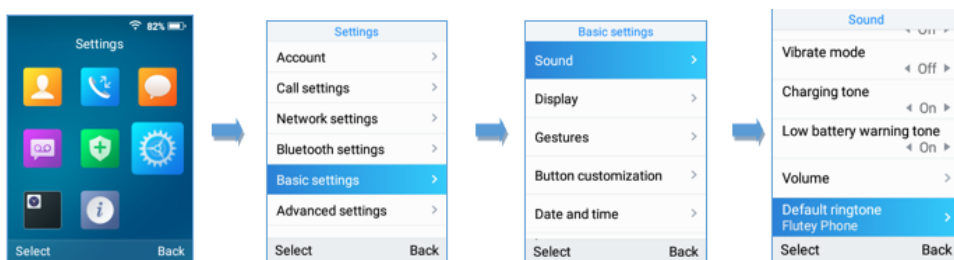
Calls Default Ringtone

Date and Time

On the WP820 the Date and time are displayed on the idle screen and it obtains the date and time from the Simple Network Time Protocol (SNTP) server by default. If your phone cannot obtain the date and time from the SNTP server, you need to configure the date and time manually. You can configure the time format and date format, respectively. The handset supports two formats for time (12 Hour or 24 Hour) and three date formats (DD/MM/YYYY; MM/DD/YYYY; YYYY/MM/DD).

To configure date and time manually

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **Settings → Basic Settings**, and then select **Date and Time** tab.

3. Press "**Back**" softkey to apply your changes

Date and Time Settings

Wallpaper Customization

WP820 wallpaper is customizable through web GUI and the user can upload up to 10 wallpapers.

To upload new wallpaper, User can choose between the below two mentioned methods:

○ **Upload Wallpaper**

1. Access WP820 **Web GUI → Phone Settings → Wallpaper Setting**.

2. Select Wallpaper Source → Uploaded

3. Press Upload button and select the file to use.

> **Note**
>
> WP820 support JPG, PNG, BMP format, size ≤ 2MB (Best Pixel: 240 * 320px)
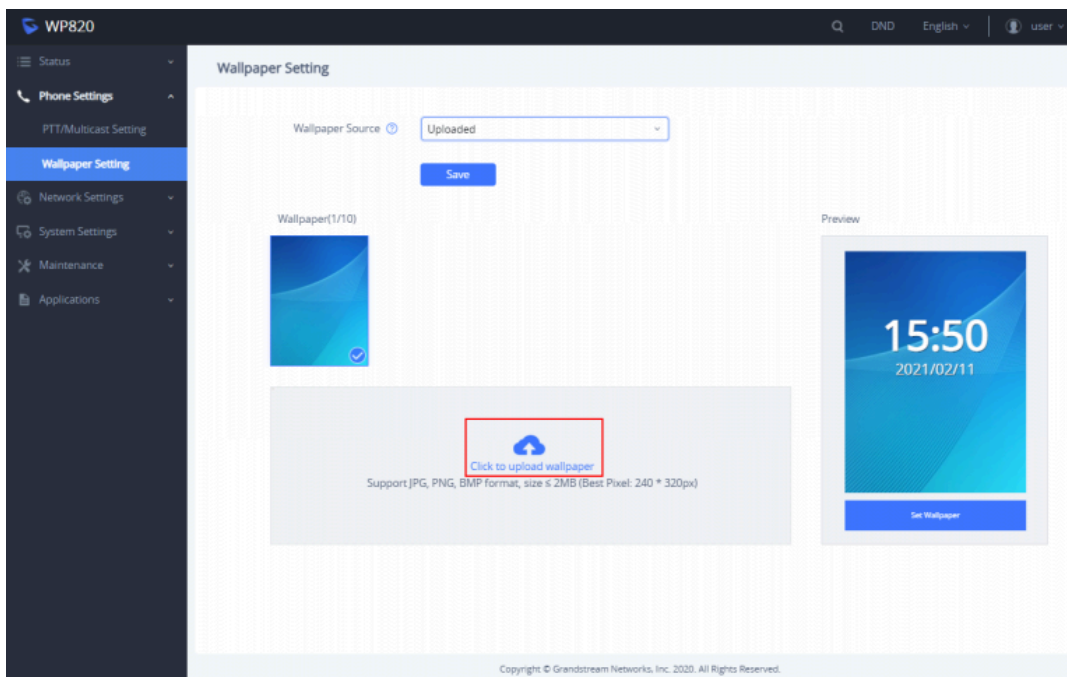
Wallpaper Settings

4. Select "Display Mode": "Default" or "Adaptive" to adjust displayed wallpaper (effective when uploaded file is not respecting recommended resolution).
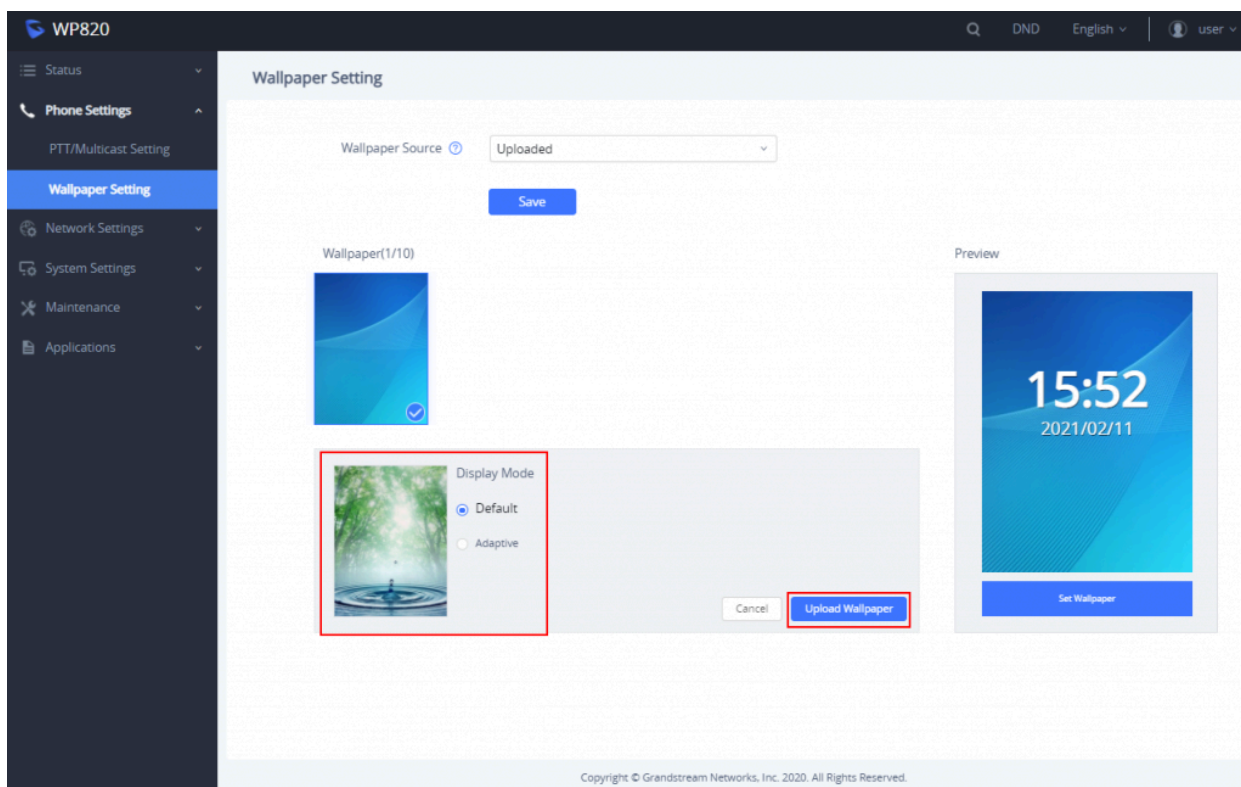
Wallpaper – Display Mode

5. Press "Upload Wallpaper".
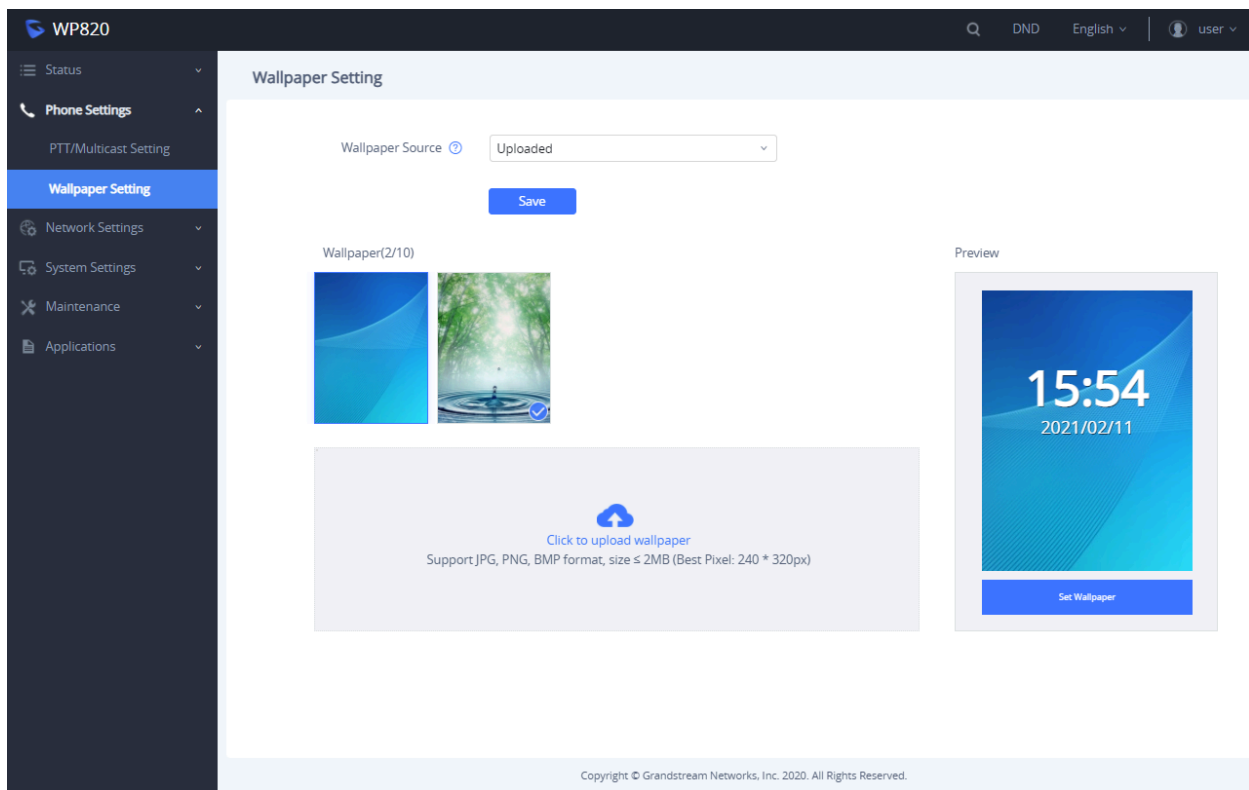
Wallpaper – Uploaded

- **Download Wallpaper**

1. Access WP820 **Web GUI → Phone Settings → Wallpaper Setting**.

2. Select Wallpaper Source → Download

3. Enter the Wallpaper Server Path

4. Press on save.
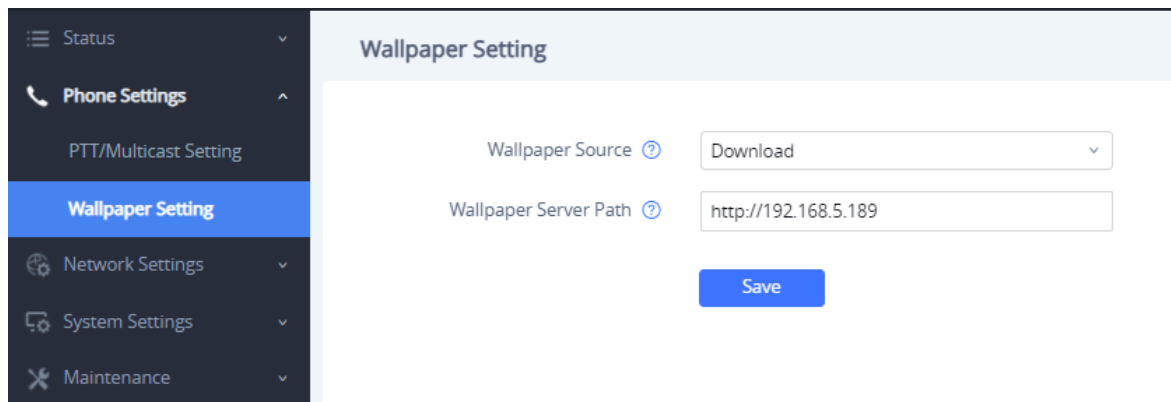
Wallpaper – Download

Applying Uploaded Wallpaper

To apply uploaded wallpaper, follow below steps:

- **From Handset:**

1. Access WP820 menu → Settings → Basic Settings → Display → Wallpaper.

2. Select uploaded wallpaper and press OK button or "Preview" (left softkey)

3. Press "Set Wallpaper" (left softkey) to apply.

Switching Wallpaper from Handset

○ **From Web GUI:**

1. Access WP820 Web GUI → Phone Settings → Wallpaper Setting.

2. Select Wallpaper Source → Uploaded.

3. Select uploaded wallpaper and press "Set Wallpaper
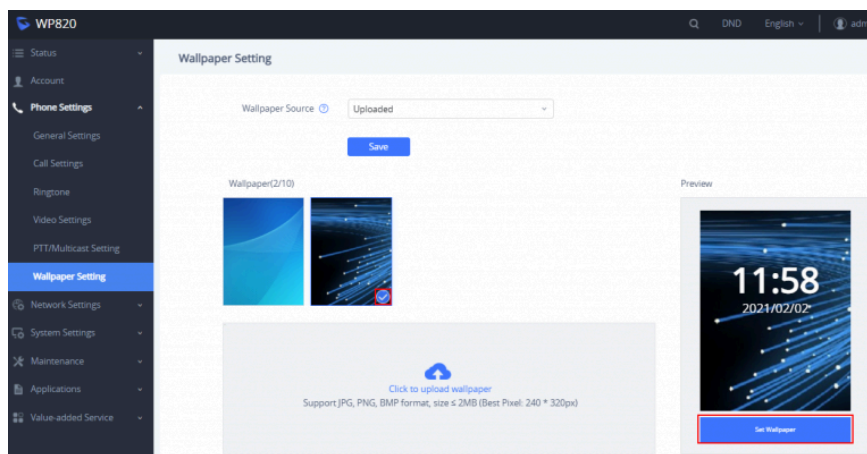
Switching Wallpaper from Web GUI

Note

When using the Download method, the wallpaper will automatically be set as the phone wallpaper once downloaded.

Deleting Wallpaper

To delete previously uploaded wallpaper, refer to following steps:

1. Access WP820 Web GUI → Phone Settings → Wallpaper.

2. Press

button to delete specific wallpaper.
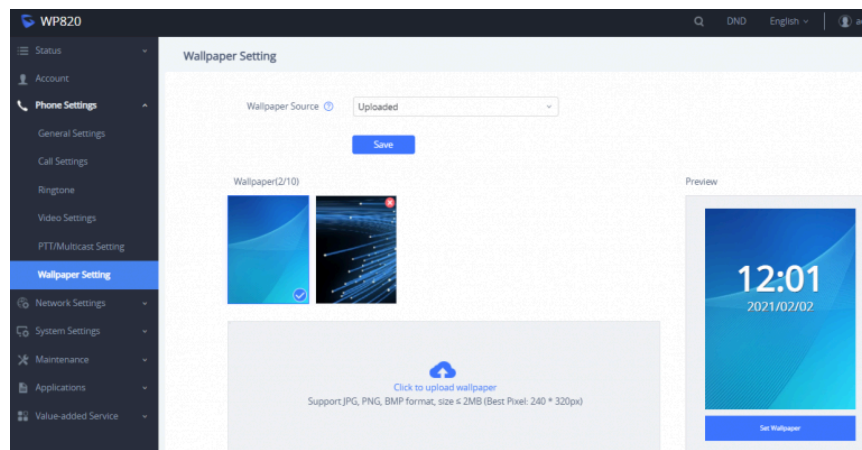
Deleting Wallpaper

Notes

- Only uploaded wallpapers can be deleted.
- Currently used wallpaper cannot be deleted.

Reboot the WP820

To reboot the WP820, please refer to following steps:

1. Access WP820 menu → Settings → Advanced Settings → Reboot.
2. A confirmation LCD message will be displayed to confirm the reboot, press "**Reboot**" button to reboot the phone or "**Cancel**" to cancel the reboot.
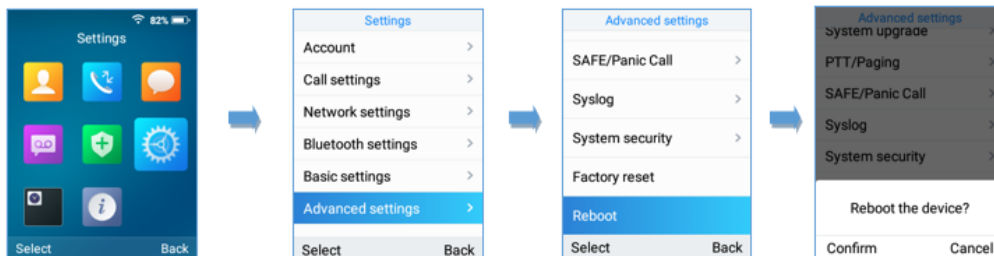
Reboot the WP820

CALL OPERATIONS

Placing calls

To place calls, you can use the following mode:

- **Earpiece mode:** pressing the off-hook / dial key to dial out.
- **Speakerphone mode:** pressing the speakerphone key to dial out.
- **Headset mode:** pressing the off-hook / dial key to dial out using connected headset.

During the call, you can switch the call mode by pressing the corresponding keys or connecting a headset.

Make a Call using a Line

Making calls require the use of SIP lines. So, you should first register the SIP account to the handset beforehand, after registering the sip lines, you can choose between them while trying to make calls by pressing the "**Accounts**" button displayed on the call screen. Please refer to the following methods to make calls using a line:

Method 1:

1. Enter the desired number using the keypad.

2. Toggle between the available lines by pressing the "**Accounts**" button to choose the line for making calls. (The account name will change on the screen when press "Accounts" button).

3. Press **Dial key** , left softkey "**Call**", **#** (Use # as "**Dial key**" or "**Redial key**" must be configured in web configuration) to initiate the call or wait for 4 seconds and the call will be initiated automatically.

Note: Users can also initiate calls with handsfree mode using **Speaker** key . To terminate the call, press **Hang-Up key** .

Method 2:

1. Press **Dial key** or **Speaker key** to enter the pre-dialing screen.

2. Toggle between available lines by pressing the "**Accounts**" button to choose the line for making calls. (The account name will change on the screen when press "Accounts" button).

3. Enter the number to dial using the keypad.

4. Press **Dial key** , left softkey "**Call**", **#** (Use # as "**Dial key**" or "**Redial key**" must be configured in web configuration) to initiate the call or wait for 4 seconds and the call will be initiated automatically.

5. To terminate the call, press **Hang-Up key** .

During the call, you can switch the call mode by pressing the corresponding keys and cancel the dialing operation by pressing the on-hook key. During the call conversations, you can press the left and right navigation keys to adjust the volume. The call duration is displayed on the LCD screen while the call is in progress and call summary will be displayed once the call is terminated.

Notes:

○ To dial "+" please keep pressing "0" key for about 2 seconds.

○ To dial from contacts list, choose a contact using navigation keys and press **Dial key** .

○ When having un-read voicemails on the WP820, once accessing the dialing interface a stutter tone will be heard to notify users about voicemails that need to be read.

○ The maximum length of dialed digits is limited to 30 characters.

Dialing from Call history

Users may use their call history entries to initiate calls. Please refer to following steps:

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **Call History.**

3. Select the desired entry and press **Dial** key to establish the call.
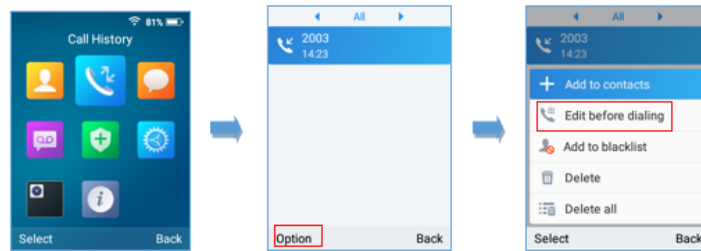
Dialing from Call History

Dialing from Phonebook

Users may use their contacts list to initiate calls.

1. Press **Menu** to bring up operation menu and use arrow keys to reach **Contacts** or press **Contacts** key

   to access directly the contacts list.

2. Select the contact to call and press **Dial Key** to initiate the call.
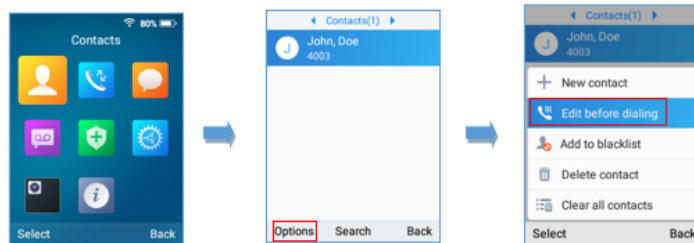
Dialing from Contacts List

Answering Calls

When receiving an incoming call, you can answer the call using following steps:

- **Earpiece mode:**

Press **Dial Key** to pick up the call, or "Accept" softkey (left softkey).

- **Speakerphone mode:**

Press **Speaker Key** to pick up the call.

- **Headset mode:**

Press **Dial Key** to pick up the call, or "Accept" softkey (left softkey) using a connected headset.

Note:

To answer an incoming call during an established call, press **Dial Key**, or the **Speaker Key**, or the "Answer" softkey. The incoming call is answered, and the original call is placed on hold.

Auto Answer

Users can enable Auto Answer feature to accept and automatically answer incoming calls.

If enabled, the WP820 will automatically answer incoming calls using speaker mode.

To activate / deactivate the auto answer feature:

- **Using WP820 LCD Menu**

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **Settings → Call settings → Auto answer**.

3. Select which account will be enabling the Auto answer feature.

4. Set "**Auto–Answer**" to "**On**" and configure the auto-answer mode and press "**Save**" button.

Auto-answer on WP820

Note

The auto-answer icon will be displayed near of the account on the LCD screen when the Auto-answer feature is enabled on the configured accounts as displayed on the following screenshot.
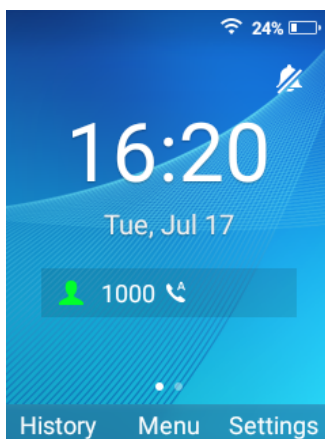
Auto-answer Idle Screen

- **Using WP820 Web Interface**
    1. Access WP820 Web GUI Interface.

2. Navigate to **Account → Call Settings → Call features**.

3. Set "Auto Answer" to "Yes". (By default, set to "No").

Ending Calls

To terminate the calls, press **Hang-Up** key

 .

Rejecting Calls

To reject an incoming call, press **Hang-Up** key

 .

Call Hold/Resume

- During active call, press the right softkey "**Hold**" to put the established call on hold.
- To resume the call, press the right softkey "**Unhold**" while the established call is being on hold.
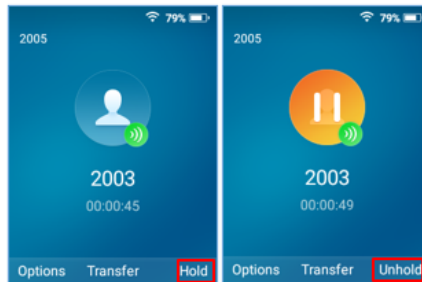
Hold/Unhold Calls

Note

If you press on" Options" during the established call, and then make a new call to another number, the first call will be on hold automatically and users can put up to 2 calls on hold at the same time

Call Waiting

This feature will notify you of a new incoming call during an established call and display the incoming call information visually on the LCD screen and a call waiting tone will be heard. If this feature is disabled, the new incoming call will be automatically rejected.

This feature is enabled from the WP820 Web GUI:

1. Access WP820 Web Interface.

2. Go to **Phone settings → Call Settings**.

3. Set "**Disable Call Waiting**" and "**Disable Call Waiting Tone**" to "No". (Default is No).

4. Press Save and Apply buttons to confirm the new settings.

Users now will be able to hear the call waiting tone and it will be visible as well on the LCD screen as displayed on the following screenshot.
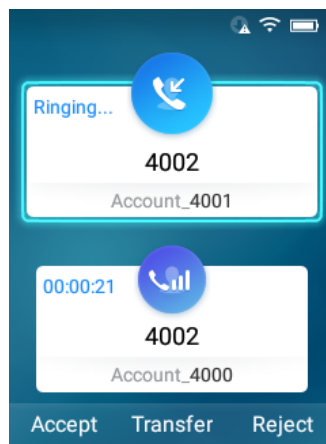
Call Waiting

Do Not Disturb

You can activate or deactivate the DND mode for your accounts registered on the handset from its LCD menu. If DND mode is activated, all incoming calls will receive busy treatment depending on your configuration (forward to voice mail, busy tone...).

To enable or disable the DND mode, Access LCD Menu → **Settings** → **Call Settings** → **Do not disturb** and set **Do not disturb** to **On**.
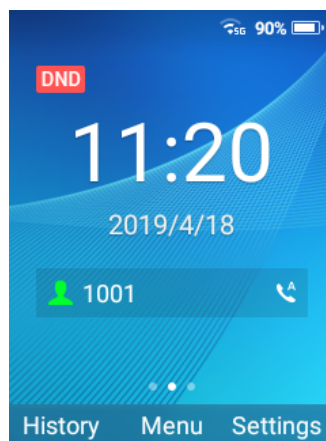
DND Enabled

Call Forward

The call forward feature will allow you to forward all the incoming calls to the desired number. Three possible call forward types are available on the WP820.

- **Unconditional**: All the incoming calls are immediately forwarded to the desired number.
- **Time Based:** Incoming calls are immediately forwarded to the desired number based on the configured time.
- **Others:** Incoming calls are forwarded to the desired number when Busy, when DND is enabled or when there is no response.

**To enable the call forward, please refer to the following steps:**

1. Press **Menu** to bring up operation menu.
2. Use arrow keys to reach **Settings** → **Call Settings** → **Call forward**.
3. Select which account will be enabling the call forwarding feature and navigate to "**Call forwarding**".
4. Set "**Call Forward**" to "**On**" and select the call forwarding mode.
5. Configure the parameters of the call forward mode and press "**Save**" button.
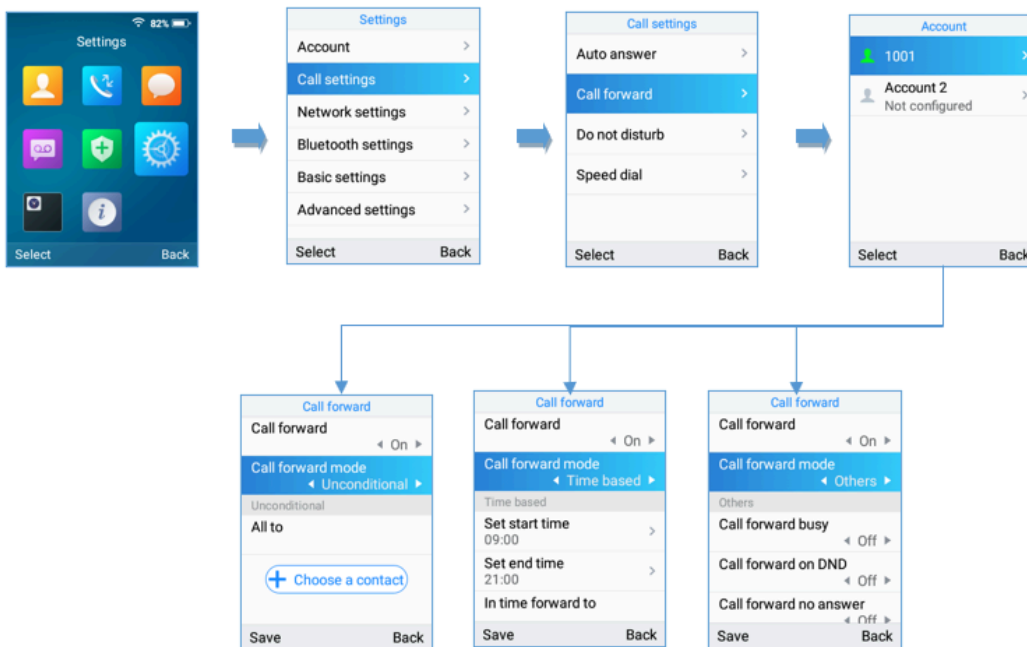
Call Forwarding

○ **Unconditional**: All the incoming calls will be forwarded to the number set up in "All To" field.

○ **Time Based**: All the incoming calls will be forwarded to the number as schedule in the time period. During the setup time, the call will be forwarded to the number in "In Time Forward To:" field. Other period the call will be forwarded to the number in "Out Time Forward To:" field.

○ **Others**: The incoming call will be forwarded when the WP820 is busy or no answer after certain interval "Delayed Call Forward Wait Time (s)" or if the phone is set to DND mode.

> **Note**
>
> The call forwarding can be also configured from the **WP820 Web GUI → Account → Call Settings**.

Call Transfer

The WP820 supports the call transfer feature, you can transfer a call to another party using one of the following ways:

○ **Blind transfer:** Transfer a call directly to another party without consulting

○ **Attended transfer**: Transfer a call with prior consulting.

> **Note**
>
> Users can also perform transfers to LDAP contacts by pressing the phonebook key when in the transfer call screen.

Blind Transfer

1. Press "Transfer" softkey during a call, and then enter the number you want to transfer the call to.

2. Select Blind transfer by pressing on **Blind** key.

3. The call is connected to the number you specified, and the LCD screen prompts Call Transferred.
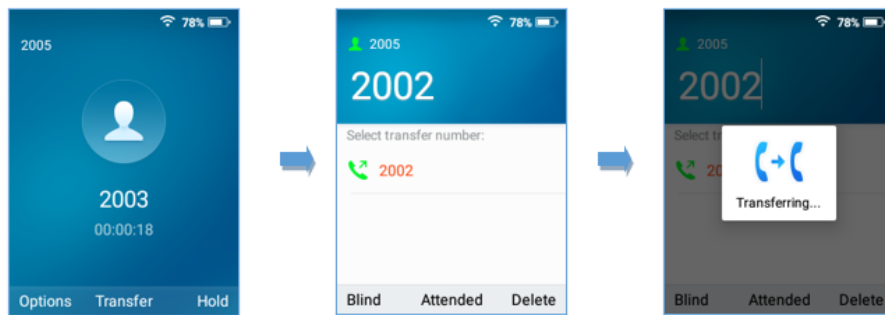
Blind Transfer

Attended Transfer

1. Press "Transfer" softkey during a call, and then enter the number you want to transfer the call to.

2. Select Attended transfer by pressing on Attended key.
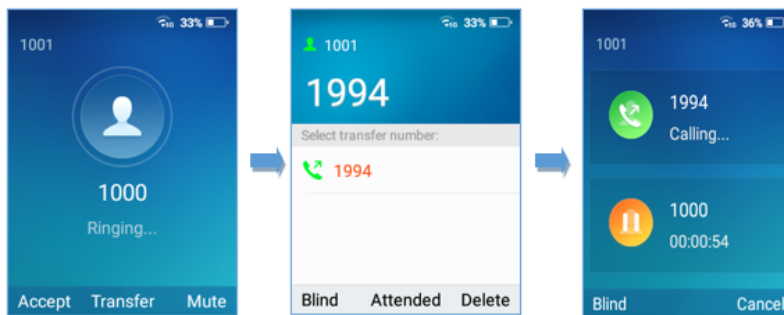
Attended transfer

3. After transfer target answers the call, the following screen will be shown up. If the transferor taps on Confirm, the call will be transferred, and the WP-820 will hang up the call.
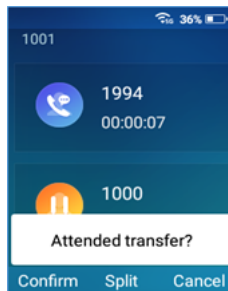
Attended transfer options

4. If the user taps on "Split" soft key to separate the calls, the user will talk to the second established call while the first call is on hold.
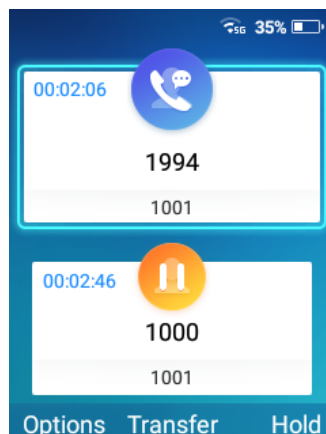
Split Calls

Speed Dial

Speed dial allows users to perform single-digit dialing to predefined numbers. This feature is particularly useful to speed up dialing frequently used or hard to remember numbers. A maximum of 10 speed dial numbers is allowed. For example, the digit key 2 is configured as a speed dial key and assigned the number 4000, the phone will dial out the number 4000 directly when you long press digit key 2.

To configure the speed dial (create, edit, or delete) numbers, proceed as the following steps:

1. Press **Menu** to bring up operation menu and use arrow keys to reach **Settings → Call Settings → Speed dial**.

2. Select the speed dial key to be configured and press "**Select**" softkey.

3. Select the associated account and the number to be dialed.
   Note: Users can also select the numbers from the contact list by selecting "Choose a contact".

4. Press "**Save**" softkey to save the configured speed dial numbers.
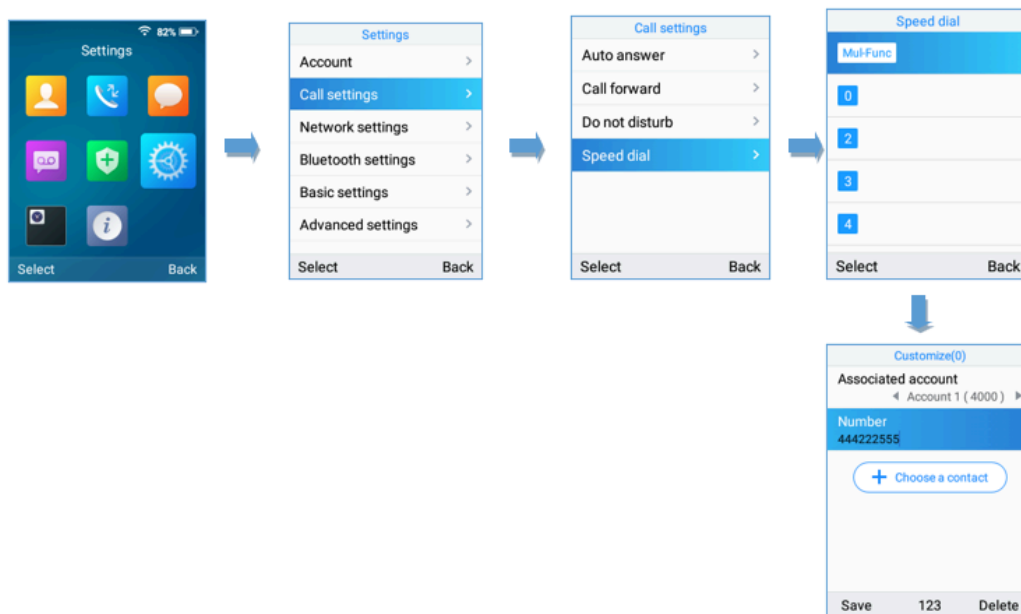
Speed Dial Configuration

3-Way Conference

The WP820 supports creating a local conference with other parties (including handset starting the conference). To start a 3 Way conference, follow below steps:

1. Place a call to the first party and press left softkey **"Options"**, then select "**Conference**".

2. Enter the number of the second party you want to add to the conference and press **Join Conf**.

3. The conference will automatically be bridged before the third party answers the call.

Please refer to the following screenshots for more details.
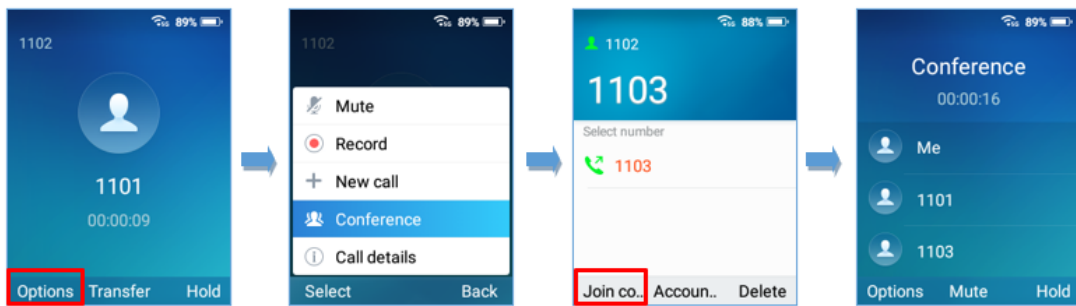
3-way Conference Call

Notes

- Users can start recording the conference by tapping on "Record" under "Options".
- Users can kick one of the parties from the conference by tapping on "Kick [Extension]" under Options.

UCM Conference

Participate in UCM Conference Room

Users could dial the UCM conference room extension to join the conference. If password is required, enter the password to join the conference as a normal user, or enter the admin password to join the conference as administrator.

Note

Number of current participants is shown starting from firmware release 1.0.5.5.
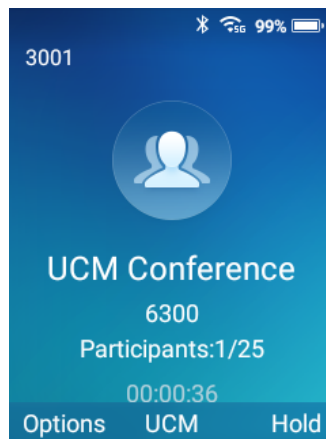
Join UCM Conference Room

Conference Call Operations

- View conference participants: Users could press on **UCM** key in order to view the conference participants.
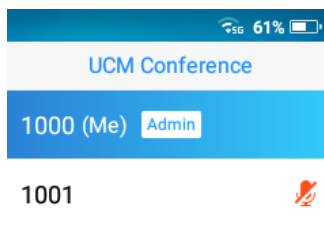
UCM Conference Participants

- Invite members: Administrators could press on **UCM** softkey during the conference and then press on **Invite** in order to send and meeting invitation to the composed number. Press on **Invite** after entering the number.
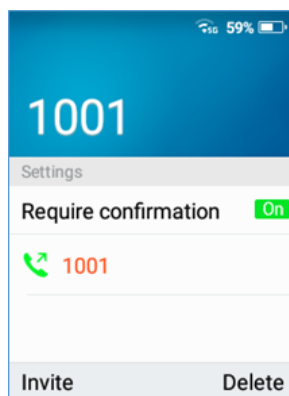
Send meeting invitation

Note

If the **'Require confirmation'** parameter is On, the invited party will need to confirm before joining the meeting conference.

- Mute/Unmute a participant: Administrators could select a member and press on **Options→ Mute/Unmute** a participant.
- Kick a Participant: Administrators could select a member and press on **Options → Kick** a participant from the conference.
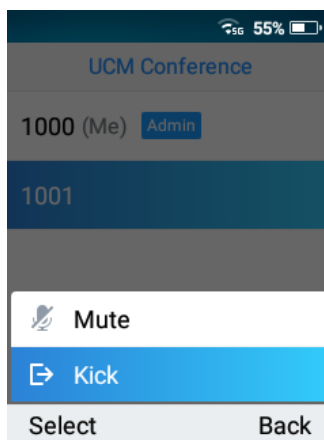
Kick a participant

CEI (Conference Event Indicator)

If CEI is enabled, Events like members joining/Leaving the conference, Invitation sent, Mute/Unmute … will be displayed in the call screen as the examples shown below:

- Member has joined notification:
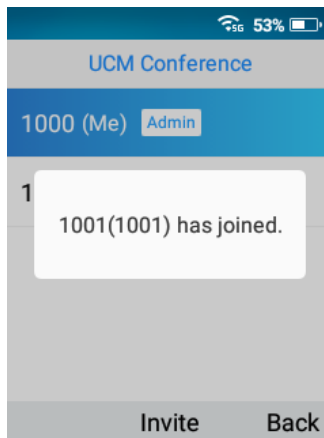
Member has joined notification

- Member Mute notification:
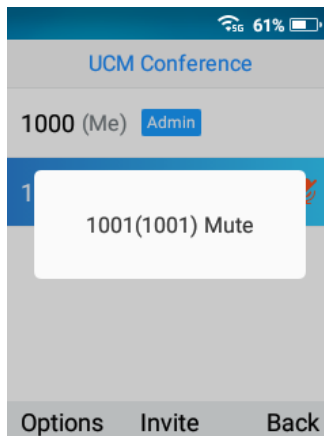
Member Mute notification

- Member Left Notification:
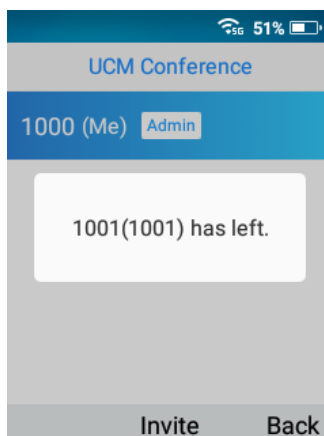
Member left notification

Voice Mail

The voice mail feature ensures that you will never miss any important messages. It permits either to leave voice mails to someone else or receive and listen to voice mails via the handset

Set Voice Mail ID

There are 2 ways to set Voice Mail Feature Code, either using WP820 Handset Menu or Web Interface.

- **Using WP820 LCD Menu**

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **VoiceMail** tab.

3. Select the desired account and configure the **Voicemail ID** number, then press "**Save**" softkey.

LCD Menu – Voice Mail ID

- **Using WP820 Web Interface**
  1. Access WP820 Web GUI Interface.
  2. Go to Account → General Settings → Account Registration.
  3. Configure **Voice Mail Access Number**.
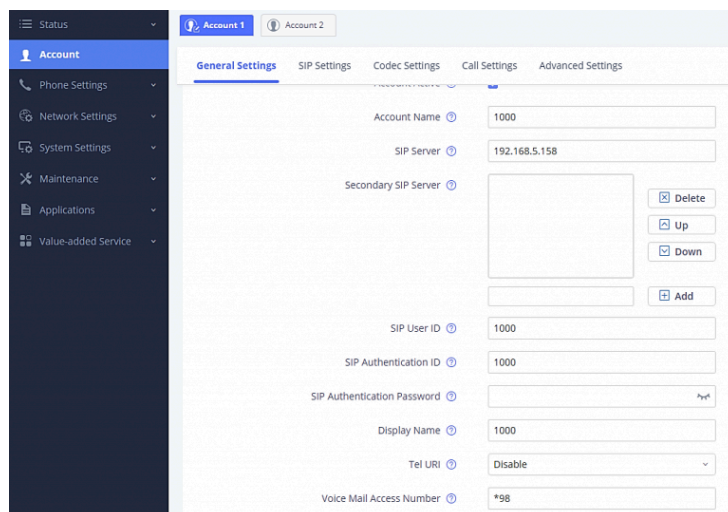
Web UI – Voice Mail Access Number

Play Voice Mail Messages

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **VoiceMail** tab.

3. Choose the account, press "**Select**" button and enter Voicemail password then to can select visually and retrieve your voice messages saved on your voice mail and listen to each individual voicemail.
Note: this feature is compatible with UCM6xxx on v.1.0.20.6 or later.
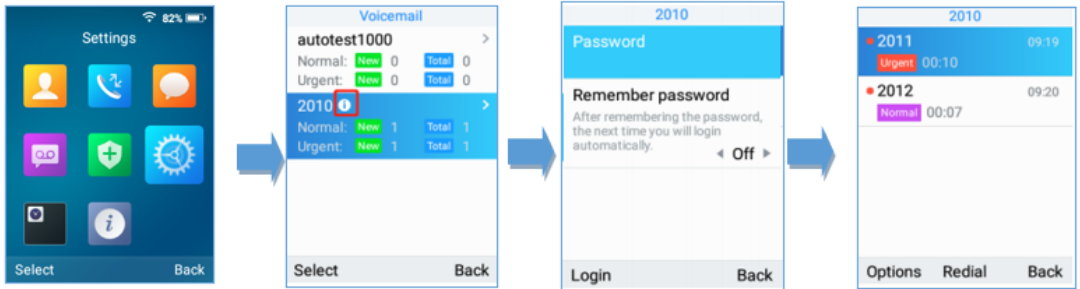
Playing Voicemail Messages

CONTACTS

Users can manage local/LDAP and Broadsoft XSI contacts, groups, and blacklist by adding, deleting, and modifying every single contact. Users could access WP820 contacts under WP820 Menu. *Please, refer to the following screenshots:*
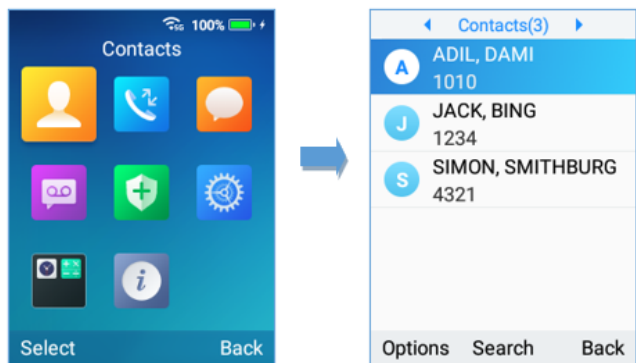
Accessing Contacts

Local Contacts

Users can manage local contacts by adding, deleting, and modifying single contacts. The following operations can be done under local contacts screen:

○ **Create new contact**: Under "Option", users can select "New Contact" in order to manually add the contacts information and details. *Please, see the following screenshots and table:*
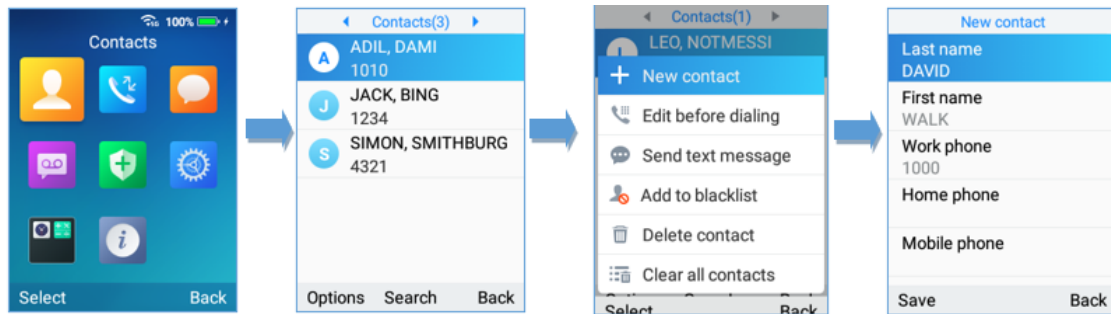
Create a new contact

Last Name	Enter the contact's last name.
First Name	Enter the contact's first name
Work Phone	Enter the contact's work phone number.
Home phone	Enter the contact's home phone number.
Mobile phone	Enter the contact's mobile phone number.
Group	Choose the group you want to include your contact into.
Ringtone	Choose a specific ringtone for the account's received calls.
Account	Choose the default account you want to dial with this contact.
Address, company, Rank, Department and Title	Additional information.

New Contact Parameters

○ **Search for a contact**: in case finding a specific contact among a batch of contacts is difficult, users can press the middle softkey "Search" and enter the name of the contact to find it easily or use the quick search feature and press on any keyboard key in order to enter the search mode.

○ **Dial out from Contacts**: Select the needed contact and tap on the dial key

to call it directly. The phone will use the configured account on contact's information to dial out with.

○ **Edit before dialing**: Users could copy the contact's number to the dial screen in order to edit it before dialing.

○ **Add to blacklist**: Users have the ability to block received calls from a specific contact from by adding it to Blacklist.

○ **Delete contact**: Users can delete a specific contact by tapping on "Delete contact".

○ **Clear all contacts**: Users can delete the whole list of local contacts by tapping on "Clear all contacts".

LDAP

In addition to local contacts, the WP820 also supports LDAP and LDAPS phonebook if LDAP or LDAPS server is available within the network. *For more information about LDAP configuration on the WP820 Web GUI, please, refer to WP820 Administration guide.*

In order to search for LDAP contacts on the WP820, users need to access "Contacts", switch to "LDAP" using the right/left arrow buttons on the handset and show the search field by tapping on "Search".

Groups

Open Contacts and switch to "Groups" using the right/left arrow buttons on the handset. To add a new group, tap on **Options➔New group**.
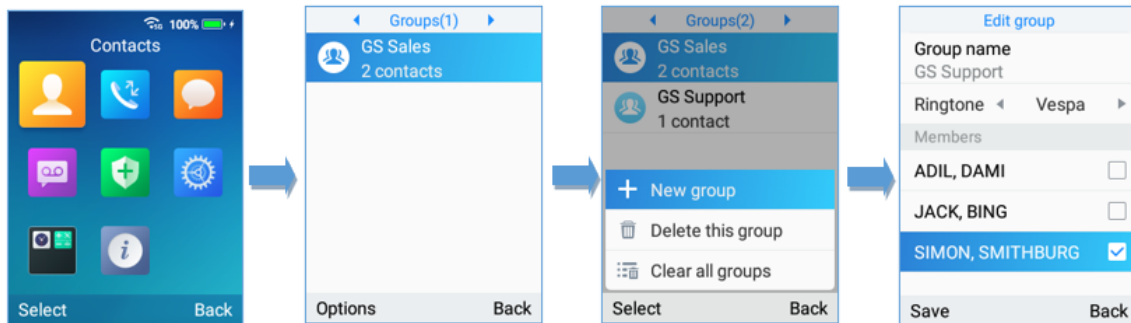
Create New Group

Users should enter the following information when creating a new group:

- **Group Name**: Enter the name of the group.
- **Ringtone**: Choose the ringtone that will be assigned to the group.
- **Members**: Choose the members of the group.

> **Notes**
>
> - Ringtone can be assigned in group as well as single contact. If the group's ringtone is customized, this ringtone has the highest priority when there is an incoming call to the contact.
> - Users could select group for contact when adding or editing the contact.
> - Users could delete a specific group or delete all groups.

Blacklist

Blacklist WP820 has blacklist support for users to manage incoming calls. To access "Blacklist", tap on "Contacts", then switch to "Blacklist" using the right/left arrow button on the Handset.
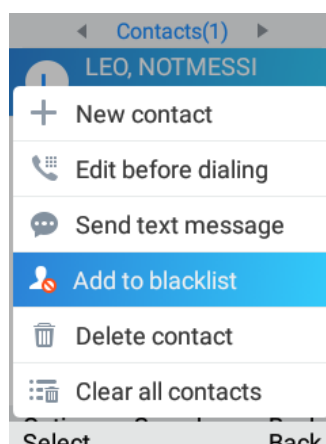
Users can tap on "Remove" to remove a contact or on "Clear" to delete all contacts from blacklist.

Broadsoft XSI

Users login to their BroadSoft XSI account from the LCD Menu:

BS XSI Login

> **Note**
>
> The BroadSoft Contacts will show up at the Contact APP.

CALL HISTORY

The WP820 Call history provides users access to phone's call logs in different categories and help users to make some operations directly. Call history can be accessed under menu as shown on the following figure:

WP820 Call History

There are four different categories in the call history. Users could use the phone's right and left arrows to view the following categories: All Calls, Missed Calls, Outgoing Calls, Incoming Calls.

Dial Out from Call History

Select one of the call history log and tap on the dial key

to call this number directly. The phone will use the same account as the call log to dial out.

Call History Options
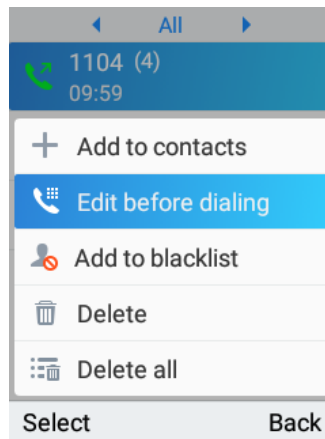
Call History Options

○ **Add to contacts**: Users can tap on this option to add the number listed on the selected call history entry to local contacts.

○ **Edit before dialing**: Users could copy the number to the dial screen in order to edit it before dialing.

○ **Add to blacklist**: Users have the ability to block a number's calls/messages by adding it to Blacklist.

○ **Delete**: Users could delete the selected call history log by tapping on "Delete".

○ **Delete all**: This option helps users to clear all the call history.

Call History Details

For each call history entry, users could tap on "OK" button to access the details to view the account on WP820 that was called and all the calls that have made/received to/from the selected number. *Please, refer to the following screenshot:*
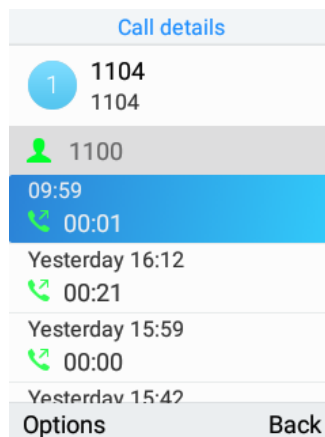
WP8200 Call History Details

The following operations could be done:

○ Dial out this number directly.

○ Bring up dial screen with the call history number. Users could edit the number before dialing out.

○ Delete the entry.

○ Add the number to black list by tapping on "Add to Blacklist".

SMS

The WP820 has built-in SMS application to send/receive message if the SIP server supports SMS message. Users can create, edit draft, and delete one or all the messages. Tap

on phone's menu to launch SMS application.

View SMS

On the SMS list screen, tap on one of the message using the OK button to view the SMS details.
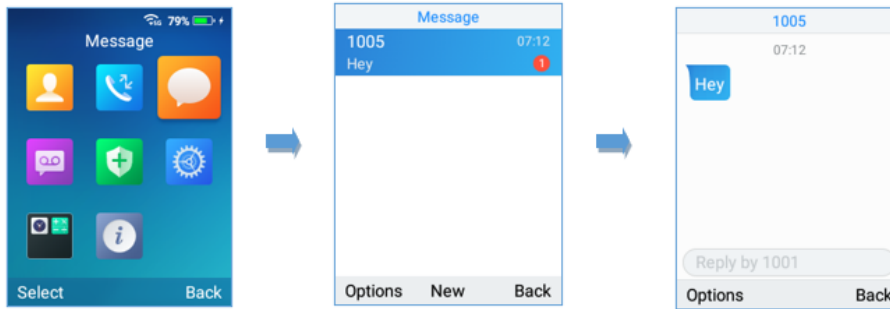
View SMS Dialog

Create SMS

Tap on "New" in SMS application to start composing a new message.
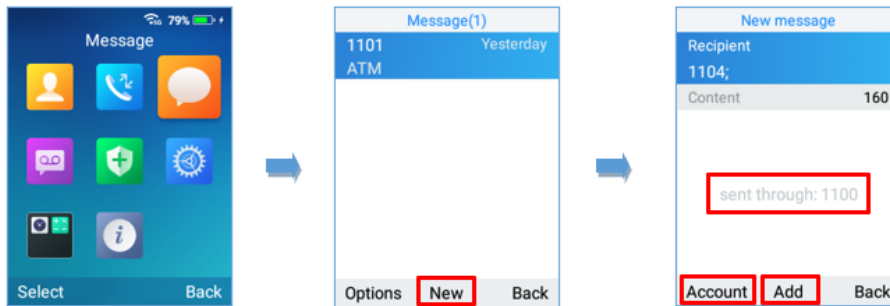
Create a New Message

1. Select the account to send the message from by tapping on "Account". (**Note:** By tapping on "Account", the user will switch from the first account to the second one in case both SIP accounts are registered. The account sending the message will be shown in the center of the screen to make sure of it as shown on the figure above).

2. Add number to send the message to in Recipient section. (**Note**: Users could click on "Add" to add existing contacts/groups to Recipient list.

3. Input content: Enter the message content on the next field of the screen. Tap on "Send" once finished, a "Sending" message will prompt and the message is confirmed as sent once the "Sending" message prompt disappears.

> **Note**
>
> Creating SMS is doable from Contacts by selecting a contact name, then pressing Options, and then choosing Send text message.
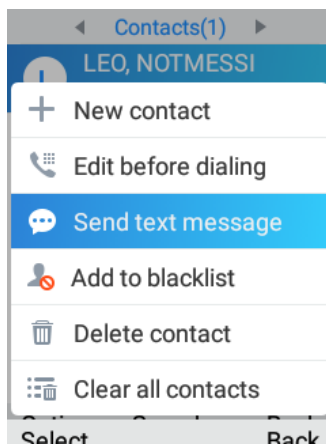
Send a New Message from Contact

Delete SMS

1. On the messages list, tap on "Options" to show more options.

2. Tap on "Delete message" to delete the selected message, or on "Clear all messages" to delete all the messages/drafts.

Notes

- Under "Options", users can also find "Add to contacts" option to directly include the number selected on the local contacts.
- The option "Edit before dialing" under "options" is used to facilitate dialing numbers directly from the SMS application.

CALL FEATURES

The WP820 supports traditional and advanced telephony features including call forward and etc.

*72	Unconditional Call Forward. To set up unconditional call forward: Off hook the phone; Dial *72 and then enter the number to forward the call; Press Call softkey or Dial key.
*73	Cancel Unconditional Call Forward. To cancel the unconditional call forward: Off hook the phone; Dial *73; Press Call softkey or Dial key.
*74	Paging Call. To establish a paging call: Off hook the phone; Dial *74; Press Call softkey or Dial key.
*90	Busy Call Forward. To set up busy call forward: Off hook the phone; Dial *90 and then enter the number to forward the call; Press Call softkey or Dial key.
*91	Cancel Busy Call Forward. To cancel the busy call forward: Off hook the phone; Dial *91;

	Press Call softkey or Dial key.
*92	No Answer Call Forward. To set up delayed call forward:
	Off hook the phone;
	Dial *92 and then enter the number to forward the call;
	Press Call softkey or Dial key.
*93	Cancel No Answer Call Forward. To cancel the delayed call forward:
	Off hook the phone;
	Dial *93;
	Press Call softkey or Dial key.

Call Features

MULTI-FUNCTION BUTTON

PTT (Push to talk) button can be configured under **WP820 Web GUI → System Settings → Preferences → Button Customization → Multi-Function Button**, to perform the following functions:

PTT/Paging

When users select Multi-function button to be a PTT/Paging button, a short press on the button will take users to PTT/Paging settings. Users can also press and hold the key to initiate PTT/Paging call.

Please, refer to the section **PTT (PUSH-TO-TALK) FUNCTIONALITY**

SAFE/Panic Call

Users could change the function of Multi-function button to SAFE/Panic Call, a short press on the key will open status page to make sure that Panic Call is enabled. Users can also press and hold the key to trigger Panic Call. *Please, refer to the section* **SAFE/PANIC CALL**

Mute/Un-mute

If "Mute" is chosen to be the function of Multi-function button, users will be able to mute incoming calls ringtone by pressing on the key. Also, the key will be performing mute/unmute function during calls.

Speed dial

The multi-function key can be used to speed dial a contact. Note: The speed dial function will need to be setup before activating the feature.

Disable

This function of Multi-function button allows the user to disable the multi-function button completely.
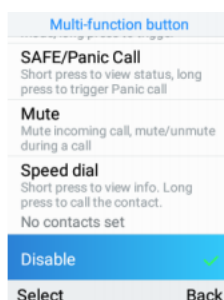
Disable Multi-function button

PTT (PUSH-TO-TALK) FUNCTIONALITY

The WP820 supports the Push to talk (PTT) features which is a technology based on the instantaneous communication commonly employed in wireless cellular phone services using a button to switch the device from voice transmission mode to voice reception mode. This feature is similar to "walkie talkie" use and the PTT mode switches a phone from full duplex mode, where both parties can hear each other simultaneously, to half duplex mode, where only one party can speak at one time. Multiple parties to the conversation may also be included.

Enabling PTT mode on the WP820

You can enable and configure the PTT settings using the WP820 LCD menu:

1. Press **Menu** to bring up operation menu.

2. Use arrow keys to reach **Settings → Advanced settings → PTT and paging**.

3. Choose **PTT settings** and enable the **PTT function**.

4. Press **Save** button to enable PTT mode.
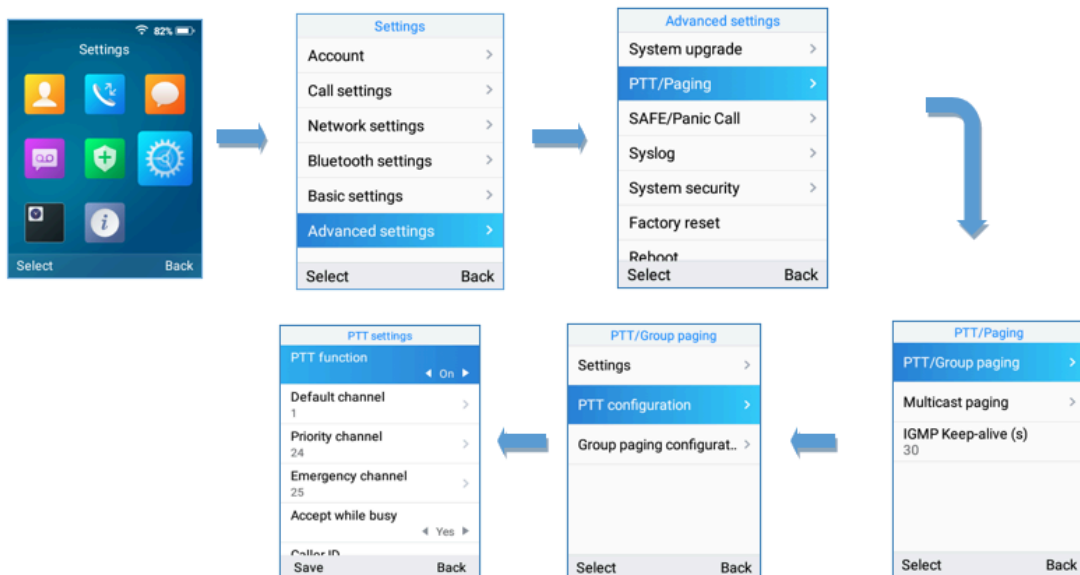
Enabling PTT Feature on WP820

Using the PTT Functionality on the WP820

To send a PTT broadcast from your WP820:

1. Unlock your WP820.

2. Make sure the multi-function button is configured to be a Push-To-Talk button.

3. Press the Push to Talk soft key.

4. Press and hold the Push to Talk key while speaking.
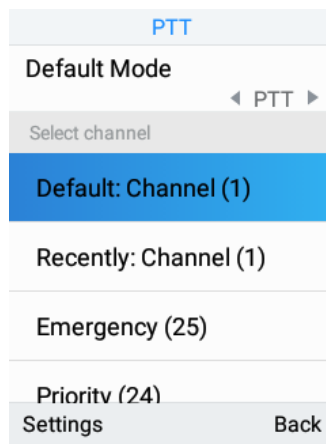
PPT Channel

Notes:

- Users could press and hold the Push-to-talk key from any screen to quickly initiate PTT call using default channel.
- The channel status will change to Sending PTT to indicate that you are transmitting as displayed on the following screenshot.
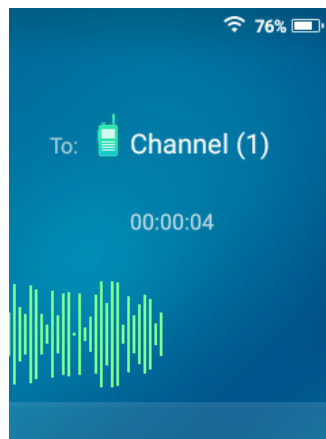
PTT Call (Caller)

- The devices which are in the same channel will receive the PTT call.
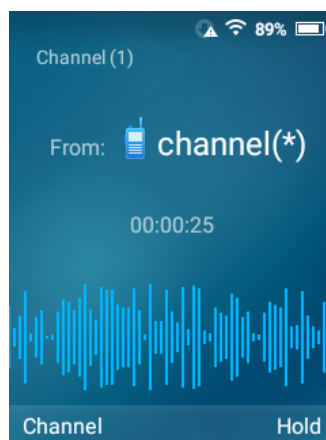
PTT Call (Callee)

- Release the Push to Talk soft key when you have finished speaking. The channel will wait 10 seconds before release.
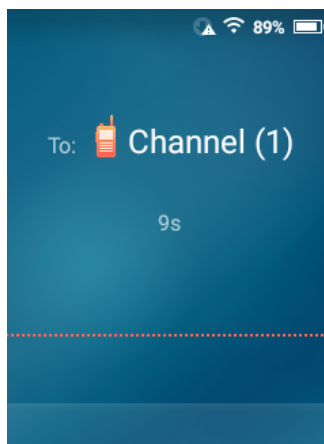
PTT Call Release

- You should press the Push to Talk soft key only when the channel status indicates Waiting. Otherwise, you may interrupt another person's message.

PTT Configuration Settings

Please refer to the following Settings for more details about the configuration of the PTT functionality:

Settings

- **Multicast address**: The multicast IP address to send page audio to and receive page audio from. Default value is 224.0.1.116.
- **Port:** The port to send audio to and receive audio from. Default value is 5001
- **Emergency volume**: The Volume of the emergency cannel. Default value is 8

PTT Parameters

- **PTT function**: Enable or disable the PTT function.
- **Default channel**: The PTT channel used to transmit an outgoing page if the user does not explicitly specify a channel.
- **Priority channel**: The channel assigned for priority pages.
- **Emergency channel**: The channel assigned for emergency pages.
- **Accept while busy**: If no, incoming PTT sessions do not produce standard call waiting. If yes, incoming PTT sessions produce standard call waiting behavior on the active audio channel.
- **CallerID(*)**: Caller ID number for identification.
- **PTime**: The audio payload size in milliseconds.
- **Audio codec**: The audio codec to use for outgoing PTT broadcasts. Incoming PTT audio will be decoded according to the codec specified in the incoming message.
- **Channel**: Set the channel whether to be usable, transported, acceptable, joined and the channel display name.

Group Paging

Enabling Group Paging Feature

You can enable and specify settings for the Group Paging feature through the phone's user interface.

To specify the Group Paging feature settings:

1. Using your phone's interface, navigate to the Group Paging Configuration menu by pressing **Settings→ Advanced setting→ PTT and paging→PTT and group paging**.

2. Choose Group Paging Configuration.

3. Set Group Paging function to Enabled.

Please, refer to the following screenshots:
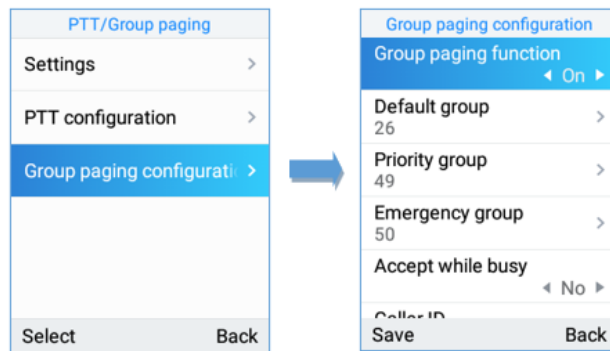
You can also enable and specify settings for the Group Paging feature through the Web GUI by selecting **Phone Settings →
PTT/Multicast Setting**.
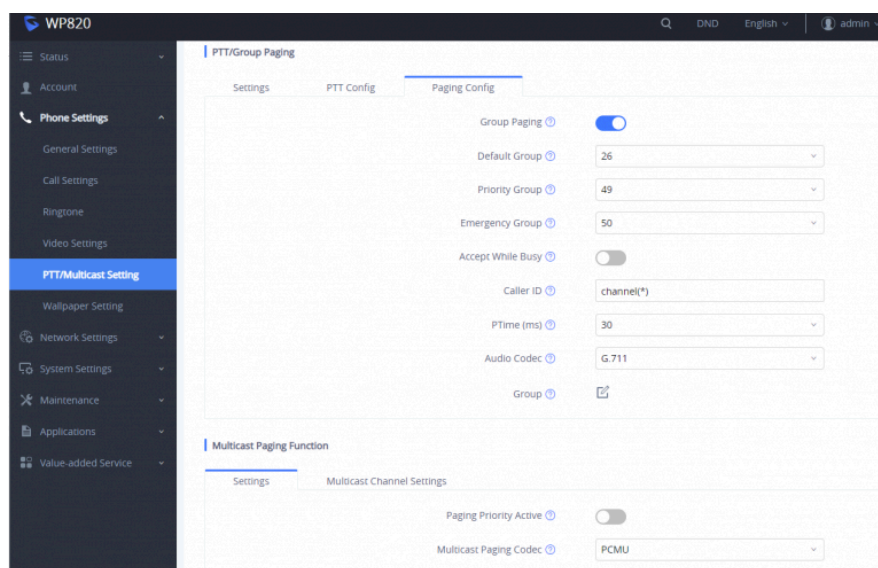
Enabling Group Paging

To send a Group Paging broadcast:

1. Unlock your WP820.

2. Press the Talk soft key.

3. Set Default mode to Group paging.

4. Scroll to the group you wish to send a broadcast to.
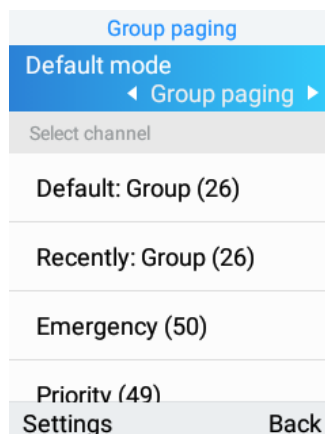
5. Press and hold the Talk soft key before speaking.

The group status will change to Sending group paging to indicate you are transmitting.

The devices which are in the group will receive the paging.
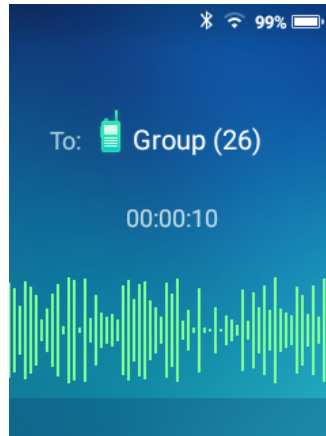
6. Release the Talk soft key, press the on-hook/power key when you have finished speaking.

Group Paging Parameters

- **Paging function**: Enable or disable the Group paging function.
- **Default group**: The group used to transmit an outgoing page if the user does not explicitly specify a group.
- **Priority group**: The group assigned for priority pages.
- **Emergency group**: The group assigned for emergency pages.
- **Accept while busy**: If no, incoming Group paging sessions do not produce standard call waiting. If yes, incoming PTT sessions produce standard call waiting behavior on the active audio group.
- **CallerID(*)**:Caller ID number for identification.
- **P-Time**: The audio payload size in milliseconds.
- **Audio codec**: The audio codec to use for outgoing Group paging broadcasts. Incoming Group paging audio will be decoded according to the codec specified in the incoming message.
- **group**: Set the group whether to be available、transmit、subscribe、join group and the group name.

IGMP Settings

Users could specify how often the phone will report IGMP when PTT/ Paging function is turned on. IGMP reporter helps to keep PTT/ Paging receivable in dormant state. The interval may take some effect to standby time. The default setting is 30 s.
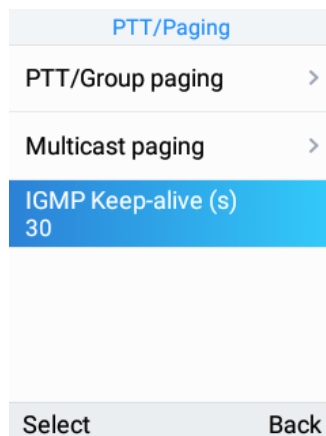
IGMP setting

SAFE/PANIC CALL

Safe Monitoring Features

SAFE monitoring feature on WP820 will monitor the user's safety situation and trigger an alarm once it detects any unsafe situation. Once the phone detects that the user may be in a dangerous situation such as unable to move, fall, or being chased using "Safe Monitoring Feature", the WP820 can quickly alert or initiate an emergency call for timely assistance.

In particular, the phone will automatically prompt a warning alert and message once it detects any unsafe situation. If the user does not cancel the prompt warning message to confirm its safety within the set time, an alarm will be triggered and an emergency call will be initialed (if configured) for assistance.

There are three major types of safety detection methods that can be set on SAFE monitoring settings:

- **No movement detection:** It detects when the user may be unable to move because of an injury or a coma, etc. Users can configure the duration of the no movement. If it stays no movement longer than the duration, the device will be triggered for detection.

- **Tilt detection:** It detects when the user may be in a state of slipping or falling, etc. Users can configure the sensitivity and timeout for this detection. With higher sensitivity level on tilt status, a relative slight falling action will trigger tilt detection and alert.

- **Running detection:** It detects when user may be in a status of being chased or escaping from a dangerous environment. Users can configure the sensitivity and timeout for this detection. With higher sensitivity level on running status, a slower running speed will trigger the running detection.

Users could configure the following SAFE monitoring options under **WP820 LCD → Menu → Settings → Advanced settings → SAFE/Panic Call → SAFE Monitoring Settings:**

Option	Description
Monitoring	Turn on/off the SAFE monitoring feature.
No Movement Sensitivity	Set the sensitivity of "No movement" detection. There are 7 levels available for detection. Choose Disabled to stop No movement detection.
No Movement Timeout (s)	Set the timeout value for "No movement" detection. The phone will start warning if the phone keeps no movement until timeout.
Tilt Sensitivity	Set the sensitivity of "Tilt detection". There are 7 levels available for detection. Choose Disabled to stop Tilt detection.
Tilt Timeout (s)	Set the timeout value for "Tilt detection". The phone will start warning if the phone keeps tilt until timeout.
Running Sensitivity	Set the sensitivity of "Running detection". There are 7 levels available for detection. Choose Disabled to stop Running detection.
Running Timeout (s)	Set the timeout value for "Running detection". The phone will start warning if the phone keeps waggle until timeout.
Snooze Timeout (s)	Set the timeout value of snooze. You can choose snooze while in warning/alarm State. After the timeout, the phone will start detecting again.
Warning Timeout (s)	Set the timeout value of warning. The phone will start alarm if the phone keeps warning and not be canceled.

SAFE Monitoring Settings

Panic Call Feature

Users can configure to have Panic Call feature on WP820 by setting it under **WP820 LCD → Menu → Settings → Advanced settings → SAFE/Panic Call**. This feature provides users the ability to manually/automatically trigger Alarm then initiate an emergency call to call for help in case of a dangerous situation.

- **Manual use**: Users can press and hold the multiple function key on the side of the phone to initial an emergency call (**Note**: Users need to configure the multi-function button to have the function of "SAFE/Panic Call" under WP820 Web UI). *Please, refer to WP820 Administration Guide.*
- **Automatic use**: If SAFE monitoring feature has been enabled, Emergency call can be initiated automatically once the phone detects the un-safe situation.

The following list is the list of options that can be configured for "Panic Call" feature under:

WP820 LCD → Menu → Settings → Advanced settings → SAFE/Panic Call:

Option	Description
SAFE Monitoring Settings	Configures "SAFE Monitoring Settings".
Panic Call Silent Alarm	To trigger alarm in a silent way during urgent or dangerous situation, configure the Panic Call silent alarm option to be on. The default setting is off. This setting will enable the phone to initiate an emergency call silently. It is mainly used when it is not convenient to play an alarm in a dangerous environment.
Emergency Call	To initiate Emergency Call, users need to set the emergency call number after turning on this feature. The default setting is off.
Warning Tone	Set the Warning tone.
Alarm Tone	Set the Alarm tone.

Panic/Emergency Call Settings

WP820 GESTURE AND INTELLIGENT CONTROL

Intelligent Control

Intelligent Control options allow to automatically answer/hang up calls upon leaving charge/connecting to charger respectively, you can also enable/disable proximity sensor.

To configure Intelligent Control options, follow instructions below:

On WP820 LCD Menu Settings, select **Basic Settings → Gestures→ Intelligent Control**.

1. Set "**Off-Cradle Pickup**" to **On**, so that phone will automatically answer the call when leaving charge.
2. Set "**On-Cradle hang up**" to **On**, so that phone will automatically hang up the call when entering the charging state.
3. Set "**Enable proximity sensor**" to **OFF**, so that the LCD screen will not turn off during a call when handset is held near the ear.

> **Note**
>
> The proximity sensor threshold has increased from 10 to 20 mm on the firmware release 1.0.7.61
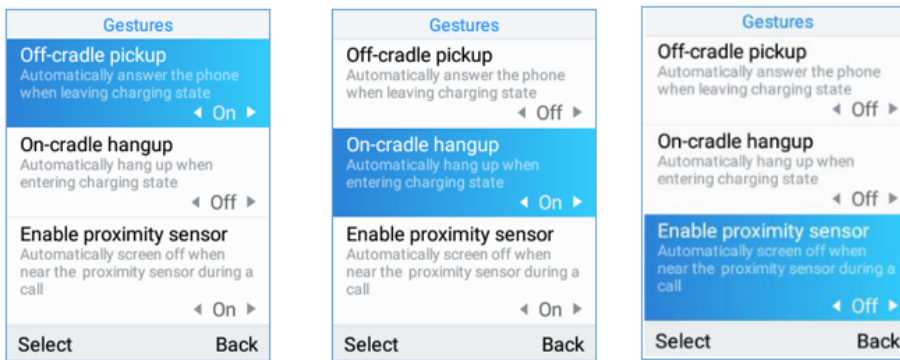
Intelligent Control Features

Gesture Control

Gesture Control options allow to perform actions (mute, decrease ringing volume, reject call…) based on the phone's gesture such as "Flip Phone" or "Pick up".

Flip Phone

1. On WP820 LCD Menu Settings, select **Basic Settings → Gestures → Gesture Control**.

2. Tap on **Flip Phone** option and set the option needed when flipping the phone.
   - **Ringing on Incoming Call:**
   - **Off:** The feature is disabled even if the phone is flipped while receiving an incoming call.
   - **Reject with SMS:** Incoming call will be rejected, and pre-defined SMS will be sent to caller when flipping the phone while receiving an incoming call. Note: SMS feature must be supported by SIP server, and users can customize SMS content by entering the message under "Reply Content".
   - **Reject:** Incoming calls will be rejected when flipping the phone while receiving an incoming call.
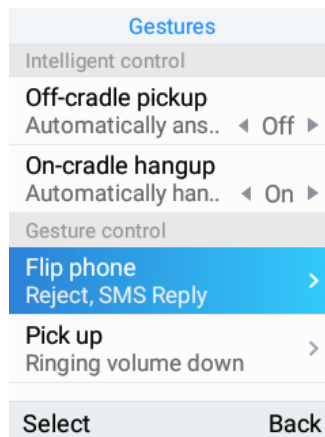
Flip Phone

WP820 Gesture Control (Flip phone)

Note

The incoming call will be rejected after 2 seconds when detecting the flip.

Pick Up

1. On WP820 LCD Menu Settings, select **Basic Settings → Gestures → Gesture Control.**

2. Tap on **Pick up** option. Two options are available:
   - **Ringtone:**
   - **Off**: The feature is disabled even if the phone is picked up when receiving a call.
   - **Ringing Volume Down**: When set to this option, picking up the WP820 from its cradle while charging will result in reducing the ringing volume.
   - **Mute**: When set to this option, picking up the WP820 from its cradle while charging will result in muting the ringing.

3. **Alarm Ringtone:**
   - **Off:** The feature is disabled even if the phone is picked up when Alarm ringtone is heard.
   - **Ringing Volume Down:** When set to this option, picking up the WP820 from its cradle while charging will result in reducing the ringing volume of Alarm ringtone.
   - **Mute:** When set to this option, picking up the WP820 from its cradle while charging will result in muting the Alarm ringtone.
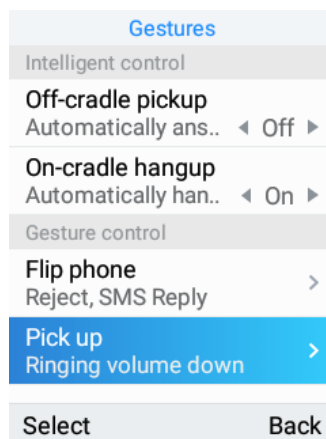
Pick up

WP820 Gesture Control (Pick up)

CONNECTING WP820 TO GDS3710 DOOR SYSTEM

The WP820 offers a powerful integration with GDS3710 Door System and allows users to open the door, initiates call to the GDS3710 and gets real time audio/video stream from the door system.

The WP820 can be connected with the GDS3710 in two different ways, either using peering mode (without a SIP server) or through a SIP server.
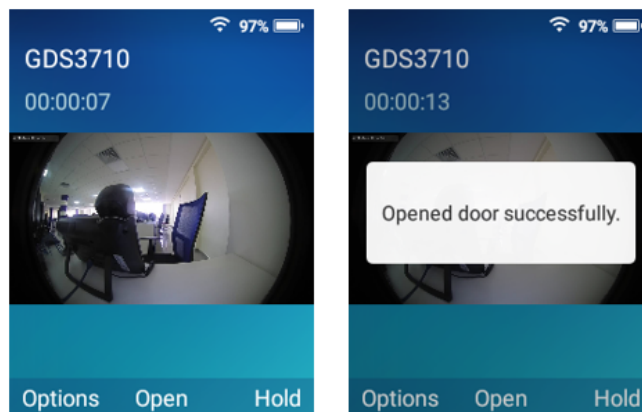
WP820 Connected to GDS3710

For more details, please, refer to:

https://documentation.grandstream.com/knowledge-base/connecting-gds37xx-with-wp820/

DIAGNOSTICS

The WP820's LCD, Audio and many other features can be diagnosed from the diagnostics APP. The sections below describe how the diagnosis is run:
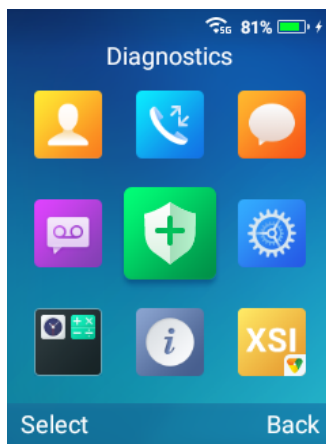
Diagnostics APP

LCD Diagnostics

Proceed from Diagnostics APP➔ Click on LCD Diagnostics, and you can use the left/right Keys to change the pictures and OK to exit:
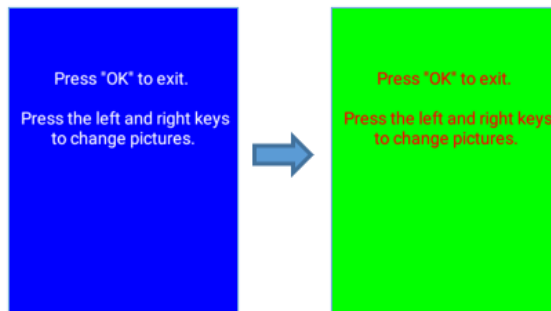
LCD Diagnostics

LCD Off

Proceed from Diagnostics APP➔ Click on Select to turn LCD Off, so that you can verify if the backlight does turn off.
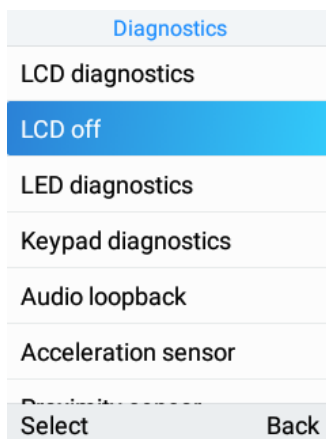
LCD Diagnostics

LED Diagnostics

Proceed from Diagnostics APP➔ Click on Select to run LED Diagnostics, and you can verify if the LED color changes upon key press during the test:
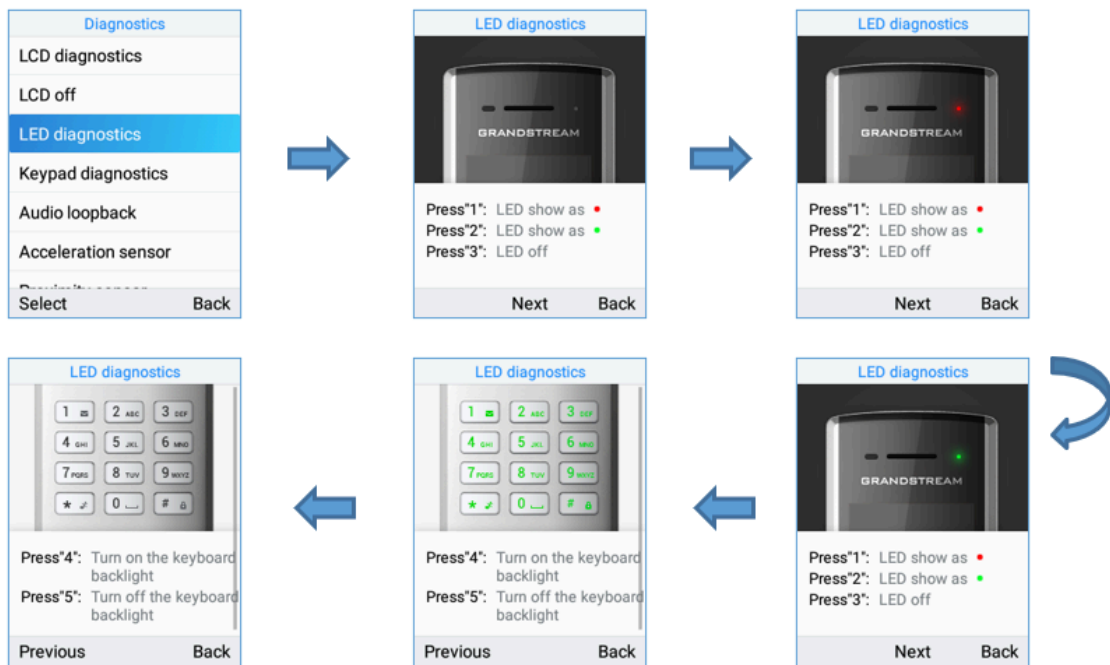
LED Diagnostics

Keypad Diagnostics

Proceed from Diagnostics APP➔ Click on Select to run Keypad Diagnostics, and you can verify if the keypad buttons are working fine:
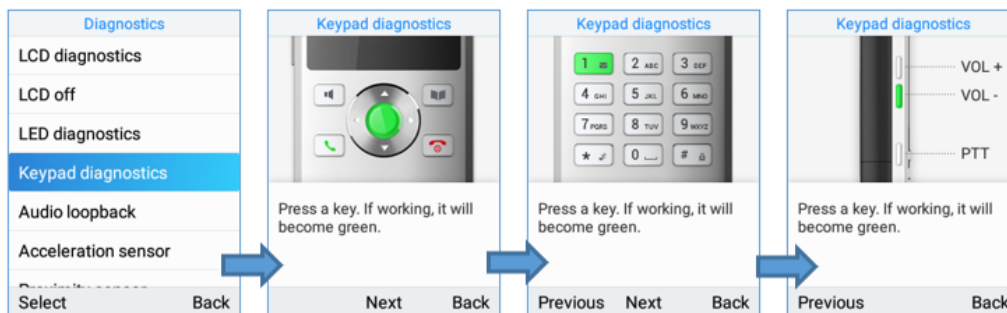
keypad Diagnostics

Audio Loopback

Proceed from Diagnostics APP➔ Click on Select to run Audio Loopback, so that you can verify if the microphone, earphone, and back speaker are working fine.
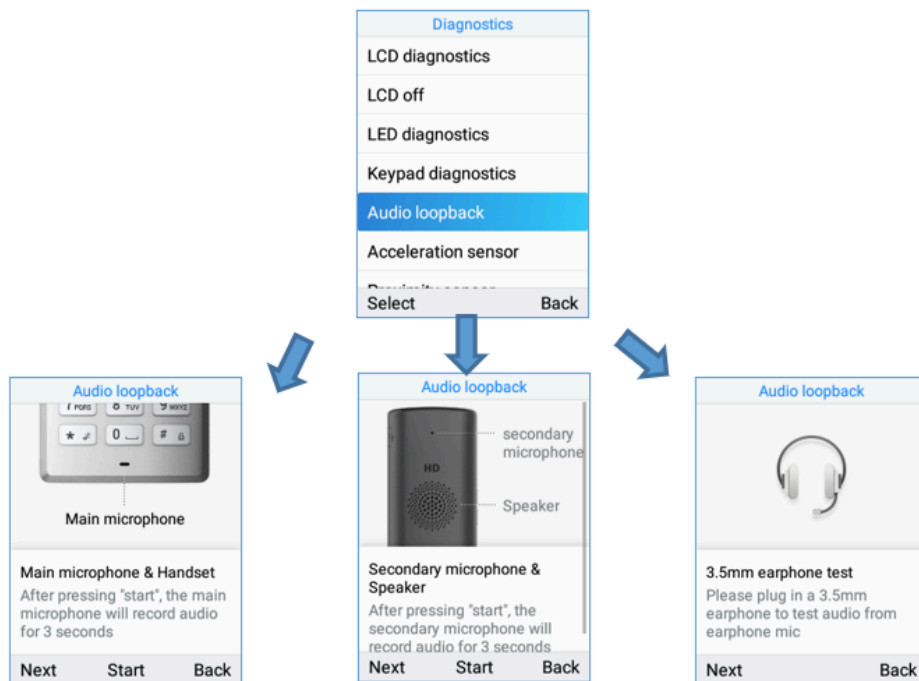
Audio Loopback

Acceleration Sensor

Proceed from Diagnostics APP➔ Click on Select to run Acceleration sensor, so that you can verify if the acceleration sensor is operating fine by tilting the handset.
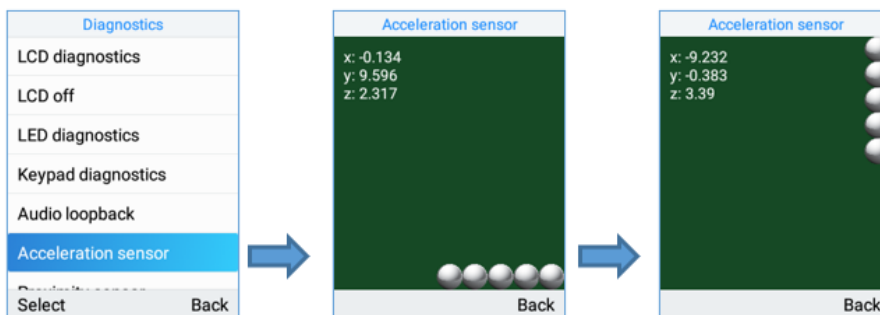
Acceleration sensor

Sensor Calibration

Proceed from Diagnostics APP➔ Click on Select to run Sensor calibration and then click on Start.

Sensor calibration

Proximity Sensor

Proceed from Diagnostics APP➔ Click on Select to run Proximity sensor, run the test by covering the sensor with a finger and wait for LED to go green.
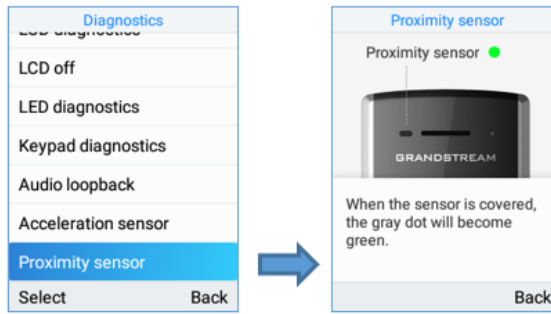
Proximity sensor

Vibration Diagnostics

Proceed from Diagnostics APP➔ Click on Select to run Vibration diagnostics, run the test by selecting Vibrate.
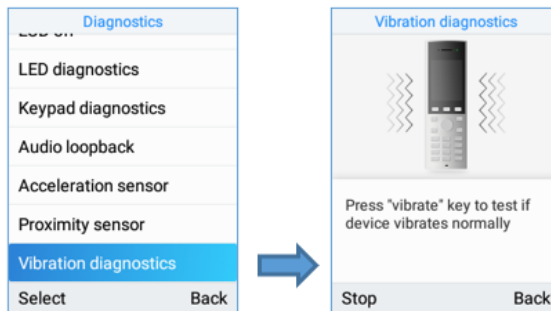
Vibration diagnostics

Certificate Verification

Proceed from Diagnostics APP➔ Click on Select to run Certificate Verification to verify the device's certificate.
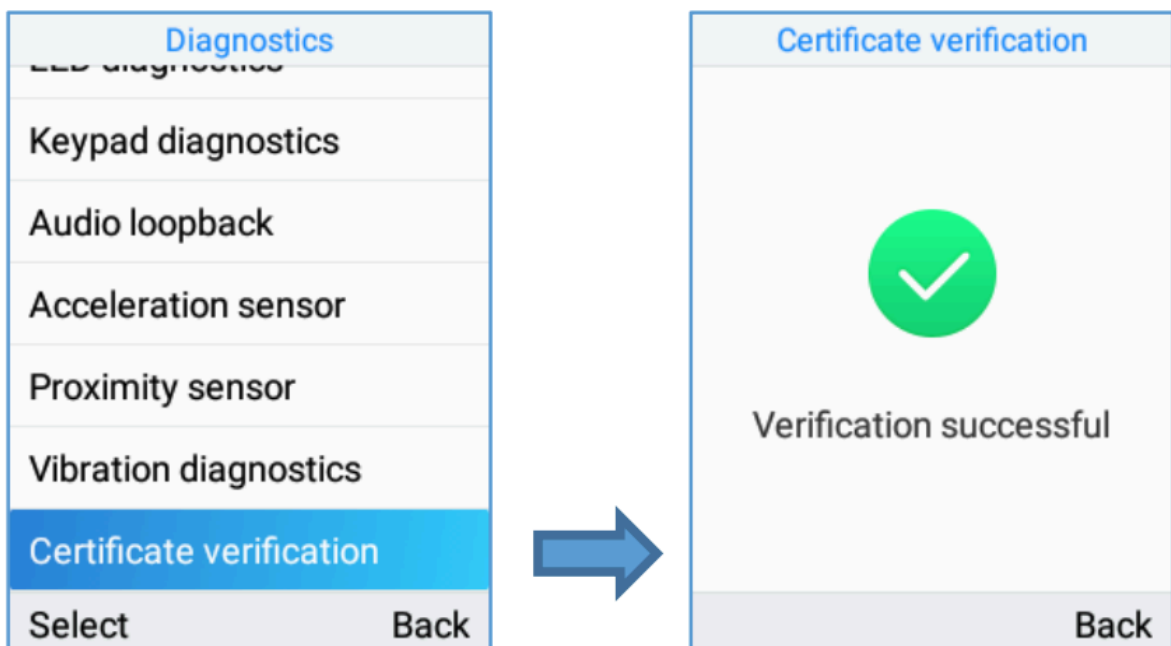
Traceroute

Proceed from Diagnostics APP➔ Click on Select to run Traceroute to a FQDN.
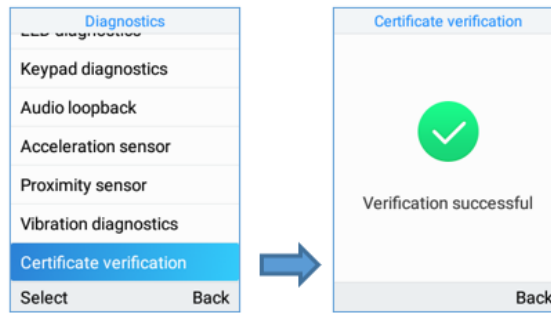
Traceroute

Ping

Proceed from Diagnostics APP➔ Click on Select to run ping to FQDN.
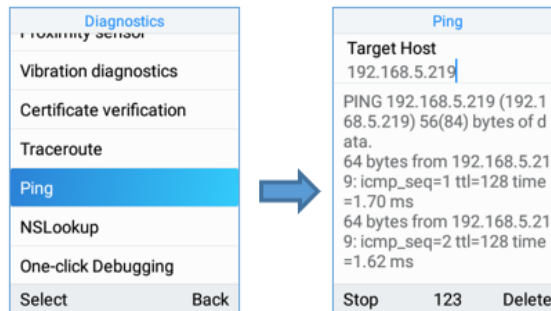
Ping

NsLookup

Proceed from Diagnostics APP➔ Click on Select to run NSLookup on to a domain name.
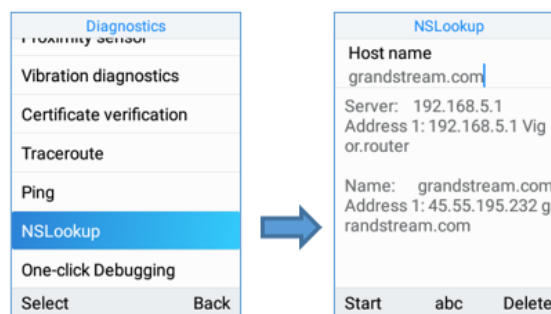
NsLookup

One-click Debugging

This feature allows user to launch the debug process from the LCD itself and to export the debug file via USB rather instead of accessing the web GUI to do so. Proceed from Diagnostics APP➔ Click on Select to run one-click debugging from the LCD.

1. Select the option One-click Debugging.
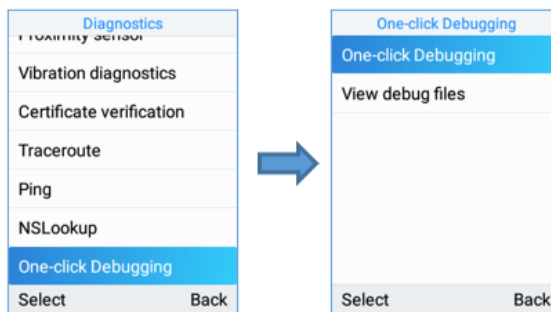
one-click debugging

2. Select the debug file menu options to be included in the debug Info file then click start
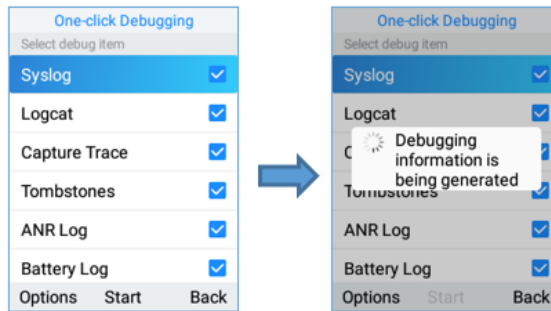
select debug mode and start capture

3. Click on stop then Back and select View debug file:
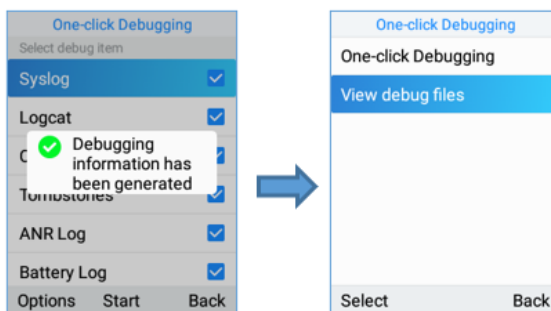
select debug mode and start capture

4. Export to USB drive or delete logs.
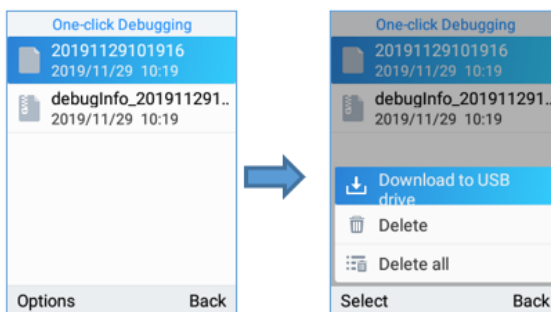
export or delete debug file

UPGRADING AND PROVISIONING

The WP820 can be upgraded via TFTP/HTTP/HTTPS by configuring the URL/IP Address for the TFTP/HTTP/HTTPS server and selecting a download method. Configure a valid URL for TFTP, HTTP or HTTPS; the server name can be FQDN or IP address.

Examples of valid URLs:

firmware.grandstream.com/BETA

fw.mycompany.com

Upgrade and Provisioning Configuration

There are two ways to setup upgrade and provisioning on WP820. They are Keypad Menu and Web GUI.

Configure via keypad Menu

- In WP820 Settings, select **Advanced Settings → System Upgrade**.
- Navigate to **Firmware/Config** and configure the firmware upgrade and config settings.
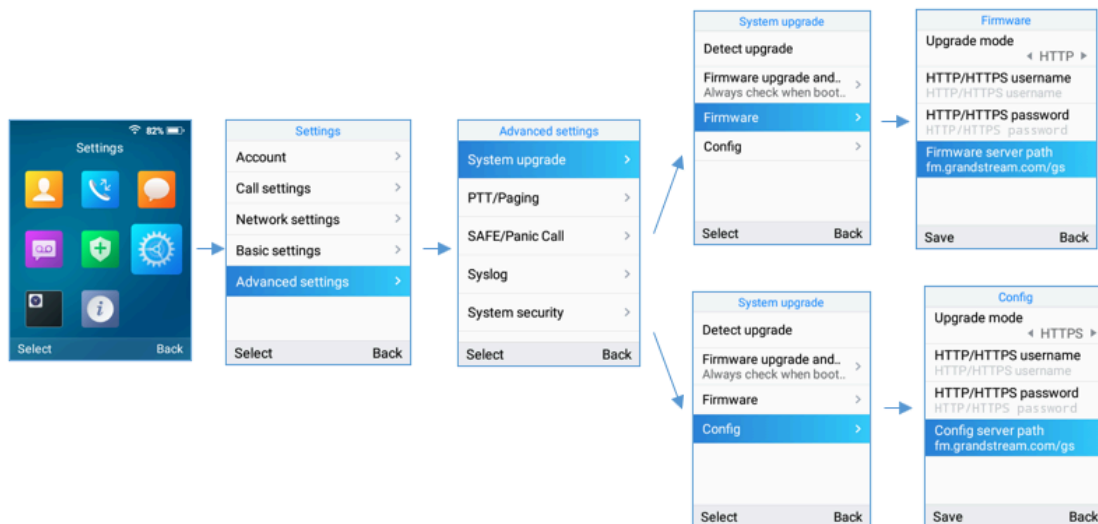
WP820 Upgrade Configuration via Keypad Menu

Configure via Web GUI

Open a web browser on PC and enter the IP address for the WP820. Then login with the administrator username and password. Go to **Maintenance → Upgrade → Firmware**. In the Upgrade web page, enter the IP address or the FQDN for the upgrade server and choose to upgrade via TFTP, HTTP or HTTPS (The default setting is HTTPS). Save and apply the changes, press **Upgrade** button, or reboot the phone to initiate firmware upgrade process.
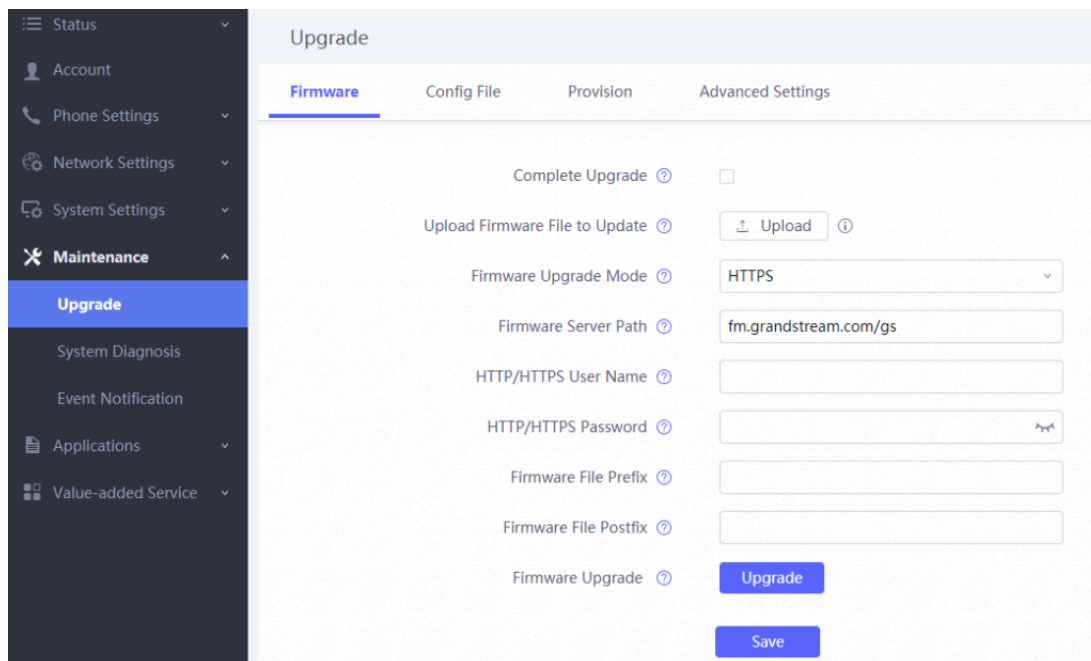
WP820 Upgrade Configuration via Web GUI

Warning

Please do not power off or unplug the WP820 when the upgrading process is on.

Upload Firmware Locally

If there is no HTTP/TFTP server, users could also upload the firmware to the WP820 directly via Web GUI. Please follow the steps below to upload firmware to WP820 locally.

1. Download the latest WP820 firmware file from the following link and save it in your PC.

https://www.grandstream.com/support/firmware

2. Log in the Web GUI as administrator in the PC.
3. Go to Web GUI→**Maintenance**→**Upgrade**→**Firmware**.
4. Click the "Upload" button, a window will be prompted to select firmware file to upload.
5. Select the firmware file from your PC. Then uploading progress will show at the button where it was "Upload" in the above step.
6. When uploading is done, users can see the upgrading process starts on the WP820 LCD.
7. The phone will reboot again with the new firmware version upgraded.

Upload Firmware File to Update

No Local Firmware Servers

Service providers should maintain their own firmware upgrade servers. For users who do not have a TFTP/HTTP/HTTPS server, some free Windows version TFTP servers are available for download from:

http://www.solarwinds.com/free-tools/free-tftp-server and http://www.tftpd64.com/.

Please check our web site at https://www.grandstream.com/support/firmware for latest firmware.

Instructions for local firmware upgrade via TFTP:

1. Unzip the firmware files and put all of them in the root directory of the TFTP server;

2. Connect the PC running the TFTP server and the WP820 device to the same LAN segment;

3. Launch the TFTP server and go to the File menu → Configure → Security to change the TFTP server's default setting from "Receive Only" to "Transmit Only" for the firmware upgrade;

4. Start the TFTP server and configure the TFTP server in the phone's web configuration interface;

5. Configure the Firmware Server Path on your WP820 to the IP address of the PC;

6. Update the changes and reboot the WP820.

End users can also choose to download a free HTTP server from https://httpd.apache.org/ or use Microsoft IIS web server.

Firmware Upgrade via USB

For users that could not use remote upgrade or could not access the phone's Web GUI to upload firmware, upgrading via external USB flash drive is an alternative. Follow the steps below to upgrade the WP820 via USB:

1. Download the firmware file to PC and save it in the USB flash drive

2. Insert the USB flash drive to the WP820.

3. The following message will appear indicating that the USB drive is connected and the

   icon will appear in the status bar.
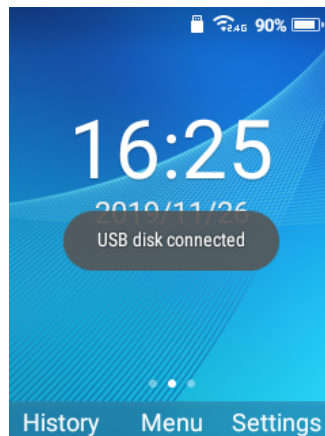
USB disk connected

4. Power cycle the WP820 and wait for the device to detect the firmware.
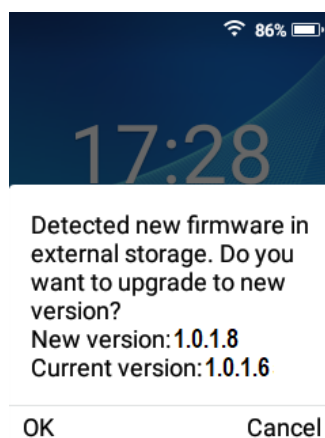
New Firmware Detected

5. Press OK to start the upgrade.

Note

The USB flash drive should be on **FAT32** format and the firmware file should be necessarily named **wp820fw.bin**

Config Provision via USB

This feature allows the user to place an XML configuration file on a USB drive and upload to WP820.

> **Note**
>
> WP820 will automatically scan the USB drive for cfg{mac}.xml files after the connection is established. Please ensure only one instance of the file type is contained in the root directory of the USB drive.

1. Download the Config file to PC and save it in the USB flash drive
2. Insert the USB flash drive to the WP820.
3. Power cycle the WP820 and wait for the device to detect the Config file.

Wi-Fi Provision via USB

This feature allows the user to place a Wi-Fi configuration package on USB and upload to WP820.

> **Note**
>
> Please see the Wi-Fi configuration upload guide on the Grandstream product page for additional details by using the following URL: https://documentation.grandstream.com/knowledge-base/wi-fi-settings-provisioning-via-usb/

Provisioning and Configuration File Download

Grandstream SIP Devices can be configured via the Web Interface as well as via a Configuration File (binary or XML) through TFTP or HTTP/HTTPS. The "Config Server Path" is the TFTP, HTTP or HTTPS server path for the configuration file. It needs to be set to a valid URL, either in FQDN or IP address format. The "Config Server Path" can be the same or different from the "Firmware Server Path".

A configuration parameter is associated with each particular field in the web configuration page. A parameter consists of a Capital letter P and 1 to 5 (could be extended to more in the future) digit numeric numbers. i.e., P2 is associated with the "Admin Password" in the Web GUI→**System Settings**→**Security Settings**→**User Info Management** page. For a detailed parameter list, please refer to the corresponding firmware release configuration template in the following link:

https://www.grandstream.com/support/tools

When the WP820 boots up, it will issue TFTP or HTTP(S) request to download a configuration XML file named "cfgxxxxxxxxxxxx" followed by "cfgxxxxxxxxxxxx.xml", where "xxxxxxxxxxxx" is the MAC address of the phone, i.e., "cfg000b820102ab" and "cfg000b820102ab.xml". If downloading "cfgxxxxxxxxxxxx.xml" file is not successful, the provision program will download a generic cfg.xml file. The configuration file name should be in lower case letters.

For more details on XML provisioning, please refer to the following document:
https://documentation.grandstream.com/knowledge-base/sip-device-provisioning-guide/

FACTORY RESET

Restore to Factory Default via LCD Menu

> **Warning**
>
> Restoring the Factory Default Settings will delete all configuration information on the phone. Please backup or print all the settings before you restore to the factory default settings. Grandstream is not responsible for restoring lost parameters and cannot connect your device to your VoIP service provider.

There are two methods to restore the WP820 to the factory default settings.

1. On WP820 idle screen, go to **Settings → Advanced Settings → Factory reset**.
2. In the new window, confirm the reset using the left softkey.

WP820 LCD – Confirm Factory Reset

3. Once confirming the factory reset, WP820 will reboot with the default factory settings.

Restore to Factory Default via the Web GUI

1. Login WP820 Web GUI and go to **Maintenance → Upgrade → Advanced Settings**;
2. At the bottom of the page, click on the **Reset** button for Factory reset.

WP820 Web GUI – Factory Reset

3. A dialog box will pop up to confirm factory reset.
4. Click OK to restore the phone to factory settings.
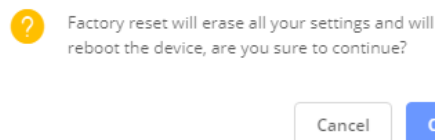
WP820 Web GUI – Confirm Factory Reset

Restore to Factory Default using Hard Keys

In order to perform hard reset of the phone using keypad buttons please follow below steps:

1. Power cycle the WP820.
2. Press key **1** + key **9** immediately and hold it until the LCD shows the factory reset message.
3. Release the buttons and the phone will boot up with the default settings.

> **Important**
>
> When constraint mode or lock screen is enabled, the user will need to enter the admin password before the device can initiate the factory reset process

CHANGE LOG

This section documents significant changes from previous firmware versions. Only major new features or major document updates are listed here. Minor updates for corrections or editing are not documented here.

Firmware Version 1.0.7.77

- No Major Updates.

Firmware Version 1.0.7.75

- Added support for the Slovenian language. [Multi-language]

Firmware Version 1.0.7.73

- No Major Updates.

Firmware Version 1.0.7.72

- No Major Updates.

Firmware Version 1.0.7.68

- No Major Updates.

Firmware Version 1.0.7.66

- No Major Updates.

Firmware Version 1.0.7.61

- Updated the display message on LCD when the call transfer fails. [Transfer]
- Adjusted the proximity sensor's low threshold from 10 to 20. [Intelligent Control]

Firmware Version 1.0.7.58

- Added the option Incoming Call Indicator. [WP820 LED Status]
- Added the option Charging Indicator. [WP820 LED Status]
- he devices which are in the group will receive the paging.Added the option Charging Completed Indicator. [WP820 LED Status]
- Added support for the Hungarian language. [Hungarian Language]

Firmware Version 1.0.7.50

- Added New options for screen lock [Screen lock]
- Added Use # as Redial key [Make a Call using a Line]

Firmware Version 1.0.7.43

- No major changes.

Firmware Version 1.0.7.30

- Added ability to disable proximity sensor. [Intelligent Control]
- Added ability to disable multi-function button completely. [Disable]

Firmware Version 1.0.7.26

- Added Sensor calibration feature code ***2223*. [Sensor Calibration]

Firmware Version 1.0.7.22

- Added Ability to upload custom wallpaper by server path. [Download Wallpaper]

Firmware Version 1.0.7.15

- Added allow transfer calls to LDAP contacts. [Call Transfer]

Firmware Version 1.0.7.7

- Added support for Finnish and Hebrew language.

- Added detection for upgrade fail if speed lower than 1B/s for 120 secs for all modes.

- Added ability to configure outbound proxy from LCD menu. [Register Account via LCD Menu]

- Added USB icon display on status bar when USB drive is plugged. [Firmware Upgrade via USB]

- Added Broadsoft XSI support. [Broadsoft XSI]

- Added "One-click Debugging" feature on handset UI. [DIAGNOSTICS]

- Added SN info on LCD and web UI. [WP820 System Info]

Firmware Version 1.0.5.5

- Added battery status. [WP820 Battery]

- Added Bluetooth interface on web UI. [Bluetooth]

- Added visual voicemail function. [Voice Mail]

- Added custom wallpaper support on web UI. [Wallpaper Customization]

- Added Wi-Fi provision via USB. [Wi-Fi Provision via USB]

- Added config file provision via USB. [Config Provision via USB]

- Added lock screen feature from web UI and screen lock password. [Screen Lock]

- Added UCM conference screen to show participants count info. [UCM Conference]

- Added send message in contacts UI. [SMS]

- Added speed dial option for multi-purpose key. [MULTI-FUNCTION BUTTON]

- Added phone support for clicking ok button to accept call.

Firmware Version 1.0.3.20

- Added video call zoom function in door system integration feature with GDS. [CONNECTING WP820 TO GDS3710 DOOR SYSTEM]

- Added ability to enable/disable SSH access without requiring reboot. [Web/SSH Access]

- Added support for UCM conference control. [UCM Conference]

- Added support for quick search mode in contacts application. [CONTACTS]

- Added ability to disable web UI access. [Accessing the Web UI]

- Added ability to disable Low Wi-Fi signal warning. [Wi-Fi Signal Warning Configuration]

- Added quick setup wizard module. [QUICK SETUP WIZARD]

- Updated attended transfer confirmation msg. [Attended Transfer]

- Increased dial digit limit to 30 characters. [Placing calls]

- Removed "Personalized Account" menu and moved related options to Settings → Call settings. [WP820 Handset Menu]

- Added Wi-Fi restart when changed Wi-Fi frequency. [Wi-Fi Band Configuration]

- Added support for connected Bluetooth device display. [Connecting WP820 to Bluetooth Devices]

- Added Bluetooth headset mode support. [Connecting WP820 to Bluetooth Devices]

- Updated device LCD language supported list. [Selecting Phone Language]

- Updated SMS interface. [SMS]

- Add 2 second delay when detect flip to reject call. [Flip Phone]

- Updated factory reset using hard key interface when constraint mode enabled. [Restore to Factory Default using Hard Keys]
- Added support for factory reset to first unregister sip message without contact head. [FACTORY RESET]
- Updated SRTP icon to display only when signaling and media are both encrypted. [WP820 Icons Description]

Firmware Version 1.0.3.6

- Changed voicemail notification from "Ordinary" to "Normal". [WP820 Icons Description]

Firmware Version 1.0.3.5

- Supported TLSv1.2. [Technical Specifications]
- Added Slovak language support on LCD display. [Technical Specifications]
- Added warning tone when device is low on battery. [Battery Information]
- Added auto bootup when placed on charger after an abnormal power off. [Battery Information]
- Added Calculator application. [WP820 Handset Menu]
- Added additional Home screen on the left and the right. [WP820 Home Screen]
- Added support for captive portal. [Manual connection]
- Added Wi-Fi Band selection. [Wi-Fi Band Configuration]
- Added warning and message prompt when Wi-Fi signal is weak. [Wi-Fi Signal Warning Configuration]
- Added beep tone during a call when Wi-Fi connection is lost. [Wi-Fi Signal Warning Configuration]
- Added support for captive portal. [Wi-Fi Roaming Mode Configuration]
- Improved time and date display for different format. [Date and Time]
- Added support for troubleshooting tools. [Diagnostics]
- Changed incoming call softkey options from "Accept, Transfer, Reject" to "Accept, Transfer, Mute" for user friendly purpose. [CALL OPERATIONS]
- Added stutter tone at dialing interface when account has un-read voicemails. [Voice Mail]
- Added support for quick conference during call. [3-Way Conference]
- Increased contacts max limit count to 1000. [CONTACTS]
- Improved SMS UI and UX. [SMS]
- Added prompt for message sending status after users click on "Send". [SMS]
- Added setting IGMP Keep Alive for PTT/Paging feature. [IGMP Settings]
- Add support for SAFE/Panic Call mode. [SAFE/PANIC CALL]
- Added Gesture Control features. [Gesture Control]
- Improved Phone User interface for user friendly purpose.

Firmware Version 1.0.1.15

- Adding show storage status in System Info. [WP820 System Info]

Firmware Version 1.0.1.12

- This is the initial version for WP820.