


# WP856 - User Guide

## WELCOME

The WP856 is a high-end mobile computing device designed for users on the go who need access to reliable mobile scanning software. This powerful, portable device comes equipped with integrated dual-band 802.11a/b/g/n/ac/ax, 2.4G/5G Wi-Fi support, advanced antenna design, roaming support, and integrated Bluetooth for pairing with headsets and mobile devices. With excellent data scanning performance on 1D and 2D barcodes and NFC support for instant data communication, this device helps increase productivity with instant access to critical and real-time information. The WP856 is equipped with a 20-hour talk time, a 5.5-inch HD touch screen, and an IP65 dustproof, waterproof, and drop-safe height of 1.5 meters this device is long-lasting and durable for any environment or user on the go. The WP856 is ideal for deployment scenarios such as healthcare facilities, retail locations, building security, logistic environments, etc.

## PRODUCT OVERVIEW

The following table contains the major features of the WP856:

	<ul style="list-style-type: none"><li>• 6 SIP accounts, 6 lines</li><li>• Android 13 OS, supports custom Android apps</li><li>• IP65 dustproof and waterproof, Drop-safe from 1.5 meter height.</li><li>• Dual-band Wi-Fi with efficient antenna design and fast roaming support</li><li>• Rechargeable 5000mAh battery, 20 hour talk time, 200 hour standby; USB Type-C port, supports fast charging</li><li>• Excellent data capture performance on 1D and 2D barcodes, Supports NFC for data communication.</li></ul>
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WP856 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 WP856.

Processor	2.2 G octa-core 64-bit processor
Operating System	Android 13 , Google Mobile Services certified
Memory	RAM: 4GB ROM: 64GB
Interface	Type-C 2.0 OTG; Support USB Type-C headset
Protocol/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
Wi-Fi	Dual-band (2.4GHz and 5GHz) Wi-Fi 6 (IEEE 802.11a/b/g/n/ac/ax) 2.4G supports 20/40MHz bandwidth, 5G supports 20/40/80/160MHz bandwidth

<b>Voice Codecs and Capabilities</b>	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
<b>Video Codecs and Capabilities</b>	H.264 BP/MP/HP, video resolution up to 1080p, frame rate up to 30 FPS, bit rate up to 20Mbps, 3-way video conference (1080p at 30 FPS), anti-flicker capability, auto focus and auto exposure
<b>Customizable Function Keys</b>	Customizable button for scan, push-to-talk, panic call, and other related functions
<b>Bluetooth</b>	Yes, Bluetooth 5.2, supports Bluetooth Low Enrgy (BLE) CMOS (≥5 mil)
<b>Scanner</b>	1D: Code128, Code 49, Code 16K, (GS1128) UCC/EAN-128, AIM-128, EAN-8, EAN-13, UPC-E, UPC-A, ITF, ITF 6, ITF 14, Matrix 2 of 5, Industrial 25, Standard 2 of 5, Code39, ISSN, ISBN, CodaBar, Code93, Code 11, Plessey, MSI Plessey, RSS 2D: Aztec, Composite, CS Code, Maxicode, Micro PDF, Micro QR, PDF 417, QR Code, Data Matrix, DotCode.
<b>Near-Field Communication (NFC)</b>	13.56MHz RFID ISO14443A/B, ISO15693,ISO18000-3, MIFARE, FeliCa RF, NFC Forum Type 1-4 Tag
<b>Telephony Features</b>	Hold, transfer, forward, 6-line audio conference, downloadable phonebook (XML, LDAP, up to 1000 items), call waiting, call log (up to 1000 records), off-hook auto dial, auto answer, click-to-dial, flexible dial plan, hot desking, personalized music ring-tones and music on hold, server redundancy and fail-over, push-to- talk
<b>Security</b>	User and administrator level passwords, MD5 and MD5-sess based authentication, 256-bit AES based secure configuration file, SRTP, TLS, HTTPS, 802.1x media access control
<b>HD Audio</b>	Yes, both on handset and speakerphone, supports wideband audio
<b>QoS</b>	802.11e and Layer 3 (ToS, DiffServ, MPLS) QoS
<b>Multi-language</b>	English, Arabic, Chinese, Czech, Dutch, German, French, Hebrew, Italian, Japanese, Polish, Portuguese, Russian, Spanish, Turkish, and more
<b>Upgrade/Provisioning</b>	Firmware upgrade via HTTP/HTTPS, mass provisioning using TR-069 or encrypted XML configuration file, manual upload
<b>Display</b>	5.5 inch (1440×720) multi-point capacitive touch screen; Up to 450 NIT (brightness), display backlight adjusts automatically
<b>Camera</b>	Rear camera: 13MP, auto focus, with LED flashlight Front camera: 5MP, fixed focus
<b>GPS</b>	Supports GPS, Galileo, and Beidou
<b>SD Card</b>	Supports Micro SD cards (up to 256GB)
<b>AC Adapter</b>	Quick charger (Output: 5V-3A/9V-2A/12V-1.5A Input: AC 100~240V, 50/60Hz)
<b>Peripherals</b>	Volume button(+,-), Push-To-Talk Button, Left/Right Scan Button, Power button, Vibration motor, Multi-color LED

Battery	5000mAh 3.85V rechargeable battery; 200 hours standby time and 20 hours talk time (the battery can be removed and replaced)
Microphone and Speaker	Dual microphones, HD speaker and speakerphone (1W)
Sensors	Light & Proximity sensor, accelerometer sensor, gyroscope sensor
Physical	Headset dimensions: 161x 74 x 15mm Handset weight: 0.28KG
Temperature and Humidity	Operating Temperature: -20 °C to 50 °C (-4°F to 122°F); Charging Temperature: 5-40 °C (41°F to 104°F); Storage Temperature: -20 °C to 60 °C (-4°F to 140°F);
Package Contents	Handset unit, power adapter, quick start guide, hand rope, protective shell, 3x plug adapter, Lithium battery, USB cable
Ruggedization and Protection	Dropsafe up to 1.5m height when dropped on to concrete Casing: IP65-rated waterproof and dustproof Static Discharge: ±15 kV (air discharge), ±8 kV (direct discharge)
Compliance	FCC, CE, EAC, IC, RCM

WP856 Technical Specifications

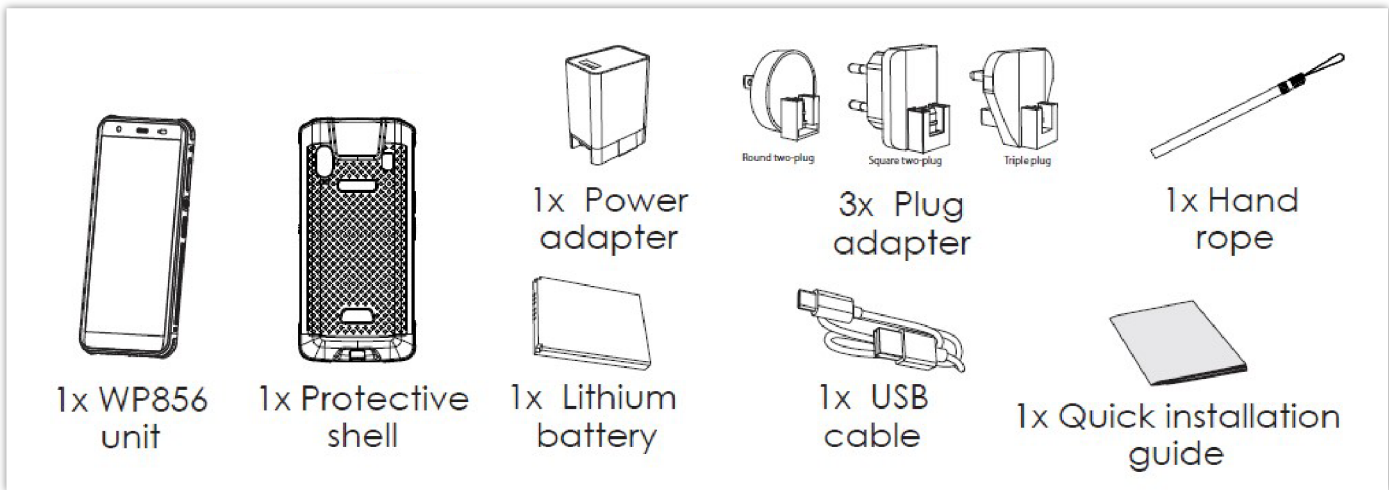
## GETTING STARTED

This chapter provides basic installation instructions including the packaging contents list and information for obtaining the best performance with the WP856.

### Equipment Packaging

WP856
<ul style="list-style-type: none"><li>• 1x WP856 Unit</li><li>• 1x Protective shell</li><li>• 1x Power adapter</li><li>• 1x Lithium attery</li><li>• 1x Round two-plug</li><li>• 1x Square two-plug</li><li>• 1x Triple plug</li><li>• 1x Hand rope</li><li>• 1x Quick Installation Guide</li></ul>

Equipment Packaging



WP856 Package Content

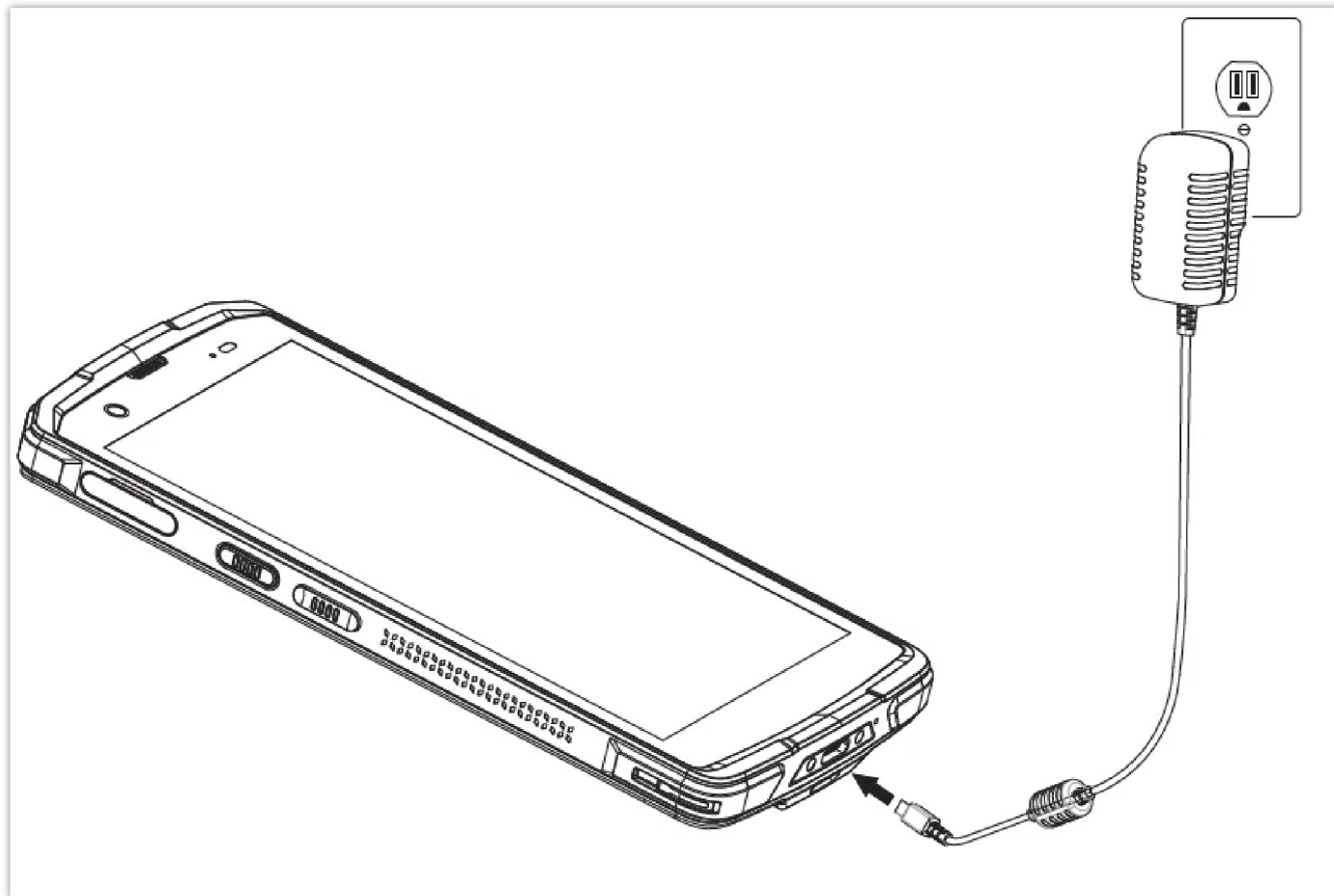
### Important

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

## Setting up the WP856

### Charging the Battery

Connect the device to a power outlet using the included AC adapter and cable as shown in the figure:



*Charging Station*

### Note

Please charge the battery fully before using the device for the first time. (For more information about the battery, please refer to Battery Information.

## Battery Information

- **Technology:** Rechargeable Li-ion Battery
- **Capacity:** 5000mAh
- **Standby time:** up to 200 hours
- **Talk time:** up to 20 hours of active talk time

To get the best performance of your WP856, we recommend using the original battery provided in the package. The specifications may differ depending on the age and capacity of the battery used.

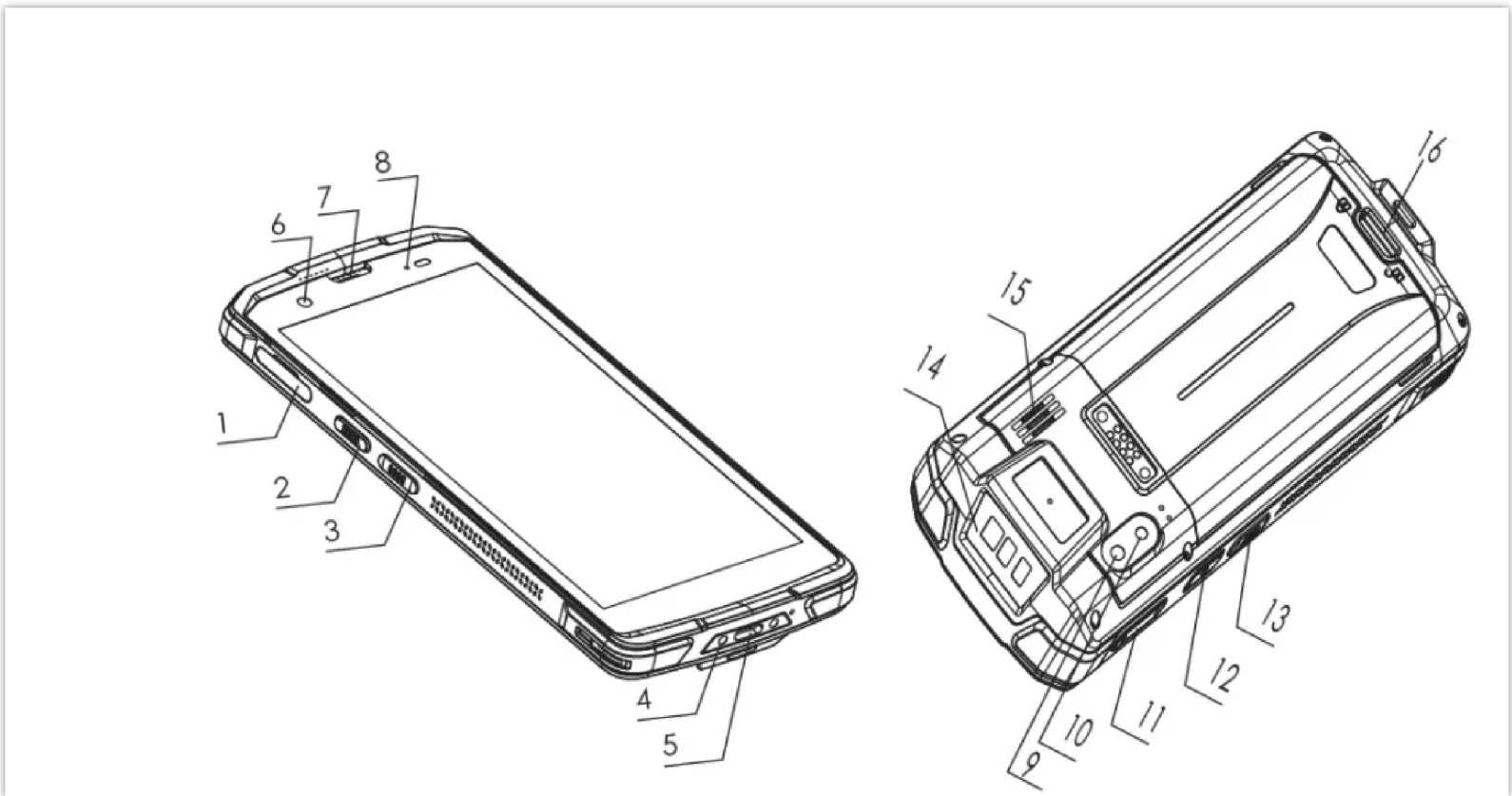
### Note

- WP856 device generates a warning tone when the device's battery level becomes 15% and 5%.
- WP856 auto boots up once placed on the charger when the device is powered off abnormally (Battery too low, battery removed suddenly, etc..).



## WP856 Handset Buttons Description

The WP856 enhances communication and combines usability and scalability in industries such as warehousing, catering, retail, and factories. The following screenshot describes the WP856 LCD screen and the main hardware components.



WP856 Description

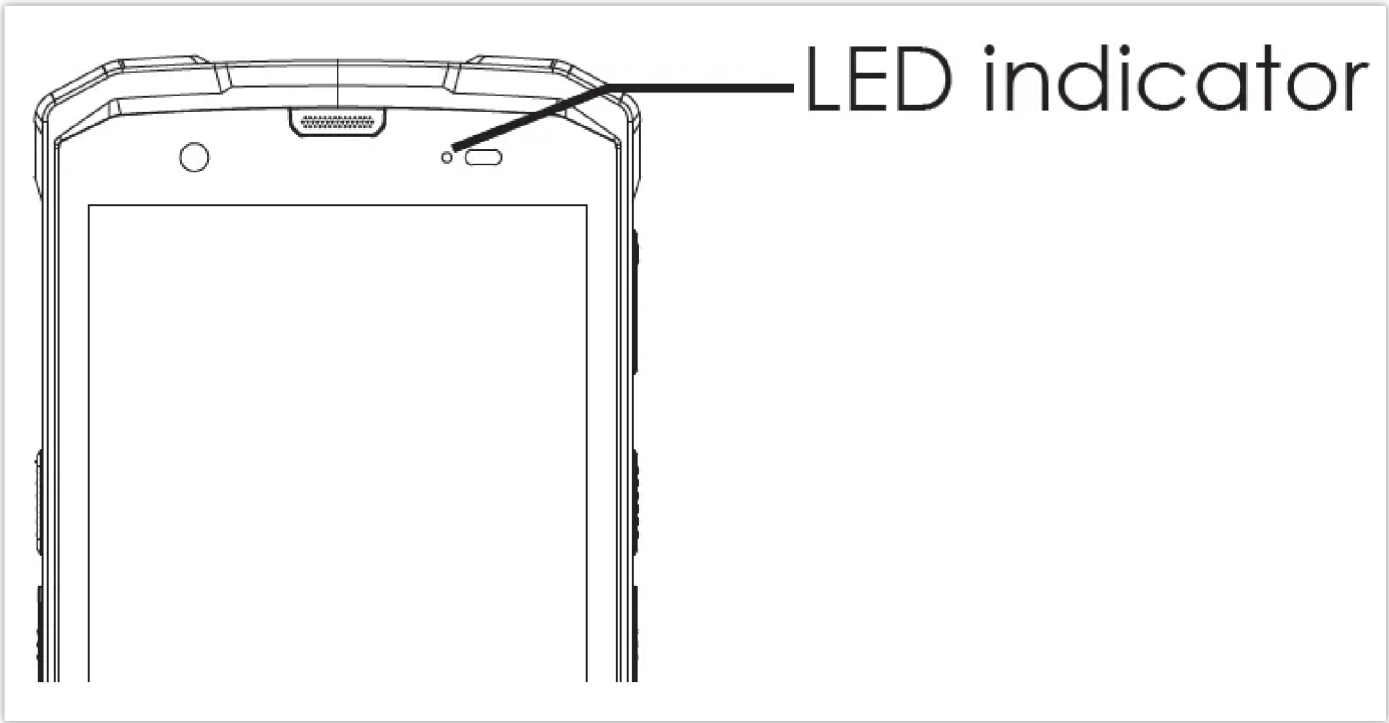
The following table describes the WP856 keypad keys.

	Key	Description
1	TF card	Slot for inserting a TF (TransFlash) or microSD card for additional storage.
2	PTT Button	Programmable key for quick access to specific functions or applications.
3	Left scan key	Button for initiating barcode or QR code scanning.
4	Dock connector	Interface for connecting the device to a docking station for charging or data transfer.
5	Charging port	Port for connecting a charger to power the device.
6	Front camera	Camera located on the front for taking selfies or video calls.
7	Earpiece	Speaker for listening to phone calls.
8	LED indicator	Light to signal notifications, charging status, or other alerts.
9	Camera	Rear camera for taking photos and videos.
10	Flashlight	LED light for illumination, used with the rear camera.
11	Volume keys	Buttons to increase or decrease the audio volume.
12	Power button	Button to power on/off the device or wake it from sleep mode.
13	Right scan key	Button for initiating barcode or QR code scanning.
14	Scan window	The area where the device scans barcodes or QR codes.

15	Speaker	Speaker for audio output, such as media playback or speakerphone calls.
16	Battery back cover latch	Mechanism to release the back cover to access the battery.

WP856 LED Status

The WP856 device has the following LED indications:



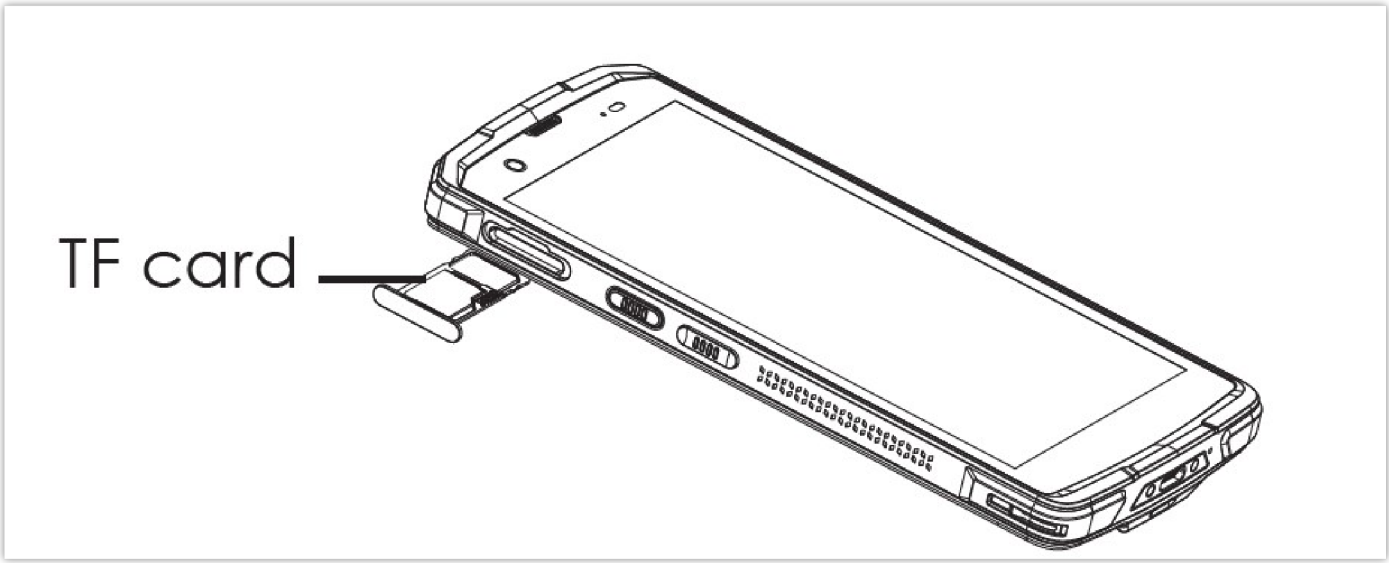
LED indicators

Solid Green	Charged (full)
Solid Red	Charging (not full)
Red Blinking	Low battery alarm
Blue Blinking Once:	Decode successfully
LED OFF	Normal

WP856 LED Status

Installing TF Card

The Transfer-Flash (TF) Card is used for additional data storage on the WP856 device, please follow the below steps for installation:



TF Card Reader

- 1. Find the TF card slot on the left side of the collector/terminal and pull out the cardholder.

2. Put the TF card into the cardholder and push the cardholder inside.

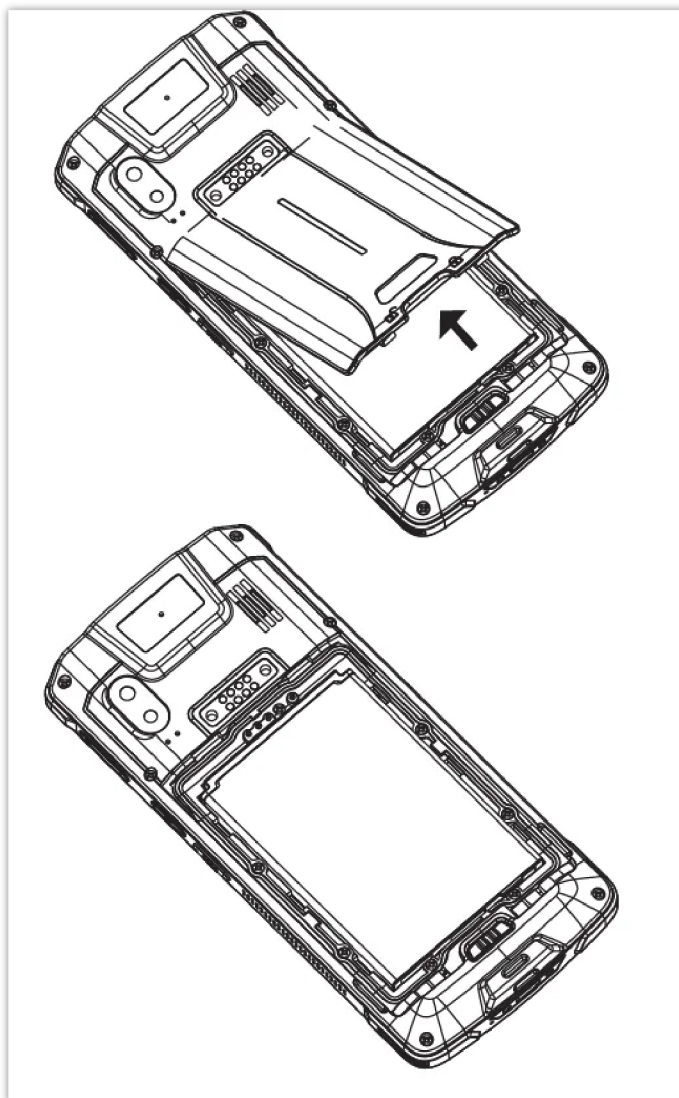
## Battery Installation and Removal

### Installing the Battery

1. Unlock the battery back cover and remove the back cover.
2. Attach the top metal contacts of the battery to the metal contacts inside the body and press down firmly.

### Removing the Battery

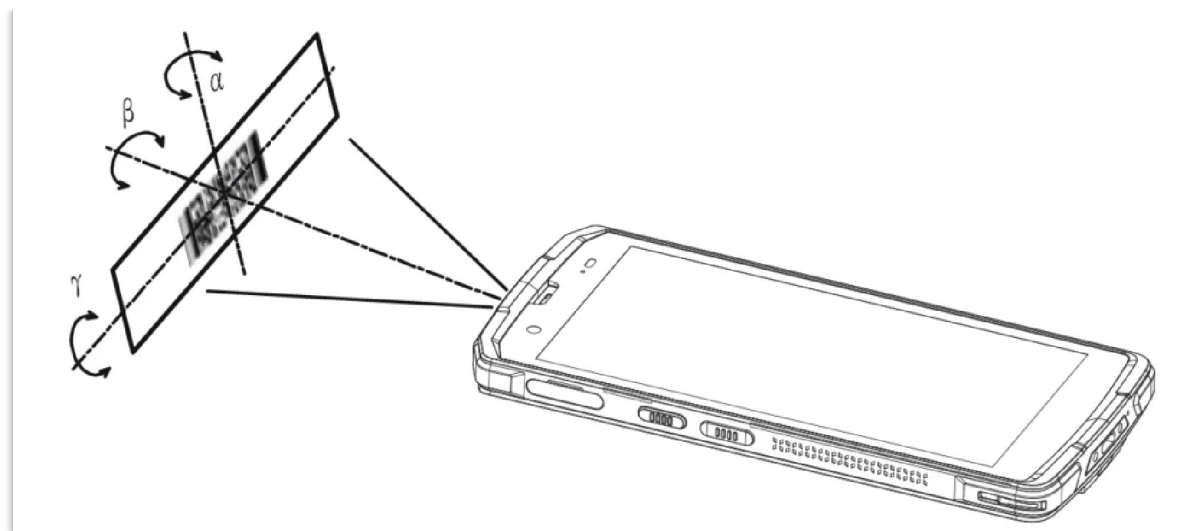
1. Press and hold the power button for 2 seconds, then click the shutdown option on the screen, then unlock the battery back cover to open the back cover
2. Remove the battery.



## Scanning Barcode

The WP856 mobile computing device allows users to scan 1D and 2D barcodes using an integrated scan window at the top of the phone, it uses NFC technology, to scan a barcode using the WP856 device, adjust the scan angle and the distance between the device and the target barcode to make them fall into the following ranges:

1. Point the Device's focus lamp at the center of the barcode.
2. Move the Device until you find the appropriate scan distance.
3. Optimum scan angles:
  - $\text{Skew}(\alpha) < 45^\circ$  ( $0^\circ$  preferably)
  - $\text{Pitch}(\gamma) < 45^\circ$  ( $5^\circ$  -  $20^\circ$  preferably)
  - $\text{Roll}(\beta) = 0^\circ - 360^\circ$



Scanning Barcode

## Obtain WP856 IP Address

To know which IP address is assigned to your WP856, please follow the below steps:

1. After unlocking, sliding the screen up will open the operation menu.
2. Go to **GS Settings** → **Device information** → **Network status** to check the IP address assigned to WP856.
3. Both the IPv4 and IPv6 addresses of the device will be displayed.



Display IP Address

## WP856 WEB GUI ACCESS CONFIGURATION

The WP856 can be configured using:

- Web GUI embedded on the WP856 using the PC's web browser.
- Configuration Menu using the WP856 touchscreen.

**Note:** From the Web GUI, you can configure all the functions supported by the WP856; while there will be some limitations when configuring the WP856 mobile computing device from the touchscreen.

## Configuration via Web Browser

The WP856 embedded Web server responds to HTTP/HTTPS GET/POST requests. Embedded HTML pages allow a user to configure the WP856 through a Web browser such as Google Chrome, or Mozilla Firefox.

**Note:** Please note that Microsoft’s IE 9 and below are not supported, also the records from the web cannot be played with IE10, Edge, and Safari. We highly recommend using Google Chrome or Mozilla Firefox.

## Accessing the Web UI

1. Access **GS Settings** → **Advanced settings** to set “Disable web login” to “No”.
2. Go to GS Settings → Device information → Network status to check the IP address assigned to WP856.
3. Type the phone’s IP address in your PC browser.
4. Enter the admin’s username and password to access the configuration menu. (The factory default username is “admin” and the password is a randomly generated string that is printed on a label in the battery compartment of the device.)

### Note

- The computer must be connected to the same sub-network as the WP856. This can be easily done by connecting the computer to the same hub or switch as the WP856.
- If the ‘**Disable web UI access**’ parameter is enabled under **Advanced settings → System security**; web UI access will be disabled.

## Web GUI Languages

The WP856 web GUI supports English and Chinese languages.

Users can select the displayed language on the web GUI login page, or at the upper right of the web GUI after logging in



WP856 Web GUI Language

## Saving the Configuration Changes

When changing any settings, always submit them by pressing the **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.

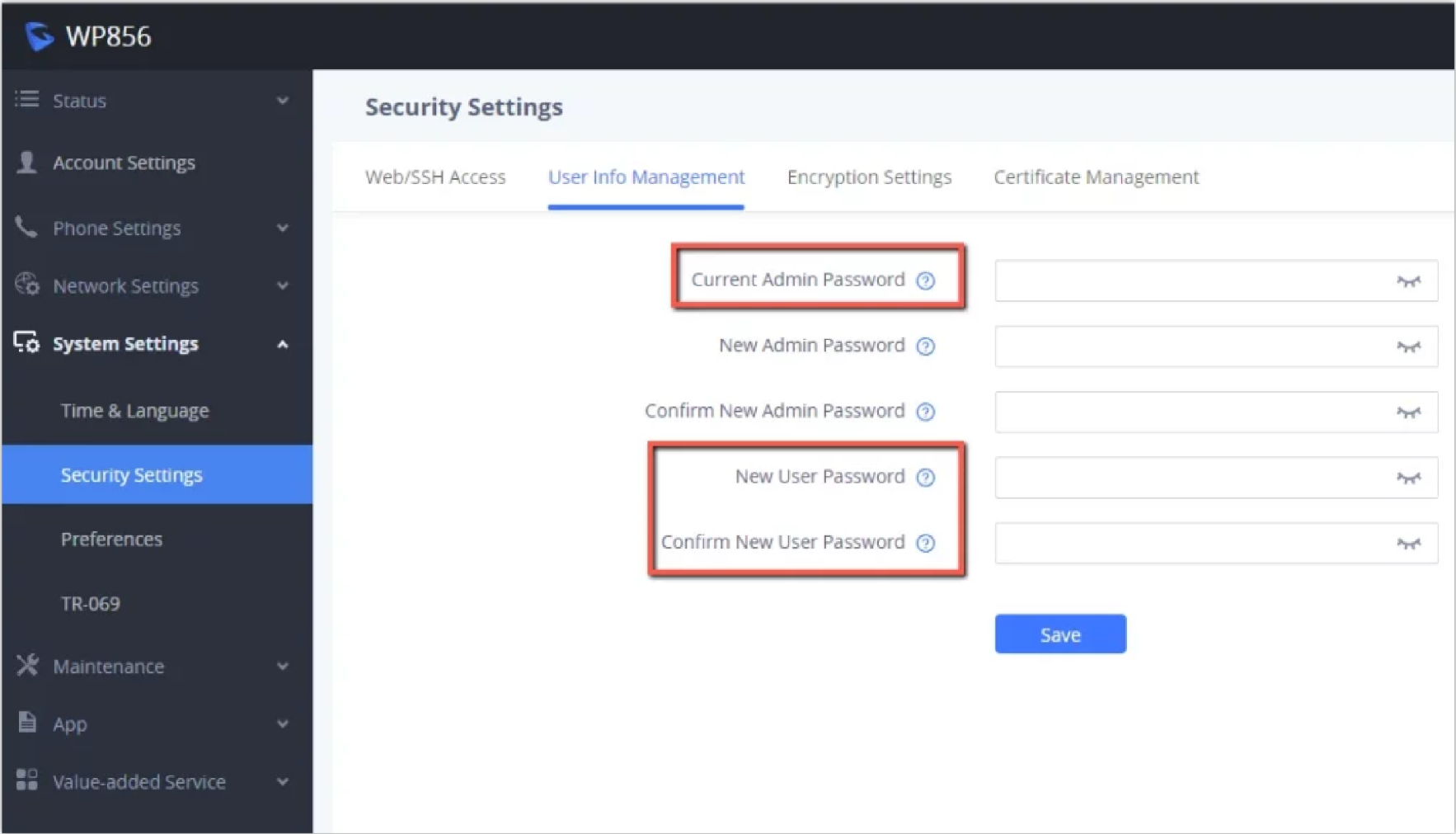
## Web UI Access Level Management

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, Network Settings, System Settings, Application settings, and Maintenance settings with limited access
Administrator Level	admin	Found on a sticker, on the device	All pages

Changing User Level Password

- 1. Access the Web GUI of your WP856 using the admin’s username and password.
- 2. Press **Login** to access your settings.
- 3. Go to **System Settings → Security Settings**.
- 4. In **User Info Management**, locate the **user password** section:
  - Type in the admin password in the **Current Admin Password** field.
  - Type in your new user password in the **New User Password** field.
  - Type in again same entered password in the **Confirm New User Password** field.
- 5. Press the **Save** and **Apply** buttons to save your new settings.



User Level Password

Notes:

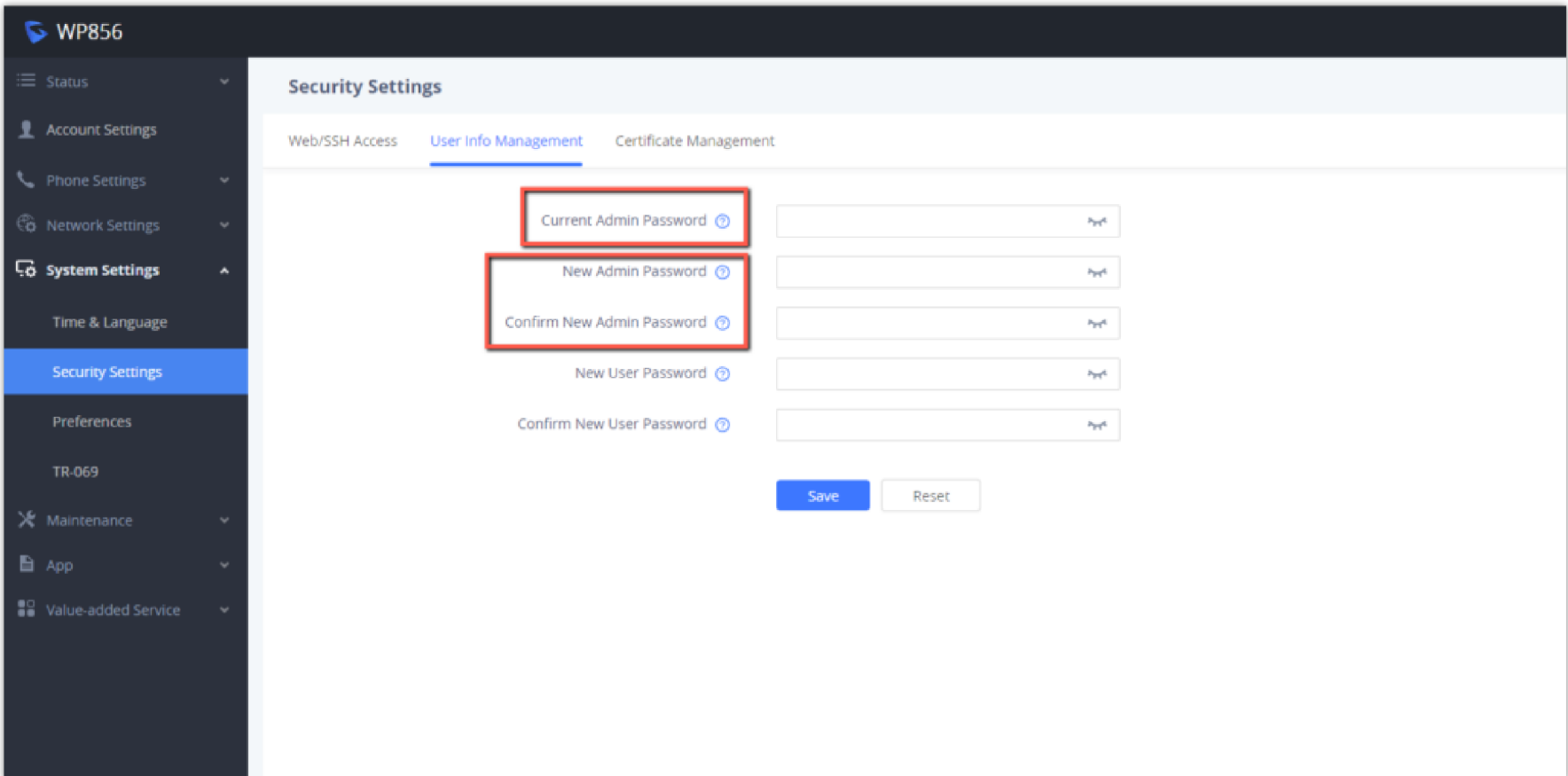
- DO NOT USE the same password for both user and admin accounts.
- The password is case-sensitive with a maximum length of 25 characters.

Changing Admin Level Password

- 1. Access the Web GUI of your WP856 using the admin’s username and password.
- 2. Press **Login** to access your settings.
- 3. Go to **System Settings → Security Settings**.



4. In **User Info Management**, locate the **admin password** section:
  1. Type in the admin password in the **Current Admin Password** field
  2. Type in your new user password in the **New Admin Password** field.
  3. Type in again the same entered password in the **Confirm New Admin Password** field.
5. Press the **Save** and **Apply** buttons to save your new settings.



The screenshot shows the WP856 web interface. On the left is a dark sidebar with a menu including Status, Account Settings, Phone Settings, Network Settings, System Settings (expanded), Time & Language, Security Settings (highlighted), Preferences, TR-069, Maintenance, App, and Value-added Service. The main content area is titled 'Security Settings' and has three tabs: Web/SSH Access, User Info Management (selected), and Certificate Management. Under the 'User Info Management' tab, there are five password fields, each with a 'Show/Hide' icon (an eye with a slash). The first three fields are 'Current Admin Password', 'New Admin Password', and 'Confirm New Admin Password', all of which are highlighted with red rectangular boxes. Below these are 'New User Password' and 'Confirm New User Password'. At the bottom right of the form are two buttons: 'Save' (blue) and 'Reset' (grey).

*Admin Level Password*

### Important

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

## Changing HTTP / HTTPS Web Access Port

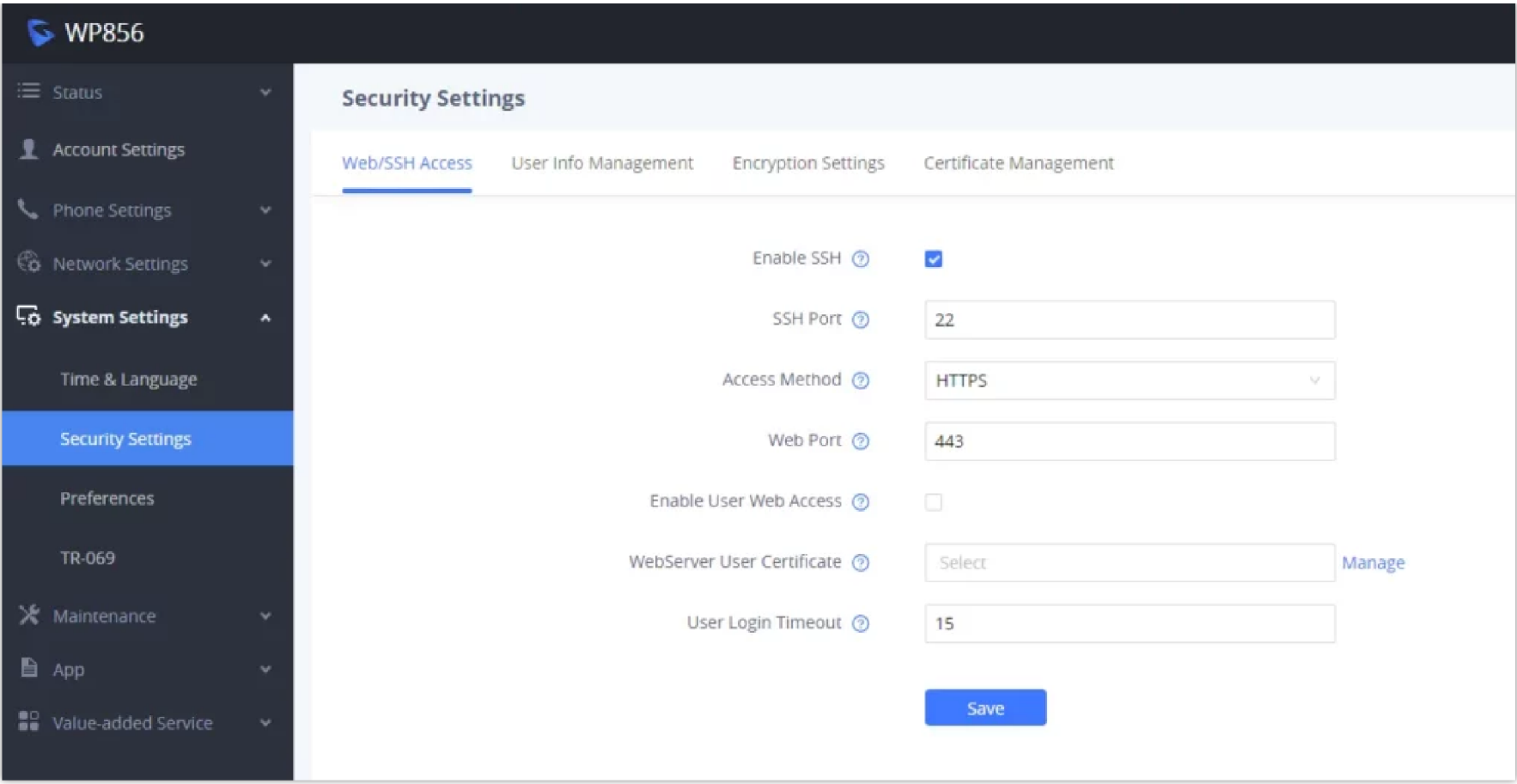
1. Access the Web GUI of your WP856 using the admin's username and password.
2. Press Login to access your settings.
3. Go to System Settings → Security Settings.
4. In the Web/SSH Access page, select the access method depending on the desired protocol (HTTP or HTTPS)
5. Locate the HTTP / HTTPS Web Port field and change it to your desired/new HTTP / HTTPS port.
6. Press the **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

By default, the HTTP port is 80 and HTTPS is 443.

SSH access is enabled by default and uses the default port 22.

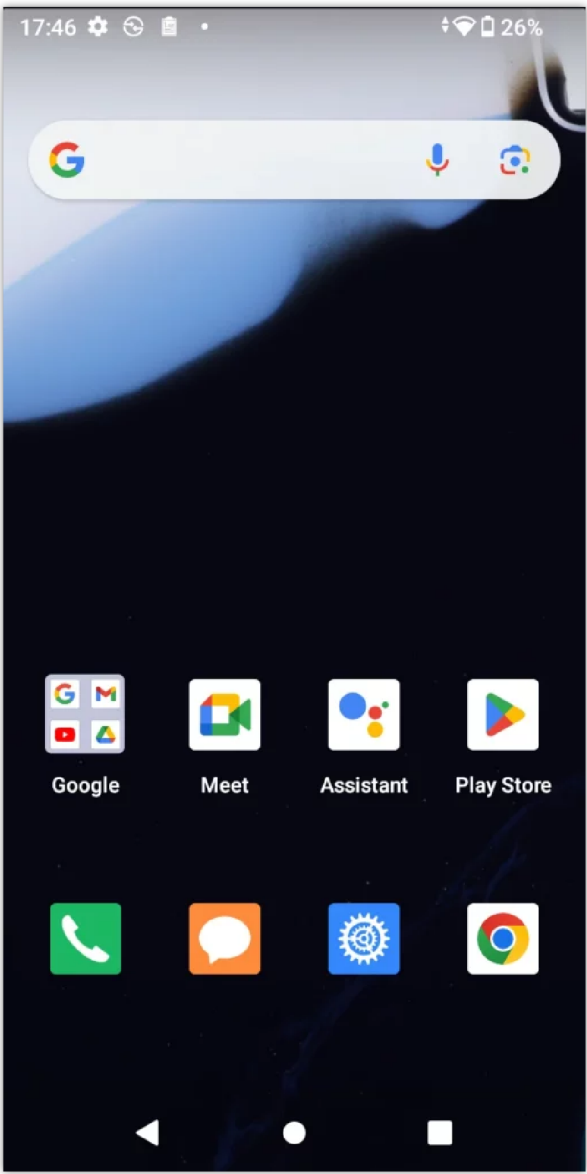


Web/SSH access

# BASIC OPERATIONS

## WP856 Home Screen

The WP856 home screen features a customizable launcher that allows users to add and configure various widgets tailored to different use cases. By default, the launcher displays a list of installed applications for easy access.

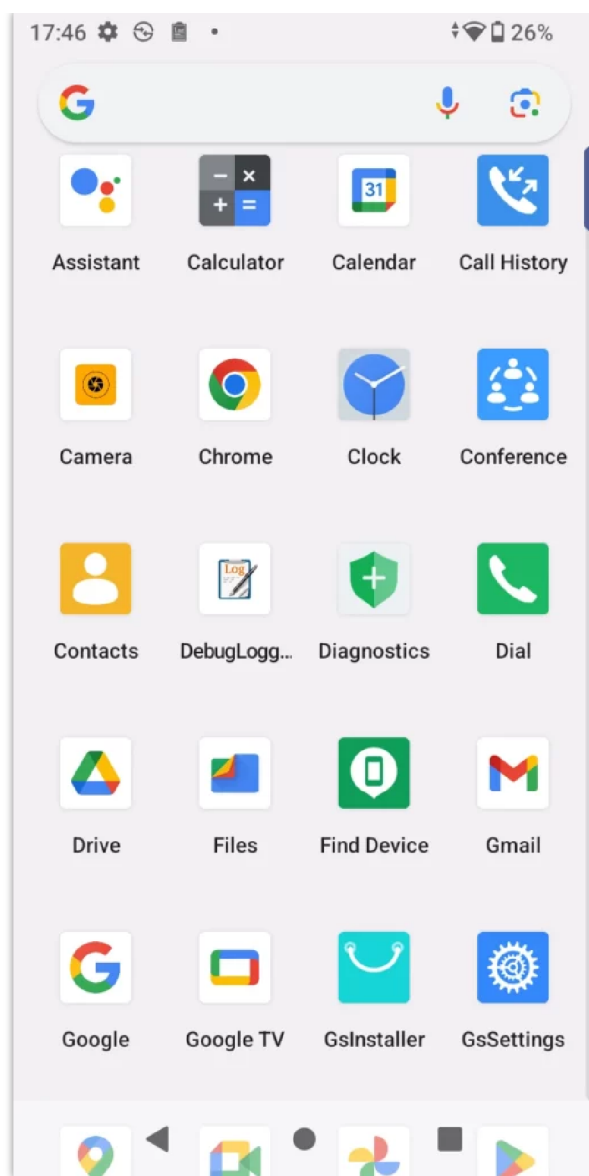


Launcher

## WP856 Application Menu

The WP856 comes with a list of preinstalled applications such as Camera, Clock, Contacts, DebugLogging, Diagnostics, and more, contributing to various use cases.

To access the applications menu, swipe up on the home screen.



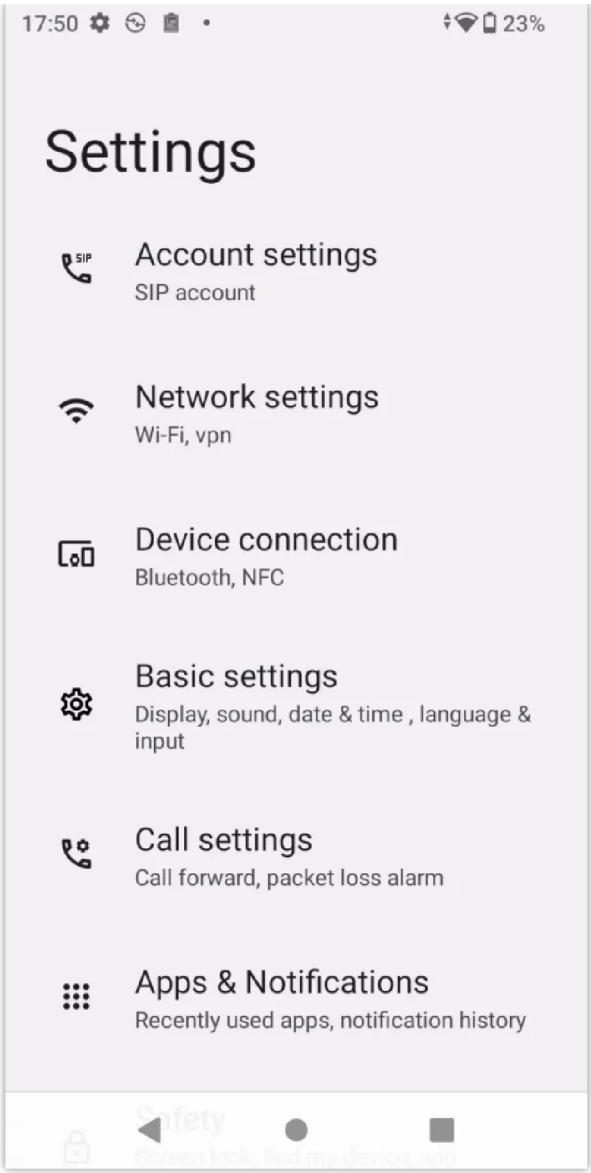
*Applications Menu*

## Connecting WP856 to Wi-Fi network

### Manual Connection

The WP856 supports dual-band 802.11a/b/g/n/ac/ax Wi-Fi, please refer to the following steps in order to connect your WP856 to the Wi-Fi networks:

1. On the WP856 touchscreen menu, press the Menu key and navigate to **GS Settings** → **Network Settings** → **Internet**.
2. Set Wi-Fi to "On", 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).

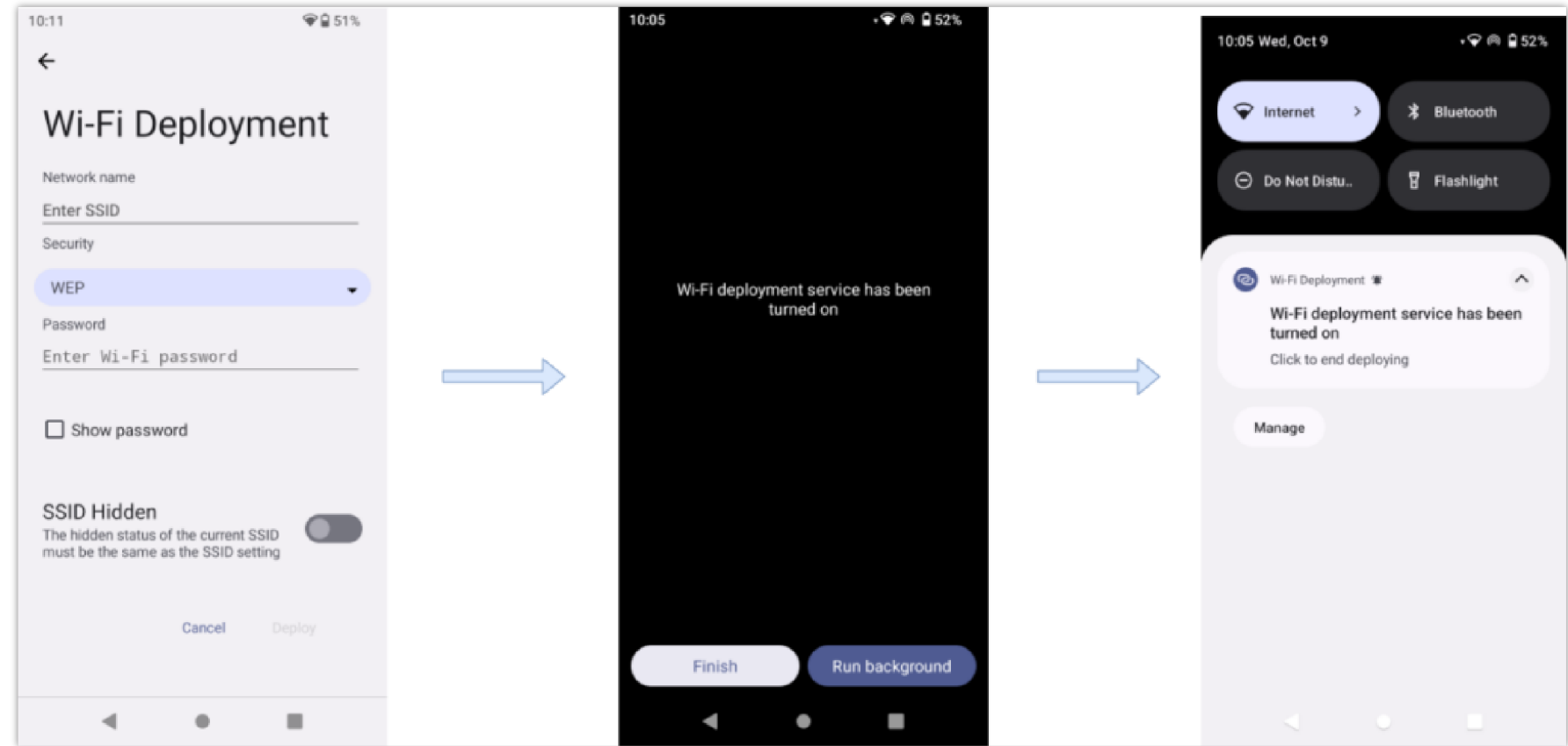


WP856 will display Wi-Fi icon on the main LCD menu if the connection to the Wi-Fi network is successful.

**Wi-Fi Batch Deployment**

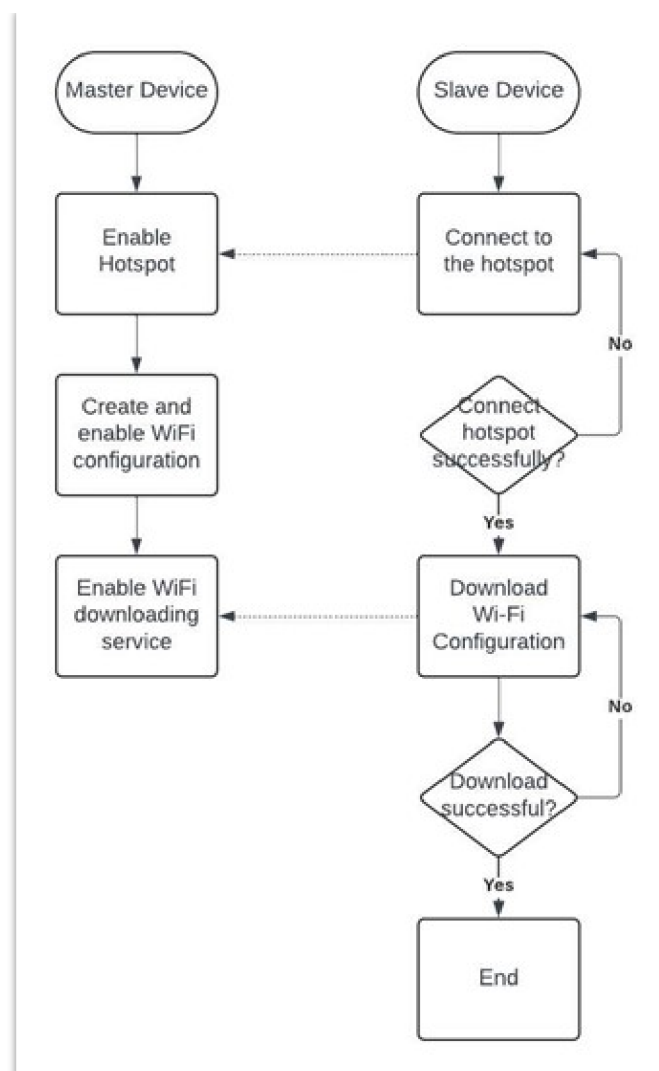
In some scenarios, WP856 can be set as a master device to deploy other units to the Wi-Fi network, this works as follows:

- 1. Enter the key code ( \*\*\*800\* ) on the dial pad to enter the host mode, in which the device hotspot will be automatically turned on.
- 2. The Master device needs to fill in the Wi-Fi information ( SSID, security, password ), and then start the deployment.
- 3. The Master device will indicate that the Wi-Fi deployment service is enabled and can be used by other devices
- 4. The Slave devices can connect to the SSID defined on the Master device and connect to the network, by dialing the key code ( \*\*\*801\* ) to enter the slave mode, and they automatically find the hotspot of the master device and establish a connection. Then download the Wi-Fi configuration parameter file, and automatically exit the slave mode after completing the Wi-Fi configuration.



Wi-Fi Batch Deployment

The following flowchart explains the connection process:



*Wi-Fi Batch Deployment Flowchart*

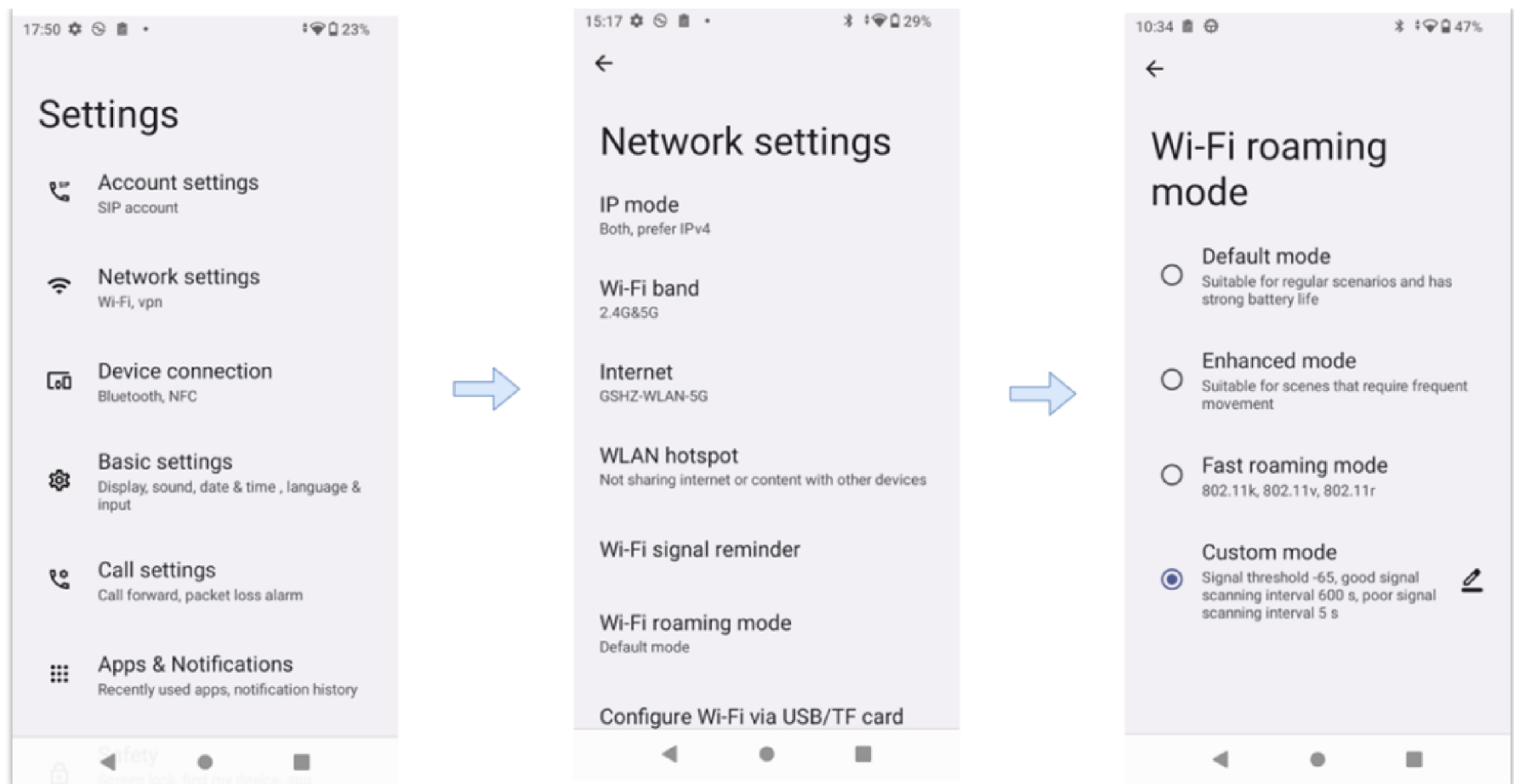
## Wi-Fi Roaming Mode

Wi-Fi roaming allows the WP856 to seamlessly switch between different Wi-Fi access points within the same network, this ensures continuous connectivity without dropping the connection. This is typically used in environments with multiple access points, like large buildings or campuses,

To enable Wi-Fi Roaming please follow the below steps:

### From the LCD settings

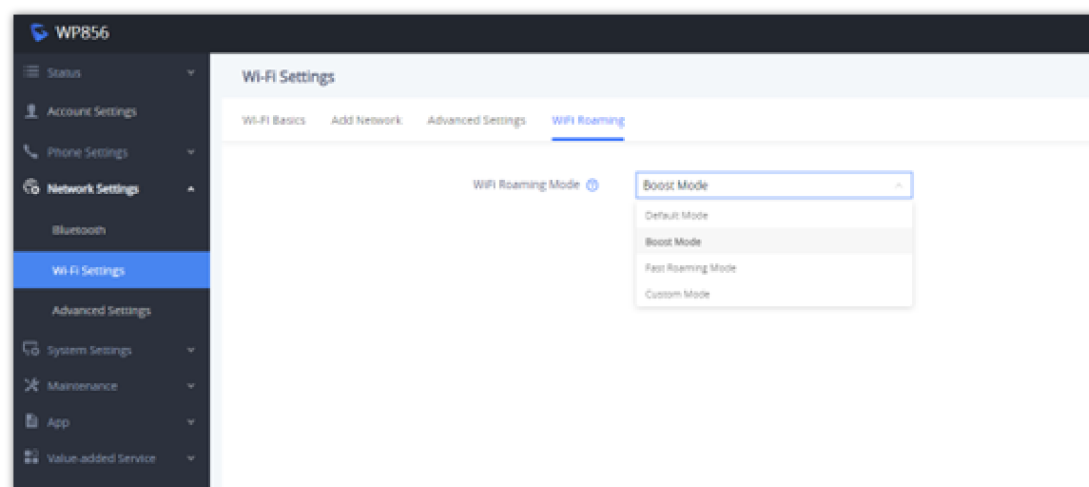
- Access: GS Settings → Network settings → Wi-Fi roaming mode
- There 4 modes to choose from:
  1. **Default mode:** suitable for common scenarios, with strong battery life.
  2. **Enhanced mode:** suitable for scenarios where you move around frequently.
  3. **Fast roaming mode:** supports 802.11k, 802.11v, 802.11r;
  4. **Custom mode:** You need to manually configure 'Signal threshold', 'Roaming gain value', 'Good signal scanning interval', and 'Poor signal scanning interval'
- Select the preferred mode



Enable Wi-Fi Roaming LCD

## From the WebUI settings

- Go to **Network Settings** => **Wi-Fi Settings** => **Wi-Fi Roaming**
- Select the desired mode and click save



Enable Wi-Fi Roaming WebUI

## Connect to Bluetooth

The WP856 supports Bluetooth pairing, which can be used to pair wireless headphones, as well as other Bluetooth-enabled gadgets, to connect the WP856 to Bluetooth please follow the below steps,

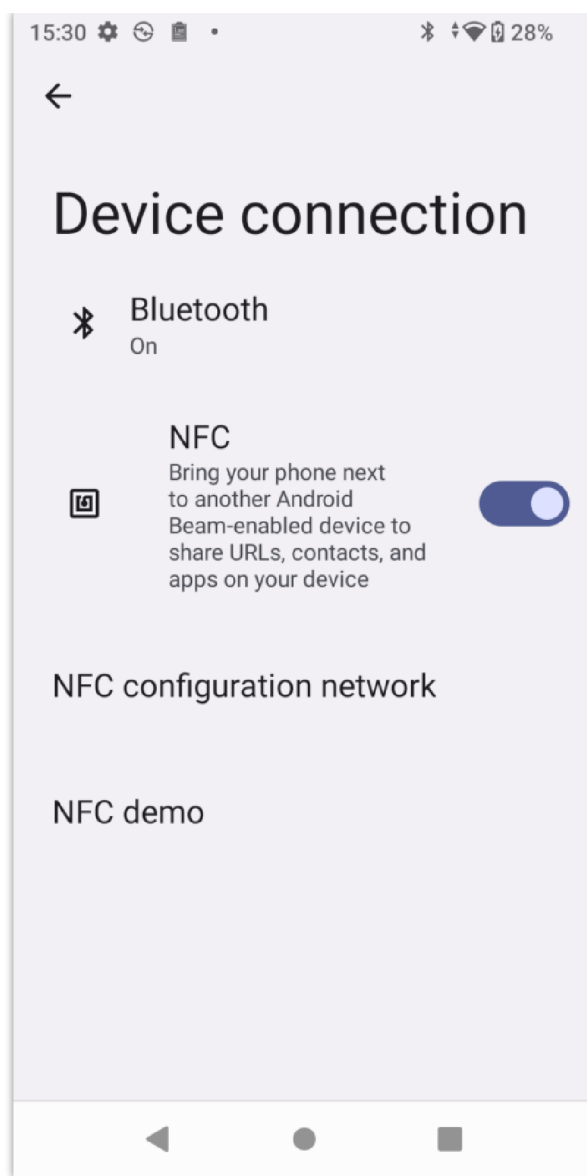
- Go to **GS Settings** → **Device Connection**
- Click "Pair a new device"
- Search for nearby Bluetooth-enabled devices
- Once the desired device is detected, Pair it to the WP856 unit.

## NFC device Connection

NFC (Near Field Communication) technology allows devices to communicate with each other wirelessly when they are in close proximity, typically within a few centimeters. It operates at a frequency of 13.56 MHz and can transfer data at speeds up to 424 kbps, this technology can be enabled and used by WP856 device, to connect WP856 using NFC, please follow the below steps:

- Go to **GS Settings** → **Device Connection**
- Enable NFC, once enabled, bring the WP856 next to another Android Beam-enabled device to share URLs, contacts, and apps on your device



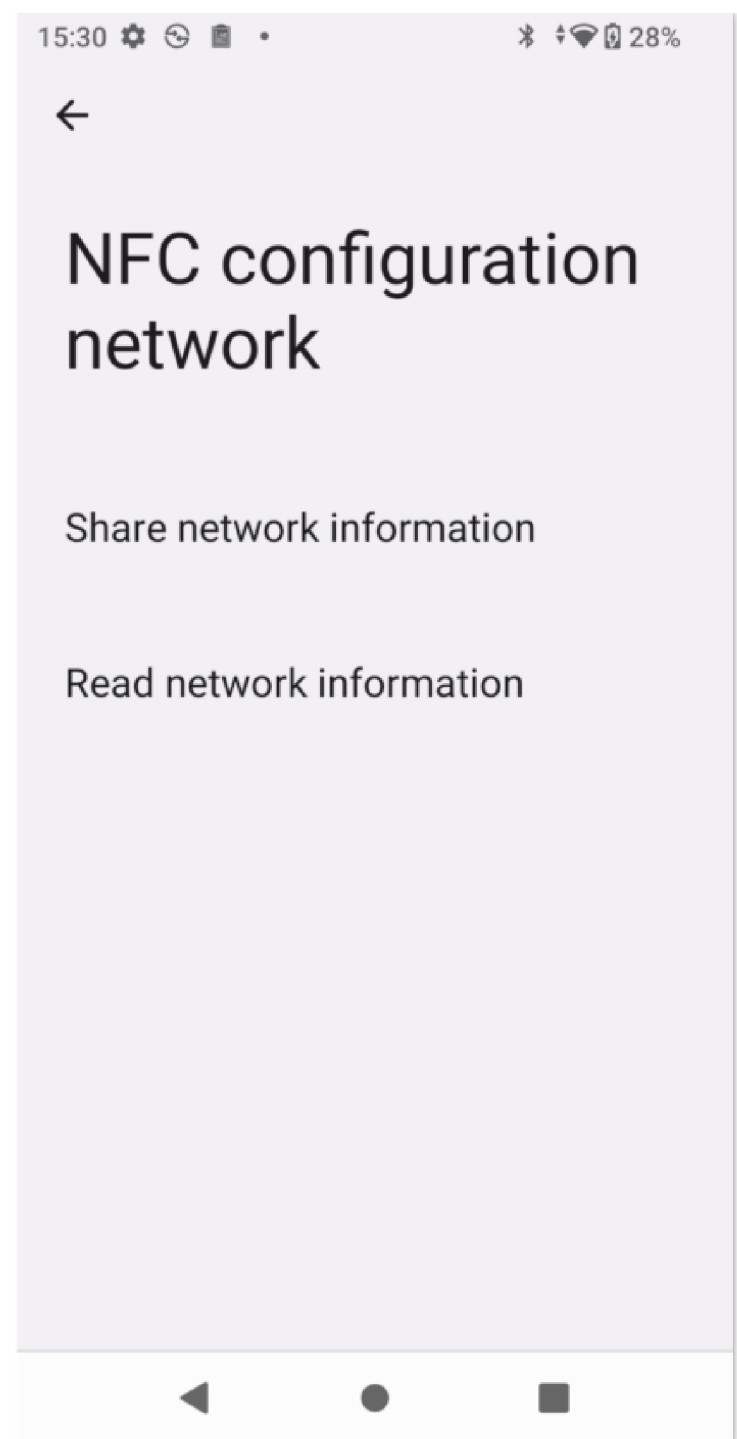
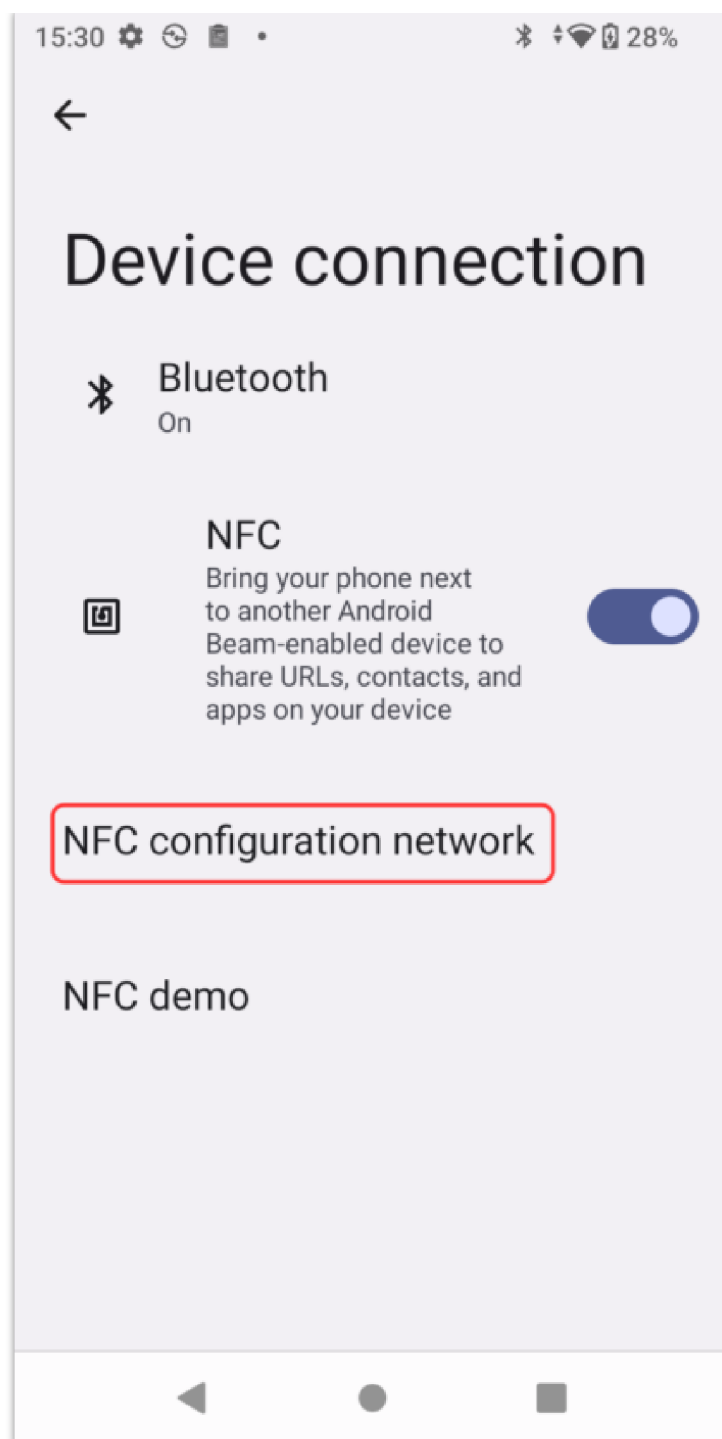


*Enable NFC*

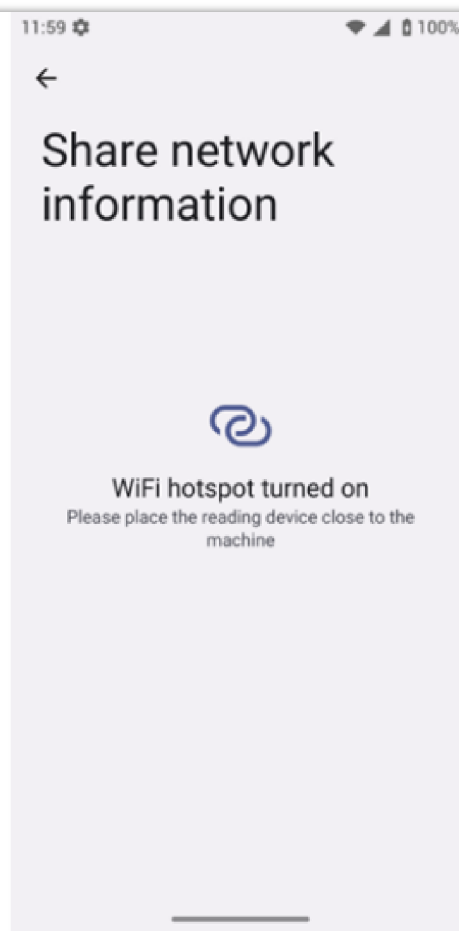
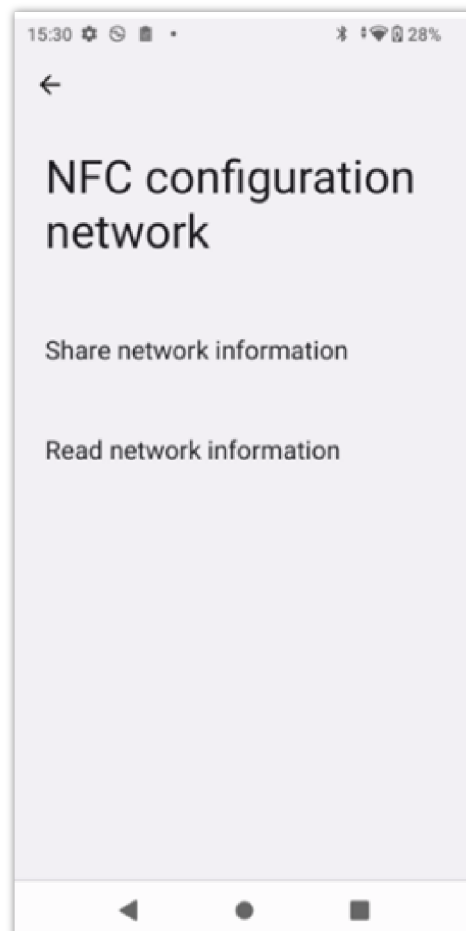
## NFC Network Sharing

Users can share and read network information of the WP856 via NFC, to do that:

1. Access: GS Settings → Device connection → NFC Configuration Network
2. Click on NFC configuration network, then Select Share Network information with the nearby connected device
3. You can also choose to Read the network information before sharing it



*NFC Network sharing*



*NFC to configure Network*

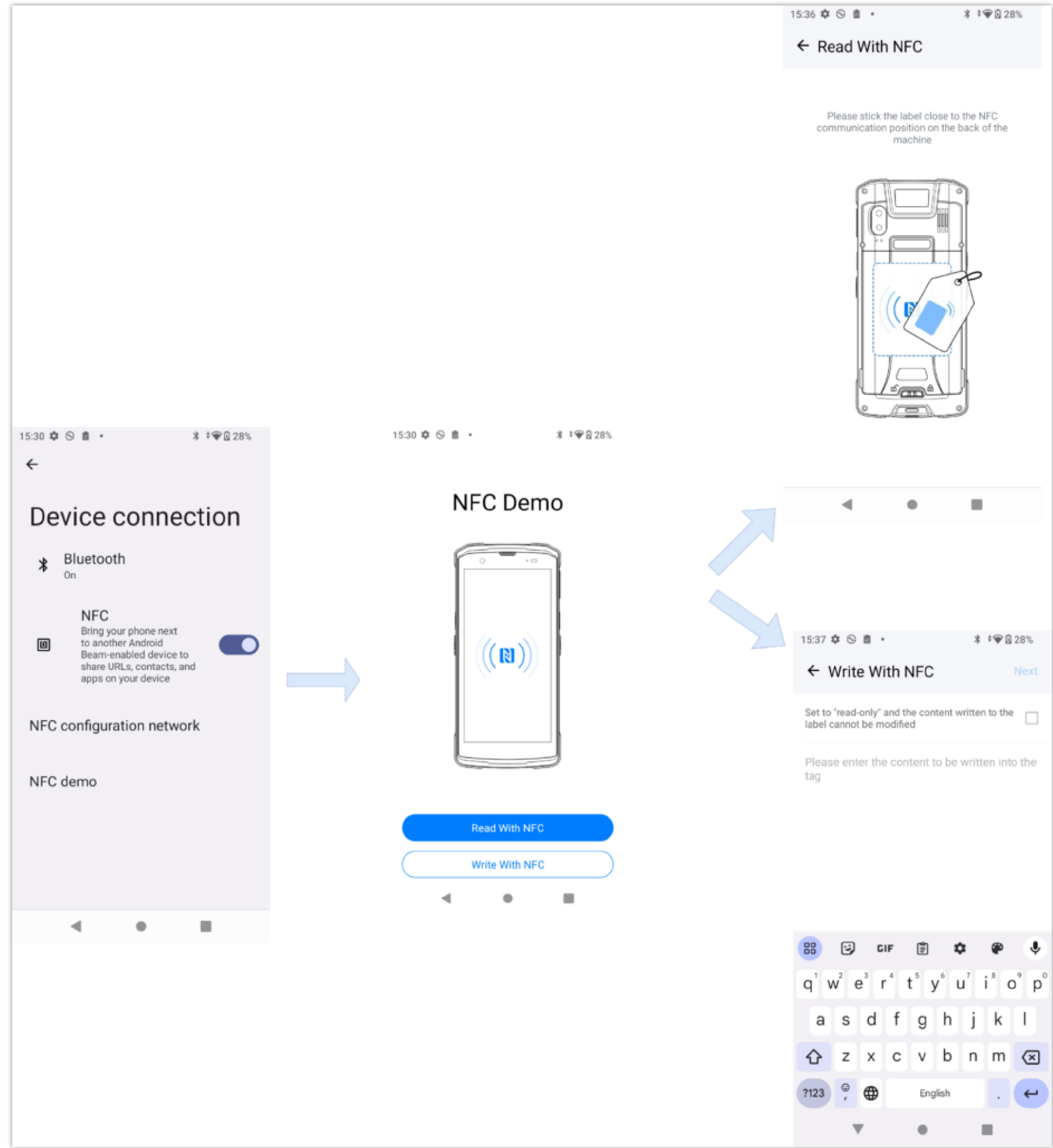
### Note

- If the wireless hotspot supports the hotspot sharing function, the mobile network can be converted into a wireless hotspot. The hotspot name and password can be transmitted to the device via the NFC chip. After the receiving device obtains the connection information through NFC, it can navigate to the WiFi connection page and connect to the hotspot network.
- At the same time, the phone's NFC supports reading WiFi NFC sensing tags. For example, the phone's NFC function can read the NFC tag on a router. The tag contains the router's wireless SSID name, password, and automatic connection instructions. When you touch the tag with WP856, it will automatically navigate to the WiFi connection page using the provided SSID and password and connect to the WiFi.

# NFC Demo

The WP856 presents an NFC demo to demonstrate to users how technology can be used to send and receive data:

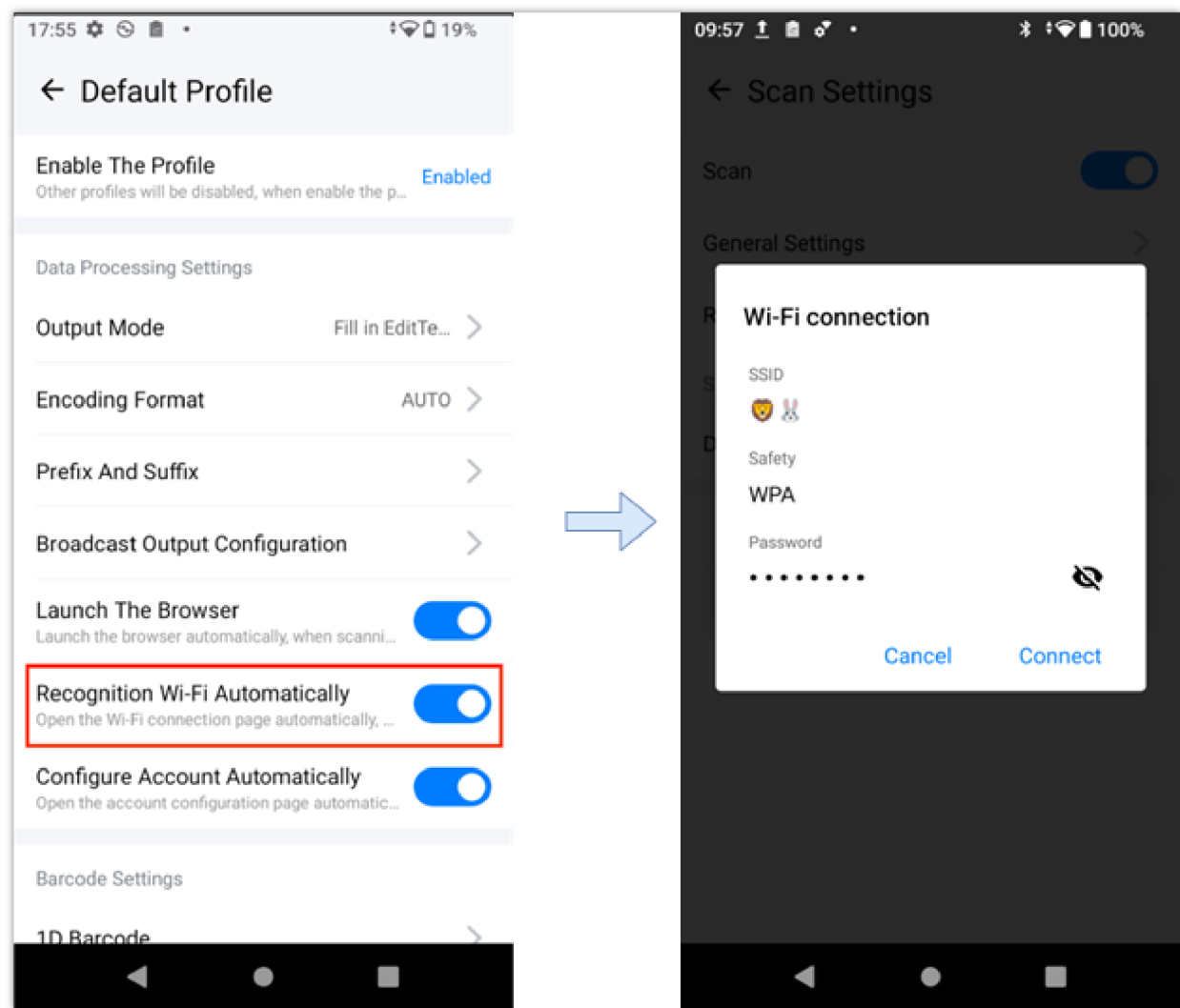
- 1. Go to **GS Settings** → **Device Connection**
- 2. Click on the NFC demo
- 3. you can choose to receive data ( Read with NFC), or send data (Write with NFC)
  - **Read NFC tags:** To use the NFC feature on your device, position the induction tag near the NFC communication area located on the back of the device. Once the tag is read, the content will be displayed within the app. A successful reading will be indicated by a sound and vibration prompt.
  - **Writing to NFC tags:** To edit the tag content, begin by writing the desired text information and deciding whether to set the sensor tag to “read-only” (which prevents further modifications to the tag’s content). Once ready, click Next. Then, place the NFC tag near the back of the phone to start the writing process. If the tag is not detected, the process will remain on this page. When the tag is detected, a beep will sound, and writing will begin automatically. The app will then indicate whether the writing process was successful or if it failed, based on the verification result.



NFC Demo

Scan QR code to configure the network

- Access LCD settings: Scan Settings → Profile → Recognition WiFi Automatically
- When [WiFi Identification] is enabled, scanning a QR code will automatically recognize it as a WiFi QR code. A pop-up window will display the WiFi SSID, password, and encryption method. Upon confirmation, the phone will connect to the Wi-Fi network.



Scan QR code to configure the network

Check WP856 Device Info

To verify the WP856 device info, please follow the below steps:

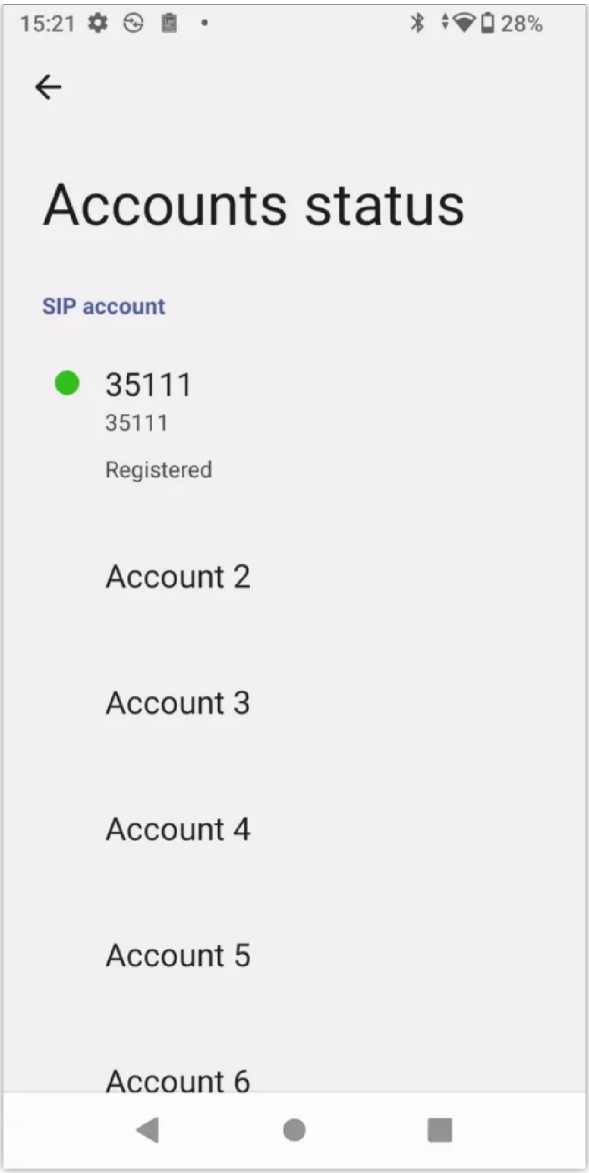
- Go to **GS Settings** → **About phone**, this will allow the users to view various device information such as Basic info, Legal and regulatory information, Device details, and device identifiers

Basic info
Device name WP856
<div><div></div><div>Owner</div></div>
Legal & regulatory
Legal information
Device details
Model WP856
Android version 13
Device identifiers
IP address fe80::92e5:e694:bf0b:dbc0 172.16.14.96
Wi-Fi MAC address To view, choose saved network
Device Wi-Fi MAC address 00:08:22:c8:c0:fb
Bluetooth address Unavailable
Up time 10:09
Build number 107.01.0.1

WP856 Device Info

Check WP856 Account Status

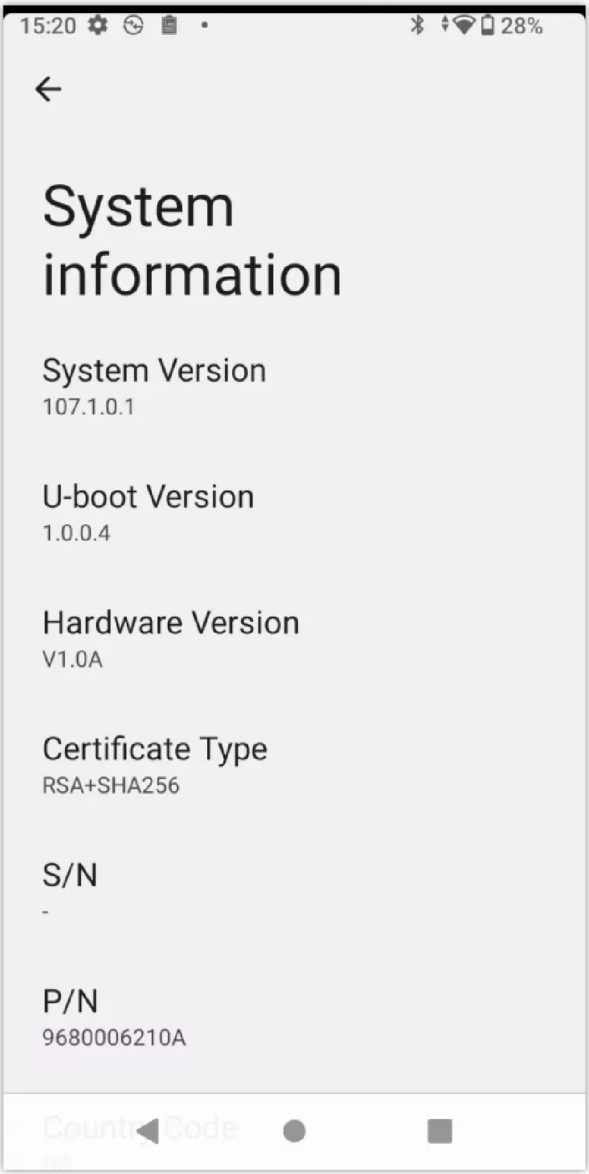
The WP856 supports configuring up to 6 SIP accounts when configured you can view their status under **GS Settings** → **About Phone** → **Account Status**



WP856 Account Status

Checking WP856 System information

WP856 system information can be viewed under **GS Settings** → **About phone** → **System information**, this page will display the following information:



WP856 System Information



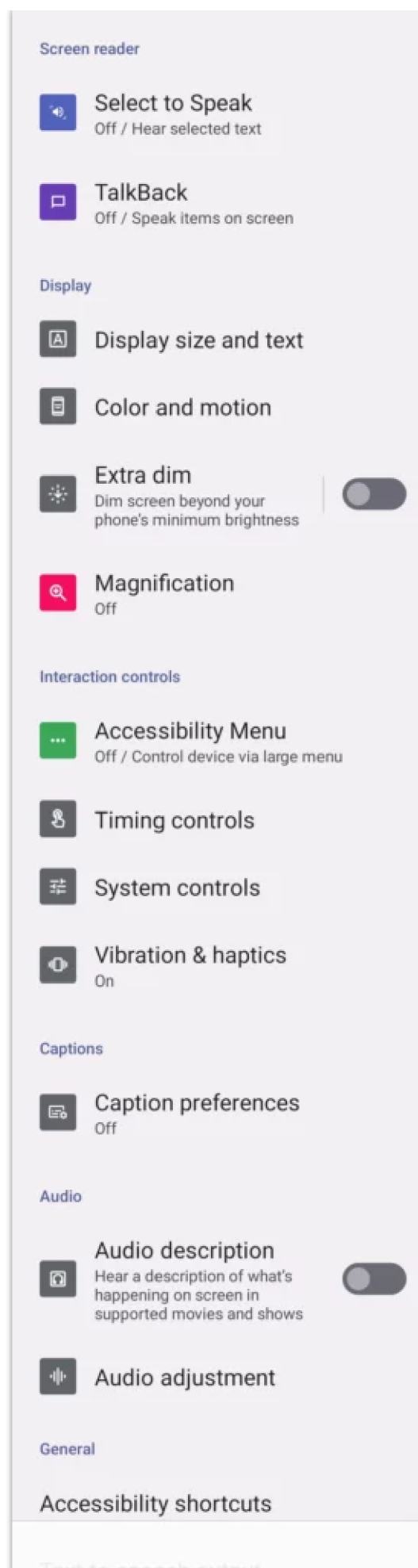
# WP856 INTELLIGENT ASSISTANCE

The WP856 mobile computing device presents a list of accessibility and gesture features to enhance the user experience, this will allow users to customize their device on a granular level to suit their day-to-day deployments need, among the settings, we have: accessibility settings, Gesture settings and Button customization.

## WP856 Accessibility Settings

The WP856 presents a list of accessibility settings, we can describe each one of them below:

- **Select to Speak:** Reads aloud selected text on the screen to assist users with visual impairments.
- **TalkBack:** Provides spoken feedback and screen reader functionality for navigating the device without looking at the screen.
- **Display size and text:** Adjust the size of text and display elements to improve readability.
- **Color and motion:** Modifies color settings and reduces motion effects to aid users with visual sensitivities.
- **Extra dim:** Lowers screen brightness beyond the minimum setting for comfortable viewing in dark environments.
- **Magnification:** Allows users to zoom in on parts of the screen for better visibility.
- **Accessibility menu:** Provides a simplified menu with large buttons for easier access to common functions.
- **Timing controls:** Adjusts the duration of screen and interaction timeouts to accommodate different user needs.
- **System controls:** Provides access to various system settings for ease of navigation and customization.
- **Vibrations & haptics:** Adjusts vibration patterns and haptic feedback for notifications and interactions.
- **Caption preferences:** Configures settings for on-screen captions, including text size, style, and color.
- **Audio description:** Enables spoken descriptions of visual content in media for users with visual impairments.
- **Audio adjustment:** Customizes audio settings, such as balance and volume levels, for a personalized listening experience.



Accessibility Settings

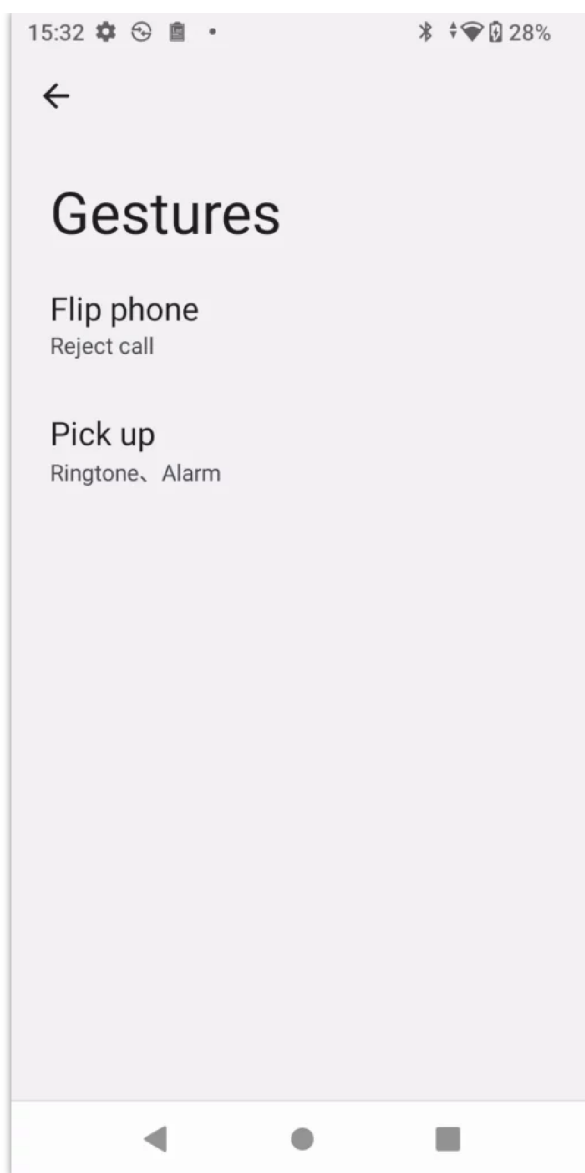
The accessibility settings can be accessed under **GS Settings** → **Intelligence assistance**

## WP856 Gesture Settings

Gesture settings allow users to control their WP856 device using specific hand movements, such as swiping, tapping, or pinching, enhancing accessibility and providing an alternative to traditional button-based navigation. These settings can be customized to perform various actions,

The gestures supported on WP856 are :

- **Flip phone:** This will define the reaction of the phone when being flipped during an incoming call, it can be set to reject the call or to silence it
- **Pick up:** Lifts the phone to your ear to automatically answer calls or activate specific functions like waking the screen.



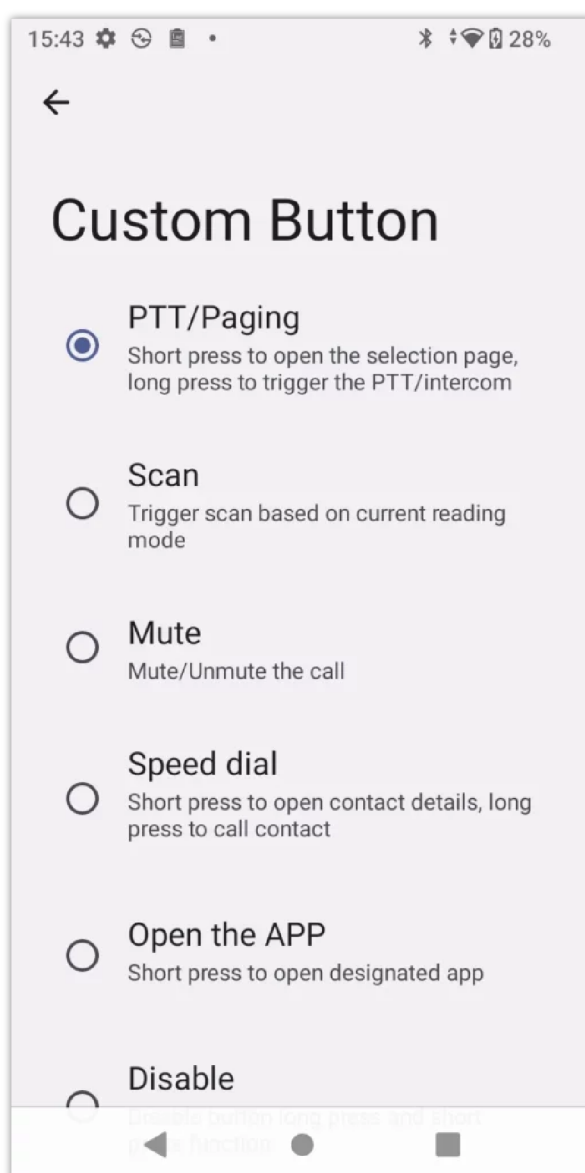
*Gestures Settings*

The gesture settings can be accessed under **GS Settings** → **Intelligence assistance**

## WP856 Button Customization

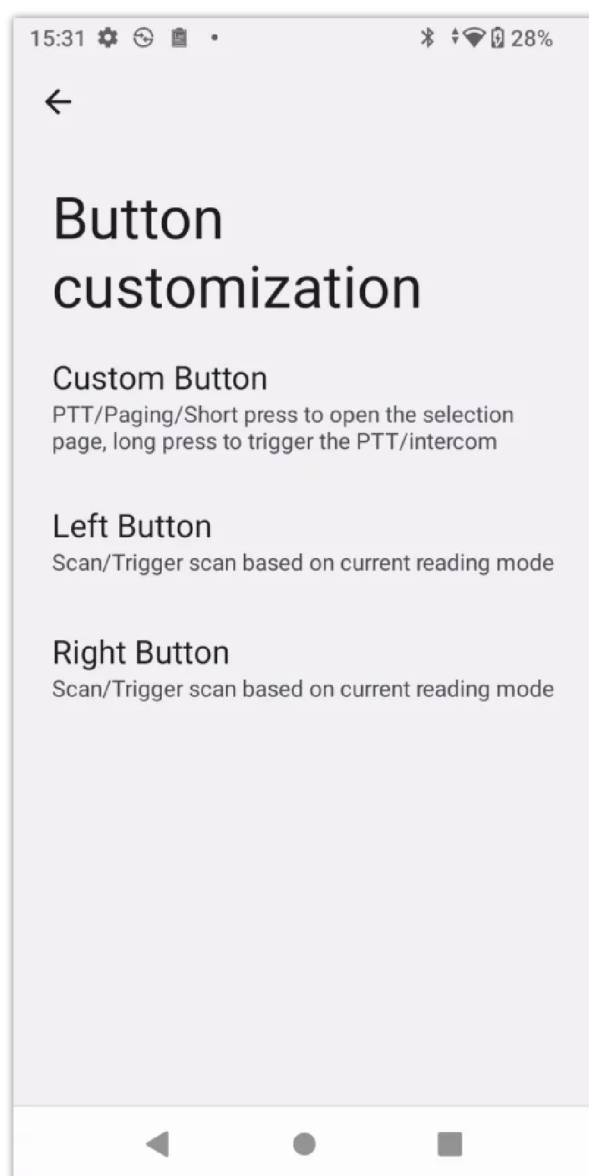
The WP856 supports three customizable hard key buttons on the side of the device:

- **PTT button:** can be configured for PTT/Paging, short press to open the selection page, long press to trigger the PTT/intercom



*Custom button settings*

- **Left button:** Scan/Trigger scan based on current reading mode using the left button
- **Right button:** Scan/Trigger scan based on current reading mode using the right button



*Left&right button*

The Button Customization settings can be accessed under **GS Settings** → **Intelligence assistance**

## WP856 ADVANCED SETTINGS

The WP856 mobile computing device offers customizable configurations for various parameters on the LCD, including the following:

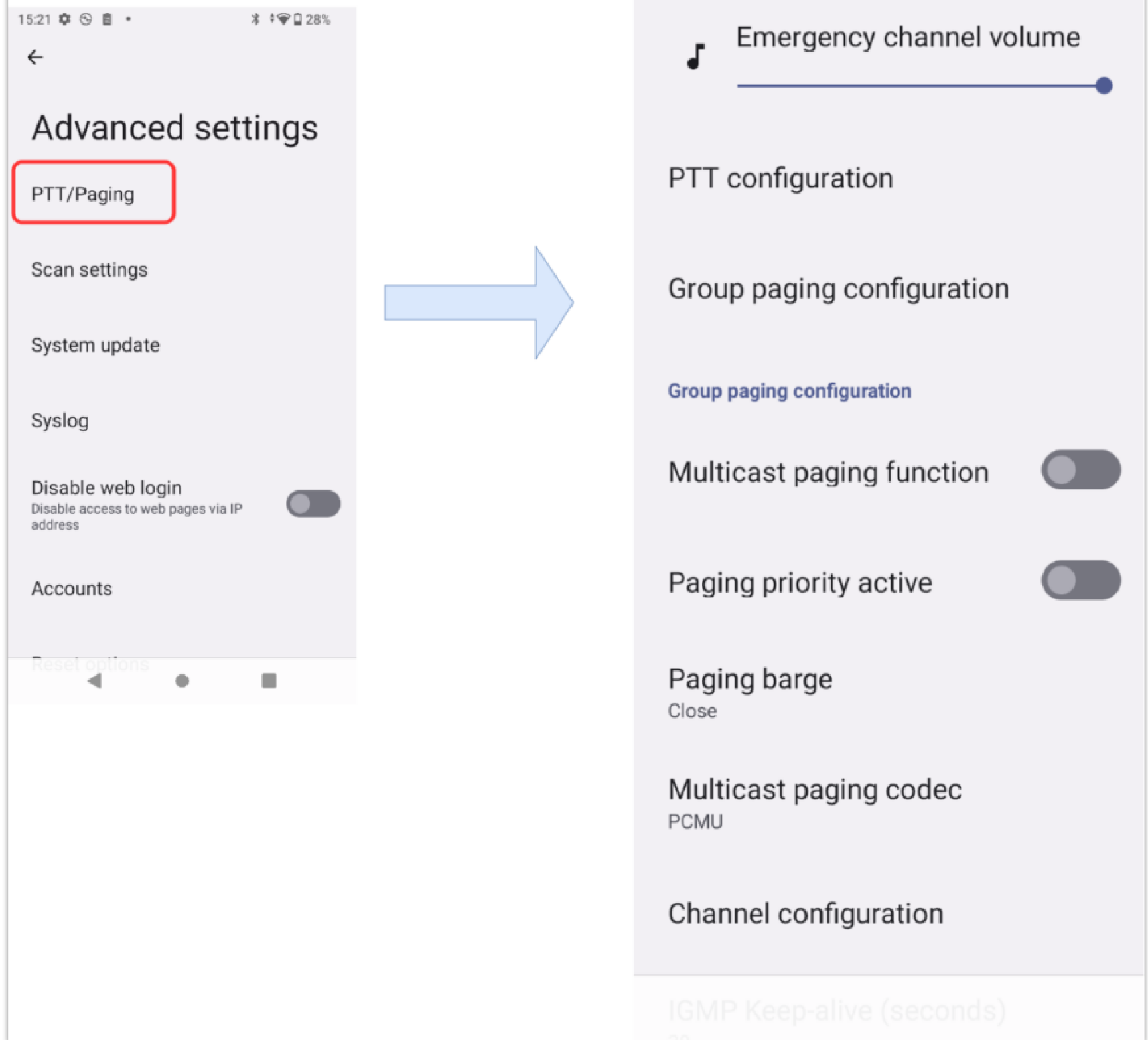
- [PTT and Group Paging Settings](#)
- [Scan Settings](#)

### PTT and Group Paging Settings

Push-to-Talk settings on the WP856 enable instant voice communication by pressing the configured custom button for PTT, while Group Paging settings facilitate broadcasting messages to a predefined group of users, both methods can be implemented as shown below,

To configure Push-to-talk or Group Paging on the WP856 LCD:

1. Access **GS Settings** → **Advanced Settings** → **PTT/Paging**, or short press the configured customizable button when configured for PTT/Paging, please check [[WP856 Button Customization](#)] for more information on how to set it up
2. Under PTT & Group paging define the multicast address that will be shared between the receivers
3. Define the RTP port that will be used
4. On the PTT configuration, you can define the default channel, priority channel, and emergency channel



PTT& Group Paging Settings

Some additional Group paging configurations can be defined here

- **Multicast Paging Function:** Allows multiple devices to receive a page simultaneously via multicast transmission
- **Paging Priority Active:** Determines the priority level for paging, ensuring higher priority pages override lower ones
- **Paging Barge:** Permits interruption of an ongoing lower priority page by a higher priority one.
- **Multicast Paging Codec:** Specifies the audio codec used for compressing and decompressing the multicast page audio
- **Channel Configuration:** Defines the settings and parameters for each communication channel in a system

Once configured, press and hold the customizable button when configured on PTT, and the paging communication will take place.

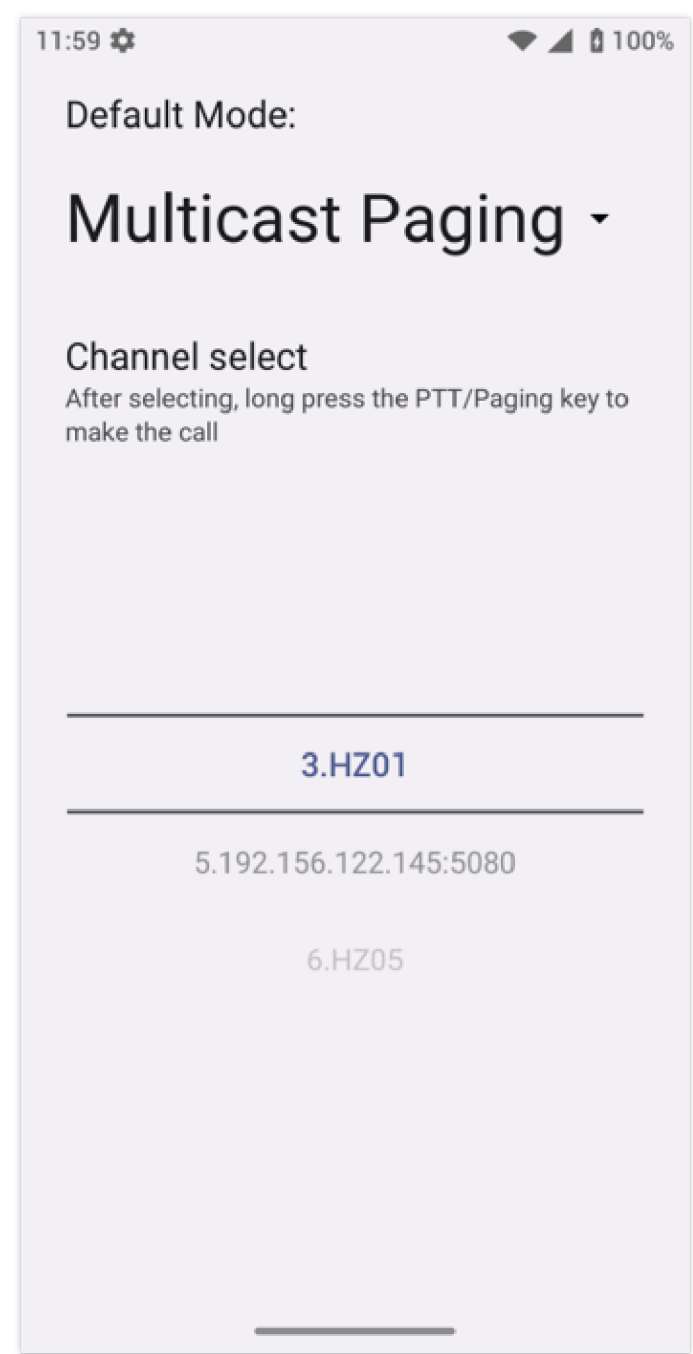
For paging channel configuration, the user can navigate to **Phone Settings > PTT/Paging**

The paging supports 50 channels, divided into two groups: PTT (1-25) and Paging (26-50). Each group of channels is divided into three types according to priority: Normal, Priority, and Emergency.

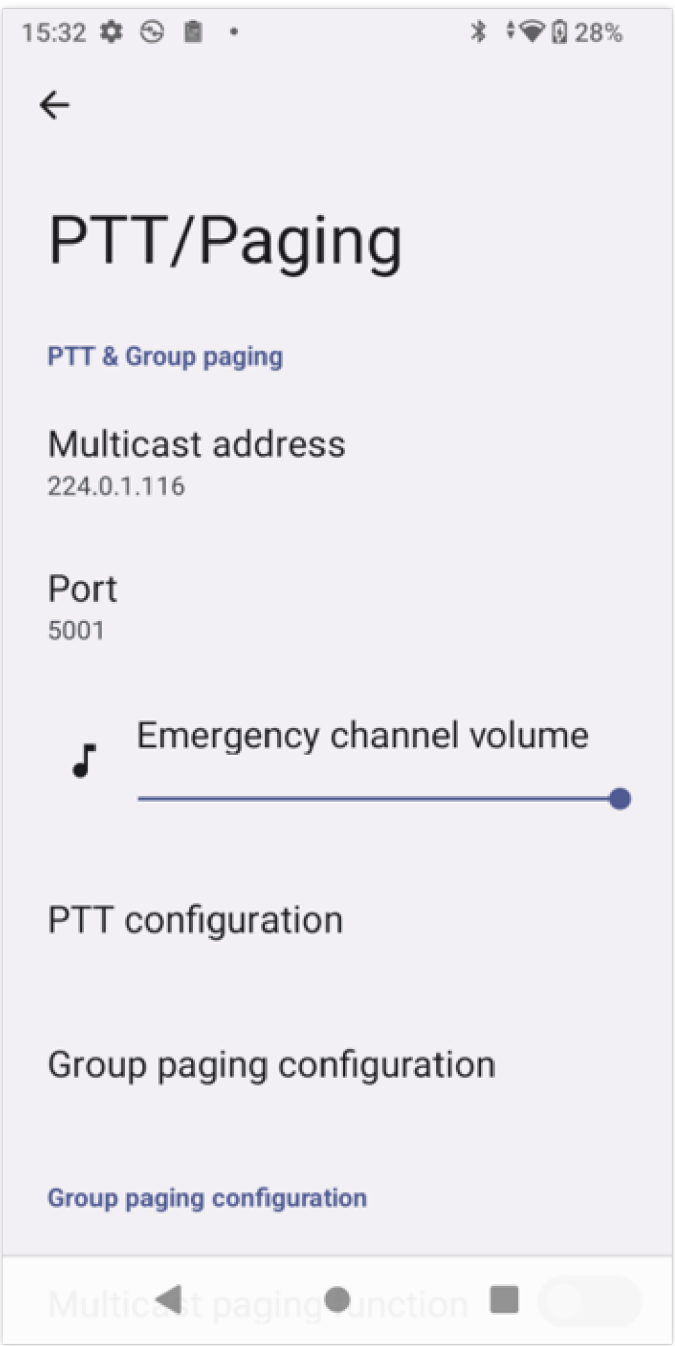
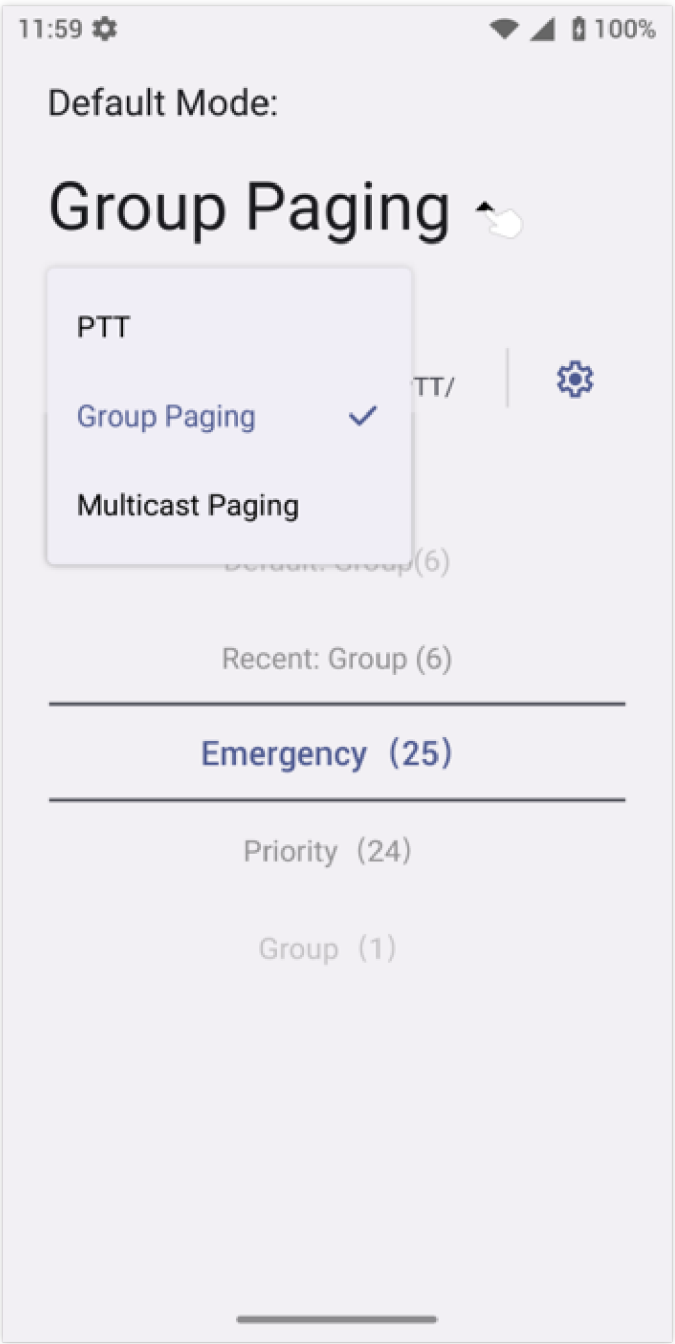
To send a PTT, press and hold the PTT button and the channel status will change to Send PTT to indicate that a conversation is in progress. Devices in the same channel will receive the PTT call. After the conversation is completed, release the PTT button. The channel will be released in 10 seconds.

To send a paging: after setting the “Default Mode” to multicast, select the channel to send multicast in the channel selection area, press and hold the PTT/Paging button to enter the multicast sending interface, and start speaking. All devices set to the same group can receive the multicast paging.

Both support the “Auto answer while busy” function. When the user is on a call or intercom, if there is a PTT/multicast call of the same level, it will be automatically answered.





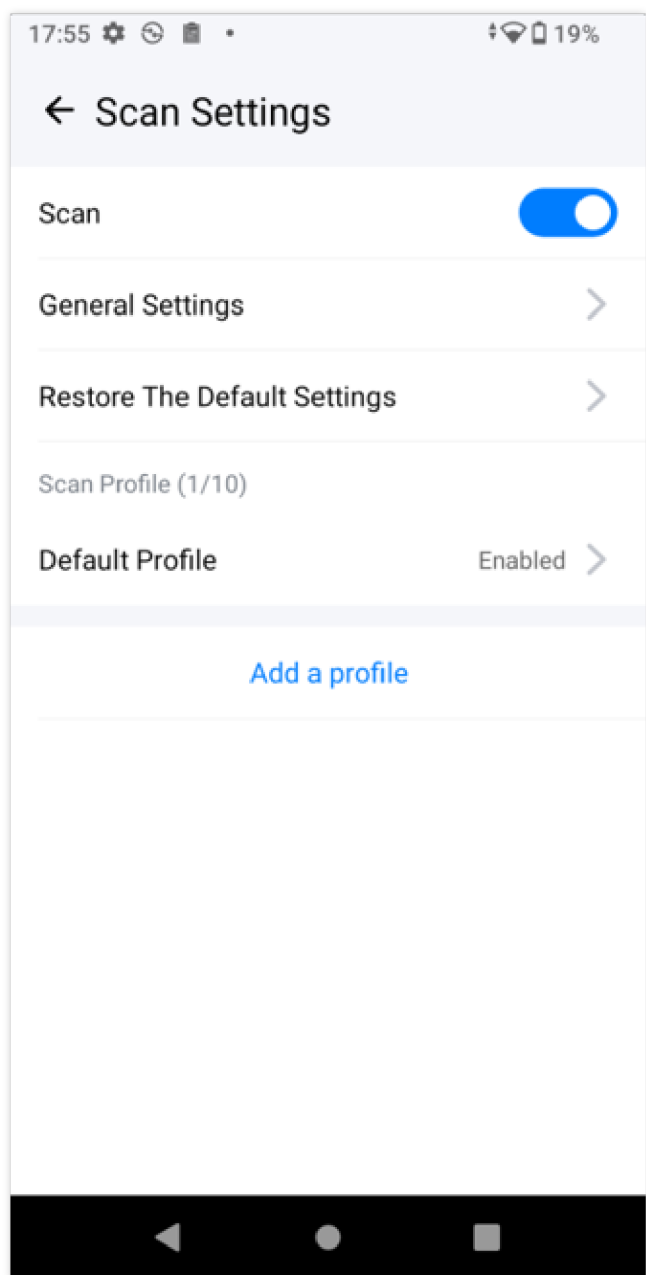


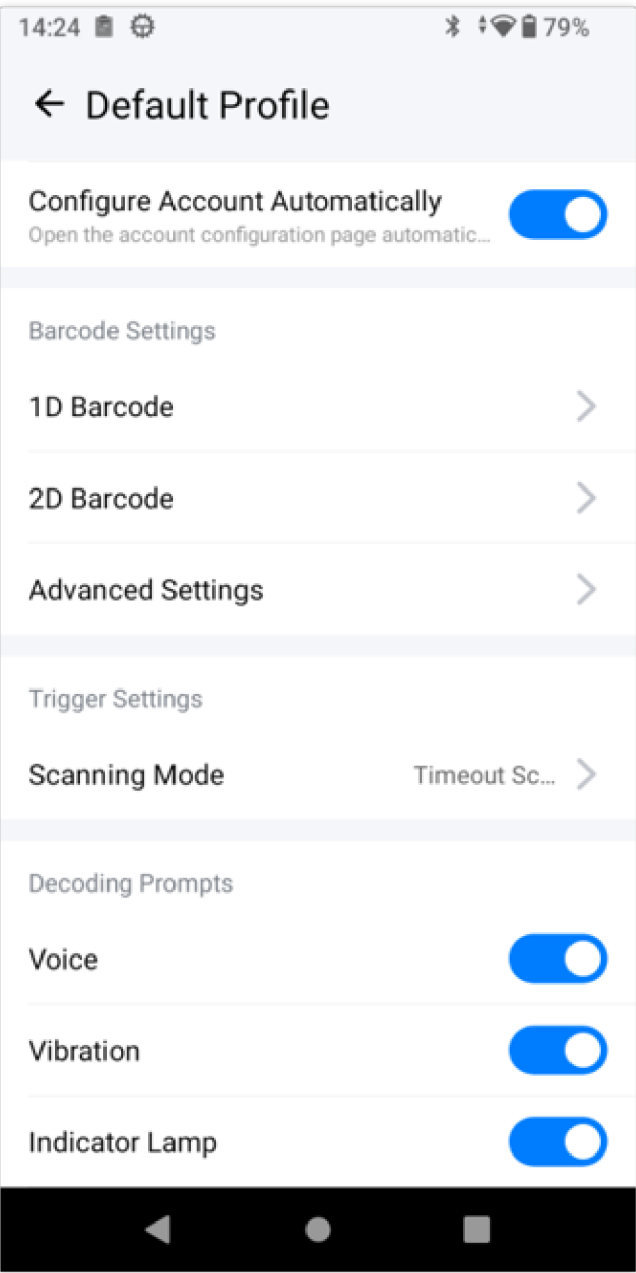
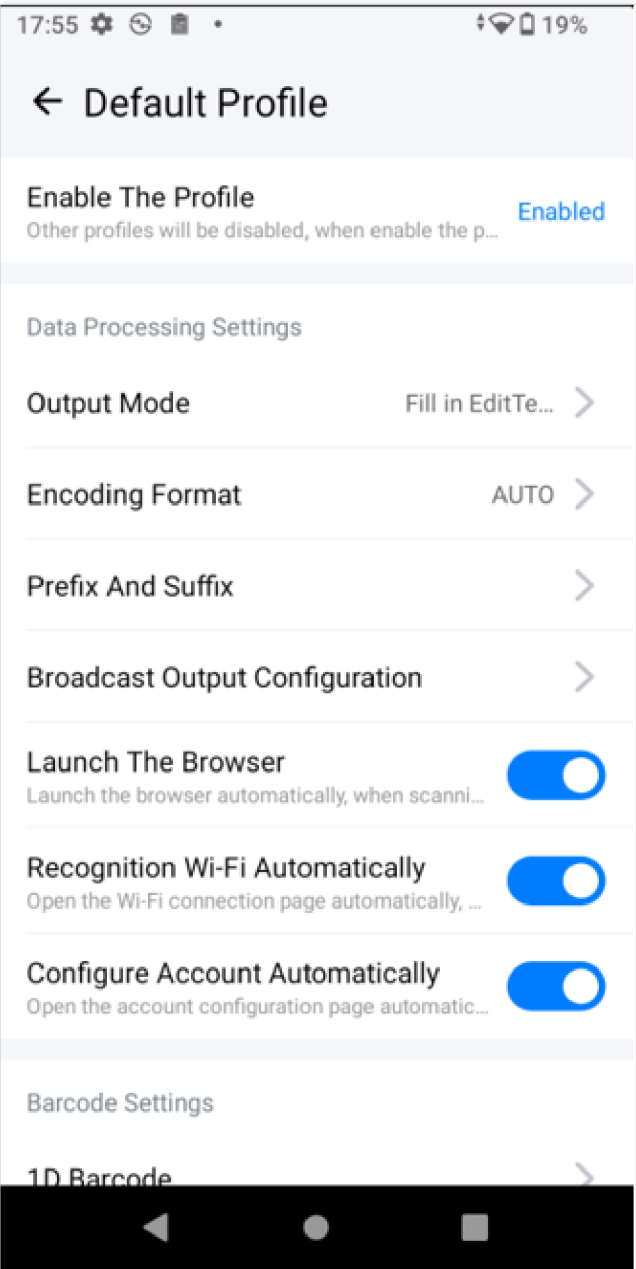
## Scanning Settings

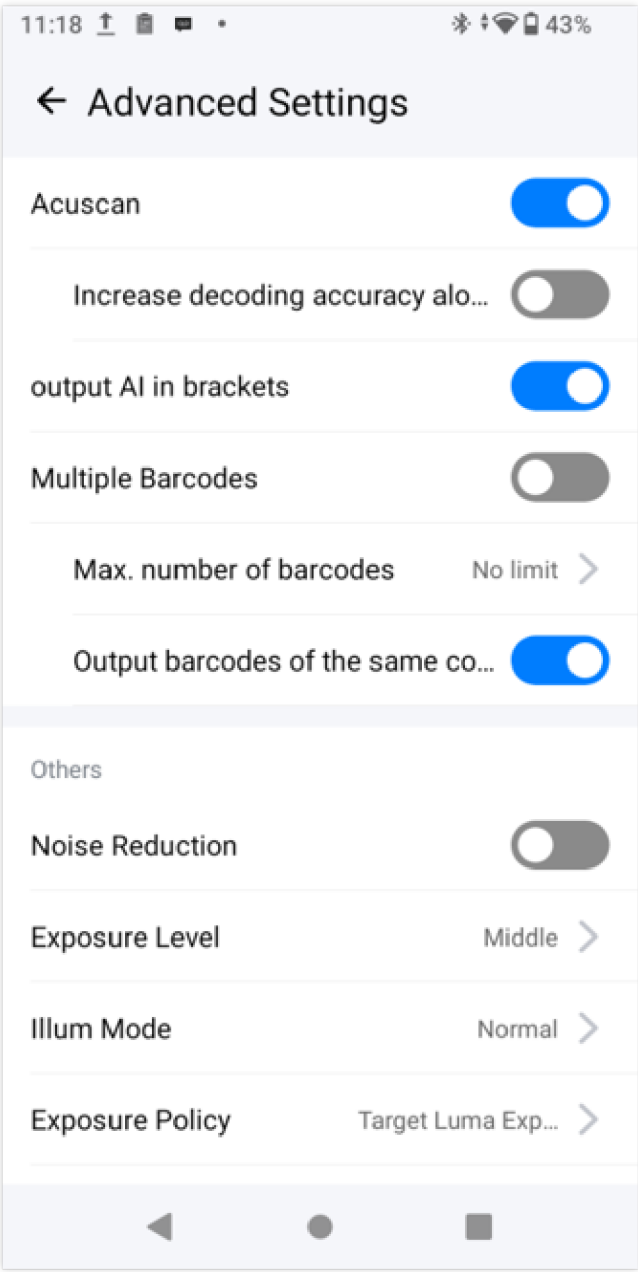
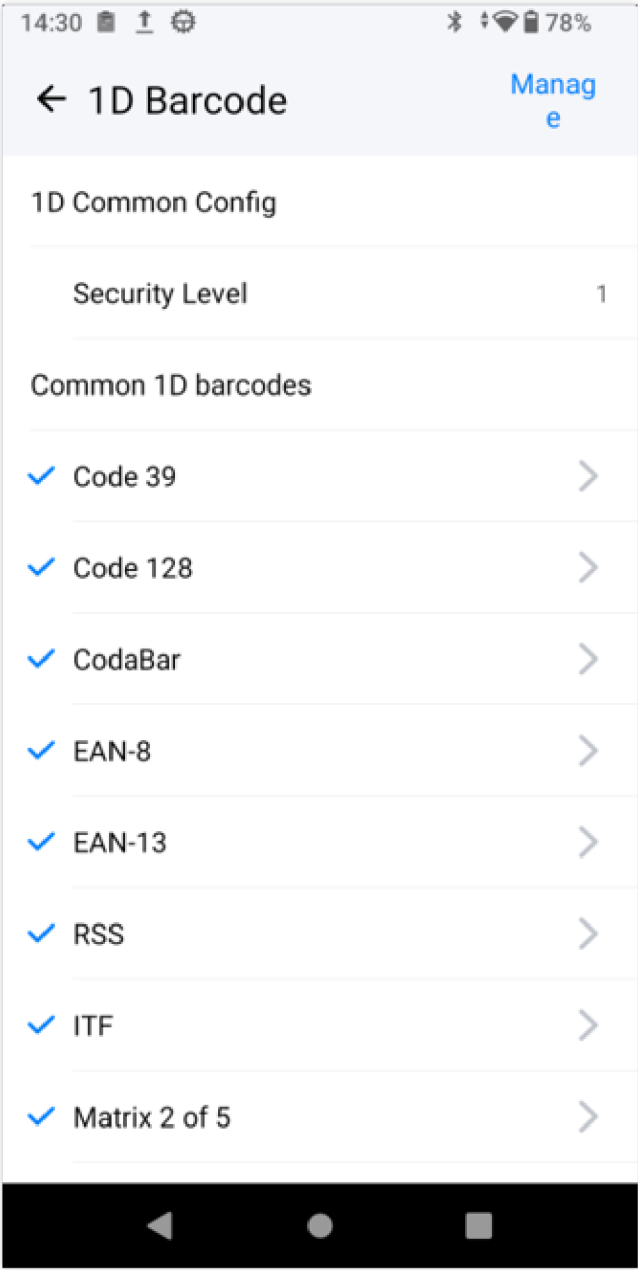
The WP856 features an essential barcode scanning capability, that allows users to scan 1D and 2D barcodes remotely from any location. It uses an integrated infrared scanner, which can be activated through the Scan Demo app and triggered by pressing the left or right scan buttons.

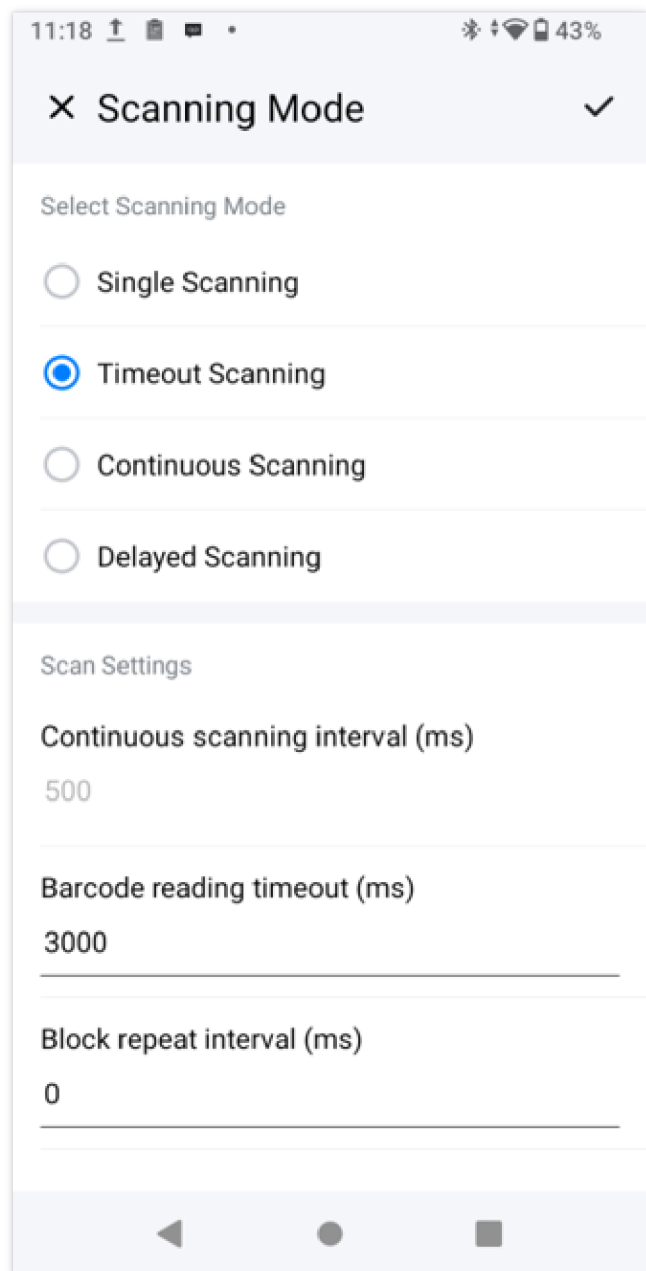
Scan Settings can define the scan profile used to scan 1D and 2D barcodes, the configuration on the WP856 is as shown below:

1. Access **GS Settings** → **Advanced Settings** → **Scan options**
2. Enable Scan option
3. Edit the Default profile after being enabled, and the following settings can be defined:
  - **Output Mode:** Specifies how scanned data is processed and delivered, whether as keyboard input or file output. Output modes include emulating key input, directly filling in text fields, broadcasting data, USB HID output, Bluetooth HID output, and network output.
  - **Encoding Format:** Specifies the character encoding used for the scanned data.
  - **Prefix and Suffix:** Adds specified characters before (prefix) or after (suffix) the scanned data.
  - **Broadcast Output Configuration:** Configures how the scanned data is broadcast to applications.
  - **Launch the Browser:** Opens a web browser automatically after a scan.
  - **Recognition Wi-Fi Automatically:** Enables automatic connection to recognized Wi-Fi networks.
  - **Configure Account Automatically:** Sets up user accounts automatically upon scanning.
  - **1D Barcode:** Configurations specific to one-dimensional barcode scanning.
  - **2D Barcode:** Configurations specific to two-dimensional barcode scanning.
  - **Advanced Settings:** Provides access to additional, detailed configuration options.
  - **Scanning Mode:** Select the operational mode of the scanner (e.g., continuous, single scan).
  - **Decoding Mode (Voice, Vibration, and Indicator Lamp):** Configures feedback methods (audio, vibration, visual) after a successful scan.







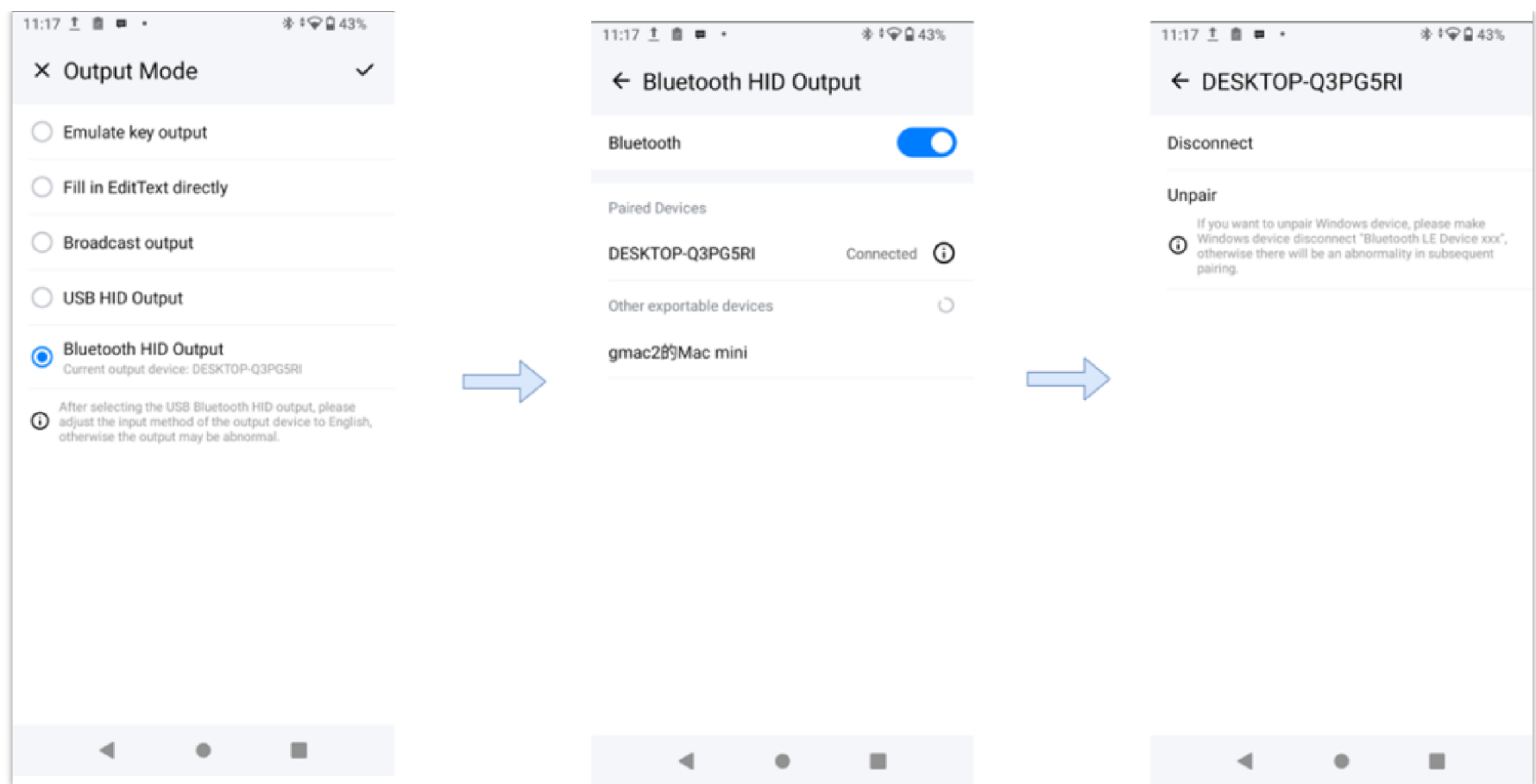


For more detailed information on how to use the barcode scanning features on the WP856 device, please visit the guide: [WP856 Code Scanning Guide](#)

## Bluetooth HID Output

To configure Bluetooth HID Output, please follow the below steps:

1. Access **GS Settings** → **Scan settings** → **Profile** → **Output Mode**
2. After selecting Bluetooth HID output, you need to select a pairable device in the output device list and connect it.
3. Click the device details in the paired device list to disconnect the device or cancel the pairing.
4. After selecting Bluetooth HID at the same time, the notification bar will display the current output mode and output device. Click to directly enter the output mode selection page;
5. When scanning code is abnormal:
  - Bluetooth HID output, Bluetooth is not turned on but not connected to a Bluetooth device. After scanning the code, a toast prompt appears: 'Bluetooth is not turned on, please turn on Bluetooth', 'Bluetooth device is not connected, please check Bluetooth settings'.
  - Bluetooth HID output, the Bluetooth device is connected. After scanning the code, it is judged as a Bluetooth device type that cannot be output. The toast prompts "The current Bluetooth device cannot be output. Please connect a Bluetooth device such as a mobile phone or computer."



*Bluetooth HID Output*

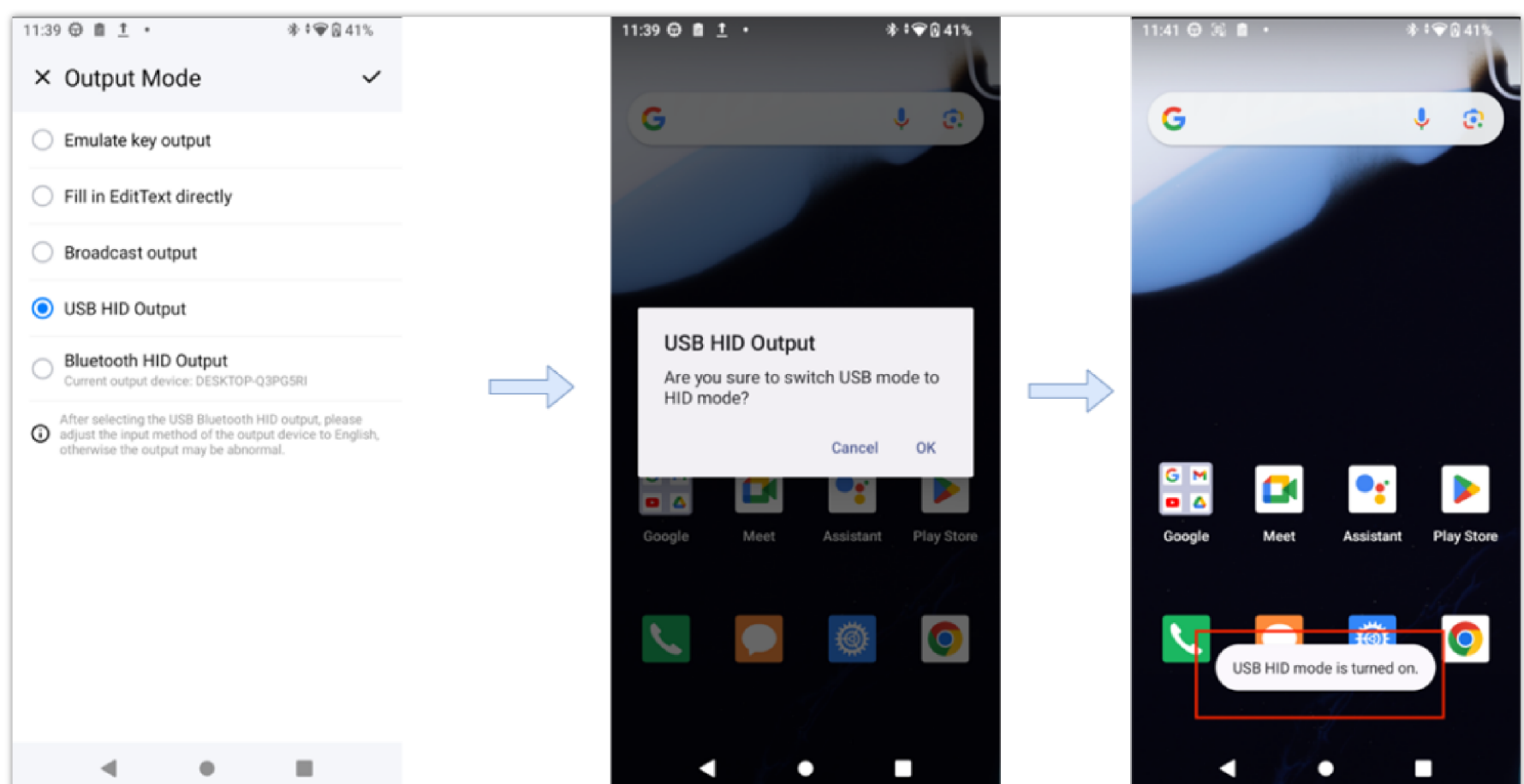
### Note

If you cancel pairing with a Windows device, you also need to disconnect “Bluetooth LE Device ec74d7229485 (Bluetooth MAC address)” on the device. Otherwise, subsequent pairing attempts may not function correctly.

## USB HID Output

To configure the USB HID Output, Please follow the below settings:

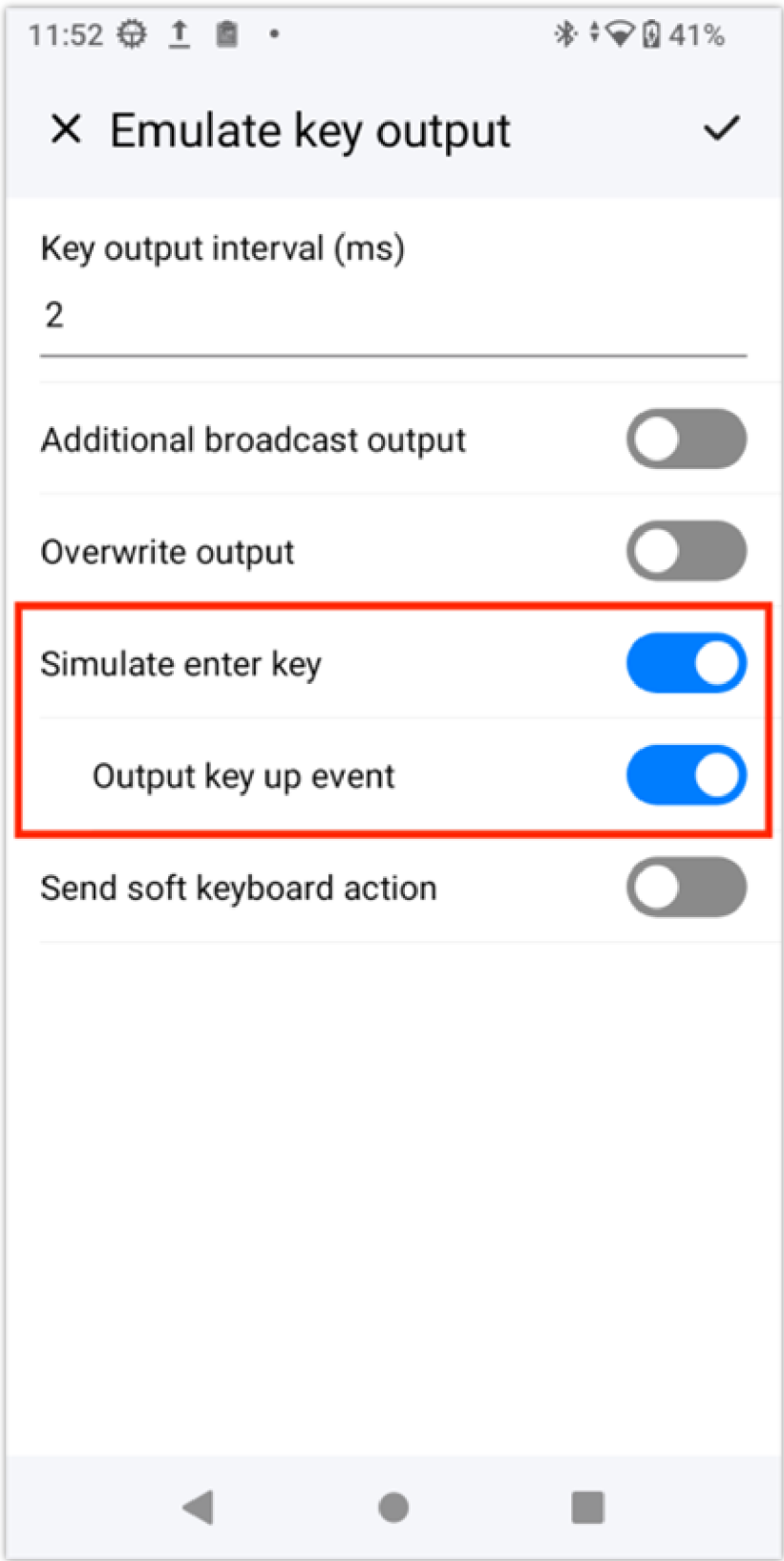
1. Access **GS Settings** → **Scan settings** → **Profile** → **Output Mode**
2. To use USB HID output, you need to connect the output device via a USB port;
3. After selecting USB HID output, each time you connect a USB, a prompt will pop up to ask to switch the USB mode to HID mode.
4. After unplugging the USB, it will automatically restore to the previous USB mode.
5. After selecting USB HID, the notification bar will display the current output mode. Click it to directly enter the output mode page.



*USB HID Output*

Simulate the Enter key

- 1. Access **GS Settings** → **Scan settings** → **Profile** → Output Mode
- 2. This function is effective for simulating key output, USB HID, or Bluetooth HID output. It is used to realize an automatic jump after scanning the code and pressing Enter. Please turn this function on or off according to actual needs.



Simulate the Enter key

	A	B	C	D	E
1	6925653783251				
2	6925653783251				
3	6925653783251				
4	6925653783251				
5	6925653783251				
6	6925653783251				
7	6925653783251				
8	6925653783251				

Turn on the simulated enter key

	A	B	C	D	E
1	6925653783251692226646219169222664621912020120320201203				
2					
3					
4					
5					
6					

Simulated Enter key is not enabled



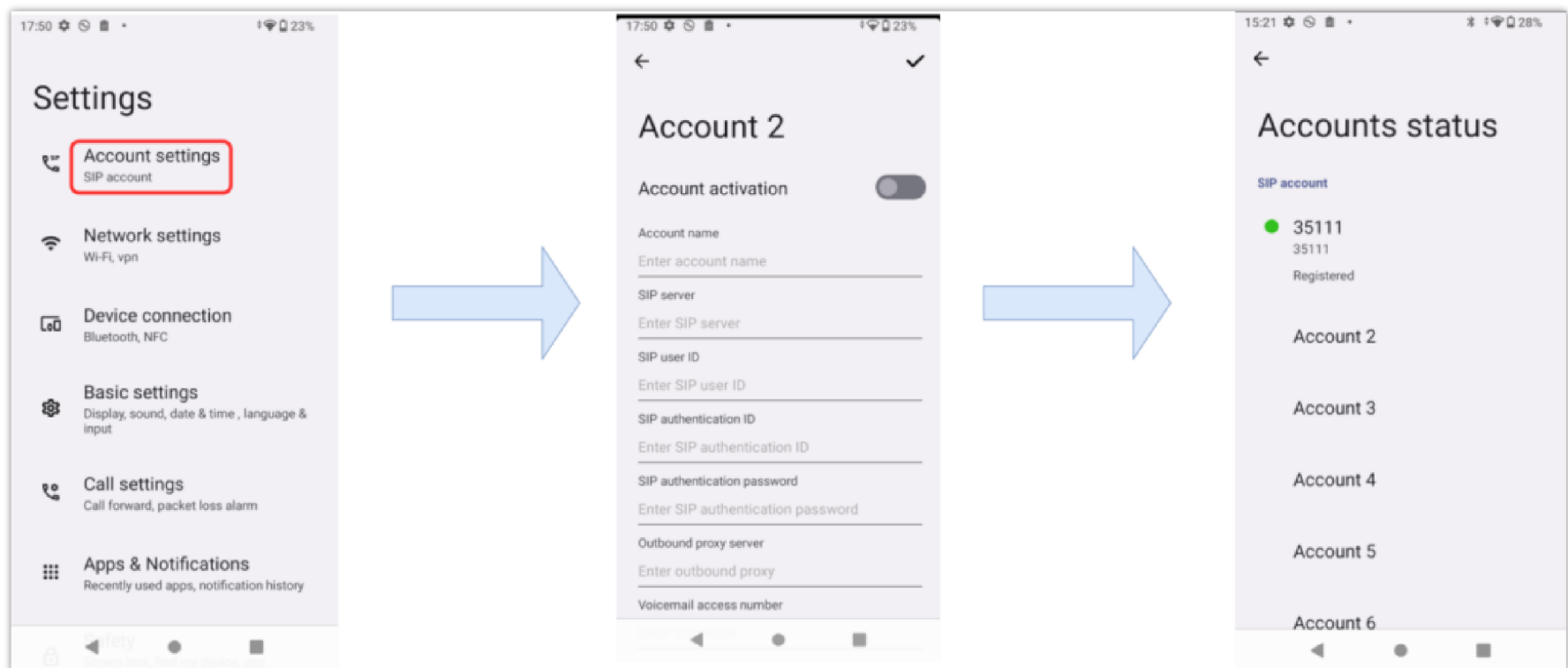
# CALLING OPERATIONS

In this section of the guide, we will demonstrate how we can configure telephony-based operations on the WP856.

## Register SIP Account

To register an SIP account from LCD Settings please follow the below steps,

1. Under **GS Settings** → **Account Settings** → **SIP Account**, select the account to configure, it will be account 2 in our case.
2. Define the following fields:
  - SIP Server
  - SIP User ID
  - SIP Authentication ID
  - SIP Authentication Password
  - Outbound Proxy Server
  - Voicemail access password
3. Toggle Account Activation
4. Click Save, after the mentioned steps, the account will be registered



*Register SIP Settings*

## Configure SIP Account through UCM QR Code

Users can scan QR codes to automatically configure the SIP accounts on the WP856 device, to do that, please follow the below steps:

- From LCD settings, Access **Scan Settings** → **Profile** → **Configure Account Auto**
- When the **Configure account automatically** is enabled, scan the QR code sent by UCM to automatically identify the SIP server address, backup SIP server address, SIP user ID, SIP authentication ID, and SIP authentication password.

General Settings

(Register an account on the phone or device)

Server Address	192.168.129.136:5061
Public IP Address	192.168.129.137:5061
RemoteConnectServer Address	https://c074ad537372-11427.a.gdms.work:5061
SIP User ID	1008
Authenticate ID	1008
Authenticate Password	123456Admin!
SIP Transport Method	tls

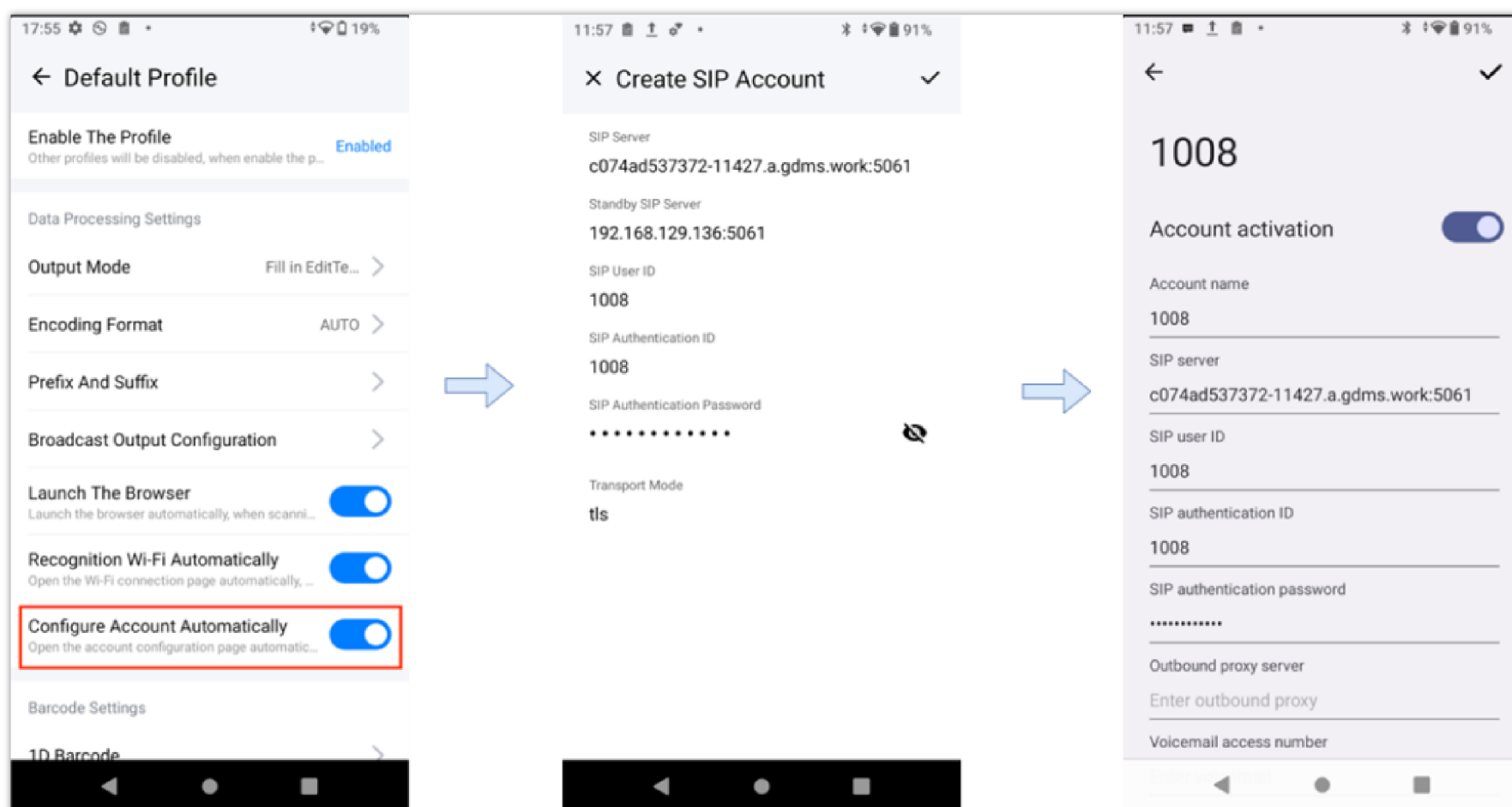
If applicable, set the minimum and maximum allowed TLS versions to 1.2.



Use the phone to scan qr code for registration

Scan QR code from UCM

- Then WP856 will navigate to the settings page of an empty account, automatically fill in the recognized information, and complete the account configuration.
- If all accounts have been configured, users can choose which account information to replace from the 6 accounts available.

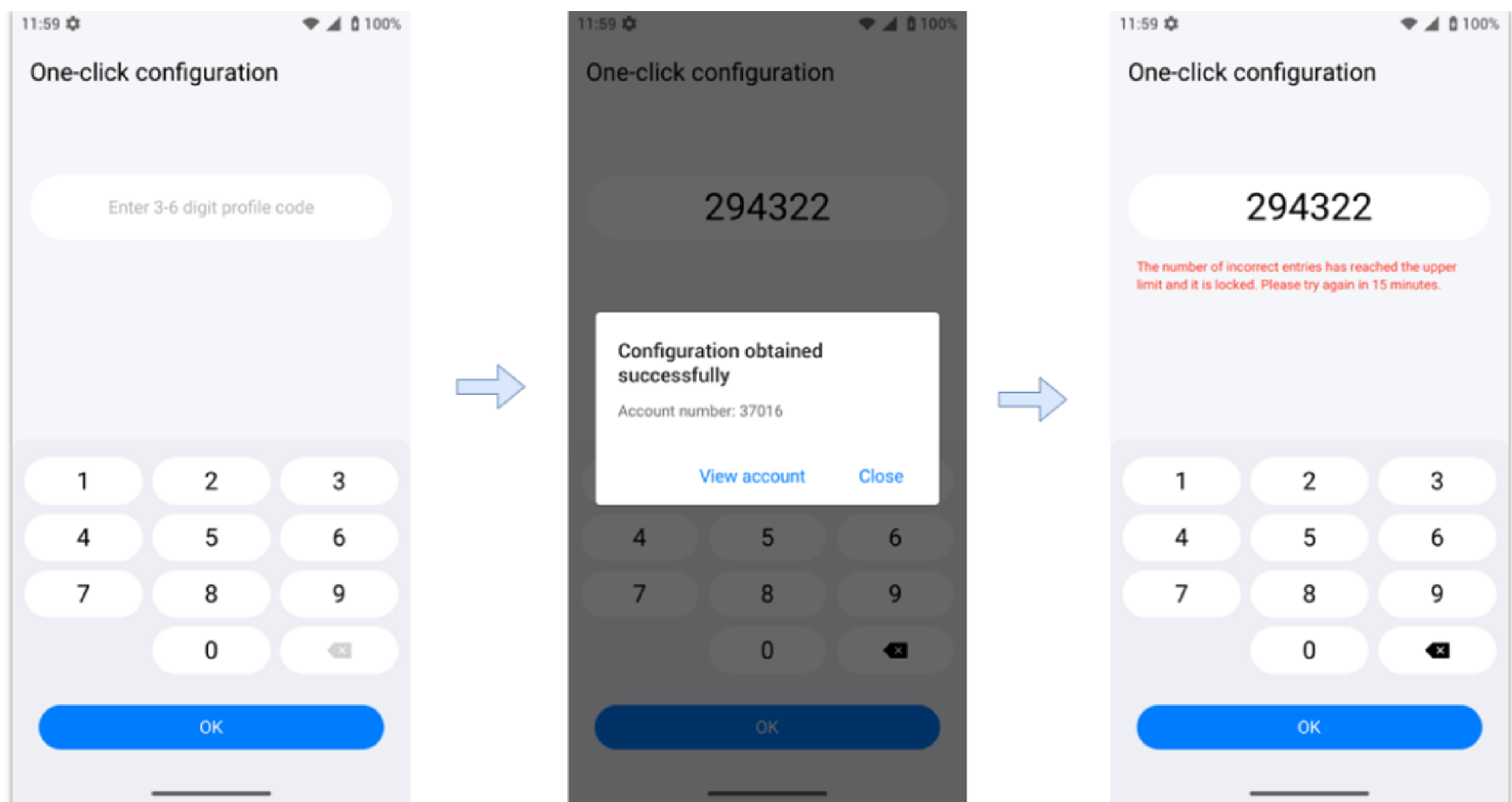


LCD settings for automatically adding an SIP account

## One-Click Configuration

The WP856 can have a SIP account deployed to it using the one-click configuration method, this is done by providing a 6-digit code generated by the GCC601x convergence device, to deploy the SIP account on the WP856 unit, the way it works is as follows:

- A unique 6-digit identification code is automatically generated by the GCC601X device.
- Employees can quickly configure extension accounts and log in by entering their own identity codes on WP856. By default, the account is configured to "Account N" (the one with the smallest number N). If all accounts have been configured, the account is configured to replace the last account.
- By default, if the user enters an incorrect or invalid ID code 5 times, the ID code will be locked. If it is locked, the user needs to try again after 15 minutes. (The specific number of times and lock time can be determined by GCC)



*One-Click Configuration*

## Incoming call

- To answer an incoming call, press the icon



on the LCD screen.

- To reject an incoming call, press the icon



on the LCD screen

- When call had been received and was not answered, the user can use quick replies to send SMS messages to the caller. These responses are preconfigured and can be sent using one tap (e.g., I'm busy, I'll call you later.)

## Outgoing call

To make an outgoing call:

1. Click the dial icon on the LCD screen
2. Enter the number you would like to call
3. Press the icon

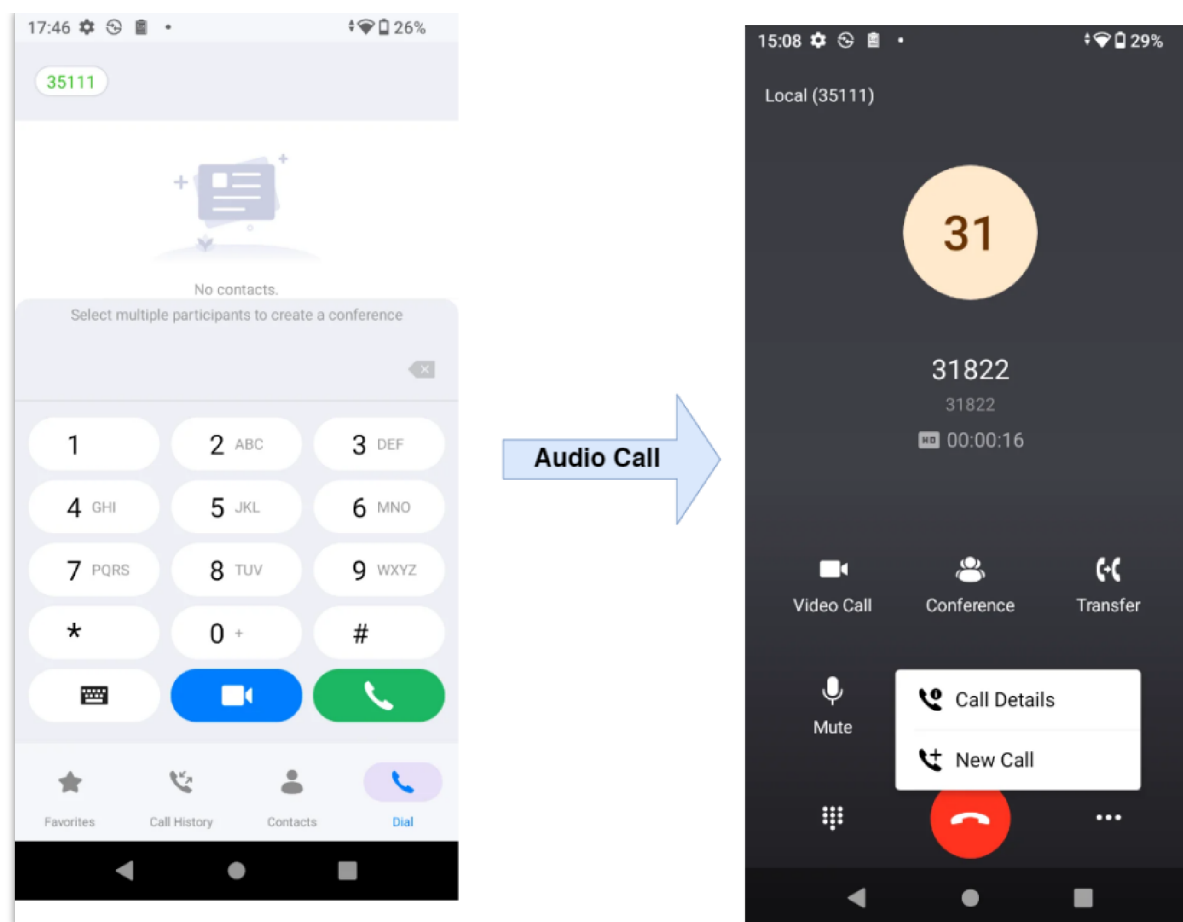


to trigger an audio call and icon

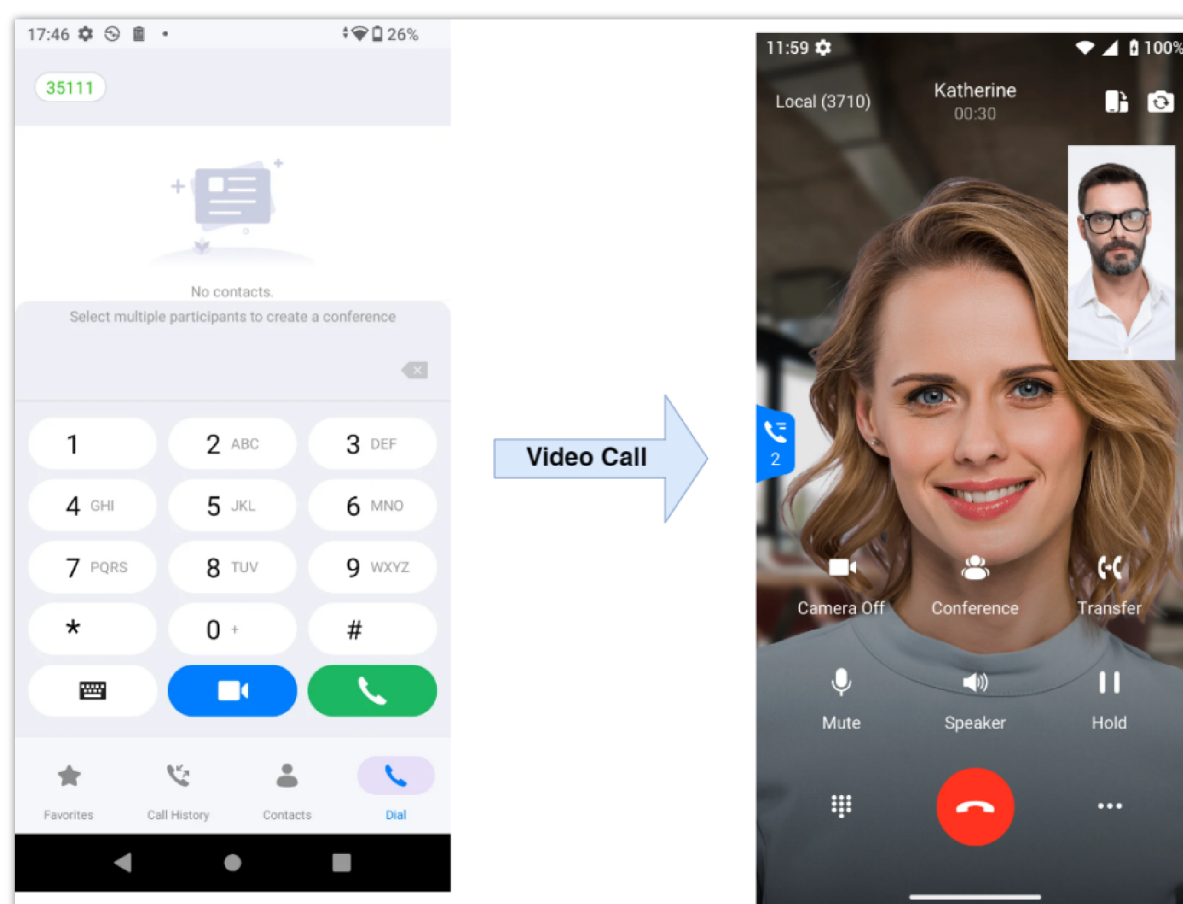


to trigger a video call

4. Once the call is connected you will be able to hear/see the callee



*Audio Call*



*Video Call*



: When tapping this icon, the user can choose the front or the back camera.

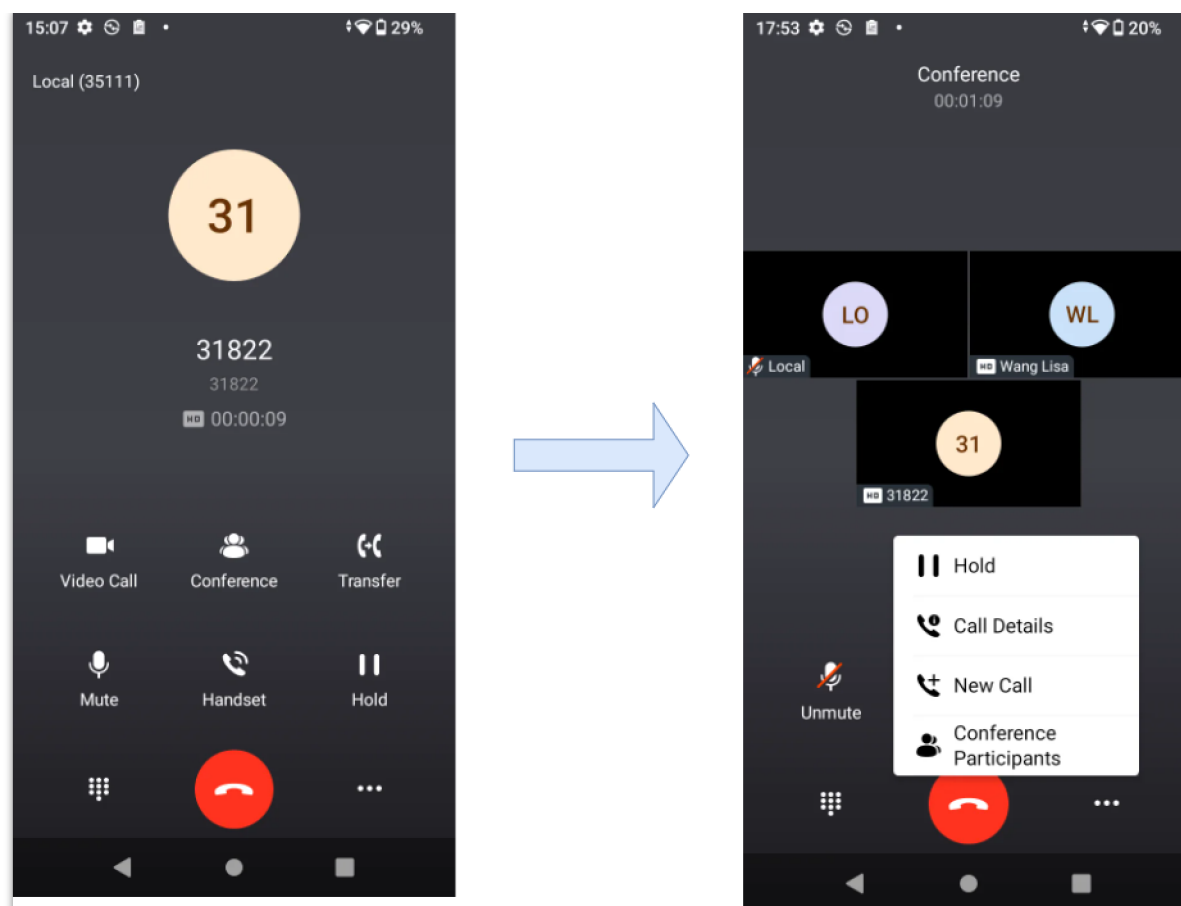


: When tapping this icon, the user can switch the display orientation of the phone from portrait to landscape, or vice versa.

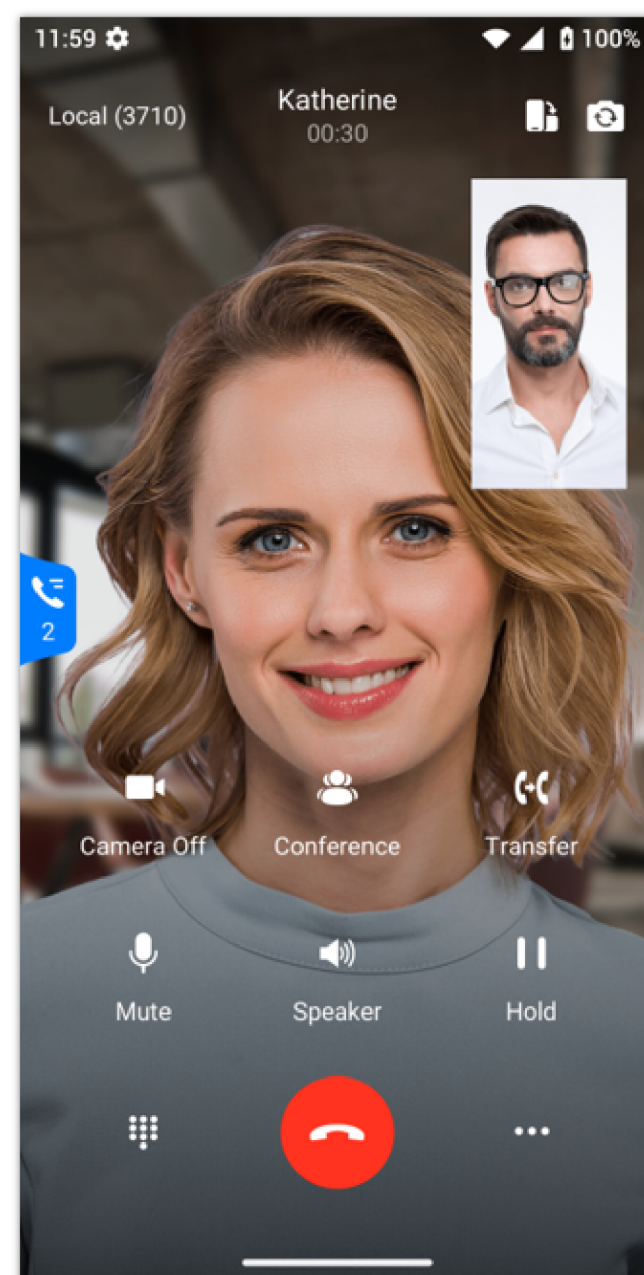
## N-WAY Conference

To initiate an N-WAY conference on the WP856 device:

1. During an ongoing call, click the on conference
2. Add the desired number to add to the call
3. Once the 3rd party answers the call, a 3-way conference will be initiated

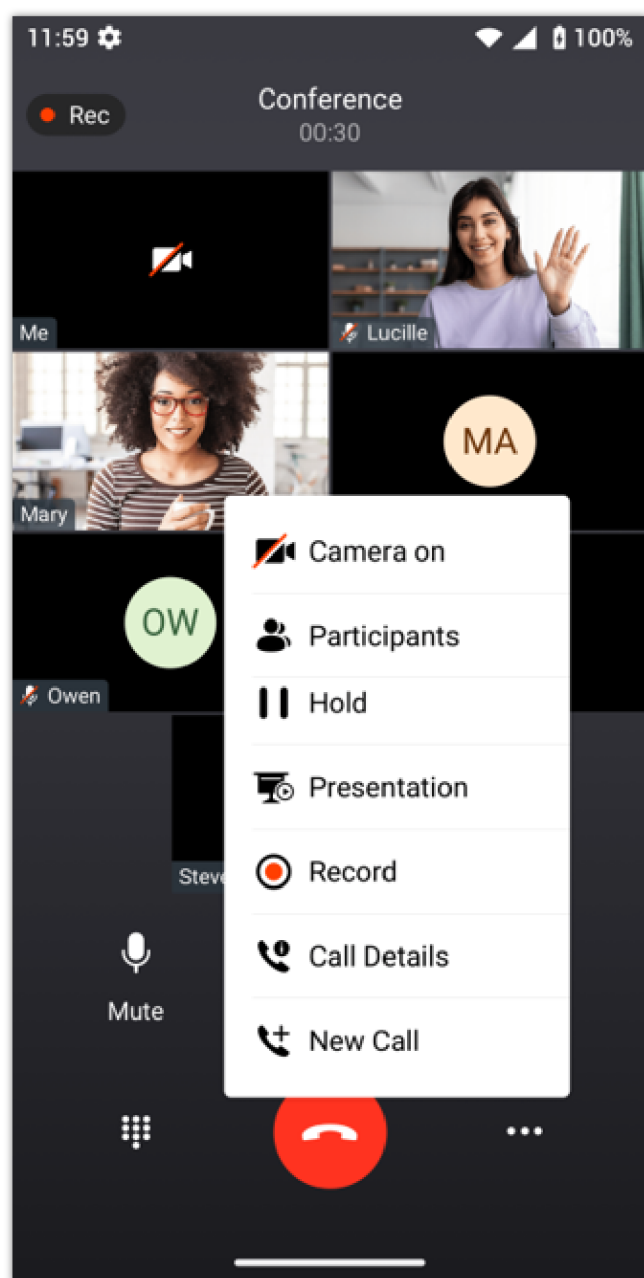


*Conference call*



*One-to-one Video Call*





*Video Conference Call*

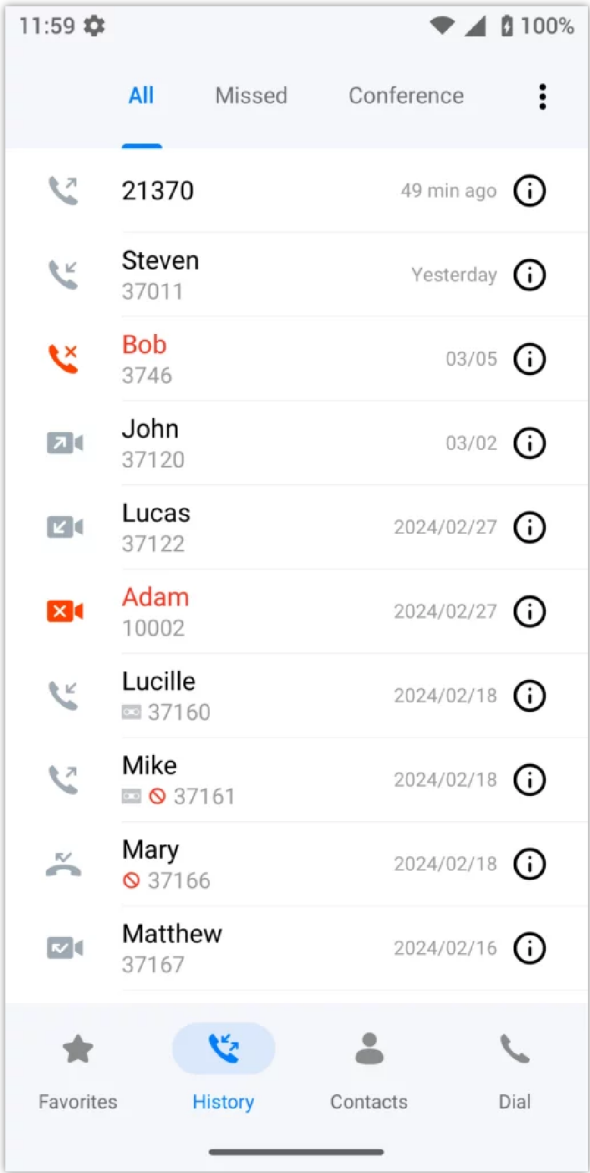


*Video Conference Landscape Display Orientation*

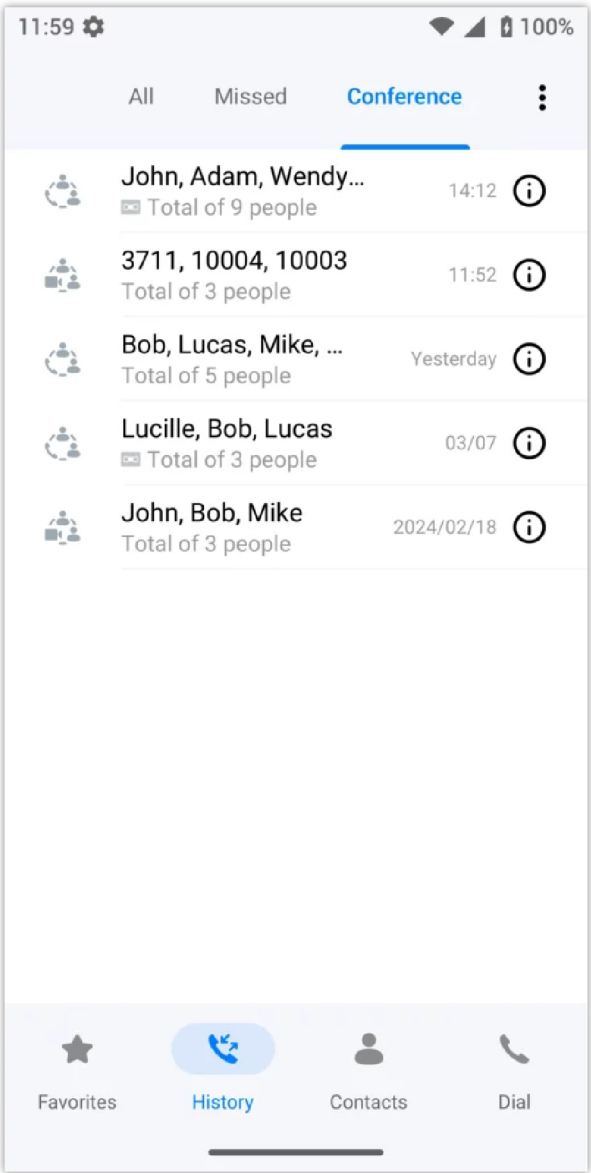
## Call History

To access Call History, please follow the below steps:

- Click the dial icon on the WP856 home screen
- Click on the history tab
  1. click on **All** to view all call logs recorded
  2. Click on **Conference** to view conference calls
  3. Click on **Missed** to view missed calls



Call History



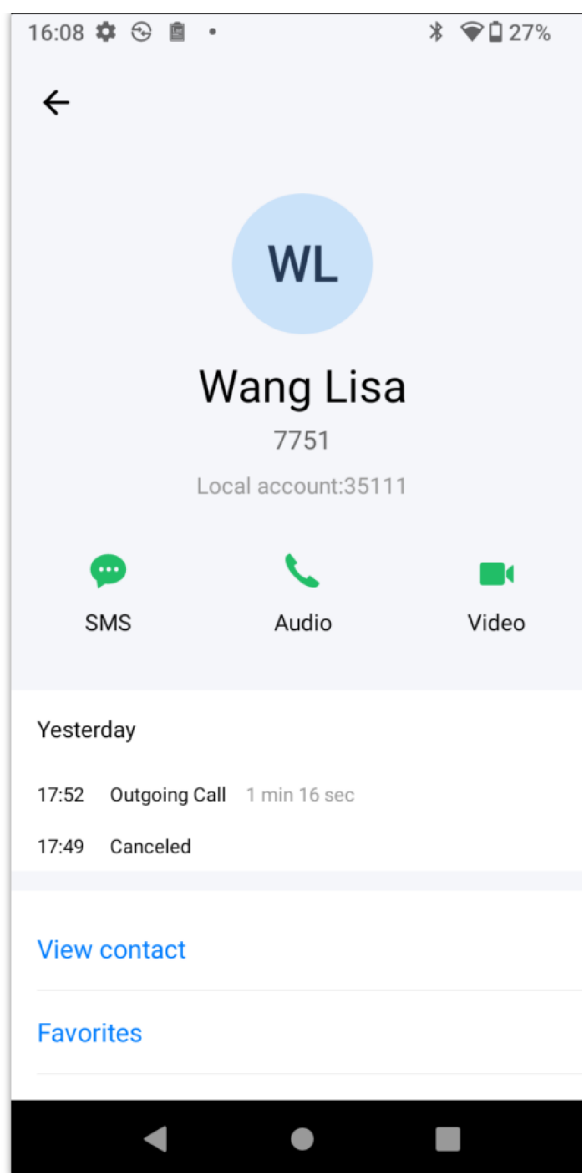
Conference History

◦ Click on icon



to view more information on the caller





*Contact Information*

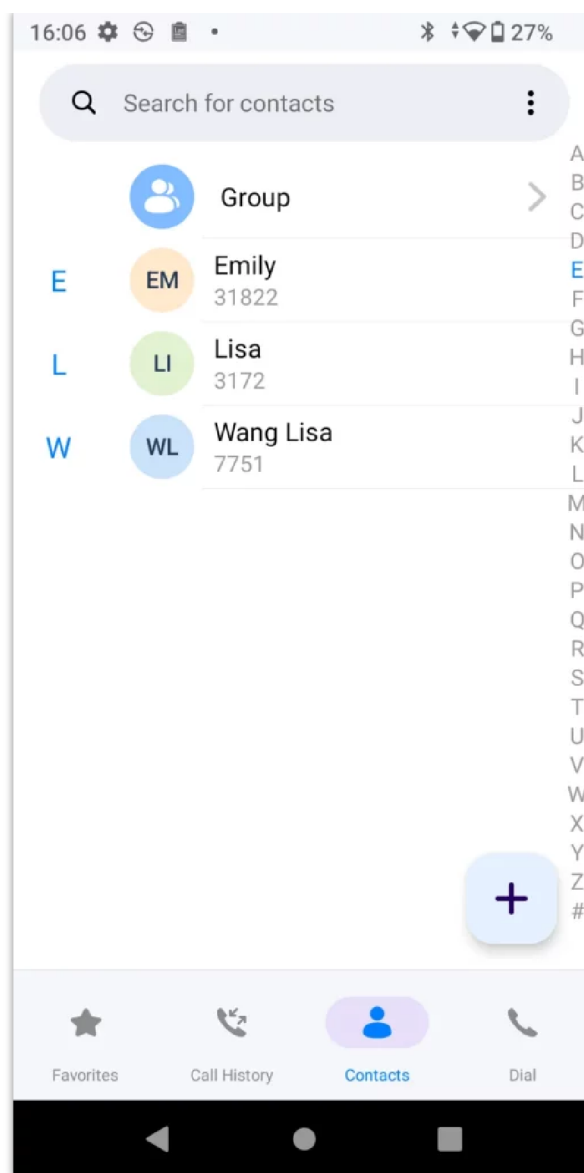
## Contacts

Users can access contacts lists from the WP856 device, they can also create new contacts manually,

### View Contacts

To view the contact list:

1. Click the dial icon on your WP856 device
2. Then Hover over to the contacts tab
3. A list of imported or created contacts will be displayed



Contact Information

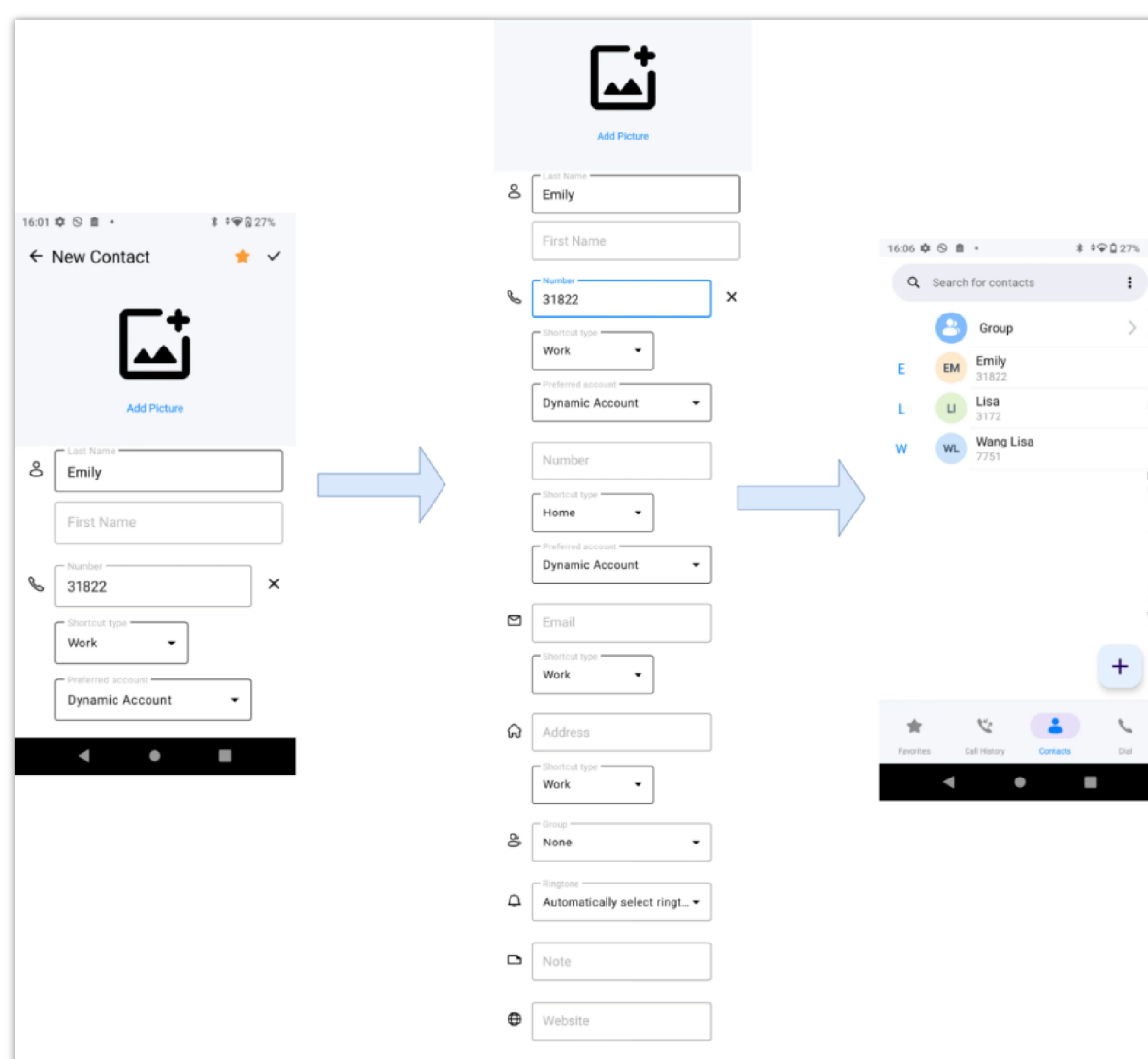
## Add contacts

To add a new contact on the WP856 device:

1. under contacts tab, click the icon



2. Define the contacts fields as displayed below
3. Once completed, click save, and the created contact will be added to your contact list



SMS

Users can send and receive SMS to other extensions using the SMS feature. When opening the messaging application, the user can view all the previous conversations and new messages. The user can tap one of the conversations and start typing the messages in the text box at the bottom of the screen. The user can send up to 500 characters in one message.

By default, there is a maximum of 1000 conversations that can be created on the device. When this limit has been reached, and a new SMS has been received, the device will show the following prompt “The SMS space is full. The oldest SMS will be deleted to receive new SMS” and the oldest SMS conversations. If the user requires to change this limit, he or she may contact our [technical support](#) to change it.

View SMS

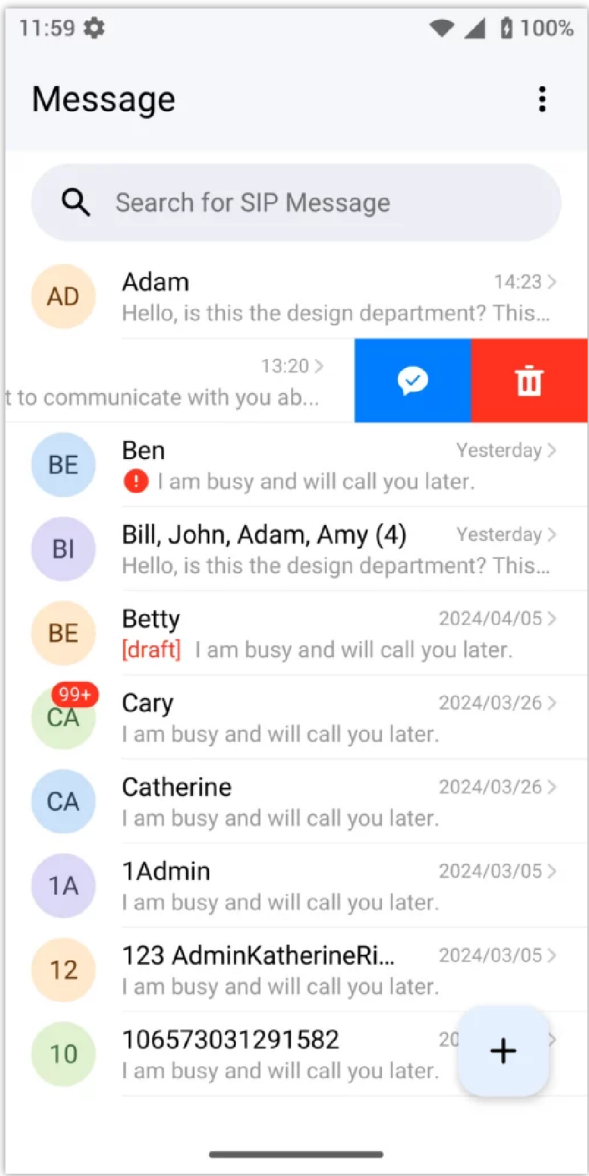
To view the list of SMS exchanges: click the icon on the home screen

- 1. Click the icon



on the home screen

- 2. A list of SMS exchanges will be displayed



SMS List

Delete SMS

To delete an SMS

- 1. Swipe right on the message you want to delete
- 2. Click the icon



to delete a message.

**Send SMS**

To send a new SMS :

- 1. Click the icon

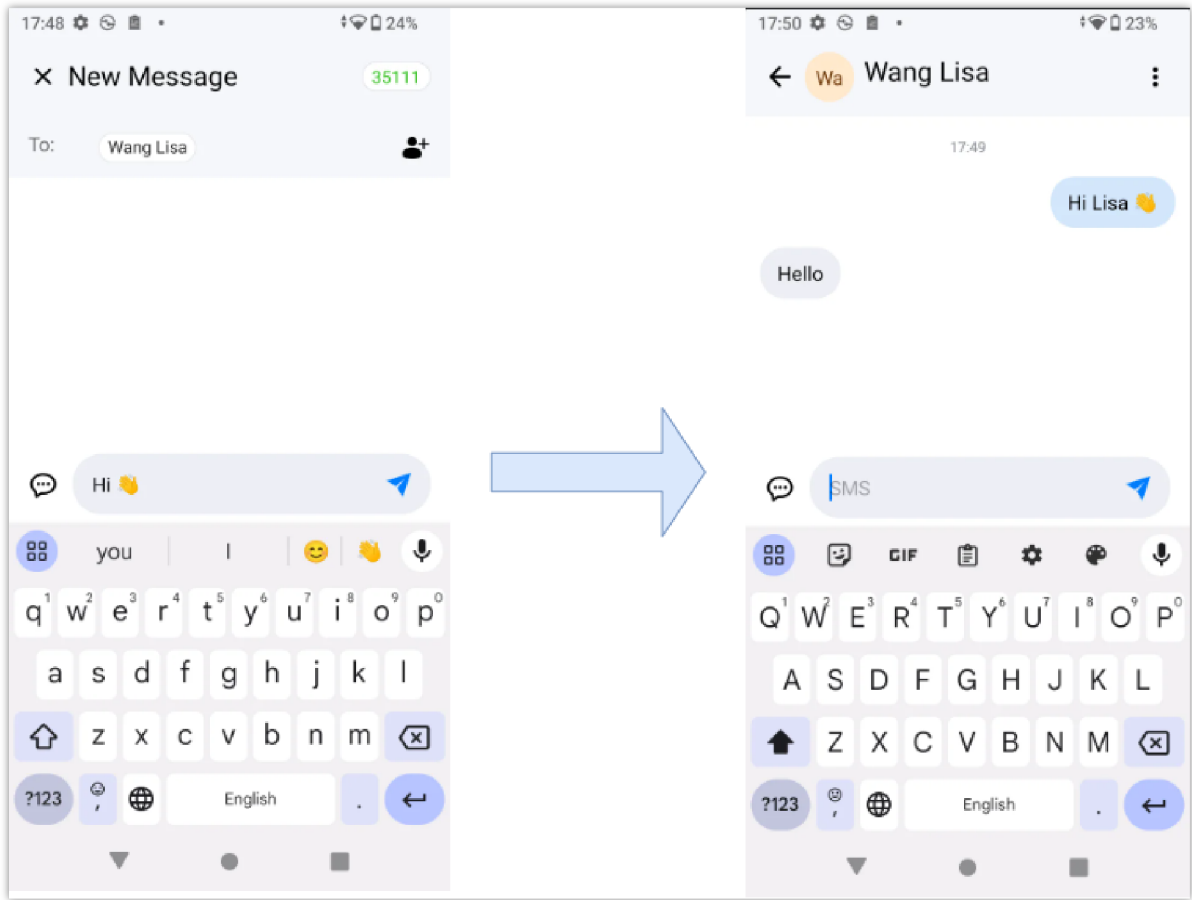


to create a new SMS

- 2. Define the receiver’s number or select it from the contact’s list
- 3. Click the icon




and the message will be sent

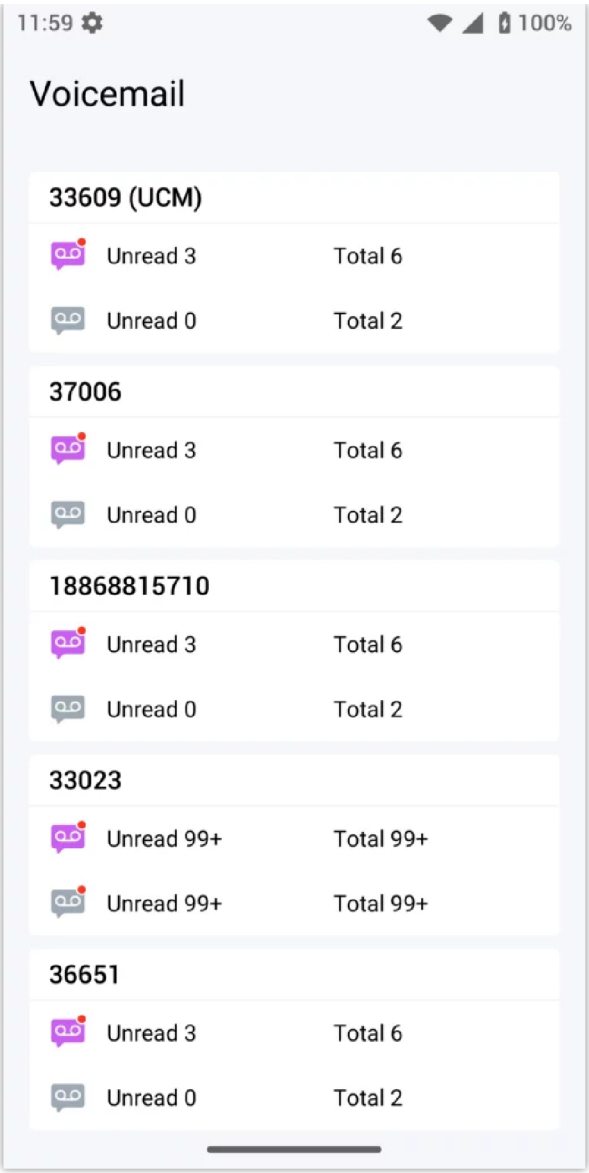


Send SMS

**Voicemail**

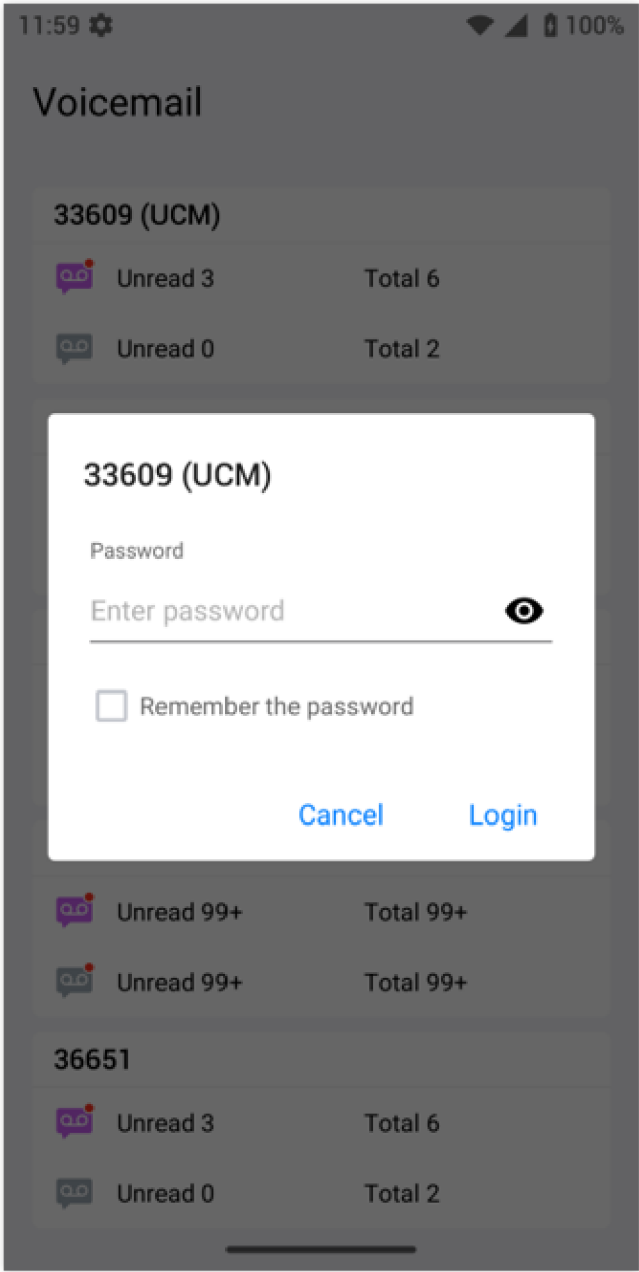
Users can access the list of received voicemails, by clicking the icon  , once clicked it will display a list of received Voicemails, with their corresponding source number, and their status (read or unread)

The user must configure an account on the phone to be able to access its voicemail. When the user adds multiple accounts, their voicemails will be displayed in categories as shown in the figure below.



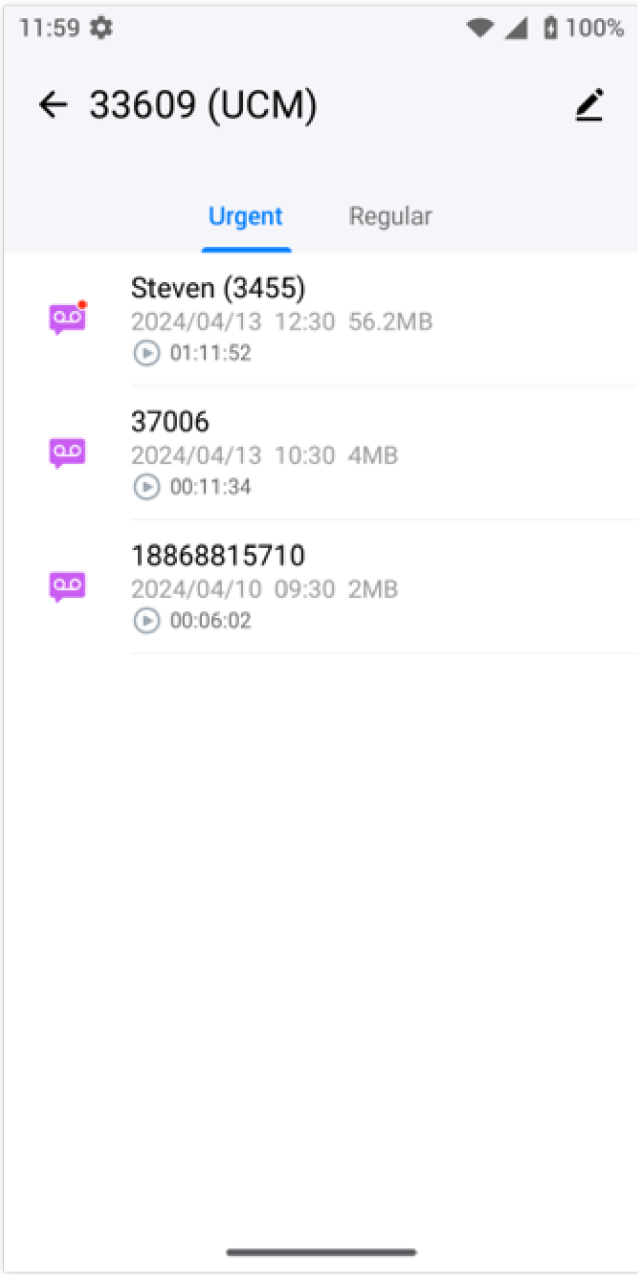
Voicemail List

To access the voicemail, the user can tap on the account number that the user wants to access, the user will be prompted to enter the voicemail password. When the correct password is entered, the user will be able to play the voicemail messages.

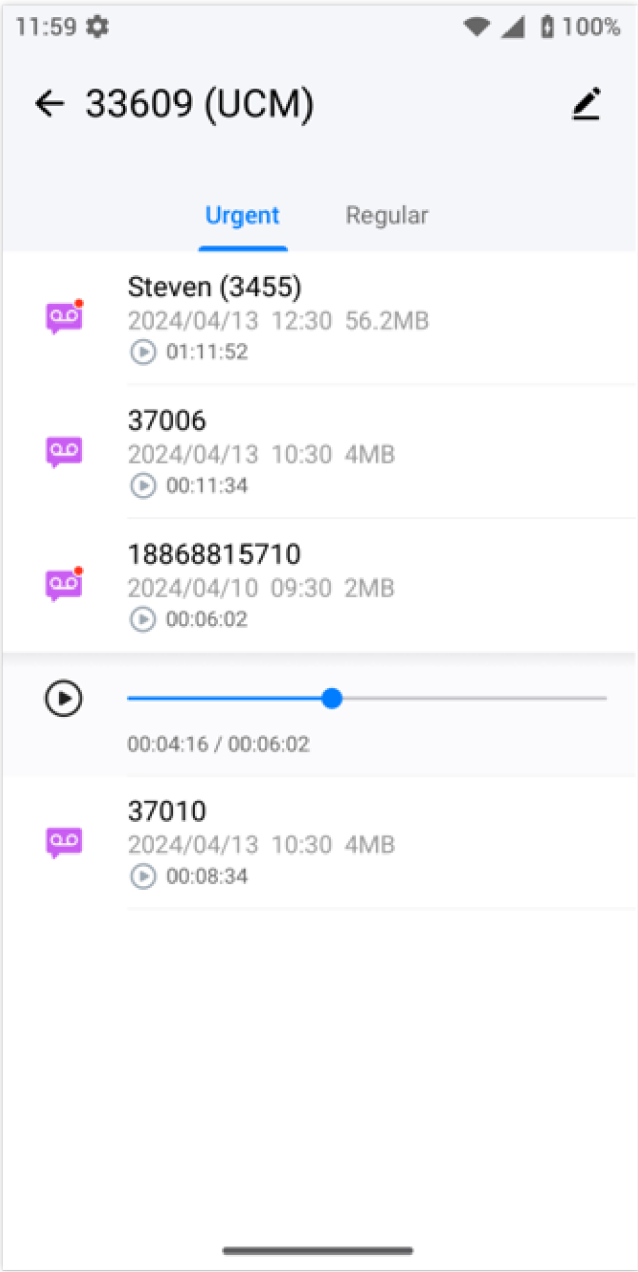


Voicemail Password Prompt

The voicemail messages are displayed as shown in the figure below. The messages are classified into two categories, urgent, and regular. The voicemail can then be played directly from this page.



Voicemail Messages



Playing The Voicemail Message

# RECORDING

The WP856 allows users to record both audio calls, and normal recordings, to do that please follow the below steps:

1. On the application menu, Click the icon



2. Click the icon



to start recording audio.

3. Click the icon



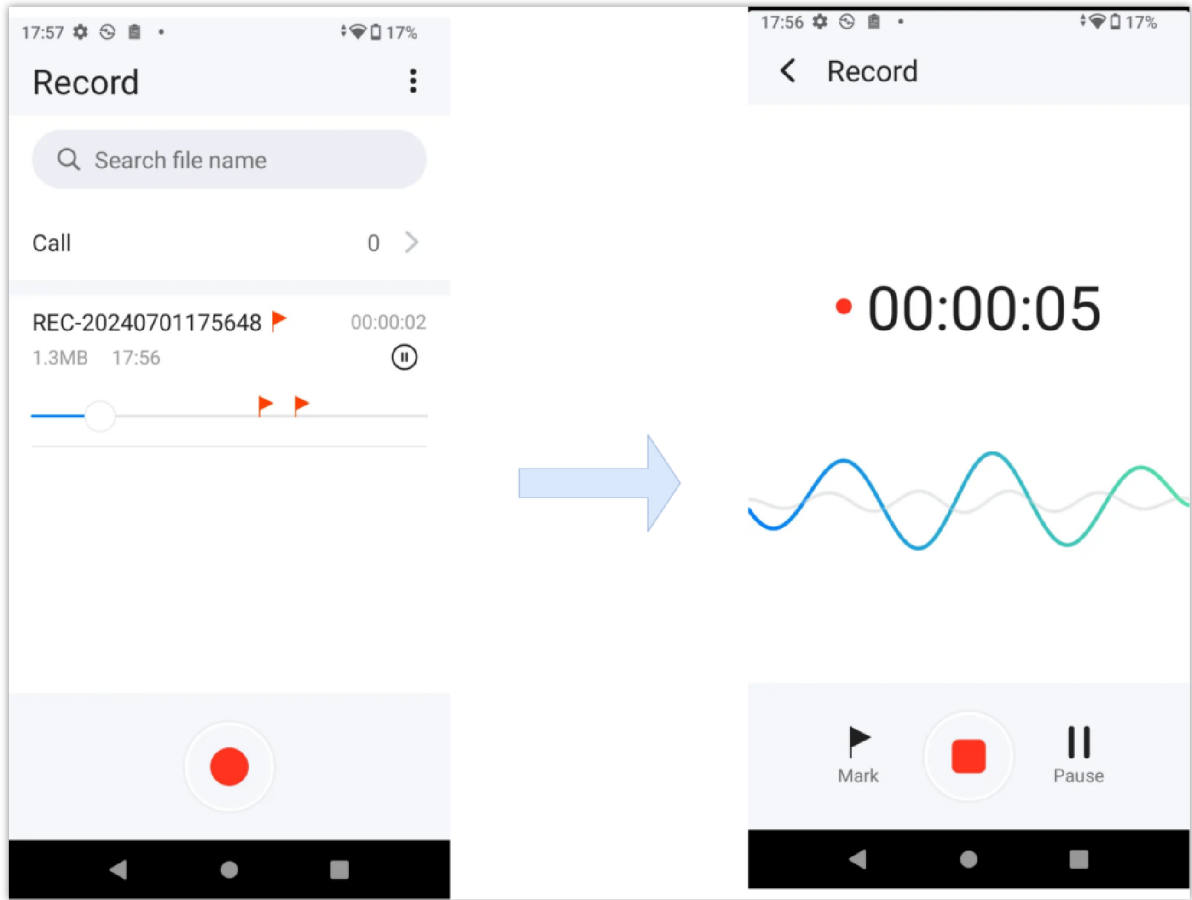
to stop audio recording.

4. While the audio is being recorded, you can click the icon



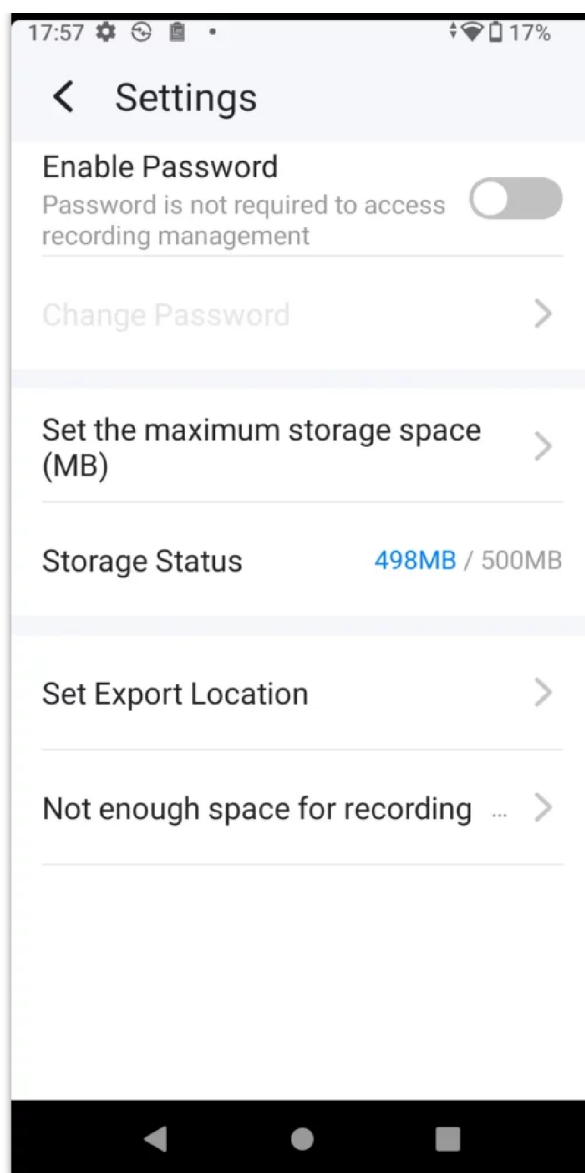
to flag a specific section of the recorded audio.

5. The recording files will be stored under the name REC-YYYYMMDDHHMMSS
6. If the calls are configured to be recorded, then all recorded calls will be stored under the call folder
7. Some additional settings can be configured such as :
- Enable Password: sets a password to access the recording app
  - Set Maximum storage space: defines the maximum storage dedicated to recording
  - Set Export Location: Defines where on the system, the recording files will be stored
  - Not Enough Space for recording action: defines how the device will react when there is no space for new recordings, the options are to either replace old recordings with new ones or stop the recordings



Recording



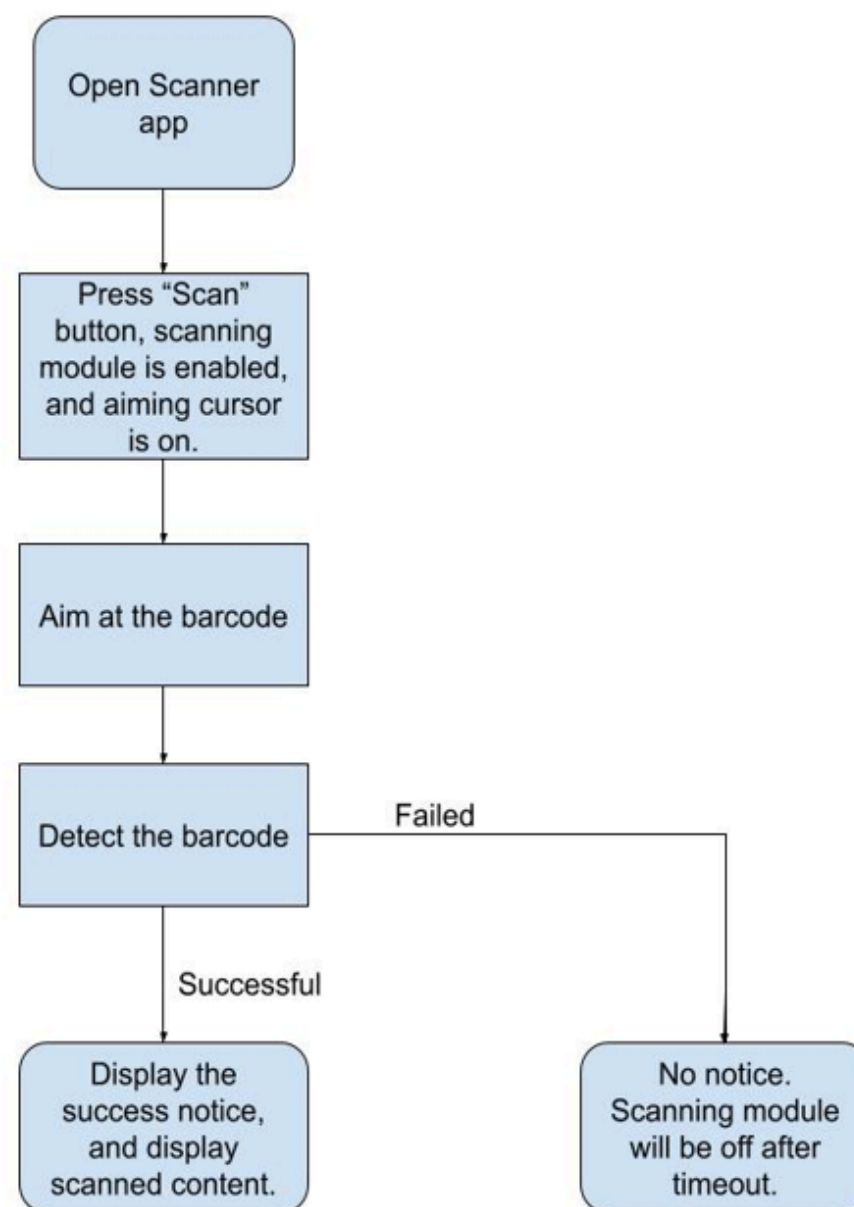


*Recording Settings*

## SCANNING DEMONSTRATION

WP856 scans one-dimensional and two-dimensional codes, as well as other information, using its hardware scanning head. The decoded content is then displayed in the scanning demonstration app or the corresponding scanning application app (which can also be a third-party application).

- Users can scan barcodes, QR codes, composite codes, and postal codes by pressing the scan button or clicking the scan button on the LCD. After a successful scan, the corresponding barcode information will be displayed in the APP.
- Supports code scanning mode switching :
  - **Single code scanning:** Long press the scan button to read the code, the code reading will stop after successful or releasing the button.
  - **Continuous code scanning:** Press the scan button once or long to start continuous scanning, and press it again or long to end code reading. Continuous code reading starts after the button is pressed once. Then the device scanner is on until the button is pressed again to end.
  - **Read code until timeout:** Press or hold the scan button to start the countdown. If a barcode is read before the timeout, scanning will automatically stop. If no barcode is detected, scanning will automatically stop after the timeout.
  - **Delayed code reading:** The device does not read the code when you hold down the scan button, and read the code after releasing the scan button.



To access the Scanning Demo application:

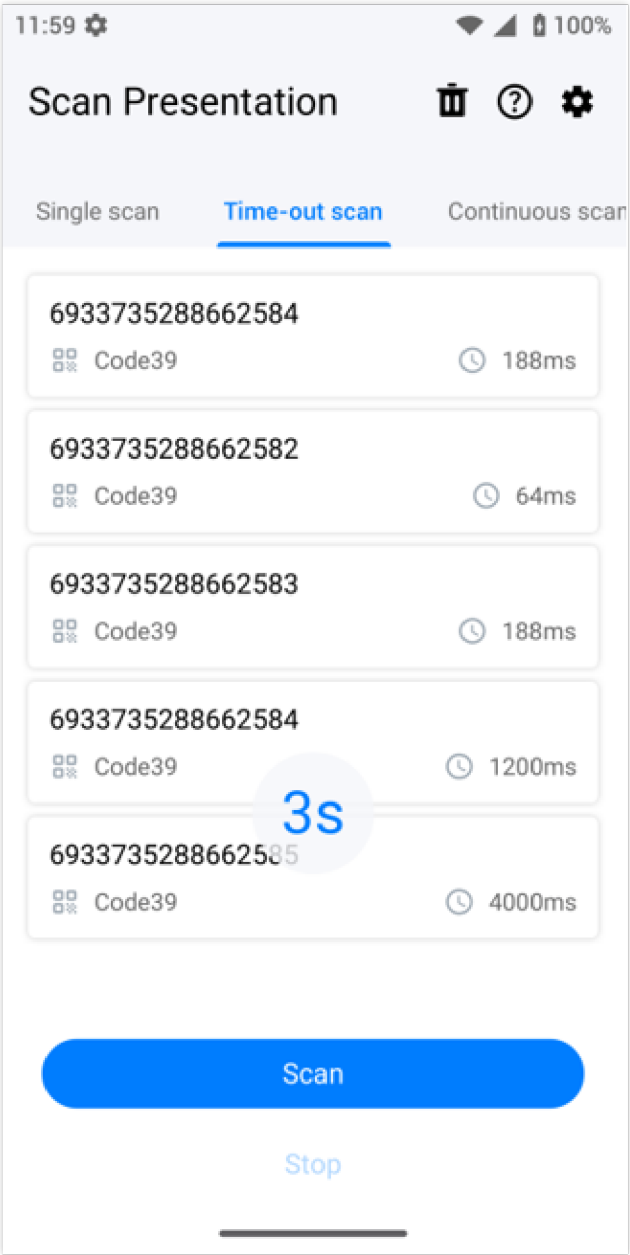
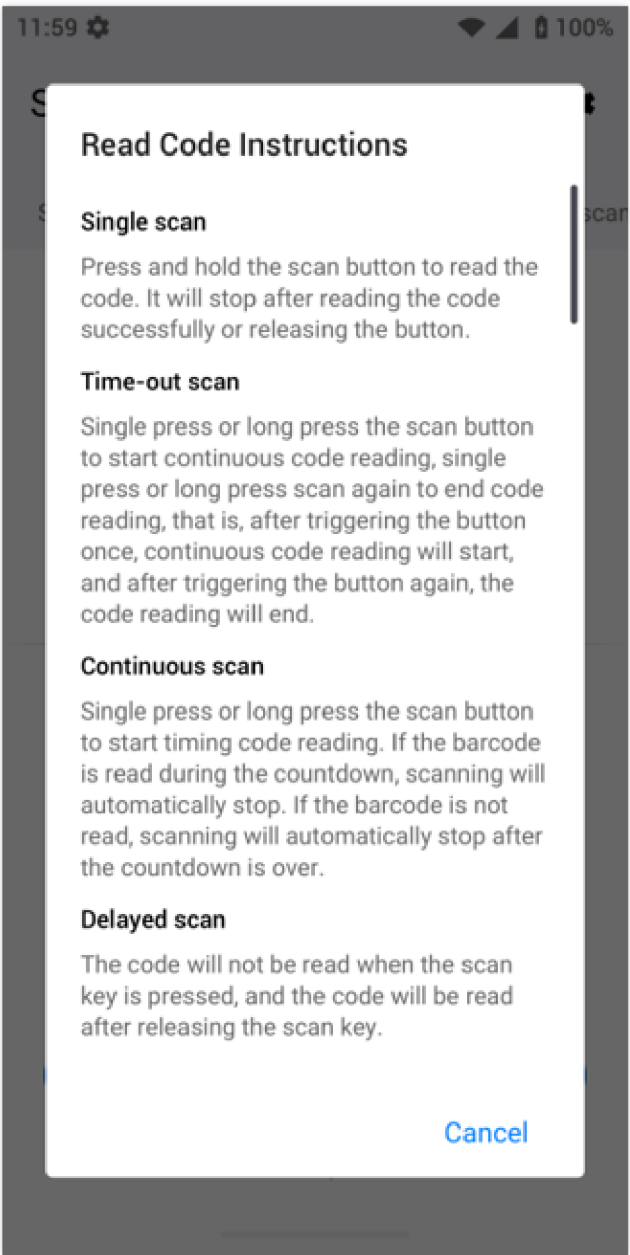
1. On the Menu, Launch the Scanning Demo application by clicking the icon

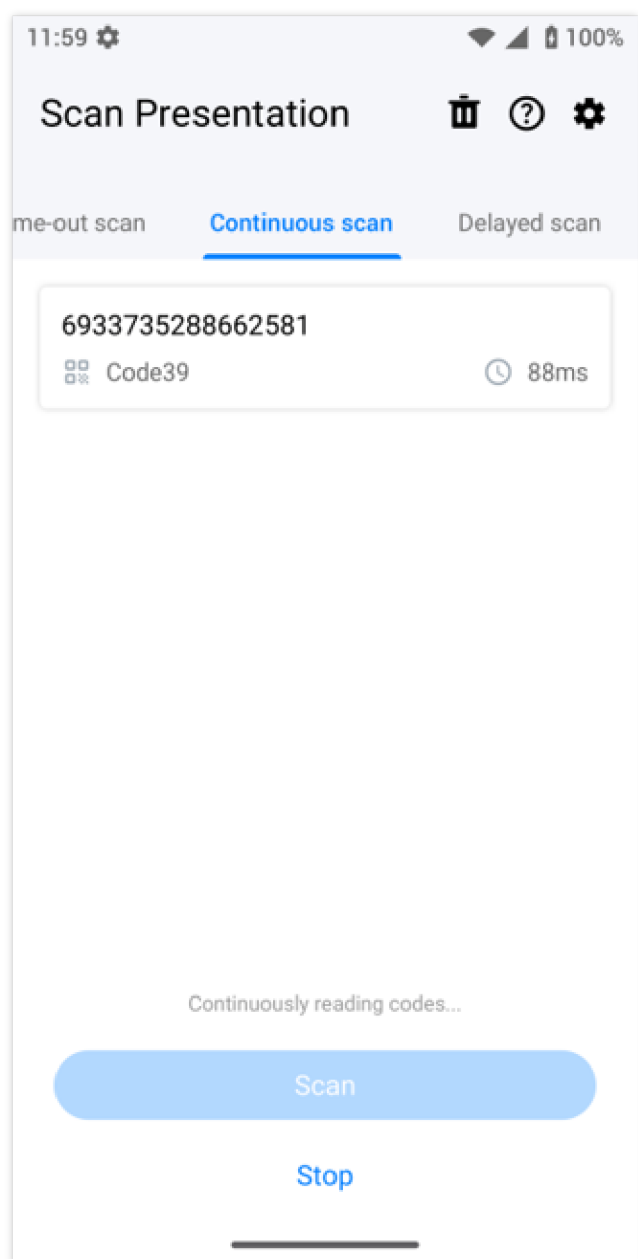


2. Press and hold the scan key to scan a code
3. Once the code is scanned, the information on the product will be displayed
4. If any additional information is required, please click the icon



some usage instructions





# STATE INSPECTION

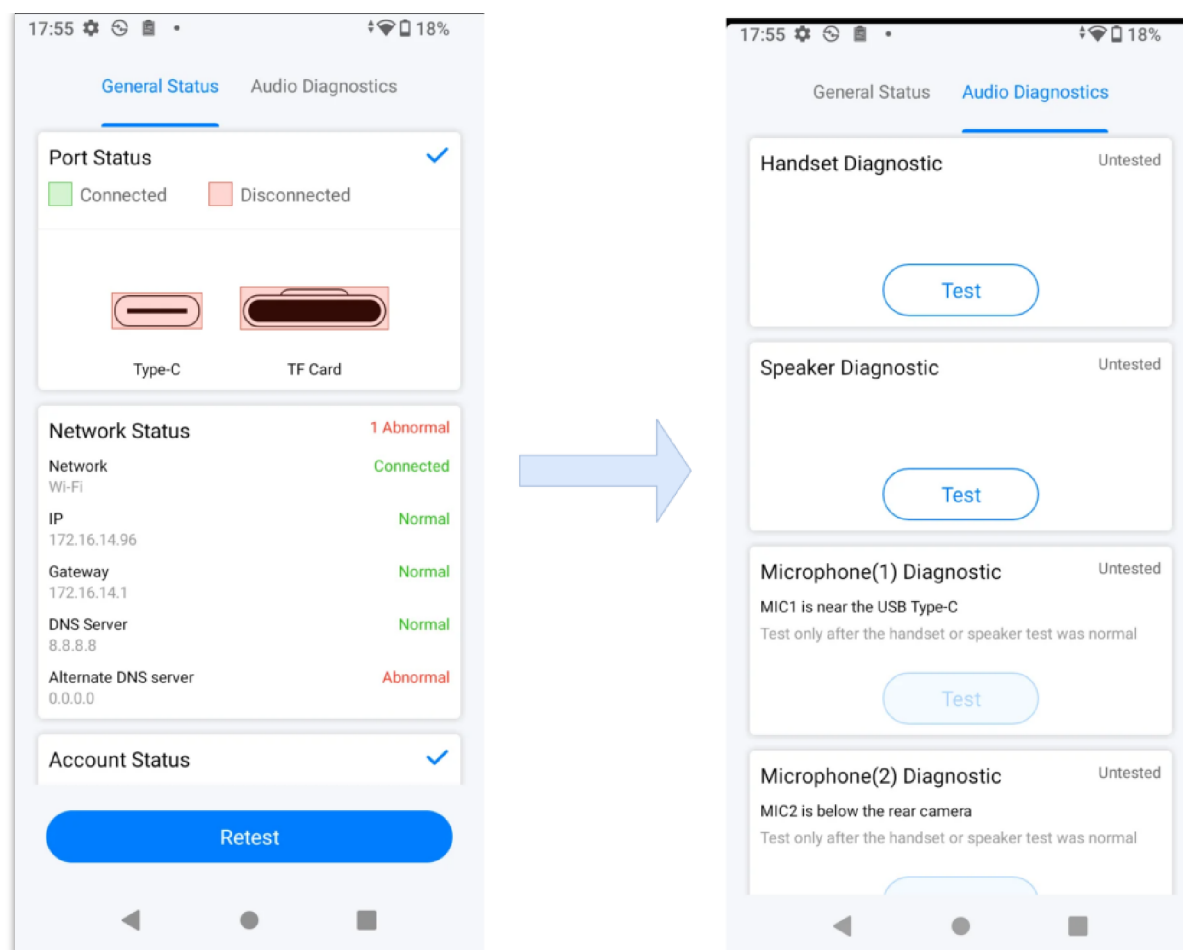
The state inspection application on the WP856 mobile computing device is designed to monitor and track the device’s condition and performance. It allows users to run diagnostics, and log inspection data, directly on the device. the data contains information about the ports’ sanity, network status, Account status, audio diagnostics...

To start State Inspection, please follow the below steps:

- 1. On the application menu, click the icon



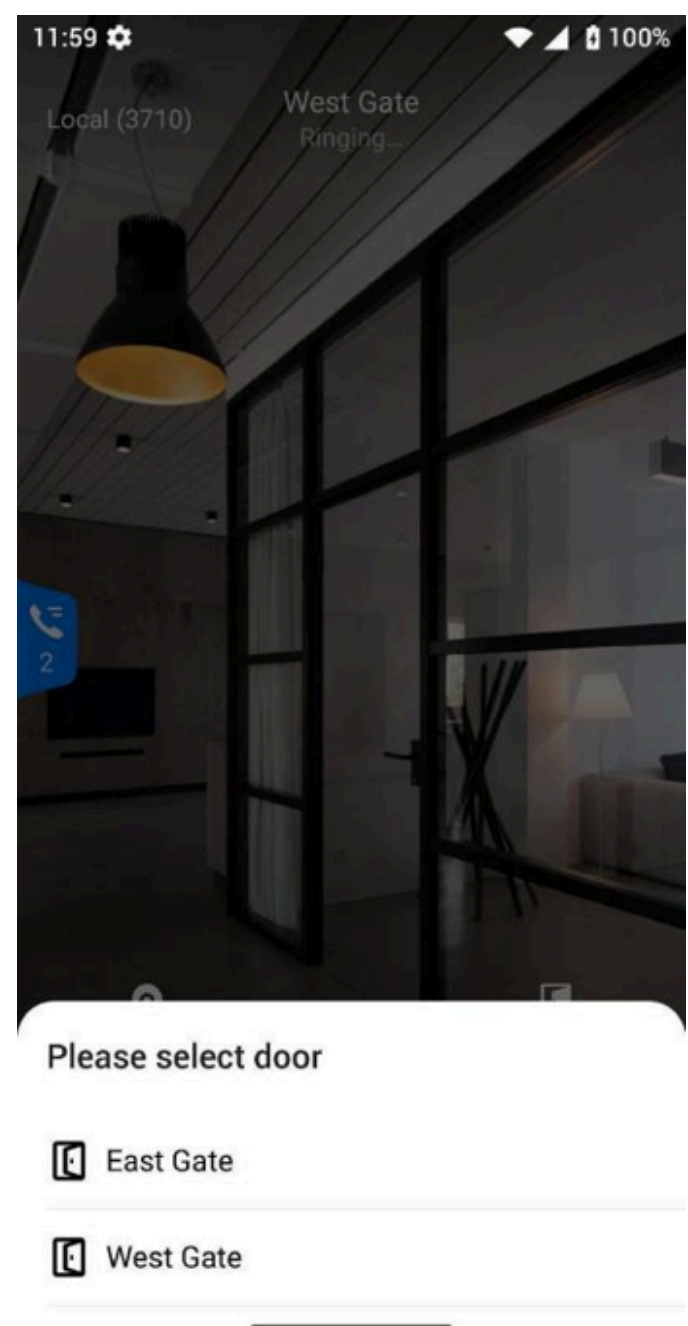
- 2. Choose to select general status inspection or Audio Diagnostics.
  - o Status inspection: this will cover inspecting the device’s port sanity, network information, and account status
  - o Audio Diagnostics: this will test and verify audio-related information such as the handset diagnostic, Speaker diagnostic, and Microphone Diagnostics...

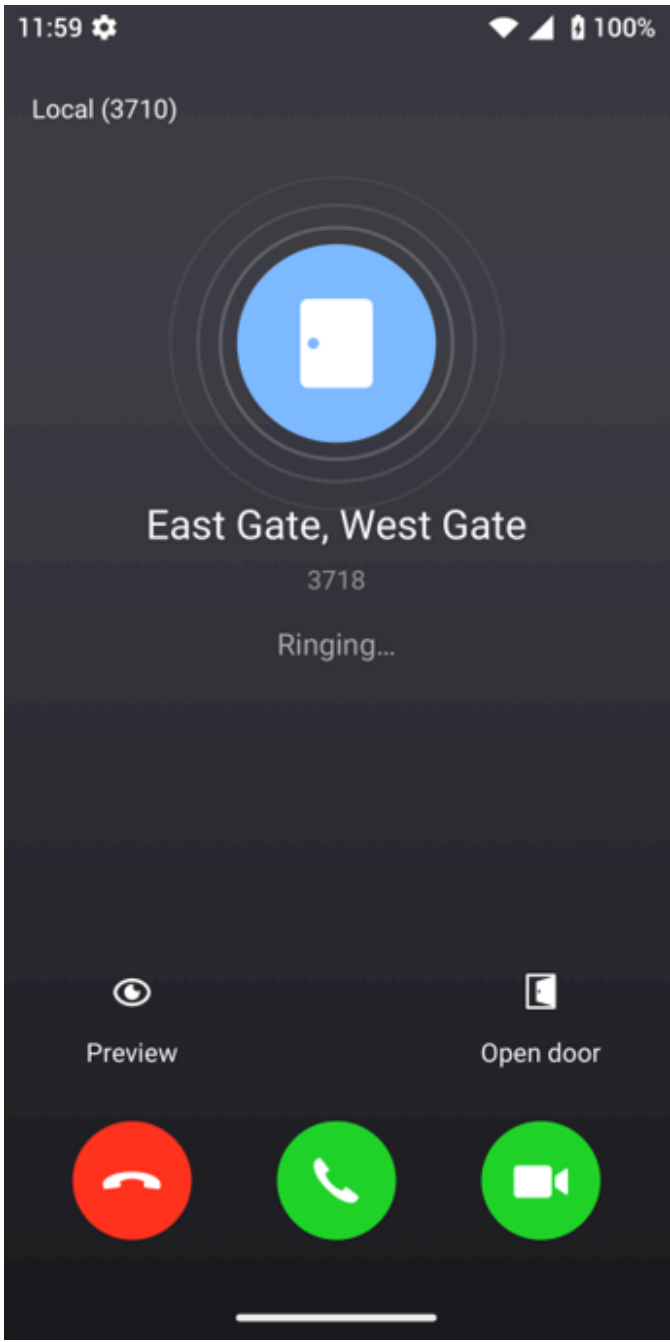
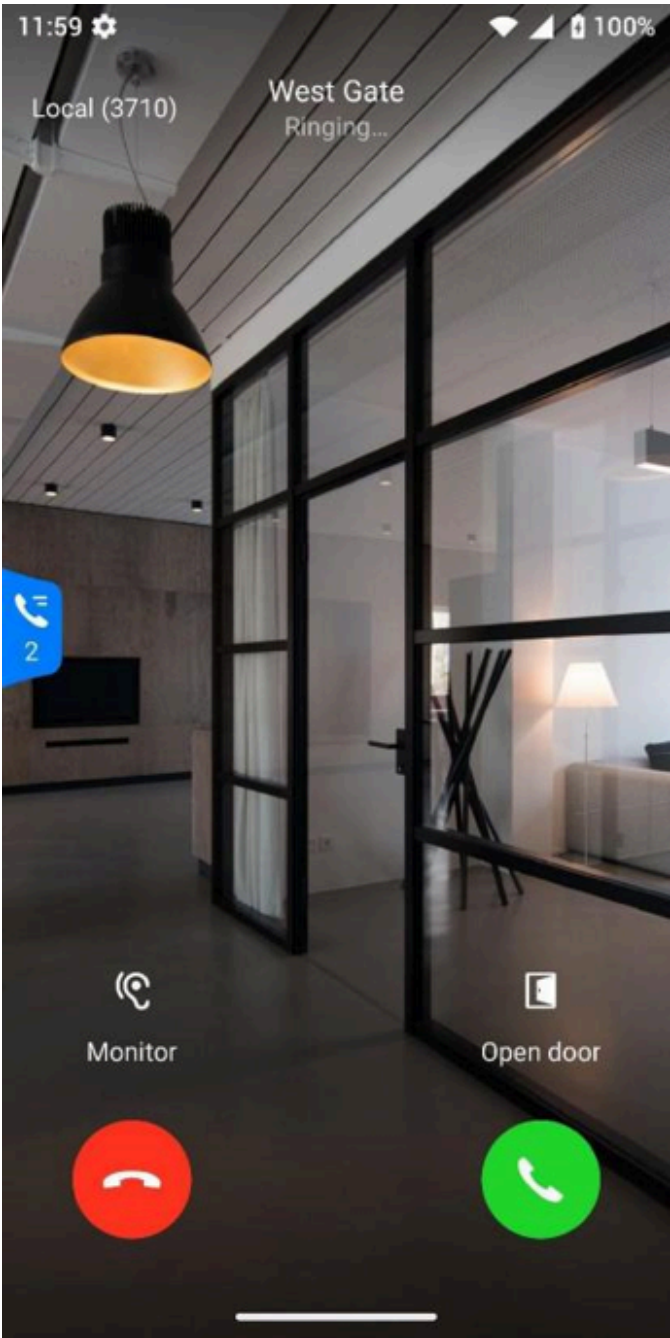


State Inspection

## DOOR CONTROL

The WP856 can be used to control different door access control devices like our facility access solution, the GDS37XX. Each WP856 device can control up to 10 door access systems. When the doorbell is rung, the phone will switch to door system mode, see the screenshots below for the aforementioned scenario.

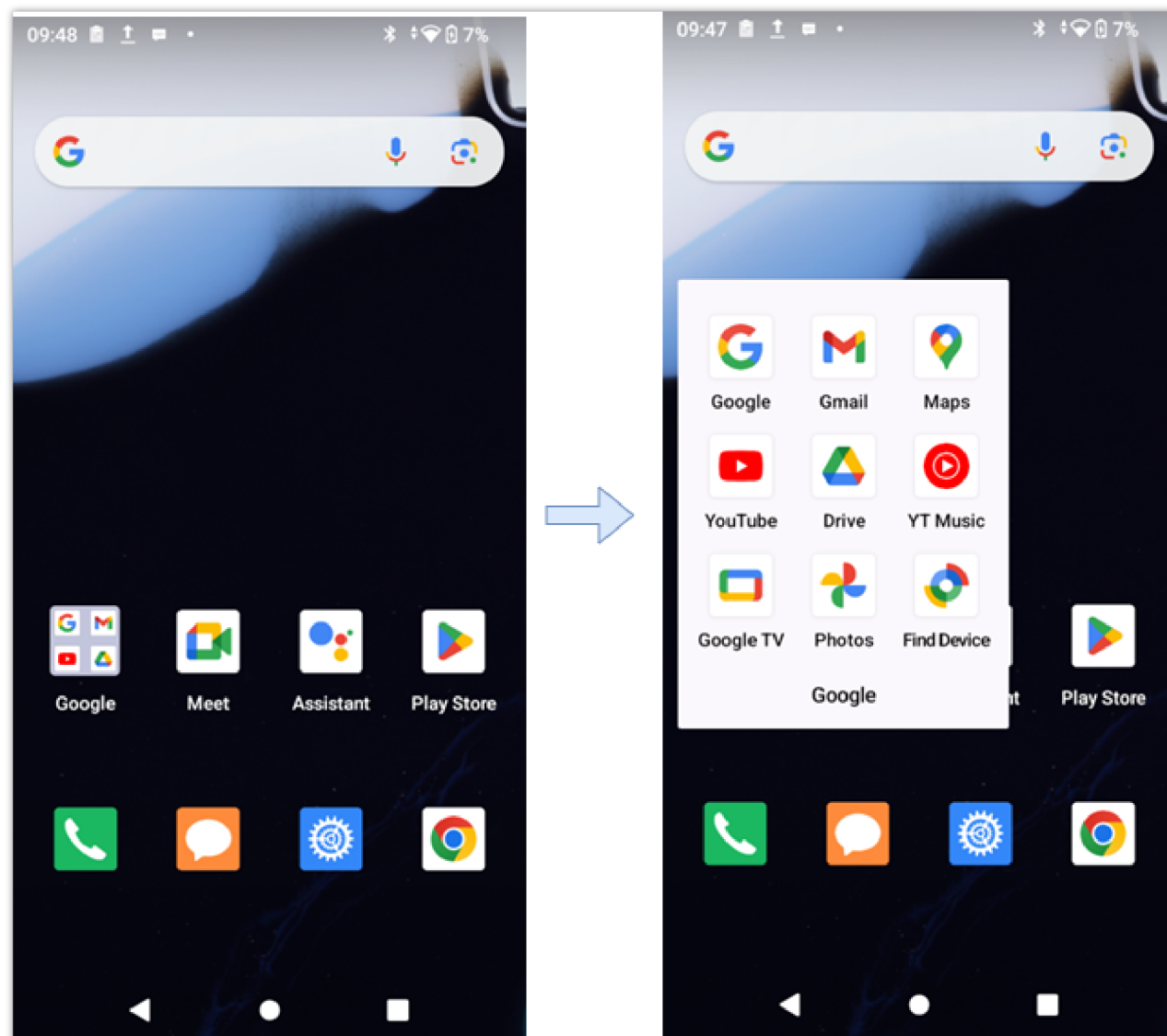




# Google GMS Suite Services


Google GMS suite services refer to Google Mobile Services, which is a collection of Google applications and services provided for Android devices. GMS provides users and developers with a series of Google applications and services, including but not limited to:

- **Google Play Store:** A platform for downloading and updating apps.
- **Google Maps:** Provides map and navigation services.
- **Gmail, YouTube, Google Drive, etc.:** Google's communication and cloud storage services.
- **Google Photos:** A photo and video backup and management service.
- **Google Files:** is a file management application used to clean up storage space and manage files.



## DIAGNOSTICS

The WP856 device provides a comprehensive and visual overview of network status, account registration, interface status, and sound channels. It features one-click inspections, covering interface, network, and account detection. The interface inspection includes checks on the Type-C port and TD card interface, while the network inspection assesses wireless connectivity, IP address, gateway, and DNS servers. Additionally, it checks the SIP account status for up to six accounts and the outbound proxy. The audio inspection evaluates the receiver, speaker, and microphones by playing and recording sounds, allowing users to verify sound quality and detect any noise issues.

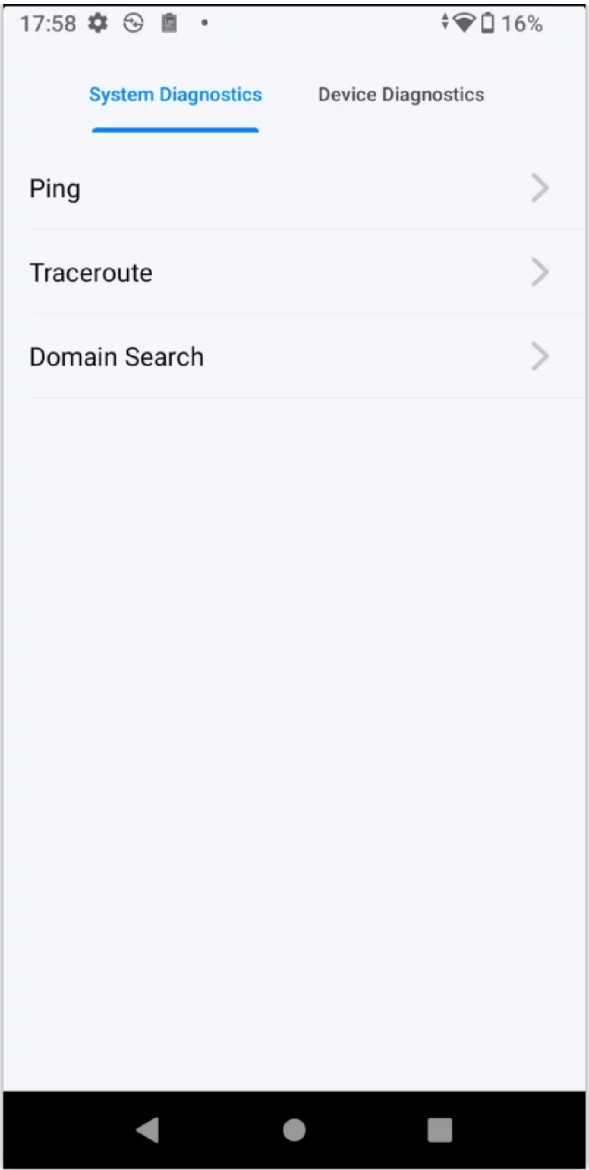
The diagnostic tool can be accessed by clicking the icon  on the application menu,

It provides a comprehensive test of the device's hardware and software components to identify any issues.

### System Diagnostics

- Ping: Check whether the phone can ping the target host normally.
- Traceroute: Check whether the device traceroute to the target host is normal.
- Domain name query: Enter the target URL to generate the return field of the domain name query result; support stopping the generation before the generation is completed.



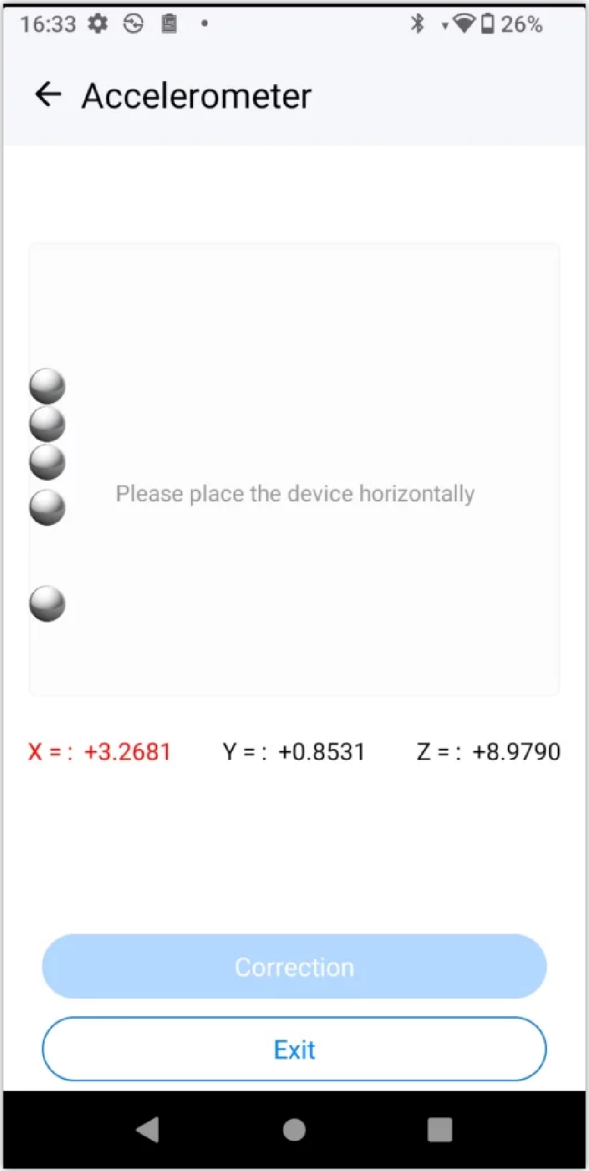


System Diagnostics

Device Diagnostics

Accelerometer

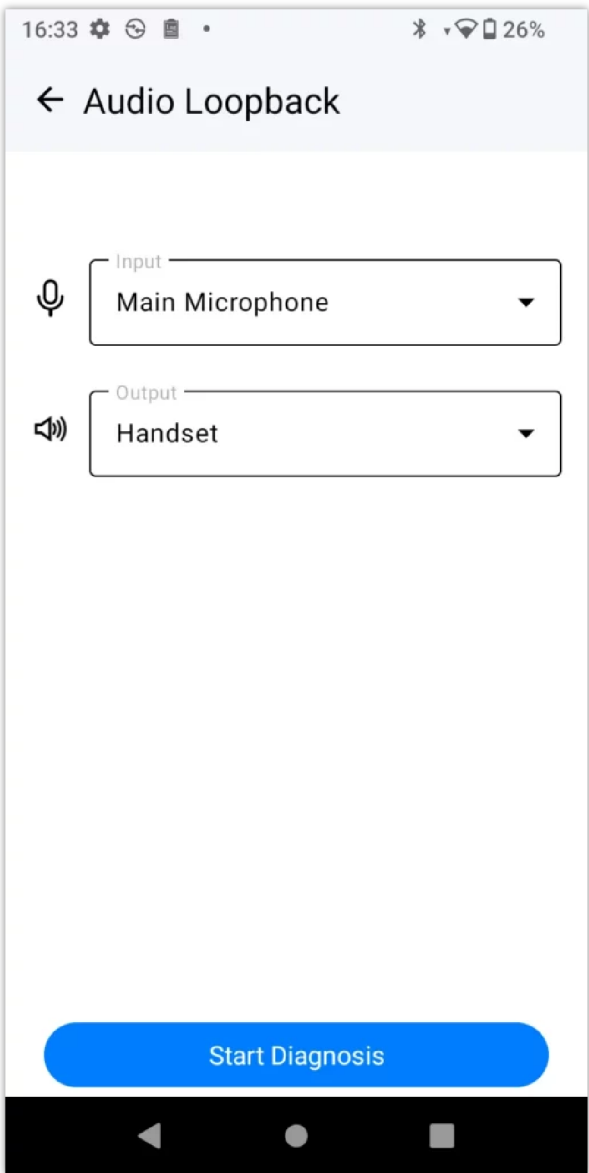
Tests the device’s accelerometer by detecting and measuring motion and orientation changes.



Accelerometer

Audio Loopback

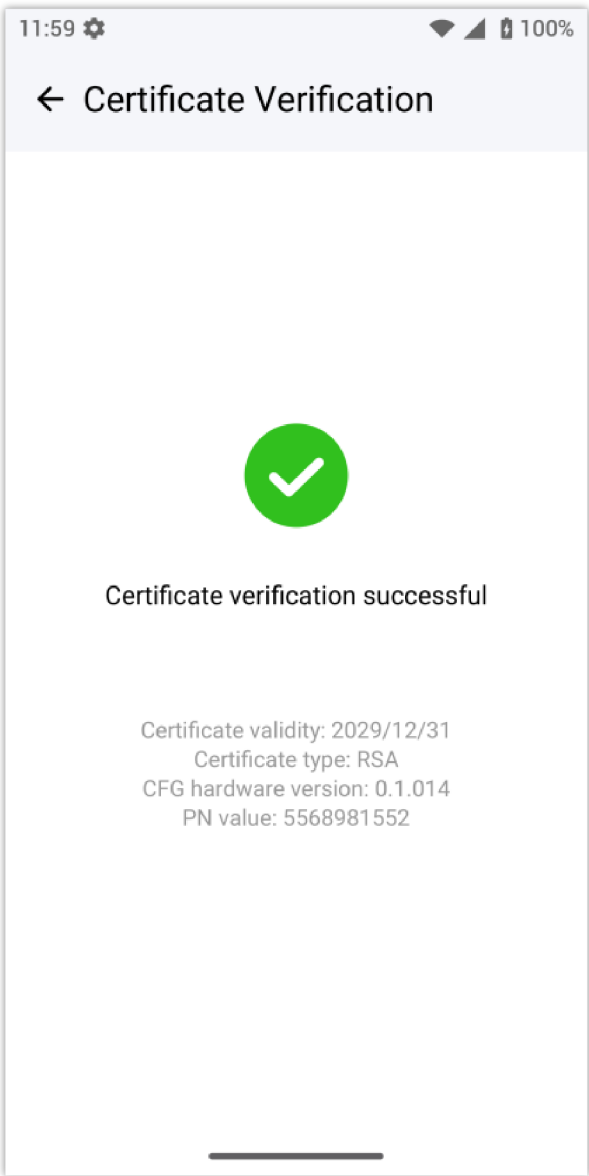
Check the audio system by recording and playing back sound to ensure the microphone and speakers are working properly.



Audio Loopback

Certificate Check

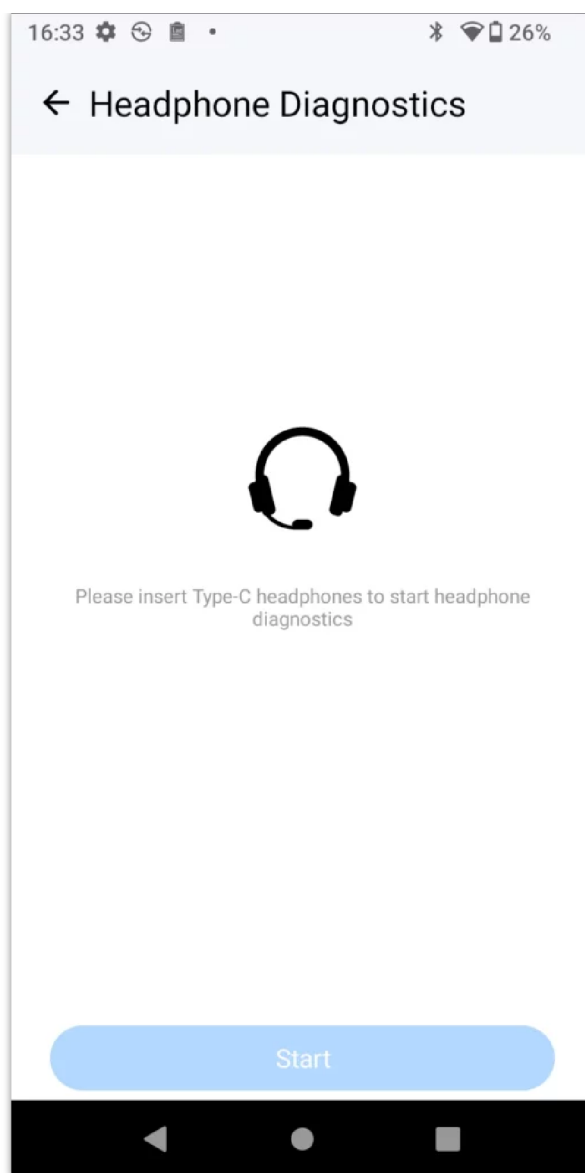
Verifies the validity and authenticity of security certificates used by the device.



Certificate Check

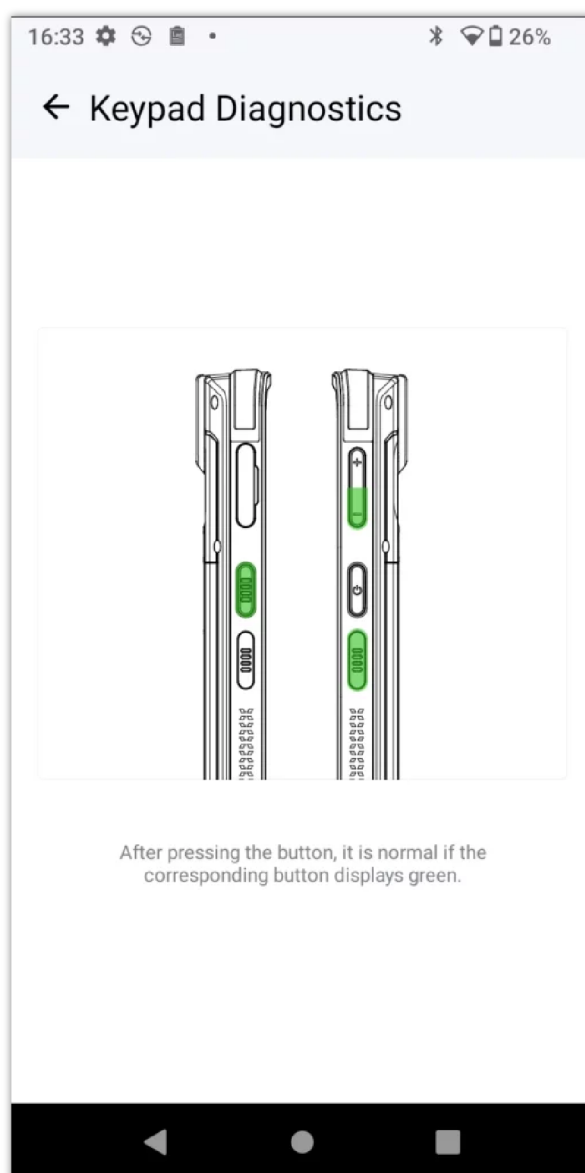
Headphone Diagnostics

Assesses the functionality of the connected headphones by playing sound and recording feedback.



## Keypad Diagnostics

Tests each side key on the WP856 device to ensure they are responsive and functioning correctly.



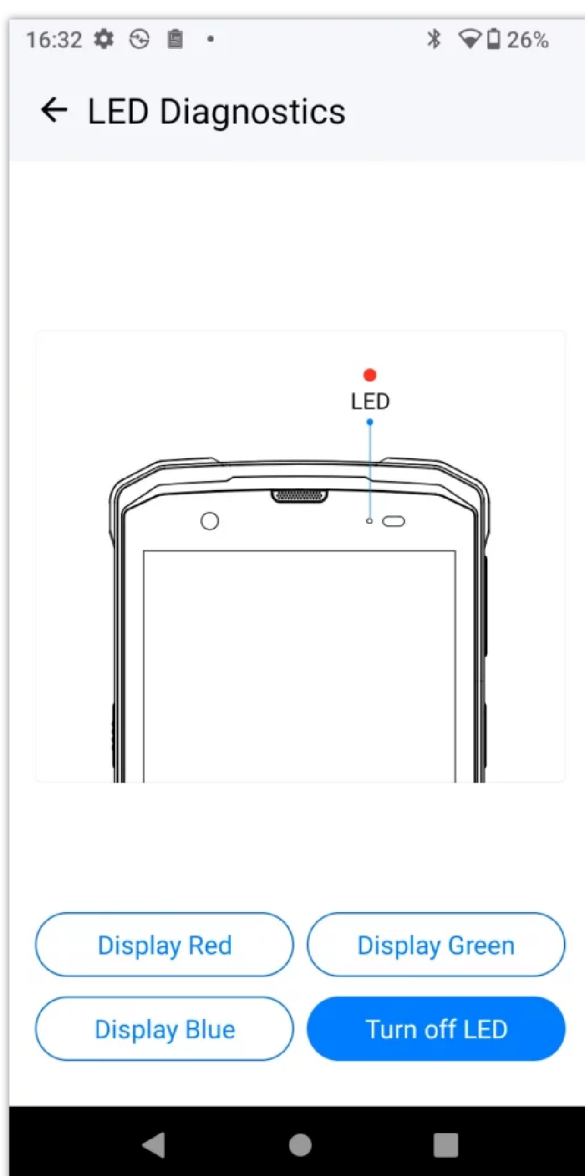
## LCD Diagnostics

Checks the display screen for dead pixels, color accuracy, and touch responsiveness.



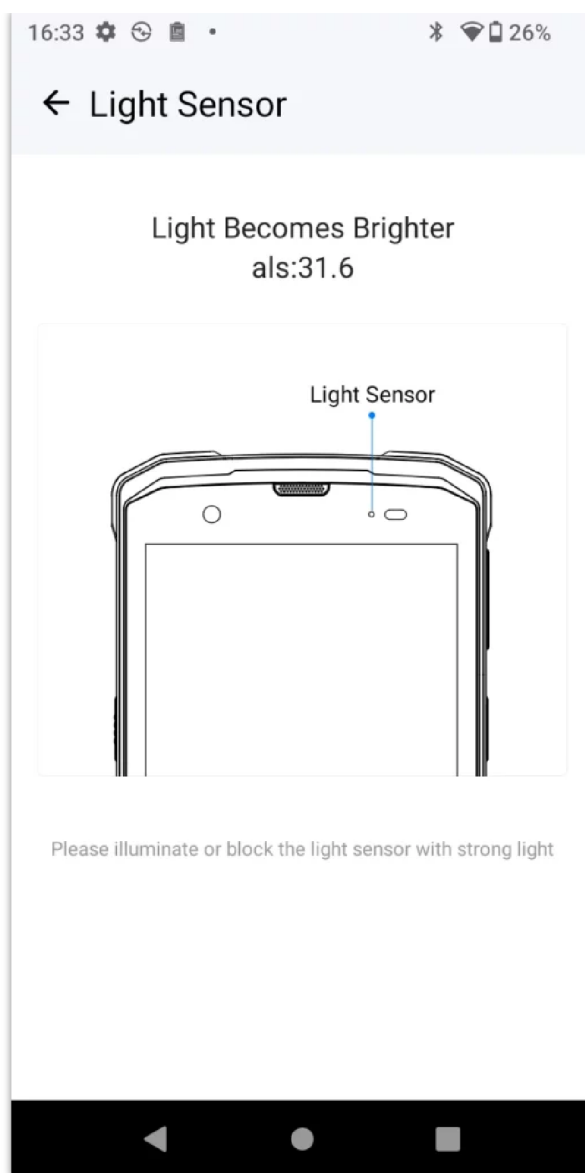
## LED Diagnostics

Tests the device's LED lights to ensure they illuminate correctly for notifications and alerts.



## Light Sensor

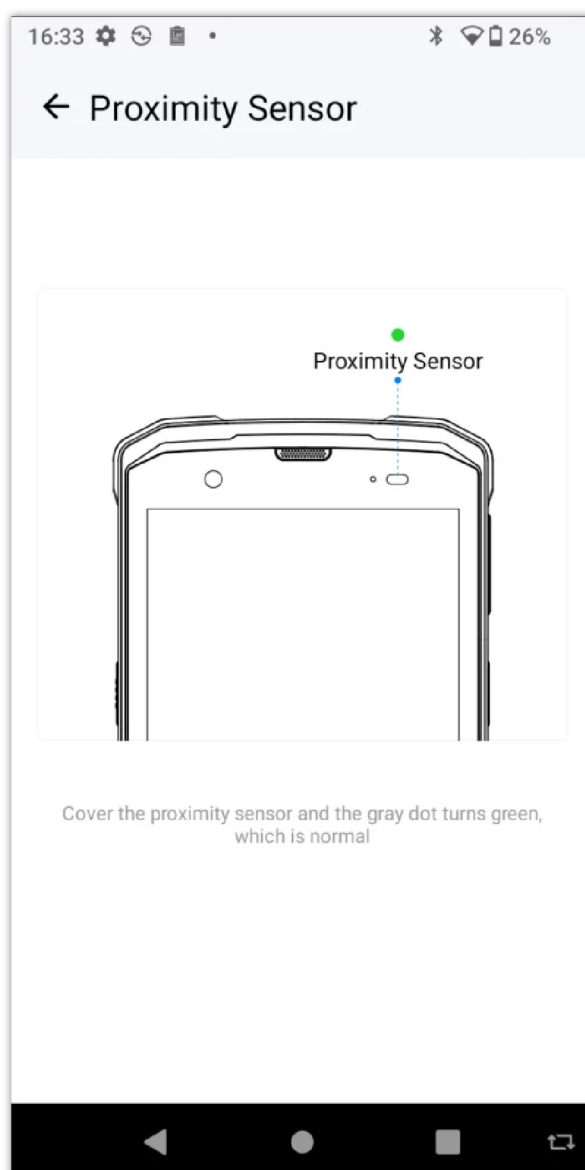
Evaluates the ambient light sensor's ability to detect changes in lighting conditions.



*Light Sensors*

## Proximity Sensor

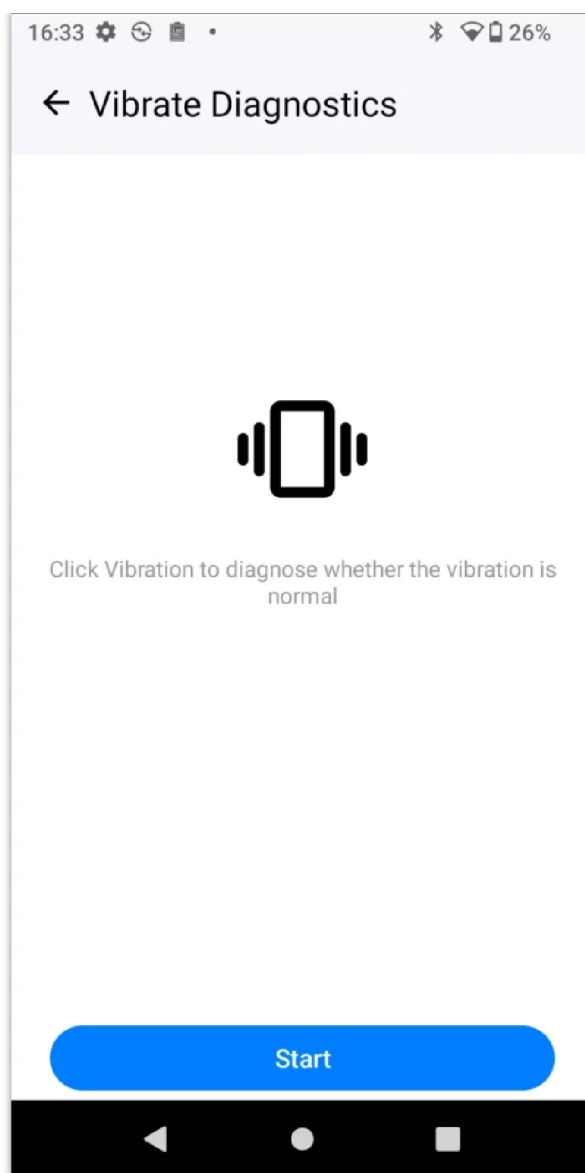
Tests the proximity sensor's ability to detect when objects are close to the screen, commonly used during calls.



*Proximity Sensor*

## Vibrate Diagnostics

Checks the device's vibration motor to ensure it operates correctly for notifications and alerts.



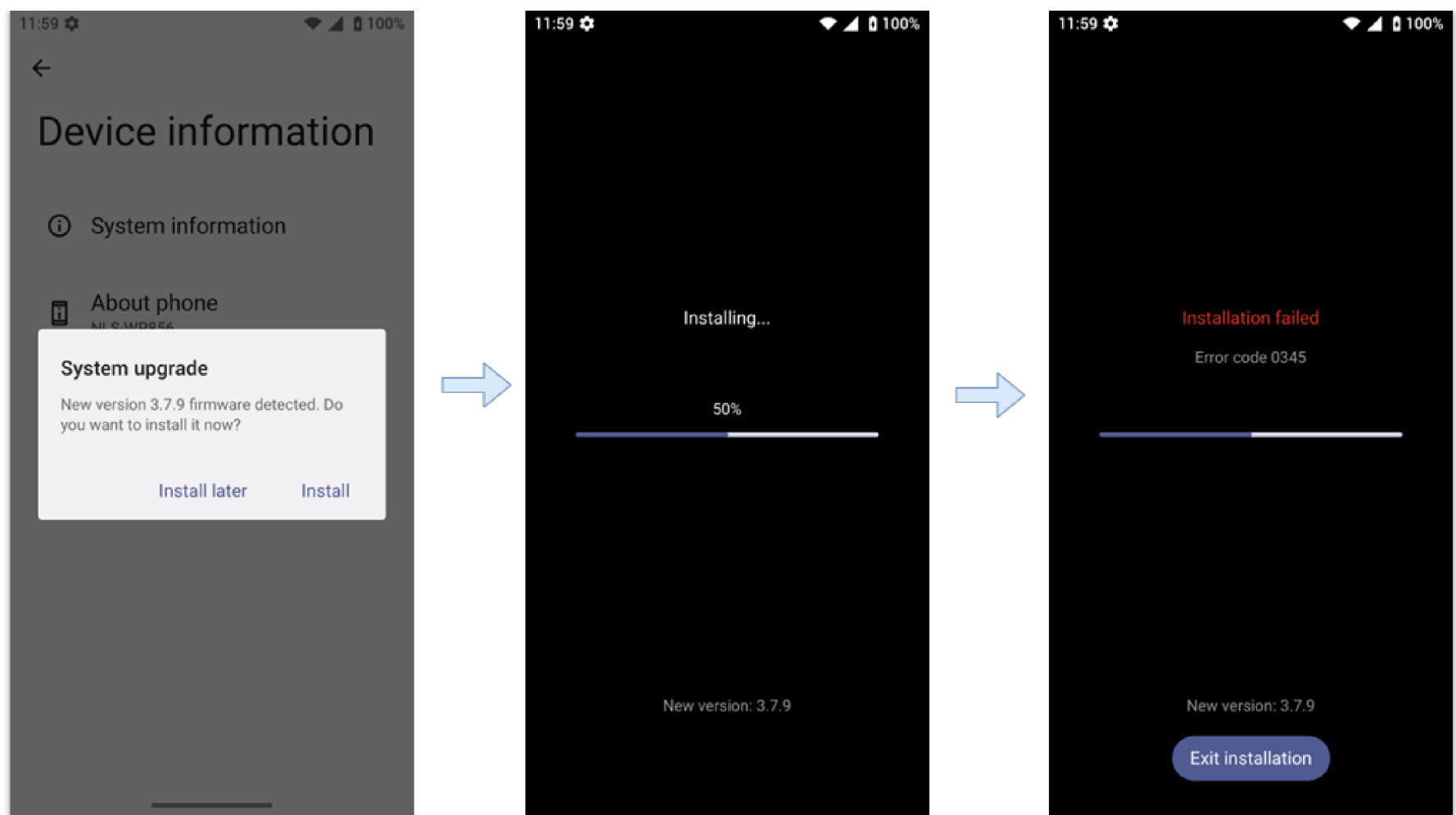
*Vibrate Diagnostics*

## USB/TF Card Operations

The WP856 supports USB and TF Card connections, which can help provide alternative ways to upgrade the device, install test firmware, or configure the network, in this section of the guide, we will walk you through how this can be done:

### Firmware upgrade via USB/TF card

- Put the firmware in the root directory of the USB drive/ TF card or in the warehouse directory, and the version number is different from the current firmware version.
- On LCD, after the new version is detected, a pop-up window will appear to confirm whether to upgrade.
- If you pull out the USB disk/TF card during the download process, the upgrade will be interrupted. You can insert it and restart the upgrade normally again.
- Unplug the USB drive/TF card during the installation process, and the upgrade can be completed normally.



*Firmware upgrade via USB/TF card*

#### Note

Upgrading will not start if the battery level is below 15%.

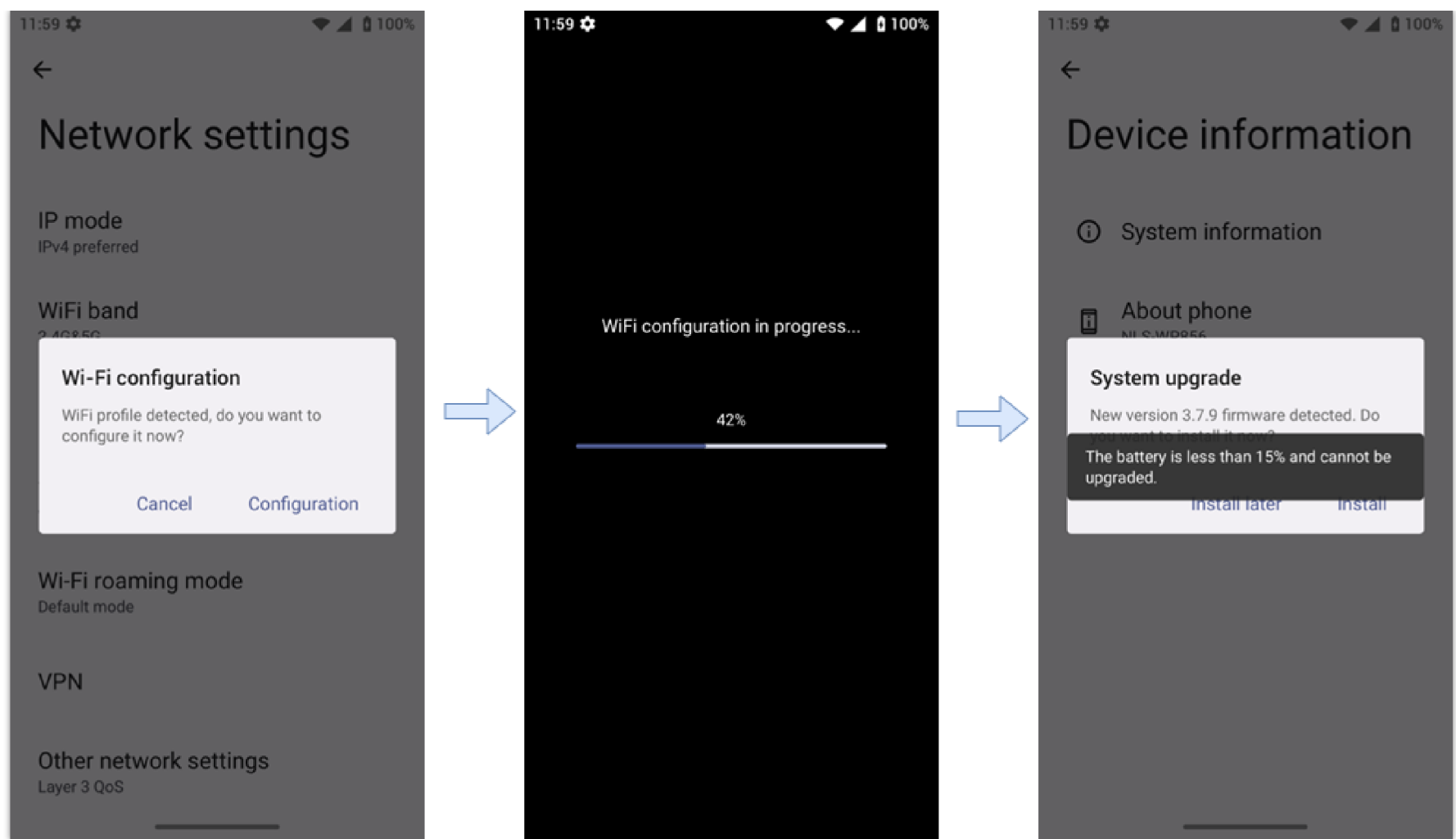
### USB/TF card configuration file

- On the LCD settings, Access GS Settings → Advanced Settings → System Upgrade → USB/TF Card Upgrade Configuration File
- When the USB/TF card is connected, after clicking "USB/TF Card Upgrade Configuration File", the root directory will be traversed to see if the CFG configuration file in the root directory is recognized.
- After the configuration file is detected, the user confirms to upgrade the cfg and starts automatic configuration. After applying all CFG files, it asks whether to reboot immediately to take effect.

### USB/SD card Wi-Fi configuration

- On the LCD Settings: Go to GS Settings → Network Settings → Configuration Wi-Fi via USB/TF Card.
- Place the Wi-Fi configuration installation package wifiAutoConfig.zip in the root directory of the USB drive/SD card.
- When the USB/TF card is connected, click "Configuration Wi-Fi via USB/TF Card" to start detecting the configuration file and automatically configure the Wi-Fi.





## UPGRADING AND PROVISIONING

The WP856 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](http://firmware.grandstream.com/BETA)

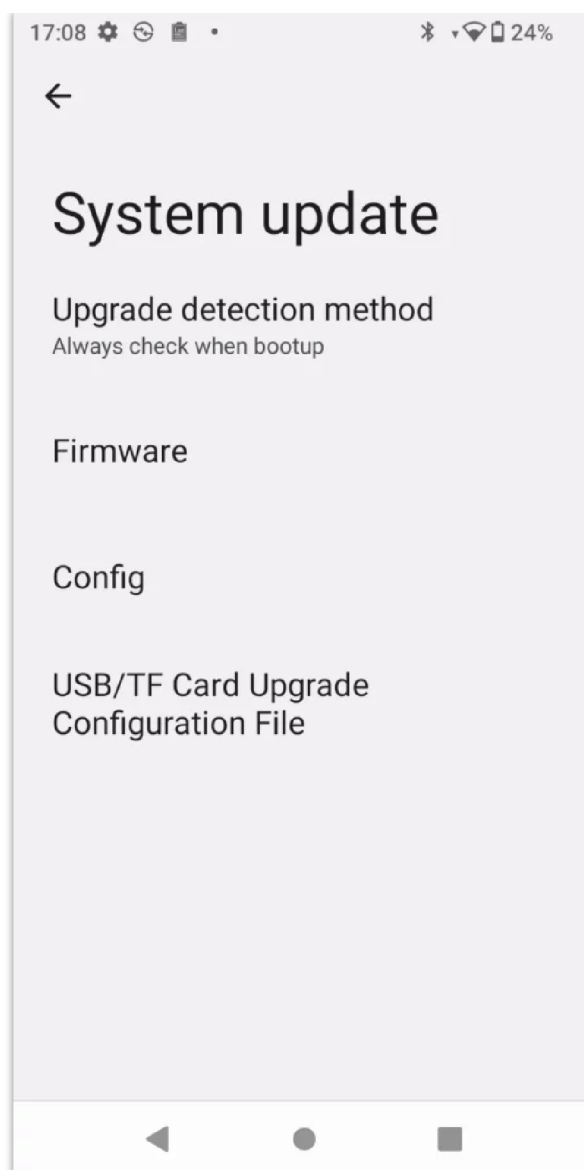
fw.mycompany.com

### Upgrade and Provisioning Configuration

There are two ways to set up an upgrade and provisioning on WP856. They are LCD Menu and Web GUI.

#### Configure via LCD Menu

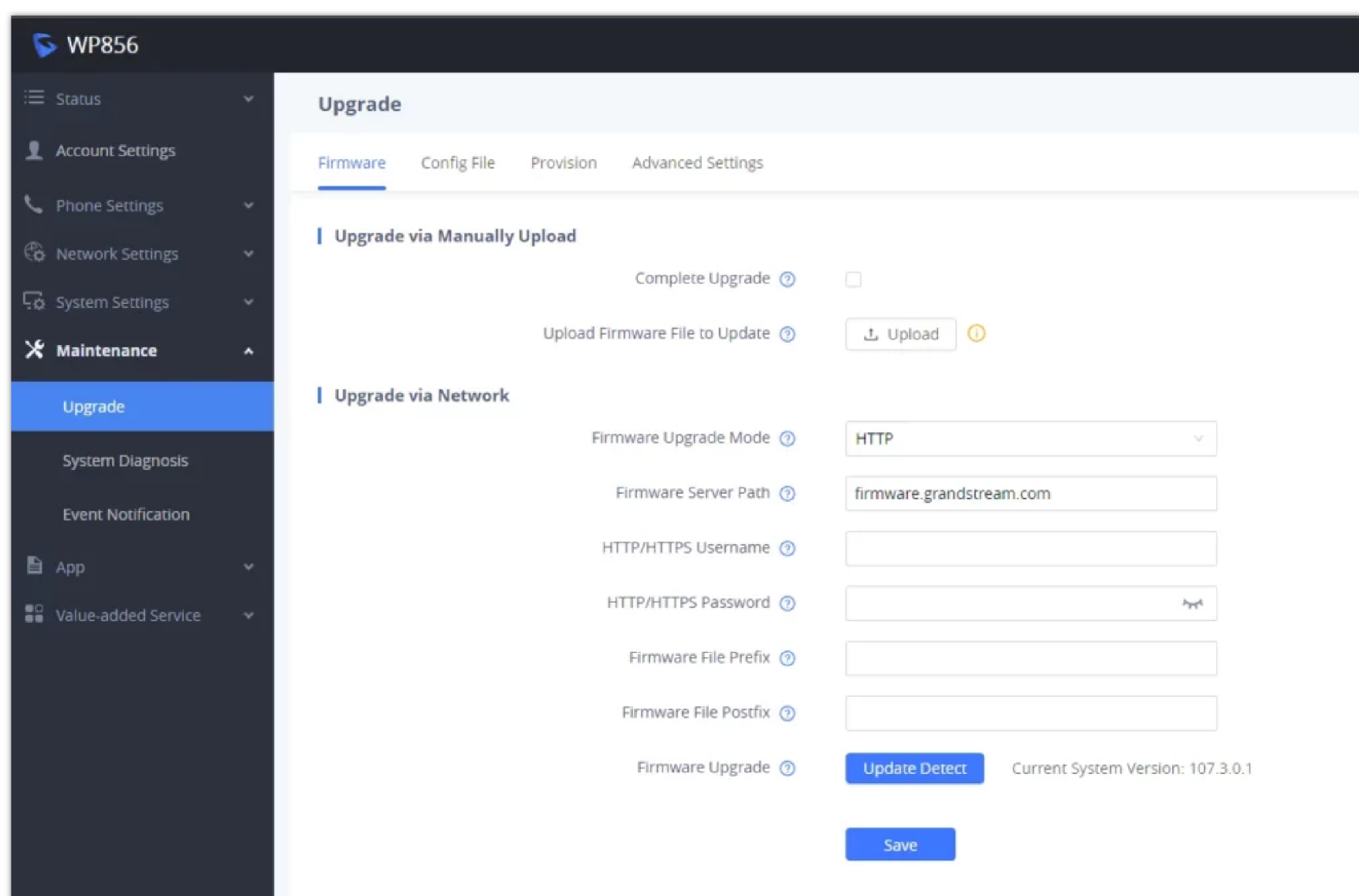
1. In WP856 Settings, select **Advanced Settings** → **System Update**.
2. Activate the Upgrade Detection method, this will detect if a new firmware or configuration file is available, based on the firmware and config server paths provided.



Configure via LCD Menu

## Configure via Web GUI

Open a web browser on a PC and enter the IP address for the WP856. 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 the Upgrade button, or reboot the phone to initiate the firmware upgrade process.



WP856 Upgrade Configuration via Web GUI

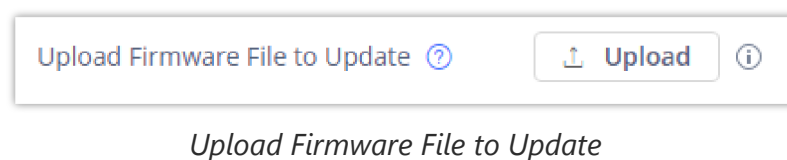
## Warning

Please do not power off the WP856 when the upgrading process is on.

## Upload Firmware Locally

If there is no HTTP(S)/TFTP server, users could also upload the firmware to the WP856 directly via Web GUI. Please follow the steps below to upload firmware to WP856 locally.

1. Download the latest WP856 firmware file from the following link and save it on your PC.  
<https://www.grandstream.com/support/firmware>
2. Log in to the Web GUI as an administrator on the PC.
3. Go to Web GUI → Maintenance → Upgrade → Firmware.
4. Click the "Upload" button, a window will be prompted to select the 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 WP856 LCD.
7. The phone will reboot again with the new firmware version upgraded.



## 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:

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

Please check our website at <https://www.grandstream.com/support/firmware> for the 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 WP856 device to the same LAN segment;
3. Launch the TFTP server and go to the **File** → **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 WP856 to the IP address of the PC;
6. Update the changes and reboot the WP856.

## Provisioning and Configuration File Download

WP856 SIP Device can be configured via the Web Interface as well as via a Configuration File (binary or XML) through HTTP/HTTPS. The "Config Server Path" is the 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 WP856 boots up, it will issue an HTTP(S) request to download a configuration XML file named "cfgxxxxxxxxxxx.xml", where "xxxxxxxxxxx" is the MAC address of the phone, i.e., "cfgec74d700aabb.xml". If downloading "cfgxxxxxxxxxxx.xml" file is not successful, the provision program will download a generic cfg<MODEL>.xml file, if this one fails as well then it downloads cfg.xml.

The configuration file name should be in lowercase 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

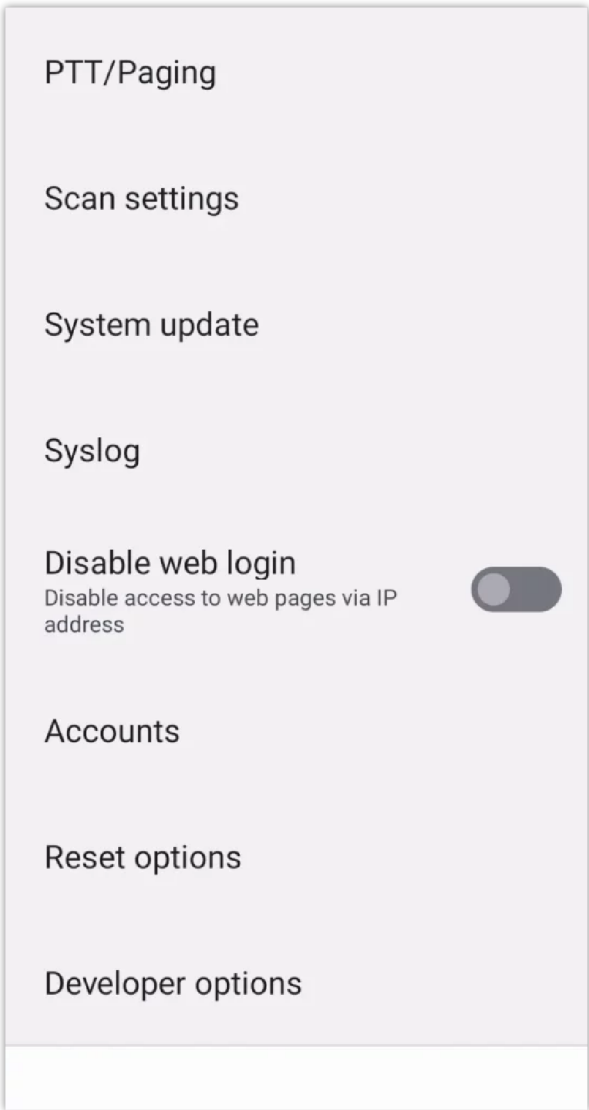
**Warning**

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 WP856 to the factory default settings :

## Restore to Factory Default via the LCD Settings

- 1. Go to **GS Settings → Advanced Settings → Reset options**
- 2. Select the factory reset option, the device will be rebooted and after this, all the WP856 data will be erased



Factory Reset from LCD Settings

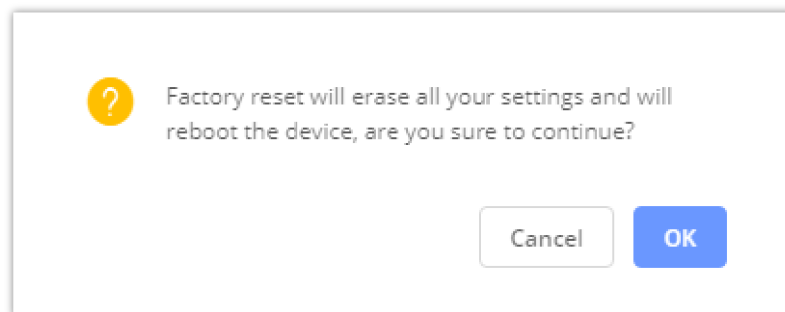
## Restore to Factory Default via the Web GUI

- 1. Login to WP856 Web GUI and go to **Maintenance → Upgrade → Advanced Settings;**
- 2. At the bottom of the page, click on the **Reset** button for Factory reset.



WP856 Web GUI – Factory Reset

3. A dialog box will pop up to confirm the factory reset.
4. Click OK to restore the phone to factory settings.



WP856 Web GUI – Confirm Factory Reset

## SDK INTERFACE

The WP856 operating system is developed based on the Android™ platform. In addition to inheriting the functional interface of Android, it also provides an interface for third-party application development according to user needs.

For details about the SDK, please refer to the document “[Android Framework Service Guide](#)”

## 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 1.0.1.11

- This is the initial release

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### Need Support?

Can't find the answer you're looking for? Don't worry we're here to help!

[CONTACT SUPPORT](#)