EVOLVE

EVOLVE Technical Training Package

Kok Ming Ng- Wave Device CPE Lead, Yuan Po Hng - Wave Device CPE, Anoop Sehgal- Wave Device Engineering, Meow Ling Ng - PDM

MOTOROLA SOLUTIONS

CONTENTS

- ➢ **EVOLVE PRODUCT OVERVIEW**
  - ○ **Key Features**
  - ○ **Built for any Environment**
  - ○ **Evolve Design**
  - ○ **Supports full WAVE PTX feature set**
  - ○ **Evolve Accessories**
- ➢ **TROUBLESHOOTING GUIDE**
  - ○ **Device Registration and Activation**
  - ○ **One App (Pre-loaded)**
  - ○ **Wave PTX (BYOD Apps)**
  - ○ **Radio Diagnostic**
  - ○ **Quick/Simple Workarounds**
  - ○ **Programmable Buttons**
  - ○ **Wave Calls Vs Telephony Calls Priority**
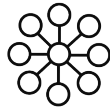- ➢ **R2.0 (Android 13) FIRMWARE UPGRADE**

PRODUCT OVERVIEW

Key features

Resilient and rugged
- Dustproof and submersible IP68
- Glove operable touch screen
- Built to withstand repeated drops
- Long life and replaceable battery

Seamless connectivity
- 3G and 4G LTE cellular connectivity[2], private LTE[2],
- Wi-Fi and Wi-Fi hotspot
- Dual SIM capability
- Ideal companion for WAVE PTX™

Mission-critical
- Dedicated emergency and PTT buttons
- Loud, clear audio
- MIL-STD-810

Open architecture
- Android platform
- Open app ecosystem
- Centralized device management

Intuitive user experience
- Simple interface
- 5" touch screen
- Front and rear facing cameras

Two models available
- Standard Model
- Intrinsically safe model[1]

1. Intrinsic safety certification only applies to the intrinsically safe model, when fitted with the Motorola Solutions UL approved battery.
2. Use Evolve on the Verizon network in the USA and private LTE networks in the USA and Canada.

BUILT FOR ANY ENVIRONMENT

Rugged and resilient

- Dustproof and submersible IP68 rated and MIL-STD-810 tested
- Liquid-resistant, glove-operable display with rugged Gorilla Glass
- UL 913_5 and CAN/CSA C22.2 NO. 157–92 intrinsically safe models for use in hazardous locations

Power for multiple shifts

- Long-lasting 2900mAh or 5800mAh battery options[1]
- Easily replaceable batteries for multi-shift use

Superior audio quality

- 2W loudspeaker with 97 Phon loudness level
- Three microphones for superior noise suppression and echo cancellation
- Accessories to support clear communication in any environment

Manufacturing

Distribution and warehousing

Mining and Oil and gas

Transportation and Logistics

Education

Healthcare

THIS IS YOUR
MOMENT
EXPAND & EXCEL

EVOLVE DESIGN

Front camera 8MP

Digital mic 1

Accessory connector (Single pin locking)

USB charging port

5" touch screen

Home, Back and Recent buttons

Digital mic 3

Fixed LTE antenna

Emergency button

Channel rocker

Digital mic 2

Power/ volume knob

MOTOROLA

Rear camera 13MP

LED flash

Battery latch

Push-to-talk button

3-dot programmable feature button

1-dot programmable feature button

2-dot sleep/wake or programmable button

External charging contacts

Battery door (battery internal)

EVOLVE

# Supports full WAVE PTX feature set

Basic (collaboration)

- PTT communications
- Text messaging
- Location services
- Photo & video sharing
- Real-time presence
- Voice message fallback

Safeguard (command)

- Emergency calling
- LMR interoperability[3]
- Location based communication
- Ambient listening
- Remote user check
- Discreet listening
- Enable/disable

Add on options

- Video streaming

[3] WAVE PTX LMR interoperability supports donor radio, MOTOTRBO IPSC, Capacity Plus, Capacity Max, DIMETRA Express and ASTRO

EVOLVE ACCESSORIES

Audio solutions

WM500 WIRELESS REMOTE SPEAKER MICROPHONE

Wireless RSM compatible with WAVE PTX.

PMMN4127

RM250 WIRED REMOTE SPEAKER MICROPHONE

Wired RSM compatible with WAVE PTX.

PMMN4125

EARPIECE WITH LOUD AUDIO TRANSLUCENT TUBE

1-wire surveillance kit with translucent eartube and in-line PTT/microphone

PMLN8191*

*Intrinsically certified

EP910W WIRELESS EARPIECE WITH PTT BUTTON

Volume up/down, PTT button and noise cancellation, Includes micro-USB cable for charging, earbud replacements available.

PMLN8123

WP300 WIRELESS BLUETOOTH CONTROL POD WITH PTT BUTTON

Bluetooth device for wireless connectivity to radio functions such as volume, push-to-talk and emergency buttons.

PMLN8298

Carry solutions

3" BELT CLIP

Meant to be used with PMLN6970.

PMLN7965

2.5" BELT CLIP

Meant to be used with PMLN6970.

NTN8266

PLASTIC CARRY HOLSTER WITH NO CLIP

PMLN6970

EVOLVE ACCESSORIES

Battery solutions

**STANDARD
2900MAH
LI-ION BATTERY**

BT000592A01

**HIGH CAPACITY
5800MAH
LI-ION BATTERY**

BT000593A01

**INTRINSIC SAFE (I.S.)
HIGH CAPACITY
5800MAH
LI-ION BATTERY**

BT000594A01

Charging solutions

**MULTI-UNIT
CHARGER**

PMPN4564

**VEHICULAR
POWER ADAPTER**

PMPN4169

**MICRO USB
POWER ADAPTOR**

PS000150A11 (US)

TROUBLESHOOTING GUIDE
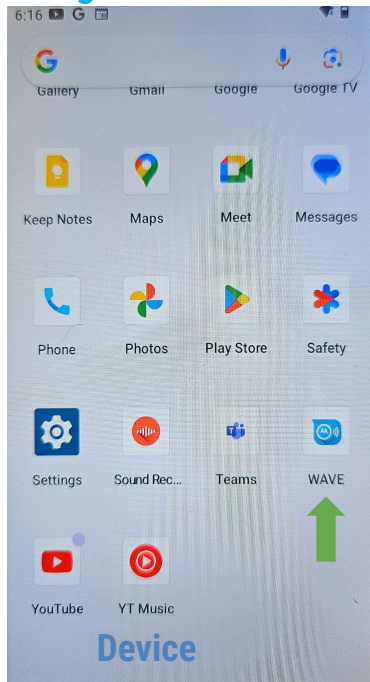
Device Registration and Activation

Wave OnCloud Portal	Activation Code
via Wave One App	No activation code require to access Wave PTX service. Device is register with serial number and IMEI.
via Wave PTX App -download from App Store	Require to key-in activation code to access Wave PTX

CAT Agency Tool	Activation Code
via Wave PTX App -download from App Store	Require to key-in activation code to access Wave PTX

Note: The device need to be on the latest SW version R2.0 so that the physical PTT button will work with apps you downloaded from apps store. EVOLVE Release Notes R02.00.14

One App (Preloaded Apps)

1. **Show as WAVE in the device**
2. **Register the device in Wave portal using S/N and IMEI**

Device

Portal

One App (Preloaded Apps)

2. **Register the device in Wave portal using S/N and IMEI**


3. **First time launching apps, allow all permission Make phone calls, Location, display over other apps and etc**

4. **Device is ready to use for use.**

BYOD Apps

1. **Prerequisite (One Apps is not running)**
    ○ **Setting → Apps→ Disable**
2. **Download from Playstore**
    ○ **Log in to playstore using gmail account**
    ○ **Download and show as WAVE PTX**
3. **Register in Wave Portal**
    ○ **Create user account as Tablet (Add user → Mobile OR TABLET)**
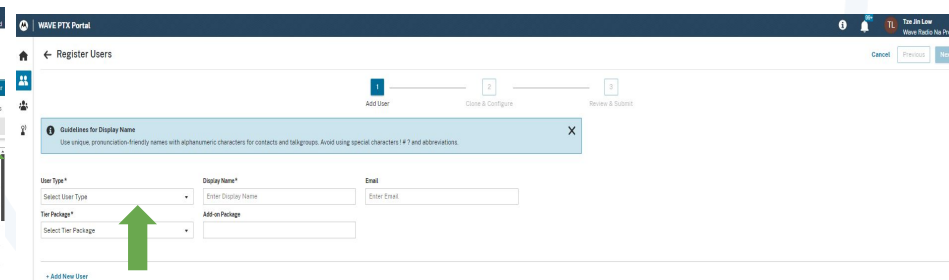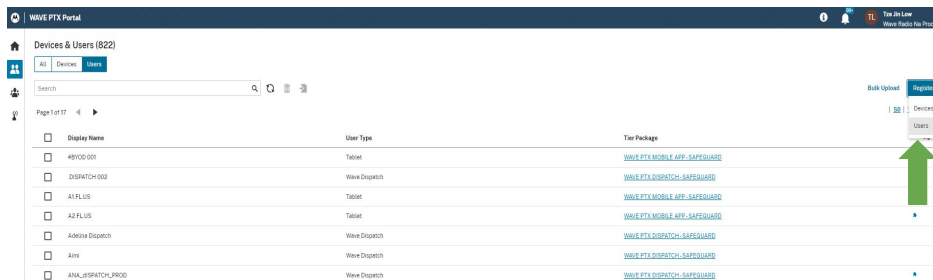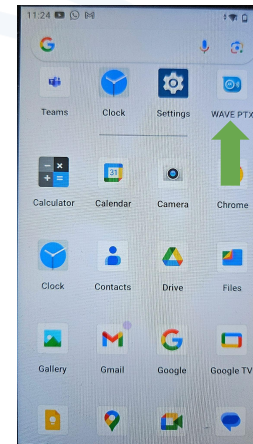
BYOD Apps

3. **Register in Wave Portal**

    a.   **Create user account as Tablet (Add user → Mobile OR TABLET)**

    b.   **Generate code to register**

4. **First time launching apps, allow all permission make phone calls, Location, display over other apps and etc and put in the activation code at the last step.**

BYOD Apps

5. **Talk group and contacts can be manage in Portal.**

Radio Diagnostic (Device Log)

PB1
PB2
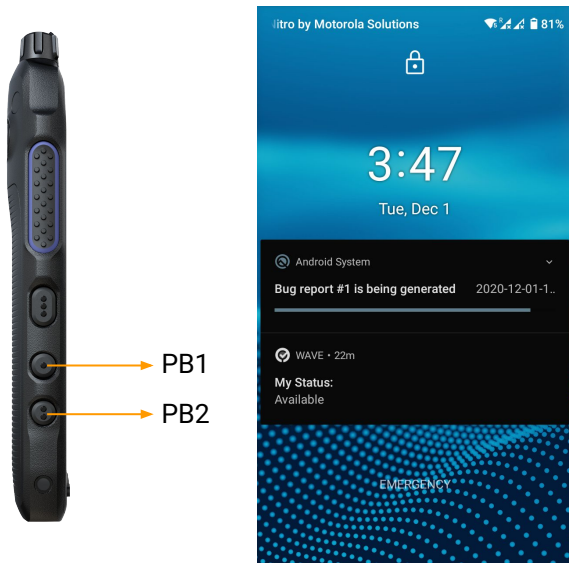
- Diagnostics can be captured using WAVE portal similar to WAVE or SLN devices, or through radio UI by pressing PB1 & PB2 buttons simultaneously

- Diagnostic log levels settings change are not required.

- Diagnostics can be uploaded to WAVE server

- Diagnostics can be uploaded over USB from folder \EVOLVE\Internal shared storage\Logs\bugreports or shared with MSI using email/chat/etc.

Radio Diagnostic (PTT App Log)

1. In WAVE apps menu, click on menu.

2. Select manual dial

3. Enter the security key '563674' and press the PTT call button

4. PTT app log file will available in SD card or device storage folder "Internal Storage>Documents>PTT" if SC card doesn't exist.

5. Share the PTT app log with MSI using email/chat/etc.
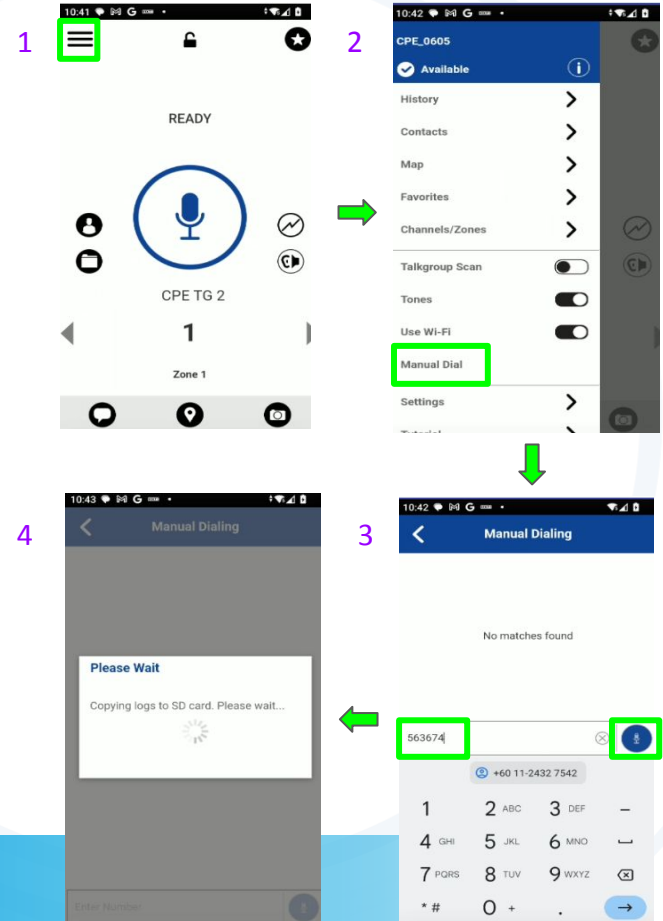
QUICK/SIMPLE WORKAROUNDS TO GAIN MINIMAL FUNCTIONALITY FROM THE PRODUCT UNTIL IT CAN BE REPAIRED

If the device appears to have become sluggish or has lost some functionality or is unresponsive then the following sequence of actions might help remedy the situation.

1. Reboot the device using the power switch or by removing the battery and re-inserting.

2. Clearing the data and cache of the application that is misbehaving.(e.g,Settings-> Apps -> WAVE-> Data & Cache -> Clear data and Cache

3. If cellular connectivity or Wifi connectivity issue is seen, then reset the connectivity configuration. Settings-> System-> Reset Options-> Reset Wi-Fi,mobile & Bluetooth

4. Final remedy is to perform factory reset. Settings->System->Reset options->Factory Reset

PROGRAMMABLE BUTTONS

1. Swipe up, tap ⚙ **Settings** → **Buttons** → **Programmable buttons**.

2. Select one of the following options:
   - **Programmable button -1- short press**
   - **Programmable button -1- long press**
   - **Programmable button -2- long press**
   - **Programmable button -3- short press**
   - **Programmable button -3- long press**

3. From the list that appears, tap your desired action.
   - **Default**
   - **Brightness Up**
   - **Brightness Down**
   - **Camera**
   - **Incoming Call (Accepts/End call)**(only for Programmable button -1- short press)
   - **Incoming Call (Ringer Mute)**(only for Programmable button -1- long press)
   - **Media**
   - **Barcode**
   - **Send to an application**

     NOTE: Application here refers to a specially designed application that can detect button presses from your device.

WAVE PTX call vs Telephony calls Priority

1. There is no priority been set but depends on which call came earlier.
2. The earlier call will not be disturbed, while later call behave as below:
   a. WAVE PTX: call will be delivered as voice message and receiver shall receive the notification
   b. Telephony call: auto direct to voicemail

R2.0 (Android 13) Firmware Update

EVOLVE Firmware Update Method

Current version	How to upgrade to a newer version firmware?
EVOLVE_R01.04.05 (A10)	- microSD card with EVOLVE_R02.00.14 or newer firmware [How-to Guide	Demo Video]
EVOLVE_R02.00.14 (A13) and onward	- Android over-the-air (OTA update)

1. All devices from the Distribution Center(DC) have upgraded to EVOLVE_R02.00.14 (A13)
2. Customers who want to upgrade the version from EVOLVE_R01.04.05 to a newer version shall contact CMSO to request a microSD card with EVOLVE_R02.00.14 firmware.
   a. Device Engineering team will ship a batch microSD card with EVOLVE_R02.00.14 to TSO team.
   b. TSO team to ship the microSD card to the customer.
3. EVOLVE Latest Release Notes: link

Thank you for your attention

Backup

SERVICE PACKAGES AT-A-GLANCE (NAM)

	ESSENTIAL SERVICES (included as standard)	ESSENTIAL SERVICES WITH ACCIDENTAL DAMAGE (optional)
Total period of cover	3 years	3 years
Service desk	3 years	3 years
Technical support	3 years	3 years
Software support (Bug Fix & Updates)	3 years	3 years
Hardware repair (manufacturing defects only)	1 year	1 year
Hardware repair (inc. normal wear & tear)	3 years	3 years
Hardware repair (inc. accidental damage)	-----	3 years
Shipping	2-way	2-way