

# **Zartek®**

## **USER MANUAL**

### **Zartek ZA-PT2**



#### **FEATURES**

- Support CDMA / GSM / WCDMA / LTE
- National Coverage
- Instant Clear Audio, PTT and Voice Call
- Connects to ZartekPTT Platform:  
Once-off Activation for Lifetime of Device (contact dealer for cost and setup)
- WiFi Function
- Bluetooth
- Compact Heavy-duty Design
- Large Battery Capacity 4000mAh
- USB-C Charging
- 1.77-inch Colour Screen
- IP54 Standard
- Dispatcher Functionality
- GPS Positioning
- Android Operating System

## Preface

Thank you for purchasing the Zartek ZA-PT2 PoC (PTT over Cellular) Two Way Radio. Please read this manual carefully before using the radio. The information presented here will ensure that you get maximum performance and functionality from the radio. There are also important battery and charging maintenance procedures.

Standard license-free two-way radios have limited range of a few kilometres whereas PoC radios connect to the GSM network for national coverage. PoC radios are also digitally encrypted for secure private, clear and instant communications. The Zartek ZA-PT2 PoC radio connects to an Internet Network (IP internet Protocol) via the data SIM card (3G / 4G GSM, not included) inserted in the side or via a local Wi-Fi connection. Coverage is country wide and will depend on network availability.

Note: SIM card is not included. Use Vodacom or MTN for best coverage. Any SIM should work but may need manual APN settings input via the buttons. 2GB data per month is more than sufficient.

The ZA-PT2 links to a Server Platform called ZartekPTT, where all calls are directed through. Most platforms charge an annual fee to gain access to their platform but the ZA-PT2 benefits from a once-off activation fee for the lifetime of the device, which is far more convenient and cost effective. This once-off platform activation allows the radio to be ready whenever needed as long as data is available. Each radio's IMEI number needs to be activated for access to the platform. Contact Zartek to remotely set up your own private groups and radio names for intercommunication.

Communication between radios is quick and can be PTT (push to talk) to groups or PTT or IP telephone Call to select individuals. TTS (text to speech) messaging is also featured.

Optional Cloud Dispatcher access using a web browser on PC, laptop or tablet is available to contact single or groups of radios, monitor many groups, view GPS map positions, historical tracking and audio recordings.

This radio is robust for heavy duty applications such as farming, outdoors, construction, mining, security and transport. It is recharged using a standard USB charger. High strength materials and quality components have been used in the manufacture of this two-way radio to give many years of use. It is designed for rugged outdoor and industrial use to excel in tough environments.

## Warranty

There is a 12 month factory warranty on the unit. Warranty does not cover speakers, battery or accessories. The product must be used for the intended purpose and not subject to willful or accidental damage. If the product has been tampered with in any way, the warranty shall be considered null and void.

## Applications:

Ideal for: Security Guards & Control Centres, Construction sites, Industrial zones, Mines & Factories, Fleet Management, Commercial use in Hotels, Hospitals, Universities, Event, Sports Stadiums, Airports, Railways, Military, Government, Rescue, Police & Emergency Services, Outdoor adventure, Logistics, Taxis, Trucking, Camping, Travelling, Shopping malls, Outdoor Events, Farming etc.

## Setup & Activation

	Radio connects to an Internet Network (IP) via a preloaded data SIM card (not included) or WiFi internet access.		There is a ONCE-OFF activation cost for lifetime of radio to ZartekPTT.
	Coverage is country wide and will depend on network availability.	 	Activation is arranged by the dealer. The dealer can set up selective groups for intercommunication.
	Each ZA-PT2 radio requires ACTIVATION via IMEI number to link to ZartekPTT Server Platform, where all calls are directed through.	   	<b>Dispatcher PC / Mobile APP login</b> is also available, via the dealer, to contact single or groups of radios, check recordings, monitor groups, and to view GPS map positions or historical tracking.

Contact Zartek via email [tech@zartek.co.za](mailto:tech@zartek.co.za) about activating radios on ZartekPTT platform, there is a once-off cost per radio. Each radio is activated using IMEI number. Locate the IMEI number on barcode label inside the radio and email to Zartek for activation.

Also include the following information:

- 1) Your contact details (name, email and / or phone number)
- 2) Preferred name to call the radio (1 – 40 digits)
- 3) Number of Groups to setup and their names (1 – 20 digits)

## Zartek PTT

Indicate if you would like to purchase a **DISPATCHER** login for dispatcher GPS and audio services.

Cloud DISPATCHER access is via a web browser on PC or laptop.

Services available are:

*GPS location and historical tracking*  
*PTT audio to radios and groups*  
*Audio Recording*  
*Messaging to radios (Text-to-Speech)*  
*Receive SOS alerts*

Indicate if you would like to purchase a **CUSTOMER MANAGEMENT** login for direct access to change radio and group details.

Customer Management services are:

*Editing radios names and groups*  
*Adding and removing radios from groups*  
*Activating additional functions like ALL CALL, Dispatcher, Recording*

Your contact information will be kept private in accordance with our Privacy Policy and PAIA manual which can be viewed on [www.zartek.co.za](http://www.zartek.co.za)

## Safety Information

- Study this manual carefully to understand your transceiver well.
- For safety reasons, it is important that the user is aware of and understands the potential hazards common to using any transceiver.
- To clean the radio, wipe with a soft cloth dampened with water. Never use solvents or cleaners on the radio, they can harm the body and leak inside, causing permanent damage.
- Your radio is not splash proof or waterproof. If the radio gets wet, turn it OFF and remove battery immediately. Dry the battery compartment to minimize potential water damage. Leave cover off battery compartment and do not use until completely dry.
- Handle the radio with care and never hold the radio by the antenna. Do not drop or impact the radio as it contains sensitive electronics.
- Do not operate the transceiver or replace/charge the battery in an explosive environment (dust, gas, fumes etc).
- Switch the transceiver off whilst filling gas or when parked at a petrol station.
- Do not open or modify the transceiver in any way.
- Refer to a qualified technician for any service or repairs.
- Do not expose the transceiver to long periods of direct sunlight, extreme hot environments or surfaces.
- Do not place the transceiver in excessively dusty, humid, wet and/or unstable areas.
- Please turn off the radio when you are close to a blast area or detonator zone.
- Do not use any radio which has a damaged antenna. It may cause a minor burn when the damaged antenna touches your skin.
- To avoid the problems caused by EMI and EMC, turn off your radio where notices "Please turn off your radios" are posted, such as hospitals.
- Turn off your radio before boarding an aircraft. Any use of the radio must be in accordance with airline regulations or flight crew's instructions.
- If a vehicle is fitted with an air bag, do not place the antenna of the radio within the air bag expand area.
- When the portable radio is transmitting, hold the radio in a vertical position and speak into the Microphone.
- If you carry a radio on your body, please keep the antenna away from your body by at least 2.5cm when transmitting.

## Battery Information

### Initial Use

New batteries are not charged fully in the factory. Please charge the battery for 6 hours at least before first use. This initial charge pre-conditions the battery for full capacity. Failure to charge fully may shorten the life span of the battery. Recharge the battery immediately once it goes flat as it could get damaged if left very flat for long periods. The maximum battery capacity and performance is achieved after three full charge-discharge cycles.

### Battery Pack

Please only use a battery which is approved by the manufacturer. Unauthorized batteries may cause failure of protection circuitry and result in bodily injury and property damage.

### Safety Information

- 1) Do not throw the battery into fire!
- 2) The battery should be recycled and disposed of correctly.
- 3) Never attempt to disassemble the battery pack.

## Notices

- 1) Only charge the battery, when the ambient temperature is between 5°C - 40°C.
- 2) Please turn off the radio when the battery is charging. Using the radio during charging will affect the normal charging of the battery pack and will lengthen the charge time.
- 3) During charging, do not plug in/pull out the power supply or the battery frequently, it would affect battery charging.
- 4) Do not charge when the battery or radio is wet. Please dry it with a soft cloth before charging.
- 5) Do not use the charger, cable or battery if it is damaged, cracked or frayed in any way.
- 6) The battery life is over when the operating time is obviously shorter than normal even if it's fully and correctly charged. Please then replace with a new battery.

## To Prolong Battery Life

- 1) Battery performance will degrade when the current temperature is below 0°C. A spare battery may be necessary in cold weather. Please keep the cold batteries, as these batteries will work under room temperature.
- 2) If the battery socket is dusty, it may influence its normal use or normal charge.

## Battery Storage

- 1) Fully charge a battery before storing for a long time, to avoid battery damage caused by over-discharge.
- 2) Recharge the Li-Ion battery after 6 months as the battery will lose small amounts of charge even when not in use. This regular maintenance will avoid the battery capacity reducing which is caused by over-discharging.
- 3) When storing your battery, keep it in a cool and dry place under room temperature.

## STANDARD ACCESSORIES

Carefully unpack the transceiver. We recommend that you identify the items listed below before discarding the packing material. If any items are missing or have been damaged during shipment, contact the supplier immediately. For optional accessories, please visit our website [www.zartek.co.za](http://www.zartek.co.za)

- 1) Radio Unit
- 2) Battery
- 3) USB Charging cable
- 4) Belt Clip with Screws
- 5) Hand Strap
- 6) User Manual



BATTERY



BELT CLIP



USB CHARGING  
CABLE



WRIST STRAP

### Charging the Battery:

Use a standard USB 5V <2A rated power supply charger and connect the charging cable.

Plug in to Type-C port either on the right side of the radio or at the bottom of radio on the battery pack to charge.

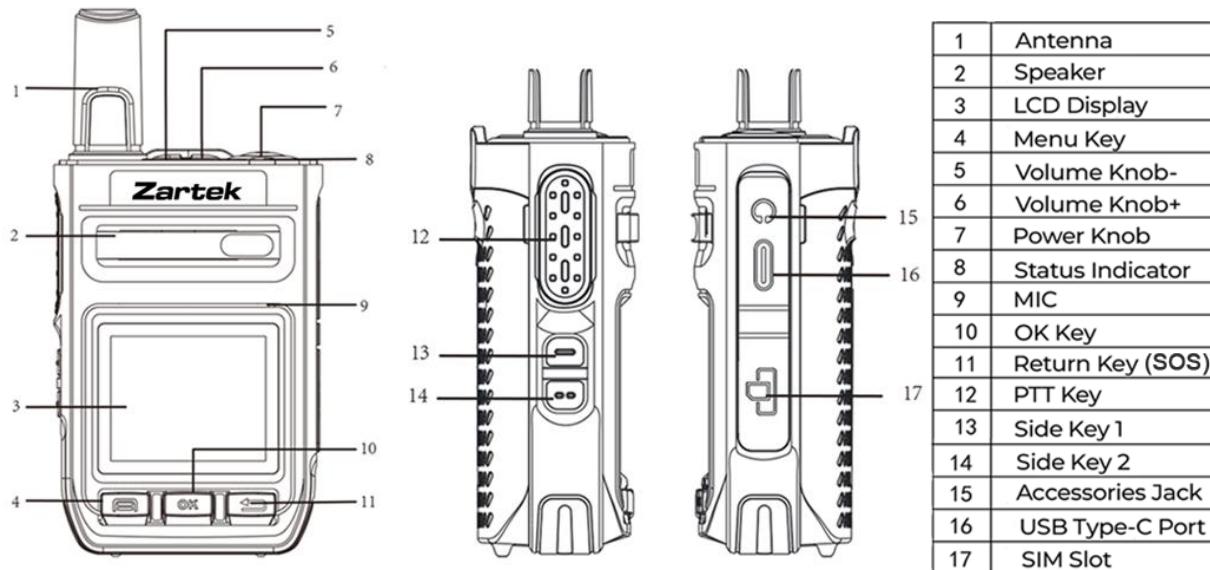


The screen icons and charging lights will show battery level and charging status. Red is charging and green is full.

Note: For optimal results, it is recommended to turn off the radio while charging.

## RADIO OVERVIEW

This network radio operates on the LTE 4G network, delivering powerful performance and advanced professional features. With the high-speed broadband connectivity provided by the latest 4G technology, it excels in any business-critical environment.



Keys	Description
MENU Key	Enter menu
Volume Down Button	Short press to lower the volume
Volume Up Button	Short press to increase the volume
Power Button	Long press for 3 seconds to turn on/off the device. Short press to turn on/off the screen
OK Key	Confirm/Select function
Return Key	Short press to return to the previous operation. In single call or IP call mode, short press the return key to exit single call or IP call. Long Press will activate SOS for a Dispatcher to check.
PTT Button	Press and hold the PTT button to initiate voice communication. In single-call mode, press and hold the PTT button to establish a single-call group and communicate. In IP call mode, briefly press the PTT button to establish an IP call.
Up Key / SK1 (Side Key)	Short press functions as an upward selection. On the standby screen: first long press will enter the group list and announces the current group. Second long press will enter the member list.
Down Key / SK2 (Side Key)	Short press functions as a downward selection. Long press enters the member list.
Type-C Jack	Used for connecting to PC software or charging.

## Radio Introduction

## Getting Started

### Installing the Battery and SIM Card

1. Open the SIM card slot.
2. Insert the SIM card into the slot in the correct orientation.
3. Close and lock the SIM card slot.
4. Align the bottom of the battery with the bottom of the radio.
5. Press the battery down until it clicks into place and locks securely.

#### Note:

- Ensure the radio is powered off before inserting or removing the SIM card.
- Avoid touching the metallic area of the SIM card to prevent data loss or damage.
- Keep the SIM card away from electromagnetic fields to protect the stored information.

### Removing the Battery

1. Push the battery latch upward to release the battery pack.
2. Once the battery is disengaged from the terminal, remove it completely.

## BASIC OPERATION



### Power On/Off

1. To power ON the radio, press and hold the POWER button DOWN for 3 seconds.
2. To power OFF, press and hold the knob button until a menu appears on the display. Select "Shut Down" and press [OK] to turn off the radio.

### Display On

1. To manually turn On the display, briefly press the Power button.
2. The radio display will automatically switch off after a period of inactivity (time can be set).

### Volume

To adjust the speaker volume level, locate the arrow buttons at the top of the screen and select level 0 (mute) to level 7 (maximum).

## **Status Bar**

The status bar displays information such as battery charge capacity, time, SIM card status, Wi-Fi, GPS, and network registration status.

## **Group and User Selection**

- Long press **upper side button 1** to enter the **group** menu. Use the same side up - /down -- buttons to select a group, and press OK to confirm and switch groups.
- Long press **lower side button 2** to enter the **member** list. Use the same up/down buttons to select the user you want to call, and press OK to confirm and enter the call page. You can either press the PTT button to call directly or use the up/down buttons to select the voice call option (Bi-direction call like ordinary phone) and then press the OK button to start the call.

## **Push-To-Talk function**

After startup, the radio will automatically join the default waiting group and is ready for instant PTT communication. Press and hold in the side PTT button and speak into microphone after the beep sound. The beep sound will be made immediately after pressing the PTT button indicating that the radio is online and ready to transmit voice. Release PTT button to await reply.

## **Voice Call**

A voice call (duplex like a normal phone call) can be made between two radios.

- Select an online member from member list accessed via side button 2.
- Use UP / DOWN arrows to choose IP CALL.
- Press the PTT button to ring and wait for other radio to answer with PTT button.
- Communication is like a regular phone call and PTT does not need to be pressed.
- Press the BACK ARROW key to hang up.

## **Dynamic PTT (private call single user)**

A private PTT call can be made with a single user instead of to the group.

- Select an online member from member list accessed via side button 2 .
- Use UP / DOWN arrows to choose icon of radio.
- Press the PTT button to only communicate with that member only.
- Press the BACK ARROW key to revert back to Group.

## **Emergency Alarm (SOS)**

*Note:* This function will only work if a Dispatcher is online to monitor.

To activate the SOS function, press and hold in the red return arrow button for 3 seconds.

## **MENU SETTINGS**

In standby mode, press the MENU button to access the intercom menu. Here, you can view and adjust settings for Dialed Records, Notices, Audio Records, Settings, Volume, Language, Record Switch, Account, and Check for Updates.

### **Dialed Records**

Lists calls made and received with other users. Select user to PTT or voice call again.

### **Notices**

List of recent short messages that were sent from dispatcher. The radio will convert the text to speech and play message on receipt.

### **Volume**

Adjust voice volume, microphone gain and speaker gain for preferred levels.

### **Record Switch**

Enable to activate recording of calls. (This function is master set on management)

### **Account**

View details about the user account set on the radio

### **Settings**

In the menu settings, the "Settings" option allows you to configure the following functions:

- Display (Screen Brightness / Screen Time-out)
- Volume Setting (Touch beep)
- SIM Card (Information)
- Wireless & Network
- Bluetooth
- Location
- Reset (USE WITH CAUTION)
- About Radio

## WIRELESS & NETWORK

### ➤ WiFi: Establish a Wireless Connection

To set up WLAN connectivity, follow these steps:

Under the Setting interface, press SK1 or SK2 to navigate to Wireless > WiFi, then press the OK key to enter and select "On." The device will display a list of connectable wireless networks within the search range. Press SK1 or SK2 to choose the network you want to connect to, and then proceed to the password input screen. Enter the correct password and press the OK key to confirm the connection.

### ➤ Tethering & Portable Hotspot setup

### ➤ Mobile Network

#### ● Preferred Network Type

If your area has weak network signals, you can manually adjust this setting to improve connection stability. This setting specifies the type of mobile network your device will prioritize when connecting (e.g., 4G LTE, 3G, or 2G).

#### ● Access Point Names (APN)

APN is a configuration profile that enables your device to connect to your carrier's mobile data network. It includes information about the network gateway, IP settings, and more.

Configuring APN Settings:

1. Select a Preset APN

After entering the APN menu, choose the desired preset APN from the list.

2. Create a New APN

To create a new APN, choose Option. The screen will display "Edit access Point".

Follow the prompts to configure the new APN.

3. Reset to Default

If needed, press "Reset to Default" to revert the selected APN to its default settings.

## BLUETOOTH: Set Up the Bluetooth Connection

Under the Setting interface, press SK1 or SK2 to navigate to Bluetooth, then press the OK key to enter and select "On." The device will display a list of connectable devices within the search range.

Press SK1 or SK2 to choose the device you want to connect to, and then press the OK key

to confirm the connection.

In the Bluetooth operation interface, you can press the menu key to search for Bluetooth devices, Rename device, and adjust the visibility timeout settings.

## LOCATION Positioning Function

If your radio has a positioning function and it is activated, you can check the "Location" of the radio. *Note:* Enabling GPS will increase the power consumption of your radio. (GPS data may take some time to load on radios and then to Dispatcher on setup)

## About Radio

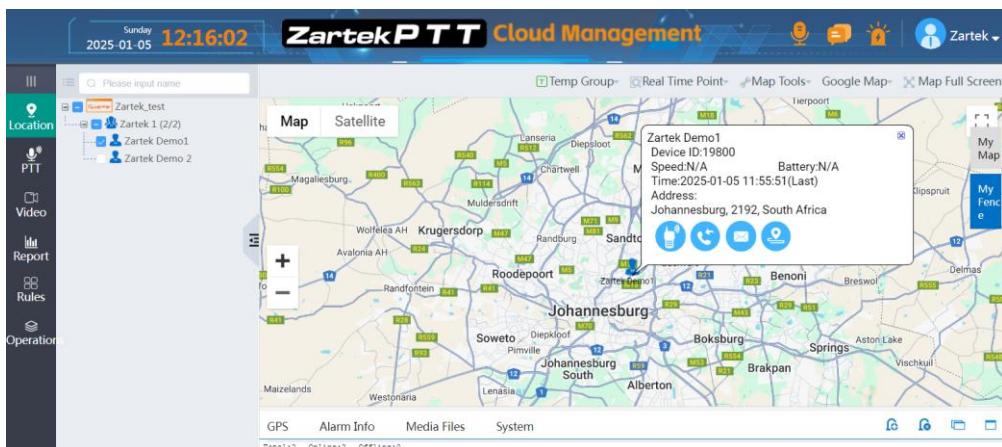
In this menu, you can view detailed information about the radio, including its status, legal information, model number, processor info, Android version, baseband version, kernel version, and firmware version.

## Status

The status information includes the following details:

- Battery – displays the remaining battery power
- SIM – includes the details: Network, Signal, Service state, Roaming, Phone No, IMEI information.
- IP Address
- Serial Number
- Uptime

## Dispatcher (optional)



A dispatcher enables enhanced functions such as group monitoring and communicating with all radios and groups, viewing GPS position on map, History Tracking, Recordings, Fencing users, receiving SOS alerts, Sending Messages...

Dispatcher can be setup on PC, Laptop or Android smart phone using software, cloud hosted or mobile App depending on the platform used. Dispatcher will usually require another user account to be activated that is dedicated as a dispatcher service.

Contact Zartek Technical Department [tech@zartek.co.za](mailto:tech@zartek.co.za) for more information.

## HEADSETS available

**Earphone** speaker with in-line PTT microphone, single jack

**Bluetooth** earphone or speaker microphone

### Other accessories available:

**Spare Battery, Desktop Charging Cradle, Charger**

## Troubleshooting

Problem	Solution
No power.	<ul style="list-style-type: none"><li>The battery pack may be dead. Recharge or replace the battery pack</li><li>The battery pack may not be installed correctly. Remove the battery pack and install it again.</li></ul>
Battery power dies shortly after charging.	<ul style="list-style-type: none"><li>The battery pack life is finished. Replace the battery pack with a new one.</li></ul>
Cannot talk to or hear other members in your group.	<ul style="list-style-type: none"><li>Make sure you are using a SIM card with data loaded and a network is available in the area.</li><li>Reset the unit to locate the network again.</li></ul>
Radio screen showing "Registering"	<ul style="list-style-type: none"><li>Cannot get a cellular or WiFi signal, move handset to location with better signal. Radio will reconnect automatically in approximately 10 - 30 seconds.</li><li>Before attempting to reboot, try multiple locations for best signal.</li><li>Close proximity to other transmission equipment like mobile phones, tablets, may cause interference with the radio until separated.</li><li>Within a vehicle or highly obstructed area, placement of the device in open space is important to gain uninterrupted connection.</li></ul>

<b>Network</b>	GSM: Band 2/3/8 CDMA: 1 X BCO CDMA2000: Evdo Rev.A 800MHz TD-SCDMA: Band 34/39 WCDMA: Band 1/5/8 TDD-LTE: Band 38/39/40/41 FDD-LTE: Band 1/3/5/8 TDD-LTE: B34/B38/B39/B40/B41
<b>Operation System</b>	Android 4.4, CAT4
<b>Memory</b>	ROM: 4GB RAM: 4Gb LPDDR2
<b>LCD Screen</b>	Size: 1.77 inch Resolution: 160*128
<b>Connector Type</b>	Type-C USB
<b>SIM Card</b>	Single SIM
<b>Battery</b>	Li-Polymer battery 4000mAh Charge current: 1000mA USB Charging Time: <= 6 Hours
<b>Sound</b>	Microphone: 1 Speaker: Speaker and Speaker PA Single Pin Earphone Jack
<b>Bluetooth</b>	BT4.0
<b>WI-FI</b>	Standard 802.11b/g/n 1X1 Support Wi-Fi Hotspot Tethering
<b>Positioning</b>	GPS / Beidou / Google Maps
<b>Antenna</b>	Built-in
<b>Dimensions</b>	125.2 x 61.7 x 38.2mm
<b>Weight</b>	175g (include battery & antenna)
<b>Working Temperature</b>	-20°C ~ 55°C
<b>IP Rate</b>	IP54
<b>Drop Test Height</b>	1.2 Meters