



- \* This radio connects to an Internet Network (IP) via the preloaded data SIM card (GSM) inserted at the back.
- \* Coverage is country wide and will depend on network availability.
- \* ZA-P7 links to a Server Platform where all calls are directed through.
- \* There may be an annual or monthly cost, arranged by the dealer, to access the platform.
- \* Each radio needs to be activated using its Serial Number before use.
- \* The dealer can also setup selective groups for intercommunication.
- \* **Dispatcher PC software** is also available, via the dealer, to contact single or groups of radios and to check GPS map position of radio.

[www.zartek.co.za](http://www.zartek.co.za)



**ZA-P7**

**Zartek**  
TWO-WAY RADIO

**IP GSM NETWORK  
Two - Way Radio**

**USER MANUAL**



- National Coverage\*
- Instant Clear Audio
- HighCapacity Li-ion Battery
- Compact & Durable
- 50 Group Channels
- Dispatcher with GPS Location
- USB Charger



## **PREFACE**

Thank you for purchasing The Zartek ZA-P7 Portable IP Two Way Radio. This radio connects to an Internet Network (GSM) via the data SIM card inserted at the back. Coverage is country wide and will depend on network availability. The ZA-P7 links to a Server Platform where all calls are directed through. Each radio needs to be activated using its Serial Number before use. There may be an annual or monthly cost, arranged by the dealer, to access the platform. The dealer can also setup selective groups for intercommunication. Dispatcher PC software is also available, via the dealer, to contact single or groups of radios and to check GPS map position of radio. This radio is robust for heavy duty applications such as construction, mining, security and transport. It is recharged using a standard USB charger.

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.

High strength materials and quality components have been used in the manufacture of this IP two-way radio to give many years of product 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.

## ACTIVATION

Contact Zartek Technical via email [tech@zartek.co.za](mailto:tech@zartek.co.za) about activating radios on the Platform. Dealers can request procedures for setting up a User Account to manage Groups or Dispatcher Access.

## 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

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

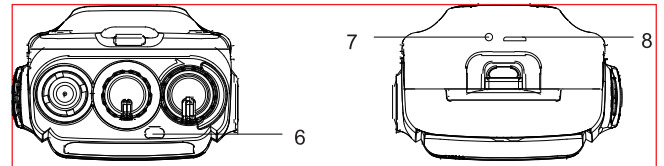
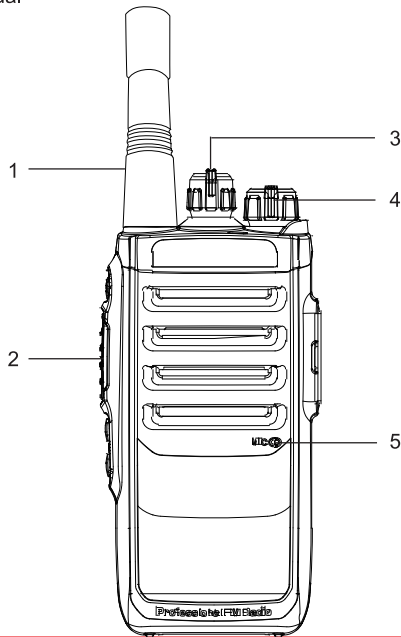
by over-discharging.

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)Antenna
- 3)Battery
- 4)USB Charging Adaptor
- 5)Belt Clip
- 6)Hand Strap
- 7)User Manual



No.	Unit	Remarks
1	Group Select	Select group or ID when in Single Call mode
2	Speaker	High Volume Speaker
3	On / Off	Press down for 3 seconds to switch ON / OFF. Start up time is about 40 seconds
4	Volume	Turn to adjust Volume level
5	Mic	Microphone. Speak clearly into Microphone.
6	LED Indicator	Green Constant : Startup , Connecting to Network Green Flashing 5s : Standby Red: Transmit
7	Charging LED	Red: Charging Green : Full
8	USB Charging Port	USB Charging Port is on Battery. Use recommended USB charger.
9	Side Key 1 (SK1)	Hold in button to send an SOS alert to Dispatcher
10	PTT Button	Press to Talk. Beep before transmit is ready, then speak. Release to Listen , Different beep sounded after transmit
11	Side Key 2 (SK2)	Short Press to announce ID / serial number Long Press : Enter / Exit Single call Mode (other ID must be selected)

12	Side Key 3 (SK3)	Short Press to announce Group Name (or ID of Single Call Mode) Long Press to check Battery Power Percentage
13	Earphone Jack	Use option Headset, MIC / SPEAKER

## GETTING STARTED

### Access to Server

The serial number of each radio will need to be activated by the dealer to get access to the server. This server platform directs all calls. Selective groups can be also setup on the server to link various radios together. Contact your dealer for access to the server. There are fees to link.

### Installing SIM card

Purchase a data SIM card from a local Cellular Network supplier. Make sure the SIM card number is loaded with data beforehand. Unscrew the SIM card cover on the inside of the radio. Shift metal holder to the left and open SIM card slot. Gently place the SIM card in the slot and align according to the shape. Close the holder and shift to the right to lock the card in place. Replace the cover and tighten screw.

**Data usage** will depend on the type of use and network connection. Average standby usage is 100 bytes per 20 seconds and whilst transmitting or receiving about 500 bytes per second which will be 3 to 4MB of data per day.

### Installing Battery Pack

Slide the battery pack along the back of the radio until it closes with a "Click".

### Removing Battery Pack

Push the battery pack latch to release and then slide the battery off.

### Install the Antenna

Only use original antenna 2G / 3G / 4G, 800 to 2700MHz

1. Switch off the radio; insert the threaded end of the antenna into the

antenna connector on the top of the radio.

2.Screw down the antenna clockwise until it is secure.

Note: Do not use radio without antenna.

### **Remove the Antenna**

Switch off the radio then turn the antenna counter-clockwise to remove.

### **Install & Remove the headset / programming cable**

Open (unscrew) the SP / MIC cover and then plug in the accessory firmly into the side jack.

If you want to remove the accessory, unplug it gently and close the SP/MIC cover.

### **Charging the Battery**

- When the battery capacity runs low, the radio's red LED will begin to flash and a voice message "Please charge the battery" will be heard.
- The USB charging socket is located on the bottom of the battery.
- Only use the approved USB charging adaptor. The battery can be charged whilst it is fitted to the radio or simply on its own as depicted in the sketch below.

**CHARGE TIME** is approximately 6 hours from flat to full.

**OPERATING TIME** is approximately 25 hours with a fully charged battery if used typically on a 5:5:90 duty cycle.

**To check % battery level remaining hold in side key 3 for 2 seconds.**

### **Note:**

- 1.Make sure the radio is switched off during charging or the charging time will be longer.
- 2.Li-ion batteries do not have memory so they can be recharged at any time. There are a limited number of charge cycles that the battery can handle, typically 500-700 times. To get the maximum use of the battery, only recharge when getting flat. If an almost full battery is recharged, the charging cycles are not optimized.
- 3.When the battery charge goes flat, the radio's LED will flash a red light and the radio will keep reporting "Please charge the battery".

## **BASIC OPERATION**

### **Power On/Off**

- Press down the the Power Knob (also called Volume Knob) for 3 seconds clockwise to switch ON the radio; After 7 seconds the LED will light Green showing that the radio is powering up. After another 18 seconds a "Welcome" announcement will be made. After a further 10 seconds the radio will announce its ID number and Group number.
- LED indicator will flash every 5 seconds when in active standby mode.
- To power OFF, press down the Power Knob (also called Volume Knob) for 3 seconds. The radio will announcing "Shutting down".
- To check the radios ID number press side key 2.

If there is a problem connecting to the network or no data available in the SIM card the radio will announce "Network Unavailable".

### **Adjust the Volume**

Turn the power volume knob to increase or decrease the volume.

### **Select a Group**

- Turn the Group Selector Knob a single step to enter group selection mode.
- Select a group by turning knob and press the side PTT button to confirm the group. The radio will announce which Group number it has entered.

Check with your dealer about setup of which radios should be assigned to different groups.

To check the group number currently in press side key 3

### **Select a Single Call**

- Hold in side key 2 for 3 seconds to enter single call selector mode. Turn the Radio Selector Knob on the top of radio to choose which

radio ID to enter a single call mode with and press the side PTT button to confirm the radio. The target radio will announce that it has entered a single call with your radio ID number.

- To exit single call hold in side key 2 for 3 seconds or turn the Group Selector Knob to choose a different group.

### **Transmit**

Keep pressing down the PTT key and speak directly into the microphone (MIC). Hold the radio about 2.5cm to 5cm from your mouth. The radio should be held so that the antenna is vertical. A RED LED will indicate transmitting and a beep tone will be sounded before and after transmission.

A "network busy" announcement will be made if the radio is busy receiving. Wait until message is finished before transmitting.

### **Receive**

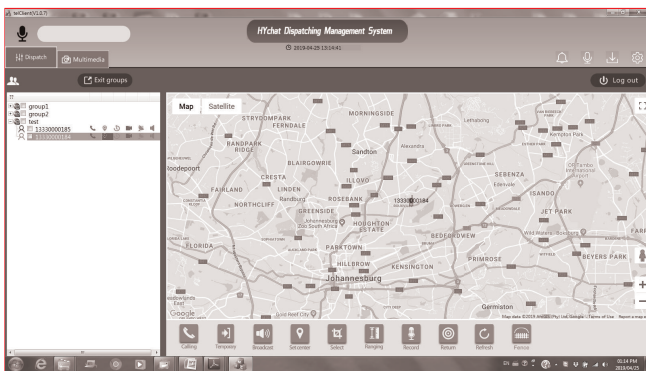
Release the PTT key to receive a call and adjust the volume if needed. A beep tone will be sounded before and after receiving. If sound quality is not good, reset the radio by switching off and on again.

### **SOS**

Hold in the top side key 1 for 2 seconds to send an SOS message to the Dispatcher computer.

### **Dispatcher**

Once the dispatcher software and user name is provided, the dispatcher will be able to call groups, selected or single radios. Each radio GPS location will be shown on the map and a track can be recalled showing a radios recent route.



### HEADSETS (use with PTT or VOX)

**GE-252 Earphone** speaker with in-line PTT microphone

**GE-259 Lapel** speaker microphone for vehicle & security use

**GE-266 Acoustic** eartube speaker with microphone for discrete communication

**GE-273 Heavy Duty D-Cup** high volume speaker with mic. & in-line PTT

**GE-273 Heavy Duty D-cup** high volume speaker with boom mic. & in-line PTT

**GE-276 Throat Microphone** with lapel & finger PTT for motorbike & high wind/noise

**GE-207 Spare Battery (3,7V 4400mAH)**

**GE-251 Carry pouch** with detachable shoulder strap

### 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>

### Specification

Frequency Range	FDD / LTE : B1 – 2100MHz , B3 – 1800MHz , B5 – 850MHz , B8 – 900 MHz WCDMA : B1 CDMA2000 : 1 x EVDO BCO RevA CDMA : 1 x BCO
Max Groups	50
Working Voltage	3.3V – 4.20V : 3.8V
Operating Temperature Range	–30°C ~ + 80°C
Dimension excl Antenna (L×W×H)	130mm × 60mm × 40mm
Weight (including Antenna and Battery)	250g

Battery Capacity	4400mAH
Battery Operating Time Average	25 hours on 5:5:90 duty cycle
Charge Time: USB	6 hours
Data Usage Standby	100 bytes per 20 seconds
Date Usage Transmit / Receive	500 bytes per second
Average Data Use Per Day	3 - 4 MB
Max RF Power	23dBm – 25dBm
Receiving Signal Sensitivity	-106dBm
Rating Water / Dust proof	IP54