

Stone Mountain **SpeakEZ™**

Full Duplex Wireless Transceiver

User Guide

1. General Information

1.1 Introduction

SpeakEZ™ is a revolutionary long range, hands free, full duplex communications system that combines state of the art technology with ease of use in a compact, lightweight package. The system is fully self-sustaining and can be deployed and operational in minutes – No need for cellular service, Wi-Fi, LMR repeaters, satellite, etc.

1.2 Main Features

- Team mode version: Up to 5 Users talking in full duplex mode.
- Group mode version: Up to 5 Users talking in full duplex mode plus up to 95 Users listening (Rx). Any Listener may become a full duplex participant by pressing the Talk button. Doing so, will revert the first duplex User to listening (Rx) mode.
- 40 User selectable talkgroups.
- ISM 900MHz GFSK modulation with frequency hopping for secure communications.
- 1,100 mAh Li-Ion rechargeable battery provides 10 hours of talk time.
- 900 MHz system range exceeds 3,000 feet line of sight.
- Supports dual remote audio accessories.
- Adjustable microphone sensitivity and selectable sidetone.
- Super audio quality ensures excellent voice intelligibility.
- Optional repeaters available to expand range and number of users.
- Micro USB charging compatible with most Android mobile phone chargers.
- Water resistant, light weight, compact design, including custom water resistant accessory connector plug/jack interface.

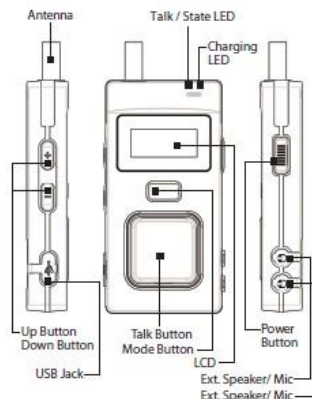
1.3 Included

- **SpeakEZ™** 900MHz transceiver.
- Neck strap with quick release latch.
- USB charging cable.
- Custom leather case with integrated belt clip.
- Custom padded carrying case.

1.4 Required/Included Audio Accessory Options – Contains one of the following:

- Lightweight behind the head headset.
 - Chest PTT, surveillance earpiece and microphone.
 - Chest PTT, surveillance earpiece and microphone w/ ProTect.
- Note:** All accessories will operate in full duplex. PTT allows you to enter full duplex mode remotely if you are in Rx only mode. The "PTT Button" has the same effect as the "Talk Button".

2. Controls and Indicators



o If "TALK" is displayed on the LCD, you are already in hands free full duplex (Rx and Tx) mode. No further action is required.

o If not already in the "TALK" (duplex) mode, i.e. "TALK" is not displayed on the LCD, press the "Talk" button for two (2) seconds minimum and release. "TALK" is now displayed on the LCD. You are now in full hands free duplex (Rx and Tx) mode.

• If you wish to receive (Rx) audio only, i.e. mute transmit (Tx) audio on the Master Transceiver and/or any other Transceiver(s):

o If "TALK" is displayed on the LCD, press the "Talk" button for at least two (2) seconds and release. "TALK" is no longer displayed on the LCD. You are now in receive (Rx) mode only – Transmit (Tx) has been muted/disabled.

o If "TALK" is not displayed on the LCD, no further action is required. You are already in receive (Rx) mode only – Transmit (Tx) has been muted/disabled

3.5 Volume Up/ Down

There are ten (10) volume settings (00 to 09).

- Press the "+" button to adjust volume up and the "-" button to adjust volume down.



Note: Default volume setting is "VOL05".

3.6 Side Tone On/ Off

The Side Tone feature allows you to hear yourself when you are speaking. This is commonly used as a "self-monitoring" system.

- Press the "Mode" button for three (3) seconds minimum.
- The "GRP" symbol on the LCD should now be blinking.
- Immediately press the "Mode" button two (2) times. The "SO" or "SF" symbol on the LCD should now be blinking.
- Press either the Up "+" or Down "-" buttons to toggle between Side Tone On and Side Tone Off.
- Release all buttons three (3) seconds minimum to lock the Side Tone status.

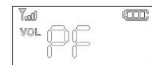
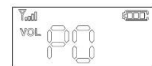


Note: Default Side Tone setting is "SO".

3.7 Receiving Only Mode Selection

It is an option to set the transceiver as receive (Rx) only.

- Press and hold the "Mode" button three (3) seconds minimum.
- The "GRP" symbol on the LCD should now be blinking.
- Immediately press the "Mode" button three (3) times. The "PO" or "PF" symbol on the LCD should now be blinking.
- Select either "PO" for normal Rx and Tx functionality or "PF" for Rx only (Tx is muted) by pressing either the Up "+" or Down "-" buttons to toggle between Rx/Tx (PO) or Rx only (PF).



- Release all buttons three (3) seconds minimum to lock the desired mode.

Note: Default setting is "PO".

3.8 Microphone Sensitivity Control

There are five (5) levels of Microphone Sensitivity to optimize

Tx audio performance according to the surrounding environment.

- Press and hold the "Mode" button three (3) seconds minimum.
- The "GRP" symbol on the LCD should now be blinking.
- Immediately press the "Mode" button four (4) times. C1, C2, C3, C4 or C5 should now be blinking.
- Select the microphone sensitivity level C1 thru C5 by pressing the Up "+" or Down "-" buttons.
- Release all buttons three (3) seconds minimum to lock the desired level.

Note:

1. "C1" is the lowest and "C5" is the highest microphone sensitivity. "C1" is recommended for normal use.
2. The default setting is "C3".



3.9 Receive Audio Output High / Low

In addition to the ten (10) volume settings on the side of the transceiver, there is a speaker boost function for listening to Rx audio in very loud environments.

- Press and hold the "Mode" button three (3) seconds minimum.
- The "GRP" symbol on the LCD should now be blinking.
- Immediately press the "Mode" button five (5) times, except
- Select either "UL" for normal Rx functionality or "UH" for boosted/louder Rx functionality by pressing either the Up "+" or Down "-" buttons to toggle between "UL" and "UH".
- Release all buttons three (3) seconds minimum to lock the desired level.



Note:

1. The default setting is "UL".
2. There may be varying levels of white noise on the "UH" setting. It is recommended to set the audio output to "UL" except when using the device in extremely loud environments.

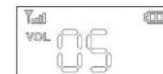
3.10 Occupied status indicator

"PT1" will blink when five (5) Users are in full duplex mode in the group that you wish to participate in full duplex. Press the "Talk" button for two (2) seconds while "PT1" is blinking and the earliest User among the five (5) participants will drop to Listener (Rx only) and you will become a Speaker/Listener (Tx and Rx).

3. Operating Instructions

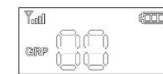
3.1 Power On/Off

- Press and hold the Power Button three (3) seconds minimum to turn the device power on.
- The LCD display should be on and displaying the volume level. Note "VOL05" is the default volume setting.
- To turn off, press and hold the Power Button for three (3) seconds minimum.



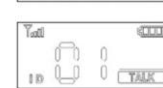
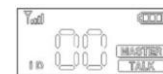
3.2 Group selection

- Press and hold the "Mode" button for three (3) seconds minimum.
- The "GRP" symbol on the LCD should now be blinking.
- Select the desired Group Number (00 to 39) by pressing the Up "+" or Down "-" buttons for the desired number.
- Release all buttons for three (3) seconds minimum to store the Group Number.
- Every transceiver must have the same Group Number to communicate with all members in the Group.



3.3 ID selection

- In a Group, each transceiver must have a unique ID from "00" to "99". The ID "00" becomes a Master Transceiver in a Group and every Group must have a Master Transceiver with ID "00". The "MASTER" and "TALK" are displayed on the LCD as soon as the ID "00" is set.
- Press and hold the "Mode" button for three (3) seconds minimum.
 - The "GRP" symbol on the LCD should now be blinking.
 - Immediately press the "Mode" button one (1) time. The "ID" symbol on the LCD should now be blinking.
 - Select each different ID Number per radio from "00" to "99" in a group by pressing the Up "+" or Down "-" buttons and then release all buttons three (3) seconds minimum to store the ID Number.



3.4 Transmitting and Receiving

- Master Transceiver (ID "00"): Full duplex (transmit and receive) is activated automatically as soon as the ID is set to "00".
- All other Transceivers (ID "01" thru "99"):

4. Battery

The rechargeable Li-Ion battery is installed inside the device. Plug the USB charging cable into the USB port to charge the battery.

The charging LED in the right top corner of the transceiver will light red while attached to the charger. Be sure to fully charge the unit overnight before the first use.

5. Specification

- Model: SPEZ
- Frequency: 902MHz~928MHz
- Tx Output: 100mW max
- Rx sensitivity: 95dBm
- Number of channels: 40
- Channel spacing: 500 kHz
- Frequency response: 200Hz~3.6 kHz
- Battery: Li-Ion battery @ 3.7V / 1100 mAh
- Battery life: Ten (10) hours
- Dimension: 100mm(H) x 50mm(W) x 17mm(D)
- Weight: 88g
- Water resistant per IP54. Avoid exposing to excessive water.

FCC 15.19 a3

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IC - English:

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device

IC - French:

Cet appareil est conforme avec Industrie Canada exempt de licence Rss

standard(s). Son fonctionnement est soumis aux deux conditions suivantes:

1. Cet appareil ne peut causer d'interférences, et
2. Cet appareil doit accepter toute interférence, y compris des interférences qui peuvent provoquer un fonctionnement indésirable du périphérique.

