

www.etech2004.co.kr

EZ1 Series User Manual



E-TECH Co., Ltd.
E-TECH

Contents

1. For Safe Operation	1
2. Features	2
3. Appearance of EZ1 Series Radio	3
4. Operating EZ1 Series Radio	4
5. Basic Operation of EZ1 Series Radio	5
6. Charging the Battery	6
7. Operating Instruction of EZ1 Series Radio	7

Thank you for purchasing the EZ1 Series radio.

1. When using the Radio, please read the enclosed user guide in details.
2. The functions and specifications are subject to be changed without notice for improvement of the Radio performance.



※ Components could be changed by buyer request.

1. For Safe Operation



Don't transmit with antenna detached from the radio or don't damage or change antenna type. Strong electronic waves are emitted from the radio and damages or changes to the antenna may affect the performance of the radio, and it may cause the radio to be defective and not covered under warranty.



Don't disassemble the radio. Disassembly of the radio may cause a serious defect or malfunction and not be covered under warranty.



Don't use the other frequency except for the permitted frequency in order not to be punished by law.



- Don't give an excessive shock to the Radio.
- Don't place the Radio where the direct sunlight and/or the high temperature occurs.
- If the Radio is placed for a long time in car in summer, the hot temperature in the car may cause an explosion of battery.
- Don't make a damage to the battery by a sharp substance and/or an excessive shock.



In case of the area that medical equipments are being used, please use the Radio after discussion with the equipment maker or the related doctor.



Please don't use the radio at the place where computer or other electric/electronic devices are being used, because the strong electronic wave from the Radio can have an effect on the equipments.



- Please keep the radio at least 1inch away from the human body.
- Don't give any damage to antenna.
- When using earphone, please reduce the volume to a low level. If not, unexpected high sound may have harmful effect to your ear.
- Don't touch the conductive metal of the battery radio with wet hands. It may cause damage on your hands.
- Please be careful when putting the battery in a pocket or a bag.

2. Features

The EZ1 Series Radio is developed to be user friendly, compact design and light weight and to have the similar communication range to the industrial Radio and the radio is suitable for leisure and women due to much light weight compared, with the other Radios.

The following are the main features of the EZ1 Series Radio.

- 16 Groups and 256 Channels are selectable
- Call Guard Squelch of standardized 53 CTCSS / 208 DCS
- Compaender function
- Dual Tone Modulation Frequency (DTMF)
- Normal Scan / Priority Scan
- VOX
- BCL / BCLO
- Time-Out Timer (TOT)
- Monitor
- High-Quality Audio Output (1W)
- DC + 3.7V Li-ion / 1800mAH high capacity Li-ion Battery
- 10 step Squelch control
- Lone Worker
- Cloning function
- PC Programming cable in USB type
- Emergency / Siren



3. Appearance of EZ1 Series Radio

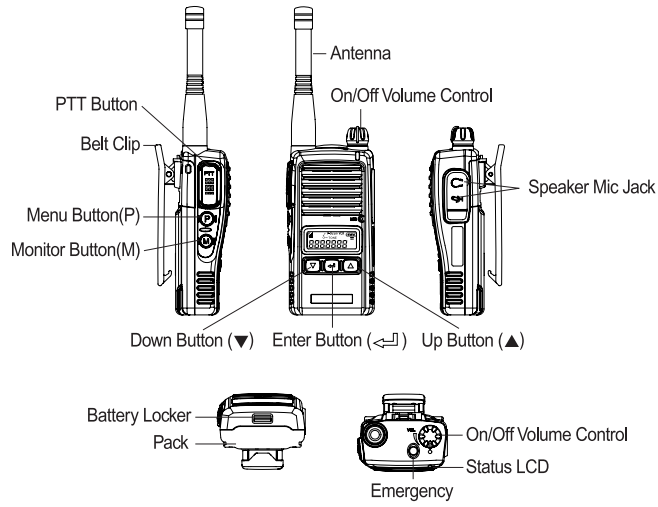


figure 3-1) Appearance of EZ1 Series Radio

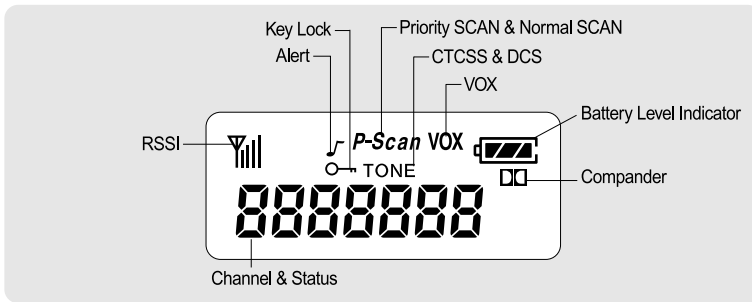


figure 3-2) LCD Indication of EZ1 Series Radio

4. Operating EZ1 Series Radio

1. On / Off / Volume Control

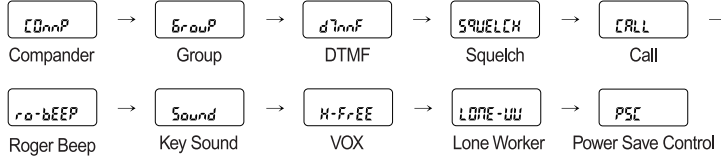
Turns the radio on and off and adjusts audio volume level.

2. PTT Button (Push-To-Talk Button)

Radio transmission button. It is recommended to talk 5~10cm away from the microphone for the best voice communication.

3. Menu Button (P, Program Menu Button)

Enter into Menu mode by pressing the Menu button(P) for 2 seconds.
 The sequence of menu mode is as follows:



4. Monitor Button (M)

The monitor mode is enabled and disabled by pressing the Monitor button(M) on the side.

Normal Mode: During pressing the Monitor button(M) for about 2 seconds, it is possible to check the receiving status.

Continuous Mode: During pressing the Monitor button(M) for more than 2 seconds, the Radio will make a "Beep" tone, which means the monitor function is maintained and if you press the Monitor button(M) again, the monitor function will be released.

5. Channel Buttons (▼, ▲)

Channel Buttons(▼, ▲) have 2 functions as shown in followings.

- (1) Channel buttons(▼, ▲) are to change channels.
- (2) Channel buttons(▼, ▲) are to select menu at menu mode.

6. Emergency Button

In case of emergency situation, if you press the Emergency button, a siren sound will be heard through the speaker in the Radio.

7. Speaker Mic Jack

The Accessory Connector is used when using an external speaker microphone or doing PC Programming or making the Cloning.

8. Status LED

The LED is a lamp indicating the current status of the Radio and please refer to the bellow contents.

- (1) RX : Green Lamp
- (2) TX : Red Lamp
- (3) CTCSS, DCS Error : Green Lamp blinks
- (4) Low Battery : Red Lamp blinks with "beep" sound.

9. Speaker : 1 Watt Output speaker.

5. Basic Operating of EZ1 Series Radio

Installation and Removal of the Battery

► Installation of the Battery

To install battery, slide up the battery towards the top of the Radio until battery latch is locked.

► Removing the Battery

Slide the battery latch located on the bottom to the radio of the Radio to

The open position as shown in figure 5-1.

The battery is removed by pressing it against and sliding it towards the bottom of the radio.

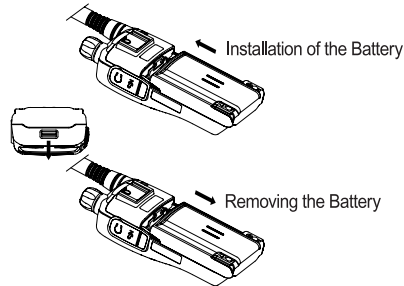


figure 5-1) Installation and Removal of the Battery

6. Charging the Battery

▶ 6.1 Safety Notes

- 1) The radio of EZ1 series receives power from high-performance Li-ion battery. Battery is safe of high performance and highly reliable, and could be charged very fast.



The charging of the enclosed Radio on the other maker's charger will cause damage to the battery and the Radio.

- 2) Please charge the battery before using the radio for best performance and safety.
- 3) When you charge the battery that is installed in the Radio, please turn off the radio first.



The continuous rapid discharge (for example, when making a short circuit on the '+, -' terminals of battery by a metal substance) may make a fatal defect and the battery can be exploded. Also, it can cause a fire.

- 4) Using the correct battery will improve the efficiency and safety.

▶ 6.2 The Time of Charging

Low battery voltage will make the radio have less coverage and also make the performance worse. Please charge the battery in case of followings:

- 1) When you think performance of the radio becomes lower
- 2) When the red lamp on Status Led blinks during transmission or reception
- 3) When the battery icon blinks
- 4) When "beep" sound is generated while the radio is in use

▶ 6.3 How to Charge

- 1) Plug the Adaptor for desk charger into the electricity power outlet.
- 2) When charging the Radio with the battery installed, please turn off the power of the Radio and place the Radio on the charger (The charger has a slide slot.).
- 3) After completion of the charging, the green LED on the charger will light. However, please continue the charging for more than 30 minutes for the complete full charge.

status	During charging	After charging	Detecting error
LED Indication	Red LED lights	Green LED lights	Red LED blinks

▶ 6.4 Charger








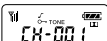
The charger is designed to charge only the Li-ion battery enclosed in this Radio.

Specifications of Charger

- Input Voltage : DC 5V, 700mA
- Operation Temperature : 0°C~+50°C
- Battery
- Size : 76(W)x85(D)x37(H)m/m
- Quick Charging Time : In 4 and half hours
- Charging Current : 700mA(Fast charging)

























7. Operating Instruction of EZ1 Series Radio

▶ 7.1 Function Table

Function	Button & LED status	LCD Display
1. Power On/Off	Power On/Off, Volume switch	
2. Transmit (TX)	PTT button Red LED	
3. Receive (RX)	Green LED	
4. Channel Selection	UP(▲)/Down(▼) button	
5. Emergency	In case of emergency, if you press the Emergency button, a siren sound will be heard through the speaker in the Radio.	
6. Scan	To start Scan, Menu(P) + Enter(↵) When set in the PC Program	  Normal Scan Priority Scan
7. Monitor	Monitor button Green LED	
8. Key Lock	To enable, Menu(P) + Up(▲) button To end Scan, Just press Menu(P) button	
9. Call	Enter(↵) button (When set)	No change in display Transmits Call signal
10. Menu Mode	Press Menu(P) over 1 sec	Press Menu(P) over 1 sec
11. CLONING Function (Frequency, Tone, Scan, Data)	Original set : Turn on the power pressing PTT (-E.T.B.N-) Clonning set : Turn on the power pressing Menu(P) (-P.R.O.G-) Connect cable	Start cloning by pressing Enter button (↵) on the original set. Reset the set after complete cloning.

7. Operating Instruction of EZ1 Series Radio

▶ 7.2 Menu Function Table

Menu	LCD in Menu Mode	LCD in Menu Mode SUB
1. Compander	 Select by Enter Key (↵)	  Select Y, N using ▲, ▼ button. Press Enter(↵) button for Menu Mode.
2. Group	 Select by Enter Key (↵)	 Select i, 15 using ▲, ▼ button. Press Enter(↵) button for Menu Mode.
3. DTMF	 Select by Enter Key (↵)	  Select Y, N using ▲, ▼ button. Press Enter(↵) button for Menu Mode.
4. Squelch	 Select by Enter Key (↵)	 Select 0~9 using ▲, ▼ button. Press Enter(↵) button for Menu Mode. Select Squelch sensitivity(0 High sensitivity, 9 low sensitivity)
5. Call	 Select by Enter Key (↵)   Select Y, N using ▲, ▼ button. Press Enter(↵) button for Menu Mode	 ↵   ↵  ↵  When selecting Y, choose sound from i~i1 Press Enter(↵) button for Menu Mode.
6. Roger Beep	 Select by Enter Key (↵)	  Select Y, N using ▲, ▼ button. Press Enter(↵) button for Menu Mode When selecting Y, there is beep sound after complete TX.
7. Sound	 Select by Enter Key (↵)	  Select Y, N using ▲, ▼ button. Press Enter(↵) button for Menu Mode. When selecting Y, there is beep sound for every key except PTT.

Menu	LCD in Menu Mode	LCD in Menu Mode SUB
8. VOX	<div style="border: 1px solid black; padding: 2px; display: inline-block;">H-Fr EE</div> Select by Enter Key <div style="display: flex; justify-content: space-between; width: 100px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">H-Fr Y</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">H-Fr R</div> </div> Select Y, R using ▲, ▼ button.	<div style="display: flex; justify-content: space-between; width: 100px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">H-Fr R</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">H-Fr EE</div> </div> <div style="display: flex; justify-content: space-between; width: 100px; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">H-Fr Y</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">H-Fr I</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">H-Fr EE</div> </div> When selecting Y, choose sensitivity level from I ~ EE Press Enter(↵) button for Menu Mode. (I High sensitivity, EE low sensitivity)
9. Lone Worker	<div style="border: 1px solid black; padding: 2px; display: inline-block;">LONE - UU</div> Select by Enter Key <div style="display: flex; justify-content: space-between; width: 100px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">LONE Y</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">LONE R</div> </div> Select Y, R using ▲, ▼ button.	When selecting Y, if there's no TX on the set time, Automatically sends Alert sound.
10. PSC	<div style="border: 1px solid black; padding: 2px; display: inline-block;">PSC</div> Select by Enter Key <div style="display: flex; justify-content: space-between; width: 100px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">PSC Y</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">PSC R</div> </div> Select Y, R using ▲, ▼ button.	When selecting Y, Power Saving Mode ON. Press Enter(↵) button for Menu Mode.

7. RADIO FREQUENCY ENERGY SAFETY INFORMATION

Your radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as "Occupational Use Only", meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is NOT intended for use by the "General Population" in an uncontrolled environment.

This radio has been tested and complies with the FCC RF exposure limits for "Occupational Use Only". In addition, your XRADIO radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.

- American National Standards Institute (C95.1-1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

- American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields– RF and Microwave.

- The following accessories are authorized for use with this product. Use of accessories other than those (listed in the instruction) specified may result in RF exposure levels exceeding the FCC requirements for wireless RF exposure. To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

- DO NOT operate the radio without a proper antenna attached, as this may damaged the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or antenna specifically authorized by the manufacturer for use with this radio.

- DO NOT transmits for more than 50% of total radio use time ("50%duty cycle"). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "TX indicator" lights red. You can cause the radio to transmit by pressing the "PTT" switch.

- ALWAYS keep the antenna at least 3 cm away from the body when transmitting and only use the Xradio belt-clip which is listed in instructions when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 3 cm from your mouth, and slightly off to one side. The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to as-sure that this radio operates with the FCC RF exposure limits of this radio. Electromagnetic Interference/Compatibility During transmissions, your XRADIO radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

Occupational/Controlled Use The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. OPERATING NOTES

- Keep the antenna at least 3 cm from your head and body.
- If you wear a mobile two-way radio on your body, ensure that the antenna is at least 3 centimeters From your body when transmitting.

PRECAUTIONS WARNING! NEVER hold the transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting.

WARNING! NEVER operate the transceiver with a headset or other audio accessories at high volume levels.

CAUTION! NEVER short the terminals of the battery pack.

NEVER connect the transceiver to a power source other than the Battery listed below

Such a connection will ruin the transceiver.

DO NOT push the PTT when not actually desiring to transmit

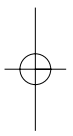
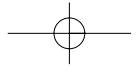
AVOID using or placing the transceiver in direct sunlight or in areas with temperatures below -30°C (-22°F) or above $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$). DO NOT modify the transceiver for any reason.

MAKE SURE the flexible antenna and battery pack are securely attached to the transceiver, and that the antenna and battery pack are dry before attachment. Exposing the inside of the transceiver to water will result in serious damage to the transceiver.

BE CAREFUL! The series transceivers employ waterproof construction, which corresponds to IPX7 of the international standard IEC 60529 (2001),

1 m depth for 30 minutes. However, once the transceiver has been dropped, waterproofing cannot be guaranteed due to the fact that the transceiver may be cracked, or the waterproof seal damaged, etc. The use of non-XRADIO battery packs/chargers may impair transceiver performance and invalidate the warranty.

FCC Notice Cautions. Changes or Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



* This User manual is subject to change according to EZ1 Series
Portable Radio without notice.

Printed in Korea

