# BI-COM

# USER GUIDE

# EZ-D9US

**915MHz DIGITAL WIRELESS INTERCOM/TWO-WAY RADIO**

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# INDEX

# 1. Introductions

Thanks for buying of EZTok product. EZTok product is integrated a technology of Bi-Com which specialize in wireless communication and this product supports full-duplex audio communication which current Two-way product can't support. Also a lot of user can converse at the same time like conference and this product is implemented rapid performance.

Please read this manual carefully how to operate this radio before use.

Notations Used in This Manual

Throughout the text in this publication, you will notice the use of WARNINGS, Cautions, and Notes.

These notations are used to emphasize that safety hazards exist, and the care that must be taken or observed.

WARNING: An operational procedure, practice, or condition, etc., which may result in injury or death if not carefully observed.

CAUTION: An operational procedure, practice, or condition, etc., which may result in damage to the equipment if not carefully observed.

NOTE: An operational procedure, practice, or condition, etc., which is essential to emphasize.

## 1.1. Product Features

| Features | |
|---|---|
| Frequency | 902MHz ~ 928MHz Free ISM Band(USA, Canada, Australia…) |
| Number of Intercom Users | 2 to 16 in full duplex mode |
| Range in Intercom Mode(LOS) | Up to 3Km(1.8mile) |
| Range in Radio Mode(LOS) | Up to 8Km(5mile) |
| Battery Life in Intercom Mode | Intercom12 : Up to 19 hours |
| | Intercom6 : Up to 6 hours |
| | Intercom16 : Up to 12 hours |
| Battery Life in Radio Mode(5:5:9) | Up to 14 hours |
| Battery | Rechargeable Li-ion 3.7V 1700mAh |
| Power in Intercom Mode at Max. | 250mW |
| Power in Radio Mode at Max. | 1W |
| Sensitivity in Intercom Mode | -98dBm |
| Sensitivity in Radio Mode | -114dBm |
| Weight | 150g (set: 110g, battery : 40g) |
| Dimension | 49mm(w) * 102.2mm(h) * 28.7(t) //167.3mm(antenna) |
| Operating Temperature | -10/+50℃ |
| Modulation | GFSK |
| Technology | FHSS-TDMA |

## 1.2. Package Contents
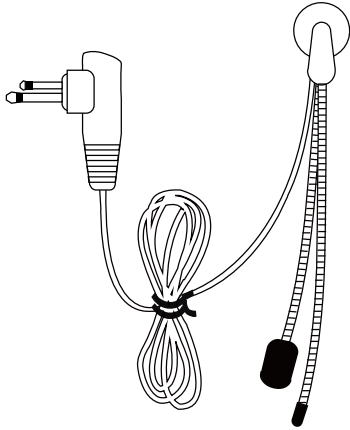
Wired Headset
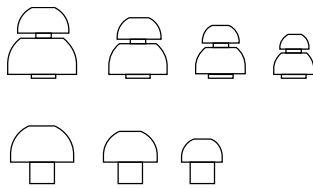
Ear Rubber
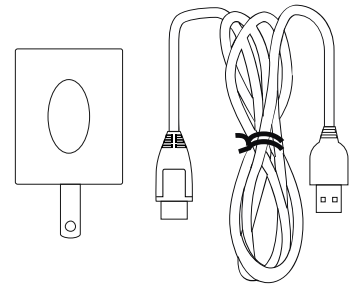
Charger & USB Cable
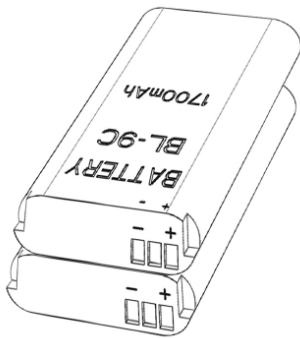
Battery
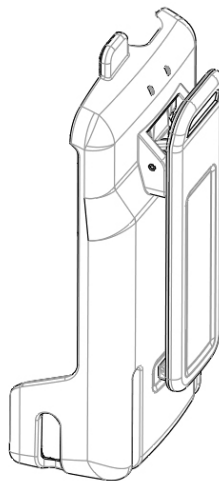
Belt Holster

Desk Charger

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## 1.3. Terminal Outlook Description
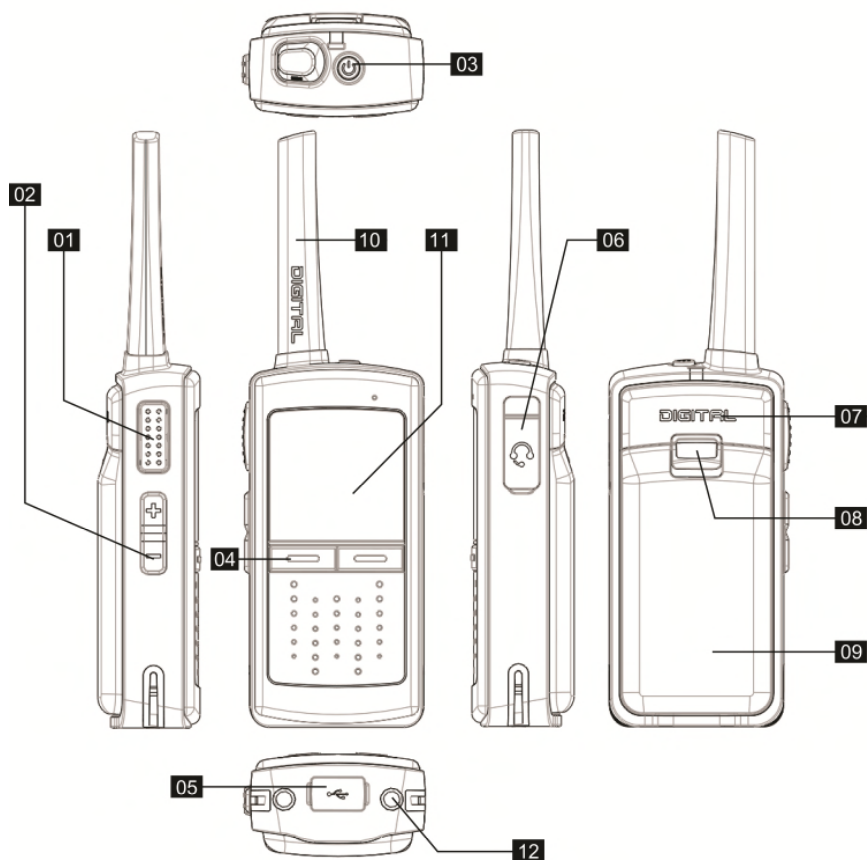


| | |
|---|---|
| Push-to-Talk(PTT) Button | 01 |
| Volume Controls Up & Down Button | 02 |
| Power Button | 03 |
| Left/Right Soft Buttons | 04 |
| Plug-in Charging  Cover | 05 |
| Audio Jack Cover | 06 |
| Antenna Cover | 07 |
| Battery Cover Locker | 08 |
| Battery Cover | 09 |
| Antenna | 10 |
| Window | 11 |
| Desk Charger Plate | 12 |

## 1.4. FCC Licensing Information

EZ-D9US operates in the license-free 900MHz ISM band. EZ-D9US is subject to the Rules and Regulations of the FCC.

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.

NOTE:   THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.  These limits are designed to provide reasonable protection against harmful interference in a residential installation.  This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.  However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

**WARNING !**

**FCC Radiation Exposure Statement:**

This portable equipment with its antenna complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance follow the instructions below; . radio and intercom mode use

1. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

2. Avoid direct contact to the antenna, or keep it to a minimum while using this equipment.

3. In front of the face.   Hold the radio in a vertical position with the microphone (and other parts of the radio including the antenna) at least one inch (2.5 centimeters) away from the nose or lips.

Keeping the radio at a proper distance is important to ensure compliance.

**Test separation distances**

KDB 643646 D01 – Appendix

Head SAR Test consideration

Head SAR is measured with the front of surface of the radio positioned at 2.5 cm

parallel to a flat phantom.

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NOTE: RF exposures decrease with increasing distance from the antenna.

• Body Worn Operation. When worn on the body, always place the radio in a Bi-Com -approved holster or body harness for this product.

Using approved body-worn accessories is important because the use of non-Bi-Com-approved accessories may result in exposure levels, which exceed the occupational/controlled environment RF exposure limits.

• Use only Bi-Com-approved supplied or replacement antennas, batteries, and audio accessories. Use of non- Bi-Com-approved antennas, batteries, and wired or wireless accessories may exceed the applicable RF exposure guidelines (FCC).

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# 2. Getting Started

## 2.1. Description of the screen icons

```
┌─────────────────────────────────┐
│ ▼.ᵢₗₗ          ▦ ▦ ▄▄▄          │
│ Channel 1                        │
│ Michael                          │
│ 123453789ABC                     │
│                      Set         │
└─────────────────────────────────┘
```
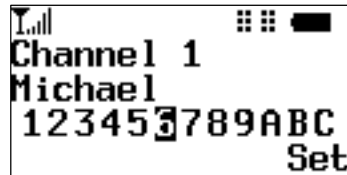
| | | |
|---|---|---|
| Link | : Display the status of link | ▼.ᵢₗₗ |
| Master | : Display the status of master or slave | 🏠M |
| Mic mute | : Display the status of microphone mute/unmute | 🎙×  |
| BT Enable | : Display the status of Bluetooth enable or disable | 📱 |
| BT Pairing | : Display the status of Bluetooth link with mobile phone | ⊏→ |
| Intercom 12 | : Display the status of intercom 12 mode | ▦ ▦ |
| Intercom 6 | : Display the status of intercom 6 mode | ⋮⋮⋮ |
| Intercom 16 | : Display the status of intercom 16 mode | ▦▦▦ |
| Radio | : Display the status of two-way radio mode | ▙▗▟ |
| Battery Status | : Display the status of the remained battery capacity | 🔋 |

## 2.2. Description of the keypad keys

**Push-to-Talk**

Allows the opening/closing of the microphone when the Radio mode.

**02**

**Power On/Off**

Allows powering up or shutdown

**01**

**03**

**Volume Up/Down**

Allows direct access to volume control. In the setup menu can adjust the setting

**Left/Right Soft**

Access the setup menu of the terminal.

**04**

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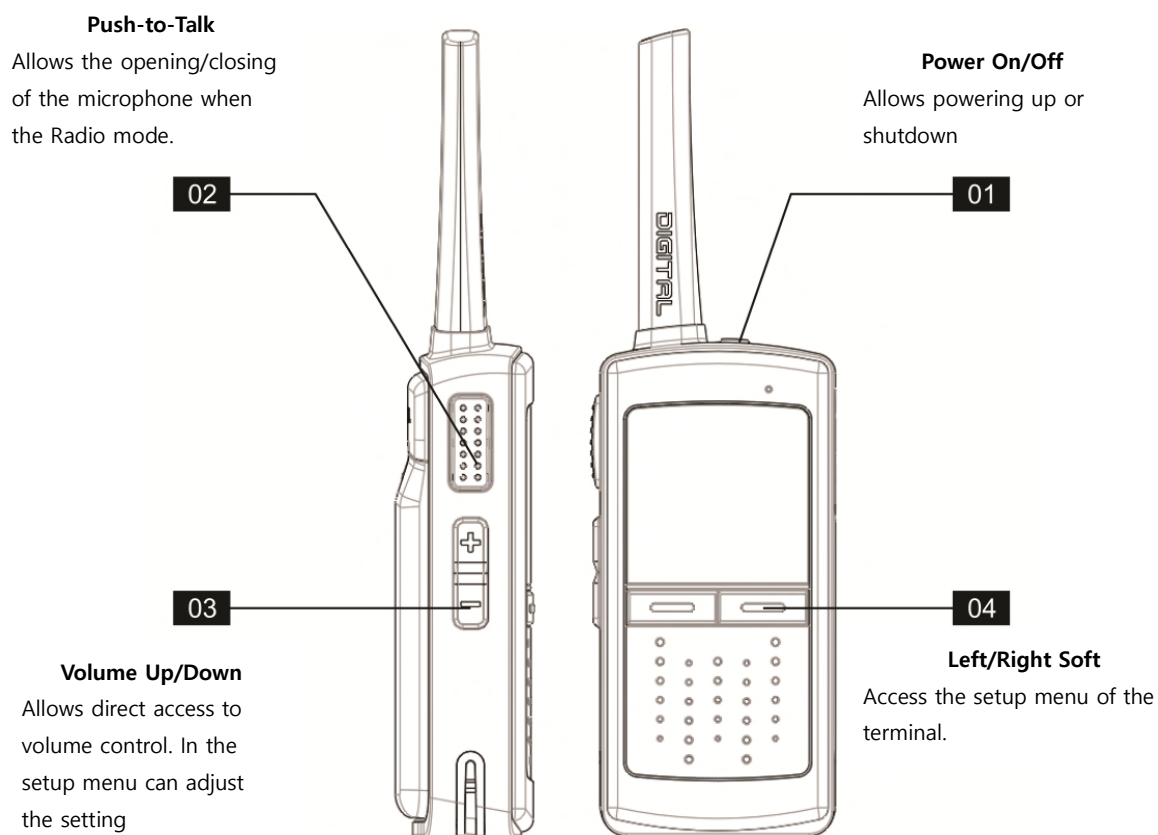
## 2.3.   Set Menu List

Setup Menu ▬▬ Operating Mode ▬▬▬

| Intercom 12 |
| Intercom 6 |
| Intercom 16 |
| Two Way Radio |

Participant ▬▬▬

| Slot 1 (Master) |
| Slot 2 |

. . .

| Slot 12 |
| Listen & PTT |

Channel ▬▬▬

| Channel 1 |
| Channel 2 |

. . .

| Channel 5 |

Pairing

Clear List

Bluetooth ▬▬▬

| Enable |
| Disable |

BT Pairing

Noise Cancel ▬▬▬

| Disable |
| Low |
| Middle |
| High |

Beep Sound ▬▬▬

| Enable |
| Disable |

LCD Contrast

Mic Level ▬▬▬

| Low |
| Middle |
| High |

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| LED Light |
|---|

| Enable |
|---|
| Disable |

| User Name |
|---|

| Language |
|---|

| English |
|---|
| Spanish |
| Portuguese |

| Factory Reset |
|---|

| Information |
|---|

## 2.4. Charging the Radio

When the radio is charging, orange color LED which located in center of the radio is flashed. After finished charging, the color of LED is changed to blue color. In case of Battery, It takes 3hours from low battery till charging is completed.

**Note: 1. We recommend that user don't charge in a state of Radio power is ON. If user charge in the situation of Radio power ON, Charging is not fully completed.**

### Charging using the desktop charger
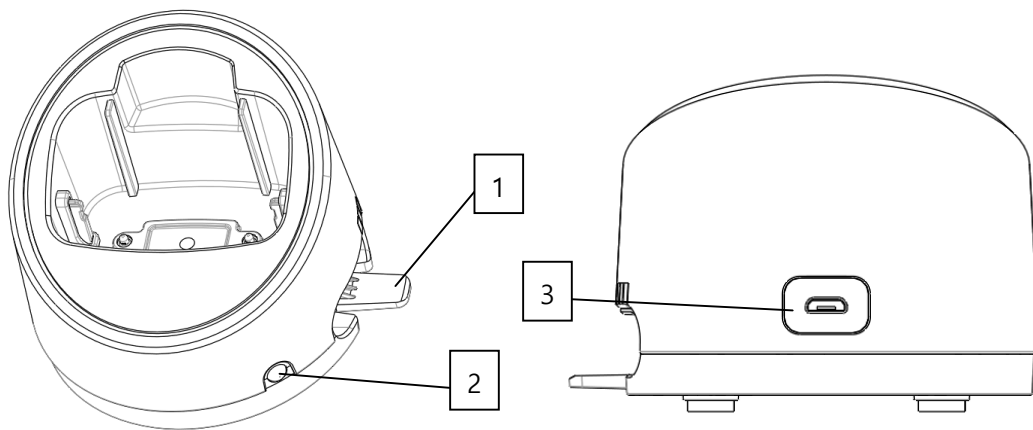
① Battery cell Ejector
② LED Lamp
③ Plug-in Charging

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## How to charge for battery cell with desk charger
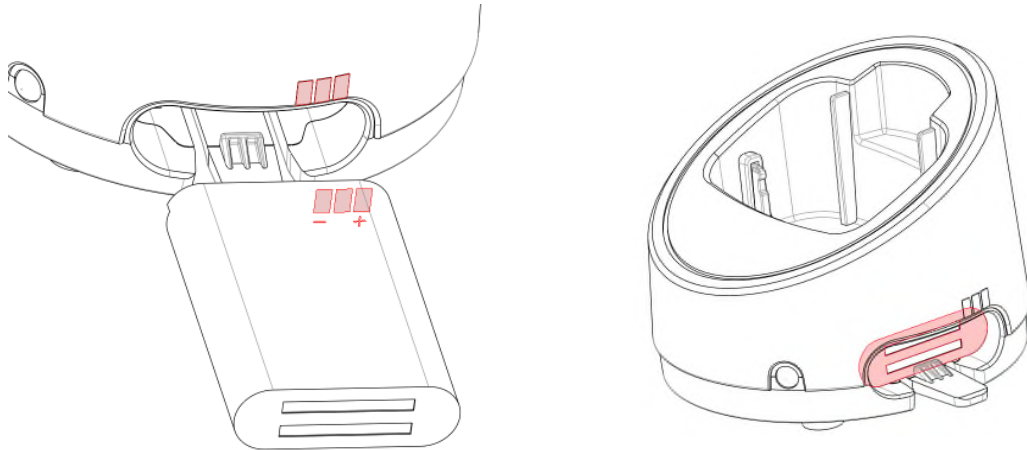


## Holster and radio with desk charger
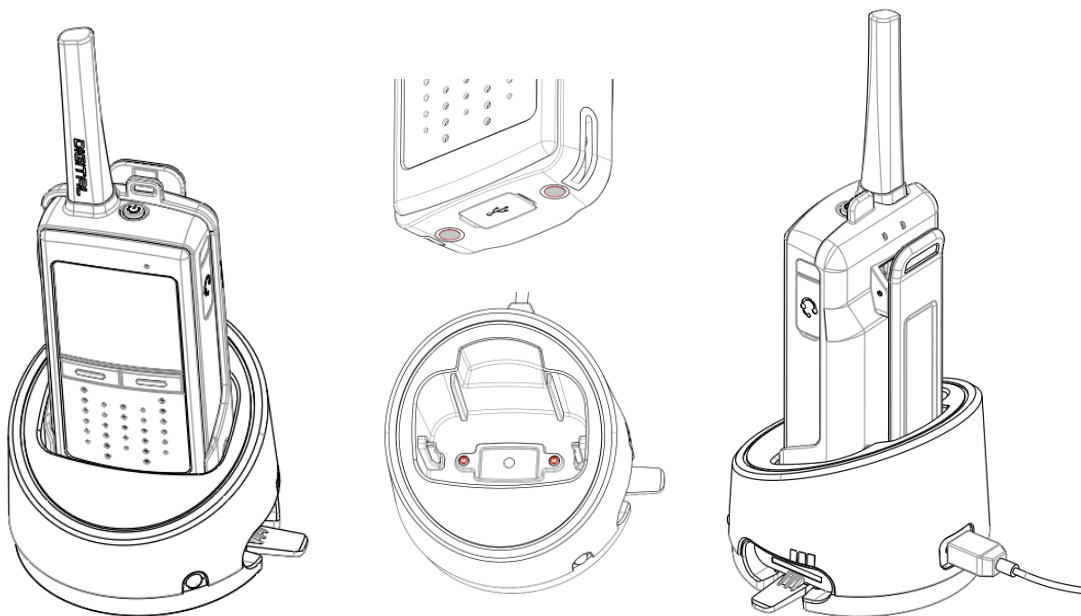


WARNING: Do not attempt to change or charge the battery in a hazardous atmosphere.

To charge the battery, place the battery (with or without the radio) in a Bi-Com approved charger.

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## Radio with desk charger
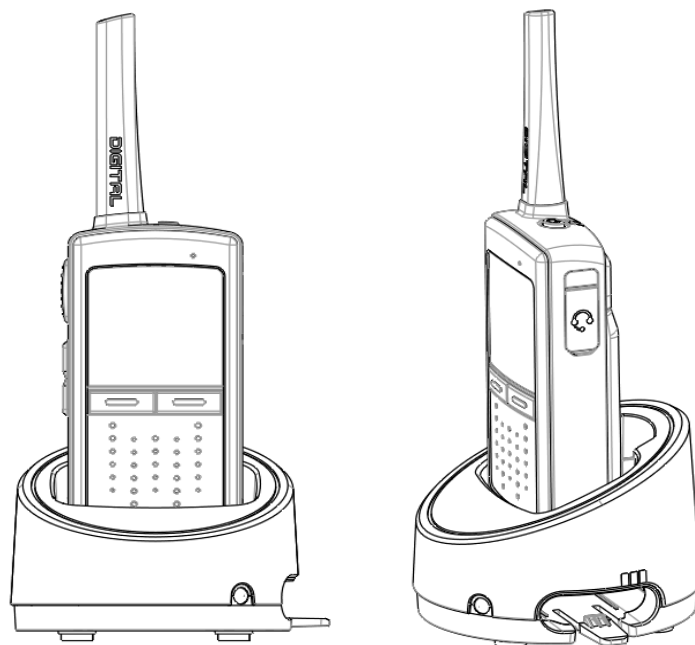


1. Stand a desk charger on flat.
2. Insert a plug of portable charger to micro USB connector which located in rear of desk charger.
3. Insert a AC plug of portable charger to AC outlet.
4. If the color of LED in desk charger is changed from Red > Green > Red+Green, It means that ready for charging.
5. Completely insert a battery cell with direction of bottom right.
6. If the red color of LED is ON, charging is started.
7. When charging is finished, the color of LED is changed to green.
8. If you press the locker on bottom right, then battery cell comes out by itself.
9. The radio is possible to charge alone or with belt holster.
10. If the radio is inserted to charger, the orange color of LED which located in center of the radio becomes on.
11. When charging is finished, orange color of LED is changed to blue color.

Note 1 . If user connects a desk charger using the USB cable to USB port in desktop computer or notebook, desk charger doesn't charge the radio and only battery cell is charged.
2. If user connects to desk charger with general mobile phone's charger, according to charger's type desk charger is not charged the radio and only battery cell is charged.
3. We recommend that user use only this product's charger.
4. If user try to charge in a state of that the radio power is turned on, the orange color of LED in the radio is not changed to blue color.

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## Charging using the Plug-in Charger
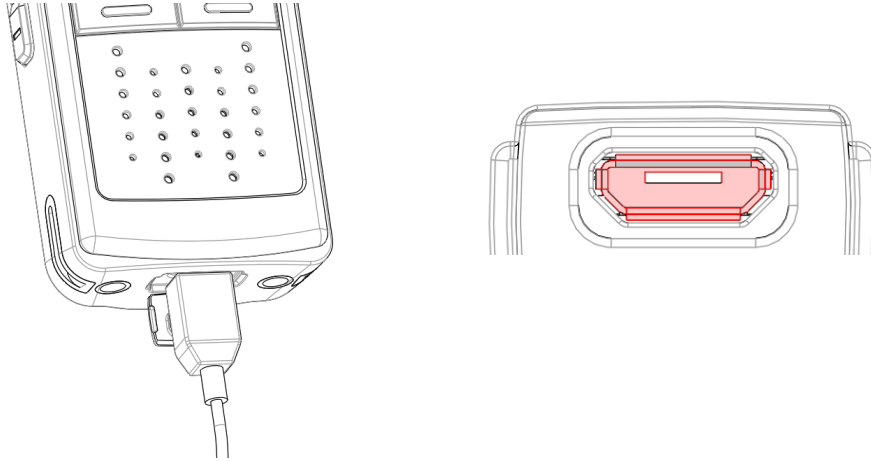
1. Insert the plug of charger to the micro USB connector in the radio.
2. If charger is inserted and starting, the orange color of LED which located in center of the radio becomes on.
3. When charging is finished, the orange color of LED is changed to blue color.

**Note : 1. If user try to charge in a state of that the radio's power is on, the orange color of LED is not changed to blue color.**

## Attaching the Battery
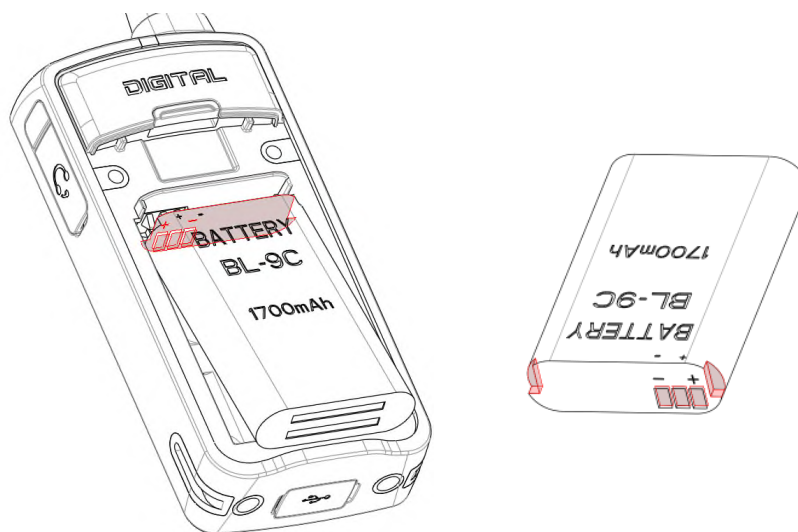
WARNING: To avoid a possible explosion: DO NOT replace the battery in any area labeled "hazardous atmosphere." DO NOT discard batteries in a fire.

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## How to use Belt Holster
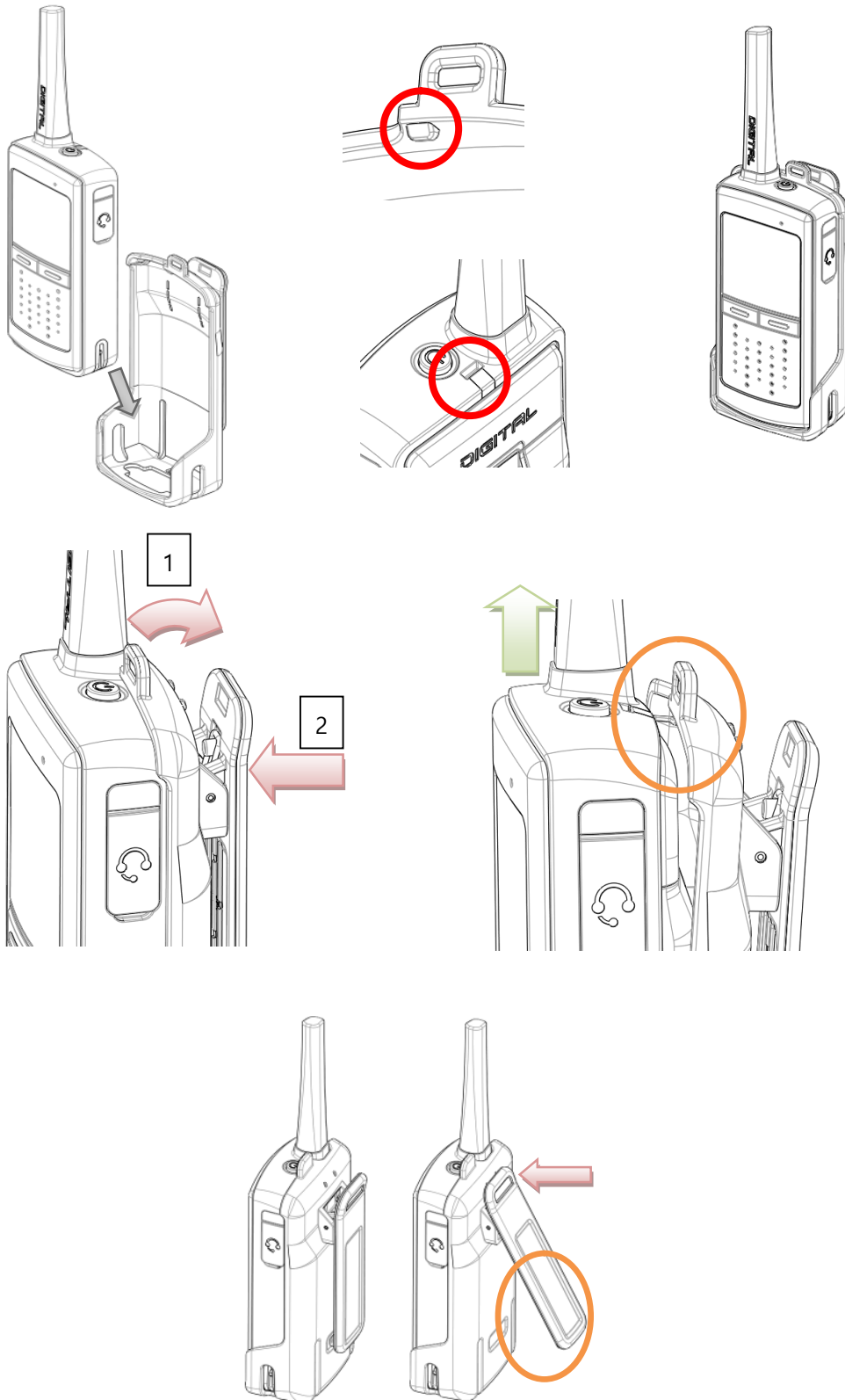
NOTE :Belt holster offers only products we like the illustration, you can only use our products.

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## 2.5. Battery Level

The icon of battery level meter shows how much battery power is remaining.

Radio is completely charged(100%~85%)

Battery remained 85%~30%

Battery remained 30%~10%

Battery remained less 10%, It need to charge.
(Battery is almost finishing, until user make a power off, battery icon's flickering is repeated.)

Battery's useable time is as below between each operating mode..

**Intercom 12**     **: 19 hours**
**Intercom 6**     **: 6 hours**
**Intercom 16**     **: 12 hours**
**Radio**     **: 14 hours(5:5:90)**

WARNING: Care should be taken to avoid external short circuiting of the battery. A sustained high-rate discharge (for example, a paper clip placed accidentally across the battery contacts) may permanently damage the battery, void the battery warranty, and create a burn or fire hazard.

# 3. General Radio Operations

Before using a radio, please check whether battery is completely charged or not. If not charged, please charging first before use.

To use EZ-D9US, User has to set as below setting procedures, then user can use the intercom or two-way radio communication.

## 3.1. Basic Implementation-Using EZ-D9US

- Power on using the power button of EZ-D9US
- Set the user name to refer 3.4 Setting the User Name menu as below.
- Select the operating mode to refer 3.6 Setting the Operating Mode menu as below.
- Select the slot ID of radio to refer 3.5 Setting the Participant menu as below. It must be set one master in using group. Also Slot ID has not to duplicate between users.
- Set the channel number to refer 3.7 Setting Channel menu as below. User group has to set same channel.
- Master radio(Slot 1) and slave radio(Slot 2~12 & Listen & PTT) have to be paired to refer 3.8 Setting Pairing menu as below. Master radio conducts a pairing with radio which set with each Slot ID.

Now Basic procedures are finished for using of Intercom or Two-way radio. To additional setting, We ask you to set by referring to below each menu explanation.

## 3.2. Turning Radio On/Off

To power on pressing the power button during 2 seconds.

Red LED of the radio's center becomes on and blinking and 'EZTok' is showed on LCD.

After EZTok is disappeared, It comes to display the start-up screen.

User name is indicated on LCD.

The basic operating mode is set with intercom 12 mode.

If user press power button during 2 seconds, the radio is power off.

```
┌─────────────────────────┐
│                 ⠿ ▰     │
│ Channel 1               │
│ SDR-D9        89782     │
│                         │
│ ─────────────           │
│                  Set    │
└─────────────────────────┘
```

**Bi-Com**
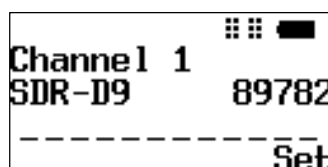
## 3.3. Adjusting the Speaker Volume

Volume control button is consist of 2 button for Upper and lower on middle left of radio.

To increase the volume press the upper button, and to decrease the volume press the lower button on the start-up screen.

The number of volume level is consisted of 0 to 8. "0" is speaker volume is muted.

```
 T.ill        :: :: ▬
Volume
          4
▉▉▉▉▉▉▉
              Exit
```
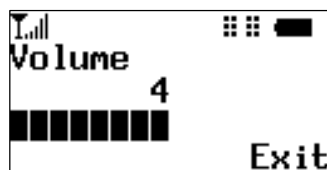
## 3.4. Setting the User Name

Please change a basic device's name to actual user's name. This case, Screen of Radio mode shows a user name who tried to call. Therefore it' gives a convenience for use.

```
 T.ill        :: :: ▬
CAP.         DEL.
Michael█
     ijk^mno
Next         Save
```

1.  Enter to set user name menu pressing the right soft key in start-up screen
2.  Select D. User name meu pressing the up/down key on side
3.  Enter to user name menu pressing the PTT key of side or left soft key
4.  Change a letters and special symbols using the up/down key
5.  If user wants to change the next letter or location of letter, press next button(left key) and move
6.  To change the capital/small letter, press PTT key for more 2 seconds, then letter is changed to capital or small letter
7.  To remove the current letter, press power key
8.  With above procedure, after changing the letter or special symbol which user wants to change using the right soft key and save (On the Screen for approval if user select YES, It's saved and user select NO, It returned to previous page which before edited)
9.  If user wants to cancel while changing the use name, press save key and select 'NO' and move to name menu

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**Definition of Edit Key**

Up Key                          : Indicate next symbol
Up Key(Long Pressing)      : Indicate next symbol with continuous changing
Down Key                       : Indicate previous symbol
Down Key(Long Pressing) : Indicate previous symbol with continuous changing
PTT Key                          : Indicate symbol change with order of 'A'->'M'->'Z'->'a'->'m'->'z'->'1'
PTT Key(Long Pressing)    : Capital/small letter's changing of current alphabet
Power Key                       : Function erasing of current location's letter

## 3.5. Setting the Participant Mode

For using of this radio, one radio device has to be set as master in user group. Also in user group other devices have to be set with slot 2~12 or Listen & PTT. And It has to be grouping through pairing process with master device. Device which didn't pairing with master can't participate in group talking.

In one group, master device for pairing has to be used only one device. if user selects other master device and do a pairing, It will be different group.



1. Go to menu pressing right soft in start-up screen
2. Select 2 participant pressing down key of side
3. Go participant menu pressing PTT key on left soft key or PTT key of side
4. After select Slot 1(master) or Slot 2~12 pressing up/down key, select <Sel> pressing left soft ley or PTT key of side. After set of <Sel>, it automatically comes out to start-up screen.
5. If set the Slot 1(Master), Master Icon is activated on LCD screen. But It set Slot 2~12, there is no any indication on LCD.
6. Other devices except for master can set the single Slot number to each device   with above way
7. In participant menu, if set the Listen & PTT, device operate like below.
    In case of that there is no device set with Slot 12 : If press PTT button of device, user can talk to others. If user release PTT button, It's automatically changed to Listen only.
    In case of that there is device set with Slot 12: Device operate with Listen only mode.

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**Note 1. Device which set till Slot 7~12 in Intercom 6 mode operates by Listen & PTT Mode. If user change a mode to Intercom 12 mode, Slot 7~12 operates by own ID.**
**Note 2. In case of Participants ID, Slot 2~12 which except for Master in Intercom 16 and Radio mode and Listen & PTT all takes part in voice communication**

## 3.6. Setting the Operation Mode

This radio supports Intercom conference mode and Two-way radio mode. User who use in group has to set the mode which fit for purpose of use. If device is set with different mode, It doesn't support a voice communication.

**Intercom 12** :　It's used in case of that all users have work radius with certain distance on basis of master. It use max. 12 radios with Full duplex and If there is additional users, put Slot 12 up free using Listen & PTT and other users set with Listen & PTT.

**Intercom 6** :　:　It's used in case of that all users have work radius with certain distance on basis of master. The number of users are less than Intercom 12 mode but the working range is more longer than intercom 12 mode. It use max. 6 radios with Full duplex and If there is additional users, put Slot 6 up free using Listen & PTT and other users set with Listen & PTT.

**Intercom 16** : It can use in case of that Max 16 users use in wide space with linear arranged. Should be one master radio in group and don't care about the other slot ID.

**Two Way Radio** : this device is used when many people want to use in wide space. In case of no working Intercom mode.

1. Enter to Menu pressing right soft key in start-up screen
2. It's selected 1 operation mode
3. After pressing the left soft key or PTT key of side and enter
4. Intercom 12 is activated in beginning
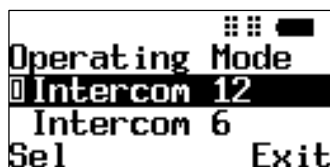


5. Move to the other mode pressing left up/down key
6. If select <Sel selection> pressing left soft key or PTT key, It comes out to start-up screen and device(radio) is changed to selected mode

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| | |
|---|---|
| **Intercom 12** |  |
| **Intercom 6** |  |
| **Intercom 16** |  |
| **Radio** |  |



<Radio mode screen>
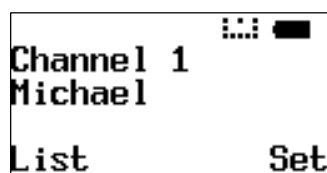
## 3.7. Setting the Channel

This radio is possible to differently set a channel for use in order to avoid interference between groups in case of that several groups use at same time and same space. Even same mode, if channel is different., It doesn't connect between groups.

1. Enter to Menu pressing right soft key in start-up screen
2. Select 3 Channel pressing down key of side
3. Enter to channel menu pressing left soft key or PTT key of side
4. Select a wanted channel pressing left up/down key
5. If select <Sel selection> pressing left soft key or PTT key, It comes out to start-up screen
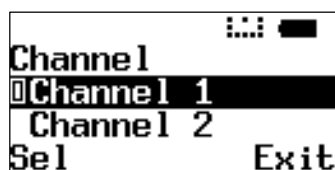
| CHANNEL | INTERCOM 12/16<br>25Channel with in | INTERCOM 6<br>50Channel with in | RADIO<br>50Channel with in |
|---------|-----------------------------------|---------------------------------|----------------------------|
| 1 | 903MHz~926.5MHz | 903MHz~922.6MHz | 903MHz~922.6MHz |
| 2 | 903MHz~926.5MHz | 903.2MHz~922.8MHz | 903.2MHz~922.8MHz |
| 3 | 903MHz~926.5MHz | 903MHz~922.8MHz | 903MHz~922.8MHz |
| 4 | 903.5MHz~926.5MHz | 903MHz~926.6MHz | 903MHz~926.6MHz |
| 5 | 903MHz~926MHz | 905MHz~926.8MHz | 905MHz~926.8MHz |

## 3.8. Setting the Pairing Method

This Radio supports intercom or two-way radio communication through the pairing between master radio and slave radio before using. Select a Master radio in user group, other user's radio conducts a pairing with Master radio. But there is user number limitation in Intercom mode, therefore Please study user guide.

1. Prepare a Master radio and another radio which wants pairing.
2. Power ON pressing the power button
3. Enter to Menu pressing right soft key in start-up screen
4. Select 4. Pairing using he Up/down key of side
5. Select <Sel> using left soft key or PTT key of side
6. Select a pairing Master radio and another radio
7. If the radio is paired without problem with Master radio Master radio and another radio go back to Menu screen
8. If user wants to cancel, select a right soft key <End>.

**Note 1. In case of Intercom 16 mode, if number of user are exceed 16 users, radios can be caused a technical problem. Therefore manager of group has to strictly control.**
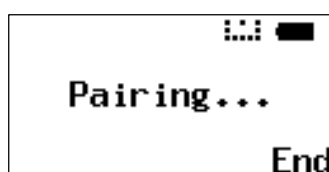
## 3.9.  Setting the Bluetooth

This radio supports functions for Bluetooth-hands free and Music player. Bluetooth is set as follows.

1. Enter to menu pressing the right soft key in start-up screen
2. Select 6.Bluetooth using the Up/down button of side
3. Select <Sel> using the left soft key or PTT Key of side
4. Select Enable / Disable using the Up/Down key of side
5. Select <Sel> using the left soft key or PTT Key of side
6. User can see whether Bluetooth icon is activated or deactivated on the screen.



## 3.10. Setting the Bluetooth Pairing

Bluetooth pairing with smart phone is proceeded as follow.

1. Enter to menu pressing the right soft key in start-up screen
2. Select a 7.Bluetooth pairing using the Up/down button of side
3. Select a <Sel> using the left soft key or PTT Key of side
4. Search a device in Bluetooth setting menu of Smartphone
5. Select a SDR-D9 of search lists
6. Device and Smartphone are mutually paired
7. After pairing Bluetooth's icon is changed to Bluetooth Link icon like below picture
8. If user wants to cancel a pairing, select right soft key<End>

**Note 1. If pairing is failed, Do OFF and ON a Bluetooth of Smartphone and EZ-D9US. And after that, try a pairing by repeating above procedure.**

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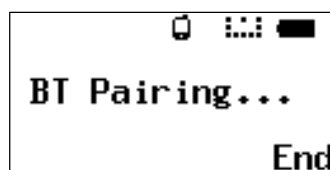
### 3.11. Setting the Mic Level

In case of that user has big or small voice, user can control a volume level of Microphone. Then user can use with smooth voice communication.

1. Enter to Menu pressing the right soft key
2. Select B. Mic Level pressing Up/down key of side
3. Enter to Mic. Level menu pressing left soft key or PTT key of side
4. Select Low/Middle/High using up/down key of side
5. After finishing, exit from menu pressing right soft key

**Note: 1. Low(Big voice)/Middle(Suitable voice)/High(Small voice).**
    **2. Hold the radio two-to-three inches away from your mouth.**

```
                    ∷∷ ▄
Mic Level
█Low
 Middle
Sel          Exit
```
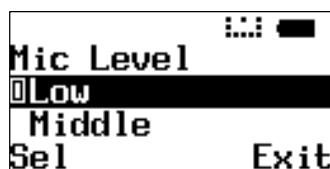
### 3.12. Adjusting the LCD Contrast

1. Enter to Menu pressing the right soft key
2. Select A. LCD Contrast pressing Up/down key of side
3. Enter to LCD Contrast menu pressing left soft key or PTT key of side
4. Control a contrast using up/down key of side
5. After finishing, exit from menu pressing right soft key<Exit>

```
                    ∷∷ ▄
LCD Contrast
        4
███████
             Exit
```

### 3.13. Setting the Language

1. Enter to Menu pressing the right soft key
2. Select C. Language pressing Up/down key of side
3. Enter to Language pressing left soft key or PTT key of side

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4. Move to language which user wants using up/down key of side

5. Select <Sel> using left soft key or PTT key of side

6. After finishing, exit from menu pressing right soft key<Exit>

```
                    ⠒⠒ ▄▄
Language
▯English
 Spanish
Sel          Exit
```
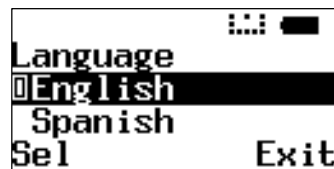
## 3.14. Setting the Noise Cancel Mode

Mode for noise reduction in case of that there's much static noise around user.

But distortion of voice signal is possible to happen

Disable : Noise Cancel Disable

Low :   Noise removal way in case of small noise

Middle : Noise removal way in case of middle noise

High : Select in case of big noise

1. Enter to Menu pressing the right soft key

2. Select 8. Noise Cancel pressing the Up/down key of side

3. Enter to Noise Cancel pressing the left soft key or PTT key of side

4. Move to wanted mode using the Up/down key of side

5. Select using the left soft key or PTT key of side

6. After select, device is automatically changed OFF and ON and It's moved to start-up screen

```
                    ⠒⠒ ▄▄
Noise Cancel
▯Disable
 Low
Sel          Exit
```
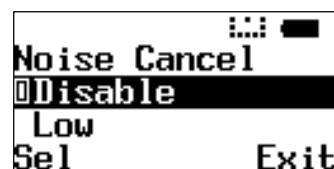
## 3.15.  Setting the Beep Sound

1. Enter to Menu pressing the right soft key in start-up screen

2. Select 9. Beef Sound pressing the Up/down key of side

3. Enter to Beef Sound menu pressing the left soft key or PTT key of side

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4. Select Enable/Disable using the up/down key of side
5. Exit from menu using the right soft key <Exit>

```
                    ⦂⦂⦂ ▬
Beep Sound
▯Enable
 Disable
Sel            Exit
```
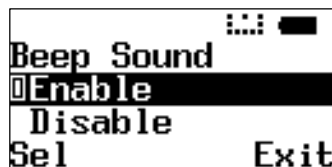
## 3.16. Setting the Backlight LCD

1. Enter to Menu pressing the right soft key in start-up screen
2. Select C. LED Light pressing the Up/down key of side
3. Enter to LED Light menu pressing the left soft key or PTT key of side
4. Select Enable/Disable using the up/down key of side
5. Exit from menu using the right soft key <Exit>

```
                    ⦂⦂⦂ ▬
Backlight & LED
▯Enable
 Disable
Sel            Exit
```

## 3.17. Setting the Clear List

This function is for removal a list which saved in other user name in Radio mode.

1. Enter to Menu pressing the right soft key
2. Select 5. Clear List pressing up/down key of side
3. Enter to Clear List menu pressing left soft key or PTT key of side
4. "Are you sure?" message will be showed and 'Yes or No' is indicated in bottom
5. if user press left soft key <Yes>, list is removed and It's moved to Menu screen

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## 3.18. Initial Screen of Radio Mode

```
┌──────────────────────┐   ┌──────────────────────┐
│             !...! ▭■  │   │ ▼.ıll       !...! ▭■ │
│ Channel 1            │   │ Public Call          │
│ Michael              │   │ Michael              │
│                      │   │                      │
│ List          Set    │   │                      │
└──────────────────────┘   └──────────────────────┘
```

The function of list in Radio mode
In case of that user talk 1:1 with specific radio in communication group in Radio mode, user can use private call with a specific radio which saved in list.

1. Enter to list pressing the left soft key in start-up screen
2. User can select the device which wanted in list which received call from other device using the up/down key
3. 'Private Call' message will be showed on screen and in case of that user talk by pressing PTT, private call is received only relevant device.
4. If user remove a private call, exit pressing the right sift key

## 3.19. What is the Private Call in Radio Mode

In case of that user wants to talk 1:1 with specific radio in communication group in Radio mode., user can communicate with relevant radio using the private call

1. Enter to list pressing the left soft key in start-up screen
2. User name list which received from other radio will be showed. If there is no record which received, will be showed "Empty List" on the screen.
3. Select the user name which wanted on list using the Up/down key of side.
4. If user press the PTT Key, voice is transmitted to user name's radio which selected by private channel
5. In this case, the priority is private call. If user wants to cancel the private call, press right soft key. Then exit and it's changed to Public call mode.

```
┌──────────────────────┐   ┌──────────────────────┐
│             !...! ▭■  │   │ ▼.ıll       !...! ▭■ │
│ List                 │   │ Private Call         │
│ Jessica              │   │ Jessica              │
│                      │   │                      │
│ Sel          Exit    │   │                      │
└──────────────────────┘   └──────────────────────┘
```

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## 4. Smart App

It is easy and quick to change user name or device setting on smart phone app.

Download app from app store
Instructions are provided on smart phone app.

# 5. Troubleshooting-FAQ

**Problem with turning on the radio**

If red LED doesn't show on the device with power button, please charge up the battery.

If the device gets turned off after red LED blink, please charge the battery.

**Connection problem with other radios**

Radios without pairing with master radio can't be joined in a group. Try re-pairing with master radio of the group

Check whether the operating mode is same or not with other users in a group. It cannot be connected with other users if it is different operating mode

Check whether the channel is same or not with other users. It cannot be connected with other users if it is different channel.

In case of Intercom 12, It is possible to connect with condition of that radio which selected slot 1 (master) radio and another one slot(slot 2~12) has to be existed in connecting range. (If only 2 radios (slot 1 radio and other radio which is selected Listen & PTT) exist, It is not connected. User need to change a Listen & PTT setting to Slot 2 or other Slot number.)

In case of Intercom 6, It's possible to connect with condition of that radio which selected slot 1 (master) radio and another one slot(slot 2~6) has to be existed in connecting range. (If only 2 device (slot 1 radio and other radio which selected slot(slot7~12) or Listen & PTT) exist, It is not connected. User need to change slot(slot7~12) or Listen & PTT setting to Slot 2 or other slot(slot3~6)).

If it does not work properly even all setting in normal mode, try it in a short distance. Long distance might be the problem.

**What happens if master radio is changed to other slot number after paring with other radios?**

Because it is paired between master radio before being changed to other slot number, pairing record is saved in master radio. So it can be communicated with other users.

**After pairing with A group, It paired with Master device of B group. If user wants to back to A group. How to back?**

Please do a pairing with same method of pairing of A group's master device again. Then It paired to A group once again.

**What happens if user use same Slot ID with other radio(Intercom 12 & Intercom 6)?**

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In this case, two radios which use the same slot ID can be received other user's voice. But user's voice which has same ID is transmitted to other radios which is located in near with my radio. Also In this case, other users hear the broken voice from same slot ID users or can't receive the voice even nearby my radio.

**How can user know that user use a same Slot ID with other radio?**
Generally before using of group intercom, user can know the number of user in group. For example, assuming that there are 5 users in this event and they use an Intercom 12 mode, the number of users on the screen has to show the Slot ID (1,2,3,4,5) for 5 users. But if there is 4 user on screen of radio in spite of that Slot 3 is empty, someone use same ID of members. This case, group manager need to inform all group members and check each ID.

**What happens if my radio set as Master radio after pairing with A group's master?**
Pairing information remains. So user who change to master radio can communicate with existing devices if there is no previous master radio. If there is a previous master radio, that will be happen the problem. But if user make pairing the other device using my radio, from this time my radio can communicate paired group.

**If you hear cranking sound on radio mode.**
=>It might happen when received date is damaged by surrounding environment or long distance.
     Make the distance between devices short, or move to good radio signal area

**If you hear cranking sound on intercom mode.**
It might happen when received date is damaged by surrounding environment or long distance.
Make the distance between devices short, or move to good radio signal area

**Battery charging problem with desk charger using by smart phone charger**
It could happen when charging current is not enough in smart phone charger. For more information, please refer to the charging section in "Charging the radio"

**Battery charging problem with desk charger using by USB cable connected with PC**
USB cable of PC has current(electric) limit, so only battery cell is charged and radio can't be charged.
For further information, please refer to the charging section in "Charging the radio"

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**If you hear your own voice from your headset.**

Give more distance between the radios. If two radios are too close, the user can hear your voice from headset.

**Keypad doesn't work properly.**

Don't push several buttons on keypad at the same time. The radio only recognizes one button sequentially.

If press the power key within short time, all of key go to lock and locks the function of keypad. If press the power key once again, goes to unlock for all of key.

**Short communication distance**

Check the antenna connection if it is damaged.

Don't hold antenna or roll around the headset line.

Communication distance could be short if you are surrounded by many building in city area or under the high humidity environment.

**Battery dies so quick.**

Check the below point if the product is under warranty

- Battery normally lasts 2 hours with frequently talking on radio mode.

- Use the charger and AC/DC adopter provided only from the our company.

- If the product is under warranty as well as battery/Adopter provided from our company are used, please contact our customer service center.

=> The warranty of battery is 12 months. You have to purchase new one afterwards.

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