

## **INSTRUCTION MANUAL**

iTALK150 POC Trunked Two-way Radio

Kirisun Communications Co.,Ltd.

# Instruction Manual POC Trunked Portable Radio

We are very grateful for your purchasing Kirisun brand two-way radio produced by Kirisun Communications Co., Ltd.

We believe Kirisun two-way radio, which always incorporates the latest technology, can bring great convenience to your life and work. We also believe that the quality and function of Kirisun two-way radio can meet your demands for reliable communication.

## **Contents**

Safety	2
Regulatory	7
Caring for your product	8
Connectors, controls, buttons and keys	9
Keys, buttons and knobs overview	11
LED status indicator	12
Battery information	13
Accessory information	17
Basic operation	19
Technical specifications	23

## Safety

Read these safety instructions carefully.

#### Attention!

Kirisun products are designed for use by mobile workforces, often working alone, and are intended for use in uncontrolled conditions.

It is the responsibility of the person operating the product to ensure that it is operated safely at all times, and that local laws and regulations governing the usage of Radio Frequency, RF, products are observed. Obey all signs and instructions relating to the usage to RF wireless devices

It is recommended that you obtain training on how to safely operate this product. Your personal safety could be affected if you do not understand how to operate this product correctly.

This product must not be operated in environments that exceed those listed in the product technical datasheet and in the Regulatory section of the product user guide.

Unauthorised modifications to the product could cause the product to become non-operational. Always use Kirisun approved antenna, battery and accessories with this product.

#### Exposure to RF energy

Kirisun designs and manufactures products to meet strict guidelines and international standards relating to Radio Frequency ,RF, energy and the potential health risks associated with using such products. If you have any concerns about potential health risks associated with long term exposure to RF energy, you should obtain advice from your employer.

#### RF energy interference with electronic equipment

Some personal medical devices, such as hearing aids and pacemakers, can be affected by RF energy. Always consult your service provider or the manufacturer of the medical device before using RF wireless devices.

Some electronic devices are sensitive to RF energy. POWER OFF your radio when operating within health care facilities or other areas that are sensitive to RF energy.

#### Safely operating your radio

Your radio is not intrinsically safe and has not been designed for use in hazardous environments such as gas fumes, flammable chemicals, or blasting areas. Check the compliance ratings of this product before operating the radio in any hazardous environment.

Your radio should be used in its normal operating position when hand-held, worn on the body or secured within a cradle. Always ensure that the antenna is pointed away from the body, particularly the eyes. When body-worn, the radio must be secured using Kirisun approved attachments. Always ensure that your radio is operating correctly before entering any environment that has a potential risk to personal safety.

Only remove the antenna, battery or accessories when it is safe to do so.

#### Protection against hearing loss

NEVER place the radio next to your ear, like a mobile phone when making a PTT call. Your radio has a powerful loudspeaker that could potentially damage your hearing if held next to your ear. Always check the volume level before making and receiving calls.

#### Safety when driving a vehicle

Always obey local laws and regulations governing the operation of RF wireless devices when driving and whilst at locations. Do not operate your radio if it creates a distraction from driving safely and observing road conditions.

Always POWER OFF your radio at refuelling stations and obey warning signs relating to the use of RF wireless devices in the vicinity of refuelling stations.

#### Important safety notes about the Antenna

NEVER touch the antenna when the radio is transmitting, this may cause a minor burn to the skin and may affect the operational range of the antenna. NEVER use your radio if the antenna shows signs for damage.

DO NOT handle, hold or swing the radio by its antenna, because this may damage the antenna and the radio. Do not chew the antenna or place it into your mouth. NEVER use your radio without an antenna attached. Transmitting without an antenna may damage the radio. Only use a Kirisun approved antenna with your radio.

#### **Operational Conditions**

Do not exceed the operational conditions for the radio and battery. Always check the technical data for this product before attempting to operate the product in extreme conditions. Leaving the radio in extreme temperatures (over 50°C or 122°F) for example behind glass indirect sunlight may cause damage to the casing and the battery.

Care should be taken to avoid mechanical impact.

#### **Accessories**

Kirisun products have been tested to meet strict guidelines for personal safety and operational conditions. Only accessories approved by Kirisun are recommended for use with this product. Always read the instructions supplied with the accessory for additional safety instructions.

The use of non-approved accessories may invalidate any product warranty. If a non-approved accessory is fitted, it may compromise the product safety ratings.

Always fit the RAC cover when an accessory is not in use.

#### Safe installation into vehicles

Electronic control mechanisms within a vehicle can be affected by the use of RF energy such as ABS and transmission controls. Always refer to the vehicle manufacturer,s instructions and technical information relating to electronic modules and their wiring harnesses before installing an RF wireless device into a vehicle.

Do not install the product within the air bag deployment area. In the event of the air bag deflating, the radio could be propelled at great force potentially causing serious injury.

#### Servicing

Do not attempt to dismantle this product. Servicing and repairs to this product must be performed by trained service technicians at Kirisun approved service centres.

## Regulatory



Kirisun declares that this product is compliant with the essential requirements and other relevant provisions of the European R&TTE directive 1999/5/EC relating to radio and telecommunications terminal equipment and the mutual recognition of their conformity. This product is also compliant with directive 2011/65/EU having been designed and manufactured to the RoHS requirements.

## Waste Electrical and Electronic Equipment recycling



This symbol on the product or its packaging indicates that this product must not be disposed of as household or commercial waste. Some countries have set up collection and recycling systems for waste electrical and electronic products. By ensuring that this product and its packaging is disposed of correctly, you will help prevent potentially negative consequences for the environment and human health, and help conserve natural resources. Please dispose

of your waste product according to your national and local regulations. Contact your service provider or Kirisun for information about disposing of this product in your region of the world.

#### Disposing of batteries



Your radio is supplied with a rechargeable lithium-ion battery. This symbol on the battery and its packaging indicates that it must not be disposed of with household or commercial waste. Please dispose of your waste batteries according to your national and local regulations.

Contact your service provider or Kirisun about recycling batteries in your region of the world.

#### **US and Canadian Markets**

#### FCC radiation exposure statement

This radio is intended for use in occupational/controlled applications where users have been made aware of the potential risks for exposure and can exercise control over their exposure. This product is not authorised for general population, consumer or similar use.

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

## Caring for your product

Your radio does not require regular servicing. Caring for your radio as described in this guide will help maintain the product in good operational condition.

Kirisun supplies a range of accessories to protect the radio during use, including a protective cover. Contact Kirisun for more information.

Always wear eye protection when using brushes or other tools to remove debris from connectors or other parts of the radio.

Do not use chemicals, aerosols or abrasive cleaners. Chemical coatings must not be applied to any part of the radio or battery.

Clean the exterior surfaces daily using a lint free soft cloth.

Clean the battery contacts periodically using a soft brush

#### Mobile Public Netwoek Walkie-talkie



## Keys, buttons and knobs overview

#### Power switch / Volume knob

To power on, rotate clockwise.

To power off, rotate counterclockwise.

To increase the volume, continue rotating clockwise. Rotate counter-clockwise to decrease the volume.

#### Channel knob / Group selector knob

Rotate clockwise to change channels / groups. Your service provider may program your radio up to 16 channels with contact groups or persons.

#### Top button

It,s defined to support individual call and duplex call.

## Side button (Programmable)

It,s programmable to support the following functions: broadcast battery / broadcast user name / broadcast group name / download voice record / open contact list / Wi-Fi switch / Hotspot switch. It supports defining function for two actions: "long press" and "short press".

## LED status indicator

The LED changes colour to show the operational state of your radio.

LED	Operational State
	Fail to insert SIM card or SIM card was installed wrongly, voice prompts ,mobile phone card read failure,.
Solid red	This device is not added in the server.
Solid red	Device is added, but its group select or knob is not set successfully.
	SIM card PIN unlock unsuccessfully, and the voice prompts "PIN ERROR".
Solid green	Calling status (group call / single call / duplex / all call).
	In the status of downloading or playing voice records.
Solid yellow	Standby status for individual call.
	Standby status or setting up status for duplex call.
Flashing red	SIM card is not activated or in deficit, so the device cannot register to the wireless network.

LED	Operational State
	Wireless signal is poor, so the device cannot register.
Flashing green slowly	Has successfully registered in the server, enter the standby mode.
Flashing yellow	In the status of registering to the network.
No indication	Radio is in 'idle' mode or is powered off.

## **Battery information**

Your radio is supplied with a Kirisun approved battery to provide optimum performance. If you battery is new, it may need to be fully charged before first use. Always ensure your battery is fully charged before you start your shift.

The following guidelines will help you get the best performance from your Kirisun battery and help to ensure your safety.

## **Battery safety**

Refer to the instructions supplied with the charger for more safety information.



**Warning**: Take care when handling and charging batteries. Accidental short-circuiting of the battery electrical circuit ,battery radios, by metal objects may cause bodily injury such as a burn. Do not disassemble, mutilate or incinerate the battery.

**Caution**: This radio has been tested and certified using a Kirisun approved battery. Using non-approved batteries may damage the radio and invalidate any product warranty. When recharging batteries, always ensure that the battery charger is placed in a well-ventilated area away from combustible materials. Never use a battery that shows signs of damage \_\_\_, not minor scratches, or has been dropped or received a 'sharp blow'. Damage to the battery may not always be obvious.

## Storage and transportation

Use the original packaging to store and transport batteries. To obtain the best performance from your battery, store it in a cool dry place. Failure to store batteries correctly could lead to reduced capacity and battery life.

Do not store a fully charged battery for periods exceeding 6 months. For storage periods exceeding 6 months, apply a conditioning charge of 7 minutes for standard and 12 minutes for high capacity batteries every 6 months.

#### Storage temperature guidelines:

<1 months -20 to +55 °C ,-4 to 131 °F,

1 to 3 months -20 to +40 °C ,-4 to 104 °F,

>3months  $-20 \text{ to } +30 \,^{\circ}\text{C}$ , -4 to 86  $^{\circ}\text{F}$ ,

## Charging your battery

If the battery is new, it is important that it is fully charged before first use.

Your radio will sound an audible alert when the battery has less than 15% charge remaining.

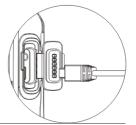
Typical charging time is approximately 3-4 hours. This may vary depending on the battery and environmental conditions.

Charge your battery between 5°C to 35 °C (41°F to 95°F) temperatures only.

Always ensure that the radio is powered off before charging the battery.

This radio provides 3 types of charging:

 Charging with the micro USB slot in the RAC (battery attached in the boy of radio)



Connect the data/charging cable to the micro USB in the RAC, the LED indicator at the top of the radio can show the charging status.

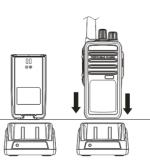
Charging with the micro USB slot at the bottom of the battery
Remove the battery from the body of the radio, connect the data/charging cable to the micro USB slot at the bottom of the battery. The LED indicator can show the charging status.



#### 3, Charging with the charger, charger is optional accessory,

The charger must be placed onto a flat surface away from flammable materials when charging.

Place the battery into the charger pocket by aligning the slots on the battery with the guides on the charger pocket. It is not necessary to remove the battery from the radio when charging. Ensure the battery ,or radio with battery attached, is secure in the charger pocket.

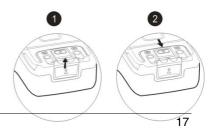


Never leave the battery or radio with battery attached in the charger when not charging. The charger unit has LEDs that indicate the state of charging.

Charger LED	State
Solid red	Battery is charging.
Solid green	Battery is fully charged. Standby mode without battery.

# Accessory information Fit the battery

Align the battery with the two slots on the back of the radio. Carefully slide the battery forward along the slots until it clicks into place.



## Remove the battery

Ensure the radio is powered off.

Push the battery latch upwards. Slide the battery backwards until it detaches from the radio.

#### Fit the antenna

Ensure the radio is powered off.

Place the antenna into its receptacle.

Rotate the antenna clockwise until finger tight.

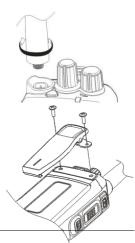
## Fit the belt clip

Ensure the radio is powered off.

Remove the two screws at the back of the radio using a cross-head PH1 screwdriver.

Align the screw holes on the belt clip with the mounting holes on the back of the radio.

Secure into position using the two screws.



**Caution**: Do not over tighten the screws, this may damage the product.

## Connect the programming cable

Open the RAC fist, then plus the data/charging cable into the micro USB slot in the RAC.

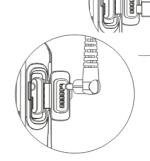
## Fit earphone (earphone is optional accessory)

Open the RAC cover first, then plug Kirisun-approved earphone into the slot in the RAC.

## **Basic operation**

#### Power on/off

To power **on**, rotate the Power/volume knob clockwise.



To power off, rotate the Power/volume knob counter-clockwise until the knob clicks.

## Standby

First boot after installed battery, it will take about 50s to register in the server. Then if turn off the power, the radio will get into sleep mode to maintain the minimum power consumption. If turn on again, it will takes just 10 seconds to register. After successfully registered, the radio will get into the standby status waiting for group call.

#### Adjusting the volume

Rotate the Power/volume knob clockwise to increase the volume.

Rotate the Power/volume knob counter-clockwise to decrease the volume.

## Selecting a channel

Your service provider may program the radio with up to 16 channels with either a contact group or person.

To change the channel, rotate the channel selector knob.

#### Call duration setting

To avoid occupy right to speak too long, it provides setting for call durat ion, Time periods range from 30 to 90 seconds, and can be set in the configurati on tool. At the end of the time period, the call will be terminated automatically no matter the calling is finished or not.

## Making a PTT call

Press PTT key to initiate a call, if there is no group member online, then voice prompts \_,no user online,, otherwise the indicator turns green to indicate the call has gotten through. Release the PTT key to finish the call to enter the standby status.

## Receiving a PTT call

When the radio is in standby status, if a call comes, the indicator will turn solid red. When the call is finished, a sound 'Di' can be heard. When the call is finished, If it's a group call, the indicator will flash green slowly; if it's a individual call, the indicator will turn yellow. If want to call back, press PTT button.

## Delay access

Allow radio to access an ongoing group call after a period of time.

## **Priority call**

Allow setting different priorities for each radio. The radio with higher priority can make a call prior to others.

## Calling types

Group call

After boot, the radio will enter standby status waiting for group call, press the PTT button can make a group call, and by rotating the channel / group selection knob can switch between the groups.

- Individual call
- 1) Do the setting of "friend person" for radio in the management platform.
- 2) Short-press "Top key" to enter the mode of "individual call". Press again to exit the individual mode.
- By pressing "Programmable side button 1" and "Programmable side button 1", each radio in the preset friend list can be selected.
- 4) Press PTT button to initiate the individual call.
- 5) The both radios in the call have the right to speak.
- 6) Press "PTT button" to terminate the call.
- All call
- First, add an "All call" group with relevant members in the management platform. The radio with the authorization of "All call" can call all the radios belonging to the account (agent / client / company etc., no matter which group the radios are in at the moment. The all call will last for 30s, within this period, every member in this call group could have right to speak.

## Historical call record playback

Press the programmable button which is programmed to be with "download the historical call", then the radio can download and playback the historical call. It only supports to download five historical calls, and this function should be opened in the management platform in advance.

## Position information report

GPS function can report the radio's position information to the management platform. Then radio's position can be shown in map in the management platform or dispatcher.

#### Low battery alert

When the remaining battery is less than 15%, voice will prompt "low battery, please charge" first time.

When the remaining battery is less than 10%, voice will prompt "low battery, please charge" again.

When the remaining battery is less than 5%, there will be a voice prompts "low battery, please charge" at a certain frequency with the indicator flashing slowly.

## Advanced signalling function

Support functions of stun, revive and kill.

## **Technical specifications**

General

Comm unication Mode & Frequency Band	3G:W CD M A 850 M hz+1900 M hz or W CD M A 900 M hz+2100 M h 2G:GSM 850 M+900 M+1800 M+1900 M hz W FI:2.4G hz
Channe 1S pacing	2G:200kHz 3G:5Mhz ,Follow 2G/3G protocol and managed by public telecom operator
O perating Tem perature	-20°C ~ + 50°C
S torage Tem perature	-40°C ~ + 80°C
Power Supply	DC 3.7V
Batery	4000 m A h Li-ion
Dimension (H*W*D )	115 mm *54mm *30m m (withbattery, without anten)na
Weight	330g ,with battery and antenpa

Display	NA	
Keypad	NA	
Dustproof & Waterproof	IP65	
Battery Life (3600mAh)	2G mode: 22 hrs ,GPS an, 25 hrs ,GPS off, 3G mode: 15 hrs ,GPS an, 16 hrs ,GPS off,	
Transmitter		
RF Power Output	2G: 2W ± 0.5W 3G: 0.25W ± 0.1W	
Frequency Stability	±0.1 ppm	
Audio Distortion	5% (typical)	
Receiver		
Frequency Stability	±0.1 ppm	

Sensitivity	2G: BER < 0.001 when lor = 1μV; 3G: BER < 0.001 when lor = 1μV
Rated Audio Power	1W
Rated Audio Distortion	5% (typical)

## Other operational description

- 1.) Switch on/off WLAN/Bluetooth: -Need to connect radio to PC via USB cable, same as traditional WIFI/Bluetooth, select the WIFI,connected after entering the password. Blueooth: Switch on or off directly.
- 2.) WLAN hot spot operation: Need to connect radio to PC, it's the same with mobile phone hotspot, open the hotspot and enter password directly, then connected.
- 3.) The role of Bluetooth/WIFI/HSDPA/HSUPA/GPRS function in the radio:-Bluetooth: It's for Bluetooth headset, Audio transmission purpose; WIFI/HSDPA/HSUP/GPRS: All of them are the networks for data transmission, as well as connecting background server

- 4.) WLAN: Connect the computer to install the desktop tool, enter the settings to open the hotspot, set the connection password. The necessity of hotspots: It can share network data to other devices.
- 5. ) Bluetooth : Connect the computer to install the desktop tool, enter the Bluetooth settings search device, input the password pair.
  - 6.) bluetooth low energy: Reduce the power consumption of whole device while using Bluetooth
  - 7.) How are the groups/ users configured: Setup group/users via IMEI number through PC terminal.
  - 8.) FM receiver YES? Answer: Does not support FM.
  - 9. ) GSM:GSM is data.
  - 10.) No information about any app which allow some configuration through smart phones? Answer:Unable to configure application by smartphone.
  - 11. ) The device is connected to the PC via USB to configure Groups/WLAN/BT





## FCC RF EXPOSURE INFORMATION:

## WARNING!! Read this information before using your phone

In August 1986 the Federal Communications Commission (FCC) of the United States with its action in Report and Outer FCC 96-326 adopted an updated safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this PTT complies with the FCC guidelines and these international standards. Use only the supplied or an approved antenna. Unauthorized antennas modifications, or attachments could impair call quality, damage the PTT, or result in violation of FCC regulations. Do not use the PTTwith a damaged antenna. If a damaged antenna comes into contact with the skin, a minor burn may result. Please contact your local dealer for replacement antenna.

## **BODY-WORN OPERATION:**

To comply with FCC RF exposure requirements, a minimum separation distance of 25mm must be maintained between the user's face and the front of the PTT, including the antenna. SAR compliance for body-worn operating conditions is restricted to belt clips, holsters or similar accessories that have no metallic component in the assembly and must provide a minimum separation distance of 0 cm between the device and the body.

and have not been tested for typical body-worn operations may not comply with FCC RF exposure limits and should be avoided.

For more information about RF exposure, please visit the FCC website at www.fcc.gov

When it is ON, it receives and also sends out radio frequency (RF) signals. In August, 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless PTT. Those guidelines are consistent with the safety standards previously set by both U.S. and international standards bodies:

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. For example, over 120 scientists, engineers, and physicians from universities, government health agencies, and industry reviewed the available body of research to develop the ANSI Standard (C95.1). Nevertheless, we recommend that you use a hands-free kit with your PTT (such as an earpiece or headset) to avoid potential exposure to RF energy. The design of your PTT complies with the FCC guidelines (and those standards).

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the PTT and may violate FCC regulations.

## RF Exposure Information:

This product is compliance to FCC RF Exposure requirements and refers to FCC website https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm search for FCC ID: Q5EW25 to gain further information include SAR Values.

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 manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. 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

Do not use the device with the environment which below minimum -10°C or over maximum 50°C, the device may not work.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Ad Hoc function is supported but not able to operate on non-US frequencies.

Please only use the belt clip provided in the package.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following tow 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables auxappareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :(1) l'appareil ne doit pas produire de brouillage, et(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre lefonctionnement.

BODY-WORN OPERATION: This device was tested for typical body-worn operations with the back of the PTT kept 0cm from the body. To comply with RSS102 requirements, a minimum separation distance of 0cm must be maintained between the user's body and the back of the PTT, including the antenna. Third-party belt-clips, holsters and similar accessories containing metallic components shall not be used. Body-worn accessories that cannot maintain 0cm separation distance between the user's body and the back of the PTT, and have not been tested for typical body-worn operations may not comply with RSS 102 limits and should be avoided.

Antenna for GSM & UMTS: GSM850: -1.26dBi; PCS1900: -1.85dBi;

WCDMA850: -1.05dBi; WCDMA1900:-1.96dBi

This EUT is compliance with SAR for general population/uncontrolled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and IEC 62209. This equipment should be installed and operated with minimum distance 0 cm between the radiator and your body.

Cet appareil est conforme aux limites d'exposition DAS incontrôlée pour la population générale de la norme CNR-102 d'Industrie Canada et a été testé en conformité avec les méthodes de mesure et procédures spécifiées dans IEEE 1528 et IEC 62209. Cet appareil doit être installé et utilisé avec une distance minimale de 0 cm entre l'émetteur et votre corps.

RF Exposure Information:

This product is compliance to IC RF Exposure requirements and refers to IC website https://sms-sgs.ic.gc.ca/eic/site/sms-sgs-prod.nsf/eng/h 00013.html search for IC: 8922A-W25 to gain further information include SAR Values.