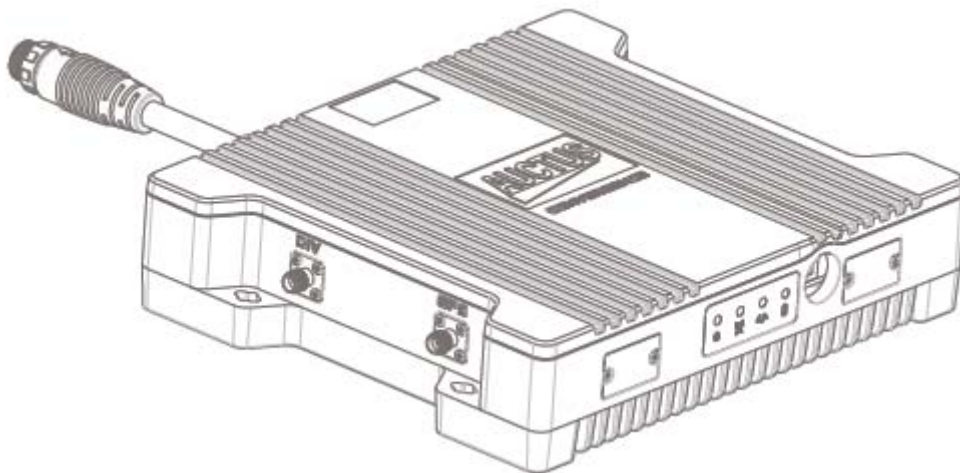




Convergence

User Manual



335100390_RevA



Thanks for Using!

The Manual introduces the information about CONVERGENCE installation and use.

To User

Thank you for purchasing our intelligent converged communication device CONVERGENCE (hereinafter referred to as “the Product”). The Product greatly simplifies your life and work based on advanced techniques and exquisite craft. Please read the Manual carefully before using the Product to master the use and avoid personal injury or property loss due to miss operation.

Tips

- Please keep the Manual properly for further reference and use.
- The Company reserves the right of changing the Manual’s software and hardware specification due to product updating or improvement. The Manual’s product specification and information are for reference only.
- The Company reserves the final power of interpretation for mistakes and omissions may exist even if it is checked carefully.

FCC NOTICE:

This device complies with Part 15 and Part 90 of the FCC Rules and is listed.

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.

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.

User Safety Information

Please read the following safety information for using the Product at higher efficiency.

- The radio can only be maintained by professional technicians. Do not disassemble the radio without permission.
- Only designated power adapter, antenna and components should be used.
- Do not install the Product in flammable and explosive places.
- Do not install the Product in places close to explosion or detonator.
- Do not use the radio with damaged antenna. A damaged antenna may cause minor burns when it comes into contact with the skin.
- Do not expose the Product to direct sunlight or place it near heating device for long period.
- Do not expose the Power Adapter or Backup Battery to direct sunlight or place it near heating device for long period. It shall be keep inside the shield box when use outdoor to avoid direct contact to sunlight or heating for long period.
- Do not expose the Product to humid and highly-corrosive places for long period.

WARNING:

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.

RF Radiation Information

1. This product is limited to occupational applications that can meet RF energy radiation requirements. The user must be fully aware of the RF radiation hazards and can take corresponding measures to meet the RF radiation limitation requirements.
2. Radio frequency (RF) refers to the electromagnetic frequency that can be radiated into space. It is a widely used technology in the fields of communication, medical treatment, and food processing. It will generate certain RF radiation during use.

RF warning statement:

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should always adhere to the following procedures:

- Antenna gain must not exceed 3dBi
- The antenna gain must be installed complying with the requirements of manufacturer or supplier, and it must be at least 40cm away from human body

European Union (EU) Waste of Electrical and Electronic Equipment (WEEE) directive



■ The European Union's WEEE directive requires that products sold into EU countries must have the crossed out trash bin label on the product (or the package in some cases). As defined by the WEEE directive, this cross-out trash bin label means that customers and end-users in EU countries.

Overheat Warning

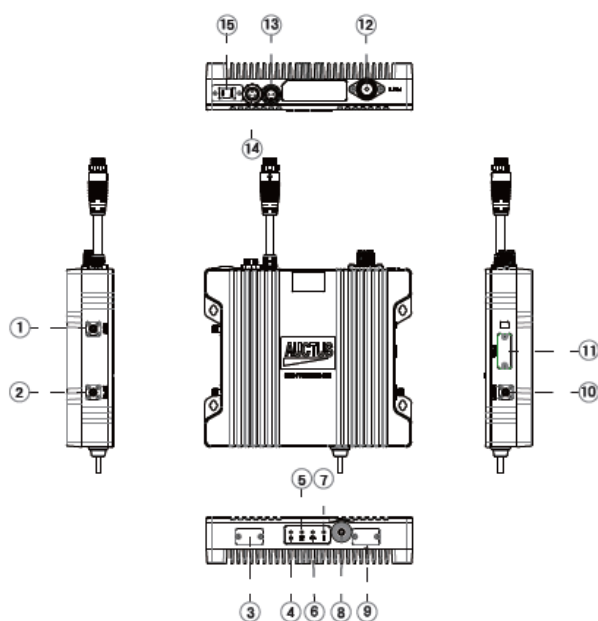
- Do not touch the Product with hands when the Product has been running for long period and surface temperature is too high, for the power amplifier radiator may be under high temperature. Instead, you can measure it using a thermometer.
- Check the ambient temperature and ventilation of the Product and if they are unacceptable, please improve them within the shortest period possible. For example, install air conditioner, promote ventilation and reduce temperature.
- Check if the RF antenna connected to transmitter is loose or damaged, and radiator temperature rise is too fast due to ultrahigh emission power when connection is poor. If so, please fasten or replace the antenna.
- For other cases, please consult the local dealers for solutions. Do not use the Product until its temperature recovers to the normal range.

Package Item Inspection

Package items are as follows. For any loss or damage, please contact the dealer from which the product is purchased.

Convergence ×1/ Adapter ×1/ RF antenna ×1/ Manual ×1/ Screw kit ×1

Device Overview



Part List

Part No.	Part Name
1	Graded antenna connector (DIV) *
2	Locating antenna connector (GPS) *
3	USB1 connector (for parameter configuration or software upgrading of narrow-band mode)
4	Power indicator
5	LAN Indicator
6	Narrow-band Tx / Rx Indicator
7	Backup battery indicator
8	LAN Ethernet port (RJ45)
9	USB-2 connector (for parameter configuration or software upgrading of broadband mode)
10	Broadband antenna connector *
11	SIM slot *
12	RF antenna connector
13	Power connector (13.5V)
14	Backup battery connector
15	Power switch

Note: * = Not applicable for this model.

Installation Preparation

- **Voltage Inspection**

Check if voltage of DC power or external power supply is within the range of the Product's working voltage (13.5 V $\pm$ 10%).

- **Product Inspection**

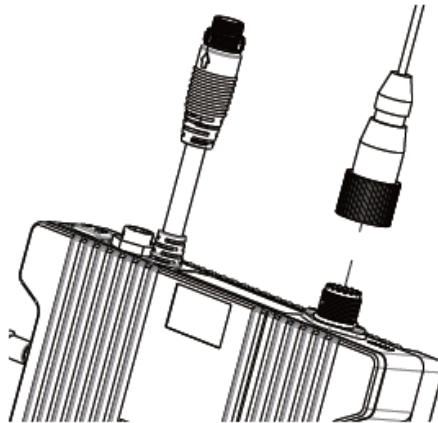
Power on and check if the Product is running normally by inspecting the status of all indicators on front panel. Please refer to "Basic functional operation" for details.

- **Fittings Installation**

Firstly install RF antenna, power adapter and LAN cable before the Product is powered on. Refer to steps below for items installation.

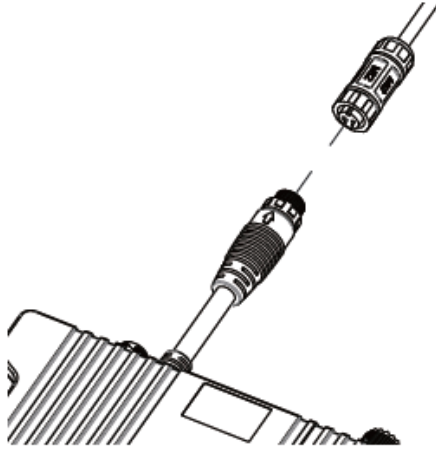
- **Assemble /Disassemble of RF Antenna**

Connect the threaded end of RF antenna to the RF antenna connector and fasten it. Rotate the antenna anticlockwise to remove it.



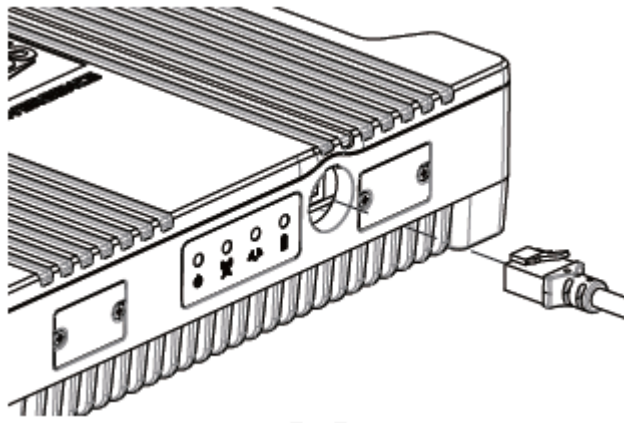
- **Assemble/Disassemble of Power Adapter**

Connect the 2 pins connector at power adapter to the power connector and then fasten it. Remove the connector at cable end of power adapter to remove the power adapter.



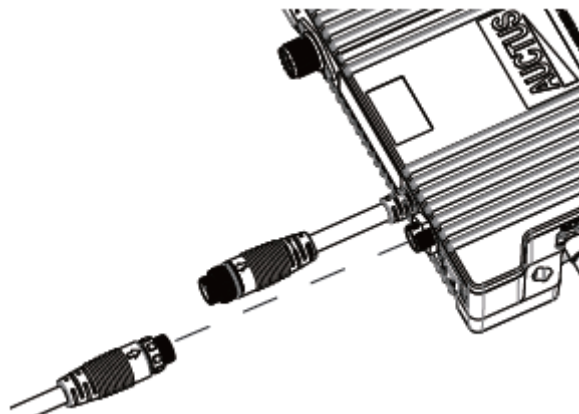
- **Assemble/Disassemble of LAN Cable**

Insert LAN cable into LAN Ethernet port (RJ45). Remove the LAN cable connector to disassemble the LAN cable.



- **Assemble/Disassemble of Backup Battery (Optional)**

Connect the connector of backup battery to the female connector of backup battery and fasten it clockwise. Rotate the connector at cable end of backup battery anticlockwise to remove the backup battery.



Parameter Configuration

Important: Please contact local dealer to configure the following parameters before use:

Configuration of Intelligent Relay

1. Configure the following parameters of the Product via programming software:

- Group number of private network
- Tx/Rx Frequency
- The Product's serial number (refer to product label)



- Domain name and port number of login backstage server

2. Configure parameters via backstage management interface and bind the serial number and username of the Product.

Configuration

Configure the same call frequency and communication group of the product through the programming software

Note: 2 Convergence will be used for realizing the transfer call between narrow-band hand machines.

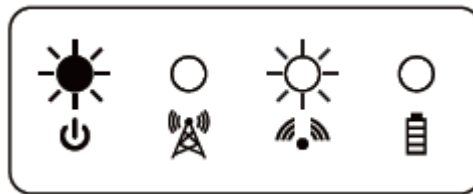


Basic Functional Operation

Ensure Product is connected to LAN cable and power supply.

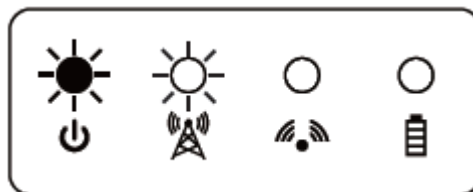
Note: Once LAN connection setup completed, LAN network (Ethernet) will auto connect to server when power on

- Press Power switch to power on, power indicator will be turn in blue and narrow-band indicator will flicker slowly in green (1.0s on, 5.0s off).



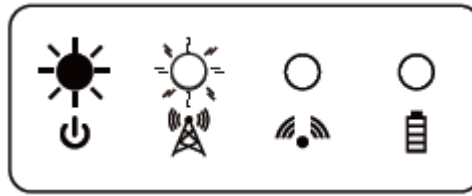
*  Normally on  Slow flickering  Quick flickering

- When network is in searching mode, the LAN indicator will flicker slowly in green (1.0s on, 1.5s off) .



*  Normally on  Slow flickering  Quick flickering

- When internet connected and login server successfully, the LAN indicator will flicker quickly in green (0.1s on, 1.5s off).



*  Normally on  Slow flickering  Quick flickering

Status Indicator

Power indicator

Host Status	Power Indicator Status	Flicker Period
Power off	Blue indicator off	/
Power on	Blue indicator on	/

Narrow-band Tx / Rx Indicator

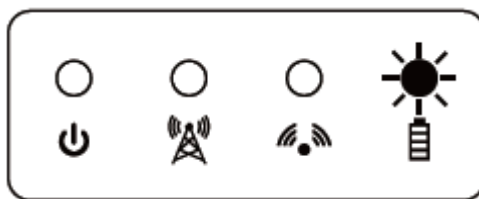
Host Status	Narrow-band Indicator Status	Flicker Period
Standby	Green indicator flickering	1.0s on, 5.0s off
Call	Red indicator normally on	/
Receive voice	Green indicator normally on	/

Status of LAN indicator

Host Status	Broadband Indicator Status	Flicker Period
Network searching	Green indicator flickers slowly	1.0s on, 1.5s off
Network connected	Green indicator flickers quickly	0.1s on, 1.5s off
Call	Red indicator normally on	/
Receive voice	Green indicator normally on	/

Backup Battery Indicator (Optional)

- Battery indicator is off when backup battery is not installed.
- Battery indicator is normally on in red when backup battery is installed and the Product is being charged.
- Battery indicator is normally on (green) when backup battery is installed and the Product is charged.
- Battery indicator is normally on (green) after charging.



*  Normally on  Slow flickering  Quick flickering

Back Up Battery Notice

Please firstly charge the battery before use for it is uncharged before delivery. The battery service life can be affected if battery is long idled or consumed up. The battery should be given one circle of charging/discharging on a semiannual basis to maintain the optimal status of battery capacity. Replace the battery if it has insufficient volume or fails to fully exert discharging.

Notice

- Avoid short circuit of battery terminal or throw the battery in fire. Do not dismantle the shell of battery without permission.
- When battery is installed in host, it will be charged automatically by host if having insufficient volume, in order to keep the battery fully charged.
- Please use the battery at temperature of about 25°C and it may easily encounter failure if being used at temperature below -10°C for long period.
- Do not expose the Product to sunlight for long period or place it near the heating device.
- Do not expose the Product to places with high moisture and corrosion for long period.
- Place the battery in waterproof box and shielded places if the Product is installed outdoors. Avoid direct sunlight for long period or place it near heating device.
- Do one circle of charging/discharging on a semiannual basis to maintain the optimal status of battery volume.

*Please consult local dealer for details.

Functionality

Transmit and Receive communication

The handset can realize no-difference intercom between Handset at long distance or under strong interference through two Convergences.

For example, press the PTT key of Handset A for emission and in the emission process, the Handset indicator on the corresponding relay A of Handset A will be normally on (green).

Handset B will receive the call voice, and the Handset indicator on relay B corresponding to Handset B will be normally on in red.

Call

The Handset can realize no-difference intercom between Handset at long distance or under strong interference through two Convergences.

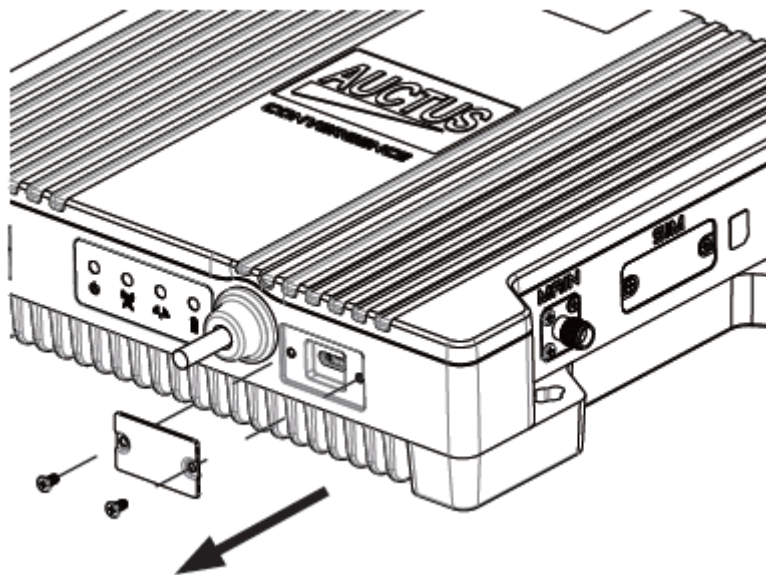
For example, press the PTT key of Handset A for emission and in the emission process, the indicator on the corresponding relay A will be normally on (green).

Handset B will receive the call voice, and the Handset indicator on relay B corresponding to B will be normally on in red.

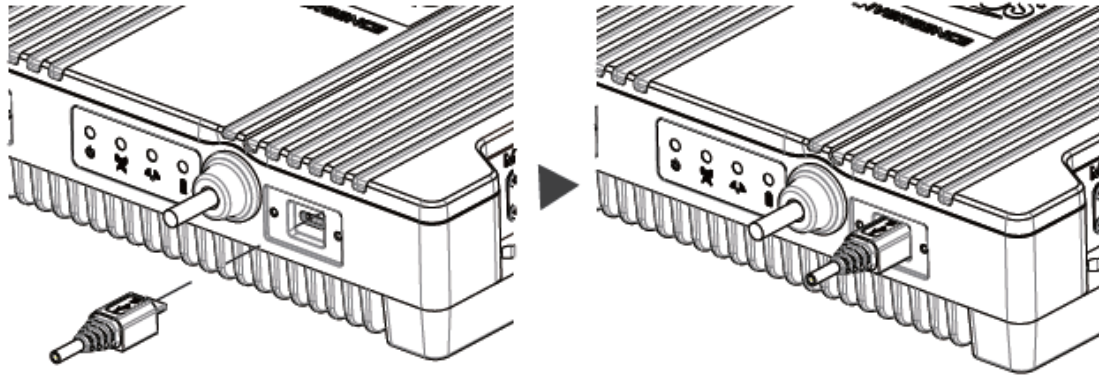
Setting through Programming Software

Programming software allow you to program other features such as software update and assign setting.

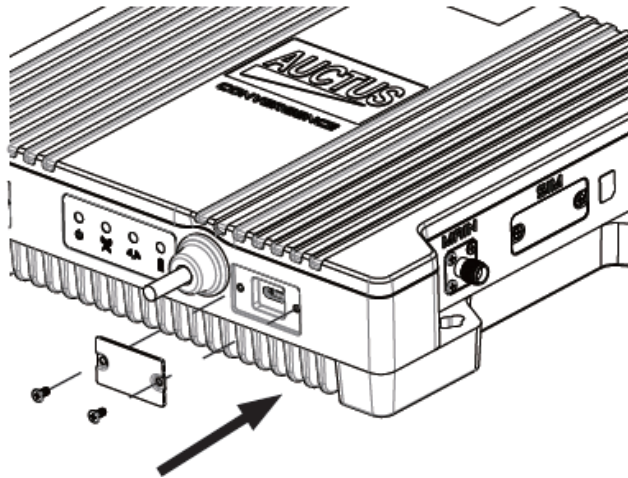
- To program, remove the screws of USB-2 seal cover and take down the cover.



- Connect programming cable to USB-2 Connector. through the programming software.



- Then re-install the seal cover.

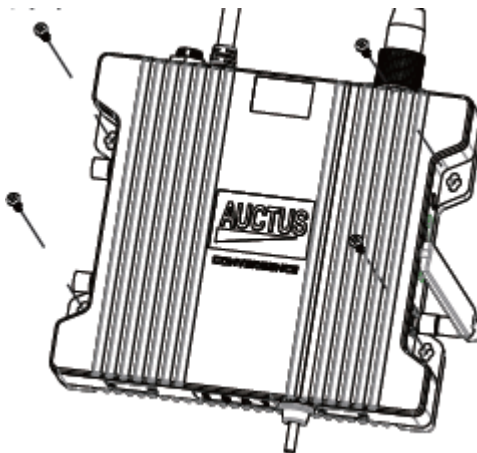


Installation

- There are 2 ways to mounting the Product to (1) wall or (2) Cylindrical Post/Rod.
- **Note:** During the installation, ensure the RF antenna side is always facing upward.

(1) Wall Mounting

- Fix the Product at the desire location using 4 pieces of M7.5*30 pan head self-tapping screws, as shown in diagram below:

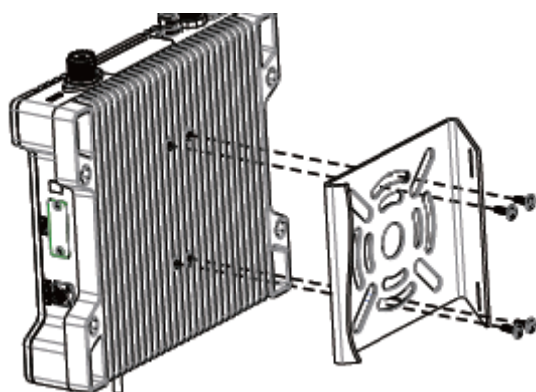


(Plane Mounting)

- For installation , ensure the RF antenna side is always facing upward.

(2) Cylindrical/Rod Mounting

- Fix the cylindrical mounting on the Product using 4 pieces of M3*8 washer head screws and then fix the Product on the cylinder using two steel rings, as shown in diagram below.



(Cylindrical Mounting)

- For installation , ensure the RF antenna side is always facing upward.

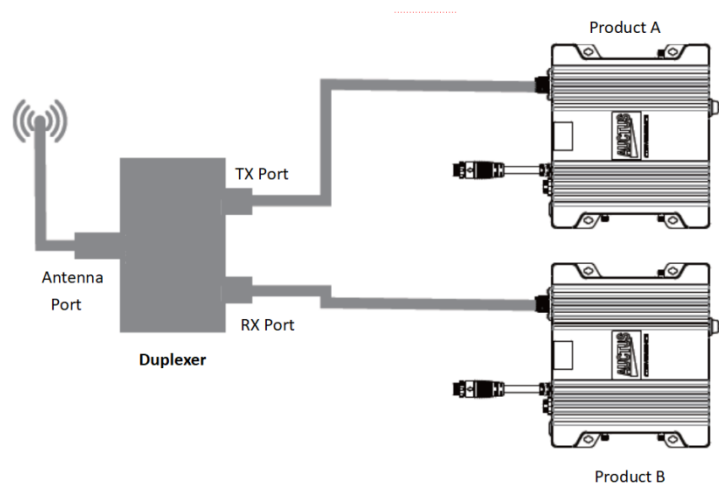
Duplexer Installation (Optional)

A duplexer should be installed for isolating the frequency and avoid disturbance if two or more Convergence are located close to each other at same site (with different radio frequency).

Note: Duplexer is use to isolating the transmit and receive signals to ensure both reception and transmission work simultaneously. Effectively improve the signals and provide protection from interference from other devices at the site.

Duplexer Setup Method

1. Use coaxial duplexer cable connect RF antenna connector of Product A to TX port of duplexer.
2. Use coaxial duplexer cable connect RF antenna connector of Product B to RX port of duplexer.
3. Connect UHF antenna to the ANT antenna port of duplexer.



Optional Components

The main accessories of the Product are included in the product box. For more information about accessories, please consult your local dealer.

Note: Please use the accessories specified by our company, if unauthorized use of unauthorized accessories, the consequences are the responsibility of the user.

Troubleshooting

Fault	Cause	Troubleshooting
Power on failure	Power supply is not connected or has loose contact with	Connect power wire correctly and ensure good contact

	socket	
	Backup battery is not installed or it has abnormal voltage	Install backup battery correctly and make sure it has sufficient power
Communication failure	Receiving and transmission frequency point of the Product is unmatched with handset	Check if frequency points are matched and reconfigure them if necessary Find the interference signal sources, or apply for changing the communication frequency point if the source cannot be closed or the interface source is long-distanced
	Team member is out range.	Ensure the Product is cover the desire coverage area and team members are in range
Short communication distance and unclear voice	Connected antenna is damaged, ware and tear	Check antenna condition and replace a new antenna if necessary
	Antenna port and connector are loose or falling	Check the connector, fasten it, or replace the antenna if necessary
	Weak network signal of the Product	Check if the Product's network signal is unstable or weak
	Duplexer is uninstalled or poorly installed when multiple Products are functioning at short distance	Contact the manufacturer or dealer and install the duplexer; check the connector of antenna port and duplexer and fasten it.

GUARANTEE CARD

Model Number: _____

Serial Number: _____

Purchasing Date: _____

Dealer: _____ Telephone: _____

User's Name: _____ Telephone: _____

Address: _____ Post Code: _____

REMARKS:

1. This guarantee card to be kept by the user, no replenishment if lost.
2. This guarantee card to be filled & chopped by the dealer, or it is invalid.
3. Don't alter the guarantee card, please confirm the serial number on the guarantee card is same as that on the machine.
4. One-Year guarantee, charger, battery, earphone, antenna are not under guarantee.
5. The user can get repairing service from the following ways:
 - a. Go to the shop where you buy the machine
 - b. Our local repairing agent



Please cut along with this line



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