

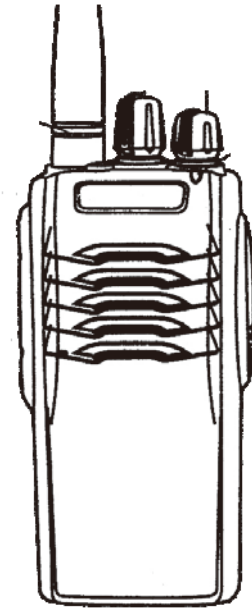
Ocean one[®]

CE FC



**Portable Intrinsically
Safe Radio UHF**

Ex Ex ib IIC T4 Gb



A300U

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Preface

Thanks for your favor in our product. To derive optimum performance from the product, please read this manual carefully before using it.

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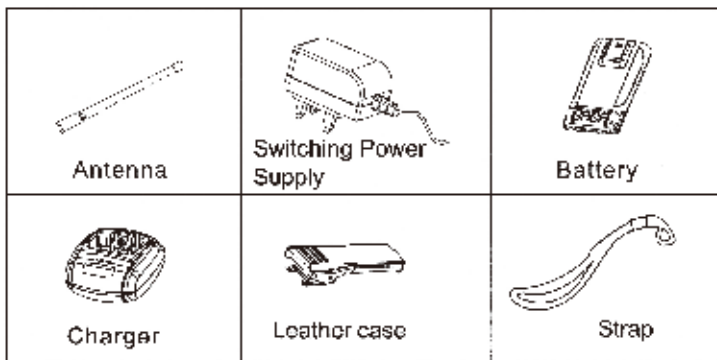
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Unpacking and checking equipment

Welcome to use two-way radio. Carefully unpack the radio. we recom mend you check the items listed in the following- table before discarding the package. If any item is missing, please contact local dealer immediately.

Supplied Accessories

Item	Quantity
Antenna	1
Charge	1
Power adapter	1
Li-ion Battery	1
Belt Clip	1
Sling	1
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Maintenance and cleanness

1. Do not hold the antenna of the transceiver or the MIC directly;
2. Clean the dirt and the dust of the transceiver with cloth of nothing cottony so that it may get a good touch.
3. If the transceiver is left unused, please cover the MIC/SP hole with cap.
4. The keypad, the case and the knob will become dirty after a long time use. Clean the dirt with cloth bedewing neutral detergent.

Main Functions

- 16 memory channels
- 50 groups CTCSS/166 groups DCS code (QT/DQT)
- Chinese and English voice guide
- PC programmable
- Side Key function programmable
- Monitor function
- TOT (Time-Out Timer)
- Wired clone
- Battery saving function
- Low battery reminder
- Busy channel lock (BCL)
- High/low power selective
- Scan
- Wide/narrow band optional
- Special signaling

Preparation

Charging Notices

The new or stored battery pack, which can not reach its full capacity for the first charging. After two or three times charging and discharging, it can reach full charge. When the battery capacity is low, it needs charging.

Applicable Battery

Please use the battery specified by while being charged with charger. It may cause explosion and harm if other battery is used.

NOTE:

Do not short-circuit the terminals of the battery or throw the battery into the fire. Do not disassemble the battery pack yourself.

The battery pack can not reach its full charge if it is charged outside the range of temperature.(0°C-40°C)

Do not use the transceiver while charging the battery pack. We suggest you turn the transceiver power off while charging is taking place.

While charging, better not take out the battery or shut off the electricity in case it will influence the charging.

When the operating time becomes short, even if it is fully charged, replace the battery pack.

Do not recharge the battery pack if it is fully charged. It may shorten the life of the battery pack or damage the battery pack.

Do not charge while the battery or the transceiver is wet.

Clean them with dry cloth before charging to avoid danger.

WARNING

All batteries can cause property damage or bodily injury if a conductive material such as jewelry, keys, or beaded chains touch exposed terminals. The conductive material may complete an electrical circuit (short circuit) and become quite hot. Exercise care in handling any charged battery, particularly when placing it inside a pocket, purse, or other container with metal objects.

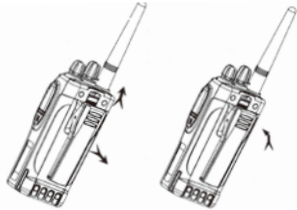
Charging Instructions

1. Plug the Charger into an electric socket.
2. Insert the battery or transceiver into the Drop-in Charging Tray.
3. Ensure that the battery's contacts connect with the Drop-in Charging Tray properly. While the charging is taking place, the light will glow red.
4. After about 8 hours of charging, the LED indicator lights green which means the full charge. Now remove the battery or the transceiver from the Drop-in Charging Tray. The transceiver and the battery can be used.

Installation of supplied accessories

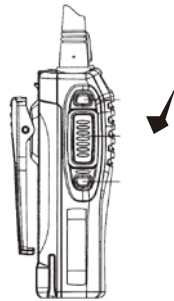
Installing/Removing battery

1. To install the battery pack, fit the extensions at the bottom of the battery into the slots at the bottom of radio. Press the top part of the battery towards the radio until a "click" sound is heard.
2. To remove the battery pack, slide the battery latches in the middle of the battery, downwards.
Pull the top of the battery away from the transceiver's body, and lift the battery from the transceivers body.



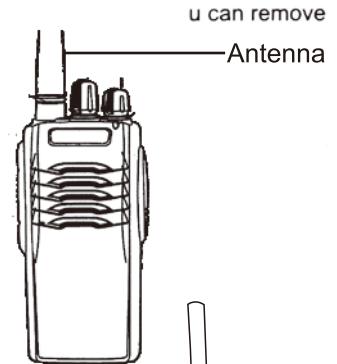
Installing/Removing belt clip

1. If necessary, insert the belt clip at the back of battery pack.
2. Loosen the screw set to remove the belt clip



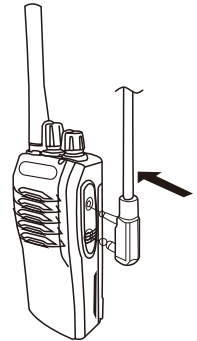
Installing/Removing Antenna

1. Screw the antenna into the connector on the top of radio by holding the antenna at its base and turning it clockwise until secure.
2. Turn the antenna counter-clockwise until you can remove it.

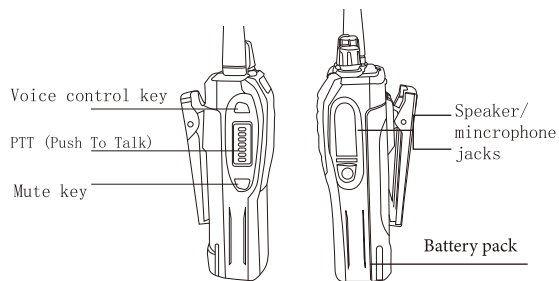
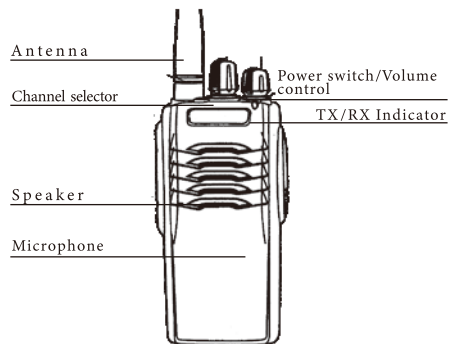


Installing external headset

- Reveal the mic/speaker jack cover; insert the headset into the mic/speaker jack.



Getting familiar



Operations Guide

Jacks and connectors

SMA connector	Random configuration of the antenna used to connect
External microphone jack on the sound field	If you want to use an external microphone, speakers, or both, please connect to this jack, the jack when not in use, please be careful not to let water flow into the jack inside.

Basic Operation

Led indicator

It lights red when transmitting, and lights green when receiving.

Channel-selecting knob

Rotate it to select channel 1-16, clockwise rotation to increase, counter-clockwise rotation to decrease. An alert tone will sound when an empty channel is selected.

Power/Volume knob

Rotate it by clockwise to power on the radio. To turn off the radio, rotate it by counter-clockwise until a click sound is heard.

PTT switch

Press PTT switch and then talk to the microphone, the indicator light turns red, if the channel does not have transmitting frequency, a "Du Du" tone sounds, and indicator light turns red. Release PTT switch to receive. It lights green when there is signal.

Squelch level

The squelch level will determine the signal strength to open the speaker of the radio. If the squelch level is lower, the background noise of opening the radio's speaker will be higher, and the corresponding communication range will be further, but the anti-interference capacity will be weaker. The default setting of

squelch level is 5, you can adjust it through the menu "Squelch level" of the "Optional features" in the software, level 0 to 9 can be selected. 0 is the lowest level.

Side key assignment

Side Key 1 (Monitor Key): Press monitor key to activate the MONITOR function; Release to exit the MONITOR function.

Side Key 2: (Scanning Function / LED Flashlight)

Short Press Side key 2 (less than 2 seconds) to turn on/off the LED Flashlight;

Long Press Side key 2 (more than 2 seconds) to turn on/off the Scan function;

Time out timer(TOT)

The purpose of TOT is to prevent any radio from talking in one channel for too long, and to prevent the radio from being damaged due to continuous transmission. If the transmitting time exceeds the TOT pre-set time, the radio will stop transmission and an alert tone sounds.

Release PTT switch to stop the alert tone, the radio resume to receiving mode.

Scan On/Off

When the radio is set as scannable via software, rotate the channel-selecting knob to any channel, it will start scanning. It will scan all scannable channels from channel 1 to 15. When there is signal in the scanning channel, it stops in the channel for talk.

- Note:**
- a. The radio will stay in the channel which has signal, and 15 seconds after the signal disappears, it will continue scanning.
 - b. It can not scan when there is less than 2 scannable channels.
 - c. In channel 16, press and hold PTT switch and side

key to power on the radio, if scanning is on, it will turn off, if scanning is off, it will turn on.

Voice prompt on/off

- Note:**
- a. Voice prompt off, the radio will not announce.
 - b. Voice prompt on, it will prompt when the channel is changed. Chinese or English voice prompt can be selected.
 - c. In channel 10, press and hold PTT switch and side key, if voice prompt is on, it turns off, if voice prompt is off, it turns on.
 - d. In channel 15, press and hold PTT switch and side key, if voice prompt is Chinese, it changes into English, if voice prompt is English, it changes into Chinese.

Busy channel lockout (BCL)

You can turn on/off the BCL function of every channel via program software

- Note:** a. If the current channel does not have QT or DQT, when receiving SQ, transmission is prohibited.
- b. If the current channel has been set QT or DQT, when receiving SQ but no QT or DQT, transmission is not prohibited. When receiving both SQ and QT or DQT, transmission is prohibited.

QT/DQT

You can select the QT/DQT via program software. When a channel has QT/DQT, the speaker will be turned on when it receives the same QT/DQT. If there is transmitted signal with different QT/DQT in the same channel, the speaker will not open and indicator light turns green.

CTCSS/DCS Table:

50 CTCSS frequency code(Hz)

60.7	94.8	131.8	171.3	203.5
69.3	97.4	136.5	173.8	206.5
71.9	100.0	141.3	177.3	210.7
74.4	103.5	146.2	179.9	218.1
77.0	107.2	151.4	183.5	225.7
79.7	110.9	156.7	186.2	229.1
82.5	114.8	159.8	189.9	233.6
85.4	118.8	162.2	192.8	241.8
88.5	123.0	165.5	196.6	250.3
91.5	127.3	167.9	199.5	254.1

166 DCS code

D023N	D025N	D026N	D031N	D032N	D043N	D047N	D051N
D054N	D065N	D071N	D072N	D073N	D074N	D114N	D115N
D116N	D125N	D131N	D132N	D134N	D143N	D152N	D155N
D156N	D162N	D165N	D172N	D174N	D205N	D223N	D226N
D243N	D244N	D245N	D251N	D261N	D263N	D265N	D271N
D306N	D311N	D315N	D331N	D343N	D346N	D351N	D364N
D365N	D371N	D411N	D412N	D413N	D423N	D431N	D432N
D445N	D464N	D465N	D466N	D503N	D506N	D516N	D532N
D546N	D565N	D606N	D612N	D624N	D627N	D631N	D632N
D654N	D662N	D664N	D703N	D712N	D723N	D731N	D732N
D734N	D743N	D754N					

D023I	D072I	D152I	D244I	D343I	D432I	D606I	D723I
D025I	D073I	D155I	D245I	D346I	D445I	D612I	D731I
D026I	D074I	D156I	D251I	D351I	D464I	D624I	D732I
D031I	D114I	D162I	D261I	D364I	D465I	D627I	D734I
D032I	D115I	D165I	D263I	D365I	D466I	D631I	D743I
D043I	D116I	D172I	D265I	D371I	D503I	D632I	D754I
D047I	D125I	D174I	D271I	D411I	D506I	D654I	
D051I	D131I	D205I	D306I	D412I	D516I	D662I	
D054I	D132I	D223I	D311I	D413I	D532I	D664I	
D065I	D134I	D226I	D315I	D423I	D546I	D703I	
D071I	D143I	D243I	D331I	D431I	D565I	D712I	

Technical specification

General

Frequency Range	V:136-174MHz U:400-420/ 419-430/400-470MHz
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Working Temperature	
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Operating Voltage	DC7.4V
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Operate Mode	Simplex or Semi-duplex
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Dimension	135*62*42 (Not included Antenna)
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Weight	240g (Including battery)
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Antenna impedance	50Ω
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Transmitter

Frequency Stability	±2.5ppm
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Max Frequency Deviation	≤5KHz
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Audio Distortion	≤5%
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Modulation Character	+3dB~-3dB
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Adjacent Channel Power	≥65dB
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Spurious Radiation	≤7.5μW
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Occupied Bandwidth	≤16KHz
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Receiver

RF Sensitivity	<0.2 μ V
Audio Distortion	\leq 5%
Audio Response	+2dB~-10dB
Adjacent Channel Selectivity	\geq -8dB
Intermodulation Rejection	\geq 55dB
Spurious Response	\geq 55dB
Blocking	\geq 85dB

* **Adove technical specification is for reference only.**

Trouble shooting guide

<i>Troubles</i>	<i>Solution</i>
No Electrical Source	<ul style="list-style-type: none"> • The battery has been exhausted. Replace or recharge the battery. • The battery is installed incorrectly. Remove it and install again.
The operating time becomes short, even the battery is fully charged.	<ul style="list-style-type: none"> • Replace the battery.
Not able to communicate with the transceivers of the same group.	<ul style="list-style-type: none"> • Confirm the QT/DQT is the same. • The distance is outside of range.
The voice of another group can be heard.	<ul style="list-style-type: none"> • Change all QT/DQT of the group.
Other radios can not receive the TX signals or receive signals in a low volume.	<ul style="list-style-type: none"> • Switch the volume knob to the highest level • The microphone may be damaged, send it to the local dealer for check.
Noise is always heard.	<ul style="list-style-type: none"> • The distance is outside of range. Turn on the radio in nearer range and try again.