

TRITAN

BUSINESS
LITE



TWO WAY RADIO
INSTRUCTION MANUAL

THANK YOU!

Thank you very much for choosing our **TRITAN** transceiver. **TRITAN** transceiver provides you with reliable, clear and efficient communication service. Our LITE introduces **innovative DSP (Digital Signal Processing) baseband technique to achieve high-fidelity voice processing** .

LITE is a compact transceiver that allows you to enjoy instant communication at ease. The features like , high power (**5 WATTS**), make the LITE a cost-effective professional transceiver. It has unique and innovative functions, such as **battery capacity, flashlight and optional high-fidelity earphones** .

SAFETY INFORMATION FOR USER

TRITAN transceiver is excellently designed with advanced technology. Please observe the following precautions to prevent personal injury and ensure the safety of transceiver usage.

- 1.Keep the transceiver and accessories away from children.
- 2.Please do not try to open or modify the transceiver without permission, This may also cause damage.
- 3.Please use genuine battery and charger to avoid damage.
- 4.Please use genuine antenna to ensure the communication distance.
- 5.Please do not expose the transceiver to a long period of direct sunlight, nor place it close to heat appliances.
- 6.Please do not put the transceiver in excessively dusty or humid areas.
- 7.Do not use harsh chemicals, cleaning solvents to clean the transceiver.
- 8.Do not transmit without antenna.
- 9.When using this transceiver, we recommend transmitting for 1 minute then receiving for 4 minutes. Continuous transmitting for long time or working in high power will heat the back of the transceiver. Do not place the transceiver's hot back close to any plastic surface .
- 10.If any abnormal odor or smoke is detected coming from the transceiver, turn off the power and take off the battery pack and its case.

User Manual Applied to: TRITAN LITE UHF FM Transceiver

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◦ UNPACKING

Carefully unpack the transceiver. We recommend you identify the items listed in the table below before discarding the packing material. If any items are missing or have been damaged during shipment, please contact local dealers immediately.

(((**Supplied Accessories**

Item		Quantity
Antenna stubby		1
Antenna long		1
Li-ion Battery		2
Desktop Charger		1
Mains PSU		1
Car Charger		1
Earpiece		1
Magnetic mount Antenna		1
Metal Belt Clip		1
Instruction Manual		1
Licence Application		1
Hand strap		1

Standard Accessories



Antenna *
QA07U(400-470MHZ)



Li-ion Battery
Pack)1300mAh
QB-33L



Charger
QBC-33L



Mains PSU
(12V/500mA)
QPS-05



Belt Clip BC06



Instruction Manual



Earpiece HS03



Car Charger CPL-02

**For optional Audio accessories
Tritan Highly Recommends Synetix Radio Accessories**

◦ BATTERY INFORMATION

(((Charging the Battery Pack

The battery pack is not charged at the factory; please charge it before use.

Charging the battery pack for the first time after purchase or extended storage (more than 2 months) may not bring the battery pack to its normal operating capacity. After fully charging/discharging cycle for two or three times, the operating capacity will reach its best performance. The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Change to a new battery pack.

(((Charger Applied

Please use the specific charger appointed by our company. Other models may cause explosion and personal injury. After installing the battery pack, if the radio displays low battery , please charge the battery.

(((NOTES

- Do not short the battery terminals or throw the battery into fire. Never attempt to remove the casing from the battery pack. We bear no responsibility on any results caused by modifying the battery without permission of our factory.
- The ambient temperature should be between 15°C and 35°C while charging is in progress. Charging outside this range may not fully charge the battery.
- Always switch OFF the transceiver equipped with a battery pack before charging. Otherwise, it will interfere with correct charging.
- To avoid interfering the charging, please do not cut off the power or take out the battery during charging.
- Do not recharge the battery pack if it is already fully charged. This may shorten the life of the battery pack or damage the battery pack.

- Do not charge the battery or transceiver if it is damp. Dry it before charging to avoid danger.

WARNING:

When keys, ornamental chain or **other metals** contact with the battery terminal, **it** may cause damage or Injury. If the battery terminal short circuit it will generate a lot of heat, please be careful when you carry or use the battery, please put battery or radio into insulated container. Do not put it into metal container.

(((How to Store the Battery

1. If the battery needs to be stored, keep it in status of **50% charged**.
2. It should be kept in **a** low temperature and dry environment.
3. Keep it away from hot places and direct sunlight.

WARNING:

- Do not short circuit **the** battery terminals.
- Never attempt to remove the casing from the battery pack.
- Never assemble the battery in dangerous surroundings, spark may cause explosion.
- Do not put the battery in hot environment or throw it into fire, it may cause explosion.

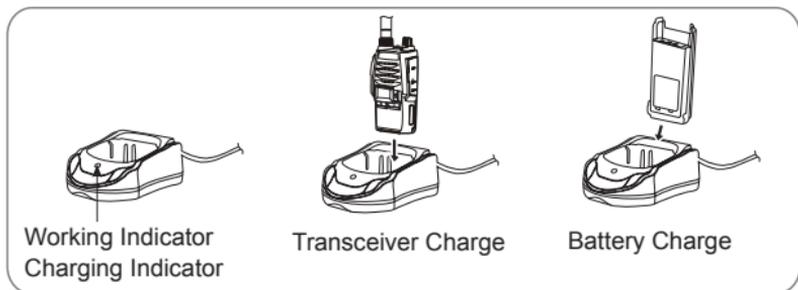
■ To charge the battery directly or the transceiver via charger

You can charge the battery or transceiver separately.

1. Plug the AC adaptor into the AC outlet, and then plug the cable of the AC adaptor into the DC jack located on the back of the Charger.

Charging indicator---Green

◦ BATTERY INFORMATION



2. Plug the Li-ion battery or the transceiver installed with Li-ion battery into the matched charger.

A. Make sure that the battery is well connected with charging connectors.

Charging indicator---Red

3. Fully charged. Charging indicator--Green.

Note:

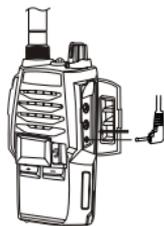
It takes approximately 4 hours to fully charge the battery. But, the actual charging time depends on the **current battery capacity**. After fully charged, please remember to remove the battery or transceiver out of charger. Over charging will shorten the battery life and reduce its performance.

(((In Car Charging

Connect the transceiver directly with adaptor or car charger to charge.

Note:

Please power off the transceiver before charging the transceiver in this way. Also, it takes longer time (totally 12hours) to fully charge the transceiver in this way.



(((Installing / Removing the Battery

■ Installing the battery:

Match the battery pack with the corresponding guides on the back of the transceiver, and push it upwards till it is fully locked by the battery latch.



■ Removing the battery pack:

Slide up the battery latch and remove the pack away from the transceiver.



(((Installing / Removing the Antenna

■ Installing the Antenna:

Screw the antenna into the connector on the top of the transceiver by holding the antenna at its base and turning it clockwise until secure.

■ Removing the Antenna:

Turn the antenna anticlockwise to remove it.



◦ PREPARATION

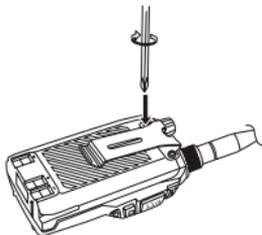
(((Installing / Removing the Belt Clip

■ Installing the Belt Clip:

Place the belt clip to the corresponding grooves on the back of the transceiver, and then clockwise screw it.

■ Removing the Belt Clip:

Anticlockwise turn the screws to remove the belt clip.



(((Installing the Additional Speaker/ Microphone (Optional)

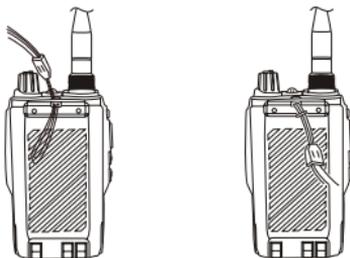
Switch the radio off. Remove the MIC-SP jack cover and then insert the Speaker/ Microphone plug into MIC-SP jack.

Note: The transceiver is not completely waterproof while using the Speaker/ Microphone.



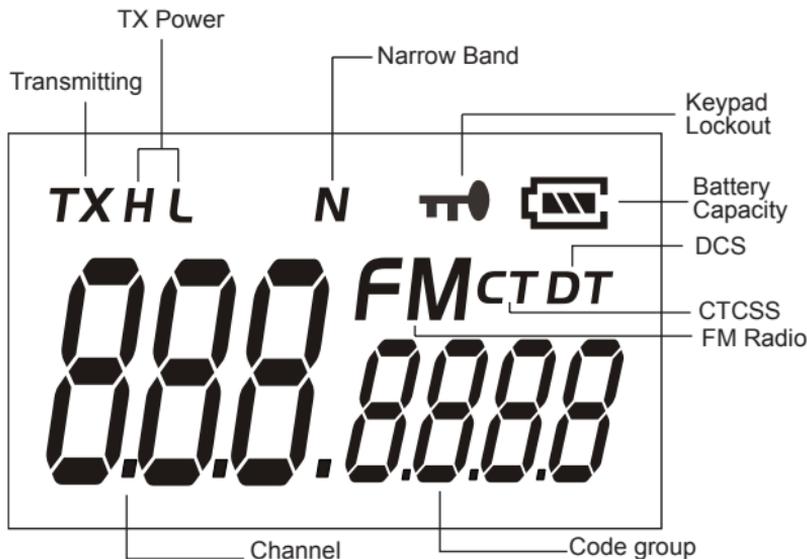
(((Installing/ Removing the Hand Strap (Optional)

Slide the loop of the hand strap through the eyelet on the upper rear of the transceiver; then pull the entire hand strap through the loop to secure the hands strap in place and lastly tighten the hands strap.



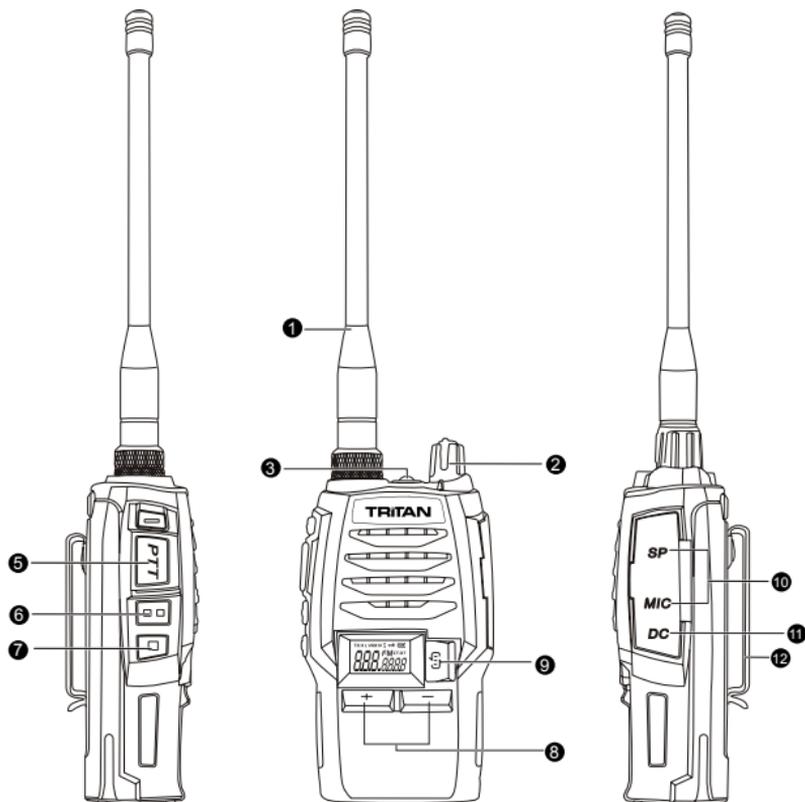
(((LCD Display Screen

On the screen, icons for the optional functions are displayed on the screen. It helps a lot when you forget the functions settings.



-  Battery capacity indicator (Full)
-  Battery exhaust ,please change battery or recharge
-   Left battery capacity

• GETTING ACQUAINTED



1. Antenna

2. POWER / VOLUME Switch:

Turn clockwise to switch on the transceiver, and turn anticlockwise till hearing "Ka" to switch off the transceiver. After switching on the transceiver, turn clockwise to increase the volume and anticlockwise to decrease the volume.

3. Flashlight:

under standby state, a short press to the flashlight Key will power on the flashlight. Repeat same operation to turn off the light.

5. PTT Key

To make a call, please press and hold this key and speak into the microphone. Release the key to receive.

6. PF1 Key

Squelch off.

7. PF2 Key

Hi/Low power switch

8. / Key

Press the buttons to select desired channel. press + to increase channel, and - to decrease channel.  /  Key When FM is on, you can press this key to search radio stations.

9. key

Press this key repeatedly to select desired function to setup. Press this key together with  /  key to set desired function value.

10. External MIC/Loudspeaker Jack

11. Car Charging Jack

12. Belt Clip

◦ GETTING ACQUAINTED

(((• **Backlight Status**

Warning on low voltage	Transceiver emits a low voltage beep at intervals of 60 seconds, and red light flashes.
Receive	Backlight eluminates all the time
Keypad operation	Transceiver emits "DU" when entering a function menu, "DU DU" to exit any function.

(((• **[PF1] & [PF2] Key**

Press [PF1]	Squelch off/on
Press [PF2]	Hi/Low power switch

(((Switch on / off the Transceiver

Switch on the Transceiver: Under power-off state, turn **POWER / VOLUME** knob clockwise till hearing "Click" to switch on the transceiver.

Switch off the Transceiver: When the transceiver is in the open state, turn **POWER / VOLUME** anticlockwise till hearing "Click" to switch off the transceiver.

(((Switch on/off the Flashlight

Under standby state, a short press to the flashlight Key will switch on the flashlight. Press the same key to switch off the light.

(((Volume Control

When the transceiver is in open state, turn **POWER / VOLUME** knob to adjust the volume. Turn clockwise to increase the volume, and anticlockwise to decrease the volume. You can press the squelch off [PF1] to monitor current volume.

(((Current Channel Enquiry

Under Standby state, pressing  or , the transceiver will show current channel number.

(((Channels Selection

Under channel mode, to choose the **desired** channel. firstly users need to press  repeatedly till the channel number displayed on the LCD flashes, secondly, press  or  to up or down the channel number, and then the transceiver will **display** the adjusted channel number. Press  to upward the channel number and  to downward the channel number. Press any key except  ,  to confirm



◦ BASIC OPERATIONS

and exit. After entering the setting mode, if users do not set the **channel** or not exit the mode after adjusting the channel number, the transceiver will exit the setting mode automatically after 10seconds.

Receiving

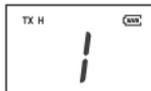
(((•) Once current channel is called, backlight lightens all the time, and then you can hear other party calling.

NOTE:

• **If current channel has been programmed with signaling, you can only hear the call from a same signaling, other calls can't be heard.**

(((•) **Transmitting**

Be sure that the channel you want to use is not in busy state through monitoring for a while by pressing the programmed Squelch off [PF1] key. Under these conditions, press the [PTT] key and speak into microphone. Please keep around 2.5-5cm distance between microphone and your lip. And please speak in normal tone to make the receiver obtain best tone quality.



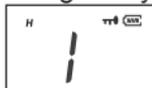
Note:

Pressing and holding [PTT], the backlight lightens for 10seconds and goes out afterwards and TX icon displayed on the LCD, the transceiver is transmitting. Release the PTT to receive.

(((Keypad Lockout

To prevent wrong operation, users can start Keypad Lockout function to lock  key and  key.

To start Keypad Lockout function, press and hold flashlight key while turning on the transceiver, and then release the key when the transceiver emits "DU". Then, the LCD displays the icon . The keys ,  will be invalid when this functions is started. Repeat the above operations to disable the keypad lockout function with "DU DU" prompt.



FUNCTIONS SETUP

Basic Functions Setup

1. Press  repeatedly to select desired sub-menu to setup.
2. Press  /  to set desired function value.
3. Press [PF1] or [PF2] to save and exit.

FM Radio

1. Press  repeatedly till "FM" on the LCD flashes.
2. Press  /  to on/off the FM radio function.
ON: turn on FM radio
OFF: turn off FM radio function (reset the transceiver when FM radio is on can also turn this function off)
3. Press [PF1] or [PF2] to exit.



NOTE:

When FM radio function is on, press  /  to search FM radio station and **display current frequency**. When a certain radio station is detected, the radio will **stop** on the station. The radio can transmit or receive when FM radio is on.

Beep Prompt

1. Press  repeatedly till "BEP" on the LCD flashes.
2. Press  /  to on/off the BEEP prompt function.
ON: turn on the BEEP prompt.
OFF: turn off the BEEP prompt.
3. Press [PF1] or [PF2] to exit.



(((Squelch off/on

Under the standby state, pressing the key of Squelch off [PF1] , the squelch circuit is off and at present you can hear the background noise. Press this key again, the squelch circuit becomes on. By using this function you can monitor the weaker signal which is hard to receive. Meanwhile, LCD will display current signal intensity.

(((Hi/Low Power Switch

Pressing the PF2 key, the transceiver emits "Du" beep and then displays current power state. If "HI" is selected, current channel transmits at high power. If "Low" is selected, current channel transmits at low power.

"H" icon on the LCD means high power.

"L" icon on the LCD means low power .



◦ BACKGROUND OPERATIONS

(((• Time-out Timer

The purpose of the Time-out Timer is to prevent any caller from using a channel for an extended period of time. If you continuously transmit for a period of time that exceeds 120 seconds, the transceiver will stop transmitting with a beep. Release the PTT and press again to continue transmitting.

(((• Time-Out Timer Pre-Alarm

The Time-Out Timer Pre-Alarm is to alarm users that overtime transmission is pending.

(((• Battery Save

The transceiver will automatically switch on Battery Save Function when not receiving any signal or making any operations. But when the transceiver receives a matched signal or make operations, it will automatically exit this function.

(((• Maintaining and Cleaning

Cover the **speaker/mic** jack with its plastic cover when the transceiver is not **in** use. After long-time use of the transceiver, keys, control buttons and housing **could** become dirty. Then, neutral detergent (no corrosive chemical agent) and damp cloth can be used to clean them.

General	
Frequency Range	UHF:400-470MHZ
Channel Capacity	128 channels
Channel Spacing	12.5KHz (Narrow Band)
Phase-locked Step	6.25KHz
Operating Voltage	7.4 DC $\pm 20\%$
Battery Life	More than 12 Hours (1300mAh), by 5-5-90 work cycle
Frequency Stability	$\pm 2.5\text{ppm}$
Operating Temperature	-20~ +55 $^{\circ}\text{C}$
Size	195 \times 56 \times 30mm (with battery pack, no antenna)
Weight	185 g (with battery pack, no antenna)

Receiver	
	Narrow band
Sensitivity(12dB SINAD)	$\leq 0.25\mu\text{V}$
Adjacent Channel Selectivity	$\geq 65\text{dB}$
Intermodulation	$\geq 62\text{dB}$
Spurious Rejection	$\geq 80\text{dB}$
Audio Response	6dB / per interval
Hum & Noise	$\geq 48\text{dB}$
Audio Distortion	$\leq 5\%$
Audio Power Output	500mW (at 10%)

TECHNICAL SPECIFICATIONS

Transmitter	
	Narrow band
Power Output	5W/1W
Modulation	11K Φ F3E
Adjacent Channel	≥ 65 dB
Hum & Noise	≥ 40 dB
Spurious Emission	≤ -36 dB
Audio Response	6dB / per interval
Audio Distortion	$\leq 5\%$

Problem	Corrective Action
No power	A. The battery pack may be flat. Recharge or replace the battery pack. B. The battery pack may not be installed correctly. Remove the battery pack and install it again. C. The power switch is broken; send it to local dealers to repair. D. Battery contact is broken; send it to local dealers to repair.
Battery power dies shortly after correctly charging	The battery pack life is finished. Replace the battery pack with a new one.
All channels noisy	Turn on squelch .
No sound after using microphone for a while	Earphone jack is broken. (Please contact with local dealers to repair it.)
Communication distance becomes short, and it is low sensitivity	A. Check whether the antenna is in good condition and the antenna base do not come adrift. B. Check radio is set to high power output. (Please contact with local dealers to repair it.)
Cannot talk to or hear other members in your group	A. Different channel , please change it. B. Out of communication range.
Can not power on or frequent power-off	Check whether the battery contact is out of shape or broken.
The other party gets low or intermittent receiving sound	Check weather the MIC is blocked (Otherwise, please contact with local dealers to repair it.)

◦ TROUBLE SHOOTING GUIDE

Intermittent receiving with loud noise.	Out of communication range or obstructed by tall buildings or in basement and so on.
Loudspeaker become lower or with "ka ka" sound after using a certain time	Check if the loudspeaker grill is broken. Iron powder or sundries are in the loudspeaker. (Please contact with local dealers to repair it.)
Receive voice from the other party but can not transmit	Check [PTT] key. (Please contact with local dealers to repair it.)
Receiving, backlight lightens but no sound	A.Low volume, please turn on clockwise. B.Loudspeaker is broken. (Please contact with local dealers to repair it.) C.Earphone jack is broken. (Please contact with local dealers to repair it.) D.Volume switch is broken. (Please contact with local dealers to repair it.)
Can not adjust channels	Keypad locked. (Please refer to "keypad locked" function to clear the lock)

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