
MODEL: TB208USL

USER MANUAL

CONTENTS

Introduction	2
Getting Acquainted	2
1. Contents of Pack	2
2. Radio View.....	2
Safety and Care Instructions	4
1. Safety Precautions.....	4
2. Caring for this Product	4
3. Caution	4
Getting Started	4
1. Installing/Removing the Battery	4
2. Installing Belt Clip	5
3. Installing Earphone.....	6
Features and Operation	6
1. Turn the unit ON/OFF	6
2. Volume Adjustment.....	6
3. Keypad Lock	6
4. Reset	7
5. Talk to another Transceiver	7
6. Select a Channel or CTCSS/DCS ..	7
Auxiliary Functions	8
Troubleshooting	8
Specifications	9
About AWC	9
Appendix	10

INTRODUCTION

Thank you for selecting TB208 as your product of choice. This product is a portable, easy-to-use two-way radio transceiver that you can use to contact your family and friends at shopping malls, amusement parks, sporting events, beaches, forests and so on. You can also use it as a vital communications tool in a neighborhood watch.

The transceiver has Max 16 and CTCSS_(Continuous Tone Coded Squelch System)_or DCS codes. CTCSS has 38 channels and DCS has 83 codes.

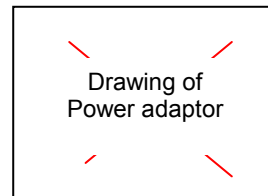
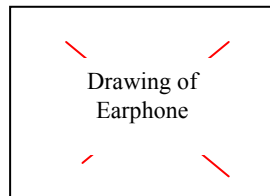
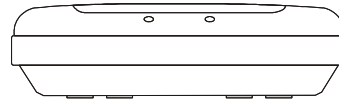
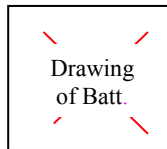
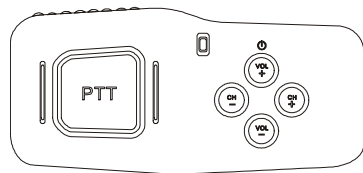
If someone else is using the same channel as you, you can select another channel or use the CTCSS feature. Talk with another person if you are both tuned to the same channel and/or CTCSS code.

Please note that the use of this item is subject to applicable regulations of the country where used.

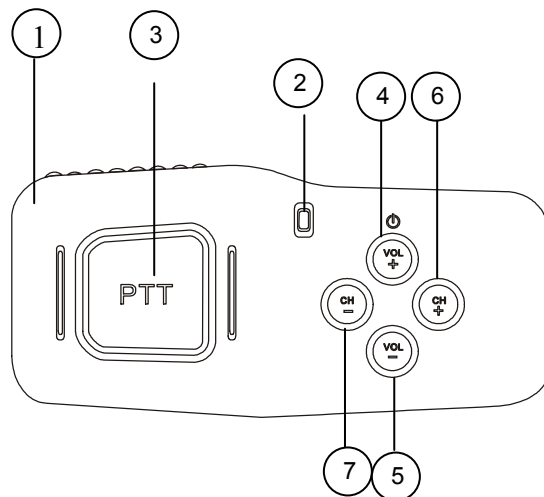
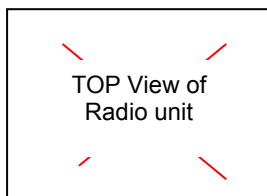
GETTING ACQUAINTED

1. CONTENTS OF PACK

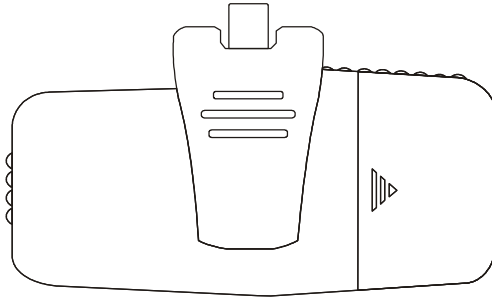
1. Transceiver
2. Earphone
3. Desktop charger
4. 4.2V/1050mA Li-on Battery pack.
5. Power adapter



2. TRANSCEIVER RADIO VIEW



O



Front View:

1. Antenna build-in
Used to transmit/receive signals
2. LED indicator
Following table indicates LED indication and corresponding radio status

Radio status	LED indication (normal voltage)	LED indication (Low voltage)
Transmitting	Red LED	Red LED flash (1s:0.1s)
Receiving busy	Green LED	
Receiving standby	Green LED slowly flashes (5s:0.1s)	

3. PTT (Push to talk) Button
Press and hold PTT, radio operates in transmit mode. Release PTT, radio returns to receive mode
4. VOL UP/Power Button
Press and hold more than 3 seconds, Turn the unit On /Off While radio power on, press button to increase volume
5. VOL DOWN Button
Press button to decrease volume
6. CH UP Button
Press to increase channel no.
7. CH DOWN Button
Press to decrease channel no.

Back View:

1. Battery door
battery compartment
2. Battery pack
Lithium 4.2V /1050mAH rechargeable battery pack.
3. Belt Clip
Used to clip the radio on your belt

Top View:

1. Earphone Jack
Earphone can be connected for hands-free communication
2. D2.5mm Jack
Used for ext. speaker

SAFETY AND CARE INSTRUCTIONS

1. SAFETY PRECAUTIONS

Please observe the following safety precautions when setting up and using this product.

- Heat sources – Keep the product away from heat sources such as radiators, stoves, heaters, and other heat-generating products.
- Water and moisture – Do not use the product in or near water or in high moisture areas such as a bathroom. Indoor use only.

2. CARING FOR THIS PRODUCT

To ensure you receive the maximum benefit from using this product, please observe the following guidelines.

- Cleaning – Use a damp cloth. Do not use liquid cleaning agents, benzene, thinner, or aerosols.
- Repair – Do not attempt to repair the product or modify the circuitry by yourself. Contact the retailer or a qualified repairman if the product requires servicing. Only use replacement parts that are recommended by the manufacturer.

3. CAUTION

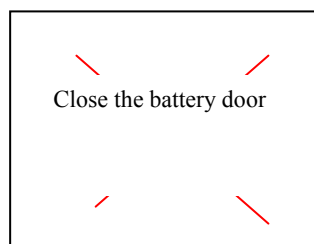
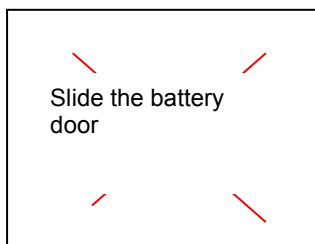
- To avoid risk of fire or injury, do not attempt to charge non-rechargeable batteries. Please turn off the unit while charging.
- Replace only batteries with the same or equivalent type recommended by the manufacturer.
- Please dispose of old, defective batteries in an environmentally friendly manner in accordance with the relevant legislation.
- See additional battery warnings in the “Power” section of the user manual.
- Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
- No naked flames, such as lighted candles, should be placed near the apparatus.
- To reduce the risk of electric shock, do not expose this application to rain or moisture.

GETTING STARTED

1. INSTALLING/REMOVING THE BATTERY

To insert the battery:

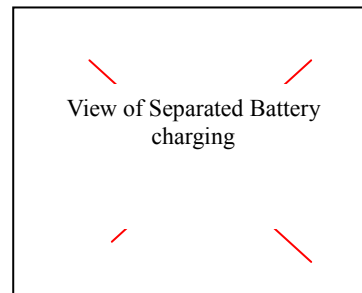
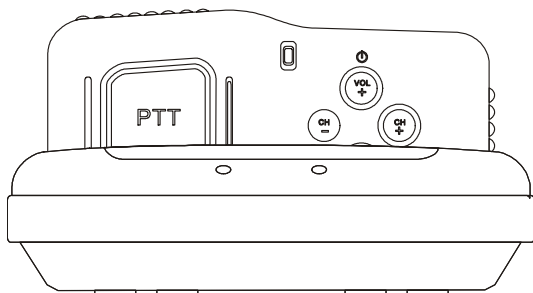
1. Slide the battery door open.
2. Insert the lithium battery into the battery compartment, making sure the polarities (+ and -) match.
3. Slide the back cover and clip into place.



WARNING There is a danger in which incorrectly placing the battery can cause an explosion. Always make sure the radio is switched off before installing or changing the battery. Replace only with the same or equipment type. Use ONLY with lithium 4.2V 1050mAh rechargeable battery. Contact your local retailer for more information.

When the battery power is low, Red LED will flash, please charge it or replace it with a new one.

To charge the battery



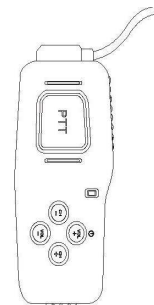
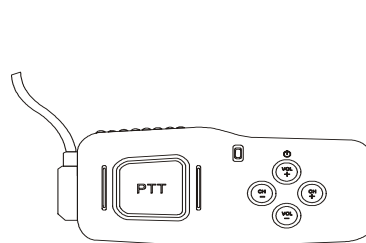
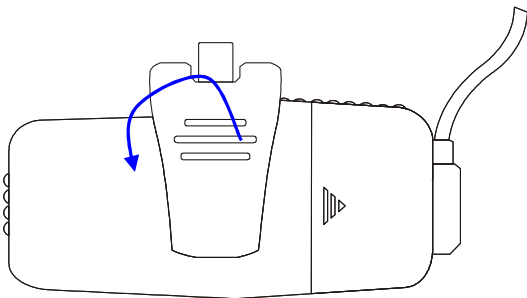
Charge the battery for 12 hours on the first charge. Subsequent charges should take 3 hours or less.

1. Plug the adaptor output into the socket on the back side of charger.
2. Plug the adaptor in the main.
3. The Desktop charger can charge both the radio and a separated battery.
4. LED indicates the charging condition: one for radio unit, and another for separated battery.
If there is no battery in cradle, LED is RED. While Radio unit or battery is placed into the cradle, the LED will become Green. After charging fully, the LED will become RED.

NOTE

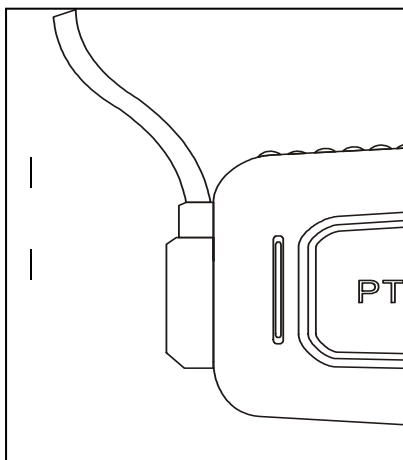
1. To maintain the battery life of your radio it is recommended that you only charge the battery when needed. Overcharging the battery will reduce performance.
2. Ensure that the unit is turned off before charging.
3. Remove batteries before storing your radio for extended periods. Batteries corrode over time and may cause permanent damage to your radio.
4. Please use the specified power adaptor within the same rating.

2. INSTALLING THE BELT CLIP



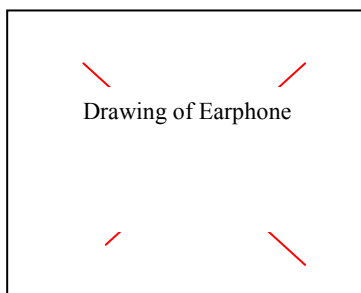
Rotate the clip to be suitable for Horizontal or Vertical mounting on the belt.

3. INSTALLING THE EARPHONE



Insert the earphone into the connection at the top of the radio. Tighten the screws on the head to secure it.

There are microphone, speaker and PTT buttons on the earphone.



FEATURES AND OPERATION

1. TURN THE UNIT ON / OFF

(Before using radio, please confirm earphone cable had been connected to the radio.)



Press and hold VOLUME UP (more than 3 seconds) until you hear "Power on", and the Green LED light appears



Press and hold VOLUME UP again (more than 3 seconds) until you hear "Power off", the radio will be powered off

2. VOLUME ADJUSTMENT



To change the volume level:

Press VOL + or VOL - to increase or decrease volume. Every time button is pressed, you will hear one "beep" sound.

(The volume level setting can be programmed by PC)

3. KEYPAD LOCK

4. RESET

Remove the battery pack for two minutes and insert it again. Any preferred setting will be cleared, the radio will be in initial condition with default values.

5. TALK TO ANOTHER TRANSCEIVER



1. To make a call, press and hold **PTT** button, then speak into the microphone using your normal speaking voice.
While transmitting, LED becomes **RED**.

2. When finished speaking, release the PTT button to allow other radios to respond. The radio will automatically switch to receive mode.
Once you have received voices from other radio(s), LED will become constant **Green**, otherwise green LED will flash in intervals.

NOTE You can only communicate with another transceiver that is on the same channel and using the same CTCSS/DCS code as your radio.

NOTE For best transmission speak about 3-4 cm away from the microphone and after pressing PTT button, leave a short pause before speaking.

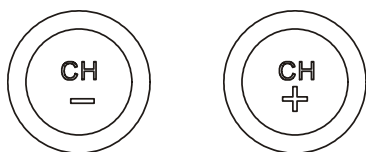
NOTE When the battery voltage becomes too low, transmitting stops and red LED flashes. Please refer to auxiliary function "Low Battery Warning".

6. SELECT A CHANNEL OR CTCSS/DCS

The transmitter and receiver **must** be on the same channel using the same CTCSS code in order for you to communicate with another party.

This feature allows you to utilize a less often-used range of CTCSS codes within a main channel to avoid congestion on the main channel and filter out unwanted noise and static. There are 38 CTCSS codes for each main channel.

IMPORTANT: The channels must be programmed, using the PC software provided, before using the device / transmitter for the first time. Only then will the user be able to choose between the available channels.



To select channels

Press CH+ or CH- to change channels.

To check transmitter and receiver are using the same channel:

Press PTT button. The other party should hear a distortion noise.

NOTE The noise can be loud. Please place earphone a certain distance away from ear when checking to avoid discomfort.

NOTE By pressing CH+ or CH- button once, a voice prompt will indicate which channel is currently being used, e.g., "one, two,..."

By pressing CH+ or CH- button again, you will Increase or Decrease the channel. Voice prompts will indicate the new channel set.

NOTE To communicate with other units that do not have CTCSS code capability, switch your unit to the same channel and set the CTCSS code to "0".

AUXILIARY FUNCTIONS

TIME-OUT TIMER (TOT)

Time-out Timer is to prevent the use of the same channel for too long and the radio from energy waste due to continued transmission.

If the radio continuously transmits signals for a period over the preset limit (set by your dealer, max time is 5 minutes), the transceiver will stop transmitting and a beep will sound. To stop the tone, release the PTT button. Press the PTT button again to resume transmission.

Battery Save

This function minimizes the amount of power used when a signal is not being received and no operations are being performed (no keys are being pressed).

While the channel is not busy and no operation performed for 10 seconds, Battery Save turns ON. When a signal is received or an operation is performed, Battery Save turns OFF.

LOW BATTERY WARNING

Low Battery Warning alerts you when the battery needs to be recharged.

While transmitting, if power of the battery goes below a pre-determined value, the red light will flash, a tone sound, and the radio will stop transmitting. Please replace or recharge the battery.

MONITOR

The squelch circuit on the radio automatically mutes the speaker when there are no signals, eliminating background noise. Press and hold "CH UP" key to manually deactivate the squelch mechanism. This operation is especially useful for adjusting volume level or receiving a weak signal.

CTCSS & DCS

Some channels may have pre-programmed CTCSS/DCS tones. A CTCSS/DCS tone is a sub-audible signal, which allows you to ignore (not hear) calls from other parties using the same channel.

When you receive a signal that has a tone different from the one set up in your radio, you will not hear the signal. Likewise, signals that you transmit will only be heard by parties whose CTCSS/DCS tone matches the tone set up in your radio.

NOTE Although using channels set up with CTCSS/DCS tones enable you to avoid hearing those unwanted calls, it does not mean your calls will be private.

TROUBLESHOOTING

See below for some common problems and their remedies. DO NOT attempt any repairs yourself. This will invalidate your warranty.

PROBLEM	POSSIBLE CAUSES / REMEDIES
Can't turn the radio on	<ul style="list-style-type: none">• Check the battery is correctly installed and has been fully charged
Can't communicate with other radios	<ul style="list-style-type: none">• Check the channel and CTCSS code

SPECIFICATIONS

Operation frequency:	450-470 MHz
Channels:	16 Max. (setting by PC programming)
CTCSS/DCS codes:	38 CTCSS/ 83 DCS
Modulation:	FM (Narrow/Wide deviation)
Sensitivity:	-119 dBm (-6 dBuV emf)
Noise Squech:	Auto (setting by PC programming)
Audio output power:	> 100 mW
Audio distortion:	< 7 %
Rx signal to noise ratio:	> 30 dB
Tx RF output power:	1W (Hi) / 400mW (Low)
Current drain while Receiving:	< 150 mA
Current drain while Transmitting:	< 1.2A (Hi) / 800 mA (Low)
Current drain at Standby saving on/off:	< 20/50 mA
Charge current:	450 mA
Power supply:	4.2V / 1050mAH Li-ion battery
Low voltage indication:	2.8 ~ 3.2 V
Dimensions (HxWxD):	115x53x29 mm (4.5x2.1x1.1 inch)
Weight (without batteries):	100 grams (2.5 oz)

About AWC

AWC Information

Warranty information

FCC Compliance

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.

FCC Requirement

Your radio must be properly licensed by the Federal Communications Commission prior to use. Your dealer can assist you in meeting these requirements. Your dealer will program each radio with your authorized frequencies, signaling codes, etc., and will be there to meet your communications needs as your system expands.

