

TC2110 User Manual

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Product Inspection

Please carefully take the radio out of the box. We recommend that you confirm the items listed in the following table before discarding the box. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

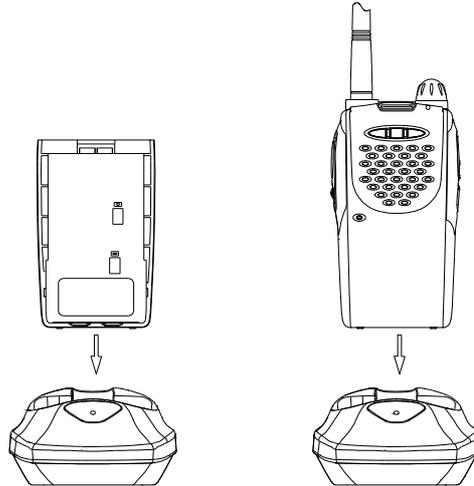
1. Available Accessories

Item	Qty.(pcs)
AC Adapter	1
Ni-MH Battery	1
Belt Clip	1
Owner's Manual	1
Charger	1
Declaration of Conformity Card	1
Safety Manual	1

Battery Charging Information

Standard Charger

1. Insert the AC adapter into an AC outlet;
2. Insert output socket of the AC adapter into AC input jack of the charger;
3. Insert the radio with battery or battery alone into the charger. Charging begins and the red LED will light continuously.



Notes:

Do not short out the battery terminals or dispose of the battery by fire.

Turn off the radio when charging the battery inside the radio.

Remove the radio and the battery from the charger when charging cycle is over. Overcharging will shorten the battery life.

Do not continue charging the battery if it is already fully charged. Or the battery life will be shortened.

Store the battery in a 25 °C place. Charging the battery in less than 10 °C temperature will cause the electrolyte leakage and damage the battery.

Charging the battery in over 35 °C temperature will affect the battery capacity.

Accessory Information

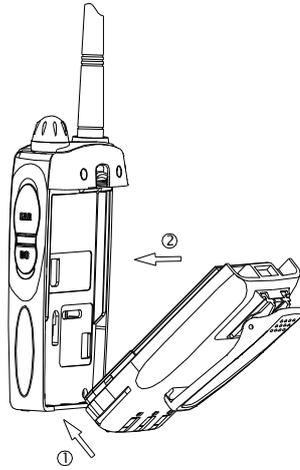
2. Battery

Attaching the Battery (See fig. 1)

1. Insert the tabs, at the bottom of the battery, into the slots at the bottom of the radio chassis.

2. Press the top of the battery towards the radio until a click is heard.

Fig. 1



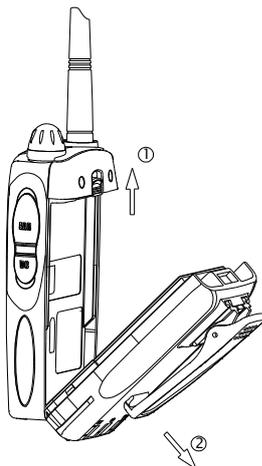
Removing the Battery (See fig. 2)

1. Turn off the radio.

2. Push the battery latch on the back panel towards the top of the radio.

3. Pull the top of the battery away from the radio chassis, and lift the battery from the radio.

Fig. 2



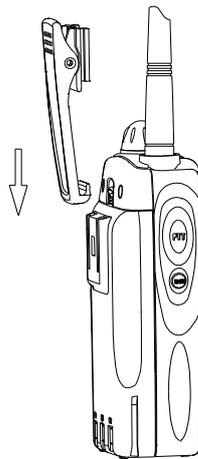
3. Belt Clip

Attaching the Belt Clip (See fig. 3)

1. Align the grooves of the belt clip with those of the battery.

2. Press the belt clip down until a click is heard.

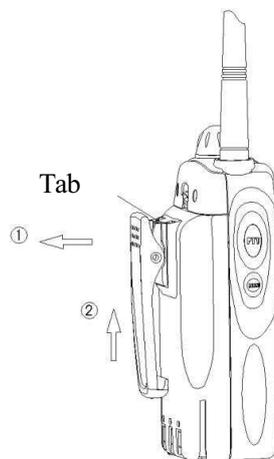
Fig. 3



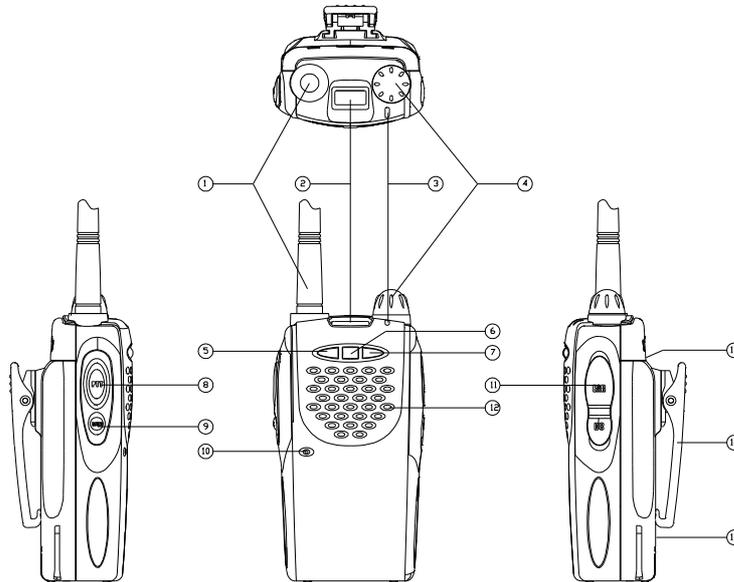
Removing the Belt Clip (See fig. 4)

1. Remove the belt clip tab away from the battery.
2. Slide the belt clip upwards to remove it.

Fig. 4



Getting Started



1. Antenna

Used to transmit or receive signals.

2. LCD

Displays operation status of the radio.

3. LED indicator

In transmit mode, the red LED will turn on. In receive mode, the green LED will turn on. A flashing red LED indicates that the battery power is low.

4. POWER/VOL Knob

Rotate the POWER/VOL Knob clockwise to turn the unit on, fully counter clockwise to turn the unit off. Increase or decrease volume by adjusting the knob accordingly.

5. DOWN key

Adjust the channel downwards.

6. SCAN key

Press [SCAN] key to enter channel scan mode. Press again to exit.

7. UP key

Adjust the channel upwards.

8. PTT button

Press and hold [PTT], radio operates in transmit mode. Release [PTT], radio returns to receive mode.

9. MONI button

Press [MONI] key to monitor the selected channel for activity.

10. Microphone

11. Jack

Used to connect with external audio accessories.

12. Speaker

13. Battery latch

Used to fasten and remove the battery.

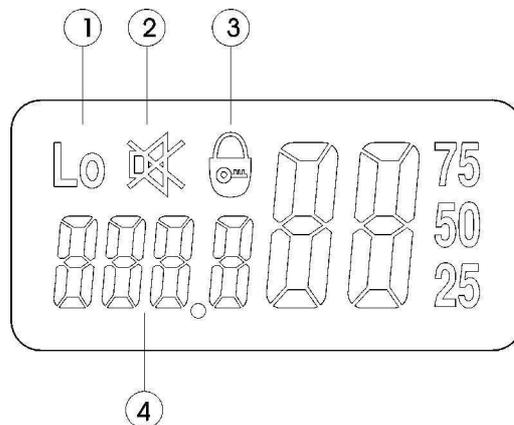
14. Belt clip

Used to clip radio on your belt.

15. Battery pack

LCD Display

1. Not available in this radio.
2. Not available in this radio.
3. Appears when the key lock feature is enabled.
4. Display the current channel number.



Basic Operations

4. To Turn On the Radio

Turn the POWER/VOL knob clockwise until a click is heard to turn the radio on.

5. To Receive

1. Press [UP] or [DOWN] key to select your desired channel.
2. Turn POWER/VOL knob to adjust the volume. In order to adjust the volume more conveniently, you may press and hold [MONI] key, and then turn the knob to adjust.
3. 3. Now the radio is ready to receive.

6. To Transmit

1. Press [UP] or [DOWN] key to select your desired channel.
2. To avoid interfering with other users, press the [MONI] key to monitor activities on the selected channel and make sure the channel is idle before transmitting.
3. To transmit, press and hold the [PTT] button and speak into the microphone with the radio 2 to 4 inches away from your mouth. To receive, release the [PTT] button. When the [PTT] button is pressed, the red LED will light until the [PTT] button is released or until the transmission is stopped by TOT.

Features

7. Monitor

Press [MONI] button to monitor activity on the current channel.

8. Channel Scan

Channel scan is set to monitor desired activities on all channels in scan list. When channel scan is enabled, the radio will automatically scan all channels in scan list until activity is detected on a channel. The radio will then lock on to that channel for communication.

When scanning stops on an active channel, it will restart in the preset restart mode set by the dealer. Scan restart mode can be either Time operated scan or Carrier operated scan.

Time Operated Scan

Scan stops on the busy channel for only the preset time (preset by the dealer) before it resumes scanning. The radio will begin scanning other channels even if the channel is still busy.

Carrier Operated Scan

Scan stops on the busy channel until there is no activity.

Channel scan operation is shown as following:

1. Press [SCAN] key, scan starts from the current channel and then scrolls all selected channels in sequence.
2. Press [UP] or [DOWN] key to change channel scan sequence. Press the [UP] key, radio skips the current channel and scans other selected channels in ascending order; press the [DOWN] key, radio skips the current channel and scans other selected channels in descending order.
3. Press [SCAN] key again, scan stops.
4. The dealer can add or delete a channel to/from the scan list. Only channels in the scan list can be scanned.

9. Priority Channel Scan

If your dealer has set a priority channel, when radio scans non-priority channels, it will periodically detect the priority channel. If activity is detected on the priority channel, it will switch to the priority channel for communications.

10. Scan Revert Channel

The scan revert channel feature allows you to transmit on the proper channel while initiating a call during channel scan. Press [PTT] button, radio stops scanning and transmits on the revert channel. This feature is set by the dealer.

11. Selectable CTCSS/CDCSS

CTCSS/CDCSS feature is used to avoid receiving unwanted signals on the same channel. When CTCSS/CDCSS is enabled, the radio will only receive signals with the same CTCSS/CDCSS. If CTCSS/CDCSS is disabled, the radio will hear all calls on the same channel.

When the dealer allows CTCSS/CDCSS to be selectable by the end user, the operations are as follows:

Press the [UP] key while holding down [MONI] key to enter CTCSS/CDCSS set mode.

In the CTCSS/CDCSS set mode, press [UP] or [DOWN] key to select CTCSS/CDCSS.

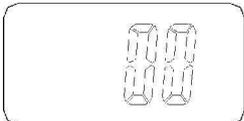
Press [SCAN], LCD display toggles among OFF/CTCSS/CDCSS/-CDCSS:

CTCSS/CDCSS OFF: 00

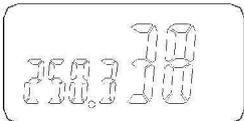
CTCSS: 01-38

CDCSS: 01-83

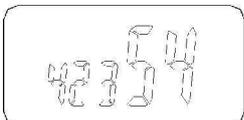
-CDCSS: -01- -83



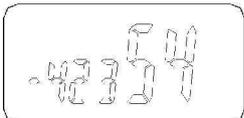
OFF



CTCSS



CDCSS



-CDCSS

Please refer to CTCSS/CDCSS table for more details.

Press [UP] while holding down [MONI] key to exit CTCSS/CDCSS set mode.

Note: Though CTCSS/CDCSS feature can prevent you from receiving unwanted signals; it doesn't mean your calls are absolutely private.

Selectable squelch level

If this feature is enabled by the dealer, then

Press the [DOWN] key while holding down [MONI] key to enter squelch level set mode. In this mode, press [UP] or [DOWN] key to select the squelch level from 0-9.

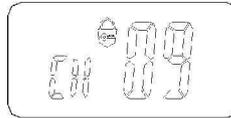
Press [PTT], [MONI] or [SCAN] key to exit the mode.

Key lock

The key lock feature is designed to avoid accidental pressing of keys. If this feature is enabled

by your dealer, the operation procedures are as follows:

1. Press [SCAN] while holding down [MONI] key to lock keys. When key lock feature is enabled, [UP], [DOWN] and [SCAN] keys are invalid, but [PTT] and [MONI] key are still valid.
2. Press [SCAN] while holding down [MONI] to unlock keys.
3. Lock symbol appears on LCD when key lock feature is enabled:



12. Time Out Timer (TOT)

Time Out Timer is used to prevent user from transmitting on the same channel for extended periods of time. This feature also protects the radio from damage caused by long time transmission.

If transmission exceeds the preset time, (the TOT time can be preset by the dealer), the radio will stop transmitting and return to the receive mode automatically. Alert beeps will sound. Release [PTT] button to stop the beeps.

13. Battery Save

While no activity is on the channel and no operation is performed for 10 seconds, the Battery Save feature will be enabled automatically to reduce power consumption. When a signal is received or an operation is performed, the Battery Save feature is automatically disabled.

14. Low Battery Alert

When the battery voltage becomes low, the red LED will flash and beeps sound. You need to replace or charge the battery.

15. Busy Channel Lockout

If the selected channel is set busy channel lockout by your dealer, you cannot transmit when there is activity on the channel. If you press the [PTT] button, the radio will sound beeps and will stay in the receive mode.

16. Backlight

This feature can be set by your dealer.

When this feature is enabled, pressing any key except the [PTT] will illuminate the display. The display will continue to light for 5 seconds.

Troubleshooting Guide

Please check the following items before requesting service.

1. Review operation procedures.
2. Replace or recharge the battery.
3. If reception is poor, check the antenna to make sure it is undamaged and operating in a vertical position.
4. Try another location with fewer obstructions.
5. If you cannot communicate with your group members, make sure you are using the same frequency and CTCSS/CDCSS.
6. If you hear other conversations on your channel, change your CTCSS/CDCSS. Remember to change CTCSS/CDCSS of your group members.

Optional Accessories

158M-S Earphone
158M-G Earphone
SM-03 Speaker Mic
PT-12 Leather Case
PT-13 Leather Case
PDS-264 Adapter
HC2108Li Charger
TC-67 Li-ion Battery

Care and Cleaning

- ✧ Do not carry your radio by the antenna or remote microphone;
- ✧ Wipe the battery contacts with a lint-free cloth to remove dirt, grease, or other material that may prevent good electrical connection;
- ✧ When not in use, keep the accessory jacks covered with the protective caps;
- ✧ Clean the shell, controls and keys of your radio with neutral detergent and warm water after a long period of usage. Avoid using strong chemicals.

TC2110 Frequency Chart

No.	Frequency (MHz)	No.	Frequency (MHz)
1	446.00625	5	446.05625
2	446.01875	6	446.06875
3	446.03125	7	446.08125
4	446.04375	8	446.09375

CTCSS/CDCSS Table

CTCSS					
NO.	Freq (Hz)	NO.	Freq (Hz)	NO.	Freq (Hz)
00	NO TONE	13	103.5	26	162.2
01	67.0	14	107.2	27	167.9
02	71.9	15	110.9	28	173.8
03	74.4	16	114.8	29	179.9
04	77.0	17	118.8	30	186.2
05	79.7	18	123.0	31	192.8
06	82.5	19	127.3	32	203.5
07	85.4	20	131.8	33	210.7

08	88.5	21	136.5	34	218.1
09	91.5	22	141.3	35	225.7
10	94.8	23	146.2	36	233.6
11	97.4	24	151.4	37	241.8
12	100.0	25	156.7	38	250.3
CDCSS					
NO.	CODE	NO.	CODE	NO.	CODE
01	023	29	174	57	445
02	025	30	205	58	464
03	026	31	223	59	465
04	031	32	226	60	466
05	032	33	243	61	503
06	043	34	244	62	506
07	047	35	245	63	516
08	051	36	251	64	532
09	054	37	261	65	546
10	065	38	263	66	565
11	071	39	265	67	606
12	072	40	271	68	612

13	073	41	306	69	624
14	074	42	311	70	627
15	114	43	315	71	631
16	115	44	331	72	632
17	116	45	343	73	654
18	125	46	346	74	662
19	131	47	351	75	664
20	132	48	364	76	703
21	134	49	365	77	712
22	143	50	371	78	723
23	152	51	411	79	731
24	155	52	412	80	732
25	156	53	413	81	734
26	162	54	423	82	743
27	165	55	431	83	754
28	172	56	432		

Frequency Chart

Model: _____

Serial Number: _____

Channel	Frequency	CTCSS/CDCSS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		