

# TX610 HANDHELD UHF TRANSCEIVER

---

## User Instructions



**GME** *Electrophone*

**STANDARD COMMUNICATIONS PTY. LTD.**

## **Warning: Safety Information**

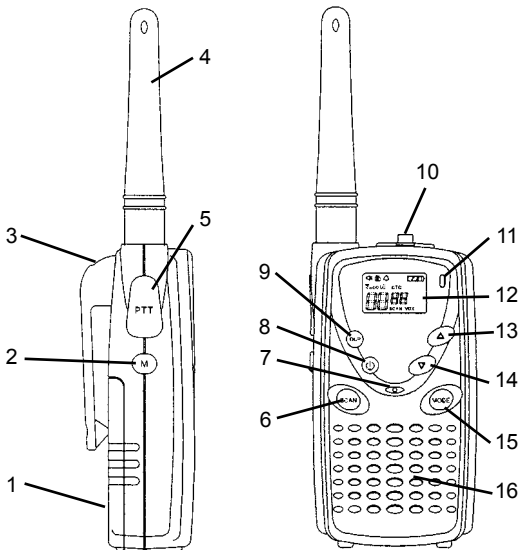
The TX610 is a radio transmitting device.

- When transmitting, keep the antenna more than 25mm from any part of the head or body.
- Do not transmit near electrical blasting equipment or in explosive atmospheres.
- Do not allow children to operate a radio transmitter unsupervised.

## TABLE OF CONTENTS

<b>Controls</b> .....	<b>4</b>
<b>LCD Indicators</b> .....	<b>5</b>
<b>Powering the Transceiver</b> .....	<b>7</b>
<b>General Operation</b> .....	<b>9</b>
Controls .....	9
Power ON/OFF Button .....	9
Adjusting the Volume .....	9
Monitor/Backlight Button .....	9
Push To Talk (PTT) Button .....	10
Up Channel/Volume Button .....	11
Down Channel/Volume Button .....	11
Mode Button .....	11
SIM/DUP Button .....	11
Speaker/Microphone Jack .....	12
Scan/Lock Button .....	12
Keylock Mode .....	12
<b>Operating Modes</b> .....	<b>14</b>
Mode Button .....	14
Channel Selection .....	14
CTCSS Code Selection .....	15
VOX Settings .....	17
Dual Watch Mode .....	17
Roger Beep Tone .....	19
Button Beep Tone .....	19
Call Alarm Selection .....	20
<b>Technical Specifications</b> .....	<b>21</b>
<b>Channel Frequency Chart</b> .....	<b>22</b>
<b>CTCSS Tone Selection Chart</b> .....	<b>23</b>
<b>Warranty</b> .....	<b>24</b>

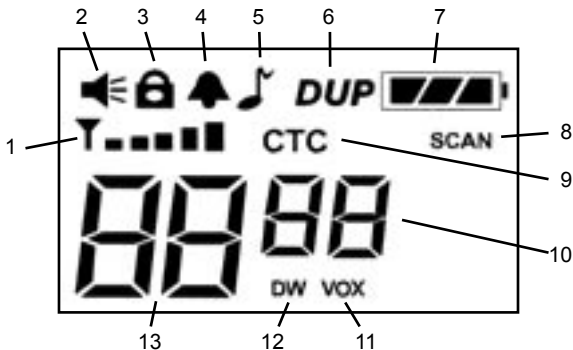
## CONTROLS



1. Battery Door.
2. Monitor/Backlight Button.
3. Detachable belt Clip.
4. Antenna.
5. Push-To-Talk Switch.
6. Scan/Key Lock Button.
7. Microphone.
8. Power On/Off.
9. Simplex/Duplex Button.

10. Socket for External Speaker/Mic.
11. TX/RX/CTCSS Indicator.
12. Liquid Crystal Display.
13. Channel/Volume Up.
14. Channel/Volume Down.
15. Mode Button.
16. Speaker.

## LCD INDICATORS



1. **Signal Strength Indicator Icon:** Appears when a signal is being received. Also represents transmit signal power during transmission.
2. **Monitor Indicator Icon:** Appears when the Monitor (M) button is pressed and the channel monitor function is activated.
3. **Key Lock Indicator Icon:** Appears when the keypad is locked. This function disables keys such as channel Up/Down and MODE.
4. **Beep Tone Indicator Icon:** Appears when the button beep confirmation tone is selected. Disappears when the button beep tone is off.

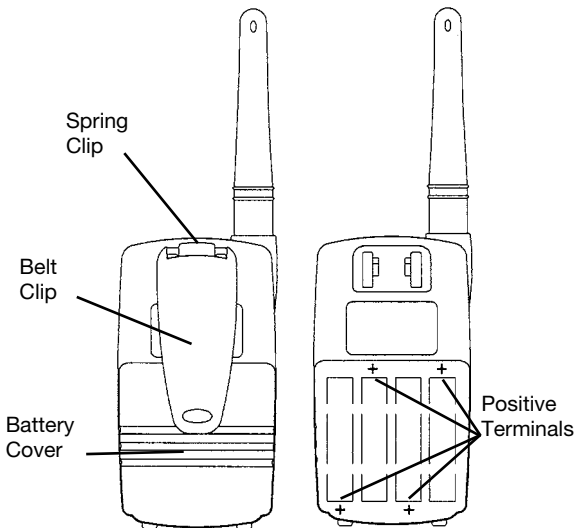
5. **Roger Beep Tone Icon:** Appears when the Roger Beep tone is on and disappears when tone is not in use.
6. **Duplex Indicator Icon:** Indicates that Duplex communication has been selected.
7. **Battery Level Indicator Icon:** Indicates the battery power level.
8. **Scan Indicator Icon:** Appears when SCAN is enabled and the radio is scanning.
9. **Continuous Tone Coded Squelch System (CTC) Icon:** Appears when the CTCSS tone function is active.
10. **CTCSS Tone Display:** Displays the selected CTCSS tone (from 00-38) on the selected channel.
11. **Voice Activated Transmission (VOX) Icon:** Appears when the VOX mode is activated.
12. **Dual Watch Mode Icon:** Appears when the Dual Watch mode is active.
13. **Channel Display:** Indicates the channel number in use.

## POWERING THE TRANSCEIVER

Your TX610 transceiver operates on four AAA batteries. While you may use rechargeable batteries, alkaline batteries will provide slightly better performance.

### Installing the batteries


Battery installation is made more convenient when the belt clip is removed. To do this, release the spring clip securing the belt clip to the radio and slide the belt clip downward and away from the radio body.



*To install the batteries:*

1. Using your thumb, press down on the battery cover at the arrow. Slide the cover down and lift the cover at the bottom to open.
2. Insert four AAA batteries as shown, with alternating positive (+) and negative (-) ends toward the bottom beginning at the lefthand side.

### **Battery Power Alert**

When the battery icon  blinks on the display, the battery level is low and the batteries should be replaced (or recharged if NiCads). If the batteries are not replaced an audio tone will sound to warn the user that the batteries must be replaced.

The following guidelines will improve performance and provide longer operating times for the TX610.

1. Do not mix old and new batteries.
2. The use of alkaline-type batteries is recommended to provide the longest operating time.
3. Do not mix alkaline, standard (carbon-zinc) or rechargeable batteries.
4. If the unit is not to be used for an extended periods of time, remove the batteries. Old or leaking batteries can cause damage to the unit and will void the warranty.



## GENERAL OPERATION

*NOTE: When the TX610 is not receiving signals, it will remain in the Standby mode. While in the Standby mode, the transmit/receive indicator will flash once every 5 seconds as the unit checks for signals.*

### CONTROLS


#### **Power On/Off Button (8)**

Press and hold the power on/off button (8) for at least 2 seconds. You will hear a confirming melody to indicate the unit is on. To turn the unit off, press and hold the power on/off button again for at least 2 seconds.

#### **Adjusting the Volume (13) (14)**

With the unit powered on, press the Up button (13) to increase the volume and the Down button (14) to decrease the volume. When adjusting the volume,  $\mu\text{L}$  is displayed along with the current volume level setting 1 - 7.

#### **Monitor/Display Backlight Button (2)**

Monitor Function: This button is used to check for activity on the current channel before transmitting. You can check for activity by pressing the Monitor Button for more than 2 seconds. The  icon will appear on the display and you will hear static or hiss if the channel is clear. Do not transmit if you hear any conversations.

Hold down the Monitor Button again for more than 2 seconds to remute the receiver.

**Backlight Function:** Press the monitor button momentarily to turn on the LCD backlight. The LCD backlight will turn off automatically after about 5 seconds, or when the monitor button is pressed momentarily once again.

### **Push To Talk (PTT) Button (5)**

Press and hold the PTT button to speak. The other transceiver must be set to the same channel (and CTCSS code if applicable) as yours. Hold the transceiver approximately 5 to 8 cms from your face with the antenna vertical and speak into the built-in microphone (7).

While the PTT button is pressed, the Transmit/Monitor LED (11) in the upper right corner of the radio will light RED and the signal indicator **Y■■■■■** will display the relative strength of the transmitted signal.

When you have finished speaking, release the PTT Button to receive incoming signals (it is not possible to transmit and receive at the same time). When receiving an incoming signal, the Transmit/Monitor LED (11) lights Green and the received signal strength indicator **Y■■■■■** will display the relative strength of the incoming signal. If the incoming signal is encoded with a matching CTCSS tone, the LED (11) will light Orange.

If no further signals are received, the unit will revert to standby mode.

The PTT Button can also be used to transmit a call alarm melody. Pressing the button twice quickly will call another party on the same channel. When this happens, the Transmit LED will light RED for approximately 3 seconds and then go out (see “Call Alarm Selection” on page 20).

### **Up Channel/Volume Button (13)**

In the *standby* mode, press this button to increase the listening volume.

In *Mode edit* mode, press this button to adjust the unit's settings.

### **Down Channel/Volume Button (14)**

In the *standby* mode, press this button to decrease the listening volume.

In *Mode edit* mode, press this button to adjust the unit's settings.

### **Mode Button (15)**

The Mode Button is used to set the various feature settings of the TX610. The operation of the Mode button is described later in this manual.

### **SIM/DUP Button (9)**

Duplex operation allows the TX610 to transmit on a different frequency to that which it receives. This allows operation through any repeater stations in your area. Repeaters automatically re-transmit your signal over a much wider area, providing greatly increased range.

The Duplex mode only works on channels 1 - 8. With Duplex selected, your TX610 actually transmits 30 channels higher than it receives.

Channel Selected	1	2	3	4	5	6	7	8
Receive Channel	1	2	3	4	5	6	7	8
Transmit Channel	31	32	33	34	35	36	37	38

Briefly press the DUP button to switch between Simplex and Duplex mode. When Duplex mode is selected, DUP appears on the display.

### **External Speaker (SPK)/Microphone (MIC) Sockets (10)**


These sockets allow the connection of a remote speaker microphone setup.





### **Scan/Lock Button (6)**

To enable the Scan mode, briefly press the SCAN Button. The SCAN icon appears on the display. While scanning, briefly press the Up key to scan upwards through the channels, or the Down key to scan downwards. To stop scanning, briefly press the SCAN button again.

### **Key Lock Mode**

The Key Lock function prevents accidental changes to the preferred settings of the unit. When the keypad is locked, the  icon is displayed and all key presses are ignored except for the PTT (5) and Monitor (2) buttons.

To activate the Key Lock press, and hold the SCAN Button for more than 2 seconds. The  icon appears on the display.

To cancel the Key Lock, press and hold the SCAN button again for at least 2 seconds; the  icon disappears from the display.

## Channel Scan Operation

Scanning allows you to monitor all channels automatically for valid signals.

*NOTE: While the scan function is active, the MODE button will be inoperative. The scan mode will reduce the overall battery life because the battery saver function is overridden.*

*To enable the channel scan mode:*


1. Momentarily press the SCAN Button: SCAN will appear on the LCD display.
2. As the radio is scanning, each channel (1-40) will be displayed in sequence. Briefly press the Up or Down button to select the scan direction.
3. If a signal is received, the scan is interrupted and you can transmit and receive on that channel. The radio will return to scan mode 5 seconds after the last reception or transmission.
4. While the unit is scanning, press the PTT switch to return to the **home** channel (the **home** channel is the channel the transceiver was on at the time scanning was initiated). The transceiver will automatically resume scanning approximately 5 seconds after the communication is completed.

5. When the unit stops on a busy channel, press the Up or Down buttons to 'Skip' over the busy channel and continue scanning.
6. To exit the SCAN mode, press the SCAN button momentarily. The TX610 will return to normal operation (and the SCAN icon will disappear from the LCD display).

## OPERATING MODES AND FEATURES

The **MODE** button is used to set the various feature settings in the TX610. The following chart shows the order of these selections.

### Standby Mode

- 
1. Channel Selection
  2. CTCSS Code Selection
  3. VOX Settings
  4. Dual Watch Settings
  5. Roger Beep Selection
  6. Button Beep Selection
  7. Call Alarm Selection

### Channel Selection

In order to communicate with another radio, both radios must be on the same frequency. The TX610 is fitted with 40 UHF CB channels (1-40) indicated by the large digits on the LCD display.

Before transmitting on the selected channel, press the Monitor (M) Button (2) to check for activity on that channel. If there is activity on the selected channel, change to another channel that is clear.

*To change the channel:*

1. Briefly press the MODE button (15) once. The channel number will flash.
2. Briefly press the Up Button (13) to move to the next higher channel number or press the Down Button (14) to move to the next lower channel number.
3. Briefly press the PTT button to store the selected channel.

## **CTCSS Code Selection**

The Continuous Tone Coded Squelch System (CTCSS) is a squelch quieting system that allows groups of users to share the same channel without disturbing each other. It uses 1 of 38 low frequency tones to open and close the squelch on the radio.

The TX610 allows you to utilise a coded squelch tone on any channel so you can communicate with another party on the same channel using the same code. (This filters out unwanted transmissions that don't have the same coded squelch tone.) You can apply any one of 38 CTCSS codes to each channel of the 40 channels.

*To set the CTCSS code for specific channel:*

1. Press the Mode Button once. The channel number will flash.
2. Press the Up or Down buttons to select the required channel.
3. While the channel number is still flashing, press the Mode Button once more. **CTC** will flash on the display along with either a flashing  $\alpha F$  or a CTCSS code number (1 - 38) (*NOTE: If the channel number is no longer flashing you will need to press the Mode Button twice to access the CTCSS code setting mode*).
4. Press the Up or Down buttons to set the CTCSS code. A list of available codes is shown on the chart at the end of this manual.
5. To turn the CTCSS code OFF, set the code to  $\alpha F$ .
6. Press the PTT button momentarily to confirm your selection.

The TX610 should now display the selected channel number and the CTCSS code you have set. If the CTCSS code was turned Off, only the channel number will be displayed.

*NOTE: To communicate with other UHF transceivers using CTCSS, all radios you wish to communicate with must be switched to the same channel and have the same CTCSS code selected. If you wish to receive signals from UHF transceivers that are not using CTCSS, you will need to set the CTCSS code to  $\alpha F$  (off) on those channels.*



*The CTCSS subcodes do not prevent others from hearing your transmission. They simply provide you with a quieter channel by preventing you from hearing transmissions that are not using the same code as you and are therefore not directed at you.*

## **VOX Settings**

The VOX feature lets you have hands-free conversations. When you speak, the microphone automatically detects your voice (or other nearby sound) causing the radio to transmit without the need to press the PTT button.

*To set radio for **VOX** operation:*

1. Press the MODE button repeatedly until the **VOX** icon flashes on the display.
2. Press the Up or Down buttons to select the **VOX** sensitivity (minimum = 1, maximum = 7). To turn the **VOX** function Off, press the Down button until  $\alpha F$  is displayed.
3. Momentarily press the PTT Button to confirm the **VOX** selection. If **VOX** has been enabled, the **VOX** icon will remain visible on the bottom of the display.
4. To disable the **VOX**, repeat the steps above while setting the **VOX** sensitivity to  $\alpha F$ .

## **Dual Watch Settings**

The Dual Watch mode lets you to monitor two channels at the same time. While in dual watch mode, the unit will continuously monitor both the currently selected channel

and a dual watch channel. If a signal is received on another channel, the radio will pause on that channel, then resume scanning the two channels 5 seconds after the last transmission ceases.

If you wish to talk on the busy channel, press the PTT button while the radio is locked onto that channel, then talk in the usual way.

If you wish to talk on the selected channel, press the PTT button while no signals are being received. The radio will switch to the selected channel.

*To select the Dual Watch Mode :*

1. Press the MODE button repeatedly until *dc* and the flashing **DW** symbol are displayed.
2. Press the Up or Down buttons to select the Dual Watch channel number. To disable the Dual Watch function altogether select *oF*.
3. Press the PTT switch to confirm the Dual Watch channel selection. The display will now alternate between the selected channel and the dual watch channel.


To EXIT the Dual Watch mode, momentarily press the **SCAN** button.

*NOTE: When Dual Watch is enabled, **DW** will be displayed at the bottom of the LCD.*

## Roger Beep Tone Settings

The Roger Beep is a tone which is automatically transmitted whenever the PTT button is released. This tone alerts the receiving party that the transmission has been terminated intentionally.

*To enable and disable the Roger Beep tone:*


1. Press the MODE Button repeatedly until  $r\bar{b}$  appears on the display and the tone icon  is flashing.
2. Press the Up or Down Button to select the tone on or off as desired.
3. Press the PTT button to confirm selection.


The tone icon  will remain steady on the display.

## Button Beep Tone Settings

The Button beep tone feature allows the transceiver to sound a confirmation tone whenever the Monitor (M), Up/Down, MODE, SCAN or SIM/DUP keys are pressed;

*To turn the Button beeps tones on or off:*


1. Press the MODE Button repeatedly until  $b^P$  is displayed and, the  icon is flashing.
2. Press the Up or Down Buttons to toggle the key tone feature On or Off.
3. Press the PTT button momentarily to confirm selection.

When the key tone feature is on, the  icon appears steady on the display, and the beep tones sound in response to button activation.


## Call Alarm Selection

The TX610 provides 5 user-selectable call alarm melodies to alert other users to your incoming call.

*To select your favorite call alarm melody:*

1. Press the MODE button repeatedly until  appears on the display together with a flashing number between 1 and 5.
2. Press the Up or Down Buttons to preview (listen) to the 5 available call melodies.
3. Press the PTT Button momentarily to confirm selection.

To send the call alarm melody, press the PTT switch twice quickly. The TX indicator will light for a few seconds as the melody is sent. The melody will be heard in the speaker of the receiving radio.

To disable call alarm melodies, select .

## TECHNICAL SPECIFICATIONS

### General

Frequency Range:	476.425 - 477.400 MHz
Channel Spacing:	25 KHz
Privacy Codes:	38 for each main channel
Dimensions (W x H x D): (Without Antenna)	53.4mm x 98 mm x 28 mm

### Power Supply

Power Source:	Alkaline Batteries - 6 VDC (4 x AAA). Ni-MH rechargeable - 4.8 VDC, 650mAh (4 x AAA).
---------------	--

### Operating Time

(Transmit 5%, Receive 5%,  
Standby 90%)

Alkaline batteries:	21 Hours
Ni-MH rechargeable:	11 Hours

### Receiver

Useable Sensitivity:	>-119 dBm
Maximum Audio Output :	>0.3 Watt max. (8 Ohm)
Modulation Distortion:	<5% (1 kHz 70%)

### Transmitter

RF Output Power:	1.0 Watt maximum.
Maximum Deviation:	+/- 5 kHz
Modulation Distortion:	<5% (1kHz 70%)

## FREQUENCY CHART

CH	Carrier frequency MHz			
	Half-duplex		Simplex	
	Tx	Rx	Tx	Rx
1 *	477,175	476.425	476.425	476.425
2*	477.200	476.450	476.450	476.450
3*	477.225	476.475	476.475	476.475
4*	477.250	476.500	475.500	475.500
5*	477.275	476.525	476.525	476.525
6*	477.300	476.550	476.550	476.550
7*	477.325	476.575	476.575	476.575
8*	477.350	476,600	476.600	476.600
9			476.625	476.625
10			476.650	476.650
11			476.675	476.675
12			476.700	476.700
13			476.725	476.725
14			476.750	476.750
15			476.775	476.775
16			476.800	476.800
17			476.825	476.825
18			476.850	476.850
19			476.875	476.875
20			476.900	476.900
21			476.925	476.925
22			476.950	476.950
23			476.975	476.975
24			477.000	477.000
25			477.025	477.025
26			477.050	477.050
27			477.075	477.075
28			477.100	477.100
29			477.125	477.125
30			477.150	477.150
31			477.175	477.175
32			477.200	477.200

33			477.225	477.225
34			477.250	477.250
35			477.275	477.275
36			477.300	477.300
37			477.325	477.325
38			477.350	477.350
39			477.375	477.375
40			477.400	477.400

Continuous Tone Coded Squelch System Tone Frequencies (in Hz)

### CTCSS TONE FREQUENCIES

CTCSS	Freq. Hz	CTCSS	Freq. Hz
1	67.0	20	131.8
2	71.9	21	136.5
3	74.4	22	141.3
4	77.0	23	146.2
5	79.7	24	151.4
6	82.5	25	156.7
7	85.4	26	162.2
8	88.5	27	167.9
9	91.5	28	173.8
10	94.8	29	179.9
11	97.4	30	186.2
12	100.0	31	192.8
13	103.5	32	203.5
14	107.2	33	210.7
15	110.9	34	218.1
16	114.8	35	225.7
17	118.8	36	233.6
18	123.0	37	241.8
19	127.3	38	250.3

\*  $\sigma F$  = No Tone

## WARRANTY

GME ELECTROPHONE limit this warranty to the original purchaser of the equipment.

GME warrant the TX610 to be free from defects in material and workmanship for a period of twelve (12) months from the date of purchase from their authorised dealer.

Should the product require servicing during this period, all labour and parts used to effect repairs will be supplied free of charge. GME ELECTROPHONE reserve the right to determine whether the damage has been occasioned by accident, misuse or improper installation whereby the warranty would be void.

Procedure to be followed by claimant: In the event of a defect occurring during the warranty period, the original Purchaser may return the defective unit along with suitable proof of purchase date (i.e. receipt, docket, credit card slip etc.) and a full description of the defect to the Dealer from whom the unit was purchased. All freight charges incurred for transportation by the Dealer or GME ELECTROPHONE are the Purchaser's responsibility.

The Dealer will forward it to the closest authorised GME ELECTROPHONE Service Depot in your particular State.



A Division of

**STANDARD COMMUNICATIONS PTY. LTD.** Website: [www.gme.net.au](http://www.gme.net.au)

\* **Head Office:**

Locked Bag 2086, NORTH RYDE N.S.W 1670  
(02) 9844 6666, Fax: (02)9844 6600



**Branches:**

**QLD.**

Unit 1, 89-101 Factory Rd,  
OXLEY 4075  
(07) 3278 6444  
Fax: (07) 3278 6555

**W.A.**

Unit 1, 10-12 Harvard Way,  
CANNING VALE 6155  
(08) 9455 5744  
Fax: (08) 9455 3110

**N.S.W.**

Locked Bag 2086,  
NORTH RYDE 1670  
(02) 9879 8888  
Fax: (02) 9816 4722

**VIC/TAS.**

103 Woodlands Drive,  
BRAESIDE 3195  
(03) 9590 9333  
Fax: (03) 9590 9344

**S.A/N.T**

Unit 1, 4 West Thebarton Rd  
THEBARTON 5031  
(08) 8234 2633  
Fax: (08) 8234 5138

**AUCKLAND N.Z.**

P.O. Box 58446  
GREENMOUNT  
(09) 274 0955  
Fax: (09) 274 0959