GME COMMERCIAL

BX SERIES
HANDHELD RADIOS

Instruction manual includes models:

- BX710
- BX720
- BX730

COMMERCIAL

GME
BX720

WARNING - SAFETY INFORMATION

The BX Series are radio frequency transmitting devices.

When transmitting, keep the antenna more than 25 mm from any part of your head or body.

Do not transmit near electrical blasting equipment or in explosive atmospheres.

Do not allow children to operate a radio transmitter unsupervised.

FEATURES

- 5W/1W RF Power (BX710), 4W/1W RF Power (BX720/BX730)
- Available in VHF and UHF versions
- Up to 128 Dealer Programmable Channels
- Desktop Fast Charger
- Power Save Mode
- CTCSS
- DCS (Digitally Coded Squelch)
- Keypad Lock
- Backlit LCD Display
- Calling Tone
- Roger Beep
- Dual Watch
- Priority Channel
- Memory Scan
- Busy Channel Lockout
- VOX (Voice Operated Transmit)

ACCESSORIES SUPPLIED

- 1700 mAh Li-Ion Battery Pack
- Desktop Fast Charger
- AC Adaptor
- Instruction Manual
- Belt Clip
- Removable Flexible Antenna
- Speaker Microphone

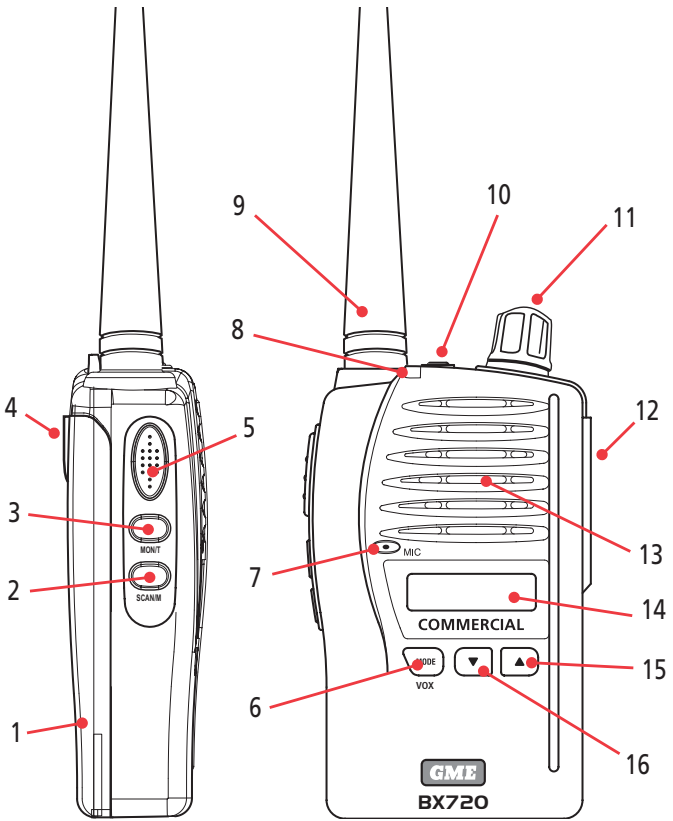If any items are missing or damaged please contact your retailer or place of purchase.

OPTIONAL ACCESSORIES

- 6 Way Charger
- Leather Case

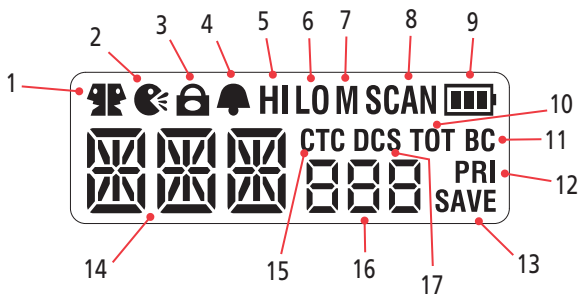## CONTENTS

1. Battery.
2. Scan.
3. Squelch/CTCSS Key.
4. Battery Release Clip.
5. Push-To-Talk (PTT) Switch.
6. Mode Key.
7. Microphone.
8. Indicator LED.

9. Antenna.
10. Priority Channel/Keylock Button.
11. Volume On/Off.
12. External Speaker/Mic.
13. Speaker.
14. LCD Display.
15. Channel Up.
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1. Dual Watch Icon: Appears when the Dual Watch mode is active

2. VOX (Voice Operated Transmitter) Icon: Appears when VOX mode is active

3. Keypad Lock Icon: Appears when the keypad is locked

4. Button Beep Icon: Appears when the button beep confirmation tones are active

5. High Power Icon: Appears when High transmitter power is selected

6. Low Power Icon: Appears when Low transmitter power is selected

7. Channel Memory Indicator: Appears when the selected channel is stored in the Scan Memory

8. Scan Indicator Icon: Appears when SCAN is enabled and the radio is scanning

9. Battery Level Icon: Indicates the battery charge level. Flashes when the battery is almost empty

10. Time Out Timer Indicator: Indicates the Time Out Timer is enabled

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12. Priority Channel Indicator: Appears when the Priority Channel mode is activated

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15. CTC (CTCSS) Icon: Indicates that CTCSS tones are enabled on the radio

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17. DCS (Digitally Coded Squelch): Indicates the Digitally Coded Squelch is enabled

INTRODUCTION

The BX Series handhelds are easy to use, full featured handheld commercial radios. Their rugged assembly comprises a single diecast frame housed in a polycarbonate alloy case. They are supplied with a 1700 mAh Li-Ion rechargeable battery pack powerful enough for a full days used under average conditions.

The BX Series handhelds are available in three versions;

• **BX710**: VHF handheld operating in the 146 – 174 MHz band

• **BX720**: UHF Handheld operating in the 450 – 490 MHz band

• **BX730**: UHF Handheld operating in the 476.4 – 520 MHz band

Programming

Your radio will probably have been programmed for you by your dealer. The frequencies and features in your radio may vary depending on your application. This manual describes the normal operation of your radio's features based on the default factory settings. Changes in programming may affect the way these features operate in your radio.

If you require any of these features to be changed please contact your commercial radio supplier.

Your BX Series handheld is supplied with a 1700 mAh 7.4 Volt Li-Ion rechargeable battery pack. When the battery pack is new it will need to be fully charged before use. Also, if you have not used your BX Series handheld for some time you will need to recharge the battery pack before use.

The battery pack is a sealed unit and contains no user-serviceable parts.

WARNING: Use only GME approved battery packs and chargers. The use of other types may be dangerous and may void the warranty.

FITTING THE BATTERY PACK

1. Locate the bottom of the battery pack into the two slots in the base of the radio frame.

2. Press the top of the battery pack into place against the radio until it 'clicks'.

REMOVING THE BATTERY PACK

1. Slide the battery retaining clip downward while pulling the top of the battery away from the radio.

2. Lift the battery pack upward to clear the slots at the bottom of the radio.

CHARGING THE BATTERY

Your BX Series handheld is supplied with an AC Adaptor and desktop fast charger. The charger will charge a fully discharged 1700 mAh battery pack to full capacity in around 1-2 hours.

1. Plug the charger into a standard 240 Volt AC Outlet.

2. Plug the lead from the charger into the charging cradle

3. Place the BX series handheld into the cradle. The Red LED will light to indicate the battery is charging.

When the battery is charged the LED will change to Green.

LOW BATTERY ALERT

When the battery drops to around 6.1 Volts the radio will beep, the battery icon on the display will flash and the TX/Busy LED will blink to indicate that the battery needs to be charged. You should recharge the battery pack as soon as possible. If you have been transmitting using the 'Hi' power setting you can extend the battery life a little further by switching to 'Lo' transmit power.

To Remove Battery Pack

Slide Downwards
Swing Away
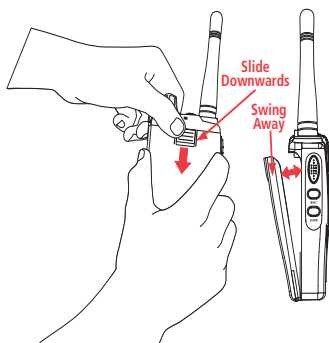
To Refit Battery Pack

Press   Press
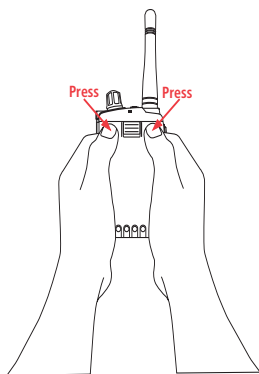
BATTERY USAGE

The time taken to discharge the battery pack will depend on how you use your BX Series handheld. The 1700 mAh battery pack is powerful enough for a full days use under average conditions.

CONSERVING BATTERY POWER

The BX Series handheld has built in power saving features to help you maximise the amount of time between charges from your Li-ion battery pack. If you need to operate your handheld in a situation where you require maximum battery life (e.g. a remote site where there is no convenient recharging facility nearby), the following hints can greatly reduce the amount of power drawn from the battery pack.

SLEEP MODE

The BX Series handheld will automatically enter the 'Sleep' mode after around 10 seconds of inactivity (i.e. no transmission or reception). While sleeping, it will still check for incoming signals but it will draw only about one fifth of the power from the battery. As soon as a signal is received or any keys are pressed, the radio will wake up again. This sleep function is automatic and by itself can greatly extend the battery life in standby mode by many hours.

SCANNING

The BX Series handheld draws more power from the battery when scanning than when monitoring a single channel. This is because it must wake more often to monitor each channel for activity. You can squeeze that extra bit of life from the battery by avoiding any unnecessary scanning. In addition, scanning several channels increases the chance of finding a signal thereby keeping the receiver awake and the squelch open.

LOW TRANSMIT POWER SETTING

The transmitter has both 'Hi' and 'Lo' power settings. If you are only operating over short distances, are in a reasonably high location or are close to a local repeater, try using the 'Lo' Transmit power setting. This reduces the transmitter power to 1 Watt.

GENERAL OPERATION

POWER ON/OFF

Rotate the volume control clockwise past the 'click' to turn the radio ON. Rotate the control fully counter clockwise past the 'click' to turn the radio OFF.

ADJUSTING THE VOLUME

While receiving a signal, rotate the volume control to achieve a comfortable listening level. If there are no signals present, press the **MON** key briefly (if available) to open the squelch, then adjust the volume while listening to the receiver's background noise. When finished, briefly press the **MON** key again to return the receiver to the quiet state.

Note: The minimum setting of the volume control has been factory preset so that, even with the volume turned right down, you can still safely listen to an incoming signal with your ear against the speaker (telephone style).

DISPLAY LIGHTING

Your BX Series handheld LCD features built-in backlighting. The backlighting is normally switched OFF to conserve battery power but will switch ON automatically when any key is pressed.

SELECTING CHANNELS

1. In the 'standby' mode press the ▲ key to step up one channel and the ▼ key step down one channel.

2. Press and hold the ▲ or ▼ keys to quickly scroll through the channels.

RECEIVING SIGNALS

NOTE: Your radio may be programmed with options that could affect the way your radio behaves when it receives a call. The description below is therefore general and should apply to most situations.

When the BX Series handheld is not receiving signals it will remain in the standby mode to conserve power. During this time the receiver is normally muted, the LED 'Busy' indicator on the upper edge of the radio is not lit and the 'Save' indicator flashes on the display.

When a signal is received, the 'Busy' indicator will light Green and the signal will be heard in the speaker. Adjust the volume control as desired for a comfortable listening level.

If the incoming signal is encoded with a CTCSS tone that matches the one set in your radio, the 'Busy' indicator will light Orange and the signal will be heard in the speaker. If the 'Busy' indicator lights Green but you cannot hear the signal (and the volume control is correctly adjusted) it is likely your radio has CTCSS enable but the incoming signal is not using your selected CTCSS tone (see **MODE** settings for CTCSS options). In this way the radio can ensure you are not disturbed by signals that were not meant for you. If you wish to temporarily listen to the encoded signal, press the **MON** (Squelch) key.

Once no further signals are received, the unit will return to standby mode.

TRANSMITTING

Important: Before transmitting, check to see if the channel is already in use (i.e. the 'Busy' indicator is lit). If the 'Busy' indicator is Green or Orange, the channel is busy. You should wait until the channel is clear before transmitting.

To transmit, press and hold the Push-To-Talk (**PTT**) switch. Hold the unit 5-8 cm from your mouth with the antenna vertical and speak into the built-in microphone. While the **PTT** is pressed the 'Busy' indicator will light Red.

When you have finished speaking, release the **PTT** switch to receive incoming signals again (you cannot transmit and receive at the same time). If no further signals are received the unit will return to standby mode.

Note: The other radio you are calling must be set to the same channel as yours.

Transmitting a 'Call Alarm' Melody

The **PTT** switch can be used to transmit a 'Call Alarm' to another radio on the same channel. The Alarm melody will be heard in the speaker of the other radio to alert them to your call. To use this feature the

'Call Alarm' option in your radio must be enabled through the **MODE** settings.

To send the 'Call Alarm' melody, press the **PTT** switch TWICE quickly. The 'Busy' indicator will light Red for several seconds and the Alarm melody will be heard in your speaker - and in the speaker of the radio you are calling.

TRANSMITTER RANGE

The signal range on the VHF/UHF frequency bands used by the BX series handhelds is generally considered to be 'line-of-sight'. Generally the range will vary according to your location and the height of your antenna. UHF and VHF signals are easily blocked by hills or large buildings so you will get less range in a valley or built-up city area than you will from a hill top or open country. If you are having trouble with reception, try moving to an open space or a higher location. If you can receive but are having difficulty transmitting back, try using the 'Hi' power setting on the transmitter to ensure maximum range is available.

SQUELCH (MON) KEY

The Squelch (**MON**) key serves a dual function that controls both the Squelch and CTCSS.

Squelch

To open the squelch briefly press the **MON** key. This will allow you to check the current channel for activity before transmitting, particularly if you have CTCSS enabled. When the squelch is open the 'Busy' indicator will light Green and you will hear static or hiss if the channel is clear. Do not transmit if you hear any conversations.

Briefly press the **MON** key again to close the squelch.

CTCSS/DCS

Note: For a description of the CTCSS and DCS features please refer to the **MODE Key** section later in this manual.

If you have one or more channels programmed with CTCSS or DCS codes, select one of these channels and press and hold the **MON** key to globally activate or deactivate CTCSS/DCS on the radio. When CTCSS/DCS is activated, 'CTC' or 'DCS' will appear on the display

along with the selected CTCSS/DCS code. When deactivated the CTCSS/DCS code will be displayed as '- - -'

Note: If your radio does not have any channels programmed with CTCSS/DCS codes or you have selected a channel that does not have a CTCSS/DCS code, this function will be ignored.

SCAN KEY

The **SCAN** key is a dual function key that controls both Scan and Memory functions.

Channel scanning allows you to monitor selected channels automatically for incoming signals. While the radio is scanning, the **MODE** key is disabled. Before scanning you must select the channels you wish to scan and store them in memory

To select channels for scanning

From the standby mode;

1. Press the ▲ or ▼ keys to select the required channel.

2. Press and hold the **SCAN** key until the radio beeps. 'M' will be displayed indicating the selected channel is now stored in the Scan memory.

3. Repeat to store further channels for scanning.

4. To remove a channel from the Scan memory, select a channel from the Scan memory (identified by 'M' on the display) then press and hold the **SCAN** key. 'M' will disappear from the display and the channel will be removed.

To scan the selected channels

Briefly press the **SCAN** key. 'SCAN' will be displayed and the radio will show rapidly changing channel numbers as it scans through the channels. While scanning, briefly press the ▲ or ▼ keys to select the scan direction.

To stop scanning press the **SCAN** key again. The radio will return to normal operation and 'SCAN' will disappear from the display.

NOTE: There must be at least TWO channels in the scan memory otherwise the radio will not scan.

Scanning Features

If a signal is received, the scan pauses allowing you to transmit and receive on that channel. The scan will resume a few seconds after the last activity.

Press the **PTT** switch while scanning to jump to the Home channel (the Home channel is the channel the radio was on at the time scanning was activated). You can then transmit and receive on that channel. The scan will automatically resume a few seconds after the last activity.

If the radio stops on a busy channel and you do not wish to listen, briefly press the ▲ or ▼ keys to 'skip' over the busy channel and continue scanning.

TIP: The scan mode will reduce the overall battery life because the standby (battery save) feature is overridden. You should avoid scanning if the battery is running low and you need to conserve power.

KEYPAD LOCK

The Keypad Lock feature disables the keys to prevent accidental key presses from changing your preferred settings. When the keys are locked the 🔒 icon is displayed and all key presses are ignored except for the **PTT** and Keypad Lock functions.

To activate the Keypad Lock

Press and hold the 🔒 key for a couple of seconds. The 🔒 icon will be displayed.

To cancel the keypad lock

Press and hold the 🔒 key again for a couple of seconds. The 🔒 icon will disappear.

MODE KEY

The Mode key is used to change the various feature settings of the BX Series handhelds. The following chart shows the order of these selections:

STANDBY MODE	
1	CTCSS Code Selection
2	DCS Code Selection
3	Transmitter Power
4	VOX Settings
5	Dual Watch Settings
6	Priority Channel Settings
7	Squelch Settings
8	Roger Beep Settings
9	Button Beep Settings
10	Call Alarm Melody Settings

1. 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 CTCSS tones 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 tone as you and are therefore not directed at you.

NOTE: To communicate with other radios using CTCSS, all radios you wish to communicate with must be on the same channel and have the same CTCSS code selected. If you wish to receive signals from others who are not using CTCSS you will need to either disable CTCSS or set the CTCSS code to '**oFF**' on that channel (as described below).

To select a CTCSS code

From the standby mode;

1. Select the required channel using the ▲ or ▼ keys.

2. Press the **MODE** key ONCE. 'CTC' will flash on the display.

3. Press the ▲ or ▼ keys to select the required CTCSS tone (a list of available tone codes is provided at the end of this manual). To turn CTCSS off on this channel set the CTCSS code to '**oFF**'.

4. Briefly press the **PTT** switch to store the setting.

To activate the CTCSS function on the radio

1. Select a channel that has a CTCSS code selected.

2. Press and hold the **MON** key. The 'CTC' icon will be displayed and the CTCSS code will appear. CTCSS is now activated on all channels that have CTCSS codes selected.

NOTE: CTCSS is only activated on those channels with CTCSS codes selected. All other channels will continue to operate normally.

To deactivate CTCSS on the radio

1. Select a channel that has a CTCSS code selected.

2. Press and hold the **MON** key. The 'CTC' icon will disappear and the CTCSS code will display as ' - - -' indicating CTCSS has been globally deactivated on the radio.

2. DCS (DIGITALLY CODED SQUELCH)

Digitally Coded Squelch (DCS) is also a squelch quieting system similar to CTCSS that allows user groups to share the same channel without disturbing each other. There are 104 DCS codes available.

To select DCS on the radio

From the standby mode;

1. Select the required channel using the ▲ or ▼ keys.

2. Press the **MODE** key TWICE. 'DCS' will flash.

3. Press the ▲ or ▼ keys to select the required DCS code (a list of available DCS codes is provided at the end of this manual). To turn DCS codes off on this channel set the code to '**oFF**'.

4. Briefly press the **PTT** switch to store the setting.

NOTE: You cannot have both DCS and CTCSS codes selected on the same channel. Selecting one automatically sets the other to '**oFF**'. However you can mix DCS and CTCSS codes across a number of channels.

To activate DCS on the radio

1. Select a channel that has a DSC code selected.

2. Press and hold the **MON** key. The 'DCS' icon will appear and the DCS code will be displayed. DCS is now activated on all channels that have DCS codes selected.

To deactivate DCS on the radio

1. Select a channel that has a DCS code selected.

2. Press and hold the **MON** key. The 'DCS' icon will disappear and the DCS code will display as ' - - -' indicating DCS has been deactivated on the radio.

NOTE: DCS is only activated on those channels with DCS codes selected. All other channels will continue to operate normally.

3. TRANSMITTER POWER

The transmitter power can be set to high (Hi) or Low (Lo) power. For the BX710, high power is 5 Watts. For the BX720/BX730 models, high power is 4 Watts. Low power is 1 Watt across all BX series models. Separate high or low power settings can be applied to individual channels.

To set the transmitter power

From the standby mode;

1. Select the required channel using the ▲ or ▼ keys.

2. Press the **MODE** key THREE times. 'PWR' is displayed and 'Hi' or 'Lo' will be flashing.

3. Press the ▲ or ▼ keys to select the required Power setting. Select 'Hi' for high power or 'Lo' for low power.

4. Briefly press the **PTT** switch to store the setting. The transmitter power setting is now applied to the selected channel.

The radio should now display the selected channel along with 'Hi' or 'Lo' to indicate the transmitter power you have set.

4. VOX

The VOX feature allows you to 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** switch.

To set the VOX sensitivity

From the standby mode;

1. Press the **MODE** key FOUR times. The ☕ icon will flash.

2. Press the ▲ or ▼ keys to select the VOX sensitivity from 1 (minimum) to 7 (maximum). The minimum setting requires a louder voice to activate the VOX. The maximum setting will activate the VOX with a much softer voice.

3. Briefly press the **PTT** switch to store the setting.

To enable VOX

1. Press and hold the **MODE** key for several seconds, ☕ will appear on the LCD.

To disable VOX

1. Press and hold the **MODE** key for several seconds, ☕ will disappear from the LCD.

5. DUAL WATCH SETTINGS

The Dual Watch mode lets you monitor two channels simultaneously. While in Dual Watch mode, the unit will monitor a 'selected' channel along with a second 'Dual Watch' channel.

To set the Dual Watch mode

From the standby mode;

1. Using the ▲ or ▼ keys, chose the 'selected' channel you wish to monitor. This must be a different channel to the Dual Watch channel.

2. Press the **MODE** key FIVE times. The 🔁 icon will flash on the display.

3. Press the ▲ or ▼ keys to select the Dual Watch channel. Note that channel you selected in step 1 is not displayed and therefore cannot be selected as the Dual Watch channel. To disable the Dual Watch mode altogether select '**oFF**'.

4. Briefly press the **PTT** switch to store the setting. While Dual Watch is enabled, 🔁 is displayed on the LCD and the display will alternate between the selected channel and the Dual Watch channel.

Note: The Dual Watch function requires that you have more than one channel programmed into your radio.

To Exit the Dual Watch mode

Briefly press the **SCAN** key. This is equivalent to setting the Dual Watch channel to '**oFF**'.

Dual Watch operation

Any signal received on the selected channel will be heard in the speaker, but the radio will continue to switch to the Dual Watch channel at regular intervals to listen for signals resulting in short breaks in the conversation on the selected channel.

If a signal is received on the Dual Watch channel, the radio will pause on that channel to allow the signal to be heard but will regularly switch back to the selected channel to listen for signals resulting in short breaks in the conversation on the Dual Watch channel.

Once the channel has become clear for a few seconds the Dual Watch function will resume normally.

If you wish to talk when either channel is busy, press the **PTT** switch while the radio is paused on the busy channel and talk in the usual way. The Dual Watch will resume a few seconds after the last activity on that channel. To resume the Dual Watch manually, briefly press the ▲ or ▼ keys.

6. PRIORITY CHANNEL SCAN

The Priority Channel scan is similar the Dual Watch function except for some minor operational differences. It is also much easier to activate as it has a dedicated key. While in Priority Channel mode, the unit will monitor a preselected 'Priority' channel along with a second 'selected' channel.

To set the Priority Channel

From the standby mode;

1. Using the ▲ or ▼ keys , choose the 'selected' channel you wish to monitor. This must be a different channel to the Priority channel.

2. Press the **MODE** key SIX times. 'PRI' is displayed and the 'PRI' icon will flash on the display along with a channel number.

3. Press the ▲ or ▼ keys to select the Priority Channel. Note that channel you selected in step 1 is not displayed and therefore cannot be selected as the Priority channel.

4. Briefly press the **PTT** switch to store the setting.

To activate the Priority Channel Scan

Briefly press the 🔒/P key on the top of the radio. 'PRI' will appear and the 'selected' channel will be displayed. After a few seconds the unit will switch to the Priority Channel then return to the 'selected' channel to continue the cycle.

To Exit the Priority Channel Scan

Briefly press the 🔒/P key on the top of the radio. The 'PRI' icon will disappear

Priority Channel Scan Operation

When the Priority Channel Scan is active, the radio will monitor the 'selected' channel but will switch to the Priority channel every few seconds to listen for signals. If no signals are present it will immediately return to the 'selected' channel and the cycle will be repeated.

During this time, signals received on the 'selected' channel can be heard in the usual way but the radio will continue to switch to the Priority channel every few seconds, resulting in short breaks in the reception on the 'selected' channel. To talk on the 'selected' channel during this time, press the **PTT** switch. The Priority Scan will pause to allow you to converse on the 'selected' channel. The Priority scan will resume a few seconds after the last activity on that channel.

If a signal is received on the Priority channel, the radio will pause on that channel to allow the signal to be heard but will continue to switch back to the 'selected' channel every few seconds, resulting in short breaks in the reception on the Priority channel. To talk on the Priority channel during this time, press the **PTT** switch. The radio will remain on the Priority channel to allow you to continue your conversation but will return to the 'selected' channel a few seconds after the last activity on that channel.

7. SQUELCH SETTINGS

The Squelch mode lets you adjust the squelch sensitivity. The higher the squelch level is set the stronger the signal needs to be, to be heard in the speaker.

To set the squelch

From the standby mode;

1. Press the **MODE** key SEVEN times. 'SQL' is displayed.

2. Press the ▲ or ▼ keys to set the squelch sensitivity. A setting of 001 will allow the squelch to open to the weakest signals while a setting of 005 requires much stronger signals to open the squelch. Select 'At' to enable an automatic (preset) level setting. To disable the squelch altogether select '**oFF**'.

3. Briefly press the **PTT** switch to store the setting.

8. ROGER BEEP SETTINGS

The 'Roger Beep' setting causes a short tone to be automatically transmitted whenever the **PTT** switch is released. This tone alerts the receiving party that your transmission has ended.

To enable or disable the Roger Beep

From the standby mode;

1. Press the **MODE** key EIGHT times. 'RB' is displayed.

2. Press the ▲ or ▼ keys to set the tone to '**on**' or '**oFF**'

3. Briefly press the **PTT** switch to store the setting.

Note: There is no display icon to indicate the status of the Roger Beep feature.

9. BUTTON BEEP SETTINGS

The Button Beep tone provides a confirmation tone whenever you press the keys on the radio.

To turn the Beep Tones on or off

From the standby mode;

1. Press the **MODE** key NINE times. BP is displayed along with a flashing 🔔 icon.

2. Press the ▲ or ▼ keys to set the Beep Tone to 'on' or 'oFF'

3. Briefly press the **PTT** switch to store the setting.

When the Beep Tones are on the 🔔 icon is visible on the display

10. CALL ALARM MELODY SETTINGS

The BX Series handhelds have 5 user selectable Call Alarm melodies to alert other users to your incoming call. When enabled, the melody can be transmitted to another user where it will be heard in the speaker of the receiving radio.

To choose a Call Melody:

From the standby mode;

1. Press the **MODE** key TEN times. 'C' will be displayed.

2. Press the ▲ or ▼ keys to set the required Call Alarm melody. To turn the Call Alarm melody off select '**oFF**'.

3. Briefly press the **PTT** switch to store the setting.

To send the Call Alarm melody, press the **PTT** twice quickly. The 'Busy' indicator will light Red for several seconds as the melody is sent.

SPECIFICATIONS

ELECTRICAL

General

Compliance:	AS/NZS 4295
Frequency Range:	BX710 : 146-174 MHz
	BX720 : 450-490 MHz
	BX730 : 476.4-520 MHz
Channel Spacing:	25 kHz/12.5 kHz
Operation Mode:	Simplex or half duplex
Scanning Speed:	40 ms per channel (25 channels per second) PC program setting.
Antenna Impedance:	50 Ohms nominal
Battery Voltage:	7.4 Volts DC nominal
Operating Voltage Range:	6 – 9 V DC
Reverse Voltage Protection:	Shunt Diode

Transmitter

BX710 RF Output:	High- 5 Watts Max. Low- 1 Watt.
BX720/730 RF Output:	High- 4 Watts Max. Low- 1 Watt.
Spurious Emissions:	< -26 dBm
Frequency Stability:	25 kHz: ± 3 kHz 12.5 kHz: ±1.5 kHz.
Modulation:	FM
Maximum Deviation:	25 kHz < ±5 kHz 12.5 kHz < ±2.5 kHz
Transmit Frequency Response:	+ 6 dB per octave 300 Hz to 3 kHz, +1, -3 dB.
Current Consumption (Max.):	1.7 Amps @ 4 Watts 0.7 Amps @ 0.75 Watts

Receiver

Intermediate Frequencies:	1st: 45.3 MHz 2nd: 455 kHz.
Sensitivity:	-119 dBm for 12 dB SINAD
Adjacent Channel Selectivity:	25 kHz > 63 dB 12.5 kHz > 60 dB
Intermodulation:	25 kHz > 60 dB 12.5 kHz > 60 dB.
Blocking:	25 kHz > 80 dB 12.5 kHz > 80 dB.
Spurious Rejection:	25 kHz > 60 dB 12.5 kHz > 60 dB.
Audio Output Power:	0.6 Watts @ < 10% distortion
Receiver Frequency Response:	- 6 dB per octave de-emphasis
Current Consumption:	25 mA: Sleep Mode 65 mA: Muted 250 mA: Full volume

MECHANICAL SPECIFICATIONS

Dimensions:	62 (W) x 98 (H) x 30 (D) mm Measured without antenna.

ENVIRONMENTAL

Operating Temperature:	-10°C to 60°C

*Specifications are typical unless otherwise indicated and may be subject to change without notice or obligation.

CTCSS TONE FREQUENCIES			
CTCSS	Frequency Hz	CTCSS	Frequency 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

DCS TONE FREQUENCIES							
CH	CODE	CH	CODE	CH	CODE	CH	CODE
1	023	33	174	65	411	97	703
2	025	34	205	66	412	98	712
3	026	35	212	67	413	99	723
4	031	36	223	68	423	100	731
5	032	37	225	69	431	101	732
6	036	38	226	70	432	102	734
7	043	39	243	71	445	103	743
8	047	40	244	72	446	104	754
9	051	41	245	73	452		
10	053	42	246	74	454		
11	054	43	251	75	455		
12	065	44	252	76	462		
13	071	45	255	77	464		
14	072	46	261	78	465		
15	073	47	263	79	466		
16	074	48	265	80	503		
17	114	49	266	81	506		
18	115	50	271	82	516		
19	116	51	274	83	523		
20	122	52	306	84	526		
21	125	53	311	85	532		
22	131	54	315	86	546		
23	132	55	325	87	565		
24	134	56	331	88	606		
25	143	57	332	89	612		
26	145	58	343	90	624		
27	152	59	346	91	627		
28	155	60	351	92	631		
29	156	61	356	93	632		
30	162	62	364	94	654		
31	165	63	365	95	662		
32	172	64	371	96	664		

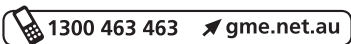# STANDARD COMMUNICATIONS CONTRACT WARRANTY

1. STATUTORY WARRANTIES

1.1 The Trade Practices Act Part V, Division 2A and other legislation imply conditions, warranties and other obligations on us to consumers that cannot be excluded, restricted or modified. Those provisions apply to the extent required by law.

1.2 We exclude all other conditions, warranties and obligations which would otherwise be implied concerning the activities covered by this agreement.

1.3 We limit our liability where we are allowed to do so. Examples of where we are allowed to limit liability are -
   (a) you acquire goods from us for re-supply;
   (b) the goods or services we supply are not of a kind ordinarily acquired for personal, domestic or household use or consumption.

1.4 Where we are allowed to limit our liability, to the extent permitted by law, our sole liability for breach of a condition, warranty or other obligation implied by law is limited -
   (a) in the case of goods we supply, to any one of the following as we decide -
       (i) the replacement of the goods or the supply of equivalent goods;
       (ii) the repair of the goods;
       (iii) the payment of the cost of repairing the goods or of acquiring equivalent goods;
       (iv) the payment of the cost of having the goods repaired; or
   (b) in the case of services we supply, to any one of the following as we decide -
       (i) the supplying of the services again;
       (ii) the payment of the cost of having the services supplied again.

2. ADDITIONAL WARRANTIES

2.1 The warranties in this clause are in addition to the statutory warranties referred to in the previous clause.

2.2 We warrant our goods to be free from defects in materials and workmanship for one year from the date of original sale (or another period we agree to in writing). During this period and as our sole liability to you under this warranty, we agree to, at our option, either repair or replace goods which we are satisfied are defective. We warrant replacement parts for the remainder of the period of warranty for the goods into which they are incorporated.

2.3 We warrant our other repairs to be free from defects in materials and workmanship for three months from the date of the original repair. During this period and as our sole liability to you for the repair, we agree to repair or replace (at our option) repaired goods which we are satisfied are defective.

2.4 We warrant that we will perform services with reasonable care and skill and agree to investigate any complaint made in good faith that we have performed services unsatisfactorily. If we are satisfied that the complaint is justified, and as our sole liability to you under this warranty, we agree to supply those services again at no extra charge to you.

2.5 If you want warranty service under this clause you must give us an original or copy of the sales invoice from the transaction or some other evidence showing details of the transaction.

3. OTHER LIMITATIONS

3.1 You may not rely on any representation, warranty or other provision by or for us which is not covered by clause [1] or repeated in this agreement in clear terms.

3.2 We are not liable (nor are our employees, contractors and agents) for any damage, economic loss or loss of profits whether direct, indirect, general, special or consequential -

    (a) arising out of any breach of any implied or express term, condition or warranty; or

    (b) suffered as a result of our negligence (or that of our employees, contractors or agents) apart from liability as set out in the previous two clauses.

3.3 The liability of a party under this agreement (whether arising in contract, tort or by statute) is to be reduced by the same proportion as represents the proportion of the loss or damage caused or contributed to by the other party, its contractors or agents.