

UNICOM

CB-320

TWO-WAY CB RADIO

3WATT

INSTRUCTION MANUAL



6KM*

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SAFETY INFORMATION

The CB-320 is a radio transmitting device.

- When transmitting, keep the antenna more than 25 mm 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.

IMPORTANT INFORMATION CONCERNING UHF CB RADIO

The use of the Citizen Band radio service is licensed in Australia by the ACMA Radio communications (Citizens Band radio Stations) Class Licence and in New Zealand by the Ministry of Economic Development New Zealand (MED). A General User Radio Licence for Citizens Band radio and operation is subject to conditions contained in those licences.

The class licence for users and equipment operating in the CB/PRS 477 MHz band has been amended. This radio meets the new 80 channel standard.

In simple terms the same amount of spectrum is available; however, radio transceivers can now operate in a narrower bandwidth and hence use less spectrum. These radios are generally referred to as narrowband or 12.5 kHz radios. By using 12.5 kHz channel spacing instead of 25 kHz, the 40 channels originally allocated can now be expanded to 80 channels thereby doubling the channel capacity and relieving congestion in the UHF CB/PRS band.

Original 40 channel wideband radios will continue to operate on the original 40 channels, however they will not be able to converse on the newer channels 41 – 80. The newer narrowband radios will be able to converse with all older 40 channel wideband radios on all channels 1 – 40 as well as the newer channels allocated from 41 – 80.

The mixing of narrowband and wideband radios in the same spectrum can cause some possible operating issues of interference and varying levels of received volume.

POSSIBLE ISSUES

When a new narrowband radio receives a transmission from an older wideband radio the speech may sound loud and distorted – simply adjust your radio volume for best performance.

When an older wideband radio receives a signal from a new narrowband radio, the speech may sound quiet – simply adjust your radio volume for best performance.

Depending on how close your receiving radio is to another transmitting radio, there can be interference from the transmitting radio if it is using a channel adjacent to the channel you are listening to. Simply try going up or down a few channels from the currently selected channel.

The above situations are not a fault of the radio but a symptom of operating wide-band and narrowband radios in the same bandwidth. This possible interference will decrease over time as the population of wideband radios ages and decreases.

Further information and updates are available from the Australian Communications and Media Authority (ACMA) at www.acma.gov.au and the Ministry of Economic Development (MED), Radio Spectrum Management at: www.rsm.govt.nz

EMERGENCY CHANNELS

The ACMA has allocated channels 5/35 for emergency use only. Channel 5 is the primary Simplex Emergency Channel. Where a channel 5 repeater is available, you should select Duplex on channel 5.

NOTE: Channel 35 is the input channel for the channel 5 repeater therefore channel 35 should also not be used for anything other than emergency transmissions.

TELEMETRY CHANNELS

ACMA regulations have allocated channels 22 and 23 for telemetry-only applications and have prohibited the transmission of speech on these channels. Consequently the radio has a transmit-inhibit applied to channels 22 and 23.

In the event that additional telemetry/telecommand channels are approved by the ACMA, these channels shall be added to those currently listed where voice transmission is inhibited. Currently, transmissions on channels 61, 62 and 63 are also inhibited and these channels are reserved for future allocation.

IMPORTANT ADVICE

READ ALL INSTRUCTIONS carefully and completely before operating your radio and retain this manual for future reference.

- **NEVER** connect the radio to a power source other than the supplied battery. This may damage your radio.

- **DO NOT** place your radio in front of a vehicle airbag.
- **DO NOT** use your radio with a damaged antenna.
- **DO NOT** attempt to modify your radio in any way.
- **ALWAYS** charge your radio at normal room temperature.
- **ALWAYS** switch off your radio where notices restrict the use of two-way radio or mobile telephones.
- **ONLY** use Unicom approved rechargeable battery packs with the supplied charger.
- **AVOID** storing or charging your radio in direct sunlight.
- **AVOID** storing or using your radio where temperatures are below -20°C or above +60°C.

SUPPLIED WITH

- CB-320 radio
- Belt clip
- Li-ion battery pack (1300 mAh)
- AC adaptor
- Desktop Charger
- Ear piece
- Instruction Manual
- Hang Strap

OPTIONAL ACCESSORIES

- USB 12V/24V vehicle charger (AC001)
- Waterproof carry case (AC003)
- Speaker microphone (AC007)
- Clear acoustic tube and lapel microphone (AC002)

FEATURES

TRANSMIT (TX)

3.0/1.0 watt RF power: Selectable transmitter power allows you to conserve battery power when transmitting in close range by using the Low Power setting.

Duplex function: Only those individual channels in your area that have repeaters.

VOX SETTINGS: The VOX feature allows you to have hands-free conversations.

RECEIVE (RX)

80 channels 477 MHz UHF CB (Refer to Page 3. Important information concerning UHF CB radio.)

Power Save feature: Conserves battery power by sleeping during periods of inactivity.

Signal receive indicator

Programmable scan function: Scans up to 80 UHF CB channels.

SQUELCH: Used to eliminate the background noise when there are no signals present.

PRIVACY FUNCTIONS

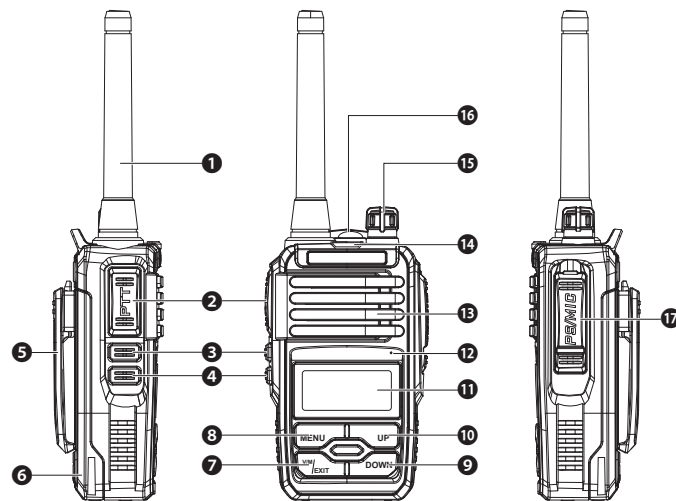
CTCSS & DCS: A built-in Continuous Tone Coded Squelch System and a Digital Coded Squelch option provide quiet channel operation.

USER CONTROLS AND INTERFACE

Keypad Lock: Prevents accidental button presses.

Backlit LCD: For night viewing.

CONTROLS



❶ Antenna

❷ PTT (Push to Talk)

❸ F1 (LED/SCAN)

❹ F2 (Radio/Emergency)

❺ Belt Clip

❻ Battery Pack

❷ Menu/Confirm

❸ Exit/Cancel/Lock

❹ Down

❺ Up

❻ LCD Display

❼ MIC

❸ Speaker

❹ Indicator LED

❺ Power/Volume

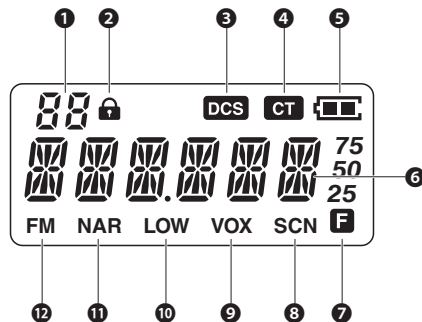
❻ LED Flashlight

❼ Accessory Jack

F1: Short press to turn the LED ON/OFF. Long Press (1s) to turn Scanning ON/OFF.

F2: Short press to turn FM radio ON/OFF. Long Press (1s) to activate Emergency Alarm. Alarm sound will stay ON and transmit through CH5. Turn the power OFF to stop this.

LCD ICONS



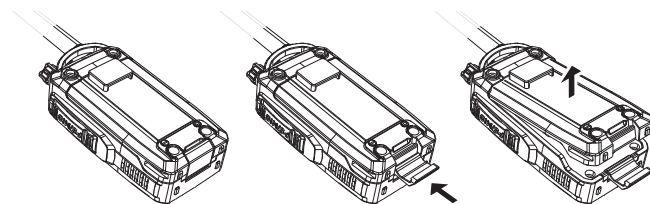
- 1 Channel Number/Menu Option:** Displays the selected channel in use or the selected menu option.
- 2 Key Lock Icon:** Appears when the keypad is locked.
- 3 DCS:** Appears when the selected channel has DCS code enabled.
- 4 CTCSS:** Appears when the selected channel has CTCSS code enabled.
- 5 Battery Icon:** Displays battery charge level.
- 6 Channel Display/Menu Option:** Displays the selected channel in use or the selected menu option.
- 7 F:** Appears on channels where Duplex is enabled.
- 8 SCN:** Appears on channels where Scan is enabled.
- 9 VOX:** Appears when VOX mode is active.
- 10 LOW:** Appears when Low TX power (1W) is selected. Otherwise, High TX (3W) power.
- 11 NAR:** Unit is running on narrow band.
- 12 FM:** Appears when in FM radio mode.

CHARGING THE BATTERY

The CB-320 is powered by a 3.7V Li-ion battery pack. The battery pack should be fully charged before being used for the first time or if you have not used the radio for some time. This will ensure maximum capacity is available.

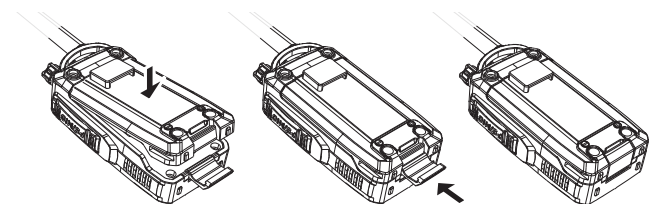
TO REMOVE THE BATTERY PACK

1. Ensure that your radio is switched off.
2. Hold the radio horizontally upside-down.
3. Using your fingernail, open the battery lock towards the rear of the radio to release the battery, then pull the battery up. The battery pack should separate from the radio.



TO REFIT THE BATTERY PACK

1. Ensure that your radio is switched off.
2. Align the slots in the battery pack with the battery guides on the back of the radio.
3. Slide the battery pack inwards as far as it will go, push down the back of the battery pack then lock it.



CHARGING THE CB-320 SINGLE UNIT

The CB-320 is supplied with a 240V Ac adaptor. The Ac adaptor will charge a fully discharged 1300mAh battery pack to full capacity in around 4 hours.

To charge the radio

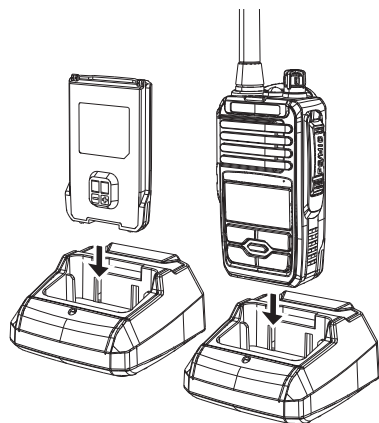
1. Plug the Ac adaptor into a 240V Ac outlet
2. Plug the micro USB connector into the charging socket on the back of the desktop charger.
3. Put the CB-320 into the desktop charger as picture below.

NOTE: Ensure that your radio is switched off.

The radio will begin charging. During this time the desktop charger's LED will light RED. Once the battery is fully charged, the indicator LED will change to GREEN.

CHARGING THE BATTERY PACK

NOTE: While the battery is charging, the indicator LED on the desktop charger will light red. Once the battery is fully charged, the desktop charger's indicator LED will change to Green.



BATTERY USAGE

The time taken to discharge the battery pack will depend on how you use the radio. The battery pack supplied is powerful enough for up to 20 hours of use under average conditions using low power.

BATTERY LOW ALERT

When the battery icon blinks on the radio's display, the battery level is low and the battery pack should be recharged.

CONSERVING BATTERY POWER

The radio has built-in power saving features to help you get the maximum amount of time between charges from your li-ion battery pack. If you need to operate your radio 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.

STANDBY MODE

The radio will automatically enter the 'standby' mode when it is inactive (i.e. not transmitting or receiving signals).

While in standby mode it will still check for incoming signals but it will draw considerably less power from the battery pack. As soon as a signal is heard or the keys are pressed the radio will 'wake up' again. This standby mode is automatic and by itself can extend the battery life by many hours.

USING CTCSS/DCS

If you are expecting to receive signals on a busy channel, you can program that channel for CTCSS/DCS operation and get the other person to call you using the same CTCSS/DCS tone. Your radio will then remain in standby and ignore all other signals until your selected CTCSS/DCS tone is received.

SCANNING

The radio draws more power from the battery pack when scanning than when monitoring a single channel. This is because it must 'wake up' more often to monitor each channel for activity. In addition, scanning increases the chance of finding a signal thereby keeping the receiver 'awake' and the squelch open more often.

LOW TRANSMIT POWER SETTINGS

The transmitter has both high and low 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 low transmitter power setting. This reduces the transmitter power to 1 watt which increases the talk time available.

BASIC OPERATION

POWER ON/OFF

Rotate the Volume control clockwise past the 'click' to turn the radio on. Rotate the Volume control counter-clockwise past the click to turn the radio off again.

ADJUSTING THE VOLUME

With the unit powered on, rotate the Volume control clockwise to increase the volume and counter-clockwise to decrease the volume.

DISPLAY LIGHTING

The LCD backlighting activates automatically whenever one of the four keys on the front face panel is pressed and turns off automatically after 10 seconds.

RECEIVING SIGNALS

When a signal is received, the LED indicator on the upper center of the radio will light BLUE. Adjust the Volume control for a comfortable listening level.

If the incoming signal is encoded with a CTCSS or DCS tone matching the one set in your radio, you will be able to hear the signal in the speaker. If the LED indicator lights BLUE but you cannot hear the signal, it is likely that the incoming signal is using a different CTCSS or DCS tone to that selected in your radio (see menu options for more details on setting CTCSS/DCS tones).

NOTE: If the selected channel in your radio is not using a CTCSS/DCS tone but the incoming signal is encoded with a CTCSS/DCS tone, your radio will still be able to listen.

If no further signals are received, the unit will return to standby mode after a few seconds.

TRANSMITTING

To transmit, press and hold the **PTT (Push-to-talk)** switch. The other radio you are talking to must be set to the same channel. Hold the radio approximately 5 – 8 cm from your mouth with the antenna vertical and speak into the built-in microphone.

While the **PTT** switch is pressed, the LED indicator on the upper center of the radio will light RED. When you have finished speaking, release the **PTT** switch to receive incoming signals (it is not possible to transmit and receive at the same time). If no further signals are received, the unit will revert to standby mode.


SELECTING CHANNELS

In the 'standby' mode, press the **UP** key to step up one channel or the **DOWN** key to step down one channel. Press and hold the **UP** or **DOWN** keys to quickly scroll through the channels.

SQUELCH

The Squelch is used to eliminate the background noise when there are no signals present. The Squelch sensitivity (5) is preset in the Menu – SQL (see Menu options for more details on setting the Squelch sensitivity).

KEYPAD LOCK

The Keypad Lock disables the keys to prevent accidental key presses from changing the preferred settings of the radio. When the keys are locked, the icon  is displayed and the 4 front keys will be locked. The **PTT** and the 2 side keys remain unlocked.

To lock the Keypad press and hold the **EXIT** key. The icon  will appear on the display.

To cancel the Keypad Lock, press and hold the **EXIT** key. The icon  will disappear.

DUPLEX OPERATION

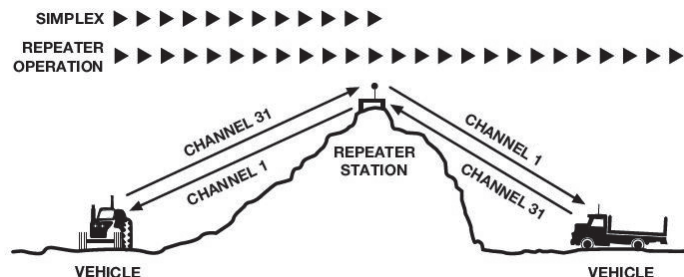
Duplex operation allows the radio to transmit on a different frequency to that which it receives. This allows operation through repeater stations in your area. Repeaters automatically re-transmit your signal over a much wider area, providing greatly increased range. The Duplex mode only works on designated repeater channels 1 – 8 and 41 – 48. With Duplex selected on one of these channels, your radio actually transmits 30 channels higher than it receives.

e.g. If Duplex is selected on channel 1, your radio will receive on channel 1 but will transmit on channel 31.

Duplex can be enabled or disabled on individual channels. When Duplex is enabled on the selected channel, **F** is displayed.

The Duplex mode is set through the Menu. Please refer to the Menu options further below.

Simplex/Duplex Range Comparison



SCANNING

Channel scanning allows you to monitor all channels for incoming signals.

NOTE: While the radio is scanning, by pressing the **MENU/EXIT** key will stop the scanning or pressing the **UP/DOWN** key will change the scan direction.

TO ADD OR REMOVE SCAN CHANNELS

NOTE: By default, all channels are in the scan memory.

1. Press the **UP** or **DOWN** keys to select the desired channel. Channels with the icon SCN visible are already in the scan memory while those that do not display the icon are not presently stored in the scan memory.
2. When the desired channel is displayed, press **MENU**, go to option "**SC.ADD**", press **MENU** again and select **ADD** to add the selected channel to the scan memory or **DEL** to remove it from the scan memory.

TO SCAN

Press and hold the **F2** key for 2 seconds, then channel numbers will change as the radio scans through the channels. To change the scan direction while scanning, briefly press **UP** or **DOWN**.

To stop scanning, briefly press **EXIT** then the radio will return to normal operation.

SCANNING FEATURES

- If a signal is received, the scan is paused allowing you to transmit and receive on that channel. Once the channel has been inactive for 5 seconds the scan will automatically resume.
- Pressing the **PTT** switch while the radio is scanning will stop the scanning and start to transmit on that channel. The scan will not resume.
- If the scan is paused on a busy channel that you don't wish to listen to, press the **UP** or **DOWN** keys to 'skip' over the channel and continue scanning after 5 seconds.

TIP: The Scan mode will reduce the overall battery life because the Standby (battery saver) feature is overridden. If the battery is running low you should avoid scanning to conserve power.

CTCSS AND DCS


CTCSS (Continuous Tone Coded Squelch System) and DCS (Digital Coded Squelch) are similar Squelch quieting systems that allow groups of users to share the same channel without disturbing each other. The CTCSS system uses 1 of 50 low frequency tones to open and close the Squelch on the radio. The DCS system is similar to CTCSS but uses 1 of 104 digital codes to control the Squelch. When CTCSS or DCS is enabled on your radio, only signals that are using the same code as your radio will be heard in the speaker and the Squelch will remain closed to all other signals.

NOTE: CTCSS and DCS codes do not prevent others from hearing your transmission.

CTCSS/DCS tones are switched off by default. To use CTCSS/DCS you must first enable a suitable CTCSS/DCS code using the Menu (see Menu options for more details). Your choice of CTCSS or DCS will largely depend on which is currently being used by other radios in your group. If neither system is currently in use, you can make your own choice. There is no difference in performance between the two systems. Once a CTCSS or DCS code has been enabled, the display will show **CT** (for CTCSS) or **DCS** (for DCS).

MENU

The menu key is used to set the various feature settings. The following chart shows the order of these selections.

#	Description	Symbol	Options
00	FM Radio (87–108Mhz) UP/DOWN to change	FM	ON/OFF
01	Button Beep selection		ON/OFF
02	Squelch level setting		0 - 9
03	Transmitter Power (default HIGH, no symbol)	LOW	HIGH/LOW
04	VOX settings	VOX	ON/OFF
05	Power on message		MSG/DC/OFF
06	Receiver CTCSS/DCS	CT/DCS	OFF/01 – 50/ 001 - 208
07	Transmitter CTCSS/DCS	CT/DCS	OFF/01 – 50/ 001 - 208
08	Keypad Lock		MANU/5 – 30
09	To add or remove scan channels	SCN	ADD/DEL
10	To start the scanning		
11	Duplex (channels 1 – 8 and 41 – 48 only)	F	ON/OFF

NOTE: CTCSS/DCS and transmit power settings are inhibited on channels 5/35 (emergency channel).

USING THE MENU

To access the Menu, press the **MENU** key then the menu options will appear in the order listed above. Press **MENU** again to enter the selected option then **UP/DOWN** to change it. Press **MENU** to confirm the change or **EXIT** to go back.

FM RADIO

To listen the FM broadcast radio range from 87Mhz – 108Mhz. While in the FM radio mode, press **UP/DOWN** to change the radio frequency.

To go to FM Radio Mode

1. Press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'RADIO' is displayed (Option #00).
3. Press **MENU** to enter the selected option and **UP/DOWN** to change the frequency.

BUTTON BEEP

The Button Beep allows the radio to sound a confirmation beep whenever the keys are pressed.

To Turn the Button Beep ON or OFF

1. Press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'BEEP' is displayed (Option #01).
3. Press **MENU** to enter the selected option and **UP/DOWN** to select 'ON' or 'OFF'.
4. Press **MENU** to confirm the change and store your selection.
5. Press **EXIT** to go back to standby.

SQUELCH LEVEL SETTING

The squelch is designed to keep the radio quiet when there are no signals present. The squelch setting adjusts the sensitivity of the squelch to incoming signals. Higher squelch settings require stronger signals to overcome the squelch and be heard in the speaker while lower settings allow much weaker signals to be heard.

To set the Squelch

1. Press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'SQL' is displayed (Option #02).
3. Press **MENU** to enter the selected option and **UP/DOWN** to adjust the Squelch level from 0 (most sensitive) to 9 (least sensitive). (We recommend level 5).
4. Press **MENU** to confirm the change and store your selection.
5. Press **EXIT** to go back to standby.

TRANSMITTER POWER

The transmitter power can be set to High (default, no symbol on LCD) or low (LCD displays **LOW**). The power setting applies to the selected channel.

1. Press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'POWER' is displayed (Option #03).
3. Press **MENU** to enter the selected option and **UP/DOWN** to change the setting.
4. Press **MENU** to confirm the change and store your selection.
5. Press **EXIT** to go back to standby.

VOX SETTINGS

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.

To enable VOX operation

1. Press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'VOX.SWI' is displayed (Option #04).
3. Press **MENU** to enter the selected option and **UP/DOWN** to select 'ON' or 'OFF'.
4. Press **MENU** to confirm the change and store your selection.
5. Press **EXIT** to go back to standby.

When VOX is enabled, the icon VOX is visible on the display.

NOTE: Using the radio in a noisy environment with the VOX set to ON could cause the radio to transmit unexpectedly. If this happens simply turn the VOX OFF.

POWER ON MESSAGE

You have the options to select what to display when power on. A welcome message, Voltage or keep it blank.

To change the power on message

1. Press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'POW.MSG' is displayed (Option #05).
3. Press **MENU** to enter the selected option and **UP/DOWN** to change the setting.
4. Press **MENU** to confirm the change and store your selection.

RECEIVER (TRANSMITTER) CTCSS/DCS CODES


The radio is fitted with both CTCSS and DCS systems. There are 50 CTCSS tones and 208 DCS codes. The DCS codes and the CTCSS tones are accessed through the same menu (see table below). When CTCSS tones are being selected 'CT' is displayed. To access DCS codes press EXIT to skip the CTCSS tone until 'DCS' is displayed.


NOTE: The other parties need to have the same CTCSS/DCS code as yours in order for you to receive their transmission.

To select a CTCSS or DCS code for receiver (same procedure as for transmitter)

1. Press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'R-CTDC' (receiver code, option #06) or 'T-CTDC' (transmitter code, option #07) is displayed.
3. Press **MENU** to enter the selected option then press **EXIT** to select from OFF, CTCSS ('CT' is displayed) or DCS ('DCS' is displayed) codes.
4. Press **UP/DOWN** to change the codes.
5. Press **MENU** to confirm the change and store your selection.
6. Press **EXIT** to go back to standby.

KEYPAD LOCK

The Keypad Lock disables the keys to prevent accidental key presses from changing the preferred settings of the radio. When the keys are locked, the icon  is displayed and the 4 front keys will be locked. The **PTT** and the 2 side keys remain unlocked.

To manually lock the Keypad press and hold the **EXIT** key. The icon  will appear on the display.

To unlock the keypad, press and hold the **EXIT** key. The icon  will disappear.

Or follow the steps below to set a time interval for the radio to lock the keypad automatically.

To Set the Auto Keypad Lock

1. Press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'LOC.KEY' is displayed (Option #08).
3. Press **MENU** to enter the selected option and **UP/DOWN** to adjust the settings.
 - a. MANU: lock the keypad manually.

b. AT 5/10/20/30: Automatically lock the keypad after 5/10/20/30 seconds.

4. Press **MENU** to confirm the change and store your selection.

5. Press **EXIT** to go back to standby.

TO ADD OR REMOVE SCAN CHANNELS AND TO START SCANNING

Menu option #09 and #10. Please refer to Page 13 for detailed instructions.

DUPLEX MODE SELECTION

Duplex mode only works on channel 1 – 8 or 41 – 48. When duplex is enabled on a repeater channel, the **F** icon will be displayed on that channel.

To enable Duplex on the selected repeater channel

1. When you are on channel 1 – 8 or 41 – 48, press the **MENU** key to enter the menu option.
2. Press **UP/DOWN** repeatedly until 'DUPLEX' is displayed (Option #11).
3. Press **MENU** to enter the selected option and **UP/DOWN** to select "ON" or "OFF".
4. Press **MENU** to confirm the change and store your selection.
5. Press **EXIT** to go back to standby.

CTCSS TONE FREQUENCIES

NO.	FREQUENCY	NO.	FREQUENCY	NO.	FREQUENCY	NO.	FREQUENCY
1	67.0	14	107.2	27	167.9	40	159.8
2	71.9	15	110.9	28	173.8	41	165.5
3	74.4	16	114.8	29	179.9	42	171.3
4	77.0	17	118.8	30	186.2	43	177.3
5	79.7	18	123.0	31	192.8	44	183.5
6	82.5	19	127.3	32	203.5	45	189.9
7	85.4	20	131.8	33	210.7	46	196.6
8	88.5	21	136.5	34	218.1	47	199.5
9	91.5	22	141.3	35	225.7	48	206.5
10	94.8	23	146.2	36	233.6	49	229.1
11	97.4	24	151.4	37	241.8	50	254.1
12	100.0	25	156.7	38	250.3	–	–
13	103.5	26	162.2	39	69.4	–	–

DCS TONE CHART

DCS	CODE	DCS	CODE	DCS	CODE	DCS	CODE	DCS	CODE	DCS	CODE
1	D023N	12	D065N	23	D132N	34	D205N	45	D255N	56	D331N
2	D025N	13	D071N	24	D134N	35	D212N	46	D261N	57	D332N
3	D026N	14	D072N	25	D143N	36	D223N	47	D263N	58	D343N
4	D031N	15	D073N	26	D145N	37	D225N	48	D265N	59	D346N
5	D032N	16	D074N	27	D152N	38	D226N	49	D266N	60	D351N
6	D036N	17	D114N	28	D155N	39	D243N	50	D271N	61	D356N
7	D043N	18	D115N	29	D156N	40	D244N	51	D274N	62	D364N
8	D047N	19	D116N	30	D162N	41	D245N	52	D306N	63	D365N
9	D051N	20	D122N	31	D165N	42	D246N	53	D311N	64	D371N
10	D053N	21	D125N	32	D172N	43	D251N	54	D315N	65	D411N
11	D054N	22	D131N	33	D174N	44	D252N	55	D325N	66	D412N

DCS	CODE	DCS	CODE	DCS	CODE	DCS	CODE	DCS	CODE	DCS	CODE
67	D413N	91	D627N	115	D054I	139	D212I	163	D346I	187	D523I
68	D423N	92	D631N	116	D065I	140	D223I	164	D351I	188	D526I
69	D431N	93	D632N	117	D071I	141	D225I	165	D356I	189	D532I
70	D432N	94	D654N	118	D072I	142	D226I	166	D364I	190	D546I
71	D445N	95	D662N	119	D073I	143	D243I	167	D365I	191	D565I
72	D446N	96	D664N	120	D074I	144	D244I	168	D371I	192	D606I
73	D452N	97	D703N	121	D114I	145	D245I	169	D411I	193	D612I
74	D454N	98	D712N	122	D115I	146	D246I	170	D412I	194	D624I
75	D455N	99	D723N	123	D116I	147	D251I	171	D413I	195	D627I
76	D462N	100	D731N	124	D122I	148	D252I	172	D423I	196	D631I
77	D464N	101	D732N	125	D125I	149	D255I	173	D431I	197	D632I
78	D465N	102	D734N	126	D131I	150	D261I	174	D432I	198	D654I
79	D466N	103	D743N	127	D132I	151	D263I	175	D445I	199	D662I
80	D503N	104	D754N	128	D134I	152	D265I	176	D446I	200	D664I
81	D506N	105	D023I	129	D143I	153	D266I	177	D452I	201	D703I
82	D516N	106	D025I	130	D145I	154	D271I	178	D454I	202	D713I
83	D523N	107	D026I	131	D152I	155	D274I	179	D455I	203	D723I
84	D526N	108	D031I	132	D155I	156	D306I	180	D462I	204	D731I
85	D532N	109	D032I	133	D156I	157	D311I	181	D464I	205	D732I
86	D546N	110	D036I	134	D162I	158	D315I	182	D465I	206	D734I
87	D565N	111	D043I	135	D165I	159	D325I	183	D466I	207	D743I
88	D606N	112	D047I	136	D172I	160	D331I	184	D503I	208	D754I
89	D612N	113	D051I	137	D174I	161	D332I	185	D506I	--	--
90	D624N	114	D053I	138	D205I	162	D343I	186	D516I	--	--

UHF CB OPERATING FREQUENCIES

CH	Freq. (MHz)	CH	Freq. (MHz)	CH	Freq. (MHz)	CH	Freq. (MHz)
1	476.4250 ^{*2}	21	476.9250	41	476.4350 ^{*2}	61	476.9375
2	476.4500 ^{*2}	22	476.9500	42	476.4625 ^{*2}	62	476.9625
3	476.4750 ^{*2}	23	476.9750	43	476.4875 ^{*2}	63	476.9875
4	476.5000 ^{*2}	24	477.0000	44	476.5125 ^{*2}	64	477.0125
5	476.5250 ^{*2}	25	477.0250	45	476.5375 ^{*2}	65	477.0375
6	476.5500 ^{*2}	26	477.0500	46	476.5625 ^{*2}	66	477.0625
7	476.5750 ^{*2}	27	477.0750	47	476.5875 ^{*2}	67	477.0875
8	476.6000 ^{*2}	28	477.1000	48	476.6125 ^{*2}	68	477.1125
9	476.6250	29	477.1250	49	476.6375	69	477.1375
10	476.6500	30	477.1500	50	476.6625	70	477.1625
11	476.6750	31	477.1750 ^{*1}	51	476.6875	71	477.1875 ^{*1}
12	476.7000	32	477.2000 ^{*1}	52	476.7125	72	477.2125 ^{*1}
13	476.7250	33	477.2250 ^{*1}	53	476.7375	73	477.2375 ^{*1}
14	476.7500	34	477.2500 ^{*1}	54	476.7625	74	477.2625 ^{*1}
15	476.7750	35	477.2750 ^{*1}	55	476.7875	75	477.2875 ^{*1}
16	476.8000	36	477.3000 ^{*1}	56	476.8125	76	477.3125 ^{*1}
17	476.8250	37	477.3250 ^{*1}	57	476.8375	77	477.3375 ^{*1}
18	476.8500	38	477.3500 ^{*1}	58	476.8625	78	477.3625 ^{*1}
19	476.8750	39	477.3750	59	476.8875	79	477.3875
20	476.9000	40	477.4000	60	476.9125	80	477.4125

Emergency use only

Telemetry / Selcall use only. Voice transmission is inhibited as required by AS/NZS 4365.2011

Guard band channel. Transmission is inhibited as required by AS/NZS 4365.2011

*1 Repeater input channels (Duplex)

*2 Repeater output channels (Duplex)

11 Officially designated call channel

10 4WD / Offroad

40 Road channel

18 Caravan and motorhome

SPECIFICATION

GENERAL	
Frequency Range	476.4250 – 477.4125 MHz
Channel Spacing	12.5 kHz
No of Channels	80 (75 voice, 2 telemetry RX only, 3 for future use)
CTCSS Codes	50
DCS Codes	208
Dimensions (W x H x D)	38 x 85 x 25 mm (without antenna and belt clip)
Complies with	AS/NZS 4365:2011
POWER SUPPLY	
Power Source	Li-ion rechargeable – 3.7V DC, 1300 mAh
Operating Time	~ 14 Hours (High Power)
	~ 20 Hours (Low Power)
	(Transmit 5%, Receive 5%, Standby 90%)
RECEIVER	
Usable Sensitivity	< 0.20uV (12dB SINAD)
Maximum Audio Output	0.5W
Modulation Distortion	50dB
TRANSMITTER	
Transmit Power	High: 3W
	Low: 1W
Modulation Mode	F3E
Max Frequency Deviation	≤5KHz

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

UNICOM COMMUNICATIONS CONTRACT WARRANTY AGAINST DEFECTS

This warranty against defects is given by Unicom Communications (NZ) Ltd NZBN 9429046455161 (We, us, our or Unicom). Our contact details are set out in clause 2.7.

1. Consumer guarantees

- 1.1 Our goods come with guarantees that cannot be excluded under the New Zealand consumer law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
- 1.2 To the extent we are able, we exclude all other conditions, warranties and obligations which would otherwise be implied.

2. Warranty against defects

- 2.1 This warranty is in addition to and does not limit, exclude or restrict your rights under the competition and consumer Act 1993 (NZ) or any other mandatory protection laws that may apply.
- 2.2 We warrant our goods to be free from defects in materials and workmanship for the warranty period (see warranty table) from the date of original sale (or another period we agree to in writing). Subject to our obligations under clause 1.2, we will at our option, either repair or replace goods which we are satisfied are defective. We warrant any replacement parts for the remainder of the period of warranty for the goods into which they are incorporated.
- 2.3 To the extent permitted by law, our sole liability for breach of a condition, warranty or other obligation implied by law is limited
 - 2.3.1 In the case of goods we supply, to any one of the following as we decide –
 - (a) The replacement of the goods or the supply of equivalent goods;
 - (b) The repair of the goods;
 - (c) The cost of repairing the goods or of acquiring equivalent goods;
 - 2.3.2 In the case of services we supply, to any one of the following as we decide –
 - (a) The supplying of the services again;
 - (b) The cost of having the services supplied again.

- 2.4 For repairs outside the warranty period, we warrant our repairs to be free from defects in materials and workmanship for three months from the date of the original repair. We agree to re-repair or replace (at our option) any materials or workmanship which we are satisfied are defective.
- 2.5 We warrant that we will perform services with reasonable care and skill and agree to investigate any complaint regarding our services made in good faith. If we are satisfied that the complaint is justified, and as our sole liability to you under this warranty (to the extent permitted at law), we agree to supply those services again at no extra charge to you.
- 2.6 To make a warranty claim you must before the end of the applicable warranty period (see warranty table), at your own cost, return the goods you allege are defective, provide written details of the defect, and give us an original or copy of the sales invoice or some other evidence showing details of the transaction.
- 2.7 Send your claim to:
- Unicom Communications (NZ) Ltd
11B Airborne Road, Rosedale, Auckland 0632, NZ
Tel: (09) 555 4206
Email: service@unicoms.co.nz
- 2.8 If we determine that your goods are defective, we will pay for the cost of returning the repaired or replaced goods to you, and reimburse you for your reasonable expenses of sending your warranty claim to us.

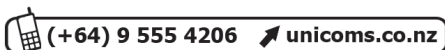
3. What this warranty does not cover

- 3.1 This warranty will not apply in relation to:
- (a) goods modified or altered in any way;
 - (b) defects and damage caused by use with non Unicom Communications products;
 - (c) repairs performed other than by our authorised representative;
 - (d) defects or damage resulting from misuse, accident, impact or neglect;
 - (e) goods improperly installed or used in a manner contrary to the relevant instruction manual; or
 - (f) goods where the serial number has been removed or made illegal.

4. Warranty period

- 4.1 We provide the following warranty on Unicom products. No repair or replacement during the warranty period will renew or extend the warranty period past the period from original date of purchase.

PRODUCT TYPE	WARRANTY PERIOD
477 Mhz UHF CB Handheld Radios	2 Years
Li-ion Battery Packs	1 Year



Unicom Communications (NZ) Ltd

11B Airborne Road, Rosedale, Auckland 0632, New Zealand
All other international enquiries email: export@unicoms.co.nz