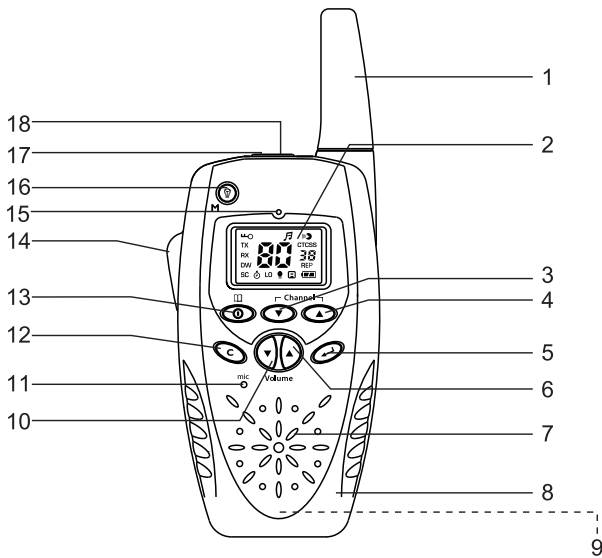


COMMUNICATOR MODEL DC-1021/DC-1027 OWNER'S MANUAL AND OPERATING INSTRUCTIONS



Communicator Controls

1. Antenna
2. LCD Screen: Displays current channel selection and other radio status symbols.
3. Channel Down ▼ Button: Press to change channels.
4. Channel Up ▲ Button: Press to change channels.
5. Confirm button ◀ / Keypad LOCK button
6. Volume Up ▲ Button: Press to adjust volume level.
7. Speaker
8. Battery Compartment (Located on the rear): Houses 3 x 1.5V "AAA" alkaline batteries or 3.6V "AAA" Ni-MH rechargeable battery pack.
9. Battery Compartment Cover Latch (Located on the rear): Secures Battery compartment cover.
10. Volume Down ▼ Button: Press to adjust volume level.
11. Mic: Microphone
12. Call ☎ button: Press to transmit CALL TONES.
13. Power ON-OFF ⏻ / Menu ☰ button: Press and hold the button to turn your unit ON/OFF and select the menu functions.
14. Push To Talk PTT button: Press to transmit.
15. TX (Transmission) /RX (Receiving) LED indicator: Illuminates red when transmitting and green when receiving.
16. LAMP/Monitor M button: Press to tune in and hold onto weak signals.
17. External SP/Mic
18. Belt Clip (Located on the rear)

Getting Started

Carefully remove your communicator from its Packing. If there is any visible damage, do not attempt to operate this communicator. Return it to the place of purchase.

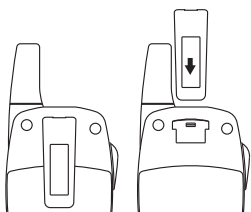


Figure 1.

Figure 2.

Removing the Belt Clip:

1. Pull the BELT CLIP LATCH away from the unit.
2. While pulling the BELT CLIP LATCH, push up on the BELT CLIP to remove it from the unit. See Figure 1.

Installing the Belt Clip:

1. Slide the BELT CLIP into the BELT CLIP SLOT. See Figure 2.
2. A "click" indicate the BELT CLIP is locked into position.

Battery Installation:

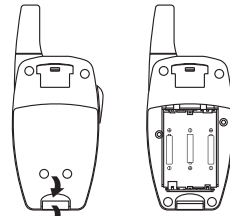


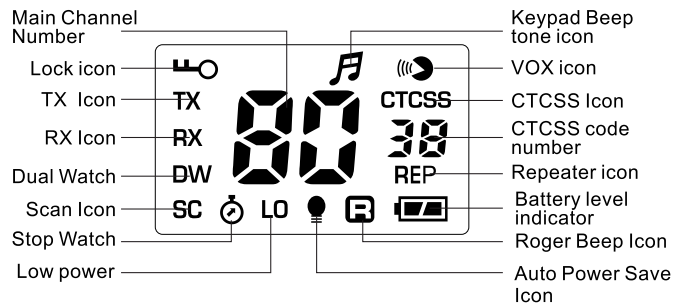
Figure 3.

Figure 4.

1. Release the BATTERY COMPARTMENT COVER LATCH located on the rear side of the unit (see Figure 3) and remove the BATTERY COMPARTMENT (See Figure 4).
2. Install 3X1.5V AAA alkaline batteries or 3.6V "AAA" Ni-MH rechargeable battery pack (not included) as shown.
3. Reinstall the BATTERY COMPARTMENT COVER and lock the BATTERY COMPARTMENT COVER LATCH into position.

The COMMUNICATOR has a built in POWER SAVER feature for maximum battery life. But when the COMMUNICATOR is not being used, conserve battery power by pressing the ⏻ button to OFF. Remove the batteries if the unit will not be used for a long period of time.





LCD Screen:



	Channel number changes from 1 to 80 selected.
	Light on when buttons are locked.
	Light on in transmission mode
	Light on in receiving mode
	Displayed during dual watch mode.
	Light on in channel scanning mode.
	Light on in stop watch mode.
	Light on when lower power is selected.
	Light on in power save mode.
	Light on Roger Beep Tone selection menu.
	Displays current Battery level.
	Light on when Repeater function is switched on.
	Channel number changes from 1 to 38 selected.
	Light on in CTCSS mode.
	Light on in VOX selection menu and Standby mode when VOX function is enabled.
	Light on keypad beep tone selection menu.

BASIC OPERATION

Turning the unit ON/OFF

1. To power on the unit, press and hold the  /  button, the LCD display will show the channel number and the CTCSS code number.
2. To power off the unit, press and hold again the  /  button again.

Using the radio

The unit has 80 main channels (Channel 1-80 with Channel 22,23,61,62 &63 prohibited for voice transmitting) and 38 CTCSS codes for each channel. You can communicate with any other PMR that is using the same main channel & CTCSS code.

In Australia,

1. Except in an emergency, the unit must not be operated on channel 5 and 35;
2. Channel 11 is the customary calling channel for establishing communication;
3. Channel 40 is the customary road vehicle channel.

Speaking to other radio

1. Press and hold the **PTT** button, the TX icon will be lighted on the LCD display.
2. Hold the unit in the vertical position with the Microphone at 5-8 cm from the mouth and then speak.
3. When you have finished speaking, release the **PTT** button.
4. Now you are ready to receive incoming transmission. Adjust the volume to the desired level if necessary.



Time-Out timer(TOT)

A timer disables transmitting after 3 minutes maximum transmission period. Transmitting can only be reactivated by releasing and pressing the **PTT** button again.



Using the Earset-microphone

1. Plug the earset-microphone into the earphone jack;
2. Press the **PTT** button on the earphone to speak and release it to listen.
3. Adjust volume control if necessary.

Channel Selection


Press the Channel  or  button to select desired channel (1-80). The factory default start up channel is channel 1 and sub-channel 00; Before selecting a channel for communication, always listen on it and ensure it is not already being used. Always avoid selecting a busy channel when the unit keeps on receiving signal from unknown party.

Adjusting speaker volume (8 levels)

1. Press the VOL  button to increase the volume;
 2. Press the VOL  button to decrease the volume.
- The LE icon and the selected volume level (01-08) will appear on the LCD display.



Repeater function

Repeater facility is a third party facility which is only available in some local areas. Only use this function for extending your communication range when you know the channel of the repeater facility in you area.

1. Pre-set the channel (1-8 and 41-48) to the channel as specified by your local repeater station;
2. Press  button for 1 second to activate / deactivate the Repeater function;
3. The unit will automatically send the signal at a frequency 30 channels (Channel 31-38 and 71-78) above the original in order to access the repeater station. After transmitting, the unit reverts back to its original operating frequency.










OPEARTIONS

Menu Operation

Press  /  button to select the Menu functions.
Menu --> CTCSS - TX Power selection --> VOX --> VOX sensitivity --> Channel Scan --> CTCSS tone SCAN --> Dual Watch --> CALL Tone--> Roger Beep -->Keypad Beep Tone --> Stop Watch

CTCSS Code Selection








The unit has 38 CTCSS private codes available different CTCSS tones may be associated to different channels. To choose the desired CTCSS code, please proceed as followings:

1. Press the  /  button until the CTCSS code number blinks on the LCD display. The CTCSS code 00 indicates that no CTCSS tone is programmed on that channel.
2. Press the Channel  or  button to select the desired CTCSS code number. Pressing and holding the Channel  or  buttons, the selection will move quicker.
3. To confirm the selection and exit the Menu Mode, press the  button or press  /  button to move to the next function.

Selection a CTCSS code of 00 will disable the CTCSS feature. To communicate between two or more radios, but the channel and CTCSS code selections must be the same. To communicate with other models and brand of radios, the actual radio frequency and CTCSS frequency must be matched. The frequency chart and CTCSS code chart are included to help with this selection.









Transmitter RF Power Setting

Your unit has a HI/LOW Power selection function. This function is very convenient to reduce the current drain and extend battery life when communicating within short distance. To select the output power proceed as followings:









1. Press the  /  button two times, until the HI/Lo icons will blink on the LCD display;
2. Press the Channel  or  button to select the desired power level HI (high power) or Lo (low power).
3. To confirm the selection and exit the Menu Mode, press  button or press the  /  button to move to the next function.

VOX (Handsfree use) Function

Your unit is equipped with a user selectable Voice Operated Transmitter function (VOX), that is used for automatic voice transmission (handsfree use or baby room monitor use). In this mode, transmission is automatically initiated by speaking into the microphone and there is no need to push the **PTT** button. To enable the VOX function, please proceed as followings:






1. Press the  /  button three times, until the  icon and the OFF indication appear on the LCD display.
2. Press the Channel  or  buttons to enable the VOX function; the On indication will appear on the LCD display.
3. To confirm the selection and exit the Menu Mode, Press  button or press  /  button to move to the VOX sensitivity level selection function.

VOX Sensitivity Level Selection

1. Press the  /  button four times, until the LE indication, the  icon and the selected VOX level will blink on the LCD display.
2. Press the Channel  or  buttons to select the level of sensitivity (from 01 to 05). The VOX level 05 indicates the highest VOX sensitivity.
3. To confirm the selection and exit the Menu Mode, press  button or press the  /  button to move to the next function.
4. When VOX feature is on, the VOX icon will appear on the LCD display.
5. You can plug in the earset-microphone for hands-free talkie and listening. Please speak close to the mic in order to activate the VOX function.

Automatic Channel Scanning

To start the automatic channel SCAN function proceed as followings:

1. Press the  /  button five times, until the channel number and the **SC** icon will blink on the LCD display.
Press the Channel  or  buttons to start the automatic channel scanning. Scan will automatically stop when a signal is detected on one channel, in order to listen the communication and Scan will re-start when no more signal is detected on that channels.
2. If you press the **PTT** or  buttons during the SCAN operation, SCAN will stop automatically and radio will set the last used channel.

Automatic CTCSS tone Scanning

This function allows automatic CTCSS tone scanning on the selected channel. Please proceed as followings:

1. Select the desired channel number, the CTCSS tone scanning will be activated on this channel.
2. Press the **0 / 1** button six times, until the CTCSS tone number and the icon will blink on the LCD display.
3. Press the Channel **▲** or **▼** buttons to start the automatic CTCSS tone scanning on the selected channel; the **SC** icon will be lighted on the LCD display. Scan will automatically stop when a signal is detected on the active channel, in order to listen to the communication and SCAN will re-start when no more signal is detected on that channel.
4. If you press the **PTT** or **←** buttons during the SCAN operation, Scan will stop automatically and radio will set the last used channel.

Dual Watch Function

The unit is equipped with a Dual Watch function that allows to monitor 2 different channels without the CTCSS code.

To set the Dual Watch function, please proceed as followings:

1. Select the first channel to be monitored.
2. Press the **0 / 1** button seven times, until the **DW** icon and the selected channel will blink on the LCD display
3. Press the Channel **▲** or **▼** buttons to select the second channel to be monitored.
4. Now the radio will start monitoring the two channels and will stop when a signal is received on one of the two stored channels.
5. To disable the Dual Watch function and return to Stand-by mode, press the **←** button.

Call Tone Setting

Call tone can only be transmitted once (not more than 3 sec.) in any 60 sec. period. It means that the unit will not transmit a call tone more than once no matter how many times you press the **C** button within a minute.

The unit is equipped with 5 user selectable Call tone melodies. To set the desired Call tone melody, please proceed as followings:

1. Press the **0 / 1** button eight times, until the **C** indication and melody number will blink on the LCD display.
2. Press the Channel **▲** or **▼** buttons to set the desired melody, between the 5 available melodies.
3. To confirm the selection and exit the Menu Mode, press **←** button or press the **0 / 1** button to move to the next function.
4. Press the **C** button to transmit the Call Tone Melody.

Roger Beep Tone Setting

The unit is equipped with a user selectable Roger Beep Tone feature, which enables you to send a Beep Tone at the end of each transmission after every release of the **PTT** button.

This will prompt any receiving unit that your transmission has ended. To enable or disable this function, please proceed as followings:

1. Press the **0 / 1** button nine times, until the **B** icon and the On or OFF indications will blink on the LCD display.
2. Press the Channel **▲** or **▼** buttons to set the desired selection On (Roger Beep tone enabled) or OFF (Roger Beep tone disabled). If the Roger Beep function is enabled, a beep tone is heard to confirm the selection.
3. To confirm the selection and exit the Menu Mode, Press **←** button or press **0 / 1** button to move to the next function.
4. When the Roger Beep tone is enable, the **B** icon appears on the LCD display.

Keypad Program Tone Setting

When a key is pressed, a beep tone is heard to confirm your command. The user may enable or disable this keypad program tone.

1. Press the **0 / 1** button ten times, until the **μ** icon and the On or OFF indications will blink on the LCD display.
2. Press the Channel **▲** or **▼** buttons to set the desired selection On (Keypad tone enabled) or OFF (Keypad tone disabled). If the keypad tone is enabled, a beep tone is heard to confirm the selection.
3. To confirm the selection and exit the Menu Mode, press **←** button or press **0 / 1** button to move to the next function.
4. When the Keypad tone is enabled, the **μ** icon appears on the LCD display.

Stop Watch function

This function will enable a timer function.

1. Press the **0 / 1** button eleven times, until the **00:00** indication will blink on the LCD display.
2. Press the Channel **▲** button to start counting and press Channel **▼** button to stop the function. The radio n still operate in this mode.
3. Press the Channel **▲** button again to re-start.
4. To reset the timer press the Channel **▼** button two times.
5. To exit to Stand-by mode press the **←** button.

ADDITIONAL FUNCTIONS

Keypad Lock

To avoid entering unwanted command, press and hold the **←** button for about 2 seconds. The **μ** icon will appear on the LCD display. When the Keypad is locked. The **PTT**, **C** and **0** buttons are enabled. To unlock the keypad press and hold the **←** button for about 2 seconds.

LCD Backlight

Shortly press the **0** button to backlight the LCD display. Press this button again to turn OFF the LCD backlight.

Monitor Function

Press and hold the **0** button for about 4 seconds to activate the Monitor Function. Press **0** button once to return.

If require to listen to weak signal with background noise temporarily, press and hold **0** button for about 2 seconds. You will hear background noise and possible weak signal from the unit. Release **0** button within 2 seconds to return.

Automatic Power Save

The unit has a Automatic Power Save circuit designed to extend battery life.

If it senses no transmission within 10 seconds, it automatically switches to the **0** icon will appear on the LCD display.

The unit can still receive transmissions in the mode.

SPECIFICATIONS

Channels Available	80 Channels
CTCSS Sub-Channel	38 for each Channel
Output Power (TX)	0.5W
Battery Life	30 Hours (typical)
Range	About 5 Km

CHANNEL TABLE		CHANNEL TABLE		CHANNEL TABLE	
Channel Number	Frequency (MHZ)	Channel Number	Frequency (MHZ)	Channel Number	Frequency (MHZ)
1*	476.4250	28	477.1000	55	476.7875
2*	476.4500	29	477.1250	56	476.8125
3*	476.4750	30	477.1500	57	476.8375
4*	476.5000	31*	477.1750	58	476.8625
5*	476.5250	32*	477.2000	59	476.8875
6*	476.5500	33*	477.2250	60	476.9125
7*	476.5750	34*	477.2500	61**	-
8*	476.6000	35*	477.2750	62**	-
9	476.6250	36*	477.3000	63**	-
10	476.6500	37*	477.3250	64	477.0125
11	476.6750	38*	477.3500	65	477.0375
12	476.7000	39	477.3750	66	477.0625
13	476.7250	40	477.4000	67	477.0875
14	476.7500	41*	476.4375	68	477.1125
15	476.7750	42*	476.4625	69	477.1375
16	476.8000	43*	476.4875	70	477.1625
17	476.8250	44*	476.5125	71*	477.1875
18	476.8500	45*	476.5375	72*	477.2125
19	476.8750	46*	476.5625	73*	477.2375
20	476.9000	47*	476.5875	74*	477.2625
21	476.9250	48*	476.6125	75*	477.2875
22+	476.9500	49	476.6375	76*	477.3125
23+	476.9750	50	476.6625	77*	477.3375
24	477.0000	51	476.6875	78*	477.3625
25	477.0250	52	476.7125	79	477.3875
26	477.0500	53	476.7375	80	477.4125
27	477.0750	54	476.7625		

* Channel 5 and 35 are for emergency calling. Please do not use these channels in non-emergency cases.
 + Speech telephony is inhibited on Channel 22 and 23.
 * Channel 1-8 and 31-38, 41-48 and 71-78 are used as repeater channels with 750kHz offset. Channels 1-8 and 41-48 are used for mobile reception and channels 31-38 and 71-78 for mobile transmission.
 Only use this repeater function when a long distance communication via the local repeater facility is specifically required. Unless it is necessary, avoid operation on locally used repeater input channels (channels 31 to 38 and channels 71 to 78) or locally used repeater receiving channels (channels 1 to 8 and channels 41 to 48) is recommended.
 ** Channel 61, 62 and 63 are reserved for future use. They cannot be activated until approved by the ACMA CBRS Class Licence in Australia.

NOTE: The maximum transmission range will vary depending on terrain and environment.

CTCSS (Continuous Tone Coded Squelch System) Frequency Table.

Sub Channel	Frequency (Hz)	Sub Channel	Frequency (Hz)	Sub Channel	Frequency (Hz)
1	67.0	14	107.2	27	167.9
2	71.9	15	110.9	28	173.8
3	74.4	16	114.8	29	179.9
4	77.0	17	118.8	30	186.2
5	79.7	18	123.0	31	192.8
6	82.5	19	127.3	32	203.5
7	85.4	20	131.8	33	210.7
8	88.5	21	136.5	34	218.1
9	91.5	22	141.3	35	225.7
10	94.8	23	146.2	36	233.6
11	97.4	24	151.4	37	241.8
12	100.0	25	156.7	38	250.3
13	103.5	26	162.2	0	No Tone

NOTE: The maximum transmission range will vary depending on terrain and environment.

TROUBLESHOOTING

SYMPTOM	SOLUTION
No power.	<ul style="list-style-type: none"> • Check battery. Ensure that the battery are installed properly. • The battery may be weak. • Charge the supplied battery.
Reception is weak.	<ul style="list-style-type: none"> • Press the Vol ▲ button to increase Volume. • The receiving signal may be weak and/or out of range • If this happens, press the 🔊 button.
Cannot change channels.	<ul style="list-style-type: none"> • To change channels, press the ⏪ / ⏩ button until the channel number flashes on the LCD display. • Press the Channel ▲ or ▼ buttons to change channels. • Battery may be weak. • Keypad lock must be deactivated.
Range is limited.	<ul style="list-style-type: none"> • Battery may be weak. • Charge the battery if the BATTERY LEVEL indicator is low. • The maximum range will vary depending on terrain and environment. • Open fields provide the maximum range, while steel/concrete structures, heavy foliage and use in buildings and in vehicles may limit the range significantly. • Wearing the radio close to the body, such as in a pocket or on a belt, will decrease range; change the location of the radio.
Sound distortion problems.	<ul style="list-style-type: none"> • If you are transmitting, speak in a normal tone of voice, 2 to 3 inches away from the Microphone. • If you are receiving, lower the volume to a comfortable level. • Radios too close. Radios must be at least 5 feet apart; increase your distance. • Radios too far apart. Obstacles interfere with transmission. Talk range is up to 10 miles in clear unobstructed conditions.

WARNING: Using batteries

1. The units operate with 3X1.5V AAA/LR03 regular Alkaline or Ni-MH (nickel metal hydride) batteries.
2. Batteries and rechargeable batter packs should not be thrown with domestic rubbish. You may hand them in at your nearest collection point.
3. Do not leave batteries installed over a long period of time as leakage may occur and this can destroy the radio.

Note to User:

Use of the citizen band radio service is licensed in Australia by ACMA Radio communications (Citizen Band Radio Stations) Class Licence and in New Zealand by MED General User Radio Licence for Citizen Band Radio and operation is subject to conditions contained in those licences. For more details, please contact ACMA or visit www.acma.gov.au.

Note:

This product is made to the new standard 2011 version.

There are possible operational issues during the changeover from the old version 25kHz to the new version of 12.5kHz channel spacing. They include the consequences of narrowband (with 2.5kHz deviation) transmissions being received on the old wideband equipment, and wideband (with 5.0kHz deviation) transmissions being received on newer narrowband equipment.

There is a possibility of interference due to the older equipment being operated on channels adjacent to new narrowband channels.

The list of currently authorised channels can be obtained from the ACMA website in Australia and the MED website in New Zealand.