DIGITECH

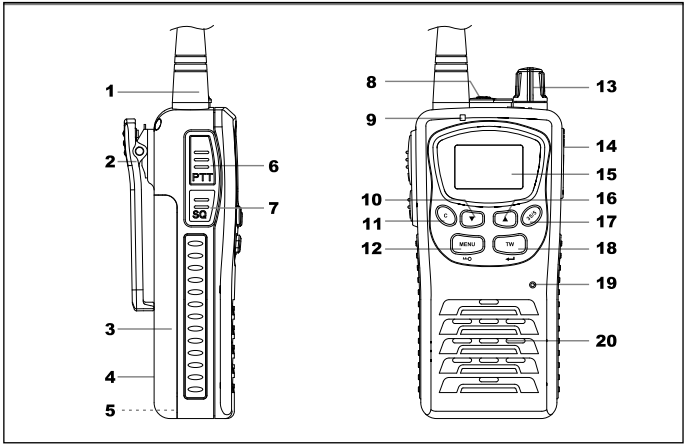
DC-1065

Professional FM Transceiver

Instruction Manual

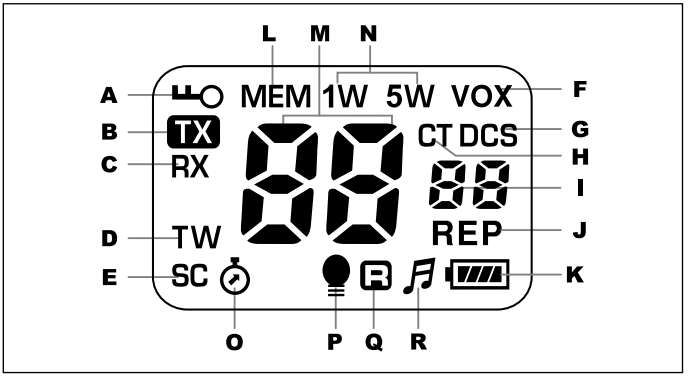
Use of the citizen band radio service is licensed in Australia by ACMA Radiocommunications (Citizen Band Radio Stations) Class Licence and in New Zealand by MED General User Radio Licence for Citizens Band Radio. Operation is subject to conditions contained in those licences.

Controls and Indicators



1 Antenna
2 Belt Clip
3 Battery Compartment with Battery
4 Charger Connect
5 Battery Compartment Cover Latch
6 Push to Talk PTT Key
7 Squelch SQ Knob
8 Speaker MIC Jack
9 TX (Transmission) LED indicator
10 Down ▼ Button(CHANNEL/MENU)
11 Call C Button
12 MENU MENU /LOCK Button
13 Power ON/OFF and Volume knob
14 CHARGER JACK
15 LCD Display
16 Up ▲ Button(CHANNEL/MENU)
17 35/5 35/5 Button
18 Triple watch TW and Enter Button
19 Microphone
20 Speaker

LCD Display



A Keypad LOCK Icon
B TX Icon - is lighted when the radio is in transmit mode.
C RX Icon - is lighted when the radio is in receive mode.
D TW Icon - Triple Watch function
E SC Icon - Automatic channels or CTCSS Code scanning
F VOX (Handsfree use) Icon
G DCS Icon
H CTCSS Icon
I CTCSS code number
J REP Icon -is lighted on when repeater function is switched on
K Battery Status Indicator
L Memory Indicator
M Selected Channel Indication
N TX power Indicator
O Stop Watch function Icon
P Power Save function Icon
Q R Icon-Roger Beep function
R Keypad Beep Tone Icon

Feature

- FM transmission
  Frequency:476.425 - 477.4125MHz
  1~80 channels
- 1W/5W output power selection
- TOT timer
- One touch to ch35/ch5 (w/o CTCSS or DCS) emergency channels
- 38 CTCSS and 83 DCS
- External headset (earphone, microphone and ext PTT)
- VOX function (off, 1,2,3,4,5)
- Call tone melody (5 songs)
- Rotary switch volume with power on/off
- LCD back-light function
- Key back-light
- 5 steps adjustable and automatic squelch function
- 20 memory store
- Repeater function
- Key lock function
- Key tone function (selectable on/off)
- Roger tone function (selectable on/off)
- 4 level battery indicator
- Auto power saver /w indication
- Tx and Rx icon
- Triple watch function
- Scan channel/Memory scan
- Stop watch function (<59'59")
- IPX5 * splash proof
- 1200mAh Li-ion battery pack
- Charging indication (icon flashing)
- Cigarette car charger plug (optional)

IPX5- Protected against water jets - Water projected at all angles through a 6.3mm nozzle at a flow rate of 12.5 liters/min at a pressure of 30kN/m2 for 3 minutes from a distance of 3 meters.

Installation

1. Removing the Belt Clip
   a. Pull the Belt Clip Latch away from the unit.
   b. While pulling the Belt Clip Latch, push up the Belt Clip as shown in Figure 1.
2. Installing the Belt Clip
   a. Slide the Belt Clip into the slot as shown in Figure 2.
   b. A “click” indicates the Belt Clip is locked into position.

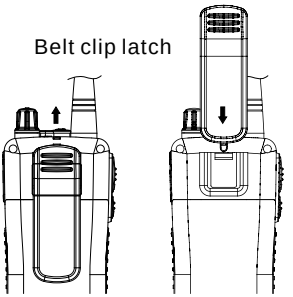


Figure 1 Figure 2

3. Installing the supplied Li-ion Rechargeable Battery (Battery built-in to the battery cover).

   a. Install the supplied Li-ion rechargeable battery as shown in Figure 4.

   b. Lock the Battery Cover latch into position as shown in Figure 5.

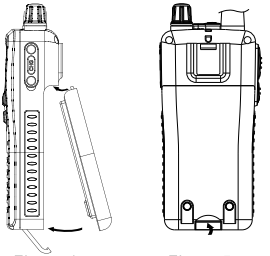


Figure 4 Figure 5

4. Charging the Rechargeable Battery pack.
   IMPORTANT: Turn OFF the unit before charging.
   Charge the Battery pack 10-14 hrs. prior to initial use.
5. Screw the supplied antenna into the antenna socket firmly.

To Charge the unit using Charger pod

1. Place the unit into the charger pod(Figure 5);
2. Insert the socket plug on the end of the AC-DC adaptor or Car Charger to the socket at the back of the charger pod (Figure 6);
3. The LED indicator on the charger pod will turn to RED once electricity get connected.
4. The LED indicator on the charger pod will turn to Green once charge fully.

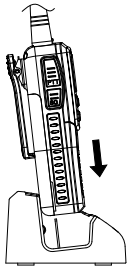


Figure 5

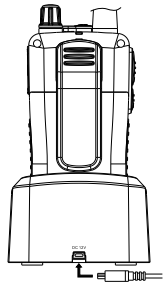


Figure 6

NOTE: The unit can be charged both ON and OFF mode.

Or Charge the unit directly

1. Insert the socket plug on the end of the AC-DC adaptor or Car Charger into the charger jack (CHG) located on the right of the unit.(Figure 7);
2. The unit indicate the icon without blinking when the battery is fully charged.

NOTE: The unit can be charged both ON and OFF mode.

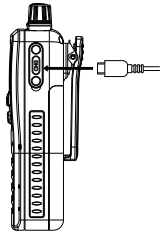


Figure 7

To Charge the battery pack using Charger pod

1. Insert the socket plug on the end of the AC-DC adaptor or Car Charger to the socket at the back of the charger pod (Figure 9);
2. The LED indicator on the charger pod will turn to RED once electricity get connected.
3. The LED indicator on the charger pod will turn to Green once charge fully.

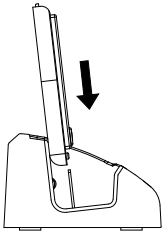


Figure 8

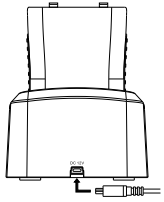


Figure 9

Battery Pack Warning

1. This equipment contains a Li-ion Battery Pack.
2. Do not mix with different battery types.
3. Do not dispose of the battery in fire.
4. Do not short-circuit the Battery Pack.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Operation

Turning on the radio

Rotate the ON/OFF volume knob clockwise to turn ON and adjust the volume, then going to self-inspection.
A series of tones will indicate the radio is on and full screen displayed 1 second.

If it is the first time to turn on the radio, the default parameter as below:

Parameter	Default setting
Channels	1
CTCSS privacy codes	0
DCS privacy codes	0
SQ levels	Auto
TX power	5W
VOX on/off	OFF
Call Tone	5
Roger Tone	ON
Key Tone	ON
Lock states	Unlock

Turning off the radio

Rotate the ON/OFF volume knob counterclockwise to turn OFF radio.

Channel Selection

Press the ▲ or ▼ button one time to select the desired channel (1-80).
Press and hold the ▲ or ▼ button, the selection will move quicker.

- Before selecting a channel for transmitting, 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. The icon 'RX' will be displayed.
- 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, to 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.

In Australia,

- Channel 11 is the customary calling channel for establishing communication;
- Channel 40 is the customary road vehicle channel

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 verison 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.

Adjusting Volume

Rotate the ON/OFF volume knob to change the volume.

Receiving a signal

The unit is continuously in the RECEIVE mode when the unit is ON and not transmitting.
When you receive a signal on the current channel, the RX icon is appeared on the LCD display

Transmitting

Press and hold the PTT button to transmit your voice. The **TX** icon will be displayed on the LCD display and the red LED indicator lights.

Time-out Timer

The unit will disable transmitting while the PTT button pressed exceed 180 seconds.
Press the PTT button again to re-activate transmitting.

Monitor

1. Press and hold the SQ button more than 2 seconds to activate the Monitor Function, you will hear background noise and possible weak signal from the unit, when you released less than 5 seconds to return.
2. Press and hold the SQ button more than 5 seconds to extended monitor;
3. Press the SQ button once to return.

Squelch level setting

1. Press the SQ button to setting Squelch level,
2. Press the ▲ or ▼ button one time to select the desired level (Auto,1,2,3,4,5)
   Press and hold the ▲ or ▼ button, the selection will move quicker.

One touch Channel

1. Press 35/5 button one time into channel 35;
2. Press 35/5 button two times into channel 5;
3. Press three times to return.

Triple Watch setting

Triple Watch mode monitors channels 35 and 5 for a signal while you listen to the currently selected channel.

1. Press TW button to scanning current channel and channel 35 and 5;
2. Press TW button once to return.

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 your area.
Push and hold the Call key to activate the Repeater function, push and hold the Call key again for release the Repeater function.
Unless it is necessary, to 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 channels 41 to 48) is recommended.

Sending a Call Tone

With the unit in normal mode, press the C button.
The microphone will be muted and the unit will transmit the current Call tone to other users with the same channel and CTCSS code.
The **TX** icon will be displayed on the LCD display and the red LED indicator lights.
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.

CTCSS code setting

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

1. Press MENU button one time, until CTCSS code number blinks on the LCD display. The CTCSS code indicates that no CTCSS tone is programmed on that channel.
2. Press the ▲ or ▼ button to select the desired CTCSS code number.
   Press and hold the ▲ or ▼ button, the selection will move quicker.

Selecting a CTCSS code will disable the CTCSS feature. To communicate between two or more radios, both the channel and CTCSS code selections must be the same.
To communicate with other models and brands of radios, the actual radio frequency and CTCSS frequency must be matched.
CTCSS codes on Emergency Channel 5 and 35 are inhibited.

DCS code setting

The radio has 83 DCS private codes available. Different DCS tones may be associated to different channels.
To choose the desired DCS code, please proceed as follow.

1. Press MENU button two times, until DCS code number blinks on the LCD display. The DCS code indicates that no DCS tone is programmed on that channel.
2. Press the ▲ or ▼ button to select the desired DCS code number.
   Press and hold the ▲ or ▼ button,the selection will move quicker.

DCS codes on Emergency Channel 5 and 35 are inhibited.

HI/LOW power setting

This feature permits the selection of the transmitting power level to high or low. Before transmitting a speech to other units, press the MENU button three times to select the desired power output 1W or 5W.

VOX Sensitivity Level setting

In VOX mode, the unit will transmit a signal only when it is activated by your voice or other sounds around you. The unit will transmit for a further for 1 second even if you stop talking.
To set the VOX sensitivity level:

1. Press MENU button four times, the VOX icon will display and the current VOX level will start blinking on the LCD display.
2. Press the ▲ or ▼ button to select the VOX level sensitivity. The highest sensitiving level is 5.

Memory setting

1. Press MENU button five times, until the MEM icon is displayed and channel number is blinking.
2. Press ▲ or ▼ button to select desired channel, then press ↵ button to confirm the channel. The most channel you can store 20 channels.

Channel scanning

Channel scan performs searches for active signals in an endless loop from channels.

1. Press MENU button six times, the SC , channel number and CTCSS number icons will start blinking on the LCD display.
2. Press the ▲ or ▼ button to activate the channel scan mode.

The channel number on the LCD display changes rapidly until an active signal is detected.
When an active signal is detected, channel scan pauses on the active channel.

CTCSS code scanning

1. Press MENU button seven times, until the SC icons displayed and CTCSS code will start blinking.
2. Press ▲ or ▼ button to start the CTCSS code scanning.

DCS code scanning

1. Press MENU button eight times, until the SC icons displayed and DCS code will start blinking.
2. Press ▲ or ▼ button to start the DCS code scanning.

Memory scanning

1. Press MENU button nine times, until the MEM icon is displayed.
2. Press ▲ or ▼ button to scanning.

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.

1. Press MENU button ten times, until the C indicated and call tone code will start blinking.
2. Press ▲ or ▼ button to set the desired melody, between the 5 available melodies.
3. Press the C button to transmit the Call Tone Melody.

Roger Beep Tone setting

The radio 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 Key.
This will prompt any receiving unit that your transmission has ended.

1. Press MENU button eleven times, until the R icon and the ON or OFF indications will start blinking on the LCD display.
2. Press ▲ or ▼ button 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.
   When the Roger Beep tone is enabled, the tone R icon appears on the LCD display.

Key Tone setting

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

1. Press MENU button twelve times, until the ♫ icon and the ON or OFF indications will start blinking on the LCD display.
2. Press ▲ or ▼ button to set the desired selection ON (Key tone enabled) or OFF(Key tone disabled). If the Key tone function is enabled, a beep tone is heard to confirm the selection.
3. When the Roger Beep tone is enabled, the tone ♫ icon appears on the LCD display.

Stop Watch Setting

Press MENU button thirteen times, until 00:00 indications and the icon will start blinking on the LCD display.

1. Press ▲ button to start the timer.
2. Press ▼ button to stop the timer
3. Press ▼ button again to re-start.

Key Lock

Press and hold the button for 2 seconds to activate/deactivate the Key Lock feature, the icon will appear/disappear on the LCD display.

Battery Level Indicator

While the battery at low voltage, the icon is blinking for every 1 second on LCD display.

The unit can indicate the icon and containing is blinking in turn while charging.

The unit indicate the icon without blinking when the battery is fully charged.

Automatic Power Save Feature

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 Power Save mode. The power Save icon will appear on the LCD display. The unit can still receive transmissions in this mode.

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 sub-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, to 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.

CTCSS Frequency Table

Sub Channel	Frequency (MHZ)	Sub Channel	Frequency (MHZ)	Sub Channel	Frequency (MHZ)
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		

DCS Frequency Table

Channel Number	Octal Code	Bit Pattern	Channel Number	Octal Code	Bit Pattern
1	023	111011000011100000010011	30	205	110111010011000010000101
2	025	110101101111000000010101	31	223	110100011101000010010011
3	026	110010111011000000010110	32	226	111101100001000010010110
4	031	101000111111000000011001	33	243	100010110111000010100011
5	032	101111101011000000011010	34	244	001111110101000010100100
6	043	101101101101000000100011	35	245	101100011111000010100101
7	047	000111111011000000100111	36	251	110001001111000010101001
8	051	111110010101000000101001	37	261	001011101111000010110001
9	054	110111101001000000101100	38	263	101111010001000010110011
10	065	101110100011000000110101	39	265	100001111001000010110101
11	071	110011110011000000111001	40	271	111100101001000010111001
12	072	110100100111000000111010	41	306	000110011111000011000110
13	073	010111001101000000111011	42	311	011100011011000011001001
14	074	111010001111000000111100	43	315	110110001101000011001101
15	114	011010111101000001001100	44	331	010001111101000011011001
16	115	111001010111000001001101	45	343	010100101111000011100011
17	116	111110000011000001001110	46	346	011101010011000011100110
18	125	000011110111000001010101	47	351	000111010111000011101001
19	131	011110100111000001011001	48	364	110100001011000011110100
20	132	011001110011000001011010	49	365	010111100001000011110101
21	134	010111011011000001011100	50	371	001010110001000011111001
22	143	011011110101000001100011	51	411	111011101101001000010001
23	152	001111011001000001101010	52	412	111100111001001000010010
24	155	100010011011000001101101	53	413	011111010011001000010011
25	156	100101001111000001101110	54	423	100101110011001000010011
26	162	110101111001000001110010	55	431	110110001011001000011001
27	165	011000111011000001110101	56	432	110001011111001000011010
28	172	000010111111000001111010	57	445	111101110001001001001101
29	174	001100010111000001111100	58	464	010011111101001001100100

DCS Frequency Table

Channel Number	Octal Code	Bit Pattern	Channel Number	Octal Code	Bit Pattern
59	465	110000010111001001101O1	72	632	1111100001010011001101O
60	466	110111000011001001101O	73	654	1001100001110011010110O
61	503	011110001101001010000O11	74	662	0100100011110011011001O
62	506	010111110001001010001O	75	664	011100100111001101101OO
63	516	100000110111001010011O	76	703	0100010101110011100001O
64	532	000111000111001010110O	77	712	000101111011001110010O
65	546	001100111101001011001O	78	723	011100110001001110100O
66	565	000110001111001011101O	79	731	001111001001001110110O
67	606	101110110011001100001O	80	732	001000011101001110110O
68	612	110011100011001100101O	81	734	000110110101001110111OO
69	624	000111101011001100101OO	82	743	001010011011001111000O11
70	627	000000111111001100101O11	83	754	010000011111001111011OO
71	631	111001010001001100110O1			

Specifications

General

Frequency Control		PLL
Frequency Tolerance	Transmit	2.5PPM (at 25°C)
	Receive	2.5PPM (at 25°C)
Operation Temperature		0°C to +55°C
Antenna		Flexible whip
Microphone		Built-in Electret type
Display		Liquid Crystal Display
Speaker		8Ω, 1 Watt
Power Source		Rechargeable Ni-MH Battery pack 7.4V 1200mAh

Transmitter

Frequency Range		476.425 - 477.4125MHz
Frequency Stability		±3 PPM
Power Output		1W & 5W
Spurious Emissions		1 μW
Current Drain		800mA (1W), 1650mA (5W)

Receiver

Receiver Type		Double Conversion Super Heterodyne Phase Locked Loop system for Local Oscillator
Frequency Range		476.425 - 477.4125MHz
Sensitivity (12dB SINAD)		-3 dBμV (emf)
Audio Output Power		0.5W @ 10% THD
Current Drain	Squelched	40mA
	Max. Audio	350mA

Troubleshooting

- **Not enough range**
  Cause: Line of sight blocked
  Increase antenna height.
- **Will not transmit on 5 Watt range but will transmit on the 1 Watt range.**
  Cause: Low voltage
  Recharge or replace the batteries.
- **Will not transmit while charging**
  Cause: Low voltage
  The radio is not designed to transmit while charging.
  DC or AC adaptor does not supply enough power for transmitting.
- **Battery will not charge**
  Cause: Low voltage
  Do not to transmit while charging.
  The adaptor does not supply enough power for transmitting.