





















Basic Operation

LCD Icons

	Signal Strength
H/L	High/Low Power
┘ ┘	Digital Mode
~	Analog Mode
	Private Call
	Group Call
	All Call
↶	Scanning on
	unread message
	Inbox or Outbox Full
	Message send successfully
	Message send failed
	Read Message
	Unread Message Inbox
	Missed Call
	Keypad Locked
	disable all tone alert
	Emergency on
	VOX on
	Plug in earphone
	Direct /Talk around Mode

	Monitoring
	Connect to Computer
	Battery Capacity

Turning the power on /off

Rotate the power switch/volume control clockwise to turn the power on. Rotate the power switch/volume control counter-clockwise to turn the power off.

Note: If you activate “power on password” function via programming software, each time you turn on radio, the 6 digit password must be entered. If you enter the wrong password, the radio will restart automatically and you must enter password again. If you enter the wrong password three times in a row, you brick the radio and you must reprogram the radio to use it again. Please enable power on password with due care.

Adjusting the volume

After the radio is powered on, you can rotate the power switch/volume control to adjust the volume level. Rotate the knob clockwise to increase the volume or rotate the knob counter-clockwise to decrease the volume.

Selecting a Channel

Turn the channel selector knob to select channel 1 to 16. Rotate the knob clockwise to increase the channel number, or rotate the knob counter-clockwise to decrease the channel number. If enabled, the radio channel number will be audibly announced when you change the channel.

Note: If a channel is not programmed, the display says : ”Unprogrammed Channel”, there is an audible message saying “No Channel” and the LED indicator flashes red.

Selecting a Zone

The radio supports up to 64 zones each with a maximum of 16 channels. With all zones used up to 1024 channels can be used. You may select a desired zone through “zone” menu or setting “zone toggle” selection function to button 1 or button 2. To select the zone, use the “Selection Key” to scrolling through the zones and then when the proper zone is highlighted, press the “OK” key. If voice enabled, the current radio channel number will be audibly announced when you change the zone.

Call

Each digital channel may assign a contact and the assigned contact could be a private call contact, a group call contact or an all call contact. To transmit on analog channels, press and hold down the PTT key, wait for the LED indication to glow red and then speak 3 to 4 centimeters away from the microphone.

Note: If the talk permit indication feature is set to “Digital”, “Analogue” or “Digital & Analogue” and you press the PTT key, the radio will generate a momentary beep on the speaker.

Private Call

If the feature “private call ACK” is enabled, when transmitting a private call, the radio will monitor if current ID is available or not.

(1) If you assigned the TX Contact parameter to be a private call contact for current digital channel, pressing the PTT key will transmit a private call.

(2) If you go to the List sub-menu in the Contacts menu and you select a private call Contact, then pressing the PTT key will transmit a private call.

(3) If you go to the Manual Call sub menu in the Contacts menu and you enter a private call number, then pressing the PTT key will transmit a private call.

(4) If you go to the Call Log menu and select a private call number you want to call, then pressing the PTT key will transmit a private call;

(5) If you assign the One Touch Call key as private call, then pressing the PTT key after you select that One Touch Call key will transmit a private call.

Group Call

- (1) If you assigned the TX Contact parameter to be a group call contact for current digital channel, pressing the PTT key will transmit a group call.
- (2) If you go to the List sub-menu in the Contacts menu and you select a group call Contact, then pressing the PTT key will transmit a group call.
- (3) If you go to the Call Log menu and select a group call number you want to call, then pressing the PTT key will transmit a group call;
- (4) If you assign the One Touch Call key as group call, then pressing the PTT key after you select that One Touch Call key will transmit a group call.

All Call

- (1) If you assigned the TX Contact parameter to be an all call contact for current digital channel, pressing the PTT key will transmit an all call.
- (2) If you go to the List sub-menu in the Contacts menu and you select an all call Contact, then pressing the PTT key will transmit an all call.
- (3) If you go to the Call Log menu and select an all call number you want to call, then pressing the PTT key will transmit an all call.

Receiving and responding to a call

On digital channel, when a private call is received, you may press the PTT key within the preset time period to call back. If you do not respond to a received private call within the preset time period, the radio will display the missed call icon. When a group call is received, you may press the PTT key within the preset time period to call back. If you do not respond to a received group call within the preset time period, the radio will display the missed call icon. You cannot respond to an all call.

Note: With channel free indication feature enabled, when the PTT key is released, a tone will be generated.

Button setting

You may program button1 and button 2 for special functions as defined below. Each key can be defined separately for differently functions depending on if you give the key a short press or a long press.

Unassigned	This key is not assigned with any function
One Touch Call 1~6	Allow user to initiate digital group call, digital private call, call alert or send preset message via the one touch call function.
Manual Dial for Private	You can manually input the private call number for calling.
Emergency On	Allow user to make an emergency call.
Monitor	Enables and disables the monitor function
Backlight Auto On/Off	This function allows the user to have the backlight on continuously or only on for five seconds after a key has been pressed
Keypad Lock	Allows user to enable the keypad lock feature. If the keypad lock is enabled user can only operate the PTT key and side button. Press MENU and # key to unlock.
Scan On/Off	Allow user to enable or disable the scan function.
All Alert Tones on/off	Allow user to enable or disable all alert tones
Battery Indicator	Indicates battery charge left
Short Message	Allows you to enter the message function menu
Zone Toggle	Allows you to enter the zone selection function
AD Switch	Selects between the Analog and Digital Modes
Contacts	Allow you to enter the Contacts menu
Radio Enable	Sends an enable command to a private call contact.
Radio Disable	Sends a disable command to a private call contact.
Radio Check	Sends a device check command to a private call contact
Remote Monitor	Allows you to remotely monitor another radio
High/Low Power	Allows user to switch between high and low power
Repeater/Talkaround	Allows radio to communicate through a repeater or speak directly to another radio without a repeater.
VOX On/Off	Enables and disables the VOX function
Nuisance Delete	While scanning, allows you to remove a channel from the scan list.
Permanent Monitor	Enables and disables the monitor function. Only works with a long key press


Note:

For an analog channel, the following keys are useful: Unassigned, Monitor, Backlight Auto On/Off, Keypad Lock, Scan On/Off, All Alert Tone on/off, Battery Indicator, Zone Toggle, High/Low Power, Repeater/Talk Around on/off, Nuisance Delete, Permanent Monitor.

Functions and Operations

Digital channel ()

Contacts

Press the  key to access the contact list. From the contacts, you can access list members, add new contacts or manually dial.

1. Group Call ()

After selecting a group contact as shown below, pressing OK will then allow you to select **Details** or **Send Message**. Selecting Details will allow you to see the alias and the ID number for that contact. Selecting Send Message will then allow you to send a new SMS or a predefined SMS



2. Private Call ()

After selecting a private contact as shown below, pressing OK will then allow you to select **Details**, **Call Alert**, **Send Message**, **Device Check**, **Remote Monitor**, **Device Enable**, **Device Disable**, **Edit SMS**, or **Delete**.



- **Details:** Allows you to see the Alias and ID number for the contact selected.
- **Call Alert:** Call alert is used for prompting an individual radio. You are asking them to respond and transmit if communication is available. While receiving a call alert command, the radio will generate alert tone.
- **Send Message:** Allows you to send a new SMS or a predefined SMS.
- **Device Check:** This function checks if the target radio is active without alerting the target radio. When the target radio is active, the screen displays: "target radio has replied", while if the radio is unavailable, the screen displays: "fail!"
- **Remote Monitor:** Allow a user to send a "Remote Monitor" request to the target radio. If the request is successful, you can enable the microphone of the target radio and monitor its activities. The target radio has to be set to allow the remote monitor command to be decoded.
- **Device enable:** Allow a user to send "Device enable" command to the target radio. If request successful, killed radio will now be operational.
- **Device Disable:** Allow a user to send "Device Disable" command to the target radio. If the target radio is lost or stolen, a user can use this function to disable the radio. The disabled radio will still be able to receive the Device Enable command.
- **Edit Contact:** Modify the ID number or alias of a private call contact. Press "*" key to delete last character entered or press "#" to switch input method. The numeric range for the ID is 1~16776415. The Alias can have up to 16 characters.
- **Delete:** Deletes unwanted contacts from the address list. If private call contact is set as channel TX Contact or call number on one touch call, the contact will not be deleted.

All Call

After selecting an all contact as shown below, pressing OK will then allow you to use that contact by pressing the PTT key.



Manual Dial

You can manually input the private call number for calling or sending call alert, sending message, device check, remote monitor, device enable or device disable.



New Contact

You can add a private call contact to the contact list. When editing the name, press "*" to delete, press "#1" to enter special characters, press "#0" to enter a space and use the rest of the keys to enter the alphanumeric characters. The name can be up to 16 characters. Next input number. The number can have a range of 1~16776415. After the private call contact was successfully added, the contacts list will show the new contact.

Scan

Scan On/Off



If current channel scan list contains at least 2 channels, at you may enable the Scan On/Off feature. Scanning allows the device to search the scan list connected to the current channel to locate qualified channel for receiving voice. During scanning, the (Z) icon flashes. When activities are detected on a channel, the radio will stay on the channel to receive current activities and the icon (Z) will stop flashing. If you don't want to receive activities on the channel, press the programmed Nuisance Delete key to remove the channel from the scan list temporarily. To exit the scanning process, enter scan menu, switch channel or press the programmed Scan key.



Note: If the channel enables the feature "Auto Scan" via the programming software, switching to that channel will enter scanning automatically. If button 1 or 2 is programmed as Scan on/off, press that button to enable scan feature.

View/Edit List

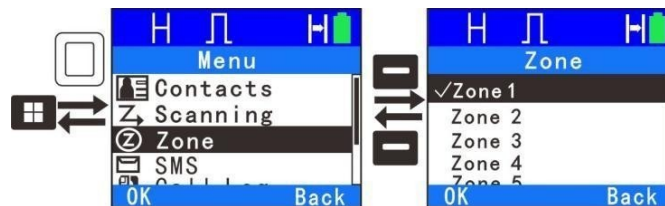
"View/Edit Member" allows a user to view the scan members, delete a member from the scan list or add a member to the scan list. If you add a member, you have to remember the list can contain no more than 16 channels. This feature will not allow you to generate a new scan list or delete an existing scan list.

Digital and analog channel can appear in the same scan list.



Zone

The radio supports up to 50 zones and each zone supports 16 channels giving a total of 800 channel. Enter "Zone" menu to select a desired zone.





Messages

New SMS

You can edit desired text message (140 characters at most) and send it to a private call contact or a group call contact. When editing the name, press "*" key to delete, press "#1" to enter special characters, press "#0" to enter a space and use the rest of the keys to enter the alphanumeric characters. Press left or right key to move input cursor. After the message is edited, you can select a contact from the address list which the message is sent to or manually dial a number to send to.



Inbox

The Inbox can save up to 30 received messages. In the Inbox the unread message displays:  and the read message displays:  For each message, you can choose to perform any of these operations: Reply, Forward and Delete.

Preset SMS





Via programming software, the user can save up to 10 text message entries and each message can contain up to 140 characters. You can choose to edit and send any entry.



Note: Preset text messages also can also be assign to one touch call.

Press the programmed key to send the message.

Outbox

With the outbox menu, you can view if the message was sent successfully or failed. The outbox can save up to 30 sent messages. If the sent message is successful it displays  and you can choose to forward or delete it. If sent message unsuccessful, it displays , and you can choose to resend, forward or delete message.



Delete All

This function is a convenient way to delete all message on the inbox or outbox. Clear All will delete all messages on Inbox and Outbox at the same time. The preset messages can't be deleted.

Call Logs



Missed Calls

The missed calls log can save up to 10 entries. When the memory for call logs is full, the oldest entry will be deleted automatically. You can add the missed call to the contact list or delete it.

Answered Calls



The answered calls log can save up to 10 entries. When the memory for call logs is full, the oldest entry will be deleted automatically. You can add the answered call to the contact list or delete it.



Outgoing Calls

The outgoing calls log can save up to 10 entries. When the memory for outgoing call logs is full, the oldest entry will be deleted automatically. You can add the outgoing call to contact list or delete it.

Clear Record



This function is convenient to delete Missed call logs Answered call logs or Outgoing call logs, Clear All will delete all call logs at the same time.

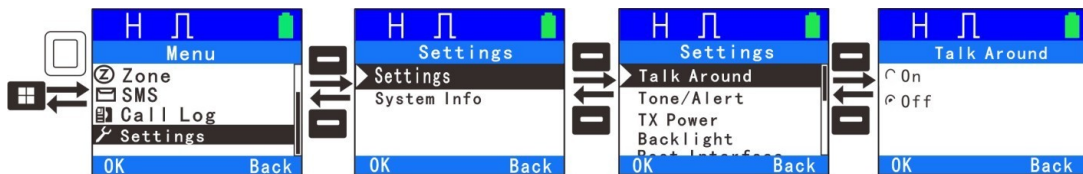


Settings

Settings

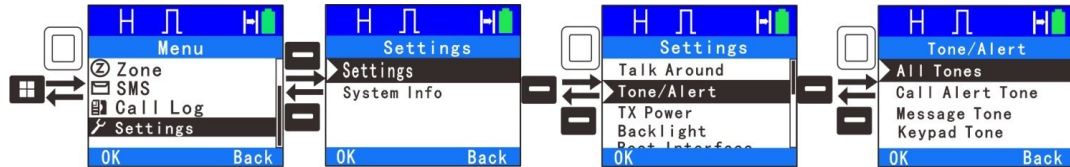
Allows a user to perform basic settings for the two-way radio.

Talk Around: When your repeater malfunctions or when the radio is out of repeater's range, you can continue to communicate in talk around mode. With the enable talk around feature, the screen displays: and the TX frequency will be the same as the RX frequency. If the channel is switched, the scan is enabled, or the radio was restarted, the feature will be disabled.

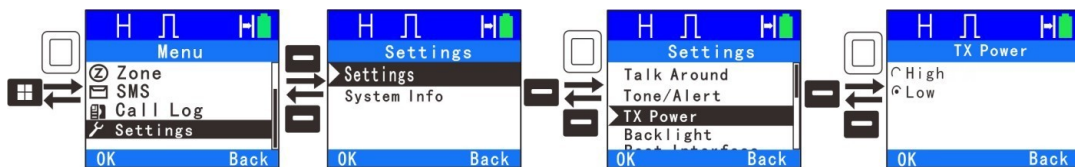


Note: To enable this function, TX frequency should be different from RX frequency, and the channel will set as allow talk around on the programming software.

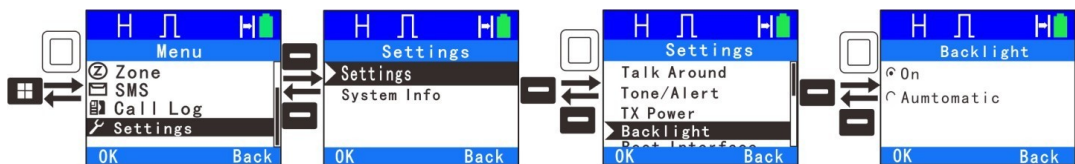
☞ Tone/Alerts: To sets alert tones for your radio. Tone alerts include settings of all tones, call alert tone, message tone and keypad tone. If disabled, all alert tones will be off except emergency tone.



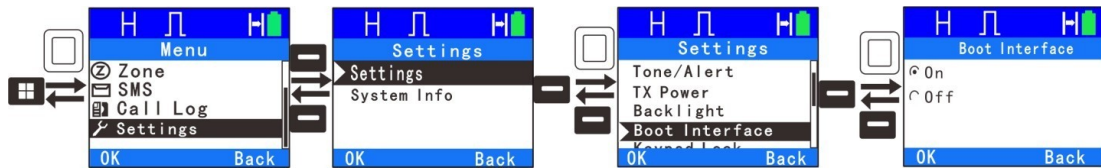
☞ TX Power : Allow a user to change the power level between high and low indicated by H and L on the display.




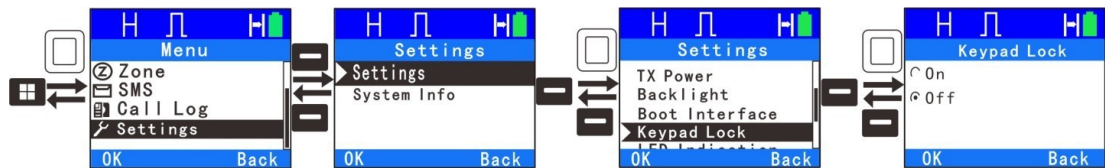
☞ Backlight: To set the backlight parametres, you can select on or automatic. When you select automatic, the light will stay on for 5 seconds after a key is pressed. If you select on, the light will stay on as long as the power is on.



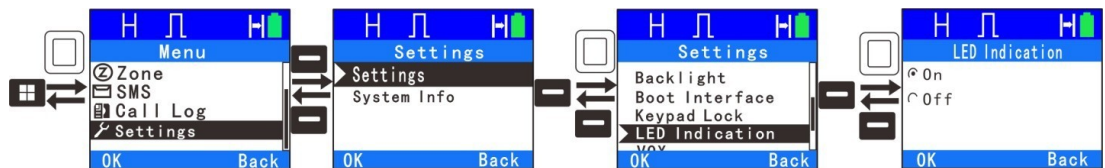
Boot Interface: Allow a user to enable or disable the introduction screen when the power is first turned on. When the introduction screen is enabled, the display will show the FDP Logo and the device name. When the introduction screen is disabled, the screen will only show the device name.




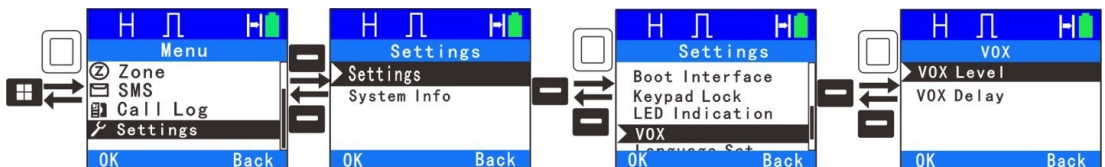
Keypad Lock: Allow a user to enable or disable the keypad lock via the menu. The Keypad locked is indicated by  When the keyboard is locked, you can only operate the PTT key, button 1 or button 2. Press “MENU” and “#” key to unlock.



LED indicator: To enable or disable LED indication. While disabled all indicators are turned off including the backlight of the LCD, the RX Green Indicator, the TX Red indicator and the Orange Scan indicator. Please use this function with due care because once it is disabled, it is difficult to enable because it is almost impossible to read the screen.

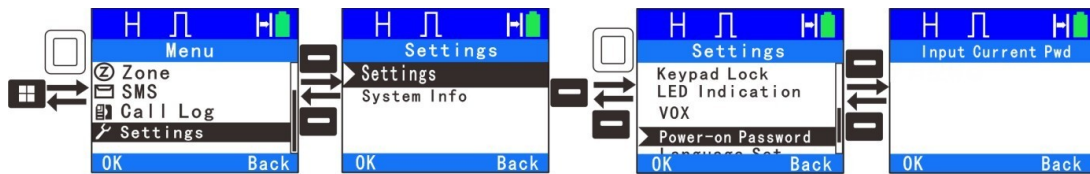


VOX: While this function is enabled you can enjoy hands-free communication. The radio will automatically begin transmitting when you speak, and terminate transmitting when you stop speaking with no need of PTT press. Allow user to set the VOX level (level 1-8) and VOX delay (0.5~10seconds) via menu. VOX on indicate by : 



Note: The VOX feature only is used if you are using a supported headphone.

Power-on Password: If the power-on password feature is enabled via the programming software, you can modify the password by this menu. First you need input old password correctly and then input a new password twice.

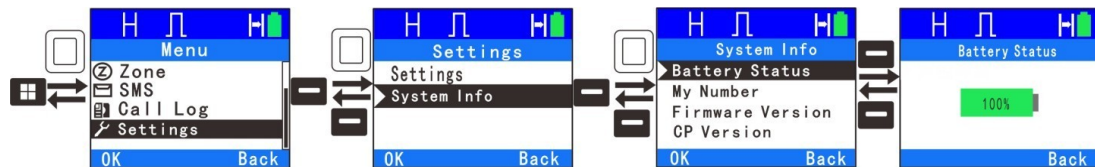


Note: This menu is effective if power on password is set via programming software.

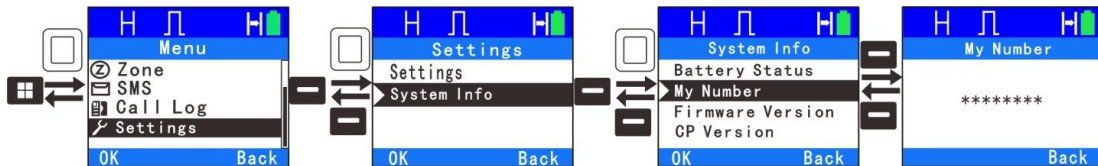
System Info

With this option, you can view the basic information of your radio.

- **Battery Status:** To view the radio's battery capacity. It's convenient for user to know the battery capacity so they can change or charge the battery before its completely discharged.



- **My Number:** Allow a user to view the radio ID number, which is same as device ID.



Digital Emergency

In case of an emergency you can enter an emergency mode to ask for help. There are three emergency types and three emergency mode available.

Emergency Type:

Regular: In emergency mode, the radio will give audible and visible indication;

Silent: In emergency mode, the radio won't give any audible or visible indication;

Silent with Voice: In emergency mode, the radio won't give any audible or visible indication, but will receive voice.


Emergency Mode:

Alarm: In this mode, you can send alarm information and expect to get an ACK back. It will do this for the maximum number of retries programmed before it will exit the emergency mode.

Alarm with Call: You can press programmed “Emergency On/Off” key to send emergency information and then press PTT to transmit an emergency call.

Alarm with voice to follow: You can press programmed “Emergency On/Off” key to send emergency information, then you can speak into the microphone, allowing your voice and background noise be transmitted automatically as you do not need to press PTT Key.


Send Emergency Alarm

If the current channel has the emergency system enabled and the current channel is used as the emergency revert channel, pressing the programmed “ emergency on/off” key sends alarm information, the LED indicator glows red, and the radio displays icon  as “regular” type.

Exit emergency mode

If the Emergency Type is Regular and in Emergency Alarm mode, the radio will continue to send Alarm messages and stay in the alarm mode until it gets back an ACK or the number of retries sent is at the maximum number programmed. You can also exit the alarm mode by a long press of the Emergency on/off key. If Emergency Type is silent or silent with voice, pressing the PTT key or a long press of the programmed emergency key will exit the emergency mode.

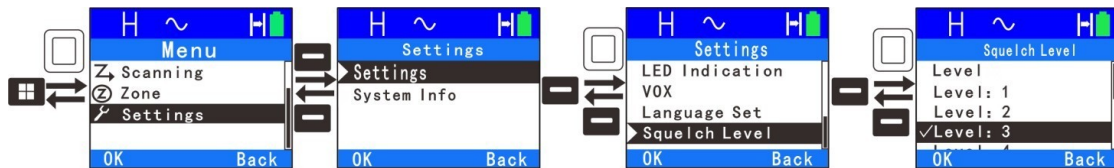
Receive Emergency Information

When the feature “emergency alarm indication” is enabled, if received emergency information, the radio displays icon , the transmitter’s ID and name, an alarm tone will sound. To exit the emergency mode, long press the programmed emergency key.

Analogue Channel (~)

In analogue mode, the radio only supports three basic operations. The first is the scanning, the second is zone and the third is settings. The scan and zone features are the same as in the digital mode. The radio settings is the same as digital except squelch level has been added.

Squelch Level: In the analog mode, this feature allows you to adjust the squelch threshold required for the radio to un-mute. You can set SQL 1~9, Level 3 is the default.



CTCSS/CDCSS

In analog channel, you can set unique CTCSS tones or CDCSS codes to guarantee the privacy of your communication. If CTCSS tone or CDCSS code has been set in the current channel, a matching CTCSS tone or CDCSS code is required for the radio to receive an incoming signal. You can select a CTCSS tone from the standard CTCSS tone table or a DCS Code from the standard CDCSS code table.

Set the encode and decode parameters in the Channel screen.

- **Decode:** Only when receiver receives a call containing matching the decode, you can hear the call. If you set it to “None”, then the radio will hear all CTCSS tones and CDCSS Codes with the disadvantage that you will also hear all noise and calls made for someone else.
- **Encode:** Signal that you transmit will only be heard by parties whose CTCSS/CDCSS signaling matches your transceiver.

Note : The radio will accept non-standard CTCSS codes in analog mode.

Voice Encryption

The voice encryption can encrypt your audio signals to guarantee the privacy of your communication. This feature is setup in the programming software. The user can select encryption type as static or dynamic. If the encrypt feature is enabled, the transmitter and receiver must be set as the same encryption type and same encryption key, otherwise the receiver is muted.

Note: This feature is effective only on digital channel.

Time Out Timer (TOT)

The purpose of TOT is to prevent any user from occupying a channel for an extended period and preventing the radio from overheating. If a channel is busy, the time will be shorter. If the preset time expires, the radio will generate beep and terminate transmission automatically. With the programming software, you can set TOT between 15 – 495 seconds, however only 180 seconds is allowed as maximum for Australian Standards.

TX Permission

Digital Channel

This feature called “Admit Criteria” and found on the Channel screen can restrict the channel from transmitting if it is already in use. There are three options available: always, color code free, channel free, if choose always, whenever the PTT key is pressed the radio will transmit.

If choose color code free, you will be unable to transmit on the channel if the color code is already in use; If choose channel free, you will be unable to transmit on the channel if it is already in use. If the channel is busy, pressing the PTT key will generate a warning tone.

Analog Channel

This feature called “BCL” (Busy Channel Lockout) and found on the channel screen can restrict the channel from transmitting if it is already in use. There are three options available: off, carrier, CTCSS/CDCSS, if choose Off, whenever the PTT key is pressed the radio will transmit. If choose carrier, you will be unable to transmit on the channel if the channel is being used by others. If choose CTCSS/CDCSS, you will be unable to transmit on the channel if it is already in use and the CTCSS/CDCSS code in use. If the channel is busy, pressing the PTT key will generate a warning tone.

Battery Saver

This function allows an idle radio to enter automatically a battery saver mode. This mode will extend battery service life, but response time may be delayed. You can set battery saver time ratio as 1:1, 1:2, 1:3 or 1:4 The larger the second number, the more power is saved and the longer the battery will last. This feature is found in General Settings of the programmable software. The greater the battery save ratio, the greater the receive lag can be when coming out of standby mode.

Low Battery Warning

When your battery gets low, the LED indicator glows red and a warning message of “Please Charge” will be announced. Please replace the battery or charge the battery. The radio will turn off automatically while battery is too low. This feature is found in General Settings of the programmable software.

Note: Keep the antenna more than 25mm away from any part of your body or head when transmitting.