



# CS750 Instruction Manual



**(This is a revised Version of the CSI Manual. The Information contained was created by Independent Radio Operator. Connect Systems does not have any responsibility for its content. Document created as an aid to other radio operators. User assumes complete responsibility for using this document.)**

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## Unpacking and Checking the Equipment

Unpack the radio carefully. We recommend that you identify the items listed below in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, please contact the carrier or the dealer immediately.

### Supplied Accessories

|   | Item               | Quantity |
|---|--------------------|----------|
| 1 | Radio              | 1        |
| 2 | Antenna            | 1        |
| 3 | Battery            | 1        |
| 4 | Hand Strap         | 1        |
| 5 | Charger            | 1        |
| 4 | Power Adapter      | 1        |
| 7 | Belt Clip          | 1        |
| 8 | Instruction Manual | 1        |

## Getting started

### Charging the Battery

Plug the power adapter into the proper AC wall outlet and insert the DC plug in the charger base. The Red LED will flash for 4.5 seconds after it is first turned on.

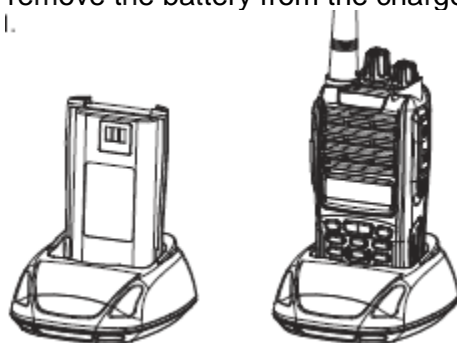
Insert the battery or the radio to be charged into the charger slot. Please turn off the radio before inserting it into the charger.

Make sure the battery is in good contact with the charger terminals. When the red indicator is lit, the charger begins to charge the battery.

After charging for about 3 hours, the red LED will turn OFF and the green LED will turn on indicating the battery has been fully charged.

Only for NiMH battery on the first charge, please leave the battery in for two more hours after the green light first turns on before you remove it from the charger to achieve the best performance of the battery. Then you can disconnect the power adapter from the AC outlet.

If the Red LED flashes quickly (0.2s on 0.2s off), this means the charging process has stopped because the charging temperature is too high or the battery has a problem. If that happens the charger enters a protective state and no more charge is delivered to the battery. Please stop charging in such situation and remove the battery from the charger.



### Notice:

The new battery is not fully charged in the factory, and needs to be fully charged when you use the radio for the first time.

The radio is supplied with a standard battery manufactured by the factory.

The battery, after been in storage for a long period ,will not reach the full capacity till several charging and discharging (during use) cycles.

Do not recharge the battery after it has been fully charged or it is partially discharged, otherwise it might affect the battery life or performance. Remove the battery from the charger after charging is finished.

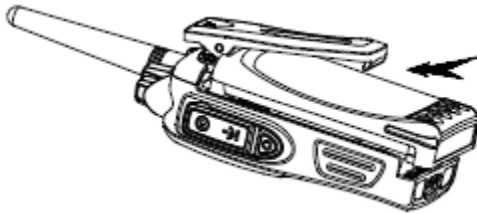
If the radio enters a low battery warning state, please recharge the battery. Do not use the radio in a low power warning state because it will affect the battery life and performance.

### Installing/Removing the Battery Pack

To install the battery, please place it into the groove on the top of the radio chassis about 5mm away from latch.

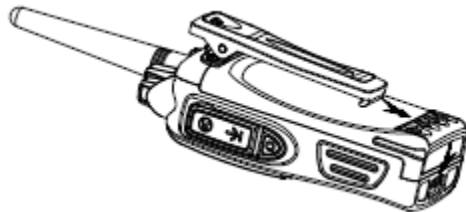
If the radio has the belt clip installed, you will have to press one side of the clip to raise it and then slide the battery in proper position.

Press the battery with your fingers and push the battery until you hear a latch click. The battery is now installed.



### Removing the battery pack

If you want to remove the battery from the radio, first press the battery latch located on the bottom of the radio, and then press down to slide the battery about 5mm to release the latch.

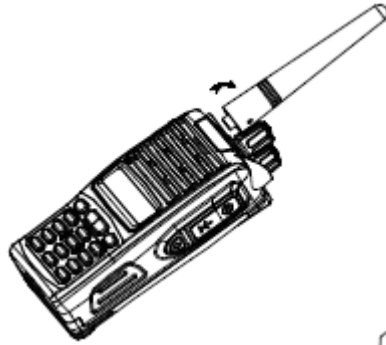


#### Notice:

- Do not short-circuit the battery terminals or dispose the battery in fire.
- Do not disassemble the battery case.

### Installing the Antenna

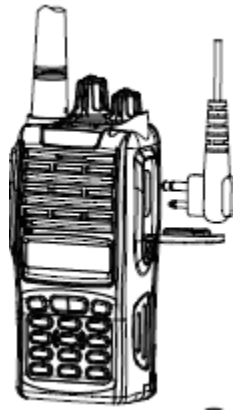
Screw the antenna into the connector at the top of the radio by holding the bottom of the



antenna and turn it clockwise until secure.

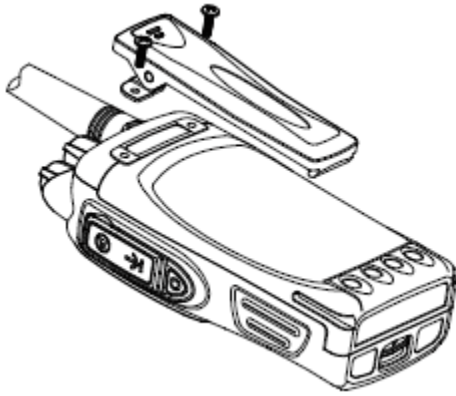
### Install external speaker/MIC

Open the cover of the jack for external speaker/MIC, and then insert the plug of the external speaker or microphone into the jack on the radio. When inserting the accessory plug, make sure it is properly aligned (straight) to avoid internal damage to the connector in the radio.

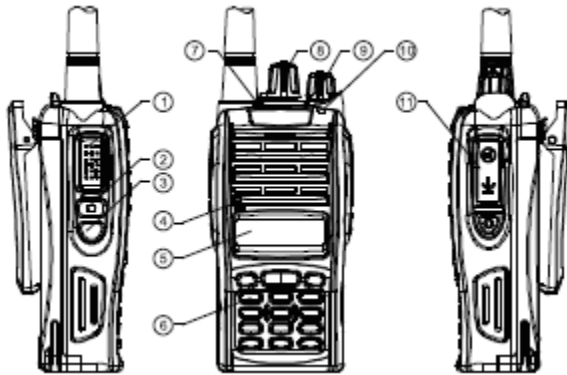


## Installing/Removing the Belt Clip

Use the 2 screws (M2.5x8.0) supplied with the radio and insert these screws through the holes in the radio clip and into the holes in the aluminum case. If you want to remove the clip from the radio, just unscrew them, and remove the clip. You can put the screws back into the radio to make sure you do not lose them.



## Radio Overview



### 1. PTT ( PUSH-TO-TALK) Button

To make a call, press and hold the PTT button, then speak into the microphone in normal voice. Release the PTT button to receive signals.

### 2. Side Button 1 (Programmable Button)

### 3. Side Button 2 (Programmable Button)

### 4. MIC Input

Please keep your mouth about 10 cm (3-4 inches) away from the microphone to achieve the best voice quality. If the distance is too far or too close to the radio, it will affect the voice quality

### 5. LCD

### 6. Key Pad





















### 7. Top Button (Programmable Button)

### 8. Channel Selector, Rotate to select Channel



9. Power/Volume Knob. Turn clockwise to switch on the radio. Turn counterclockwise till a click is heard to switch off the radio.

10. LED Indicator. LED Indicator Status/Alert: Green LED lights a carrier is detected in the current channel. Red LED lights during transmission. Orange LED flashes when scanning. Red LED flashed when low battery

| ICON  | Description  |
|---|--|
|    | RSSI: Received Signal Strength Indicator   |
|    | Monitor: Selected channel is being monitored   |
|    | RF Power Level: Radio is currently set at Low Power(L) or High Power(H)  |
|    | Tones Disable: Tones are turned off  |
|    | GPS Available: The GPS feature is enabled. The icon stays lit when a position fix is available   |
|    | GPS Not Available: The GPS feature is enabled but is not receiving data from the satellites  |
|    | Scan: Scan feature is enabled  |
|    | Priority Scan: Radio recognizes activity on the channel/group designated as Priority 1(if • is blinking) or as Priority 2(if • is steady)  |
|    | Unread Message: Unread message in the Inbox  |
|    | Inbox Full: User's Inbox is full   |
|    | Emergency: Radio is in Emergency mode  |
|    | Secure: The Privacy feature is enabled   |
|    | Unsecure: The Privacy feature is disabled  |
|    | Talk Around: In the absence of a repeater, radio is currently configured for direct radio to radio communication   |
|   | Battery Meter  |
|  | Private Call: Indicates a Private Call in progress. In Contacts list, it indicates a subscriber alias or ID  |
|  | Group Call/All Call: Indicates a Group Call or All Call in progress. In Contacts list, it indicates a group alias or ID  |
|  | Sent Successfully: The text message is sent successfully   |
|  | Send Failed: The text message cannot be sent   |
|  | In-Progress:<br>•The text message to a group alias or ID is pending transmission<br>•The text message to a subscriber alias or ID is pending transmission, followed by waiting for acknowledgement |

## Basic Operations

### Power on the radio

Turn on the radio by turning the Power/Volume switch clockwise till a click is heard, and you will hear a Power up beep if the dealer has set it. The radio is now in Rx mode.

### Adjust Volume

Rotate the Power/Volume knob to adjust the volume. Turn clockwise to increase the volume and counterclockwise to decrease the volume.



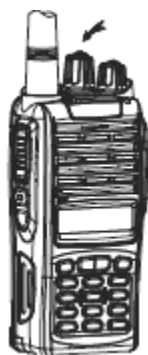
### Select a Channel

Rotate the channel selector to the desired channel. When a signal is received, it will be heard in the speaker.

Each channel in your radio can be configured as an analog channel or a digital channel. Use the Channel Selector Knob to switch between an analog channel or a digital channel. When switch from digital to analog mode, certain features are unavailable. Icons for the digital features (such as Messages) reflect this change by appearing "grayed out". Disabled features are hidden in the menu.

Your radio also has features available in both analog and digital mode. However, the minor differences in the way each feature works does not affect the performance of your radio.

NOTE: Your radio also switches between digital and analog modes during a dual mode scan










### Make a Call Selecting a Zone

A zone is a group of channels. Your radio supports up to 250 zones, with a maximum of 16 channels per zone. Use the following procedure to select a zone.

Procedure:

Press the programmed Zone button and proceed to step 2.

OR Follow the procedure below.

1. Press  then press  /  to Zone and press  to select.
2. The current zone is displayed and indicated by a ✓
3. Press  /  to the required zone and press  to select.
4. The display shows <Zone> Selected momentarily.

## Selecting a Radio Channel, Subscriber ID, or Group ID

Procedure:

Once the required zone is displayed, if you have multiple zones in your radio, turn the programmed channel Selector Knob to select the channel, subscriber alias or ID, or group alias or ID

## Receiving and Responding to a Radio Call

Once the channel, subscriber ID or group ID is displayed, you can proceed to receive and respond to calls.

To unscramble a privacy-enabled call, your radio must have the same Privacy Key, OR the same Key Value and Key ID (programmed by your dealer), as the transmitting radio (the radio you are receiving the call from)

## Receiving and Responding to a Group Call

To receive a call from a group of users, your radio must be configured as part of that group.

Procedure:

When you receive a Group Call (while on the Home screen)

1. The green LED lights.
2. The first line of the display shows the caller alias and the RSSI icon. The second line displays the group alias and the Group Call icon (in Digital mode only).
3. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.  
If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is free for you to respond.
4. Press the PTT button to respond to the call and the RED LED turns on.
5. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
6. Release the PTT button to listen.
7. If there is no voice activity for a predetermined period of time, the call ends.

## Receiving and Responding to a Private Call

A Private Call is a call from an individual radio to another individual radio.

There are two types of Private Calls. The first type is where a radio presence check is performed prior to setting up the call. The other type sets up the call immediately.

Procedure:

1. The green LED turns on.
2. The first line of the display shows the subscriber alias or ID, and the RSSI icon. The second line displays Private Call and the Private Call icon.
3. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is free for you to respond.
4. Press the PTT button to respond to the call. The RED LED turns on.
5. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
6. Release the PTT button to listen.
7. If there is no voice activity for a predetermined period of time, the call ends.
8. You hear a short tone. The display shows Call Ended.

## Receiving an All Call

An All Call is a call from an individual radio to every radio on the channel. It is used to make important announcements requiring the user's full attention.

Procedure:

When you receive an All Call:

1. A Tone sounds and the Green LED turns on.

2. The first line of the display shows the caller alias and the RSSI icon. The second line displays All Call and the All Call icon.

3. Once the All Call ends, the radio returns to the previous screen before receiving the call. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is now available for use.

You cannot respond to an All Call.

NOTE: the radio stops receiving the All Call if you switch to a different channel while receiving the call. During an All Call, you will not be able to use any programmed button functions until the call ends.

## **Making a Radio Call**

You can select a channel, subscriber ID, or group by using:

- The Channel Selector Knob
- A programmed One Touch Call button
- The Contacts list
- Manual Dial (Via Contacts) This method is for Private Calls only and is dialed using the keypad.

NOTE: Your radio must have the Privacy feature enabled on the channel to send a privacy-enabled transmission.

Only target radios with the same Privacy Key OR the same Key Value and Key ID as your radio will be able to unscramble the transmission.

## **Making a Call with the Channel Selector Knob**

### **Making a Group Call**

To make a call to a group of users, your radio must be configured as part of that group.

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active group alias or ID.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0cm) from your mouth.
3. Press the PTT button to make the call. The RED LED turns on. The display shows the group alias or ID and the Group Call icon.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT button to listen. When the target radio responds, the LED blinks green. You see the Group Call icon, the group alias or ID, and transmitting radio alias or ID on your display.
6. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the PTT button, indicating the channel is free for you to respond. Press the PTT button to respond.

OR

If there is no voice activity for a predetermined period of time, the call ends.

7. Radio returns to the previous screen you were on prior to receiving the call.

You can also make a Group Call via Contacts.

### **Making a Private Call**

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active subscriber alias or ID.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
3. Press the PTT button to make the call. The RED LED turns on. The first line displays the subscriber alias or ID. The second line displays Private Call and the Private Call icon.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT button to listen. When the target radio responds, the Green LED turns on.

6. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the PTT button, indicating the channel is free for you to respond. Press the PTT button to respond.

OR

If there is no voice activity for a predetermined period of time, the call ends.

7. You hear a short tone. The display shows Call Ended.

You can also make a Private Call via Contacts or perform a quick alphanumeric search for the required alias via a keypad entry.

### **Making a All Call**

This feature allows you to transmit to all users on the channel. Your radio must be programmed to allow you to use this feature.

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active All Call group alias or ID.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
3. Press the PTT button to make the call. The RED LED turns on. The display shows the All Call group alias or ID and the All Call icon.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

NOTE: Users on the channel cannot respond to an All Call.

### **Making a Group or Private Call with the One Touch Call Button**

The One Touch Call feature allows you to make a Group or Private Call to a predefined alias or ID easily. This feature can be assigned to a short or long programmable button press.

You can ONLY have one alias or ID assigned to a One Touch Call button. Your radio can have multiple One Touch Call buttons programmed.

Procedure:

1. Press the programmed One Touch Call button to make a Group or Private Call to the predefined alias or ID.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
3. Press the PTT button to make the call. The RED LED turns on. The display shows the group/subscriber alias or ID, and the Group/Private Call icon.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT button to listen. When the target radio responds, the Green LED turns on.
6. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the PTT button, indicating the channel is free for you to respond. Press the PTT button to respond.

OR

If there is no voice activity for a predetermined period of time, the call ends.

### **Talkaround**








You can continue to communicate when your repeater is not operating, or when your radio is out of the repeater's range but within talking range of other radios. This is called "talkaround".

Procedure:

Press the programmed Repeater/Talkaround button to toggle between talkaround and repeater modes.

OR

Follow the procedure below.

1. Press  to access the menu.
2. Press  /  to Utilities and press  to select
3. Press  /  to Radio Settings and press  to select

4. Press: / to Talkaround and press to confirm or press to cancel.
  5. After confirmation, the display shows "Talkaround On" OR "Talkaround Off"
  6. Press or wait the presetting time to exit the menu state.
- The Talkaround setting is retained even after powering down.

## Monitoring Features (Analog)

### Monitoring a Channel

Use the Monitor feature to make sure a channel is clear before transmitting by listening for activity on the channel.

Procedure:

1. Press the programmed Monitor button and listen for activity. The monitor icon appears on the display.
2. If you hear activity on the channel the channel is busy. If you hear "white noise" on the channel the channel is free.

## Advanced Features

### Radio Check

If enabled, this feature allows you to determine if another radio is active in a system without disturbing the user of that radio. No audible or visual notification is shown on the target radio. This feature is only applicable for subscriber aliases or IDs

### Sending a Radio Check

Procedure:

Use the menu.

1. Press to access the menu.
  2. Press / to Contacts and press to select
  3. Press / to the required subscriber alias or ID and press to select
- OR
- Press / to Manual Dial and press to select. Key in the subscriber alias or ID and Press.
4. Press / to Radio Check and press to select.
  5. Wait for acknowledgement
  6. If the target radio is active in the system, a tone sounds and the display briefly shows Target Radio Available.
- OR
- If the target radio is not active in the system, a tone sounds to show Target Radio Not Available.
7. Radio returns to the subscriber alias or ID screen.

### Remote Monitor

Use the Remote Monitor feature to turn on the microphone of a target radio (subscriber alias or IDs only). No audible or visual indication is given to the target radio. You can use this feature to monitor, remotely, any audible activity surrounding the target radio. Your radio must be programmed to allow you to use this feature.

### Initiating Remote Monitor





Procedure:

Use the programmed Remote Monitor button.

Use the menu.

1. Press to access the menu.
2. Press / to Contacts and press to select
3. Press / to the required subscriber alias or ID and press to select

OR

Press   to Manual Dial and press  to select. Key in the subscriber alias or ID and Press  to select.

4. Press   to Remote Mon. and press  to select.

5. Wait for acknowledgement

6. The display shows Remote Monitor Successful.

OR

The display shows Remote Monitor Failed.

7. If successful:

The radio starts receiving audio from the monitored radio for a programmed duration.

Once the timer expires, the radio sounds an alert tone.

The display shows Remote Monitor Ended.

OR

If unsuccessful:

The radio repeats the attempt until the programmed number of tries expires.










## Scan Lists

Scan lists are created and assigned to individual channels/groups. Your radio scans for voice activity by cycling through the channel/group sequence specified in the scan list for the current channel/group.

Your radio can support up to 250 scan lists. A scan list can contain 31 channels in addition to the selected channel. Each scan list supports a mixture of both analog and digital entries.

You can add, delete, or prioritize channels by editing a scan list.

Procedure:

1. Press  to access the menu.
2. Press   to Scan and press  to select
3. Press   to View/Edit List and press  to select
4. Press   to view each member on the list.

## Scan

When you start a scan, your radio cycles through the programmed scan list looking for voice activity. The LED blinks Orange while in scan mode. During a dual mode scan, if you are on a digital channel, and your radio locks onto an analog channel, it automatically switches from digital mode to analog mode for the duration of the call. This is also true for the reverse.

There are two ways of initiating scan:

- Main Channel Scan (Manual): Your radio scans all the channels/groups in your scan list. On entering scan, your radio may, depending on the settings, automatically start on the last scanned "active" channel/group or on the channel where scan was initiated.
- Auto Scan (Automatic): Your radio automatically starts scanning when you select a channel/group that has Auto Scan enabled.





## Starting and Stopping Scan

Procedure:

Press the programmed Scan button to start or stop Scan.

OR


Follow the procedure below.

1. Use the Channel Selector Knob to select a channel programmed with a scan list.
2. Press  to access the menu.
3. Press   to Scan and press  to select
4. The display shows Turn On if scan is disabled.

OR



The display shows Turn Off if scan is enabled.

5. Press  to select. The LED blinks orange when Scan is enabled. Or the LED turns off when Scan is disabled.

### Responding to a Transmission During a Scan

During scanning, your radio stops on a channel/group where activity is detected. The radio stays on that channel for a programmed time period known as "hang time"

Procedure:

1. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.  
If digital channel and the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is free for you to respond.
2. Press the PTT button during hang time. The RED LED turns on.
3. Wait for the Talk Permit Tone to finish if enabled and speak clearly into the microphone.
4. Release the PTT button to listen.
5. If you do not respond within the hang time, the radio returns to scanning other channels/groups.

### Deleting a Nuisance Channel

If a channel continually generates unwanted calls or noise (termed a "nuisance" channel), you can temporarily remove the unwanted channel from the scan list.

This capability does not apply to the channel designated as the Selected Channel.

Procedure:

1. When your radio locks on to an unwanted or nuisance channel, press the programmed Nuisance Channel Delete button until you hear a tone.
  2. Release the Nuisance Channel Delete button. The nuisance channel is deleted.
- Deleting a "nuisance" channel is only possible through the programmed Nuisance Channel Delete button. This feature is not accessible through the menu.

### Restoring a Nuisance Channel

Procedure:

To restore the deleted nuisance channel, do ONE of the following:

- Turn the radio off and then powering it on again.
- Stop and restart a scan via the programmed Scan button or menu.
- Change the channel via the Channel Selector Knob.

### Contacts Settings

Contacts provides "address-book" capabilities on your radio. Each entry corresponds to an alias or ID that you use to initiate a call.

Additionally, each entry, depending on context, associates with ONE of five types of calls: Group Call, Private Call, All Call, PC Call or Dispatch Call, PC Call and Dispatch Call are data-related. They are only available with the applications. Refer to the data applications documentation for more information.

NOTE: If the Privacy feature is enabled on a channel, you can make privacy-enabled Group Call, Private Call, and All Call on that channel. Only target radios with the same Privacy Key OR the same Key Value and Key ID as your radio will be able to unscramble the transmission.

Each entry within Contacts displays the following information:







- Call Type
- CallAlias
- Call ID

NOTE: You can add, delete, or edit subscriber IDs for the Digital Contacts list.









## Making a Group Call from Contacts

Procedure:



1. Press  to access the menu.
2. Press  /  to Contacts and press  to select. The entries are alphabetically sorted.
3. Press  /  to the required group alias or ID.
4. Press the PTT button to make the call.

## Making a Private Call from Contacts

Procedure:

1. Press  to access the menu.
2. Press  /  to Contacts and press  to select. The entries are alphabetically sorted.
3. Press  /  to the required subscriber alias or ID.

OR

Press  /  to Manual Dial and press 00 to select. Use the keypad to enter a new subscriber alias or ID.


















Press the PTT button to make the call

## Call Indicator Settings


Activating and Deactivating Call Ringers for Private Calls

You can turn on or off the ringing tones for a received Private Call.

Procedure:

1. Press  to access the menu.
2. Press  /  to Utilities and press  to select.
3. Press  /  to Radio Settings and press  to select.
4. Press  /  to Tone/Alerts and press  to select.
5. Press  /  to Call Ringers and press  to select.
6. Press  /  to Private Call and press  to select.
7. The display shows Turn On. Press  to enable Call Ringers for Private Calls. The display shows Private Call Ringer On.





















OR

The display shows Turn Off. Press  to disable Call Ringers for Private Calls. The display shows Private Call Ringer Off.

## Activating and Deactivating Call Ringers for Text Message





You can turn on or off the ringing tones for a received Text Message.

Procedure:

1. Press  to access the menu.
2. Press  /  to Utilities and press  to select.
3. Press  /  to Radio Settings and press  to select.
4. Press  /  to Tone/Alerts and press  to select.
5. Press  /  to Call Ringers and press  to select.
6. Press  /  to Text Message and press  to select.
7. The current tone is indicated by a 
8. Press  /  to the preferred tone and press  to select.

The display shows Tone <Number> Selected and a  appears left of the selected tone.














OR

Press  /  to Turn Off and press  to select. The display shows Text Message Ringer Off and a  appears left of Turn Off.




### Assigning Ring Styles (Available after Version 2)

You can program your radio to sound one of ten predefined ringing tones when receiving a Call Alert or a Text Message from a particular contact.

Procedure:

1. Press  to access the menu.
2. Press /  to Contacts and press  to select. The entries are alphabetically sorted.
3. Press /  to the required alias or ID and press  to select.
4. Press /  to Ring Style and press  to select.
5. A.,j indicates the current selected tone.
6. Press /  to the required tone and press  to select.
7. The display shows Tone <Number> Selected and a ✓ appears left of the selected tone.

OR














Press /  to Turn Off and press  to select. The display shows Text Message Ringer Off and a ✓ appears left of Turn Off.

### Escalating Alarm Tone Volume (Available after Version 2)

You can program your radio to continually alert you when a radio call remains unanswered. This is done by automatically increasing the alarm tone volume over time. This feature is known as Escalart.


Procedure:

Press  to access the menu.

2. Press /  to Utilities and press  to select.
3. Press /  to Radio Settings and press  to select.
4. Press /  to Tones/Alerts and press  to select.
5. Press /  to Escalart and press  to select.
6. The display shows Turn On. Press  to enable Escalart.

The display shows Escalart On.

OR

The display shows Turn Off. Press  to disable Escalart.

The display shows Escalart Off.

### Call Log Features

Your radio keeps track of all recent outgoing, answered, and missed Private Calls. Use the Call log feature to view and manage recent calls.










You can perform the following tasks in each of your call lists:

- Store 10 to Contacts
- Delete

### Viewing Recent Calls

The lists are Missed, Answered, and Outgoing.

Procedure:

1. Press  to access the menu.
2. Press /  to Call Log and press  to select.
3. Press /  to preferred list and press  to select.
4. The display shows the most recent entry at the top of the list.
5. Press /  to view the list.

Press the PTT button to start a Private Call with the current selected alias or ID

## Missed Call Screen

Whenever a call is missed, your radio displays a missed call message. Select View to view it immediately or View Later to view at a later time.

NOTE: The radio exits the Missed Call screen and sets up a Private Call if you press the PTT button while viewing a missed call number.

1. The display shows Missed Calls, along with the number of calls missed and View?
2. Press to view the missed call ID. The missed call log list appears on display.

Press to store or delete the entry.

OR

Press to view Later and press to select. You return to the Home screen.

## Storing an Alias or ID from the Missed Call List

Procedure:

1. Press to access the menu.
2. Press to Call Log and press to select.
3. Press to Missed and press to select.
4. Press to the required missed call alias or ID and press to select.
5. Press to Store and press to select.
6. A blinking cursor appears. If needed, key in the alias for that ID and press .
7. The display shows Contact Saved.

You can also store an ID without an alias.

## Deleting a Call from a Call List

Procedure:

1. Press to access the menu.
2. Press to Call Log and press to select.
3. Press to the required list and press to select.
4. Press to the required alias or ID and press to select.
5. Press to Delete Entry? And press to select. The display show Entry Deleted.

OR

6. Press to No to return to the previous screen.

When you select a call list and it contains no entries, the display shows List Empty, and sounds a low tone if Keypad Tones are turned on.

## Call Alert Operation

Call Alert paging enables you to alert a specific radio user to call you back when they are able to do so.

This feature is applicable for subscriber aliases or IDs only and is accessible through the menu via Contacts or manual dial.

## Receiving and Acknowledging a Call Alert.

Procedure:

1. You hear a repetitive tone.
2. Press and release the PTT button to acknowledge the alert.

OR

Press to select ignore and to exit the Call Alert.

Making a Call Alert from the Contacts List

1. Press to access the menu.
2. Press to Contacts and press to select.
3. Press to the required subscriber alias or ID and press to select.

OR

Press / to Manual Dial and press to select. A blinking cursor appears.

Enter the subscriber ID you want to page and press .

4. Press / to Call Alert and press to select.

5. The display shows Call Alert: <Subscriber Alias or ID>, indicating that the Call Alert has been sent.

6. The RED LED turns on when your radio is sending the Call Alert.

7. If the Call Alert acknowledgement is received, a tone sounds and the display shows Call Alert Successful.

OR

If the Call Alert acknowledgement is not received, a tone sounds and the display shows Call Alert Failed.

## Emergency Operation

An Emergency Alarm is used to indicate a critical situation. You are able to initiate an Emergency at any time on any screen display even when there is activity on the current channel.

Your radio supports 3 Emergency Alarms:

- Emergency Alarm
- Emergency Alarm with Call
- Emergency Alarm with Voice to Follow

In addition, each alarm has the following types:

- Regular - Radio transmits an alarm signal and shows audio and/or visual indicators.
- Silent - Radio transmits an alarm signal without any audio or visual indicators. There will be no response (call) from the target radio until you press the PTT button to initiate the call.
- Silent with Voice - Radio transmits an alarm signal and is able to receive an incoming call without any audio or visual indicators until you press the PTT button to initiate or respond to the call.

Only ONE of the Emergency Alarms above can be assigned to the programmed Emergency button.

## Receiving an Emergency Alarm

Procedure:

1. When receiving an Emergency Alarm, the display shows the Emergency icon, the number of alarms received, and Alarm Rcvd, which alternates with alias ID of the sender.

2. A tone sounds.

3. If enabled, your radio automatically acknowledges the Emergency Alarm.

When your radio receives an Emergency Alarm, it displays the Emergency Alarm received indications until acknowledgement is sent and you exit the Emergency mode.

You will not be able to receive any other indications or displays for any other calls until you exit the Emergency Alarm received screen.

NOTE: Short press, then long press the programmed Emergency button to clear the Emergency Alarm received indications and exit Emergency mode.

## Responding to an Emergency Alarm

Procedure:

When receiving an Emergency Alarm:

1. Press any button to stop all Emergency Alarm received indications.

2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0cm) from your mouth.

If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is now available for use.

3. Press PTT button to initiate a call with the emergency initiating radio. The RED LED turns on. Your radio remains in the Emergency mode.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT button to listen. When the emergency initiating radio responds, you see the Group Call icon, the group ID, and transmitting radio ID on your display.
6. Once your call ends, short press ,then long press the programmed Emergency button to clear the Emergency Call received indications and exit Emergency mode.
7. The radio returns to the Home screen.

### **Sending an Emergency Alarm**

This feature allows you to send an Emergency Alarm, a non-voice signal, which triggers an alert indication on another radio.

Procedure:

1. Press the programmed Emergency button.
2. The display shows "Sending Alarm", which alternates with your radio ID. The RED LED turns on and the Emergency icon appears on the Home screen display.
3. When an Emergency Alarm acknowledgment is received, the Emergency tone sounds and the GREEN LED turns on. The display shows Emergency Alarm Successful.

OR

If your radio does not receive an Emergency Alarm acknowledgment, and after all retries have been exhausted, a tone sounds and the display shows Emergency Alarm Failed.

4. Radio exits the Emergency Alarm mode and returns to the Home screen.

If your radio is set to Silent, it will not display any audio or visual indicators during Emergency mode.

### **Sending an Emergency Alarm with Call**

This feature allows you to send an Emergency Alarm to another radio. Upon acknowledgment, both radios can communicate over a programmed Emergency channel.

Procedure:

1. Press the programmed Emergency button.
2. The display shows "Sending Alarm", which alternates with your radio ID. The RED LED turns on and the Emergency icon appears on the Home screen display.
3. When an Emergency Alarm acknowledgment is received, the Emergency tone sounds and the GREEN LED turns on. The display shows "Emergency Alarm Successful" .
4. Hold the radio vertically 1 to 2 inches (2.5 to 5.0cm) from your mouth.
5. Press PTT button to make the call. The RED LED light turns on and the group icon appears on the display.
6. Wait for the Talk Permit Tone to finish if enabled and speak clearly into the microphone.
7. Release the PTT button to listen.

8. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the PTT button, indicating the channel is free for you to respond

OR

Long press the programmed Emergency button to exit the Emergency mode.

9. The radio returns to the Home screen.

If your radio is set to Silent, it will not display any audio or visual indicators during Emergency mode, or receive a response (Call) from the target radio until you press the PTT button to initiate the call.

If your radio is set to Silent with Voice, it will not display any audio or visual indicators during Emergency mode, or when you are receiving a call from the target radio. The indicators will only appear once you press the PTT button to initiate or respond to the call.

### **Sending an Emergency Alarm with Voice to Follow**

This feature allows you to send an Emergency Alarm to another radio. Upon acknowledgment, your radio's microphone is automatically activated, allowing you to communicate with the other radio without pressing the PTT button.

This activated microphone state is also known as "hot mic". If you press the PTT button during the programmed hot mic transmission period, the radio ignores the PTT press and remains in Emergency mode.

Procedure:

1. Press the programmed Emergency button.
2. The display shows Sending Alarm. The RED LED turns on and the Emergency icon is displayed.
3. Once the display shows Emergency Alarm successful, speak clearly into the microphone. When hot mic has been enabled, the radio automatically transmits without a PTT press until the hot mic duration expires.
4. While transmitting, the RED LED turns on and the Emergency icon appears on the display.
5. Once the hot mic duration expires, the radio automatically stops transmitting. To transmit again, press the PTT button.

If your radio is set to Silent, it will not display any audio or visual indicators during Emergency mode, or receive any response from the target radio until the programmed hot mic transmission period is over, and you press the PTT button.

If your radio is set to Silent with Voice, it will not display any audio or visual indicators during Emergency mode when you are making the call with hot mic or when the target radio responds after the programmed hot mic transmission period is over. The indicators will only appear when you press the PTT button.

NOTE: If the Emergency Alarm request fails, the radio returns to the Home screen.

### **Exiting an Emergency Mode**

Your radio exits Emergency mode when one of the following occurs:



- Emergency Alarm acknowledgement is received. (for Emergency Alarm only),  
OR
- All retries to send the alarm have been exhausted,  
OR
- The programmed Emergency button is long pressed.

NOTE: If your radio is powered off, it exits the Emergency mode. The radio will not reinitiate the Emergency mode automatically when it is turned on again.

### **Text Message Features**








Your radio is able to receive data, for example a text message, from another radio or an e-mail application.

The maximum length of characters for a text message, including the subject line is 138


NOTE: press  at any time to return to the previous screen or long press  to return to the Home screen.

### **Writing and Sending a Text Message**

Procedure:

1. Press  to access the menu.
2. Press  /  to Messages and press  to select.
3. Press  /  to Write and press  to select.
4. A blinking cursor appears.

Use the keypad to type your message.

Press  to move one space to the left.

Press **[Right Arrow]** or the # key to move one space to the right.

Press the \*DEL key to delete any unwanted characters.

5. Press **[Enter]** once message is composed.

6. Press **[Left Arrow]/[Right Arrow]** to the required alias or ID and press **[Enter]** to select.

OR

Press **[Left Arrow]/[Right Arrow]** to Manual Dial and press **[Enter]** to select.

Key in the subscriber ID and press **[Enter]**.

7. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.

8. If the message is sent, a tone sounds and the display shows Message Sent.

OR

If the message is not sent, a low tone sounds and the display shows Message Send Failed.

If the message fails to send, the radio returns you to the Resend option screen.

### **Sending a Quick Text Message**

Procedure:

Your radio supports a maximum of ten (10) Quick Text messages as programmed by your dealer.

While Quick Text messages are predefined, you can edit each message before sending it.

1. Press **[Enter]** to access the menu.

2. Press **[Left Arrow]/[Right Arrow]** to Messages and press **[Enter]** to select.

3. Press **[Left Arrow]/[Right Arrow]** to Quick Text and press **[Enter]** to select.

4. Press **[Left Arrow]/[Right Arrow]** to the required Quick Text and press **[Enter]** to select.

5. A blinking cursor appears.

Use the keypad to edit the message, if required.

Press **[Left Arrow]** to move one space to the left.

Press **[Right Arrow]** or the # key to move one space to the right.

Press the \*DEL key to delete any unwanted characters.

6. Press **[Enter]** once message is composed.

7. Press **[Left Arrow]/[Right Arrow]** to the required alias or ID and press **[Enter]** to select.

OR

Press **[Left Arrow]/[Right Arrow]** to Manual Dial and press **[Enter]** to select.

Key in the subscriber ID and press **[Enter]**.

8. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.

9. If the message is sent, a tone sounds and the display shows Message Sent.

OR

If the message is not sent, a low tone sounds and the display shows Message Send Failed.

If the message fails to send, the radio returns you to the Resend option screen.

### **Sending a Quick Text Message with the One Touch Call Button**

Procedure:

1. Press the programmed One Touch Call button to send a predefined Quick Text message to a predefined alias or ID.

2. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.

3. If the message is sent, a tone sounds and the display shows Message Sent.

OR

If the message is not sent, a low tone sounds and the display shows Message Send Failed.

If the message fails to send, the radio returns you to the Resend option screen.



## Managing Fail-to-Send Text Messages

You can select one of the following options while at the Resend Option screen:

- Resend
- Forward
- Edit

## Resending a Text Messages

Procedure:

1. Press to resend the same message to the same subscriber/group alias or ID.
2. If the message is sent, a tone sounds and the display shows Message Sent.

OR

If the message is not sent, a low tone sounds and the display shows Message Send Failed.

## Forwarding a Text Message

Select Forward to send the message to another subscriber/group alias or ID.

Procedure:

1. Press to access the menu.
2. Press / to Messages and press to select.
3. Press / to Inbox and press to select.
4. Press / to the required Message and press to select.
5. Press and press / to Forward and press to select.
6. Press / to the required alias or ID and press to select.

OR

Press / to Manual Dial and press to select.

Key in the subscriber ID and press.

7. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.

8. If the message is sent, a tone sounds and the display shows Message Sent.

OR

If the message is not sent, a low tone sounds and the display shows Message Send Failed.

## Managing Sent Text Messages

Once a message is sent to another radio, it is saved in Sent Items. The most recent sent text message is always added to the top of the Sent Items list.

The Sent Items folder is capable of storing a maximum of thirty last sent messages. When the folder is full, the next sent text message automatically replaces the oldest text message in the folder.

## Viewing a Sent Text Message

Procedure:

1. Press to access the menu.
2. Press / to Messages and press to select.
3. Press / to Sent Items and press to select.
4. Press / to the required Message and press ID to select.

## Sending a Sent Text Message

You can select one of the following options while viewing a sent text message:

- Resend
- Forward
- Edit
- Delete



## Deleting all Sent Text Messages from Sent Items

Procedure:

1. Press to access the menu.
2. Press / to Messages and press to select.
3. Press / to Sent Items and press to select.
4. Press / to Delete All and press to select.
5. At Delete Message?, press to select Yes. The display shows Sent Items Cleared.

OR

At Delete Message? , Press / to No and press to return to the previous screen.

When you select Sent Items and it contains no text messages, the display shows List Empty.

## Receiving a Text Message

When your radio receives a message, the display shows the alias or ID of the sender and the message icon at the far left of the screen.

You can select one of the following options when receiving a text message:

- Read?
- Read Later
- Delete

## Reading a Text Message

Procedure:

1. Press / to Read? And press to select.
2. Press to Reply, forward, or delete the text message.

OR

Press / to access the Read Later or Delete option screen:

- Select Read Later to return to the screen you were on prior to receiving the text message.
- Select Delete to delete the text message.

## Managing Received Text Messages

Use the Inbox to manage your text messages. The In box is capable of storing a maximum of 50 messages.

Your radio supports the following options for text messages:

- Reply
- Forward
- Delete
- Delete All

Text messages in the Inbox are sorted according to the most recently received.

## Viewing a Text Message from the Inbox

Procedure:

1. Press then / to Messages and press to select.
2. Press / to Inbox and press to select.
3. Press / to view the messages.
4. Press to select the current message, and press again to reply forward, or delete that message.

Unread messages are indicated with an exclamation mark(!).

## Viewing a Text Message from the Inbox

Procedure:

1. Press then / to Messages and press to select.
2. Press / to Inbox and press to select.

3. Press / to the required message and press to select.
4. Press once more to access the sub-menu.
5. Press / to Reply and press to select.
6. Press / to Write and press to select.

A blinking cursor appears. Use the keypad to write your message.

OR

Press / to Quick Text and press to select.

A blinking cursor appears. Use the keypad to edit your message, if required.

7. Press once message is composed.
8. The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.

### Deleting a Text Message from the Inbox

Procedure:

1. Press then / to Messages and press to select.
2. Press / to Inbox and press to select.
3. Press / to the required message and press to select.
4. Press once more to access the sub-menu.
5. Press / to Delete and press to select.
6. At Delete Message?, Press / to Yes and press to select.
7. The Display shows message Deleted.
8. The screen returns to the Inbox.

### Deleting All Text Messages from the Inbox

Procedure:

1. Press then / to Messages and press to select.
2. Press / to Inbox and press to select.
3. Press / to Delete All and press to select.
4. At Delete Message?, Press / to Yes and press to select.
5. The Display shows Inbox Cleared.

When you select the Inbox and it contains no text messages, the display shows List Empty.

### Privacy

If enabled, this feature helps to prevent eavesdropping by unauthorized users on a channel by the use of a software based scrambling solution. The signaling and user identification portions of a transmission are not scrambled.

Your radio must have privacy enabled on the channel to send a privacy-enabled transmission, although this is not a necessary requirement for receiving a transmission.

While on a privacy-enabled channel, the radio is still able to receive clear (unscrambled) transmissions.

Your radio supports two types of privacy:

- Basic Privacy
- Enhanced Privacy

Only ONE of the privacy types above can be assigned to the radio.

To unscramble a privacy-enabled call or data transmission, your radio must be programmed to have the same Privacy Key (for Basic Privacy), OR the same Key Value and Key ID (for Enhanced Privacy) as the transmitting radio.

If your radio receives a scrambled call that is of a different Privacy Key, OR a different Key Value and Key ID, you will either hear a garbled transmission (Basic Privacy) or nothing at all (Enhanced Privacy).

Procedure:

1. Press then to Utilities and press to select.
2. Press to Radio Settings and press to select.
3. Press to Privacy and press to select.
4. The display shows Privacy and Turn On. press to enable privacy. The display shows the secure icon and Privacy On.

OR

The display shows Privacy and Turn Off. press to disable privacy. The display shows the unsecure icon and Privacy Off.

## Dual Tone Multi Frequency (DTMF) (Analog)

The Dual Tone Multi Frequency (DTMF) feature allow the radio to operate in a radio system with an interface to telephone systems.

Procedure:

To initiate a DTMF call.

1. Press and hold PTT button.
2. Enter the desired number.

You can turn off the DTMF tone by disabling all radio tones and alerts

## Security

You can enable or disable any radio in the system. For example, you might want to disable a stolen radio, to prevent the thief from using it, and enable that radio, when it is recovered.

NOTE: Performing Radio Disable and Enable is limited to radios with these functions enabled.

Check with your dealer or system administrator for more information.

### [J Radio Disable

Procedure:

1. Press then to Contacts and press to select. The entries are alphabetically sorted.
2. Press to the required alias or ID and press to select.

OR

Press to Manual Dial and press to select.

Key in the subscriber alias or ID and press.

3. Press to Radio Disable and press to select.
4. The display shows Radio Disable: <Subscriber Alias or ID> and the LED lights up RED.
5. Wait for acknowledgment.
6. If successful, a tone sounds and the display shows Radio Disable Successful.

OR

If not successful, a tone sounds and the display shows Radio Disable Failed.

## Radio Enable

Procedure:

1. Press then to Contacts and press to select. The entries are alphabetically sorted.
2. Press to the required alias or ID and press to select.

OR

Press to Manual Dial and press to select.

Key in the subscriber alias or ID and press.

3. Press to Radio Enable and press to select.
4. The display shows Radio Enable: <Subscriber Alias or ID> and the LED lights up RED.
5. Wait for acknowledgment.
6. If successful, a tone sounds and the display shows Radio Enable Successful.

OR

If not successful, a tone sounds and the display shows Radio Enable Failed.

## Utilities

### Locking and Unlocking the Keypad

You can lock your radio's keypad to avoid inadvertent key entry.

Procedure:

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to Keypad Lock and press to select.
4. The display shows Keypad Locked and returns to the Home screen.
5. To unlock the keypad, press followed by \*.
6. The display shows Keypad Unlocked and returns to the Home screen.

### Turning Keypad Tones On or Off

You can enable and disable keypad tones if needed.

Procedure:

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to Tones/Alerts and press to select.
4. Press / to Keypad Tones and press to select.
5. The display shows Turn On. Press to enable keypad tones. The display shows Keypad Tone On.

OR

The display shows Turn Off. Press to disable keypad tones. The display shows Keypad Tone Off.

### Setting the Squelch Level (Analog)

You can adjust your radio's squelch level to filter out unwanted calls with low signal strength or channels that have a higher than normal background noise.

Settings: Normal is the default. Tight filters out (unwanted) calls and/or background noise.

However, calls from remote locations may also be filtered out.

Procedure:

Press the programmed Squelch button to toggle squelch level between normal and tight.

OR

1. Press then / to Utilities and press to select.
  2. Press / to Radio Settings and press to select.
  3. Press / to Squelch and press to select.
  4. Choose either Tight or Normal and press to select.
- Screen returns to the previous menu.

### Setting the Power Level

You can customize your radio's power setting to high or low for each channel.

Settings: High enables communication with radios located at a considerable distance from you.

Low enables communication with radios in closer proximity.

Procedure:

Press the programmed Power Level button to toggle transmit power level between high and low.

OR

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to Power and press to select.
4. Change your current setting as prompted on the display.
5. Press to select a new power level.

Screen returns to the previous menu.

### Turning the Voice Operating Transmission (VOX) Feature On or Off

This feature allows you to initiate a hands-free voice activated call on a programmed channel. The radio automatically transmits, for a programmed period, whenever the microphone on the VOX-capable accessory detects voice.

Pressing the PTT button during radio operation will disable VOX. To re-enable VOX, do one of the following:

- Turn the radio off and powering it on again, OR
- Change the channel via the Channel Selector Knob, OR
- Follow the procedure below.

NOTE: Turning this feature on or off is limited to radios with this function enabled. Check with your dealer or system administrator for more information.

Procedure:

Press the programmed VOX button to toggle the feature on or off.

OR

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to VOX and press to select.
4. The display shows VOX On. Press to disable VOX.

The display shows VOX Off.

OR

The display shows VOX Off. Press to enable VOX.

The display shows VOX On.

### Controlling the Display Backlight

You can enable or disable the radio's display backlight as needed. The setting also affects keypad backlighting accordingly.

Procedure:

Press the programmed Backlight button to toggle the backlight settings.

OR

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to Backlight and press to select.
4. The display shows Auto On. Press to enable the display backlight. The display shows Backlight Auto On.

OR

The display shows Turn Off. Press to disable the display backlight. The display shows Backlight Turn Off.

The display backlight and keypad backlighting are automatically turned off if the LED indicator is disabled.

### Turning the Radio Tones/Alerts On or Off

You can enable or disable the radio tones and alerts(except for the incoming Emergency alert tone) if needed.

Procedure:

Press the programmed All Tones/Alerts button to toggle all tones on or off.

OR

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to Tones/Alerts and press to select.

4. Press / to All Tones and press to select.
  5. The display shows Turn On. Press to enable all tones and alerts. The display shows All Tones On.
- OR
- The display shows Turn Off. Press to disable all tones and alerts. The display shows All Tones Off.

### Turning the Talk Permit Tone On or Off

You can enable or disable the Talk Permit Tone if needed.

Procedure:

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to Tones/Alerts and press to select.
4. Press / to Talk Permit and press to select.
5. The display shows Turn On. Press to enable the Talk Permit Tone. The display shows Talk Permit Tone On.

OR

The display shows Turn Off. Press to disable the Talk Permit Tone. The display shows Talk Permit Tone Off.

### Turning the LED Indicator On or Off

You can enable or disable the LED Indicator if needed.

Procedure:

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to LED Indicator and press to select.
4. The display shows Turn On, Press to enable the LED Indicator, The display shows All LEDs On.

OR

The display shows Turn Off. Press to disable the LED Indicator. The display shows All LEDs Off.

The display backlight, buttons, and keypad backlighting are automatically turned off if the LED indicator is disabled

### Turning the Introduction Screen On or Off

You can enable or disable the Introduction Screen if needed.

Procedure:

1. Press then / to Utilities and press to select.
2. Press / to Radio Settings and press to select.
3. Press / to Intro Screen and press to select.
4. The display shows Turn On. Press to enable the Introduction Screen. The display shows Intro Screen On.

OR

The display shows Turn Off. Press to disable the Introduction Screen. The display shows Intro Screen Off.

The display backlight, buttons, and keypad backlighting are automatically turned off if the LED indicator is disabled.











### Accessing General Radio Information

Your radio contains information on the following:

- RadiolD

- Software Version
- Codeplug Version

Procedure:

5. Press  then  /  to Utilities and press  to select.
6. Press  /  to Radio Info and press  to select.
7. Press  /  to My Number or Firmware Ver. Or CP Ver. and press  to select.
8. The display shows the radio ID or the current firmware version or codeplug version.

## PROGRAMMING

### Software

Programming software for the radio can be downloaded from the Connect Systems Site. The link below will take you to the CSI site:

<http://www.connectsystems.com/>

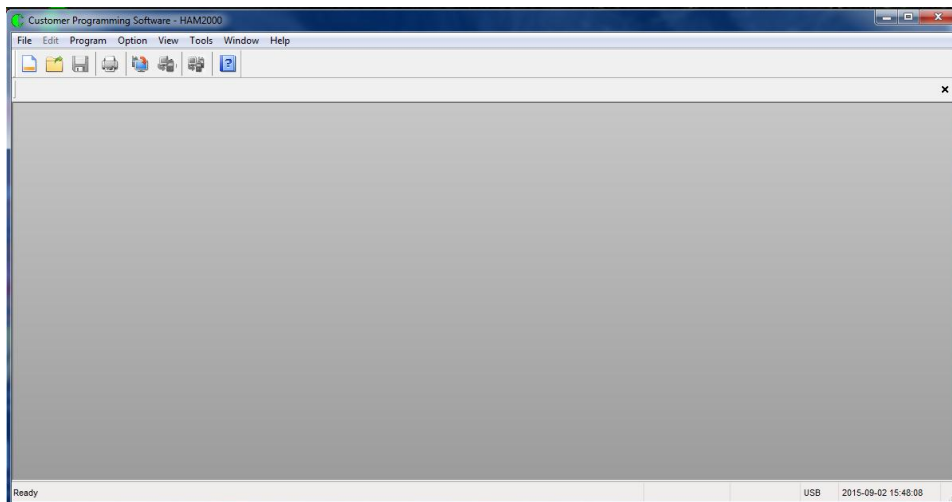
This link will take you to the Connect Systems Software page. Note CSI has been making updates to their site, so this link might not work. Be sure to download the “General Instruction and Information” document found there, and read first.

<http://www.connectsystems.com/software/software%20CS750.htm>

### Firmware Updates

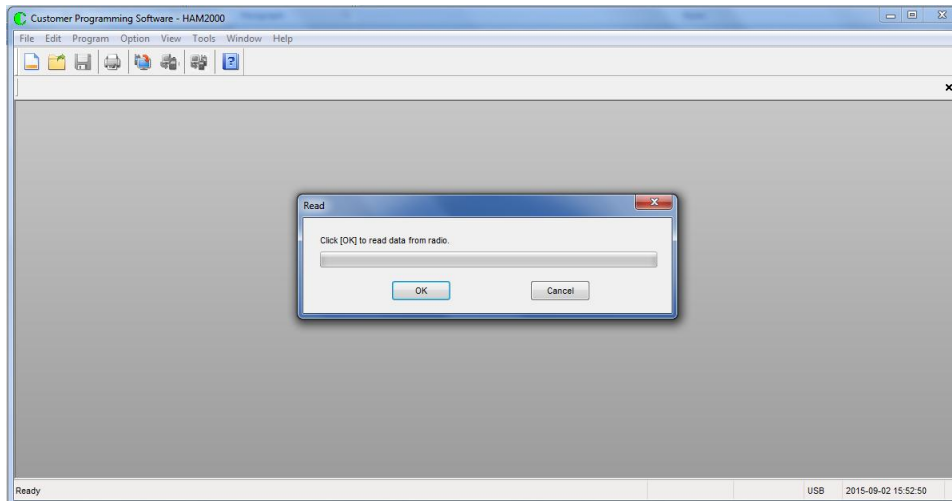
#### Determining Current Configuration

To determine if your radio requires an update, you can use the CPS programming software to read the radio's current configuration. Launch the CPS programming software. You will see a screen like the one shown below.

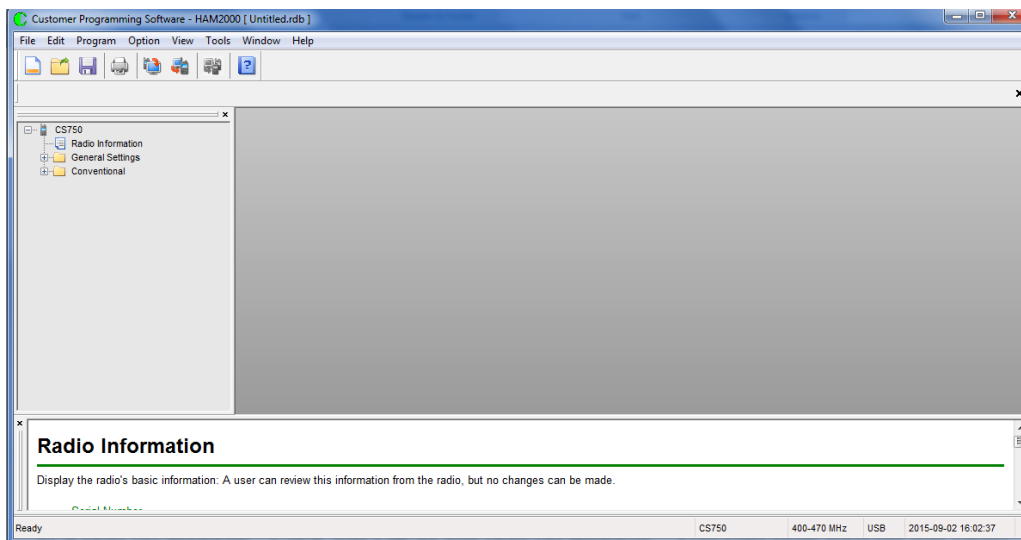




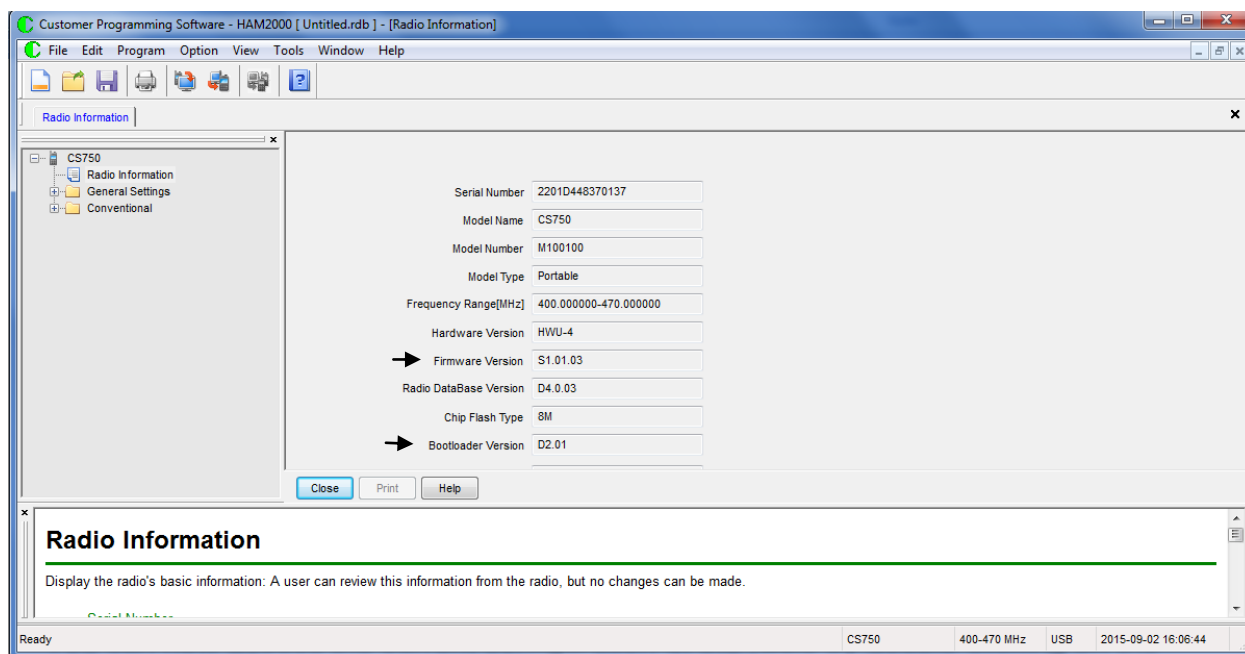
On the top menu ribbon, click on Program, a drop down menu will appear, click on the Read From Radio. You should see the following:



Connect your radio to your PC, and turn the radio on. Wait a couple of seconds for the radio to complete connection to PC. Click on the OK button in the pop up. The program will read in the contents of the radio. When completed it should say Read Successfully in a pop up window. Click the OK in the pop up window. You can now turn off the radio and disconnect from the PC. The CPS software screen should now show the following:



You can now access the current configuration of the radio by double clicking on the Radio information listed in the drop down menu on the left. Screen will show the configuration information similar to this:



The arrows point to the information you need to record.

When you go to the CSI site, and select software for the CS750 you will see a listing of firmware updates. Below is a screen shot of the site as an example of what you will see.

|   |   |
|---|---|
| <p>AUGUST 25, 2015</p> <p><b>2000 Channels and 65536 Contacts</b></p> <p>Firmware Version 1.01.03</p> <p>CPS Version 4.00.10</p>  | <p>AUGUST 25, 2015</p> <p>Based on feedback from customers, this version seems to be working good.</p> <p>Removing previous version from website.</p>                   |
| <p>AUGUST 22, 2015</p> <p><b>2000 Channels and 65536 Contacts</b></p> <p>Firmware Version 1.01.02</p> <p>CPS Version 4.00.08</p>  | <p>AUGUST 22, 2015</p> <p>Because of problems, the programs on the left have been removed. Please use the August 25 versions above.</p>                                 |
| <p>AUGUST 14, 2015</p> <p><b>1000 Channels and 1000 Contacts</b></p> <p>CPS Version 3.03.34</p> <p>Firmware Loader Version 2.00</p> <p>Firmware Version 1.00.44</p> <p>Boot Loader Version 2.01</p> | <p>AUGUST 14, 2015</p> <p>While the firmware and software on the left is stable, we are moving to the 2000 channel versions so it is recommended you do not use it.</p> |
| <p>AUGUST 12, 2015</p> <p><b>1000 Channels and 1000 Contacts</b></p> <p>CPS Version 3.03.28</p> <p>Firmware Loader Version 2.00</p> <p>Firmware Version 1.00.44</p> <p>Boot Loader Version 2.01</p> | <p>AUGUST 12, 2015</p> <p>GENERAL INSTRUCTION AND INFORMATION</p>   |
| <p>AUGUST 12, 2015</p> <p>CS700 TO CS750 DATA EXPORTER</p>  |   |

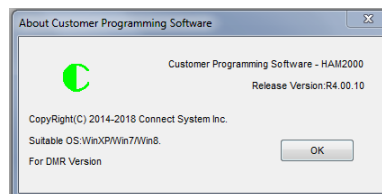
According to CSI, if your radio is more than one firmware version older than the latest version, you DO NOT have to do the intermediate firmware updates, however if the CPS version (the programming software) is at a newer version than what you have, you need to perform the CPS Upgrade described in this document.

So for example, from the information shown at the CSI site, the latest configuration of a radio would be:

Firmware Version: 1.01.03  
Boot Loader Version: 2.01

So for this example, the information obtained from reading the information from the radio shows that the radio is at the current configuration, so no updates are required. If the radio had shown a firmware update listed in one of the earlier release dates, or a lower version of the Boot Loader, the radio requires an update.

To determine the version of the CPS software you have, launch the CPS software, click on the Help located on the top menu ribbon, then click the About, you should see a pop up like below showing the version you have.



If the CPS upgrade is required, do the translate of your current code plug, it will create a new code plug with a slightly different file name. DO NOT attempt to load the translated code plug into the radio until you have completed the actual firmware updates. To aid in keeping things straight, I create a file folder on my computer to download the firmware updates to work out of.

## Firmware Update Procedure

Locate the FlashBurn file you downloaded. Should look something like the file below:

|  |                  |             |
|--|------------------|-------------|
|  FlashBurn 2.00_CSI | 9/1/2015 2:41 PM | Application |
|--|------------------|-------------|

Double click on the file and it should launch. Your PC might ask if you want to Run, click to Run. Should see something like this:

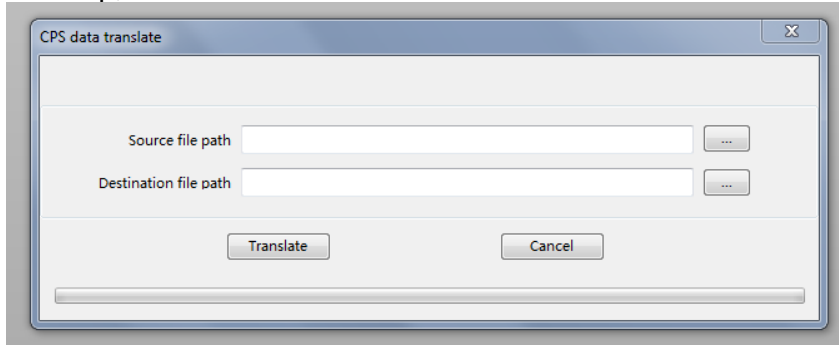


Click on the  A pop up window will appear to allow you to go to the folder that you stored the boot loader file. File will be something like, 750\_bootloader\_D2.01.bin. Note your version number at the end of the file might be different. Click on the file, and then click on Open, the file should then appear in the File Package dialog box of the FlashBurn program. Next follow the four steps shown on the FlashBurn program. Once the radio has rebooted, leave it connected to your computer. Next locate the firmware update file you stored. File should be something like CS750(2000)\_Host\_S1.01.03.20150825.bin. Note version number at end of file might be different. Click on the file, and then click on open, the file should then appear in the File Package dialog box. Click on the Flash button on the FlashBurn program. Once the download is completed, the radio should reboot. This completes the update process.

Now that the firmware is updated on the radio, it might show not programmed when powered up. You need to reload the radio with the updated code plug you translated. With the radio connected to your computer, launch the programming software, and download the code plug.

## CPS Upgrade

When upgrading to a new version of CPS be sure to translate your code plug from the previous version. To do this, open the new version of the CPS. Do NOT open your code plug file. Click on “Tools” in the top menu ribbon bar. Select “CPS data Translate”. Pop of menu will come up, shown below.



Click on the “-“ button to the right of the Source file path box. Locate your code plug and open, it will show up then in the Source file path box. Do NOT type anything into the Destination file path box, instead just click on the Translate button, the file will be translated, and the new name will appear in the Destination file path. This will be the new code plug.

## Programming Cable

The programming cable for the CS750 plugs into the external microphone speaker jack on the side of the radio.



## Trouble shooting

| No. | Problems  | Solutions   |
|-----|---|---|
| 1   | The radio cannot be switched on or no display after switched on | Battery pack may not be installed properly.<br>Reinstall the battery pack.<br>Or<br>Battery power may be insufficient. Recharge or replace battery pack.  |
| 2   | The battery doesn't last long after charging                    | The battery life is finished. Replace with new battery pack.  |
| 3   | Cannot talk to or hear other members in your group              | Digital: Make sure the CC, ID Time Slot is correct<br>Analog: Make sure the signaling is set correct<br>Or<br>Beyond the radio efficient communication range  |
| 4   | Other voices from non-group members are heard on the channel    | Analog: Change the CTCSS/DCS tone, and make sure change the tone on all radios in your group  |
| 5   | Communication range is too small                                | 1. Make sure the antenna is well connected<br>2. Make sure the antenna is the originally supplied one<br>3. Check if the battery power is in the normal state   |
| 6   | Unable to Transmit  | 4. Ask you local deler to adjust the squelch level<br>1. Make sure the PTT button has been pressed completely<br>2. Battery power may be insufficient, recharge or replace battery pack<br>3. Transmitting frequency has not been set on the channel and the radio has been remote killed |
| 7   | Noise to Load   | 1. Battery power maybe insufficient, recharge or replace battery pack<br>2. Beyond the sufficient communication range.  |

## Radio Specifications

|                           |                                  |               |
|---------------------------|----------------------------------|---------------|
|                           | CS750                            |               |
| Frequency Range           | (1) 136~174                      | (2) 400 ~ 470 |
| RF Power                  | 5W(H)/1W(L)                      | 4W(H)/1W(L)   |
| Frequency Stability       | $\pm 1$ PPM                      |               |
| Analog Sensitivity        | 35 $\mu$ V/-116dBm (20 dB SINAD) |               |
|                           | 22 $\mu$ V/-120dBm (12dB SINAD)  |               |
| Digital Sensitivity       | 3 $\mu$ V/-117.4dBm(BER 5%)      |               |
|                           | 7 $\mu$ V/-110dBm (BER 1%)       |               |
| Intermodulation Rejection | $\geq 65$ dB                     |               |
| Digital Protocol          | ETSI TS 102 361-1,-2,-3          |               |
| Vocoder Type              | AMBE3000 or SELP                 |               |
| Maximum AF Output Power   | $\geq 1000$ mW                   |               |
| Number of Channels        | 32/1000                          |               |
| Battery (Standard)        | DC 7.4V                          |               |
| Dimension (WxHxD)         | 113mm x54.5mm x 35mm             |               |
| Weight                    | 275g (With battery and antenna)  |               |