

# Curve Series



## Non-Keypad Portable Radio User Guide

**SEPTEMBER 2021**

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**MN007944A01-AA**



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## Supplier's Declaration of Conformity

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### Supplier's Declaration of Conformity

Per FCC CFR 47 Part 2 Section 2.1077(a)



Responsible Party

Name: Motorola Solutions, Inc.

Address: 2000 Progress Pkwy, Schaumburg, IL. 60196

Phone Number: 1-800-927-2744

Hereby declares that the product:

Model Name: **Curve**

conforms to the following regulations:

FCC Part 15, subpart B, section 15.107(a), 15.107(d), and section 15.109(a)

### **Class B Digital Device**

As a personal computer peripheral, this device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1 This device may not cause harmful interference, and
- 2 This device must accept any interference received, including interference that may cause undesired operation.

**NOTE:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

## Industry Canada WLAN Statement



### CAUTION:

- 1 The maximum antenna gain permitted for devices in the band 5752–5850 MHz shall be such that the equipment still complies with e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.
- 2 The worst case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in Section 6.2.2 (3) shall be clearly indicated.
- 3 User should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5650–5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

# Product Safety and RF Exposure Compliance

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**CAUTION:**

This radio is restricted to occupational use only to satisfy FCC RF energy exposure requirements. Before using this product, read the Product Safety and RF Exposure booklet enclosed with your radio which contains important operating instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulations.

For a list of Motorola Solutions-approved antennas, batteries, and other accessories, visit <http://www.motorolasolutions.com>

## Notice to Users (FCC and Industry Canada)

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The business two-way radios operate in the license-free 900 MHz ISM Band and are subject to the Rules and Regulations of the Federal Communications Commission (FCC).

This device complies with Part 15 of the FCC rules and Industry Canada's license-exempt RSS's per the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications made to this device, not expressly approved by Motorola Solutions, could void the authority of the user to operate this equipment.

To comply with FCC/IC requirements, transmitter adjustments should be made only by or under the supervision of a technically qualified person to perform transmitter maintenance and repairs. Replacement of any transmitter component such as crystal, semiconductor, and

other that are not authorized by the FCC/IC equipment authorization for this radio violates FCC/IC rules.



### **NOTE:**

Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

## Batteries, Chargers, and Audio Accessories Safety Information

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This document contains important safety and operating instructions. Read these instructions carefully and save them for future reference. Before using the battery charger, read all the instructions and cautionary markings on:

- the charger
- the battery
- the radio attached with battery

- 1** To reduce risk of injury, charge only the rechargeable Motorola Solutions-authorized batteries. Charging the other batteries may cause explosion, personal injury, and damage.
- 2** Use of accessories not recommended by Motorola Solutions may result in fire, electric shock, or injury.
- 3** To reduce damage to the electric plug and cord, pull by plug rather than the cord when disconnecting the charger.
- 4** An extension cord should not be used unless necessary. Use of an improper extension cord may

result in fire and electric shock. If an extension cord must be used, make sure that the cord size is 18 AWG for lengths up to 2.0 m (6.5 feet), and 16 AWG for lengths up to 3.0 m (9.8 feet).

- 5** Do not operate the charger if it has been broken or damaged in any way. Take it to any qualified Motorola Solutions service representatives.
- 6** Do not disassemble the charger; it is not repairable and replacement parts are not available. Disassembly of the charger may result in risk of electrical shock or fire.
- 7** To reduce risk of electric shock, unplug the charger from the AC outlet before attempting any maintenance or cleaning.

## Operational Safety Guidelines

- Turn off the radio while charging.
- The charger is not suitable for outdoor. Use only in dry locations or conditions.
- Connect charger to an appropriately fused and wired supply of the correct voltage (as specified on the product only).
- Disconnect charger from line voltage by removing main plug.

- Connect the equipment to an outlet which is easy to access and near.
- For equipment using fuses, replacements must comply with the type and rating specified in the equipment instructions.
- Maximum ambient temperature around the power supply equipment must not exceed 40 °C (104 °F).
- Power output from the power supply unit must not exceed the ratings stated on the product label located at the bottom of the charger.
- Make sure the cord is not stepped on, tripped over, subjected to water, damage, or stress.

## Acoustic Safety

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**CAUTION:**

Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing. The louder the radio volume, the less time is required before your hearing can be affected. Hearing damage from loud noises is sometimes undetectable at first and can have a cumulative effect.

To protect your hearing:

- Use the lowest volume necessary to do your job.
- Increase the volume only if you are in noisy surroundings.
- Reduce the volume before connecting headset or earpiece.
- Limit the amount of time you use headsets or earpieces at high volume.
- If you experience hearing discomfort, ringing in your ears, or speeches that are muffled, you should stop listening to your radio through your headset or earpiece, and have your hearing checked by your doctor.

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The AMBE+2™ voice compression software included in this product is protected by intellectual property rights

including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc. This voice compression technology is licensed solely for use as is within the Communications Equipment. US Patent Nos.: #8,595,002 B2, #8,359,197, #8,315,860, #8,200,497, #7,970,606, #6,912,495 B2, #6,199,037 B1, #5,826,222, #5,754,974, #5,701,390, and #5,715,365.

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## European Union (EU) Waste of Electrical and Electronic Equipment (WEEE) Directive



The European Union's WEEE directive requires that products sold into EU countries must have the crossed out trash bin label on the product (or the package in some cases).

As defined by the WEEE directive, this cross-out trash bin label means that customers and end-users in EU countries should not dispose of electronic and electrical equipment or accessories in household waste.

Customers or end-users in EU countries should contact their local equipment supplier representative or service centre for information about the waste collection system in their country.

### **Disclaimer**

Please note that certain features, facilities, and capabilities described in this document may not be applicable to or licensed for use on a specific system, or may be dependent upon the characteristics of a specific mobile subscriber unit or configuration of certain parameters. Please refer to your Motorola Solutions contact for further information.

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## Sécurité du produit et respect des normes relatives à l'exposition aux radiofréquences



### **MISE EN GARDE:**

Pour être conforme aux règlements de la FCC relatifs aux normes d'exposition aux radiofréquences, cette radio ne doit être utilisée qu'à des fins professionnelles. Avant d'utiliser ce produit, lisez le guide Sécurité du produit et respect des normes relatives à l'exposition aux radiofréquences compris avec votre radio, qui contient d'importantes informations sur le mode d'emploi sécuritaire du produit ainsi que des informations relatives à l'énergie de RF et à son contrôle, afin d'assurer la conformité aux normes et règlements applicables.

Visitez le site Web suivant pour obtenir la liste des antennes, des batteries et des autres accessoires approuvés par Motorola Solutions : <http://www.motorolasolutions.com>.

## Protection de l'ouïe



### MISE EN GARDE:

Une exposition à des bruits forts en provenance de n'importe quelle source pendant de longues périodes pourrait affecter votre audition de manière temporaire ou permanente. Plus le volume sonore de la radio est élevé, plus votre audition peut se détériorer rapidement. Les dommages auditifs dus à l'exposition à des bruits forts peuvent d'abord être indétectables, mais ceux-ci ont parfois des effets cumulatifs.

Pour protéger votre audition :

- Réglez le volume le plus bas possible pour effectuer votre travail.
- Augmentez le volume seulement si vous vous trouvez dans un environnement bruyant.
- Réduisez le volume avant de brancher le casque ou l'écouteur.
- Limitez la période de temps d'utilisation de casques ou d'écouteurs à volume élevé.
- Lorsque vous utilisez la radio sans casque ni écouteur, ne placez pas le haut-parleur directement sur votre oreille.

- Si vous ressentez une gêne auditive, que vous entendez des sifflements ou que les conversations sont étouffées, vous devez cesser d'utiliser votre radio avec un casque d'écoute ou une oreillette et consulter votre médecin pour faire vérifier votre audition.

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Les produits Motorola Solutions décrits dans ce manuel peuvent inclure des logiciels Motorola Solutions protégés en vertu de la loi sur le droit d'auteur enregistrés dans des mémoires à semi-conducteurs ou dans d'autres supports. Les lois du Canada, des États-Unis et d'autres pays protègent, au nom de Motorola Solutions, certains droits exclusifs visant les logiciels, y compris, mais sans s'y limiter, les droits exclusifs de copie et de reproduction sous toute forme que ce soit des logiciels protégés par la loi sur le droit d'auteur. Par conséquent, la loi sur le droit d'auteur protégeant tous les logiciels de Motorola Solutions inclus avec les produits de Motorola Solutions décrits dans ce manuel interdit toute copie, reproduction, modification, ingénierie à rebours ou distribution de ces logiciels sans l'autorisation écrite expresse de Motorola Solutions.

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## Avis aux utilisateurs (FCC et Industrie Canada)

Les radios bidirectionnelles commerciales fonctionnent dans la bande ISM 900 MHz (902-928 MHz) et sont assujetties à la réglementation et aux règlements de la Federal Communications Commission (FCC).

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence et à la partie 15 des règlements de la FCC :

- Cet appareil ne doit pas causer d'interférence nuisible.
- Cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant entraîner un fonctionnement indésirable.
- Toute modification effectuée à cet appareil sans l'autorisation explicite de Motorola Solutions peut annuler l'autorisation d'utiliser cet appareil.

Pour satisfaire aux exigences de la FCC/IC, les réglages de l'émetteur-récepteur doivent être effectués par ou sous la supervision d'un technicien qualifié pour effectuer l'entretien et la réparation de l'émetteur-récepteur. Le remplacement de tout composant de l'émetteur-récepteur, tels que le quartz, un semi-conducteur et tout autre

composant de la présente radio dont le remplacement n'est pas autorisé par la FCC/IC constitue une violation de la réglementation de la FCC/IC.



### **AVIS:**

L'utilisation de cette radio en dehors du pays pour lequel elle est distribuée est soumise aux réglementations gouvernementales et peut être interdite.

## Renseignements sur l'utilisation sécuritaire des batteries et des chargeurs

Ce document contient d'importantes directives relatives à la sécurité et au fonctionnement de l'appareil. Veuillez lire attentivement cette notice et la conserver pour vous y référer ultérieurement. Avant d'utiliser le chargeur de batterie, lisez toutes les directives et marquages d'avertissement propres

- au chargeur,
- à la batterie,
- à la radio avec batterie.
- Pour réduire les risques de blessure, ne chargez que les batteries rechargeables agréées Motorola Solutions. Le chargement d'autres batteries peut provoquer une explosion, des blessures corporelles et des dommages.
- L'utilisation d'accessoires non recommandés par Motorola Solutions pourrait occasionner des risques d'incendie, de décharge électrique ou de blessure.

- Afin de réduire la possibilité d'endommager la fiche et le cordon d'alimentation, débranchez le chargeur en tirant sur la fiche au lieu du cordon.
- Il n'est pas recommandé d'utiliser une rallonge, sauf en cas de nécessité. L'utilisation d'une rallonge inappropriée pourrait causer un risque d'incendie et de décharge électrique. Si une rallonge doit être utilisée, assurez-vous que le format du cordon est de calibre 18 lorsque sa longueur est de 30,48 m (100 pi) ou moins et de calibre 16 lorsque sa longueur est de 45,72 m (150 pi).
- N'utilisez pas un chargeur défectueux ou endommagé de quelque façon que ce soit. Confiez-le à un représentant de service Motorola Solutions.
- Ne désassemblez pas le chargeur. Il ne peut être réparé et aucune pièce de rechange n'est disponible. Le désassemblage du chargeur pourrait occasionner des risques de choc électrique ou d'incendie.
- Pour réduire les risques de choc électrique, débranchez le chargeur de la prise c.a. avant de procéder à une maintenance ou à un nettoyage.

## Directives d'utilisation sécuritaire

- Mettez la radio hors tension pendant la charge.

- Le chargeur n'est pas conçu pour une utilisation à l'extérieur. Ne l'utilisez que dans des emplacements secs et sous des conditions de nature semblable.
- Branchez le chargeur uniquement sur un bloc d'alimentation à fusible câblé approprié et à tension prescrite (tel que spécifié sur le produit).
- Débranchez le chargeur de la tension de secteur en retirant la fiche principale.
- Branchez l'appareil dans une prise murale facile d'accès et suffisamment proche.
- Pour les appareils utilisant des fusibles, les pièces de rechange devront être conformes aux instructions fournies dans la documentation.
- La température ambiante maximale autour du bloc d'alimentation ne doit pas dépasser 40 °C (104 °F).
- La puissance de sortie du bloc d'alimentation ne devra pas dépasser la puissance indiquée sur l'étiquette du produit apposée sous le chargeur.
- Assurez-vous que le cordon est placé à un endroit où il ne sera pas écrasé ou endommagé, ne gênera pas le passage, ne sera pas tendu de façon anormale et ne sera pas exposé à une source d'humidité.

## Package Contents

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The following list encompasses the package content available:

- Radio
- Holster
- Lithium-Ion Battery
- Quick Reference Guide
- Drop-in Tray Charger with Power Adapter
- Product Safety and RF Exposure Booklet

# Introduction

---

This user guide covers the operation of your radios.

This radio is a product of Motorola Solutions' 90 years of experience as a world leader in the designing and manufacturing of communications equipment. This series provides cost-effective communications for businesses such as retail stores, restaurants, schools, construction sites, manufacturing, property and hotel management, and more. Motorola Solutions professional two-way radios are the perfect communications solution for all modern fast-paced industries.

Your dealer or system administrator may have customized your radio for your specific needs. Check with your dealer or system administrator for more information.



**NOTE:**

Read this user guide carefully to ensure that you know how to properly operate the radio before use.

# Maintenance

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This chapter explains the maintenance of the radio.

## 2.1

### Use and Care



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Do not immerse radio in water



---

Use a soft damp cloth to clean the exterior



---

Do not use alcohol or cleaning solutions



---

Do not place more than seven turned on radios, too close to each other in a container

---

---

If the radio is submerged in water,

---



---

Turn the radio off and remove the battery



Dry with soft cloth



---

Do not use radio until it is completely dry

---

-

-

# Battery Features

The radio comes with a rechargeable Lithium-ion (Li-ion) battery. For optimum capacity and performance, ensure your battery is fully charged before first use.

## 3.1 Battery Specifications

The radio comes equipped with a rechargeable Li-Ion battery. To ensure optimum capacity and performance, the battery should be charged before initial use.

Battery life is determined by several factors. The critical ones are overcharging of batteries and the average depth of discharge each cycle. Typically, the greater the overcharge and the deeper the average discharge, the fewer cycles a battery lasts. For example, a battery which is overcharged and discharged 100 % for several times a day, lasts fewer cycles than a battery that overcharges less and is discharged to 50 % per day. Battery with minimal overcharge and has an average of 25 % discharge, lasts even longer.

Motorola Solutions batteries are designed specifically to be used with a Motorola Solutions charger and vice versa. Charging batteries with non-Motorola Solutions equipment

may lead to battery damage and void the battery warranty. Whenever possible, maintain the battery temperature to 77 °F (25 °C) (room temperature). Charging a cold battery (below 50 °F [10 °C]) may result in leakage of electrolyte and ultimate failure of the battery. Charging a hot battery (above 95 °F [35 °C]) results in reducing discharge capacity and affecting the performance of the radio. Motorola Solutions rapid-rate battery chargers contain a temperature-sensing circuit to ensure that batteries are charged within the temperature limits.



**NOTE:**  
Batteries with different capacities and operational life may be available in the future.

## 3.2 Motorola Solutions Authorized Batteries

**Table 1: Motorola Solutions Authorized Batteries**

Part Number	Description
HKNN4013_	Li-Ion Battery 1800 mAh
PMNN4578_	Li-Ion Battery 2500mAh

3.3

## Battery Recycling and Disposal

Li-ion rechargeable batteries can be recycled. However, recycling facilities may not be available in all areas. Under various U.S. state laws and the laws of several other countries, batteries must be recycled and cannot be disposed of in landfills or incinerators. Contact your local waste management agency for specific requirements and information in your area. Motorola Solutions fully endorses and encourages the recycling of Li-Ion batteries.

In the U.S. and Canada, Motorola Solutions participates in the nationwide Call2Recycle program for battery collection and recycling. Many retailers and dealers participate in this program. For the location of the drop-off facility closest to you, access Call2Recycle's Internet web site at <https://www.call2recycle.org/> or call 1-800-8-BATTERY. This internet site and telephone number also provide other useful information concerning recycling options for consumers, businesses, and governmental agencies.

3.4

## Battery Life

The battery life lasts longer when the Battery Save feature is turned on. The Battery Save feature is enabled by default.

Table 2: Battery Life

Battery Type	Battery Life
HKNN4013ASP01 (BT90)	11.5 hours
PMNN4578A (BT110)	16 hours



**NOTE:**  
Battery life is estimated based on 5% transmit/5% receive/90% standby standard duty cycle.

3.5

## Battery Status

This section provides information on the battery status. The radio can announce the corresponding battery level when

you use the **Power** button to enter the Battery Gauge mode by default.

**Table 3: Battery Status**

Battery Status	Battery Level	Voice Prompt or Tone
High	100 % – 71 %	“Battery level high”
Medium	70 % – 31 %	“Battery level medium”
Low	30 % – 11 %	“Battery level low”
Critical	10 % – 0 %	“Battery level critical”
Shutdown	0 %	Shutdown beeps

## Charging Method

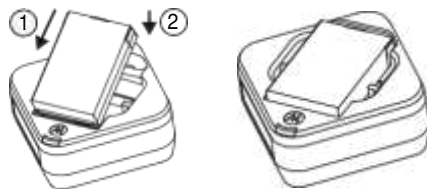
---

This chapter describes the methods you use to charge your radio.

### 4.1

## Charging Stand-Alone Battery

- 1 Align the raised tab on each side of the battery with the corresponding groove on each side of the charger pocket.
- 2 Press the battery toward the rear of the pocket.



- 3 Slide the battery into the charger pocket, ensuring complete contact between the charger and battery contacts.

When the battery is in the pocket, the charger indicates the Battery Level status as shown in [Charger LED Indication on page 27](#) table. The red LED blinks to indicate that the battery is charging rapidly. The LED changes to a steady green light to indicate that the battery is nearly or fully charged.

---

### 4.2

## Charging with the Drop-In Tray Single Unit Charger



### NOTE:

Turn off the radio before charging, and fully charge the battery before first use. It is best to charge at room temperature.

- 1 Place the SUC on a flat surface.
  - 2 Insert the connector of the power supply into the port on the side of the SUC.
-

- 3 Plug the AC adapter into a power outlet.
- 4 Insert the radio into the SUC with the front of the radio facing the LED of the SUC. Ensure the radio is securely inserted all the way into the charger.



For more information, see [Charger LED Indication on page 27](#) and [Operational Safety Guidelines on page 11](#)

The red LED on the SUC illuminates to indicate that the battery is charging.

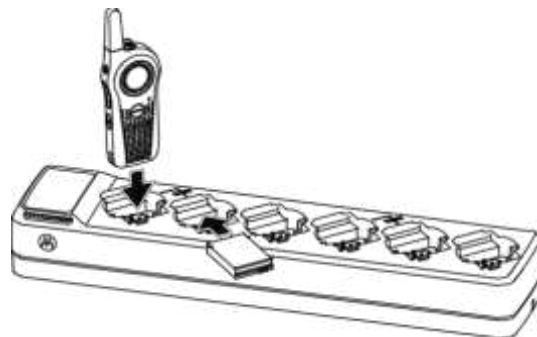
#### 4.3

### Charging the Radio and the Battery Using a Curve Series 12-Pocket Multi-Unit Charger - Optional Accessory

The Curve Series 12-Pocket Multi-Unit Charger (MUC) allows drop-in charging of up to 12 radios or up to six radios and six stand-alone batteries. The batteries can be charged with the radios or removed and placed in the MUC separately. Each of the six charging pockets can hold a radio (with or without the Holster) or battery, but not both at the same time.

- 1 Place the MUC on a flat surface.
- 2 Insert the power cord plug into the MUC dual pin connector at the bottom of the MUC.
- 3 Plug the power cord into an AC outlet.
- 4 Turn off the radio.

- 5 Insert the radio or the battery into the charging pocket with the radio or the battery facing away from the contacts.



**NOTE:**

- The MUC clones up to two radios (two Source radios and two Target radios). For more information, refer to [Cloning Mode in Multi-Unit Charger on page 98](#).
- For more information on the MUC operation, refer to the Instruction Sheets provided with the MUC. For more information on the parts and their part numbers, refer to [Accessories on page 113](#).

4.4

Estimated Charging Time

The following table provides the estimated charging time of the battery. For more information, see [Accessories on page 113](#).

Table 4: Estimated Charging Time

Charging Solutions	Estimated Charging Time
HKNN4013ASP01 (BT90)	4 hours
PMNN4578A (BT110)	5 hours 15 minutes

4.5

Charger LED Indication

The following table describes the meaning of the charger LED indicator.



NOTE:

Ensure the radio or the stand-alone battery is inserted correctly in the charger, and there is power to the outlet.

Table 5: Charger LED Indication

Indication	Status
Green for approximately one second	Power On
Solid red	Charging
Solid green	Charged
Fast blink red	Error <sup>1</sup>
Slow blink orange	Standby <sup>2</sup>
Blink red one time	Battery level is low
Blink orange two times	Battery level is medium
Blink green three times	Battery level is high

<sup>1</sup> Re-position the battery pack to fix the error.

<sup>2</sup> Battery temperature is too warm or too cold or wrong power voltage is used.

## Curve, DLR, and DTR Radios Compatibility

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The Curve series radios, DLR, and DTR radios are based on the same digital radio technology and can be used in mixed fleets of the Curve series radios, DLR, and DTR radios. Out of the box, Curve, DLR, and DTR radios communicate using the factory default settings.

If you have DLR or DTR radios with customized settings and/or private groups, and need to add the Curve series radios, make sure to use the Curve Series CPS software<sup>3</sup> in order to create a compatible configuration in the Curve Series radios. The same applies if DLR or DTR radios are to be added to an existing Curve Series radio fleet. For more details on Curve Series, DLR, and DTR compatibility, please contact your Motorola Solutions point of sale.

For questions or comments related to this product, please contact Motorola Solutions: 1-800-448-6866

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<sup>3</sup> Curve CPS software is available for free download at <http://www.motorolasolutions.com/curve>.

# Radio Overview

This chapter explains the buttons and functions to control the radio.

## 6.1 Curve Series Radio Controls and Indicators

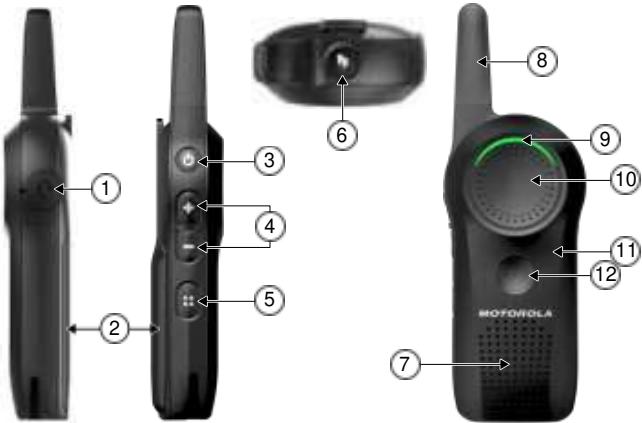


Figure 1: Curve Controls and Indicators

Number	Description
1	<b>Audio Accessory Connector</b> Connects compatible audio accessories.
2	<b>Lithium-ion (Li-ion) Battery</b> For more information on the battery, refer to <a href="#">Battery Specifications on page 21</a> .
3	<b>Power Button</b> <ul style="list-style-type: none"><li>To turn the radio On/Off, long press the <b>Power</b> button.</li><li>To check the battery status, short press the <b>Power</b> button.</li></ul>
4	<b>Volume Control Button</b> <ul style="list-style-type: none"><li>To increase the volume, press the <b>Volume Up</b> button.</li><li>To decrease or mute the volume, press the <b>Volume Down</b> button.</li></ul>

Number	Description
	<ul style="list-style-type: none"> <li>To cycle through the settings in Programming Mode, press the <b>Volume Up</b> and <b>Volume Down</b> buttons.</li> <li>To cycle through the feature settings in User Menu, press the <b>Volume Up</b> and <b>Volume Down</b> buttons.</li> </ul>
5	<b>Channel/Menu Button</b> In standard radio operation mode, the <b>Channel/Menu</b> button comes defaulted to channel function. <ul style="list-style-type: none"> <li>To change channels, press the <b>Channel/Menu</b> button.</li> <li>To enter the Favorite Contact List (if the Favorite Contact List is not empty), press and hold the <b>Channel/Menu</b> button.</li> <li>To browse channels, press the <b>Volume Up</b> or <b>Volume Down</b> button.</li> <li>To navigate through various menus set in the CPS, press the <b>Channel/Menu</b> button.</li> </ul>

Number	Description
	<ul style="list-style-type: none"> <li>To exit, short press the <b>PTT</b> button.</li> </ul> In Advanced Configuration Mode, the <b>Channel/Menu</b> button gives access, and allows navigation to set up special features.
6	<b>Top Button</b> The radio <b>Top</b> button is defaulted to Private Reply feature.  For more information on programming the <b>Top</b> button to other features, refer to <a href="#">Special Radio Call Features on page 41</a> .
7	<b>Speaker</b>
8	<b>Antenna</b> The antenna is nonremovable.
9	<b>Tx/Rx Indicator LED</b> Indicates whether the radio is on stand-by, receiving, transmitting, scan enable, and Wi-Fi mode.

Number	Description
10	<b>Push-to-Talk (PTT) Button</b> To talk, press the <b>PTT</b> button and wait to hear the Talk Permit Tone (TPT). The TPT is a quick double beep. Release it to listen.

Number	Description
	For more information, refer to <a href="#">Transmitting and Receiving Calls on page 36</a> .
11	<b>Microphone</b>
12	<b>VAB (Voice Assistant Button)</b> Supports Voice Assistance Application.

6.2

Radio Specifications

The radio specification is printed on the back of the radio.

Table 6: Radio Specifications

Model	Frequency Band	Transmit Power (Watts)	Number of Channels	Antenna
Curve	ISM 900 MHz	1	10	Non-removable

# Getting Started

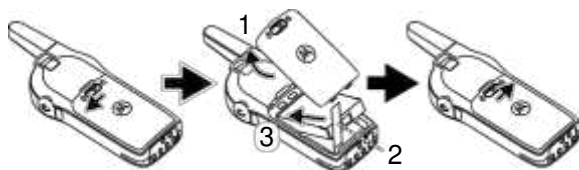
This section helps you to get familiar with the basic operations of the radio.

## 7.1

### Attaching the Battery

- 1 Slide the latch at the top of the battery door to the unlock position, and lift the battery door at the center recess.
- a Align the battery contacts with the tabs in the battery compartment. Insert the contact side of the battery first, then press the battery down to secure in place.

**Figure 2: Attaching the Battery**



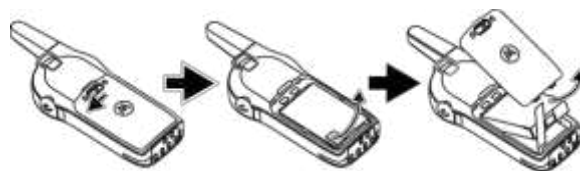
- 2 Put the battery door back on the radio.

- 3 Slide the latch to the lock position.

## 7.2

### Removing the Battery

- 1 Turn the radio off.
- 2 Slide the latch at the top of battery door to the unlock position, and lift the battery door at the center recess.



**Figure 3: Removing a Li-Ion Battery**

- 3 Pull the battery removal tab until the battery is disengaged from the battery compartment.
- 4 Pull the battery away from the radio.

### 7.3 Attaching the Holster

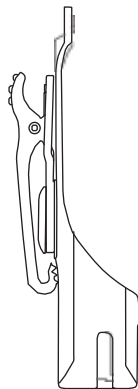


Figure 4: Holster

- 1 To insert the radio into the holster, press the radio against the back of the holster until the hook on the holster is inserted in the top recess.
- 2 To remove the radio from the holster, detach the hook of the holster from the top recess using the top tab, and slide the radio out from the holster.

### 7.4 Turning the Radio On or Off

- To turn on the radio, long press the **Power** button until the radio plays the power-up tone, and the Tx/Rx LED indicator blinks.
- To turn off the radio, long press the **Power** button until the radio power down tone is heard, and the Tx/Rx Indicator LED indicator turns off.



#### NOTE:

By default, when the radio is turned on, it announces the current channel name and battery status.

### 7.5 Adjusting the Volume

There are 16 increments of volume. When you press the **Volume Up** or **Volume Down** buttons, you hear a beep at the current volume level. If your radio is receiving during volume interaction, you hear audio voice prompt from your radio, and the new volume instead of beeps.

- Press the **Volume Up** button to increase the volume, or the **Volume Down** button to decrease the volume.

- To mute, press and hold the **Volume Down** button (~2 seconds) until you hear "Mute" voice prompt from your radio.
- Alternatively, you can mute by pressing the programmable button that is preprogrammed with Mute Mode. You hear "Mute" voice prompt from your radio.
- To maximize the volume, press and hold the **Volume Up** button (~2 seconds). The volume scrolls up fast to maximum volume. You hear the volume beeps increment as the volume increases.



### NOTE:

- Radio mute means setting the volume to the lowest level. This is to prevent the user from forgetting to unmute the radio.
- If Silent mode is set as accessory only audio, the tone and audio remains at the lowest volume in radio speaker regardless of the volume button press. Volume for accessory is still configurable through volume buttons.
- Do not hold the radio too close to the ear when the volume is high or when adjusting the volume.
- When using radio with earpiece, make sure to adjust the radio volume to the lowest volume before putting on the earpiece. For more information, refer to [Acoustic Safety on page 13](#). Use only Motorola Solutions approved accessories. For more information, refer to [Accessories on page 113](#).

## 7.6

### Checking Battery Status

The battery level status are high, medium, low, and critical.

Short press the **Power** button.

For more information, refer to [Battery Status on page 22](#).

---

# General Radio Operations

## 8.1 Transmitting and Receiving Calls

- 1 Press the **PTT** button to respond.



**NOTE:**  
Wait for the Talk Permit Tone (TPT) to end and speak. If you receive a busy tone, the channel is either not available, busy, or there is no user reachable within transmission range.

A quick double beep is heard.

- 2 Hold the radio vertically by 1 to 2 in. from mouth when speaking into the microphone.
- 3 Release the **PTT** button to listen.

Table 7: Tx/Rx LED Indicator

Indicator	Status
Slow blink- ing red	The radio is on standby.
Solid red	The radio is in transmission mode.
Fast blink- ing red	The radio is in receiving mode.



**IMPORTANT:**  
Do not release the **PTT** button at any given time when talking on the radio. Whether you are transmitting using the **PTT** button or using an in-line **PTT** on the earpiece accessory, always ensure the **PTT** button is pressed firmly until the transmission is finished. Releasing the **PTT** button while transmitting and trying to immediately press the **PTT** button again causes the radio to give a loud denial tone.

Wait for two seconds and press **PTT** again to continue speaking. If you press the **PTT** button to transmit and a busy tone is received instead of a **TPT**, this means the channel is either not

available, busy or there are no users reachable within transmission range.

## 8.2

## Talk Permit Tone

Talk Permit Tone (TPT) is a quick distinctive double beep tone that sounds after you press the **PTT** button, indicating the channel is free to talk.

TPT ensures orderly communications by preventing radios from transmitting over ongoing conversations.


**NOTE:**

To ensure your words are not cut off, always wait for the TPT before you start to speak.

## 8.3

## Talking to Group in Channel

- 1 To transmit, press the **PTT** button.

Solid red Tx/Rx Indicator LED illuminates and the TPT is heard.

- 2 Before you speak, wait for the TPT.

## 8.4

## Browsing or Selecting Channel

- 1 Press the **Channel/Menu** button until you hear "Channel <Number>" voice prompt from your radio.

- 2 To select channel, press the **Volume Up** button or **Volume Down** button.

Your hear selected channel voice prompt from your radio.

- 3 To exit <Channel Change>, press the **PTT** button or wait for the radio Channel/Menu timer to expire.

## 8.5

## Starting Private Reply

The **Top** button is set to Private Reply feature by default. This feature allows two people to instantly connect privately after a group transmission is over.

- 1 To initiate a Private Reply, press the **Top** button during a group call.

The **Top** button LED blinks orange.

- 2 After a group call, press **PTT** button to call privately. The **Top** button LED illuminates in solid orange.

- 3 Wait for the Talk Permit Tone to end and speak.



**NOTE:**

There is a channel Hangtime after a Private transmission. By default, the Hangtime is set to 10 seconds.

8.6

Talk Range

Table 8: Talk Range

Talk Range		
Model	Industrial	Multi-Level

Talk Range

	Inside steel/ concrete Indus- trial buildings	Inside multi-lev- el buildings
ISM 900 MHz	Up to 300,000 sq. ft	Up to 20 Floors

For a group of radio to communicate, the radios need to be on the same channel and have the same radio PROFILE ID number. The default PROFILE ID number is **0000**.

Channel

Current channel that the radio is using, depending on radio model.

PROFILE ID Number

The radio in your fleet (independent of the channels that users are assigned to) should use the same PROFILE ID. It is important to customize the PROFILE ID number in order to avoid interference from other users using the default **0000** number. In order to customize your radio fleet PROFILE ID, choose a four digit number and enter it using the radio Advanced Configuration Mode (Turn off the radio, press **PTT**→**Volume Up**→**Power** buttons at the same time, and hold until you hear Programming Mode voice prompt from your radio. For

more information, refer to the [Advanced Configuration Mode on page 76](#).

You can configure the **Top** button to other features such as Page All Available, Call Available, Direct Call and Mute.

For more information on **Top** button configuration, refer to [Advanced Configuration Mode on page 76](#).

8.7

## Top Button Options

The **Top** button is programmed to Private Reply feature by default.

8.8

## Radio Status

Table 9: Radio Status

Radio Status	Front LED Indicator	Top Button LED Indicator	Voice Prompt or Tone
Power-Up	Solid Orange, followed by Solid Red for 2 seconds	OFF	“Battery Level <Level>, Channel <Number>”
Power Off	Solid Red for 2 seconds	OFF	Power Off chirps
Fatal Error at Power-up	Double Blink Red	Single Blink Orange	Not Available
Channel Busy	Not Available	OFF	Busy tone

Radio Status	Front LED Indicator	Top Button LED Indicator	Voice Prompt or Tone
Idle Mode	Slow Blink Red	OFF	Not Available
Transmit (Tx) (standard group call)	Solid Red	OFF	Not Available
Receive (RX) (standard group call)	Fast Blink Red	OFF	Not Available
Voice Assistant Tx	Solid Green	OFF	Not Available
Voice Assistant Rx	Fast Blink Green	OFF	Not Available
Voice Assistant Error	Double Blink Red	OFF	Not Available
Voice Assistant Hang Time	Slow Blink Green	OFF	Not Available
Scan Enable	Slower Blink Green	OFF	Not Available

# Special Radio Call Features

This topic explains Curve Radio Series special call features.

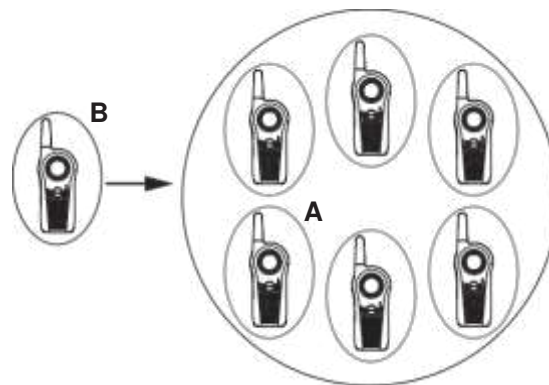
## 9.1

### Private Reply

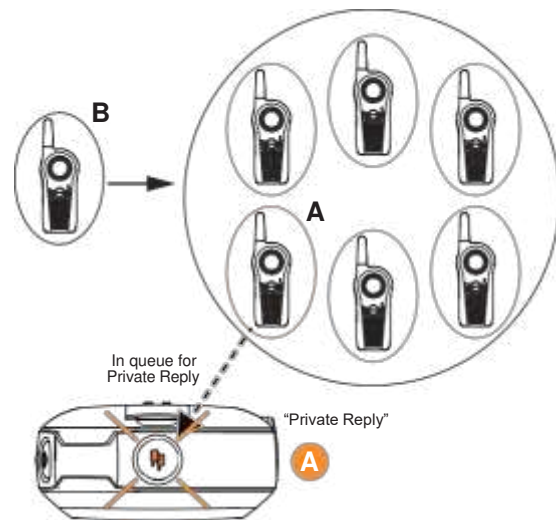
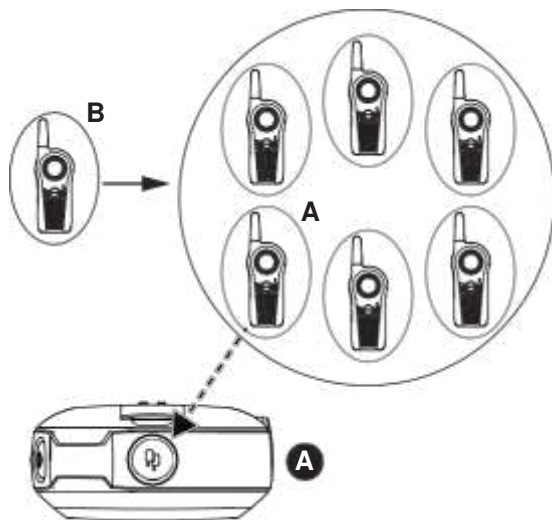
This feature allows two people to instantly connect privately after a group transmission.

#### Private Reply Scenario

User B is talking to a group of radios.



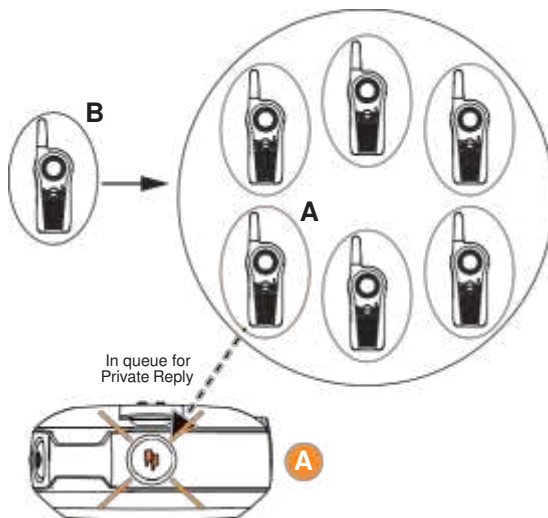
User A wants to talk to User B privately and presses the **Top** button to queue up.

**NOTE:**

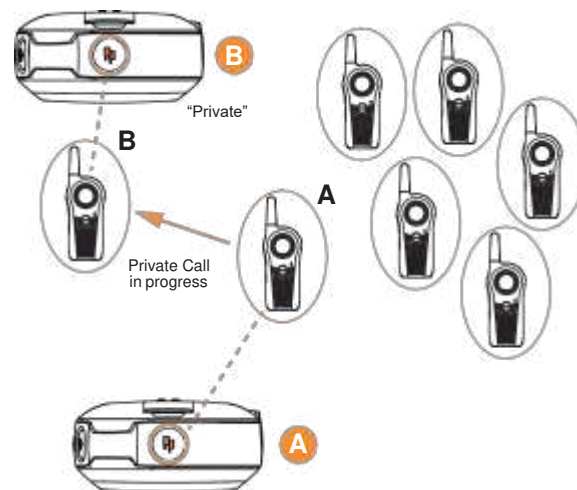
Long pressing the **Top** button a second time cancels the Private Reply queue.

User A radio plays voice prompt “Private Reply” and the **Top** button starts blinking orange, showing user A is in queue waiting to talk privately to User B.

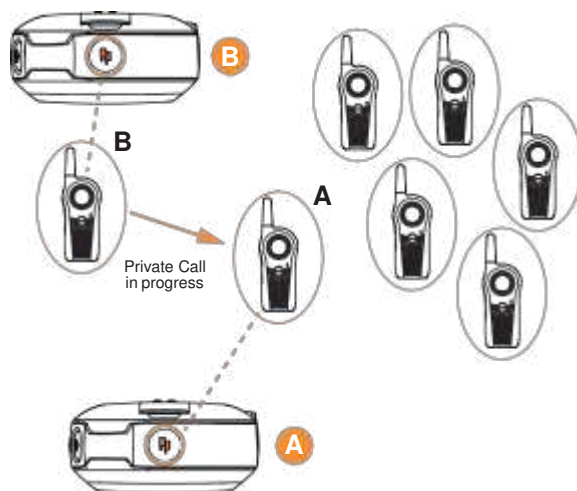
User B finishes talking to the Group while User A radio is still blinking orange indicating it is in queue for Private Reply call.



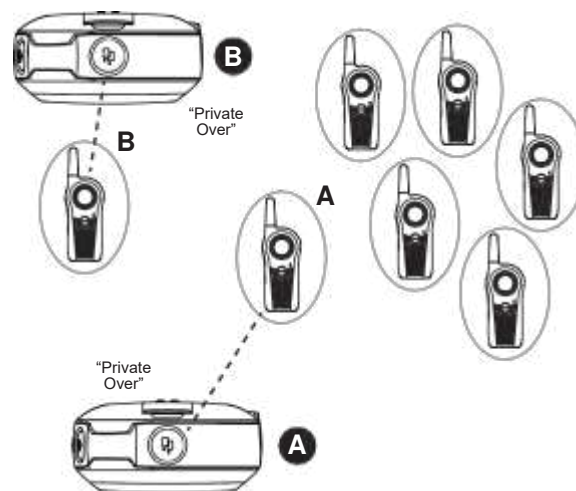
User A presses **PTT** button to talk privately to User B. The **Top** button LED indicator for both radio A and radio B illuminate solid orange. User B hears radio voice prompt "Private" and radio plays a distinctive Private TPT.



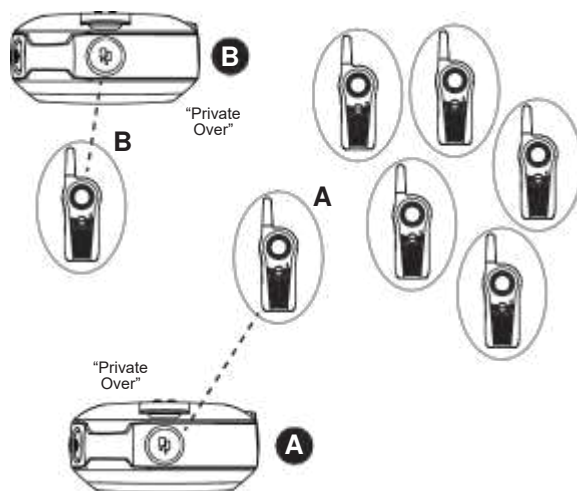
Whenever user A or B presses the **PTT** button to reply back, they are talking privately to each other. Nobody else hears them. Radio plays a distinctive Private TPT.



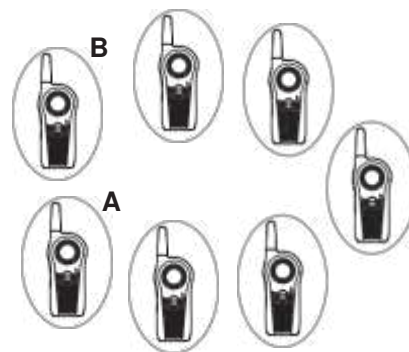
If either one of the radio users takes too long to push the **PTT** button and reply back, (the default “Private Hang Time” is 10 seconds), the radio times out and ends the private communication with voice prompt “Private Over” on both radios A and B. The **Top** button LED indicator goes off.



Radio user A (who initiated the Private Call), can also end the call at any time by long pressing the **Top** button. The radio plays voice prompt “Private Over” on both radio A and B to indicate that the private call is over. The **Top** button LED indicator turns off.



Radio users A and B join back the group transmission in their channel once the private call ends.



#### NOTE:

You can set the “Private Hang Time” and “Group Hang Time” to different values using the CPS.

#### 9.1.1

### Starting Private Reply

This feature allows two people to instantly connect privately after a group transmission. The **Top** button is programmed by default as Private Reply.

- 1

To capture the radio ID of the person currently talking to your group after transmission is over, press the **Top** button.
- 2

To initiate the conversation privately, press the **PTT** button.

9.1.2

Private Reply Status Indicator

Table 10: Private Reply Status Indicator

Private Reply Status	Top Button LED Indicator	Voice Prompt or Tone
Private Reply request in queue (initiated using <b>Top</b> button press) – Initiator party	Blink Orange	“Private Reply”
Private conversation initiated (using the	Solid Orange	Private TPT

Private Reply Status	Top Button LED Indicator	Voice Prompt or Tone
PTT button) – Receiver party		
Private Call notification <sup>4</sup> – Receiver party	Solid Orange	“Private”
Private conversation in progress – Both parties	Solid Orange	Private TPT
End of private conversation – Both parties	Off	“Private Over”

<sup>4</sup> This notification occurs only once in the beginning of the call.

## 9.2

## Direct Call

You can call a pre-determined user programmed in the radio privately. The Direct Call feature is configurable using the Customer Programming Software (CPS).



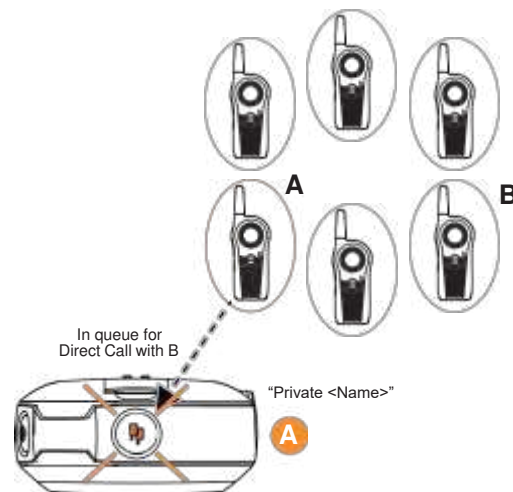
### NOTE:

To configure Direct Call feature for the first time in your radio, download the Customer Programming Software (CPS) for free at <http://www.motorolasolutions.com/curve>. Read and upload the radio IDs (identified as "privates" in CPS) in CPS. For more information, refer to [Customer Programming Software on page 90](#)

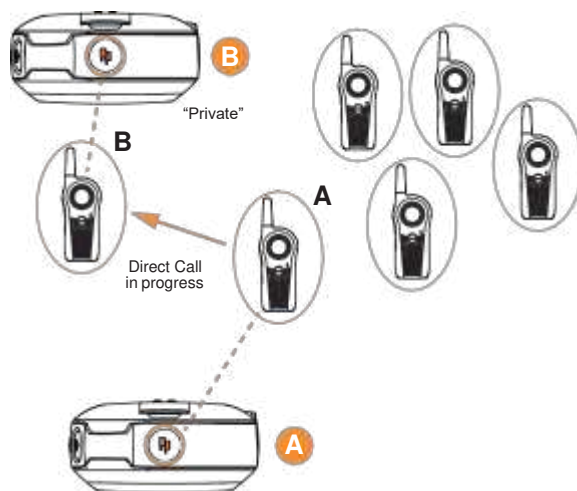
You have the option to program the Direct Call feature into the **Top** button, or assign to any radio channel.

### Direct Call Scenario

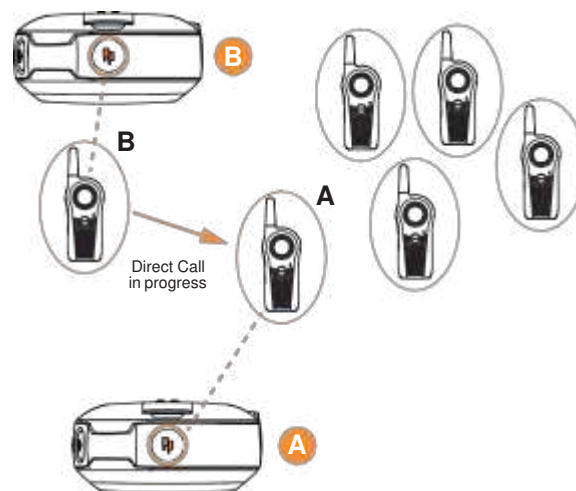
User A presses the radio **Top** button to talk directly to User B. User A radio plays voice prompt "Private <Name>" as programmed in CPS, and the **Top** button LED indicator starts blinking orange, indicating that User A is in queue waiting to talk privately to User B.



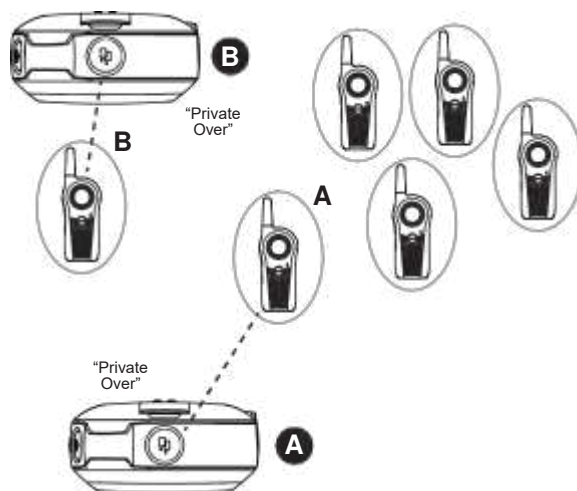
User A presses the **PTT** button to talk privately to User B (who is NOT in a radio conversation), the **Top** button LED indicators of both A & B radios illuminate in solid orange. Radio B plays voice prompt "Private" indicating that the incoming call is a Direct Private Call. Radio plays a distinctive Private TPT.



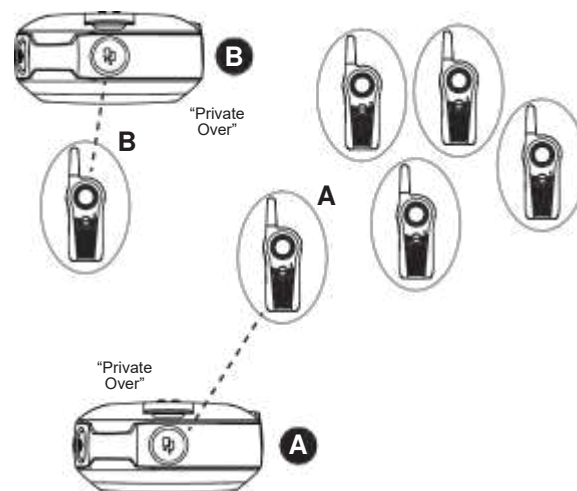
Whenever either user A or B presses the **PTT** button to reply back, they are talking privately to each other. The radio plays a distinctive Private TPT.



If any of the radio users takes too long to push the **PTT** button and reply back, (the default "Private Hang Time" is 10 seconds), the radio times out and ends the private communication with voice prompt "Private Over" on both radio A and B. The **Top** button LED indicator goes off.




Radio User A (who initiated the Direct Call), ends the call by long pressing the **Top** button. The radio plays voice prompt "Private Over" on both radio A and B to indicate that the private call is over. The **Top** button LED indicator goes off.



## Application Example

Set up your employees to be able to contact directly and privately their supervisor, the Manager on Duty or to reach a designated person for special requests by simply

pressing the Direct Call button (**Top** button) and then pushing the **PTT** button to talk.

 **NOTE:**  
If the Direct Call is set up in a specific channel, change to that channel and press the **PTT** button to talk privately.

9.2.1  
**Direct Call Status Indicator**

**Table 11: Direct Call Status Indicator**

Action	Radio Caller/ Receipient	Top Button LED In- dicator	Voice Prompt or Tone
Direct Call initiated using <b>Top</b> button.	Caller	Blink Orange	"<Name of Direct Call user>" <sup>5</sup>

Action	Radio Caller/ Receipient	Top Button LED In- dicator	Voice Prompt or Tone
Private conversation initiated using <b>PTT</b> button	Caller	Solid Orange	Private TPT
Private Call notification	Receipient	Solid Orange	"Private"
Private conversation in progress	Caller and Receipient	Solid Orange	Private TPT
End of private conversation	Caller and Receipient	Off	"Private Over"

<sup>5</sup> According to the private user name programmed in CPS.To play the direct call user name, check the **User Private Name** checkbox in CPS.

## 9.3

## Private Reply and Direct Call Frequently Asked Questions

- 1** Question: If I change my mind and want to exit the request for Private Call (or I pressed the **Top** button by mistake), how do I get out of the “private queue” status (Radio **Top** button LED indicator is blinking orange)?

Answer: Long press the **Top** button. The radio exits the private queue request and the **Top** button LED indicator turns off, returning you to radio normal status.

- 2** Question: What happens if two people (for example user A and C) press their **Top** button at the same time to Private Reply or Direct Call User B?

Answer: Pressing the **Top** button only queues the radio B ID; therefore, there is no issue if two people press the **Top** button at the same time. The issue occurs when these two people press the **PTT** button at the same time to talk privately to B. Then, whoever presses the **PTT** button faster gets to talk privately to B. The other user hears a “busy” or rejection tone.

- 3** Question: What happens if a person Private Reply or Direct Call User B, but User B does not want to engage in the Private conversation?

Answer: The nature of the radio communication is to allow instant communication without the option to decline radio calls. Therefore, if you are concerned about users disrupting group communications or misusing the Private Reply or Direct Call features, make sure that these features are enabled only on authorized radio users.

- 4** Question: I pressed the Private Reply button but nothing happened (for example, **Top** button LED indicator did not start blinking) and instead the radio gives out a busy tone.

Answer: It can be due to different causes such as the **Top** button is disabled or the radio could not store the radio ID you wanted to reply to (this is if the **Top** button was pressed outside the four seconds Group Hang Time).

- 5** Question: What happens if I want to Private Reply to a person that just finished talking?

Answer: The radios allow for “Group Hang Time” (around four seconds) for you to be able to Private Reply to someone who had just finished talking. Push the **Top** button within the hang time window and the radio **Top** button LED indicator starts blinking orange. You can then press the **PTT** button to talk privately.

## 6 Question: How exactly does Private Reply work?

Answer: When you press the radio **Top** button while User B is talking, your radio “captures” the ID of radio B. Once user B finished talking and you press the **PTT** button, your radio calls radio B privately.

## 7 Question: What happens if I want to end the call during a Private Call or Direct Call conversation?

Answer: If you are the user who initiated the Private Reply or Direct Call, you can end the call by long pressing the **Top** button. However, if you are the call receiver, you have to wait for the radio to time out (i.e. no communications detected for more than 10 seconds) OR change the channel.

## 8 Question: I pressed the **Top** button to queue to talk privately to the last person transmitting, but when the user finished talking and I push the **PTT** button to talk, the radio gave me a busy tone or other strange tones and I could not initiate my conversation.

Answer: It is likely there are other users who were waiting as well to talk to the last person transmitting and someone else pressed the **PTT** button before you, giving you a busy or error tone. Another reason is that the last person transmitting has gone out of transmission range.

## 9 If I press the **Top** button (either for Private Reply or Direct Call) and I forgot that I wanted to talk privately and I did not push the **PTT** button:

- Question: Would I be still able hear the group conversations in my channel if I do not press the **PTT** button?  
Answer: Yes, you should be able to still hear conversations in your channel.
- Question: How long do I have to talk privately to User B?  
Answer: There is no time restriction on how long you can take to press the **PTT** button to talk privately to user A, as long as your **Top** button LED indicator is blinking.
- Question: Does the radio gives me any alert to know that I am in still in the private queue mode?  
Answer: Yes. While waiting in queue to talk privately, you will receive a call reminder tone after 1 minute of being in queue, followed by another reminder tone 4 minutes after that. No other reminder is heard afterwards, but you remain in queue until Private Reply mode is exited.
- Question: How do I respond to group conversation if I have already pushed the **Top** Button (for either

Private Reply or Direct Call) and my **Top** button LED indicator is blinking?

Answer: Long Press the **Top** button to exit the private queue mode (**Top** Button LED indicator should turn off) and press the **PTT** button to reply to the group call.

- 10 Question:** What happens if I am in queue to talk privately (LED indicator blinking orange), then the person that was transmitting finished talking and I press the **PTT** button to talk but the **Top** button LED indicator does not change to solid orange?

Answer: The radio lets you know you are ready for a private communication by turning the **Top** button LED indicator to solid orange and playing the voice prompt “private” in the beginning. During the private conversation, it also plays a distinctive Talk Permit Tone. All these different prompts from the radio need to happen to ensure there is a private communication established. If you do not have these prompts, it means that you do not have private communication established and you need to try again.

- 11 Question:** How do I know when the radio is no longer in Private Mode conversation?

Answer: You are no longer in a private conversation if the **Top** button LED indicator is not illuminating solid

orange and is either blinking or switched off instead. Furthermore, the radio plays the voice prompt: “Private Over”.



**NOTE:**

Remember that the Private Reply and the Direct Call time out after 10 seconds of inactivity in which both users are sent back to the group call mode (Radio plays the voice prompt “Private Over” and the **Top** button LED indicator goes off).

## 9.4

### Call All Available

You can perform group call to all users available on different channels, and users who are not in an on-going radio conversation. The Call All Available feature does not interrupt ongoing communications.

You have the option to program the Call All Available feature into **Top** button, or assign to a channel using the Customer Programming Software (CPS).

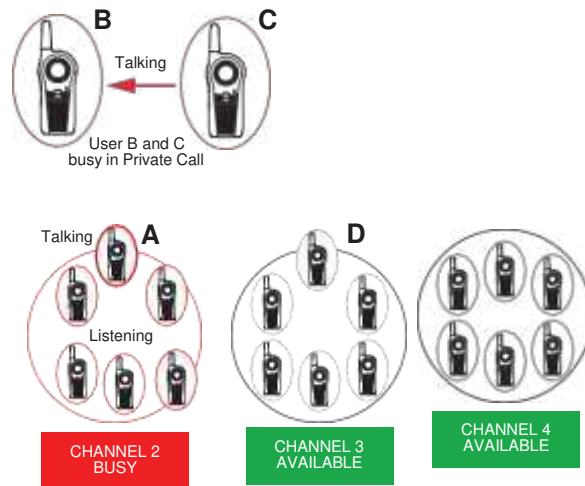
The Call All Available feature allows a communication with all available radio users at once in a temporary “super channel” group, without having to change through each channel individually.

When a caller initiate the Call All Available transmission, the **Top** button is disabled in all radios involved. The Private Reply feature or Direct Call feature is disabled during this period.

The radio times out a Call All Available communication after four seconds of inactivity. The time out prevents all users from being tied up indefinitely in an unnecessary group conversation.

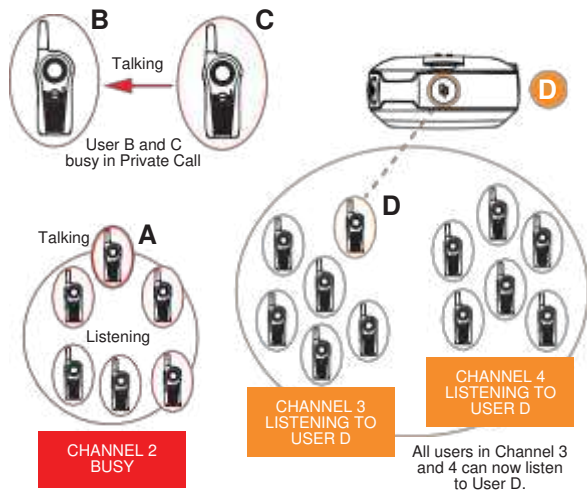
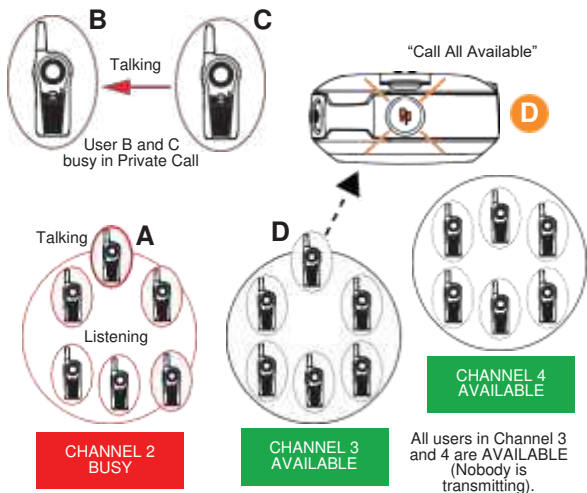
### Call All Available Scenario

All users in Channel 3 and 4 are available (nobody is transmitting).



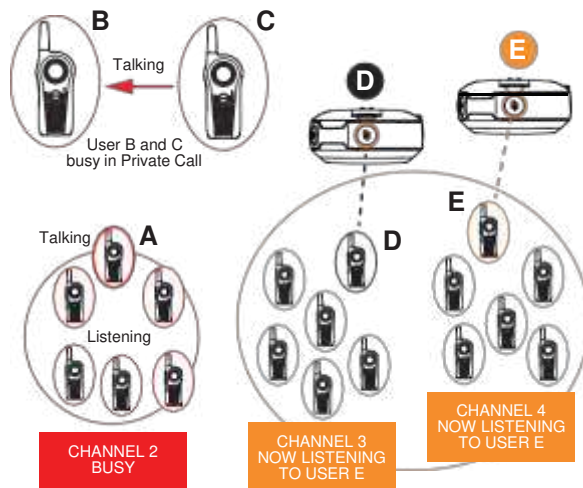
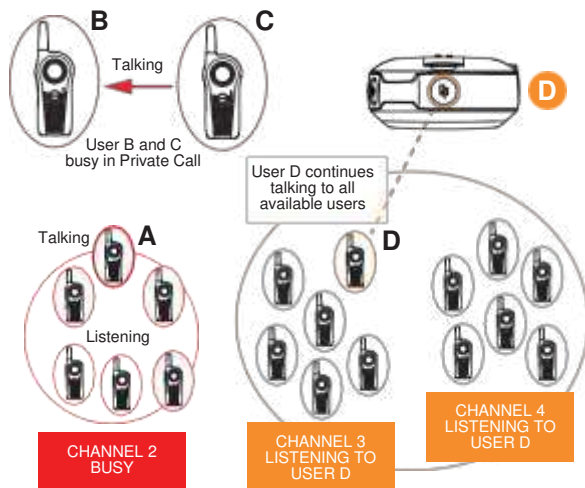
User D in Channel 3 initiates Call All Available by pressing the radio **Top** button<sup>6</sup>

<sup>6</sup> **Top** button must be pre-programmed to Call All Available before using this feature.



All users from Channel 3 and 4 are brought into a temporary “super channel” group. User D then presses the **PTT** button and start talking to all available users in both channels.

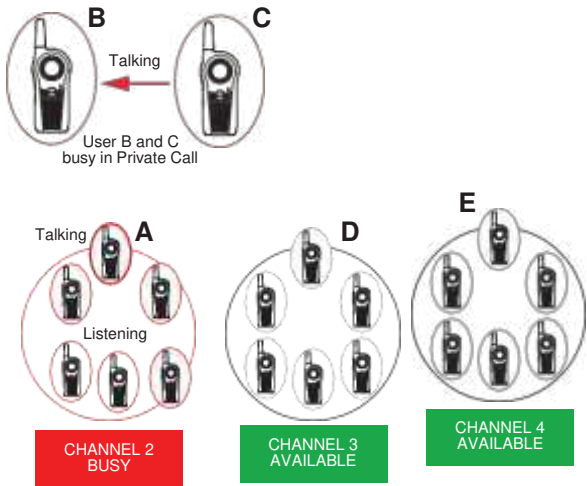
All radios **Top** buttons in Channel 3 and 4 are solid orange indicating that Call All Available is in progress.



User D finished talking [**Top** button LED indicator still solid orange<sup>7</sup>]. User E presses the **PTT** button and starts talking to all available users. All users in Channel 3 and 4 now hear User E. All radios **Top** buttons are solid orange indicating that Call All Available is in progress.

Once all users finished communicating (no transmissions for more than four seconds), the radios time out and end the Call All Available “super channel” group. All users in channel 3 and 4 return to their original talk channels.

<sup>7</sup> Users in the Call All Available group must respond back within the four second hang time or the Call All Available mode will be terminated.



### Application Example

An employee in a retail shop uses the radio with the **Top** button programmed to Call All Available. This employee is trying to check if anyone took the back room scanner. The employee presses the **Top** button followed by the **PTT** button and asks “Does anybody know who has the backroom scanner?”. Anyone, irrespective of their channel, who is not already part of another conversation, will hear

this call and can talk back to the whole group of users (who are tied up in the super channel group call) and provide the needed information.

#### 9.4.1 Call All Available Status Indicator

Table 12: Call All Available Status Indicator

Action	Radio Caller/ Recipient	Top Button LED In- dicator	Voice Prompt or Tone
Call All Avail- able initiated using <b>Top</b> button	Caller	Blink Or- ange	“Call All Availa- ble”
Call All Avail- able conver- sation initi- ated using <b>PTT</b> button	Caller	Solid Orange	Stand- ard TPT

Action	Radio Caller/ Recipient	Top Button LED In- dicator	Voice Prompt or Tone
Call All Avail- able call noti- fication	Recipient	Solid Orange	Stand- ard TPT
Call All Avail- able conver- sation in pro- gress	Caller and Recipient	Solid Orange	Stand- ard TPT
End of Call All Available	Caller and Recipient	Off	None

9.5

## Page All Available

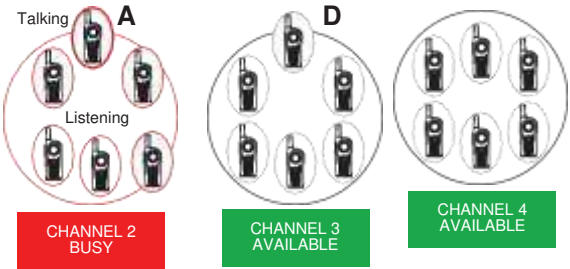
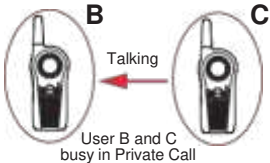
You can communicate with all available radio users at once without having to change through each channel individually. The Page All Available feature does not interrupt ongoing communications.

You have the option to program the Page All Available feature into **Top** button, or assign to a channel using the Customer Programming Software (CPS).

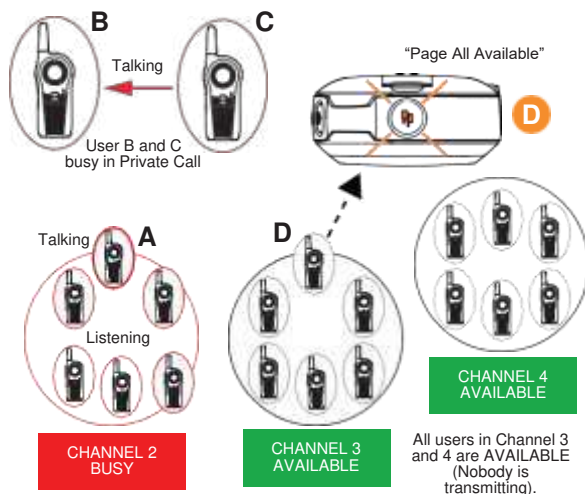
The Page All Available feature is a one-way group voice announcement to all users on different channels who are not in an ongoing radio conversation. It prevents users from getting in an unwanted ongoing group conversation.

### Page All Available Scenario

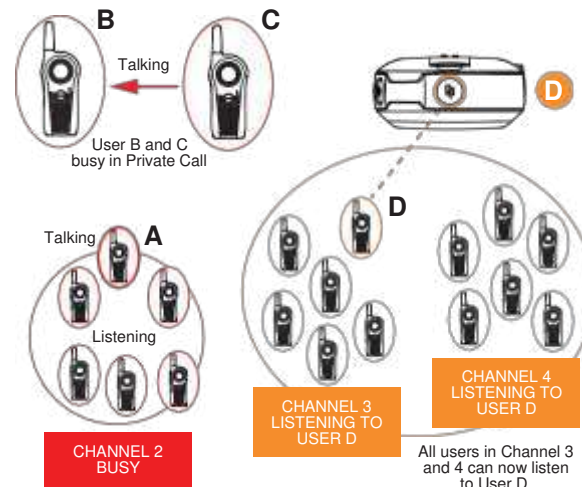
All users in Channel 3 and 4 are available (nobody is transmitting).



User D in Channel 3 initiates Page All Available by switching to Channel 6<sup>8</sup>.



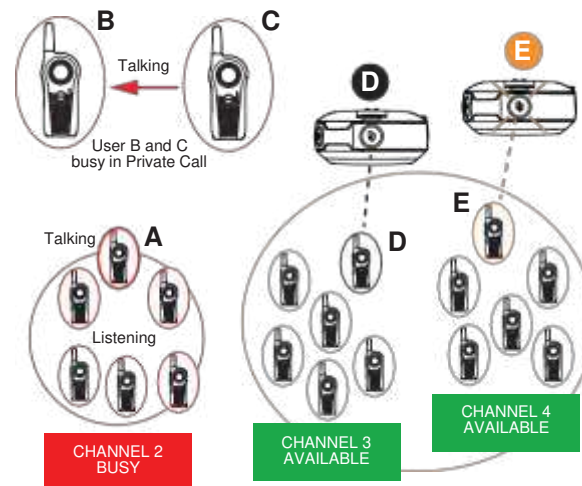
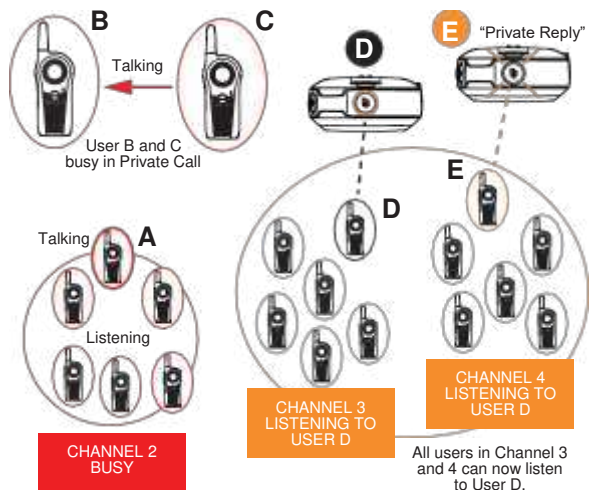
All users from Channel 3 and 4 are brought into a temporary "super group". User D then presses the **PTT** button and starts talking to all available users in both channels.



User D continues talking to all available users. User E wants to reply to user D and presses the **Top** button<sup>9</sup>. User E goes in queue for Private Reply.

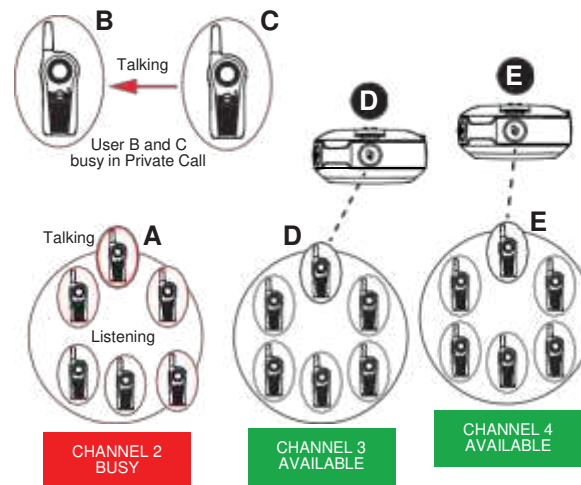
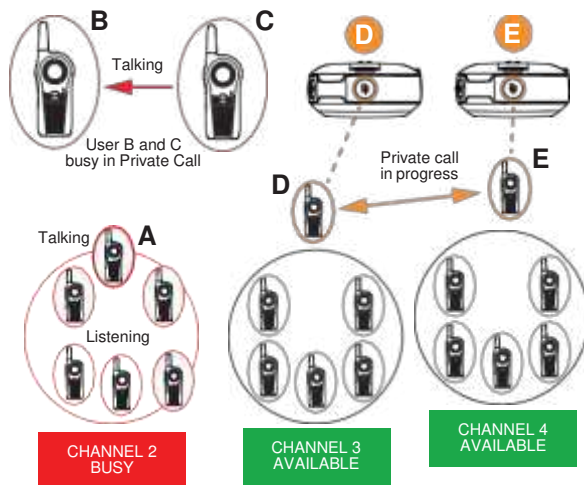
<sup>8</sup> Channel 6 must be pre-programmed to Page All Available before using this feature.

<sup>9</sup> **Top** button of Radio E must be pre-programmed to Private Reply feature.



Once user D stops transmitting by releasing the **PTT** button, the Page All Available is over. All users in Channel 3 and 4 are back to their original channel groups. User E remains in queue for Private Reply.

User E presses **PTT** to talk to user D. They are now engaged in a Private Conversation. Nobody else can hear them. The **Top** button LED indicator for radio D and E illuminates solid orange.



Once User D and E finish the private conversation, they are returned to their respective group channel. The **Top** button LED indicator both radios switched off.

## Application Example 1

An employee in a retail shop uses the radio with the **Top** button programmed to Private Reply and Channel 6 programmed to Page All Available feature. This employee is looking for anyone (in any of the group radio channels) who can come over to help out in the back room. The employee changes to the Page All Available channel before pressing the **PTT** button and asks "Can someone

come over to the back room to help out?”. Whoever is available in any of the radio channels can privately reply to the employee to ask for more details or to confirm that they are available to help.

Application Example 2

Anna needs to talk privately to another user (John) and she is not sure in which channel to find him. It is cumbersome to browse all channels to search for John. Anna uses the radio with the **Top** button programmed to Private Reply and Channel 6 programmed to Page All Available feature. She switches to Channel 6 and asks “John Smith, are you available?”

If John is available, he can reply privately (by pressing the **Top** button). If no response is heard, it means that he is busy in another radio call or is not within the communication range.

9.5.1

Page All Available Status Indicator

Table 13: Call All Available Status Indicator

Action	Radio Caller/ Receipient	Top Button LED In- dicator	Voice Prompt or Tone
Page All Available initiated using <b>Top</b> button	Caller	Blink Or- ange	“Page All Avail- able”
Page All Available conversation initiated using the <b>PTT</b> but- ton	Caller	Solid Orange	Stand- ard TPT
Page All Available Call notification	Receipient	Solid Orange	Stand- ard TPT
Page All Available	Caller and Receipient	Solid Orange	Stand- ard TPT

Action	Radio Caller/ Receipient	Top Button LED In- dicator	Voice Prompt or Tone
conversation in progress			
End of Page All Available	Caller and Receipient	Off	None

**NOTE:**

To initiate Page All Available, press the **Top** button or change to a channel that is preset to Page All Available followed by the **PTT** button to talk to all available users in different channels.

**Top** button must be pre-programmed to Page All Available via Advanced Configuration or CPS. The only way to respond to someone doing a Page All Available call is by Private Reply. Page All Available can also be programmed to a radio channel.

For more information, refer to [Customer Programming Software on page 90](#).

# Advanced Features


This topic explains the advanced features for Curve Series radios.

## 10.1 Voice Assistant Mode Features

Voice Assistant Button (VAB) enables the user to initiate connection to the Portal through Wi-Fi.

You can perform the following actions while holding the VAB button:

- to log in to the portal
- to log out from the portal
- to send and play back voice messages
- to trigger voice calls.



**NOTE:** You must pre-configure all Voice Assistant features in the Voice Assistant Portal before you can use these features on the radio.

Table 14: Voice Control Command

Voice Assis- tant Mode	Examples
Voice Login	Say one of the following com- mands: <ul style="list-style-type: none"><li>• "log in &lt;username&gt;, pin &lt;pin&gt;"</li><li>• "log on &lt;username&gt;, pin &lt;pin&gt;"</li><li>• "sign in &lt;username&gt;, pin &lt;pin&gt;"</li><li>• "sign on &lt;username&gt;, pin &lt;pin&gt;"</li></ul>
Voice Logout	Say one of the following com- mands: <ul style="list-style-type: none"><li>• "log out"</li><li>• "log off"</li><li>• "sign out"</li><li>• "sign off"</li></ul>

Voice Assistant Mode	Examples
Direct Call	Say one of the following commands: <ul style="list-style-type: none"><li>• "Call &lt;username&gt;"</li><li>• "Contact &lt;username&gt;"</li><li>• "Call &lt;group name&gt;"</li><li>• "Contact &lt;group name&gt;"</li></ul>
Record Voice Message	Say one of the following commands: <ul style="list-style-type: none"><li>• "Record message for &lt;username&gt;"</li><li>• "Send message to &lt;username&gt;"</li></ul>
Play Voice Message	"Play Message"



**NOTE:**  
Voice Control Command is only supported in English only.

## Voice Assistant Mode Indicators

Table 15: Voice Assistant Mode Indications


Radio Status	Front LED	Voice Prompt or Tone
VAB HangTime	Slow blink green	N/A
VAB Tx	Solid green	Voice Control ready tone.
VAB Rx	Fast blink green	VAB responses.
Wi-Fi connection error during VAB use	Double blink red	<ul style="list-style-type: none"><li>• Busy tone while the <b>VAB</b> button is pressed.</li><li>• When the <b>VAB</b> is released, "Wi-Fi Connection required".</li></ul>

10.1.2

# Voice Assistant Feedback Error Definition

Table 16: Voice Assistant Feedback Error Definition

Error Feedback	Error and Possible Solutions
"Wi-Fi Connection Required."	<p>Radio is not connected to the Wi-Fi router. Perform one of the following solutions:</p> <ul style="list-style-type: none"><li>• Ensure that the Wi-Fi SSID, password, and security type are correct.</li><li>• Ensure that the radio is within Wi-Fi coverage.</li><li>• Radio is busy. Wait for 15 seconds and press the <b>VAB</b> button again.</li></ul>
"System error. Please try again."	<p>Radio is not connected to the server. Perform one of the following solutions:</p>

Error Feedback	Error and Possible Solutions
	<ul style="list-style-type: none"><li>• Ensure that the Dealer Token is set and correct.</li><li>• Radio is busy. Wait for 15 seconds and press the <b>VAB</b> button again.</li></ul>
<p>Single bonk</p> 	<p>The radio plays a single bonk to alert the user that the user pressed an unsupported button in VA mode, such as the <b>Menu</b> button and <b>Top</b> button.</p> <p>Radio is busy and failed to establish a new connection with the server. Perform one of the following solutions:</p> <ul style="list-style-type: none"><li>• Press the <b>PTT</b> button to exit VA mode, or</li><li>• Wait for a few seconds before pressing the <b>VAB</b> button.</li></ul>
Double bonk	<p>Radio does not receive response from the server with-</p>

Error Feedback	Error and Possible Solutions
	<p>in the allocated response time. This error happens after the user has completed a voice command and release the <b>VAB</b> button.</p> <p>Ensure that your internet signal strength is strong. Try sending voice command and release the <b>VAB</b> button.</p> <p>The radio is busy when the user press and release the <b>VAB</b> button. Perform one of the following solutions:</p> <ul style="list-style-type: none"> <li>• Press the <b>PTT</b> button to exit VA mode, or</li> <li>• Wait for a few seconds before pressing the <b>VAB</b> button.</li> </ul>
Talk prohibited tone (while holding the <b>VAB</b> button.	Radio is busy when user press and hold the <b>VAB</b> button. This error happens immediately when

Error Feedback	Error and Possible Solutions
	<p>you press and hold the <b>VAB</b> button.</p> <p>Perform one of the following solutions:</p> <ul style="list-style-type: none"> <li>• Press the <b>PTT</b> button to exit VA mode, or</li> <li>• Wait for a few seconds before pressing the <b>VAB</b> button.</li> </ul> <p>Radio encounters error to transmit voice command to the server. The server does not process partially completed voice caused by a sudden error. This error occurs more than 10 seconds after you press and hold the <b>VAB</b> button.</p> <p>Perform one of the following solutions:</p> <ul style="list-style-type: none"> <li>• Wi-Fi signal strength is weak. Move nearer to the Wi-Fi router.</li> </ul>

Error Feedback	Error and Possible Solutions
	<ul style="list-style-type: none"><li>Internet speed is too slow. Upgrade your internet speed or switch to another internet source.</li></ul>
	User press and hold the <b>VAB</b> button for more than 2 minutes (exceeded the maximum voice command or voice message length). Radio transmits the 2 minutes voice command or voice message to the server. Release the <b>VAB</b> button.

10.1.3

Voice Assistant Message Query

Voice Assistant (VA) Message Query allows the radio to send a periodic query to the VA to check whether or not you have any pending voice message. A voice message chirps when there is a new message available and exits Wi-Fi mode.

To enable this feature, you must set the VA Message Query interval in CPS. The default value for the interval is 5 minutes.



**NOTE:**  
VA Message Query is disabled if the **Enable Wi-Fi** checkbox is disabled regardless of the VA Message Query interval settings. This feature only works in Idle mode.

10.1.4

Login and Logout of Voice Assistant Mode

Perform one of the following actions based on your preference:

Choose from:

Option	Actions
<b>Logging In through voice</b>	<p><b>a</b> Press and hold the <b>VAB</b> button.</p> <p><b>b</b> After you hear a tone and the front LED shows</p>

Option	Actions
	<p>solid green, speak your request into the microphone.</p> <p><b>c</b> Release the <b>VAB</b> button.</p> <p><b>d</b> If login is successful, a voice command responds "&lt;username&gt; logged in".</p>
<b>Logging In through Kiosk</b>	<p><b>a</b> Go to Curve Kiosk.</p> <p><b>b</b> Press and release the <b>VAB</b> button on your radio. A voice respond speaks out your radio passphrase.</p> <p><b>c</b> Type your address book name.</p> <p><b>d</b> Type your PIN.</p> <p><b>e</b> Select your radio passphrase from the drop-down list. Use the pass-</p>

Option	Actions
	<p>phrase provided by the voice respond from <a href="#">step b</a>.</p> <p><b>f</b> If login is successful, a voice command responds "&lt;username&gt; logged in".</p>

#### 10.1.5

### Logout of Voice Assistant Mode

- 1 Press and hold the **VAB** button.
- 2 After you hear a tone and the front LED shows solid green, speak your request into the microphone.
- 3 Release the **VAB** button.
- 4 If logout is successful, the voice command responds "<username>" logged out, goodbye".

The user is automatically log off from the Voice Assistant portal in the following scenarios:

- Radio automatically power off because battery is low.
- User manually switches off the radio or remove the battery.
- Radio automatically powered off when it returns to the charger.



## 10.1.6

## Making Direct Call in Voice Assistant Mode

- 1 Perform one of the following actions based on your preference:

Option	Actions
<b>Making Direct Private Call</b>	<p><b>a</b> Press and hold the <b>VAB</b> button.</p> <p><b>b</b> After you hear a tone and the front LED shows solid green, speak your request into the microphone.</p>

Option	Actions
	<p><b>c</b> Release the <b>VAB</b> button.</p> <p><b>d</b> If requested user is available, voice command responds "&lt;username&gt;, private call available" and followed by the top button LED continuously blinking orange.</p> <p><b>e</b> Press the <b>PTT</b> button to initiate call in LMR mode.</p>
<b>Making Direct Group Call</b>	<p><b>a</b> Press and hold the <b>VAB</b> button.</p> <p><b>b</b> After you hear a tone and the front LED shows solid green, speak your request into the microphone.</p> <p><b>c</b> Release the <b>VAB</b> button.</p> <p><b>d</b> If the requested group is available, voice command</p>

Option	Actions
	<p>responds <i>&lt;group name&gt;</i> available".</p> <p> <b>NOTE:</b> Direct call group name is limited to Public Group 21–Public Group 100.</p> <p> <b>NOTE:</b> Group name must match the group name in Voice Assistant mode portal.</p> <p><b>e</b> Press the <b>PTT</b> button to initiate group call.</p>

- 2 To cancel call queue and to enter Voice Assistant mode, press and hold the **VAB** button.
- 3 To cancel private call and return to the LMR idle mode, press and hold the programmable button.

### 10.1.7

## Recording Voice Message

Ensure that you're login to Voice Assistant mode before recording a voice message.

- 1 Press and hold the **VAB** button.
- 2 After you hear a tone and the front LED shows solid green, speak your request into the microphone.
- 3 Release the **VAB** button.
- 4 If the user is found in the database, the voice command responds "*<username>* ready".
- 5 Press the **VAB** button and speak the voice message immediately. Otherwise, the recording fails.

6 Release the **VAB** button.

Voice command response "message sent to **<username>**" and disconnected from the Voice Assistant gateway.



**NOTE:**

Maximum length of voice is 2 minutes.

10.1.8

**Playing and Ending Voice Message**

Ensure that you are login to Voice Assistant mode before playing a voice message. A voice message chirps when there is a new message available.

- 1 Press and hold the **VAB** button.
- 2 After you hear a tone and the front LED shows solid green, speak "play message" into the microphone.
- 3 Release the **VAB** button.
- 4 Perform the following choices based on response from the voice command.

If voice command responds with... then, you...	
<ul style="list-style-type: none"><li>• "You have <b>&lt;number&gt;</b> of new messages and <b>&lt;number&gt;</b> of old messages, new message from <b>&lt;sender&gt;</b>, <b>&lt;message&gt;</b>. Repeat, Delete or Next Message?"</li><li>• "Sorry, I didn't get that, you can say repeat, delete, or next, message"</li></ul>	<ul style="list-style-type: none"><li>• press the <b>VAB</b> button to reply "Repeat", "Delete", or "Next Message".</li><li>• release the <b>VAB</b> button.</li></ul>
<p><b>There are no more messages. Play the first message or End Call?</b></p>	<ul style="list-style-type: none"><li>• press the <b>VAB</b> button to reply "Play the first message" or "End call".</li><li>• release the <b>VAB</b> button.</li></ul>

If voice command responds with...	then, you...
There are no messages. Ending call.	No respond required from you.

- Programming mode by software reset

You must turn the radio off and on manually by pressing the **Power** button to enable the APO after the scenarios.

### 10.2.1

## Initiating Auto Power Off

- This feature is turned on by default in CPS with a 180 seconds of delay duration.
- If you have performed cloning or your radio is in Programming mode or Test mode, you must turn your radio off and on.

1 Plug in your radio to a single-unit charger (SUC) or a multi-unit charger (MUC).

2 Turn on the power socket.

3 Ensure that your radio is in User mode.

Do not remove the radio from the charger. Removing the radio while the APO timer is running causes the

### 10.2

## Auto Power off Features

Auto Power Off (APO) feature allows the radio in User mode to power off automatically after a specific delay duration from the moment the radio is plugged into a charger where the power socket is switched on. This feature available by default with a 180 seconds of delay duration. Contact your dealer if you need to reconfigure the timer for the APO feature or to turn off this feature.

APO feature is disabled for the radios that are in the following scenarios:

- Programming Mode
- Test Mode
- Clone Mode
- Return to User mode after CPS performed read or write
- Completed cloning


timer to stop abruptly and the radio do not power off automatically.

Radio powers off automatically after the Auto Power Off timer runs out. Power Off tone is played.

10.3  
Scan

The Curve series radio supports scan feature. When the radio detects activity, it stops scanning and locks in on the active channel. This allows you to listen and talk to the person transmitting without changing channels.

Depending on the selection you configured in CPS and based on the hopset of the current channel, you can scan either for “Public Group and Private Group” or scan for “Public Group Only”.

 **NOTE:**  
All Private Groups that your radio is a member are scanned. You cannot choose the groups to be scanned.

10.3.1

Enabling or Disabling Scan

You must configure the CPS to enable the Scan menu before Scan can used in the radio menu.

- 1 Press the **Menu** button to navigate through the various menu.
- 2 Upon entering the **Scan** menu, you hear "Scan mode disable", or "scan mode enable", or "To change, press plus or minus".
- 3 Press **Volume Up** or **Volume Down** button to enable or disable scan mode.

10.3.2  
Scan Status Indicator

Table 17: Scan Status Indicator

Radio Status	Front LED	Voice Prompt or Tone
Scan	Slower blink green	N/A

Radio Status	Front LED	Voice Prompt or Tone
Receive during scan	Fast blink red	N/A

#### 10.4

### Favorite Contact List

The Curve series radio has Favorite Contact List feature. Scan and Receive calls are not allowed in Favorite Contact List Menu. The radio terminates any receive or hangtime modes, stops scanning, and return the base mode to idle state when entering Favourite Contact List Menu.

To use Favourite Contact List, you must add contact into Favourite Contact in CPS first.

#### 10.4.1

### Entering Favorite Contact List Menu

- 1 Press and hold the **Menu** in the User Mode.

If the list is empty, the radio plays a bad bonk tone.  
If the list is not empty, the radio enters into the **Favorite Contact List Menu**.

- 2 Press **Volume Up** or **Volume Down** button to select the *<preferred contact>*.

You can hear voice prompt of the current favorite contact when scrolling the list.

- 3 Press the **PTT** button to initiate a Private Call.

#### 10.4.2

### Exiting Favorite Contact List Menu

To exit **Favorite Contact List Menu**, choose from:

- press and hold the **Menu** button, or
- wait for the timer to expire.

Radio plays the Menu Exit tone.

# Advanced Configuration Mode

Advanced Configuration Mode allows you to configure special settings in your radio without the need of programming cables or additional software.

Advanced Configuration Mode allows you to customize the following features.

- PROFILE ID Number
- Maximum Channels
- **Top** button
- Microphone (MIC) Gain
- Home Channel

**Table 18: Advanced Configuration Mode Feature Customization**

Feature	Description
PROFILE ID Number	Choose a 4-digit number (0000–9999) as your ra-

<sup>10</sup> Only if enabled via CPS.

Feature	Description
	dio PROFILE ID Number. Customize the PROFILE ID Number to ensure interference free/private communications.
Maximum Channels	Choose the maximum number of channels you want to allow for your radio.
<b>Top</b> button	Set the Top button with one of the following features: Private Reply, Direct Call <sup>10</sup> , Call All Available, Page All Available, Mute, Disabled.
MIC Gain	Choose between High, Medium, or Low MIC Gain to adjust the radio microphone sensitivity level to fit different users or noise environments.

Feature	Description
Home Channel	Choose the channel you want to designate as your main channel. Every time you change to a different channel and no activity is detected from the channel, the radio reverts to your home channel.

11.1

Entering Advanced Configuration Mode

To enter Advanced Configuration Mode, press **Power**→**PTT**→**Volume Up** buttons at the same time.



Number	Description
1	<b>Power</b> button
2	<b>Volume Up</b> button

Number	Description
3	PTT button

You hear "Programming Mode. Press Menu button to continue" voice prompt from your radio.

11.2

## Browsing Advanced Configuration Options

- 1 Upon entering Advanced Configuration Mode, you hear "Programming Mode. Press Menu button to continue" voice prompt from your radio.
- 2 To browse through Advanced Configuration options, press **Channel/Menu** button.
- 3 To exit Advanced Configuration Mode, long press the **PTT** button.

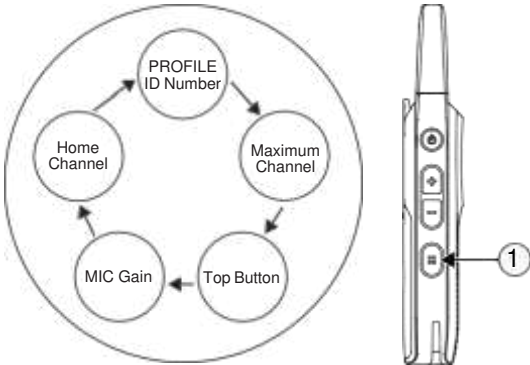


Figure 5: Advanced Configuration Options

Number	Description
1	Channel/Menu button

11.2.1

### Entering Current PROFILE ID Number

- 1 Press the **Channel/Menu** button until you hear "PROFILE ID Number default is "0000". Change it to avoid interferences and improve privacy" voice prompt from your radio to change it.

- 2 To enter the Profile ID number sub-menu, press the **Volume Up** button or **Volume Down** button.
- 3 To continue to the next Advanced Configuration option, press the **Channel/Menu** button.

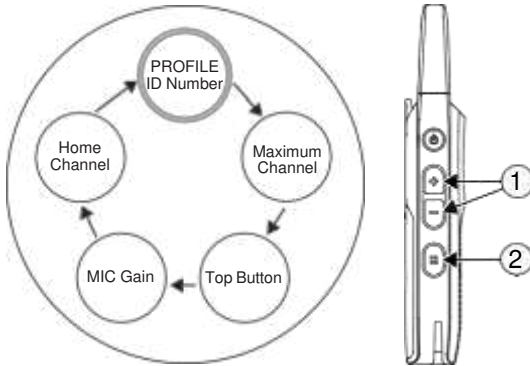


Figure 6: Profile ID Number - Current Value

Number	Description
1	<b>Volume Up</b> button or <b>Volume Down</b> button.

Number	Description
	Press to enter the PROFILE ID Number sub-menu
2	<b>Channel/Menu</b> button. Press to continue to the next Advanced Configuration option.

11.2.2

Changing PROFILE ID Number

- 1 To enter and change the PROFILE ID Number sub-menu, press the **Volume Up** button or **Volume Down** button.  
You hear "There is 10,000 options of PROFILE ID Number to choose from (0000 – 9999)" voice prompt from your radio.
- 2 To change the first digit, press the **Volume Up** button or **Volume Down** button.

- 3 To continue to the next digit, press **Channel/Menu** button.

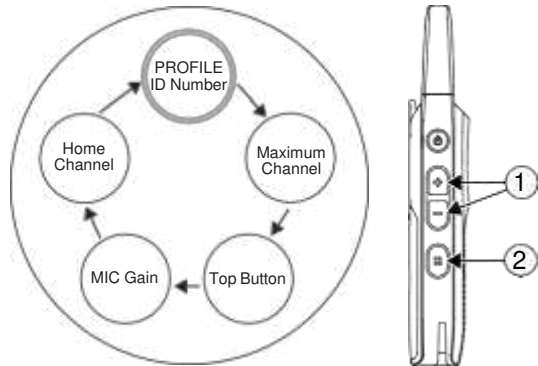


Figure 7: Profile ID Number

Number	Description
1	<b>Volume Up</b> button or <b>Volume Down</b> button. Press to change the first digit.
2	<b>Channel/Menu</b> button.

Number	Description
	Press to continue to the next digit.

11.2.3

### Changing PROFILE ID Number in Sub-Menu

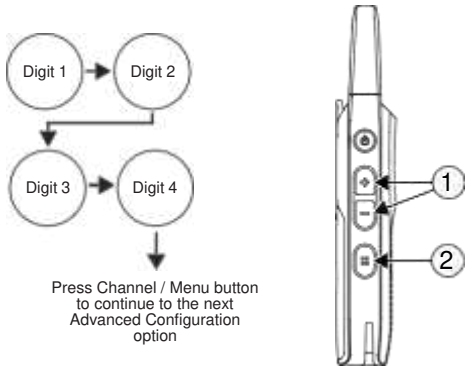
- 1 To change the current digit, press the **Volume Up** button or **Volume Down** button.
- You hear the value voice prompt from your radio.
- 2 To continue to the next digit, press **Channel/Menu**.

- 3 Once you have entered the fourth digit, press the **Channel/Menu** button again to continue to the next Advanced Configuration option.



**NOTE:**

You have the option to browse forward through the four digits using the **Channel/Menu** button. However, you do not have the option to browse backward through the four digits of PROFILE ID Number.



**Figure 8: Profile ID Number in Sub-Menu**

Number	Description
1	<b>Volume Up</b> button or <b>Volume Down</b> button. Press to change the first digit.
2	<b>Channel/Menu</b> button. Press to continue to next digit. Once in the last digit, press the button again to continue to the next Advanced Configuration option.

11.2.4

Confirming Modified PROFILE ID Number

- 1 You hear the new PROFILE ID Number voice prompt from your radio when you have set the four digit PROFILE ID Number.



NOTE:

If the four digit PROFILE ID number annouced is not the correct number, press the **Channel/Menu** button, and cycle through the Advanced Configuration options until you return to the PROFILE ID number option to change the value.

- 2 To continue to the next Advanced Configuration option, press the **Channel/Menu** button.

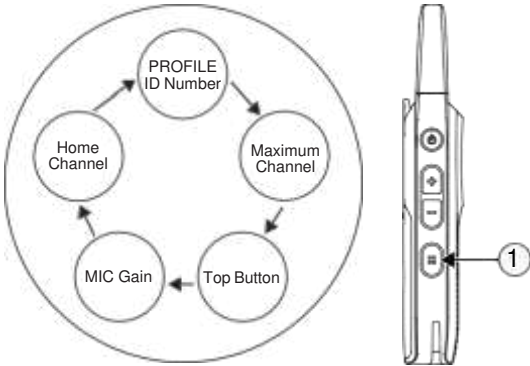


Figure 9: Modified PROFILE ID Number Confirmation

Number	Description
1	<b>Channel/Menu</b> button. Press to continue to the next Advanced Configuration option.

- 3 To exit the Advanced Configuration Mode, long press the **PTT** button.

11.2.5

Setting Maximum Channels

The maximum number of channels you can set up in your radio is according to your radio model. DRLx1100 radio has maximum 10 channels.

- 1

Press the **Channel/Menu** button until your radio announces the current maximum number of channels and prompts you to change it.
- 2

To change the number of channels, press the **Volume Up** button or **Volume Down** button.
- 3

To continue to the next Advanced Configuration option, press the **Channel/Menu** button.

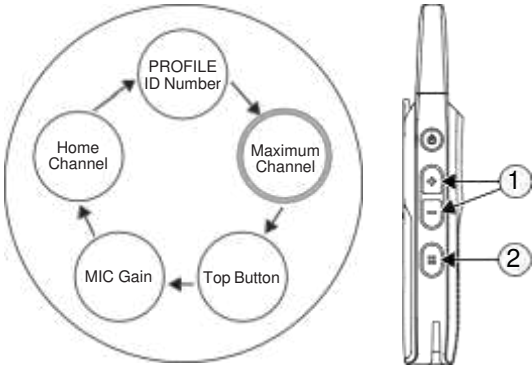


Figure 10: Maximum Channels Setup

Number	Description
1	<b>Volume Up</b> button or <b>Volume Down</b> button. Press to change the number of channels.
2	<b>Channel/Menu</b> button. Press to continue to the next Advanced Configuration option.

11.2.6

Entering Top Button - Current Feature

- 1 Press the **Channel/Menu** button until your radio announces the current **Top** button feature and prompts you to change it.
- 2 To enter the **Top** button sub-menu, press the **Volume Up** button or **Volume Down** button.
- 3 To continue to the next Advanced Configuration option, press the **Channel/Menu** button.

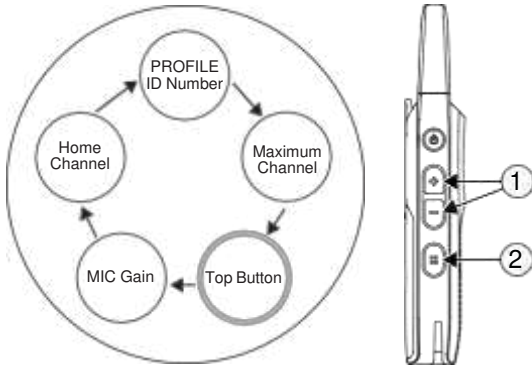


Figure 11: Top Button - Current Feature

Number	Description
1	<b>Volume Up</b> button or <b>Volume Down</b> button. Press to enter the <b>Top</b> button sub-menu.
2	<b>Channel/Menu</b> button. Press to continue to the next Advanced Configuration option.

11.2.6.1

Browsing Top Button - Sub-Menu Options

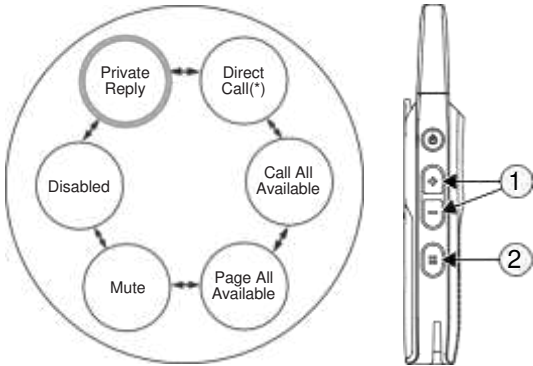
- 1 To browse through the different options in **Top** button sub-menu, press the **Volume Up** button or **Volume Down** button.
- You hear voice prompts from your radio as you navigate through the feature.

2 To continue to the next Advanced Configuration option, press the **Channel/Menu** button.



**NOTE:**

To use Direct Call option, you must enable the feature in CPS first. Otherwise **Top** button sounds an error tone even if you choose the option in the this menu.



**Figure 12: Top Button - Sub-Menu Options**

Number	Description
1	<b>Volume Up</b> button or <b>Volume Down</b> button.

Number	Description
	Press to browse through the <b>Top</b> button option in sub-menu.
2	<b>Channel/Menu</b> button. Press to continue to the next Advanced Configuration option.

11.2.7

**Setting MIC Gain**

You can change your MIC Gain setting to low, medium, or high. The default setting for MIC Gain is medium.

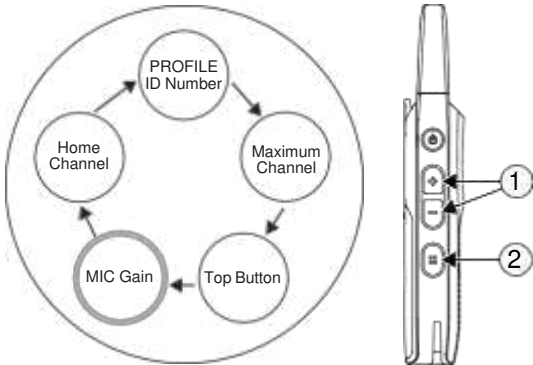
- 1 Press the **Channel/Menu** button until your radio announces the MIC Gain setting and prompts you to change it.
- 2 To change the MIC Gain setting, press the **Volume Up** button or **Volume Down** button.

- 3 To continue to the next Advanced Configuration option, press the **Channel/Menu** button.



**NOTE:**

You should only change the MIC Gain setting if other users complain that the volume from your radio is too low or too high. The default medium setting is appropriate for most users, so it can be left unchanged.



**Figure 13: MIC Gain Setup**

Number	Description
1	<b>Volume Up</b> button or <b>Volume Down</b> button. Press to change MIC Gain settings.
2	<b>Channel/Menu</b> button. Press to continue to the next Advanced Configuration option.

11.2.8

**Setting Home Channel**

You can change your Home Channel setting to Disabled or Channel number (or channel name if alias was set up in CPS). The default setting for Home Channel is Disabled.

- 1 Press the **Channel/Menu** button until your radio announces the Home Channel setting and prompts you to change it.
- 2 To change the Home Channel setting, press the **Volume Up** button or **Volume Down** button.

- 3 To go back to the first Advanced Configuration option – PROFILE ID Number, press the **Channel/Menu** button.



**NOTE:**

When Home Channel is enabled and there is no activity detected from a channel for seven seconds, the radio reverts to Home Channel. This feature may not be appropriate if you need to frequently change channels throughout the day.

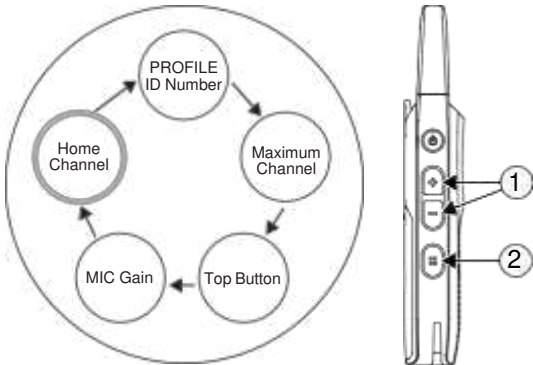


Figure 14: Home Channel Setup

Number	Description
1	<b>Volume Up</b> button or <b>Volume Down</b> button. Press to change Home Channel settings.
2	<b>Channel/Menu</b> button. Press to go back to the first Advanced Configuration option.

11.2.9

**Resetting to Factory Defaults**

To reset your radio to the original factory defaults, press **Power**→**PTT**→**Volume Down**→**Volume Up** buttons at the same time.

You hear resetting beeps and "Battery Level <battery level>, Channel <channel name>" voice prompt from your radio.



Number	Description
1	<b>Power</b> button
2	<b>Volume Up</b> button and <b>Volume Down</b> button
3	<b>PTT</b> button

11.2.9.1  
**Radio Factory Default Settings**

**Table 19: Radio Basic Feature Defaults**

Radio Basic Feature	Default
Power up announcement	Battery Status and Channel Name
Quick press <b>Power</b> button	Battery Status
Number of channels	Set to maximum number of channels supported by the radio model
<b>Channel/Menu</b> button	Channel change only
<b>Top</b> button feature	Private Reply

**Table 20: Radio Advanced Configuration Mode Defaults**

Radio Basic Feature	Default
PROFILE ID Number lock	Off
Radio PROFILE ID Number	0000

Radio Basic Feature	Default
Maximum Channels	Set to maximum number of channels supported by the radio model
Direct Call	Off
MIC Gain	Medium
Home Channel	Disabled
Battery Save	On
Power Save	Off
<b>Programmable</b> button	Call All Available

**NOTE:**

For other radio default setting, refer to Customer Programming Software (CPS).

**Table 21: Radio Special Mode Defaults**

Radio Special Mode	Default
Enable restore Factory Default reset	On
Enable Advanced Configuration Mode	On
Enable Cloning Mode	On

# Customer Programming Software

You can program or change features in your radio by using Customer Programming Software (CPS) and the CPS Programming Cable (Part Number HKKN4027\_).

CPS gives you the flexibility to prevent radio features to be accidentally modified by users by providing the option to disable functionalities like Factory Reset, and Advanced Configuration Mode. It provides security by giving the option to set up a password for profile radio management.

You can download the software for free at [http://www.motorolasolutions.com/map/en\\_xa/curve](http://www.motorolasolutions.com/map/en_xa/curve)

## 12.1 Setting Radio to Customer Programming Software

Verify that the switch in the Programming Cable is in Digital position. If your Customer Programming Software (CPS) Programming Cable is showing "CPS/Flash," ensure to position it to "Flash".

To program, connect the radio from the Drop-in Charger Tray and CPS Programming Cable to your computer.

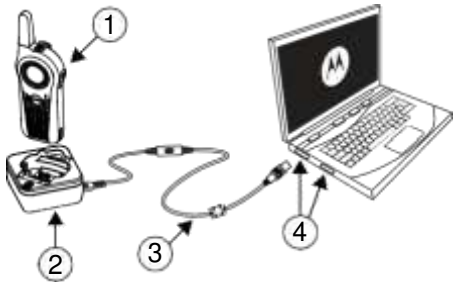


Figure 15: Setting-Up the Radio to the CPS

Table 22: Setting-Up the Radio to the CPS

Number	Description
1	Radio
2	Single Unit Charger (SUC)
3	CPS Programming Cable
4	Computer Cable Port

## 12.2

## Customer Programming Software Basic Menu Instructions

- 1 Open the Customer Programming Software.
- 2 Click on the **RADIO** top tab.
- 3 Perform one of the following actions:
  - a Click on the **READ** tab to read the radio.<sup>11</sup>
  - b If you want to open a new profile or an existing one, from the drop-down menu **Radio Type**, select Curve.

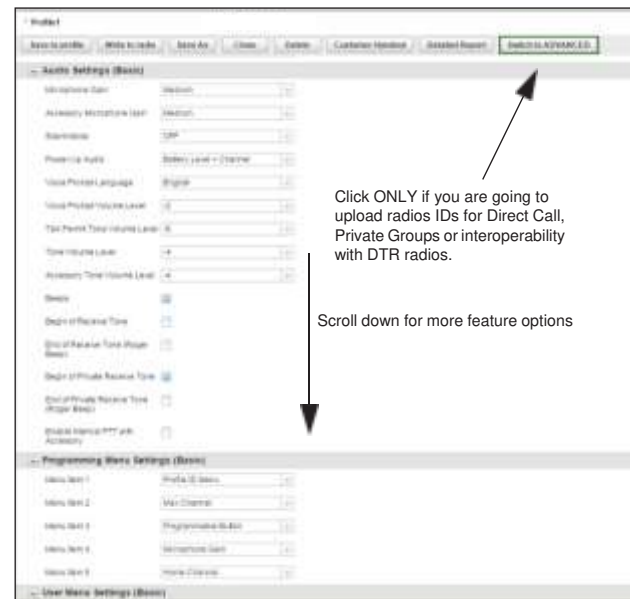


- 4 Perform one of the following actions:
  - a Click Read Radio.  
The radio sounds a series of tones to indicate that reading is in progress and uploads your radio profile settings.
  - b To create customized profile based on the default profile, click New Profile.

<sup>11</sup> Select the Radio Type to open a new or predetermined the profile. The CPS is automatically determine the radio model.



- 5 Scroll down to see more feature options. Customize as necessary.



- 6 Choose which options you want available in the Advanced Configuration Mode. Add any of the features shown to be accessed by the radio

## Channel/Menu button in the Radio Basic Operation mode.



### NOTE:

You can also choose the function of the **Power** button short press.

## 7 Modify the radio **Top** button feature by changing the default option.

## 8 To enable the Direct Call feature in your Basic Menu options, perform the following actions:

You can export all available public group contacts to an `xml` file to be used in the portal by using the **Export Contact** button.

- a Upload one or more radios unique private identification (12 digit) number.
- b Click on the **Switch to ADVANCED** button.
- c On **Privates (Advanced)** tab, Click **Add** for CPS to upload the radio ID.
- d Customize the radio ID name under the **Name** column. After a radio ID is uploaded, the CPS enables the Direct Call feature.

- 9 Set PROFILE ID number for any four-digit number different from "0000" to differentiate your radios in a radio fleet.

- 10 Assign the Home Channel by performing the following actions:

- a To assign a specific channel as your Home Channel, select the channel using the drop-down menu under **Home Channel**. CPS enables the option to choose any channel you want as your designated Home Channel for the radio that you are programming.



#### NOTE:

Home Channel is turned off by default.

- b After setting your Home Channel, select the mode using the drop-down menu under **Home Channel Mode**.

- 11 Customize the name of your channel (alias) in the Name column.



- 12 Configure a customized Channels Voice Prompt by performing the following steps:

- a Click **Edit More** to edit the voice prompt.



You can set your own customized Channels Voice Prompt (VP) to enable your channel name to be announced by the radio.

- b Select the **Enable User Customized VP** check box to enable the standard Voice Prompt.



When a speaker icon appears in the menu, then that channel has customized voice prompt enabled.

- c Click the speaker icon to preview the User Customized VP.
- d If you want to include your own voice recording, click on Import Voice File<sup>12</sup>.

- 13 Modify the configurable fields for your Wi-Fi in the **Cloud Settings (Basic)** section.

<sup>12</sup> .wav audio files supported.

List of  
configurable  
features for  
WiFi

Extract the  
Dealer Token  
from the Voice  
Assistant  
Portal.



#### NOTE:

You must extract the Dealer Token from the Voice Assistant Portal.

- 14 Modify the radio **Programmable** button feature by changing the default option.
- 15 After changing all the settings, program your radio by clicking **Write to radio** button.

CPS displays a window confirming the programming of your radio is successful.



#### NOTE:

Save your profile at any time to use the same settings when programming other radios by clicking on **Save to profile** button. This saves the profile to the current default path on your computer. To specify a different path to save the profile, click the **Save As** button.

# Cloning Mode

You can clone radio profiles from a Source radio to a Target radio.

Use the following devices/tools to perform Cloning Mode:

- Multi-Unit Charger (MUC) – Optional accessory
- Two Single Unit Chargers (SUC) and a Radio-to-Radio cloning cable - Optional accessory
- Customer Software Programming (CPS) – Free software download
- Wireless PIN cloning

Contact your dealer for more information.

## 13.1

# Configuring Cloning Mode

Press **Power**→**PTT**→**Volume Down** buttons at the same time.



Table 23: Cloning Mode

Number	Description
1	Power button
2	Volume Down button

Number	Description
3	PTT button

You hear Cloning Mode beeps, and "Cloning Mode, Serial" voice prompt from your radio.

- 1 and 2
- 4 and 5
- 7 and 8
- 10 and 11



**NOTE:**

Read MUC pocket numbers from left to right with the Motorola Solutions logo facing front.

When pairing the Source and Target radio, use the same band type for successful cloning mode.

When cloning, the MUC does not need to be connected to a power source.

## 13.2

# Cloning Mode in Multi-Unit Charger

You can clone radio profiles in Multi-Unit Charger (MUC).

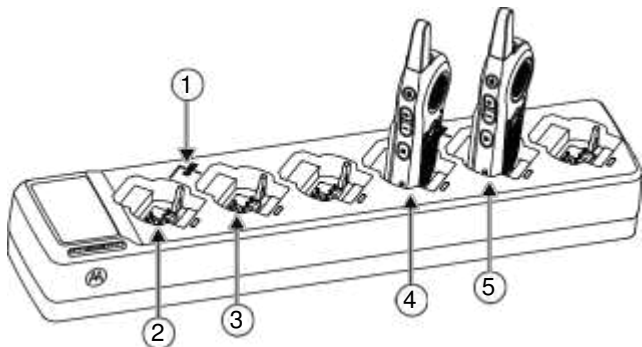
When in Cloning Mode, you must have at least two radios. Identify the radios as follow:

- A Source Radio which consists of the cloned or copied radio profiles
- A Target radio which consists of the cloned from the source radio

The placement for Source Radio in MUC is in pocket 1, 4, 7, or 10.

The placement for Target Radio in MUC is in pocket 2, 5, 8, or 11.

Match the placement for Source and Target radios in MUC as follows:



**Figure 16: Cloning Mode in Multi-Unit Charger**

**Table 24: Cloning Mode in Multi-Unit Charger**

Number	Item
1	Pocket 1
2	"CLONE" symbol
3	Pocket 2
4	Pocket 4
5	Pocket 5
6	Pocket 7
7	Pocket 8

Number	Item
8	Pocket 10
9	Pocket 11

13.3

## Configuring Cloning Mode Using Radio to Radio Cloning Cable

Ensure all radios are fully charged.

Required devices/tools:

- Cloning Cable (Part Number HKKN4028\_)
- Two Single-Unit Chargers (SUC)



**Figure 17: Radio to Radio Cloning**

- 1 Turn the radio off.
- 2 Unplug any cables from the SUC.
- 3 Plug one side of the cloning cable mini USB connector to the first SUC, and the other end to the second SUC.



**NOTE:**

During the cloning process, no power is being applied to the SUC. The batteries are not charged. Only data communication is being established between the two radios.

- 4 Turn on the Target Radio and place it into one of the SUCs.
- 5 To turn on the Source Radio, press **PTT→Volume Down** buttons at the same time for three seconds.  
You hear Cloning Mode beeps, and "Cloning Mode, Serial" voice prompt from your radio.
- 6 For the Source Radio, power on the radio with the following sequence:
  - 1 Press **PTT→Volume Down** buttons at the same time while turning the radio on. Wait three seconds before releasing the buttons, and you hear "Clone Mode Serial" voice prompt from your radio.

2 Place the Source Radio in its SUC. Press and release the **Volume Up** button.

You hear "Pass" or "Fail" voice prompt from your Source Radio.

---

7 To exit the Clone Mode when the process is completed, press the **Power** button, or long press the **PTT** button.

---

#### 13.4

### Troubleshooting Cloning Mode

The radio audible voice announces "Bonk" indicating that the cloning process has failed. In the event that cloning fails, perform each of the following steps before attempting to start cloning process again.

1 Ensure that the batteries on both radios are fully charged and engaged properly on the radio.

---

2 Check the cloning cable connection on both Single-Unit Chargers (SUC).

---

3 Check the cloning cable connection on both Single-Unit Chargers (SUC and if the cable is switched to "Cloning".

---

4 Ensure that there is no debris in the charging tray or on the radio contacts and the radio contact is touching the SUC or MUC contact firmly.

---

5 Ensure that the Target Radio is turned on.

---

6 Ensure that the Source Radio is in cloning mode.

---

7 Ensure that the two radios are both from the same frequency band, same region and have the same transmission power.



#### NOTE:

This cloning cable is designed to operate only with compatible Motorola Solutions SUC. This cloning cable is designed to operate only with compatible Motorola Solutions SUC, PMLN7140\_.

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When ordering cloning cable kit, refer to part number HKKN4028\_ When ordering cloning cable kit, refer to part number HKKN4026\_. For more information about the accessories, see [Accessories](#) For more information about

the accessories, see [Accessories](#) For more information about the accessories, see [Accessories on page 113](#).

### 13.5

## Cloning Mode Using Wireless PROFILE ID Number

The PROFILE ID Number Wireless Cloning feature is useful when you want to clone the PROFILE ID Number for all the radios in your fleet, but you do not want to clone particular radio settings that may be unique for each radio such as Top button configuration, MIC Gain, Radio Name. Wireless PROFILE ID preserves each user radio setup, but still ensure that all radios are under the same PROFILE ID Number. This feature is useful if you do not have a programming Cable, Cloning Cable or PC easily available.

### 13.5.1

## Configuring Cloning Mode Using Wireless PROFILE ID Number

- 1 Turn the Source Radio on by performing the following actions:

- a Press **PTT**→**Volume Down** buttons at the same time while turning the radio on.
- b Wait three seconds before releasing the buttons until you hear "Clone Mode Serial" voice prompt from the Source Radio.



#### NOTE:

Serial cloning for Curve series is compatible with DLR radios only.

- a Press and release the **Volume Down** button.  
You hear "Wireless" from the Source Radio.

- 
- 2 Turn on the Target Radio by performing the following actions:

- a Press **PTT**→**Volume Down** buttons at the same time while turning the radio on.

- b** Wait three seconds before releasing the buttons until you hear "Clone Mode Serial" voice prompt from the Target Radio.

**NOTE:**

Avoid putting powered on radios (more than seven radios) in a container together, other than the Multi-Unit Charger.

**NOTE:**

Serial cloning for Curve series is compatible with DLR radios only.

indicating cloning failed voice prompt from the Target Radio.

---


- 3** To start the wireless PROFILE ID Number cloning on the Source Radio, press and release the **Volume Up** button.

- You hear a tone.
- After cloning is completed, you hear "Pass" indicating cloning is successful or "Fail" indicating cloning failed voice prompt from the Source Radio.
- On the Target radio, the radio receives the PROFILE ID Number information. You hear "Pass" indicating cloning is successful or "Fail"

# Troubleshooting


Troubleshoot your radio using the method describe in the table.


Table 25: Troubleshooting

If...	Then...
If there is no power,	recharge or replace the Li-ion battery. <div> <b>NOTE:</b> Extreme operating temperature may affect battery life. See <a href="#">Battery Specifications on page 21</a>.</div>
If CPS is unable to read the radio,	perform one of the following actions: <ul style="list-style-type: none"><li>• Ensure that one side of the programming cable is connected to the radio, and the other side of the programming cable is connected to the USB port.</li></ul>


If...	Then...
	<ul style="list-style-type: none"><li>• Verify that the switch on the programming cable is set at <b>Digital</b> position or <b>Flash</b> position in older version programming cable.</li><li>• Ensure that the radio is positioned correctly inside the Single Unit Charger (SUC).</li></ul>
If the radio generates continuous tone when pressing the <b>PTT</b> button,	press the <b>PTT</b> button again when receive mode ends.
If the radio does not transmit audio when pressing the <b>PTT</b> button,	perform one of the following actions: <ul style="list-style-type: none"><li>• Verify that nobody else is using the channel and try again.</li><li>• When using an earpiece, ensure that the <b>PTT</b> button is disabled.</li><li>• Ensure to use the earpiece in-line with <b>PTT</b> button to transmit.</li></ul>
If you receive communication	customize your PROFILE ID to a 4-digit number for all radios.

If...	Then...
that is not within your channel,	
If you hear a cracking noise when nobody is talking,	perform one of the following actions: <ul style="list-style-type: none"> <li>• While wearing the radio on belts or pockets, check if the <b>PTT</b> button is not against another object.</li> <li>• Use earpiece.</li> </ul>
If the audio quality is not good,	perform the following actions: <ol style="list-style-type: none"> <li>1 Check if the radio settings are the same in all radios.</li> <li>2 Go to <b>Advanced Configuration Mode</b>.</li> <li>3 Adjust the microphone sensitivity gain (MIC Gain).</li> </ol>
If the audio sounds garbled/robotic,	ensure that you are within transmission range.

If...	Then...
	 <b>NOTE:</b> Digital technology gives you the advantage to experience clear audio up to the edge of the range. However, when maximum transmission range has been reached, audio may sound garbled just before the transmission is lost completely.
If the transmitted audio is low,	hold the radio vertically 1 inch to 2 inches from your mouth when talking. For accessory, hold the accessory microphone 2 inches to 3 inches from your mouth when talking.
If there is a loud tone interrupting the conversation,	perform the following actions: <ul style="list-style-type: none"> <li>• When talking, ensure not to release the <b>PTT</b> button at any moment.</li> </ul>

If...	Then...	If...	Then...
	<ul style="list-style-type: none"> <li>Always press the <b>PTT</b> button firmly, until transmission completes.</li> <li>Ensure not to release the <b>PTT</b> button while transmitting, and not to immediately press the <b>PTT</b> button again.</li> <li>Ensure the channel is available, and there is a user reachable within the transmission range.</li> </ul>		<div>  <b>NOTE:</b>            Radios provide greater coverage in industrial and commercial buildings.         </div>
If there is a limited talk range,	perform the following actions: <ul style="list-style-type: none"> <li>Check for clear line of sight to improve transmission. Avoid being near steel and/or concrete structures, heavy foliage, buildings, or vehicles.</li> <li>Change the placement of the radio. Ensure your radio is not too close to your body, such as in a pocket or on a belt.</li> </ul>	If the radio echo feedback,	perform one of the following actions: <ul style="list-style-type: none"> <li>Lower the volume in your radio, and ensure that transmitting and receiving radios are not too close.</li> <li>Use earpiece.</li> </ul>
		If your voice is not transmitted or received,	perform the following actions: <ul style="list-style-type: none"> <li>Ensure that the <b>PTT</b> button is completely pressed when transmitting.</li> <li>Ensure that the radios have the same settings, and the same PROFILE ID.</li> <li>Before talking, wait until you hear the Talk Permit Tone. Speaking before hearing the</li> </ul>

If...	Then...
	<p>tone results in the first few words of the transmission being cut out.</p> <ul style="list-style-type: none"> <li>Recharge, replace, or reposition the batteries. See <a href="#">Battery Specifications on page 21</a>.</li> <li>Change to a location with no interference.</li> </ul>
If you hear heavy static or interference,	ensure that transmitting and receiving radios are at least five feet apart.
If the Drop-in Charger LED light does not blink,	<p>perform the following actions:</p> <ol style="list-style-type: none"> <li>1 Verify that the radio/battery is properly inserted.</li> <li>2 Check the battery/charger contacts to ensure that they are clean and charging pin is inserted correctly.</li> </ol> <p>Refer to <a href="#">Charging with the Drop-In Tray Single Unit Charger on page 24</a>, <a href="#">Radio Status on page 39</a> and <a href="#">Attaching the Battery on page 32</a>.</p>

If...	Then...
If the battery is low,	<p>recharge or replace the battery.</p> <p> <b>NOTE:</b> Extreme operating temperature may affect battery life. See <a href="#">Battery Specifications on page 21</a>.</p>
If low battery indicator is blinking although new batteries are inserted,	refer to <a href="#">Attaching the Battery on page 32</a> and <a href="#">Battery Specifications on page 21</a> .
If the battery does not charge although it has been placed in the drop-in charger for a while,	<p>perform the following actions:</p> <ul style="list-style-type: none"> <li>Verify that the drop-in tray charger is properly connected and corresponds with a compatible power supply. See <a href="#">Charging with the Drop-In Tray Single Unit Charger on page 24</a> and <a href="#">Charging Stand-Alone Battery on page 24</a>.</li> </ul>

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**If...**

**Then...**

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- Check the charger LEDs indicators to see if the battery is in error state.
-

# Motorola Solutions Limited Warranty for the United States and Canada

## 15.1 Warranty

Subject to the exclusions contained below, Motorola Solutions, Inc. warrants its telephones, pagers, and consumer and business two way radios (excluding commercial, government or industrial radios) that operate via Family Radio Service or General Mobile Radio Service, Motorola Solutions-branded or certified accessories sold for use with these Products (“Accessories”) and Motorola software contained on CD-ROMs or other tangible media and sold for use with these Products (“Software”) to be free from defects in materials and workmanship under normal consumer usage for the period(s) outlined.

This limited warranty is a consumer's exclusive remedy, and applies as follows to new Motorola Solutions Products, Accessories and Software purchased by consumers in the United States, which are accompanied by this written warranty.

## 15.2 Products and Accessories

The table shows the length of coverage of products and accessories.

**Table 26: Products and Accessories**

Products Covered	Length of Coverage
Products and accessories as defined above, unless otherwise provided for below	One (1) year from the date of purchase by the first purchaser of the product unless otherwise provided for below.
Decorative accessories and cases. Decorative covers, bezels, Phone-Wrap™ covers and cases	Limited lifetime warranty for the lifetime of ownership by the first purchaser of the product.
Business two-way radio accessories	One (1) year from the date of purchase by the first purchaser of the product.

Products Covered	Length of Coverage
Products and accessories that are repaired or re-placed	The balance of the original warranty or for 90 days from the date returned to the consumer, whichever is longer.
Two-way radio	Two (2) years from the date of purchase by the first purchaser of the product.

## 15.3

## Exclusions

### Normal Wear and Tear

Periodic maintenance, repair and replacement of parts due to normal wear and tear are excluded from coverage.

### Batteries

Only batteries whose fully charged capacity falls below 80% of their rated capacity and batteries that leak are covered by this limited warranty.

### Abuse and Misuse

Defects or damage that result from:

- improper operation, storage, misuse or abuse, accident or neglect, such as physical damage (cracks, scratches, etc.) to the surface of the product resulting from misuse
- contact with liquid, water, rain, extreme humidity or heavy perspiration, sand, dirt or the like, extreme heat, or food
- use of the Products or Accessories for commercial purposes or subjecting the Product or Accessory to abnormal usage or conditions
- other acts which are not the fault of Motorola Solutions, are excluded from coverage.

### Use of Non-Motorola Solutions Products and Accessories

Defects or damage that result from the use of Non-Motorola Solutions branded or certified Products, Accessories, Software or other peripheral equipment are excluded from coverage.

### Unauthorized Service or Modification

Defects or damages resulting from service, testing, adjustment, installation, maintenance, alteration, or modification in any way by someone other than Motorola Solutions, or its authorized service centers, are excluded from coverage.

**Altered Products**

Products or Accessories with:

- serial numbers or date tags that have been removed, altered or obliterated
- broken seals or that show evidence of tampering
- mismatched board serial numbers
- nonconforming or non-Motorola Solutions housings, or parts, are excluded form coverage

**Communication Services**

Defects, damages, or the failure of Products, Accessories or Software due to any communication service or signal you may subscribe to or use with the Products Accessories or Software is excluded from coverage.

**Software**

**Table 27: Software Warranty Table**

Products Covered	Length of Coverage
<b>Software</b> Applies only to physical defects of the media that embodies the copy of the software (for example CDROM, or floppy disk).	90 days from the date of purchase.

**Exclusions**

**Software Embodied in Physical Media**

The warranty does not cover that the software will meet your requirements or will work in combination with any hardware or software applications provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected.

**Software not Embodied in Physical Media**

Software that is not embodied in physical media (for example, software downloaded from the internet), is provided “as is” and without warranty.

15.5

## Warranty Coverage

This warranty extends only to the first consumer purchaser, and is not transferable.

15.6

## How to Obtain Warranty Service or Other Information

Contact your Motorola Solutions point of purchase.

15.7

## Patent Notice

This product is covered by one or more of the following United States patents.

5896277 5894292 5864752 5699006 5742484 D408396  
D399821 D387758 D389158 5894592 5893027 5789098  
5734975 5861850 D395882 D383745 D389827 D389139  
5929825 5926514 5953640 6071640 D413022 D416252  
D416893 D433001

15.8

## Export Law Assurances

This product is controlled under the export regulations of the United States of America. The Government of the United States of America may restrict the exportation or re-exportation of this product to certain destinations.

For further information, contact the U.S. Department of Commerce.

For questions or comments related to this product, please contact Motorola Solutions 1-800-448-6866 or visit: <http://www.motorolasolutions.com/curve>.

# Accessories

Choose from a variety of accessories designed, tested, and certified to optimize the performance of this radio.

**Table 28: Audio Accessories**

Part Number	Description
PMLN8311_	Over-the-ear Earpiece with Eartip, 2.5 mm, Single Pin, Angled

**Table 29: Battery**

Part Number	Description
HKNN4013_	Li-Ion Battery 1800 mAh
PMNN4578_	Li-Ion Battery 2500 mAh

**Table 30: Battery Doors**

Part Number	Description
PMLN8393_	Standard cap for BT90.
HN001884A01	High cap for BT110.

**Table 31: Cables**

Part Number	Description
HKKN4027_	Business Radio CPS Cable Kit
HKKN4028_	Business Radio Cloning Cable Kit

**Table 32: Chargers**

Part Number	Description
PMPN4587_	Curve Single-Unit Charger (SUC) Kit
PMPN4589_	Curve 6-Pocket Multi-Unit Charger (MUC)

**Table 33: Carry Accessories**

Part Number	Description
PMLN8392_	Curve Holster Kit

