

# WorkForce Connect

PTT Express



**ZEBRA**

## **User Guide**

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# About This Guide

## Introduction

PTT Express client creates Push-To-Talk (PTT) communication capability between disparate enterprise devices. Leveraging existing Wireless Local Area Network (WLAN) infrastructure, this solution delivers simple PTT communication without the need of a voice communication server. The client also enables PTT communication with 2-way radios using the Interworking Gateway (IWG).

This guide is intended for use by any associate, manager, network engineer or IT administrator who will use the client.



**NOTE:** This guide refers to Android clients 3.1.x and Windows Mobile/CE clients 1.2.x. Screens, icons, and options may differ on each device.

## Related Documents

Refer to the following documents for associated information about the system.

PTT Express Installation and Configuration Guide - Provides an overview, general requirements, installation and configuration instructions for the PTT Express.

For the latest version of this guide and all guides, go to: [zebra.com/support](http://zebra.com/support).

## Chapter Descriptions

Topics covered in this guide are as follows:

- [PTT Express Client](#) provides an overview of PTT Express and gives a general description of the PTT Express client.
- [Advanced Features](#) describes the advanced features of the PTT Express client.
- [PTT Communication](#) describes PTT communication and other useful information.
- [Configuration](#) provides information for modifying the configuration file used to configure the PTT Express client.

## Notational Conventions

The following conventions are used in this document:

- **Bold** text is used to highlight the following:
  - Dialog box, window and screen names

- Drop-down list and list box names
- Check box and radio button names
- Icons on a screen
- Key names on a keypad
- Button names on a screen.
- Bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (such as those that describe step-by-step procedures) appear as numbered lists.

## Icon Conventions

The documentation set is designed to give the reader more visual clues. The following graphic icons are used throughout the documentation set. These icons and their associated meanings are described below.



**NOTE:** The text here indicates information that is supplemental for the user to know and that is not required to complete a task.



**IMPORTANT:** The text here indicates information that is important for the user to know.



**WARNING:** If danger is not avoided, the user CAN be seriously injured or killed.



**DANGER!** If danger is not avoided, the user WILL be seriously injured or killed.

## Service Information

If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at [zebra.com/support](http://zebra.com/support).

When contacting support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software/firmware type or version number

Zebra responds to calls by email, telephone or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Zebra Customer Support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your Zebra business product from a Zebra business partner, contact that business partner for support.

# PTT Express Client

## Introduction

The PTT Express client plays received audio only in a hands-free modality delivered through a speaker or a headset. Handset mode of operation is not supported by the PTT Express client.

The PTT Express client supports the following Push-To-Talk use cases:

- Group Call - One to Many
- Private Response - One to One
- Group Call with 2-Way Radios - One to Many (requires IWG).
- allows users to listen to multiple Talk Groups at one time.
- allows a Talk Group to preempt another Talk Group.
- provides flexibility to configure multiple configurations and profiles.
- provides use of friendly names for Talk Groups.
- provides notification status icons to easily see current PTT Express client status. (Applies to Android clients only.)
- is backward compatible with PTT Express client V1.1.
- PTT Express Android client v3.1.46 and above requires a Zebra license to use the app. Refer to the Zebra Licensing User Guide for information on installing license for this app.

The PTT Express client can be configured to contain one or more Profiles. Each Profile can be assigned a unique name and has a set number of available Talk Groups. The Profile name and the Talk Group names are defined in the Configuration file.



PTT Express does not support Bluetooth accessories.

PTT Express is available on the following devices:

**Table 1** Supported Devices

Operating System	Devices
WEHH/Windows CE	MC55A0, MC75A0/6/8, SB1, VH10
Android	CC600, CC6000, EC30, L10A, MC33, MC33x, MC40, MC67, MC92, MC93, TC20, TC21, TC25, TC26, TC51, TC52, TC56, TC57, TC70, TC72, TC70x, TC75, TC75x, TC77, TC8000, TC8300, VC80x, VC8300, VC8300, WT6000



**NOTE:** When using Speaker/Mic with Push-to-Talk, the M1000 accessory is required for PTT Express operation on the VH10, VC80x, and VC8300.

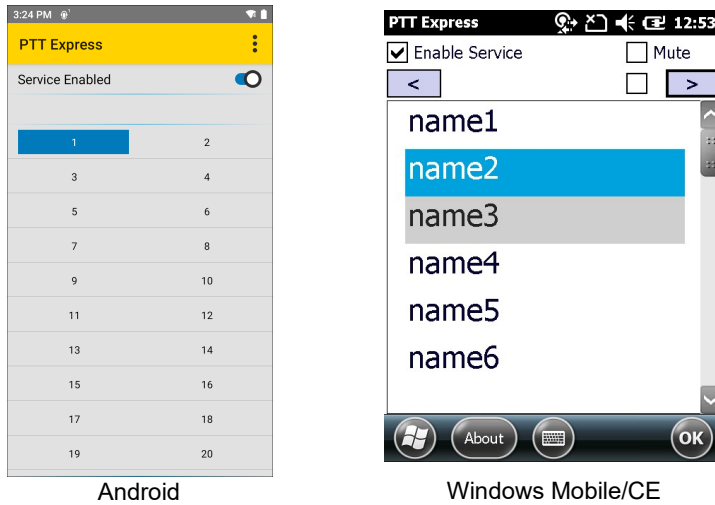
## Device Communication

There are two ways to communicate when operating the PTT Express client: Group Call and Private Response. Depending upon the device and the PTT Express client configuration, these can be hard buttons on the device or soft buttons.

- **Group Call:** Press and hold to start communicating with other voice client users.
- **Private Response:** Press and hold to respond to the originator of the last call.

Buttons on the device can be configured to perform various functions. Contact your system administrator for exact button functionality.

**Figure 1** Default PTT Express Screen



While a PTT communication button is pressed the user will not be able to use other device buttons to perform separate tasks. In general, pressing multiple buttons simultaneously leads to inconsistent PTT Express client behavior. Also, when the PTT Express client is installed on a mobile computer, the action button is no longer available.

**Table 2** Group and Private Key Assignment/Mapping

Device	Recommended Group Key (Key Code)	Recommended Private Key (Key Code)
MC40	Left side top PTT button (L2)	Left side lower button (L1)
MC55A0	197-Single	125-Single
MC67	L2-Single	L1-Single
MC75A0/6/8	197-Single	114-Single
MC92	L1-Single	L2-Single



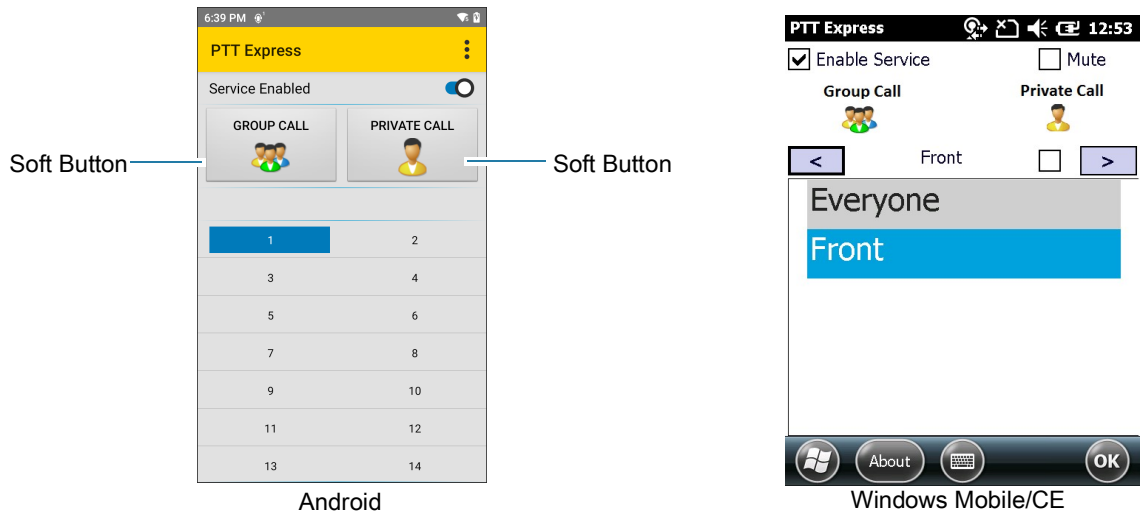
**Table 2** Group and Private Key Assignment/Mapping (Continued)

Device	Recommended Group Key (Key Code)	Recommended Private Key (Key Code)
SB1 CC600, CC6000, EC30, L10A, MC33, MC33x, MC93, TC20, TC21, TC25, TC26, TC51, TC52, TC56, TC57, TC70, TC72, TC70x, TC75, TC75x, TC77, TC8000, TC8300, VC80x, VC8300, VC8300, WT6000	134-Single L2-Single	135-Single L2-Double
VH10	7-Single	7-Double

## Soft Buttons

The PTT Express client can be configured to use on-screen buttons for Group Call and Private Response. To use the on-screen buttons, touch and hold the button just as you would with the device's hard buttons.

**Figure 2** PTT Express Client Soft Buttons



## PTT Audible Indicators

The following tones provide helpful cues when using the PTT Express client.

- **Talk Tone:** Double chirp. Plays when the Talk (or Private) button is pressed. This is a prompt for the user to start talking.
- **Access Tone:** Single beep. Plays when another user just finished a call or response. The user is now able to initiate a Group Call or Private Response.
- **Busy Tone:** Continuous tone. Plays when the Talk (or Private) button is depressed and another user is already communicating on the same talkgroup.
- **Network Tone:**

- Three increasing pitch beeps. Plays when PTT Express client has acquired the WLAN connection and the service is enabled.
- Three decreasing pitch beeps. Plays when PTT Express client has lost a WLAN connection or the service is disabled.

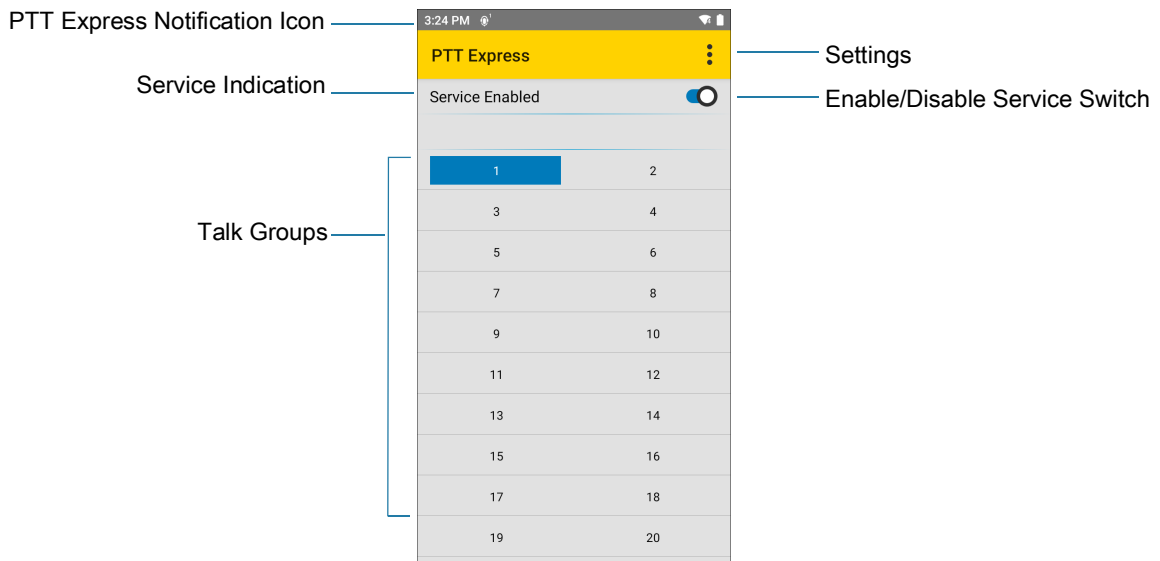
## PTT Express User Interface

The PTT Express client User Interface (UI) is highly configurable. The default UI provides basic PTT functionality and can be configured to use Profiles which provide additional customized functionality.

### Default User Interface

The default UI provides for basic PTT communication and features.

**Figure 3** PTT Express Default User Interface Sample Configuration



- **PTT Express Notification Icons** - Indicates the current state of the PTT Express client. Applies to Android clients only.
- **Service Indication** - Indicates the status of the PTT Express client. Options: **Service Enabled**, **Service Disabled**, or **Service Unavailable**.
- **Enable/Disable Service Switch** - Turns the PTT service on or off.
- **Talk Groups** - Lists all 32 Talk Groups available for PTT communication.
- **Settings** - Opens the PTT Express client settings screen. (Available on Android clients only)

### Profile User Interface

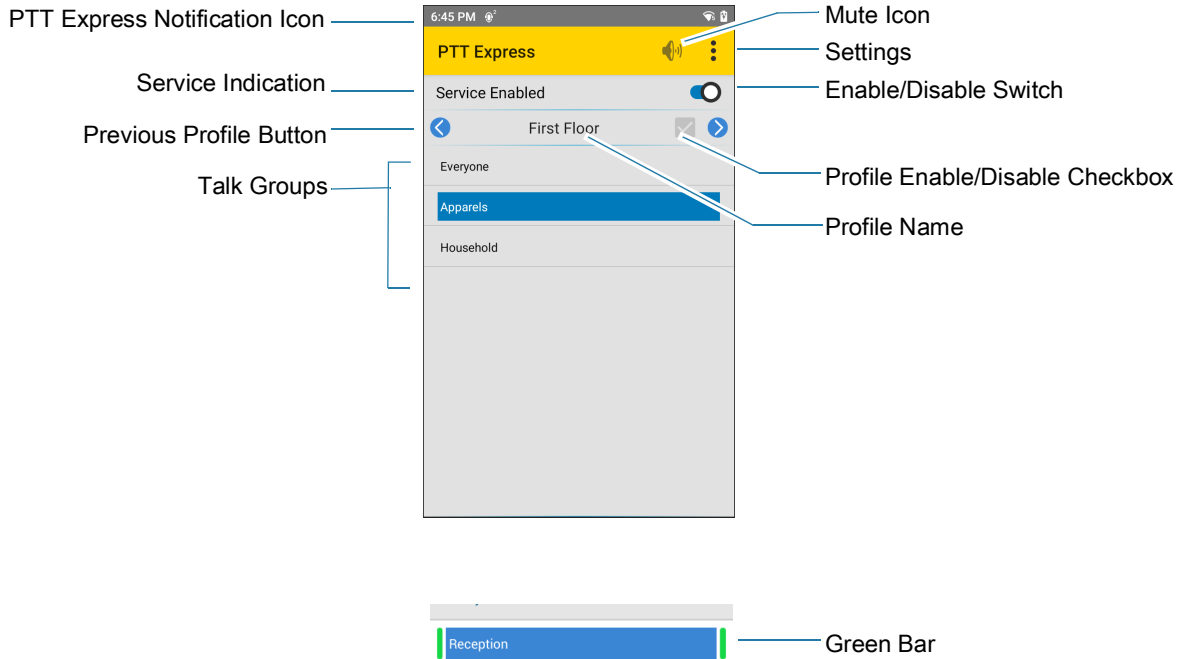
The default UI can be configured to meet the needs of the customer's solution. The client can be configured with:

- up to 12 Profiles.
- up to 32 Talk Groups in each Profile.
- both hard buttons and on-screen soft buttons for Group Calls and Private Responses.

- ability to display other buttons and controls.

## Android User Interface

**Figure 4** PTT Express Profile User Interface Sample Android Configuration

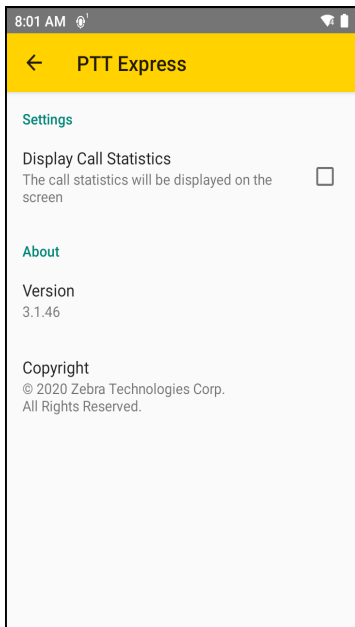


- **Service Indication** - Indicates the status of the PTT Express client. Options: **Service Enabled**, **Service Disabled**, or **Service Unavailable**.
- **Enable/Disable Switch** - Turns the PTT service on or off.
- **Profile Name** - Displays the name of the current Profile.
- **Profile Enable/Disable Checkbox** - Indicates that the Profile is enabled (checked) or disabled (un-checked).
- **Previous/Next Profile Buttons** - Scrolls to the previous or next Profile screen. If at the first or last Profile, the button is not available.
- **Talk Groups** - Lists (up to 32) Talk Groups available for PTT communication.
- **Speaker Icon** - Mutes and un-mutes the client. If muted, a call cannot be heard or initiated.
- **Settings** - Opens the PTT Express client settings screen. (Available on Android clients only)

## Android Settings

Use the **Settings** to configure PTT Express client settings.

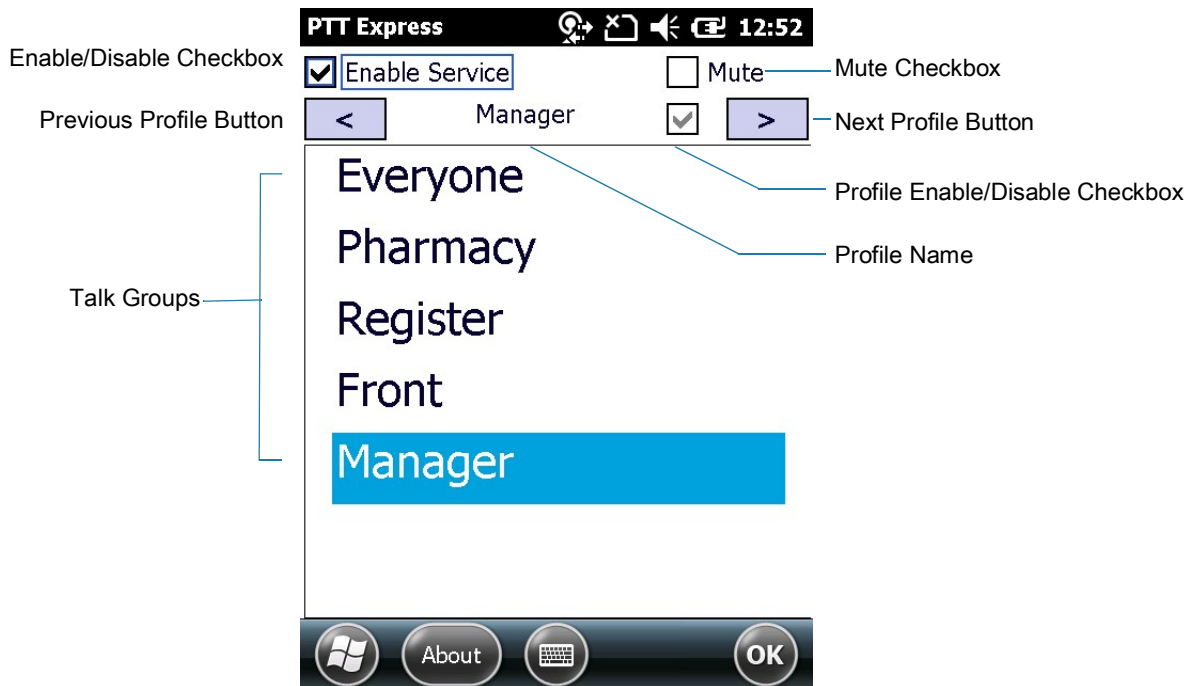
**Figure 5** Android Settings Screen



- Settings
  - **Display Call Statistics** - Check to display call statistics on the screen.
  - **About** - Displays the PTT Express client version number.

## Windows Mobile/CE User Interface

**Figure 6** PTT Express Profile User Interface Sample Windows Mobile/CE Configuration



- **Enable/Disable Checkbox** - Turns the PTT service on (selected) or off (unselected).
- **Profile Name** - Displays the name of the current Profile.

- **Profile Enable/Disable Checkbox** - Indicates that the Profile is enabled (checked) or disabled (un-checked).
- **Previous/Next Profile Buttons** - Scrolls to the previous or next Profile screen. If at the first or last Profile, the button is not available.
- **Talk Groups** - Lists (up to 32) Talk Groups available for PTT communication.
- **Mute Checkbox** - Mutes (if selected) and un-mutes (unselected) the client. If muted, a call cannot be heard or initiated.
- **About** - Displays the PTT Express client version number.
- **OK** - Closes the PTT Express User Interface. PTT service continues to run in the background.

## Windows Mobile/CE About Window

Figure 7 Windows Mobile/CE About Window






## PTT Express Notification Icons

Indicates the current state of the PTT Express client. Available on Android clients only.

Table 3 PTT Express Notification Icons

Status Icon	Description
	Indicates that PTT Express client is disabled.
	Indicates that PTT Express client is enabled but not connected to a WLAN.
	Indicates that PTT Express client is enabled, connected to a WLAN and listening on the Talk Group indicated by the number next to the icon.
	Indicates that PTT Express client is enabled, connected to a WLAN and communicating on the Talk Group indicated by the number next to the icon.

**Table 3** PTT Express Notification Icons (Continued)

Status Icon	Description
	Indicates that PTT Express client is enabled, connected to a WLAN and in a private response.
	Indicates that PTT Express client is enabled and muted.
	Indicates that the PTT Express client is enabled but it is not able to communicate due to a VoIP telephony call is in progress.

## Audio Feedback

### For Android Clients

The PTT Express client (when configured) provides audio feedback for:

- Channel number - whenever the user presses a hard button to change to another Talk Group/Channel, the device speaks the channel number or name. For example, Channel 3, or Apparel.
- Profile name - whenever the user presses a hard button to change to another profile, the device speaks the profile name. For example, Groceries.

By default, audio feedback is enabled. It can be enabled or disabled for each configured profile by modifying the configuration file. The PTT Express client can also be configured to set Profiles to different languages. The languages supported are those installed on the device. To view supported languages select **Settings > Language & input > Text-to-Speech-output > Preferred Engine > Settings > Language**.

### For Windows Mobile/CE Clients

There is a small difference in Audio Feedback functionality for Windows Mobile/CE clients. The audio clips for Profile and Channel are not included in the installation. The Administrator has to prepare and store audio clips in a specified folder for the client to use them at run time.

The Audio clips used to announce Profile and Talk Group changes are located in the following folder:  
 \Application\PttExpress\Audio\<<language>

The <language> setting is part of the Profile in the configuration (See [Table 14 on page 29](#)). For example:

```
<profile id="1" name="Groceries" enable="true" language="en">
```

In the example, language="en" means that audio clips shall be placed in the following folder:

```
\Application\PttExpress\Audio\en
```

Talk Group/Channel Audio Clip file name format: channel\_0000X.wav (Where X = Channel Id).

Profile Clip Audio file name format: profile\_0000X.wav (Where X == Profile Id).

The audio clips should be .wav files with 8000 samples per second and mono (1) channel.



**NOTE:** For VH10, use the following folder to store the audio clips:

```
\Flash Disk\PttExpress\Audio\<<language>
```

Free third party tools (for example, Jampal Text To Speech) are available, which allow you to convert text to speech and save the output in .wav format.

## Profiles

The PTT Express client can be configured to contain one or more Profiles. Each Profile can be assigned a unique name and have a set number of available Talk Groups. The Profile name and the Talk Group names are defined in the Configuration file.

### Switching Between Profile Screens

If the PTT Express client is configured for more than one Profile, the user can switch (if configured) between Profiles by:

- swiping the screen to the left or right (Applies to Android clients only)
- touching the Previous/Next Profile buttons
- pressing a hard button.

When the user swipes the screen or touches the Previous/Next Profile buttons, the new Profile screen appears but is not enabled. The user must touch the Profile Enable/Disable checkbox to enable the current Profile.

If configured, pressing a hard button switches the client to the next Profile from the currently enabled Profile. The new profile then automatically becomes enabled. The user can continue this process until the desired Profile screen is enabled.

### Selecting Talk Groups

Each Profile screen can display a list of up to 32 Talk Groups. The home Talk Group is highlighted in blue. To switch to another Talk Group:

- touch the Talk Group on the screen
- quickly press the configured button (if configured to change the talk group on a button press).

The selected Talk Group becomes blue. If the Audio Feedback feature is enabled, the device speaks the Talk Group name or number.

## Licensing General Notes



Applies to Android Operating System only.

If Ala Carte licensing is not available, a dialog box appears indicating that the licensing is not available. When the user touches the close button, PTT Express process are turned off. The user must launch the PTT Express app again.

After restarting the PTT Express app or switching to a new user, wait approximately two minutes until the License Manager app and PTT Express app are up and running.

After switching from one Android User Mode to another, user must launch PTT Express application to enable PTT Service.

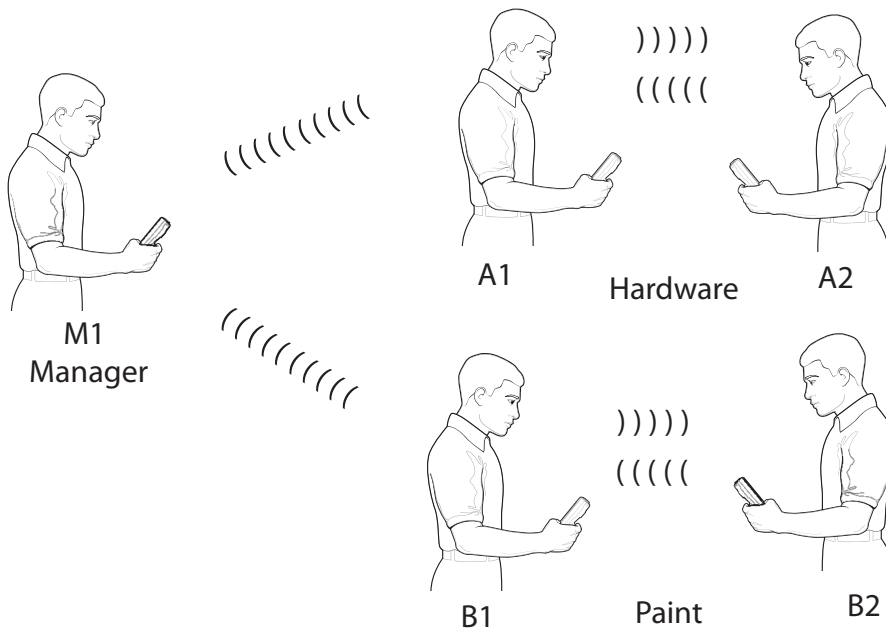
# Advanced Features

## Listening to Multiple Talk Groups

The client monitors multiple Talk Groups at the same time. If multiple Talk Group conversations are detected, the client determines which message is heard based on configuration parameters.

For example, multiple groups are communicating in a department store. The Manager's PTT Express client scans all Talk Groups (Hardware and Paint).

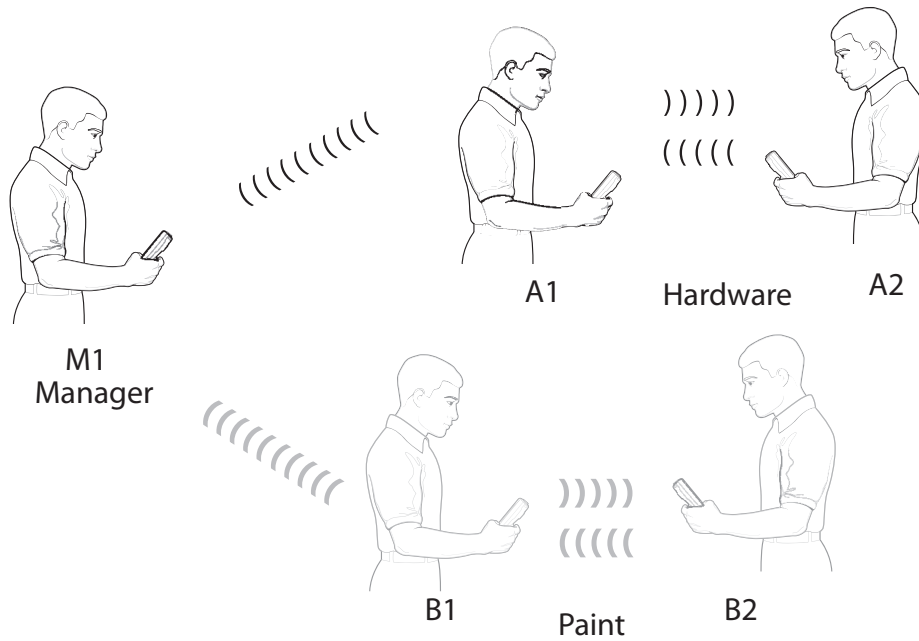
**Figure 8** Client Listening to All Talk Groups



Based on PTT Express client configuration, the client determines which Talk Group conversation will be heard by the Manager. In this example, the Hardware Talk Group.

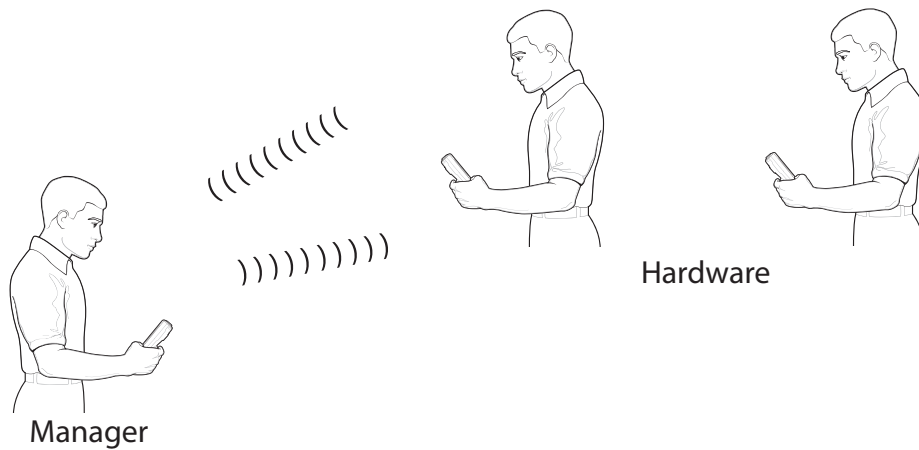


**Figure 9** Selected Hardware Talk Group



The Manager can then communicate with the Hardware Talk Group.

**Figure 10** Manager Communication with Selected Talk Group

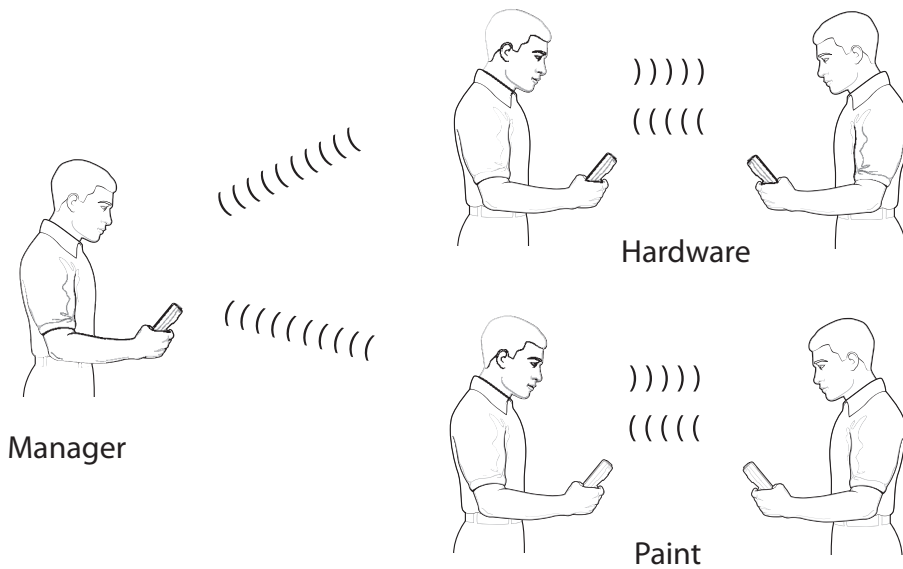


## Preemptor Feature

When configured, a user on a Talk Group can preempt a conversation between other users on that Talk Group.

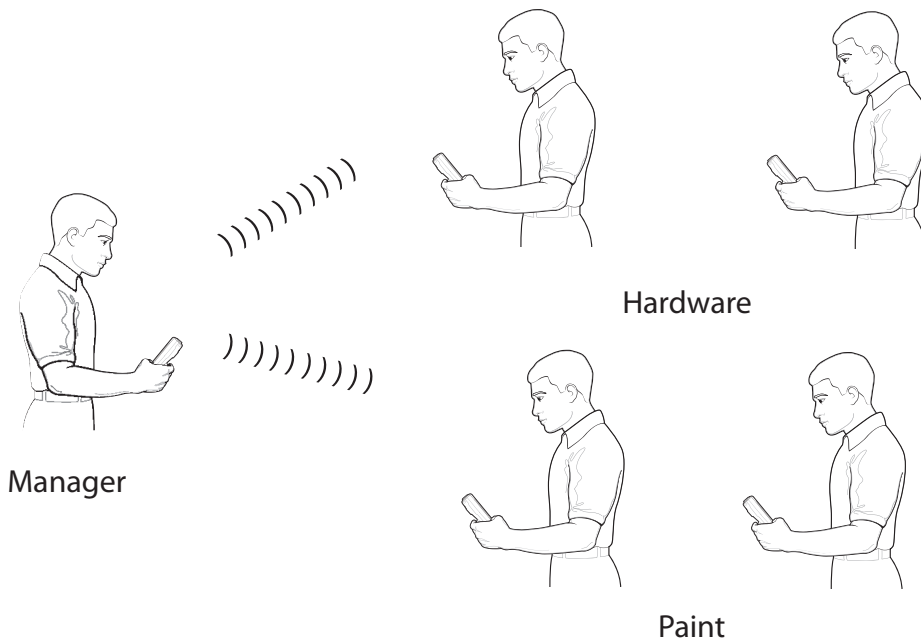
For example, employees are communicating on the Hardware and Paint Talk Group. The Manager hears the conversation between the employees.

**Figure 11** Talk Group Communication



For some reason the Manager wants to communicate with all employees, he can interrupt the conversations and send a message to all employees.

**Figure 12** Preempting Communications



When the Manager is done communicating, employees can continue communicating with each other.

## Alternative Channels Feature

The Alternative Channel feature allows the PTT Express user to temporarily select another Talk Group other than the Home Talk Group. The user can then communicate on that Talk Group. After a configured time frame, the PTT Express client will return to the user's Home Talk Group.

# PTT Communication

## Introduction

PTT communication may be established as a Group Call, Group Call with 2-Way Radio, or a Private Response.



**NOTE:** For additional information about enterprise devices, see the website at: [zebra.com/support](https://zebra.com/support).

## Group Call

A group call is a call that is sent from one device to all devices on the same Talk Group. To initiate a Group Call:



**NOTE:** This procedure also applies for communicating with 2-Way radios.

Actual Group Call and Private Response buttons are dependent upon client configuration.

Selection of Profile and Talk Groups are dependent upon client configuration.

1. If configured, select a Profile.
2. Select a Talk Group.
3. Press and hold the configured Group Call button.
4. Listen for the talk tone to play.
  - If you hear the busy tone, release the Group Call button and wait for a moment before you press and hold the Group Call button to make another attempt.
  - If you do not hear a tone, make sure the PTT Express client is enabled and on the network.
5. Start talking immediately after the talk tone plays.
6. Release the Group Call button when you finish talking.

## Responding to a Group Call

You can respond to a Group Call by:

- responding with another Group Call
- responding with a Private Response.

## Responding with a Group Call

To respond to a Group Call with another Group Call:



**NOTE:** This procedure also applies for communicating with 2-Way radios.

Actual Group Call and Private Response buttons are dependent upon client configuration.

Selection of Profile and Talk Groups are dependent upon client configuration.

1. Wait until you receive an access tone.
2. Press and hold the configured Group Call button.
3. Listen for the talk tone to play.
  - If you hear the busy tone, release the Group Call button and wait for a moment before you press and hold the Group Call button and make another attempt.
  - If you do not hear a tone, make sure your client is enabled and on the network.
4. Start talking immediately after the talk tone plays.
5. Release the Group Call button when you finish talking.

## Responding with a Private Response



**NOTE:** A Private Response can only be initiated once a Group Call has been established. The initial Private Response is made to the originator of the Group Call. The steps for making the first Private Response and all subsequent Private Responses are the same. Users cannot initiate Private Responses to 2-way radios.

Actual Group Call and Private Response buttons are dependent upon client configuration.

Selection of Profile and Talk Groups are dependent upon PTT Express client configuration.

To establish a Private Response:

1. After the Group Call is completed, wait until you receive an access tone.
2. Press and hold the configured Private Response button.
3. Listen for the talk tone to play.
  - If you hear the busy tone, release the Private Response button and wait for a moment before you press and hold the Private Response button and make another attempt.
  - If you do not hear a tone, make sure your client is enabled and on the network.
4. Start talking immediately after the talk tone plays.
5. Release the Private Response button when you finish talking.

## Operating Information

Use the following information to operate the PTT Express client:

- Use the device volume control buttons to change the client volume.

- Only one user at a time can initiate a Group Call on the Talk Group. Other users on the same Talk Groups get the busy tone.
- Users can talk for up to 60 seconds (configurable) at a time when communicating on the network.
- A private response is possible for up to 60 seconds (configurable) after receiving a Group Call.
- The initiator of a Group Call cannot initiate a private response until a response (either group or private) is received.
- If you do not hear a talk or busy tone when initiating a Group or Private Response, check 1) the device network status indicator to make sure device is on the network, 2) the client is enabled, 3) the volume level.
- PTT Express communication has been designed to minimize end-to-end audio delay. However, audio delay may be up to two seconds or more depending on conditions of the network.
- While a PTT communication key is pressed, the user is not able to use other device keys to perform separate tasks. In general pressing multiple keys simultaneously leads to inconsistent client behavior.

See PTT Express Installation and Configuration Guide or contact view the website at: [zebra.com/support](https://zebra.com/support) for additional PTT Express client details.

# Configuration

## Introduction

Configuration of the PTT Express client is controlled by a configuration XML file. The configuration file is divided into:

- Application settings
- Profile List settings
- Channel settings.

## Application Settings

The Application setting control PTT Express client functionality.

- General Settings
- Diagnostic settings
- Coexistence settings
- Hard Button settings
- GUI settings
- Group Call/Private Response Transport/Timers settings.

## Windows Mobile/CE Clients

To change the application settings, modify **ptt\_settings.xml** located at:

`\Application\PttExpress\`

**NOTE:** For VH10, ptt\_settings.xml is located at:

`\Flash Disk\PttExpress`

## Android Clients

To change the application settings, modify `ptt_settings.xml` located at:

`/enterprise/device/settings/ptt/`

## General Settings

**Table 4** General Settings

Name	Options	Default	Description
enable	true false	false	Enable or disable the PTT service. True = Enabled False = Disabled
<code>&lt;setting name="enable"&gt;true&lt;/setting&gt;</code>			
defaultProfileID	1 through 12	1	Numeric identifier of the default profile.
<code>&lt;setting name="defaultProfileID"&gt;1&lt;/setting&gt;</code>			
disablePTTClient	true false	false	Enable or disable the PTT Express client. If the value is true, PTT Express client functionality is disabled. This settings is optional and is not shown in the default XML file.
<code>&lt;setting name="disablePTTClient"&gt;false&lt;/setting&gt;</code>			
ignoreKeysInLockMode	true false	false	Ignore keys in lock mode. (Available on Android clients only.)
<code>&lt;setting name="ignoreKeysInLockMode"&gt;false&lt;/setting&gt;</code>			
muteExitTimer	0 to 10000 ms	120000	The amount of time (in milliseconds) that has to elapse after which the device will come out of the mute state. Decimal value in milliseconds: 0 implies an infinite switch. Minimum = 0 ms. Maximum = 8,640,000 ms. Default = 120,000 ms.
<code>&lt;setting name="muteExitTimer"&gt;0&lt;/setting&gt;</code>			

## Diagnostic Settings

**Table 5** Diagnostic Settings

Name	Options	Default	Description
logLevel	None Error Warning Info Debug	None	Set the type of logs that will be collected. None = No logs collected. Error = Only error logs collected. Warning = Only warning logs collected. Info = Only informational logs collected. Debug = Only debug logs collected.
<code>&lt;setting name="logLevel"&gt;None&lt;/setting&gt;</code>			
logDir	<path>	PTT	Sets the path storage to store the PTT log files.
<code>&lt;setting name="logDir"&gt;PTT&lt;/setting&gt;</code>			

**Table 5** Diagnostic Settings (Continued)

Name	Options	Default	Description
enableCDR	true false	false	Enable or disable the CDR logs.
<code>&lt;setting name="enableCDR"&gt;&gt;false&lt;/setting&gt;</code>			
cdrSize	100 to 25,000	5,000	Size of the CDR log file in kilobytes.
<code>&lt;setting name="cdrSize"&gt;5000&lt;/setting&gt;</code>			

## Coexistence Settings

**Table 6** Coexistence Settings

Name	Options	Default	Description
fullDuplexClient Coexistence	true false	true	Allows the PTT Express client to coexist with full duplex clients installed on the same device.
<code>&lt;setting name="fullDuplexClientCoexistence"&gt;&gt;false&lt;/setting&gt;</code>			
vibrateOnVoiceCall	true false	true	Allows full duplex incoming calls to vibrate the device when PTT Express client is in call.
<code>&lt;setting name="vibrateOnVoiceCall"&gt;&gt;true&lt;/setting&gt;</code>			

## Hard Button

These settings determine the buttons that can switch profile screens and a headset button.

For Windows Mobile/CE clients, use the virtual key code for the key to be used.

**Table 7** Client Options

Name	Options	Default	Description
profileSwitchKey	L1-Single L1-Double L2-Single L2-Double	L1-Double	Sets the key used to switch profiles. Contains two parts: 1. the key code and 2. Single or double press. The parts are separated by a hyphen.  Refer to device's Integrator Guide for key mappings.
<code>&lt;setting name="profileSwitchKey"&gt;L1-Double&lt;/setting&gt;</code>			
allowProfileSwitchFrom Key	true false	true	Allows Profile screen switching using defined button.
<code>&lt;setting name="allowProfileSwitchFromKey"&gt;&gt;true&lt;/setting&gt;</code>			
headsetKey		R2	Sets the Headset key.  (Available on Android clients only.)
<code>&lt;setting name="headsetKey"&gt;R2&lt;/setting&gt;</code>			



## GUI

These settings determine the screen options.

**Table 8** GUI Settings

Name	Options	Default	Description
allowProfileSwitchFromUI	true false	true	Allows Profile screen switching on the screen.
<code>&lt;setting name="allowProfileSwitchFromUI"&gt;true&lt;/setting&gt;</code>			

## Group Call/Private Response Transport/Timers

These settings set Group Call and Private Response options.

**Table 9** Group Call/Private Response Transport/Timers Settings

Name	Options	Default	Description
ipBroadcastGroup	<code>&lt;ipaddress&gt;</code>	239.192.2.2	Sets the multicast address used for Group Call communications.
<code>&lt;setting name="ipBroadcastGroup"&gt;239.192.2.2&lt;/setting&gt;</code>			
ipBasePort	<code>&lt;port&gt;</code>	5000	Sets the IP Port number of the multicast address used for Group Call communications. Decimal value.
<code>&lt;setting name="ipBasePort"&gt;5000&lt;/setting&gt;</code>			
sipLocalPort	<code>&lt;port&gt;</code>	4080	Sets the client IP Port to be used for Private Response communications. Decimal value.
<code>&lt;setting name="sipLocalPort"&gt;4080&lt;/setting&gt;</code>			
gcJitterSize	2 to 4	3	One group call packet holds 200 ms data. Decimal value: min = 2, max = 4, default = 3: which means the maximum data the jitter holds is 600 ms.
<code>&lt;setting name="gcJitterSize"&gt;3&lt;/setting&gt;</code>			
pcJitterSize	2 to 4	3	One private response packet holds 100 ms data. Decimal value: min = 2, max = 4, default = 3: which means the maximum data the jitter holds is 300 ms.
<code>&lt;setting name="pcJitterSize"&gt;3&lt;/setting&gt;</code>			
gcFloorHoldTimer	0 (disabled) 10000 to 90000	60000	In a group call, the amount of time the user is allowed to hold the floor (talk without interruption). Decimal value in milliseconds. disable = 0.
<code>&lt;setting name="gcFloorHoldTimer"&gt;60000&lt;/setting&gt;</code>			

**Table 9** Group Call/Private Response Transport/Timers Settings (Continued)

Name	Options	Default	Description
pcFloorHoldTimer	0 (disabled) 10000 to 90000	60000	In a private response, the amount of time the user is allowed to hold the floor in the private response (talk without interruption). Decimal value in milliseconds. disable = 0.
<code>&lt;setting name="pcFloorHoldTimer"&gt;60000&lt;/setting&gt;</code>			
gcHangTimer	0 (disabled) 1000 to 10000	10000	The amount of time that has to elapse after which a Private Response cannot be made to the last known talker in the session. Decimal value in milliseconds.
<code>&lt;setting name="gcHangTimer"&gt;10000&lt;/setting&gt;</code>			
pcHangTimer	0 (disabled) 1000 to 10000	10000	The amount of time that has to elapse after which the Private Response can not be initiated. Decimal value in milliseconds. Min = 1000 ms. Maximum = 10000 ms. Default = 10000 ms
<code>&lt;setting name="pcHangTimer"&gt;10000&lt;/setting&gt;</code>			

## Profile List Settings

The PTT Express client must have at least one Profile and can have up to 12 Profiles. Each Profile must have its own configuration settings in the XML file.

In the `<profile_list>` section, each Profile has the following options:

- Profile attributes
- Profile channel attributes
- Profile UI attributes
- Profile hard buttons
- Profile user attributes.

## Profile Attributes

These settings determine the profile attributes.

**Table 10** Profile Attributes Descriptions

Setting	Value	Default	Description
id	1 - 12	1	Set the Profile identifier. Each Profile has to have a unique number.
name	<blank>		Assigns an ASCII string name to the Profile. The name can consists of a 16 alphanumeric character string that can include symbols. This name displays on the Profile screen.

**Table 10** Profile Attributes Descriptions (Continued)

Setting	Value	Default	Description
enable	true false	true	Enables or disables the Profile. When set to true, the Profile can be selected during Profile switching.
language		en	Set the audio feedback language for the Profile. The value for language attribute should be a locale string defined as per <a href="http://developer.android.com/reference/java/util/Locale.html">http://developer.android.com/reference/java/util/Locale.html</a> . (Available for Android clients only)
<code>&lt;profile id="1" name="Groceries" enable="true" language="en"&gt;</code>			

## Profile Channel Attributes

These settings determine the channel attributes.

**Table 11** Profile Channel Attributes Descriptions

Setting	Value	Default	Description
scanOnlyHome	true false	true	If this parameter is true, the device will only listen on the channel it is set to transmit upon. i.e. that scan only the HOME channel (as in 1.1).
<code>&lt;setting name="scanOnlyHome"&gt;true&lt;/setting&gt;</code>			
alternativeChannelSwitchTimer	0 to 8640000	0	The amount of time, in milliseconds, that has to elapse after which the current channel will change from Alternative Channel to Home Channel. 0 implies an infinite switch.
<code>&lt;setting name="alternativeChannelSwitchTimer"&gt;0&lt;/setting&gt;</code>			
enablePriority	true false	false	The value true implies that the per channel priority settings will be honored, else it will be ignored.
<code>&lt;setting name="enablePriority"&gt;&gt;false&lt;/setting&gt;</code>			

## Profile Screen Attributes

These settings determine the Profile screen attributes.

**Table 12** Profile Screen Attributes Descriptions

Setting	Value	Default	Description
pttClientStatusUILock	true false	false	Allow the PTT Express client to be enabled/disabled from screen.
<code>&lt;setting name="pttClientStatusUILock"&gt;&gt;false&lt;/setting&gt;</code>			
allowChannelSwitchFromUI	true false	true	Allow switching Talk Groups on the screen.

**Table 12** Profile Screen Attributes Descriptions (Continued)

Setting	Value	Default	Description
<code>&lt;setting name="allowChannelSwitchFromUI"&gt;true&lt;/setting&gt;</code>			
allowChannelSwitchFromKey	true false	true	Allow switching Talk Groups using a hard button.
<code>&lt;setting name="allowChannelSwitchFromKey"&gt;true&lt;/setting&gt;</code>			
allowMuteFromUI	true false	false	Allow muting or unmuting operation from the screen.
<code>&lt;setting name="allowMuteFromUI"&gt;false&lt;/setting&gt;</code>			

## Profile Hard Buttons

These settings determine the Profile hard button attributes.

**Table 13** Profile Hard Buttons Descriptions

Setting	Value	Default	Description
gcKey	L2-Single, R2-Single	L2-Single, R2-Single	Sets the key to use for making a Group Call. Contains two parts. 1. the key code and 2. Single or double press. The parts are separated by hyphen. Dependent upon available device buttons.  Refer to device's User Guide for key mappings. See <a href="#">Table 2 on page 8</a> for Windows Mobile/CE clients.
<code>&lt;setting name="gcKey"&gt;L2-Single,R2-Single&lt;/setting&gt;</code>			
pcKey	L1-Single, R2-Double	L1-Single, R2-Double	Sets the key to use for making a Private Response. Contains two parts. 1. the key code and 2. Single or double press. The parts are separated by hyphen. Dependent upon available device buttons.  Refer to device's User Guide for key mappings. See <a href="#">Table 2 on page 8</a> for Windows Mobile/CE clients.
<code>&lt;setting name="pcKey"&gt;L1-Single,R2-Double&lt;/setting&gt;</code>			
muteKey			Sets the key to use for muting and unmuting the application. Contains two parts. 1. the key code and 2. Single or double press. The parts are separated by hyphen. Dependent upon available device buttons.  Refer to device's Integrator Guide for key mappings.
<code>&lt;setting name="muteKey"&gt;&lt;/setting&gt;</code>			

**Table 13** Profile Hard Buttons Descriptions (Continued)

Setting	Value	Default	Description
alternativeChannelSwitchKey			Sets the key to use to switch to an alternative channel. Contains two parts. 1. the key code and 2. Single or double press. The parts are separated by hyphen. Dependent upon available device buttons.  Refer to device's Integrator Guide for key mappings.
<code>&lt;setting name="alternativeChannelSwitchKey"&gt;&lt;/setting&gt;</code>			
oneKeyTimerDelay	400 - 1000 ms	600 ms	One key timer delay. Decimal value in milliseconds. Minimum = 400 ms. Maximum = 1000 ms. Default = 600 ms.
<code>&lt;setting name="oneKeyTimerDelay"&gt;600&lt;/setting&gt;</code>			
allowMuteFromKey	true false	false	Enables muting operation using a key.
<code>&lt;setting name="allowMuteFromKey"&gt;&gt;false&lt;/setting&gt;</code>			

## Profile User Attributes

These settings determine the Profile user attributes.

**Table 14** Profile User Attributes Descriptions

Setting	Value	Default	Description
disablePrivateCall	true false	false	Disable or enable a Private Response.
<code>&lt;setting name="disablePrivateCall"&gt;&gt;false&lt;/setting&gt;</code>			

**Table 14** Profile User Attributes Descriptions (Continued)

Setting	Value	Default	Description
audioFeedback	Off Default	Default	Controls audio feedback feature. Set to Off to disable audio playback. Set to Default to play the Profile and Talk Group names while switching Profiles or Talk Groups.
<code>&lt;setting name="audioFeedback"&gt;default&lt;/setting&gt;</code>			
callKeyConfiguration	0 1	1	<p>Determines whether the Group Call and Private Response buttons are hard or soft buttons. Set to 1 to enable the device hard buttons as defined in the <i>gckey</i> and <i>pckey</i> settings. Set to 0 to enable on-screen soft buttons.</p> <p>Notes:</p> <p>Setting callKeyConfiguration to "0" is not supported on VH10, VC80x, and VC8300 devices.</p> <p>The soft button can only be pressed for up to 30 seconds on devices with the Android operating system.</p>
<code>&lt;setting name="callKeyConfiguration"&gt;1&lt;/setting&gt;</code>			

## Channel List Settings

Each Profile can have a list of Talk Groups. In the `<channel list>` section, list each Talk Group (up to 32) as follows:

```
<channel id="1" name="" priority="1" type="Alternative" replyable="true" preemptor="false" cdr="false"/>
```

**Table 15** Channel List Descriptions

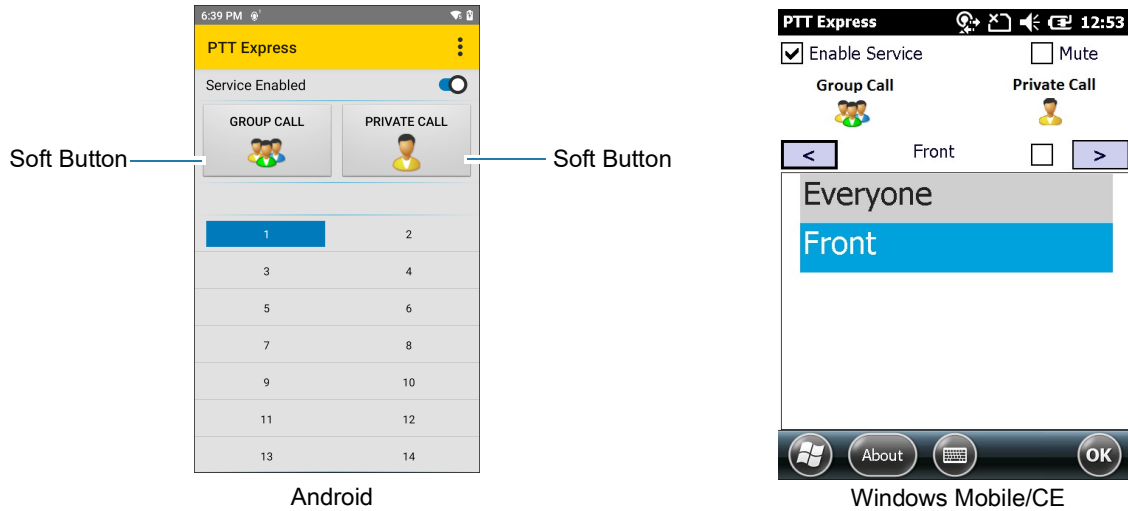
Setting	Values	Default	Description
id	1 through 32	N/A	Identifies the Talk Group number.
name	<alphanumeric>	N/A	Sets the name for the Talk Group. A 16 character alphanumeric string that includes symbols. This name displays on the Profile screen.
priority	1 through 32	N/A	Set the priority of the Talk Group. Where 1 is the highest priority and 32 is the lowest priority.
type	Home Alternative Emergency Scan Disabled	N/A	Talk Groups that are not mentioned in the list will be disabled from scan group and from UI,
replyable	true false	true	When set to true, allows a Talk Group to be in a conversation in response to an inbound traffic on this Talk Group.
preemptor	true false	false	When set to true, a pre-emptor Talk Group of higher priority can preempt a conversation on lower priority Talk Group.
cdr	true false	false	Enables or disables CDR logging for this channel.

## Adding Soft Buttons to a Profile

To add soft buttons to a Profile, set the callKeyConfiguration setting to 0.

```
<setting name="callKeyConfiguration">0
  <description>Set as 0 to use soft key for GC and PC. Set as 1 to use hard keys as
    defined by key codes in XML for Group Call, Private Response</description>
</setting>
```

**Figure 13** Profile with Soft Buttons





## Configuring a Profile with Three Talk Groups

To configure a Profile to have three Talk Groups with individual names:

- Talk Group 1 = Everyone
- Talk Group 2 = Apparels
- Talk Group 3 = Household

Set the following:

```
<channel_list>
  <channel id="1" name="Everyone" priority="1" type="Alternative" replyable="false"
    preemptor="true" cdr="false"/>
  <channel id="2" name="Apparels" priority="2" type="Home" replyable="true"
    preemptor="true" cdr="false"/>
  <channel id="3" name="Household" priority="2" type="Alternative" replyable="true"
    preemptor="true" cdr="false"/>
</channel_list>
```

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