

Workcloud Communication

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PTT Express for Android



ZEBRA

User Guide

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About This Guide

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.



NOTE: This guide refers to Android clients 3.1.x and 4.0.x. Screens, icons, and options may differ on each device.

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

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.

Notational Conventions

The following notational conventions make the content of this document easy to navigate.

- **Bold** text is used to highlight the following:
 - Dialog box, window, and screen names
 - Dropdown list and list box names
 - Checkbox and radio button names
 - Icons on a screen
 - Key names on a keypad
 - Button names on a screen
- Bullets (•) indicate:
 - Action items
 - List of alternatives
 - Lists of required steps that are not necessarily sequential.
- Sequential lists (for example, 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 visual indicators are used throughout the documentation set.



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.



CAUTION: If the precaution is not heeded, the user could receive a minor or moderate injury.



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.

When contacting support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software type and 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.

Revision History

The PTT Express User Guide revision history.

Revision	Date	Description
MN-004514-01EN Rev A	April 2022	First version.
MN-004514-02EN Rev A	January 2024	Rebranding and added true hot swapping support.
MN-004514-03EN Rev A	May 2024	New release version.

PTT Express Client

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
- 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.
- 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.
- PTT Express Android client v4.0.x and above must be loaded onto a device and requires a Zebra license. It is not pre-installed. 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.



NOTE:

PTT Express only supports Zebra PTT headsets, e.g.; HDST-35MM-PTVP-01. By default, the PTT button on this headset will initiate PTT calls.

PTT Express does not support any Bluetooth headsets with or without a PTT button.

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

Refer to the PTT Express for Android Release Notes for complete list of supported devices.

Device Communication

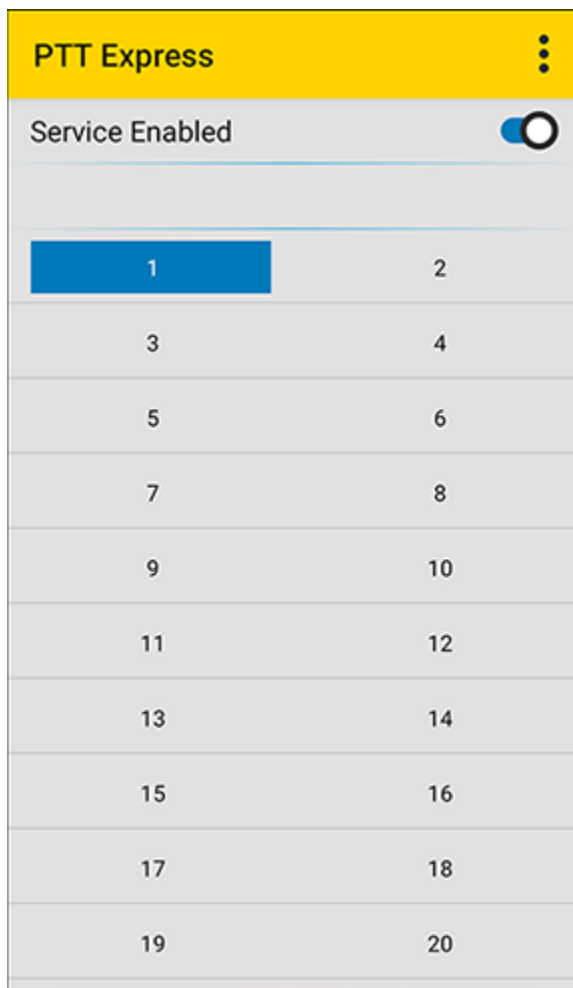
There are two ways to communicate when operating the PTT Express client: Group Call and Private Response.

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 Android 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 1 Group and Private Button Assignment/Mapping

Device	Recommended Group Button (Key Code)	Recommend Private Button (Key Code)
MC40	Left side top PTT button (L2)	Left side lower button (L1)
MC55A0	197-Single	125-Single
MC67	L2-Single	L1-Single
MC92	L1-Single	L2-Single
All other Android devices.	L2-Single	L2-Double

PTT Calls During Battery True Hot Swap

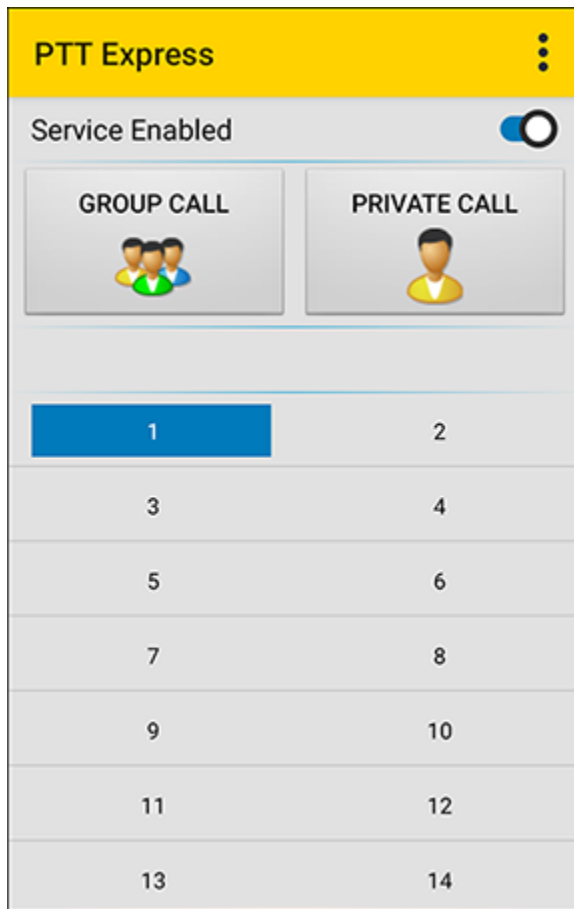
PTT Express supports sending and receiving PTT calls during a battery true hot swap on Zebra HC50 mobile devices. A hot swap battery is a power source that can be swapped out without interrupting the normal operation of the mobile device.

A user can continue to receive or send PTT calls for 60 seconds during the battery's true hot swap.

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 - Android

PTT Audible Indicators

Audio tones provide helpful clues when using the 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

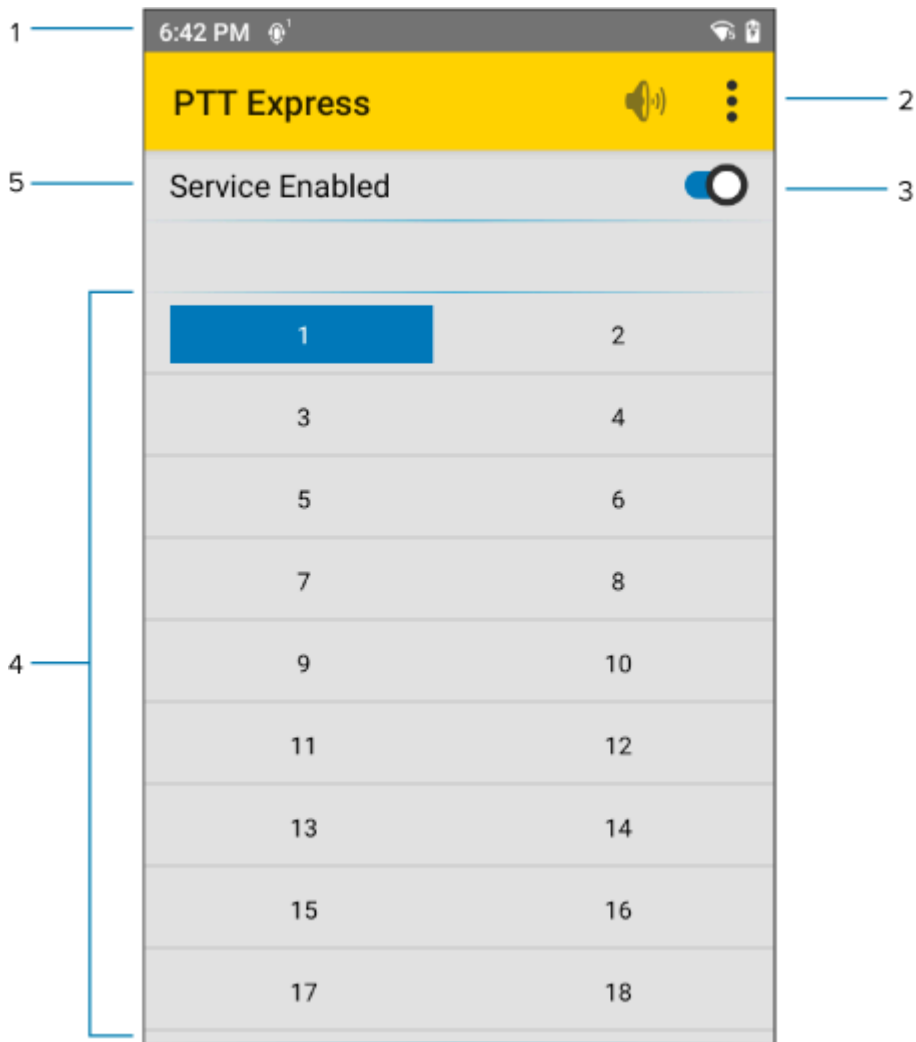
The PTT Express client User Interface (UI) is highly configurable.

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



1	PTT Express Notification Icons - Indicates the current state of the PTT Express client. Applies to Android clients only.
2	Settings - Opens the PTT Express client settings screen. (Available on Android clients only).
3	Enable/Disable Service Switch - Turns the PTT service on or off.

4	Talk Groups - Lists all 32 Talk Groups available for PTT communication.
5	Service Indication - Indicates the status of the PTT Express client. Options: Service Enabled , Service Disabled , or Service Unavailable .

Profile User Interface

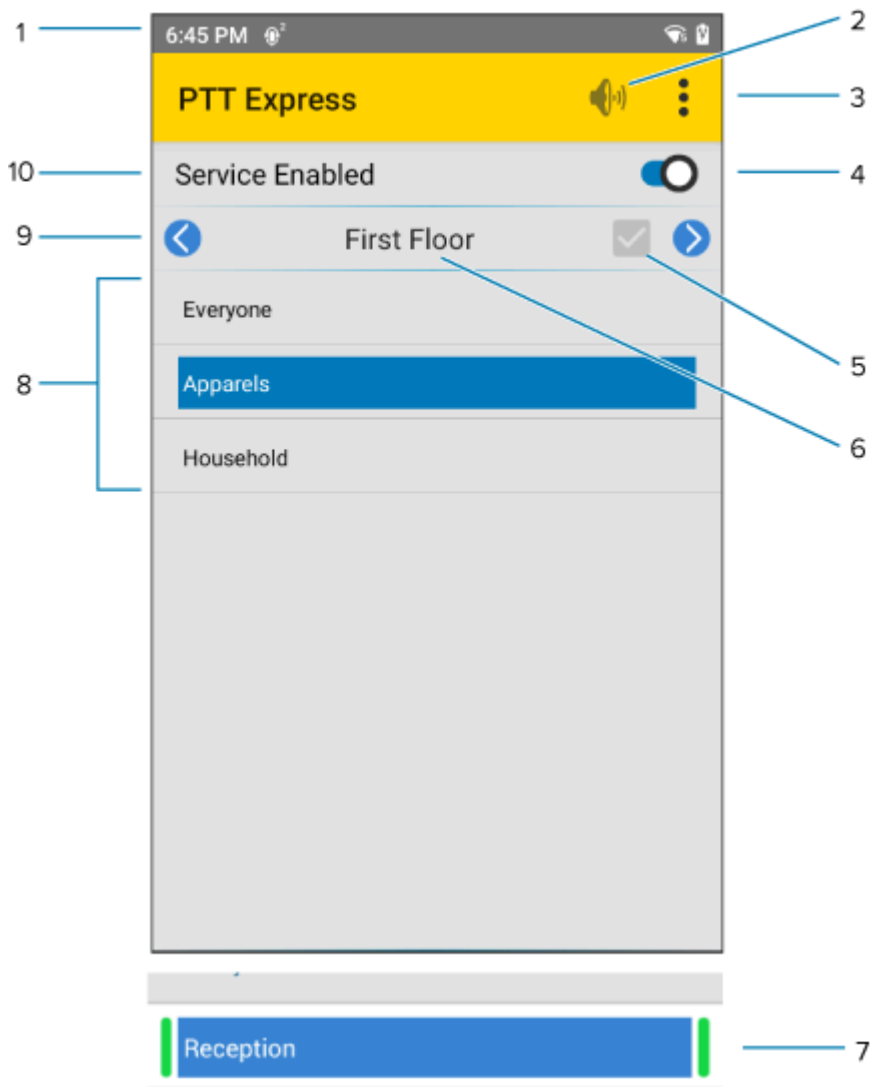
The default UI can be configured to meet the needs of the customer's solution.

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.

When configured, the use interface displays the profiles and talk groups.

Figure 4 PTT Express Profile User Interface Sample Android Configuration



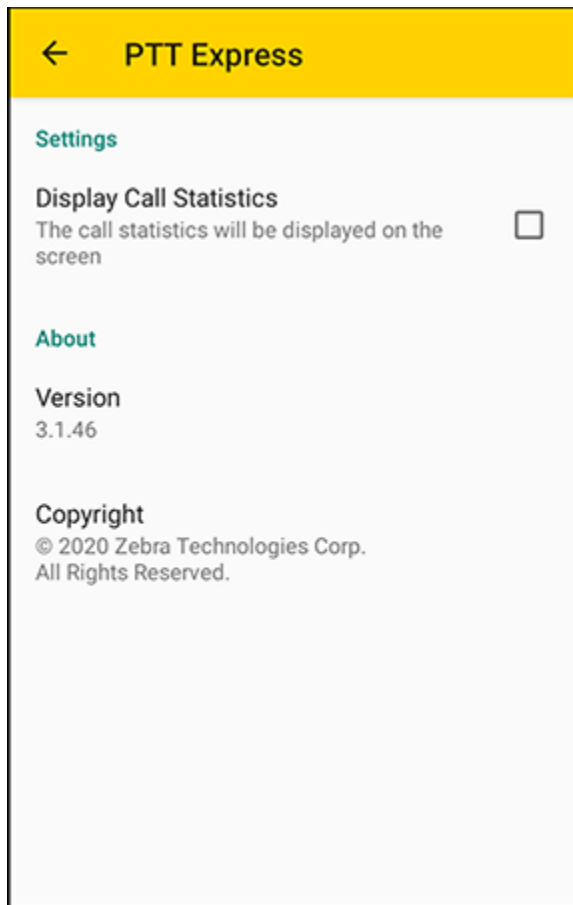
1	PTT Express Notification Icons - Indicates the current state of the PTT Express client. Applies to Android clients only.
2	Speaker Icon - Mutes and un-mutes the client. If muted, a call cannot be heard or initiated.
3	Settings - Opens the PTT Express client settings screen.
4	Enable/Disable Switch - Turns the PTT service on or off.
5	Profile Enable/Disable Checkbox - Indicates that the Profile is enabled (checked) or disabled (un-checked).
6	Profile Name - Displays the name of the current Profile.
7	Green Bar - Indicates the user is talk on a talk group.
8	Talk Groups - Lists (up to 32) Talk Groups available for PTT communication.

9	Previous/Next Profile Buttons - Scrolls to the previous or next Profile screen. If at the first or last Profile, the button is not available.
10	Service Indication - Indicates the status of the PTT Express client. Options: Service Enabled , Service Disabled , or Service Unavailable .

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.

PTT Express Notification Icons

Indicates the current state of the PTT Express client.

Table 2 PTT Express Icons

Status Icon	Description
	The PTT Express Voice client is disabled.
	The PTT Express Voice client is enabled but not connected to a WLAN.
	The PTT Express Voice client is enabled, connected to a WLAN, and listening on the Talk Group indicated by the number next to the icon.
	The PTT Express Voice client is enabled, connected to a WLAN, and communicating on the Talk Group indicated by the number next to the icon.
	The PTT Express Voice client is enabled, connected to a WLAN, and in a private response.
	The PTT Express Voice client is enabled and muted.
	The PTT Express Voice client is enabled but it is not able to communicate due to a VoIP telephony call in progress.

Audio Feedback

The PTT Express client provides audio feedback for Channel number or Profile name.

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**.

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

The PTT Express Android client requires licensing to use the application.



NOTE: 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

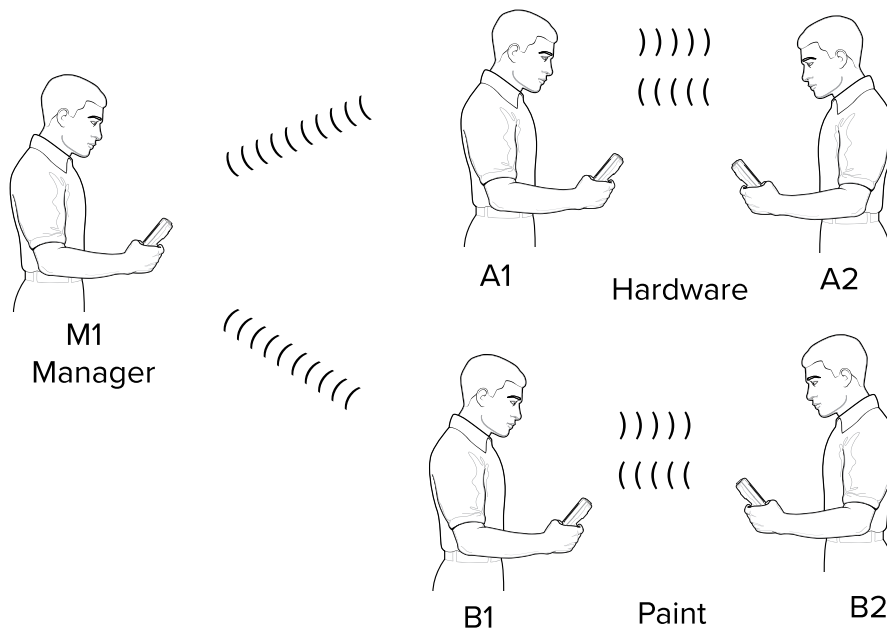
The PTT Express client advanced features include listening to multiple talk groups, preemptor feature, and alternative channels.

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.

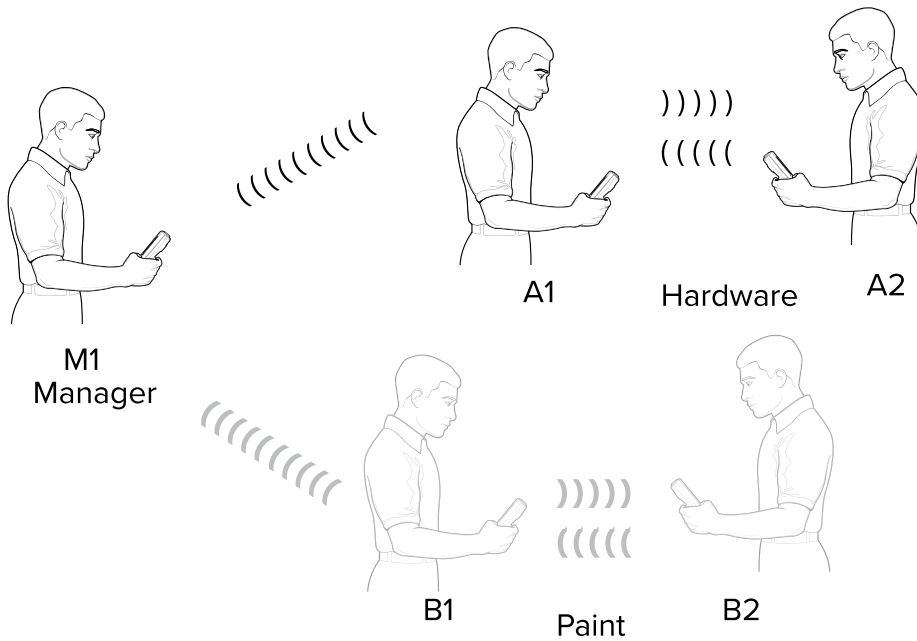
For example, multiple groups are communicating in a department store. The Manager's PTT Express client scans all Talk Groups (Hardware and Paint).

Figure 6 Client Listening to All Talk Groups



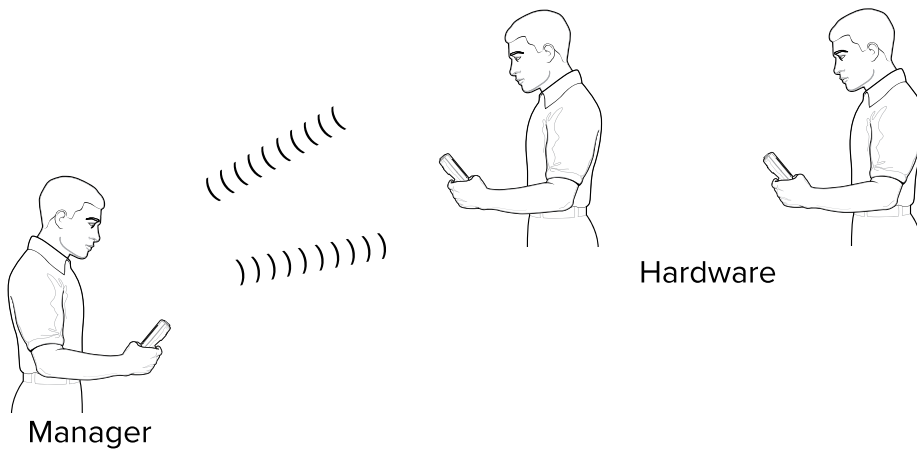
Based on PTT Express client configuration, the client determines which Talk Group conversation will be heard by the Manager. In this example, the Hardware Talk Group.

Figure 7 Selected Hardware Talk Group



The Manager can then communicate with the Hardware Talk Group.

Figure 8 Manager Communication with Selected Talk Group

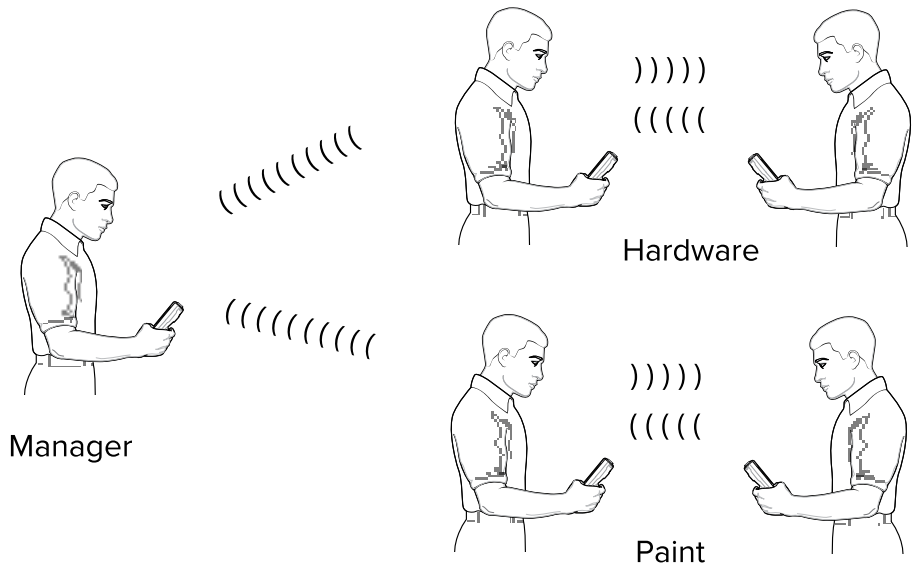


Preemptor Feature

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

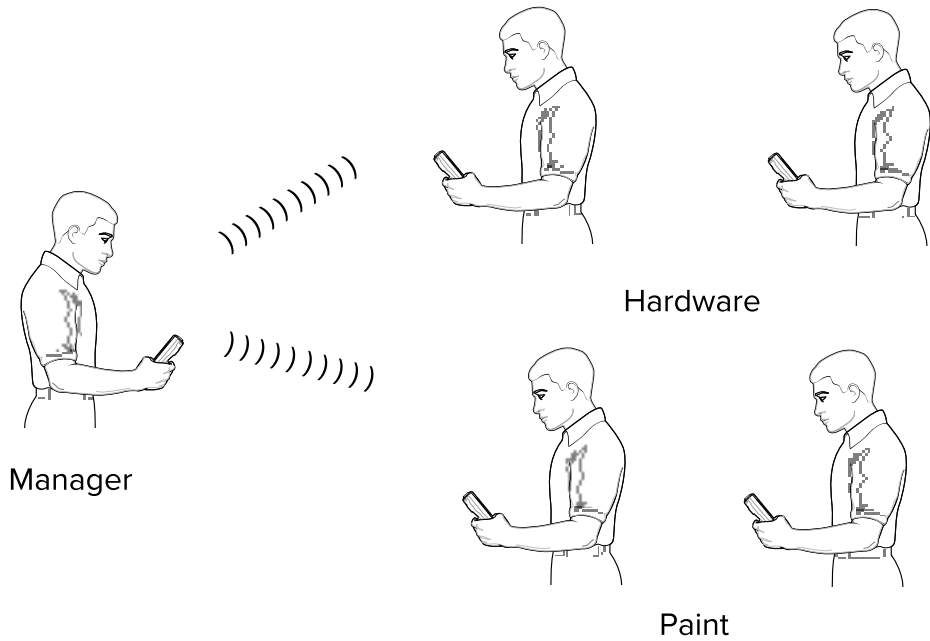
For example, employees are communicating on the Hardware and Paint Talk Group. The Manager hears the conversation between the employees.

Figure 9 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 10 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

PTT communication may be established as a Group Call, or a Private Response.



NOTE: For additional information about enterprise devices, see the website at: zebra.com/support.

Initiating a Group Call

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



NOTE:

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

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

On PTT Express client v4.0.x, if the application is in the background, pressing the PTT button brings the application to the foreground to initiate a Group Call.

To initiate a Group Call:

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.
5. If you do not hear a tone, make sure the PTT Express client is enabled and on the network.
6. Start talking immediately after the talk tone plays.
7. Release the Group Call button when you finish talking.

Responding to a Group Call

A user can respond to a Group Call in two ways.

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

Responding with a Group Call

A user can respond to a Group Call with another Group Call.



NOTE:

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.

4. If you do not hear a tone, make sure your 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 with a Private Response

A user can respond to a Group Call 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.

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.

On PTT Express client v4.0.x, if the application is in the background, pressing the PPT button brings the application to the foreground to initiate a Private Response.

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.

4. If you do not hear a tone, make sure your client is enabled and on the network.
5. Start talking immediately after the talk tone plays.
6. 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.

Refer to the PTT Express Installation and Configuration Guide for additional PTT Express client details. Go to zebra.com/support.

