Introduction

The WAVE Mobile Communicator (WMC) extends push-to-talk communications by enabling Android and Apple iOS smartphones, tablets and other specialty devices to securely communicate with other communication systems over broadband networks.

In addition to English, WMC is localized in 14 languages, enabling screens to be displayed in any of these languages if the user selects the corresponding language in the device's operating system (OS).

- Chinese (Simplified)
- Chinese (Traditional)
- Danish
- Dutch
- French
- German
- Italian
- Korean
- Norwegian
- Portuguese (Brazil)
- Russian
- Spanish
- Spanish (Latin America)
- Swedish

WMC accesses your mobile device's microphone, speaker and location while signed in. All WMC data (with the exception of your credentials stored in the OS Keychain) is deleted when you sign out.

This document provides instructions on the operation of WMC for iOS. The Take a Tour can be accessed directly from the Sign In screen and is also available online at https://www.motorolasolutions.com/content/msi/en_us/products/voice-applications/wave-work-group-communications/wave-mobile/en.html.

Troubleshooting support can be found at https://www.motorolasolutions.com/en_us/support/wave-support-resources.html.

WAVE 5000 or 3000 server capabilities or configuration information can be found at www.motorolasolutions.com/wave.

Supported Devices and Versions

All v3.x versions of the WAVE Mobile Communicator (WMC) for iOS support operation on iPhones, iPads and iPods running iOS 8.1 or greater. To fully support our installed customer base, there are multiple iOS WMC versions available for download. Select the version corresponding to your server indicated by the app title. All v3.x versions with (5.11) in the title are compatible with server version 5.7.3-5.11.

WAVE Mobile Communicator (WMC)

The WMC screens are organized as follows:

- Sign In Screen
- Home Screens
    - GROUPS > Group FEED and MAP
    - RECENTS

- - CONTACTS > Member FEED and MAP
- Group and Member Event Screens
  - Group FEED and MAP > Group Member List > Member FEED and MAP
  - Member FEED and MAP
- Menu
  - Sign Out
  - App Settings>Multiple App Setting Options
  - About > App and Server Information, Copyright, Trademark, Legal Information
  - Send Feedback

The app is Talkgroup-centric, meaning that it is designed to easily expose an individual Talkgroup and its members, or, via the RECENTS tab, monitor all activity across all Talkgroups while also being able to access members with whom you have already communicated in the session. All audio is transmitted in real-time, as playback is not currently available. However, RECENTS and FEED screens provide activity history. Users can execute only one communication at a time: one group call, one private call or one text message.

Your WAVE Administrator has assigned you one or more profiles. Each profile consists of a collection of Talkgroups which can either be unique from one profile to another or overlap (i.e., a Talkgroup can be in multiple profiles). Members can be other broadband, web client or radio users. Radio users are only displayed in CONTACTS.

Sign In Screen

Credentials
For your first sign in after downloading the WMC, you will need to enter your Username, Password and Server Address. WMC will always pre-populate your Username and Server Address until you delete the WMC app. It is not necessary to append https:// or http:// to your server name. WMC will always attempt an https:// connection first. If unsuccessful, it will make one attempt to sign in using http://. However, if you <u>do</u> append https:// or http://, WMC will only attempt the specified connection type.

Remember me on this device
You can enable "Remember me on this device" so you do not have to re-enter your password for future sign ins. It will remain enabled until you toggle it off. If not enabled, you must re-enter your password for every sign in.

Take a Tour
Take a Tour is a brief introduction to the major screens and actions for the WMC.

Connectivity
The WMC must have either cellular data or wifi connectivity to communicate with the WAVE server. If you sign in while using a wifi network, WMC will use wifi and will only change to cellular if wifi connectivity is lost. If you sign in while using cellular data and later enable wifi on your mobile device, the iOS OS does not automatically switch you to wifi for currently running apps. Signing out and back in will switch you to the wifi network.

The WMC will always attempt to reconnect if network connectivity is lost or is so weak that there is a significant delay in the time it takes for the server to send acknowledgements to the app. During a reconnect, the Connecting Overlay is displayed with an action spinner. Tapping CANCEL signs you out. Since this deletes the session's history, only tap CANCEL if you do not anticipate regaining network connectivity for a long period of time. Being in a reconnecting state for an extended period of time can lead to significant battery consumption.

Remote Disconnect

If your WAVE Administrator remotely signs you out, you must tap the Sign In button since you will not automatically be reconnected.

Backgrounding WMC

Backgrounding WMC will not sign you out. You will continue to receive transmissions, and (if you are using an external PTT device), you can transmit audio.

Mobile Device Power Cycle

If the mobile device is power cycled while you are signed in to WMC you are automatically signed back in once fully powered up. However, you will lose history prior to the power cycle.

> IMPORTANT: WMC will display an alert prior to sign in if it detects another WMC app is installed on your device. We strongly recommend against having more than one WMC app running on a device as it can cause negative audio interactions.

Home Screens

GROUPS

The GROUPS screen provides access to a maximum of 16 active Talkgroups, each listed on a separate row. Current transmission activity, mute state and number of missed texts are displayed for each Talkgroup. Tapping a row will take you to that Talkgroup's FEED.

RECENTS

The RECENTS screen displays a scrollable chronologic history of this session's transmissions and receptions across all Talkgroups (audio and text) and any of your private calls. New events are added to the top of the list, pushing older events down. Each entry includes:

- An audio or text icon identifying type of transmission
- Call initiator
- Receiver (either a Talkgroup or you)
- Time of initiation
- Duration (shown in blue if the call is active)
- Up to the first two lines, if a text message

Tapping any row will take you to that Talkgroup's or Member's FEED.

Additionally, the following events are displayed if they occur:

- Time you signed in to this WMC session shown as "CONNECTED 2:30 PM"
- Time periods when disconnected from the network shown as "NO NETWORK 2:30:10 – 2:30:55 PM"
- Time periods when the Talkgroup is deactivated after signing in (and reactivated if within the same session). These are shown when they occur as "[*TALKGROUP NAME*] DEACTIVATED 2:30 PM" and "[*TALKGROUP NAME*] ACTIVATED 2:50 PM". No history is displayed for a Talkgroup while it is not active. Any events for a Talkgroup prior to its deactivation remain in your history but become grey and non-actionable. They become actionable if reactivated.

CONTACTS

The CONTACTS screen displays the members in the address book assigned to you by your Administrator and will not necessarily match members of your Talkgroups. Tapping a member's row takes you to that member's FEED. As radio users are not displayed in a Member List, you can locate them in CONTACTS if your Admin has included them in your address book. Not all Contacts displayed are signed in to WAVE

and, thus, may not be callable (signified by the bonk/red PTT button when the PTT button is pressed). Only your WAVE Administrator can add members to an address book.

Global Mute/Unmute

The three Home screens (GROUPS, RECENTS, CONTACTS) have access to the global Talkgroup mute/unmute and menu icons. Tapping the global mute/unmute icon will toggle between muting and unmuting all active Talkgroups. Muting/unmuting a single Talkgroup can be performed on an individual Talkgroup FEED or MAP screen. If a Talkgroup is muted and you PTT on that Talkgroup, it will automatically unmute. If all Talkgroups are muted, and one of the Talkgroups is unmuted, the global mute/unmute icon will be the unmuted state.

Menu

Sign Out

Ends your current session. Doing so deletes all history and any data temporarily stored in volatile memory. WMC does not auto-connect if you sign out; you must press Sign In.

About

Displays information about the app and server versions, legal terms and conditions, copyright, and trademark.

Send Feedback

Enables you to send feedback to the WMC Product Management team. Use this to make a suggestion or ask a question about an existing or upcoming feature. Send Feedback should not be used to request troubleshooting or support. Please see the Troubleshooting section for frequently asked troubleshooting questions and how to directly contact WMC Support.

App Settings

All settings are user-specific and are remembered across your sessions unless you change profiles. Only muted Talkgroups are remembered across profile changes.

Text Notifications

Enables or disables notifications for text messages received for a Talkgroup when the WMC is backgrounded or your device's screen is off. When enabled, a notification is displayed and an alert tone is played based on your configurations in device Settings>WAVE>Notifications. The location of the display is also determined by your device notification settings. If notifications are disabled at this level, and you attempt to enable the App Setting after signing in, you will be prompted to first change your device level setting.

Group Call Incoming Sound

Enables or disables notifications just prior to the reception of any Talkgroup audio transmission. This sound will play at the same level as other WAVE audio which is governed by the device's media volume setting.

Share Location

Enables or disables sharing of your location with all other members currently signed in to WAVE for all of your active Talkgroups on a specified frequency from 5 seconds and 1 hour. The frequency impacts your battery consumption and should match the need for others to know your location in real-time versus a less frequent interval.

Map Type

Allows selection of Normal, Satellite or Hyrbrid map type when viewing Talkgroup or member MAP screens.

Map Traffic Overlay
Enables or disables the traffic overlay on whichever map type already selected. This is only available for OS versions 9 or greater and only displays if there are areas of congestion (yellow or red) as determined by the device's OS.

Use Bluetooth Device for PTT
Enables or disables use of a Bluetooth Low Energy device to trigger the app's PTT button whenever you are on a screen with the PTT button. Standard Bluetooth devices are not compatible with iOS devices. This setting is only for PTT (not for audio) and will only connect devices specifically integrated with the WMC. The currently integrated devices are:
- Pryme PTT-Z Mini (PTT only)
- Pryme BTH-600 (PTT and audio)
- Milicom PTT Button (PTT only)

If you would like to request a new device for integration with WAVE, please provide the Bluetooth PTT device information to the WAVE product team via the Feedback option found in the app menu.

To use a device with both audio and PTT capability, first connect the audio in the mobile device's settings (as you would for a Bluetooth audio-only accessory).

1. Follow the basic steps provided with your Bluetooth PTT device to put it into discovery mode.
2. Toggle "Use Bluetooth Device for PTT" on.
3. Select the desired device from the displayed list of available Bluetooth PTT devices discovered by WAVE. If it is not one of the integrated devices, you will receive an error message that it is not compatible.

A Bluetooth PTT device will remain connected to WAVE until you sign out or the device goes out of range of your mobile device. If you have difficulty connecting to WAVE, please consult the WMC Troubleshooting Guide or contact the Bluetooth device's manufacturer.

Audio Route Selection
If you connect a Bluetooth audio device with your mobile device, WAVE will present you with an option to select your audio route (Bluetooth device or phone speaker). The default behavior is for WAVE audio to play through the Bluetooth audio device.

Profile Selection
Allows you to switch between available profiles and only appears if you have more than one profile assigned. You will be signed out of your current profile and signed back in with the newly selected one, creating a new session. All history from the previous session is deleted. You must have at least one profile to use WAVE and will not be allowed to deselect all profiles.

Talkgroup Selection
Allows you to activate or deactivate Talkgroups available in your profile. Upon first sign in to WAVE, you will have up to 16 Talkgroups automatically activated. Deactivating a Talkgroup will remove it from the GROUPS screen and results in a greyed out entry for any recorded events for this Talkgroup in the current session. The history for this Talkgroup is still displayed in RECENTS but is not actionable, meaning that you can no longer access that Talkgroup's FEED or MAP screens. If you reactivate a Talkgroup, you will again have full access to its Event screens. Any deactivation or reactivation of a Talkgroup during your current session is recorded in the RECENTS whenever it occurred. You must have at least one Talkgroup selected to use WAVE and will not be allowed to deselect all Talkgroups.

NOTE: This is the same behavior as when your Administrator adds or removes a Talkgroup (via configurations on the server) in your active profile during your current session. Non-active profile changes (such as adding or removing a profile from your account) are not automatically reflected until you sign out and in again.

Talkgroup FEED and MAP Screens

You can make audio transmissions and send text messages from both the Talkgroup FEED and MAP screens.

Making Group Calls

GROUPS>Select Talkgroup>Press PTT button

Press and hold the PTT button. Once you receive the grant tone and the PTT button animates, speak into the phone's microphone. Release the PTT button when you are finished. You can transmit up to one minute continuously (default setting) at which point you will be timed-out (bonked), and the call will end. Please consult your Administrator to determine the exact group call timeout duration.

The PTT button turns red and plays the bonk tone if someone else is talking on that Talkgroup or if you are trying too rapidly to re-press the PTT button. The button animation and grant sound are indicators that you can start speaking. If you continue to get the bonk sound even though no one else is transmitting, consult WMC Troubleshooting Guide or your WAVE Admin.

WMC mutes all other incoming audio while you transmit audio unless your Administrator has configured the Talkgroup as duplex, allowing multiple members to transmit concurrently.

Events initiated by you will be displayed on the right in the FEED, with the other member's events on the left. Similar to RECENTS, the time you signed in, any times of network disconnection and any deactivation/reactivation of the Talkgroup are also displayed in the appropriate chronological location.

NOTE: If all members have been restricted from transmitting on a Talkgroup, the PTT button will be replaced with "Listen Only". However, you will still see a history of any broadcasts.

Full-Screen PTT Mode

You can launch the full-screen PTT mode by tapping the chevron in the left corner of the bottom action bar. Doing so enables the entire screen to be pressable and functions the same as pressing the standard PTT button. Once selected, this will be your default mode for group calls on all Talkgroups until you return to standard PTT mode by pressing the chevron again.

NOTE: You cannot send texts or view MAPs while in full-screen PTT mode.

Sending Text Messages

Tapping the text icon in the right corner of the bottom action bar will expose the texting keyboard. Any text messages you send will be received by all other members in this Talkgroup currently signed in to WAVE. There is a 150 character limit per text.

Viewing Members in a Talkgroup

GROUPS>Select Talkgroup>Member icon>Member list

Tapping the members icon in the upper right corner opens this Talkgroup's Member List displaying its members who are currently signed in and includes yourself. A location icon indicates you have received the member's location at least once in the current session, and the member is still sharing their location. Tapping this location icon takes you to that member's MAP. Tapping anywhere else on a row will take

you to that member's FEED. Some WAVE servers allow concurrent sign ins for the same username. A member signed in concurrently on multiple devices will be displayed the same number of times as sign ins.

Making a Private Call

GROUPS>Select Talkgroup>Member icon>Member list>Select Member>Press PTT button
OR
CONTACTS>Select Member>Member FEED>Press PTT button

You can directly call another member by selecting them from a Talkgroup's member list (or alternatively from CONTACTS) and pressing the PTT button on the member's FEED or MAP screen. This launches the private call overlay indicating that the call is trying to connect. When connected, the grant tone plays, and the call timer starts. The receiving member will hear a brief ring tone as the private call overlay appears. You and the other member can transmit back and forth using the PTT button until the Hang Up button is pressed or neither of you transmit for 15 seconds. This is the inactivity timeout, and its length is not configurable. WMC mutes all other incoming audio while in a private call. As with group calls, there is a one-minute default timeout for a single continuous transmission.

Only one FEED/RECENTS entry is displayed for a private call no matter how many times the members transmit back and forth during the call. Whoever initiated the private call determines which side the event entry is displayed.: yours on the right, the other member's on the left.

> NOTE:
> Private calls are barge-in calls and cannot be declined by the receiving member.
> Your Administrator must enable telephony for each member to be able to receive or make private calls.
> Calls made from the CONTACTS may not connect since display in CONTACTS is not confirmation that the member is signed in.
> If you call a member who is signed in with the same username on more than one device, the call will ring on all of those devices – but only one device will connect the call. You cannot direct which device accepts the call; it is random based on whichever one can connect first, and the other devices can transmit and receive as normal while that private call is active.

MAP Screen

The MAP screen functionality is the same for Talkgroups and Members with the only difference being who is displayed. A Talkgroup MAP will display all its signed in members who are sharing location and for whom you have received a location in this session. A Member's MAP will display the location of that Member and you.

> NOTE: Your location will always display locally on your MAPs even if you are not sharing. No other members will see your location on their MAPs until you enable location sharing in App Settings.

Your map pin is blue; other member's pins are black. If the time of a location acquisition is greater than 5 minutes, the pin will become yellow and include how long ago it was acquired in the name marker when the map pin is tapped. It will continue to increment as long as the user is still sharing his location but has not sent an updated location.

Map Controls

"Center on me" is the top icon which will re-center the map on you.

"Show all members" is the bottom icon which will refocus the map to show all member's pins until either the "center on me" icon is tapped or you move the map around (e.g., zooming in or out, dragging). While "show all members" is enabled, the map will continuously adjust to include changes in members' locations, newly signed in members, if they are sharing location, or removes map pins as soon as a member signs out or stops sharing.

Either control will turn blue when tapped and remain blue while in that state. If the Center on me control is greyed out, your device is unable to acquire your current location. If the Show all map pins control is greyed out, no one is either or sharing location or has been able to acquire a location since your session started.

Other Audio Apps and Cell Calls
Because WMC uses the media portion of your Android device, you should not run any other audio apps while using WMC as it can cause incorrect audio functionality. In addition, if you make or receive an incoming cellular call while signed in to WMC, you will be temporarily signed out of WMC until the call is ended or you decline the call, at which point WMC automatically reconnects. This is done for security purposes and cannot be adjusted in App Settings.

Battery Saving Mode
If you enable Low Power Mode on your iOS device or if your device's battery reaches a critically low charge level and the WMC is backgrounded, location will cease to be obtained and shared. In addition, background tasks will cease, and you may be signed out of WMC as the WAVE server will not be able to reach you.