



T.Flex for iOS

User's Guide

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Contents

Introduction to T.Flex	7
Getting around in T.Flex	8
Bottom toolbar.....	8
Main menu.....	9
Application settings	11
Choice of mode	11
Accounts.....	11
User settings	11
Audio settings	12
External hardware settings	13
Remote control settings	13
System information	14
Debug menu.....	14
Logging in and out	15
Connection security details.....	15
HTTPS.....	15
Secure logout.....	15
QR code-based authentication.....	16
Account switching	16
Access to people in your TASSTA network.....	18
Group list.....	18
Zone management	18
Multi-channels and cross-server channels	18
Channel message	19
User list	19
Voice communication	20
One-to-many communication.....	20
Group call	20
Broadcast call.....	21
PTT is available throughout T.Flex.....	22
Priority call.....	22
Dynamic group call	22
Multilisting	22

Accidental PTT use can be prevented for specific channels.....	23
Group call to PMR over T.Bridge.....	23
One-to-one communication	23
Individual call	23
Direct individual call.....	24
Offline user call.....	24
Muting users	24
Many-to-many communication	25
Full-duplex call.....	25
Communication with PMR over T.Bridge.....	25
Minimizing and restoring ongoing call controls	25
Temporarily muting all voice communications.....	26
E2E encrypted call.....	26
Establishing a secure connection.....	27
Video communication	28
One-to-one video communication	28
Video call	28
PTV call.....	29
Many-to-many video communication	29
Multi PTV call.....	29
Conference PTV call.....	29
Minimizing and restoring ongoing call controls	31
Emergency calls	32
Making emergency calls.....	32
Deferred emergency	33
Covert emergency.....	34
Hidden emergency countdown	34
Communicating.....	35
PTT timeout for covert emergencies	35
Covert video emergency	35
Emergency screen during covert emergency.....	35
Emergency channel	36
Covert emergency calls in history.....	36
Voice and video from other covert emergency call participants	36
Messaging	37

Text exchange	37
Copying messages	37
Deleting messages	37
Message states	38
Status messages	38
File exchange	39
Message exchange with PMR through T.Bridge	39
Emergency journal	40
My TASSTA feature	41
Call shortcuts	41
Mute button	42
Call request	42
Quick status messages	43
Hiding PTT and emergency buttons	43
Lone worker protection	44
Sensor check	45
Tests performed during the sensor check	46
Possible errors during the tests	46
Periodic Check and Periodic Check U	46
Man Down	47
Movement	48
Impact detection	48
Battery level control	49
Voice recording and call history	50
Voice data storage and retention	50
GPS location and tracking	51
User identification and markers	51
Detailed street view	53
Real-time positioning and precise location on the map	53
Hiding users from other channels	53
Guard tour	53
Waypoints	54
Using integrated indoor localization features	55
Task management and control	56
Remote media capture	58

Remote listening 58

Remote picture 59

Direct mode..... 60

Supported external devices..... 61

 Aina PTT Voice Responder Bluetooth speaker microphone..... 61

 Crosscall X-COMM remote speaker microphone 61

Increasing battery life 62

Introduction to T.Flex

T.Flex is a TASSTA application running on touchscreen mobile devices powered by the two most popular mobile operating systems: Android and iOS. It works over Wi-Fi or any mobile network (such as 3G and LTE) while providing users with maximum connectivity at the lowest price. VoIP technology implemented in T.Flex ensures that users can connect and communicate with each other from every corner of the world. In addition to Wi-Fi and 3G, T.Flex is designed for communicating under poor conditions and being able to retain acceptable communication quality on GPRS and EDGE (2G) networks.

T.Flex contains all the expected basic features such as group calls and individual calls, messaging and history, map and GPS positioning. Combined with T.Rodon (the TASSTA command and control center solution), it acquires additional tools for organizing and managing your business: task management system, GPS and indoor localization, geofencing, alarming and so on.

T.Flex has a streamlined user interface and is flexible in use. It is specially designed for compact mobile touch screen devices.

T.Flex uses TCP flow for signaling and data transfer, and UDP is used for voice and video data transfer. In the event of any limitation on UDP flow (for example, enforced by the network provider), T.Flex can wrap the data in TCP.

The app requires a set of iOS permissions for correct operation. For details, see [Required permissions](#).

Getting around in T.Flex

To use T.Flex, you need to log into the TASSTA network with valid credentials of a subscribed user account.

On the first run, in addition to the user name and password you also need to specify where you are connecting to. For that, click the Settings button at the bottom. On the Settings screen, configure the following:

- User name
- Password
- Server domain name (or IP address)
- Server port

Contact your administrator for this information. For more details about login sessions, see [Logging in and out](#).

The T.Flex UI consists of the main view area, the Push-to-Talk (PTT) button and the bottom toolbar. The main view area is multi-functional and can show a variety of interfaces, depending on which feature you are working with. For a list of these features, see [Main menu](#).

The PTT screen is your main screen after login in a default deployment. However, the choice of main screen for you is up to the administrator, so your experience may vary.

Bottom toolbar

At the bottom of the screen, the application shows a toolbar with the following items for quick access:

- Users
Opens the user list; for details, see [Access to people in your TASSTA network](#).
- Groups
Opens the group list; for details, see [Access to people in your TASSTA network](#).
- PTT
Takes you to the PTT button screen.
- LWP
Takes you to the Lone Worker Protection screen; for details, see [Lone worker protection](#).
NOTE: If the lone worker protection feature is not enabled for your user account, a different item is shown instead.
- Menu
Opens the main menu.

Main menu

The top of the main menu shows your current user name. If you have a role assigned, that role and your current status are also shown. To change your status, tap your user name and select the new status on the next screen.

The main menu contains the app's main navigation options. To reveal it, tap the Menu icon in the bottom toolbar.

The list of options available for navigation depends on T.Commander settings. Scroll the list if all of the options don't fit on the screen.

The following table briefly explains the purpose of each menu item. Tapping any of the items takes you to the corresponding dedicated interface.

Interface	Description
PTT	Takes you to the PTT button screen.
Users	Lists the users configured by the administrator in T.Commander and shows their statuses, group memberships and activity. See Access to people in your TASSTA network .
Groups	Lists the groups configured by the administrator in T.Commander. To select a group in the list, tap the group. Once you have selected a group, you can initiate a group call to it from any interface using the PTT button. See Access to people in your TASSTA network .
LWP	Takes you to the Lone Worker Protection screen; for details, see Lone worker protection .
Map	GPS location and tracking of users on the map in real time. All available users are marked with their user name and pin icon. See GPS location and tracking .
Emergency	Features related to emergency situations: emergency call, Periodic Check U, and lone worker protection. See Voice communication and Lone worker protection .
E2EE	End-to-end encryption is an additional security mechanism. Configure keys for encryption and decryption. See Voice communication .
Reset password	Change the password for your user account. See Logging in and out .

Interface	Description
Chats	Real-time exchange of free-form text messages between individual users or in groups. See Messaging .
History	Lists the calls that involved you. Depending on the administrative configuration, it can also let you play back recordings of recent voice messages. See Voice recording and call history .
Bluetooth	Lists the audio and Bluetooth devices that can be paired for use with the app.
Emergency Journal	Lists emergency calls that have occurred. See Lone worker protection and Emergency journal .
Features Status	Summary of which TASSTA features are available to you on the device, as configured by the administrator in T.Commander. The availability of a feature is indicated by a small disk next to it. A green disk means the feature is enabled, and red means disabled. Some features can be marked by split red/gray or green/gray disks. The gray part means the feature is unsupported or unavailable due to permission settings.
Task Manager	Lets you work with your assigned tasks and create new tasks. See Task management and control .
Settings	Configure T.Flex options. See Application settings .
My TASSTA	User-defined shortcuts to favorite features and options. This screen also provides call requests that are sent to the T.Rodon operator. See My TASSTA feature .
About	Version of the application and links to legal information and privacy policy.
Logout	Log out of the TASSTA network. See Logging in and out .

Application settings

Configure the application using the gear icon on the login screen. The version information can be found at the bottom of the screen.

The following settings are mandatory for establishing a connection to the TASSTA network:

- Username
- Password
- Server domain name (or IP address)
- Server Port

To change a parameter, tap that parameter, enter the value and tap **OK**.

NOTE:

Changing these settings can be disallowed by your TASSTA administrator in T.Commander.

The following tables list all of the options and features available in the T.Flex Settings menu. Configure them in accordance with your network policy and operational environments.

Choice of mode

Parameter	Description
Operation mode	Whether to communicate with the TASSTA server for the full-featured experience (Server mode) or become part of a peer-to-peer network with reduced functionality within the reach of a wireless network (WiFi direct mode); for details about direct mode, see Direct mode

Accounts

This item is available only if you are logged out. Here you can switch the account that you want to log in as and change the list of account profiles stored on the device. For details about account switching, see [Logging in and out](#).

User settings

For more information about the use of these settings, see [Logging in and out](#).

Parameter	Description
User name	User name configured in T.Commander
Password	Password configured in T.Commander
Server	Server domain name or IP address
Port	Server port
Edit credential on login screen	Whether to show the user name and password input boxes every time the app starts
Use name alias	Show the aliases (where available) of users in the network instead of their login names
Show user and channel IDs	Whether to show user IDs in the user list and group indexes in the group list
Autologin	Whether to automatically log in with the pre-configured credentials when the app starts
Allow save password	Whether to save the last password you used for successful login
Send analytics	Whether to send analytics data to the server

Audio settings

Parameter	Description
Play PTT start tone	Whether to play a short tone every time the PTT button is pressed
Play PTT release tone	Whether to play a short tone every time someone releases the PTT button in a group or individual call
Noise suppression	Whether to reduce background noise from your surrounding environment
Echo cancellation	Whether to reduce echoes and other unwanted reverberations
Voice activity detection	Whether to determine if you are talking; when there is no voice, the microphone volume is significantly reduced

Parameter	Description
Mic Audio volume gain	How much to equalize the average microphone volume
Mute Button	Tap to configure and enable the app-wide Mute countdown button: • Mute speaker time specifies the duration of the muting action in seconds • Beep notification selects how to indicate that the Mute button has been tapped For details about temporarily muting all voice communications, see Voice communication

External hardware settings

Parameter	Description
Preferred BT device	Select the Bluetooth device to pair with and use as a PTT aid
Programmable button	Select the functionality to assign to the button on a supported external device (paired Aina device or connected headset with a multimedia button): • Last record in History • Defined channel • Reset yellow alarm timer – this means the timer for the Periodic Check U feature; for details, see Lone worker protection • Answer the incoming call • None

Remote control settings

For more details about the use of these options, see [Remote media capture](#).

Parameter	Description
Accept incoming remote audio requests	Whether to automatically accept remote audio requests without a confirmation prompt; if this option is selected, you cannot reject such requests

Parameter	Description
Accept incoming remote camera requests	Whether to automatically accept remote camera requests without a confirmation prompt; if this option is selected, you cannot reject such requests

System information

Item	Description
Device ID	The unique ID of the mobile device for identification in the TASSTA network; this ID is separate from the device IMEI
T.Lion server version	Version of the T.Lion server that the app can communicate with

Debug menu

The Settings screen also provides access to the Debug menu, where you can configure T.Flex logging, view logs and send them to a recipient of your choice (such as Support).

To switch to the Debug menu, open the Settings and tap 10 times in the top right corner of the screen. The Debug menu opens with the following options and tools:

- Log level
Select how detailed the logging should be:
 - None
 - Fatal
 - Error
 - Warning
 - Information
 - Traces
- Log list
- **Remove any logs** option for deleting all stored logs

To view a log from the list, tap that log's item. When the log view is open, you can tap the upload icon in the bottom left corner to share the log using one of your installed apps or save it to a location of your choice.

Logging in and out

Tap the launcher icon to start T.Flex. Type your user name and password for the TASSTA network and press the **CONNECT** button to log in to the TASSTA server.

To make T.Flex log in automatically, specify the **User name** and **Password** options and enable the **Autologin** option in the application settings.

If you want to change your password, use the **Reset password** item in the main menu.

To log out, use the **Logout** item in the main menu.

Connection security details

All TASSTA applications use an encrypted connection that enables authentication, session management, and access control mechanisms. All data between clients and servers is exchanged through encrypted channels. This protects the connection from active eavesdropping and passive disclosure in the network traffic. It also prevents session fixation attacks during the authentication or authorization processes.

In order to manage access to enterprise networks, the TASSTA administrator has the ability to assign rights and permissions to any TASSTA user in T.Commander. Any TASSTA client must be configured with proper connection settings before attempting to log in.

All important connection settings in T.Flex are contained in the Settings menu. For details about configuring them, see [Application settings](#).

HTTPS

The T.Flex client application uses the HTTPS protocol for communication with the server. This makes data exchange robust and secure.

Voice encryption

By default, all TASSTA communication traffic is encrypted with TLS using 256-bit AES-SHA. The client and the server authenticate using digital certificates. The standard TASSTA server does not support voice encryption. However, the encryption option can be used on demand. If the specific encryption algorithm is not defined, TASSTA will offer an Authenticated-Encryption Algorithm with blockcipher: AES128, AES192, and AES256 specified in ISO/IEC 19772:2009.

Secure logout

To improve safety, T.Flex provides an additional authentication mechanism on logout. This is controlled through T.Commander and can be enabled by the TASSTA network administrator. The feature forces the user to enter a specific password for logout.

QR code-based authentication

QR code-based authentication can be useful in some operating conditions and has the additional advantage of applying preconfigured T.Flex settings.

1. Tap the QR code icon on the login screen of the application. You will be prompted to scan a code with your camera in a few moments.
2. Focus the camera and scan the code. The new T.Flex settings are applied automatically.
3. Tap the **CONNECT** button to authenticate.

Account switching

The instance of T.Flex installed on your device can store authentication profiles for multiple TASSTA user accounts and [direct mode](#) accounts. You can set up multiple users and switch from one user to another between login sessions.

Selecting the user for login

On the login screen, you may want to change the user that you want to log in as. For that, tap **Settings** and then tap **Accounts** in the configuration settings editor. In the list that opens, tap the user you want and then tap the back arrow to return to the login screen.

Configuring users

To add, edit and delete user account profiles, you need to be logged out. When you are logged in, these tools are not available.

On the login screen, tap **Settings** and then tap **Accounts** in the configuration settings editor to open the account list. You can do the following:

- To add an account to the list, tap **Add** and select the connection mode for the account you are adding: **Server mode** or **WiFi direct mode**.

For a server mode account, specify the following:

- User name
- Password
- Server
- Port
- T.Lion server version

For a direct mode user, you only need to specify the name of the user and the number of that user's local mode group.

- To modify an existing account, tap it in the list and then tap **Edit** to change the settings listed above.

- To delete an item from the account list, tap it in the list and then tap **Remove**.

NOTES:

- The **User name**, **Password**, **Server** and **Port** options outside the account list editor refer to the currently selected account. Modifying them applies the changes only to that account.
- The accounts you configure don't have to use the same port or even the same server.

Access to people in your TASSTA network

In the TASSTA network, subscribers have associated user accounts, which are managed by TASSTA administrators. Interaction among users takes place individually or in channels, which are also managed by administrators. The terms channel and group are used interchangeably in the TASSTA framework most of the time.

To view the available groups and users and work with them, switch to the group list and user list.

Group list

The group/channel list is one of the main interfaces in T.Flex.

In this list, you can change your channel by tapping the channel you need. The channel you select is the one in which you talk using PTT.

For convenience, there is a search bar at the top of the list. List filtering is applied as you type. Sorting tools are also available: you can sort groups alphabetically or by index. Note that a custom group order can be defined for your environment, and the indexes of groups are not necessarily the same as their IDs. To view group indexes, enable the **Show user and channel IDs** option in the [app settings](#).

Zone management

A zone is a collection of channels that is defined by the administrator in T.Commander. Zones enable users to switch channels conveniently.

Select a zone by tapping the corresponding icon in the top bar of the app.

NOTES:

- This icon is not shown if no zones are defined.
- Starting with version 2.6.10 of the TASSTA services, management of zones is done by microservices instead of the server. T.Flex iOS 1.15.0 and later supports both types of zones; earlier versions of the client can only select legacy zones that are managed by the server.

Multi-channels and cross-server channels

In TASSTA networks, communication among multiple channels at once can be organized as if they were a single channel. The simpler variant of this is *multi-channels* on the same server port. In addition, there is the more advanced option to combine channels from multiple server ports or even from multiple servers into *cross-server communications*.

If a channel is part of a multi-channel or a cross-server communication, this is indicated by the



icon, accompanied by the abbreviated name of the composite channel.

Channel message

Exchange text messages with other users in the channel and send photos by pressing the camera icon that appears in the upper right corner. You can also attach a file from the device or from iCloud by tapping the corresponding option.

NOTE:

You may have no permission to enter specific channels. Such channels are not visible to you in the channel list. Channel access is managed by the administrator with ACL rules in T.Commander.

Selecting a channel may automatically take you to the main screen. This behavior is configured by the administrator in T.Commander.

User list

This list contains TASSTA user accounts created by the administrator.

Users in the list are color-coded based on their status:

- **Green** means the user is online and a member of the same channel as you.
- **Light gray** means the user is online but in another channel.
- **Dark gray** means the user is currently offline.

Add users to your contact book for quick access. Select the user from the user list, tap the **More**



icon and select **Add to contacts**.

For each user in the user list, a set of action icons is available to the right of the user name. This set varies depending on your permissions, the user's permissions, status of the user and the way the administrator configured the features of the network. The common actions include direct call, individual call, messaging, remote listening, remote picture and map location. The buttons for the available actions are shown in the top bar when a user is selected.

If a user has a role assigned, that role and the user's status are shown while the user is online.

For offline users, the date and time of their most recent activity is shown.

For convenience, T.Flex provides a search bar at the top of the list. List filtering is applied as you type. In addition, you can sort the list by name or ID. To view user IDs and be able to sort by user ID, enable the **Show user and channel IDs** option in the [app settings](#).

NOTE:

The precedence of returned results is as follows: ID, Session, Name or Channel contains the search characters.

To view the details of a user, select that user, tap the **More**  icon and select **User profile**.

Voice communication

T.Flex supports the following types voice communication:

- One-to-many:
 - Group call (from anywhere in the app)
 - Broadcast call
 - Priority call
 - Dynamic group call
 - Group call to PMR over T.Bridge
- One-to-one:
 - Individual simplex call
 - Direct call
 - Offline call
 - Remote microphone control (ambiance listening mode)
 - E2E encrypted call
- Many-to-many:
 - Full-duplex call

For details about emergency calls with GPS location notification, see [Emergency calls](#).

One-to-many communication

Group call

Push-To-Talk (PTT) is the main feature of any radio, from simple walkie-talkie handhelds to professional mobile radios such as MPT, DMR, P25 or TETRA. PTT allows a single person to reach hundreds of users in multiple channels by pushing a button. This time-honored and efficient approach is also implemented in the TASSTA solution to improve communication.

A channel normally has a PTT queue, where only one user can have the floor at a time. Depending on the configuration, channels can serve the same purpose as conference calls. In a group that is designated as a *conference group*, there is no PTT queue. Unlike regular group calls, any user in a conference channel can press PTT and talk without waiting their turn.

Whether or not a group is a conference group is configured on a per-group basis by the administrator in T.Commander. This property is not indicated in the group list, so you should ask your administrator to include this information in conference group names.

GROUP TALK IN BACKGROUND MODE:

T.Flex uses the Apple Push Notification service to track PTT use in channels and monitor the connection to the server. If you find that the app doesn't become active when someone talks in your selected channel, contact your administrator to ensure that use of the Apple Push Notification service is enabled for your user account and the necessary certificates are valid.

Group/channel setup on T.Flex is similar to PMR terminals. During PTT use, the screen shows appropriate color behavior: light green – red – green, meaning released – requested – granted, respectively.

The PTT button changes color from light green to green when someone is speaking in your group.

PTT HOLD TIMEOUT SPECIFICS:

Administrative configuration may define a PTT hold timeout for your user account, where you are allowed to hold the floor for no longer than a specified time and PTT is automatically released for you when the time limit is hit. This feature works in some situations but not in others – it is applicable where there is a PTT queue (floor control).

In particular, the timeout works in the following types of call:

- Group call (except in conference channels)
- Broadcast call

The timeout *does not work* in the following situations:

- Conference channel
- Full-duplex call
- Individual call

Also note that in networks with bridged connections, the timeout never works for bridge users.

PTT screen

The PTT screen is filled with a single PTT button. This button changes color from light green to green when someone is speaking in your group.

At the bottom, the PTT button may display information about the user that is currently talking in the channel. If the channel is free, it may show the name of the channel and the user that last spoke. That behavior is configured by the administrator in T.Commander.

In addition, the screen shows the names of available audio devices and lets you switch them.

Broadcast call

A broadcast call is similar in purpose to a group call but it is initiated by the broadcast call action instead of the PTT button. Broadcast call permissions are also administered separately from PTT permissions. Broadcast calls are normally intended for announcements and organizational information. In this type of call, the initiator subscribes specific users; these users can only listen and cannot opt out or answer.

To make a broadcast call

1. Go to the user list by selecting it in the navigation drawer.
2. Tap the **Select users for call** icon  and tap **Broadcast call**.
3. In the view that opens, select the users you need.
4. At the bottom, tap the **Start broadcast call** button.

PTT is available throughout T.Flex

Channel talk is the central functionality of the TASSTA system. By default, you can start a channel talk from any operational interface using the PTT button. Even if you are focused on the map interface, the PTT button is always at hand. This feature has the advantage of providing easy and fast communication anytime in any context.

When the app is not in the foreground, the iOS-native PTT framework is used for monitoring PTT activity in your selected channel and other channels that you are listening to. You can take the floor in your selected channel by tapping the system-provided graphical PTT button. This applies only to static channels created by the administrator.

Priority call

The priority call is one of the major features of modern professional communication. It allows users with a higher priority (meaning greater priority number) to interrupt individual or group call communication at any time and get through with important information. The range of priority levels is defined by the administrator per server, and the default range is 0 to 9999.

Dynamic group call

A dynamic group is formed on the spot from selected T.Flex users. A dispatcher assigns a dynamic group to selected users in T.Rodon to create an ad-hoc channel for immediate communication needs. This feature is designed for command and control centers to provide a flexible operational tool for team organization and quick response.

A dynamic group exists until the last T.Flex user leaves the dynamic group call channel.

Multilistening

You can listen to multiple channels at the same time if this functionality is enabled for you by the administrator in T.Commander. If this is the case, enable multilistening for each group you need. Do the following:

1. In the group list, long-tap the icon to the left of the group. This enables listening for the group, and the icon changes accordingly.
2. If you long-tap the icon again, this either mutes the group or disables listening for it, depending on administrative configuration.

Groups for which listening is enabled have a green circle icon on the left.

An additional administrative setting lets the administrator directly specify the list of groups for you to listen to, and that group list is stored on the server side. This is especially useful on devices that have no screen. In such a configuration, you are free to change the multilisting settings, but the administrator's changes may take precedence – for example, if the administrator includes a group that you have previously muted.

Accidental PTT use can be prevented for specific channels

The administrator can configure a channel so that only deliberate group talk occurs in it. Before you can use PTT in such a channel, you have to select that channel. This starts a timer, and you have to press PTT before the timer runs out; otherwise, you'll need to select the channel again.

Group call to PMR over T.Bridge

Any PMR Network such as TETRA or MOTOTRBO can be extended with the TASSTA solution or become integrated as its complement. Voice communication between PMR and TASSTA is possible through T.Bridge. If T.Bridge is configured in your environment, voice communication involving both networks (TASSTA and PMR) is done through special allocated groups using regular group calls. The T.Bridge configuration is transparent to you as a T.Flex user – use the PTT button and talk, whether your audience is in the TASSTA network or in the PMR network.

One-to-one communication

Individual call

This is the equivalent of a one-to-one simplex call, providing secure point-to-point communication. The two users can be anywhere in the network or in different channels.

To make an individual call

1. Go to the user list by selecting it in the main menu.
2. Tap the user you need and then tap the individual call icon. The available action icons are above the user list interface when a user is selected.
3. Wait for the other user to accept your call, and then use the PTT button to start talking.

WHAT HAPPENS DURING AN INDIVIDUAL CALL:

The calling party sees the Outgoing Call window and hears outgoing call ringtones.

The party being called can hear incoming call ringtones and see the incoming call notification.

The calling party has to wait until the call is accepted or drop the call using the red phone button.

The party being called can accept the incoming individual call or drop it using the red phone button.

If the user could not answer the call, they get a notification message about the missed call.

TIP:

When the app is in the background, you can make individual calls by telling Siri, "Call <user_name> in TASSTA". This works best for customary natural-sounding names without special affixation.

Direct individual call

This is a call to another user without prior notice. The user who receives the call immediately sees the icon of the established connection on the device screen. This type of call does not require confirmation from the receiving party.

To make a direct call

1. Go to the user list by selecting it in the main menu.
2. Tap the user you need and then tap the direct call icon. The available action icons are above the user list interface when a user is selected.

If the corresponding parameter is configured by the administrator in T.Commander, a progress bar appears and will run out unless one of the parties involved in the call presses the PTT button. The call is interrupted if the progress bar runs out.

Offline user call

You can initiate an individual call to an offline user. In this case the system automatically accepts the call and records your message. Use the PTT button to record the message. Your records appear in the history and will be available when user is online.

If you get such a call while you are offline, you can listen to the recorded message in the History view, on the **Missed calls** tab. Tap the play button for that message to play back the recording.

Muting users

You can mute specific users in a similar way to how you disable listening for groups. This doesn't change the muted users' configuration or permissions in any way; it only makes sure you don't hear them in T.Flex.

To mute or unmute a user, long-tap the icon to the left of that user.

NOTE:

You can mute a user only if they have the same priority as you or lower.

Many-to-many communication

Full-duplex call

In a full-duplex call, multiple users can listen and talk at the same time.

To make a full-duplex call

1. Go to the user list by selecting it in the main menu.
2. Tap the **Select users for call** icon  and tap **Full-duplex call** or **Direct full-duplex call**. If you choose the direct full-duplex call option, the recipients are not prompted to accept the call.
3. In the view that opens, select the users you need.
4. At the bottom, tap the button for the type of call you selected: **Start full-duplex call** or **Start direct full-duplex call**.

A direct full-duplex call does not require confirmation on the receiving end.

Communication with PMR over T.Bridge

Any PMR Network such as TETRA or MOTOTRBO can be extended with the TASSTA solution or become integrated as its complement. Voice communication between PMR and TASSTA is possible through T.Bridge. If T.Bridge is configured in your environment, voice communication involving both networks (TASSTA and PMR) is done through special allocated groups using regular group calls. The T.Bridge configuration is transparent to you as a T.Flex user – use the PTT button and talk, whether your audience is in the TASSTA network or in the PMR network.

IMPORTANT:

Depending on the PMR channel binding method chosen in your environment, creation of dynamic sub-channels in the bridged channel may not be supported. In this case, communication features relying on dynamic channels (including full-duplex calls, PTV calls and others) will not work for any members of the channel, and you will get the following error: "Failed to establish a call due to timeout. Contact the system administrator for details."

If this happens for you unexpectedly and interferes with your work, contact your administrator about using appropriate labels in the names of such channels or revising the bridging topology.

Minimizing and restoring ongoing call controls

During a call, the entire screen is normally occupied by call controls. If necessary, you can minimize the controls to switch to other parts of the app without interrupting the call. For that, tap the **Back**

 button in the top left corner. The call controls are stowed in a mini panel at the bottom, and you can freely navigate the app and keep talking at the same time.

To restore the full call screen, tap the **Restore** button in the mini panel:



You can end your call from the mini panel without restoring the full view by tapping the **Hang up** button:



Temporarily muting all voice communications

T.Flex gives you the option to mute all voice communications for a few seconds with a dedicated app-wide **Mute** button. This button is configured in the [app settings](#) and disabled by default.

When enabled, the button becomes available:

- On most app screens: the main PTT screen, map, user list and so on
- As the **Touch to mute** tile in the [My TASSTA](#) view
- As the **TASSTA mute button** Apple shortcut

NOTE:

On iOS 15 and later, tapping the back of the device can also be interpreted as the **Mute** action.

In any screen where this button is available, tap it to mute audio until the countdown ends:



The button changes to the following:



A shrinking strip around the button shows how long is left until the end of the countdown. You can tap the button again before the end of the countdown to unmute immediately.

E2E encrypted call

T.Flex offers an additional security mechanism called end-to-end encryption (E2EE), implemented on top of built-in TLS. E2EE prevents potential eavesdroppers from being able to access the encrypted conversation even if they manage to intercept the communication channel. E2EE in TASSTA provides a way of communication where only the communicating users with matching key pairs (encryption and decryption keys) can hear the voice messages. It is an additional level of protection to ensure that no third parties without the keys can capture the voice data being transmitted or store it.

When you make an E2EE call, you need both an encryption key and a decryption key. Agree on the keys with the other user in advance. You can also share the keys with other users from the user list or from the map.

Establishing a secure connection

IMPORTANT:

- The E2EE feature must be enabled for both participating users by the administrator in T.Commander.
- For security reasons, all recorded E2EE calls can be played back from the history only if the appropriate keys are provided.
- Emergency calls and remote listening audio are never E2E encrypted.

Encrypt both devices and share the keys with the user you need. For that, take the following steps:

1. Make sure **Enable PTT Encryption** is enabled in T.Flex on both devices.
2. Come up with a key. Any string can be used as the key. Save it as your encryption key in the settings.
3. Select the user you need and share the encryption key with them. Instruct the user that they should save it as their decryption key.
4. Confirm that the other user has accepted and saved the key.
5. Obtain the other user's key and save it as your decryption key in the settings.

The padlock icon on the PTT button indicates the state of E2EE configuration:

- Green, closed – encryption is turned on, and at least one of the two keys is set
- Green, open – encryption is turned off, but at least one of the two keys is set
- Gray, open – neither of the two keys is set (no matter if encryption is turned on)

To go to the encryption configuration screen, long-tap the padlock icon.

If you clear the **Encryption Key** and **Decryption Key** fields and tap **Save**, this has the effect of turning off encryption on the device.

Video communication

T.Flex supports the following types of video communication:

- One-to-one:
 - Video call
 - PTV (push to video) call
- Many-to-many:
 - Multi PTV call
 - Conference PTV call

PTT HOLD TIMEOUT SPECIFICS:

Administrative configuration may define a PTT hold timeout for your user account, where you are allowed to hold the floor for no longer than a specified time and PTT is automatically released for you when the time limit is hit. This feature works in some situations but not in others – it is applicable where there is a PTT queue (floor control).

In particular, the timeout works for PTV calls but not for video calls.

During video-enabled calls, toggle buttons for the following are available:

- Flashlight
- Front or rear camera
- Other speaker's voice
- Your own microphone
- Your own video feed

One-to-one video communication

Video call

Users can exchange video calls in the TASSTA system. During a video call, each of the participants can change the speaker of the output sound, turn on and off the microphone and video camera, and switch between the front and rear camera view.

Tap the  button with a counter to view a drop-down list of the call participants.

NOTE:

Make sure that you have a stable Internet connection when placing or receiving video calls. The quality of a video call depends on the contact with the weakest connection.

To make a video call

1. Go to the user list by selecting it in the main menu.
2. Tap the user you need and then tap the video call icon. The available action icons are above the user list interface when a user is selected.
3. Wait for the other user to accept your call.

RECEIVING A VIDEO CALL:

When someone video calls you, you see an INCOMING VIDEO CALL screen, where you can accept or decline the call.

PTV call

This is a video call that does not require confirmation from the receiving party. A PTV call is declined if the receiving party is already in a call.

To make a PTV call

1. Go to the user list by selecting it in the main menu.
2. Tap the user you need and then tap the **PTV call** icon. The available action icons are above the user list interface when a user is selected.
3. Use the PTT button to take your turn transmitting video and voice.

Many-to-many video communication

Multi PTV call

This is a PTV call with more than two participants.

To make a multi PTV call

1. Go to the user list by selecting it in the main menu.
2. Tap the **Video PTV call**  icon in the top bar and proceed to the user selection screen.
3. Select the users you need.
4. At the bottom, tap the **Video PTV call** button.

Conference PTV call

A conference PTV call allows multiple users to speak at the same time without interrupting each other. To speak, you need to press the PTV button; otherwise, neither audio nor video are transferred from your device.

To make a conference PTV call

1. Go to the user list by selecting it in the main menu.
2. Tap the **Select users for call** icon  and tap **Conference PTV call**.
3. Select the users you need.
4. At the bottom, tap the **Conference PTV call** call.

Participating in a conference PTV call

Once you have started or joined a conference PTV call, you get a grid of video frames with the participants' video feeds, a push-to-video button, a hang up button and a drop-down list of participants.

Depending on the number of participants, the video frame grid is a single frame, two frames side-by-side or four frames two-by-two. Therefore, you can see a maximum of four participants at a time, but you can swipe left and right to switch to other participants if there are more. Audio from all users is transferred, including those that are off-screen.

To mute the incoming sound or hide the video from a specific user, tap the mute icon next to the user's name. The muted users are highlighted in the list, so they can be easily found. To unmute the user or show its video stream, click the icon again.

To talk in the conference PTV call, tap and hold the PTV button (or tap it once if the toggle option is turned on for you). Unlike PTT-based group calls, there is no floor control; all users who hold the push-to-talk button can talk simultaneously.

Leaving and re-joining a conference PTV call

You can leave the call at any moment by doing any of the following:

- Tapping the **Hang up** button on the call screen
- Changing the channel using a hardware button or knob

To re-join the call, switch back to the corresponding conference PTV dynamic channel, named **Conference PTV <initiator>: <number>**.

Ending a conference PTV call

How a conference PTV call is automatically terminated depends on the state of the **Do not auto-close channels with members** administrative option for the call initiator and the call participants.

When the initiator leaves the call, the following happens:

- If the **Do not auto-close channels with members option** is enabled for the initiator, the call continues while there remain at least two participants. When only one participant is left, the rules are as follows:
 - If the option is disabled for the last remaining user, the call ends as soon as that user is left alone in the call.
 - If the option is enabled for the last remaining user, the call ends as soon as the user leaves the call.

- If the **Do not auto-close channels with members** option is disabled for the initiator or the initiator is a T.Rodon dispatcher, the call ends.

At the end of the call, the corresponding dynamic channel (**Conference PTV <initiator>: <number>**) is automatically removed.

Minimizing and restoring ongoing call controls

During a video call, the entire screen is normally occupied by call controls. If necessary, you can minimize the controls to switch to other parts of the app without interrupting the call. For that, tap the **Back**  button in the top left corner. The call controls and the video thumbnail are stowed in a mini panel at the bottom, and you can freely navigate the app and keep talking at the same time.

To restore the full call screen, tap the **Restore** button in the mini panel:



You can end your call from the mini panel without restoring the full view by tapping the **Hang up** button:



Emergency calls

The emergency call feature is integrated into any mobile client and can be useful in emergency situations. Emergency calls do not require acceptance by the operator. They get through automatically to allow the user to talk straight away without any delay. This feature is designed for immediate interaction with the operator of a command and control centers (who are normally T.Rodon users). When an emergency call is in progress, T.Flex sounds an appropriate emergency audio signal and sends an emergency message with GPS coordinates (if GPS is enabled on the caller device).

The emergency message is highlighted red. All emergency messages contain the reason that caused the emergency, and it is logged in the emergency journal.

There are a variety of situations that qualify as emergencies: simple emergency (SOS) call, any LWP emergency (Periodic Check, Mandown, No Movement, Impact or Fall Detection, Battery Level Warning or Alarm), zone statuses (if a zone is empty, if a user goes in or out, if a user connects or disconnects, if a user stays in the zone for a certain time), and so on.

All emergency messages appear in the emergency journal, which can be enabled or disabled by the administrator in T.Commander, no matter what caused the emergencies. However, only emergency messages from regular emergency calls (made by tapping **Emergency Call**) are duplicated in the root channel.

When an emergency call is started, T.Rodon can toggle a distress sound on the caller device.

When an emergency call is completed, the user is transferred to the default group predetermined for the user.

There are a few emergency-related options that an administrator may configure for users in T.Commander, listed below. You cannot change these options in T.Flex.

- **Prevent stop emergency**

If this is enabled, you cannot stop an emergency call once you have initiated it. To finish the emergency call in this case:

1. Tap and hold in the screen to suspend the emergency call.
2. Wait for the T.Rodon operator to confirm the call end. (T.Rodon shows a confirmation prompt that has to be closed.)

- **Mute outgoing emergency**

Mutes the sound of the emergency popup that appears when the user sends an emergency.

- **Max emergency volume**

Maximizes the volume for an outgoing emergency when the user sends it.

Making emergency calls

You can make an emergency call in the following two ways:

- By tapping the Emergency symbol on the PTT screen

- By opening the **Emergency** tab in the main menu and holding the Emergency symbol

In either case, you get a popup that says "Click to Cancel Emergency Call" and shows a countdown. This helps prevent false emergencies started by mistake. If you tap the popup before the end of the countdown, the emergency call is cancelled. If the countdown completes uninterrupted, the emergency call starts and the emergency message is sent.

PTT HOLD TIMEOUT SPECIFICS:

Administrative configuration may define a PTT hold timeout for your user account, where you are allowed to hold the floor for no longer than a specified time and PTT is automatically released for you when the time limit is hit. This feature works in some situations but not in others – it is applicable where there is a PTT queue (floor control).

In emergency calls, the timeout works only after the emergency PTT timeout ends.

Depending on the administrative configuration for your user account, your emergency call may be a video call instead of a plain voice call.

IMPORTANT:

Use emergency calls only for emergency reasons; do not abuse the feature where a direct call would suffice. Emergency calls are intended for users who are in need of urgent assistance. In addition, emergency calls affect the performance of T.Rodon and T.Flex more than other types of call do.

The TASSTA development and marketing teams accept no liability for any loss or damage by malfunction or misuse. Users need to ensure that their emergency calls sent to T.Rodon by T.Flex can be received by the monitoring operator.

Before production use, do a coverage network test and physical test of the device, including moving it from one site to another. The monitoring operator must ensure that their supervised users follow very strict operating instructions. The users and the monitoring operator should be aware that they cannot rely fully and solely on this product to ensure their safety and security; they can only use this product as an auxiliary, supplemental aid to assist them in knowing the user is in need of assistance.

Deferred emergency

In poor connectivity conditions, it is especially important that your emergency state is signaled and your emergency call comes through whenever the connection to the server is up. The deferred emergency mechanism is used in situations like the following:

- An emergency is triggered while connection is lost
T.Flex waits until the connection is restored to send the emergency alert and start the emergency call
- An emergency is triggered, but then connection is lost before the emergency call can be started
T.Flex waits until the connection is restored to start the emergency call
- An emergency is triggered and an emergency call is started, but then connection is lost mid-call
T.Flex waits until the connection is restored and starts a new emergency call

In all of those cases, the emergency notifications received by other users indicate that the emergency had to be deferred.

NOTE:

If an emergency is triggered and then cancelled while there is no connection, then the emergency is not started when the connection is restored. The exception is Battery Alarm, which is triggered every time a failed connection is restored.

Covert emergency

Covert emergency is a mode for when you need to keep your emergency state unnoticed by people around you. During a covert emergency call, the on-screen indication is the same as for a regular group call. Users who receive your emergency call see standard emergency notifications. Whether your emergencies are regular or covert is configured by the administrator in T.Commander.

To start a covert emergency call, use one of the ways listed in [Making emergency calls](#).

To end a covert emergency call, do one of the following:

- Press and hold the hardware SOS key on a connected accessory.
- Go to the group list and change your group. Leaving your emergency group ends the call if other users have already left it.
- Contact the dispatcher to dismiss the call from T.Rodon.

IMPORTANT:

Covert emergency and [lone worker protection](#) features should not be used together, because LWP emergencies are not supposed to be covert. If they are covert, they may start without you knowing about it. Covert emergency is designed specifically for deliberately signalling about a threatening situation in secret.

Hidden emergency countdown

If an emergency countdown is set by the administrator, the emergency call starts after the specified timeout has elapsed.

Until the timeout has elapsed, both on-screen and hardware push-to-talk buttons will continue to function normally (for making standard PTT calls) and the user can switch T.Flex screens.

Unlike standard emergency calls, there is no on-screen countdown to cancel the covert emergency and no audio alert. The only indication that an emergency has been initiated is the disappearance of the Emergency icon from the screen.

Once the emergency call is ended, the Emergency icon re-appears on T.Flex screens and the original channel name is displayed in the header and on the PTT button.

WARNING:

Since there is no visual indication of the covert emergency countdown, this countdown can only be cancelled using a hardware SOS button on a connected accessory.

Communicating

Once the emergency call is started, a dynamic channel called Emergency <number>: <user> is created and the user is automatically switched to it.

The emergency (blinking red) screen is not shown and the user can freely switch between T.Flex screens.

While the emergency call is in progress, the Emergency icon is not displayed on T.Flex screens.

PTT timeout for covert emergencies

If the administrator has set the emergency PTT timeout for you to 0 (unlimited), you can talk indefinitely without holding the PTT button until the emergency call is ended.

If the emergency PTT timeout is limited to a certain number of seconds, you can talk without holding the PTT button until the timeout expires. After that, you need to tap and hold the button to continue talking (as with standard PTT calls).

If you tap the PTT button before the emergency PTT timeout expires, it automatically releases the floor regardless of the emergency PTT timeout setting. After that, you need to tap and hold the button to continue talking (as with standard PTT calls).

Whether or not you have the floor, you remain in your emergency channel until you end the call.

Covert video emergency

If the administrator has enabled video emergency for you, the voice call is replaced by a video transmission from the default (front) device camera.

The video is transmitted all the time until the emergency call is ended, regardless of the PTT button state and emergency PTT timeout.

During covert video emergency, the standard interface is shown, and you can freely switch app screens.

A covert video emergency call is ended in the same way as a voice emergency call.

Emergency screen during covert emergency

While covert emergency is active, the text "HOLD TO START EMERGENCY CALL" is displayed as if the emergency call has not started. However, tapping and holding the screen is disabled.

Emergency channel

IMPORTANT:

Although visual and audible signs of a covert emergency are minimal, there is still a way to tell an emergency call was made. The name of the active channel can be a giveaway.

An emergency call operates in a dedicated dynamic channel called **Emergency <number>: <initiator>**. The name of this channel will replace the original channel name in the header and (if enabled by the administrator) on the PTT button.

WORKAROUND:

If the administrator disables the display of the channel name on the PTT button for you, this prevents the telltale emergency channel name from appearing on the PTT button.

Unlike standard emergency calls, the channel and the user names on the PTT button during covert emergency are displayed in the default color instead of red.

Emergency channel will also be displayed in the group list.

Covert emergency calls in history

If you have access to call history, information about the covert emergency call is available on the History screen:

- Emergency channel name
- Call type (exclamation mark icon)
- Call date and time
- Recorded call with playback functionality (if recording is enabled)

WORKAROUND:

To prevent attackers and aggressors from gaining access to this information, an administrator should disable access to activity history for you.

Voice and video from other covert emergency call participants

The voice responses from other call participants are played on the covert emergency initiator's device, as in standard PTT calls, even if the device is in loudspeaker mode.

Video from other participants is not shown to the call initiator during covert video emergency.

Messaging

T.Flex has advanced integrated messaging and file transfer facilities that let you exchange text messages and files in a group or privately. T.Flex supports the following features:

- Text exchange
- Status messages
- File exchange
- Message exchange with PMR through T.Bridge

Text exchange

Tap the user or channel that you want to send a message to, and then tap the envelope icon above the list to go to the chat. Write your text message and tap the paper plane icon to send it. The recipient's mobile client will receive a notification in the status bar and sound an audio notification.

Your messages can be viewed in recent messaging history. To read all recent messages, tap **Chats** in the main menu. You can also switch to the chats by tapping a new message notification in the status bar. The chats home screen lists the users and groups that you have chat history with.

Text messages can also be sent to offline users. When the user comes back online, they will be able to read and reply to those messages. The user gets a notification about the unread message and can switch to the messaging screen using that notification.

Copying messages

Messages can be copied and quoted.

To copy a message, tap the message and select **Copy**. Then tap and hold in the input field and tap **Paste**.

To quote a message, tap the message and select **Quote**. The message is quoted immediately in your input field.

Deleting messages

You can delete your own messages as long as this is permitted to your user account by the administrator.

To delete a single message, tap it and then tap the trash can  icon that appears in the top bar.

To delete multiple messages:

1. Tap the **More**  icon in the top bar and tap **Delete messages**.

2. Select the messages you want to delete by tapping them. The trash can icon in the top bar becomes green when something is selected.
3. Tap the trash can icon to proceed with the deletion.
4. Tap the **Back** arrow in the top bar to exit message deletion mode.

After you have deleted the messages, a notification bar is shown at the bottom for a few seconds, telling you how many messages have been deleted. It includes an **Undo** button in case you change your mind and decide to restore the messages, but you only have a few seconds to do it.

Message states

T.Flex tracks if your messages have been received and read. This is indicated as follows:

- Sent – a single white check mark next to the message means the recipient was offline at the time of the sending
- Received – a double white check mark means the recipient got the message and was notified but hasn't read the message
- Read – a double green check mark means the user has read the message

In a user-to-user chat, a message can also come with an acknowledgement request; this is the sender's way of confirming you have given attention to the message. On the requester's end, such a message has the "Confirmation Requested" label at the bottom. On the recipient's end, the message has a lighter background. To request acknowledgement for your own message, send it by long-tapping the **Send** button and tapping **Send with acknowledge**.

To acknowledge a message that requires it, simply tap the message. An acknowledged message is tagged with the "Confirmed" label on the requesting user's end and gets the normal background color on the recipient's end.

Status messages

Status messages are canned short messages for specific situations. Examples of such messages are "OK", "Call me" or "Busy right now". You can receive and send status messages that are configured by the administrator in T.Commander. Each such message has a tag, message text and comment, and a color can be defined for it so that you can instantly spot and categorize it.

When you are in a chat with someone, tap the callout icon and then select the necessary message by tapping it. The message is sent immediately. Alternatively, type the hash (#) symbol to see the list of available hashtag-like shorthand labels. Tap the label you need to send the message that it stands for.

If you commonly send the same status messages to the same recipients, the quickest way to do it is to create shortcut tiles for these messages in the [My TASSTA view](#).

File exchange

To go to the file exchange interface, tap the user or group you need in the user or group list. This takes you to the recent messages history screen. Here you can send a file and see recent chat history.

To send an image, tap the staple icon, select the image source and complete the upload. The file will be immediately transferred to the server, and the recipient will be notified.

When you send a file to a group, all users in the group receive an incoming message notification and can download the file.

NOTES:

- The app does not restrict the maximum size of a file to upload. However, your upload may be affected by the server-side configuration settings.
- There are some restrictions on the file types you can upload. Files with the following extensions are blocked:
 - Executables: .action, .apk, .app, .bat, .bin, .cmd, .com, .command, .cpl, .csh, .exe, .gadget, .inf, .ins, .inx, .ipa, .isu, .job, .jse, .ksh, .lnk, .msc, .msi, .msp, .mst, .osx, .out, .paf, .pif, .prg, .ps1, .reg, .rgs, .run, .scr, .sct, .shb, .shs, .u3p, .vb, .vbe, .vbs, .vbscript, .workflow, .ws, .wsf, .wsh
 - Web resources: .aro, .ashx, .asp, .aspx, .atom, .att, .axd, .chm, .cms, .css, .dcr, .dhtml, .discomap, .download, .ece, .epibrw, .htm, .html, .htmls, .hxs, .jcz, .jnlp, .js, .php, .jspx, .php3, .qrm, .rss, .tvs, .ucf, .url, .xhtml
 - Office files: .docm, .dotm, .potm, .pptm, .ppam, .ppsm, .xlsm

To view a file that you have received, tap the message. This downloads a file and opens it with an associated app.

Message exchange with PMR through T.Bridge

Any PMR Network such as TETRA or MOTOTRBO can be extended with the TASSTA solution or become integrated as its complement. Messaging between PMR and TASSTA is possible through T.Bridge. If T.Bridge is configured in your environment, messaging involving both networks (TASSTA and PMR) is done through special allocated groups using regular group calls. The T.Bridge configuration is transparent to you as a T.Flex user – you can text people no matter whether they are in the TASSTA network or in the PMR network.

Emergency journal

The emergency journal shows emergency calls and alarms of all types (including geozone traversal alarms and [lone worker protection](#)-related alarms), and it is the only area in T.Flex that lists emergency messages. The emergency journal is available to you only if it is enabled by the administrator in T.Commander.

To view emergency messages, tap the menu button in the bottom panel and tap **Emergency Journal**.

When a user initiates an emergency call, authorized users get an emergency notification with an indication of the type of emergency message. Whether or not you can receive emergency notifications depends on administrative configuration for your user account and the current set of channel rules. Notably, you may receive emergency notifications even if the emergency journal is not enabled for you.

If the user who sent the emergency message has GPS enabled, the message contains the coordinates of the emergency event. Tap the message to do any of the following actions:

- Copy the text of the emergency message, including the type of emergency
- View the location of the emergency event on the map by tapping the centering icon

My TASSTA feature

The My TASSTA screen is a way to get quick access to favorite T.Flex features and options.

NOTES:

- The administrator can use T.Commander to set My TASSTA as your main T.Flex screen.
- Depending on your permissions, you may not be able reconfigure your My TASSTA view, getting configuration updates from the server instead. Alternatively, you may have permission to modify that configuration not just for yourself but for multiple users on the server.

Arrange the important options and features as follows:

1. Select My TASSTA in the main menu and then tap the "three dots" **More** icon in the upper right corner.
2. Tap **Add Shortcuts**.
3. Select the options and features from the list by tapping their icons. The selected tiles will move to the shortcuts collection.
4. Tap **Done** to confirm.

To remove or rearrange items:

1. Tap the "three dots" **More** icon and select **Change Shortcuts**.
2. Use the minus icons on items to remove them and arrow icons to move them about.
3. Tap the "three dots" **More** icon and select **Use Shortcuts** to confirm.

NOTE:

The My TASSTA view offers tiles only for those features that are available to your user account.

Call shortcuts

You can add tiles that act as shortcuts for various types of call:

- Individual
- Direct
- Broadcast
- Full-duplex
- Direct full-duplex
- PTV
- Video
- Conference PTV

The call participants that you select can be saved with the shortcuts that you create, so that you can instantly call the same people again without reselecting them. Alternatively, you can use such a tile to go into participant selection mode and then proceed to start your call.

A newly added unnamed call shortcut tile is not associated with any call participants. Tap a blank call shortcut tile to specify who you are calling; select the user or users you need, and then do one of the following:

- To start your call without saving it for later reuse, tap the button with the call type name below. This starts the call.
- To save the call parameters for later reuse, tap the **Save as template** button below. You are prompted to specify a unique name for the call shortcut. Type a meaningful name and tap **OK**. This does not start the call.

To start a call from a named call shortcut tile, tap that tile.

To clear the configuration of a named call shortcut, long tap its tile and tap **Update call parameters**. This turns it into a blank call shortcut.

Mute button

The **Touch to mute** tile mutes all voice communications for a few seconds. This button is configured in the [app settings](#) and disabled by default.

Tap the tile to mute audio until the countdown ends. How long is left is indicated by a shrinking strip around the icon. You can tap the tile again before the end of the countdown to unmute immediately.

Call request

My TASSTA provides an additional option that is always present: Call Request. It sends a request for communication to the T.Rodon operator so that they can call you back at their convenience.

You can make:

- A regular call request (green tile)
- An urgent call request (red tile)
- A first-to-answer call request (yellow tile)

To send a call request, tap and hold the call request tile you need. If you have already sent a call request and you want to change its priority from normal to urgent or the other way around, simply tap and hold the tile for the other priority. This will change the call request priority.

A first-to-answer call request doesn't have an urgency option. A dispatcher accepts such a request by making a one-to-one (individual or direct) call to you.

To cancel a call request that you have made, tap and hold the tile that says, "Hold to End Call Request". The request can also be cancelled from T.Rodon in the following situations:

- The T.Rodon operator manually cancels the request.

- For regular and urgent requests: the T.Rodon operator accepts your request and moves to the channel you were in at the time of the request, but you are not in that channel anymore.

NOTE:

[Call queue](#) must be enabled on the server in order to use this feature.

Quick status messages

My TASSTA tiles can be used as shortcuts for sending specific status messages to specific chats. If you regularly send the same status messages to the same recipients, save time by making a tile for each of these situations.

For that, add a status message shortcut to the view. You will be prompted to select the status message and the recipient. You can add as many status message shortcuts as necessary.

Hiding PTT and emergency buttons

The **Hide PTT Button** and **Hide Emergency Button** options are available only on the My TASSTA screen. Use them if you want to hide these particular buttons from the My TASSTA screen to make room for other shortcuts. This does not affect the availability of the PTT and emergency buttons on other screens.

Lone worker protection

Lone worker protection (LWP) is a set of features implemented across the TASSTA solution components to meet codified safety requirements, defined in the DGUV 112-139 standard (view in [PDF format](#)) and other regulations. These requirements are developed specifically for lone worker users, who work by themselves without close or direct supervision.

If you are a lone worker, we hope you will appreciate the safety features that T.Flex provides and the way it keeps you connected to your team.

Before you start using the LWP features, confirm that the administrator has enabled them for you in T.Commander. If LWP is enabled for you, you are prompted to perform a sensor check as soon as you log in.

LWP has three states:

- Disabled and Inactive
LWP features are not applied to your user account.
- Enabled and Inactive
LWP features are applied to your user account, but they are not working properly. For example, this can happen if the sensor check has failed or the dispatcher has gone offline.
- Enabled and Active
LWP features are applied to your user account and working properly.

To view your LWP settings, tap **LWP** in the main menu and select LWP settings.

All emergency messages created by LWP features are kept only in the emergency journal.

DISPATCHER PRESENCE:

The Dispatcher option enables a mode in which the lone worker is supposed to work under direct supervision of a dispatcher who is running T.Rodon. This option is enabled by the administrator in T.Commander.

In this mode, T.Flex constantly checks if the dispatcher is online. On login, you won't be able to pass the sensor check if the dispatcher is offline. If the dispatcher goes offline while you are logged in, you get a warning signal, and LWP features change their state to Enabled and Inactive.

To ensure maximum safety, LWP provides the following functionality:

- Periodic check
- Man down
- Movement
- Detect impact
- Battery control
- Connect/Disconnect monitor

NOTES:

- Lone worker protection is provided by a dedicated service on the TASSTA server. When the server is turned off, you receive a notification about disconnection from the LWP server and a short vibrating signal.
- Your user account settings may be such that all of the LWP functionality is turned off while the device is charging. This is configured by the administrator in T.Commander.

WARNING:

Use lone worker protection alerts strictly as emergency features. This will help you receive timely assistance if you experience an emergency situation.

Sensor check

The sensor check certifies that the device is ready to work in lone worker protection mode. At its core, the sensor check is a series of tests that verify the basic functionality of LWP. When you see the Sensor Check Validator popup, follow the instructions on the screen.

The sensor check is requested in the following situations:

- On the first launch of T.Flex on the device if LWP is enabled for your user account
- When you log in on a different device from your previous one
- When the T.Rodon operator starts it for you
- Periodically at configurable intervals; the interval ranges from 15 minutes to 24 hours

VEHICLE MODE SPECIFICS:

If the administrator has enabled vehicle mode for your user account, then lone worker protection is activated for you without the sensor check when you log in. The sensor check is reported as passed, although in fact it is not even attempted. If you are still online during the next scheduled sensor check, its status changes to "Not passed", and lone worker protection remains active. This behavior may be revised in future releases. At this time, it is recommended that you run the sensor check manually after vehicle mode is turned off for you. Otherwise, it will be requested no sooner than the next scheduled time.

You can also start the sensor check manually by tapping the circle icon in the top right corner of the LWP screen.

NOTES:

If you lose connection with the server and your emergency occurs in an offline state, then the emergency will be initiated upon reconnection with the server.
If the application exits correctly, all notifications in the status bar are deleted.

Tests performed during the sensor check

- Emergency call button
- Man down
- Movement
- Battery alarm
- Impact
- GPS ready (disabled by default)
- Bluetooth ready (disabled by default)

Possible errors during the tests

Error	Meaning
Wrong phone number	Set the correct phone number
Network error	No internet connection
Network is disabled	Enable the data exchange module through the Internet
Connection failed. Sensor check stopped now	T.Flex sent a request to the server but received no response
There is no sensor	The device has no accelerometer
Please, charge battery	Charge the device more than the suggested minimum battery value
Getting location data is not permitted	T.Flex has no access to the GPS module; enable access in the settings of your device
Turn on GPS, please	Turn on the GPS
Waiting time has expired	The response timeout interval is exceeded

Periodic Check and Periodic Check U

The Periodic Check feature is a way to make you repeatedly confirm that you are OK. It provides a popup dialog at regular intervals that are set by the command and control center operator in T.Rodon. The dialog pops up no matter which T.Flex screen you are using. Furthermore, T.Flex can unlock the

device to show the popup. The popup dialog says, "EVERYTHING FINE? CLICK TO CANCEL ALARM" and starts a countdown. You have until the end of the countdown to tap the popup, confirming that you are not incapacitated. If you fail to submit the OK status, an emergency call starts and an emergency message is sent.

NOTE:

If covert emergency is enabled for your user account by the administrator, then covert emergency is initiated in this case. For details about covert emergency, see [Emergency calls](#).

Periodic Check U is similar, but it is a T.Flex feature and cannot be enforced by the administrator or dispatcher. It is up to you when to activate it.

Periodic Check U is based on a combination of two timers: Check Time and SOS Timer (auto).

- **Check Time**
This is the time interval (in seconds) between checks. The minimum value is 20 seconds, and the maximum value is 86400 seconds (24 hours). Check Time is restarted every time you successfully pass the check.
- **SOS Timer (auto)**
This time interval (in seconds) specifies how quickly you need to respond when prompted (by the "EVERYTHING FINE?" popup) to confirm that you are safe. The minimum value is 20 seconds, and the maximum value is 86400 seconds (24 hours). If this time elapses without your response, an emergency is triggered.

To activate the feature, open **Emergency** in the main menu and select **Periodic Check U**. Tap the Periodic Check U symbol to start the timer. If you minimize the application, the timer will continue. If you fail a check and an emergency call is made as a result, the checks stop. To use this functionality again, re-enable it.

If the administrator turns off the LWP feature set for you while your Periodic Check U timer is running, the timer stops and no emergency call is triggered.

The timer does not depend on the connection to the server and continues whether or not the server is available. However, if the Check Time timer expires while you have no connection to the Internet, the emergency popup is not shown. It is also not shown automatically upon reconnection in this case.

When connection is lost, a special audio signal may be played. This is configured by the administrator in T.Commander.

Man Down

Automated Man Down alerting has proven to be an effective way to make the workplace safer for all employees. If an employee encounters a hazardous or a life-threatening situation, an automatic Man Down alert can be used to let the appropriate personnel know that a dangerous or life threatening situation has occurred. In the event of an emergency the assigned personnel can take action immediately after receiving the emergency alert.

The accelerometer on the mobile device is used for detecting an impact, and a Man Down alert is sent to the group. Once the application detects that the phone is in a horizontal position (for a defined

period of time), a popup dialog saying "EVERYTHING FINE? CLICK TO CANCEL ALARM" is automatically displayed. To send the OK status, tap this popup. If the worker doesn't send the OK status, an emergency call starts and an emergency message is sent.

The Man Down feature is based on the following three parameters:

- **Degree**
If the device falls and the accelerometer reports that the device tilt has exceeded a certain angle (the value can be set in the range from 0 to 90) T.Flex starts the Tilt Timer.
- **Tilt Timer**
If the device remains at an angle that exceeds the threshold value until this timer expires, the app goes into a warning state. The timer can be set to a value between 0 and 86400 seconds (24 hours).
- **SOS Timer (auto)**
This time interval (in seconds) specifies how quickly you need to respond when prompted (by the "EVERYTHING FINE?" popup) to confirm that you are safe. The minimum value is 20 seconds, and the maximum value is 86400 seconds (24 hours). The default is 30, and the value is configured in T.Rodon or T.Commander. If this time elapses without your response, an emergency is triggered.

Movement

Movement monitoring uses location data from the mobile device's acceleration sensor to detect lack of movement, which may mean that the worker is hurt. In this situation, an emergency alert is triggered and an emergency call is made. The emergency alert includes the user name, group membership and GPS coordinates with a link to the exact location on the map. Automatic no-movement alerting has proven to be an effective way to create safer workplaces.

The Movement feature is based on two timers:

- **Inactivity Timer**
If the device remains motionless for a period of time, an Inactivity Timer starts. If any movement occurs within this time, the timer is cancelled and T.Flex goes back to its regular operation. The default setting is 60 seconds, but it can be set in the range from 1 to 86400 seconds using T.Rodon or T.Commander.
- **SOS Timer (auto)**
This time interval (in seconds) specifies how quickly you need to respond when prompted (by the "EVERYTHING FINE?" popup) to confirm that you are safe. The minimum value is 20 seconds, and the maximum value is 86400 seconds (24 hours). The default is 30, and the value is configured in T.Rodon or T.Commander. If this time elapses without your response, an emergency is triggered.

Impact detection

IMPORTANT:

The device must have an accelerometer for this feature to work.

The Detect Impact feature watches for sudden physical impact on the device (and, by extension, on the user). T.Flex uses the accelerometer to distinguish between motions that would be characteristic of normal activities such as walking and irregular jolts that could mean falling, struggling or tumbling downstairs.

As soon as the deceleration of the device reaches the impact threshold which is set in by the T.Rodon operator, the user receives a notification saying, "EVERYTHING FINE?". When T.Flex is closed but a worker is still logged in, a popup appears over other apps. If the worker's device is locked, T.Flex can unlock the device and the popup will appear. The popup says, "EVERYTHING FINE? CLICK TO CANCEL ALARM". Tap the popup to confirm the OK status. If you fail to do so, an emergency call starts and an emergency message is sent.

The Detect Impact feature is based on the following parameters:

- **Impact Threshold**
This value is set from 1 to 40, where 1 is the maximum sensitivity, and 40 is the minimum sensitivity.
- **Impact Time**
For the Impact feature to be triggered, the device must experience the threshold (or higher) acceleration for at least this long. The value is in milliseconds. The recommended value is 2 to 3, but performance may vary depending on the type of accelerometer. You should check what value is acceptable for your particular device.
- **SOS Timer (auto)**
This time interval (in seconds) specifies how quickly you need to respond when prompted (by the "EVERYTHING FINE?" popup) to confirm that you are safe. The minimum value is 20 seconds, and the maximum value is 86400 seconds (24 hours). The default is 30, and the value is configured in T.Rodon or T.Commander. If this time elapses without your response, an emergency is triggered.

Battery level control

The T.Rodon operator can make T.Flex on your device send emergency warnings and battery alarms if the battery charge is below a certain level.

The notifications that the operator receives depend on the following parameters:

- **Battery Level Warning**
This parameter sets the value which is lower than normal but is not critical. If the battery level becomes lower than this, T.Flex sends out an emergency message with the subject "Battery level warning".
- **Battery Level Alarm**
This parameter sets the critical value. If the battery level falls below this, T.Flex sends out an emergency message with the subject "Battery level alarm".

Another battery control function is Battery Call. With this feature is enabled, if the battery level becomes critical, T.Flex starts an emergency call. This happens without a warning popup timer.

Battery Level and Battery Call can be enabled at the same time.

Voice recording and call history

T.Flex provides a feature-rich voice recording and history call log. The TASSTA system can store vast amounts of voice communication data and call details for all channels and users. This data can be accessed through the History interface in T.Flex. You can do the following:

- View call details: time, date, user or channel, duration
- Play back voice recordings (individual and group calls)

To view the history, tap **History** in the main menu. Recent recordings for a preconfigured period are available on the history screen. How far back the items are available is configured by the administrator in T.Commander.

To replay a call, tap the "play" icon for that call.

Voice data storage and retention

The TASSTA system records conversations in real time and keeps the recordings on the T.Lion server. The only consideration for the retention of recordings is how much disk space the server has. This affects your administrator's decision on how much recent data to make available to users.

GPS location and tracking

Many popular services such as taxi companies, post offices and shipping companies often use GPS tracking features to optimize their operations in the field. T.Flex provides tools that integrate GPS tracking capabilities with the built-in map. To access the GPS location and tracking interface, tap **Map** in the main menu. You can do the following on the map:

- Zoom in and out
- Switch to detailed street view
- View the precise positions of TASSTA users and locate them
- View the "who is talking" status and identify users
- Center on a specific user
- Configure the GPS view
- Use indoor localization features
- Work with guard tours

User identification and markers

The position of each subscriber is marked by an icon on the map with a label that shows the user name.

The user's icon changes status changes when the user presses PTT and the floor is granted. The set of icons is as follows:

Icon	Meaning
	Your location
	Your last known location
	You are talking
	Location where you were last seen talking

Icon	Meaning
	User's location
	User's last known location
	User is talking
	Location where user was last seen talking
	User is in emergency
	Emergency message
	User's coordinates are unknown
	User with unknown coordinates is talking

In addition to the icons listed above, there is a set of icons with the same meanings for radio users connected to the TASSTA network through bridge middleware. These icons have a pin, as in the following example:



If the user logs out or loses connection, that user's marker is displayed half-transparent until it times out or the user comes back online.

The last known location icons are displayed in two cases:

1. The user has gone offline. The user icon will immediately change to the last known location icon.

2. The user turned off the GPS. The user icon will change to the previous location icon only after a timeout that is configured by the administrator in T.Commander.

NOTE:

Some users who are online may be absent from the map. This normally means the administrator has turned off GPS location sharing for these users. However, when such a user makes an emergency call, their GPS coordinates are sent to all users that they can reach.

Detailed street view

It is important to have a detailed street view on the map. The integrated map provides a detailed street view with house numbers, road and street names and provides the address of any location.

Furthermore, the map shows colored lines, areas and other standard symbols to help read and interpret the map at different scales.

Real-time positioning and precise location on the map

There are many publications and articles on the Internet devoted to the accuracy of GPS on mobile phones. Some of them introduce us to new technologies improving the accuracy of GPS receivers on phones. Some articles describe the test results for specific mobile phones and even explain the math behind the process. These materials are good to keep in mind, but the best practice is always to test.

Our tests and practical experience allow us to say that today embedded GPS receivers in many existing mobile phones not only meet but also exceed most of the requirements for production use.

The map component of T.Flex has powerful user locating features. On the T.Flex map you can see your TASSTA network users' locations in real time, accurate to the street and house number.

To jump to your own location, tap the **On map**  icon, which is located above the map view.

Hiding users from other channels

To hide users that are not in your channel, tap the **More**  icon in the top bar and select **Current channel only**.

Guard tour

T.Flex provides features for organizing, logging and performing guard tours and security patrols, helping you accomplish your tasks within predefined time intervals.

The routes for the guard tours are configured and assigned by the T.Rodon operator. T.Flex is responsible for helping you track your progress on the tour and providing ways to pass checkpoints.

The following methods are supported for passing a checkpoint:

- GPS
Simply arrive in the vicinity of the checkpoint
- QR
Scan a QR code located at the checkpoint
- NFC
Tap an NFC tag located at the checkpoint

When a guard tour is assigned to you by the T.Rodon operator, you get a notification and a shield icon is displayed.

To view your guard tours on the map, tap the **More**  icon in the top bar and select **Guard tours**.

To view the details and keep track of your guard tours, select **Guard tours** in the main menu. In the screen that opens, select the guard tour you need. You can do the following:

- Start the guard tour
Once you have started a guard tour, you cannot cancel it.
- See which checkpoints you have passed and which you have yet to pass
A checkpoint has one of several states: "not visited", "in progress", "paused", "skipped" and "visited". The checkpoint that is "in progress" is the one you currently have to visit next.
- Check the time left for you to reach the next checkpoint
The operator sets timers for passing points (H:MM:SS time format). If you fail to pass the next point before the corresponding timer runs out, a warning is sent to the operator.
- Pass the checkpoint by scanning a QR code if this is a QR-mode guard tour or by tapping an NFC tag if this is an NFC tour.
In this mode, the QR scan and NFC buttons are available in the toolbar in guard tour view. To update your status from a QR code or barcode, tap the QR scan button and scan the code with the camera. To update the status from an NFC tag, tap the NFC button and then tap the phone on the NFC tag. If the scanned information is valid, your status is updated.
- Pause or resume the tour
- Skip a checkpoint
This action has to be approved by the operator.
- Stop the tour
This action has to be approved by the operator.

Waypoints

You can leave annotated marks and routes on the map, called *waypoints*. Waypoints are intended for your personal use and stored on the server.

To go into waypoint editing mode, long tap a spot on the map. To add a waypoint in this mode, place the cursor where needed and tap the **+** icon. You are prompted to provide a name, color and description for the new waypoint. Repeat this without leaving placement mode to draw a route. To apply your changes, tap the check mark icon.

NOTES:

- Waypoints are available only if Mapbox is used as the map provider in your environment. To check if that is the case, look for the Mapbox logo in the lower left corner of the map.
- Waypoint management does not require that you share your GPS data. You can keep your location data private, and your waypoints will still be synchronized with the server.
- Deleting waypoints is not supported. This is done by your operator in T.Rodon.

Using integrated indoor localization features

T.Flex supports two approaches to indoor localization, depending on the way it is configured in your environment. Indoor location representations are integrated into the main map view using either of the following:

- Infsoft indoor localization
- Indoor localization based on fixed beacon locations

If one of the methods is used in your TASSTA network and enabled for you, then switching to indoor localization mode is simply a matter of zooming in enough for the indoor location map to appear. The indoor location becomes represented by a 3D floor plan (in the case of Infsoft technology) or by a custom set of images that correspond to the location levels.

When you are in indoor mode, only the indoor location is shown distinctly, and the rest of the map is dimmed. Additional controls appear on the left to let you switch location floors, if any.

Task management and control

The TASSTA Task Manager system provides users issue management capabilities found in any modern CRM system.

It includes manual and automated processing algorithms with real-time status updates, user management, positioning, reporting, and administrative information. What's more, the data can be integrated into other TASSTA services, web clients, and external databases. The Task Manager system is highly flexible and feature-rich. An issue can be renamed or transformed into an order, task, item, client or any other tracker type. The main features are as follows:

- Adaptable to a variety of purposes
- Tracking of tasks, orders and issues in real time
- Customer service data
- Centralized database
- Status updates through QR codes or barcodes

For example, taxi and logistics companies use Task Manager to integrate order response with voice and data communication. The TASSTA Task Manager helps them create and track the order, follow the order status and preserve customer data.

Data exchange between the Task Manager server and the client uses the HTTPS protocol, which makes communication more reliable and secure.

The complete Task Manager solution is based on T.Rodon and T.Flex. T.Rodon is responsible for most of the control and management. The T.Rodon operator creates and assigns issues, orders and tasks. T.Flex users can change status, add notes, take pictures, attach files and add signatures.

Each issue/order/task has the following attributes:

- ID
- Name
- Description
- Title
- Priority
- Tracker
- Progress
- Author
- Assignee
- Created date and time
- Notes
- Last status update

In addition, the issue/order/task can have custom fields that are configured by the operator in T.Rodon.

It can also contain attached files (documents, signatures and so on). In addition, the schema can be extended by custom fields for storing specialized information in the system.

When the T.Rodon operator creates an issue and assigns it to you, you get a T.Flex notification in the phone's task bar.

To see the full or filtered list of issues assigned to you, tap **Task Manager** in the main menu.

To create a new issue, tap the plus icon in the top bar and specify the name for the issue. The newly created issue is automatically assigned to you.

To work with a specific existing issue, tap that issue in the list. The following tools become available:

Icon	Meaning
	Edit the fields of the issue
	Add a note
	Attach a file
	Add a signature

Remote media capture

To ensure higher safety, T.Flex provides the possibility of remote capture of audio and pictures from other users' mobile devices. For example, if a user fails to get in touch, remote media capture can help you assess the situation that the user is in.

NOTE:

Remote video capture from iOS devices is not supported at this time.

This can be very important in critical environments such as security services or the military where the person can be attacked or works in high-risk conditions.

NOTES:

- Remote media capture gives you undetected access to the current working situation of your teammate. Always respect the privacy of your colleagues. These features are designed strictly to meet security requirements. In addition, applicable legislation and company policy must be considered.
- Due to continuous software and hardware upgrades, TASSTA functionality may be incompatible with some mobile cameras. Please consult TASSTA if in doubt.
- Remote media capture is not E2E encrypted. If the other user has turned on E2E encryption, you can still get media from their device.
- Remote media capture stops when the user presses PTT or an individual call is made to or by the user.
- Remote access to a particular user's camera and microphone can be denied by the administrator in T.Commander.

Remote listening

You can access the microphone of a specific user remotely, unless this is denied by the administrator. To activate remote listening, tap the user in the user list, go the options menu and select **Remote listening ON**. Remote listening mode is activated, the appropriate notification is displayed, and a blue microphone icon is shown for the user's item in the list. To deactivate remote listening, go the options menu and select **Remote listening OFF**.

T.Flex users may not be warned about remote listening, and this can be used for assessing the situation undetected. Whether or not the user is notified is configured by the administrator in T.Commander.

If such notifications are enabled for your user account, you can use the **Accept incoming remote listening requests** option in T.Flex settings to control whether you want to be able to reject the requests.

NOTE:

Remote listening is turned off if you or make or answer a call or use PTT to talk in a channel.

Remote picture

You can access the snapshot functionality of a specific user's camera remotely, unless this is denied by the administrator. For example, if you get a Man Down alarm from a user, it might be a good time to try and get a picture from the user's camera in case it helps find out what happened.

To take a remote picture, tap the user in the user list, go the options menu and select **Remote picture (back camera)** or **Remote picture (front camera)**. This opens a popup window with the snapshot.

T.Flex users may not be warned about snapshots being taken remotely, and this can be used for assessing the situation undetected. Whether or not the user is notified is configured by the administrator in T.Commander.

If such notifications are enabled for your user account, you can use the **Accept incoming remote camera requests** option in T.Flex settings to control whether you want to be able to reject the requests.

The quality of the snapshot depends on the mobile device, position of the camera and light conditions.

NOTE:

Generally, the resulting snapshot is unlikely to be informative. For example, if the user's phone is lying lens down, the picture from either camera is useless.

Direct mode

T.Flex can operate in a serverless Wi-Fi direct mode that provides only push-to-talk (group call) functionality and works only within the reach of a single wireless network. To enable direct mode, log out of the TASSTA network (if you haven't already), go to the application settings and under **Operation mode** tap **WiFi direct mode**. Direct mode becomes enabled, and all operational views and configuration settings that are not applicable become hidden.

To log in with direct mode enabled, go to the login screen and specify the following:

- The desired user name
- The port number, which doubles as your group ID; this is the port that your group calls will use, and you will only be able to talk to users that have specified the same port

After that, tap **Connect**.

In direct mode, there is no authentication and no centralized user and channel directory. Any T.Flex user is free to connect with an arbitrary user name. Furthermore, user names don't have to be unique. If there are identical user names in a direct-mode ad-hoc network, you can distinguish them by the IP addresses shown next to them in the user list.

In direct mode, the PTT screen has a green notification line at the top, saying that only group calls are available.

To talk in the channel, tap the PTT button.

Logging out in direct mode is no different from logging out in server mode – tap **Logout** in the main menu.

Supported external devices

The following devices have been tested and approved for use with T.Flex on iOS.

Aina PTT Voice Responder Bluetooth speaker microphone

THIRD-PARTY ISSUE:

The buttons on a PTT Voice Responder may stop working. This can occur if you change the device that the accessory is connected to. If this happens, try the following:

1. Reset the PTT Voice Responder by pressing both PTT buttons and both arrow buttons until the LED turns off.
2. Close T.Flex.
3. Forget the PTT Voice Responder in the iOS Bluetooth settings.
4. Open T.Flex and reconnect the PTT Voice Responder.

Crosscall X-COMM remote speaker microphone

Increasing battery life

The battery life of client iOS devices is greatly affected by the TASSTA network features enabled on the server side. The more features enabled, the faster the battery drains due to multiple services exchanging information frequently.

If you find that your battery drains too quickly after installing T.Flex, try the following workarounds (one or more):

- Disable [client features](#) you do not use or those which are not required by this particular user. Pay special attention to the following features:
 - [Indoor localization](#) - enable it only for users who need indoor positioning. Otherwise, keep it disabled.
 - [Share indoor position](#) - enable it only for users who need indoor positioning. Otherwise, keep it disabled.
 - [Map](#) - enable it only for users who need to access a map from T.Flex. Otherwise, keep it disabled.
 - [Share location](#) - enable it only for users whose position you want to tracked. Otherwise, keep it disabled.
- Completely disable [Mapbox](#) geodata provider for the user. Switch **Geodata provider** in [user settings](#) to *OpenStreetMap / Apple Maps (iOS)*.
- Increase the [location sharing interval](#) parameter to 60 seconds or more.



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