

TRBOnet Bluetooth Messenger User Guide

Version 1.1

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1 Introduction

1.1 About This Document

This document is intended for end users of the TRBOnet Bluetooth Messenger software installed on an Android mobile device. The document describes how to install and configure TRBOnet Bluetooth Messenger, send and receive text messages, view the history of text messages, and use the contact list.

1.2 About TRBOnet

TRBOnet is a suite of professional applications for the MOTOTRBO digital two-way radio networks. TRBOnet manages voice, text and data communication paths to network endpoints and provides a unified graphical dispatcher workbench interface for all the messaging and workforce orchestration tasks.

For more information about TRBOnet products, refer to our website.

1.3 Contacts

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EMEA	+44 203 608 0598	info@trbonet.com — general and commercial inquiries
Americas	+1 872 22 28 726	support@trbonet.com — technical support
APAC	+61 28 6078325	http://kb.trbonet.com — online knowledge base

2 Overview

TRBOnet Bluetooth Messenger is a software application for Android mobile devices. Install this application and pair it with a Motorola two-way radio via Bluetooth to send and receive text messages on the MOTOTRBO radio network using the screen of your mobile device.

Features

- Configurable TMS parameters displayed at startup
- Incoming text messages from radio users and operators displayed on the screen of the mobile device
- Sending text messages from the mobile device to any contact
- Text message delivery status
- Responding to an incoming text message (a conversation)
- Correspondence history
- Customizable contact book
- Group contacts supported
- Auto-reconnect to the last connected radio after the radio or the mobile device is off and on again
- Auto-scan of active Bluetooth radios within the 15-meter area
- Notification about a new incoming message with the application closed
- Adaptive user interface for all smartphone and tablet screen types
- Portrait and landscape orientation of the screen supported

Requirements

The hardware and software requirements to install and run TRBOnet Bluetooth Messenger 1.1 on a mobile device include:

- Android version: 4.1 and higher
- Bluetooth LE supported
- Wi-Fi disabled (except for Nexus)
- Bluetooth enabled

The hardware requirements for a Motorola two-way radio to work with TRBOnet Bluetooth Messenger 1.1 include:

- MOTOTRBO DP4000 Series and above
- Bluetooth LE supported
- Bluetooth enabled
- "Forward to PC" option is set to "via Bluetooth" in the configuration of the radio

3 Installation

The latest version of the TRBOnet Bluetooth Messenger software application is available for download on Google Play (play.google.com).

To install TRBOnet Bluetooth Messenger:

1. Visit play.google.com from your mobile device.
2. Type "TRBOnet" in the search box and run the search.
3. Tap the TRBOnet Bluetooth Messenger application, then tap **Install**.
4. Click **Accept** to activate all required options on your mobile device.

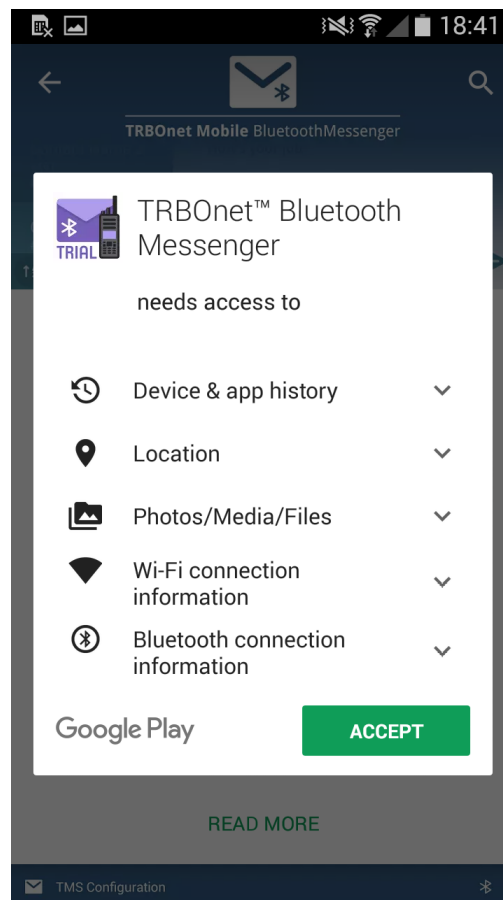


Figure 1: Activating options on your mobile device

5. When the installation is completed, tap **Open**.

4 Bluetooth Connection

4.1 Radio Configuration

Before two devices can start communication over Bluetooth, they need to be paired. For your MOTOTRBO radio to be able to perform Bluetooth pairing, update the configuration of your radio in MOTOTRBO CPS as follows:

Table 1: Radio configuration in MOTOTRBO CPS – Bluetooth pairing settings

Path	Setting	Note
Network > Bluetooth	Enabled = Yes	
Network > Radio Network	Forward to PC = Via Bluetooth	A configured radio cannot send or receive text messages on its behalf. The radio serves as a gateway forwarding text messages to/from the mobile device. If the mobile device is down, transfer of text messages is stopped.
Buttons > Radio Buttons	[any button, short or long press] = Bluetooth Discoverable On/Off	Applies to non-display radios only. The programmed button serves for the activation/deactivation of the Find Me mode on the radio.

4.2 Connecting a Radio

To launch TRBOnet Bluetooth Messenger on your mobile device, you need to establish a Bluetooth connection with a Motorola radio as described below.

Note: When connecting TRBOnet Bluetooth Messenger to a radio for the first time or after connection with a different radio, include the steps with the “Bluetooth pairing” mark. When connecting TRBOnet Bluetooth Messenger to the paired radio, skip the marked steps.

To connect a radio:

1. Turn on the radio.
2. (Bluetooth pairing) Activate the Find me mode on the radio:
 - On a radio with display, go to the **Bluetooth** menu section and select the **Find me** option. The “Find me” message should remain on the screen until Bluetooth pairing is done.
 - On a non-display radio, push the button programmed for the activation of the Find me mode. If successful, the orange LED indicator is activated. For details, refer to section [4.1 Radio Configuration](#) (page 4).
3. Launch TRBOnet Bluetooth Messenger on your mobile device. The TMS settings appear on the screen. To modify any setting, tap the field, enter the preferred value, and tap **Enter**.
4. Tap **Start Messenger**. Disable Wi-Fi and enable Bluetooth on your mobile device if requested.

The mobile device scans around for devices with enabled Bluetooth.

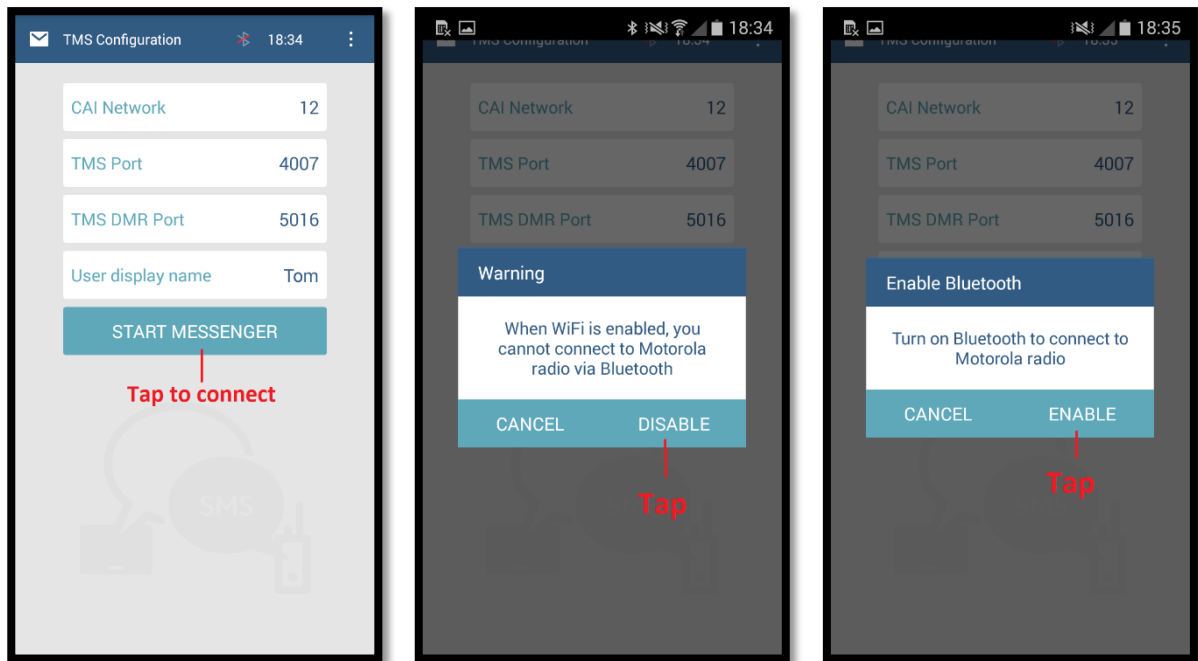


Figure 2: Starting TRBOnet Bluetooth Messenger

All radios with the activated Find me option appear in the bold font on top of the **Choose a Motorola radio** list. Radios that were connected earlier are displayed in the normal font below.

- 5. Tap the preferred radio, then tap **Connect**.

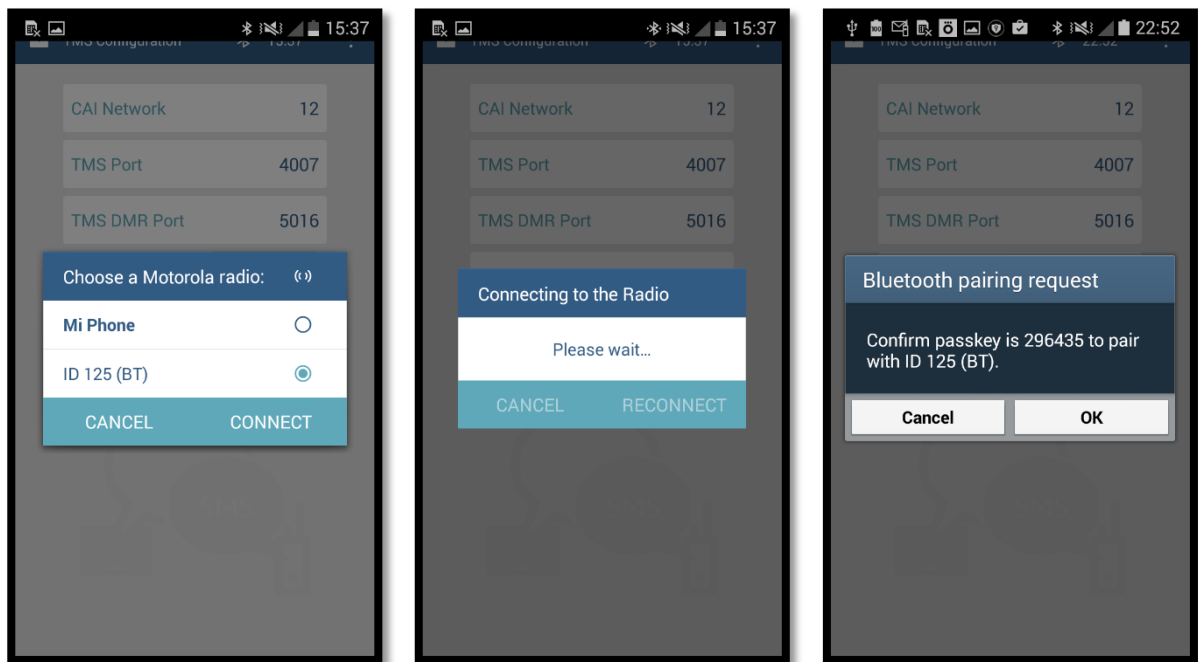


Figure 3: Connecting an unpaired radio

6. (Bluetooth pairing) Confirm Bluetooth pairing on both devices:
 - On a radio with display, you see two options – **Accept** and **Decline**. Select **Accept**. On a non-display radio, you see the activated orange LED indicator, which means that the pairing request is accepted automatically. No user action is required.
 - In the messenger, tap **OK** to confirm the receipt of the passkey sent by the radio (Figure 3).

Note: The paired radio is remembered in the Bluetooth settings of the Android device. In future, you do not need to activate the Find me mode again for the messenger to find the paired radio.

7. When the Bluetooth connection is established, the radio plays back the tone. The main application window appears on the screen of your mobile device.

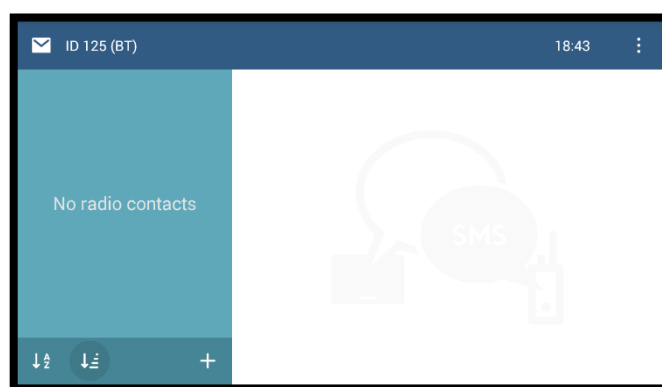


Figure 4: The main window

From this moment, all incoming text messages are displayed in the application.

4.3 Connection Issues

The following table summarizes all known issues that you may encounter when trying to connect TRBOnet Bluetooth Messenger to a Motorola radio.

Table 2: Bluetooth connection issues

Issue	Solution
The radio has played back the "connected" tone. The application displays the Unable to connect error message.	The connection is established. The application has not received the confirmation of the "connected" status from the radio. Tap Reconnect to update the connection status of the application.
The application cannot scan a particular radio. The radio is not displayed in the Choose a Motorola radio list.	Make sure that you have enabled Bluetooth and the Find Me option on the radio. Keep the radio within 15 meters from the mobile device. The "Find me" message should be displayed on the screen of the radio. Then tap the "scan" icon in the right upper corner of the Choose a Motorola radio list to scan again.
The application fails to scan Bluetooth devices. The No devices message is displayed.	This issue is known for Android 6 and higher versions. The issue typically occurs if TRBOnet Bluetooth Messenger has not been granted access to all required services on the mobile device during the installation. To resolve this issue, try any of the following:

Issue	Solution
	<div>1. On your mobile device, go to Settings and Apps (or Application Manager). Find and tap (or tap and hold) TRBOnet Bluetooth Messenger. In the application settings, find Permissions. Enable all permissions required by the application (Figure 1, page 3).</div> <div>Now launch the application and tap Start Messenger. All Bluetooth devices now appear in the Choose a Motorola radio list.</div> <div>2. On your mobile device, go to Bluetooth settings (tap and hold the Bluetooth icon). Enable Bluetooth and start scanning. When your radio appears in the list available devices, tap it. Respond to the pairing request on the radio and on the mobile device.</div> <div>Now launch the application and tap Start Messenger. The paired radio appears in the Choose a Motorola radio list. Tap it and tap Connect.</div>

4.4 Disconnecting

To get disconnected from the radio, tap the menu icon and then tap **Disconnect**.

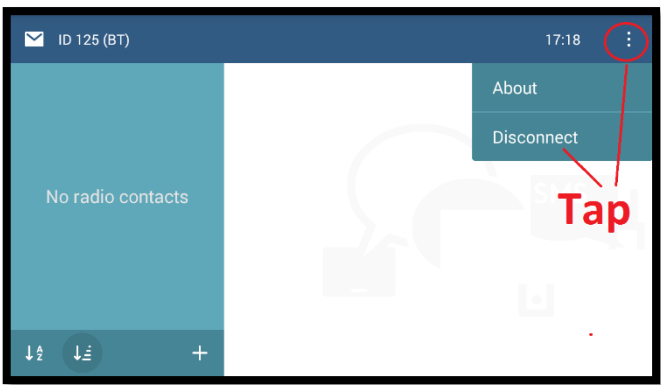


Figure 5: Disconnecting

The radio plays back the tone. The application is stopped, the **TMS Configuration** window appears on the screen of your mobile device.

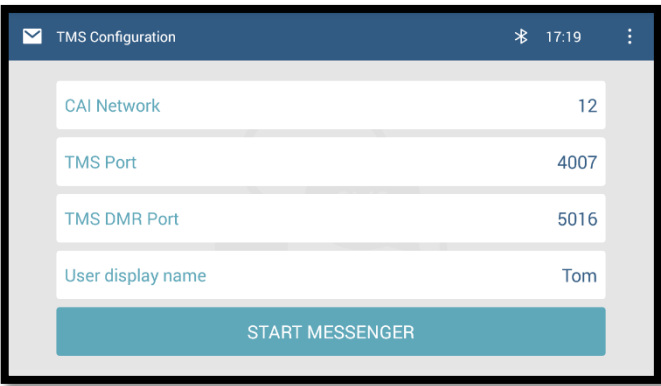


Figure 6: The application is disconnected from the radio

The paired radio remains in the Bluetooth settings of your mobile device.

4.5 Reconnecting after Restart

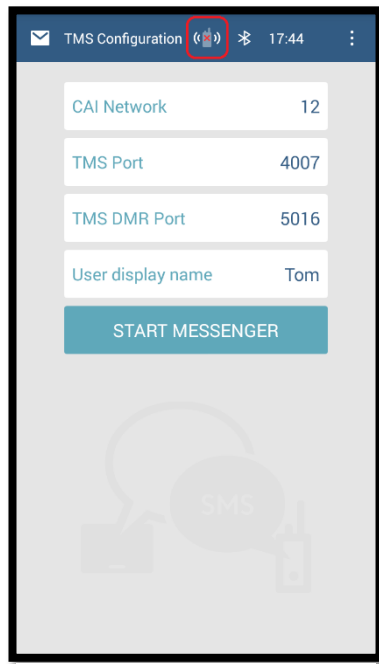


Figure 7: The radio is off

Radio is off and on

If the connected radio is off, the application is stopped. The mobile device displays the **TMS Configuration** window and the “radio off” icon on top (Figure 7).

When the radio is on again, the connection is restored automatically, without any user action. The radio plays back the tone, and the mobile device displays the main window of the application.

Mobile device is restarted

When the mobile device is powered off, the disconnected radio plays back the tone.

When the mobile device is restarted, the Bluetooth connection between the radio and the mobile device is restored automatically. The radio plays back the tone. The application is not launched.

To send a text message, launch TRBOnet Bluetooth Messenger manually. If you do not do that, the mobile device will display an indication of an incoming text message on top of the screen. Swipe the screen to see the notifications and tap the notification about a new incoming message. The TRBOnet Bluetooth Messenger is launched automatically and the unread message appears in the main window.

4.6 Notifications

When running, the application performs continuous monitoring of the Bluetooth connection with the radio. To know the actual status of the Bluetooth connection, swipe the screen of the mobile device and find the TRBOnet Bluetooth Messenger notification.

Radio and messenger are connected

For the normally working messenger, the notification box displays the “Radio and messenger are connected” text. In Android 5 and later versions, the notification box displays the icon of a particular color for each Bluetooth connection status.

If you tap the notification box, the main window of the application appears on the screen (Figure 8, right).

If you tap **Disconnect** in the notification box or on the application menu, the Bluetooth connection with the radio is terminated. The application is closed and the connection status monitoring is stopped.

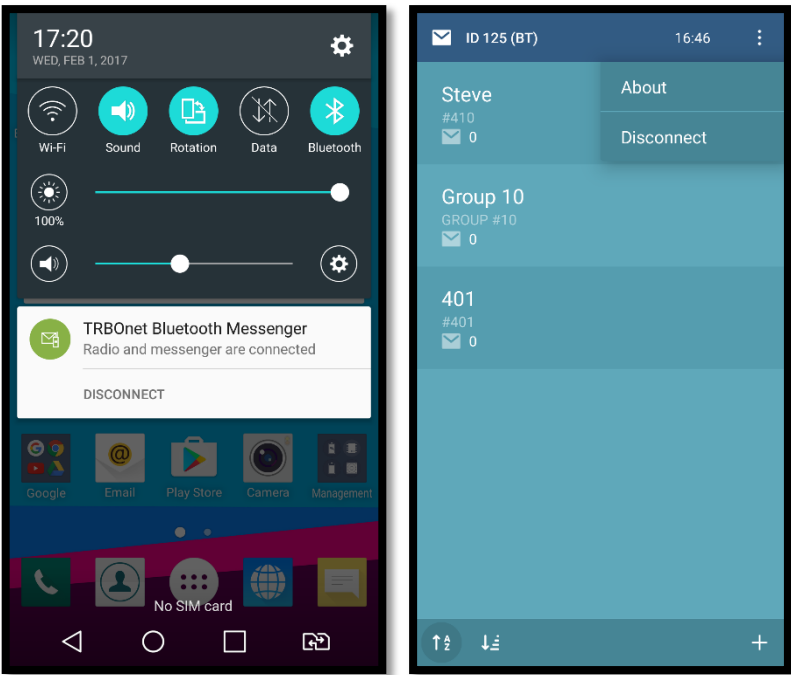


Figure 8: Radio and messenger are connected

Searching for the radio

When the connected radio is off or out of the Bluetooth signal range, the application searches for the radio and tries to restore the lost connection. The notification box displays the “Searching for the radio” text (Figure 9).

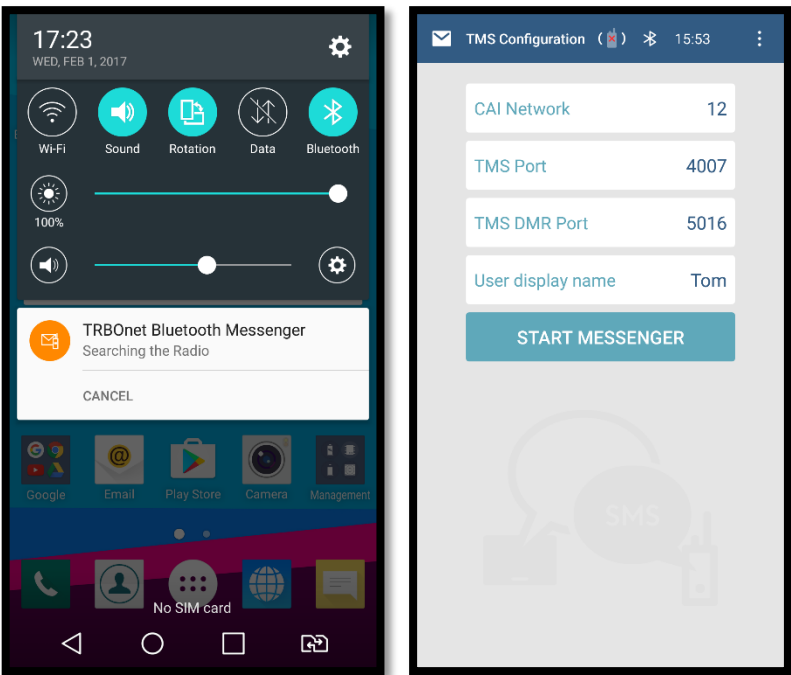


Figure 9: Searching for the radio

If you tap the notification box, the mobile device displays the **TMS configuration** window of the application (Figure 9, right). The “radio off” icon is displayed on top of the screen. When the radio is on or back in the range, the connection is restored and the application is started automatically, without any user action.

The search stops after five minutes or after you tap **Cancel** in the notification box. When the search is canceled, the notification box disappears. The monitoring of the Bluetooth connection is stopped.

Radio is not connected

If Bluetooth is disabled on the mobile device, the connection with the radio is down. The notification box displays the “Radio is not connected” text.

If you tap the notification box, the mobile device displays the **TMS Configuration** window of the application. The “Bluetooth off” icon appears on top of the screen.

When Bluetooth is enabled again, the connection is restored and the application is restarted automatically, without any user action.

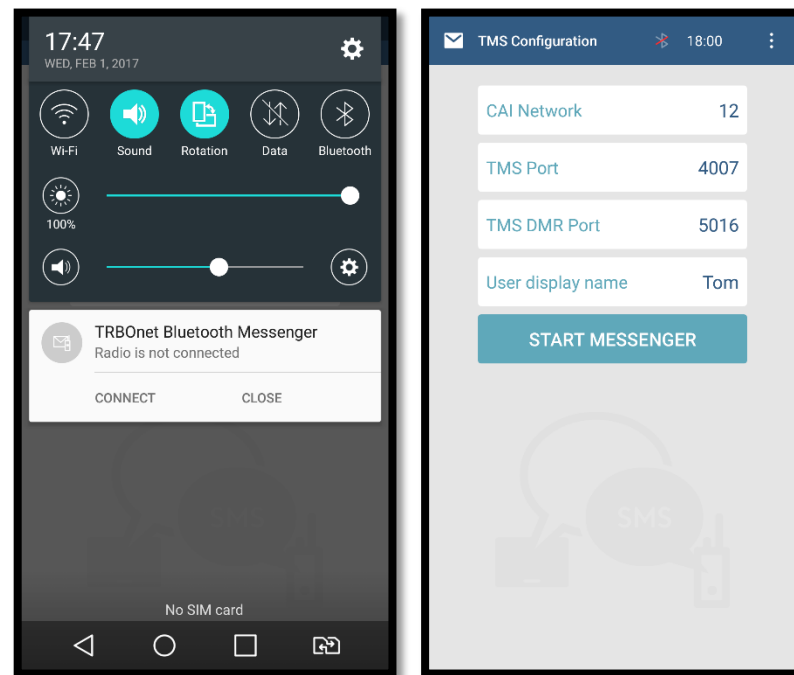


Figure 10: Bluetooth is disabled on the mobile device

Radio is connected

When the Bluetooth connection with the radio is restored after a break, the notification box displays the “Radio is connected” text. If the application is restarted automatically, the notification text changes to “Radio and messenger are connected” (Figure 11).

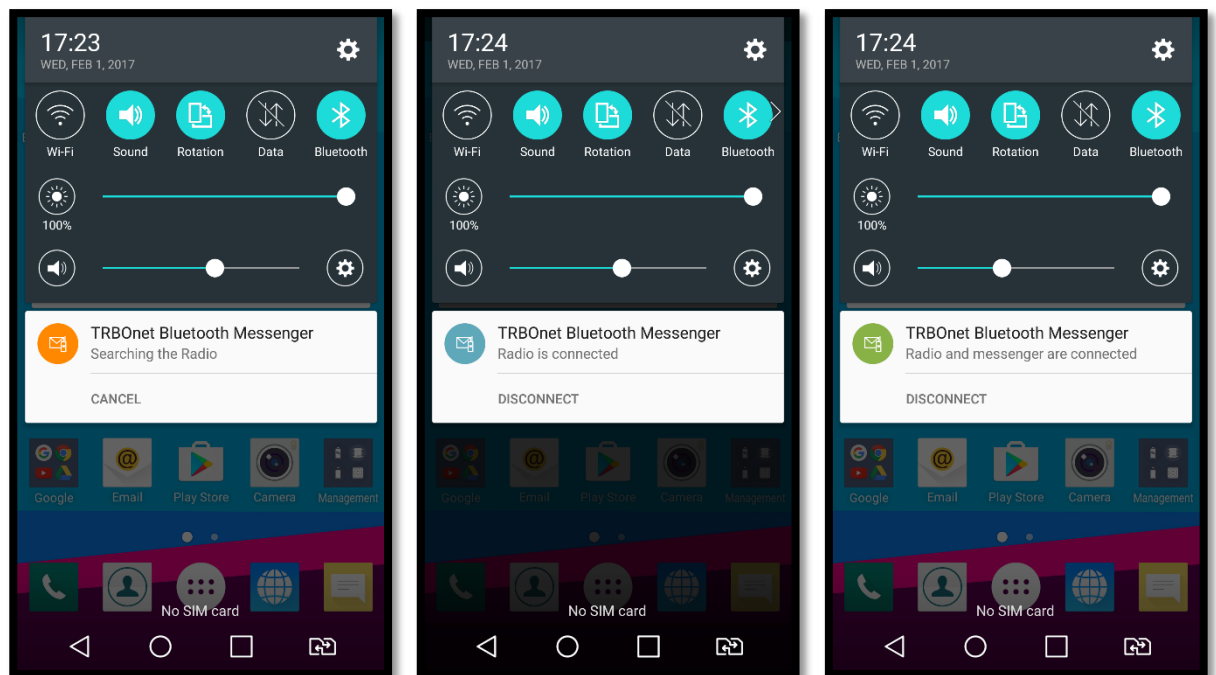


Figure 11: Auto-reconnect and restart of the application step by step

After restart of the mobile device, the Bluetooth connection is recovered but the application is not launched automatically. The notification box displays the “Radio is connected” text. This case is described in section [4.4 Reconnecting after Restart](#) (page 8).

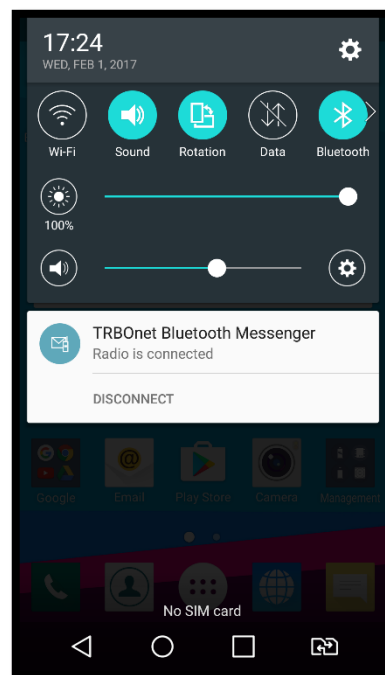


Figure 12: The “Radio is connected” notification

The “Radio is connected” notification remains until you launch the application manually or tap **Disconnect** in the notification box to terminate the Bluetooth connection.

5 Main Window

When you rotate the screen of your mobile device, TRBOnet Bluetooth Messenger changes the layout of the window elements accordingly.

Landscape layout

When laid out horizontally, the main window of TRBOnet Bluetooth Messenger displays the following elements:

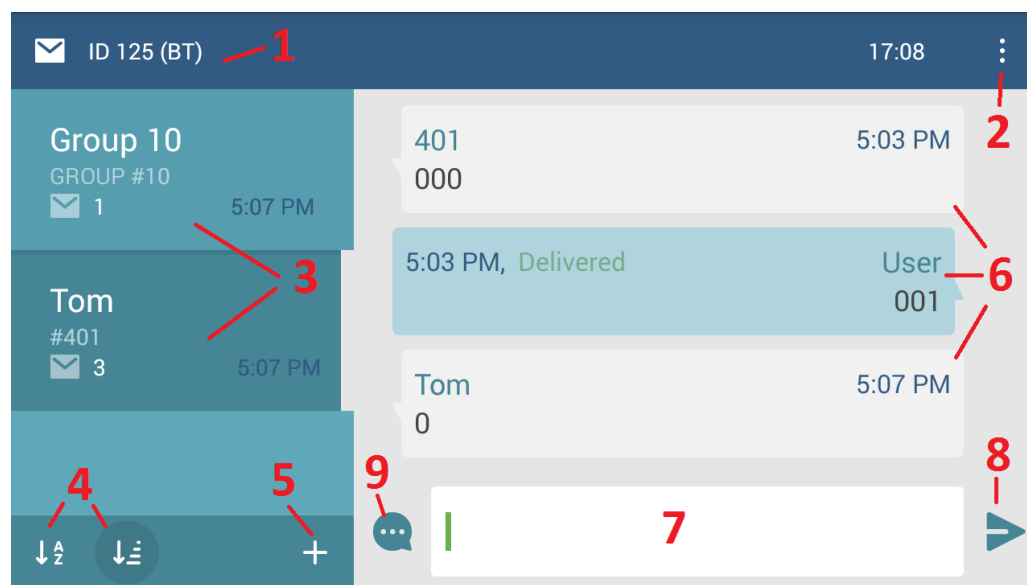


Figure 13: TRBOnet Bluetooth Messenger (landscape layout)

Table 3: TRBOnet Bluetooth Messenger – main window elements

##	Element	Description
1	Radio Name	The name of the radio for which you send and receive text messages.
2	Menu button	Tap this button to see the menu items.
3	Contact list	Tap a contact to see all of their messages. The number next to the envelope icon indicates the number of messages in your conversation with this contact.
4	Sort buttons	Tap these buttons to sort contacts alphabetically (left button) or by the radio or group ID (right button) in the descending or ascending order.
5	Add contact button	Tap this button to add a new contact to the contact list.
6	Conversation	Text messages of the selected contact. Incoming messages have no shading. Outgoing messages have blue shading and the delivery status.
7	Edit box	Type your message for the selected contact in this box.
8	Send button	Tap this button to send your message.
9	Quick text button	Tap this button to open the list of quick replies. Tap a reply to be inserted in the edit box.

Portrait layout

When orientated vertically, the main window of TRBOnet Bluetooth Messenger displays the contact list or all messages of the selected contact.

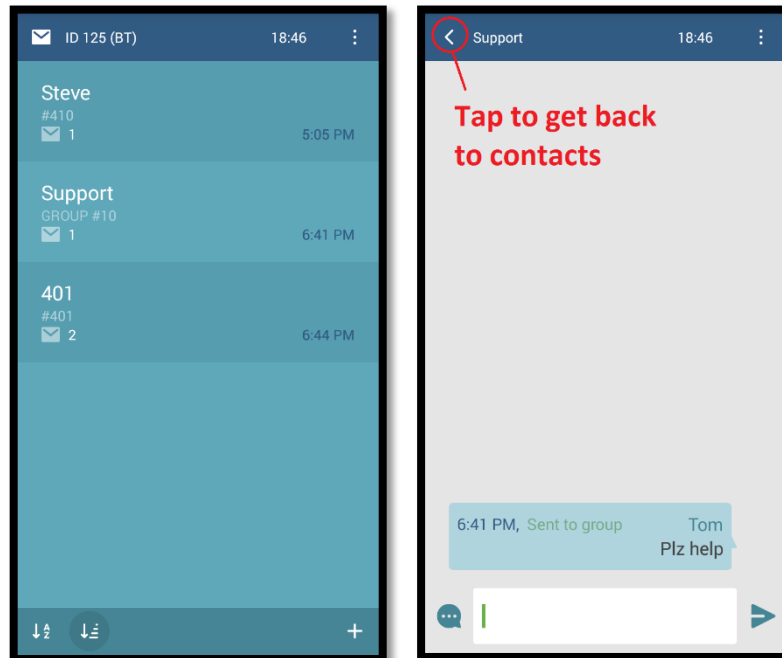


Figure 14: Contact list (left) and messages of one contact (right)

All elements of the main window are described in Table 3. To get back to the contact list, tap the **Back** button.

6 Contact List

To send a message to a radio, a talk group, or a control room operator, you need to select the respective contact from the contact list.

When you launch TRBOnet Bluetooth Messenger for the first time, the contact list is empty. The respective panel shows the “No radio contacts” message.

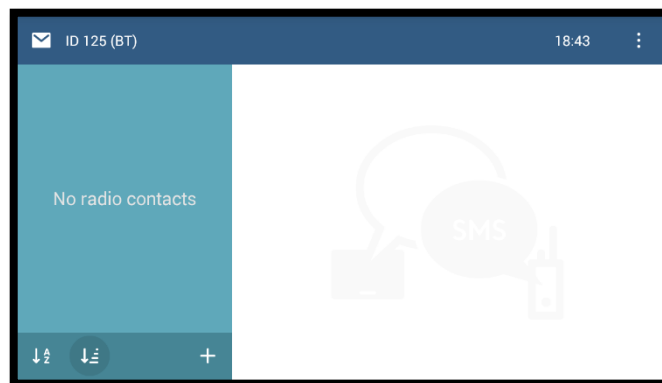


Figure 15: Contact list

Contacts are added to the contact list automatically when you receive a message from an unknown sender. You can also add a contact manually.

6.1 Adding a Contact

To add a contact, tap the “plus” icon at the bottom of the contact list. Specify the contact properties in the popup dialog box:

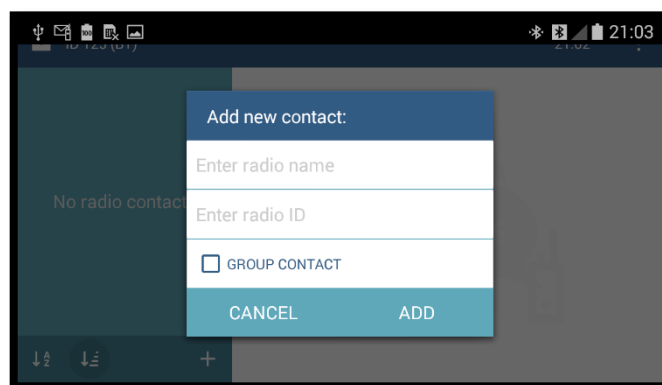


Figure 16: Adding a contact

- Radio name: Enter a descriptive name of the contact that you will see in the application.
- Radio ID: Enter the radio ID of the subscriber or operator, or the group ID if you are adding a talk group.
- Group contact: Select this option if you are adding a talk group.

Tap **Add**. The new contact appears in the contact list.

6.2 Editing a Contact

To edit a contact, tap and hold it. Tap **Edit contact** on the popup menu. Modify the properties and tap **Apply**.

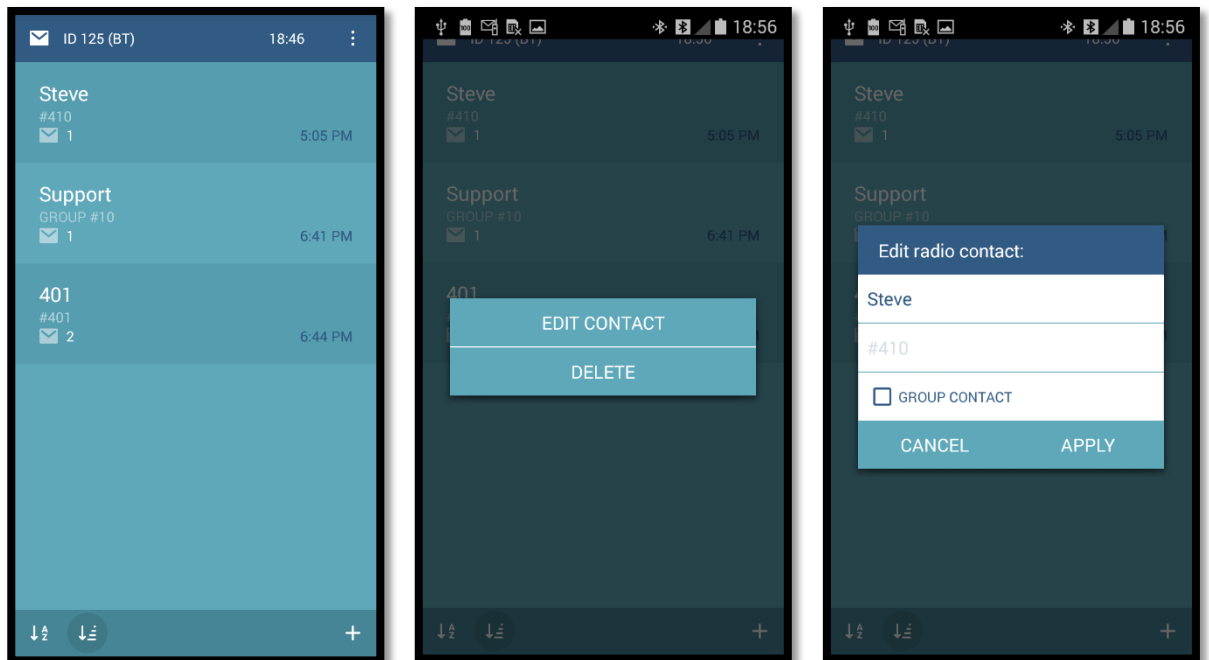


Figure 17: Editing a contact

You can modify the descriptive name and the type of any contact. The radio ID (or group ID) of the contact cannot be edited. Instead, delete the wrong contact and create a new one with the correct radio ID.

6.3 Deleting a Contact

To delete a contact, tap and hold it. Then tap **Delete**.

7 Text Messages

With TRBOnet Bluetooth Messenger, you can send a text message to any contact in your contact list, receive a text message from a radio user, an operator, or a talk group member, and respond to an incoming text message.

7.1 Sending a Text Message

To send a text message, tap the recipient (a user or a group) in the contact list. Type your message in the edit box or use a quick message. Tap **Send**.

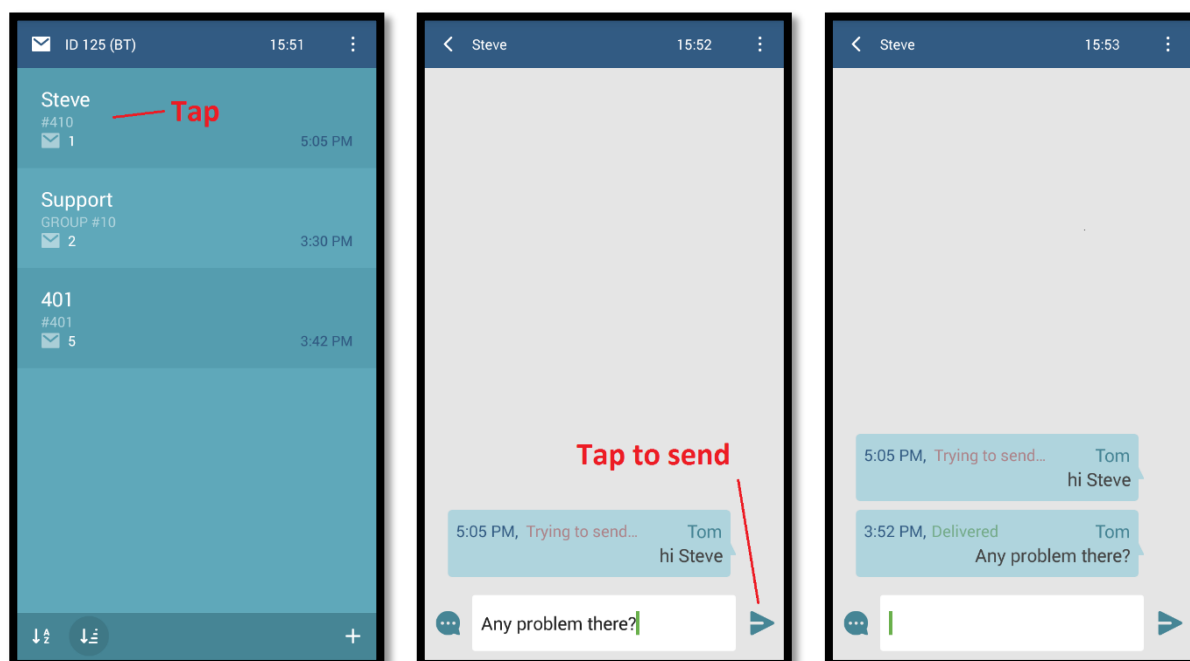


Figure 18: Sending a text message

The sent message appears in a separate message box above the edit box. The delivery status is displayed in the message box.

7.2 Receiving a Text Message

When the application window is open, the number of new incoming messages is marked with a red icon on top of the main window (Figure 19). The flashing “envelope” icon in a contact box indicates the sender. Tap the sender to open the message.

When all new messages are opened, the read icon disappears.

When the application window is hidden, an indication of a new text message appears on the icon bar of your Android device. Swipe the screen to open the notifications and tap the notification about a new incoming message. The messenger appears on the screen to display the unread incoming text message.

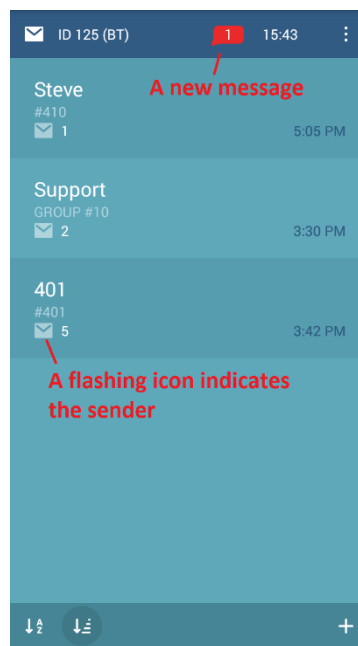


Figure 19: An incoming message

7.3 Responding to a Text Message

To respond to an incoming text message, type your answer in the edit box or use a quick message. Tap **Send**.

7.4 Using Quick Text

You can save the text of a message once and send it whenever needed without typing.

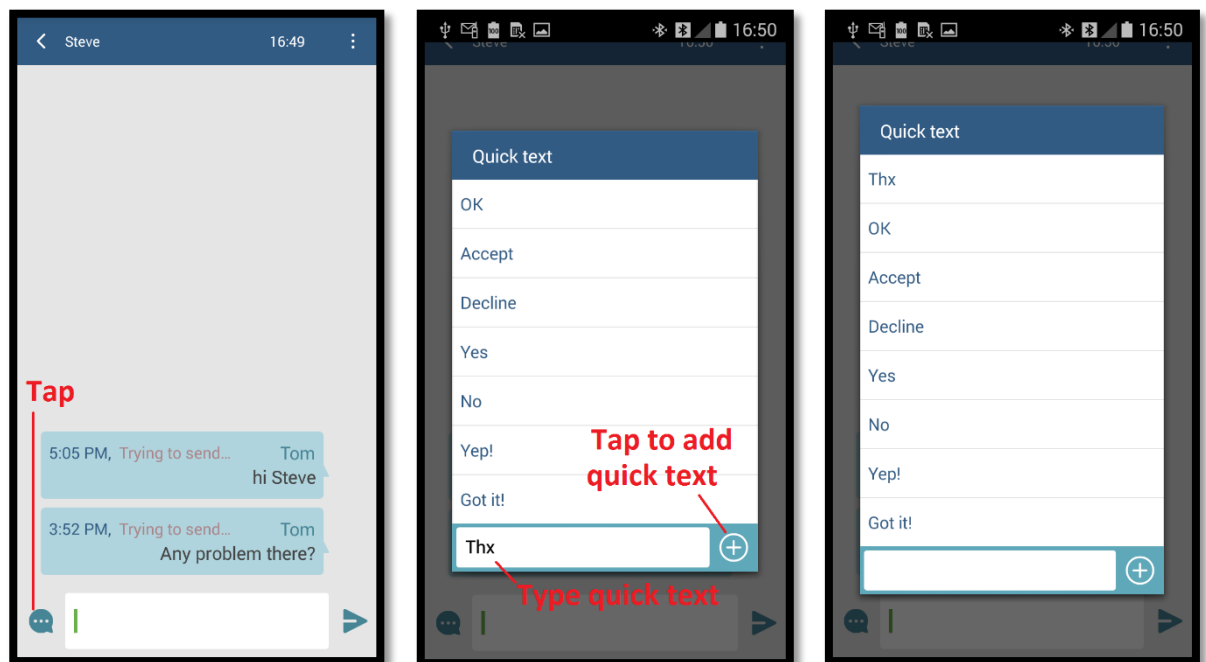


Figure 20: Adding a quick message

Tap the **Quick text** button to view all quick messages available. To add a new quick message, type it and then tap the **Add** button. The new quick message appears in the **Quick text** menu.

To send a quick message, select the contact. Tap the **Quick text** button and tap a quick message. The message is copied to the edit box. Tap **Send**.

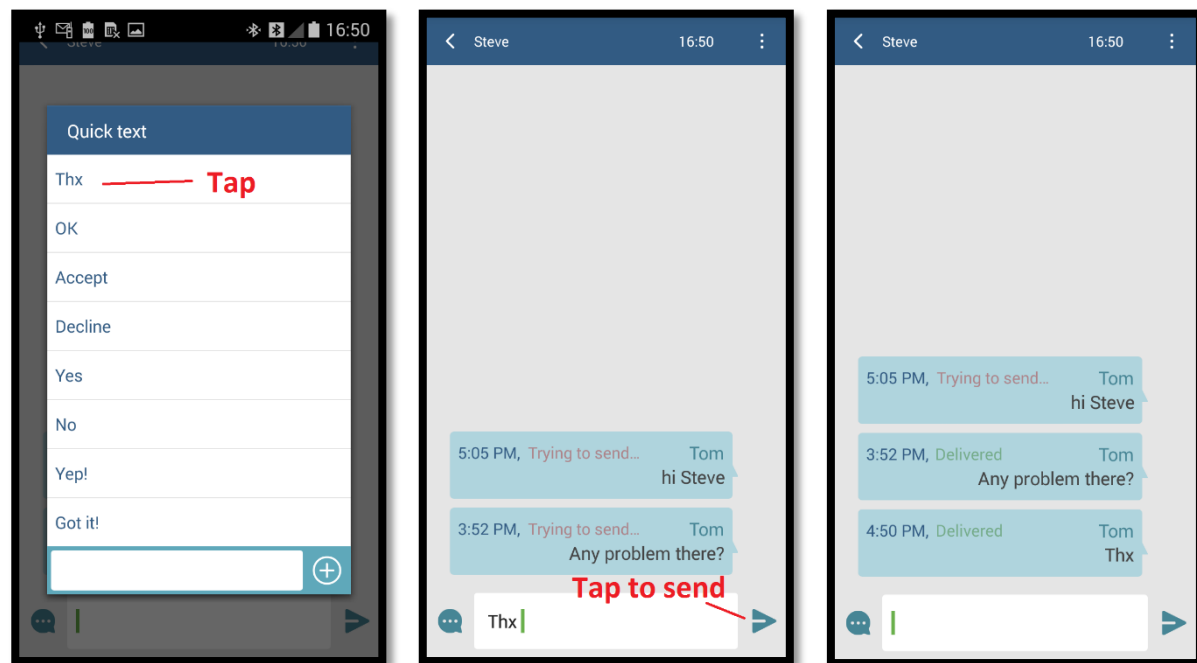


Figure 21: Sending a quick message

7.5 Viewing Correspondence History

Tap a contact to view all messages that you exchanged with this contact.

Radio user

If a contact is a radio user or an operator, you can see all incoming and outgoing messages that you exchanged with this contact.

Talk group

If a contact is a talk group, you can see all messages that you sent to the group. If any group member responds, you receive a private message from a particular radio user rather than a group message. Replies are not included in the group conversation.

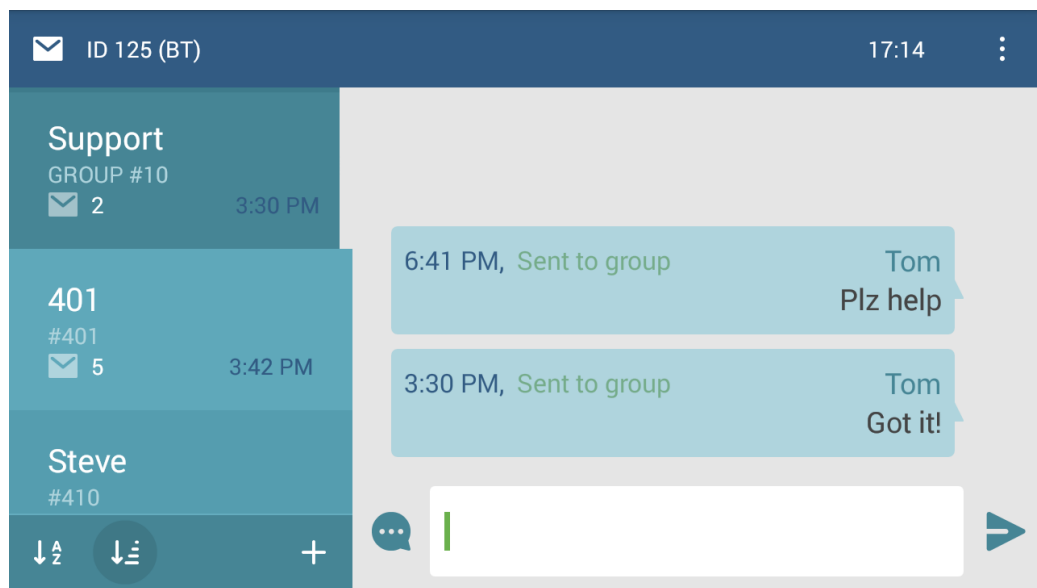


Figure 22: A conversation with a group