



Genaker PTT Android Client

User Manual

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1 Introduction

1.1 System Requirements

The Genaker PTT application client is compatible with handsets running Android 4.4, Android 4.4.x, Android 5.0, Android 5.0.1, Android 5.1, and Android 6.0

Do not doubt to contact Genaker (support@genaker.net) in case you have a problem with a specific handset or need more information about support.

The application Genaker PTT cannot be found on Google Play©. Therefore, the setting to allow the installation of application from unknown sourced must be enabled before attempting to install the application. This option is enabled via Settings → Security → Enable unknown sources (activated).

If employing Android 6.0 (Marshmallow), you will be prompted to accept 6 permissions. If you are not prompted to do so, you may enable them via Setting → Application administrator → Genaker PTT (lower end of the screen, in the field 'permissions').

1.2 Execute the application

After having installed the client, you may start using it. Please note the application will initiate every time you start-up your phone. Therefore, you won't need to worry about initiating it manually. In any case, the application can also be initiated like any other Android application by clicking on the corresponding icon of the application in the applications list.

1.3 Register in the service for the first time

The first time you execute the application on a handset, it will request a username and password to be introduced. Contact your administrator to be provided with the credentials of the service.

NOTE: It is possible that the administrator may have previously introduced the user credentials in your handset, this avoiding the need – for the operative user of the handset – to know or type in the credentials of the user in the Genaker PTT service, as they will have been introduced previously by the administrator.

The following image shows the screen where user is requested his credentials. After successfully completing a registration, the application will not show this screen again, so that in successive re-initiations, the application will automatically register to the service with the credentials which had previously been provided.

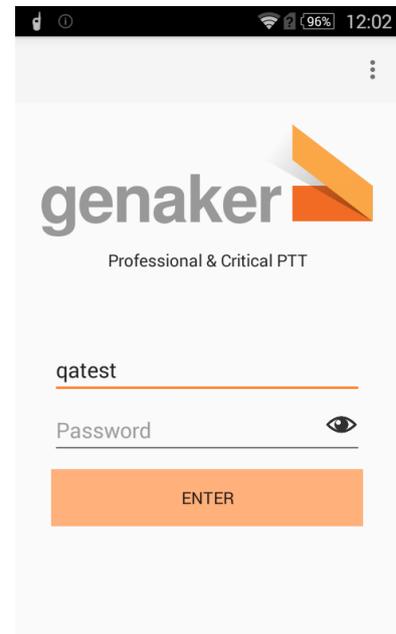


Figure 1. Initiate session

2 First steps

The Genaker PTT App starts by default in “MonoChannel” mode, i.e. only one channel can be selected at any given moment to listen or to speak to. If you prefer to listen to several channels (also named Groups) at the same time you must disable the “Walkie-Talkie Interface” setting:

Menu→Settings→PTT Features→Walkie-Talkie Interface: Disable

Note: Switching this Setting forces the App to close down. Please manually restart it.

After having registered the application, we come upon a screen such as one of the two that appear hereunder. In Figure 2 the Channel Selector View is shown. If Channels are named starting by A01...B01... such View is available. This view emulates the selection mode in the Two-way Radios. We can see the channel that we are connected to, the different options that the application provides, we can change channels by means of the zone selector (A, B, C) as well as the right & left arrows or add the channel to the favourites list by selecting the star which appears next to the name of the channel.

If the Channels have not been provisioned using this naming prefix than the default Channel / Group View is shown. In Figure 3 we can see 3 channels selected to listen (scanning) and the one displayed on the PTT orange button (in this case “CRITICAL”) as the one we will speak to when pressing this PTT orange button (or other Hardware button if enabled, such as the Volume Up Key or a dedicated HW button depending on the Mobile Phone model).

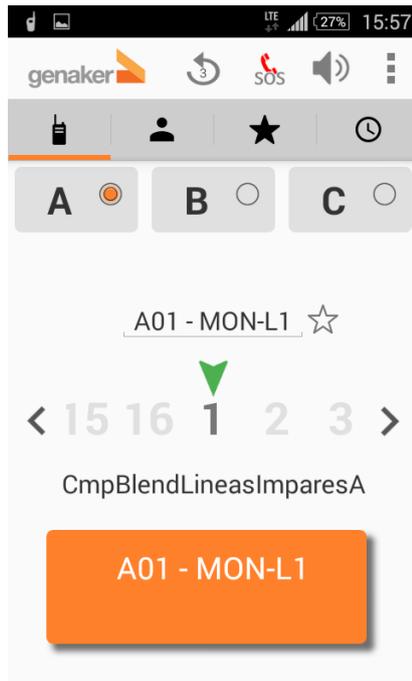


Figure 2. Main view and indicator of the selected channel

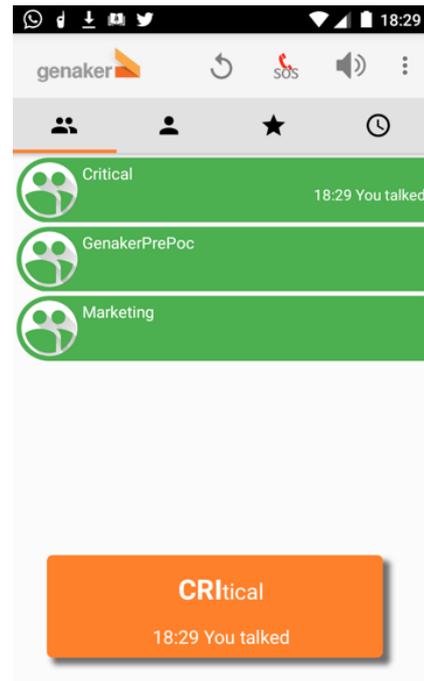


Figure 3. Channels (also named Groups) View

Once we have tuned-in a channel, we can begin speaking in it by pressing the orange button (PTT button from now on) located in the lower side of the screen or by pressing the physical PTT button located on the side of the handset.



Figure 4. Physical PTT button example

The list of available channels can be shown, alternatively, by means of “Channel selector” interface, which simulates the channel selection mechanism of a traditional radio, or by means of a simple list of available channels. Please remember that the “Channel selector” option is only available if the Channel/Groups are named following the pattern with the Prefix format described in the previous paragraphs.

In order to switch between both views you may press the  button (“Menu”) and then select the option “Show as list”.

In the following images, again the two alternative views are shown, depending on whether the channel selector interface or the available channel list interface is used.

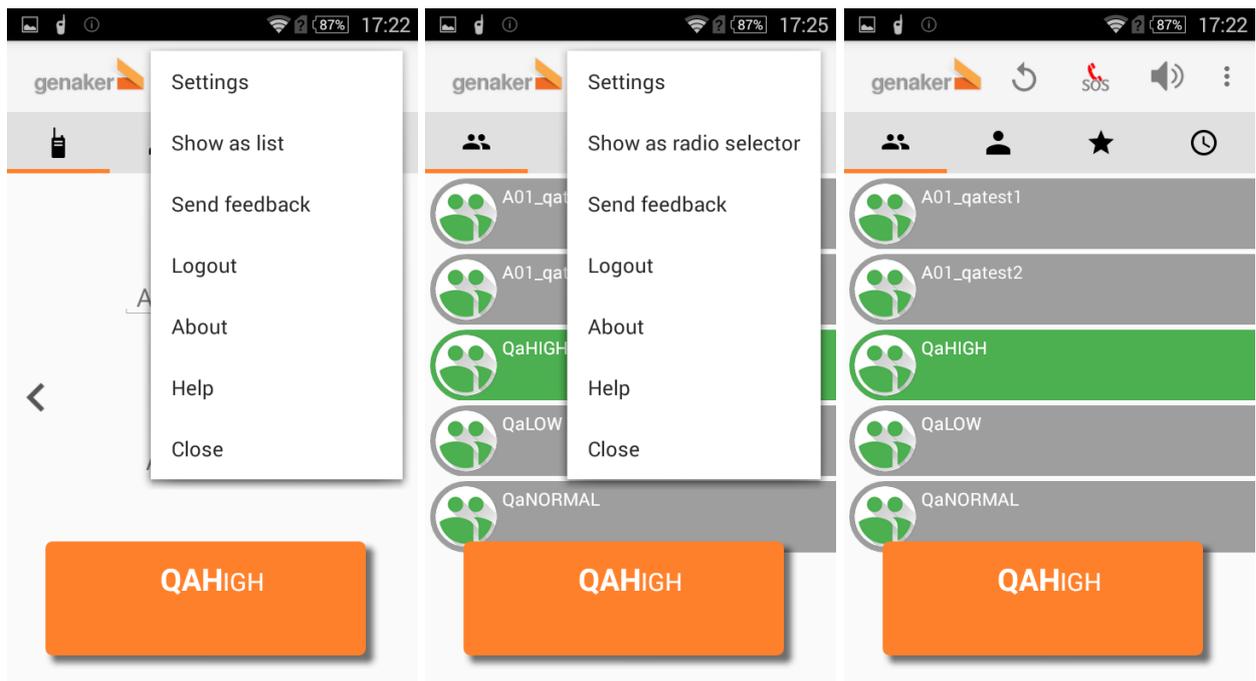


Figure 5. Channel selector and Channel list mode

In the same way, we can access the previous channel selection format pressing again the



button and selecting “Show as selector” or “Show as radio selector”.

3 General Use: contacts, favourites and history

3.1 Views of the application

The PTT client presents four main views: a) Available channels, b) Individual contacts, c) Favourites and d) History. Each of them can be selected by pressing on the corresponding view selection icon:

- Channels =  Avatars icon.

- Contacts =  Avatar icon.

- Favourites =  Star icon.

- History / Chat =  Clock icon.

Independently from the select view, the PTT button of the channel to which we are connected will appear at all times.

3.2 Channels / Groups

As explained in the First Steps (section 2) by selecting this tab the list of available Channels or Groups are shown.

In the List (when the view is not the “Channel Selector”) by selecting one of the Groups the options available are displayed as seen in this image:

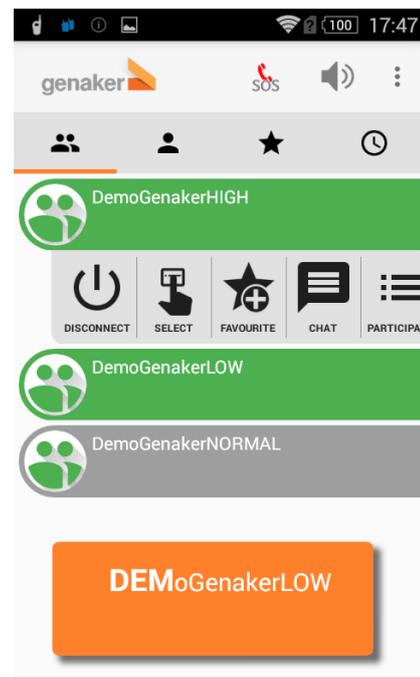


Figure 6. Options for group

The options available are:

1. Connect (or Disconnect when you are connected to this group)
2. Make this Group the Default: Becoming the Default makes that this Group is the one where the user speaks to when pressing the PTT orange button at the bottom of the display. It is also the Default group that the user speaks to when pressing a Hardware PTT button¹.
3. Add/Remove from Favourites: See description in section 3.3.3.
4. Chat: see section 8.
5. Participants: The list of the members of the Group/Channel is displayed with those currently participating marked in green.

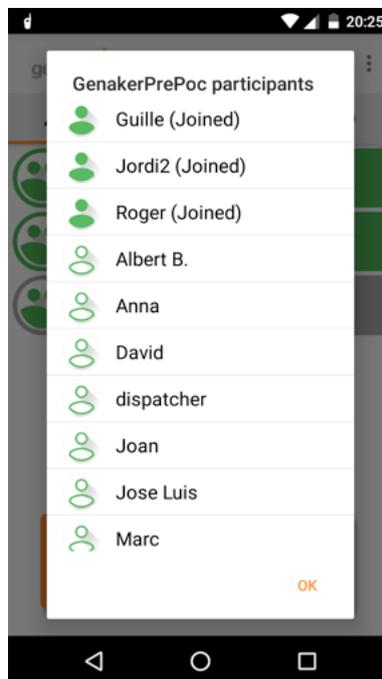


Figure 7. List of the Group Members with those currently participating in green.

¹ Mobile Device dependant

3.3 Contacts

In this part of the application we can access all the available contacts of the user and carry out individual PTT calls, individual VoIP calls, add a contact to the favourites list or initiate messaging with the selected Contact. Remember that the Contacts and Groups that are displayed have been provisioned by the Administrator.

Please contact your Administrator if you want any change in the provisioned Contacts and Groups.

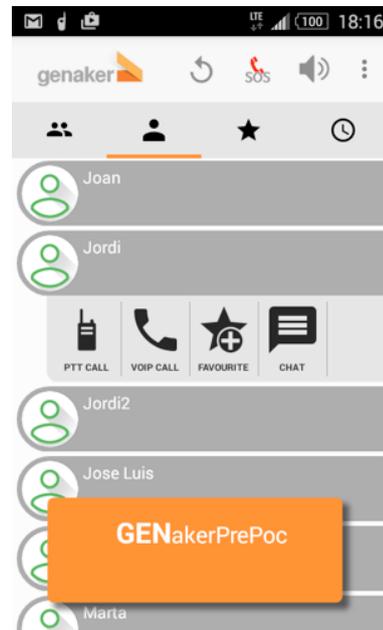


Figure 8. Contact view.

3.3.1 Individual PTT call

The individual call is based on a “walkie-talkie” mode of communication (we must press every time we wish to speak) between the calling user and that receiving the call. Therefore, in order to speak, the PTT button of the application or the physical PTT of the handset will need to be pressed. These types of calls are independent from the group calls and therefore aren’t heard by the rest of the users connected to the group.

The following image shows a sequence of call initiation, incoming call and the call ongoing call screen.

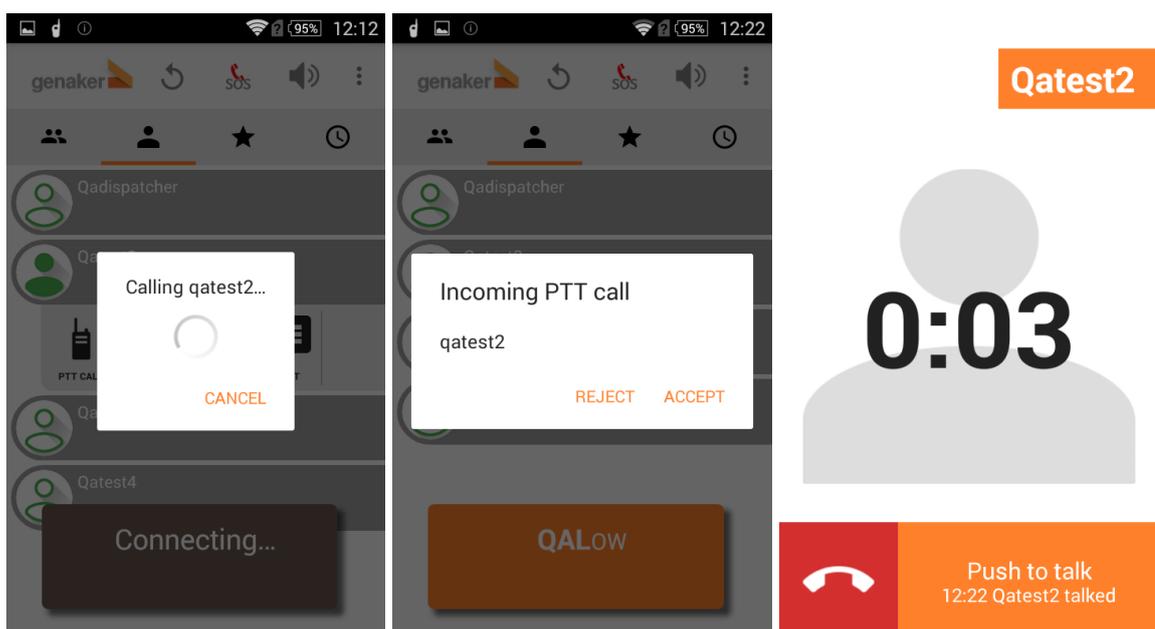


Figure 9. Calling, incoming call and user view

3.3.2 VoIP Call

One of the options available from the Contacts View when selecting one User is the Voice-over-IP call.

The Voice-over-IP call works like a usual telephone call, i.e. user does not need to keep the pressing the call button. Just press it once and release it, wait for the destination user to take the call and start talking. To finish press the red button.

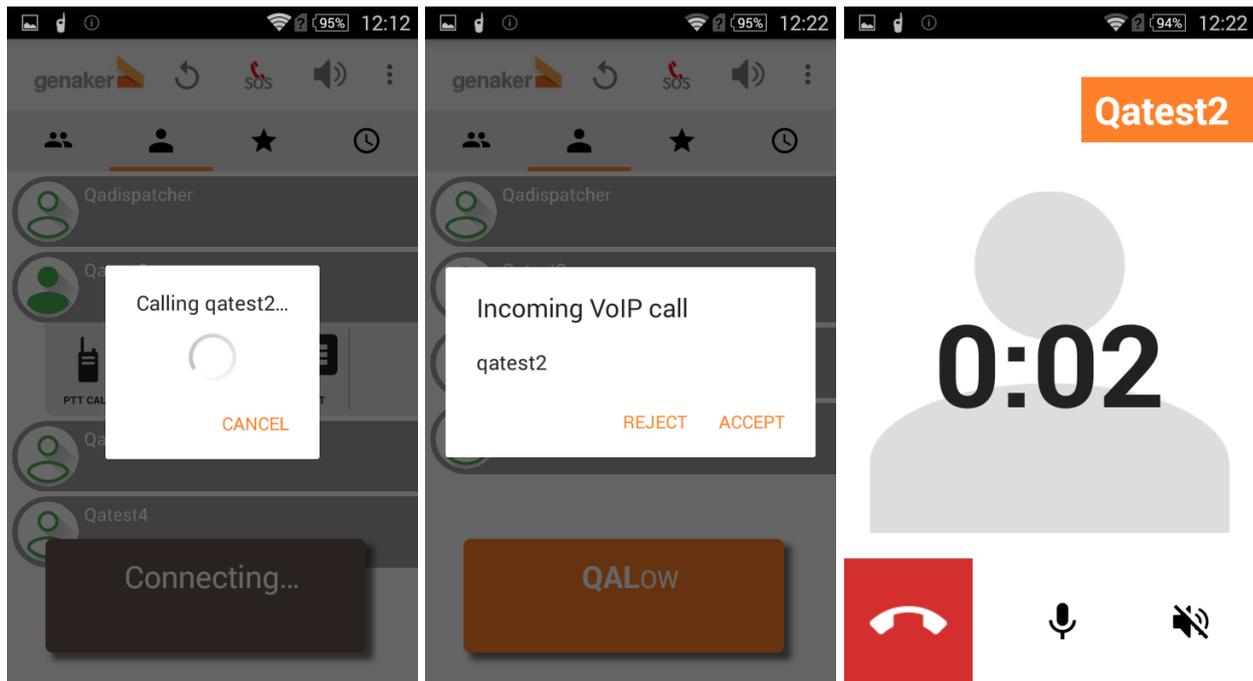


Figure 10. Calling, incoming call and user view

3.3.3 Adding/Removing a Contact from the Favourites List

Selecting the  option the Contact will be added to the Favourites List and when pressing the Favourites tab you will see it there as one of the squares in the grid (See Figure 11 and Section 3.4).

Likewise to remove the Contact from the Favourites List press .

3.4 Favourites

As mentioned earlier, both users and channels can be added to the favourites screen in order to reach them more quickly. In the following view such users and channels are shown.

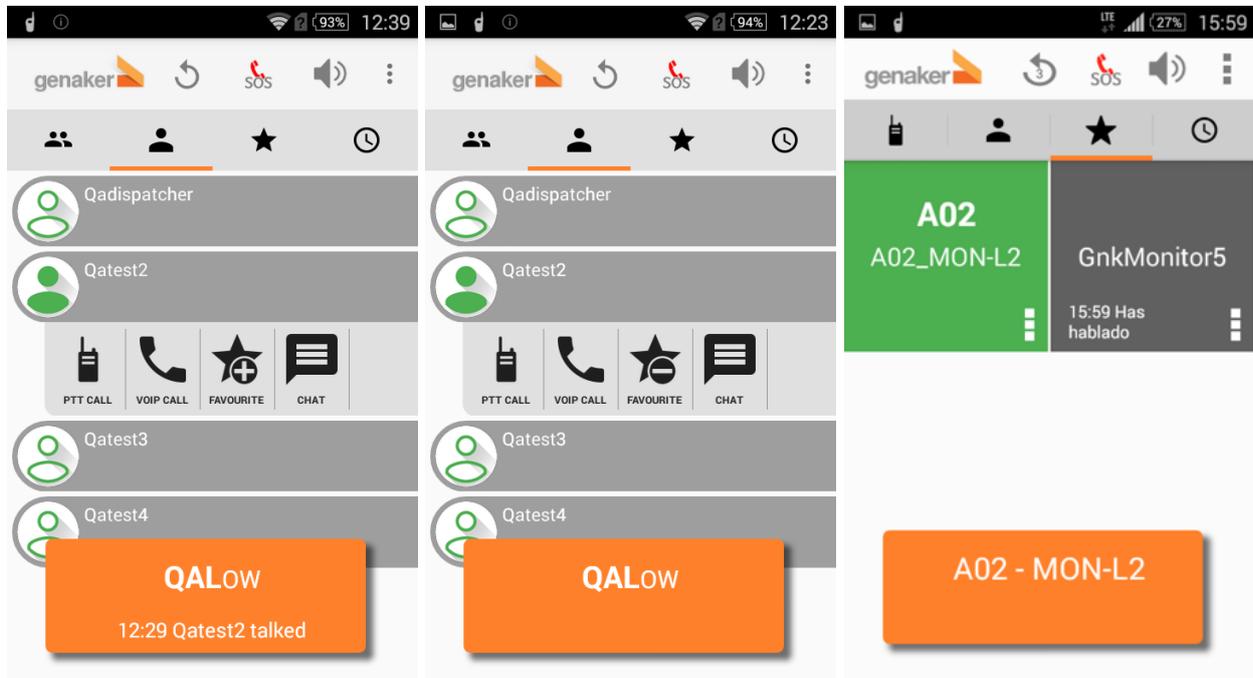


Figure 11. Left and centre, favourite channel and user after being marked. On the right, favourite screen.

You can talk directly to any of the Groups or Users selected as favourites by pushing directly on the square button even if you are not connected to the Group or User (e.g. GnkMonitor5 is in dark grey because we are not connected to him). In such case by pressing and holding first we will join the Group or connect to the User and then we get the permission to talk. For the default Group you can still use the orange PTT button at the bottom as usual.

As mentioned earlier, both users and channels can be added to the favourites screen in order to reach them more quickly. At Figure 11, in the rightmost image a view with the favourite's user and channel is shown.

3.5 History

In the history tab we can access the last calls to a user and interventions carried out in a connected channel, replaying them if we wish to. We can also replay the last three

interventions by pressing the button  at the top bar of the Genaker PTT App.

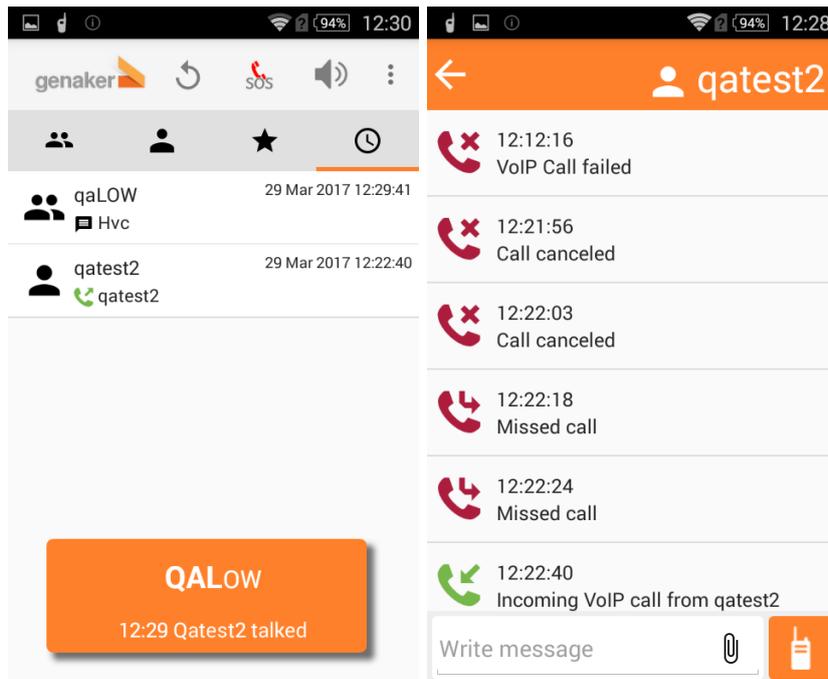


Figure 12. History view and user history.

We can also see all history of groups and individual user.

4 Communications in the emergency channel

If an emergency occurs, one can access the emergency channel by pressing the button in the application. The channel may also be called by holding down for a few seconds the lateral red button of the handset, just as is shown in Figure 13.²



Figure 13. Physical emergency button example

Some considerations about the emergency call:

- i. Emergency calls expire after 10 seconds of inactivity.
 - Emergency calls will only be received by users who have been provisioned as members of the emergency call group and have been ticked as auto join. Those users not provisioned as auto join in the emergency call group will be able to initiate an emergency call but will not be able to receive it.
 - NOTE: Consult with your administrator of the service to know whether your user has been configured as an emergency call receiver or not.
 - Upon receiving an emergency call, this will substitute any previous communication or lesser priority. When the call is finalized, communications interrupted at the moment of receiving the emergency call will be re-established.
 - The user may, during the course of the emergency call, connect manually to any other channel in the system if he wishes.

² This is device dependant

5 Volume configuration

The volume can be configured either by pressing the volume buttons of the handset or by

pressing the  button in the application.

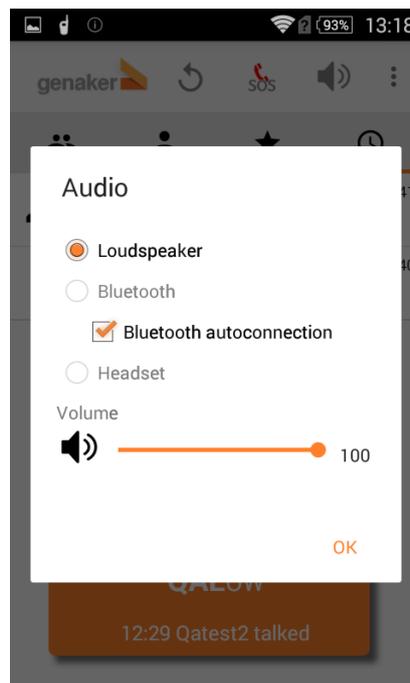


Figure 14. Volume configuration

Upon reaching the volume menu in the application we observe 3 options: loudspeaker, Bluetooth and earpieces. The loudspeaker option is the one which comes activated by defect, the Bluetooth option is disabled and the earpiece option is only activated in case of connecting a cabled accessory.

6 Menu

By pressing the menu icon  at the upright corner the following options appear:

1. Settings
2. Send feedback
3. Logout
4. About
5. Help
6. Close

6.1 Settings

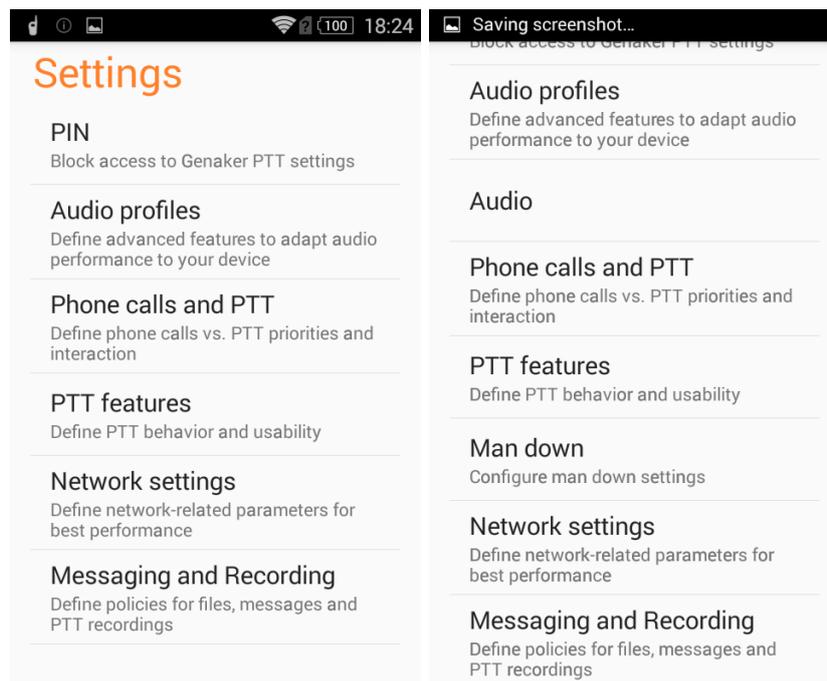


Figure 15. General settings

6.1.1 PIN: Protecting the Settings management

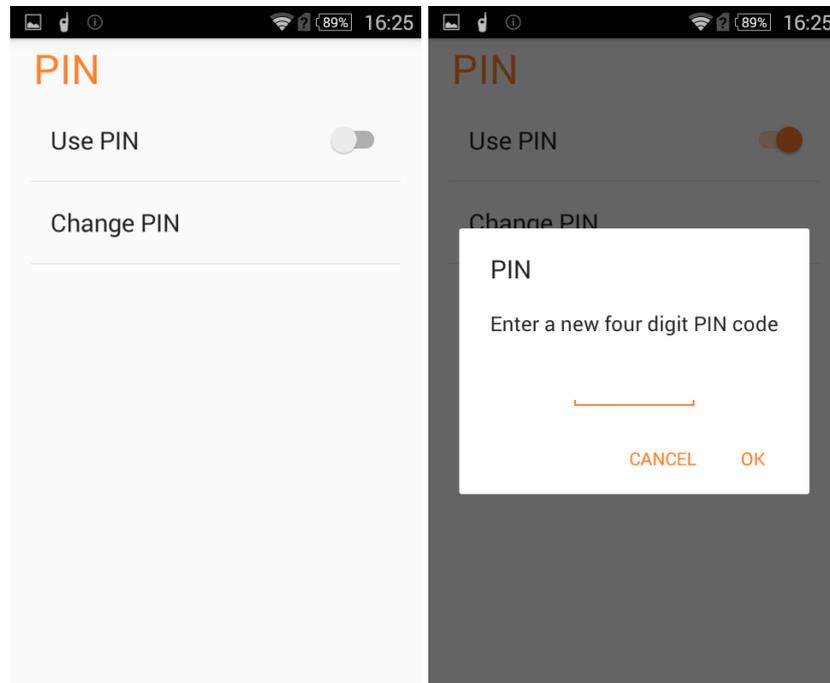


Figure 16. PIN settings

The access to the Settings configuration can be blocked by means of a Setting.

6.1.2 Manage Audio profiles

Audio configuration can be adjusted by means of several parameters.

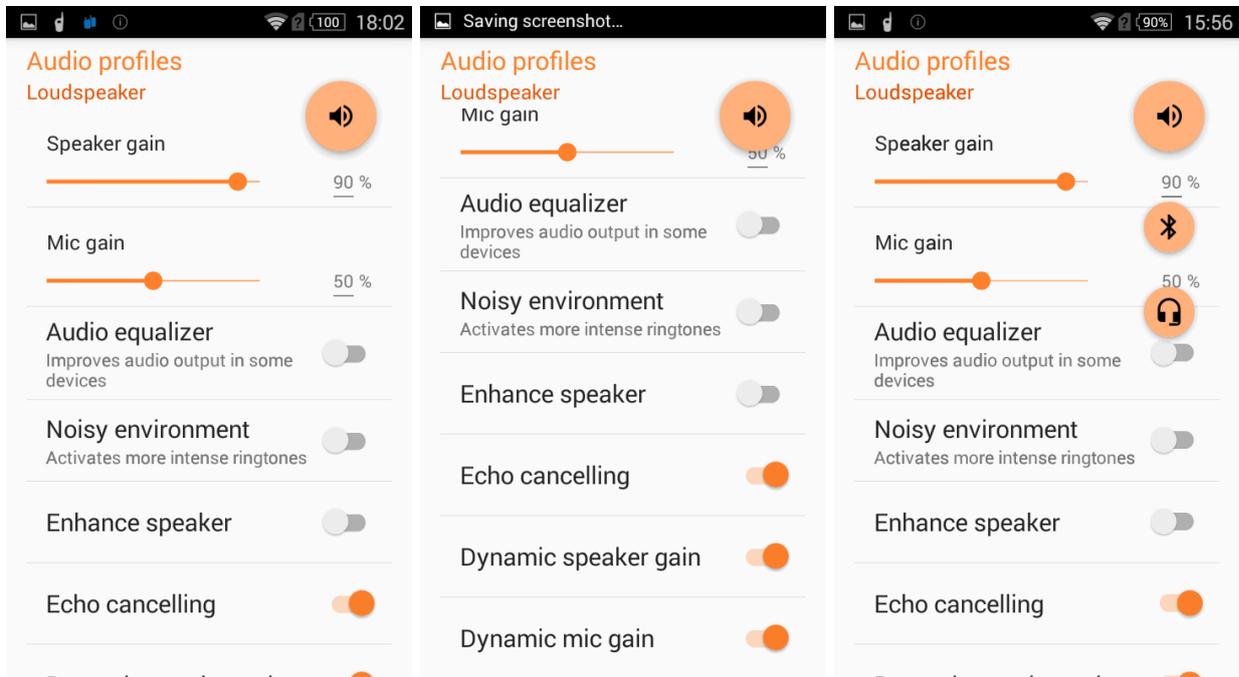


Figure 17. Audio profiles settings

Pressing the different audio Mode (Speaker, Bluetooth, Headphone), we can manage the followed configurations.

1. **Speaker gain:** Adjust this value in case you hear too slow or too high (or too distorted). It is also recommended to modify this value with care and test iteratively until you find the right balance for your phone.
2. **Mic gain:** Increase this value slightly in case those that you talk to tell you they hear you too low or too distorted. This parameter must be changed in small increments since it introduces distortion. It is recommended to test with a receiving user a few times until you find the proper balance between volume and clarity.
3. **Audio equalizer:** By enabling this setting the audio is adjusted by equalizing filter. In some devices the equalizer improves the audio output but it may reduce the volume.
4. **Noisy environment:** Enabling this setting the ringtones become more acute and with higher volume in order to ease hearing them in noisy environments.
5. **Enhance speaker:** Default is disabled. In some devices it may help to improve speaker.
6. **Echo cancelling:** When activated it avoids echo. Enabled by default. Usually it reduces volume also. This parameter is recommended to set it as enabled if receiving phones hear too much distortion when you speak. Since it usually reduces volume it might probably need that the receiving phones increase the speaker gain.

7. Dynamic speaker gain: It is recommended to keep this setting enabled since it tries to minimize the distortion effect when increasing the speaker gain. Only test it disabled if you want to obtain higher volume accepting some distortion when increasing the speaker gain.
8. Dynamic Mic gain: It is recommended to keep this setting enabled since it tries to minimize the distortion effect when increasing the microphone gain. You may want to disabled it if those you speak to tell you that they still do not hear you after having tried to increase significantly the microphone gain.

6.1.3 Phone calls interaction

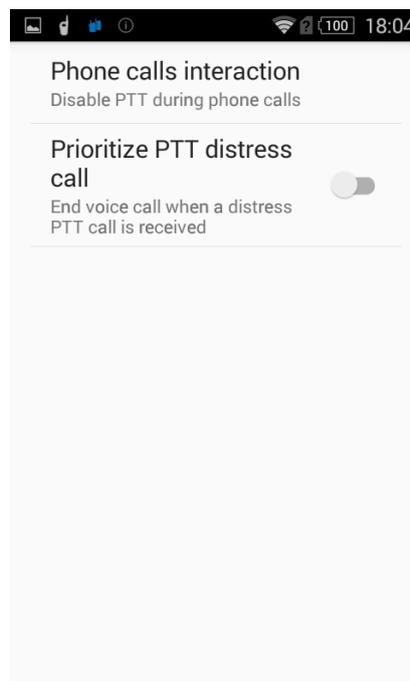


Figure 18. Phone calls interaction setting

The way PTT calls and regular voice calls (GSM) interact can be configured to support different user and corporate scenario.

1. Phone calls interaction:
 - a. Block any incoming call
 - b. Silence PTT during incoming calls (Default)
 - c. Keep PTT enabled during incoming calls
 - d. End voice call on PTT activity
2. Prioritize PTT distress calls: Voice calls will be ended if a Distress (Emergency) PTT call is received. This setting is disabled

6.1.4 PTT Features

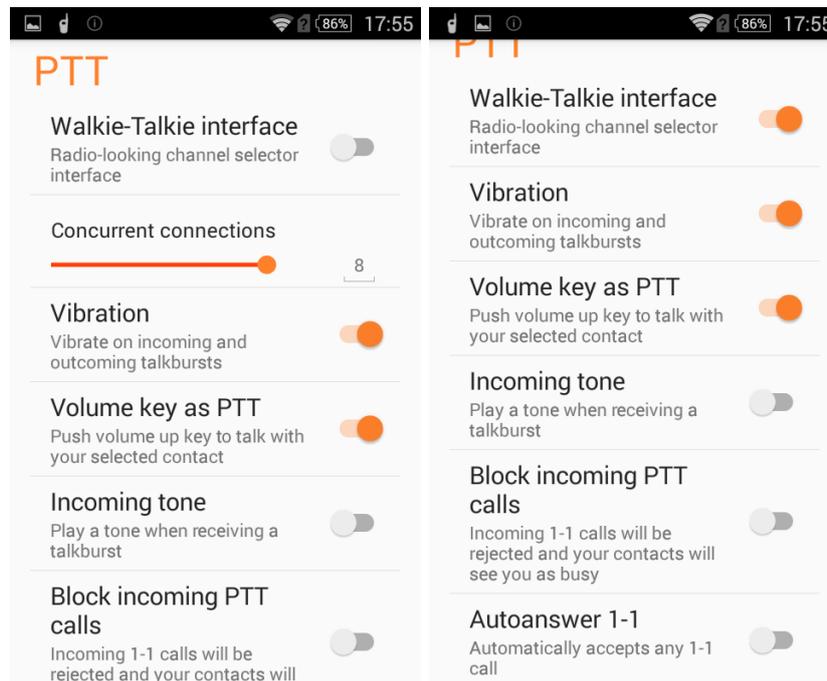


Figure 19. PTT settings

The following options are available to adjust the PTT behaviour:

1. Walkie-Talkie interface: This is by default enabled after installation of the App. When enabled only one Channel/Group can be selected at a given moment to listen to.
2. Concurrent connections: This option is only visible when Walkie-Talkie interface is enabled and it sets the maximum number of Channels/Groups that can be listened concurrently.
3. Vibration: Activate vibration for incoming and outgoing talkbursts. By default, this setting is enabled.
4. Volume key as PTT: You can convert the Volume Up key into a hardware PTT button. This function in most devices requires that the screen is unlocked. When this option is enabled if we need to increase the volume of the mobile phone we first decrease it a little bit and then we can increase up to the desired level.
5. Incoming tone: Play a tone before an incoming audio. By default, this setting is disabled.
6. Block incoming PTT calls: Individual incoming PTT calls can be block. Initiator will see you as busy. By default, this setting is disabled.
7. Auto answer 1-1: Individual incoming PTT calls will be accepted when this setting is enabled. By default, it is disabled: manual acceptance is required.

6.1.5 Network settings

1. Network mode: Optimize audio codec for the preferred network conditions. 4G (High Quality), 3G (by Default), 2 (Lower Quality)
2. Disconnection notification frequency: These options, play a tone when there isn't internet connection. (From Never to 60 minutes)
3. Keep alive frequency: message sent the APP to server to maintain the activity available. (From 5 secs to 30 secs).

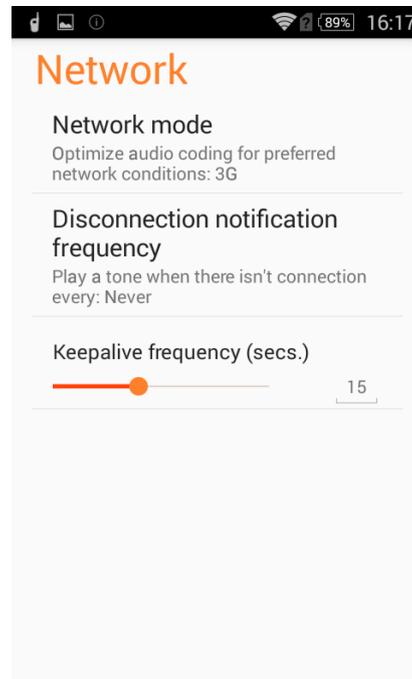


Figure 20. Network settings

6.1.6 Recordings settings

Record audio: If this option is Enable, the app will save the last 50 Talkburst in internal storage of the phone. (The last 50 talkbursts are just temporal on phone, they will be appearing on the history menu).

Export audio talkburst: This option will export the last 50 talkburst to the memory storage of the phone.

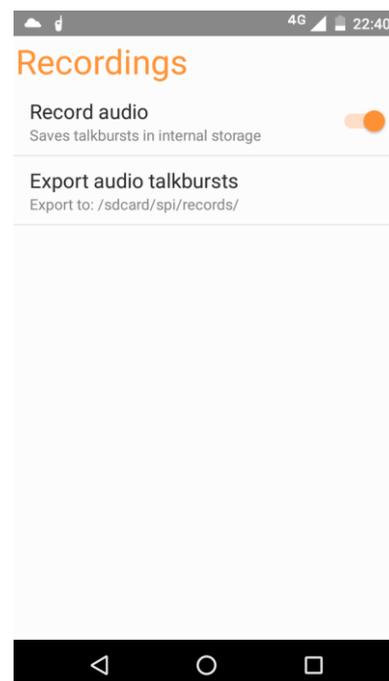
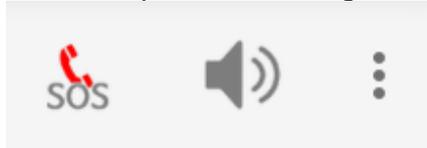


Figure 21. Recordings settings

7 Default Setting

7.1 Introduction

After login in to the application, on the right upper side of the screen we can find the SOS emergency call button, the audio option and settings.



In the settings section (7.2) we will find different default options which are shown in this document.

7.2 Settings

The following options are displayed in the settings section:

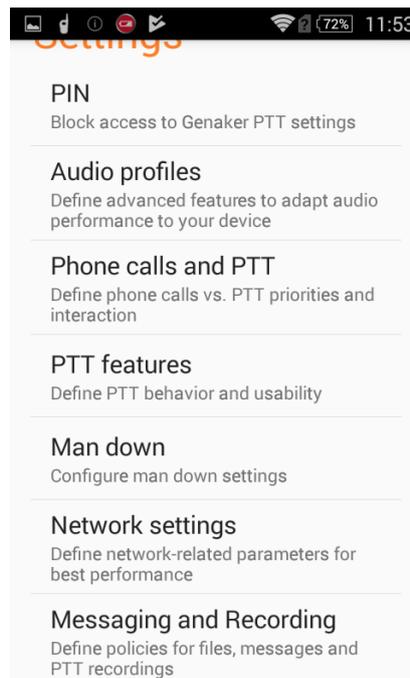


Figure 22. Settings section

7.2.1 PIN

This option allows choosing if the user wants a PIN to block the access to Genaker PTT Settings. This option is **disabled** by default. Also, in the same option we can change the PIN if we want or need to.

7.2.2 Audio profiles

This option includes features that let the user adapt the audio performance on the device. On the right upper side, we will find a light orange button with a speaker icon. If the user clicks on it, there will appear 4 different audio options to configure: **Loudspeaker, Bluetooth, headset and internal speaker (use in VoIP calls)**

- i. Speaker gain: this option allows increasing the power of the signal. It comes by default in **90%**.
- ii. Mic gain: this option allows increasing the power of the microphone output signal. It comes by default in **50%**.
- iii. Audio equalizer: it allows improving the audio output in some devices. This option is **disabled** by default.
- iv. Noisy environment: it allows activating more intense ringtones. This option is **disabled** by default.
- v. Enhance speaker: it allows enhancing the speakers. This option is **disabled** by default.
- vi. Echo cancelling: This option is **enabled** by default.
- vii. Dynamic speaker gain: This option is **enabled** by default.
- viii. Dynamic mic gain: This option is **enabled** by default.

7.2.3 Phone calls and PTT

This option allows defining phone calls vs PTT priorities and interaction.

- i. Phone calls interaction: This option comes by default in **Disable PTT during phone calls**. But the user can choose 4 different options: Block any incoming call, Disable PTT during phone calls, Keep PTT enabled during incoming calls, End voice call on PTT activity.
- ii. Prioritize PTT distress call: This option allows ending voice calls when a distress PTT call is received. This option is **disabled** by default.

7.2.4 PTT features

This option allows defining PTT behaviour and usability.

- i. Walkie talkie interface: This option is **enabled** by default (As monochannel).
- ii. One to one calls: This option allows configuring the behaviour of 1-1 calls.
Block incoming PTT calls: This option allows rejecting 1-1 calls and makes the user look busy to the other contacts. This option is **disabled** by default
Autoanswer 1-1: This option allows automatically accepting any 1-1 calls. This option is **disabled** by default.
- iii. Vibration: This option allows vibration on incoming and outgoing talkbursts. This option is **enabled** by default.
- iv. Volume key as PTT: This option let us use the volume key to talk to our selected contact. This option is **enabled** by default in “Volume up”. You can also “Disable” the volume key or change it to “Volume down”.

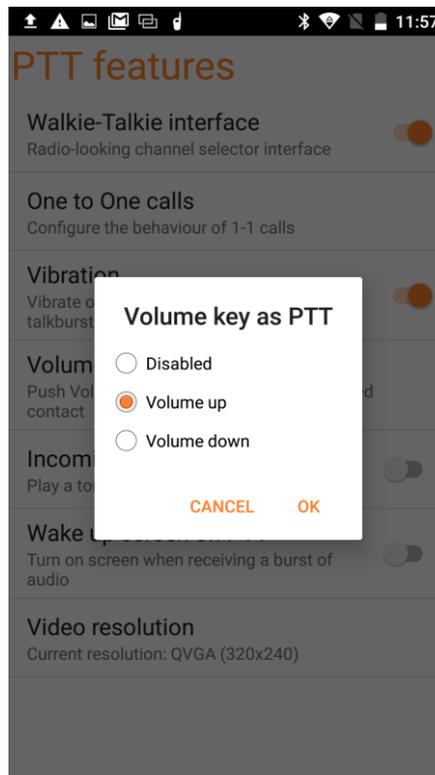


Figure 23. Settings volume key

- v. Incoming tone: This option allows playing a tone when receiving a talkburst. This option is **disabled** by default.
- vi. Wake up screen on PTT: This option allows turning on the screen when receiving a burst of audio. This option is **disabled** by default.
- vii. Video Resolution: This option allows to choose the resolution for PTV call. This can be change in different modes as seen in photos:

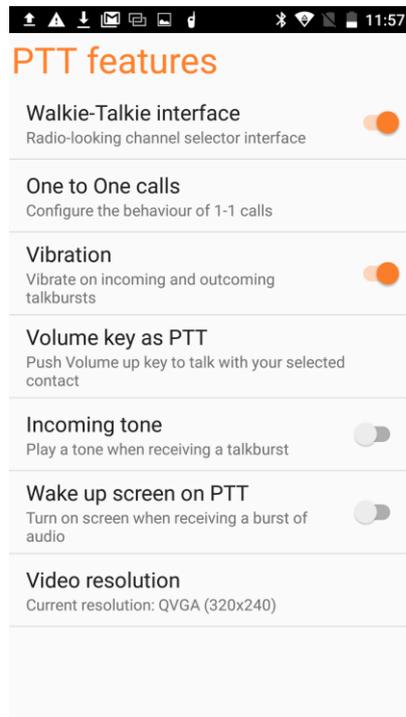


Figure 24. PTT features

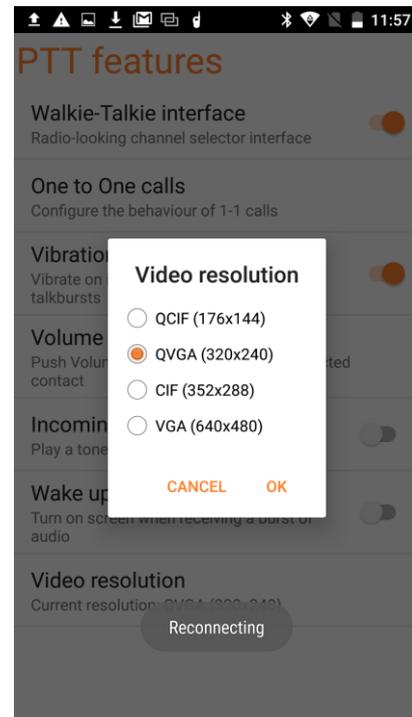


Figure 25. Different video resolution

7.2.5 Network settings

This option allows defining network related parameters for best performance

- i. Network mode: This option makes the user choose between 2G, 3G or 4G. The option comes by default in **3G** network mode.
- ii. Disconnection notification frequency: This option allows playing a tone when there is not connection. The user can choose the time of repeating the tone from never to 60 minutes. The option comes in **never** by default.
- iii. Keepalive frequency (secs): The option comes by default in **15 secs**.

7.2.6 Messaging and recording

This option allows defining policies for files, messages and PTT recordings.

- i. Record audio: This option allows saving talkbursts in the internal storage. This option is **enabled** by default.
- ii. Export audio talkbursts: This option allows exporting audio talkbursts.

8 Chat (optional)

To use the Chat functionality select the history tab  and the list of recent activity will be shown such as in the Figure 26:

As other chat systems, we can also have individual chat with a user of the contact list and with a group.

The Chat messaging has the following options:

8.1 Write and send instant text messaging

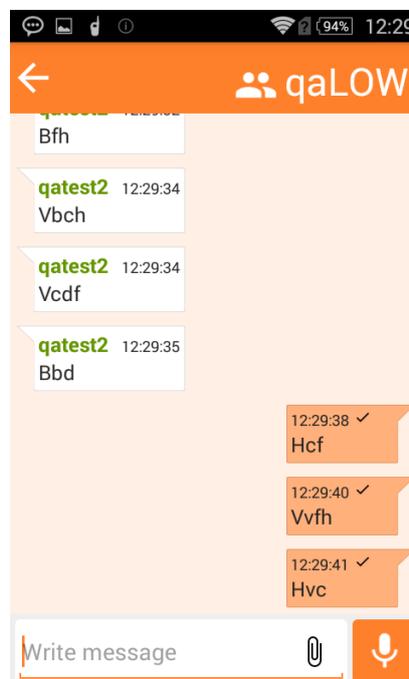


Figure 26. Chat view

8.2 Listen the last 50 recording talkburst

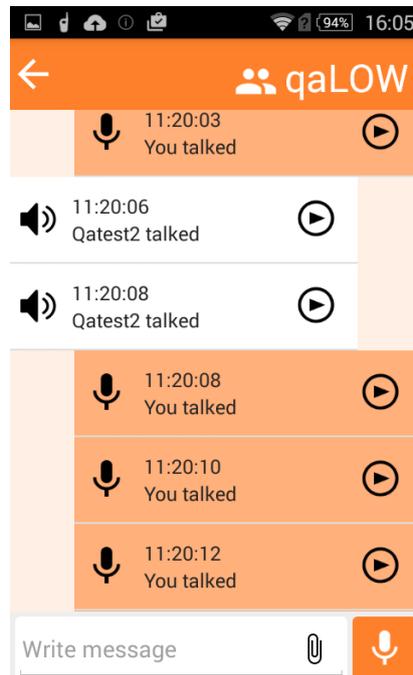


Figure 27. Listen last recorded talkbursts

8.3 Attach a Picture taken directly from the Camera or selected from the Gallery

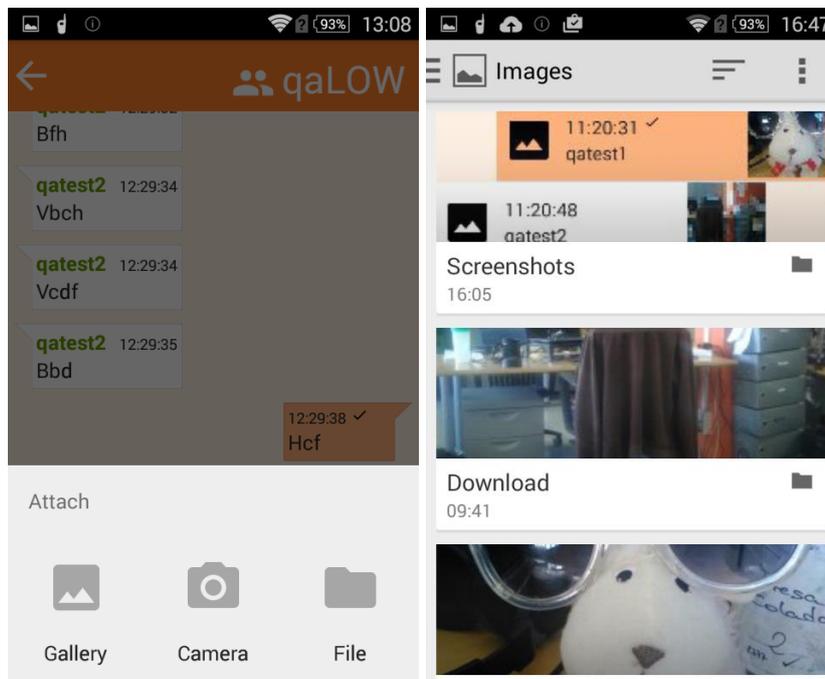


Figure 28. Attach a picture

8.4 Attach a File

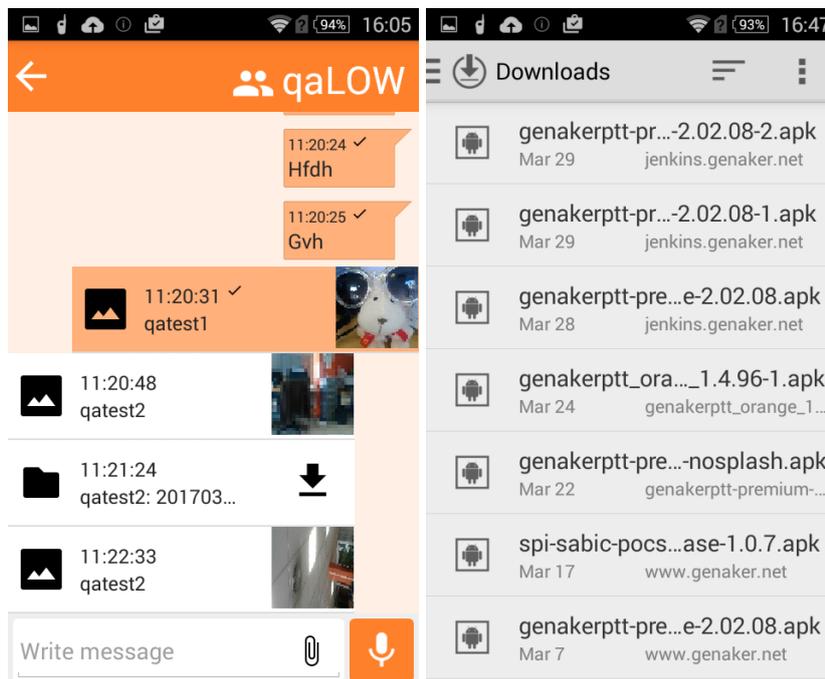


Figure 29. Attach a file

8.5 Check's functionality

When the message has been sent a single black check appears to the right of the timestamp. When the destination user has received the message a double black check is shown. Finally, when the destination user has read it the double check becomes white.

Please note that when the destination is a group, the check will not become double until all the members of the group have received the message and will not become white until all the members have read it.

8.6 Additional information

Also note that the user can always speak over PTT to the default Group by pressing the

small  button at the right of the text entry field. If a Hardware PTT button is configured such as the Volume Up Key or a dedicated Hardware PTT button of the device, then the user can also speak always to the default group never mind the screen he is in.

9 Video (optional)

For initiate a video transmission, just push the Video RTP icon. The video transmits only image, not audio. During a video transmission, the PTT works as usual:

- If it's an individual video transmission, the PTT button of the application shows the member receiving the video. If we press the button or use the physical PTT of the handset, only this member receives the talkbursts.
- If it's a group video transmission, the PTT button of the application shows the group receiving the video. If we press the button or use the physical PTT of the handset, all members of the groups receive the talkbursts.



Figure 30. Initiating video

For stop the video transmission, just press the back arrow and the app will return to the previous menu.



Figure 31. Video transmitting example

10 Man down (optional)

10.1 Man Down Options

Man down has 2 different modes (when enabled): Inactivity and Motion sensor, both of which generate automated emergency calls.

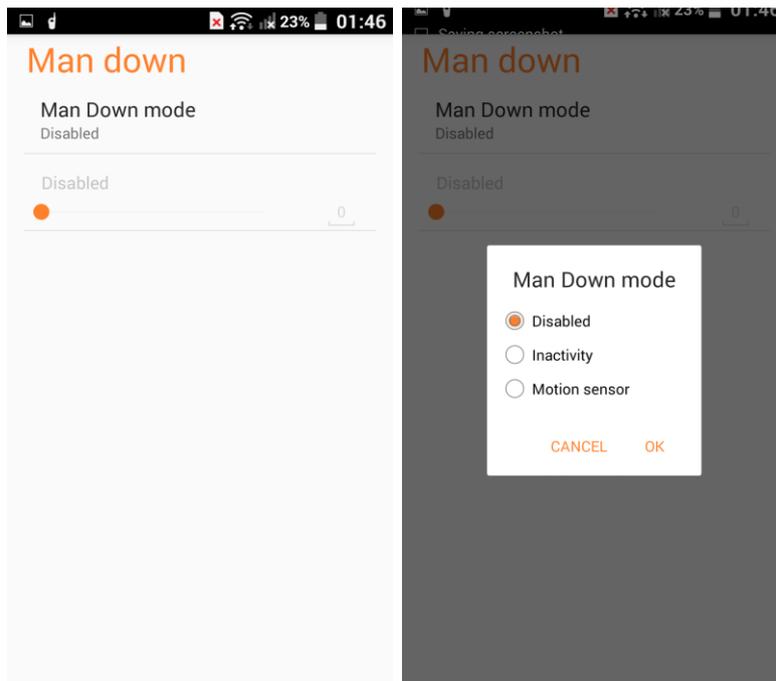


Figure 32. Enabling Man Down mode

For activate the mode selected, hold for 3 seconds the alarm button

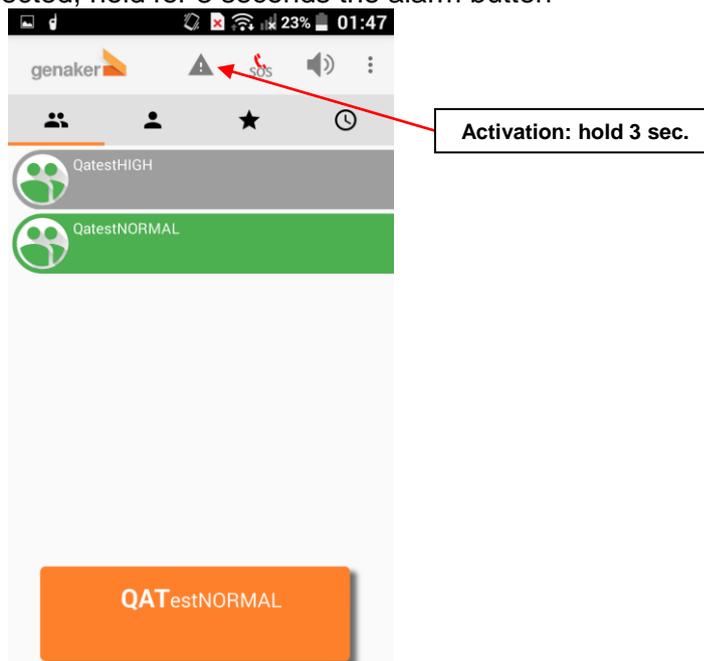


Figure 33. Activating Man Down mode

10.2 Inactivity Mode

This mode requires the worker to confirm he is alright at a preset time intervals by pressing a SAFE button which appears at the lower end of the screen. If he fails to do so, an Emergency call will be sent to the staff.

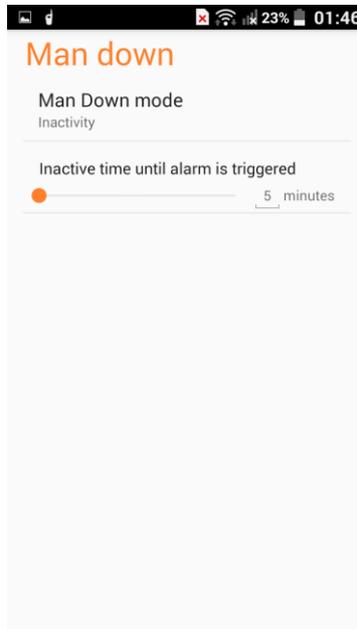


Figure 34. Setting the time interval for Inactivity Mode

10.3 Motion sensor Mode

An Emergency call will be sent to the staff if the worker stops moving for a preset period of time. However, before the emergency call goes off, the worker is notified via acoustic and visual signals and has the possibility of cancelling the alarm by delivering movement to the device.

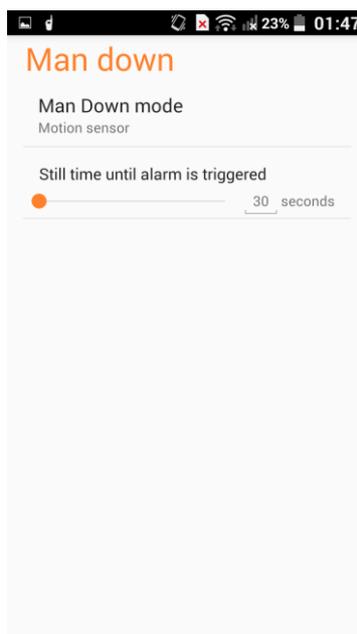


Figure 35. Setting the period of time for Motion sensor Mode

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