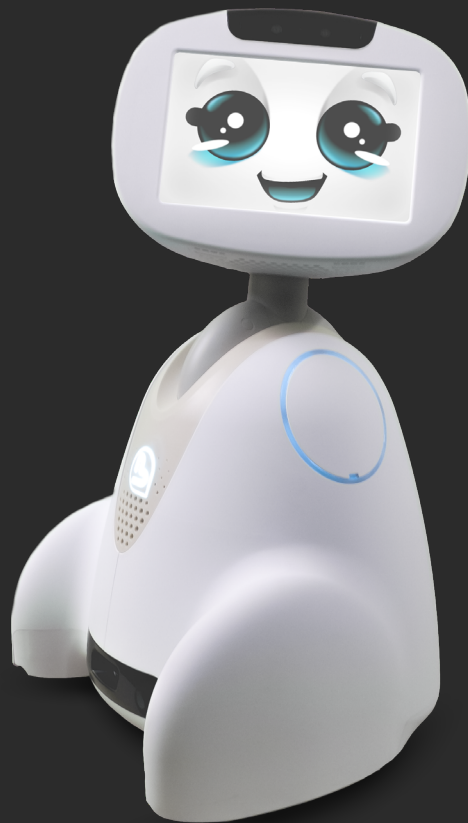
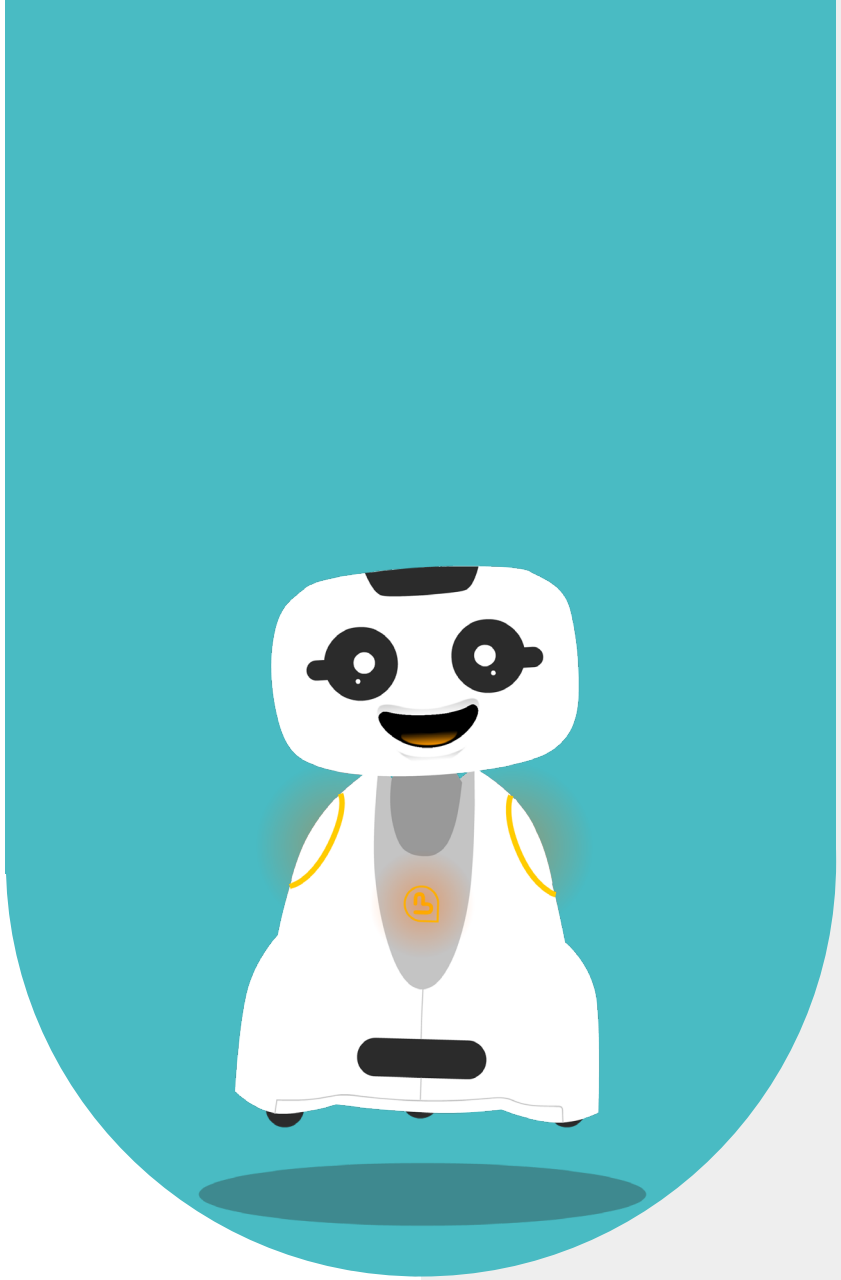


Télé-présence

User guide v1.1



Buddy[®]
The Emotional Robot



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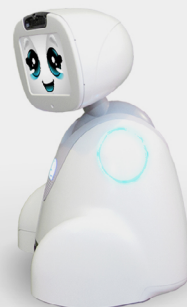
2 - GENERAL DESCRIPTION

2.1 - WHAT IS TELE-PRESENCE

The Telepresence application lets you interact with your loved ones from a distance! Simply connect your tablet to your Buddy. You can also control your Buddy

The principle of Telepresence is to communicate by video/audio between two distant people. Users equipped with a tablet or smartphone and a dedicated application can control Buddy remotely.

- The Telepresence solution has two control modes, a static mode «and a «dynamic» mode (ground control).
- The «static» mode allows you to call a person from a distance and control Buddy's head position.
- The «dynamic» ground control mode also allows the robot to be moved on the ground by the remote user.



Download the MyBuddyApp APK by scanning this QRCode



Find the complete user guide to create your Agora.io account in the documentation by scanning this QRCode



2.1 - ROBOT CHARGING

For maximum ease of use, we recommend that you leave the robot connected to its power supply the robot connected to its power supply for the duration of the «static» mode.

2.2 - MYBUDDYAPP - THE TELEPRESENCE APPLICATION FOR TABLETS & MOBILES

The remote user uses the tablet to control Buddy and communicate with other users around the robot. The connection between the Tablet and the robot is possible via 4G or WiFi. The application's general functions are as follows:

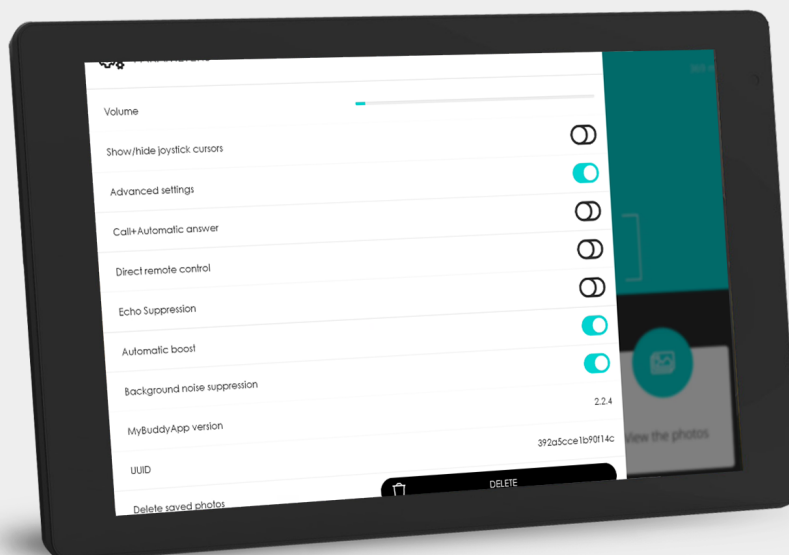
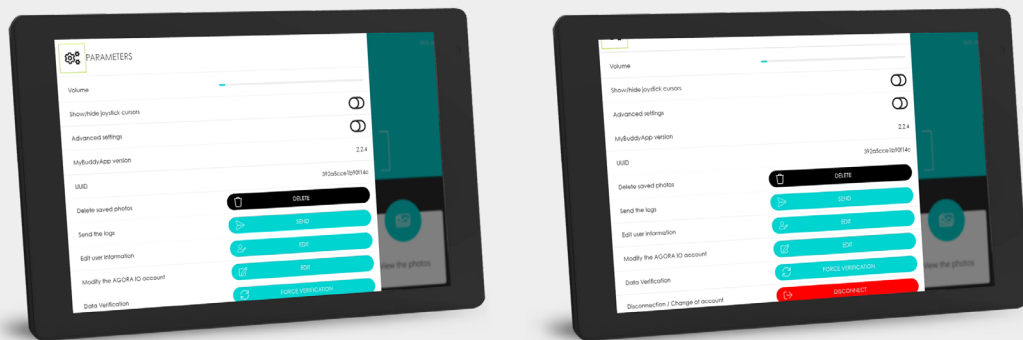
- Access to the General Menu for application settings
- Activation/deactivation of video sent to robot (Tablet front camera)
- Activation/deactivation of dynamic navigation (this option is available only if authorized by the robot user)
- Microphone on/off (Tablet's microphone/headset)
- Send text and/or spoken message from Buddy
- Display facial expressions (predefined expressions)
- Zoom the video by switching from short (80°) to wide (130°) focus and vice versa.
- Access to photos (Gallery)
- Adjust listening volume (Tablet volume)
- Activate/deactivate driver video thumbnail (Tablet front camera return)
- Activation/deactivation of speaking request
- (1)Head centering indicator -> 'Static' mode crossbar
- (2)Two steering cursors on the left and right of the touchscreen -> 'Dynamic' mode Ground steering



2.3 - TABLET OPTIONS MENU

Access to the General Menu of application settings:

- To hang up and end the call
- Adjust the volume of what the robot says
- Show/hide joystick cursors
- Delete saved photos
- Modify user information
- Modify Agora.io account
- Check data
- Log out to change user account
- Send logs (bug reports) to support



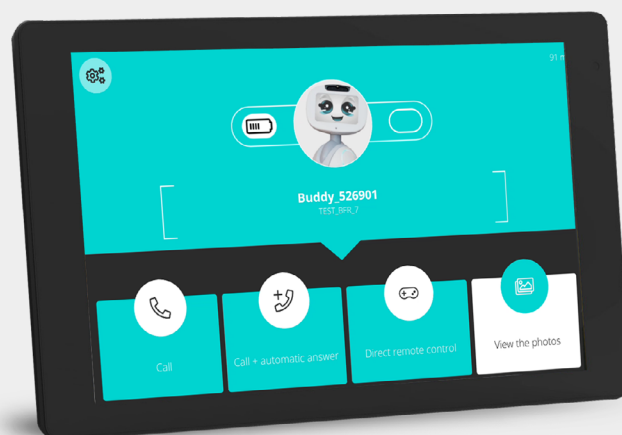
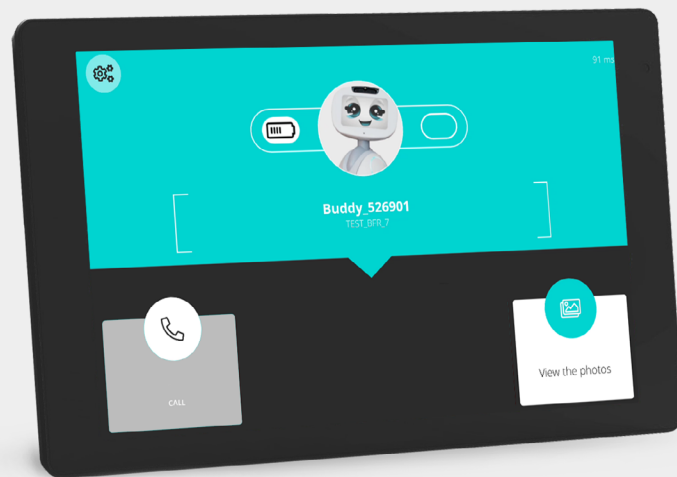
Option menu view with «Advanced settings» open

In the advanced settings you can add call options:

- Call + automatic pick-up: if you use this type of call, the call will start after the ring even if the user doesn't pick up.
- Direct control: call starts immediately without ringing on the robot

These options are only available if the robot user has authorized automatic pick-up in the TeleBuddy settings (on the robot).

If these call types are enabled, the associated call buttons appear on the home page



Audio adjustment options are also available in the advanced settings.

2.4 - TELEBUDDY THE ROBOT TELEPRESENCE APPLICATION

When a connection is established, the following information and functions are displayed:

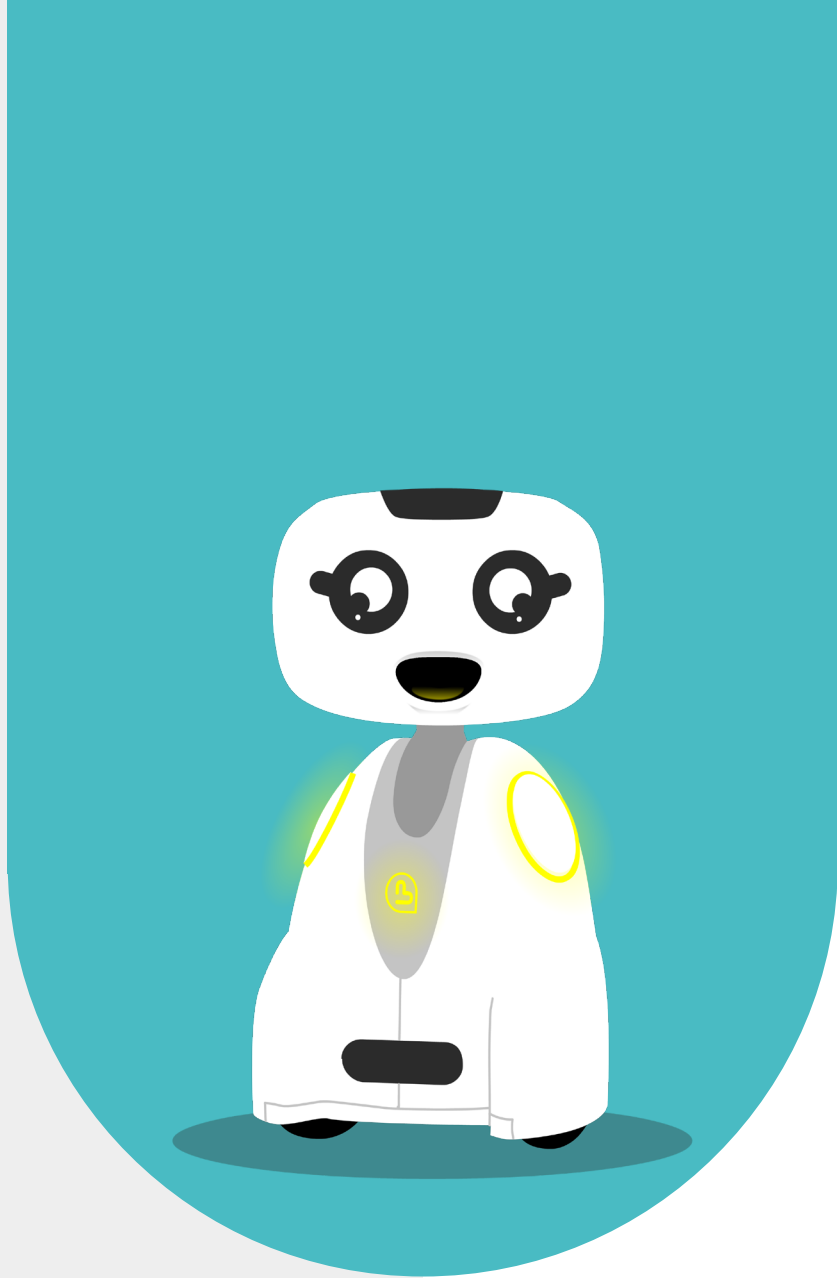
- «Hang-up» icon
- Battery level
- 4G/WiFi network quality
- Volume control
- Video on/off Tablet video
- Microphone on/off on robot
- Activate/deactivate robot camera video feedback



2.5 - ROBOT OPTIONS MENU



- Access the Buddy Menu (The icon at top left)
- Exit App (Cross at top right)
- Information icon top right
- Network quality
- Connection quality VideoChat in ms
- Volume level
- Activate static or dynamic navigation
- Update logged-in user by swiping down



3 - HOME SCREEN (TABLET - ROBOT)

3.1 - TABLET SIDE

The connection can be initiated either by the robot or from the Tablet.

The remote user turns on the tablet and starts the MyBuddyApp application. The home page displays the name of the robot with which the tablet is paired and a «call» button.

Other information displayed:

- Connection speed expressed in ms -> If offline, info not displayed
- Robot connection status -> Online (blue call button), Offline (gray call button)
- Robot battery level
- Access to photos



When the «call» button is displayed in gray, Buddy is off-line. You can't make a call.

When the «call» button is displayed in blue, Buddy is available to establish a connection.

3.2 - ROBOT SIDE

User turns on robot, Buddy's face appears.

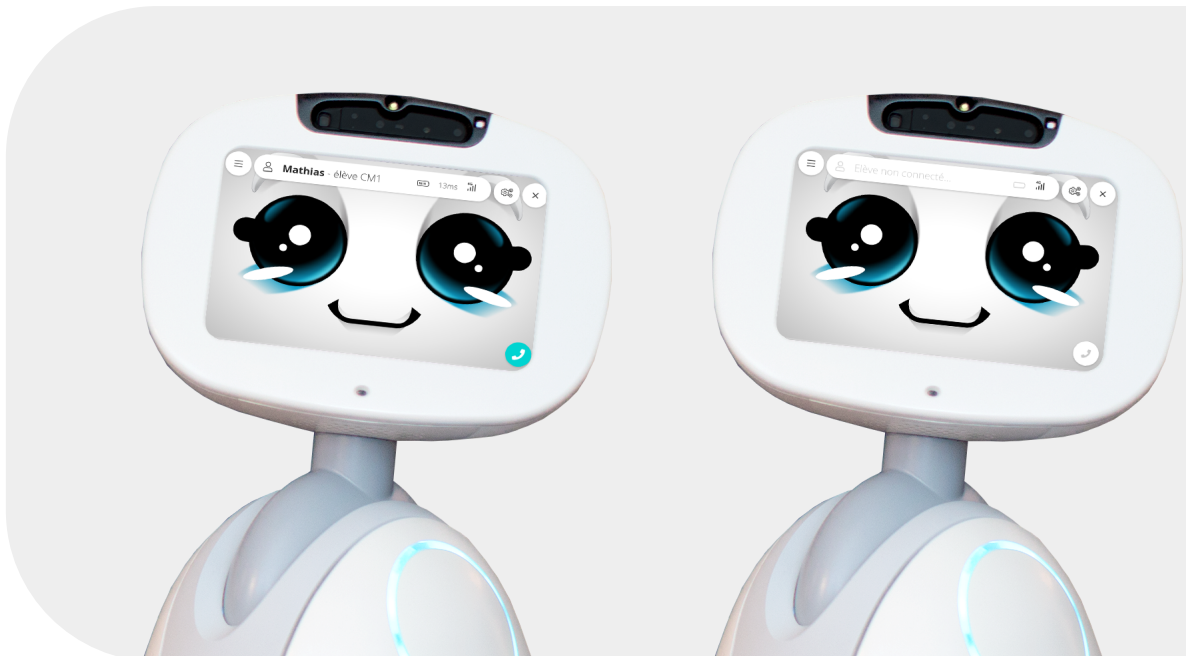
The face reacts to strokes and fingers in the eyes/mouth. The user can launch the MyBuddyApp application and start the call by pressing the call button.

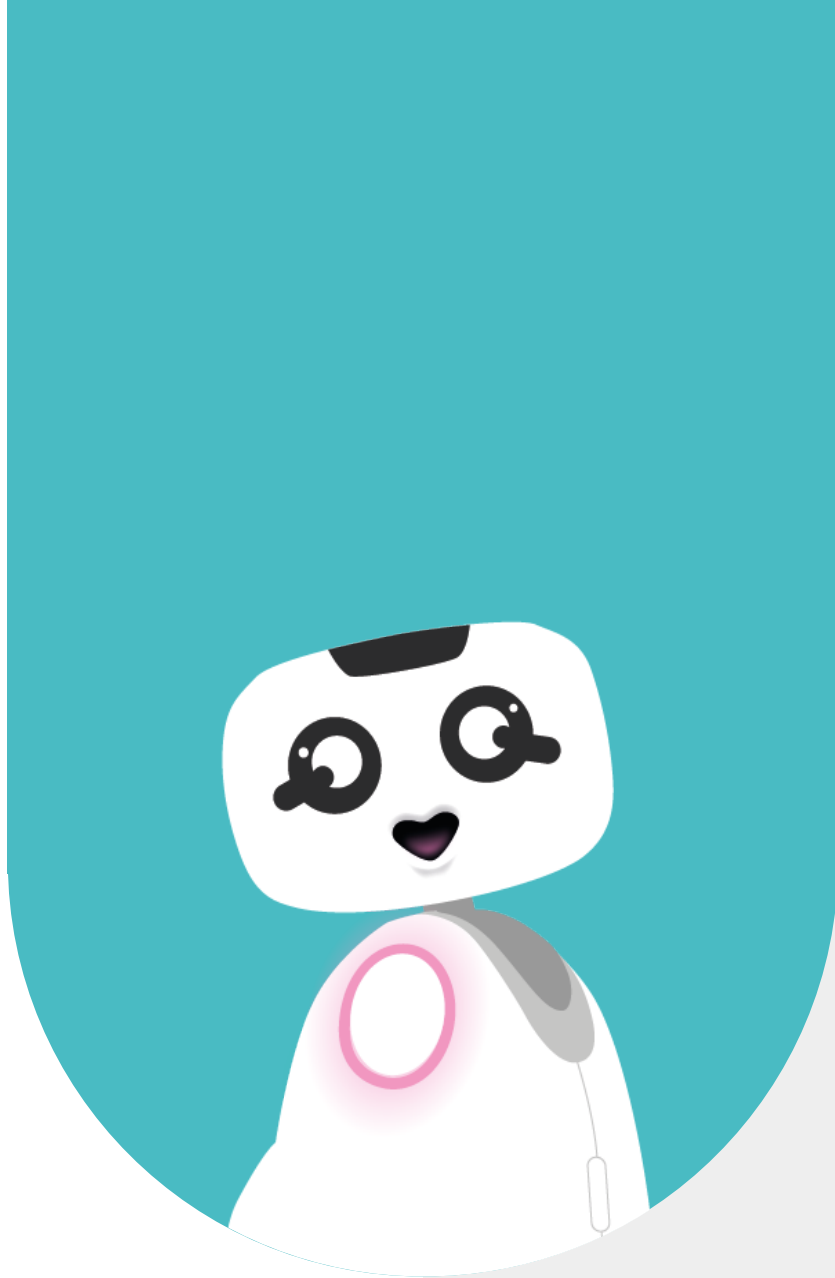
Other information displayed:

- 4G/Wifi network quality
- Connection quality
- Robot battery level
- Tablet connection status
- Online (green call button)
- Offline (call button greyed out)
- Tablet user name
- Menu access

When the «  » button is displayed in blue, this means that the user is available to establish a connection.

When the «  » button is greyed out, the user is offline.



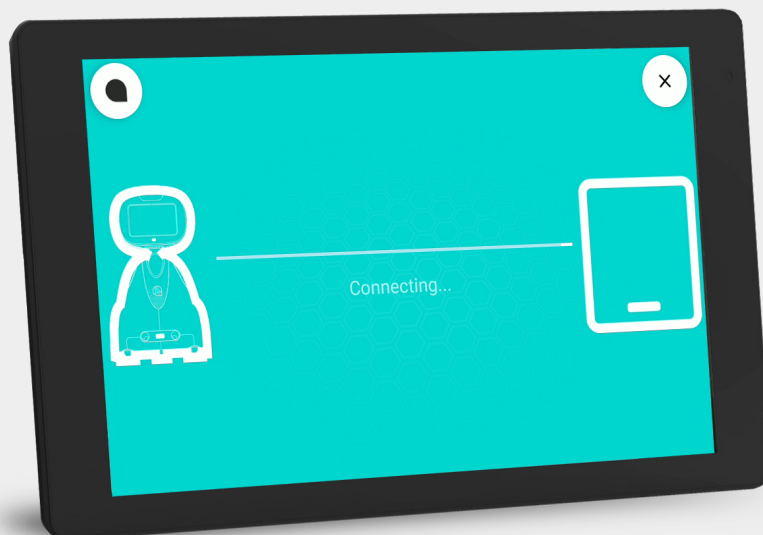
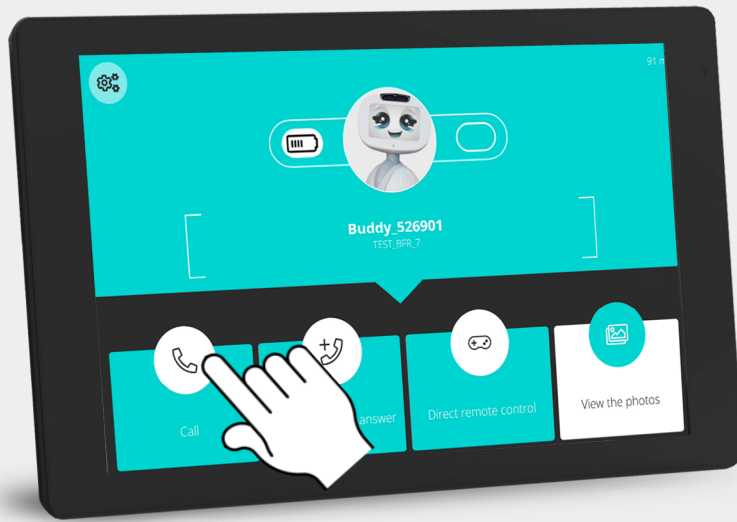


4 - LOGIN PROCEDURE

4.1 - CONNECTION FROM THE TABLET

TABLET SIDE

The remote user turns on the tablet and arrives at the home page. If the robot's status is «online» (blue call button), the user presses the «call» button.



The current connection display appears

ROBOT SIDE

The «call reception» illustration appears as a transparent overlay above the robot's face.

At the same time, the robot says «You've got a call, do you want to pick it up?» and a ringing tone sounds. If the user chooses to take the call, the connection is established (cf. illustration «TeleBuddy» on the robot side) If the user chooses to hang up, the robot's face appears.



If there is no response from the user on the robot side, the application automatically hangs up after 60s. If the user has made a «Call+auto-hook» call, the call begins automatically at the end of the ringing tone. If the user has made a «call, the call reception display does not appear on Buddy's face. Buddy's face and there is no ringing no ringing tone, the call begins directly.



4.2 - CONNECTION FROM THE ROBOT

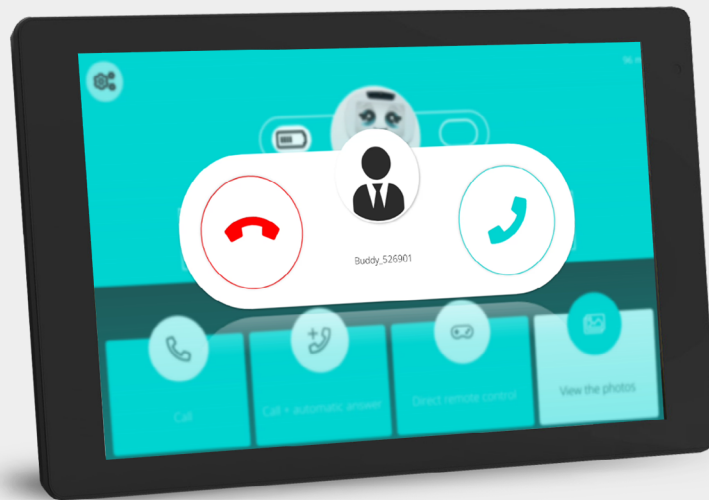
ROBOT SIDE

The remote user turns on the robot, and Buddy's face is displayed. If the remote user's status is «online» (blue icon), then his correspondent presses the call button. A loading screen appears



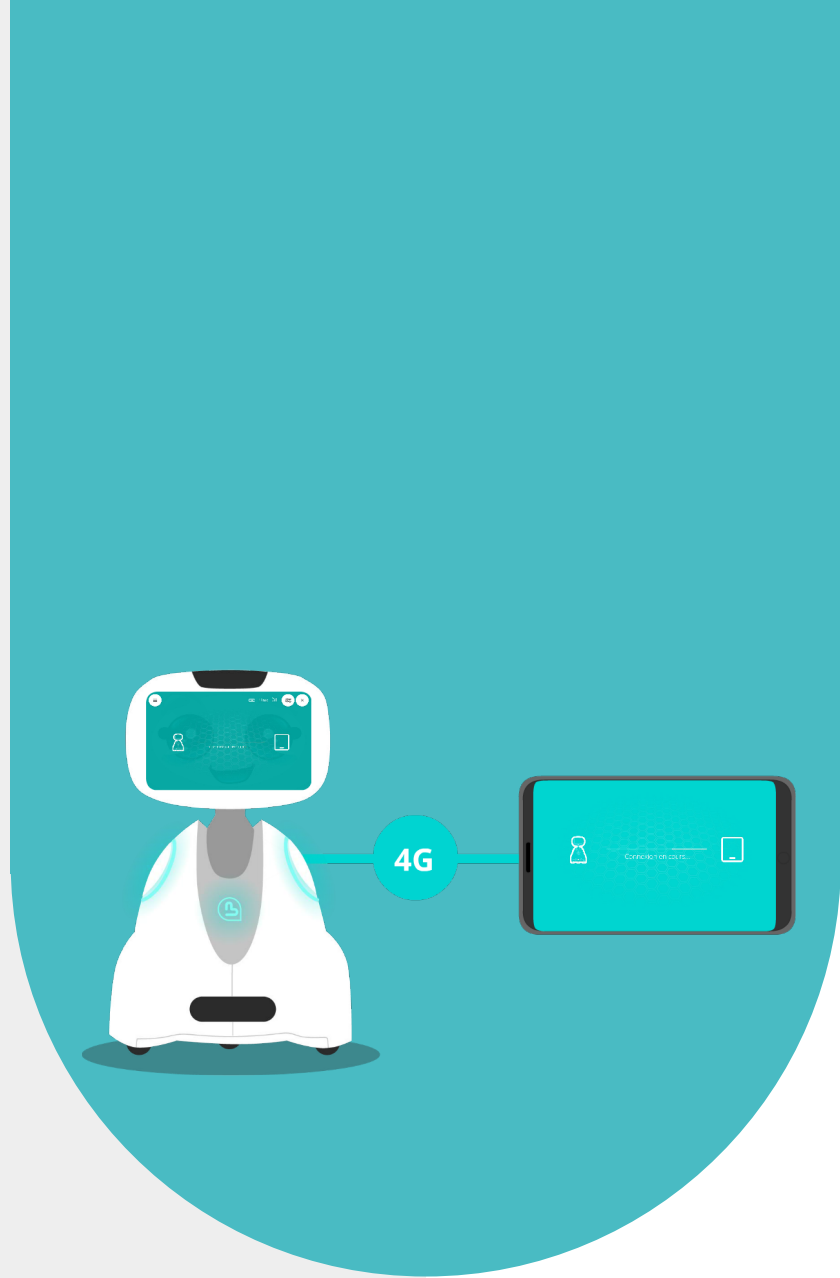
TABLET SIDE

The «Call reception» illustration appears on the tablet. A ringing tone rings during this phase. If the user chooses to accept the call, the connection is established (see «TeleBuddy» illustration on the tablet). If the user chooses to hang up or no one picks up after 60s, the user returns to the home screen.



Telepresence mode Tablet side (opposite)





5 - TABLET FUNCTIONS IN TELEPRESENCE MODE

5.1 - VISUAL PILOT INTERFACE

Robot control must respond to two distinct control situations.

The robot can be driven in static mode to orientate Buddy's head, or in dynamic mode (ground control) to move the robot.

To switch from «static» to «dynamic navigation» mode, press the «dynamic navigation» icon in the options menu. This mode can be activated from the tablet if the option is enabled from MyBuddyApp to switch to dynamic mode.

When the « dynamic mode » (ground control) mode is activated, all control commands appear on the tablet, and the robot's head is positioned upright (vertical -> motor yes) and aligned with the robot's body.



In «static» mode:

- The user presses on an area of the video and the robot centers its head on the chosen spot.
- E.g. Press at the top right of the image -> the robot raises its head to the right and centers itself on the point touched.

Move head:

- The user presses once on a point in the video and the robot automatically centers its head on this point.

In "Dynamic mode (ground control) mode :

The remote user (the pilot) sees :

- head up/down positioning cursor
- Robot movement cursor (head aligned with body)
- Cursors only appear when the screen is touched

Positioning the head Up/Down :

- The entire green area on the left is used to adjust head height
- The direction cursor (up/down) only appears at the touch of the screen
- SlideBar displays «current position» indicator (white line)
- Head moves up => white indicator rises
- Head moves down => white indicator moves down

The head height remains at the set position once the finger is removed from the green.



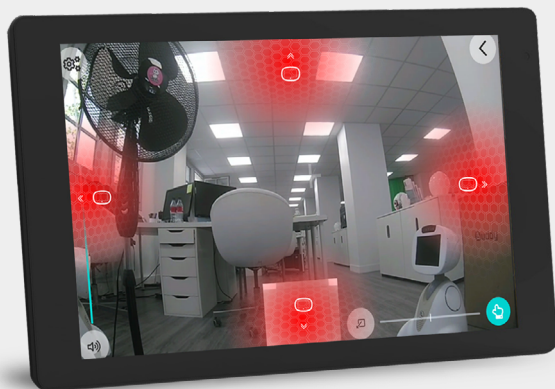
Controlling head height Up/Down :

- User places finger anywhere within the control zone
- Virtual direction cursor appears

Robot motion control (Body) :

- The user places his or her finger anywhere within the travel control zone movement
- Virtual direction cursor is displayed
- Body (wheel) displacement speed/acceleration correlates with finger speed/acceleration of the finger
- User moves finger in any direction
- Vertical movement of cursor varies forward/backward movement speed
- Horizontal cursor movement varies body rotation speed Left/Right
- Body rotation is symmetrical wheel rotation

Red indicators are displayed when the robot head comes to a stop on the Left/Right/Up/Down movement.



A red indicator is displayed when the robot hits an obstacle while moving forward or backward.

5.2 - EXPRESS MOOD THROUGH FACIAL EXPRESSION

If the pilot wishes to substitute his face for Buddy's, he can choose an expression from Buddy's face. In this way, he can express his emotional state: happy, tired, angry...

He can also take a photo and display it in place of his face (his video) on the robot's screen.



The steering controls remain active when a facial expression is displayed

All of Buddy's facial expressions:



Once the facial expression or mood has been chosen :

The control screen is displayed with the crossed-out camera icon, and the image of the facial expression is displayed in the video feedback window.

The image of the mood's face remains displayed until the student presses the crossed-out camera icon to exit this avatar mode and return to send his/her video => the return thumbnail also displays his/her video.



To exit this mode, simply reactivate the camera.

5.3 - ACTIVATION OF THE SPEAKING REQUEST

The pilot can visually signal to the robot user when he wishes to speak by clicking on the «raised hand» icon. Buddy then plays an animation on his face with a raised index finger, and the lights on the robot's body (heart and shoulders) also start flashing yellow.

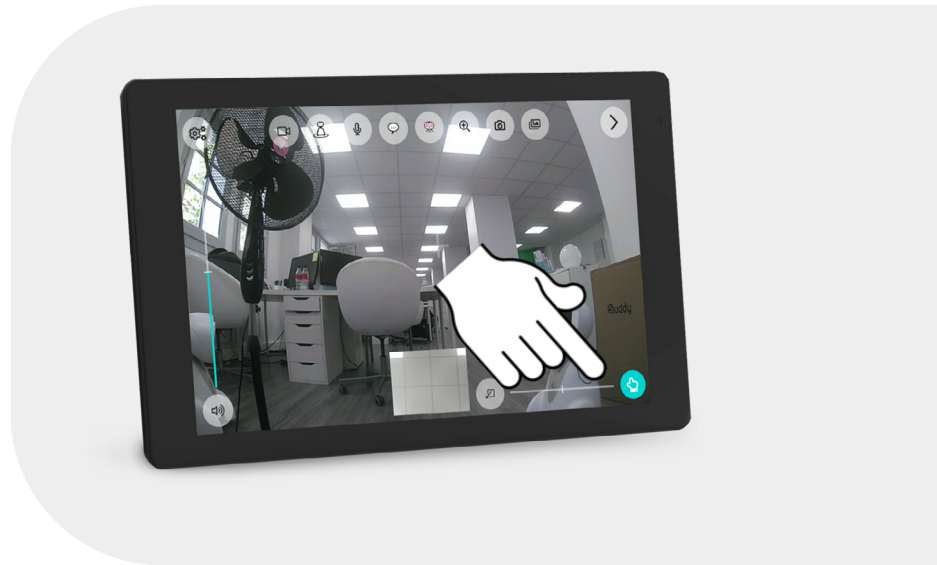
Talking can be done in «static mode» or «ground control mode»

TABLET SIDE :

The speech icon is red by default.

Just click once on the icon to keep the robot in «speak» mode, then the speak icon changes color to flashing green.

To deactivate the speaking mode, simply press the icon again, and its color will return to solid red.



ROBOT SIDE :

Pressing the speak button on the tablet or smartphone displays the animation of a raised finger on the robot's screen. finger on the robot's screen.



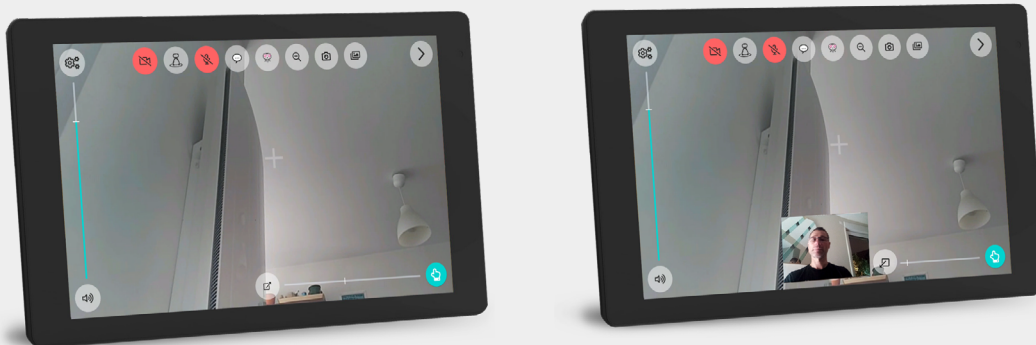
5.4 - ACTIVATE/DEACTIVATE PILOT VIDEO

Disabling user video automatically deletes the video feedback thumbnail.

On the robot side, Buddy's face is displayed with the «camera off» icon.



5.5 - ACTIVATE / DEACTIVATE DRIVER VIDEO FEEDBACK THUMBNAIL



5.6 - ROBOT SPEAKER VOLUME CONTROL



5.7 - ACTIVATE/DEACTIVATE DYNAMIC MODE

If the option is enabled on Buddy, the pilot can activate/deactivate dynamic navigation.

5.8 - ACTIVATE / DEACTIVATE PILOT MICROPHONE

The pilot can use the «mute» or «sound on» icons on his tablet to manage audio. To speak, simply click on the icon to activate the microphone sound.

5.9 - TEXT INPUT

TEXT INPUT

The pilot can communicate via Buddy through messages displayed and/or spoken by Buddy's voice:

Here are the methods of communication :

1. Enter a text message then display it on the robot's screen (display time 10s)
2. Enter a text message, then display it on the screen and speak Buddy's voice.
3. Choose a predefined message



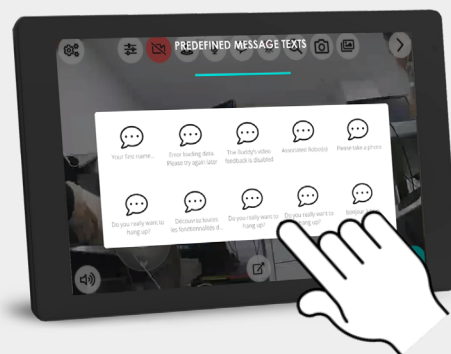
Dictate a message with voice recognition (Android) via the keyboard's «micro» key

Selection of predefined messages or phrases for editing

The driver can send predefined phrases. He can also edit new ones.

These messages are displayed and spoken via Buddy.

The message is displayed for 10s if no other message is sent.



5.10 - VIDEO ZOOM ACTIVATION

The Zoom function depends on the available camera equipment. The following description takes into account a two-camera architecture, one with a 127° wide angle. A second camera with an 80° angle to view a more precise area, while maintaining a resolution of 13M pixels. Both cameras are 13M, but don't have the same optics, so the zoom function is to switch from a wide video (127°) to a narrower one (80°) while keeping the same pixel density (13M). The principle is to switch from one camera to the other by pressing «The user will see the field of view shrink or enlarge with each camera change.

The user can press the «take photo» icon at any time, regardless of the 127°/80° camera, if this option is enabled on the robot. Once the photo has been taken, the user enters the photo recording procedure described later in this chapter. The zoom function is activated by clicking on the «zoom +» icon and toggling between the 130° and 80° cameras. Once the 80° camera has been activated, the «magnifying glass +» icon «magnifying glass -» icon to switch from 130° to 80° and vice versa



The zoom icon changes from «zoom +» to «zoom -», the camera changes sources.

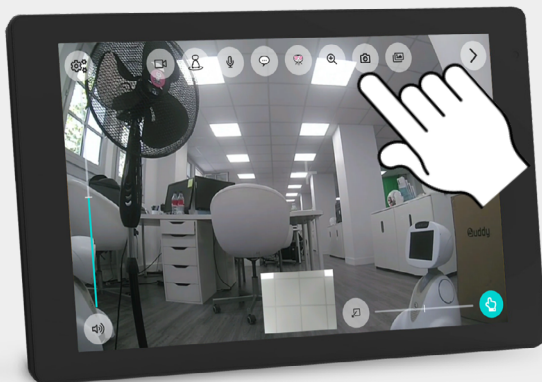
5.11 - TAKE A PHOTO DURING A CALL



The zoom video camera (80°) is now active, and the user can continue to pilot the robot, positioning the head in the area where he wishes to take a photo and save it in the gallery.

After clicking on the «take photo» icon, the «photo saved» information appears for one second.

Once recorded, the photo is stored in the photo gallery. Video/audio and piloting are never interrupted during the photo-taking process.



To return to 130° view, press the «zoom ->» icon.

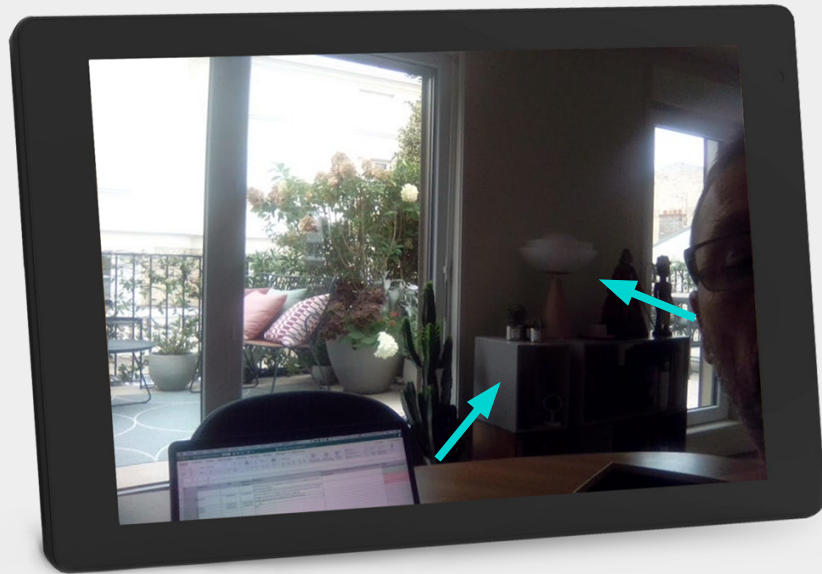
5.12 - ACCESS TO PHOTO GALLERY

Pressing the «gallery» icon gives access to photos taken during piloting or personalized photos in Avatar mode.



Open the gallery and select the photo to view

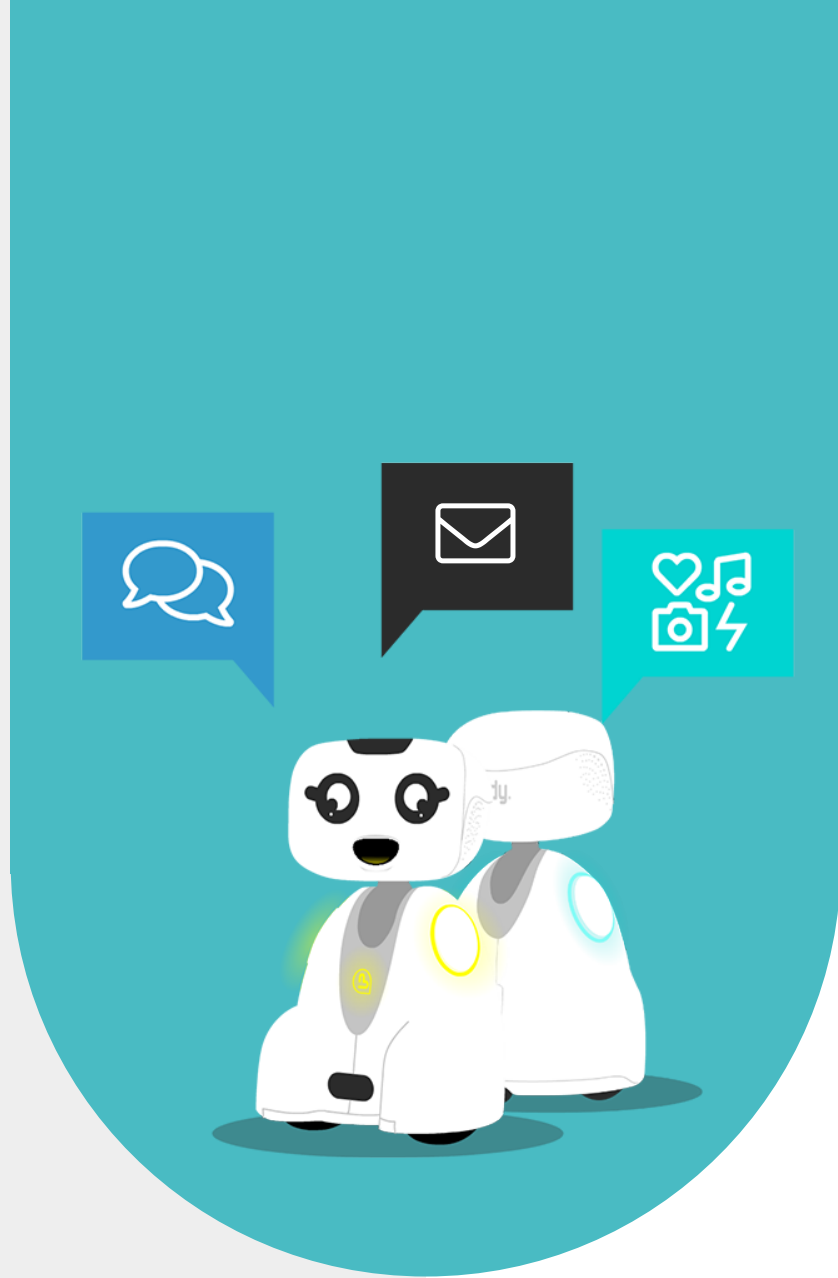




Display in «full screen» mode, digital zoom by pinching fingers



To close the gallery, slide your finger upwards at the bottom of the screen to reveal the back button and click on it.



6 - CONTACT US



6.1 - CONTACT DETAILS

If you wish to contact us for further information, please refer to the addresses below.

SUPPORT
support@bluefrogrobotics.com

GENERAL INFORMATION
info@bluefrogrobotics.com